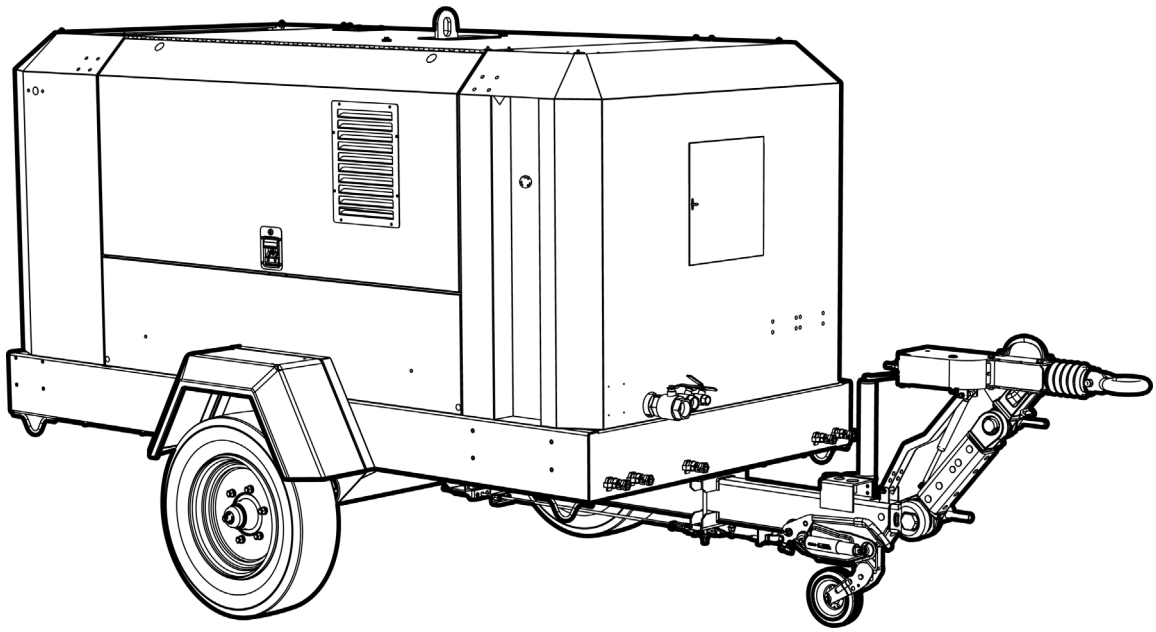
Portable Power

7/205, 10/175, 12/155, 14/145, 12/205

REPAIR AND MAINTENANCE INFORMATION (RMI)
This manual is not intended for operation of the unit.
It is intended for RMI in accordance with Regulation (EU) 2018/858.
A separate operation and maintenance manual is supplied with each unit.



This manual contains important safety information and must be made available to personnel who operate and maintain this machine. If the required repair and maintenance information is not detailed in this manual then contact your local dealer.

This manual is applicable for trailers under the following Type Approval numbers:
e1*2007/46*1572*05

SERIAL No : 705700 -> 706999

46857157_en_A_05/22

DOOSAN

Portable Power

1 CONTENTS

2 FOREWORD

3 ISO SYMBOLS

7 SAFETY

9 GENERAL INFORMATION

13 MAINTENANCE

28 PARTS ORDERING

30 RMI PARTS

ABBREVIATIONS & SYMBOLS

Contact the company for serial number
->#### Up to Serial No.
####-> From Serial No.

***** Not illustrated
† Option
AR As required
HA High ambient machine
F.H.R.G. Fixed height running gear
V.H.R.G. Variable height running gear

bg Bulgarian
cs Czech
da Danish
de German
el Greek
en English
es Spanish
et Estonian
fi Finnish
fr French
hu Hungarian
it Italian
lt Lithuanian
lv Latvian, Lettish
mt Maltese
nl Dutch
no Norwegian
pl Polish
pt Portuguese
ro Romanian
ru Russian
sk Slovak
sl Slovenian
sv Swedish
zh Chinese

2 FOREWORD

The contents of this manual are considered to be proprietary and confidential to and should not be reproduced without the prior written permission of the company.

Nothing contained in this document is intended to extend any promise, warranty or representation, expressed or implied, regarding the products described herein. Any such warranties or other terms and conditions of sale of products shall be in accordance with the standard terms and conditions of sale for such products, which are available upon request.

This manual contains instructions and technical data to cover all routine operation and scheduled maintenance tasks by operation and maintenance staff. Major overhauls are outside the scope of this manual and should be referred to an authorised service department.

The design specification of this machine has been certified as complying with EC directives. As a result:

a) Any machine modifications are strictly prohibited, and will invalidate EC certification.
b) This machine may be used in USA/Canada when configured with components bearing the appropriate certification. (Where ASME certification is valid).

All components, accessories, pipes and connectors added to the compressed air system should be:

- of good quality, procured from a reputable manufacturer and, wherever possible, be of a type approved by the company.
- clearly rated for a pressure at least equal to the machine maximum allowable working pressure.
- compatible with the compressor lubricant/coolant.
- accompanied with instructions for safe installation, operation and maintenance.

Details of approved equipment are available from the company service departments.

The use of repair parts / lubricants / fluids other than those included within the approved parts list may create hazardous conditions over which the company has no control. Therefore the company cannot be held responsible for equipment in which non-approved repair parts are installed.

The company reserves the right to make changes and improvements to products without notice and without incurring any obligation to make such changes or add such improvements to products sold previously.

The intended uses of this machine are outlined below and examples of unapproved usage are also given, however the company cannot anticipate every application or work situation that may arise.

IF IN DOUBT CONSULT SUPERVISION.

This machine has been designed and supplied for use only in the following specified conditions and applications:

- Compression of normal ambient air containing no known or detectable additional gases, vapours or particles
- Operation within the ambient temperature range specified in the *GENERAL INFORMATION* section of this manual.

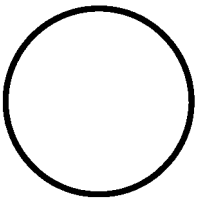
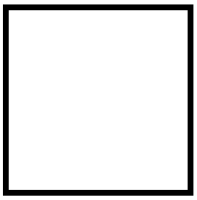
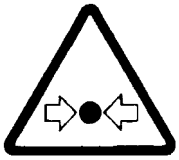
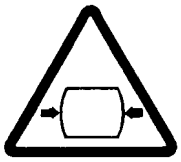
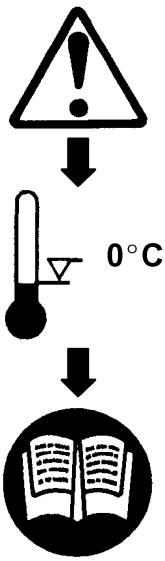
The use of the machine in any of the situation types listed in table 1:

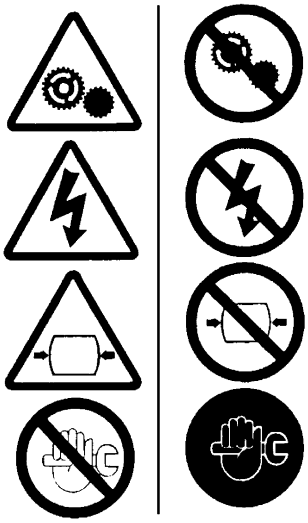
a) Is not approved,
b) May impair the safety of users and other persons, and
c) May prejudice any claims made against the company.

TABLE 1
Use of the machine to produce compressed air for: a) direct human consumption b) indirect human consumption, without suitable filtration and purity checks.
Use of the machine outside the ambient temperature range specified in the *GENERAL INFORMATION SECTION* of this manual.
This machine is not intended and must not be used in potentially explosive atmospheres, including situations where flammable gases or vapours may be present.
Use of the machine fitted with non approved components / lubricants / fluids.
Use of the machine with safety or control components missing or disabled.

The company accepts no responsibility for errors in translation of this manual from the original English version.

GRAPHIC FORM AND MEANING OF ISO SYMBOLS

		
Prohibition / Mandatory.	**Information / Instructions.**	**Warning.**
		
WARNING: Electrical shock risk.	**WARNING - Pressurised component or system.**	**WARNING - Hot surface.**
		
WARNING - Pressure control.	**WARNING - Corrosion risk.**	**WARNING - Air/gas flow or Air discharge.**
		
WARNING - Pressurised vessel.	**WARNING - Hot and harmful exhaust gas.**	**WARNING - Flammable liquid.**
		
WARNING - Maintain correct tyre pressure. (Refer to the GENERAL INFORMATION section of this manual).	**WARNING - Before connecting the tow bar or commencing to tow consult the Operation & Maintenance manual.**	**WARNING - For operating temperature below 0°C (32°F), consult the Operation & Maintenance manual.**



WARNING - Do not undertake any maintenance on this machine until the electrical supply is disconnected and the air pressure is totally relieved.

WARNING - Consult the Operation & Maintenance manual before commencing any maintenance.

Do not breathe the compressed air from this machine.

Do not remove the Operating and Maintenance manual and manual holder from this machine.

Do not stack.

Do not operate the machine without the guard being fitted.

Do not stand on any service valve or other parts of the pressure system.

Do not operate with the doors or enclosure open.

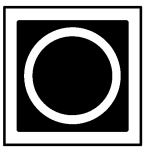
Do not use fork lift truck from this side.

Do not exceed the trailer speed limit.

No naked lights.

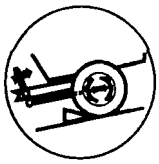
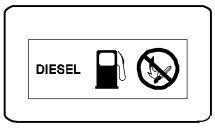
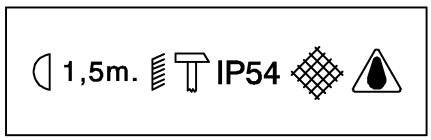
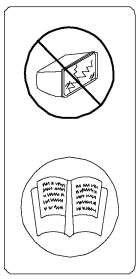
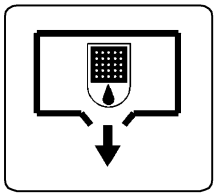
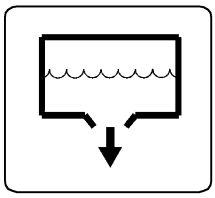
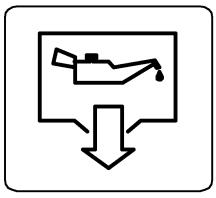
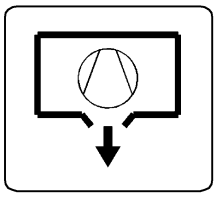
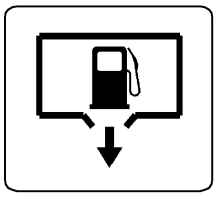
Do not open the service valve before the airhose is attached.

Use fork lift truck from this side only.

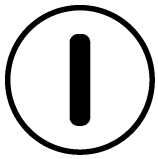
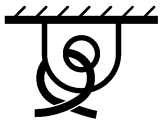
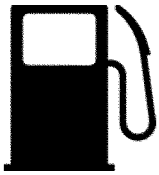
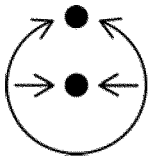
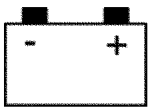
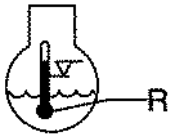


Emergency stop.

Tie down point.

		
Lifting point.	On (power).	Off (power).
		
Read the Operation & Maintenance manual before operation or maintenance of this machine is undertaken.	When parking use prop stand, handbrake and wheel chocks.	Compressor oil filling.
		
Diesel fuel No open flame.	Parking brake.	Rough Service Designation. Wet Location Operation.
		
Replace any cracked protective shield.	Separator tank drain.	Engine coolant drain.
		
Engine oil drain.	Compressor coolant drain.	Fual tank drain.
		
Operational status of the engine emission filter.	Engine emissions system temperature may be high.	Disable active regeneration of the engine emission filter.

6 ISO SYMBOLS

		
Start and stop device.	Mandatory action: Hearing protection must be worn.	Lashing point (Tie down).
		
Prohibition: Do not start.	**WARNING - Maintenance work in progress.**	Engine oil.
		
Fuel level/point.	Pressure control.	Malfunction.
		
Battery charging condition.	Low pressure.	High pressure.
		
Engine malfunction.	High compressor temperature.	Compressor malfunction.
		
Low engine oil pressure.	High engine temperature.	Overspeed valve test.

WARNINGS
Warnings call attention to instructions which must be followed precisely to avoid injury or death.

CAUTIONS
Cautions call attention to instructions which must be followed precisely to avoid damaging the product, process or its surroundings.

NOTES
Notes are used for supplementary information.

General Information

Never operate unit without first observing all safety warnings and carefully reading the operation and maintenance manual shipped from the factory with this machine.

Ensure that the operator reads and *understands* the decals and consults the manuals before maintenance or operation.

Ensure that the Operation & Maintenance manual, and the manual holder, are not removed permanently from the machine.

Ensure that maintenance personnel are adequately trained, competent and have read the Maintenance Manuals.

Ensure that ice and snow do not block the cooling air inlets.

Use hearing protectors when unit is running.

Make sure that all protective covers are in place and that the canopy/ doors are closed during operation.

The specification of this machine is such that the machine is not suitable for use in flammable gas risk areas. If such an application is required then all local regulations, codes of practice and site rules must be observed. To ensure that the machine can operate in a safe and reliable manner, additional equipment such as gas detection, exhaust spark arresters, and intake *(shut-off)* valves may be required, dependant on local regulations or the degree of risk involved.

A weekly visual check must be made on all fasteners/fixing screws securing mechanical parts. In particular, safety-related parts such as coupling hitch, drawbar components, road-wheels, and lifting bail should be checked for total security.

All components which are loose, damaged or unserviceable, must be rectified without delay.

Air discharged from this machine may contain carbon monoxide or other contaminants which will cause serious injury or death. Do not breathe this air.

This machine produces loud noise with the doors open or service valve vented. Extended exposure to loud noise can cause hearing loss. Always wear hearing protection when doors are open or service valve is vented.

Never inspect or service unit without first disconnecting battery cable(s) to prevent accidental starting.

Do not use petroleum products (solvents or fuels) under high pressure as this can penetrate the skin and result in serious illness. wear eye protection while cleaning unit with compressed air to prevent debris from injuring eye(s).

Rotating fan blade can cause serious injury. Do not operate without guard in place.

The machine must not be used for transport or storage of explosive, flammable or other dangerous substances.

Use care to avoid contacting hot surfaces (engine exhaust manifold and piping, air receiver and air discharge piping, etc.).

Ether is an extremely volatile, highly inflammable gas. When it is specified as a starting aid, use sparingly. DO NOT USE ETHER IF THE MACHINE HAS GLOW PLUGS OR INLET HEATER STARTING AIDS OR ENGINE DAMAGE WILL RESULT.

Never operate unit with guards, covers or screens removed. Keep hands, hair, clothing, tools, blow gun tips, etc. well away from moving parts.

Compressed air

Compressed air can be dangerous if incorrectly handled. Before doing any work on the unit, ensure that all pressure is vented from the system and that the machine cannot be started accidentally.

Ensure that the machine is operating at the rated pressure and that the rated pressure is known to all relevant personnel.

All air pressure equipment installed in or connected to the machine must have safe working pressure ratings of at least the machine rated pressure.

If more than one compressor is connected to one common downstream plant, effective check valves and isolation valves must be fitted and controlled by work procedures, so that one machine cannot accidentally be pressurised / over pressurised by another.

Compressed air must not be used for a direct feed to any form of breathing apparatus or mask.

High Pressure Air can cause serious injury or death. Relieve pressure before removing filler plugs/caps, fittings or covers.

Air pressure can remain trapped in air supply line which can result in serious injury or death. Always carefully vent air supply line at tool or vent valve before performing any service.

The discharged air contains a very small percentage of compressor lubricating oil and care should be taken to ensure that downstream equipment is compatible.

If the discharged air is to be ultimately released into a confined space, adequate ventilation must be provided.

When using compressed air always use appropriate personal protective equipment.

All pressure containing parts, especially flexible hoses and their couplings, must be regularly inspected, be free from defects and be replaced according to the Manual instructions.

Avoid bodily contact with compressed air.

The safety valve located in the separator tank must be checked periodically for correct operation.

Whenever the machine is stopped, air will flow back into the compressor system from devices or systems downstream of the machine unless the service valve is closed. Install a check valve at the machine service valve to prevent reverse flow in the event of an unexpected shutdown when the service valve is open.

Disconnected air hoses whip and can cause serious injury or death. Always attach a safety flow restrictor to each hose at the source of supply or branch line in accordance with OSHA Regulation 29CFR Section 1926.302(b).

Never allow the unit to sit stopped with pressure in the receiver-separator system.

Materials

The following substances *may* be produced during the operation of this machine:

- brake lining dust
- engine exhaust fumes

AVOID INHALATION

Ensure that adequate ventilation of the cooling system and exhaust gases is maintained at all times.

The following substances are used in the manufacture of this machine and *may* be hazardous to health if used incorrectly:

- anti-freeze
- compressor lubricant
- engine lubricant
- preservative grease
- rust preventative
- diesel fuel
- battery electrolyte

AVOID INGESTION, SKIN CONTACT AND INHALATION OF FUMES.

Should compressor lubricant come into contact with the eyes, then irrigate with water for at least 5 minutes.

Should compressor lubricant come into contact with the skin, then wash off immediately.

Consult a doctor if large amounts of compressor lubricant are ingested.

Consult a doctor if compressor lubricant is inhaled.

Never give fluids or induce vomiting if the patient is unconscious or having convulsions.

Safety data sheets for compressor and engine lubricants should be obtained from the lubricant supplier.

Battery

Batteries contain corrosive liquid and produce explosive gas. Do not expose to naked lights. Always wear personal protective clothing when handling. When starting the machine from a slave battery ensure that the correct polarity is observed and that connections are secure.

A battery contains sulphuric acid and can give off gases which are corrosive and potentially explosive. Avoid contact with skin, eyes and clothing. In case of contact, flush area immediately with water.

DO NOT ATTEMPT TO SLAVE START A FROZEN BATTERY SINCE THIS MAY CAUSE IT TO EXPLODE.

Exercise extreme caution when using booster battery. To jump battery, connect ends of one booster cable to the positive (+) terminal of each battery. Connect one end of other cable to the negative (-) terminal of the booster battery and other end to a ground connection away from dead battery (to avoid a spark occurring near any explosive gases that may be present). After starting unit, always disconnect cables in reverse order.

Radiator

Hot engine coolant and steam can cause injury. Ensure that the radiator filler cap is removed with due care and attention.

Do not remove the pressure cap from a HOT radiator. Allow radiator to cool down before removing pressure cap.

Transport

When loading or transporting machines ensure that the specified lifting and tie down points are used and cables or chains are in safe limits.

When loading or transporting machines ensure that the towing vehicle, its size, weight, towing hitch and electrical supply are all suitable to provide safe and stable towing at speeds either, up to the legal maximum for the country in which it is being towed or, as specified for the machine model if lower than the legal maximum.

Ensure that the maximum trailer weight does not exceed the maximum gross weight of the machine (by limiting the equipment load), limited by the capacity of the running gear.

When using the handbrake lever ensure there is enough space for it to operate safely.

NOTE:
Gross mass (on data plate) is for the basic machine and fuel only, excluding any fitted options, tools, equipment and foreign materials.

Before towing the machine, ensure that:

- the tyres and towing hitch are in a serviceable condition.
- the canopy is secure.
- all ancillary equipment is stored in a safe and secure manner.
- the brakes and lights are functioning correctly and meet necessary road traffic requirements.
- break-away cables/safety chains are connected to the towing vehicle.

The machine must be towed in a level attitude (the maximum permissible drawbar angle is between 0° and +5° from horizontal) in order to maintain correct handling, braking and lighting functions. This can be achieved by correct selection and adjustment of the vehicle towing hitch and, on variable height running gear, adjustment of the drawbar.

The machine must not be towed on public roads if it is fitted with the hose carrier option.

To ensure full braking efficiency, the front (towing eye) section must always be set level.

When adjusting variable height running gear:

- Ensure front (towing eye) section is set level.
- When raising towing eye, set rear joint first, then front joint.
- When lowering towing eye, set front joint first, then rear joint.
- After setting, fully tighten each joint by hand and then tighten further to the next pin. Refit the pin.
- When parking always use the handbrake and, if necessary, suitable wheel chocks.
- Make sure wheels, tyres and tow bar connectors are in safe operating condition and tow bar is properly connected before towing.

Safety chains / connections and adjustment

The legal requirements for the joint operation of the breakaway cable and safety chains are as yet unidentified by 71/320/EEC or UK regulations. Consequently we offer the following advice / instructions.

Where brakes only are fitted:

- Ensure that the breakaway cable is securely coupled to the handbrake lever and also to a substantial point on the towing vehicle.
- Ensure that the effective cable length is as short as possible, whilst still allowing enough slackness for the trailer to articulate without the handbrake being applied.

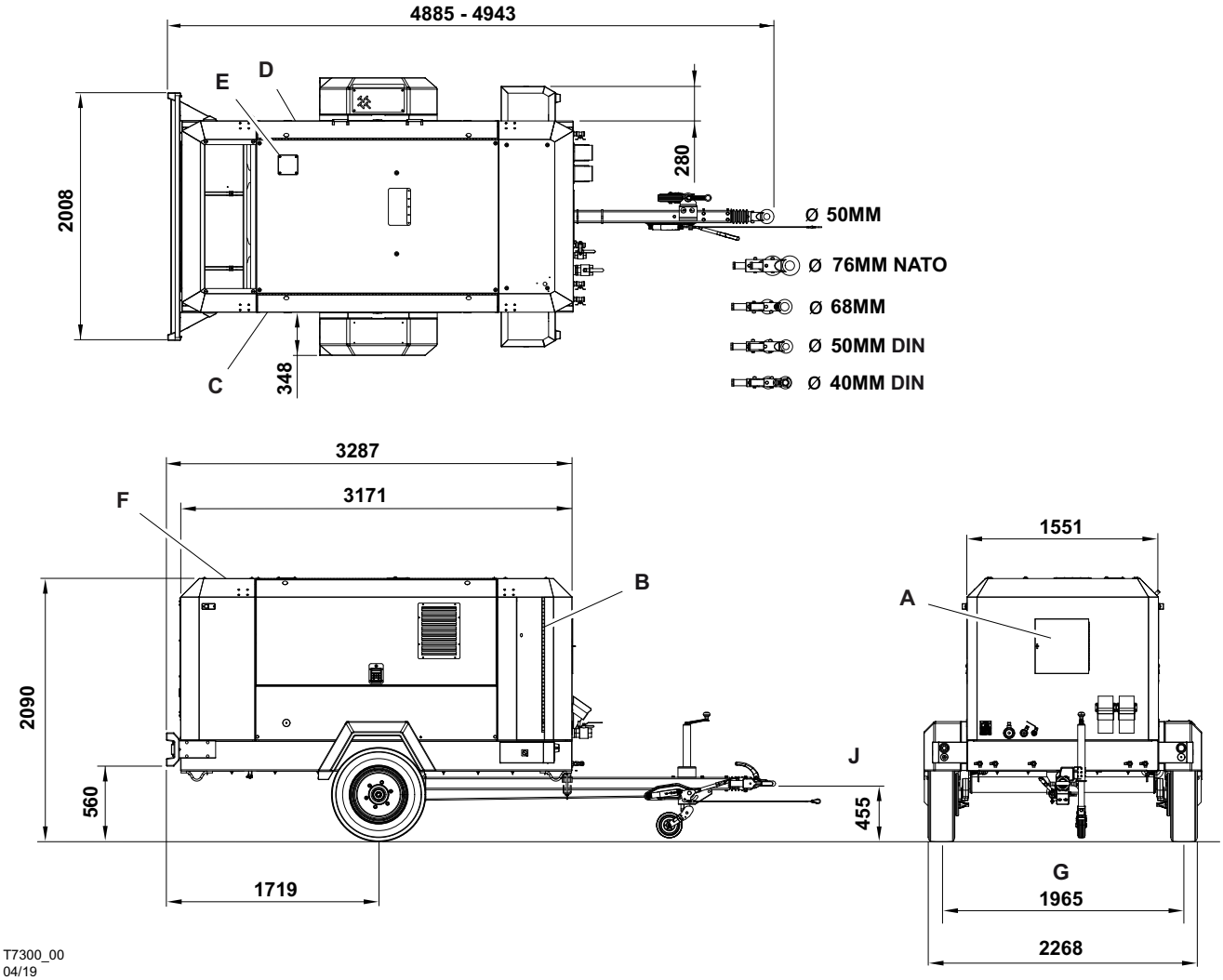
Where brakes and safety chains are fitted:

- Loop the chains onto the towing vehicle using the towing vehicle hitch as an anchorage point, or any other point of similar strength.
- Ensure that the effective chain length is as short as possible whilst still allowing normal articulation of the trailer and effective operation of the breakaway cable.

Where safety chains only are fitted:

- Loop the chains onto the towing vehicle using the towing vehicle hitch as an anchorage point, or any other point of similar strength.
- When adjusting the safety chains there should be sufficient free length in the chains to allow normal articulation, whilst also being short enough to prevent the towbar from touching the ground in the event of an accidental separation of the towing vehicle from the trailer.

