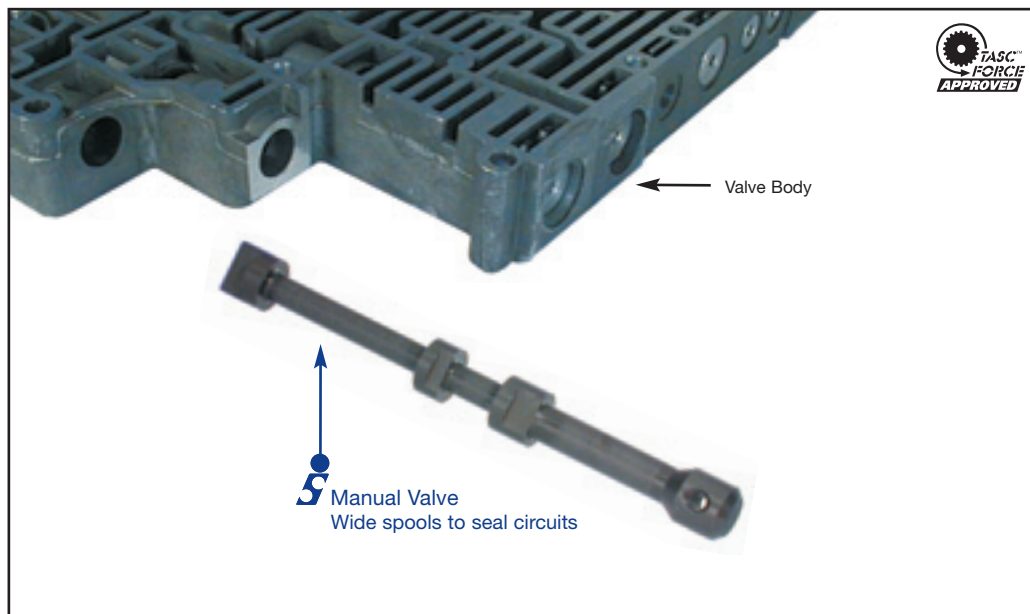


Manual Valve

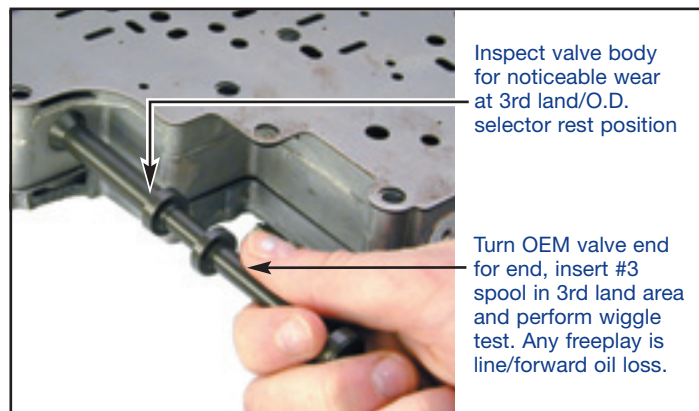
96201-05

1 Manual Valve



Wiggle & Wet Air Test

This manual valve was designed to reduce loss at the manual valve bore. In some conditions the bore will become severely polished or have step wear from frequent linkage movement. This can be seen visually in badly worn valve bodies. To verify if the bore is worn, a “wiggle test” can be performed as illustrated below. On an assembled unit, or dyno test, the pressure will be erratic and may drop below 50 psi in O.D. range as the unit reaches operating temperature. In order to perform a Wet Air Test of the forward circuit and manual valve, the unit must be completely assembled with fluid filling the valve body, in order to seat the checkballs. With side cover removed, place the selector lever in O.D., and blow air into the forward tap. Fluid leaking out the end of the manual valve bore is leakage past the end spool.



Instructions

Some valve bodies are worn severely enough to allow visible detection. Otherwise, to determine if the manual valve is leaking excessively, perform a Wet Air Test of the forward clutch circuit.

1. Remove the side cover. Locate the forward clutch circuit to air test. Use a manual to find the correct location for your unit.
2. Place the selector in the O.D. position as you Wet Air Test the forward clutch circuit. The forward clutch should apply with minimal air pressure with a dull thud.
3. If it does not, place your thumb over the left end of the manual valve bore opening. If it applies now, your manual valve is leaking excessively and needs replacing.
4. Valve rotation/index is not a factor. Valve may be inserted from either direction.

Complaint of Delayed Forward Engagement:

1. Inspect the forward engagement control valve for a bent stem or worn bore.
2. Inspect the servo regulator clip and valve.
3. Inspect the pump checkball quality, specifically B-2.
4. Clean and/or open the snout orifice on the lower solenoid #3. Restricted solenoid exhaust will burn the forward clutch and create premature clutch overheat. Removing the snout and redrilling the ball seat to .072"-.075" is beneficial.

Note: Sonnax also offers reverse boost kits **96201-01K** and **96201-12K** to eliminate the following complaints in these transmissions: flare 1-2 or 2-3 upshifts, 2-1 downshift clunks, non-adjustable throttle psi, high pressure, harsh reverse (300 psi) and clutch or band failure.