



J.I. Case

Service Manual

2470 & 2670

4 Wheel Drive Diesel

S/n 8762940 & Up &

8763224 & Up

Volume 1 of 4

Service Manual



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CA-S-2470LATE

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Hydraulic Pump

Type	Direct Drive, Gear Type, Triple Hydraulic Pump
First Section	Charging Pump, Capacity at 2200 Engine RPM - 39 GPM (147.6 l/min.)
Intermediate Section	Supplies oil to the Transmission Hydraulic and PTO. Capacity at 2200 Engine RPM - 17 GPM (64.4 l/min.)
Third Section	Supplies oil to the Steering System. Capacity at 2200 Engine RPM 17 GPM (64.4 l/min.)
Front Steering	7 GPM (26.5 l/min.)
Rear Steering	10 GPM (37.9 l/min.)

Hydrostatic Front Power Steering

Oil Supply	Triple Hydraulic Pump
HGA Hydrostatic Type	Integral and Bi-Directional Gerotor Metering Section, Actuated By the Steering Wheel.
Front Steering Cylinders	Two Double Acting Cylinders

Rear Power Steering

Oil Supply	Triple Hydraulic Pump
Control Valve Type	4 Way, Three Position Spool Type.
Rear Steering Cylinders	Two Double Acting Cylinders
Controls	Hand Lever on Instrument Panel (Manual or Automatic)

Differential and Planetaries

Front and Rear	Spiral Bevel with Planetary Reduction in Hub.
Differential Oil Cap. Ea. (Front & Rear)	19 U.S. Quarts (18 Litres)
Planetary Oil Cap. Ea. (Front & Rear)	12 U.S. Quarts (11.4 Litres)

3 Point Hitch System

Type Control	Hand Lever
Type Valve	3 Positions - Raise - Hold - Lower with Speed Control
Type Draft Arms	Rigid Swinging, with Manual Float Adjustment
Type Hitch	3 Point Category III
Hitch Coupler	Case Available - Category III

Operator's Cab

The Case Tractor Operator's Cabs are equipped with built-in rollover protection (ROPS) as specified in ASAE Standard S-336.1, SAE Standard J168a, and OSHA Regulation 1928.53, Approval Number CA R231.

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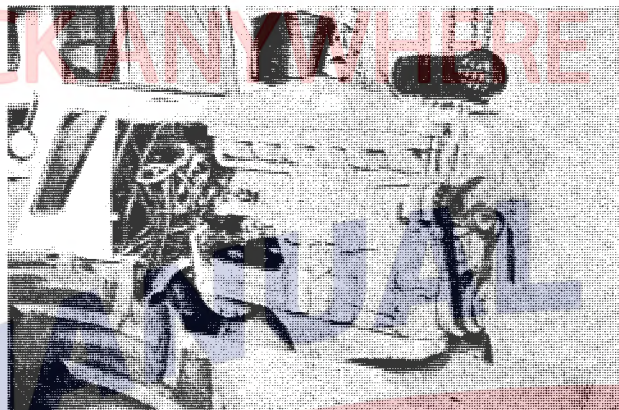
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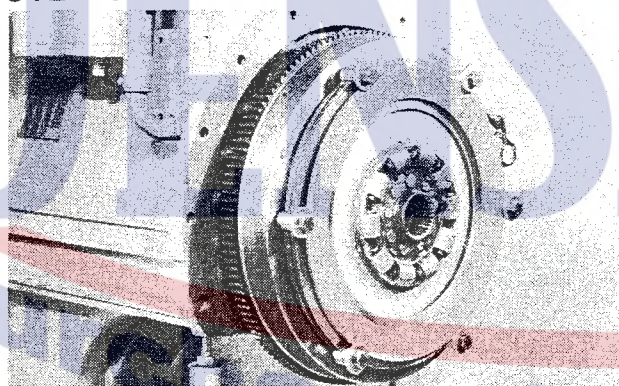
REASSEMBLY

STEP 66



Reassemble the engine to the transmission torque tube by following the reverse order of Steps 64 thru 1 and paying particular attention to the following special reassembly instructions.

