STERLING

OPERATING & MAINTENANCE MANUAL

Type: 7.50/140/160/180/260/320

Description: Plant Body

65485 Revision 2023.02

The Higher Standard.

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I - SAFETY INFORMATION

- This Operating and Maintenance manual covers the Sterling Beavertail body, model numbers 180/260/320. These are fitted to rigid truck chassis and are used to lift and transport items of construction equipment and general plant. The body consists of a flat load carrying deck, and then hydraulically operating loading ramps at the rear. The product can also be fitted with hydraulically or electrically operated winches at the front of the body.
- The product is designed to be used by trained personnel, and this is made clear in this operating manual. Its use is also subject to the loading and usage restrictions that the vehicle manufacturers apply to the base chassis.
- This manual contains important information vital to the safe operation of the Sterling Beavertail. Operators must read and understand this document before attempting to use it
- PPE should be used when operating this equipment. This includes gloves and safety footwear.
- Safe systems or work are outlined in this manual, these, should be followed at, all times.
- Daily Maintenance tasks are straightforward and outlined in the maintenance section of this manual. More significant maintenance is only to be carried out by trained personnel with the correct lifting equipment, due to the weight of the components involved
- The operating equipment should be isolated before any work is carried out on it, and ramps must be securely stowed or lowered completely to ground level before any lubrication of other inspection or maintenance is carried out.
- Hydraulic oil and lithium grease are present in the product. These are low risk and the relevant MSDS data sheet should be consulted about risks in handling and remedial action to take
- Daily walk round inspections should be carried out, and any damaged or worn parts should be replaced immediately
- Do not use whilst tired or under the influence of alcohol or drugs
- Do not allow non-trained operators (particularly children) to use or be near the product.
- Emergency stop controls are fitted to the vehicle, familiarize yourself with them before use. Resetting is by pulling the mushroom head switch
- Ramps are limited to move slowly and minimize the risks of trapping, but some risks, still remain. Ensure operator feet and hands are kept clear from danger zones whilst raising and lowered the ramps. In particular be careful, when stowing the ramps down to deck level, due to a potential finger trap area under the toe end.
- Hydraulic pressure and flow rates are factory set and must not be altered by operator.
- No other modifications should be carried out by the operator, that are not approved in writing by Sterling.
- This manual should be read in conjunction with the relevant national legislation for workplace safety/other relevant documentation.

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1.1 GENERAL SYMBOLS & INSTRUCTIONS

Safety information through this manual is denoted by:

Signs & Symbols	Description
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury
	Risk of Slipping
	Indicates a mandatory action, if not carried out there is a risk to people and machinery
	Wear protective footwear
	High visibility clothing must be worn

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One deciding factor on the quantity of grip on the decking is the weather conditions the machinery is used in. Wet/icy weather can lead to a significant decrease in the amount of grip on the deck surface. Therefore, footwear of substantial grip and in good condition must be worn, at all times when walking on the deck or ramps i.e. Safety Boots. Walking on the edge of the deck should always be avoided where possible.

Protective Clothing. High visibility clothing should be worn When operating around the machinery.

	Risk: Ramps falling whilst in operation Level of Risk: Severe injury or Death Description: This warning label has been put in place to emphasise the point that no-one should walk behind the ramps whilst they are functioning. Failure to abide by the sign could result in the ramps severely injuring or killing someone
	Risk: Ramps falling whilst in transit Level of Risk: Severe injury or Death Description: This warning label has been put in place to emphasise the point that the ramp stays **MUST** be put on the ramps before travelling. Although supported by the hydraulic system the stay offers a secondary safety feature. Failure to use them could result in the ramps falling whilst in transit.

Double Flip Ramps

Straight Ramps

Cheese Wedge Ramps

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1.2 PROHIBITED APPLICATIONS

- The hydraulic operation of the loading ramps is designed to lift their own weight only. They are not to be used to lift any object or person.
- The ramp must not be used as a bridge plate to raised platform, or loading dock
- Ramps must be securely supported by the ground before loading, both by the lowered jacklegs and at the toe end of the ramp. Operators should ensure the ground is firm enough to support both sections without subsidence
- Do not push rear of ramps with machinery if stuck on site.
- Ramps must not be used for access onto the body by pedestrians.

1.3 NOISE DECLARATION

The noise level of the product is lower than the background noise generated by the vehicle engine, so the chassis manufacturer's handbook should be consulted for any safety precautions required to minimize exposure to noise.
Noise level of the Hydraulic Power Pack is < 70 dBA.

1.4 EMC COMPATIBILITY

The product has some items fitted which come under the EMC regulations. This equipment is only used when the vehicle is stationary, and in fact the equipment controls are impossible to use whilst the vehicle is in motion, The controls are all mounted externally on the vehicle body and are not reachable except when the vehicle is stationary and the handbrake is applied.

2 - SAFETY SYSTEMS

The Sterling body is fitted with safety systems and you should familiarize yourself with them before first operation:

To operate ramps and winch you must carry out the following procedures:

- Turn on ignition
- Turn on ramp and winch control switch in cab (see Photo, location in cab may vary depending on the chassis type) – ramps now activated
- To activate winch – press the two green buttons at the same time on the remote- control handset or the two green buttons on the receiver to activate the system.

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In the event of an emergency:

- Press either one of the Emergency Stop controls fitted to the body or:
- Press the red button on the remote control
- Turn off the Isolator Switch.

Any one of these will stop the operation of the winch and the ramps. In order to reset the system, you should:

1. Pull out the mushroom head on the emergency stop button and:
2. Turn Isolator switch back on.
3. Press the two green buttons on the remote handset at the same time
4. In the event, that you lose the remote control, handset, matching controls are fitted to the remote control, receiver box mounted to the side of the body.

If the body stops operating, and the above procedure will not restart it, there are no other user serviceable items so please call Sterling on 01642 713333 for assistance.

3 - WINCH SAFETY – BASIC REQUREMENTS

- Keep yourself and all personnel clear of the winch rope
- Never step over, stand near or touch a winch rope under tension
- Always wear protective clothing: rigger gloves, safety boots, safety helmet, high visibility clothing, goggles or visor.
- Always check the winching layout and capacities of equipment (walk the line)
- Do not use the winch rope as a tow rope
- Always obey rope-handling procedure
- Never wrap winch ropes around loads or attach rope hook back onto rope to form loop
- Carry out regular inspections of winch rope
- Always locate position of emergency stop before attempting to use winch
- Never operate winch drum free spool with winch rope attached to load
- Always survey site for potential hazards before deploying winching equipment
- Always survey path load will be winched through for potential hazards
- Do not use winch for movement of persons.

SAFE WINCHING IS EFFICIENT WINCHING!

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4 - PLANT BODY SAFETY – BASIC REQUREMTENTS

- Keep yourself and all personnel clear of 'downhill side of load.'
- Keep yourself and all personnel clear of area behind loading ramp
- Keep yourself and all personnel clear of moving ramp
- Unlock loading ramp by standing at side, not behind
- Do not move vehicle unless ramp is fully stowed and locking stays engaged
- Ensure machine being loaded/unloaded cannot roll away, chock if necessary
- Do not ride on machine being loaded/unloaded unless it technically requires driving
- Do not allow yourself or other personnel to be positioned between load and body headboard
- Do not walk up body alongside machine being loaded/unloaded
- Do not allow the load to 'fall' over beavertail angle when unloading
- A minimum of 4 load restraints shall be used to secure machines to body
- Always 'dump' air from suspension before loading/unloading. Ensure suspension is restore to 'ride' position before moving vehicle
- Always ensure that area to load/unload is safe and act to minimize collision risks
- If jacklegs are fitted to vehicle they must always be in firm contact with ground whilst loading. If the ground is too uneven for this then the jacklegs must be blocked to ensure they are supported.

