# TABLE OF CONTENTS
# 2094, 2294 AND 3294 TRACTORS


| SERIES | SECTION | DESCRIPTION | FORM NUMBER |
|---|---|---|---|
| 10 | | **GENERAL** | |
| | 1210 | General Specifications - 2094 Tractor | 8-24830 |
| | 1211 | General Specifications - 2294 Tractor | 8-24840 |
| | 1211 | General Specifications - 3294 Tractor | 8-26970 |
| | 1212 | Lubrication - 2094 Tractor | 8-24780 |
| | 1213 | Lubrication - 2294 Tractor | 8-24790 |
| | 1214 | Lubrication - 3294 Tractor | 8-26980 |
| | 1220 | Engine Specifications - 504BDT Engine, 3294 Tractor | 8-20841 |
| | 1320 | Engine Specifications - 504BDT Engine, 2294 Tractor | 8-20040 |
| | 1420 | Engine Specifications - 504BD Engine, 2094 Tractor | 8-20050 |
| | 1230 | Fuel System Specifications | 8-20062 |
| | 1250 | Steering System Specifications | 8-24920 |
| | 1260 | Power Train Specifications | 8-24940 |
| | 1270 | Brake System Specifications | 8-24860 |
| | 1280 | Hydraulic System Specifications | 8-24870 |
| 20 | | **ENGINES** | |
| | 2201 | Troubleshooting - Engine | 8-20111 |
| | 2202 | Engine Tune-Up | 8-20120 |
| | 2211 | Tractor Split (Between Engine and Torque Tube) | 8-24480 |
| | 2215 | Cylinder Head, Valve Train and Camshaft | 8-20140 |
| | 2225 | Cylinder Block, Sleeves, Pistons and Rods | 8-20150 |
| | 2235 | Crankshaft, Main Bearings, Flywheel and Oil Seals | 8-20160 |
| | 2245 | Lubrication System - Oil Pump, Oil Pan and Heat Exchanger | 8-20910 |
| | 2255 | Cooling System | 8-20180 |
| | 2265 | Turbocharger - T04B | 8-20190 |
| | 2565 | Turbocharger - Failure Analysis | 9-78235 |
| | 2275 | Air Induction System - 2294 and 3294 Tractors | 8-20210 |
| | 2375 | Air Cleaner System - 2094 Tractors | 8-24740 |
| | 2290 | Reconditioning Engine Cylinder Block | 8-21170 |
| 30 | | **FUEL SYSTEM** | |
| | 3210 | Fuel System and Filters | 8-20220 |
| | 3212 | Robert Bosch Fuel Injection Pumps | 8-20230 |
| | 3213 | American Bosch Fuel Injectors | 8-20240 |
| 40 | | **ELECTRICAL** | |
| | 4201 | Electrical System Troubleshooting | 8-26500 |
| | 4205 | Instrument Cluster Troubleshooting | 8-26470 |
| | 4210 | Tractor Electrical Wiring Diagram | 8-24360 |
| | 4215 | Power Shift Electrical Wiring Diagram | 8-24342 |
| | 4220 | Cab Electrical Wiring Diagram | 8-24371 |
| | 4230 | Starting Motors - Nippondenso | 8-25980 |
| | 4235 | Battery Servicing and Testing | 8-20291 |
| | 4240 | Delco-Remy Alternator System | 8-25690 |
| | 4280 | Neutral Start Switch Adjustment and Correct Starting Procedure Using Booster Batteries | 8-20310 |
| 50 | | **STEERING** | |
| | 5205 | Testing Tractor Steering System | 8-20330 |
| | 5210 | Steering Column, Pump and Valve | 8-20341 |
| | 5220 | Steering Cylinder | 8-20351 |
| | 5230 | Front Steering Axle and Lines | 8-24720 |


Reprinted


CASE CORPORATION

Rac 8-24901

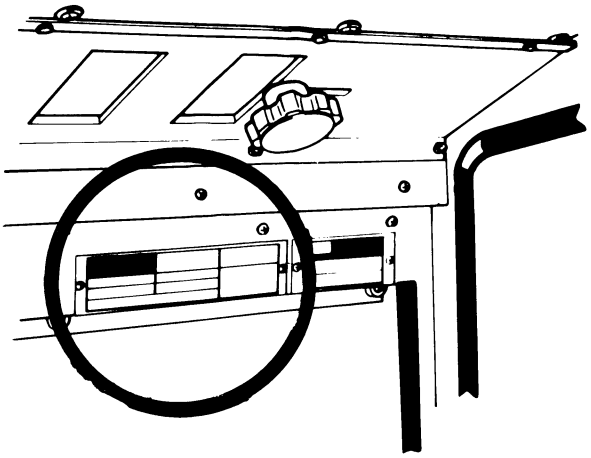
Printed in U.S.A.
September, 1983 (Revised April, 1985)



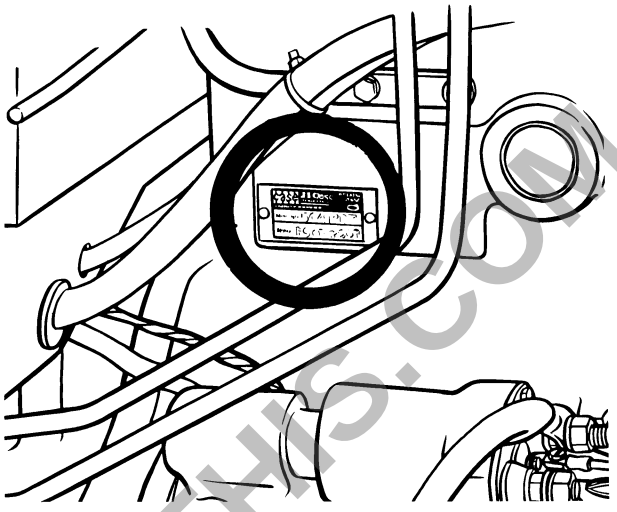
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

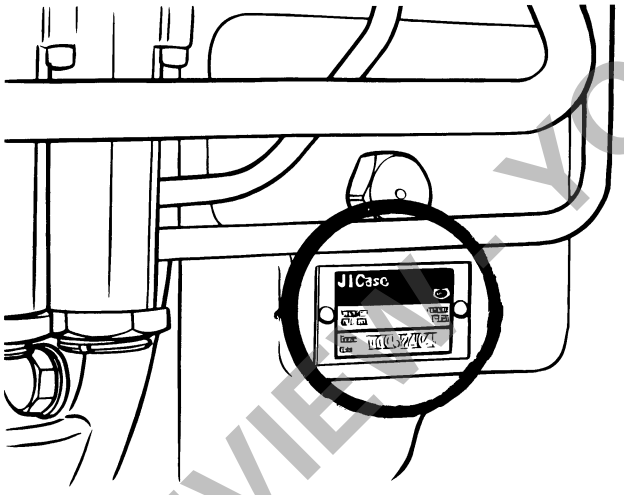
# SERIAL NUMBERS



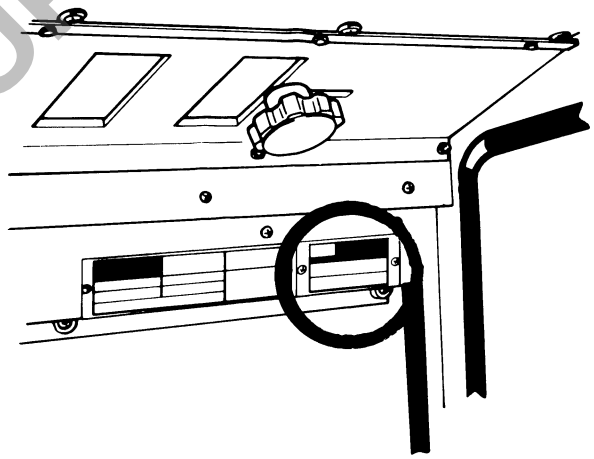
CAB SERIAL NUMBER PLATE



ENGINE SERIAL NUMBER PLATE




TRANSMISSION SERIAL NUMBER PLATE



MODEL AND PRODUCT IDENTIFICATION NUMBER PLATE

PREVIEW. YOUFIXTHIS.COM



Download full manual at youfixthis.com

Issued 7-83 Printed in U.S.A.

| REF. NUMBER | SERVICE POINTS | NO. OF POINTS | APPLY GREASE | APPLY GRAPHITE | REMOVE FLUID | CHECK | CLEAN | CHANGE | FREQUENCY |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Engine Oil Level | 1 | | | | ▒ | | | 10 HOURS |
| 2 | Fuel Tank Level | 1 | | | | ▒ | | | ○ |
| 3 | Transmission Oil Level | 1 | | | | ▒ | ▒ | | |
| 4 | Fuel Tank Water Trap | 1 | | | ▒ | | | | |
| 5 | Front Axle Pivot | 2 | ▒ | | | | | | 50 HOURS |
| 6 | King Pins | 2 | ▒ | | | | | | |
| 7 | Battery Water Level | 2 | | | | ▒ | | | ● |
| 9 | Tire Pressure | 4 | | | | ▒ | | | |
| 10 | Drawbar Roller | 1 | ▒ | | | | | | 100 HOURS |
| 11 | Engine Crankcase Oil | 1 | | | | | | ▒ | ⬡ |
| 12 | Cab Air Filter | 1 | | | | ▒ | | | |
| 13 | Engine Oil Filters | 2 | | | | | | ▒ | △ 200 HOURS |
| 14 | Fan and Compressor Belts | 2 | | | | ▒ | | | 250 HOURS |
| 15 | Transmission Hydraulic Breather | 1 | | | | | ▒ | | ▽ |
| 16 | Cooling System Treatment | 1 | | | | | | ▒ | |
| 17 | Water Filter | 1 | | | | | | ▒ | ▲ 300 HOURS |
| 18 | Fuel Filters | 2 | | | ▒ | | | ▒ | 500 HOURS |
| 19 | Door and Window Hinges | 6 | | ▒ | | | | | □ |
| 20 | PTO and Other Control Console Cables* | 20 | ▒ | | | | | | |
| 21 | Front Wheel Bearings | 2 | ▒ | | | | ▒ | ▒ | 1000 HOURS |
| 22 | Transmission Oil | 2 | | | ▒ | | | ▒ | |
| 23 | Air Conditioner Refrigerant Level | 1 | | | | ▒ | | | ▭ |
| 24 | Cooling System - Without Water Filter | 3 | | | ▒ | | | ▒ | |
| 25 | Cooling System - With Water Filter | 4 | | | ▒ | | | ▒ | ■ 2000 HOURS |
| 26 | Air System Tubes | 1 | | | | ▒ | ▒ | | AS NEEDED |
| 27 | Air System Filters | 2 | | | | ▒ | ▒ | ▒ | |
| 28 | Hydraulic Oil Filters | 2 | | | ▒ | | ▒ | ▒ | ⬢ |

*NOTE: *Use WD-40 Case Part Number M20685 (Canada M20870).*

NOTE: *Check coolant every 50 hours if tractor is not equipped with low coolant warning lamp.*

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

Issued 7-83 Printed in U.S.A

# Section

# 1220

## SPECIFICATION DETAILS

## 504BDT ENGINE

Written In *Clear And Simple English*

PREVIEW - YOUFIXTHIS.COM

CASE CORPORATION

Rac 8-20841

Printed in U.S A
Issued August, 1978 (Revised August, 1979)

