MANITOU

HANDLING YOUR WORLD

648860 EN/US/AU (27/03/2023)

MHT-X 1490 129M ST3A S1
MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1
MHT 10130 129M ST4 S1

OPERATOR'S MANUAL

(ORIGINAL INSTRUCTIONS)

IMPORTANT

Carefully read and understand this instruction manual before using the lift truck.

It contains all information relating to operation, handling and lift truck equipment, as well as important recommendations to be followed.

This document also contains precautions for use, as well as information on the servicing and routine maintenance required to ensure the lift truck's continued safety of use and reliability.

WHENEVER YOU SEE THIS SYMBOL IT MEANS:



WARNING ! BE CAREFUL ! YOUR SAFETY OR THE SAFETY OF THE LIFT TRUCK IS AT RISK.

- This manual has been produced on the basis of the equipment list and the technical characteristics given at the time of its design.
- The level of equipment of the lift truck depends on the options chosen and the country of sale.
- According to the lift truck options and the date of sale, certain items of equipment/functions described herein may not be available.
- Descriptions and figures are non binding.
- MANITOU reserves the right to change its models and their equipment without being required to update this manual.
- The MANITOU network, consisting exclusively of qualified professionals, is at your disposal to answer all your questions.
- This manual is an integral part of the lift truck.
- It is to be kept in its storage space at all times for ease of reference.
- Hand this manual to the new owner if the lift truck is resold.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

1st ISSUE	**12/06/2015**
UPDATED	**10/05/2016**
UPDATED	**23/06/2016** **0-1; 0-2; 0-3; 0-4; 0-5; 0-6; 0-7; 0-8;** **2-11; 2-13; 2-14; 2-15; 2-16; 2-17; 2-18; 2-19; 2-20; 2-21; 2-29; 2-30;** **2-48; 2-78; 2-81;** **3-6; 3-7; 3-8; 3-10; 3-11;** **4-5 @ 4-18;** **5-1 @ 5-52.**
UPDATED	**03/07/2020**
UPDATED	**27/03/2023 0-1; 0-2; 0-3; 0-4; 0-5; 0-6; 0-7; 0-8;** **3-61; 3-62.**

Manitou BF S.A Limited liability company with a Board of Directors.
Head office: 430, Rue de l'Aubinière - 44150 Ancenis - FRANCE
Share capital: 39,548,949 euros
857 802 508 RCS Nantes.
Tel: +33 (0)2 40 09 10 11
www.manitou.com

This manual is for information purposes only. Any reproduction, copy, representation, recording, transfer, distribution, or other, in part or in whole, in any format is prohibited. The plans, designs, views, commentaries and instructions, even the document organization that are found in this document, are the intellectual property of MANITOU BF. Any violation of the aforementioned may lead to civil and criminal prosecution. The logos as well as the visual identity of the company are the property of MANITOU BF and may not be used without express and formal authorization. All rights are reserved.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

1 - INSTRUCTIONS ET CONSIGNES DE SÉCURITÉ

2 - DESCRIPTION

3 - MAINTENANCE

4 - ACCESSOIRES ADAPTABLES EN OPTION SUR LA GAMME

5 - LOAD CHARTS FOR INTERCHANGEABLE EQUIPMENT

MHT 1490 129M ST4 S1
MHT-X 1490 129M ST3A S1



648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MHT 10130 129M ST4 S1
MHT-X 10130 129M ST3A S1



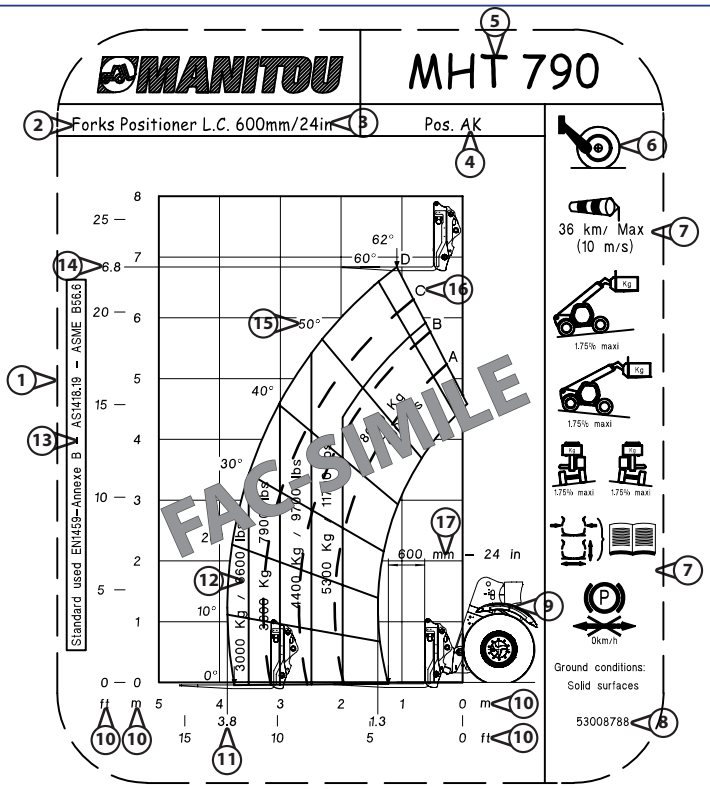
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

LEGEND OF SIGNS AND SYMBOLS

OVERVIEW:

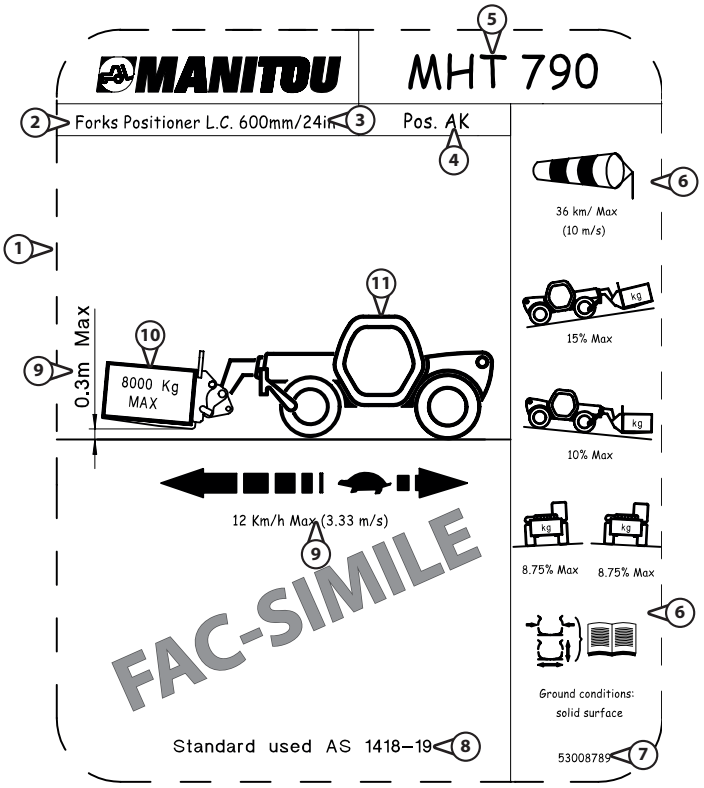
	Warning ! be careful ! your safety or the safety of the lift truck is at risk.
	See image 2-48
	For more details: see paragraph “Switches”

ATTACHMENT LOAD TABLE



Reference	Indication (example)	Example
1	load table	
2	machine type	Forks Positioner
3	load centre	L.C.600mm/24in
4	alphanumeric code which identifies the type of attachment in use **(Optional)**	Pos. AK
5	machine model	MHT 790
6	machine in working configuration: on front tyres, on tyres and turret rotated, on stabilisers **(Depending on the model machine)**	
7	working conditions	
8	load table code	53008788
9	indicative drawing of the machine	
10	metric system [unit of length (m) and unit of weight (kg)] or imperial system [unit of length (ft) and unit of weight (lb)]	
11	maximum length extension of the telescopic boom	3.8 m
12	load capacity range of the machine	3000kg/6000lbs, 3600kg/7900lbs, 4400kg/9700lbs, 5300kg/11700lbs, 8000kg/17700lbs
13	capacity table according to standards in force in the destination country	EN1459-ANNEXE B - AS1418.19 - ASME B56.6
14	maximum lift height of the telescopic boom	6.8 m
15	angle of the boom	0°, 10°, 20°, 30°, 40°, 50°, 60°, 62°
16	length of the boom **(Optional)**	A, B, C, D
17	load centre	600 mm - 24in

ATTACHMENT PICK AND CARRY TABLE



Reference	Indication (example)	Example
1	load chart	Pick and Carry
2	type of attachment	Forks Positioner
3	load center	L.C.600mm/24in
4	alphanumeric code which identifies the type of attachment in use **(Optional)**	Pos. AK
5	machine model	MHT 790
6	working conditions	
7	load table code	53008789
8	capacity table according to standards in force in the destination country	AS 1418.19
9	metric system [unit of length (m) and unit of weight (kg)] or imperial system [unit of length (ft) and unit of weight (lb)]	
10	maximum load capacity of the attachment in use	8000 kg
11	indicative drawing of the machine	

1 - OPERATING AND SAFETY INSTRUCTIONS

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

REDUCE 04 MANITOU

ASSISTANCE I 23 SIMPLE TIPS

The Manitou Group wishes to assist you in reducing the consumption of the machines to help you reduce your carbon footprint.



Chose a machine with an appropriate power rating for your needs.



Switch off your engine after running at idle for more than 3 minutes.



Optimum engine efficiency is achieved at the maximum torque engine speed.



Preferably use a fan control and reversal system.



Favor "smart" electronically-managed transmissions.



Use the air-conditioning with windows and doors closed.



Preferably use LED headlights.



Adapt the type of tire to your environment.



Ensure that your tires are inflated to the correct pressure.



Check the parking brake adjustment.

Preferably use manufacturer-recommended attachments



Check the general condition of your trailer.



Adapt your maximum towable load.



Use the attachments that are suitable for your machine.



Check the hydraulic adjustment of your attachments.



Observe the maintenance periods.



Regularly clean the radiator, the air filter, etc.



Lubricate regularly.



Preferably buy through a manufacturer-approved dealer.



Favor OEM parts.



Study the manufacturers' maintenance contracts.



You can follow eco-driving courses.



Demand to know the consumption and emissions of the machines.



Calculate your consumption and emissions at reduce.manitou.com

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

CONTENTS

1 - OPERATING AND SAFETY INSTRUCTIONS

INSTRUCTIONS TO THE COMPANY MANAGER 6

THE SITE 6

THE OPERATOR 6

THE TELEHANDLER 6

A - THE TRUCK'S SUITABILITY FOR THE JOB . . . 6
B - ADAPTATION OF THE TELEHANDLER TO STANDARD ENVIRONMENTAL CONDITIONS . . . 6
C - MODIFICATION OF THE TELEHANDLER . . . 7
D - FRENCH ROAD TRAFFIC RULES . . . 7
E - TELEHANDLER CAB PROTECTION . . . 7

INSTRUCTIONS 8

MAINTENANCE 8

INSTRUCTIONS FOR THE OPERATOR 10

FOREWORD 10

GENERAL INSTRUCTIONS 10

A - OPERATOR'S MANUAL . . . 10
B - AUTHORISATION FOR USE IN FRANCE . . . 10
C - MAINTENANCE . . . 10
D - TYRES . . . 10
E - MODIFICATION OF THE TELEHANDLER . . . 11
F - LIFTING PEOPLE . . . 11

OPERATING INSTRUCTIONS UNLADEN AND LADEN 12

A - BEFORE STARTING THE TELEHANDLER . . . 12
B - DRIVER'S OPERATING INSTRUCTIONS . . . 12
C - ENVIRONMENT . . . 12
D - VISIBILITY . . . 13
E - STARTING THE TELEHANDLER . . . 14
F - DRIVING THE TELEHANDLER . . . 14
G - STOPPING THE TELEHANDLER . . . 15
H - DRIVING THE TELEHANDLER ON THE PUBLIC HIGHWAY . . . 16

INSTRUCTIONS FOR HANDLING A LOAD: 18

A - CHOICE OF ATTACHMENTS . . . 18
B - WEIGHT OF LOAD AND CENTRE OF GRAVITY . . . 18
C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE . . . 18
D - TRANSVERSE ATTITUDE OF THE TELEHANDLER . . . 19
E - TAKING UP A LOAD ON THE GROUND . . . 19
F - TAKING UP AND SETTING DOWN A HIGH LOAD ON TYRES . . . 20
G - PICKING UP AND PUTTING DOWN A HIGH LOAD ON STABILISERS . . . 22
H - PICKING UP AND SETTING DOWN A SUSPENDED LOAD . . . 24
I - TRAVELLING WITH A SUSPENDED LOAD . . . 24

INSTRUCTIONS FOR USING AS A LOADER 25

A - LOADING . . . 25
B - BACKFILLING . . . 25

INSTRUCTIONS FOR USING THE PLATFORM 26

A - AUTHORISATION FOR USE . . . 26

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

B - TELEHANDLER SUITABILITY FOR USE . . . 26
C - PRECAUTIONS WHEN USING THE PLATFORM . . . 26
D - USING THE PLATFORM . . . 26
E - ENVIRONMENT . . . 26
F - MAINTENANCE . . . 27

INSTRUCTIONS FOR USING THE RADIO-CONTROL 28
HOW TO USE THE RADIO-CONTROL . . . 28
PROTECTIVE DEVICES . . . 28

***LIFT TRUCK MAINTENANCE INSTRUCTIONS* 30**

GENERAL INSTRUCTIONS 30

PLACING THE JIB SAFETY WEDGE 30
FITTING THE WEDGE. . . . 30
REMOVING THE WEDGE . . . 30

MAINTENANCE 30
MAINTENANCE LOG. . . . 30

LUBRICANT AND FUEL LEVELS 31

HYDRAULIC 31

ELECTRICITY 31

WELDING 31

WASHING THE TELEHANDLER 31

TRANSPORTING THE TELEHANDLER 31

***IF THE TELEHANDLER IS NOT TO BE USED FOR A LONG TIME* 32**

INTRODUCTION 32

PREPARING THE TELEHANDLER 32

ADBLUE TANK 32

PROTECTING THE ENGINE 32

PROTECTING THE TELEHANDLER 32

BRINGING THE TELEHANDLER BACK INTO SERVICE 33

***TELEHANDLER DISPOSAL* 34**

RECYCLING OF MATERIALS 34
METALS. . . . 34
PLASTICS. . . . 34
RUBBER. . . . 34
GLASS. . . . 34

ENVIRONMENTAL PROTECTION 34
WORN OR DAMAGED PARTS . . . 34
USED OIL. . . . 34
USED BATTERIES . . . 34

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

INSTRUCTIONS TO THE COMPANY MANAGER

THE SITE

Proper management of telehandler's area of travel will reduce the risk of accidents:

- ground not unnecessarily uneven or obstructed,
- no excessive slopes,
- pedestrian traffic controlled, etc.

THE OPERATOR

- Only qualified, authorized personnel can use the telehandler. This authorization is given in writing by the appropriate person in the establishment with respect to the use of telehandlers and must be carried permanently by the operator.

Experience has shown that there are a number of inappropriate ways in which the telehandler might be used. Such foreseeable misuse, of which the main examples are listed below, is strictly forbidden.
- The foreseeable abnormal behaviour resulting from ordinary negligence, but which does not result from any wish to put the machinery to any improper use.
- The reflex reactions of a person in the event of a malfunction, incident, fault, etc. during operation of the telehandler.
- Behaviour resulting from application of the "principle of least effort" when performing a task.
- For certain machines, the foreseeable behaviour of such persons as: apprentices, teenagers, handicapped persons, trainees tempted to drive a telehandler, operators tempted to operate the machine to win a bet, in competition or for their own personal experience.
The person in charge of the equipment must take these criteria into account when assessing whether or not a person will make a suitable driver.

THE TELEHANDLER

A - THE TRUCK'S SUITABILITY FOR THE JOB

- MANITOU has ensured that this telehandler is suitable for use under the standard operating conditions defined in this operator's manual, with a **STATIC test coefficient of 1.33** and a **DYNAMIC test coefficient of 1**, as specified in harmonised standard **EN 1459** for variable reach trucks.
- Before commissioning, the company manager must make sure that the telehandler is appropriate for the work to be done, and perform certain tests (in accordance with current legislation).

B - ADAPTATION OF THE TELEHANDLER TO STANDARD ENVIRONMENTAL CONDITIONS

- In addition to series equipment mounted on your telehandler, many options are available, such as: road lighting, stop lights, revolving light, reverse lights, reverse buzzer alarm, front light, rear light, light at the jib head, etc. (according to the telehandler model).
- The operator must take into account the operating conditions to specify the telehandler's signalling and lighting equipment. Contact your dealer
- Take into account climatic and atmospheric conditions of the site of utilisation.
  - Protection against frost (◅ 3 - MAINTENANCE: LUBRICANTS AND FUEL).
  - Adaptation of lubricants (ask your dealer for information).
  - Engine filtration (◅ 3 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).

For operation under average climatic conditions, i.e.: between -15 °C and 35 °C, correct levels of lubricants in all the circuits are checked in production. For use in harsher conditions, before setting off, lubricants must be changed and topped up using lubricants appropriate to the ambient temperatures.
The same applies to the cooling liquid.

- Preventing fire risks associated with use in dusty and flammable conditions (e.g. straw, flour, sawdust, organic waste, etc.).
- A telehandler operating in an area without fire extinguishing equipment must be equipped with an individual extinguisher. There are solutions, consult your dealer.

Your telehandler is designed for outdoor use under normal atmospheric conditions and indoor use in suitably aerated and ventilated premises.
It is prohibited to use the telehandler in areas where there is a risk of fire or which are potentially explosive (e.g. refineries, fuel or gas depots, stores of flammable products. etc.).
For use in these areas, specific equipment is available (ask your dealer for information).

- Our telehandlers comply with Directive 2004/108/EC concerning electromagnetic compatibility (EMC), and with the corresponding harmonized standard EN 12895. Their proper operation is no longer guaranteed if they are used within areas in which the electromagnetic fields exceed the limit specified by that standard (10 V/m).
- Directive 2002/44/EC prohibits company managers from exposing their employees to excessive levels of vibration. There is no recognized code of measurement for comparing the machines of different manufacturers. The actual doses received can only therefore be measured under actual operating conditions at the user's premises.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

- The following are some tips for minimizing these vibration doses:
  - Select the most suitable telehandler and attachment for the intended use.
  - Adapt the seat adjustment to the operator's weight (according to telehandler model) and maintain it in good condition, as well as the cab suspension. Inflate the tires in accordance with recommendations.
  - Ensure that the operators adapt their operating speed to suit the conditions on site.
  - As far as possible, arrange the site in such a way as to provide a flat running surface and remove obstacles and harmful potholes.

C - MODIFICATION OF THE TELEHANDLER

- For your safety and that of others, you must not change the structure and settings of the various components used in your telehandler (hydraulic pressure, calibrating limiters, engine speed, addition of extra equipment, addition of counterweight, unapproved attachments, alarm systems, etc.) yourself. In this event, the manufacturer cannot be held responsible.

D - FRENCH ROAD TRAFFIC RULES

(or see current legislation in other countries)

- Only one EC declaration of conformity is issued. It must be kept in a safe place.
- The road traffic rules of telehandlers are subject to the provisions of the highway code, according to the following categories:
  - Construction-type trucks (MT range): public works vehicle not predominantly for use on roads (point 6.9 of Article R311-1 of the French Highway Code). The truck must have a 25 disc displayed on the rear of the vehicle and an operating licence plate.
  - Agricultural-type trucks (MLT range) that are non-EC type approved tractors: (point 6.2 of Article R311/1 of the French Highway Code). The truck must be fitted with an operating licence plate.
  - Agricultural-type trucks (MLT range) that are EC type approved tractors: agricultural tractor type T1a (point 5.1.1 of Article R311/1 of the French Highway Code). The truck must be registered.

SPECIAL INSTRUCTION APPLYING TO "EC TRACTOR" TYPE-APPROVED TELEHANDLERS

- All EC tractor type-approved telehandlers are supplied with an "EC tractor" certificate complying with directive 2003/37/EC, to be retained by the owner, and a page of administrative details together with a CNIT number (national type approval code) for registration at the prefecture.
- The telehandler owner is responsible for carrying out the necessary procedures for obtaining the vehicle registration document within the time limit defined by the regulations.
- The operator must hold a category B driver's licence, unless granted an exemption.
- The telehandler must be driven on the public highway in accordance with the instructions given in the manual supplied with the telehandler (Gross weight, Gross combination weight, towing load, axle loads, maximum speeds, etc. according to type/version). The operator must be in possession of the telehandler's registration document.

When towing a trailer or agricultural equipment, the travelling speed of the telehandler is limited to 25 km/h (15.5 mph). In this case, a "25" disc must be affixed to the rear of the convoy.

E - TELEHANDLER CAB PROTECTION

- All telehandlers comply with the requirements of ISO 3471 (wheel loader code) regarding cab rollover protection (ROPS) and ISO 3449 (Level II) regarding the protection of the cab against falling objects (FOPS).
- "EC TRACTOR" type-approved telehandlers comply, in addition, with Directive 79/622/EC (OECD Code 4) regarding cab rollover protection (ROPS).

Structural damage or overturning, a modification, changes or a poorly executed repair can reduce the protective efficiency of the cab, cancelling its compliance. Do not carry out any welding or drilling on the cab structure. Consult your dealer to determine the limits of this structure without cancelling its compliance.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

INSTRUCTIONS

- The operator's manual must always be in good condition and kept in the place provided on the telehandler and in the language used by the operator.
- The operator's manual and any plates or stickers which are no longer legible or are damaged, must be replaced immediately.

MAINTENANCE

- Maintenance or repairs other than those detailed in part: 3 - MAINTENANCE must be carried out by qualified personnel (your dealer) and under the necessary safety conditions to maintain the health of the operator and any third party.



Your telehandler must be inspected periodically to ensure that it remains in compliance.
The frequency of this inspection is defined by current legislation in the country in which the telehandler is used.

- Example for France "The manager in charge of the establishment using a telehandler must open and maintain a maintenance log for each machine (order of 2 March 2004) and undergo a general periodic inspection every 6 months (order of 1 March 2004)".

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

INSTRUCTIONS FOR THE OPERATOR

FOREWORD

The risk of accident while using, servicing or repairing your telehandler can be reduced if you follow the safety instructions and preventive measures detailed in these instructions.
Failure to comply with the safety instructions and instructions for the use, repair or maintenance of your telehandler may result in serious or even fatal accidents.

- Only the operations and manoeuvres described in these operator's manual must be performed. The manufacturer cannot predict all possible risky situations. Consequently, the safety instructions given in the operator's manual and on the telehandler itself are not exhaustive.
- As the operator, you must at all times envisage, up to a reasonable limit, the possible risks to yourself, others and to the telehandler when using it.

In order to reduce or avoid any danger with a MANITOU-approved attachment, follow the instructions of paragraph: 4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE: INTRODUCTION.

GENERAL INSTRUCTIONS

A - OPERATOR'S MANUAL

- Read the operator's manual carefully.
- The operator's manual must always be in good condition and in the place provided for it on the lift truck.
- You must report any plates and stickers which are no longer legible or which are damaged.

B - AUTHORISATION FOR USE IN FRANCE

(or see current legislation in other countries).

- Only qualified, authorized personnel can use the lift truck. This authorization is given in writing by the appropriate person in the establishment with respect to the use of lift trucks and must be carried permanently by the operator.
- The operator is not competent to authorise the driving of the lift truck by another person.

C - MAINTENANCE

- The operator must immediately advise his superior if his lift truck is not in good working order or does not comply with the safety notice.
- The operator is prohibited from carrying out any repairs or adjustments himself, unless he has been trained for this purpose. He must keep the lift truck properly cleaned if this is among his responsibilities.
- The operator is responsible for carrying out daily maintenance (◁ 3 - MAINTENANCE).
- The operator is responsible for deciding and adjusting the frequency of cleaning needed to prevent the risk of fire ensuing from the build-up of flammable material(s). The operator should pay special attention to all the areas of the lift truck where these risk materials are likely to accumulate.

D - TYRES

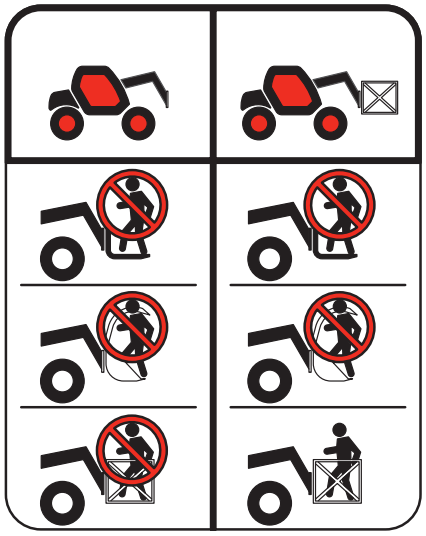
- The operator must ensure tyres are adapted to the nature of the ground (see area of the contact surface of the tyres in the chapter: 2 - DESCRIPTION: TYRES). There are optional solutions, consult your dealer.
  - SAND tyres.
  - FARM tyres.
  - Snow chains.
- The lift truck's four tyres must be the same brand and the same usage category (normal, snow or special), have the same structure (radial or diagonal) and have the same degree of tread wear.
- In the event of tyre replacement, use tyres authorised by MANITOU that are the same type and dimensions. Using different tyres voids the lift truck's type approval and you may be liable.
- If you are replacing just one of the lift truck's tyres (e.g. because it is damaged), we recommend choosing a tyre with the same degree of wear as the remaining tyres so as not the damage the transmission's kinematic chain.

Do not use the telehandler if the tyres are incorrectly inflated, damaged or excessively worn, because this could put your own safety or that of others at risk, or cause damage to the telehandler itself.
The fitting of foam inflated tyres is prohibited and is not guaranteed by the manufacturer, excepting prior authorisation.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

E - MODIFICATION OF THE TELEHANDLER

- For your safety and that of others, you must not change the structure and settings of the various components used in your telehandler (hydraulic pressure, calibrating limiters, engine speed, addition of extra equipment, addition of counterweight, unapproved attachments, alarm systems, etc.) yourself. In this event, the manufacturer cannot be held responsible.



F - LIFTING PEOPLE

- The use of working equipment and load lifting attachments to lift people is:
  - prohibited;
  - or authorised exceptionally and under certain conditions (◁ Current regulations in the country in which the telehandler is used).
- The pictogram posted at the operator station reminds you that:

  Left-hand column
  - It is forbidden to lift people, with any kind of attachment, using a non PLATFORM-fitted telehandler.

  Right-hand column
  - With a PLATFORM-fitted telehandler, people can only be lifted using platforms designed by MANITOU for the purpose.
- MANITOU sells equipment specifically designed for lifting people (OPTION PLATFORM telehandler, contact your dealer).

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

A - BEFORE STARTING THE TELEHANDLER

- Carry out daily maintenance (3 - MAINTENANCE: 10 HOURS - DAILY MAINTENANCE OR EVERY 10 HOURS OF SERVICE).
- Make sure that the driver's cab is clean, particularly the floor and floor mat. Check that no movable object may hinder the operation of the telehandler.
- Make sure the lights, indicators and windscreen wipers are working properly.
- Make sure the rear view mirrors are in good condition, clean and properly adjusted.
- Make sure the horn works.

B - DRIVER'S OPERATING INSTRUCTIONS

- Whatever his experience, the operator is advised to familiarize himself with the position and operation of all the controls and instruments before operating the telehandler.
- Wear clothes suited for driving the telehandler, avoid loose clothes.
- Make sure you have the appropriate protective equipment for the task to be performed.
- Prolonged exposure to high noise levels may cause hearing problems. It is recommended to wear ear muffs to protect against excessive noise.
- Always face the telehandler when getting into and leaving the driving seat and use the handle(s) provided for this purpose. Do not jump out of the seat to get down.
- Always pay attention when using the telehandler. Do not listen to the radio or music with headphones or ear buds.
- Never operate the telehandler when hands or feet are wet or soiled with greasy substances.
- For increased comfort, adjust the seat to your requirements and adopt the correct position in the driver's cab.

Under no circumstances must the seat be adjusted while the telehandler is moving.

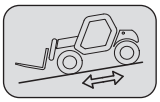
- The operator must always be in his normal position in the driver's cab. It is prohibited to have arms or legs, or generally any part of the body, protruding from the driver's cab of the telehandler.
- The safety belt must be worn and adjusted to the operator's size.
- The control units must never in any event be used for any other than their intended purposes (e.g. climbing onto or down from the telehandler, portemanteau etc.).
- If the control components are fitted with a forced operation (lever lock) device, it is forbidden to leave the cab without first putting these controls in neutral.
- It is prohibited to carry passengers either on the telehandler or in the driver's cab.

C - ENVIRONMENT

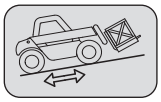
- Ensure compliance with site safety rules.
- If you have to use the telehandler in a dark area or at night, make sure it is equipped with working lights.
- During handling operations, make sure that no one is in the way of the telehandler and its load.
- Do not allow anybody to come near the working area of the telehandler or pass beneath an elevated load.
- When using the telehandler on a transverse slope, before lifting the jib, follow the instructions given in the paragraph: INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE TELEHANDLER.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

- Travelling on a longitudinal slope:
  • Drive and brake gently.
  • Moving without load: Forks or attachment facing downhill.



  • Moving with load: Forks or attachment facing uphill.



- Take into account the telehandler's dimensions and its load before trying to negotiate a narrow or low passageway.
- Never climb up onto a loading platform without first checking the following:
  • It has been properly installed and secured.
  • The unit to which it is connected (wagon, lorry, etc.) can not shift.
  • This platform is prescribed for the total weight of the telehandler to be loaded.
  • This platform is prescribed for the size of the telehandler.
- Never climb up onto a foot bridge, floor or freight lift, without being certain that they are prescribed for the weight and size of the telehandler to be loaded and without having checked that they are in sound working order.
- Be careful in the area of loading bays, trenches, scaffolding, soft ground and manholes.
- Make sure the ground is stable and firm under the wheels and/or stabilizers before lifting or removing the load. If necessary, add sufficient wedging under the stabilizers.
- Make sure that the scaffolding, loading platform, pilings or ground is capable of bearing the load.
- Never stack loads on uneven ground, they may tip over.

If the load or the attachment must remain above a structure for a long time, there is the risk that it will rest on the structure because of the jib descending owing to the oil in the cylinders cooling down.
To eliminate this risk:
- Regularly check the distance between the load or the attachment and the structure and readjust this if necessary.
- If possible, use the telehandler with the oil temperature as close as possible to ambient temperature.

- When working near aerial lines, ensure that the safety distance is sufficient between the working area of the telehandler and the aerial line.

You must consult your local electrical agency.
You could be electrocuted or seriously injured if you operate or park the telehandler too close to power cables.
In the event of high winds, do not carry out handling work that jeopardises the stability of the telehandler and its load, particularly if the load catches the wind badly.

- Prevent fire risks associated with use in dusty and flammable conditions (e.g. straw, flour, sawdust, organic waste, etc.).

D - VISIBILITY

- The safety of people within the telehandler's working area, as well as that of the telehandler itself and the operator are depend on good operator visibility of the telehandler's immediate vicinity in all situations and at all times.
- This telehandler has been designed to allow good operator visibility (direct or indirect by means of rear-view mirrors) of the immediate vicinity of the telehandler while travelling with no load and with the jib in the transport position.
- Special precautions must be taken if the size of the load restricts visibility towards the front:
  • moving in reverse,
  • site layout,
  • assisted by a person directing the manoeuvre (while standing outside the truck's area of travel), making sure to keep this person clearly in view at all times,
  • in any case, avoid reversing over long distances.
- Certain special accessories may require the truck to travel with the jib in the raised position. In such cases, visibility on the right hand side is restricted, and special precautions must be taken:
  • site layout,
  • assisted by a person directing the manoeuvre (while standing outside the truck's area of travel).
  • replacement of a suspended load by a load on a pallet.
- If visibility of your road is inadequate, ask someone to assist by directing the manoeuvre (while standing outside the truck's area of travel), making sure to keep this person clearly in view at all times.
- Keep all components affecting visibility in a clean, properly adjusted state and in good working order (e.g. windscreens, windows, windscreen wipers, windscreen washers, driving and work lights, rear-view mirrors).

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

E - STARTING THE TELEHANDLER

SAFETY INSTRUCTIONS

The telehandler must only be started up or manoeuvred when the operator is sitting in the driver's cab, with his seat belt adjusted and fastened.

- Never try to start the telehandler by pushing or hauling it. Such an operation may cause severe damage to the transmission. If necessary, towing requires the transmission to be put in neutral (◁ 3 - MAINTENANCE: OCCASIONAL OPERATION).
- If using an emergency battery for start-up, use a battery with the same characteristics and respect battery polarity when connecting it. Connect at first the positive terminals before the negative terminals.

Failure to respect polarity between batteries can cause serious damage to the electrical circuit.
The electrolyte in the batteries may produce an explosive gas. Avoid flames and generation of sparks close to the batteries.
Never disconnect a battery while it is charging.

INSTRUCTIONS

- Check the closing and locking of the hood(s).
- Check that the cab door is closed.
- Check that the forward/reverse selector is in neutral, and that the parking brake is engaged.
- Press on the service brake pedal and maintain it down.
- Turn the ignition key to the position I to activate the electrical and pre-heating system.
- Check the fuel level on the indicator.

It is forbidden to press the accelerator pedal when starting the engine

- Turn the ignition key fully, the engine should then start. Release the ignition key and let the engine run at idle.
- Do not engage the starter motor for more than 15 seconds and carry out the preheating between unsuccessful attempts.
- Make sure all the signal lights on the instruments panel are off.
- Check all control instruments when the engine is warm and at regular intervals during use, so as to quickly detect any faults and to be able to correct them without any delay.
- If an instrument does not show the correct display, stop the engine and immediately carry out the necessary operations.

F - DRIVING THE TELEHANDLER

SAFETY INSTRUCTIONS

Operators' attention is drawn to the risks involved in using the telehandler, in particular:
- Risk of losing control.
- Risk of losing lateral and frontal stability of the telehandler.
The operator must remain in control of the telehandler. In the event of the telehandler overturning, do not try to leave the cabin during the incident.
YOUR BEST PROTECTION IS TO STAY FASTENED IN THE CABIN.

- Observe the company's traffic regulations or, by default, the public highway code.
- Do not carry out operations which exceed the capacities of your telehandler or attachments.
- Always drive the telehandler with the forks or attachment to the transport position, i.e. at 300 mm (11.8 in) from the ground, the jib retracted and the carriage sloping backwards.
- Only carry loads which are balanced and properly anchored to avoid any risk of a load falling off.
- Ensure that palettes, cases, etc, are in good order and suitable for the load to be lifted.
- Familiarise yourself with the telehandler on the terrain where it will be used.
- Ensure that the service brakes are working properly.
- **The loaded telehandler must not travel at speeds in excess of 5 km/h - 3.1 mph and 1,5 km/h - 0.9 mph for Australia.**
- Drive smoothly at an appropriate speed for the operating conditions (land configuration, load on the telehandler).
- Do not use the hydraulic jib controls when the telehandler is moving.
- Never change the steering mode whilst driving.
- Do not manoeuvre the telehandler with the jib in the raised position unless under exceptional circumstances and then with extreme caution, at very low speed and using gentle braking. Ensure that visibility is adequate.
- Take bends slowly.
- In all circumstances make sure you are in control of your speed.
- On damp, slippery or uneven terrain, drive slowly.
- Brake gently, never abruptly.
- Only use the telehandler's forward/reverse selector from a stationary position and never do so abruptly.
- Do not drive with your foot on the brake pedal. Always remember that hydrostatic type steering is extremely sensitive to movement of the steering wheel, so turn it gently and not jerkily.
- Never leave the engine on when the telehandler is unattended.
- Do not leave the cab when the telehandler has a raised load.

- Look where you are going and always make sure you have good visibility along the route.
- Use the rear-view mirrors frequently.
- Drive round obstacles.
- Never drive on the edge of a ditch or steep slope.
- It is dangerous to use two telehandlers simultaneously to handle heavy or bulky loads, since this operation requires particular precautions to be taken. It must only be used exceptionally and after risk analysis.
- The ignition switch has an emergency stop mechanism in case of an operating anomaly occurring in the case of telehandlers not fitted with a punch-operated cut-out.

INSTRUCTIONS

- Always drive the telehandler with the forks or attachment to the transport position, i.e. at 300 mm (11.8 in) from the ground, the jib retracted and the carriage sloping backwards.
- For telehandlers with gearboxes, use the recommended gear (2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).
- Select the steering mode appropriate for the use and/or working conditions (2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS) (according to model of telehandler).
- Release the hand brake.
- Shift the forward/reverse selector to the selected direction of travel and accelerate gradually until the telehandler moves off.

Starting and driving a telehandler on a slope can present a very real danger.
The telehandler being parked or stopped, scrupulously follow the following instructions for moving off:
- Press the service brake pedal.
- Engage 1st or 2nd gear and select forward or reverse.
- Check that there is nothing and no-one obstructing the telehandler's path.
- Release the service brake pedal and increase the engine revs.
Using the telehandler when loaded or with a trailer increases the risk. Extreme care is required in this case.

G - STOPPING THE TELEHANDLER

SAFETY INSTRUCTIONS

- Never leave the ignition key in the telehandler during the operator's absence.
- When the telehandler is stationary, or if the operator has to leave his cab (even for a moment), place the forks or attachment on the ground, apply the parking brake and place the forward/reverse selector in neutral.
- Make sure that the telehandler is not stopped in any position that will interfere with the traffic flow and at less than one meter from the track of a railway.
- In the event of prolonged parking on a site, protect the telehandler from bad weather, particularly from frost (check the level of antifreeze), close and lock all the telehandler accesses (doors, windows, cowls, etc.).

INSTRUCTIONS

- Park the telehandler on flat ground or on an incline lower than 15 %.
- Set the forward/reverse selector to neutral.
- Apply the parking brake.
- For telehandlers with gearboxes, place the gear lever in neutral.
- Fully retract the jib.
- Lower the forks or attachment to rest on the ground.
- When using an attachment with a grab or jaws, or a bucket with hydraulic opening, close the attachment fully.
- Before stopping the telehandler after a long working period, leave the engine idling for a few moments, to allow the coolant liquid and oil to lower the temperature of the engine and transmission. Do not forget this precaution, in the event of frequent stops or warm stalling of the engine, or else the temperature of certain parts will rise significantly due to the stopping of the cooling system, with the risk of badly damaging such parts.
- Stop the engine with the ignition switch.
- Remove the ignition key.
- Lock all access to the telehandler (doors, windows, cowls etc).

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

H - DRIVING THE TELEHANDLER ON THE PUBLIC HIGHWAY

(or see current legislation in other countries)

FRENCH ROAD TRAFFIC RULES

- The driving of non EC type-approved tractors on the public highway is subject to the provisions of the highway code relating to special machines, defined in article R311-1 of the highway code, in category B of the Equipment Order of 20 November 1969 that determines the procedures applicable to special machines. The telehandler must be fitted with a licence plate.
- The driving of EC type-approved tractors on the public highway is subject to the provisions of the highway code regarding agricultural tractors, defined in article R311-1 of the highway code. The telehandler must be registered.
- The telehandler must be driven on the public highway in accordance with the instructions given in the manual supplied with the telehandler (Gross weight, Gross combination weight, towing load, axle loads, maximum speeds, etc. according to type/version). The operator must be in possession of the telehandler's registration document.
- The operator must hold an HGV licence, unless granted an exemption.
- When towing a trailer or agricultural equipment, the travelling speed of the telehandler is limited to 25 km/h (15.5 mph). In this case, a "25" disc must be affixed to the rear of the convoy. When driving with a trailer, the fact of not engaging 4th gear will ensure compliance with the towing speed limit (max. 25 km/h15.5 mph). On "POWERSHIFT" models, as 3rd gear is slower than on other models, it is preferable to use 5th gear and disable automatic upshifting to 6th gear (◁ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).

SAFETY INSTRUCTIONS

- Operators driving on the public highway must comply with current highway code legislation.
- The telehandler must comply with current road legislation. If necessary, there are optional solutions. Contact your dealer

INSTRUCTIONS

- Make sure the revolving light is in place, switch it on and verify its operation.
- Make sure the lights, indicators and windscreen wipers are working properly.
- Switch off the working headlights if the telehandler is fitted with them.
- Select the steering mode "HIGHWAY TRAFFIC" (according to model of telehandler) (◁ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).
- Fully retract the jib and set the attachment approximately 300 mm (11.8 in) off the ground.
- Place the roll corrector in the central position, i.e. the transverse axis of the axles parallel to the chassis (as model of telehandler).
- Fully raise the stabilizers and turn the blocks inwards (according to model of telehandler).

Never move in neutral (forward/reverse selector or gear lever in neutral or transmission cut-off button pressed) to preserve the telehandler engine brake.
Failure to respect this instruction on a slope will lead to excessive speed which may make the telehandler uncontrollable (steering, brakes) and cause serious mechanical damage.

DRIVING THE TELEHANDLER WITH A FRONT-MOUNTED ATTACHMENT

- You must comply with current regulations in your country, covering the possibility of driving on the public highway with a front-mounted attachment on your telehandler.
- If road legislation in your country authorizes circulation with a front-mounted attachment, you must at least:
  - Protect and report any sharp and/or dangerous edges on the attachment (◁ 4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE: ATTACHMENT SHIELDS).
  - The attachment must not be loaded.
  - Make sure that the attachment does not mask the lighting range of the forward lights.
  - Make sure that current legislation in your country does not require other obligations.

OPERATING THE TELEHANDLER WITH A TRAILER

- For using a trailer, observe the regulations in force in your country (maximum travel speed, braking, maximum weight of trailer, etc.).
- Do not forget to connect the trailer's electrical equipment to that of the telehandler.
- The trailer's braking system must comply with current legislation.
- If pulling a trailer with assisted braking, the tractor telehandler must be equipped with a trailer braking mechanism. In this case, do not forget to connect the trailer braking equipment to the telehandler.
- The vertical force on the towing hook must not exceed the maximum authorised by the manufacturer (consult the manufacturer's plate on your telehandler).
- The authorised gross vehicle weight must not exceed the maximum weight authorised by the manufacturer (◁ 2 - DESCRIPTION: CHARACTERISTICS).

IF NECESSARY, CONSULT YOUR DEALER.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

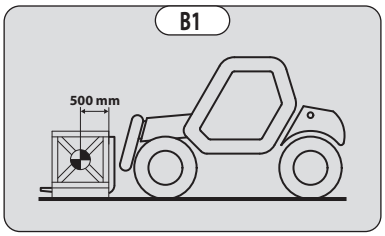
INSTRUCTIONS FOR HANDLING A LOAD:

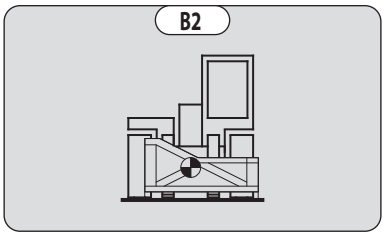
A - CHOICE OF ATTACHMENTS

- Only attachments approved by MANITOU can be used on its telehandlers.
- Make sure the attachment is appropriate for the work to be done (◁ 4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE).
- If the telehandler is equipped with the single side-shift carriage OPTION (TSDL), use only the authorised attachments (◁ 4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE).
- Make sure the attachment is correctly installed and locked onto the telehandler carriage.
- Make sure that your telehandler attachments work properly.
- Comply with the load chart limits for the telehandler for the attachment used.
- Do not exceed the rated capacity of the attachment.
- Never lift a load in a sling without the attachment provided for the purpose, as there is a risk of the sling slipping (◁ INSTRUCTIONS FOR HANDLING A LOAD: H - PICKING UP AND SETTING DOWN A SUSPENDED LOAD).
- Do not handle loads that are hung directly from the forks with straps (e.g.: big bags), as there is a risk that the straps will shear against the sharp edges. Use an attachment designed for this purpose.

B - WEIGHT OF LOAD AND CENTRE OF GRAVITY

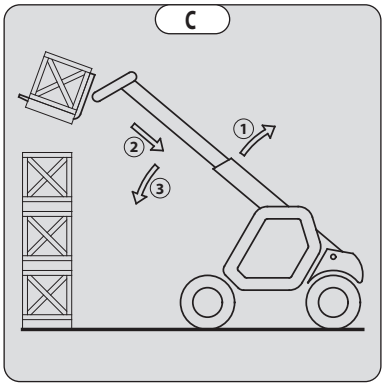
- Before taking up a load, you must know its mass and its centre of gravity.
- The load chart for your telehandler is valid for a load in which the longitudinal position of the centre of gravity is 500 mm (19.6 in) from the base of the forks (fig. B1). For a higher centre of gravity, contact your dealer.
- For irregular loads, determine the transverse centre of gravity before any movement (fig. B2) and set it in the longitudinal axis of the telehandler.





It is forbidden to handle a load heavier than the effective capacity specified on the truck load chart.
For loads with a moving centre of gravity (e.g. liquids), take account of the variations in the centre of gravity in order to determine the load to be handled and be extra vigilant and careful to limit these variations as far as possible.

C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE



This device gives an indication of the longitudinal stability of the telehandler, and limits hydraulic movements in order to ensure this stability, at least under the following operating conditions:

- when the telehandler is at a standstill,
- when the telehandler is on firm, stable and consolidated ground,
- when the telehandler is performing handling and placing operations.

- Move the jib very carefully when approaching the authorised load limit (◁ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).
- Always watch this device during handling operations.
- In the event that "AGGRAVATING" hydraulic movements are cut-off, only perform de-aggravating hydraulic movements in the following order (fig. C): if necessary, raise the jib (1), retract the jib as far as possible (2) and lower the jib (3) to set down the load.

The instrument reading may be erroneous when the steering is at its maximum limit or the rear axle oscillated to its limit.
Before lifting a load, make sure that the telehandler is not in either of these situations.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

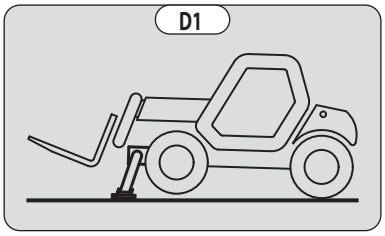
D - TRANSVERSE ATTITUDE OF THE TELEHANDLER.

Depending on the model of telehandler

The transverse attitude is the transverse slope of the chassis with respect to the horizontal. Raising the jib reduces the telehandler's lateral stability. The transverse attitude must be set with the jib in down position as follows:

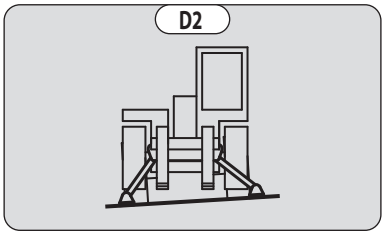
1 - TELEHANDLER WITHOUT ROLL CORRECTOR USED ON TYRES

- Position the telehandler so that the bubble in the level is between the two lines (◁ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).



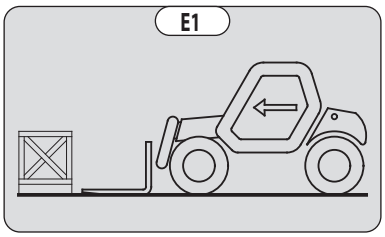
E - TAKING UP A LOAD ON THE GROUND

- Approach the telehandler perpendicular to the load, with the jib retracted and the forks in a horizontal position (fig. E1).
- Adjust the fork spread and centering relative to the load to ensure stability (fig. E2) (optional solutions exist, consult your dealer).
- Never lift a load with a single fork.



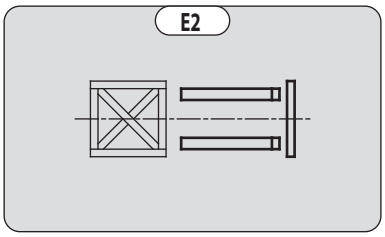
Beware of the risks of trapping or squashing limbs when manually adjusting the forks.

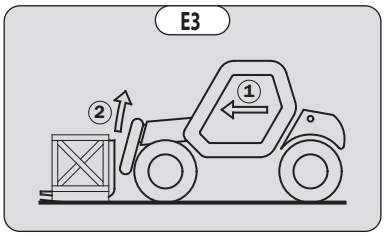
- Move the telehandler forward slowly (1) and insert the forks under the load as far as they will go (fig. E3). If necessary, slightly lift the jib (2) while taking up the load.
- Bring the load into the transport position.
- Tilt the load far enough backwards to ensure stability (loss of load on braking or going downhill).

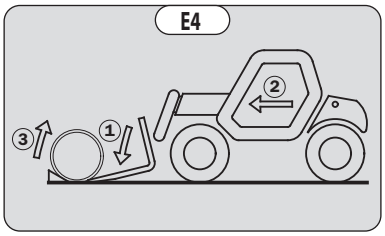


FOR A NON-PALLETIZED LOAD

- Tilt the carriage (1) forwards and move the telehandler slowly forwards (2), to insert the fork under the load (fig. E4) (block the load if necessary).
- Continue to move the telehandler forwards (2) tilting the carriage (3) (fig. E4) backwards to position the load on the forks and check the load's longitudinal and lateral stability.







648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

F - TAKING UP AND SETTING DOWN A HIGH LOAD ON TYRES

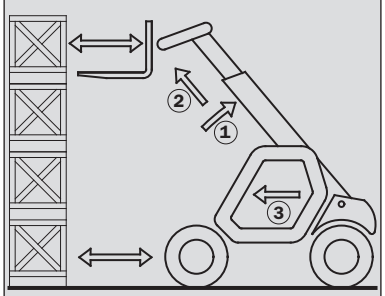
You must not raise the jib if you have not checked the transverse attitude of the telehandler (e INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE TELEHANDLER.

REMINDER: Make sure that the following operations can be performed with good visibility (◁ OPERATION INSTRUCTIONS UNLADEN AND LADEN: D - VISIBILITY).

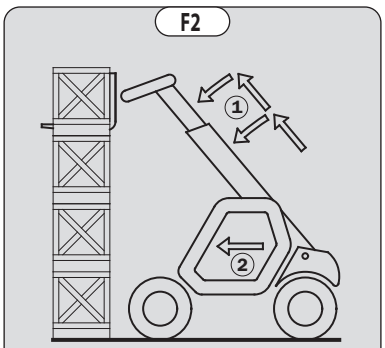
TAKING UP A HIGH LOAD ON TYRES

- Ensure that the forks will easily pass under the load.
- Raise and extend the jib (1) (2) until the forks are at the level of the load. If necessary, move the telehandler (3) forward (fig. F1), driving very slowly and carefully.
- Always remember to keep the distance necessary for inserting the forks under the load, between the stack and the telehandler (fig. F1) and use the shortest possible length of jib.
- Insert the forks under the load as far as they will go by alternately extending and lowering the jib (1) or, if necessary, moving the telehandler forward (2) (fig. F2). Apply the parking brake and place the forward/reverse selector in neutral.
- Slightly raise the load (1) and tilt the carriage (2) backwards to stabilize the load (fig. F3).
- Tilt the load sufficiently backwards to ensure its stability.
- Monitor the longitudinal stability limiter and warning device (◁ INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE). If it is overloaded, set the load back down in the place from which it was taken.
- If possible lower the load without shifting the telehandler. Lift the jib (1) to release the load, retract (2) and lower the jib (3) to bring the load into the transport position (fig. F4).
- If this is not possible, back up the telehandler (1), manoeuvring very gently and carefully to release the load. Retract (2) and lower the jib (3) to bring the load into the transport position (fig. F5).

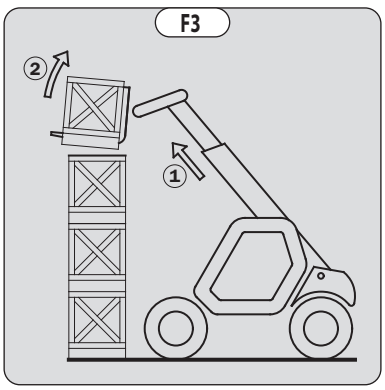
F1



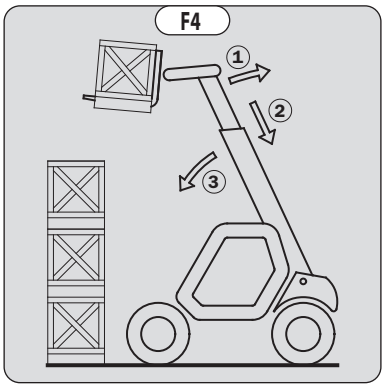
F2



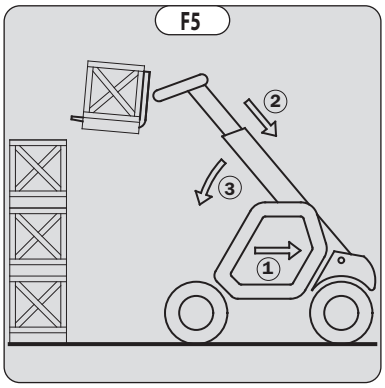
F3



F4



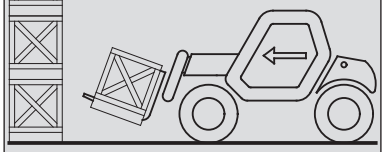
F5



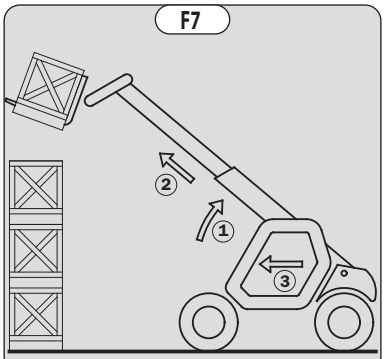
SETTING DOWN A HIGH LOAD ON TYRES

- Approach the load in the transport position in front of the stack (fig. F6).
- Apply the parking brake and place the forward/reverse selector in neutral.
- Raise and extend the jib (1) (2) until the load is above the stack, while monitoring the longitudinal stability limiter and warning device (⇐ IINSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE). If necessary, move the telehandler (3) forward (fig. F7), driving very slowly and carefully.
- Place the load in a horizontal position and lay it down on the pile by lowering and retracting the jib (1) (2) in order to position the load correctly (fig. F8).
- If possible, release the fork by alternately retracting and raising the jib (1) (fig. F9). Then set the forks into transport position.
- If this is not possible, reverse the telehandler (1), manoeuvring very slowly and carefully to release the forks (fig. F10). Then set them into transport position.

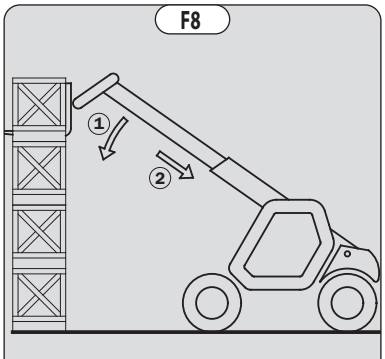
F6



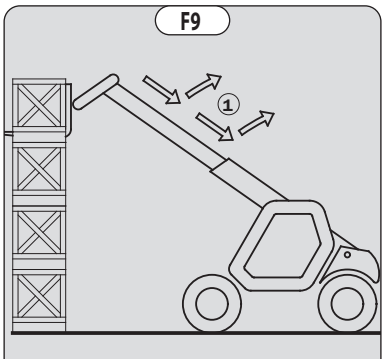
F7



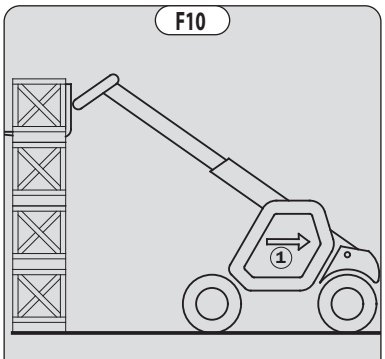
F8



F9



F10



648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

G - PICKING UP AND PUTTING DOWN A HIGH LOAD ON STABILISERS

Depending on the model of lift truck

In no circumstances should you raise the boom if you have not checked the transverse attitude of the lift truck (e INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE LIFT TRUCK).

REMINDER: Make sure that the following operations can be performed with good visibility (◁ OPERATING INSTRUCTIONS UNLADEN AND LADEN: D - VISIBILITY).

The stabilisers are used to optimise the lift truck's lifting performance (◁2 - DESCRIPTION: COMMAND AND CONTROL INSTRUMENTS).

POSITIONING THE STABILISERS WITH THE FORKS IN TRANSPORT POSITION (UNLADEN AND LADEN)

- Set the forks in transport position in front of the elevation.
- Stay far enough away to allow the boom to be raised.
- Apply the parking brake and place the forward/reverse selector in neutral.
- Put the two stabilisers on the ground and lift the two front wheels of the lift truck (fig. G1), making sure the lift truck has transverse attitude.

RAISING THE STABILISERS WITH THE FORKS IN TRANSPORT POSITION (UNLADEN AND LADEN)

- Raise both stabilizers fully and at the same time.

LOWERING THE STABILISERS WITH BOOM UP (UNLADEN AND LADEN)

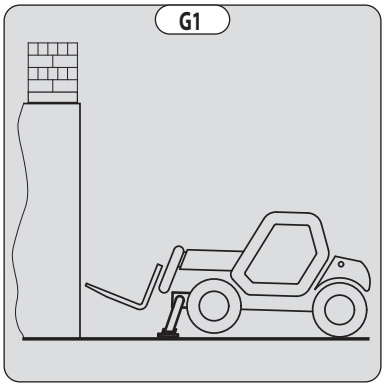
This operation must be exceptional and performed with great care.

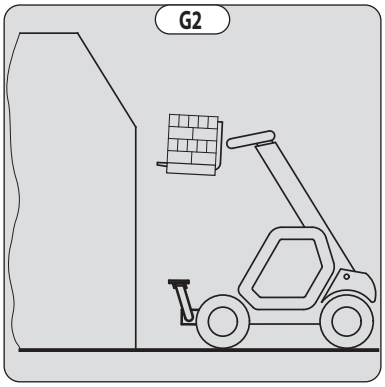
- Raise the boom and retract the telescopes completely.
- Bring the lift truck into position in front of the elevation (fig. G2) moving very slowly and carefully.
- Apply the parking brake and place the forward/reverse selector in neutral.
- Move the stabilizers very slowly and gradually as soon as they are close to the ground or in contact with it.
- Lower the two stabilisers and lift the two front wheels of the lift truck (fig. G3). During this operation, transverse attitude must be permanently maintained: the bubble in the level must be kept between the two lines.

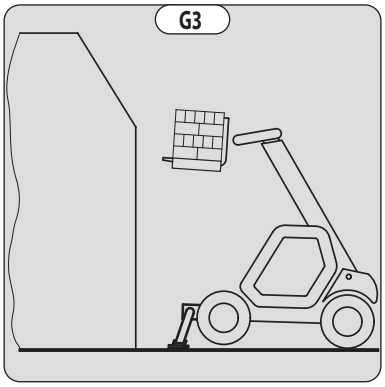
SETTING THE STABILISERS WITH THE BOOM UP (UNLADEN AND LADEN)

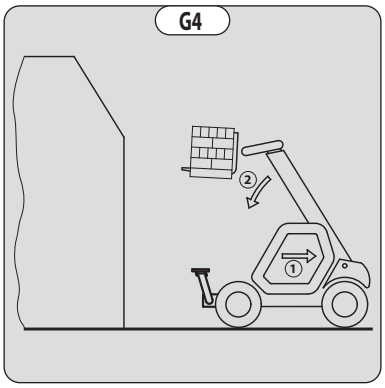
This operation must be exceptional and performed with great care.

- Keep the boom raised and retract the telescopes completely (fig. G3).
- Move the stabilisers very slowly and gradually as soon as they are in contact with the ground and when they leave the ground. During this operation, the transverse attitude must be permanently maintained: the bubble in the level must be kept between the two lines.
- Raise both stabilizers completely.
- Release the parking brake and reverse the lift truck (1) very slowly and carefully, to release it and lower the forks (2) into transport position (fig. G4).



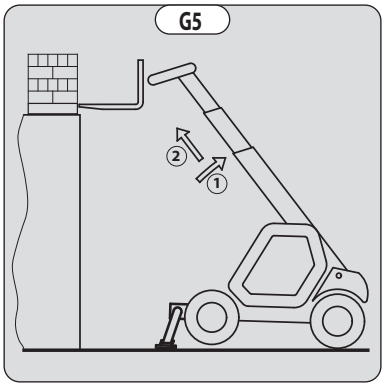


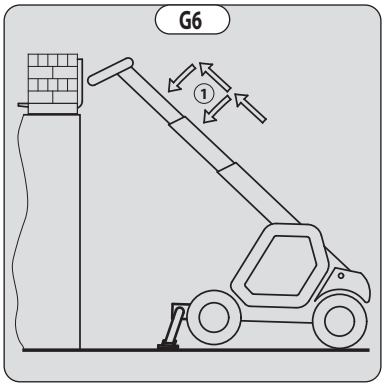


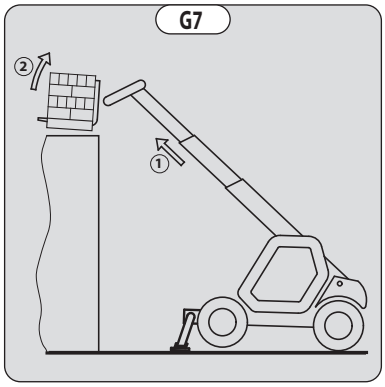


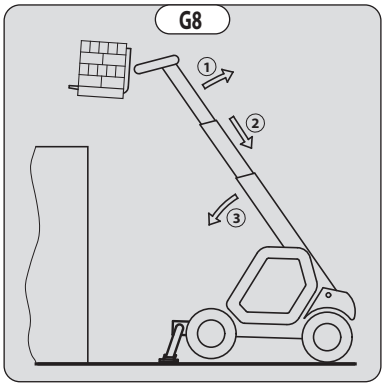
TAKING UP A HIGH LOAD ON STABILISERS

- Ensure that the forks will easily pass under the load.
- Check the position of the lift truck with respect to the load and make a test run, if necessary, without taking the load.
- Raise and extend the boom (1) (2) until the forks are at the level of the load (fig. G5).
- Bring the forks to the stop in front of the load by alternately extending and lowering the boom (1) (fig. G6).
- Lift the load slightly (1) and tilt the carriage (2) backwards to stabilise the load (fig. G7).
- Monitor the longitudinal stability limiter and warning device (◁ INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE). If it is overloaded, put the load back down in the place from which it was picked up.
- If possible lower the load without moving the lift truck. Raise the boom (1) to release the load, retract (2) and lower the boom (3) to put the load into transport position (fig. F4).

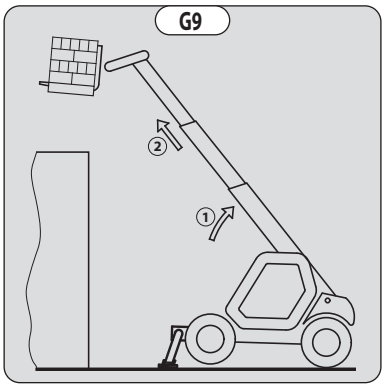


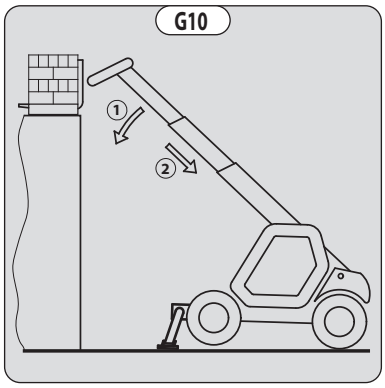


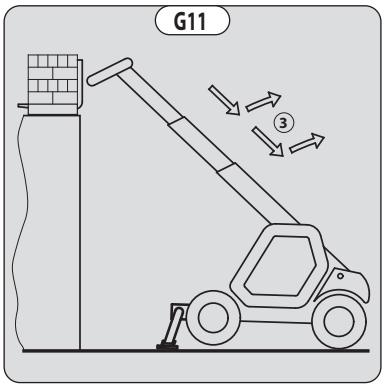




- SETTING DOWN A HIGH LOAD ON STABILISERS
- Raise and extend the boom (1) (2) until the load is above the elevation (fig. G9), while monitoring the longitudinal stability limiter and warning device (◁ INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE).
- Position the load horizontally and release it by lowering and retracting the boom (1) (2) to position the load correctly (fig. G10).
- Free the forks by alternately retracting and raising the boom (3) (fig. G11).
- If possible, putt the boom in transport position without moving the lift truck.







648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

H - PICKING UP AND SETTING DOWN A SUSPENDED LOAD

Failure to follow the above instructions may lead the telehandler to lose stability and overturn.
MUST be used with a telehandler equipped with an operational hydraulic movement cut-out device.

CONDITIONS OF USE

- The length of the sling or the chain shall be as short as possible to limit swinging of the load.
- Lift the load vertically along its axis, never by pulling sideways or lengthways.

HANDLING WITHOUT MOVING THE TELEHANDLER

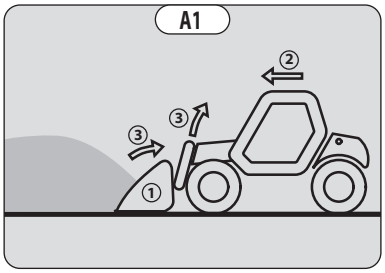
- Whether on stabilisers or on tyres, the lateral attitude must not exceed 1 % and the longitudinal attitude must not exceed 5%, the bubble of the level must be held at "0".
- Ensure that the wind speed is not higher than 10 m/s (32.8 ft/s).
- Ensure that there is no one between the load and the telehandler.

I - TRAVELLING WITH A SUSPENDED LOAD

- Before moving, inspect the terrain in order to avoid excessive slopes and cross-falls, bumps and potholes, or soft ground.
- Ensure that the wind speed is not higher than 36 km/h (22.3 mph).
- The telehandler must not travel at more than 0.4 m/s (1.3 ft/s) (1.5 km/h-0.93 mph, i.e., one quarter walking speed).
- Drive and stop the telehandler gently and smoothly to minimise swinging of the load.
- Carry the load a few centimetres above the ground (max. 30 cm - 11.8 inch) the shortest possible jib length. Do not exceed the offset indicated on the load chart. If the load begins to swing excessively, do not hesitate to stop and lower the jib to set down the load.
- Before moving the telehandler, check the longitudinal stability limiter and warning device (◁ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS), only the green LEDs and possibly the yellow LEDs should be lit.
- During transport, the telehandler operator must be assisted by a person on the ground (standing a minimum of 3 m (11.8 in) from the load), who will limit swinging of the load using a bar or a rope. Ensure that this person is always clearly in view.
- The lateral attitude must not exceed 5 %, the bubble in the level must be kept between the two "MAX" marks.
- The longitudinal attitude must not exceed 15%, with the load facing uphill, and 10%, with the load facing downhill.
- The jib angle must not exceed 45°.
- If the first red LED of the longitudinal stability limiter and warning device (◁ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS) comes on while travelling, gently bring the telehandler to a halt and stabilise the load. Retract the telescope to reduce the offset of the load.

A - LOADING

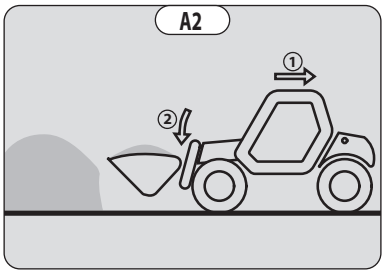
You must not raise the jib if you have not checked the transverse attitude of the telehandler (e INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE TELEHANDLER).



REMINDER: Make sure that the following operations can be performed with good visibility (◁ OPERATION INSTRUCTIONS UNLADEN AND LADEN: D - VISIBILITY).

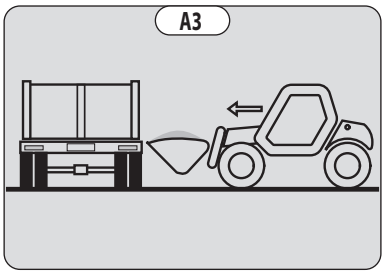
FILLING THE BUCKET

- Place the bottom of the bucket in a horizontal position, barely touching the ground (1) (fig. A1).
- Move forward gradually (2) while raising the jib and tilting the bucket backwards (3), for better filling and more extraction force (fig. A1).



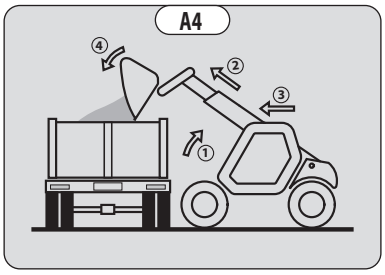
- Back up the telehandler (1) very carefully and gently to release the bucket. Lower the jib (2) into the transport position (fig. A2).

Tilt the bucket sufficiently back to avoid spilling product and ensure its stability (loss of product under braking).

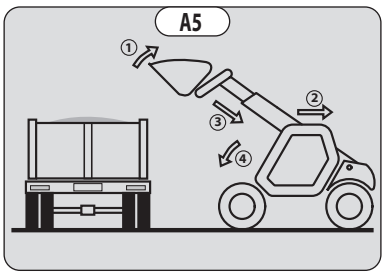


LOADING A TRAILER

- Approach the side of the trailer in the transport position (fig. A3).



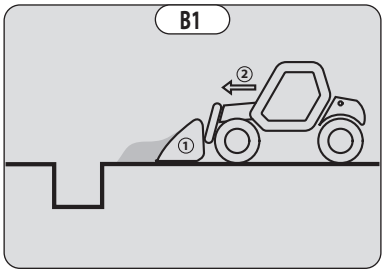
- Raise and extend the jib (1) (2) until the bucket is above the trailer, while monitoring the longitudinal stability limiter and warning device (◁ INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE) (fig. A4).
- Drive the telehandler forward (3) very carefully and gently so that the bucket empties its load at the centre of the trailer (fig. A4).
- Apply the parking brake and place the forward/reverse selector in neutral.
- Slowly discharge the material (4) (fig. A4).



- Tilt back the bucket (1) and reverse the telehandler (2) very carefully and gently (fig. A5).
- Retract (3) and lower the jib (4) into the transport position (fig. A5).

B - BACKFILLING

- Place the bottom of the bucket in a horizontal position, barely touching the ground (1) (fig. B1).
- Drive forward gradually (2). When filled, the bucket will serve as a levelling blade (fig. B1).



During operation, look out for trench is and ground which has been recently dug and/or backfilled.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

For telehandlers fitted with a PLATFORM

A - AUTHORISATION FOR USE

- Operation of the platform requires further authorisation in addition to that of the telehandler.

B - TELEHANDLER SUITABILITY FOR USE

- MANITOU has ensured that this platform is suitable for use under the normal operating conditions defined in this operator's manual, with a **STATIC test coefficient of 1.25** and a **DYNAMIC test coefficient of 1.1** as specified in harmonised standard **EN 280** for "mobile elevating work platforms".
- Before commissioning, the company manager must make sure that platform is appropriate for the work to be done, and perform certain tests (in accordance with current legislation).

C - PRECAUTIONS WHEN USING THE PLATFORM

- Wear suitable clothing when using the platform, avoid loosely-fitting garments.
- Never operate the platform when hands or feet are wet or soiled with greasy substances.
- Always pay attention when using the platform. Do not listen to the radio or music with headphones or ear buds.
- For increased comfort, adopt the correct position at the platform's operator station.
- The platform's guard rail exempts the operator from wearing a safety harness under normal operating conditions. As a result, you are responsible for deciding whether to wear a safety harness.
- The control units must never in any event be used for any other than their intended purposes (e.g. climbing onto or down from the telehandler, portemanteau etc.).
- Safety helmets must be worn.
- The operator must always be in his normal position in the driver's cab. It is prohibited to have arms or legs, or generally any part of the body, protruding from the basket.
- Ensure that any materials loaded onto the platform (pipes, cables, containers, etc.) cannot fall out. Do not pile these materials to the point where it is necessary to step over them.

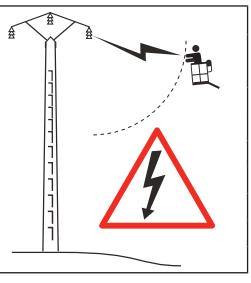
D - USING THE PLATFORM

- However experienced they may be, operators must acquaint themselves with the emplacement and operation of all control instruments prior to operating the platform.
- Check before use that the platform has been correctly assembled and locked onto the telehandler.
- Check before operating the platform that the access gate has been properly locked.
- The platform should be operated in an area free of any obstructions or danger when it is lowered to the ground.
- The operator using the platform must be aided on the ground by a person with adequate training.
- You should stay within the limits set out in the platform load chart.
- The lateral constraints are limited (◁ 2 - DESCRIPTION: CHARACTERISTICS).
- It is strictly forbidden to suspend a load from the platform or the telehandler jib without a specially designed attachment (◁ INSTRUCTIONS FOR HANDLING A LOAD: H - PICKING UP AND SETTING DOWN A SUSPENDED LOAD).
- The platform cannot be used as a crane or a lift for permanently transporting people or materials, nor as jacks or supports.
- The telehandler must not be moved with one (or more) person(s) in the platform.
- It is forbidden to transport people on the platform using the hydraulic controls in the telehandler's driver's cab (except in case of rescue).
- The operator must not climb onto to off the platform when it is not on ground level (jib retracted and in the down position).
- The platform must not be fitted with attachments that increase the unit's wind load.
- Do not use ladders or improvised structures in the platform to gain extra height.
- Do not climb onto the sides of the platform to gain extra height.
- It is forbidden to use the platform on forks. The forks are only to be used for storing the platform and not for lifting people under any circumstances.

E - ENVIRONMENT

It is forbidden to use the platform close to electricity cables. Maintain the specified safe distances.

RATED VOLTAGE	SAFE DISTANCE m (ft)
50 < U < 1000	2.30 (7.54)
1000 < U < 30000	2.50 (8.20)
30000 < U < 45000	2.60 (8.53)
45000 < U < 63000	2.80 (9.18)
63000 < U < 90000	3.00 (9.84)
90000 < U < 150000	3.40 (11.15)
150000 < U < 225000	4.00 (13.12)
225000 < U < 400000	5.30 (17.38)
400000 < U < 750000	7.90 (25.91)



648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

It is strictly forbidden to use the platform when the wind speed exceeds 45 km/h (27.9 mph).

- To visually recognise this wind speed, refer to the empirical wind evaluation scale below:

BEAUFORT scale (wind speed at a height of 10 m on a flat site)						
Force	**Type of wind**	**Speed (knots)**	**Speed (km/h)**	**Speed (m/s)**	**Effects on the ground**	**Sea conditions**
0	Calm	**0 - 1**	**0 - 1**	**< 0.3**	Smoke rises vertically.	Sea is like a mirror.
1	Light air	**1 - 3**	**1 - 5**	**0.3 - 1.5**	Smoke indicates direction of wind.	Ripples with appearance of scale, no foam crests.
2	Light breeze	**4 - 6**	**6 - 11**	**1.6 - 3.3**	Wind felt on face, leaves rustle.	Short wavelets, but pronounced.
3	Gentle breeze	**7 - 10**	**12 - 19**	**3.4 - 5.4**	Leaves and small twigs in constant motion.	Very small waves, crests begin to break.
4	Moderate breeze	**11 - 16**	**20 - 28**	**5.5 - 7.9**	Wind raises dust and loose pieces of paper; small branches are moved.	Small waves, becoming longer, numerous whitecaps.
5	Fresh breeze	**17 - 21**	**29 - 38**	**8 - 10.7**	Small tees in leaf begin to sway.	Wavelets form on inland waters; moderate waves, taking longer form.
6	Strong breeze	**22 - 27**	**39 - 49**	**10.8 - 13.8**	Large branches in motion, whistling heard in overhead wires, umbrella use becomes difficult.	Larger waves forming, whitecaps everywhere, some spray.
7	Near gale	**28 - 33**	**50 - 61**	**13.9 - 17.1**	Whole trees in motion, inconvenience felt when walking against the wind.	Sea heaps up; white foam from breaking waves begins to be blown in streaks along the direction of the wind.
8	Gale	**34 - 40**	**62 - 74**	**17.2 - 20.7**	Wind breaks twigs off trees; impedes progress.	Moderately high waves of greater length; edges of crests begin to break into spindrift.
9	Strong gale	**41 - 47**	**75 - 88**	**20.8 - 24.4**	Wind damages roofs (chimneys, slates, etc.).	Large waves, the crests of the waves start to roll, streaks of foam, reduced visibility.
10	Storm	**48 - 55**	**89 - 102**	**24.5 - 28.4**	Seldom experienced inland; trees uprooted; considerable structural damage occurs.	Very high waves; white streaks of foam; reduced visibility.
11	Violent storm	**56 - 63**	**103 - 117**	**28.5 - 32.6**	Very rare, widespread damage.	Exceptionally high waves able to hide medium sized ships from view, reduced visibility.
12	Hurricane	**64 or more**	**118 or more**	**32.7 or more**	Devastating damage.	Sea completely white; air filled with foam and spray, very reduced visibility.

F - MAINTENANCE

Your platform must be periodically inspected to ensure its continued compliance.
The inspection frequency is defined by the legislation applying in the country in which the equipment is used.
In France, a general periodic inspection every 6 months (order of 1 March 2004).

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

HOW TO USE THE RADIO-CONTROL

SAFETY INSTRUCTIONS

- This radio-control consists of electronic and mechanical safety elements. Commands cannot come from another transmitter because each radio-control uses unique internal coding.

If it is used improperly or incorrectly, there is a risk of danger to:
- The physical and mental health of the user or others.
- The telehandler and other neighbouring items.
Everyone working with this radio-control:
- Must be qualified in line with current regulations and therefore appropriately trained.
- Must follow this operating manual as closely as possible.

- The system is used to control the telehandler remotely via radio waves. Commands are also transmitted if the telehandler is out of sight (behind an obstacle or a building for example), this is why:
  - After stopping the truck and removing the key switch (only possible when it is stationary), always place the transmitter in a safe, dry place.
  - Before performing any installation, maintenance or repair work, always switch off power sources (in particular, electric welding devices and electric head units on hydraulic distributors must be disconnected at each section).
  - Never remove or alter the safety devices (such as the hand-guard frame, key, emergency stop button, etc.).

Never drive the telehandler if it is not continuously and perfectly within view of the operator!

- Before leaving the transmitter, the operator must make sure that it cannot be used by an unauthorized third person: either by removing the key button from the transmitter or locking it in an inaccessible place.
- The user must ensure that the operating manual is accessible at all times and that operators have read and understood it.

INSTRUCTIONS

- Take up position in a stable place with no risk of slipping.
- Before using the transmitter, make sure there is nobody within the working area.
- Only use the transmitter with its carrying device or installed correctly on the platform.

When you remove the transmitter, remove the accumulator and key button so that it cannot be used accidentally or deliberately by anyone else.

PROTECTIVE DEVICES

- The telehandler will be immobilised within a maximum of 450 milliseconds (approx. 0.5 second):
  - If the emergency stop button of the transmitter is pressed (50 milliseconds), or that of the telehandler.
  - If the transmission distance of the radio waves is exceeded.
  - If the transmitter is faulty.
  - If an interfering radio signal is received from elsewhere.
  - If the accumulator is removed from its housing in the transmitter.
  - If the battery reaches the end of its autonomy.
  - If the transmitter is switched off by turning the key switch to the off position.
- These protective devices are provided for the safety of personnel and property and must never be modified, removed or bypassed in any way whatsoever!
- The hand-guard frame prevents external action on a manipulator (e.g. if the transmitter is dropped, or if the operator leans on a guard-rail).
- An electronic safety device prevents radio transmission from being initiated if the manipulators are not mechanically and electrically at rest and if the internal combustion engine speed selector is not set to idle.

In an emergency, press the transmitter emergency stop button immediately; then follow the manual's instructions (e 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS). TELEHANDLER MAINTENANCE INSTRUCTIONS

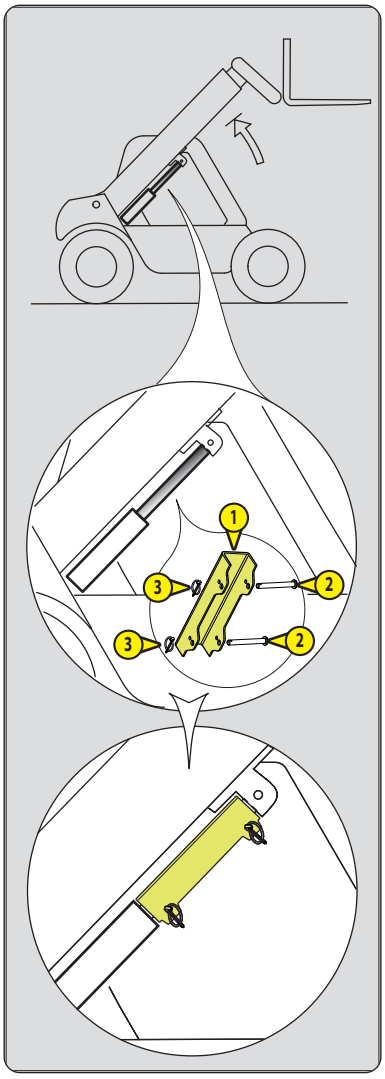
LIFT TRUCK MAINTENANCE INSTRUCTIONS

GENERAL INSTRUCTIONS

- Ensure the area is sufficiently ventilated before starting the telehandler.
- Wear clothes suitable for the maintenance of the telehandler, avoid wearing jewellery and loose clothes. Tie and protect your hair, if necessary.
- Stop the engine before carrying out any maintenance on the telehandler and remove the ignition key.
- Read the operator's manual carefully.
- Carry out all repairs immediately, even if the repairs concerned are minor.
- Repair all leaks immediately, even if the leak concerned is minor.
- Ensure that process materials and of spare parts are disposed in all safely and in an ecological manner.
- Be careful of the risk of burning and splashing (exhaust, radiator, engine, etc.).

PLACING THE JIB SAFETY WEDGE

- The telehandler is equipped with a jib safety wedge (◁ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS) that must be installed on the rod of the lifting cylinder when working beneath the jib.



FITTING THE WEDGE

- Fully raise the jib.
- Place the safety wedge 1 on the rod of the lifting cylinder and secure with the rod 2 and the pin 3.
- Slowly lower the jib then stop the hydraulic movements before it comes into contact with the wedge.

REMOVING THE WEDGE

- Fully raise the jib.
- Remove the pin and the rod.
- Return the safety wedge to the storage location provided on the telehandler.

Only use the wedge supplied with the telehandler.

MAINTENANCE

- Perform the periodic service (e 3 - MAINTENANCE) to keep your telehandler in good working condition. Failure to perform the periodic service may cancel the contractual guarantee.

MAINTENANCE LOG

- The maintenance operations carried out in accordance with the recommendations given in part: 3 - MAINTENANCE and the other inspection, maintenance or repair operations or modifications performed on the telehandler or its attachments shall be recorded in a maintenance logbook. The entry for each operation shall include details of the date of the works, the names of the individuals or companies having performed them, the type of operation and its frequency, if applicable. The part numbers of any telehandler items replaced shall also be indicated.

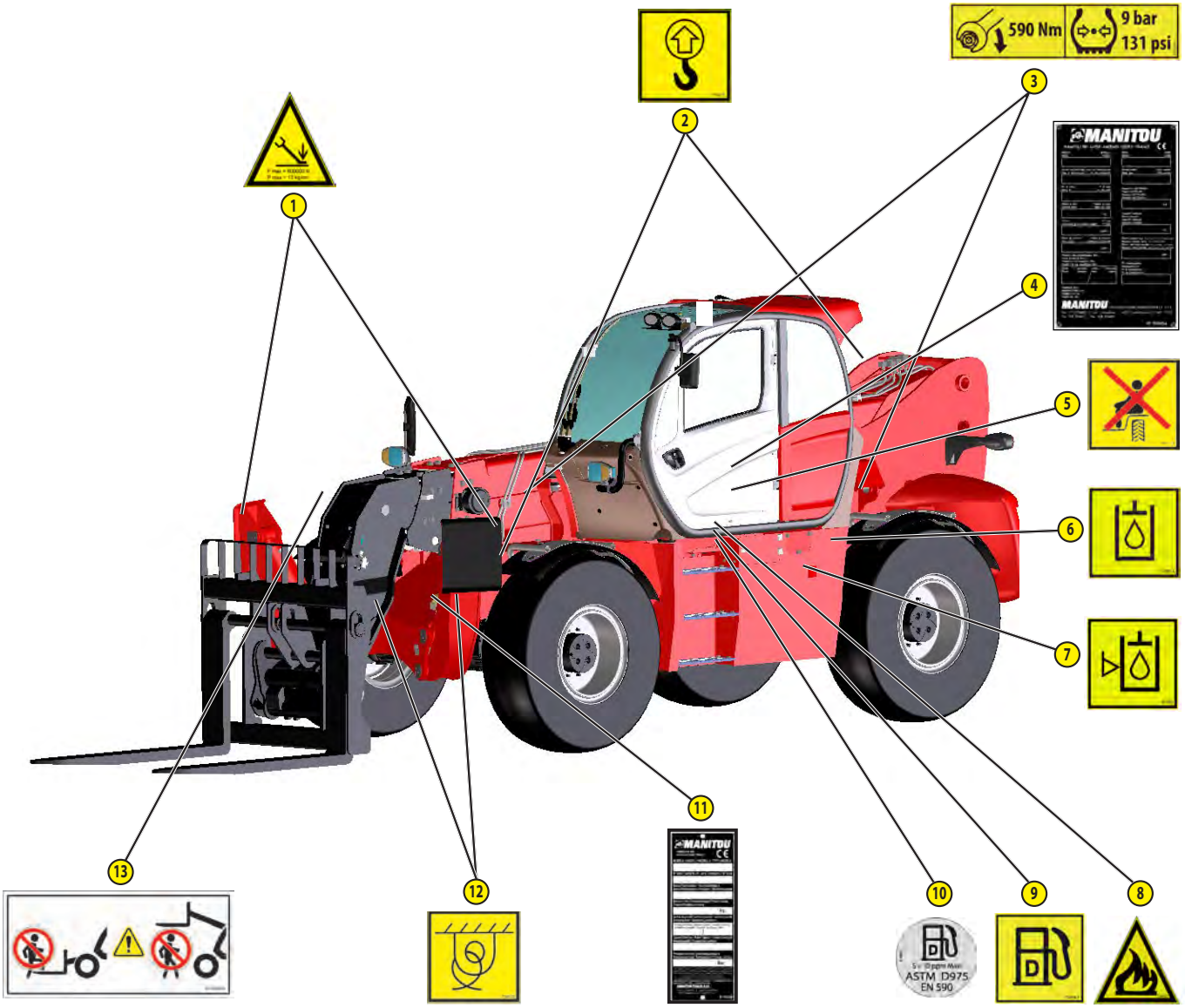
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

2 - USE

Clean all the stickers and safety plates to keep them legible. It is essential to replace stickers and safety plates which are illegible or damaged.
Check the presence of stickers and safety plates after replacing any spare parts.

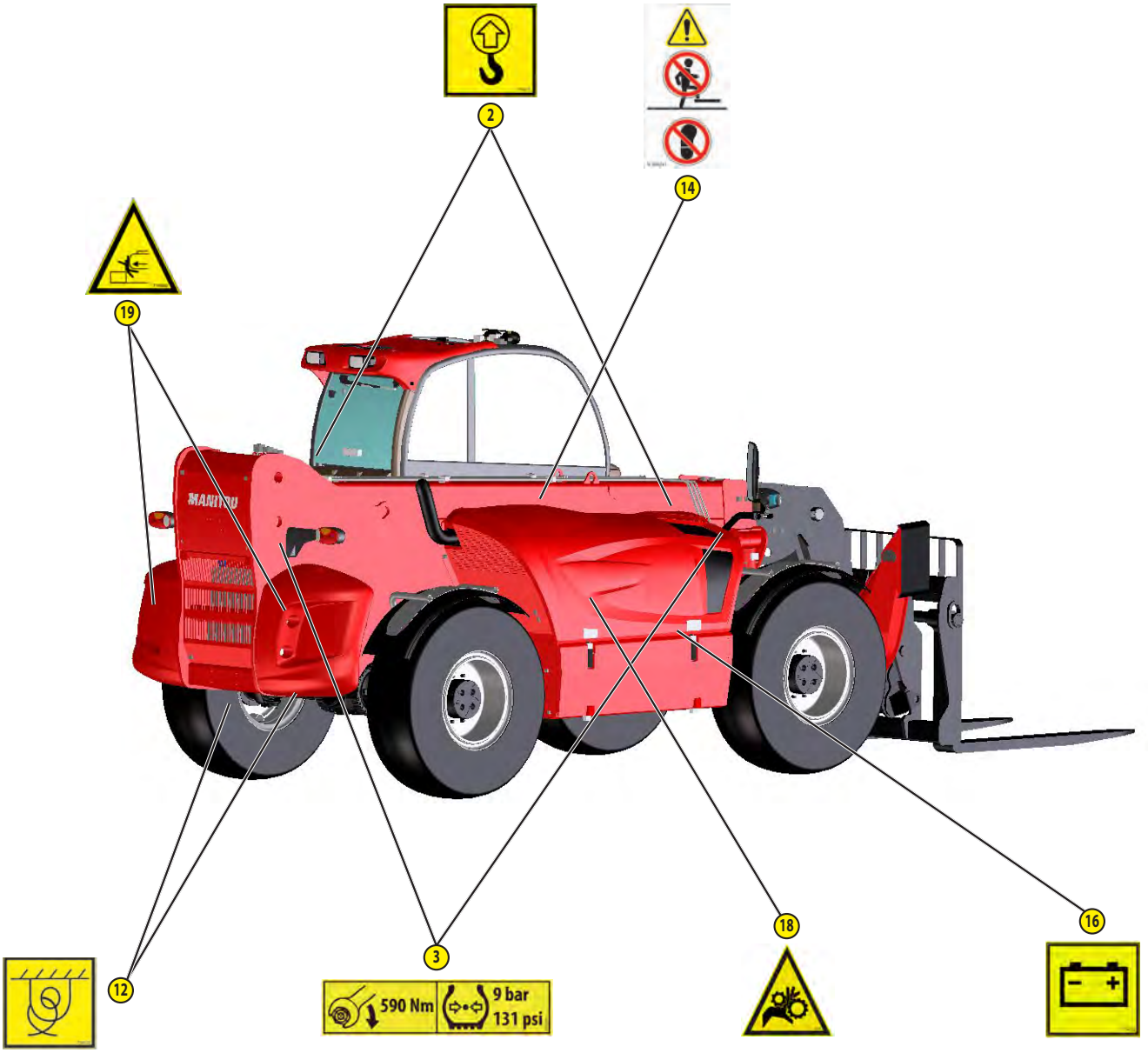
EXTERNAL STICKERS AND PLATES

Reference	Code	Description
1	934816	Attention! Pressure at the ground
2	53000709	Tightening and inflation pressure of tyres
3	716923	Harnessing point
4	(Contact your dealer)	Telehandler manufacturer's plate
5	716917	Danger of falling / crushing. Transportation of people is forbidden.
6	716909A	Hydraulic oil refill
7	932067	Hydraulic oil level
8	716907	Danger! Flammable liquids may catch fire causing personal injuries or death
9	716908A	Diesel refill
10	296751A	Diesel type
11	(Contact your dealer)	Attachment manufacturer's plate (Contact your dealer)
12	716923	Fixing point
13	296998A	MANISCOPIC Safety Instructions



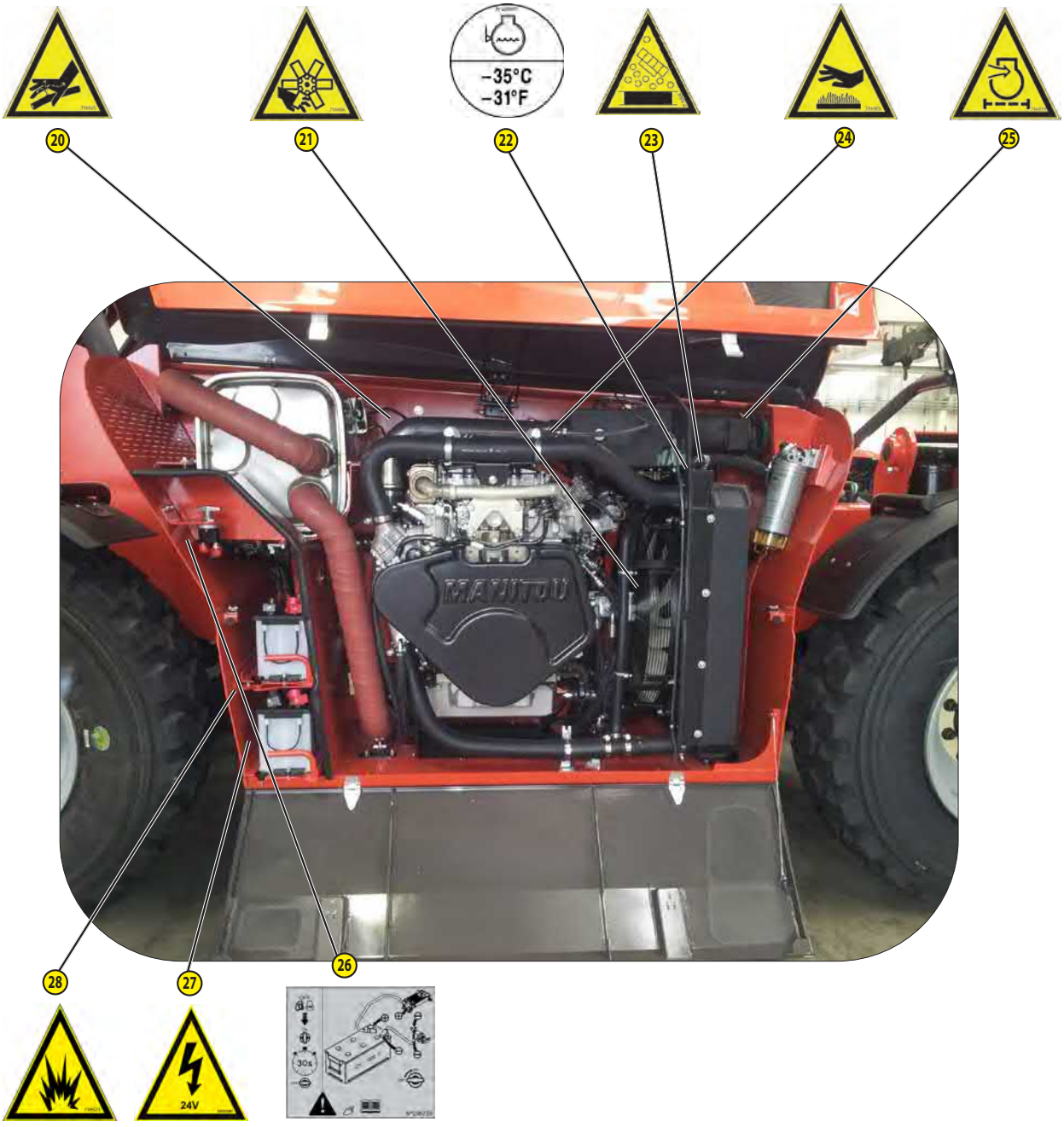
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

Reference	Code	Description
14	296641	Safety instruction: “Attention! Do not step on”
15	53002558	Quick-release couplings identification on the boom head
16	934222	Battery
17	934750	Control that opens the engine bonnet (access to telehandler engine)
18	932095	Warning! Access to moving parts of the telehandler due to opening of engine bonnet
19	716930	Danger! Risk of investment / crushing. During the operation of the telehandler, do not approach until it stops



PLATES AND STICKERS UNDER THE ENGINE BONNET

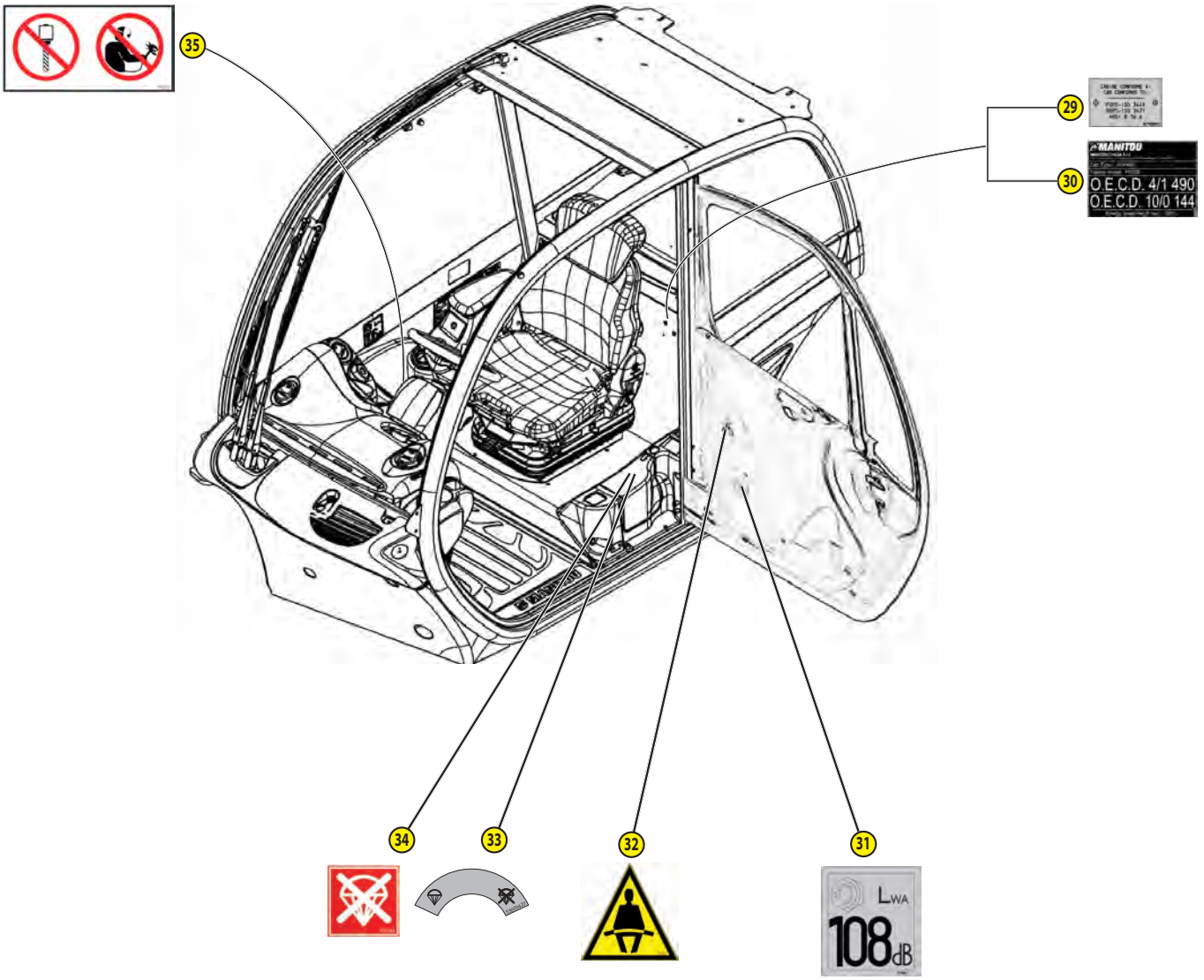
Reference	Code	Description
20	716925	Danger! Risk of injury from pressurized liquids. Before connecting the hydraulic hoses, check that the circuit is not pressurized, replace the tubes according to the wearing time provided on the user and maintenance manual
21	53000709	Fan in operation. Danger of entanglement. Do not put your hands near the fan blades
22	293887	Antifreeze fluid
23	716926	Danger! Projection hazard of pressurized antifreeze fluid
24	716917	Hot surfaces. Danger of scalding and burning! Be careful, stay away from hot surfaces (engine, exhaust manifold gas, etc.).
25	716909A	Engine intake air filter
26	296733	Battery cut-off instruction
27	909050	Risk of electric shock
28	716921	Risk of explosion. There is a danger of explosion if the battery is incorrectly replaced



648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

PLATES AND STICKERS IN THE CAB

Reference	Code	Description
29	193032B	Cab conformity
30	930978	Cab approval (depending on model)
31	293887	Sound power
32	732107	It is mandatory to wear the safety belt when driving the telehandler
33	53003427	Control that excludes the stability system of telehandler
34	933345	Control position for the exclusion of the stability system of the telehandler
35	932117	Do not drill and weld telehandler parts



1) DECLARATION "CE" DE CONFORMITE (originale)
" EC" DECLARATION OF CONFORMITY (original)

2) La société, *The company* : **MANITOU ITALIA S.r.l.**
3) Adresse, *Address* **: Via Cristoforo Colombo 2, 41013 Cavazzona in Castelfranco Emilia –ITALIE**

4)Dossier technique,*Technical file* : MANITOU ITALIA S.r.l. Via Cristoforo Colombo 2, 41013 Cavazzona in Castelfranco Emilia (MO) , Italie

5) Constructeur de la machine décrite ci-après, *Manufacturer of the machine described below* :

CHARIOT TELESCOPIQUE ROTATIF MRT 2150 PRIVILEGE N° 763407
NACELLE ORH EXTENSIBLE 2,25/4M – Capacité 365 Kg p.n. 711204 (GSS POSITION B)
PFB p.n.709835 + FOURCHES FEM 4999 KG p.n.578097 (GSS POSITION I)
TREUIL 5 TON p.n.711934 (GSS POSITION J)

6) Déclare que cette machine, *Declares that this machine* :

❑ 7)- Est conforme aux directives suivantes et à leurs dernières dispositions en droit national, *Complies with the following directives and their transpositions into national law*

2006/42/CE

8) - Pour les machines à l'annexe IV , *For annex IV machines* :
9) - Numéro d'attestation, *Certificate number*: ME.0017.10 REV.05 du, *of* 05/07/2011
10) - Organisme notifié, *Notified body* : **ECO s.p.a. EUROPEAN CERTIFYNG ORGANIZATION, Via Mengolina 33 48018 Faenza- Ravenna - Italia – Organismo notificato n° 0714**

2000/14/CE + 2005/88/CE

11) -Procédure appliquée, *Applied procedure* : **Annexe VI – 2000 / 14 / CE proc.I**
10) - Organisme notifié, *Notified body* : **ECO s.p.a. EUROPEAN CERTIFYNG ORGANIZATION, Via Mengolina 33 48018 Faenza- Ravenna - Italia – Organismo notificato n° 0714**
12) - Niveau de puissance acoustique, *Sound power level* :
13) Mesuré, *Measured* : 103 dB (A)
14) Garanti, *Guaranteed* : 104 dB (A)

2004/108/CE

❑ 15)-Normes harmonisées utilisées, *Harmonised standards used* : **EN 12895, EN 280 :2001+A2 :2009**

❑ 16)-Normes ou dispositions techniques utilisées, *Standards or technical provisions used* : /

17) - Fait à, *Done at* : CASTELFRANCO EMILIA 18) - Date, *Date* : 04/01/2013
19) - Nom du signataire, *Name of signatory* : IOTTI MARCO
20) - Fonction, *Function* : DIRECTEUR GENERAL
21) - Signature, *Signature* :

MANITOU ITALIA Srl
A Socio Unico - Sede Legale e Amm.va - Via C. Colombo, 2
Località Cavazzona - 41013 CASTELFRANCO E. (MO)
Tel. 059 / 959811 - Fax 059 / 959850
Cap. Soc. € 5.000.000 I.V.
Reg. Impr. Di Modena e C.F. 00173970369
P.IVA IT 02591050360 - N. Mecc. MO 033322 R.E.A. 148776

FAC-SIMILE

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

bg : 1) удостоверение за « CE » съответствие (оригинална), 2) Фирмата, 3) Адрес, 4) Техническо досие, 5) Фабрикант на описаната по-долу машина, 6) Обявява, че тази машина, 7) Отговаря на следните директиви и на тяхното съответствие национално право, 8) За машините към допълнение IV, 9)Номер на удостоверението, 10) Наименувана фирма, 15) хармонизирани стандарти използвани, 16) стандарти или технически правила, използвани, 17) Изработено в, 18) Дата, 19) Име на разписалия се, 20) Функция, 21) Функция.

cs : 1) ES prohlášení o shodě (původní), 2) Název společnosti, 3) Adresa, 4) Technická dokumentace, 5) Výrobce níže uvedeného stroje, 6) Prohlašuje, že tento stroj, 7) Je v souladu s následujícími směrnicemi a směrnicemi transponovanými do vnitrostátního práva, 8) Pro stroje v příloze IV, 9) Číslo certifikátu, 10) Notifikační orgán, 15) harmonizované normy použity, 16) Norem a technických pravidel používaných, 17) Místo vydání, 18) Datum vydání, 19) Jméno podepsaného, 20) Funkce, 21) Podpis.

da : 1) EF Overensstemmelseserklæring (original), 2) Firmaet, 3) Adresse, 4) tekniske dossier, 5) Konstruktør af nedenfor beskrevne maskine, 6) Erklærer, at denne maskine, 7) Overholder nedennævnte direktiver og disses gennemførelse til national ret, 8) For maskiner under bilag IV, 9) Certifikat nummer, 10) Bemyndigede organ, 15) harmoniserede standarder, der anvendes, 16) standarder eller tekniske regler, 17) Udfærdiget i, 18) Dato, 19) Underskrivers navn, 20) Funktion, 21) Underskrift.

de : 1) EG-Konformitätserklärung (original), 2) Die Firma, 3) Adresse, 4) Technischen Unterlagen, 5) Hersteller der nachfolgend beschriebenen Maschine, 6) Erklärt, dass diese Maschine, 7) den folgenden Richtlinien und deren Umsetzung in die nationale Gesetzgebung entspricht, 8) Für die Maschinen laut Anhang IV, 9) Bescheinigungsnummer, 10) Benannte Stelle, 15) angewandten harmonisierten Normen, 16) angewandten sonstigen technischen Normen und Spezifikationen, 17) Ausgestellt in, 18) Datum, 19) Name des Unterzeichners, 20) Funktion, 21) Unterschrift.

el : 1) Δήλωση συμμόρφωσης CE (πρωτότυπο), 2) Η εταιρεία, 3) Διεύθυνση, 4) τεχνικό φάκελο, 5) Κατασκευάστρια του εξής περιγραφόμενου μηχανήματος, 6) Δηλώνει ότι αυτό το μηχάνημα, 7) Είναι σύμφωνο με τις εξής οδηγίες και τις προσαρμογές τους στο εθνικό δίκαιο, 8) Για τα μηχανήματα παραρτήματος IV, 9) Αριθμός δήλωσης, 10) Κοινοποιημένος φορέας, 15) εναρμονισμένα πρότυπα που χρησιμοποιούνται, 16) Πρότυπα ή τεχνικούς κανόνες που χρησιμοποιούνται, 16) Είναι σύμφωνο με τα εξής πρότυπα και τεχνικές διατάξεις, 17) Εν, 18) Ημερομηνία, 19) Όνομα του υπογράφοντος, 20) Θέση, 21) Υπογραφή.

es : 1)Declaración DE de conformidad (original), 2) La sociedad, 3) Dirección, 4) expediente técnico, 5) Constructor de la máquina descrita a continuación, 6) Declara que esta máquina, 7) Está conforme a las siguientes directivas y a sus transposiciones en derecho nacional, 8) Para las máquinas anexo IV, 9) Número de certificación, 10) Organismo notificado, 15) normas armonizadas utilizadas, 16) Otras normas o especificaciones técnicas utilizadas, 17) Hecho en, 18) Fecha, 19) Nombre del signatario, 20) Función, 21) Firma.

et : 1) EÜ vastavusdeklaratsioon (algupärane), 2) Äriühing, 3) Aadress, 4) Tehniline dokumentatsioon, 5) Seadme tootja, [illegible] innitatud see toode, 7) On vastavuses järgmiste direktiivide ja nende riigisisesesse õigusesse ülevõtmiseks vastuvõetud õigusaktidega, 8) IV lisas loetletud seadmete puh[illegible]nistuse number, 10) Sertifitseerimisasutus, 15) kasutatud ühtlustatud standarditele, 16) Muud standardites või spetsifikatsioonides kasutatakse, 17) [illegible]aandmise k[illegible] 18) Väljaandmise aeg, 19) Allkirjastaja nimi, 20) Amet, 21) Allkiri.

fi : 1) EY-vaatimustenmukaisuusvakuutus (alkuperäiset), 2) Yritys, 3) Osoite, 4) teknisen eri[illegible]n, 5) [illegible]essa [illegible]vatu[illegible]neen valmistaja, 6) Vakuuttaa, että tämä kone, 7) Täyttää seuraavien direktiivien sekä niitä vastaavien kansallisten säännösten vaatimukset[illegible]tteen [illegible]koni[illegible]salta, 9) Todistuksen numero, 10) Ilmoitettu laitos, 15) yhdenmukaistettuja standardeja käytetään, 16) muita standardeja tai, 17) Paikka, [illegible]ka, 1[illegible]Al[illegible]ioitta[illegible]nimi, 20) Toimi, 21) Allekirjoitus.

ga : 1) « EC »dearbhú comhréireachta (bunaidh), 2) An comhlacht, 3) Seoladh, 4) [illegible]nhad[illegible]m[illegible]5) [illegible]éar[illegible]an innill a thuairiscítear thíos, 6) Dearbhaíonn sé go bhfuil an t-inneall, 7) Go gcloíonn sé le na treoracha seo a leanas agus a trasuímh isteach[illegible]í náir[illegible]a, 8)[illegible]hag[illegible]h innill an aguisín IV, 9) Uimhir teastais, 10) Comhlacht a chuireadh i bhfios, 15) caighdeáin comhchuibhithe a úsáidtear, 16) caighdeáin eile nó so[illegible]ochtaí teic[illegible]a ú[illegible]tear, 17) Déanta ag, 18) Dáta, 19) Ainm an tsínitheora, 20) Feidhm, 21) Síniú.

hu : 1) CE megfelelőségi nyilatkozat (eredeti), 2) A vállalat, 3) Cí[illegible]ki [illegible]mentáció, 5) Az alábbi gép gyártója, 6) Kijelenti, hogy a gép, 7) Megfelel az alábbi irányelveknek valamint azok honosított előírásainak, 8) A IV. melléklet gép[illegible]ez, 9) Bizonylati szám, 10) Értesített szervezet, 15) felhasznált harmonizált szabványok, 16) egyéb felhasznált műszaki szabványok és elő[illegible]ok hivatkozá[illegible]17) Kel[illegible]ely), 18) Dátum, 19) Aláíró neve, 20) Funkció, 21) Aláírás.

is : 1) (Samræmisvottorð ESB (upprunalega), 2) [illegible]yrirtækið, 3) Aðsetur, 4) Tæknilegar skrá, 5) Smiður tækisins sem lýst er hér á eftir, 6) Staðfestir að tækið, 7) Samræmist eftirfarandi stöðlum og staðfærslu [illegible]eð hl[illegible]m af þjó[illegible]rétti, 8) Fyrir tækin í aukakafla IV, 9) Staðfestingarnúmer, 10) Tilkynnt til, 15) samhæfða staðla sem notaðir, 16) önnur staðlar eða forskrift[illegible]notað[illegible]7) [illegible]ður, [illegible]ng, 19) Nafn undirritaðs, 20) Staða, 21) Undirskrift.

it : 1) Dichiarazione [illegible] conformit[illegible]ginale), 2) La società, 3) Indirizzo, 4) fascicolo tecnico, 5) Costruttore della macchina descritta di seguito, 6) Dichiara che questa macchina, 7) È conform[illegible]ll[illegible]ttiv[illegible]eguenti e alle relative trasposizioni nel diritto nazionale, 8) Per le macchine Allegato IV, 9) Numero di Attestazione, 10) Organismo notificato, 15) norme armo[illegible]ate appli[illegible]e, 16) altre norme e specifiche tecniche applicate, 17) Stabilita a, 18) Data, 19) Nome del firmatario, 20) Funzione, 21) Firma.

lt : 1) CE atitikties deklaracija[illegible]iginalas), 2) Bendrovė, 3) Adresas, 4) Techninė byla, 5) Žemiau nurodytas įrenginio gamintojas, 6) Pareiškia, kad šis įrenginys, 7) Atitinka toliau nurodytas direktyvas ir į nacionalinius teisės aktus perkeltas jų nuostatas, 8) IV priedas dėl mašinų, 9) Sertifikato Nr, 10) Paskelbtoji įstaiga, 15) suderintus standartus naudojamus, 16) Kiti standartai ir techninės specifikacijas, 17) Pasirašyta, 18) Data, 19) Pasirašiusio asmens vardas ir pavardė, 20) Pareigos, 21) Parašas.

lv : 1) EK atbilstības deklarācija (oriģināls), 2) Uzņēmums, 3) Adrese, 4) tehniskās lietas, 5) Tālāk aprakstītās iekārtas ražotājs, 6) Apliecina, ka šī iekārta, 7) Ir atbilstoša tālāk norādītajām direktīvām un to transpozīcijai nacionālajā likumdošanā, 8) Iekārtām IV pielikumā, 9) Apliecības numurs, 10) Reģistrētā organizācija, 15) lietotajiem saskaņotajiem standartiem, 16) lietotajiem tehniskajiem standartiem un specifikācijām, 17) Sastādīts, 18) Datums, 19) Parakstītāja vārds, 20) Amats, 21) Paraksts.

mt : 1) Dikjarazzjoni ta' Konformità KE (originali), 2) Il-kumpanija, 3) Indirizz, 4) fajl tekniku, 5) Manifattriċi tal-magna deskritta hawn isfel, 6) Tiddikjara li din il-magna, 7) Hija konformi hija konformi mad-Direttivi segwenti u l-liġijiet li jimplimentawhom fil-liġi nazzjonali, 8) Għall-magni fl-Anness IV, 9) Numru taċ-ċertifikat, 10) Entità nnotifikata, 15) l-istandards armonizzati użati, 16) standards tekniċi u speċifikazzjonijiet oħra użati, 17) Magħmul f', 18) Data, 19) Isem il-firmatarju, 20) Kariga, 21) Firma.

nl : 1) EG-verklaring van overeenstemming (oorspronkelijke), 2) Het bedrijf, 3) Adres, 4) technisch dossier, 5) Constructeur van de hierna genoemde machine, 6) Verklaart dat deze machine, 7) In overeenstemming is met de volgende richtlijnen en hun omzettingen in het nationale recht, 8) Voor machines van bijlage IV, 9) Goedkeuringsnummer, 10) Aangezegde instelling, 15) gehanteerde geharmoniseerde normen, 16) andere gehanteerde technische normen en specificaties, 17) Opgemaakt te, 18) Datum, 19) Naam van ondergetekende, 20) Functie, 21) Handtekening.

no : 1) CE-samsvarserklæring (original), 2) Selskapet, 3) Adresse, 4) tekniske arkiv, 5) Fabrikant av følgende maskin, 6) Erklærer at denne maskinen, 7) Oppfyller kravene i følgende direktiver, med nasjonale gjennomføringsbestemmelser, 8) For maskinene i tillegg IV, 9) Attestnummer, 10) Notifisert organ, 15) harmoniserte standarder som brukes, 16) Andre standarder og spesifikasjoner brukt, 17) Utstedt i, 18) Dato, 19) Underskriverens navn, 20) Stilling, 21) Underskrift.

pl : 1) Deklaracja zgodności CE (oryginalne), 2) Spółka, 3) Adres, 4) dokumentacji technicznej, 5) Wykonawca maszyny opisanej poniżej, 6) Oświadcza, że ta maszyna, 7) Jest zgodna z następującymi dyrektywami i odpowiadającymi przepisami prawa krajowego, 8) Dla maszyn załącznik IV, 9) Numer certyfikatu, 10) Jednostka certyfikująca, 15) zastosowanych norm zharmonizowanych, 16) innych zastosowanych norm technicznych i specyfikacji, 17) Sporządzono w, 18) Data, 19) Nazwisko podpisującego, 20) Stanowisko, 21) Podpis.

pt : 1) Declaração de conformidade CE (original), 2) A empresa, 3) Morada, 4) processo técnico, 5) Fabricante da máquina descrita abaixo, 6) Declara que esta máquina, 7) Está em conformidade às directivas seguintes e às suas transposições para o direito nacional, 8) Para as máquinas no anexo IV, 9) Número de certificado, 10) Entidade notificada, 15) normas harmonizadas utilizadas, 16) outras normas e especificações técnicas utilizadas, 17) Elaborado em, 18) Data, 19) Nome do signatário, 20) Cargo, 21) Assinatura.

ro : 1) Declaraţie de conformitate CE (originală), 2) Societatea, 3) Adresa, 4) cărtii tehnice, 5) Constructor al maşinii descrise mai jos, 6) Declară că prezenta maşină, 7) Este conformă cu directivele următoare şi cu transpunerea lor în dreptul naţional, 8) Pentru maşinile din anexa IV, 9) Număr de atestare, 10) Organism notificat, 15) standardele armonizate utilizate, 16) alte standarde si specificatii tehnice utilizate, 17) Întocmit la, 18) Data, 19) Numele persoanei care semnează, 20) Funcţia, 21) Semnătura.

sk : 1) ES vyhlásenie o zhode (pôvodný), 2) Názov spoločnosti, 3) Adresa, 4) technickej dokumentácie, 5) Výrobca nižšie opísaného stroja, 6) Vyhlasuje, že tento stroj, 7) Je v súlade s nasledujúcimi smernicami a smernicami transponovanými do vnútroštátneho práva, 8) Pre stroje v prílohe IV, 9) Číslo certifikátu, 10) Notifikačný orgán, 15) použité harmonizované normy, 16) použité iné technické normy a predpisy, 17) Miesto vydania, 18) Dátum vydania, 19) Meno podpisujúceho, 20) Funkcia, 21) Podpis.

sl : 1) ES Izjava o ustreznosti (izvirna), 2) Družba. 3) Naslov. 4) tehnične dokumentacije, 5) Proizvajalac tukaj opisanega stroja, 6) Izjavlja, da je ta stroj, 7) Ustreza naslednjim direktivam in njihovi transpoziciji v državno pravo, 8) Za stroje priloga IV, 9) Številka potrdila, 10) Obvestilo organu, 15) uporabljene harmonizirane standarde, 16) druge uporabljene tehnične standarde in zahteve, 17) V, 18) Datum, 19) Ime podpisnika, 20) Funkcija, 21) Podpis.

sv : 1) CE-försäkran om överensstämmelse (original), 2) Företaget, 3) Adress, 4) tekniska dokumentationen, 5) Konstruktör av nedan beskrivna maskin, 6) Försäkrar att denna maskin, 7) Överensstämmer med nedanstående direktiv och införlivandet av dem i nationell rätt, 8) För maskinerna i bilaga IV, 9) Nummer för godkännande, 10) Organism som underrättats, 15) Harmoniserade standarder som använts, 16) andra tekniska standarder och specifikationer som använts, 17) Upprättat i, 18) Datum, 19) Namn på den som undertecknat, 20) Befattning, 21) Namnteckning.

FAC-SIMILE

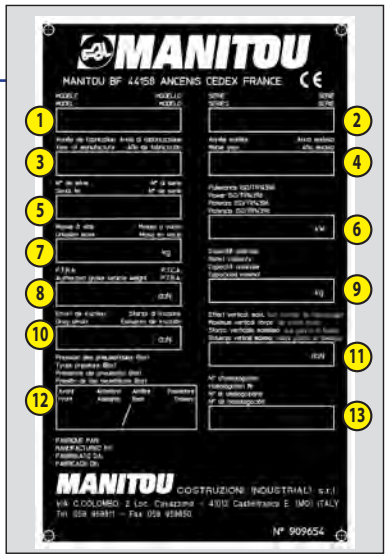
IDENTIFICATION OF FORKLIFT TRUCK

With a view to making constant improvements to our products, certain modifications may be made to our range of forklift trucks, without any obligation on our part to inform the clients.

For ordering spare parts or requesting technical information, please specify:

NOTE: To be able to easily provide us with all the reference numbers, you are advised to file the information when the forklift truck is delivered.

FORKLIFT TRUCK MANUFACTURER'S PLATE (A)



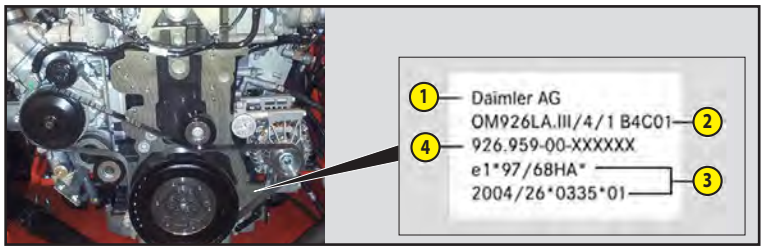
1 - MODEL
2 - SERIES
3 - Year of manufacture
4 - Model year
5 - Serial No.
6 - ISO/TR 14396 Power
7 - Unladen mass
8 - Authorised Total Circulating Weight
9 - Nominal capacity
10 - Traction force
11 - Maximum vertical force
(on the tow hook)
12 - Pressure of tyres (bar)
13 - Approval No.

