

TROUBLE SHOOTING

NOTE: Always check fluid level and condition, linkage adjustment and vacuum diaphragm prior to trouble shooting.

SYMPTOMS

Slow Initial Engagement

Plugged filter or low main control pressure.

Rough Initial Engagement

Idle speed too high. Sticking valve body or high control valve pressure.

Delayed Or No Forward Engagement, Reverse Okay

Low main control pressure. Forward clutch assembly burnt or damaged. Valve body sticking. Improper valve body torque. Forward clutch cylinder check ball leaking or seal rings leaking. Forward clutch stator support seal rings leaking.

Delayed Or No Reverse Engagement, Forward Okay

Reverse clutch stator support seal rings leaking or clutch assembly burnt. Valve body sticking. Improper valve body torque. Reverse clutch piston check ball leaking or seal rings leaking. Low main control pressure.

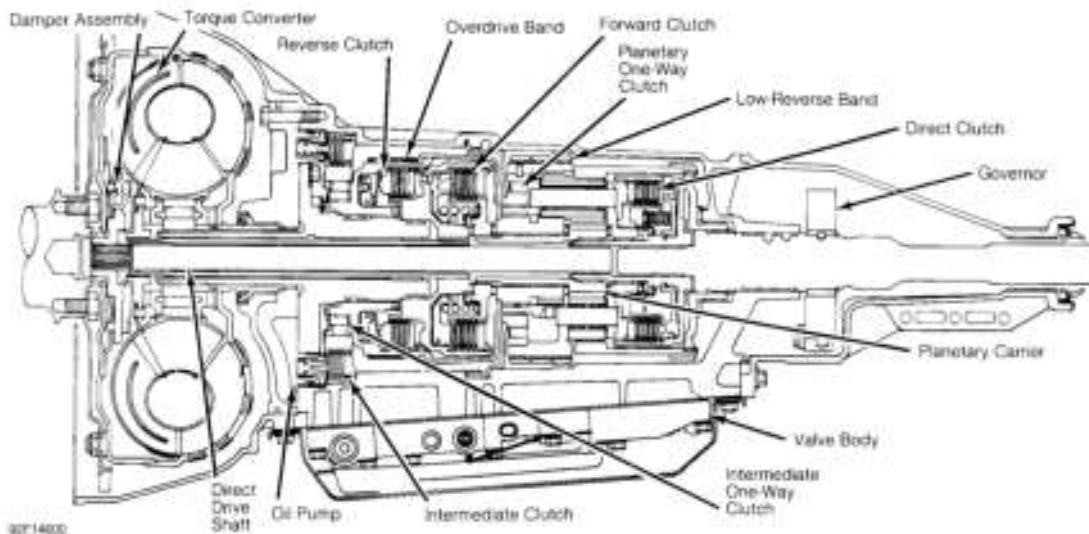


Fig. 6: Cross-Sectional View of AOD Transmission
Courtesy of FORD MOTOR CO.

Delayed Or No Reverse Engagement And/Or No Engine Braking In Manual Low

Planetary low one-way clutch damaged. Low reverse band burnt. Low reverse servo piston seal leaking.

No Engine Braking In Manual 2nd

Intermediate band improperly adjusted. Overdrive servo leaking. Intermediate one-way clutch damaged. Glazed intermediate band.

Forward Engagement Slips, Shudders Or Chatters On Engagement

Plugged filter. Low main control pressure. Valve body sticking or improperly torqued. Defective forward clutch assembly. Low one-way clutch damaged.

Reverse Engagement Slips, Shudders Or Chatters On Engagement

Plugged filter. Low main control pressure. Reverse band improperly adjusted or damaged. Low one-way clutch damaged. Reverse servo leaking. Reverse clutch piston seals defective or clutch assembly defective.

Starts Up In 2nd Or 3rd

Improper intermediate band adjustment. Defective governor. Sticking or loose valve body. Cross leaks between valve body and case mating surfaces.

Incorrect Shift Points, Harsh Or No Upshift

Sticking or improperly adjusted T.V. rod (high T.V. pressure). Improper control valve pressure. Dirty or sticking valve body or governor assembly. Improper speedometer gear.

Early, Mushy, Soft Or Slipping Upshift

Low main control pressure. Dirty or sticking valve body or governor. Leaking or improperly torqued valve body. Sticking or improperly adjusted T.V. rod (low T.V. pressure).

