Operators Handbook

T. J. TERMITE MICRO EXCAVATOR

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T. J. TERMITE MICRO EXCAVATOR

Controls and Operation

IMPORTANT

AN OPERATOR should first become familiar with the controls before attempting any difficult digging operations, and it is recommended that for the first few hours the unit should be operated at reduced engine speed to allow manoeuvres to be made within the capabilities of the operator.

The controls give immediate response and the operator is advised to gently feel the action of the controls at low engine speeds.

NOTE: When the term "RIGHT" or "LEFT" is used it is as viewed from the operator's seat.

SECTION 1

THE CONTROLS

Illustration i) (Showing Control Levers)

The Left Hand Control Lever 1 (Fig. 1) controls the Boom.

Position 1 — Boom Lower
Position 2 — Boom Raise
Position 3 — Left Slew
Position 4 — Right Slew

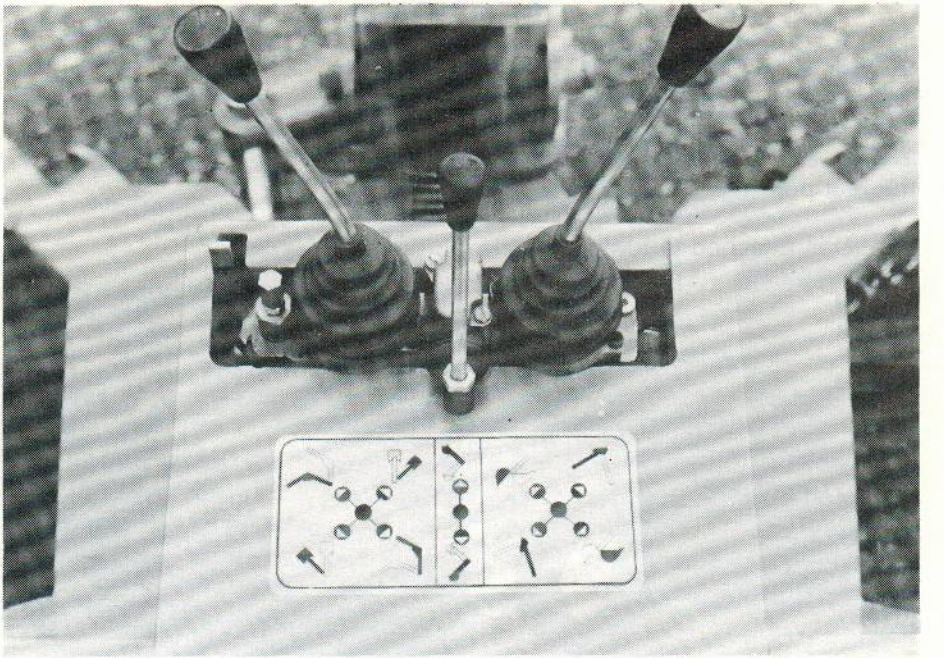
The Right Hand Control Lever 2 (Fig. 1) controls the Dipper.

Position 1 — Bucket Fill
Position 2 — Bucket Empty
Position 3 — Dipper Out
Position 4 — Dipper In

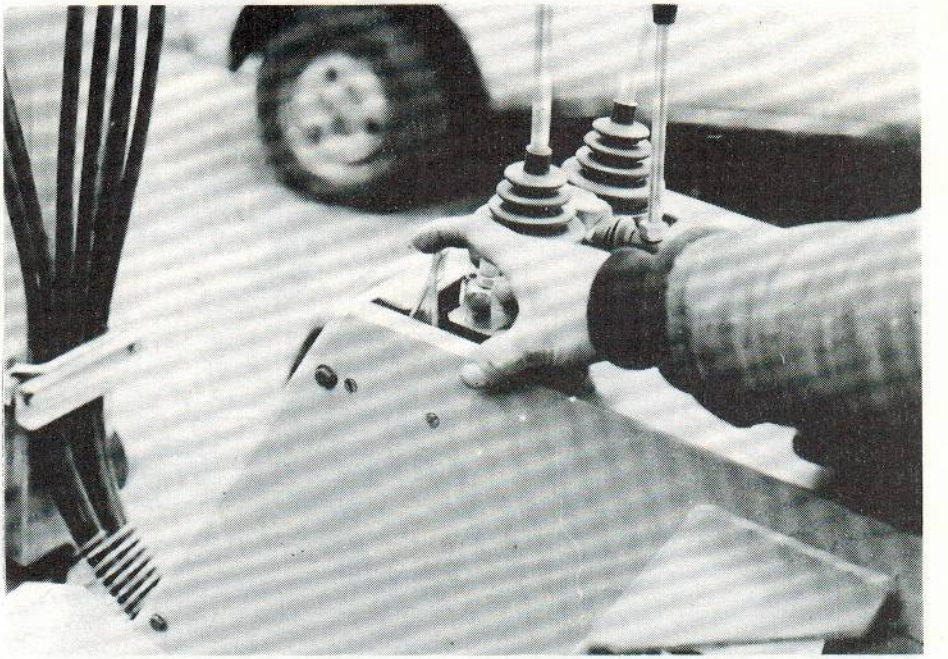
The Centre Lever 3 controls the rear stabiliser.

