



# Technical Service Information

## FORD 5R110W

### LOSS OF REVERSE & SEVERAL FORWARD GEARS

**COMPLAINT:** The vehicle comes in, or comes back, with a complaint of no reverse and a perceived loss of fourth gear. The transmission seems to have shifted three times at one point in time and only twice another time.

**CAUSE:** The cause of the complaint was the fact that the center support sleeve had walked forward out of position thereby blocking the direct clutch feed holes, Refer to Figure 1.  
The loss of reverse is easily explained after inspection of the clutch application chart in Figure 2. The loss of fourth gear and the shift issues are not that easy, and here is why. The 5R110W is a six speed transmission. The shift strategy is such that it uses only five speeds at any given time. When the transmission is cold, (5° F or less), the transmission will shift 1-2-3-4-6, skipping fifth gear. When the transmission warms up, it will shift 1-2-3-5-6, skipping fourth gear.

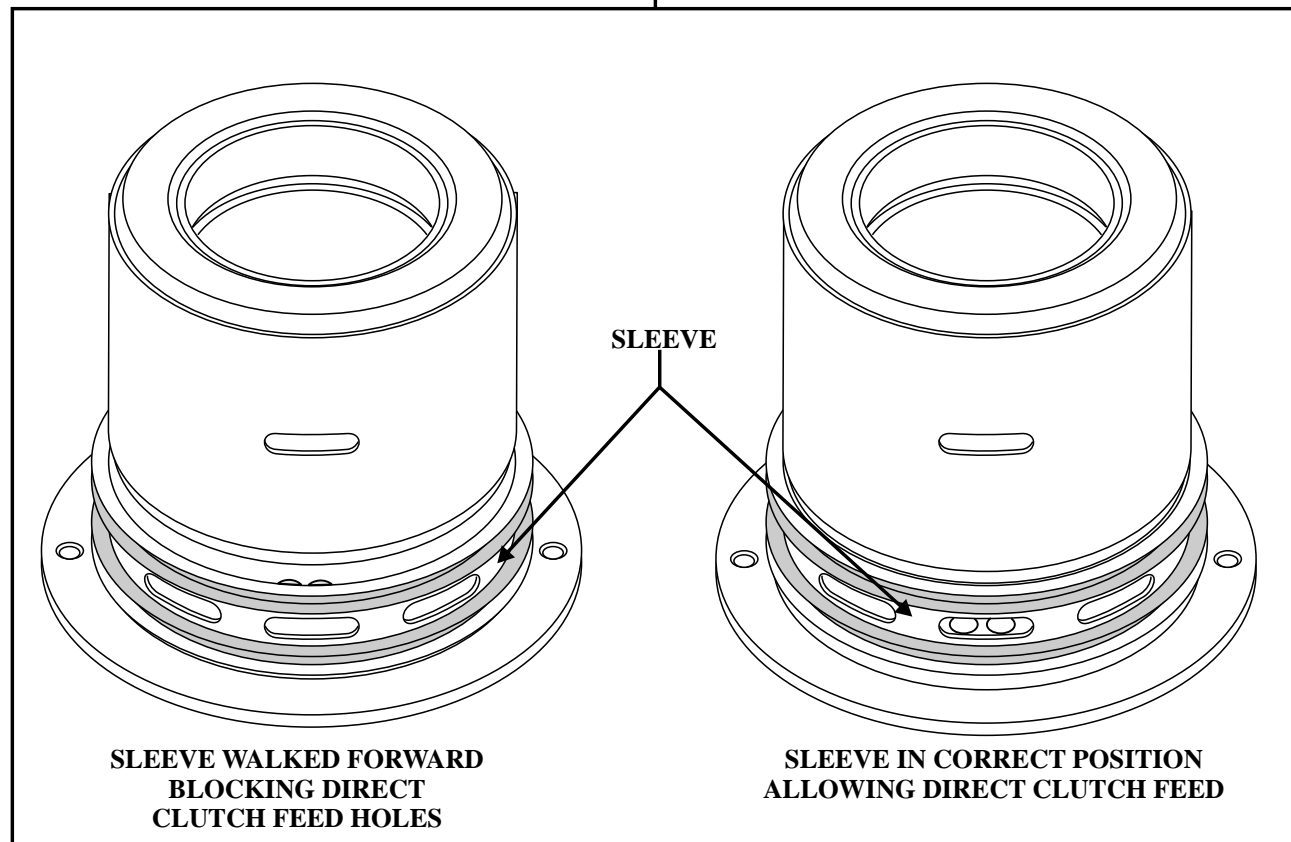
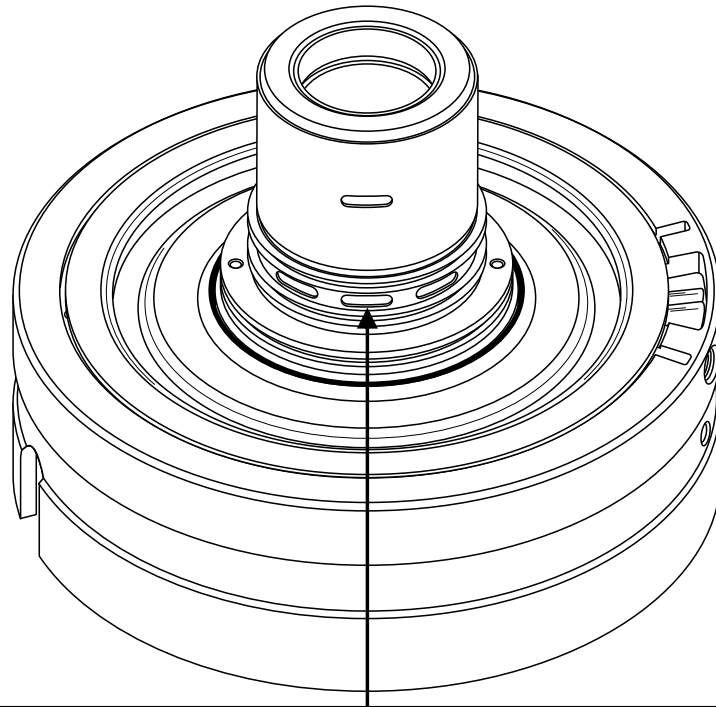
Because the direct clutch is used in reverse, fifth and sixth gear, when cold the transmission without the direct clutch would only shift 1-2-3-4, in other words, it would shift only three times. When it warms up it would only shift 1-2-3, in other words, it would only shift twice. Because the gear ratios in fourth, fifth and sixth gears being so close to each other, see gear ratios in Figure 2, it would be extremely difficult to tell which gear has been skipped or lost.

