

DAVID BROWN

Manual for Operators of 885 and 885N Tractors

**Standard, Highway and Narrow versions
without Q-cab
(For tractor with Q-cab, use the alternative
manual Pub. 9-5203)**

**David Brown Tractors Limited
Meltham · Huddersfield · England · HD7 3AR**

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SAFETY POINTS



- Always** lock the two foot brake pedals together when running on the highway.
- Always** ensure that PTO driven implements are not run faster than their designed speed, because a mechanical failure could occur, resulting in personal injury.
- Always** ensure the PTO (and belt pulley when fitted) is adequately guarded. Stop the engine before working on or near a PTO-driven implement.
- Always** remove loose clothing when working near moving parts of the tractor, engine and implements.
- Always** remove the isolating/starter key from the tractor when leaving it unattended, especially where children have access.
- Always** operate the steering and driving controls with care, for example:—
- Don't swerve or turn sharply at speed.
 - Don't let the clutch in suddenly going up hill or the tractor may rear up.
 - Don't brake fiercely, especially going backwards down hill.
- Always** take extra care on steeply sloping ground. Move cautiously, as the sudden swing of a heavy implement, or pull of a trailer, could overturn the tractor.
- Always** make sure before turning that there is room for any mounted implement which will swing *outwards* at the rear.
- Always** hitch trailers to the approved drawbar or pick-up hitch which is below the centre line of the rear axle. Do not hitch above the centre line of the rear axle.
- Always** tow the tractor carefully. When towing by rope with a dead engine, power steering will be inoperative and the steering will be very difficult to turn.



IMPORTANT DONT'S



- Do Not** carry passengers on the linkages or on the tractor, except in an approved passenger seat.
- Do Not** drill into the safety frame or cab.
NOTE : Any damaged parts should be replaced immediately with new parts. Bent parts should not be straightened but replaced and no welding should be attempted on the safety frame. Bolts when replaced, must be of the correct tensile strength. After any accident to a safety frame it is advisable to report this to your local safety officer.
- Do Not** lift the tractor by the cab lifting hooks. These are designed only for removing a cab from the tractor.
- Do Not** do any repair or adjustment to a tractor or implement with the engine running. Pull up the hand brake before getting down from the tractor.

INTRODUCTION

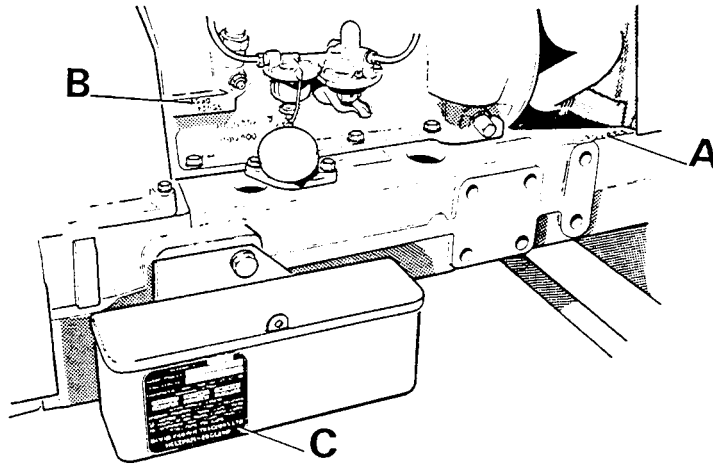
We recommend that even the most experienced tractor user reads the Operation and Regular Maintenance sections of this book *before* commencing operations with his new tractor. The various tasks can in fact be performed by any but the complete novice, but this book details the easiest, quickest and most efficient ways of carrying them out.

The most important aspect, however, is *safety*, because a tractor can be a dangerous machine if handled without due caution. Knowledge gained beforehand from this manual can prevent accidents. Ensure therefore that it is made available to all your employees, and anyone else, before they are asked to operate the tractor, and that they fully understand all relevant aspects.

The 885 tractor is the culmination of many years of development and rigorous field testing. The 3-cylinder diesel engine and the Selectamatic[®] hydraulics have previously obtained remarkably successful results in field operation and in official tests. Subsequent improvements in these and other features have made the 885 an exceptionally reliable and efficient tractor. Finally, the incorporation of hand and foot throttle controls (except on the narrow tractor) and of the David Brown synchromesh gearbox, makes it as easy to handle as a family car.

A great deal of care goes into the building of every David Brown tractor. The engine is part run-in, the completed tractor is road tested and at each stage of assembly it is checked by a team of Quality Control Inspectors. The user can help to maintain this in-built quality by carrying out the simple tasks outlined in the Regular Maintenance chapter – Section 4. Neglect can lead eventually to major repairs which are expensive as well as time wasting.

It is a tractor which will amply repay the user provided that the simple maintenance routines are carried out regularly.



A. Tractor number. B. Engine number. C. Identification plate.

When ordering parts or with any query always quote the full prefix and serial numbers as follows :

Tractor letters and numbers as stamped on right-hand edge of the chassis front extension at A and on the identification plate C, e.g. 885/1/620001.

Engine Numbers as stamped on the flat vertical surface on the right-hand side of the cylinder block at B and on the identification place C, e.g. 355011/18243.

For future reference, enter details of your tractor below :

Tractor Serial No.....

Engine Serial No.....

Tractor Registration No.....

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TAKE SPECIAL CARE OF YOUR NEW TRACTOR

Although every engine is tested and run-in at the factory, care should be taken during the first 25 to 50 hours' use. Avoid excessive speeds or loading. Do not allow the engine to labour unduly, instead change to a lower gear. Use the middle range of engine speeds from 1200 to 1800 rev/min. Prolonged light load should also be avoided as this might lead to cylinder wall glazing with consequent high oil consumption. Best running-in is achieved by alternating between low/medium and high (not maximum) loading.