SAFE LOADING IS EFFICIENT LOADING!

5 - GUIDANCE FOR OPERATING PLANT TRANSPORTER TYPE BODY

The following is for guidance only

Each user must carry out a risk assessment for the type of operation the equipment is used for and act to minimize the risks identified.

When operating at the roadside the danger from other road users place operators at high risk.

Before attempting to load/unload the body, ensure the area to work in is safe and secure. This may involve deploying warning beacons (light bars), cones, or requesting help from your supervisor. Ensure your actions do not cause a hazard to other road users.

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5.1 POWER ISOLATION

A power isolation switch is fitted on the vehicle. Ensure this is off when the winch or ramp is not in use.

Both the winch and the ramp draw power from the vehicle battery. When operating either, ensure engine is running to prevent battery discharging.

5.2 EMERGENCY STOP

Before operation locate position of Emergency Stop on vehicle. In an emergency depress stop button, to reset twist button.

Front E Stop button on front (N/Side of body)

Back E Stop (N/Side Rear)

5.3 OPERATION OF HYDRAULIC LOADING RAMP

The control station for the ramp is situated at the nearside of the vehicle. This is the workstation for the operator whilst the ramp is in movement. Stays are fitted to restrain ramp during travel.

5.4 ANDERSON SOCKET

Anderson socket/plug will only be live when the body electrics are activated.

5.5 TRAINING

Operators should have read and fully understand this handbook before operating this product

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5.6 MAX LOADING LIMITS

The maximum loading capacity of the Sterling Beavertail Body is limited by the available payload of the chassis. These products are fitted to a maximum vehicle size of 32t GVW, with a maximum payload of no more than 18 tonnes.

The vehicle body and ramps have a design capacity of 18 tonnes, with a maximum axle weight of 12 tonnes, for a vehicle with pneumatic tyres

5.7 STABILITY

The stability of the loaded vehicle will be affected by the height of the centre of gravity of the load. Please refer to the chassis manufacturer's handbook to find safe loading heights for their chassis.

Operators should ensure the ground is solid and level enough before loading / off - loading.

Operator should check area for overhead electric cables.

6 - RAMP OPERATION

6.1 STANDARD & FLIP-OVER RAMPS

Never lower ramps before dumping suspension, always dump suspension first.

When ramp is in use or being deployed keep area behind ramp clear of all personnel.

1. Release the stays at each side of the ramp

WHEN RELEASING STAYS DO NOT STAND BEHIND THE RAMP, STAND TO THE SIDE CLEAR OF THE RAMP, ELEASE OFFSIDE STAY FIRST.

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Lowering Ramps:

- To lower jacklegs press the 'Black down Button' till jackleg reach vertical position.
- 'Dump' air from air suspension
- Ensure area behind ramp is clear
- Then press the 'Black down Button' again to fully lower ramp, continue to do so until the ramp, is firmly on the ground. If flip-over ramps are fitted, then the feet on the end of the upper section must also be firmly on the ground
- The ramp is now ready for loading

Raising Ramp:

- When ramp is in use or being deployed keep area behind ramp clear of all personnel
- Ensure no part of the load will obstruct the ramp when raised to the stowed position
- Ensure all personnel are kept clear when stowing ramp
- To raise ramp, press the 'White Up Button' continue, until ramp is firmly against stops
- Keep all personnel and limbs away from ramp
- Engage stay on nearside first, then offside

WHEN ENGAGING STAYS DO NOT STAND BEHIND RAMP, STAND TO THE SDIE CLEAR OF RAMP. ENGAGE NEARSIDE STAY FIRST.

- Under no circumstances attempt to drive without stays being engaged
- Return air suspensions to 'ride' condition
- Press the 'White Up Button' again to raise jacklegs, to 'horizontal' position

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6.2 USING CHEESE-WEDGE RAMPS

Operating Cheese-Wedge Ramps:

- 'Dump' air from suspension
- Press the 'White button' to left of E-Stop, and hold, continue to hold in until ramp is fully lowered.
- Raise the 'Middle Lever' to raise 'Toe section' into straightened position, then move 'Left Hand Lever' up to move 'Locking Flap' into lock position. Ramps
- are ready to be lowered, BUT OPERATOR MUST ensure the locking flaps are fully engaged on both sides of ramp before use, with a visual check.
- Moving the 'Right Hand Lever' into down position, 'Jacklegs' will move to vertical position first, then fully lower ramp to the ground.
- Ramp is now ready for loading/unloading.

NOTE: ENSURE LOCKING FLAPS ARE FULLY CLOSED BEFORE UNLOADING

To fold ramps:

- Press the 'White button' to left of E-Stop, and hold,
- Moving the 'Right Hand Lever' into up position, to lift ramp to vertical position, 'Jackleg' will move to horizontal position, at this stage.
- Move 'Left Hand Lever' down to move 'Locking Flap' to open position.
- Move the 'Middle Lever' down to lower 'Toe section' down onto deck.
- Fold main flip section to deck.

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Travelling with Ramps in Vertical Position

It is possible to travel with ramps in vertical position as shown, but straps MUST be in place, to prevent damage to ramps.

7 - REMOTE CONTROL INSTRUCTIONS

Model: SAGA1-V6

Image: Remote Control (Transmitter)

Image: Remote Control (Receiver Unit)

Button Function on Transmitter and Receiver

1. Winch in (where fitted)
2. Winch out (where fitted)
3. Ramps Up (optional)
4. Ramps Down (optional)
5. Spare button
6. Spare button

   Green buttons (system activation)
   Red button (Stop Button)

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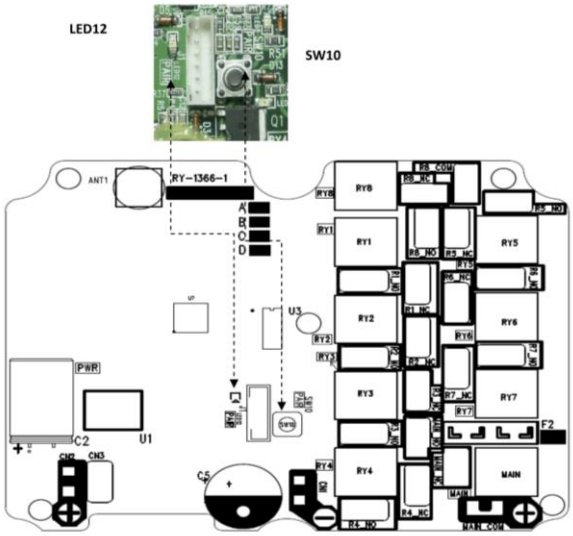
1 Protective Rubber
2 Function Buttons
3 LED Power Indicator
4 START Buttons
5 STOP Button
6 Belt Clip

SAGA1-V6 TX



With casing removed

1 External Antenna Connecting Point
2 Function Buttons
3 LED Power Indicator
4 START Buttons
5 STOP Button
6 Control Panel Slide Cover
7 Pre-wired Output Cable

SAGA1-V6 plus

Active Winch Remote

1. Press and hold ‘Both Green Buttons’ together on transmitter simultaneously (Factory default) to activate the system.
2. Press function ‘Button 1’ to spool rope out.
3. Press function ‘Button 2’ to spool rope in.

