

885, 895 and 995 Series Tractors

Service Manual No. 8-85073

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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

Fuel Tanks	UK Value	U.S. Value	Metric Value
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 Synchronmesh 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 Synchronmesh, 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 Synchronmesh, 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 385and 485 Three Point, Category one and Two
 585, 685 and 885 Three Point, Category Two
 Quick Hitch Coupler (Available)

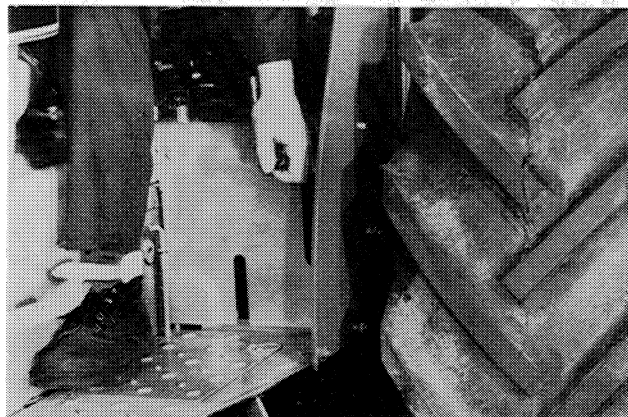
Section 2120

ENGINE REMOVAL

85 Series Tractors with Air Conditioning

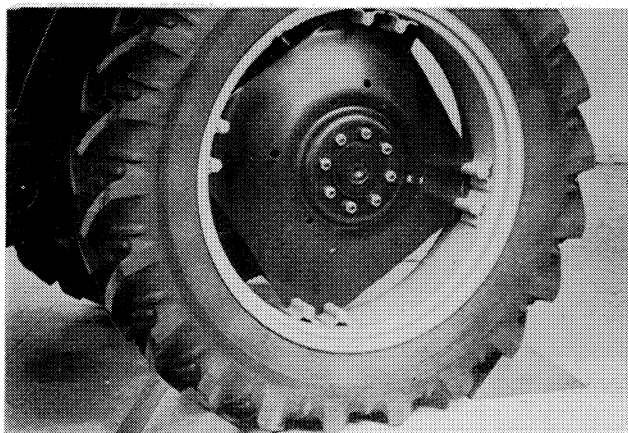
ENGINE Removal

STEP 1



Put the tractor on level ground and engage the parking brake.

STEP 2



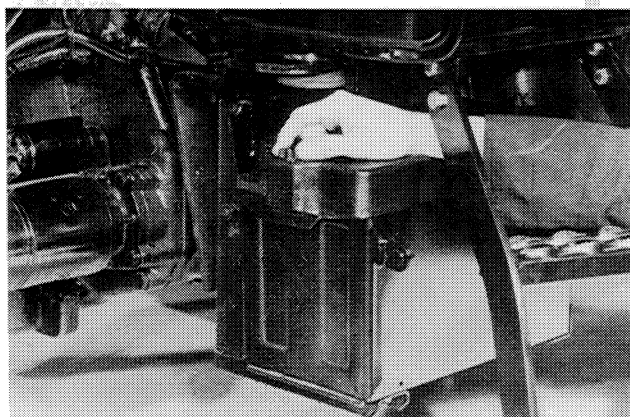
Put blocks in front of and behind the rear wheels.

STEP 3



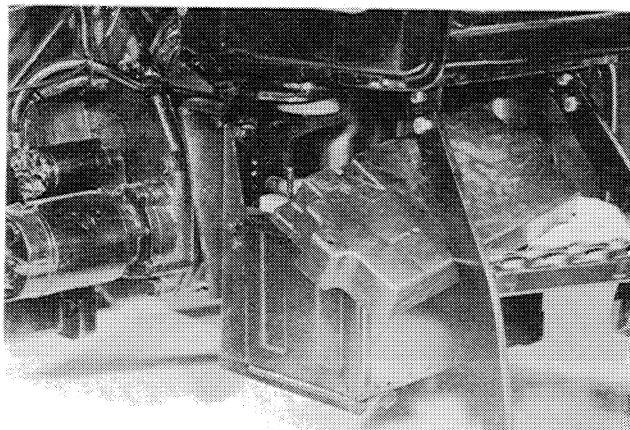
Remove the hoodsheet. Refer to Section 9240.

STEP 4



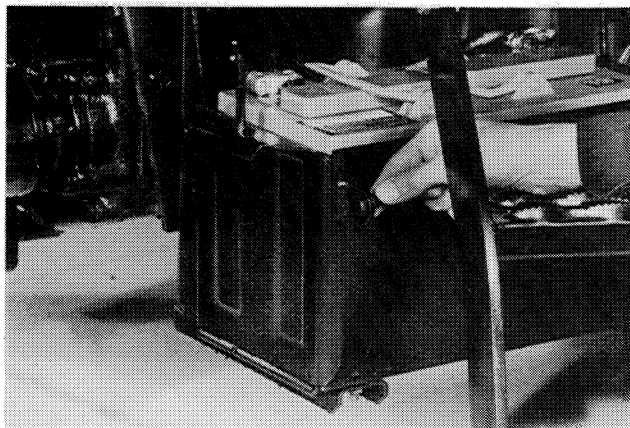
Remove the battery cover wing nuts.

STEP 5



Remove the battery cover.

STEP 6



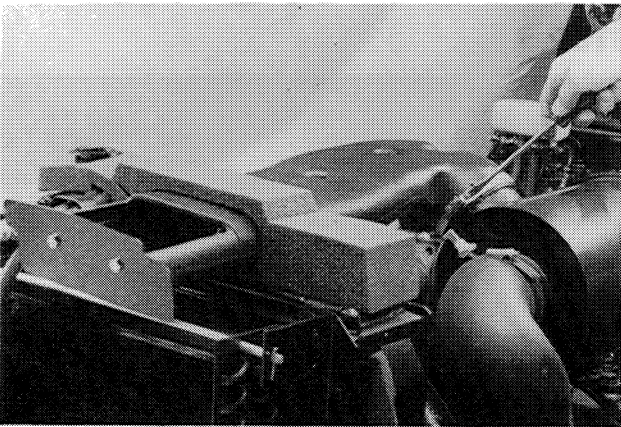
Remove the battery box side plate wing nut.

STEP 7



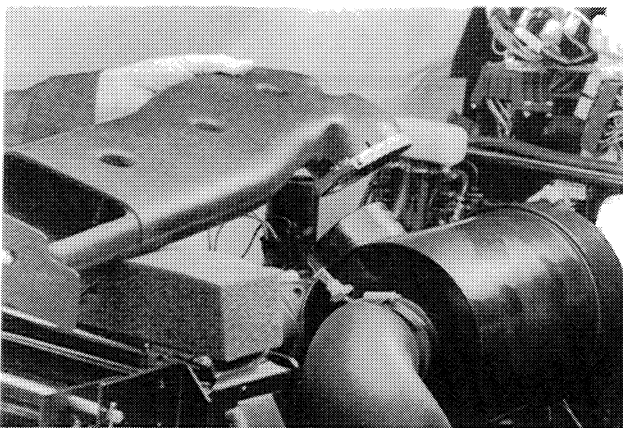
Disconnect the negative (-) ground terminal.

