A TEREX BRAND

Operator's Manual

	Serial number range
2500kg FIXED HOOK on PLATE	From s/n: FXHOOKC14B-1001 To s/n: FXHOOKC15B-1008
5000kg FIXED HOOK on PLATE	From s/n: FXHOOK14B-1001 To s/n: FXHOOK15B-1036
4000mm/900kg Mech JIB	From s/n: MJ4/90014B-1001 To s/n: MJ4/90014B-1003
4000mm/900kg Hyd JIB	From s/n: HYJ4/9014B-1001 To s/n: HYJ4/9015B-1002
2000mm/2000kg Mech JIB	From s/n: MJ2/20014B-1001 To s/n: MJ2/20015B-1007
3000kg HOIST	From s/n: HYW300014B-1001 To s/n: HYW300016M-1008
4000kg HOIST	From s/n: HYW400014B-1001 To s/n: HYW400015B-1008
5000kg HOIST	From s/n: HYW50R14B-1001 To s/n: HYW50R14B-1010

With Maintenance Information

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Introduction

Symbols



Safety alert symbol: used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death

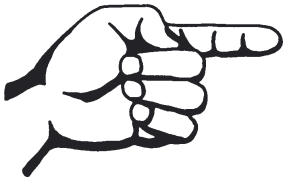
DANGER ***Red: indicates a hazardous situation which, if not avoided, will result in death or serious injury.***

WARNING ***Orange: indicates a hazardous situation which, if not avoided, could result in death or serious injury.***

CAUTION ***Yellow : indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.***

NOTICE ***Blue: indicates a hazardous situation which, if not avoided, could result in property damage.***

PROTECT THE ENVIRONMENT ***Green: used to draw the attention to important information on environment protection.***



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Equipment Identification

Check that the Operator's Manual refers to the delivered equipment.

■ DESIGNATION:

✓ **FIXED HOOK ON PLATE**

✓ **JIB**

✓ **HOIST**

■ MODEL:

✓ 2500kg Fixed Hook on Plate

✓ 5000kg Fixed Hook on Plate

✓ 4000mm/900kg Hydraulic Jib

✓ 4000mm/900kg Mechanical Jib

✓ 2000mm/2000kg Mechanical Jib

✓ 3000kg Hoist

✓ 4000kg Hoist

✓ 5000kg Hoist

■ PRODUCT IDENTIFICATION

The attachment serial number is located on the serial label.

- *2500kg Fixed Hook on Plate 59.0700.9008GT*
- *5000kg Fixed Hook on Plate 59.0700.9007GT*
- *4000mm/900kg Hydraulic Jib 59.0802.3018GT*
- *4000mm/900kg Mech. Jib 59.0802.3017GT*
- *2000mm/2000kg Mech. Jib 59.0802.3016GT*
- *3000kg Hoist 59.0901.9009GT*
- *4000kg Hoist 59.0901.9005GT*
- *5000kg Hoist 59.0901.9008GT*

■ APPLICABLE STANDARDS

For the operator's safety, the following standards were obeyed during the risk assessment of the handler fitted with telescopic boom norme:

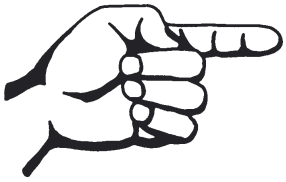
Directive	***Title***
2006/42/EC	Machinery Directive

Standard	***Title***
EN 1459:1988/A2:2009	Safety of Industrial trucks - Self- propelled variable reach trucks.

■ IDENTIFICATION PLATE

The data plate is applied on the equipment.

The identification plate contains model, designation, serial number, weight, payload and year of manufacture.

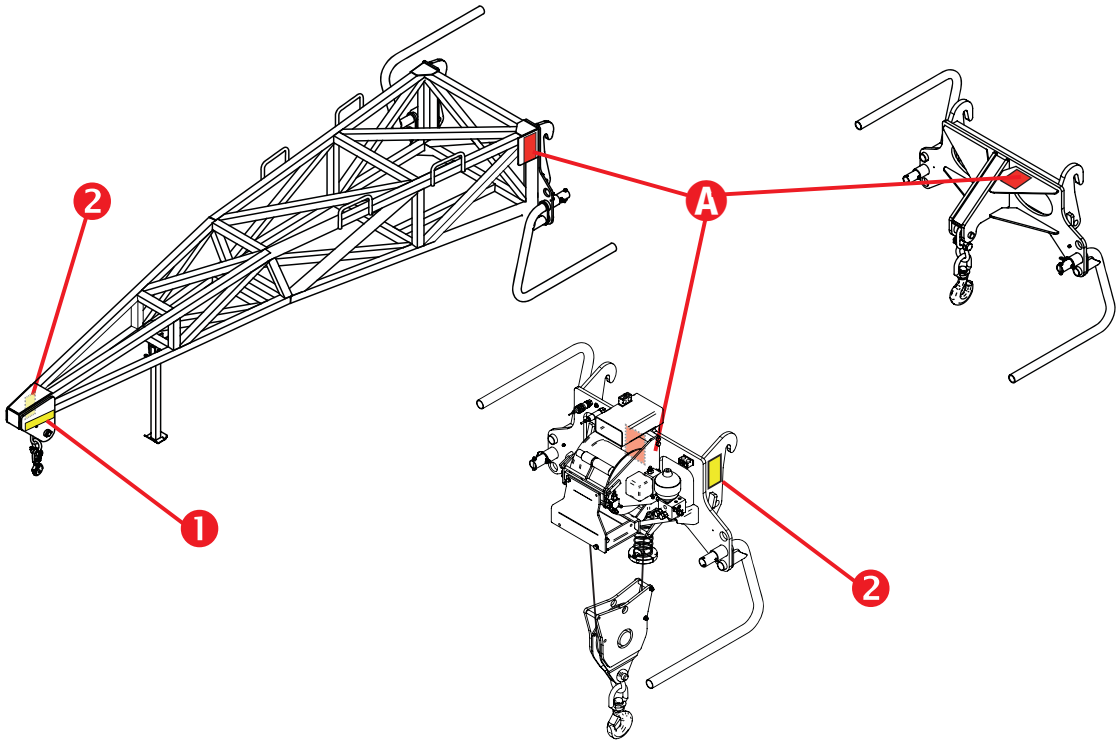


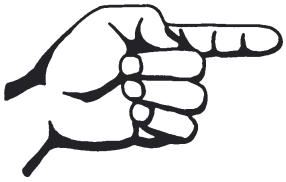
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Labels And Plates Applied

Use the pictures on these pages to verify that all labels and plates are legible and in place. The following chart shows quantities and description too.

Ref.	Decal	Code	Description	Qt.
1	900 kg	/	**PLATE_Maximum payload. ONLY for 4000mm/900kg JIB**	1
2		09.4618.1346	**Entanglement Hazard**	1
A		/	**IDENTIFICATION PLATE**	1





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Safety Precautions

DAMAGED MACHINE HAZARDS

- Do not use a damaged or modified equipment.
- Do a thorough pre-operation inspection of the equipment and test all functions before each work shift. Tag and remove from service a damaged or modified equipment.
- Make sure that all maintenance jobs have been carried out as specified in this manual and in the telehandler's specific manuals.
- Make sure that all plates are in place and legible.
- Make sure that the operator's manual is intact, legible and placed in the special container located in the machine.

PERSONAL INJURY HAZARDS

- Do not operate the equipment in case of hydraulic oil or air leak of the telehandler. Air or hydraulic oil leaks can penetrate or burn the skin.
- Always operate the telehandler in a well ventilated area to avoid carbon monoxide poisoning.
- Do not lower the boom if the area underneath is not clear of personnel or obstructions.

SAFETY DEVICES



Several safety devices have been fitted to the telehandler. They must never be tampered with or removed.
Regularly check the efficiency of such devices. In case of faults, stop working immediately and proceed in replacing the modified device.
For the checking procedures, read chap. "Maintenance" of the telehandler Operator's Manual.

MOMENT LIMITING SYSTEM

The moment limiting system has been developed to help the operator to maintain the telehandler longitudinal stability. Audible and visual messages are provided when the limits of longitudinal stability are being approached.
However this device cannot replace the experience of the operator. It is up to the user to adopt the necessary safety measures to work within the rated limits of the machine.

Safety Precautions



Not observing the instructions and safety rules in this manual may result in death or serious injury.

Do not operate the equipment unless:

- You learn and practice the principles of safe work equipment operation contained in this operator's manual.
  1. **Avoid hazardous situations.** Read and understand the safety instructions before going on to the next chapter.
  2. **Always perform a pre-operation inspection.**
  3. **Always test the equipment functions prior to use.**
  4. **Inspect the work place.**
  5. **Only use the equipment for the intended application.**

- Read, understand and obey the manufacturer's instructions and the safety rules, the safety and operator's manuals, and the decals applied on the equipment.
- Read, understand and obey the employer's safety rules and worksite regulations.
- Read, understand and obey the applicable national regulations.
- Only trained personnel informed on the safety rules can operate the equipment.

■ GENERAL REMARKS

Most accidents occurring while working, repairing or maintaining machines, are caused by not complying with the basic safety precautions.
Therefore, it is necessary to pay steady attention to the potential hazards and the effects that may come of operations carried out on the telehandler.

NOTICE

If you recognise hazardous situations, you can prevent accidents!

DANGER

The instructions given in this handbook are the ones established by TEREX Global GmbH. They do not exclude other safe and most convenient ways for the telehandler and/or the equipment installation, operation and maintenance that take into account the available spaces and means.

If you decide to follow instructions other than those given in this manual, you shall absolutely:

- be sure that the operations you are going to carry out are not explicitly forbidden;
- be sure that the methods are safe, say, in compliance with the rules and provisions given in this section;
- be sure that the methods cannot damage the telehandler and/or the equipment, directly or indirectly, or make it unsafe;
- contact TEREX Global GmbH Assistance Service for any suggestion and the necessary written permission.

Safety Precautions

■ REQUISITES OF THE PERSONNEL IN CHARGE

■ Requisites of the TELEHANDLER OPERATORS

The operators who use the telehandler and/or the equipment, regularly or occasionally, shall have the following prerequisites:

health:
before and during any operation, operators shall never take alcoholic beverages, medicines or other substances that may alter their psycho-physical conditions and, consequently, their working abilities.

physical:
good eyesight, acute hearing, good co-ordination and ability to carry out all required operations in a safe way, according to the instructions of this manual.

mental:
ability to understand and apply the enforced rules, regulations and safety precautions. They shall be careful and sensible for their own as well as for the others' safety and shall desire to carry out the work correctly and in a responsible way.

emotional:
they shall keep calm and always be able to evaluate their own physical and mental conditions.

training:
they shall read and be familiar with this handbook, its enclosed graphs and diagrams. They shall be skilled and trained about the telehandler and/or the equipment use.

NOTICE

The operator shall have a licence (or a driving licence) when provided for by the laws enforced in the country where the machine works. Please, ask the competent bodies.

■ Requisites of the SERVICEMEN

The personnel charged with the telehandler and the equipment maintenance shall be qualified, specialized in their maintenance, and shall have the following prerequisites:

physical:
good eyesight, acute hearing, good co-ordination and ability to carry out all required maintenance operations in a safe way, according to this manual.

mental:
ability to understand and apply the enforced rules, regulations and safety precautions. They shall be careful and sensible for their own as well as for the others' safety and shall desire to carry out the work correctly and in a responsible way.

training:
they shall read and be familiar with this handbook, its enclosed graphs and diagrams, the identification and warning plates. They shall be skilled and trained about the machine functioning.

NOTICE

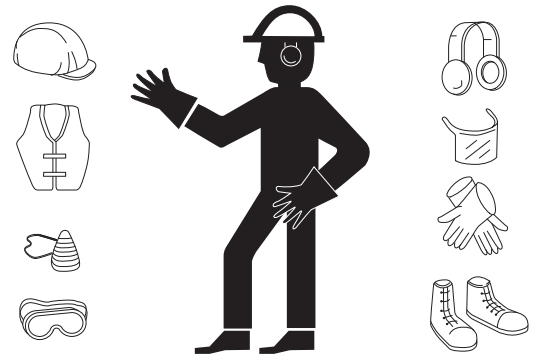
From a technical point of view, the ordinary maintenance of the telehandler and/or the equipment is not a complex intervention and can be carried out by the operator too, provided he has a basic knowledge of mechanics.

Safety Precautions

■ WORKING CLOTHES

During work, but especially when maintaining or repairing the machine, operators must wear suitable protective clothing:

- Overalls or any other comfortable garments. Operators should not wear clothes with large sleeves or objects that can get stuck in moving parts of the machine.
- Ear-protectors or equivalent equipment.
- Protective helmet.
- Protective gloves.
- Working shoes.



Use only type-approved working clothing in good condition.

■ Personal PROTECTIVE EQUIPMENT

Under special working conditions, the following personal protective equipment should be used:

- Breathing set (or dust mask).
- Goggles or facial masks.

■ OTHER DANGERS

■ Hazards on the JOBSITE

Always take into account the features of the job site where you are going to work:

- Always examine the working area and compare it with the telehandler dimensions in the different configurations.

DANGER

The telehandler is not electrically insulated and does not provide protection from contact with or proximity to electrical power lines.
Always keep at a minimum safe distance from the telescopic boom and the lifted load. Electrical hazards!

- Keep away from the machine in case of contact with energized power lines. Personnel on the ground must never touch or operate the telehandler until energized power lines are shut off.

DEATH OR INJURY CAN RESULT FROM CONTACTING ELECTRIC POWER LINES.					
ALWAYS CONTACT THE ELECTRIC POWER LINES OWNER. THE ELECTRIC POWER SHALL BE DISCONNECTED OR THE POWER LINES MOVED OR INSULATED BEFORE MACHINE OPERATIONS BEGIN					
POWER LINE VOLTAGE			REQUIRED CLEARANCE		
0	to	50 kV	10 ft	3.00 m	
50	to	200 kV	15 ft	4.60 m	
200	to	350 kV	20 ft	6.10 m	
350	to	500 kV	25 ft	7.62 m	
500	to	750 kV	35 ft	10.67 m	
750	to	1000 kV	45 ft	13.72 m	

DANGER

Do not, at any time, use the machine during a storm.

WARNING

Operator have to survey his/her field of vision when operating the telehandler.

Safety Precautions

■ OPERATION or MAINTENANCE hazards

Before any operation, following precautions should be taken:

- First of all, make sure that the maintenance interventions have been carried out with care according to the established schedule.

WARNING

Set the telehandler to working configuration and level it.

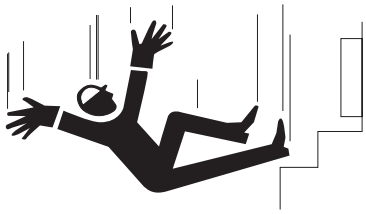
- Ensure you have enough fuel to avoid a sudden stop of the engine, especially during a crucial manoeuvre.
- Clean instruments, data plates, lights and the cab windscreen thoroughly.
- Check the correct functioning of all the safety devices installed on the telehandler and/or on the equipment.
- In case of troubles or difficulties, inform the foreman at once. Never start working under unsafe conditions.
- Do not carry out any repair work in a makeshift way to start working!

During work, and especially maintenance, always pay the greatest attention:

- Do not walk or stop under raised loads or machine parts supported by hydraulic cylinders or ropes only.
- Keep the machine handholds and access steps always clean from oil, grease or dirt to prevent falls or slips.



- When entering/leaving the cab or other raised parts, always face the machine; never turn the back.



- When carrying out operations at hazardous heights (over **1.5** meters from the ground), always use approved fall restraint or fall arrest devices.
- Do not enter/leave the machine while it is running.
- Do not leave the driving place when the machine is running.
- Neither stop nor carry out interventions under or between the machine wheels when engine is running. When maintenance in this area is required, stop the engine.
- Do not carry out maintenance or repair works without a sufficient lighting.
- When using the machine lights, the beam should be oriented in order not to blind the personnel at work.
- Before applying voltage to electric cables or components, check their connection and proper functioning.
- Do not carry out interventions on electric components with voltage over **48V**.
- Do not connect wet plugs or sockets.
- Plates and hazard warning stickers shall never be removed, hidden or become unreadable.
- Except for maintenance purposes, do not remove safety devices, shields, protection cases, etc. Should their removal be necessary, stop the engine, remove them with the greatest care and always remember to refit them before starting the engine and using the machine again.
- Before any maintenance or repair work, stop the engine and disconnect the batteries.
- Do not lubricate, clean or adjust moving parts.