Push the lever forward — STABILISER RAISE
Pull the lever back — STABILISER LOWER

THE THROTTLE (Fig. 2) Moving the lever increases engine speed.
Refer to engine handbook for operating instructions.



(Fig. 1)



(Fig. 2)

SECTION 2

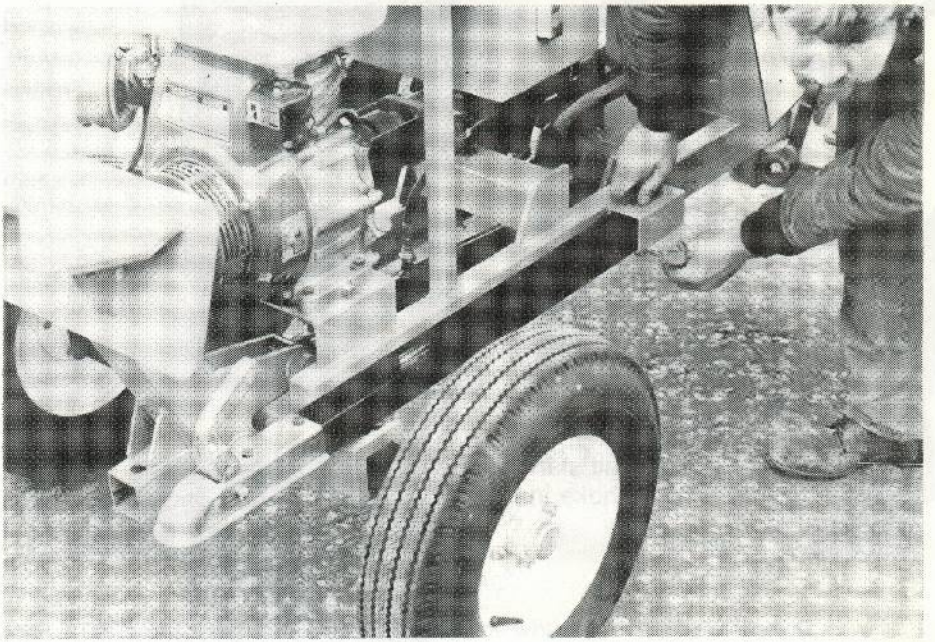
SETTING UP THE UNIT FOR OPERATION

THE illustrations show the sequence of setting up the unit prior to operation.

1) Unit attached to towing vehicle.

2) Unhitching and removing towbar.

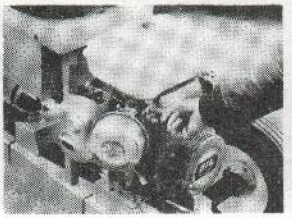
2a) Stow the towbar.



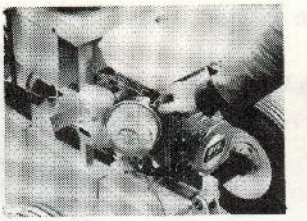
3) Starting engine.

* Magneto to On Position

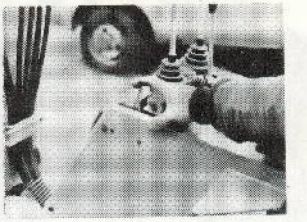
* Petrol on



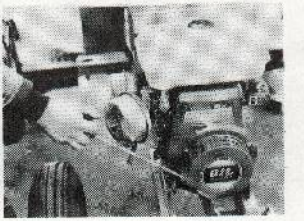
* Choke out (as necessary)



