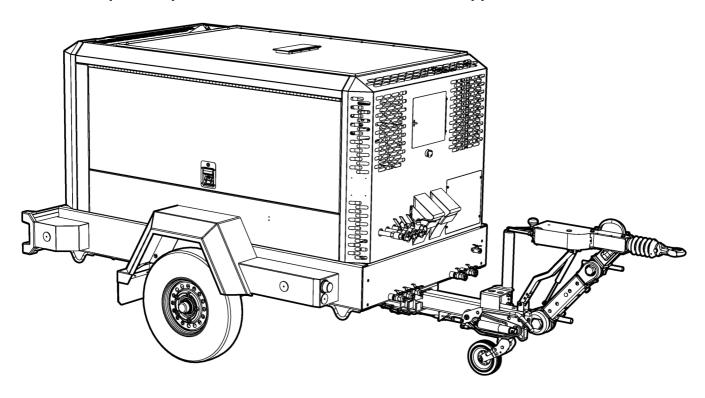


REPAIR AND MAINTENANCE INFORMATION (RMI) Compressor

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.



PA10.12v (L45) PA14.12v (L46)



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.

Serial No: 661501->

This manual is applicable for trailers under the following Type Approval numbers: e1*2007/46*1572*06



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1	CONTENTS

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ABBREVIATIONS & SYMBOLS

Contact the company for serial number

->#### Up to Serial No. ####-> From Serial No.

Not illustrated

† Option

WDG Generator option

AR As required

HA High ambient machineS.R.G. Site running gear

H.R.G. High speed 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

It Lithuanian

Iv 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) A unique specification for USA/Canada is adopted and tailored to the territory.

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.

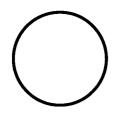
Use of the machine fitted with non approved components / lubricants / fluids.

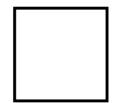
Use of the machine with safety or control components missing or disabled.

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

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GRAPHIC FORM AND MEANING OF ISO SYMBOLS







Prohibition I	Mand	latory
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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.

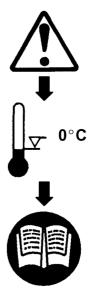




WARNING - Maintain correct tyre pressure. (Refer to the GENERAL INFORMATION section of this manual).



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 air hose is attached.



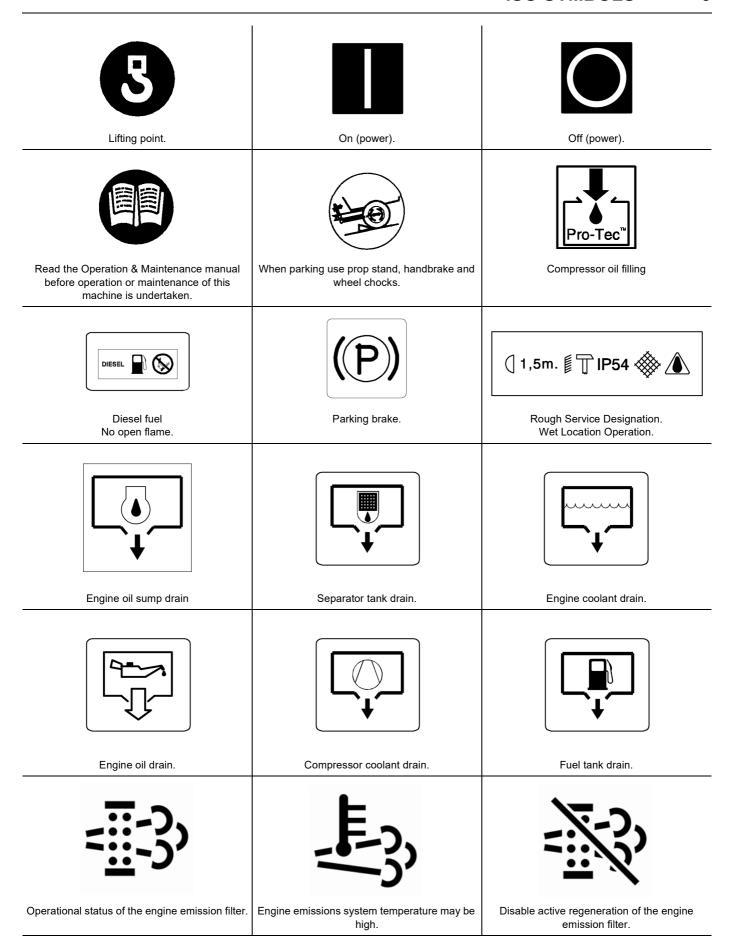
Use fork lift truck from this side only.

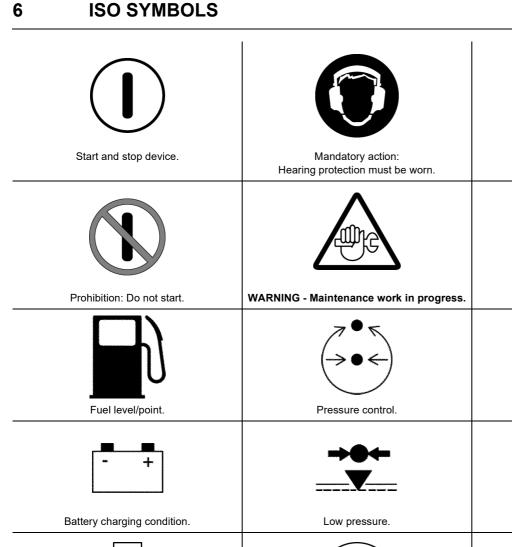


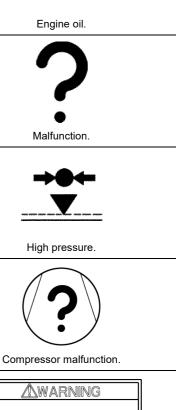
Emergency stop.



Tie down point







Lashing point (Tie down).



Engine malfunction.

Low engine oil pressure.

Ultra low sulphur diesel fuel only (15ppm sulphur maximum).



High engine temperature.

High compressor temperature.

Low DEF and fuel warning beacon.

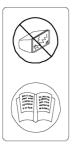


DAILY DRAIN OF RAINWATER CHECK CORRECT ANGLE OF TILT

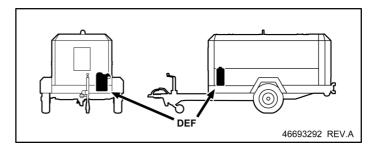
WARNING - Daily drain of rainwater. Check

correct angle of tilt.

DEF drain.







DEF tank position.

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 and 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 no block the cooling air inlets.

Use hearing protectors when the machine is running.

Ensure that sufficient and safe ventilation is provided during operation of the machine, as the machine is powered by an internal combustion engine.

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 arrestors, 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.

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 PLUG STARTING AID 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 receiverseparator 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:

- · 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 physician if large amounts of compressor lubricant are ingested.

Consult a physician 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.

Never operate the engine of this machine inside a building without adequate ventilation. Avoid breathing exhaust fumes when working on or near the machine.

This machine may include such materials as oil, diesel fuel, antifreeze, brake fluid, oil/air filters and batteries which may require proper disposal when performing maintenance and service tasks. Contact local authorities for proper disposal of these materials.

Battery

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.

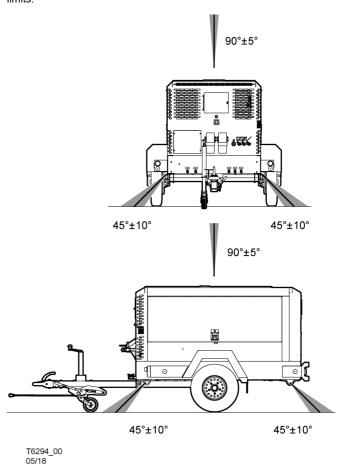
Do not remove the pressure cap from a HOT radiator. Allow radiator to cool down before removing pressure cap.

Generator sets

The generator set is designed for safety in use. However, the responsibility for safe operation rests with those who install, use and maintain it. The following safety precautions are offered as a guide, which, if conscientiously followed, will minimise the possibility of accidents throughout the useful life of this equipment.

Transport

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

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 permissable 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.

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 their adjustment

The legal requirements for the joint operation of the breakaway cable and the safety chains can be different in different countries. Always check that you meet the relevant legal requirements of the country in which the machine is used. 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.
- b) 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.

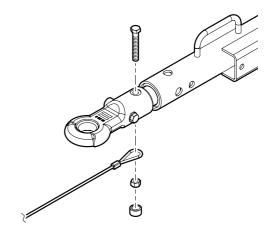
Where brakes and safety chains are fitted:

- a) Loop the chains onto the towing vehicle using the towing vehicle hitch as an anchorage point, or any other point of similar strength.
- b) 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.

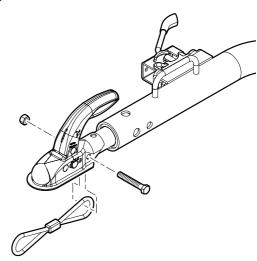
Where breakaway cable only is fitted (un-braked trailer):

- a) Loop the end of the cable around the towing vehicle hitch and secure with the spring clip, or any other connection point on the towing vehicle intended for these purposes.
- b) When adjusting the breakaway cable there should be sufficient free length in the cable to allow normal articulation, whilst also being short enough to prevent the tow-bar from touching the ground in the event of an accidental separation of the towing vehicle from the trailer.

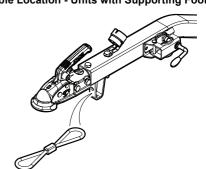
Breakaway Cable Location - Units with Towing Eye



Breakaway Cable Location - Units with Ball Hitch



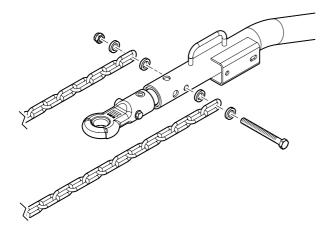
Breakaway Cable Location - Units with Supporting Foot



Where safety chains only are fitted:

- a) Loop the chains onto the towing vehicle using the towing vehicle hitch as an anchorage point, or any other point of similar strength.
- b) 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 tow-bar from touching the ground in the event of an accidental separation of the towing vehicle from the trailer.

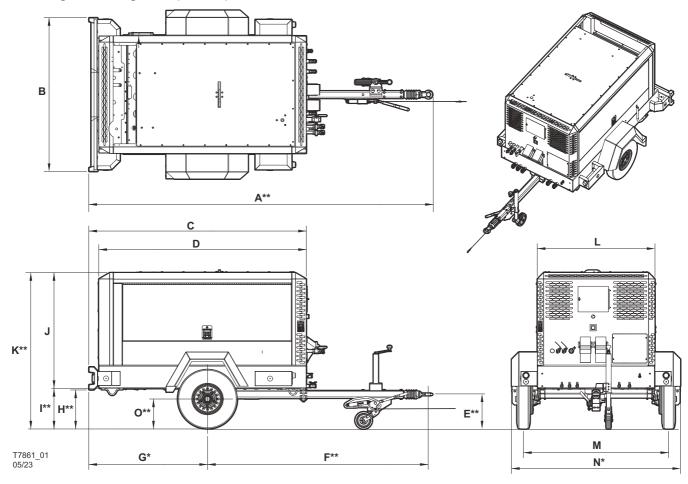
Safety Chain Location



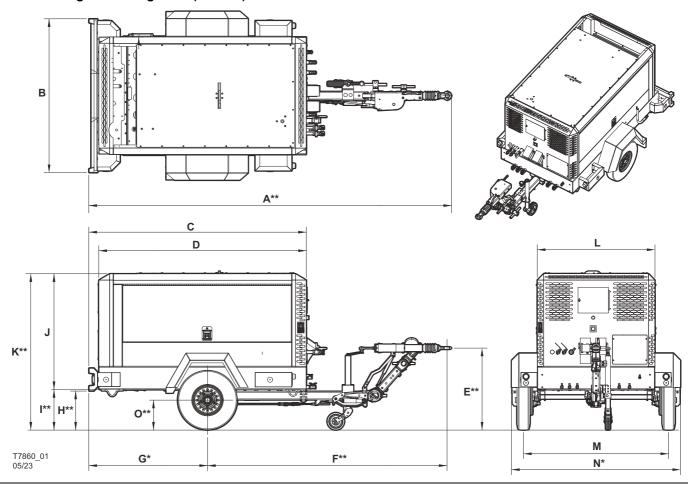
Where breakaway cable or safety chains are not fitted:

- a) In the case the breakaway cable or safety chains are not assembled, lost or misplaced, always check the legal requirements of the country in which the machine is used. If required, then make sure that suitable breakaway cables or safety chains that meets the legal requirement are connected and used. In some countries the use of this device is mandatory for un-braked trailers.
- b) Connect this device according to the above procedures.