Safety Precautions

- Do not carry out operations manually when specific tools are provided for this purpose.
- Avoid the use of tools in bad condition or use in an improper way i.e. pliers instead of adjustable wrenches, etc.
- Applying loads in different points of the attachment holding plate is forbidden.

⚠ WARNING

Any intervention on the hydraulic circuit must be carried out by authorised personnel.
The hydraulic circuit of this machine is fitted with pressure accumulators. You and others could be seriously injured if accumulators are not completely depressurised.
For this purpose, shut the engine down and step on the brake pedal 8/10 times.



- Before carrying out operations on hydraulic lines under pressure or disconnecting hydraulic components, ensure the relevant line has been previously depressurised and does not contain any hot fluid.
- Do not empty catalytic mufflers or other vessels containing burning materials without taking the necessary precautions.
- After any maintenance or repair work, make sure that no tool, cloth or other object has been left within machine compartments, fitted with moving parts, or where suction and cooling air circulates.
- When working, do not give instructions or signs to several people at the same time. Instructions and signs must be given by one person only.
- Always pay due attention to the instructions given by the foreman.
- Never distract the operator during working phases or crucial manoeuvres.
- Do not call an operator suddenly, if unnecessary.
- Do not frighten an operator or throw objects by any means.
- After work, never leave the machine under potentially dangerous conditions.
- Before any maintenance or repair work, remove the attachment.

■ MACHINE OPERATION hazards

Absolutely avoid the following work situations:

- Do not handle loads beyond the maximum capacity of the machine.
- Do not raise or extend the boom if the machine is not on a firm, level surface.
- Do not operate the machine in strong wind. Do not increase the surface area of the machine or forked load exposed to the wind. Increasing the area exposed to the wind will decrease machine stability.
- Use extreme caution and slow speeds when the machine is driven across uneven or unstable grounds, slippery surfaces or near trenches or drop-offs.
- Limit travel speed according to ground conditions, slopes, presence of personnel or other factors which may cause collision.
- Do not place or attach overhanging loads to any part of the machine.

Safety Precautions

EXPLOSION OR FIRE hazards

- Do not start the engine if you smell or detect LPG, gasoline, diesel fuel or other explosive substances.
- Do not refuel the machine with the engine running.
- Refuel the machine and charge the battery only in a well ventilated area away from sparks, naked flames and lighted cigarettes.
- Do not operate the machine in dangerous environments or in places with flammable or explosive gases or materials.
- Do not inject ether in engines equipped with glow plugs.
- Do not leave fuel cans or bottles in unsuitable places.
- Neither smoke nor use open flames in areas subject to fire dangers and in presence of fuel, oil or batteries.
- Carefully handle all flammable or dangerous substances.
- Do not tamper with fire-extinguishers or pressure accumulators.



DAMAGED COMPONENT hazards

- Do not use battery chargers or batteries with a voltage above 12V to start the engine.
- Do not use the machine as a ground for welding.

PERSONAL INJURY hazards

- Do not operate the machine in case of hydraulic oil or air leak. Air or hydraulic oil leaks can penetrate or burn the skin.
- Always operate the machine in a well ventilated area to avoid carbon monoxide poisoning.
- Do not lower the boom if the area underneath is not clear of personnel or obstructions.

Safety Precautions

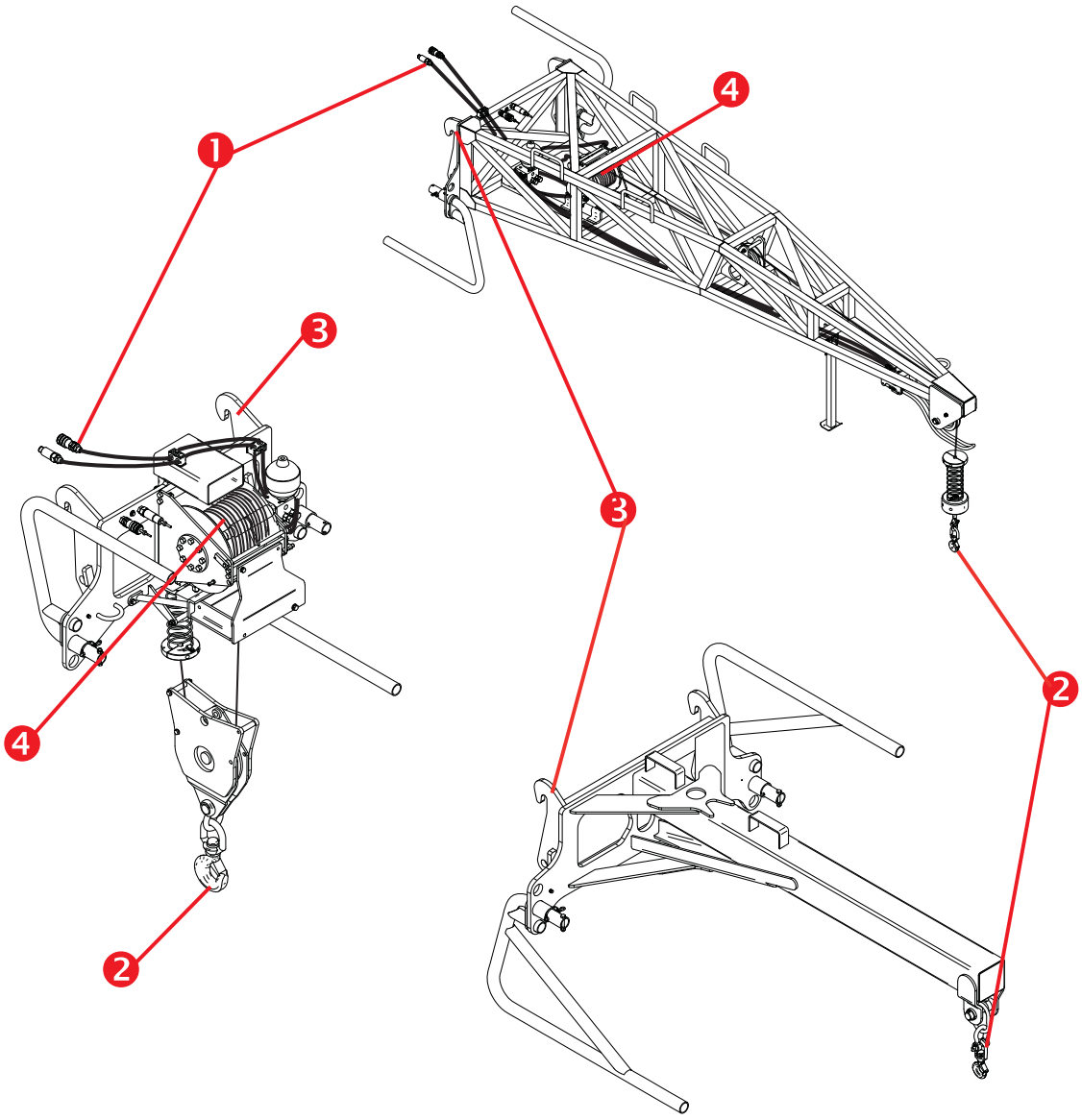
SUSPENDED LOAD HAZARDS

- A suspended load has a dynamic, and therefore unpredictable, effect on machine stability, so extreme caution should always be exercised when operating with suspended loads.
- Only lift the load when the telehandler is on firm level ground.
- Do not operate the machine while people are under a suspended load.
- All movements of the load must be accomplished at lowest possible speed.
- Do not lift loads when wind speeds exceed 20 mph (32 kmh).
- Level the telehandler before lifting the load.
- Use guide ropes or tag lines by qualified personnel to help control the load and prevent it from swinging.
- Do not attempt to use the telehandler frame-leveling to compensate for a swinging load.
- Never drag the load.
- Do not try to move fixed or obstructed loads.
- Only lift a load vertically; do not pull a load horizontally as it could cause excessive swinging of the load.
- When visibility is or could be obstructed, the operator shall use alternative/additional means to safely transport the load.
- Use of additional personnel to direct the operator in his movements as well as surrounding ground traffic.
- Speed shall be limited by any conditions that could cause any unexpected movement of the load, or jeopardize the safe transport of the load.
- The boom shall be fully retracted during travel.
- Only travel on solid surfaces.
- Start, travel, turn and stop slowly to prevent the load from becoming unstable or swing.
- Do not exceed walking speed.
- The load shall be transported as low to the ground as practical.
- Do not use any controls for re-positioning the load when traveling. Come to a gradual and complete stop before attempting to re-position the load.

Equipment Description

■ JIB AND HOIST MAIN COMPONENTS

1. **Quick couplings (if any)**
2. **Hook**
3. **Coupling frame**
4. **Winch**



Equipment Description

■ HOIST GENERAL DESCRIPTION

This attachment is used to handle payloads which are suspended by a rope system.
It mainly consists of a steel truss beams welded structure which is provided with two lateral flanges having mechanical slots (on the upper area) and holes (in the lower area) to be coupled with the GTH telehandlers standard interface. These two lateral flanges are connected together (by welding) through a central steel plate which is then welded to the truss beams structure.
The truss beam welded structure is shaped to have, in its lower end, four supporting feet sustaining the attachment when it is on the ground and not linked to the telehandler.
The hydraulic hoist is installed on the front surface of the central steel plate. The hoist is hydraulically powered through the auxiliary line provided at the end of the telescopic boom. The hydraulic connection between this line and the hoist is provided through two hydraulic quick coupling adapters. This hoist is equipped with a mechanical drum where a steel rope is winded.
The end of the steel rope is linked directly or through a steel pulley (depending on the model of the attachment) to a certified hook, capable to lift the payload.
The hook is certified to handle the payload defined for this attachment (its structural strength meets or exceeds the maximum payload defined for the complete attachment).
A special hydraulic switch is installed close to the hook area with the aim to signal when the hook is completely lifted up.
When the hook is completely lifted up no hydraulic pressure is provided to the hoist so avoiding any not necessary overload on the jib structural components.

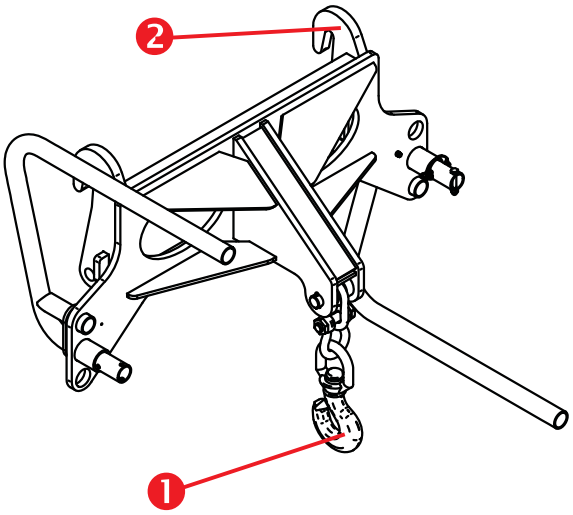
■ JIB GENERAL DESCRIPTION

This attachment is used to handle payloads which is suspended by a rope system.
It mainly consists of a steel truss beams welded structure which is provided with two lateral flanges having mechanical slots (on the upper area) and holes (in the lower area) to be coupled with the GTH telehandlers standard interface.
These two lateral flanges are connected together (by welding) through a central steel plate which is then welded to the truss beams structure.
The truss beam welded structure is shaped to have, in its forward end, a mechanical link for the connection to a certified steel hook.
The hook is certified to handle the payload defined for this attachment (its structural strength meets or exceeds the maximum payload defined for the complete attachment).
The hydraulic version of this attachment is provided with an hydraulic hoist installed inside the truss beam structure immediately ahead of the central steel plate.
The hoist is hydraulically powered through the auxiliary line provided at the end of the telescopic boom.
The hydraulic connection between this line and the hoist is provided through two hydraulic quick coupling adapters.
This hoist is equipped with a mechanical drum where a steel rope is winded.
The end of the steel rope is linked to the certified hook, placed at the end of the truss beams structure.
The rope is guided, between the hoist drum and the hook, by steel pulleys installed inside the truss beam structure and at the end of the truss beams structure.
At the end of this structure a special hydraulic switch is installed with the aim to signal when the hook is completely lifted up.
When the hook is completely lifted up no hydraulic pressure is provided to the hoist so avoiding any not necessary overload on the jib structural components.

Equipment Description

HOOK MAIN COMPONENTS

1. **Hook**
2. **Coupling frame**



HOOK GENERAL DESCRIPTION

This attachment is used to handle payloads which is suspended by a rope system.
It mainly consists of a steel welded structure which is provided with two lateral flanges having mechanical slots (on the upper area) and holes (in the lower area) to be coupled with the GTH telehandlers standard interface.
The welded structure is shaped to have, in its central part, a structural beam protruded forward and having at the front end a mechanical link for the connection to a certified steel hook.
The hook is certified to handle the payload defined for this attachment (its structural strength meets or exceeds the maximum payload defined for the complete attachment).

Equipment Description

ALLOWED USE

The hoist and the jib are designed to vertically raise and lower loads by winding and unwinding the cable around the drum.
Any other use is considered contrary to what established and, therefore, improper.
The compliance with and the strict respect of the use, maintenance and repair instructions of the Manufacturer represent an essential part of the allowed use.
The use, maintenance and repair of the equipment shall be carried out by skilled personnel having the necessary knowledge of its special features and the safety precautions to be taken.
It is also essential to comply with the national safety at work legislation, the provisions concerning the safety and health of workers at work, and the road traffic regulations.

NOTICE

Effecting changes or carrying out interventions on the telehandler and/or on the equipment other than those of routine maintenance is expressly forbidden. Any modification of the telehandler and/or of the equipment not carried out by TEREX Global GmbH or an authorised assistance centre involves the automatic invalidation of the conformity of the machine.

IMPROPER USE

Improper use means any utilisation of the equipment following working criteria which do not comply with the instructions of this manual, and which, in general, may result in risks for both operator and bystanders .

DANGER

We list below some improper use of the jibs/ hoists. Others may exist.

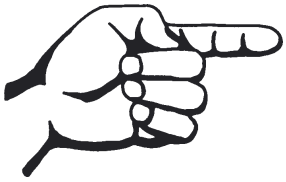
- ***Not strictly complying with the operation and maintenance instructions of this handbook and of the telehandler handbook;***
- ***Never use the jibs/hoists to lift and/or transport people;***
- ***Working beyond the operation limits of the equipment;***
- ***Working or resting the machine on unstable or yielding grounds;***
- ***Working on steep slopes or working with a not levelled telehandler;***
- ***Fit mobile guards that may increase the wind action and jeopardise the stability of the machine;***
- ***Using telescopic handlers not approved or not manufactured by TEREX Global GmbH in combination with these attachments;***
- ***Attach loads to the boom anywhere other than on the quick coupling frame.***

Equipment Description

■ EQUIPMENT APPLICATION FIELD

The following table represents the application field of equipment installed on TEREX Global GmbH telehandlers

	GTH-2506 (stage 3A-3B)	GTH-4014 (stage 3A-3B)	GTH-4018 (stage 3A-3B)	GTH-4016R (stage 3B)	GTH-4018R (stage 3B)	GTH-5021R (stage 3B)
2500kg FIXED HOOK on PLATE	✕					
5000kg FIXED HOOK on PLATE		✕	✕	✕	✕	✕
4000mm/900kg Man JIB		✕	✕	✕	✕	✕
4000mm/900kg Hyd JIB		✕	✕	✕	✕	✕
2000mm/2000kg Man JIB	✕	✕	✕	✕	✕	✕
3000kg HOIST				✕	✕	
4000kg HOIST		✕	✕			✕
5000kg HOIST						✕



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Inspections



Make sure:

☑You learn and practice the principles of safe machine operation contained in this operator's manual and in the telehandler one.

1. Avoid hazardous situations.
2. **Always perform a pre-operation inspection.**

Know and understand the pre-operation inspection before going on to the next section.

