



DAVID BROWN

4600 SELECTAMATIC

**Instruction
book**

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

4600 Selectamatic Livedrive

INSTRUCTION BOOK



4600/1 — Livedrive

With 3-cylinder Gasoline Engine

DAVID BROWN TRACTORS LIMITED

MELTHAM

· YORKSHIRE

· ENGLAND

HD7 3AR

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INTRODUCTION

The 4600 Selectamatic tractor with 3-cylinder gasoline 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: A list of abbreviations used in this book is given on page 86

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CONTENTS

	Page
Precautions with a new tractor	4
SECTION 1. OPERATION	5-37
Starting the engine	5
Controls	6
Description of the Selectamatic controls	13
Operation of Services	16
Operation of Live External Equipment	26
Differential lock	28
Ballast	29
Wheel width adjustments	29
Tyre pressures	32
Linkage settings	32
Drawbar	34
Pick-up hitch	36
Overload release	37
SECTION 2. REGULAR MAINTENANCE	38-50
Lubrication Chart	41
Recommended fuel and lubricants	48-50
SECTION 3. SERVICING INFORMATION	51-76
Wiring diagrams	76
SECTION 4. INFORMATION AND DATA	77-85
Capacities	80
Accessories	85
Abbreviations	86

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.

FIFTY-HOUR SERVICE

After 50 hours, change the engine oil and filter element, drain and flush the transmission gearbox and final drive reduction housings and change the full-flow filter element. Refill with new oil. Check the valve clearances and tightness of cylinder head and main external nuts and bolts.

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 48 to 50.

SECTION 1. OPERATION



IMPORTANT

To start the engine it is essential that the hand-throttle lever is fully closed and that the foot throttle is lifted upwards with the shoe toe to return the governor and carburettor butterfly to the fully closed position.

STARTING THE GASOLINE ENGINE (FROM COLD)

1. With fuel in the tank.
2. Pull out the choke control.
3. Put the gear shift in neutral (the right-hand lever).
4. Depress the clutch pedal fully. The starter cannot be energised until this is done because of the safety switch.
5. Switch on the ignition and operate the starter by turning the ignition key to the right against the spring.



Release the ignition key as soon as the engine fires and immediately it runs push the choke control part way in to prevent over rich mixture with erratic running and smoky exhaust.

Leaving the choke part way out will ensure a fast idling speed to give a quick warm-up. The choke may be pushed home as soon as the engine is warm enough to idle slowly.

RESTARTING WHEN WARM

When the engine is still warm, or the weather very hot the engine will start without use of the choke. Do not use the choke unnecessarily as this causes wear due to dilution of the lubricating oil by fuel.

If the choke has been used excessively and flooding occurs, a start may be made by opening the throttle wide with the choke pushed in. Close the throttle immediately on starting.

STOPPING THE ENGINE

Close the throttle. If the engine has been working hard, allow it to idle for 2 minutes. Switch off the ignition and pull out stop knob. Do not attempt to re-start engine before ensuring that knob is pushed in. Remove the key when leaving the tractor unattended.

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 ignition key is removed.

CONTROLS

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

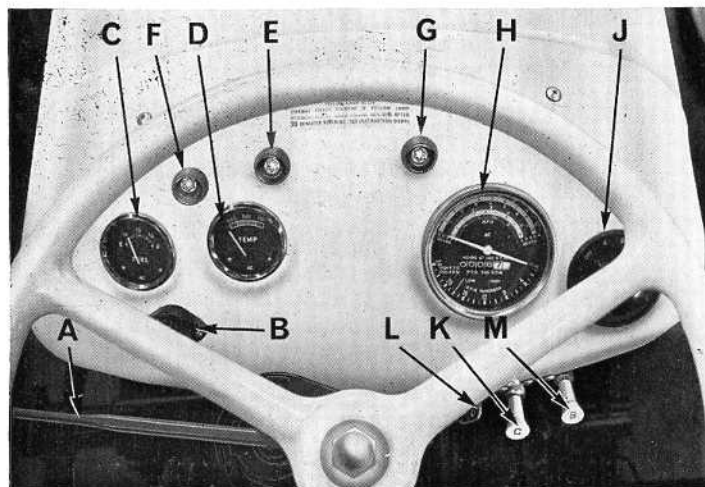


FIGURE 1/1. INSTRUMENT PANEL

- | | |
|---------------------------------------|----------------------------------|
| A. Throttle lever | F. Filter warning light (Yellow) |
| B. Horn button | G. Charge warning light (Red) |
| C. Fuel gauge | H. Tractormeter |
| D. Temperature gauge | J. Light switch |
| E. Oil pressure warning light (Green) | K. Choke |
| | L. Ignition/starter key |
| | M. Engine stop knob |

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.

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 lights 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.

THROTTLE CONTROL LEVER

When fully rearwards the engine is governed to its maximum speed. The rated speed of the engine is 1800 rev/min and may be set by observing the tractormeter. This speed should be used for most purposes to conserve fuel and engine life. It also gives a PTO speed of 532 rev/min.

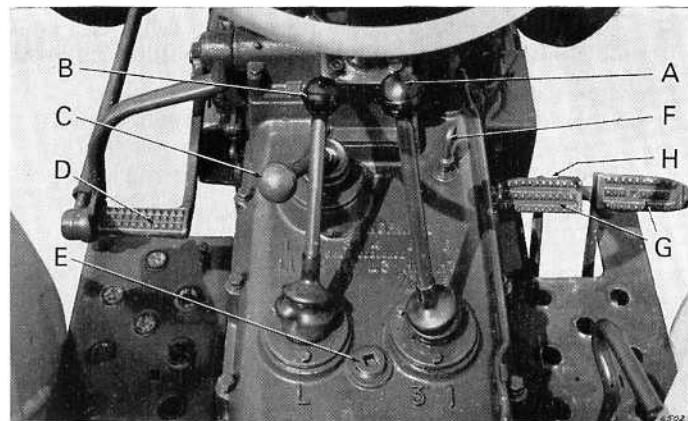


FIGURE 1/2. CONTROLS

- | | |
|-----------------------|-----------------------------|
| 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 |