Fixed Height Running Gear (Braked)



Variable Height Running Gear (Braked)



	DIMENSIONS															
MODEL	Α	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	Р
Fixed Height Braked	4003 MIN 4060 MAX	1798	2541	2424	400	2592 MIN 2609 MAX	1375	435	460	1370	1830	1374	1692	1975	350	-
Variable Height Braked	4220 MIN 4443 MAX	1798	2541	2424	405 MIN 930 MAX	2791 MIN 3014 MAX	1375	435	460	1370	1830	1374	1695	1975	350	-
				А	LL DIMENS	IONS IN ML	LIMET	RES								
	Dimensions marked with * are subject to a 10mm tolerance															
		[Dimens	ions n	narked with	** are subje	ect to a	40mm	tolera	nce						

FIXED HEIGHT RUNNING GEAR Braked version

Working weight. 2410 kg (5313 Lbs)

Maximum weight. 2700 kg (5952 Lbs)

Maximum horizontal towing force. 26,9 kN (5931 Lbs)

Maximum vertical coupling load (nose weight). 150 kg (331 Lbs)

VARIABLE HEIGHT RUNNING GEAR Braked version

Working weight.	2480 kg (5467 Lbs)
Maximum weight.	2700 kg (5952 Lbs)
Maximum horizontal towing force. Maximum vertical coupling load	27 kN (5953 Lbs)
(nose weight).	150 kg (331 Lbs)

WHEELS AND TYRES

Number of wheels. $2 \times 5.5 J \times 16,0$ ET-5 (6 bolts) Tyre size. 225/75 R16C Tyre pressure. 5,25 bar (76 psi)

TOWING SPEED

Maximum towing speed. 100 km/h (62 mph)

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

<u>MAINTENANCE</u>									
	Initial 500 miles /850 km	Daily	Weekly	Monthly	3 Months 500 hrs	6 Months 1000 hrs	12 Months 2000 hrs		
*Brake linkage	С				С				
*Brakes	С				С				
*Lights (running, brake, & turn)		CBT							
*Pintle Eye Bolts		CBT							
*Tire Pressure and Condition			С						
*Wheel Lug Nuts				С					
*Running gear linkage				G/C					
*Running gear bolts (1)					С				
*Wheels (Bearings, Seals, etc.)						С	G/C		

^{*} Disregard if not appropriate for this particular compressor

(1) 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

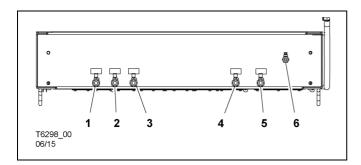
G/C = Grease and check

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 Bobcat dealer for more information or assistance in determining the optimum intervals for your application.

DRAIN LOCATIONS



- 1. Separator tank drain.
- 2. Oil cooler drain.
- 3. Engine oil sump drain.
- 4. Engine coolant drain (radiator).
- 5. Fuel tank drain.
- 6. DEF 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. Place the empty container underneath the drain outlet and open the valve using the tool provided. 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*.

In addition to periodic inspections, many of the components in these units require periodic servicing to provide maximum output and performance. Servicing may consist of pre-operation and postoperation procedures to be performed by the operating or maintenance personnel. The primary function of preventive maintenance is to prevent failure, and consequently, the need for repair. Preventive maintenance is the easiest and the least expensive type of maintenance. Maintaining your unit and keeping it clean at all times will facilitate servicing.

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.

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.
- · battery cables are disconnected.

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 MidPort diagnostic display codes table for a listing of shutdown conditions.

RUNNING GEAR/WHEELS

Check the wheel nut torque 30 kilometres (20 miles) 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 frame 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.

RUNNING GEAR WHEEL BEARINGS

Wheel bearings should be packed with heavy duty wheel bearing grease every 6 months.

Wheel bearings should be greased per the Maintenance Schedule in this manual. The type of grease used should conform to specifications below:

Grease

Thickener Type Lithium Complex

Dropping Point 215°C (419°F) Minimum

Consistency NLGI No.2

Additives EP, Corrosion & Oxidation Inhibitors

Viscosity Index 80 Minimum

Axles with E-Z lube feature can be periodically lubricated without removing the hubs from the axle. This feature consists of axle spindles that have been fitted with grease fitting in their ends. When grease is pumped into it, it is channeled to the inner bearing and then flows back to the outer bearing, and then back out of the grease cap.

TYRES/TYRE PRESSURE

See the GENERAL INFORMATION section of this manual.

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.

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

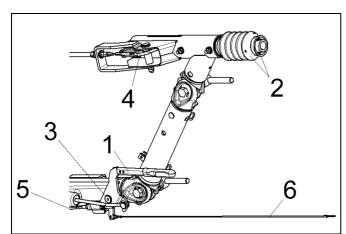
ADJUSTING THE OVERRUN BRAKING SYSTEM (KNOTT RUNNING GEAR)

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:

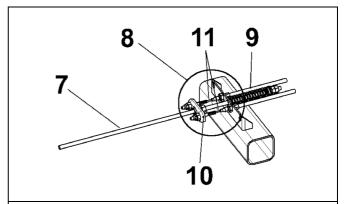
During the adjustment procedure always start with the wheel brakes.

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.

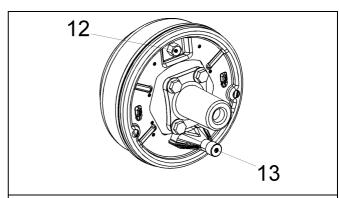


- 7. Brake linkage
- 8. Equalisation assembly
- 9. Compression spring
- 10. Equaliser plate
- 11.Cable

CAUTION: The compression spring [9] must only be lightly pretensioned 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. $\frac{1}{2}$ 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 fasteners 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 fasteners on the transmission system (cables, brake equalisation system and linkage)

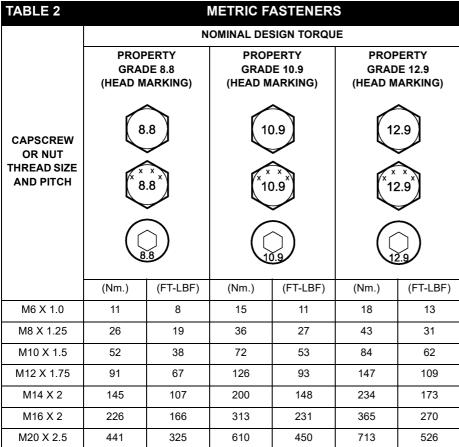
Apply the handbrake while rolling the machine forward, travel of the handbrake lever up to 2 /₃ of maximum is allowed.

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.

TORQUE VALUES

TABLE 1		INCH FA	STENERS		
,		NOMINAL DES	-	J249	9 5 1 4 8
	GRADE 5		GRADE 8		(10) (6) (2) (3) (7)
	(HEAD IV	IARKING)	(HEAD N	IARKING)	TYPICAL RECTANGULAR TORQUE PATTERN
CAPSCREW OR NUT THREAD SIZE AND PITCH					3 2
				TYPICAL SQUARE TORQUE PATTERN	
					6 7
	(Nm.)	(FT-LBF)	(Nm.)	(FT-LBF)	
1/4 - 20	11	8	16	12	(4) (3)
5/16 - 18	24	17	33	25	
3/8 - 16	42	31	59	44	
7/16 - 14	67	49	95	70	(8) (5)
1/2 - 13	102	75	144	106	2
9/16 - 12	148	109	208	154	TYPICAL CIRCULAR TORQUE PATTERN
5/8 - 11	203	150	287	212	
3/4 - 10	361	266	509	376	



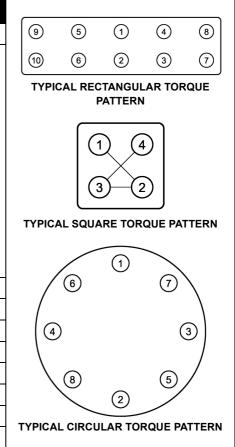
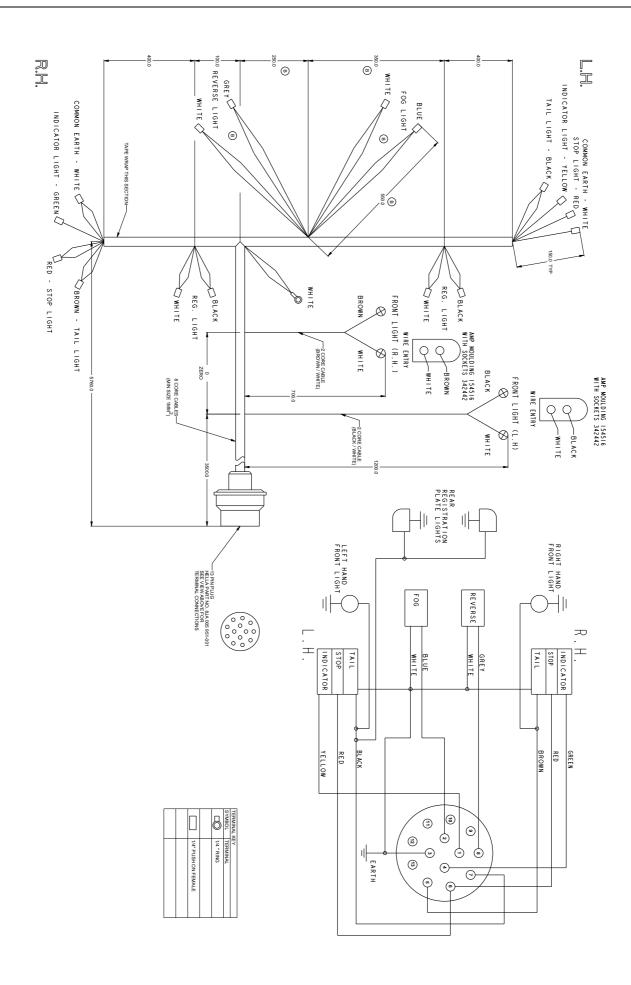


TABLE 3	WHEEL TORQUE	CHART		
Wheel Torque Chart	- Inch	Wheel Torque	Chart - Metric	
1/2" lug nuts	Torque (Ft-Lbs)		Torque (N-m)	Torque (ft-Lbs)
13" Wheel	80-90			
15" Wheel	105-115	M12 Bolts	85-95	62-70
16" Wheel	105-115	M14 Bolts	145-155	107-115
16.5" Wheel	105-115	M16 Bolts	175-185	129-137
5/8" Lug Nuts		M18 Bolts	205-215	151-159
16" Wheel	190-210			
17" Wheel	190-210			
9/16" Clamp nuts/Demountable Wheels				
14.5" Wheel	105-115			



Bumper Lights Wiring Diagram 46501565

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 Bobcat parts for your compressor.

NOTICE

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

Bobcat 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 Bobcat Parts Department with the unit serial number for assistance with these special parts.