STEP 67



Refer to Section 6020 for installing torque limiter on engine flywheel.

STEP 68 (PTO equipped Tractors only)



Align splines on PTO drive sleeve with splines on RPS drive shaft.

STEP 69



Install a new housing gasket, bring engine and torque tube together. Rotate engine as necessary to align drive shaft splines with torque limiter splines. When splines are aligned, push engine until bolt flanges contact.

STEP 70



Torque the engine to torque tube 1/2" mounting bolts 80 to 96 ft. lbs. and the 3/4" mounting bolts 270 to 324 ft. lbs.

STEP 71



Torque the front mounts to engine 3/4" mounting bolts 270 to 324 ft. lbs.

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2045**

**LUBRICATION SYSTEM
Oil Pump and Heat Exchanger**

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SPECIFICATIONS

	Decimal System	Metric System
Turbine Wheel Horizontal End Play	.001 to .004"	.0254 to .1016mm
Turbine Wheel Vertical Play	.003 to .006"	.0762 to .1524mm
Backing Plate Seal Bore I.D. (Max.)	.5010"	12.725mm
Thrust Collar Ring Groove Width	.066"	1.676mm
Thrust Collar Bearing Groove Width	.1752"	4.450mm
Center Housing Bearing Bore I.D. (Max.)	.6228"	15.819mm
Turbine Wheel Bearing Journal O.D. (Min.):		
Standard	.3994"	10.145mm
.005" Undersize Shaft	.3944"	10.018mm
.010" Undersize Shaft	.3894"	9.891mm
Turbine Wheel Blade Tip Thickness (Min.)	.025"	.635mm
Turbine Wheel Ring Groove Width (Max.)	.0735"	1.867mm

SPECIAL TORQUES

Backing Plate to Center Housing Mounting Bolt	75 to 90 in. lbs.	8.4 to 10.1 Nm
Compressor Wheel Lock Nut	18 to 20 in. lbs.	2.0 to 2.2 Nm
Turbine Housing Mounting Bolt	100 to 130 in. lbs.	11.2 to 14.6 Nm
Compressor Housing Mounting Bolt	110 to 130 in. lbs.	12.3 to 14.6 Nm

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SPECIFICATIONS

Aspirated Strata Tube

Service Interval After each season of use or at least once a year.

Final Safety Elements

Dry type 2 element Replaceable element

Primary element change interval After every four washings,
or before if required.

Safety element change interval As Required

Primary element service interval When the red signal appears
in the clear plastic window
of the restriction indicator.

Restriction Indicator

Replacement When the red signal does not disappear
after several resets or does not meet the
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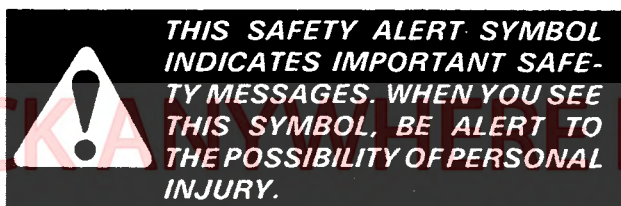
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WARNING

When testing or adjusting fuel injectors, do not place your hands or arms in front of the injector nozzle.



The fuel spray from an injector has sufficient penetrating power to puncture the flesh and destroy tissue. Should the fuel enter the blood stream, it may cause blood poisoning.

In the event the skin is punctured from the discharge of an injector, apply the following first aid immediately, then have the injury examined by a physician as quickly as possible.

Wash the injured part with boric acid solution, support the injured finger or hand with a splint and sling so the injured part will remain absolutely at rest until a physician can examine it.