SERVICE PACKS

50-hour service and filter packs are available from your dealer. Ask for details and get your pack before starting a service task.

FIRST SERVICE (50/100 HOURS)

The first service should be done by a David Brown dealer who will carry out a full check on the tractor. The main essentials in this service are :—

1. Change the fuel filter element.
2. Change the engine oil and filter element.
3. The transmission gearbox should be flushed and the wire mesh and magnetic filter cleaned. A new paper filter element should be fitted and the gearbox refilled with new oil.
4. Change the oil in the final drive reduction housings.
5. Check the tightness of cylinder head bolts and the valve clearances, and the tightness of main external nuts and bolts especially rear wheel nuts.

NOTE : To remove any contaminants which may build up in the oil due to initial bedding in, it is essential to drain the transmission oil and refill with new oil at the 50/100 hour service.

SECTION 1. DESCRIPTION AND OPERATION—GENERAL

INSTRUMENT PANEL

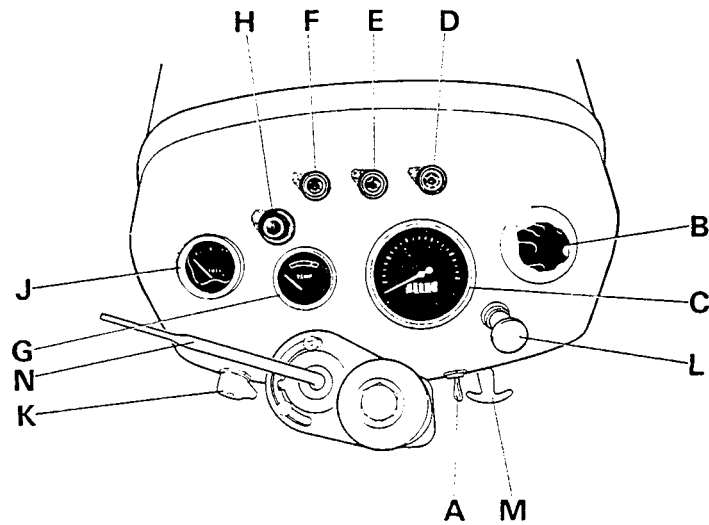


FIGURE 1/1. INSTRUMENT PANEL

- | | |
|--|---------------------------------|
| A. Isolating/Starter switch | G. Temperature gauge |
| B. Light switch | H. Horn push button |
| C. Engine speed indicator
(or speedometer) | J. Fuel gauge |
| D. Charge warning light (red) | K. Direction signal switch |
| E. Engine oil warning light
(green) | L. Hazard warning lights switch |
| F. Transmission filter warning
light (yellow) | M. Engine stop control |
| | N. Hand throttle |

Engine oil warning light

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

Charge warning light

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

Transmission filter warning light

When the fall in pressure across the full flow filter element in the hydraulic system is high enough to open the filter by-pass valve and allow oil to by-pass the filter element, the yellow warning light 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 also lights when the starter switch is turned on and the driver should check that it 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 light 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.

As the filter element becomes blocked with dirt, the warning light will come on at progressively lower engine speeds so that, even when the oil is warm, full working speed may not be achieved without causing the bulb to light.

When the bulb lights at 1800 r/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.

Light switch

This has 4 positions :

1. Off
2. Side and Tail
3. Side, tail and head (low beam)
4. Side, tail and head (high beam)

The rear plough lamp is controlled by its own switch, mounted on the lamp housing. The lamp can be switched on when the main light switch on the instrument panel is in any of the positions 2, 3 or 4.

Engine speed indicator

The engine speed indicator (rev counter) fitted to the instrument panel, shows the engine revolutions per minute and should be used in conjunction with the chart attached to the bonnet (hood) in order to determine the travel speed of the tractor (see Fig. 1/2).

The engine speed is marked along the bottom edge of the chart. An imaginary vertical line projected upwards will cross the various horizontal gear bands at the appropriate speed. The travel speed in any gear can, therefore, be obtained by first reading the engine speed indicator and transferring to the chart.

Alternatively, any required travel speed in an appropriate gear can be projected downwards and the necessary engine speed determined. The throttle can then be set to give the required engine speed as observed on the engine speed indicator.

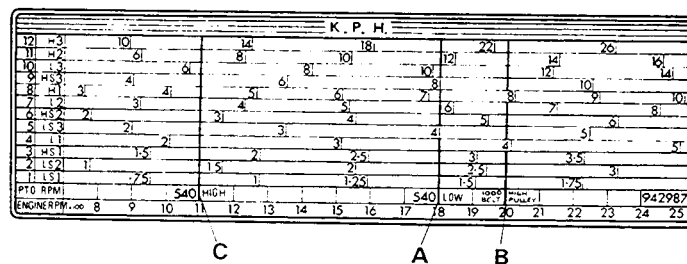


FIGURE 1/2. GEAR/SPEED CHART

- A. Blue line at 540 r/min PTO in low ratio
- B. Red line at 1000 r/min PTO in high ratio
- C. Red line at 540 r/min PTO in high ratio

Alternative gear/speed charts are available for different tyre sizes and in mile/h or km/h versions.

Use of the chart for PTO work is facilitated by the provision of two red vertical lines corresponding to the high PTO ratio and a blue line for the low PTO ratio (also single ratio PTO). Each line is marked immediately above the engine speed with the ratio (high or low) and the PTO speed (540 or 1000). Therefore, having decided which PTO speed and ratio is required for the type of work in hand, it is only necessary to inspect the appropriate vertical coloured line and note which horizontal gear band bears the nearest desired travel speed and choose the gear ratio shown at the left-hand edge.

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