Deactivate the operation of transmitter

Press RED Stop button to deactivate the operation of transmitter and switch off receiver power isolate switch.

SAGA1-V6plus receiver pushbutton panel operating instructions

1. Press and hold ‘Both Green Buttons’ together on transmitter simultaneously (Factory default) to activate the system.
2. Press function ‘Button 1’ to spool rope out.
3. Press function ‘Button 2’ to spool rope in.

Attention:
Both Transmitter and Receiver pushbutton panel can control receiver simultaneously.

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7.1 INDICATOR

Transmitter status indication

1. Red (Blinking Rapidly): Transmitter is not being activated correctly or pushbutton jammed.
2. Red (Blinking Slowly): Transmitter is activating but receiver is not able to work properly.
3. Green (Blinking Slowly): Transmitter and receiver both have been activated successfully.

Transmitter Battery Indication

1. Green (Full Power): Operate as usual.
2. Yellow (Mid Power): Stop operation until new batteries are replaced.
3. Red (Low Power): A Stop signal will be sent to receiver automatically to turn off receiver. To avoid the interruption during operation, check battery power frequently.

Pairing Transmitter and Receiver

1. Before carrying out the pairing processes, please make sure that transmitter and receiver switched off.

Through the following pairing processes, any SAGA1-V6 transmitter and receiver can be paired as a group working together.

1 Remove the receiver upper casing, then press and hold **SW10 (Receiver)** for 3 seconds, the **LED12** will flash Red constantly
2 Press and hold “Pushbutton 1&2” on transmitter altogether initially, then press “Start pushbutton A”.
3 LED Indicator on transmitter as flashes Green color
   A. Press “Pushbutton 1” to confirm pairing processes (This stores receivers ID code/function setting into transmitter memory (Overwritten), then LED indicator will flash Green slowly and vanish, the whole process is completed.)
   B. Press “Pushbutton 2” to abandon the processes.

Note**:** When assembling the SAGA1-V6 Receiver upper & bottom casing together, please assure that the pressure balance air bag is not squeezed or being compressed by wires.

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Changing Battery in Handset

Unscrew the bottom casing of transmitter, install 2 new AA-size batteries in the battery compartment (make sure batteries correctly installed according to the indication of "Positive" & "Negative") and fasten transmitter bottom casing firmly.

8 - OPERATION OF THE TRANSPORTER WINCH

As with any powerful tool there are hazards involved with winching operations. However, with proper training and risk awareness coupled with well-maintained equipment and respect for the power available, the operator should come to regard winching equipment as a most versatile and efficient tool.

The winch may be controlled by either a wander-lead/spool valve control, or by a radio remote handset, which gives the operator freedom of movement without the encumbrance of trailing wires.

NOTE: The winch will only 'winch out' if there is a load on the winch rope. To avoid a badly spooled winch drum and rope damage do not 'winch out' without tension on the rope.

A free spool control is provided on the end of the winch. This control disconnects all braking and drive from the drum producing a drum, which is free to rotate. It is useful if a long length of rope requires to be pulled out by hand.

Under no circumstances attempt to engage free spool with a load attached to the winch rope.

At all times it should be remembered that winching operations involve tensile forces, which are difficult to restrain in the event of a failure within the winching system. In the event of a failure the tensile forces will suddenly be released causing the winching equipment and winch rope to 'whiplash', as a piece of released elastic. Bodily contact with a winch rope suddenly released in this manner may cause serious injury. In addition, the load will be released and may move uncontrollably possibly causing further injury.

Before using a winch, identify the location of the emergency stop/isolator switch.

To prevent discharge of vehicle battery, ensure engine is running when using electric winch for long periods.

The maximum power available from a winch is when the rope is on the bottom layers of the drum. Therefore avoid 'overloading' the drum with excessive length of rope.

When handling the winch rope always wear good rigger gloves.

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To maintain the winch rope in a safe condition good rope management is essential – keep the rope as square to the drum as possible – maintain tension on rope by hand when powering 'out' under no load – maintain tension on rope by hand when powering 'in' under no load – periodically pull all the rope off the drum and rewind under hand tension to achieve neat and tightly packed wraps of rope on the drum.

Never allow the winch rope to slide through the hands. Always handle winch rope 'hand over hand'.

Inspect the rope and end fittings daily for damage and deformation. Check regularly for signs of wear in the form of broken strands or severe kinks along its length. If there are more than 6 strands broken in any length of 100mm the rope is severely weakened and must be replaced.

Safety catches must be in place on hooks.

Keep yourself and all personnel clear of the winch rope.

Never step over, stand near or touch a winch rope under tension.

Never wrap the winch rope around a load or hook the rope back in itself.

Never pass the winch rope around any object other than a snatch block or sheave specially designed for the purpose.

Always maintain 5 wraps of rope on the drum – the rope anchor on the drum will not withstand the winch pull without these 5 wraps on the drum. This is of importance when winching 'out'.

Always ensure that the drive is fully engaged to the winch and that the free spool is not partially selected before attempting to winch a load.

Never operate the winch drum to free spool if the rope is attached to the load.

Always survey the site for potential hazards before deploying the winching equipment.

Ensure that any additional equipment used such as shackles, webbing straps etc. are compatible to the winch capacity.

Always survey the path the load will be winched along for potential hazards.

Do not use the winch for the movement of persons.

Always keep the 'downhill side' of the load clear of persons.

Do not use the winch rope as a towrope or pull the rope of the drum by engaging free spool, attaching the rope to the load and driving away.

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When repositioning the rope on the load, always stabilize the load before removing winch rope.

Do not drive machine off transporter, use the winch. Some machines may require being driven and winched. Take great care not to shock load the winch. When machine passes over change of angle between beavertail and flat part of body the machine may roll rearwards. Carry out this part of the operation as slowly as possible ensuring that the winch rope does not go slack.

DO NOT WALK DOWN ALONGSIDE THE MACHINE BEING LOADED WITH A HAND ON THE STEERING WHEEL.

There is, only two places an operator should be positioned:

- Alongside the body on the ground
- In the normal driving position of the machine being unloaded if it requires to be driven and winched at the same time
- Keep 'downhill' side of operation clear of all personnel
- Release handbrake
- Ensure Machine is in neutral gear, release steering lock if fitted
- Release load restraints
- Commence winch 'out' operation, do not operate winch in a series of 'blips', and load in one continuous operating. Ensure that machine rolls of body controlled by winch rope.

IF MACHINE STOPS, IMMEDIATELY STOP WINCH OPERATION

- When machine is clear of ramps, secure machine, apply handbrake and remove winch rope.
- Stow winch rope and load restraints, slow loading ramps
- Return air suspension to 'ride' condition

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9 – LOADING AND UNLOADING

Loading the transporter body

- Beware gradients; will the machine roll forward on the body during loading. In general attempt to load with the transporter facing 'uphill'
- Turn on battery isolator switch/emergency stop to 'on'
- Dump air suspension if vehicle fitted with air suspension
- Deploy ramp to load position (see operation of hydraulic loading ramps)
- Ensure ground end of the ramp tip is in contact with the ground
- If jacklegs are fitted the must always be in firm contact with ground. Block if necessary.
- Position Machine to be loaded centrally at base of ramps, with wheels touching ramps.
- Ensure attachment point to load is secure and will withstand the winching forces.
- Position winch rope attachment to load centrally. The use of 'brothers' or two webbing straps is often required.
- Before applying tension to the load check winch rope is not fouling other components and all attachments are secure
- Do not use the winch to secure the load on the body. After securing the load with cargo restrain equipment operate winch 'out' to just release the winch tension. When unloading first ensure tension is replaced in winch rope by momentarily operating winch 'in' before removing cargo restraints.
- The operator should not be positioned between the load and the winch or on the 'downhill' side of the load.
- When unloading do not allow the load to 'snatch' or operate the winch 'out' in a series of 'blips'. This will cause severe shock loading to the rope and winch resulting in possible failure.
- Before releasing the winch rope from the load ensure the load is stabilized and that there is no danger of the load 'running away'
- Apply machine handbrake if fitted. Ensure machine is secure, loose items secured etc.
- 'Blip' winch 'out' control to just release tension on winch rope.
- Stow hydraulic loading ramps and ensure their security.
- Return air suspension to 'ride' condition.
- Turn battery isolator switch/emergency stop to 'off'.
- During journeys periodically check security of load restraints.