3. Always perform function tests prior to use.
4. Inspect the workplace.
5. Only use the telehandler and the equipment as they were intended.

Pre-operation Inspection Fundamentals

It is the responsibility of the operator to perform a pre-operation inspection and routine maintenance.

The pre-operation inspection is a visual inspection performed by the operator prior to each work shift. The inspection is designed to discover if anything is apparently wrong with a telehandler and/or with an equipment before the operator performs the function tests.

The pre-operation inspection also serves to determine if routine maintenance procedures are required. Only routine maintenance items specified in this manual may be performed by the operator.

If damage or any unauthorized variation from factory delivered condition is discovered, the telehandler and/or the equipment must be tagged and removed from service.

Repairs to the telehandler and/or the equipment may only be made by a qualified service technician, according to the manufacturer's specifications. After repairs are completed, the operator must perform a pre-operation inspection again before going on to the function tests.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications.

Inspections

■ PRE-OPERATION INSPECTION



For the Maintenance and the Pre-operation Inspection of the telehandler, refer to the specific Operator's Manual presents placed inside the cabin.

For the equipment:

- Make sure the operator's manuals are intact, legible and placed inside the telehandler.
- Make sure all decals are present and legible. See "**Labels And Plates Applied**" chapter.
- Check for hydraulic oil leaks and proper oil level. Top up if necessary. See "**Maintenance**" chapter.

Check the following components or zones for damage, missing or wrongly fitted parts or non-authorised modifications:

- electrical components and electrical cables
- hydraulic hoses and fittings
- fuel and hydraulic oil tanks
- nuts, bolts and other fasteners

Check the entire structure for:

- cracks on welds or structural components
- dents or damage to the structure

WARNING

If even one single item is damaged or modified, do not start work. Stop the machine and repair the fault.

NOTICE

If the machine shall be used in a marine or equivalent environment, protect it against salt deposits with an adequate treatment against saltiness to prevent rust formation.

Inspections

FUNCTION TESTS FUNDAMENTALS

The function tests are designed to discover any malfunctions before the machine is put into service. The operator must follow the step-by-step instructions to test all machine functions. A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service. Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications. After repairs are completed, the operator must perform a pre-operation inspection and function tests again before putting the machine into service.

Make sure:

☑You learn and practice the principles of safe machine operation contained in this operator's manual and in the telehandler one.

1. Avoid hazardous situations.
2. **Always perform a pre-operation inspection.**

Know and understand the pre-operation inspection before going on to the next section.

3. Always perform function tests prior to use.
4. Inspect the workplace.
5. Only use the telehandler and the equipment as they were intended.

TESTS

About the telehandler:

1. Select a test area that is firm, level and free of obstruction.
2. Enter the operator's compartment and sit on the seat.
3. Fasten the seat belt.
4. Adjust all the mirrors.
5. Be sure the parking brake is on and the transmission control is in neutral.
6. Start the engine.



Perform all the tests provided for the telehandler and listed in the machine Operator's Manual.

Test the Control Lever

7. Using the control lever, momentarily raise and lower the rope.

- Result: All functions should operate smoothly.

Inspections

WORKPLACE INSPECTION

The workplace inspection helps the operator determine if the workplace is suitable for safe machine operation. It should be performed by the operator prior to moving the machine to the workplace.

It is the operator's responsibility to read and remember the workplace hazards, then watch for and avoid them while moving, setting up and operating the machine

Be aware of and avoid the following hazardous situations:

- drop-offs or holes
- bumps, floor obstructions or debris
- sloped surfaces
- unstable or slippery surfaces
- overhead obstructions and high voltage conductors
- hazardous locations
- inadequate surface support to withstand all load forces imposed by the machine
- wind and weather conditions
- the presence of unauthorized personnel
- other possible unsafe conditions

Operating Instructions

This section provides the operator and the ground staff a practical guide for the gradual learning of the use of the telehandler fitted with either a hook, jib or hoist.
Both operator and ground staff shall have all the necessary requisites and shall become familiar with both telehandler and equipment before starting using them.
This familiarisation ensures a proper use during work.

WARNING

Before using the telehandler, inspect the job site and check for possible hazardous conditions. Make sure that there are no holes, moving banks or debris that may cause you to lose the control of the machine.

DANGER

Pay the greatest attention when working close to electric lines. Check their position and ensure that no part of the machine operates at less than 6 meters from the power lines.

WARNING

For a safe use of the telehandler with equipment, before elevating any load, always know the weight of the loads going to be handled.

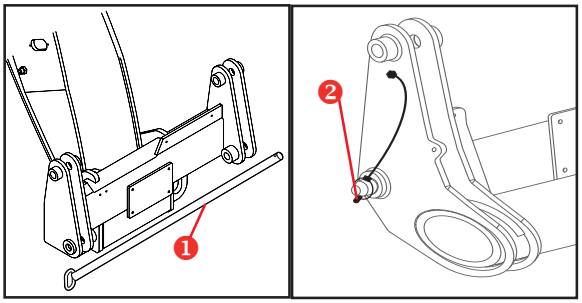
Operating Instructions

■ CHANGING THE EQUIPMENT

Version with MECHANICAL LOCKING

To change an attachment, operate as follows:

- Drive to the place where you will release the mounted attachment (when possible, a solid and sheltered site).
- Disconnect the quick connectors of the attachment (if any).
- Pull out pin **1** locking the attachment after removing the safety split-pin **2** at its end.



- Rest the attachment flat on the ground.
- Pitch the attachment holding frame forward and lower the boom to release the attachment upper lock.
- Move back with the machine and drive to the new attachment to be coupled.
- Hold the frame pitched forward and hook the upper lock of the new attachment.
- Retract and raise the attachment some centimetres. It will centre automatically on the quick coupling frame.
- Refit pin **1** fixing it with its safety split-pin **2**.
- Re-couple the connectors of the attachment (if any).

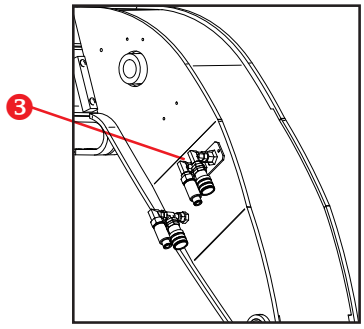
WARNING

After substitution, visually check the attachment is correctly coupled to the boom, before operating the machine. A wrongly coupled attachment may result in death or serious injury.

Version with HYDRAULIC LOCKING

To change an attachment, operate as follows:

- Drive to the place where you will release the mounted attachment (when possible, a solid and sheltered site).
- Disconnect the quick connectors of the attachment and connect the hydraulic locking pipes of the attachments to couplings **3**.



- Rest the attachment flat on the ground.
- Remove the safety pin **2** placed at its end.
- Free the attachment operating the control of the attachment locking/unlocking cylinder
- Pitch the attachment holding frame forward and lower the boom to release the attachment upper lock.
- Move back with the machine and drive to the new attachment to be coupled.
- Hold the frame pitched forward and hook the upper lock of the new attachment.
- Retract and raise the attachment some centimetres. It will centre automatically on the quick coupling frame.
- Operate the attachment locking lever and secure the attachment in place with safety pin **2** previously removed.
- Re-couple the connectors of the attachment.

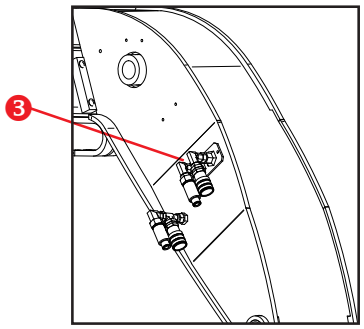
Operating Instructions

CONNECTING THE EQUIPMENT

Hydraulic connection (*if any*)

To use the hoists or the hydraulic jib, these shall be connected hydraulically as follows:

- after mounting the equipment as described above, disconnect the hydraulic hoselines of the attachment locking/release cylinder from quick couplings **3**,
- store the removed hoselines in rest position,
- connect the hydraulic hoselines of the winch to the quick couplings **3**.



This hydraulic connection allows winding/unwinding the rope on/from the winch. The operation is performed with the controls usually used for locking and releasing the attachments, as described in the relative paragraphes.

Operating Instructions

STABILITY CONTROL SYSTEM

All the telehandlers are equipped with an automatic stability control system which warns the operator of the variation of stability of the machine and blocks any manoeuvre before the same reaches a critical condition. A display inside the cabin shows the stability status of the machine and the relative equipment.

LLMI/ LLMC HAZARDS

The LLMI/LLMC will only function to the design specification:

- when the truck is static;
- when the truck is on consolidated, stable and level ground;
- when the truck is performing loading or placing functions;
- when the LLMI/LLMC is activated (not overridden);

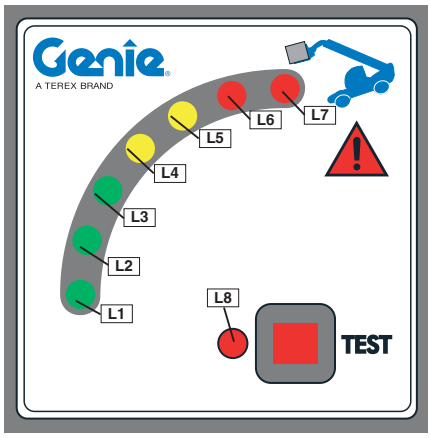
The LLMI will only warn the operator in the event of inadequate stability in the longitudinal plane in the forward direction.
The LLMI/LLMC is not intended for warning of the risk of overturning in the case of:

- a sudden overload;
- travelling with the load in the elevated position;
- travelling on rough terrain or on grounds with obstacles and holes;
- travelling across a slope or turning on a slope;
- driving in bends too fast or too sharp;

Adjustments affecting the setting of the LLMI/LLMC shall be performed only by authorised personnel.

The system changes according with the telehandler and can easly be recognized depending on the display fitted into the cabin:

MODEL N°1



1. Calibration button
2. Stability indicator with LED-bar
3. Green light - power OK
4. L8 functional led

Operation

When power is turned on the load limiting system runs a self-test:

- **LED-bar 2** gradually lights from green to red
- the display buzzes
- **L8** and the **Load limiting system general alarm indicator light** stay on
- then **LED-bar 2** gradually switches off
- **L8** and the **Load limiting system general alarm indicator light** switch off

During operation, the **LED-bar 2** lights up gradually depending on the variation of stability.

Alarm codes and resetting

The limiter has diagnostic facilities to aid in the identification of failures of the transducers, breakages of the cables or malfunction of the electronic system.

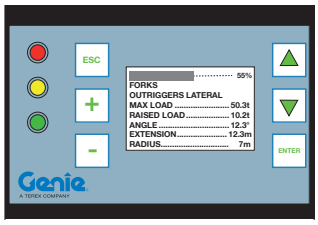
Operating Instructions

When a failure is signalled, the limiter enters the safety mode blocking any dangerous manoeuvres: **Load limiting system general alarm indicator light** stays on together with **LED L8** which starts flashing representing an alarm code.
The meaning of these alarm codes is shown in section "**Faults and Troubleshooting**".

DANGER

Before using the machine, make sure that the first green LED of the overload warning system is ON.

■ MODEL N°2



1 ***Green LED ON***
Stability condition. The raised load does not exceed 90% of maximum allowed load of the chart in that defined working position.

2 ***Yellow LED ON***
Pre-alarm condition. The raised load exceeds 90% of maximum allowed load, but it is still inferior to it: the boom movements are slow down and the acoustic alarm emits short bips.

3 ***Red LED ON***
Alarm condition. The raised load exceeds the maximum allowed load, the acoustic alarm emits long bips and the machine motions are stopped, but for those allowing to return the load within safety limits.

The display of the limiting device is divided into three areas:

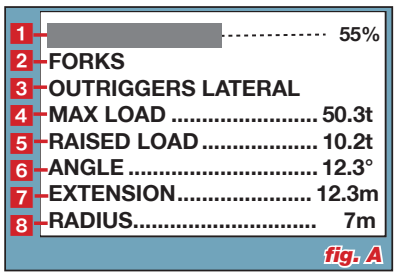
LED's area: Three LED's warn of the variation of the working condition:

1 **green LED** - machine stable
2 **yellow LED** - machine in pre-alarm
3 **red LED** - machine in alarm

Control Keys

ESC	To go back to the previous screen page
ENTER	To confirm and open the screen page linked
ARROWS	To scroll the lines up or down
PLUS (+)	Additional selection button
MINUS (-)	Additional selection button

Operating Instructions

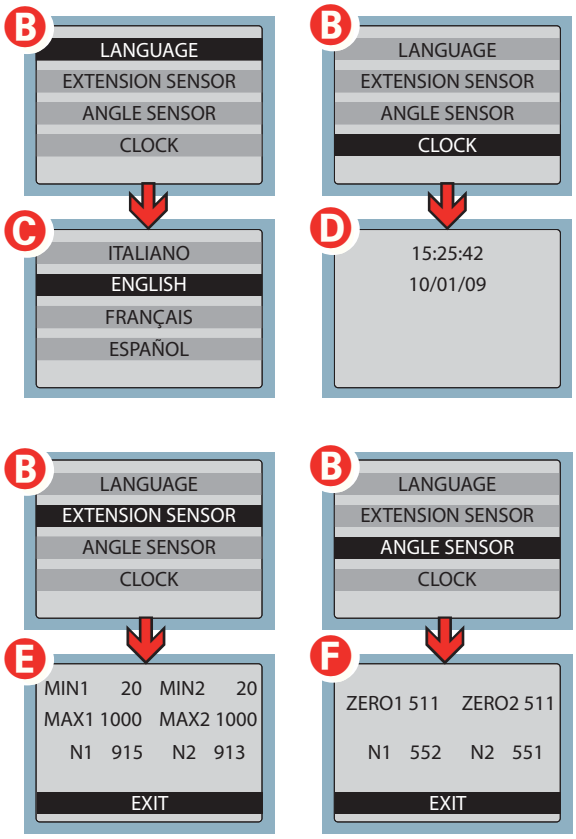


Display, which is divided into 8 lines_ fig.A

1. Load percentage strip
2. Indicates the attachment used
3. Indicates the operating mode
4. Indicates the max. load that can be raised
5. Indicates the weight raised for the system calibration
6. Indicates the boom angle
7. Indicates the boom extension (it'll be **= 0 meters** once the boom is fully retracted)
8. Indicates the distance of the load from the slewring axis and, in case of necessity, it displays the related warning message

■ *Operation*

- At the machine starting, the overload warning system runs an automatic check and the software datas are displayed.
- Within 3/4 seconds, the list of attachments allowed is displayed: using the arrows, the operator has to select the right attchment and then press ***ENTER*** to confirm.
- Once the attachment has been selected, the display shows the *Standard Screen Page* (***fig.A***).
- From this screen page, pushing ***PLUS (+)*** for some seconds, the operator can open the ***UPPER LEVEL (B)*** where other four sub-menus are displayed: one of these, ***LANGUAGE (C)*** can be modified while the other three, ***CLOCK (D)***, ***EXTENTION SENSOR (E)*** and ***ANGLE SENSOR (F)***, can only be consulted.
- Pressing ***ESC***, go back to the *Standard Screen Page.*
- Press the two buttons ***PLUS (+)*** and ***MINUS (-)*** simultaneously to access to the *Diagnostic Screen Pages.* These pages can only be consulted. Use the ***ARROWS*** to pass from one page to another.



DANGER

Before using the machine, make sure that the green LED is ON, and that the operating mode shown in line 3 and the attachment shown in line 2 are those actually used.