DESCRIPTION

The illustrated parts breakdown illustrates and lists the various assemblies, subassemblies 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.
- Locate the area or system of the compressor in which the desired part is used and find illustration page number.
- 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:

- 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 Bobcat 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

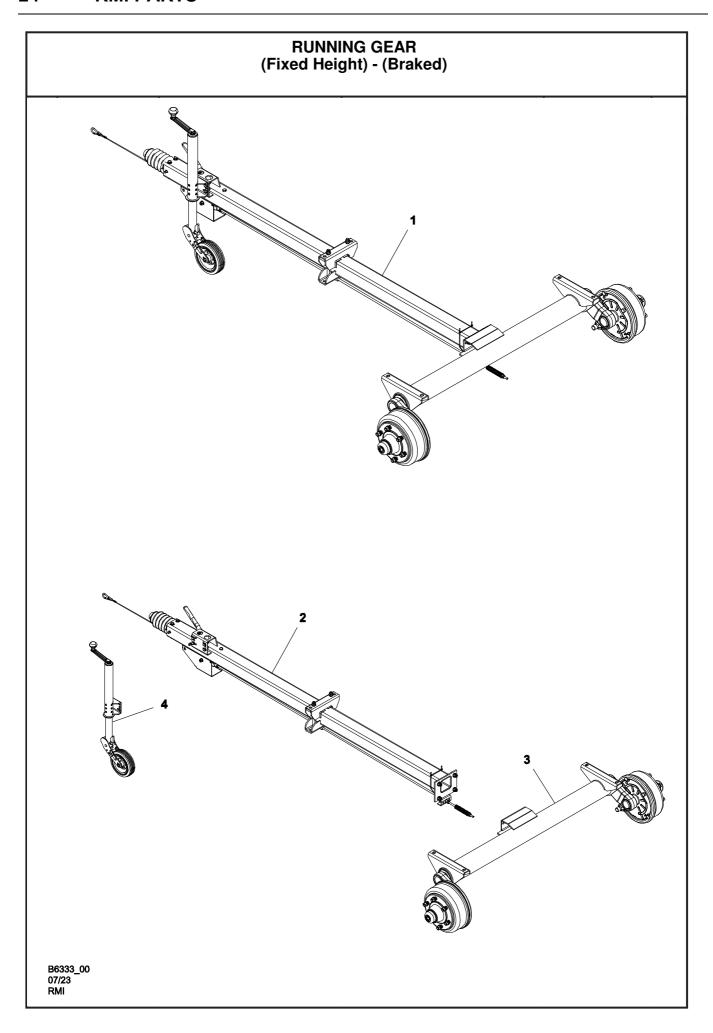
For parts, service or information regarding your local distributor (Europe, Middle East, Africa) please contact:

Facility: Website:

Doosan Bobcat EMEA s.r.o. (DBEM), https://www.bobcat.com/eu/

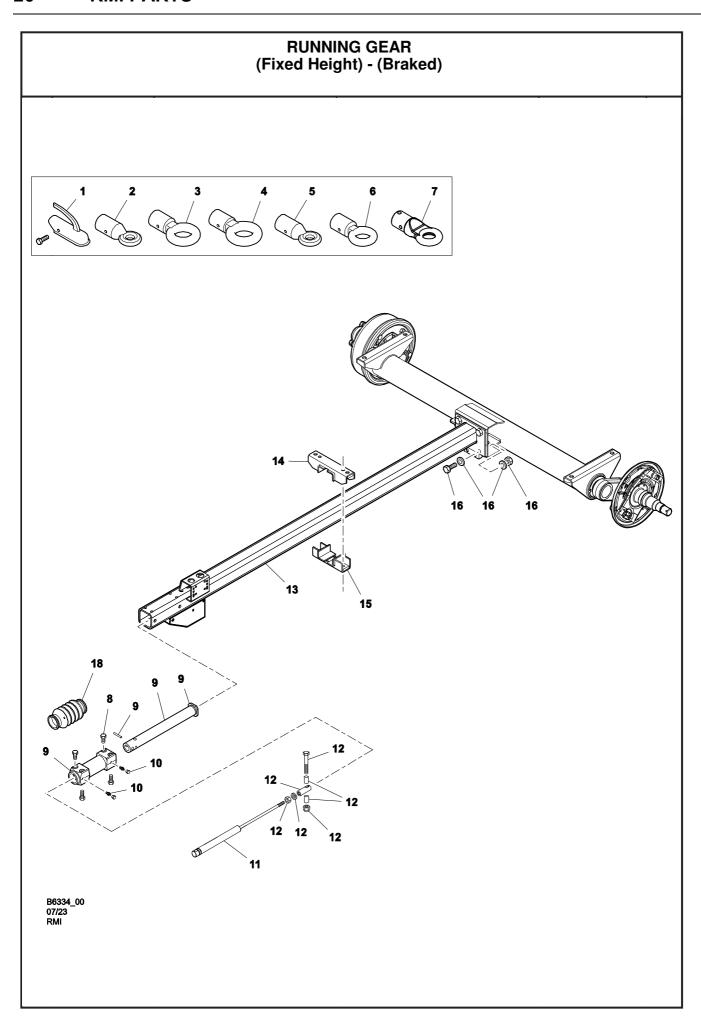
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Czech Republic



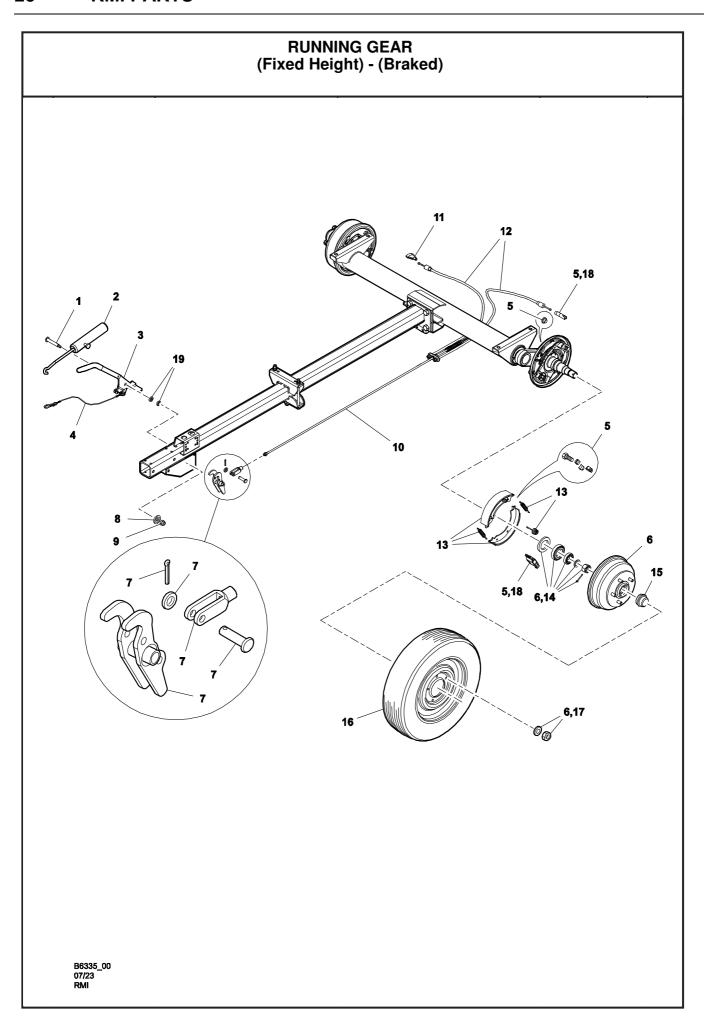
RUNNING GEAR (Fixed Height) - (Braked)

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46849470	RUNNING GEAR ASSEMBLY	W/Ref. 2-3 - (Fixed Height Braked)	- Silai Hamboi	1
2	46692981	DRAWBAR ASSEMBLY	(Mod Holght Branca)		
					1
3	46849471	AXLE ASSEMBLY			1
4	22182075	JOCKEY WHEEL ASSEMBLY			1



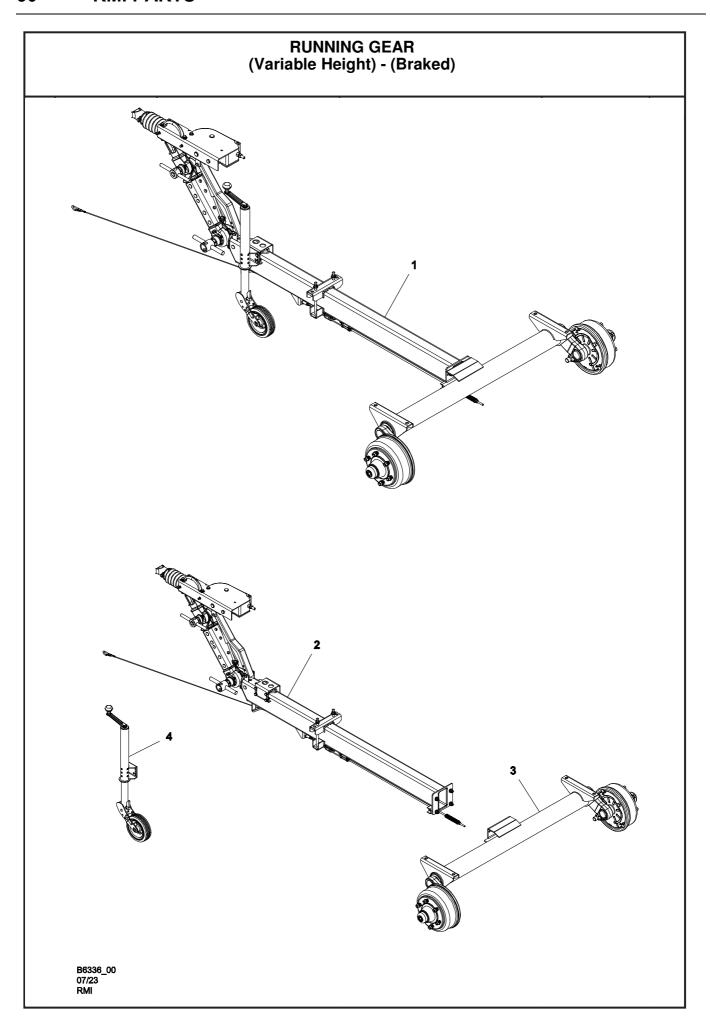
RUNNING GEAR (Fixed Height) - (Braked)

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	22241368	SCREW			8						
9	46651395	GUIDE ASSEMBLY			1						
10	46551800	KIT, GREASE NIPPLE	(including cover)		2						
11	22251227	DAMPER			1						
12	46670267	KIT, CONNECTING			1						
13	46694612	DRAWBAR			1						
14	46559525	CLAMP, UPPER			1						
15	46694613	CLAMP, LOWER			1						
16	46651380	KIT, CONNECTING			1						
17	46670245	CLAMP ASSEMBLY	W/Ref. 14-15		1						
18	46517710	KIT, COVER			1						

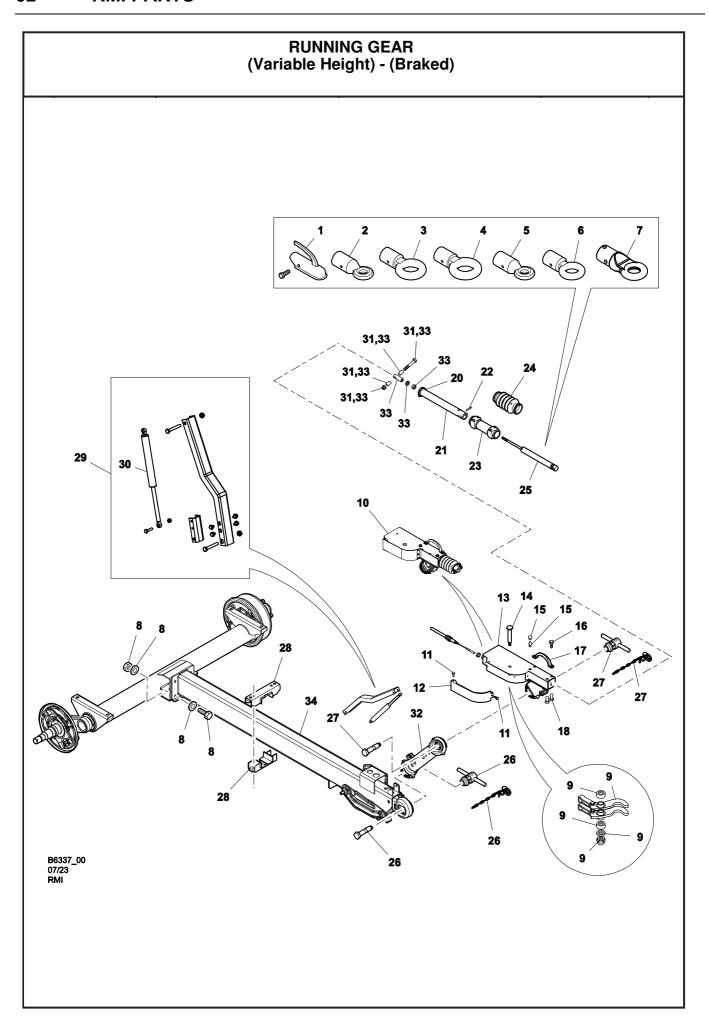


RUNNING GEAR (Fixed Height) - (Braked)