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Unloading the transporter body

Beware gradients; will the machine roll forward on the body during unloading when load restraints removed? In general attempt to unload with the transporter facing 'uphill'.

Dump air suspension.

Deploy ramp to load position. Ensure ground end of the ramp tip is in contact with ground. If jacklegs are fitted, they must ALWAYS be in firm contact with the ground. Block if necessary.

Ensure there is enough space at base of ramps to unload machine.

'Blip' winch 'in' control to restore tension on the winch rope.

Select attachment point on machine and fit winch rope hook – it may often be necessary to use a strop or shackle onto the attachment point before fitting hook. Ensure attachment point is secure. If in doubt use brothers for central pull from secure parts of the machine.

- Ensure machine to be loaded has handbrake 'on' or if not fitted with handbrake will not roll away whilst preparing for loading, check if necessary.
- Deploy winch rope. *(*See the Transporter Winch section*)*.
- Operate bypass valve on hydraulic driven machines if fitted.
- Ensure vehicle is in neutral gear. Release steering lock if fitted.
- Release machine handbrake.
- Commence winch operation; do not operate winch in a series of 'blips', and load in one continuous operation.
- Keep 'downhill' side of operation clear of all personnel.
- Operators shall not position themselves between machine and transporter body headboard.
- During loading it may be required to steer the machine, this may be done by pushing the front wheels of the machine from the ground whilst the operator stands on the ground alongside the body.

DO NOT WALK UP THE BODY ALONGSIDE THE MACHINE BEING LOADED WITH A HAND ON THE STEERING WHEEL.

THERE ARE ONLY TWO PLACES AN OPERATOR SHOULD BE POSITIONED:

1. Alongside the body on the ground
2. In the normal driving position of the machine being loaded if it requires to be driven and winched at the same time.

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Once machine is positioned on transporter body fit load restraints to each wheel or lashing points on machine. First restraint fitted should restrain machine from roll 'off'. Load restraints should restrain the machine in all directions.

REMEMBER SAFETY IS IN YOUR HANDS! YOUR ACTIONS WILL RESULT IN A SAFE OPERATION FOR YOU AND OTHERS OR, PUT YOURSELF AND OTHERS AT RISK!

10 - SERVICING INSTRUCTIONS

The Sterling bodywork must be regularly inspected and serviced in accordance with the following schedule

10 .1 RAMP MAINTENANCE

Ram rods are chromed against corrosion and will give a long life under normal conditions. However, they should be kept clean and free from dirt, which can damage the seals. Road salt should be wiped off regularly to prolong the life of the chrome coating.

10.2 HYDRAULIC SYSTEM

Safety Information

If these power packs are handled improperly or not used as specified, the resultant may:

Cause danger of the life and limb of the third party.

Damage other system components and other assets belonging to the owner.

Hinder the performance of the system into which it is installed.

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Hydraulic connection

It is important to note that these power packs are capable, of producing peak pressure of 350bar, and as such all connecting pipes / hoses must be rated accordingly

Filler Cap / Dipstick (Green Circle).

Drain Plug on bottom end of tank (Blue Circle)

The hydraulic power pack needs little maintenance, but the oil level should be checked when ramps are in stowed position and topped up if required. The system uses ISO32 hydraulic oil, and the manufacturer's data sheets should be consulted for information on handling and disposing of the product. The fill point is a breather cap on the top of the reservoir, and the level can be checked using a dip stick, (or the sight glass, for hydraulic winch system where fitted.) Hoses should be regularly checked for chafing or leaks and should be replaced immediately.

Oil Level

The oil level should be between the red lines on the dipstick as picture

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Recommended Maintenance Routines

External Cleaning: Regular cleaning of the unit will give early warning of any problems, such as leaks, damage or corrosion.

Oil Change: after 100 hours / 3000 hours / Yearly.

Electrical Connections: should be checked yearly and where necessary cleaned.

10.3 WINCH MAINTENANCE

Regular Monthly Maintenance

Externally: the winch should be kept clean to prevent any build up of corrosion on external working parts.
Inspect roller guides for grooving, and if excessive, the rope life will be reduced, worn guides should be replaced to ensure rope is not damaged.

- Check winch for external damage.
- Check winch mounting for distortion and re-tighten mounting bolts if necessary.
- Operate free spool clutch mechanism to ensure correct operation, giving full engagement and disengagement.
- All external-moving parts should be lubricated with lightweight oil.
- All electrical connections and wiring should be inspected for loose connections, corrosion or fraying.
- Check the tie bars that hold the winch in alignment, replace if bent or broken.
- Check the emergency STOP control to ensure it functions correctly by operating the winch and pushing the STOP button.

THE WINCH MUST HAVE A THOROUGH WINCH EXAMINATION ONCE A YEAR, THIS SHOULD BE CARRIED OUT BY A COMPIDNET PERSON, AND A CERTIFICATE SHOULD BE FILLED IN AND FILED.

Care of a Winch Rope

Note: ISO4309:2004/2010 – Wire Ropes Directive
ISO 4309:2004 /2010 details guidelines for the care, installation, maintenance and examination of wire rope in service on winches, hoists and cranes, and enumerates the discard criteria to be applied to promote the safe use of the machinery.
It is important that these guidelines – for safe care, installation and ultimately disposal of wire ropes is strictly adhered to according to this directive.

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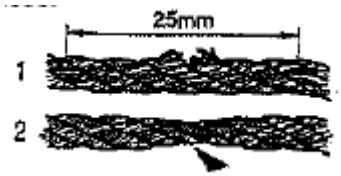
It is important that the wire rope is inspected on a regular basis, for kinks, flat spots, broken strands and other damage, and if necessary, the damaged sections should be cut away and the rope reattached or completely replaced.

Check both the rope and the hook and replace under any of the following circumstances:

- 10 strands of the rope or more broken within space of 25mm (see fig.1)
- Rope shows visible signs of wasting (See fig.2)



- Deformed or excessively corroded rope.
- Twisted /bent or kinked.

A good habit is to rewind the rope onto the winch drum after it has been used, so it is evenly layered. To do this, rewind keeping the rope under tension. Normally the load can be applied by hand.

Under no circumstances wrap the wire rope around the load being recovered and then attach the hook back on to the rope. This will result in serious rope damage or breakage. Always employ a chain or wedding strap from the hook to the load.

WINCH ROPES ARE NOT COVERED BY WARRANTY

Cables

Cables on flip-over ramps should be re-tensioned when required to ensure correct operation of flip-over. Worn cables should be replaced.