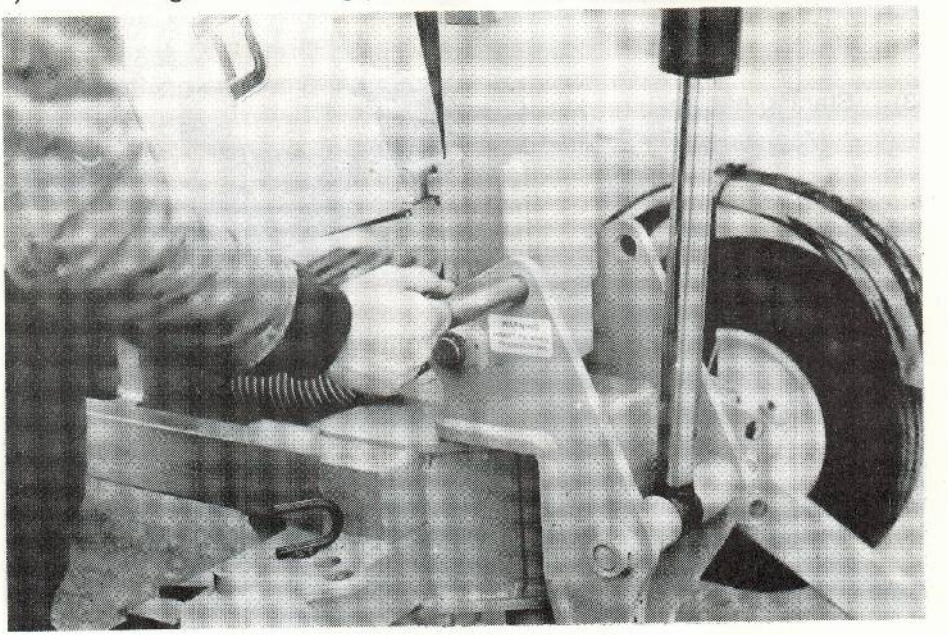
* Throttle mid position



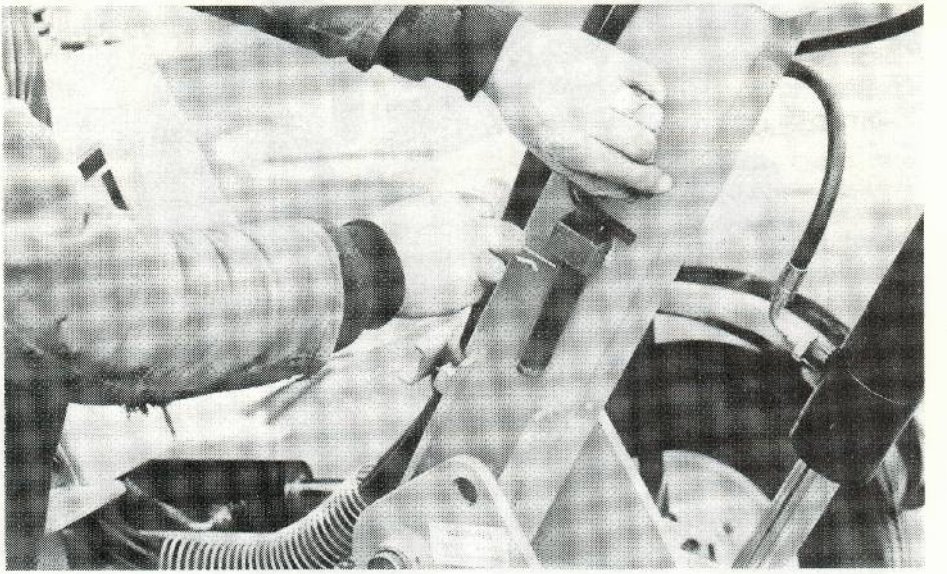
* Pull start
* Choke in



4) Removing boom locking pin.

