

T40170

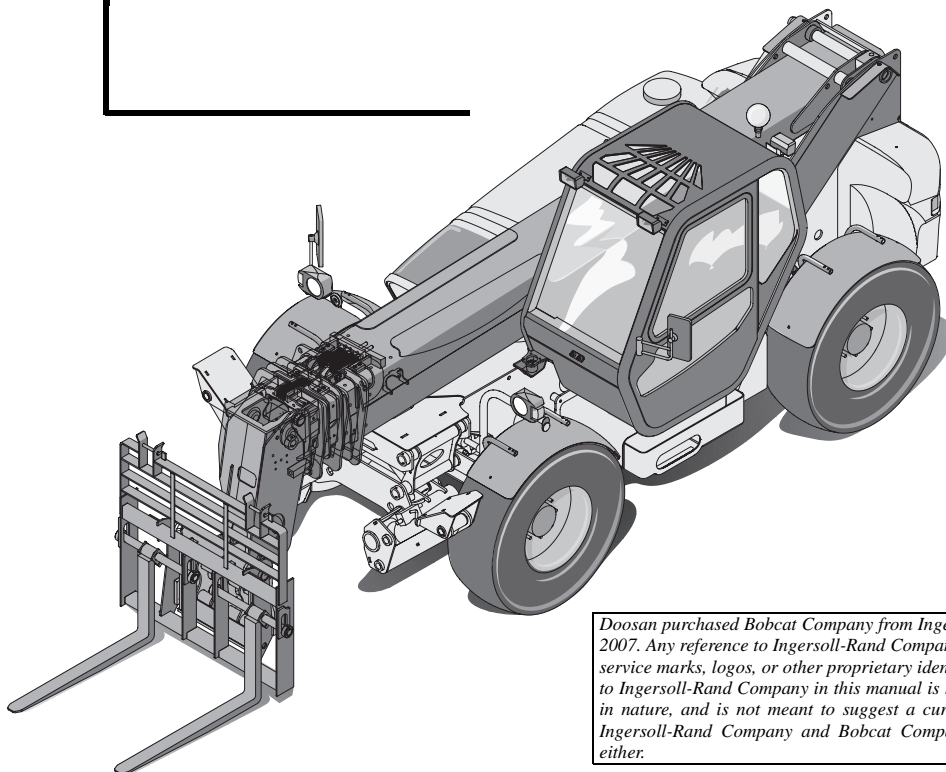
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EN

Bobcat®

Operation and Maintenance Manual



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Safety instructions



WARNING

Operators must receive instructions before running the machine. Untrained operators can cause injury or death.





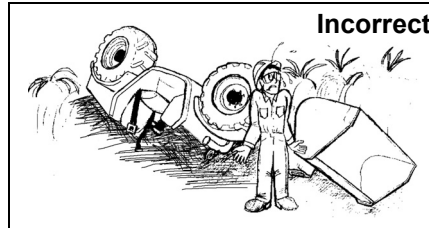
Never use the telescopic handler without instructions. See the machine signs (decals), Operation & Maintenance Manual, and data sheets located in the cab.




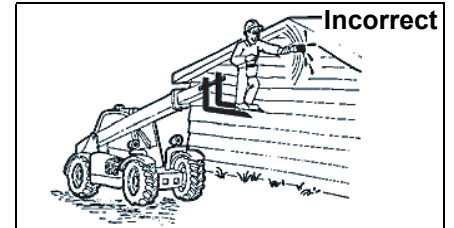
Safety Alert Symbol: This symbol with a warning statement means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.




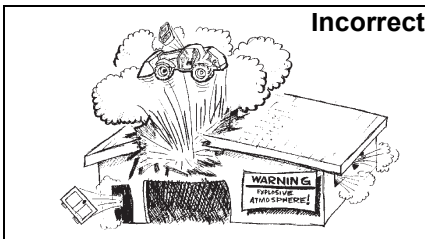
-  Always fasten seat belt securely.
 Do not have any part of your body outside the cab




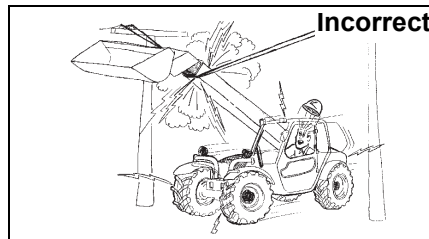
-  Never use the telescopic handler without operator cab (ROPS & FOPS).