All other technical information regarding your forklift truck is listed in the chapter: 2 – DESCRIPTION: CHARACTERISTICS

ENGINE PLATE

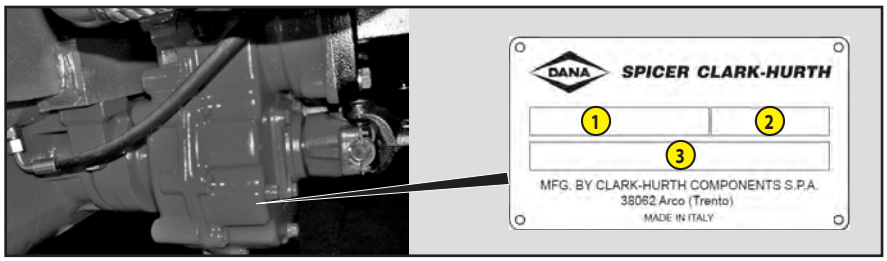
The following data is contained on the engine data plate in the form of numbers stamped directly onto the crankcase:
Example: engine data plate

1. Manufacturer's name
2. Engine model designation
3. Type approval number
4. Engine number



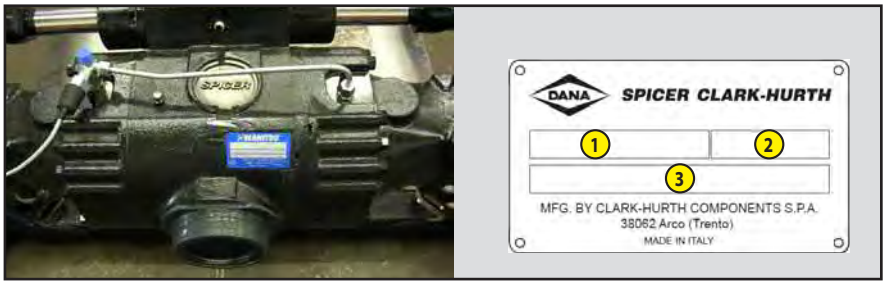
GEARBOX PLATE

1. Type and model unit - modification index
2. Serial number
3. MANITOU Reference



FRONT AND REAR AXLE PLATE

1. Type and model unit - modification index
2. Serial number
3. MANITOU Reference



648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

CAB

1. Type and model unit - modification index
2. Serial number



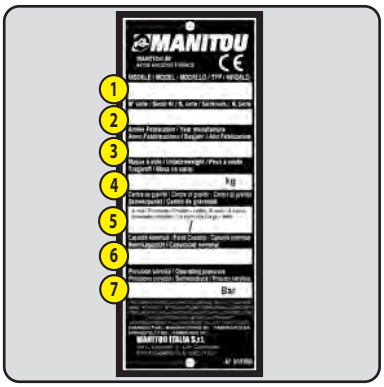
FRAME

- Serial No. of lift truck



ATTACHMENT MANUFACTURER'S PLATE (H)

1. Model
2. Serial number
3. Year manufacture
4. Unladen weight
5. Centre of gravity
6. Rated capacity
7. Operating pressure



CHARACTERISTICS

ENGINE			
Engine		*MHT-X 1490* *MHT-X 10130*	*MHT-1490* *MHT 10130*
Type		OM 904LA (EU Stage 3A)	OM 934LA (EU Stage 4)
Fuel		Diesel	
Number of cylinders		4	
Injection system		High pressure injection system with injection nozzles in central position	Common Rail
Firing order		1 - 3 - 4 - 2	
Displacement	L - cm^3	4.25 - 4250	5.13 - 5130
Bore	mm - in	102 - 4.01	110 - 4.33
Stroke	mm - in	130 - 5.11	135 - 5.31
Turbocharging system		Turbocharging with charge air cooling (air/air)	
Turbocharger		TC charging with waste-gate valve	TC charging with fixed geometry and waste-gate valve
Compression ratio	rpm	18	17.6
Nominal rate	rpm	2200	2200
Idle rate	rpm	800	800
Maximum rate	rpm	2750	2500
Rated power		176 CV-129 kW @ 2200 rpm	176 CV-129 kW @ 2200 rpm
Maximum torque		675 Nm @ 1200 - 1600 rpm	750 Nm @ 1200 - 1600 rpm
Main Coupling type		SAE3	
Additional service PTO (type, max torque)			
Exhaust gas after-treatment			SCR system, exhaust muffler with catalyst, AdBlue injection with supplying and metering unit
Cooling system			
Water cooling		Cooling water/air radiator	
Hydraulic oil cooling		Cooling oil radiator	
Fan drive system		Hydraulic system with proportional regulation	
Motor type		Hydraulic	
Blower fan speed	rpm	2070	
Number of blades		14	
Diameter	mm - in	680 - 26.77	

TRANSMISSION		
Hydrostatic motor		
Motor type		A6VM115DA - Axial piston variable motor
Max displacement	L - cm^3	0.115 - 115
Pressure	bar - psi	500 - 7251.88
Gearshift		Model 357HD/497
Nb of forward gears		2
No. of reverse gears		2
Reverser		On hydrostatic pump
Brakes		
Type		Disc in oil bath on front and rear axle
Foot brake		Action on front and rear wheels
Hand brake		Hydraulic with negative action on front axle
Front axle		
Type		Steering, DANA
Brake type		6 internal, wet disk

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

Limited slip system		Open differential	
Final drives		Epicyclic	
Rear axle			
Type		Steering, DANA	
Brake type		6 internal, wet disk	
Limited slip system		Open differential	
Final drives		Epicyclic	
Standard front & rear tyres		***MHT-X 1490 MHT 1490***	***MHT-X 10130 MHT 10130***
Dimensions		EOLUS 17.5 R 25 A2237	
Pressure	bar - psi	9 - 130.53	8 - 116.03
Optional front & rear tyres			
Dimensions		EOLUS 17.5 R 25 A2233	
Pressure	bar - psi	9 - 130.53	8 - 116.03
Optional front & rear tyres			
Dimensions		GOOD YEAR 17.5 R 25 RL-5K	
Pressure	bar - psi	9 - 130.53	8 - 116.03
ELECTRICAL CIRCUIT			
Electrical circuit			
Ground		Negative	
Battery standard		24 V - 100 A	
Voltage regulator		Built into the alternator	
HYDRAULIC CIRCUIT			
Hydrostatic pump			
Pump Type		A4VG85DA - Axial piston variable pump	
Max displacement	L - cm^3	0.085 - 85	
Flow rate @ 2200 rpm	l/min	182	
Pressure	bar - psi	500 - 7251.88	
Hydraulic circuit main pump			
Pump Type		MVP60.84D-06S8-LSF - Axial piston variable pump	
Displacement	L - cm^3	84 - 0.084	
Flow rate @ 2200 rpm	l/min	180	
Pressure	bar - psi	300 - 4351.13	
Hydraulic circuit secondary pump			
Pump Type		KP20.16	
Displacement	L - cm^3	0.016 - 16	
Flow rate @ 2200 rpm	l/min	34	
Pressure	bar - psi	290 - 4206.09	
Main solenoid valves			
Lifting circuit	bar - psi	280 - 4061.05	
	l/min	180	130
Extension circuit	bar - psi	280 - 4061.05	
	l/min	180	130
Tilting circuit	bar - psi	280 - 4061.05	
	l/min	180	130
Frame levelling	bar - psi	115 - 1667.93	
	l/min	8	
Rear axle locking	bar - psi	30 - 435.11	
	l/min	40	
Stabilizers		***MHT-X 1490 MHT 1490***	***MHT-X 10130 MHT 10130***
	bar - psi	280 - 4061.05	-
	l/min	100	-

Optional circuit	bar - psi	280 - 4061.05
	l/min	100
Steering circuit		
Pump Type		MVP60.84D-06S8-LSF - Axial piston variable pump
Displacement	L - cm^3	0.084 - 84
Flow rate @ 2200 rpm	l/min	70
Pressure	bar - psi	210 - 3045.79
Type		Load sensing
Brake circuit		
Type		Oil bathed multidisc
Pressure	bar - psi	80 - 1160.30 (max on brakes)

NOISE AND VIBRATION		
Acoustic pressure level in the driver's cab LpA **(according to NF EN 12053)**	dB(A)	79.7 (cab closed)
Noise pressure level ensured in the LwA environment **(according to directive 2000/14/EC modified by directive 2005/88/EC)**	dB(A)	108 (guaranteed)
Average weighted acceleration on driver's body **(according to NF EN 13059)**	m/s^2	0.786
The average weighted acceleration transmitted to the driver's hand/arm system **(according to ISO 5349-2)**	m/s^2	< 2.5

HYDRAULIC MOTION SPEEDS			
		MHT-X 1490 MHT 1490	***MHT-X 10130 MHT 10130***
Unladen lifting	s	18	18
Laden lifting	s	/	/
Unladen lowering	s	15,5	15,5
Laden lowering	s	/	/
Unladen extending	s	20,60	14
Laden extending	s	/	/
Unladen retracting	s	18,2	11,8
Laden retracting	s	/	/
Reverse tilt time unladen	s	6,4	5,3
Forward tilt time unladen	s	6,8	5,9

SPECIFICATION AND WEIGHT			
Speed of movement of the telehandler in standard configuration on flat ground (except particular conditions)			
Driving speed			
Maximum speed:	km/h - mph	30,5 - 18.9	
Forward unloaded	km/h - mph	30,5 - 18.9	
With nominal load	km/h - mph	5 - 3.1	
Reverse unloaded	km/h - mph	30,5 - 18.9	
With nominal load	km/h - mph	5 - 3.1	
Lifting capacity		***MHT-X 1490 MHT 1490***	***MHT-X 10130 MHT 10130***
Standard lifting height on tyres	m - ft	13,65 - 44.78	9,62 - 31.56
Standard lifting height on stabilizers	m - ft	13,97 - 45.83	-
Lifting height at max capacity on tyres	m - ft	7,99 - 26.21	6,17 - 20.24
Lifting height at max capacity on stabilizers	m - ft	9 - 29.5	-
Forward reach at max capacity on tyres	m - ft	2,3 - 7.54	1,48 - 4.85
Forward reach at max capacity on stabilizers	m - ft	2,45 - 8	-

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

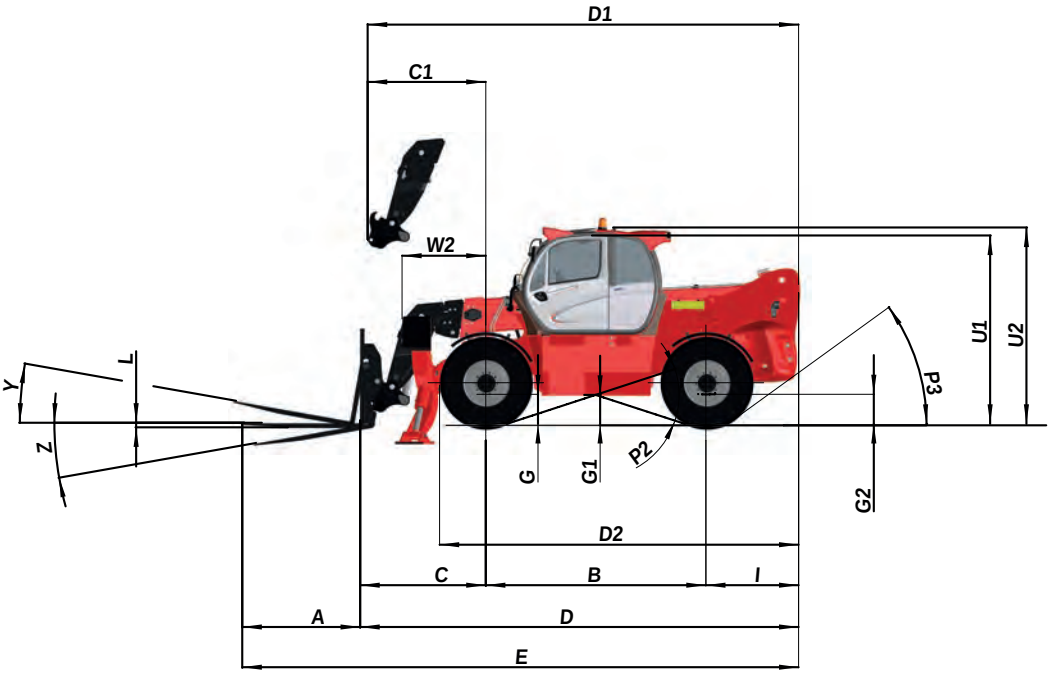
Max rated capacity with STD carriage and forks	kg - lb	9000 - 19841.58	13000 - 28660.06
Distance from centre of gravity	mm - in	600 - 23.62	
Capacity at max height with STD carriage and forks on tyres	kg - lb	4500 - 9920.79	7500 - 16534.65
Capacity at max height with STD carriage and forks on stab	kg - lb	6000 - 13227.72	-
Capacity at max reach with STD carriage and forks on tyres	kg - lb	1500 - 3306.93	2500 - 5511.55
Capacity at max reach with STD carriage and forks on stabilizers	kg - lb	3500 - 7716.17	-
Weight distribution with STD carriage and forks		***MHT-X 1490 MHT 1490***	***MHT-X 10130 MHT 10130***
Truck weight with STD carriage and forks (unloaded)	kg - lb	21250 - 46848.17	18660 - 41138.21
Front axle unloaded	kg - lb	7950 - 17526.73	6610 - 14572.54
Rear axle unloaded	kg - lb	13300 - 29321.45	12050 - 26565.67
Truck weight with STD carriage and forks (loaded)	kg - lb	30160 - 66491.34	32430 - 71495.83
Front axle loaded	kg - lb	24410 - 53814.77	30120 - 66403.15
Rear axle loaded	kg - lb	5750 - 12676.56	2310 - 5092.67
Max load on each stabilizer	N - kg/cm^2	135000 - 10	-
Max pressure on ground (unladen - max speed)	daN/cm^2	16	
Max pressure on ground (laden - max speed 5 km/h / 3.1 mph)	daN/cm^2	29	
Drawbar pull			
Tractive force (drawbar pull)	daN - kgf	10700 - 10910	
Breakout force with bucket **(according to standard ISO 8313)**			
Gradeability		***MHT-X 1490 MHT 1490***	***MHT-X 10130 MHT 10130***
Unladen	%	37	
Loaded	%	37	

FILLING					
Tank capacities		***MHT-X 1490 MHT 1490***		***MHT-X 10130 MHT 10130***	
Hydraulic and transmission oil	L - US gal	290 - 76.6			
Fuel	L - US gal	315 - 83.2			
DEF	L - US gal	***MHT-X 1490***	***MHT-X 10130***	***MHT 1490***	***MHT 10130***
		-		63 - 16.6	

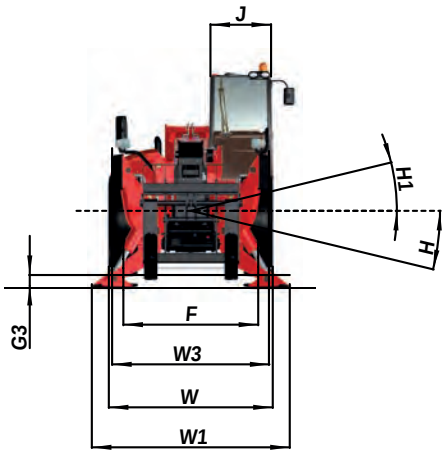
DIMENSIONS

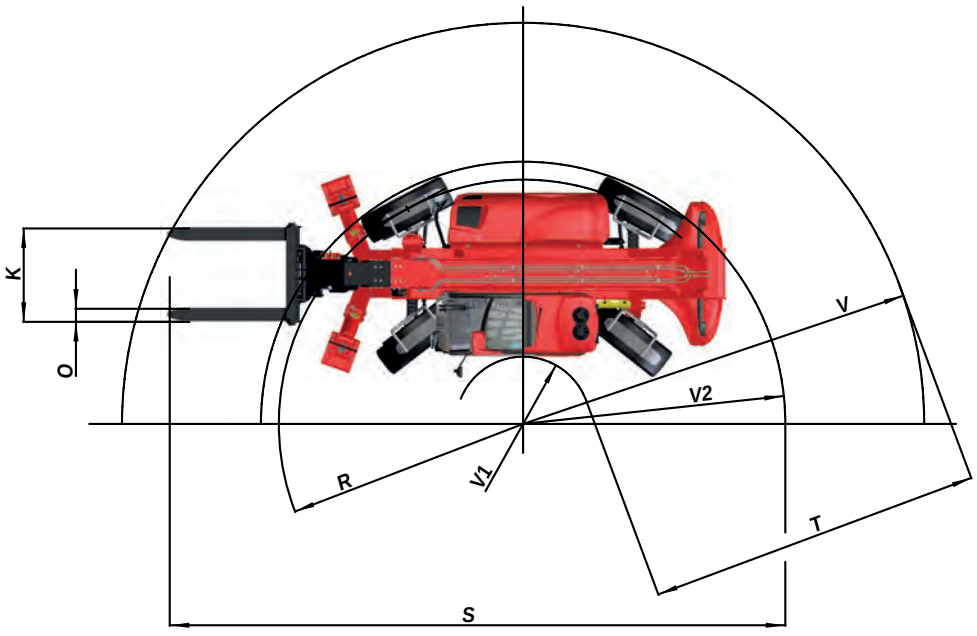
MHT-X 1490
MHT 1490

	mm	in
A	1200	47.24
B	3380	133.07
C	1870	73.62
C1	1750	68.90
D	6680	262.99
D1	6550	257.87
D2	5500	216.54
E	7880	310.24
F	2060	81.10
F1	2055	80.91
G	465	18.31
G1	420	16.54
G2	445	17.52
G3	225	8.86
H1	8.9°	
H2	10°	
I	1430	56.30
J	950	37.40
K	1415	55.71
L	60	2.36
O	200	7.87
P2	16.5°	
P3	33°	
R	5113	201.30
S	10050	395.67
T	3905	153.74
U1	2945	115.94
U2	3000	118.11
V	6455	254.13
V1	2550	100.39
V2	5345	210.43
W	2523	99.33
W1	3055	120.28
W2	1350	53.15
W3	2435	95.87
Y	30°	
Z	103°	



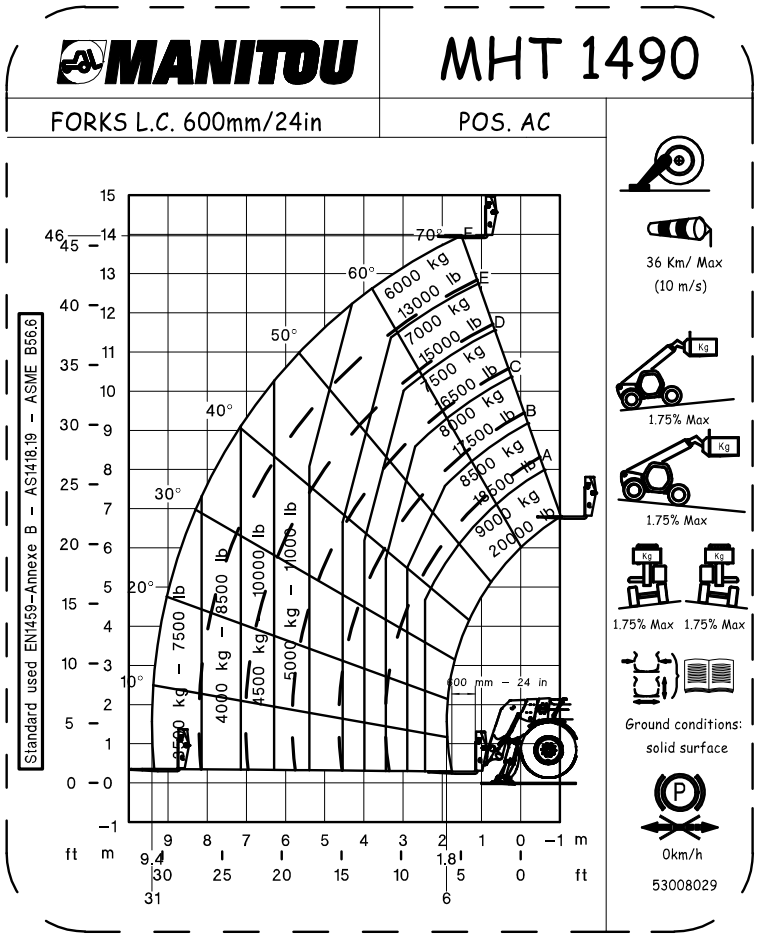


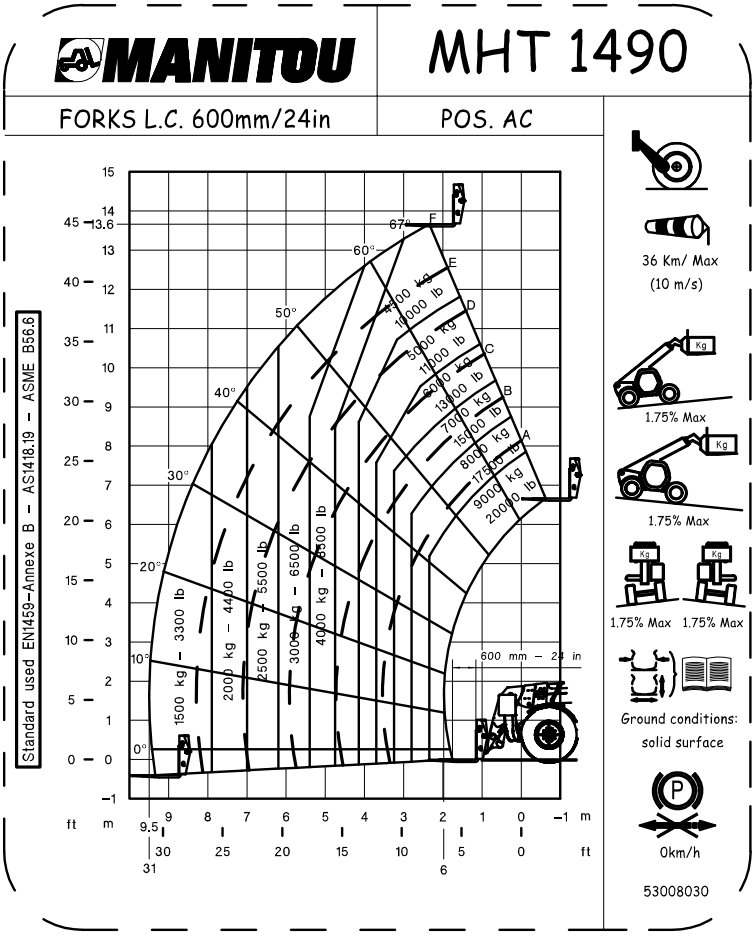




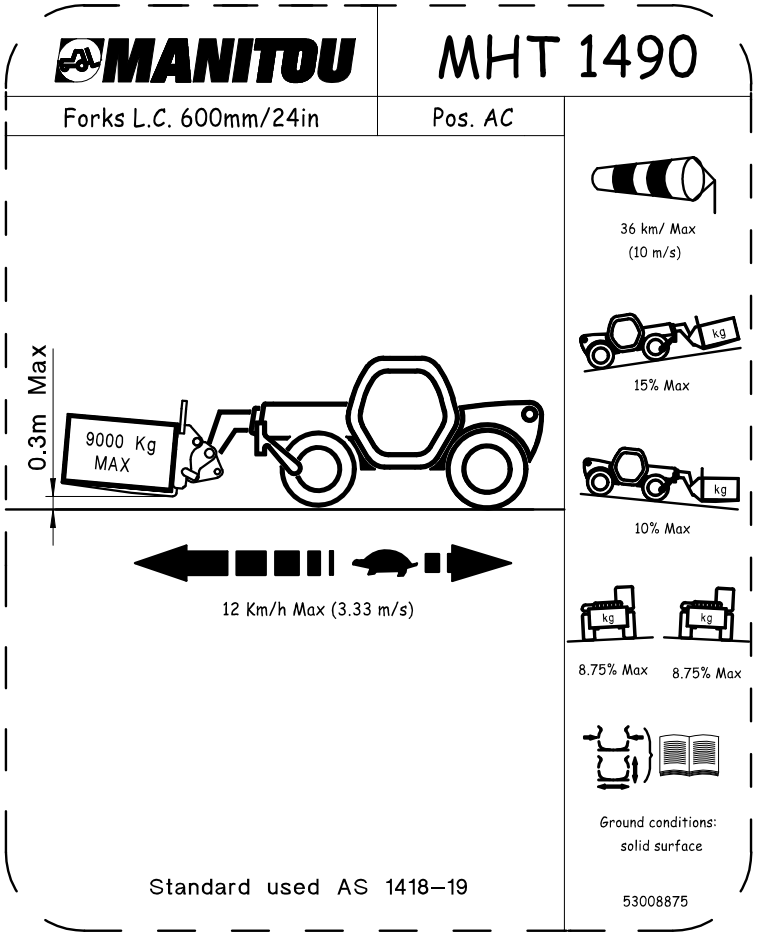
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MHT-X 1490 with plate
MHT 1490 with plate





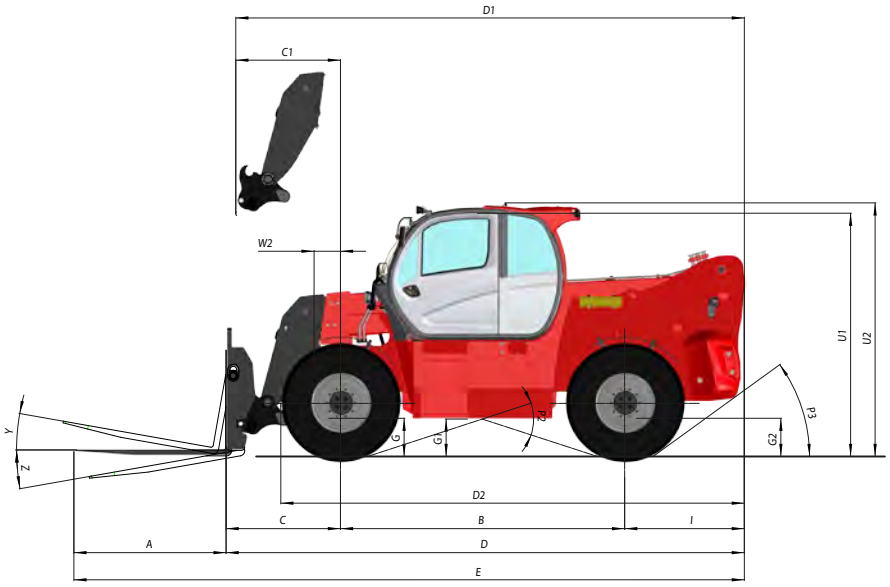
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 1490
Forks L.C. 600mm/24in
Pos. AC
36 km/ Max
(10 m/s)
kg
15% Max
kg
10% Max
0.3m Max
9000 Kg
MAX
12 Km/h Max (3.33 m/s)
kg
kg
8.75% Max
8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53008875

DIMENSIONS

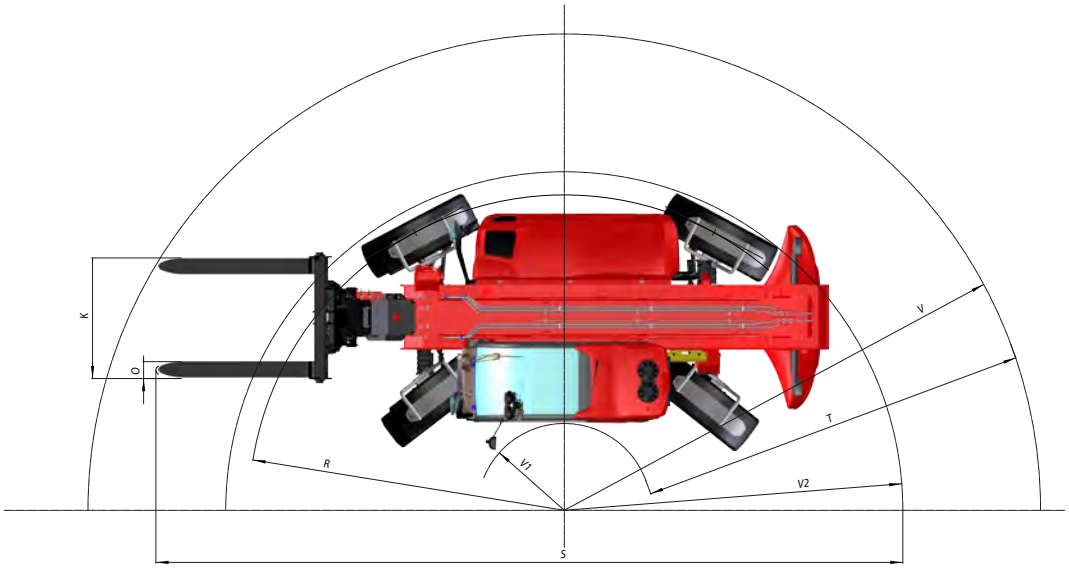
MHT-X 10130
MHT 10130

	mm	in
A	1200	47.24
B	3370	132.68
C	1365	53.74
C1	1230	48.43
D	6150	242.13
D1	6010	236.61
D2	5500	216.54
E	7950	312.99
F	2090	82.28
F1	2090	82.28
G	480	18.90
G1	440	17.32
G2	470	18.50
H1	10.3°	
H2	9.4°	
I	1415	55.71
J	928	36.54
K	1428	56.22
L	700	27.56
O	200	7.87
P2	16°	
P3	30.5°	
R	3740	147.24
S	9145	360.04
T	5120	201.57
U1	2930	115.35
U2	2990	117.72
V	6150	242.13
V1	1030	40.55
V2	4015	158.07
W	2550	100.39
W2	313	12.32
Y	22°	
Z	109°	

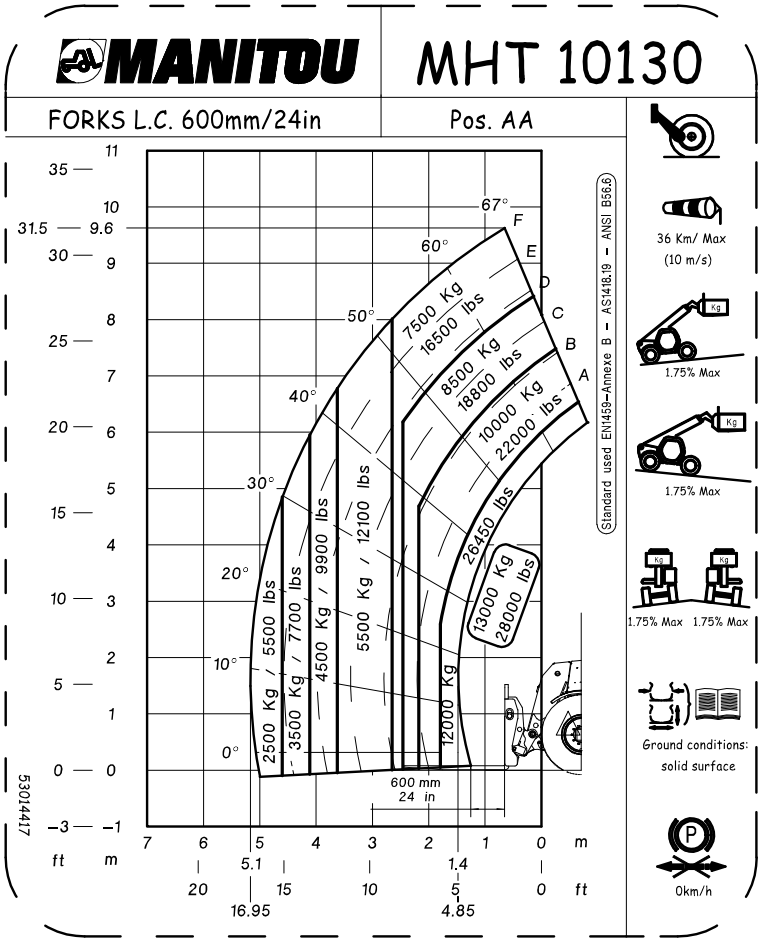


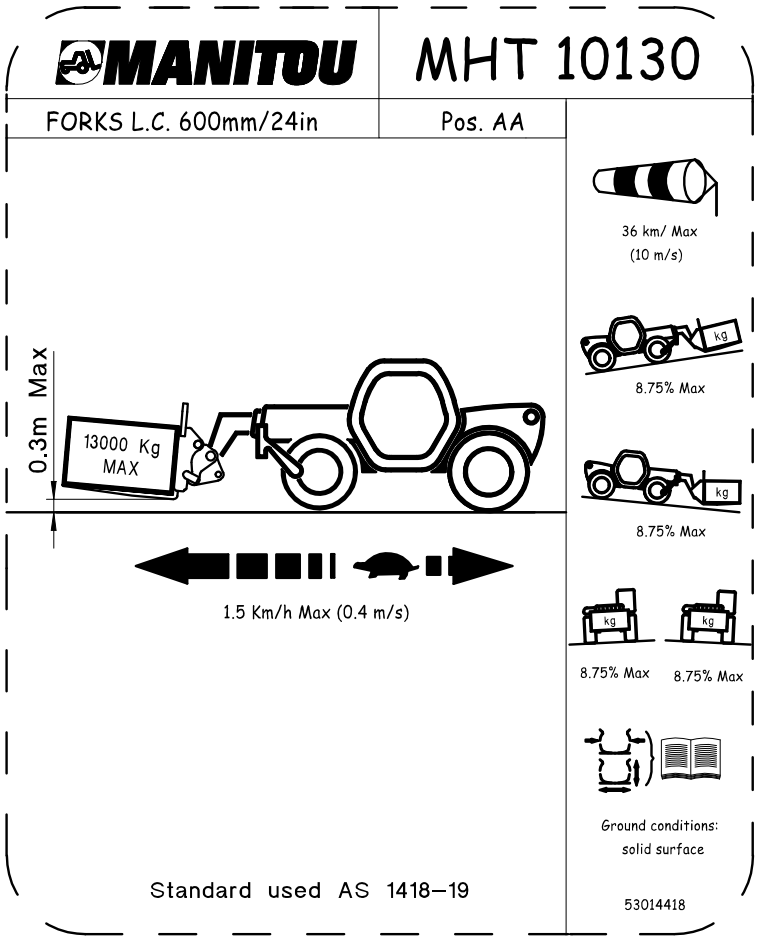






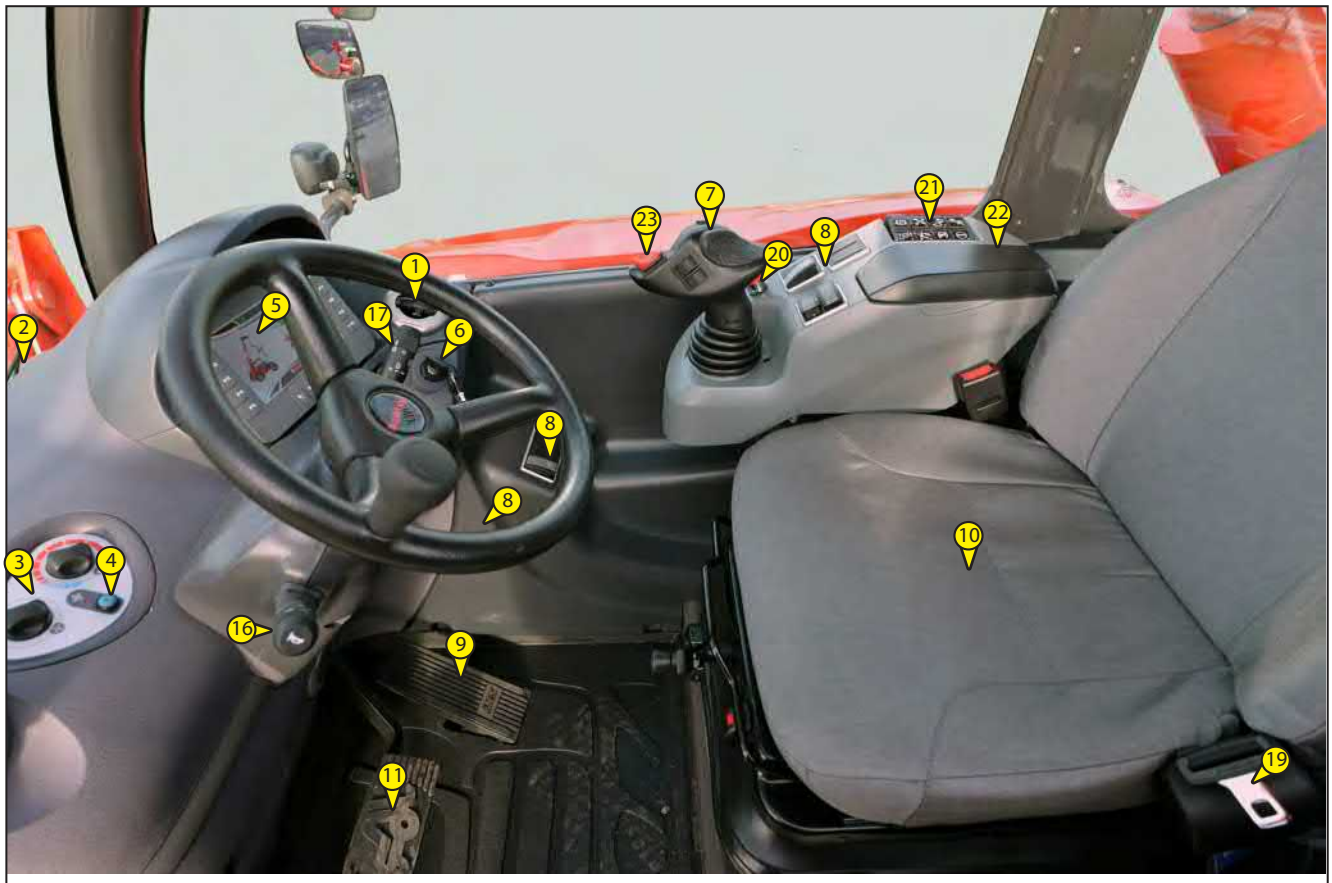
MHT-X 10130 with plate
MHT 10130 with plate

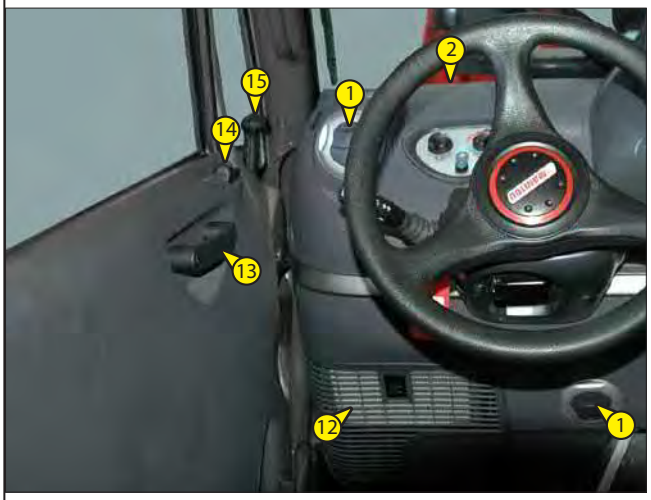




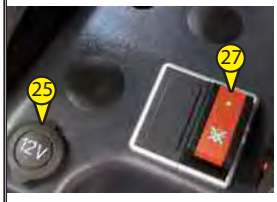
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

(Depending on the telehandler model)











(Second equipment)



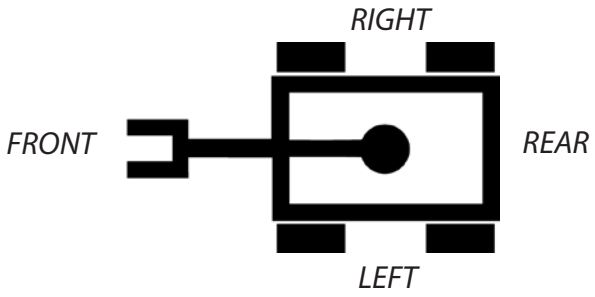


2 - 1

OVERVIEW (**2 - 1**)

1. "AIR DIFFUSERS OF HEATING" 2-66
2. "AIR DIFFUSERS FOR DEMISTING" 2-66
3. "HEATER CONTROL" 2-65
4. "AIR CONDITIONING CONTROLS (OPTION)" 2-65
5. "CONTROL PANEL AND LOAD LIMITER "HMI"" 2-24
6. START-UP SWITCH 2-59
7. PROPORTIONAL ELECTRO-HYDRAULIC JOYSTICK 2-64
8. "SWITCHES" 2-42
9. "ACCELERATOR PEDAL" 2-61
10. "DRIVER'S SEAT" 2-22
11. "SERVICE BRAKE PEDAL" 2-61
12. "CAB FILTER VENTILATORS" 2-68
13. "DOOR CLOSING HANDLE" 2-66
14. "WINDOW LIFT (POWER-OPERATED) SWITCH" 2-45
15. "DOOR OPENING LEVER" 2-66
16. "LIGHTING, HORN AND INDICATOR LIGHTS LEVER" 2-62
17. "FRONT AND REAR WINDSCREEN WIPER LEVER" 2-61
18. "BUBBLE LEVEL" 2-40
19. "SEAT BELT" 2-23
20. ""EMERGENCY STOP" BUTTON" 2-50
21. "KEYPAD" 2-38
22. "ARMREST AND STORAGE" 2-67
23. "FORWARD/NEUTRAL/REVERSE GEAR SELECTION" 2-63
24. "CEILING LIGHT" 2-67
25. "POWER OUTLET 12 V" 2-24
26. "STEERING WHEEL ADJUSTMENT LEVER" 2-66
27. "SELECTOR TO DISABLE THE LOAD LIMITER" 2-37

NOTE: RIGHT, LEFT, FRONT, REAR are meant for an observer seated on the driver's seat and looking forward.



648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

1- DRIVER'S SEAT

There are three types of driver's seat:
A - Driver's seat (standard) (2 - 2)
B - Low frequency driver's pneumatic seat (option) (2 - 3)
C - Driver's pneumatic seat (option) (2 - 3)

DRIVER'S SEAT (STANDARD)
Designed for maximum comfort, this seat can be adjusted as follows.

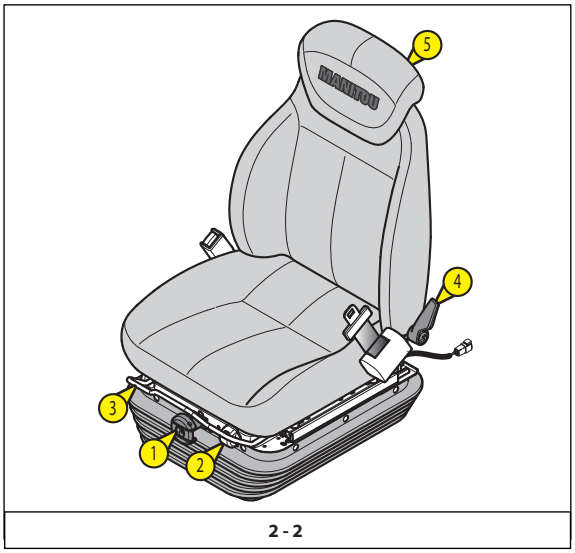
SEAT HEIGHT ADJUSTMENT
Sit correctly on the seat.
Turn the knob (1, 2 - 2) according to the desired height, clockwise to lift, anti-clockwise to lower, ensuring that the green indicator lamp (2, 2 - 2) remains visible.
If the indicator lamp (2, 2 - 2) is red, re-adjust the height.
NOTE: The seat is designed so as not to require adjustment according to the driver's weight.

LONGITUDINAL ADJUSTMENT
Pull the locking lever (3, 2 - 2) upwards.
Slide the seat to the desired position.
Release the lever and ensure it returns to the lock position.

ANGLE ADJUSTMENT OF THE BACK-REST
Support the back-rest, push the lever (4, 2 - 2) backward and tilt the back-rest to the desired position.

If you do not support the back-rest when making adjustments, it will completely swing forward.

EXTENDING THE HEAD-REST
The height of the head-rest (5, 2 - 2) can be adjusted by pulling it upwards (the notches will click) up to the stop.
The head-rest can be removed by applying sufficient pressure to pull it off the stop.



2 - 2

LOW FREQUENCY DRIVER'S PNEUMATIC SEAT (OPTION)

Designed for maximum comfort, this seat can be adjusted as follows.

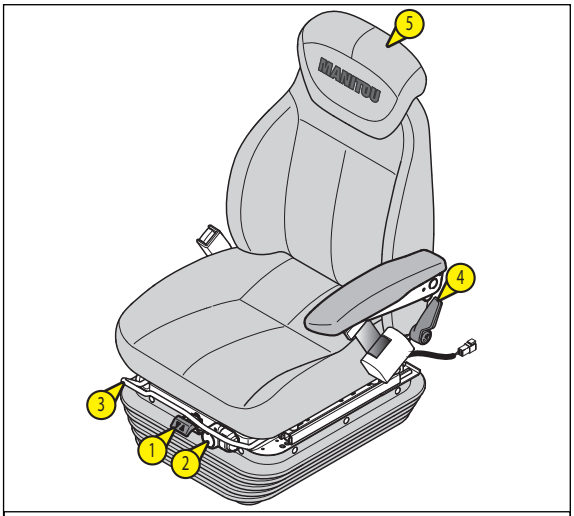
SEAT HEIGHT ADJUSTMENT
Sit correctly on the seat.
Switch on lift truck ignition.
Pull or push lever (1, 2 - 3) according to the desired height, making sure that the green indicator lamp (2, 2 - 3) remains visible.
If the indicator lamp (2, 2 - 3) is red, re-adjust the height.
NOTE: The seat is designed so as not to require adjustment according to the driver's weight.

LONGITUDINAL ADJUSTMENT
Pull the locking lever (3, 2 - 3) upwards.
Slide the seat to the desired position.
Release the lever and ensure it returns to the lock position.

ANGLE ADJUSTMENT OF THE BACK-REST
Support the back-rest, push the lever (4, 2 - 3) backward and tilt the back-rest to the desired position.

If you do not support the back-rest when making adjustments, it will completely swing forward.

EXTENDING THE HEAD-REST
The height of the head-rest (5, 2 - 3) can be adjusted by pulling it upwards (the notches will click) up to the stop.
The head-rest can be removed by applying sufficient pressure to pull it off the stop.



2 - 3

DRIVER'S PNEUMATIC SEAT (OPTION)

Designed for maximum comfort, this seat can be adjusted as follows.

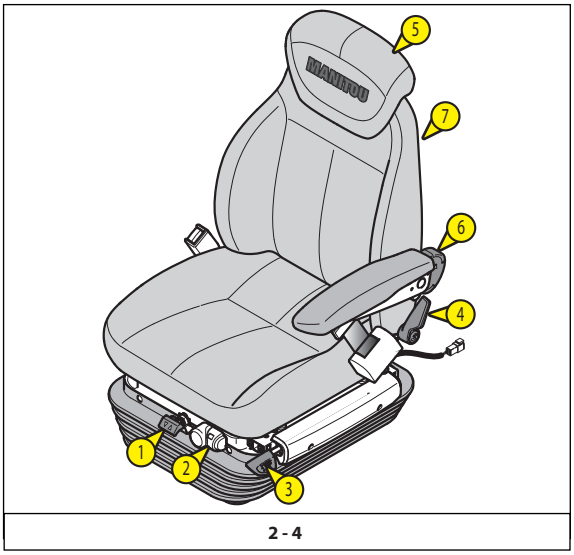
SEAT HEIGHT ADJUSTMENT
Sit correctly on the seat.
Switch on lift truck ignition.
Pull or push lever (1, 2 - 4) according to the desired height, making sure that the green indicator lamp (2, 2 - 4) remains visible.
If the indicator lamp (2, 2 - 4) is red, re-adjust the height.
NOTE: The seat is designed so as not to require adjustment according to the driver's weight.

LONGITUDINAL ADJUSTMENT
Swing lever (3, 2 - 4) upwards.
Slide the seat to the desired position.
Release the lever and ensure it returns to the lock position.

HORIZONTAL DAMPER
In certain conditions (e.g. driving with a trailer) the use of a horizontal shock absorber is recommended. The driver's seat is thus better able to absorb jerks in the direction of travel.
Swing lever (3, 2 - 4) downwards to block the horizontal damper.

ANGLE ADJUSTMENT OF THE BACK-REST
Support the back-rest, push the lever (4, 2 - 4) backward and tilt the back-rest to the desired position.

If you do not support the back-rest when making adjustments, it will completely swing forward.



2 - 4

EXTENDING THE HEAD-REST
The height of the head-rest (5, 📷 2 - 4) can be adjusted by pulling it upwards (the notches will click) up to the stop.
The head-rest can be removed by applying sufficient pressure to pull it off the stop.

LUMBAR ADJUSTMENT
Turn knob (6, 📷 2 - 4) anti-clockwise to select one of the (5, 📷 2 - 4) lumbar support settings.

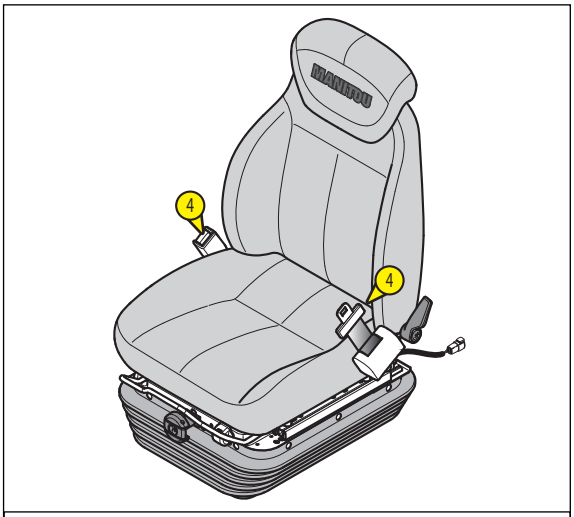
SEAT HEATING
Switch (7, 📷 2 - 4) operates the heating of the seat cushion and the back-rest.

2- SEAT BELT

A 2-point belt attaches at its two endpoints (4, 📷 2 - 5).

The seat belt is a machine safety device, designed to protect the telehandler driver against harmful movements that may occur during a collision or a sudden stop.
The seat belt function is to reduce the risk of death or serious injury in a collision. It reduces the force of secondary impacts, by keeping the driver positioned correctly and preventing the driver from being ejected from the telehandler in a crash or if the telehandler rolls over.

- Sit correctly on the seat.
- Check that seat belt is not twisted.
- Place the seat belt at hip level.
- Attach the seat belt and check that it locks.
- Adjust the seat belt to your body shape without squeezing your hips and without over-slack.



2 - 5

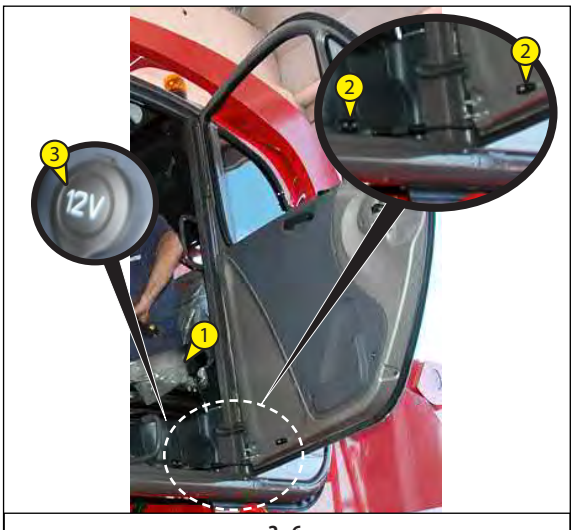
Under no circumstances the lift truck should be used if the seat belt is defective (fixing, locking, cuts, tears, etc.).
Repair or replace the seat belt immediately.

3- DRIVER'S PRESENCE

The driver's presence detector is a device that defines a specific safety device designed to monitor the presence and vigilance of the driver of telehandler.

The driver's presence is validated when the operator is correctly seated (1, 📷 2 - 6) and the cab door is closed (2, 📷 2 - 6).

It is only from that moment that the telehandler is operational; the operator can perform hydraulic movements and move the telehandler.



2 - 6

4- POWER OUTLET 12 V

(3, 📷 2 - 6).

5- CONTROL PANEL AND LOAD LIMITER

(According to the security system type installed on the telehandler)

The manitou safety system performs the functions of the telehandler control and load movement limiter for the frontal telehandler.

A - "STRAIN GAUGE" safety system type
B - "LMI" safety system type

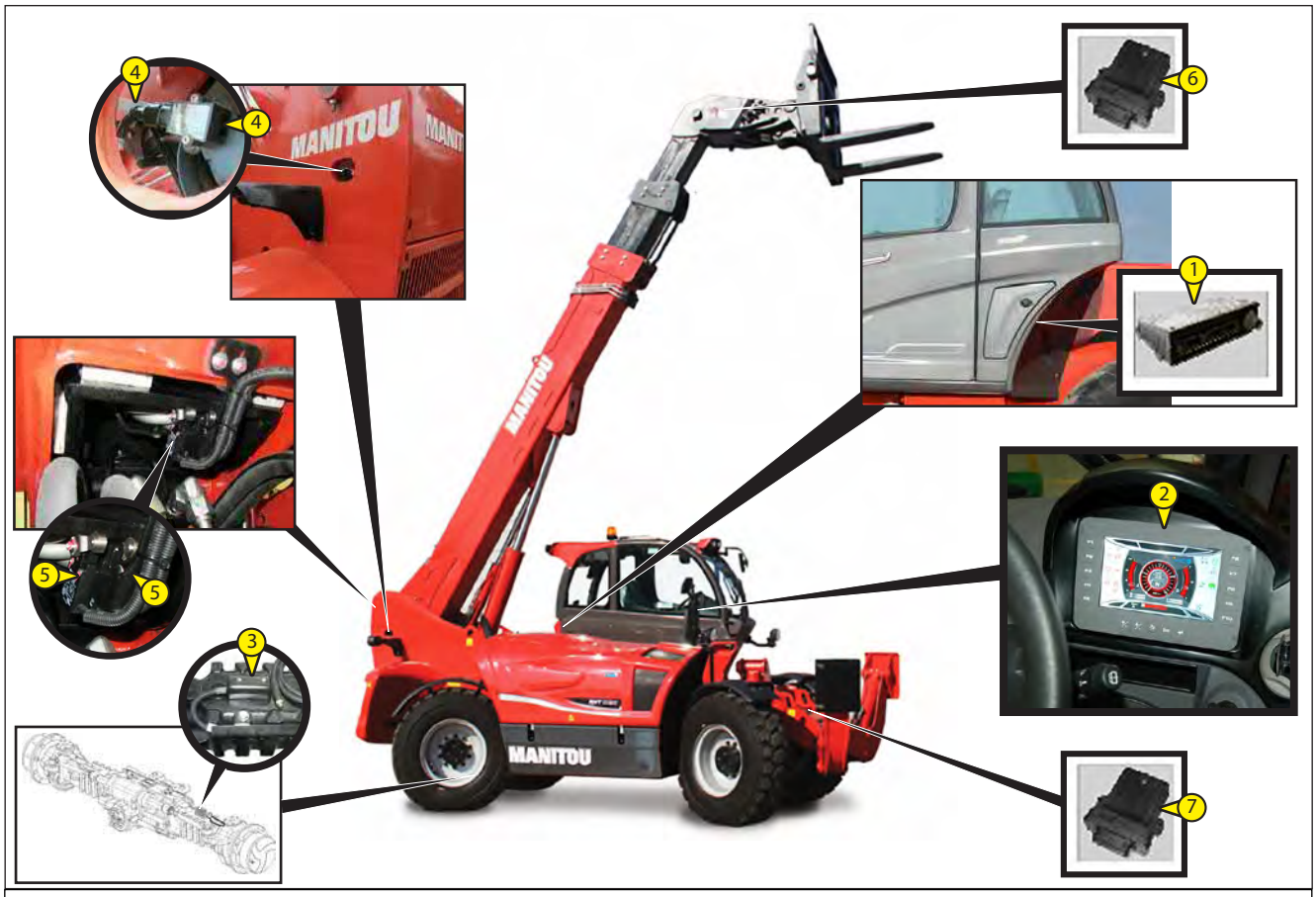
A - "STRAIN GAUGE" safety system type

SAFETY SYSTEM LAYOUT

MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1

- MC2M control board (1, 📷 2 - 7)
- TERA7 instrument control panel + Slave IO-CORE control board (2, 📷 2 - 7)
- Strain gauge (3, 📷 2 - 7)
- Telescopic boom angle sensor (4, 📷 2 - 7)
- Fully retracted telescopic boom microswitches (5, 📷 2 - 7)
- Midac Plus control board (N = platform) (6, 📷 2 - 8) *OPTIONAL*
- Midac Plus control board (S = stabilizers) (7, 📷 2 - 8)

MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1



2 - 19

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

SAFETY SYSTEM LAYOUT

MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

- MC2M control board (1, 📷 2 - 7)
- TERA7 instrument control panel + Slave IO-CORE control board (2, 📷 2 - 7)
- Strain gauge (3, 📷 2 - 7)
- Telescopic boom angle sensor (4, 📷 2 - 7)
- Fully retracted telescopic boom microswitches (5, 📷 2 - 7)
- Midac Plus control board (N = platform) (6, 📷 2 - 8) *OPTIONAL*

MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1



2 - 19

B - "LMI" safety system type

SAFETY SYSTEM LAYOUT

MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1

- MC2M control board (1, 📷 2 - 8)
- TERA7 instrument control panel + Slave IO-CORE control board (2, 📷 2 - 8)
- Midac Plus limiter control board (3, 📷 2 - 8)
- CCR2 Angle (4, 📷 2 - 8) and lenght telescopic boom sensor
- Pressure transducers (5, 📷 2 - 8)
- Midac Plus control board (N = platform) (6, 📷 2 - 8)
- Electronic level (7, 📷 2 - 8)
- External light indicator (8, 📷 2 - 8),
  indicating the percentage of load raised compared to the max. permitted load in these working conditions:
  - ○ Green light on: safety zone (8.1, 📷 2 - 8)
  - ○ Yellow light on (external horn activated): alarm zone, load raised higher than 90% of permitted load (8.2, 📷 2 - 8).
  - ○ Red light on (external horn activated): stop zone, load raised higher than 100% of permitted load (8.3, 📷 2 - 8).

MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1



2 - 19

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

SAFETY SYSTEM LAYOUT

MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

- MC2M control board (1, 2 - 8)
- TERA7 instrument control panel + Slave IO-CORE control board (2, 2 - 8)
- Midac Plus limiter control board (3, 2 - 8)
- CCR2 Angle (4, 2 - 8) and lenght telescopic boom sensor
- Pressure transducers (5, 2 - 8)
- Midac Plus control board (N = platform) (6, 2 - 8)
- Electronic level (7, 2 - 8)
- External light indicator (8, 2 - 8),
  indicating the percentage of load raised compared to the max. permitted load in these working conditions:
  - Green light on: safety zone (8.1, 2 - 8)
  - Yellow light on (external horn activated): alarm zone, load raised higher than 90% of permitted load (8.2, 2 - 8).
  - Red light on (external horn activated): stop zone, load raised higher than 100% of permitted load (8.3, 2 - 8).

MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1



2 - 19

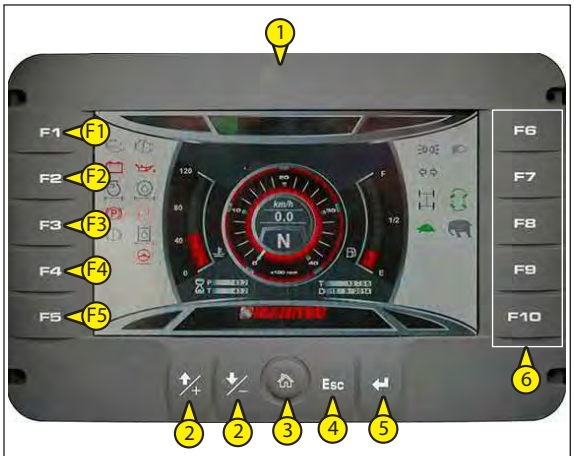
INSTRUMENT CONTROL PANEL

The control panel TERA7 (1, 📷 2 - 19) with colour screen display shows and informs the operator of all the steps of the working of the telehandler.

Five pages are saved in memory in the panel (1, 📷 2 - 7) and these can be selected by pressing the keys (F1, F2, F3, F4, F5 📷 2 - 7) on the panel (1, 📷 2 - 7).
Push the keys (F1, F2, F3, F4, F5, 📷 2 - 7) to select the pages.
Push the keys:

- Up/Down, Plus/Minus (2, 📷 2 - 7)
- Home (3, 📷 2 - 7)
- Esc (4, 📷 2 - 7)
- Enter (5, 📷 2 - 7)
- F3, F6, F7, F8, F9, F10 not used (6, 📷 2 - 7).

to navigate into the pages.



2 - 7

Main pages saved in memory (📷 2 - 20):

C - Splash screen
D - Driving page
E - Working page
F - Slowing page
G - Setting page
H - Alarm page

Pages overview:



2 - 20

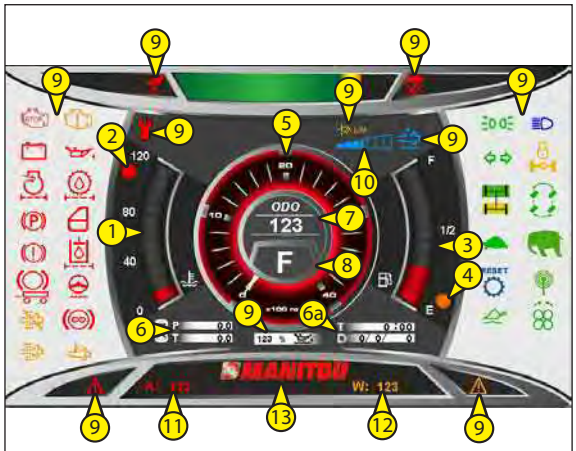
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

DRIVING PAGE

1. engine coolant temperature gauge indicator (1, 📷 2 - 8)
2. warning light for potential engine coolant overheating or engine coolant level in the tank is lower (2, 📷 2 - 8)
3. fuel level indicator (3, 📷 2 - 8)
4. the indicator lamp light is on (4, 📷 2 - 8) when the fuel level in the tank is lower than 10% of its capacity
5. engine rpm indicator (x100 rpm) (5, 📷 2 - 8)
6. partial (P) and total (T) hour-counter (6, 📷 2 - 8)
   Keep the "HOME" key (6, 📷 2 - 8) pressed to reset the partial hour-counter (P)

6a. time(T) and date (D) (6a, 📷 2 - 8)

7. speed indicator (km/h or mph) (7, 📷 2 - 8)
8. direction and gear shift indicator (8, 📷 2 - 8):
   - direction: N= neutral
     F= forward
     R= reverse
9. warning and indicator lamps (9, 📷 2 - 8)



2 - 8

Symbol overview:

	position lights
	low beams
	blue high beams
	direction lights
	rear axle locking
	front wheel alignment
	rear wheel alignment
	front wheel steering
	concentric wheel steering
	crab steering green
	telescopic boom hydraulic movement control
	retarder (optional)
	fast gear
	slow gear
	high torque; high force
RESET	transmission reset
	telescopic boom suspension (optional)
	remote control (optional)
	reversing radiator fan (optional)

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

	I.C. engine severe fault
	I.C. engine malfunction
	alternator excitation
	I.C. engine oil level
	I.C. engine oil PRESSURE
	brake fluid
	engine intake air filter
	transmission oil filter
	parking brake
	telehandler door
	hydraulic oil filter
	steering emergency
	trailer brake anomaly (optional)
	DPF: quantity of soot is high
	DPF: active regeneration (◁ next paragraph)
	DPF: regeneration disabled
	Diesel exhaust fluid (DEF) level indicator (◁ next paragraph)
	Malfunction related to the emissions from the exhaust gas after-treatment system or DEF supply (◁ next paragraph)
LIM	Vehicle speed or torque operating restriction (◁ next paragraph)
	"emergency stop" red button
	safety system exclusion
	warning / alarm
	service

(For more details: ◁ next paragraph "Warning and indicator lamps" or "Switches").

10. Diesel exhaust fluid (DEF) level indicator that provides information about the quantity of diesel exhaust fluid in the tank (10, 📖 2 - 8).
11. Machine alarm code*
    (11, 📖 2 - 8) are displayed in normal operating conditions
12. Machine warning code*
    (12, 📖 2 - 8) is displayed in normal operating conditions
13. Message area (13, 📖 2 - 8)

*: Check the alarms or warnings types, referring to the display page "F5 - ALARM PAGE".

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

IMPACTS AND ACTIONS BY OPERATOR

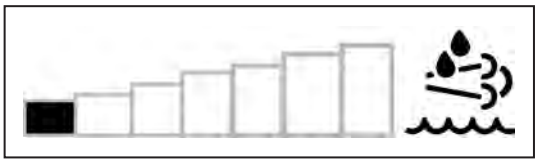
To ensure proper Tier 4 emission levels and to comply with the EPA and CARB regulations MTU has implemented an inducement strategy that will activate when emission related warnings occur. The following occurrences will trigger a warning indicator light:

- **Low DEF Additive**
- **Insufficient DEF Additive Quality**
- **Faulty Elements of the Aftertreatment**

In the case that inducement occurs again within 40 hours of engine operation, shortened inducement periods are activated.

Operators must:

- regularly check the gauge to make sure the DEF additive is at a proper level or else engine inducement may occur;
- ensure in-time refilling with DEF additive;
- avoid any contamination of DEF additive with any other fluids or debris;
- ensure refills with properly stored DEF only.



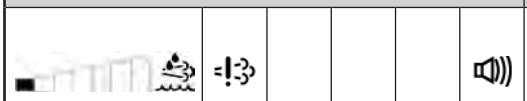
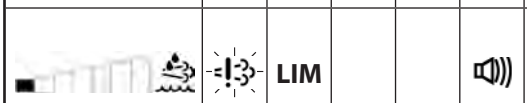
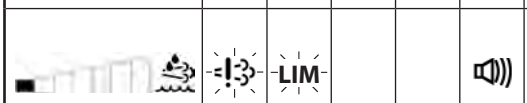
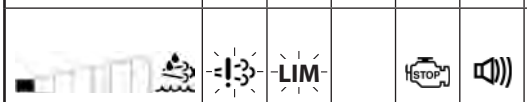
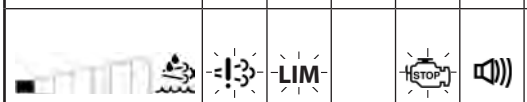
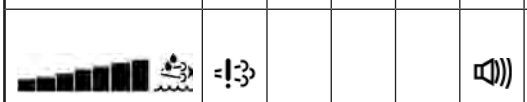
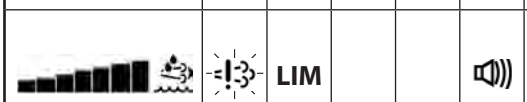
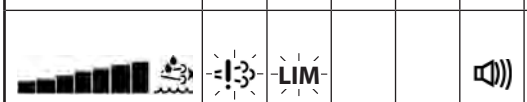
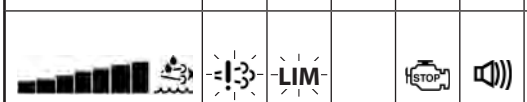
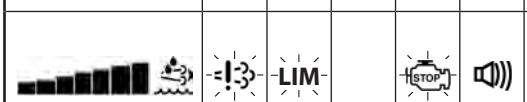
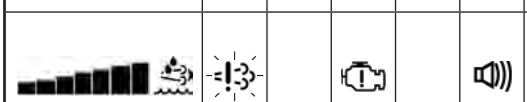
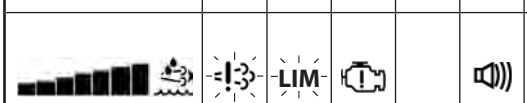
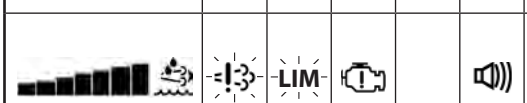
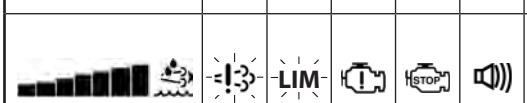
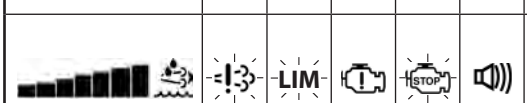
INDICATORS AND DESCRIPTIONS OF THE INDUCEMENT STRATEGY(EMISSIONS CONTROL SYSTEM OF THE EXHAUST GAS)

Overview:

OPERATING RESTRICTIONS OF THE INDUCEMENT STRATEGY				
Indicator lamp	**Description**	**Problem**	**Possible causes/consequences**	**LEVEL: consequences/times**
	**Diesel Exhaust Fluid (DEF)**	The indicator lamp lights up	An emissions-relevant malfunction in the exhaust gas aftertreatment system or in the DEF supply has been detected.	**LOW:** Maximum available torque is reduced to 75% of peak torque across the speed range and for a time interval between 120 to 240 minutes. **SEVERE:** Maximum available torque will be reduced from 75 to 50% and for a time interval between 240* a 265* minutes. Engine speed will be reduced to 60% rated speed and for a time interval between 240* a 265* minutes. **ULTRA SEVERE:** Maximum available torque will be reduced from 50 to 20%, and simultaneously engine speed will be reduced to idle and for a time interval between 265* a 290* minutes. **FINAL:** The engine torque is limited to a maximum of 20% across the whole engine speed range and for a time interval between 290* a 300* minutes. The engine speed is limited to idling speed and for a time interval between 290* a 300* minutes.. ***A maximum of 3 overrides for 30 minutes each is possible.***
LIM	**Torque Limiter Active (LIM):**	The indicator lamp lights up	The engine torque is limited to a maximum between <100% and > 50% across the whole engine speed range.	
		The indicator lamp flashes	The engine torque is limited to a maximum of ≤ 50% across the whole engine speed range.	
	**Engine Malfunction**	The orange indicator lamp lights up	A failure and tampering in the engine system has been detected	
	**Stop Engine Lamp**	The red indicator lamp lights up	A serious fault in the engine system has been detected Level: ULTRA SEVERE	
		The indicator lamp flashes red.	A serious fault in the engine system has been detected Level: FINAL	
	**Buzzer**	With each transition of inducement state the buzzer sounds for 5 seconds. **In case of an override, the buzzer sounds with a frequency of: 1 bpm.**		

(*): In case of reoccurring failures the time for the final inducement will be reduced from 240 to 30 minutes.

INDUCEMENT STRATEGY

Notifications	Descriptions	Operator Actions
	**Low DEF Tank Level Warning:** The DEF level is now between 7.5 and 10% full.	**Fill DEF tank to full.** If DEF lamp is still illuminated there may be improper DEF quality. Call for service.
	**Low DEF Tank Level:** DEF level is between 5 and 7.5%. Low inducement begins (75% torque).	**Fill DEF tank to full.** If DEF lamp is still illuminated there may be improper DEF quality. Call for service.
	**Low DEF Tank Level:** DEF level is between 2.5 and 5%. Severe inducement begins (60% rated speed / 50% torque).	**Park equipment and fill DEF tank.** If DEF lamp is still illuminated there may be improper DEF quality. Call for service.
	**Low DEF Tank Level:** DEF level is between 0 and 2.5%. Ultra severe inducement begins (idle speed / 20% torque).	**Immediately park equipment in safe location and fill DEF tank.** If DEF lamp is still illuminated there may be improper DEF quality. Call for service.
	**Low DEF Tank Level:** DEF level is at 0%. Final inducement begins (Engine idle / 20% torque)..	**Immediately park equipment in safe location and fill DEF tank.** If DEF lamp is still illuminated there may be improper DEF quality. Call for service.
	**Poor DEF Quality Warning:** Poor DEF quality is detected and there is one hour before inducement process takes place.	If DEF tank is above 10% full and these lights are illuminated there may be a quality issue with the DEF. **Call for service.**
	**Poor DEF Quality:** Low inducement is taking place. Within 15 minutes torque is reduced from 100 to 75%.	If DEF tank is above 7.5% full and these lights are illuminated there may be a quality issue with the DEF. **Call for service.**
	**Poor DEF Quality:** Severe inducement is taking place. Within 25 minutes the rated speed is reduced to 60% and torque to 50%.	If DEF tank is above 5% full and these lights are illuminated there may be a quality issue with the DEF. **Call for service.**
	**Poor DEF Quality:** Ultra severe inducement is taking place. Within 8 minutes the rated speed is reduced to idle and torque to 20%.	If DEF tank is above 2.5% full and these lights are illuminated there may be a quality issue with the DEF. **Park vehicle and call for service.**
	**Poor DEF Quality:** Final inducement is active. Engine speed is at idle with torque limited to 20% until problem is fixed.	If DEF tank is not empty and these lights are illuminated there may be a quality issue with the DEF. **Immediately park vehicle and call for service.**
	**Faulty Aftertreatment Equipment Warning:** Faulty equip. has been detected and there is one hour before inducement process takes place.	Some component of the aftertreatment system is malfunctioning. **Call for service.**
	**Faulty Aftertreatment Equipment:** Low inducement is taking place. Within 15 minutes torque is reduced from 100 to 75%.	Some component of the aftertreatment system is malfunctioning. **Call for service.**
	**Faulty Aftertreatment Equipment:** Severe inducement is taking place. Within 25 minutes the rated speed is reduced to 60% and torque to 50%.	Some component of the aftertreatment system is malfunctioning. **Call for service.**
	**Faulty Aftertreatment Equipment:** Ultra severe inducement is taking place. Within 8 minutes the rated speed is reduced to idle and torque to 20%**.**	Some component of the aftertreatment system is malfunctioning. **Park vehicle and call for service.**
	**Faulty Aftertreatment Equipment:** Final inducement is active. Engine speed is at idle and torque is limited to 20% until problem is fixed.	Some component of the aftertreatment system is malfunctioning. **Immediately park vehicle and call for service.**

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

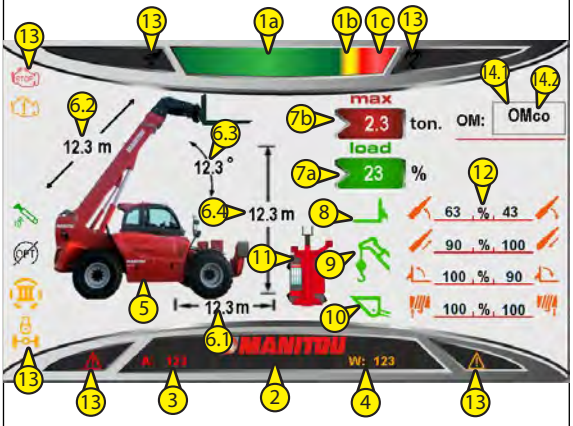
WORKING PAGE

(Depending of the Safety system type: "STRAIN GAUGE" or "LMI")

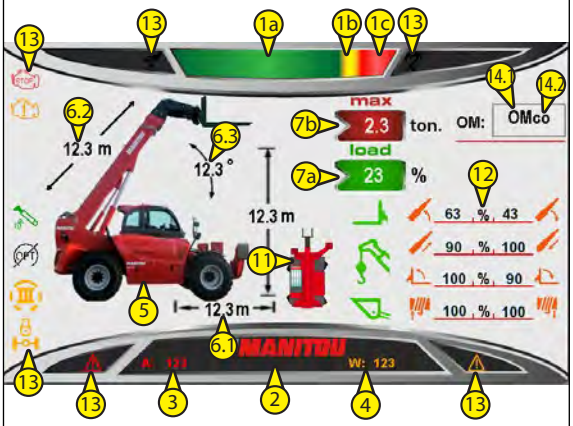
1. Load conditions
   The coloured bar indicates the percentage of the load lifted in reference to the machine's operating condition:
   - Green reference (1a, 📷 2 - 9): safety area.
   - Yellow reference (1b, 📷 2 - 9): alarm area, load lifted 90% more than permitted load (external warning sound active) .
   - Yellow reference (1c, 📷 2 - 9): alarm area, load lifted 100% more than permitted load (external warning sound active) .
2. Messages area (2, 📷 2 - 9)
3. Machine alarm code*
   (3, 📷 2 - 9) is displayed in normal operating conditions
4. Machine warning code*
   (4, 📷 2 - 9) is displayed in normal operating conditions
5. Reading main operating data
   - Indicative drawing of the machine (5, 📷 2 - 9)
   - Boom angle
     Reading in "Degrees■", with a decimal (6.4, 📷 2 - 9)
   - Weight of load lifted "LOAD" (reading in "% or Tons■" for second equipment) (7a, 📷 2 - 9)
   - Operating radius (optional)
     Measurement of the distance from the fifth wheel centre to the projection of the point of application of the load (reading in "Meters■", with a decimal) (6.1, 📷 2 - 9).
   - Boom length (optional)
     Reading in "Meters■", with a decimal (6.2, 📷 2 - 9)
   - Height off the ground (optional)
     Reading in "Meters■", with a decimal (6.3, 📷 2 - 9)
   - According to the type of attachment used:
     - forks (8, 📷 2 - 9)
     - suspended load (9, 📷 2 - 9)
     - bucket (10, 📷 2 - 9)
6. Working configuration
   - Indicative drawing:
     - of the machine on wheels (11, 📷 2 - 9)
     - of the machine on stabilisers (11, 📷 2 - 9)
   - OM Code:
     - The first digit refers to the operating mode "OM":
       1 = on stabilisers (14.1, 📷 2 - 9)
       2 = on wheels (14.1, 📷 2 - 9)
     - The second digit refers to the equipment being used: PT, forks, etc. (14.2, 📷 2 - 9).
7. Slowing settings view (12, 📷 2 - 9) for more details: ◁ next paragraph "Slowing page").
8. Warning and indicator lamps telehandler status (13, 📷 2 - 9)
   Symbol overview:

	I.C. engine severe fault
	I.C. engine malfunction
	telescopic boom hydraulic movement control
	optional exclusion
	2nd optional working (optional)
	3rd optional working (optional)
	rear axle locking
	"emergency stop" red button

"STRAIN GAUGE"



"LMI"



2 - 9

	safety system exclusion
	warning / alarm

(For more details: ◁ next paragraph “Warning and indicator lamps”).

*: Check the alarms or warnings types, referring to the display page “F5 - ALARM PAGE”.

▪: Metric unit [length unit (m) and weight unit (ton)] or imperial unit [length unit (ft) and weight unit (kLb)]

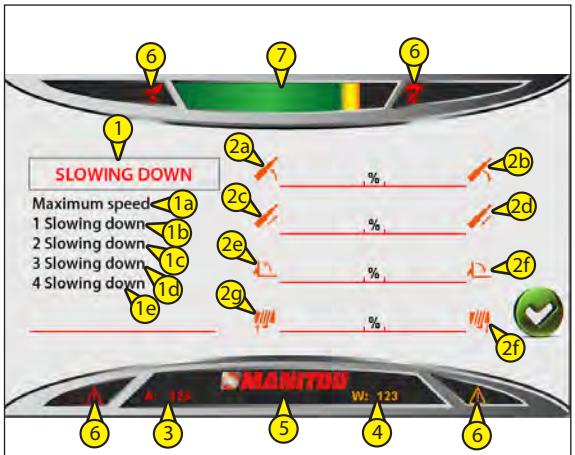
SLOWING PAGE (F3)

Is possible to save five working systems:

1. Slowing down (1, 📷 2 - 10):
   - Maximum speed (100%) (1a, 📷 2 - 10)
   - 1 Slowing down (1b, 📷 2 - 10)
   - 2 Slowing down (1c, 📷 2 - 10)
   - 3 Slowing down (1d, 📷 2 - 10)
   - 4 Slowing down (1e, 📷 2 - 10)

It is possible to set the maximum speed of hydraulic movement control:
- maximum ascent speed of telescopic boom (2a, 📷 2 - 10)
- maximum descent speed of telescopic boom (2b, 📷 2 - 10)
- maximum extension speed of telescopic boom (2c, 📷 2 - 10)
- maximum retraction speed of telescopic boom (2d, 📷 2 - 10)
- maximum speed of load tilt upwards (2e, 📷 2 - 10)
- maximum speed of load tilt downwards (2f, 📷 2 - 10)
- maximum speed of attachment movement control: ascent, clockwise rotation, to the RH, upward tilt (depending on the attachment installed) (2g, 📷 2 - 10)
- maximum speed of attachment movements control: descent, anticlockwise rotation, to the LH, downward tilt (depending on the attachment installed) (2h, 📷 2 - 10)

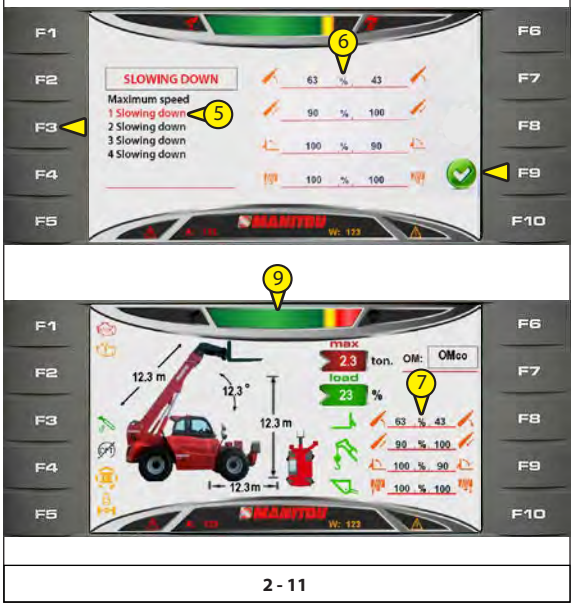
The maximum speed of hydraulic movement control is expressed in percentage: from 0 to 100 % .



2 - 10



To select a working system
- Push the "F3" key to open the "Slowing page" (📷 2 - 11)
- Push the "Scroll" key (1, 📷 2 - 11) to select the "Slowing down" working system (8 📷 2 - 11,)
- Push "F9" key to confirm the selection of the "Slowing down" working system (📷 2 - 11).
  Automatically will open the "Working page" (9, 📷 2 - 11) with "Slowing down" working system selected (7, 📷 2 - 11).



2 - 11

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

To set and save the "1 Slowing down" working system (example)

- Push the "Scroll" keys (1, 📷 2 - 12) to select the "1 Slowing down" working system (3, 📷 2 - 12) and setting area are shown (4, 📷 2 - 12).
- Push the "F8" key (📷 2 - 12) to select the hydraulic movement to be set. Near the hydraulic movement a black cursor lights up (5, 5a, 📷 2 - 12).
- Push the "Scroll" keys (1, 📷 2 - 12) to set the percentage (3, 📷 2 - 11) of maximum speed of hydraulic movement control.
- Repeat these steps for each hydraulic movement to be set.
- Push "F9" key to save the settings (3, 📷 2 - 11). The "Working page" automatically opens (9 📷 2 - 11,) and the settings for the "1 Slowing down" working system are shown (7, 📷 2 - 11).

To delete the "1 Slowing down" working system from memory (example)

- Push the "F3" key to open the "Slowing page" (📷 2 - 12)
- Push the "Scroll" key (1, 📷 2 - 12) to select the "1 Slowing down" working system (3, 📷 2 - 12)
- Push "F8" key to access the settings (5a, 📷 2 - 12)
- Push the key "F7" (📷 2 - 12) to delete the settings (6, 📷 2 - 12) for the"1 Slowing down" working system (3, 📷 2 - 12).

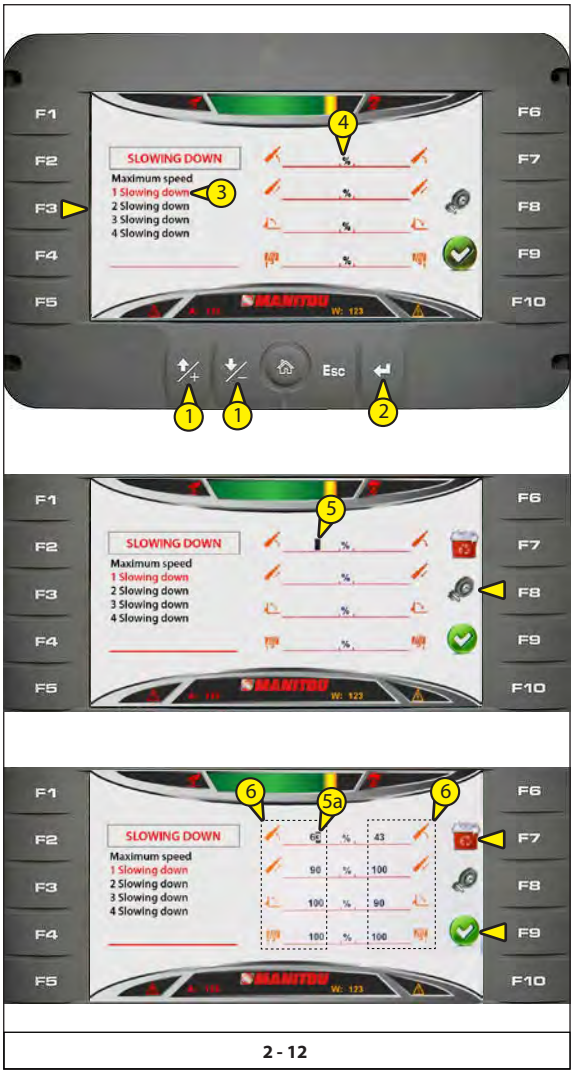
2. Coloured bar indicating the load conditions (7, 📷 2 - 10)
3. Machine alarm code* (3, 📷 2 - 10) is displayed in normal operating conditions
4. Machine warning code* (4, 📷 2 - 10) is displayed in normal operating conditions
5. Messages area (5, 📷 2 - 10)
6. Warning and indicator lamps (6, 📷 2 - 10)

Symbol overview:

	“emergency stop” red button
	safety system exclusion
	warning / alarm
	confirm or save settings
	select settings
	delete settings into Slowing down
	ascent speed of telescopic boom orange indicator
	descent speed of telescopic boom orange indicator
	extension speed of telescopic boom orange indicator
	retraction speed of telescopic boom orange indicator
	tilt speed of load upwards orange indicator
	tilt speed of load downwards orange indicator
	control speed of attachments orange indicator
	control speed of attachments orange indicator

(For more details: ◁ paragraph "Warning and indicator lamps").

*: Check the alarms or warnings types, referring to the display page “F5 - ALARM PAGE”.



2 - 12

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

SETTING PAGE (F4)

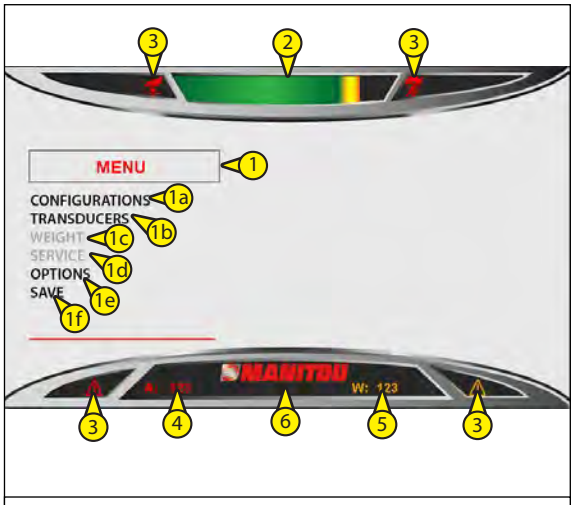
1. Menu screen (1, 📷 2 - 13):
   - Configurations (1a, 📷 2 - 13)
   - Transducers (1b, 📷 2 - 13)
   - Weight (1c, 📷 2 - 13) (only with password)
   - Service (1d, 📷 2 - 13) (only with password)
   - Options (1e, 📷 2 - 13)
   - Save (1f, 📷 2 - 13)
2. Coloured bar indicating the load conditions (2, 📷 2 - 13)
3. Machine alarm code* (4, 📷 2 - 13) is displayed in normal operating conditions
4. Machine warning code* (5, 📷 2 - 13) is displayed in normal operating conditions
5. Messages area (6, 📷 2 - 13)
6. Warning and indicator lamps (3, 📷 2 - 13)

Symbol overview:

	"emergency stop" red button
	safety system exclusion
	warning / alarm

(For more details: ◁ paragraph "warning and indicator lamps").

*: Check the alarms or warnings types, referring to the display page "F5 - ALARM PAGE".



2 - 13

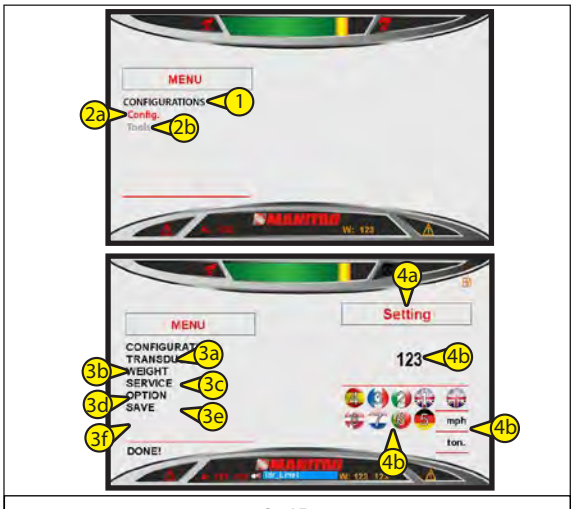
Configurations (1, 📷 2 - 14)

- Push the "Scroll" keys (1, 📷 2 - 14) to select "CONFIGURATIONS" (1a, 📷 2 - 14) and to access the settings:
  - Config. (2a, 📷 2 - 14)
  - Tools (only with password) (2b, 📷 2 - 14)

- Push the "Enter" key (3, 📷 2 - 14) to select "Config." and to access the functions list:
  - Language (3a, 📷 2 - 14)
  - Brightness (3b, 📷 2 - 14)
  - Speed Unit (3c, 📷 2 - 14)
  - Password 1 (only with password) (3d, 📷 2 - 14)
  - Password 2 (only with password) (3e, 📷 2 - 14)
  - Unit (only with password) (3f, 📷 2 - 14)
- Push the "Enter" key (3, 📷 13) to select one function (3, 📷 2 - 14) and to access the corresponding menu setting (4a, 📷 2 - 14)
- Push the "Scroll" keys (1, 📷 2 - 14) to set the number (4b, 📷 2 - 14) of the function in the setting menu (4a, 📷 2 - 14)
- Push the "Enter" key (3, 📷 2 - 14) to confirm the setting
- Push the "Home" key (4, 📷 2 - 14) to return the "Menu" screen (1, 📷 2 - 13)



2 - 14



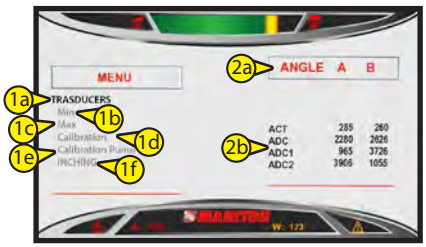
2 - 15

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

Transducers (1b, 📷 2 - 13)

(These settings can be used for machine diagnostics)

- Push the "Scroll" keys (1, 📷 2 - 14) to select "TRANSDUCERS" (1b, 📷 2 - 13) and to access the functions:
  - Transducers (1a, 📷 2 - 16)
  - Min (only with password) (1b, 📷 2 - 16)
  - Max (only with password) (1c, 📷 2 - 16)
  - Calibration (only with password) (1d, 📷 2 - 16)
  - Calibration pump (only with password) (1e, 📷 2 - 16)
  - INCHING (only with password) (1f, 📷 2 - 16)
- Transducers and sensor voltage (2a, 2b, 📷 2 - 16)



2 - 16

Options (1c, 📷 2 - 13)

- Push the "Scroll" keys (1, 📷 2 - 14) to select "OPTIONS" (1c, 📷 2 - 13) and to access the function:
  - Time setting (only with password) (1a, 📷 2 - 17)
  - Machine settings (only with password) (1b, 📷 2 - 17)
  - Tyre size (only with password) (1c, 📷 2 - 17)
  - Hours zeroing (1d, 📷 2 - 17)

- Push the "Enter" key (3, 📷 2 - 14) to select "Hours zeroing" (1d, 📷 2 - 17)
- Push the "Home" key (4, 📷 2 - 14) to return the "Menu" screen (1, 📷 2 - 13)



2 - 17

Save (1d, 📷 2 - 13)

- Push the "Scroll" keys (1, 📷 2 - 14) to select "SAVE" (1a, 📷 2 - 13) and push "Enter" key (3, 📷 2 - 14) to confirm the saving of settings.

ALARM PAGE (F5)

The indicators with the red light on the central unit or the component indicate an error or an anomaly.

1. Warning list °(1, 📷 2 - 18)
   Example: 123 [code warning] LMI_TXTAL1 [description warning]
2. Alarm list ° (2, 📷 2 - 18)
   Example: 123 [code alarm] LMI_TXTAL1 [description alarm]
3. Messages area (3, 📷 2 - 18)
   - Attention, telehandler alarm (4, 📷 2 - 18).
   - Telehandler alarms code (5, 📷 2 - 18).
   - Telehandler warnings code (6, 📷 2 - 18).
   - Red warning lights (7, 📷 2 - 18)

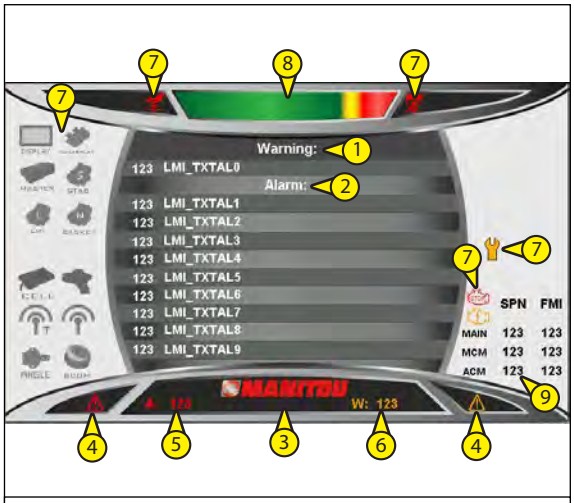
   Symbol overview:

DISPLAY	DISPLAY, display in cab
IO-CORE	IO-CORE, control unit to control the voltage 12
MASTER	MASTER, control unit frame
STAB	STABILIZERS control unit
LMI	LMI load limiter control unit **("LMI" safety system type)**
MASTER	BASKET control unit **(optional)**
CEL	CEL, strain gauge **("STRAIN GAUGE" safety system type)**
	joystick
T	acknowledgement of attachment **(optional)**
	radio remote controls **(optional)**
ANGLE	load limiter angle sensor
BOOM	load limiter winder on BOOM **("LMI" safety system type)**
	I.C. engine malfunctions
STOP	I.C. engine stop
	service
	"emergency stop" red button
	safety system exclusion
	warning / alarm

(For more details: ◁ paragraph "Warning and indicator lamps").

4. Coloured bar indicating the load conditions (8, 📷 2 - 18)
5. Engine units errors codes (9, 📷 2 - 18)

°: For more details: ◁ chapter 5 -"Machine anomalies"



2 - 18

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

6- SELECTOR TO DISABLE THE LOAD LIMITER

IThe load limiter can be manually deactivated only in exceptional cases and for reasons of safety.

When the load limiter is deactivated, the operator and the telehandler are exposed to risks and there is nothing to prevent overloads and/or the telehandler overturning.

KEY SELECTOR OR BUTTON SELECTOR

(Second equipment)

To disable the load limiter, the operator must turn a key selector (2, 📷 2 - 19) or keep pressed the button selector (4, 📷 2 - 19) in the cab.

The key (3, 📷 2 - 19) is kept inside a safety box (4, 📷 2 - 19) placed behind the driver's seat.

The key selector (2, 📷 2 - 19) or button selector (4, 📷 2 - 19) has two positions "1" and "0":

- position "1": the load limiter is activated;
- position "0": the load limiter is deactivated.

During normal use, the key selector (2, 📷 2 - 19) or button selector (4, 📷 2 - 19) is in position "1", so the load limiter is activated.

When the safety system is disabled, enable it automatically:

- a red warning light on the control panel display
  (For more details: paragraph "Warning and indicator lamps").
- an alarm sound,

to warn the driver and other persons who may be present outside the vehicle of a potentially dangerous situation.

When the safety system is disabled, all the telehandler movements are restricted to 15% of their maximum speed.



2 - 19

7- KEYPAD

The keypad (11, 📷 2 - 22) is located in the cab on the armrest (10, 📷 2 - 22).



2 - 21

KEY FUNCTIONS

1. Parking brake key (1, 📷 2 - 22)
2. Telescopic jib hydraulic movement stop key (2, 📷 2 - 22)
3. Speed selector (slow-fast gear) (3, 📷 2 - 22)
4. 2nd and 3rd line selector option (4, 📷 2 - 22)
5. Steering type selector (5, 📷 2 - 22)
6. Working mode selector (6, 📷 2 - 22)
7. Attachment control disconnect key (7, 📷 2 - 22)
8. 'Optional' key for easy hydraulic attachment connection (8, 📷 2 - 22).

PARKING BRAKE

The parking brake acts on the front and rear axle.
To engage the parking brake, press the key (1, 📷 2 - 22). A red warning light will turn on the display (◁ paragraph: "Instrument control panel, Driving page F1") and on the keypad, a red LED comes on.
To engage the parking brake, press the key (1, 📷 2 - 22). The red warning light will switch off on the display (◁ paragraph: 'Instrument control panel, Driving page F1').

When you start the telehandler, the parking brake is engaged and, to disengage it, press the parking brake key (1, 📷 2 - 22). If the parking brake is disengaged manually, in some conditions, the emergency brake is activated automatically.
The emergency brake insertion conditions are:

- the operator is not present on the driver's seat,
- the gear selector is in neutral position for several seconds,
- the accelerator pedal is released,
- the moving speed of the telehandler is less than 3.6 km/h (2.23 mph).

The automatic emergency brake is disabled if the gear switch is engaged and the rpm are accelerated by pressing on the gas pedal.

TELESCOPIC JIB HYDRAULIC MOVEMENT STOP KEY

While travelling on roads, it is advisable (compulsory in Italy and Germany) to stop all hydraulic movements of the telescopic jib.
Press key (2, 📷 2 - 22) to stop (a red LED comes on on the keypad) or activate (a green LED comes on on the keypad) the hydraulic movements.
On the display, the indicator lights up, indicating that the movements are stopped or are available for use (◁ paragraph: 'Instrument control panel, Driving page F2').

SPEED SELECTOR (SLOW-FAST GEAR)

The machine can run at two speeds (◁ 3, 📷 2 - 22):

- Slow (work site speed)
- Fast (for road travel)

To change the speed, follow the instructions given below:

- stop vehicle movement completely
- keep the I.C. engine running at minimum speed
- set the forward or reverse gear in idle
- push the brake pedal down
- by pressing "slow gear", the tortoise symbol comes on on the display (◁ paragraph: 'Instrument control panel, Driving page F1'), an orange LED comes on on the keypad and the machine travels at a low speed;
- by pressing "fast gear", the hare symbol comes on on the display (◁ paragraph: 'Instrument control panel, Driving page F1'), a red LED comes on on the keypad and the machine travels at a high speed;

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

2nd AND 3rd LINE SELECTOR OPTION (depending on machine)

The selector (◁ 4, 📷 2 - 22) is used for switching the hydraulic control, which carries out two or three hydraulic movements using the attachment.

Depending on the machine, select the 2nd and 3rd option by pressing the key (◁ 4, 📷 2 - 22).

Each time the key is pressed, the following is selected:

1. optional output direct line (LEDs off on keypad)
2. 2nd line option (orange LED comes on on the keypad)
3. 3rd line option (red LED comes on on the keypad)

On the display, the indicator light indicates the 2nd and 3rd optional output available for use (◁ paragraph: 'Instrument control panel, Driving page F2').

When you switch on the telehandler, the instrument control panel recalls the last output option selected.

STEERING WHEEL TYPE KEY

To select one of the three steering options available, press the key (◁ 5, 📷 2 - 22) as follows, each press on their key selects:

1. front and rear wheel steering (orange LED comes on on the keypad)
2. front wheel steering (orange LED comes on on the keypad)
3. wheels in angled position, crab steering lock (red LED comes on on the keypad).

On the display, the indicator lights indicate the selected steering option (◁ paragraph: 'Instrument control panel, Driving page F1').

Before selecting a type of steering, check the rear and front wheel alignment (◁ paragraph: "Warning and indicator lamps").

WORKING MODES KEY

Press key (6, 📷 2 - 20) to select the working mode depending on the type of accessory installed:

A - "HANDLING" MODE
B - "BUCKET" MODE
C - "SUSPENDED LOAD" MODE

A - "HANDLING" MODE

Use on forks (TFF, PFB, TDL, etc.)., and adjustable accessories on forks.

- By default, the device is in "HANDLING" MODE when the telehandler is started-up, except if the "SUSPENDED LOAD" MODE has been selected before shutting-down the engine.
- Press the key (6, 📷 2 - 20), the "HANDLING" MODE is confirmed with an audible beep and the lamp on the display switches on (◁ paragraph: "INSTRUMENT CONTROL PANEL").

B - "BUCKET" MODE

Use with a bucket (CB, CBA, CBC, CBG, CBR, etc.).

- Place the telehandler in the transport position.
- Press the key (6, 📷 2 - 20) for 2 seconds, the "BUCKET" MODE is confirmed with an audible beep and the lamp on the display switches on (◁ paragraph: "Instrument control panel").
- The machine returns to "HANDLING" MODE by pressing the key, or in case of loss of driver presence for a few seconds, or shutting down the engine.

C - "SUSPENDED LOAD" MODE

Use with crane jib (P, PC, PT...).

- Place the telehandler in the transport position.
- Press the key (6,2 - 20) for 2 seconds, "SUSPENDED LOAD" MODE is validated with an audible beep and the lamp on the display switches on (◁ paragraph: "Instrument control panel").
- Return to "HANDLING" MODE by pressing the key

Movements permitted depending the working modes
Telehandler controlled from cab (operating mode: on stabilizer and on wheels)

"HANDLING" MODE
- Working condition:

Movement	Status
Lifting telescopic boom	✓
Lowering telescopic boom	✓
Extending telescopic boom	✓
Retracting telescopic boom	✓
Backward tilting accessory	✓
Forward tilting accessory	✓
Optional 1	✓
Optional 2	✓

✓: allowed
✗: not allowed

- Overturning condition:

Movement	Status
Lifting telescopic boom (contemporary only retracting telescopic boom)	✓
Lowering telescopic boom	✗
Extending telescopic boom	✗
Retracting telescopic boom	✓
Backward tilting accessory	✗
Forward tilting accessory	✗
Optional 1	✗
Optional 2	✗

✓: allowed
✗: not allowed

- The actuation of the anti-overturning system bypass key allows to rearm of movements for 30 seconds
- The open door does not stop the movements
- Every movement is allowed with the telescopic boom retracted and the overturning system bypassed
- With "STRAIN GUAGE" security system type : when the lifted load exceeds 120%, the safety system cuts the power of the lifting telescopic boom (this action can be performed simultaneously with a movement of telescopic boom retraction)
- With "LMI" security system type: when the lifted load exceeds 100%, the safety system cuts the power of the lifting telescopic boom (this action can be performed simultaneously with a movement of telescopic boom retraction).

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

"BUCKET" MODE

- Working condition:

Movement	Status
Lifting telescopic boom	✓
Lowering telescopic boom	✓
Extending telescopic boom	✓
Retracting telescopic boom	✓
Backward tilting accessory	✓
Forward tilting accessory	✓
Optional 1	✓
Optional 2	✓

✓: allowed
×: not allowed

- Overturning condition:

Movement	Status
Lifting telescopic boom	✓
Lowering telescopic boom	×
Extending telescopic boom	×
Retracting telescopic boom	✓
Backward tilting accessory	✓
Forward tilting accessory	✓
Optional 1	✓
Optional 2	✓

✓: allowed
×: not allowed

- The actuation of the anti-overturning system bypass key allows to rearm of movements for 30 seconds
- The open door does not stop the movements
- Every movement is allowed with the telescopic boom retracted and the overturning system bypassed
- With "STRAIN GUAGE" security system type : when the lifted load exceeds 120%, the safety system cuts the power of the lifting telescopic boom (this action can be performed simultaneously with a movement of telescopic boom retraction)
- With "LMI" security system type: when the lifted load exceeds 100%, the safety system cuts the power of the lifting telescopic boom (this action can be performed simultaneously with a movement of telescopic boom retraction).

"SUSPENDED LOAD" MODE

- Working condition:

Movement	Status	
Lifting telescopic boom	✓	
Lowering telescopic boom	✓	
Extending telescopic boom	✓	
Retracting telescopic boom	✓	
Backward tilting accessory	×	✓:below 10°
Forward tilting accessory	×	✓:below 10°
Optional 1	✓	
Optional 2	✓	

✓: allowed
×: not allowed

- Overturning condition:

Movement	Status	
Lifting telescopic boom	✓	
Lowering telescopic boom	×	
Extending telescopic boom	×	
Retracting telescopic boom	✓	
Backward tilting accessory	×	
Forward tilting accessory	×	✓:below 10°
Optional 1	×	
Optional 2	×	

✓: allowed
×: not allowed

- The actuation of the anti-overturning system bypass key allows to rearm of movements for 30 seconds
- The open door does not stop the movements
- Every movement is allowed with the telescopic boom retracted and the overturning system bypassed
- With "STRAIN GUAGE" security system type : when the lifted load exceeds 120%, the safety system cuts the power of the lifting telescopic boom (this action can be performed simultaneously with a movement of telescopic boom retraction)
- With "LMI" security system type: when the lifted load exceeds 100%, the safety system cuts the power of the lifting telescopic boom (this action can be performed simultaneously with a movement of telescopic boom retraction).

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

ACCESSORY CONTROL DISCONNECT KEY

Press key (8, 📷 2 - 22) to activate or deactivate the accessory roller button (2, 📷 2 - 22) on the joystick in the cab (1, 📷 2 - 22).

On the control panel, the indicator lights indicates that the accessory control is disconnected or activated (◁ paragraph:"Instrument control panel").



2 - 22

'OPTIONAL' KEY FOR EASY HYDRAULIC ATTACHMENT CONNECTION "ECS"

For easy attachment connecting and disconnecting.

Press the 'OPTIONAL' key (8, 📷 📷 2 - 21) to release the hydraulic pressure from the attachment direct line on the telescopic boom (this function is activated only for the attachment hydraulic line on the telescopic boom).

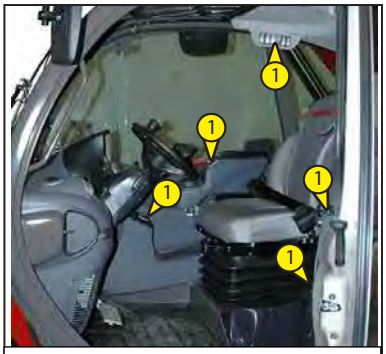
On the key (8, 📷 📷 2 - 21), the green LED comes on to indicate the function is active.

Connect or disconnect the rapid connectors of the hydraulic attachment (◁: Chapter 4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE: PICKING UP THE ATTACHMENTS).

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

8- SWITCHES

The location of the switches may vary depending on the options (1, 📷 2 - 23).



2 - 23

HAZARD WARNING LIGHTS BUTTON

This button (📷 2 - 24) allows the L.H. and R.H. indicators to be switched on simultaneously, with the ignition off.
The red button lights up when pressed.
NOTE: except in case of emergency, it is advised to disable the hazard warning lights when the ignition is switched off to avoid a flat battery.



2 - 24

REAR FOG LIGHT SWITCH

This switch (1 📷 2 - 25,) activates a special light located in the rear of the telehandler to aid with machine identification in foggy conditions.
On the switch, the led comes on to indicate that the function is active (2, 📷 2 - 25).
On the control panel, the yellow indicator light indicates that the function is active (◁ 5- CONTROL PANEL AND LOAD LIMITER "HMI", 🕮 2-24).

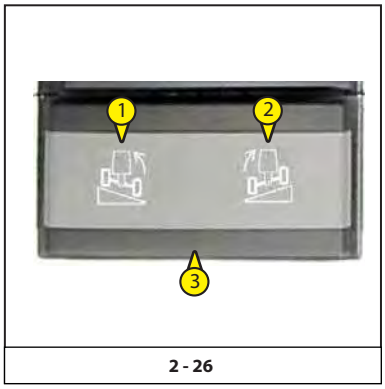


2 - 25

CHASSIS LEVELLING SWITCH

This switch (3, 📷 2 - 26) controls the transverse levelling of the telehandler.
To carry out levelling operations, press the switch (1, 📷 2 - 26) on the left to incline the telehandler to the left. Push the switch (2, 📷 2 - 26) on the right to incline the telehandler to the right.
To make the telehandler perfectly horizontal, check the bubble level (1, 📷 2 - 27).
The levelling operation is allow when:

- in working configuration on wheels (◁ F2 - WORKING PAGE, 🕮 2-28)
- if the angle of the telescopic boom is lower than 13° (◁ F2 - WORKING PAGE, 🕮 2-28).



2 - 26

The telehandlers are provided with a device for levelling the chassis in relation to the ground in order to allow the levelling of the telehandler and therefore the lifting of the boom to the maximum height in complete safety and stability.
This device allows to correct the level by 8° to the right and 8° to the left.

Use of the device

Checking the bubble level (1, 📷 2 - 27) meant for the purpose, level the telehandler before lifting and extending the boom.
If the telehandler is not levelled, lower the boom and repeat the levelling operation.

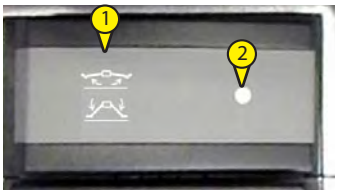


2 - 27

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

STABILIZER SWITCH

This switch (1, 📷 2 - 28) enables the stabilizers movements (📷 2 - 28).
Keep the switch pressed (1, 📷 2 - 28) and move the joystick (J, 📷 2 - 28) to operate the stabilizers.
On the switch, the led comes on to indicate that the function is active (2, 📷 2 - 28).



2 - 28

General movement of stabilizers:

1. ascent or descent simultaneously
2. levelling

The speed of movement of stabilizers changes according to the condition of use:

Condition	Control	Percentage of speed
stabilizers on the ground	ascent or descent simultaneously	100%
stabilizers not on the ground	ascent or descent simultaneously	55%
stabilizers on the ground	levelling	60%
stabilizers not on the ground	levelling	45%

Conditions for stabilizers leveling:

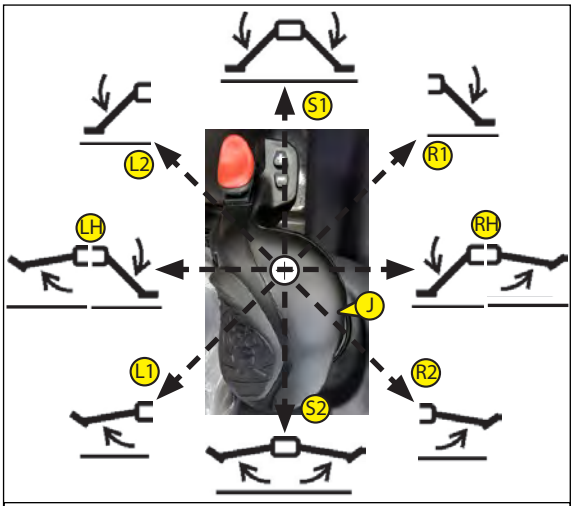
- are allowed to lift or lower the stabilizers only if the telescopic boom measure an angle less than 13°,
- are allowed to lift the stabilizers only with the telescopic boom completely retracted,
- are allowed to lift or lower the stabilizers only the driver is seating,
- any movement of the stabilizers is allowed with the overturning system bypassed.

Joystick movements

1. Simultaneous ascent or descent of stabilizers:
   - descent: move the joystick (S1, 📷 2 - 29) forwards,
   - ascent: move the joystick (S2, 📷 2 - 29) backwards,

2. Ascent or descent of a stabilizer:
   - move the joystick (J, 📷 2 - 29) at the same time to the left and backwards or forwards (L1 or L2, 📷 2 - 29) to lower or lift the left stabilizer,
   - move the joystick (J, 📷 2 - 29) at the same time to the right and backwards or forwards (L1 or L2, 📷 2 - 29) to lower or lift the right stabilizer.

3. Levelling of stabilizers:
   - move the joystick (J, 📷 2 - 29) to the left (LH, 📷 2 - 29): the left stabilizer lowers and the right stabilizer lifts,
   - move the joystick (J, 📷 2 - 29) to the right (RH, 📷 2 - 29): the right stabilizer lowers and the left stabilizer lifts.



2 - 29

To enable and carry out the movements, keep the manoeuvre enabling button (OK) on the joystick (1, 📷 2 - 31) pressed.
(Depending on the telehandler model)

TRANSMISSION RESET SWITCH
In normal operating conditions the function is off.

If the forward or reverse gear (1, 📷 2 - 31) does not engage, follow the instructions given below:

- a blue indicator lights up on the control panel (◁paragraph: "Instrument control panel")
- position the forward/backward movement selector in the neutral position (N, 📷 2 - 31)
- release the pressure from the brake pedal
- press the switch (2, 📷 2 - 30)
- a blue indicator turns off
- position the forward/backward movement selector in the required position (F or R, 📷 2 - 31)
- slowly and gradually accelerate the engine until the telehandler starts moving
- release the switch (2, 📷 2 - 30)

On the switch (2, 📷 2 - 30) the led comes on (1, 📷 2 - 30) to indicate that the function is active.
These indications must be followed for the proper working of the transmission.



2 - 30



2 - 31

ROTATING BEACON LIGHT SWITCH
This switch (2, 📷 2 - 32) controls the operation of the rotating beacon light.
On the switch (2, 📷 2 - 32) the led comes on (1, 📷 2 - 32) to indicate that the function is active.

NOTE: except in case of emergency, it is advised to disable the rotating beacon light when the ignition is switched off to avoid a flat battery.

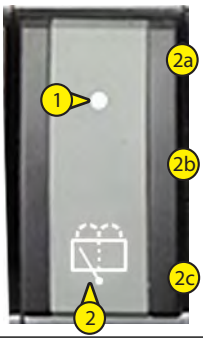


2 - 32

CAB ROOF WIPER AND WASHER SWITCH
This switch (2, 📷 2 - 33) sprays a cleaning liquid on the cab roof and uses the wiper to clear the liquid from the cab roof.
The switch (2, 📷 2 - 33) has three positions:

- deactivated (2a, 📷 2 - 33);
- for window wiper (2b, 📷 2 - 33);
- for window washer (2c, 📷 2 - 33). To deactivate the window washer, just release the switch.

On the switch (2 📷 2 - 33,) the led comes on (1, 📷 2 - 33) to indicate that the function is active.



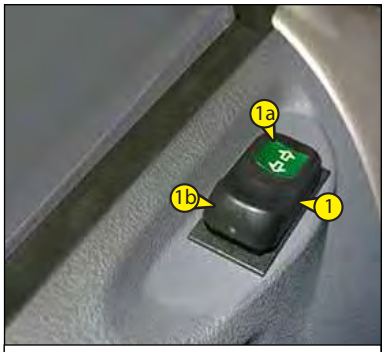
2 - 33

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

WINDOW LIFT (POWER-OPERATED) SWITCH

This switch (1, 📷 2 - 34) activates the control that raises or lowers the cab door window using a powered mechanism.

- Opening the window.
  - Press the switch forward (1a, 📷 2 - 34) and keep it pressed until the window has moved to the desired position.
  - Press the switch forward (1a, 📷 2 - 34) and keep it pressed until the window will open all the way.
- Closing the window
  - Press the switch back (1b, 📷 2 - 34) and keep it pressed until the window has moved to the desired position.
  - Press the switch back (1b, 📷 2 - 34) and keep it pressed until the window will close all the way.

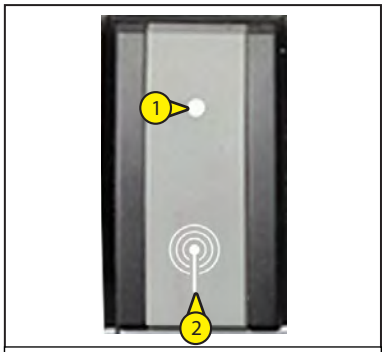


2 - 34

OPTIONAL FUNCTIONS SWITCHES

RADIO REMOTE CONTROL SWITCH

This switch (2, 📷 2 - 35) activates the radio remote control.
On the switch (2, 📷 2 - 35) the led comes on (1, 📷 2 - 35) to indicate that the function is active.
On the control panel, the green indicator light indicates the active function (◁ paragraph: "Instrument control panel").



2 - 35

EMERGENCY PUMP SWITCH

This switch (1, 📷 2 - 36) activates the emergency pump.
The switch has two positions with safety block:

- press on (1a, 📷 2 - 36) the engine safety pump is disabled,
- press on (1b, 📷 2 - 36) the engine safety pump is enabled.

To deactivate the control, switch from pressing (1b, 📷 2 - 36) to pressing (1a, 📷 2 - 36), release the safety block (2, 📷 2 - 36) and press the switch.

For more information on the control, see the "Platform User Manual".

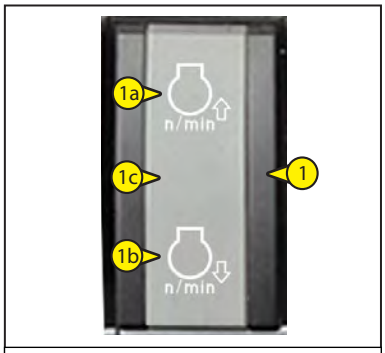


2 - 36

ELECTRIC ACCELERATOR SWITCH

The function of the switch (1, 📷 2 - 37) is to electrically increase or decrease the I.C. engine rpm.
The switch has two positions:

- pressing (1a, 📷 2 - 37) will cause the I.C. engine to accelerate gradually,
- deactivated (1c, 📷 2 - 37),
- pressing (1b, 📷 2 - 37) will cause the I.C. engine to decelerate gradually.



2 - 37

ENGINE BRAKE SWITCH

MHT 1490
MHT 10130

The engine brake decelerates the telehandler without using mechanical friction in order to avoid the overheating of the brake system.
This brake is mainly used during long descents, and it allows to brake the vehicle without stressing the brakes.

Press switch (2, 📷 2 - 38) to enable or disable the engine brake.
On the control panel, an orange indicator light indicates that the function is active (◁ paragraph: "Instrument control panel").

On the switch (2, 📷 2 - 38), the LED switches on (1, 📷 2 - 38) to indicate that the function is active.

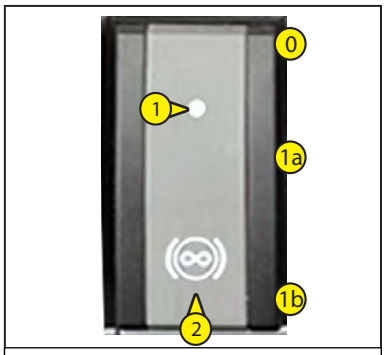
The engine brake allows two stages of deceleration (0, 1a, 1b, 📷 2 - 38), a low and an intense one.

Operating conditions of the engine brake.
The engine brake works only if:

- the engine water temperature is > 60°C
- the accelerator pedal is not pressed
- the revs of the I.C. engine are > 1100 rpm.

IMPORTANT! In order to maintain the braking power of the engine brake, the speed shall not exceed 42 km/h. If required, slow down the machine by pressing the service brake pedal.

If the speed of the machine exceeds 42 km/h, the driver will be warned by an alarm sound and by an optical signal "BRAKE" on the tachometer.



2 - 38

ENGINE BRAKE SWITCH

MHT-X 1490
MHT-X 10130

The engine brake decelerates the telehandler without using mechanical friction in order to avoid the overheating of the brake system.
This brake is mainly used during long descents, and it allows to brake the vehicle without stressing the brakes.

Press switch (2, 📷 2 - 39) to enable or disable the engine brake (0, 1a, 📷 2 - 39).

On the control panel, an orange indicator light indicates that the function is active (see paragraph: "Instrument control panel").

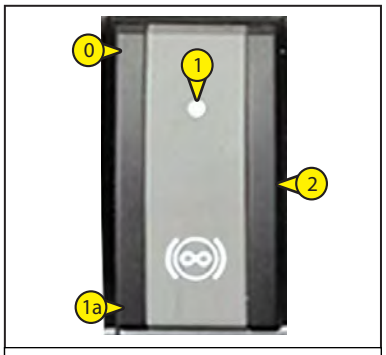
On the switch (2, 📷 2 - 39), the LED switches on (1, 📷 2 - 39) to indicate that the function is active.

Operating conditions of the engine brake.
The engine brake works only if:

- the engine water temperature is > 60°C
- the accelerator pedal is not pressed
- the revs of the I.C. engine are > 1100 rpm.

IMPORTANT! In order to maintain the braking power of the engine brake, the speed shall not exceed 42 km/h. If required, slow down the machine by pressing the service brake pedal.

If the speed of the machine exceeds 42 km/h, the driver will be warned by an alarm sound and by an optical signal "BRAKE" on the tachometer.



2 - 39

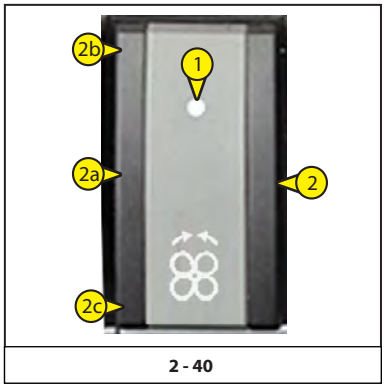
FANS ROTATION INVERSION TIMED CONTROL SWITCH

The 3-position switch (2, 📷 2 - 40) can by activated to invert the rotation of the radiator fan for a few seconds.
On the switch (2, 📷 2 - 40) the led comes on (1, 📷 2 - 40) to indicate that the function is active.
On the control panel, the green indicator light indicates the active function (◁ paragraph: "Instrument control panel").

In this situation, the direction of fan rotation is alternated periodically.
- When the switch is pressed (2a, 📷 2 - 40) the fan rotation inversion function is activated.
- When the switch is pressed (2b, 📷 2 - 40) the fan rotation inversion function is deactivated.
- When the switch is in position (2c, 📷 2 - 40) the fan rotation inversion function is forced.
  When the switch is released, the fan rotation inversion timed control is reset.

The switch can also be activated with the telehandler running.

IMPORTANT
When the telehandler is travelling on roads,
the fan rotation inversion system must be deactivated [switch pressed in position (2c, 📷 2 - 40)] .



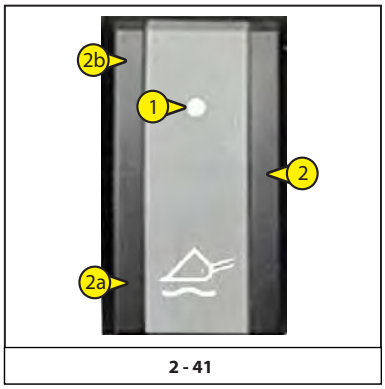
2 - 40

BOOM SUSPENSION SWITCH

The boom is suspended to reduce the shaking of the telehandler on rough ground (e.g. when moving straw in a field).
The switch (2, 📷 2 - 41) has two position.
On the switch (2, 📷 2 - 41) the led comes on (1, 📷 2 - 41) to indicate that the function is active.
On the control panel, the green indicator light indicates the active function (◁ paragraph: "Instrument control panel").
Operation:
- place the forks or the attachment on the ground and lift the front wheels just a few centimetres.
- press switch set to position (2a, 📷 2 - 41), the visual indicator comes on indicating that the boom suspension is activated.
- press switch set to position (2b, 📷 2 - 41), the visual indicator goes out indicating that boom suspension is deactivated.

The boom suspension is active up to a lifting height of 3 m from the axis of articulation of the carriage with respect to the ground, when the boom retracted. When you move beyond this height or make another hydraulic movement (tilting, telescoping, attachment), boom suspension is momentarily deactivated and the visual indicator of switch 1 goes out.

- When the I.C. engine is switched off, the boom suspension is automatically deactivated.



2 - 41

HYDRAULIC ATTACHMENT BLOCK SWITCH

Precautions to be taken if the machine is provided with the "hydraulic attachment block" device.

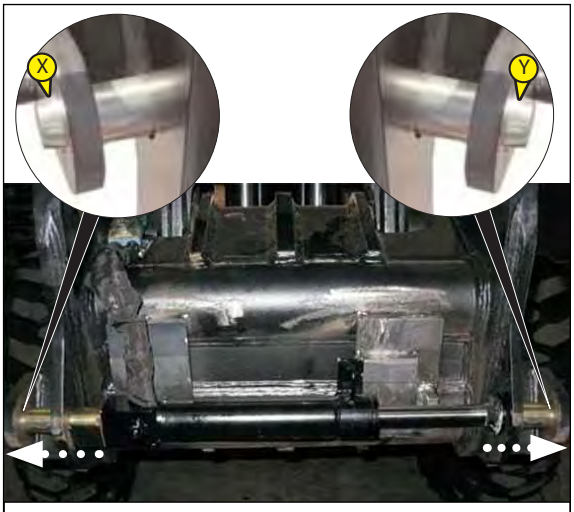
This electronically controlled hydraulic device allows the operator to block/release an attachment from the driving position.
The device activates two pins (X, Y, 2 - 34) which move horizontally acting on the quick-release coupling from the outside (blocking the attachment) and from the inside (releasing the attachment).
To lock the attachment, the two check pins must come completely out of the quick-release coupling (X, Y, 2 - 34)

To select the "hydraulic attachment locking" device , the operator must press the "2nd and 3rd line selector option" on keypad (1, 2 - 35).

The operator can activate two pins (X,Y, 2 - 34) and lock/release the attachment the by pressing the optional rocker button (4, 2 - 35) on the joystick (3, 2 - 35).
Push the optional rocker button (4, 2 - 35) forward to release the attachment and backward to lock it.

By press the "2nd and 3rd line selector option" (1, 2 - 35), the operator deactivates the hydraulic locking control and and resets the standard controls of the optionals.

If the installed equipment is fitted with hydraulic connections, connect them to the arm quick-release fitting with the I.C. engine switched off (Chapter 4: OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE: PICKING UP THE ATTACHMENTS).



2 - 42





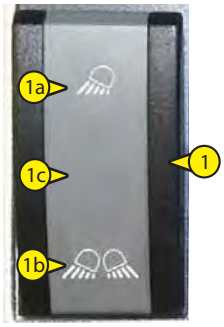
2 - 43

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

CAB FRONT AND REAR WORK LIGHTS SWITCH

This switch (1, 📷 2 - 44) controls the operation of the front and rear work lights.
The switch (1, 📷 2 - 44) has three positions:

- front work lights (1a, 📷 2 - 44);
- deactivated (1c, 📷 2 - 44);
- front and rear work lights (1b, 📷 2 - 44).



2 - 44

BOOM HEAD WORK LIGHTS SWITCH

This switch (2, 📷 2 - 45) controls the operation of the boom head work lights.
On the switch (2 📷 2 - 45), the led comes on (1, 📷 2 - 45) to indicate that the function is active.



2 - 45

REAR WINDOW DEMISTING AND DEFROSTING SWITCH

This switch (2, 📷 2 - 46) activates the control that distributes a low electrical current to the rear window to facilitate frost, fog and mist removal.
On the switch (2, 📷 2 - 46) the led comes on (1, 📷 2 - 46) to indicate that the function is active.



2 - 46

LATERAL WINDOW WASHER AND WIPER SWITCH

This switch (2, 📷 2 - 47) activates the control which, in turn, activates the lateral wiper and dispenses washing fluid, initiating a sweeping motion and the spraying of the fluid to clear the side window.
This switch (2, 📷 2 - 47) activates the control that distributes a low electrical current to the rear window to facilitate frost, fog and mist removal.
On the switch (2, 📷 2 - 47) the led comes on (1, 📷 2 - 47) to indicate that the function is active.



2 - 47

BOOM HEAD ELECTRICAL POWER SWITCH

This switch (2, 📷 2 - 40) controls the operation of the boom head electrical power.
On the switch (2, 📷 2 - 40), the LED switches on (1, 📷 2 - 40) to indicate that the function is active.



2 - 48

OPERATING MODE IN CONTINUOS OF THE HYDRAULIC ATTACHMENTS

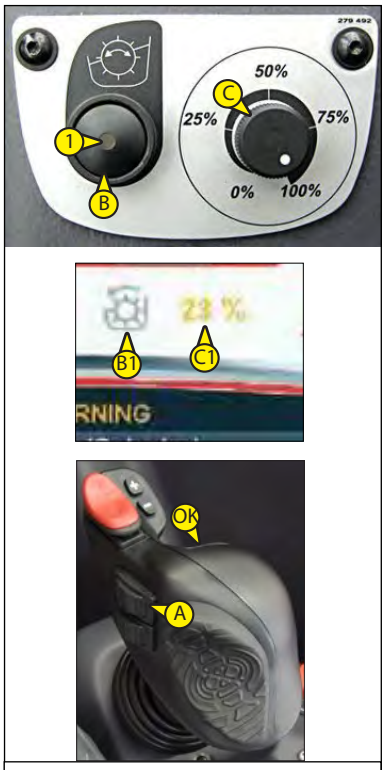
This OPTION must only be used with an attachment requiring continuous hydraulic movement, such as a brush, feeder bucket, mixer, spray etc. It is strictly forbidden for use in handling operations and all other applications (winch, crane jib, crane jib with winch, hook, etc.).

Continuous hydraulic movement of the attachment

- Check that potentiometer (C, 📷) is set to 0%.
- Switch button* (A, 📷) to the front or the back (depending on the type of attachment), press button (B, 📷) and release button (A, 📷). The red indicator (1, 📷) flashes to indicate that it is in operation.
- On the control panel in "F2-Working page" a orange indicator light up (B1, 📷) to indicate that function is active.
- Set the required flow rate using potetiometer (C, 📷). On the control panel in "F2-Working page" is displayed the setting (%).
- To stop continuous hydraulic movement of the attachment, move switch (C, 📷) forwards or backwards or press button (B, 📷). Indicator (1, 📷) goes out.
- Set potentiometer (C, 📷) to 0%. Never leave the driver's cab without resetting the potentiometer C to 0%. Before starting the telehandler, make sure the potentiometer is set to 0%.

NOTE: If the operator leaves the driver's cab, the continuous hydraulic movement will automatically stop and must be restarted.

*: Place a hand on the joystick, press the hydraulic movement consent button (OK, 📷) and perform the movement.

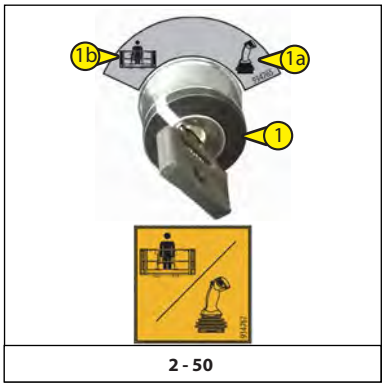


2 - 49

TELEHANDLER/PLATFORM SELECTOR SWITCH KEY (only with platform)

- Handling or platform operation from driver's cab controls (1, 📷 2 - 50).
- Platform operation from control console (2, 📷 2 - 50).

(For more details: 📢 the "Platform User Manual")



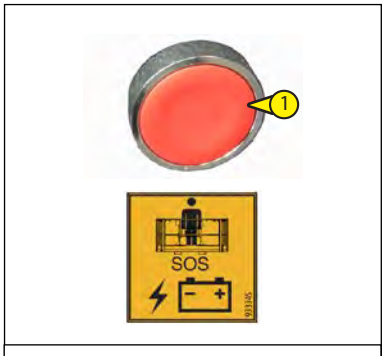
2 - 50

BUTTON FOR RESTORING ELECTRICAL POWER SUPPLY (only with platform)

If the "emergency stop" button is pressed from the basket, the supply of electricity from the battery is cut off and the I.C. engine switches off.

Keep button pressed (2, 📷 2 - 51) to restore the supply of electricity to the battery and make it possible to restart the I.C. engine

(For more details: 📢 the "Platform User Manual")



2 - 51

9- "EMERGENCY STOP" BUTTON

In case of emergency, press the mushroom-shaped red button (1, 2 - 52) to stop the I.C. engine of the telehandler.

On the control panel, the indicator light indicates the active function (◁ paragraph: "Instrument control panel").

Warning, hydraulic movements suddenly stop when using this button.
If possible, stop the telehandler before using the emergency stop.

Turn the button (1, 2 - 52) to disable it and to restart the telehandler.



2 - 52

INDICATOR LAMPS

POSITION LIGHTS

(For more details: ◁ paragraph "Lighting, horn and indicator lights lever")

	position lights are off
	position lights active green indicator light

LOW BEAMS

(For more details: ◁ paragraph "Lighting, horn and indicator lights lever")

	low beams are off
	low beams active green indicator light

HIGH BEAMS

(For more details: ◁ paragraph "Lighting, horn and indicator lights lever")

	high beams active blue indicator light

DIRECTION LIGHTS

(For more details: ◁ paragraph "Lighting, horn and indicator lights lever")

	direction lights are off
	direction lights active green indicator light

CAB DOOR

(For more details: ◁ paragraph "Driver's presence")

	telehandler door is closed
	telehandler door is not closed properly active red indicator light

FRONT WHEELS ALIGNMENT GREEN INDICATOR LIGHT

(For more details: ◁ the "Pushbutton panel" paragraph)

	front wheels alignment active green indicator light

Indicates the alignment of the front wheels in relation to the telehandler axis (♦).
When the wheels are aligned the indicator lights up.

REAR WHEELS ALIGNMENT YELLOW INDICATOR LIGHT

(For more details: ◁ the "Pushbutton panel" paragraph)

	rear wheels alignment active yellow indicator light

Indicates the alignment of the rear wheels in relation to the telehandler axis (♦).
When the wheels are aligned the indicator lights up.

(♦) **Front and rear wheels alignment procedure:**
turn the selector for the steering type to "concentric steering", turn the wheel so that the rear wheels alignment yellow indicator does not light up; then position the selector on "front steering" and turn the wheel so that the front wheels alignment green indicator does not light up.
When the front and rear wheels are aligned, one of the three steering modes mentioned above can be selected.
The wheels coordination may be lost with use; carry out realignment of the wheels every 20 hours of service by following the procedure described above.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

STEERING WHEEL TYPES

(For more details: ◁ the "Pushbutton panel" paragraph)

	front wheel steering active green indicator light
	concentric wheel steering active green indicator light
	crab steering active green indicator light

FAST GEAR

(For more details: ◁ the "Pushbutton panel" paragraph)

	gear engaged active green indicator light

SLOW GEAR

(For more details: ◁ the "Pushbutton panel" paragraph)

	gear engaged active green indicator light

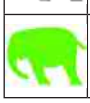
TRANSMISSION RESET

(For more details: ◁ the "Switches" paragraph)

	gear engaged
	gear not engaged active blue indicator light

HIGH TORQUE

(For more details: ◁ paragraph "High torque selectors")

	high torque disabled
	high torque active green indicator light

STOPPING TELESCOPIC BOOM HYDRAULIC MOVEMENTS

(For more details: ◁ the "Pushbutton panel" paragraph)

	telescopic boom hydraulic movements control stopped
	telescopic boom hydraulic movements control active green indicator light

REAR AXLE LOCKING

	rear axle locking is disabled
	rear axle locking active yellow indicator light

Rear axle locking is automatic and occurs only when:

- the telehandler is stabilized and the lifting angle of the telescopic boom is more than 15°.
- the lifting angle of the telescopic boom is less than 13°.

TELESCOPIC BOOM SUSPENSION(For more details: ◁ the "Switches" paragraph)

	telescopic boom suspension is disabled
	telescopic boom suspension active yellow indicator light

REVERSING RADIATOR FAN

(For more details: ◁ the "Switches" paragraph)

	reversing radiator fan is disabled
	reversing radiator fan active yellow indicator light

ATTACHMENT HYDRAULIC CONTROL DISCONNECT

(For more details: ◁ the "Pushbutton panel" paragraph)

	black indicator light indicates that the optional hydraulic movement is excluded

2ND OPTIONAL WORKING (OPTIONAL)

(For more details: ◁ the "Pushbutton panel" paragraph)

	2nd optional working active orange indicator

3RD OPTIONAL WORKING (OPTIONAL)

(For more details: ◁ the "Pushbutton panel" paragraph)

	3rd optional working

EXHAUST GAS AFTER-TREATMENT

	diesel exhaust fluid (DEF) blue level indicator
	yellow indicator: emissions-relevant malfunction of the exhaust gas after-treatment system or DEF supply
LIM	yellow indicator: machine speed or torque operating restriction

SERVICE

(For more details: see next paragraph "Warning lamps in alarm page": "Service")

	Service orange indicator light

ENGINE BRAKE (OPTIONAL)

(For more details: ◁ the "Switches" paragraph)

	engine brake disabled
	engine brake on green indicator light

REMOTE CONTROL (OPTIONAL)

(For more details: ◁ the "Switches" paragraph)

	remote control disabled
	remote control active green indicator light on

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

WARNING LAMPS

I.C. ENGINE SEVERE FAULT

If the indicator lights up or flashes when the telescopic lift is in operation, there is a severe fault, switch off the I.C. engine immediately and contact your dealer.

	normal functioning of the I.C. engine
	I.C. engine severe failure active red warning light

I.C. ENGINE MALFUNCTIONS

If the indicator lights up or flashes when the forklift truck is in operation, there is a malfunction. The telescopic lift operates in reduced mode.
Impermissible operating conditions.

	normal functioning of the I.C. engine
	I.C. engine malfunctions active orange warning light

It is important that malfunctions are rectified promptly. You can rectify certain faults yourself.
Malfunctions that you cannot eliminate yourself must be rectified at a qualified specialist workshop.

The operating safety of your vehicle could be affected if maintenance work is carried out incorrectly. You could lose control of the telehandler and cause an accident. Also, the safety systems may no longer be able to protect you or others, in the way in which they were designed. Always have maintenance work carried out at a qualified specialist workshop.

I.C. ENGINE OIL LEVEL

	i.c. engine oil level (0-100 %)
	the red warning lamp lights on when the level is under 20%

ALTERNATOR EXCITATION

	normal functioning of the alternator excitation
	alternator excitation active red warning light

This indicator lights up when the electric contact on the forklift truck is activated and it must switch off once the I.C. engine starts running. If the indicator lights up while the telescopic tractor is in operation, switch the I.C. engine off immediately and check the electric circuit and the alternator belt.

I.C. ENGINE OIL PRESSURE RED INDICATOR LIGHT

	normal functioning of the i.c. engine oil pressure
	i.c. engine oil pressure active red warning light

This indicator lights up when the electric contact on the forklift truck is activated and it must switch off once the I.C. engine starts running. If the indicator lights up while the truck is in operation, switch the I.C. engine off immediately and check for the cause (check the oil level in the engine crankcase).

ENGINE AIR FILTER CLOGGING RED INDICATOR LIGHT

	normal functioning of the engine intake air filter
	blocked engine intake air filter active red warning light

This light indicates the status of the filter cartridge: if the cartridge is encrusted or damaged, the warning lights up (for replacing the cartridge, refer to the “Lubricants” Chapter).

TRANSMISSION FILTER BLOCKING

	normal functioning of the transmission oil filter
	blocked transmission oil filter active red warning light

This light indicates the status of the filter cartridge: if the cartridge is encrusted or damaged, the warning lights up (for replacing the cartridge, refer to the “Lubricants” Chapter).

PARKING BRAKE

(For more details: ◁ the "Pushbutton panel" paragraph)

	parking brake disabled
	parking brake engaged active red warning light

LOW BRAKE OIL

	normal functioning of the brake system
	red braking oil level low warning light

If the lamp switches on when the lift truck is running, stop the I.C. engine immediately and look for the cause (braking oil level, possible leak, etc.). In the event of an abnormal level drop, consult your dealer.

HYDRAULIC OIL FILTER

	normal functioning of the hydraulic oil filter
	blocked hydraulic oil filter red warning light

This light indicates the status of the filter cartridge: if the cartridge is encrusted or damaged, the warning lights up (for replacing the cartridge, refer to the “Lubricants” chapter).

STEERING SYSTEM OIL PRESSURE

	normal functioning of the steering system
	“emergency steering” red warning light

If the lamp switches on when the lift truck is running, stop the I.C. engine immediately and look for the cause (possible leak, etc.).

TRAILER BRAKE ANOMALY (OPTIONAL)

	normal functioning of the trailer brake
	trailer brake anomaly red warning light

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

“EMERGENCY STOP”

(For more details: ◁ paragraph “Emergency stop” button)

	“emergency stop” red button not pressed
	“emergency stop” red button pressed red warning light

LOAD LIMITER DISABLED

(For more details: e paragraph “Selector to disable the load limiter”)

	normal operation of the load limiter
	DANGER! Load limiter disabling red warning light

ALARM AND WARNING MACHINE

(For more details: e paragraph “Control panel and load limiter”)

	ATTENTION! Machine alarm active red warning light

WARNING LAMPS IN ALARM PAGE

(For more details: e paragraph “Control panel and load limiter”)

DISPLAY IN CAB

	operating normally
	red warning light on indicates an error or an anomaly

CONTROL UNIT ON HEAD BOOM TO CONTROL THE VOLTAGE 12 V

	operating normally
	red warning light on indicates an error or an anomaly

MASTER CONTROL UNIT FRAME

	operating normally
	red warning light on indicates an error or an anomaly

STABILIZERS CONTROL UNIT

(Second equipment)

	operating normally
	red warning light on indicates an error or an anomaly

LOAD LIMITER CONTROL UNIT (OPTIONAL)
(Second equipment)

	operating normally
	red warning light on indicates an error or an anomaly

BASKET CONTROL UNIT (OPTIONAL)
(Second equipment)

	operating normally
	red warning light on indicates an error or an anomaly

ACKNOWLEDGEMENT OF ATTACHMENT (OPTIONAL)

	operating normally
	red warning light on indicates an error or an anomaly

JOYSTICK

	operating normally
	red warning light on indicates an error or an anomaly

RADIO REMOTE CONTROLS (OPTIONAL) (SECOND EQUIPMENT)

	operating normally
	red warning light on indicates an error or an anomaly

WINDER ON BOOM (OPTIONAL)
(Second equipment)

	operating normally
	red warning light on indicates an error or an anomaly

I.C. ENGINE ALARM

	I.C. engine malfunctions active orange warning light
	I.C. engine severe failure active red warning light

SERVICE

	Service orange indicator light

To indicate that the telehandler needs servicing, maintenance. Refer to scheduled maintenance

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

11- START-UP SWITCH

The switch (2 - 53) has five positions, and its functions are:

- **0** : I.C. engine STOP;
- **I** : Main electric contact "+" (it also activates the preheating device, if installed)
- **II** : Not used
- **III** : I.C. engine START-UP and return to position "1" when the key is released (it also deactivates the preheat device, if installed).



2 - 53

12- ACCELERATOR PEDAL

Electronic pedal (1, 📷 2 - 54) used for changing the telehandler speed by acting on the rpm of the I.C. engine.
Press on the accelerator pedal (1, 📷 2 - 54) to move the telehandler.

13- SERVICE BRAKE PEDAL

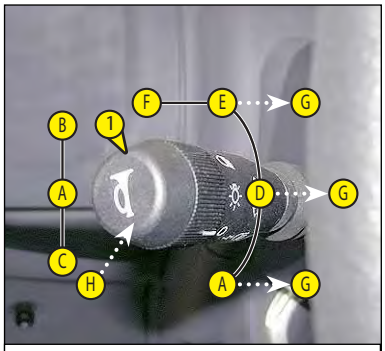
The pedal (2, 📷 2 - 54) acts on the front and rear wheels by a power assisted hydraulic brake system, and allows the telehandler to be slowed down and stopped.
Press on the brake pedal (2, 📷 2 - 54) to slow or stop the telehandler forward movement.

INCHING CONTROL
The pedal (2, 📷 2 - 54) acts on the front and rear wheels by a power assisted hydraulic brake system, allowing the telehandler to move slowly and the accurate handling of loads.
The inching control cuts off the traction of telehandler.



2 - 54

14- LIGHTING, HORN AND INDICATOR LIGHTS LEVER



2 - 55

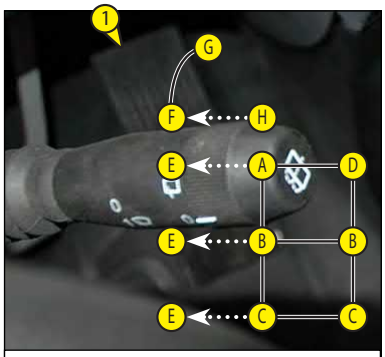
The lever (1, 📷 2 - 55) controls:

- All lights are off, the direction indicator lights do not flash (A, 📷 2 - 55).
- The right hand direction indicator lights flash (B, 📷 2 - 55).
- The left hand direction indicator lights flash (C, 📷 2 - 55).
- The sidelights and the rear lights are on (D, 📷 2 - 55).
- The dipped headlights and the rear lights are on (E, 📷 2 - 55).
- The main beam headlights and the rear lights are on (F, 📷 2 - 55).
- Headlight signal (G, 📷 2 - 55).
- Pressing the switch sounds the horn (H, 📷 2 - 55).

NOTE: positions (D - E - F - G, 📷 2 - 55) can be used without starting the machine.

On the control panel, the indicator lights indicate the active function (◁ 10- WARNING AND INDICATOR LAMPS, 2-57).

15- FRONT AND REAR WINDSCREEN WIPER LEVER



2 - 56

The lever (1, 📷 2 - 56) controls:

Front windscreen wiper (1, 📷 2 - 56):

- Front windscreen wiper stop (A, 📷 2 - 56).
- Slow speed for front windscreen wiper (B, 📷 2 - 56).
- Fast speed for front windscreen wiper (C, 📷 2 - 56).
- Front windscreen wiper intermittent control (D, 📷 2 - 56).
- Front windscreen washer, pulse-driven (E, 📷 2 - 56).