Fixed Height Running Gear



A. Instrument panel access door

B. Package air inlet

C. Access items:
Separator element & fill
Compressor oil filter
Fuel filters
Dipstick
Engine oil fill

D. Access items:
Fuel fill
Engine oil filter
Fuel filter
Engine and compressor air filter

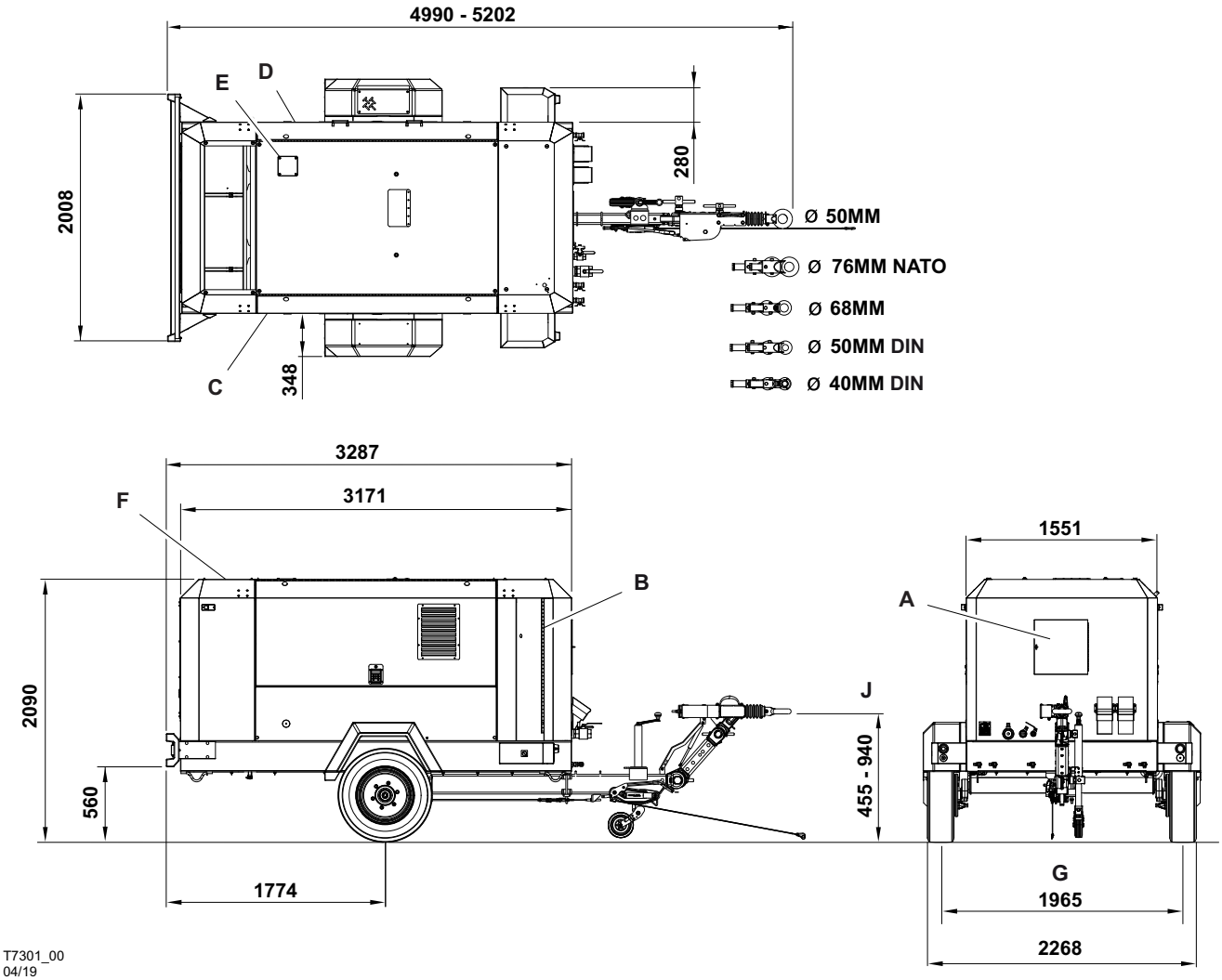
E. Access items:
Coolant fill

F. Package air outlet

G. Track width

J. Fixed height drawbar

Variable Height Running Gear



A. Instrument panel access door

B. Package air inlet

C. Access items:
Separator element & fill
Compressor oil filter
Fuel filters
Dipstick
Engine oil fill

D. Access items:
Fuel fill
Engine oil filter
Fuel filter
Engine and compressor air filter

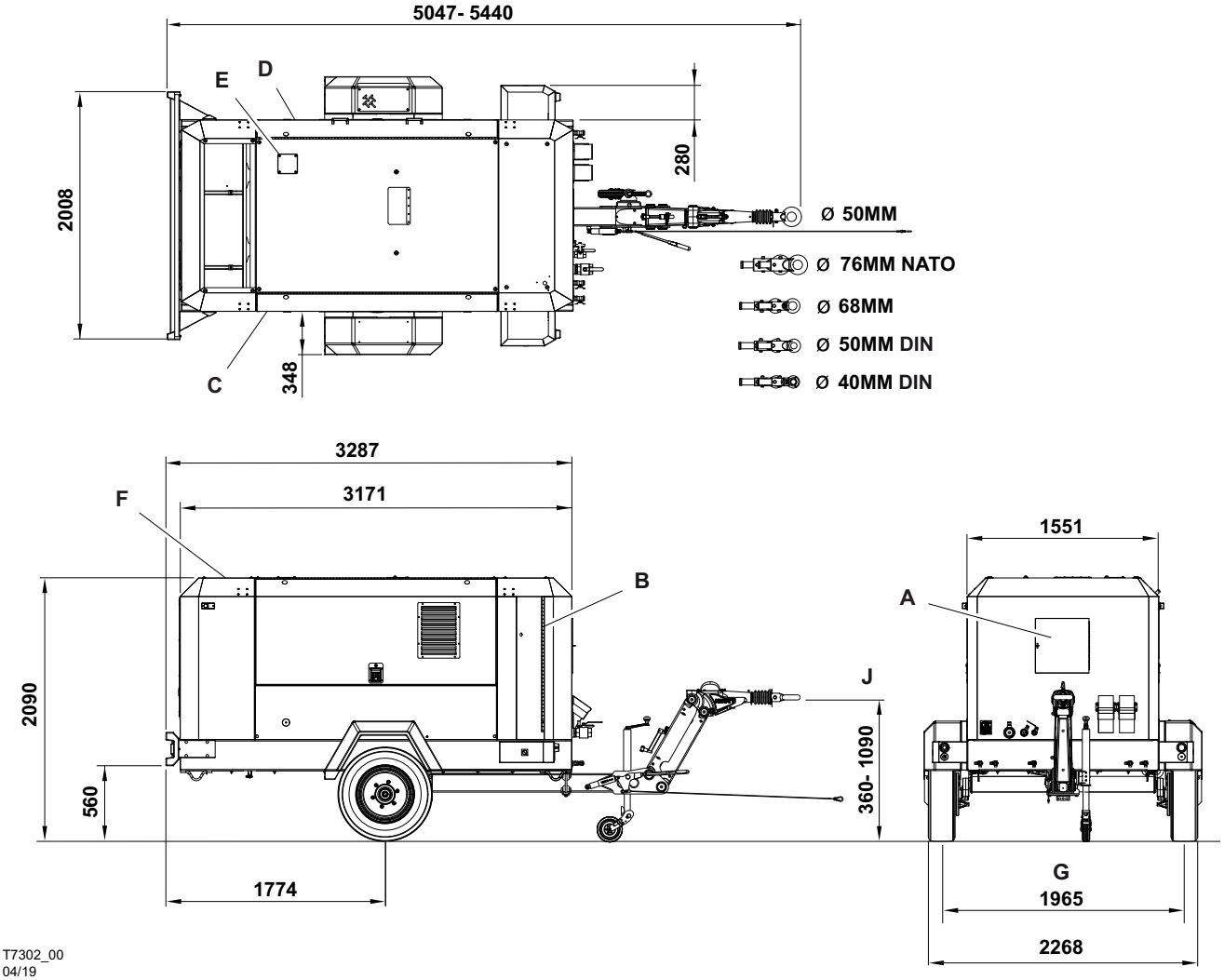
E. Access items:
Coolant fill

F. Package air outlet

G. Track width

J. Variable height drawbar
438mm minimum / 968mm maximum

KHD Variable Height Running Gear



A. Instrument panel access door

B. Package air inlet

C. Access items:
Separator element & fill
Compressor oil filter
Fuel filters
Dipstick
Engine oil fill

D. Access items:
Fuel fill
Engine oil filter
Fuel filter
Engine and compressor air filter

E. Access items:
Coolant fill

F. Package air outlet

G. Track width

J. Variable height drawbar
320mm minimum / 1090mm maximum

FIXED HEIGHT RUNNING GEAR
Braked version

Mass in running order.	3117kg (6872Lbs)
Maximum mass.	3500kg (7716Lbs)
Maximum horizontal towing force.	3100kg (6834Lbs)
Maximum vertical coupling load (nose weight).	150 kgf (331Lbs)

VARIABLE HEIGHT RUNNING GEAR
Braked version

Mass in running order.	3184kg (7019Lbs)
Maximum mass.	3500kg (7716Lbs)
Maximum horizontal towing force.	3100kg (6834Lbs)
Maximum vertical coupling load (nose weight).	150 kgf (331Lbs)

KHD VARIABLE HEIGHT RUNNING GEAR
Braked version

Mass in running order.	3187kg (7026Lbs)
Maximum mass.	3500kg (7716Lbs)
Maximum horizontal towing force.	3100kg (6835Lbs)
Maximum vertical coupling load (nose weight).	150 kgf (331Lbs)

- Mass in running order means the mass of the vehicle including the fuel and liquids, fitted with the standard equipment.
- Actual mass with optional equipment may be different.

WHEELS AND TYRES

Number of wheels.	2
Tyre size.	215/75 R17,5
Tyre pressure.	6,0 bar (87 psi)

Further information may be obtained by request through the customer services department.

MAINTENANCE

	Initial 500 miles /850 km	Daily	Weekly	Monthly	3 Months 500 hrs	6 Months 1000 hrs	12 Months 2000 hrs
Brake linkage	C				C		
Brakes	C				C		
Lights (running, brake, & turn)		CBT					
Pintle Eye Bolts		CBT					
Tire Pressure and Condition			C				
Wheel Lug Nuts				C			
Running gear linkage				G/C			
Running gear bolts (*)					C		
Wheels (Bearings, Seals, etc.)						C	G/C

(*) or 3000 miles/5000km whichever is the sooner.

C = Check and act if required.

T = Test.

D = Drain.

R = Replace.

R/WI = Replace or when indicated earlier.

CBT = Check before towing

C/R = Check and replace if required.

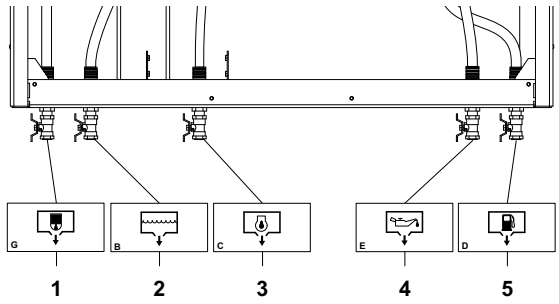
G/C = Grease and check.

C/A = Check and adjust if required.

NOTE: 500 and 1000 hour intervals are meant to be repeated at every 500 or 1000 hours. Other intervals only to be performed at hours indicated.

Contact your Doosan Portable Power dealer for more information or assistance in determining the optimum intervals for your application.

DRAIN LOCATIONS



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1. Separator tank drain.
2. Engine coolant drain.
3. Engine oil drain.
4. Compressor oil cooler drain.
5. Fuel tank drain.

Ensure the compressor is stopped and all pressure is relieved before draining fluids. Check and close all drain valves, remove the plug from the drain outlet using the tool provided. Place the empty container underneath the drain outlet and open the valve. Do not leave unattended as some fluids will drain very rapidly and could spill.

WARNING: Use caution when draining fluids as these can be hot and could cause injury.

ROUTINE MAINTENANCE

This section refers to the various components which require periodic maintenance and replacement.

The *SERVICE/MAINTENANCE CHART* indicates the various components' descriptions and the intervals when maintenance is recommended. Oil capacities, etc., can be found in the *GENERAL INFORMATION* section of this manual.

For any specification or specific requirement on service or preventative maintenance for the engine, refer to the *Engine Manufacturer's Manual*.

Compressed air can be dangerous if incorrectly handled. Before doing any work on the unit, ensure that all pressure is vented from the system and that the machine cannot be started accidentally.

If the automatic blowdown fails to operate, then pressure must be gradually relieved by operating the manual blowdown valve. Suitable personal protective equipment should be worn.

Ensure that maintenance personnel are adequately trained, competent and have read the Maintenance Manuals.

Prior to attempting any maintenance work, ensure that:-

- all air pressure is fully discharged and isolated from the system. If the automatic blowdown valve is used for this purpose, then allow enough time for it to complete the operation.

NOTE: Pressure will always remain in the part of the system between the minimum pressure valve and the discharge valve after operation of the auto blowdown valve.

WARNING:
THIS PRESSURE MUST BE RELIEVED BY CAREFULLY:
(a) DISCONNECTING ANY DOWNSTREAM EQUIPMENT.
(b) OPENING THE DISCHARGE VALVE TO ATMOSPHERE.
(USE HEARING PROTECTION IF NECESSARY).

- the machine cannot be started accidentally or otherwise, by posting warning signs and/or fitting appropriate anti-start devices.
- all residual electrical power sources (mains and battery) are isolated.

Prior to opening or removing panels or covers to work inside a machine, ensure that:-

- anyone entering the machine is aware of the reduced level of protection and the additional hazards, including hot surfaces and intermittently moving parts.
- the machine cannot be started accidentally or otherwise, by posting warning signs and/or fitting appropriate anti-start devices.

Prior to attempting any maintenance work on a running machine, ensure that:-

- the work carried out is limited to only those tasks which require the machine to run.
- the work carried out with safety protection devices disabled or removed is limited to only those tasks which require the machine to be running with safety protection devices disabled or removed.
- all hazards present are known (e.g. pressurised components, electrically live components, removed panels, covers and guards, extreme temperatures, inflow and outflow of air, intermittently moving parts, safety valve discharge etc.).
- appropriate personal protective equipment is worn.
- loose clothing, jewellery, long hair etc. is made safe.
- warning signs indicating that Maintenance Work is in Progress are posted in a position that can be clearly seen.

Upon completion of maintenance tasks and prior to returning the machine into service, ensure that:-

- the machine is suitably tested.
- all guards and safety protection devices are refitted.
- all panels are replaced, canopy and doors closed.
- hazardous materials are effectively contained and disposed of.

PROTECTIVE SHUTDOWN SYSTEM

Refer to the Beede gauge diagnostic display codes table for a listing of shutdown conditions.

SCTYRES/TYRE PRESSURE

Tyre Pressure: 600kPa.

RUNNING GEAR/WHEELS

Check the wheel nut torque 20 miles (30 kilometres) after refitting the wheels. Refer to the *TORQUE SETTING TABLE* later in this section.

Lifting jacks should only be used under the axle.

The bolts securing the running gear to the chassis should be checked periodically for tightness (refer to the *SERVICE/MAINTENANCE CHART* for frequency) and re-tightened where necessary. Refer to the *TORQUE SETTING TABLE* later in this section.

BRAKES

Check and adjust the brake linkage at 500 miles (850km) then every 3000 miles (5000km) or 3 months (whichever is the sooner) to compensate for any stretch of the adjustable cables. Check and adjust the wheel brakes to compensate for wear.

When using the handbrake lever ensure there is enough space for it to operate safely.

CAUTION: *Check the wheel nut torque 20 miles (30 kilometres) after refitting the wheels (Refer to the TORQUE SETTING TABLE later in this section).*

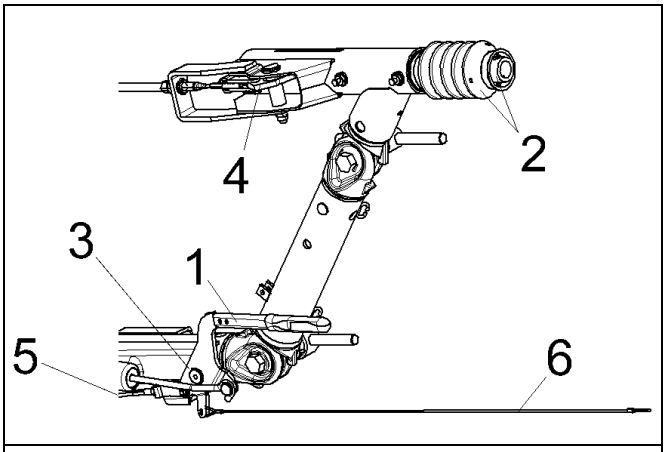
ADJUSTING THE OVERRUN BRAKING SYSTEM (KNOTT RUNNING GEAR)

1. Preparation

Jack up the machine

Disengage the handbrake lever [1].

Fully extend the draw bar [2] on the overrun braking system.



1. Handbrake lever
2. Draw bar and bellows
3. Handbrake lever pivot
4. Transmission lever
5. Brake cable
6. Breakaway Cable

Requirements:

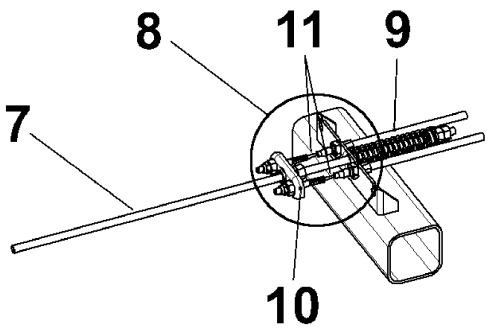
During the adjustment procedure always start with the wheel brakes.

Always rotate the wheel in the direction of forward movement.

Ensure that an M10 safety screw is fitted to the handbrake pivot.

The brake actuators must not be pre-tensioned - if necessary loosen the brake linkage [7] on the brake equalisation assembly [8].

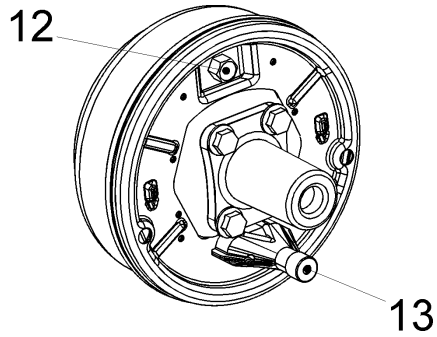
Check that brake actuators and cables [11] operate smoothly.



7. Brake linkage
8. Equalisation assembly
9. Compression spring
10. Equaliser plate
11. Cable

CAUTION: *The compression spring [9] must only be lightly pre-tensioned and when operating must never touch the axle tube.*
Never adjust the brakes at the brake linkage [7].

2. Brake Shoe Adjustment



12. Adjusting screw
13. Cable entry

Width across flats of adjusting screw [12]

Brake size	**Key width**
160x35 / 200x50	SW 17
250x40	SW 19
300x60	SW 22

Tighten adjusting screw [12] clockwise until the wheel locks.

Loosen adjusting screw [12] anti-clockwise (approx. ½ turn) until the wheel can be moved freely.

Slight dragging noises that do not impede the free movement of the wheel are permissible.

This adjustment procedure must be carried out as described on both wheel brakes.

When the brake has been adjusted accurately the actuating distance is approximately 5-8mm on the cable [11].

3. Compensator assembly adjustment

Variable Height models

Fit an M10 safety screw to the handbrake pivot.

Disconnect the handbrake cable [5] at one end.

Pre-adjust brake linkage [7] lengthways (a little play is permissible) and re-insert the cable [5], adjusting it to give a small amount of play.

Remove the M10 safety screw from the handbrake pivot.

All Models

Engage the handbrake lever [1] and check that the position of the equaliser plate [10] is at right angles to the pulling direction. If necessary correct the position of the equaliser plate [10] on the cables [11].

The compression spring [9] must only be slightly pre-tensioned and when engaged must not touch the axle tube.

4. Brake linkage adjustment

Adjust the brake linkage [7] lengthways without pre-tension and without play in the transmission lever [4].

Readjustment

Engage the handbrake lever [1] forcefully a number of times to set the brake.

Check the alignment of the equalisation assembly [8], this should be at right angles to the pulling direction.

Check the play in the brake linkage [7].

If necessary adjust the brake linkage [7] again without play and without pre-tensioning.

There must still be a little play in cable [5] (Variable Height Only).

Check the position of the hand brake lever [1]. The start of resistance should be approximately 10-15mm above the horizontal position.

Check that the wheels move freely when the handbrake is disengaged.

Final test

Check the fastenings on the transmission system (cables, brake equalisation system and linkage).

Check the handbrake cable [5] for a small amount of play and adjust if necessary (Variable height only).

Check the compression spring [9] for pre-tensioning.

Test run

If necessary carry out 2-3 test brake actions.

Test brake action

Check the play in brake linkage [7] and if necessary adjust the length of brake linkage [7] until there is no play.

Apply the handbrake while rolling the machine forward, travel of the handbrake lever up to $^2/_3$ of maximum is allowed.

RE-ADJUSTING THE OVERRUN BRAKING SYSTEM (KNOTT RUNNING GEAR)

Re-adjustment of the wheel brakes will compensate for brake lining wear. Follow the procedure described in *2: Brake Shoe Adjustment.*

Check the play in the brake linkage [7] and re-adjust if necessary.

Important

Check the brake actuators and cables [11]. The brake actuators must not be pre-tensioned.

Excessive operation of the handbrake lever, which may have been caused by worn brake linings, must not be corrected by re-adjusting (shortening) the brake linkage [7].

Re-adjustment

The handbrake lever [1] should be engaged forcefully several times to set the braking system.

Check the setting of the brake equalisation assembly [8], which should be at right angles to the pulling direction.

Check the play in the brake linkage [7] again, ensuring that there is no play in the brake linkage and that it is adjusted without pre-tension

Check the position of the hand brake lever [1], cable [5] (with little play) and the compression spring [9] (only slight pre-tension). The start of resistance of the handbrake lever should be approximately 10-15mm above the horizontal position.

Final test

Check the fastenings on the transmission system (cables, brake equalisation system and linkage)

Apply the handbrake while rolling the machine forward, travel of the handbrake lever up to $^2/_3$ of maximum is allowed.

Check the handbrake cable [5] for a small amount of play and adjust if necessary (Variable height only).

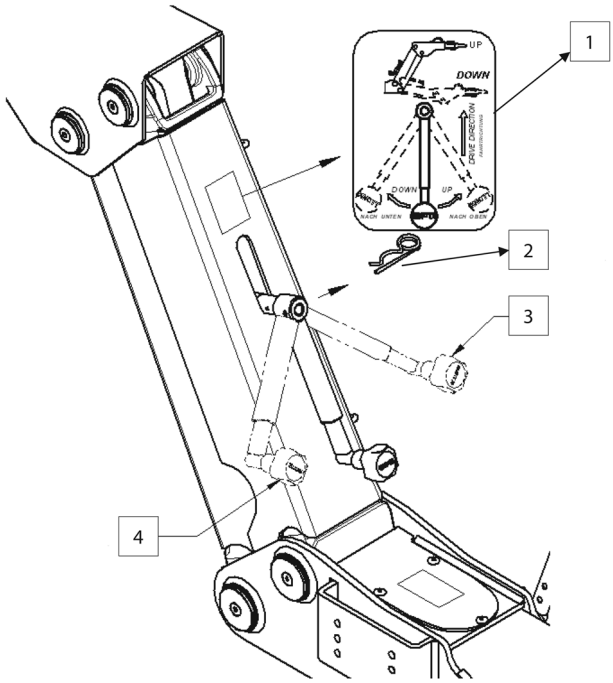
Check the compression spring [9] for slight pre-tensioning.

RUNNING GEAR HEIGHT ADJUSTMENT (KNOTT KHD)

Operating the height adjusting mechanism

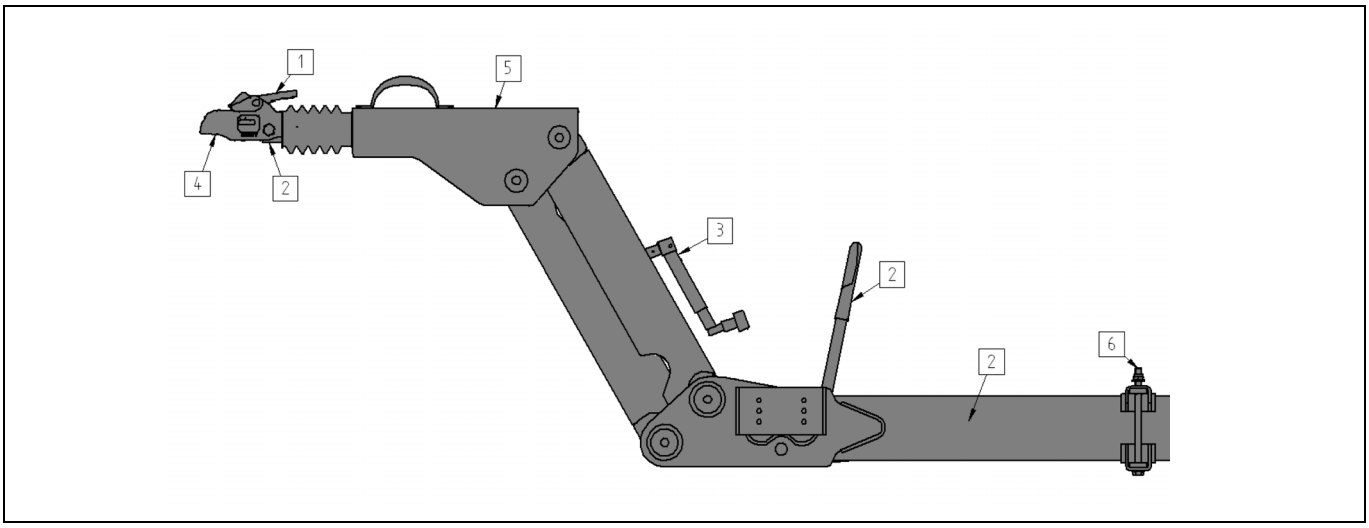
To adjust the coupling to the proper height, the lock spring must first be removed. Turning the handle clockwise will move the coupling down, turning it counter-clockwise will move the coupling up. The direction of adjustment is visible on the warning label. After reaching the desired position, the coupling must be secured with the lock spring again.

WARNING:
During height adjustment, the drawbar may NOT be connected to the towing vehicle!
After connecting the coupling to the towing vehicle, turning the handle **IS FORBIDDEN!**
Lifting of the trailer by turning the handle **IS STRICTLY FORBIDDEN!**



1. Warning label
2. Lock spring
3. Upward adjustment
4. Downward adjustment

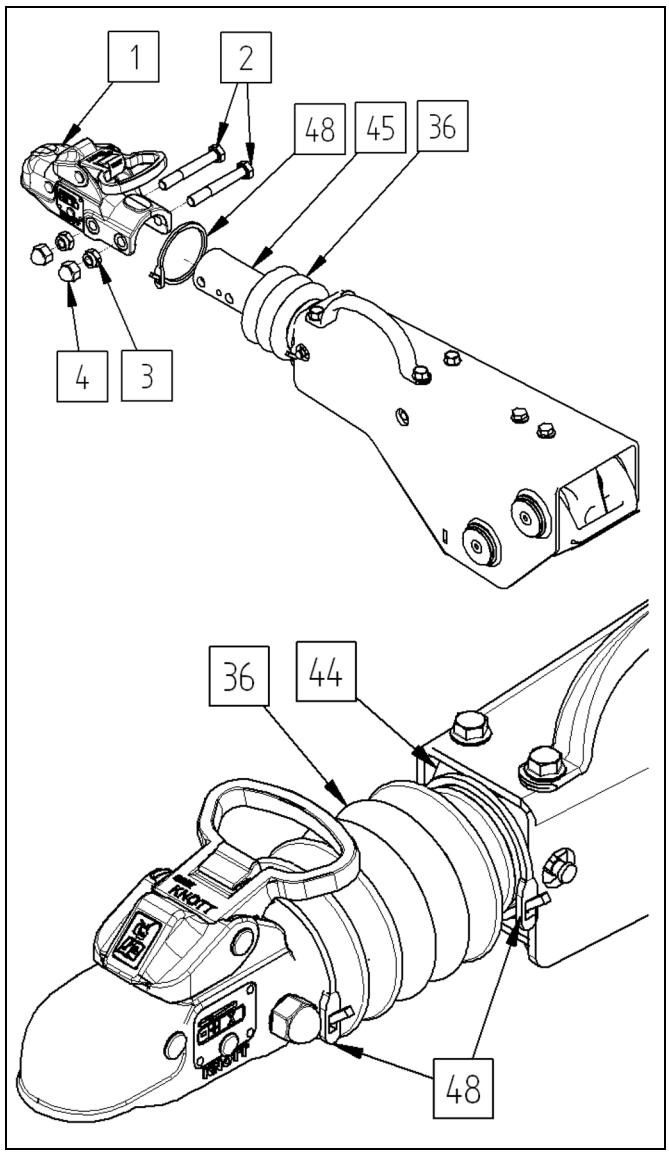
Maintenance: Lubrication and servicing



	Service interval Lubricate in accordance with regulation SK70003	Before the first journey	After the first loaded journey	After 500 km	Every 2000-3000 km
1	Function check of the coupling head or the towing eye	•			•
2	Mobility check of the drawtube, handbrake lever and rods	•		•	•
3	Mobility and ease of operation check of the height adjusting mechanism	•			•
4	Coupling head lubrication	•			•
5	Drawtube support lubrication – at the housing of the overrun coupling				•
6	Clamping jig bolts tightening		•		

Replacement of the coupling head or the towing eye

To be carried out ONLY by skilled service personnel.