STEP 8



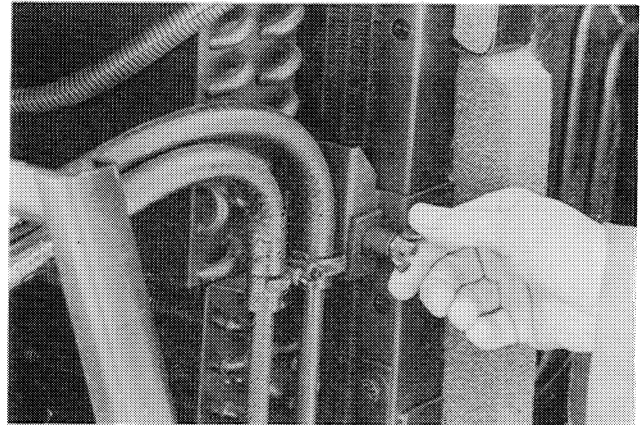
Loosen the air intake duct clip.

STEP 9



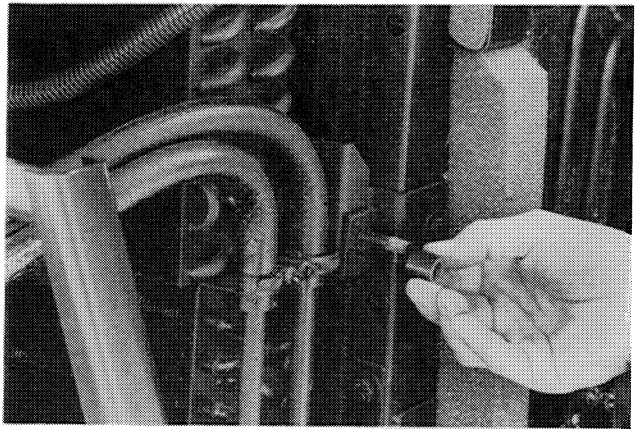
Remove the air intake duct.

STEP 10



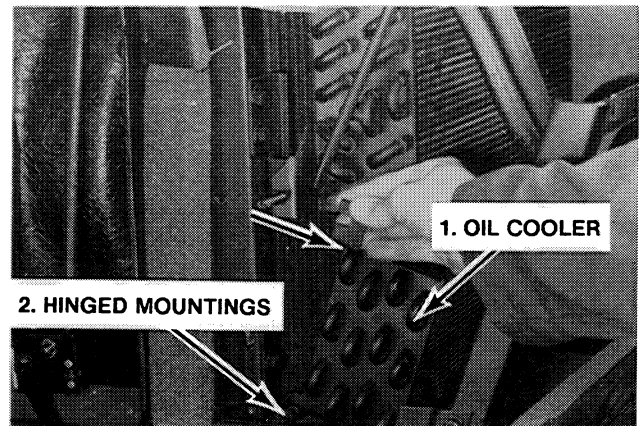
Remove the oil cooler and condenser securing wing nuts.

STEP 11



Remove the spacer.

STEP 12

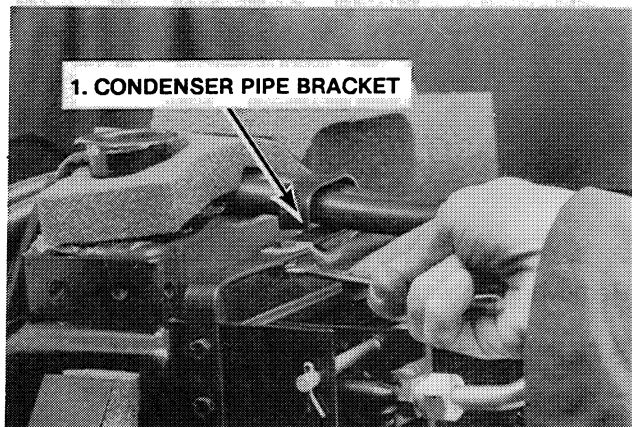


Swing the oil cooler down, away from the radiator.



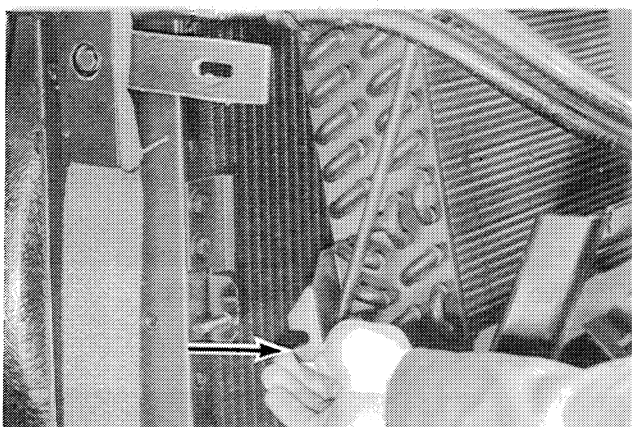
WARNING: Liquid refrigerant could cause severe frostbite. Follow all air conditioning safety rules. Refer to Section 9235.

STEP 13



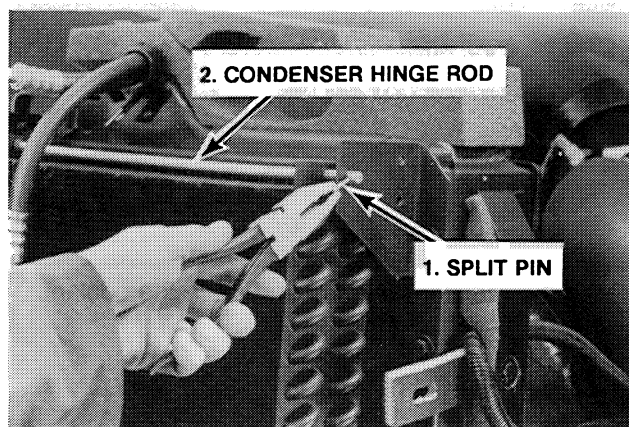
Remove the condenser pipe bracket.

STEP 14



Lift the condenser away from the radiator.