Operating Instructions

USING THE LOAD CHARTS

The load charts **1** indicates the maximum permissible load in relation to the boom extension and the type of attachment used. To operate under safe conditions, always refer to these charts.
The extension level of the boom can be checked with the help of the letters (**A**, **B**, **C**, **D**, **E**) painted on the same boom (pos.**3**), while the actual degrees of inclination of the boom are shown by the angle indicator **2.**
All the load charts are placed into a dedicated holder installed in the cabin.
The tag **4** located at the top of each load chart, indicates the type of attachment used**.**

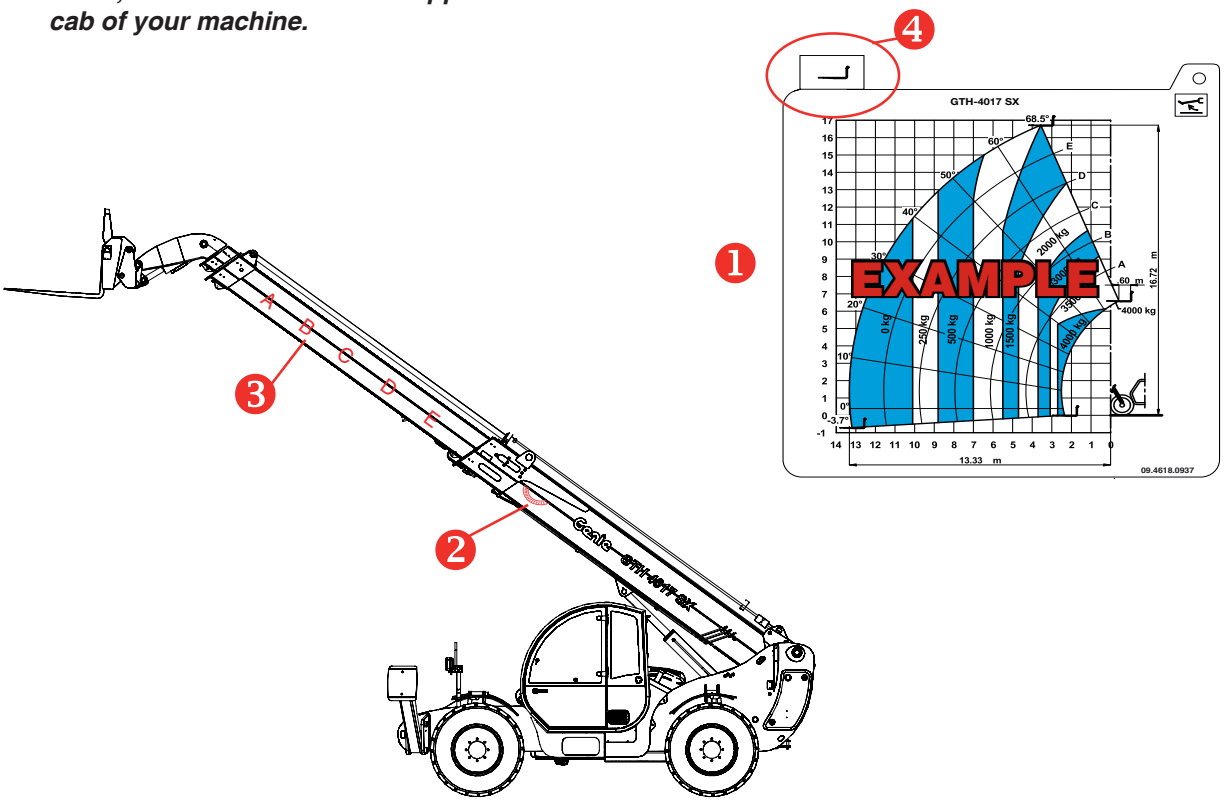
The load chart illustrated in this chapter is given only as a mere example. To define the payload limits, refer to the load charts applied within the cab of your machine.

WARNING

The load charts applied on the cab refer to a stationary machine standing on a solid and level ground.
Raise the load some centimetres and check its stability before raising it completely.

DANGER

A suspended load has a dynamic, and therefore an unpredictable effect on machine stability, operate with caution.



Operating Instructions

SLINGING LOAD

EVALUATING THE LOAD

The operator should take all practicable steps to establish the weight and the position of its centre of gravity of any load. A drawing may be available giving the weight or it may be calculable within reasonable limits of accuracy. The following gives guidance as to the various ways of obtaining this information.

WARNING

Verify that the load to be lifted respects the max payload of the equipment and of the telehandler. Refer to the relative Load Chart.

WEIGHT

1. Look to see if the weight is marked on the load. If it is, check to ensure that it is the weight of all parts of the load;
2. Check the weight stated on any documentation.
3. Look at the drawing of the load. If the weight is marked, check as in (1) above to ensure it includes all parts of the load.
4. Estimate the weight of the load by using tables of material weights, as, for example, the ones shown in the "***Tables of Material***" section.

CENTRE OF GRAVITY

The "centre of gravity" (CoG) is a point which, if the load could be suspended from the hook, the load would be in perfect balance.
The hook needs to be directly over the centre of gravity, for the load to be stable, as shown in **fig.A**.

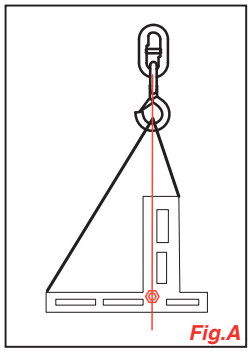


Fig.A

Lifting a load with the centre of gravity offset will cause the load to shift until a balance is restored.
If there is the slightest doubt of the stability of a load, it should be slowly lifted just clear of the ground. If the load tilts, the sling should be refixed in a more stable position.

LOAD SECURITY

Before lifting it is essential to ensure that, when clear of the ground, the load will adopt the intended attitude and remain securely attached to the lifting appliance without overloading any of the lifting gear. This means that the load must be both balanced and stable.

BALANCE

In the majority of lifts it will be intended that the load will remain level when clear of the ground. To achieve this it is first necessary to position the hook of the lifting appliance vertically above the centre of gravity of the load.
The legs of the sling(s) should be distributed as evenly as is practicable according to the lifting points available. The angle which the individual leg makes with the vertical, affects the proportion of the load which will be imposed upon it and all legs should therefore be, so far as is practicable, at a similar angle to provide equal loading.
If the load tilts on lifting, the load in the sling legs will become unequal. This effect is especially significant at small included angles between sling legs.
With rigid loads when three or more legs are employed, consideration should be given to how many of the legs will bear the weight as it may be found that only two or three will take the majority with the remaining legs providing a relatively small 'balancing force' only. If this is the case, larger capacity tackle will be required.

STABILITY

In this context, stability means 'resistance to toppling'. An object with a narrow base and a high centre of gravity will need less force to topple it than one with a wide base and a low centre of gravity.
As the height of the centre of gravity increases relative

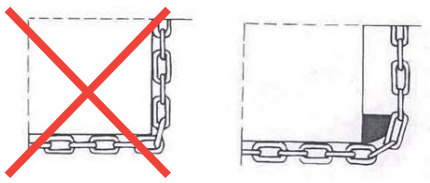
Operating Instructions

to the width of the base, a point will be reached where the object will fall over unless it is supported by external means. At this point the object is regarded as being unstable and the greater the support required the more unstable it is.
A similar situation exists with a suspended load. Forces which try to topple the load will inevitably be present (e.g. wind, acceleration, braking). It is essential, therefore, when slinging a load, to ensure that it is sufficiently stable to resist these toppling forces.
A load will be inherently stable if the lifting tackle is attached ABOVE the centre of gravity and properly positioned around it.

■ HARNESSING ACCESSORIES

A good packing between sling and load is fondamental.
Operate as follow:

- Check the load: dimensions, weight and units
- Select the right sling for each job using the manufacturers' tables
- Inspect each item of lifting equipment before and after lifts
- Protect slings from damage by sharp edges with corner saddles, padding, or wooden blocks



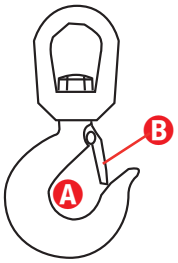
- When lifting long loads, particularly in confined spaces, slingers should attach a rope or 'tag line' to one or both ends of the load so that rotational movement may be controlled.
- Hook unused sling legs to the sling ring.

WARNING

- ***Protect your hands and fingers: when slack is being taken out of a sling, keep them from between the sling and load so they will not be trapped and crushed. Step away before the lift is made.***
- ***Avoid impact loading: do not jerk the load when lifting or lowering the sling. This increases the actual stress on the sling.***
- ***Do not exceed the capacities of slings***
- ***Do not twist or tie knots in slings or use bolts, nails or pieces of wire to shorten slings.***
- ***Do not splice together broken slings.***
- ***Do not carry a load by inserting the point of the hook into a link of the chain.***
- ***Do not leave unused slings, accessories, or blocking lying on the floor. Hang on racks or store in a proper place.***
- ***Do not use a sling to drag a load.***
- ***Do not shorten a chain with knots or by twisting other than by means of an integral chain clutch.***
- ***Do not use homemade chains or strings.***
- ***Do not heat treat or weld chain links: the lifting capacity will be reduced drastically.***
- ***Do not expose chain links to chemicals without the manufacturers approval.***

WARNING

Hooks are designed to support the load in the bowl A. Users should ensure that the hook of a sling engages freely in the lifting point so that the weight of the load is supported in the bowl of the hook.
Wedging or forcing the hook tip B into the lifting points results in the hook being stressed in a manner for which it was not designed which may easily lead to hook deformation and premature failure.



Operating Instructions

CONTROLS

GTH-2506, GTH-4014, and GTH-4018

DANGER

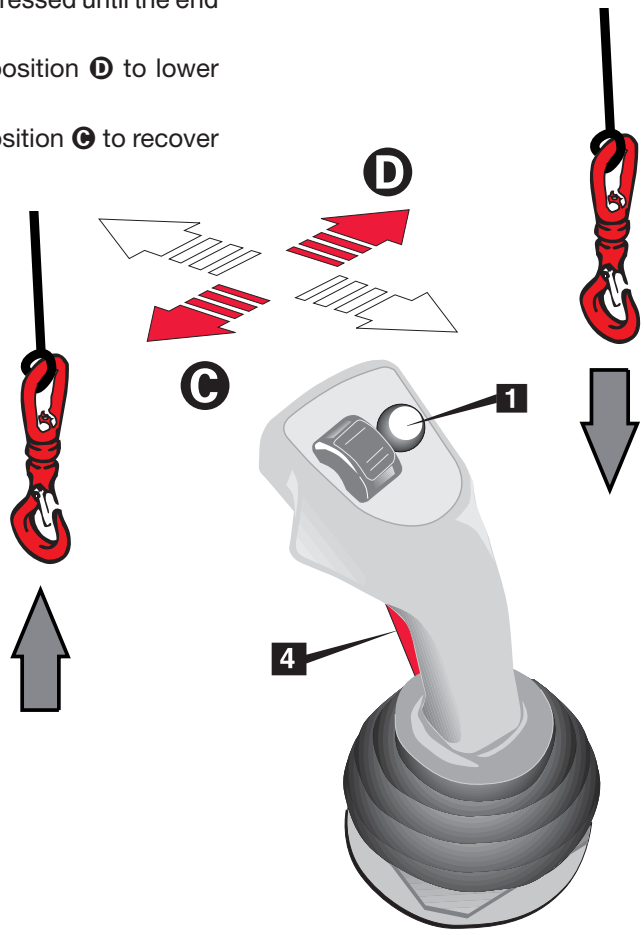
Before operating the winch, make sure that nobody is within its working range.

To lower/recover the winch rope:

- set the control lever to central position and press switch 4.
- Press button 1 and hold it pressed until the end of the motion.
- shift the control lever to position D to lower the rope,
- shift the control lever to position C to recover the rope.

WARNING

As the raising and lowering speed of the winch is determined by the flow of the oil, it is recommended to move the control lever gently when you perform raising and lowering manoeuvers so as to avoid violent joilts of the load which would provoke strains on all the structural elements and could result in the machine becoming unstable.



Operating Instructions

■ GTH-4016R, GTH-4018R GTH-5021R

DANGER

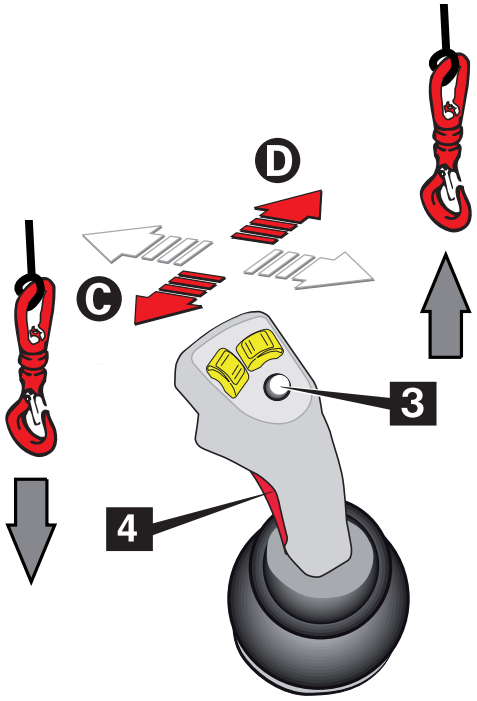
Before operating the winch, make sure that nobody is within its working range.

WARNING

As the raising and lowering speed of the winch is determined by the flow of the oil, it is recommended to move the control lever gently when you perform raising and lowering manoeuvers so as to avoid violent joilts of the load which would provoke strains on all the structural elements and could result in the machine becoming unstable.

To lower/recover the winch rope:
WITH RIGHT JOYSTICK (***Standard Configuration) and*** **WITH LEFT JOYSTICK** (***Optional Configuration)***

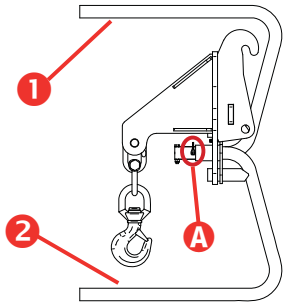
- Set the control lever to central position and press switch 4.
- Press button 3 and hold it pressed until the end of the motion.
- Smoothly shift the lever to position Ⓒ to lower the rope.
- Shift the lever to position Ⓓ to recover the rope.



Operating Instructions

OPERATION

FIXED HOOK ON PLATE

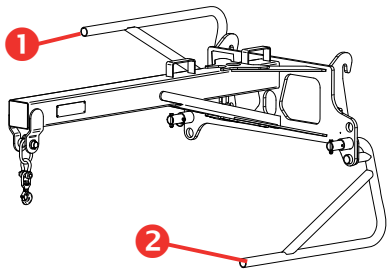


- Couple the hook and hold it in position by means of the attachment locking system (mechanical or hydraulic).
- Set the attachment supports in working position **1**, using the dedicated pins **A**.
- All loads must be bridled with special textile slings or chains in compliance with all pertinent regulations.
- To handle the load, raise and rotate the telescopic boom of the handler.
- To remove the attachment, set the supports in resting position **2**, then carefully tilt the attachment forward, lower the boom resting the attachment on the ground and retract the boom.

CAUTION

The fixed hook has been designed to support the load declared beside. The max payload corresponds to the nominal capacity rating of the handler on which it is installed and is indicated on the load charts supplied with the equipment.

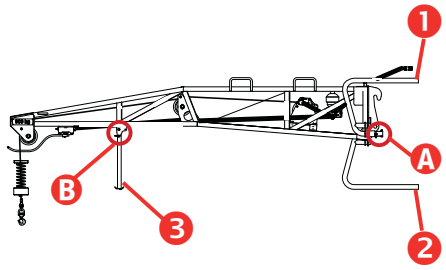
2000 KG EXTENSION JIB



- Couple the jib and hold it in position by means of the attachment locking system (mechanical or hydraulic).
- Set the attachment supports in working position **1**.
- To change the working height, operate the lever according to the "Quick-Coupling The Attachments" function.
- To remove the attachment, set the supports in resting position **2**, then carefully tilt the attachment forward, lower the boom resting the attachment on the ground and retract the boom.
-

Operating Instructions

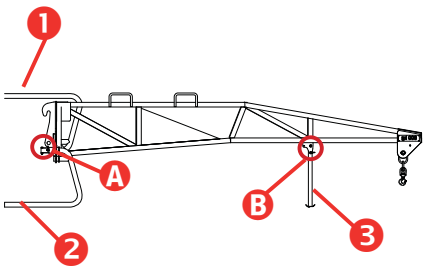
900 KG HYDRAULIC EXTENSION JIB



- Couple the jib and hold it in position by means of the attachment locking system (mechanical or hydraulic).
- Set the attachment supports in working position **1**, using the dedicated pins **A**.
- Lift the attachment support **3** locking it in working position by means of the dedicated pin **B.**
- All loads must be bridled with special textile slings or chains in compliance with all pertinent regulations.
- To handle the load, raise and rotate the telescopic boom of the handler.
- To remove the attachment, set the supports in resting position **2**, lower the attachment support **3** locking it in resting position by means of the dedicated pin **B,** carefully tilt the attachment forward, lower the boom resting the attachment on the ground, then retract the boom.