Disassembly

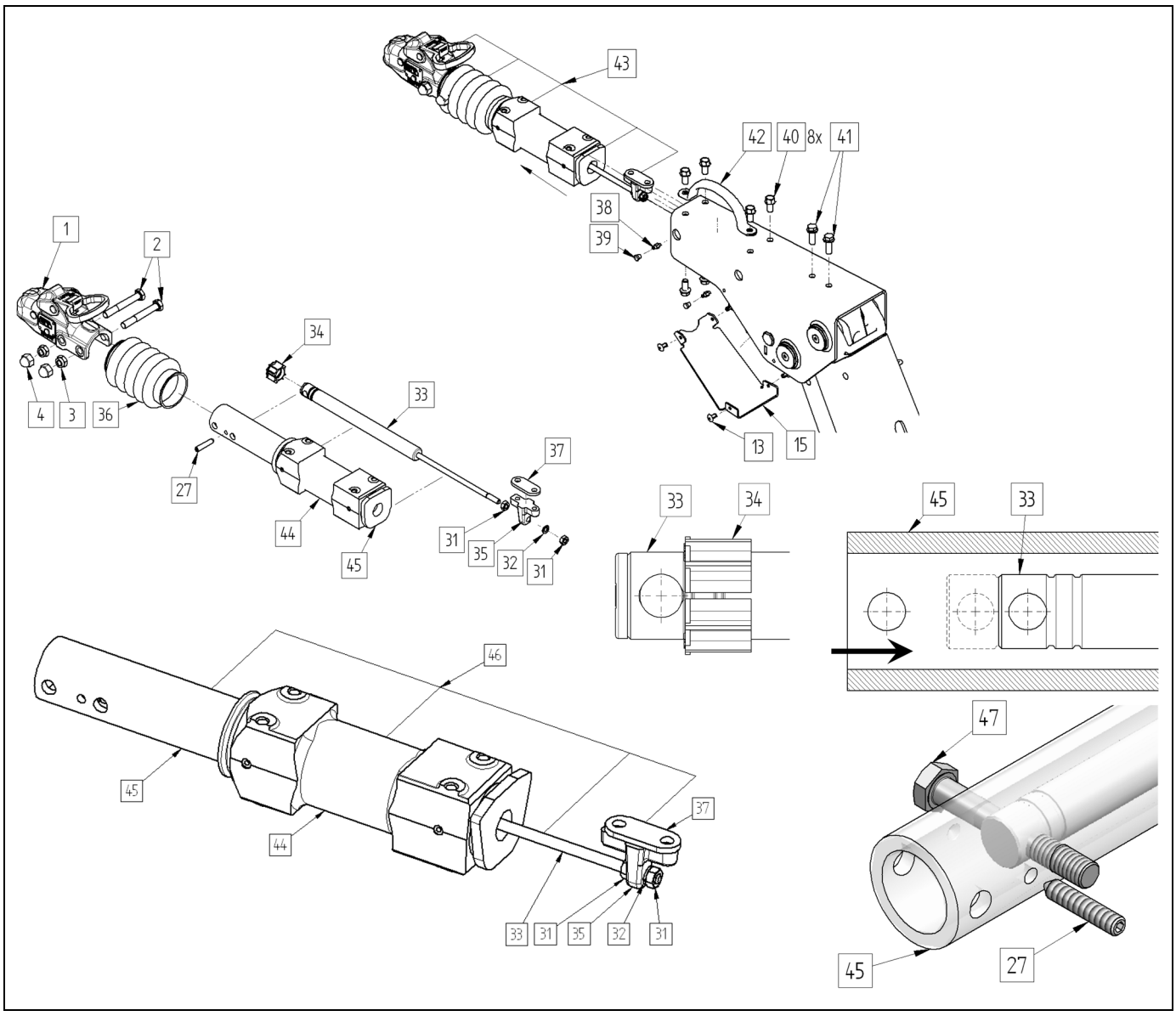
To remove the coupling (1), the cable tie (48) must be removed. Withdraw the bellows (36) from the coupling head (1) and remove the protection caps (4). Unscrew the fixing nuts (3) and remove the bolts (2). The coupling head (1) may now be removed. If the bellows (36) is damaged, it must be replaced.

Assembly

Before mounting, all the new and removed parts have to be lubricated in accordance with **regulation SK70003**. Attach the shaft of the coupling head (1) onto the drawtube (45) and adjust until the holes overlap. Insert both bolts (2). Screw on new fixing nuts (3) and fasten them with a torque wrench (Bolt M12 to 77 ± 5Nm, Bolt M14 to 125 ± 5Nm). Replace the protection caps (4). Slide the bellows (36) onto the coupling head (1). The rear bolt (2) must be covered by the bellows (36). Secure the bellows (36) with a new cable tie (48).

Replacement of the shock absorber

To be carried out ONLY by skilled service personnel.



Disassembly

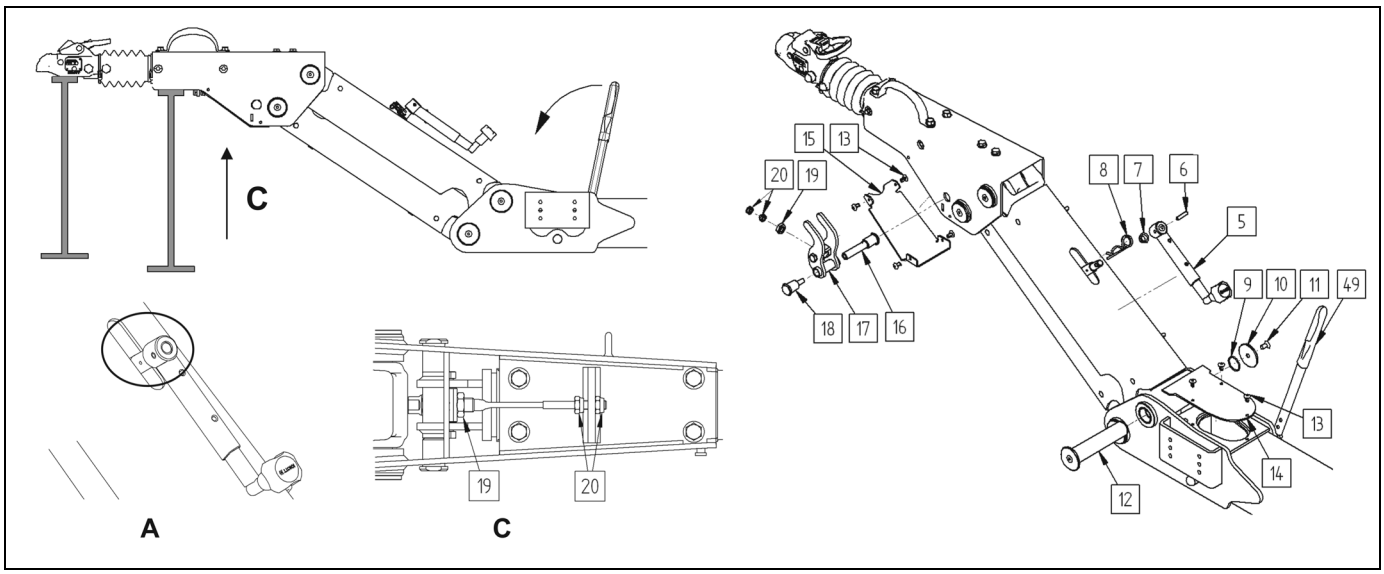
Drill out the blind rivets (13), remove the shield (15), grease the nipple caps (39) and the nipples (38) themselves. Unscrew all the bolts (41) and also all bolts (40) and then pull out the assembly (43). remover the coupling head (1), the bellows (36) and the pin (27) from the drawtube (45). Unscrew the hexagonal nut (31) from the shock absorber (33) and pull out the shock absorber (33) to the front. Dismount the centralizer tube (34) (if present) from the shock absorber (33) and replace the shock absorber (33).

Assembly

Before mounting, all the new and removed parts must be lubricated in accordance with regulation SK70003. Mount the centralizer tube (34) (if present) onto the shock absorber (33). Push the shock absorber (33) into the drawtube (45) from the front and bolt together with the shock absorber bracket (35). Fasten the hexagonal nut (31) with a tightening moment of 30±5Nm. Push the unit (46) from the front into the housing, place the disc (37) (if present) between the housing and the shock absorber bracket (35) and fasten with lock bolts (40), (41). At the same time mount the hand grip (42). Fasten the lock bolts with a tightening moment of 80+5Nm. Using a screw clamp, the shock absorber (33) has to be pressed together so far that the position of the hole in the shock absorber (33) coincides with the position of the rear hole in the drawtube (45). Secure in position using the bolt (47) and screw in (plug in) the pin (27) through the drawtube (45). Mount the bellows (36) and the coupling head (1) on the drawtube (45). Secure the bellows (36) on the coupling head (1) and the guide bearing (44) using cable ties (48). Replace the grease nipples (38), nipple caps (39) and the shield (15) for the overrun head.

Replacement of the cable

To be carried out ONLY by skilled service personnel.



Disassembly

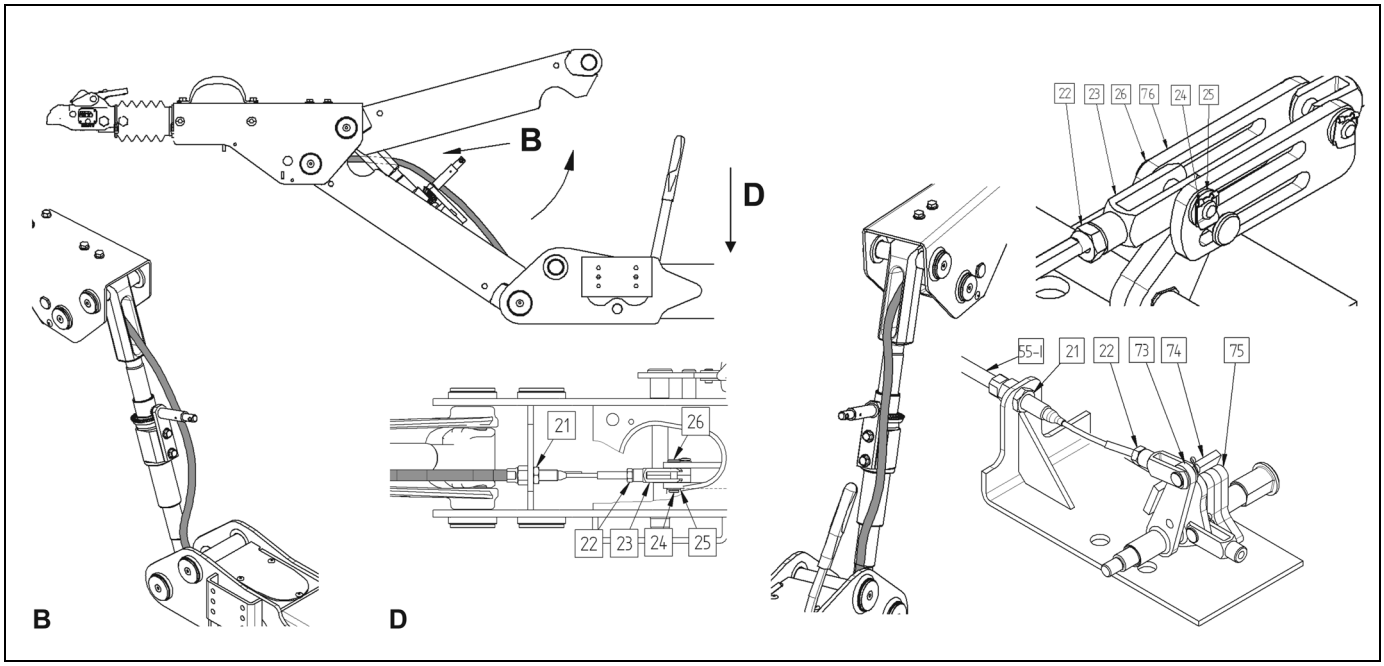
Remove the lock spring (8). Turn the handle (5) until halfway up the slot (See View A). Move the handbrake lever (49) to the front. Drill out the blind rivets (13) and shields (15) and (14). Unscrew the nut (20) from the cable (See View C), then pull the cable from the cable bracket. remove the hexagonal nut (19) and pins (16) and (18). Pull the cable out of the transmission lever (17). Knock out the pin (6) using a hammer and remove the winding handle (5). Pull out the adaptor (7). Unscrew the bolt (11) and remove the disc (10) with the seal ring (9).

Secure the overrun head against falling off – injury risk!!! Knock out the pin (12) with a hammer and bronze bar. Lift off the top middle part and **secure it against falling off – injury risk!!!**

Remove the SL-clip (24) and the disc (25) and pull out the pin (26). Unscrew the clevis (23) and hexagonal nuts (22) and (21). Pull out the cable and replace it.

Assembly

Before mounting, all the new and removed parts must be lubricated in accordance with regulation SK70003. Push the new cable through the cable bracket into the drawbar, screw in the hexagonal nut (21) and fasten it with a tightening moment of 30 ± 2Nm.

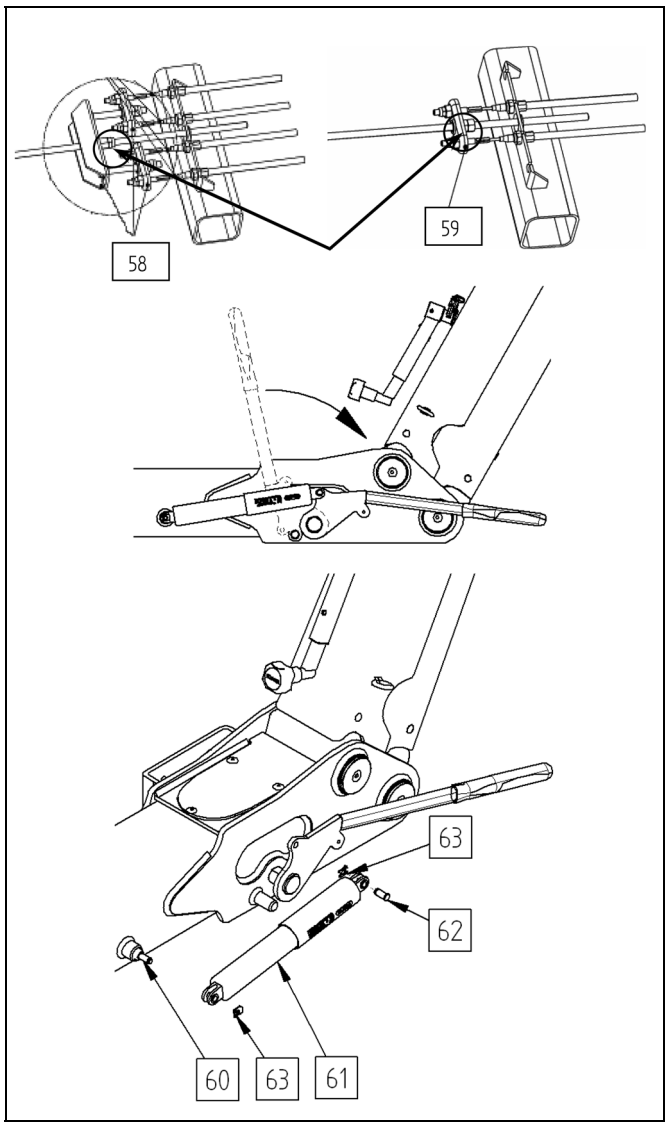


Screw the hexagonal nut (22) and the clevis (23) onto the cable and adjust it **in accordance with regulation SK70008**. Put the pin (26) through the balance lever (76) and the clevis (23) and lock it with the disc (25) and the SL-clip (24). Insert the cable into the slot in the spindle top part (See View B) and mount it with the transmission lever (17). Mount the transmission lever (17) into the overrun head and secure it with pins (16) and (18). Spread the pin (18) with liquid high strength thread locker and fasten it with a tightening moment of 30 ± 2Nm.

Screw in the hexagonal nuts (19) and (20) and adjust them **in accordance with regulation SK70008**. Mount on the top middle part. Using gentle hammer impacts, put the pin (12) through the drawbar and the top middle part. Secure the pin (12) with the seal ring (9), disc (10) and the bolt (11). Spread the bolt (11) with liquid high strength thread locker and fasten it with a tightening moment of 20 ± 2Nm. Set the handbrake lever into its non-braking position and check the adjustment of the KHD braking system **in accordance with regulation SK70008** once more. Do additional adjustments if necessary. Put on shields (15) and (14) and secure them with blind rivets (13). Plug in the adaptor (7) and the winding handle (5). Secure the winding handle (5) with the pin (6). Put the coupling unit into the highest position and adjust the whole braking system (KHD + axles).

Replacement of the coupling head or the spring pack

To be carried out ONLY by skilled service personnel.



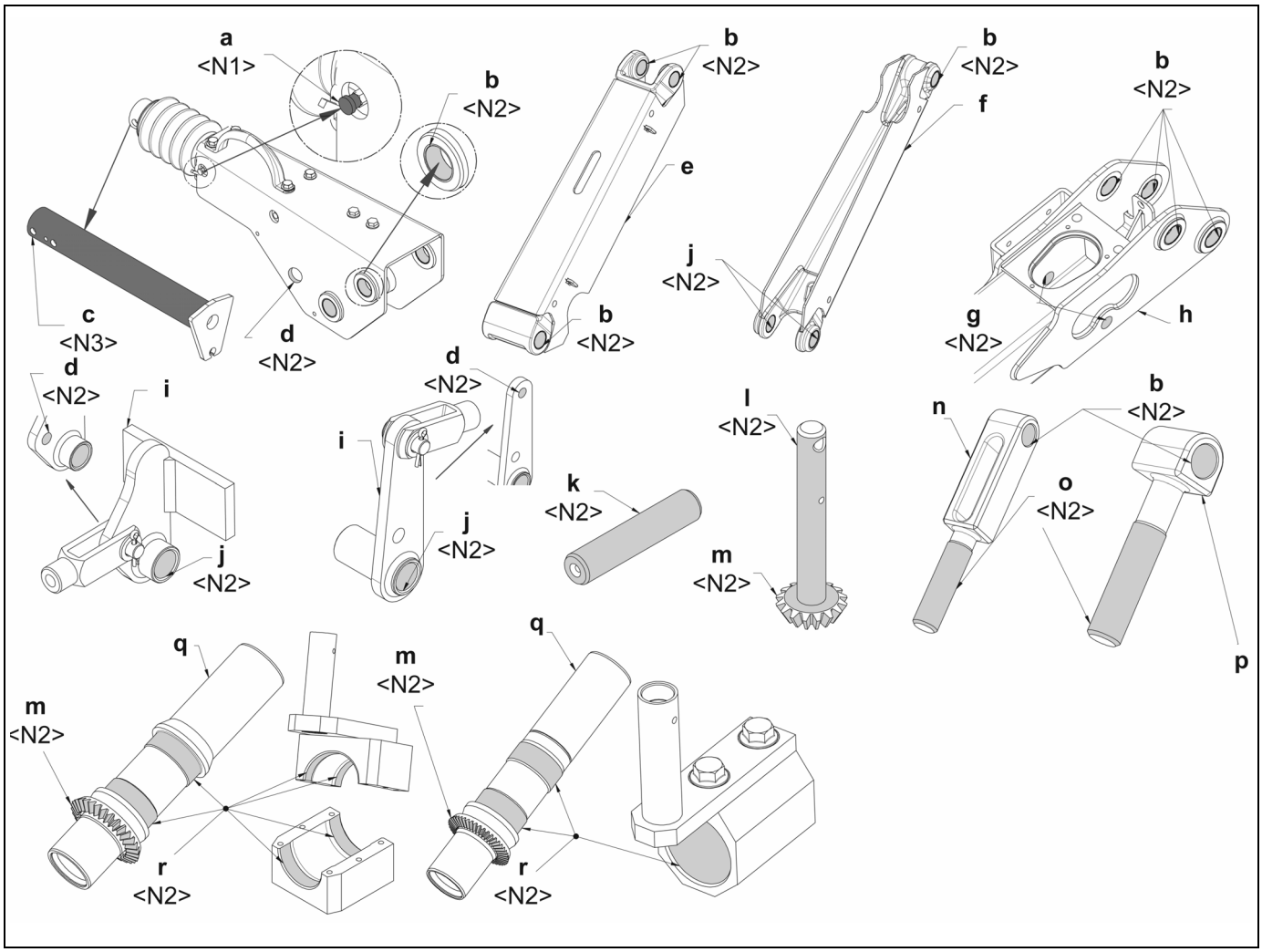
Disassembly

Loosen the balance bar (58, tandem) or (59, single axle) so that the handbrake lever can be moved down. Undo the SL-clips (63) and pull out the pin (62). Replace the damaged spring pack.

Assembly

Mount the new spring pack onto the spring pack bracket (60) and secure it with the SL-clip (63). Mount the spring pack (61) with the handbrake lever, insert the pin (62) and secure with the SL-clip (63). Set up the whole braking system according to general KNOTT regulation.

Lubrication points



	Part to be lubricated
a	Grease nipple
b	Bush
c	Piston rod
d	Hole
e	Top middle part
f	Bottom middle part
g	Holes for handbrake
h	Drawbar coupling
i	Conversion lever coupling
j	Tube
k	Pin
l	Adjustment bolt, welded
m	Gearing
n	Top spindle
o	Thread
p	Bottom spindle
q	Adjustment nut, welded
r	Area
s	Pin of handbrake
t	Seal ring
u	Contact area
v	Screw
w	Guiding slot

Lubricants

<N1> Lubricate with 5g SPHEEROL EPL2 lubricant or equivalent NLGI 2 Grade lubricant.

<N2> Using a brush, cloth or plastic sponge, apply a thin, even layer of OPTIMOL OLISTAMOLY 2 lubricant or equivalent MoS2 based high performance grease.

<N3> Using a brush, apply a thin, even layer of SPHEEROL EPL2 or equivalent NLGI 2 Grade lubricant.

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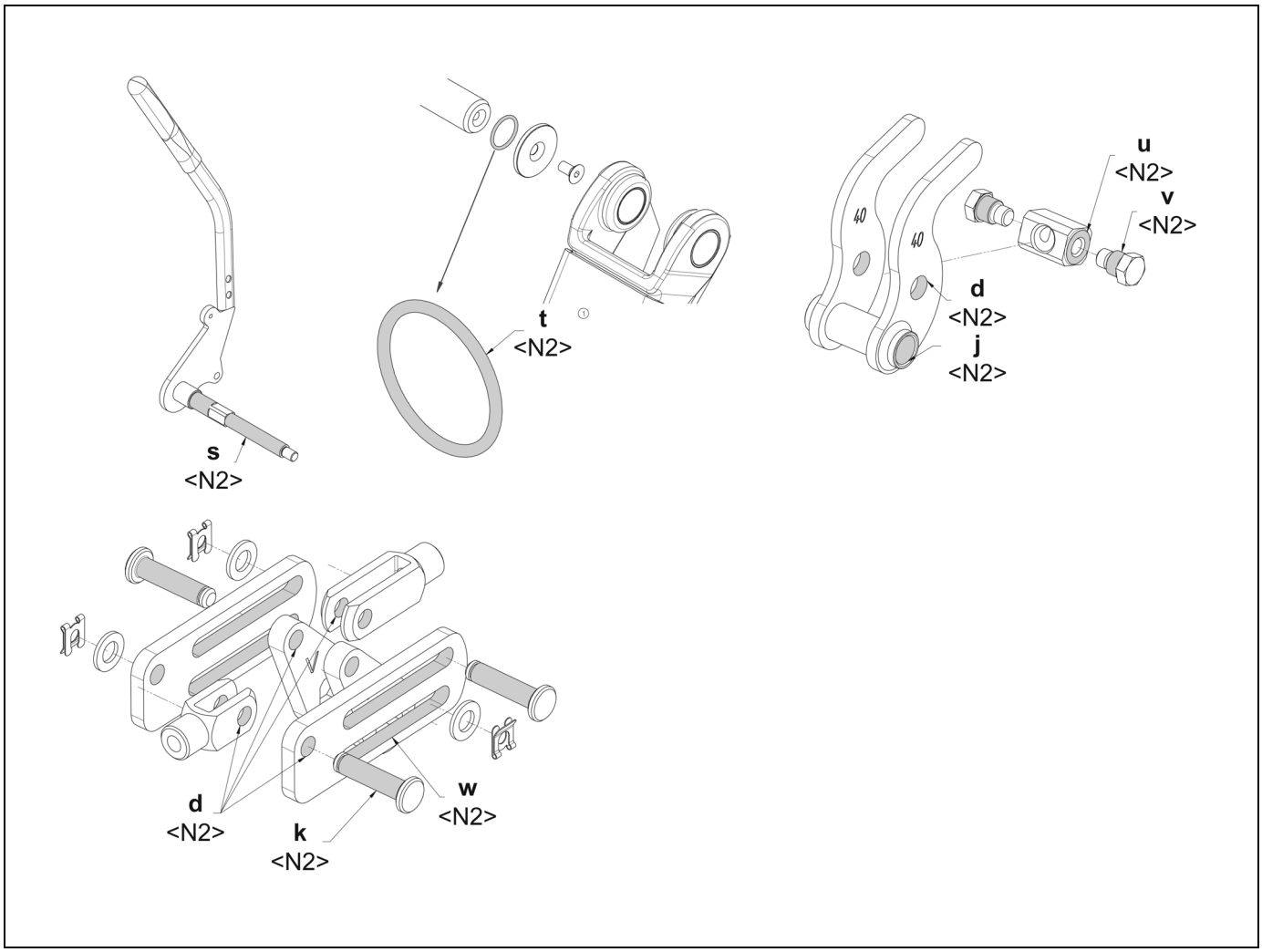
Lubrication points (continued)



	Part to be lubricated
a	Grease nipple
b	Bush
c	Piston rod
d	Hole
e	Top middle part
f	Bottom middle part
g	Holes for handbrake
h	Drawbar coupling
i	Conversion lever coupling
j	Tube
k	Pin
l	Adjustment bolt, welded
m	Gearing
n	Top spindle
o	Thread
p	Bottom spindle
q	Adjustment nut, welded
r	Area
s	Pin of handbrake
t	Seal ring
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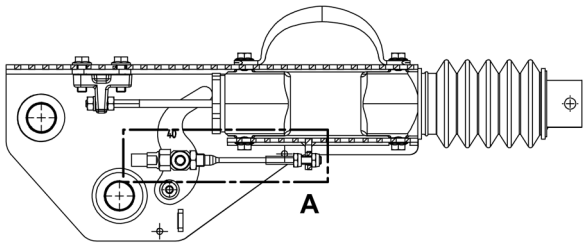
<N3> Using a brush, apply a thin, even layer of SPHEEROL EPL2 or equivalent NLGI 2 Grade lubricant.

Brake cable adjustment for KHD drawbar – SK70008

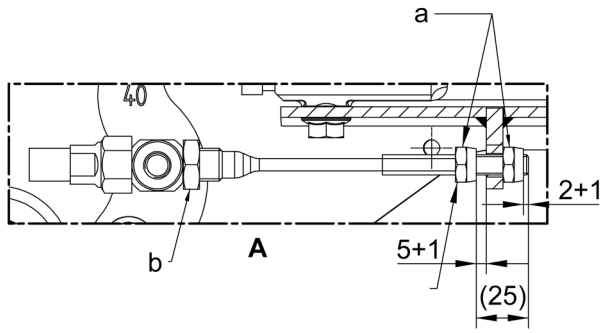
Instructions

1. Adjust drawbar in top position (60°).



Coupling cross-section showing position of detail 'A'

2. Adjust the brake system according to detail 'A'.

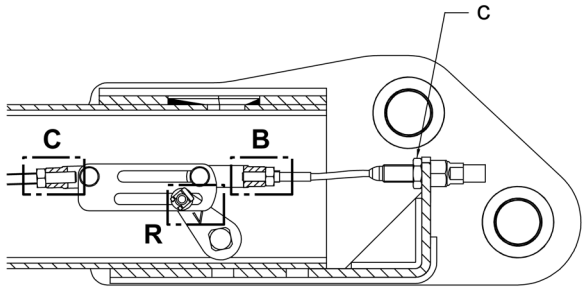


Detail 'A'

a. Fixing nut M10-8 DIN980
ATTENTION: Do NOT lock fixing nuts M10-8 DIN980!

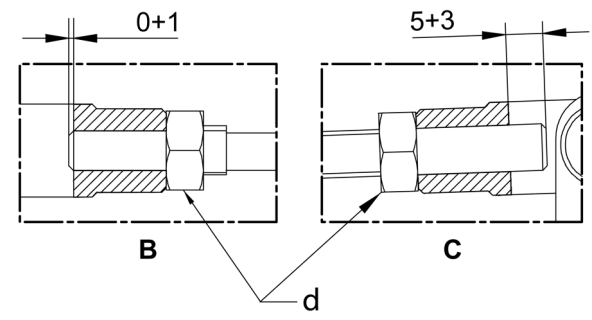
b. Hexagonal head nut M16x1,5 DIN936
Torque 30Nm ± 2Nm

3. Adjust the brake system according to details 'B' and 'C'.



Cross-section showing positions of details 'B', 'C' and 'R'

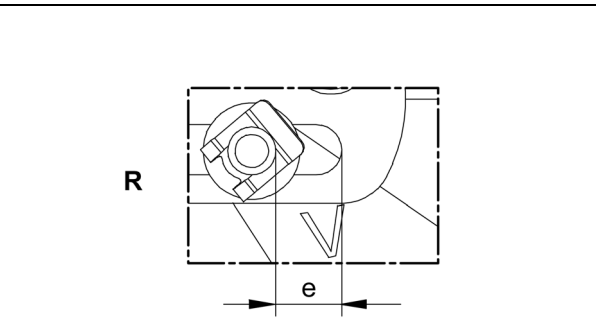
c. Hexagonal head nut M16x1,5 DIN936
Torque 30Nm ± 2Nm



Details 'B' and 'C'

d. Fixing nut M10-8 DIN980
ATTENTION: Do NOT lock fixing nuts M10-8 DIN980!

