

# **Edbro**

## **OPERATOR'S MANUAL**

CONFORMS  
WITH  
EUROPEAN  
REGULATIONS



**Wet Kit**

# **Edbro**



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## SPARE PARTS & SERVICE

Use only genuine Edbro parts from Edbro service dealers.  
Refer to the online Dealer Location at [www.edbro.com](http://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.

## CORRECT USE

This hydraulic kit has been specified to be assembled to a vehicle to carry out one or more specific tasks i.e. Tipper, Walking floor or Ejector or a combination of these.

It is the operator's responsibility to ensure that the equipment is coupled to the appropriate equipment.

This manual is intended as a general guide for safe use but more specific safety guidance should be provided by the bodybuilder depending on the nature of the equipment to which it is connected.

The bodybuilder can also advise on the pressure and flow requirement of the connected equipment such as the hoist capability and road traffic regulations.

## OPERATING PRESSURE

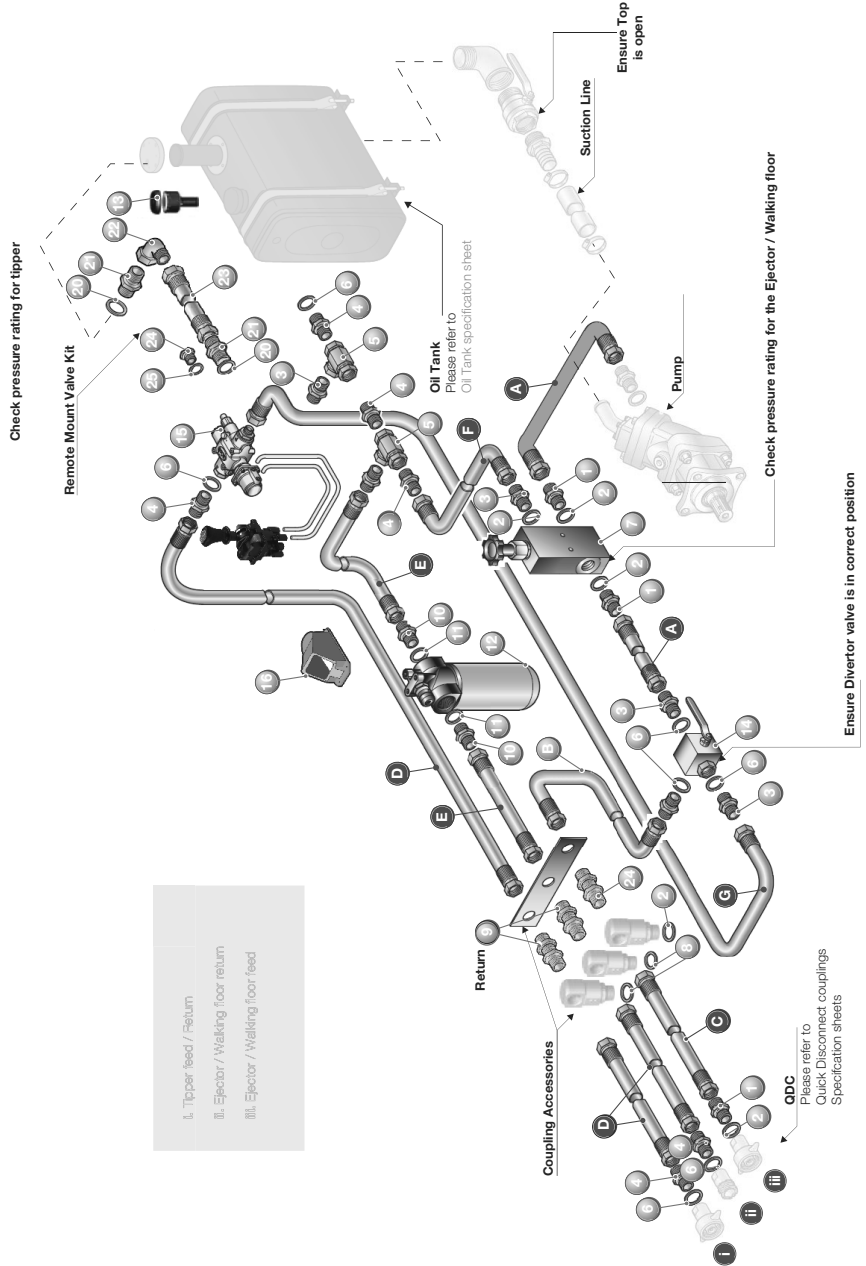
The equipment must only be operated up to a maximum rated pressure shown on the equipment to which the hydraulic kit is attached.