Download full manual at youfixthis.com

# Section

# 1230

## SPECIFICATION DETAILS
## FUEL SYSTEM

Written In *Clear And Simple English*

PREVIEW - YOUFIXTHIS.COM

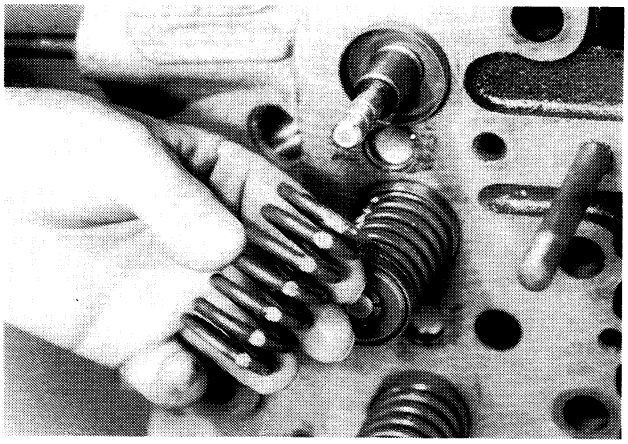
CASE CORPORATION

Rac 8-20062

Printed in U.S.A.
August, 1978 (Revised May, 1985)

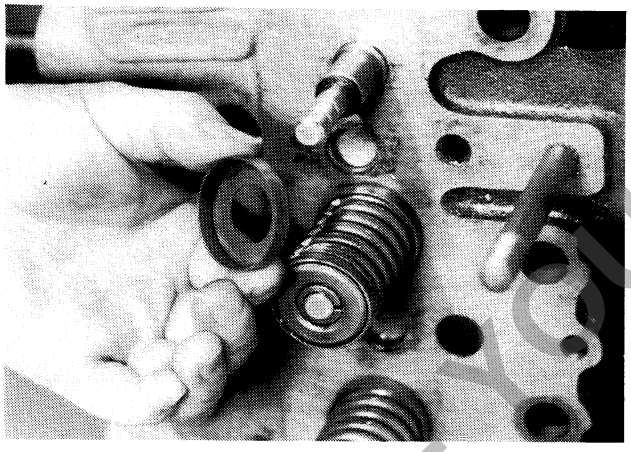
Download full manual at youfixthis.com

**STEP 5**



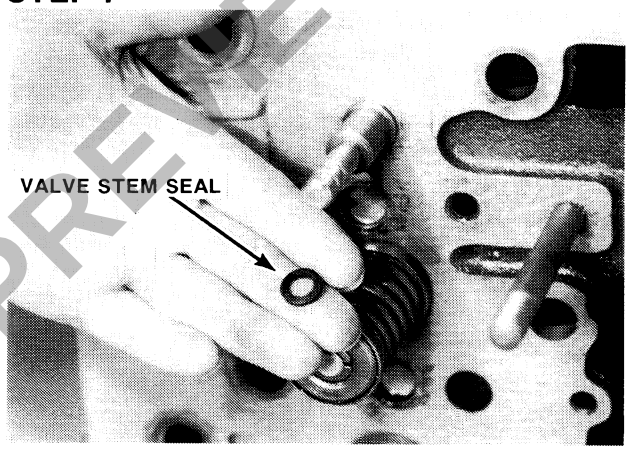
Remove the valve springs.

**STEP 6**



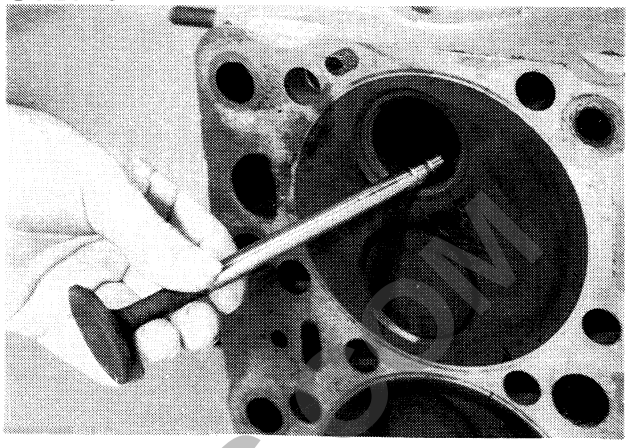
Remove the spring seats.

**STEP 7**



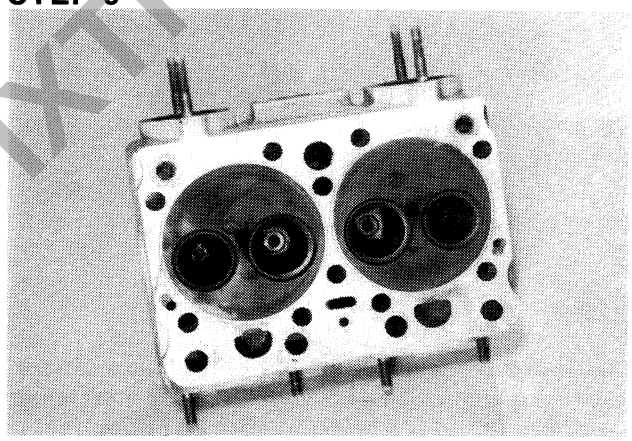

Remove the valve stem seals.

**STEP 8**



Remove the valves.

**STEP 9**



Clean the cylinder head completely, removing all the carbon and other deposits. Check for cracks and for any sign of damage, existing in the area of the fire ring contact.

**STEP 10**



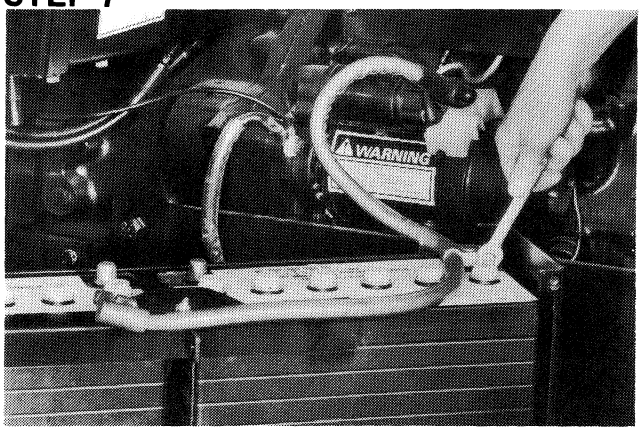
Clean the valves with a fine wire brush that is power driven. Remove all carbon and varnish deposits. Do not scratch the valve stems.



PREVIEW - YOUFIXTHIS.COM

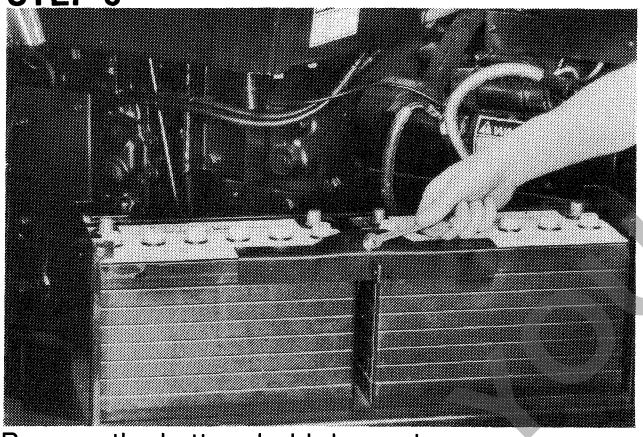
Download full manual at youfixthis.com

**STEP 7**



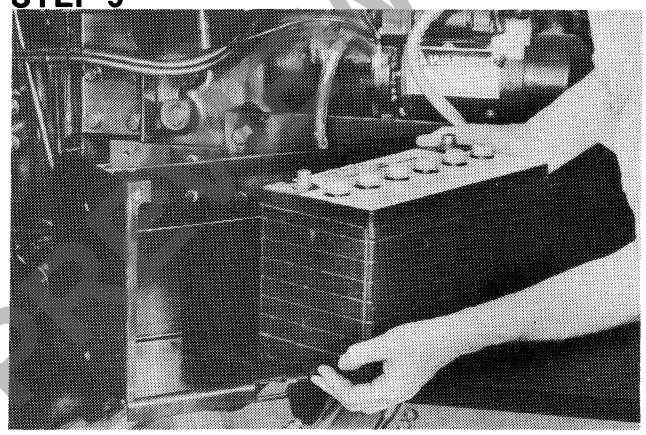

Remove the negative terminal cable from the batteries first and then the positive terminal cable.

**STEP 8**



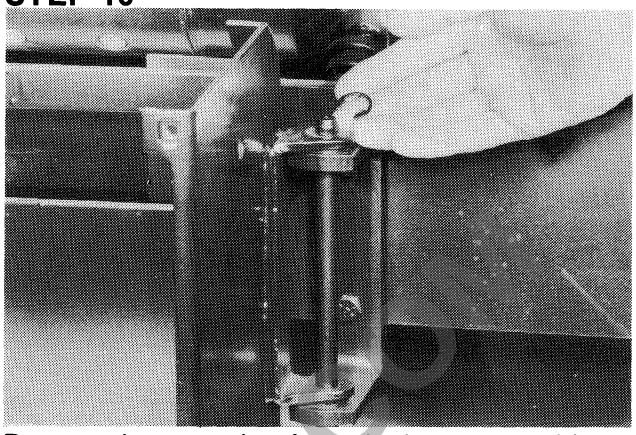
Remove the battery hold down clamp.

**STEP 9**



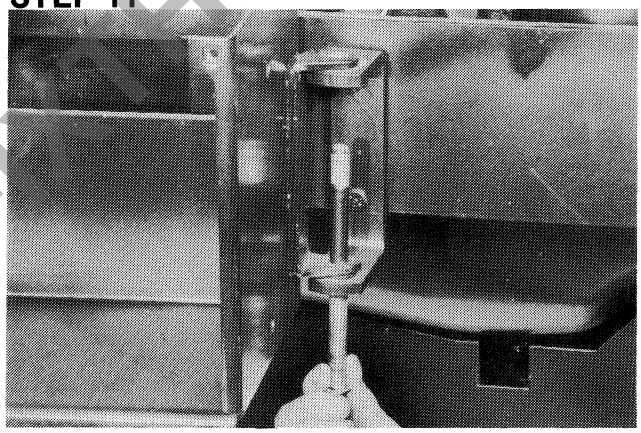
Remove the batteries.

**STEP 10**



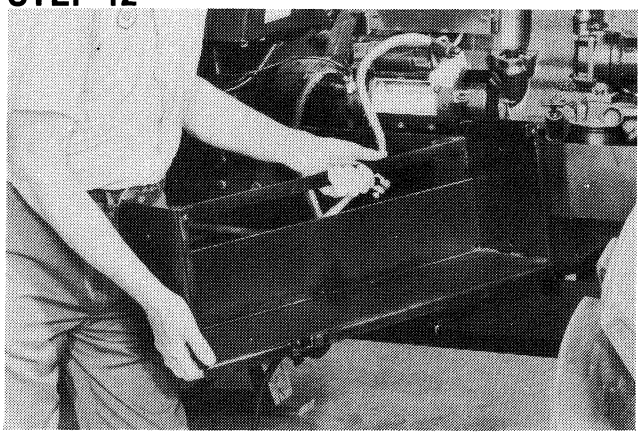
Remove the snap ring from the battery tray hinge pin.

**STEP 11**



Remove the hinge pin.

**STEP 12**

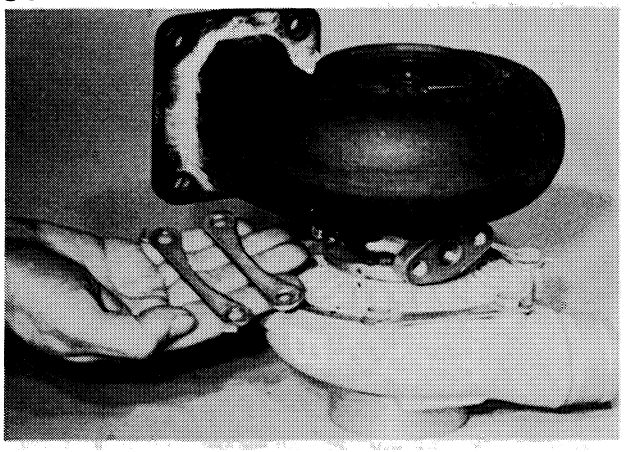


Remove the battery tray.