Once the attachment quick connectors have been disconnected from the boom connectors, take care to reconnect them to the proper rest connectors that are present on the jib, in order to prevent impurities from entering the circuit. Carefully protect the rest connectors with the proper plugs when they are not used.

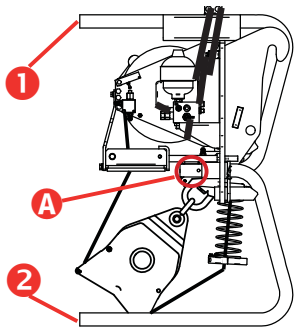
900 KG MECHANICAL EXTENSION JIB



- Couple the jib and hold it in position by means of the attachment locking system (mechanical or hydraulic).
- Set the attachment supports in working position **1**, using the dedicated pins **A**.
- Lift the attachment support **3** locking it in working position by means of the dedicated pin **B.**
- All loads must be bridled with special textile slings or chains in compliance with all pertinent regulations.
- To handle the load, raise and rotate the telescopic boom of the handler.
- To remove the attachment, set the supports in resting position **2**, lower the attachment support **3** locking it in resting position by means of the dedicated pin **B,** carefully tilt the attachment forward, lower the boom resting the attachment on the ground, then retract the boom

Operating Instructions

3000 KG HYDRAULIC HOIST



- Couple the hoist and hold it in position by means of the attachment locking system (mechanical or hydraulic).
- Set the attachment supports in working position **1**, using the dedicated pins **A**.
- To change the working height, operate the lever according to the "Quick-Coupling The Attachments" function.
- To remove the attachment, set the supports in resting position **2**, then carefully tilt the attachment forward, lower the boom resting the attachment on the ground and retract the boom.

Once the attachment quick connectors have been disconnected from the boom connectors, take care to reconnect them to the proper rest connectors that are present on the hoist, in order to prevent impurities from entering the circuit. Carefully protect the rest connectors with the proper plugs when they are not used.

Operating Instructions

TRANSPORTING A SUSPENDED LOAD

Once the load is attached, operate as follow:

- raise the load and check if it is correctly suspended: the wire shall be tightened and shall not be in slack-condition when the load movement begins;
- completly retract the boom;
- raise it again to the transport height of 300-500mm from the ground;
- make sure a load is high enough to clear all objects before starting to move;
- identify any risks present on the route to be travelled;
- avoid excessively undulating ground when travelling;
- consider that when transporting load permissible gradients are 10% downhill, 15% uphill, 5% side;
- consider effects of the wind on load: wind speed should not exceed 10m/s or number 5 of the Beaufort Scale, as explain in the "***Beaufort Wind Scale***" section;
- initiate movements of the load with the lowest available speed;
- travel at walking speed (1,5 km/h).

DANGER

- ***Do not allow suspended loads to oscillate.***
- ***Do not drag loads when they are hooked up.***
- ***Do not ride on hooks or loads.***
- ***Do not allow workers to walk or work under a load.***
- ***Do not leave suspended loads unattended.***
- ***Warn all people out of the load area before starting the lift.***

WARNING

When visibility is or could be obstructed, the operator shall use alternative/additional means to safely transport the load: use of additional personnel to direct the operator in his movements as well as surrounding ground traffic.

LOAD LANDING

Before a load is lifted, a place should be prepared where it is to be put down. The nature of the load will determine the type of preparation necessary but most loads should be lowered onto timber battens. The sling may then be easily withdrawn. The load should never be landed directly on to the chain.

Operating Instructions

■ STOPPING and STORING the EQUIPMENT and the TELEHANDLER

NOTICE

Lay the equipment on a dry and level ground.

To release the attachment from the telehandler:

- Approach the place where you will release the equipment.
- Lower the equipment on the ground.
- Stop the engine of the telehandler
- Disconnect the hydraulic pipes of the equipment from the boom fittings.
- Restart the engine.
- Operate the joystick to release the equipment from the quick coupling plate.
- Tilt the coupling plate forward and lower the boom to release the upper lock of the equipment.
- Move back with the telehandler.

NOTICE

When the equipment is parked, check the state of the wire rope. This must be tensioned, correctly wound on the winch drum and not be twisted to avoid frays and breakage.



The equipment itself can be handled by means of the telehandler to which it is coupled or by means of machines equipped with forks that have a suitable rated capacity.

Operating Instructions

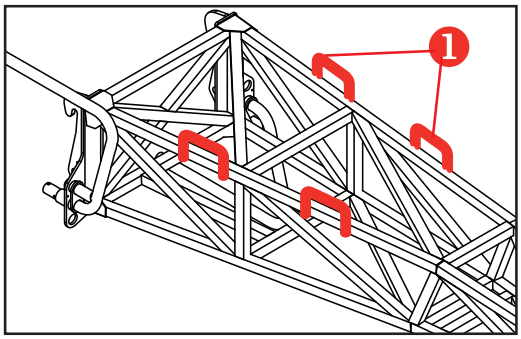
Moving the Equipment

CAUTION

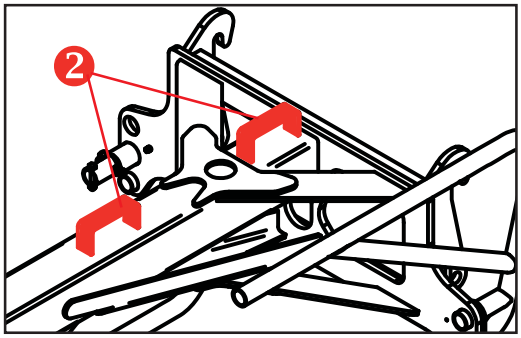
When the equipment shall be moved, use only means having a suitable capacity. The characteristic data are detailed in the relevant chapter of this manual and on the identification plate.

According to the equipment, proceed as follow for moving:

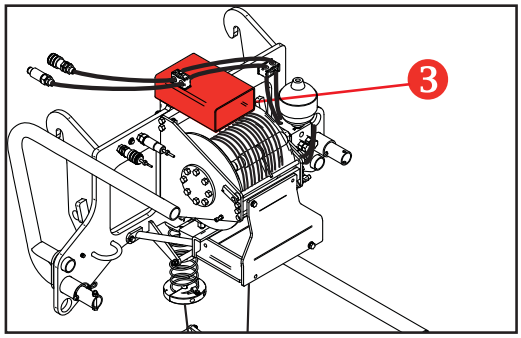
- **900kg JIB**, insert the forks into the four dedicated lugs **1**



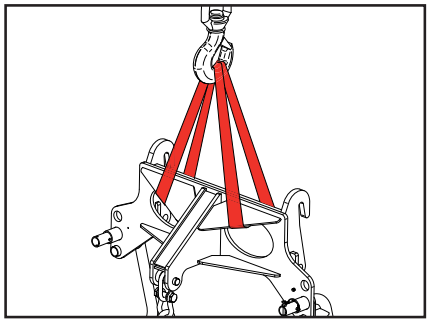
- **2000kg JIB**, insert the forks into the two dedicated lugs **2**



- **HOIST**, insert the forks into the dedicated lug **3**



- **HOOK**, run two slings through the frame holes as shown in the draft below



Operating Instructions

■ Parking for Short Periods

Always park the telehandler in a safe way after a working day, a shift and at night.
Take all precautions to prevent damage to those persons who will approach the machine while stationary:

- Park the machine so that it does not hinder other operations.
- Put the parking brake.
- Remove the key from the ignition switch and lock the cab door.

■ Parking for Long Periods

In case of extended inactivity of the telehandler and/or the equipment, follow the above precautions and additionally:

- Wash the machine thoroughly. For a better cleaning, remove grills and protection casings.

⚠ CAUTION

Do not use gasoline, solvents or other flammable products for cleaning purposes. Use only authorized, non-flammable and harmless solvents. Wear safety goggles and a protection mask when you use compressed air. In case of washing, do not direct the jet of water towards electrical parts.

- Carefully dry all machine parts by blowing some compressed air.
- Lubricate the machine thoroughly.
- Do a walk-around inspection and replace any worn or damaged part.
- Re-paint any worn or damaged part.
- Store the machine in a sheltered and well-ventilated place.

⚠ WARNING

Always remember that the ordinary maintenance must be carried out even during the machine inactivity. Pay particular attention to the fluid levels and to those parts subject to ageing. Before re-starting the machine and the equipment, carry out an extraordinary maintenance and carefully check all mechanical, hydraulic and electrical components.

■ DISPOSAL

PROTECT THE ENVIRONMENT

At the end of the telehandler and/or the equipment life, call in a specialised firm to dispose of it in compliance with the local or national regulations.

■ BATTERY DISPOSAL

PROTECT THE ENVIRONMENT

Used lead-acid batteries cannot be disposed of as normal industrial solid wastes. Because of the presence of harmful substances, they must be collected, eliminated and/or recycled in accordance with the laws of the UE.
Used batteries must be kept in a dry and confined place. Make sure the battery is dry and the cell plugs are tight. Place a sign on the battery to warn of not using it. If before disposal the battery is left in the open air, it will be necessary to dry, smear the box and the elements with a coat of grease and tighten the plugs. Do not rest the battery on the ground; it is always advisable to rest it on a pallet and cover it. The disposal of batteries shall be as rapid as possible.

Maintenance

Observe and obey:



* The operator can only perform the routine maintenance operations in this manual.
* Scheduled maintenance procedures shall be completed by qualified technical personnel according to the manufacturer's specifications.

Maintenance symbol legend:

The following symbol is used in this manual to Indicates the time interval for the maintenance jobs expressed in working hours.



SERVICE INTERVAL

Running-in _____

Ordinary _____

INTRODUCTION

A thorough and regular maintenance keeps the machine in a safe and efficient working condition.

For this reason, it is advisable to wash, grease and service the machine properly, especially after having worked under particular conditions (muddy or dusty environments, heavy operations, etc.).

Always ensure all machine components are in good condition. Check for oil leaks or loosening of guards, and make sure that the safety devices are efficient. In case of damages, find and rectify them before using the machine again.

Not respecting the ordinary maintenance schedule of this manual automatically voids TEREX Global GmbH warranty.

NOTICE

Effecting changes or carrying out interventions on the telehndler or the equipment other than those of routine maintenance is expressly forbidden. Any modification not carried out by TEREX Global GmbH or an authorized assistance centre involves the automatic invalidation of the conformity of the machine to the Directive 2006/42/EC

Maintenance

LUBRICANTS - HEALTH AND SAFETY PRECAUTIONS

Health
A prolonged skin contact with oil can cause irritation. Use rubber gloves and protective goggles. After handling oil, carefully wash your hands with soap and water.

Storage
Always keep lubricants in a closed place, out of the children's reach. Never store lubricants on the open air and without a label indicating their contents.

Disposal
New or exhausted oil is always polluting! Never drain oil on the ground. Store new oil in a suitable warehouse. Pour exhausted oil into cans and deliver them to specialized firms for disposal.

Oil leaks
In case of accidental oil leaks, cover with sand or type-approved granulate. Then scrape off and dispose of it as chemical waste.

First aid

Eyes : In case of accidental contact with the eyes, wash with fresh water. If the irritation persists, seek medical advice.

Intake : In case of oil intake, do not induce vomiting, but seek medical advice.

Skin : In case of a prolonged contact, wash with soap and water.

Fire
In case of fire, use carbon dioxide, dry chemical or foam extinguishers. Do not use water.

ORDINARY MAINTENANCE

A wrong or neglected maintenance can result in possible risks for both operator and bystanders. Make sure maintenance and lubrication are carried out according to the manufacturer's instructions to keep the machine or the equipment safe and efficient. The maintenance interventions are based on the machine working hours. Regularly check the hour-meter and keep it in good conditions to define the maintenance intervals correctly. Make sure any damage detected during the maintenance is promptly rectified before using the machine.

At every use

1. Check the efficiency of the safety systems installed, as described into the dedicated paragraph "***Safety Devices***".
2. Ensure all bolts and nuts are properly tightened
3. Check the couplings for oil leaks
4. Check the hydraulic system
5. Check the electrical connection
6. Check the wear of the rope
7. Check the hook
8. Check the safety devices
9. Make a visual check of the structure, paying particular attention to signs of corrosion and structural welds.

Every 10 working hours

1. Grease all moving parts.

Maintenance

MAINTENANCE INTERVENTIONS

WARNING

All maintenance interventions must be carried out with engine stopped, parking brake engaged, equipment flat on the ground and gear lever in neutral.

WARNING

Any intervention on the hydraulic circuit must be carried out by skilled personnel.
The hydraulic circuit of the telehandler is fitted with pressure accumulators. You and others could be seriously injured if accumulators are not completely depressurised.
For this purpose, shut the engine down and step on the brake pedal 8/10 times.

WARNING

Before any operation on hydraulic lines or components, make sure there is no residual pressure. For this purpose, stop the engine, engage the parking brake and operate the control levers of the main valve in both working directions (alternately) to depressurise the hydraulic circuit.

CAUTION

High pressure lines must be replaced by qualified personnel only.
Any foreign matters entering the closed circuit may result in a sudden deterioration of the transmission.

CAUTION

The qualified staff charged with the maintenance of the hydraulic circuit must clean all areas around with care before any intervention.

PROTECT THE ENVIRONMENT

The handling and disposing of used oils can be ruled by local or national regulations. Address to authorised centres.

NOTICE

During maintenance or repair works, and while welding, turn off the disconnected battery switch, located into the engine compartment.

Maintenance

■ CHECKING THE ROPE FOR WEAR

DANGER

Working intentionally with worn and/or damaged ropes can be highly dangerous. Immediately replace the worn and/or damaged rope. TEREX Global GmbH disclaims any responsibility for damage to persons and/or property arising from the non-compliance with this precaution.

Check the ropes daily and find and rectify any possible fault. Ropes must be replaced when the following signs of deterioration are found:

- when the total diameter of the rope gets reduced by 10% with respect to the original diameter, even in a single point;
- when the rope shows dents, twists or permanent bends caused by damages or sharp edges;
- when a strand is completely broken or when it has suffered from such damages that its useful section is reduced by 40% in some points;
- when the central section of the rope (core) comes out even in a single point;
- when, even though the rope is under tension, one or more strands are slacken or protrude out of the rope;
- in case of clear damages caused by heat (torch, electric arc, etc.)..

Model	Ø Rope	Length
4000mm/900kg Jib	8 mm	37 m
3000 kg Hoist	12 mm	70 m

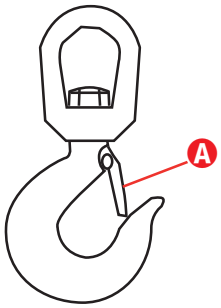
SERVICE INTERVAL

Running-in _____ **None**

Ordinary _____ **Every Use**

■ CHEKING THE HOOK

Every time you use the hook, check the hook tip **A** is in good condition.



SERVICE INTERVAL

Running-in _____ **None**

Ordinary _____ **Every Use**

Maintenance

CHECKING THE SAFETY DEVICES

Checking the MOMENT LIMITING SYSTEM of the TELEHANDLER
(at every use)

At the telehandler start-up, the moment limiting system runs an automatic check. In the case of troubles, the red led will come on and the buzzer will sound to warn of the error. The telehandler will enter the alarm mode and no operation will be allowed.
To check the system manually, proceed as follows:
- Set the telehandler on wheels.
- Load a weight of 1000 kg.
- Raise the boom about 30 cm above the ground.
- Extend the telescope and check if the system enters the alarm mode once reached the distance indicated in the load charts for the attachment fitted to the machine.
- If the system does not enter the alarm mode, contact the TEREX Global GmbH Technical Service.

Checking the FLUID POWERED LOCKING VALVE of the WINCH
(at every use)

This device stops the load moving, obstructs motoring over, blocks tubes in the event of their breaking.
To check its efficiency:
- lift a weight
- move the control lever to recover the rope
- set the lever to neutral position: the weight has to stop. If not, contact the TEREX Global GmbH Technical Service.