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**Section
5010**

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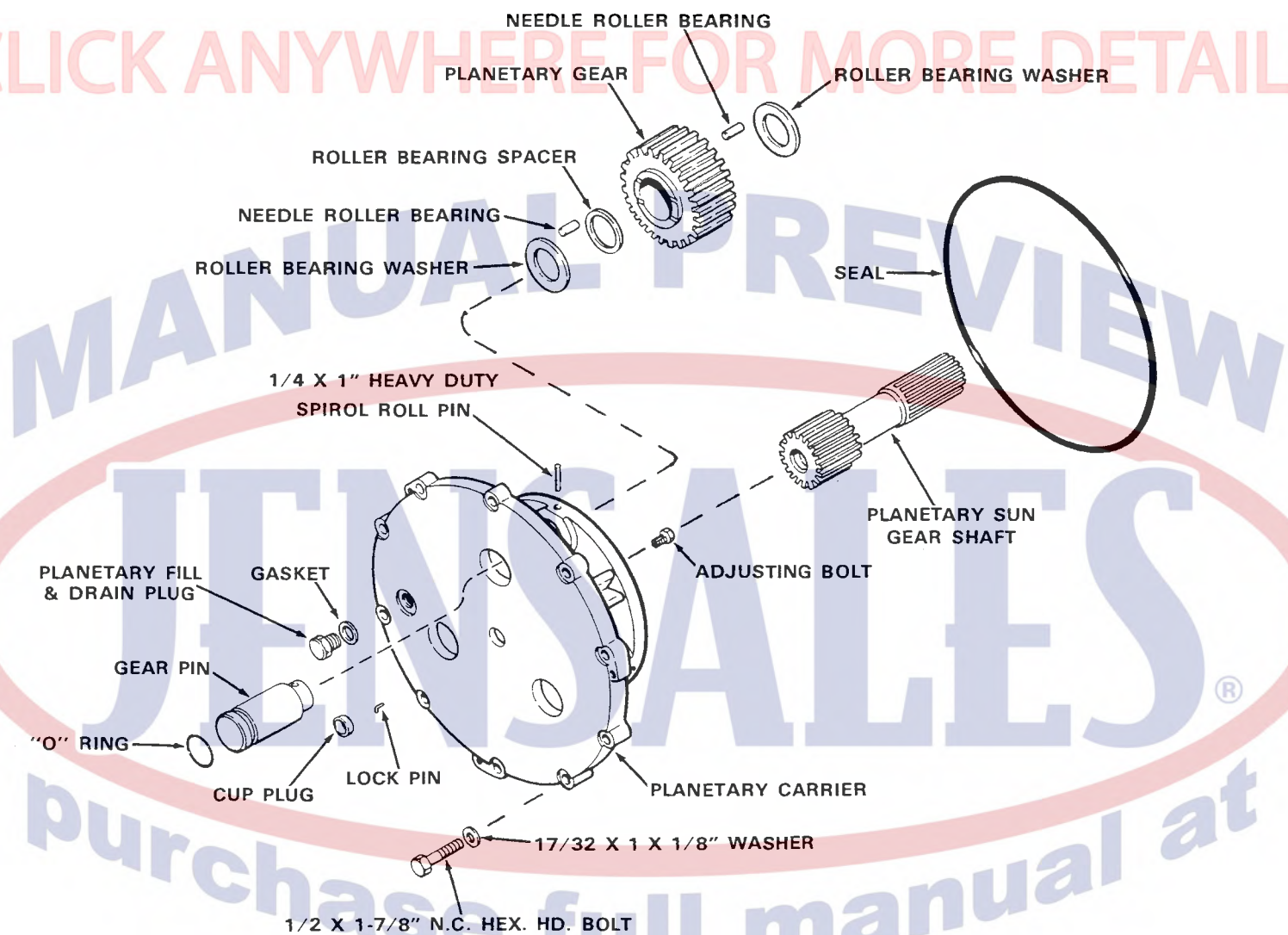
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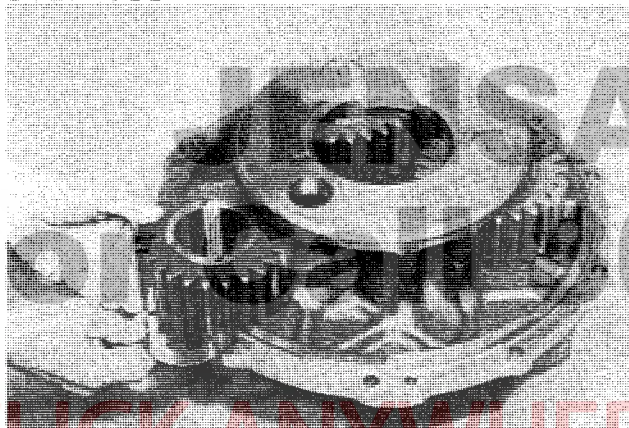
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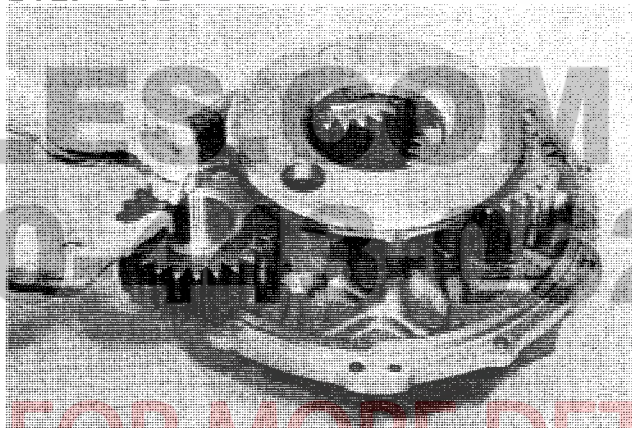


