

**PLEASE PUT THIS
OPERATOR'S
MANUAL
IN THE DRIVER'S
CAB**

Edbro

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JOST UK Ltd, Edbro House, Nelson Street,
Bolton BL3 2JJ
UK Tel: 0044 (0)1204 528 888

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JOST Werke, Siemensstr.2, 63263 Neu-Isenburg
Germany Tel: 0049-6102-295-0

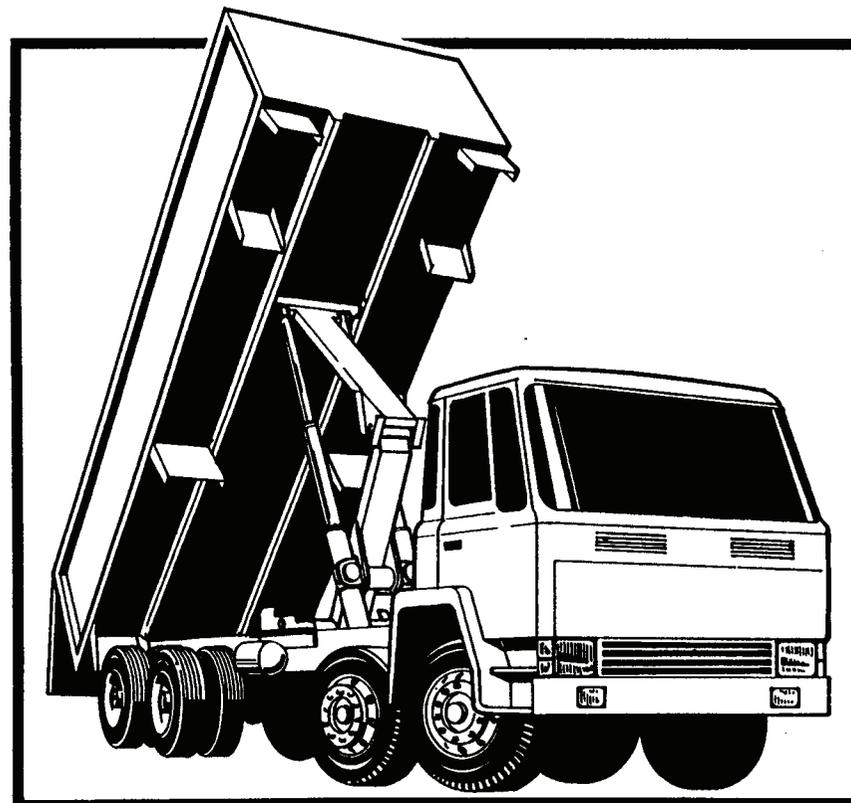
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Edbro

CONFORMS
WITH
EUROPEAN
REGULATIONS **CE**

**OPERATOR'S
MANUAL**



**TS26 & 32
HOISTS**

Edbro



Member of **JOST**-World

JOST UK Ltd

Edbro House, Nelson Street, Bolton, England, BL3 2J3

Tel: +44 (0) 120 452 8888 Fax: +44 (0) 120 453 1957 Web: www.edbro.com Email: postmaster@edbro.com

DECLARATION OF INCORPORATION
Edbro ISO9001 Registration Number: 4978

Description of Equipment										
UNDERBODY CYLINDERS FOR RIGID CHASSIS										
TS26 (CS11)					TS32 (CS11)					
UB7	UB9	UB10	UB11	UB12	UB14	UB16	UB18	UB21	UB24	

EQUIPMENT SUPPLY ONLY

This is to certify that the above equipment complies with all relevant essential safety requirements of the EC Machinery Directive 2006/42/EC and the national laws and regulations adopting this directive.

Further information relating to conformity is available on request.

This equipment must not be put into service until the machinery into which it is incorporated has been declared in conformity with the provisions of the above directive and all relevant EC directives and appropriately CE marked.

To confirm the suitability of this equipment for the application proposed, email details to applications@edbro.co.uk.

The quality assurance arrangements adopted in respect of these products have been in accordance with the conditions of our ISO9001 registration.

For technical documentation refer to www.edbro.com or your local sales office.

Conformity assessment procedure followed: Internal control of production.

Name of person authorised to sign on behalf of the manufacturer: *G D Creamer*

Position: *Technical Director*

Signature:

Date: *April 2015*

Registered Office: Nelson Street, Bolton, No. 283933 United Kingdom

Ref. QCP131-v2

This is an example of our Declaration of Incorporation. If you require an individual copy for your technical file, call Edbro Sales.