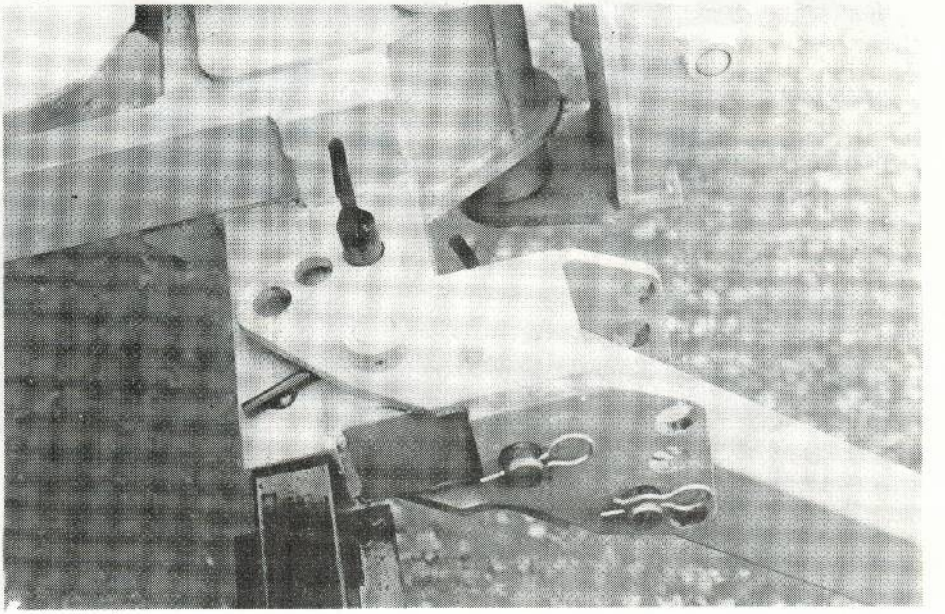


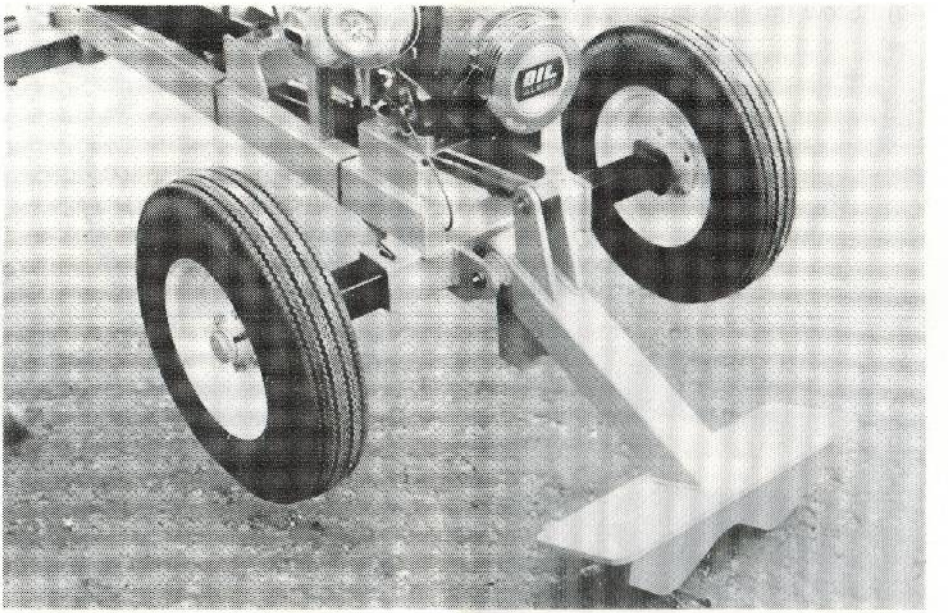
4a) Stow the locking pin.



5) Powering down boom to raise front wheels from ground.

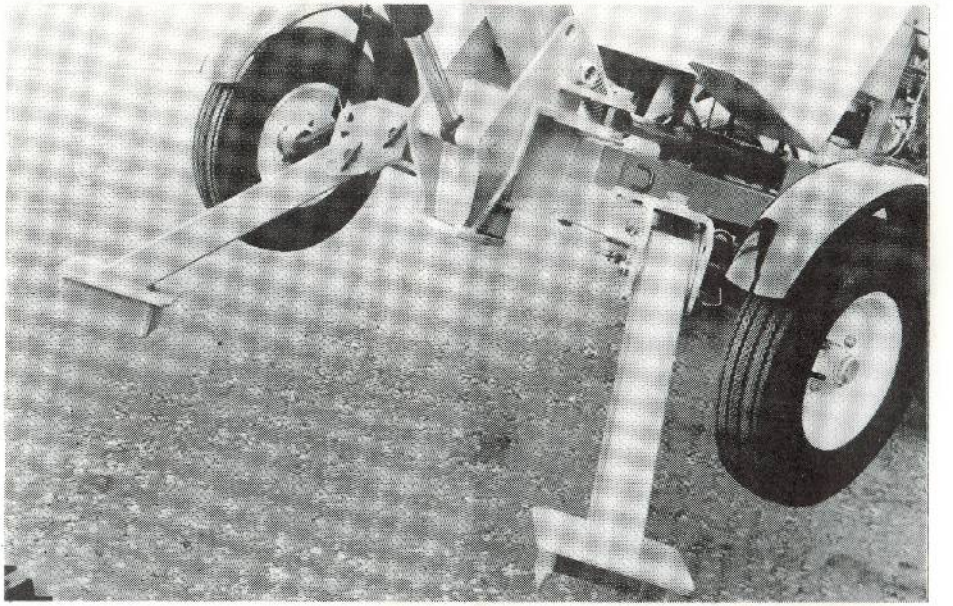
6) Close up of stabilisers being pinned in position. (NOTE ON VARIOUS POSITIONS).





7) Powering down rear stabiliser.

8) Boom raised to lower stabilisers to ground.