Rear windscreen wiper (1, 📷 2 - 56):

- Rear windscreen wiper stop (F, 📷 2 - 56).
- Rear windscreen wiper (G, 📷 2 - 56).
- Rear windscreen washer, pulse-driven (H, 📷 2 - 56).

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

16- FORWARD/NEUTRAL/REVERSE GEAR SELECTION



2 - 57

TRAVEL INVERTER AND MOVING THE TELEHANDLER

The telehandler travelling inverter selector (1, 📷 2 - 56) is located on the joystick in the cab.
When operating this control, the telehandler should be travelling at slow speed and not accelerating.

- FORWARDS: Move the switch forwards (F, 📷 2 - 56), the selected gear is displayed on the control panel (📷 2 - 56).
  Press on the accelerator pedal to move the telehandler (📷 2 - 56, "Accelerator pedal").
- REVERSE: Move the switch in reverse (R, 📷 2 - 56), the selected gear is displayed on the control panel (📷 2 - 56).
  Press on the accelerator pedal to move the telehandler (📷 2 - 56).
  Reversing lights and an acoustic reversing alarm indicate that the telehandler is running in reverse.
- set the switch (N, 📷 2 - 56) to the centre position, the gear set is displayed on the control panel and the parking brake is applied (by default).

Safety when moving the telehandler

The operator must observe the following sequence to move the truck forwards or backwards:

1. sit down correctly in the driver's seat (📷 3- PRÉSENCE DU CONDUCTEUR)
2. release the hand brake(📷 8- INTERRUPTEURS)
3. the stabilisers are not resting on the ground (📷 8- INTERRUPTEURS) **(if present)**
4. engage forwards or reverse.

*: Forwards or reverse movement is authorised with speeds lower than 15 km/h. In the case of travel inverter at higher speeds, the transmission system goes into neutral position, informing the operator with a flashing letter 'N' on the screen and opposite travel direction is only activated when the transmission system detects a speed lower than 15 km/h.

Telehandler movement

MOVEMENT IS ACTIVATED IF:

1. the operator is sitting on the seat
2. the door is closed
3. the parking brake has been released manually
4. the travel direction selector is in the forwards or reverse position.

MOVEMENT IS DISABLED IF:

1. door opening forces the gearbox into the neutral position
2. you press the travel switch into forwards or reverse before closing the door, you need to return through neutral then select a travel direction
3. you use the forwards or reverse travel selector when the operator is not sitting on the seat, you need to return through neutral then select a forwards or reverse travel direction
4. during forwards or reverse travel, the operator getting up from the seat does not disable travel until the operator releases the accelerator pedal
5. with the machine at a standstill, the travel switch is moved forwards or backwards and the parking brake is engaged, the operator is forced to release the brake to move and they must return through neutral then select a forwards or backwards travel direction.

To stop the telehandler without switching off electric power, they must observe the following sequence:

1. set the travel selector to neutral 'N'
2. apply the parking brake
3. get out of the telehandler.

NOTE: an intermittent alarm sound and a message on the screen inform the driver that they have left the driving position

17- TRAVELLING MODE BUTTONS

These buttons (+, -, 2 - 58) select the two operating mode:
- slow mode by pressing the button (-, 2 - 58)
- fast mode by pressing the button (+, 2 - 58).

When the telehandler starts, the default mode is set to fast.

The operating mode buttons (+, -, 2 - 58) are located on the joystick in cab.

Slow operating mode
- The button (+, 2 - 58) identifies the control that increases the torque and the force to a higher level, but decreases the travel speed.

  When you press the button (+, 2 - 58) a green indicator lights on the control panel.

Fast operating mode
- The button (-, 2 - 58) identifies the control that decreases the torque and increase the travel speed.
- When you press the button (+, 2 - 58) a indicator goes off on the control panel.

The buttons can also be turned on with the telehandler in motion.



2 - 58

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

18- PROPORTIONAL ELECTRO-HYDRAULIC JOYSTICK

(Depending on the telehandler model)

The joystick (1, 📷 2 - 58) is located in the cab on the armrest (2, 📷 2 - 58).

The hydraulic control use authorisation is given by the validation of the driver's presence (◁ 18- PROPORTIONAL ELECTRO-HYDRAULIC JOYSTICK, ♏ 2-70)and confirmed if the conditions for use are observed.
To enable and carry out the movements, press and hold the manoeuvre enabling button (OK, 📷 2 - 58) on the joystick (1, 📷 2 - 58) **(if the machine is equipped)**..

Do not attempt to alter the hydraulic system pressure. In the event of suspected malfunction, contact your dealer.
ANY ALTERATION MAY RENDER THE WARRANTY NULL AND VOID.
Use the hydraulic controls carefully without sudden movements, to avoid accidents caused by the shaking of the machine.

NOTE: when driving on roads, it is highly recommended that you disable all the hydraulic movements (◁ Stopping telescopic boom hydraulic movements key, 🕮 2-41).



2 - 58

GENERAL MOVEMENT OF TELESCOPIC JIB

- Lifting control lever (A, 📷 2 - 58).
- Tilting control lever (A, 📷 2 - 58).
- Control button on telescopic element (B, 📷 2 - 58).
- Attachment control button (C, 📷 2 - 58).
- Hydraulic movement validation button (OK, 📷 2 - 58) **(if the machine is equipped)**.

Position your hand on the knob, press the hydraulic movement authorisation button and complete the movement. A timer enables you to keep the activated hydraulic movements activated during use of the telehandler. If required, reactivate the hydraulic movements by pressing the hydraulic movement authorisation button.

Direction of movement

LIFTING THE LOAD

- Lever (A 📷 2 - 58) back to lift.
- Lever (A 📷 2 - 58) forward to lower.

TILT OF CARRIAGE

- Lever (A 📷 2 - 58) to the left to tilt backwards.
- Lever (A 📷 2 - 58) to the right to tilt forwards.

TELESCOPIC ACTION

- Button (B, 📷 2 - 58) forwards to deploy.
- Button (B, 📷 2 - 58) backwards to retract.

ATTACHMENTS

- Button (C, 📷 2 - 58) forwards or backwards.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

19- HEATER CONTROL



2 - 60

FAN CONTROL (1, 📷 **2 - 60**)
This 3-speed control allows the air to be ventilated through the air vents.
TEMPERATURE CONTROL (2, 📷 **2 - 60**)
Allows the temperature inside the cab to be adjusted.
The fan pumps in the air at ambient temperature (4, 📷 2 - 60).
The fan pumps in warm air (3, 📷 2 - 60).
The intermediate position allows the temperature to be adjusted.

20- AIR CONDITIONING CONTROLS (OPTION)



2 - 61

The air conditioning only works if the telehandler has been started. When using your air conditioning unit, work with the cab closed off. In winter: In order to ensure correct operation and complete efficiency of the air conditioning unit, switch on the compressor once a week, even for a short time, to lubricate the internal seals. In cold weather: Warm the I.C. engine before switching on the compressor. This allows the coolant, which was collected in a liquid state at the lowest point of the compressor circuit, to turn into gas. This is due to the effect of the heat given off by the I.C. engine, as the compressor is liable to be damaged by the coolant in a liquid state.
If your air conditioning does not seem to be working correctly, have it examined by your dealer (see 3 - MAINTENANCE: F - EVERY 2000 HOURS OF SERVICE).
Never try to repair any faults yourself.

FAN CONTROL (1, 📷 **2 - 61**)
This 3-speed control allows the air to be ventilated through the air vents.

TEMPERATURE CONTROL (2, 📷 **2 - 61**)
Allows the temperature inside the cab to be adjusted.
- The fan pumps in cold air (4, 📷 2 - 61).
- The fan pumps in warm air (3, 📷 2 - 61).

The intermediate position allows the temperature to be adjusted.

AIR CONDITIONING CONTROL
This control with a pilot light allows the air conditioning unit to be switched on.

Heating mode
The controls must be adjusted in the following way:
- Control with pilot light off (5, 📷 2 - 61).
- At the required temperature (2, 📷 2 - 61).
- At the desired speed: 1, 2 or 3 (1, 📷 2 - 61).

Conditioned air mode
The controls must be adjusted in the following way:
- Control with pilot light on (5, 📷 2 - 61).
- At the required temperature (2, 📷 2 - 61).
- At the desired speed: 1, 2 or 3 (1, 📷 2 - 61).

Demisting mode
The controls must be adjusted in the following way:
- Control with pilot light on (5, 📷 2 - 61).
- At the required temperature (2, 📷 2 - 61).
- At the speed: 1, 2 or 3 (2, 📷 2 - 61).

For optimum effectiveness, close the heating diffusers.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

21- AIR DIFFUSERS FOR DEMISTING

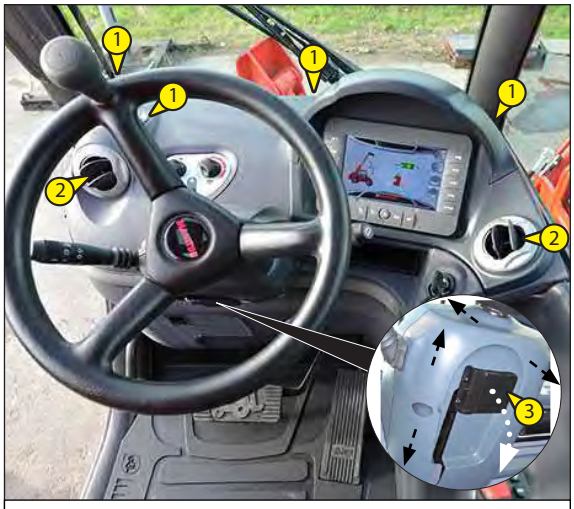
Windscreen (1, 📷 2 - 62).
For optimum effectiveness, close the heating diffusers. (2, 📷 2 - 62).

22- AIR DIFFUSERS OF HEATING

The heating diffusers(2, 📷 2 - 62) allow the distribution of the ventilated air inside the cab and on the side windows.

23- STEERING WHEEL ADJUSTMENT LEVER

This lever (3, 📷 2 - 62) allows the angle and height of the steering wheel to be adjusted.
Pull the lever backwards.
Adjust the steering wheel to the desired position.
Push the lever back to lock the steering wheel in position.



2 - 62

24- COMMANDS ARMREST ADJUSTMENT CONTROL KNOBS

This control knobs (1, 2, 📷 2 - 63) allow the longitudinal and height of the commands armrest to be adjusted.
HEIGHT ADJUSTMENT
Turn the locking control knobs (1, 📷 2 - 63) and slide the commands armrest to the desired position.
Release the control knobs and ensure it returns to the lock position.
LONGITUDINAL ADJUSTMENT
Turn the locking control knobs (2, 📷 2 - 63) and slide the commands armrest to the desired position.
Release the control knobs (2, 📷 2 - 63) and ensure it returns to the lock position.



2 - 63

25- DOOR OPENING LEVER

(1, 📷 2 - 64)

26- DOOR CLOSING HANDLE

(2, 📷 2 - 64)

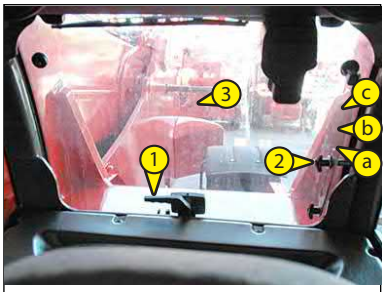


2 - 64

27- HANDLE FOR REAR WINDOW OPENING/CLOSING

The handle (1, 2 - 65) opens and closes the rear window.
The rear window has 3-position (a, b, c, 2 - 65).
Turn the handle (1, 2 - 65) and push it to open the window.
Block the window in the desired position (a, b, c, 2 - 65).
Close the window using the knob (2, 2 - 65) and ensure it returns to the lock position.

Emergency exit
Use the rear window as an emergency exit (3, 2 - 65) if it is impossible to leave the cab using the door.



2 - 65

28- CEILING LIGHT

(1, 2 - 66)



2 - 66

29- ARMREST AND STORAGE

Lift the armrest (1, 2 - 67) to access the storage (2, 2 - 67).



2 - 67

30- SIDE STORAGE SPACE

(Behind driver seat)
(1, 2 - 68)

31- DOCUMENT HOLDER NET

Make sure that the operator's manual is in the right place, i.e. in the document holder net (2, 2 - 68).



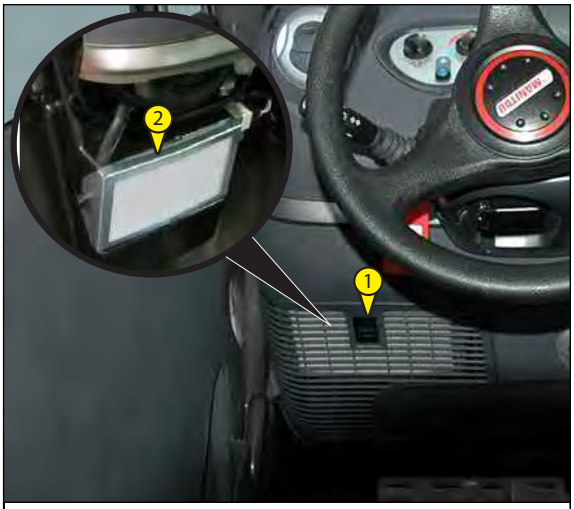
2 - 68

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

32- CAB FILTER VENTILATORS

(Standard)

Cab internal ventilation filter.
Remove the door (1, 📷 2 - 69) that gives access to the filter ventilators (2, 📷 2 - 69).



2 - 69

33- CAB FILTER FANS

(Option air conditioning)

Cab external ventilation filter.
Remove the panel (1, 📷 2 - 70) on front cab and that gives access to the filter ventilators (2, 📷 2 - 70).

34- WINDSCREEN WASHER TANK

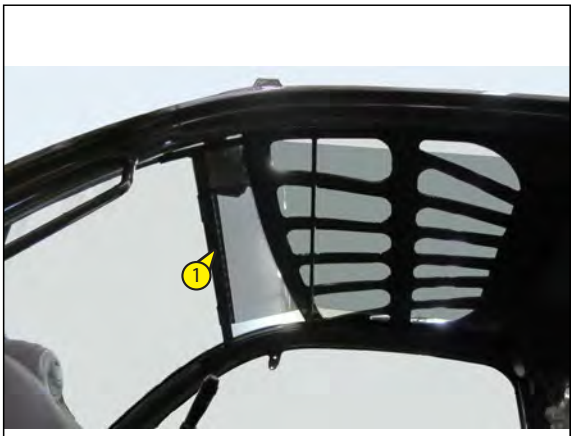
Remove the panel (1, 📷 2 - 70) on front cab and that gives access to the windscreen washer tank (3, 📷 2 - 70).



2 - 70

35- SUN VISOR (OPTION)

(1, 📷 2 - 71)

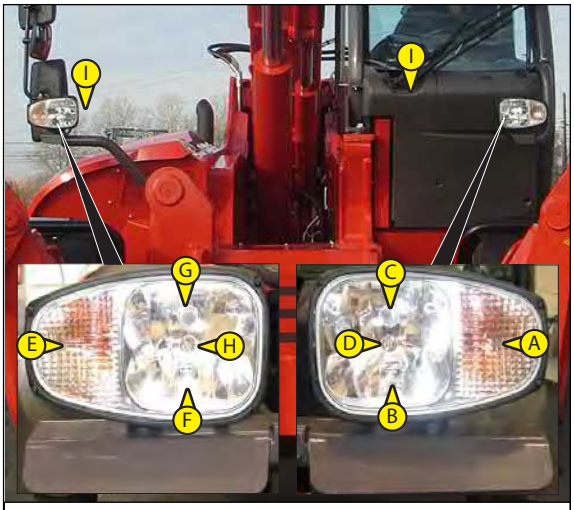


2 - 71

36- FRONT HEADLIGHTS

- Left front indicator (A, 2 - 72).
- Left front low beam (B, 2 - 72).
- Left front high beam (C, 2 - 72).
- Left front sidelight (D, 2 - 72).
- Right front indicator (E, 2 - 72).
- Right front low beam (F, 2 - 72).
- Right front high beam (G, 2 - 72).
- Right front sidelight (H, 2 - 72).

A grid protection is installed on front headlights (I, 2 - 72).

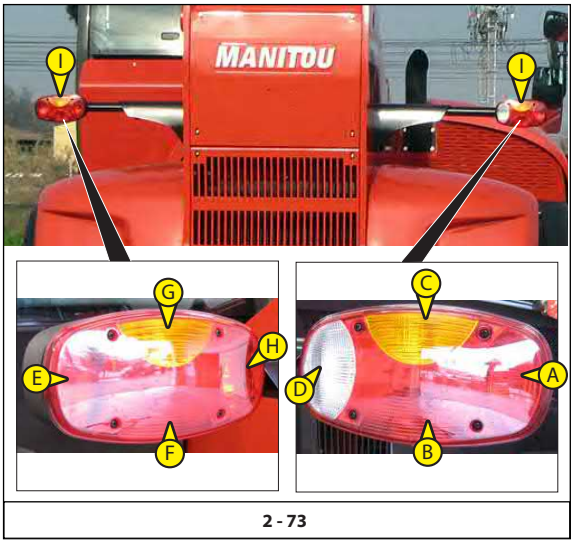


2 - 72

37- REAR LIGHTS

- Left rear indicator (A, 2 - 73).
- Left rear stop light (B, 2 - 73).
- Rear left headlight (C, 2 - 73).
- Rear fog light (D, 2 - 73).
- Rear reverse light (E, 2 - 73).
- Right rear headlight (F, 2 - 73).
- Right rear stoplight (G, 2 - 73).
- Right rear indicator (H, 2 - 73).

A grid protection is installed on rear lights (I, 2 - 73).



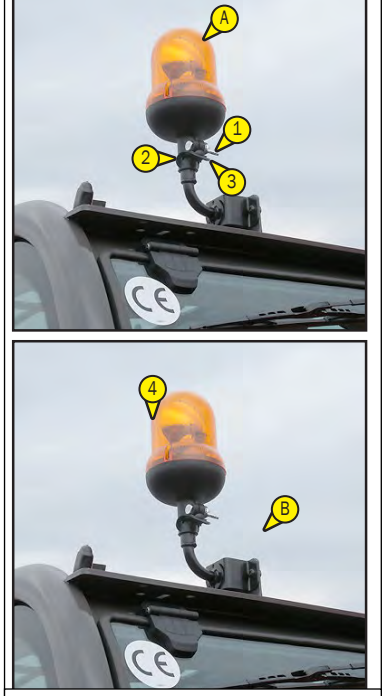
2 - 73

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

38- ROTATING BEACON LIGHT

Standard
The rotating beacon light (A, 2 - 74) pivots to save space on the telehandler and can be detached to prevent theft.
- Loosen the nut (1, 2 - 74) and remove the revolving light.
- Protect mounting (2, 2 - 74) with cap (3, 2 - 74).

Optional air conditioning
The magnetic rotating beacon light (4, 2 - 74) must be clearly visible on the roof of the
cab and plugged-in to socket (4, 2 - 74).



2 - 74

39- REAR WORK LIGHTS (OPTION)
(1, 2 - 75)



2 - 75

40- FRONT WORK LIGHTS (OPTION)
(1, 2 - 76)

A - Front work lights
B - Telescope work lights



2 - 76

41- INSIDE REAR-VIEW MIRROR (OPTION)
(1, 2 - 77)



2 - 77

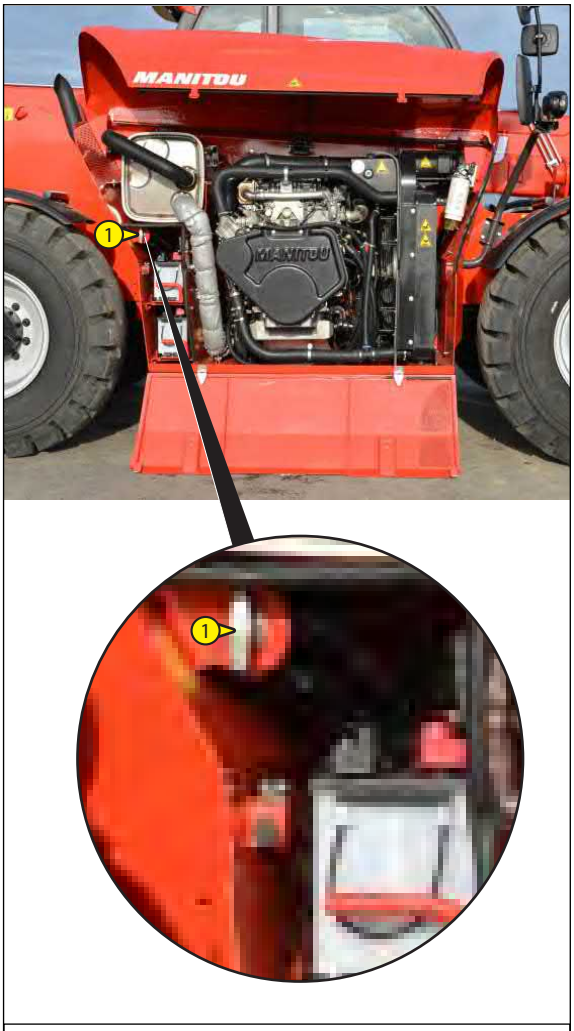
42- BUBBLE LEVEL INDICATOR

This indicator (2, 2 - 77) allows the operator to verify that the lift truck is in the horizontal position.

43- BATTERY CUT-OFF

It allows the quick disconnection of the battery (1, 📷 2 - 78) for example when working on the electrical circuit or when soldering.

Operate the battery cut-off no less than 30 seconds before switching off the ignition with the ignition key.



2 - 78

44- BOOM SAFETY WEDGE

The forklift truck is provided with a safety wedge for the boom which must be installed under the lift cylinder rod in case of intervention on the boom (see: 1 - OPERATING AND SAFETY INSTRUCTIONS).
(1, 📷 2 - 79)
Use only the safety wedge supplied with the forklift truck.

Operate the battery cut-off no less than 30 seconds before switching off the ignition with the ignition key.



2 - 79

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

45- PORTABLE POWDER FIRE EXTINGUISHER

Portable powder fire extinguisher (1, 📷 2 - 80) is positioned behind the driver's seat (2, 📷 2 - 80).
The portable powder fire extinguisher (1, 📷 2 - 80) is suitable for use on live electric appliances.
The fire extinguisher (1, 📷 2 - 80) fits into an extinguisher-holding support (3, 📷 2 - 80) and is secured on the machine (4, 📷 2 - 80).



2 - 80

PORTABLE POWDER FIRE EXTINGUISHER

Model	K2 B
Capacity	2 kg
Classes	13A - 89 BC

Technical features

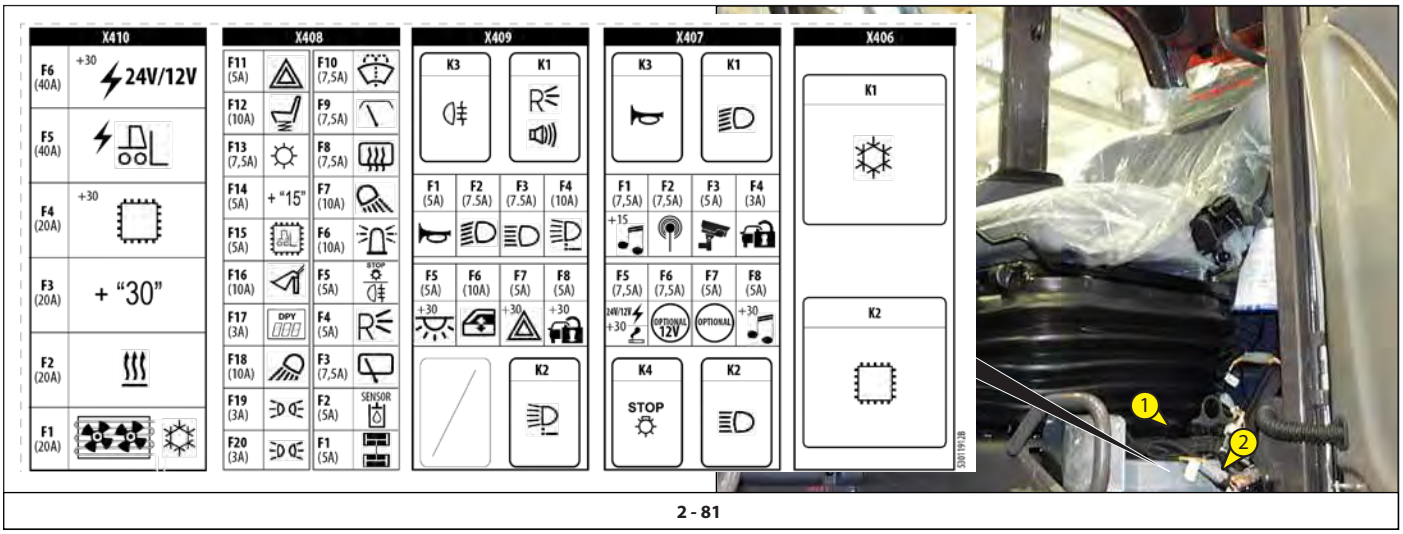
Fire classes	13A - 89 BC
Total weight	Approx. 3.6 kg
Nominal load	2 kg.
Extinguishing agent	ABC powder
Discharge time	12.6 sec.
Tank diameter	102 mm
Total height	370 mm
Working pressure at 20°C	15 bar
Ministerial approval	DCPST / A6 / 557 / 153 According to 128 02/03/2006
Test pressure	26 bar
Bursting pressure	>55 bar
Gauge	ø 23
Working temperature	-30 +60°C

For information regarding the periodic inspection and maintenance of the fire extinguisher, refer to the legislation and regulations in force in the country where it is in use.

46- FORKLIFT TRUCK FUSES AND RELAYS

- Remove the door (1, 2 - 81) giving access to the fuses and relays (2, 2 - 81).

Always replace a faulty fuse with an equivalent one. Never use a repaired fuse.



2 - 81

		FUNCTIONS
		X 410
F1	20 A	Fuse +30 for conditioner assy
F2	20 A	Relay fuse +30 for heating
F3	20 A	Fuse +30 for start-up panel
F4	20 A	Relay fuse +30 vp
F5	40A	Relay fuse for services
F6	40A	Supply fuse +30 for cc-cc converter
		X 408
F1	5A	Fuse for transmission sensors and axles
F2	5A	Fuse for hydraulic sensors
F3	7.5A	Fuse for rear wiper
F4	5A	Relay fuse for reversing lights
F5	5A	Relay fuse for brake and ear fog lights
F6	10A	Fuse for rotating beacon light
F7	10A	Switch fuse for rear working light
F8	7.5A	Fuse for rear window defroster
F9	7.5A	Fuse for roof and side wiper
F10	7.5A	Fuse for front window wiper-washer
F11	5A	Fuse +15 for warning
F12	10A	Fuse for pneumatic seat
F13	7.5A	Fuse for switch backlighting and light switching
F14	5A	Fuse +15 for start-up panel
F15	5A	Fuse +ve
F16	10A	Fuse +15 for mix bucket
F17	3A	Fuse +30 for display tera 7"
F18	10A	Fuse +15 for front working lights
F19	3A	Fuse front LH and rear RH position lights
F20	3A	Fuse front RH and rear LH position lights

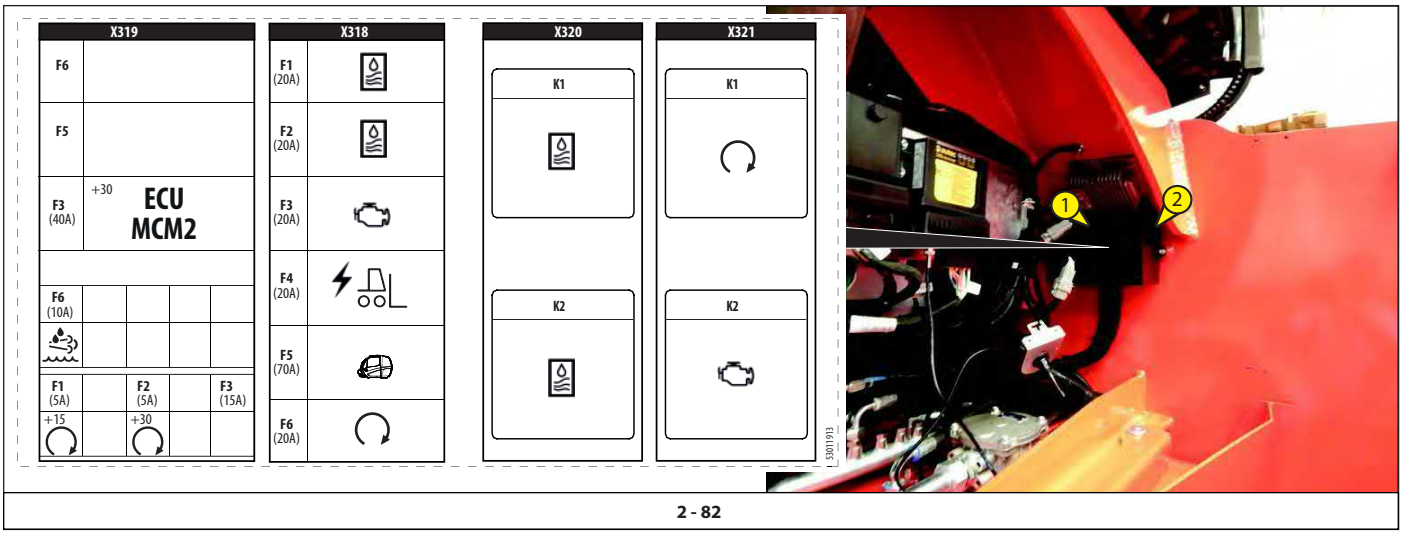
		X 409
F1	10A	Fuse +30 for micro dome - dome light
F2	7.5A	Fuse for window lifter
F3	5A	Fuse +30 for warning
F4	3A	Fuse +30 for immobilizer - radio
F5	10A	Fuse for warning sound
F6	7.5A	Fuse for low beams
F7	5A	Fuse for high beams
F8	5A	Fuse for boom head working lights
K1		Relay for reversing lights + reversing buzzer + ev forward-reverse gear
K2		Fuse for boom head working light
K3		Relay for rear fog lights
K4		-
		X 407
F1	7.5A	Fuse +15 for inverter sens. + 30 for 12 V socket
F2	10A	Fuse 12 V (+15) for boom head centr.
F3	5A	Fuse +15 for brake-steering emergency kit
F4	5A	Fuse +12 V (+30) for car stereo
F5	7.5A	Fuse +12 V for car stereo
F6	7.5A	Fuse for remote radio control
F7	5A	Fuse for rear camera
F8	5A	Fuse for immobilizer - radio
K1		Relay for low beams
K2		Relay for high beams
K3		Relay for warning sound
K4		Relay for brake-reversing lights
		X 406
K1		Relay +15 for conditioner assy from relay
K2		Relay +15 vp for MC2M

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

47- FORKLIFT TRUCK FUSES AND RELAYS

- Remove the door (1, 2 - 82) giving access to the fuses and relays (2, 2 - 82).

Always replace a faulty fuse with an equivalent one. Never use a repaired fuse.



2 - 82

		FUNCTIONS
X 319		
F1	5A	Fuse +15 for engine services/alternator energisation
F2	5A	Fuse +30 for alternator
F3	15A	Fuse +15 engine services/Diesel filter preheating
F3	40A	Fuse +30 for battery/Mercedes control unit
F6	20 A	Fuse +30 for battery
X 318		
F1	20 A	Fuse +30 for group 1 electro-fan relay
F2	20 A	Fuse +30 for group 2 electro-fan relay
F3	20 A	Relay fuse +30 for engine services
F4	20 A	Fuse +30 Optional
F5	70A	Fuse +30 for cab supply
F6	10A	Fuse for start-up relay
X 320		
K1		Relay for group 1 electro-fan
K2		Relay for group 2 electro-fan
X 321		
K1		Relay for starter motor
K2		Relay +15 for engine services

48- RADIO CONTROL (OPTIONAL)

Identification of the radiocontrol.

The serial number (S/N) is the only reference that must be used to identified in a unique way the radiocontrol, both for maintenance that with regards to communication to the pertinent authorities.
The serial number (S/N) and some information about the radiocontrol are present on plates both on the transmitting unit and the receiving unit.

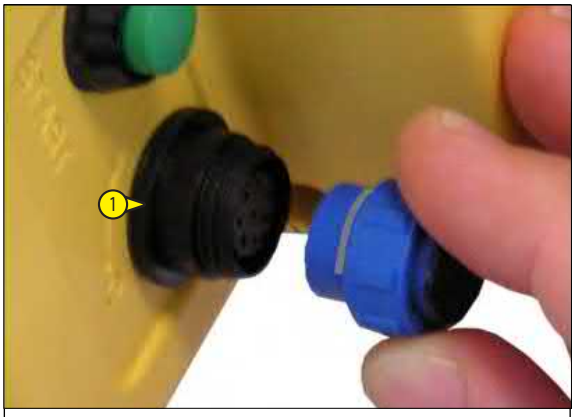
These plates must not be:
- removed from their position (removal immediately waives the warranty)
- altered or ruined (contact MANITOU for replacement).
-

Plates of the transmitting unit

Three plates are located in the transmitting unit.
1. identification plate of the radiocontrol (1, 📷 2 - 82).
   Information contained: the serial number of the radiocontrol (S/N).
2. identification plate of the transmitting unit (2, 📷 2 - 82).
   Information contained: The manufacturing year, bar code and ID number of the transmitting unit (TU ID).
3. Technical data plate (3, 📷 2 - 82).
   Information contained: The MODEL, TYPE and main technical specification of the transmitting unit, the marking and any markings on the radiocontrol.

Plates of the receiving unit

Two plates are present in the receiving unit:
4. identification plate of the radiocontrol (4, 📷 2 - 82).
   Information contained: The serial number of the radiocontrol, a bar code (S/N) and the year of manufacture.
5. Technical data plate (5, 📷 2 - 82).
   Information contained: The MODEL, TYPE and main technical specification of the receiving unit,
   the marking and any markings on the radiocontrol (5, 📷 2 - 82).







2 - 82

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

General description of the system

The radiocontrol system includes:

1. **TRANSMITTING UNIT (PUSHBUTTON PANEL)** (1, 📷 2 - 83)
2. **RECEIVING UNIT** (2, 📷 2 - 83)
3. **ANTENNA** (3, 📷 2 - 83)
4. **BATTERY CHARGER** (4, 📷 2 - 83)
   Input 80-250V 7W
   Output 9V 0.45A
   Battery ..... 7.2V NiMH
   Loading time 3h
5. **BATTERY** (2, 📷 2 - 83) ..... 7.2V 750mAh Ni-MH



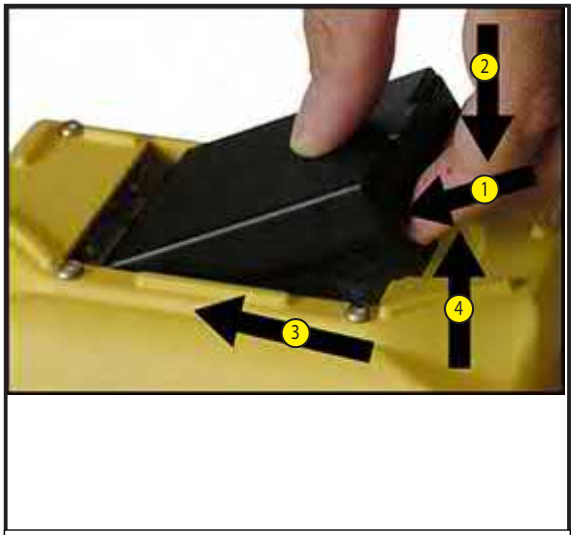
2 - 83

General operating instructions
(see also CHAPTER 1 - OPERATING AND SAFETY INSTRUCTIONS)

Operation

Battery (📷 2 - 84)
The transmitting unit can be powered only with rechargeable batteries of the manufacturer.
The battery must be entered in the relevant housing of the transmitting unit, with the technical specification plat facing downward and the contacts directed toward the contacts of the transmitting unit.

To insert a battery, perform the following operations:
1. push the battery toward the contacts of the transmitting unit (1, 📷 2 - 73)
2. push the battery downward (2, 📷 2 - 73)
   To pull out a battery, perform the following operations:
3. push the battery toward the contacts of the transmitting unit (3, 📷 2 - 73)
4. lift the battery (4, 📷 2 - 73)



2 - 84

TRANSMITTING UNIT CONTROL FUNCTIONS (Radio control) (2 - 85)

1. Machine function and load status display (1,1.1, 2 - 85)
2. Joystick, selector switches, machine function buttons (2, 2 - 85)
3. Emergency stop button (3, 2 - 85)
4. Radiocontrol power on S-KEY (4, 2 - 85)
5. Engine start-up authorisation and horn (5, 2 - 85)
6. Engine start-up (6, 2 - 85)
7. Emergency electric pump button to salvage the basket (7, 2 - 85)
8. Plug for wired control (8, 2 - 85)
9. Accessory movement cards (9, 2 - 85)
10. Button to confirm acknowledgment of the attachment on the display (10, 2 - 85)

1. Machine function LED and load status display

1.1 - Page :0 (2 - 86)

- FUNCTION AND ALARM WARNING LIGHTS:

STOP	I.C. engine stop
	I.C. engine fault
	I.C. engine energised
	DPF regeneration inhibited or DEF check **(Depending on the machine model)**
MAX	Basket overload
	I.C. engine oil pressure
	Basket door
	Fuel reserve tank

	Engine water temperature boiling
	Telescopic boom chain faults
	Hydraulic oil temperature
	General alarm
	Accessory not recognised
	Stabilizers not on the ground **(Depending on the machine model)**
	Pivot not engaged **(Depending on the machine model)**
Example: ***FORKS***	Type of installed attachment



2 - 85

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

READING MAIN OPERATING DATA (2 - 86)

- Height off the ground (H)*, (reading in "Meters ", with a decimal position)
- Boom angle (A), (reading in "Degrees", with a decimal position)
- Boom length (L)*, (reading in "Meters", with a decimal position)
- Operating radius (R)*, Measurement of the distance from the fifth wheel centre to the projection of the point of application of the load (reading in "Meters", with a decimal position).
- Weight of load lifted (W), (reading in "Tons", with a decimal position).
- Maximum permitted load (M)* in the current configuration of the machine. (reading in "Tons", with a decimal position)
- Working configuration
  - The first digit refers to the operating mode:
    1. On stabilizers **(Depending on the machine model)**
    2. On tyres (front turret) **(Depending on the telehandler model)**
    3. On tyres (turned turret) **(Depending on the machine model)**
    4. On partially withdrawn stabilizers **(Depending on the telehandler model).**
  - The second digit refers to the equipment being used (PT, forks, basket, etc...).
  - Digits pertaining to the equipment being used.

1.a - Charging the radiocontrol battery

1.b - Radio signal

(*): optional

1.2 - page : 1 (2 - 86)

1.c - Alarm/fault

1.d- I.C. engine water temperature

1.e - Fuel level

1.3 - Display button (1.3, 2 - 86)

- Turns on the display lighting if off
- Scroll pages 0,1, in the display

1.4 - Green LED (1.4, 2 - 86)

- Off: the transmitting unit is off
- Flashes rapidly: the transmitting unit is on and the radioelectrical control is off
- Flashes slowly: the radio control is started and the radioelectrical connection is present

1.5 - Red LED (1.5, 2 - 86)

- Off: the transmitting unit works properly
- Flashing: the battery is getting low
- On for 2 seconds: the transmitting unit does not work properly
- Flashes once: when turned on, the transmitting unit detects that the STOP button is active or faulty.
- Flashes 2 times: the transmitting unit detects that a SAFETY control is active or faulty.
- Flashes 3 times: when turned on, the transmitting unit detects that the battery is flat
- Flashes 4 times: the transmitting unit detects that an alarm control is active or faulty.

1.6 - Load conditions, % and alarms (1.6, 2 - 86)

Bar indicating the percentage of lifted load compared with the maximum load that can be lifted in those operating conditions.

- Green reference: Safety area
- Yellow reference: Alarm area
  Load lifted 90% more than permitted load. (external buzzer on)
- Red reference: Block area
- Load lifted 100% more than permitted load. (external buzzer on)

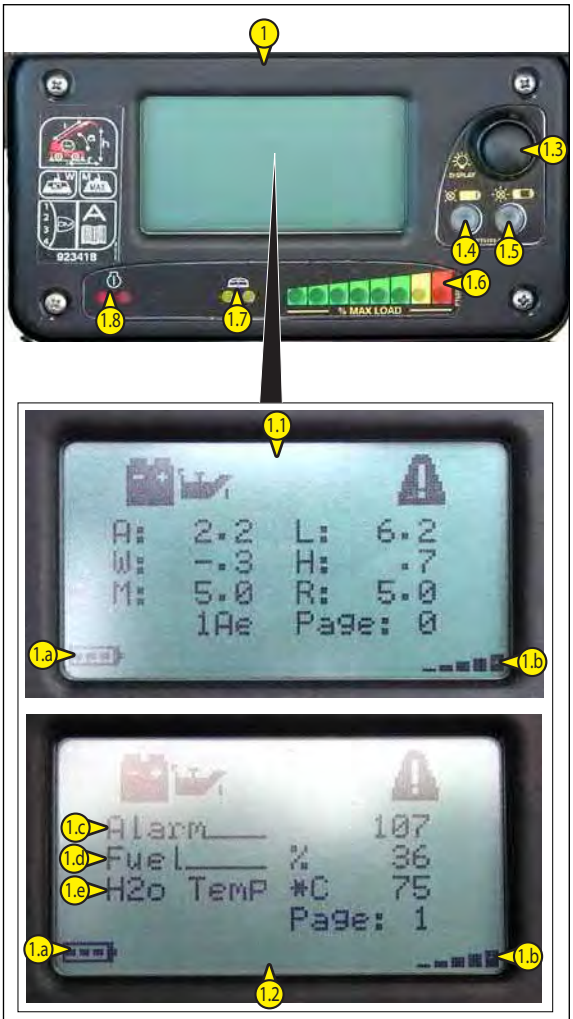
1.7 - Yellow warning light (1.7, 2 - 86)

When on, this light indicates:

- Flashing light on + buzzer indicating that the safety system is blocked.
- The light continuously on indicates that the basket is overloaded.

When the basket is overloaded, all movement controls of the platform are inhibited.

Note: when the light turn on when the basket is lifting, it means there is an overload.You must stop and lighten the basket.



2 - 86

1.8 - Red warning light(1.8, 2 - 86)
When on, this light indicates:

- Stabilizers are not properly positioned
  (Depending on the machine model).
- The basket access door was not properly closed.
- The gear of the truck is engaged.

Note: only for the ORH COUVREUR BASKET: the functions of the red light (1.7, 2 - 86) are included in the yellow light (1.8, 2 - 86).

2 - Joystick, selector switches, machine function buttons (2 - 87)

2.1 - Joystick (2 - 87)

- Operate the joystick (2.1, 2 - 87) to perform the desired movements following the coloured arrows.

-

2.2 - Movement switch (2.2, 2 - 87)
A pair of controls that can be performed at the same time corresponds with each position (A-B-C-D-E-F)

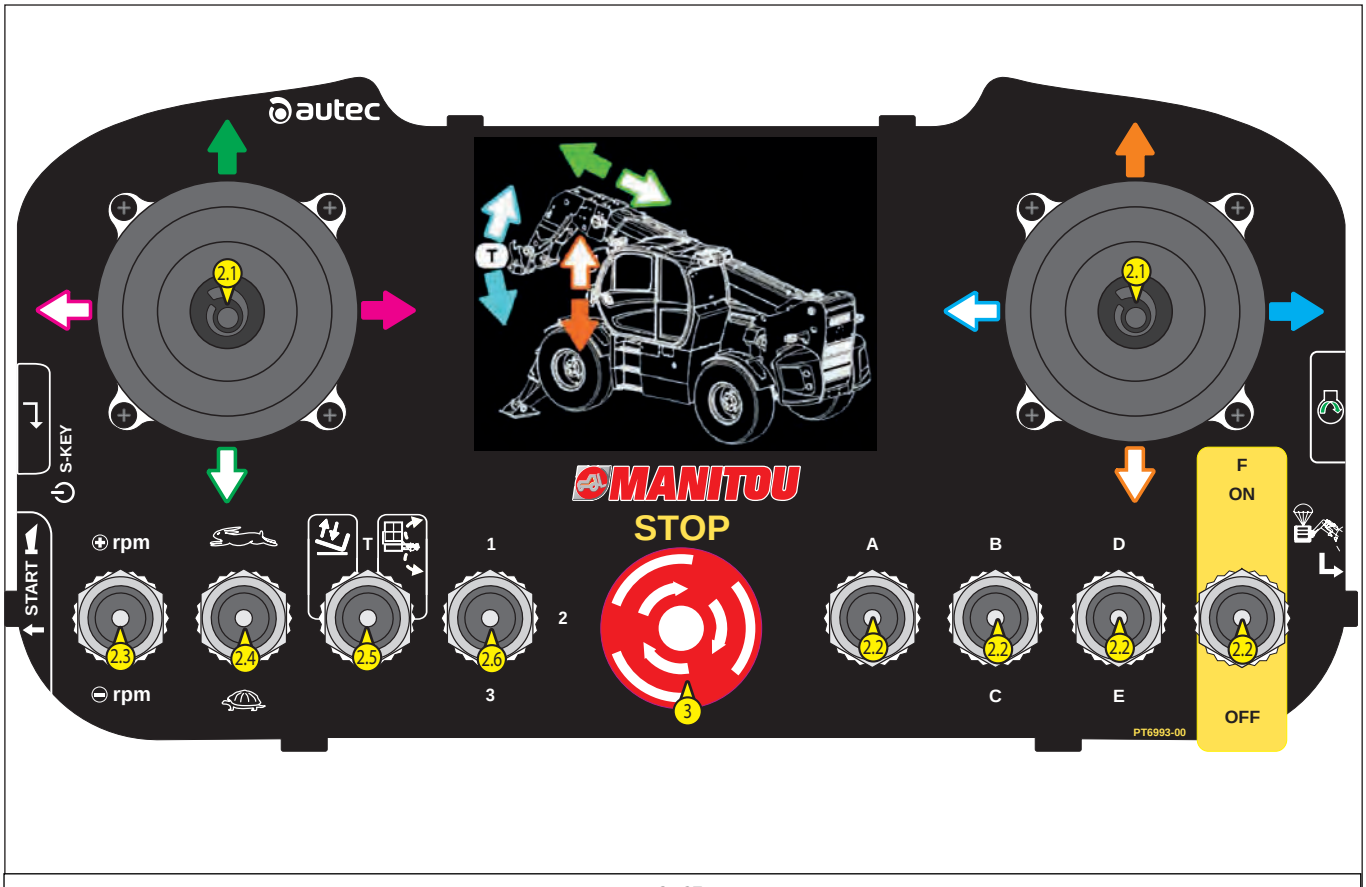
2.3 - Engine RPM accelerator (2.3, 2 - 87)

2.4 - Hydraulic movement speed (2.4, 2 - 87)
(according to the type of accessory installed)

2.5 - T.S. panning movement (T) or basket levelling (O) selector switch
(2.5, 2 - 87)
2.6 - Multiple movements "1-2-3"(2.6, 2 - 87)
(according to the type of accessory installed)

3 - "Emergency stop" red button (3, 2 - 87)
Functions:

- allows accelerating the I.C. engine.
  In case of danger, this allows the basket user to bypass the movements controlled by the truck lift.
  To restore movements, turn the red button clockwise.



2 - 87

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

4 - Radiocontrol power on S-KEY (2 - 88)
Turn the key to turn on the radiocontrol (4 , 2 - 88).
When the radiocontrol is not used, pull out the S-KEY for safety

5 - Engine start-up authorisation and horn (5, 2 - 88)

6 - Engine start-up (2 - 88)
Before switching on, the EMERGENCY STOP button must be raised (3, 2 - 88).
Press the button (6, 2 - 88) then press button (5, 2 - 88) to turn on the engine.(6, 2 - 88)

7 - Emergency electric pump button to salvage the load (2 - 88)
To withdraw the extensions.

- Keep button (7, 2 - 88) pressed to operate the salvage pump.
- Only perform operations that are strictly required to return to ground.

8 - Plug for wired control (8, 2 - 88)
(Only if equipped with aerial platform)

9 - Basket movement boards (9, 2 - 88)
Change the movement card according to the installed accessory.

10 - Button to confirm acknowledgment of the attachment on the display (2 - 88)
Press enter to confirm the type of accessory.



2 - 88

49- INDICATION COLUMNS FOR CHECKING THE LOAD STATUS

(Depending on the telehandler model)

External indicator light (1, 📷 2 - 89), indicating the percentage of load raised compared to the max. permitted load in these working conditions.

- Green light on: safety zone (1.1, 📷 2 - 89)
- Yellow light on (external horn activated "1.4, 📷 2 - 89"): alarm zone, load raised higher than 90% of permitted load (1.2, 📷 2 - 89).
- Red light on (external horn activated "1.4, 📷 2 - 89"): stop zone, load raised higher than 100% of permitted load (1.3, 📷 2 - 89).



2 - 89

50- WHITE LED INDICATOR LIGHT

(With remote control option only)

External indicator light (1, 📷 2 - 90):

- when on (slow white double flash), it alerts and indicates that the remote control function is active and that the telehandler is being remotely controlled.
- when off, it indicates that the remote control function is not active.



2 - 90

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

51 - FUEL TANK

Keep the fuel tank full as far as possible to reduce condensate due to atmospheric conditions to the minimum.

Do not smoke or use a naked flame during refuelling operations or when the tank is open. Never refuel with the engine running.



- If necessary, add diesel (3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Remove the plug 1.
- Fill the tank with clean filtered diesel through the filler hole 2.
- Refit the cap.
- Visually check the tank and pipes for leaks.

NOTE: A lockable tank cap is available as an OPTIONAL.

52 - DEF (Diesel Exhaust Fluid) tank

Diesel exhaust fluid is corrosive, protect the bodywork and wear personal protective equipment (gloves and goggles).

The diesel exhaust fluid level is important, operation with a tank containing little or no fluid may have consequences for the I.C. engine performance.



- If necessary, add diesel exhaust fluid (3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Remove the plug 1.
- Slowly fill the tank to the bottom of the filling chute.
- Always keep a proper level to limit the alteration of the product.
- Refit the cap.

DEF (Diesel Exhaust Fluid) QUALITY

The quality of diesel exhaust fluid can be measured with a refractometer, the fluid must be compliant with ISO 22241-1 with a urea solution at 32.5%.

MANITOU refractometer reference 959709

STORING DEF (Diesel Exhaust Fluid)

Up to 4 months of the telehandler not being used: check the quality of the diesel exhaust fluid with a refractometer.

Over 4 months, replace the diesel exhaust fluid. Empty and rinse the DEF tank.

NOTE: For a prolonged stop of the telehandler, 1 - OPERATING AND SAFETY INSTRUCTIONS: PROLONGED STOP OF Telehandler.

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

EQUIPMENT CAN BE SELECTED MANUALLY, WITHOUT AUTOMATIC RECOGNITION OF THE 'E-RECO' ATTACHMENT

Do not use the attachments in different positions or those not covered by the safety system adjustment.

LIST OF EQUIPMENT WHICH CAN BE SELECTED MANUALLY

(Depending on machine model)

MHT-X 1490 129M ST3A S1 MHT 1490 129M ST4 S1			
#	Equipment	Equipment code	Position in the load charts
1	Forks TFF CDG 600	939800	AC
2	P9000 9T	930830	N
3	P9000 5T	930830	O
4	P9000 2T	930830	P
5	PC90	939970	S
6	TH33-2000S	939039	TA
7	TH35-2900S	939040	TB
8	TH49	914600	TD

MHT-X 10130 129M ST3A S1 MHT 10130 129M ST4 S1			
#	Equipment	Equipment code	Position in the load charts
1	Forks TFF CDG 600	53005668	AA
2	Forks TFF CDG 900	53005668	AB
3	Forks TFF CDG 1200	53005668	AC
4	P13000 13T	53009841	N
5	P13000 10T	53009841	O
6	P13000 7500 kg	53009841	P
7	PC130	53008009	S

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

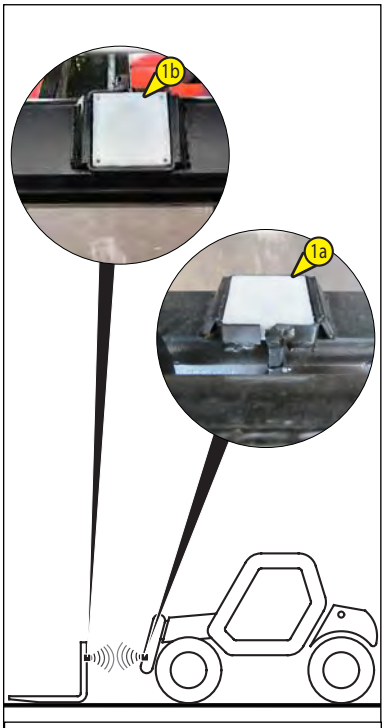
AUTOMATIC RECOGNITION OF THE ACCESSORY "E-RECO" (OPTIONAL)

The machine is equipped with an electronic accessory recognition system that identifies the type of accessory installed when it is connected (E-RECO).

This system facilitates and speeds up the accessory change operations.

- The system features 2 devices, one located on the boom (1a, 📷 2 - 89) of the machine and one on the accessory (1b, 📷 2 - 89).

After identifying the type of accessory and confirmation by the operator, the recognition system sets the machine to operate with the accessory attached. This is the automatic mode.
However the machine can operate with an accessory lacking an identification device; in this case the operator must identify and check the type of accessory installed. This is the manual mode.



2 - 89

Automatic mode
Immediately after connecting an accessory, the recognition system:
- identifies the type of accessory (2, 📷 2 - 90),
- requires the operator to confirm (1, 📷 2 - 90) that the recognised accessory is the actual accessory connected to the machine,
- press enter (3, 📷 2 - 90) to confirm the type of accessory.



2 - 90

Manual mode
Immediately after connecting an accessory without identification device, the recognition system:
- does not recognise the connected accessory,
- The operator must select the type of installed accessory installed on the machine.

The operator must select the type of installed accessory manually, as follows:
- press ESC (1, 📷 2 - 91) to leave the "empty" mode(2, 📷 2 - 91) [no accessory connected]
- press the up/down arrows (3, 📷 2 - 91) to select the accessory that was connected (4, 📷 2 - 92), confirm the accessory, press enter (5, 📷 2 - 92).

Note: in "empty" mode, the machine can move the arm with a fixed maximum lifting capacity of 500 kg.



2 - 91



2 - 92

In both modes:
the operator must ensure that the connected accessory displayed on the screen is the same accessory identified by the recognition system or manually selected.

The safety of the user and of the lift truck is at stake.

Failure to observe this may cause malfunctions of the forklift and damage to property or injury to people near the machine operating area.

Follow the aforementioned procedures.

TOWING PIN AND HOOK

Located at the rear of the lift truck, this device is used to attach a trailer. Its capacity is limited for each lift truck by the Authorized Gross Vehicle Weight, tractive force and maximum vertical force on the coupling point.

- To use a trailer, see current regulations in your country (maximum running speed, braking, maximum weight of trailer, etc.).
- Verify the trailer's condition before using it (tyre condition and pressures, electrical connection, hydraulic hose, brake system…).

Do not tow a trailer or attachment which is not in perfect working order. Using a trailer in poor condition may affect the lift truck's steering and braking, and hence safety.

If a third party helps in coupling or uncoupling the trailer, this person must be permanently visible to the driver and wait until the lift truck has stopped, the handbrake is on and the I.C. engine is switched off before performing the operation.

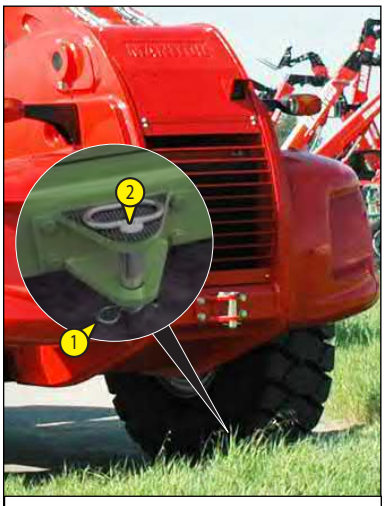
NOTE: A rear-view mirror allows the lift truck to approach more closely to the trailer ring.

A - COUPLING FITTING

COUPLING AND UNCOUPLING THE TRAILER

- To couple the trailer, position the lift truck as close as possible to the trailer ring.
- Put the handbrake on and switch off the I.C. engine.
- Remove the clip (1, 📷 2 - 93), lift the trailer pin (2, 📷 2 - 93), and place or remove the trailer ring.

Be careful not to get your fingers caught or crushed during this operation.
Do not forget to put clip 1 back in place (1, 📷 ***2 - 93***).
When uncoupling, make sure that the trailer is supported independently.



2 - 93

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

3 - MAINTENANCE

INDEX

3 - MAINTENANCE

MANITOU ORIGINAL SPARE PARTS AND EQUIPMENT 4

FILTER ELEMENTS AND BELTS 6

LUBRICANTS AND FUEL 8

MAINTENANCE TABLE 10

A - DAILY OR EVERY 10 HOURS OF SERVICE 12

B - EVERY 50 HOURS OF SERVICE 18

C - EVERY 250 HOURS OF SERVICE 26

D - EVERY 500 HOURS SERVICE OR 6 MONTH 30

E - EVERY 1000 HOURS OF SERVICE OR 1 YEAR 40

F - EVERY 2000 HOURS SERVICE OR 2 YEARS 50

G - EVERY 3000 HOURS SERVICE OR 3 YEARS 54

H - OCCASIONAL MAINTENANCE 58

MANITOU ORIGINAL SPARE PARTS AND EQUIPMENT

OUR FORKTELEHANDLERS MUST BE SERVICED USING ORIGINAL MANITOU PARTS.

IF YOU USE PARTS WHICH ARE NOT ORIGINAL MANITOU PARTS, YOU RISK:

THE USE OF COUNTERFEIT PARTS OR COMPONENTS NOT APPROVED BY THE MANUFACTURER MEANS YOU LOSE THE RIGHT TO THE CONTRACTUAL GUARANTEE.

- Legally - being responsible in the event of an accident.
- Technically - causing operating failure or shortening the working life of the forklift truck.

BY USING ORIGINAL MANITOU PARTS FOR MAINTENANCE OPERATIONS, YOU WILL BENEFIT FROM OUR ADVANCED EXPERTISE

Through its network, MANITOU offers to the user,

- Know-how and competence.
- Guarantee of high-quality work.
- Original spare parts.
- Help with preventive maintenance.
- Efficient help with diagnostics.
- Improvements due to experience feedback.
- Operator training.
- Only the MANITOU network has a detailed knowledge of the design of the forklift truck and therefore the best technical ability to provide maintenance.

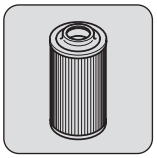
ORIGINAL SPARE PARTS ARE DISTRIBUTED EXCLUSIVELY BY MANITOU AND ITS DEALER NETWORK.
The dealer network list is available on the MANITOU website www.manitou.com.

FILTER ELEMENTS AND BELTS

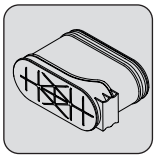
MHT 1490, MHT 10130

I.C. ENGINE

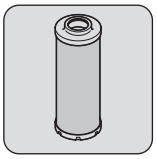
I.C. ENGINE OIL FILTER
Reference: 53006638
Replace: 500 H



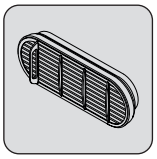
DRY AIR FILTER CARTRIDGE
Reference: 53002309
Replace: 1000 H



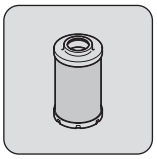
FUEL FILTER CARTRIDGE
Reference: 53006464
Replace: 500 H



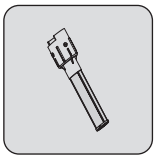
DRY AIR FILTER SAFETY CARTRIDGE
Reference: 923594
Replace: 3000 H



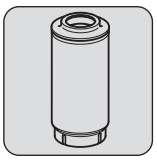
FUEL PRE-FILTER
Reference: 53006466
Replace: 500 H



"DEF" PUMP PRE-FILTER
Reference: 53017247
Clean: 1000 H



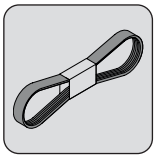
FUEL PREFILTER CARTRIDGE WITH WATER SEPARATOR
Reference: 608776
Replace: 500 H



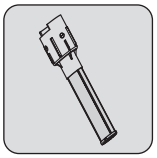
"DEF" PUMP FILTER
Reference: 53006687
Replace: 2000 H



ALTERNATOR BELT
Reference: 53006659

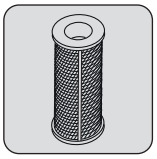


"DEF" TANK FILTER
Reference: 53002466



TRANSMISSION

HYDROSTATIC PUMP OIL FILTER
Reference: 737524
Replace: 500 H

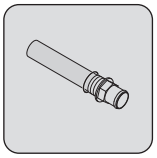


HYDRAULICS

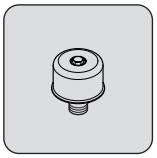
HYDRAULIC RETURN OIL FILTER CARTRIDGE
Reference: 925420
Replace: 500 H



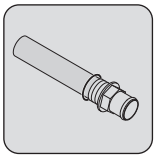
SUCTION STRAINER FOR HYDRAULIC OIL TANK
Reference: 924767
Clean: 1000 H



HYDRAULIC OIL TANK BREATHER
Reference: 781336
Replace: 1000 H

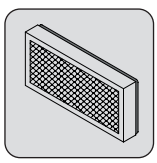


SUCTION STRAINER FOR HYDRAULIC OIL TANK
Reference: 924765
Clean: 1000 H

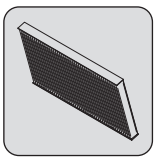


CAB

CAB EXTERNAL VENTILATION FILTER
Reference: 261971
Clean: 50 H
Replace: 250 H



CAB INTERNAL VENTILATION FILTER
Reference: 933971
Clean: 50 H
Replace: 250 H

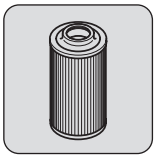


FILTER ELEMENTS AND BELTS

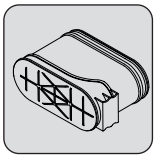
MHT -X1490, MHT-X 10130

I.C. ENGINE

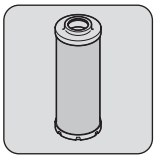
I.C. ENGINE OIL FILTER
Reference: 608773
Replace: 500 H



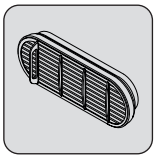
DRY AIR FILTER CARTRIDGE
Reference: 53002309
Replace: 1000 H



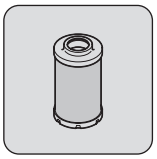
FUEL FILTER CARTRIDGE
Reference: 608774
Replace: 500 H



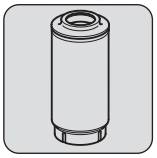
DRY AIR FILTER SAFETY CARTRIDGE
Reference: 923594
Replace: 3000 H



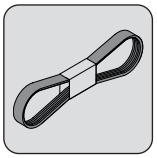
FUEL PRE-FILTER
Reference: 710887
Replace: 500 H



FUEL PREFILTER CARTRIDGE WITH WATER SEPARATOR
Reference: 608776
Replace: 500 H

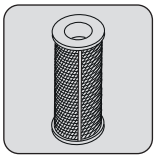


ALTERNATOR BELT
Reference: 53003392



TRANSMISSION

HYDROSTATIC PUMP OIL FILTER
Reference: 737524
Replace: 500 H

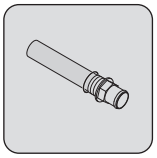


HYDRAULICS

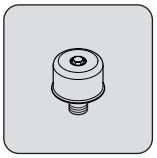
HYDRAULIC RETURN OIL FILTER CARTRIDGE
Reference: 925420
Replace: 500 H



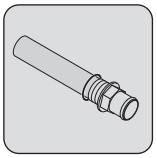
SUCTION STRAINER FOR HYDRAULIC OIL TANK
Reference: 924767
Clean: 1000 H



HYDRAULIC OIL TANK BREATHER
Reference: 781336
Replace: 1000 H

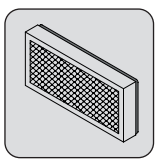


SUCTION STRAINER FOR HYDRAULIC OIL TANK
Reference: 924765
Clean: 1000 H

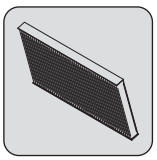


CAB

CAB EXTERNAL VENTILATION FILTER
Reference: 261971
Clean: 50 H
Replace: 250 H



CAB INTERNAL VENTILATION FILTER
Reference: 933971
Clean: 50 H
Replace: 250 H



LUBRICANTS AND FUEL

USE THE RECOMMENDED LUBRICANTS AND FUEL:
- Not all oils can be mixed to make up the level.
- MANITOU oils are perfectly suitable for changing the oil.

DIAGNOSTIC ANALYSIS OF OILS
If a service or maintenance contract has been organized with the dealer, a diagnostic analysis of engine, transmission and axle oils may be requested depending on the rate of use.

(*) RECOMMENDED FUEL SPECIFICATION
Use a high-quality fuel to obtain optimal performance of the engine.
MHT-X 10180, MHT-X 10230

- Diesel fuel type N590 - Auto/C0/C1/C2/C3/C5
- BS2869 Class A2
- ASTM D975-91 Class 2-2DA, US DF1, US DF2, US DFA
- JIS K2204 (1992) Grades 1, 2, 3 and Special Grade 3.

Only refuel using commercially available, sulphur-free diesel fuel that complies with the following standards:
MHT 10180, MHT 10230

- EN 590 on 2010 version et seq. (max sulphur component: 0.001% by weight) (10 ppm) or
- ASTM D975 (max sulphur component: 0.0015% by weight) (15 ppm).

(**) FEATURES OF Diesel Exhaust Fluid
MHT 10180, MHT 10230

- Aqueous urea solution at 32.5 % (ISO22241)
- Solidification at -11°C and 10% expansion
- Non-flammable product
- Thermal degradation (>60°C)
- Storage between -5°C and 30°C

Wear suitable protective gloves, protective clothing and safety goggles

RECOMMENDED PRODUCT

I.C. ENGINE

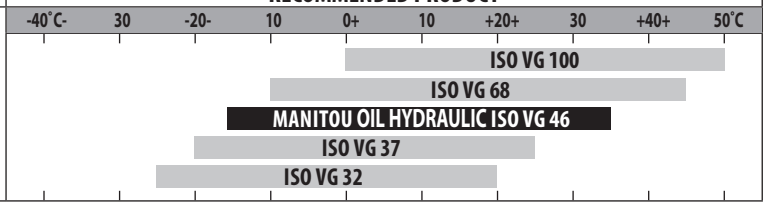
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDED PRODUCT
I.C. ENGINE *MHT-X 1490, MHT-X 10130*	13 - 16L (3.4 - 4.2 US gal)	-40°C- 30 -20- 10 0+ 10 +20+ 30 +40+ 50°C SAE 0W40 SAE 5W30 SAE 10W30 SAE 10W40 MANITOU PREMIUM 15W40 API CI4 -40°C- 30 -20- 10 0+ 10 +20+ 30 +40+ 50°C
I.C. ENGINE *MHT 1490, MHT 10130*	17.5 - 20.5L (4.6 - 5.4 US gal)	SAE 0W40 SAE 5W30 SAE 10W30 MANITOU EVOLOGY 10W40 API CJ4 SAE 15W40 -40°C- 30 -20- 10 0+ 10 +20+ 30 +40+ 50°C
COOLING SYSTEM	about 40 L (10.5 US gal)	COOLANT -35°C -40°C- 30 -20- 10 0+ 10 +20+ 30 +40+ 50°C
FUEL TANK	315L (83.2 US gal)	FUEL*
DEF TANK *MHT 1490, MHT 10130*	63L (16.6 US gal)	DEF**

TRANSMISSION

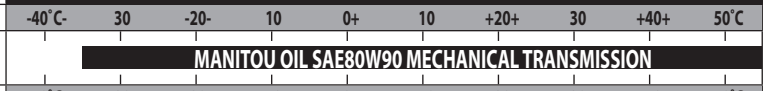
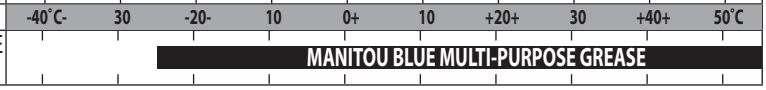
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDED PRODUCT
GEAR BOX	4.4L (1.16 US gal)	MANITOU OIL SPECIAL IMMERSED BRAKES -40°C- 30 -20- 10 0+ 10 +20+ 30 +40+ 50°C
CARDAN SHAFT		MANITOU BLUE MULTI-PURPOSE GREASE

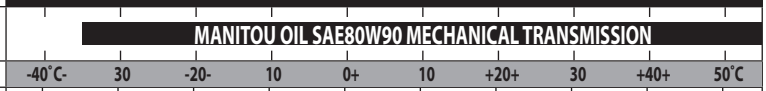
TELESCOPIC BOOM

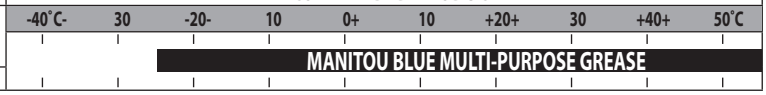
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDED PRODUCT
BOOM PADS		-40°C- 30 -20- 10 0+ 10 +20+ 30 +40+ 50°C MANITOU BLACK MULTI-PURPOSE GREASE -40°C- 30 -20- 10 0+ 10 +20+ 30 +40+ 50°C
BOOM GREASING		MANITOU BLUE MULTI-PURPOSE GREASE

HYDRAULIC		
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDED PRODUCT
HYDRAULIC OIL TANK	290L (76.6 US gal)	

CAB		
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDED PRODUCT
WINDSCREEN WASHER RESERVOIR		WINDSCREEN WASHER LIQUID

FRONT AXLE		
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDED PRODUCT
FRONT AXLE DIFFERENTIAL	21L (5.5 US gal)	MANITOU OIL SPECIAL IMMERSED BRAKES
FRONT WHEELS REDUCING GEAR	2 x 1.8L (2 x 0.4 US gal)	
FRONT WHEELS REDUCTION GEAR PIVOTS FRONT AXLE OSCILLATION		

REAR AXLE		
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDED PRODUCT
FRONT AXLE DIFFERENTIAL	20L (5.2 US gal)	MANITOU OIL SPECIAL IMMERSED BRAKES
REAR WHEEL REDUCING GEAR	2 x 1.8L (2 x 0.4 US gal)	
PIVOTS DES RÉDUCTEURS DE ROUES ARRIÈRE OSCILLATIONDE L'ESSIEU ARRIÈRE		

CHASSIS		
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDED PRODUCT
TILTING CORRECTOR		
STABILIZERS *MHT-X 1490, MHT-X 1490*		

PACKAGING

OIL						
PRODUCT	PACKAGING / PART NUMBER					
	1 L (0.26 US gal)	2 L (0.52 US gal)	5 L (1.32 US gal)	20 L (5.28 US gal)	55 L (14.5 US gal)	209 L (55.2 US gal)
- MANITOU OIL EVOLOGY 10W40 API CJ4			895837	895838	895839	895840
- MANITOU OIL HYDRAULIC ISO VG 46			545500	582297	546108	546109
- MANITOU OIL DEXROM III AUTOMATIC TRANSMISSION	958186		947972	947973	947974	947975
- MANITOU OIL SPECIAL IMMERSED BRAKES	546034		545976	582391		894257
- MANITOU OIL SAE80W90 MECHANICAL TRANSMISSION		499237	720184	546330	546221	546220
- MANITOU MINERAL BRAKE FLUID	490408					4500078

GREASE						
PRODUCT	PACKAGING / PART NUMBER					
	400 ml	400 g (0.88 lb)	1 kg (2.2 lb)	5 kg (11 lb)	20 kg (44 lb)	50 kg (110.2 lb)
- BLACK MANITOU MULTI-PURPOSE GREASE		947766	161590			499235
- BLACK MANITOU MULTI-PURPOSE GREASE		161589		554974	958177	958176

LIQUID						
RECOMMENDATION	PACKAGING / PART NUMBER					
	1 L (0.26 US gal)	2 L (0.52 US gal)	5 L (1.32 US gal)	20 L (5.28 US gal)	55 L (14.5 US gal)	209 L (55.2 US gal)
- COOLANT -35°C (Concentrated product)	53017514			53017515		53004600
- WINDSCREEN WASHER LIQUID	490402	486424				
- DIESEL EXHAUST FLUID TANK			958575		958576	

MAINTENANCE TABLE

(1): MANDATORY 500 HOUR OR 6 MONTH SERVICE. This service must be carried out after approximately the first 500 hours of operation or within 6 months following the start-up of the machine (whichever occurs first).
(2): Every 10 hours during the first 50 hours, then a last time after 250 hours.
(3): Contact your dealer.

A = ADJUST, C = CHECK, G = GREASE, N = CLEAN, P = PURGE, R = REPLACE, V = CHANGE	PAGE	(1)	DAILY OR EVERY 10 HOURS SERVICE	EVERY 50 HOURS OF SERVICE	EVERY 250 HOURS OF SERVICE	EVERY 500 HOURS OF SERVICE OR 1 YEAR	EVERY 1000 HOURS OF SERVICE OR 2 YEARS	EVERY 2000 HOURS OF SERVICE OR 2 YEARS	EVERY 3000 HOURS OF SERVICE	EVERY 4000 HOURS OF SERVICE	OCCASIONAL
I.C. ENGINE											
- I.C. engine oil level	3-12	C	C								
- Coolant level	3-13	C	C								
- Fuel level	3-13	C	C								
- "DEF" level *(MHT 1490, MHT 10130)*	3-14										
- Fuel pre-filter with water separator	3-13	C		C/P							
- Dry air filter cartridge	3-40						R				
- Radiator grilles	3-18	N		N							
- Condenser grille (OPTIONAL air conditioning)	3-19	C/N		C/N							
- Wear and damage of the poly-V-belt	3-35	C/A			C/A						
- I.C. engine oil	3-33	V				V					
- I.C. engine oil filter	3-33	R				R					
- Fuel pre-filter	3-37	R				R					
- Fuel filter	3-37	R				R					
- Fuel pre-filter cartridge with water separator	3-38										
- Fuel tank	3-40						N				
- Dry air filter safety cartridge	3-54								R		
- Silicate cartridge *(MHT 1490, MHT 10130)*	3-56								R		
- "DEF" filter *(MHT 1490, MHT 10130)*	3-50							R			
- I.C. engine silentblocks	3-						C (3)				
- I.C. engine speeds	3-28						C (3)				
- Engine and engine brake valve clearance	3-45	C (3)					C (3)				
- "DEF" prefilter *(MHT 1490, MHT 10130)*	3-47							N			R
- Coolant	3-54								V		XXX
- Radiator								C (3)			
- Water pump and temperature sensor								C (3)			
- Alternator and starter motor								C (3)			
- Turbocharger								C (3)			
- Check that the drain system is waterproof and in good conditions						C (3)					
TRANSMISSION											
- Gearbox oil level	3-26	C	C								
- Transmission cross journals	3-19	G		G					G/C (3)		
- Hydrostatic pump oil filter	3-31					R					
- Gearbox oil	3-34/43	V					V				
- Gearbox silentblocks							C (3)				
- Gearbox controls							C (3)				
- Transmission pressures								C (3)			
- Gearbox calibration								C (3)			
TYRES											
- Tyre pressure	3-15	C		C							
- Tightening torque of wheel nuts	3-15	C		C							
- Tightening torque of the wheel nuts	3-51	C						C			
- Wheel	3-58										R
BOOM											
- Boom pads	3-15		G(2)								
- Telescopic boom external chains	3-29	N/G/C									
- Wear of telescopic boom external chains	3-43						C				
- Boom	3-20	G		G							
- Wear of boom pads							C (3)				
- Boom assembly conditions								C (3)			
- Bearings and articulation rings								C (3)			
HYDRAULICS											
- Hydraulic oil level	3-21	C		C							
- Hydraulic return oil filter cartridge	3-32	R				R					
- Hydraulic and transmission oil	3-41						V				
- Hydraulic system suction filter cartridges	3-41						N				
- Vent filter of hydraulic and transmission oil tank	3-32						R				

A = ADJUST, C = CHECK, G = GREASE, N = CLEAN, P = PURGE, R = REPLACE, V = CHANGE	PAGE	(1)	DAILY OR EVERY 10 HOURS SERVICE	EVERY 50 HOURS OF SERVICE	EVERY 250 HOURS OF SERVICE	EVERY 500 HOURS OF SERVICE OR 1 YEAR	EVERY 1000 HOURS OF SERVICE OR 2 YEARS	EVERY 2000 HOURS OF SERVICE OR 2 YEARS	EVERY 3000 HOURS OF SERVICE	EVERY 4000 HOURS OF SERVICE	OCCASIONAL
- Hydraulic motion speeds							C (3)				
- Rubber hose pipe and piping conditions							C (3)				
- Cylinder conditions (leakage, rods)							C (3)				
- Hydraulic circuit pressures								C (3)			
- Hydraulic circuit flow rate								C (3)			
- Hydraulic oil tank								N (3)			
BRAKE											
- Brake circuit							P (3)				
- Brake circuit pressure							C (3)				
- Brake							A (3)				
STEERING											
- Steering								C (3)			
- Direction ball joints									C (3)		
CAB											
Windscreen washer liquid level	3-21	C		C							
- Cab door	3-22	G		G							
- Cab ventilation filter (OPTIONAL Air conditioning)	3-22/26	R		N	R						
- Cab ventilation filter	3-34	N				N					
- Seat belt	3-42						C				
- Side rear-view mirror conditions							C (3)				
- Structure							C (3)				
- Air conditioning (OPTIONAL)								N/C (3)			
ELECTRICITY											
Batteries	3-28	C				C					
Signalling device and longitudinal stability limiter	3-16	C	C								XXX
Bundle and cable conditions							C (3)				
Lighting and signalling							C (3)				
Warning sounds							C (3)				
Front lights	3-62										A
FRONT AXLE											
- Front wheel final drive pivots	3-23	G		G					G/C (3)		
- Rear axle oscillation	3-23	G		G				G/C (3)			
- Front axle differential oil level	3-26	C			C						
- Front wheel final drive oil level	3-27	C			C						
- Front axle differential oil	3-42	V				V					
- Front wheel final drive oil	3-42	V					V				
- Wear of rear axle brake discs										C (3)	
- Front wheel final drive cross journal									C (3)		
- Front wheel final drive clearance									C (3)		
REAR AXLE											
- Front wheel final drive pivots	3-23	G		G					G/C (3)		
- Rear axle oscillation	3-23	G		G				G/C (3)			
- Front axle differential oil level	3-26	C			C						
- Front wheel final drive oil level	3-27	C			C						
- Front axle differential oil	3-42	V				V					
- Front wheel final drive oil	3-42	V					V				
- Wear of rear axle brake discs										C (3)	
- Front wheel final drive cross journal									C (3)		
- Front wheel final drive clearance									C (3)		
FRAME											
- Tilt corrector	3-23	G		G				G/C (3)			
- Stabilizers	3-24	G		G							
- Structure							C (3)				
- Bearings and articulation rings								C (3)			
ATTACHMENTS											
- Fork wear		C (3)				C (3)					
- Attachment holder T.S.							C (3)				
- Attachment condition							C (3)				
TELEHANDLER											
- Trail the lift truck	3-58										XXX
- Sling the lift truck	3-60										
- Transport the lift truck on a platform	3-61										XXX
- Radio remote control maintenance	3-62										XXX

A1 - I.C. ENGINE OIL LEVEL

CHECK

Do not add too much oil. If you add too much oil, the engine or the exhaust after-treatment unit could be damaged. Drain or siphon off any excess oil.

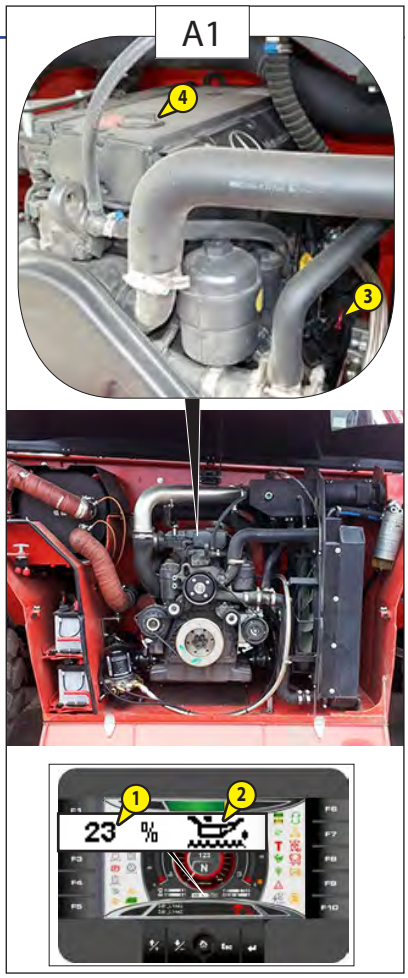
The engine is equipped with an electronic oil level detection system.
If the engine is also equipped with a dipstick, this is subsidiary to the electronic oil level measurement system. It is merely used for a general check to determine if there is oil in the engine.

Checking the oil level electronically
The current oil level in the engine is only displayed once the engine is switched off and with the ignition switched on. An accurate display of the engine oil level is therefore only possible with the engine switched off and the ignition switched on. The engine oil level is not displayed while driving or when the engine is running. On the control panel is displayed the oil level warning light 1 (A1) and the oil level measurement in "%" 2 (A1).

Oil level measurement:

from 100% to 20%: maximum oil level and the black indicator lit up,
from 19% to 0%: oil level too low.

Park the vehicle/device on a level surface.
Engage the parking brake.
Switch off the engine.
Wait approximately 5 to 10 minutes. If you call up the oil level in the engine too early or while the engine is running, it is not available.

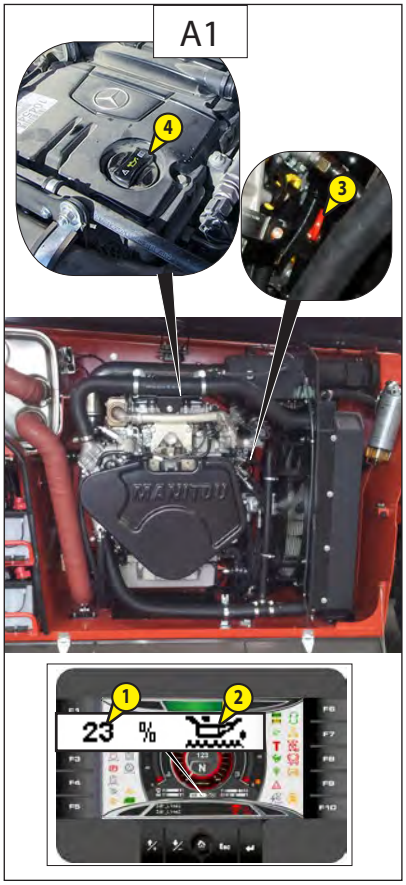


MHT-X 1490, MHT-X 10130

Checking the oil level with the dipstick
Park the vehicle/device on a level surface.
Engage the parking brake.
Switch off the engine.
Wait approximately 5 to 10 minutes.

Check the engine oil level with
dipstick 2(A1). The oil level should be between the upper and lower marks on dipstick 2 (A1).

If necessary, refill the oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the filler port 4 (A1).



A2 - COOLANT LEVEL

CHECK



System pressurised: the boiling coolant can cause serious burns. Before opening the filler cap, stop the engine and allow the cooling circuit components to cool down.

Slacken the pressure cap slowly to discharge pressure.

Never add cold cooling liquid to a hot engine.

In an emergency, water can be used as coolant; proceed as rapidly as possible, to change the liquid in the cooling circuit (see:3 - MAINTENANCE: F1 - COOLANT).

When maintenance or repairs are carried out on the engine cooling system, the operations must be carried out with the engine resting level on the ground.This makes it possible to check the coolant level accurately.It is thus also possible to avoid the risk of introducing an air bubble in the cooling system.

- Open the engine hood.
- Check the correct level with reference to the centre of the indicator 1 (A2).
- If necessary, add coolant (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Slowly turn the radiator cap 2 (A2) up to the safety stop.
- Allow the pressure and the steam to escape.
- Press and remove the cap by rotating it.
- Add coolant through the filler hole 3 (A2) up to the centre of the indicator 1 (A2).
- Slightly grease the filler hole to allow an easier installation and removal of the radiator cap.
- Visually check the radiator and pipes for leaks.

A3 - FUEL LEVEL

CHECK



Keep the fuel tank full as far as possible to reduce condensate due to atmospheric conditions to the minimum.

Do not smoke or use a naked flame during refuelling operations or when the tank is open.

Never refuel with the engine running.

- Check the indicator on the instruments panel.
- If necessary, add fuel (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Open the door to access the tank for refuelling.
- Remove cap 1 (A3) using a contact wrench.
- Fill the tank with clean filtered fuel through filler hole 2 (A3).
- Refit the cap.
- Visually check the tank and pipes for leaks.



If the "DEF" tank cap is opened at high temperatures, ammonia vapours may escape.

Ammonia vapours have a pungent odour and are particularly irritating to
- the skin
- the mucous membranes
- the eyes

The presence of such vapours can result in burning eyes, nose, and oral cavities, as well as coughing and tearing. Avoid inhaling ammonia vapours.

"DEF" must not come into contact with skin, eyes or clothing.
- If the "DEF" comes into contact with your eyes or skin, rinse affected areas with clean water immediately.
- If the "DEF" is swallowed, immediately rinse your mouth out with a lot of clean water and drink plenty of water.
- Change clothing that is soiled with "DEF" immediately.
- If allergic reactions occur, consult a doctor immediately.
Keep the "DEF" out of the reach of children.

The "DEF" lines and all connected components are pressurised during operation and could be hot, even after the engine has been switched off. There is a risk of burns. When opening the pressurised system, there is a risk of scalding due to hot "DEF" spraying out.
- Wait at least 5 minutes after switching off the engine before starting to work on the exhaust gas after-treatment system.
- Open line connections and caps on system components slowly. Cover the area that you are disconnecting with a cloth.
- Wear suitable protective gloves, protective clothing and safety goggles.

If the "DEF" gets into the coolant circuit (even minute amounts), thermostats and temperature sensors will be damaged.
- Always keep the "DEF" completely separate from other service products.
- Do not use the same containers and fluid collecting pans for the "DEF" and other service products.
- Do not continue to use service products that contain traces of "DEF".

Individual components of the BlueTec® system react very sensitively to even the slightest trace of impurities in the "DEF".
- Only use containers and fluid collecting pans that are clean and suitable for the "DEF".
- Do not continue to use "DEF" which contains traces of impurities.

Fire fighting measures.
The "DEF" is not flammable. In the event of a fire, NH3 (ammonia) may be released.
This may result in a risk of poisoning. Measures to extinguish a fire must therefore be adapted to suit the surroundings.

Environmental note.
Disposing of the "DEF":
- Even a small amount of spilled "DEF" can be an issue.The product is easily biodegradable and can be disposed of in the sewage system without issues by using a lot of water.
- Packaging that is contaminated with "DEF" residue must be treated in the same way as the "DEF".
- Packaging should be emptied as thoroughly as possible, cleaned appropriately and then recycled.Packaging should be emptied as thoroughly as possible, cleaned appropriately and then reused.
- Check the indicator on the instruments panel.
- If necessary, add "DEF" (see:3 - MAINTENANCE: LUBRICANTS AND FUEL).

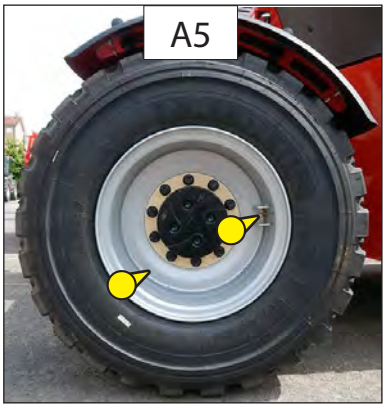
- Open the door to access the filler port of the "DEF" tank for refuelling.
- Remove cap 1 (A4) of the filler port.
- Fill the tank with clean filtered "DEF" through the filler port 2 (A4).
- Refit the cap 1 (A4).
- Visually check the tank and pipes for leaks.

- Check the indicator on the instruments panel.
- If necessary, add "DEF" (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Open the door to access the filler port of the "DEF" tank for refuelling.
- Remove cap 1 (A4) of the filler port.
- Fill the tank with clean filtered "DEF" through the filler port 2 (A4).
- Refit the cap 1 (A4).
- Visually check the tank and pipes for leaks.

A5 - TYRE PRESSURE AND WHEEL NUT TORQUE

CHECK

Check that the air hose is correctly connected to the tyre valve before inflating and keep all persons at a distance during inflation. Respect the recommended tyre pressures given.



- Check the condition of the tyres, to detect cuts, protuberances, wear, etc.
- Check the torque load of the wheel nuts. Non-compliance with this instruction can cause damage and rupture to the wheel bolts and distortion to the wheels.
- Check and, if required, adjust the pressure of the tyres.
  Inflation pressure, AEOLUS 17.5 R 25 A2237 (std tyres):
  •Front wheels: 9 bar - 130.53 psi
  •Rear wheels: 9 bar - 130.53 psi

A6 - BOOM PADS

CLEAN AND LUBRICATE

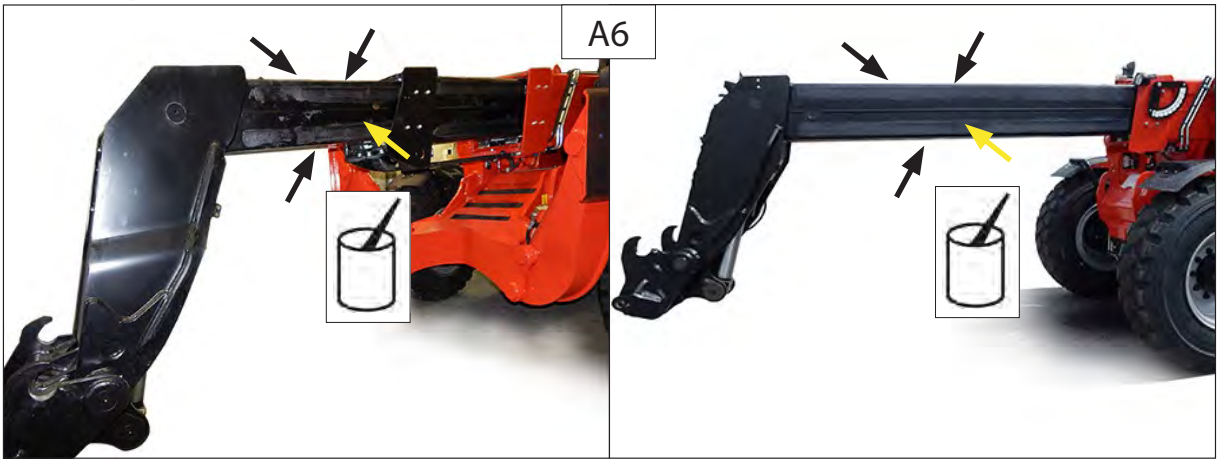
Operation to be carried out every 10 hours during the first 50 hours of service, then a last time after 250 hours.

- Completely extend the boom.
- Apply grease with a brush (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) on the 4 sides of the telehandler(s) (A6).
- Extend and retract the boom several times to evenly distribute the grease.
- Remove any excess grease.

In case of use in abrasive atmospheres (sand, dust, coal), use a protective paint (MANITOU reference: 483536). For more information, please contact your dealer.

MHT 1490, MHT-X 1490

MHT 10130, MHT-X 10130



Telehandler equipped with "Strain gauge"safety system



1 step = Lift and fully retract the telescopic boom without weight;.

2 step = Lift a max weight with the forks , extend the load (keeping it about 1m - 3.2ft from the ground), then make sure that it reaches the limit established by the load chart and that the machine blocks the movements when the safety system is actives.

Telehandler equipped with "LMI "safety system



Use a measuring cord and a level to check the arm angle (A) and length (L) indications.

Then lift a known weight with the fork arms closed and make sure that the load reading in the system is correct.

Lastly, extend the load (keeping it about 0.5 meters from the ground) then make sure that it reaches the limit established by the diagram and that the machine blocks the load bearing movements when the safety system activates.

THIS PAGE IS INTENTIONALLY BLANK

B - EVERY 50 HOURS OF SERVICE

Carry out the previous operations and the following ones.

B1 - RADIATOR GRILLES

CLEAN

Adjust the cleaning frequency according to the operating environment.

Inspect these radiator elements. damaged fins, corrosion, dirt, grease, insects, leaves, oil or other debris. Clean the radiator, if necessary.

Using compressed air is the best method to remove debris.
Aim the air jets in the opposite direction to the air flow of fan 1 (B1/1-B1/2). Keep the nozzle about 6 mm (0.25") away from the radiator fins.
Move the air nozzle slowly parallel to the radiator tubes. The pressurised air will remove the debris present between the tubes.

Before blowing, remove guards 2 (B1/1-B1/2) in order to expel the air with the impurities.

The air pressure can cause personal injury.

Failure to respect the safety measures can cause personal injuries. Use a visor and protective clothing when using compressed air.

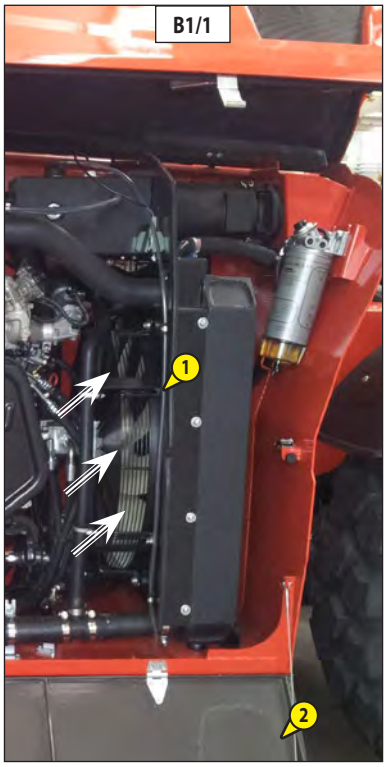
The maximum pressure at the compressed air nozzle for cleaning must be less than 21 bar (30 psi).

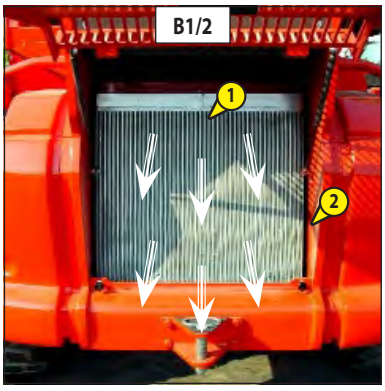
Pressurised water can also be used for cleaning. The maximum water pressure must be less than 2.8 bar (40 psi).
Use pressurised water to soften the mud. Clean the radiant mass on both sides.

To remove oil and grease, use a degreaser and steam.
Clean both sides of the radiator mass.
Wash the radiating body with detergent and boiling water.
Rinse thoroughly with clean water.

After cleaning the radiator, start up the engine.
Run the engine without load for 3-5 minutes to warm it. Bring the engine to operating speed. Running the engine at maximum speed will help remove dirt and dry the radiating body. Reduce the engine speed to minimum and then stop it. Use a light to check behind the radiating body to see if it is clean. If necessary, clean again.

Check to see if the fins are damaged. Bent fins can be straightened using a "comb".
Inspect these elements to make sure they are in good condition: welds, mounting brackets, air piping, connections, clamps and gaskets.
Carry out repairs if necessary.





B3 - CONDENSER GRILLE (OPTIONAL AIR CONDITIONING)

CHECK - CLEAN



In polluting environments, clean the radiator grille daily. Do not use a high pressure water or steam jet as this could damage the condenser fins.

- Remove the protection grille 1 (B3) and clean it if necessary.
- Visually check the condenser 2 for cleanliness (B3) and clean it if necessary.
- Clean the condenser using a jet of compressed air, aiming the jet in the direction of the air flow (B3).

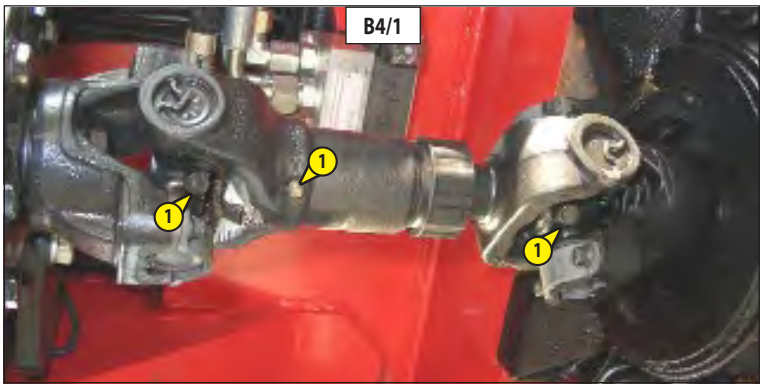
NOTE: To optimise the cleaning, carry out this operation with the fans switched on.

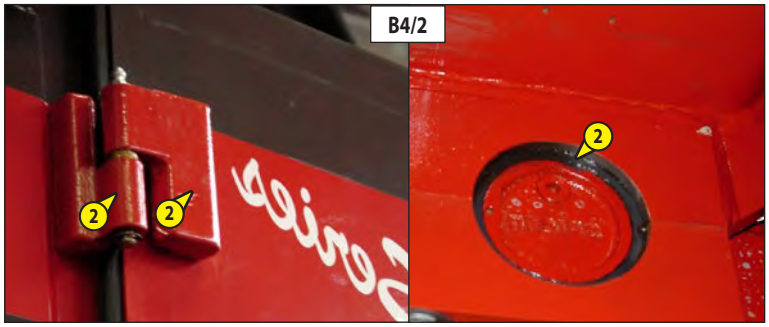
B4 - TRANSMISSION CROSS JOURNAL

LUBRICATE

Clean and lubricate the following points with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.

1 - Grease nipples of transmission cross journal: Transmission/Front axle
(2 grease nipples) (B4/1).
2 - Grease nipples of transmission cross journal: Transmission/Rear axle
(1 grease nipple) (B4/2).





Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (see:1 - OPERATING AND SAFETY INSTRUCTIONS: TELEHANDLER MAINTENANCE INSTRUCTIONS).

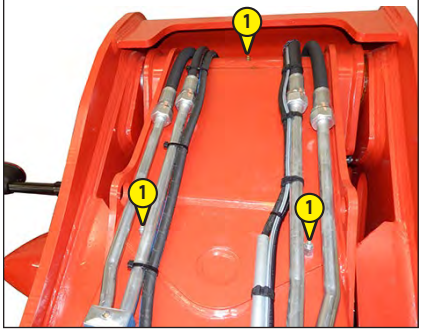
To be carried out weekly, if the lift truck has been operated for less than 50 hours during the week.

In the event of prolonged use in an extremely dusty or oxidising atmosphere, reduce this interval to 10 working hours or every day.

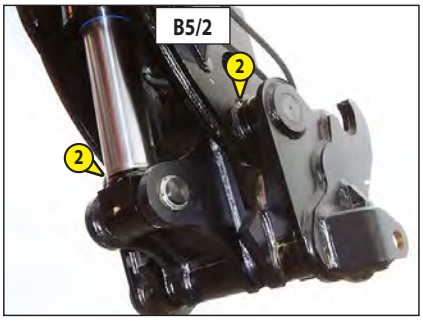
- Clean and lubricate the following points with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.

1 - Lubricators of the boom (3 lubricators) (B5/1).
2 - Lubricators of the TS (2 lubricators) (B5/2).
3 - Lubricator of the tilt cylinder foot (1 lubricator) (B5/3).
4 - Lubricator of the tilt cylinder head (1 lubricator) (B5/4).
5 - Lubricator of the lifting cylinder foot (1 lubricator) (B5/5).
6 - Lubricator of the lifting cylinder head (1 lubricator) (B5/9).
7 - Lubricator of the compensation cylinder foot (1 lubricator) (B5/7).
8 - Lubricator of the compensation cylinder head (1 lubricator) (B5/8).

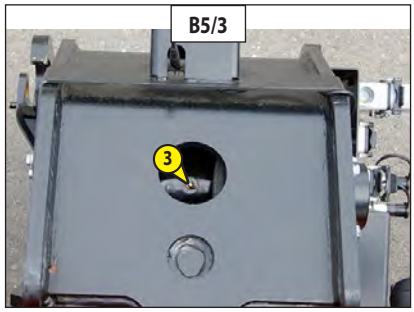
B5/1



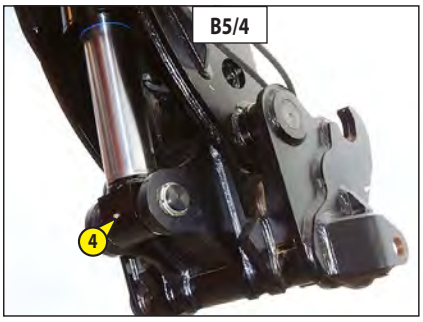
B5/2



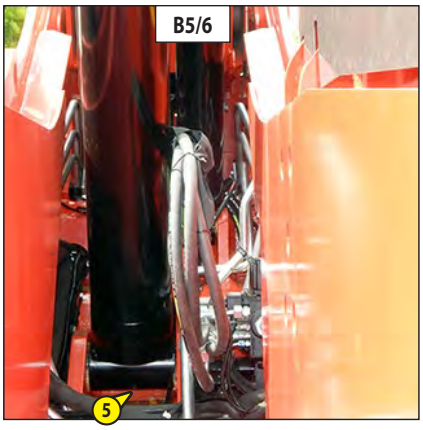
B5/3



B5/4



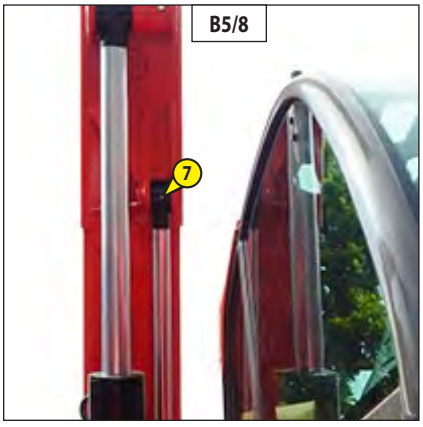
B5/6



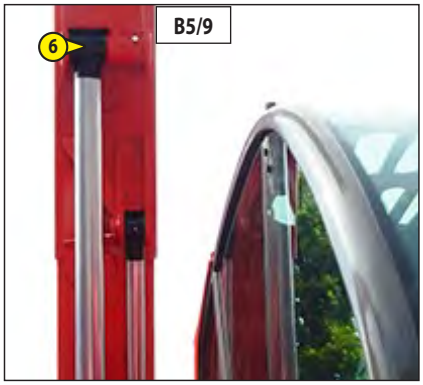
B5/7



B5/8



B5/9



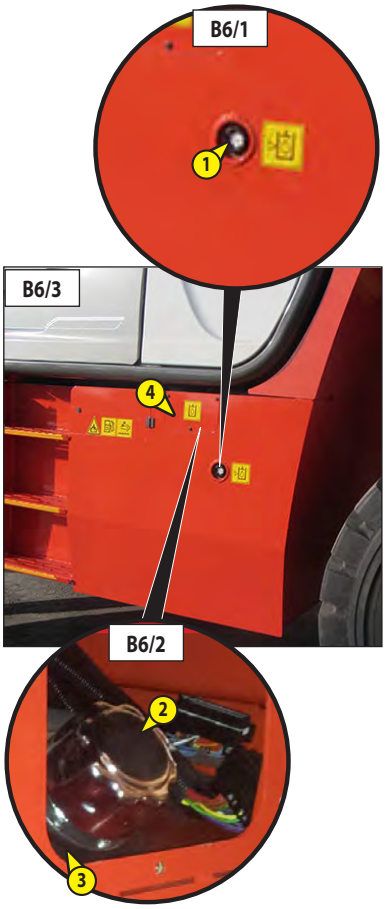
B6 - HYDRAULIC OIL LEVEL

CHECK

Place the lift truck on level ground with the engine stopped and the boom retracted and lowered as far as possible.

Use a clean container and funnel. Clean the top of the oil drum before filling.

- Check the level on the low level indicator 1 (B6/1). The level is correct when it is above or on the red spot.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Open the access door 4 (B7/3) for refilling the hydraulic oil using a contact wrench.
- Remove the cap 2 (B7/2).
- Refill the oil through the filler hole 3 (B6/2) up to the black spot on the level indicator 1 (B7/1).
- Refit the cap.
- Visually check the tank and pipes for leaks.



B7 - WINDSCREEN WASHER LIQUID LEVEL

CHECK

- Remove the guard 1 (B7/1) using a contact wrench.
- Check the tank level visually 1(B7/2).
- If necessary, add windscreen washer fluid (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Remove the cap 2 (B7/2).
- Add windscreen washer liquid through filler hole 3 (B7/2).
- Refit the cap.

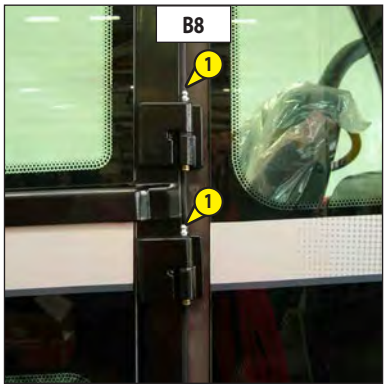




B8 - CAB DOOR

LUBRICATE

-Clean and lubricate the points 1 (B8) (4 lubricators) with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.



B9 - CAB VENTILATION FILTERS

CLEAN

CAB EXTERNAL VENTILATION FILTER

- Remove the cab ventilation filter 1 (B9).
- Clean the filter with a jet of compressed air.
- Check the condition of the filter and replace it if necessary (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Refit the filter.
- Remove the guard 2 (B9).

CAB INTERNAL VENTILATION FILTER

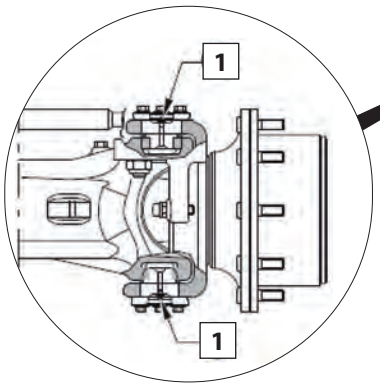
- Remove the protection grille 3 (B9).
- Remove the cab ventilation filter 4 (B9).
- Clean the filter with a jet of compressed air.
- Check the condition of the filter and replace it if necessary (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Refit the filter.
- Refit the protection grille 3 (B9).

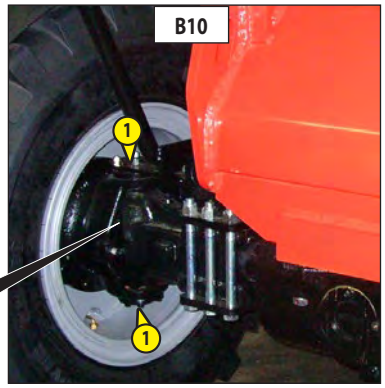


B10 - FRONT AND REAR WHEEL FINAL DRIVE PIVOTS

LUBRICATE

-Clean and lubricate the points 1 (B10) (8 lubricators) with grease (see:3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.

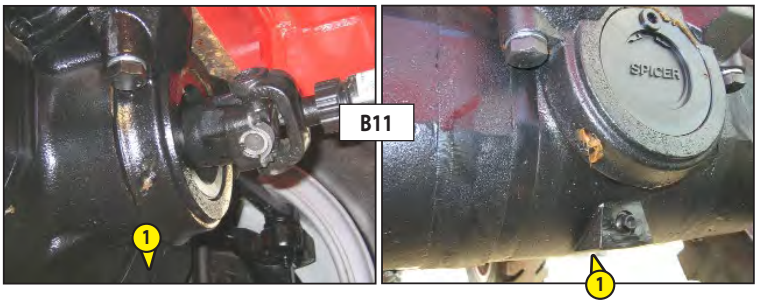




B11 - FRONT AXLE OSCILLATION

LUBRICATE

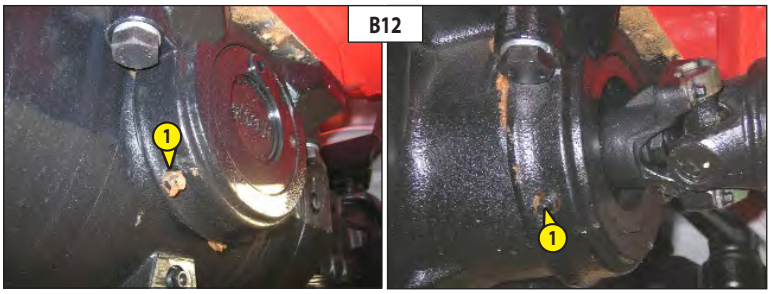
Clean and lubricate the points 1 (B11) (2 lubricators) with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.



B12 - REAR AXLE OSCILLATION

LUBRICATE

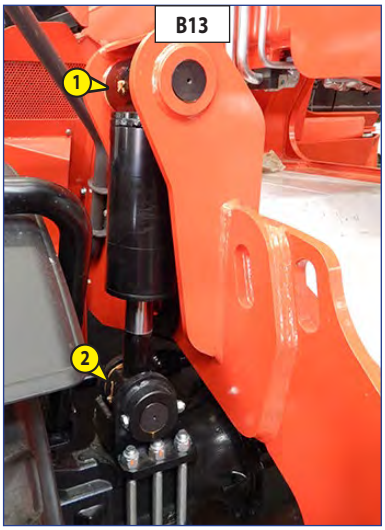
-Clean and lubricate the points 1 (B12) (2 lubricators) with grease (see:3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.



B13 - TILT CORRECTOR

LUBRICATE

- Clean and lubricate the following points with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.
  1- Lubricator of foot axis of tilt corrector cylinder (1 lubricator) 1 (B13).
  2- Lubricator of head axis of tilt corrector cylinder (1 lubricator) 2 (B13).



B14 - STABILIZERS

LUBRICATE

- Clean and lubricate the following points with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.
  1- Lubricator of foot axis of stabilizer cylinder (1 lubricator) 1 (B14).
  2- Lubricator of head axis of stabilizer cylinder (1 lubricator) 2 (B14).



MHT 1490, MHT -X1490

B15 - EMPTYING THE FUEL PRE-FILTER WITH WATER SEPARATOR

EMPTY

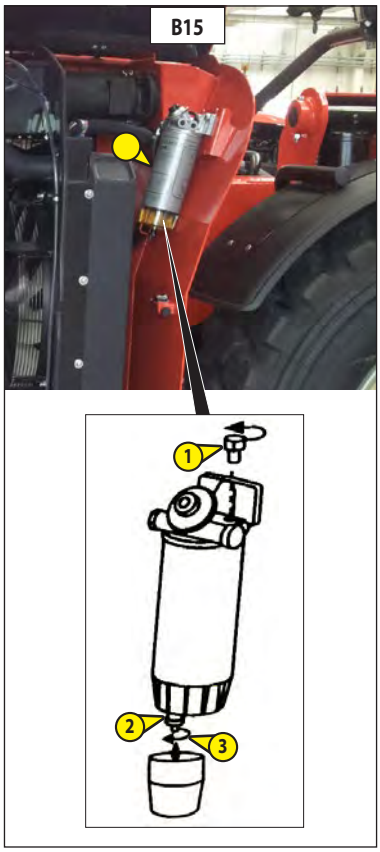
The fuel poured on the boiling surfaces and electrical components can cause fires. To avoid possible accidents, switch off the starter switch while changing the filters or water separator element. Remove spilt fuel immediately.

Make sure the engine is stationary before carrying out any maintenance or repairs on it.

The water separator is in under pressure during the normal working of the engine. Make sure the discharge valve is closed properly to prevent air from entering the supply system.

Wipe the outside of the prefilter as well as its support thoroughly to prevent dust from penetrating the system.

- Open the engine bonnet
- Place a suitable container under the condensate trap to collect the fuel that flows out. Wipe fluid that may have leaked outside.
- Make sure the outer body of the filter unit is clean and devoid of dirt.
- Install a suitable tube on outlet 3 (B15). Open discharge valve 2 (B15). Turn the discharge valve anticlockwise. It must be turned through two complete turns. Slacken the venting screw 1 (B15).
- Let the liquid flow out into the container.
- Insert the valve thread in the filter element and tighten the discharge valve only manually. Tighten the vent screw firmly.
- Remove the tube and the container.



THIS PAGE IS INTENTIONALLY BLANK

C - EVERY 250 HOURS OF SERVICE

Carry out the previous operations and the following ones.

C1 – CAB VENTILATION FILTERS

REPLACE

CAB EXTERNAL VENTILATION FILTER

- Remove the guard 1 using a contact wrench.
- Remove the cab ventilation filter 2 and replace it with a new one (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Refit the guard.

CAB INTERNAL VENTILATION FILTER

- Remove the protection grille 3.
- Remove the cab ventilation filter 4 and replace it with a new one (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Refit the protection grille.

C1



C2 – REAR AND FRONT AXLE DIFFERENTIAL OIL LEVEL

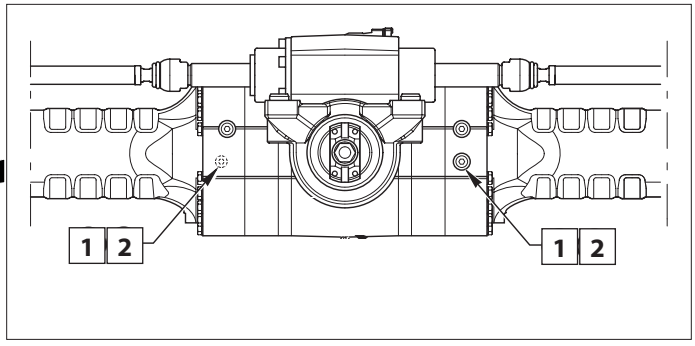
CHECK

Place the lift truck on level ground with the I.C. engine stopped.

- Remove the level plug 1: oil must reach the hole.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the filler hole 2.

C2





C3 – REAR AND FRONT WHEEL FINAL DRIVE OIL LEVEL

CHECK

Place the lift truck on level ground with the I.C. engine stopped.

- Check the oil level in each front wheel final drive.
- Place the level plug 1 horizontally.
- Remove the level plug: oil must reach the hole.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the same hole.
- Fit the level plug back on and tighten it (tightening torque: 34 to 49 Nm).

Place the lift truck on level ground with the I.C. engine stopped.

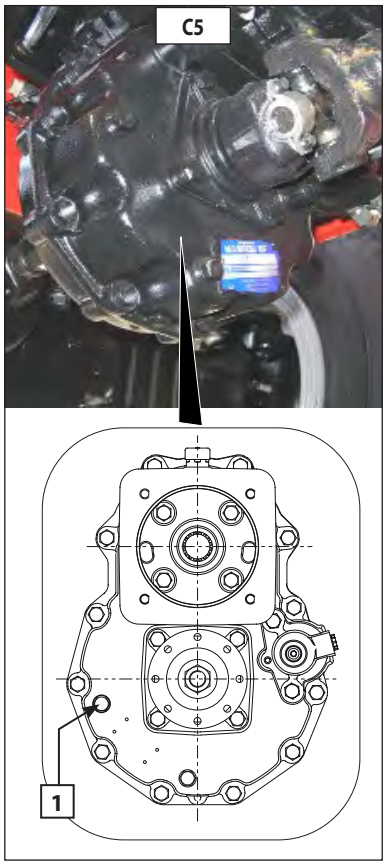


C4 - GEARBOX OIL LEVEL

CHECK

Place the lift truck on level ground with the I.C. engine stopped.

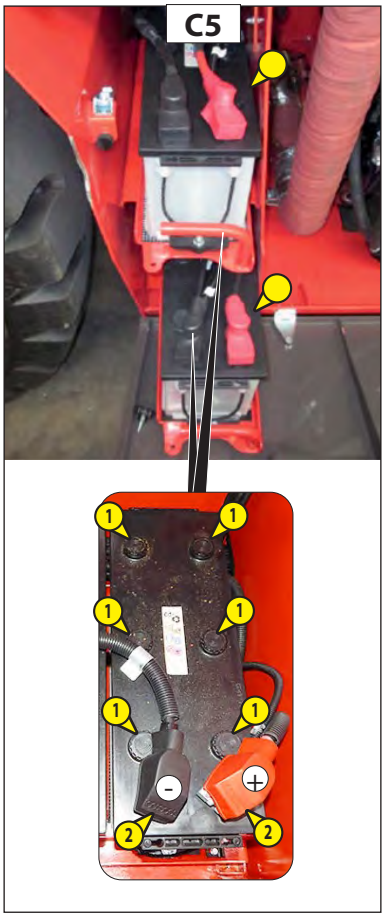
- Remove the level plug 1 (C4), the oil must reach the hole.
- If necessary, add oil through the same hole (see: 3 - MAINTENANCE : LUBRICANTS AND FUEL).
- Fit the drain plug 1 (C4) back on and tighten it.



C5 - BATTERIES

CHECK

Operate the battery cut-out no less than 30 seconds after having switched off the ignition with the ignition key.4 (C5).
Handling and servicing a battery can be dangerous, take the following precautions:
- Wear protective goggles.
- Keep the battery horizontal.
- Never smoke or work near a naked flame.
- Work in a well-ventilated area.
- In the event of electrolyte being spilled onto the skin or splashed in the eyes, rinse thoroughly with cold water for 15 minutes and call a doctor.



Check the electrolyte level in the battery every 250 hours.
If necessary, add only distilled water to restore the level. Never add sulphuric acid.
If frequent topping up with distilled water becomes necessary, or if the battery is subject to getting discharged, check the regulator voltage, which must be between 13 V and 14.7 V, with the engine running at maximum speed.
Once in a while, check the connecting terminals to make sure they are not rusted.
If the vehicle is to remain unused for a long time, disconnect the battery.

When the ambient temperature is high, the level should be checked more frequently.

Maintenance:
- Remove the guard 3 (C5).
-Check the connection terminals 2 (C5).
- Check electrolyte levels regularly 1 (C5). Add distilled or demineralised water if necessary.
- Never add sulphuric acid.
-Battery needs lo be recharged if tension drops below 12.3 V (specific gravity of 1.21).
-If vehicle is not-being used for a while. disconnect the battery.

Charging the battery:
-Remove the caps 1 (fig. C5).
-Only use direct current (DC).
-Connect the positive battery charger cable (+) to the positive terminal (+) on the battery and the negative battery charger cable (-) to the negative terminal (-) on the battery.
-Charge at recommended rating i.e. 10% of battery rated capacity (Ah).
-The battery is fully charged when specific gravity has reached 1.28 (1.23 under tropical climate).
-When charge has completed. -Switch off charger then disconnect.
-Check electrolyte level.

C6 - BOOM EXTERNAL CHAINS

CLEAN - LUBRICATE - CHECK

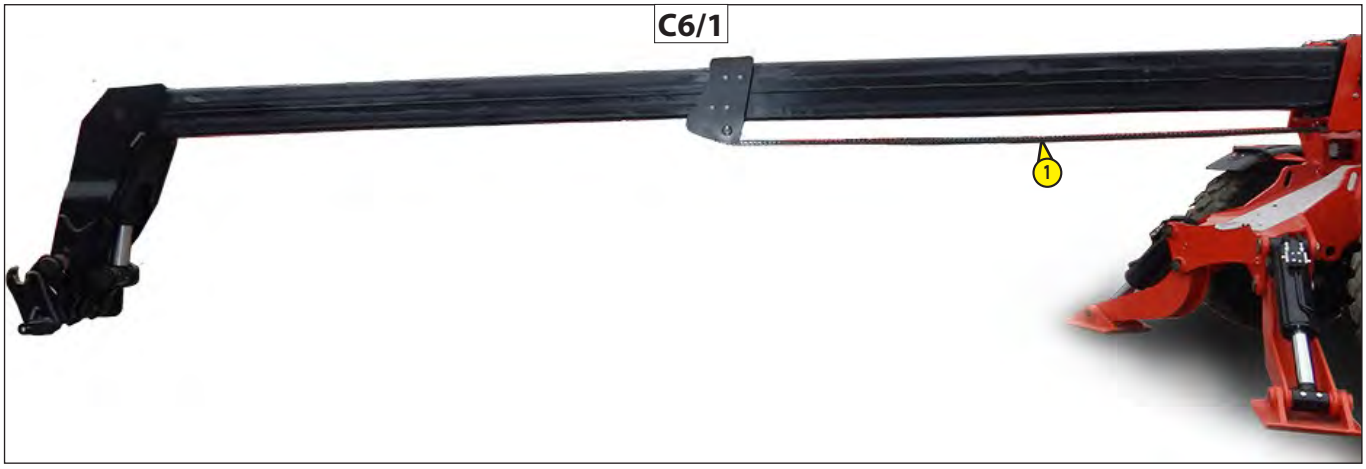
MHT 1490, MHT -X1490

These checks are important for the proper operation of the boom. In case of technical faults, consult your dealer.

CLEAN AND GREASE

- Set the lift truck on its stabilisers, with the boom horizontal.
- Fully extend the telescopic boom.
- Protect the underside of the telescopic boom.
- Wipe the external boom chains 1 (C6/1) with a clean, lint-free cloth, then examine them closely so as to detect any signs of wear.
- Vigorously brush the chains to get rid of any foreign matter. Use a hard nylon brush and clean diesel fuel.
- Rinse the chains by means of a paint brush impregnated with clean diesel fuel and dry them with a compressed air jet.
- Lightly lubricate the chains (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and perform a number of telescoping movements to check the behaviour of the chains.

C6/1

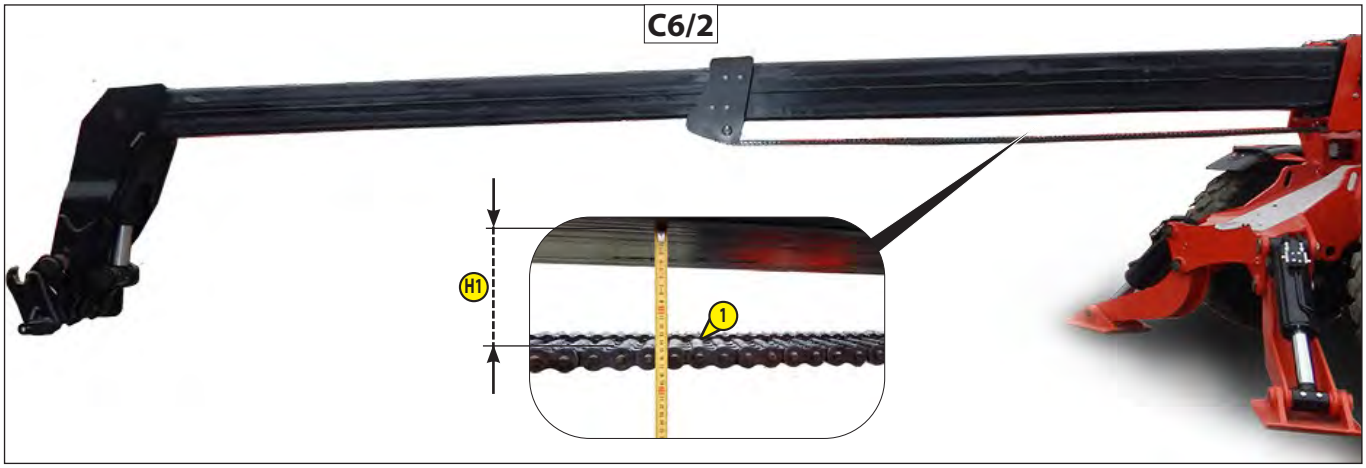


CHECK THE TENSION

- Check the tension of the boom upper chain and, if necessary, re-tighten it, using the spanner meant for the purpose:
- Position the truck on stabilizers.
- Extend the telescopic boom completely in the horizontal position (C6/2).
- Verify that the chains are still under tension.
- Measure the distance between the upper side of the chain and the lower side of the boom using a gauge or a ruler (C6/2).
- If the values are lower than those shown in the table below, adjust the chains.

Minimum measurement:	H1 ≥ 137 mm
Maximum measurement:	H1≤ 157 mm

C6/2



D - EVERY 500 HOURS SERVICE OR 6 MONTH

Depending on machine model.

MACHINE INSPECT OPERATION

In order to minimize unexpected downtime or critical fault of the machine, the inspections and checks need to be carried out on a regular basis.

The interval between the inspections or checks depends on some factors:

- Operating conditions of the machine (working place environment conditions),
- Severity of the application (heavy loading and stress work cycles)
- Age of machine
- Travelling for long distance on roads.

The parts to be inspected or checked are:

- Main frame;
- Boom;
- Cab;
- Axle and axle supports;
- Engine supports;
- Stabilizers.

For each part inspects all welded joints and mounting points

If some damage parts are found, contact your dealer.

In case the machine has been involved in any accident or every 500 working hours, Manitou suggests to inspects the above parts of the machine.

More frequent inspections will be required for older machines and machines that are used in particularly severe applications.

HYDRAULIC OIL LEVEL



MANITOU offers a hydraulic oil analysis kit to delay the recommended due date for periodic maintenance (2000 hours). In this case we recommend an analysis of the hydraulic oil every 500 hours of operation.

The hydraulic oil analysis kit also makes it possible to validate the oil quality so as to obtain a deadline of 2000 hours for specific uses putting demand on the hydraulic circuit: extreme environmental conditions, use of the attachments with a high hydraulic flow rate (such as a sweeper, or a concrete mixer).

- Order the oil analysis kit from your dealer.
- When you receive the kit, take an oil sample and follow the instructions located inside the kit.
- Keep the analysis report and replace the hydraulic oil, depending on the results.

MANITOU oil analysis kit Part No. 958162.

D1 - HYDROSTATIC PUMP OIL FILTER (TRANSMISSION)

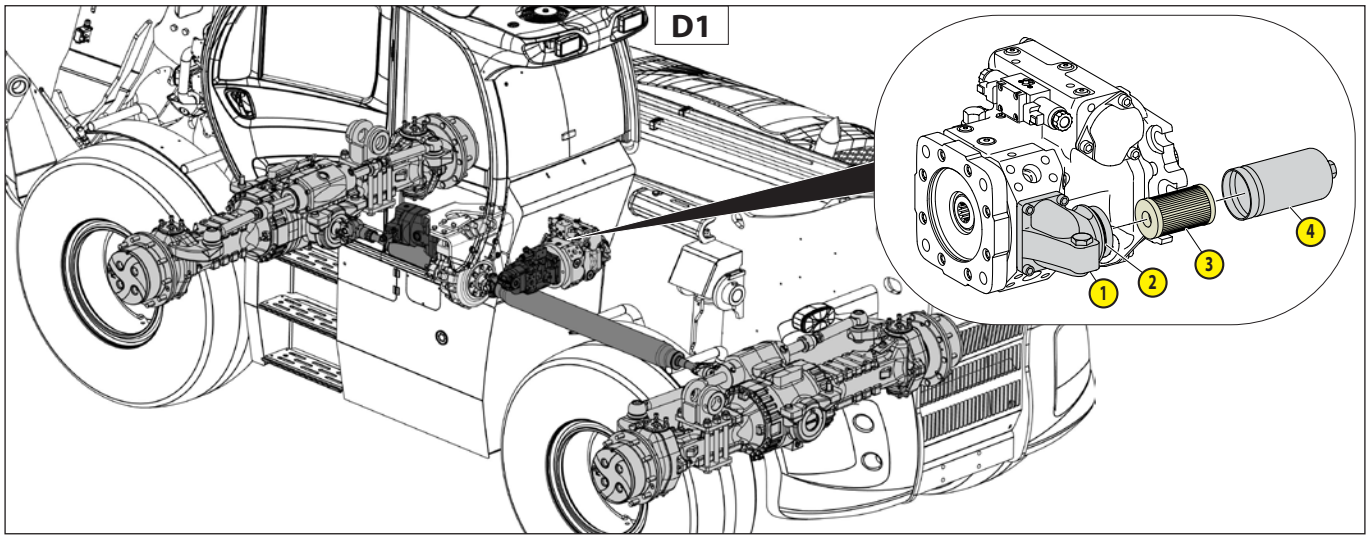
REPLACE

Risk of poisoning and injury!Contact with hydraulic fluid damages your health (e.g. eye injuries, skin and tissue damage, poisoning through inhalation). While working with hazardous materials (for example, hydraulic fluids), always wear safety gloves and safety glasses.

Procedure

To replace the filter cartridge and the filter case seal:

- Loosen and remove the filter housing 4 (D1) from the filter head 1 (D1).
- Remove the used filter cartridge 3 (D1) from the filter housing 4 (D1).
- Check the filter head and filter housing for damage, wear and contaminants.
- Insert the new filter cartridge 3 (D1) into the filter housing 4 (D1).
- Check the O-ring and O-ring groove for damage, wear or contaminants.
- Replace the O-ring 2 (D1) with a new one. Lightly grease the O-ring.
- Screw the filter housing 4 (D1) onto the filter head 1 (D1).
- Tighten the filter housing 4 (D1) with a torque of 45 Nm.

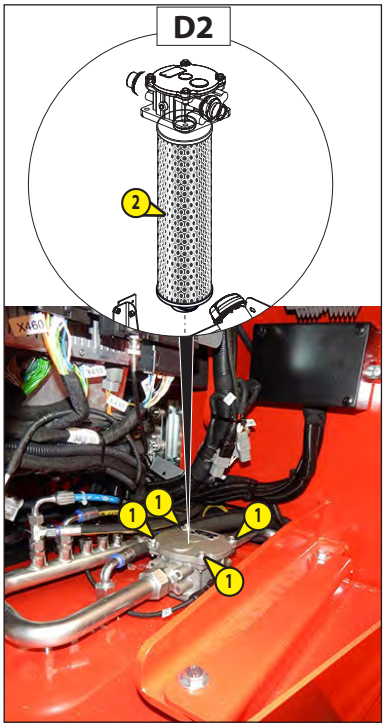


D2 -HYDRAULIC OIL FILTER CARTRIDGE (DISCHARGE)

REPLACE

Loosen the 4 screws 1 (D2) which secure the filter lid. Remove the used cartridge 2 (D2) and replace it with a model with the same features, see (FILTER ELEMENTS AND BELTS TABLE).

Before fitting the cover of filter back on, check that the cartridge has been correctly installed.



D3 - HYDRAULIC AND TRANSMISSION OIL BREATHER

REPLACE

Unscrew vent 1 (D3) on the oil tank and replace it with a new one (see: FILTER ELEMENTS AND BELTS TABLE). Screw on the new vent by hand.



D4 - ENGINE MAINTENANCE

D4/1 - OIL AND FILTER

DRAIN/REPLACE

D4/2 - POLY-V-BELT FOR WEAR AND DAMAGE

CHECK

D4/3 - CARTRIDGES FUEL PREFILTER AND FUEL FILTER

REPLACE

D4/4 - FUEL PRE-FILTER CARTRIDGE WITH WATER SEPARATOR

REPLACE

D4/1 - OIL AND FILTER

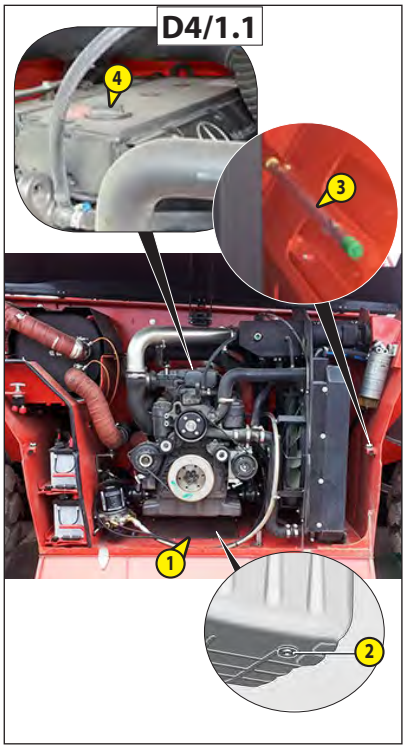
DRAIN/REPLACE

Change the oil only with the engine at operating temperature.

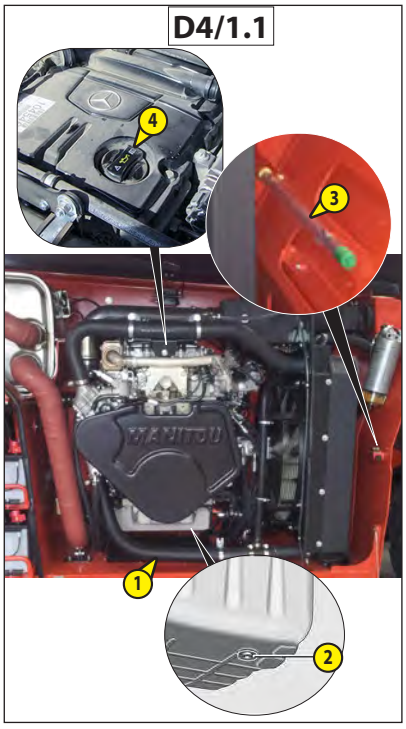
Drain the engine oil
Open the engine bonnet.
Remove guard 1 (D4/1.1) under the engine compartment.
Place a suitable container under the drain screw 2 (D4/1.1) at the bottom of the oil cup.
Take drain hose 3 (D4/1.1).
Place the end of the drain hose in the container and screw the hose fully to the drain connector 2 (D4/1.1).
Unscrew the drain screw carefully and let the oil drain out.
Remove level and filling plug 4 to ensure that the oil is drained properly (D4/1.1).