For dual pressure systems it is important to ensure that the correct pressure is selected and connected appropriately.

***NEVER TRY TO ALTER THE PRESSURE SETTING OF THE RELIEF (OVERLOAD) VALVE. THIS IS AN ESSENTIAL SAFETY DEVICE NORMALLY PRESET AT THE FACTORY.***

- If in doubt contact the bodybuilder or EDBRO

# IDENTIFICATION



## IDENTIFICATION

Serial numbers for Edbro PTO, pumps and valve are stamped on the casing or on a separate plate.

The serial number should be quoted in all correspondence.

## FAMILIARISATION

Before using this equipment, familiarise yourself with the key features. The position of the hydraulic parts may vary depending on specification.

Before putting into service, confirm that the equipment is in good working order.

Check:

- Hoses and fittings for abrasion and leaks.
- check oil level
- check, where applicable, that quick detachable couplings are tight
- check PTO warning light is working
- Diverter valve is switched to correct position for the equipment to be operated.



## 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.



**Warning** : Take care to guard against the escape of high pressure oil

# SAFETY CODE

## ALWAYS

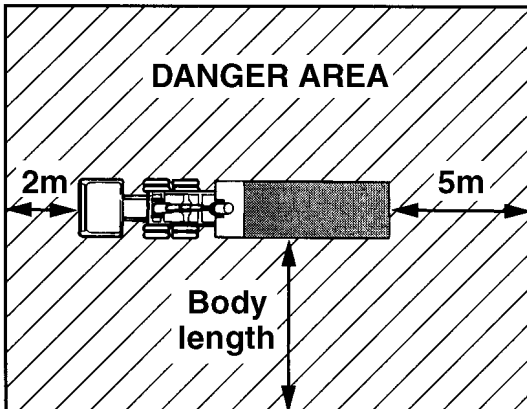
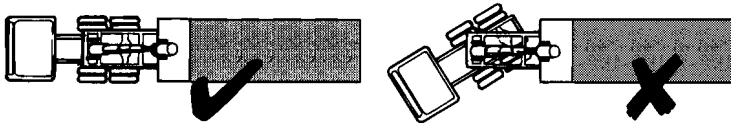
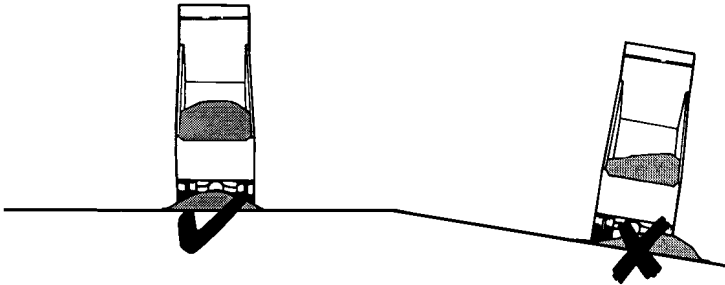
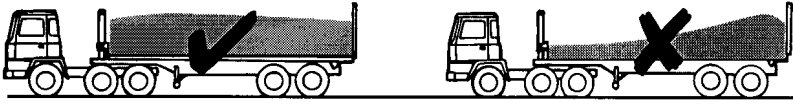
- Check the hoses are correctly connected.
- Ensure the diverter valve is in the correct position.
- Keep the tyres at the correct pressure
- Spread the load evenly in the Body
- Before tipping make sure your truck is on firm, level ground
- Make sure the danger area is clear of people and obstructions (*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

## NEVER

- Overload or Shake the load free
- Alter the pressure setting of the relief (*overload*) valve
- Put the tipper lever in 'tip' unless you are actually tipping
- Tip in high winds or on a side slope
- Operate the equipment with trailer connected.
- Tip with the body within 5 metres of overhead power lines
- Drive off with the body up or the PTO engaged. This could damage the equipment
- Leave the vehicle with the ignition key in
- Go under a raised loaded body or Leave the body up overnight
- Go under a raised empty body (*Unless it is propped*)
- Steam clean 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
- Operate the equipment without trailer connected.

# SAFETY CODE



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

## CONTROLS

The hydraulic kit works best if the vehicle is fitted with matching Edbro hydraulics (*PTO, pump, valves, oil tank, pipes and controls*).

The following options are available for PTO and tipper control.

