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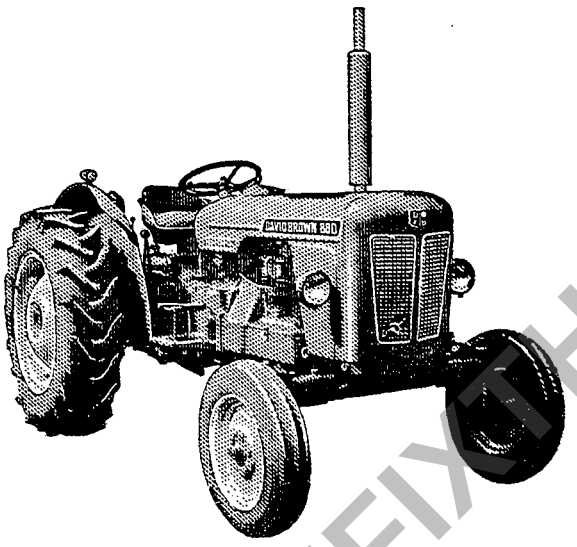
Operator's Manual for 880 Implematic Tractor (3-cylinder)

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David Brown Tractors Ltd
A Tenneco Company
Affiliate of J I Case

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CONTROLS

The engine and tractor controls are shown in Fig. 1/1 and 1/2.

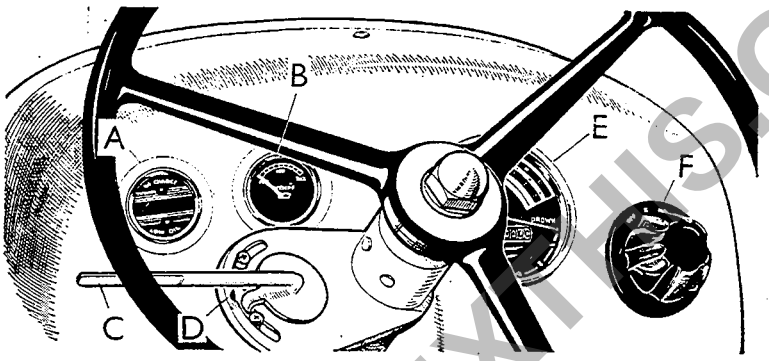


Fig. 1/1. Instrument panel

A. Warning lights (Oil and charge)
B. Water temperature (U581)
C. Throttle lever
D. Rated speed setting (1800 *rev/min*)
E. Tractormeter
F. Light switch

OIL WARNING LIGHT

The amber light is illuminated when oil pressure is too low. Ensure that it lights when the isolating switch is turned on and goes out when the engine runs.

NO CHARGE WARNING LIGHT

The red light is illuminated when the isolating switch is turned on but should extinguish as soon as the dynamo commences to charge.

THROTTLE CONTROL LEVER

When fully rearwards the diesel engine is governed to its maximum speed. When the lug on the lever is brought into line with the corresponding mark on the quadrant (Fig. 1/1), the engine is governed at its rated speed of 1800 rev/min. This position should be used for most purposes to conserve fuel and engine life. It also gives a PTO speed of 540 rev/min in low ratio.

LIGHT SWITCH

This has 5 positions as follows: OFF—all lights extinguished. S—Side and tail (and rear number plate) lights. S/D—Side and tail lights plus the head lamps on dipped beam. S/M—Side and tail lights plus the head lamps on main beam. M—Head lights only on main beam. The rear flood lamp is in circuit when the head lamps are on main beam but incorporates its own switch allowing it to be extinguished when not required.

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OPERATION OF SYSTEM 1

(Implements with depth wheel and use of TCU)

CONTROL SETTINGS

1. Connect the top link cable to the top link response unit.
2. Move the pre-set guide until the TCU mark lines up with the arrow on the body of the housing and tighten the locking screw.
3. Engage the override control with the ramshaft.
4. Fully unscrew the TCU handwheel.

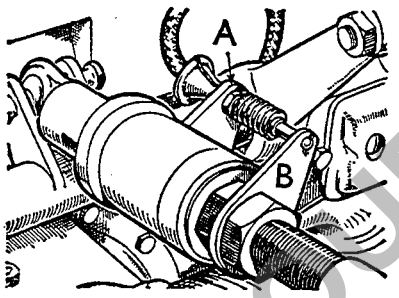


FIG. 1/6. Top link cable

A. Outer cable attachment
B. Inner cable attachment

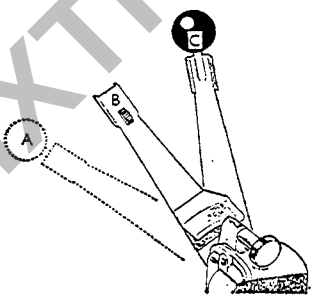


FIG. 1/7. Pre-set guide

A. Lower position
B. TCU position
C. Raise position

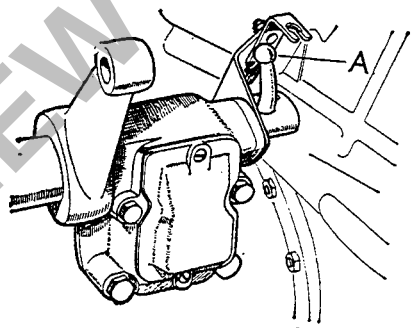


FIG. 1/8. Override control

A. Override lever connected to ramshaft

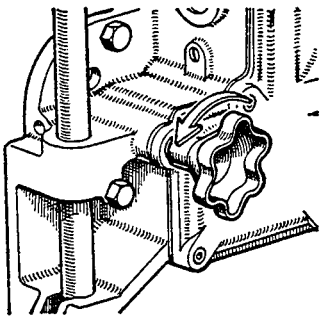


FIG. 1/9. TCU handwheel

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Note. Recommended times are for normal conditions. In very wet and muddy conditions—grease more often. In dry dusty conditions (i.e. stationary work)—clean the air filter, oil and fuel filters and carry out oil changes more frequently.

