

TROUBLE SHOOTING

NOTE: Always check fluid level/linkage. Ensure all computer control systems are operating properly before diagnosing transmission shifting problems. See [AUTO TRANS DIAGNOSIS - FORD E4OD](#) article.

NOTE: See [Fig. 30-Fig. 33](#) for exploded views of valve body, internal components, thrust washer and needle bearing locations referred to in trouble shooting symptoms.

SYMPTOMS

Shift Effort High

Improperly adjusted linkage. Detent spring malfunction.

Vehicle Will Not Start

Ignition switch defective. Check fluid for proper level.

Transmission Overheats

Improper fluid level. Engine cooling system defective. Seized converter one-way clutch. Sticky valve body. Converter clutch does not apply.

No 1-2 Shift

Sticky or dirty valve body. Improperly adjusted manual linkage. Damaged 1-2 shift valve. Sticky D2 valve. Improper fluid level. Sticky intermediate clutch accumulator regulator valve. Sticky 1-2 manual transition.

1-2 & 2-3 Shift Harsh Or Soft

High or low line pressure. Sticky valve body. Damaged intermediate clutch accumulator regulator valve. High or low line modulator pressure. Leaking pump air bleed check valve.

No 2-3 Upshift

Improper fluid level. Low-to-direct clutch line pressure. S1 solenoid malfunction. Sticky valve body. BS5 check ball missing. Sticky 2-3 shift valve. Damaged direct clutch cylinder seals. Center support malfunction.

No 3-4 Upshift

Improper fluid level. S1 or S2 solenoid malfunction. Sticky or dirty valve body. Sticky or damaged 3-4 shift valve. Defective overdrive accumulator regulator valve. High or low line pressure.

2-3 Shift Harsh Or Soft

Defective direct clutch accumulator regulator valve. Sticky valve body. High or low line modulator pressure. Damaged direct clutch cylinder seals. Defective center support.

3-4 Shift Harsh Or Soft

Dirty or sticky valve body. High or low check line pressure or service line modulator pressure. Defective overdrive accumulator regulator valve. Defective overdrive Clutch assembly.

Shifts 1-3

Dirty or sticky D2 shift valve. Improper fluid level. Sticky intermediate clutch accumulator regulator valve. Burnt or worn intermediate friction clutch. Defective intermediate one-way clutch assembly.

Shift Speed High Or Low

Defective speed sensor. Malfunctioning electronic powertrain control system.

4-3, 3-2 & 2-1 Downshift Harsh

Missing check ball. Separator plate check ball seat damaged.

Erratic Shifts

Improper fluid level. Defective speed sensor. Sticky valve body. Defective electronic engine control system.

Converter Clutch Does Not Release

Improper fluid level. Sticky converter clutch control valve. Pinched wires. Bulkhead connector damaged. S3 solenoid malfunction. No unlock signal.

No Converter Clutch Apply

Improper fluid level. Pinched wires. S3 solenoid malfunction. Bulkhead connector damaged. Sticky converter clutch control valve. Damaged stator shaft teflon seal.

Shift Hunting

Erratic speed signal. Improper fluid level. Defect in electronic engine control system.

No Forced Downshifts

Defect in electronic engine control system. Dirty or sticky valve body.

No Engine Braking In Manual 1st Or 2nd

Improper fluid level. Low line pressure. Check ball missing. Dirty or sticky reverse clutch modulator, D2-4-3-2 timing valve, 2-3 or coast clutch shift valve. Worn intermediate band or drum. Defective reverse clutch. Defective coast clutch. Defective intermediate servo.

Harsh Neutral To Drive Or To Reverse Engagement

Defective "U" joint, slip yoke, transfer case, rear axle or rear suspension. Sticky engagement control valve. Improper fluid level. Reverse clutch leaking. Check ball missing. Defective forward clutch assembly. Defective direct clutch accumulator regulator valve.

No Reverse

Improperly adjusted manual linkage. Improper fluid level. Low line pressure. Dirty or sticky pump control body and valve body. Defective direct clutch assembly. Leaking coast clutch assembly. Defective direct clutch accumulator regulator valve.

Buzzing Noise

Buzzing noise in all shift positions may be caused by missing orificed cup plugs in pump body. Ensure orifice size is .030.

CLUTCH & BAND APPLICATIONS

Clutch / Band Application Chart

Gear	Friction Elements							One-Way Clutch						
	Coast	Inter- mediate	Direct	Forward	Reverse	Over- Drive	Band	Drive			Coast			
								O/D DWC	Inter- mediate DWC	Low Reaction DWC	O/D DWC	Inter- mediate DWC	Low Reaction DWC	
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬		
Ⓚ first	-	-	-	apply	-	-	-	HOLD	-	HOLD	-	O/R*	-	O/R
Ⓛ second	-	apply	-	apply	-	-	-	HOLD	HOLD	O/R	-	O/R*	O/R	O/R
Ⓜ third	-	apply	apply	apply	-	-	-	HOLD	O/R	O/R	-	O/R*	O/R	O/R
Ⓝ fourth	-	apply	apply	apply	-	apply	-	O/R	O/R	O/R	-	O/R	O/R	O/R
1	apply	-	-	apply	apply	-	-	HOLD	-	-	-	CC	-	-
2	apply	apply	-	apply	-	-	apply	HOLD	HOLD	O/R	-	CC	BA	O/R
Reverse	apply	-	apply	-	apply	-	-	HOLD	O/R	-	-	CC	O/R	-

O/D — Overdrive
 DWC — One-Way Clutch
 O/R — Overrunning
 CC — Coast Friction Clutch Applied
 BA — Band Applied

*In D Range with the Overdrive Cancel Switch pressed, the coast clutch is applied and the O/D one-way clutch is bypassed.

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Fig. 10: E4OD Clutch & Band Application
 Courtesy of FORD MOTOR CO.