- Factory fitted PTO
- Edbro/ JOST PTO
- Pneumatic Dual Hoist and PTO control
- Single Hoist control

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

The EDBRO Dual 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.*

# CONTROLS

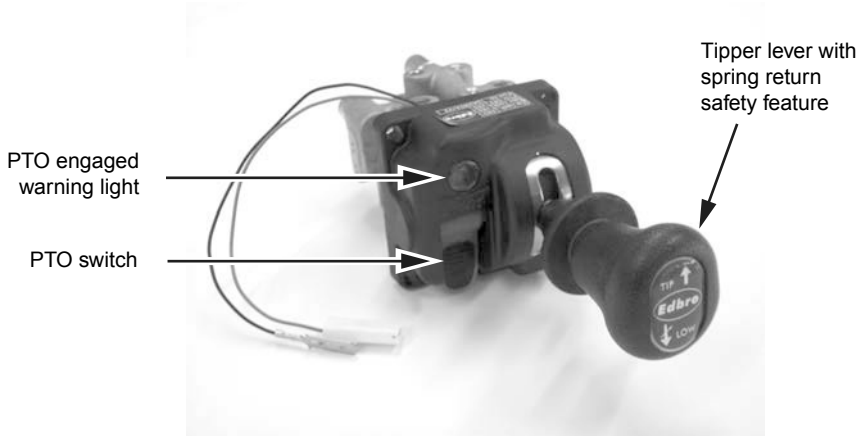


Fig. a. Combined PTO & tipper air controls



Fig. b. Separate tipper air control

## OPERATE THE EQUIPMENT

### CHECK DIVERTER VALVE IS IN THE CORRECT POSITION.

Make sure the handbrake is on, the gear lever is in neutral, the tipper lever is in 'hold' and the PTO switch is 'out'.

- Refer connected trailer to equipment operator manual. Then:
  - If fitted, lower the rear stabiliser legs
  - Unlock the taildoor or grain hatch (*taking care to stand clear*)
  - Start the engine and make sure the air pressure is at the level recommended by the manufacturer
  - Remain in the cab until the tipping operation is complete
  - Depress the clutch\* and wait 4 seconds  
(*8 seconds for a gear box with a rear mounted pto*)
  - Press the safety latch and switch the pto 'in'  
(*the warning light will come on*)
  - Release the clutch
  - Make sure no-one is within the danger area (*see page 7*)
  - Move the tipper lever to 'raise' and hold in position.  
Releasing pressure on the lever will stop the body lifting
  - Raise the body smoothly by varying the engine revs but **NEVER EXCEED 1100RPM**
  - 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

\* 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.

# 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 17*).

## MONTHLY

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.

Tighten any loose pipe connections.

Check and tell your Edbro service dealer if:

- Oil is leaking from the 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 17*).

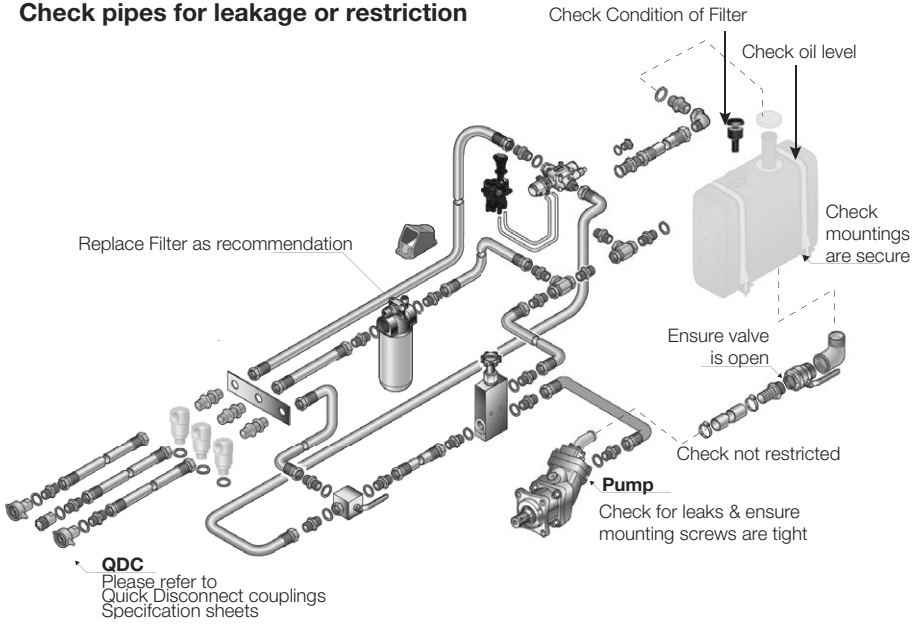
In order to protect the environment, ensure that no oil is spilled when draining, and old oil is disposed of correctly. Replace filter element (if fitted).