DAILY INSPECTION

1. **Inspection**—Check for oil, water and fuel leaks.

2. **Engine Oil**—Top up the engine sump if below the safe limit.

3. **Fuel**—Top up the fuel tank to within 1½ in. (4 cm) of the top. This ensures a good supply and reduces condensation in the tank. Visually check the fuel water trap for excessive dirt or water. Clean if necessary.

4. **Air Cleaner**—In dusty conditions clean and refill the air cleaner oil bath to the bead with new engine oil. Remove and clean the detachable gauze element. Refit the sealing rings.



FIG. 2/2 Air cleaner

5. **Greasing**—In dusty or wet and muddy conditions apply lubricant to the following points (see Fig. 2/1.). Clean the nipples before applying the gun.

SAE 140 OIL	King Pins. Front Axle Trunnions (2 points).
GREASE	Front Hubs.* Steering Box Cross-shaft (3 points). Rear Hubs.*

*Continue till grease exudes from inside of hub. This is not a sign that the hub seal is faulty.

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TABLE OF SERVICE TASKS

Carry out the tasks marked X at the times shown in addition to the Daily Inspection and greasing.

Hour Meter Reading	Task A	Task B	Task C	Task D	Task E
60	X	†			† (1 to 4)
125	X	X			
185	X				
250	X	X	X		
315	X				
375	X	X			
440	X				
500	X	X	X	X	
560	X				
625	X	X			
685	X				
750	X	X	X		
815	X				
875	X	X			
940	X				
1000	X	X	X	X	X

† New and Reconditioned Tractor only.

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Section 1—Operation

STARTING THE DIESEL ENGINE

1 With fuel in the tank and the tap turned on, pull the fuel cut-off rearward to the running position, and drop into the retaining slot.

2. Open the throttle wide (towards the driver).

3. **Put the gear lever in neutral.**

4. Depress the clutch.

5. Switch on and operate the starter switch (turn the key to the right against the spring).

Release the starter switch immediately the engine runs and close the throttle to give about 1000 rev/min to warm up. Check that the oil warning light goes out.

STARTING IN COLD WEATHER

The wing nut on the side of the Injection Pump should be screwed in **before** trying to start the engine. As soon as the engine is running, the screw must be unscrewed otherwise erratic running with black exhaust will occur. In conditions when starting is difficult the use of ether or a proprietary starting fluid is recommended. This should be used on the felt attached to the plastic plug in the top of the manifold. Replace and start immediately. When starting is difficult, short presses on the starter will be of no avail. The engine should be kept turning by the starter until the engine runs unaided. However, if it fails to run, release the starter switch after 25 seconds and wait 20 seconds before trying again, otherwise the batteries will be overheated and damaged.

Use of the starter places a heavy drain on the batteries and adequate running time should be allowed to enable the dynamo to replace the charge. Use of the correct grade of oil in the engine, and pressing the clutch whilst starting, will help to reduce the load on the starter.

STOPPING THE ENGINE AND TRACTOR

Reduce engine speed, lift the fuel cut-off and allow it to move forward to the stop position. Switch off and remove the key. Do not stop the engine by turning off the fuel as this will produce air locks necessitating complete venting of the fuel system. Apply the handbrake securely and provided the isolating key is removed, park in a low gear ratio if not on level ground.

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Section 4
Information and Data

DIESEL ENGINE

Type AD3/40A (Livedrive) and AD3/40B

The engine is a compact and robust power unit applying the cross-flow head technique for economy coupled with high performance. The three throw crankshaft is supported in 4 main bearings ensuring rugged dependability and is fully balanced giving very smooth running. Cylinder sleeves of the thin wall, cast iron, dry type are used for long life.

Displacement—3 cylinders	154 in. (2526 cm)
Bore	$3\frac{13}{16}$ in. (97 mm)
Stroke	$4\frac{1}{2}$ in. (114·3 mm)
Rated speed	1800 rev/min
Maximum full load speed ..	2200 rev/min
Maximum no load speed ..	2350 rev/min
Gross maximum power ..	42·5 B.H.P. at 2200 rev/min
Compression Ratio	17 : 1
Firing order	1, 2, 3.

Valve Timing—

Inlet opens 8° before top centre.
Inlet closes 38° after bottom centre.
Exhaust opens 36° before bottom centre
Exhaust closes 10° after top centre.

Valve clearances—SET COLD

	To Engine Number AD3/40A—3423 AD3/40B—1495	From Engine Number AD3/40A—3424 AD3/40B—1495
—inlet	0·015 in. (0·38 mm)	0·010 in. (0·25 mm)
—exhaust	0·012 in. (0·30 mm)	0·007 in. (0.18 mm)

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