STEP 109



Install planetary gear needle roller bearing washers under planetary gears.

STEP 110



Apply a liberal amount of lubriplate to the needle roller bearings and insert one row of needle roller bearings into the planetary gears.

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Special Torques

	U.S. VALUE	METRIC VALUE
Output Shaft Bearing Retainer Bolts	35 to 42 ft. lbs.	47 to 57 Nm
Intermediate Shaft Lock Nut (Stake in place)	60 to 75 ft. lbs.	81 to 102 Nm
Oil Distributor Carrier Bolt	35 to 42 ft. lbs.	47 to 57 Nm
Transmission Bottom Cover Bolts	35 to 42 ft. lbs.	47 to 57 Nm
Transmission Drain Plug	17 to 20 ft. lbs.	23 to 27 Nm
Output Shaft Yoke Retaining Nuts -		
2470 Tractors - 1-1/8" Locknuts	220 to 300 ft. lbs.	298 to 407 Nm
2670 Tractors - 1-3/8" Locknuts	460 to 640 ft. lbs.	624 to 868 Nm
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Section

8012

STARTING OR CRANKING MOTORS

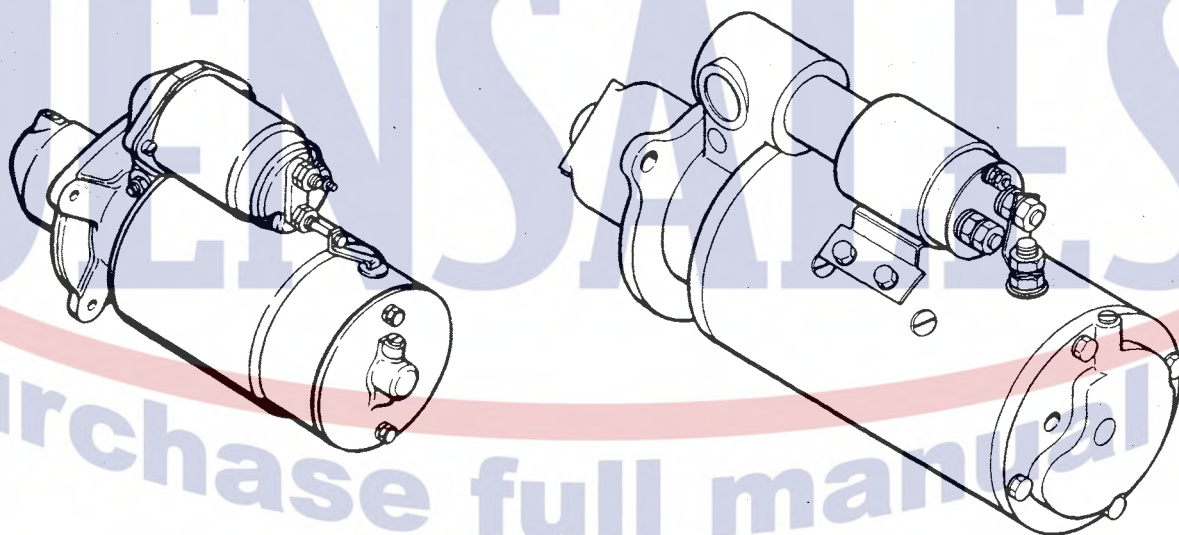


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CASE CORPORATION

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Section

8014

PRESTOLITE ALTERNATOR SYSTEMS

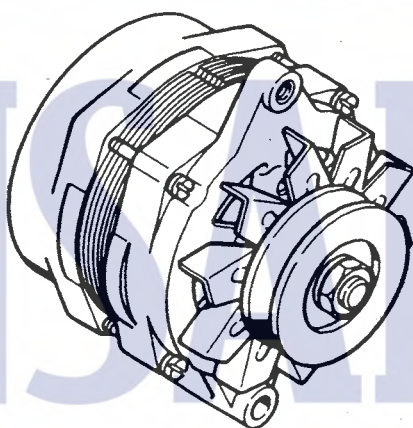


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Section

8114

DELCO-REMY 10-SI SERIES ALTERNATOR SYSTEM

DELCO-REMY PART NO.
LOCATION REFER TO
SPECIFICATIONS

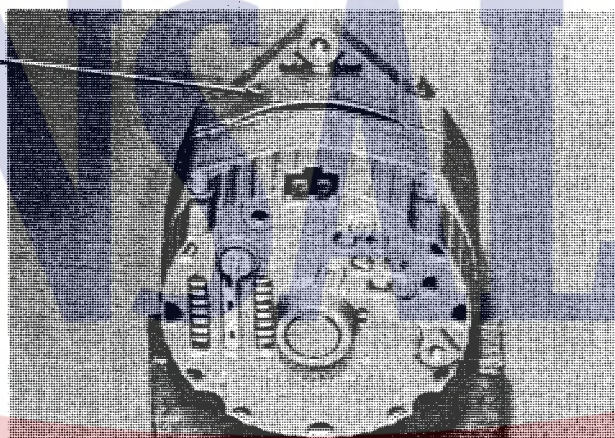


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Checking Alternator System Resistor	26

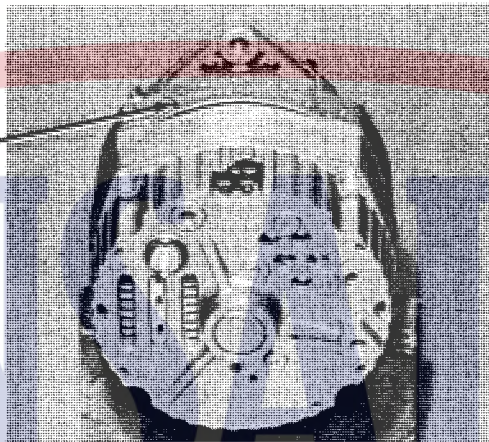
SPECIFICATIONS

CASE PART NO.	DELCO- REMY NO.	FIELD CURRENT 80 Deg. F.		COLD OUTPUT 75 Deg. F.			RATED HOT OUTPUT 160 Deg. F.
		AMPS	VOLTS	AMPS	RPM	VOLTS	AMPS
A135715	1102867	4.0-4.5	12	55	6500	13	50
A45202	1100585	4.0-4.5	12	61	6500	13	56
A137862	1102914	4.0-4.5	12	55	6500	13	50