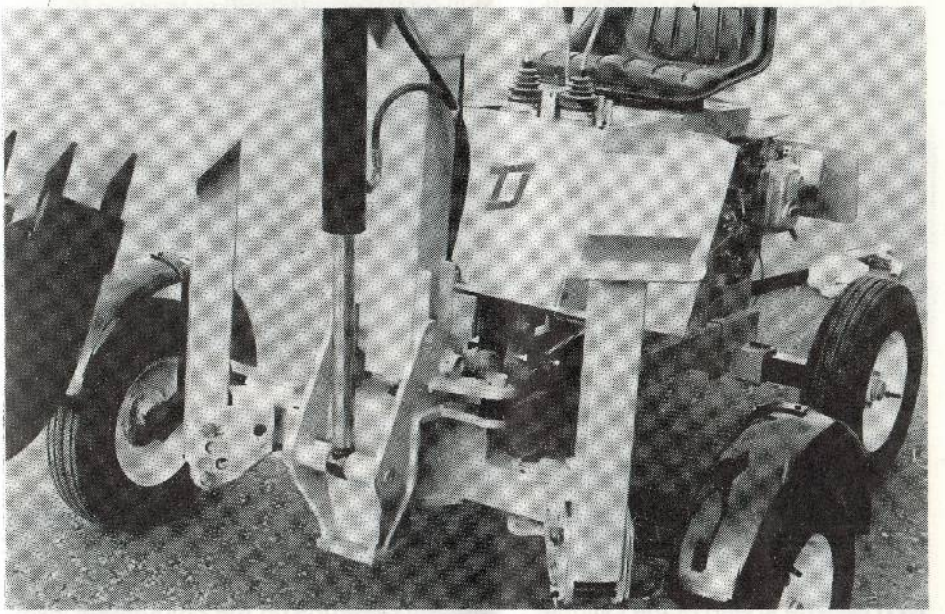


STABILISERS

The stabilisers can be adjusted to suit varying ground conditions.

On each front stabiliser there is a choice of three horizontal and three vertical positions.

The additional hole in the vertical adjustment is for stowing the leg in the travel position.



For normal working the legs should be adjusted to give the widest base for maximum stability.

When working in close to a wall (for example) the leg nearest the wall can be fitted in the straight ahead position.

IMPORTANT: When working in this mode do not attempt to swing the bucket to the side with the straight ahead leg as under certain circumstances the Unit could lose stability.

NOTE: The rear (working) wheels should always be returned to the outer (wide) position for unit operation where space permits to provide maximum stability.

REAR STABILISER

The position of the Rear Stabiliser is determined by the Hydraulics Control Lever (see Controls and Operations).

The Stabiliser should only be lowered enough to remove the weight from the rear wheels.

Raising the Unit higher reduces stability.

Always remember to raise the stabiliser before attempting to move the unit by means of the bucket.

SECTION 3

OPERATION

Operating Techniques

IT IS not difficult to become an efficient operator.

A control lever operating guide is located behind the valve control handles.

Study this guide to familiarise yourself with the controls.

NOTE: The speed of the cylinder movement depends on the amount the levers are moved.

Swing the Boom several times to practice controlling the speed of swing.

When digging, especially in hard ground, don't try to take too much material in one bite.

Don't push material back into a ditch by using the side of the bucket.

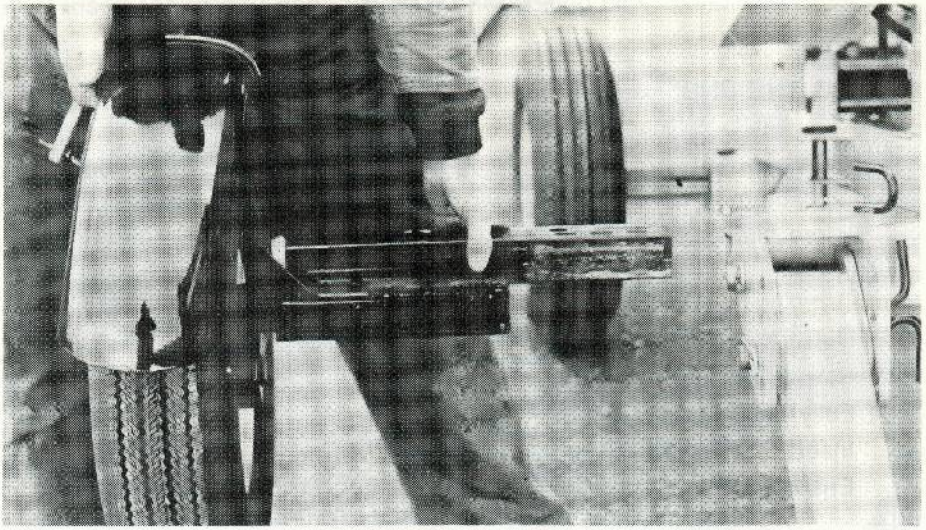
Don't raise the bucket higher than is necessary to tip the load.

NEGOTIATING NARROW GAPS (e.g. DOORWAYS)

To enable the Unit to pass through a narrow gap (.75m) the following procedure should be used:—

1) Raise the Unit onto the stabilisers with all four wheels clear of the ground.