STEP 15



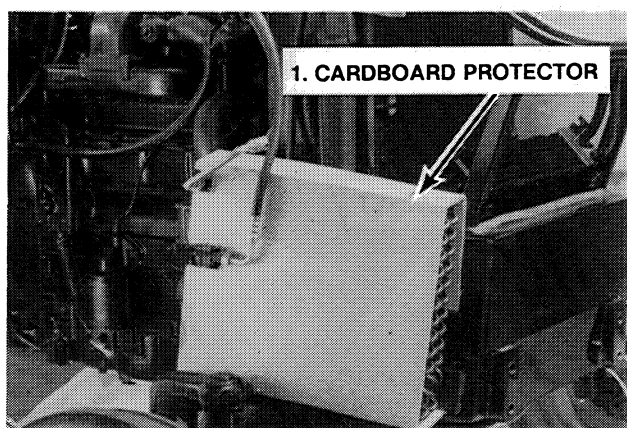
Remove the condenser hinge rod split pin.

STEP 16



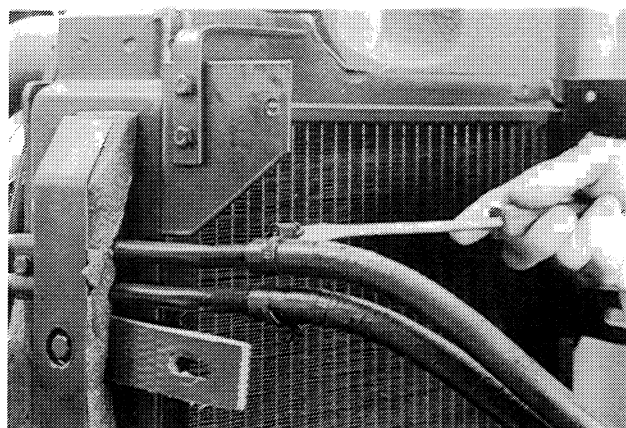
Support the condenser and remove the hinge rod.

STEP 17



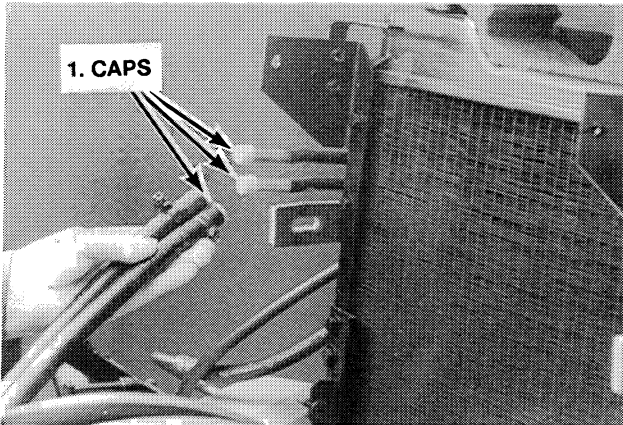
Put a cardboard protector around the condenser and tie the condenser safely out of the way.

STEP 18



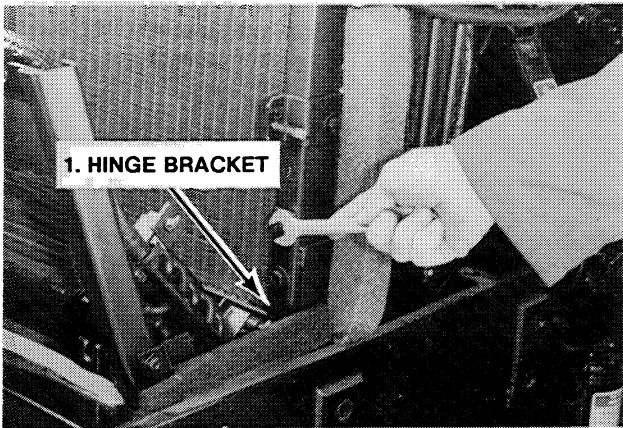
Disconnect the oil cooler pipes.

STEP 19



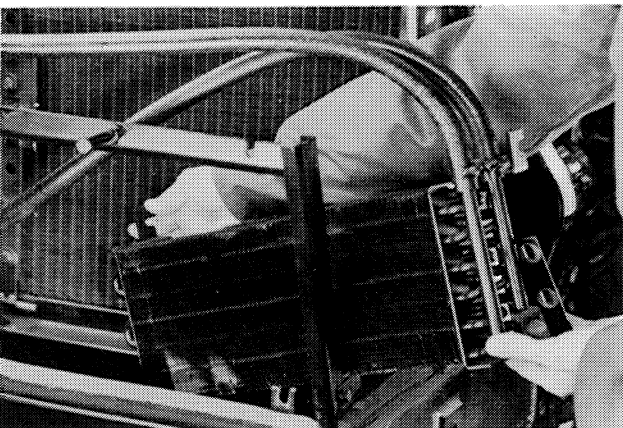
Fit caps to prevent foreign material from entering the system.

STEP 20



Remove one of the oil cooler hinge brackets.

STEP 21



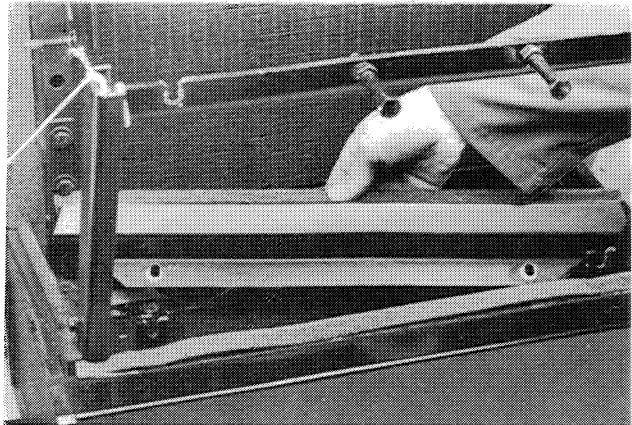
Remove the oil cooler.

STEP 22



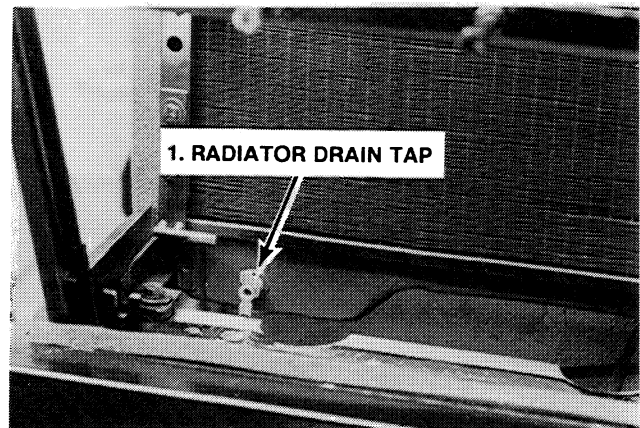
Remove the lower radiator sealing strip bolts.

