

1490, 1494, 1594 and 1690 Tractors
Service Manual

Table of Contents

Description	Section No.	Form No.
Engine	Tab 2	
Separating the Tractor - Low Profile - 1490 and 1494 Tractors	2010	9-43508
Engine Removal - 1490 and 1494 Tractors without Cab	2110	8-24380
Cylinder Head, Valves and Rocker Arm - 1490 and 1494 Tractors	2115	8-24100
Cylinder Block - 1490 and 1494 Tractors	2120	8-24110
Crankshaft, Main Bearings, Flywheel and Oil Seals - 1490 and 1494 Tractors	2135	8-24400
Lubrication System - 1490 and 1494 Tractors	2145	8-24120
Cooling System - 1490 and 1494 Tractors	2155	8-24080
Turbocharger - 1490 and 1494 Tractors	2165	8-24090
Six Cylinder Engine - 1594 and 1690 Tractors	2215	9-43586
Lubrication System - 1594 and 1690 Tractors	2245	9-43518
Cooling System - 1594 and 1690 Tractors	2255	9-43514
Turbocharger Failure Analysis - 1490 and 1494 Tractors	2565	9-78235
Fuel System	Tab 3	
Fuel System and Thermostat System	3110	8-56020
Fuel Injection Pumps	3112	8-56040
Fuel Injectors	3113	8-56030
Fuel System - 1594 and 1690 Tractors	3210	9-43516
Fuel Tanks	3140	9-43511
Fuel Tank Removal	3141	8-23720
Electrical	Tab 4	
Tractor Electrical System Troubleshooting	4001	8-24130
Cab Electrical System Troubleshooting (Sims Cab)	4002	8-24150
Cab Electrical Wiring Diagram	4015	8-23860
Wiring Diagram - 94 Series Tractors with Cab	4114	8-85800
Wiring Diagram - 94 Series Tractors without cab	4117	8-85810
Wiring Diagram - 90 Series High Platform	4141	9-43593
Wiring Diagram - 90 Series Low Profile	4142	9-43594
Electrical Equipment	4205	9-43571
Steering	Tab 5	
Steering Hand Pump	5010	8-24040
Steering System Oil Pump	5110	8-56250
Steering Cylinder - (Side Mounted) - 1494 Tractors	5120	8-56420
Front Axle (MFD) David Brown	5130	8-23290
Hydrostatic Steering - High Platform	5140	9-43561
Front Axle (MFD) Carraro AE3	5160	8-23480
Front Axle (MFD) Carraro 709/19	5260	8-56290

Reprinted

1490, 1494, 1594 and 1690 Tractors
Service Manual

Table of Contents

Description	Section No.	Form No.
Power Train	Tab 6	
Troubleshooting the Powershift Transmission	6000	8-59740
Separating the 1490 and 1494 Tractors Between Engine and Transmission	6010	8-24410
Differential - Synchromesh Transmission - 1594 and 1690 Tractors	6060	8-23750
Independent Clutch Assembly - 1490 and 1494 Tractors	6140	9-43522
12 Speed Synchromesh Transmission	6140	8-23540
12/12 Inch Independant Clutch (Laycock)	6141	8-24420
Transfer Gearbox (MFD) - 1490 and 1494 Tractors	6142	8-23340
Transfer Gearbox - Mechanical Front Drive	6150	8-59780
Differential - Synchromesh Transmission - 1490 and 1494 Tractors	6160	8-23610
Synchromesh Gearbox - 1594 and 1690 Tractors	6161	9-43531
Independant Clutch Assembly - 1594 and 1690 Tractors	6161	9-43521
Final Drive - 1490 and 1494 Tractors	6170	8-23620
Separating the Tractor to Service the Front of the Transmission	6200	8-59770
Transfer Gearbox - (Carraro)	6242	8-23490
Powershift Hydraulic Pump	6225	8-23680
Powershift	6230	8-23550
Powershift Control Valve	6235	8-23660
Powershift Sequence Valves	6236	8-23670
Three Speed Transmission - Powershift	6240	8-23640
Reversible PTO Shaft	6245	9-43555
Differential - Powershift Transmission	6260	8-23650
Final Drive - 1594 and 1690 Tractors	6270	8-23760
Creeper Gearbox - 1494 Tractors	6280	8-85980
Multi Speed PTO - 1494 Tractors	6445	8-59830
Brakes	Tab 7	
Brake Valves, Lines, Linkage and Air Removal	7110	8-23770
Brakes	7140	8-23630
Hydraulic System	Tab 8	
Filters, Pumps and Relief Valve	8010	9-43572
Rockshaft, Lift Cylinder and Removal of the Schematic Control Valve - 1494 Tractors	8020	8-85970
Selector Dial Mechanism	8045	9-43550
Draft Sensing Units	8085	9-43553
Inlet Filter - Hydraulic System	8110	8-24440
Rockshaft, Lift Cylinder and Removal of the Selectromatic Control Valve - 1594	8120	8-56440
Remote Valves and Couplers	8190	8-23590
Hydraulic Adjustments	8204	9-43565
Hydraulic System - Specifications, How it Works and Fault Finding	8205	9-43566
Oil Cooler	8209	9-43573
Selectomatic Valve	8235	9-43574
Lower Link Sensing - 1594 Tractor	8280	9-43588
Chassis	Tab 9	
Engine Cover	9140	9-43581
Cab Removal	9140	8-23690
Air Conditioning Troubleshooting and System Checks	9240	8-59810
Air Conditioning System Checks	9340	8-59820

Section 2010

SEPARATING THE TRACTOR 1190, 1290, 1390 and 1490 Tractors without Cab or Flat Deck

Written In *Clear
And
Simple
English*

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Hello dear friend!

Thank you very much for reading.

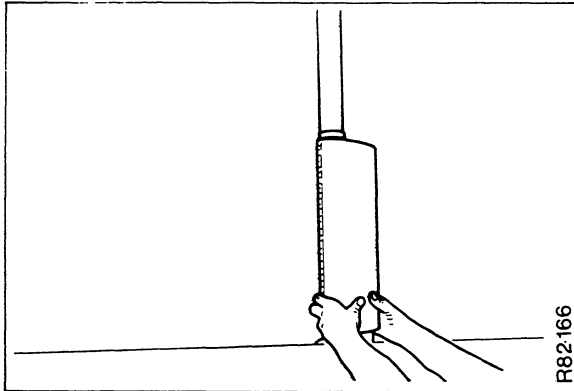
Enter the link into your browser.

The full manual is available for immediate download.

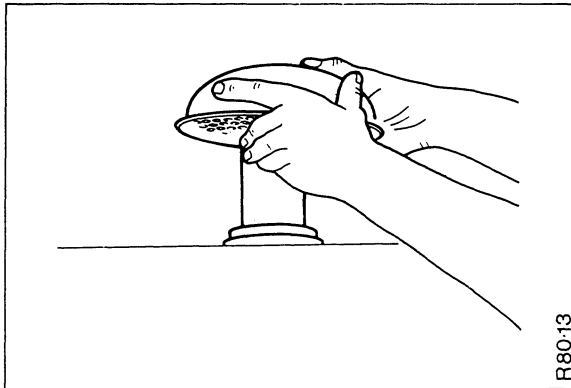
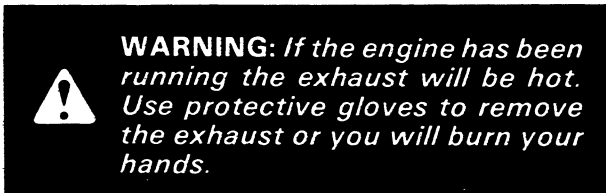
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SEPARATING THE TRACTOR

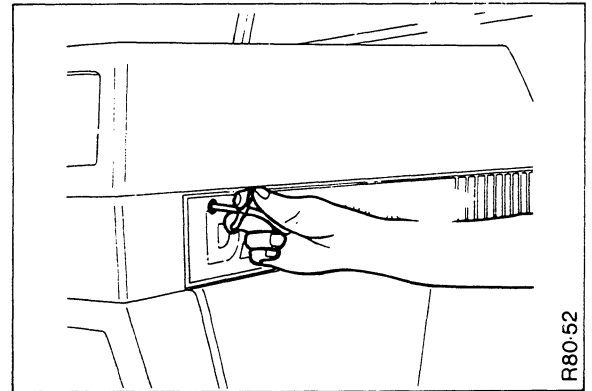
Put the tractor on a hard level surface. Apply the hand brake and put blocks in front and behind the rear wheels. Make sure you have enough space to move the front half of the tractor far enough forward to do the job.



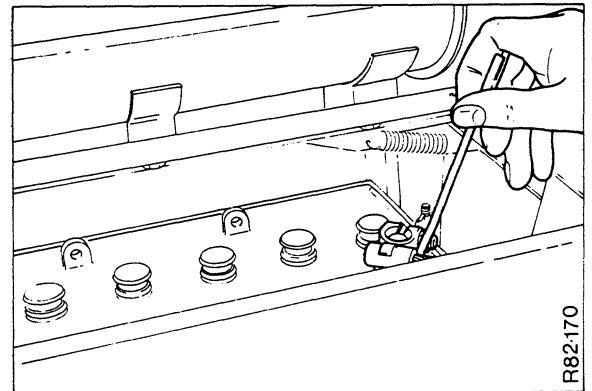
STEP 1. Remove the engine exhaust silencer.



