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Section 1000

GENERAL SPECIFICATIONS 85 Series Tractors

SERIAL NUMBERS

Compiled in this manual are the operating and maintenance instructions for the 85 Series Agricultural Tractors

When in need of service parts always quote the tractor, transmission unit, and engine serial numbers, including prefix and suffix letters.

If information is required that is not available in this manual see the nearest authorized Case Dealer.

Transmission Serial Number

EXAMPLE: 293805 BTY

The suffix letters, BTY denote the build of the unit.

The first letter denotes the type of drive train, B = fast speed transmission, A or D = slow speed transmission.

The second letter denotes the bevel gear ratio,
T = 11:52, S = 14:51 and R = 12:53.

The third letter denotes the operating speeds for the PTO and the number of splines on the upper and lower shafts as shown below.

U	=	555 r/min	6 splines upper shaft
V	=	1000 r/min	6 splines lower shaft
W	=	580 r/min	6 splines upper shaft
X	=	606 r/min	6 splines upper shaft
Y	=	611 r/min	6 splines upper shaft
Z	=	614 r/min	6 splines upper shaft

V denotes that only the lower PTO shaft is fitted, as for compressor drive. When applicable, dual speed installations are indicated by a fourth suffix letter D.

GENERAL SPECIFICATIONS

Specifications for each machine are under individual headings which follow these GENERAL SPECIFICATIONS.

Capacities

	UK Value	U.S. Value	Metric Value
Fuel Tanks			
XL Tractors	24 6 gal	29.6 gal	112 litres
Non XL Tractors	17 gal	20.3 gal	77 litre
2WD Transmission	7.5 gal	8.9 gal	34 litre
MFD Transmissions	8 gal	9.6 gal	36.5 litre

NOTE: These capacities are only a guide to the quantities. Always use the dipstick or level plug to make sure that units are filled to the correct level.

Electrical System

Type of System	12 Volt, Negative ground
Battery (Rating IEC/BS)	
Standard	Reserve Capacity 170 minute
Cold Cranking Amperes	420 ampere
Heavy Duty	Reserve Capacity 170 minute
Cold Cranking Amperes	510 ampere
Heavy Duty Plus	Reserve Capacity 220 minute
Cold Cranking Amperes	510 ampere
Alternators	
XL Tractors	65 amp
Non XL Tractors	45 amp
North America with Simms Cab	75 amp

XL Tractors

Head Lamps (2)	12 Volt, 37.5/60 watt sealed beam or 40/45 watt British prefocus cap (export)
Side Lamps (2)	12 Volt, 10 watt small bayonet cap
Stop Lamps (2)	12 Volt, 21 watt small bayonet cap
Tail Lamps (2)	12 Volt, 10 watt small bayonet cap
Work Lamps	12 Volt, 55 watt Halogen
Registration Number Plate Lamp	12 Volt, 10 watt small bayonet cap
Direction Indicator Lamps (2)	12 Volt, 21 watt small bayonet cap
Instrument Warning Lamps	12 Volt, 1.2 watt capless wedge
Tachometer Lamp	12 Volt, 3 watt capless wedge
Speedometer Lamp	12 Volt, 3 watt capless wedge
Speed Decal Lamp	12 Volt, 1.5 watt capless wedge

Non XL Tractors

Head Lamps	12 Volt, 37.5/60 watt sealed beam 40/45 watt British prefocus cap (export)
Side Lamps (2)	12 Volt, 5 watt festoon
Stop/Tail Lamps (2)	12 Volt, 21/5 watt small bayonet cap
Work Lamp	12 Volt, 35 watt sealed beam
Direction Indicator Lamps (2)	12 Volt, 21 watt small bayonet cap
Registration Number Plate Lamp	12 Volt, 5 watt miniature center contact
Instrument Warning Lamps	12 Volt, 3 watt capless wedge
Tachometer Lamp	12 Volt, 3 watt capless wedge
Speedometer Lamp	12 Volt, 3 watt capless wedge
Panel Lamp	12 Volt, 5 watt festoon

Pistons and Rods

Rings Per Piston	3
Compression Rings Per Piston	2
Oil Rings Per Piston	1
Type of Piston Pin	Full Float
Type of Bearings	Replacement Bearings Available Steel Back with Copper and Lead Liners

Main Bearings

Tractors 385 and 485	3
Tractors 585 685 and 885	5
Type of Bearings	Replacement Bearings Available Steel Back with Copper and Lead Liners

Engine Lubrication System

Type of System	Pressure Spray
Oil Pump	Gear Type
Oil Filter	Full Flow, Turn on Type, Bypass

Fuel System

Fuel Injection Pump	Robert Bosch Type CR
Fuel Transport Pump	None
Governor	Variable Speed, Part of the Fuel Injection Pump
First Stage Fuel Filter	Full Flow Element Type or Turn on Type
Second Stage Fuel Filter	Full Flow Element Type or Turn on Type
Water Trap and Drain for the Fuel Tank	Location is in the Bottom of the Fuel Filters
Fuel Gauge	Location is On the Instrument Panel
Fuel Level Gauge	Location is on the Instrument Panel
Fuel Strainer	None