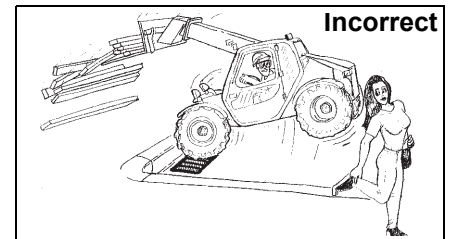
-  Never use the machine as a working platform or an elevator unless it is equipped with a Bobcat-approved platform.




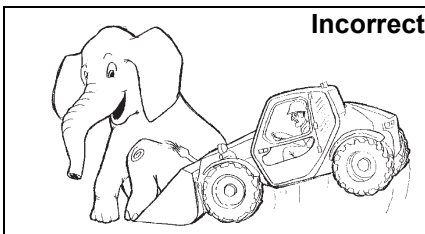
-  Do not use the machine in atmospheres with explosive dust or gas, or where exhaust can contact flammable material.




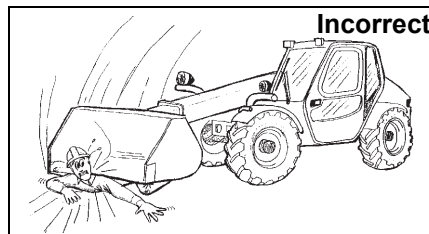
-  Check for underground or overhead lines in the area before operating the machine.
 Keep a minimum distance of 8 m between the nearest line and the machine arm, attachment, or load.




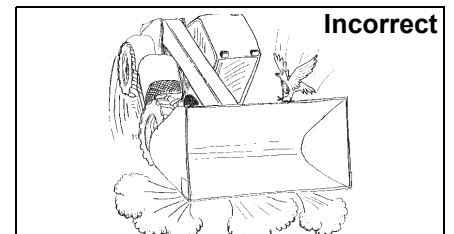
-  Never transport a load when raised.
 Do not travel or turn with the lift arms up.
 Load, unload and turn on flat level ground.




-  Never exceed rated operating capacity.
 Keep to the limits of the machine's load chart and/or the attachment's nominal capacity.



-  Never leave telescopic handler with engine running or with lift arms up.
 To park, engage parking brake and put attachment flat on the ground.



-  Never modify equipment.
 Only use attachments that are approved by Bobcat for this type of telescopic handler.

SAFETY EQUIPMENT

The Bobcat telescopic handler must be equipped with safety systems necessary for each job. Ask your dealer for information on the safe use of attachments and accessories.

- **SEAT BELT:** Check belt fasteners and check for damaged strap or buckle.
- **OPERATOR CAB (ROPS & FOPS):** It must be on the machine with all fasteners tight. Never use the machine without the right side window.
- **OPERATOR'S HANDBOOK:** Must be in cab.
- **MACHINE SIGNS (Decals):** Replace if Damaged
- **SAFETY TREADS:** Replace if Damaged
- **GRAB HANDLES:** Replace if Damaged
- **PARKING BRAKE**
- **WINDOWS AND MIRRORS:** Clean and check for broken window or mirror. Replace if Damaged

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REFERENCE INFORMATION

Write the correct information for your Bobcat telescopic handler in the spaces below. Always use these numbers when referring to your machine.

Telescopic Handler Serial Number _____

Engine Serial Number _____

Notes:

Your Bobcat dealer:

Address:

Telephone:



Bobcat Europe
J. Huysmanslaan 59
B-1651 LOT
Belgium



FOREWORD

IMPORTANT

This manual was written to give the owner/operator instructions on the safe operation and maintenance of the Bobcat telescopic handler. READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING YOUR MACHINE. If you have any questions, see your Bobcat dealer.

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Bobcat Company is ISO 9001 Certified



ISO 9001 is a set of international standards that control the processes and procedures which we use to design, develop, manufacture, distribute, and service Bobcat products.

British Standards Institute (**BSI**) is the Certified Registrar, which Bobcat Company chose to assess the Company's compliance with the ISO 9001 set of standards. The BSI registration certifies that the manufacturing plant in Pontchâteau (France) is in compliance with ISO 9001 standards. Only certified assessors, like BSI, can grant registrations.

ISO 9001 means that as a company we say what we do and do what we say. In other words, we have established procedures and policies, and we provide evidence that the procedures and policies are followed.

Regular Maintenance Items

The parts listed below are those required for normal maintenance of the machine. For other parts, consult your Bobcat dealer who has the catalogue of spare parts for your machine.