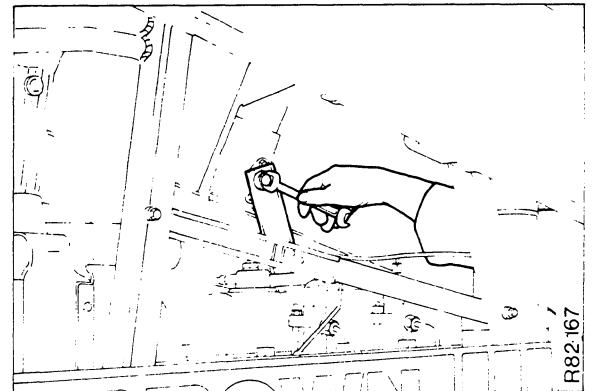
STEP 2. Remove the precleaner from the engine air intake pipe.



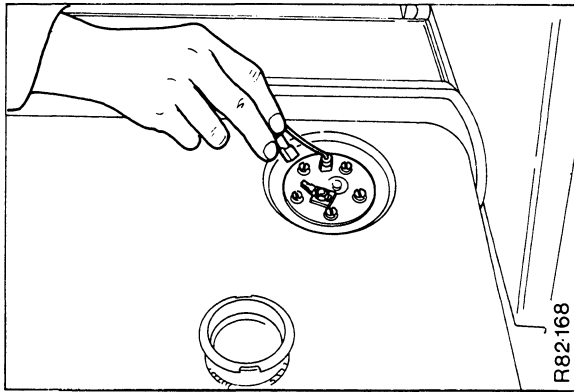
STEP 3. Open the engine cover.



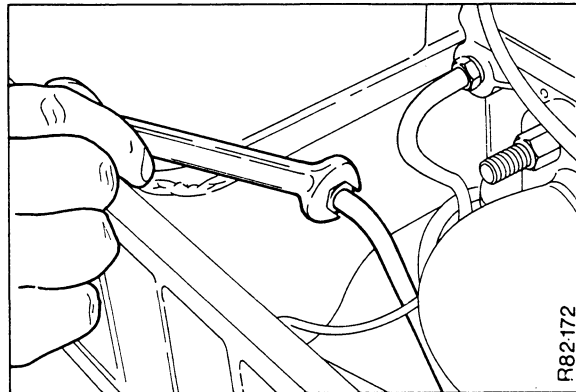
STEP 4. Disconnect the battery cables, ground cable first.



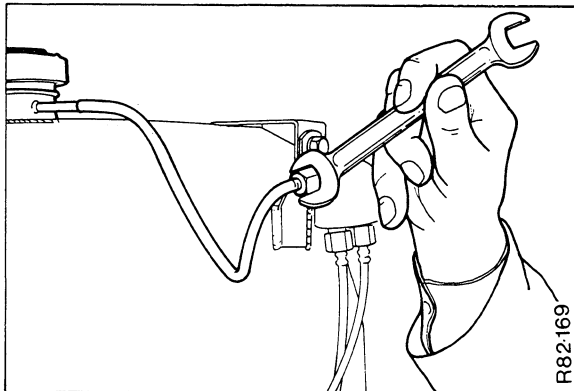
STEP 5. Remove the two upper bolts from the engine cover rear supports and push the cover forward.



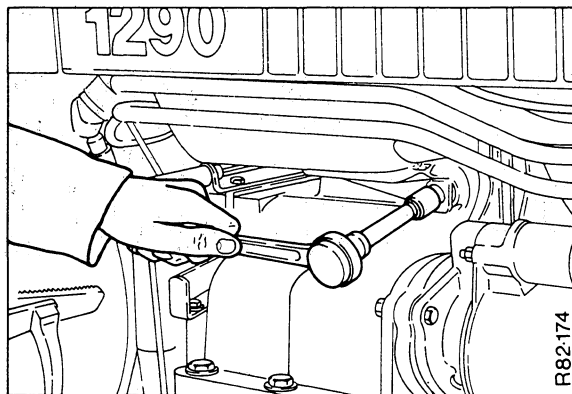
STEP 6. Make a note of which terminal each wire fits on. Disconnect the wires from the fuel tank sender unit.



STEP 9. Drain the fuel from the tank and disconnect the pipe to the supply pump.

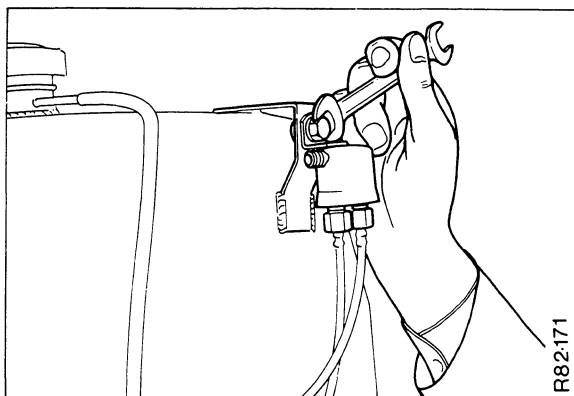


STEP 7. Disconnect the fuel pipe which goes to the fuel tank from the fuel leak-off reservoir.

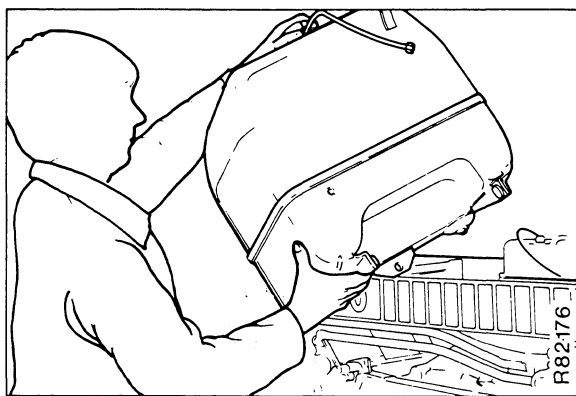


STEP 10. Remove the fuel tank mounting bolts, one each side.

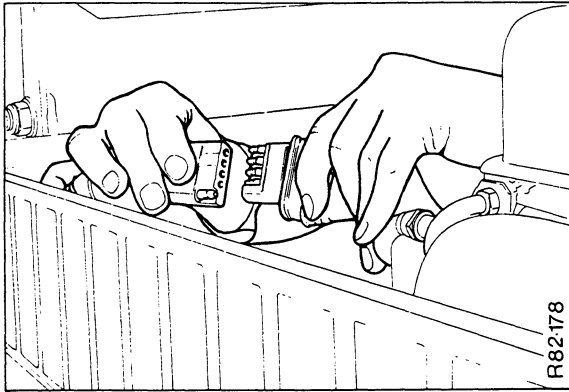
1190, 1290 and 1390 only, steps 8 to 11



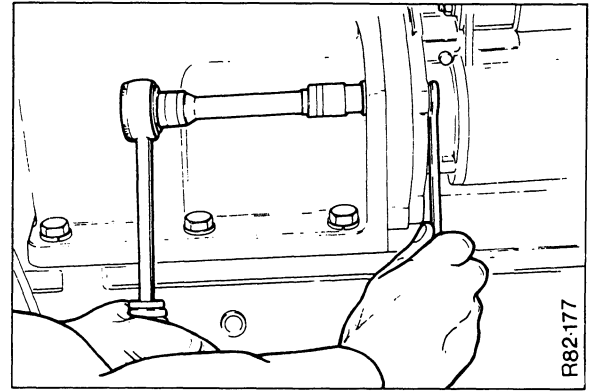
STEP 8. Disconnect the fuel leak-off reservoir from the fuel tank.



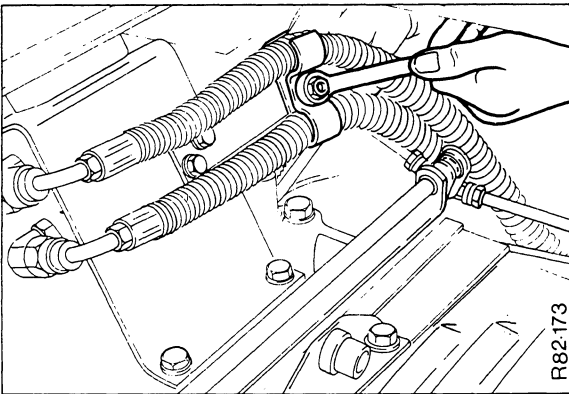
STEP 11. Move the fuel tank forward off the rear mounting and remove the tank.

All Models, steps 12 to 25

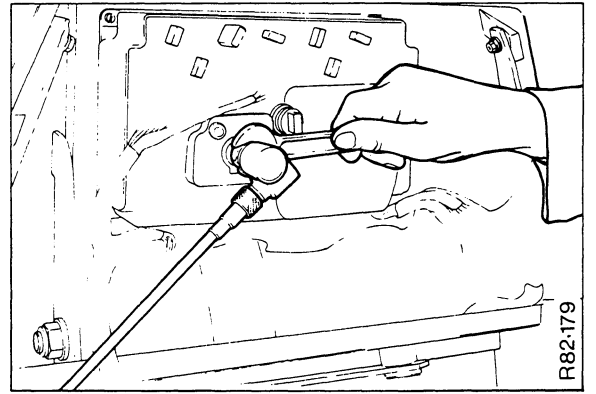
STEP 12. Disconnect the wiring harness plug to the engine harness.



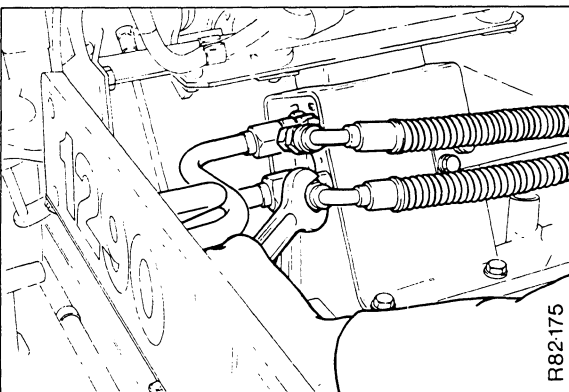
STEP 15. Remove the three starter motor retaining bolts.



