case DAVID BROWN

1690 Turbo Tractor – 4WD Synchromesh Transmission Operators Manual

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Written In *Clear And Simple English*

David Brown Tractors Ltd

Affiliate of J I Case

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SAFETY RULES

Understand that your safety and the safety of other persons is measured by how you service, and operate this tractor. Know the positions and operations of all controls before you try to operate. MAKE SURE YOU CHECK ALL CONTROLS IN A SAFE AREA BEFORE STARTING YOUR WORK.

READ THIS MANUAL COMPLETELY and make sure you understand the controls. All equipment has a limit. Make sure you understand the speed, brakes, steering stability and load characteristics of this tractor before you start to operate.

The safety information, given in this manual does not replace safety codes, insurance needs, country and local laws. Make sure your tractor has the correct equipment needed by the local laws and regulations.

CAUTION: ***Provide a first aid kit for use in case of accident.***

CAUTION: ***It is good practice to carry a fire extinguisher on the tractor. Be sure that the extinguisher is properly maintained and be familiar with its proper use.***



Figure 2

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TRACTOR SERIAL NUMBERS

The tractor serial number is on the right-hand top face of the main frame.

The engine serial number is on the right-hand side of the cylinder block. Below the steering pump and reservoir.

The cab serial number is on a plate fastened inside the cab.

The serial number plate is fastened to the left-hand side of the clutch housing.

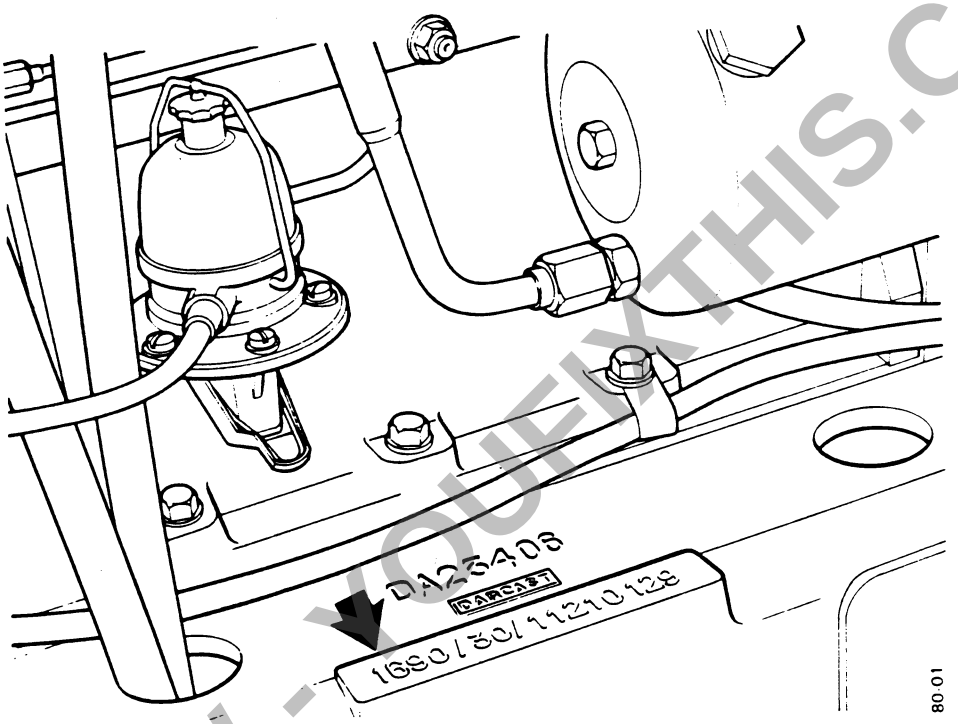


Figure 20

Write the serial numbers for your tractor below:

TRACTOR SERIAL NUMBER _____
ENGINE SERIAL NUMBER _____
CAB SERIAL NUMBER _____
CAB DOOR KEY NUMBER _____
REGISTRATION NUMBER _____

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TRAVEL SPEED CHART

1690 Turbo Synchromesh Transmission — 9/59 Ratio Final Drives

Tyre Sizes: 16.9/14–38 — Average Rolling Radius 787 mm (31 in)