10.4 GENERAL

A general inspection should be made of the body for items such as hydraulic leaks, chaffing pipes, cracking in steel frame, security of body mounting bolts and security of ramp assembly. It is the responsibility of the operator to ensure any faults are repaired promptly to avoid any consequent damage, which would not be covered by manufacturer's warranty. A walk round check should be made every day to identify any damage or worn parts, or damaged or missing safety systems or labels, which should be replaced immediately. Lubrication should be carried out at 6-week intervals.

Spare Parts are available from Sterling, who will recommend procedures for replacement.

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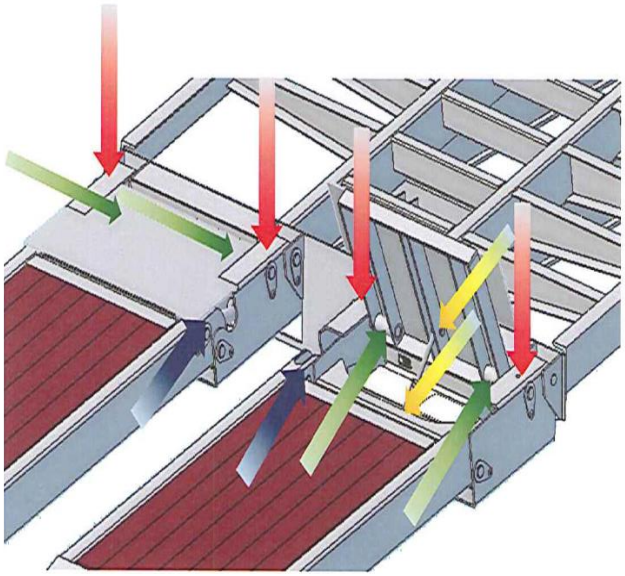
II - GREASE POINTS

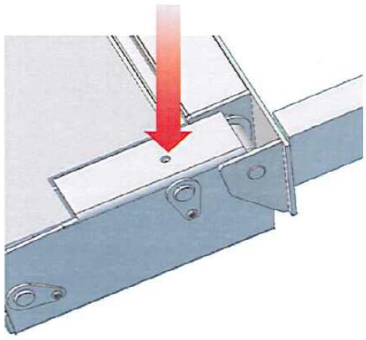
Hinge Points

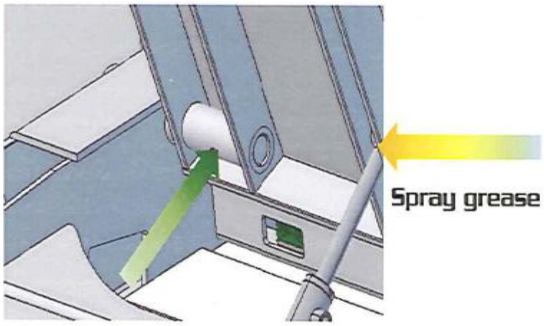
All greased hinge points are to be regularly lubricated using heavy-duty grease. Pictures are included below to show location of greasing points. Ramps must be secured before greasing commences. This means they are either folded fully forward onto deck or lowered onto ground. When greasing hinges on flip lock plates, they must be propped against falling.

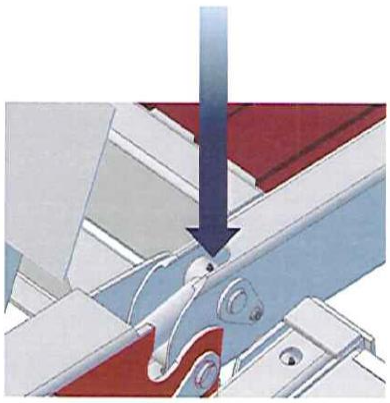
II.I CHEESE-WEDGE GREASE POINTS

Use grease gun on all points shown here on the following images









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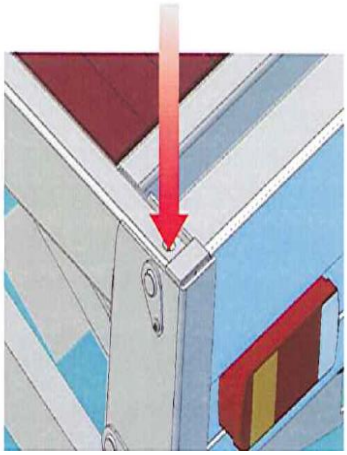
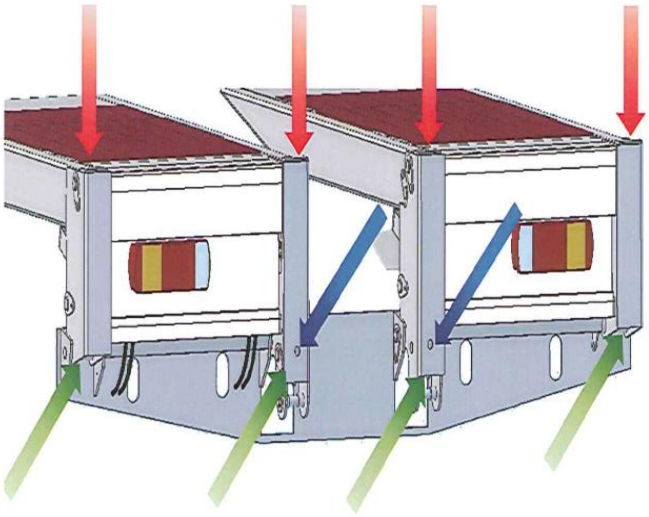
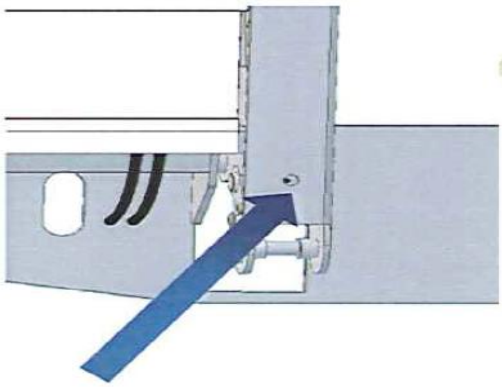
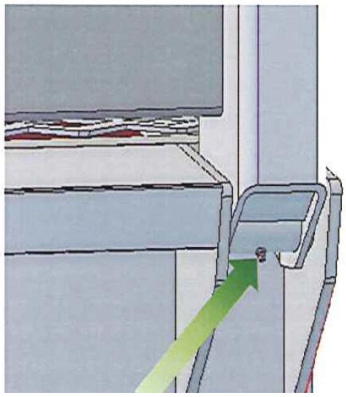
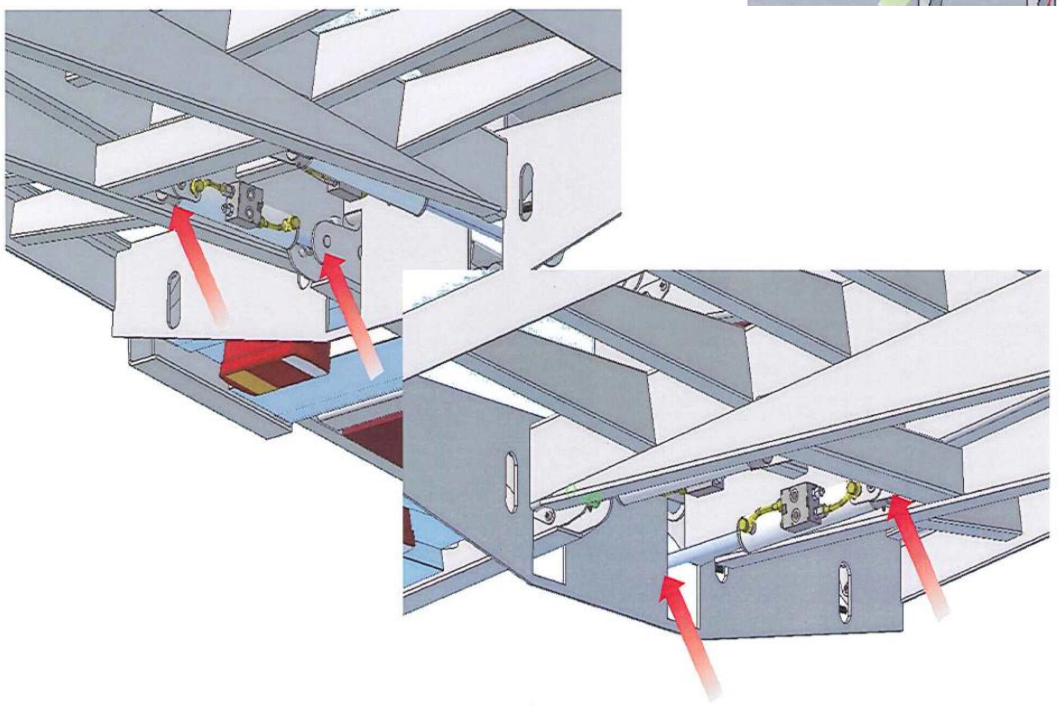
Cheese-wedge Grease points