4. Check the gap in detail 'R'.

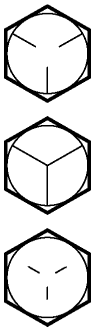
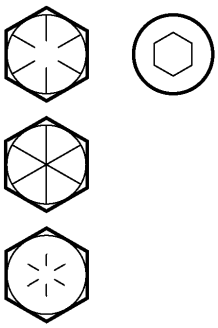


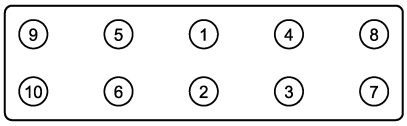
Detail 'R'

5. If gap 'e' is less than 10mm in detail 'R', then adjust the gap in detail 'B' to 0+5mm.

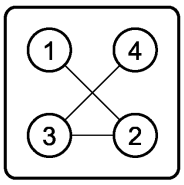
6. If gap 'e' is greater than 28mm in detail 'R', then adjust the gap in detail 'B' to 0-5mm.

TORQUE VALUES

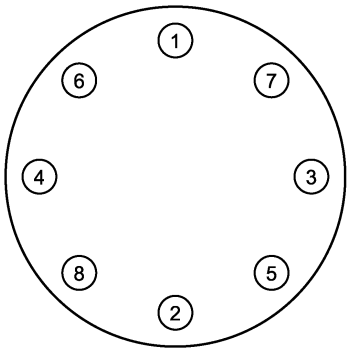
TABLE 1 INCH FASTENERS				
CAPSCREW OR NUT THREAD SIZE AND PITCH	NOMINAL DESIGN TORQUE			
	8AE J249 GRADE 5 (HEAD MARKING) 		8AE J249 GRADE 8 (HEAD MARKING) 	
	(Nm.)	(FT-LBF)	(Nm.)	(FT-LBF)
1/4 - 20	11	8	16	12
5/16 - 18	24	17	33	25
3/8 - 16	42	31	59	44
7/16 - 14	67	49	95	70
1/2 - 13	102	75	144	106
9/16 - 12	148	109	208	154
5/8 - 11	203	150	287	212
3/4 - 10	361	266	509	376



TYPICAL RECTANGULAR TORQUE PATTERN



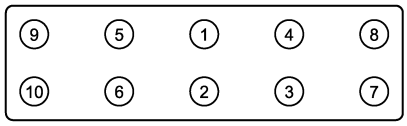
TYPICAL SQUARE TORQUE PATTERN



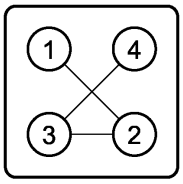
TYPICAL CIRCULAR TORQUE PATTERN

TABLE 2 METRIC FASTENERS

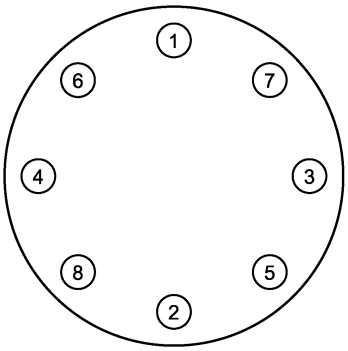
CAPSCREW OR NUT THREAD SIZE AND PITCH	NOMINAL DESIGN TORQUE					
	PROPERTY GRADE 8.8 (HEAD MARKING)		PROPERTY GRADE 10.9 (HEAD MARKING)		PROPERTY GRADE 12.9 (HEAD MARKING)	
	(Nm.)	(FT-LBF)	(Nm.)	(FT-LBF)	(Nm.)	(FT-LBF)
M6 X 1.0	11	8	15	11	18	13
M8 X 1.25	26	19	36	27	43	31
M10 X 1.5	52	38	72	53	84	62
M12 X 1.75	91	67	126	93	147	109
M14 X 2	145	107	200	148	234	173
M16 X 2	226	166	313	231	365	270
M20 X 2.5	441	325	610	450	713	526



TYPICAL RECTANGULAR TORQUE PATTERN



TYPICAL SQUARE TORQUE PATTERN



TYPICAL CIRCULAR TORQUE PATTERN

28 PARTS ORDERING

GENERAL

This publication, which contains an illustrated parts breakdown, has been prepared as an aid in locating those parts which may be required in the maintenance of the unit. All of the compressor parts, listed in the parts breakdown, are manufactured with the same precision as the original equipment. For the greatest protection always insist on genuine Doosan parts for your compressor.

NOTICE

Doosan can bear no responsibility for injury or damages resulting directly from the use of non-approved repair parts.

Doosan Infracore service facilities and parts are available worldwide.

There are Authorised Distributors or Company Sales offices in principal cities of many countries.

Special order parts may not be included in the manual. Contact Doosan Parts Department with the unit serial number for assistance with these special parts.

DESCRIPTION

The illustrated parts breakdown illustrates and lists the various assemblies, sub-assemblies and detailed parts which make up this particular machine. This covers the standard models and the more popular options that are available.

A series of illustrations show each part distinctly and in location relative to the other parts in the assembly. The part number, the description of the part and the quantity of parts required are shown on each illustration or on adjacent page. The quantities specified are the number of parts used per one assembly and are not necessarily the total number of parts used in the machine. Where no quantity is specified the quantity is assumed to be one.

Each description of a part is based upon the "noun first" method, i.e., the identifying noun or item name is always the first part of the description. The noun name is generally followed by a single descriptive modifier. The descriptive modifier may be followed by words or abbreviations such as upper, lower, inner, outer, front, rear, RH, LH, etc. when they are essential.

In referring to the rear, the front or to either side of the unit, always consider the **drawbar end** of the unit as the **front**. Standing at the rear of the unit facing the drawbar (front) will determine the right and left sides.

FASTENERS

Both SAE/inch, ISO/metric hardware have been used in the design and assembly of these units. In the disassembly and reassembly of parts, extreme care must be taken to avoid damaging threads by the use of wrong fasteners. In order to clarify the proper usage and for exact replacement parts, all standard fasteners have been identified by part number, size and description. This will enable a customer to obtain fasteners locally rather than ordering from the factory. These parts are identified in tables that will be found at the rear of the parts illustrations. Any fastener that has not been identified by both part number and size is a specially engineered part that must be ordered by part number to obtain the exact replacement part.

MARKINGS AND DECALS

NOTICE

Do not paint over safety warnings or instructional decals. If safety warning decals become illegible, immediately order replacements from the factory.

Part numbers for original individual decals and their mounting locations are shown within Parts List Section. These are available as long as a particular model is in production.

HOW TO USE PARTS LIST

a. Turn to Parts List.

b. Locate the area or system of the compressor in which the desired part is used and find illustration page number.

c. Locate the desired part on the illustration by visual identification and make note of part number and description.

HOW TO ORDER

The satisfactory ordering of parts by a purchaser is greatly dependent upon the proper use of all available information. By supplying your nearest sales office, autonomous company or authorised distributor, with complete information, you will enable them to fill your order correctly and to avoid any unnecessary delays.

In order that all avoidable errors may be eliminated, the following instructions are offered as a guide to the purchaser when ordering replacement parts:

a. Always specify the model number of the unit as shown on the general data decal attached to the unit.

b. Always specify the serial number of the unit. THIS IS IMPORTANT. The serial number of the unit will be found stamped on a plate attached to the unit. (The serial number on the unit is also permanently stamped in the metal of the frame side rail.)

c. Always specify the number of the parts list publication.

d. Always specify the quantity of parts required.

e. Always specify the part number, as well as the description of the part, or parts, exactly as it is given on the parts list illustration.

In the event parts are being returned to your nearest sales office, autonomous company or authorised distributor, for inspection or repair, it is important to include the serial number of the unit from which the parts were removed.

TERMS AND CONDITIONS ON PARTS ORDERS

Acceptance: Acceptance of an offer is expressly limited to the exact terms contained herein. If purchaser's order form is used for acceptance of an offer, it is expressly understood and agreed that the terms and conditions of such order form shall not apply unless expressly agreed to by Doosan Company ("Company") in writing. No additional or contrary terms will be binding upon the Company unless expressly agreed to in writing.

Taxes: Any tax or other governmental charge now or hereafter levied upon the production, sale, use or shipment of material and equipment ordered or sold is not included in the Company's price and will be charged to and paid for by the Purchaser.

Shipping dates shall be extended for delays due to acts of God, acts of Purchaser, acts of Government, fires, floods, strikes, riot, war, embargo, transportation shortages, delay or default on the part of the Company's vendors, or any other cause beyond the Company's reasonable control.

Should Purchaser request special shipping instruction, such as exclusive use of shipping facilities, including air freight when common carrier has been quoted and before change order to purchase order can be received by the Company, the additional charges will be honoured by the Purchaser.

Warranty: The Company warrants that parts manufactured by it will be as specified and will be free from defects in materials and workmanship. The Company's liability under this warranty shall be limited to the repair or replacement of any part which was defective at the time of shipment provided Purchaser notifies the Company of any such defect promptly upon discovery, but in no event later than three (3) months from the date of shipment of such part by the Company. The only exception to the previous statement is the extended warranty as it applies to the special airend exchange program.

Repairs and replacements shall be made by the Company F.O.B. point of shipment. The Company shall not be responsible for costs of transportation, removal or installation.

Warranties applicable to material and equipment supplied by the Company but wholly manufactured by others shall be limited to the warranties extended to the Company by the manufacturer which are able to be conveyed to the Purchaser.

Delivery: Shipping dates are approximate. The Company will use best efforts to ship by the dates specified; however, the Company shall not be liable for any delay or failure in the estimated delivery or shipment of material and equipment or for any damages suffered by reason thereof.

The company makes no other warranty or representation of any kind whatsoever, expressed or implied, except that of title, and all implied warranties, including any warranty of merchantability and fitness for a particular purpose, are hereby disclaimed.

Limitation of Liability:

The remedies of the Purchaser set forth herein are exclusive, and the total liability of the Company with respect to this order whether based on contract, warranty, negligence, indemnity, strict liability or otherwise, shall not exceed the purchase price of the part upon which such liability is based.

The Company shall in no event be liable to the Purchaser, any successors in interest or any beneficiary of this order for any consequential, incidental, indirect, special or punitive damages arising out of this order or any breach thereof, or any defect in, or failure of, or malfunction of the parts hereunder, whether based upon loss of use, lost profits or revenue, interest, lost goodwill, work stoppage, impairment of other goods, loss by reason of shutdown or non-operation, increased expenses of operation or claims of customers of Purchaser for service interruption whether or not such loss or damage is based on contract, warranty, negligence, indemnity, strict liability or otherwise.

AIREND EXCHANGE PROGRAM

Doosan offers an airend exchange program to benefit portable compressor users.

Your nearest sales office, autonomous company or authorised distributor must first contact the Parts Service Department at the factory at which your portable air compressor was manufactured for further instructions.

For parts, service or information regarding your local distributor (Europe, Middle East, Africa) please contact:

Facility:

Doosan Bobcat EMEA s.r.o. (DBEM),

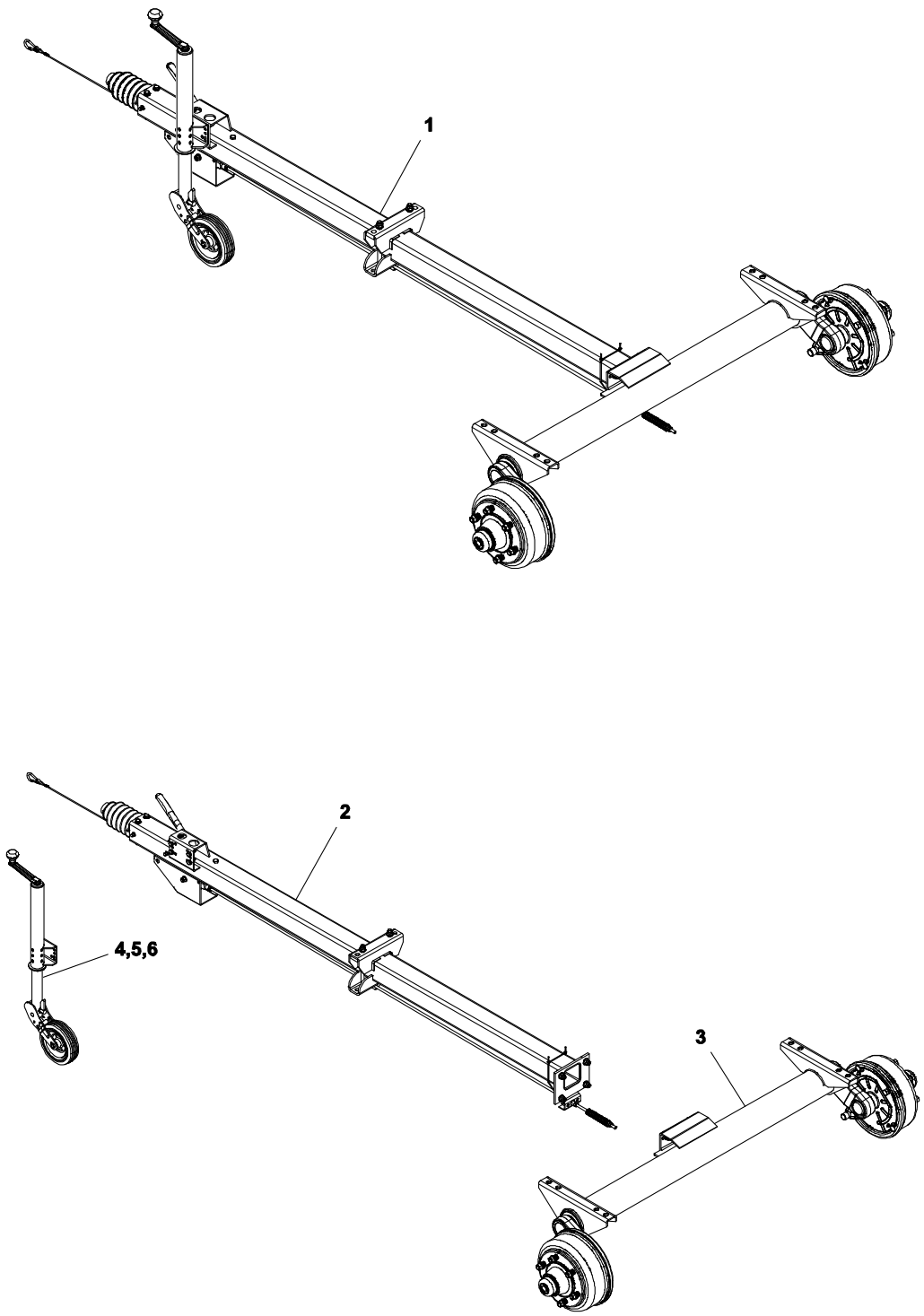
U Kodetky 1810, 263 12 Dobris,

Czech Republic

Website:

www.doosanportablepower.eu

RUNNING GEAR
(Fixed Height)
(Braked)



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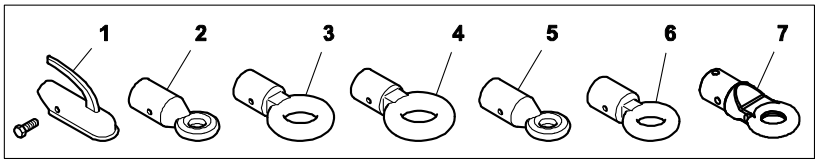
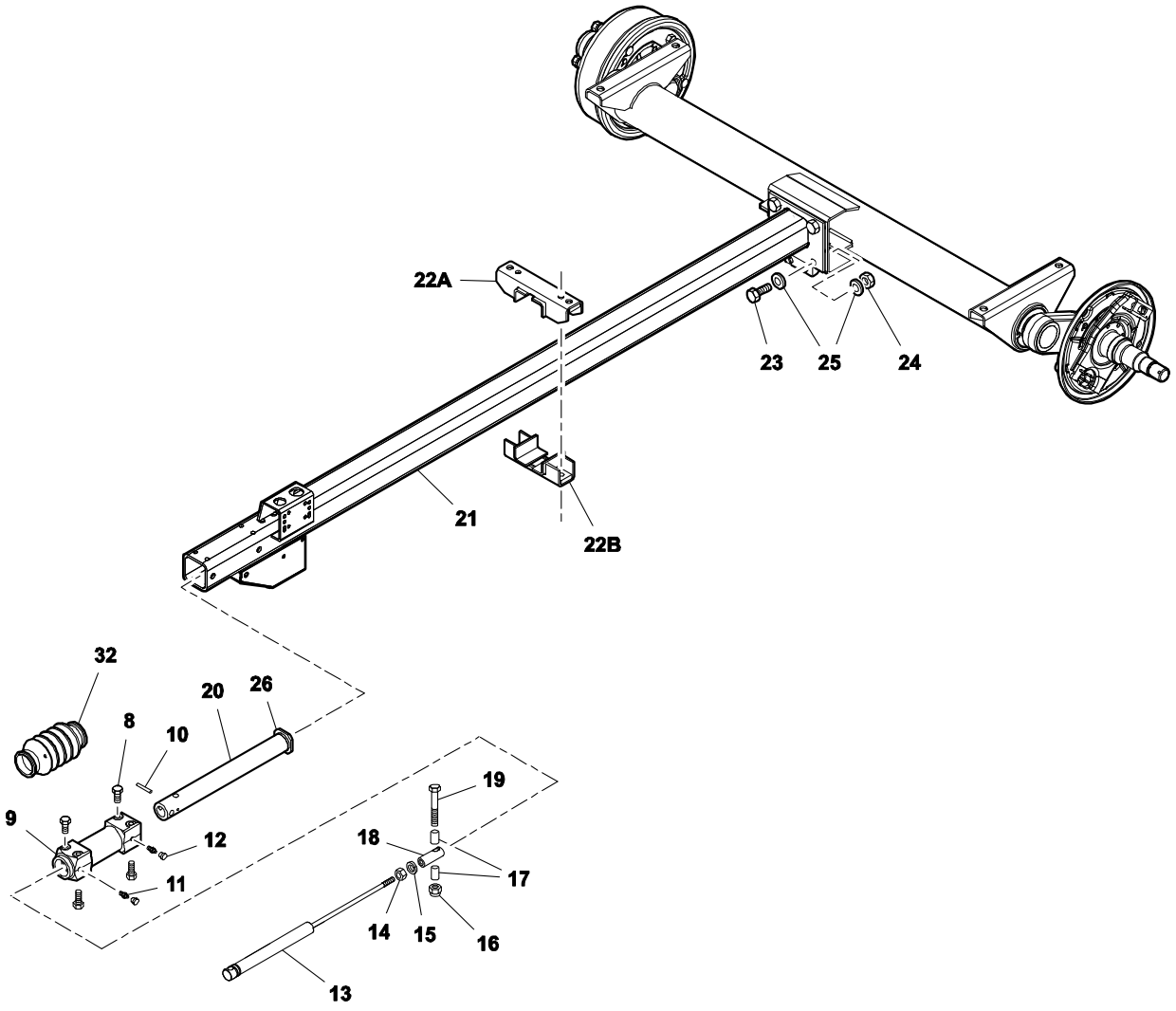
RMI

RUNNING GEAR
(Fixed Height)
(Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46750285	RUNNING GEAR ASSEMBLY	W/Ref. 2-4		1
2	23372949	DRAWBAR ASSEMBLY			1
3	46750286	AXLE ASSEMBLY			1
4	46663121	JOCKEY WHEEL ASSEMBLY			1
5	92280981	SCREW	(M10 x 30)		4
6	96735550	NUT	(M10)		4

RUNNING GEAR
(Fixed Height)
(Braked)





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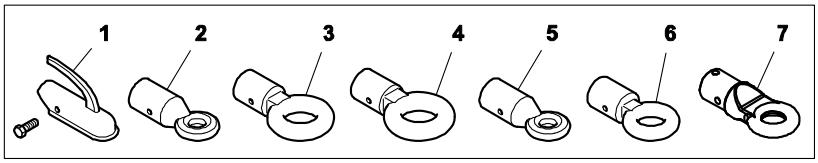
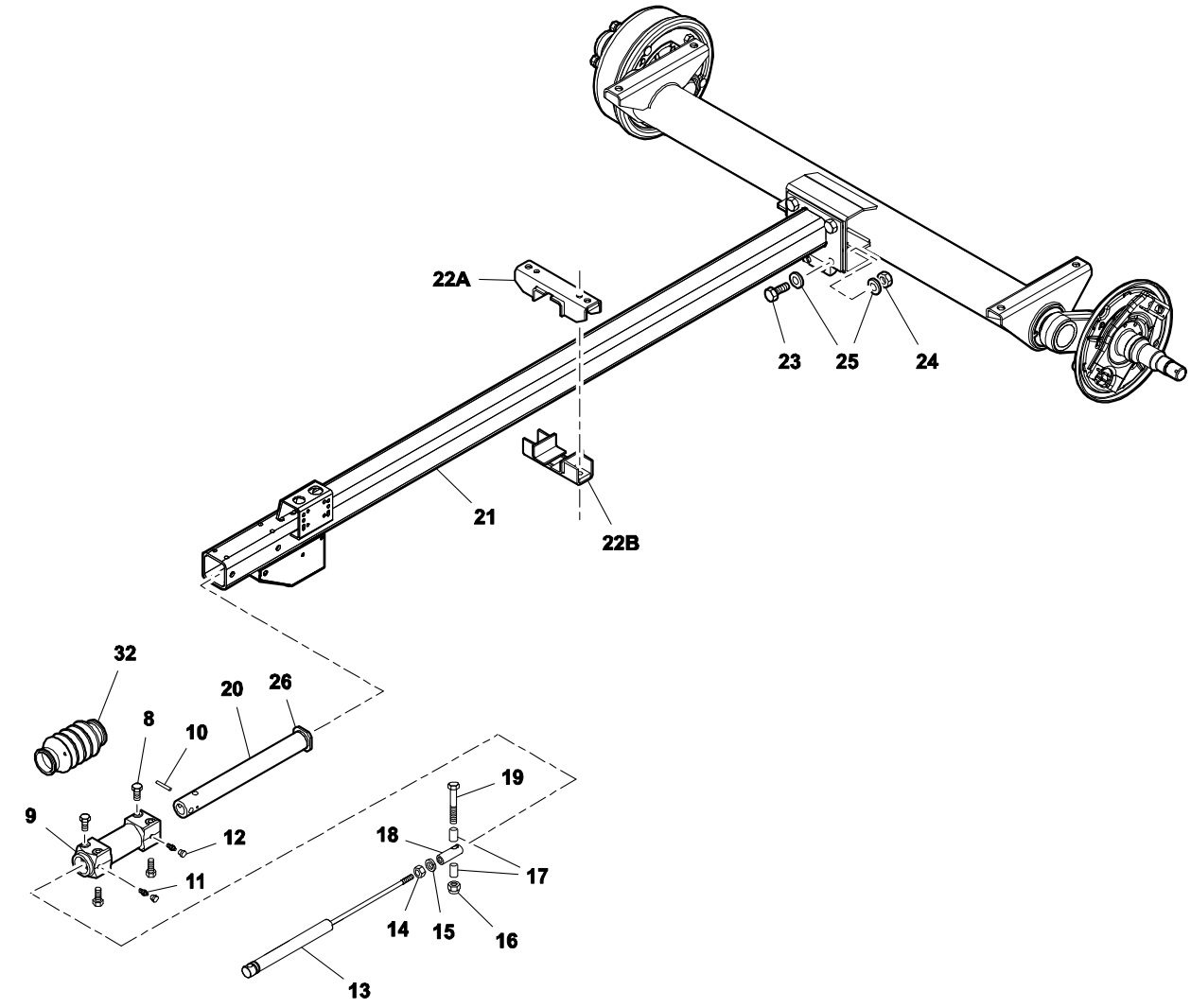
RMI

RUNNING GEAR
(Fixed Height)
(Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46569661	HITCH, BALL	(50 mm)		1
2	22177588	EYE, TOWING	(Ø 40 mm)		1
2	46569700	EYE, TOWING	(non-standard)(UK) - (Ø 40 mm)		1
3	22097823	EYE, TOWING	(Ø 68 mm)		1
3	46569682	EYE, TOWING	(non-standard) - (Ø 68 mm)		1
4	22177620	EYE, TOWING	(Ø 76 mm)		1
5	46569701	EYE, TOWING	(non-standard)(Italy) - (Ø 45 mm)		1
6	46569685	EYE, TOWING	(non-standard) - (Ø 50 mm)		1
7	22177687	EYE, TOWING	(Ø 50 mm)		1
8	22241350	BOLT			8
9	22250450	TUBE			1
10	22251599	PIN			1
11	22241095	NIPPLE, GREASE			2
12	22391858	CAP, GREASE NIPPLE			2
13	22251243	SHOCK ABSORBER			1
14	22051577	NUT			1
15	22051585	RING			1
16	22051494	NUT			1
17	22051551	BUSH			2
18	22051544	JOINT			1
19	22251482	BOLT			1
20	22250518	SLIDER			1
21	22250583	DRAWBAR			1
22	46559525	CLAMP, UPPER	(A)		1
22	46550526	CLAMP, LOWER	(B)		1
23	22251516	BOLT	NAP - Order Ref. 27		4
24		LOCKNUT	NAP - Order Ref. 27		4
25		WASHER	NAP - Order Ref. 27		8
26	46551382	RING, STOP			1
27	46651380	KIT, CONNECTING	W/Ref. 23-25		1
28	46670242	KIT, TUBE	W/Ref. 9-10, 20, 26		1

RUNNING GEAR (CONT'D)
(Fixed Height)
(Braked)





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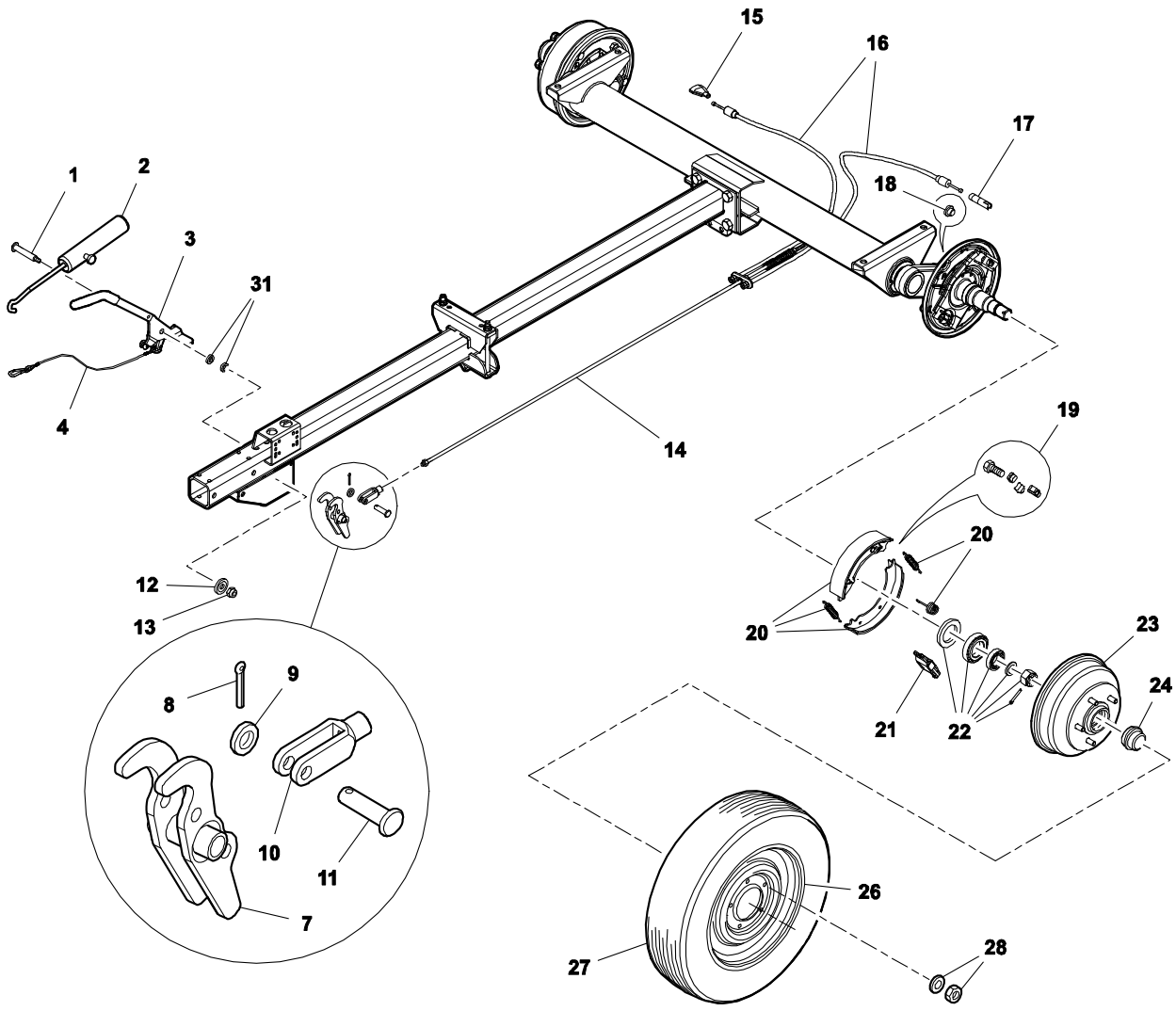
RUNNING GEAR (CONT'D)
(Fixed Height)
(Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
29	46670243	SHOCK ABSORBER ASSEMBLY	W/Ref. 13-15, 18		1
30	46670244	KIT, CONNECTING	W/Ref. 16-17, 19		1
31	46670245	CLAMP ASSEMBLY	W/Ref. 22A-22B		1
32	46551408	KIT, COVER			1