Section

8115

DELCO-REMY 10-SI SERIES ALTERNATOR SYSTEM



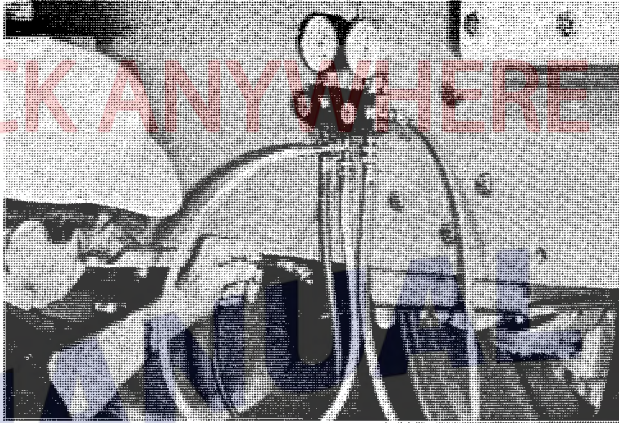
DELCO-REMY PART NO.
LOCATION REFER TO
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Checking Alternator System Resistor	26

SPECIFICATIONS

CASE PART NO.	DELCO- REMY NO.	FIELD CURRENT 80 Deg. F.		COLD OUTPUT 75 Deg. F.			RATED HOT OUTPUT 160 Deg. F.
		AMPS	VOLTS	AMPS	RPM	VOLTS	AMPS
A47057	1102921	4.0-4.5	12	61	6000	13	56
A147159	1102928	4.0-4.5	12	61	6000	13	56
A47044	1102922	4.0-4.5	12	72	6500	13	64
A147160	1102930	4.0-4.5	12	72	6500	13	64

STEP 5

LOW PRESSURE
GAUGE

HIGH
PRESSURE
GAUGE

HIGH PRESSURE VALVE
(SMALL FITTING)

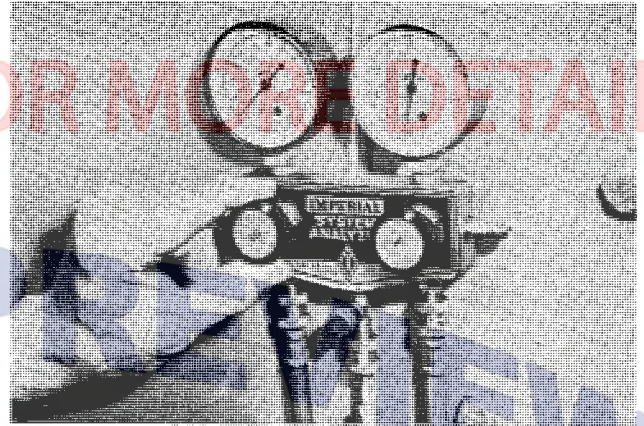
LOW PRESSURE VALVE
(LARGE FITTING)

COMPRESSOR

Connect test gauge hoses to test ports. **NOTE:** Low pressure gauge hose to suction valve (valve with large outlet fitting).

STEP 6

Gauge hoses connected to service valve test ports.

STEP 7

Check manifold gauge valves, they must be closed.

STEP 8

TEST PORT

MID-POSITION

ADJUSTING STEM

Mid-position (two turns clockwise) both compressor service valves. Crack each manifold valve, 3 to 5 second to purge air from the hoses. The manifold gauge set is now connected into the air conditioning system and performance testing can now be made.