Erratic Shifts

Poor engine performance. Improper valve body bolt torque. Valve body or governor sticking. Governor collector body seal rings leaking. T.V. linkage sticking.

No Forced Downshift

Improperly adjusted or sticking T.V. rod. Dirty or sticking valve body or governor. Improper oil control pressure.

Transmission Overheats

Engine idle too high. Engine cooling system defective. Transmission pressure too low. Restriction in cooler or cooler lines. Seized convertor one-way clutch.

Transmission Clunk Or Squawk During Upshift

Intermediate clutch piston bleed hole blocked or not positioned at 12 o'clock. Anti-Clunk spring out of position. Converter damper spring broken.

Transmission Noisy (Valve Resonance)

Improper control valve pressure. Internal oil pressure leaks or pump cavitation. Grounding cooler lines. Dirty or sticking valve body.

Harsh Initial Engagement Into Drive

Idle speed too high. Too much forward clutch clearance. Improper oil control pressure.

Delayed Reverse Engagement

Sticking pressure regulator boost valve. Leaking rear servo piston or cover.

Slips & Chatters When Hot, Delayed Drive & Reverse

Worn pump. Pressure regulator valve sticking when hot.

No Forward After A Stop

The 3-4 shift valve stuck in upshifted position.

No Reverse

Rear servo piston not contacting rear band (may happen during overhaul).

No 2nd, 4th Or Reverse

Broken weld on sun gear shell.

No 2nd Or 4th, Reverse Okay

Stuck 1-2 shift valve.

No 3-4 Upshift

The 3-4 shift valve stuck in downshifted position. The 3-4 shift valve bore plug leaking. Leaking orifice control valve bore plug. Leaking direct clutch and oil control rings. Cut direct clutch piston outer lip seal. Large oil control ring leaking on 2-3 accumulator piston. Leaking governor oil control rings or worn ring area in case bore. Worn case or direct clutch drum bushing. Governor loose on output shaft. Sticking 4-3 back-out valve.

No 3rd Or 4th

Broken torque converter assembly. Burnt direct clutch. The 2-3 shift valve stuck in downshifted position.

2-3 Squawk

Wrong ATF (Dexron II or Mercon only). Direct clutch circuit leaks (oil control rings, outer piston lip seal, leaking piston check ball). Worn direct drum bushing. Worn case bushing. Worn ring area in case bore. Worn friction plates.

Clacking Noise Or Squawk, Intermediate Buck On Deceleration

Weak torque converter damper spring (damper assembly is bottoming out). This can cause direct clutch

failure.

3-4 Slip

Leaking overdrive servo piston or cover seals. Wrong size overdrive servo piston and cover. Throttle linkage adjustment.

Neutral Condition On 3-4 Upshift

Missed overdrive band when installing overdrive servo piston (may happen during overhaul). Band anchor out of position.

Bucking On Deceleration & Kills Engine When Stopping

Governor valve in high gear position.

Chatters Or Bucks On Acceleration Or Deceleration In 4th Gear

Engine performance problem (EGR, fuel system, etc.).

No 3-4 Upshift Until 50 MPH, Or Until Accelerator Pedal Is Released Slightly

Condition normal if valve body has 2-piece 3-4 shift valve. Throttle linkage adjustment.

Harsh 4-3 Or 4-2 Downshift

Sticking overdrive servo regulator valve. Forward clutch apply hole in separator plate larger than .100" (2.54 mm) in diameter.

Bearing Whine In All Gear Positions Except 3rd & 4th

Bad bearing between direct clutch drum and output shaft flange.

CLUTCH & BAND APPLICATION CHART

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Selector Lever Position	Elements In Use
"O" Overdrive	
1st	Forward Clutch, Planetary One-Way Clutch
2nd	Intermediate Clutch, Forward Clutch & Intermediate One-Way Clutch
3rd	Forward Clutch, Intermediate Clutch & Direct Clutch
Overdrive	Overdrive Band, Intermediate Clutch & Direct Clutch
"D" (Drive)	
1st	Forward Clutch, Planetary One-Way Clutch
2nd	Intermediate Clutch, Forward Clutch & Intermediate One-Way Clutch
3rd	Forward Clutch, Intermediate Clutch &

	Direct Clutch
"2" (Intermediate) (2nd)	Forward Clutch, Intermediate Clutch & Intermediate One-Way Clutch
"1" (Low) (1st)	Forward Clutch, Planetary One-Way Clutch & Low Reverse Band
"R" (Reverse)	Reverse Clutch & Low Reverse Band