	(Fixed Height) (Braked)										
Item	Part Number	Description	Remarks	Serial Number	Qty						
1	46694616	BOLT			1						
2	46670246	SPRING			1						
3	46677015	HANDBRAKE LEVER ASSEMBLY			1						
4	22051841	CABLE			1						
5	46551496	KIT, BRAKE OVERHAUL	(order one per machine)		1						
6	46858022	BRAKE HUB COMPLETE	W/Ref. 14,17 - (order two per machine)		2						
7	46694617	CONVERSION LEVER ASSEMBLY			1						
8	22104806	WASHER			1						
9	22051494	NUT			1						
10	22250773	COMPENSATOR			1						
11	46551497	KIT, COVER			2						
12	46551383	CABLE, BRAKE			2						
13	80027980	KIT, BRAKE SHOE	(order one per machine)		1						
14	46694615	KIT, BEARING	(order two per machine)		2						
15	22392153	CAP, DUST			2						
16	46873317	WHEEL AND TYRE ASSEMBLY			2						
17	46636762	KIT, CONNECTING	(order one per machine)		1						
18	46651381	KIT, EXPANDING KEY	(order one per machine)		1						
19	22051643	WASHER			2						

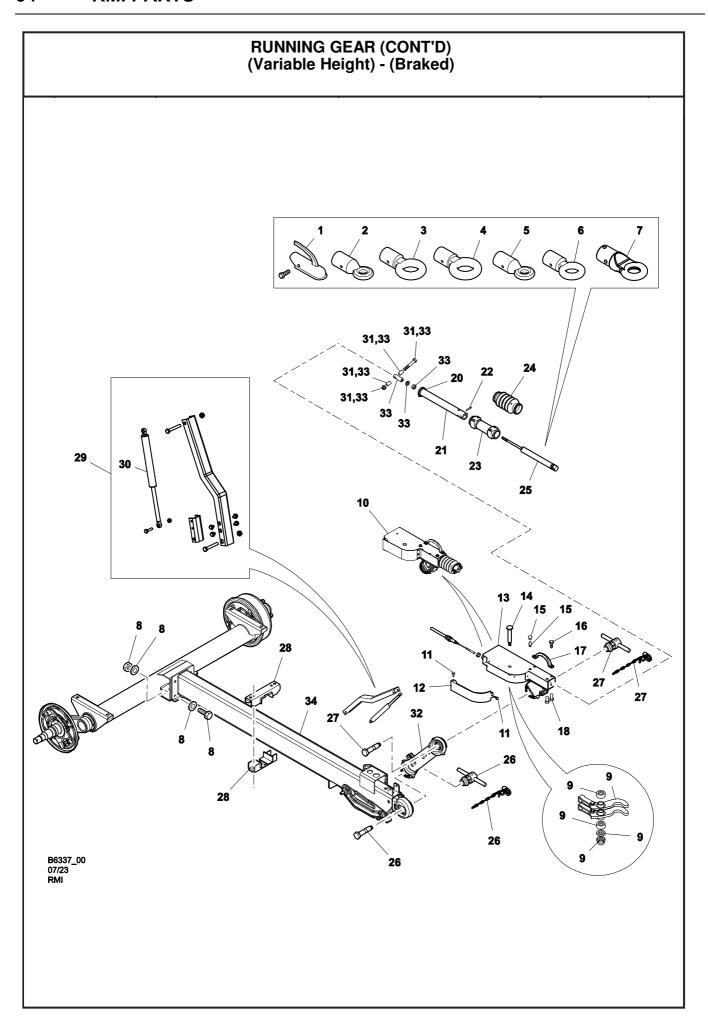


RUNNING GEAR (Variable Height) - (Braked) Part Number Description Remarks Serial Number Qty Item 1 46849469 RUNNING GEAR ASSEMBLY W/Ref. 2-3 - (Variable Height Braked) 1 2 46692980 DRAWBAR ASSEMBLY 1 AXLE ASSEMBLY 3 46849471 1 4 22182075 JOCKEY WHEEL ASSEMBLY 1

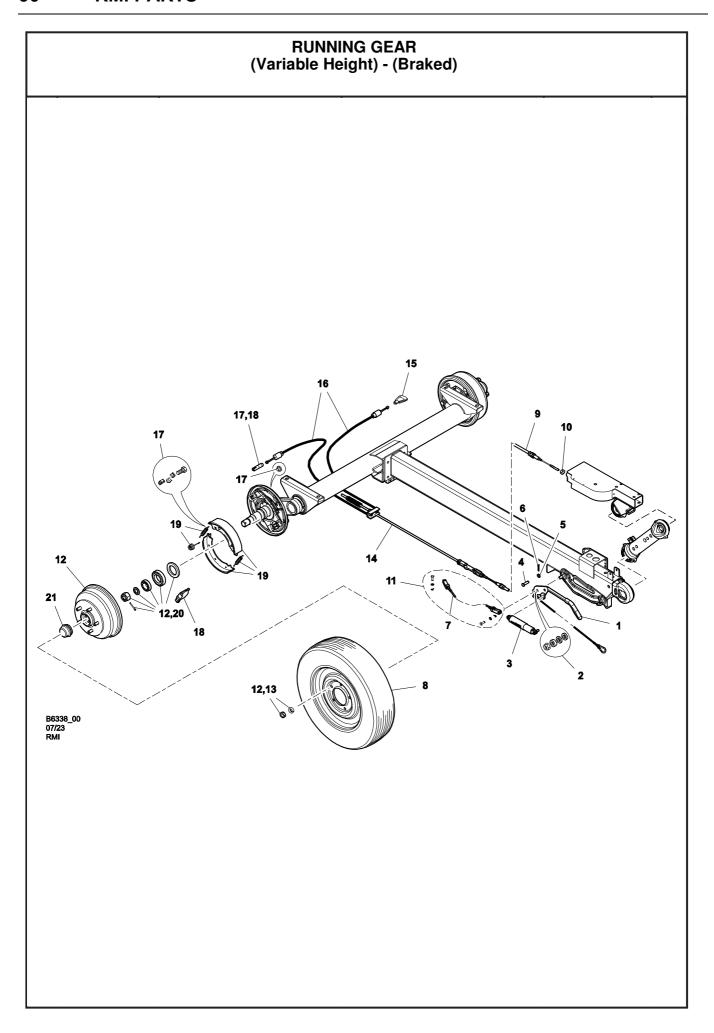


RUNNING GEAR (Variable Height) - (Braked)

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	46651380	KIT, CONNECTING			1
9	46651400	CONVERSION LEVER ASSEMBLY			1
10	46651393	COUPLING ASSEMBLY	W/Ref. 11-25		2
11	22241533	SCREW			3
12	46670257	COVER			1
13	22250534	COUPLING			1
14	22250492	BOLT			1
15	46694720	KIT, GREASE NIPPLE	(including cover)		2
16	22241368	SCREW			2
17	22250864	HANDLE			1
18	22241368	SCREW			8
19	46651395	GUIDE ASSEMBLY	W/Ref. 20-23		1
20	46551382	RING, STOP			1
21	22251284	SLIDER	W/Ref. 20 - (including ring stop)		1
22	46694721	PIN			1
23	22250401	TUBE			1
24	46517710	KIT, COVER			1
25	22251227	DAMPER			1
26	46651402	PIVOT ASSEMBLY			1
27	46670261	PIVOT ASSEMBLY			1
28	22250567	CLAMP ASSEMBLY			1
29	22251326	LINK ASSEMBLY	W/Ref. 49		1
					l

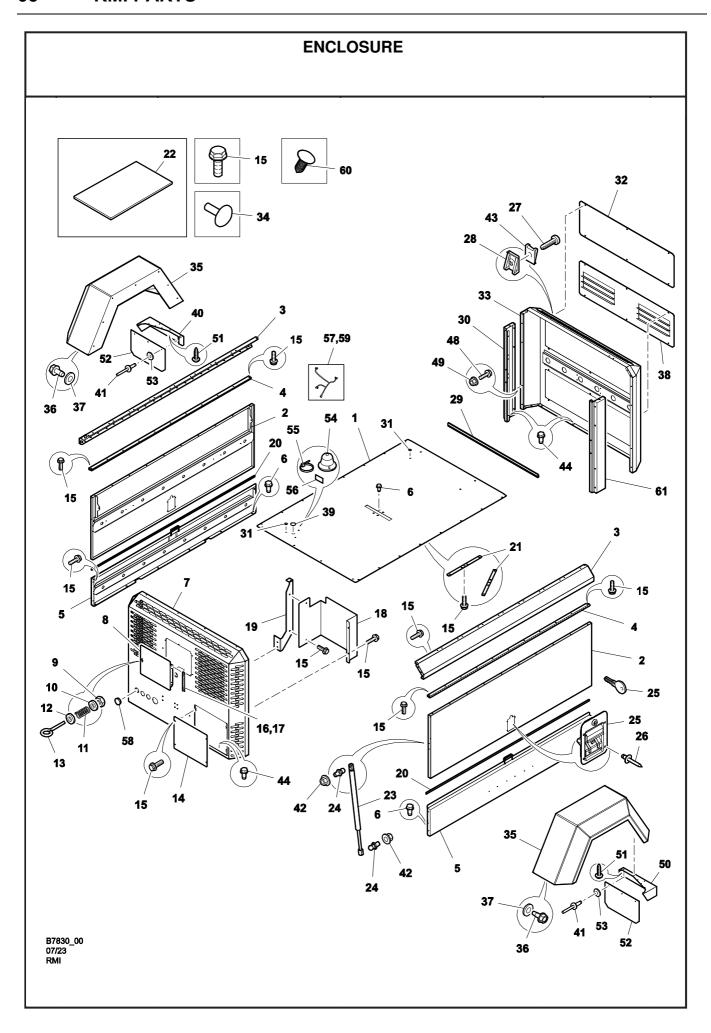


	RUNNING GEAR (CONT'D) (Variable Height) - (Braked)					
Item	Part Number	Description	Remarks	Serial Number	Qty	
30	23179310	DAMPER			1	
31	46651399	KIT, CONNECTING			1	
32	22250526	ARM ASSEMBLY			1	
33	46670267	KIT, CONNECTING			1	
34	46694719	DRAWBAR			1	



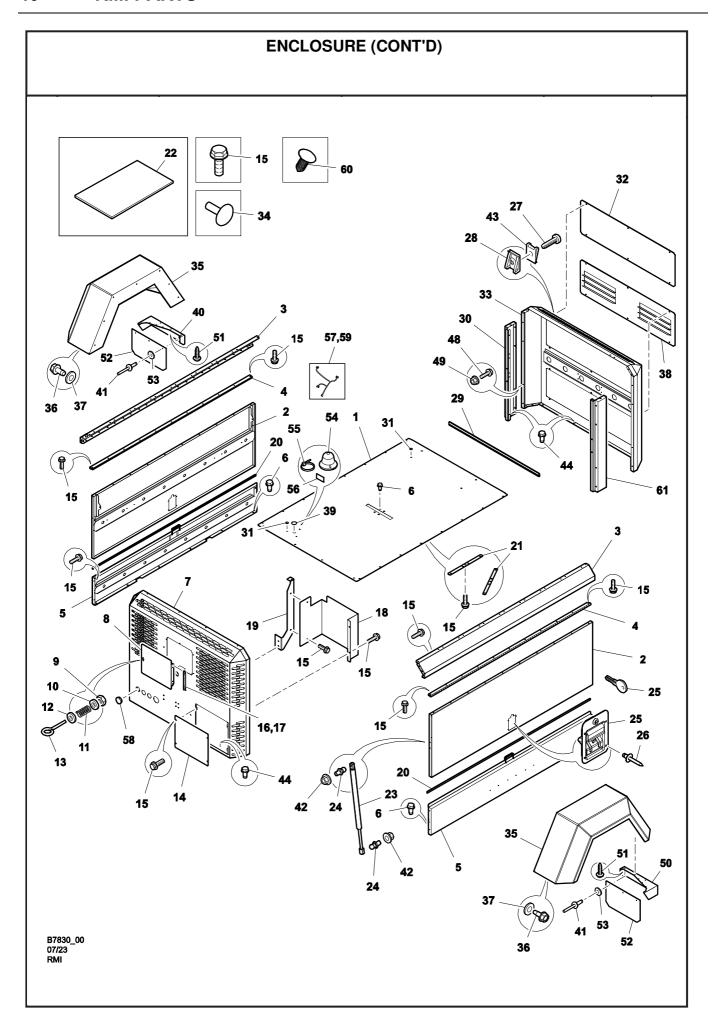
RUNNING GEAR (Variable Height) - (Braked)