WARNING

Only use guaranteed genuine Bobcat parts for the maintenance of the machine.

| Designation | Code |
|--|------------|
| Air filter - Main cartridge turbocharged engine | 69 107 25 |
| Air filter - Standby cartridge turbocharged engine | 69 107 26 |
| Diesel engine fuel filter cartridge | 69 119 07 |
| Diesel engine oil filter cartridge (T40170: from S/N 3633 11062 & above) | 36925.6 |
| Diesel engine oil filter cartridge (T40170: until S/N 3633 11061) | 69 119 05 |
| Alternator belt | 79 527.8 |
| Hydraulic oil filter cartridge | 69 130 59 |
| Hydraulic tank vent valve | 37 148.4 |
| Wheel nut | 100345-41K |

Lubricants, fuel and fluids

The lubricants and fuels described below are those used in the factory. They apply to operating conditions in European temperate climate areas. Please consult us for requirements under other weather conditions.

| Designation | Brand | Code |
|---|----------|---------------------------------|
| Engine oil - Diesel engine lubricating circuit | TOTAL | RUBIA TIR MAX |
| Hydraulic oil - Hydraulic system | TOTAL | EQUIVIS ZS 46 |
| Transmission oil - Axle and transfer box housings | - | SAE85W90 (API GL5 - MIL 2105-B) |
| Brake fluid - Service brake circuit | TOTAL | EQUIVIS ZS 46 |
| Grease - Boom hinges and guides | TOTAL | MULTIS EP |
| Grease - Boom telescoping chains | MOLYKOTE | MKL-N |
| Antifreeze - Diesel engine coolant circuit | TOTAL | ANTIGEL |
| Fuel | - | Gas oil |

Serial Number Locations

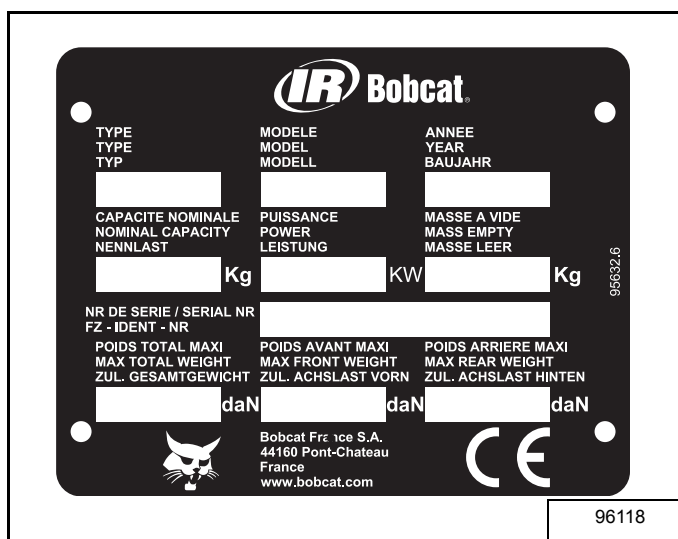
Telescopic Handler Serial Number

Always use the type, model and serial number of the machine when requesting service information or when ordering parts.

Early or later models (identified by the serial number) may use different parts or require a specific maintenance procedure.

The machine name plate is riveted to the right side of the frame, near the front right wheel. The serial number is etched on the top of the frame, on the front right end.

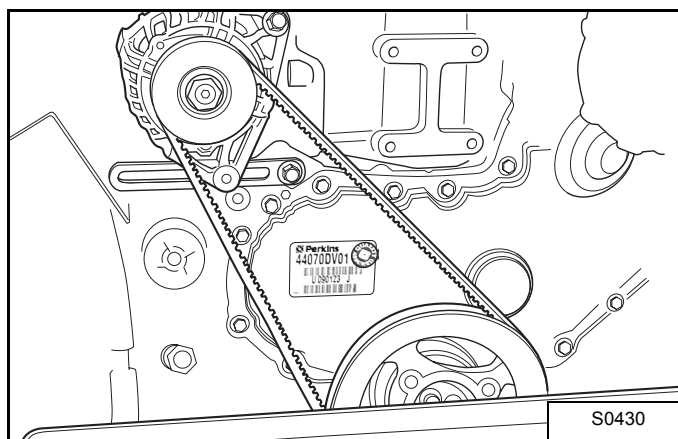
Figure 1



Engine Serial Number

The engine serial number plate is located near the injection pump or at the rear of the cylinder block. Always use the complete serial number when requesting information or when ordering parts.