STEP 23

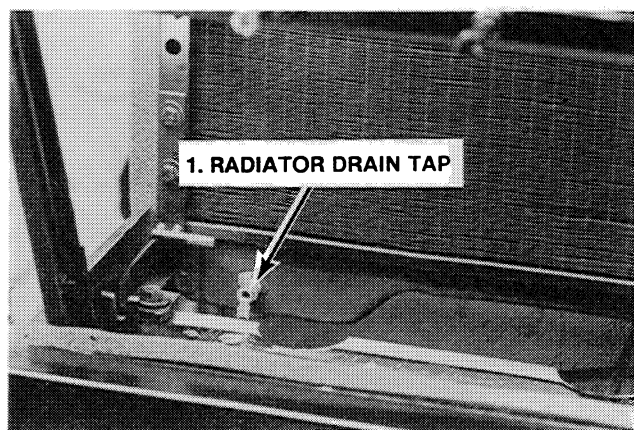


Remove the lower radiator sealing strip.

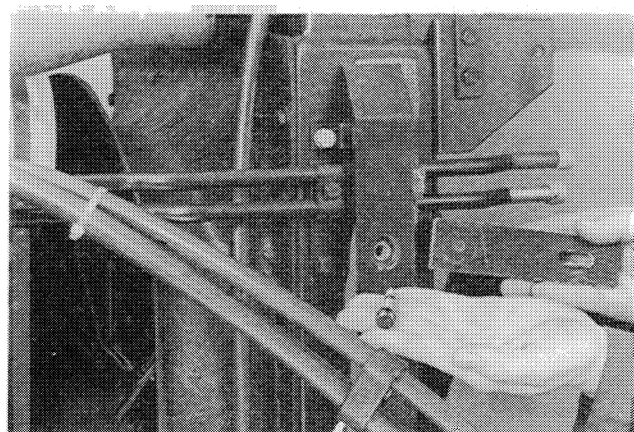
STEP 24



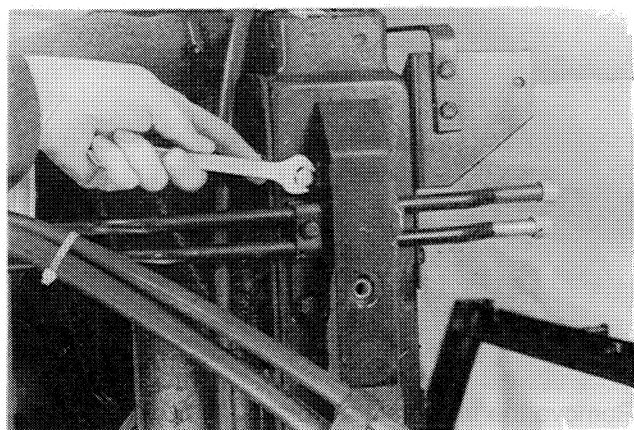
Open the radiator drain tap and drain the coolant.

STEP 25

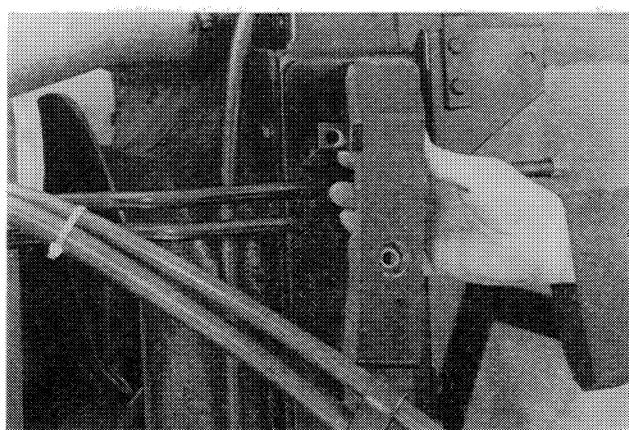
Close and tighten the radiator drain tap.

STEP 26

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

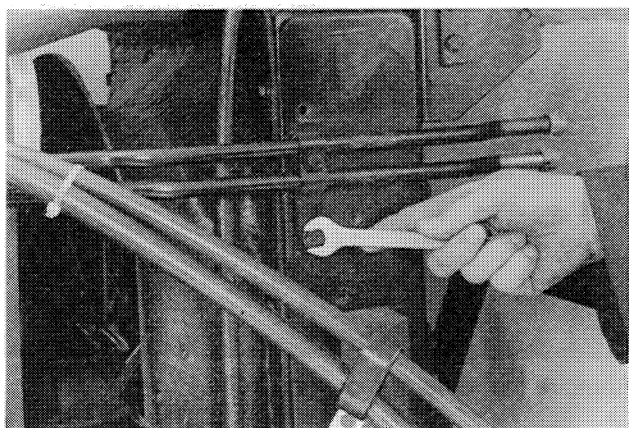
STEP 27

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

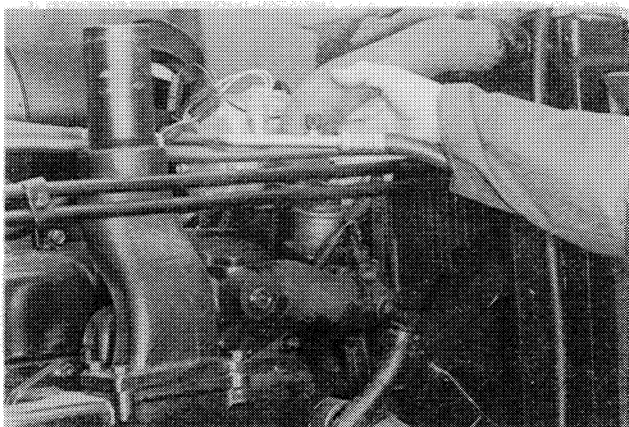
STEP 28

Remove the radiator side plate, (both sides).

NOTE: Move the headlamp harness rearward of the radiator on the left hand side.

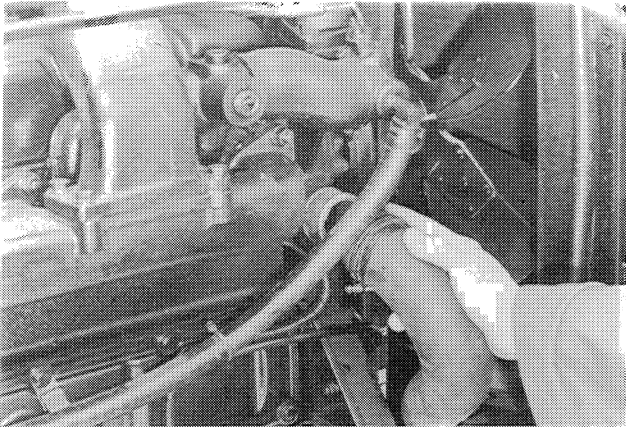
STEP 29

Remove the oil cooler pipe securing bracket bolt.