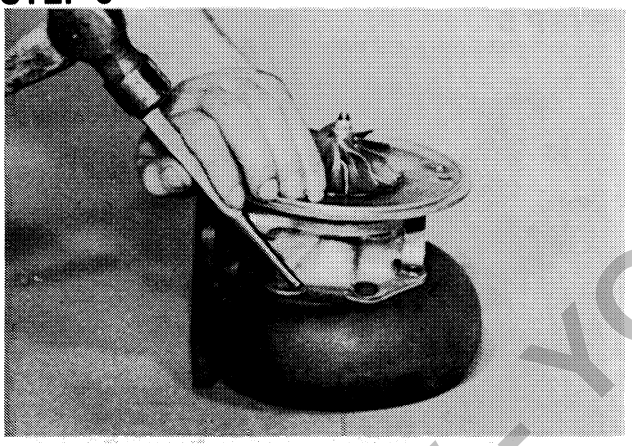
Download full manual at youfixthis.com

**STEP 7**



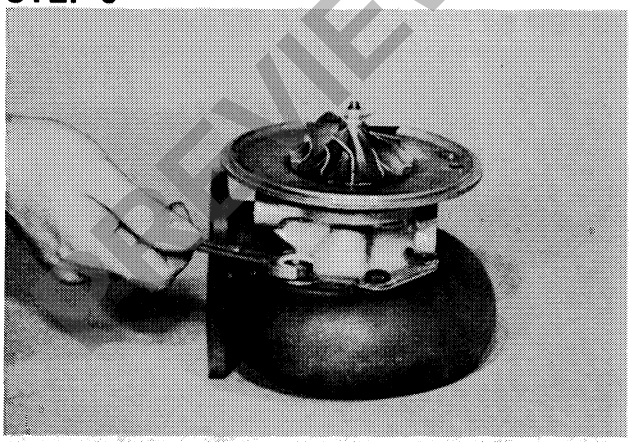
Remove the compressor housing lock plates and clamp plates. Lift the the assembly from the compressor housing.

**STEP 8**



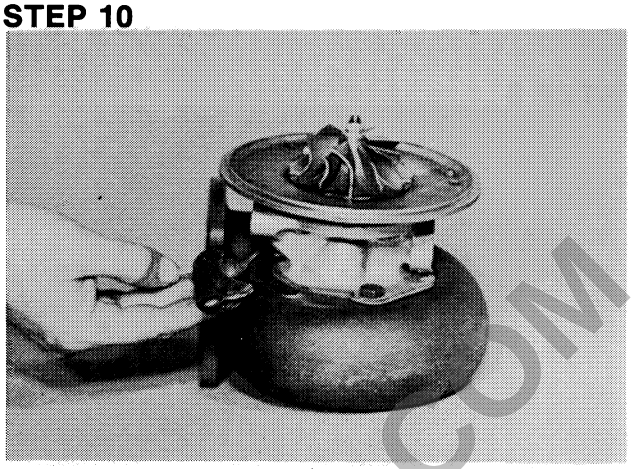
Make the tabs straight on the lock plate.

**STEP 9**



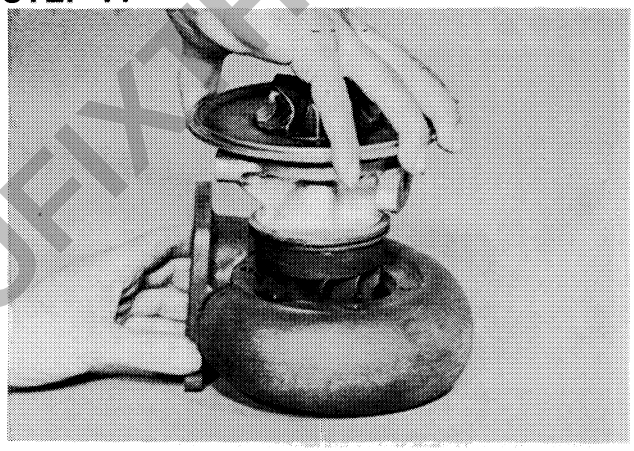
Remove the turbine housing retaining bolts.

**STEP 10**



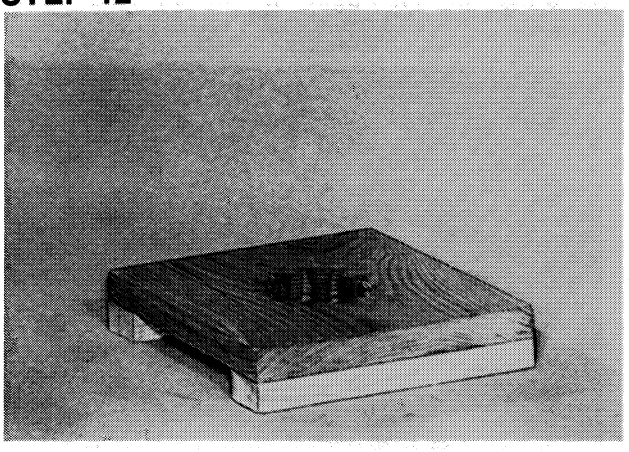
Remove the turbine housing lock plates and clamp plates.

**STEP 11**



Lift the center housing assembly from the turbine housing.

**STEP 12**



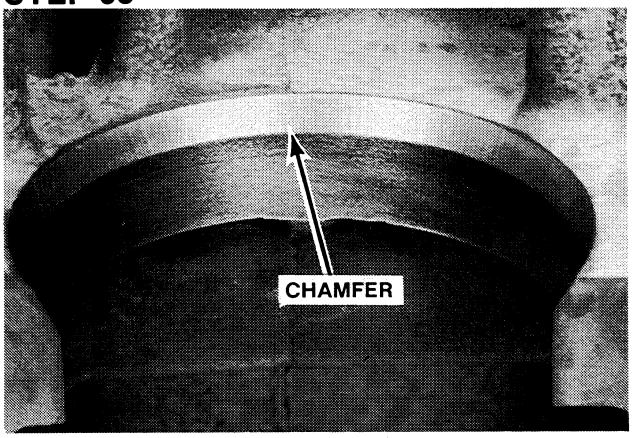
Holding fixture. See Special Tools Which Must Be Made, Page 3.



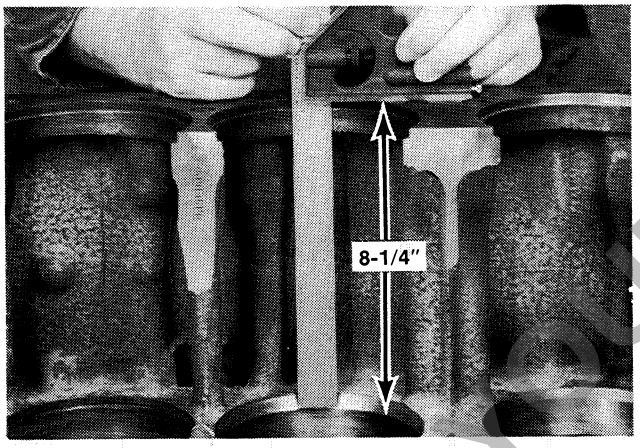
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

**STEP 93**




The lower bore tool can be used to clean up an existing chamfer.




The lower edge of the chamfer must not be more than 8-1/4" (209.55 mm) below the top surface of the cylinder block.

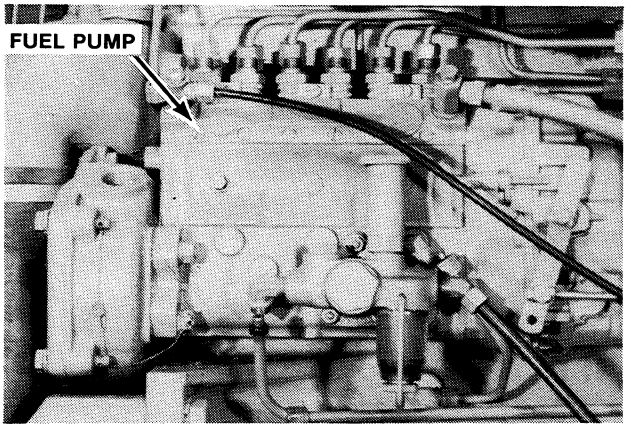
PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

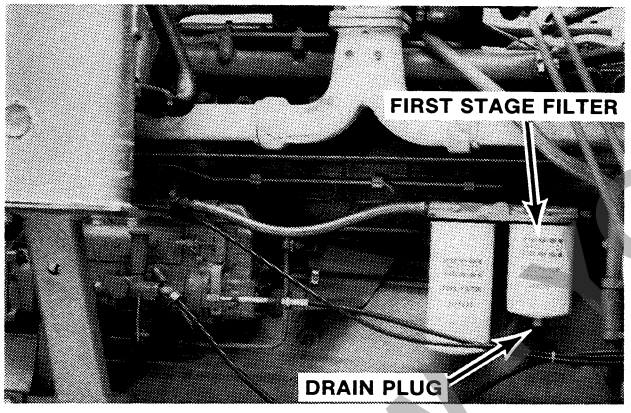
# REMOVING THE FUEL PUMP

## STEP 1



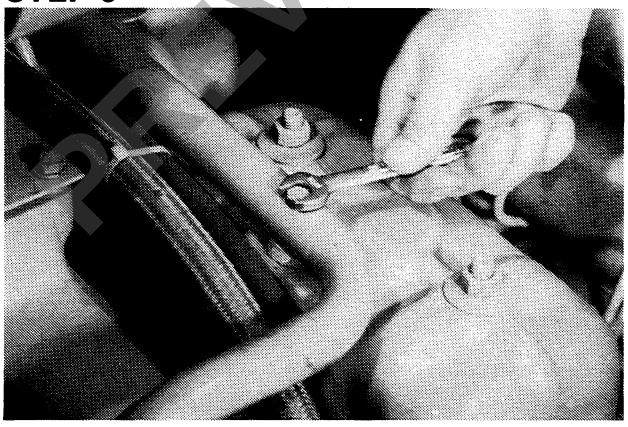

Before doing any service work, clean the engine completely, using steam, in the area of the fuel injection pump and lines.

## STEP 2



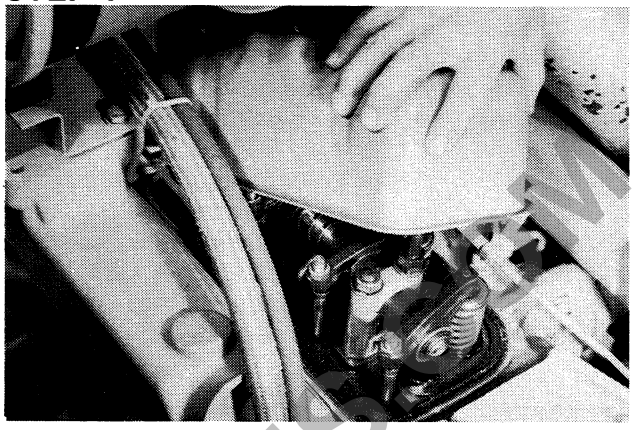

Remove the drain plug from the first stage filter and remove the fuel from the filters. Install the drain plug.

## STEP 3



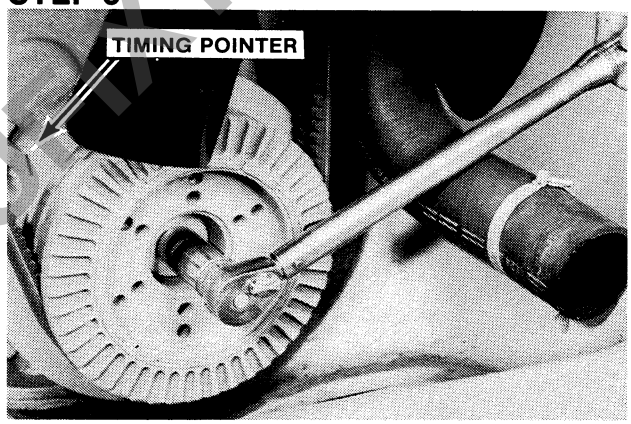
Remove the breather tube.