RUNNING GEAR
(Fixed Height)
(Braked)



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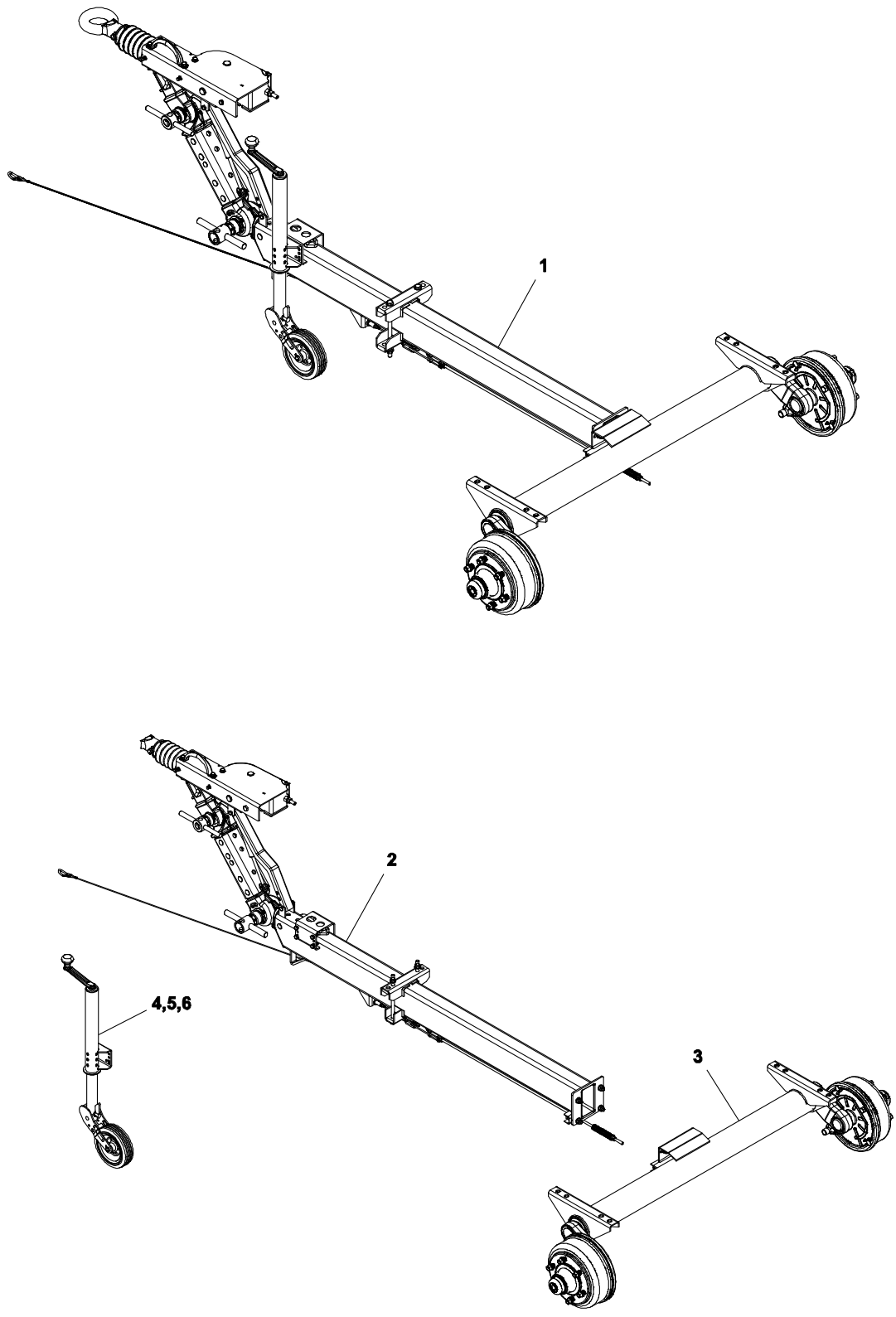
RUNNING GEAR
(Fixed Height)
(Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46518205	BOLT			21
2	46670246	SPRING			1
3	46651463	HANDBRAKE LEVER ASSEMBLY			1
4	22051841	CABLE			1
5	46551496	KIT, BRAKE OVERHAUL	W/Ref. 17-19,21 - (order one per machine) - (order one per machine)		1
6	46670250	BRAKE HUB COMPLETE	W/Ref. 22,23,28 - (order two per machine)		2
7	46670251	CONVERSION LEVER ASSEMBLY			1
8	22357693	PIN			1
9	46670248	WASHER			1
10	46670249	CLEVIS			1
11	46670619	PIN			1
12	22104806	WASHER			1
13	22051494	NUT			1
14	46518213	COMPENSATOR			1
15	46551497	KIT, COVER			2
16	46551383	CABLE, BRAKE			2
17		CONNECTOR	NAP - Order Ref. 5		2
18		COVER	NAP - Order Ref. 5		4
19		KIT, ADJUSTING	NAP - Order Ref. 5		2
20	80027980	KIT, BRAKE SHOE	(order one per machine) - (order one per machine)		1
21		EXPANDER	NAP - Order Ref. 5		2
22	46670247	KIT, BEARING			2
23	46670618	HUB ASSEMBLY			2
24	46670252	COVER			2
25	46713805	WHEEL AND TYRE ASSEMBLY	W/Ref. 26-27		2
26	46656661	WHEEL			1
27	46709305	TYRE			1
28	46551516	KIT, CONNECTING			1
29	46651381	KIT, EXPANDING KEY	W/Ref. 17,21 - (order one per machine)		1
30	46670253	KIT, CONVERSION LEVER	W/Ref. 7-11		1
31	22051643	WASHER			2

RUNNING GEAR
(Variable Height)
(Braked)



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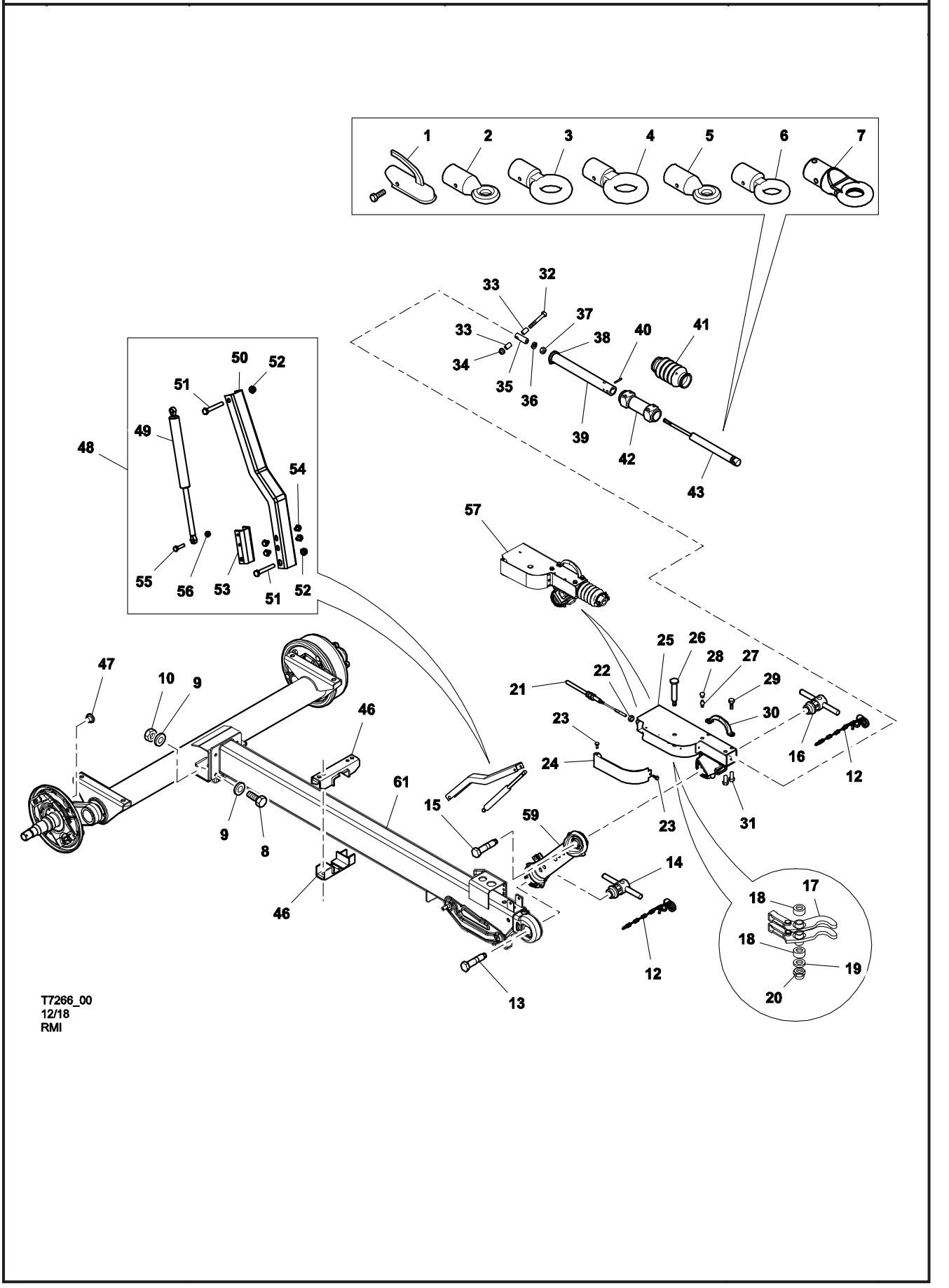
RMI

RUNNING GEAR
(Variable Height)
(Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46750287	RUNNING GEAR ASSEMBLY	W/Ref. 2-4		1
2	46655626	DRAWBAR ASSEMBLY			1
3	46750286	AXLE ASSEMBLY			1
4	46663121	JOCKEY WHEEL ASSEMBLY			1
5	92280981	SCREW	(M10 x 30)		4
6	96735550	NUT	(M10)		4

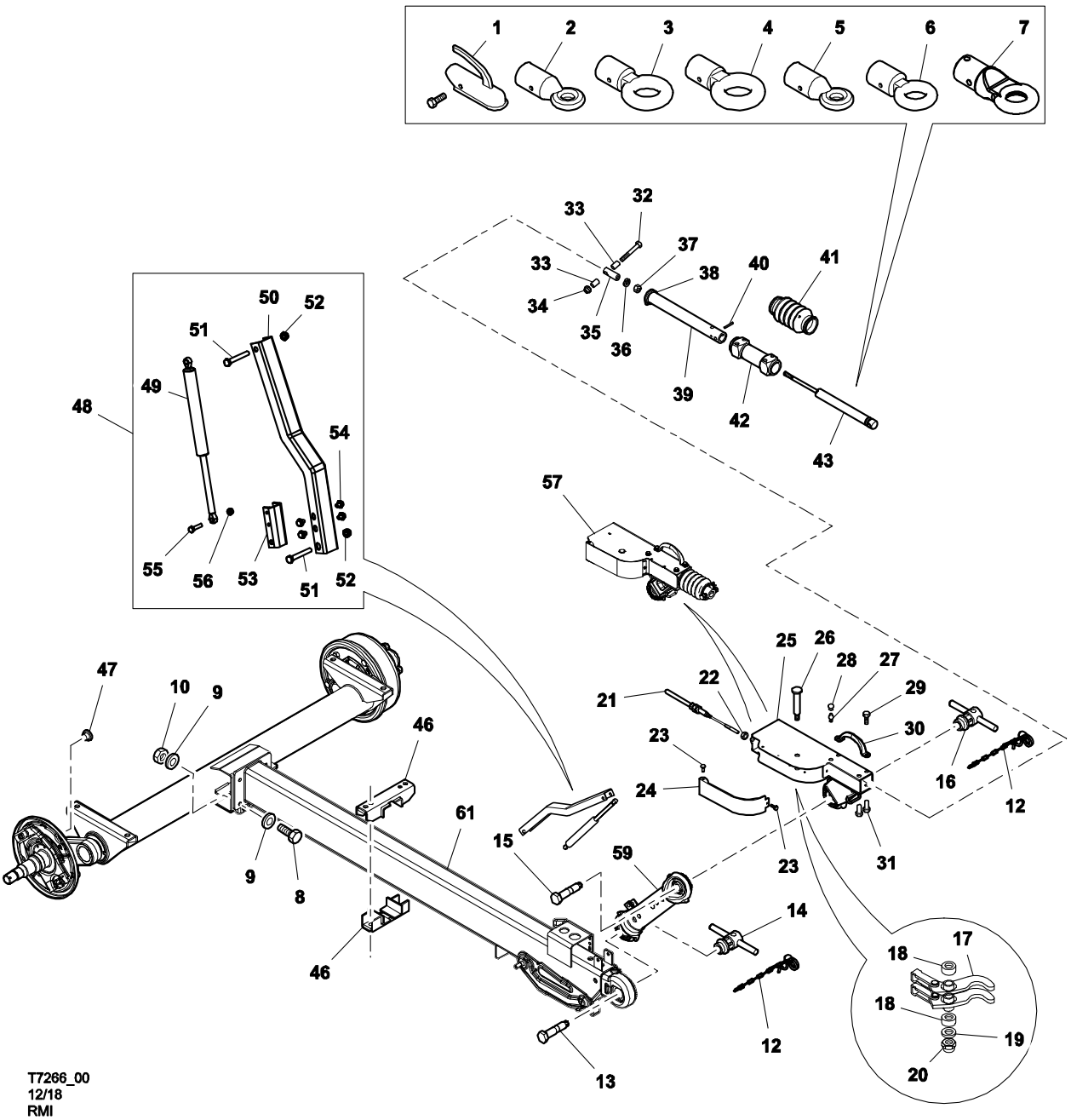
RUNNING GEAR
(Variable Height)
(Braked)



RUNNING GEAR
(Variable Height)
(Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46569661	HITCH, BALL	(50 mm)		1
2	22177588	EYE, TOWING	(Ø 40 mm)		1
2	46569700	EYE, TOWING	(non-standard)(UK) - (Ø 40 mm)		1
3	22207823	EYE, TOWING	(Ø 68 mm)		1
3	46569682	EYE, TOWING	(non-standard) - (Ø 68 mm)		1
4	22177620	EYE, TOWING	(Ø 76 mm)		1
5	46569701	EYE, TOWING	(non-standard)(Italy) - (Ø 45 mm)		1
6	46569685	EYE, TOWING	(non-standard) - (Ø 50 mm)		1
7	22177687	EYE, TOWING	(Ø 50 mm)		1
8	22251516	BOLT	NAP - Order Ref. 11		4
9		WASHER	NAP - Order Ref. 11		8
10		LOCKNUT	NAP - Order Ref. 11		4
11	46651380	KIT, CONNECTING	W/Ref. 8-10		1
12	22051734	CLIP ASSEMBLY			1
13		BOLT	NAP - Order Ref. 44		1
14		HANDLE	NAP - Order Ref. 44		1
15	22241178	BOLT	NAP - Order Ref. 45		1
16	22051718	HANDLE	NAP - Order Ref. 45		1
17	46670255	CONVERSION LEVER ASSEMBLY			1
18	22250419	WASHER			2
19	22104806	WASHER			1
20	22051494	NUT			1
21	46551207	CABLE			1
22	22241558	NUT			1
23	22251516	BOLT	NAP - Order Ref. 57		1
24	46670257	COVER			1
25	46670258	COUPLING, WELDED			1
26	46670259	BOLT			1
27	22241095	NIPPLE, GREASE			2
28	22391858	CAP, GREASE NIPPLE			2
29	22241368	SCREW			2

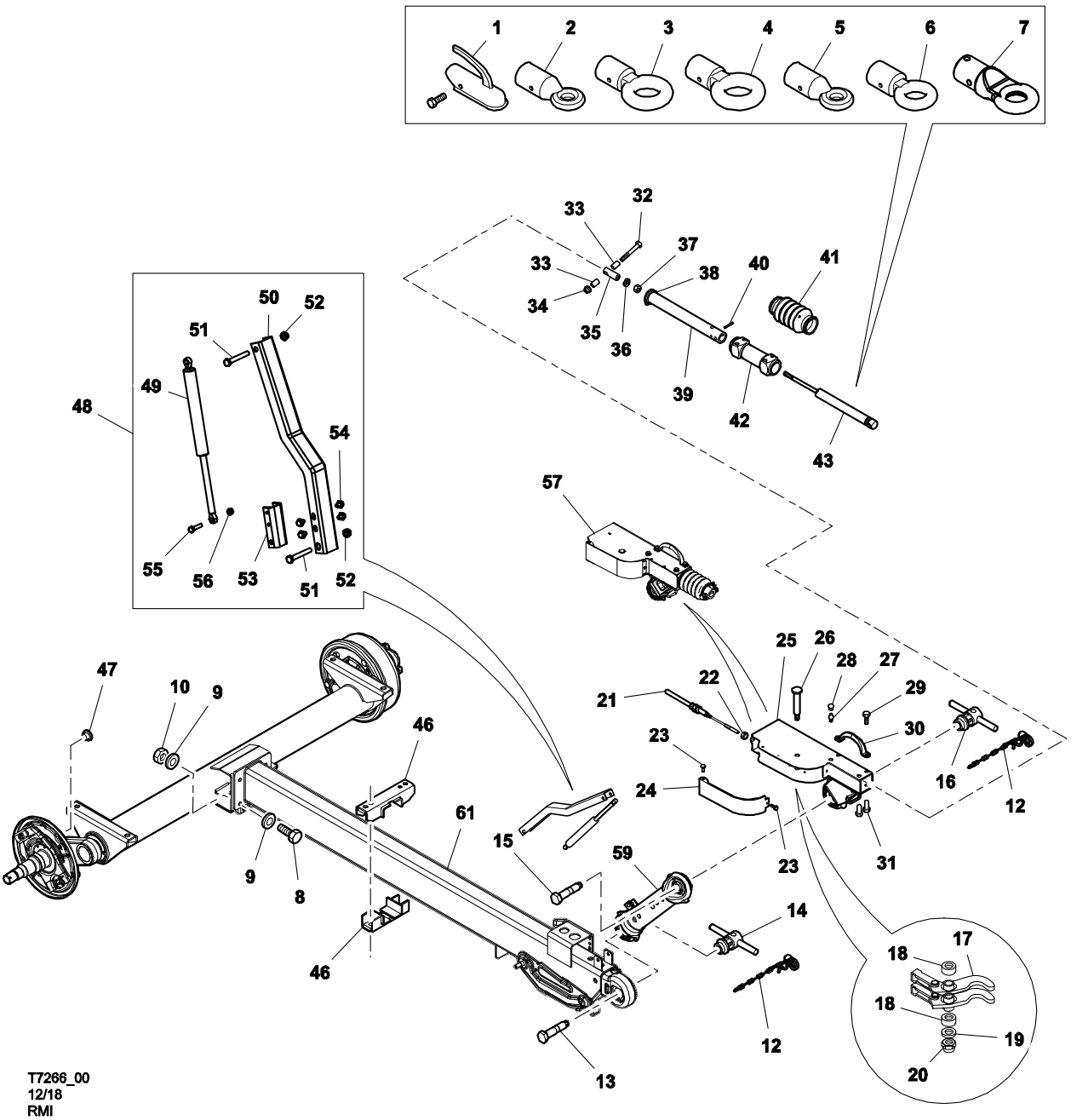
RUNNING GEAR (CONT'D)
(Variable Height)
(Braked)



RUNNING GEAR (CONT'D)
(Variable Height)
(Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
30	22250864	HANDLE			1
31	22241350	BOLT			6
32	22251409	BOLT			1
33	22051551	BUSH			2
34	22051494	NUT			1
35	22051544	JOINT			1
36	22051585	RING			1
37	22051577	NUT			1
38	46551382	RING, STOP			1
39	22250518	SLIDER			1
40	46518197	PIN			1
41	46551408	KIT, COVER			1
42	46670262	TUBE			1
43	22251243	SHOCK ABSORBER			1
44	46651402	PIVOT ASSEMBLY	W/Ref. 12-14		1
45	46670261	PIVOT ASSEMBLY	W/Ref. 12, 15-16		1
46	46670263	CLAMP ASSEMBLY			1
47		COVER	NAP		2
48	22251326	LINK ASSEMBLY	W/Ref. 49-56		1
49	23179310	DAMPER			1
50		ARM	NAP - Order Ref. 48		1
51		SCREW	NAP - Order Ref. 48		2
52	22392260	NUT	NAP - Order Ref. 48 - (M10)		2
53		U-PROFILE	NAP - Order Ref. 48		1
54		SCREW	NAP - Order Ref. 48		4
55		SCREW	NAP - Order Ref. 48		1
56		NUT	NAP - Order Ref. 48		1
57	46670265	HEAD ASSEMBLY	W/Ref. 23-43		2
58	46651399	KIT, CONNECTING	W/Ref. 32-34		1
59	46670447	ADJUSTABLE LINK ASSEMBLY			1
60	46670267	KIT, CONNECTING	W/Ref. 31-37		1

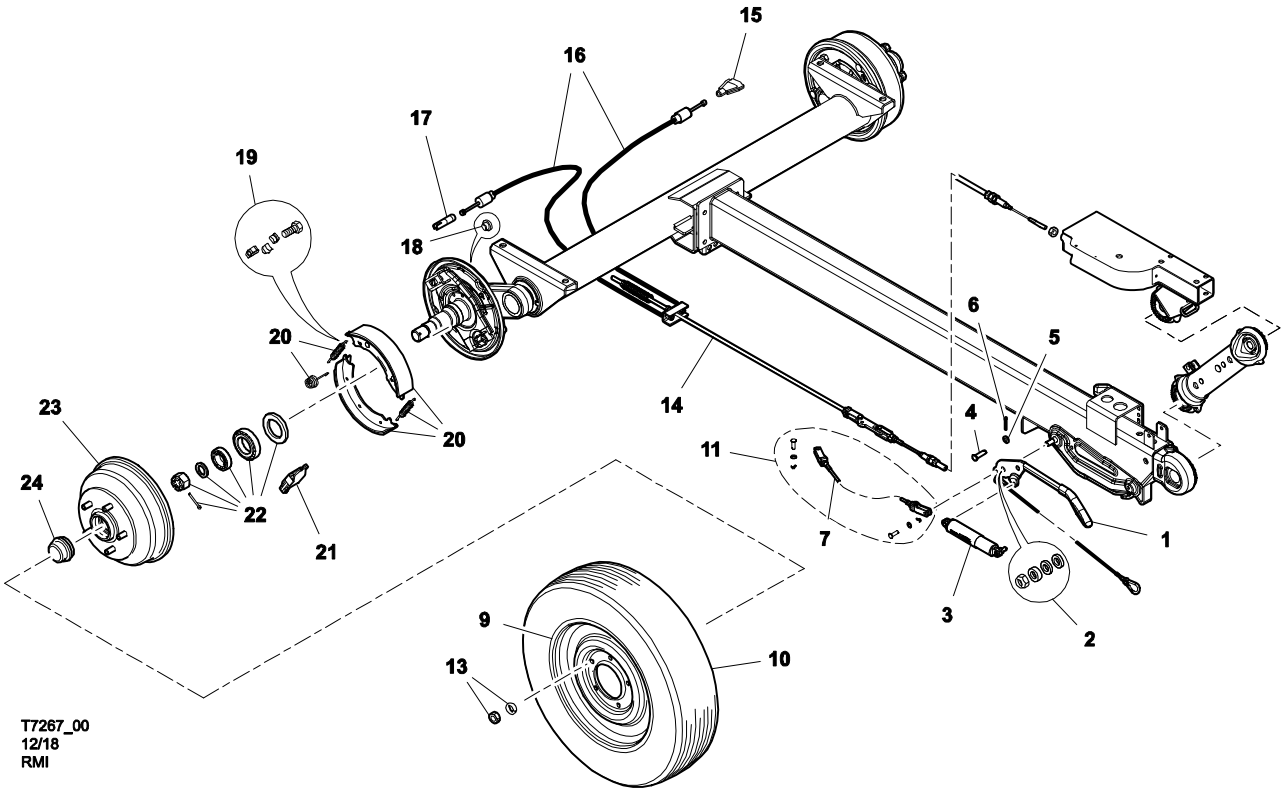
RUNNING GEAR (CONT'D)
(Variable Height)
(Braked)



RUNNING GEAR (CONT'D)
(Variable Height)
(Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
61	46670254	DRAWBAR			1

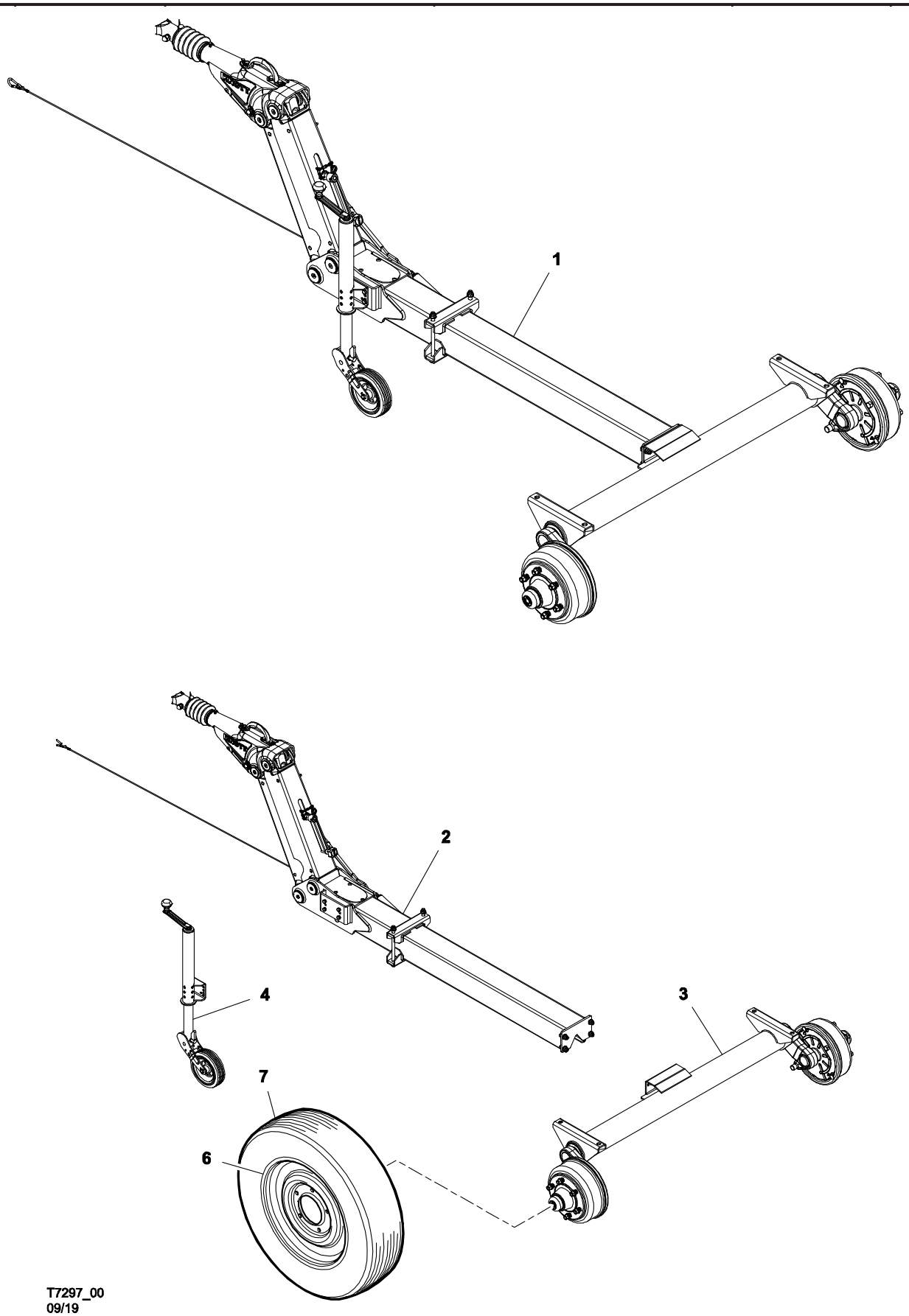
RUNNING GEAR
(Variable Height)
(Braked)