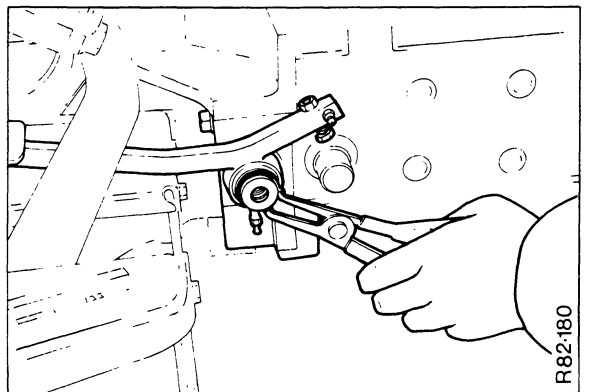
STEP 13. Disconnect the steering pipe brackets.



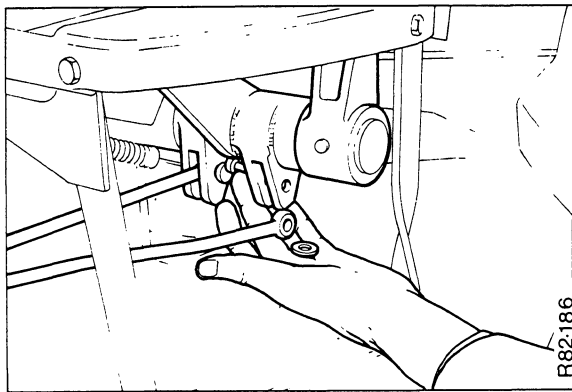
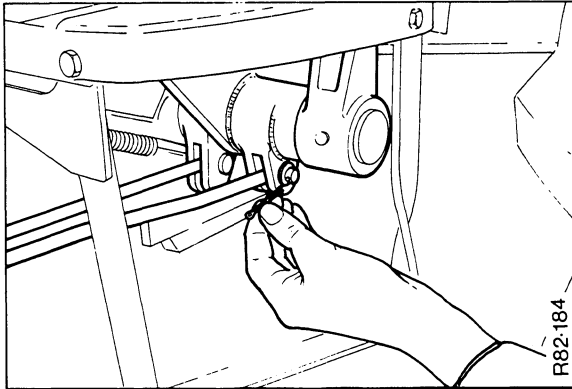
STEP 16. Disconnect the drive cable from the engine speed indicator.



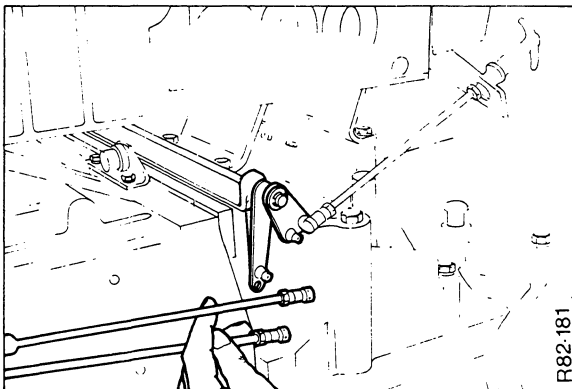
STEP 14. Disconnect the four steering pipes at the steering valve on the end of the steering column. Disconnect the pipes at the other end also on 1490 tractors and remove the pipes.



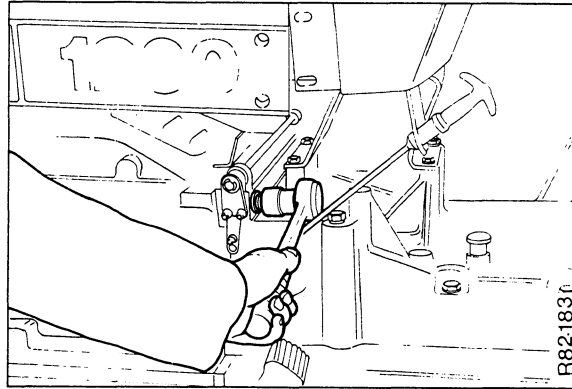
STEP 17. Remove the engine speed control pedal to gain access to the top right-hand side frame bolt.



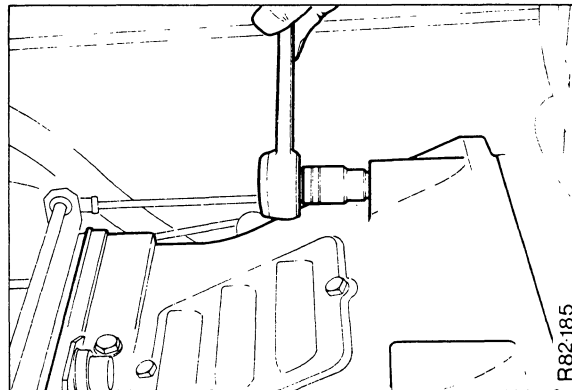
STEP 18. Disconnect the PTO and transmission clutch linkages at the cross shaft under the footplate.



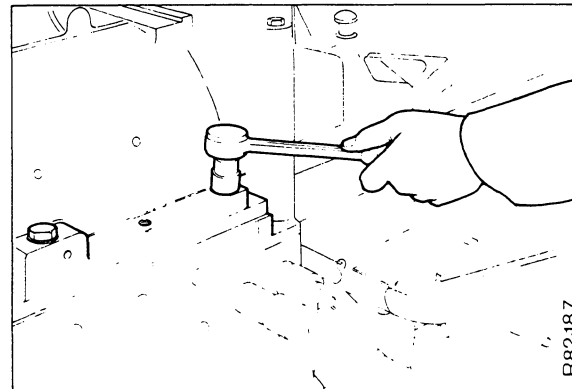
STEP 19. Disconnect the engine stop and throttle controls.



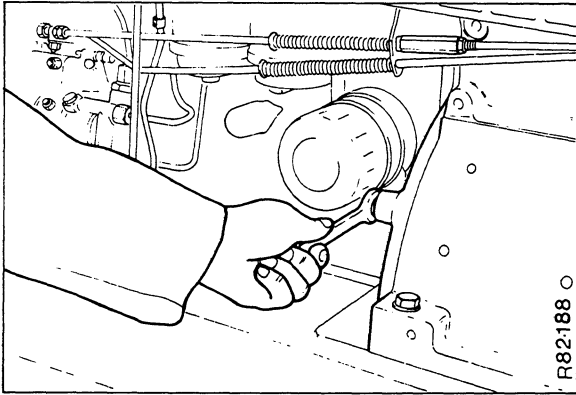
STEP 20. (Not 1490) Remove the bolts which fasten the gearbox cover to the clutch cover.



STEP 21. Remove the bolts which fasten the clutch cover to the engine.

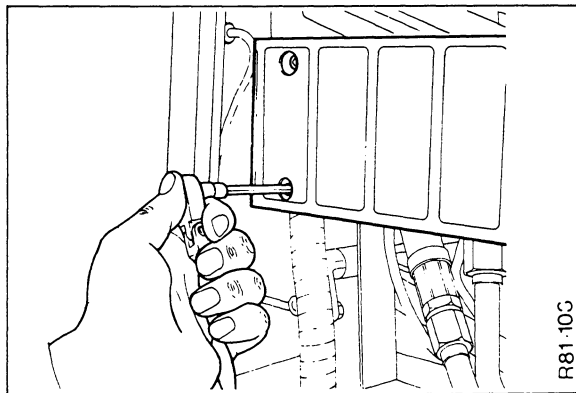
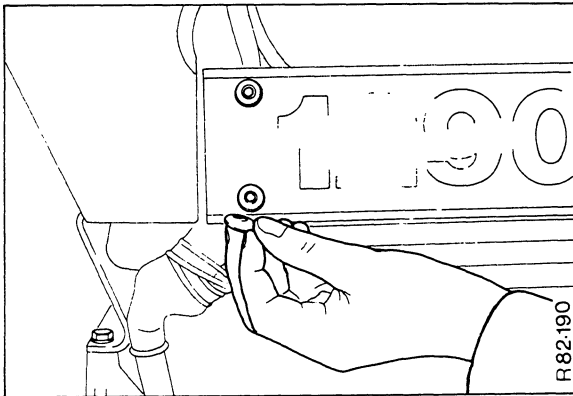


STEP 22. Remove the bolts which fasten the clutch cover to the frame.



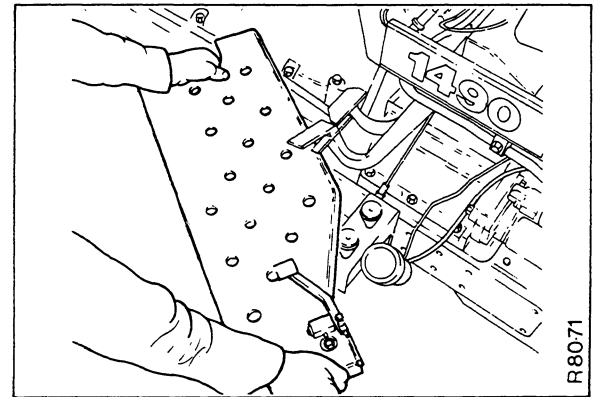
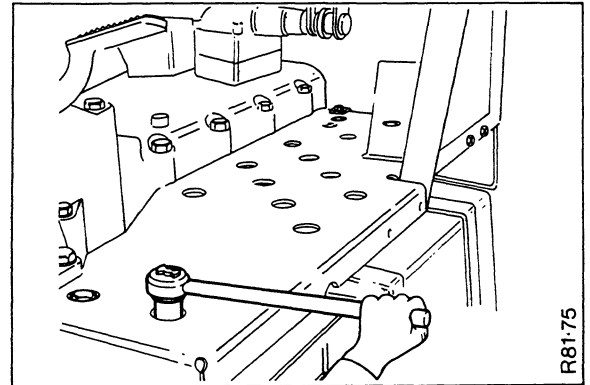
STEP 23. Remove the bolt or bolts which fasten the engine to the clutch cover on the left-hand side.