Air Intake System

Type	Dry Type Air Induction System, Two Stage, with Dust Unloader
------	---

Cooling System

Type	Pressure System, Thermostat Controlled Bypass, Impeller Type Pump
Radiator	Fin and Tube Type
Thermostat	Starts to Open at Approximately 180 Degrees F (82 Degrees C) Fully Open at 203 Degrees F (94 Degrees C)
PressureCap	9 to 12 PSI (62 to 82 kPa)
Water Level Monitor	None
Water Temperature Gauge	Location is on the Instrument Panel

Tractor Brakes

Type	Wet, Hydraulic, Self-Adjusting, Single Disc
------	---

Clutch

Type	Hydraulic Operated, Self Adjusting (XL only), Single Dry Plate
	U.S Value Metric Value
Plate Diameter	385, 485 and 585 11 in 280 mm
	685 and 885 12 in 305 mm

Transmissions

BASIC

Type 4 Speed Synchromesh with High/Low Ranges and Reverse
 Number of Gears 8 Forward, 4 Reverse
 Controls 2 Levers

OPTIONAL (Not 885/885XL)

Type Forward/Reverse
 Same as Synchromesh, plus a Hydraulically Operated Forward
 and an Increased Speed Reverse

Number of Gears 8 Forward, 8 Reverse
 Controls 3 Levers

OPTIONAL

Type 2 Speed Power Shift
 Same as Synchromesh, Plus Hydraulically
 Operated Speed Decrease in all Gears

Number of Gears 16 Forward, 8 Reverse
 Controls 2 Levers and an Electrical Switch

Foot Brakes

Type Hydraulic, Self Adjusting, Oil Cooled Discs

	U.S Value	Metric Value
Disc Diameter	10 in	254 mm

Hydraulic System

Type Independent, with Fully Live
 Hydraulic Pump in the Transmission

Operating Pressure 175 kg/cm² (2500 lb/in²)

Steering

Type Hydrostatic

Turning Radius with Brake Assistance:	2WD 132 in	3352 mm
(with MFD engaged) MFD 146 in		3708 mm

Turning Radius without Brake Assistance:	2WD 151 in	3835 mm
(with MFD engaged) MFD 171 in		343 mm

Differential Lock

Type Mechanical Actuated by the Operators Right Foot

Hitch system

Type of Sensing Upper Link

Type of Control Hand Lever

Type of Valve Four-Position, Hold, Lift, Lower, and Float

Type of Draft Arms Rigid, Swing Type, Manual Float Adjuster

Type of Hitch 385 and 485 Three Point, Category one and Two

585, 685 and 885 Three Point, Category Two

Quick Hitch Coupler (Available)

Section 2115

ENGINE REMOVAL 85 Series Tractors with L Cab

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Installation	12



WARNING: *This safety symbol is used in this manual to indicate important safety messages. When you see this symbol, read the message carefully. It is shown when possible injury or death can be caused.*

STANDARD TORQUES

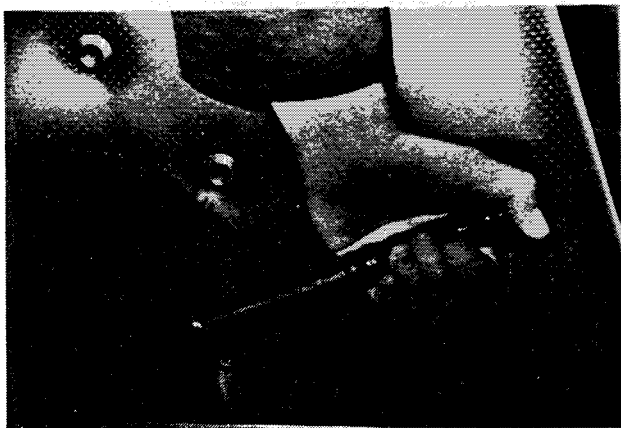
STANDARD TORQUE DATA FOR NUTS AND BOLTS

Where no special torque data is specified, the following torque figures should be applied. Threads should be lubricated with engine oil or chassis grease. Apply the minimum figure to bolts that have previously been used.