Figure 2



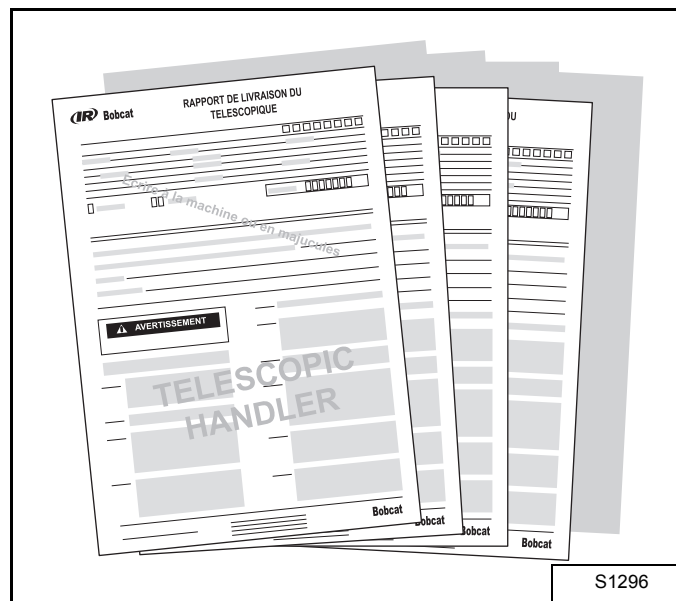
Other Serial Numbers

Other components may also have serial numbers and an identification plate. Always use these serial numbers when ordering parts.

Delivery Report

The Delivery Report must be filled out by the dealer and signed by the owner or operator when the Telescopic Handler is delivered. An explanation of the form must be given to the owner. Make sure it is filled out correctly.

Figure 3

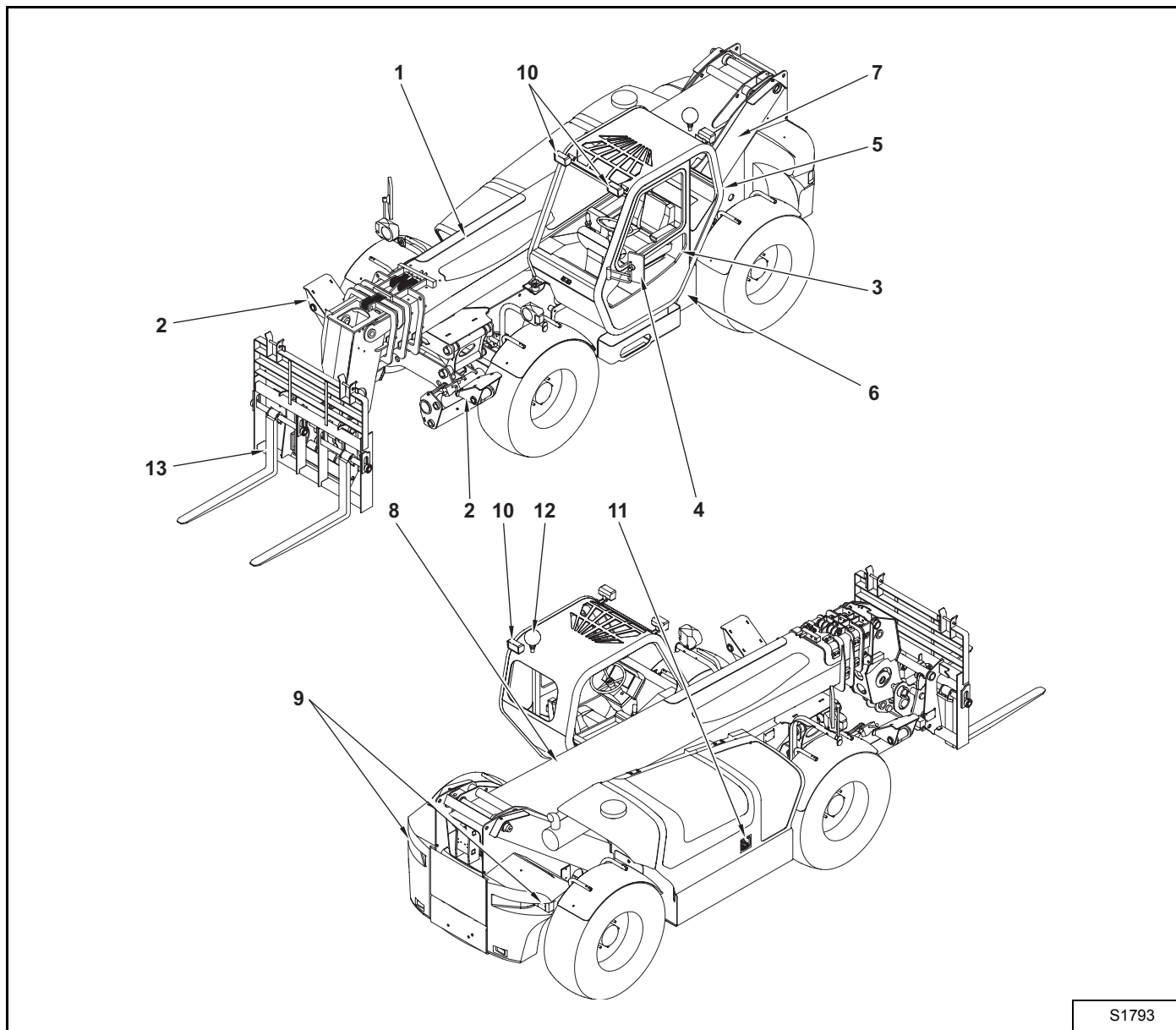


Telescopic Handler Identification

[Figure 4]