## STEP 4



Remove the cylinder head valve cover from the Number One and Number Two cylinders.

## STEP 5




Turn the engine over until the timing pointer is aligned with the Top Dead Center timing mark on the crankshaft pulley.

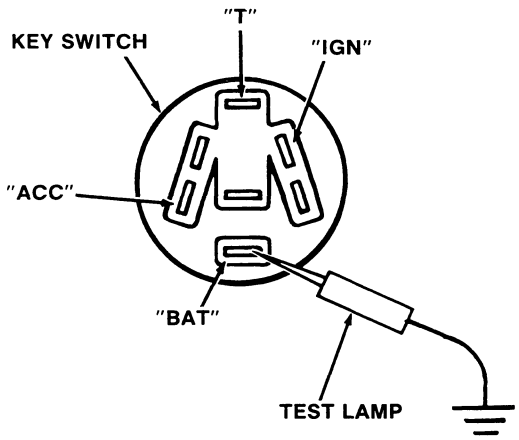
PREVIEW OF YOUFIXTHIS.COM



Download full manual at youfixthis.com

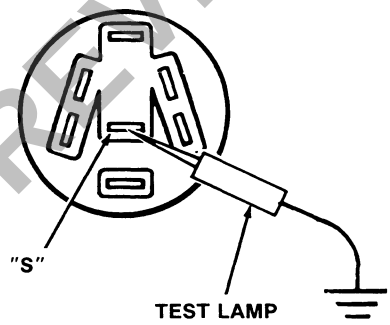
**STEP 3D**

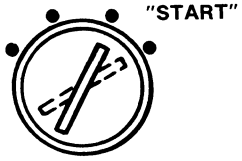
| PROCEDURE | RESULT |
|---|---|
| Check power in the key switch:<br>a. Connect one wire of a 12 volt test lamp to a good ground.<br>b. Connect the other test lamp wire to the "BAT" terminal of the key switch. Check for test lamp illumination. | a. Test lamp illuminates:<br>Continue to Step 3E<br>b. Test lamp does not illuminate:<br>Repair wiring between the "IGNITION SWITCH" fuse in the fuse panel and the key switch "BAT" terminal and<br>Go back to Step 1A |




**STEP 3E**

| PROCEDURE | RESULT |
|---|---|
| Check key switch operation:<br>a. Connect one wire of a 12 volt test lamp to a good ground.<br>b. Connect the other test lamp wire to the center terminal on the key switch.<br>c. Turn the key switch to the "START" position. Check for test lamp illumination. | a. Test lamp illuminates:<br>Key switch is good,<br>Continue to Step 3F<br>b. Test lamp does not illuminate:<br>Replace key switch and<br>Go back to Step 1A |



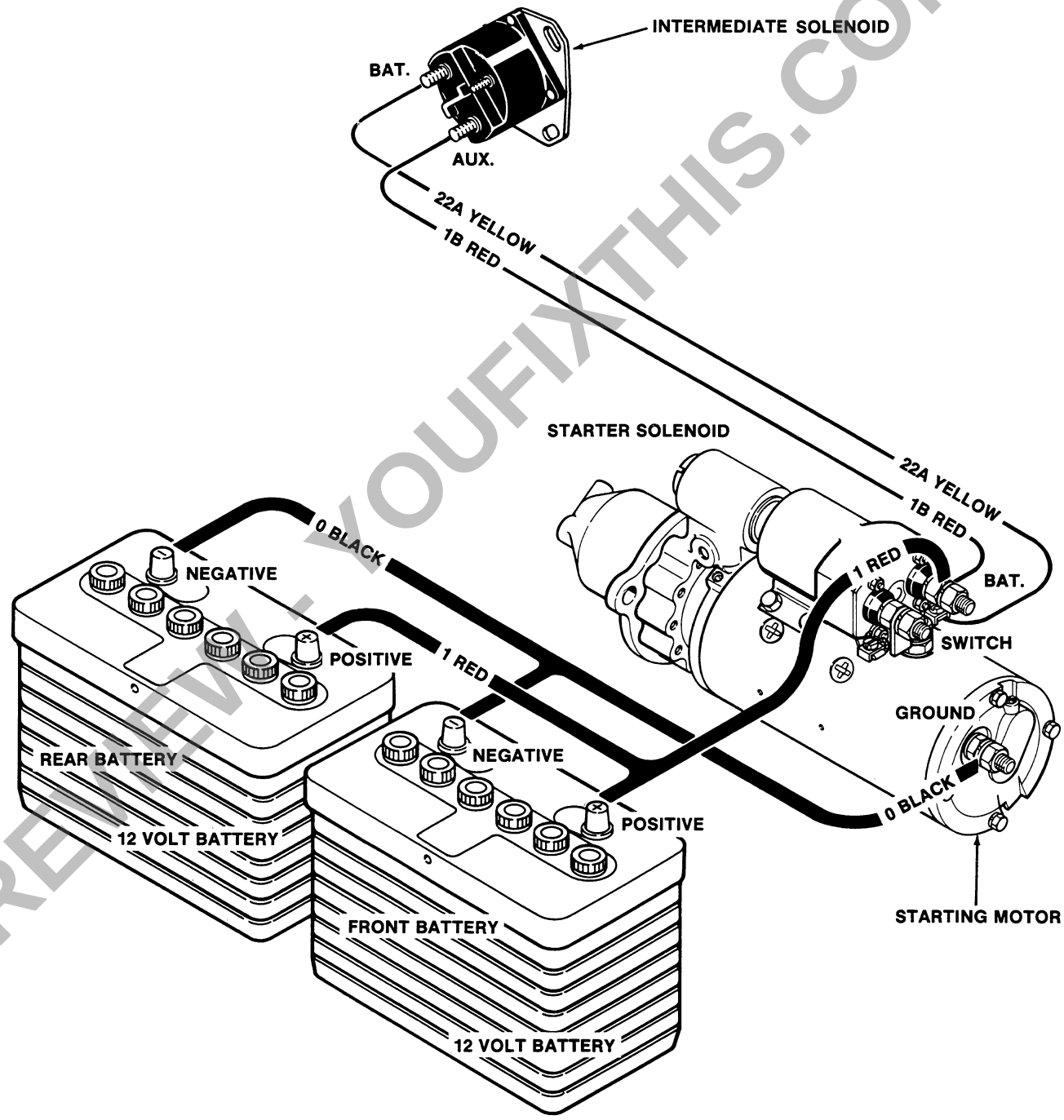

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

# CRANKING SYSTEM

| REF | COLOR | FROM | TO |
|---|---|---|---|
| 0 | Black | Battery Negative Posts | Starting Motor Ground |
| 1 | Red | Battery Positive Posts | Starting Motor Solenoid (Bat.) |
| 1B | Red | Starting Motor Solenoid (Bat.) | Intermediate Solenoid (Bat.) |
| 22A | Yellow | Starting Motor Solenoid (Sw. Term.) | Intermediate Solenoid (Aux. Term.) |

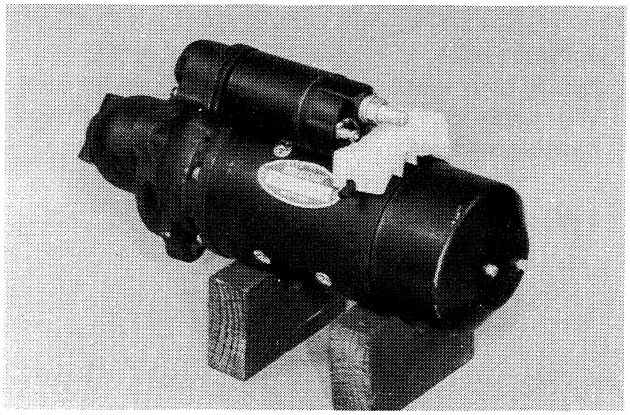



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

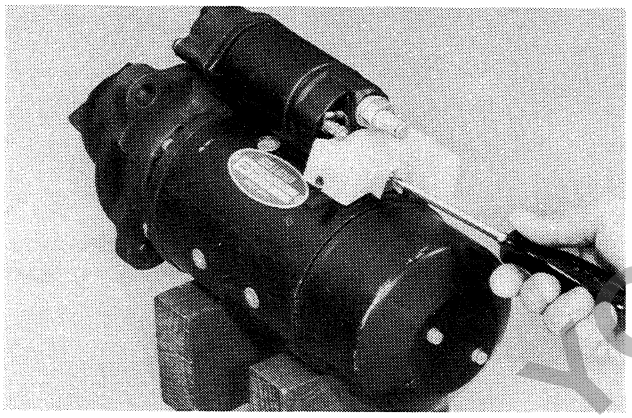
# STARTING MOTOR DISASSEMBLY

**STEP 1**



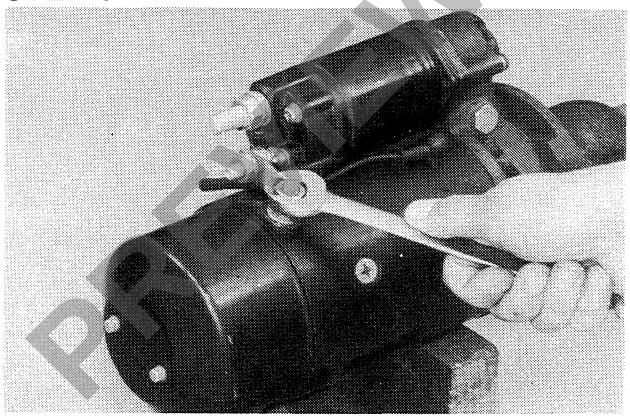
Place the starting motor on a clean work bench.

**STEP 2**



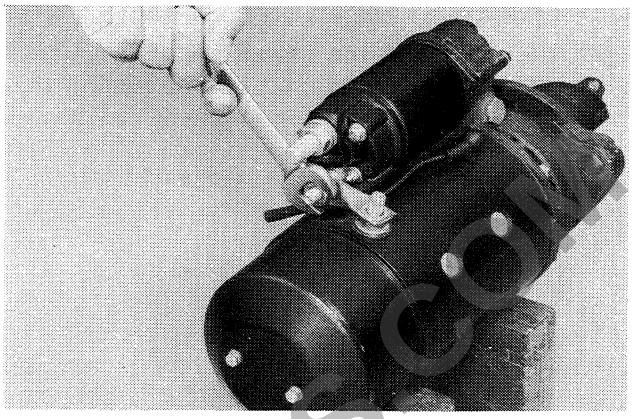
Remove the terminal cover.

**STEP 3**



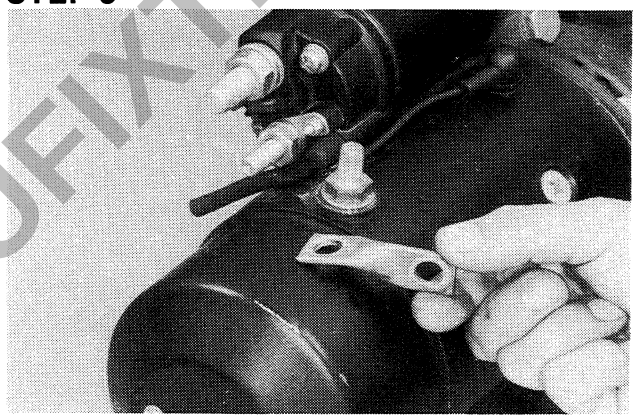
Remove the hex nut from the field coil terminal stud.