BOLT		TYPE 5				TYPE 8			
SIZE		MIN		MAX		MIN		MAX	
inch	(mm)	Nm	lb ft	Nm	lb ft	Nm	lb ft	Nm	lb ft
1/4	6	12	9	14	10	22	12	19	14
5/16	8	26	19	28	21	36	27	41	30
3/8	9	45	33	50	37	61	45	68	50
7/16	11	72	53	81	60	102	75	115	85
1/2	13	108	80	122	90	156	115	176	130
9/16	15	156	115	176	130	224	165	251	185
5/8	16	217	160	244	180	298	220	329	250
3/4	19	393	290	434	320	542	400	610	450
7/8	22	569	420	637	470	881	650	990	730
1	25	854	630	963	710	131	970	1478	1090
1-1/8	28	1152	850	1288	950	187	1380	2102	1550
1-1/4	31	1627	1200	1830	1350	263	1940	2956	2180

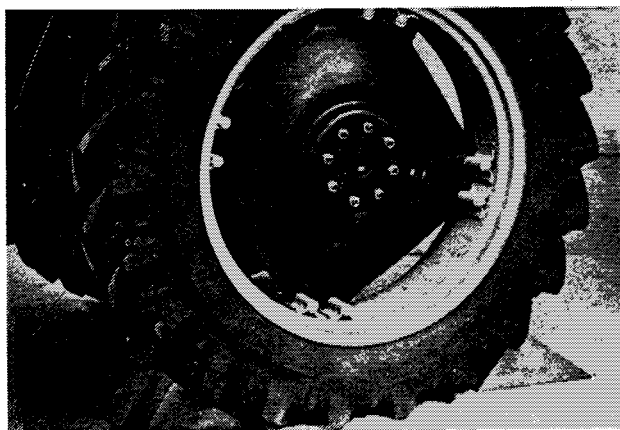
Removal

STEP 1



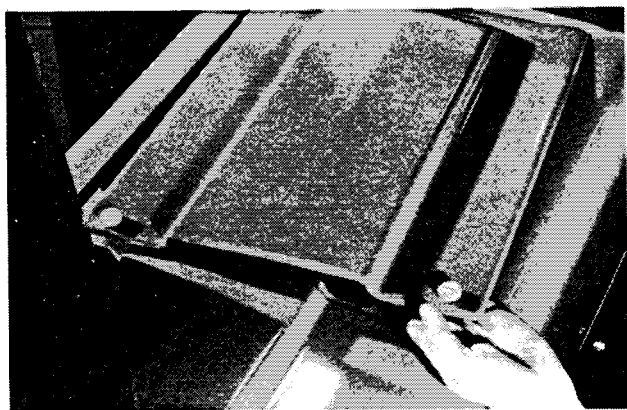
Apply the parking brake.

STEP 2



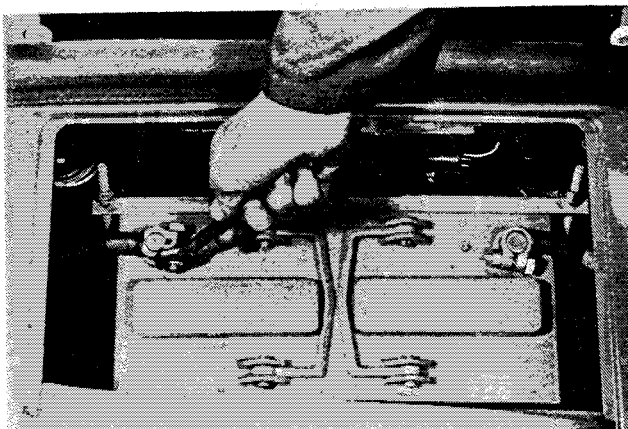
Put blocks in front of and behind the rear wheels.

STEP 3



Remove the battery access panel.

STEP 4



Disconnect the battery terminals.

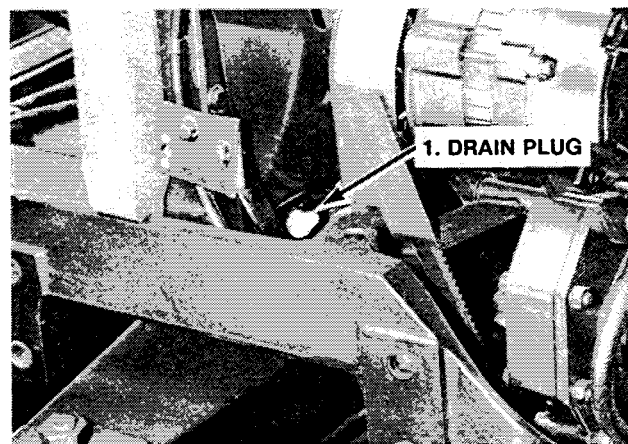
NOTE: *Negative (-) terminal first.*

STEP 5



Remove the hoodsheet. See section 9240.

STEP 6



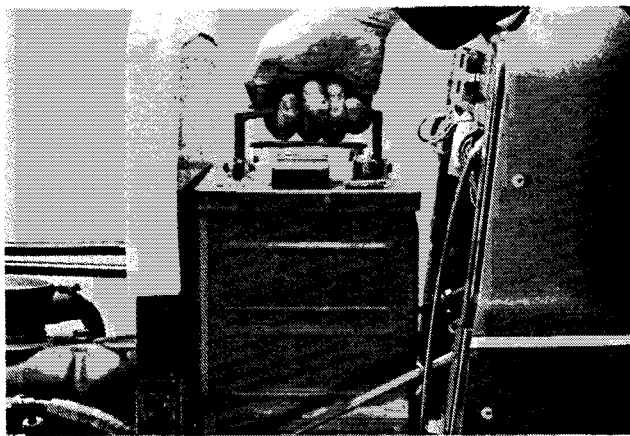
Remove the radiator drain plug and drain the coolant. After draining install and tighten the drain plug.