Record your hoist details below:
(refer to hoist serial plate - see page 3)

Hoist model code;

Hoist serial number;

Date put into service;

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CORRECT USE

This hoist is designed to be assembled into a tipping vehicle for the movement of bulk commodities. This manual is intended as a general guide for safe tipping but more specific safety guidance should be supplied by the bodybuilder depending on the nature of the equipment. The bodybuilder can also advise on the maximum load capacity of the equipment, bearing in mind the hoist capability and road traffic regulations.

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SAFETY CODE

ALWAYS

- keep the tyres at the correct pressure
- spread the load evenly in the body
- before tipping make sure your truck is on firm, level ground
- make sure the danger area is clear of people and obstructions (refer opposite)
- during tipping, stay in the cab at the controls; if danger signs develop (for example, if the body starts to lean to one side or the load sticks) immediately lower the body
- prevent the discharging load from piling up and fouling on the taildoor by driving forward **VERY SLOWLY BY NO MORE THAN A METRE AT A TIME**
- just before loading, move the control lever to lower to ensure that no oil is trapped in the cylinder and the full load rests on the chassis.

EXTRA CAUTION

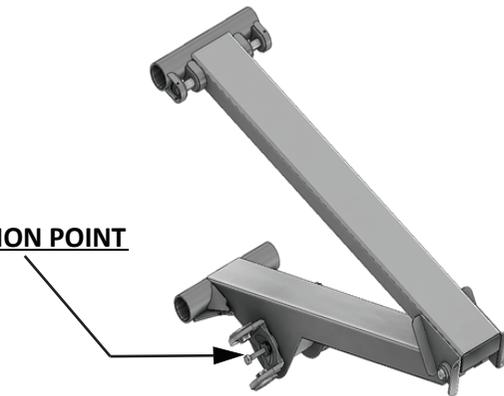
Be particularly careful in frosty weather. Frost can cause wet loads to stick and discharge unevenly.

NEVER

- overload
- alter the pressure setting of the relief (overload) valve
- put the tipper lever in 'tip' unless you are actually tipping
- tip in high winds
- tip on a side slope
- tip with the body within 5 metres of overhead power lines
- shake the load free
- drive off with the body up or the PTO engaged. This could damage the equipment
- leave the body up overnight
- leave the vehicle with the ignition key in
- go under a raised **LOADED** body
- go under a raised **EMPTY** body (unless it is propped)
- steam clean or the exposed cylinder tubes, this will cause corrosion
- climb on the equipment by any means other than that provided by the bodybuilder.
- never power wash near the breather

YOKE MAINTENANCE

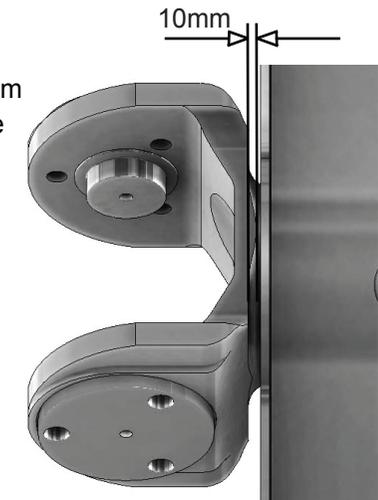
YOKE INSPECTION POINT



Operators and Service agents are advised to inspect this area during routine maintenance. In extreme cases, a loose bolt can allow the cylinders to move sideways and possibly result in fouling of the chassis frame resulting in cylinder and chassis damage. Inspection and repair should be carried out on a regular basis if necessary.

Check that this gap does not exceed 10mm when the yoke assembly is levered to one side. If this figure is exceeded, advise the customer that the equipment is not safe to use and carry out repair procedure.

Yoke to be fully greased after installation of new parts.



SAFETY

Tipping is always hazardous and sometimes dangerous.

Vehicles can be overturned by sticking loads, poor ground conditions, high cross winds or bad practices such as tipping on a side slope. So:

- do not tip until you have read and understood this manual
- remember the hoist (tipping gear) is designed to lift; it is not a stabiliser
- if the vehicle overturns, any damage to the hoist is the RESULT and not the CAUSE of the turnover
- avoid accidents by following the safety code on pages 6 and 7
- it is the responsibility of the operator to ensure that drivers are suitably trained in the use of this equipment.