RUNNING GEAR
(Variable Height)
(Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46651397	LEVER ASSEMBLY			1
2	46670620	KIT, CONNECTING			1
3	46651401	SET, SPRING			1
4	22241160	PIN			1
5	22241491	WASHER			1
6	22357693	PIN			1
7	46670268	CABLE			1
8	46713805	WHEEL AND TYRE ASSEMBLY	W/Ref. 9-10		2
9	46656661	WHEEL			1
10	46709305	TYRE			1
11	46670266	CABLE ASSEMBLY			1
12	46670250	BRAKE HUB COMPLETE	W/Ref. 13,22,23 - (order two per machine)		2
13	46551516	KIT, CONNECTING			2
14	46670621	BRAKE ROD ASSEMBLY			1
15	46551497	KIT, COVER			2
16	46551383	CABLE, BRAKE			2
17		CONNECTOR	NAP		2
18		COVER	NAP - Order Ref. 25		2
19		KIT, ADJUSTING	NAP - Order Ref. 25		2
20	80027980	KIT, BRAKE SHOE	(order one per machine) - (order one per machine)		1
21		EXPANDER	NAP - Order Ref. 25		1
22	46670247	KIT, BEARING	724753P02		2
23	46670618	HUB ASSEMBLY			2
24	46670252	COVER			2
25	46551496	KIT, BRAKE OVERHAUL	W/Ref. 18,19,21 - (order one per machine) - (order one per machine)		1

RUNNING GEAR
(Variable Height)
(Braked - KHD)



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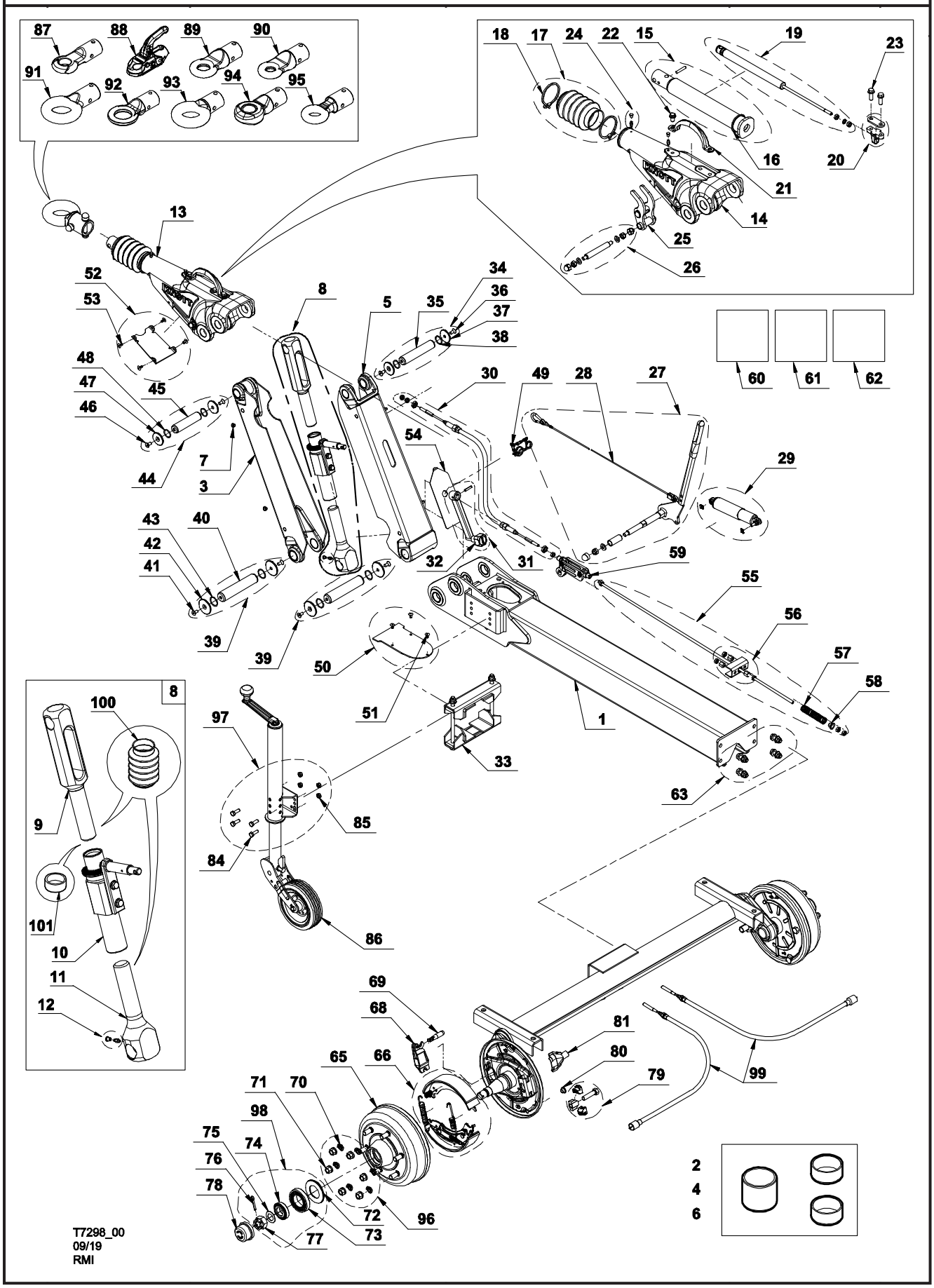
RUNNING GEAR
(Variable Height)
(Braked - KHD)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46766827	RUNNING GEAR ASSEMBLY	W/Ref. 2-4		1
2	46655648	DRAWBAR ASSEMBLY			1
3	46766828	AXLE ASSEMBLY			1
4	22182075	JOCKEY WHEEL ASSEMBLY			1
5	46713805	WHEEL AND TYRE ASSEMBLY	W/Ref. 6-7		2
6	46656661	WHEEL			1
7	46709305	TYRE			1

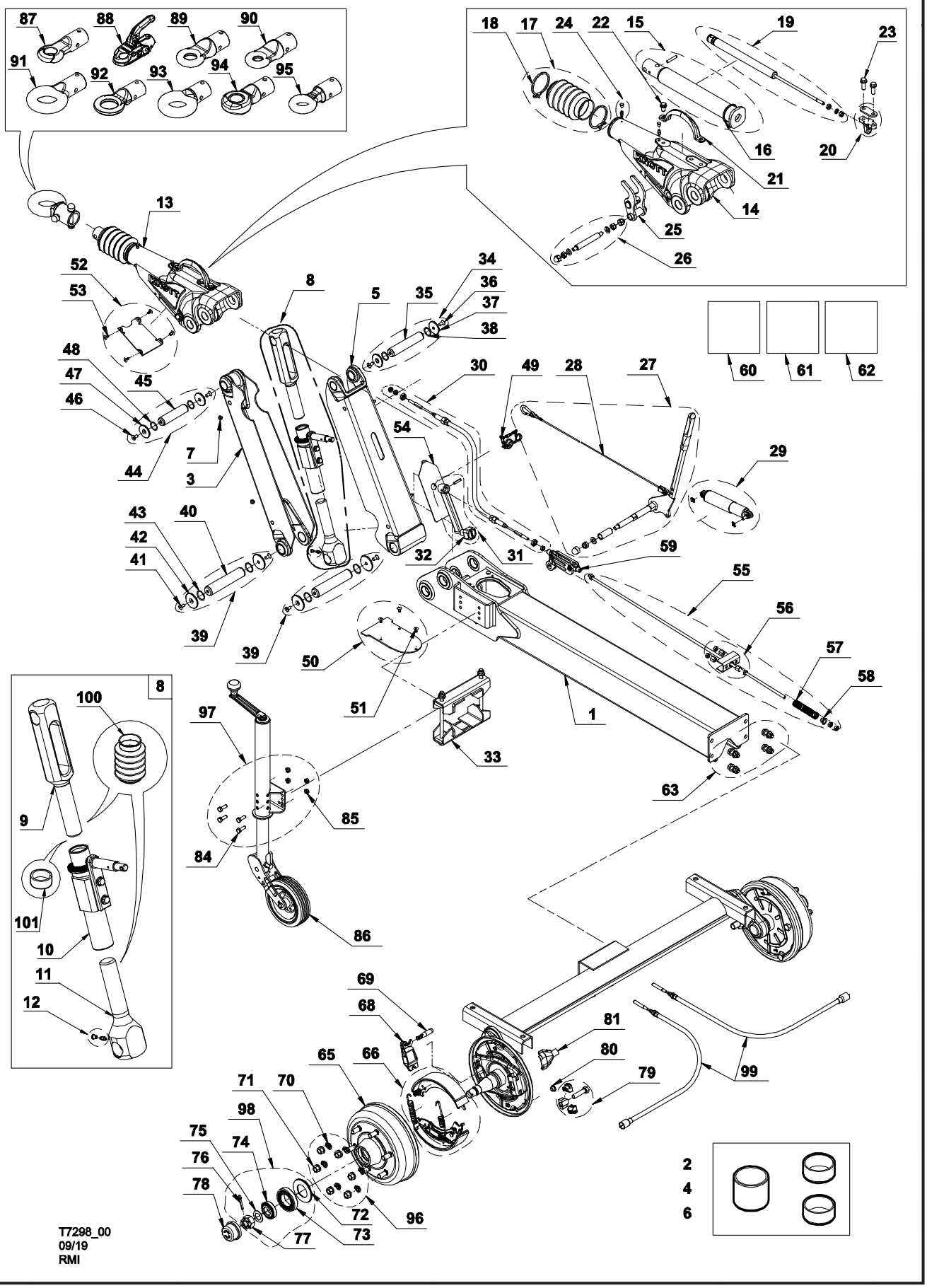
RUNNING GEAR
(Variable Height)
(Braked - KHD)



RUNNING GEAR
(Variable Height)
(Braked - KHD)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46670271	DRAWBAR	W/Ref. 2		1
2	46551483	SET, BUSH			1
3	46551401	UPPER ARM ASSEMBLY	W/Ref. 4		1
4	46551484	SET, BUSH			1
5	46551402	LOWER ARM ASSEMBLY	W/Ref. 6-7		1
6	46551485	SET, BUSH			1
7		COVER	NAP - Order Ref. 5		2
8	46551514	CENTRING MECHANISM ASSEMBLY	W/Ref. 9-12,100,101		1
9		SCREW	NAP - Order Ref. 8		1
10		NUT, ADJUSTMENT	NAP - Order Ref. 8		1
11		SCREW	NAP - Order Ref. 8		1
12	46551409	NIPPLE, GREASE			1
13	46551420	HOUSING ASSEMBLY	W/Ref. 14-26		1
14	46551380	HOUSING			1
15	46551412	ROD, PISTON			1
16	46551382	RING, STOP			1
17	46551408	KIT, COVER	W/Ref. 18		1
18		CABLE, TIE	NAP - Order Ref. 17		2
19	46551404	ABSORBER, SHOCK			1
20	46551486	BRACKET ASSEMBLY			1
21	22250864	HANDLE			1
22	22241350	BOLT			1
23	46551391	SCREW			2
24	46551409	NIPPLE, GREASE			1
25	46551417	LEVER ASSEMBLY			1
26	46551487	PIVOT ASSEMBLY			1
27	46670272	HANDBRAKE LEVER ASSEMBLY	W/Ref. 28		1
28		CABLE	NAP - Order Ref. 27		1
29	46551403	SPRING ASSEMBLY			1
30	46551416	BRAKE CABLE ASSEMBLY			1
31	46670273	HANDLE ASSEMBLY	W/Ref. 32		1

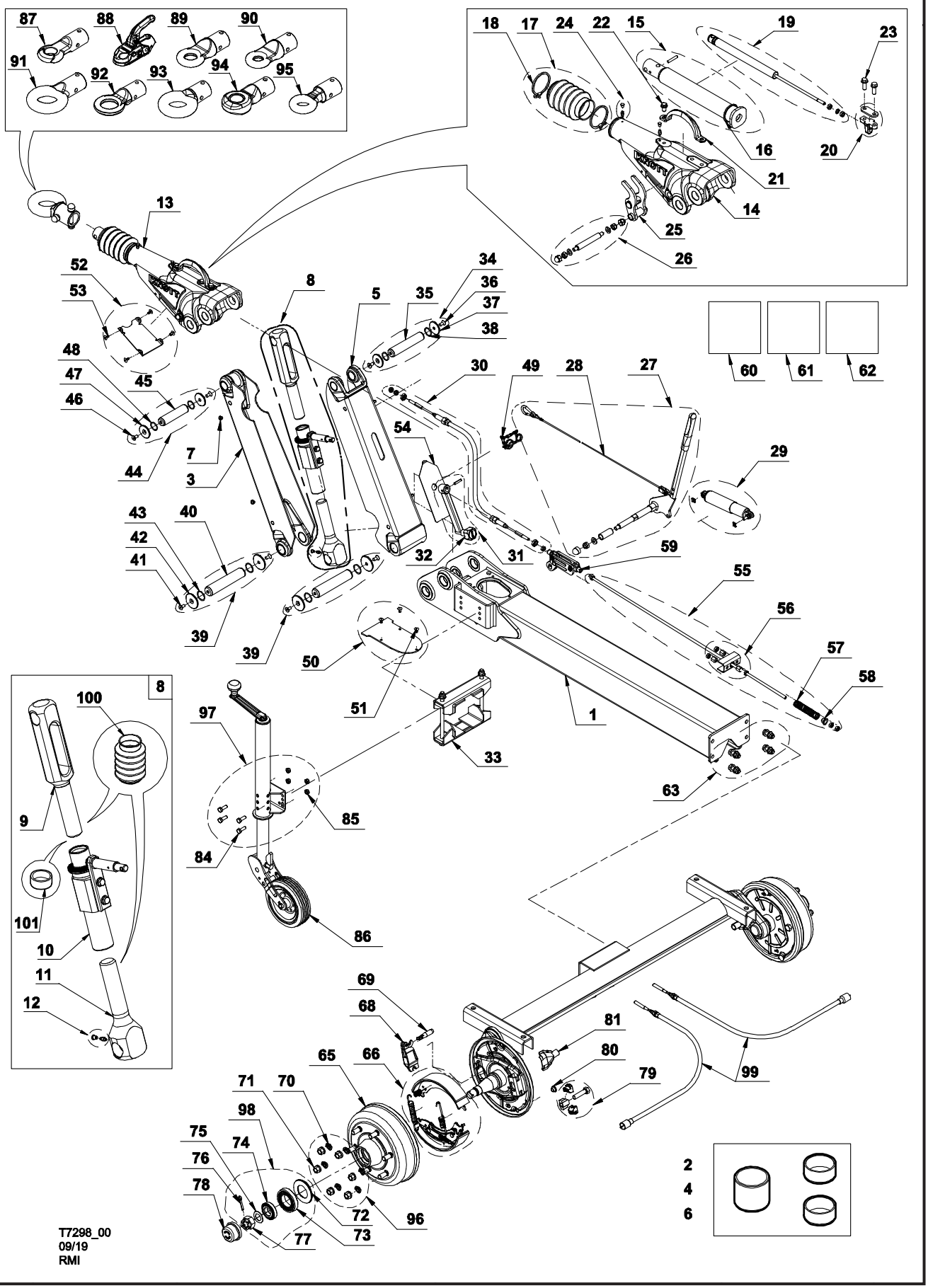
RUNNING GEAR (CONT'D)
(Variable Height)
(Braked - KHD)



RUNNING GEAR (CONT'D)
(Variable Height)
(Braked - KHD)

Item	Part Number	Description	Remarks	Serial Number	Qty
32		KNOB	NAP - Order Ref. 31		1
33	46551418	JIG, CLAMPING			1
34	46670274	PIVOT ASSEMBLY	W/Ref. 35-38		1
35		BOLT	NAP - Order Ref. 34		1
36		SCREW	NAP - Order Ref. 34		2
37		WASHER	NAP - Order Ref. 34		2
38		SEAL	NAP - Order Ref. 34		2
39	46670279	PIVOT ASSEMBLY	W/Ref. 40-43		2
40		PIN, PIVOT	NAP - Order Ref. 39		1
41		SCREW	NAP - Order Ref. 39		2
42		WASHER	NAP - Order Ref. 39		2
43		SEAL	NAP - Order Ref. 39		2
44	46670448	PIVOT ASSEMBLY	W/Ref. 45-48		1
45		PIN, PIVOT	NAP - Order Ref. 44		1
46		SCREW	NAP - Order Ref. 44		2
47		WASHER	NAP - Order Ref. 44		2
48		SEAL	NAP - Order Ref. 44		2
49	46551422	CLIP, SPRING			1
50	46551491	SHIELD ASSEMBLY	W/Ref. 51		1
51		RIVET	NAP - Order Ref. 50		3
52	46551492	SHIELD ASSEMBLY	W/Ref. 53		1
52	46670281	SHIELD			1
53		RIVET	NAP - Order Ref. 52		4
54	46551400	SHIELD			1
55	46551384	ROD ASSEMBLY	W/Ref. 56-58		1
56		COUPLING ASSEMBLY	W/Ref. 57-58 - NAP - Order Ref. 55		1
57		SPRING	NAP - Order Ref. 55		1
58		BUSH	NAP - Order Ref. 55		1
59	46551415	LEVER ASSEMBLY			1
60	46551406	DECAL	(English/German)		1
61	46551407	DECAL	(English/French)		1

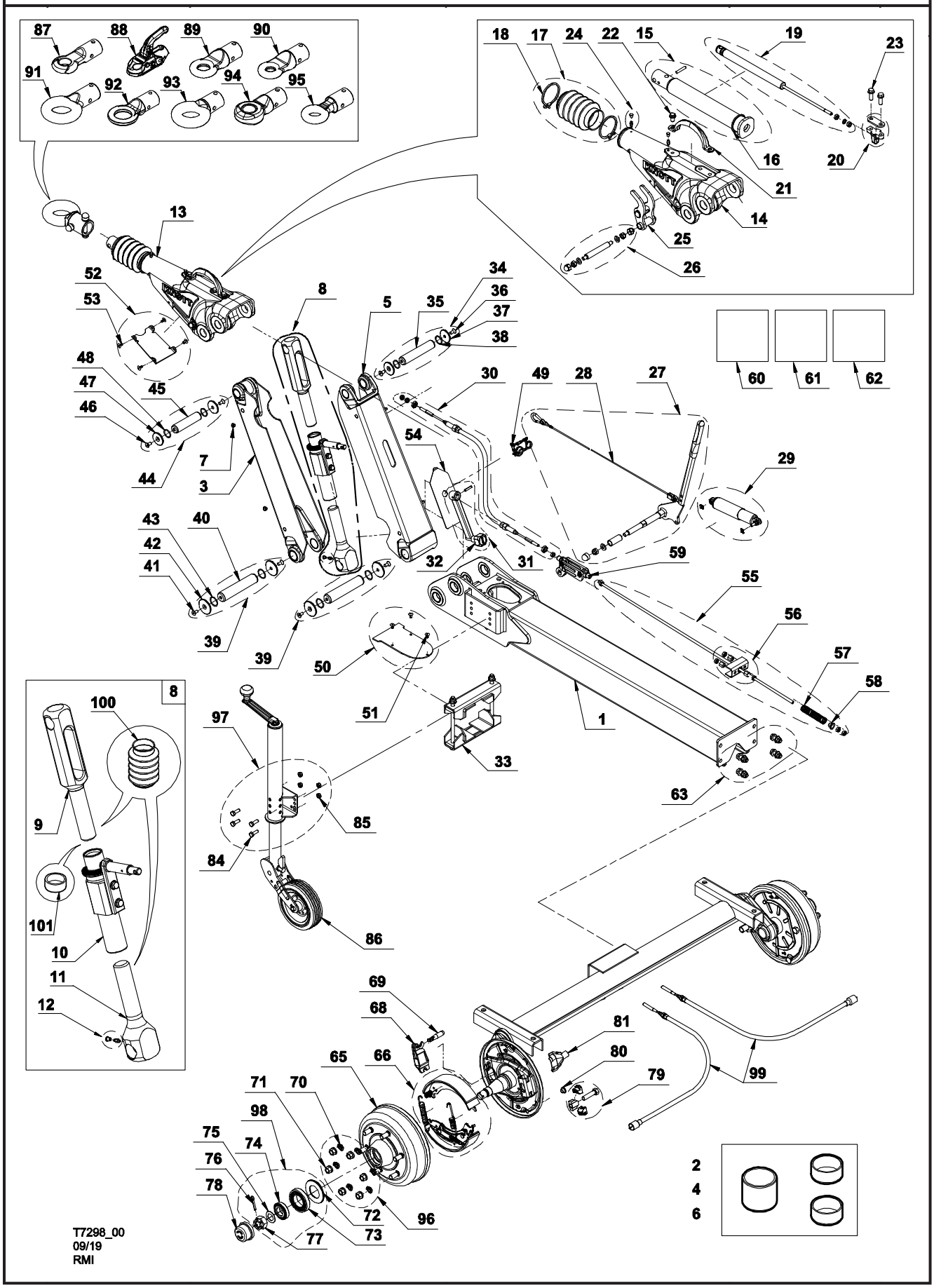
RUNNING GEAR (CONT'D)
(Variable Height)
(Braked - KHD)



RUNNING GEAR (CONT'D)
(Variable Height)
(Braked - KHD)

Item	Part Number	Description	Remarks	Serial Number	Qty
62	46551405	DECAL	(English/German)		1
63	46651380	KIT, CONNECTING			2
64	46670250	BRAKE HUB COMPLETE	W/Ref. 65,71-77 - (order two per machine)		2
65	46670282	HUB ASSEMBLY			1
66	80027980	KIT, BRAKE SHOE	(order one per machine) - (order one per machine)		1
67	46551496	KIT, BRAKE OVERHAUL	W/Ref. 68,69,79,80 - (order one kit per machine) - (order one per machine)		1
68		EXPANDER	NAP - Order Ref. 67		2
69		CONNECTOR	NAP - Order Ref. 67		2
70		LOCKWASHER	NAP - Order Ref. 96		6
71		NUT	NAP - Order Ref. 96		6
72		SPACER	NAP - Order Ref. 98		1
73		BEARING	NAP - Order Ref. 98		1
74		BEARING	NAP - Order Ref. 98		1
75		WASHER	NAP - Order Ref. 98		1
76		PIN	NAP - Order Ref. 98		1
77		LOCKNUT	NAP - Order Ref. 98		1
78	46670252	COVER			1
79		KIT, ADJUSTING	NAP - Order Ref. 67		2
80		COVER	NAP - Order Ref. 67		2
81	46551497	KIT, COVER	W/Ref. 82-83		2
82		COVER	NAP - Order Ref. 81		2
83		CAP	NAP - Order Ref. 81		1
84		BOLT	NAP - Order Ref. 97		4
85	22392260	NUT	NAP - Order Ref. 97 - (M10)		4
86	22182075	JOCKEY WHEEL ASSEMBLY			1
87	22177588	EYE, TOWING	(Ø 40 mm)		1
88	46569661	HITCH, BALL	(50 mm)		1
89	22177687	EYE, TOWING	(Ø 50 mm)		1
90	46551378	EYE, TOWING			1
91	22177620	EYE, TOWING	(Ø 76 mm)		1
92	22207823	EYE, TOWING	(Ø 68 mm)		1

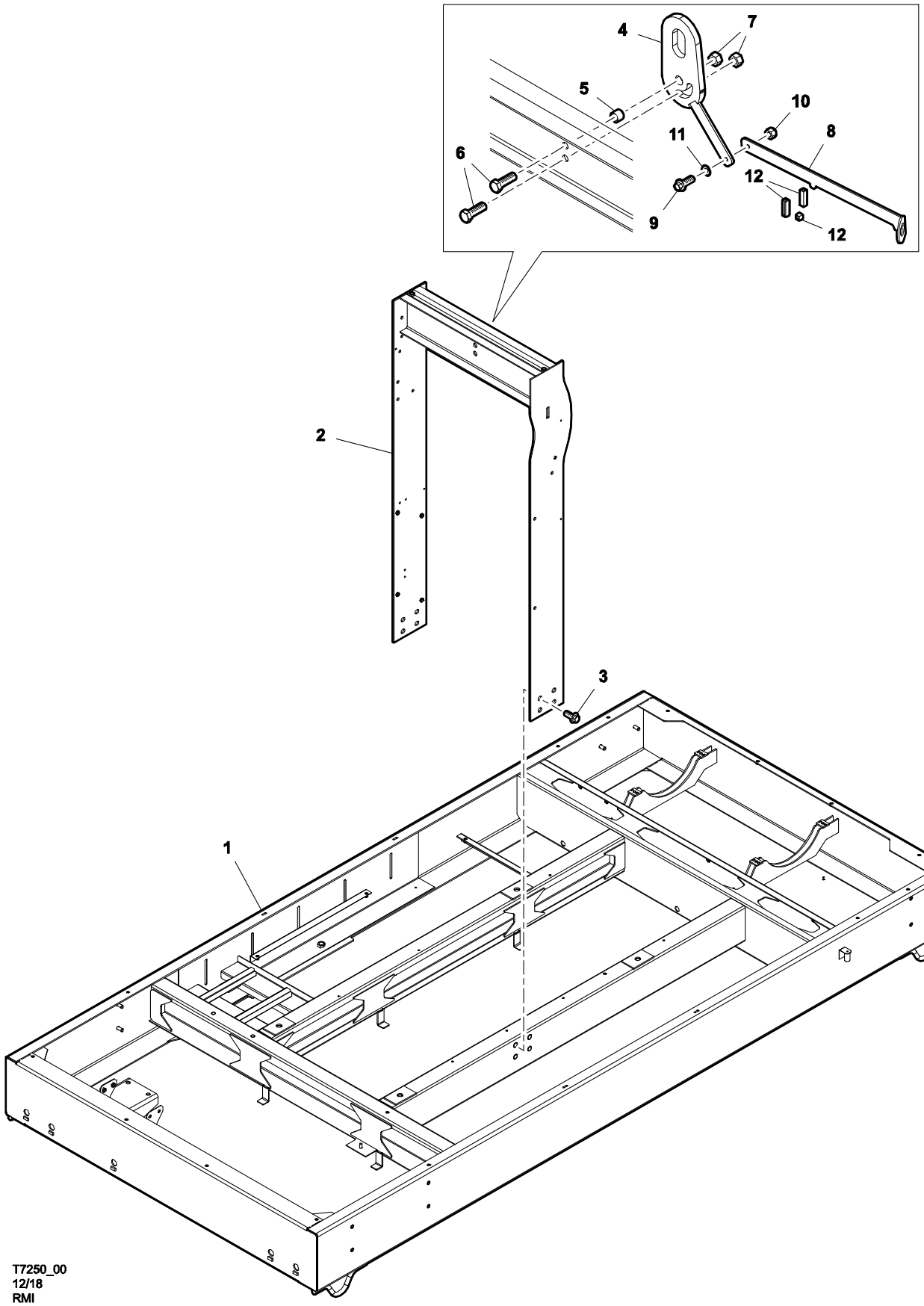
RUNNING GEAR (CONT'D)
(Variable Height)
(Braked - KHD)



RUNNING GEAR (CONT'D)
(Variable Height)
(Braked - KHD)