STEP 30

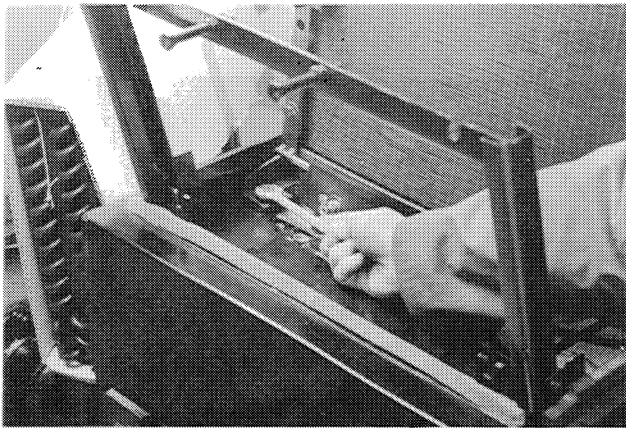
Loosen the clip and disconnect the top coolant hose.

STEP 31



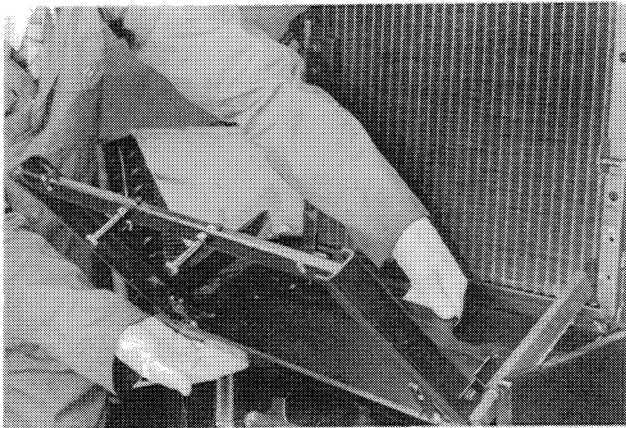
Loosen the clip and disconnect the bottom coolant hose.

STEP 32



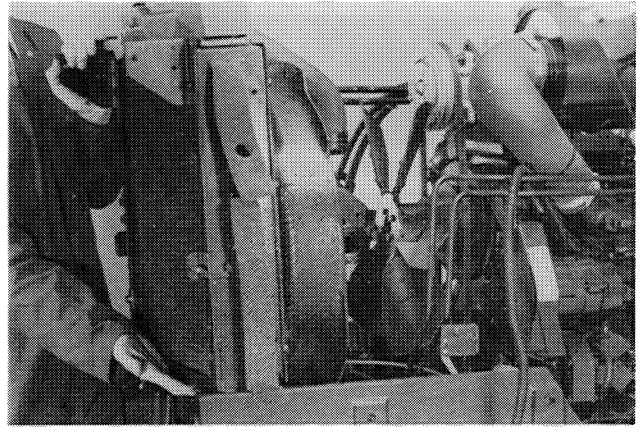
Remove the radiator mounting bolts.

STEP 33



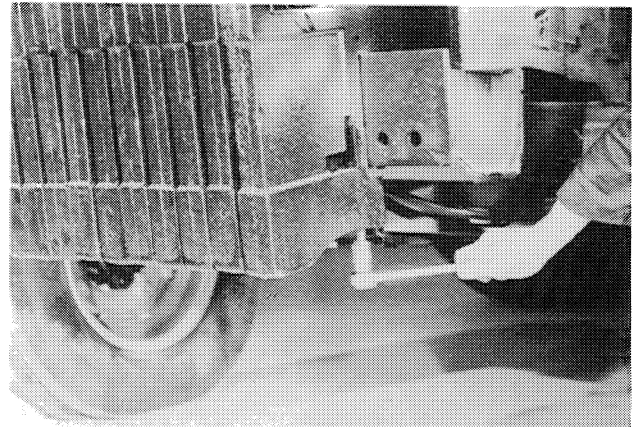
Remove the hoodsheet mounting frame.

STEP 34



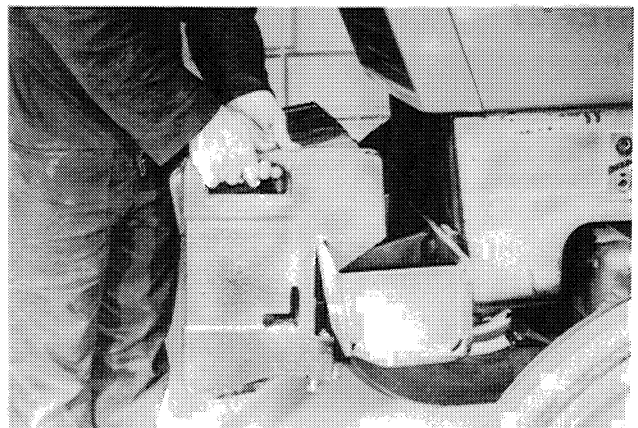
Carefully lift the radiator clear of the tractor.

STEP 35

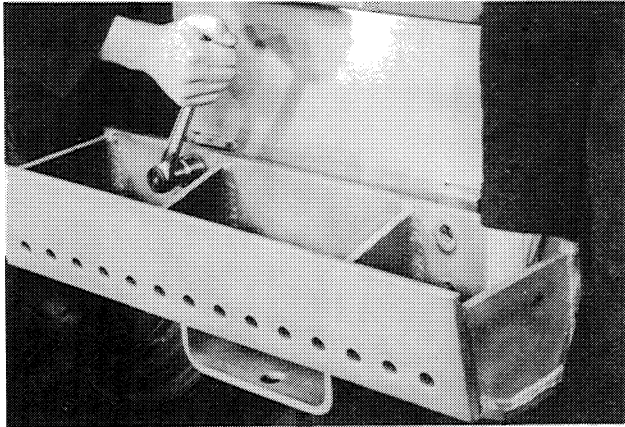


Loosen the tractor weight securing bolts, (if fitted).

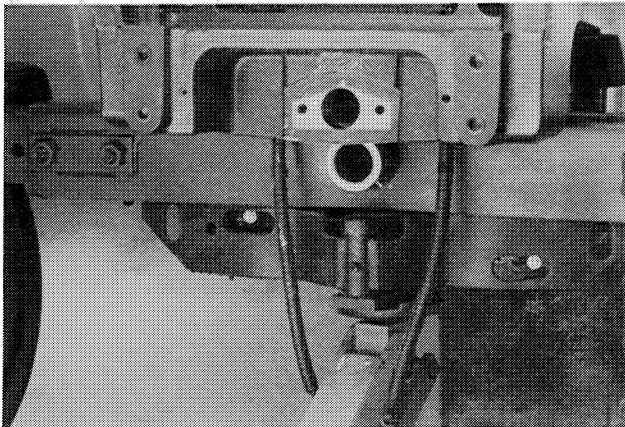
STEP 36



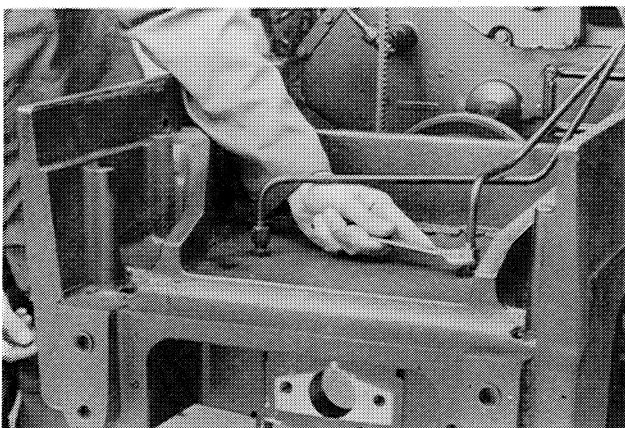
Remove the front tractor weights, (if fitted).