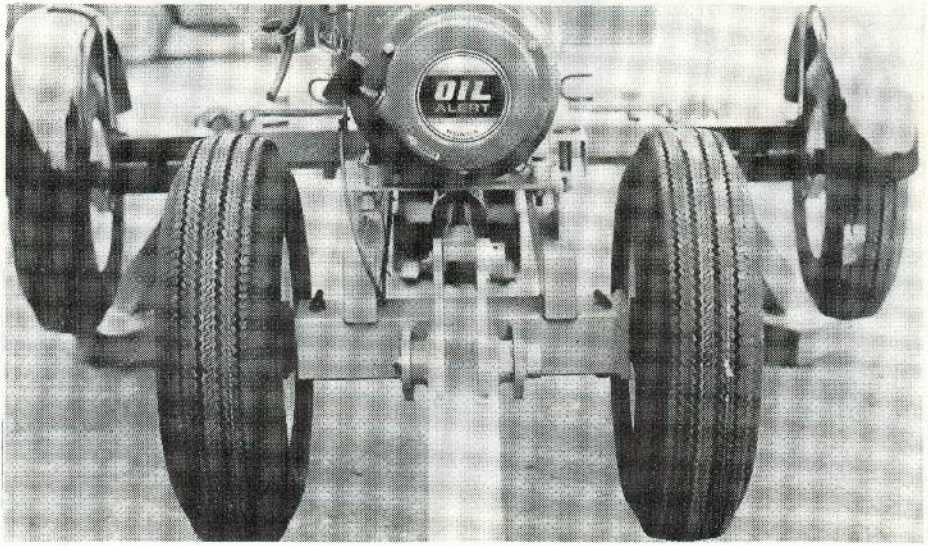
2) Remove the front (road) wheels.



(Fig. 13)

3) Withdraw the rear wheel axle locking clips and pins and slide the wheels fully in aligning the inner pin holes.

Re-insert the pins into the axles and fit locking clips.



(Fig. 14)

NOTE: The rear (working) wheels should always be returned to the outer (wide) position for Unit operation where space permits to provide maximum stability.

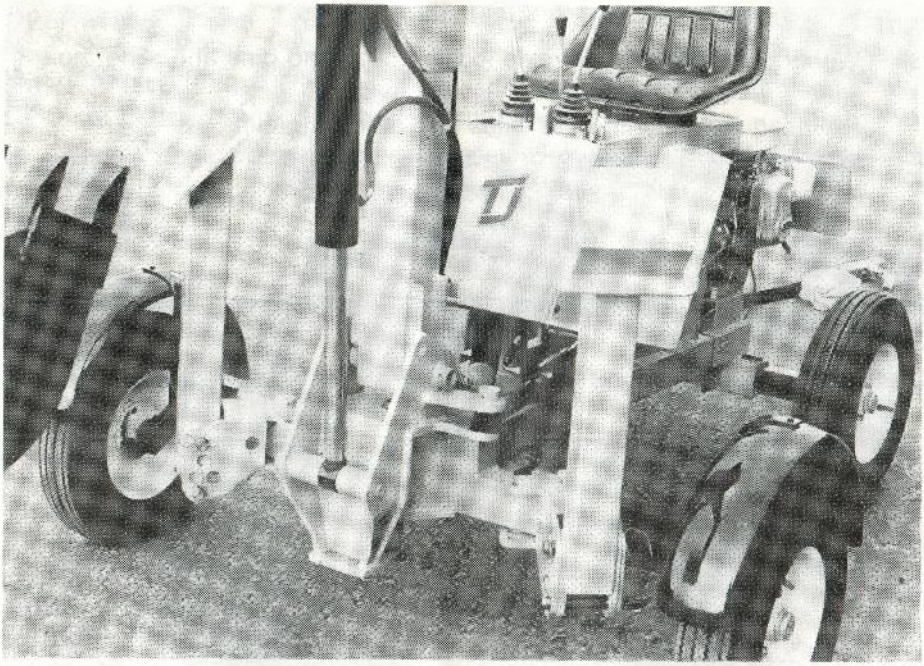
SECTION 4

TOWING THE UNIT

THE UNIT can be towed by most cars and light trucks and it is fitted with a standard 50mm towing hitch.

Before hitching the TERMITE to the vehicle:

1) Curl the bucket fully in.
2) Crowd the dipper fully in.
3) Fully raise the boom.
4) Insert the boom lock pin.
5) Ensure that the front stabilisers are in the transport position.



6) Fully raise the rear stabiliser.

7) Insert the towbar and insert pin and locking clip.

8) Ensure that there is no loose equipment on the Unit.

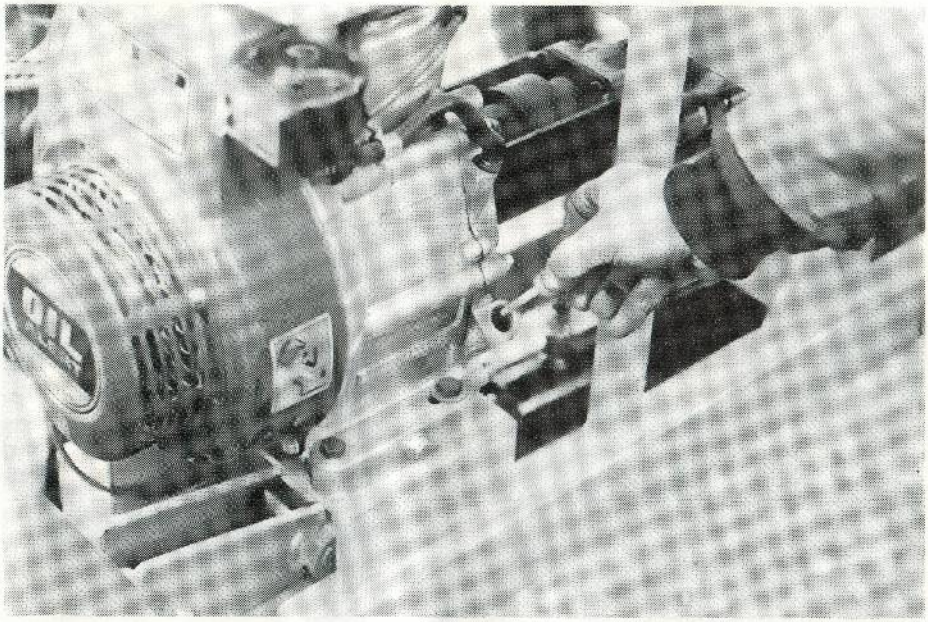
9) Ensure that the engine fuel tap is in the 'OFF' position.