OVERHEAD POWER LINES

Maintain a 6m safety zone horizontally from nearest & either side of the overhead wire(s). Greater distance may be required to allow for crane jib encroachment on the safety zone.

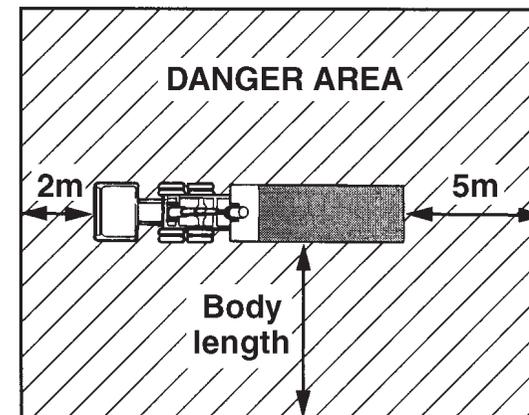
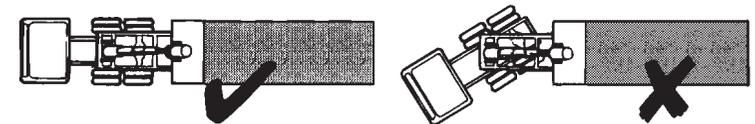
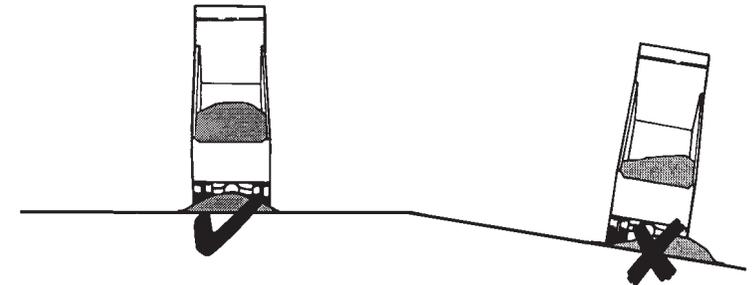
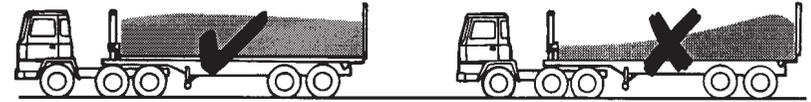
SPARE PARTS & SERVICE

Use only genuine Edbro parts from Edbro service dealers. Refer to the online Dealer Locator at www.edbro.com for a full list of service dealers and distributors.

Always quote the component part number and serial number when ordering parts or seeking advice.



SAFETY CODE



Always ensure that no person, animal or other equipment is within this area when tipping

CONTROLS

Your Edbro hoist works best if the vehicle is fitted with matching Edbro hydraulics (PTO, pump, valves, oil tank, pipes and controls).

The PTO and tipper controls are combined in one unit and work off the vehicle's air system (fig. a).

The PTO control switch is fitted with a PTO engaged warning light.

The tipper control is a lever with four safety features:

- a spring-loaded device stops it from being accidentally moved into 'raise' or 'lower'
- a spring return to 'hold' from 'raise' position, known as a deadman's handle function, ensures the driver keeps his hand on the tipper control **all the time** the body is being raised
- when the lever is moved from 'hold' towards 'lower', the PTO is *automatically disengaged; this internal mechanical feature prevents PTO, pump or gearbox damage if you forget to disengage the PTO before driving off
- controlled lowering (feathering) regulates speed of descent for loaded or part-loaded bodies.

This type of control is recommended for conformity with European standards. Other controls are available but, if used, the bodybuilder will need to ensure that all Essential Safety Requirements are covered by other means. For example, separate controls are available (fig. b).

*Alternative combined controls **without** automatic PTO disengagement feature (for spreading or static discharge applications) are available.

PROBLEM SOLVING

THE BODY STOPS ON THE WAY UP

Lower the body as slowly as possible. Then make sure:

- the body is not overloaded or badly distributed
- the oil in the tank is up to dipstick level (refer page 16).

THE BODY WILL NOT STAY UP WITH THE TIPPER LEVER IN 'HOLD'

Put the tipper lever back in 'raise' and lift the body. Then:

- rev the engine until the relief (overload) valve blows, i.e. until you hear a high pitched noise coming from the tipper valve (page 3)
- keep the engine revs going for five seconds
- put the tipper lever in 'hold'.