STEP 37

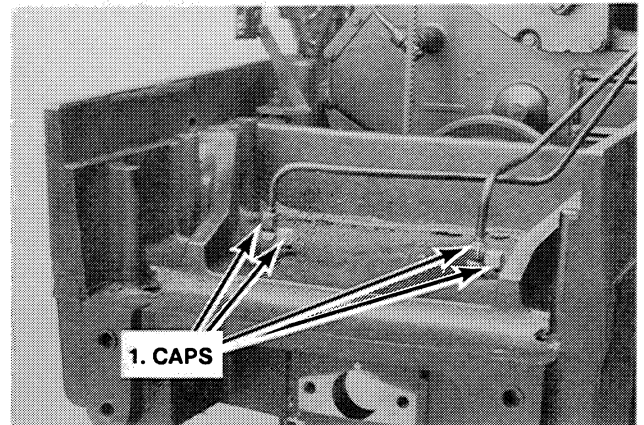
Remove the front tractor weight bracket, (if fitted).

STEP 38

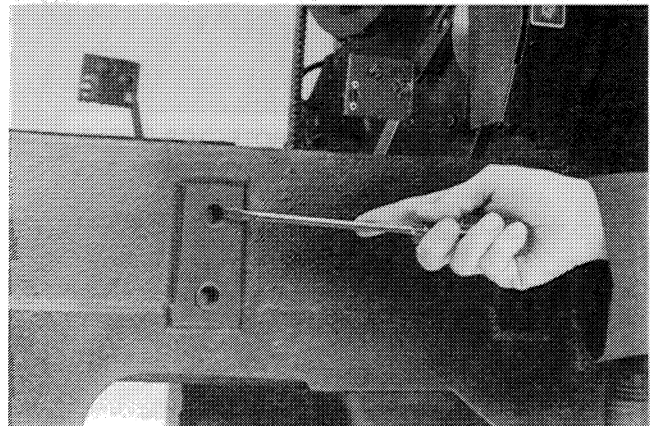
Remove the front axle. Refer to Section 5330 for 2WD tractors or Section 6465 for MFD tractors.

STEP 39

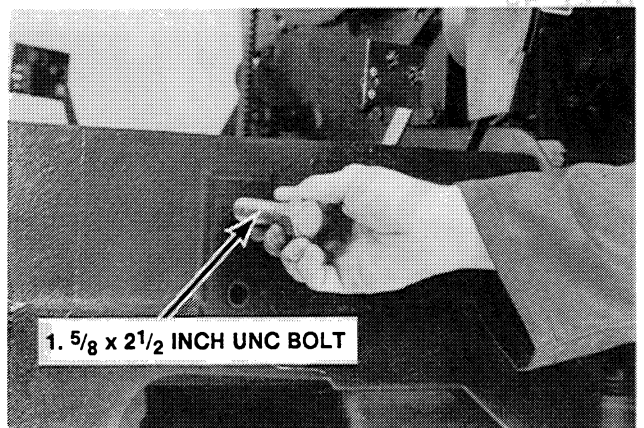
Disconnect the hydraulic steering pipes.

STEP 40

Fit caps to prevent foreign material from entering the system.

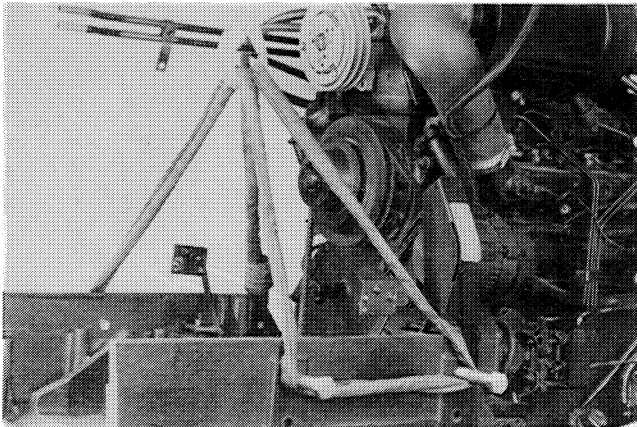
STEP 41

Remove four plastic caps from the front bolster.

STEP 42

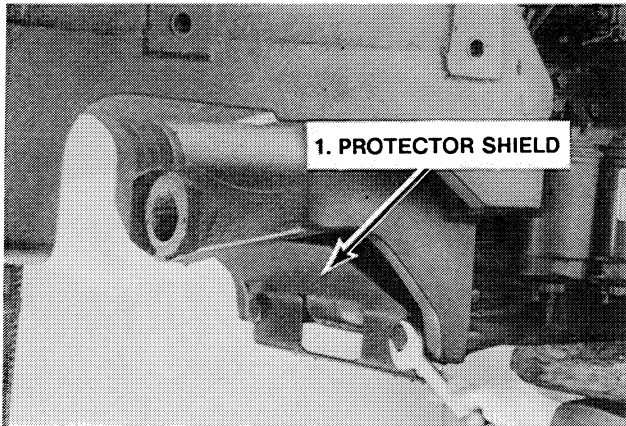
Install four $\frac{5}{8}$ x $2\frac{1}{2}$ inch U.N.C. bolts into the front bolster.

STEP 43



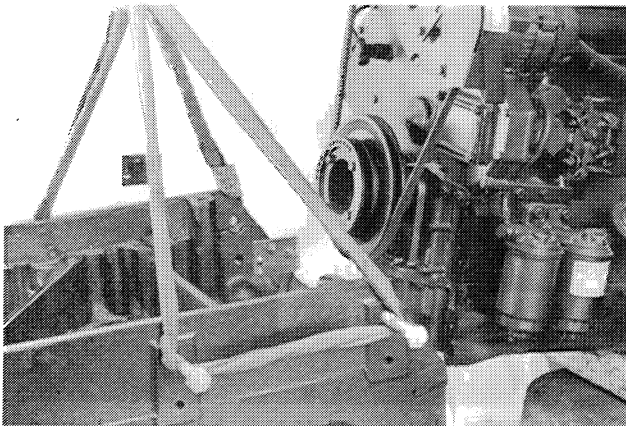
Secure a sling to the front bolster and a lifting hoist.