Checking the PARKING BRAKE of the WINCH
(at every use)

This device stops the drum when loads are suspended.
To check its efficiency:
- lift a weight
- move the control lever to lower the rope
- set the lever to neutral position: the weight has to stop. If not, contact the TEREX Global GmbH Technical Service.

Checking the LIMIT SWITCHES of the WINCH
(at every use)

This device must maintain the range of the movement of the load between the pre-fixed limits.
To check its efficiency:
- lift a weight
- smoothly move the control lever to recover the rope: the weight should stop once reached the fixed limits. If not, stop recovering the rope and contact the TEREX Global GmbH Technical Service.

Checking the HOIST LIMITING MECHANISM of the WINCH
(at every use)

This device must prevent the winch from hoisting weights which are greater than its maximum limit.
To check its efficiency:
- lift a weight higher then the euipment payload
- move the control lever to recover the rope: the winch should stop at soon as the weight is hoisted from the ground. If not, contact the TEREX Global GmbH Technical Service.

Go to the section "Routine Check Schedule" to note down the results of the safety devices daily check.

SERVICE INTERVAL

Running-in	**None**
Ordinary	**Every Use**

Maintenance

■ GREASING

CAUTION

Before injecting grease into the greasers, thoroughly clean them to avoid that mud, dust or other matters can mix with the lubricant and reduce or annihilate the lubrication effect. Remove any old grease with a degreaser from the telescopes before smearing them with new grease.

Regularly grease the machine to grant it efficient conditions and a long life. By means of a pump, inject grease into the special greasers. As the fresh grease comes out, stop the operation.

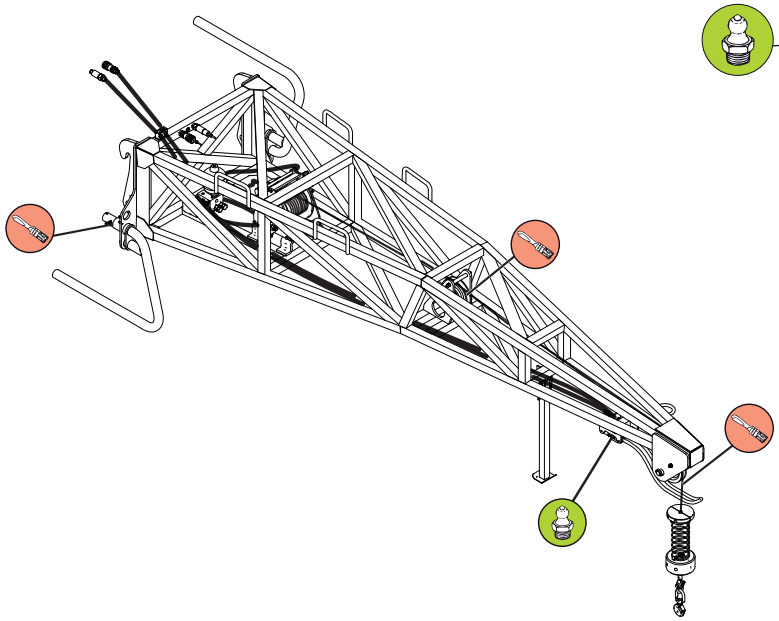
For the rope lubrication, use the assistance of a second operator to stop the machine in an emergency; smear the rope with grease while unwinding it at the minimum permitted speed.

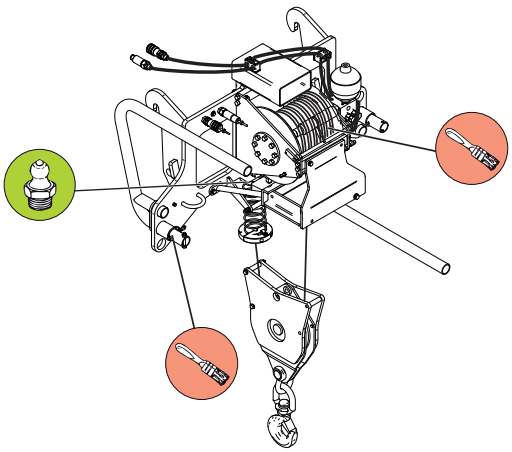
The greasing points are shown in the following figures:

- the symbol  represents the points to be greased by a pump
- the symbol  represents the points to be greased by a brush.

SERVICE INTERVAL

Running-in	**None**
Ordinary	**Every 10 hours**





Faults And Troubleshooting

FAULTS AND TROUBLESHOOTING

This chapter represents a practical guide for the operator for fixing the most common failures and, at the same time, detecting those interventions that must be carried out by qualified technical engineers. If you are unsure about anything, do not carry out operations, but call in a skilled technician.

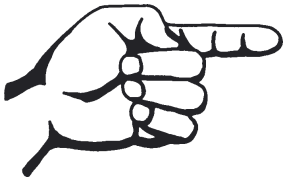
WARNING

The equipment is an accessory coupled to a telehandler. A modified telehandler may affect the proper functioning of the equipment. For this reason, it is recommended to read the telehandler manual for all faults which are not listed below.

PROBLEM	CAUSES	SOLUTIONS
THE OVERLOAD WARNING SYSTEM IS IN ALARM	• The attachment has been overloaded	• Remove any excess load. Take note of the limits of the use of the telehandler with the equipment is coupled to.
NOISE IN THE HYDRAULIC CIRCUIT	• Presence of air in the circuit	• Purge the circuit
NOISE DURING HOISTING ACCOMPANIED BY JERKY ROTATION	• Insufficient circulation of oil in the circuit	• Operate the hoist with gradually increasing loads until it turns regularly and the noise disappears
WITH THE DISTRIBUTOR SET IN THE CENTER THE LOAD TENDS TO GO DOWN	• Brake spring are broken	• Replace springs
THE HOIST CANNOT LIFT THE LOAD	• Insufficient pressure in the hydraulic circuit • Damaged motor	• Make sure the maximum-load valve on the control distributor is set correctly • Check the drainage of the motor: if the oil flow exceeds 1l/min , replace the motor

NOTICE

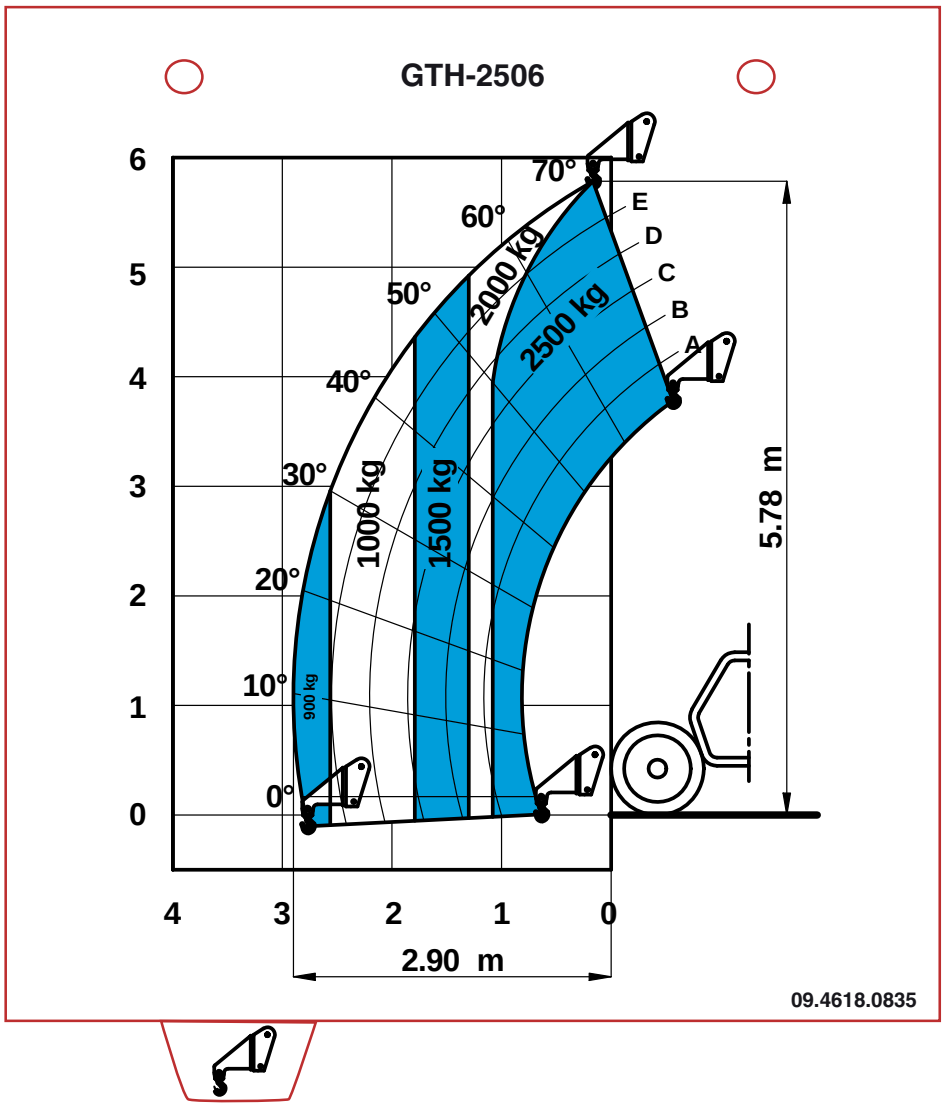
In case of faults not listed in this chapter, address to the TEREX Global GmbH Technical Assistance, your nearest authorised workshop or dealer.



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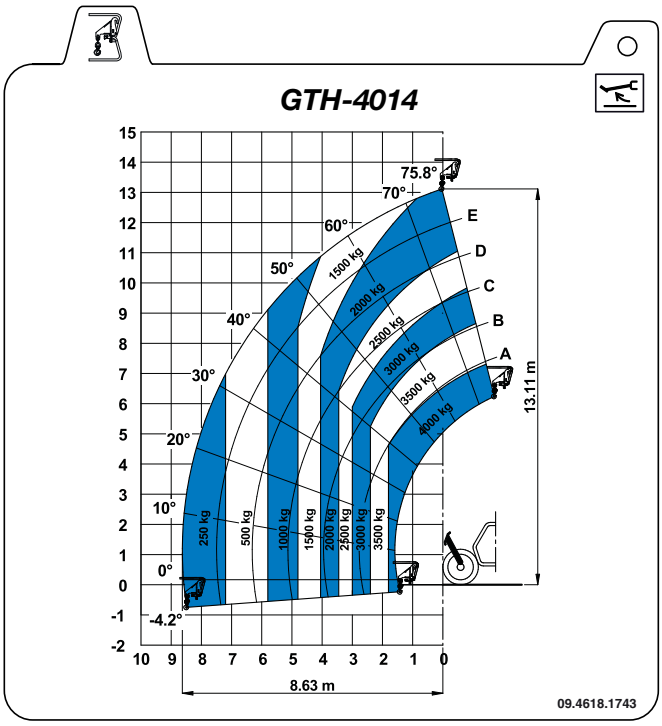
Load Charts

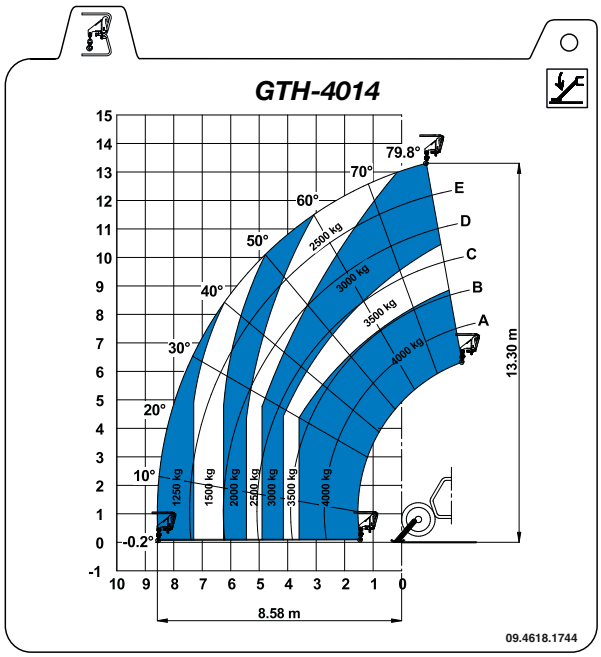
FIXED HOOK ON PLATE COUPLED TO GTH-2506



Load Charts

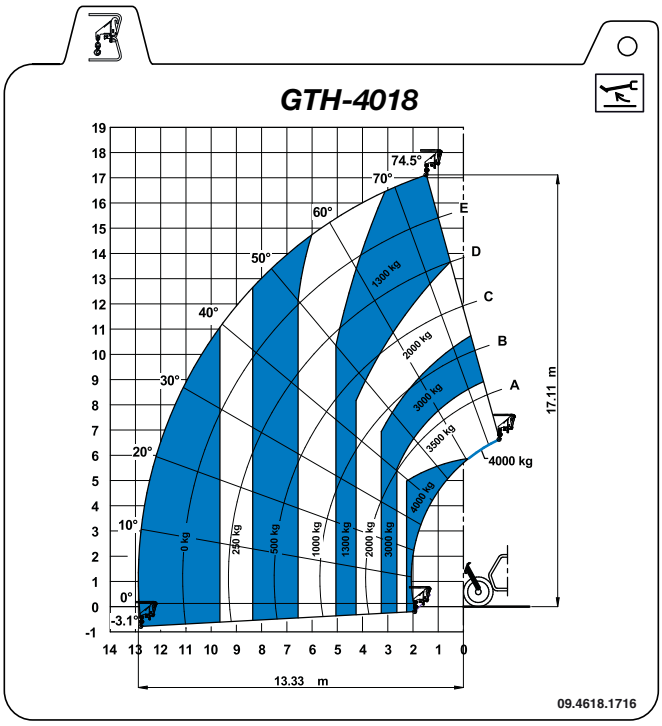
■ FIXED HOOK ON PLATE COUPLED TO GTH-4014

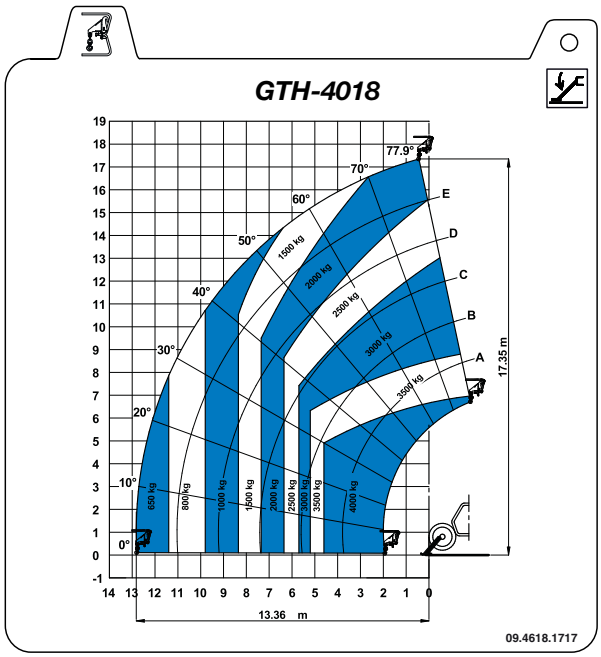




Load Charts

FIXED HOOK ON PLATE COUPLED TO GTH-4018





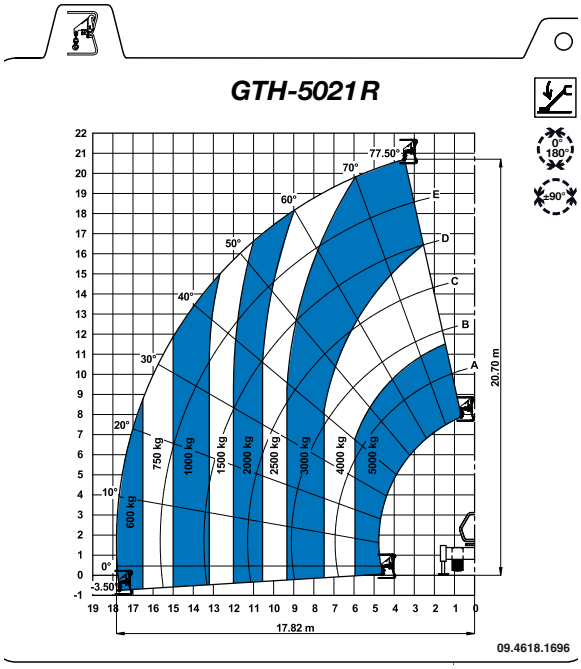
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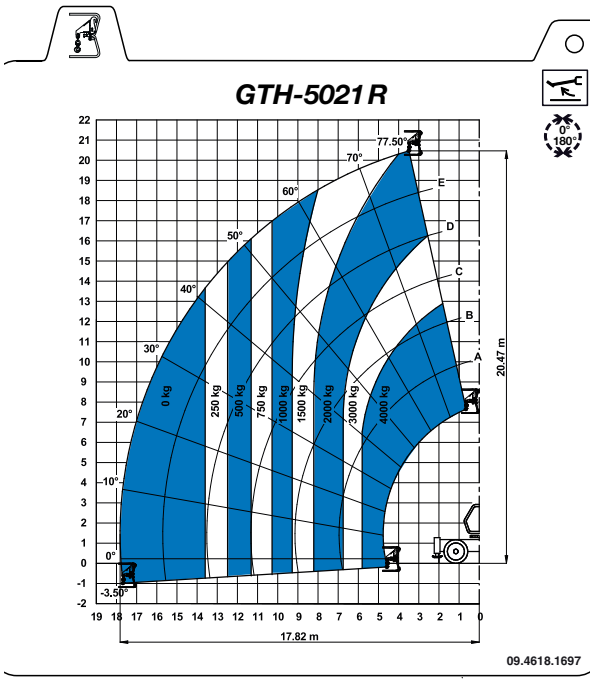
FIXED HOOK ON PLATE COUPLED TO GTH-4016 R