IMPORTANT:

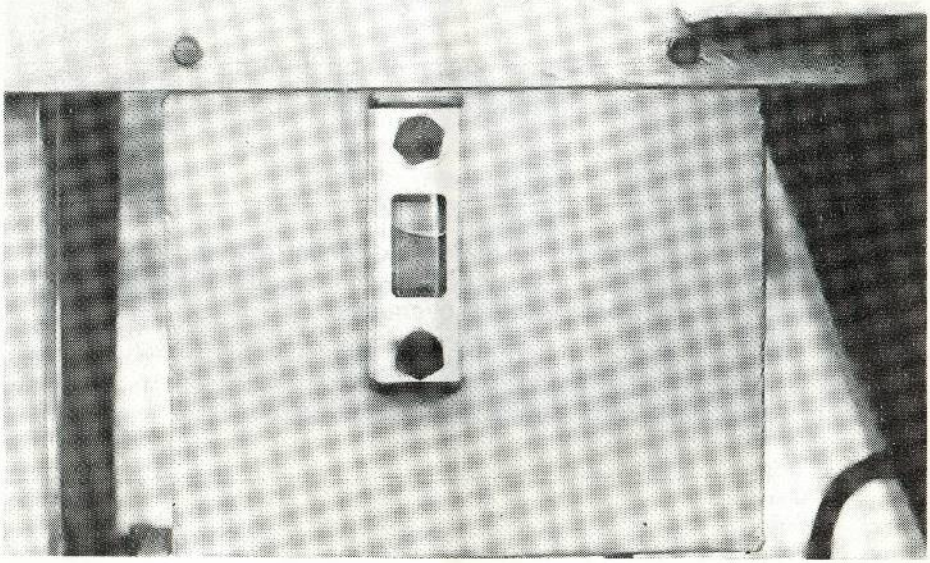
As regulations pertaining to the towing and lighting of towed vehicles varies from place to place, it is the responsibility of the operator to ensure that the Unit under tow complies with local requirements.

SECTION 5

SERVICING



(Fig. 16)



(Fig. 17)

DAILY CHECKS (10 HOURS)

Engine Oil Level
Hydraulic Oil Level
Greasing all pivots.

ENGINE OIL LEVEL

Check level with dipstick (Fig. 16). If necessary add oil through dipstick tube.

See Section 7 for Recommended Oil.

HYDRAULIC OIL LEVEL

With the bucket resting on the ground and the dipper fully in check the level on the sight gauge (RHS of tank) (Fig. 17).

See Section 7 for Recommended Oil.

NOTE: Under normal usage it should not be necessary to add oil over long periods. Frequent topping up indicates a leak in the system.

GREASING

All grease fittings should be lubricated with a multi-purpose type grease (see specification). See Chart.

WEEKLY CHECKS (50 HOURS)

CARRY OUT THE PRECEDING CHECKS PLUS THE FOLLOWING:

Check all bolts for tightness.
Check all Hydraulic connections for leaks and if necessary, tighten.
Check all hoses for damage.
Check tyre pressures.
Apply oil to seat hinges.
Check wheel nuts for tightness.
Service Air Cleaner (See Engine Handbook).

100 HOUR CHECK

CARRY OUT ALL OF THE PRECEDING CHECKS PLUS THE FOLLOWING:

Change Engine Oil
Clean Fuel Strainer
Clean Spark Plug and check gap.