SPEED RANGE	LEVER POSITIONS: RANGE LEVERS	LEVER POSITIONS: GEAR LEVER	GEARBOX RATIO	OVERALL RATIO	700 r/min		1100 r/min		1800 r/min		2050 r/min*		2300 r/min	
					mile/h	km/h	mile/h	km/h	mile/h	km/h	mile/h	km/h	mile/h	km/h
1	LS	1	11.132	373.99	0.4	0.6	0.5	0.9	0.9	1.4	1.0	1.6	1.1	1.8
2	LS	2	6.788	228.04	0.6	0.9	0.9	1.4	1.5	2.3	1.7	2.7	1.9	3.0
3	HS	1	5.581	187.49	0.7	1.1	1.1	1.7	1.8	2.9	2.0	3.3	2.3	3.6
4	LF	1	4.404	147.95	0.9	1.4	1.4	2.2	2.2	3.6	2.6	4.1	2.9	4.6
5	LS	3	3.932	132.11	1.0	1.6	1.5	2.5	2.5	4.0	2.9	4.6	3.2	5.2
6	HS	2	3.403	114.32	1.1	1.8	1.8	2.9	2.9	4.7	3.3	5.3	3.7	6.0
7	LF	2	2.685	90.21	1.4	2.3	2.3	3.6	3.7	5.9	4.2	6.8	4.7	7.6
8	HF	1	2.208	74.17	1.8	2.8	2.7	4.4	4.5	7.2	5.1	8.2	5.7	9.2
9	HS	3	1.971	66.23	2.0	3.1	3.1	5.0	5.0	8.1	5.7	9.2	6.4	10.3
10	LF	3	1.556	52.26	2.5	4.0	3.9	6.3	6.4	10.2	7.2	11.6	8.1	13.1
11	HF	2	1.346	45.23	2.9	4.6	4.5	7.2	7.3	11.8	8.4	13.5	9.4	15.1
12	HF	3	0.780	26.20	4.9	7.9	7.7	12.5	12.7	20.4	14.4	23.2	16.2	26.1
	LS	R	6.679	224.39	0.6	0.9	0.9	1.5	1.5	2.4	1.7	2.7	1.9	3.0
	HS	R	3.348	112.49	1.2	1.9	1.8	2.9	3.0	4.8	3.4	5.4	3.8	6.1
	LF	R	2.642	88.77	1.5	2.3	2.3	3.7	3.7	6.0	4.3	6.9	4.8	7.7
	HF	R	1.325	44.50	2.9	4.7	4.6	7.3	7.5	12.0	8.5	13.7	9.5	15.3

*Engine Speed for PTO Operation.

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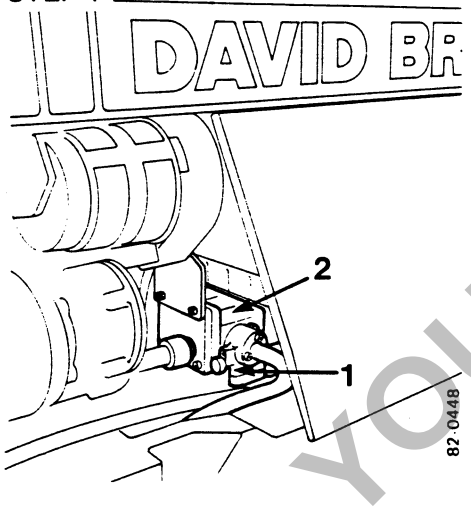
FLOW VALVE
HYDRAULIC OIL COOLER
(If Equipped)

When the flow valve is open, hydraulic oil will flow through an oil cooler. The oil cooler is fitted in front of the cooling system radiator. The flow valve is fastened to the right-hand side of the hydraulic pump at the front of the engine. The flow valve must be open at all times, except when operating in cold temperatures. In cold temperatures, open the flow valve when the hydraulic oil is warm.