**STEP 4**



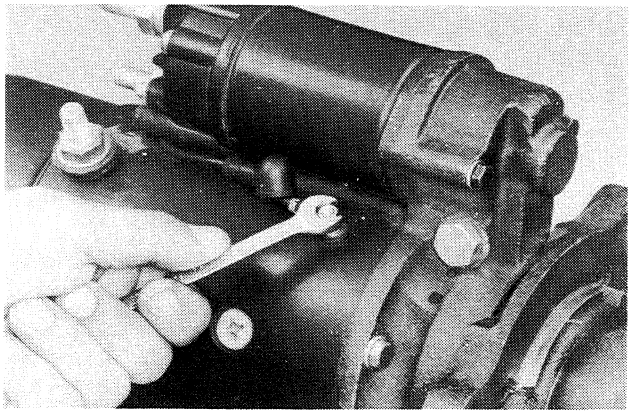
Remove the hex nut from the magnetic switch terminal.

**STEP 5**



Remove the terminal connector.

**STEP 6**



Remove the magnetic switch wire from the terminal.

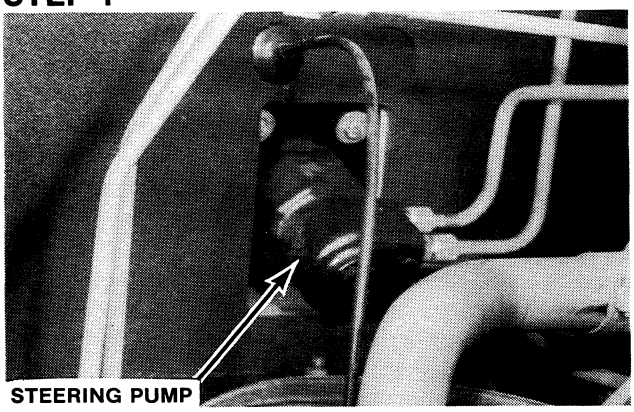
PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

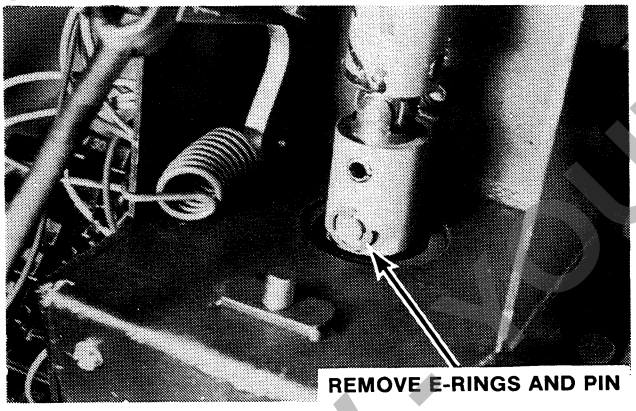
# STEERING PUMP REMOVAL

## STEP 1



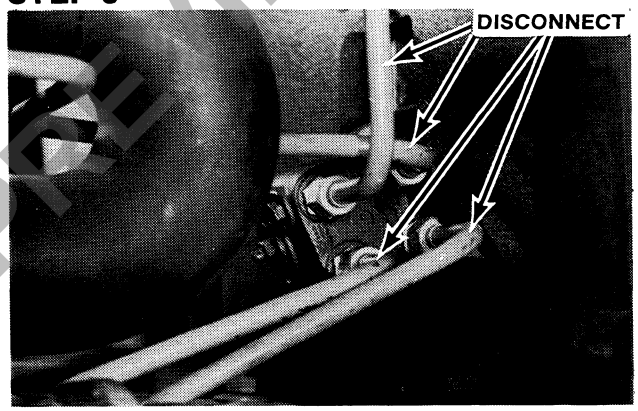

The steering pump mounts on the outside of the engine firewall.

## STEP 2



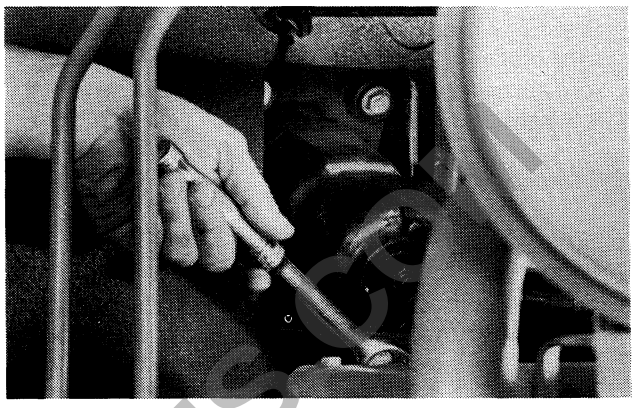

Remove the e-rings and pin from the coupling that connects the steering pump to the universal joint. This coupling is found under the instrument panel.

## STEP 3



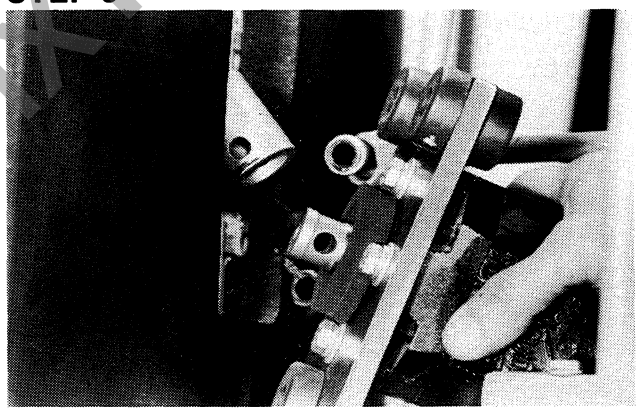

Disconnect the four tubes at the steering pump. Put a cap on the open ends of the tubes.

## STEP 4



Remove the three bolts and washers that hold the steering pump to the engine firewall.

## STEP 5



Remove the steering pump.

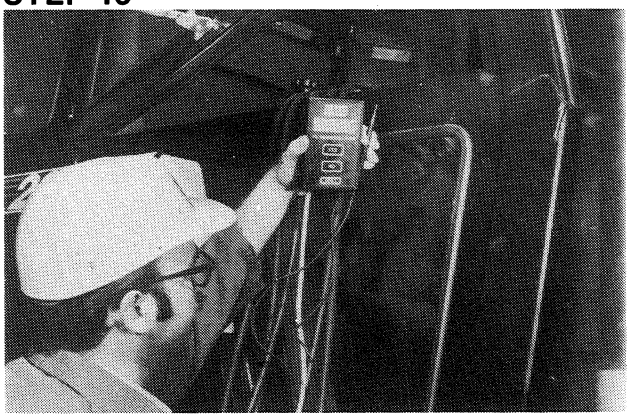
**NOTE:** *See Page 5210-12 for disassembly of the steering pump.*

PREVIEW YOUFIXTHIS.COM



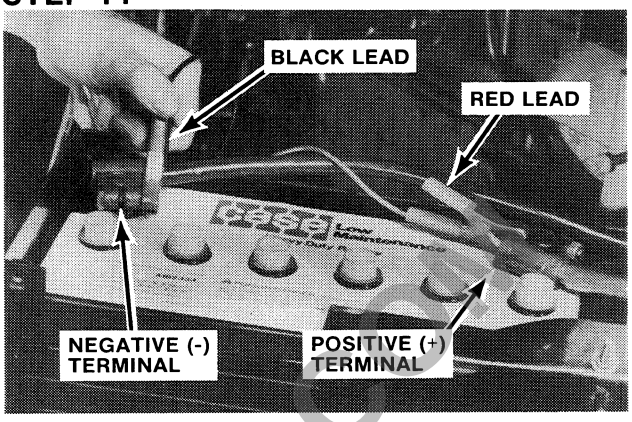
Download full manual at youfixthis.com

**STEP 13**



Open the RH cab window and put the control box and test probe for the monitor inside the cab.

**STEP 14**



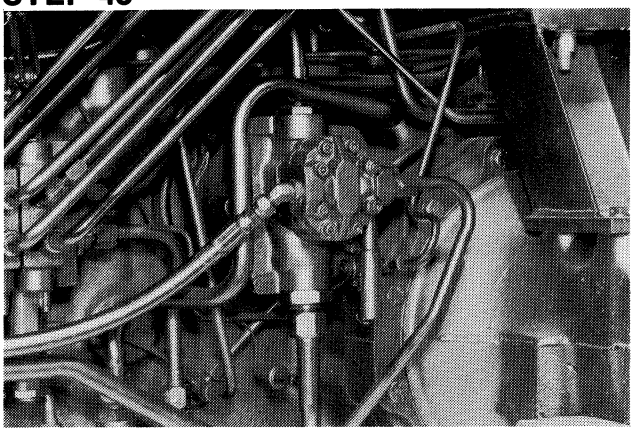

Remove the battery cover. Connect the red lead from the monitor to the positive (+) battery terminal and the black lead to the negative (-) battery terminal.

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

## STEP 45



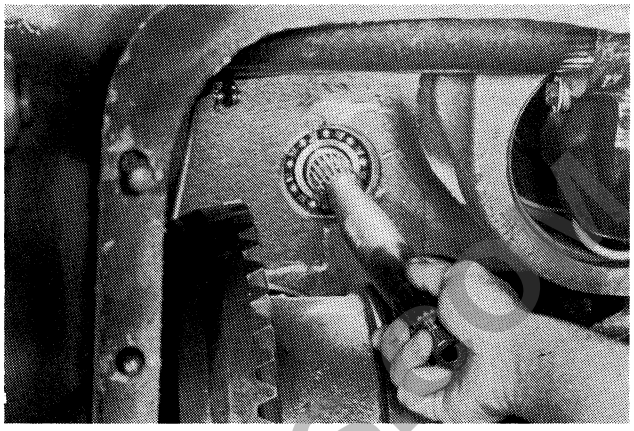
Install the hydralic pump. See Section 8225 in this service manual.

## STEP 46



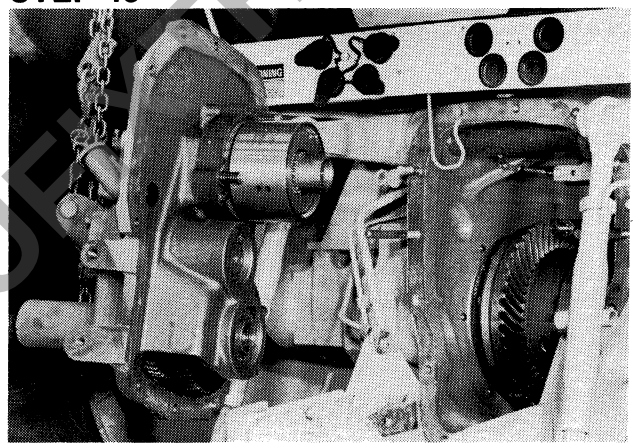

Install the cab on the tractor.

## STEP 47



Install the rear PTO shaft.

## STEP 48



See Section 6245 or 6345 to install the PTO housing.

PREVIEW - YOUFIXTHIS.COM

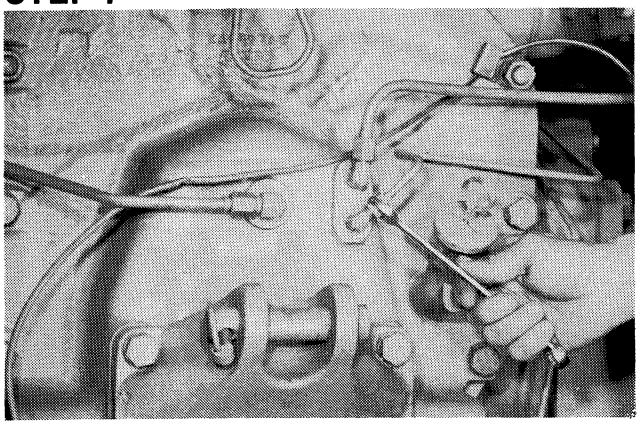
**NOTE:** The Case Company reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.