	(and any					
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	46873317	WHEEL AND TYRE ASSEMBLY			2	
9	46518239	CABLE			1	
10	22241558	NUT			1	
11	46670266	CABLE ASSEMBLY			1	
12	46858022	BRAKE HUB COMPLETE	W/Ref. 13,20 - (order two per machine)		1	
13	46636762	KIT, CONNECTING	(order one per machine)		1	
14	46670621	BRAKE ROD ASSEMBLY			1	
15	46551497	KIT, COVER			2	
16	46551383	CABLE, BRAKE			2	
17	46551496	KIT, BRAKE OVERHAUL	W/Ref. 18 - (order one per machine)		1	
18	46651381	KIT, EXPANDING KEY	(order one per machine)		1	
19	80027980	KIT, BRAKE SHOE	(order one per machine)		1	
20	46694615	KIT, BEARING	(order two per machine)		2	
21	22392153	CAP, DUST			2	



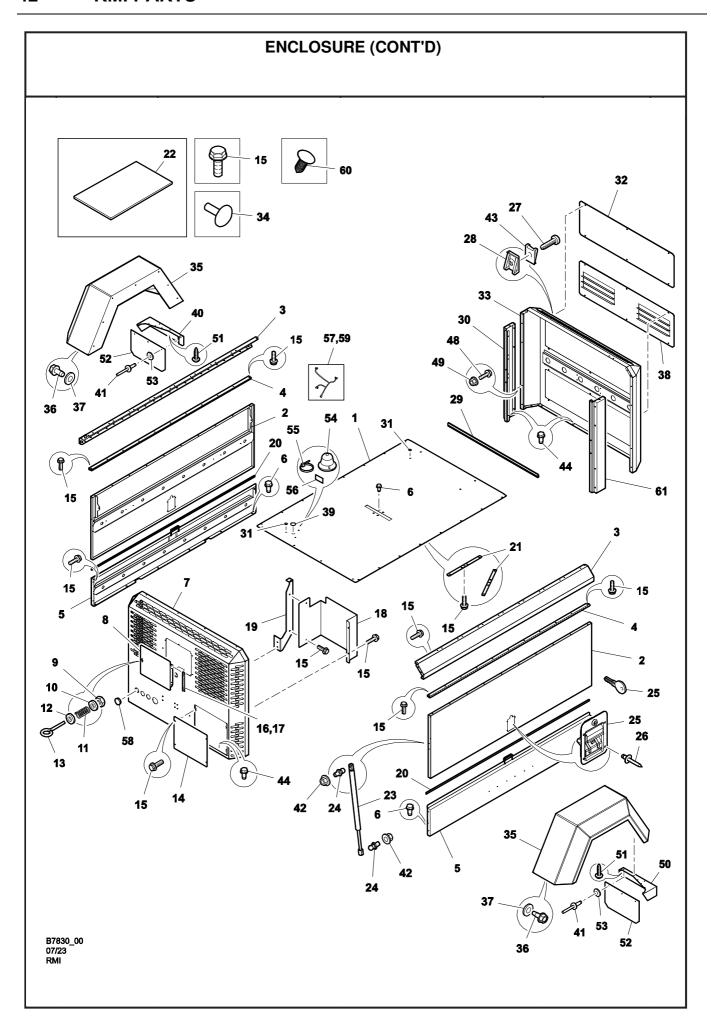
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Item	Part Number	Description	Remarks	Serial Number	Qty
1	46699419SM	PANEL, ROOF ASSEMBLY			1
2	54743257GM	DOOR, SIDE			2
3	46663639GM	RAIL			2
4	54639174	HINGE, SIDE DOOR			2
5	46692664SM	PANEL			2
6	35279025	SCREW	(M8 x 20)		16
7	46634245GM	PANEL			1
8	54743265GM	DOOR, CONTROL PANEL			1
9	92304542	NUT	(M6)		1
10	95935029	WASHER	1/4"		1
11	46652145	SPRING			1
12	36772028	WASHER	(M7.5)		1
13	46629499	PIN	(M6)		1
14	46636744SM	PANEL			1
15	36797652	SCREW	(M6 x 12)		100
16	22107478	HINGE, SPRING CONTROL PANEL			1
17	92271923	RIVET	3/16" x 5/8"		6
18	46626179SZ	BAFFLE			1
19	54737622SZ	BRACKET, FRONT INTAKE			1
20	22068373	SEAL			2
21	54718184	STRAP, FOAM RETAINING			2
22	92949742	FOAM FIELD KIT (with adhesive)	1,9 m x 1,5 m x 25 mm (7' x 5' x 1")		1
22	92949759	FOAM FIELD KIT (with adhesive)	0,95 m x 1,5 m x 25 mm (3' x 5' x 1")		1
22	92949767	FOAM FIELD KIT (with adhesive)	1,9 m x 1,5 m x 50 mm (7' x 5' x 2")		1
22	92949775	FOAM FIELD KIT (with adhesive)	0,95 m x 1,5 m x 50 mm (3' x 5' x 2")		1
22	46592579	FOAM FIELD KIT (no adhesive)	1,9 m x 1,5 m x 50 mm (7' x 5' x 2")		1
22	46592580	FOAM FIELD KIT (no adhesive)	0,95 m x 1,5 m x 50 mm (3' x 5' x 2")		1
23	35600261	SPRING			4
24	35337328	STUD, BALL	(M8)		8
25	22375877	LATCH			2
25	36794345	CYLINDER, KEY			2

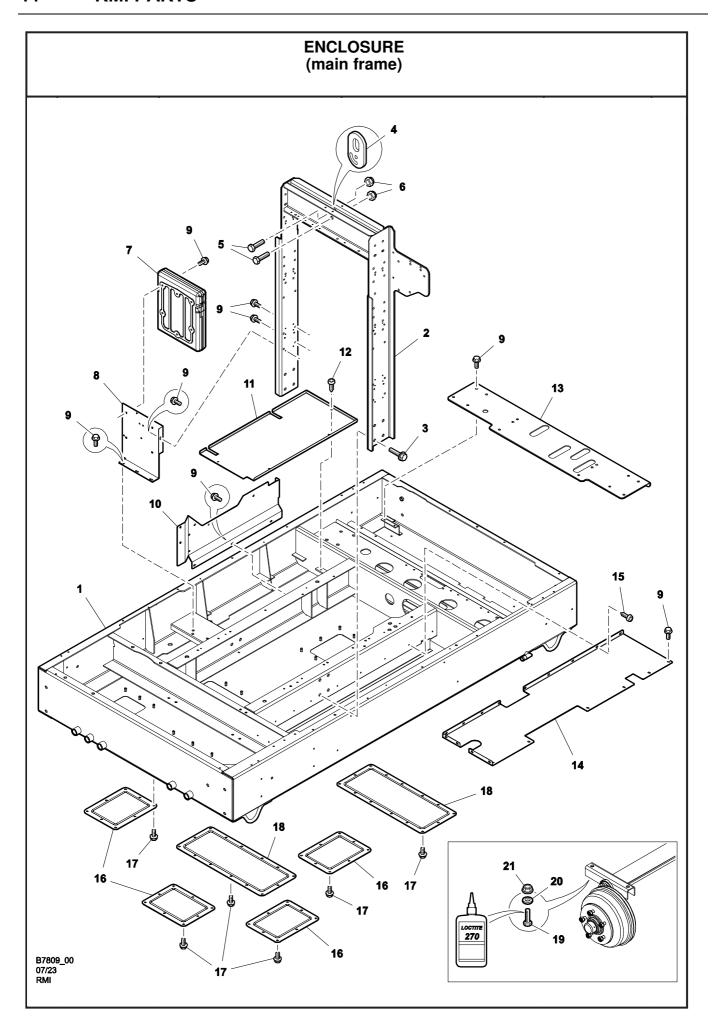


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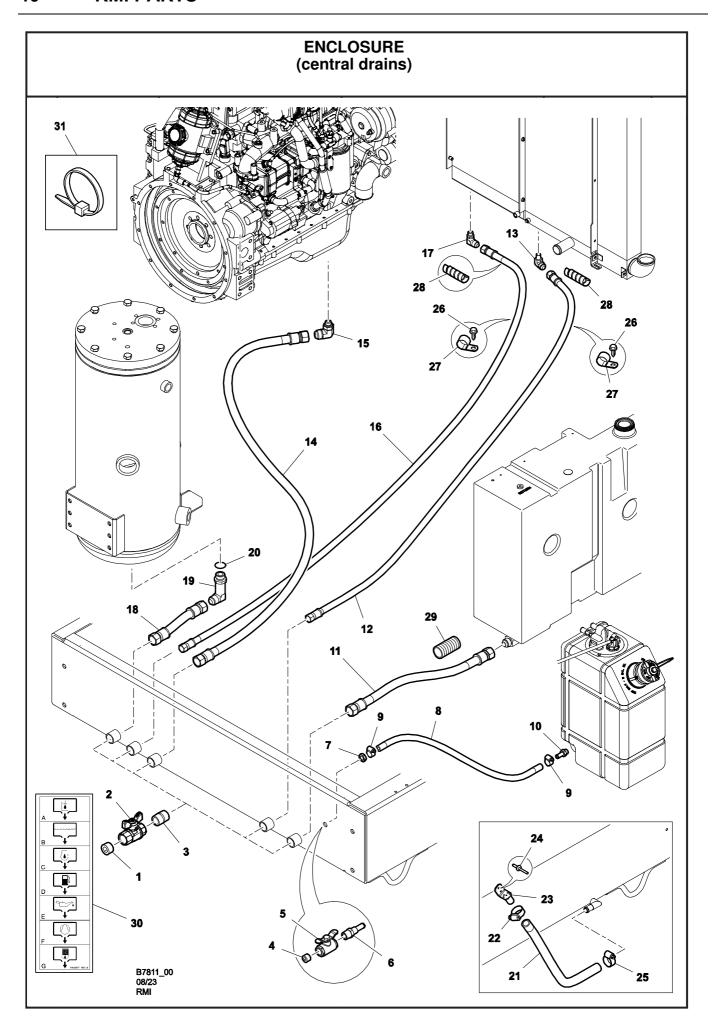
Item	
26 36794816 RIVET 27 35256429 STUD 28 35256429 RECEPTACLE 29 92899699 SEAL 1,13 m long 30 46692811SM PANEL 31 46622824 PLUG 32 54694831GP PANEL, REAR ACCESS 33 54688254SM PANEL, REAR END 34 46570819 RETAINER 35 88106224 FENDER 36 35300771 SCREW (M6 x 20) 37 29076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M6 x 20) 48 92184811 SCREW (M6 x 20) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only 54 22254403 LIGHT, STROBE optional	Qty
27 35256429 STUD 28 35256452 RECEPTACLE 29 92899699 SEAL 1,13 m long 30 46692811SM PANEL 31 46622824 PLUG 32 54694831GP PANEL, REAR ACCESS 33 54688254SM PANEL, REAR END 34 46570819 RETAINER 35 88106224 FENDER 36 35300771 SCREW (M6 x 20) 37 23076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671618SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M6 x 20) 46 92184811 SCREW (M6 x 20) 46 92184811 SCREW (M6 x 20) 51 9279205 SCREW CE units only 52 46671617SZ BRACKET CE units only 53 23076656 WASHER CE Units only 54 CE units only 55 92281427 TIE, CABLE Optional	2
28 35256452 RECEPTACLE 29 92899699 SEAL 1.13 m long 30 46692811SM PANEL 31 46622824 PLUG 32 54694831GP PANEL, REAR ACCESS 33 54688254SM PANEL, REAR END 34 46570819 RETAINER 35 88106224 FENDER 36 35300771 SCREW (M6 x 20) 37 23076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671618SZ BRACKET CE units only 41 4650699 RIVET CE units only 42 36891886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M6 x 20) 48 92184811 SCREW (M6 x 20) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW (M6 x 20) 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	8
29 92899699 SEAL	12
30 46692811SM PANEL 31 46622824 PLUG 32 54694831GP PANEL, REAR ACCESS 33 54688254SM PANEL, REAR END 34 46570819 RETAINER 35 88106224 FENDER 36 35300771 SCREW (M6 x 20) 37 23076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only 54 22254403 LIGHT, STROBE optional	12
31	1
32 54694831GP PANEL, REAR ACCESS 33 54698254SM PANEL, REAR END 34 46570819 RETAINER 36 38106224 FENDER 36 35900771 SCREW (M6 x 20) 37 23076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING (M8 x 20) 44 22959936 SCREW (M6 x 12) 49 96704176 NUT (M6) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional	2
33 54688254SM PANEL, REAR END 34 46570819 RETAINER 35 88106224 FENDER 36 35300771 SCREW (M6 x 20) 37 23076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46571616SZ BRACKET CE units only 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M6 x 20) 48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional	7
34 46570819 RETAINER 35 88106224 FENDER 36 35300771 SCREW (M6 x 20) 37 23076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING WASHER, RETAINING 44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional <td>1</td>	1
35 88106224 FENDER 36 35300771 SCREW (M6 x 20) 37 23076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only - (M6 x 25) 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	1
36 35300771 SCREW (M6 x 20) 37 23076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	2
37 23076656 WASHER (M6 x 25) 38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M6 x 20) 48 92184811 SCREW (M6) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	2
38 46693259SM PANEL, LOUVER ACCESS 39 46552221 PLUG 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	14
39 46552221 PLUG 40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	14
40 46671616SZ BRACKET CE units only 41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING (M8 x 20) 44 22959936 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	1
41 46560699 RIVET CE units only 42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	1
42 36881886 NUT (M8) 43 35256445 WASHER, RETAINING 44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	1
43 35256445 WASHER, RETAINING 44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	6
44 22959936 SCREW (M8 x 20) 48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	4
48 92184811 SCREW (M6 x 12) 49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	12
49 96704176 NUT (M6) 50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	4
50 46671617SZ BRACKET CE units only 51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	4
51 92789205 SCREW CE units only 52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	4
52 46671621 FLAP, RAIN CE units only 53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	1
53 23076656 WASHER CE units only - (M6 x 25) 54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	12
54 22254403 LIGHT, STROBE optional 55 92281427 TIE, CABLE optional	2
55 92281427 TIE, CABLE optional	6
	1
FC 40000010 DECAL LOW DEE AND FUEL Anti-	4
56 46696519 DECAL, LOW DEF AND FUEL optional	1
57 46797087 HARNESS, FUEL/DEF BEACON optional	1
58 23046220 PLUG, PLASTIC	1