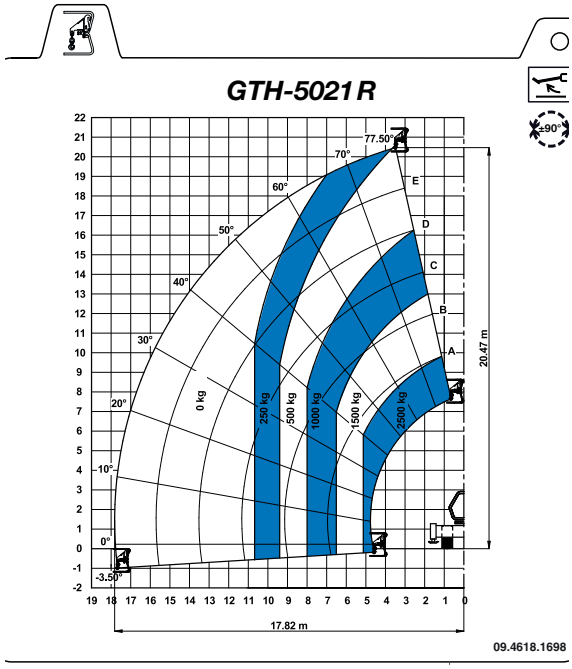
FIXED HOOK ON PLATE COUPLED TO GTH-4018 R

Load Charts

FIXED HOOK ON PLATE COUPLED TO GTH-5021R

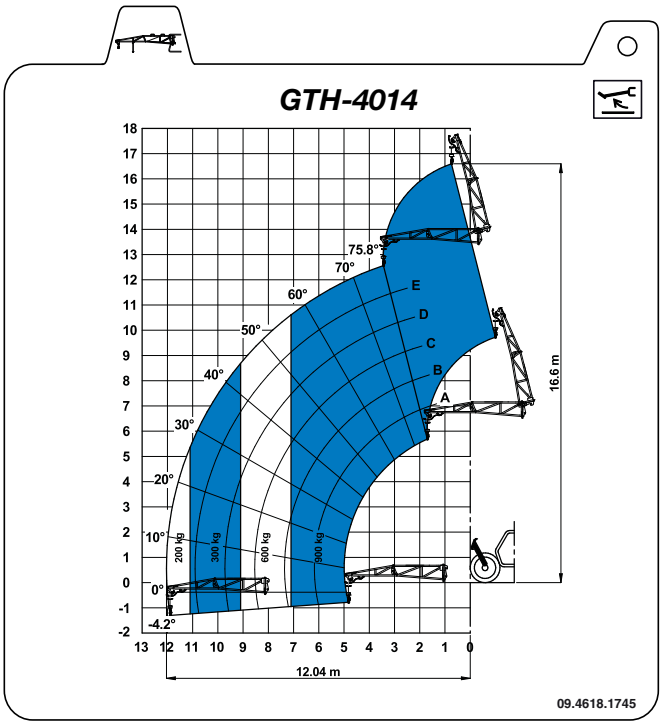


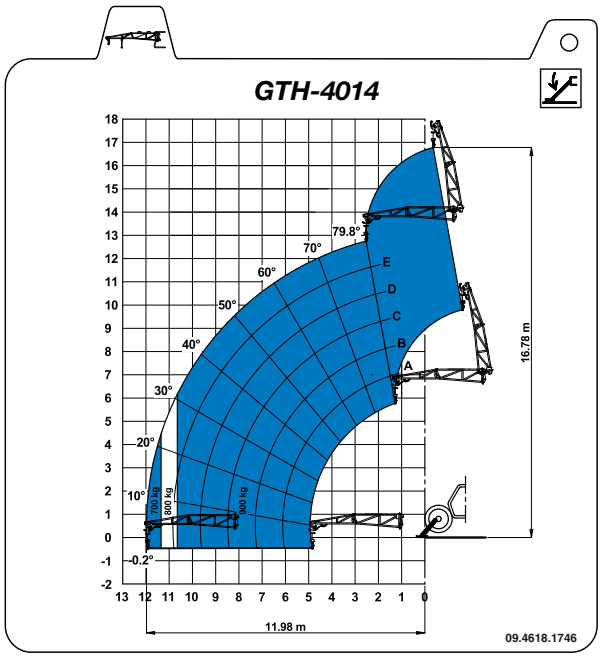




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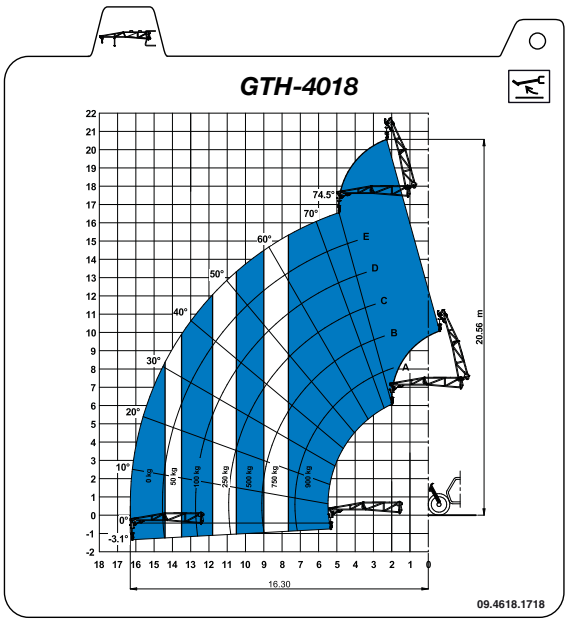
■ 4000mm/900kg HYDRAULIC and MECHANICAL JIB COUPLED TO GTH-4014

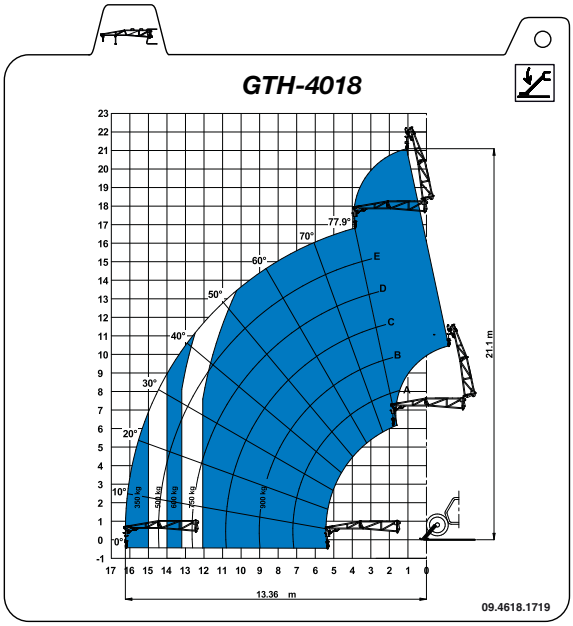




Load Charts

■ 4000mm/900kg HYDRAULIC and MECHANICAL JIB COUPLED TO GTH-4018





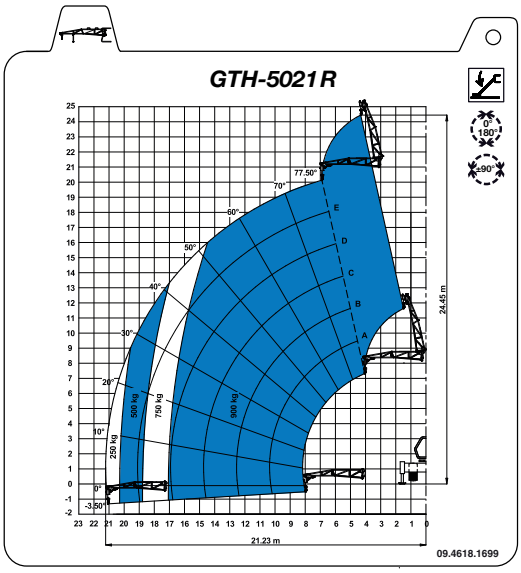
Load Charts

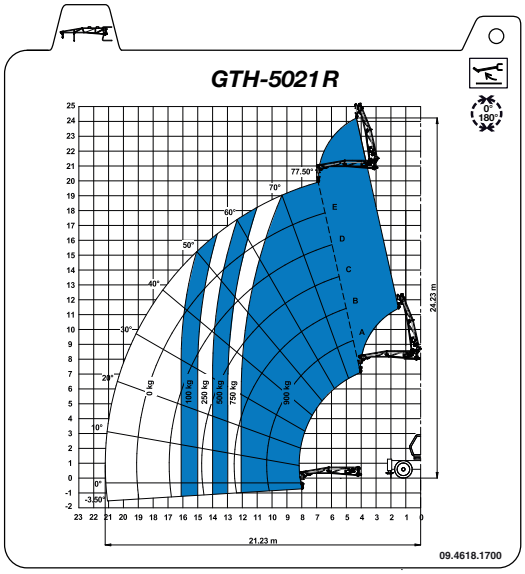
4000mm/900kg HYDRAULIC and MECHANICAL JIB COUPLED TO GTH-4016 R

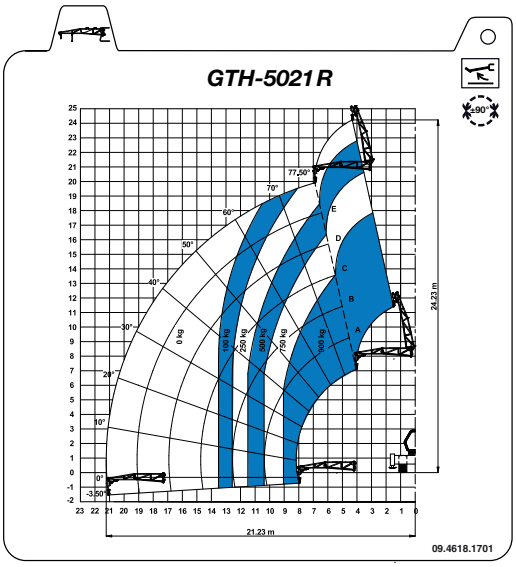
4000mm/900kg HYDRAULIC and MECHANICAL JIB COUPLED TO GTH-4018 R

Load Charts

4000mm/900kg HYDRAULIC and MECHANICAL JIB COUPLED TO GTH-5021R

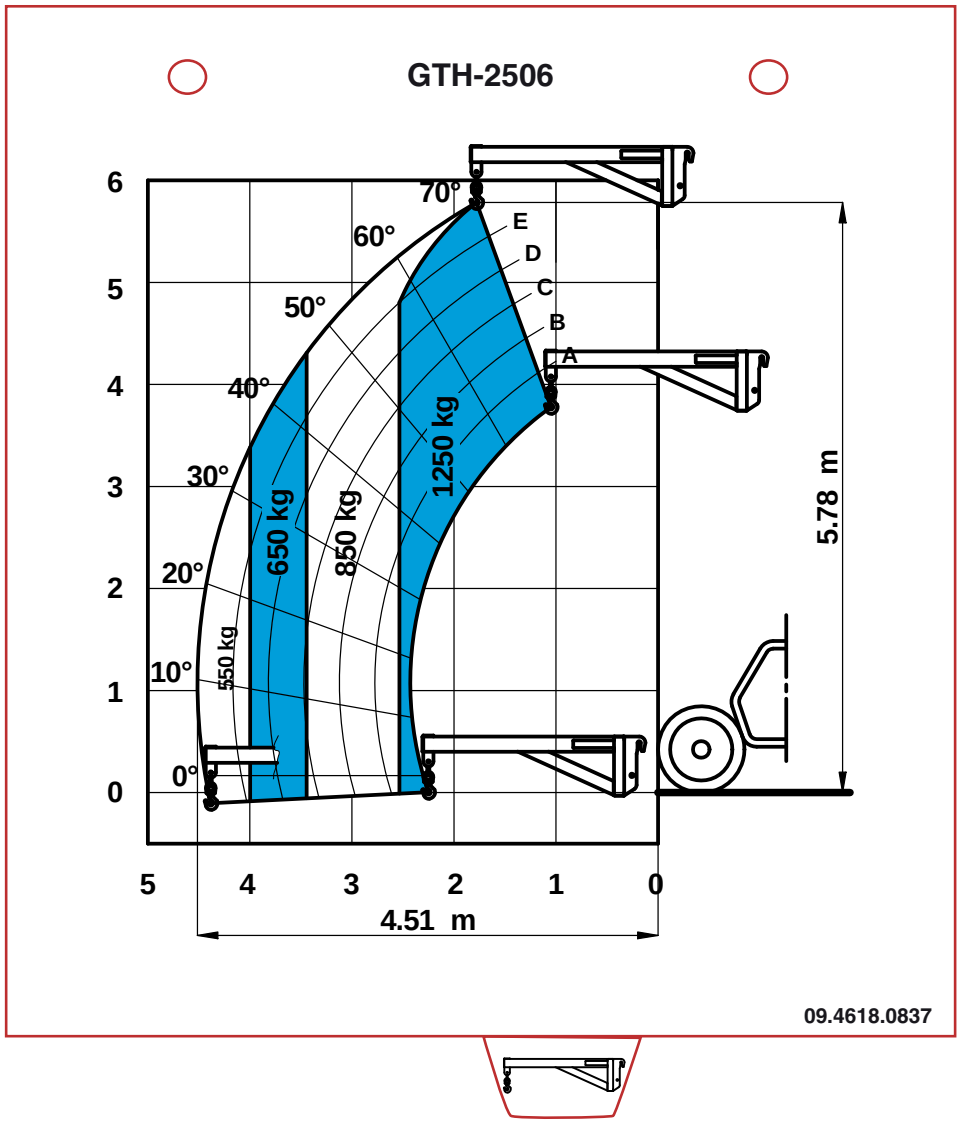






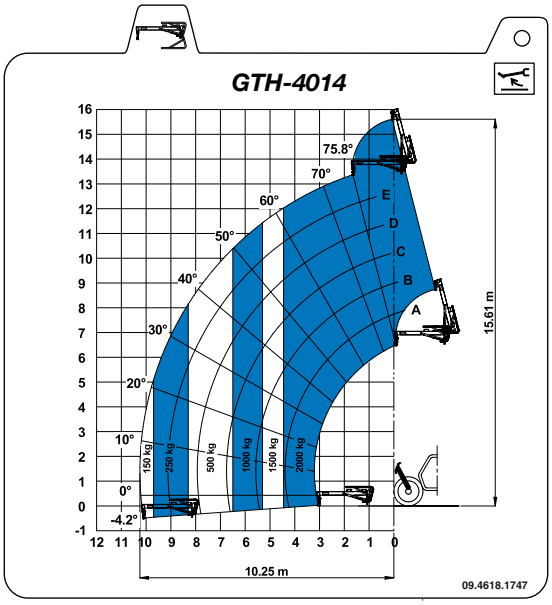
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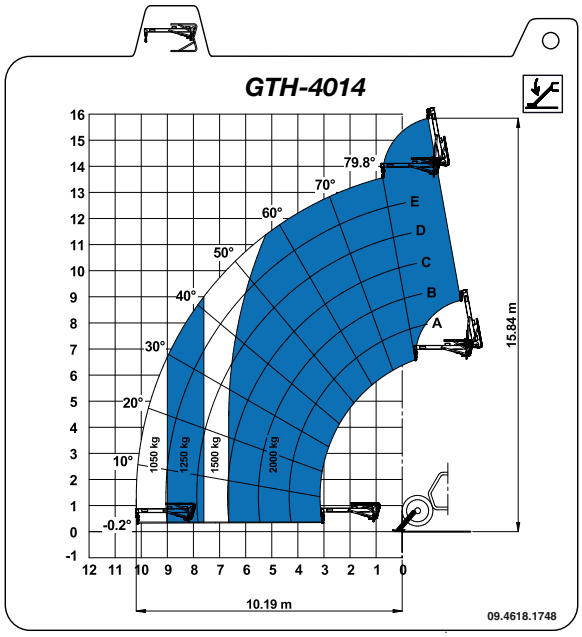
2000mm/2000kg JIB COUPLED TO GTH-2506