STEP 7



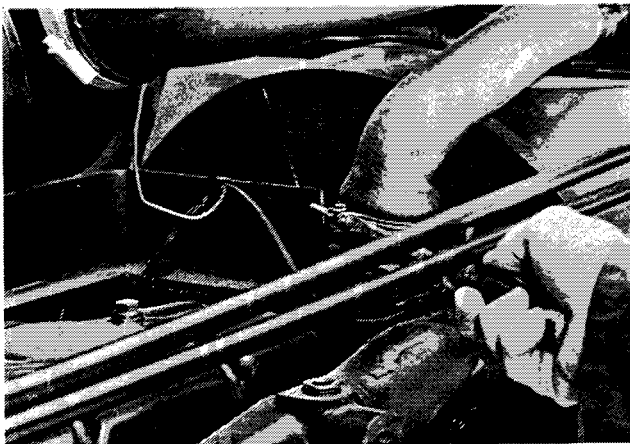
Loosen the battery clamp nuts and remove the clamp.

STEP 8



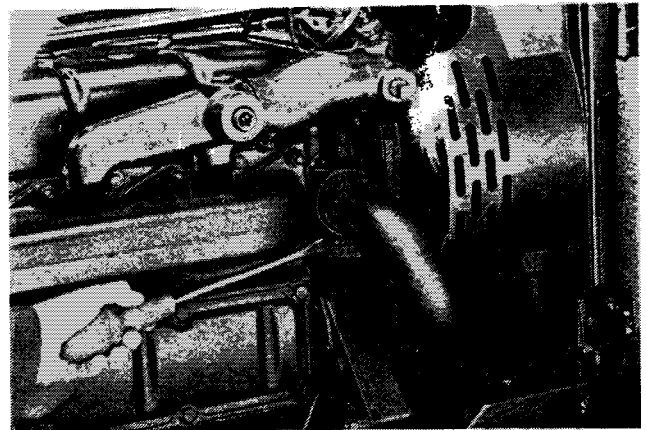
Remove the battery.

STEP 9



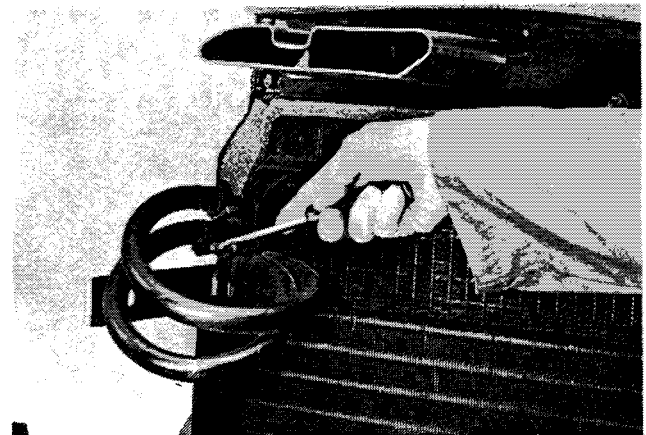
Loosen the clip and disconnect the top radiator hose from the water pump.

STEP 10



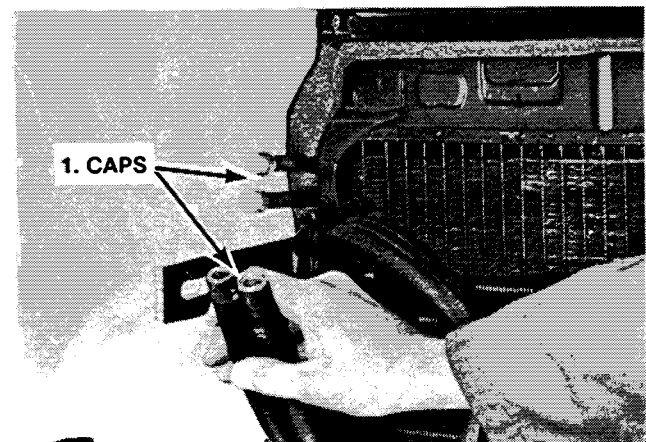
Loosen the clip and disconnect the bottom radiator hose from the engine.