NOTE: *The hydraulic system on this tractor uses oil from the transmission reservoir. If extra oil is needed for external hydraulic equipment, add oil to the transmission reservoir (Page 101).*

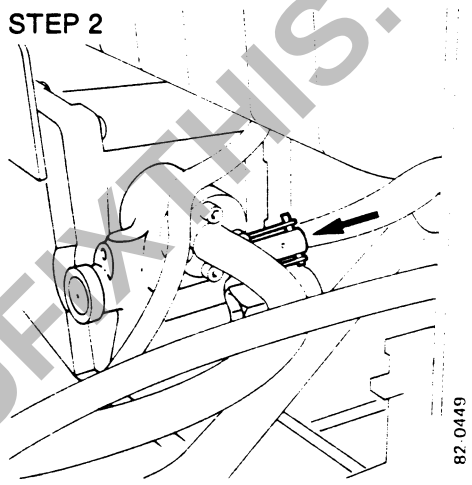
IMPORTANT: *Always check the flow valve before operating.*

STEP 1



The flow valve (1) is fitted on the right-hand side of the hydraulic pump.

STEP 2



The arrow points to the flow valve control lever. Remove the clip then push the lever inward to OPEN the flow valve. Oil will flow through the cooler. To CLOSE the flow valve, pull the lever out and fit the clip.

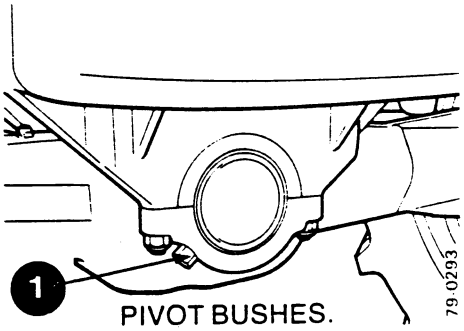
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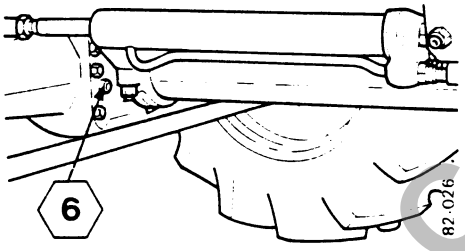
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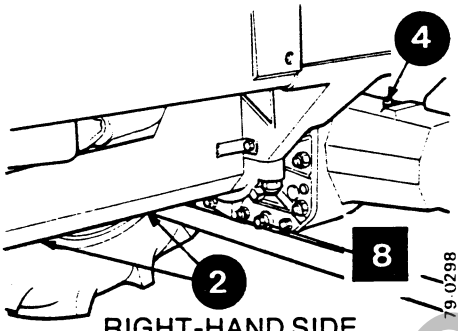
MAINTENANCE: SERVICE CHART
Service Chart
Front Axle



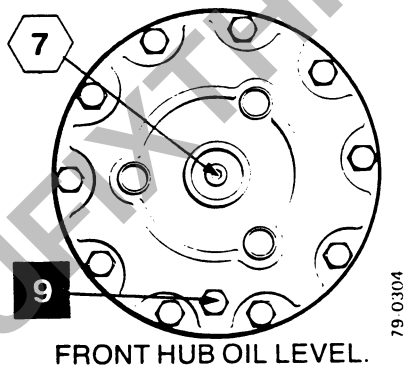
PIVOT BUSHES.
Figure 116



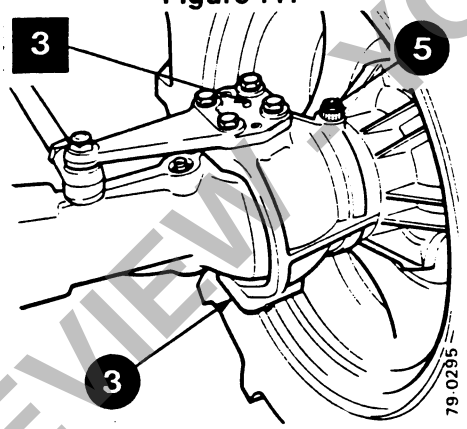
DIFFERENTIAL OIL LEVEL.
Figure 119



RIGHT-HAND SIDE.
Figure 117



FRONT HUB OIL LEVEL.
Figure 120



LEFT—HAND SIDE.
Figure 118

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Linkage

Type	Three Point, Category II
Working Load	1315 kg (2,900 lb)
Maximum Static Lift	2990 kg (6,500 lb)
Sensing	Lower Link