	ENCLOSURE (CONT'D)					
Item	Part Number	Description	Remarks	Serial Number	Qty	
59	46800470	RELAY, FUEL/DEF BEACON			1	
60	46552210	PLUG	optional - units with no road lighting		12	
61	46800705GM	PANEL			1	

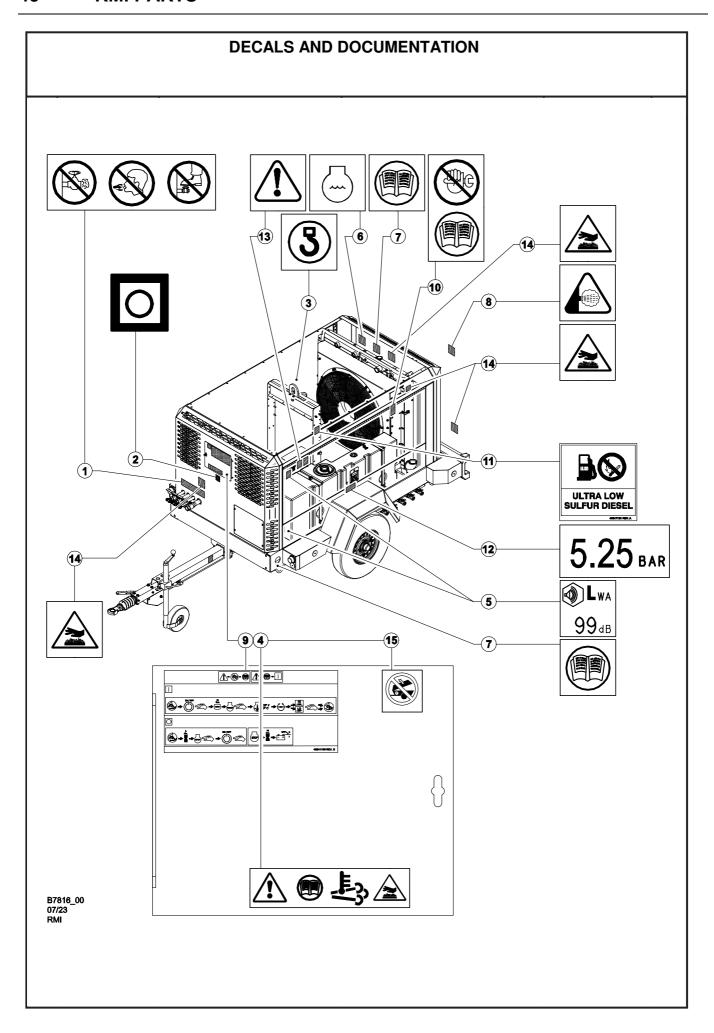


	ENCLOSURE (main frame)					
Item	Part Number	Description	Remarks	Serial Number	Qty	
1	46790025SZ	FRAME			1	
2	46790485SZ	BAIL, LIFTING			1	
3	36879492	SCREW	(M12 x 25)		8	
4	54742028SZ	PLATE, BAIL EYE			1	
5	36765121	SCREW	(M16 x 55)		2	
6	96704630	NUT	(M16)		2	
7	22990816	POUCH, LITERATURE			1	
8	46794845SZ	PANEL			1	
9	36797652	SCREW	(M6 x 12)		22	
10	46791686SZ	PANEL			1	
11	46793208SZ	PAD, TOOLBOX			1	
12	46699370	SCREW	(M4.8 x 13)		4	
13	46794885SZ	PANEL			1	
14	46792005SZ	PAD, FUEL TANK			1	
15	46584999	SCREW	(M6 x 16)		13	
16	46688862SZ	COVER			4	
17	92184811	SCREW	(M6 x 12)		60	
18	46688861	COVER			2	
19	35375591	SCREW	(M16 x 30)		4	
20	95935052	WASHER	5/8"		4	
21	36879211	NUT, FLANGE	(M16)		2	

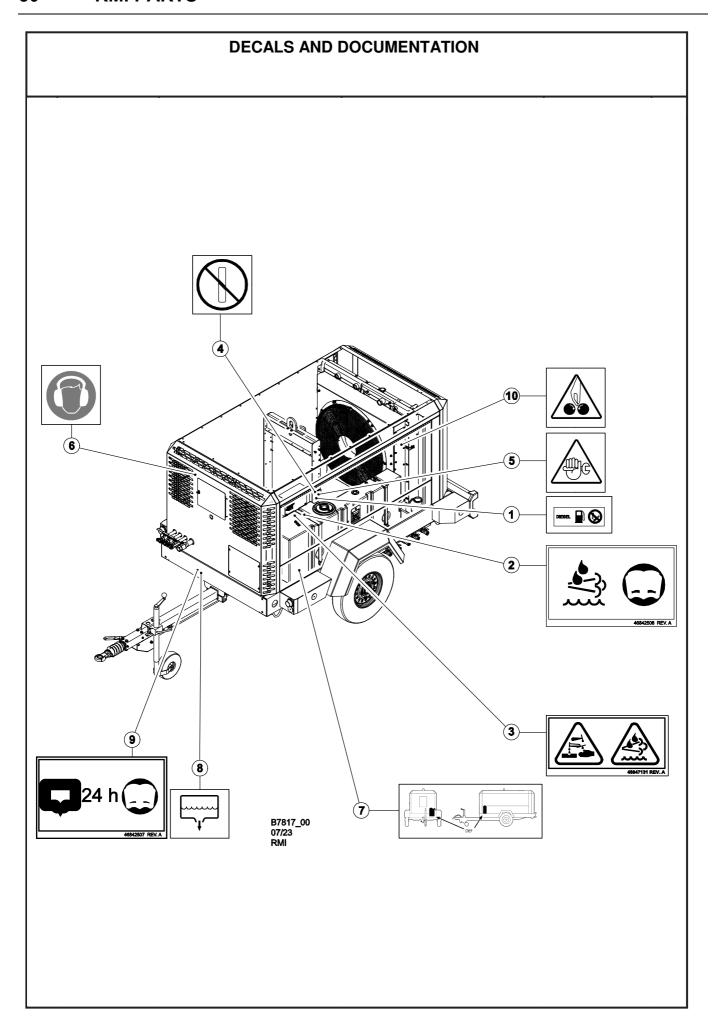


ENCLOSURE (central drains)

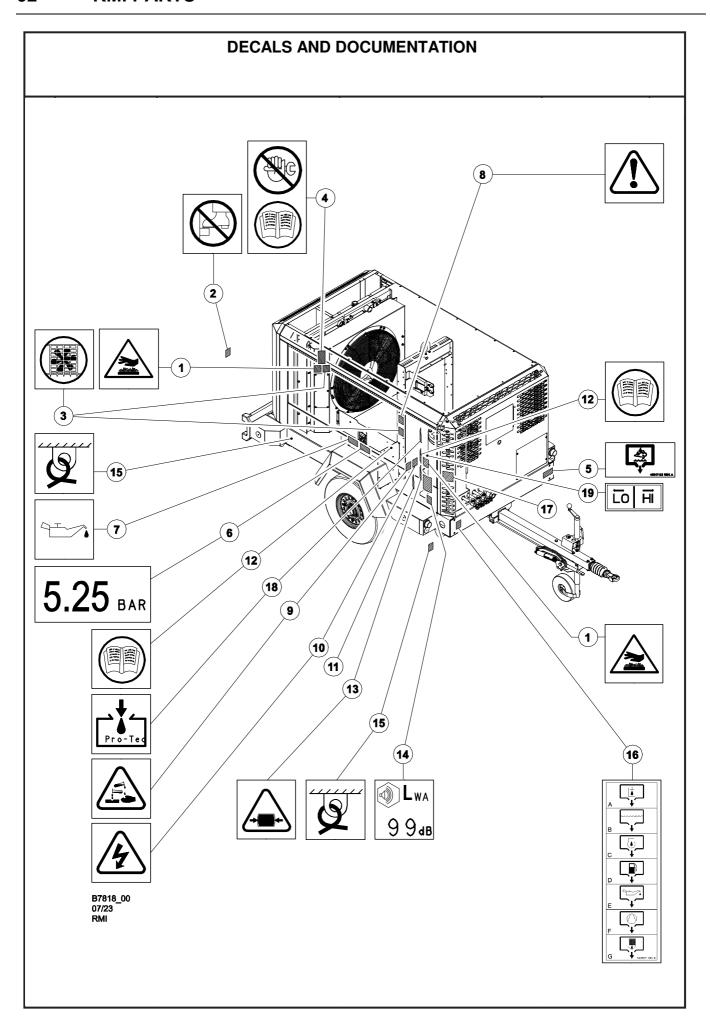
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Item	Part Number	Description	Remarks	Serial Number	Qty
1	95947149	PLUG			5
2	46857229	VALVE, BALL			5
3	95928040	NIPPLE	3/4" NPT x 1 3/8"		5
4	46675040	PLUG			1
5	22375141	VALVE, BALL	3/8"		1
6	46700044	CONNECTOR	3/8" NPT		1
7	46700045	NUT	(M14 x 1.5)		1
8	46652350	HOSE	0,5 m long		1
9	95264776	CLAMP			2
10	46700046	CONNECTOR	9/16" - 18 UNF		1
11	22180889	HOSE ASSEMBLY			1
12	35305481	HOSE ASSEMBLY			1
13	35296250	ELBOW	- 8 JIC - 1/4" - 90 DEG		1
14	23366214	HOSE ASSEMBLY			1
15	46764546	ELBOW	- 12 JIC - 18MM - 90 DEG		1
16	35305499	HOSE ASSEMBLY			1
17	35287937	ELBOW	- 8 JIC - 9/16" - 18 UNF - 90 DEG		1
18	36882975	HOSE ASSEMBLY			1
19	46764546	ELBOW	W/Ref. 20 12 JIC - 18MM - 90 DEG		1
20	35294768	O-RING			1
21	46679455	HOSE			1
22	46502795	CLAMP			1
23	46666160SZ	SUPPORT			1
24	36843282	RIVET			2
25	95220844	CLAMP			1
26	35279025	SCREW	(M8 x 20)		2
27	35114081	CLAMP			2
28	46679461	PROTECTOR, HOSE	0,35 m long		2
29	46551700	PROTECTOR	0,25 m long		1
30	54629977	DECAL, ISO CENTRAL DRAIN			1
31	92281427	TIE, CABLE			5