STEP 24. Disconnect the steering drag link on models with manual steering.

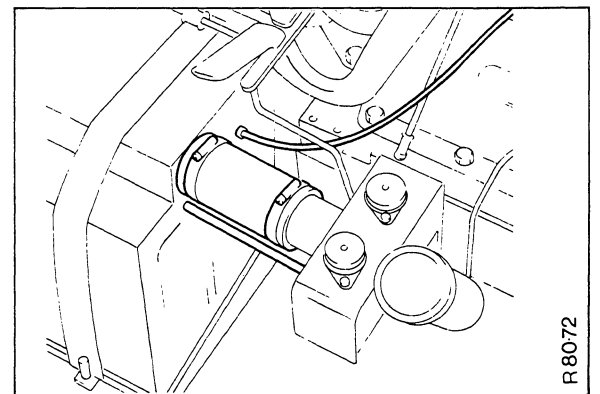


STEP 25. Remove the four rubber plugs and Allen screws from the rear of the engine cover waist rail.

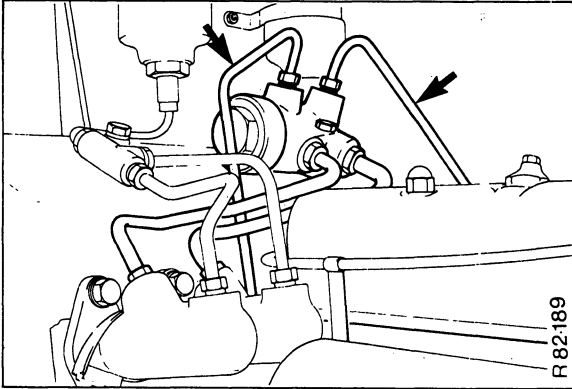
1490 only, steps 26 to 31



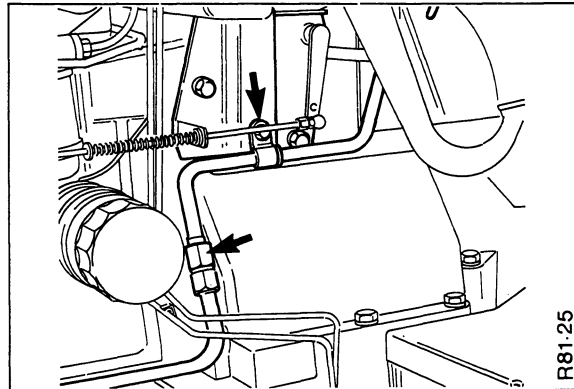
STEP 26. Remove both footplates.



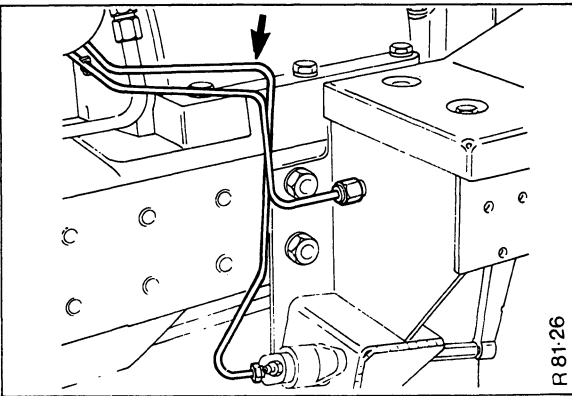
STEP 27. Disconnect the fuel tank filler pipe and the air balance pipe.



STEP 28. Disconnect and remove the brake pipes between the balance valve and the footplate front brackets.

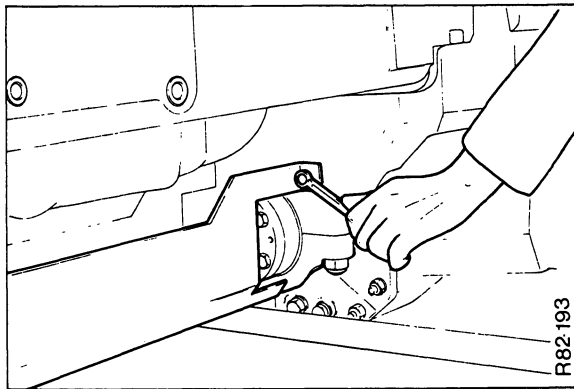


STEP 31. Disconnect the left-hand steering pipe at the centre connection and remove upper part.

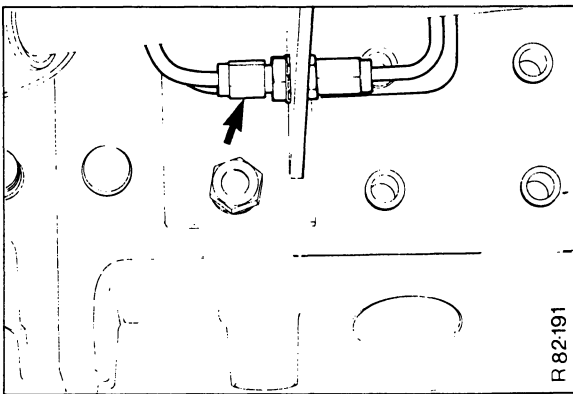


STEP 29. Disconnect and remove the pipe between the clutch master cylinder and the clutch slave cylinder.

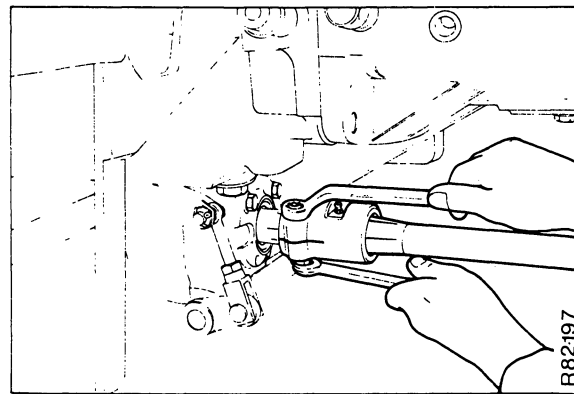
4WD Models with Carraro axle, steps 32 to 34



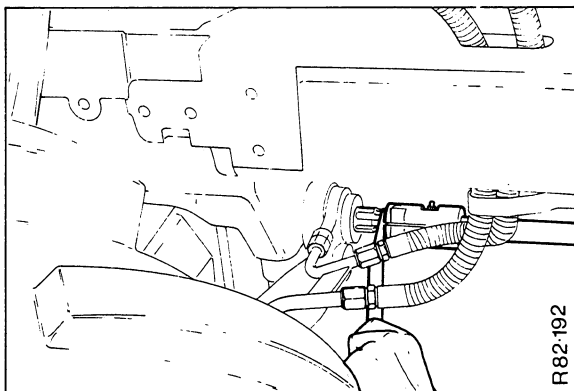
STEP 32. Remove the cover over the drive shaft to the front axle.



STEP 30. Disconnect the brake pipes from behind the footplate front brackets.

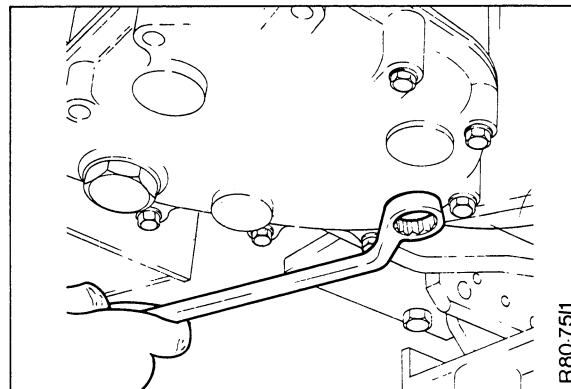


STEP 33. Remove the bolts from the couplings at each end of the drive shaft.



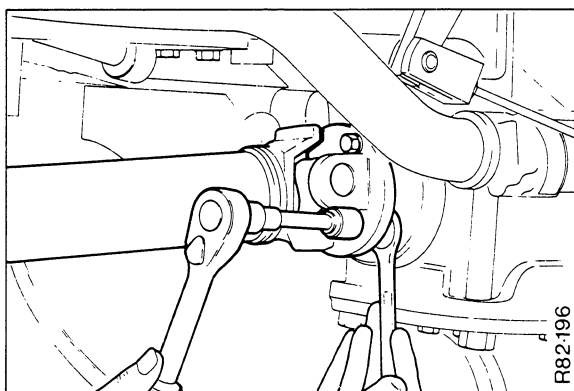
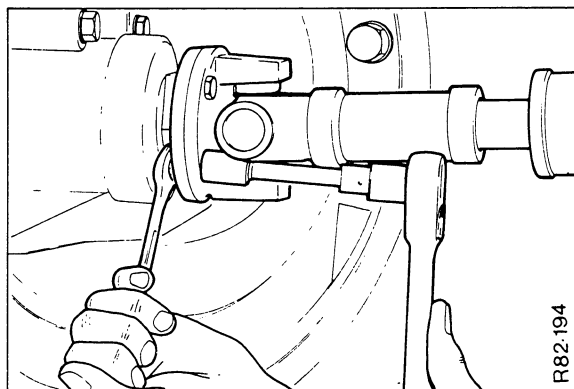
STEP 34. Use a lever to push the couplings on to the drive shaft. Remove the shaft and the spring which fits in a hole in the front of the shaft.