| Reference | Designation |
|-----------|---------------------|
| 1 | Telescopic boom |
| 2 | Stabilisers |
| 3 | Fuel tank |
| 4 | Mirror |
| 5 | Operator Cab |
| 6 | Battery compartment |
| 7 | Boom stop (option) |
| 8 | Engine exhaust |
| 9 | Lights |
| 10 | Working lights |
| 11 | Engine cover |
| 12 | Rotating beacon |
| 13 | Pallet forks |

Figure 4



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Standard equipment and options

All T40170 telescopic handlers are equipped with the following standard equipment:

- Hydrostatic transmission
- ROPS/FOPS operator cab
- Heating, demisting, windscreen washer
- Hydraulic Joystick Control
- Two-way auxiliary hydraulic supply at the end of the boom
- 265 bars hydraulic system
- Mechanical lock of accessories
- Aggravating Movements Arrester (AMA) system with key switch to deactivate this function.
- 4 equal-size drive and steering wheels with 400/80 x 24 156B tyres
- Mudguards
- Narrow bracket (mounting of the equipment)

Below is a list of equipment available from your dealer. They are either dealer accessories, factory installed accessories or both. Please see your Bobcat dealer for more information.

Options

- Reverse drive alarm
- Cab air conditioning
- Rear hydraulic hook + mirror
- Transmission lock override
- Rear hydraulic connection
- Trailer brake valve
- Fan reverser
- Hydraulic lock of equipment
- Rotating beacon
- Windscreen grill
- Work light on boom
- Tow hitch + electrical plug
- Roof windscreen wiper
- 2nd hydraulic function on boom
- Radio remote control
- Platform



SAFETY

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Safety Instructions for Bobcat Telescopic Handlers and Attachments

Safety is the operator's responsibility

Carefully follow the operating and maintenance instructions in this manual.

All Bobcat telescopic handlers and attachments are designed to ensure maximum safety to the operator. However, in spite of very careful design, this machine can be dangerous if not used and serviced according to the instructions in this manual.

A certificate of compliance is issued on delivery of the machine. This must be kept and shown at each periodic inspection of the machine and handed over to the purchaser if the machine is resold.

The Bobcat telescopic handler is highly maneuverable and compact. It is rugged and useful under a wide variety of conditions. The operator should still face hazards associated with various types of applications.

Subject to compliance with operating and maintenance instructions, and use of the specially designed original equipment, this machine can be used for lifting operations with variable-length load suspension components. This machine allows the load to swing freely in all directions.

This machine is not designed for:

- use under weather conditions with a risk of lightning, storm or winds faster than 12.5 m/s (force 6 on the Beaufort scale);
- use in explosive atmosphere;
- carrying out work on live power lines;
- carrying out underground work.

The dealer explains the capabilities and restrictions of the Bobcat telescopic handler for each application. The dealer demonstrates the safe operation according to Bobcat instructions, which are made available to operators.

The dealer can also identify unsafe modifications or use of non-approved attachments.

The attachments and buckets are designed for nominal capacities and secure fastening to the Bobcat telescopic handler.

The user should check with the dealer, or refer to Bobcat documentation, to determine safe loads of materials of specified densities for the Telescopic Handler/Attachment combination.

The user must adhere to the load charts relative to the type of tyre mounting on the machine.

The user should use only the tires listed in "Tyres" on page 95 for the telescopic handler T40170. The user should ensure that the machine is equipped with 4 identical tyres.

The following publications and training materials provide information on the safe use and maintenance of the telescopic handler and attachments:

- The Delivery Report ensures that complete instructions have been given to the new owner and that the Bobcat Telescopic Handler and equipment are in safe operating condition.
- The Operation & Maintenance Manual delivered with the Bobcat telescopic handler or attachments provides operating information as well as routine maintenance and service procedures. It is a part of the telescopic handler and must be stored in the container provided inside the operator cab. Replacement Operation & Maintenance Manuals are available from your Bobcat dealer.
- Machine signs (decals) instruct on the safe operation and maintenance of your Bobcat telescopic handler or attachments. The signs and their locations are shown in this manual. Replacement signs are available from your Bobcat dealer.

