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David Brown®

Supplement to Operating  
and Maintenance Manual  
for 1210 4WD TRACTORS  
with David Brown  
FRONT DRIVE AXLE

Pub. 9-5797 February 1979

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Written In *Clear  
And  
Simple  
English*

**David Brown Tractors Ltd**

A Tenneco Company

Affiliate of J I Case



## INTRODUCTION

Use this supplement for 1210 4 wheel drive tractors which are fitted with the David Brown front drive axle.

This supplement gives information for the operating and regular lubrication of the front axle and transfer gearbox.

The information in the 1210 Operator's Manual still applies to this model except for the details in this supplement.

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## OPERATION

Only engage or disengage four wheel drive when the tractor is running without load on the transmission.

**IMPORTANT:** Do not try to engage four wheel drive after there is a loss of traction by the rear wheels. When operating your tractor, look for soft ground and engage four wheel drive before you reach it.

### Tractors Fitted with a Cab

The control lever for the selection of four wheel drive is installed below the front of the operator's seat.

To engage four wheel drive; move the lever fully to the left.

To disengage four wheel drive; move the lever fully to the right.

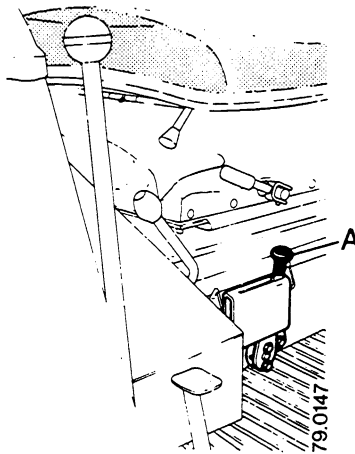


FIGURE 1. 4WD CONTROL LEVER

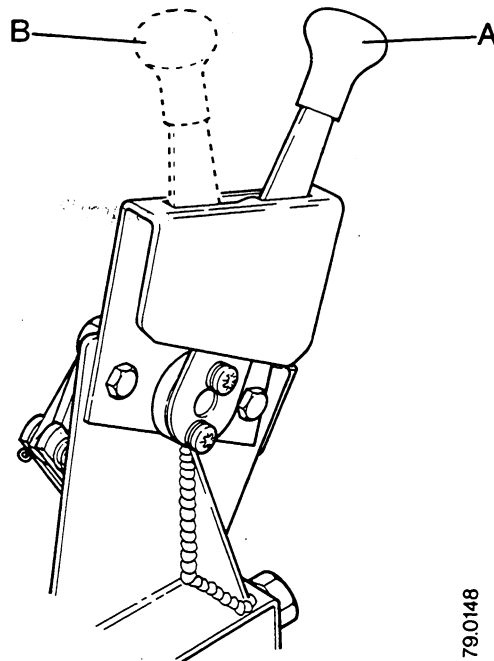
A. Lever engaged

**Tractors Without a Cab**

The control lever is installed toward the rear and to the left-hand side of the seat. See Figure 2.

To engage four wheel drive move the lever forward.

To disengage four wheel drive move the lever backward.



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**FIGURE 2. 4WD CONTROL LEVER**

- A. Control lever in engaged position.*
- B. Control lever disengaged.*

## FRONT TRACK SETTINGS

The front track is adjustable in 50 mm (2 in) steps on each wheel. The wheel rim can be fitted to the wheel centre in four positions, as shown in Figure 3.

Minimum track: 1·525 m, 60 in.

Maximum track: 1·830 m, 72 in.

**NOTE:** The wheel centre must not be moved.

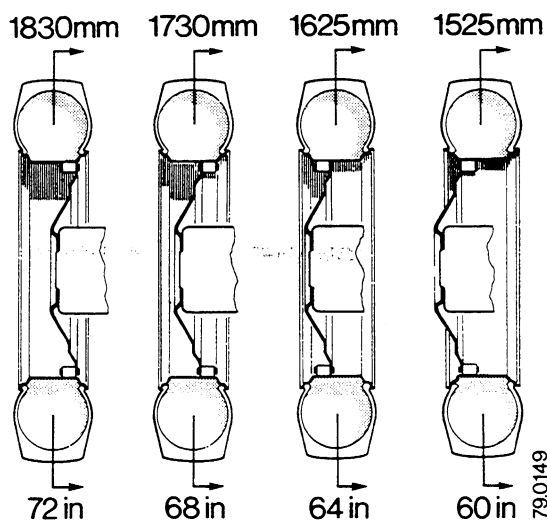


FIGURE 3. FRONT AXLE TRACK SETTINGS

## TYRES

Only the following tyre sizes and arrangements must be used or damage will be caused to the transmission.

	Front	Rear
1.	11·2/10—24	13·6/12—38
2.	11·2/10—24	16·9/14—34
3.	11·2/10—24	18·4/15—30

Check pressures frequently, variation in pressures can cause wind up of the transmission and cause damage.