**Warning :** Take care to guard against the escape of high pressure oil. Wear protective equipment to prevent oil contacting the skin.

# MAINTENANCE

## Check pipes for leakage or restriction





# MAINTENANCE

Category	Instructions	Weekly	Monthly	Quarterly	Annually
Oil	Check and re-fill hydraulic oil	✓			
	Replace tank filler breather filter		✓		✓
	Drain and refill oil tank with new hydraulic oil				✓
	Replace oil filter if fitted		✓		✓
Hydraulic Couplings / Pipes	Check hose pipe condition, and replace when necessary	✓			
	Check pipes are secured and not hanging loose	✓			
	Check for oil leaks	✓			
	Re-Tighten pipe connections		✓		
Connecting bolts	Tighten fixing bolts for tipper valve, PTO and tank mounting brackets			✓	
	Check condition and re-tighten tank straps			✓	

Category	Instructions	Weekly	Monthly	Quarterly	Annually
Pneumatic Components	Check for leaks and correct operation	✓			
Pump	Check for leaks, damage and correct operation	✓			
	Check for noisy operation	✓			
PTO	Check for oil leaks, damage and correct operation	✓			
Brackets	Grease articulating joints	✓			

✓ In very dusty environments replace the return line filter element and filler-breather elements monthly.

Dirty oil is the enemy of a hydraulic system. The cleaner the oil, the more efficiently the equipment will operate and the longer the life will be. Always use clean hydraulic oil for topping up or changing the oil in the tank.

Please dispose of oil according to local regulations and in an environmentally friendly manner.

Check and tell your Edbro service provider if:

- Oil is leaking from the hydraulic equipment
- Air is leaking from the air pipes
- Air is leaking continuously from the controls



#### ADVICE!

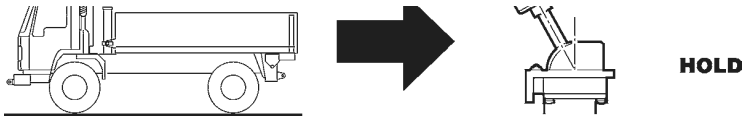
It is recommended that the oil is replaced after the first six months of operation, annually thereafter.

## HOW TO LOWER THE BODY

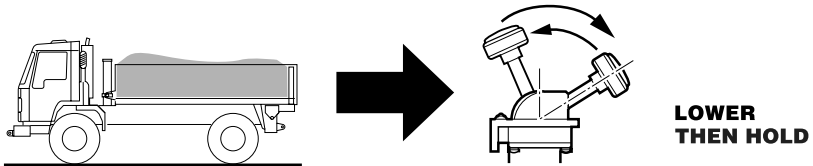
Make sure that no-one is in the danger area (*see page 7*). Then:

- **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.

### WHEN DRIVING



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.

# OIL

Dirty oil is the enemy of a hydraulic system. The cleaner the oil, the more efficient the hoist's operation and the longer it's 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 -20°C to +30°C. Typical suitable trade names are:

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

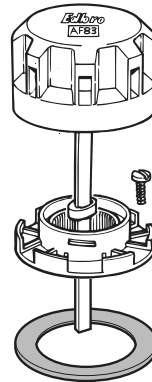
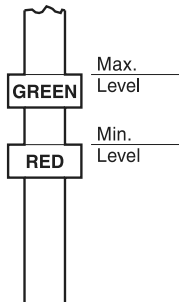
For other climates seek advice from your local distributor or direct from Edbro.

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

To determine the oil level, 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

## PROBLEM SOLVING

The following action can be taken without special tools. If unsuccessful, call your nearest Edbro service dealer (*refer to [www.edbro.com](http://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 18*)

### 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 17*)
- 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
- The quickly detachable couplings of the tractor and trailer, where applicable, are clean and screwed together tightly
- 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 (*page 3*)
- Keep the engine revs going for five seconds
- Lower the body (*page 11*).

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.

## 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.

### EXCESSIVE NOISE

- Check pump speed / engine revs
- Check tank ball (*if fitted*) is fully open
- check the oil level
- Check pipes for kinks and leaks
- Check suction hose is tightended correctly and unrestricted



## Notes...

**PLEASE PUT THIS  
OPERATOR MANUAL  
IN THE VEHICLE CAB**

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For a full list of Edbro Service Agents  
and  
Distributors, please refer to:  
**[www.edbro.com/dealerlocator](http://www.edbro.com/dealerlocator)**

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

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