1390 and 1490 only, steps 36 to 38

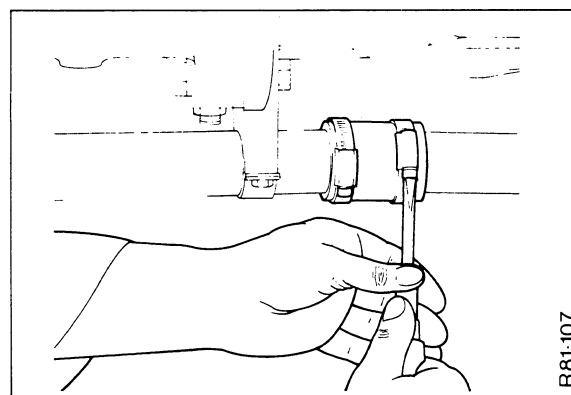


STEP 36. Put a 45 litre container under the transmission drain plug and drain the oil. Put a cover over the oil if the oil is to be used again.

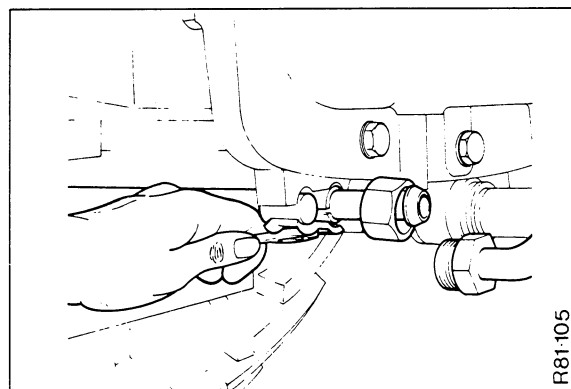
4WD Models with David Brown axle



STEP 35. Disconnect the axle drive shaft at both ends and remove.

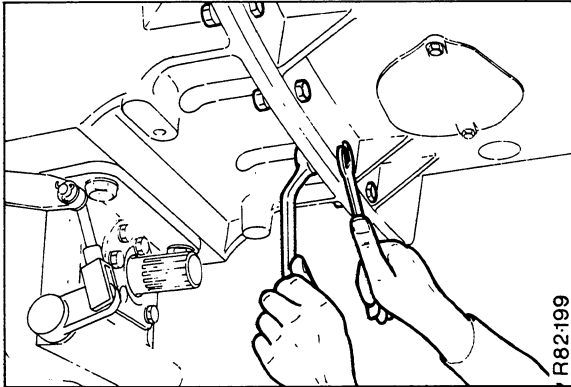


STEP 37. Disconnect the hydraulic pump inlet pipe at the centre of the tractor or filter housing.

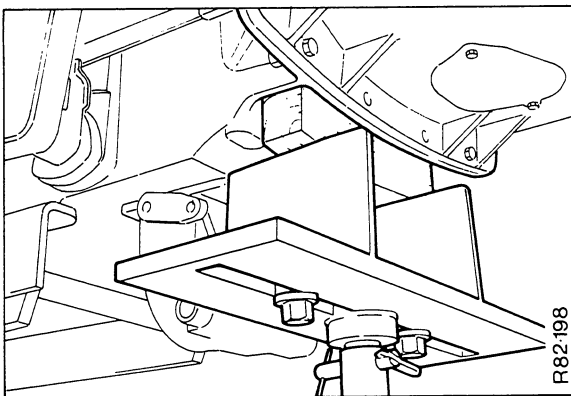
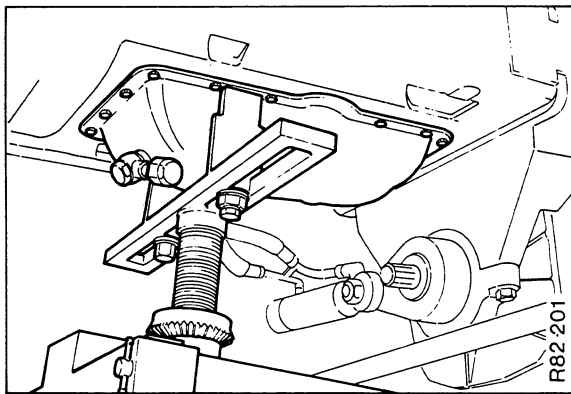


STEP 38. Disconnect the hydraulic pump outlet pipe at the centre union. Disconnect the pipe clamp.

45 litre = 10 gal U.K = 12 gal U.S.

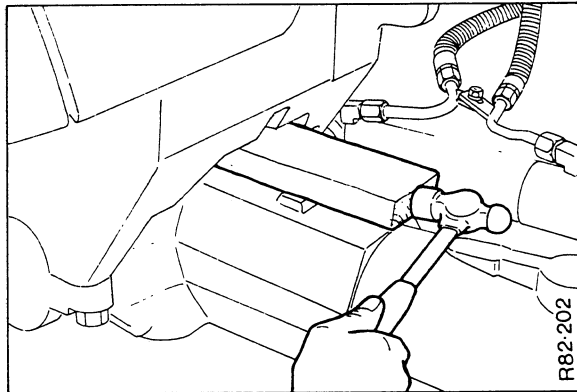
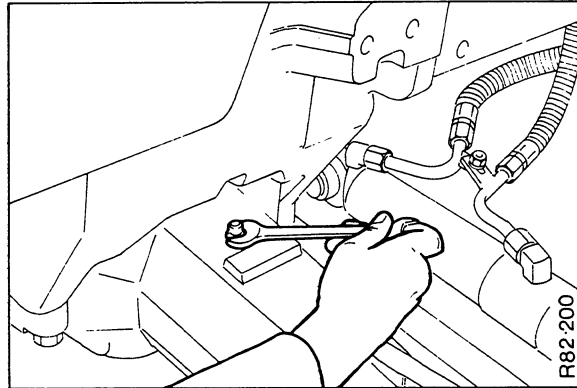
All models, steps 39 to 45

STEP 39. Remove the two centre frame to frame bolts under the tractor. These bolts can be difficult to remove after installing the separating tool.

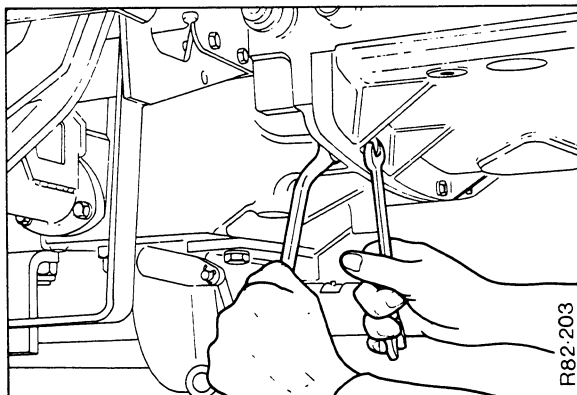


STEP 40. Put the tractor separating tool under the tractor as shown. Make sure the rails are parallel with the tractor frame. Adjust each part of the tool to hold the weight of the tractor but not lift the tractor. Make sure the vertical support plates are in a safe position and will not cause damage. If necessary use wooden blocks as shown to clear the frame or other parts.

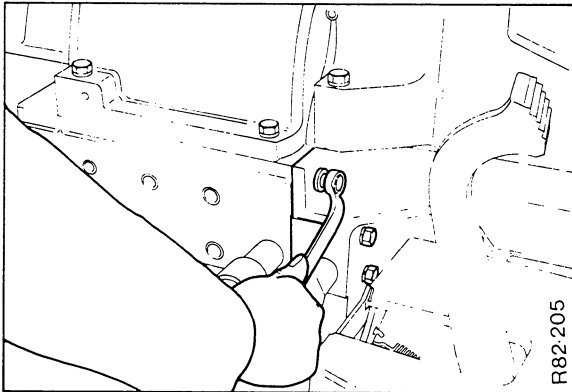
STEP 41. Engage the PTO to stop the selector gear moving out of position.



STEP 42. Remove the breather from the Carraro front axle on the left-hand side. Put a wooden wedge between the front axle beam and the frame on each side.

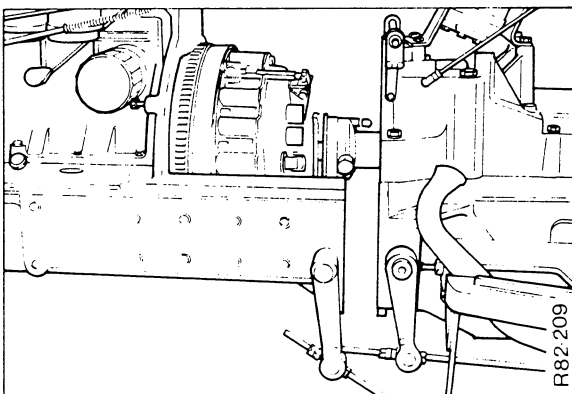
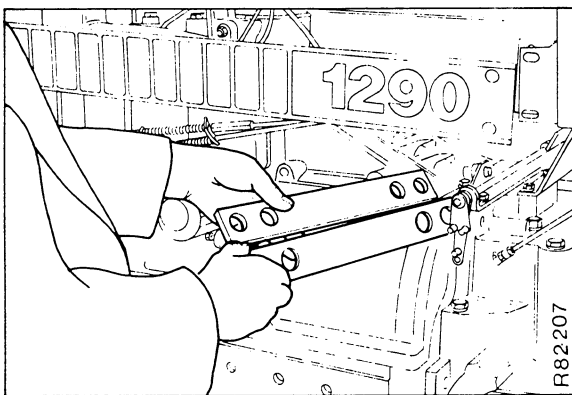


STEP 43. Remove the remaining front to rear frame bolts from under the tractor.