On delivery, the dealer checks the recommended applications of the product with the owner / operator. If the machine is to be used for other applications, the owner/ operator should check the relevant recommendations with the dealer.

Safety Symbols

 **WARNING**


This symbol with a warning statement, means: **“Warning, be alert! Your safety is involved!” Carefully read the message that follows.**

IMPORTANT

This sign identifies procedures which must be followed to avoid damaging the machine.

 **WARNING**

The operator must read the instructions before running the machine. Untrained operators can cause injury or death.

 **WARNING**

Warnings signs on the machine and in the manuals are for your safety. Failure to obey warnings can cause injury or death.

The Bobcat telescopic handler and attachment must be in good operating condition before use.

Safe operation requires a qualified operator

A qualified operator must understand the written instructions, rules and regulations.

- Written instructions from Bobcat include the Delivery Report, Operation & Maintenance Manual, Operator's Handbook and machine signs (decals).
- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) emblem.

A qualified operator must have training with actual operation.

- Operator training should consist of a demonstration and verbal instruction. This training is given by your Bobcat dealer before the product is delivered.
- The new operator must start in an area without bystanders and use all the controls until he can operate the machine and attachment safely under all conditions of the work area. Always fasten seat belt before operating.

A qualified operator must know the work conditions.

- The operator must know the weight of the materials being handled. Avoid exceeding the Rated Operating Capacity and comply with the load chart of the machine and attachment. Very dense material is heavier than the same volume of less dense material. Reduce the size of load when handling dense material.
- The operator must know any prohibited uses or work areas, for example, he needs to know about steep slopes.
- The operator must enquire about the location of any underground lines.
- Where overhead power lines are present in the operating area, ensure sufficient clearance between the nearest of these lines and any part of the machine.

| Voltage | Minimum distance |
|-----------------------|------------------|
| up to 1 KV | 1 m |
| from 1 KV to 110 KV | 3 m |
| from 110 KV to 220 KV | 4 m |
| from 220 KV to 380 KV | 5 m |
| unknown | 5 m |

- Wear tight fitting clothing. Always wear safety glasses when performing maintenance or service work. Safety glasses or hearing protection are required for some work.

IMPORTANT

A qualified operator must not use drugs or alcoholic drinks which impair his alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he can safely operate a machine.

Fire Prevention

The machines and some attachments have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the engine and exhaust system. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.

Keep in mind the following instructions:

- Stop the engine and let it cool before adding fuel. No smoking!
- Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting.
- Know where fire extinguishers and first aid kits are located and how to use them. Replacement fire extinguishers are available from your Bobcat dealer.

Instructions for maintenance



- Read the maintenance instructions carefully.
- Machine maintenance and compliance are obligatory.
- For any intervention other than normal maintenance, consult your Bobcat dealer.
- Clean the machine or at least the relevant area before any intervention. Protect any critical components (particularly electric components) against water, steam or cleaning agents during this operation.
- Only wear suitable clothing, avoid loose clothing. Tie back and protect your hair, if necessary.


- Turn off the engine before any intervention. If any intervention requires the engine to be running, take all the necessary safety measures and precautions. There may be moving parts, high temperatures, hydraulic circuits under pressure, electric circuits under voltage. Such operations must be carried out by trained, qualified personnel.
- Make sure that the area is adequately ventilated before starting the engine.
- Clean up all traces of fuel, oil, grease or impurities.
- Make any necessary repairs immediately even if they do not seem important.
- Immediately repair any leaks, even if they do not seem important.
- Do not run the engine without complete fuel and exhaust systems, without oil or coolant, or in case of fuel leakages.
- Do not operate the machine without hydraulic fluid in the hydraulic system.
- Use only recommended lubricants. Do not use polluted lubricants or lubricants whose filtration state is not precisely known.
- Wait until the engine coolant has dropped to a temperature of less than 20°C before opening the surge tank plug or carrying out work on the engine cooling system.
- Do not take apart, tighten or loosen any connections, hoses or any hydraulic component when the system is under pressure. Such operations must be carried out by trained, qualified personnel.
- Do not smoke or approach the machine with a bare flame if the fuel tank is open or when filling it. Fill the tank in a suitable place. Do not fill the tank while the engine is running.

Warning of residual risks







Warning signs are provided on the machine to inform you of residual risks.