Download full manual at youfixthis.com

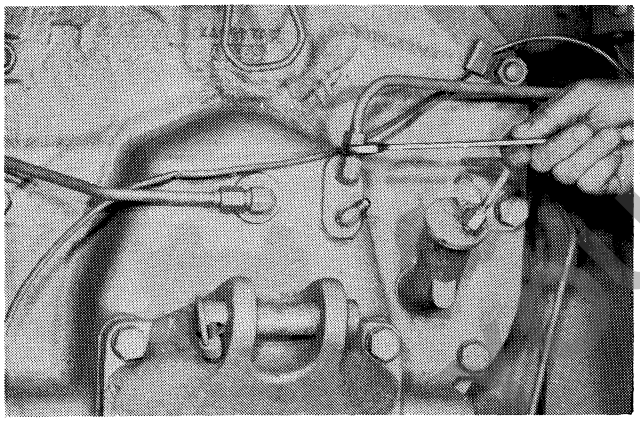
Issued 7-83 Printed in U.S.A.

**STEP 7**



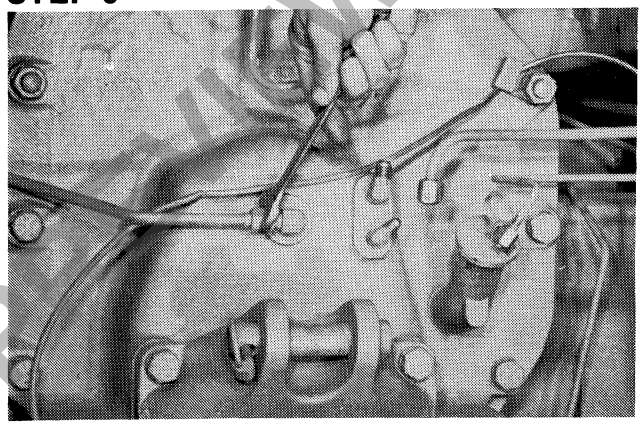
Disconnect the PTO brake tube.

**STEP 8**



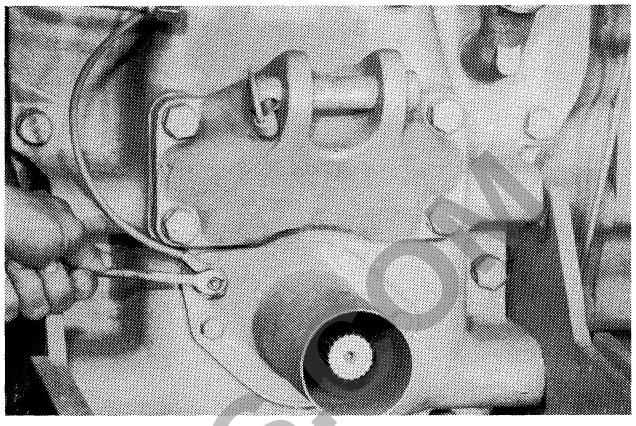
Disconnect the PTO clutch tube.

**STEP 9**



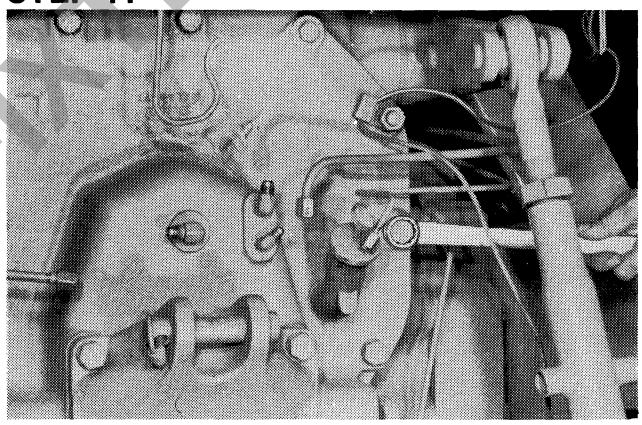
Disconnect the PTO lubrication tube.

**STEP 10**



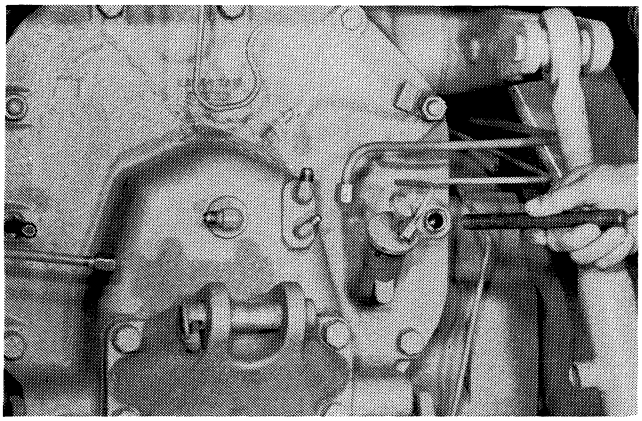
Remove the electrical wire from the transmission temperature sending unit.

**STEP 11**



Remove the two center PTO housing bolts.

**STEP 12**



Install two 5/8 inch NC studs in the bolt holes.

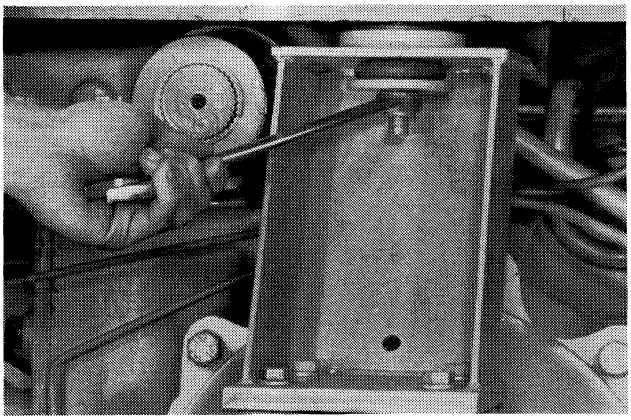
PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

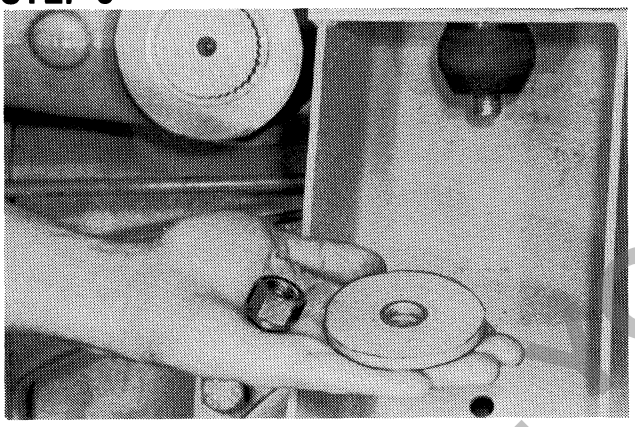
Issued 8-78 Printed in U.S.A.

**STEP 7**



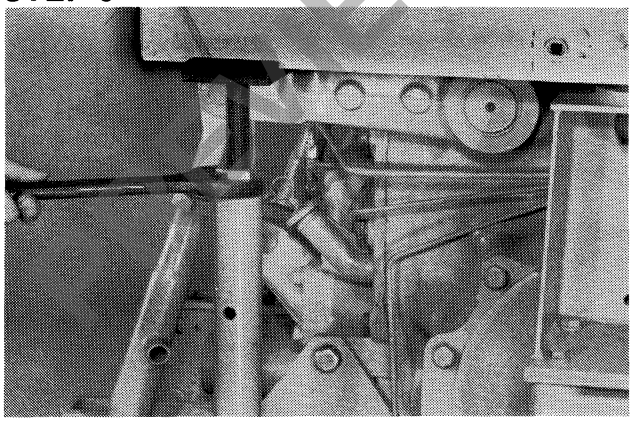
Loosen the platform mount nut on each side of the tractor.

**STEP 8**



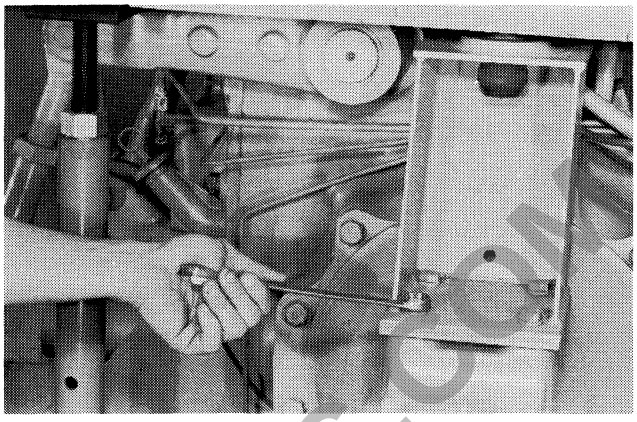
Remove the nut and washer from the platform mount on each side of the tractor.

**STEP 9**



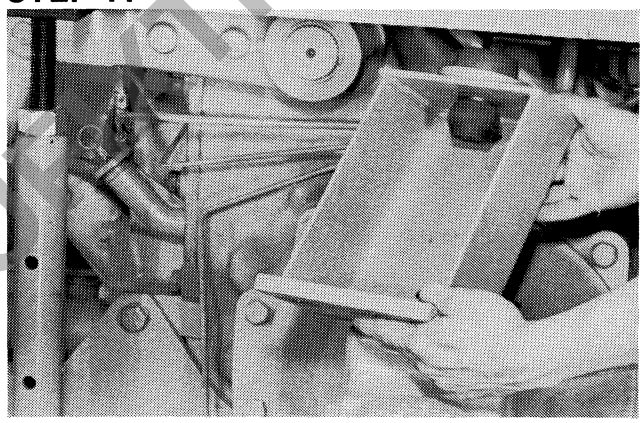
Install the cab stands, Case Part Number CAS-10281 on each side of the cab and lift the cab until the mounting brackets can be removed.

**STEP 10**



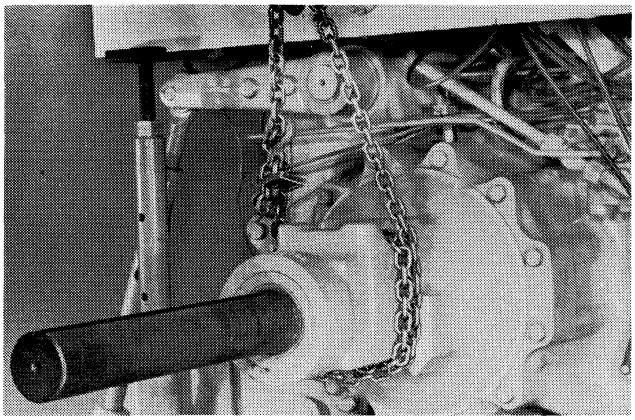
Remove the bolts from each rear mounting bracket.

**STEP 11**



Remove the platform rear mounting bracket.

**STEP 12**



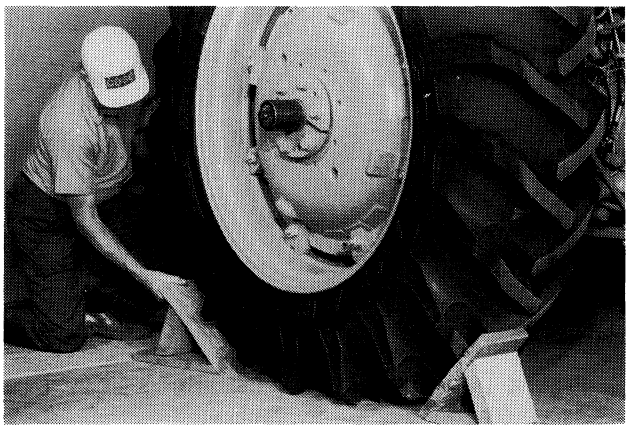
Install a chain and hoist on the tractor rear axle housing.