Drawbar

Type	Adjustable, Height Side to Side, Front to Rear
Height Positions	Two, 16.9-38 Tire - 451 mm (17-3/4in) 527 mm (20-3/4in) 18.4-38 Tire - 476 mm (18-3/4in) 552 mm (21-3/4in)
Maximum Load on Drawbar	
PTO Work	1500 kg (3,300 lb)
Trailer Work	1750 kg (3,850 lb)

Combined Pick-Up Hitch and Drawbar

Pick-Up Hitch	
Maximum Height	460 mm (18-1/8in) - 15.9-38 Tire 485 mm (19-1/8in) - 18.4-38 Tire
Maximum Load	2500 kg (5,500 lb)

Drawbar

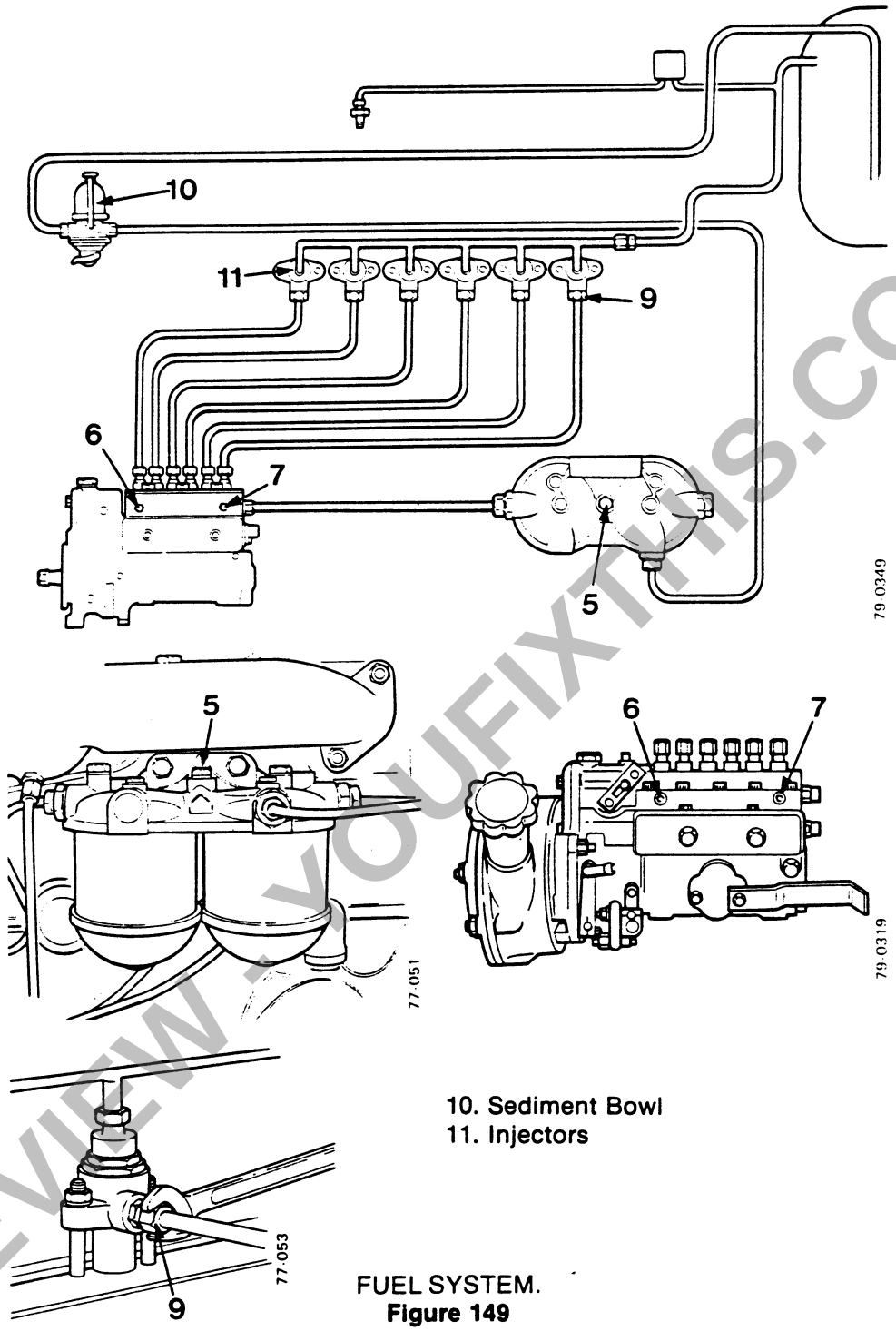
Type	Adjustable, Side to Side, Front to Rear
Height Position	460 mm (18-1/8in) - 16.9-38 Tire 485 mm (19-1/8in) - 18.4-38 Tire
Maximum Load on Drawbar	
PTO Work	1500 kg (3,300 lb)
Trailer Work	1750 kg (3,850 lb)

