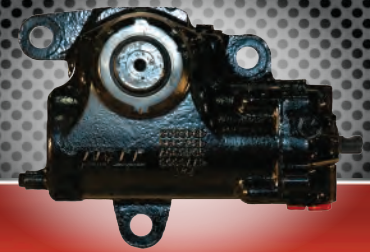


ADJUSTMENT PROCEDURES



ADJUSTMENT PROCEDURES FOR AUTOMATIC POPPET VALVES

For TRW TAS, Sheppard M-Series with a part number ending in 3, ZF 8014, 8016, 8018, 8097, 8098

Adjusting the relief valve plungers is critical to the operation of your complete steering system. The relief plunger adjustment is provided to automatically reduce the steering pressure when the road wheels have reached their limits of turn. This keeps the supply pump from operating at maximum relief pressure when the road wheels are at their steering limits. System temperatures are therefore reduced, and high stress loads on the mechanical components of the steering systems are relieved.

1. Ensure that the steering gear is not rotated from the center position prior to installation.
2. Make sure that the axle stops are present and set for the proper turning radius as per manufacturer's specifications.
3. Install steering gear to frame.
4. Attach and torque input yoke. Connect hydraulic hoses.
5. Attach pitman arm and torque nut and bolt assembly.
6. Make sure that the timing mark on the sector shaft is:
 - A. 90 degrees from center line of worm shaft.
 - B. Properly aligned with the mark on the pitman arm.
7. Make sure the pitman arm positioning allows for the center point of the sector and the center point of the drag link to be plumb with each other.
8. With the wheels square to the frame, check the drag link for proper adjustment and install.
9. Fill reservoir, start engine, and allow to idle only. Do not allow the reservoir to run low on fluid.
10. With the front axle lifted off the ground and the engine at idle, turn the steering wheel all the way in one direction until "steering stops" bottom out. Repeat procedure in the opposite direction. Return wheels to straight ahead. Lower front axle back to the ground.
11. Poppets are now set and any remaining air should be bled.