Download full manual at youfixthis.com

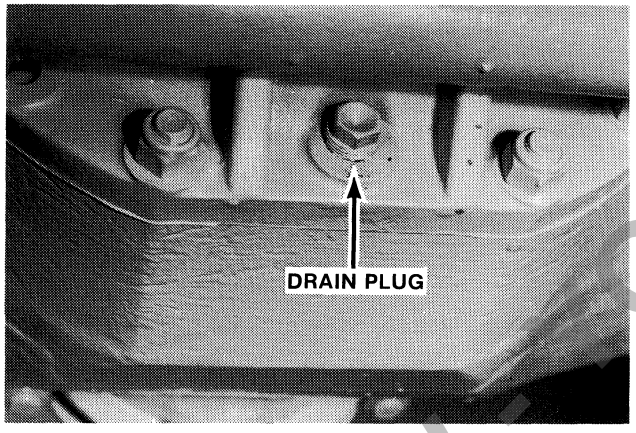
# REMOVAL OF AXLE AND DIFFERENTIAL ASSEMBLY

## STEP 1



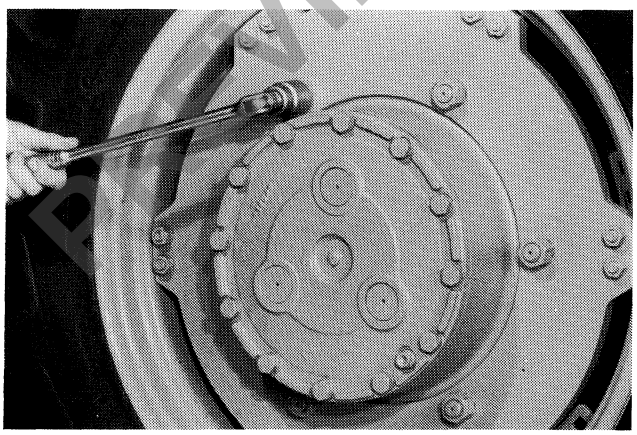
Put the tractor in park. Put blocks in front of and behind the rear wheels.

## STEP 2



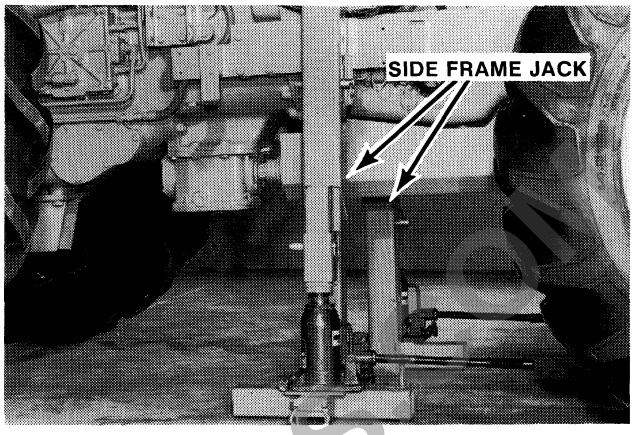

Put a container under the differential drain plug. Remove the plug and drain the oil. Install the plug when the oil is drained.

## STEP 3



Loosen the nuts on the front wheels.

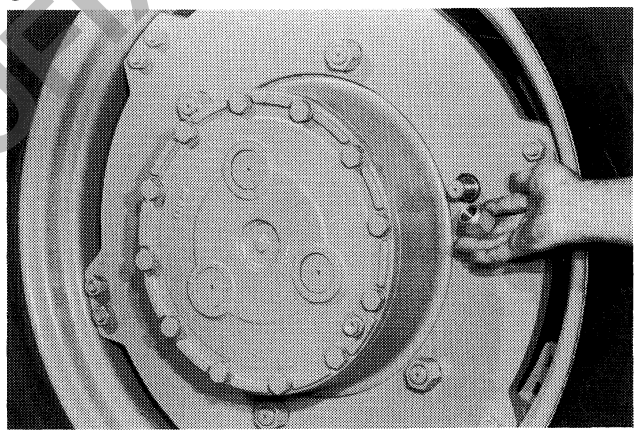
## STEP 4




Install a side frame jack (CAS-10500-1) on each side of the tractor. Raise the front wheels off the ground.

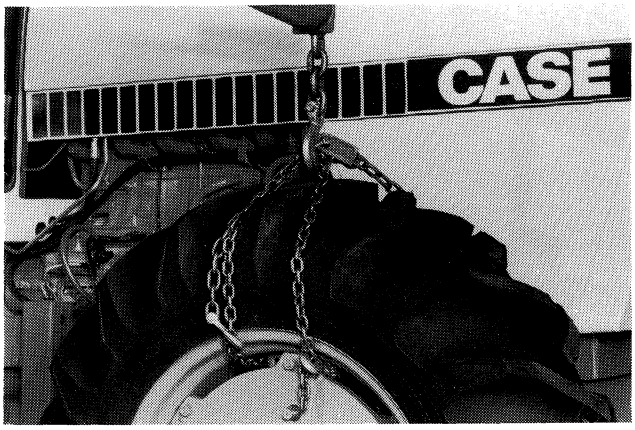
**IMPORTANT:** *Raise both jacks at the same time.*

## STEP 5



Remove the wheel nuts.

## STEP 6

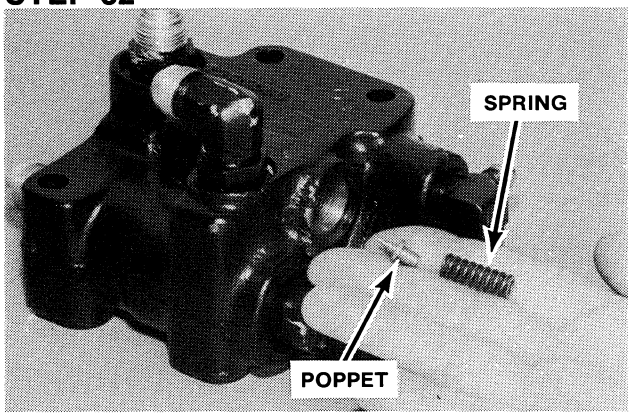



Use a chain hoist to remove the front wheel.



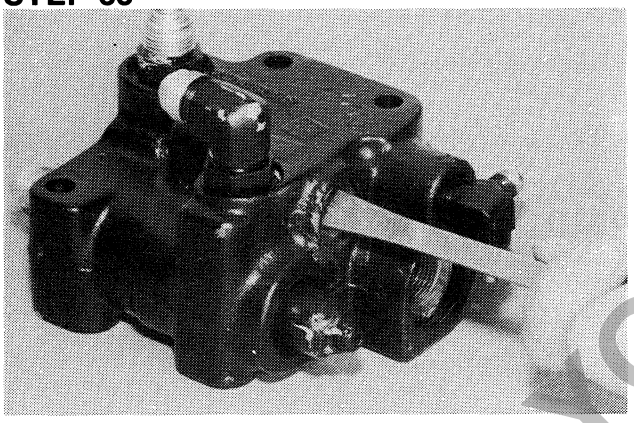
Download full manual at youfixthis.com

**STEP 32**



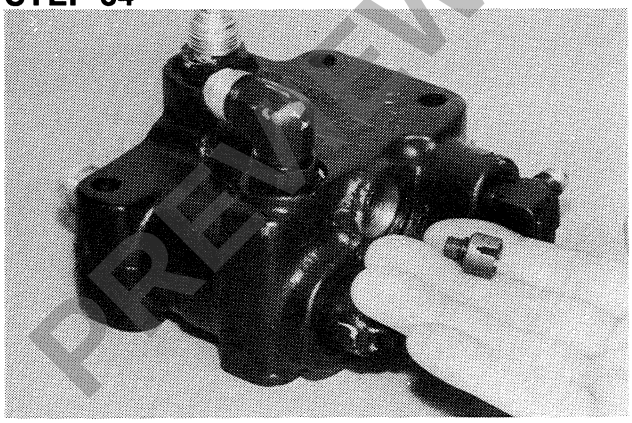

Remove the spring and poppet for the brake relief valve.

**STEP 33**



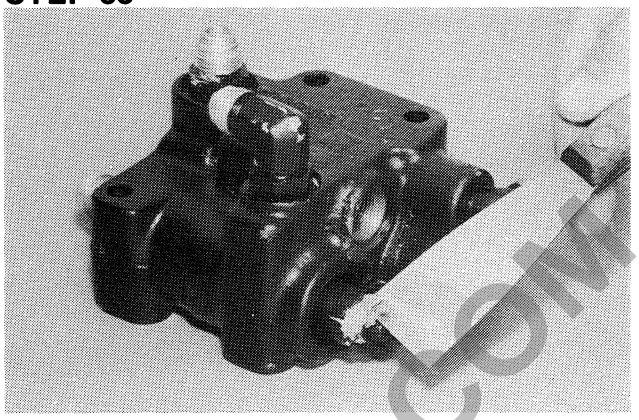
Use a large screwdriver to loosen the relief valve seat.

**STEP 34**



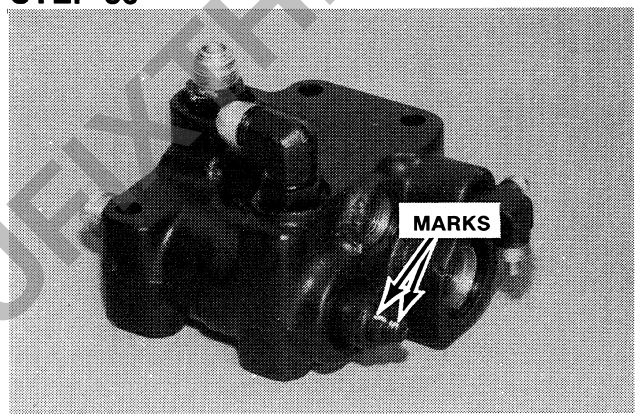
Remove the relief valve seat from the bore.

**STEP 35**



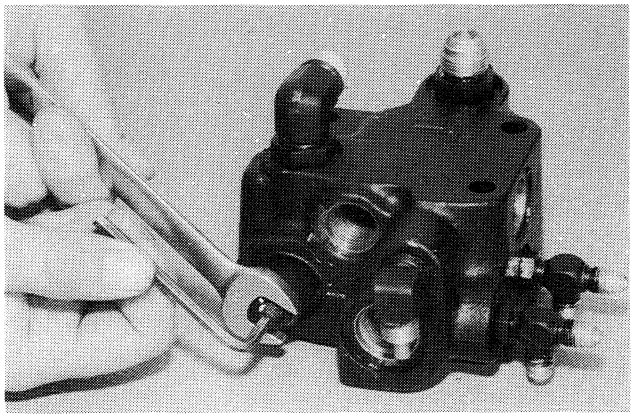
Clean the sealant from around the adjusting screw for the steering relief valve.

**STEP 36**




Put reference marks on the lock nut and the adjusting screw.