STEP 44. Remove the rear to front frame bolts on each side.

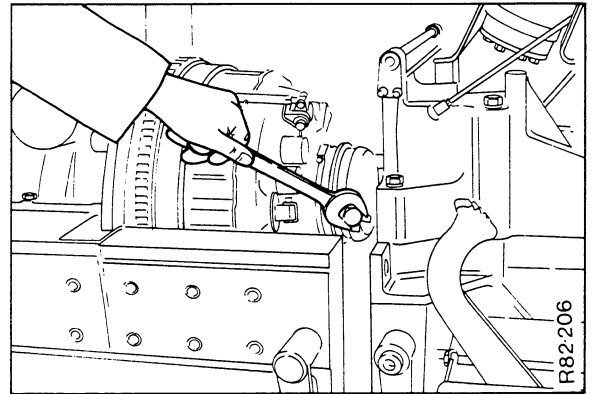
NOTE: *The lower two bolts cannot be removed completely from the rear frame.*



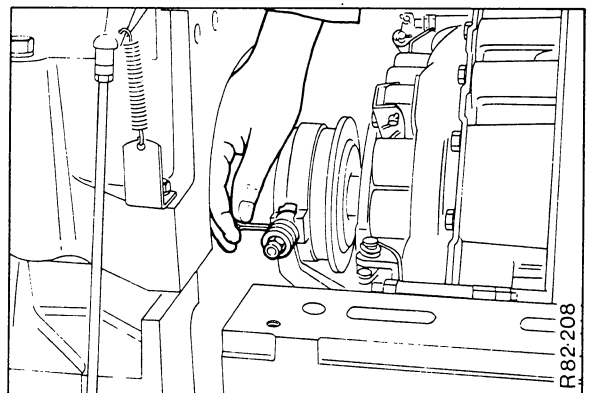
STEP 45. Move the front half of the tractor forward approximately 25 mm and remove the clutch cover, wedge and shims. Check that the gap between the halves of the frame is equal top and bottom and adjust tool if necessary.

25 mm = 1 in

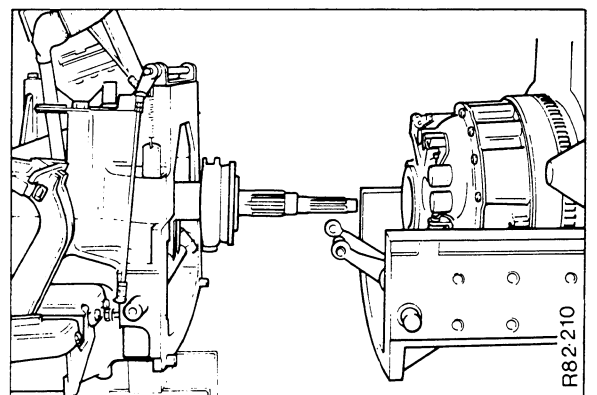
1290 and 1390 with independent clutch, steps 46 and 47



STEP 46. Release the tabwasher and remove the left-hand trunnion pin from the PTO clutch release fork.



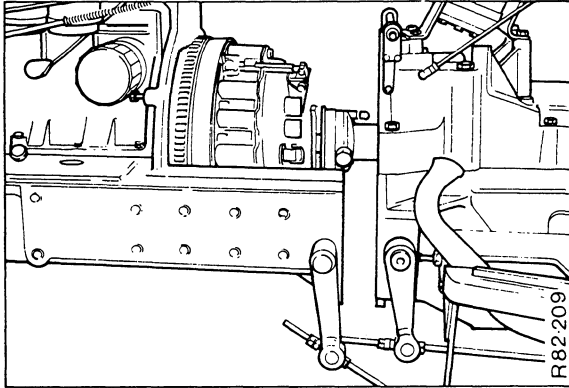
STEP 47. Remove the split pin from the right-hand trunnion pin.



STEP 48. Make sure all parts are disconnected, then move the front half of the tractor forward enough to do the job. Put blocks in front and behind the front wheels to prevent the front half moving.

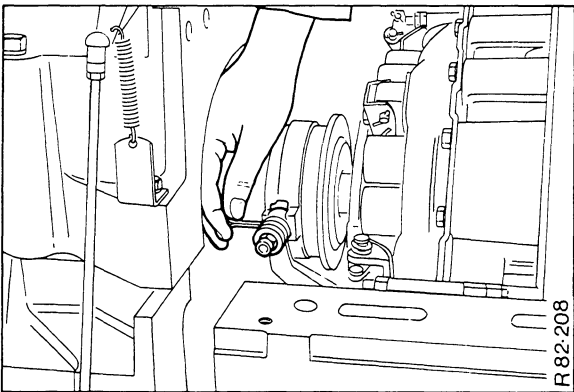
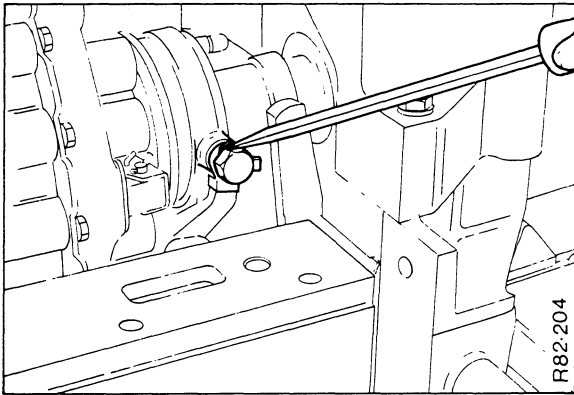
CONNECTING THE TRACTOR

NOTE: Connecting the halves of the tractor will be difficult if the halves are not in exact alignment. The alignment of the halves must be checked continually during the connecting stage.



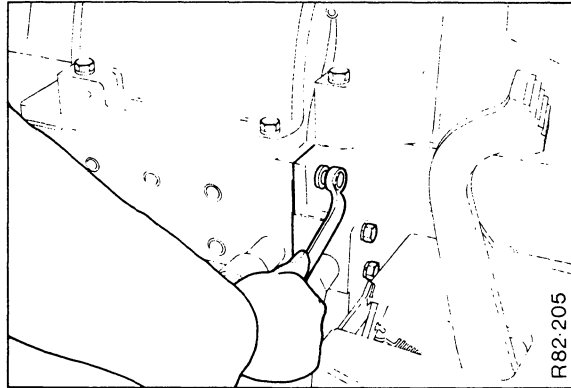
STEP 1. Clean the joint faces of the frame and make sure the dowels are in position. Push the front half toward the rear half until the clutch release fork trunnion pins can be engaged.

1290 and 1390 with independent clutch



STEP 2. Install the left-hand trunnion pin and bend tab washer against head of pin. Install the split pin in the right-hand trunnion pin.

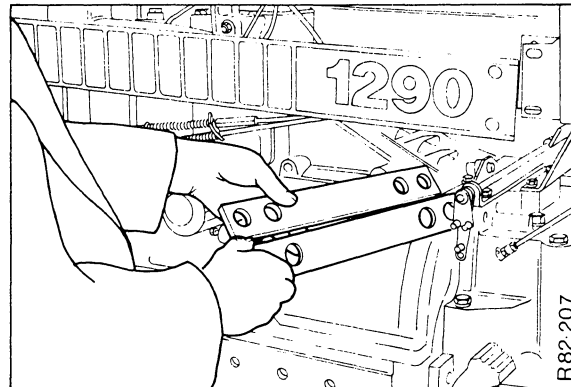
All models, steps 3 to 16



STEP 3. Install the clutch cover (not 1490) and continue to push the front half to the rear until the side frame bolts can be installed. Push until the faces are in contact.

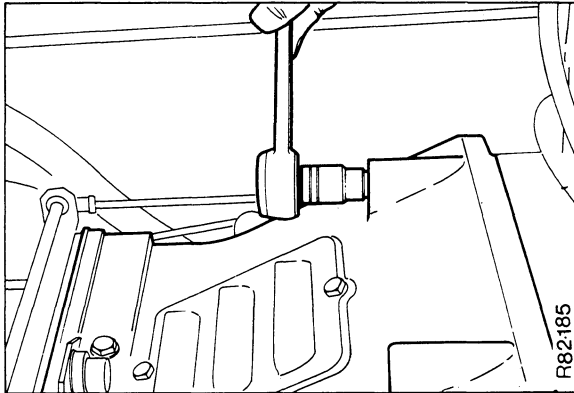
IMPORTANT: *DO NOT* use the bolts to pull the halves together.

STEP 4. Install the remaining frame to frame bolts and nuts and tighten to between 68 and 81 Nm on 1190, 1290 and 1390 and between 102 and 122 Nm on 1490 tractors.

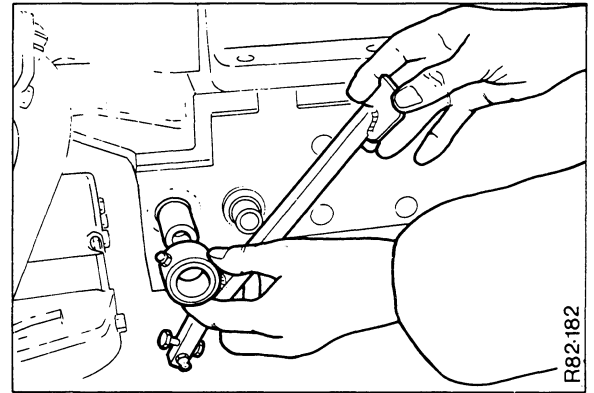


STEP 5. Install the wedge and shim between the gearbox cover and the clutch cover. Install the bolts and tighten to 40 Nm.