These warnings are mentioned on stickers located on the machine, close to where the risks are. These stickers are outlined in red with black inscriptions on a yellow background.

| Ref. | Decal | Description |
|------|---|--|
| 1 |  | Risk of load falling when the forks or attachment tilt forwards. The decal is located on each side of the boom head. |
| 2 |  | Risk of being caught up in a wheel when the machine is in motion. The decal is located on the frame in front of each wheel. |

| Ref. | Decal | Description |
|------|---|---|
| 3 |  | Risk of residual pressure in a hydraulic accumulator and its circuit. The decal is located near the access to the accumulator and its circuit. |

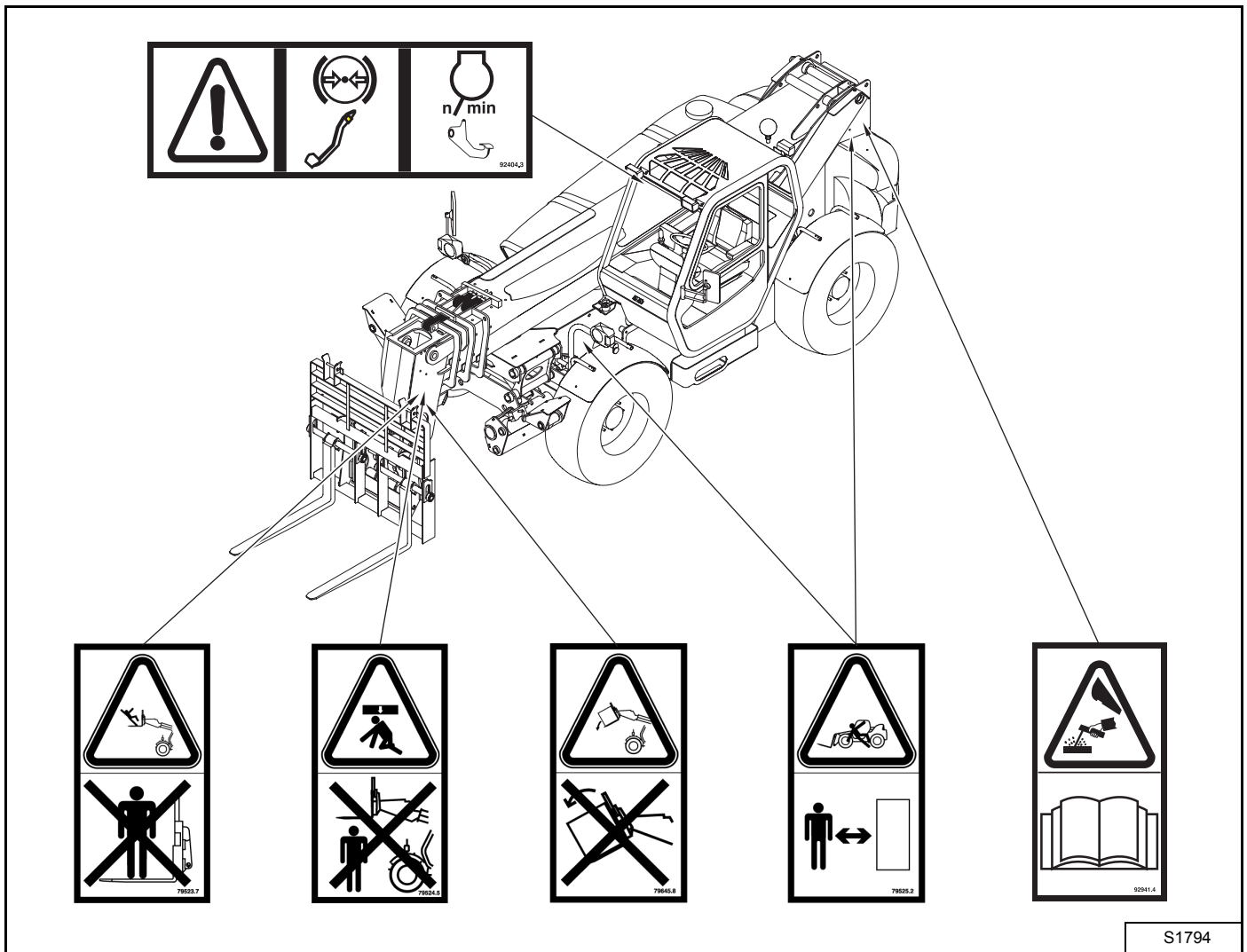
Other instructions

| | | |
|---|---|---|
| 1 |  | Do not use the fork as lift for personnel or work platform. Do not transport passengers. Danger of serious injury or death from falling. The decal is located on the boom head. |
| 2 |  | Danger of serious injury or death from dropping or lowering an attachment or load. Keep bystanders away. The decal is located on the boom head. |
| 3 |  | Read instructions before welding (see "Maintenance Safety" on page 43). The decal is located on both sides of the machine in back. |
| 4 |  | Danger of electrocution as well as explosion of the battery (see "Maintenance Safety" on page 43). The decal is located at the back of the engine compartment. |
| 5 |  | The left pedal activates the brake. The right pedal adjusts the engine speed. The decal is located on the front or right window of the cab. |
| 6 |  | Danger of cutting/crushing the hands during maintenance on the engine. Danger of burning the hands during maintenance on the engine. Danger of explosion of the coolant fluid tank. First read the instructions and remove the key during engine maintenance. The decal is located on the engine cover. |

