




SAFETY NOTICE


 **STOP!** Before you begin, please read this manual carefully. The repair procedures outlined in this manual are for repairing the Sheppard Integral Power Steering Gear. To ensure safe and reliable operation, these service and repair procedures must be followed carefully.



THIS MANUAL CONTAINS A NUMBER OF SAFETY SIGNAL WORDS LIKE: DANGER, WARNING, CAUTION, IMPORTANT, or NOTE. The information following a safety signal word is very important.

When you see the word  **DANGER** it means the information will help you avoid an extreme hazard that could kill or cause a very serious injury every time.

When you see the word  **WARNING** it means there is a hazard that is not as serious as DANGER but the hazard could cause injury or death if you do not follow the proper rules or procedures.

When you see the  **CAUTION** it means the information that follows will help avoid damage to the steering gear.

The signal words IMPORTANT or NOTE are used to draw attention to ways of doing your job better or right.

Sheppard Power Steering gears have no external adjustments for sector shaft or valve shaft pre-load. Make sure all linkages and system components are within vehicle manufacturers specs.

TORQUE: Check all fastener torques when installing the steering gear. A torque chart for steering gear fasteners can be found in the chart below. Consult the vehicle manufacturers service manual for steering gear to frame, pinch bolt and drag link torque values.

PITMAN ARM: Pitman arm application torque is critical. Follow the pitman arm installation instructions in this manual.

! DANGER IMPROPER INSTALLATION OF THE PITMAN ARM COULD LEAD TO AN ACCIDENT OR SERIOUS PERSONAL INJURY!

SET RELIEF PLUNGERS: Verify the type of relief plungers in your steering gear. Refer to the Common Procedures section of this manual to properly set the relief plungers.

BLEED THE SYSTEM: Follow the guidelines in the Common Procedures Section for proper bleeding of both single and dual gear systems.

TORQUE SPECIFICATIONS

APPLICATION	SIZE	GRADE	FT/LBS	(Nm)
Bearing Cap Cover - All M-Series	M10 x 1.5	10.9	53-64	(72-87)
Bearing Cap Bolts				
M80	M10 x 1.5	10.9	53-64	(72-87)
M90	M12 x 1.75	8.8	72-87	(97-118)
M100	M14 x 2.0	8.8	114-140	(154-190)
M110	M16 x 2.0	10.9	230-277	(312-376)
Cylinder Head				
M80	M10 x 1.5	10.9	53-64	(72-87)
M90	M12 x 1.75	8.8	72-87	(97-118)
M100	M14 x 2.0	8.8	114-124	(154-190)
M110	M10 x 1.5	10.9	53-64	(72-87)
All Clip Style Cover Bolts	M8 x 1.25	12.9	31-38	(42-52)

TROUBLESHOOTING CHECKLIST

Before proceeding with the following tests, be sure to read the diagnosis and Troubleshooting section of this manual. Check all mechanical and external conditions before hydraulic testing.

Date: _____

Servicing Dealer Location: _____

Customer Name: _____

Description of Steering Complaint:

Vehicle Model _____ **Mileage** _____ **VIN** _____
Steering Gear Model: _____ **Serial No.** _____
Slave Gear Model (if equipped) _____ **Serial No.** _____
Pump Manufacturer _____ **Front Axle Weight** _____

Hydraulic Tests:

Do not remove the steering gear! Install a pressure and flow tester in series with the pressure line of the pump as outlined in the Diagnosis and Troubleshooting Section. Record the following information:

Stabilized Oil Temperature: _____
System Backpressure @ Idle _____ **Backpressure @ Full RPM** _____
Maximum System Pressure (Pump Relief Setting) _____ **psi**
Flow @ Idle with Backpressure Only _____ **GPM**
Flow @ Full Governed RPM Backpressure Only _____ **GPM**
Flow @ Idle With 1500psi Load Applied _____ **GPM**
Flow @ Full Governed RPM With 1500psi Load Applied .. _____ **GPM**

Static Steer Pressure **Right Turn** _____ **psi** **Left Turn** _____ **psi**
Static Steer Input **Right Turn** _____ **In. Lbs** **Left Turn** _____ **In. Lbs.**

If you are unsure of your diagnosis contact **Sheppard Field Service** at **1-800-274-7437**

Heavy Duty Power Steering Test Kit

This tester is a self contained, direct reading device to check system flow, pressure or both simultaneously. Requiring no electrical connections, it can detect worn components, verify flow and pressure control settings or monitor overall performance.

EASY TO USE -

Only one hose connection is broken, either at the pump output or at the pressure input to the power steering gear housing.

- Installs between pump and steering gear
- Shutoff valve isolates pump from gear
- Pressure and flow can be read simultaneously
- 0-3000 P.S.I. pressure gauge
- 1-10 G.P.M. flow meter
- Complete with hoses & standard swivel fitting



- **SHIPMENT FROM STOCK**
- **INCLUDES SHEPPARD SERVICE MANUAL**

PHOTOCOPY AND USE FOR ORDER FORM

CUSTOMER'S ORDER NO.	DATE	OUR ORDER NO.			
SOLD TO:		SHIPPED TO:			
ITEM NO.	QTY ORDERED	PART NUMJBER	PART DESCRIPTION	UNIT PRICE	TOTAL
		5517641	Pressure Flow & Test Kit		

Includes Sheppard service manual with operating instructions

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