If the body still will not stay up, lower the body, then contact nearest service agent for advice.

EXCESSIVE NOISE

- check the oil level
- check pipes for kinks and leaks.

PROBLEM SOLVING

The following action can be taken without special tools. If unsuccessful, call your nearest Edbro service dealer (refer to www.edbro.com).

THE HOIST IS JERKY OR SLUGGISH

Air may be trapped in the system. Check oil level and then operate the hoist to full stroke several times; any air will be dissipated back to the tank. (see page 10)

THE BODY WILL NOT TIP

Make sure:

- the vehicle air pressure has had enough time to build up (see vehicle operator's manual)
- the oil in the tank is up to dipstick level (refer page 9)
- the PTO switch is 'in' and PTO is engaged (oil is circulating)
- the tipper lever is in 'raise'
- there are no kinks in the oil pipes
- no air is leaking from the air pipes.

THE BODY WILL NOT LOWER

Check PTO has disengaged and warning light is out.

Put the tipper lever back in 'raise'. Then:

- rev the engine until the relief (overload) valve blows, i.e. until you hear a high pitched noise coming from the tipper valve
- keep the engine revs going for five seconds
- lower the body (page 7).

If the body still will not come down, put the tipper lever in 'hold', PROP THE BODY, switch the PTO to 'out' and turn off the engine.

CONTROLS



Fig. a. Combined PTO & tipper air control



Fig. b. Separate tipper air control

HOW TO LIFT THE BODY

Make sure the handbrake is on, the gear lever is in neutral, the tipper lever is in 'hold', the pto switch is 'out', the engine is running and the air pressure is at the level recommended by the truck manufacturer. Then:

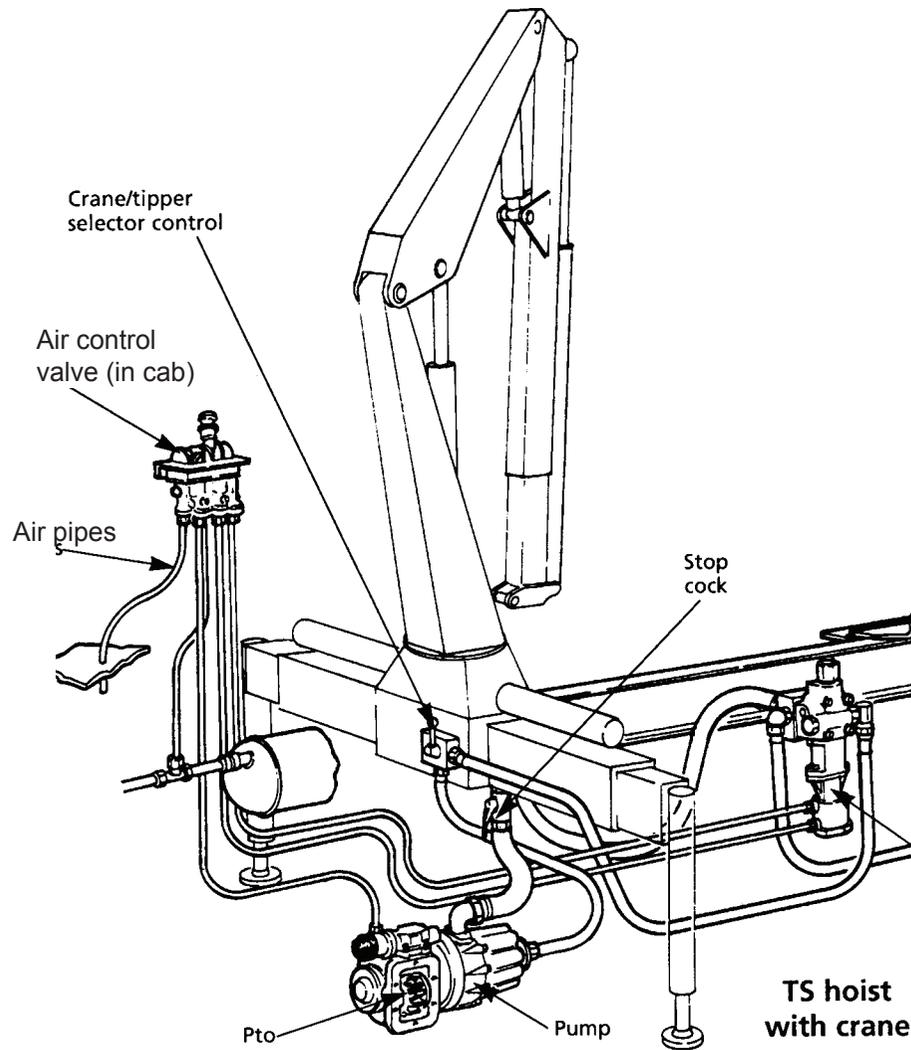
- If a crane is fitted, move the selector control lever (page 14) to 'tipper'
 - Unlock the taildoor (taking care to stand clear)
 - Return to the cab and remain there until the tipping operation is complete
 - Depress the clutch* and wait 8 seconds
 - Press the safety latch and switch the pto 'in' (the warning light will come on)
 - Release the clutch
 - Make sure no-one is near the danger area (page 3)
 - Move the tipper lever to 'raise' and hold in position. Releasing pressure on the level will stop the body lifting
 - Raise the body SMOOTHLY by varying the engine revs but **NEVER EXCEED 1100rpm**
 - Higher engine revs may be possible depending on the PTO / pump model & the gearbox model. Check with your supplier to be sure.
 - Prevent the discharging load from piling up and fouling the taildoor by driving forward VERY SLOWLY BY NO MORE THAN A METRE AT A TIME
 - When the body gets to the tipping angle required, release the tipper lever to 'hold'
 - If you need to spread your load, release the handbrake and drive forward VERY SLOWLY
- *If you have an automatic gearbox, the PTO operation will be different. Refer to the PTO installer for specific instructions.