STEP 11

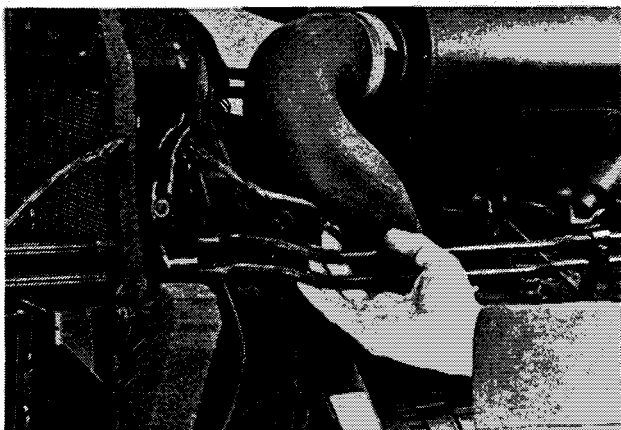


Loosen the clips and disconnect the oil cooler pipes.

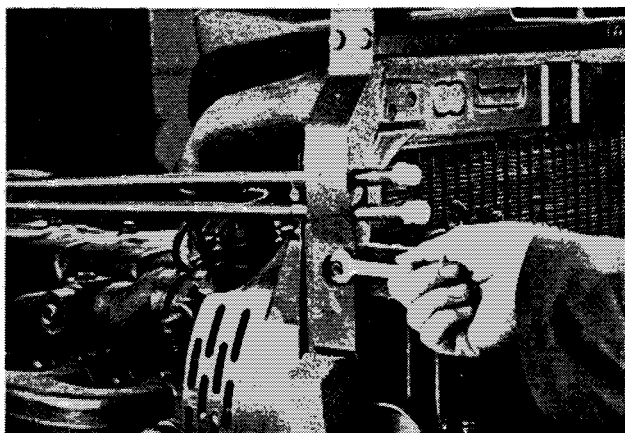
STEP 12



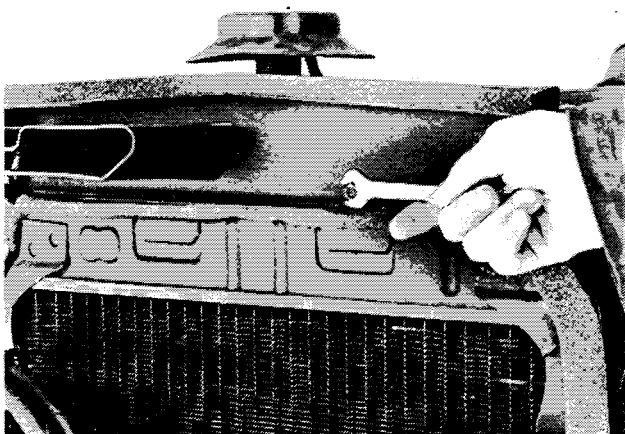
Install caps to prevent foreign material entering the system.

STEP 13

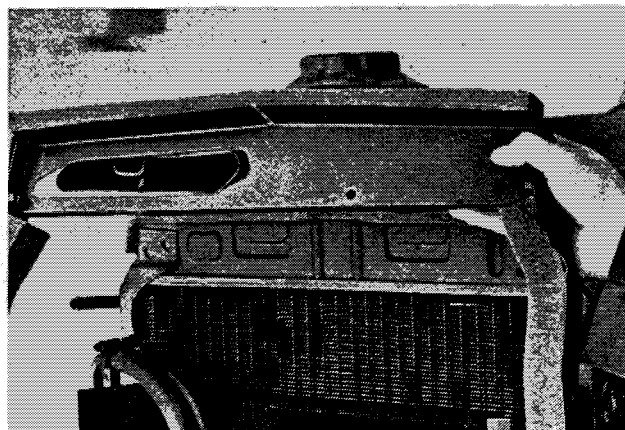
Remove the wiring harness from the radiator shroud.

STEP 14

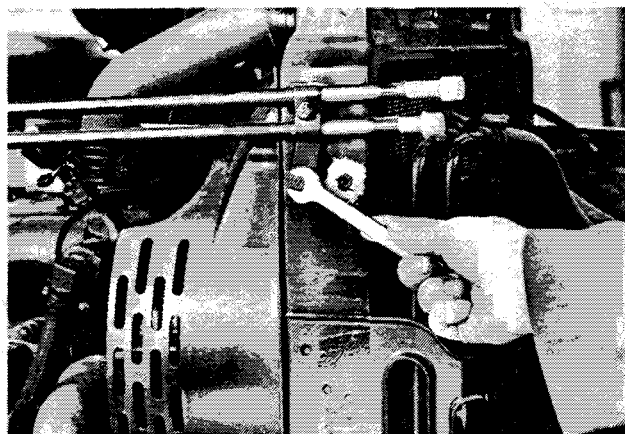
Remove the radiator side plate bolt, (both sides) and the hoodsheet side straps.