The engine oil and filter must be disposed off in compliance with the laws in force in the place where the engine is used.

Re-screw the drain screw back on with a new sealing ring and tighten it.
Tightening torque: M16x1.5 – 35 Nm



MHT -X1490, MHT-X 10130



MHT 1490, MHT 10130

Engine oil filter
Unscrew the oil filter threaded cap using a pipe wrench. Let the oil drain out of the filter casing.

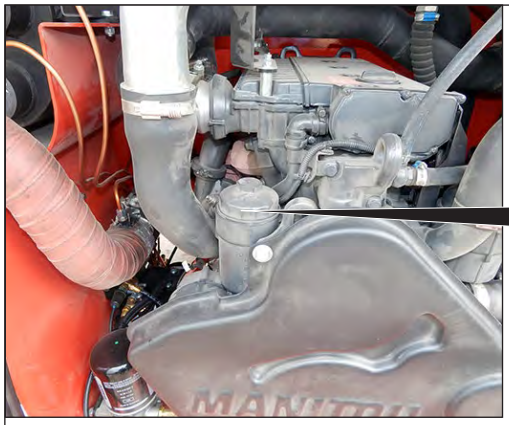
Remove the threaded cap 5 (D4/1.2) together with the oil filter cartridge 7 (D4/1.2) and release the cartridge 7 (D4/1.2) by pressing on the sides on the lower edge.

Make sure foreign bodies do not penetrate the filter casing. Never wipe inside the filter housing.

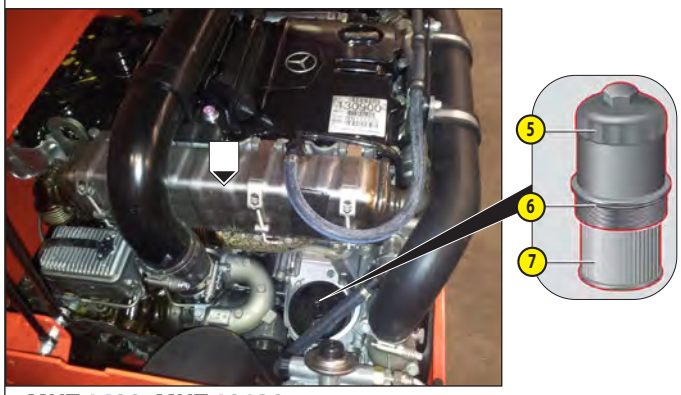
Replace the sealing ring present on threaded cap 6 (D4/1.2).
Insert the new cartridge in the threaded cap and press it so that it clicks into place.

Screw the threaded cap on the oil filter casing and tighten it.
Tightening torque: 40 Nm ***MHT-X 1490, MHT-X 10130***
Tightening torque: 50 Nm ***MHT 1490, MHT 10130***

D4/1.2



MHT -X1490, MHT-X 10130



MHT 1490, MHT 10130

Change the engine oil
Pour fresh oil in the engine through the filler port 7 (D4/1.2).

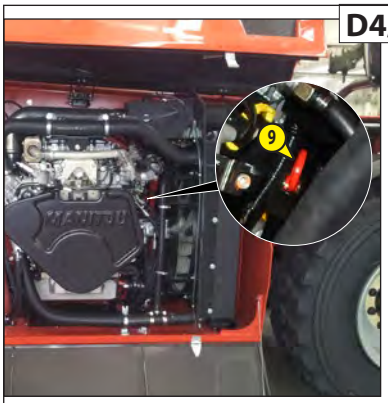
Checking the engine oil level:
- Checking the oil level electronically 8 (D4/1.3).
- Checking the oil level with the dipstick. This is subsidiary to the electronic oil level measurement system. It is merely used for a general check to determine if there is oil in the engine. Remove the dipstick 9 (D4/1.4) to check the level. The oil level should be between the upper and lower marks on the dipstick 9 (D4/1.4).

D4/1.3



Check the sealing of the filter and the drain screw. Switch off the engine. After about 5 minutes, check the oil level and, if necessary, top it up to the max. notch on the oil level rod.

D4/1.4



MHT -X1490, MHT-X 10130



MHT 1490, MHT 10130

D4/2 - POLY-V-BELT FOR WEAR AND DAMAGE

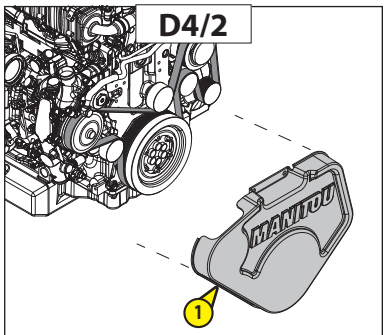
CHECK

A faulty poly-V-belts can tear, the belt or parts of it could then be thrown off the engine, thereby causing injury to others.
- Always observe the specified maintenance intervals for poly-V-belts.
- If damage is detected, replace the poly-V belt concerned immediately.

If the poly-V-belt is torn, there is no drive to the coolant pump and the alternator. The engine may overheat as a result.
- Check the poly-V-belt condition regularly.
- Replace the poly-V-belt concerned immediately if there are any signs of damage.

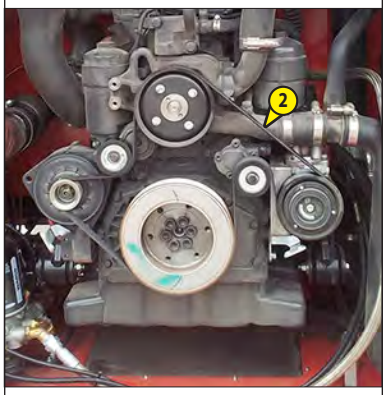
- Open the engine hood and remove crankcase 1 (D4/2).
- Fit the cranking device to the flywheel housing inspection hole.
  Tightening torque: 25 Nm ***MHT-X 1490, MHT-X 10130***.
  Tightening torque: 30 Nm ***MHT 1490, MHT 10130***.
- Make a chalk mark on the poly-V-belt.
- Check the poly-V-belt 2 (D4/2) section by section for damage (D4/2). To do this, turn the engine or poly-V-belt gradually using the cranking device until the chalk mark is reached again.
- Remove the cranking device.
- Screw the cap into the inspection hole in the flywheel housing and tighten it.
  Tightening torque: 25 Nm ***MHT-X 1490, MHT-X 10130***.
  Tightening torque: 30 Nm ***MHT 1490, MHT 10130***.

D4/2





MHT 1490, MHT 10130



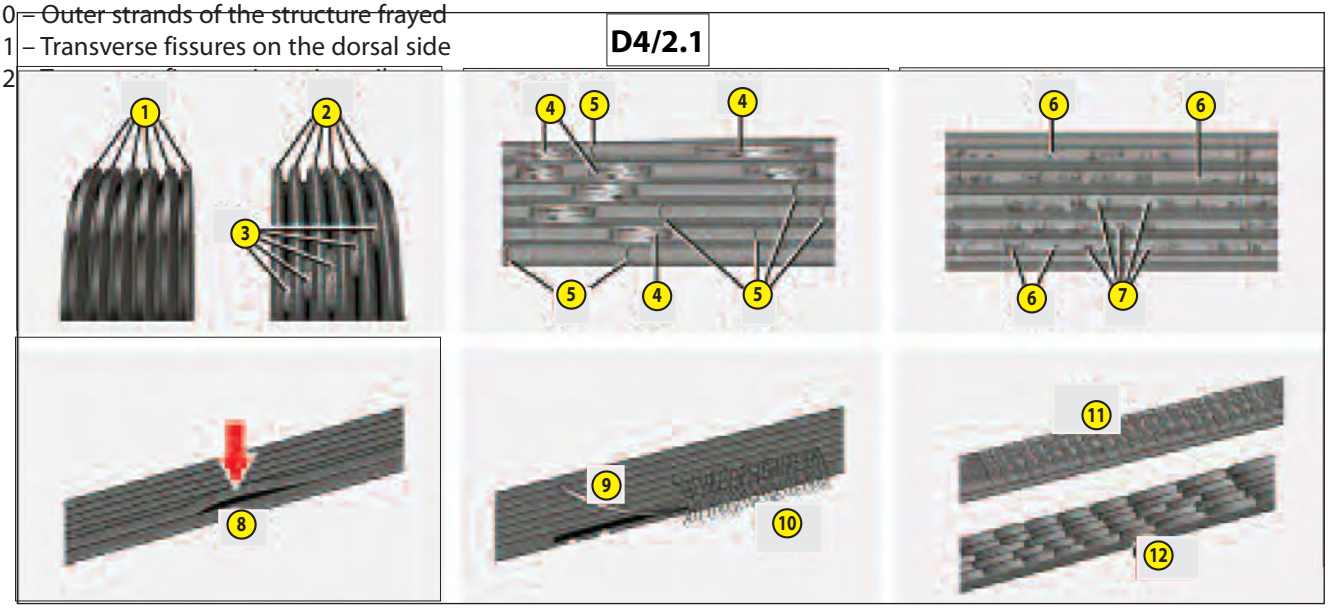
MHT -X1490, MHT-X 10130

Patterns of damage

Replace the poly-V-belts if one of the following damage patterns occurs on the poly-V-belt. (D4 / 2.1)

1 – New belt (for comparison; ribbed fan belt)
2 – Wear on the sides: wedge-shaped ribbing
3 - Structure visible at the bottom of the ribbing
4 – Broken ribbing
5 – Transverse fissures in various ribs
6 – Rubber nodules at the bottom of the belt
7 – Dirt or rubble deposits
8 – Ribbing detached from the bottom of the belt
9 – Strands of the structure torn on the sides
10 – Outer strands of the structure frayed
11 – Transverse fissures on the dorsal side
12

D4/2.1



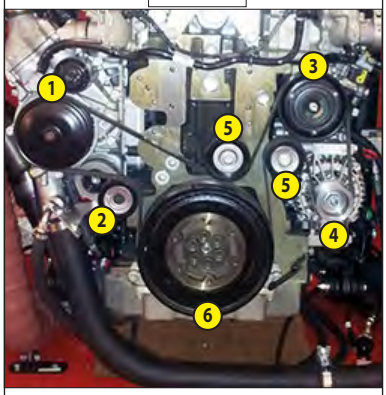
Replacing the poly-V-belt

The tensioning device is spring-tensioned. When it is loosened or tightened, there is a risk of injury from crushing or entrapment in pretensioned parts.
- Always carry out work on the tensioning device with extreme care.
- Make sure that the tool is handled correctly.

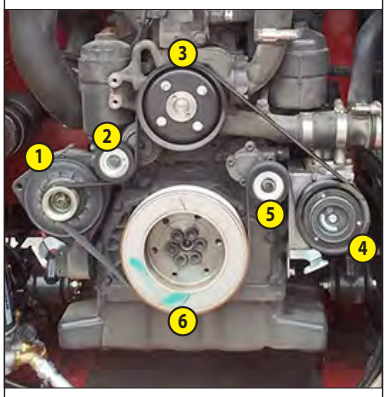
Poly-V-belt routing (engine with refrigerant compressor) (D4/2.2):

1 - Alternator (D4/2.2)
2 - Tensioning pulley (D4/2.2)
3 - Coolant pump (D4/2.2)
4 - Refrigerant compressor (D4/2.2)
5 - Guide pulley (D4/2.2)
6 - Crankshaft (D4/2.2)

D4/2.2



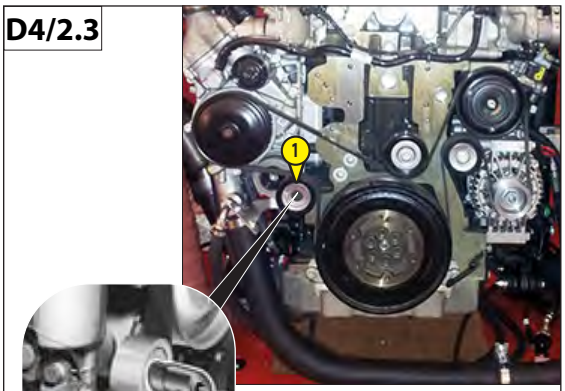
MHT 1490, MHT 10130



MHT -X1490, MHT-X 10130

- Insert the 15 mm socket, with the handle 1 (D4/2.3) and extension attached, into the tensioner 2 (D4/2.3).
- Swing the tensioning pulley up and remove the poly-V-belt.
- Swing back the tensioner.
- Check for such defects as worn bearings in the tensioner, tensioning pulley and guide pulleys and for wear of the tooth profile on the belt pulleys.
- Replace faulty parts.
- Route the new poly-V-belt over all belt pulleys except the tensioning pulley. Refer to the installation showing the belt route.
- Swing the tensioning pulley up with the lever and engage the poly-V-belt. Then return the tensioning pulley to its initial position.
- Remove the lever and check for correct seating of the poly-V-belt on the belt pulleys.

D4/2.3



IHT 1490, MHT 10130



MHT -X1490, MHT-X 10130

D4/3 - CARTRIDGES FUEL PREFILTER AND FUEL FILTER

REPLACE

Clean the fuel pre-filter cartridge
Open the tank cap to discharge the overpressure inside.

Clean the outside of the fuel pre-filter, keeping the ducts, hose pipes and cables that may be present under the pre-filter covered.

Unscrew threaded cap 1 and remove it from the filter casing together with filter cartridge 2 (D4/3.1).

Clean threaded cap 1 (D4/3.1) and the filter cartridge 2 (D4/3.1).
If the filter cartridge is excessively dirty or damaged, replace it.

Check the sealing ring 3 (D4/3.1) of the threaded cap and replace it if necessary.
Insert the filter cartridge in the threaded cap and screw the latter back on the filter casing. Tightening torque: 25 Nm.

Replace the fuel filter cartridge

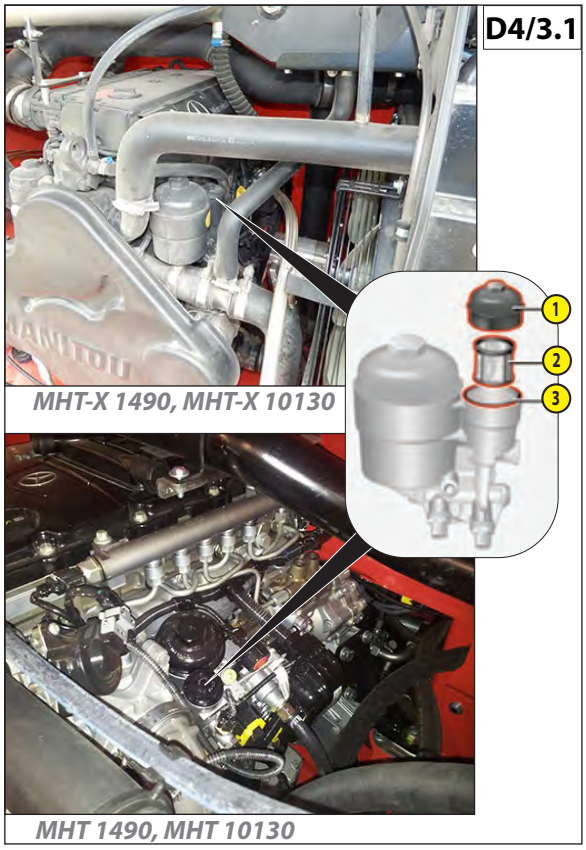
There is an increased risk of fire when handling fuels as they are highly flammable. Avoid fire, naked flames and sparks, and refrain from smoking when handling fuels.

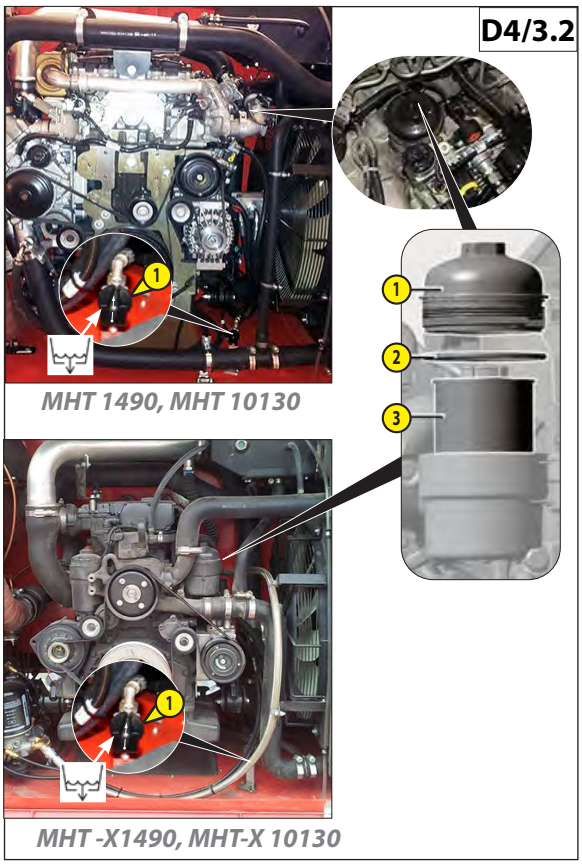
Environmental note.
dispose of used filter elements, seals and fuel residue in accordance with relevant local regulations.

Environmental note.
If the diesel level (tank) is above the height of the motor, it is necessary to perform the following when replacing the filter:
- fully close the shutoff valve on the fuel prefilter with water separator 3 (D4/3.3),
- open the valve by turning tap 4 (D4/3.2) to drain and collect the fuel coming from the filter drain pipe into a container. Downward tap arrow. Otherwise diesel may leak.

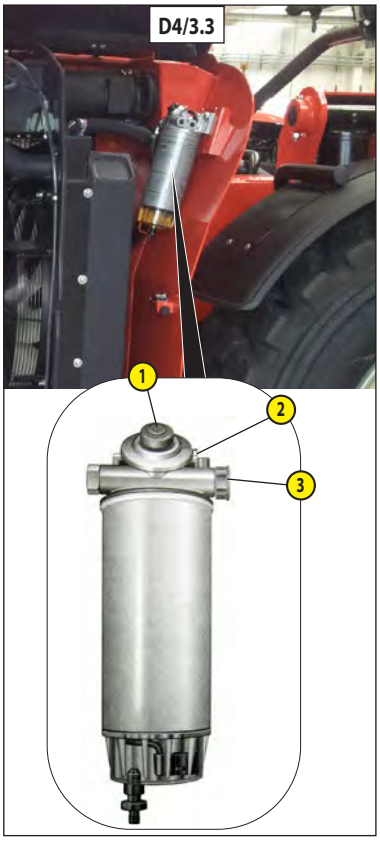
- Clean the outside of the filter housing.
- Open the fuel filler cap to prevent excess pressure in the fuel tank.
- Unscrew fuel filter cap 1 (D4/3.2) using a socket spanner insert (SW 36).
- Pull fuel filter cap 1 (D4/3.2) with filter element 3 (D4/3.2) out of the filter housing slightly. Allow the fuel to drain off.
- Remove the cap and filter element. Unclip the filter element by pressing the sides of the lower edge of the filter element.
- Make sure foreign bodies do not penetrate the filter casing.
- Never wipe inside the filter housing.
- The ingress of water must be prevented.
- Replace sealing ring 2 (D4/3.2) with a new one (grease lightly).
- Clip new filter element 3 (D4/3.2) into housing cover 1 (D4/3.2).
- Screw on and tighten oil filter cap 1 (D4/3.2) with filter element 3 (D4/3.2) (tightening torque: 25 Nm).
- Put on the fuel filler cap and tighten it.
- Run the engine for approximately 1 minute. The fuel system is bled automatically. If the engine stalls or does not start, bleed the fuel system manually (see paragraph D4/3.3).
- Check the fuel filter for leaks with the engine running.

Bleeding the fuel system with fuel prefilter (D4/3.3)





Bleeding the fuel prefilter using the manual fuel pump (D4/3.3).



The fuel prefilter must only be bled when:
- the fuel tank is empty
- the fuel filter has been replaced.

- Unscrew the fuel tank filler cap.
- Place the collector underneath the fuel prefilter.
- Open shutoff valve 3 (D4/3.3) fully.
- Open bleed nipple 2 (D4/3.3).
- Only press the manual fuel pump 1 (D4/3.3) until the fuel escaping from the bleed nipple 2 (D4/3.3) is free of bubbles. Do not continue to pump.
- Close bleed nipple 2 (D4/3.3).
- Close the fuel tank filler cap.
- Start the engine.
  The fuel system is bled automatically.

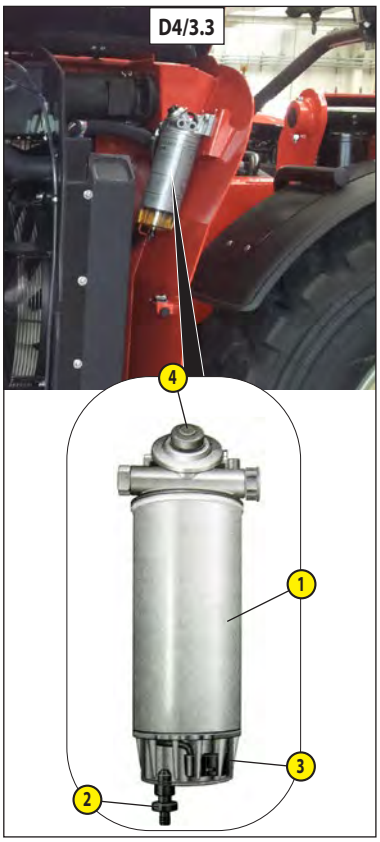
Do not continue to press the fuel hand pump after the engine has started. This could otherwise damage the hand pump.

D4/4 - FUEL PRE-FILTER CARTRIDGE WITH WATER SEPARATOR

REPLACE

There is an increased risk of fire when handling fuels as they are highly flammable. Avoid fire, naked flames and sparks, and refrain from smoking when handling fuels.

Environmental note.
dispose of used filter elements, seals and fuel residue in accordance with relevant local regulations.



Open the drain valve and bleed screw 2 (D4/4) and collect the water-fuel mixture that flows out of the filter element in a container.
Remove the heating connector.
Unscrew filter cartridge 1 (D4/4) and remove it.

Unscrew the separator container 3 (D4/4) from filter cartridge and remove it, cleaning and replacing it, if necessary.

Assembly must be done by repeating the procedure described in reverse order. Use new sealing rings during assembly.

Screw the filter element manually back all the way on the filter cup.

Close the drain valve and refill the pre-filter by means of fuel hand pump 4 (D4/4).
Then close the bleed screw.
Start up the engine and bleed the supply system.

Run the engine for about 1 minute.
The fuel system is bled automatically.

Check the pre-filter seal.



Consult your dealer.

E - EVERY 1000 HOURS OF SERVICE OR 1 YEAR

Carry out the previous operations and the following ones.

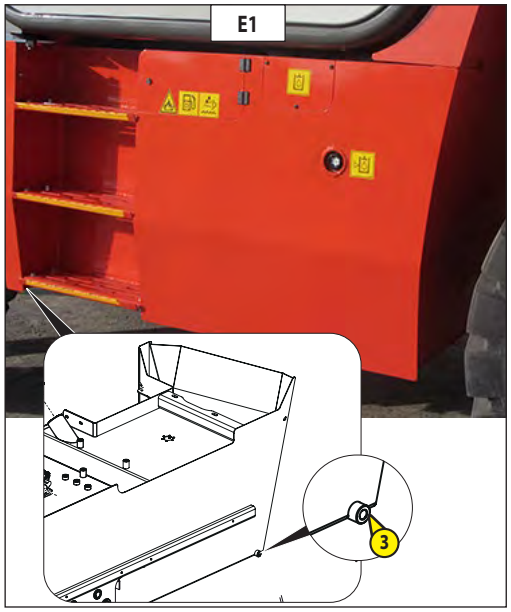
E1 – FUEL TANK

CLEAN

There is an increased risk of fire when handling fuels as they are highly flammable. Avoid fire, naked flames and sparks, and refrain from smoking when handling fuels.

Position the forklift truck on a level surface, with the I.C. engine switched off.
Unscrew the tank topping up plug 1 (E1) then place a container under the drainage plug 3 (E1) and unscrew the plug.
Allow the fuel to flow out and then pour 10 litres of clean fuel through the filler hole 2 (E1) to eliminate impurities, if present.
Refit and tighten the drainage plug 3 (E1).
Fill the tank with clean fuel and refit the topping up plug 1 (E1/1).

Do not fill the tank completely.As the fuel heats up, it expands. The tank may overflow.



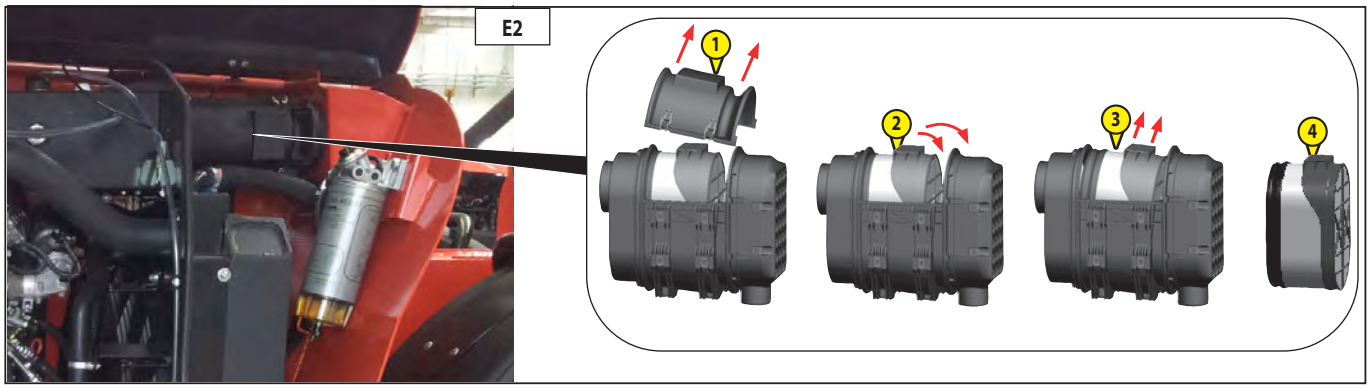
E2 – DRY AIR FILTER CARTRIDGE

REPLACE

In case of use in very dusty environments, reduce the cartridge replacement frequency (up to 250 hours in very dusty environments).

Replace the cartridge in a clean environment and with the I.C. engine switched off.
Never use the forklift truck without the air filter or with a damaged air filter.
If the air filter clogging indicator lights up, replace the cartridge in the shortest possible time (maximum 1 hour).

- Open the engine bonnet.
- Free the blocks and remove the cover 1.
- Carefully rotate the cartridge 2 forwards, to reduce dust leakage as far as possible.
- Do not remove the safety cartridge.
- Carefully clean the following parts with a wet clean cloth that does not leave lint.
  - The inside of the filter and cover.
  - The inside of the filter inlet piping.
  - The seats of the gaskets in the filter and cover.
- Check the state and fixing of the connecting pipe to the I.C. engine, and the connection and the conditions of the filter clogging indicator.
- Before the assembly, check the state of the new filter cartridge (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Incline the cartridge forwards by about 5°, insert it in the filter and position it by pressing on the edge of the cartridge and not in the centre.
- Refit the cover and check to make sure the clips are secured correctly. It must be possible to install the cover easily; if necessary, check the correct positioning of the filter cartridge.



E3 - HYDRAULIC/TRANSMISSION OIL AND BREATHER

DRAIN/REPLACE

E4 - HYDRAULIC SYSTEM SUCTION STRAINER

CLEAN

Place the lift truck on level ground with the engine stopped and telescopic boom retracted and lowered as far as possible.

Before any intervention, thoroughly clean the area surrounding the drain plug and the suction strainer on the hydraulic tank.
Use a clean container and funnel. Clean the top of the oil drum before filling.
Dispose of the drain oil in an ecological manner.

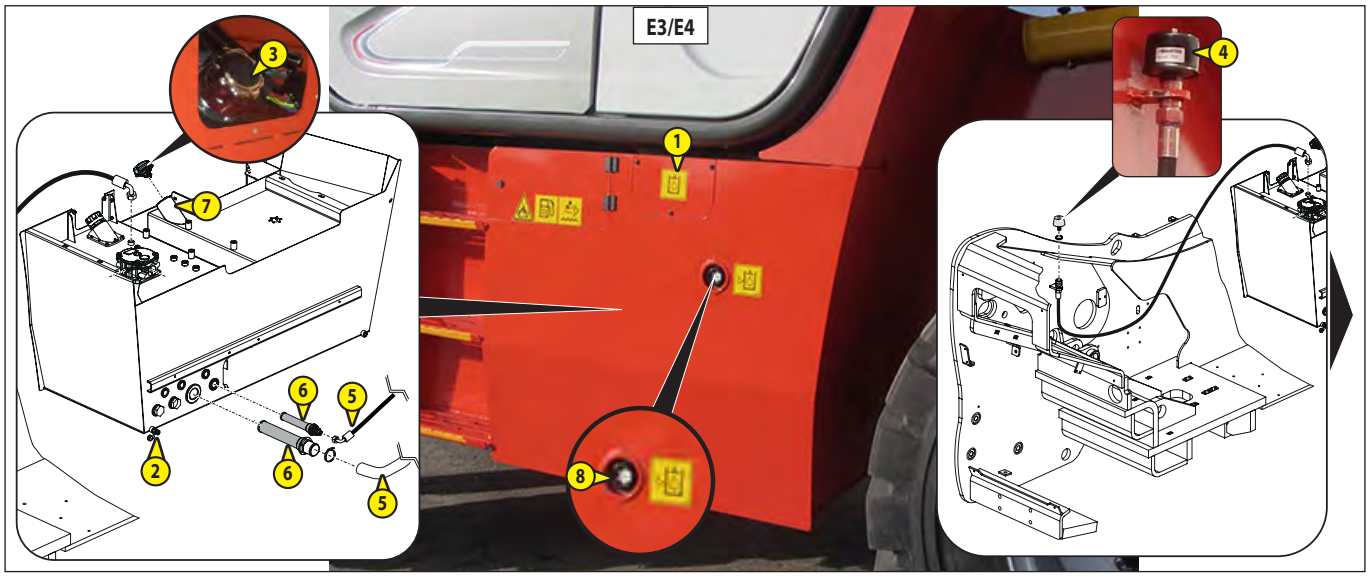
Draining the oil
- Remove the guard 1 (E1/E2).
- Place a container under drain plug 2 (E1/E2) and unscrew the plug.
- Remove filling plug 3 (E1/E2) to ensure that the oil is drained properly.

Replacing the breather
- Unscrew the breather 4 (E1/E2) and replace it with a new one (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).

Cleaning the strainer
- Disconnect hose 5 (E3/E4).
- Remove and clean the suction strainer 6 (E3/E4) using a compressed air jet, check its condition and replace if necessary (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Refit the suction strainer making sure the seal is in the correct position.

Filling up the oil
- Refit and tighten the drainage plug 2 (E3/E4).
- Fill the hydraulic oil tank through the filler hole 7 (E3/E4) until the oil level lies mid-way between the lower and upper reference marks on the level indicator 8 (E3/E4).
- Check for leakage through the drain hole 2 (E3/E4).
- Fit and tighten the tank cover 3 (E3/E4).

Hydraulic circuit decontamination
- Leave the engine running (accelerator pedal at halfway travel) for 5 minutes without using anything on the lift truck, then for 5 more minutes while fully using the hydraulic movements (except the steering system and the service brakes).
- Accelerate the engine at full speed for 1 minute, then activate the steering system and the service brakes.
- This operation makes a pollution abatement of the circuit possible through the hydraulic return oil filter.



E5 - SEAT BELT

CHECK

The forklift truck must not be used if the seat belt is defective (fixing, lock, seams, tears, etc.).
Repair or replace the seat belt immediately.

SAFETY BELT WITH TWO FIXING POINTS

- Check the following points:
  - The fixing of the anchoring points on the seat.
  - The cleanliness of the belt and the locking mechanism.
  - The clicking of the locking mechanism.
  - The state of the belt (tears, fraying).

AUTOMATIC SAFETY BELT WITH TWO FIXING POINTS

- Check the afore-mentioned points and those below:
  - Correct sliding of the belt.
  - The state of the winder plates.
  - The locking of the winder mechanism by pulling the belt with one firm pull.

NOTE: After an accident, replace the safety belt.

E6 - CHANGE FRONT AND REAR AXLE DIFFERENTIAL OIL

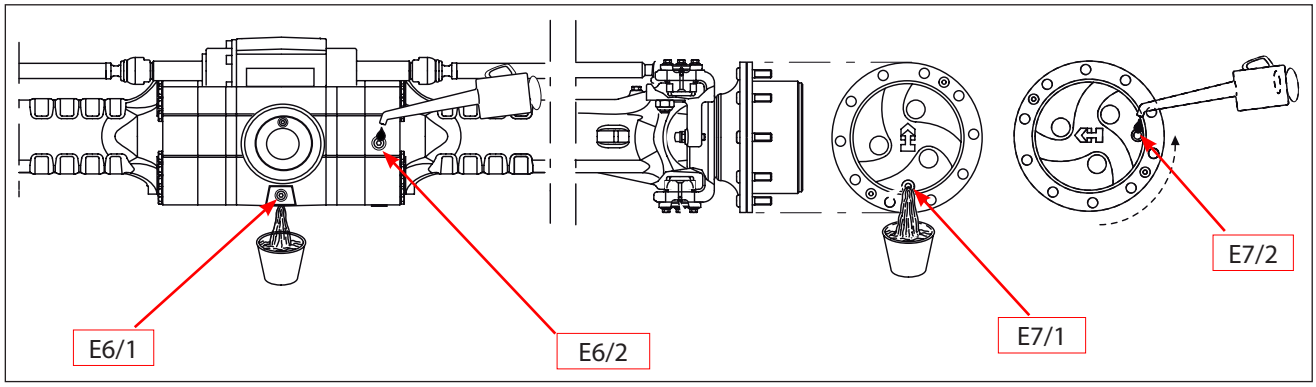
REPLACE

Position the forklift truck on a level surface, with the engine switched off and the differential oil still hot.
Place a container under the drainage plug (E6/1) and let the oil flow out. Remove the level and filler plug (E6/2) to ensure the oil is drained out completely.
Fit and tighten the plug (E6/1). Fill oil through the filler hole (E6/2).
The level is correct when the oil reaches the level hole (E6/2).
Check for leakage from the drainage plugs.
Fit and tighten the level and filler plug (E6/2).
Repeat the operation for the front and rear differential.

E7 - CHANGE THE FRONT AND REAR WHEELS GEAR OIL

REPLACE

Position the forklift truck on a level surface, with the engine switched off and the gear oil still hot.
Make sure the drainage and level plug (E7/1-E7/2) faces downwards to allow the oil to drain out easily.
Place a container (E7/1) under the drainage plug and unscrew the plug. Let all the oil drain out. Bring the outlet hole to the horizontal position to check the oil level.
Fill the oil (E7/2) (see: "LUBRICANTS") through level hole (E7/2). The level is correct when the oil reaches the level hole (E7/2).

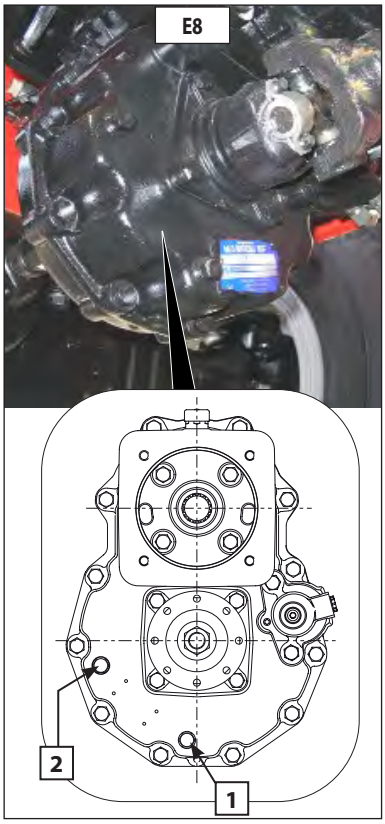


Refit the drainage plug (E7/2) and tighten it. Repeat this operation for each gear.

E8 -GEARBOX OIL

REPLACE

Position the truck on a horizontal surface with the engine stopped and the oil in the gear still hot.
Place a container under the drainage plug 1 (E8). Unscrew the plug 1 and let the oil flow out.
Remove the level and filler plug 2 (E8) to ensure the complete drainage. Refit and tighten the plug 1 (E8).
Fill the oil (see: "LUBRICANTS") through the level and filler hole 2 (E8). The level is correct when the oil reaches the hole.
Fit the drain and filler plug 2 (E8) back on and tighten it
Check the drainage plug for leakage.



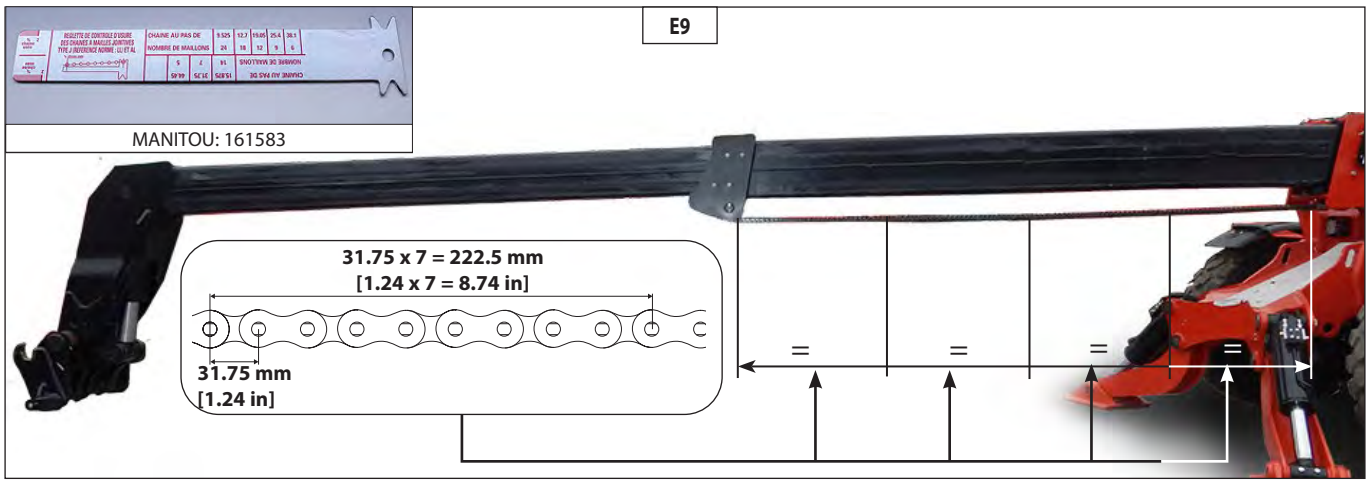
E9 - WEAR OF TELESCOPIC BOOM EXTERNAL CHAINS

CHECK

- Chain wear occurs at a number of locations.
  - On the articulations, which leads to elongation of the chain.
  - On the edge of link plates through contact with the pulleys.
  - On the face of the plates and the extended pins through contact with the pulley flanges.
  - On the alignment of the flats of the extended pins.

Chain elongation (E9)
We recommend that you perform this operation using the chain checking gauge (MANITOU part No.: 161583).
- Set the lift truck on its stabilisers, with the boom horizontal.
- Fully extend the telescopes and continue operating the control for a few moments to properly tension the chains.
- As the chain will likely wear unevenly over its length, divide the chain into 4 equal sections and check with the gauge at the centre of each section.

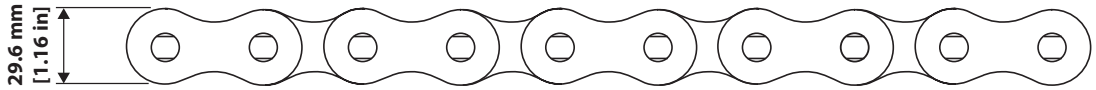
If the maximum dimension is exceeded (222,5 mm +2% = 227 mm) [8.74 in +2%= 10.4 in], replace the pair of chains (contact your dealer).



Side wear of plates

As for chain elongation, perform a check in the middle of each section using a calliper gauge.

If the minimum dimension is exceeded (29.6 mm - 2% = 29 mm) [1.16 in -2% = 1.14 in], replace the pair of chains (contact your dealer).

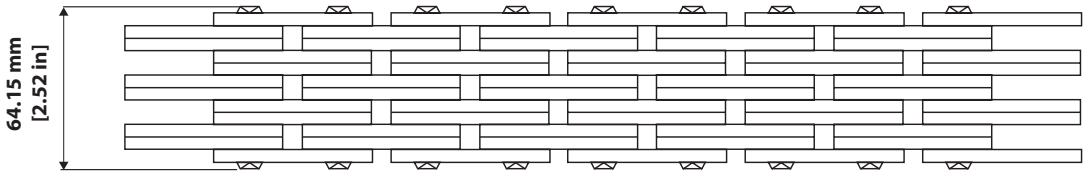


Extended pin wear

As for chain elongation, perform a check in the middle of each section using a calliper gauge.

If the minimum dimension is exceeded (64.15 mm - 2% = 62.87 mm) [2.52 in - 2% = 2 in], replace the pair of chains (contact your dealer).

- In addition to wear, the high pressures between the side of the plates and the pulleys may force out material, causing the articulations to seize. In this case, also replace the pair of chains.

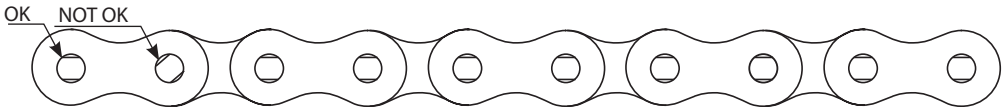


Alignment of extended pin flats

Check the chains over their entire length.

- High friction between the plates and the extended pins may cause the pins to turn in the outer plates and thus come out of their housing.

If the flats are not aligned in the longitudinal direction of the chain, replace the pair of chains (contact your dealer).



Operation to be carried out the first time after 1000 hours of service, **periodically every 1000 hours of service.**

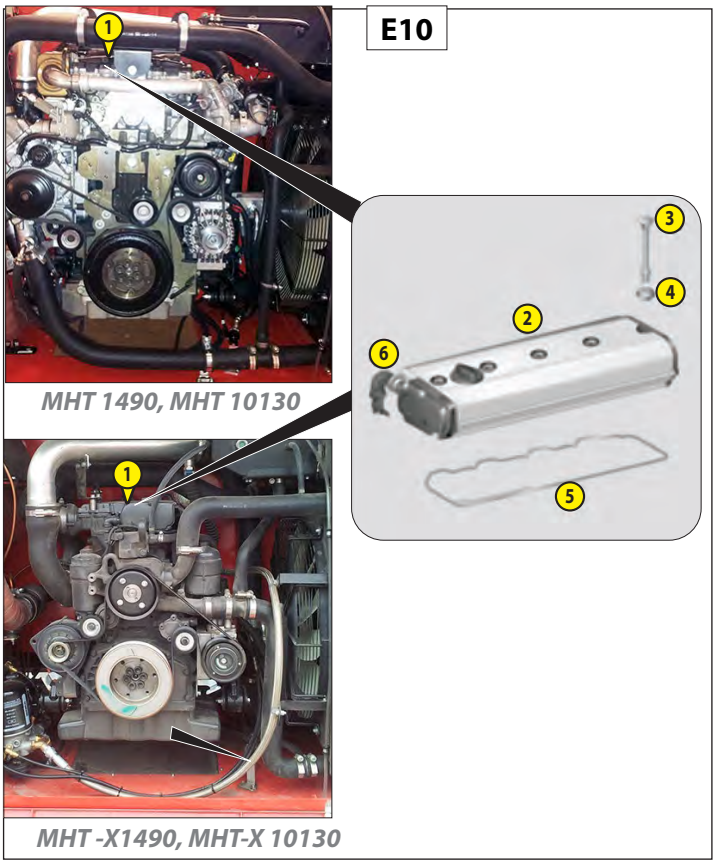
Adjust the valve clearance when the engine is cold (at least 30 minutes after stopping the engine, even if it was only operated for a brief period). Clean very dirty cylinder head covers before removal.

Risk of accident.
If not properly secured, a vehicle might accidentally be set in motion, knocking somebody down or trapping them or causing an accident and injuring you or others.
- Always prevent the vehicle from rolling away by applying the parking brake and, if necessary, by placing chocks under the wheels.
- Shift the transmission into neutral.
- Only turn the engine over using the rotation device provided for this purpose.

Removal/fitting of the cylinder head covers 1 (E10)

Removal
Remove engine ventilation hose 6 (E10) from the cylinder head cover.
Unscrew hexagon socket screw 3 (E10) from the cylinder head cover with sealing washers 4 (E10).
Remove cylinder head cover 2 (E10).

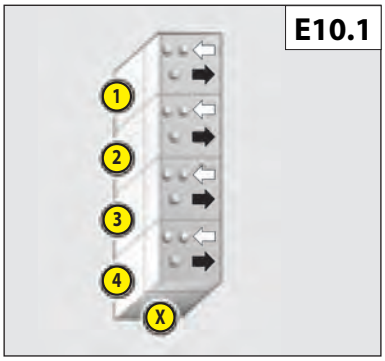
Installation
Clean the cylinder head and the cylinder head cover sealing surfaces.
Always replace the gasket between the cylinder head cover and the cylinder head.
Position the cylinder head cover.
Fit Allen bolts 3 (E10) with new sealing washers 4 (E10) and tighten.
Tightening torque: 30 Nm.



MHT 1490, MHT 10130

MHT -X1490, MHT-X 10130

Layout of cylinders and valves ("1, 2, 3, 4" E10.1):
⇨ = inlet valve
⇦ = exhaust valve
X = flywheel end



Checking and adjusting the valve clearance

Engine	Position of the drive shaft	Cylinders/valves to be adjusted			
		1	2	3	4
OM 924	Valve crossing cyl. 4	E/A	E	A	-
OM 934	Valve crossing cyl. 1	-	A	E	E/A

E – intake valve
A – exhaust valve
Adjust all valve clearances in 2 crankshaft positions.

Use the turning tool to turn the crankshaft until the 4th cylinder is at overlap TDC. (1st cylinder at ignition TDC). Then turn the 1st cylinder to overlap TDC (4th cylinder at ignition TDC).

Check and adjust the valves in accordance with the table above.

Measure the valve clearance between the rocker arm and valve stem (exhaust valve) or valve bridge (inlet valve) with a feeler gauge (arrow).
It must be possible to pull the feeler gauge through with only a slight resistance.

Valve clearance:

MHT-X 1490-10130

Inlet valves	mm = 0.40 (±0.05)
Exhaust valve	mm = 0.60 (±0.05)

MHT 1490-10130

Inlet valves	mm = 0.30 (±0.05)
Exhaust valve	mm = 0.60 (±0.05)

Slacken counter nut 2 (E10.2) to adjust the valve clearance.
Adjust the valve clearance by turning the adjustment screw 1 (E10.2).
Tighten the counter nut again.
Tightening torque: 25 Nm.
Check the valve clearance again and readjust if necessary.

ENGINE BRAKE: CHECKING CONDITION AND SETTING (IF INSTALLED)

Checking condition

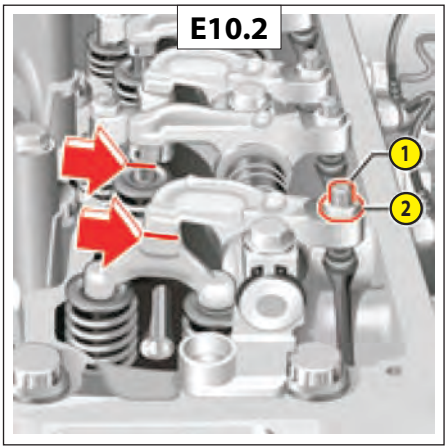
Remove the wire circlip from the engine cylinder ball socket.
Prise off the ball socket from throttle valve lever 1 (E10.3) ball neck.
Check the engine brake cylinder, ball neck and ball socket as well as the throttle valve shaft for wear.
Check the throttle valve lever on the throttle valve shaft for firm seating and retighten the clamping screws if necessary.
Lubricate the ball socket with the specified grease.
Press the ball socket back onto the ball neck.
Insert the wire circlip.

Checking adjustment

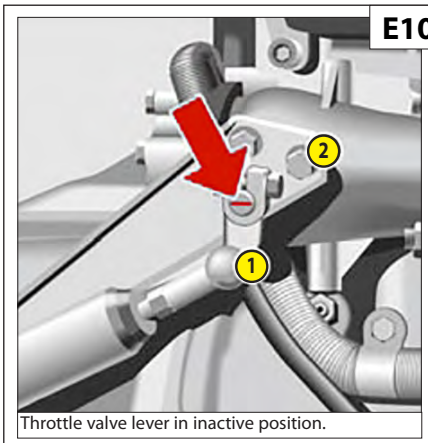
When the engine brake is applied, throttle valve lever 1 (E10.3) must make contact with retainer 2 (E10.3) when the throttle valve lever is in its active position (cylinder extended).

The throttle valve lever must also make contact with the retainer when the engine brake cylinder is in its inactive position (cylinder retracted); if this is the case the return spring pretension of the engine brake cylinder is adequate.
Check the position of the throttle valve shaft: when the engine brake is inactive, the slot must be horizontal. On the other hand, in working position the slot must be in vertical position.

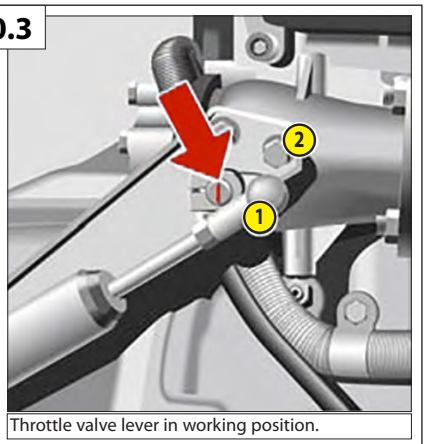
E10.2



E10.3



Throttle valve lever in inactive position.



Throttle valve lever in working position.

MHT 1490, MHT 10130

If the "DEF" tank cap is opened at high temperatures, ammonia vapours may escape. Ammonia vapours have a pungent odour and are particularly irritating to
- the skin
- the mucous membranes
- the eyes
The presence of such vapours can result in burning eyes, nose, and oral cavities, as well as coughing and tearing.
Avoid inhaling ammonia vapours.

"DEF" must not come into contact with skin, eyes or clothing.
- If the "DEF" comes into contact with your eyes or skin, rinse affected areas with clean water immediately.
- If the "DEF" is swallowed, immediately rinse your mouth out with a lot of clean water and drink plenty of water.
- Change clothing that is soiled with "DEF" immediately.
- If allergic reactions occur, consult a doctor immediately.

Keep the "DEF" out of the reach of children.

The "DEF" lines and all connected components are pressurised during operation and could be hot, even after the engine has been switched off. There is a risk of burns. When opening the pressurised system, there is a risk of scalding due to hot "DEF" spraying out.
- Wait at least 5 minutes after switching off the engine before starting to work on the exhaust gas after-treatment system.
- Open line connections and caps on system components slowly. Cover the area that you are disconnecting with a cloth.
- Wear suitable protective gloves, protective clothing and safety goggles.

If the "DEF" gets into the coolant circuit (even minute amounts), thermostats and temperature sensors will be damaged.

- Always keep the "DEF" completely separate from other service products.
- Do not use the same containers and fluid collecting pans for the "DEF" and other service products.
- Do not continue to use service products that contain traces of "DEF".

Individual components of the SCR system react very sensitively to even the slightest trace of impurities in the "DEF".
- Only use containers and fluid collecting pans that are clean and suitable for the "DEF".
- Do not continue to use "DEF" which contains traces of impurities.

Fire fighting measures The "DEF" is not flammable.In the event of a fire, NH3 (ammonia) may be released.
This may result in a risk of poisoning. Measures to extinguish a fire must therefore be adapted to suit the surroundings.

Environmental note
Disposal of the "DEF":
- Even a small amount of spilled "DEF" can be an issue.The product is easily biodegradable and can be disposed of in the sewage system without issues by using a lot of water.
- Packaging that is contaminated with "DEF" residue must be treated in the same way as the "DEF".
- Packaging that is contaminated with "DEF" residue must be treated in the same way as the "DEF". Packaging should be emptied as thoroughly as possible, cleaned appropriately and then reused.

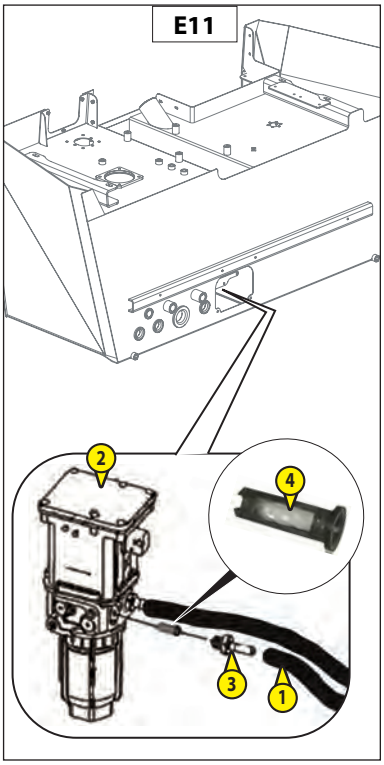
Cleaning the "DEF" prefilter

Clamp the feed 1 (E11) line on the pump/filter unit 2 (E11) using hose clamps.
Unscrew the feed pipe fitting 3 (E11).
Remove the "DEF" prefilter 4 (E11).

Clean the "DEF" 4 (E11) prefilter with a jet of compressed air and rinse with new "DEF" fluid.
Check its conditions and replace if significantly soiled or damaged (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).

- Ensure no foreign body enters the pump-filter unit.
- The pump filter-unit must never be cleaned with cloths or similar tools.
- Do not allow fluids other than "DEF" entering the unit.

Reassemble prefilter 4 (E11) and feed pipe fitting 3 (E11), checking they are properly positioned.



CHECK	I.C. engine silentblocs*
CHECK	Gear box silentblocs*
CHECK	Brake system pressure *
CHECK	Jib pads wear *
CHECK	Condition of wiring harnesses and cables *
CHECK	Lights and signals *
CHECK	Warning indicators *
CHECK	Condition of the rear view mirrors *
CHECK	Structure of the cab *
CHECK	Structure of the chassis *
CHECK	Attachment carriage *
CHECK	Condition of attachments *
BLEED	Brake circuit *
ADJUST	Brake *

*Consult your dealer.

F - EVERY 2000 HOURS SERVICE OR 2 YEARS

Carry out the previous operations and the following ones.

F1 - "DEF" FILTER

REPLACE

MHT 1490, MHT 10130

If the "DEF" tank cap is opened at high temperatures, ammonia vapours may escape. Ammonia vapours have a pungent odour and are particularly irritating to
- the skin
- the mucous membranes
- the eyes
The presence of such vapours can result in burning eyes, nose, and oral cavities, as well as coughing and tearing. Avoid inhaling ammonia vapours.

"DEF" must not come into contact with skin, eyes or clothing.
- If the "DEF" comes into contact with your eyes or skin, rinse affected areas with clean water immediately.
- If the "DEF" is swallowed, immediately rinse your mouth out with a lot of clean water and drink plenty of water.
- Change clothing that is soiled with "DEF" immediately.
- If allergic reactions occur, consult a doctor immediately.

Keep the "DEF" out of the reach of children.

The "DEF" lines and all connected components are pressurised during operation and could be hot, even after the engine has been switched off. There is a risk of burns. When opening the pressurised system, there is a risk of scalding due to hot "DEF" spraying out.
- Wait at least 5 minutes after switching off the engine before starting to work on the exhaust gas after-treatment system.
- Open line connections and caps on system components slowly. Cover the area that you are disconnecting with a cloth.
- Wear suitable protective gloves, protective clothing and safety goggles.

If the "DEF" gets into the coolant circuit (even minute amounts), thermostats and temperature sensors will be damaged.

- Always keep the "DEF" completely separate from other service products.
- Do not use the same containers and fluid collecting pans for the "DEF" and other service products.
- Do not continue to use service products that contain traces of "DEF".

Individual components of the SCR system react very sensitively to even the slightest trace of impurities in the "DEF".
- Only use containers and fluid collecting pans that are clean and suitable for the "DEF".
- Do not continue to use "DEF" which contains traces of impurities.

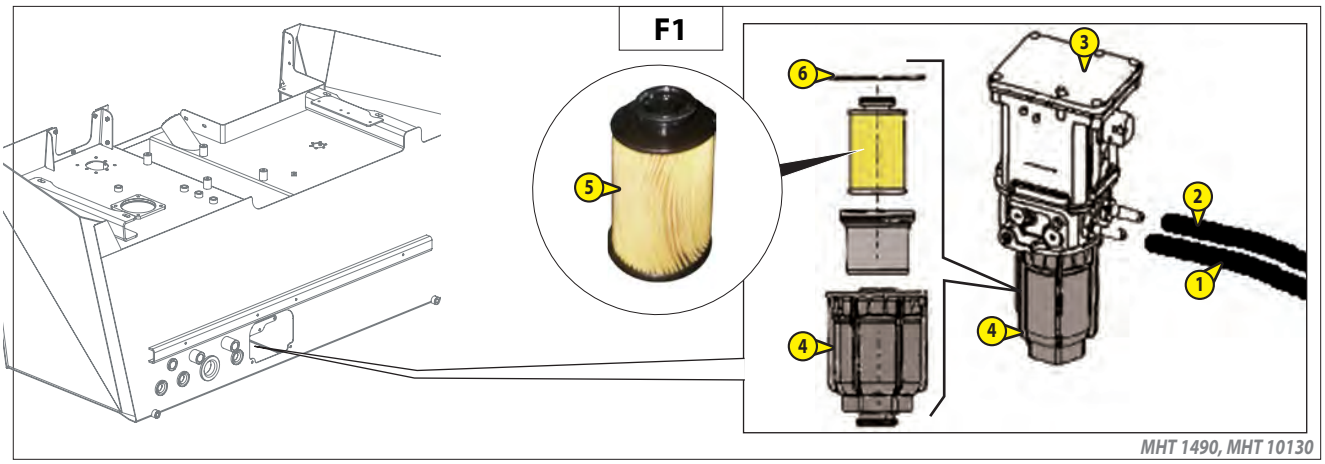
Fire fighting measures
The "DEF" is not flammable.In the event of a fire, NH3 (ammonia) may be released.
This may result in a risk of poisoning. Measures to extinguish a fire must therefore be adapted to suit the surroundings.

Environmental note
Disposal of the "DEF":
- Even a small amount of spilled "DEF" can be an issue. The product is easily biodegradable and can be disposed of in the sewage system without issues by using a lot of water.
- Packaging that is contaminated with "DEF" residue must be treated in the same way as the "DEF".
- Packaging that is contaminated with "DEF" residue must be treated in the same way as the "DEF". Packaging should be emptied as thoroughly as possible, cleaned appropriately and then reused.

Replacing the "DEF" filter
Clamp the feed 1 (F1) and return 2 (F1) lines on the pump/filter unit 3 (F1) using hose clamps.

Place a suitable receptacle under the pump/filter unit 3 (F1) to collect any "DEF" fluid that escapes.
Unscrew filter bowl 4 (F1) from the pump/filter unit 3 (F1).
Remove filter element 5 (F1).
Smear O-ring 6 (F1) on new filter element 5 (F1) thinly with silicone grease before assembly.
Insert new filter element 5 (F1) into filter bowl 4 (F1).
Use silicone grease as a lubricant.
Screw filter bowl 4 (F1) into pump module 3 (F1) and tighten.
Tightening torque: 32 Nm.

Only silicone grease is permissible as a lubricant. Use silicone grease very sparingly, otherwise damage to the exhaust gas after-treatment system could result. The system is self-bleeding and does not need to be bled manually.



MHT 1490, MHT 10130

F2 - TIGHTENING TORQUE OF THE WHEEL NUTS

CHECK

- Check the condition of the tyres, to detect cuts, protuberances, wear, etc.
- Check the tightening torque of the wheel nuts with a torque wrench.
 • Front wheels: 680 Nm (502 lb·ft) ± 15%
 • Rear wheels: 680 Nm (502 lb·ft) ± 15%

CLEAN THE COILS OF THE CONDENSER AND EVAPORATOR (*)

CLEAN THE CONTAINER FOR THE CONDENSATE AND THE DRAINAGE VALVE (*)

RECOVERY OF THE COOLANT FOR CHANGING THE DEHYDRATOR FILTER (*)

REFILLING WITH COOLANT AND CHECKING THE THERMOSTATIC CONTROL AND PRESSURE SWITCHES (*)

NOTE: Do not forget to replace the sealing gasket of the cover on opening the evaporator unit.

(*): (CONTACT YOUR DEALER).

NEVER TRY TO CARRY OUT MAKESHIFT REPAIRS IN CASE OF FAULTS. TO RECHARGE A CIRCUIT, ALWAYS CONTACT THE DEALER WHO HAS THE SUITABLE SPARE PARTS, TECHNICAL KNOW-HOW AND THE NECESSARY TOOLS.

In case of inhalation, bring the victim out into the open air, supply oxygen or carry out the necessary artificial respiration and see a doctor.

In case of contact with the skin, rinse immediately with plenty of running water and remove contaminated clothing.

In case of contact with the eyes, flush eyes with plenty of water for 15 minutes and get medical attention.

IMPORTANT INFORMATION ON THE TYPE OF COOLANT USED

- This product contains fluorinated greenhouse gases covered by the Kyoto Protocol.
- Type of coolant: R134A; it is colourless, odourless and heavier than air. Its GWP value (Global Warming Potential) is 1430.
- Do not let the gases be released into the atmosphere. Do not open the circuit under any circumstances as this would cause the coolant to be lost.

- The compressor has a fluid level gauge; never unscrew this gauge because it would depressurise the system. The fluid level should only be checked when draining the system.

CHECK	Radiator*
CHECK	Transmission pressures*
CHECK	Steering*
CHECK	Steering swivel joints*
CHECK	Condition of jib unit*
CHECK	Bearings and articulation rings*
CHECK	Rubber hose pipe and piping conditions*
CHECK	Condition of cylinders (leakage, shafts)*
CHECK	Hydraulic circuit pressures*
CHECK	Bearings and articulation rings*

*Consult your dealer.

G - EVERY 3000 HOURS SERVICE OR 3 YEARS

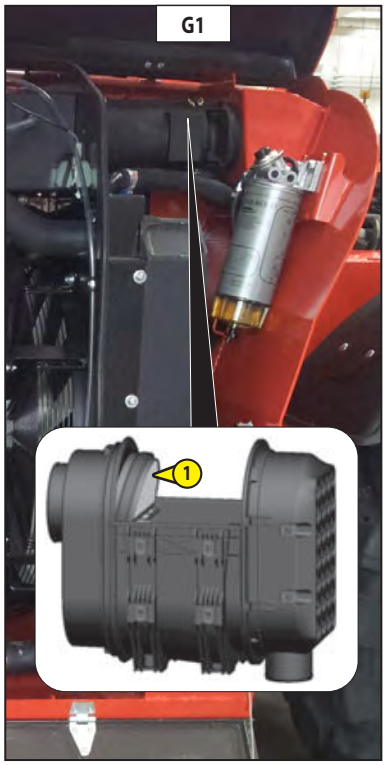
Carry out the previous operations and the following ones.

G1 - DRY AIR FILTER SAFETY CARTRIDGE

REPLACE

- To remove and refit the dry air filter, see: (3 - MAINTENANCE: "E6 – DRY AIR FILTER CARTRIDGE").
- Remove the safety cartridge "1" (fig.G1) of the dry air filter very carefully, to reduce leakage of dust to the minimum.
- Carefully clean the seat of the filter gaskets with a wet clean cloth that does not leave lint.
- Before the assembly, check the state of the new safety cartridge (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Insert the cartridge in the filter and position it by pressing on the edge of the filter, not in the center.

NOTE: The safety cartridge replacement frequency is purely indicative. It must be replaced with every three replacements of the dry air filter cartridge.



G2 - COOLANT AND SILICATE CARTRIDGE

REPLACE

These operations are to be carried out if necessary or every 2 years at the beginning of winter. Place the lift truck on level ground with the I.C. engine stopped and cold.

The I.C. engine does not contain any corrosion resistor and must be filled during the whole year with a mixture containing 25% of ethylene glycol-based antifreeze.

Risk of injury
The cooling system is pressurised.
Hot coolant can escape under pressure when the cooling system is opened and scald your skin and eyes.
- Only open the cooling system at coolant temperatures below 90°C.
- Unscrew the cap slowly and release any excess pressure completely before opening the cap fully.
- Wear suitable protective gloves, protective clothing and safety goggles when handling coolant.

Risk of poisoning
There is a risk of poisoning if coolant is swallowed.
- Never swallow coolant.
- Never store coolant in containers normally used for beverages.
- Store coolant out of the reach of children.

Environmental note
Dispose of used coolant in accordance with current local regulations.

Draining coolant
Carry out operations on the cooling system only if the coolant temperature is below 50 °C.

Before proceeding with draining the coolant, cover the cables, piping, etc, present under the drain screw, and place a suitable sized container to hold the quantity of liquid to be drained.

Open the engine bonnet.

Open the cooling system cap G2/1 of the engine slowly, discharge the overpressure and then remove the cap.

Open the panel G2/2 under the drain plug G2/3.

Set a container under drain plug G2/3 on the radiator and drain plug G2/4 of the engine block and loosen them.

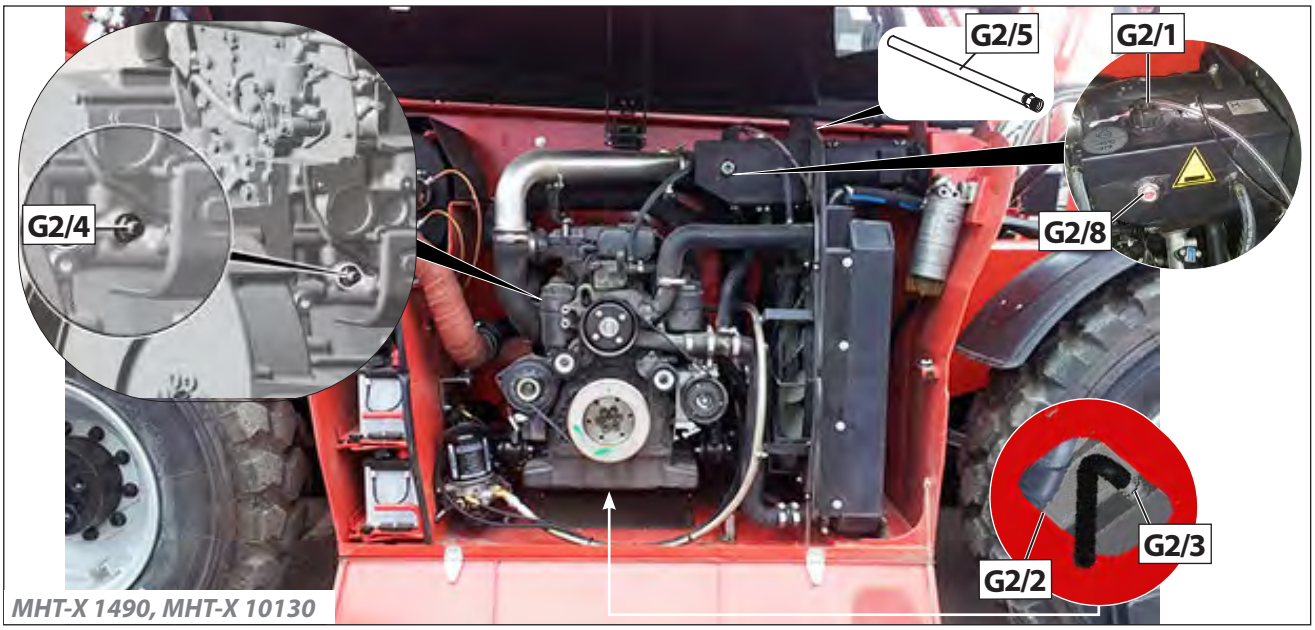
Take drain hose G2/5.

Place the end of the drain hose in the container and screw the hose fully to the drain connector G2/3.

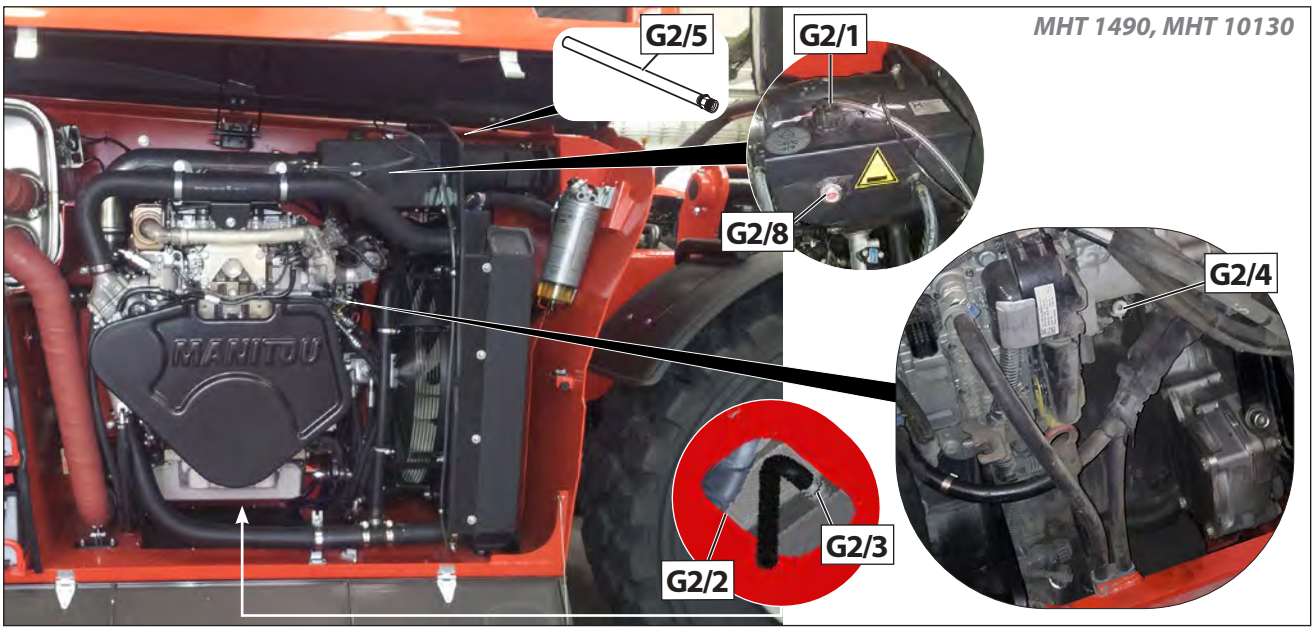
Let the cooling circuit drain entirely while ensuring that the ports do not get clogged.

Check the condition of the hoses as well as the fastening devices and change the hoses if necessary.

Rinse the circuit with clean water and use a cleaning agent if necessary.



MHT-X 1490, MHT-X 10130



MHT 1490, MHT 10130

Replace the silicate cartridge
MHT 1490, MHT 10130



Clean the coolant from the sealing surface on the pump body, using a lint-free cloth.

Clean the coolant pump near the silicate cartridge G2/6. Remove the silicate cartridge G2/7.

Assemble the new silicate cartridge (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
Screw in and tighten the silicate cartridge G2/7.
(Tightening torque: 50 Nm).

Do not grease the sealing ring of the new silicate cartridge.

Remove the silicate cartridge G2/7.
Assemble the new silicate cartridge (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
Screw in and tighten the silicate cartridge G2/7.
(Tightening torque: 50 Nm).

Do not grease the sealing ring of the new silicate cartridge.

Adding coolant
Remove, clean and refit drain hose G2/5.

Refit and tighten drain plug G2/3 and drain plug G2/4.

Slowly fill the circuit with the cooling liquid (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the filler port G2/8.

Top up the cooling circuit level up to the centre of the indicator G2/10 via filler port G2/8.
Retighten the radiator filler plug G2/1.

Run the engine at idle for a few minutes.

Check for any possible leaks.

Close the panel G2/2.

Check the level and refill if necessary.

TABLE

FREEZING POINT OF THE VARIOUS % VOLUMES OF ANTIFREEZE AND WATER

Antifreeze fluid SHELL ANTIFREEZE	***Water (distilled recommended)***	***Freezing temperature***
25%	75%	-14 °C
35%	65%	-23 °C
40%	60%	-27 °C
50%	**50%**	**-40°C Filling by manufacturer**

THIS PAGE IS INTENTIONALLY BLANK

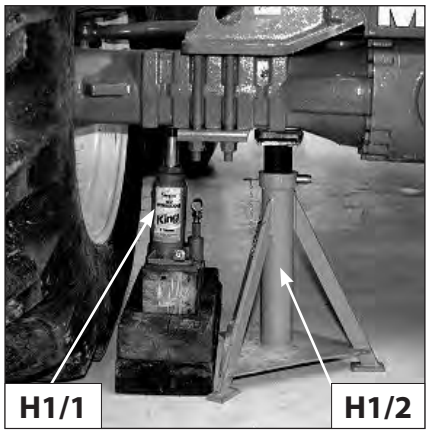
H - OCCASIONAL MAINTENANCE

H1 - WHEEL

REPLACE

In the event of a wheel change on the public highway, ensure the environment around the telehandler is safe.

Procedure for changing a wheel at the roadside:



- Stop the telehandler, if possible on even and hard ground.
- Turn off the telehandler (See chapter: DRIVING INSTRUCTIONS in paragraph: 1 - OPERATING AND SAFETY INSTRUCTIONS).
- Apply the parking brake
- Put the warning lights on.
- Immobilise the telehandler in both directions on the axle opposite to the wheel to be changed.
- Unlock the nuts of the wheel to be changed.
- Place the jack under the flared axle tube, as near as possible to the wheel and adjust the jack (fig. H1/1).
- Lift the wheel until it comes off the ground and put in place the safety support under the axle (fig. H1/2).

For this operation, we advise you to use the hydraulic jack and the safety support.

- Completely unscrew the wheel nuts and remove them.
- Free the wheel by reciprocating movements and roll it to the side.
- Slip the new wheel on the wheel hub.
- Refit the nuts by hand, if necessary grease them. - Remove the safety support and lower the telehandler with the jack.
- Tighten the wheel nuts with a torque wrench.

(See chapter: A - DAILY OR EVERY 10 HOURS SERVICE in paragraph: 3 - MAINTENANCE for tightening torque).

NOTE: As an OPTIONAL, an equipment kit for the tyres and an anti-puncture kit.

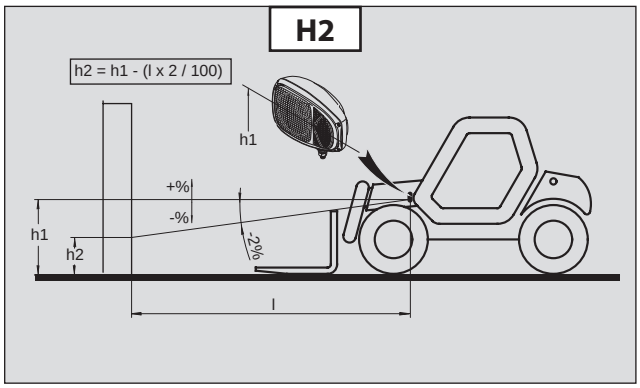
H2 - FRONT HEADLAMPS

ADJUST

RECOMMENDATIONS FOR ADJUSTMENT

(as per standard ECE-76/756 76/761 ECE20)

Set to - 2% of the dipped beam in relation to the horizontal line of the headlamp.



ADJUSTING PROCEDURE

- Place the telehandler unloaded and in the transport position, and perpendicular to a white wall on flat, level ground (G3).
- - Check the tyre pressure (see: 2 - DESCRIPTION: TECHNICAL FEATURES).
- Put the gear selector in neutral and disengage the parking brake.

CALCULATING THE HEIGHT OF THE DIPPED BEAM (H2)

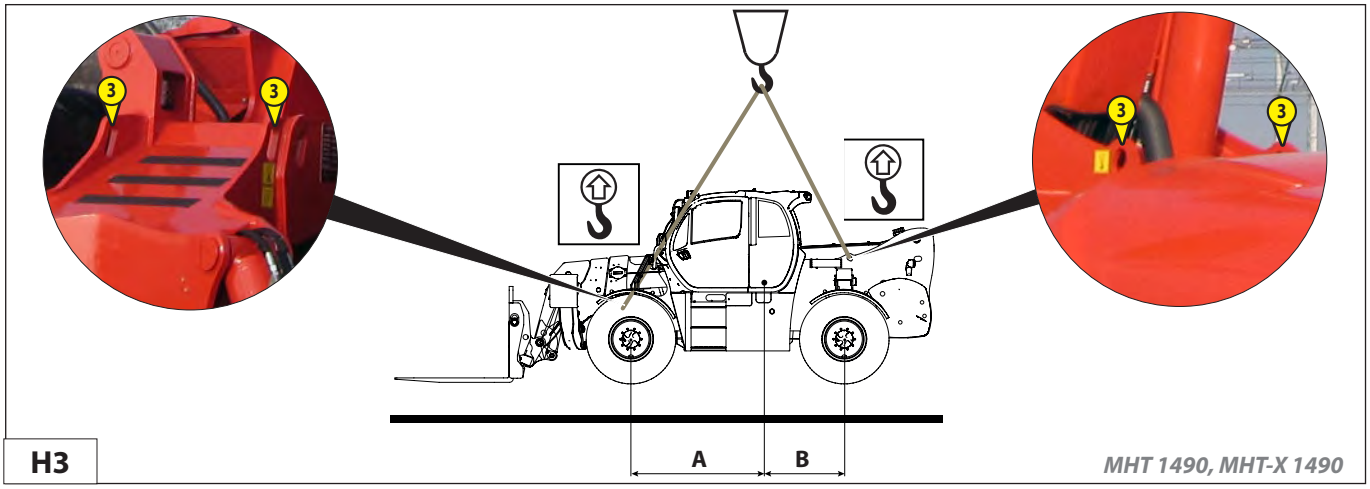
- h1 = Height of the dipped beam in relation to the ground.
- h2 = Height of the adjusted beam.
- l = Distance between the dipped beam and the white wall.

H3 - SLINGING

- Take into account the position of the telehandler gravity centre for lifting (H3):

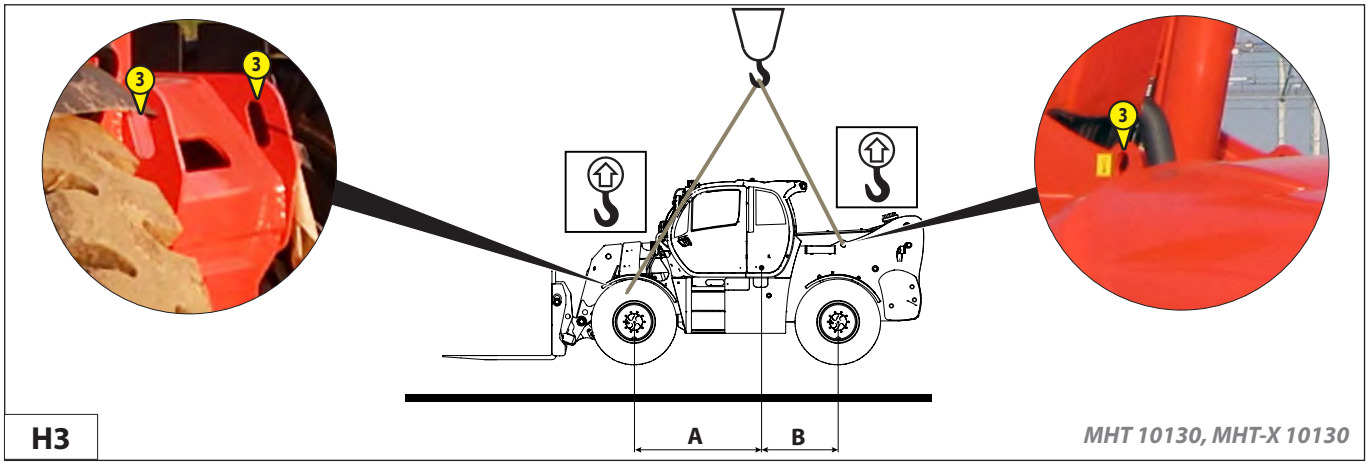
	MHT 1490, MHT-X 1490	MHT 10130, MHT-X 10130
A	~2140 mm	~2120 mm
B	~1230 mm	~1260 mm

- Place the hooks in the fastening points provided 3 (H3).
- Place the clamps 1 and 2 in the fastening points provided (H3).



H3

MHT 1490, MHT-X 1490



H3

MHT 10130, MHT-X 10130

Check that the safety instructions pertaining to the transport platform are properly followed before loading the forklift and check that the transport vehicle driver is informed of the size and weight of the forklift (see: 2 – DESCRIPTION: TECHNICAL FEATURES).

Ensure that the size and load capacity of the platform are sufficient for transporting the lift truck. Check also the pressure on the contact surface allowable for the platform in connection with the lift truck.

For lift trucks equipped with a turbocharged engine, plug the drainage outlet to prevent the rotation of the turbo-shaft without lubrication when the convoy moves.

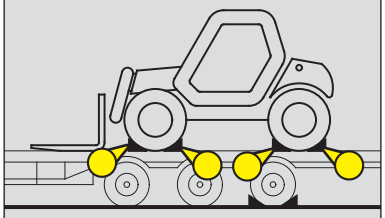
LOAD THE TELEHANDLER

- Block the wheels of the platform.
- Fix the loading ramps so that you obtain an angle as little as possible to lift the lift truck.
- Load the lift truck parallel to the platform.
- Stop the lift truck (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: DRIVING INSTRUCTIONS WITH AND WITHOUT LOAD).

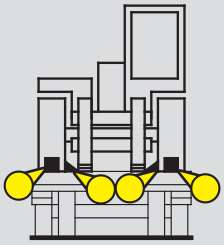
SLING THE TELEHANDLER

- Fix the chocks to the platform at the front and at the back of each tyre (H4/1).
- Fix the chocks to the platform on the inner side of each tyre (H4/2).
- Stow the lift truck on the platform with enough resisting ropes. At the front of the lift truck, on the fastening points 1 (H4/3) and on the rear of the tow hook 2 (H4/3).
- Tighten the ropes (H4/3).

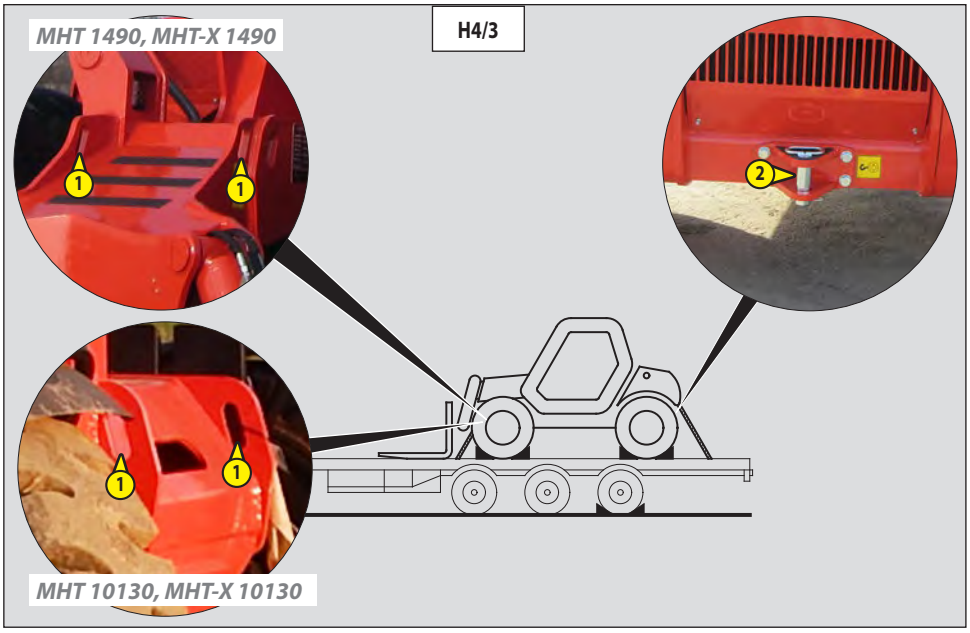
H4/1



H4/2



H4/3



Towing can be done at very low speed and for short distances.

Towing procedure

How to operate:

- press the forward-reverse direction selector in neutral "N"
- release the parking brake
- turn on the hazard warning lights
- activate the bypass feature on the hydrostatic pump to allow the hydraulic oil to flow freely.

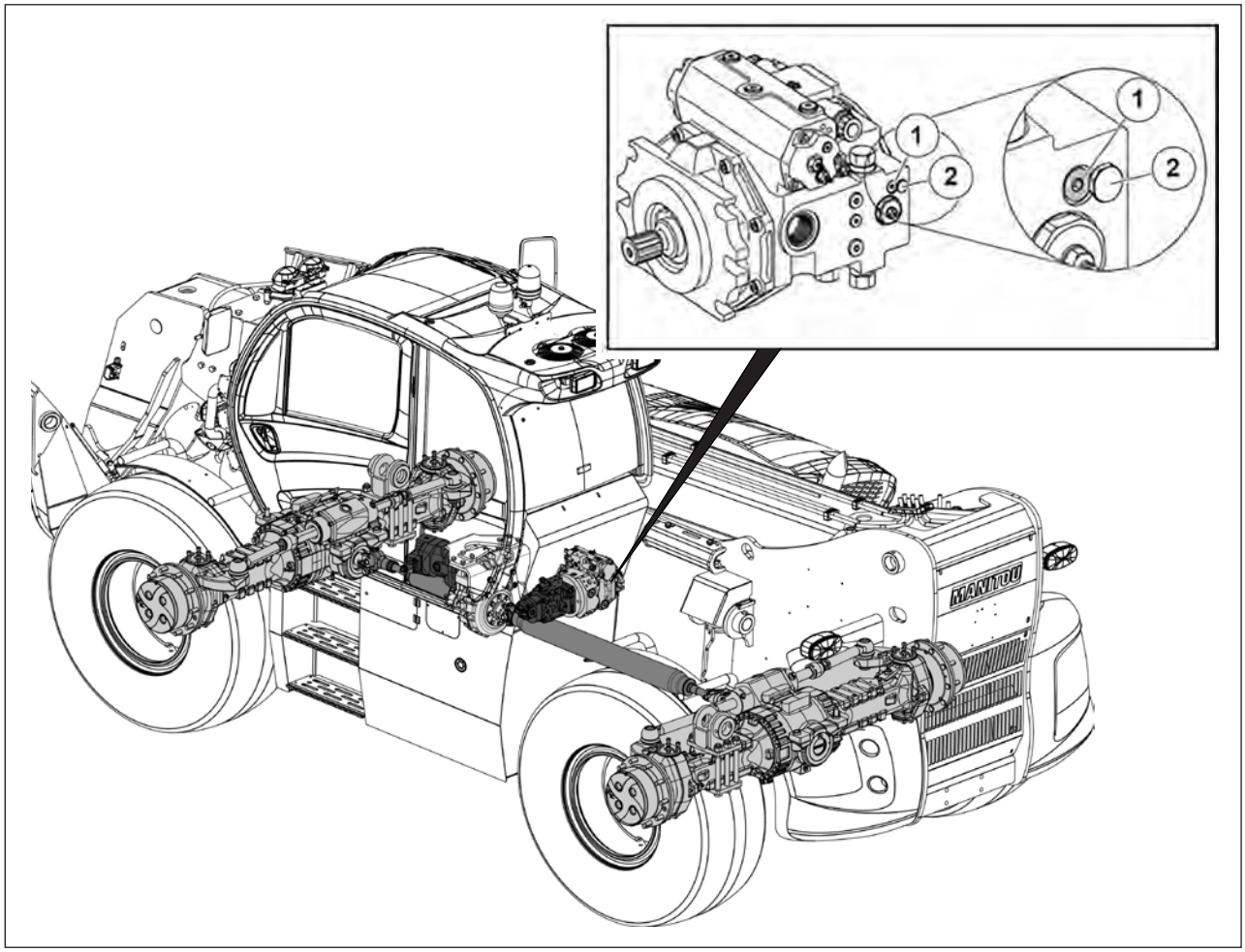
To activate the bypass feature:

1. Turn off the engine.
2. Use an Allen key (WAF 8) to turn the diverter valve (1) counterclockwise until it stops (2). The bypass feature is now active

Immediately after towing, deactivate the bypass feature.

To deactivate the bypass feature:

1. Use an Allen key (WAF 8) to turn the diverter valve (1) clockwise until it stops and tighten it with a tightening torque of 50 Nm. The bypass feature is no longer active.



Mechanical release of negative brake on front and rear axle

- Loosen the nuts (2) on the screws (1) for the manual mechanical release of the braking groups and retract the nuts by a few mm.
- Screw the screws (1) until they are fully seated on the pressure plate (3).
- Using a wrench, screw the screws (1) alternately by 1/4 of a revolution at a time, to compress the cup springs and release the braking discs.

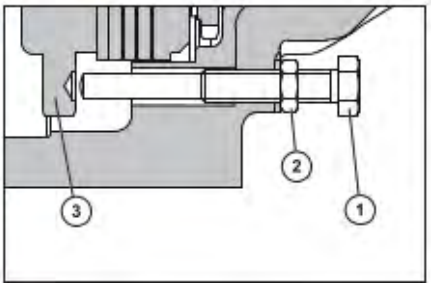




Screw the screws (1) for a maximum for 1.5 revolutions to release the brakes.

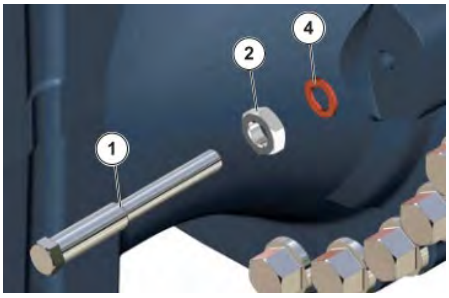
Note: the opposite screws must be tightened by turning them by the same number of revolutions.



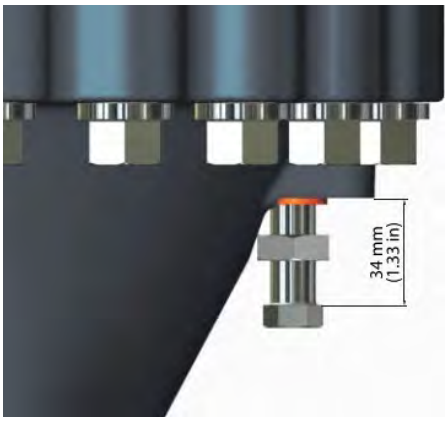


Adjustment after each brake release

- Remove the screws (1) complete with nuts (2) and gaskets (4). Replace the gaskets, lubricate the screws with silicone grease and reassemble everything.
- Adjust the screws (1) until there is a protrusion from the axle block of 34 ± 0.5 mm (1.33 ± 0.5 in).
- Block the position with the nuts (2). Tighten the counter nut (2) o a torque of 15 - 20 N·m (11 - 14.7 lbf·ft).

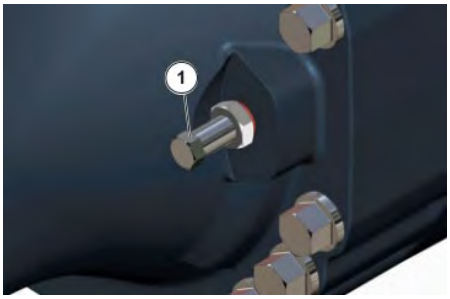


Retain the position of the screws (1) when the nuts (2) are locked; after locking, check the protrusion of the screws (1) again



- In the absence of hydraulic steering and power brake assistance, act slowly and vigorously on these two controls.

Avoid sudden movements and jerks.



Daily routine maintenance
Before starting to work:
- make sure that the battery housing and the battery contacts are always clean
- make sure that the gaskets, bellows and caps of the actuators (joysticks, selectors and pushbuttons) are intact, soft and elastic,
- make sure that the transmitting unit panel symbols can be easily recognised and replace the panel if necessary
- check that the three plates on the transmitting unit are readable and intact
- make sure that the mechanical operation of the STOP pushbutton is correct.

During normal operation:
- check the structural integrity of the transmitting unit
- make sure that materials that could endanger the transmitting unit usage and safety (such as concrete, sand, lime, dust) do not deposit on it.

After using the radio remote control:
- clean the transmitting unit: never use solvents or flammable/corrosive materials and do not use high-pressure water cleaners or steam cleaners
- store the transmitting unit in clean and dry areas.

Three-month routine maintenance
Every 3 months:
- remove dust or deposits of material from the receiving unit: never use solvents or flammable/corrosive materials to clean it, and do not use high-pressure water cleaners or steam cleaners
- check structural integrity of the receiving unit
- make sure that the wiring of the receiving unit is intact and connected
- make sure that the receiving unit panel symbols can be easily recognised and replace the panel if necessary
- check that the plates on the receiving unit are readable and intact.

Special maintenance

Any fault should be repaired by authorised personnel only (contact the support service of MANITOU).

Troubleshooting
When the radio remote control does not work:
- bring the transmitting unit close to the receiving unit to avoid radio interference and disturbances
- establish whether the problem lies with the radio remote control or with the machine. Therefore, before any inspection, try to control the machine from a control unit different from the radio remote control, if present. If the problem persists, it lies with the machine. If not, the problem may lie with the radio remote control. In such case, please refer to paragraph “Malfunction signalled by the transmitting unit”.

Malfunction signalled by the transmitting unit (keypad)
Identify the radio remote control malfunction according to the light signals on the units. If the problem persists after the suggested solution has been carried out, contact the support service of MANITOU.

Signals	Possible reason	Solutions
The green LED does not switch on when the START pushbutton is pressed, even though both the battery and the S-KEY are inserted.	The battery is flat.	Replace the battery with a charged one.
The green LED blinks fast.	No radio link.	Take the transmitting unit close to the receiving unit.
The red LED switches on for 2 seconds and then the unit switches off.	The transmitting unit does not work properly.	Contact the support service of MANITOU.
The red LED blinks once during start up.	The STOP pushbutton is locked or damaged.	Unlock the STOP pushbutton. If this signal persists, contact the support service of MANITOU.
The red LED blinks twice during start up.	At least one of the actuators corresponding to commands is activated or damaged.	Take the actuators to the rest position. If this signal persists, contact the support service of MANITOU.
The red LED blinks three times during start up.	The battery is flat.	Replace the battery with a charged one.
The red LED blinks four times during start up.	At least one of the actuators corresponding to commands is activated or damaged.	Take the actuators to the rest position. If this signal persists, contact the support service of MANITOU.

Malfunction signalled by the receiving unit (keypad)

Identify the radio remote control malfunction according to the light signals on the units.
If the problem persists after the suggested solution has been carried out, contact the support service of MANITOU.

Signals	Possible reason	Solutions
The POWER LED is off.	The receiving unit is switched off.	Make sure that fuse F2 is intact. Correctly plug in the connecting plug and power on the receiving unit.
The POWER LED is on.	No radio link.	Take the transmitting unit close to the receiving unit.
The ALARM LED blinks once.	Error on the STOP outputs.	Make sure that fuses F3 and F4 are intact. Correctly plug in the connecting plug. Make sure that the STOP outputs are wired correctly.
The ALARM LED blinks twice.	Error on the SAFETY outputs.	Make sure that fuses F1 and F5 are intact. Correctly plug in the connecting plug. Make sure that the SAFETY outputs are wired correctly.
The ALARM LED blinks three times.	Error on the outputs corresponding to direction commands.	Contact the support service of the machine manufacturer. Make sure that the outputs of direction commands are wired correctly.
The ALARM LED is on.	The receiving unit does not work correctly.	Contact the support service of MANITOU.
The RUN LED blinks.	The receiving unit does not send commands in the CAN network.	Contact the support service of MANITOU.
The ERR LED blinks.	CAN communication error.	Contact the support service of MANITOU.

4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE

INDEX

4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE

INTRODUCTION 5

ATTACHMENT CONNECTIONS MANOEUVRES 6

ATTACHMENT CHARACTERISTICS 8

PROTECTION DEVICES FOR ATTACHMENTS 8

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

INTRODUCTION

- Your lift truck must be provided with an interchangeable equipment. This interchangeable equipment is called ATTACHMENT.
- A wide range of attachments specifically designed to fit your lift truck and guaranteed by MANITOU is available.

Only attachments approved by MANITOU can be used with the lift truck.
The manufacturer will have no liability in case of modifications or adaptations of the attachments without his knowledge.

- The attachments are supplied with a load chart relating to your lift truck. The user manual and the load chart must be kept on the lift truck. The use of standard attachments is subject to the instructions contained in this manual.

The maximum loads are defined by the capacity of the lift truck taking into account the weight and the centre of gravity of the attachment.
If the capacity of the attachment is below the capacity of the lift truck, never exceed this limit.

- Some specific uses require the attachment to be adapted as it may not be included in the optional catalogue. Other solutions are available: for more information, please contact your dealer.

Due to their size, when the boom is lowered and retracted some attachments may interfere with the front tyres and damage them if the carriage is tilted downward.
IN ORDER TO AVOID THIS RISK, EXTEND THE BOOM FAR ENOUGH TO ELIMINATE ANY INTERFERENCE (THE DISTANCE WILL DEPEND ON THE TRUCK AND THE ATTACHMENT).

SUSPENDED LOAD

Suspended loads MUST be handled only with lift trucks designed for such purpose
(see: 1 - OPERATING AND SAFETY OBLIGATIONS: LOAD HANDLING INSTRUCTIONS: H - TAKING UP AND LAYING A SUSPENDED LOAD).

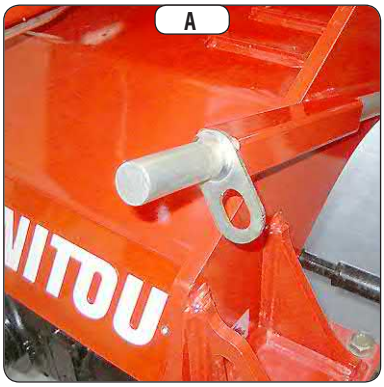
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

ATTACHMENT CONNECTION MANOEUVRES

1 - ATTACHMENT WITHOUT HYDRAULIC CIRCUIT WITH MANUAL LOCK

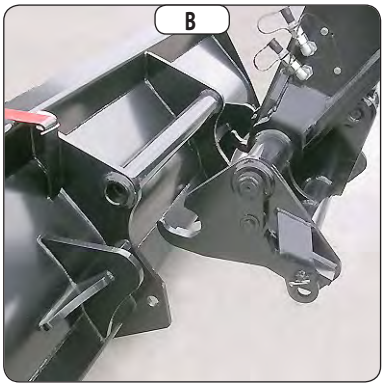
ENGAGING THE ATTACHMENT

- Check that the attachment is in a position which simplifies the connection to the carriage. If it is badly positioned, take all the necessary precautions to move it safely.
- Check that the locking pin is engaged in the support (fig. A).
- Place the lift truck with the boom lowered in front of and parallel to the attachment and tilt the carriage forward (fig. B).
- Take the carriage under the connection pipe of the attachment, slightly raise the boom and tilt the carriage back in order to position the attachment (fig. C).
- Raise the accessory off the ground for easier engagement.



MANUAL LOCKING

- Take the locking pin from the support (fig. A) and lock the attachment in place (fig. D). Do not forget to fit on the split pin.

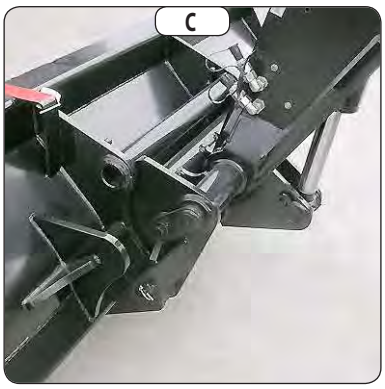


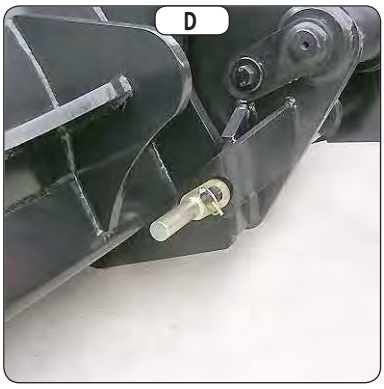
MANUAL RELEASE

- Follow the MANUAL LOCKING procedure in reverse order, taking care to replace the locking pin in its support (fig. A).

LAYING THE ATTACHMENT

- Follow the ENGAGING THE ATTACHMENT procedure in reverse order, taking care to lay the attachment flat on the ground and in closed position.

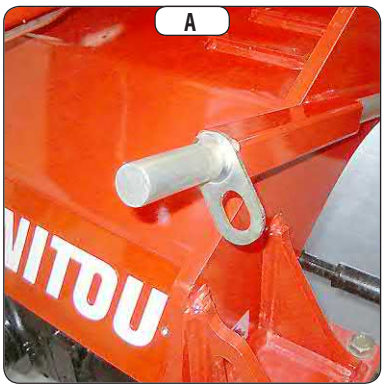




2 - HYDRAULIC ATTACHMENT AND MANUAL LOCK

ENGAGING THE ATTACHMENT

- Check that the attachment is in a position which simplifies the connection to the carriage. If it is badly positioned, take all the necessary precautions to move it safely.
- Check that the locking pin is engaged in the support (fig. A).
- Place the lift truck with the boom lowered in front of and parallel to the attachment and tilt the carriage forward (fig. B).
- Take the carriage under the connection pipe of the attachment, slightly raise the boom and tilt the carriage back in order to position the attachment (fig. C).
- Raise the accessory off the ground for easier engagement.



MANUAL LOCKING AND CONNECTION OF THE ATTACHMENT

Check the quick couplings for cleanliness and protect the unused orifices with the caps provided.

- Take the locking pin from the support (fig. A) and lock the attachment in place (fig. D). Do not forget to fit on the split pin.
- Discharge the pressure from the hydraulic circuit of the attachment by giving 4/5 impulses, forwards and backwards, on button 1 (fig. E) of the distributor lever.
- Connect the quick couplings, respecting the logic of the hydraulic movements of the attachment.



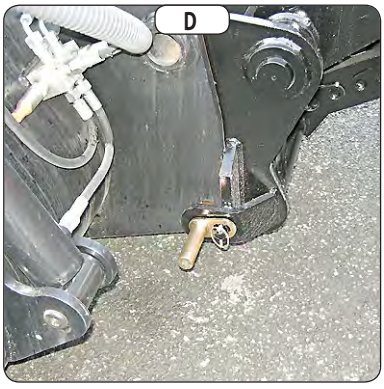
MANUAL RELEASE AND DISCONNECTION OF THE ATTACHMENT

- Follow the MANUAL LOCKING AND CONNECTION OF THE ATTACHMENT procedure in reverse order, taking care to replace the locking pin in its support (fig. A).



LAYING THE ATTACHMENT

- Follow the ENGAGING THE ATTACHMENT procedure in reverse order, taking care to lay the attachment flat on the ground and in closed position.





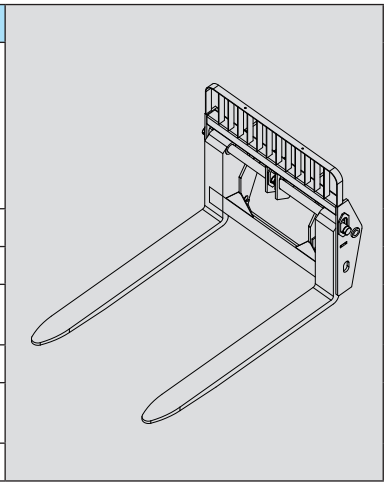
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

FORK CARRIAGES

FLOATING FORKS CARRIAGE

MHT 1490 / MHT-X 1490

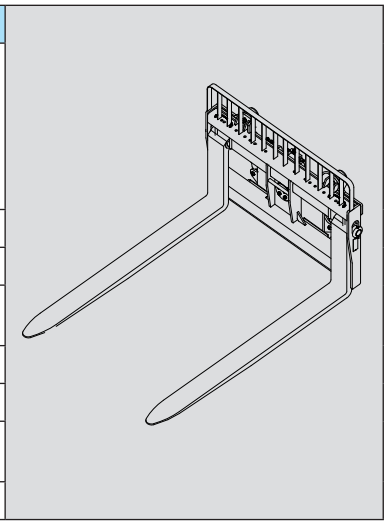
	TFF L1425	TFF L1425	TFF L1425
REFERENCE	**939800**	**939345**	**939346**
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in
Width	1425 mm - 56.1 in	1425 mm - 56.1 in	1425 mm - 56.1 in
Fork (Section)	200x60x1200 mm 7.8x2.3x47.2 in	200x60x1500 mm 7.8x2.3x59 in	200x60x2000 mm 7.8x2.3x78.7 in
Weight	665 kg - 1466 lb	730 kg - 1609 lb	820 kg - 1807 lb



FLOATING FORKS CARRIAGE

MHT 1490 / MHT-X 1490

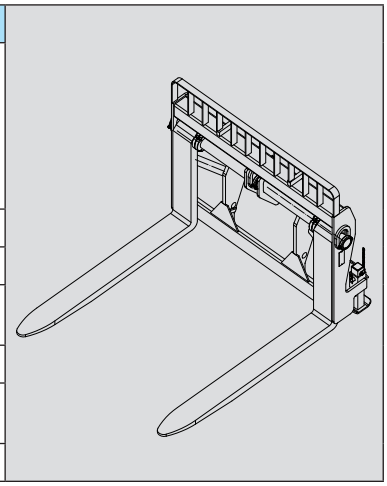
	TFF CN 10		
REFERENCE	**53012760**		
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in		
Side Shift	2x200 mm - 2x7.8 in		
Width	1750 mm - 68.8 in		
Fork (Section)	200x60x2400 mm 7.8x2.3x94.4 in		
Weight	1250 kg - 2755 lb		



FLOATING FORKS CARRIAGE

MHT 10130 / MHT-X 10130

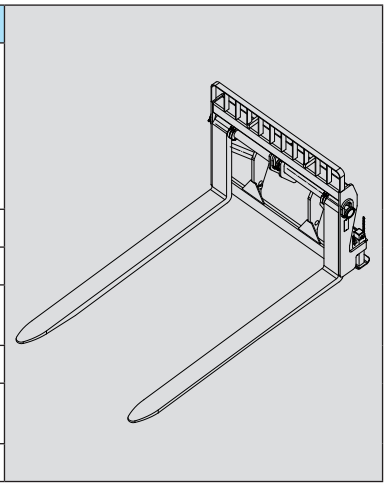
	TFF L1750	TFF L1750	TFF L1425
REFERENCE	**53005668**	**939200**	**939201**
Rated capacity	13000 kg @ 600 mm 28660 @ 23.6 in	13000 kg @ 600 mm 28660 @ 23.6 in	13000 kg @ 600 mm 28660 @ 23.6 in
Width	1750 mm - 68.8 in	1750 mm - 68.8 in	1750 mm - 68.8 in
Fork (Section)	200x70x1200 mm 7.8x2.7x47.2 in	200x70x1500 mm 7.8x2.7x59 in	200x70x1800 mm 7.8x2.7x78.7 in
Weight	974 kg - 2147 lb	1020 kg - 2248 lb	1105 kg - 2436 lb



648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

FLOATING FORKS CARRIAGE

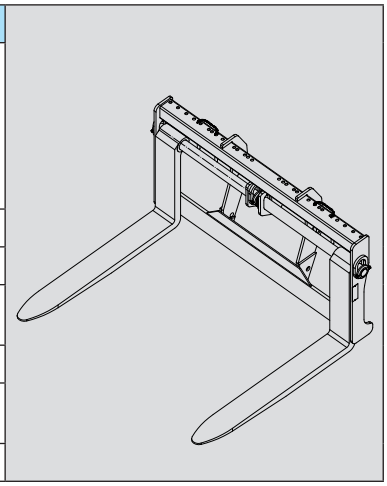
MHT 10130 / MHT-X 10130



	TFF L1425		
REFERENCE	**939202**		
Rated capacity	13000 kg @ 600 mm 28660 @ 23.6 in		
Width	1425 mm - 56.1 in		
Fork (Section)	200x70x2400 mm 7.8x2.7x94.4 in		
Weight	1180 kg - 2601 lb		

FLOATING FORKS CARRIAGE

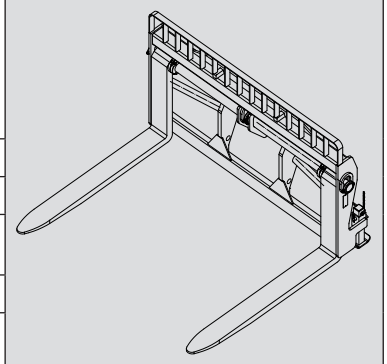
MHT 1490 / MHT-X 1490



	TFF L2000	TFF L2000	TFF L2000
REFERENCE	**939347**	**939348**	**939349**
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in
Width	2000 mm - 78.7 in	2000 mm - 78.7 in	2000 mm - 78.7 in
Fork (Section)	200x60x1200 mm 7.8x2.3x47.2 in	200x60x1500 mm 7.8x2.3x59 in	200x60x2000 mm 7.8x2.3x78.7 in
Weight	745 kg - 1642 lb	770 kg - 1697 lb	885 kg - 1951 lb

FLOATING FORKS CARRIAGE

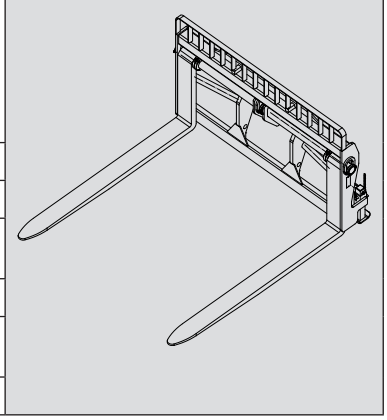
MHT 10130 / MHT-X 10130



	TFF L2500	TFF L2500	TFF L2500
REFERENCE	**53009230**	**939203**	**939204**
Rated capacity	13000 kg @ 600 mm 28660 @ 23.6 in	13000 kg @ 600 mm 28660 @ 23.6 in	13000 kg @ 600 mm 28660 @ 23.6 in
Width	2500 mm - 98.4 in	2500 mm - 98.4 in	2500 mm - 98.4 in
Fork (Section)	200x70x1200 mm 7.8x2.7x47.2 in	200x70x1500 mm 7.8x2.7x59 in	200x70x1800 mm 7.8x2.7x70.8 in
Weight	1180 kg - 2601 lb	1240 kg - 2733 lb	1300 kg - 2866 lb

FLOATING FORKS CARRIAGE

MHT 10130 / MHT-X 10130

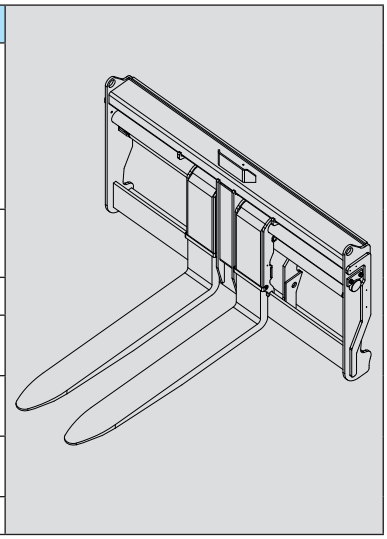


	TFF L2500		
REFERENCE	**939205**		
Rated capacity	13000 kg @ 600 mm 28660 @ 23.6 in		
Width	2500 mm - 98.4 in		
Fork (Section)	200x70x2400 mm 7.8x2.7x94.4 in		
Weight	1350 kg - 2976 lb		

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

HD FORK POSITIONERS

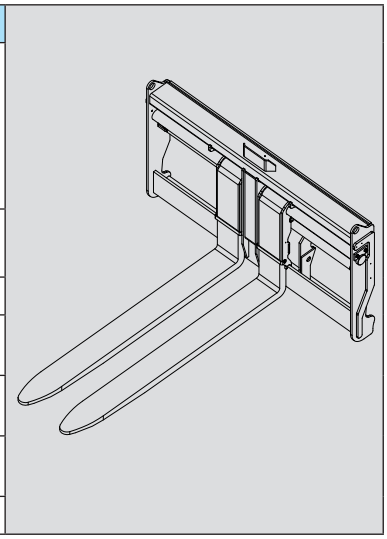
MHT 1490 / MHT-X 1490



	TFF + Positioner 9t 2000mm	TFF + Positioner 9t 2000mm	
REFERENCE	**939350**	**939351**	
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in	
Width	2000 mm - 78.7 in	2000 mm - 78.7 in	
Fork (Section)	200x60x1200 mm 7.8x2.3x47.2 in	200x60x1500 mm 7.8x2.3x59 in	
Weight	840 kg - 1851 lb	880 kg - 1940 lb	

HD FORK POSITIONERS

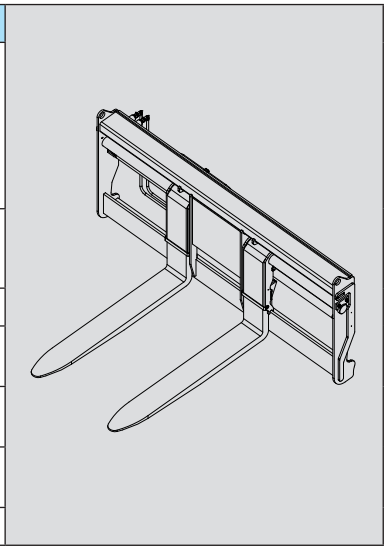
MHT 1490 / MHT-X 1490



	TFF + Positioner 9t 2000mm	TFF + Positioner 9t 2000mm	
REFERENCE	**939054**	**53009730**	
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in	
Width	2000 mm - 78.7 in	2000 mm - 78.7 in	
Fork (Section)	200x60x1500 mm 7.8x2.3x59 in	200x60x2000 mm 7.8x2.3x78.7 in	
Weight	920 kg - 2028 lb	985 kg - 2171 lb	

HD FORK POSITIONERS

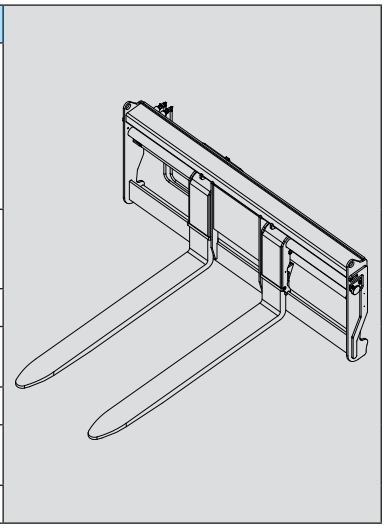
MHT 1490 / MHT-X 1490



	TFF + Positioner 9t 2500mm	TFF + Positioner 9t 2500mm	TFF + Positioner 9t 2500mm
REFERENCE	**939355**	**939356**	**939216**
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in
Width	2500 mm - 98.4 in	2500 mm - 98.4 in	2500 mm - 98.4 in
Fork (Section)	200x60x1200 mm 7.8x2.3x47.2 in	200x60x1500 mm 7.8x2.3x59 in	200x60x1800 mm 7.8x2.3x70.8 in
Weight	925 kg - 2039 lb	955 kg - 2105 lb	1000 kg - 2204 lb

HD FORK POSITIONERS

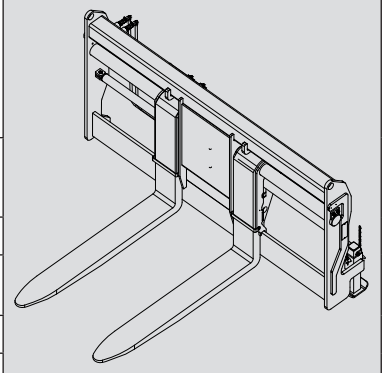
MHT 1490 / MHT-X 1490



	TFF + Positioner 9t 2500mm		
REFERENCE	**53006760**		
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in		
Width	2500 mm - 98.4 in		
Fork (Section)	200x60x1800 mm 7.8x2.3x70.8 in		
Weight	1090 kg - 2403 lb		

HD FORK POSITIONERS

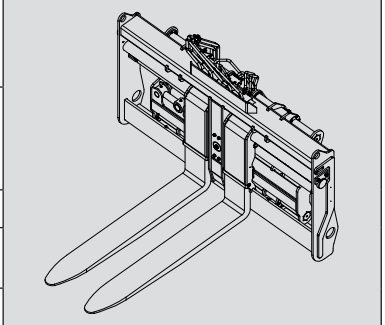
MHT 10130 / MHT-X 10130



	TFF + Positioner 13t 2500mm	TFF + Positioner 13t 2500mm	TFF + Positioner 13t 2500mm
REFERENCE	**939219**	**939220**	**53008986**
Rated capacity	13000 kg @ 600 mm 28660 @ 23.6 in	13000 kg @ 600 mm 28660 @ 23.6 in	13000 kg @ 600 mm 28660 @ 23.6 in
Width	2500 mm - 98.4 in	2500 mm - 98.4 in	2500 mm - 98.4 in
Fork (Section)	200x70x1500 mm 7.8x2.7x59 in	200x70x1800 mm 7.8x2.7x70.8 in	200x70x2400 mm 7.8x2.7x94.4 in
Weight	1250 kg - 2755 lb	1340 kg - 2954 lb	1420 kg - 3130 lb

HD FORK POSITIONERS

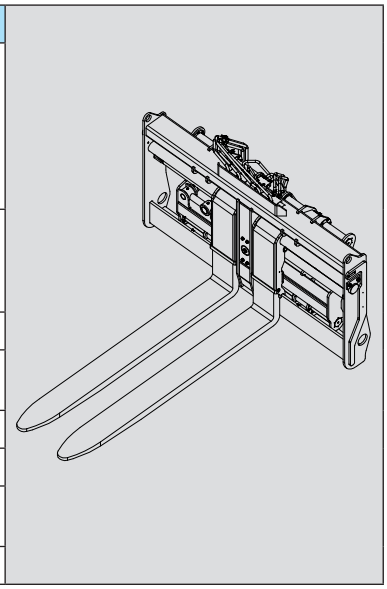
MHT 1490 / MHT-X 1490



	TFF + Positioner + Side Shift 9t 2000mm	TFF + Positioner + Side Shift 9t 2000mm	TFF + Positioner + Side Shift 9t 2000mm
REFERENCE	**939552**	**939055**	**939353**
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in
Side Shift	2x200 mm - 2x7.8 in	2x200 mm - 2x7.8 in	2x200 mm - 2x7.8 in
Width	2000 mm - 78.7 in	2000 mm - 78.7 in	2000 mm - 78.7 in
Fork (Section)	200x60x1200 mm 7.8x2.3x47.2 in	200x60x1500 mm 7.8x2.3x59 in	200x60x1800 mm 7.8x2.3x70.8 in
Weight	1090 kg	1120 kg	1176 kg

HD FORK POSITIONERS

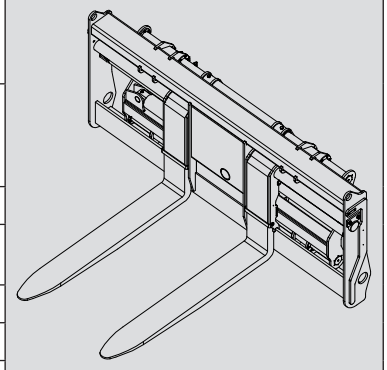
MHT 1490 / MHT-X 1490



	TFF + Positioner + Side Shift 9t 2000mm		
REFERENCE	**939554**		
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in		
Side Shift	2x200 mm - 2x7.8 in		
Width	2500 mm - 98.4 in		
Fork (Section)	200x60x2000 mm 7.8x2.3x78.7 in		
Weight	1240 kg - 2733 lb		

HD FORK POSITIONERS

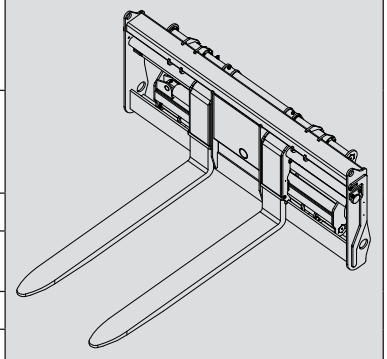
MHT 1490 / MHT-X 1490



	TFF + Positioner + Side Shift 9t 2500mm	TFF + Positioner + Side Shift 9t 2500mm	TFF + Positioner + Side Shift 9t 2500mm
REFERENCE	**939357**	**53004234**	**939358**
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in
Side Shift	2x200 mm - 2x7.8 in	2x200 mm - 2x7.8 in	2x200 mm - 2x7.8 in
Width	2500 mm - 98.4 in	2500 mm - 98.4 in	2500 mm - 98.4 in
Fork (Section)	200x60x1200 mm 7.8x2.3x47.2 in	200x60x1500 mm 7.8x2.3x59 in	200x60x1800 mm 7.8x2.3x70.8 in
Weight	1230 kg - 2711 lb	1255 kg - 2766 lb	1310 kg - 2888 lb

HD FORK POSITIONERS

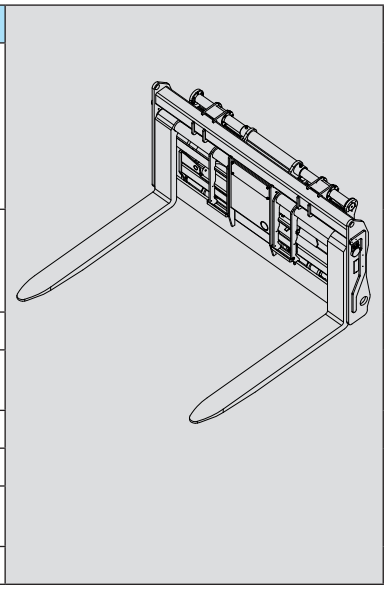
MHT 1490 / MHT-X 1490



	TFF + Positioner + Side Shift 9t 2500mm		
REFERENCE	**939359**		
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in		
Side Shift	2x200 mm - 2x7.8 in		
Width	2500 mm - 98.4 in		
Fork (Section)	200x60x2000 mm 7.8x2.3x78.7 in		
Weight	1370 kg - 3020 lb		

HD FORK POSITIONERS

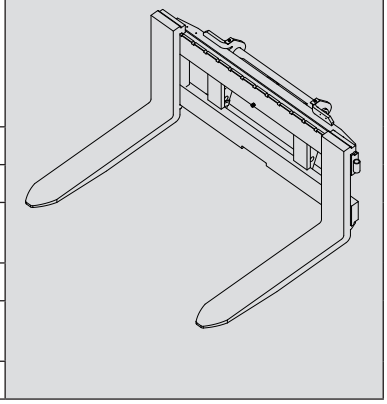
MHT 10130 / MHT-X 10130



	TFF + Positioner + Side Shift 13t 2500mm	TFF + Positioner + Side Shift 13t 2500mm	TFF + Positioner + Side Shift 13t 2500mm
REFERENCE	**939221**	**939222**	**53008727**
Rated capacity	13000 kg @ 600 mm 28660 @ 23.6 in	13000 kg @ 600 mm 28660 @ 23.6 in	13000 kg @ 600 mm 28660 @ 23.6 in
Side Shift	2x200 mm - 2x7.8 in	2x200 mm - 2x7.8 in	2x200 mm - 2x7.8 in
Width	2500 mm - 98.4 in	2500 mm - 98.4 in	2500 mm - 98.4 in
Fork (Section)	200x70x1500 mm 7.8x2.7x59 in	200x70x1800 mm 7.8x2.7x70.8 in	200x70x2400 mm 7.8x2.7x94.4 in
Weight	1765 kg - 3891 lb	1835 kg - 4045 lb	1935 kg - 4265 lb

TILTING FORKS CARRIAGE

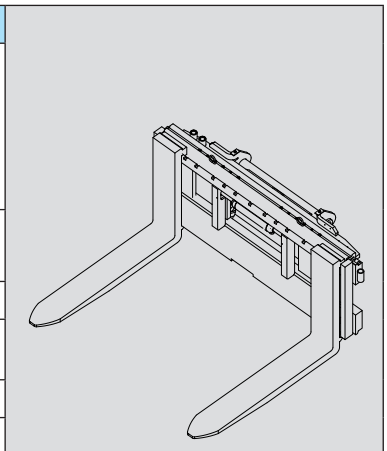
MHT 1490 / MHT-X 1490



	PFB L1750	PFB L2000	
REFERENCE	**939056**	**939058**	
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in	
Width	1750 mm - 68.8 in	2000 mm - 78.7 in	
Fork (Section)	200x60x1200 mm 7.8x2.3x47.2 in	200x60x1200 mm 7.8x2.3x47.2 in	
Weight	780 kg - 1719 lb	822 kg - 1812 lb	

TILTING FORKS CARRIAGE

MHT 1490 / MHT-X 1490



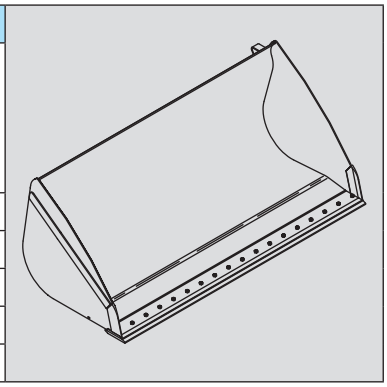
	PFB L1750 + Side Shift	PFB L2000 + Side Shift	
REFERENCE	**939057**	**939059**	
Rated capacity	9000 kg @ 600 mm 19841lb @ 23.6 in	9000 kg @ 600 mm 19841lb @ 23.6 in	
Side Shift	2x100 mm - 2x3.9 in	2x100 mm - 2x3.9 in	
Width	1750 mm - 68.8 in	2000 mm - 78.7 in	
Fork (Section)	200x70x1800 mm 7.8x2.7x70.8 in	200x70x1800 mm 7.8x2.7x70.8 in	
Weight	1090 kg - 2403 lb	1100 kg - 2425 lb	

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

AGRICULTURAL BUCKET

MHT 1490 / MHT-X 1490

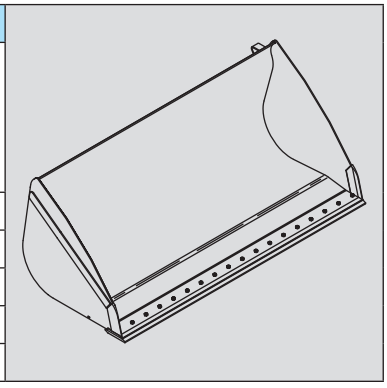
	CBA 2000 L2450		
REFERENCE	**939160**		
Content capacity	2000 L - 528 gal		
Width	2450 mm - 96.4 in		
Weight	678 kg - 1494 in		



AGRICULTURAL BUCKET

MHT 10130 / MHT-X 10130

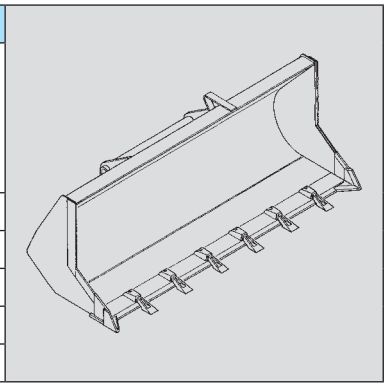
	CBA 4000 L2500		
REFERENCE	**939233**		
Content capacity	2500 L - 660 gal		
Width	4000 mm - 157.4 in		
Weight	1041 kg - 2295 in		



CONSTRUCTION BUCKET

MHT 1490 / MHT-X 1490

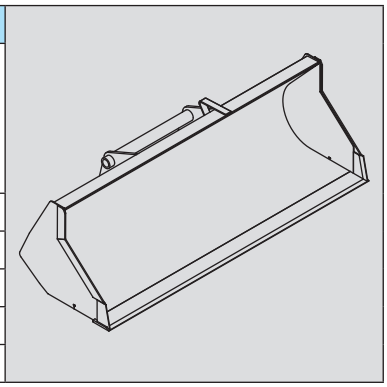
	CBC 1000 L2500	CBC 1500 L2500	
REFERENCE	**939163**	**939164**	
Content capacity	1000 L - 264.1 gal	1500 L - 396.2 gal	
Width	2500 mm - 98.4 in	2500 mm - 98.4 in	
Weight	620 kg - 1366 lb	669 kg - 1474 lb	



GENERAL PURPOSE BUCKET

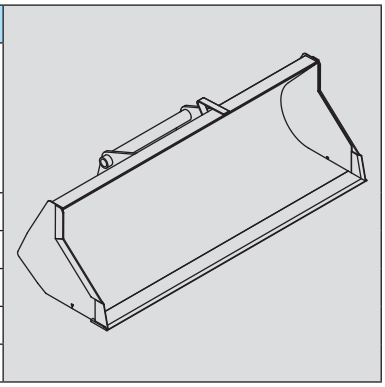
MHT 1490 / MHT-X 1490

	CBR 1000 L2500	CBR 1500 L2500	
REFERENCE	**939165**	**939166**	
Rated capacity	1000 L - 264.1 gal	1500 L - 396.2 gal	
Width	2500 mm - 98.4 in	2500 mm - 98.4 in	
Weight	664 kg - 1463.8 lb	800 kg - 1763.6 lb	



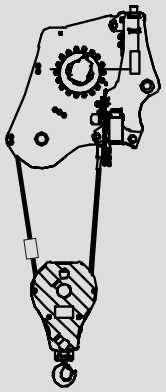
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

GENERAL PURPOSE BUCKET				
MHT 10130 / MHT-X 10130				
	CBR 2000 L2500			
REFERENCE	**939232**			
Rated capacity	2000 L - 528 gal			
Width	2500 mm - 98.4 in			
Weight	940 kg - 2072 lb			

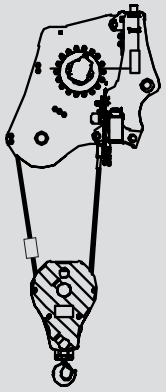


WINCHES

HEAVY DUTY HYDRAULIC WINCH			
MUST be used with a lift truck equipped with an operational hydraulic movement cut-out device.			
MHT 1490 / MHT-X 1490			
	WINCH 9T		
REFERENCE	**939030**		
Rated capacity	9000 kg - 19841 lb		
Weight	850 kg - 1873 lb		



HEAVY DUTY HYDRAULIC WINCH			
MUST be used with a lift truck equipped with an operational hydraulic movement cut-out device.			
MHT 10130 / MHT-X 10130			
	WINCH 13T		
REFERENCE	**939234**		
Rated capacity	13000 kg - 28660 lb		
Weight	1185 kg - 2612 lb		

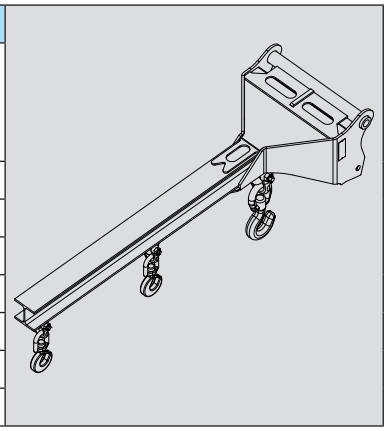


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

CRANE HEAVY DUTY

MHT 1490 / MHT-X 1490

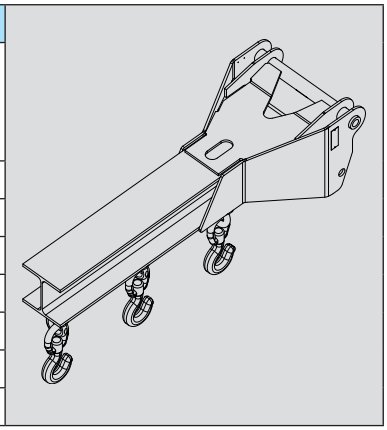
	P 9 T		
REFERENCE	**930830**		
Rated capacity	9000 kg - 19841 lb		
Hook no. 1	9000 kg - 19841 lb		
Hook no. 2	5000 kg - 11023 lb		
Hook no. 3	2000 kg - 4409 lb		
Weight	295 kg - 650 lb		



CRANE HEAVY DUTY

MHT 10130 / MHT-X 10130

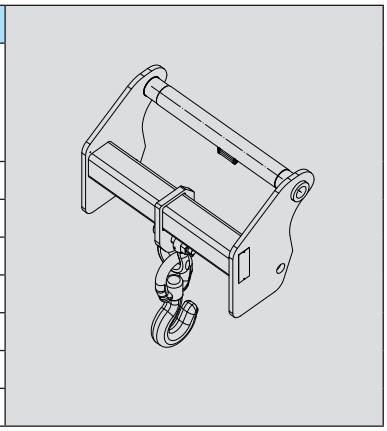
	P 13 T		
REFERENCE	**53009841**		
Rated capacity	13000 kg - 28660 lb		
Hook no. 1	13000 kg - 28660 lb		
Hook no. 2	10000 kg - 22046 lb		
Hook no. 3	7500 kg - 16534 lb		
Weight	560 kg - 1234 lb		



FRAME MOUNTED HOOK HEAVY DUTY

MHT 1490 / MHT-X 1490

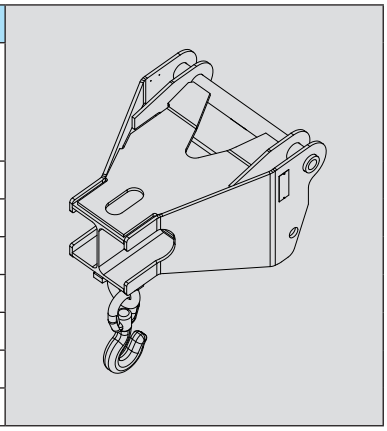
	PC 9 T		
REFERENCE	**939970**		
Rated capacity	9000 kg - 19841 lb		
Weight	129 kg - 284 lb		



FRAME MOUNTED HOOK HEAVY DUTY

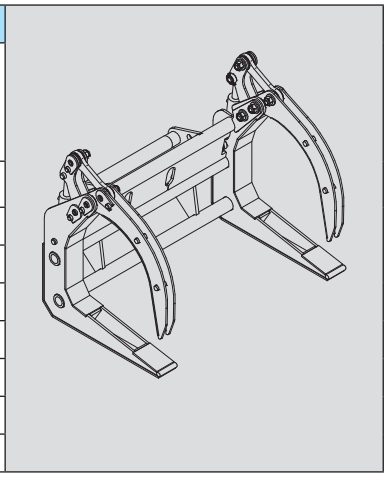
MHT 10130 / MHT-X 10130

	PC 13 T		
REFERENCE	**53008009**		
Rated capacity	13000 kg - 28660 lb		
Weight	305 kg - 672 lb		



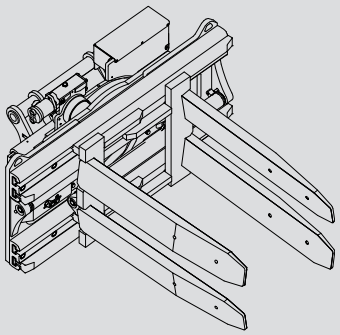
CLAMPS

GRABS FOR LOGS			
MHT 10130 / MHT-X 10130			
	Grabs for Logs 10 T		
REFERENCE	**939235**		
Rated capacity	10000 kg - 22046 lb		
Clamping range	1500 mm - 59 in		
Width	1310 mm - 51.5 in		
Weight	492 kg - 1084 lb		

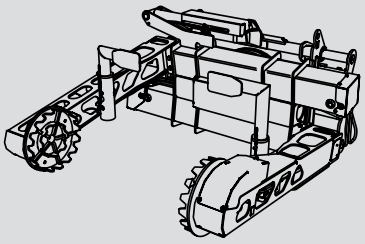


MINING ATTACHMENTS

SLIM TYRE HANDLER			
MHT 1490 / MHT-X 1490			
	TH 33 / 2000 S	**TH 35 / 2900 S**	
REFERENCE	**939039**	**939040**	
Rated capacity	2000 kg - 4409 lb	2900 kg	
Side Shift	2x100 mm - 2x3.9 in	2x100 mm - 2x3.9 in	
Clamping range	470 mm / 2100 mm 18.5 / 82.6 in	640 mm / 2650 mm 25.1 in / 104.3 lb	
Body rotation	360° continuos	360° continuos	
Weight	1160 kg - 2557 lb	1160 kg - 2557 lb	



TYRE HANDLER			
MHT 1490 / MHT-X 1490			
	TH 49 / 2500		
REFERENCE	**914600**		
Rated capacity	1500 kg - 3306 lb		
Side Shift	2x150 mm - 2x5.9 in		
Clamping range	1100 mm / 3100 mm 43.3 in / 122 in		
Body rotation	+/- 22,5 °		
Pads Rotation	0°-120°		
Weight	1160 kg - 2557 lb		

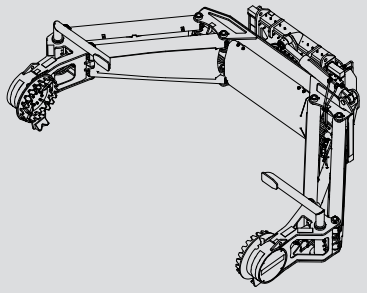


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

TYRE HANDLER

MHT 1490 / MHT-X 1490
MHT 10130 / MHT-X 10130

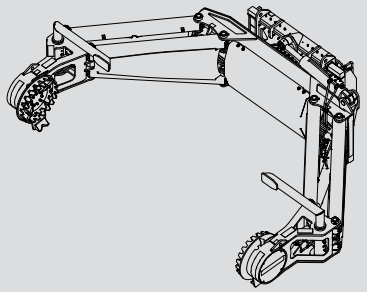
	TH 51 / 3500		
REFERENCE	**911969**		
Rated capacity	3500 kg - 7716 lb		
Side Shift	2x150 mm - 2x5.9 in		
Clamping range	1130 mm / 3410 mm 44.4 in / 134.2 in		
Body rotation	+/- 22,5 °		
Pads Rotation	0°-120°		
Weight	3200 kg - 7054 lb		



TYRE HANDLER

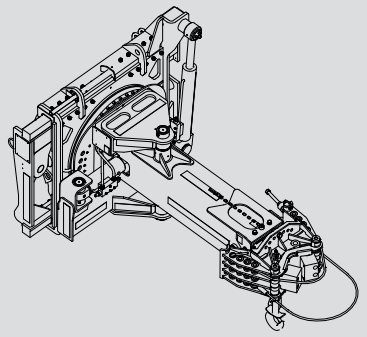
MHT 10130 / MHT-X 10130

	TH 57 / 6000		
REFERENCE	**939237**		
Rated capacity	6000 kg - 13227 lb		
Side Shift	2x300 mm - 2x11.8 in		
Clamping range	1210 mm / 3830 mm 47.6 in / 150.7 in		
Body rotation	+/- 172 °		
Pads Rotation	360° continuos		
Weight	4300 kg - 9479 lb		



CYLINDER HANDLER

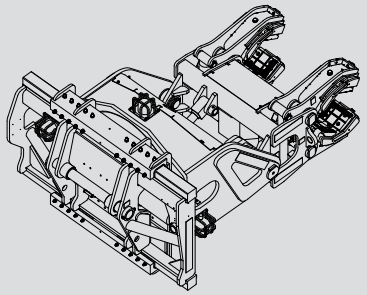
	CH 4		
REFERENCE	**911968**		
Rated capacity	4000 kg - 8818 lb		
Side Shift	2x150 mm - 2x5.9 in		
Clamping range	250 mm / 530 mm 9.8 in / 20.8 in		
Body rotation	+/- 22.5 °		
Head rotation	+/- 35 °		
Jib orientation	+/- 15 °		
Weight	1740 kg - 3836 lb		



CYLINDER HANDLER

MHT 10130 / MHT-X 10130

	CH 10		
REFERENCE	**939239**		
Rated capacity	4000 kg - 8818 lb		
Side Shift	2x300 mm - 2x11.8 in		
Clamping range	230 mm / 640 mm 9 in / 25.1 in		
Body rotation	- 140° / + 200 °		
Clamp tilting	90°		
Weight	3500 kg - 7716 lb		



5 - LOAD CHARTS FOR INTERCHANGEABLE EQUIPMENT

INTRODUCTION

The load capacity diagrams are only valid with the safety system properly activated.