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11.2 STRAIGHT RAMPS GREASE POINTS

11.3 DOUBLE FLIP RAMPS GREASE POINTS

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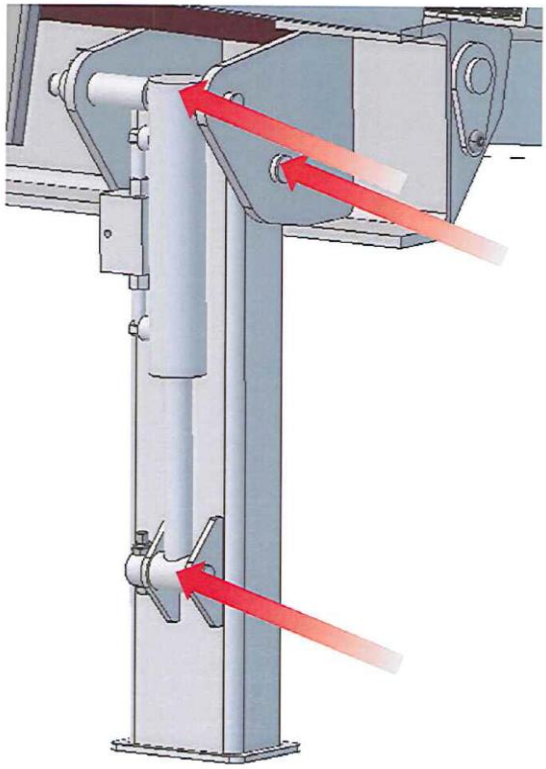
11.4 JACKLEG GREASE POINTS



12 - TECHNICAL DATA SHEETS

Revision date: 12/12/2018 Revision: 7 Supersedes date: 24/07/2017

SAFETY DATA SHEET
Triad 32 Hydraulic Oil

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	Triad 32 Hydraulic Oil
Product number	7589
Internal identification	GHS21608
REACH registration number	n/a Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Universal hydraulic oil.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	Morris Lubricants Castle Foregate Shrewsbury Shropshire SY1 2EL +44 (0) 1743 232200 +44 (0) 1743 353584 sds@morris-lubricants.co.uk
Manufacturer	MORRIS LUBRICANTS Castle Foregate Shrewsbury Shropshire SY1 2EL UK +44 (0) 1743 232200 +44 (0) 1743 353584 sds@morris-lubricants.co.uk

1.4. Emergency telephone number

Emergency telephone	+44(0)1743 232200 (08.45 - 17.00 GMT)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified
Classification (67/548/EEC or 1999/45/EC)	Not classified

Triad 32 Hydraulic Oil

2.2. Label elements

Hazard statements NC Not Classified

Supplemental label information EUH210 Safety data sheet available on request.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Distillates,hydrotreated heavy paraffinic **60-100%**

CAS number: 64742-54-7 EC number: 265-157-1 REACH registration number: 01-2119484627-25-0014

Classification	Classification (67/548/EEC or 1999/45/EC)
Not Classified	-

Distillates,hydrotreated heavy paraffinic **30-60%**

CAS number: 64742-54-7 EC number: 265-157-1 REACH registration number: 01-2119484627-25-0014

Classification	Classification (67/548/EEC or 1999/45/EC)
Asp. Tox. 1 - H304	-

2-ethylhexyl zinc dithiophosphate **<1%**

CAS number: 4259-15-8 EC number: 224-235-5 REACH registration number: 01-2119493635-27-0000

Classification	Classification (67/548/EEC or 1999/45/EC)
Eye Dam. 1 - H318 Aquatic Chronic 2 - H411	Xi;R41. N;R51/53.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments If REACH registration numbers do not appear the substance is either exempt from registration, does not meet the minimum volume threshold for registration, the registration date has not yet come due or this information is proprietary. This product contains less than 3% DMSO measured by IP346 and shall therefore not be classified.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention if any discomfort continues.

Inhalation If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Ingestion Get medical attention if any discomfort continues. Do not induce vomiting.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water.

Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

General information	If aspiration into the lungs is suspected, eg when vomitting, admit to hospital immediately.
Inhalation	Upper respiratory irritation.
Ingestion	The product contains mineral oil, which if aspirated into the lungs through vomitting after ingestion, may result in chemical pneumonia.
Skin contact	Prolonged contact may cause redness, irritation and dry skin.
Eye contact	Irritation of eyes and mucous membranes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Heat from fire could result in drums bursting
Hazardous combustion products	Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m3. Oxides of carbon. Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting	Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	For personal protection, see Section 8. Take care as floors and other surfaces may become slippery. Keep unnecessary and unprotected personnel away from the spillage.

6.2. Environmental precautions

Environmental precautions	The product is insoluble in water and will spread on the water surface. Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	In case of spillage on water prevent the spread by use of suitable barrier equipment Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

6.4. Reference to other sections

Triad 32 Hydraulic Oil

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Always remove oil with soap and water or skin cleaning agent, never use organic solvents. Do not use oil-contaminated clothing or shoes, and do not put rags moistened with oil into pockets.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Miscellaneous hazardous material storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Distillates,hydrotreated heavy paraffinic

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³
Short-term exposure limit (15-minute): ACGIH 10 mg/m³

Distillates,hydrotreated heavy paraffinic

Long-term exposure limit (8-hour TWA): ACGIH 5
Short-term exposure limit (15-minute): ACGIH 10 mg/m³

Mineral Oil

Long-term exposure limit (8-hour TWA): OES 5 mg/m3(c)
ACGIH = American Conference of Governmental Industrial Hygienists.