STEP 15

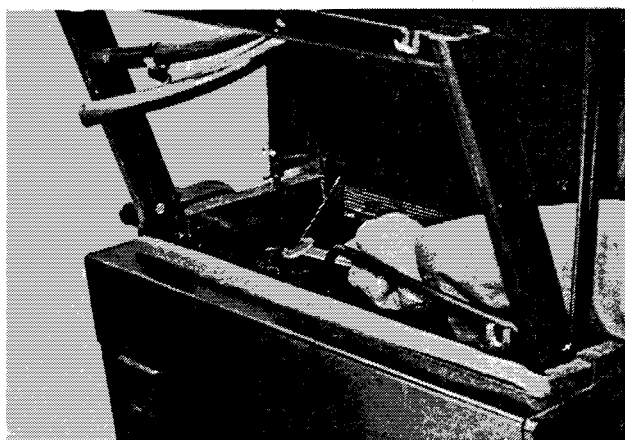
Remove the radiator baffle plate bolt.

STEP 16

Remove the radiator baffle plate.

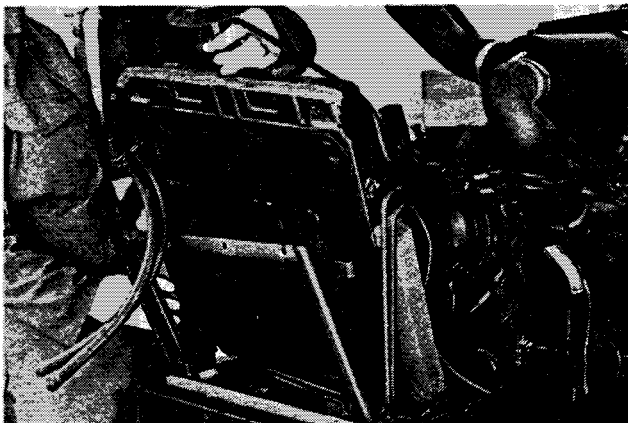
STEP 17

Remove the oil cooler pipe bracket.

STEP 18

Remove the radiator mountings.

STEP 19



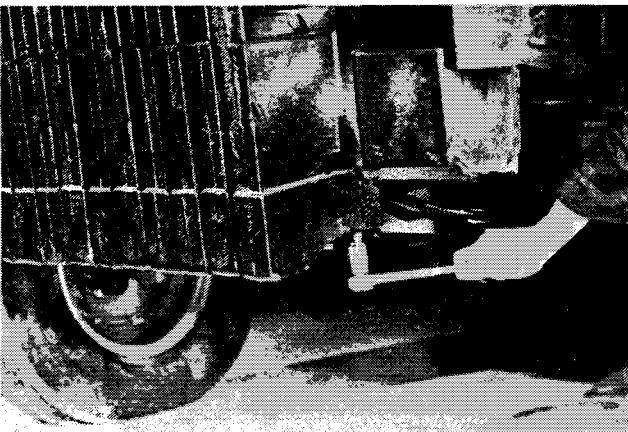
Remove the radiator and oil cooler from the tractor.

STEP 20



Remove the radiator mounting pads and side cover brackets.

STEP 21



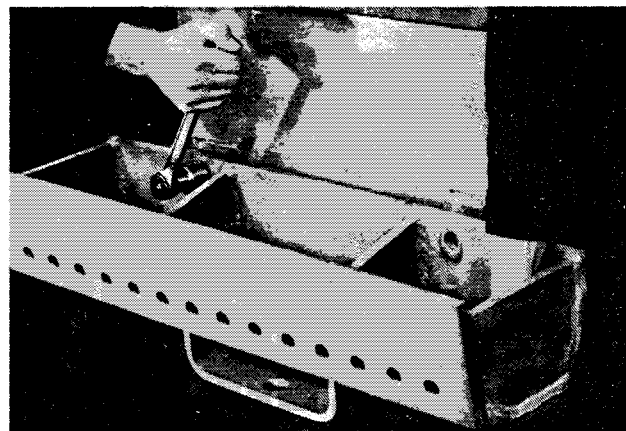
Loosen the front weight securing bolts, (if fitted).

STEP 22



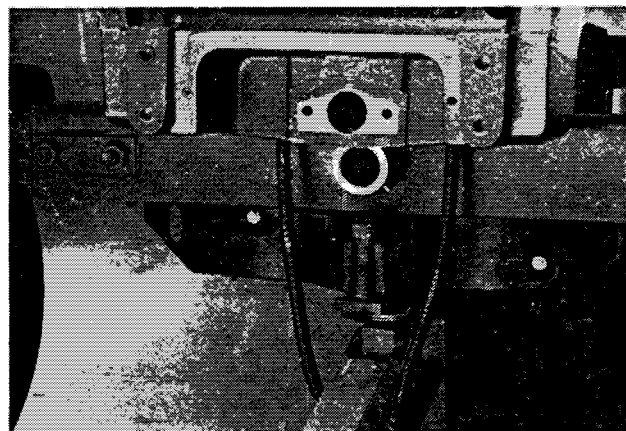
Remove the weights, (if fitted).

STEP 23



Remove the weight bracket, (if fitted).