STEP 44



Remove the oil pan protection shield and the front bolster mounting bolts.

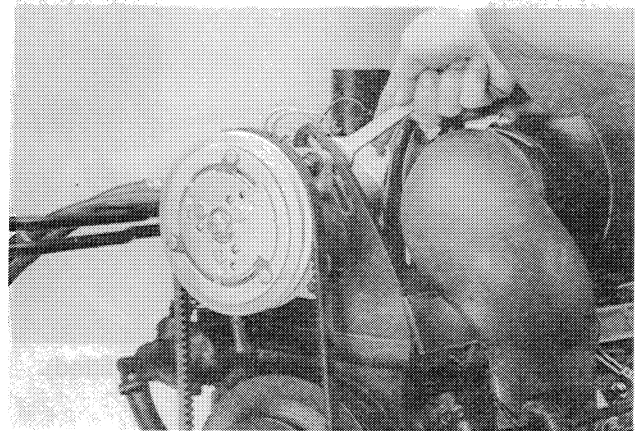
STEP 45



Move the front bolster clear of the tractor.

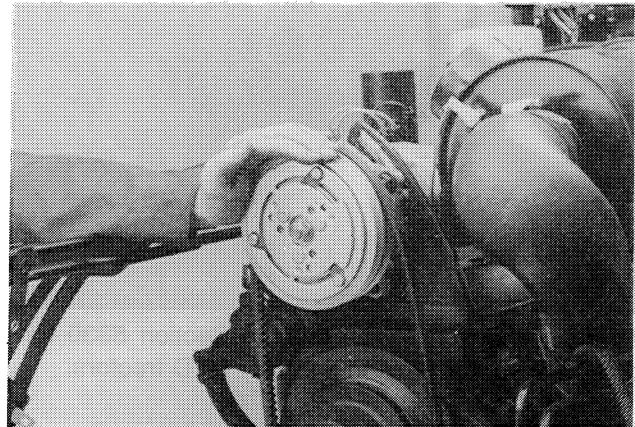
NOTE: *The radiator fan is removed for photographic purposes only.*

STEP 46



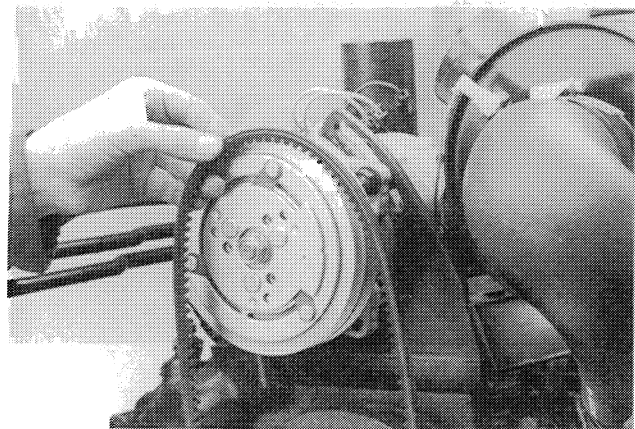
Loosen the air conditioning compressor adjusting strap bolt.

STEP 47



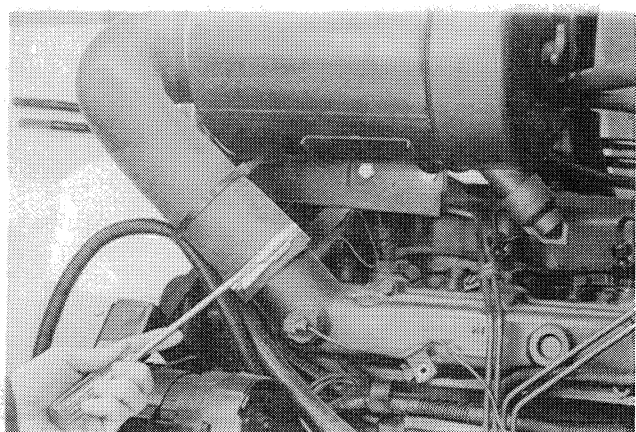
Push the compressor toward the engine.

STEP 48



Remove the compressor drive belt.

STEP 49



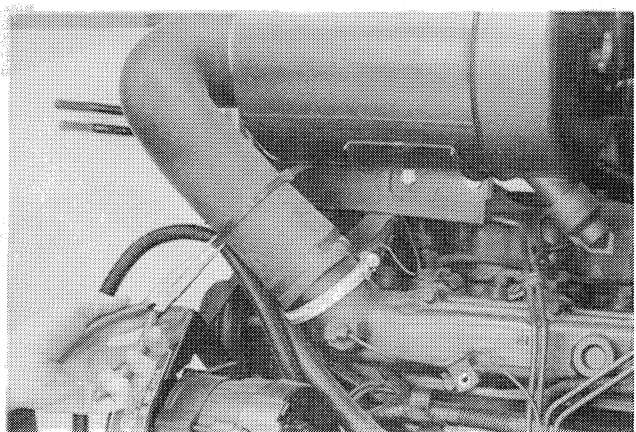
Loosen the air cleaner intake hose clip.

STEP 52



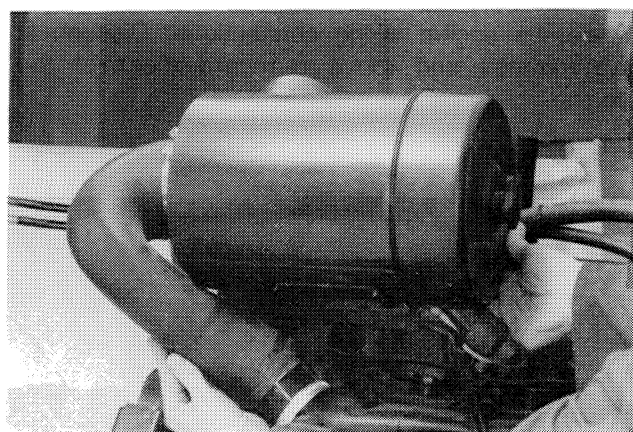
Remove the air cleaner body mounting bolts.

STEP 50



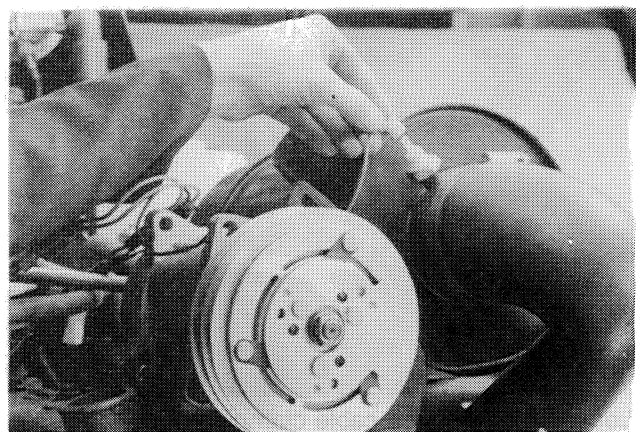
Cut the strap and move the headlamp harness rearward.

