



DAVID BROWN

880 SELECTAMATIC

**Instruction
book**

TP 630 Reprinted

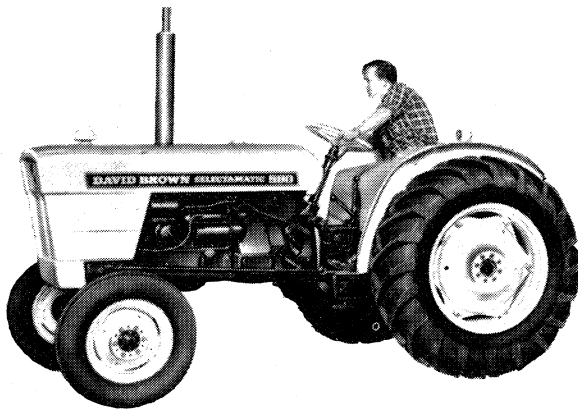
SAFETY POINTS

- Don't** operate the independent foot brake when travelling at high speed.
- Don't** run on the highway without locking the two foot brake pedals together.
- Don't** run the PTO or Belt Pulley without a guard.
- Don't** wear loose clothing near moving parts of the tractor, engine or implements.
- Don't** leave the ignition/starter key in the tractor when unattended, especially where children have access.
- Don't** swerve or turn sharply at speed.
- Don't** let the clutch in suddenly on a slope, or brake fiercely if running backwards down hill, or the tractor may rear up.
- Don't** use the differential lock on the public highway.
- Don't** try to make a sharp turn unless the differential lock is out of engagement.
- Don't** operate the tractor on dangerously steep ground. Move cautiously on steep slopes, the sudden swing of a heavy implement, or the pull of a trailer, may cause trouble. Use the clutch, brakes, throttle and steering *slowly*. Beware especially of slippery surfaces.
- Don't** carry passengers on the tractor or linkages.
- Don't** turn with a projecting implement without making sure there is room for it.
- Don't** hitch trailed implements above the centre line of the rear axle.

DAVID BROWN

880 Selectamatic and 880 Selectamatic Livedrive

INSTRUCTION BOOK



880 A — Livedrive

880 B — Non-Livedrive

With 3-cylinder Diesel Engine

DAVID BROWN TRACTORS LIMITED
MELTHAM · HUDDERSFIELD · ENGLAND
HD7 3AR

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INTRODUCTION

The 880 Selectamatic tractor with 3-cylinder diesel engine incorporates the latest refinements of technical design and is the culmination of many years of development and rigorous field testing. In fact, it is a tractor which does a wide range of farming jobs well, reliably and efficiently.

Good design is backed up by skilled manufacture on some of the most modern machines currently available in Europe. The potential life and efficiency which is built into the tractor by careful choice of materials, close manufacturing limits and expert assembly, requires the co-operation of the user whose responsibility it is to carry out the *regular* lubrication and maintenance outlined in this book.

Almost any but the complete novice will be able to carry out the various work which a tractor driver is required to do. But to do this in the easiest, quickest and most efficient way, not to mention the *safest* way because a tractor can be a dangerous machine if handled carelessly and without thought, requires knowledge and skills which have to be acquired. This book gives the necessary information, armed with which the user will quickly gain skill after a little practice.

It is suggested that time spent in reading the Operation and Regular Maintenance sections of this book *before* the new tractor is put into use, will be amply repaid. It is appreciated that the tractor will only be used occasionally for some tasks and the book should be kept readily available at all times so that one's memory may be refreshed. For ease of use the book is divided into 4 sections as indicated in the contents list opposite.

In case of difficulty of any kind, the person most fitted to assist you is your David Brown dealer. Besides having specialist knowledge of the product, he has a great experience of local conditions which will be especially useful to you. In any query always quote the full *prefix* and *serial number* of the tractor and also the *engine type* and *number*.

Note: Abbreviations for the names of units in this book conform to the British Standard 1991 : 1954. These should be readily understood, but for the benefit of countries where they are not yet widely known, a glossary is given on page 84.

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PRECAUTIONS WITH A NEW TRACTOR

Although every engine is tested and part run-in at the factory care should be taken during the first 25 to 50 hours' use. Avoid excessive speeds or heavy loading. Do not allow the engine to labour, change to a lower gear instead. Use the middle range of engine speeds from 1200 to 1800 rev/min. If possible use light loads to begin with and gradually increase the loading until the engine is fully run-in. If higher speed or heavy loading must be used, keep this down to very short periods interspersed with periods of light load.

Periods of idling should be avoided as the rate of carbon formation is fairly high at low temperatures.

FIFTY-HOUR SERVICE

After 50 hours, change the engine oil and filter element. Change the transmission oil and hydraulic filter element. The transmission gearbox should be flushed and the wire mesh screen cleaned. Clean the small Nylon filter situated in the hydraulic by-pass valve assembly. Change the oil in the final drive reduction housings. Check the valve clearances and tightness of cylinder head and main external nuts and bolts especially rear wheel nuts.