Item	Part Number	Description	Remarks	Serial Number	Qty
93	46569682	EYE, TOWING	(non-standard) - (Ø 68 mm)		1
94	46569685	EYE, TOWING	(non-standard) - (Ø 50 mm)		1
95	46551424	EYE, TOWING			1
96	46551516	KIT, CONNECTING	W/Ref. 70-71 - (order two per machine)		2
97	46551498	KIT, CONNECTING	W/Ref. 84-85		1
98	46670247	KIT, BEARING	W/Ref. 72-77 - (order two per machine)		2
99	46670283	CABLE, BRAKE			2
100		COVER	NAP - Order Ref. 8		2
101		TUBE	NAP - Order Ref. 8		1

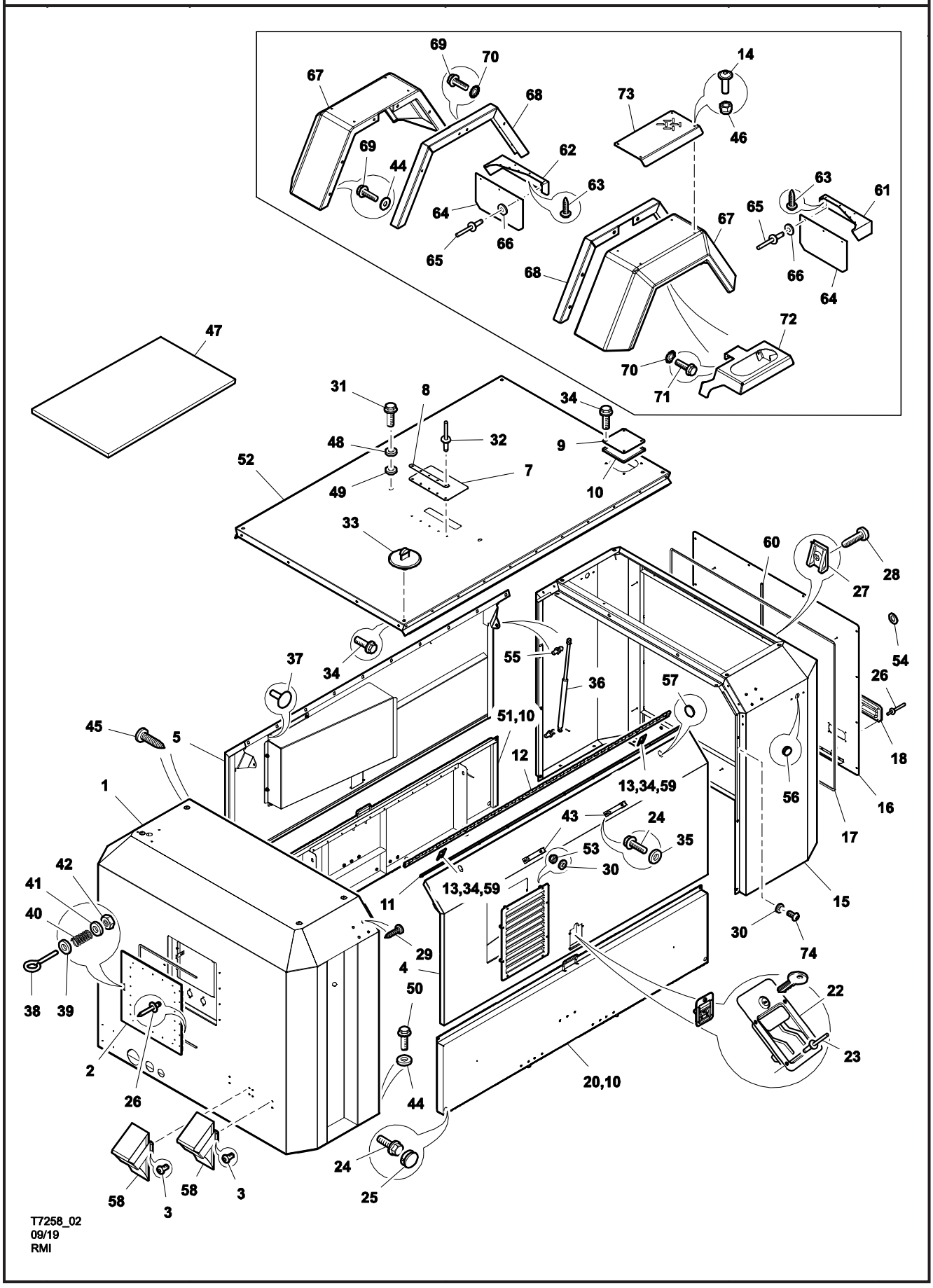
MAIN FRAME



MAIN FRAME

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46707826	FRAME			1
2	46737005	BAIL, LIFTING			1
3	36793040	SCREW	(M16 x 40)		8
4	46753106	EYE			1
5	23114358	SPACER			1
6	96703962	SCREW	(M16 x 50)		2
7	92311695	LOCKNUT	(M16)		2
8	46753107	HANDLE, LIFTING BAIL			1
9	36889608	SCREW	(M8 x 25)		1
10	96704606	NUT			1
11	46502092	WASHER	(M8)		1
12	46502035	PROTECTOR	order as required		x

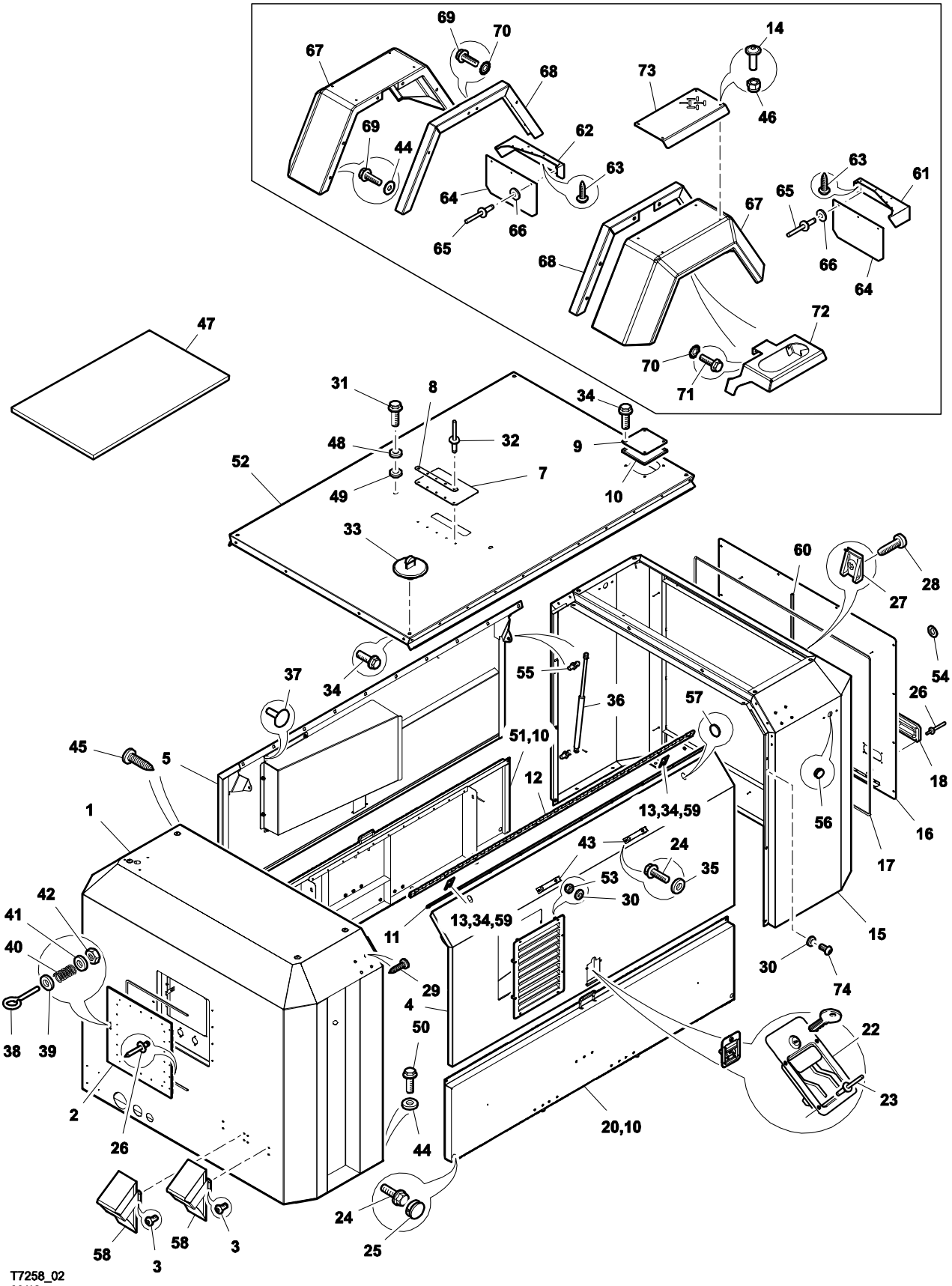
ENCLOSURE



ENCLOSURE

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46723547	ENCLOSURE ASSEMBLY, FRONT	W/Ref. 2		1
1	46704785	ENCLOSURE, BARE			1
2	46641619	DOOR, INSTRUMENT PANEL			1
3	92766690	RIVET	optional		8
4	46723928	DOOR ASSEMBLY, LEFT	W/Ref. 6		1
4	46723405	DOOR, BARE			1
5	46723945	DOOR ASSEMBLY, RIGHT	W/Ref. 6		1
5	46704565	DOOR, BARE			1
6	46624120	AIR INLET, DOOR			1
7	23138464	COVER			1
8	23094683	PLATE			1
9	46753065	COVER			1
10	22716039	SEAL	order as required		x
11	46755985	HOLDER, HINGE			2
12	54639174	HINGE, SIDE DOOR			2
13	46758230	HOLDER, FIXING			4
14	23283419	SCREW	(M6 x 22)		4
15	46723526	ENCLOSURE ASSEMBLY, REAR			1
15	46704705	ENCLOSURE, BARE			1
16	46723527	PANEL			1
17	22716039	SEAL	4,3 m long		1
18	92824010	HANDLE			2
20	46723826	PANEL ASSEMBLY, LEFT			1
20	46704606	PANEL, BARE			1
22	22375877	LATCH			2
22	36794345	CYLINDER, KEY			1
22		KEY, REPLACEMENT	NAP		1
23	36794816	RIVET			8
24	96728480	SCREW	order as required - (M8 x 16)		x
25	92783281	PLUG	order as required		x
26	92271923	RIVET	3/16" x 5/8"		12

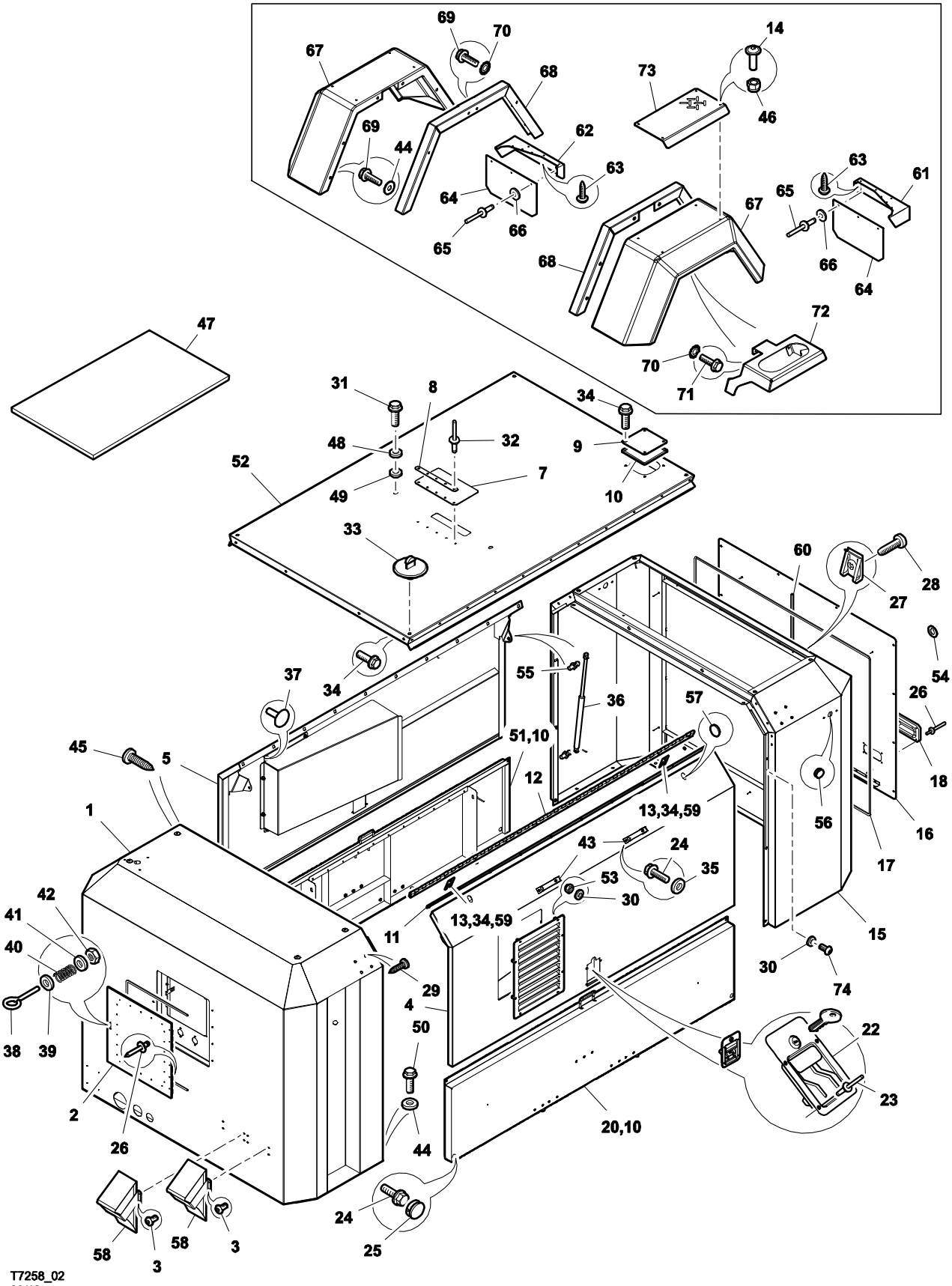
ENCLOSURE (CONT'D)



ENCLOSURE (CONT'D)

Item	Part Number	Description	Remarks	Serial Number	Qty
27	35256452	RECEPTACLE	order as required		x
28	35256429	STUD	order as required		x
29	23367956	PLUG	order as required		x
30	96701396	WASHER			20
31	96737556	SCREW	(M10 x 25)		2
32	22054498	RIVET			15
33	23143506	PLUG			12
34	92184811	SCREW	order as required - (M6 x 12)		x
35	23192651	WASHER	(M8)		16
36	22663173	SPRING, GAS			4
37	46570819	RETAINER	order as required		x
38	35607829	BOLT, EYE			1
39	95935029	WASHER			1
40	35607837	SPRING			1
41	36772028	WASHER	(M7.5)		1
42	95923298	NUT			1
43	46538740	HANDLE			2
44	92304609	WASHER	(M8)		18
45	92890037	PLUG			4
46	92829316	NUT	(M6)		4
47	92949742	FOAM FIELD KIT (with adhesive)	1,9 m x 1,5 m x 25 mm (7' x 5' x 1")		1
47	92949767	FOAM FIELD KIT (with adhesive)	1,9 m x 1,5 m x 50 mm (7' x 5' x 2")		1
47	92949759	FOAM FIELD KIT (with adhesive)	0,95 m x 1,5 m x 25 mm (3' x 5' x 1")		1
47	92949775	FOAM FIELD KIT (with adhesive)	0,95 m x 1,5 m x 50 mm (3' x 5' x 2")		1
47	46592579	FOAM FIELD KIT (no adhesive)	1,9 m x 1,5 m x 50 mm (7' x 5' x 2")		1
47	46592580	FOAM FIELD KIT (no adhesive)	0,95 m x 1,5 m x 50 mm (3' x 5' x 2")		1
48	46556659	WASHER			2
49	46594459	SEAL, FOAM			2
50	92101112	SCREW	(M8 x 25)		16
51	46723806	PANEL ASSEMBLY, RIGHT			1
51	46723385	PANEL, BARE			1

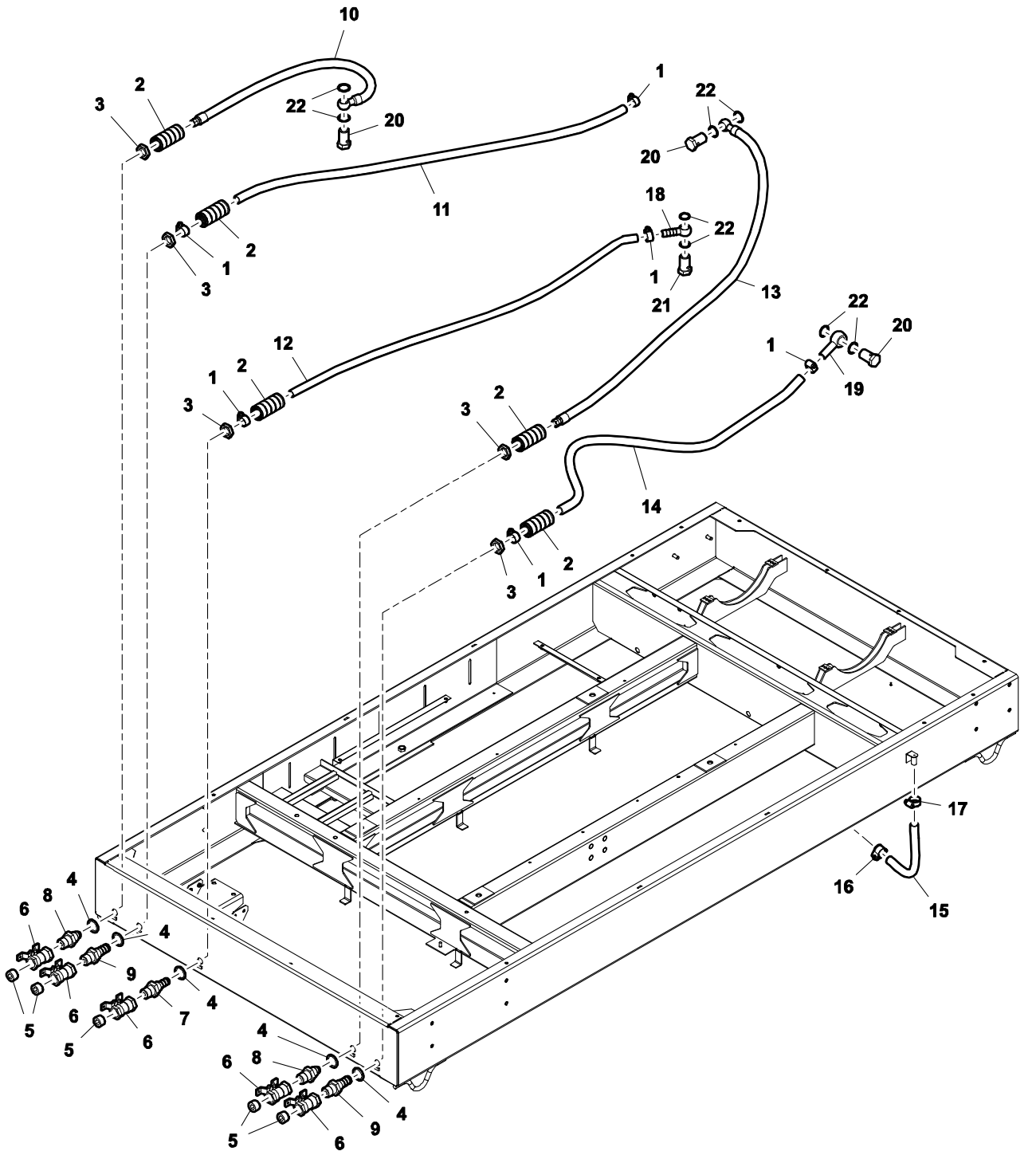
ENCLOSURE (CONT'D)



ENCLOSURE (CONT'D)

Item	Part Number	Description	Remarks	Serial Number	Qty
52	46723766	ENCLOSURE ASSEMBLY, TOP			1
52	46723727	ENCLOSURE, BARE			1
53	92304559	NUT	(M8)		16
54	35256445	WASHER, RETAINING			13
55	35337328	STUD, BALL	(M8)		8
56	46539268	PLUG			2
57	46552221	PLUG			2
58	92899293	WHEEL CHOCK AND HOLDER ASSEMBLY	optional		2
59	96704176	NUT	(M6)		4
60	22068373	SEAL	order as required		x
61	46671617	BRACKET			1
62	46671616	BRACKET			1
63	92789205	SCREW			12
64	46680257	FLAP, RAIN			2
65	46560699	RIVET			6
66	23076656	WASHER	(M6 x 25)		6
67	46666844	MUDGUARD			2
68	46738689	SPACER			2
69	96704408	SCREW	(M8 x 20)		20
70	96745229	WASHER	(M8)		10
71	36889608	SCREW	(M8 x 25)		2
72	46738688	BRACKET			1
73	23283401	COVER			1
74	96745211	SCREW	(M8 x 16)		4

ENCLOSURE
(central drains)



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12/18
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ENCLOSURE
(central drains)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	95220844	CLAMP			6
2	46551700	PROTECTOR	order as required		x
3	46700576	NUT	(M24 x 1.5)		5
4	46735450	O-RING			5
5	95947149	PLUG			5
6	36777399	VALVE, BALL	3/4" NPT		5
7	46748805	CONNECTOR			1
8	46748806	CONNECTOR	3/4" - 16 UNF - 3/4" NPT		2
9	46748807	CONNECTOR	19MM - 3/4" NPT		2
10	23122088	HOSE, OIL SEPARATOR	bulk - sold per metre		1
11	23174980	HOSE	bulk - sold per metre - (20 mm ID)		1
12	35326578	HOSE	bulk - sold per metre		1
13	46668265	HOSE	bulk - sold per metre		1
14	23190515	HOSE, FUEL	bulk - sold per metre		1
15	23028574	HOSE	bulk - sold per metre		1
16	46501862	CLAMP			1
17	46502795	CLAMP			1
18	23190549	FITTING, BANJO			1
19	23190556	BANJO STRAIGHT			1
20	23174923	BOLT, BANJO			3
21	23174949	BOLT, BANJO			1
22	23174931	WASHER, COPPER			8

DECALS AND DOCUMENTATION


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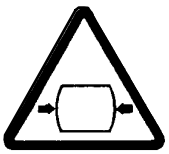
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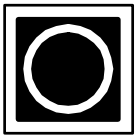
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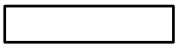
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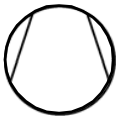
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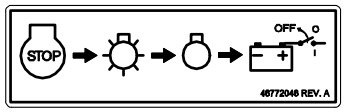
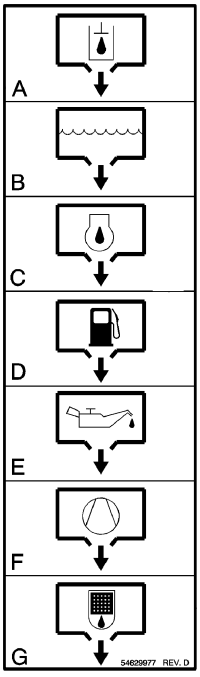


19



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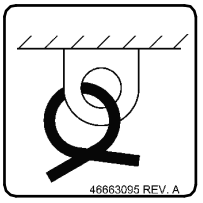

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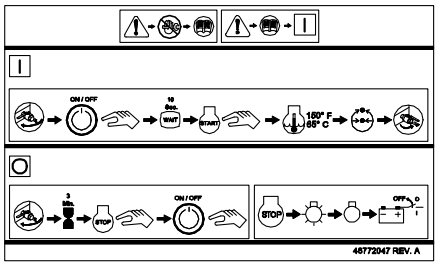

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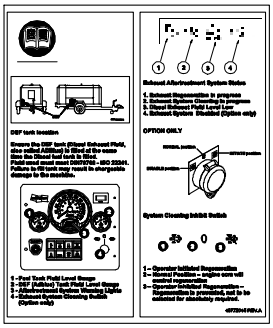
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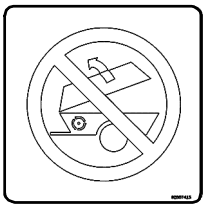
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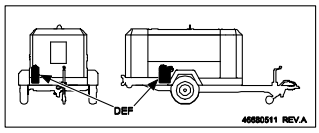

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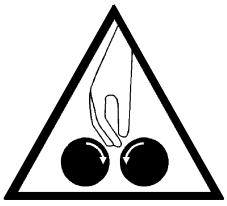
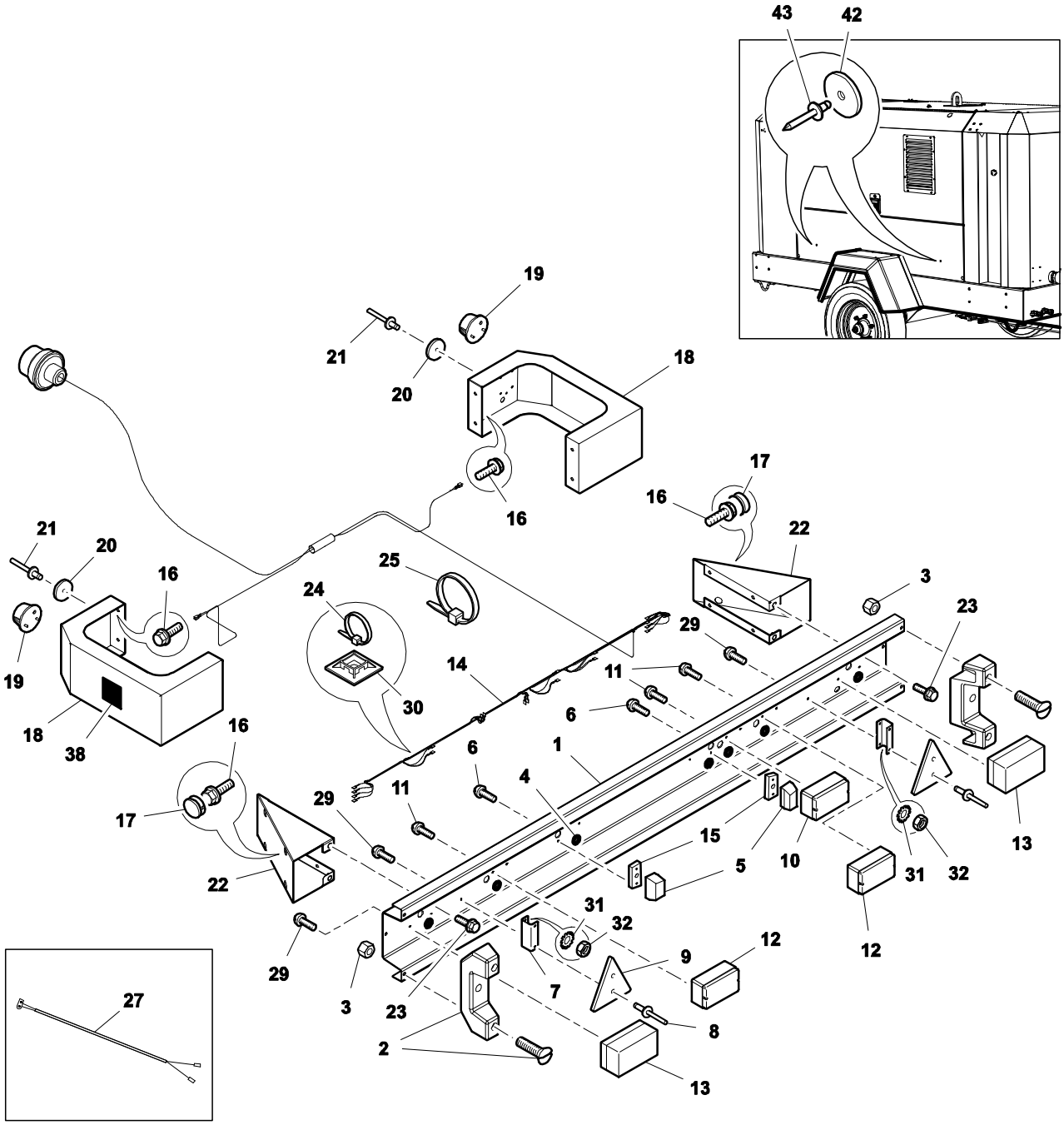