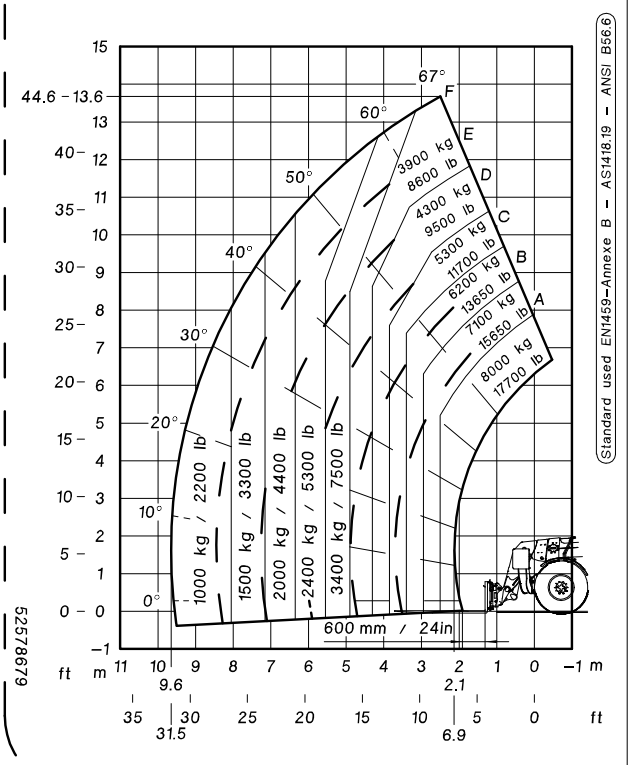
MHT-X 1490 129M ST3A S1
MHT 1490 129M ST4 S1

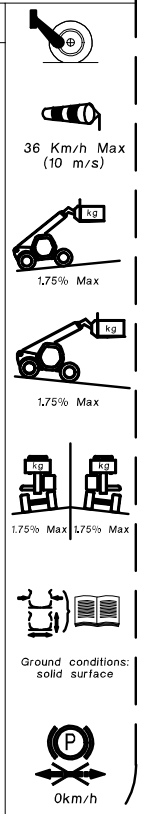
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU MHT 1490

PFB+DL L2000 L.C.600mm/24in

Pos. AH

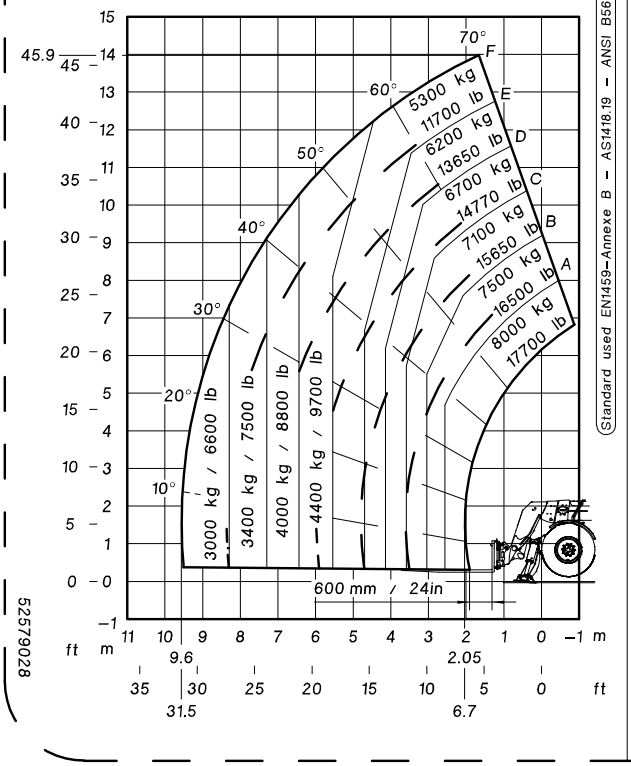


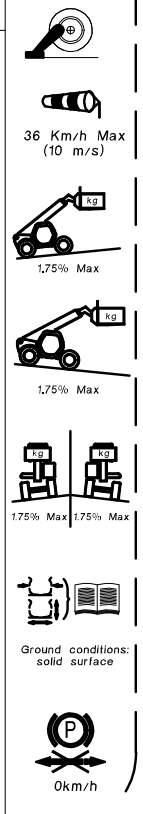


MANITOU MHT 1490

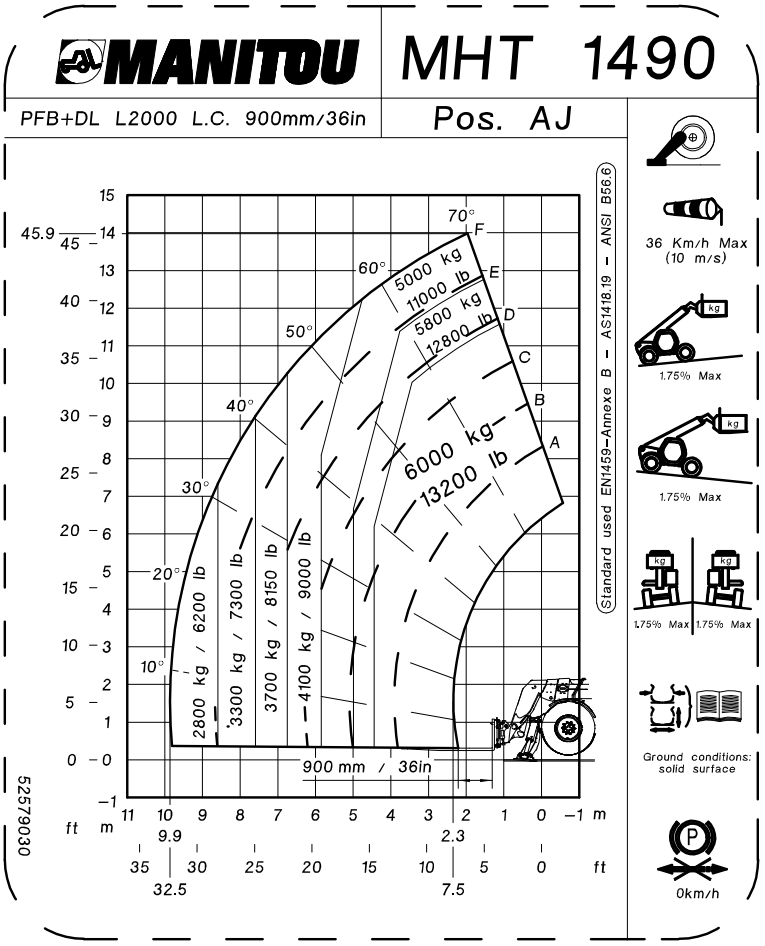
PFB+DL L2000 L.C. 600mm/24in

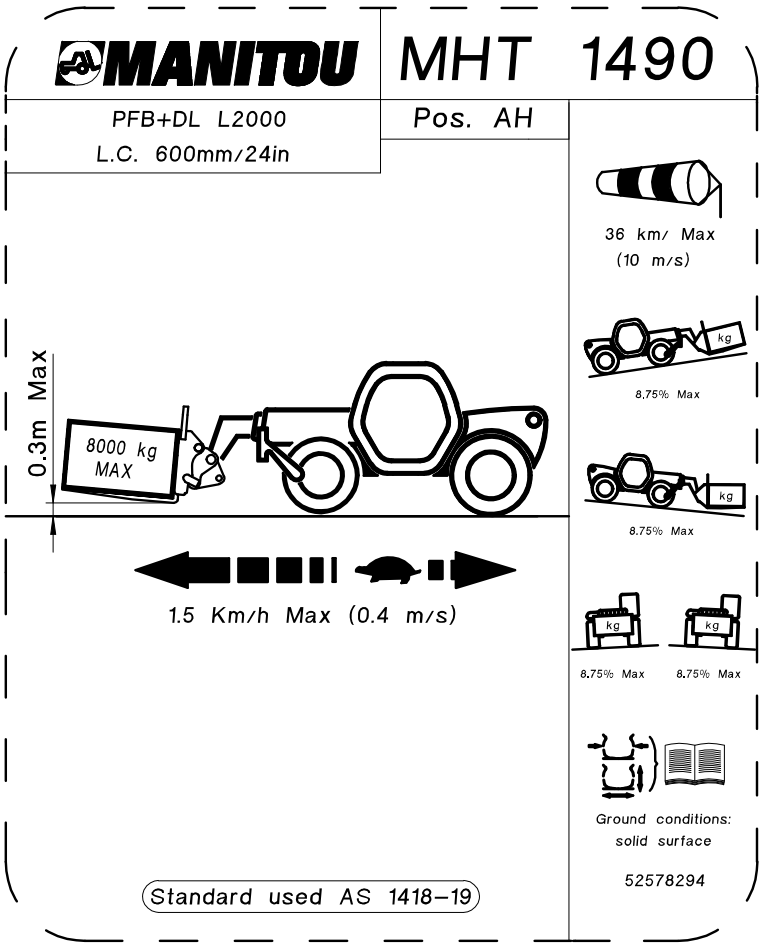
Pos. AH





648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

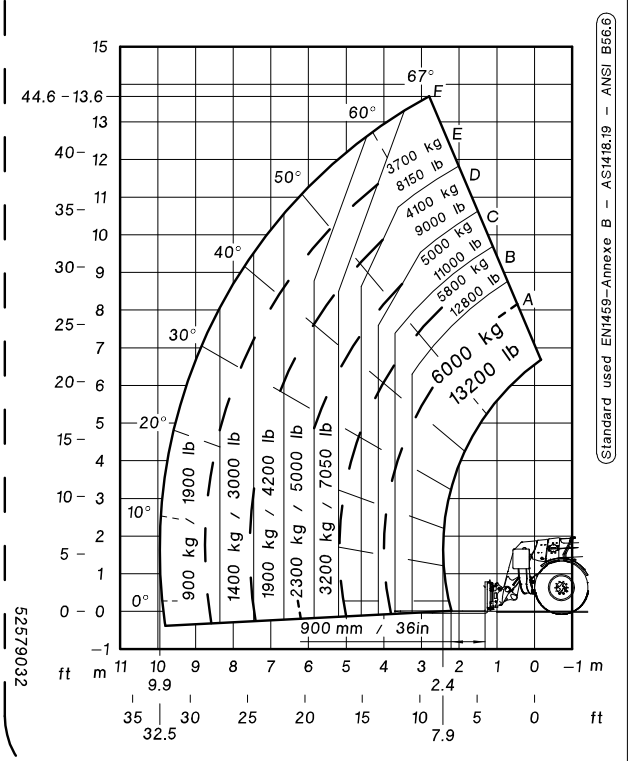

MANITOU
MHT 1490
PFB+DL L2000 L.C. 900mm/36in
Pos. AJ
70°
60°
50°
40°
30°
20°
10°
F
E
D
C
B
A
5000 kg
11000 lb
5800 kg
12800 lb
6000 kg
13200 lb
2800 kg / 6200 lb
3300 kg / 7300 lb
3700 kg / 8150 lb
4100 kg / 9000 lb
900 mm / 36in
45.9
ft
m
9.9
32.5
2.3
7.5
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
52578030
36 Km/h Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h

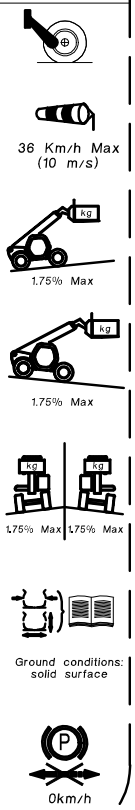

MANITOU
MHT 1490
PFB+DL L2000
L.C. 600mm/24in
Pos. AH
0.3m Max
8000 kg
MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions:
solid surface
52578294
Standard used AS 1418-19

MANITOU MHT 1490

PFB+DL L2000 L.C.900mm/36in

Pos. AJ



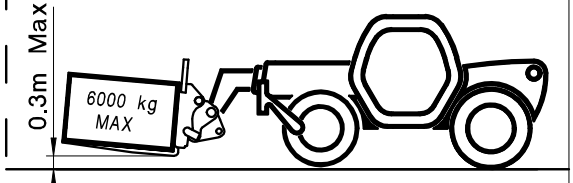


MANITOU MHT 1490

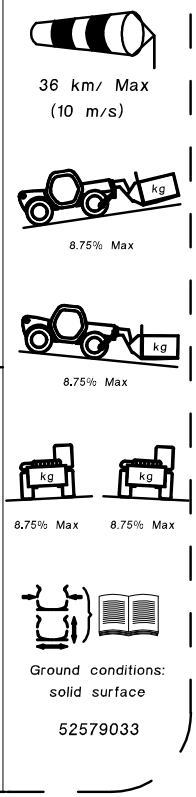
PFB+DL L2000

L.C. 900mm/36in

Pos. AJ



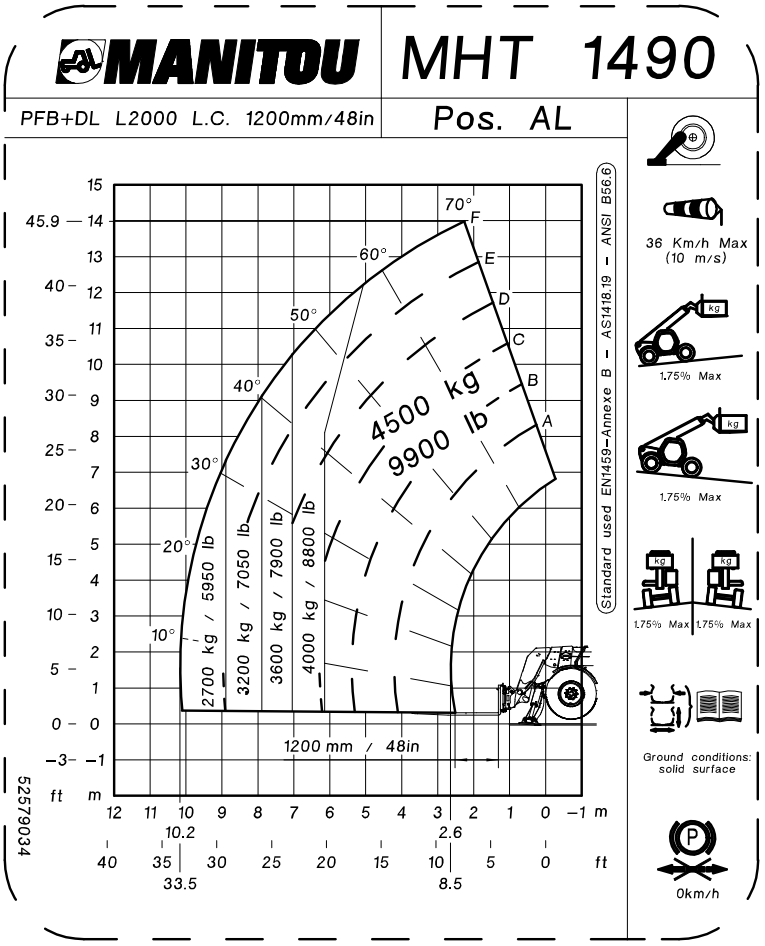
1.5 Km/h Max (0.4 m/s)

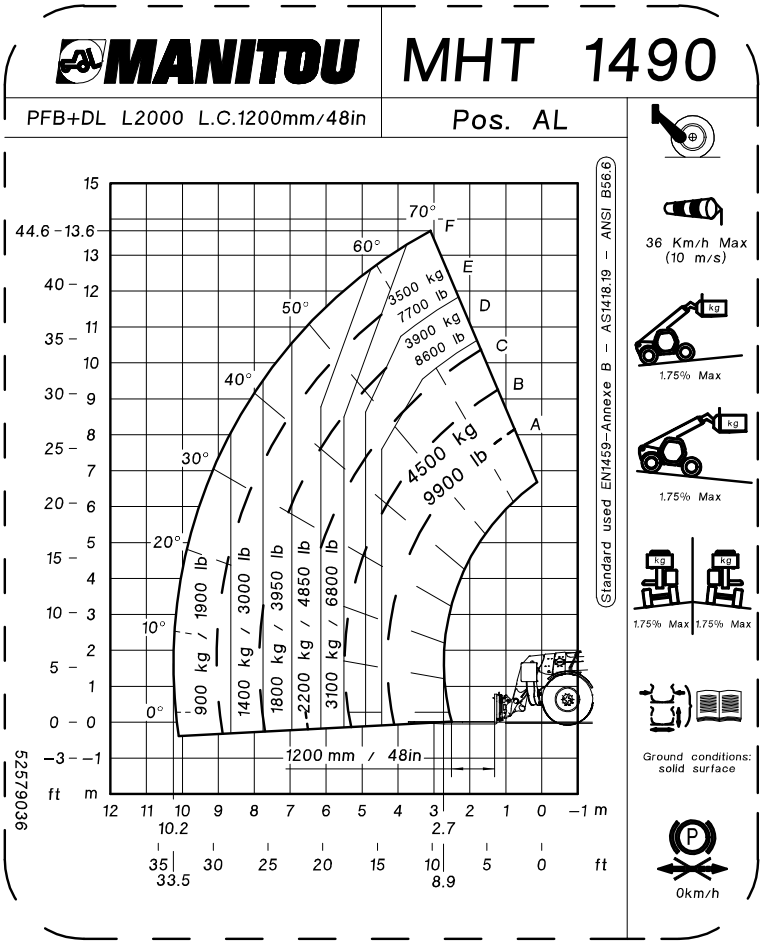


Standard used AS 1418-19

52579033

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 1490
PFB+DL L2000 L.C. 1200mm/48in
Pos. AL
4500 kg
9900 lb
2700 kg / 5950 lb
3200 kg / 7050 lb
3600 kg / 7900 lb
4000 kg / 8800 lb
1200 mm / 48in
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
36 Km/h Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
52579034

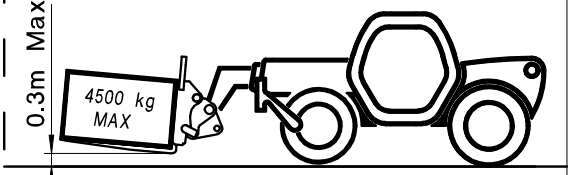

MANITOU
MHT 1490
PFB+DL L2000 L.C.1200mm/48in
Pos. AL
4500 kg
9900 lb
3500 kg
7700 lb
3900 kg
8600 lb
900 kg / 1900 lb
1400 kg / 3000 lb
1800 kg / 3950 lb
2200 kg / 4850 lb
3100 kg / 6800 lb
1200 mm / 48in
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
36 Km/h Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
52579036

MANITOU

MHT 1490

PFB+DL L2000
L.C. 1200mm/48in

Pos. AL



1.5 Km/h Max (0.4 m/s)



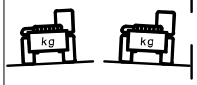
36 km/ Max
(10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



Ground conditions:
solid surface

52579037

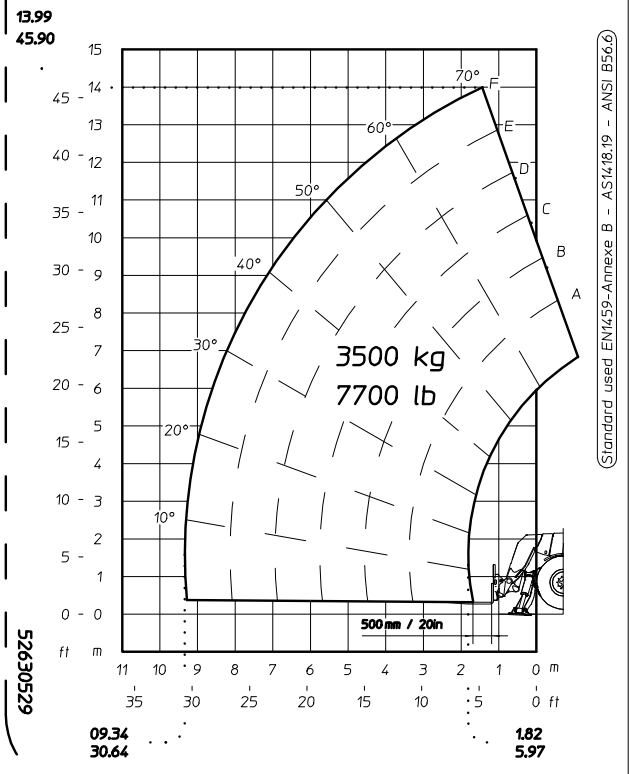
Standard used AS 1418–19

MANITOU

MHT 1490

TFF 35 L.C. 500mm/20in

Pos. AQ

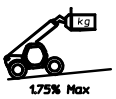


Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6





36 Km/h Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max

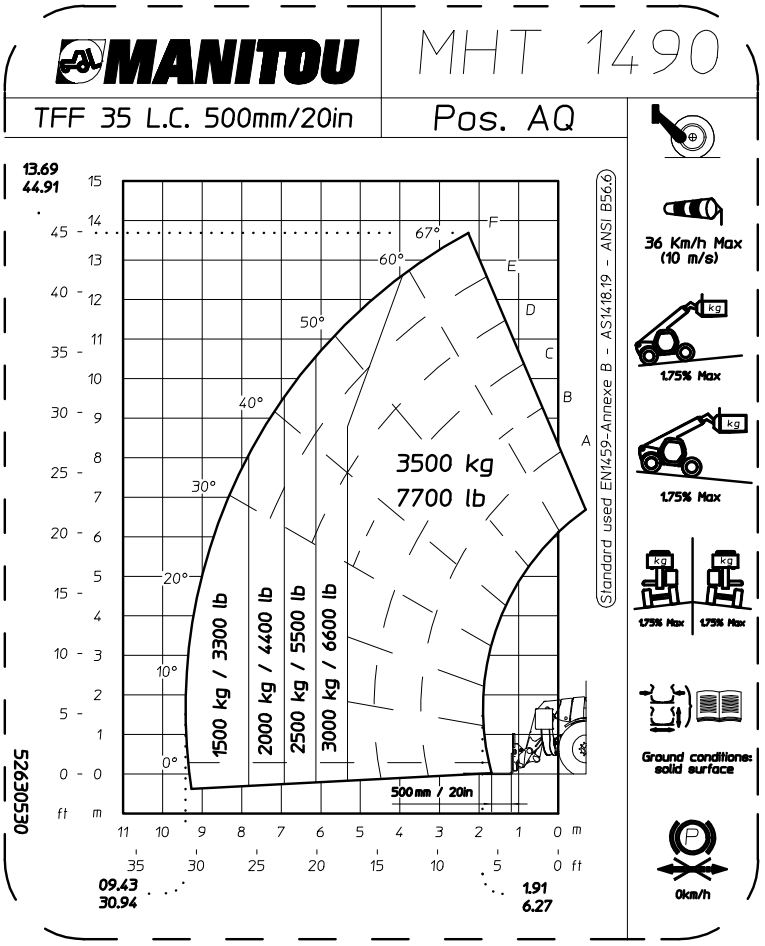


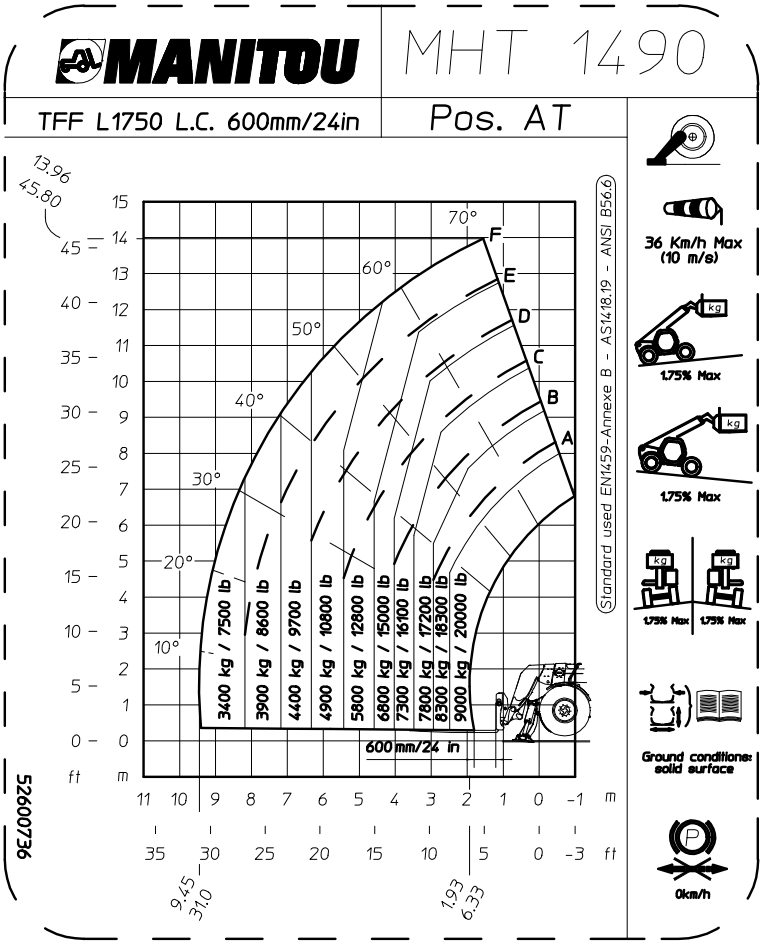
Ground conditions:
solid surface



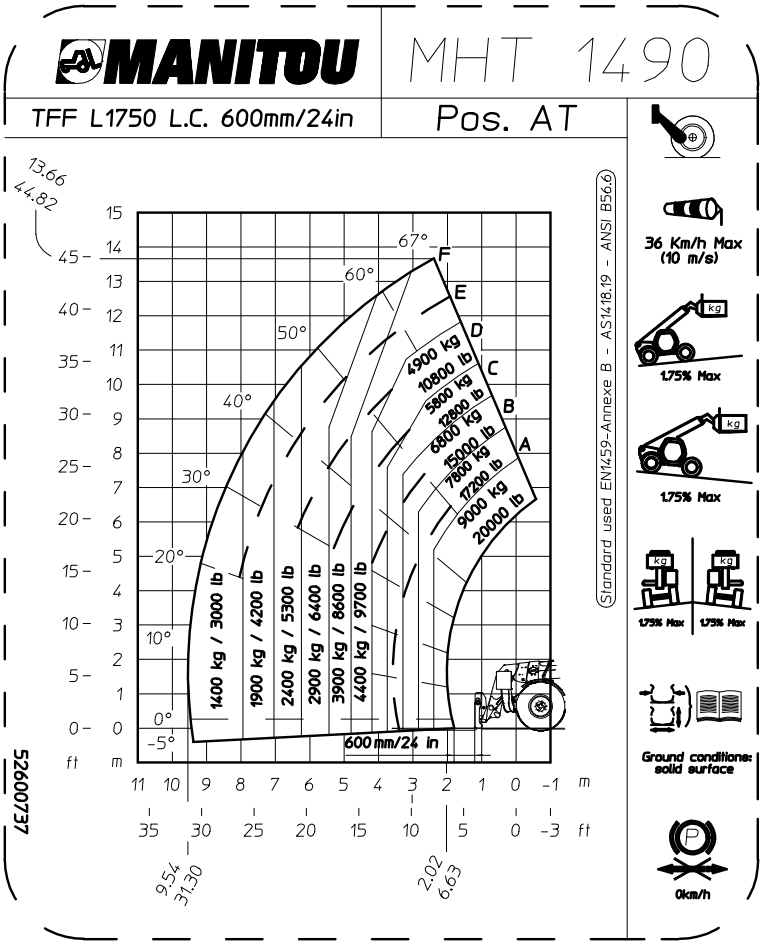
0km/h

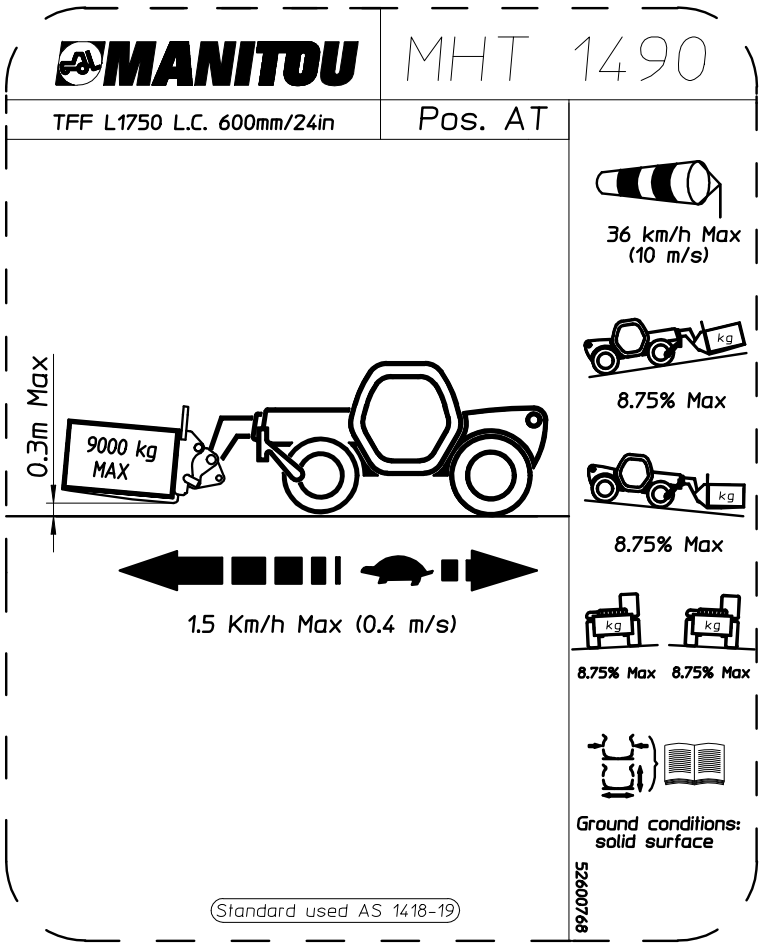
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1



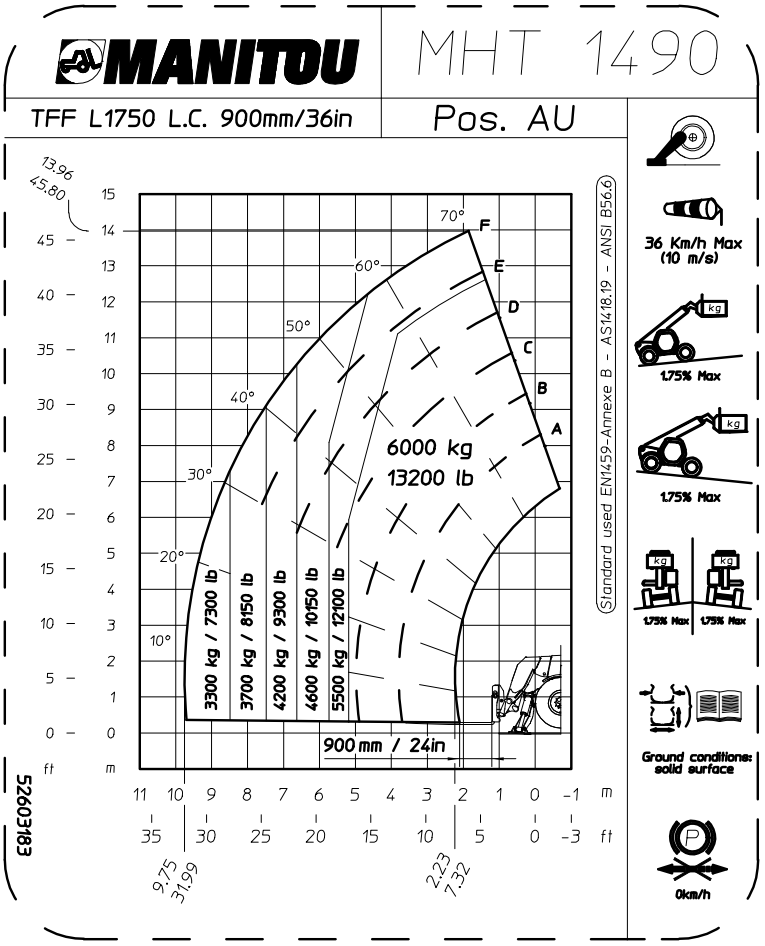


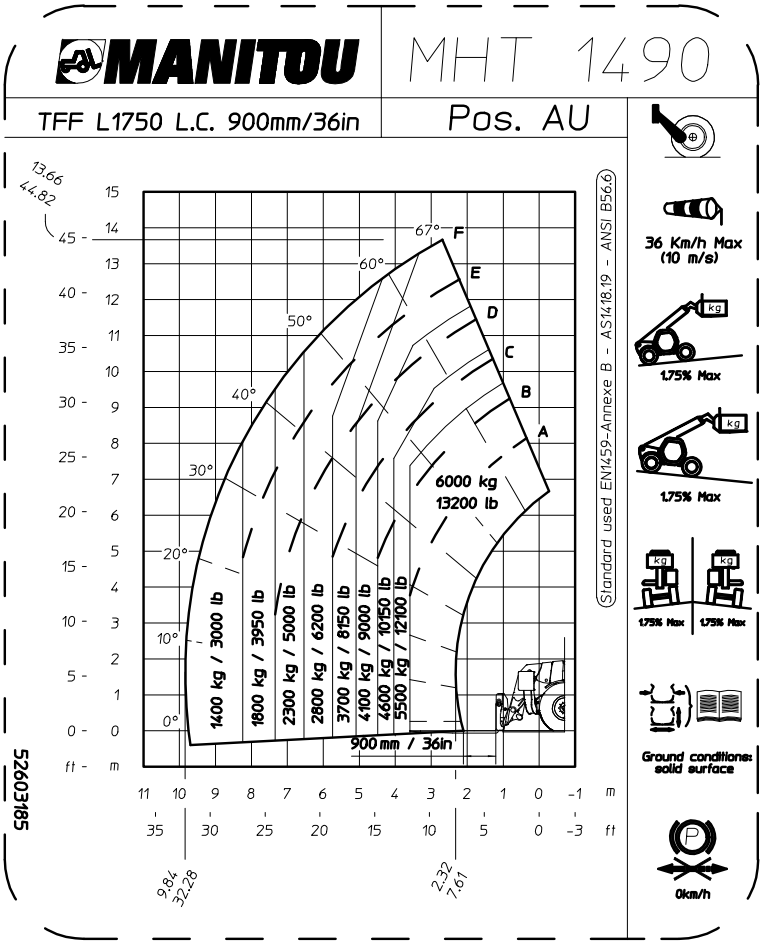
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1



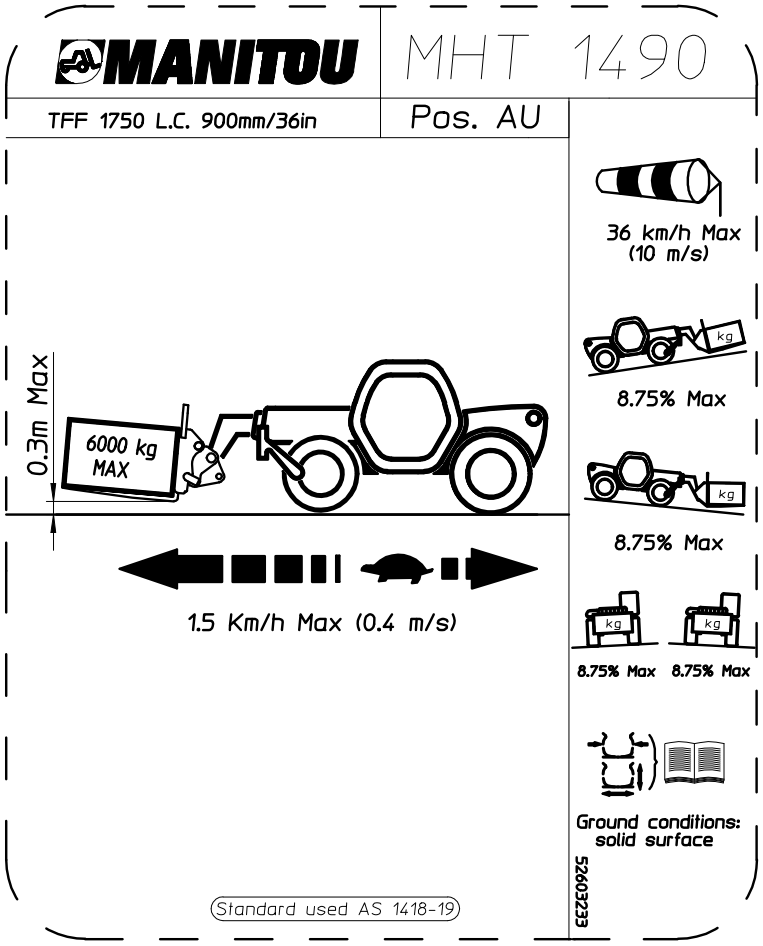


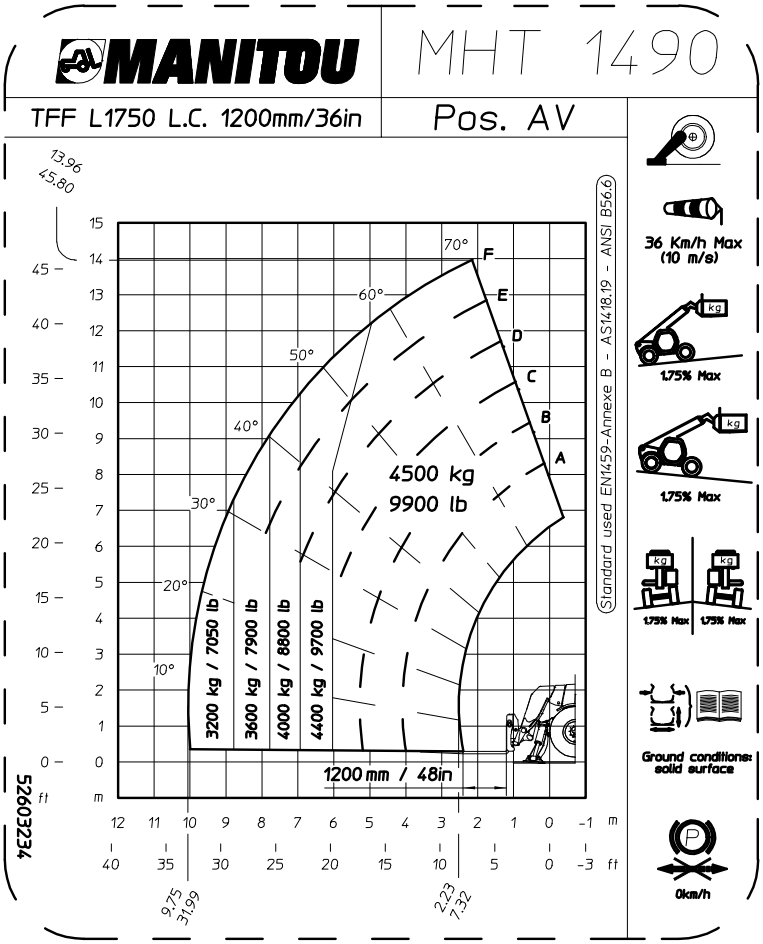
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1



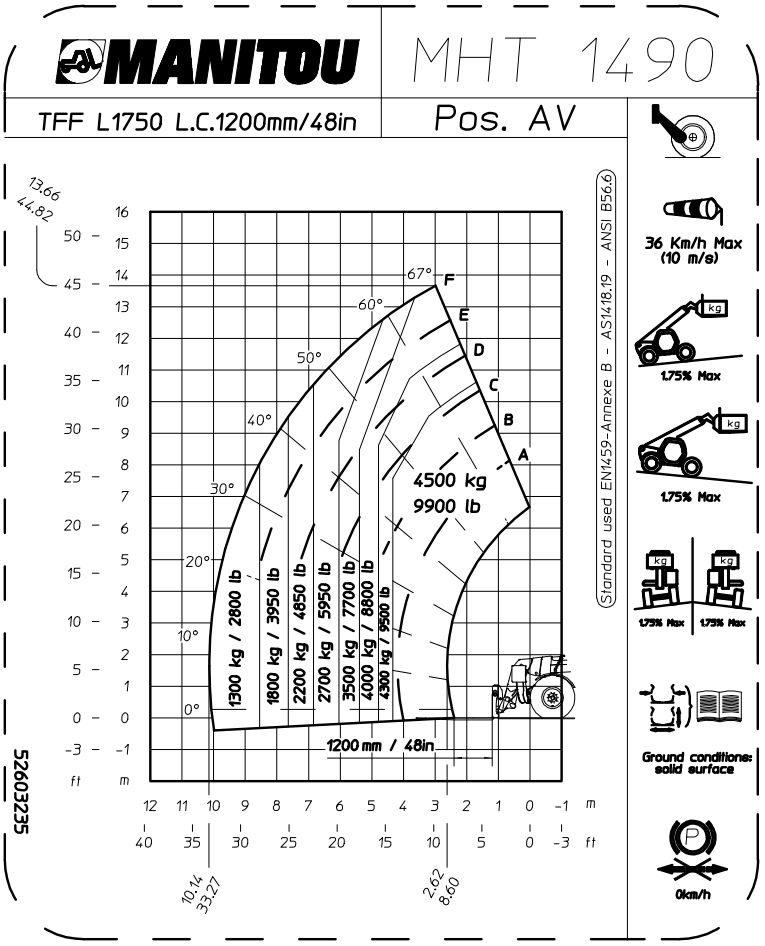


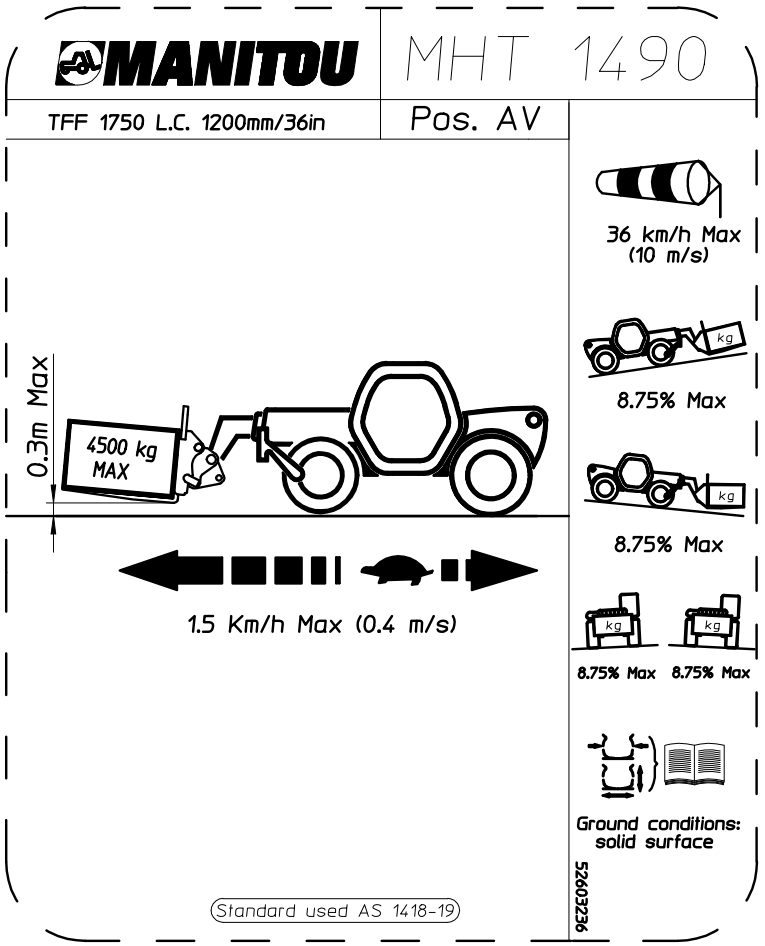
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

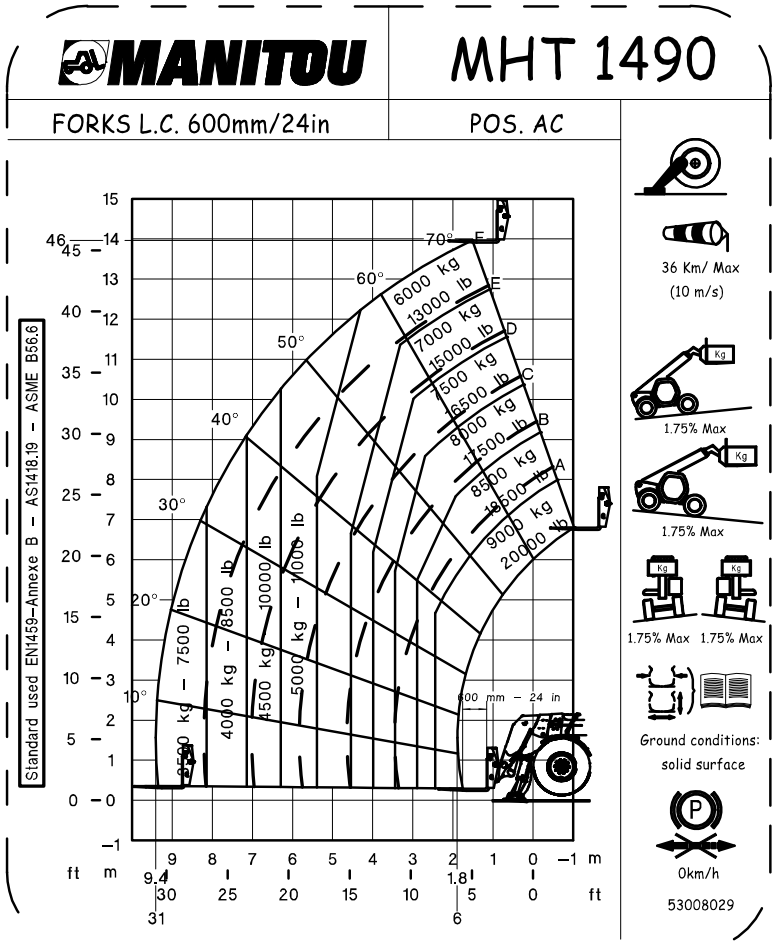


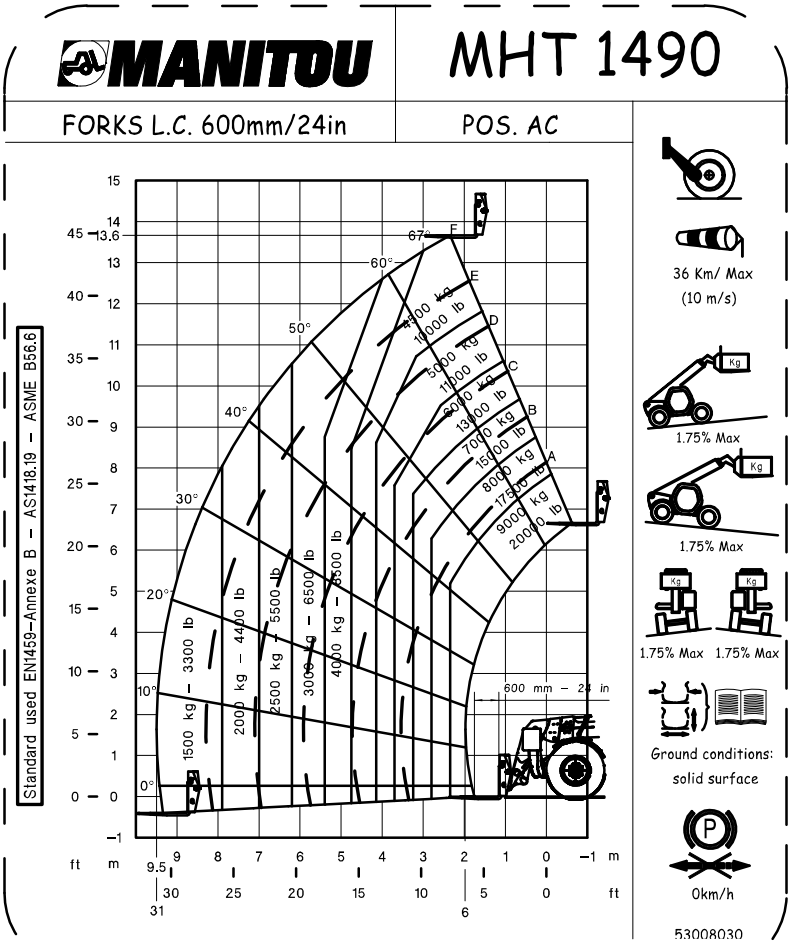


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

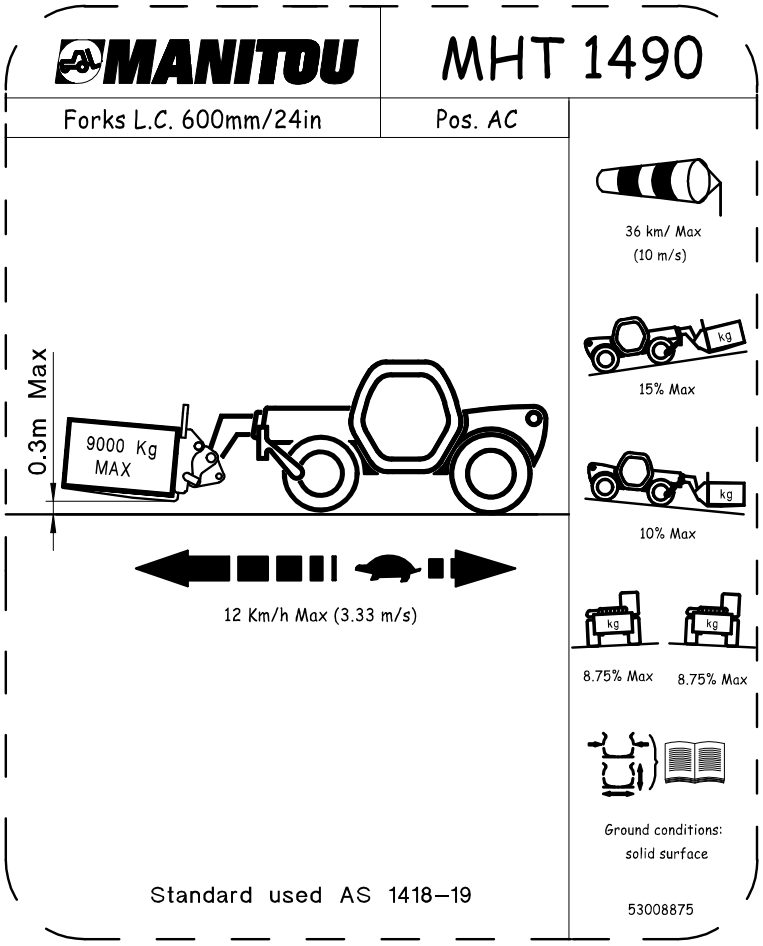

MANITOU
MHT 1490
TFF L1750 L.C.1200mm/48in
Pos. AV
13.66
44.82
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
4500 kg
9900 lb
1300 kg / 2800 lb
1800 kg / 3950 lb
2200 kg / 4850 lb
2700 kg / 5950 lb
3500 kg / 7700 lb
4000 kg / 8800 lb
4300 kg / 9500 lb
1200 mm / 48in
10.14
33.27
2.62
8.60
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
36 Km/h Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
526032351

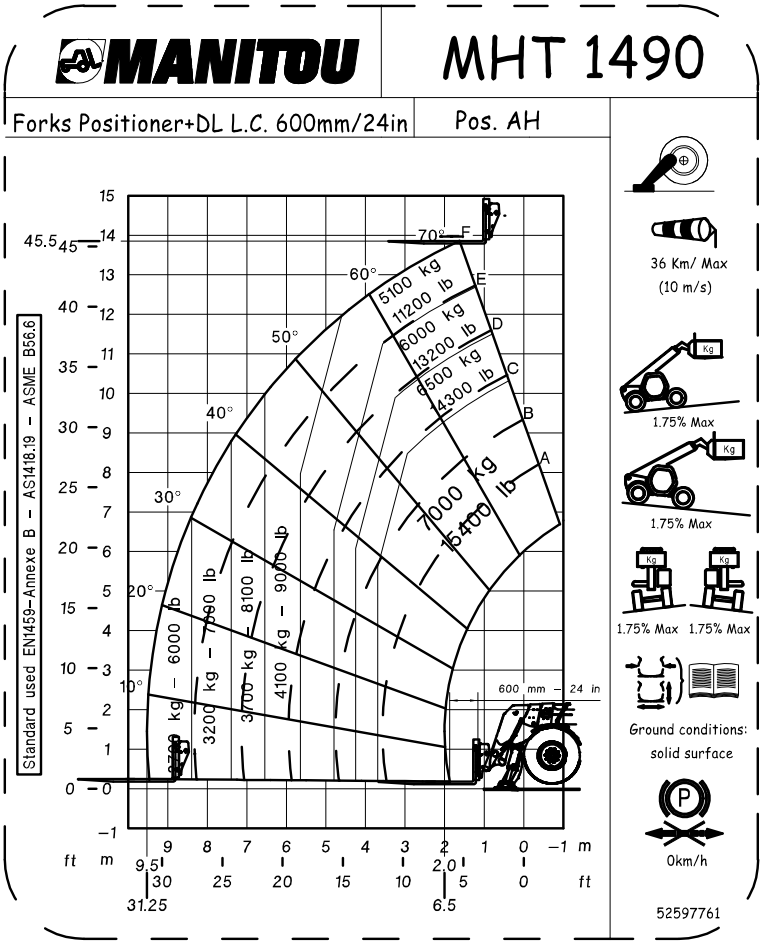

MANITOU
MHT 1490
TFF 1750 L.C. 1200mm/36in
Pos. AV
36 km/h Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
0.3m Max
4500 kg
MAX
1.5 Km/h Max (0.4 m/s)
Ground conditions:
solid surface
Standard used AS 1418-19
526032361





648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

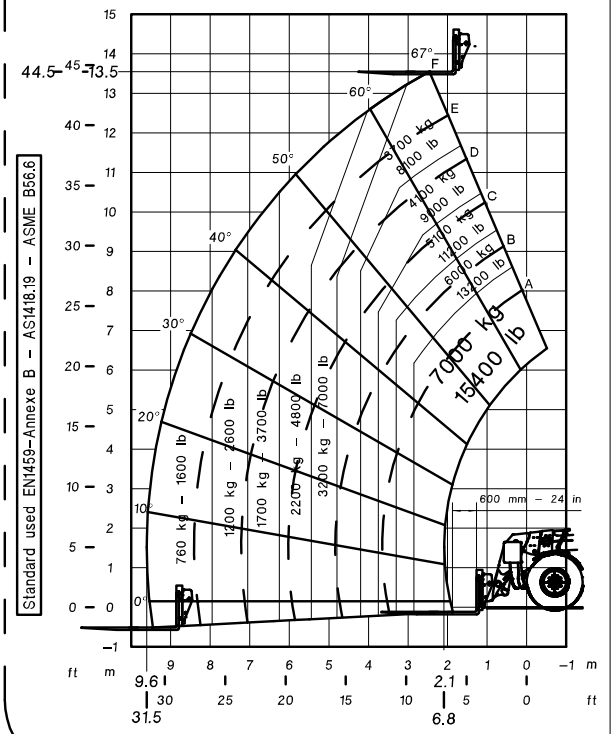

MANITOU
MHT 1490
Forks L.C. 600mm/24in
Pos. AC
0.3m Max
9000 Kg MAX
12 Km/h Max (3.33 m/s)
36 km/ Max (10 m/s)
15% Max
10% Max
8.75% Max
8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53008875


MANITOU
MHT 1490
Forks Positioner+DL L.C. 600mm/24in
Pos. AH
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
70°
60°
50°
40°
30°
20°
10°
5100 kg 11200 lb
6000 kg 13200 lb
6500 kg 14300 lb
7000 kg 15400 lb
A
B
C
D
E
F
600 mm – 24 in
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
52597761

MANITOU

MHT 1490

Forks Positioner+DL L.C. 600mm/24in — Pos. AH



36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

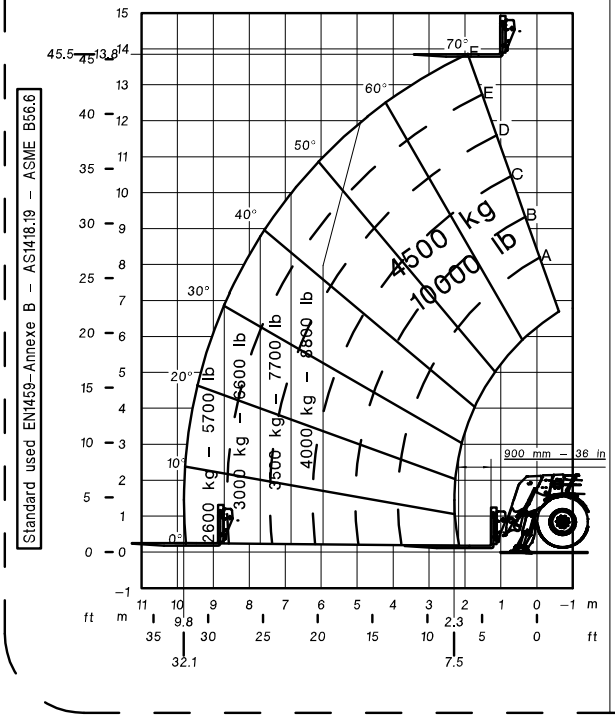
0km/h

52597762

MANITOU

MHT 1490

Forks Positioner+DL L.C. 900mm/36in — Pos. AJ



36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

0km/h

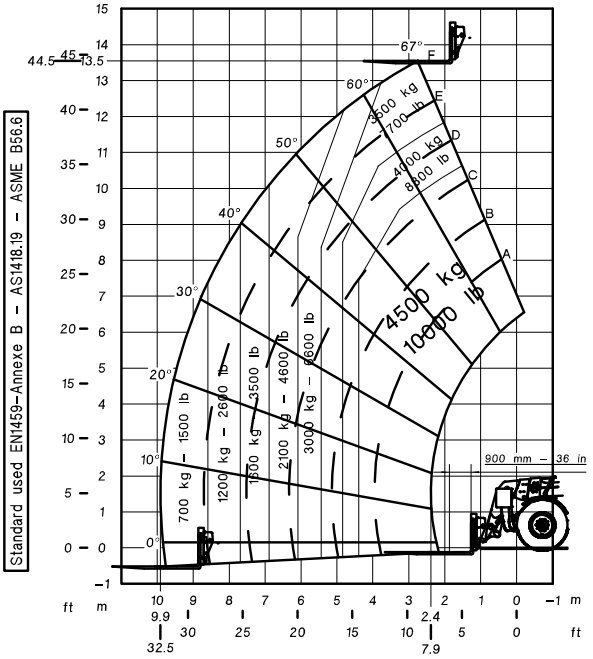
52597764

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU

MHT 1490

Forks Positioner+DL L.C. 900mm/36in | Pos. AJ



36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

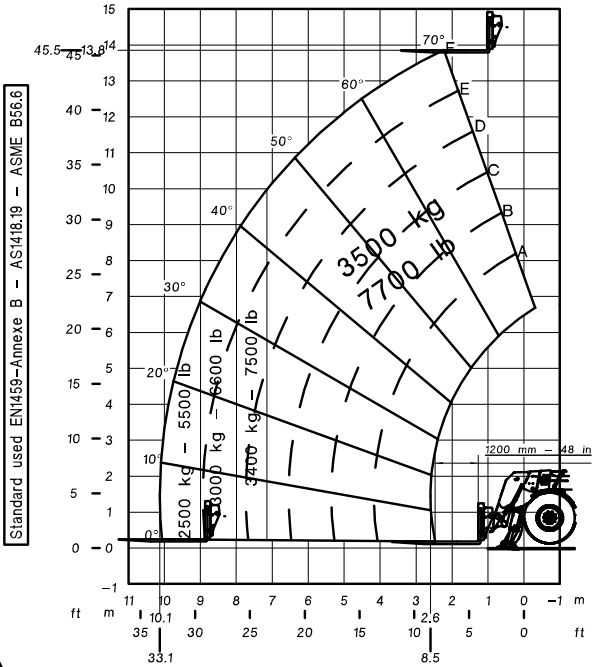
0km/h

52597769

MANITOU

MHT 1490

Forks Positioner+DL L.C. 1200mm/48in | Pos. AL



36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

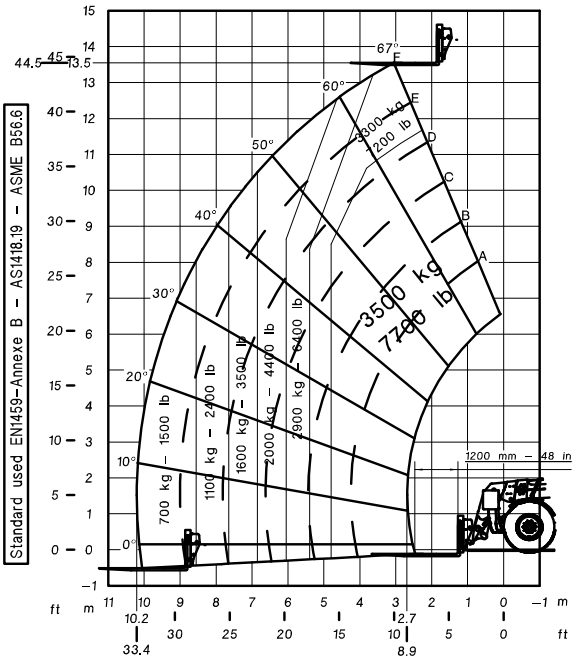
0km/h

52597773

MANITOU

MHT 1490

Forks Positioner+DL L.C. 1200mm/48in Pos. AL



36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

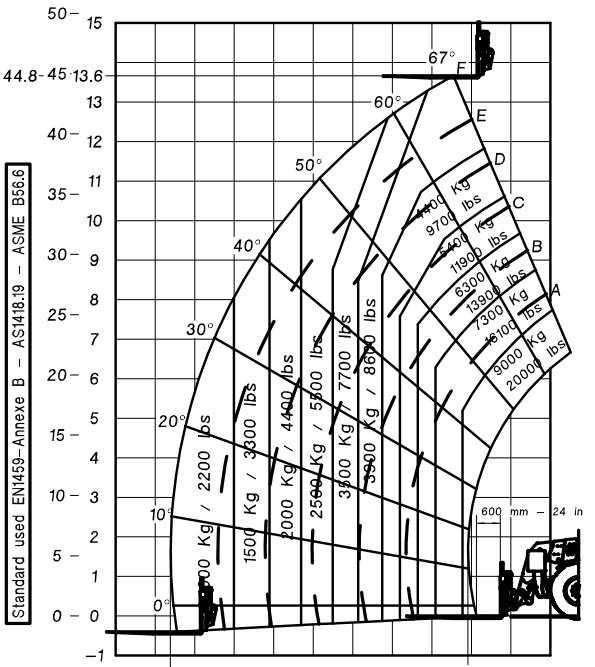
0km/h

52597776

MANITOU

MHT 1490

FORKS TFF CN +/- 10° Pos. AI



36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

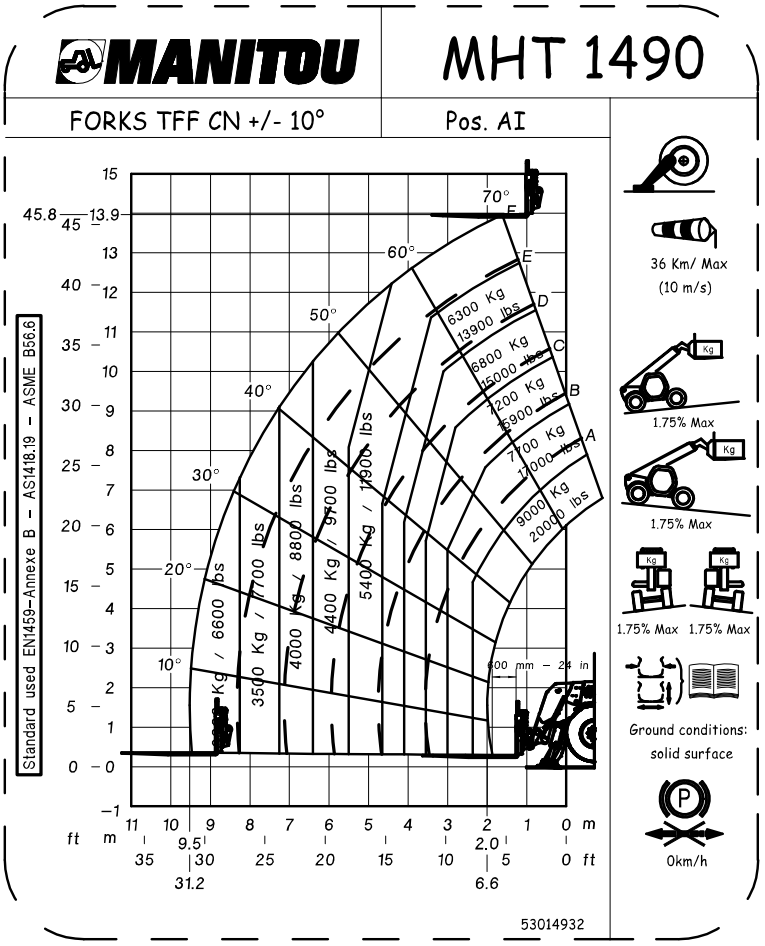
1.75% Max 1.75% Max

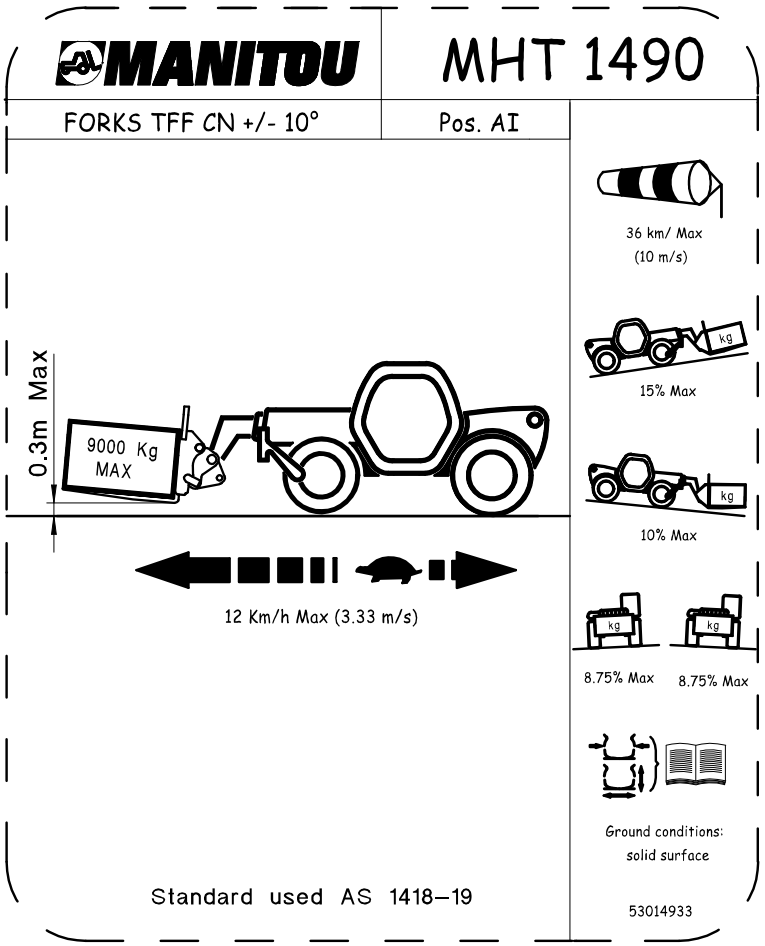
Ground conditions:
solid surface

0km/h

53014931

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

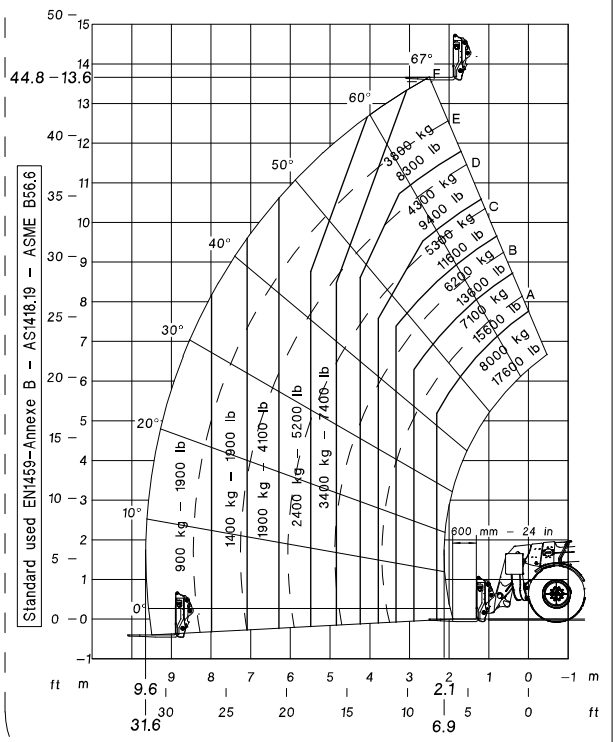

MANITOU
MHT 1490
FORKS TFF CN +/- 10°
Pos. AI
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
70°
60°
50°
40°
30°
20°
10°
E
D
C
B
A
6300 Kg 13900 lbs
6800 Kg 15000 lbs
7200 Kg 15900 lbs
7700 Kg 17000 lbs
9000 Kg 20000 lbs
3500 Kg / 7700 lbs
4000 Kg / 8800 lbs
4400 Kg / 9700 lbs
5400 Kg / 11900 lbs
600 mm – 24 in
45.8
13.9
31.2
9.5
6.6
2.0
ft
m
53014932
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h

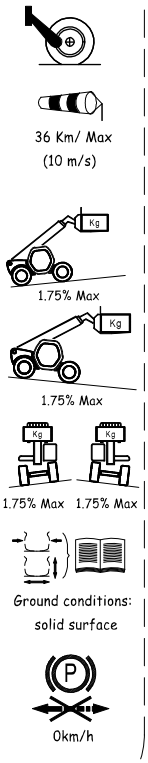

MANITOU
MHT 1490
FORKS TFF CN +/- 10°
Pos. AI
0.3m Max
9000 Kg
MAX
12 Km/h Max (3.33 m/s)
Standard used AS 1418–19
53014933
36 km/ Max
(10 m/s)
15% Max
10% Max
8.75% Max
8.75% Max
Ground conditions:
solid surface

MANITOU

MHT 1490

POS+DL L2500 L.C. 600mm/24in | Pos. AN



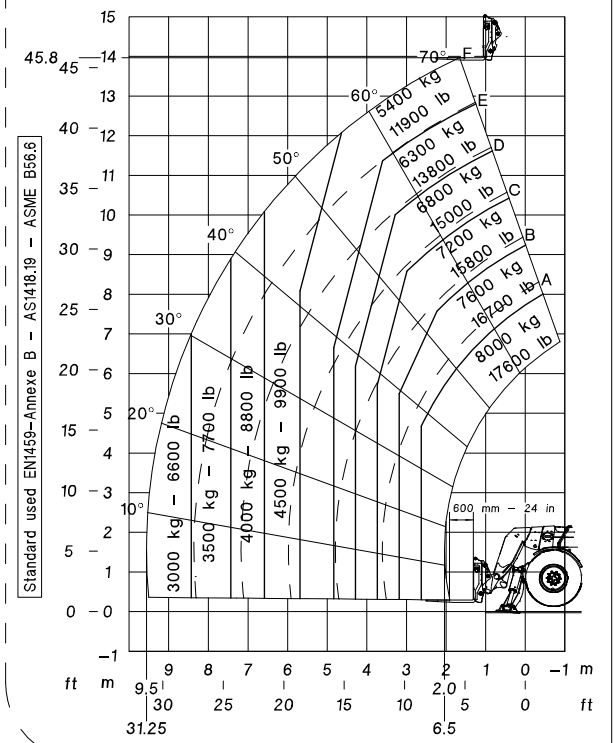


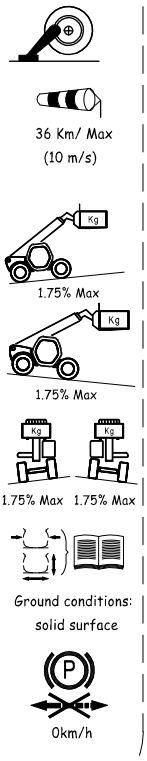
53020628

MANITOU

MHT 1490

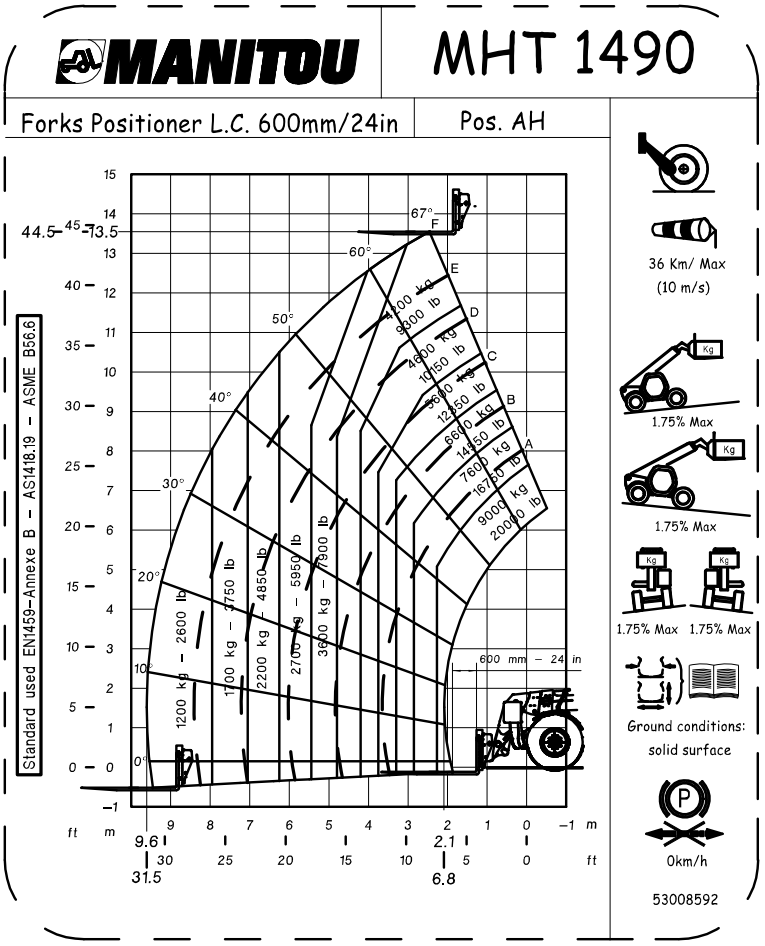
POS+DL L2500 L.C. 600mm/24in | Pos. AN

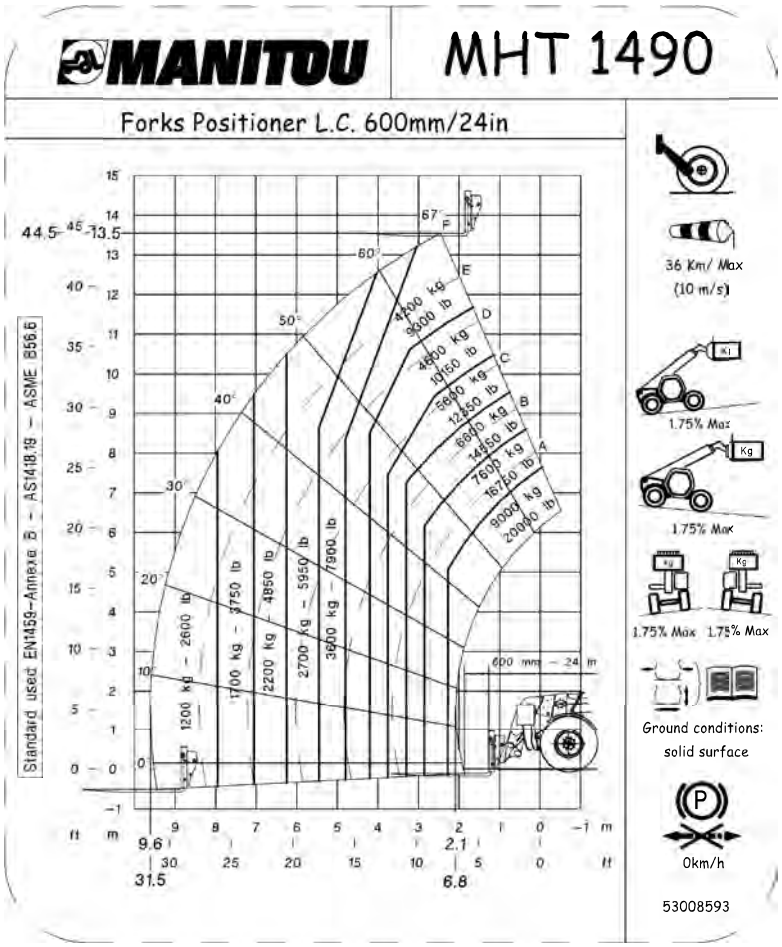




53020631

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

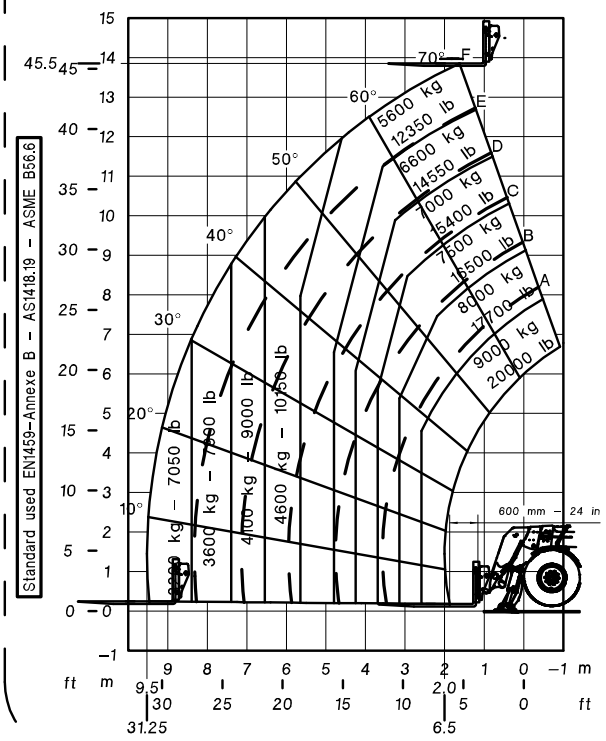

MANITOU
MHT 1490
Forks Positioner L.C. 600mm/24in
Pos. AH
Standard used EN1459-Annexe B - AS1418.19 - ASME B56.6
44.5
13.5
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
4200 kg 9300 lb
4800 kg 10550 lb
5600 kg 12350 lb
6600 kg 14550 lb
7600 kg 16750 lb
9000 kg 20000 lb
1200 kg - 2600 lb
1700 kg - 3750 lb
2200 kg - 4850 lb
2700 kg - 5950 lb
3600 kg - 7900 lb
600 mm - 24 in
ft
m
9.6
31.5
2.1
6.8
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
53008592


MANITOU
MHT 1490
Forks Positioner L.C. 600mm/24in
Standard used EN1459-Annexe B - AS1418.19 - ASME B56.6
44.5
13.5
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
4200 kg 9300 lb
4800 kg 10550 lb
5600 kg 12350 lb
6600 kg 14550 lb
7600 kg 16750 lb
9000 kg 20000 lb
1200 kg - 2600 lb
1700 kg - 3750 lb
2200 kg - 4850 lb
2700 kg - 5950 lb
3600 kg - 7900 lb
600 mm - 24 in
ft
m
9.6
31.5
2.1
6.8
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
53008593

MANITOU

MHT 1490

Forks Positioner L.C. 600mm/24in | Pos. AH



36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

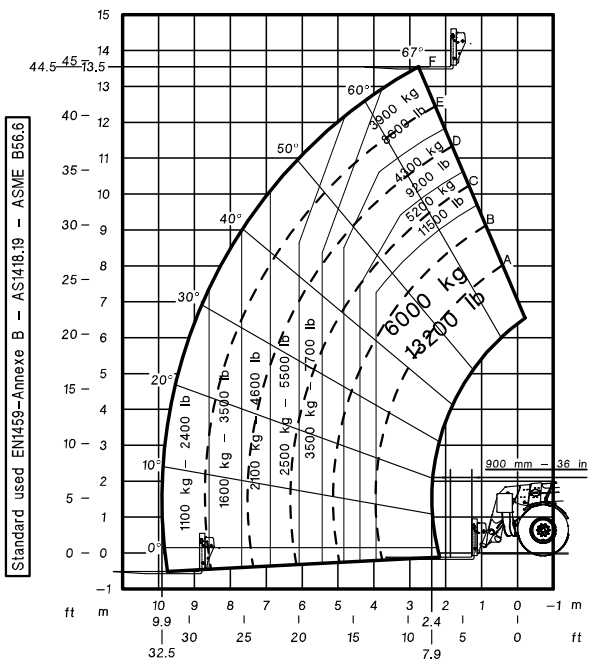
0km/h

53008594

MANITOU

MHT 1490

Forks Positioner L.C. 900mm/36in | Pos. AJ



36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

0km/h

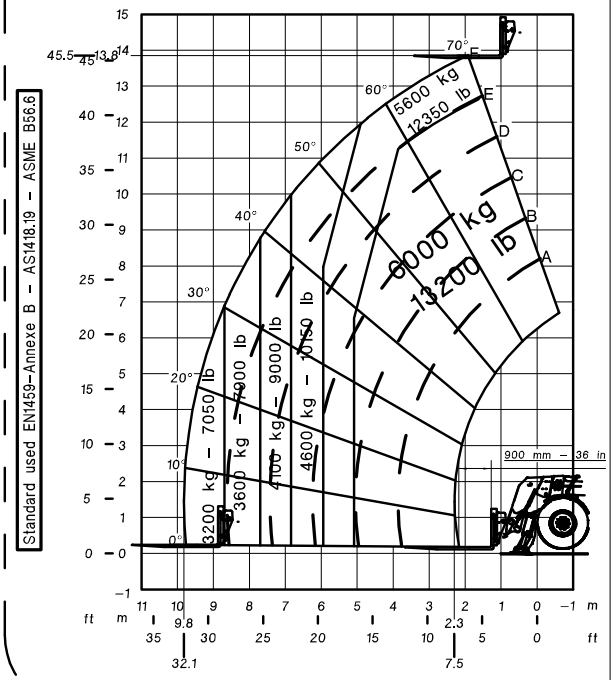
53008596

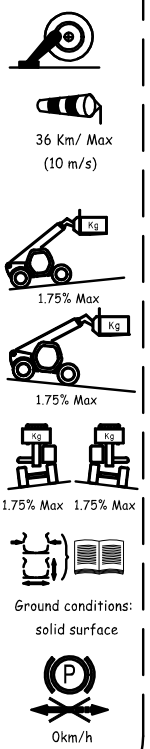
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU

MHT 1490

Forks Positioner L.C. 900mm/36in | Pos. AJ



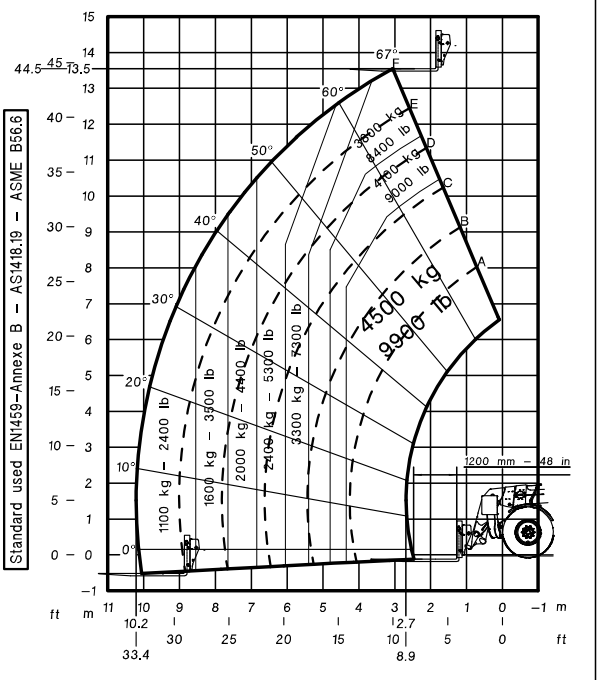


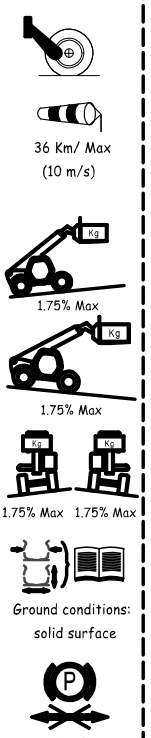
53008598

MANITOU

MHT 1490

Forks Positioner L.C. 1200mm/48in | Pos. AL



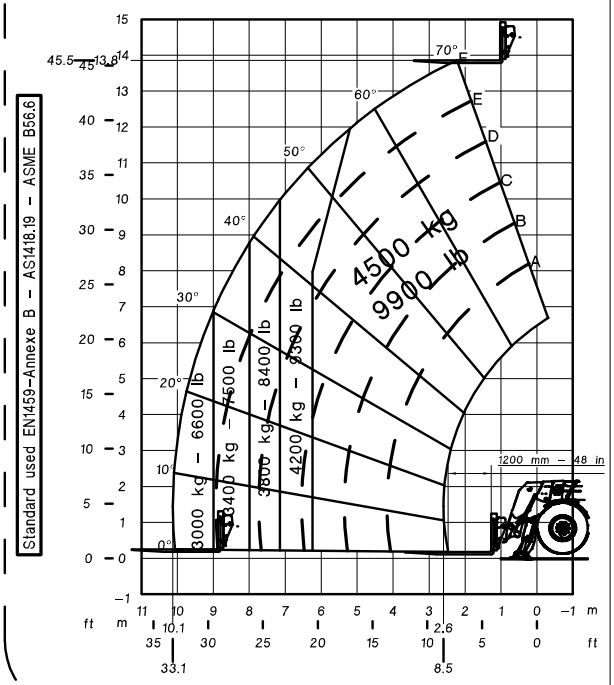


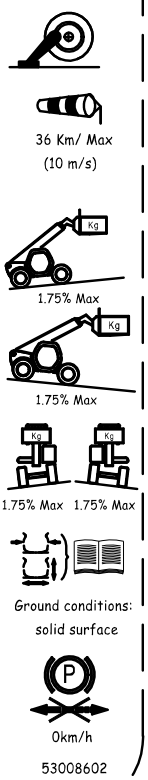
53008600

MANITOU

MHT 1490

Forks Positioner L.C. 1200mm/48in | Pos. AL

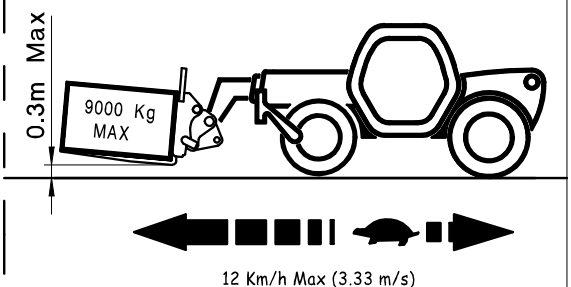


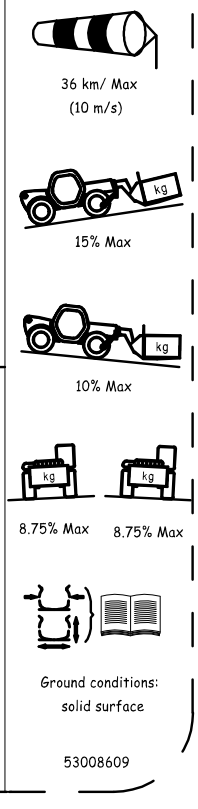


MANITOU

MHT 1490

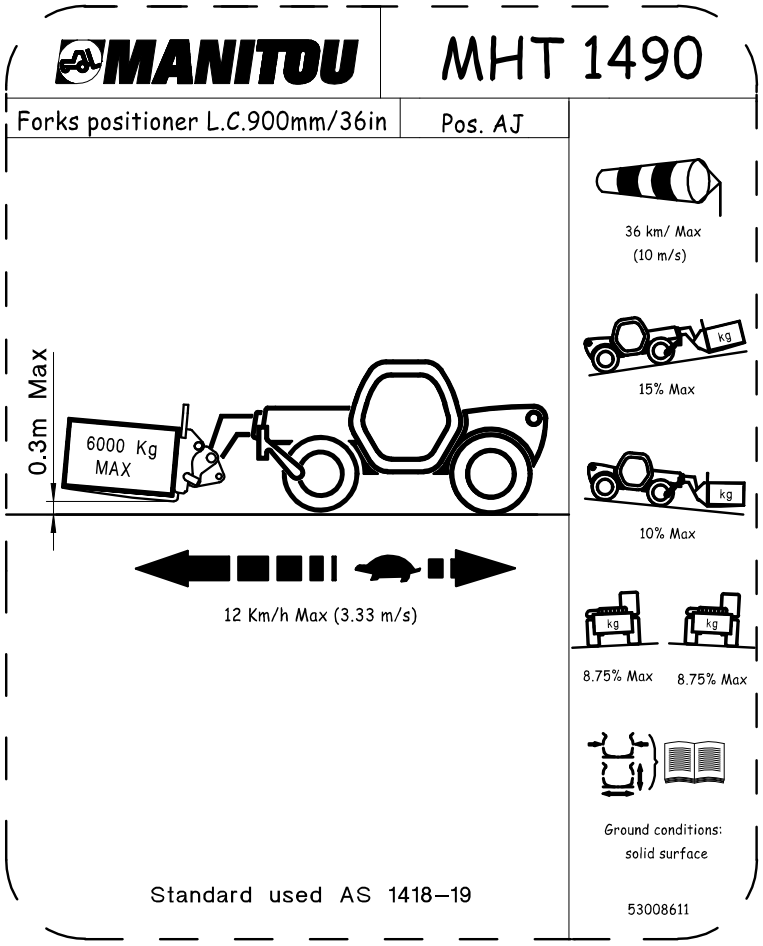
Forks positioner L.C.600mm/24in | Pos. AH

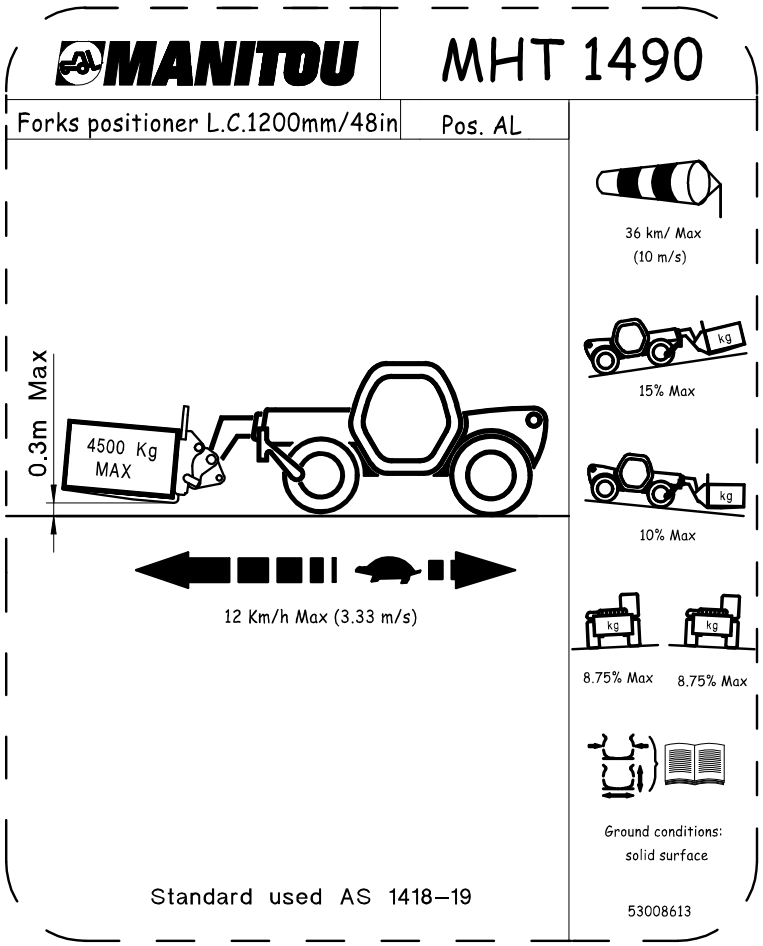




Standard used AS 1418–19

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

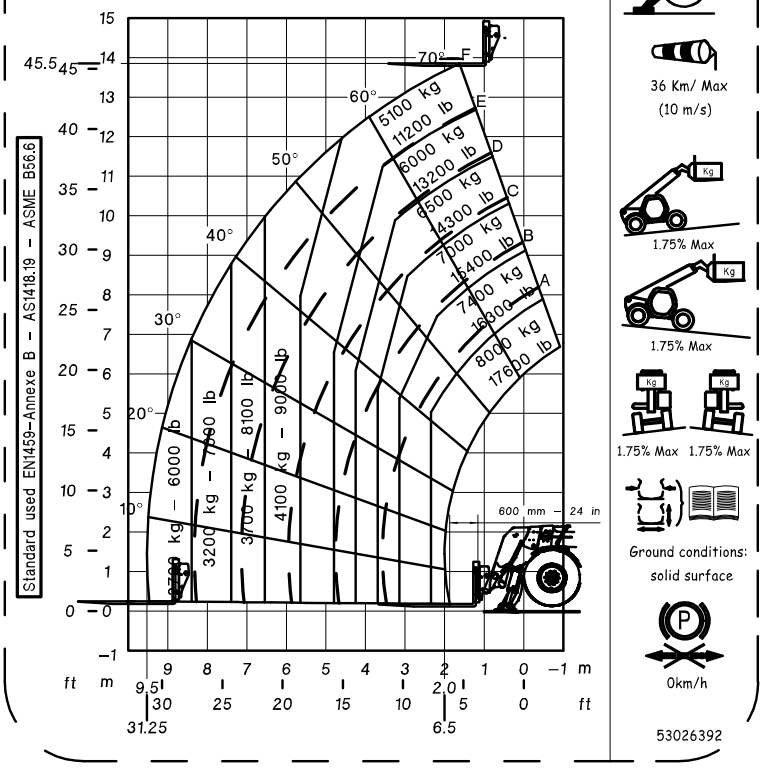

MANITOU
MHT 1490
Forks positioner L.C.900mm/36in
Pos. AJ
36 km/ Max
(10 m/s)
15% Max
10% Max
8.75% Max
8.75% Max
0.3m Max
6000 Kg
MAX
12 Km/h Max (3.33 m/s)
Ground conditions:
solid surface
Standard used AS 1418–19
53008611


MANITOU
MHT 1490
Forks positioner L.C.1200mm/48in
Pos. AL
36 km/ Max
(10 m/s)
15% Max
10% Max
8.75% Max
8.75% Max
0.3m Max
4500 Kg
MAX
12 Km/h Max (3.33 m/s)
Ground conditions:
solid surface
Standard used AS 1418–19
53008613

MANITOU

MHT 1490

Forks Positioner+DL L.C. 600mm/24in | Pos. AH




36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

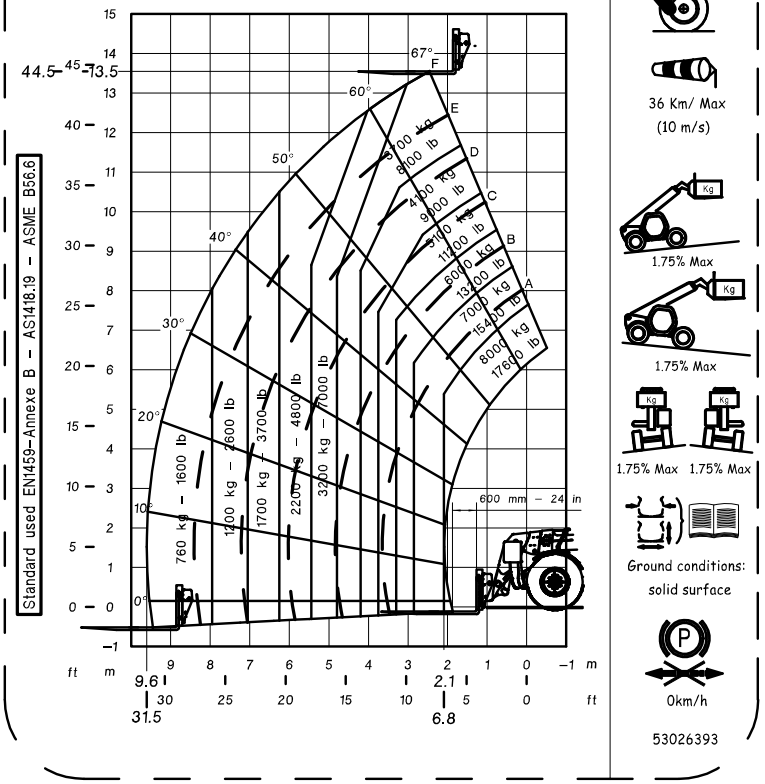
0km/h

53026392

MANITOU

MHT 1490

Forks Positioner+DL L.C. 600mm/24in | Pos. AH




36 Km/ Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

0km/h

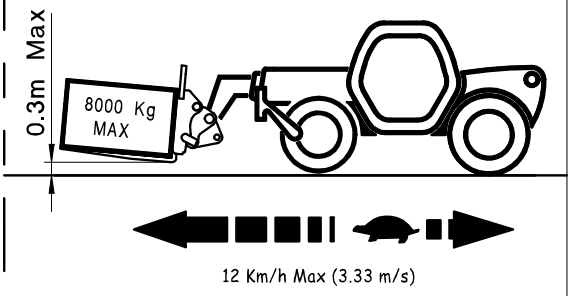
53026393

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU

MHT 1490

Forks Positioner+DL L.C. 600mm/24in | Pos. AH



12 Km/h Max (3.33 m/s)



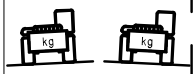
36 km/ Max
(10 m/s)



15% Max



10% Max



8.75% Max 8.75% Max



Ground conditions:
solid surface

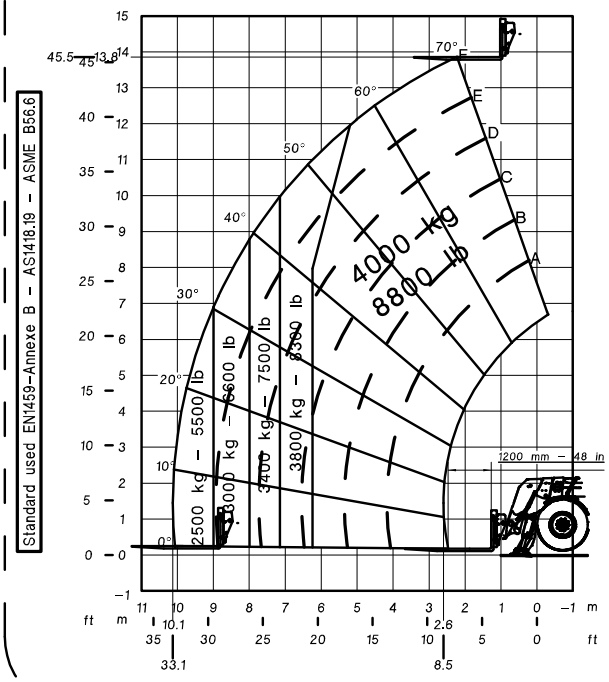
Standard used AS 1418–19

53026394

MANITOU

MHT 1490

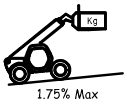
Forks Positioner+DL L.C. 1200mm/48in | Pos. AL



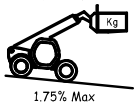




36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



Ground conditions:
solid surface



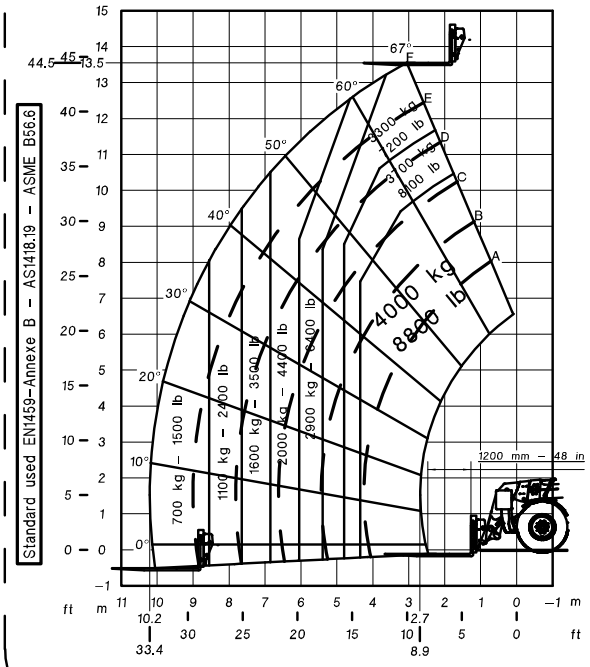
0km/h

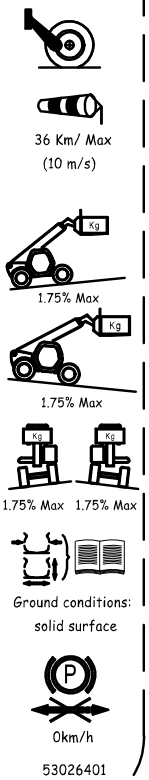
53026396

MANITOU

MHT 1490

Forks Positioner+DL L.C. 1200mm/48in Pos. AL

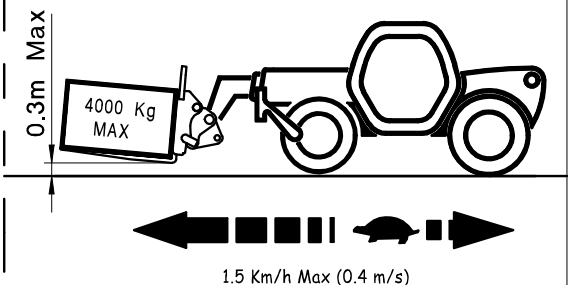




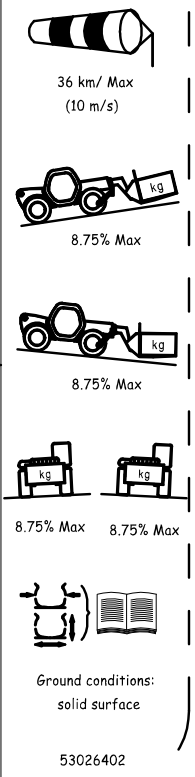
MANITOU

MHT 1490

Forks Positioner+DL L.C.1200mm/48in Pos. AL



Standard used AS 1418–19

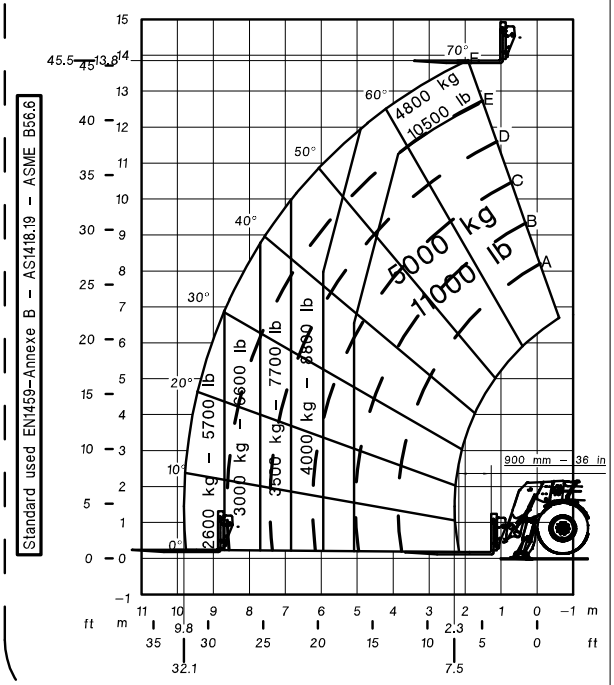


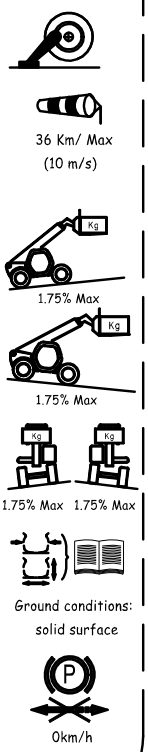
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU

MHT 1490

Forks Positioner+DL L.C. 900mm/36in | Pos. AJ



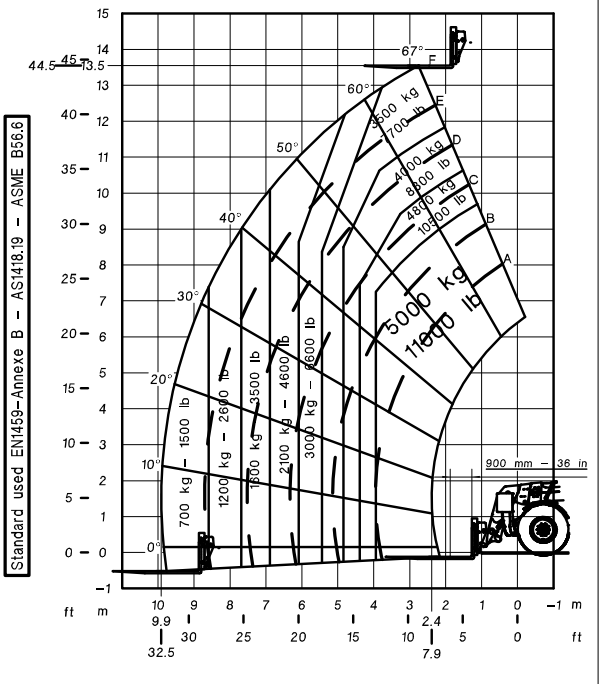


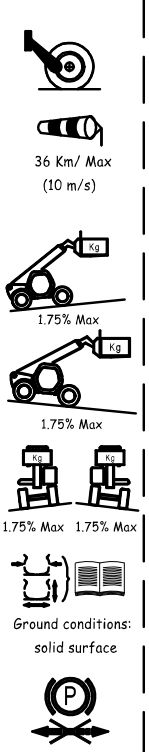
53026403

MANITOU

MHT 1490

Forks Positioner+DL L.C. 900mm/36in | Pos. AJ



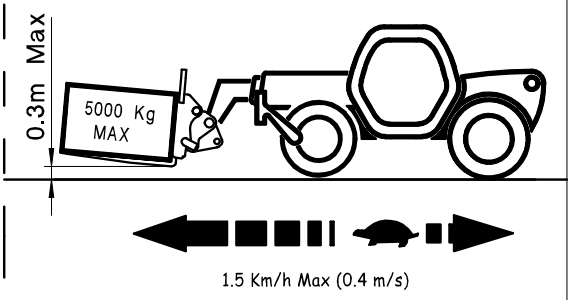


53026404

MANITOU

MHT 1490

Forks Positioner+DL L.C.900mm/36in | Pos. AJ



1.5 Km/h Max (0.4 m/s)



36 km/ Max
(10 m/s)



8.75% Max



8.75% Max



8.75% Max



8.75% Max



Ground conditions:
solid surface

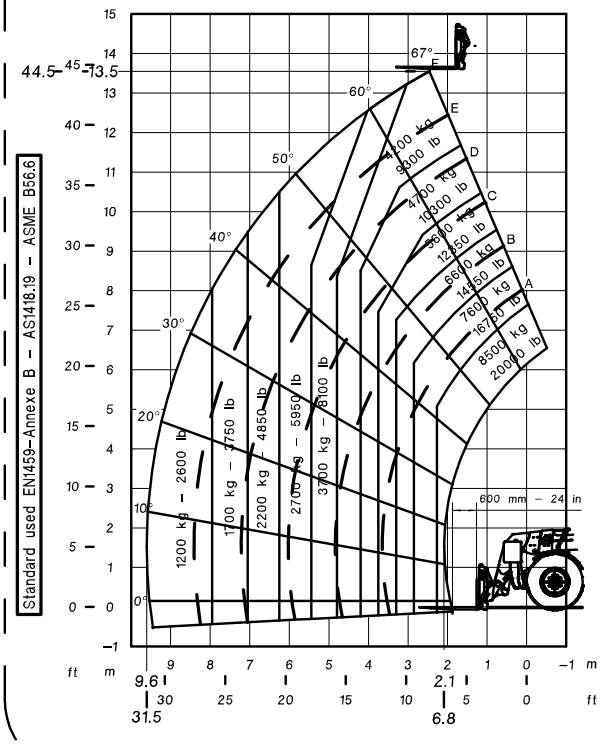
Standard used AS 1418–19

53026405

MANITOU

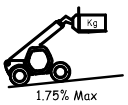
MHT 1490

Forks Positioner L.C. 600mm/24in | Pos. AF

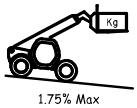




36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max



1.75% Max



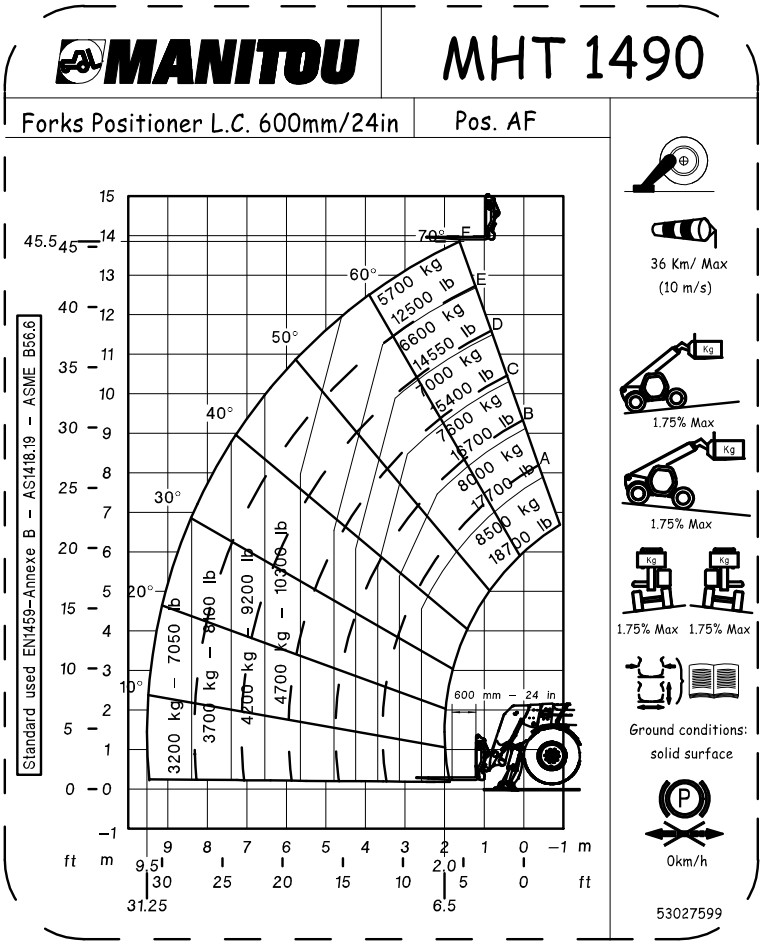
Ground conditions:
solid surface

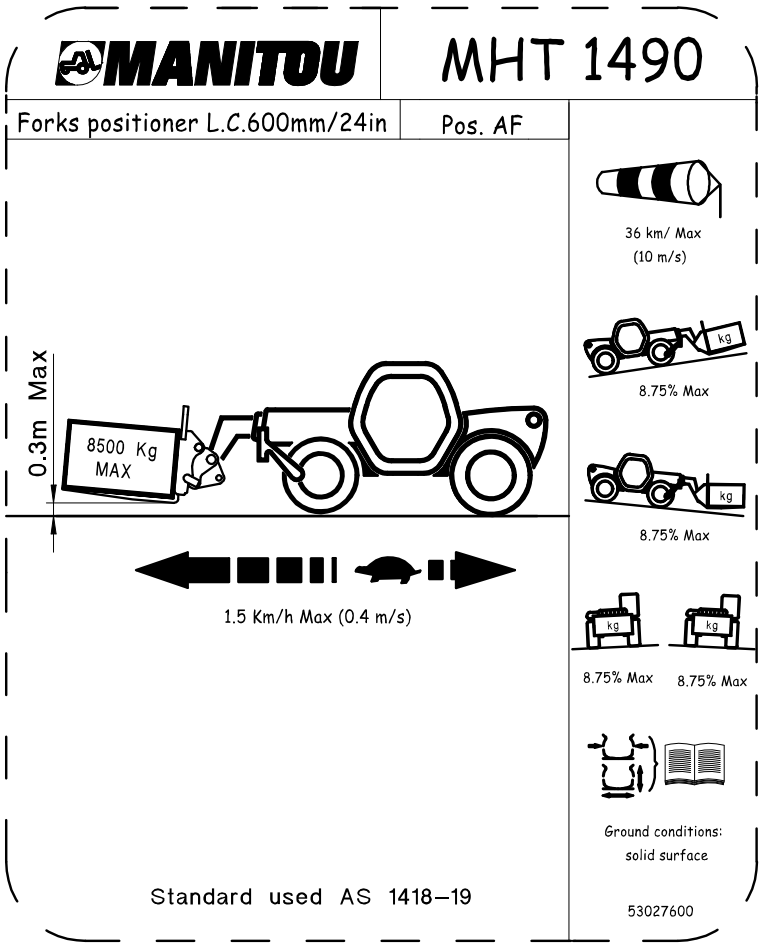


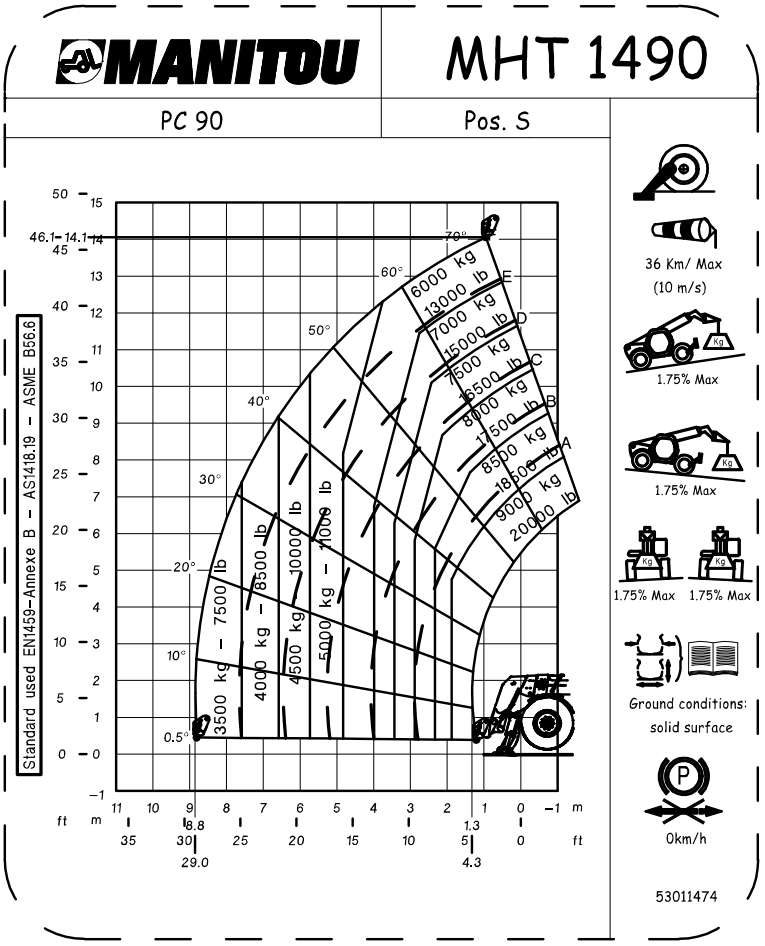
0km/h

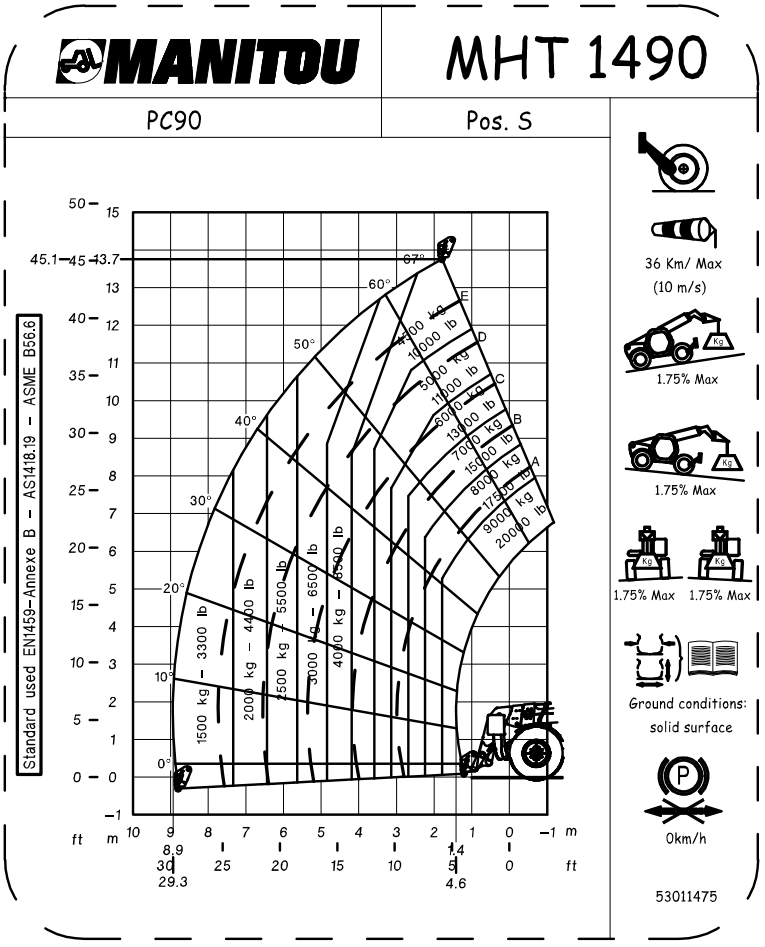
53027598

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

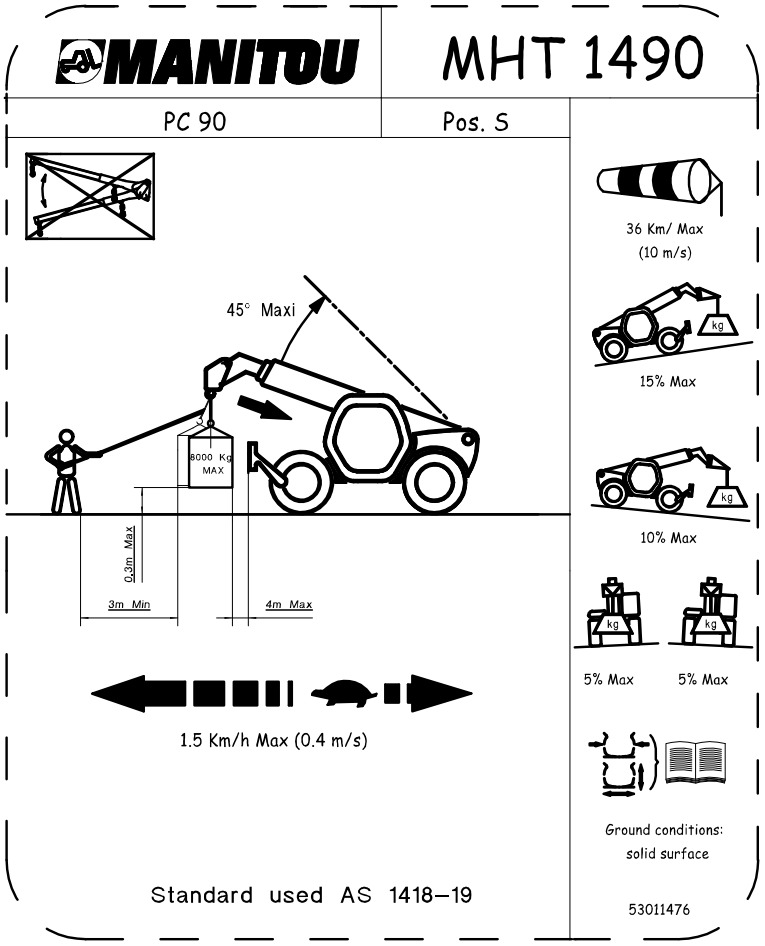

MANITOU
MHT 1490
Forks Positioner L.C. 600mm/24in
Pos. AF
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
79°
60°
50°
40°
30°
20°
10°
5700 kg 12500 lb E
6600 kg 14550 lb D
7000 kg 15400 lb C
7600 kg 15700 lb B
8000 kg 17700 lb A
8500 kg 18700 lb
3200 kg – 7050 lb
3700 kg – 8160 lb
4200 kg – 9200 lb
4700 kg – 10300 lb
600 mm – 24 in
ft m
31.25 9.5 30 25 20 15 10 2.0 5 0 6.5 ft
9 8 7 6 5 4 3 2 1 0 –1 m
45.5 45
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions:
solid surface
0km/h
53027599

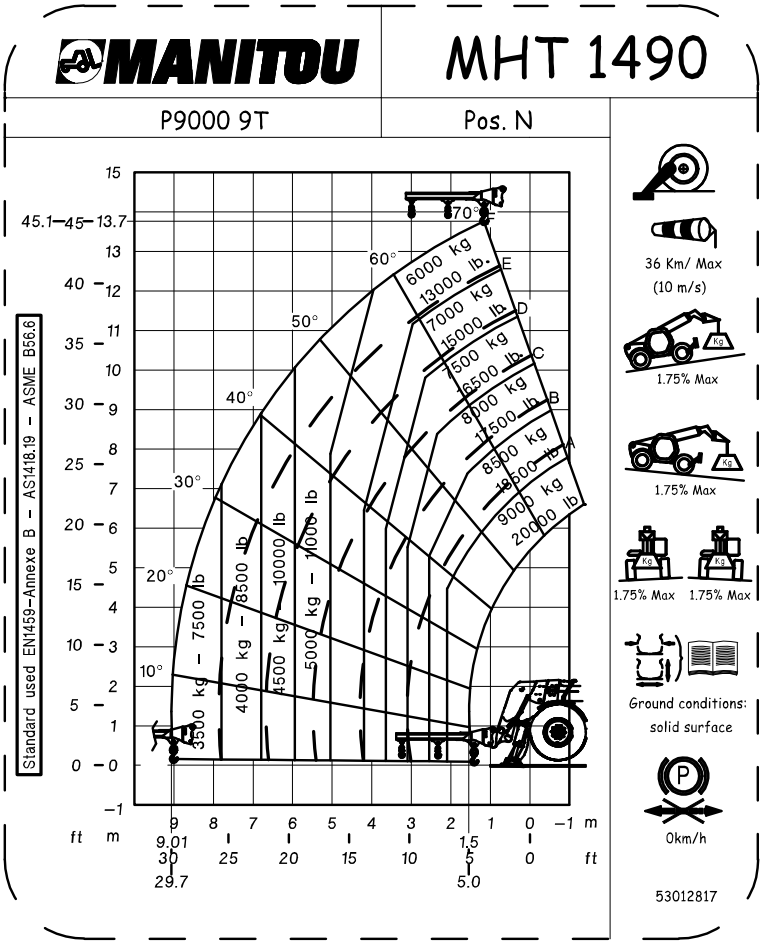

MANITOU
MHT 1490
Forks positioner L.C.600mm/24in
Pos. AF
0.3m Max
8500 Kg
MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53027600





648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 1490
PC 90
Pos. S
45° Maxi
8000 Kg MAX
0.3m Max
3m Min
4m Max
1.5 Km/h Max (0.4 m/s)
36 Km/ Max (10 m/s)
15% Max
10% Max
5% Max
5% Max
Ground conditions: solid surface
Standard used AS 1418–19
53011476

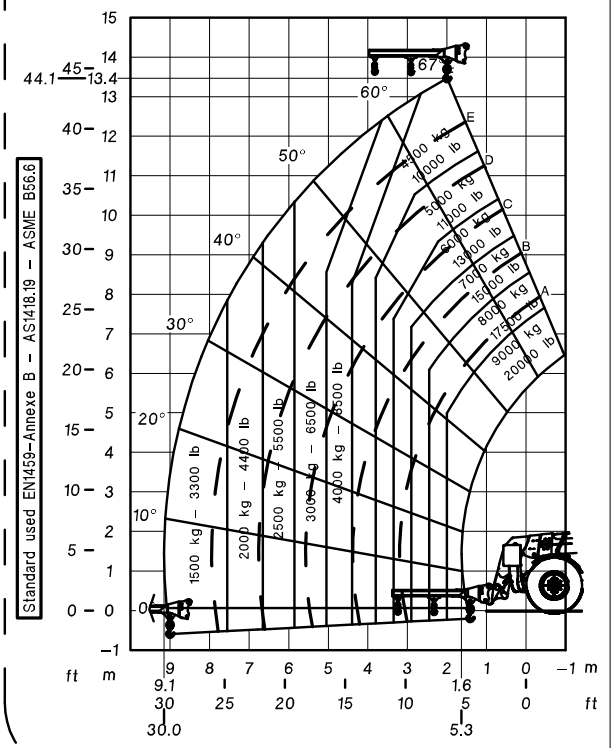

MANITOU
MHT 1490
P9000 9T
Pos. N
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
45.1–45–13.7
70°
60°
50°
40°
30°
20°
10°
6000 kg 13000 lb. E
7000 kg 15000 lb. D
7500 kg 16500 lb. C
8000 kg 17500 lb. B
8500 kg 18500 lb. A
9000 kg 20000 lb
3500 kg – 7500 lb
4000 kg – 8500 lb
4500 kg – 10000 lb
5000 kg – 11000 lb
ft m
9.01 30 29.7
25 20 15 10 5 0
1.5 5.0
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
53012817