Warning : Maximum engine revs therefore pump revs & flow should be limited by the application in the first instance & then by the limit of the pump & the suction line size used. Excess speed can cause damage to the pump & gearbox. Refer to edbro for support & advice on maximum pump speeds.

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MAINTENANCE



HOW TO LOWER THE BODY

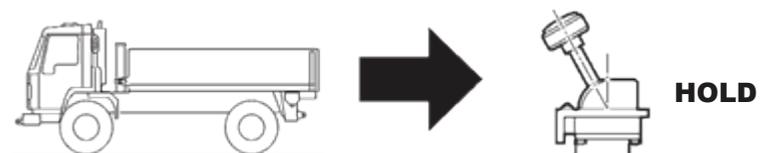
Make sure that no-one is in the danger area (see page 3). Then:

- SLOWLY move the tipper lever out of 'hold' towards 'lower'; this will automatically disengage the PTO and the warning light will go out. If automatic PTO disengagement isn't fitted, switch the PTO to 'out' before driving off
- regulate the speed the body comes down by moving the lever towards 'hold' to slow it down or towards 'lower' to speed its descent
- when the body is down, move the lever back to 'hold'
- lock the taildoor
- if fitted, raise the stabiliser legs.

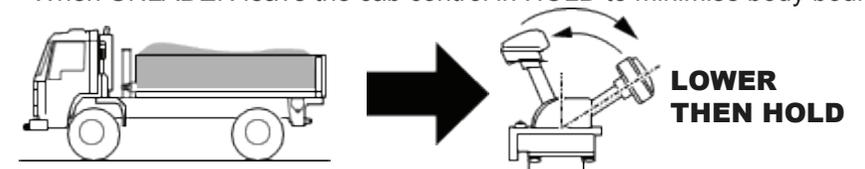


DO NOT DRIVE OFF UNTIL THE BODY IS FULLY DOWN. MAKE SURE THAT THE PTO IS DISENGAGED BEFORE DRIVING OFF.

HOW TO LOWER THE BODY



When UNLADEN leave the cab control in HOLD to minimise body bounce.



When LOADING put the cab control in LOWER to ensure that no oil is trapped in the cylinder and the entire load rests on the chassis. Then return the control to HOLD when travelling.

TIPPING 'MUSTS'

You must remain in the cab to operate the 'deadmans' handle control until you have finished tipping.

If, after tipping, you drive off with the body still up, the outer cover could damage the ram tubes. Always lower the body BEFORE driving off.

When driving along with an EMPTY body, keep the tipper lever in 'HOLD' this reduces body bounce.

When driving along with a LOADED body, keep the tipper lever in 'LOWER'. This prevents damage to the hoist and rear hinge by putting the weight of the load on the chassis (where it should be) and not on the hoist.