DECALS AND DOCUMENTATION						
Item	Part Number	Description	Remarks	Serial Number	Qty	
1	93465383	DECAL, SERVICE VALVE			1	
2	92930650	DECAL, EMERGENCY STOP			1	
3	93171262	DECAL, LIFT/TIE POINT			1	
4	46595939	DECAL, EXHAUST GAS WARNING			1	
5	22062335	DECAL, SOUND POWER	(99 dB)		2	
6	46663243	DECAL, COOLANT FILL			1	
7	92867449	DECAL, REFER TO HANDBOOK			5	
8	92976042	DECAL, EXHAUST GAS DISCHARGE			1	
9	46641199	DECAL, DUAL MODE			1	
10	92930668	DECAL, NO MAINT/READ MANUAL			1	
11	46847130	DECAL, ULTRA LOW SULFUR DIESEL			1	
12	46557424	DECAL, TYRE PRESSURE	(5,25 bar)		1	
13	92930627	DECAL, GENERAL WARNING			1	
14	92867530	DECAL, HOT SURFACE			4	
15	92867415	DECAL, CLOSE DOORS			1	

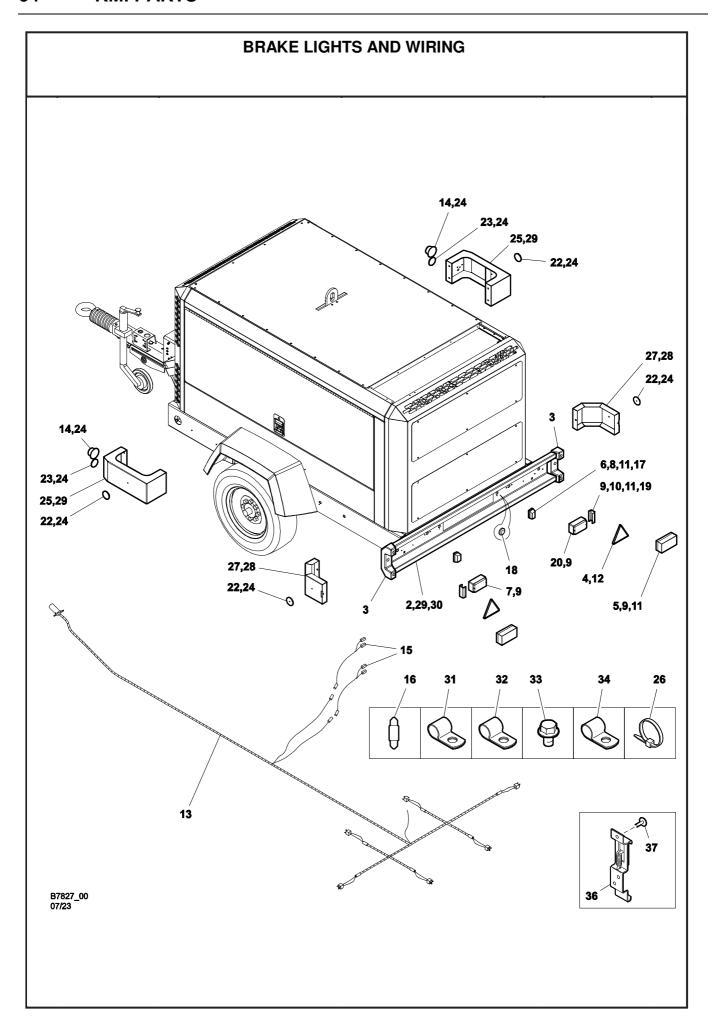


	DECALS AND DOCUMENTATION						
Item	Part Number	Description	Remarks	Serial Number	Qty		
1	93171254	DECAL, DIESEL FUEL			1		
2	46842508	DECAL, DEF INFORMATION			1		
3	46847131	DECAL, DEF CORROSION			1		
4	46663241	DECAL, DO NOT START			1		
5	46663242	DECAL, MAINTENANCE IN PROGRESS			1		
6	46663244	DECAL, HEARING PROTECTION			1		
7	46693292	DECAL, DEF TANK POSITION			1		
8	46693523	DECAL, DRAIN BUNDED BASE			2		
9	46842507	DECAL, DAILY DRAIN			1		
10	23047582	DECAL, CRUSH HAZARD			1		



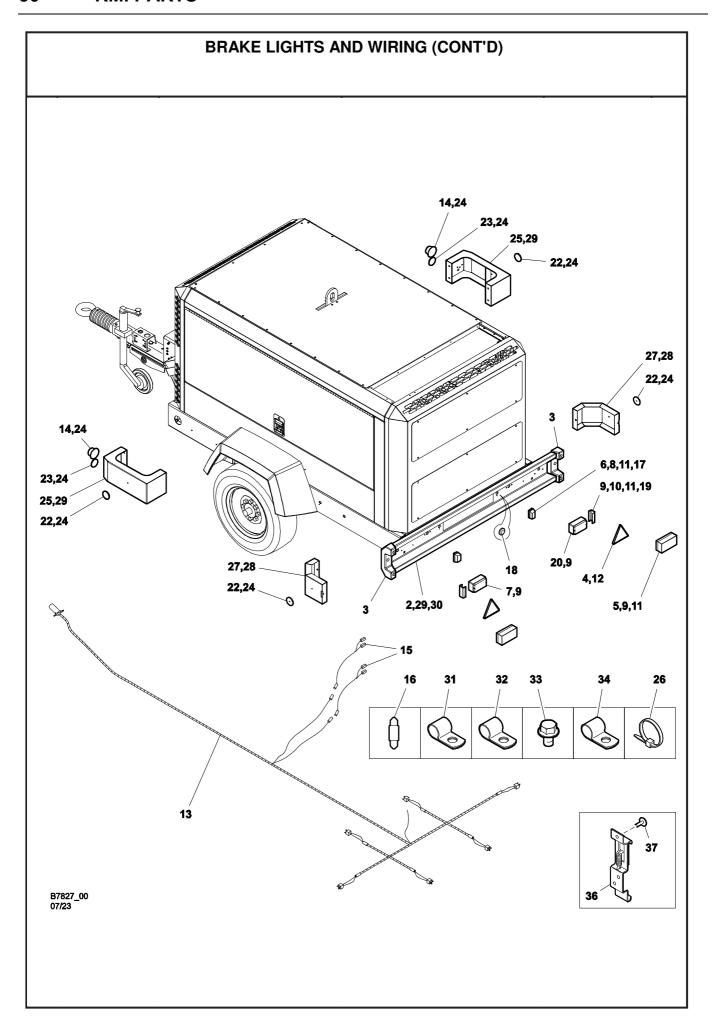
DECALS AND DOCUMENTATION						
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Item	Part Number	Description	Remarks	Serial Number	Qty
1	92867530	DECAL, HOT SURFACE			1
2	93194413	DECAL, DO NOT STAND			1
3	93165959	DECAL, ROTATING FAN	DECAL, ROTATING FAN		2
4	92930668	DECAL, NO MAINT/READ MANUAL			1
5	46847132	DECAL, DEF DRAIN			1
6	46557424	DECAL, TYRE PRESSURE	(5,25 bar)		1
7	93178945	DECAL, OIL FILL SYMBOL XP			1
8	92930627	DECAL, GENERAL WARNING			1
9	92930601	DECAL, CORROSIVE SUBSTANCE			1
10	92930593	DECAL, ELECTRIC SHOCK			1
11	93190486	DECAL, COOLANT LEVEL			1
12	92867449	DECAL, REFER TO HANDBOOK			2
13	92930585	DECAL, PRESSURISED VESSEL			1
14	22062335	DECAL, SOUND POWER	(99 dB)		1
15	46663095	DECAL, TIE DOWN			4
16	54629977	DECAL, ISO CENTRAL DRAIN			1
17	46740625	PLATE, DATA	(EC certified)		1
18	89298491	DECAL, PROTEC OIL			1
19	46652167	DECAL, REGULATION			1

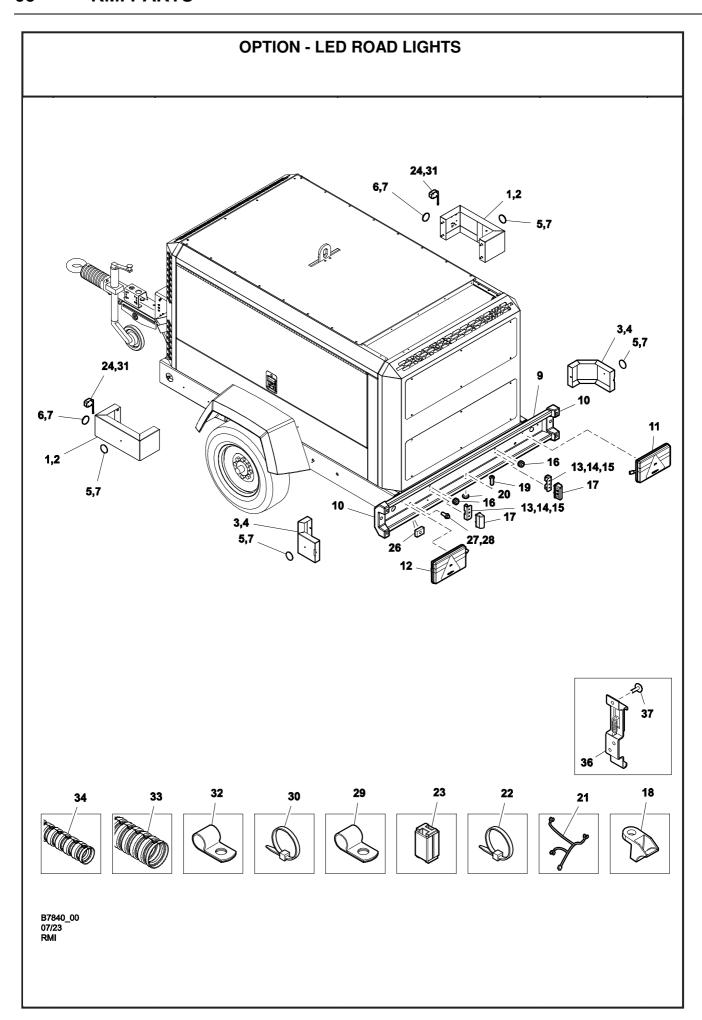


BRAKE LIGHTS AND WIRING

Item	Part Number	Description	Remarks	Serial Number	Qty
1	46501557	BAR ASSEMBLY, BUMPER / LIGHT	W/Ref. 2-20		1
2	54737630	BUMPER			1
3	54614870	BUMPER, END STOP			2
4	92721331	REFLECTOR, RED			2
5	92975507	LAMP			2
6	92901230	LAMP, REGISTRATION PLATE			2
7	93477388	LAMP, FOG			1
8	23251705	SCREW	(M5 x 35)		4
9	46556647	SCREW	(M5 x 12)		12
10	46556648	WASHER	(M5)		4
11	92304492	NUT	(M5)		16
12	92271915	RIVET	3/16" x 1/2"		4
13	46501565	HARNESS, REAR BUMPER			1
14	92121250	LIGHT, FRONT SIDE			2
15	54477740	HARNESS, FRONT SIDE			2
16	23181704	BULB			2
17	46540217	PLINTH			2
18	46500021	GROMMET			6
19	22073183	BRACKET			2
20	23212863	LAMP, REVERSE			1
21	46688966	OPTION, BUMPER WITH ROAD LIGHTS	W/Ref. 22-28		1
22	92121243	REFLECTOR, AMBER			4
23	92085729	REFLECTOR, WHITE			2
24	92271915	RIVET	3/16" x 1/2"		10
25	46694519SZ	POD, FRONT SIDE			2
26	92281427	TIE, CABLE			7
27	46700048SZ	POD, REAR SIDE			2
28	22959936	SCREW	(M8 x 20)		10
29	22539357	SPACER, BUMPER			4
30	96708284	CAP SCREW			4
31	35222538	CLIP, RETAINING			2