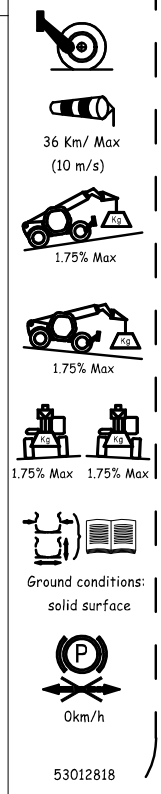
MANITOU

MHT 1490

P9000 9T

Pos. N



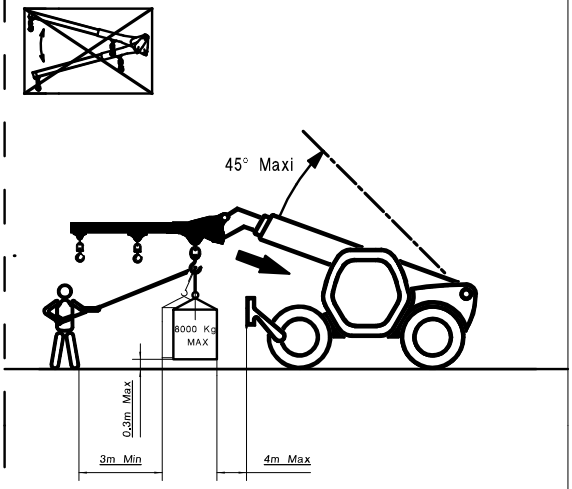


MANITOU

MHT 1490

P9000 8T

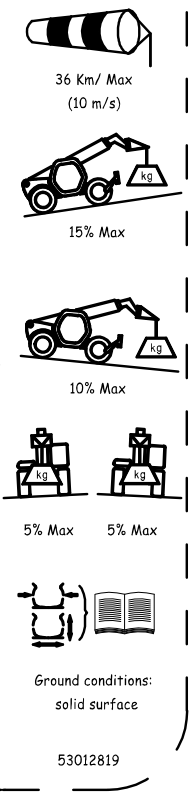
Pos. N



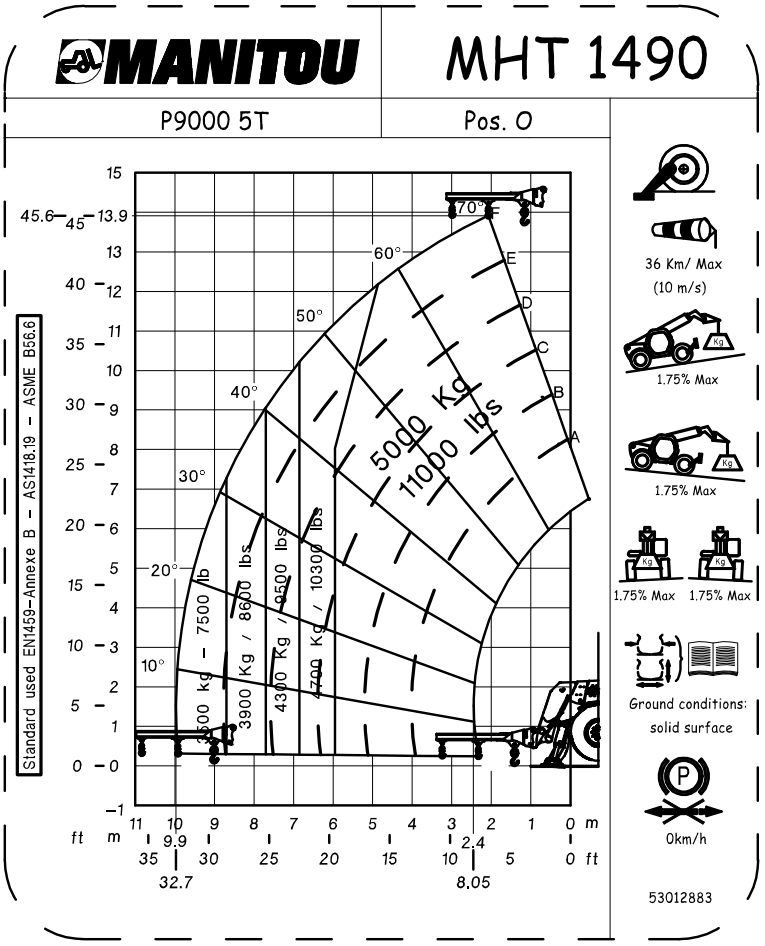


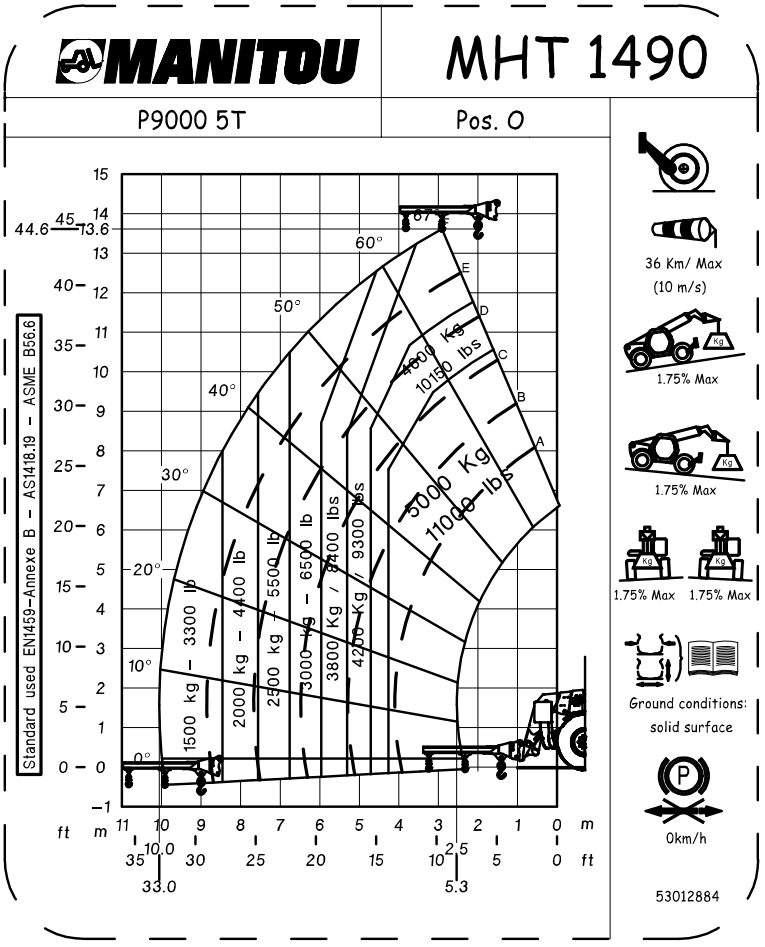
1.5 Km/h Max (0.4 m/s)

Standard used AS 1418–19



648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

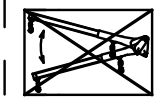

MANITOU
MHT 1490
P9000 5T
Pos. O
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
5000 Kg
11000 lbs
4700 Kg / 10300 lbs
4300 Kg / 9500 lbs
3900 Kg / 8600 lbs
3500 kg – 7500 lb
70°
60°
50°
40°
30°
20°
10°
0°
45.6
13.9
9.9
32.7
2.4
8.05
ft
m
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
53012883

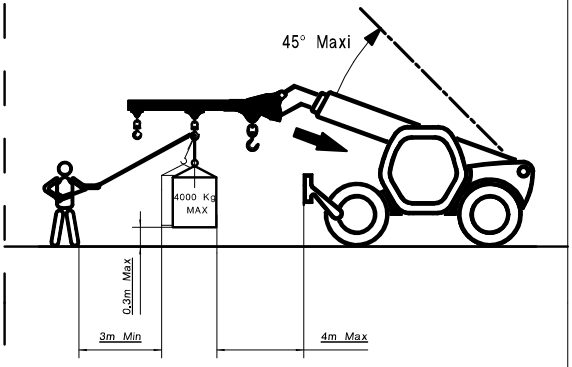

MANITOU
MHT 1490
P9000 5T
Pos. O
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
5000 Kg
11000 lbs
4500 Kg
10150 lbs
4200 Kg / 9300 lbs
3800 Kg / 8400 lbs
3000 kg – 6500 lb
2500 kg – 5500 lb
2000 kg – 4400 lb
1500 kg – 3300 lb
67°
60°
50°
40°
30°
20°
10°
0°
44.6
13.6
10.0
33.0
2.5
5.3
ft
m
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
53012884

MANITOU

MHT 1490

P9000 4T | Pos. O







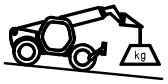
1.5 Km/h Max (0.4 m/s)



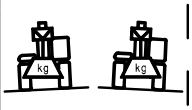
36 Km/ Max
(10 m/s)



15% Max



10% Max



5% Max 5% Max



Ground conditions:
solid surface

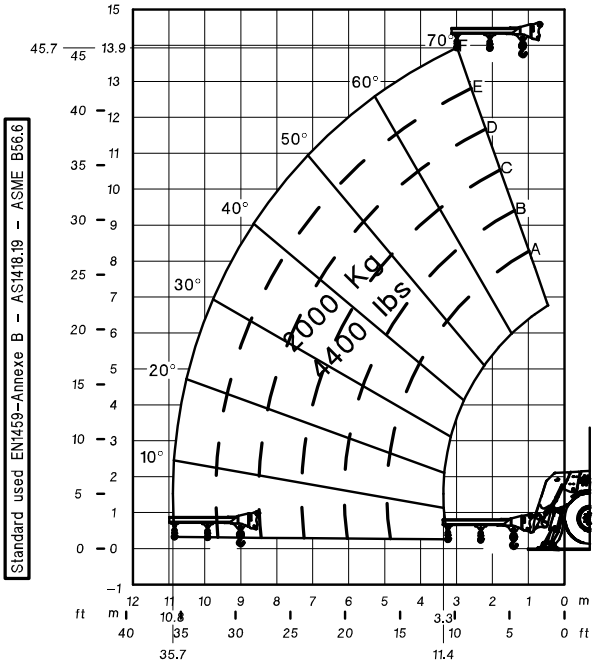
Standard used AS 1418–19

53012885

MANITOU

MHT 1490

P9000 2T | Pos. P







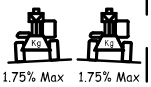
36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



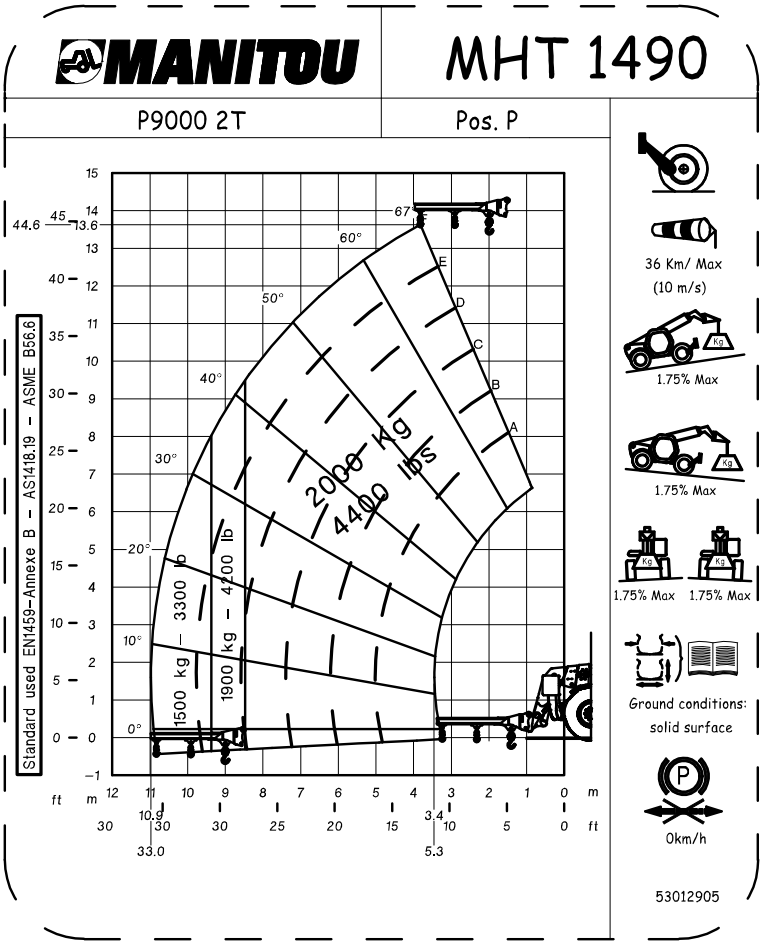
Ground conditions:
solid surface

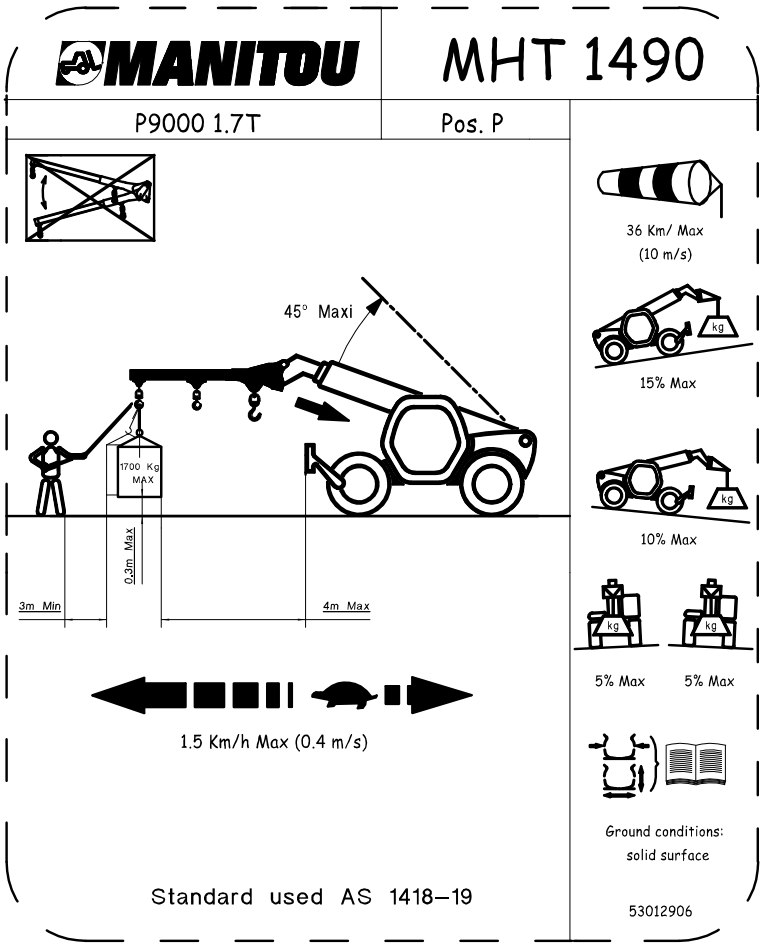


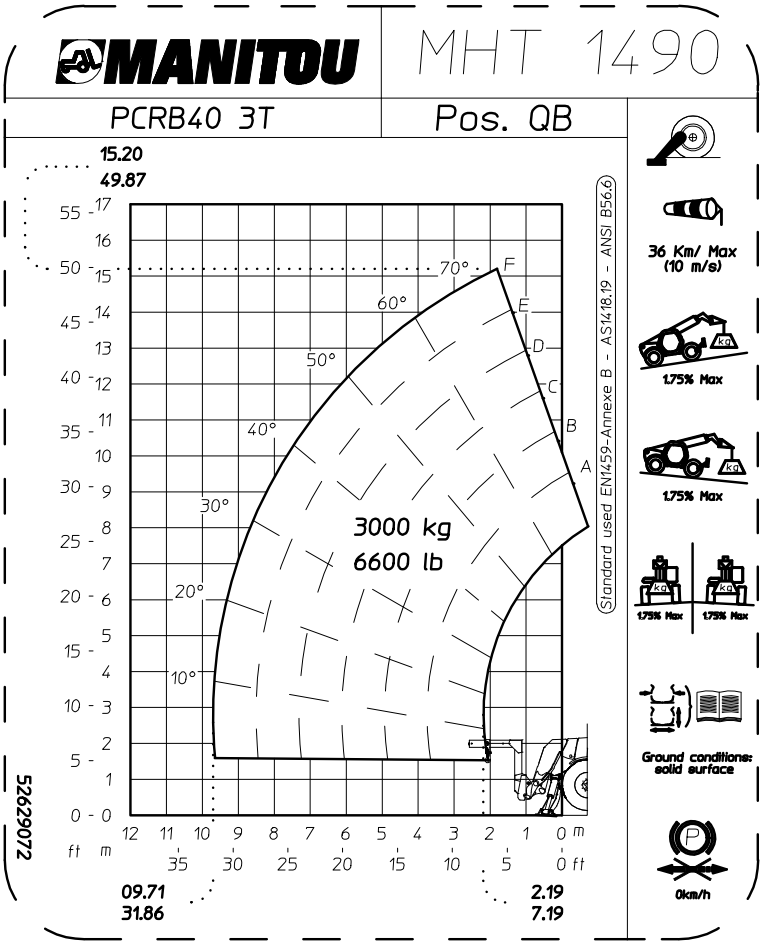
0km/h

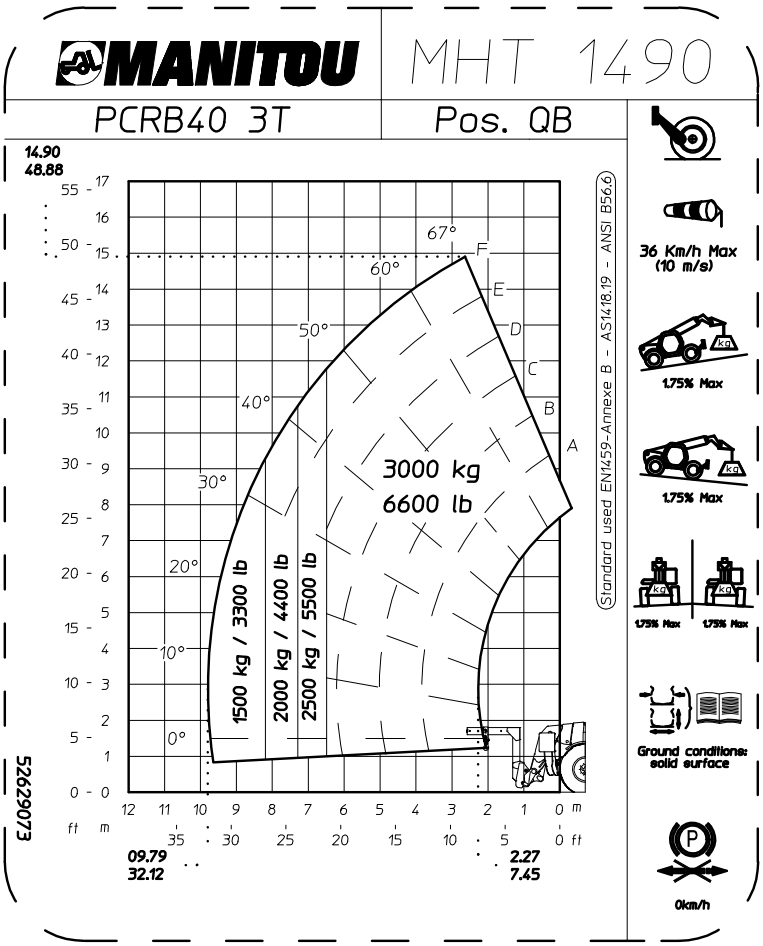
53012904

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

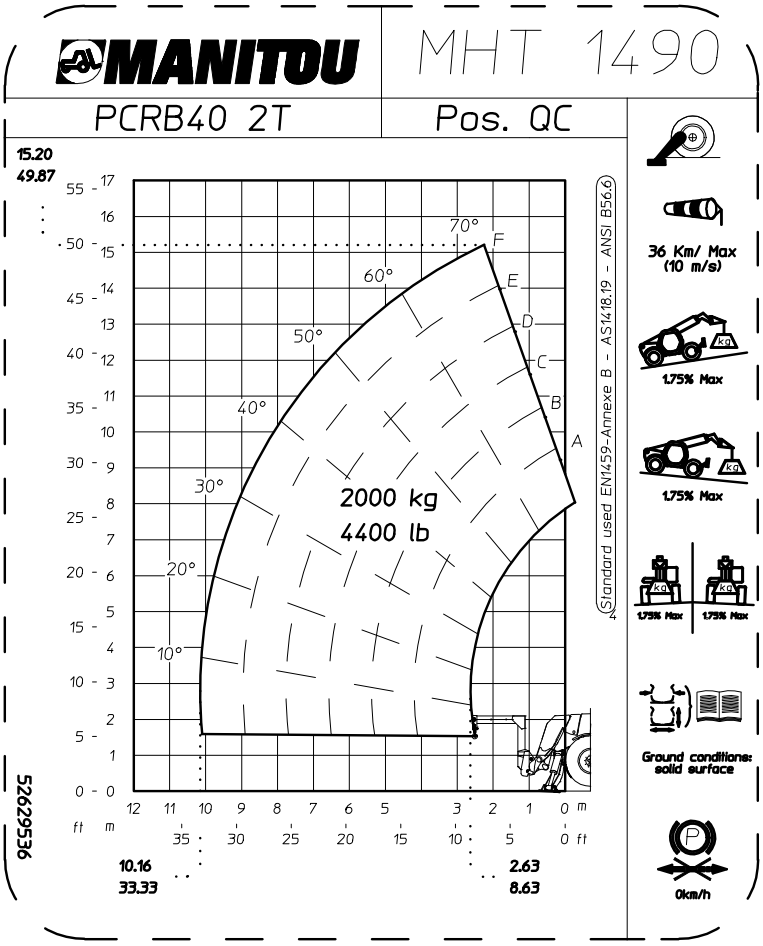

MANITOU
MHT 1490
P9000 2T
Pos. P
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
2000 kg
4400 lbs
1900 kg – 4200 lb
1500 kg – 3300 lb
67°
60°
50°
40°
30°
20°
10°
0°
A
B
C
D
E
44.6
45
13.6
10.9
33.0
5.3
3.4
ft
m
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
53012905

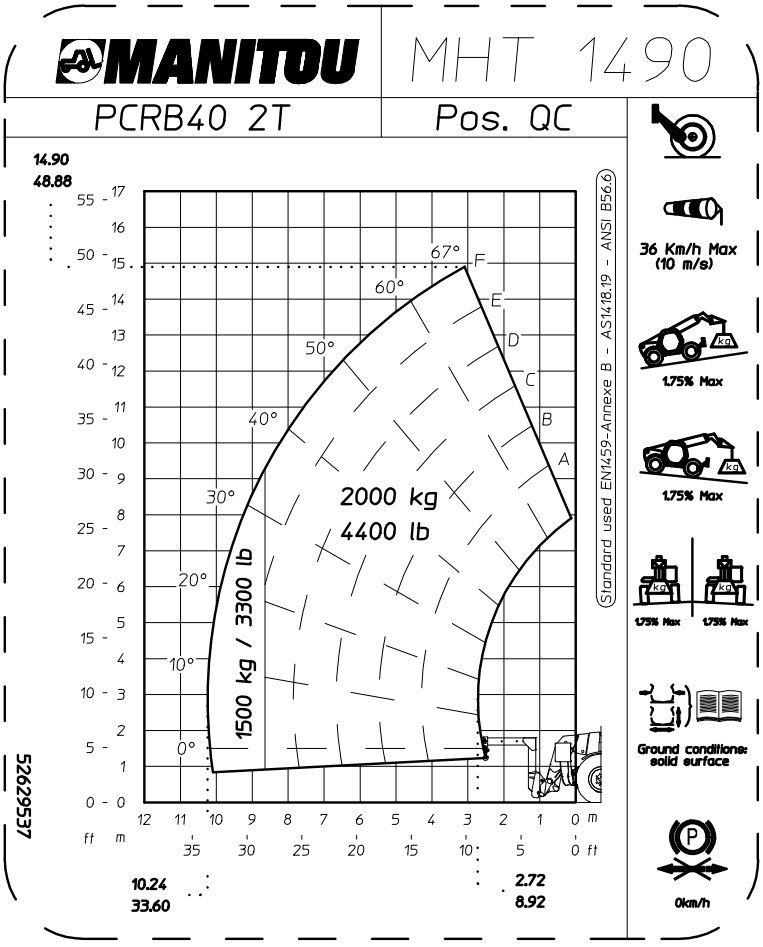

MANITOU
MHT 1490
P9000 1.7T
Pos. P
45° Maxi
1700 Kg
MAX
0.3m Max
3m Min
4m Max
1.5 Km/h Max (0.4 m/s)
36 Km/ Max
(10 m/s)
15% Max
10% Max
5% Max
5% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53012906



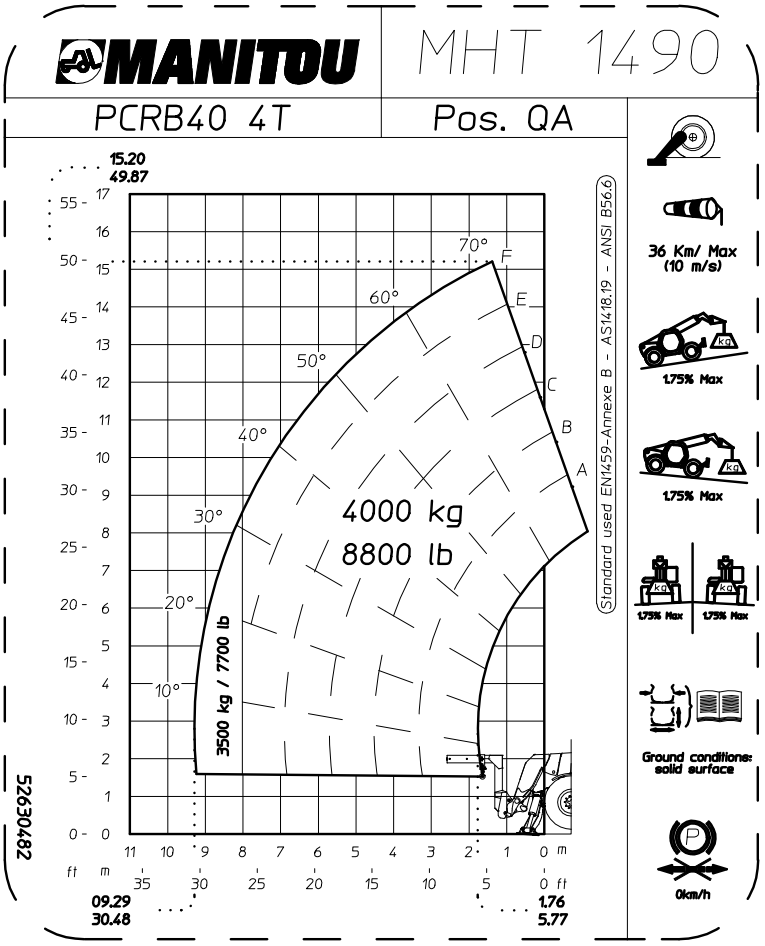


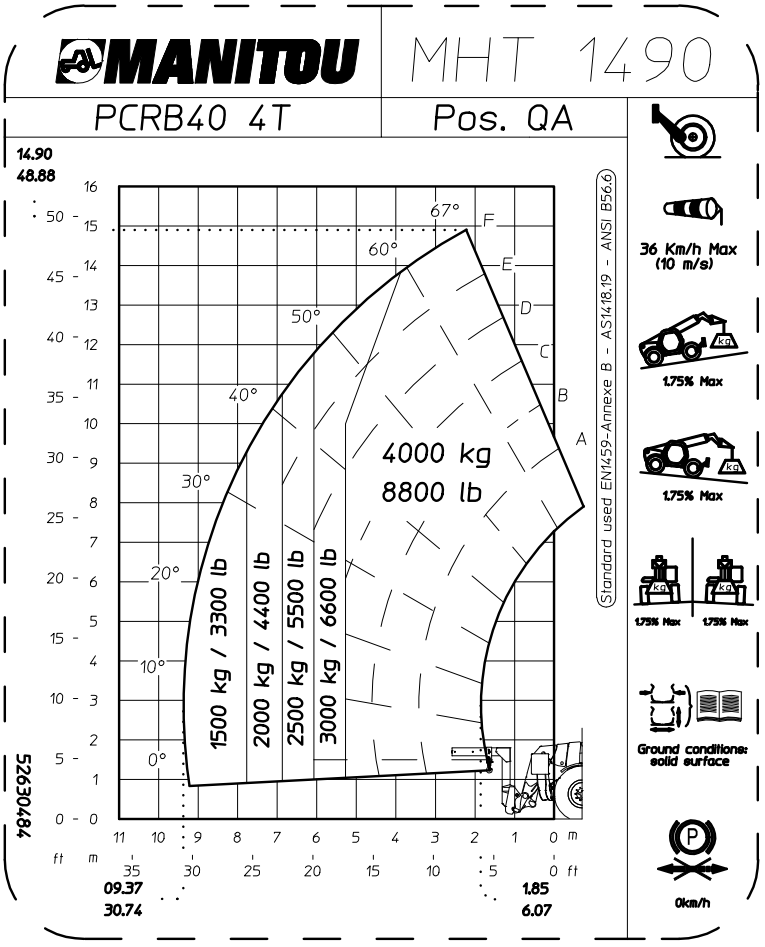
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1



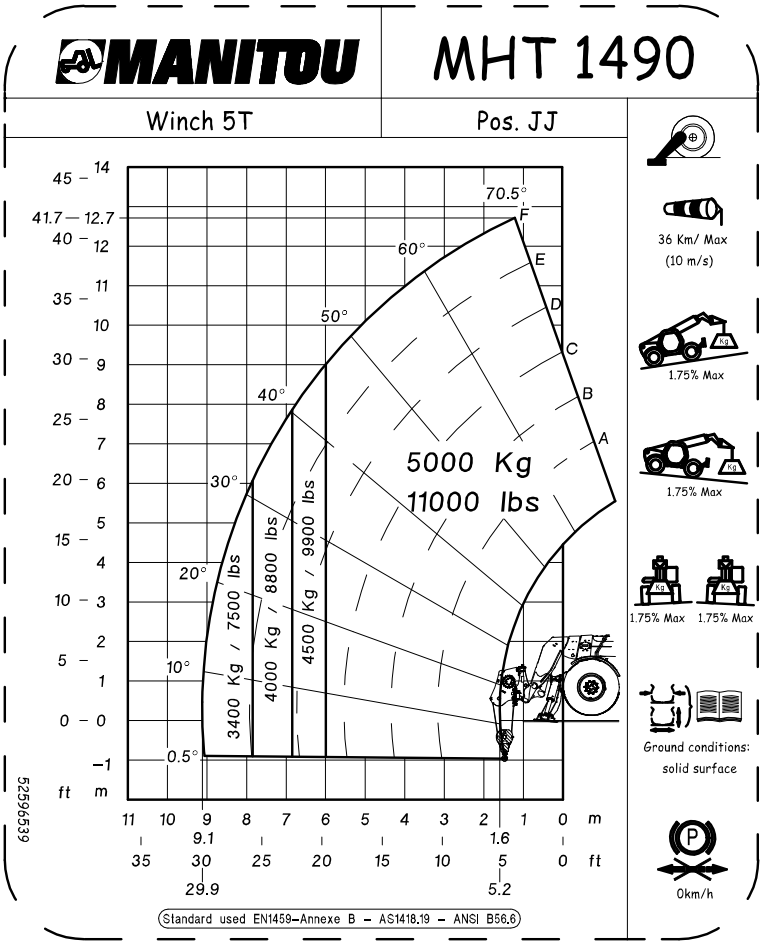


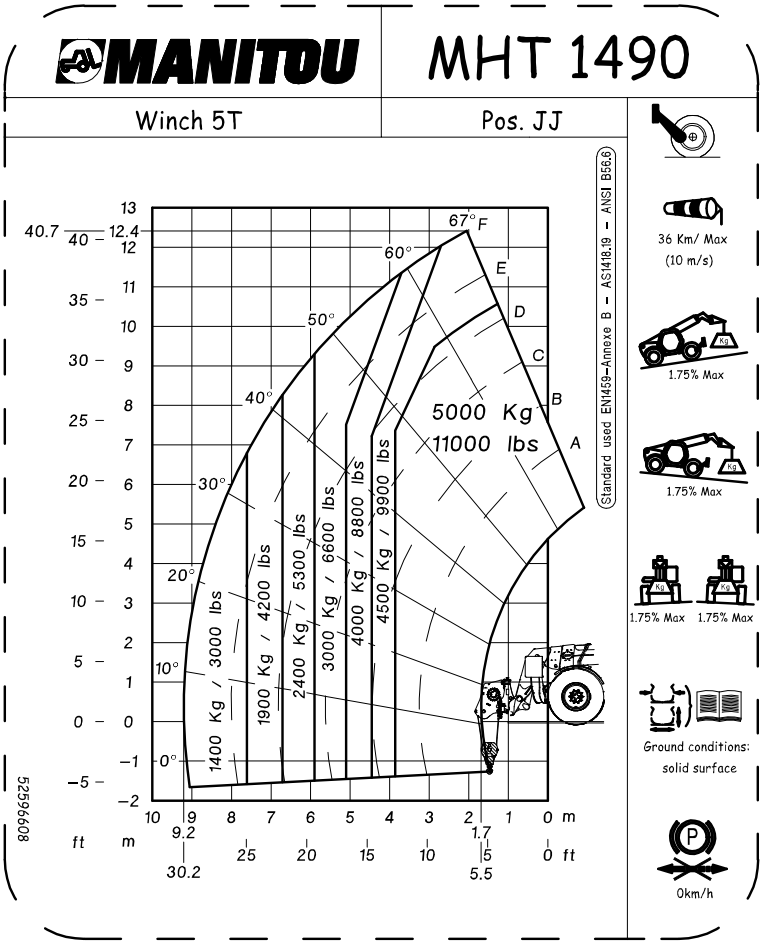
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

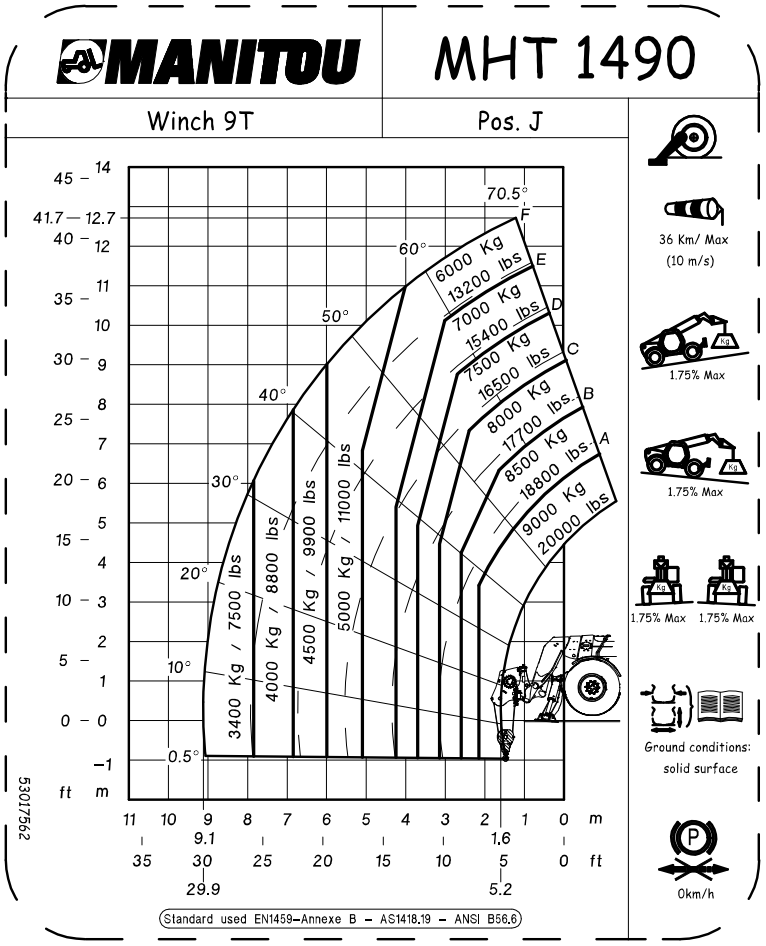


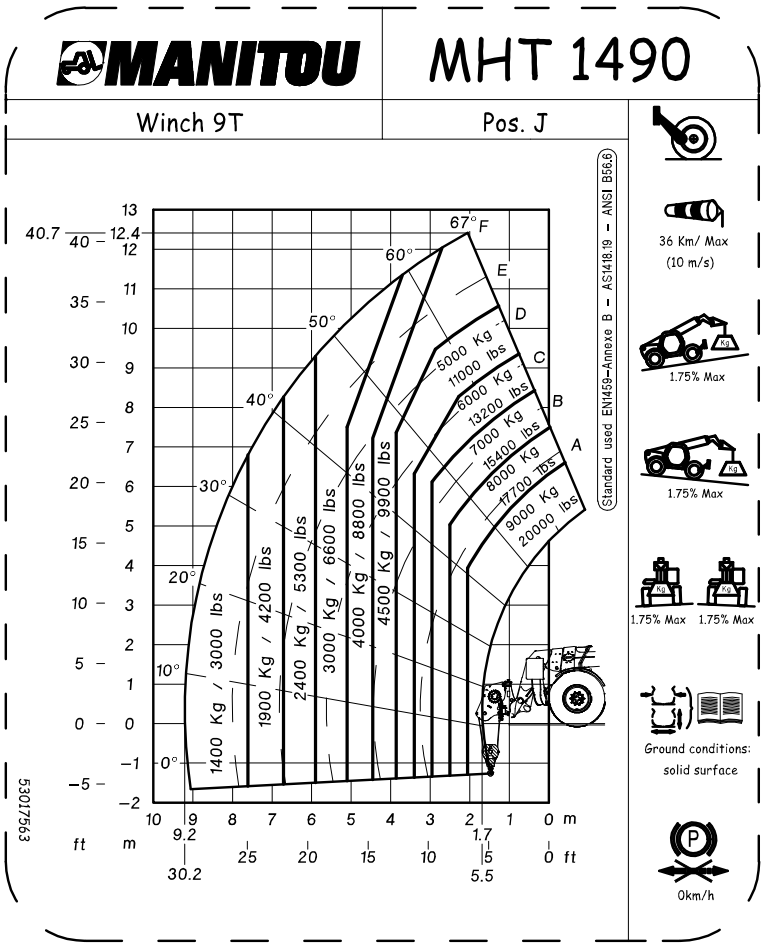


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

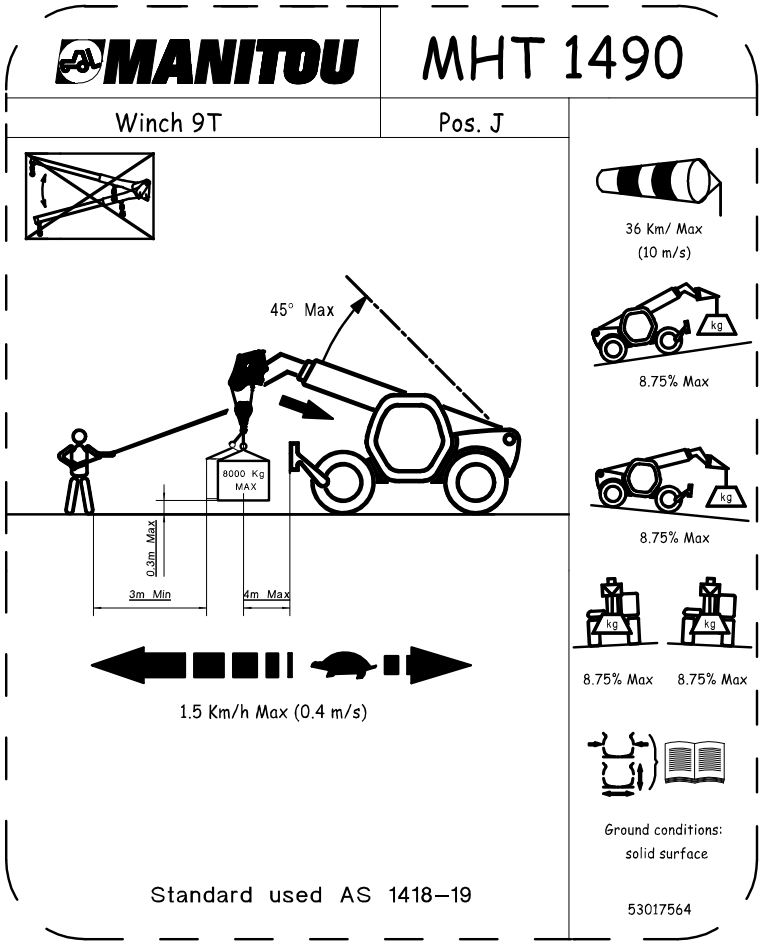

MANITOU
MHT 1490
Winch 5T
Pos. JJ
70.5°
60°
50°
40°
30°
20°
10°
0.5°
F
E
D
C
B
A
5000 Kg
11000 lbs
3400 Kg / 7500 lbs
4000 Kg / 8800 lbs
4500 Kg / 9900 lbs
45 41.7 40 35 30 25 20 15 10 5 0 ft
14 12.7 12 11 10 9 8 7 6 5 4 3 2 1 0 −1 m
11 10 9 8 7 6 5 4 3 2 1 0 m
35 30 25 20 15 10 5 0 ft
9.1
29.9
1.6
5.2
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
525966539
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h

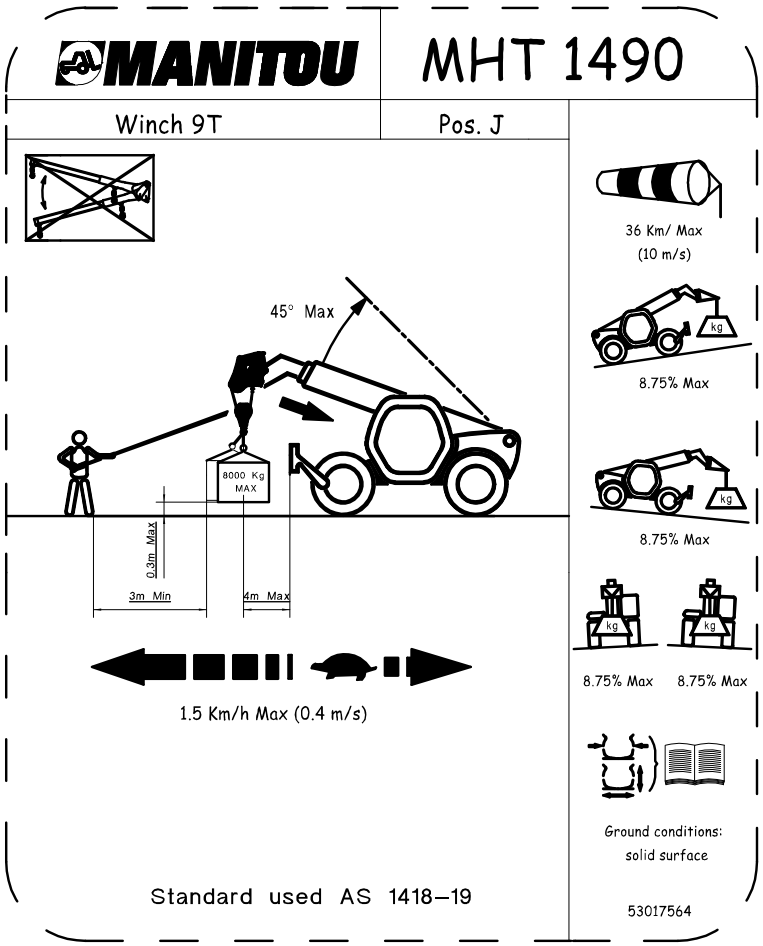

MANITOU
MHT 1490
Winch 5T
Pos. JJ
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
5000 Kg
11000 lbs
1400 Kg / 3000 lbs
1900 Kg / 4200 lbs
2400 Kg / 5300 lbs
3000 Kg / 6600 lbs
4000 Kg / 8800 lbs
4500 Kg / 9900 lbs
40.7 40 35 30 25 20 15 10 5 0 ft
13 12.4 12 11 10 9 8 7 6 5 4 3 2 1 0 −1 −2 −5 m
10 9 8 7 6 5 4 3 2 1 0 m
25 20 15 10 5 0 ft
9.2
30.2
1.7
5.5
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
525966808
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h



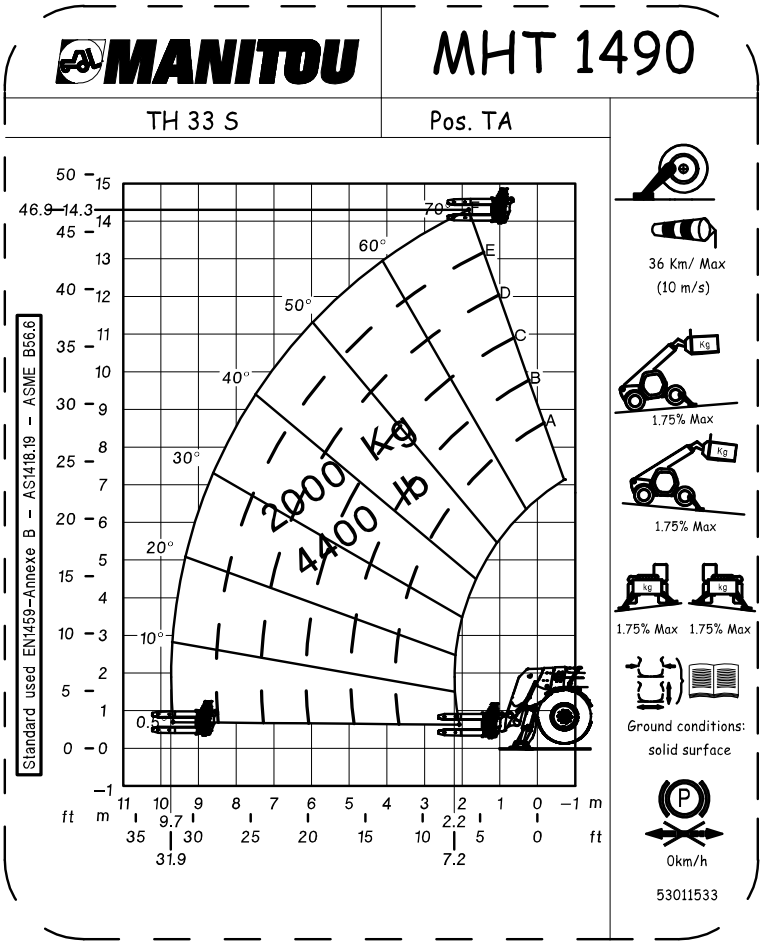


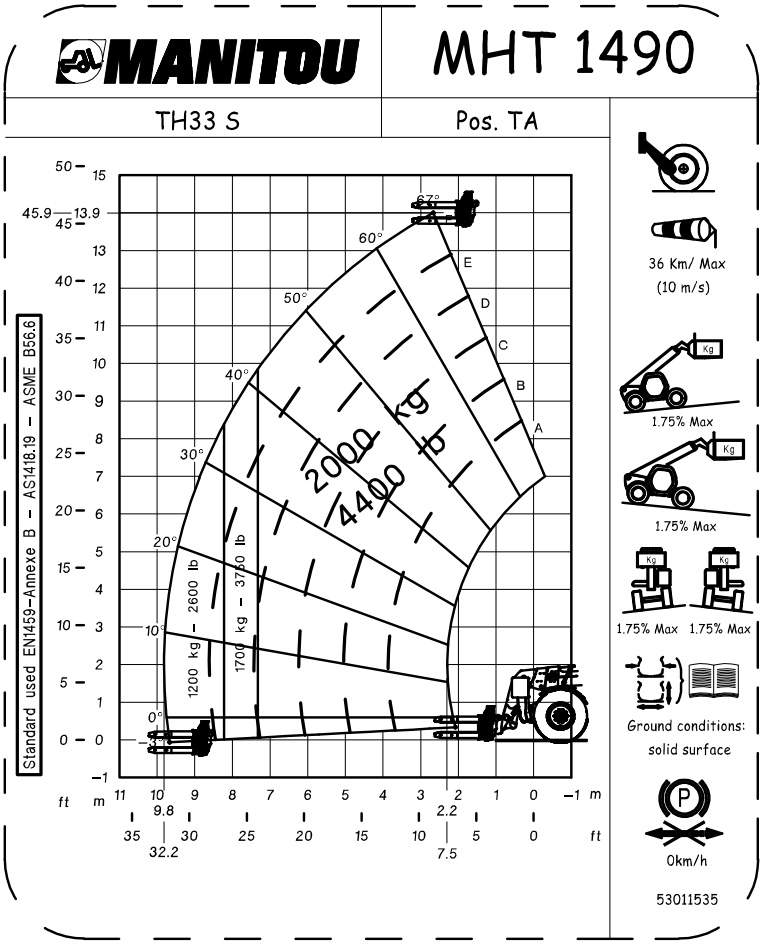
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1





648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1



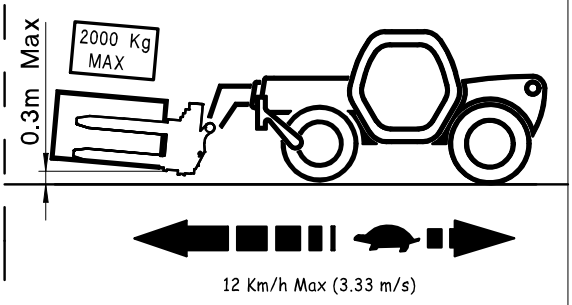


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU

MHT 1490

TH33 S | Pos. TA



12 Km/h Max (3.33 m/s)



36 km/ Max
(10 m/s)



15% Max



10% Max



8.75% Max 8.75% Max



Ground conditions:
solid surface

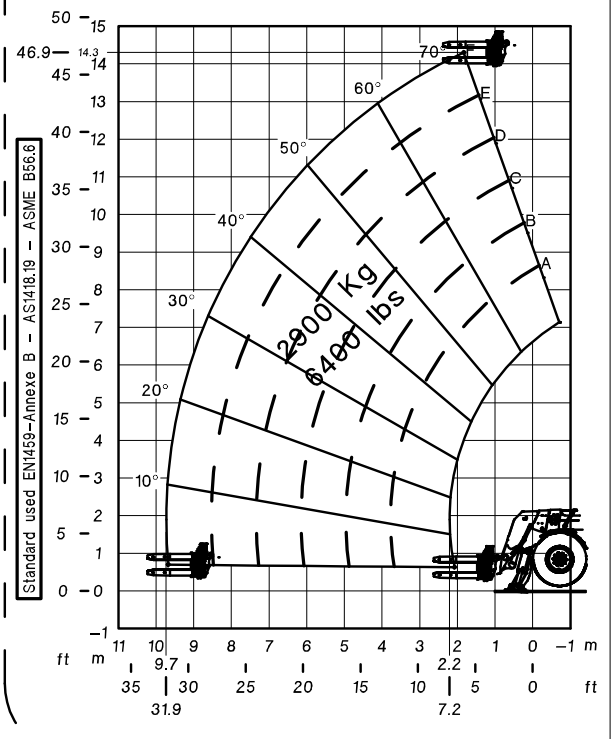
Standard used AS 1418–19

53011536

MANITOU

MHT 1490

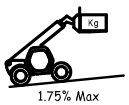
TH 35 S | Pos. TB



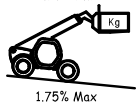




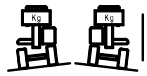
36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



Ground conditions:
solid surface



0km/h

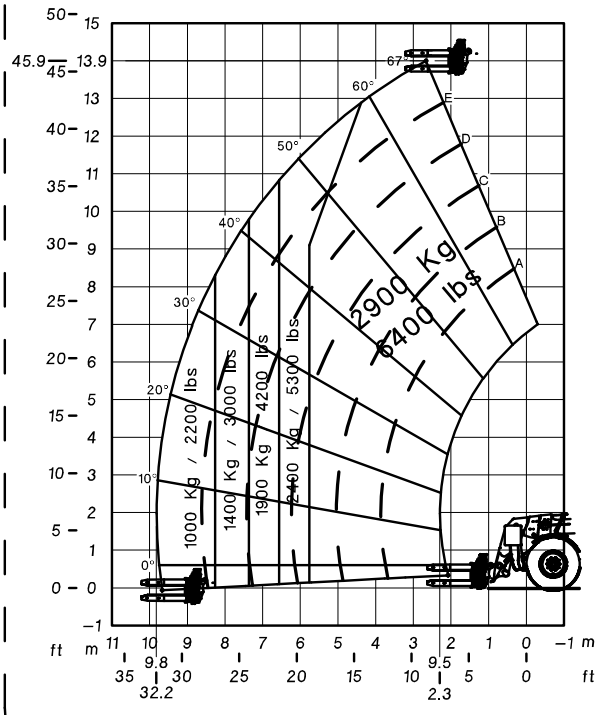
53011570

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU

MHT 1490

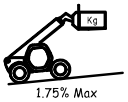
TH 35 S | Pos. TB



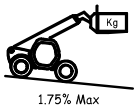
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6



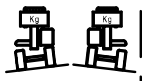
36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



Ground conditions:
solid surface



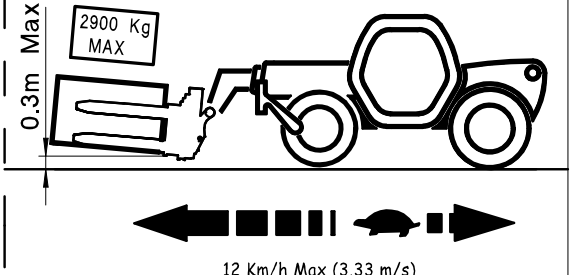
0km/h

53011571

MANITOU

MHT 1490

TH35 S | Pos. TB



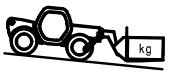
12 Km/h Max (3.33 m/s)



36 km/ Max
(10 m/s)



15% Max



10% Max



8.75% Max 8.75% Max

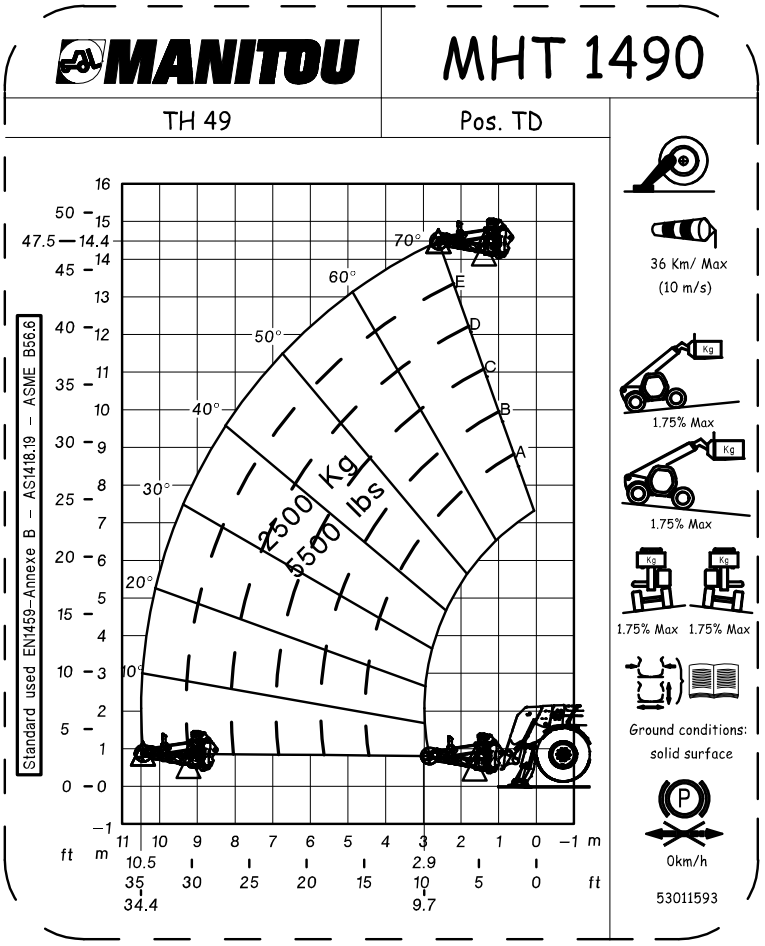


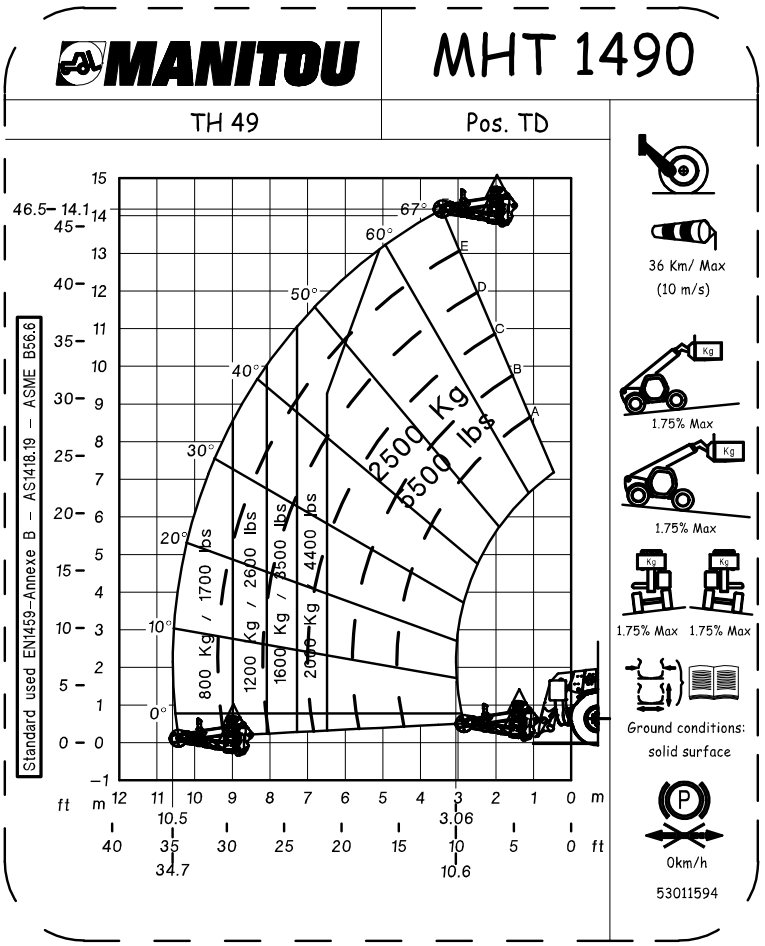
Ground conditions:
solid surface

Standard used AS 1418–19

53011572

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 1490
TH 49
Pos. TD
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
70°
60°
50°
40°
30°
20°
10°
E
D
C
B
A
2500 Kg
5500 lbs
47.5
14.4
10.5
35
34.4
2.9
10
9.7
ft
m
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
53011593

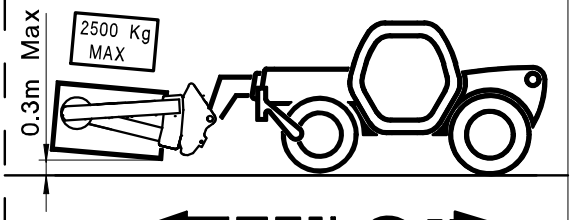

MANITOU
MHT 1490
TH 49
Pos. TD
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
67°
60°
50°
40°
30°
20°
10°
0°
E
D
C
B
A
2500 Kg
5500 lbs
800 Kg / 1700 lbs
1200 Kg / 2600 lbs
1600 Kg / 3500 lbs
2000 Kg 4400 lbs
46.5
14.1
10.5
35
34.7
3.06
10
10.6
ft
m
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
53011594

MANITOU

MHT 1490

TH 49

Pos. TD



1.5 Km/h Max (0.4 m/s)



36 km/ Max
(10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



Ground conditions:
solid surface

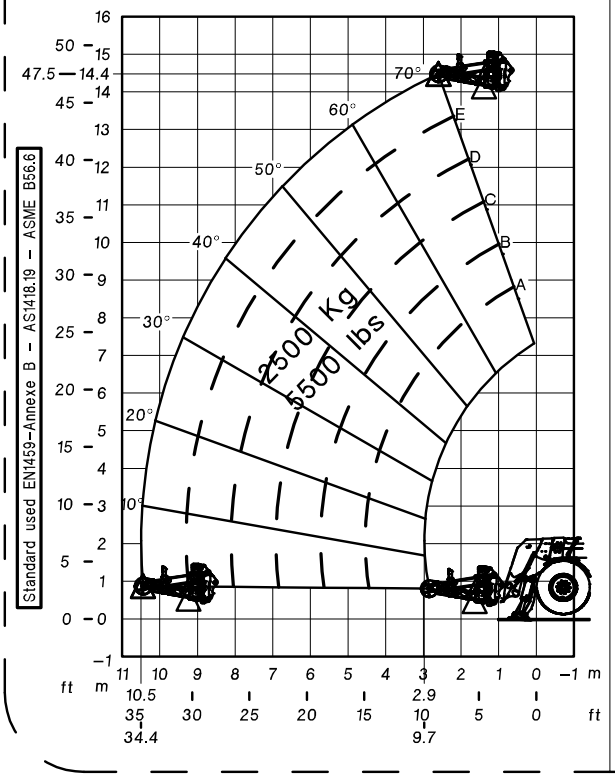
Standard used AS 1418–19

53011595

MANITOU

MHT 1490

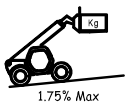
TH 49



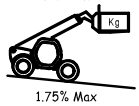




36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



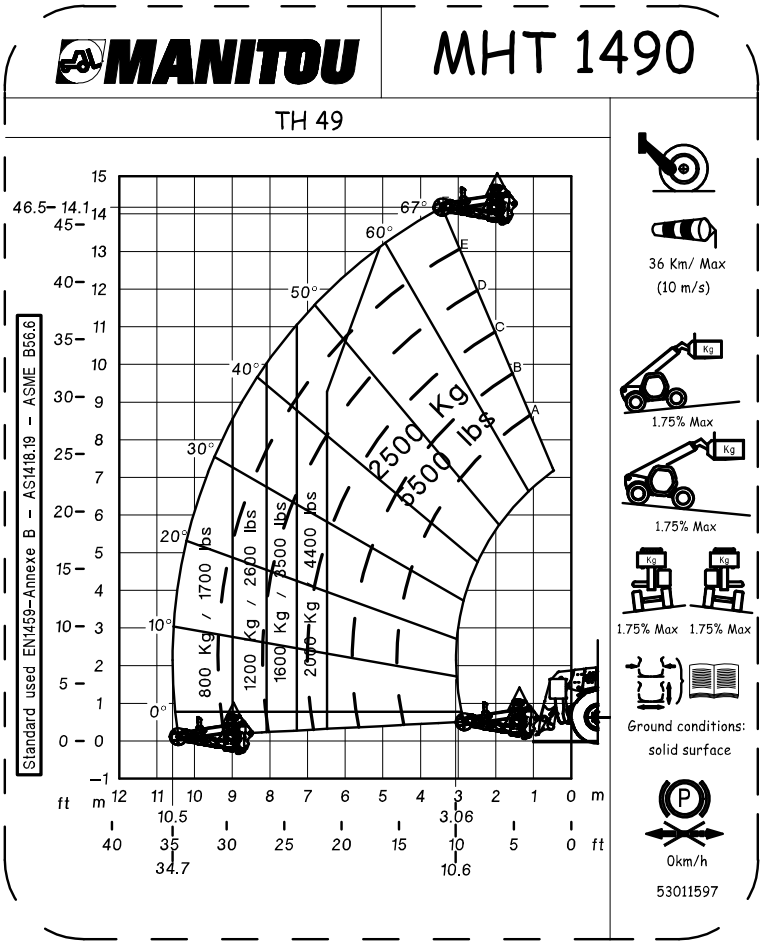
Ground conditions:
solid surface

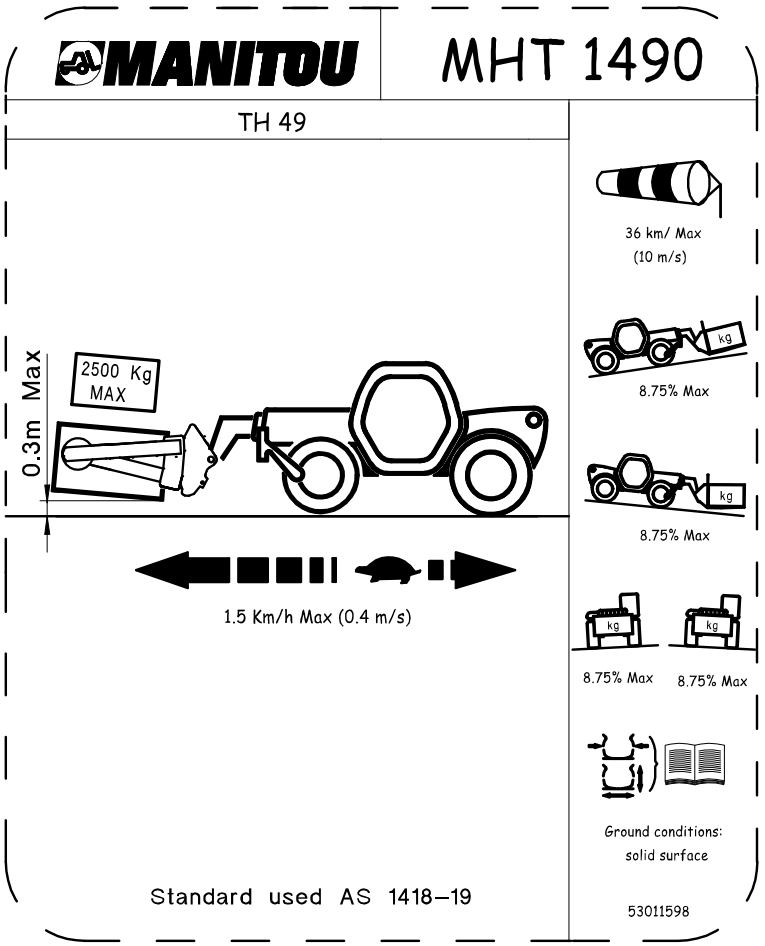


0km/h

53011596

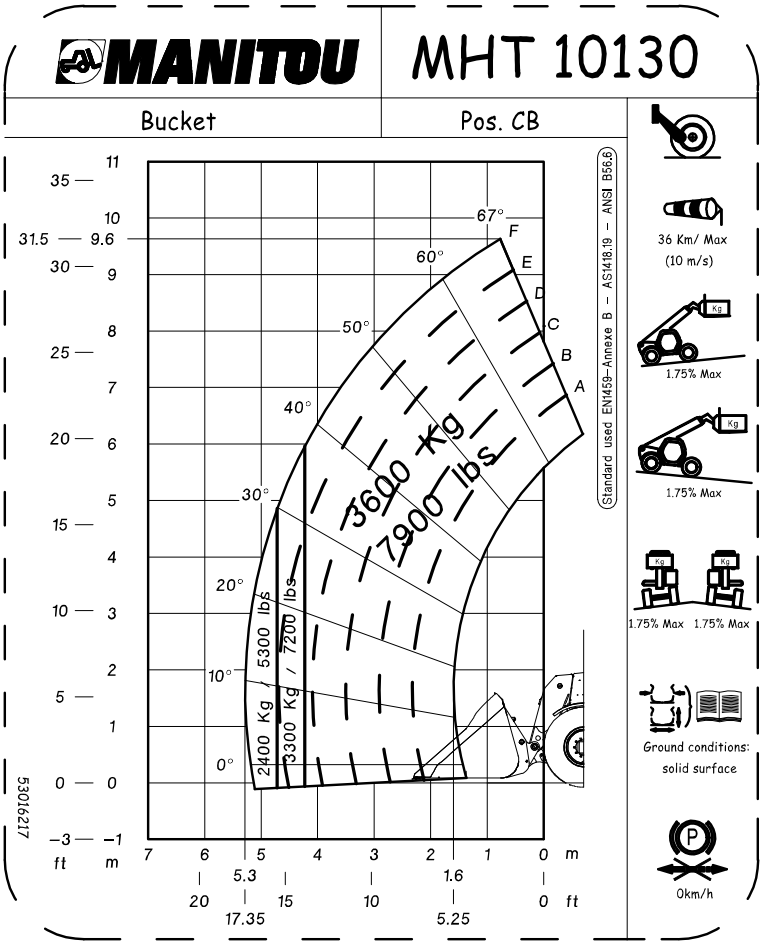
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

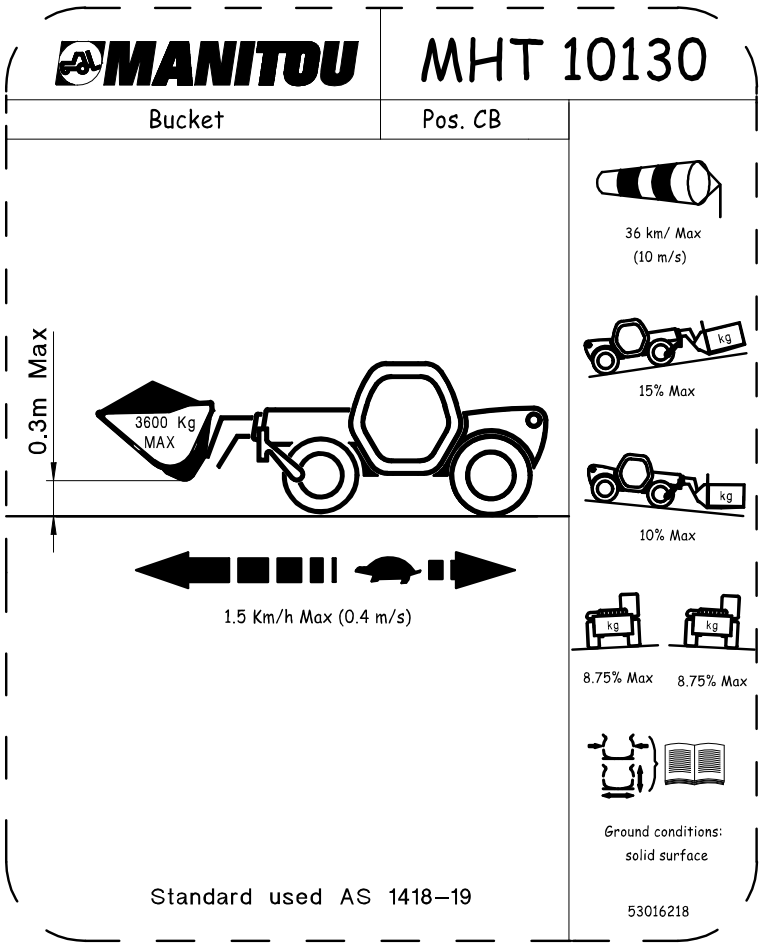

MANITOU
MHT 1490
TH 49
Standard used EN1459–Annexe B – AS1418.19 – ASME B56.6
46.5– 14.1
67°
60°
50°
40°
30°
20°
10°
0°
E
D
C
B
A
2500 Kg
5500 lbs
800 Kg / 1700 lbs
1200 Kg / 2600 lbs
1600 Kg / 3500 lbs
2000 Kg / 4400 lbs
ft m
m
10.5
3.06
40 35 30 25 20 15 10 5 0 ft
34.7
10.6
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions:
solid surface
0km/h
53011597


MANITOU
MHT 1490
TH 49
0.3m Max
2500 Kg
MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53011598

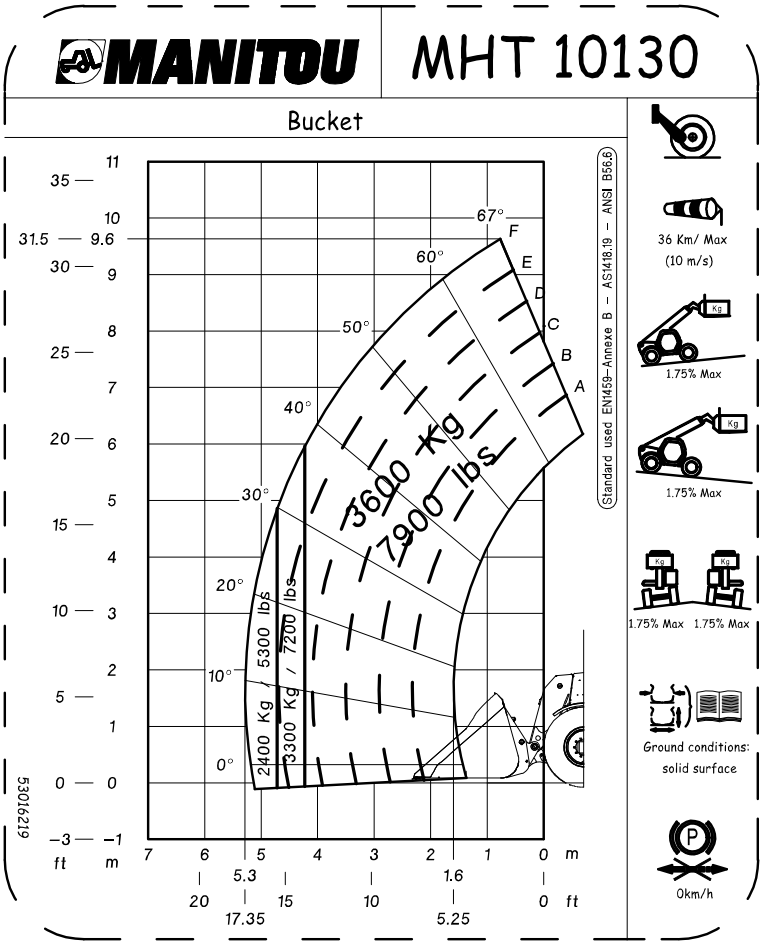
MHT-X 10130 129M ST3A S1
MHT 10130 129M ST4 S1

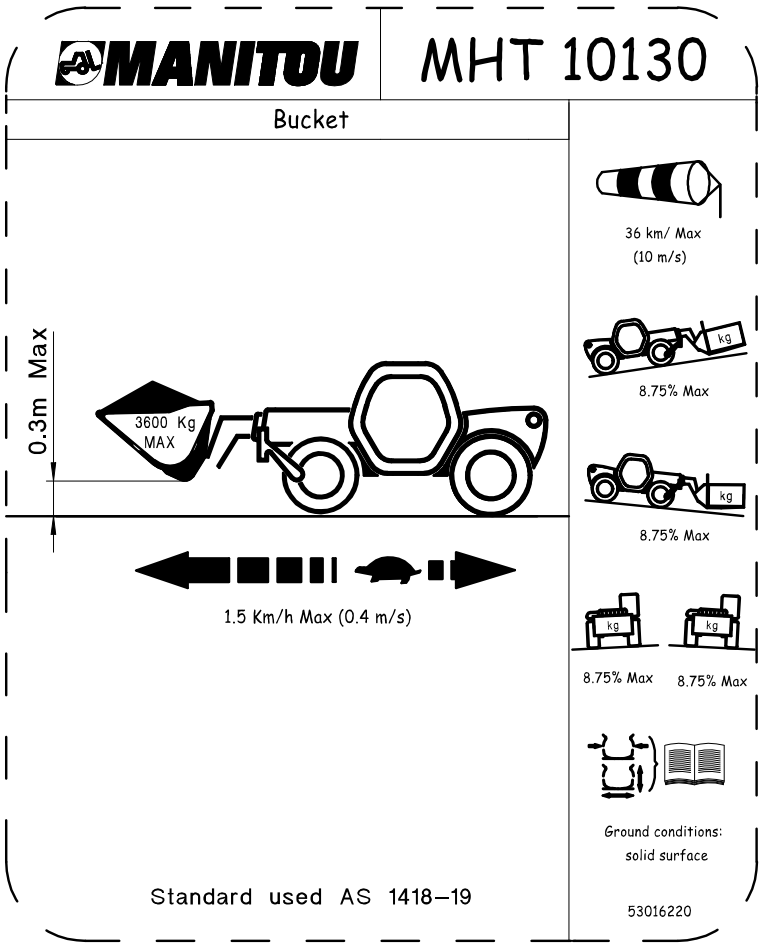
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

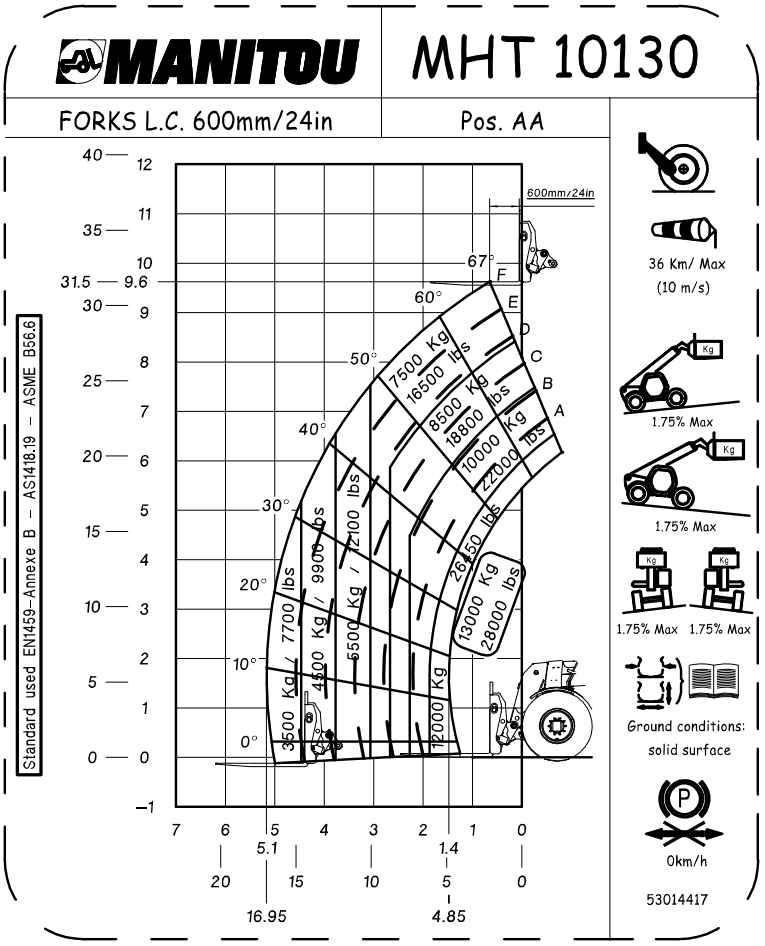


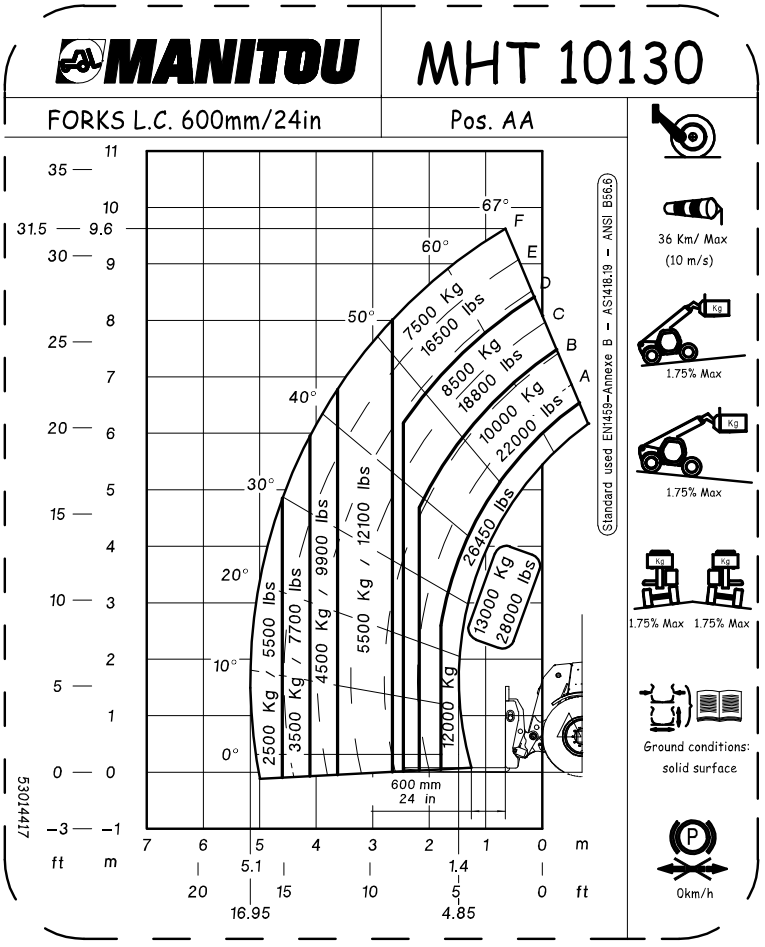


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

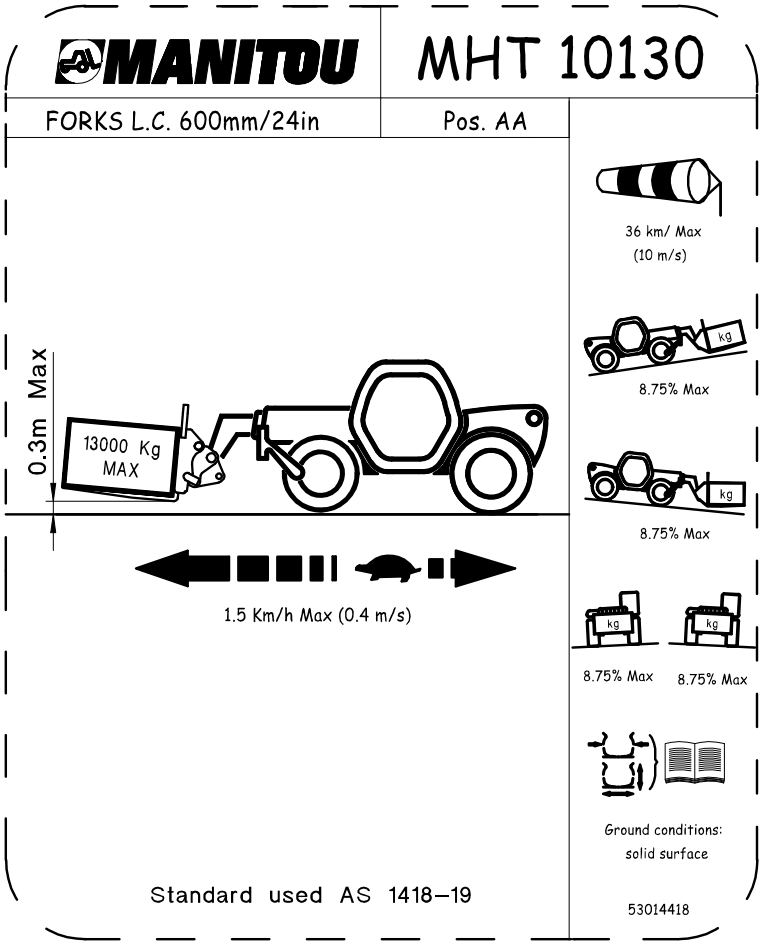

MANITOU
MHT 10130
Bucket
35
31.5
30
25
20
15
10
5
0
−3
ft
11
10
9.6
9
8
7
6
5
4
3
2
1
0
−1
m
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
3600 Kg
7900 lbs
2400 Kg / 5300 lbs
3300 Kg / 7200 lbs
7
6
5
4
3
2
1
0
m
5.3
1.6
20
15
10
0
ft
17.35
5.25
53016219
Standard used EN459-Annexe B – AS1418.19 – ANSI B56.6
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h

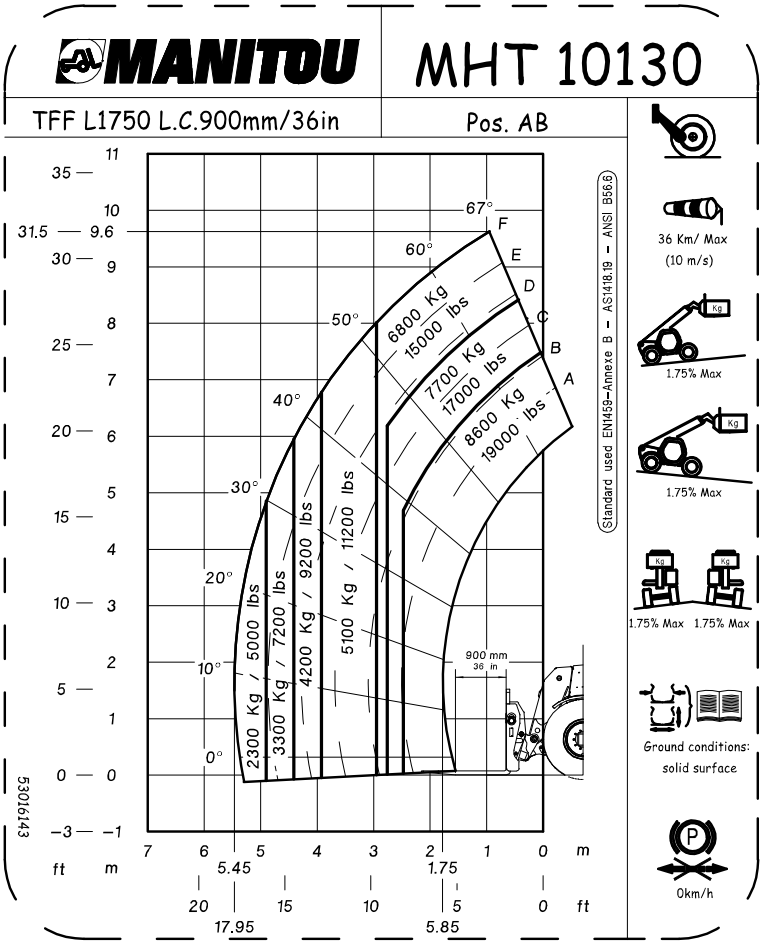

MANITOU
MHT 10130
Bucket
0.3m Max
3600 Kg
MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53016220





648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

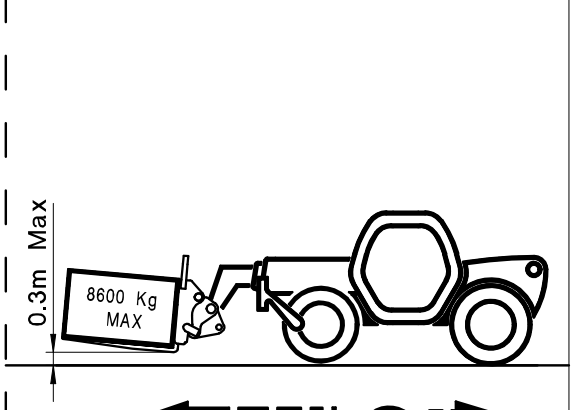

MANITOU
MHT 10130
FORKS L.C. 600mm/24in
Pos. AA
0.3m Max
13000 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53014418


MANITOU
MHT 10130
TFF L1750 L.C.900mm/36in
Pos. AB
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6800 Kg 15000 lbs
7700 Kg 17000 lbs
8600 Kg 19000 lbs
5100 Kg / 11200 lbs
4200 Kg / 9200 lbs
3300 Kg / 7200 lbs
2300 Kg / 5000 lbs
900 mm 36 in
(Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6)
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions: solid surface
0km/h
ft
m
5.45
1.75
17.95
5.85
53016143

MANITOU

MHT 10130

TFF L1750 L.C. 900mm/36in | Pos. AB



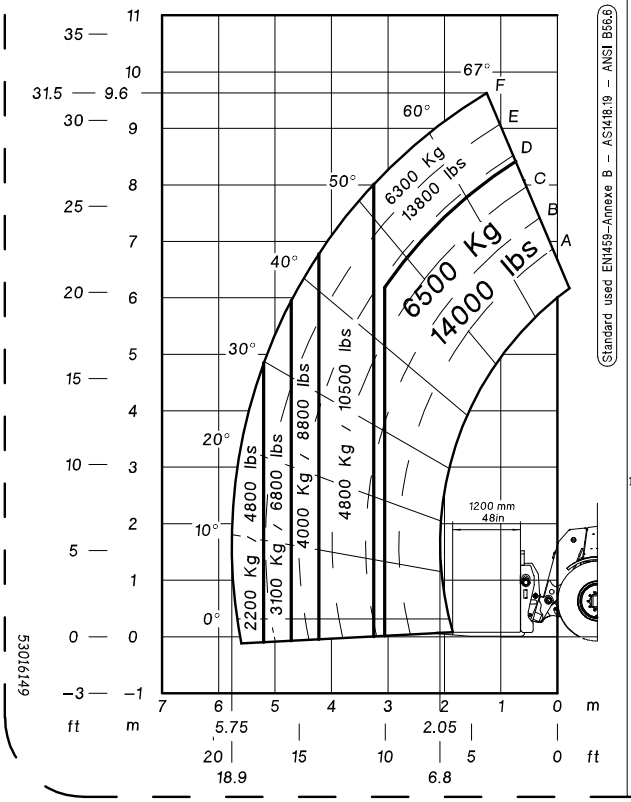
Standard used AS 1418–19

53016144

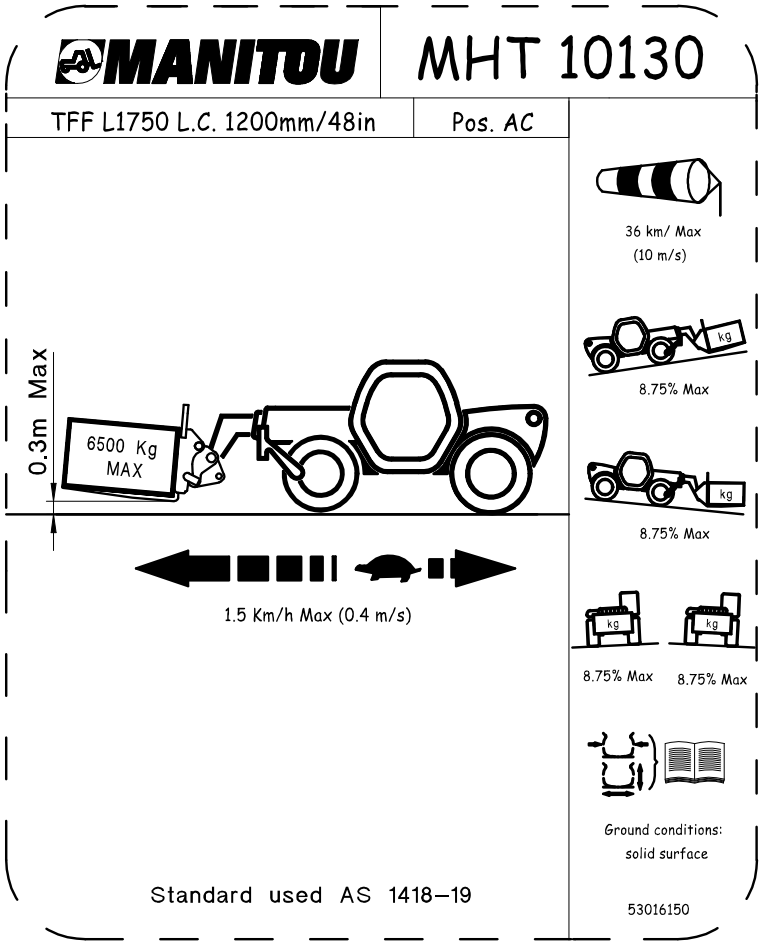
MANITOU

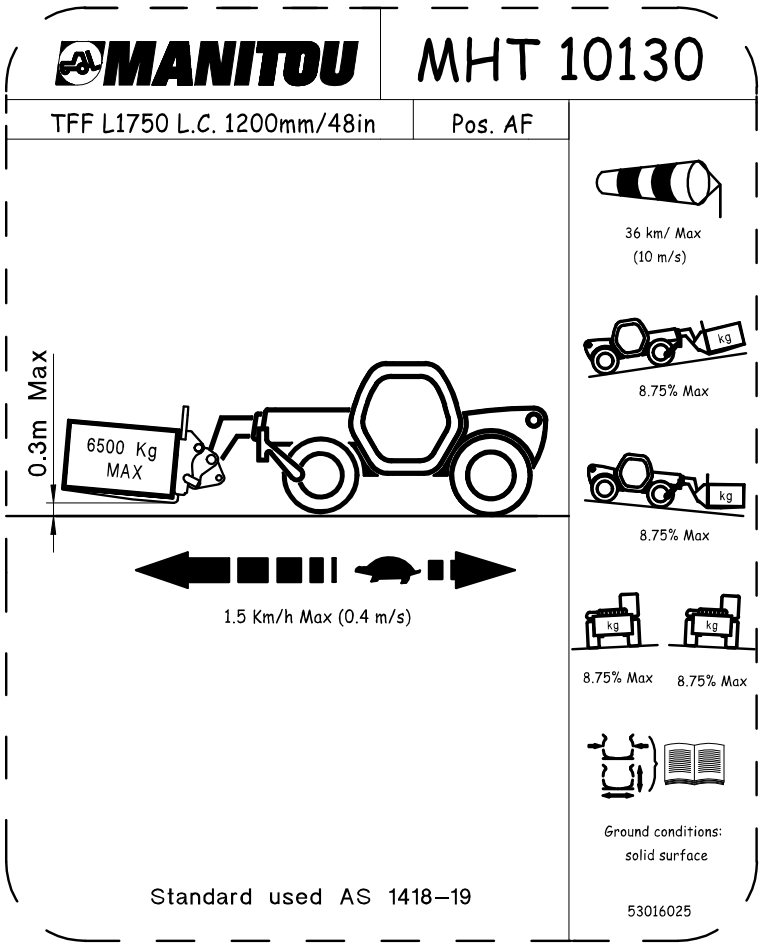
MHT 10130

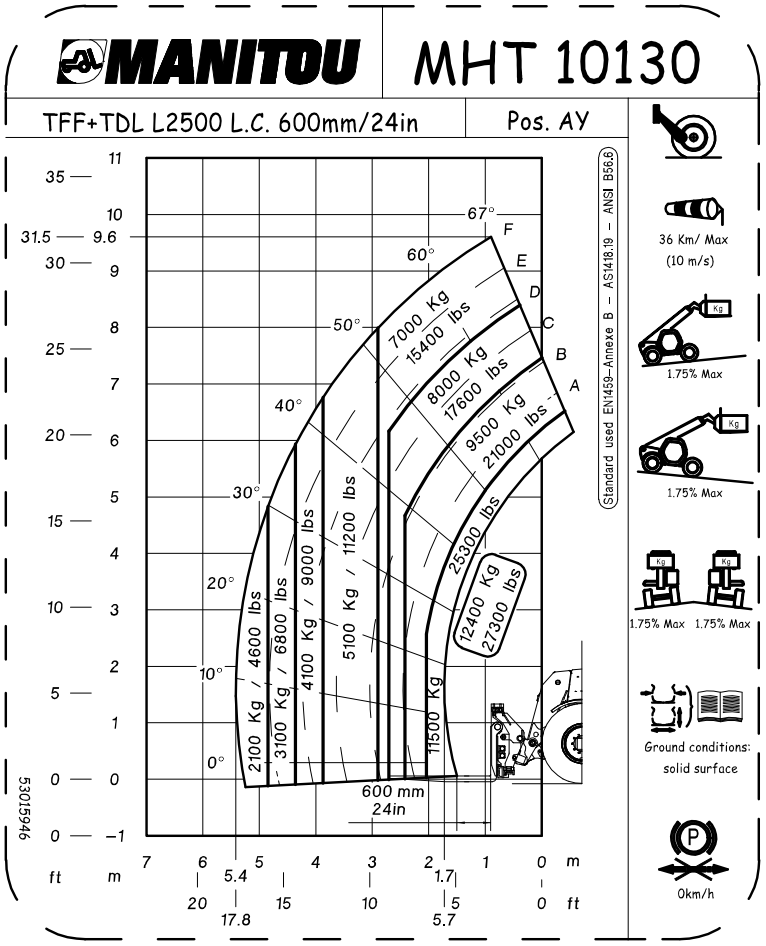
TFF L1750 L. C. 1200mm / 48in | Pos. AC

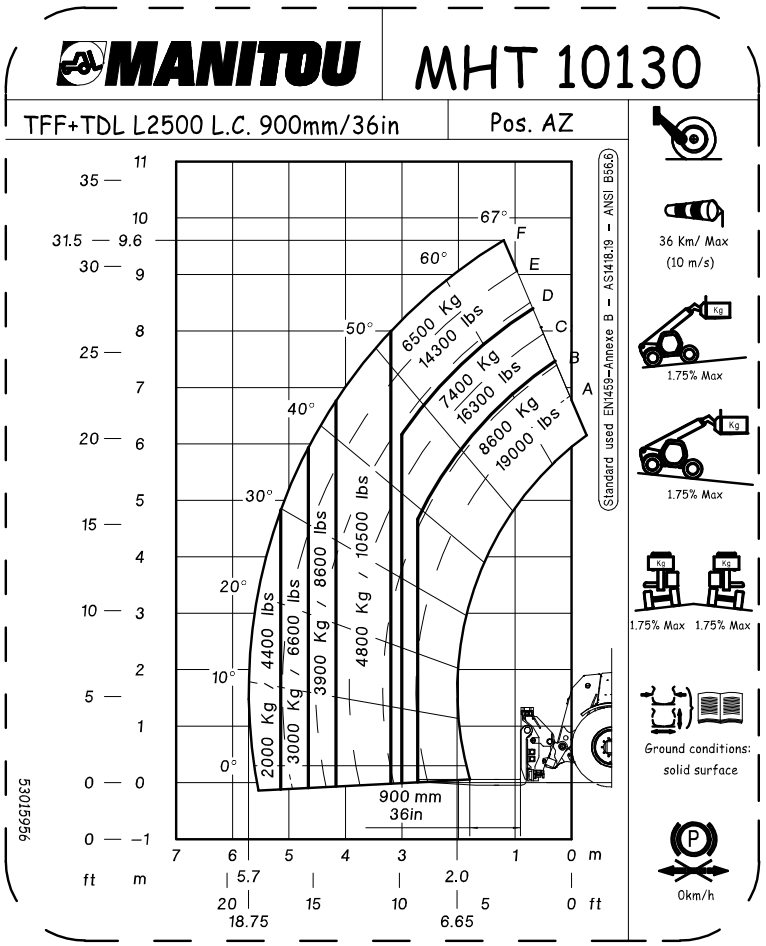


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

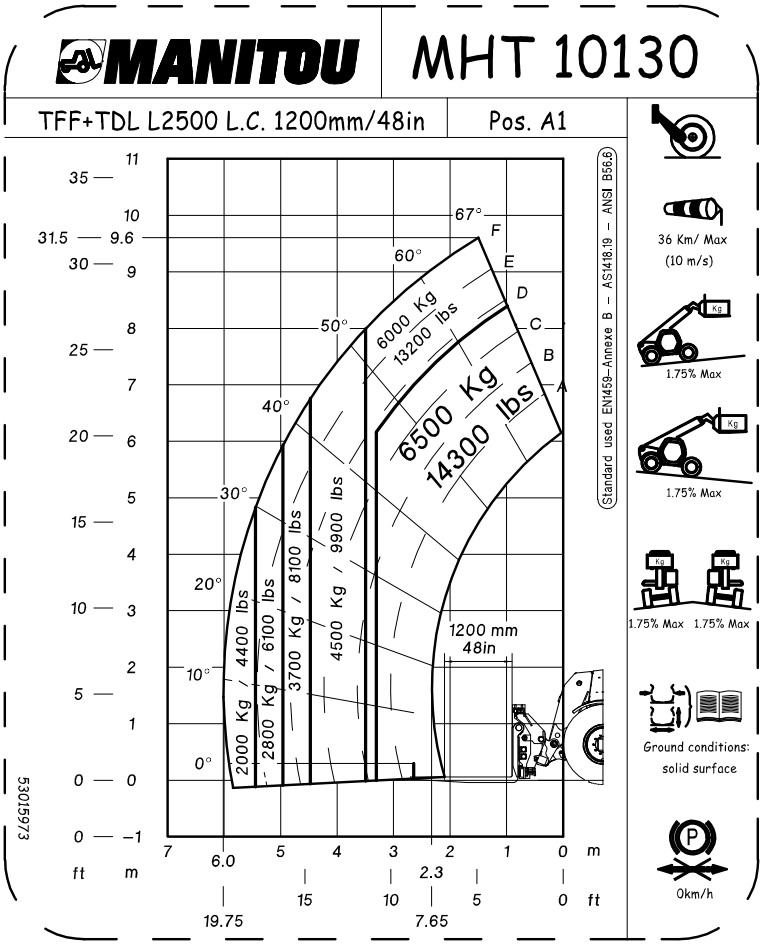

MANITOU
MHT 10130
TFF L1750 L.C. 1200mm/48in
Pos. AC
36 km/ Max
(10 m/s)
kg
8.75% Max
kg
8.75% Max
0.3m Max
6500 Kg
MAX
kg
kg
8.75% Max
8.75% Max
1.5 Km/h Max (0.4 m/s)
Ground conditions:
solid surface
Standard used AS 1418–19
53016150

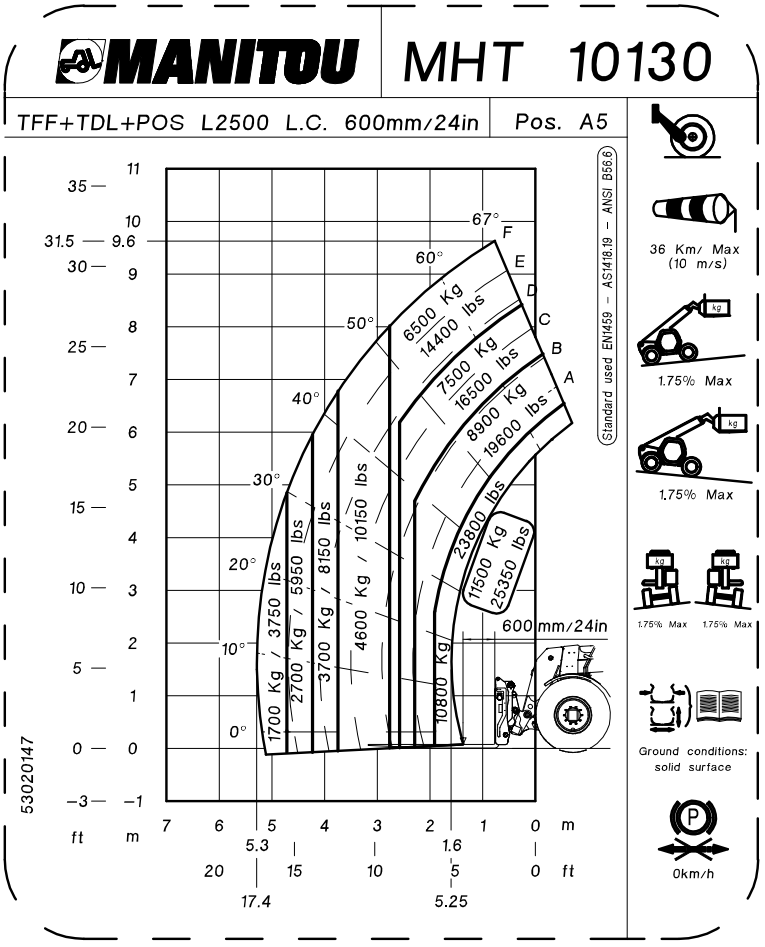

MANITOU
MHT 10130
TFF L1750 L.C. 1200mm/48in
Pos. AF
36 km/ Max
(10 m/s)
kg
8.75% Max
kg
8.75% Max
0.3m Max
6500 Kg
MAX
kg
kg
8.75% Max
8.75% Max
1.5 Km/h Max (0.4 m/s)
Ground conditions:
solid surface
Standard used AS 1418–19
53016025





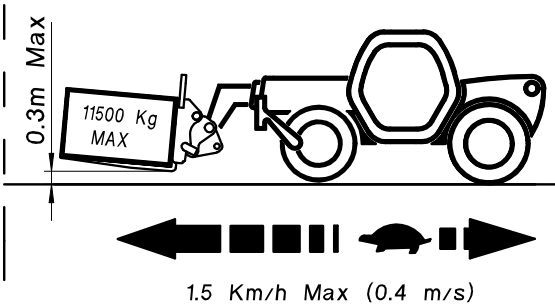
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF+TDL L2500 L.C. 1200mm/48in
Pos. A1
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6000 Kg 13200 lbs
6500 Kg 14300 lbs
4500 Kg / 9900 lbs
3700 Kg / 8100 lbs
2800 Kg / 6100 lbs
2000 Kg / 4400 lbs
1200 mm 48in
Standard used EN1459-Annexe B – AS1418.19 – ANSI B56.6
53015973
ft m
m
6.0
2.3
19.75
15
10
5
0
7.65
ft
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h


MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C. 600mm/24in
Pos. A5
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6500 Kg 14400 lbs
7500 Kg 16500 lbs
8900 Kg 19600 lbs
10800 Kg 23800 lbs
11500 Kg 25350 lbs
4600 Kg / 10150 lbs
3700 Kg / 8150 lbs
2700 Kg / 5950 lbs
1700 Kg / 3750 lbs
600mm/24in
Standard used EN1459 – AS1418.19 – ANSI B56.6
53020147
ft m
m
5.3
1.6
17.4
20
15
10
5
0
5.25
ft
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.600mm/24in | Pos. A5



1.5 Km/h Max (0.4 m/s)



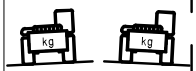
36 km/ Max (10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



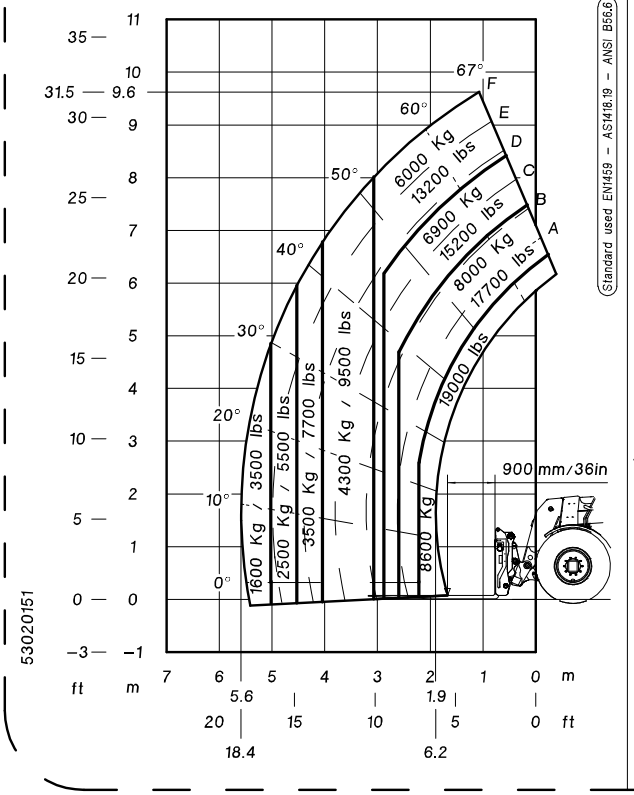
Ground conditions: solid surface

Standard used AS 1418–19

53020148

MANITOU MHT 10130

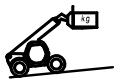
TFF+TDL+POS L2500 L.C. 900mm/36in | Pos. A6



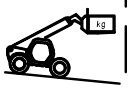




36 Km/ Max (10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max

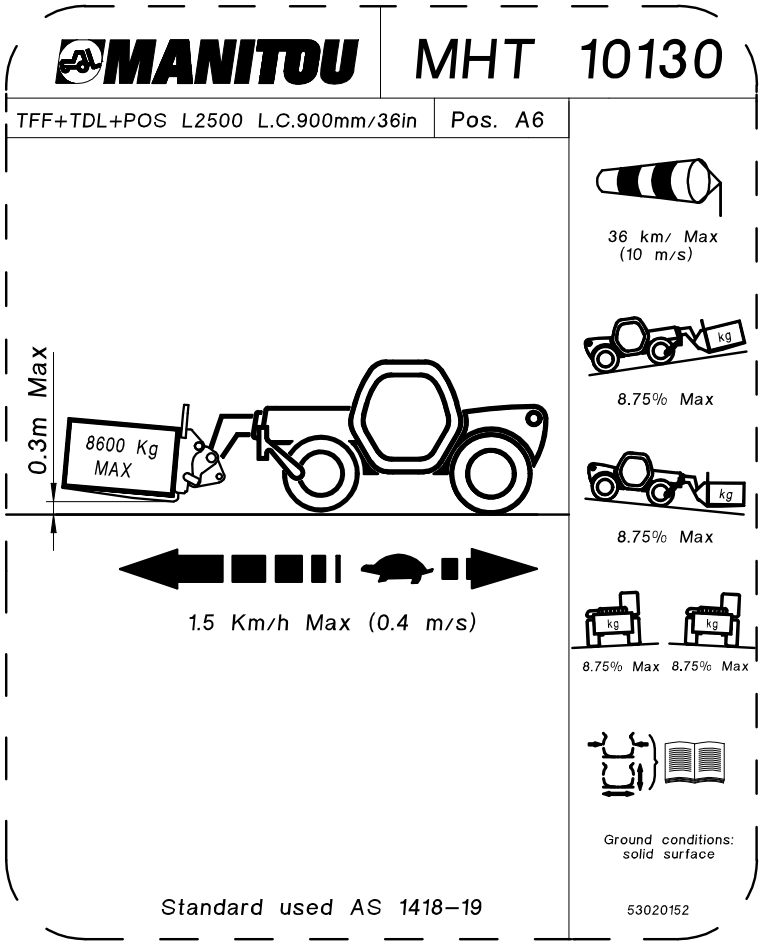


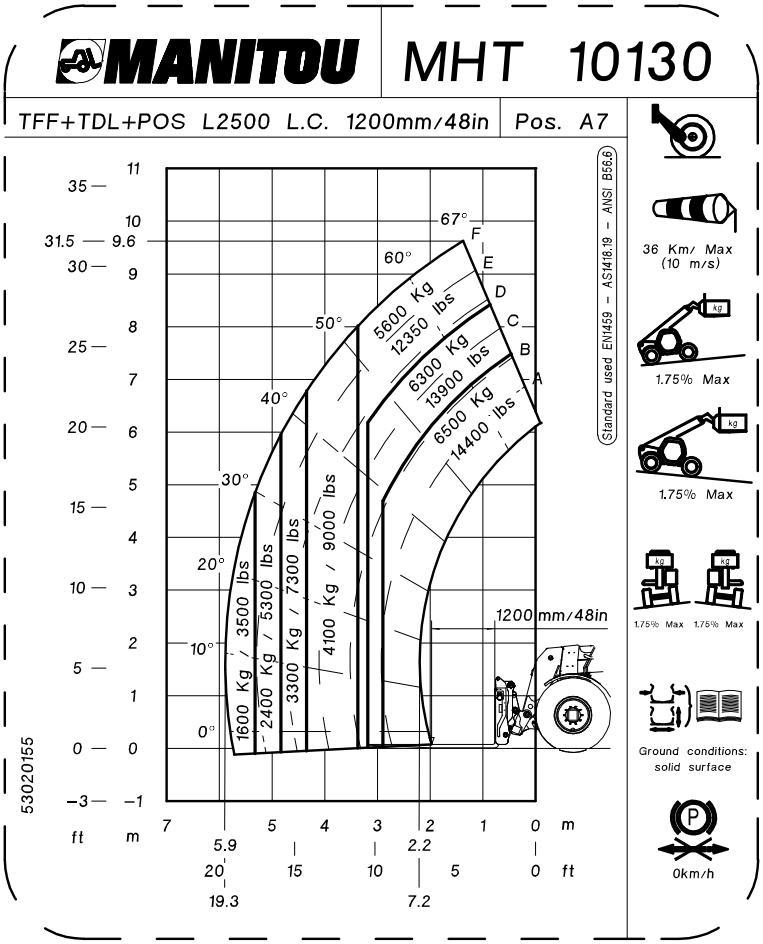
Ground conditions: solid surface



0km/h

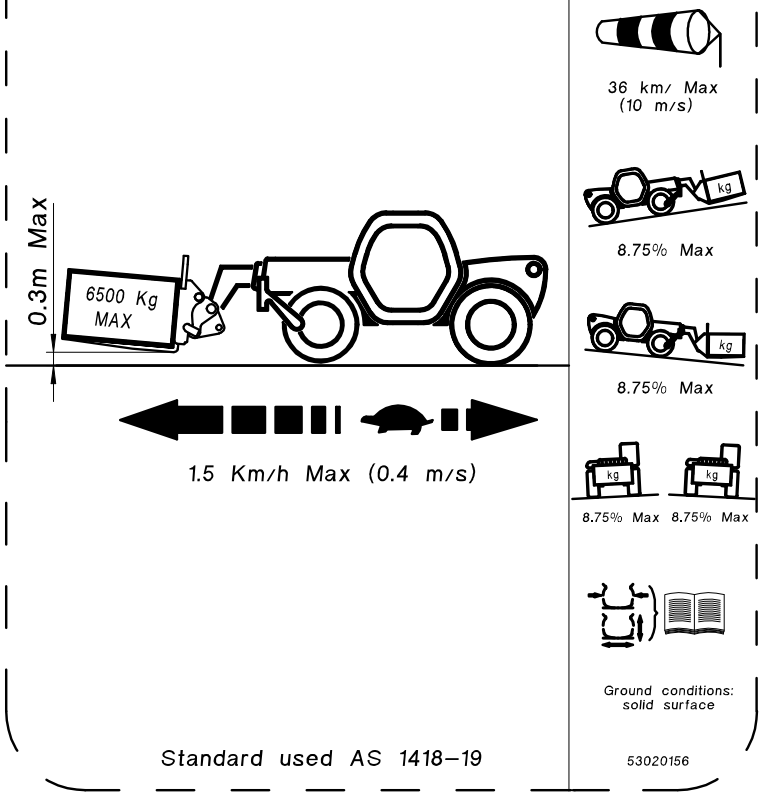
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C.900mm/36in
Pos. A6
0.3m Max
8600 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53020152


MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C. 1200mm/48in
Pos. A7
Standard used EN1459 – AS1416.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
5600 Kg 12350 lbs
6300 Kg 13900 lbs
6500 Kg 14400 lbs
4100 Kg / 9000 lbs
3300 Kg / 7300 lbs
2400 Kg / 5300 lbs
1600 Kg / 3500 lbs
1200 mm/48in
35
31.5
30
25
20
15
10
5
0
–3
ft
m
11
10
9.6
9
8
7
6
5
4
3
2
1
0
–1
7
5
4
3
2
1
0
m
5.9
2.2
20
15
10
5
0
ft
19.3
7.2
53020155
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

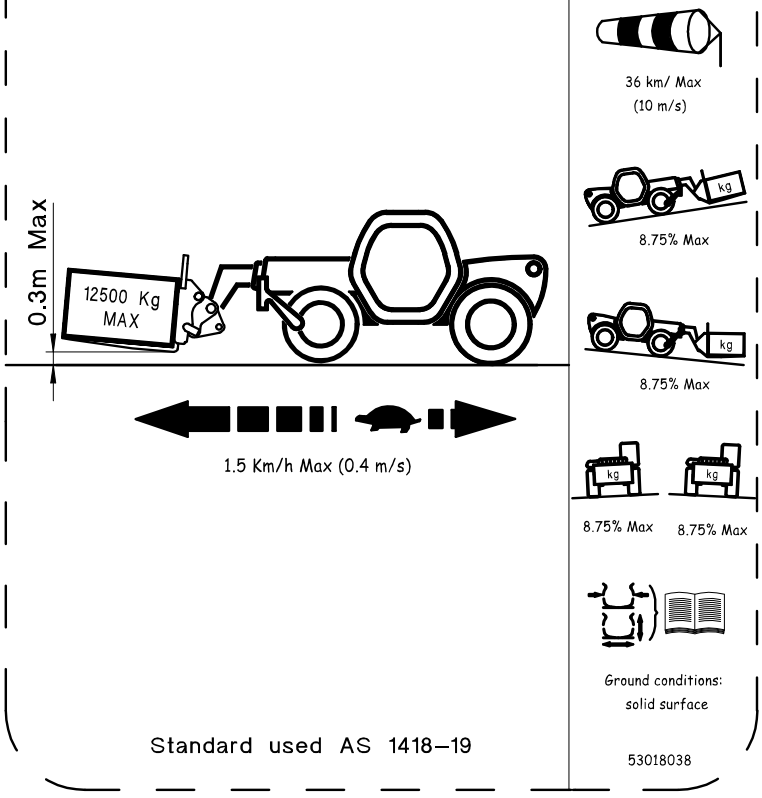
MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.1200mm/48in | Pos. A7

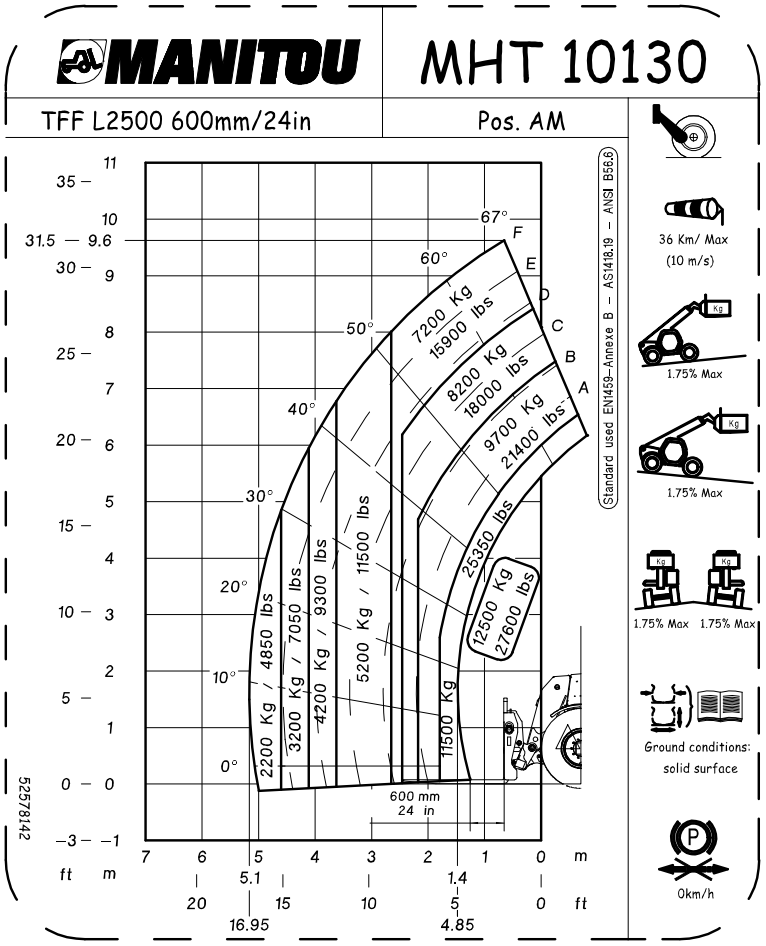


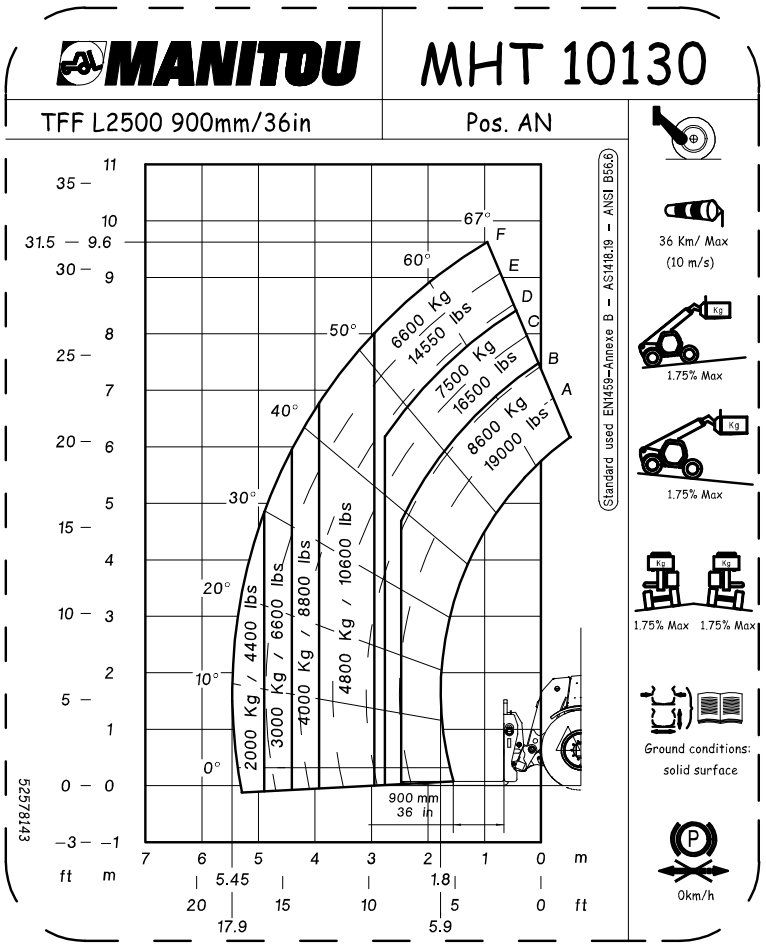
MANITOU MHT 10130

TFF L2500 L.C. 600mm/24in



648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF L2500 600mm/24in
Pos. AM
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
7200 Kg 15900 lbs
8200 Kg 18000 lbs
9700 Kg 21400 lbs
11500 Kg
12500 Kg 27600 lbs
2200 Kg / 4850 lbs
3200 Kg / 7050 lbs
4200 Kg / 9300 lbs
5200 Kg / 11500 lbs
25350 lbs
600 mm 24 in
52578142
35
31.5
30
25
20
15
10
5
0
−3
11
10
9.6
9
8
7
6
5
4
3
2
1
0
−1
7 6 5 4 3 2 1 0 m
ft m
5.1 1.4
20 15 10 5 0 ft
16.95 4.85
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

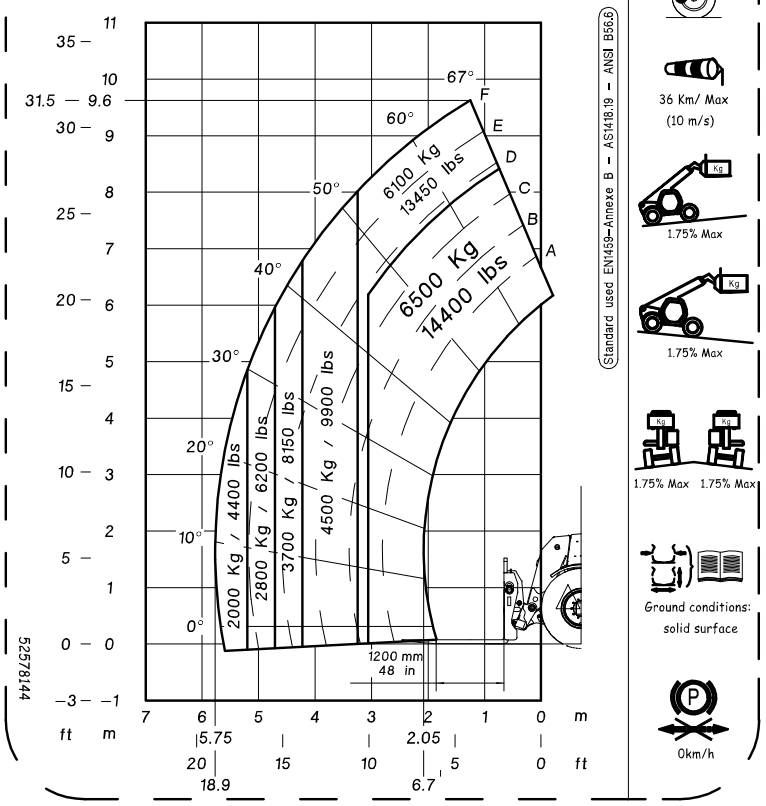

MANITOU
MHT 10130
TFF L2500 900mm/36in
Pos. AN
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6600 Kg 14550 lbs
7500 Kg 16500 lbs
8600 Kg 19000 lbs
2000 Kg / 4400 lbs
3000 Kg / 6600 lbs
4000 Kg / 8800 lbs
4800 Kg / 10600 lbs
900 mm 36 in
52578143
35
31.5
30
25
20
15
10
5
0
−3
11
10
9.6
9
8
7
6
5
4
3
2
1
0
−1
7 6 5 4 3 2 1 0 m
ft m
5.45 1.8
20 15 10 5 0 ft
17.9 5.9
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

MANITOU

MHT 10130

TFF L2500 1200mm/48in

Pos. AO

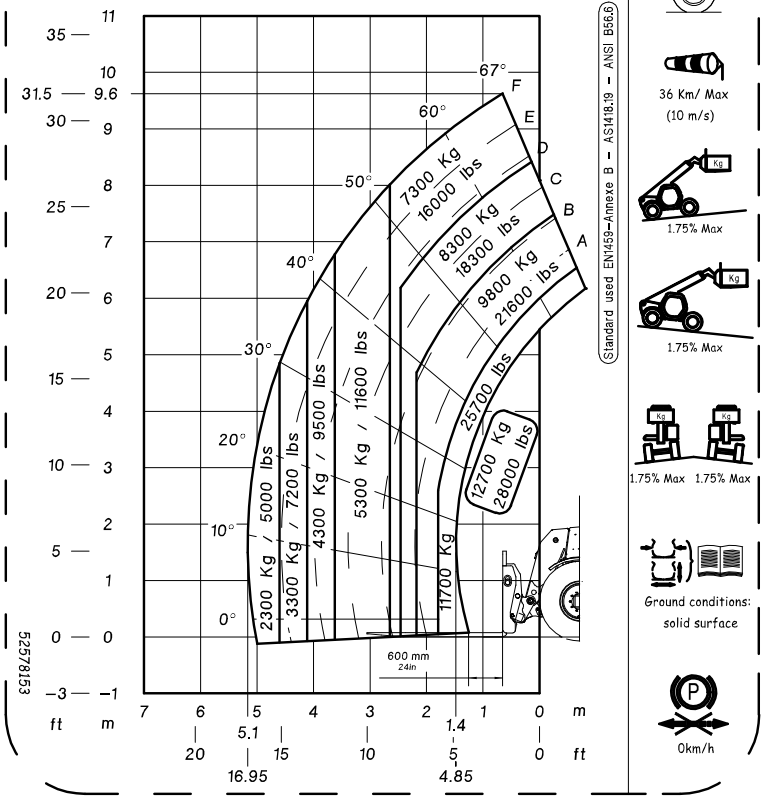


MANITOU

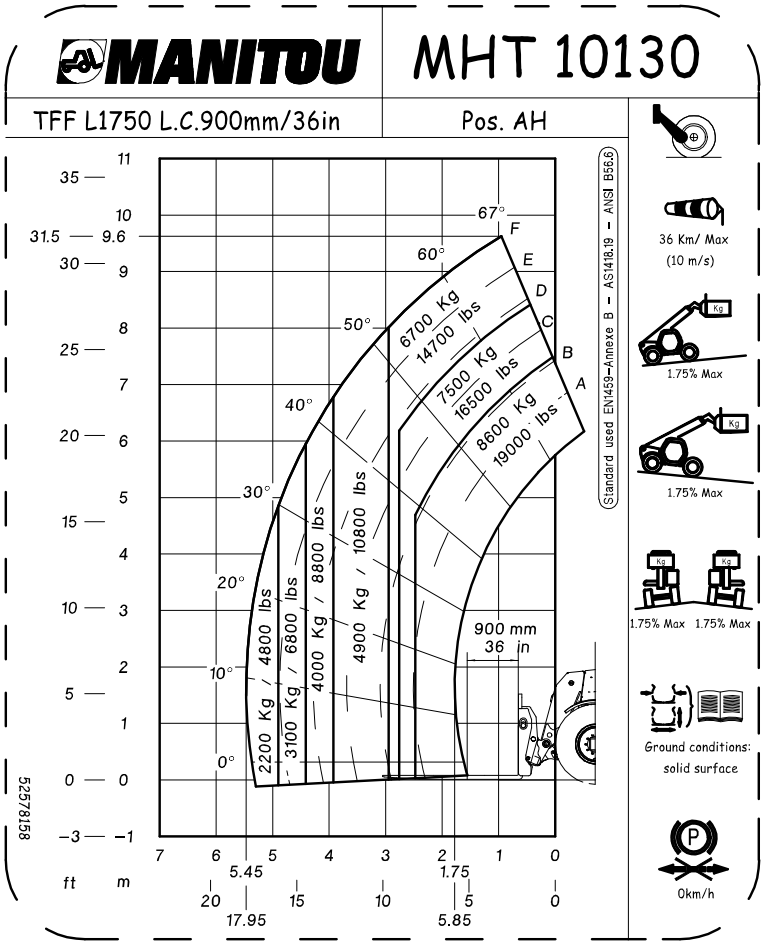
MHT 10130

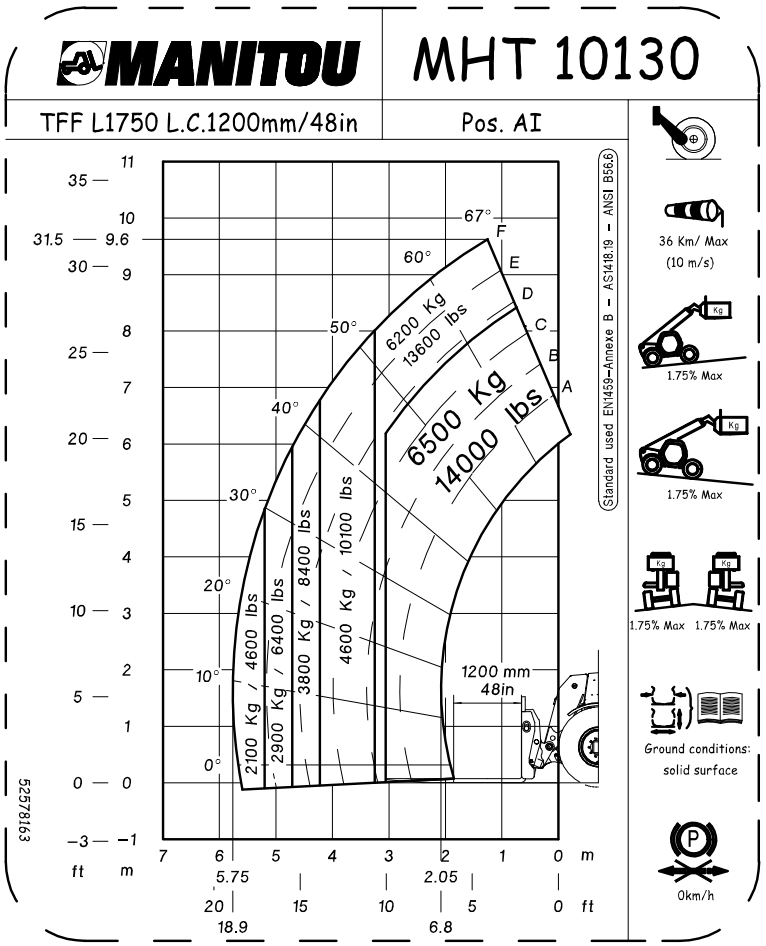
TFF L1750 L.C.600mm/24in

Pos. AG



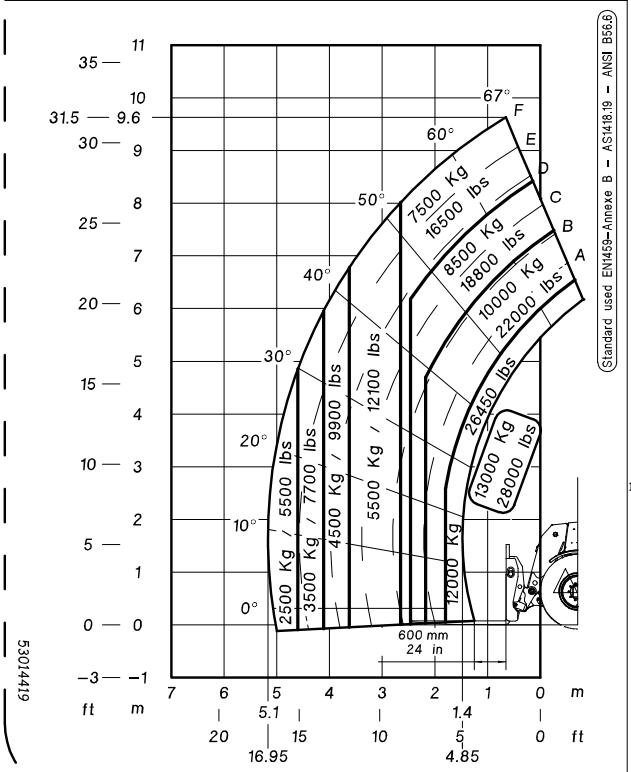
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

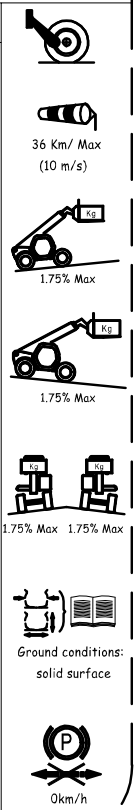

MANITOU
MHT 10130
TFF L1750 L.C.900mm/36in
Pos. AH
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6700 Kg
14700 lbs
7500 Kg
16500 lbs
8600 Kg
19000 lbs
2200 Kg / 4800 lbs
3100 Kg / 6800 lbs
4000 Kg / 8800 lbs
4900 Kg / 10800 lbs
900 mm
36 in
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
52578158
ft
m
5.45
1.75
17.95
5.85
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions:
solid surface
0km/h


MANITOU
MHT 10130
TFF L1750 L.C.1200mm/48in
Pos. AI
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6200 Kg
13600 lbs
6500 Kg
14000 lbs
2100 Kg / 4600 lbs
2900 Kg / 6400 lbs
3800 Kg / 8400 lbs
4600 Kg / 10100 lbs
1200 mm
48in
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
52578163
ft
m
5.75
2.05
18.9
6.8
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions:
solid surface
0km/h