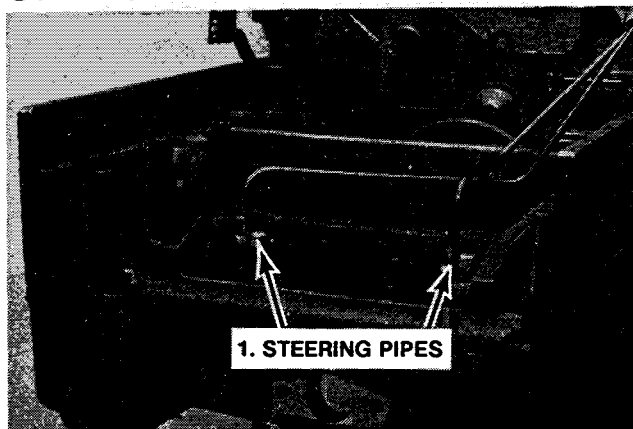
STEP 24



Remove the front axle. See section 5330 for 2WD tractors or section 6465 for MFD tractors.

STEP 25

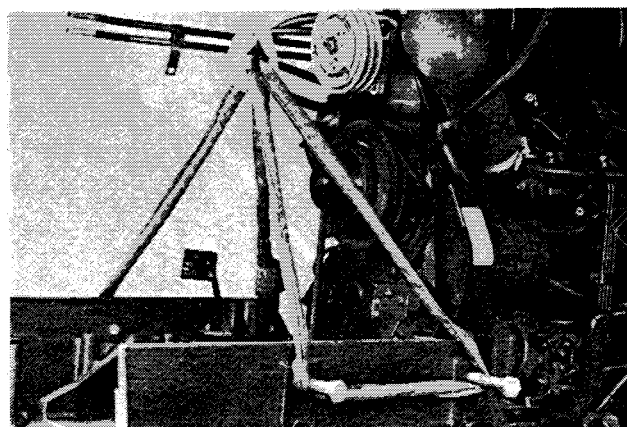
If tractor is fitted with MFD, remove the drive shaft. See section 6485.

STEP 26

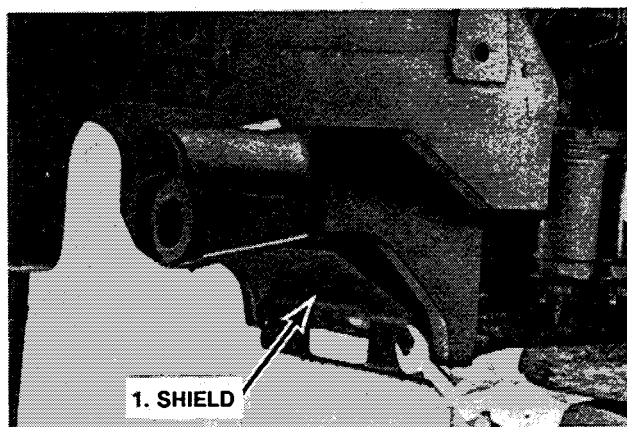
Mark the hydraulic steering pipes for correct installation and disconnect and cap the steering pipes.

STEP 27

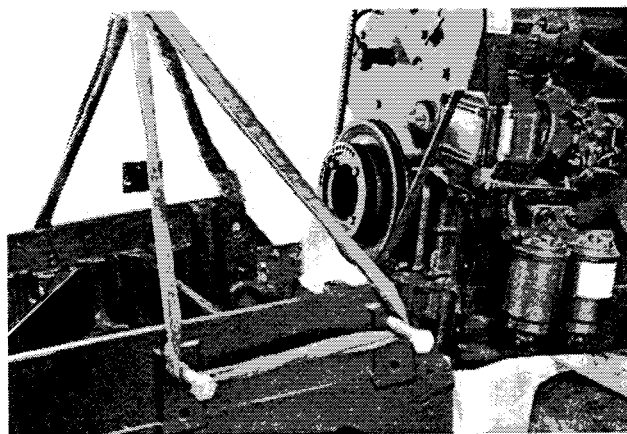
Install two 5/8 x 2-1/2 inch UNC bolts into each side of the front bolster.

STEP 28

Fasten the bolster to a hoist as shown.

STEP 29

Remove the oil pan shield and bolster mounting bolts.

STEP 30

Remove the bolster from the tractor.

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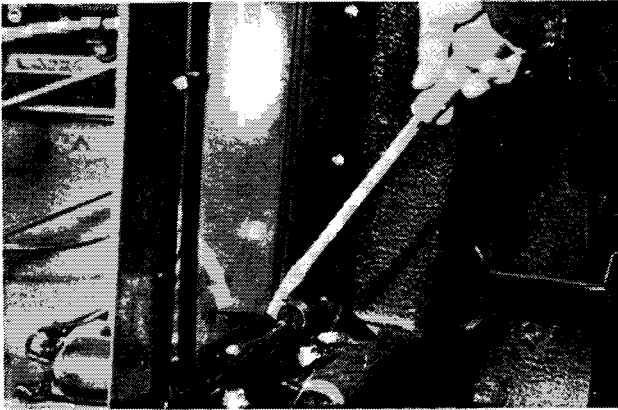