2-ethylhexyl zinc dithiophosphate (CAS: 4259-15-8)

DNEL
Workers - Dermal; systemic effects: 0.14 mg/kg/day
Workers - Inhalation; systemic effects: 0.422 ppm
Workers - Inhalation; Long term systemic effects: 0.07 ppm
Workers - Dermal; local effects: 0.09 mg/cm²
Workers - Inhalation; local effects: 0.42 ppm
Workers - Inhalation; Long term systemic effects: 0.21 ppm
Workers - Dermal; Long term systemic effects: 0.09 mg/cm²
Workers - Dermal; Long term systemic effects:

PNEC
- Fresh water; 0.004 mg/l
- Soil; 0.0548 mg/kg
- Sediment (Freshwater); 0.0701 mg/kg
- Marine water; 0.0046 mg/l
- Sediment (Marinewater); 0.00701 mg/kg
- STP; 3.8 mg/l
- Air; 7.1 mg/m³

8.2. Exposure controls

Triad 32 Hydraulic Oil

Protective equipment

Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.
Hand protection	The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.
Other skin and body protection	Use of suitable barrier/afterwork creams to protect skin may be beneficial.
Hygiene measures	Use engineering controls to reduce air contamination to permissible exposure level. Wash promptly with soap and water if skin becomes contaminated.
Respiratory protection	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.
Thermal hazards	Not anticipated under normal conditions of use. The product is combustible if heated excessively and an ignition source is applied.
Environmental exposure controls	Do not allow the product to contaminate land or water.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Amber.
Odour	Characteristic. Oil-like.
Odour threshold	Not known.
pH	Not applicable.
Melting point	-34°C Pour point
Initial boiling point and range	>320°C @ 101.3 kPa
Flash point	213°C PMCC (Pensky-Martens closed cup).
Evaporation rate	Not relevant.
Upper/lower flammability or explosive limits	Not known.
Other flammability	Product is not flammable but on excessive heating may become combustible.
Vapour pressure	<0.1 kPa @ 20°C
Vapour density	Not determined.
Relative density	0.871 @ 15.6°C
Solubility(ies)	Insoluble in water. Soluble in the following materials: Organic solvents.

Triad 32 Hydraulic Oil

Partition coefficient	Not determined. log Kow:>7 Typical of mineral oil.
Auto-ignition temperature	No specific test data are available.
Decomposition Temperature	Not determined.
Viscosity	32.9 cSt @ 40°C
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information

Volatile organic compound	The product is a complex mixture, the majority of which would not be classed as a VOC. However it cannot be discounted that trace or low levels of VOC's may be present.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	The product is unlikely to present any significant inhalation hazard at ambient temperatures and under normal conditions of use.

Serious eye damage/irritation

Serious eye damage/irritation	May cause mild, short lasting discomfort to eyes.

Respiratory sensitisation

Triad 32 Hydraulic Oil

Respiratory sensitisation	Repeated exposure to oil mists may cause respiratory damage. There is no evidence that the product can cause respiratory hypersensitivity.
Skin sensitisation	
Skin sensitisation	Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP346 test
Reproductive toxicity	
Reproductive toxicity - fertility	No data available to suggest the product will cause reproductive toxicity.
Specific target organ toxicity - single exposure	
STOT - single exposure	Based on available data the classification criteria are not met.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Based on available data the classification criteria are not met.
Aspiration hazard	
Aspiration hazard	No data available to suggest the product will cause reproductive toxicity.
General information	This product has low toxicity. Only large quantities are likely to have adverse effects on human health.
Inhalation	Unlikely to be hazardous by inhalation because of the low vapour pressure of the product at ambient temperature.
Ingestion	No harmful effects expected from quantities likely to be ingested by accident.
Skin contact	Skin irritation should not occur when used as recommended. Repeated exposure may cause skin dryness or cracking.
Eye contact	May cause temporary eye irritation.
Acute and chronic health hazards	Prolonged or repeated contact with used oil may cause serious skin diseases, such as dermatitis and skin cancer.

Triad 32 Hydraulic Oil

SECTION 12: Ecological Information

Ecotoxicity Based on available data the classification criteria are not met. Not regarded as dangerous for the environment.

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met. Not considered toxic to fish.

Acute toxicity - aquatic invertebrates Based on available data the classification criteria are not met.

12.2. Persistence and degradability

Persistence and degradability The product contains mineral oil which has limited biodegradability in CEC test methods but will biodegrade slowly in aerobic water and sediments and is considered ultimately biodegradable.

Stability (hydrolysis) The product is based on highly refined mineral oils that are considered stable to hydrolysis.

Biodegradation The product is not considered readily biodegradeable, albeit the major constituents are expected to ultimately biodegrade.

Biological oxygen demand Not determined.

Chemical oxygen demand Not determined.

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient Not determined. log Kow:>7 Typical of mineral oil.

12.4. Mobility in soil

Mobility The product is non-volatile. The product is insoluble in water and will spread on the water surface.

Henry's law constant Not determined.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information This material and its container must be disposed of as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Dispose of waste via a licensed waste disposal contractor.

Waste class European Waste Catalogue (EWC) = 13 01 13* (other hydraulic oils)

SECTION 14: Transport information

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Triad 32 Hydraulic Oil

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations Health and Safety at Work etc. Act 1974 (as amended).
The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
Control of Substances Hazardous to Health Regulations 2002 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].

EU legislation Dangerous Preparations Directive 1999/45/EC.
Dangerous Substances Directive 67/548/EEC.
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Guidance Workplace Exposure Limits EH40.
Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

Canada - DSL/NDSL
All the ingredients are listed or exempt.

US - TSCA
All the ingredients are listed or exempt.

Australia - AICS
All the ingredients are listed or exempt.

Korea - KECI
All the ingredients are listed or exempt.

China - IECSC
All the ingredients are listed or exempt.

Philippines – PICCS
All the ingredients are listed or exempt.

New Zealand - NZIOC
All the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. GHS: Globally Harmonized System. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. vPvB: Very Persistent and Very Bioaccumulative.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Issued by	Regulatory Affairs
Revision date	12/12/2018
Revision	7
Supersedes date	24/07/2017
SDS number	21608
Hazard statements in full	H304 May be fatal if swallowed and enters airways. H318 Causes serious eye damage. H411 Toxic to aquatic life with long lasting effects.

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SAFETY DATA SHEET

TruckTEC

EP2 GREASE

Product Code: GT501

SECTION 1 IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF COMPANY/UNDERTAKING

1.1	Product Identifier Product Code	EP2 GREASE GT501
1.2	Relevant identified uses of the substance or mixture and uses advised against	Lubricating grease Do not use in any other application.
1.3	Company	GROUPAUTO UK & Ireland Ltd Roydsdale House, Roydsdale Way Euroway Trading Estate, Bradford, BD4 6SE
1.4	Emergency Telephone Number	+44 (0) 121 568 6800 (Monday – Friday 08.30 – 17.00 hrs GMT)
1.5	Other Information	Preparation Date: 21/10/2015

SECTION 2 HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

CLP Classification:
No classification required
Not classified as dangerous for the Environment

Classification to DPD (1999/45/EC) and CHIP
No classification required

See section 16 for full text of H and R phrases

2.2 Label Elements

Labelling in accordance with CLP
None

Labelling in accordance with CHIP
None

2.3 Other Hazards

PBT: This substance is not identified as a PBT substance.

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous Ingredients	CAS No.	REACH Reg. No.	GHS Classification	Conc. %
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	85940-28-9	01-211952121-61	Skin Irrit. 2; H315 Eye. Irrit. 2; H319 Aquatic Chronic 2; H411	<1.5

The mineral oil contains less than 3% DMSO extract as measured by IP 346

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

Eyes	Wash out eye with plenty of water. Obtain medical assistance if soreness or redness persists.
Skin	Wash skin with soap and water. If grease has been injected under the skin, seek medical advice immediately.
Ingestion	Do not induce vomiting. Obtain medical attention.
Inhalation	No risk from inhalation.