MANITOU MHT 10130

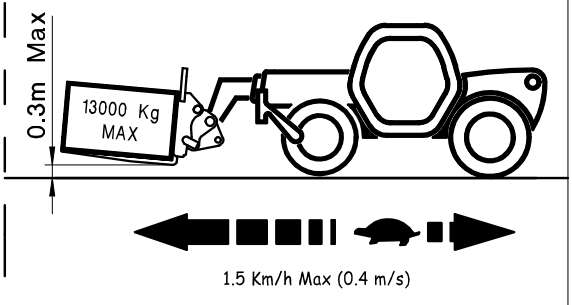
FORKS L.C. 600mm/24in

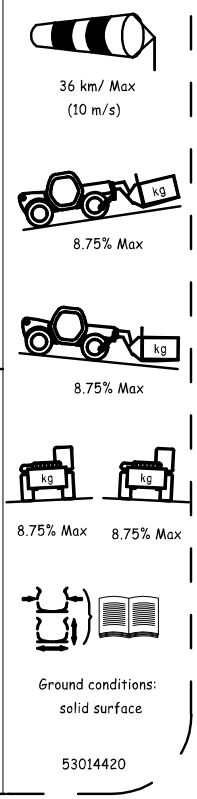




MANITOU MHT 10130

FORKS L.C. 600mm/24in

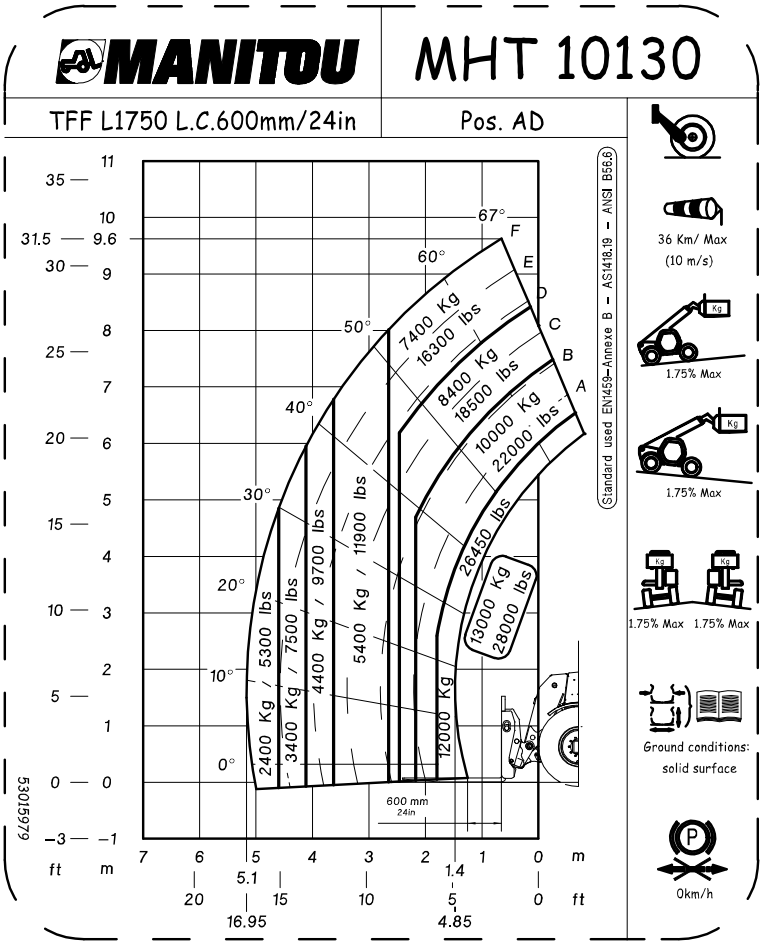


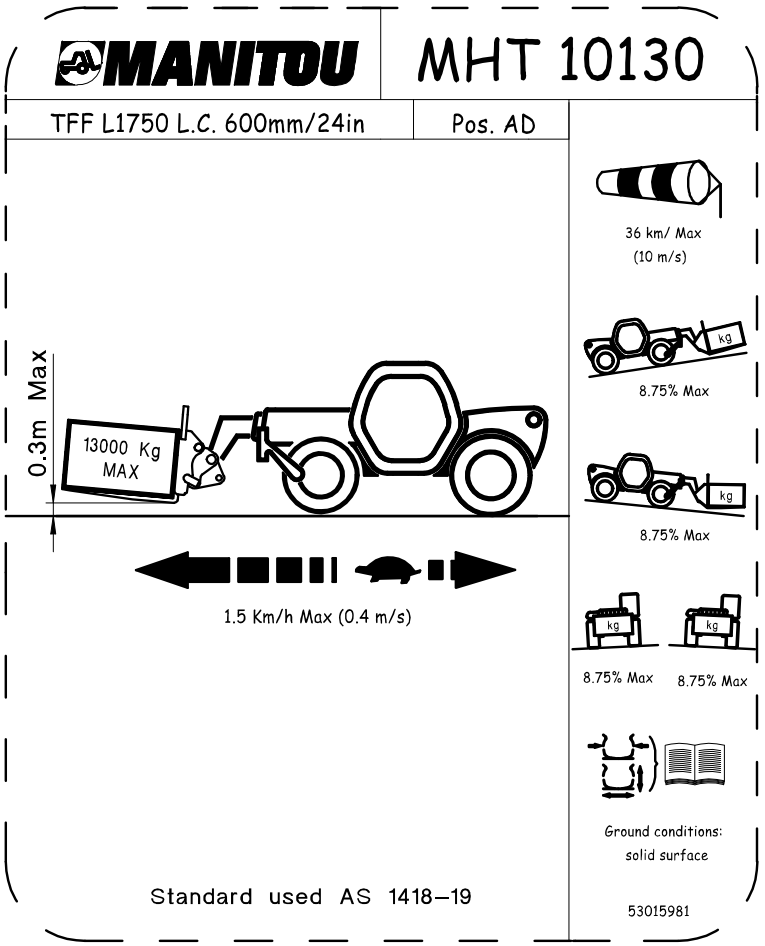


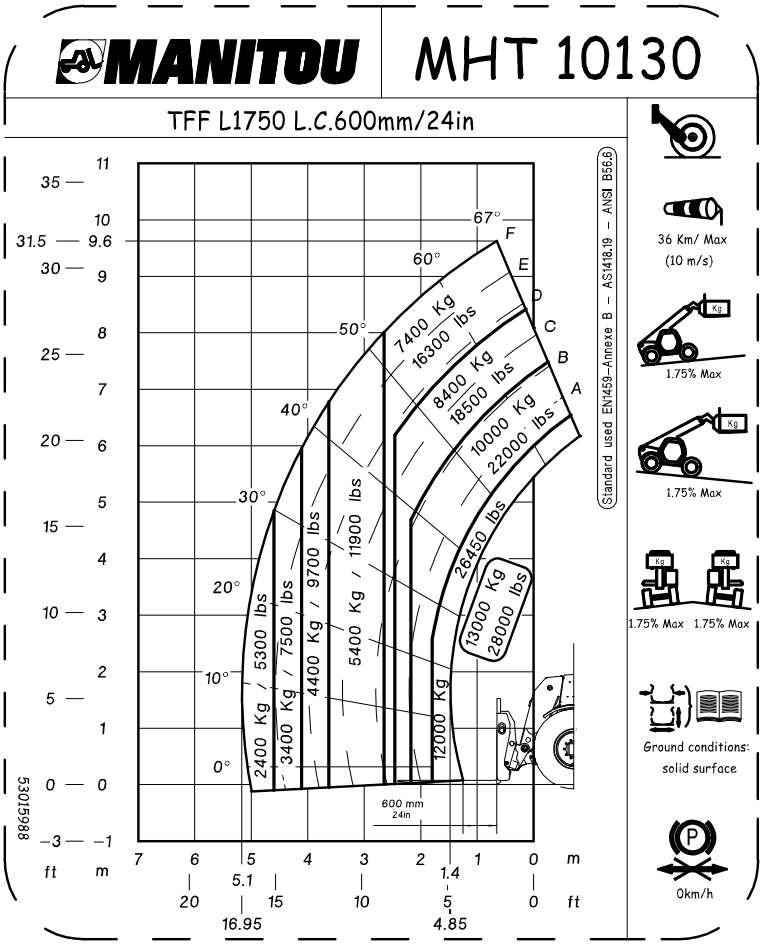
Standard used AS 1418–19

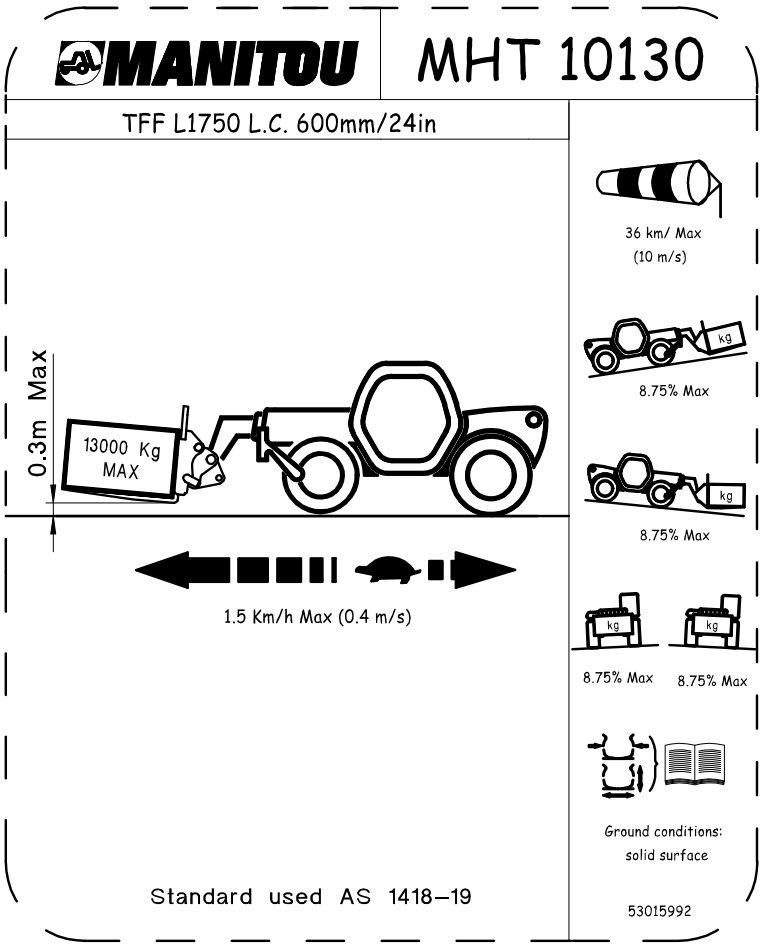
53014420

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

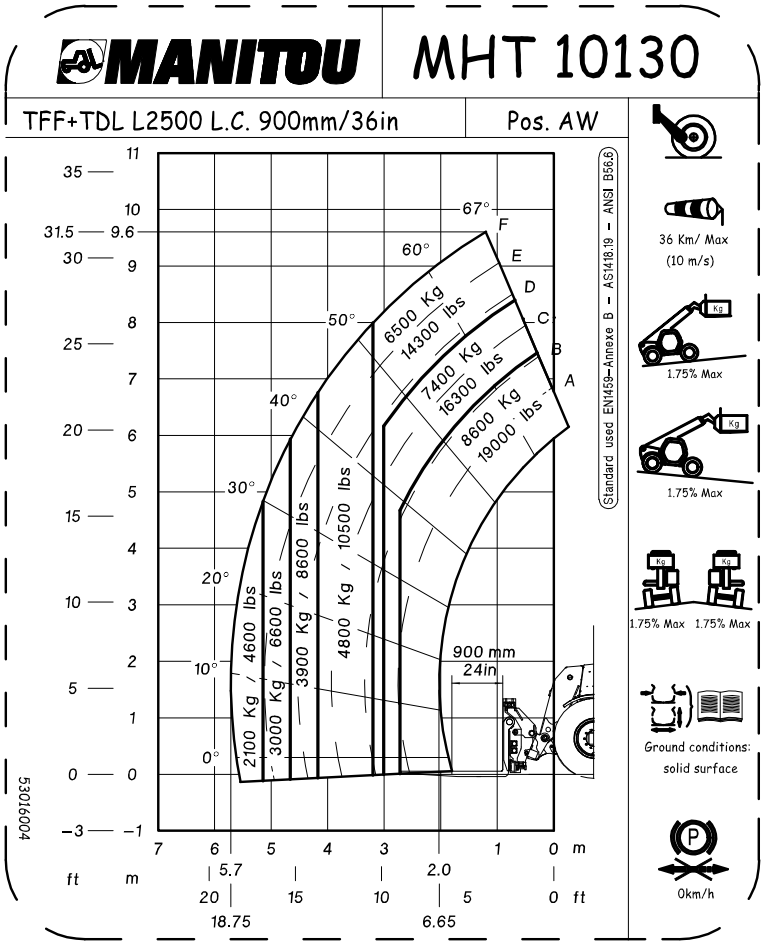

MANITOU
MHT 10130
TFF L1750 L.C.600mm/24in
Pos. AD
Standard used EN1459-Annexe B – AS1418.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
7400 Kg 16300 lbs
8400 Kg 18500 lbs
10000 Kg 22000 lbs
13000 Kg 28000 lbs
12000 Kg
2400 Kg / 5300 lbs
3400 Kg / 7500 lbs
4400 Kg / 9700 lbs
5400 Kg / 11900 lbs
600 mm 24in
53015979
ft
m
16.95
5.1
4.85
1.4
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

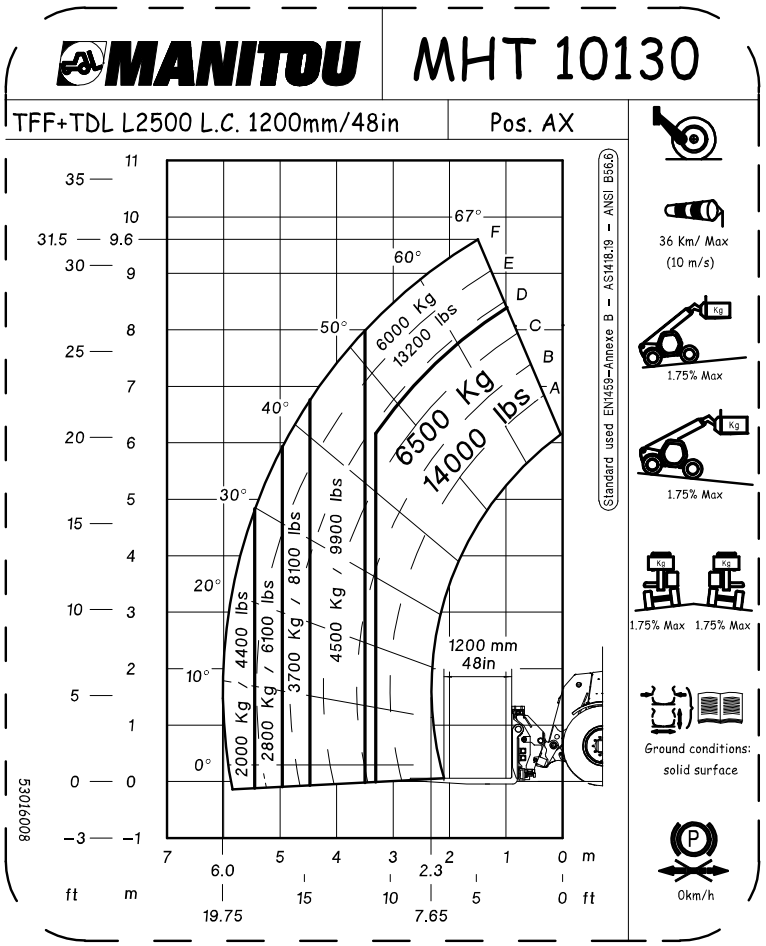

MANITOU
MHT 10130
TFF L1750 L.C. 600mm/24in
Pos. AD
0.3m Max
13000 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53015981

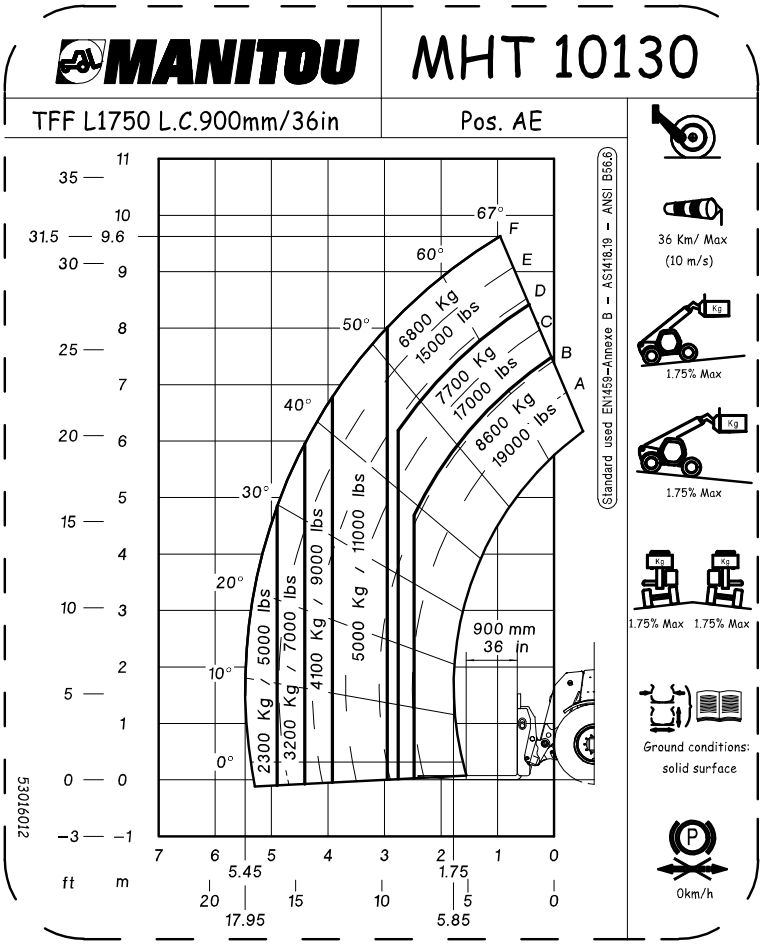


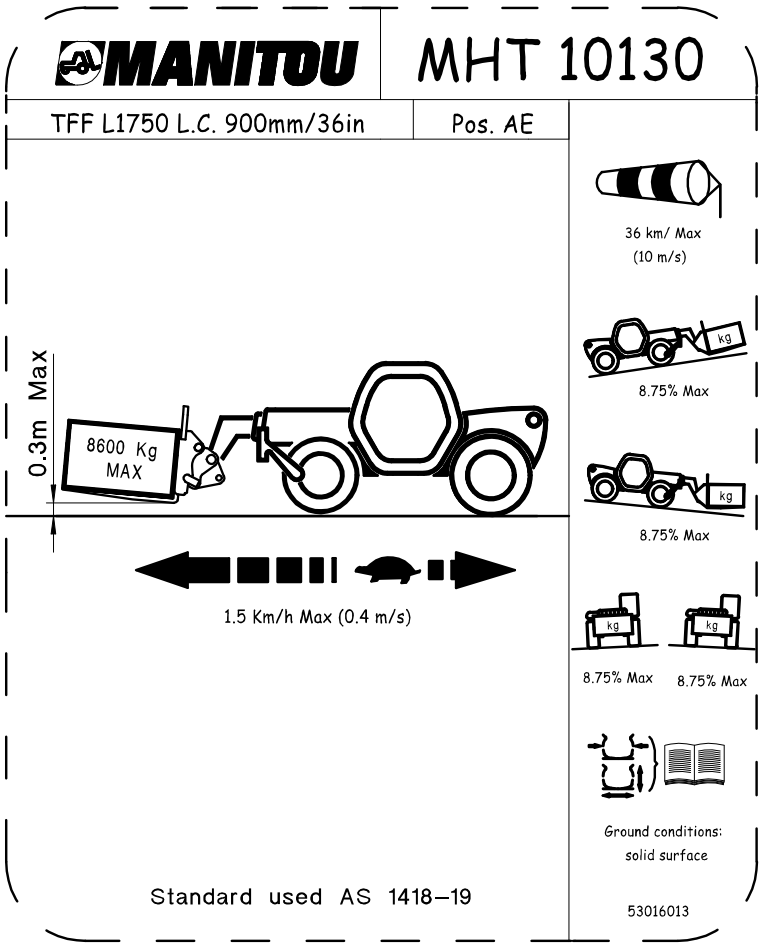


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

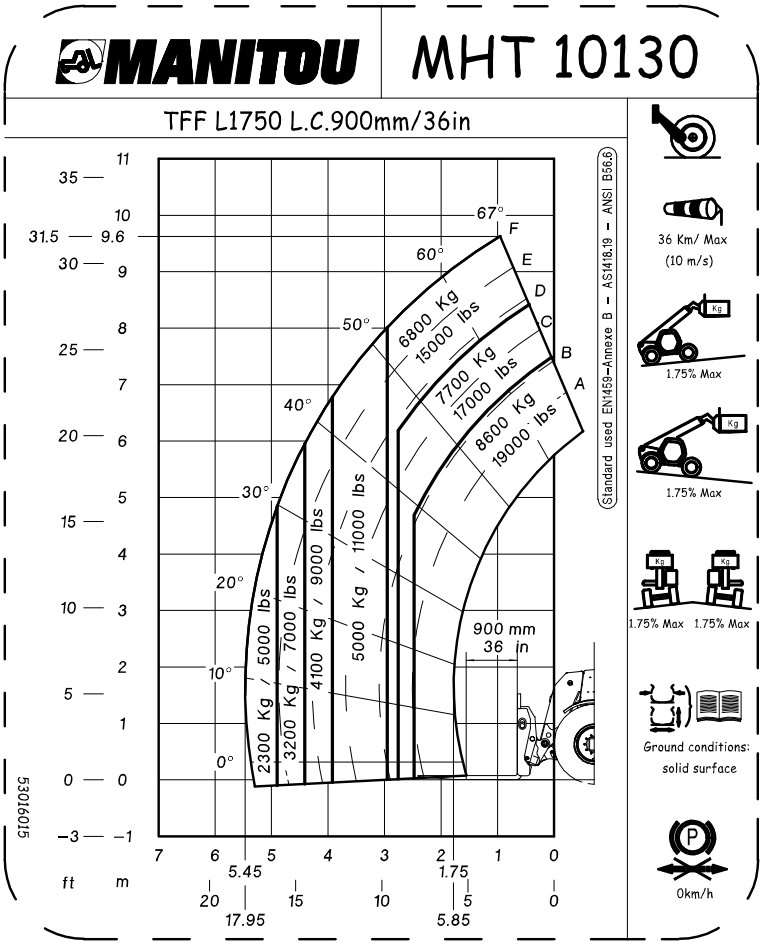

MANITOU
MHT 10130
TFF+TDL L2500 L.C. 900mm/36in
Pos. AW
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
6500 Kg 14300 lbs
7400 Kg 16300 lbs
8600 Kg 19000 lbs
4800 Kg / 10500 lbs
3900 Kg / 8600 lbs
3000 Kg / 6600 lbs
2100 Kg / 4600 lbs
900 mm 24in
53016004
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

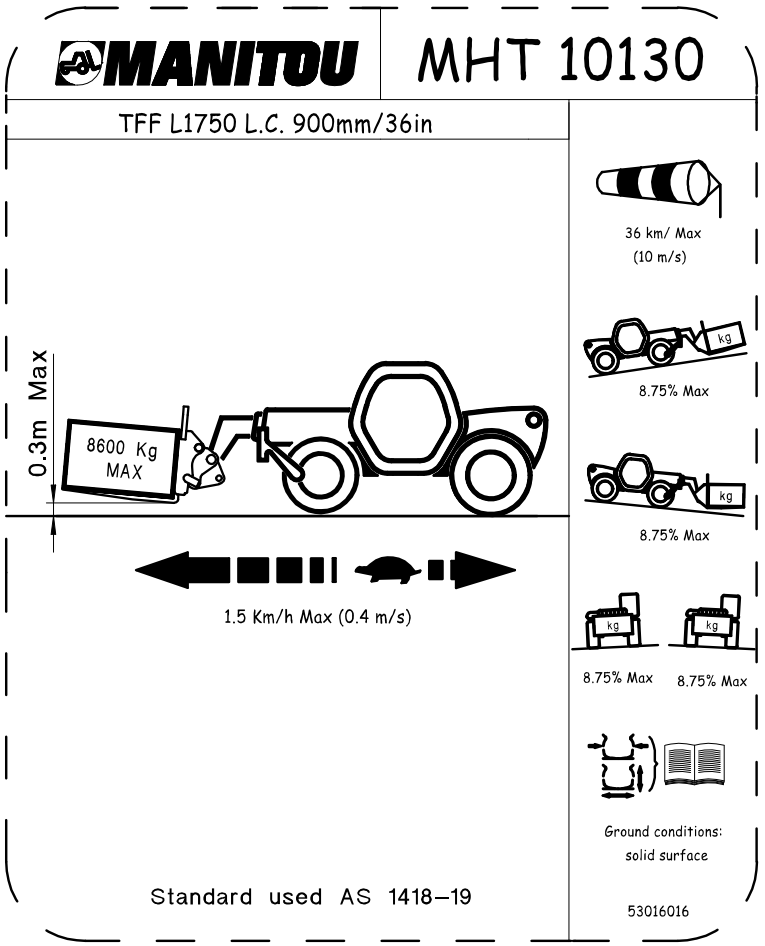

MANITOU
MHT 10130
TFF+TDL L2500 L.C. 1200mm/48in
Pos. AX
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
6000 Kg 13200 lbs
6500 Kg 14000 lbs
4500 Kg / 9900 lbs
3700 Kg / 8100 lbs
2800 Kg / 6100 lbs
2000 Kg / 4400 lbs
1200 mm 48in
53016008
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

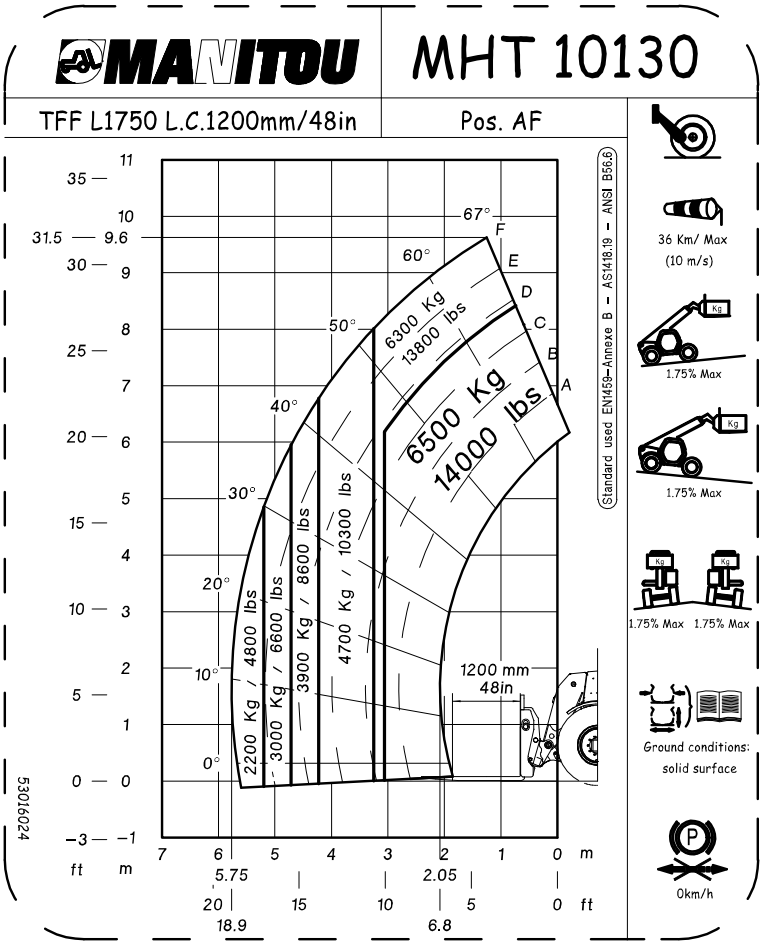


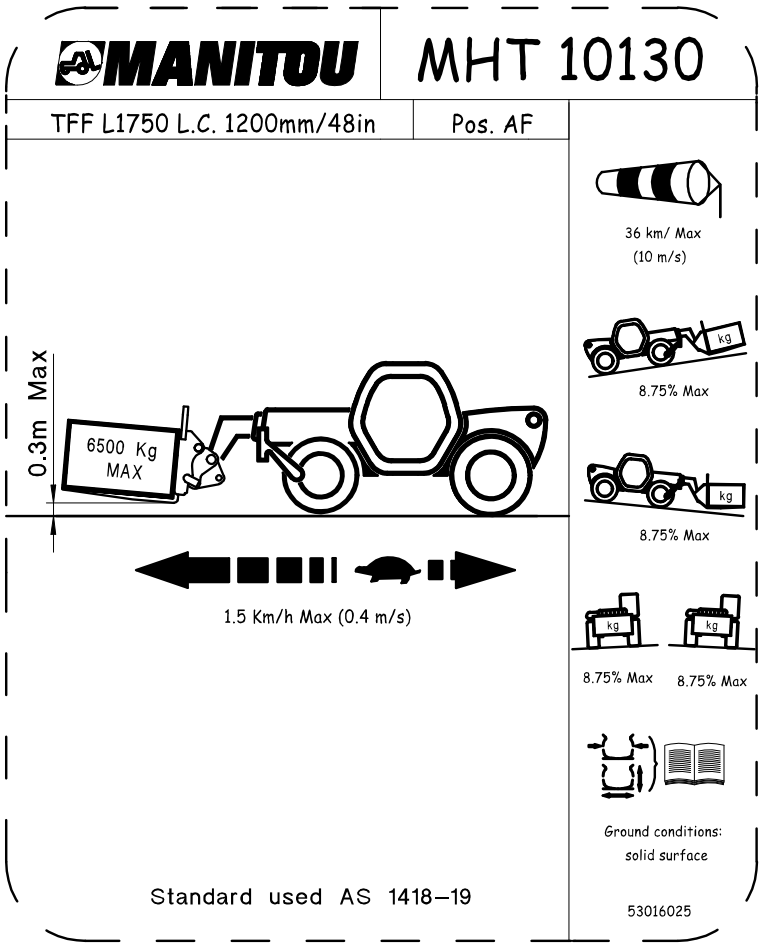


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

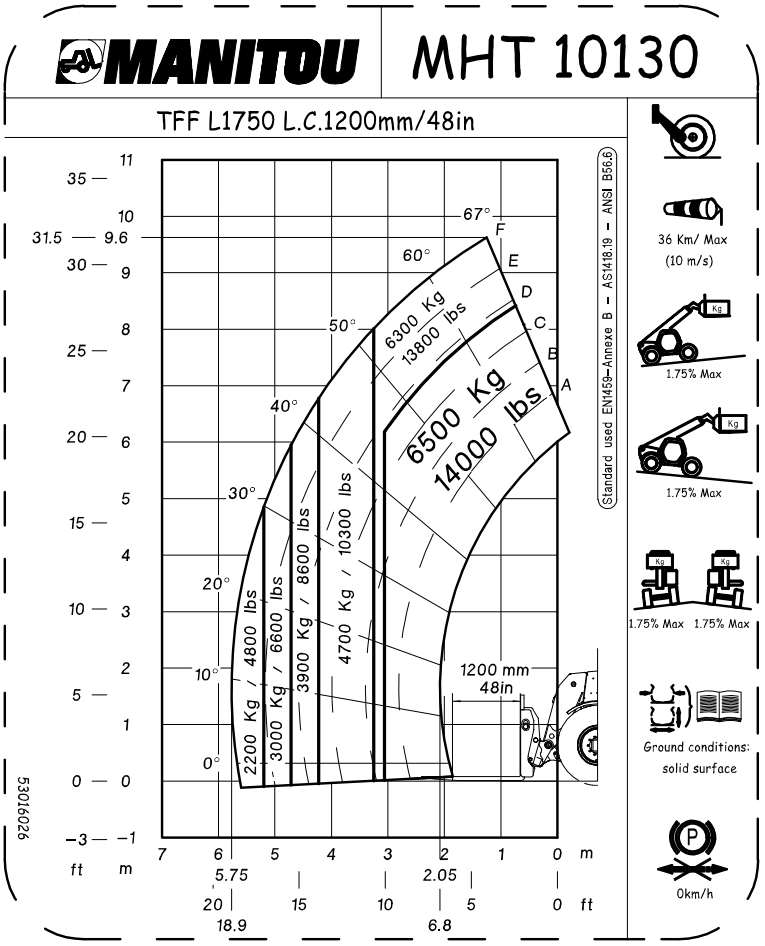

MANITOU
MHT 10130
TFF L1750 L.C.900mm/36in
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
6800 Kg 15000 lbs
7700 Kg 17000 lbs
8600 Kg 19000 lbs
2300 Kg / 5000 lbs
3200 Kg / 7000 lbs
4100 Kg / 9000 lbs
5000 Kg / 11000 lbs
900 mm 36 in
53016015
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

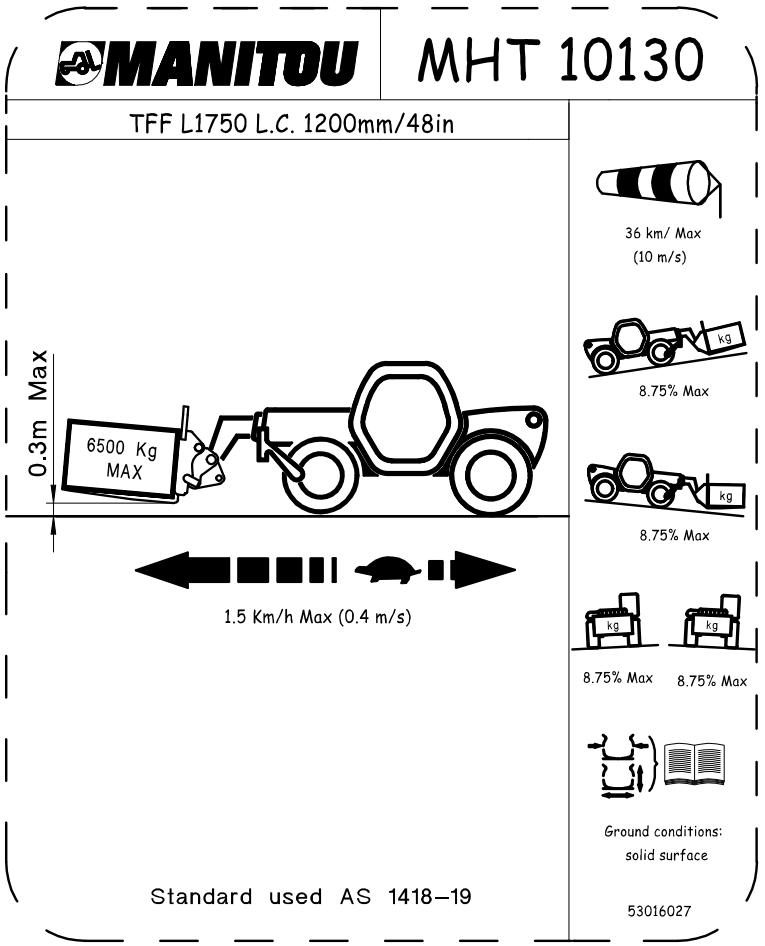

MANITOU
MHT 10130
TFF L1750 L.C. 900mm/36in
0.3m Max
8600 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53016016

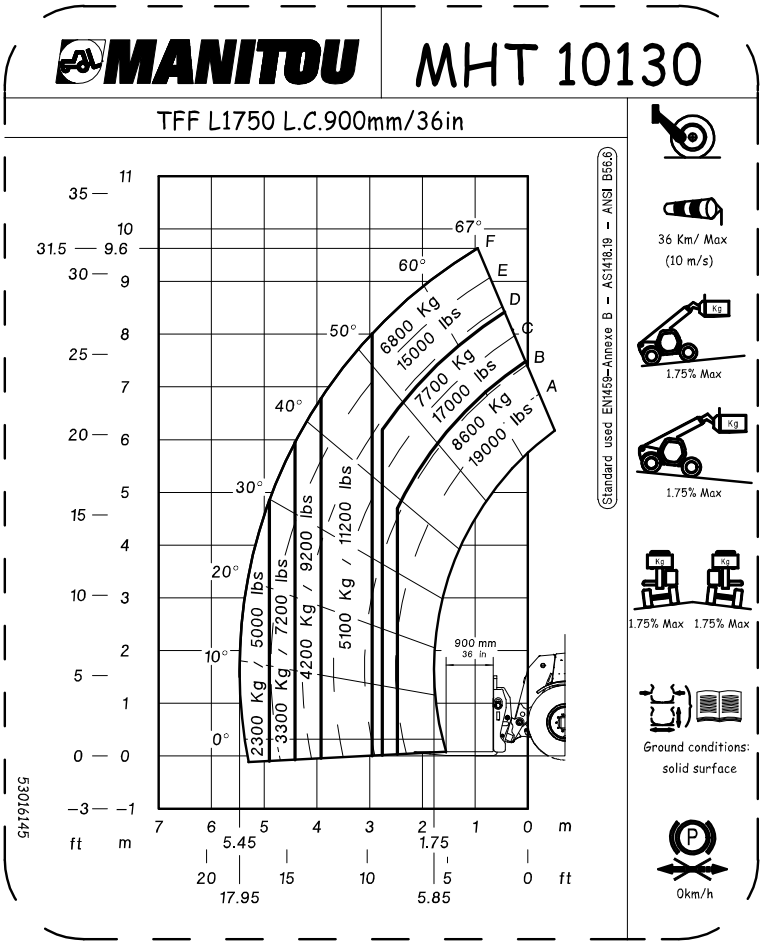


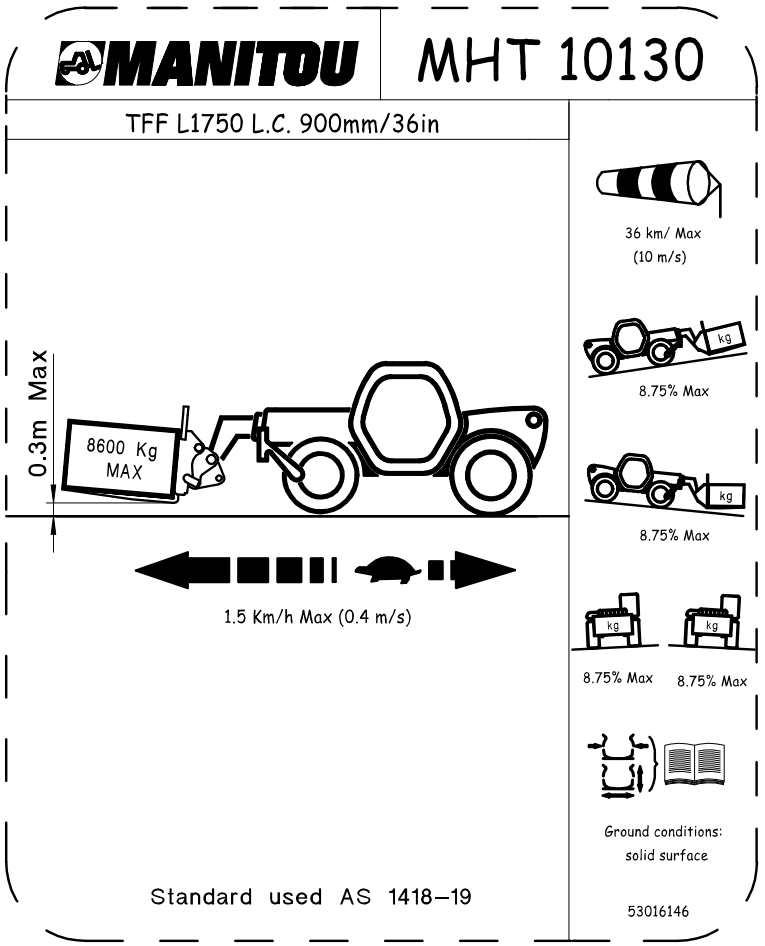


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

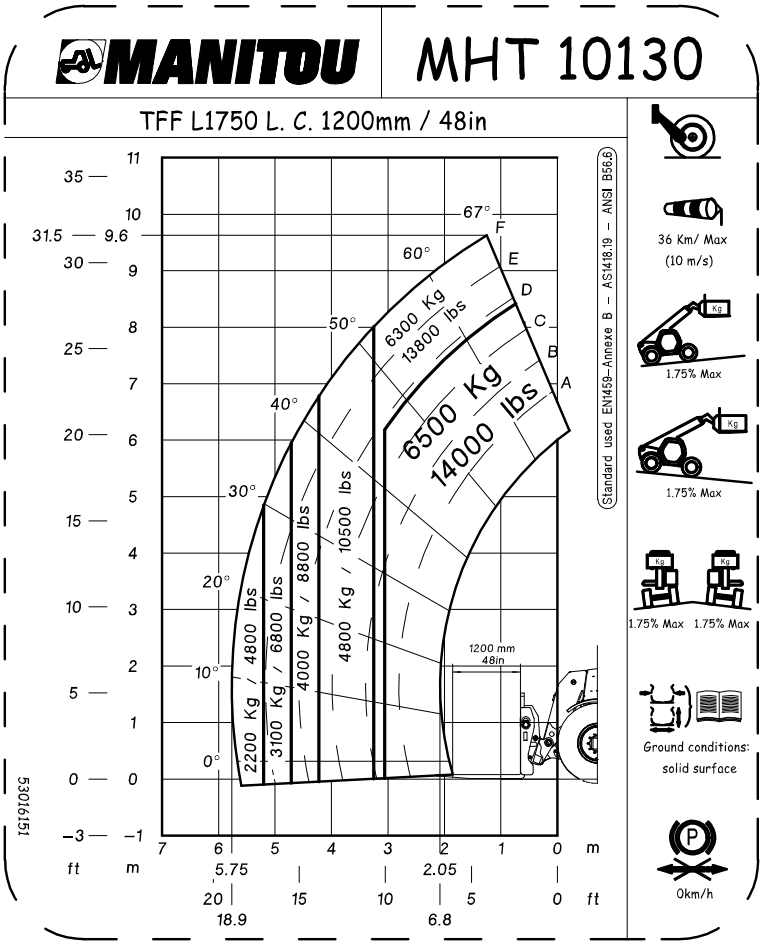

MANITOU
MHT 10130
TFF L1750 L.C.1200mm/48in
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
6300 Kg 13800 lbs
6500 Kg 14000 lbs
4700 Kg / 10300 lbs
3900 Kg / 8600 lbs
3000 Kg / 6600 lbs
2200 Kg / 4800 lbs
1200 mm 48in
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
35
31.5
30
25
20
15
10
5
0
−3
11
10
9.6
9
8
7
6
5
4
3
2
1
0
−1
ft
m
7 6 5 4 3 2 1 0 m
5.75 2.05
20 15 10 5 0 ft
18.9 6.8
53016026
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions:
solid surface
0km/h

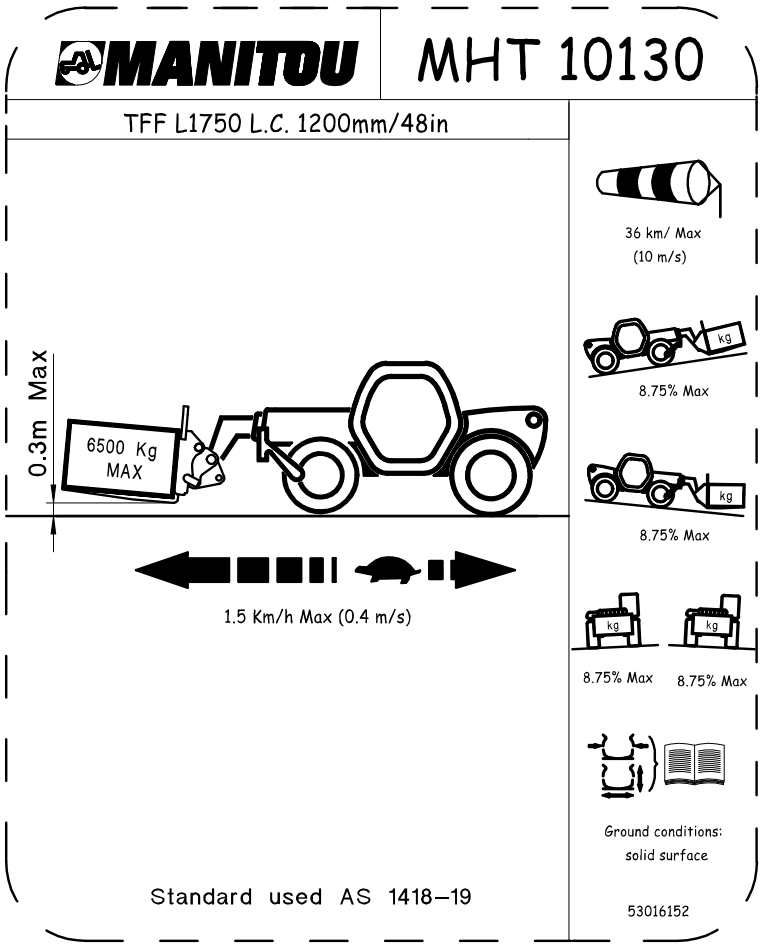

MANITOU
MHT 10130
TFF L1750 L.C. 1200mm/48in
0.3m Max
6500 Kg
MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53016027

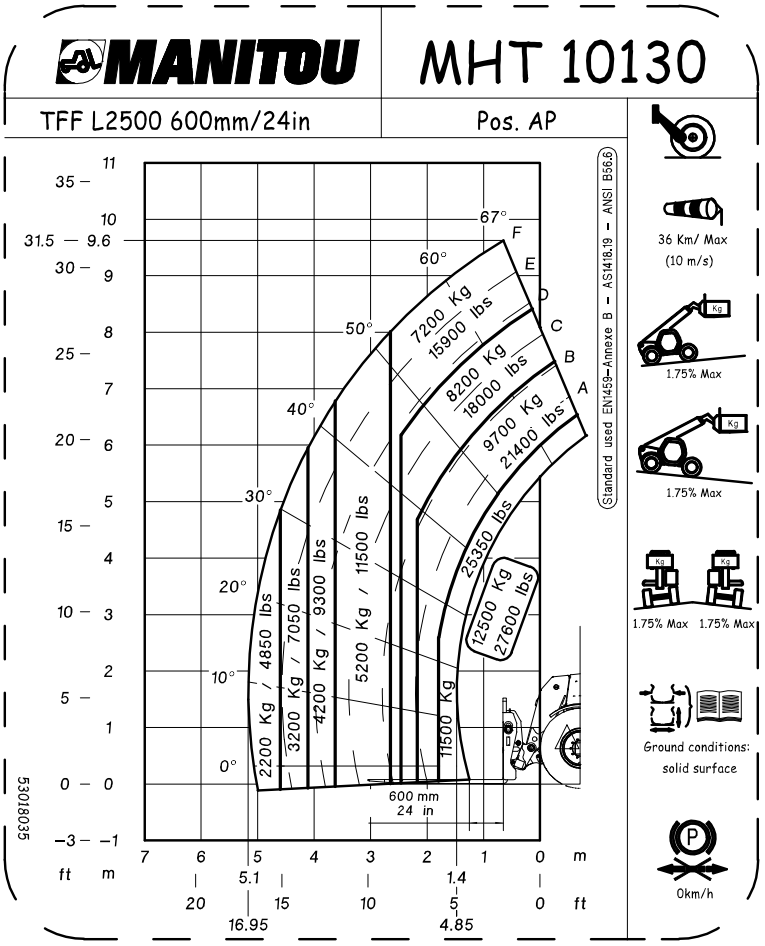


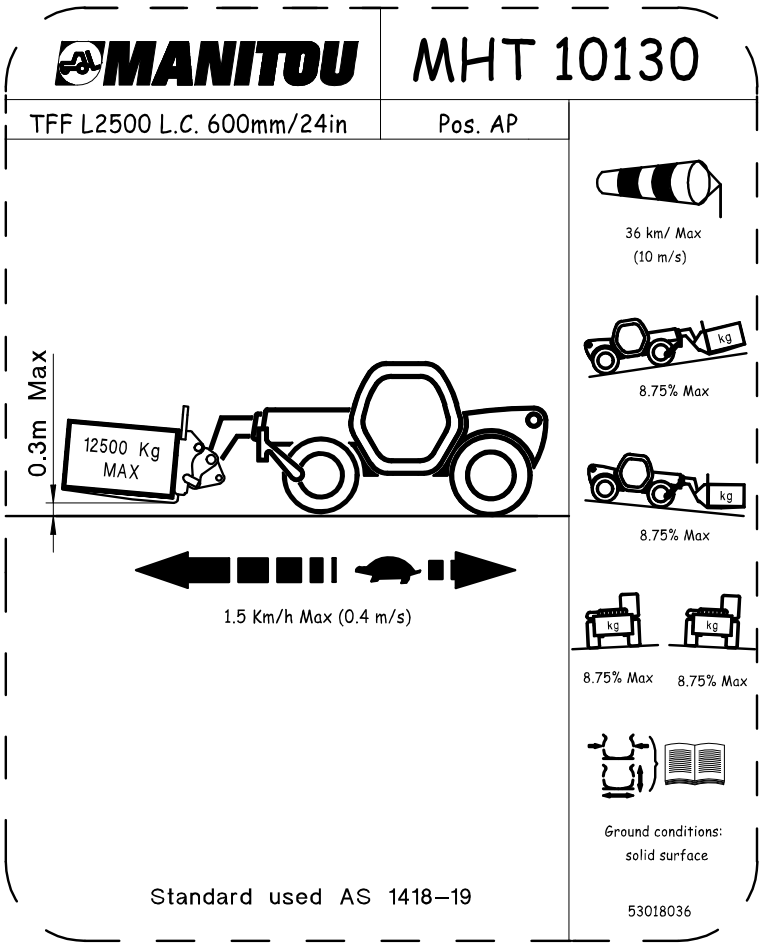


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

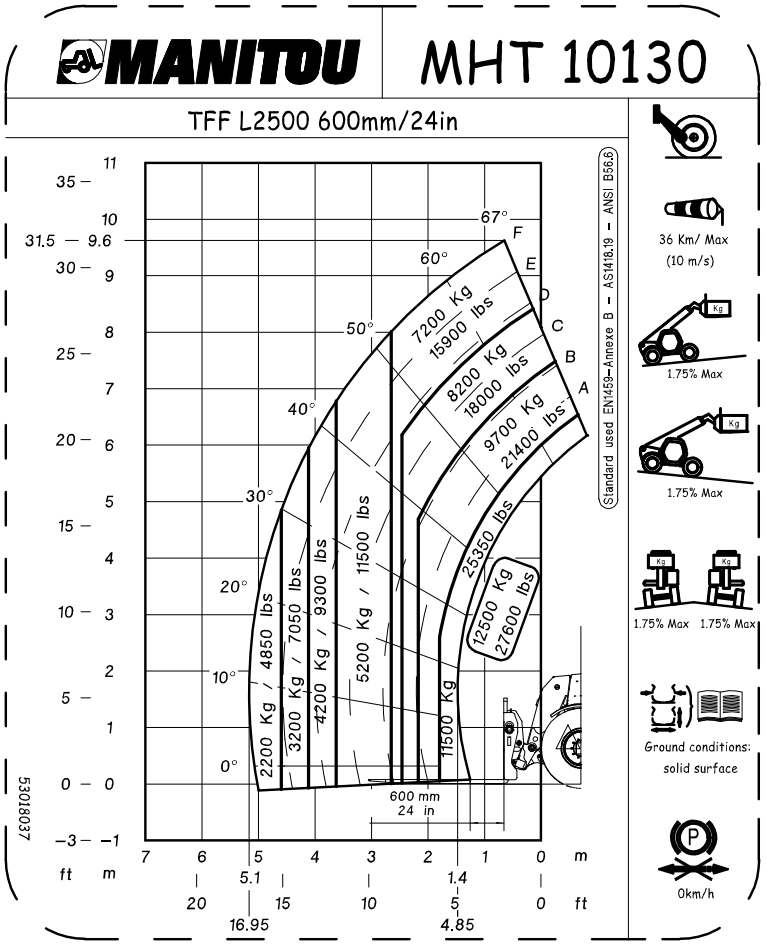

MANITOU
MHT 10130
TFF L1750 L. C. 1200mm / 48in
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
6300 Kg 13800 lbs
6500 Kg 14000 lbs
4800 Kg / 10500 lbs
4000 Kg / 8800 lbs
3100 Kg / 6800 lbs
2200 Kg / 4800 lbs
1200 mm 48in
67°
60°
50°
40°
30°
20°
10°
0°
A
B
C
D
E
F
35
31.5
30
25
20
15
10
5
0
–3
11
10
9.6
9
8
7
6
5
4
3
2
1
0
–1
7 6 5 4 3 2 1 0 m
5.75 2.05
20 15 10 5 0 ft
18.9 6.8
53016151
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions:
solid surface
0km/h

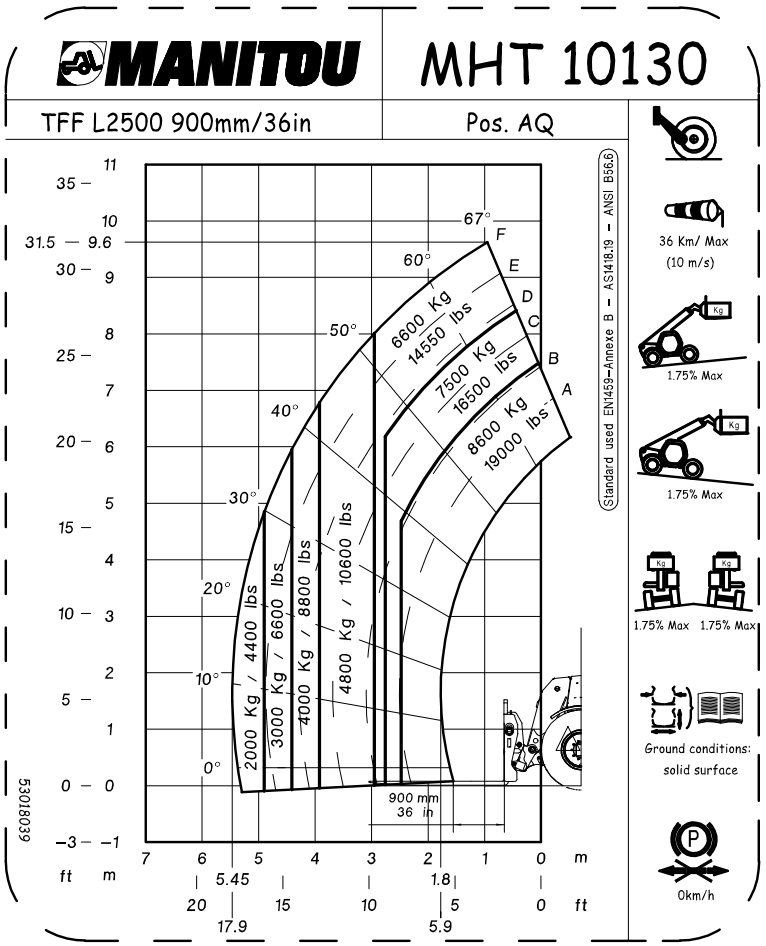

MANITOU
MHT 10130
TFF L1750 L.C. 1200mm/48in
0.3m Max
6500 Kg
MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53016152





648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF L2500 600mm/24in
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
7200 Kg 15900 lbs
8200 Kg 18000 lbs
9700 Kg 21400 lbs
11500 Kg
12500 Kg 27600 lbs
25350 lbs
5200 Kg / 11500 lbs
4200 Kg / 9300 lbs
3200 Kg / 7050 lbs
2200 Kg / 4850 lbs
600 mm 24 in
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
53018037
ft m
11 10 9 8 7 6 5 4 3 2 1 0
35 31.5 30 25 20 15 10 5 0 -3
7 6 5 4 3 2 1 0 m
5.1 1.4
20 15 10 5 0 ft
16.95 4.85

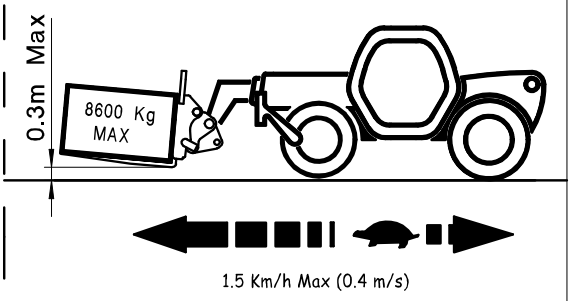

MANITOU
MHT 10130
TFF L2500 900mm/36in
Pos. AQ
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6600 Kg 14550 lbs
7500 Kg 16500 lbs
8600 Kg 19000 lbs
4800 Kg / 10600 lbs
4000 Kg / 8800 lbs
3000 Kg / 6600 lbs
2000 Kg / 4400 lbs
900 mm 36 in
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
53018039
ft m
11 10 9 8 7 6 5 4 3 2 1 0
35 31.5 30 25 20 15 10 5 0 -3
7 6 5 4 3 2 1 0 m
5.45 1.8
20 15 10 5 0 ft
17.9 5.9

MANITOU

MHT 10130

TFF L2500 L.C. 900mm/36in

Pos. AQ




36 km/ Max
(10 m/s)



8.75% Max



8.75% Max



8.75% Max



8.75% Max


Ground conditions:
solid surface

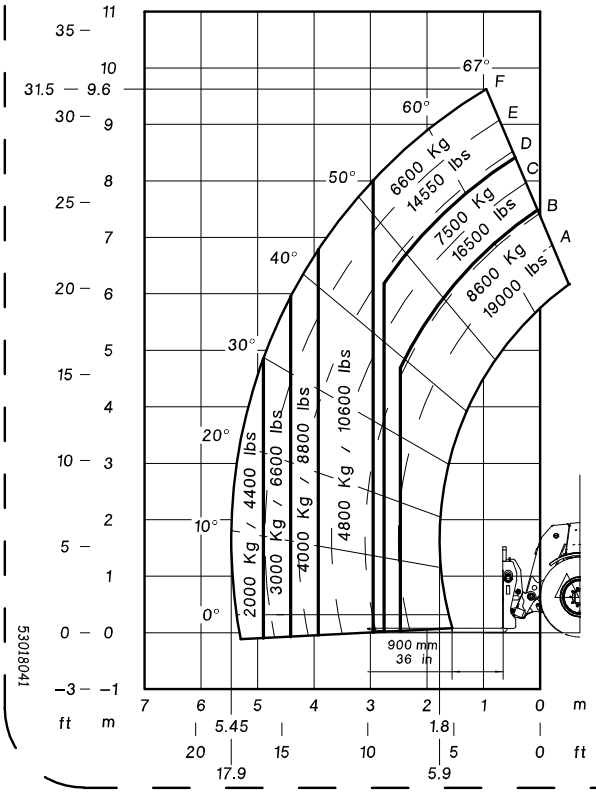
Standard used AS 1418–19

53018040

MANITOU

MHT 10130

TFF L2500 900mm/36in

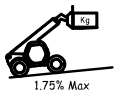


Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6

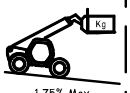
53018041



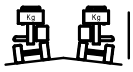

36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



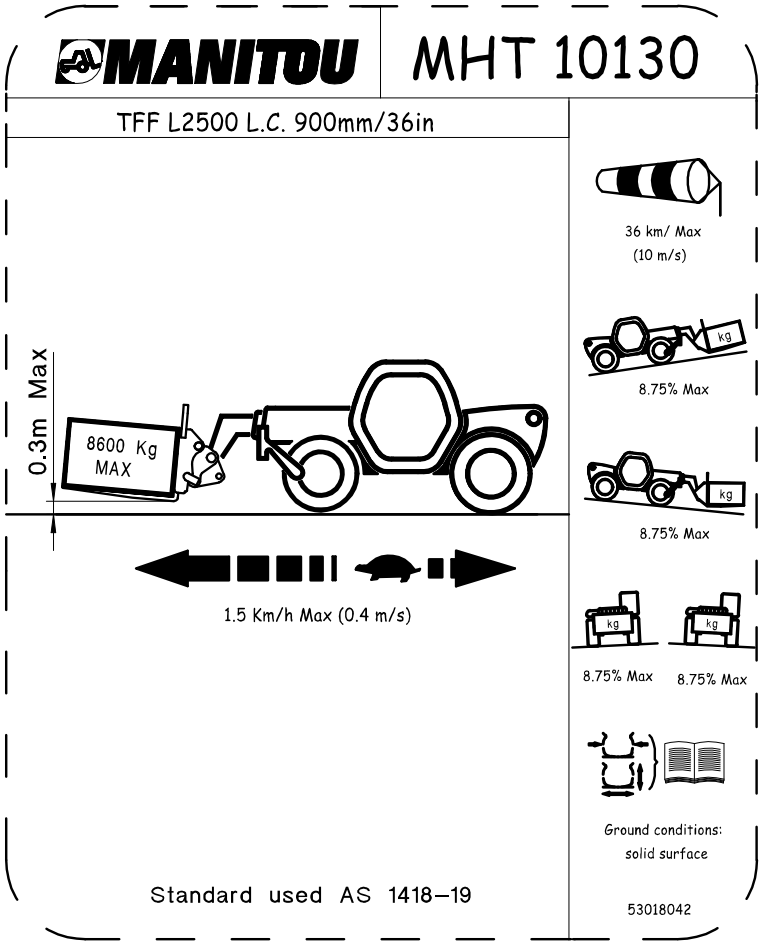
1.75% Max 1.75% Max

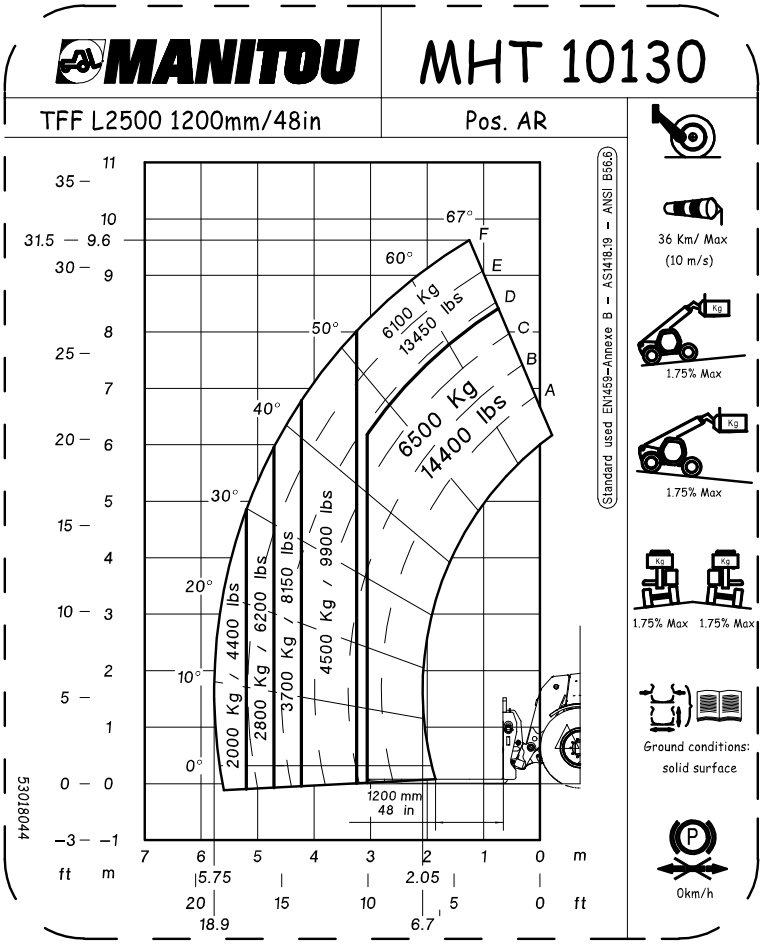

Ground conditions:
solid surface



0km/h

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF L2500 L.C. 900mm/36in
0.3m Max
8600 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53018042

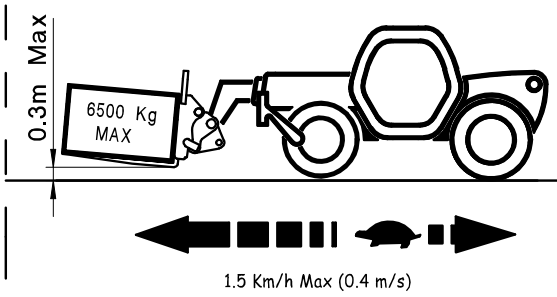

MANITOU
MHT 10130
TFF L2500 1200mm/48in
Pos. AR
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6100 Kg 13450 lbs
6500 Kg 14400 lbs
4500 Kg / 9900 lbs
3700 Kg / 8150 lbs
2800 Kg / 6200 lbs
2000 Kg / 4400 lbs
1200 mm 48 in
35
31.5
30
25
20
15
10
5
0
−3
ft
m
11
10
9.6
9
8
7
6
5
4
3
2
1
0
−1
7
6
5
4
3
2
1
0
m
5.75
2.05
20
15
10
5
0
ft
18.9
6.7
53018044
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions: solid surface
0km/h

MANITOU

MHT 10130

TFF L2500 L.C. 1200mm/48in

Pos. AR



1.5 Km/h Max (0.4 m/s)



36 km/ Max
(10 m/s)



8.75% Max



8.75% Max



8.75% Max



8.75% Max



Ground conditions:
solid surface

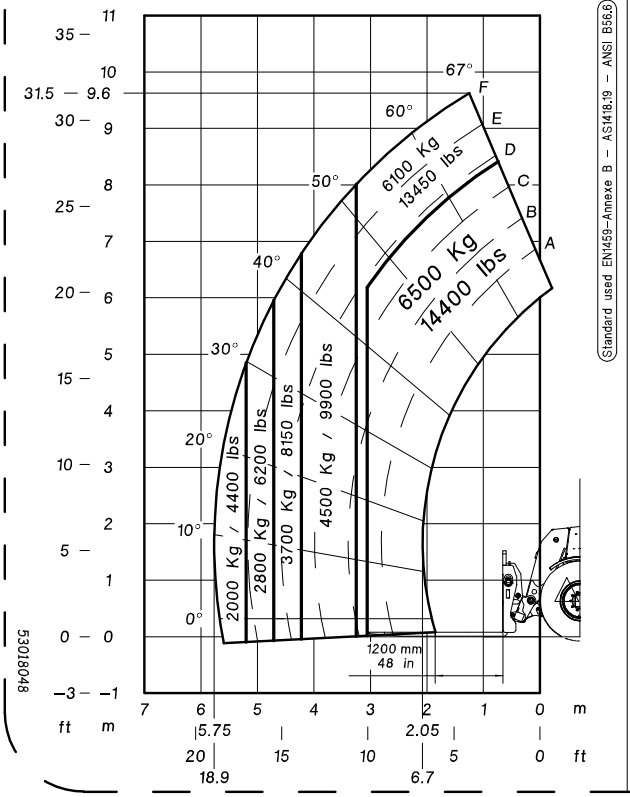
Standard used AS 1418–19

53018046

MANITOU

MHT 10130

TFF L2500 1200mm/48in



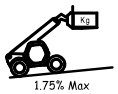
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6

53018048

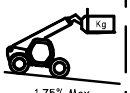




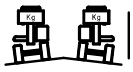
36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max

1.75% Max

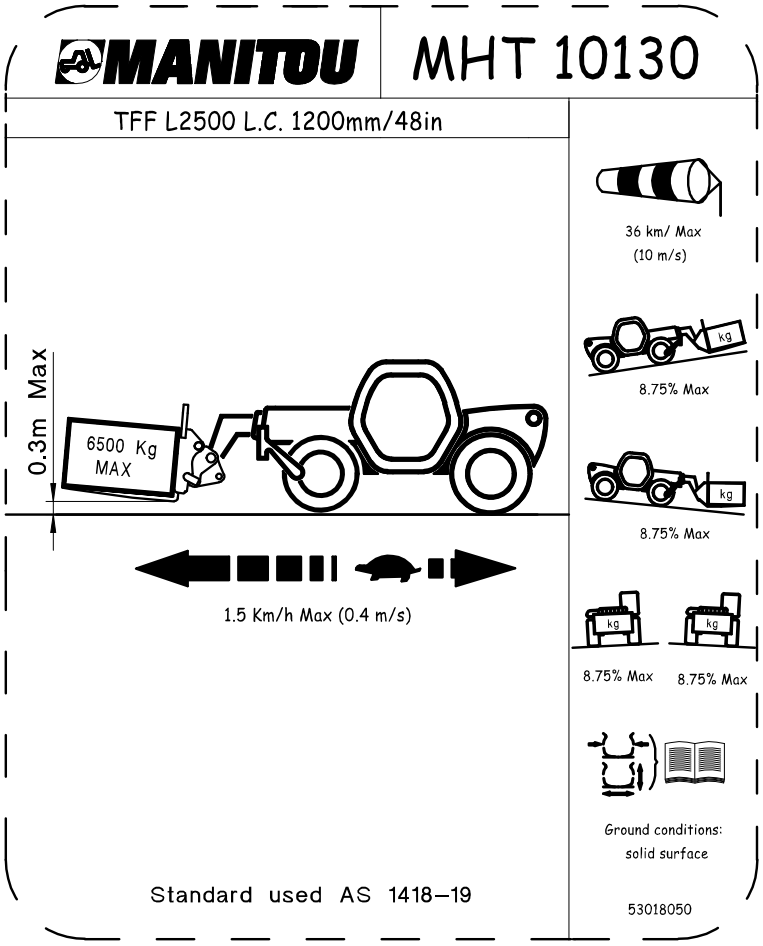


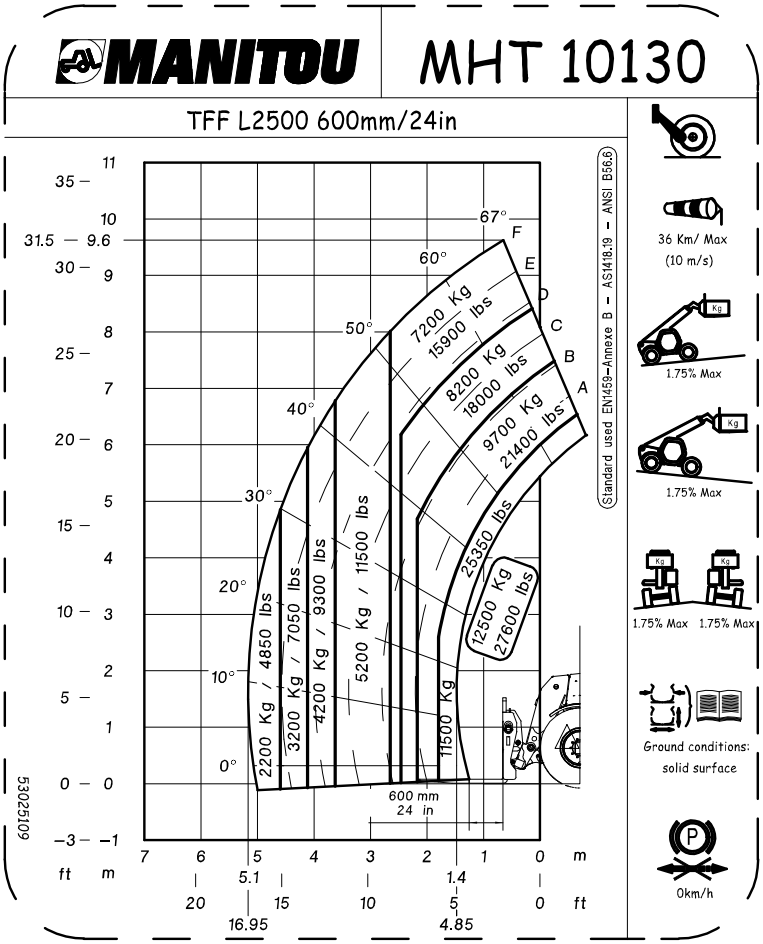
Ground conditions:
solid surface



0km/h

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF L2500 L.C. 1200mm/48in
0.3m Max
6500 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53018050

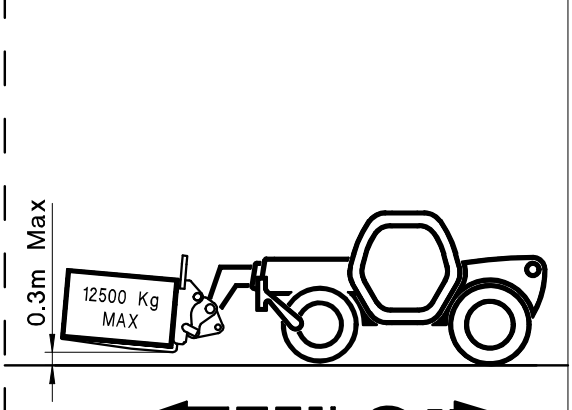

MANITOU
MHT 10130
TFF L2500 600mm/24in
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
7200 Kg 15900 lbs
8200 Kg 18000 lbs
9700 Kg 21400 lbs
25350 lbs
12500 Kg 27800 lbs
11500 Kg
2200 Kg / 4850 lbs
3200 Kg / 7050 lbs
4200 Kg / 9300 lbs
5200 Kg / 11500 lbs
600 mm 24 in
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
53036109

MANITOU

MHT 10130

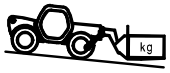
TFF L2500 L.C. 600mm/24in

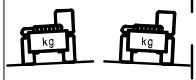
Pos. AJ




36 km/ Max
(10 m/s)


1.75% Max


1.75% Max


8.75% Max 8.75% Max


Ground conditions:
solid surface

Standard used AS 1418–19

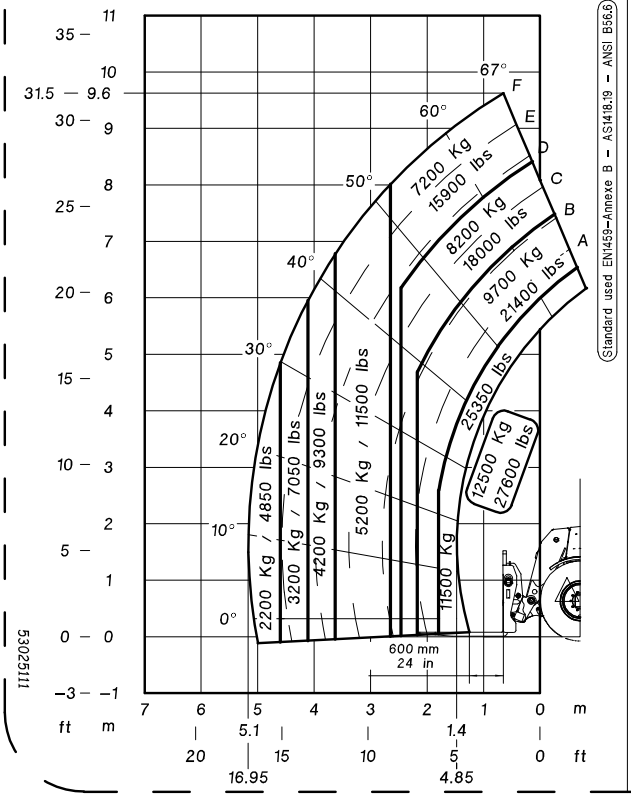
53025110

MANITOU

MHT 10130

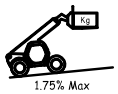
TFF L2500 600mm/24in

Pos. AJ

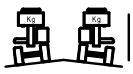





36 Km/ Max
(10 m/s)


1.75% Max


1.75% Max


1.75% Max 1.75% Max


Ground conditions:
solid surface

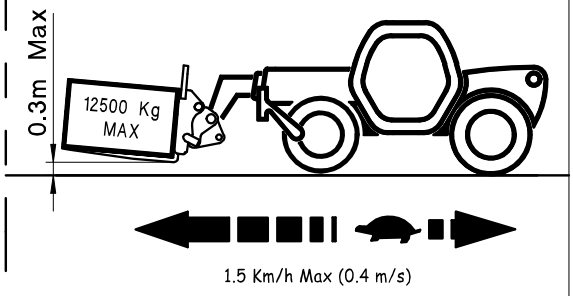

0km/h

53025111

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU MHT 10130

TFF L2500 L.C. 600mm/24in




36 km/ Max
(10 m/s)


1.75% Max


1.75% Max


8.75% Max 8.75% Max

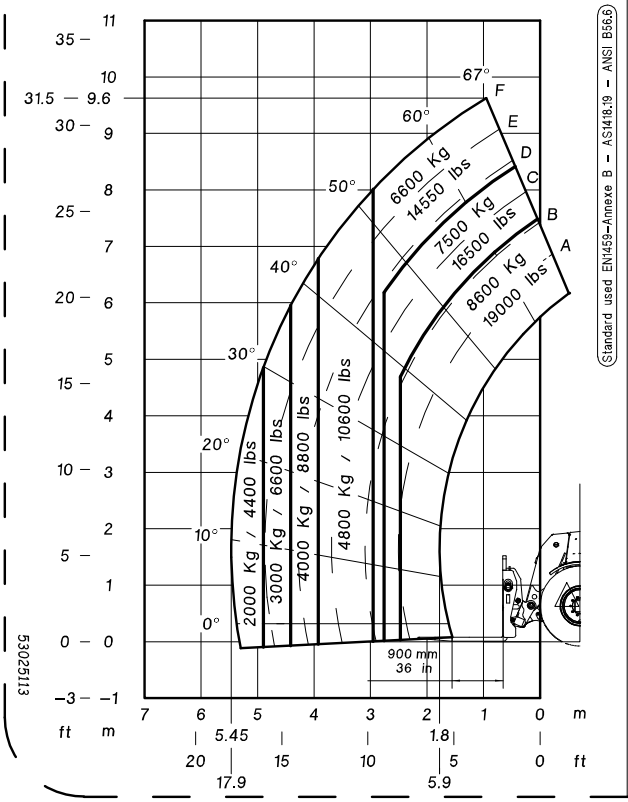

Ground conditions:
solid surface

Standard used AS 1418–19

53025112

MANITOU MHT 10130

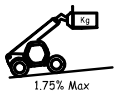
TFF L2500 900mm/36in

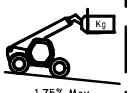


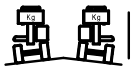
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6




36 Km/ Max
(10 m/s)


1.75% Max


1.75% Max

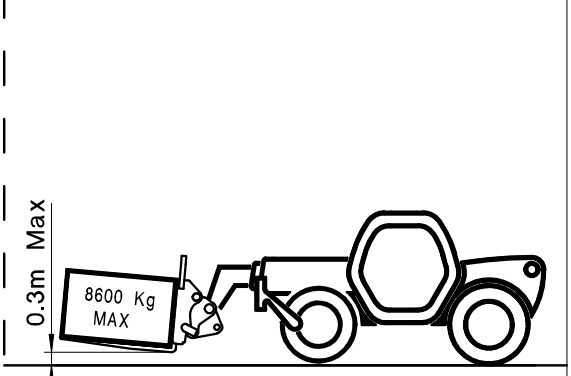

1.75% Max 1.75% Max


Ground conditions:
solid surface


0km/h

MANITOU MHT 10130

TFF L2500 L.C. 900mm/36in



1.5 Km/h Max (0.4 m/s)



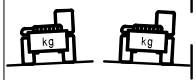
36 km/ Max
(10 m/s)



1.75% Max



1.75% Max



8.75% Max 8.75% Max



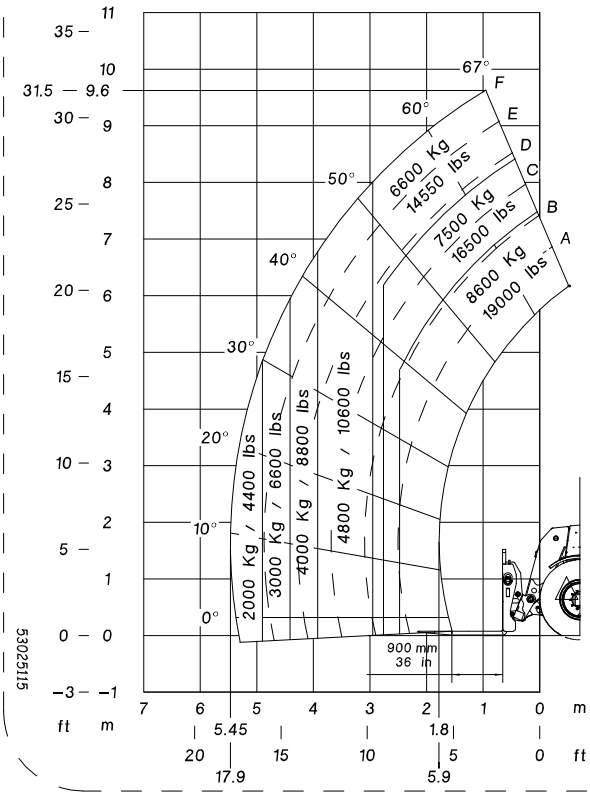
Ground conditions:
solid surface

Standard used AS 1418–19

53025114

MANITOU MHT 10130

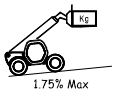
TFF L2500 900mm/36in | Pos. AK



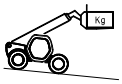




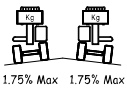
36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



Ground conditions:
solid surface



0km/h

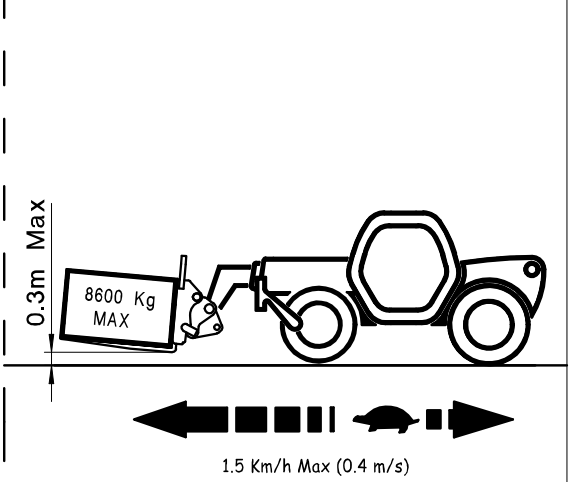
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU

MHT 10130

TFF L2500 L.C. 900mm/36in

Pos. AK




36 km/ Max
(10 m/s)



1.75% Max



1.75% Max



8.75% Max



8.75% Max


Ground conditions:
solid surface

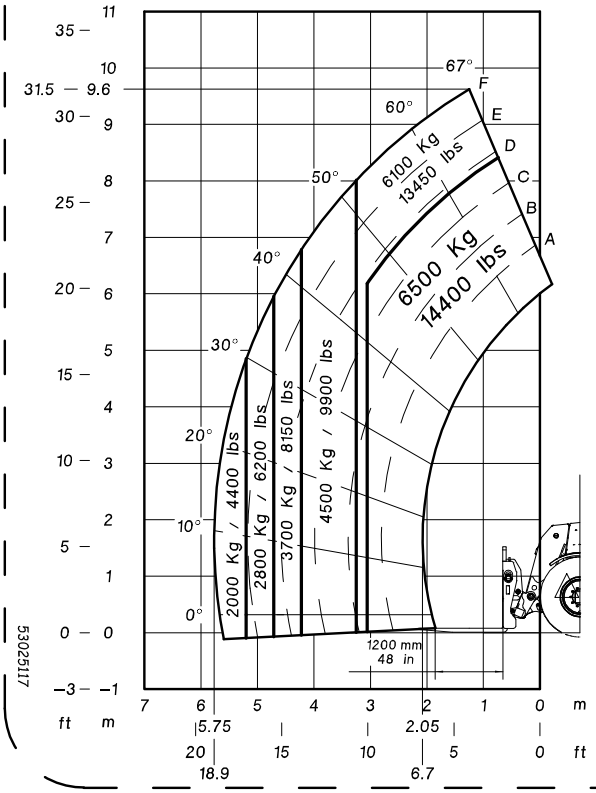
Standard used AS 1418–19

53025116

MANITOU

MHT 10130

TFF L2500 1200mm/48in

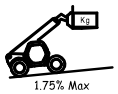


Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6

53025117



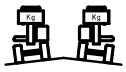

36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max

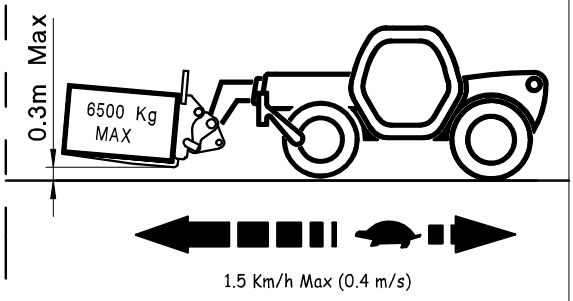

Ground conditions:
solid surface



0km/h

MANITOU MHT 10130

TFF L2500 L.C. 1200mm/48in Pos. AL



1.5 Km/h Max (0.4 m/s)



36 km/ Max
(10 m/s)



1.75% Max



1.75% Max



8.75% Max 8.75% Max



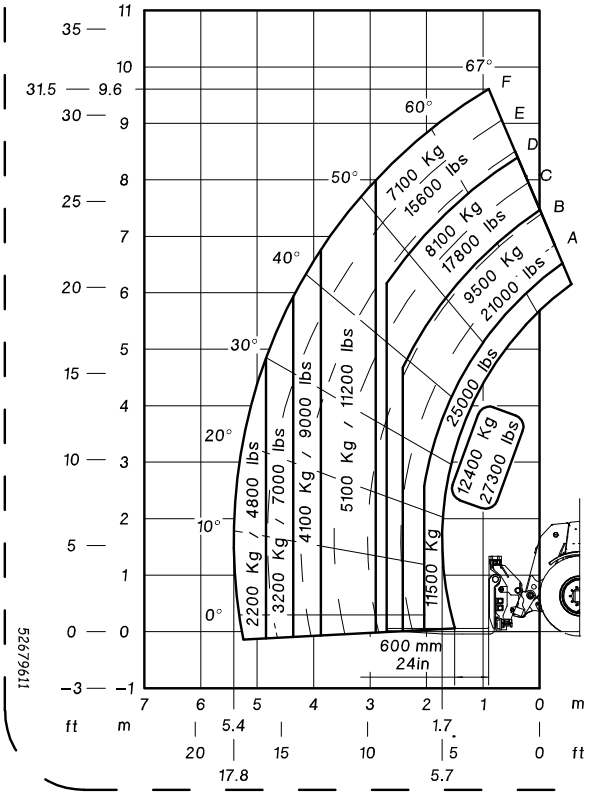
Ground conditions:
solid surface

Standard used AS 1418–19

53025120

MANITOU MHT 10130

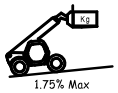
TFF+TDL L2500 L.C. 600mm/24in Pos. AS



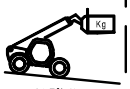




36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max

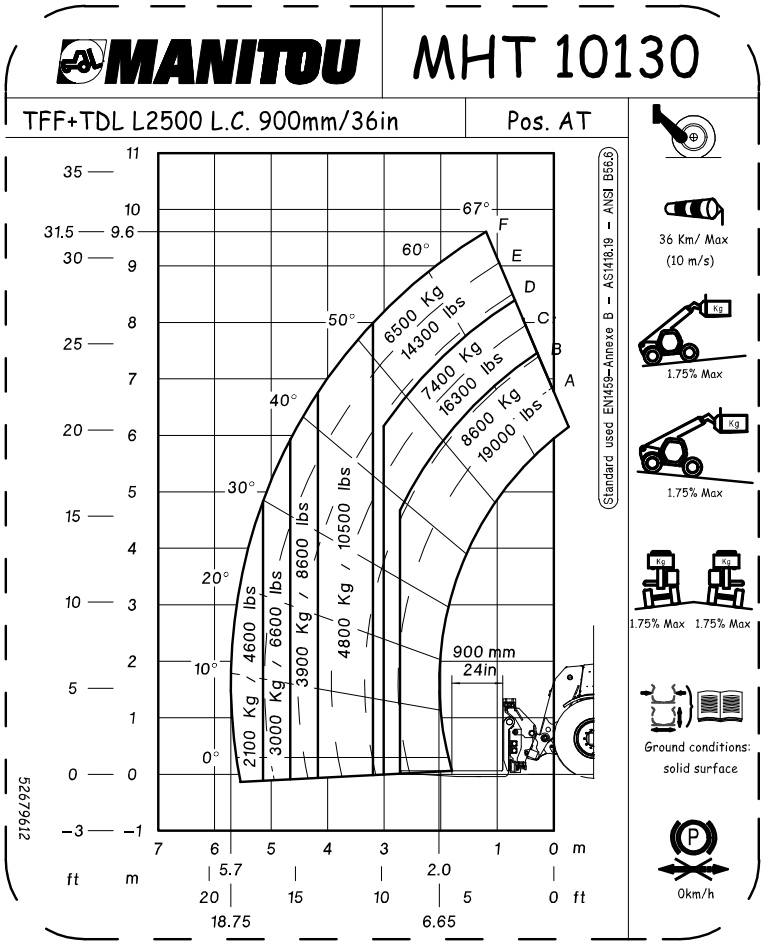


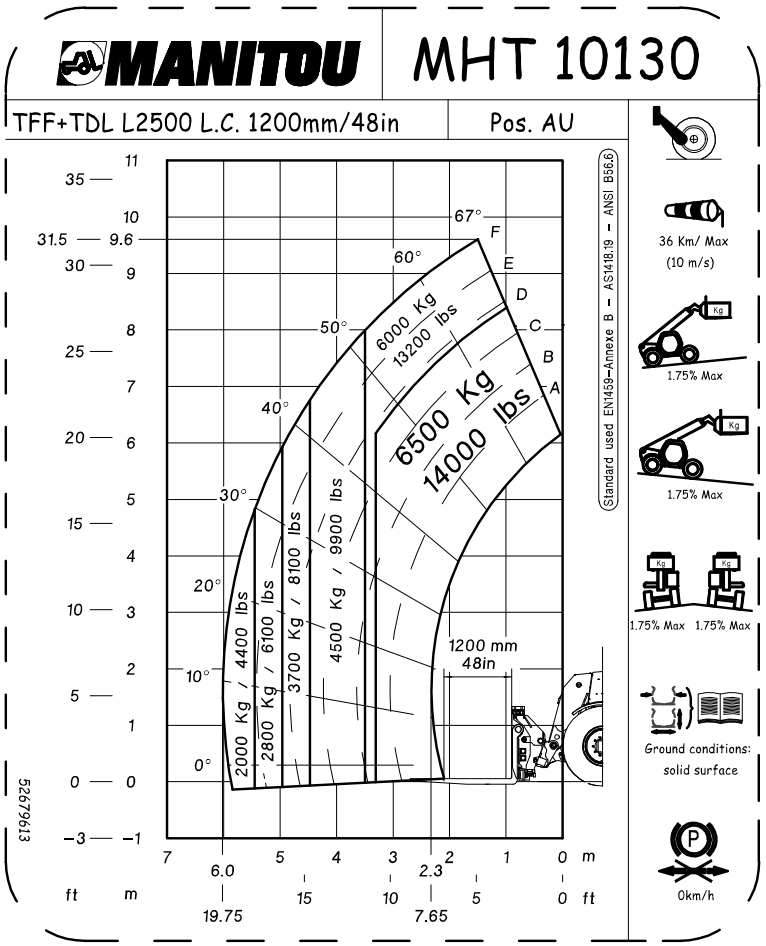
Ground conditions:
solid surface

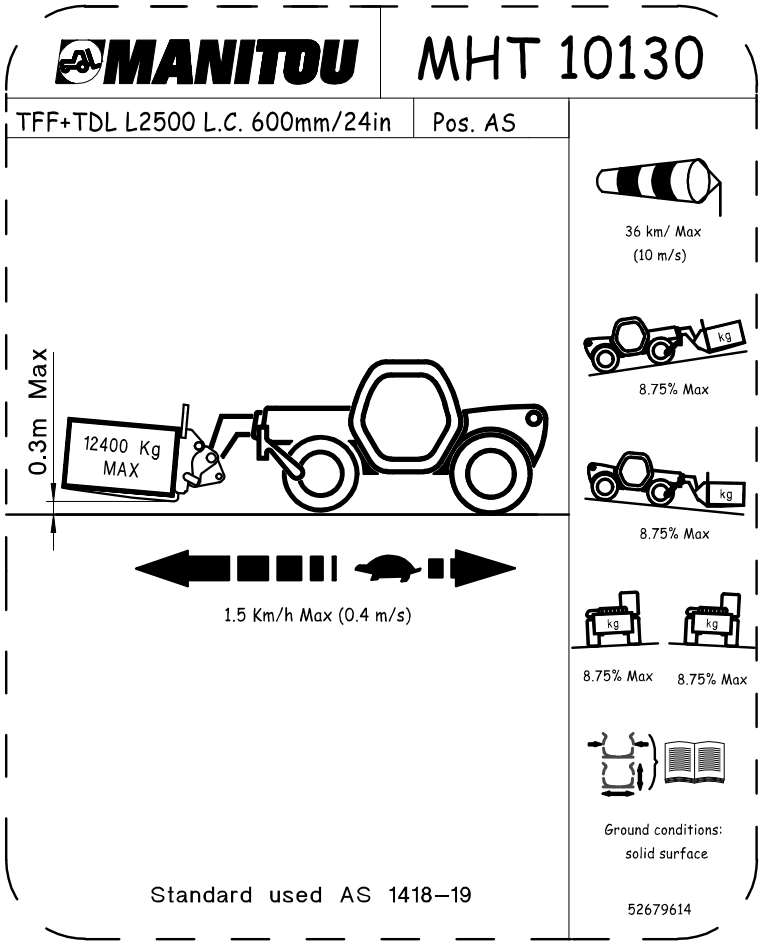


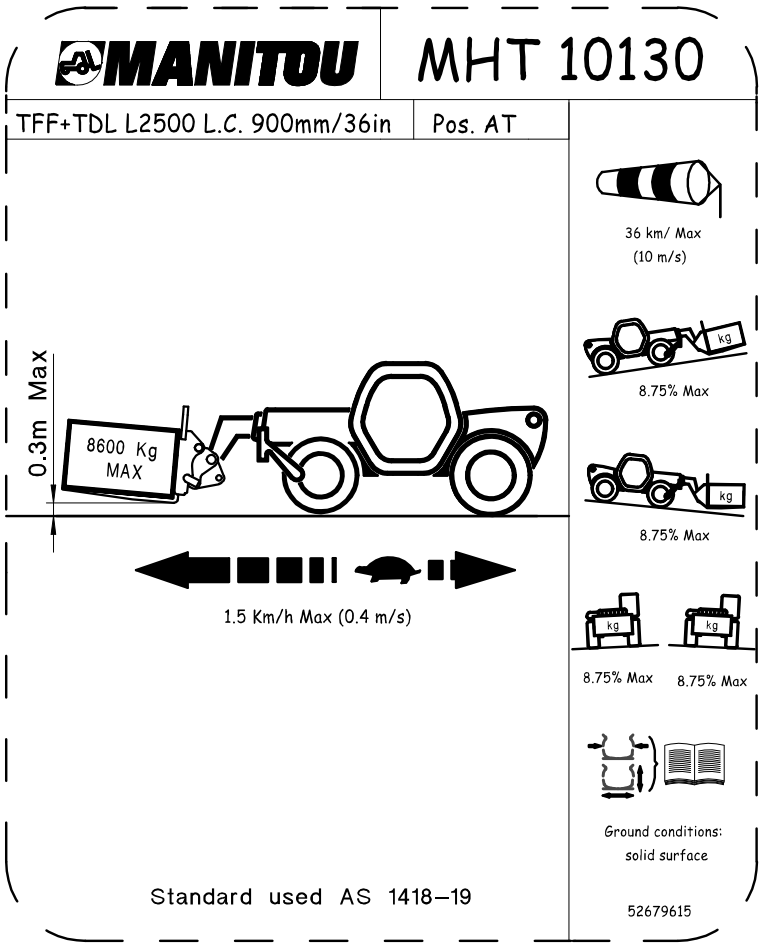
0km/h

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

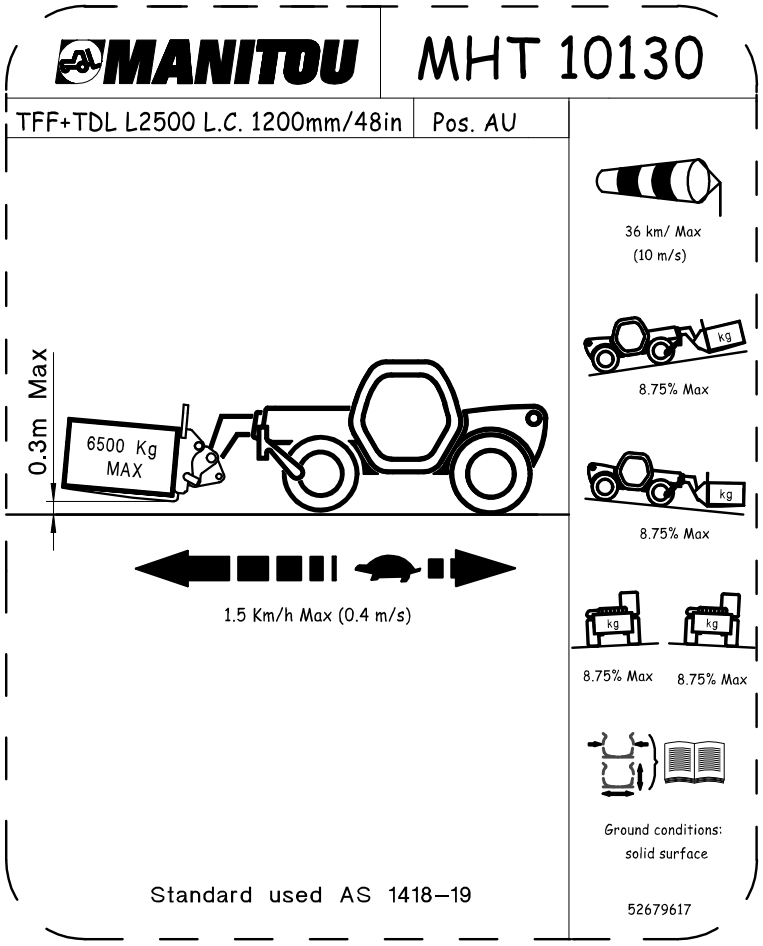

MANITOU
MHT 10130
TFF+TDL L2500 L.C. 900mm/36in
Pos. AT
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6500 Kg 14300 lbs
7400 Kg 16300 lbs
8600 Kg 19000 lbs
2100 Kg / 4600 lbs
3000 Kg / 6600 lbs
3900 Kg / 8600 lbs
4800 Kg / 10500 lbs
900 mm 24in
52679612
ft m
35 31.5 30 25 20 15 10 5 0 −3
11 10 9.6 9 8 7 6 5 4 3 2 1 0 −1
7 6 5 4 3 1 0 m
20 15 10 5 0 ft
5.7 2.0
18.75 6.65
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

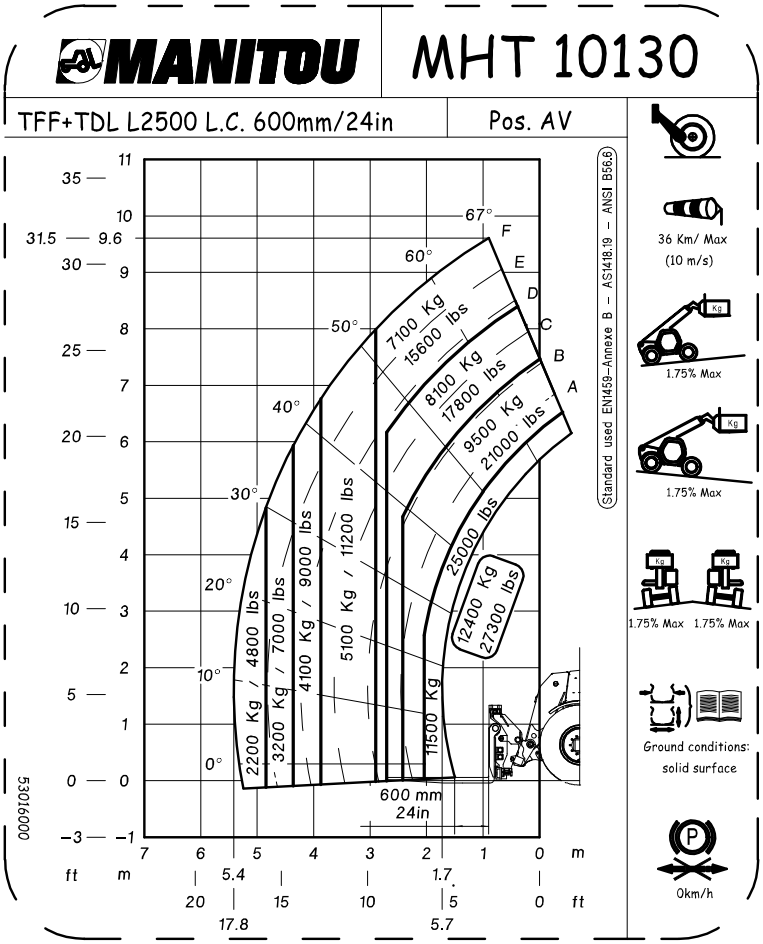

MANITOU
MHT 10130
TFF+TDL L2500 L.C. 1200mm/48in
Pos. AU
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6000 Kg 13200 lbs
6500 Kg 14000 lbs
2000 Kg / 4400 lbs
2800 Kg / 6100 lbs
3700 Kg / 8100 lbs
4500 Kg / 9900 lbs
1200 mm 48in
52679613
ft m
35 31.5 30 25 20 15 10 5 0 −3
11 10 9.6 9 8 7 6 5 4 3 2 1 0 −1
7 6 5 4 3 2 1 0 m
20 15 10 5 0 ft
6.0 2.3
19.75 7.65
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h





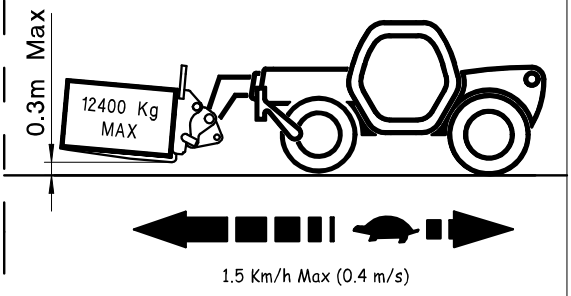
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF+TDL L2500 L.C. 1200mm/48in
Pos. AU
0.3m Max
6500 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
52679617


MANITOU
MHT 10130
TFF+TDL L2500 L.C. 600mm/24in
Pos. AV
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
7100 Kg 15600 lbs
8100 Kg 17800 lbs
9500 Kg 21000 lbs
25000 lbs
12400 Kg 27300 lbs
11500 Kg
5100 Kg / 11200 lbs
4100 Kg / 9000 lbs
3200 Kg / 7000 lbs
2200 Kg / 4800 lbs
600 mm 24in
5301600D
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

MANITOU MHT 10130

TFF+TDL L2500 L.C. 600mm/24in | Pos. AV



1.5 Km/h Max (0.4 m/s)



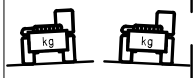
36 km/ Max
(10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



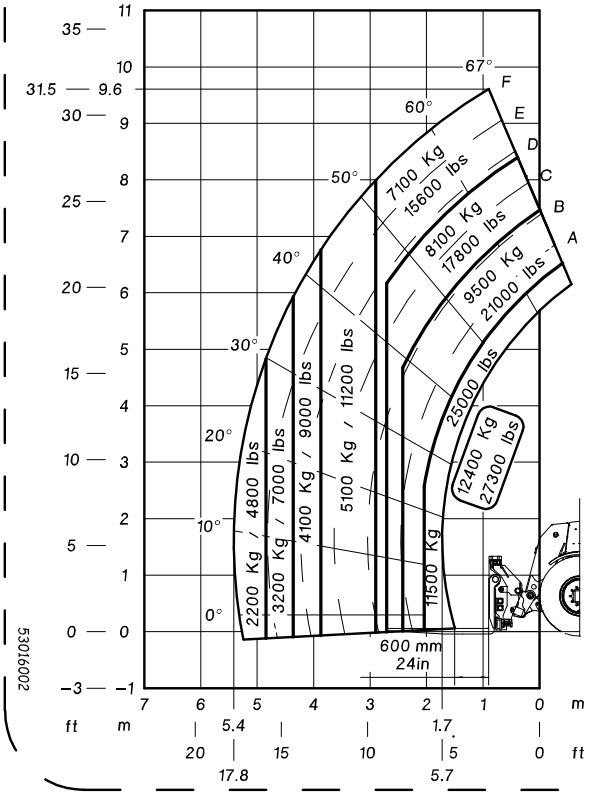
Ground conditions:
solid surface

Standard used AS 1418–19

53015947

MANITOU MHT 10130

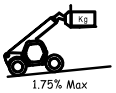
TFF+TDL L2500 L.C. 600mm/24in



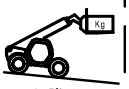




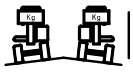
36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max

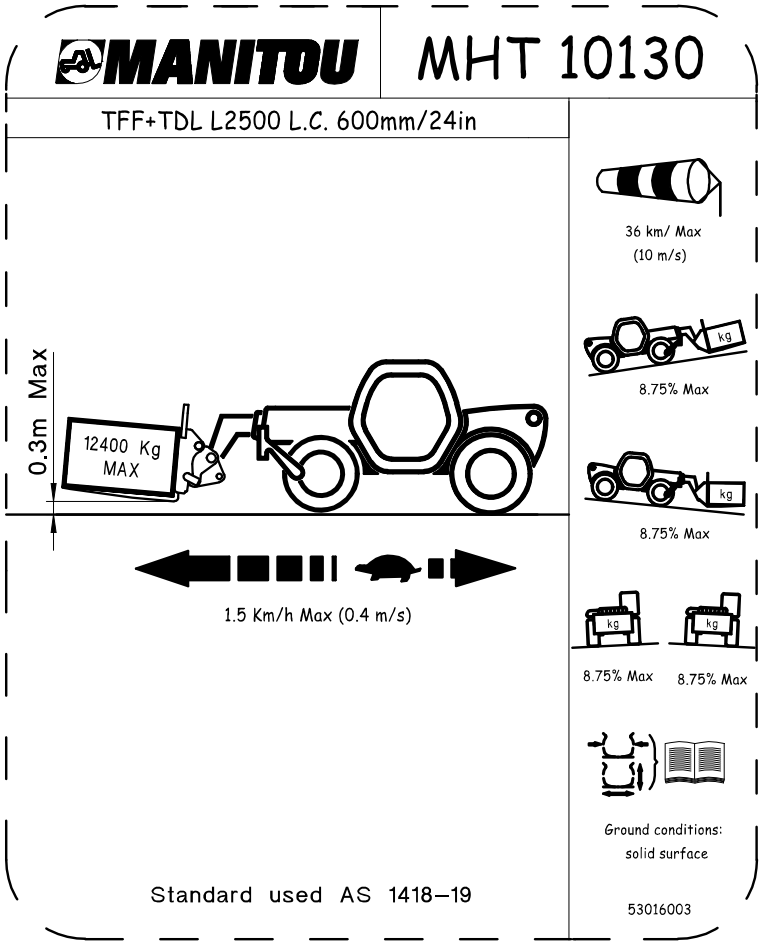


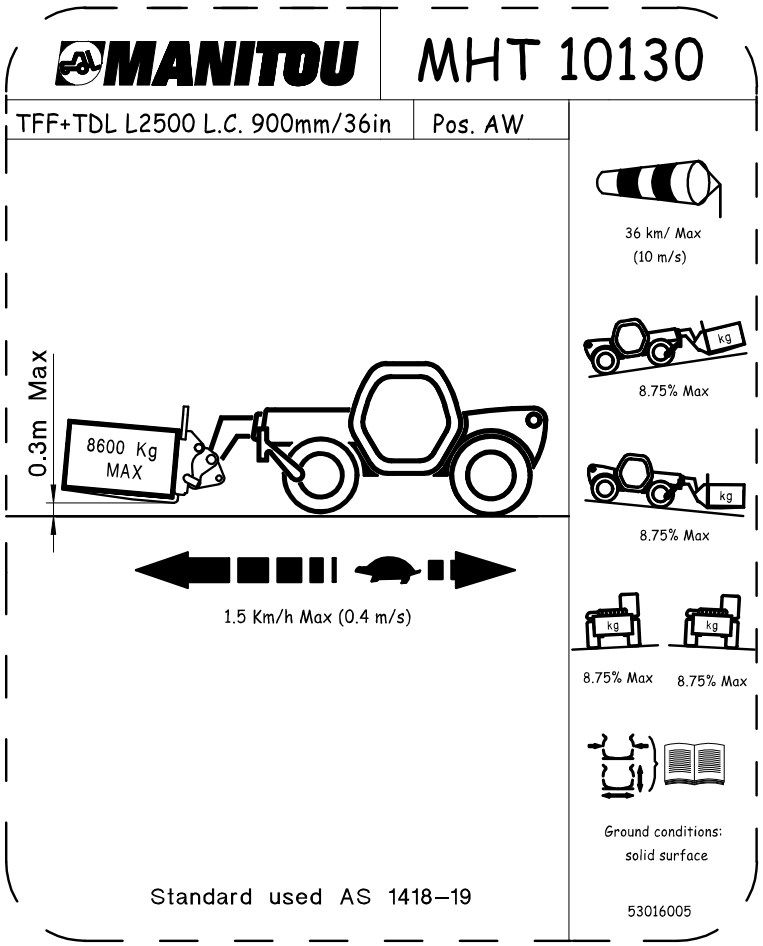
Ground conditions:
solid surface



0km/h

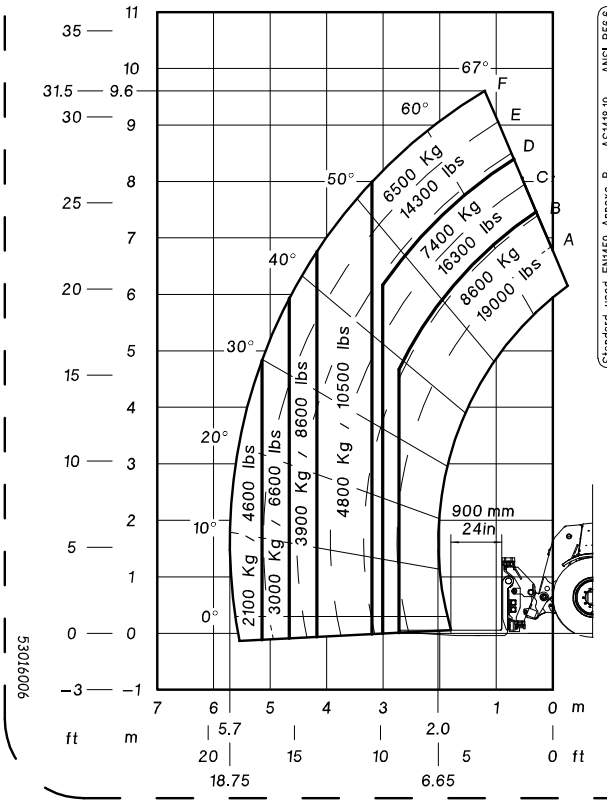
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF+TDL L2500 L.C. 600mm/24in
36 km/ Max
(10 m/s)
kg
8.75% Max
kg
8.75% Max
0.3m Max
12400 Kg
MAX
1.5 Km/h Max (0.4 m/s)
kg
kg
8.75% Max
8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53016003


MANITOU
MHT 10130
TFF+TDL L2500 L.C. 900mm/36in
Pos. AW
36 km/ Max
(10 m/s)
kg
8.75% Max
kg
8.75% Max
0.3m Max
8600 Kg
MAX
1.5 Km/h Max (0.4 m/s)
kg
kg
8.75% Max
8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53016005

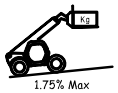
MANITOU MHT 10130

TFF+TDL L2500 L.C. 900mm/36in

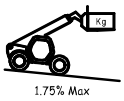




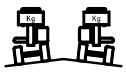
36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



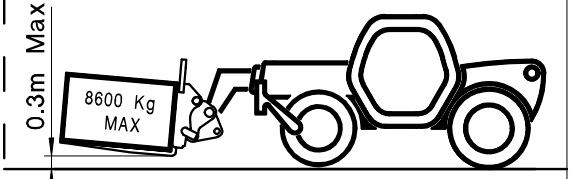
Ground conditions:
solid surface



0km/h

MANITOU MHT 10130

TFF+TDL L2500 L.C. 900mm/36in





1.5 Km/h Max (0.4 m/s)



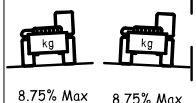
36 km/ Max
(10 m/s)



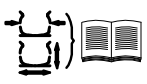
8.75% Max



8.75% Max



8.75% Max 8.75% Max

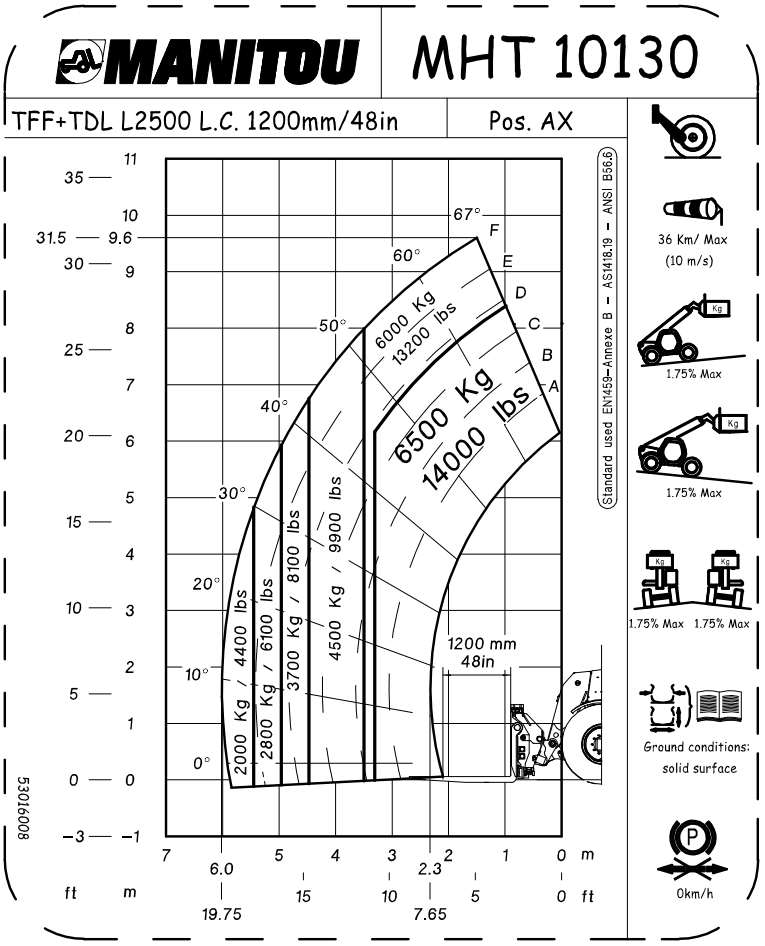


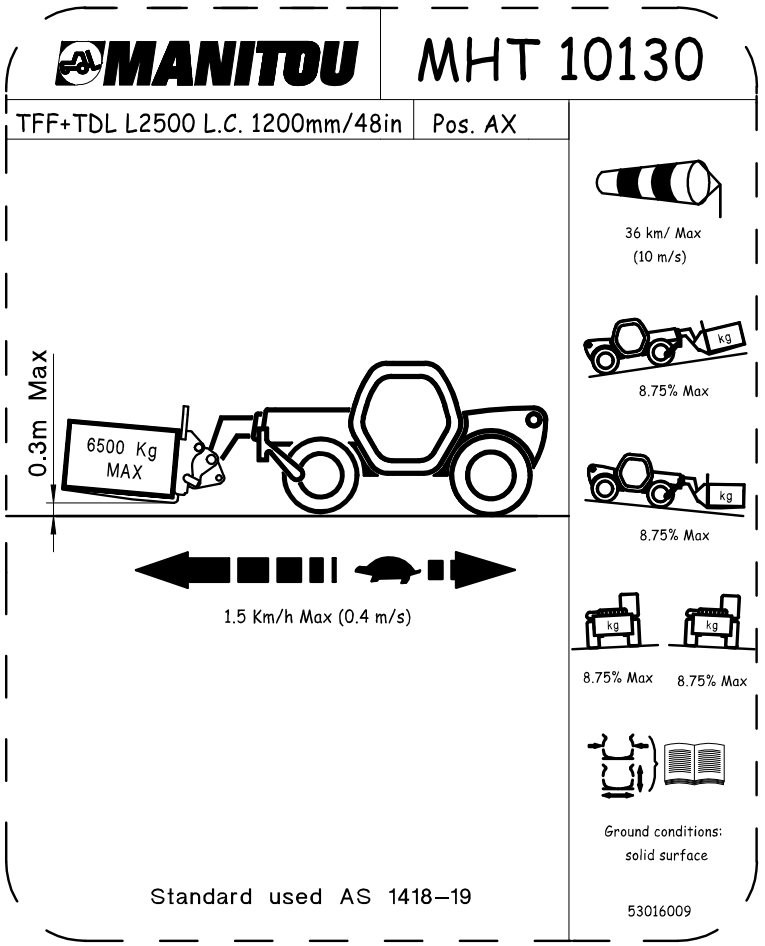
Ground conditions:
solid surface

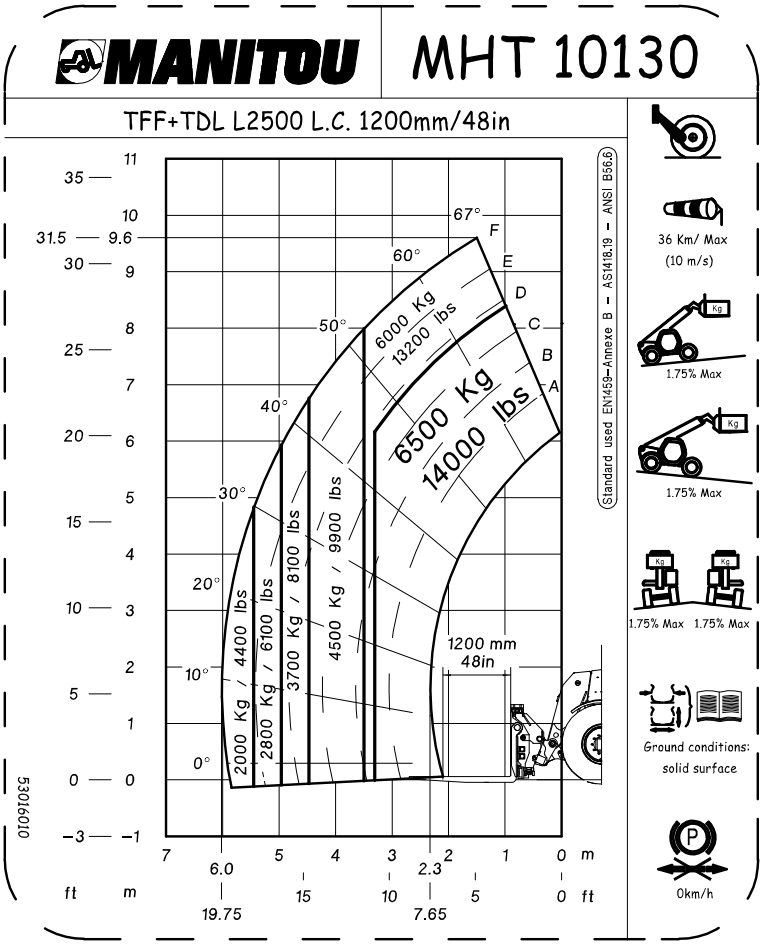
Standard used AS 1418–19

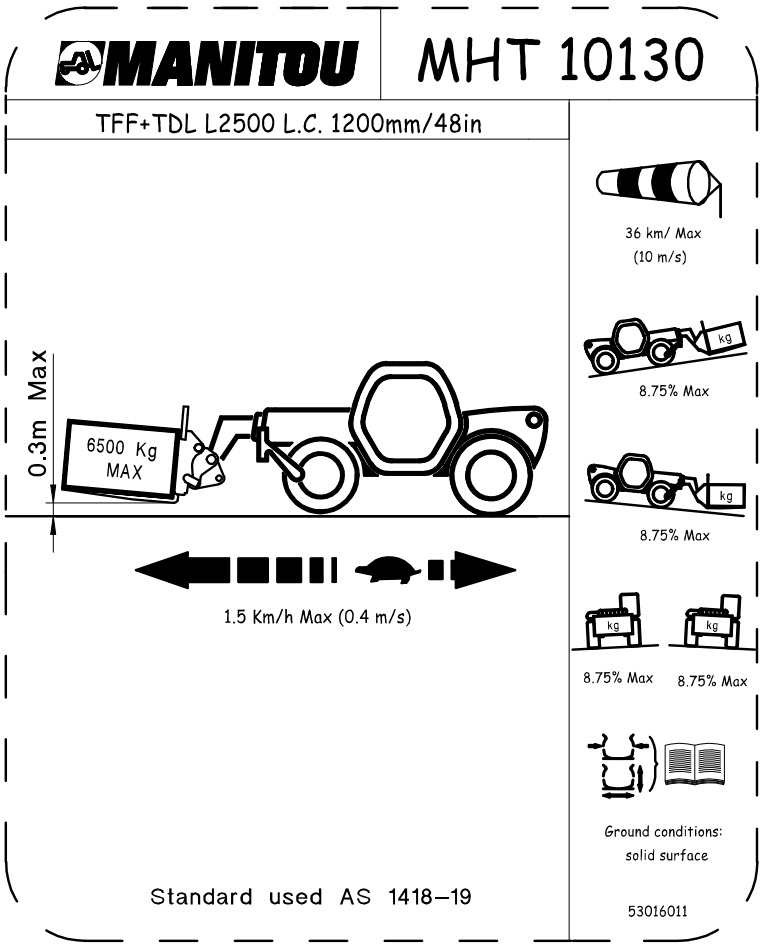
53016007

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF+TDL L2500 L.C. 1200mm/48in
Pos. AX
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6000 Kg
13200 lbs
6500 Kg
14000 lbs
4500 Kg / 9900 lbs
3700 Kg / 8100 lbs
2800 Kg / 6100 lbs
2000 Kg / 4400 lbs
1200 mm
48in
35
31.5
30
25
20
15
10
5
0
−3
11
10
9.6
9
8
7
6
5
4
3
2
1
0
−1
7
6.0
5
4
3
2.3
2
1
0 m
ft
m
19.75
15
10
7.65
5
0 ft
53016008
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions:
solid surface
0km/h


MANITOU
MHT 10130
TFF+TDL L2500 L.C. 1200mm/48in
Pos. AX
0.3m Max
6500 Kg
MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53016009

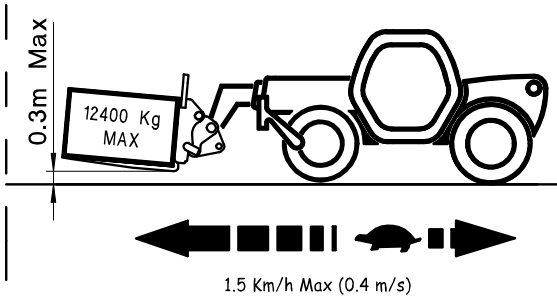




648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU MHT 10130

TFF+TDL L2500 L.C. 600mm/24in | Pos. AY




36 km/ Max
(10 m/s)


8.75% Max


8.75% Max


8.75% Max 8.75% Max

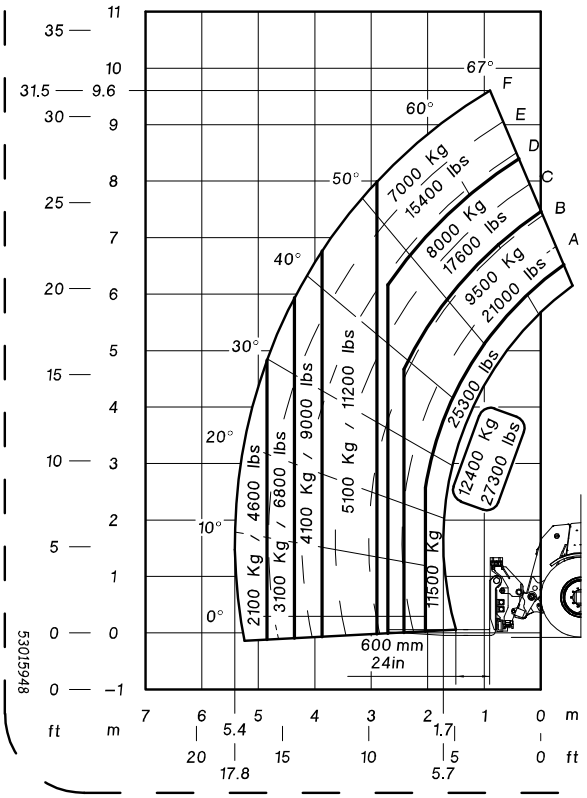

Ground conditions:
solid surface

Standard used AS 1418–19

53015947

MANITOU MHT 10130

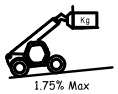
TFF+TDL L2500 L.C. 600mm/24in

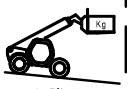


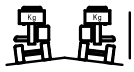
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6)

53015948


36 Km/ Max
(10 m/s)


1.75% Max


1.75% Max


1.75% Max 1.75% Max

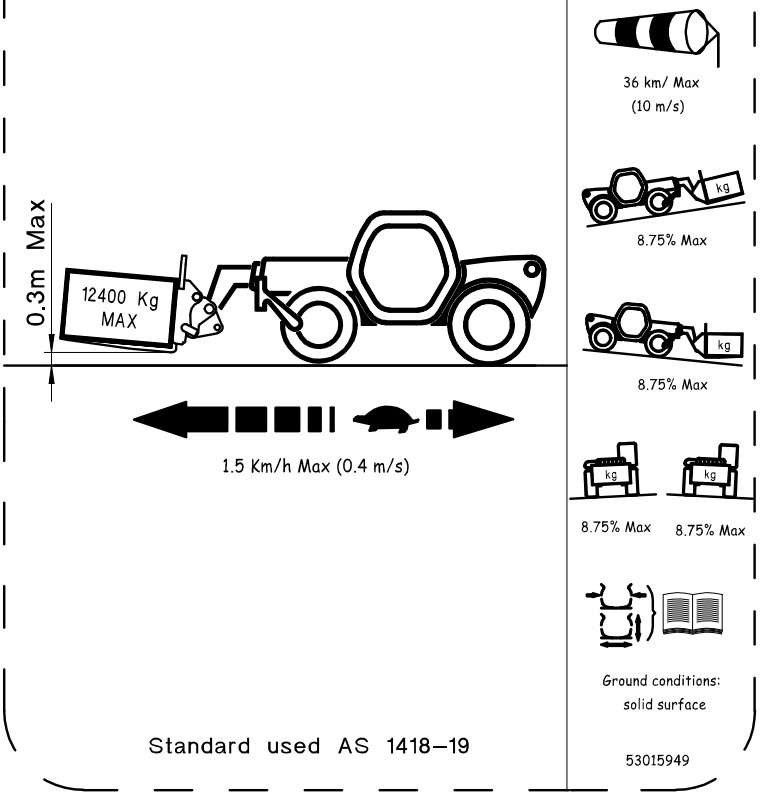

Ground conditions:
solid surface


0km/h

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

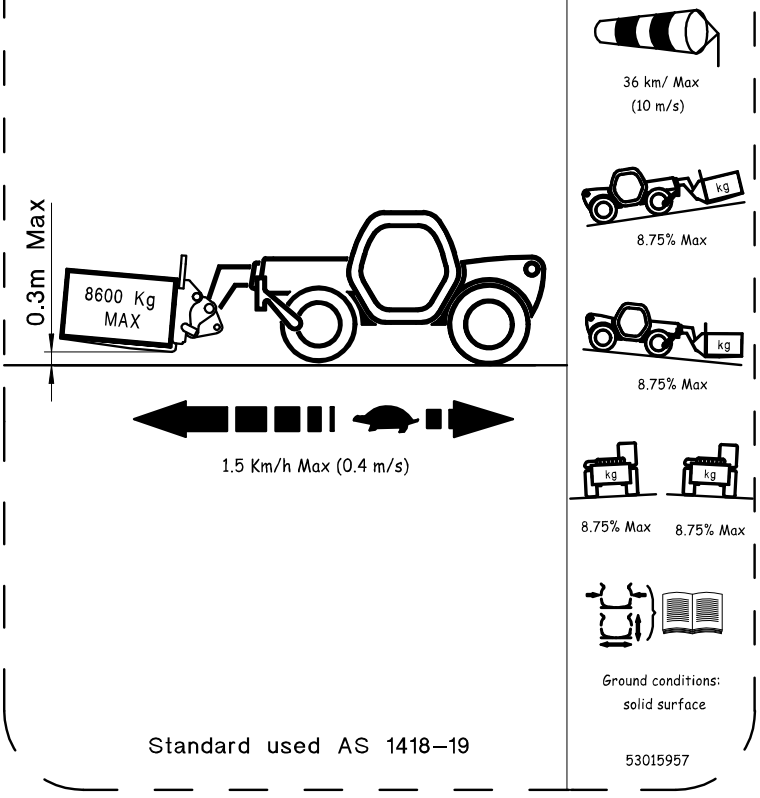
MANITOU MHT 10130

TFF+TDL L2500 L.C. 600mm/24in

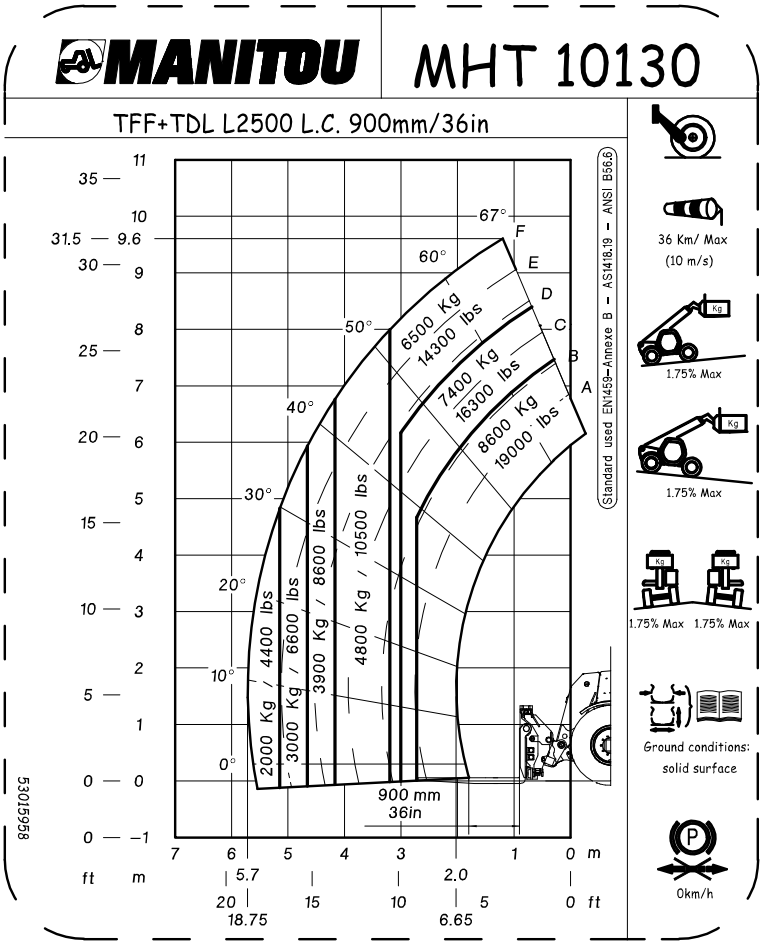


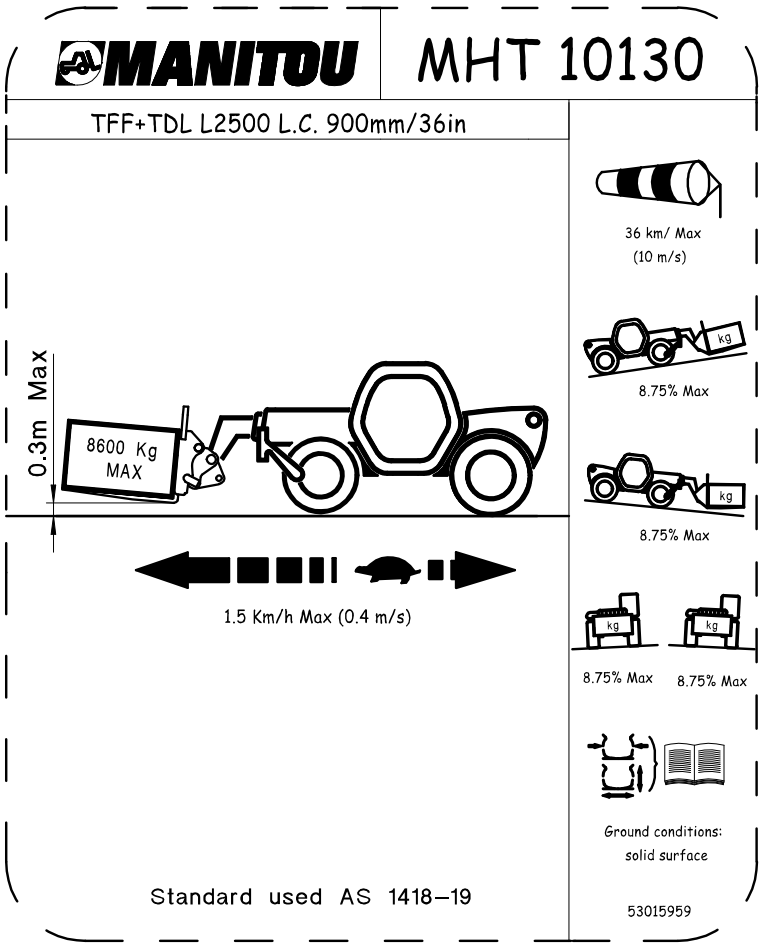
MANITOU MHT 10130

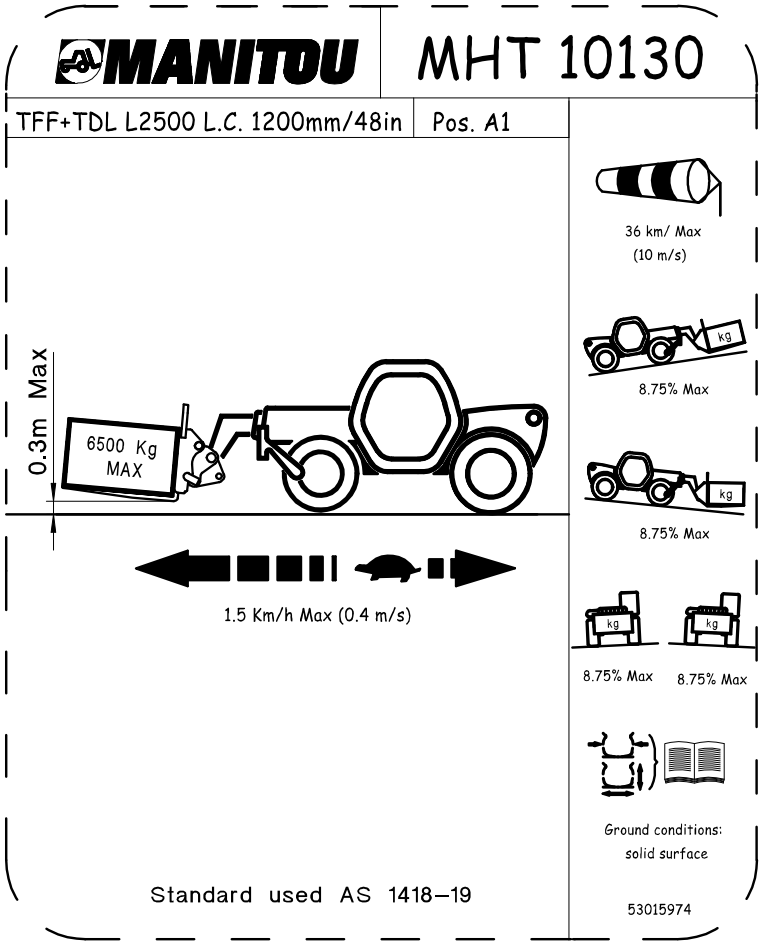
TFF+TDL L2500 L.C. 900mm/36in | Pos. AZ

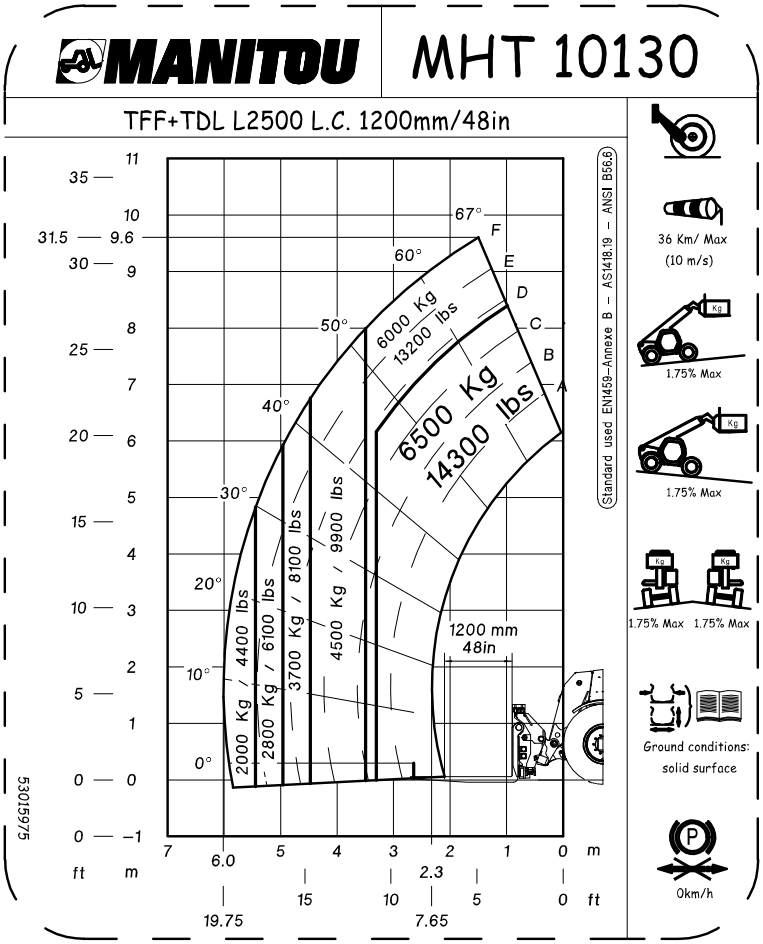


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF+TDL L2500 L.C. 900mm/36in
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
2000 Kg / 4400 lbs
3000 Kg / 6600 lbs
3900 Kg / 8600 lbs
4800 Kg / 10500 lbs
6500 Kg 14300 lbs
7400 Kg 16300 lbs
8600 Kg 19000 lbs
900 mm 36in
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
53015958