Transmission

Synchromesh	Four Speed Range with Three Forward, One Reverse Gear Section. Synchromesh between Second and Third Gear Section.
Number of Gear Ratios	Twelve Forward, Four Reverse

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10. Sediment Bowl
11. Injectors

FUEL SYSTEM.
Figure 149

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INSTRUMENTS AND CONTROLS

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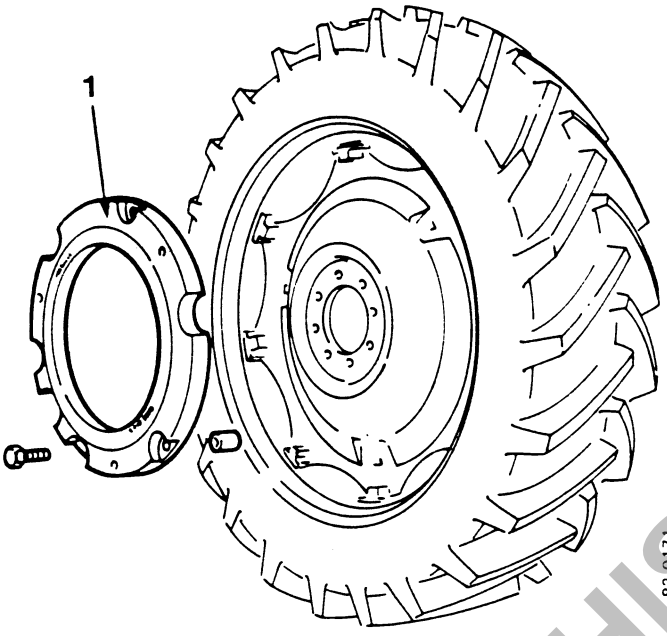
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REAR WHEEL WEIGHTS.
Figure 54

1. Rear Wheel Weights

NOTE: *When you have too much ballast installed on the tractor, you will see the clear shape of the tire tread in the ground which is an indication of no slippage. With too little ballast, the tire tread marks will not show because of the tire slippage.*

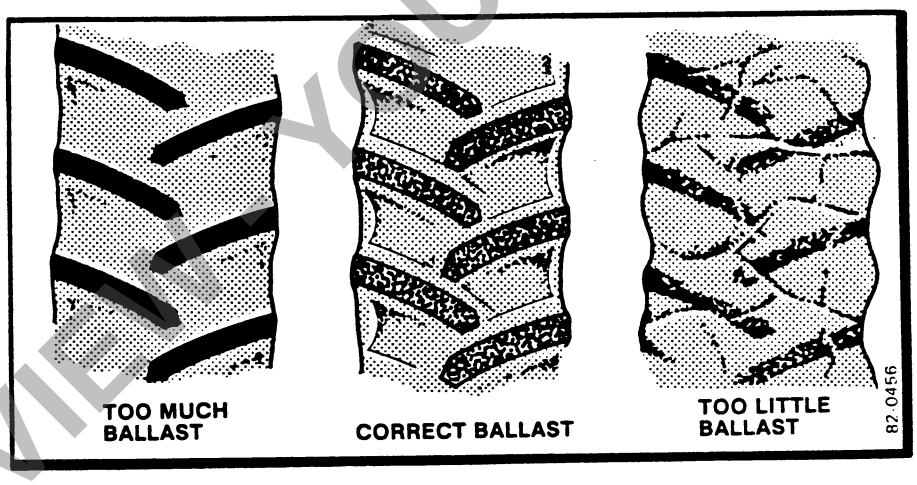


Figure 55

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