28

T7254_01
09/19
RMI

DECALS AND DOCUMENTATION

Item	Part Number	Description	Remarks	Serial Number	Qty
1	92930593	DECAL, ELECTRIC SHOCK			1
2	92867530	DECAL, HOT SURFACE			1
3	92930601	DECAL, CORROSIVE SUBSTANCE			1
4	92930585	DECAL, PRESSURISED VESSEL			1
5	92930668	DECAL, NO MAINT/READ MANUAL			1
6	93165959	DECAL, ROTATING FAN			3
7	92867449	DECAL, REFER TO HANDBOOK			2
8	92930650	DECAL, EMERGENCY STOP			2
9	46653481	DECAL, PRESSURE	(6 BAR)		2
10	92930627	DECAL, GENERAL WARNING			2
11	46556990	DECAL, ULTRA LOW SULFUR DIESEL FUEL			1
12	93190486	DECAL, COOLANT LEVEL			1
13	93171262	DECAL, LIFT/TIE POINT			2
14	93465383	DECAL, SERVICE VALVE			1
15	89298491	DECAL, PROTEC OIL			1
16	92976042	DECAL, EXHAUST GAS DISCHARGE			1
17	93194413	DECAL, DO NOT STAND			1
18	93171288	DECAL, COOLANT FILL			2
19	46772046	DECAL, BATTERY DISCONNECT			1
20	54629977	DECAL, ISO CENTRAL DRAIN			1
21	46772047	DECAL, SINGLE MODE			1
22	46663095	DECAL, TIE DOWN			4
23	46539870	DECAL, HOT LIQUID SYMBOL			1
24	46772045	DECAL, DEF TANK INFORMATION			1
25	92867415	DECAL, CLOSE DOORS			1
26	46680511	DECAL, DEF TANK LOCATION			1
27	46777685	DECAL, STAGE 5			1
28	23047582	DECAL, CRUSH HAZARD			2

OPTION - BUMPER LIGHTS

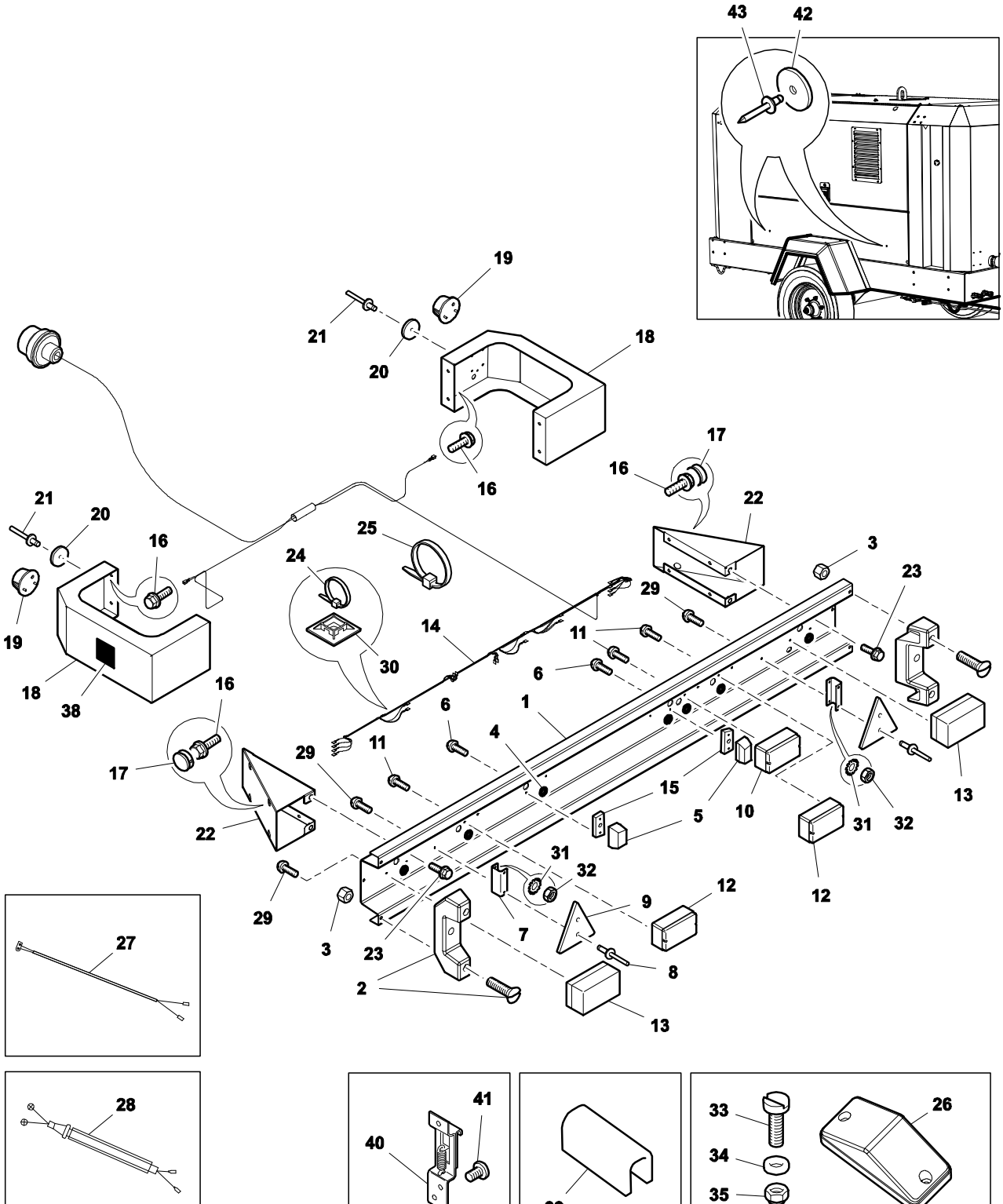


T7269_00
02/19
RMI

OPTION - BUMPER LIGHTS

Item	Part Number	Description	Remarks	Serial Number	Qty
1	23205529	BUMPER			1
2	54614870	BUMPER, END STOP			2
3	96704606	NUT			6
4	46500021	GROMMET			7
5	92901230	LAMP, REGISTRATION PLATE			2
6	23251705	SCREW	(M5 x 35)		4
7	22073183	BRACKET			2
8	22054498	RIVET			4
9	92721331	REFLECTOR, RED			2
10	23212863	LAMP, REVERSE			1
11	96705728	SCREW	(M5 x 16)		6
12	93477388	LAMP, FOG			2
13	92975507	LAMP			2
14	23205537	HARNESS			1
15	46540217	PLINTH			2
16	96728480	SCREW	(M8 x 16)		16
17	92783281	PLUG			8
18	46666896	POD, FRONT SIDE			2
19	92121250	LIGHT, FRONT SIDE			2
20	92085729	REFLECTOR, WHITE			2
21	92766690	RIVET			8
22	23207897	BRACKET BUMPER			2
23	92176114	SCREW	(M12 x 20)		4
24	92281427	TIE, CABLE			18
25	92861640	TIE, CABLE	(350 mm)		2
26	46552110	LAMP, END OUTLINE			2
27	46552118	HARNESS, OUTLINE LAMP			2
28	54477740	HARNESS, FRONT SIDE			1
29	46556647	SCREW	(M5 x 12)		12
30	93524007	PLATE, CABLE TIE			2
31	46556648	WASHER	(M5)		4

OPTION - BUMPER LIGHTS (CONT'D)

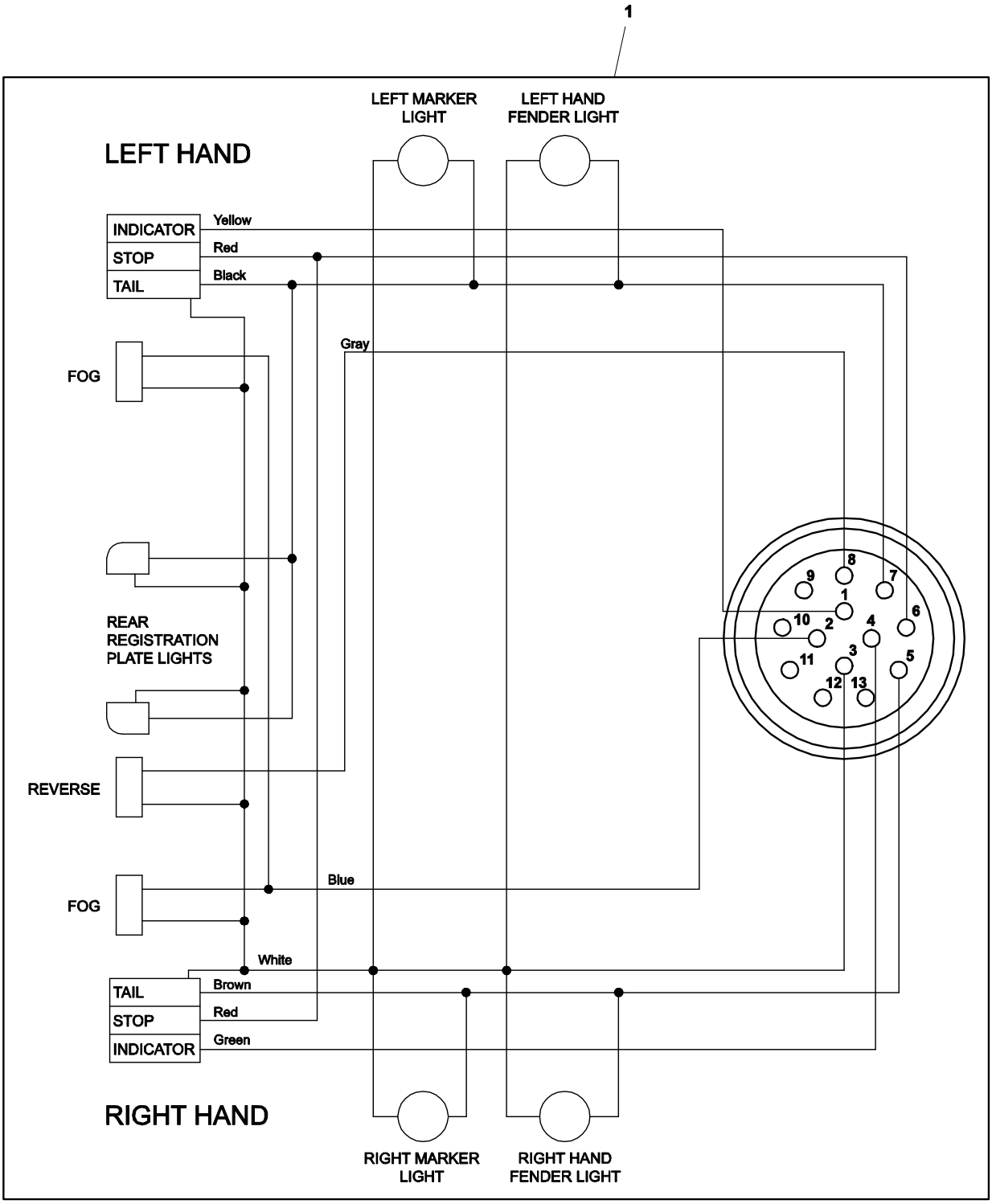


T7269_00
02/19
RMI

OPTION - BUMPER LIGHTS (CONT'D)

Item	Part Number	Description	Remarks	Serial Number	Qty
32	96705132	NUT	(M5)		12
33	92050376	SCREW	(M4 x 16)		4
34	92340439	WASHER	(M4)		4
35	46541223	NUT	(M4)		4
36	46663697	BUMPER LIGHT OPTION FIELD KIT	W/Ref. 1-32		1
37	23205511	BUMPER ASSEMBLY	W/Ref. 1-15		1
38	46553802	DECAL, DO NOT USE AS STEP			2
39	22293419	SEAL, U-PROFILE	0,05 m long		2
40	92962547	CLIP, NUMBER PLATE	optional		2
41	92281369	RIVET	optional - 5/32" x 1/2"		6
42	92121243	REFLECTOR, AMBER			4
43	92271915	RIVET	3/16" x 1/2"		4

OPTION - BUMPER LIGHTS

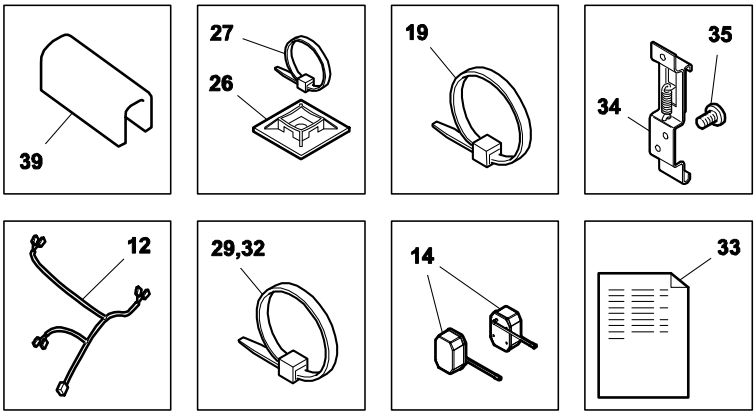


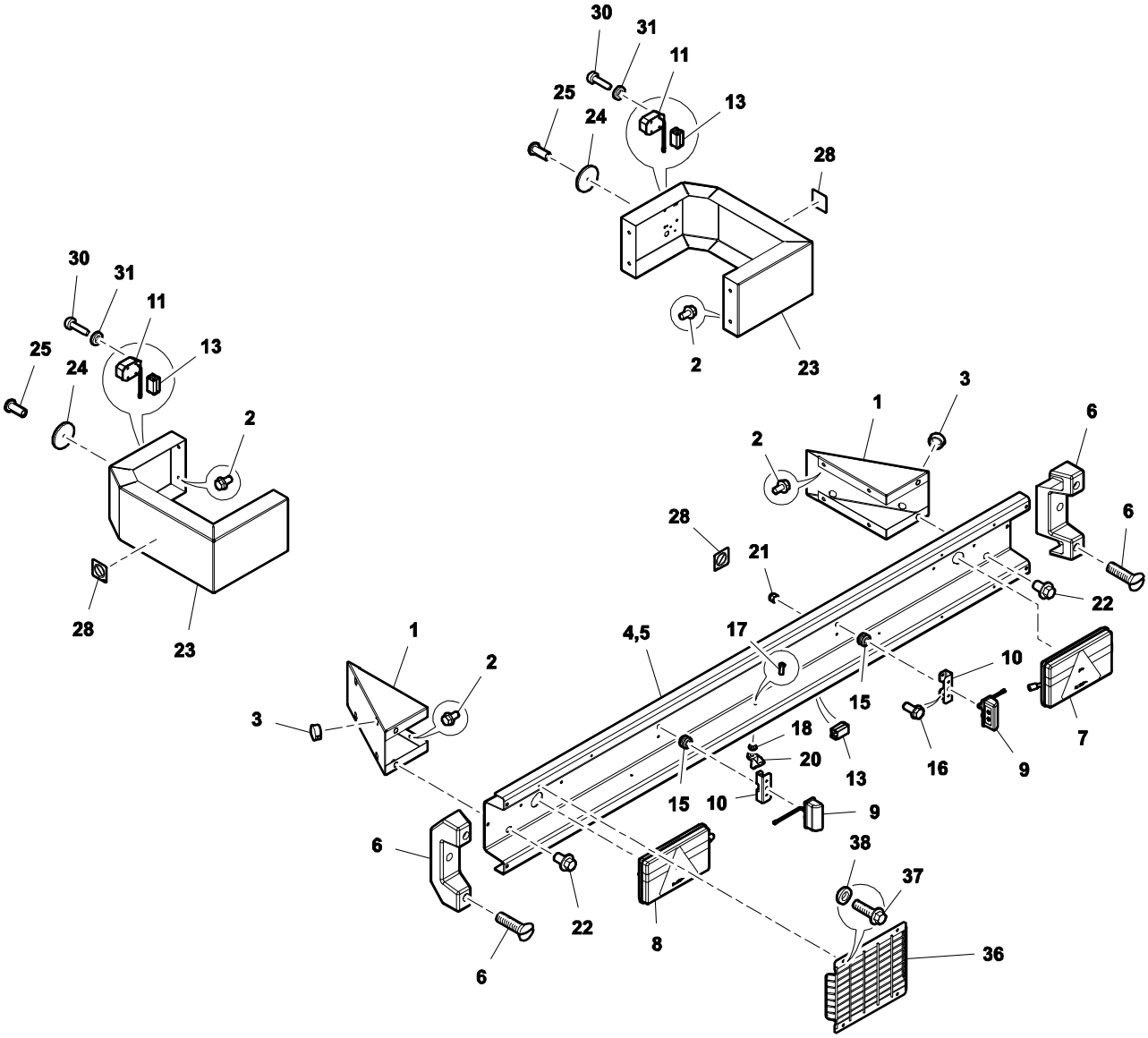
T7270_00
12/18
RMI

OPTION - BUMPER LIGHTS

Item	Part Number	Description	Remarks	Serial Number	Qty
1	23205537	HARNESS			1

OPTION - BUMPER LIGHTS (LED)

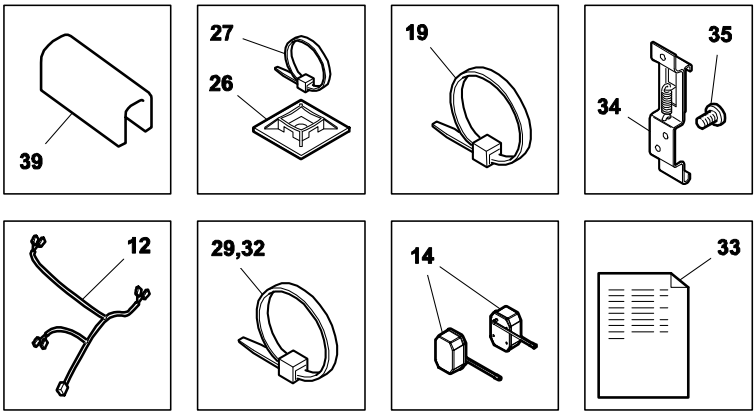


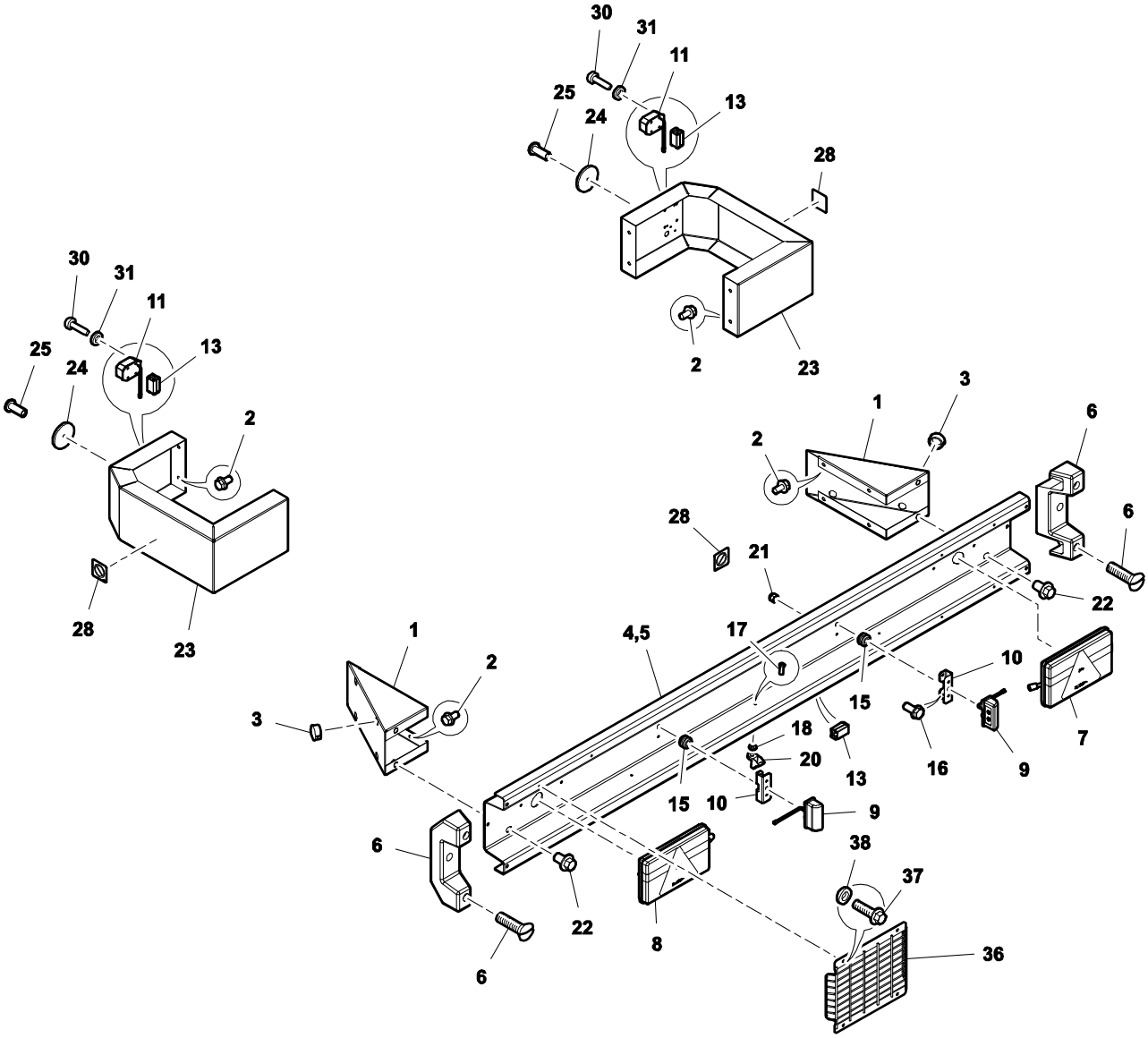


OPTION - BUMPER LIGHTS (LED)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46706385	BRACKET			2
2	96728480	SCREW	(M8 x 16)		16
3	92783281	PLUG			8
4	46704345	BUMPER ASSEMBLY	W/Ref. 5 - 21		1
5	46704346	BUMPER			1
6	54614870	BUMPER, END STOP			2
7	46698055	LAMP, REAR RIGHT			1
8	46698098	LAMP, REAR LEFT			1
9	46698056	LAMP, REGISTRATION PLATE			2
10	46698058	BRACKET			2
11	46698057	LAMP, FRONT SIDE			2
12	46698115	HARNESS, LED LIGHTS			1
13	46699885	CONNECTOR, FLAT CABLE			7
14	46705745	LAMP, LED			2
15	54580139	GROMMET			2
16	92096015	SCREW	(M6 x 16)		4
17	92271923	RIVET	3/16" x 5/8"		3
18	92304583	WASHER	(M5)		3
19	92434315	TIE, CABLE			5
20	92803790	BASE, CABLE TIE			5
21	92829316	NUT	(M6)		21
22	92176114	SCREW	(M12 x 20)		4
23	46666896	POD, FRONT SIDE			2
24	92085729	REFLECTOR, WHITE			2
25	92271915	RIVET	3/16" x 1/2"		2
26	93524007	PLATE, CABLE TIE			2
27	92281427	TIE, CABLE			20
28	46553802	DECAL, DO NOT USE AS STEP			3
29	92434315	TIE, CABLE			6
30	46707125	SCREW	(M3.9 x 16)		4
31	92340439	WASHER	(M4)		4

OPTION - BUMPER LIGHTS (CONT'D)
(LED)





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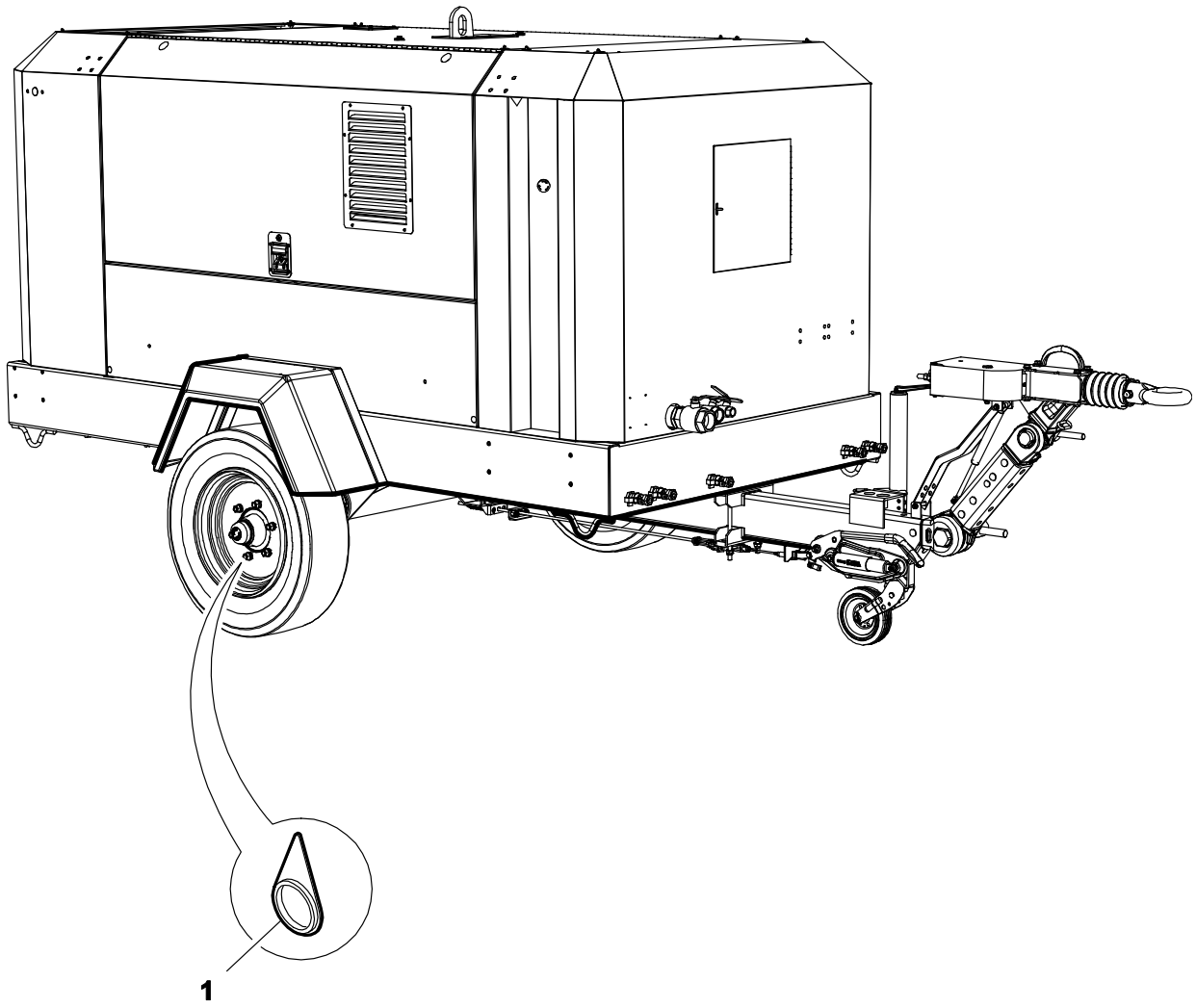
03/19
RMI

OPTION - BUMPER LIGHTS (CONT'D)
(LED)

Item	Part Number	Description	Remarks	Serial Number	Qty
32	92861640	TIE, CABLE	(350 mm)		2
33	46706089	INSTRUCTION, CANOPY MOD			1
34	92962547	CLIP, NUMBER PLATE	optional		2
35	92281369	RIVET	optional - 5/32" x 1/2"		6
36	46706327	GRILLE	optional		2
37	22538508	SCREW	optional		8
38	92341981	WASHER	optional		8
39	22293419	SEAL, U-PROFILE	0.1 m long		1

OPTION - WHEEL NUT INDICATORS



T7293_00
02/19
RMI

OPTION - WHEEL NUT INDICATORS

Item	Part Number	Description	Remarks	Serial Number	Qty
1	23128515	INDICATOR, WHEEL NUT	(24 mm)		12

DOOSAN

Portable Power

Revision History

Rev.	EC Number	Comments
A		Original release

DOOSAN®

Portable Power

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