Safety Signs (Decals)

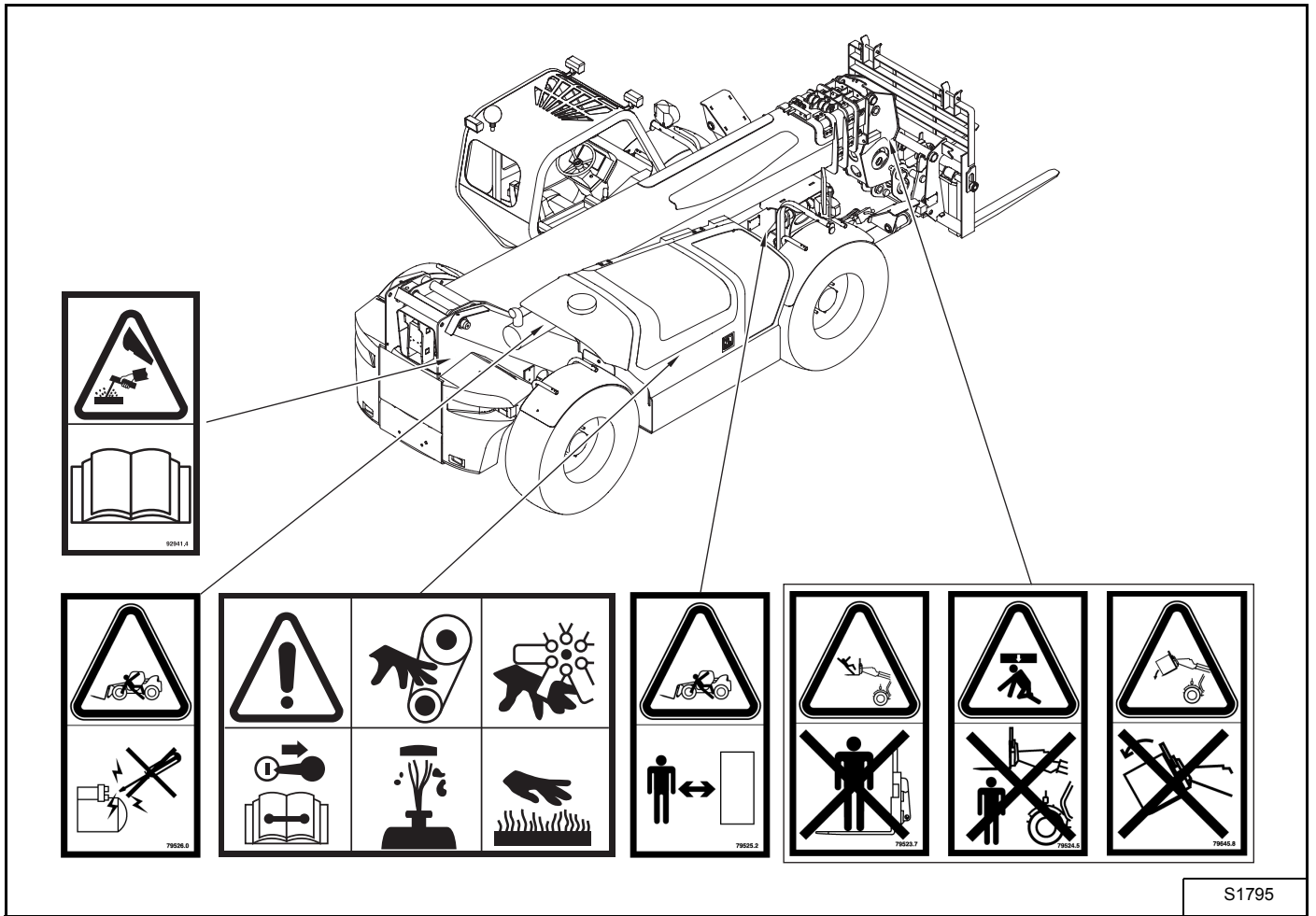
Follow the instructions on all the Machine Signs (Decals) that are on the telescopic handler. Replace any damaged machine signs and be sure they are in the correct locations. Machine signs are available from you Bobcat loader dealer.

Figure 5



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Figure 6



LOAD CHARTS

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