Note — The transmission gearbox is filled at the factory with special oil having inhibitors to prevent corrosion and assist initial bedding in. This oil **must** be discarded after 50 hours and the gearbox refilled with new oil of the type recommended on pages 47 to 50.

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 (shift) lever in neutral** (the right-hand lever).
4. Depress the clutch pedal fully. In the U.S.A., Canada and U.K. an isolating switch is fitted so that the starter cannot be energised until the clutch is pushed down.
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 battery will be overheated and damaged.

Use of the starter places a heavy drain on the battery 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

Reduce engine speed, lift the fuel cut-off and allow it to move forward to the stop position. Switch off and remove the key.

STOPPING THE TRACTOR

Reduce travel speed by closing the throttle and apply the foot brakes. Just before the tractor comes to a halt, disengage the clutch and stop the engine. Apply the handbrake securely and park the tractor in a low gear ratio. To prevent accidental starting, ensure that the isolating key is removed and the fuel cut-off in the 'stop' position.

CONTROLS

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

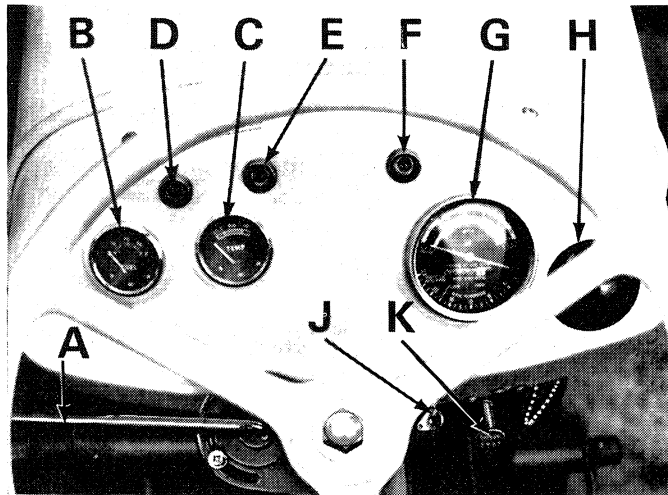


FIGURE 1/1. INSTRUMENTS AND CONTROLS

- | | |
|---------------------------------|---------------------------|
| A. Throttle lever | F. Charge warning (Red) |
| B. Fuel gauge | G. Engine speed indicator |
| C. Water temperature | H. Light switch |
| D. Filter warning (Yellow) | J. Ignition/starter key |
| E. Oil pressure warning (Green) | K. Engine stop control |

TRANSMISSION FILTER WARNING LAMP

When the fall in pressure across the full flow filter element in the hydraulic system is high enough to open the valve and allow oil to by-pass the filter element, the yellow warning lamp illuminates. This may occur (a) when the filter element is blocked with dirt and requires changing for a new one or (b) when the oil is cold and engine speed is high.

It is also arranged to light when the isolating switch is turned on and the driver should check that the bulb is intact each time before starting the engine. A faulty bulb should be replaced as soon as it fails.

If the bulb glows or flickers at idling speeds, this should be ignored.

The warning lamp may illuminate at less than full engine speeds when the oil is cold. The engine speed should be adjusted so that the light is not kept on for more than a few minutes otherwise proper filtering of the oil will not take place.

When the filter element becomes blocked with dirt it will be found impossible to run the engine at high speeds, even when the oil is warm, without the warning lamp illuminating. When the bulb lights at 1800 rev/min after a warming up period of 30 minutes the full flow filter element **must** be changed for a new one at the first opportunity.

OIL WARNING LIGHT

The green 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. The rated speed of the engine is 1800 rev/min and may be set by observing the engine speed indicator. This speed should be used for most purposes to conserve fuel and engine life. It also gives a PTO speed of 532 rev/min in low ratio.

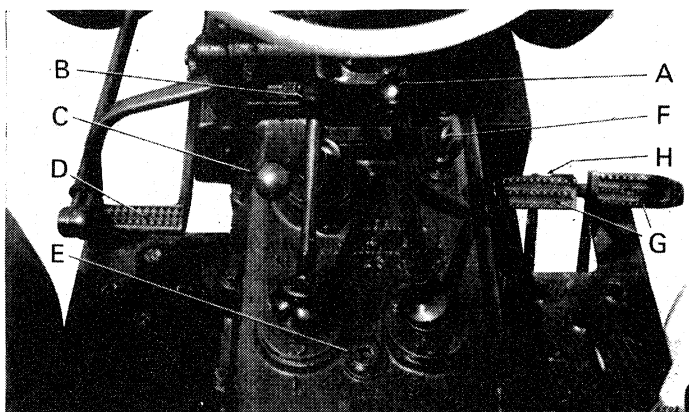


FIGURE 1/2. CONTROLS — 12-SPEED GEARBOX

- | | |
|-----------------------|-----------------------------|
| A. Gear (shift) lever | E. Transmission filler plug |
| B. H/L range lever | F. Transmission dip stick |
| C. S/N (creep) lever | G. Brake pedals |
| D. Clutch pedal | H. Locking bar |

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