(See Engine Handbook for details)

250 HOUR CHECK

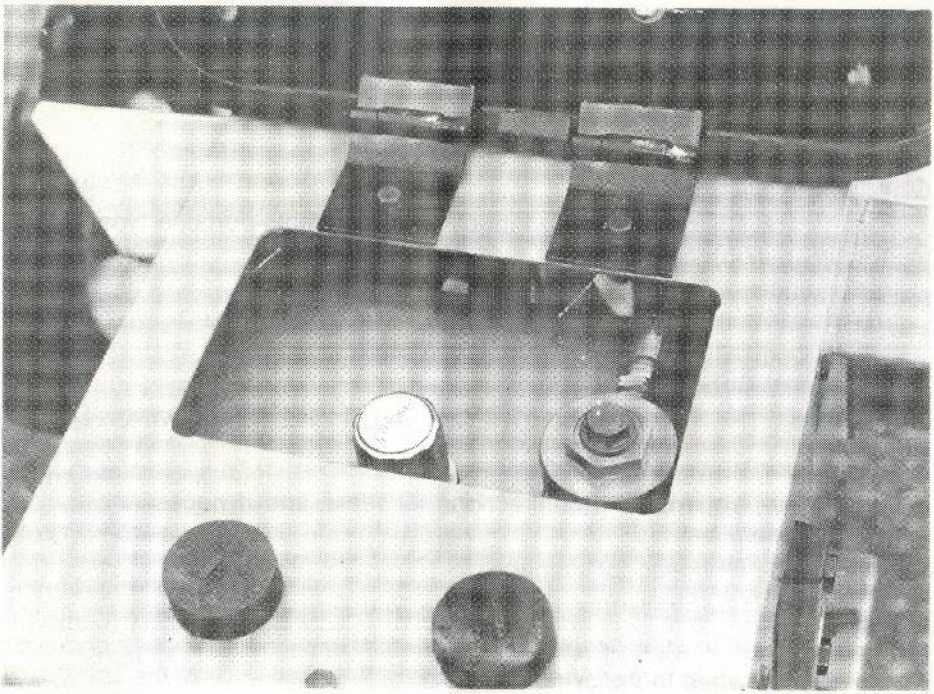
CARRY OUT ALL OF THE PRECEDING CHECKS PLUS THE FOLLOWING:

Replace Hydraulic Oil Filter

The hydraulic filter assembly is located on top of the hydraulic tank and can be reached by hinging the seat forward.

The filter element can be removed after first unscrewing the cover of the housing, with a lint-free cloth.

Insert a new element and replace the cover after first applying a smear of oil to the smearing ring. DO NOT OVERTIGHTEN.



(Fig. 18)

1000 HOUR CHECK (YEARLY)

CARRY OUT ALL OF THE PRECEDING CHECKS PLUS THE FOLLOWING:

HYDRAULIC OIL — DRAIN AND REFILL

With the oil at operating temperature and the Unit positioned on level ground, fully extend the bucket and dipper and lower the boom until the bucket is resting on the ground.

The rear stabiliser should be in the raised position.

Disconnect the Pump Suction Hose from the bottom of the tank and drain the oil into a suitable container. (15 litres capacity).

Refit the suction hose to the tank and refill with the recommended oil (see specifications) until level with the high mark on the sight gauge.

Operate the unit, fully stroking all cylinders to purge air from the system and re-check the oil level, topping up if necessary.

SECTION 6

SAFETY RULES

ALWAYS lower the bucket to the ground before leaving the seat.

Don't dig under the stabilisers.

Watch out for bystanders especially when swinging the boom.

Be sure the stabilisers are correctly set before operation.

Always insert the boom locking pin before transporting.

Escaping Hydraulic oil under pressure can cause injury.

Check all connections for tightness and examine all hoses for damage regularly.

Don't disconnect hoses with the engine running.

When operating on a slope adjust the front stabilisers, minimise lean and avoid swinging the bucket to the downhill direction. Always dump on the uphill side. When manoeuvering the Unit it is advisable to have the rear axle set to the widest position for maximum stability.

SECTION 7

SPECIFICATIONS

THE GENERAL specifications given in this section are provided for your information and reference — consult your dealer should you require more detailed information.

ENGINE TYPE	—	Petrol 4 Stroke.
FUEL	—	Regular grade petrol "2 Star" in U.K.
OIL CAPACITY	—	1.21 ltrs. (2.25 US pt)
OIL TYPE	—	SAE 10w-30 or SAE 10w-40 AP 1 Classification CD.
SPARK PLUG TYPE	—	N6K B-4H or BR-4 HS.
SPARK PLUG GAP	—	0.6 — 0.7 mm (.024 — .027 in).
VALVE CLEARANCE	—	Inlet 0.08 — 0.16 (.003 — .006 in) Exhaust 0.11 — 0.19 (.004 — .007 in)
IDLE SPEED	—	1400 RPM.

NOTE: Engine is fitted with "OIL ALERT" system which caused automatic shutdown if operated with dangerous oil level.

HYDRAULICS

Pump type	—	Gear Type.
Output	—	20 Lit/Min 3600 RPM
Control Valve	—	Monobloc — 5 Sections.
Relief Pressure	—	140 Bar.

HYDRAULIC CYLINDERS

Bore	—	63.0 mm.
Stroke	—	330.0 mm.

TANK

Capacity	—	16 litres.
Filtration	—	20 micron filter on return line.
Oil Type	—	SAE 10w.