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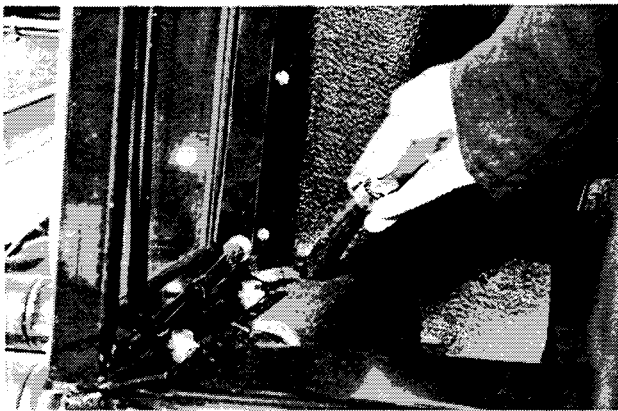
Thank you so much for reading.

STEP 31



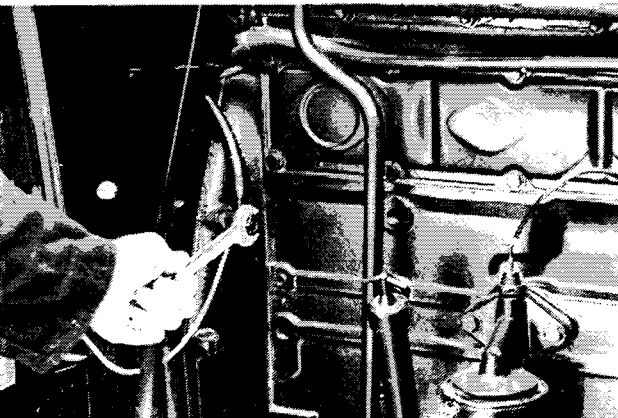
Loosen the heater hose clips, (both sides).

STEP 32



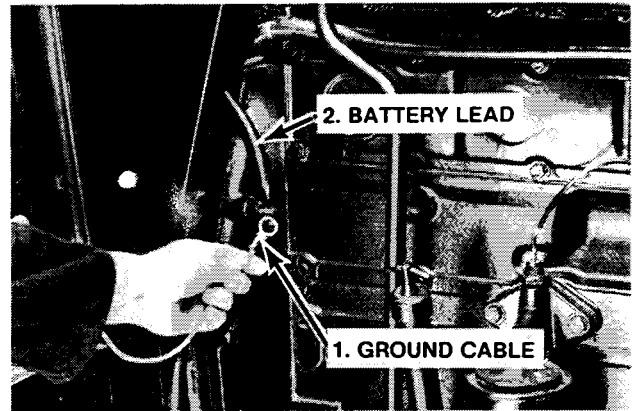
Disconnect and cap the hose, (both sides).
Remove the hoses from the cab.

STEP 33



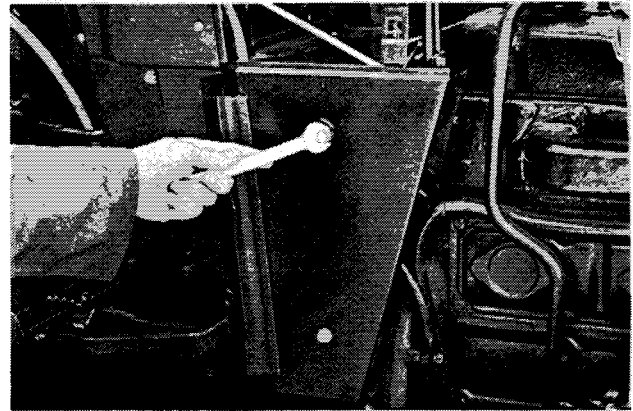
Remove the ground cable nut.

STEP 34



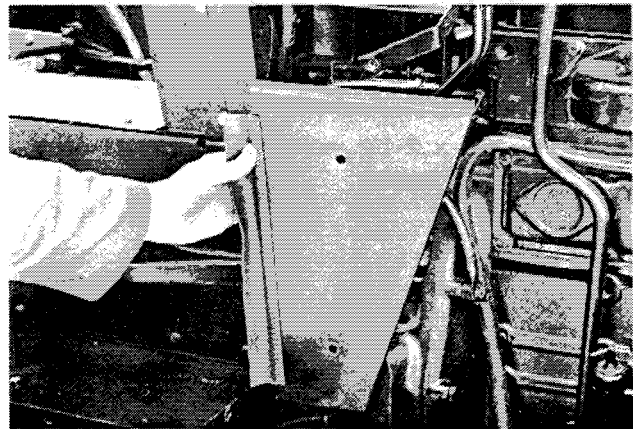
Remove the ground cable and battery lead.

STEP 35



Remove the side panel bolts, (both sides).

STEP 36



Remove the side panel, (both sides).