Never leave the body up overnight. This can cause the ram tube to corrode and the seals to deteriorate.

Never steam clean or power wash the ram tubes. This can cause corrosion.

OVERHEAD POWER LINES

Maintain a 6m safety zone horizontally from nearest & either side of the overhead wire(s). Greater distance may be required to allow for crane jib encroachment on the safety zone.

MAINTENANCE

WEEKLY

Make sure the body is down, the handbrake is on and the engine is switched off. Then top up the oil in the tank to dipstick level with clean hydraulic oil (refer page 9).

Use a grease gun to lubricate the points shown in the inset diagrams on pages 14 or 15 with a good quality, multipurpose grease.

MONTHLY

Grease the taildoor hinge and locking mechanism.

Where appropriate, check that the quickly detachable couplings seal when uncoupled.

Replace any worn or damaged flexible pipes.

Make sure all flexible pipes are secured to the chassis and are not hanging loose.

Check the outer cover fixing studs are tight.

Tighten any loose pipe connections.

Check and tell your Edbro service dealer if:

- the outer cover (where applicable) is loose (side-to-side or rotating)
- any ram tube is damaged
- the ram trunnion arms, the outer cover trunnion arms, or the rear hinge brackets are worn
- oil is leaking from the ram tubes, tipper valve, PTO, pump or flexible pipes
- air is leaking from the air pipes
- air is leaking continuously from the controls

THREE MONTHLY

Use spanners to check the tightness of the fixing bolts on the tipper valve, PTO and brackets.

YEARLY (more often in dusty or dirty conditions)

Drain and refill the tank with clean hydraulic oil (refer page 9). In order to protect the environment, ensure that no oil is spilled when draining, and old oil is disposed of correctly.

MAINTENANCE

BLEEDING THE HOIST

If air becomes trapped in the system the hoist may become jerky or even sluggish. If this happens, bleed the system as follows:

- make sure the body is down, empty and the engine is turned off
- use clean hydraulic oil (page9) to top up the oil in the tank to dispstick level (40mm or 1.5" from the top) or, if a crane is fitted, to the level recommended in the crane operator's manual
- lift the body to full tip
- put the tipper lever in 'hold' and PROP THE BODY
- move the tipper lever to 'tip'
- slacken the bleed screw (fig e) about one turn until air escapes
- when oil flows freely, tighten the bleed screw (fig e)
- lower the body and, if the hoist is still jerky or sluggish, repeat the whole procedure
- lower the body, switch off the engine and top up the hydraulic oil tank with clean oil

Never re-use the oil bled from the system

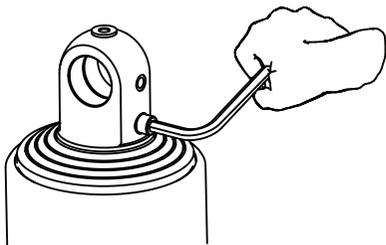


fig e - bleeding an eye-ended hoist

OIL

Dirty oil is the enemy of a hydraulic system. The cleaner the oil, the more efficient the hoist's operation and the longer its life. So always use clean hydraulic oil for topping up or changing the oil in the tank.

Use oil to specification ISO6734/4 HM32 for temperatures between -20deg C to +30deg C. Typical suitable trade names are:

CASTROL	AWS32
ESSO	VG32
GULF	HYDRASIL 32
MOBIL	DTE24
SHELL	TELLUS 32

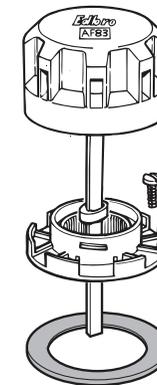
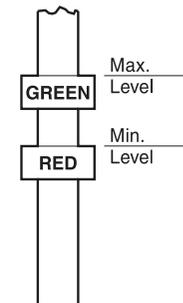
For other climates seek advice from your local distributor or direct from Edbro.

Never put used oil in the tank. Never power wash near the breather ALWAYS use a cloth when cleaning.

To determine the oil level, use the sight gauge provided if available. Alternatively, remove the filler cap and check that the level is within the max./min. marks as shown.

Correct oil level:

- not above green mark on dipstick
- not below red mark on dipstick



Edbro combined filler/breather assembly

fig e - bleeding an eye-ended hoist

MAINTENANCE

MAINTENANCE