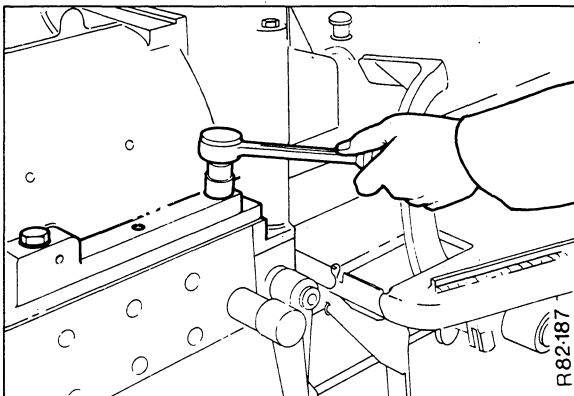
40 Nm	=	4.1 kg m	=	30 lb ft
68 Nm	=	6.9 kg m	=	50 lb ft
81 Nm	=	8.2 kg m	=	60 lb ft
102 Nm	=	10.3 kg m	=	75 lb ft
122 Nm	=	12.4 kg m	=	90 lb ft



STEP 6. Install the bolts which fasten the clutch cover to the engine, tighten to 40 Nm. This includes the bolts which fit from the front of the clutch housing.



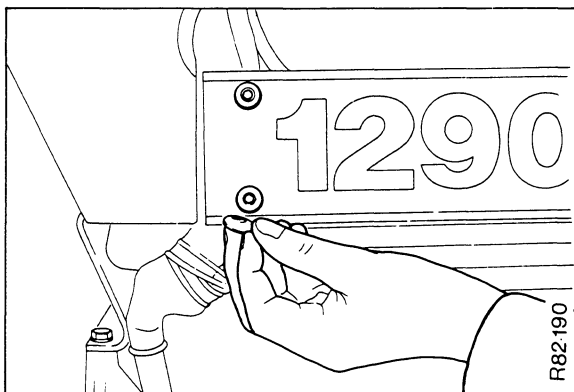
STEP 9. Install the engine speed pedal.



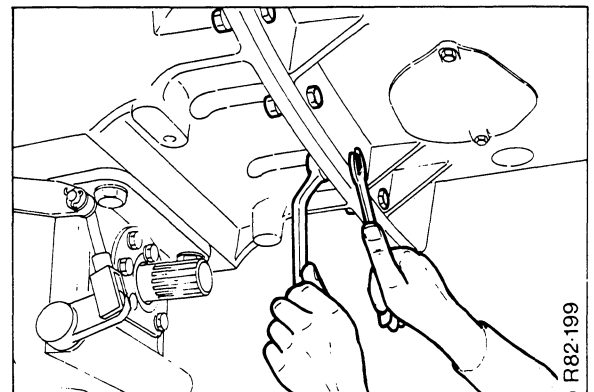
STEP 7. Install the bolts which fasten the clutch cover to the frame, tighten to 40 Nm.



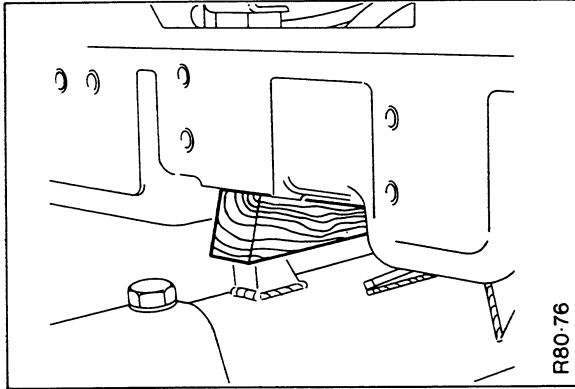
STEP 10. Connect the engine wiring harness plug.



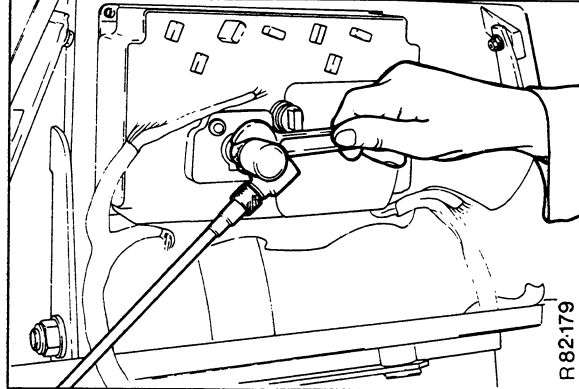
STEP 8. Install the four Allen screws which fasten the engine cover frame and install the rubber plugs.



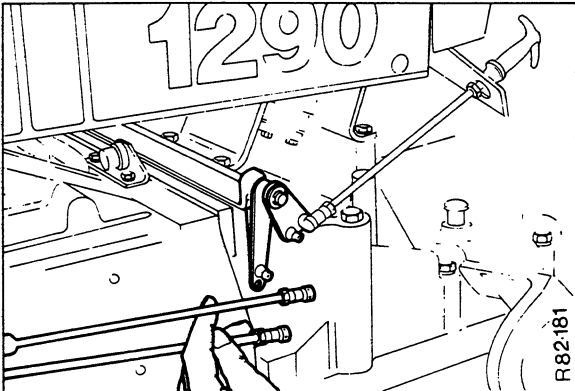
STEP 11. Remove the special tool from under the tractor. Install and tighten the two centre bolts and nuts if not installed at step 4.



STEP 12. Remove the wedges from the front axle. Install the breather in the Carraro axle.

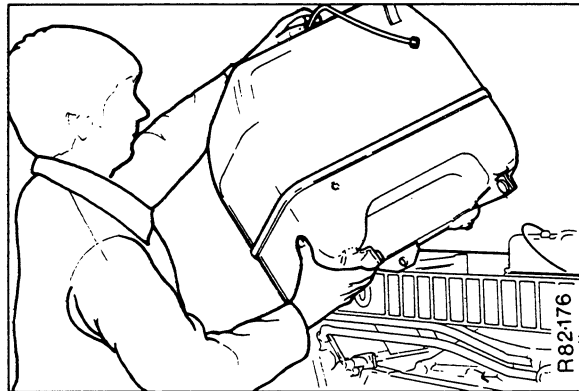


STEP 16. Connect the engine speed indicator cable.

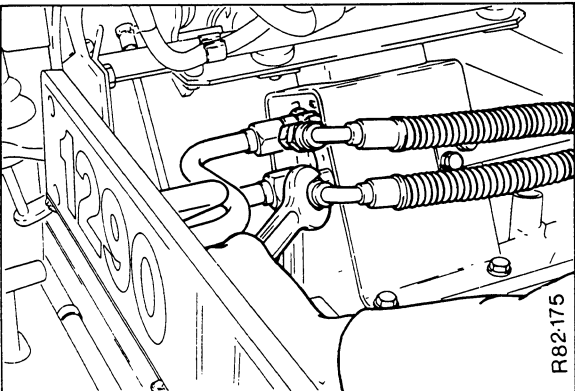


STEP 13. Connect the engine stop and engine speed controls.

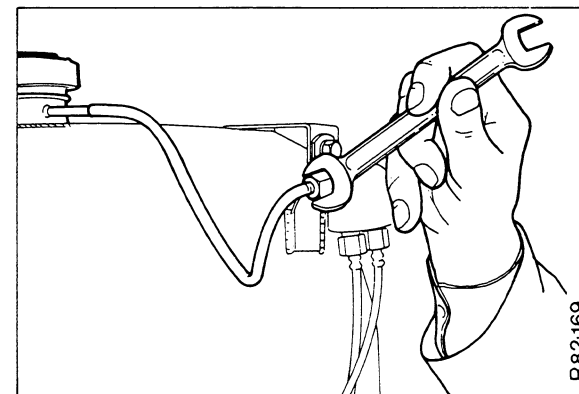
1190, 1290 and 1390 only, steps 17 and 18



STEP 17. Install the fuel tank and connect the fuel pipes and sender unit wires.

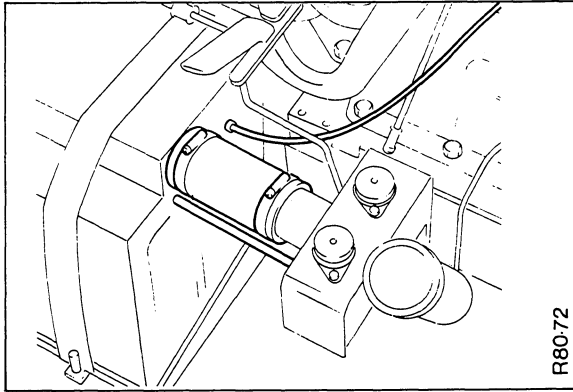


STEP 14. Connect the steering pipes to the steering valve. Connect the pipes at the other ends and on the left-hand side on 1490 tractors.

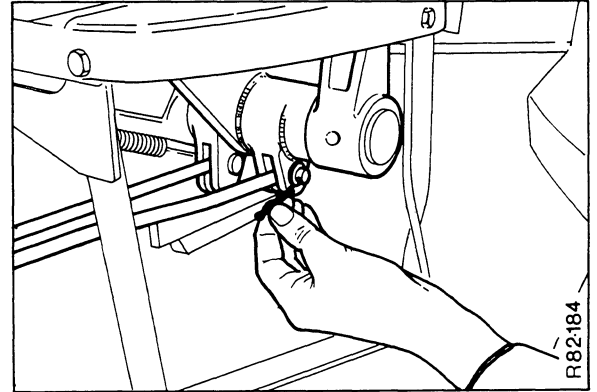


STEP 18. Install the thermostart reservoir and connect the pipe. Fill the tank with diesel fuel.