MANITOU
MHT 10130
TFF+TDL L2500 L.C. 900mm/36in
0.3m Max
8600 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53015959

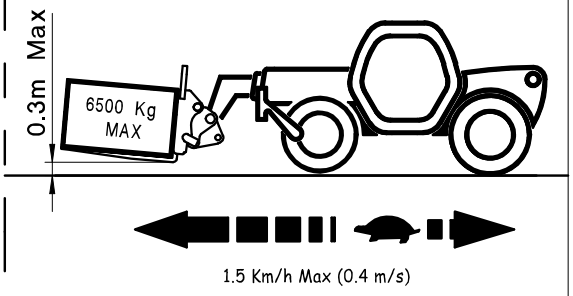




648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU MHT 10130

TFF+TDL L2500 L.C. 1200mm/48in



1.5 Km/h Max (0.4 m/s)



36 km/ Max
(10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



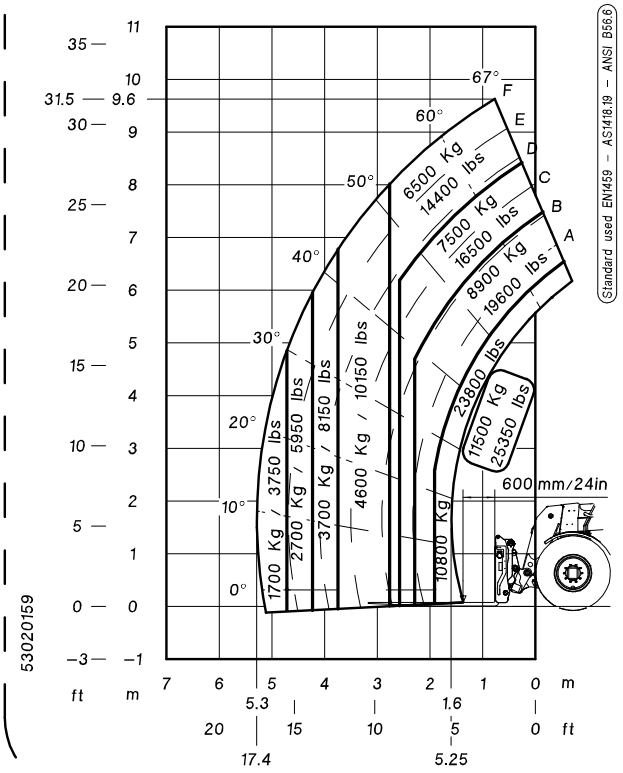
Ground conditions:
solid surface

Standard used AS 1418–19

53015976

MANITOU MHT 10130

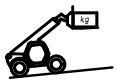
TFF+TDL+POS L2500 L.C. 600mm/24in Pos. A2



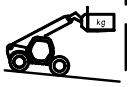




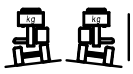
36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



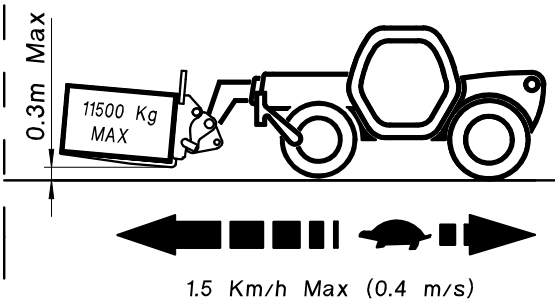
Ground conditions:
solid surface



0km/h

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.600mm/24in | Pos. A2



1.5 Km/h Max (0.4 m/s)



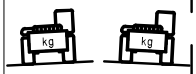
36 km/ Max (10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



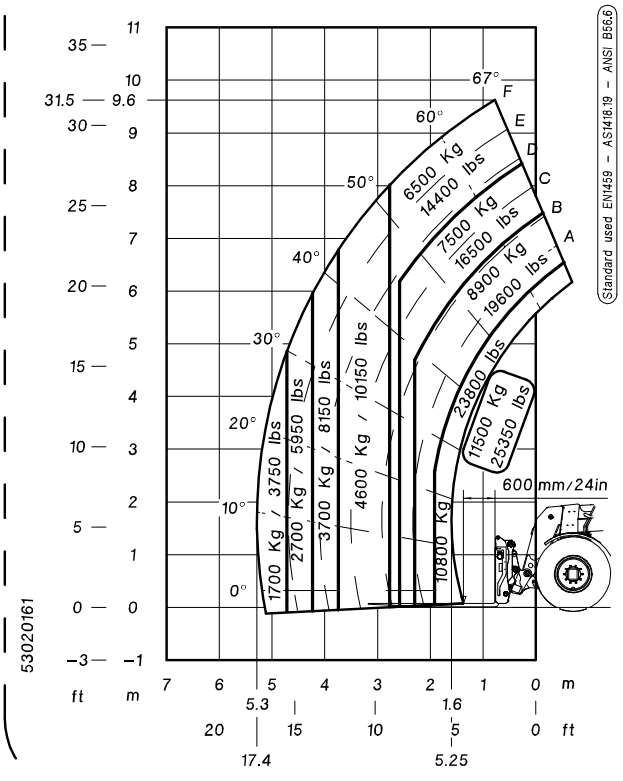
Ground conditions: solid surface

Standard used AS 1418–19

53020160

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C. 600mm/24in



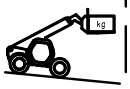




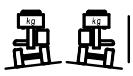
36 Km/ Max (10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



Ground conditions: solid surface



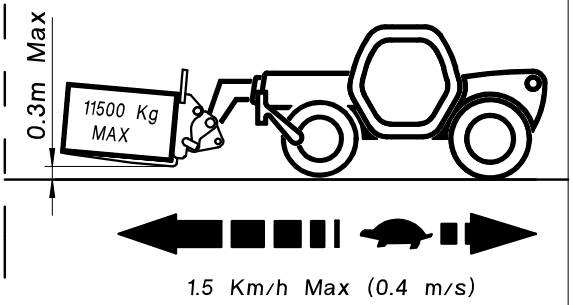
0km/h

53020161

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.600mm/24in



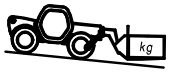
1.5 Km/h Max (0.4 m/s)



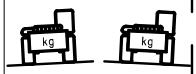
36 km/ Max (10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



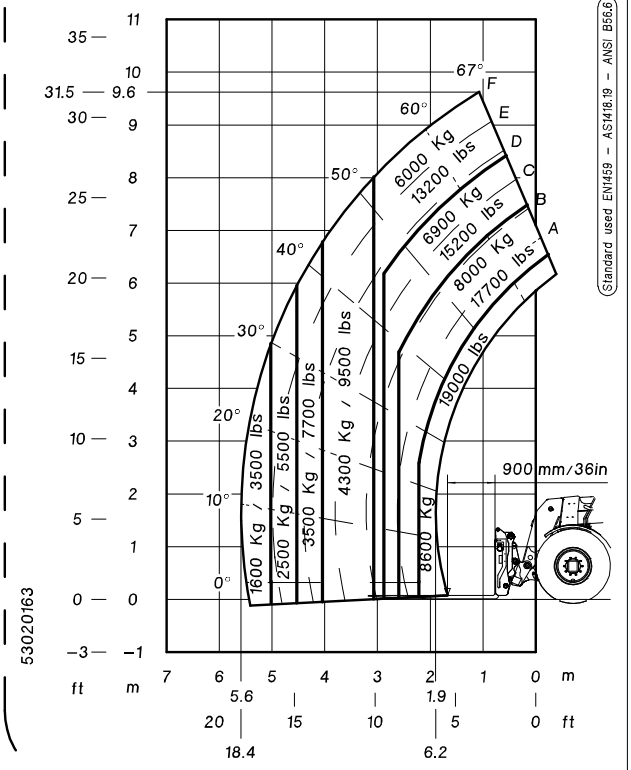
Ground conditions: solid surface

Standard used AS 1418–19

53020162

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C. 900mm/36in Pos. A3

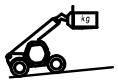


Standard used EN1459 – AS1418.19 – ANSI B56.6

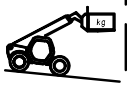




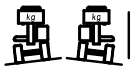
36 Km/ Max (10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



Ground conditions: solid surface

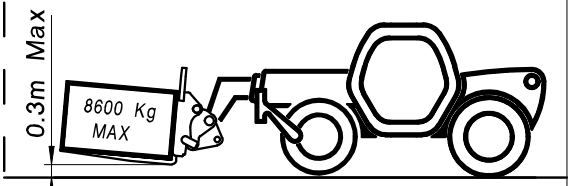


0km/h

53020163

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.900mm/36in | Pos. A3



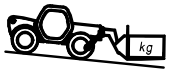
1.5 Km/h Max (0.4 m/s)



36 km/ Max (10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



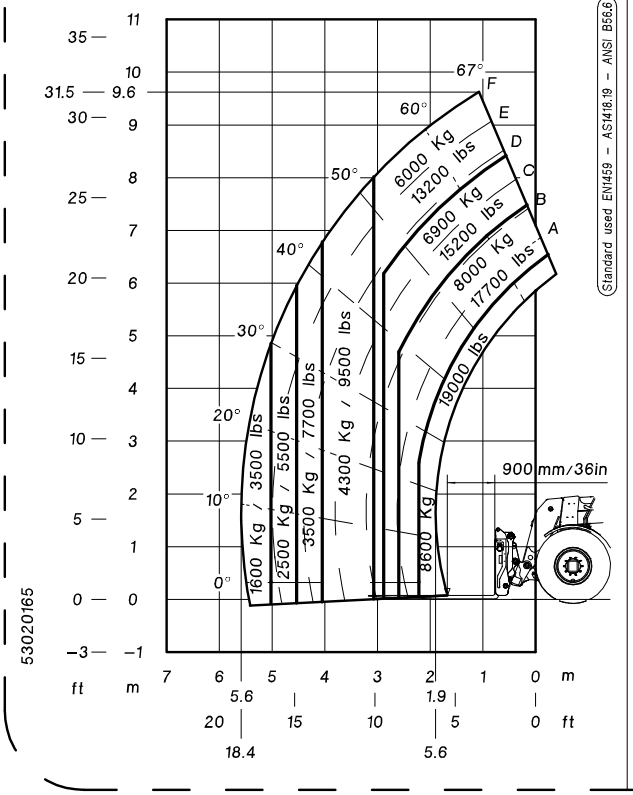
Ground conditions: solid surface

Standard used AS 1418–19

53020164

MANITOU MHT 10130

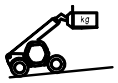
TFF+TDL+POS L2500 L.C. 900mm/36in



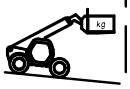




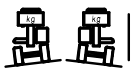
36 Km/ Max (10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max

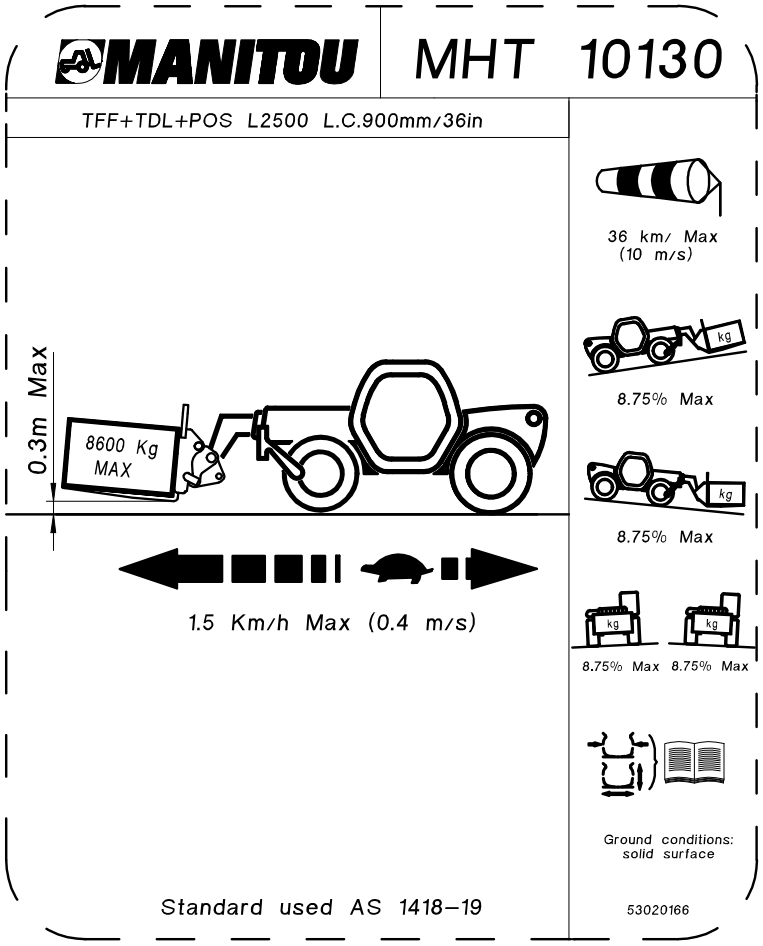


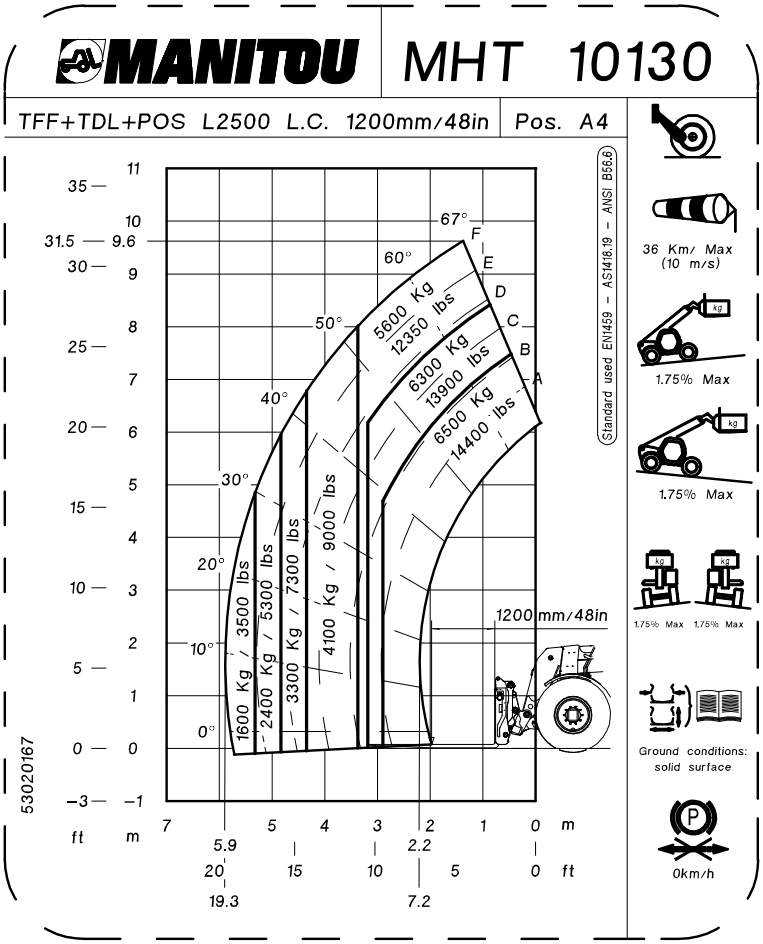
Ground conditions: solid surface



0km/h

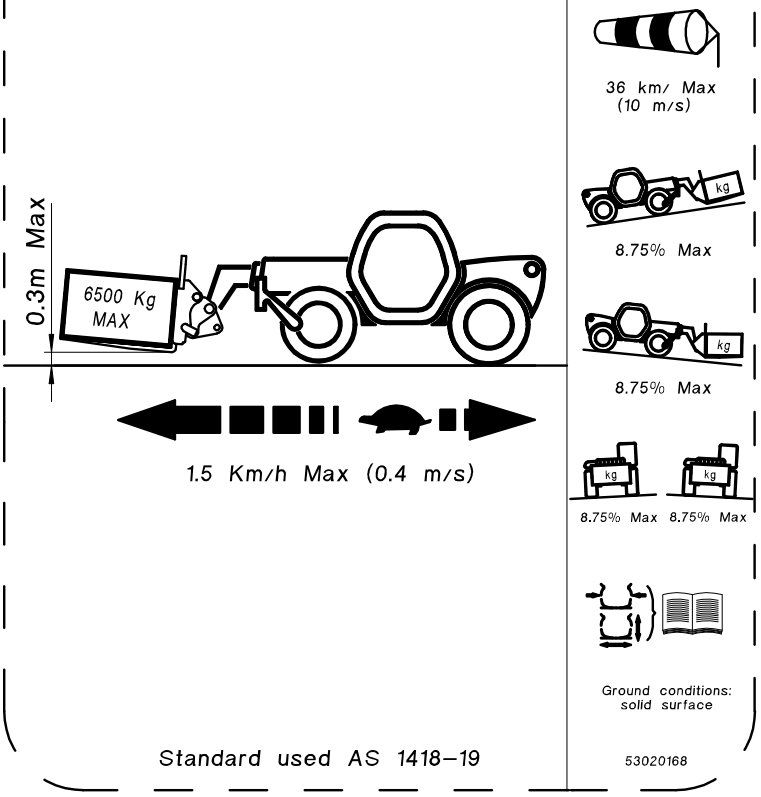
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C.900mm/36in
0.3m Max
8600 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53020166


MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C. 1200mm/48in
Pos. A4
Standard used EN1459 – AS1416.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
5600 Kg 12350 lbs
6300 Kg 13900 lbs
6500 Kg 14400 lbs
4100 Kg / 9000 lbs
3300 Kg / 7300 lbs
2400 Kg / 5300 lbs
1600 Kg / 3500 lbs
1200 mm/48in
53020167
ft
m
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

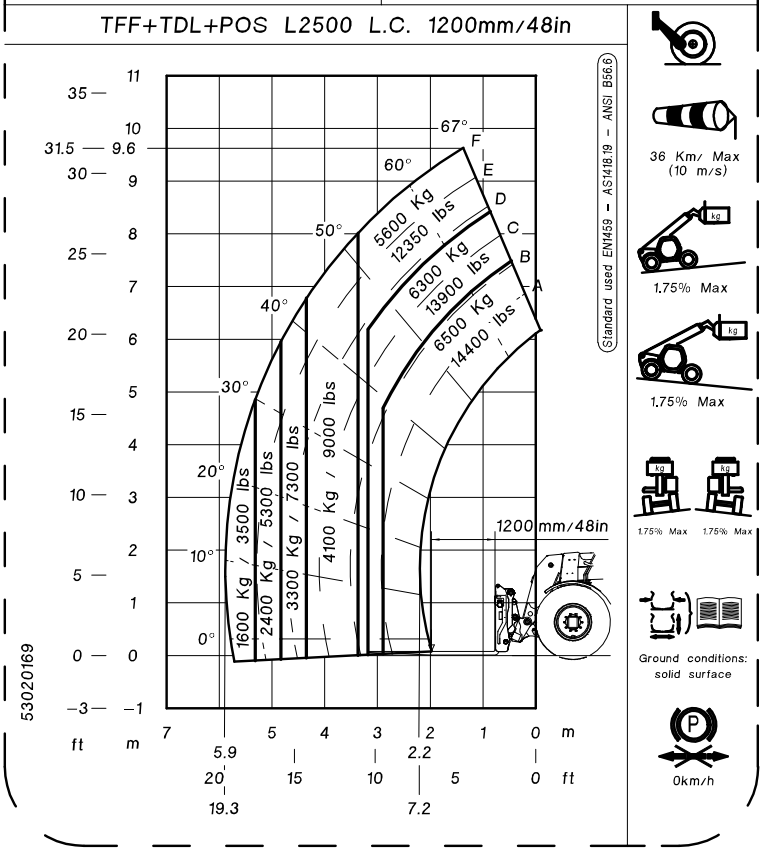
MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.1200mm/48in | Pos. A4

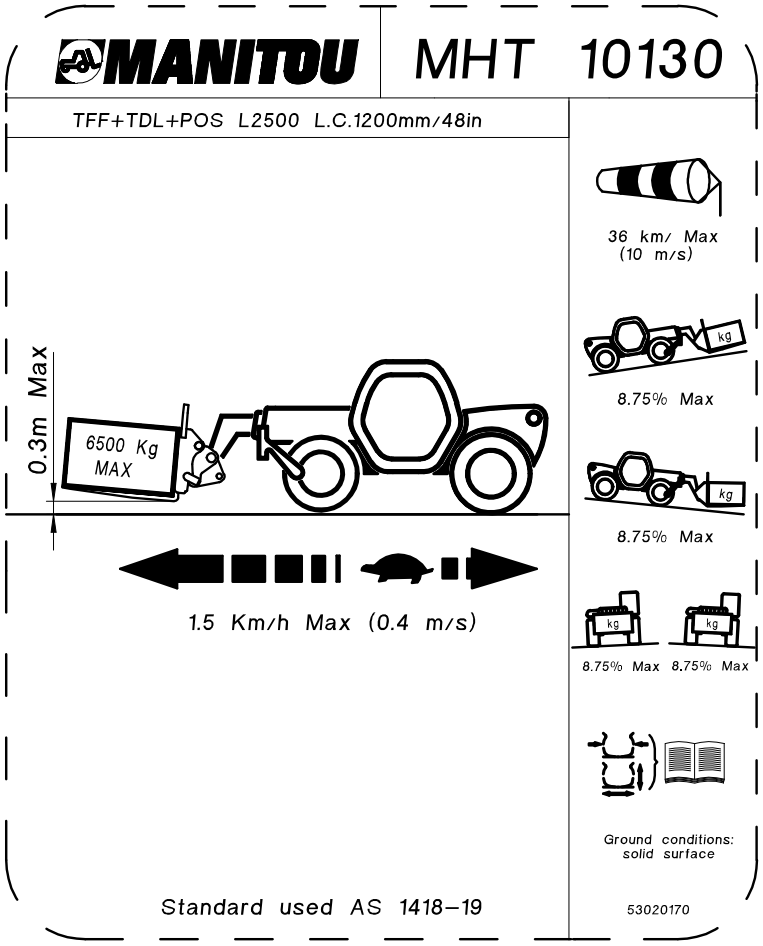


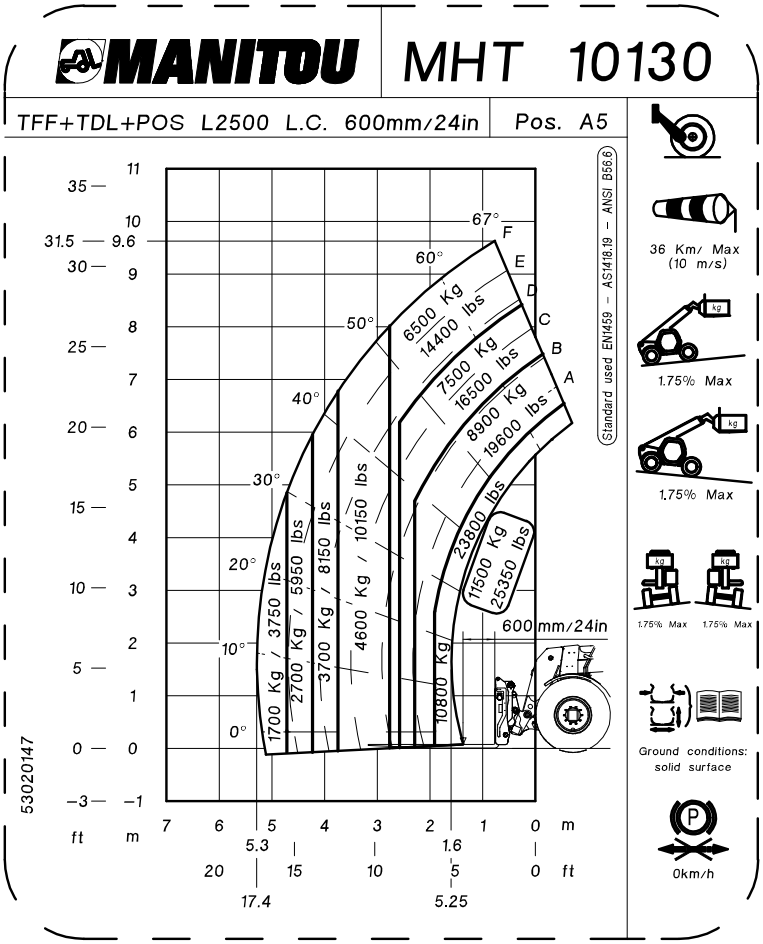
MANITOU MHT 10130

TFF+TDL+POS L2500 L.C. 1200mm/48in



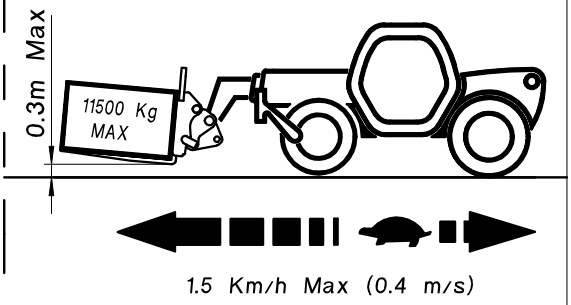
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C.1200mm/48in
0.3m Max
6500 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions: solid surface
Standard used AS 1418-19
53020170


MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C. 600mm/24in
Pos. A5
Standard used EN1459 - AS1418.19 - ANSI B56.6
6500 Kg 14400 lbs
7500 Kg 16500 lbs
8900 Kg 19600 lbs
11500 Kg 25350 lbs
10800 Kg
23800 lbs
1700 Kg / 3750 lbs
2700 Kg / 5950 lbs
3700 Kg / 8150 lbs
4600 Kg / 10150 lbs
600mm/24in
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
53020147

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.600mm/24in | Pos. A5



1.5 Km/h Max (0.4 m/s)



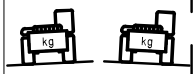
36 km/ Max
(10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



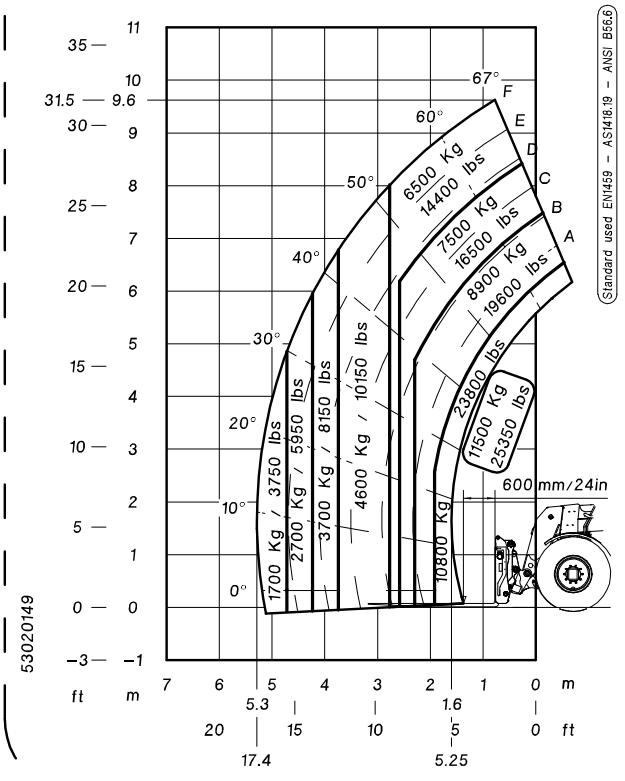
Ground conditions:
solid surface

Standard used AS 1418–19

53020148

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C. 600mm/24in



53020149

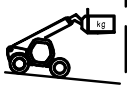




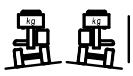
36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max

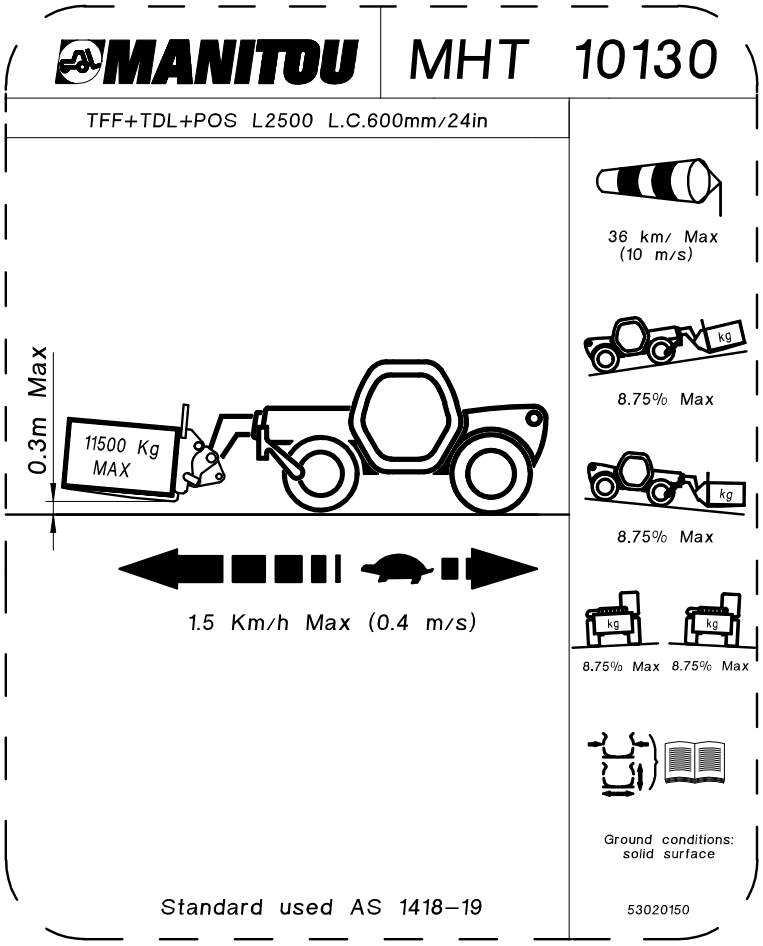


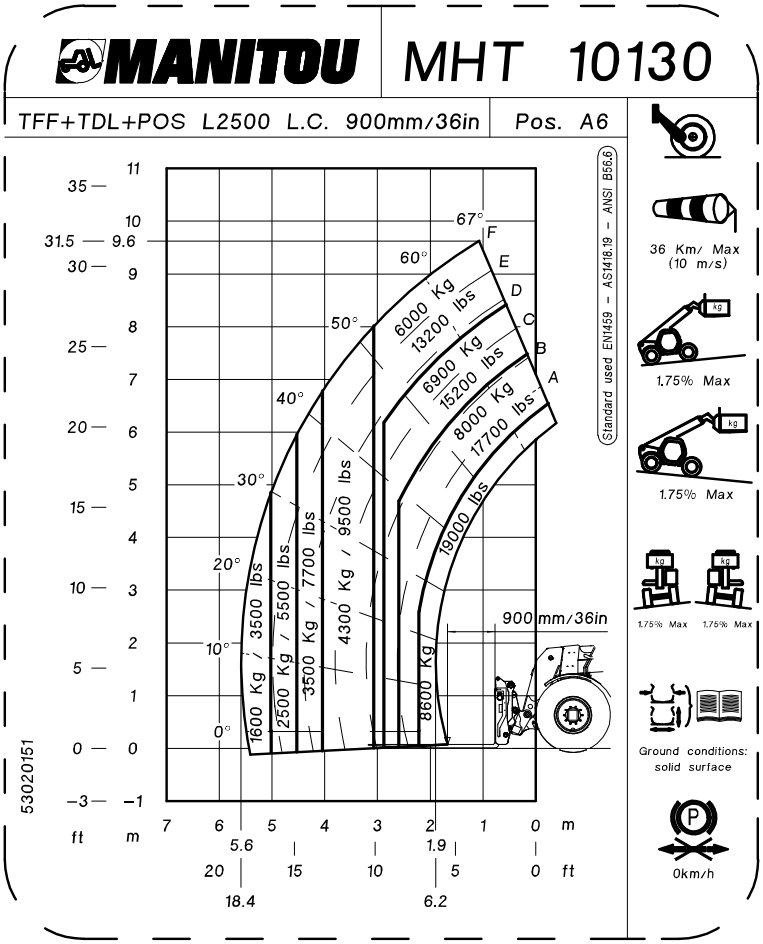
Ground conditions:
solid surface



0km/h

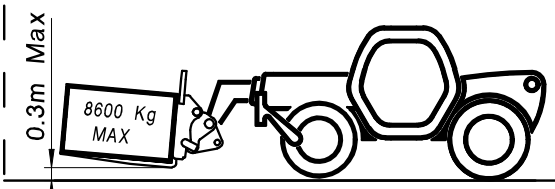
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C.600mm/24in
0.3m Max
11500 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions: solid surface
Standard used AS 1418–19
53020150


MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C. 900mm/36in Pos. A6
Standard used EN1459 – AS1416.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6000 Kg 13200 lbs
6900 Kg 15200 lbs
8000 Kg 17700 lbs
19000 lbs
4300 Kg / 9500 lbs
3500 Kg / 7700 lbs
2500 Kg / 5500 lbs
1600 Kg / 3500 lbs
8600 Kg
900 mm/36in
53020151
ft
m
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.900mm/36in | Pos. A6



1.5 Km/h Max (0.4 m/s)



36 km/ Max (10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



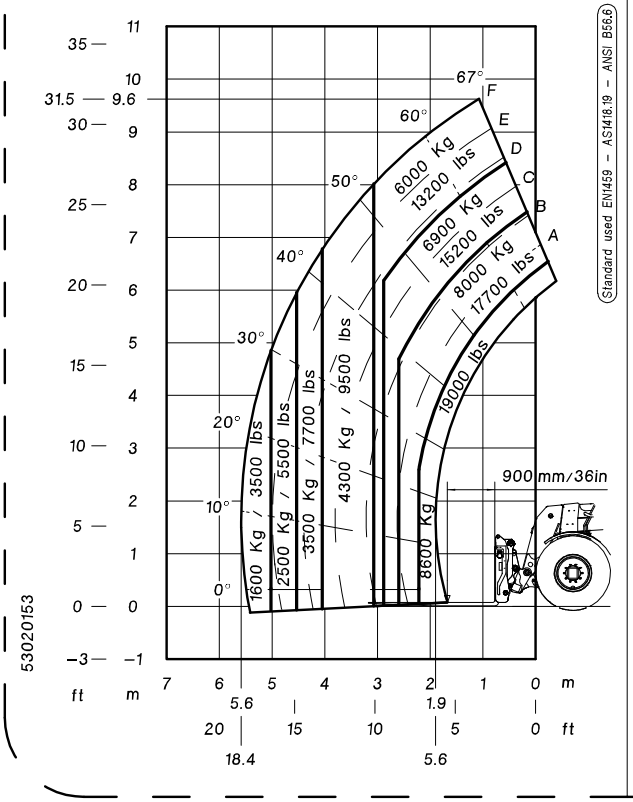
Ground conditions: solid surface

Standard used AS 1418–19

53020152

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C. 900mm/36in

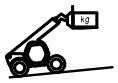


53020153

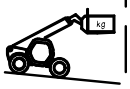




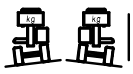
36 Km/ Max (10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



Ground conditions: solid surface

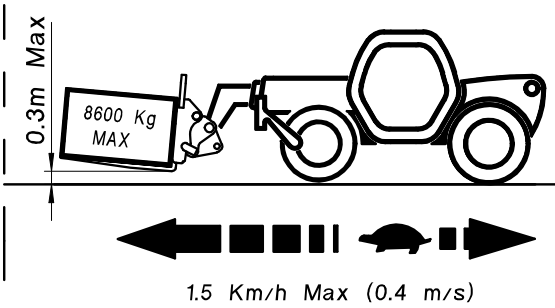


0km/h

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.900mm/36in



1.5 Km/h Max (0.4 m/s)



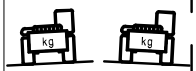
36 km/ Max
(10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



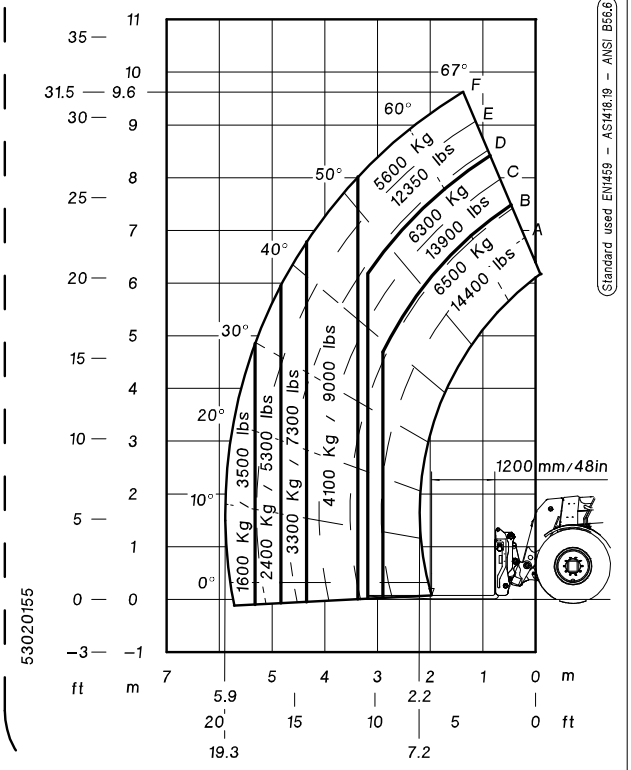
Ground conditions:
solid surface

Standard used AS 1418–19

53020154

MANITOU MHT 10130

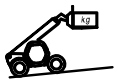
TFF+TDL+POS L2500 L.C. 1200mm/48in Pos. A7



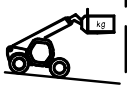




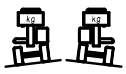
36 Km/ Max
(10 m/s)



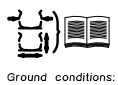
1.75% Max



1.75% Max



1.75% Max 1.75% Max



Ground conditions:
solid surface

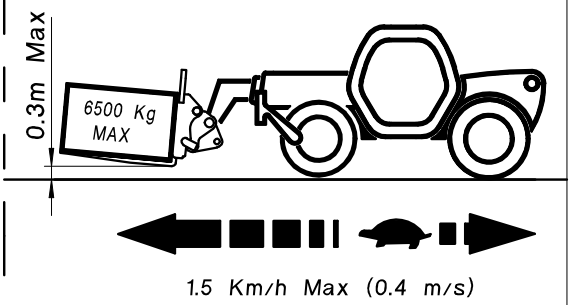


0km/h

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C.1200mm/48in | Pos. A7



1.5 Km/h Max (0.4 m/s)



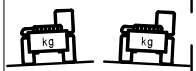
36 km/ Max (10 m/s)



8.75% Max



8.75% Max



8.75% Max 8.75% Max



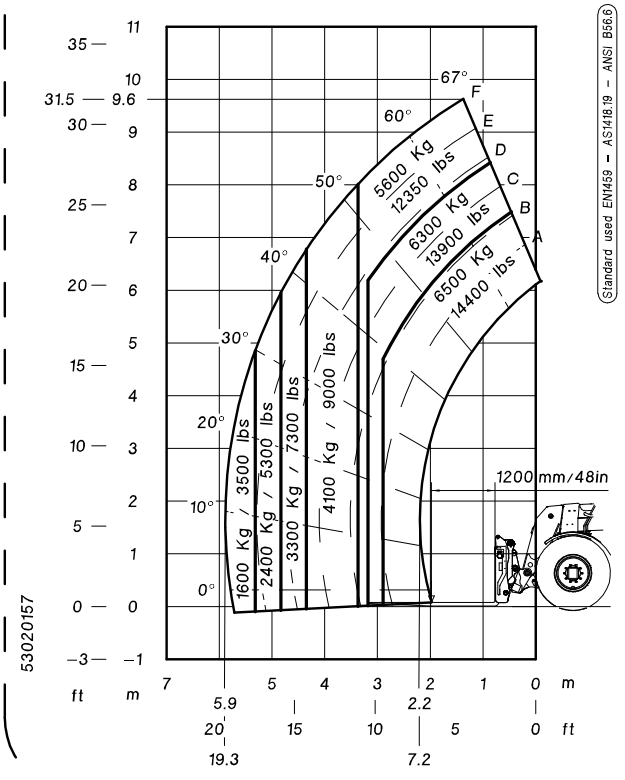
Ground conditions: solid surface

Standard used AS 1418–19

53020156

MANITOU MHT 10130

TFF+TDL+POS L2500 L.C. 1200mm/48in



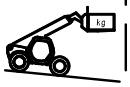
53020157



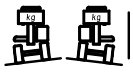
36 Km/ Max (10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max

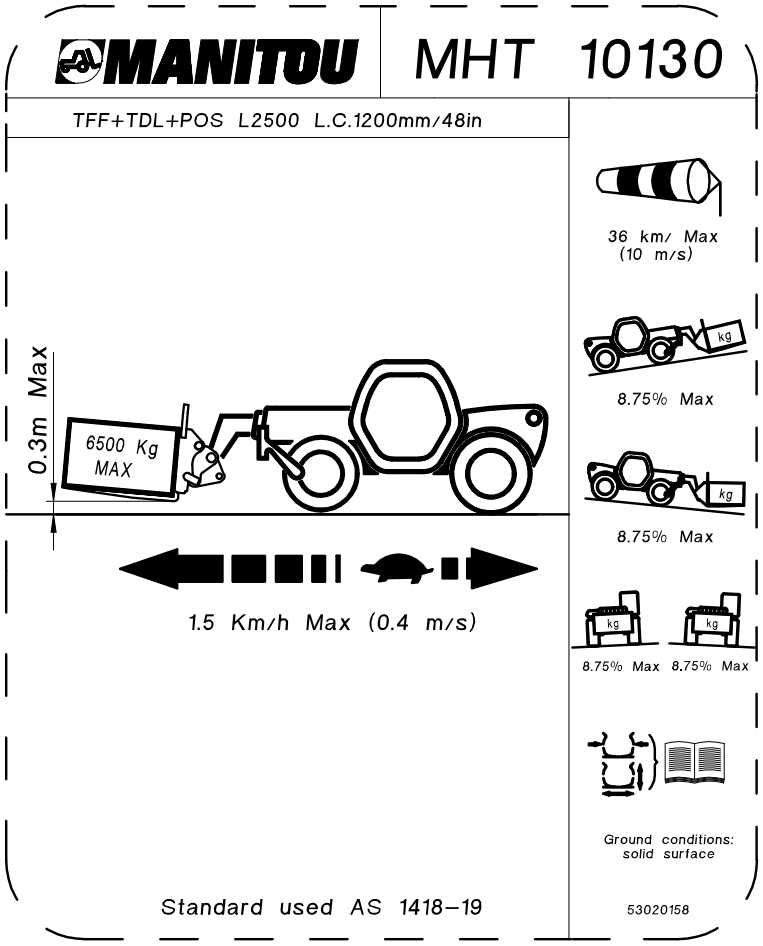


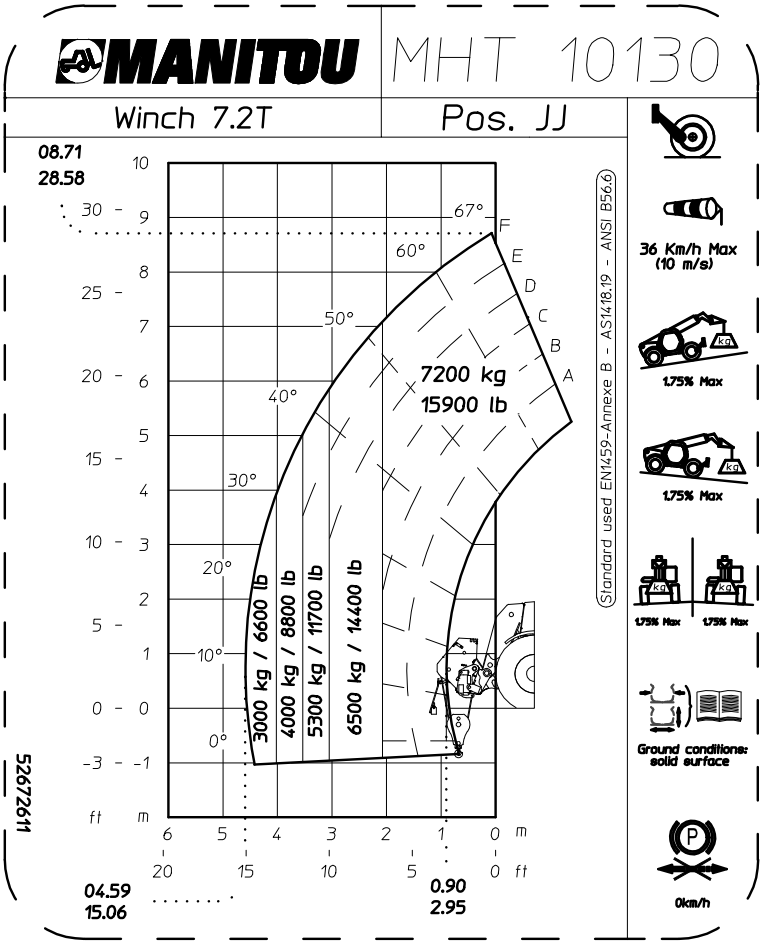
Ground conditions: solid surface

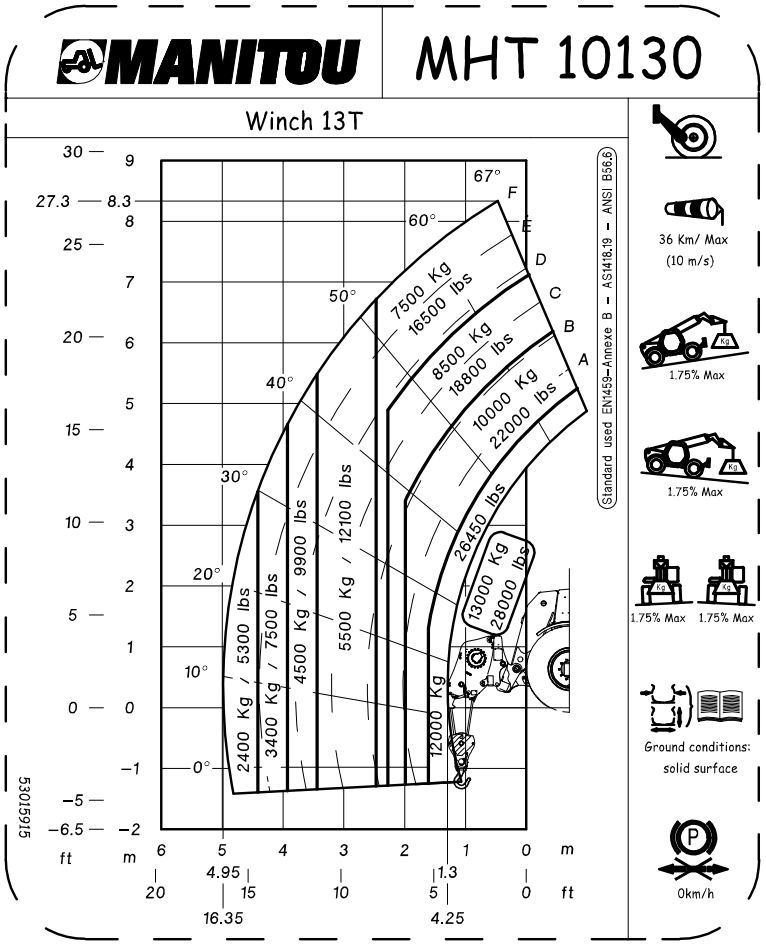


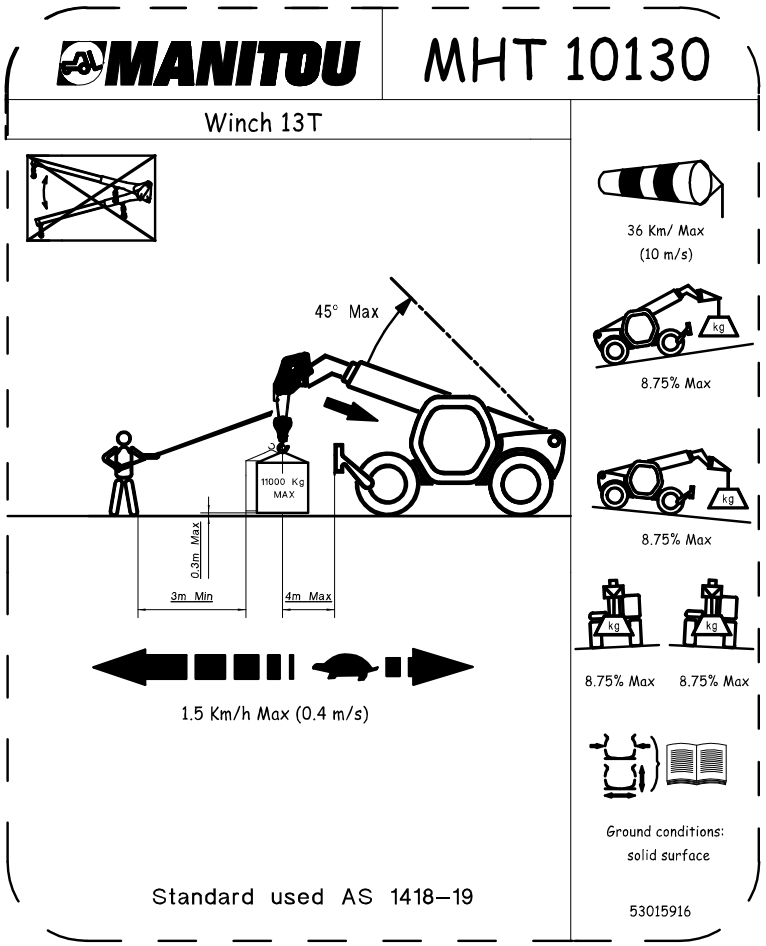
0km/h

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

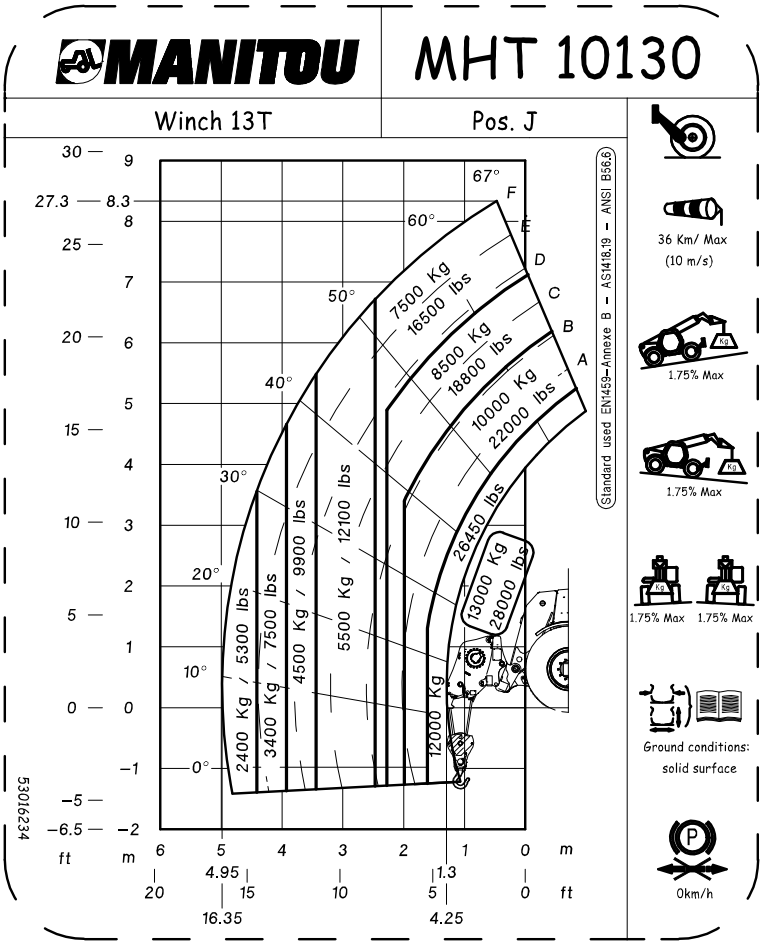

MANITOU
MHT 10130
TFF+TDL+POS L2500 L.C.1200mm/48in
0.3m Max
6500 Kg MAX
1.5 Km/h Max (0.4 m/s)
36 km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions: solid surface
Standard used AS 1418-19
53020158

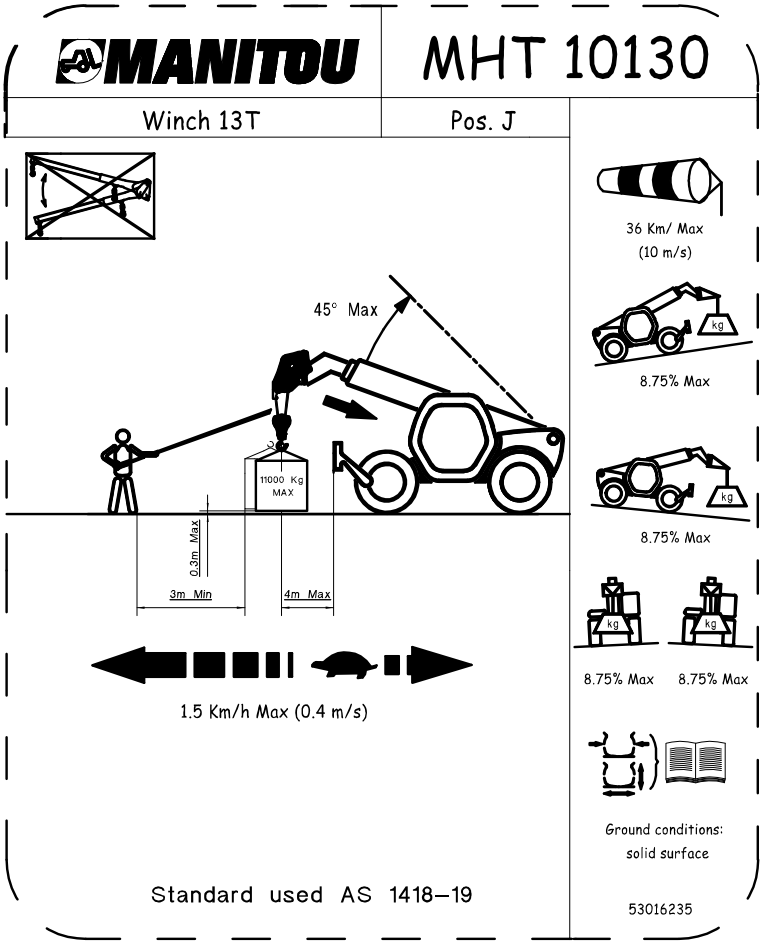

MANITOU
MHT 10130
Winch 7.2T
Pos. JJ
08.71
28.58
04.59
15.06
0.90
2.95
67°
60°
50°
40°
30°
20°
10°
0°
A
B
C
D
E
F
7200 kg
15900 lb
3000 kg / 6600 lb
4000 kg / 8800 lb
5300 kg / 11700 lb
6500 kg / 14400 lb
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
36 Km/h Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h
52672611





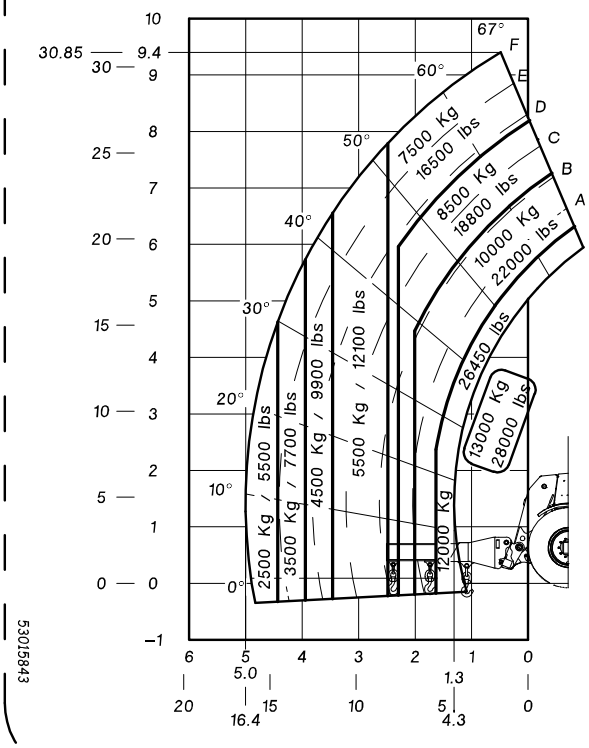
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
Winch 13T
Pos. J
30
27.3
25
20
15
10
5
0
−5
−6.5
9
8.3
8
7
6
5
4
3
2
1
0
−1
−2
ft
m
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
7500 Kg
16500 lbs
8500 Kg
18800 lbs
10000 Kg
22000 lbs
26450 lbs
13000 Kg
28000 lbs
12000 Kg
5500 Kg / 12100 lbs
4500 Kg / 9900 lbs
3400 Kg / 7500 lbs
2400 Kg / 5300 lbs
6
5
4
3
2
1
0
m
4.95
1.3
20
15
10
5
0
ft
16.35
4.25
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
53016234


MANITOU
MHT 10130
Winch 13T
Pos. J
45° Max
11000 Kg
MAX
0.3m Max
3m Min
4m Max
1.5 Km/h Max (0.4 m/s)
36 Km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53016235

MANITOU MHT 10130

P 13000 13T



Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6

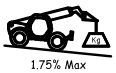




36 Km/ Max
(10 m/s)



1.75% Max



1.75% Max



1.75% Max 1.75% Max



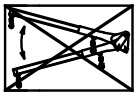
Ground conditions:
solid surface

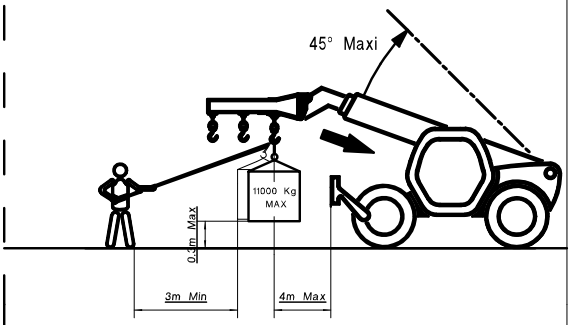


0km/h

MANITOU MHT 10130

P 13000 13T







1.5 Km/h Max (0.4 m/s)

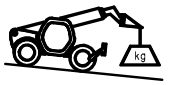
Standard used AS 1418–19



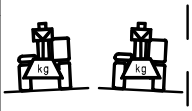
36 Km/ Max
(10 m/s)



8.75% Max



8.75% Max



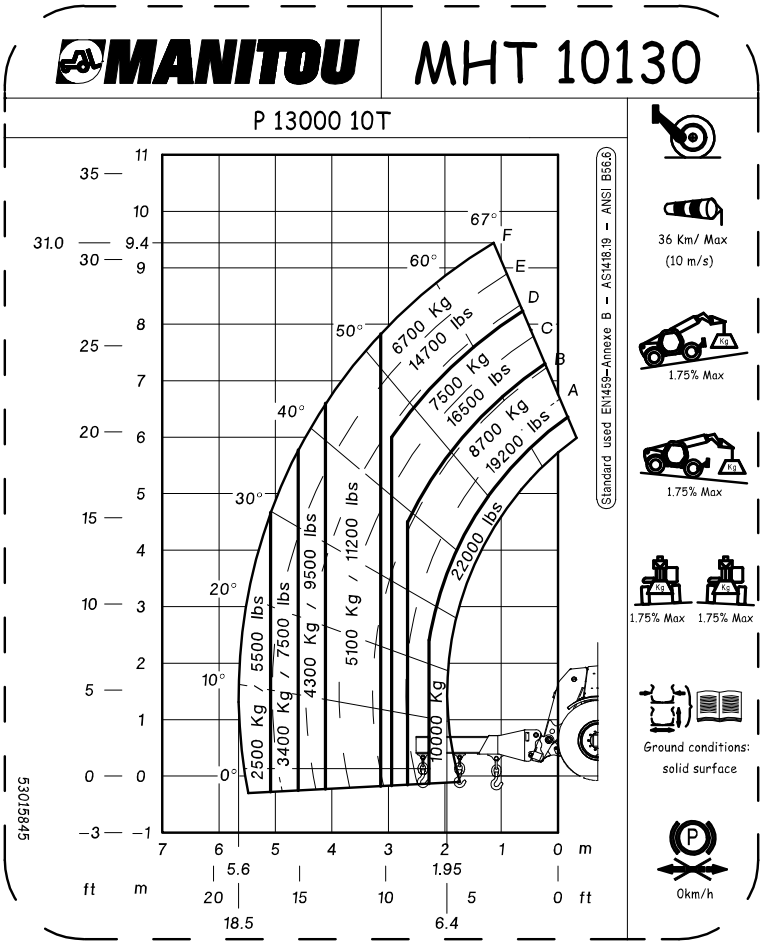
8.75% Max 8.75% Max

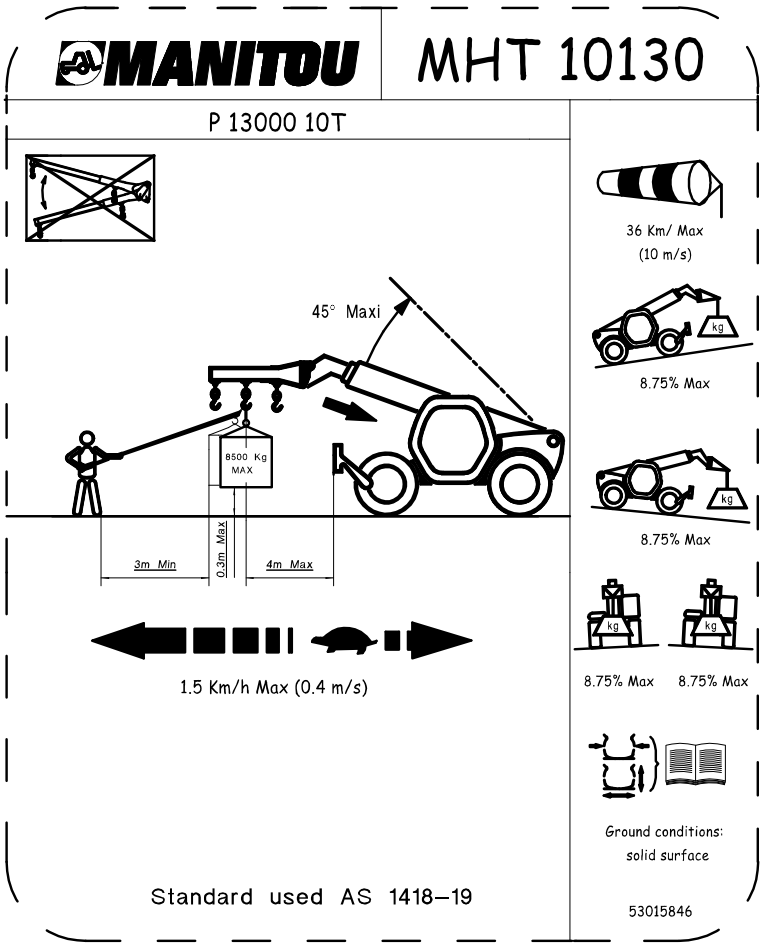


Ground conditions:
solid surface

53015844

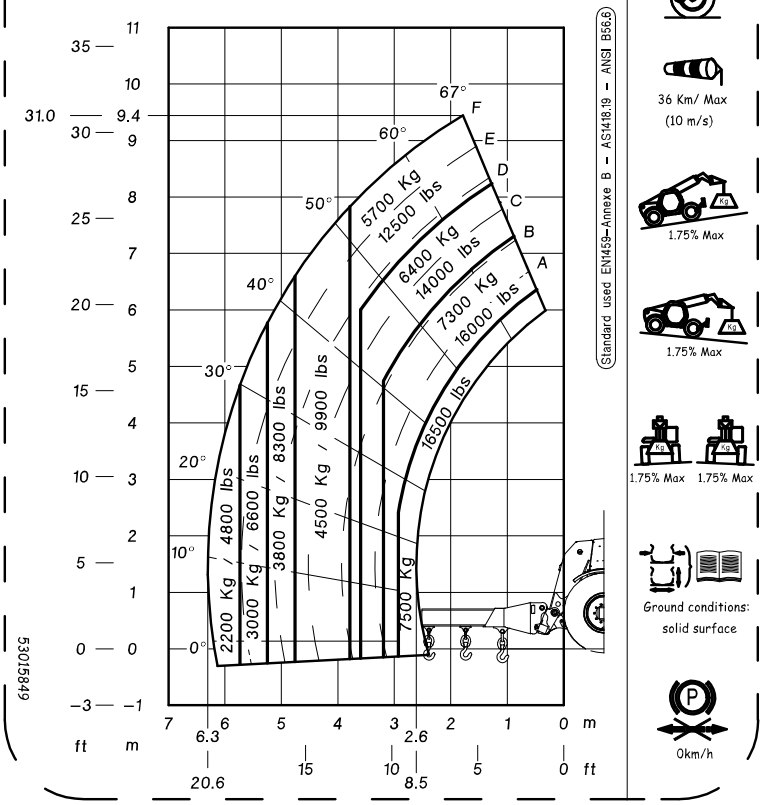
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
P 13000 10T
Standard used EN1459–Annexe B – AS1418:19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6700 Kg
14700 lbs
7500 Kg
16500 lbs
8700 Kg
19200 lbs
10000 Kg
22000 lbs
2500 Kg / 5500 lbs
3400 Kg / 7500 lbs
4300 Kg / 9500 lbs
5100 Kg / 11200 lbs
31.0
35
30
25
20
15
10
5
0
−3
11
10
9.4
9
8
7
6
5
4
3
2
1
0
−1
7
6
5
4
3
2
1
0 m
5.6
1.95
ft
m
20
15
10
5
0 ft
18.5
6.4
53015845
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h


MANITOU
MHT 10130
P 13000 10T
45° Maxi
8500 Kg
MAX
3m Min
0.3m Max
4m Max
1.5 Km/h Max (0.4 m/s)
Standard used AS 1418–19
36 Km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions:
solid surface
53015846

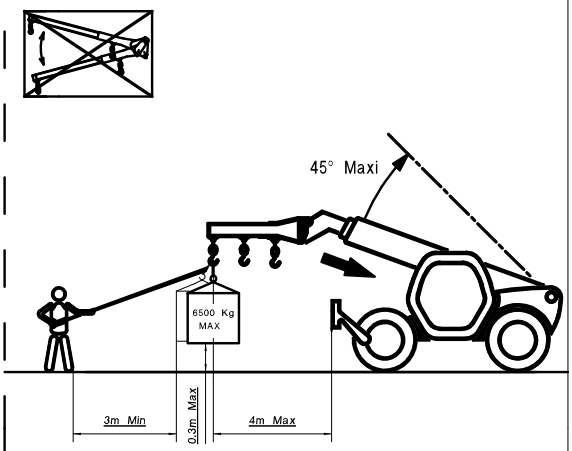
MANITOU MHT 10130

P 13000 7.5T

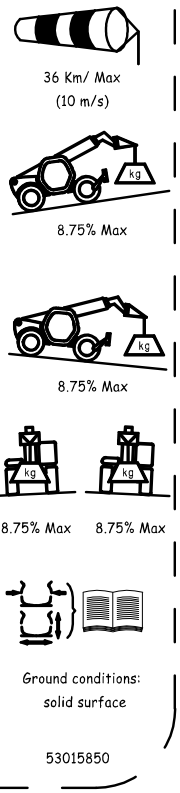


MANITOU MHT 10130

P 13000 7.5T



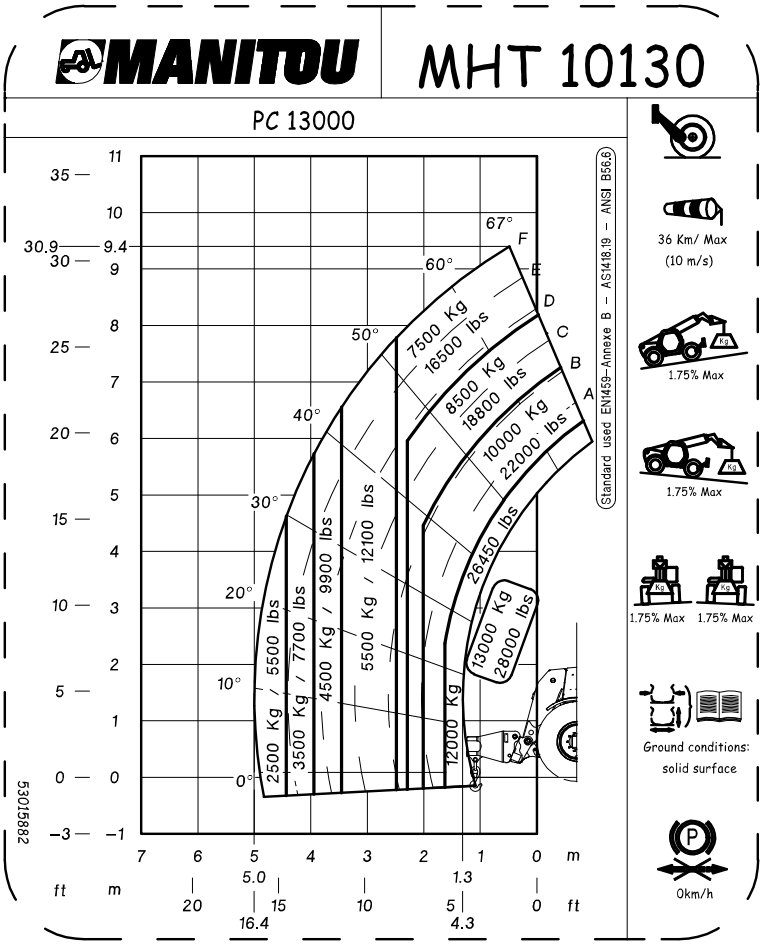
1.5 Km/h Max (0.4 m/s)

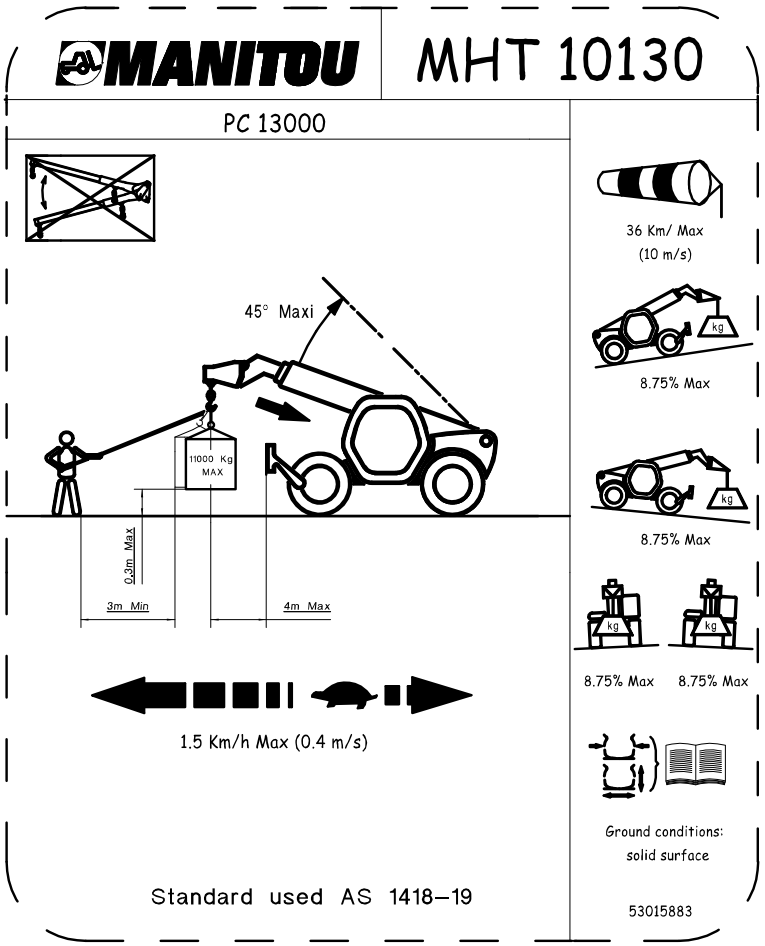


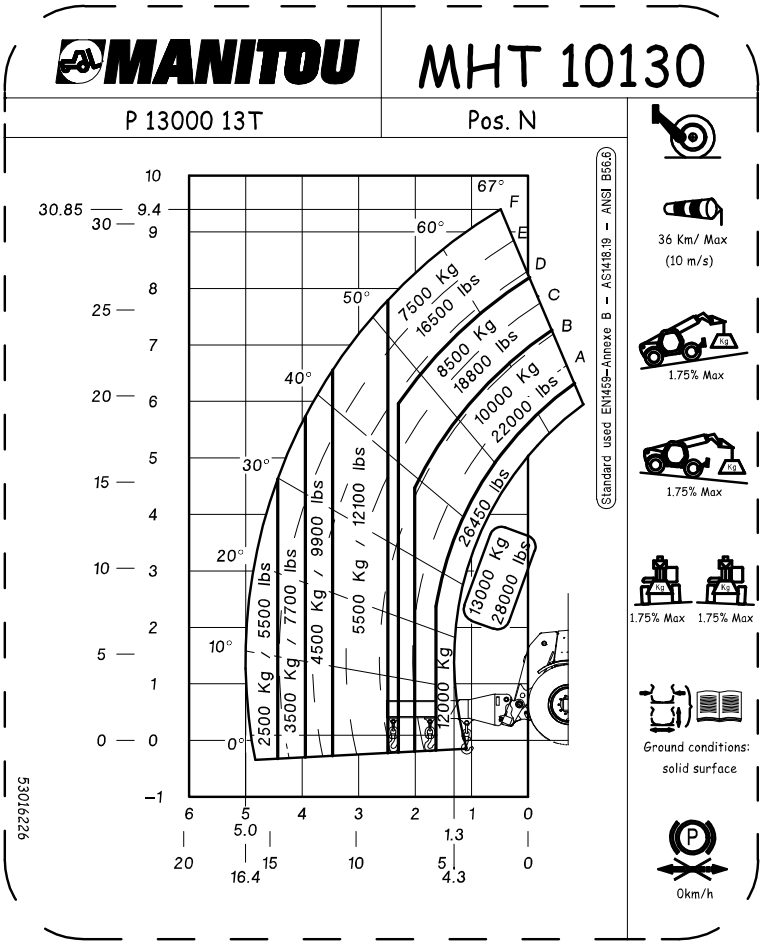
Standard used AS 1418–19

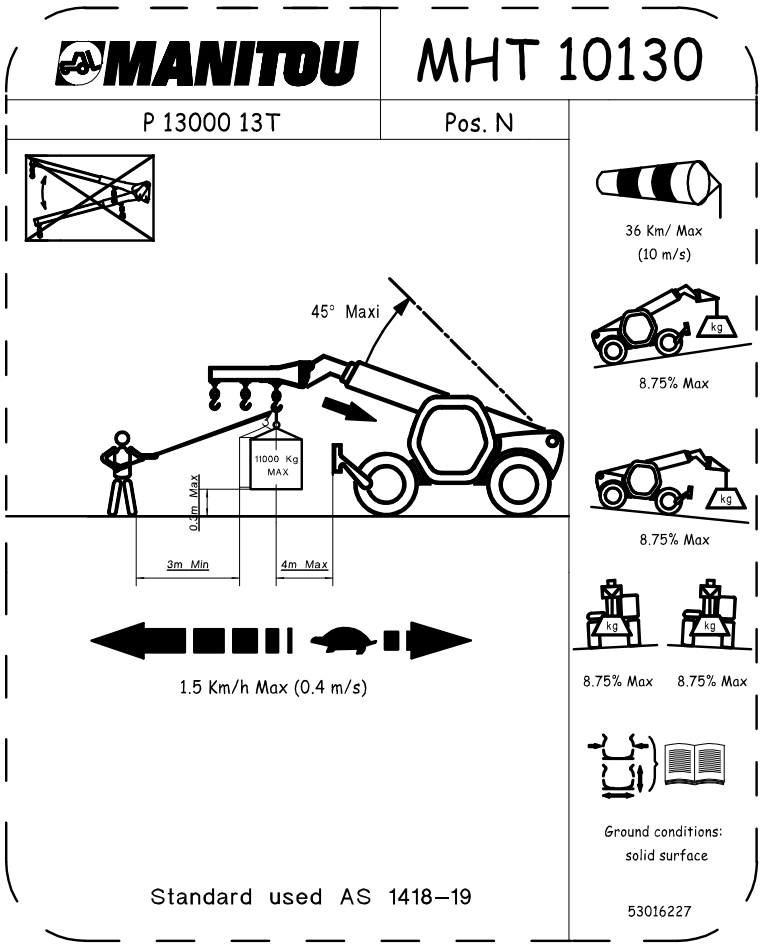
53015850

648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

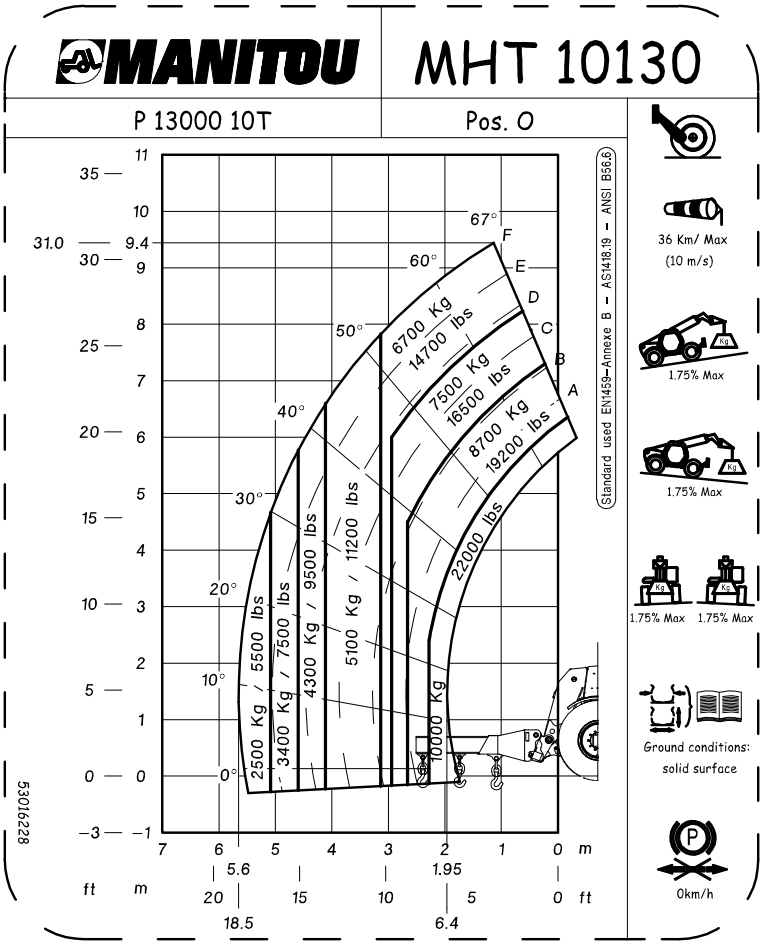

MANITOU
MHT 10130
PC 13000
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
7500 Kg 16500 lbs
8500 Kg 18800 lbs
10000 Kg 22000 lbs
28450 lbs
13000 Kg 28000 lbs
12000 Kg
5500 Kg / 12100 lbs
4500 Kg / 9900 lbs
3500 Kg / 7700 lbs
2500 Kg / 5500 lbs
Standard used EN1459-Annexe B – AS1418.19 – ANSI B56.6
53015882
ft m
m ft
36 Km/ Max (10 m/s)
1.75% Max
1.75% Max
1.75% Max 1.75% Max
Ground conditions: solid surface
0km/h

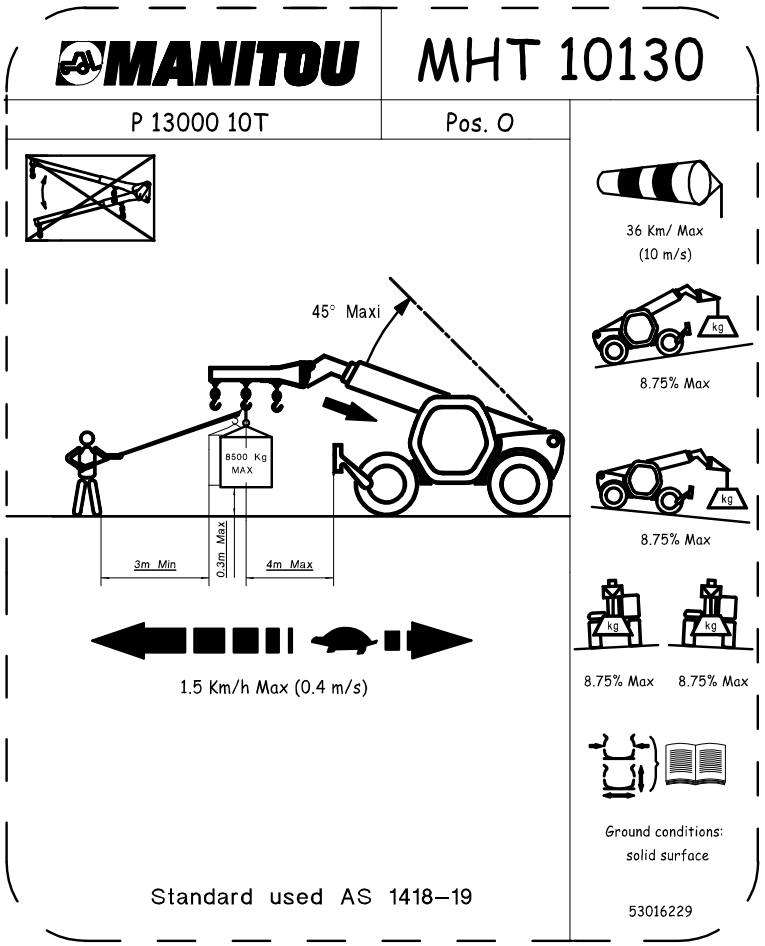

MANITOU
MHT 10130
PC 13000
45° Maxi
11000 Kg MAX
0.3m Max
3m Min
4m Max
1.5 Km/h Max (0.4 m/s)
Standard used AS 1418–19
36 Km/ Max (10 m/s)
8.75% Max
8.75% Max
8.75% Max 8.75% Max
Ground conditions: solid surface
53015883

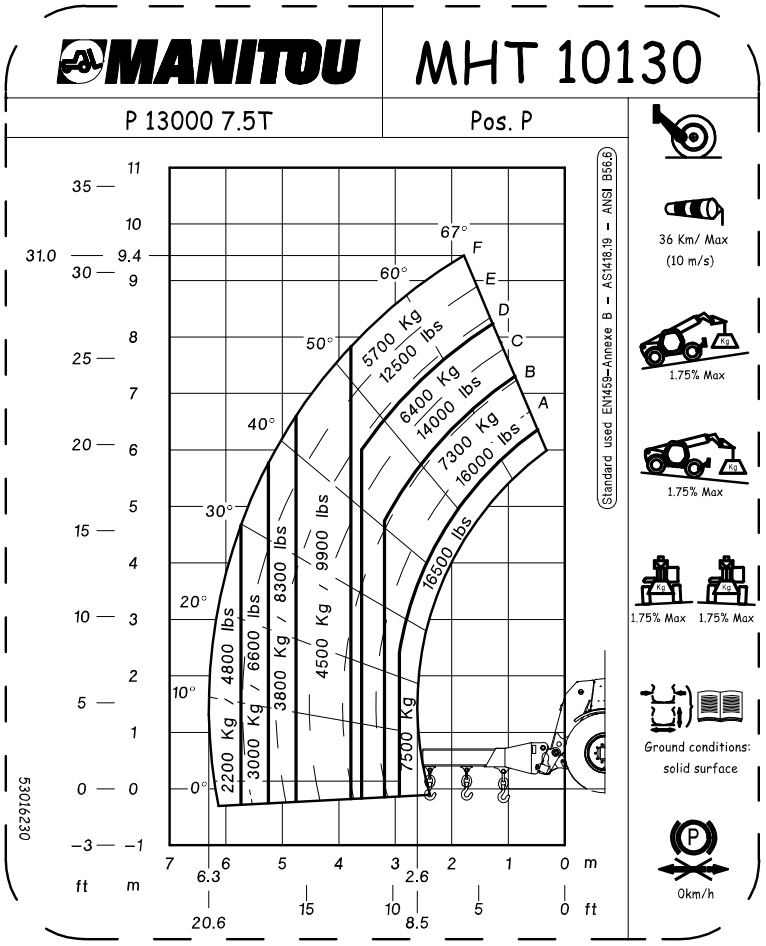


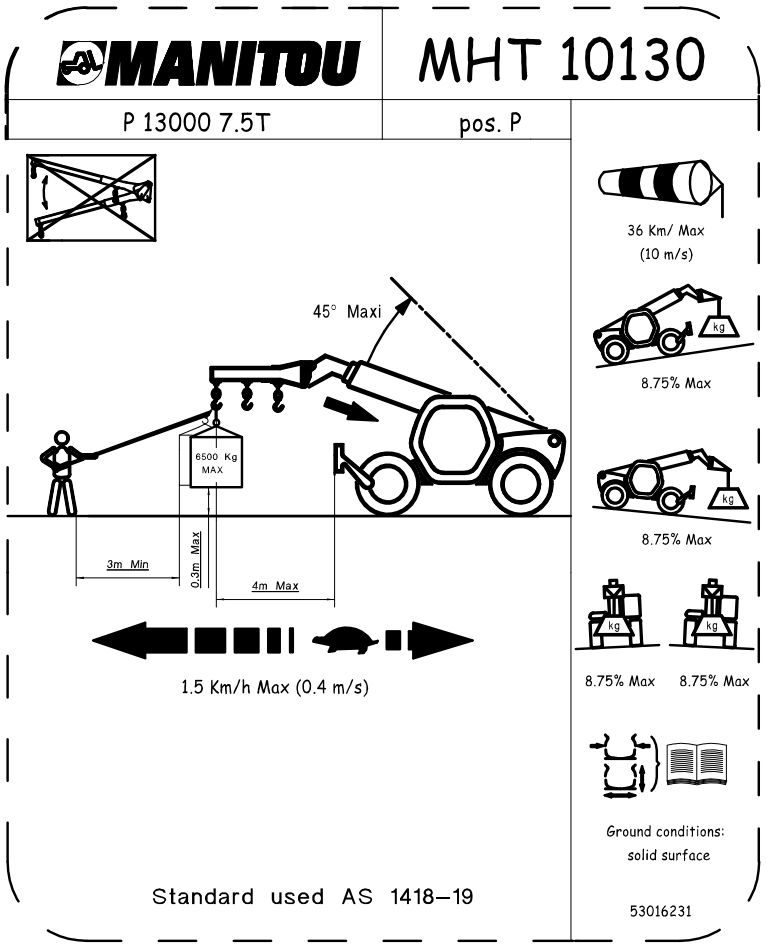


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

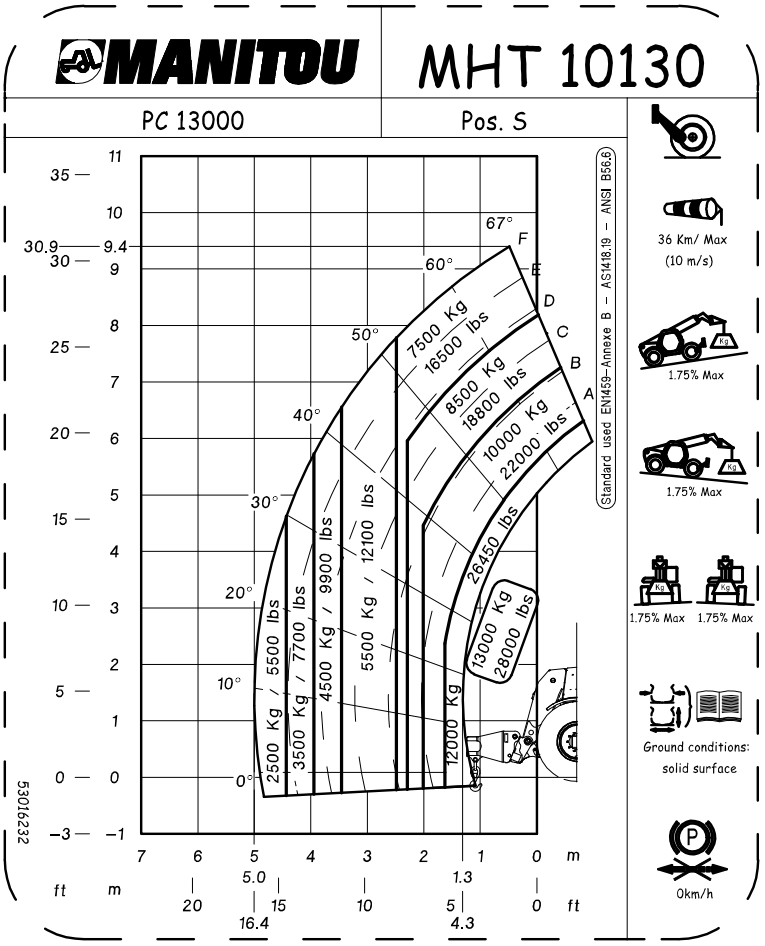

MANITOU
MHT 10130
P 13000 10T
Pos. O
Standard used EN1459–Annexe B – AS1418.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
6700 Kg
14700 lbs
7500 Kg
16500 lbs
8700 Kg
19200 lbs
22000 lbs
2500 Kg / 5500 lbs
3400 Kg / 7500 lbs
4300 Kg / 9500 lbs
5100 Kg / 11200 lbs
10000 Kg
31.0
35
30
25
20
15
10
5
0
−3
11
10
9.4
9
8
7
6
5
4
3
2
1
0
−1
7 6 5 4 3 2 1 0 m
5.6
1.95
ft m
20 15 10 5 0 ft
18.5
6.4
53016228
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h

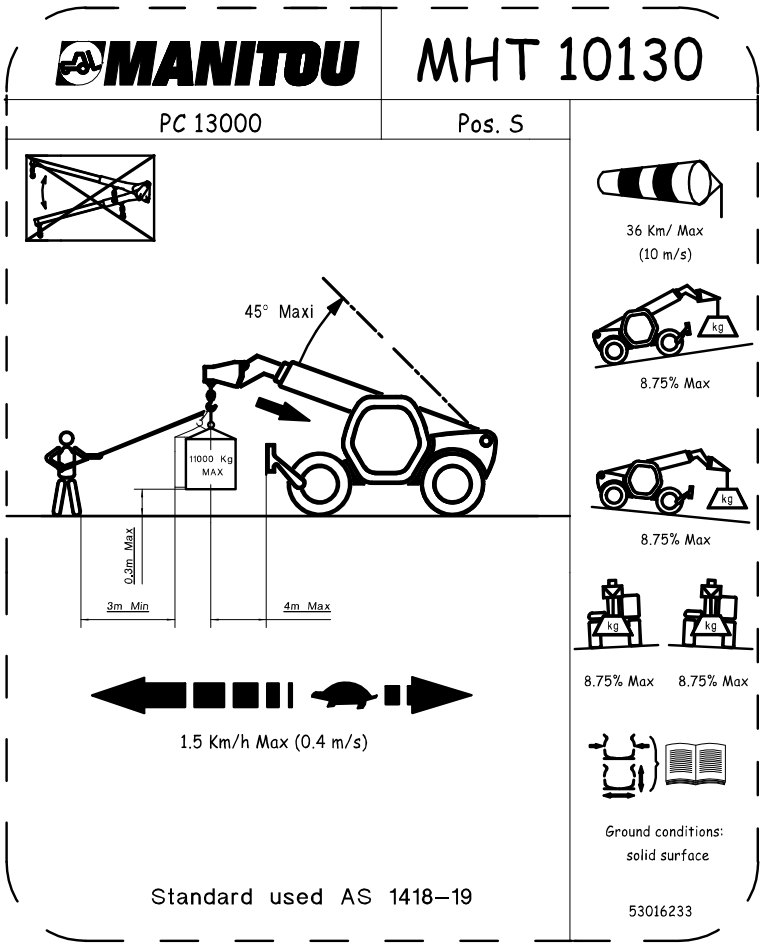

MANITOU
MHT 10130
P 13000 10T
Pos. O
45° Maxi
8500 Kg
MAX
3m Min
0.3m Max
4m Max
1.5 Km/h Max (0.4 m/s)
Standard used AS 1418–19
53016229
36 Km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions:
solid surface

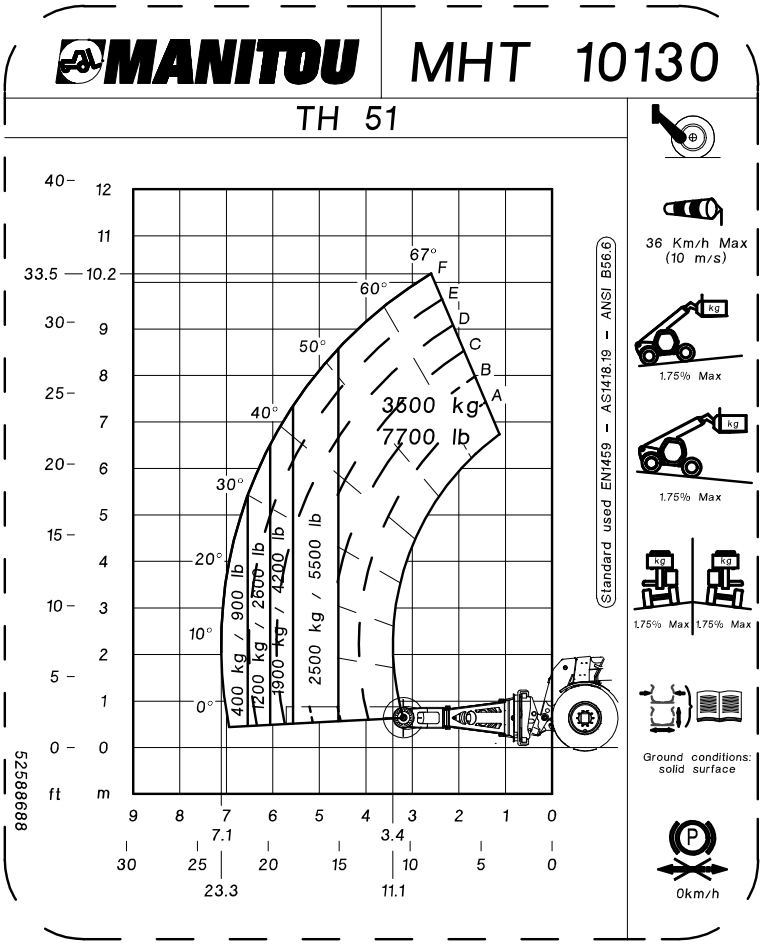


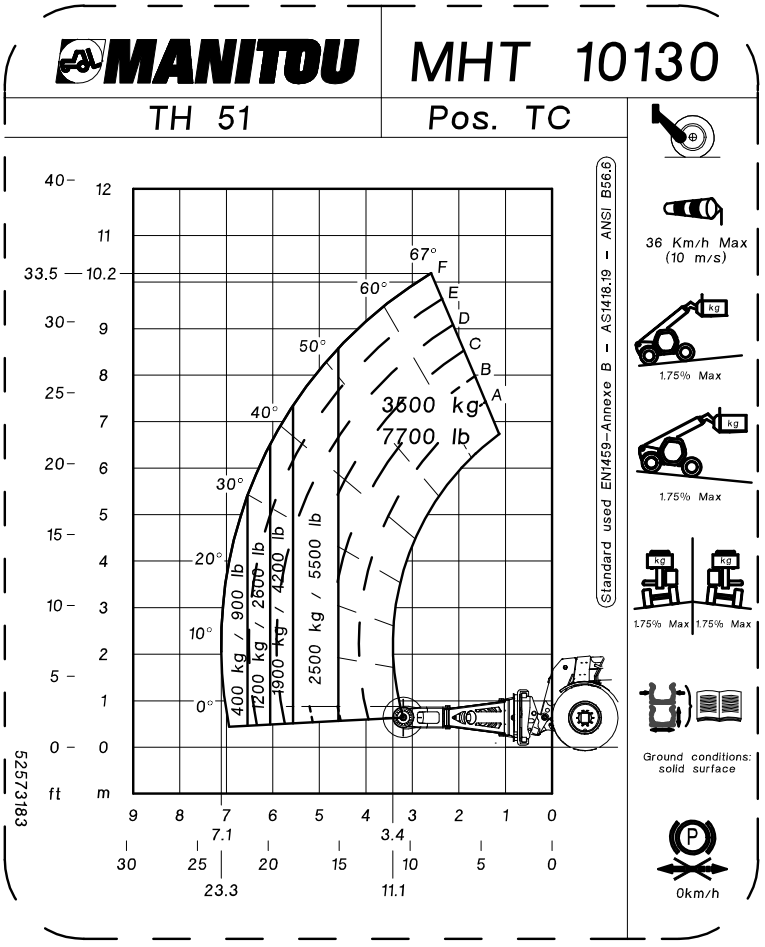


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
PC 13000
Pos. S
Standard used EN1459-Annexe B – AS1418.19 – ANSI B56.6
67°
60°
50°
40°
30°
20°
10°
0°
F
E
D
C
B
A
7500 Kg 16500 lbs
8500 Kg 18800 lbs
10000 Kg 22000 lbs
12000 Kg 26450 lbs
13000 Kg 28000 lbs
2500 Kg / 5500 lbs
3500 Kg / 7700 lbs
4500 Kg / 9900 lbs
5500 Kg / 12100 lbs
53016232
ft
m
5.0
1.3
16.4
4.3
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h


MANITOU
MHT 10130
PC 13000
Pos. S
45° Maxi
11000 Kg MAX
0.3m Max
3m Min
4m Max
1.5 Km/h Max (0.4 m/s)
36 Km/ Max
(10 m/s)
8.75% Max
8.75% Max
8.75% Max
8.75% Max
Ground conditions:
solid surface
Standard used AS 1418–19
53016233

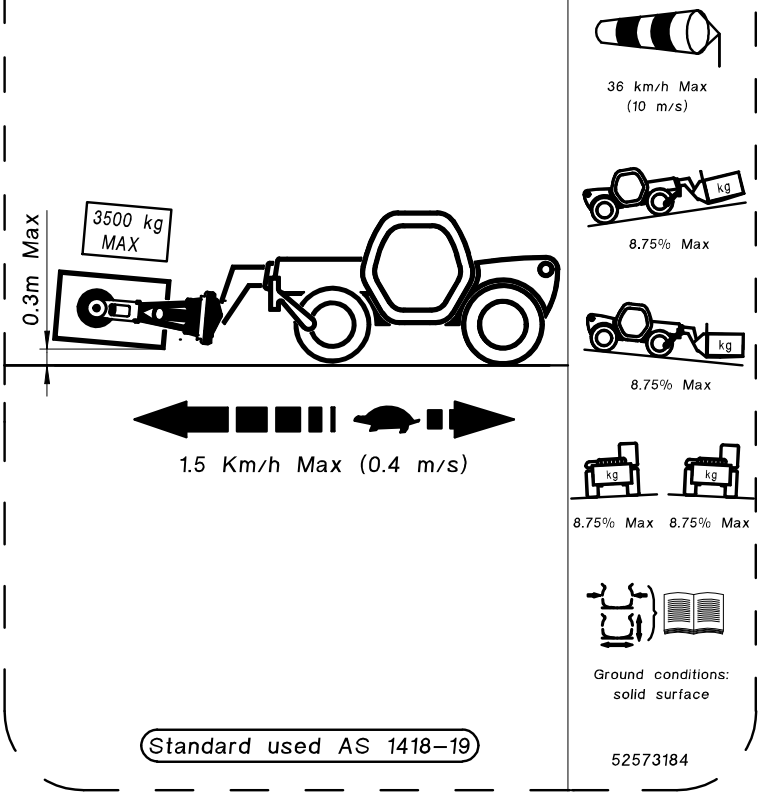




648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU MHT 10130

TH 51 Pos. TC

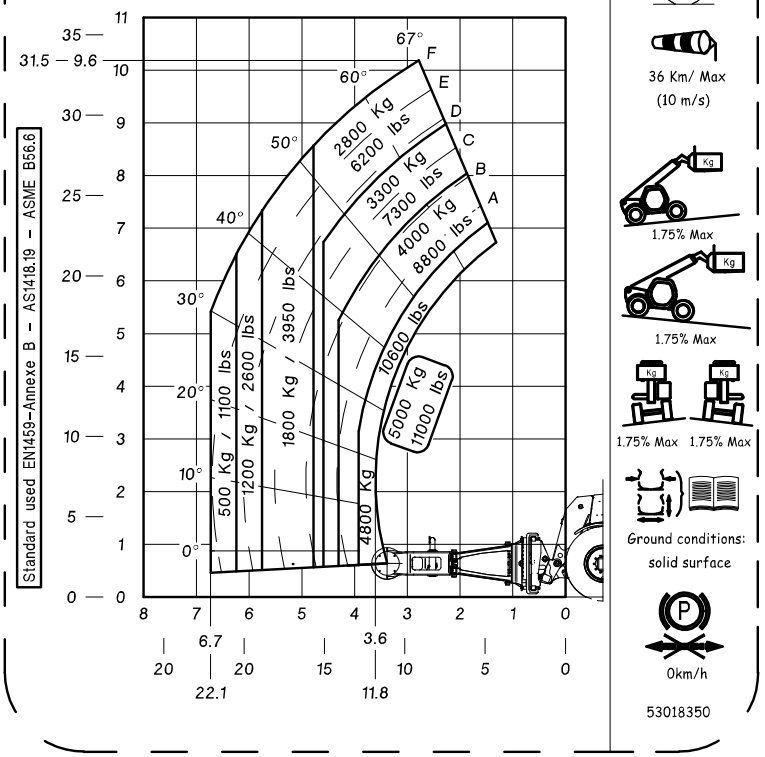


Standard used AS 1418–19

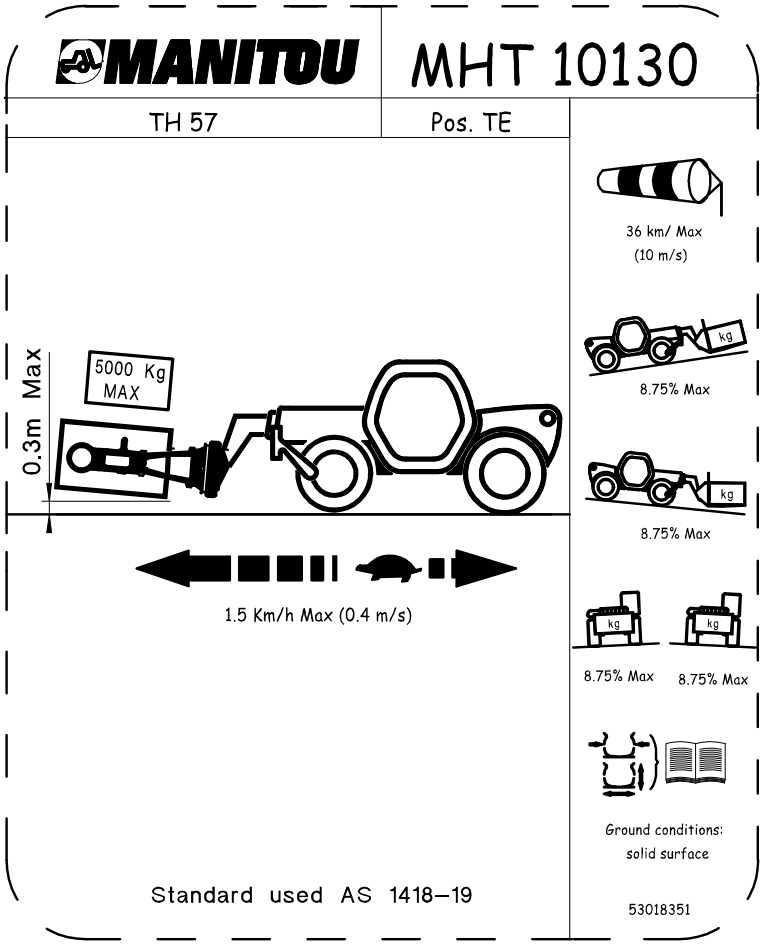
52573184

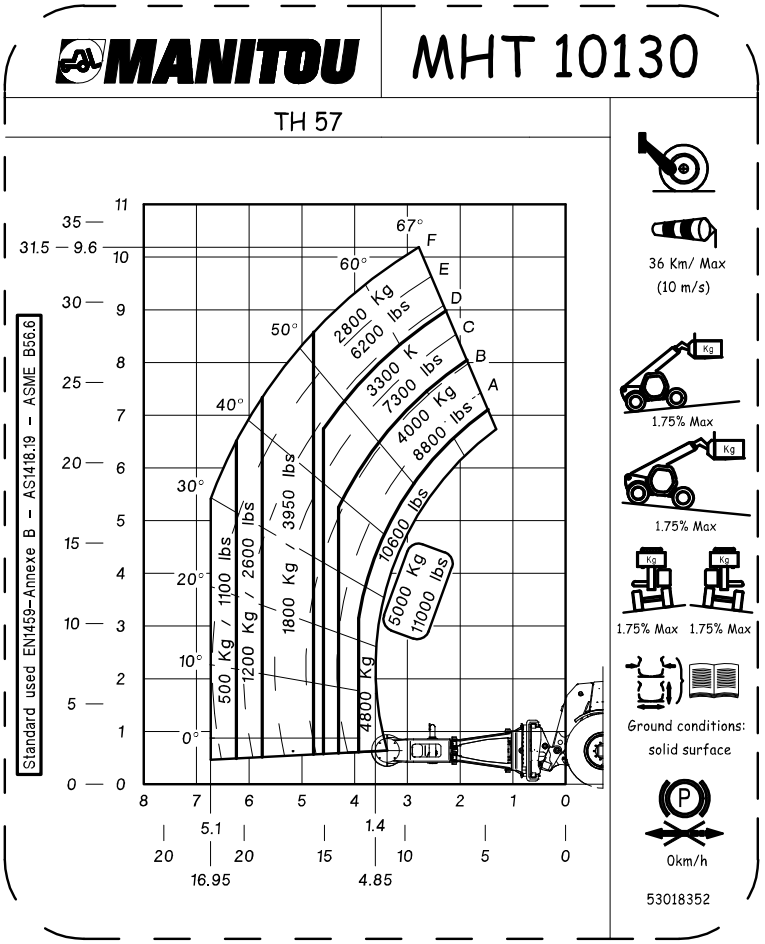
MANITOU MHT 10130

TH 57 Pos. TE

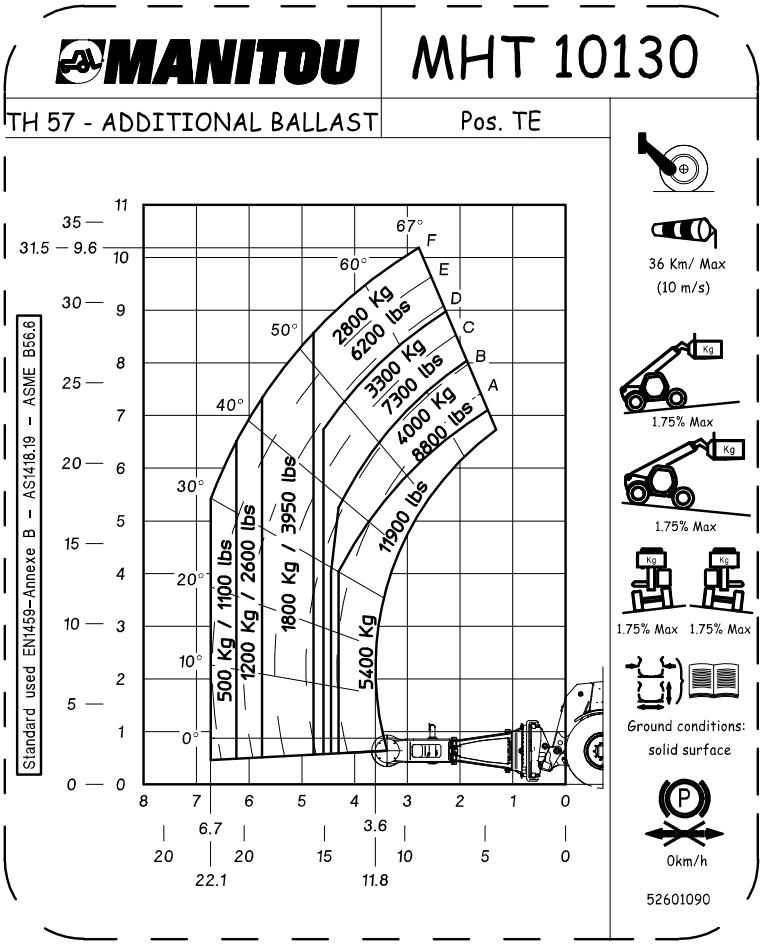


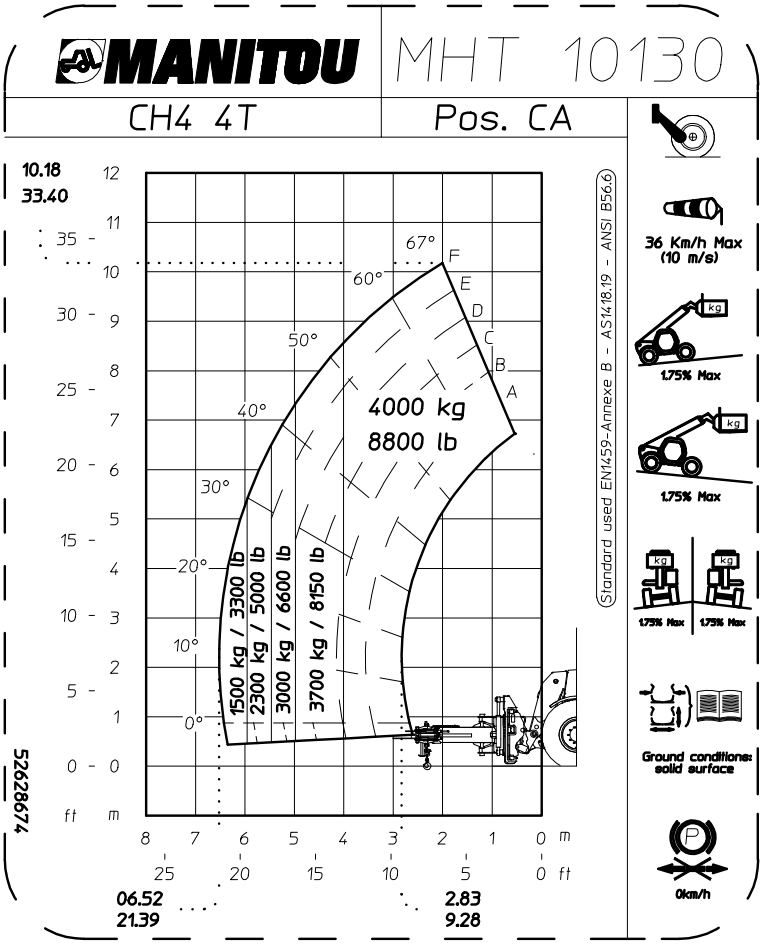
53018350

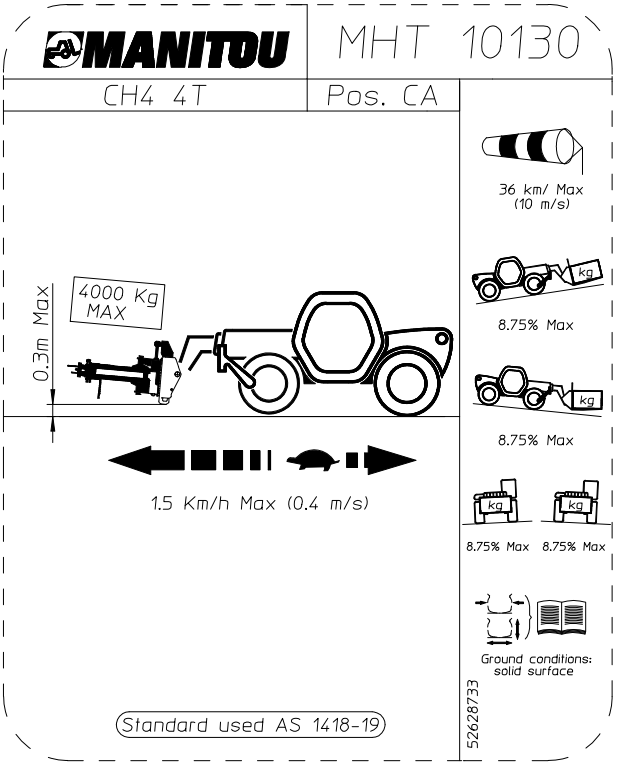


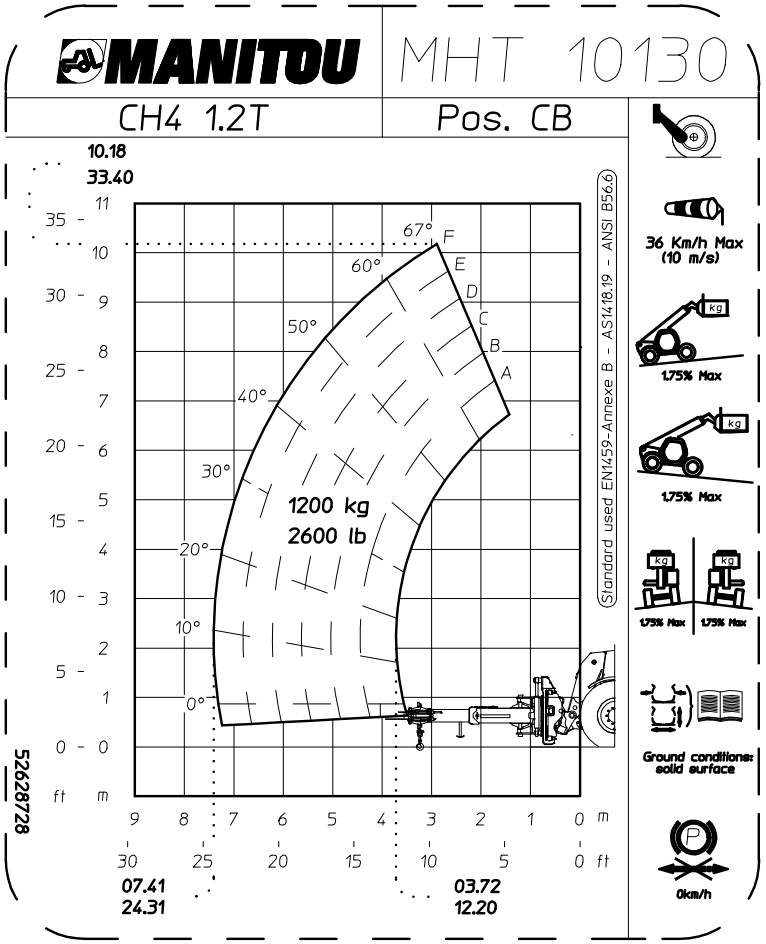


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
TH 57 - ADDITIONAL BALLAST
Pos. TE
Standard used EN1459-Annexe B - AS1418.19 - ASME B56.6
2800 Kg
6200 lbs
3300 Kg
7300 lbs
4000 Kg
8800 lbs
11900 lbs
5400 Kg
1800 Kg / 3950 lbs
1200 Kg / 2600 lbs
500 Kg / 1100 lbs
22.1
11.8
36 Km/ Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
52601090


MANITOU
MHT 10130
CH4 4T
Pos. CA
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
4000 kg
8800 lb
1500 kg / 3300 lb
2300 kg / 5000 lb
3000 kg / 6600 lb
3700 kg / 8150 lb
06.52
21.39
2.83
9.28
36 Km/h Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
5269874



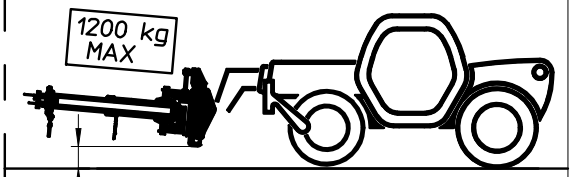


648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU

MHT 10130

CH4 1.2T | Pos. CB



0.3m Max

1.5 Km/h Max (0.4 m/s)

36 km/h Max
(10 m/s)

8.75% Max

8.75% Max

8.75% Max 8.75% Max

Ground conditions:
solid surface

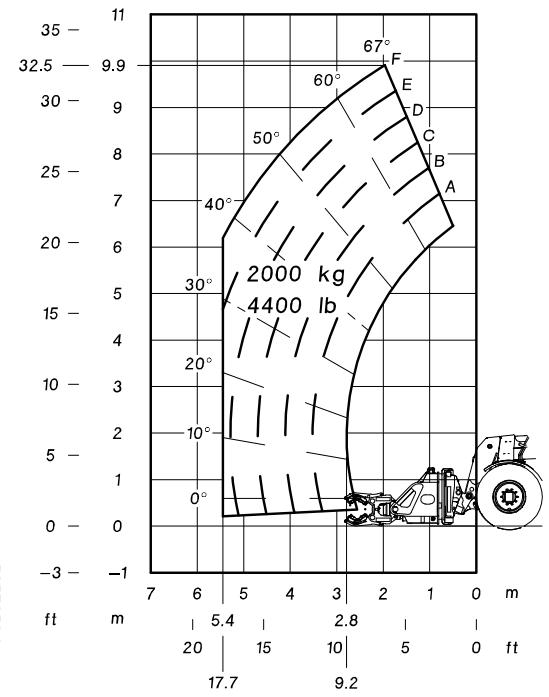
Standard used AS 1418-19

52628752

MANITOU

MHT 10130

CH 10 2T | Pos. TG



52572594

Standard used EN1459-Annexe B – AS1418.19 – ANSI B56.6

36 Km/h Max
(10 m/s)

1.75% Max

1.75% Max

1.75% Max 1.75% Max

Ground conditions:
solid surface

0km/h

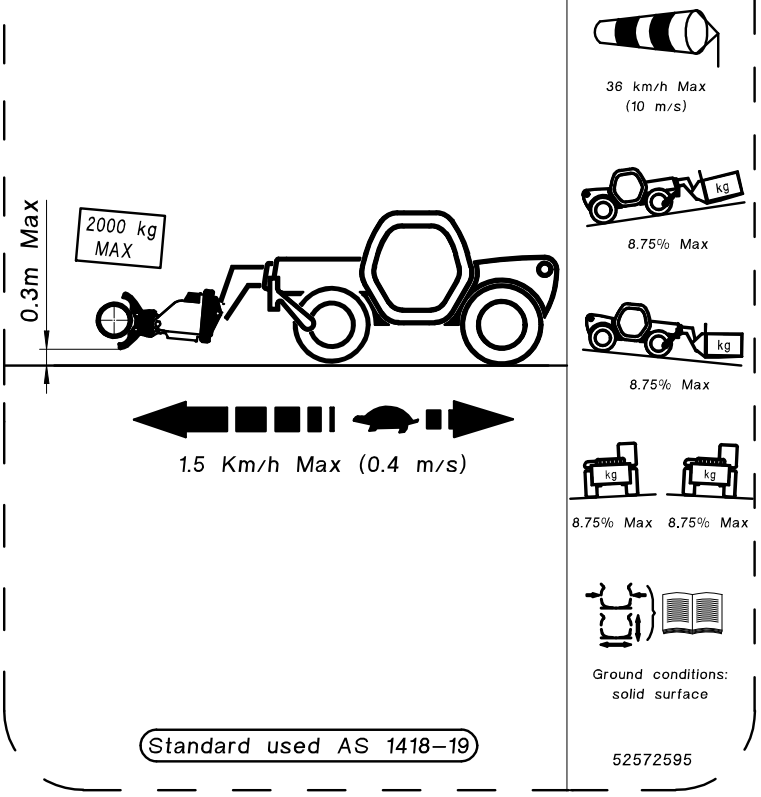
648860 EN-US-AU (27/03/2023)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1

MANITOU

MHT 10130

CH10 2T

Pos. TG



Standard used AS 1418–19

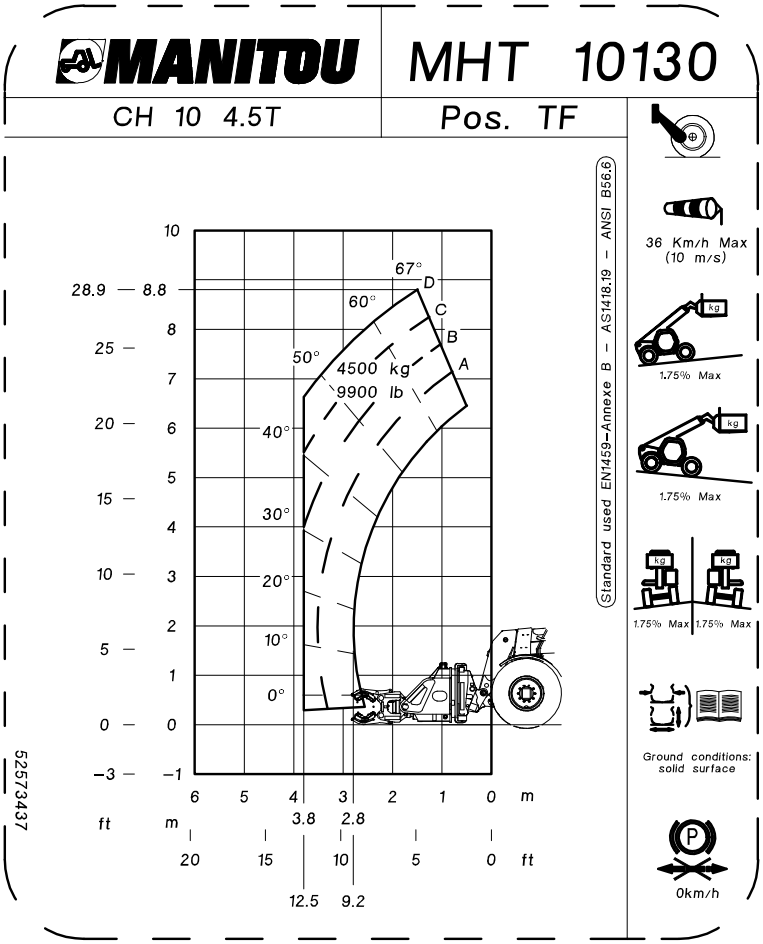
52572595

MANITOU

MHT 10130

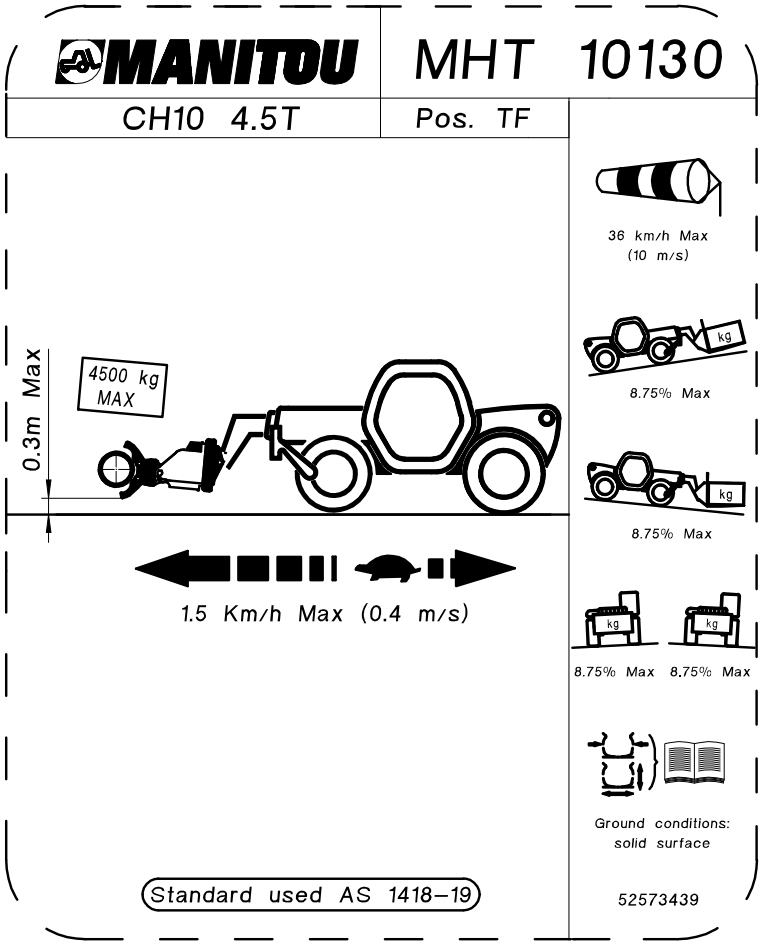
CH 10 4.5T

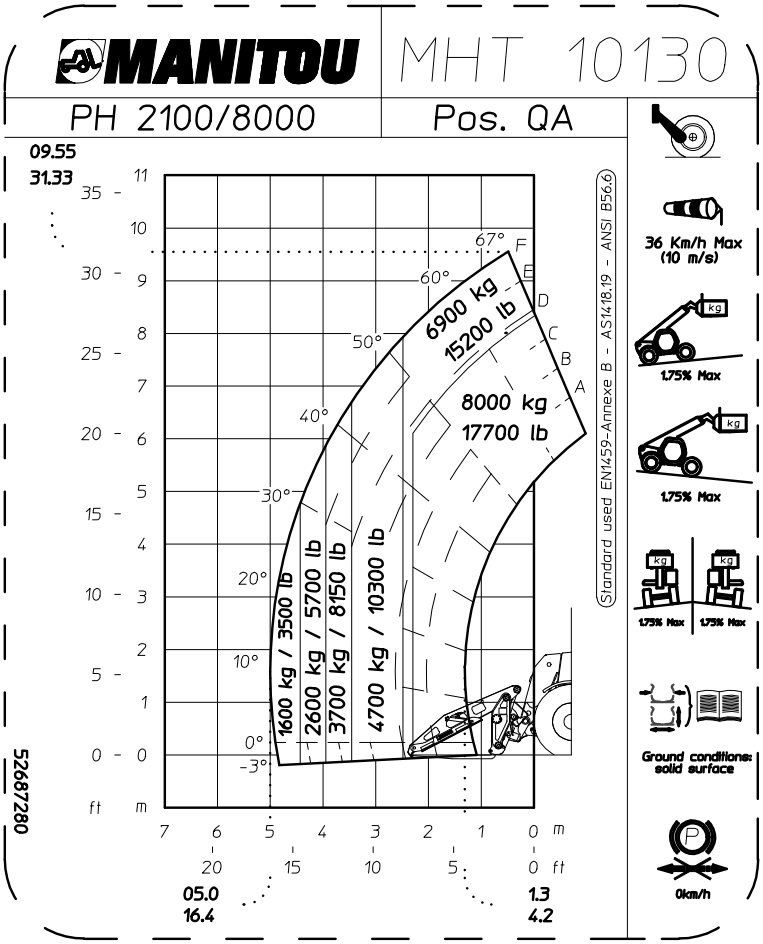
Pos. TF



52573437

648860 EN-US-AU (28/09/2020)
MHT-X 1490 129M ST3A S1, MHT 1490 129M ST4 S1
MHT-X 10130 129M ST3A S1, MHT 10130 129M ST4 S1


MANITOU
MHT 10130
CH10 4.5T
Pos. TF
36 km/h Max
(10 m/s)
4500 kg
MAX
0.3m Max
8.75% Max
8.75% Max
8.75% Max
8.75% Max
1.5 Km/h Max (0.4 m/s)
Ground conditions:
solid surface
Standard used AS 1418-19
52573439


MANITOU
MHT 10130
PH 2100/8000
Pos. QA
09.55
31.33
6900 kg
15200 lb
8000 kg
17700 lb
1600 kg / 3500 lb
2600 kg / 5700 lb
3700 kg / 8150 lb
4700 kg / 10300 lb
67°
60°
50°
40°
30°
20°
10°
0°
-3°
A
B
C
D
E
F
ft
m
05.0
16.4
1.3
4.2
Standard used EN1459-Annexe B - AS1418.19 - ANSI B56.6
36 Km/h Max
(10 m/s)
1.75% Max
1.75% Max
1.75% Max
1.75% Max
Ground conditions:
solid surface
0km/h
52687280