## MAINTENANCE

### DAILY

If conditions are wet or dusty, put grease in the following fittings. See Figure 4.

Swivel fittings C and D. Remove square plug to gain access to top fittings C.

Drive shaft joints B.

Axle drive shaft joints and sliding sleeve E.

**NOTE:** If conditions are not wet or dusty see 60 hour service.

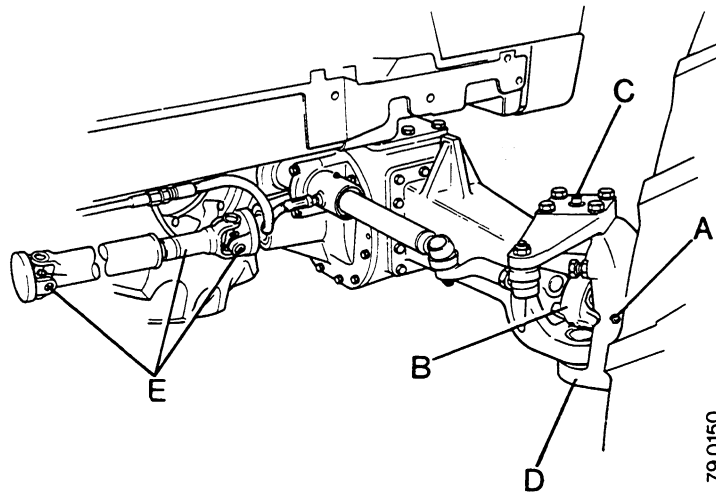


FIGURE 4. GREASE FITTINGS FRONT AXLE 4WD

- A. One each side, on stub axle, one front, one rear
- B. Two each side, on driveshaft joints
- C. One each side, top swivel, under square plug
- D. One each side, bottom swivel
- E. Three on drive shaft, two front, one rear

## FIRST SERVICE 50/100 HOURS

Change the oil in the front hubs and differential as follows. This is best done when the oil is warm after the tractor has been used.

### Differential

1. Put a container of at least 9 litre (2 gal) capacity under the drain plug A. Figure 5.
2. Clean around both plugs. Remove both plugs — A and B.
3. When the oil has stopped flowing, install the drain plug A.
4. Fill the differential to the bottom of the level plug hole with the correct grade of oil. See table on page 11.
5. Install the plug and remove any oil on the casing.

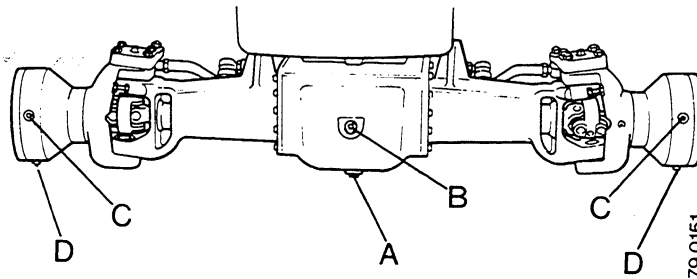


FIGURE 5. FRONT AXLE 4WD: LEVEL AND DRAIN PLUGS

A. Drain plug, differential      C. Level plug, hubs  
B. Level plug, differential      D. Drain plug, hubs

### Hubs

1. Use a jack to raise the front wheels clear of the ground.
2. Rotate wheel until one of the plugs in the hub housing is at the lowest position. See D, Figure 5.
3. Put a container of at least 1 litre (2 pint) capacity under the hub.
4. Clean around both plugs before removing. Remove both plugs and let the oil flow into the container.
5. When the oil stops flowing, install the bottom plug D.
6. Fill the hub to the bottom of plug hole at C with the correct grade of oil.
7. Install plug C and clean away any oil from the housing.

### **Transfer Gearbox**

Change the oil in the transfer gearbox.

The transfer gearbox uses the same oil as the transmission, so this will be changed at the same time.

1. Put a container of at least 45 litres (10 gal) under the drain plug of the transfer box and remove the plug.
2. Install the plug when the oil has stopped flowing.
3. Fill the transmission to the correct level with the correct grade of oil.

Use the normal transmission filler and level points for this purpose.

**NOTE:** Make sure the area around the plugs and dipstick are cleaned before removal.

### **LUBRICATION**

Lubricate all fittings except A which are done on 500 hour service, see Figure 4 and 60 hour service.

### **60 HOUR SERVICE**

If ground conditions **are not** wet or dusty, every 60 hours lubricate the following fittings. See Figure 4.

1. Swivels, 4 fittings C and D. Remove the square plugs to gain access to the top fittings.
2. Drive shaft universal joints. 4 fittings B.
3. Axle drive shaft joints and sliding sleeve, 3 fittings E.
4. Use SAE 90EP gear oil for the two fittings on the axle trunnion pin, see B, Figure 6.
5. Check the oil level in the differential and both front hubs.  
Add oil if necessary, to the level of the plug holes at B and C, Figure 5.



