

### **Ross TAS automatic poppet valve adjustment:**

- A. For installation of new and remanufactured steering gears only.
  - 1. Lift front wheels off the ground.
  - 1. Start engine and let operate at idle.
    - a. All linkage must be connected at this point.
  - 2. Steer wheels to full travel in one direction until the linkage firmly bottoms against the axle stop. (Maximum torque 30lbs. of rim pull on a 20inch wheel for this step).
  - 3. Steer wheels to the other direction-repeating step 3.
  - 4. Set front wheels on the ground rechecking travel.

### **Ross TAS manual readjustment of poppet valves:**

(Two people will be required for this procedure).

- A. Set axle stops to vehicle manufacture's wheelcut or clearance specifications.
- B. Start the engine and let run for 5 to 10 minutes to allow hydraulic fluid to warm up. Turn off engine
- C. If the steering gear is equipped with a fixed poppet bolt and washer at the lower end of the housing, it must be replaced with an adjusting poppet screw and sealing nut.  
(The adjusting screw will have to be purchased separately, part #021407X1 for most gears).
- D. Screw the sealing nut onto the drive screw until it is flush with the end of the adjusting screw.
- E. Screw the adjusting screw in until the sealing nut is firmly against the housing. Tighten the sealing nut.
- F. Lift front wheels off the ground and check fluid levels.
- G. Observe the end of the sector shaft for the direction of travel (see page 6).
- H. Start the engine and let it run at idle.
- I. Note which timing mark is nearest to the housing piston bore.
- J. Turn the steering wheel in the direction that makes the timing mark move toward the adjusting screw at the end of the housing. Turn in this direction until the axle stop contact is made.
- K. Pull hard on the steering wheel (about 40lbs. of rim pull on a 20-inch diameter wheel) after the axle stop contact is made.

- L. Turn the steering wheel in the opposite direction until the other side axle stop is contacted.
- M. Pull hard on the steering wheel (about 40lbs. of rim pull on a 20-inch diameter wheel)
- N. Release the steering wheel and shut off the engine.
- O. Loosen sealing nut and back out adjusting screw 1 inch past the end of the sealing nut.
- P. Tighten the sealing nut against the housing.
- Q. Start engine and let engine idle.
- R. Turn the steering wheel in the opposite direction (timing mark toward adjusting screw) until the axle stop contact is made.
- S. Hold the steering wheel in this position for no more than 10 seconds and release as many times as necessary while completing the next two steps.
- T. Loosen the jam nut and hold it in place with a wrench.
- U. Turn in the adjusting screw in with an allen wrench using finger pressure only (don't use a ratchet) until the allen wrench stops turning. Do not attempt to turn in any farther.
  - Caution: Applying pressure to the steering wheel at the end of travel for more than 10 seconds may damage the steering pump.
- V. Back out the adjusting screw 3-1/4 of a turn and tighten the sealing nut.
- W. The adjusting screw must not exceed 1-1/16 inch beyond the sealing nut for proper thread engagement.
- X. Torque adjusting screw sealing nut 35-ft lbs.