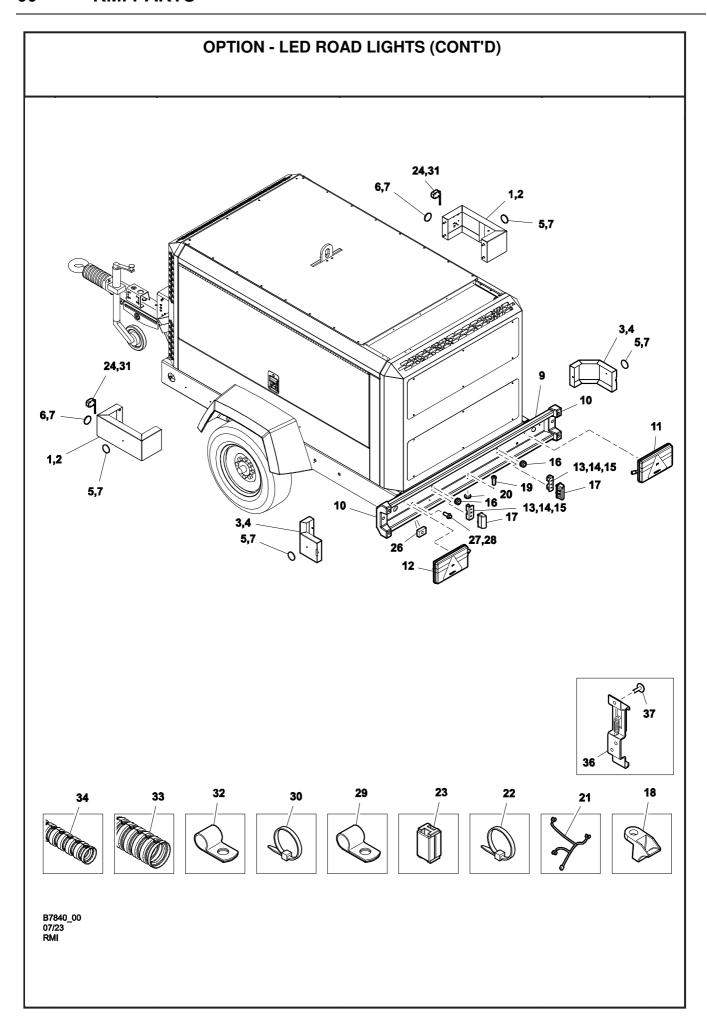


	BRAKE LIGHTS AND WIRING (CONT'D)				
Item	Part Number	Description	Remarks	Serial Number	Qty
32	35225093	CLIP, RETAINING			1
33	22959936	SCREW	(M8 x 20)		1
34	36853174	CLIP, RETAINING			1
35	46663692	OPTION, NUMBER PLATE CLIPS	W/Ref. 37-38		1
36	92962547	CLIP, NUMBER PLATE	optional		2
37	92281369	RIVET	optional - 5/32" x 1/2"		6

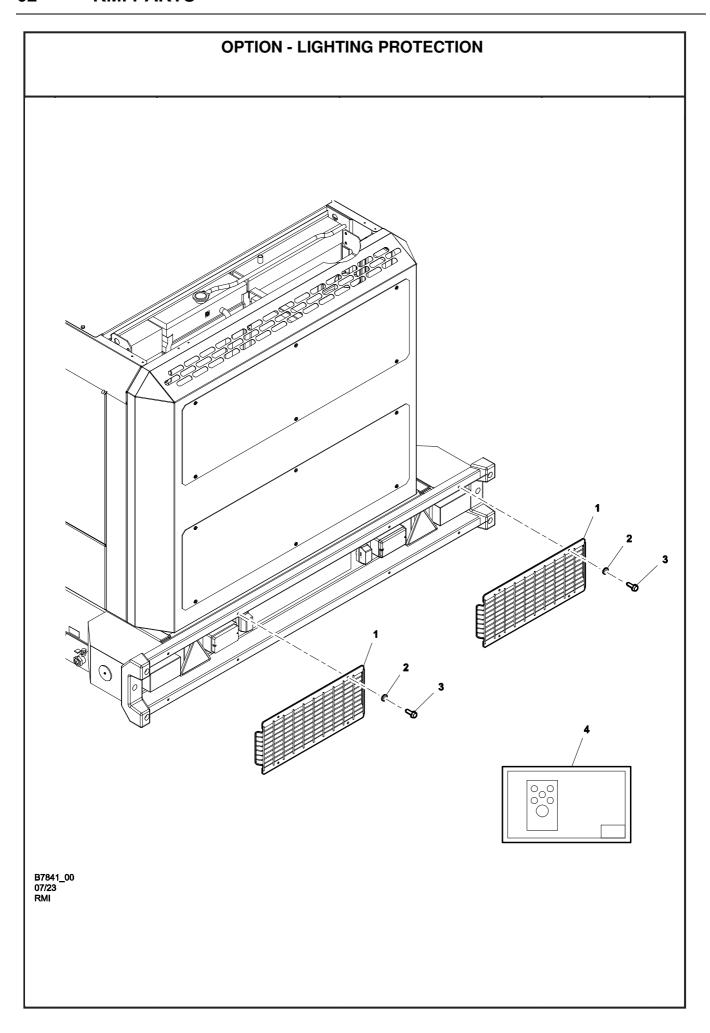


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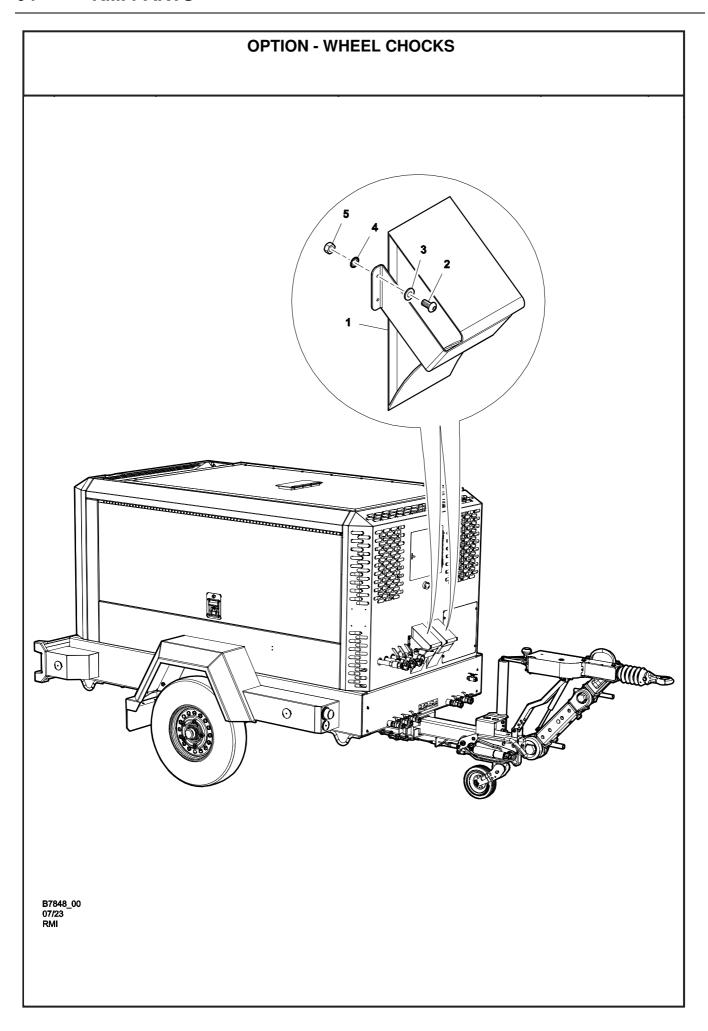
Item	Part Number	Description	Remarks	Serial Number	Qty
1	46694519SZ	POD, FRONT SIDE			2
2	22959936	SCREW	(M8 x 20)		8
3	46700048SZ	POD, REAR SIDE			2
4	22959936	SCREW	(M8 x 20)		2
5	92121243	REFLECTOR, AMBER			4
6	92085729	REFLECTOR, WHITE			2
7	92271915	RIVET	3/16" x 1/2"		6
8	46698060	LED LIGHTS BUMPER ASSEMBLY	W/Ref. 9-25		1
9	46698059SZ	BUMPER, REAR			1
10	54614870	BUMPER, END STOP			2
11	46698055	LAMP, REAR RIGHT			1
12	46698098	LAMP, REAR LEFT			1
13	46698058SZ	BRACKET			2
14	92096015	SCREW	(M6 x 16)		4
15	92829316	NUT	(M6)		4
16	54580139	GROMMET			2
17	46698056	LAMP, REGISTRATION PLATE			2
18	92803790	BASE, CABLE TIE			5
19	92271923	RIVET	3/16" x 5/8"		3
20	92304583	WASHER	(M5)		3
21	46698115	HARNESS, LED LIGHTS			1
22	92434315	TIE, CABLE			27
23	46699885	CONNECTOR, FLAT CABLE			4
24	46698057	LAMP, FRONT SIDE			2
26	22539357	SPACER, BUMPER			4
27	46638560	SCREW	(M12 x 35)		4
28	36879203	NUT	(M12)		3
29	35222538	CLIP, RETAINING			1
30	92281427	TIE, CABLE			4
31	46699878	SCREW	(M4 x 16)		4
32	35253038	CLAMP			2
				<u> </u>	l



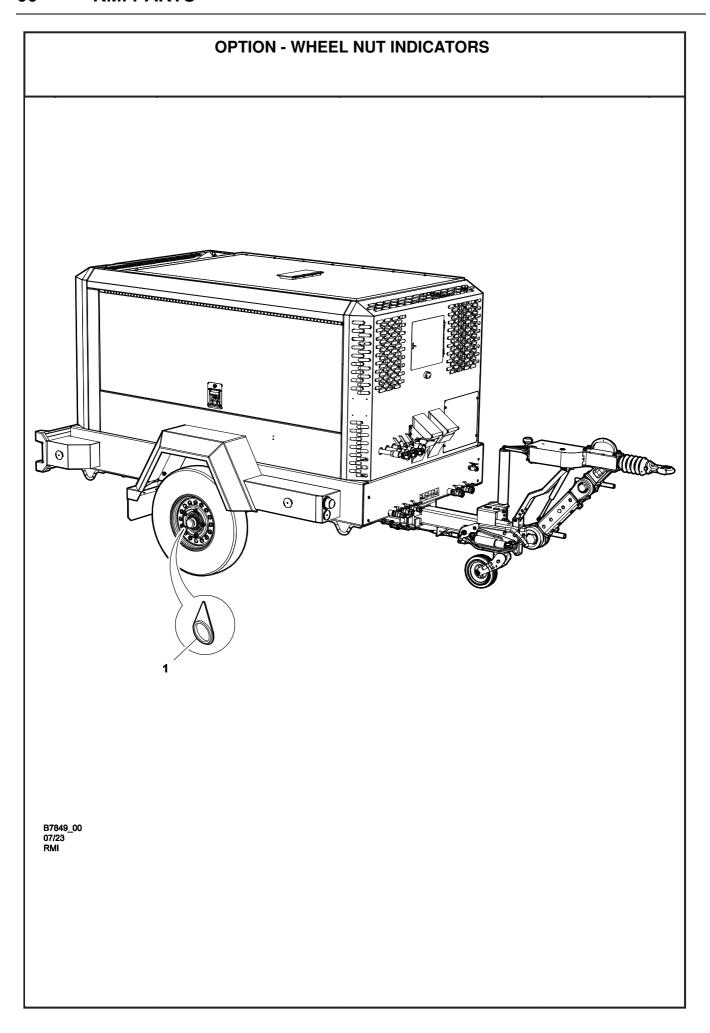
	OPTION - LED ROAD LIGHTS (CONT'D)				
	Г			T .	
Item	Part Number	Description	Remarks	Serial Number	Qty
33	46668232	PROTECTOR, HOSE	order as required		×
34	46699869	CONDUIT	order as required		×
35	46663692	OPTION, NUMBER PLATE CLIPS	W/Ref 36-37		1
36	92962547	CLIP, NUMBER PLATE			2
37	92281369	RIVET	5/32" x 1/2"		6



	OPTION - LIGHTING PROTECTION				
Item	Part Number	Description	Remarks	Serial Number	Qty
1	46687700	GRILLE, LIGHT PROTECTION			2
2	92341981	WASHER	(M6)		8
3	22538508	SCREW	(M6 x 20)		8
4	46687833	DIAGRAM, BUMPER MODIFICATION			1



	OPTION - WHEEL CHOCKS				
Item	Part Number	Description	Remarks	Serial Number	Qty
1	92899293	WHEEL CHOCK AND HOLDER ASSEMBLY			2
2	96745211	SCREW	(M8 x 16)		8
3	96701396	WASHER	(M8)		8
4	96745229	WASHER	(M8)		8
5	96735543	NUT	(M8)		8



	OPTION - WHEEL NUT INDICATORS				
Item	Part Number	Description	Remarks	Serial Number	Qty
1	23128523	INDICATOR, WHEEL NUT			10



Revision History

Rev.	EC Number	Comments
Α	-	Original release