## 250 HOUR SERVICE

1. Check the level of the oil in the differential and both hubs. Add oil if necessary to the level of the plug holes at B and C, Figure 5.
2. Make sure the breathers on the axle case are clear from dirt. Remove and wash in kerosene and dry with compressed air to clean.

There are two breathers, one on each side of the axle case, see A, Figure 6.

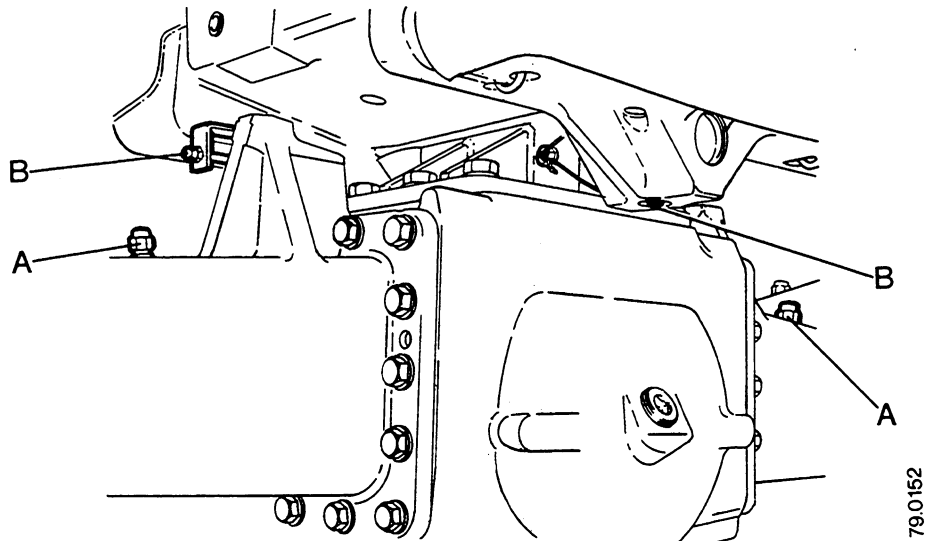


FIGURE 6. BREATHERS AND TRUNNION PIN FITTINGS

- A. *Breathers*
- B. *Trunnion pin lubrication fittings*

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### 500 HOUR SERVICE

1. Do a 250 hour service.
2. Put grease in the stub axle fittings at A, Figure 4, until it shows at hub to stub axle joint.

### 1000 HOUR SERVICE

1. Change the oil in the hubs and differential. See page 8.
2. Do a 500 hour service.

## SPECIFICATIONS

Ground clearance with 11·2/10—24 tyres fitted	356 mm	14 in
Toe-in, front wheels	0 to 1·5 mm	0 to 0·06 in
Steering angle	40 degrees	
Total axle reduction	13·875:1	
Capacities: Hub, each	0·85 litre	1·5 pt
Differential	7·96 litre	14 pt
Tyres:	Front	Rear
	11·2/10—24	13·6/12—38
		16·9/14—34
		18·4/15—30
Track settings:	1830 mm	72 in
	1730 mm	68 in
	1625 mm	64 in
	1525 mm	60 in

## RECOMMENDED LUBRICANTS

COMPONENT	BP	CASTROL	ESSO	MOBIL	SHELL
Differential, Front Hubs, Trunnion Pin	Gear Oil 90EP or Farm Gear Oil Universal	Agricastrol Gear Oil EP90/140	Gear Oil GP90/140	Mobilube GX 90 Gear Oil	Spirax 90EP
Stub Axle Bearings, Universal Joints on Drive shafts, Stub axle hub joint	Energrease Universal or Energrease L2	Agricastrol Multi-use Grease	Beacon 2	Mobilgrease MP or Mobilgrease Super	Retinax A or Farm Grease Universal



**DAVID BROWN®  
Manual for Operators  
of 1210, 1210 4WD  
and 1212 Tractors**

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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 or a dangerous mechanical failure may result. This is especially so with lightly loaded 540 r/min implements driven in high PTO ratio at 1100 r/min engine speed. For maximum safety the low ratio is recommended.
- Always** ensure the PTO (and Belt Pulley when fitted) is adequately guarded. Stop the engine before working on or near the tractor or implement.
- Always** remove loose clothing when working near moving parts of the tractor, engine and implements, or ensure that it is adequately fastened or tied up.
- 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:—
- Do not swerve or turn sharply at speed.
  - Do not let the clutch in suddenly going up hill or the tractor may rear up.
  - Do not 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, may cause trouble.
- 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.
- Always** tow the tractor carefully. When towing by rope with a dead engine, power steering will be inoperative and the steering wheel will be very difficult to turn.



## IMPORTANT



- 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 attachments before you have stopped the engine and pulled up the hand brake.

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