STEP 53



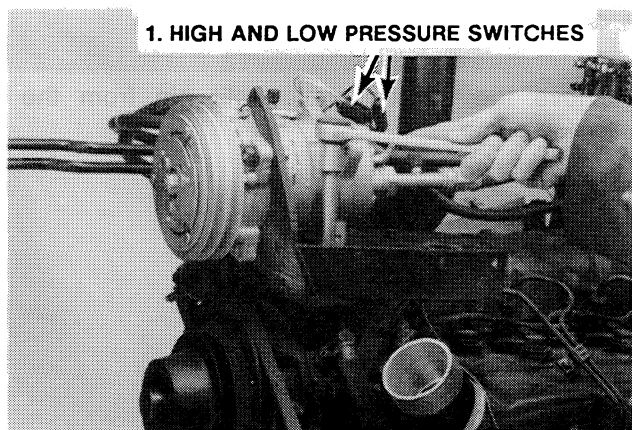
Lift clear the air cleaner body.

STEP 51



Disconnect the vacuum switch connection.

STEP 54



Label and disconnect the high and low pressure switches, remove the compressor mounting bracket bolts and lift clear the compressor.

NOTE: Safely secure the compressor (out of the way) to the tractor.



Suggest:

If the above button click is invalid.

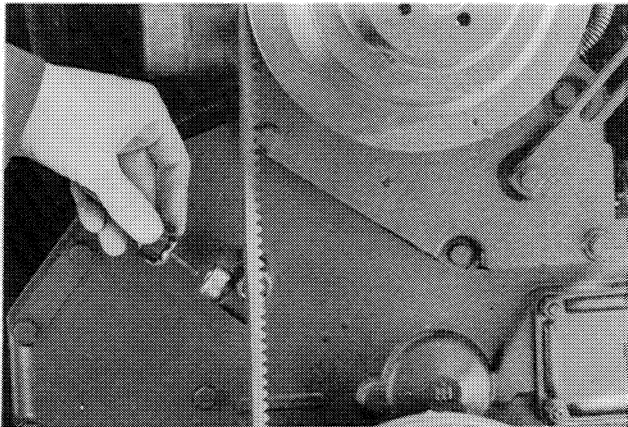
Please download this document

first, and then click the above link

to download the complete manual.

Thank you so much for reading

STEP 55

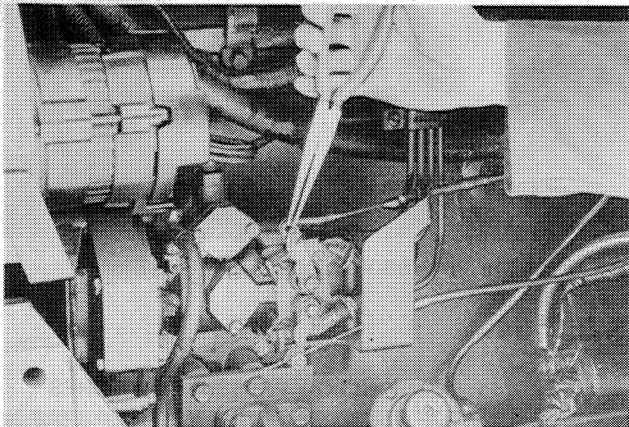


Disconnect the tachometer cable.

STEP 56

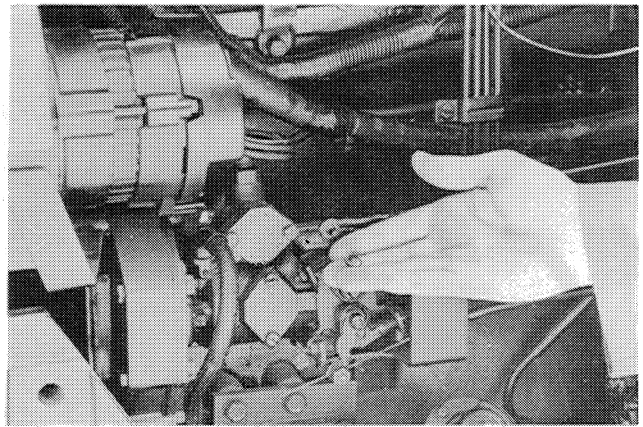
Label the engine wiring connections. Disconnect the harness and move rearward clear of the engine.

STEP 57



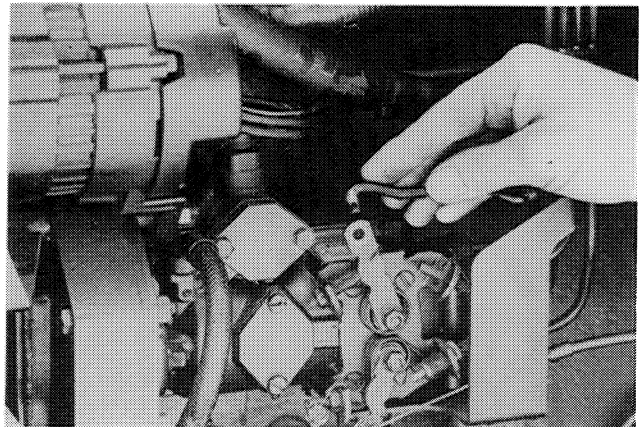
Remove the throttle cable split pin from the injection pump.

STEP 58



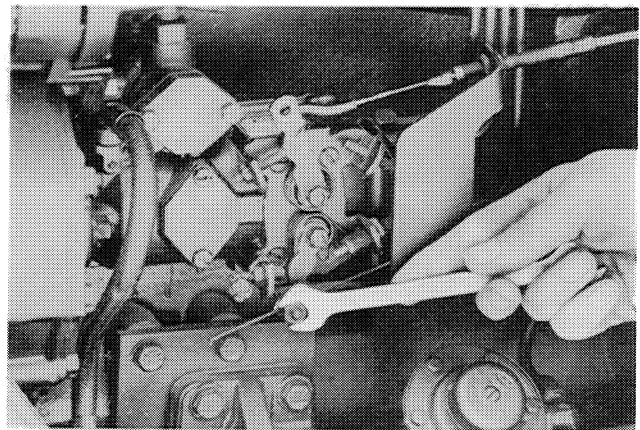
Remove the washer.

STEP 59



Disconnect the throttle cable.

STEP 60



Loosen the fuel stop cable clamping nut.

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