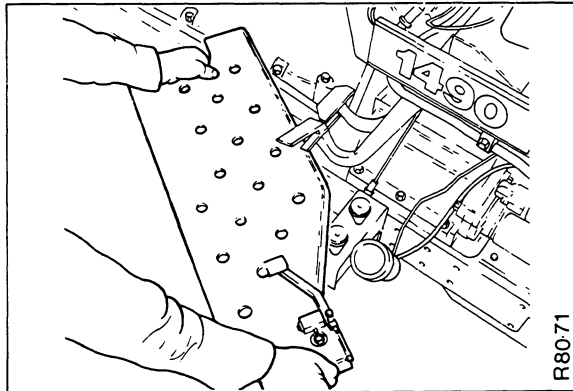
STEP 15. Connect the steering drag link on tractors with manual steering.

1490 only, steps 19 to 21

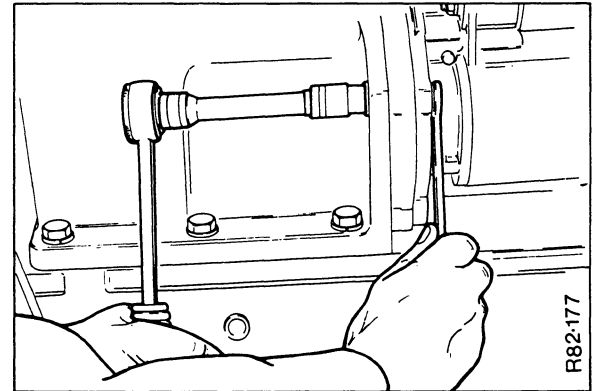
STEP 19. Connect the fuel tank filler and air balance pipes. Connect sender unit wires.

All Models, steps 22 to 24

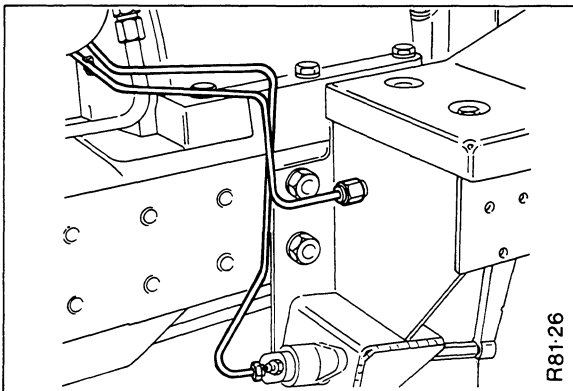
STEP 22. Connect the clutch linkages and adjust the free pedal movement.



STEP 20. Install the footplates.

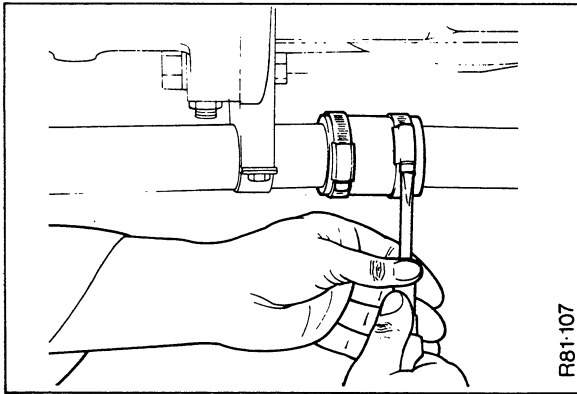


STEP 23. Install the starter motor.

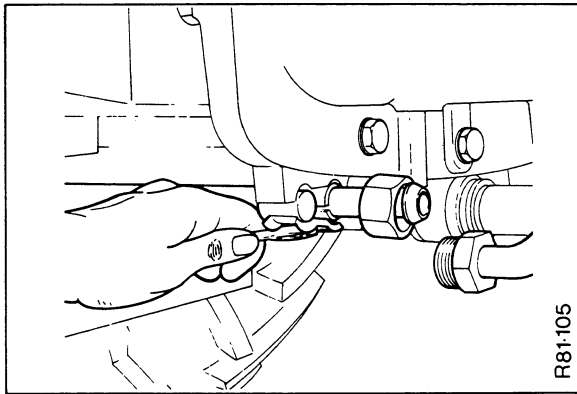


STEP 21. Install the brake and clutch pipes. Connect the brake pipes behind the footplate brackets. Remove air from both systems.

STEP 24. Fill the steering reservoir and remove air from the system.

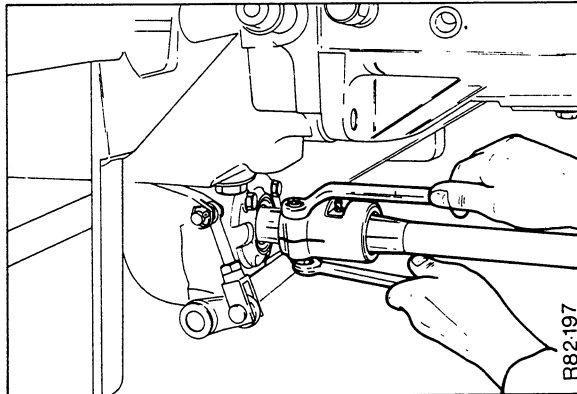
1390 and 1490 only, steps 25 to 27

STEP 25. Connect the hydraulic pump inlet pipe and install the clamp.

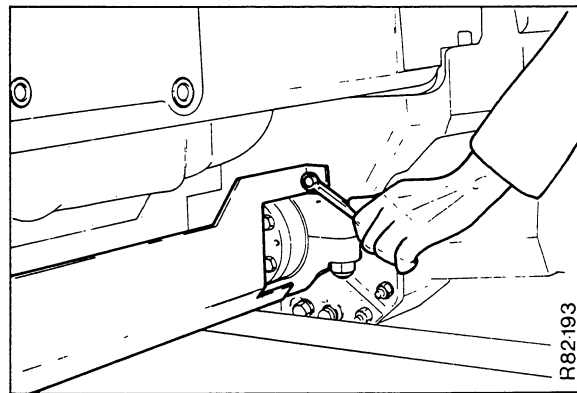


STEP 26. Connect the hydraulic pump outlet pipe, or pipes if twin pump, and install the pipe clamp.

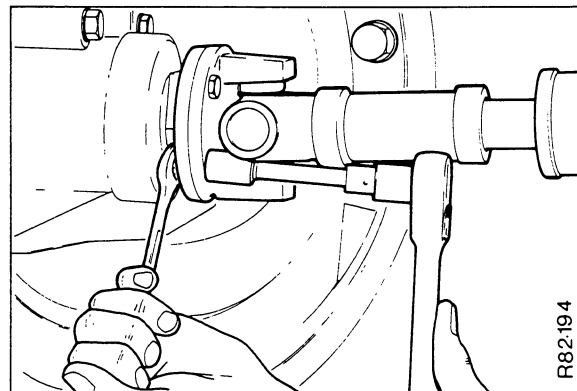
STEP 27. Fill the transmission to the correct level with the specified oil.

4WD Models with Carraro axle, steps 28 and 29

STEP 28. Install the axle drive shaft, slide couplings outward and install bolts and tighten.



STEP 29. Install the drive shaft cover.

4WD Models with David Brown axle

STEP 30. Install the axle drive shaft with the sliding yoke at the axle end. Install the bolts and new locknuts and tighten.



Suggest:

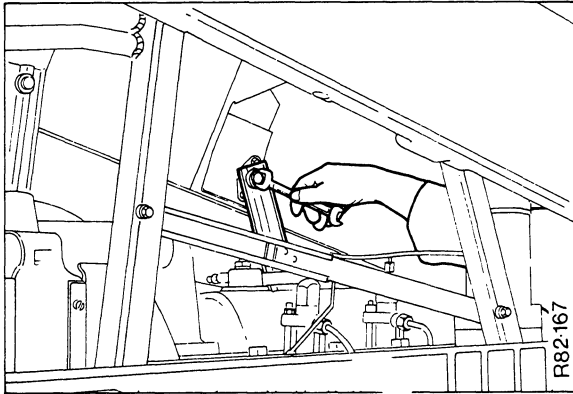
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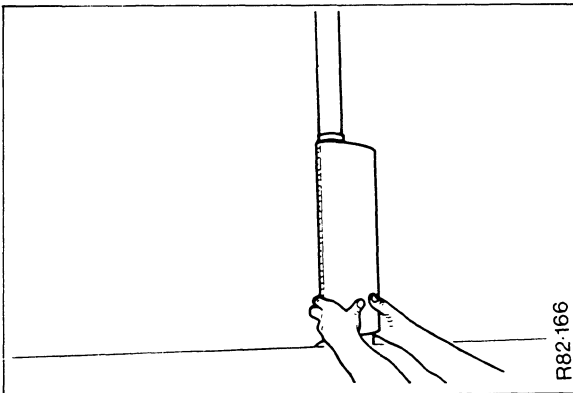
first, and then click the above link

to download the complete manual.

Thank you so much for reading

All Models, steps 31 to 33

STEP 31. Install the engine cover rear support bolts and tighten.



STEP 32. Connect the battery, positive terminal first. Close engine cover and install the exhaust and precleaner.

STEP 33. Start the engine and check the operating of the hydraulic system, steering system, brakes and clutch, and PTO. Check for leaks and then road test the tractor.

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