

## Emergency Steering Ground Drive System

### OPERATION:

The ground drive emergency steer system provides hydraulic flow and pressure for power steering in the event of a primary steering system failure. The unit consists of a bi-rotational gear pump with an integral logic valve to switch the ground drive pump into the steering circuit upon primary steering system failure. The ground drive unit is driven from the output side of the transmission and operates when the vehicle is moving in forward and reverse direction.

### MAINTENANCE/SERVICE

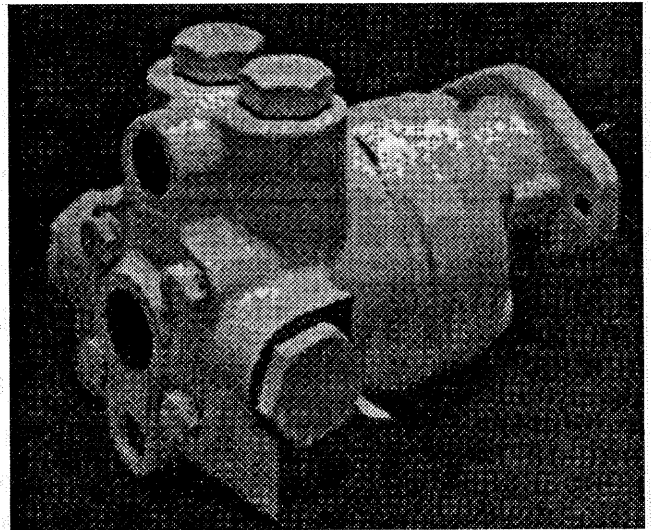
The ground drive system is virtually maintenance free, requiring only regular periodic inspection of components/connections and testing to ensure reliability in an emergency application.

### APPLICATIONS:

This ground drive system is used where SAE J53 emergency code applies. The ground drive is generally applied at maximum vehicle speeds to 30 MPH and rated steering system flows to 20 GPM. Emergency steering must be qualified by actually testing against the applicable regulations.

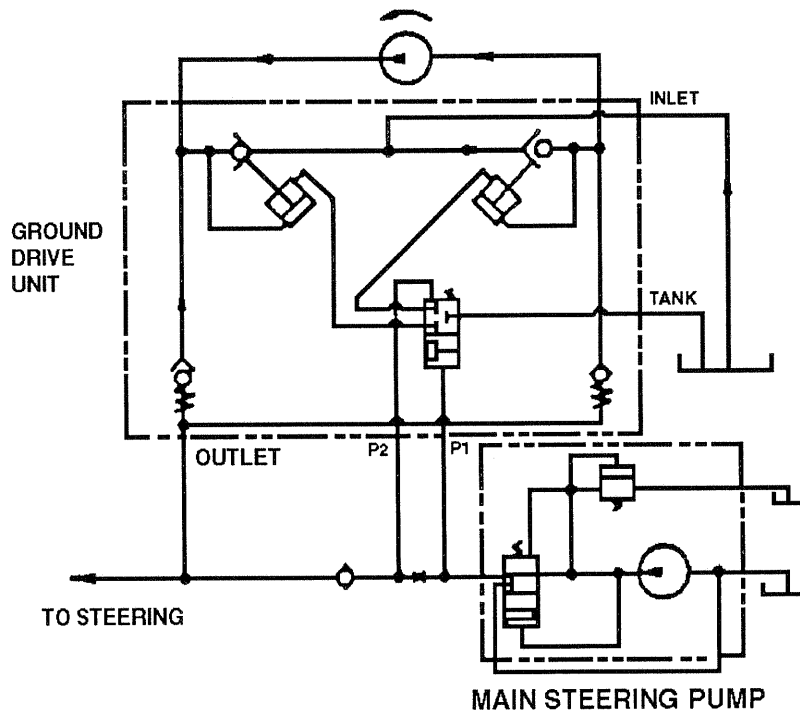
### APPLICATION SUGGESTIONS:

Bleed air from the system before any tests are performed. Bleed the air by moving the vehicle forward and backward, under engine power. The main steering flow will create differential pressure that will vent the valve package. The air will be bled to tank via Port "T". Approximately ten (10) cycles will be required.

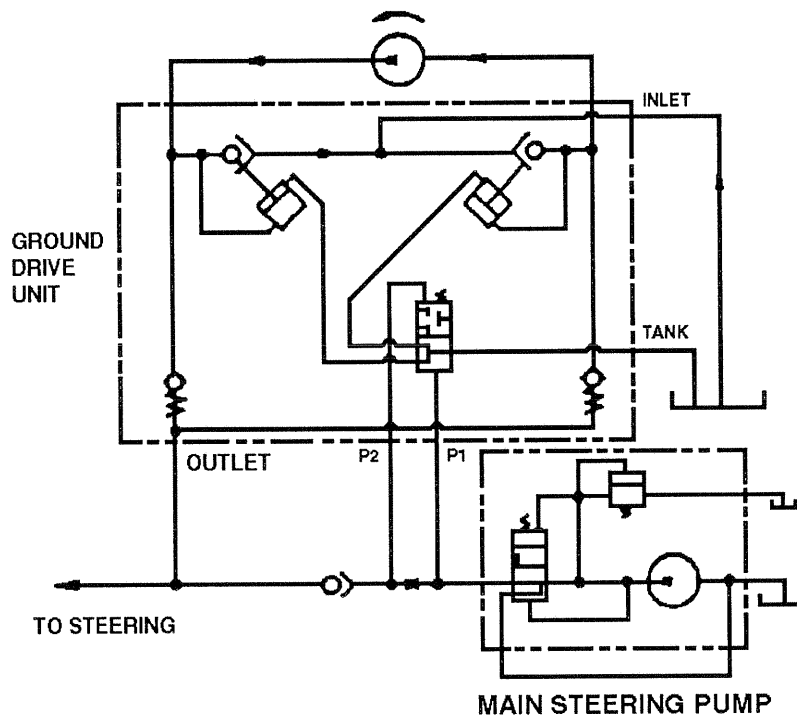


25 GD GROUND DRIVE ASSEMBLY

**See page 2 for Main Pump Diagram**



MAIN PUMP SHUT DOWN  
WITH VALVE IN NEUTRAL POSITION



MAIN PUMP PUMPING  
WHEN P1 IS 35 PSI GREATER THAN P2  
THE VALVE IS ACTUATED AS SHOWN ABOVE