4.2 Most important symptoms and effects, both acute and delayed — No ill effects

4.3 Indication of immediate medical attention and special treatment needed, if necessary — Eye Contact: immediately washout with plenty of water

SECTION 5 FIRE-FIGHTING MEASURES

TruckTEC

GROUPAUTO G-TRUCK

SAFETY DATA SHEET

5.1	Extinguishing media	Use water spray to cool containers. Use foam, dry chemical, carbon dioxide or suitable extinguishing media.
5.2	Specific hazards arising from the substance or mixture	This product may give rise to hazardous fumes in a fire.
5.3	Advice for fire-fighters	Wear self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures	See Section 8 for protective equipment. Wash down floor area as spillage may be slippery. Larger spillage should be contained with sand or earth and collected in salvage container for disposal.
6.2	Environmental precautions	Protect drains from potential spills to minimise contamination. Do not wash product into drainage system. In the case of large spills contact the appropriate authorities. In the case of spillage on water, prevent the spread of product by the use of suitable barrier equipment. Recover product from the surface. Protect environmentally sensitive areas and water supplies.
6.3	Methods and material for containment and cleaning up	Absorb into dry earth or sand. Protect drains using drain covers. Dispose of as hazardous waste.
6.4	Reference to other sections	Personal protective equipment: See section 8

SECTION 7 HANDLING AND STORAGE

7.1	Precautions for safe handling	Avoid direct contact with the substance - Wear gloves. Care should be taken with dispensing equipment not to inject product under the skin.
7.2	Conditions for safe storage, including any incompatibilities	Store in a cool well-ventilated area.
7.3	Specific end use(s)	Intended for use as a high temperature lubricating grease.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Country	Substance	Long Term (8 Hours TWA)	Short Term (15 Mins)
None assigned			

8.2 Exposure controls

Hand Protection:	PVC gloves
Eye Protection:	Wear approved safety goggles
Skin Protection:	Normal work wear
Respiratory Protection:	N/A

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties — Does not constitute a specification

Typical Values Grades:	Units	EP2 GREASE
Appearance		Brown smooth semi-fluid/stiff grease
Odour		Odourless
Odour Threshold		No data available
pH		Not applicable
Relative density	kg/l	0.89-0.93
Solubility - water		Insoluble
Melting Point	°C	>185
Initial boiling point and range	°C	No data available
Flash point (PMCC)	°C	>200
Flammability		Auto-flammability > 200°C
Upper/lower flammability or explosive limits		No data available
Vapour pressure	kPa (0.1 mm Hg)	Not applicable

Partition coefficient n-octanol/water	Log Pow	Not applicable
Autoignition temperature	°C	>200
Decomposition temperature		No data available
Viscosity	mm²/s	No data available
Evaporation rate		Not applicable
Vapour density		Not applicable
Explosive properties		No data available
Oxidising properties		None

9.2 Other Information Not Applicable.

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity	Stable at ambient temperatures.
10.2 Chemical stability	Stable under normal conditions of use
10.3 Possibility of hazardous reactions	Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.
10.4 Conditions to avoid	Heat
10.5 Incompatible materials	Strong oxidising agents
10.6 Hazardous decomposition products	Combustion will generate: smoke, carbon dioxide and carbon monoxide.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity	
-Oral	No toxic components present at levels to cause classification.
-Inhalation	No toxic components present at levels to cause classification.
-Dermal	No toxic components present at levels to cause classification.
Corrosivity/Irritation	
-Eye	No components present that cause classification as an eye irritant.
- Skin	No components present that cause classification as a skin irritant.
-Respiratory Tract	No components present that cause classification as a respiratory irritant.
Sensitisation	
-Skin	No evidence of sensitisation effects.
- Respiratory	No evidence of sensitisation effects.
Repeated-dose Toxicity	No data available.
Mutagenicity	No evidence of mutagenicity.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive Toxicty	No evidence of reproductive toxicity.

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity	No information available.
12.2 Persistence and Degradability	Only slightly biodegradable.
12.3 Bioaccumulative Potential	This product, as supplied, is not expected to bio-accumulate.
12.4 Mobility in Soil	This product is poorly absorbed onto soils or sediments. Non-volatile.
12.5 Results of PBT and vPvB Assessment	This substance is not identified as a PBT or a vPvB substance.
12.6 Other Adverse Effects	None known.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods
Send to registered waste disposal site using services of a registered waste disposal contractor. Disposal of packaging: Dispose of as normal industrial waste. **NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

SECTION 14 TRANSPORT INFORMATION

Not classified as dangerous goods for carriage under ADR/RID/AND/IMDG/ICAO/IATA regulations.

14.1	UN Number	None
14.2	UN Proper Shipping Name	None
14.3	Transport Hazard Class	None
14.4	Packing Group	None
14.5	Environmental Hazards	Not classified as an Environmentally hazardous substance/Marine Pollutant
14.6	Special Precautions for User	
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable to packaged goods

SECTION 15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	Supply regulations: DPD: Dangerous Preparations Directive; GHS: Globally Harmonised System of classification and labelling of chemicals; CLP: Classification, Labelling and Packaging regulations. Transport regulations: CDG: Carriage of Dangerous Goods regulations; ADR/RID/IMDG/ICAO/IATA regulations.
15.2 Chemical Safety Assessment	A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

SECTION 16 OTHER INFORMATION

Third Issue
Second Issue March 2015: Changed composition
First Issue November 2013: Changed to new format.

Full text of classification data in sections 2 and 3

Skin Irrit. 2: H315	Causes skin irritation
Eye Irrit. 2; H319	Causes serious eye irritation
Aquatic Chronic 2; H411	Toxic to aquatic life with long lasting effects

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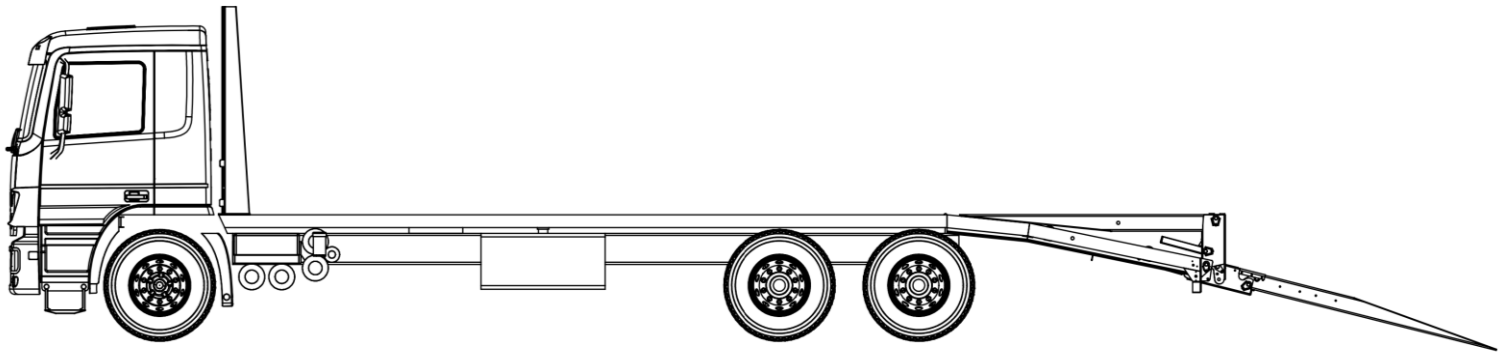

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