CLICK ANYWHERE FOR MORE DETAILS

Section

9025

COMPRESSOR ISOLATION, REMOVAL, INSTALLATION AND EVACUATION

DISCHARGING, EVACUATION AND CHARGING THE AIR CONDITIONING SYSTEM

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Section

14015

**HYDRAULIC PTO CLUTCH, CONTROL VALVE
AND DROPBOX**

HOW IT WORKS

MANUAL PREVIEW

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Section

15010

STEERING HAND PUMP AND VALVE

HOW IT WORKS

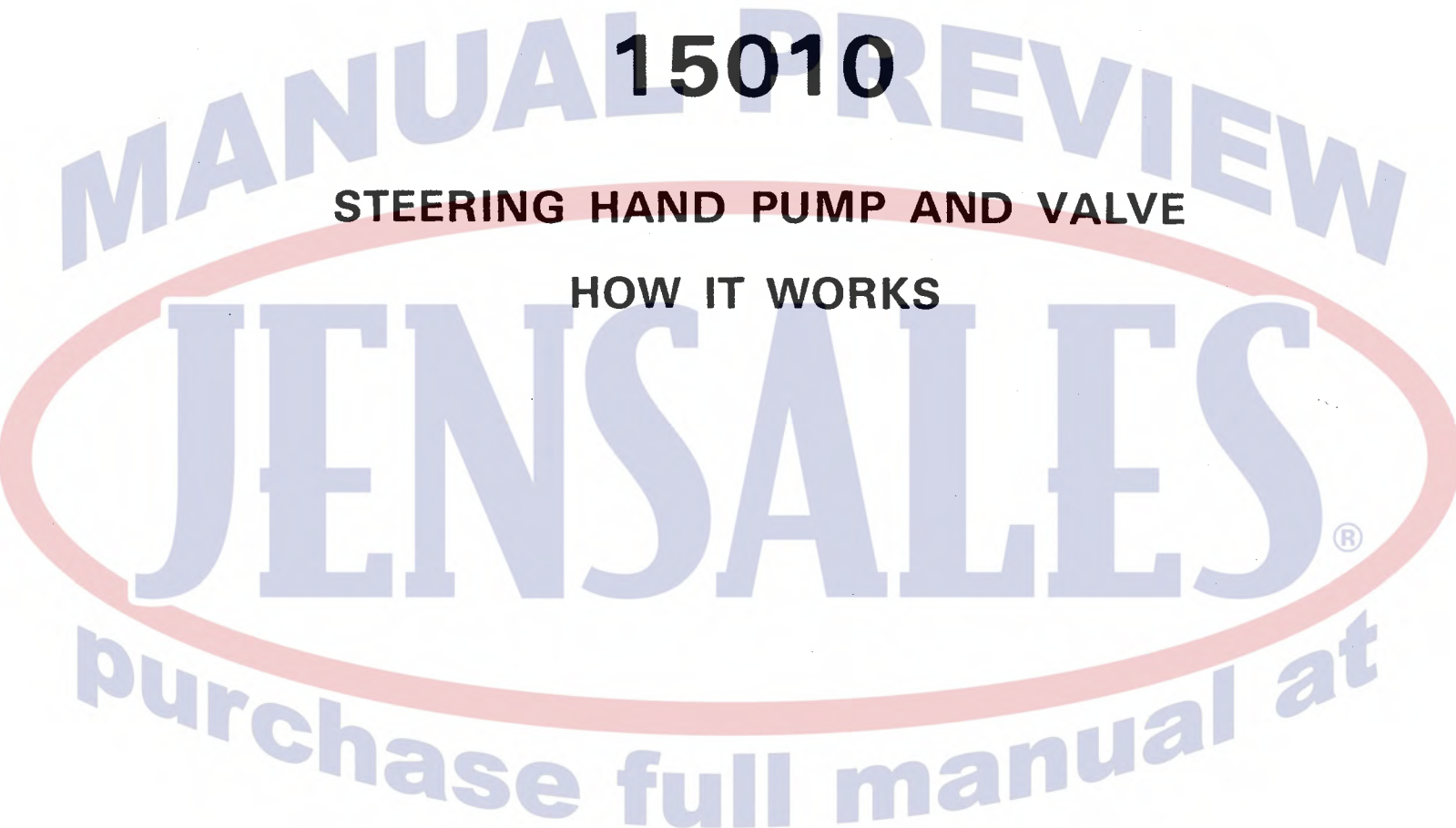


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**Section
15012**

**REAR STEERING CONTROL VALVE
AND CHECK VALVE
HOW IT WORKS**

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16030

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Section

19010

AIR CONDITIONING

THEORY OF OPERATION

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