**STEP 37**

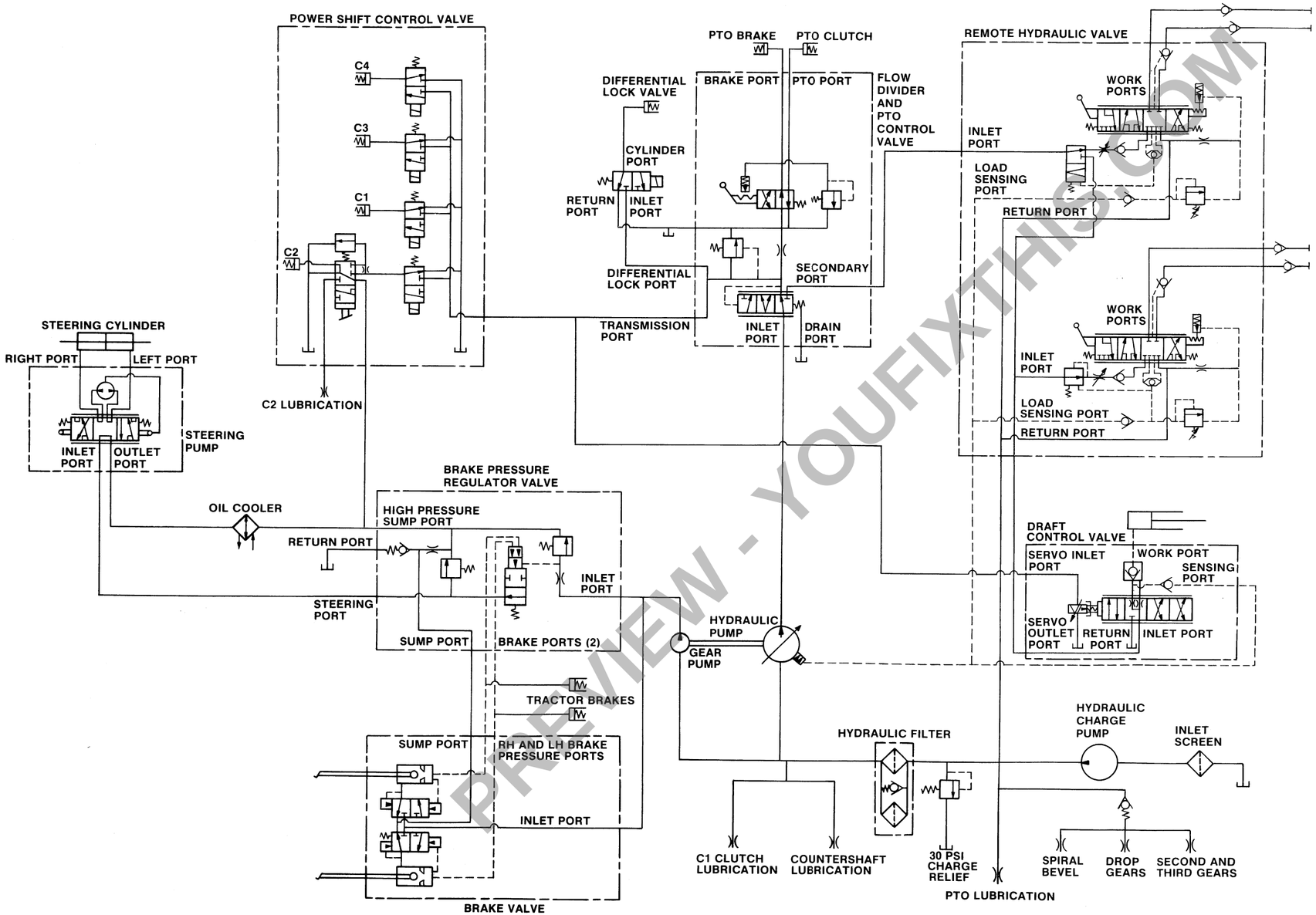


Loosen the lock nut and the adjusting screw at the same time.

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

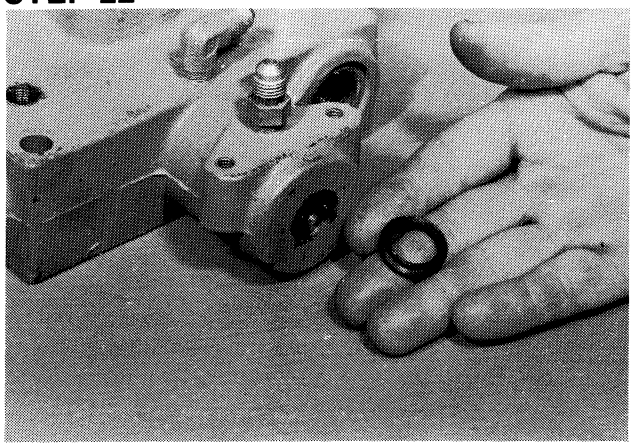



PREVIEW - YOUFIXTHIS.COM



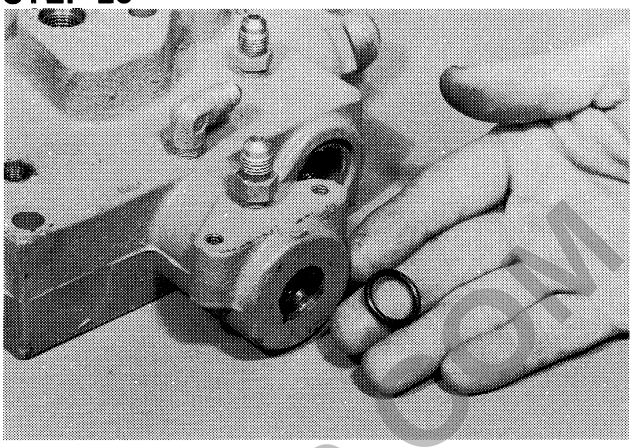
Download full manual at youfixthis.com

**STEP 22**



Remove the wiper seal from the control spool bore.

**STEP 23**



Remove the o-ring from the control spool bore.

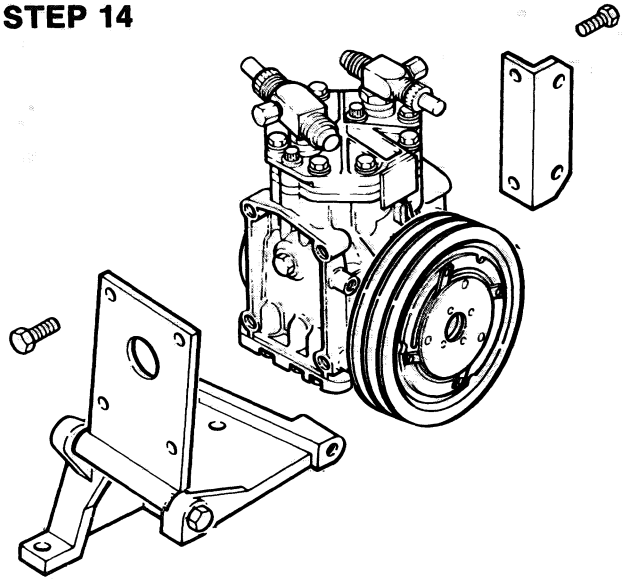
PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

# Compressor Installation and Air and Moisture Removal

**STEP 14**



Install the compressor in the tractor.

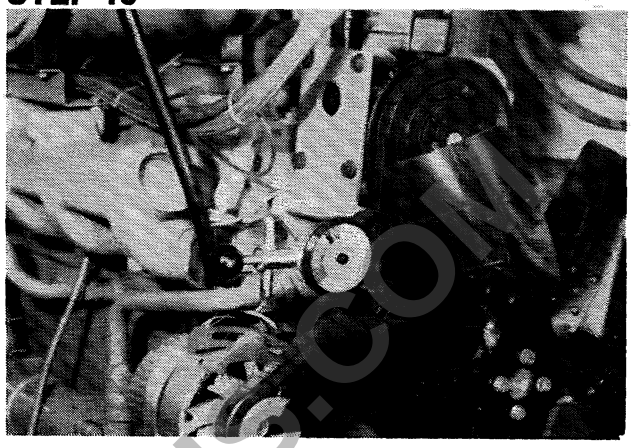
**STEP 15**



Install the service valves on the compressor.

**NOTE:** *Install the service valve with the large outlet fitting in the suction port of the compressor. The suction and discharge ports of the compressor have identification marks "S" and "D".*

**STEP 16**



**Check the compressor belt tension. See Section 9235 for belt tension adjustment.**

PREVIEW YOUFIXTHIS.COM



Download full manual at youfixthis.com

## 12 Speed Power Shift Transition Stage

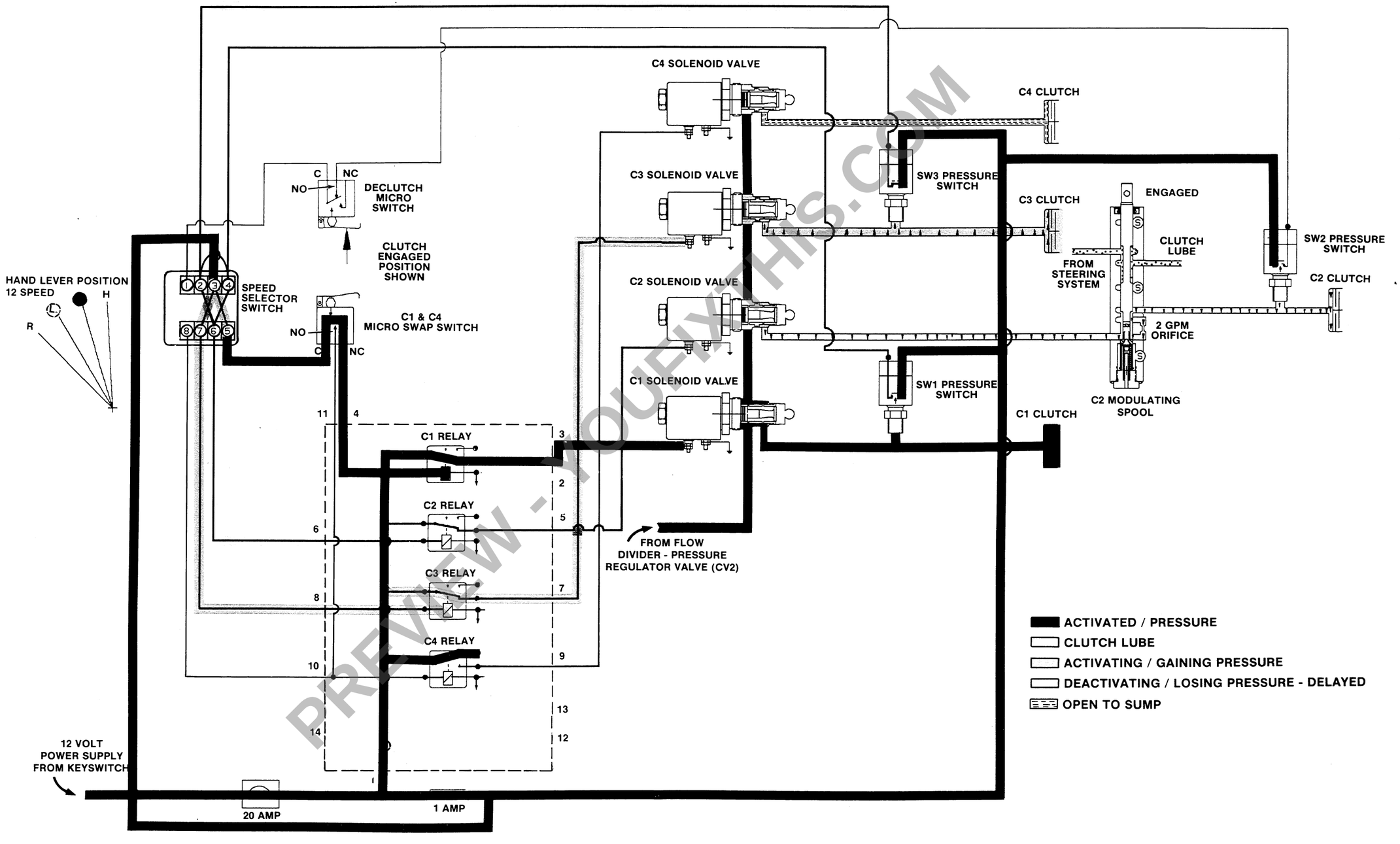



**Figure 1**

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

# PREVIEW ONLY

You're viewing 24 of 2203 pages

## The full manual includes:

- All 2203 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

**GET FULL MANUAL NOW**

**Case 2094, 2294, 3294 Service Manual**

**Scan or click anywhere**
**youfixthis.com**

*Click anywhere on this page to get the full manual*