Load Charts

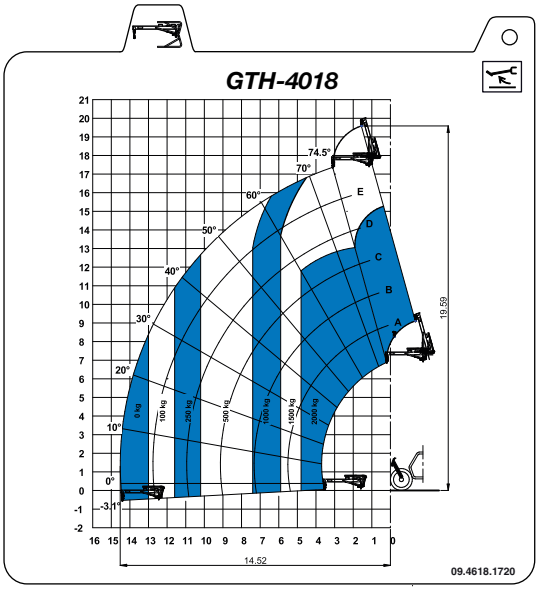
2000mm/2000kg JIB COUPLED TO GTH-4014

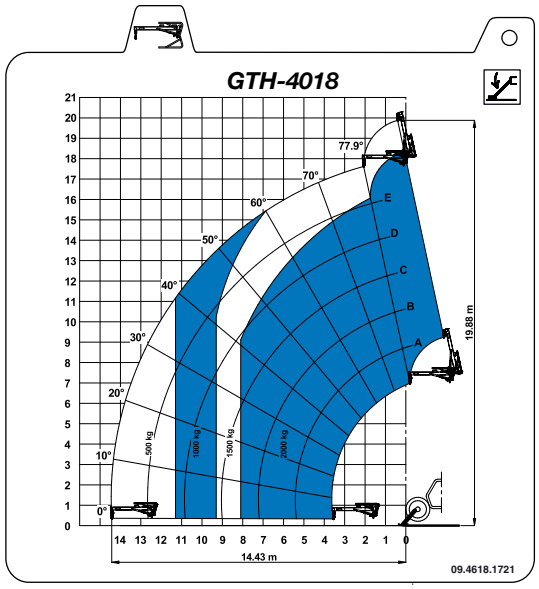




Load Charts

■ 2000mm/2000kg JIB COUPLED TO GTH-4018





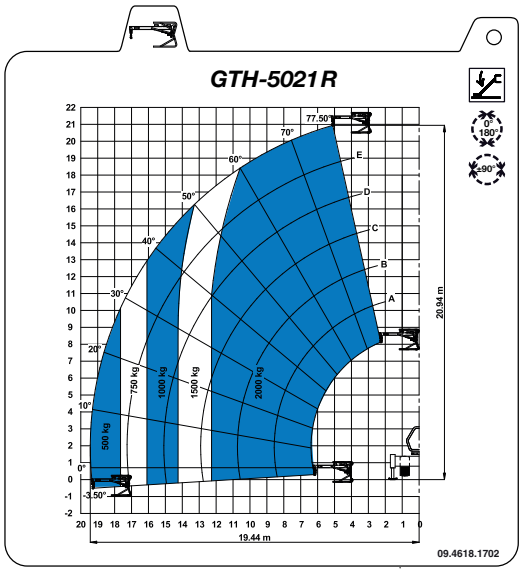
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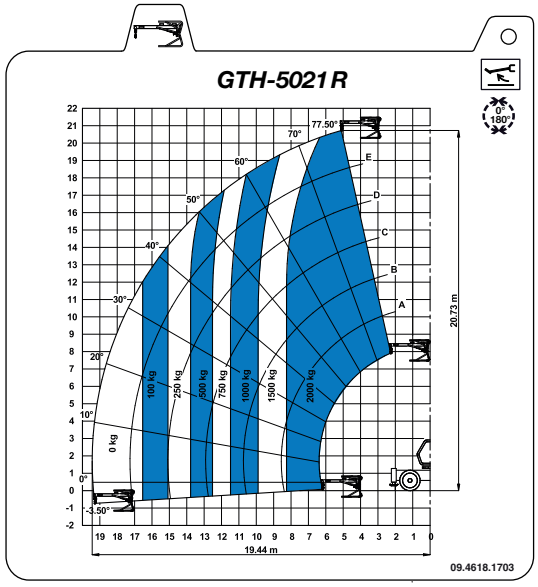
2000mm/2000kg JIB COUPLED TO GTH-4016 R

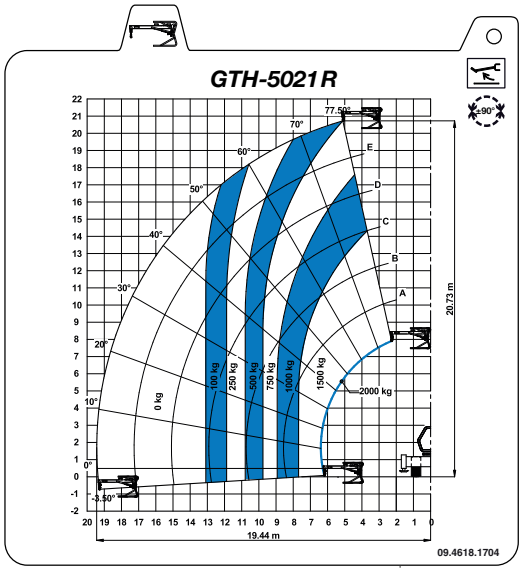
2000mm/2000kg JIB COUPLED TO GTH-4018 R

Load Charts

■ 2000mm/2000kg JIB COUPLED TO GTH-5021 R







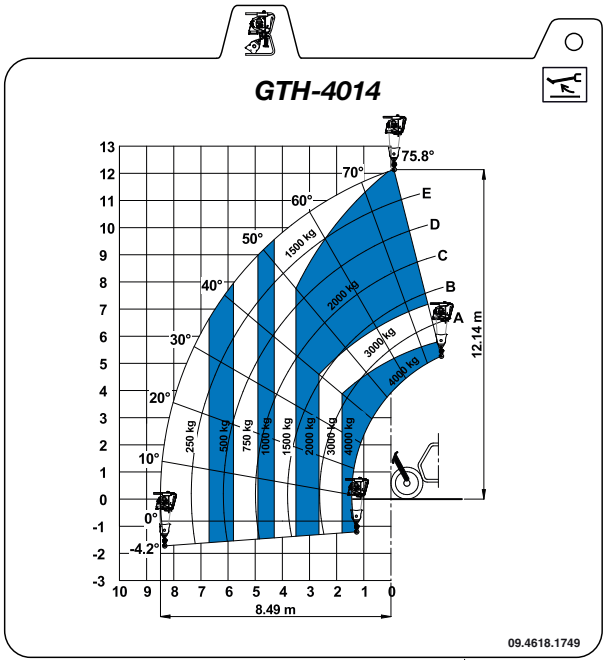
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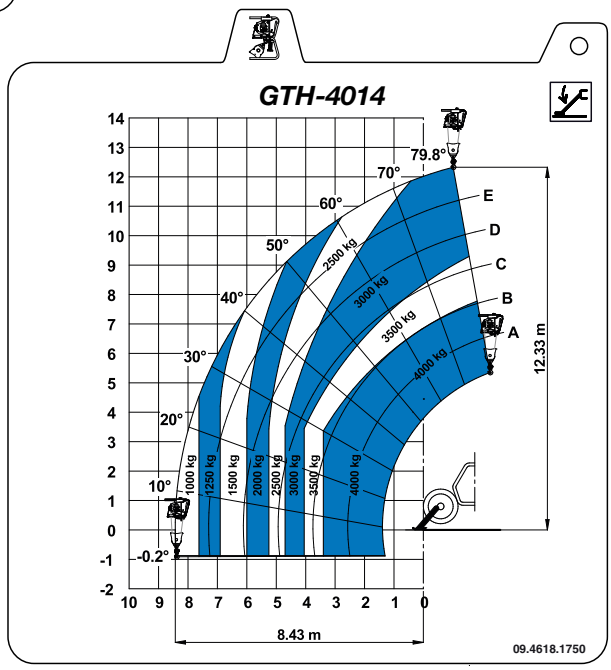
3000 kg HOIST COUPLED TO GTH-4016 R

3000 kg HOIST COUPLED TO GTH-4018 R

Load Charts

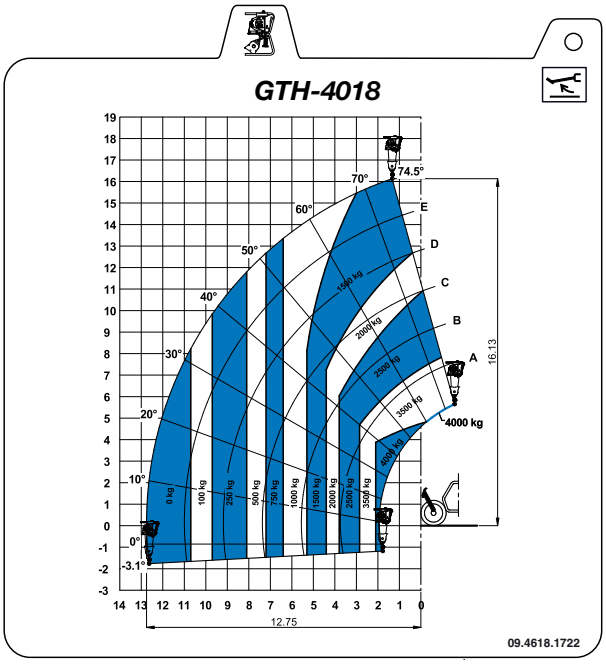
4000 kg HOIST COUPLED TO GTH-4014

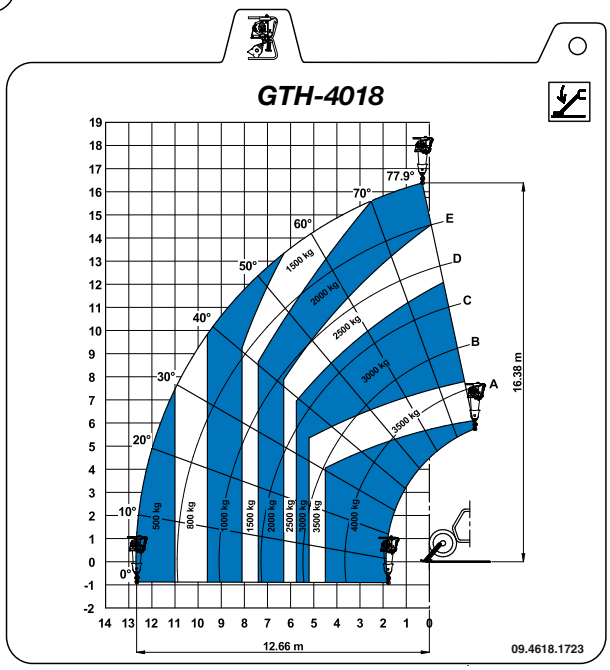




Load Charts

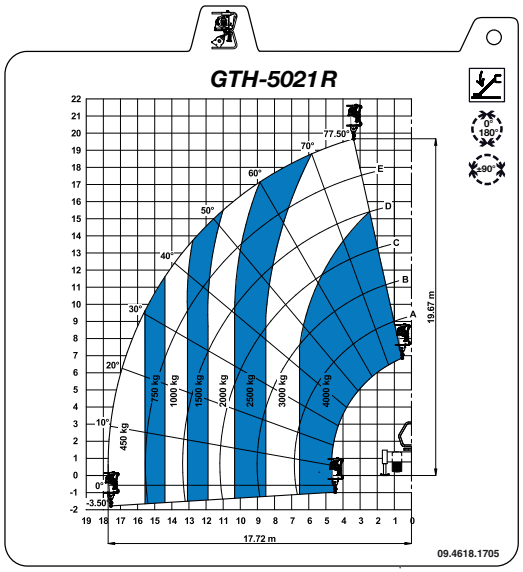
■ 4000 kg HOIST COUPLED TO GTH-4018

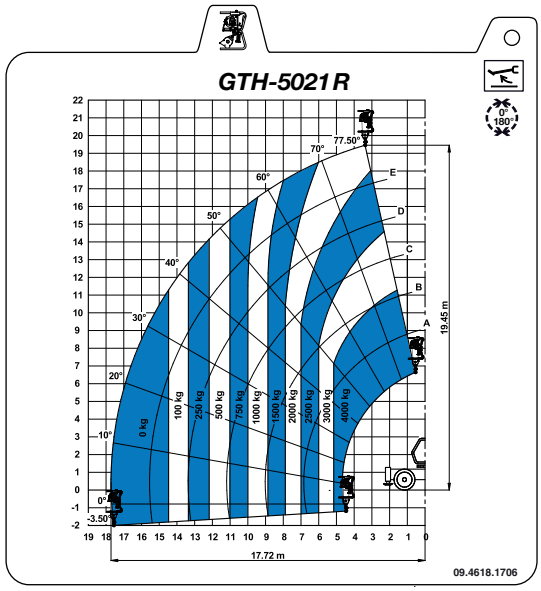


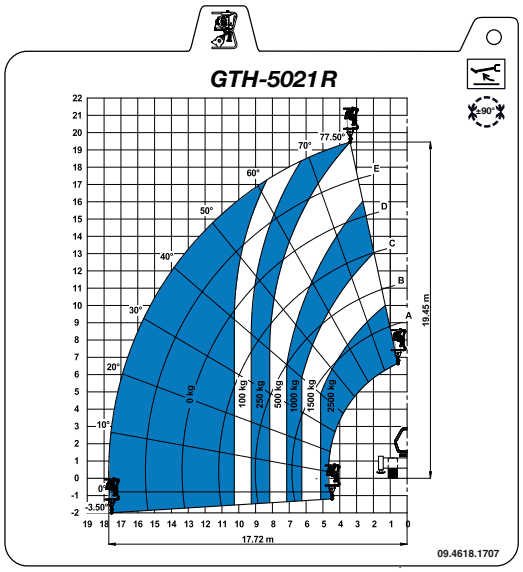


Load Charts

■ 5000 kg HOIST COUPLED TO GTH-5021 R







EC Declaration of Conformity

TEREX Global GmbH hereby declares that the machinery described below complies with the provisions of the following Directives:
1. EC Directive **2006/42/EC,** Machinery Directive.
The machinery described below is suitable for Genie telehandlers, models specified in the user manual.
Model/Type:
Description:
Serial Number:
Manufacture Date:
Country of Manufacture:
Manufacturer:
TEREX Global GmbH
Muhlenstrasse 26
8200 Schaffhausen
Switzerland
European representative:
Genie UK LTD
The Maltings
Wharf Road, Grantham, Lincolnshire
NG31 6BH United Kingdom
Empowered signatory:
Place of issue:
Date of issue: