

# **STEERING TROUBLE SHOOTING INFORMATION**

**MEDIUM & HEAVY DUTY APPLICATIONS**

**JUNE 2013**

**STEERING REBUILDERS & TRUCK PARTS, INC.**

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# **“SRTP, INC”**

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## **“TROUBLE SHOOTING INFORMATION”**

### **“DARTING or WANDERING”**

The following are possible causes for “Darting or Wandering”:

- A) Air in system
- B) Tight tie rod ends and draglink sockets
- C) Mechanical bind in steering gear
- D) Steering gear mounting bolts loose on frame
- E) Loose pins or shackle bolts
- F) Play in pitman arm
- G) Oil flow to high
- H) Excessive wear or damage in steering gear
- I) Gear improperly adjusted
- J) Loose or worn wheel bearings
- K) Dry 5th wheel or trailer plate

### **“NO WHEEL RECOVERY”**

The following are possible causes for “No Wheel Recovery”:

- A) Low tire pressure
- B) Front end alignment incorrect
- C) Relief valve plungers mis-adjusted
- D) No positive caster
- E) Dry 5th wheel or trailer plate
- F) Bent of mis-aligned steering gear mounting bracket
- G) Steering gear improperly adjusted
- H) Insufficient pump flow
- I) Restricted hoses
- J) Clogged Filter
- K) Steering gear mount distorted
- L) Steering gear control valve sleeve sticking
- M) Components of steering system binding or seizing

### **“SHIMMY”**

The following are possible causes for “Shimmy”:

- A) Air in system
- B) Front wheels or brake drum out of balance
- C) Wheel bearings improperly adjusted or worn
- D) Out of balance drive shaft
- E) Front end alignment incorrect
- F) Badly worn or unevenly worn tires
- G) Worn u-joints and/or center support
- H) Components of steering system binding or seizing

### **“LOST MOTION AT STEERING WHEEL”**

The following are possible causes for “Lost Motion at Steering Wheel”:

- A) Steering wheel loose at column
- B) Steering gear loose on frame
- C) Steering gear improperly adjusted
- D) Loose or worn u-joints, coupler or yoke
- E) Pitman arm loose
- F) Sector shaft bearing or bushing worn

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### **“EXCESSIVE HEAT”**

The following are possible causes for “Excessive Heat”:

- A) Excessive pump flow or pressure
- B) Vehicle overload - Pump too small or large for application.
- C) Clogged filter
- D) Air trapped in system
- E) Hoses and/or fittings too small, kinked or blocked
- F) Steering gear poppets not adjusted properly
- G) Axle stops not set properly

### **“OIL BEING FORCED FROM RESERVOIR”**

The following are possible causes for “Oil being Forced from Reservoir”:

- A) Clogged oil filter
- B) Air in system
- C) Relief valve plungers of steering gear not adjusted properly
- D) Loose pump drive belts
- E) Faulty supply pump (Cavitation)
- F) Operating temperature too high

### **“BINDING or SEIZING”**

The following are possible causes for “Binding or Seizing”:

- A) Worn or frozen universal joints
- B) Insufficient pump flow
- C) Universal joints not phased properly

### **“WHEEL CUTS RESTRICTED”**

The following are possible causes for “Wheel Cuts Restricted”:

- A) Steering gear linkage not centered
- B) Relief valve plungers misadjusted
- C) Bent or damaged linkage
- D) See also “Hard Steering”

### **“HARD STEERING”**

The following are possible causes for “Hard Steering”:

- A) Loose belts
- B) Steering out of alignment
- C) Components of steering system binding
- D) Obstruction in lines
- E) Low tire pressure
- F) Oversized tires
- G) Internal leakage in steering gear
- H) Restriction in pump flow
- I) Faulty power steering pump
- J) Air in hydraulic system
- K) Low pump output or leaks in system
- L) Improper pump application
- M) Front axle overloaded
- N) Control Valve malfunction
- O) Low hydraulic fluid

### **“NOISES”**

The following are possible causes for “Noises”:

#### **NORMAL NOISES -**

- A) Hissing noise from the relief valve (when turning steering wheel)
- B) Fluid bypassing through the poppets at full turn
- C) System relief valve noise when required to actuate
- D) Selected gears make a “Growling” noise

#### **ABNORMAL NOISES -**

- A) “Squealing” noise from belt drive pump. Check belts and tighten or replace if needed
- B) “Clicking” noise made during the turn indicates some components may be loose and shifting under the load of the truck
- C) Any change in the “normal” noise of the pump may indicate that air has gotten into the system or the fluid is low

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