**CORRECTION:** Replacement of the center support corrected the complaint.

*Many thanks to Trent at Acadiana Transmission in Lafayette, La. for sharing his experience with us making this bulletin possible.*

## LOSS OF REVERSE & SEVERAL FORWARD GEARS

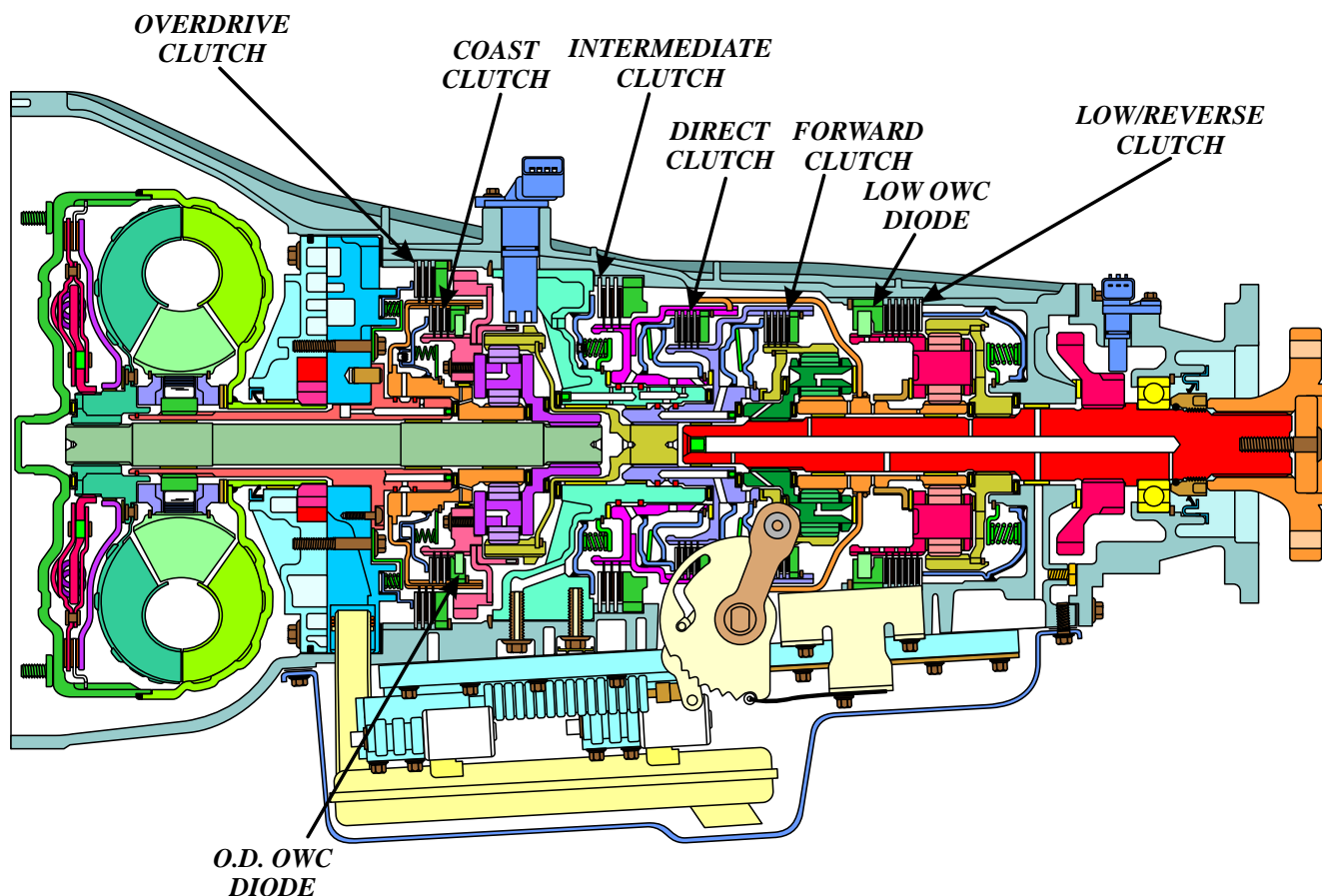
### 5R110W CENTER SUPPORT



Copyright © 2008 ATSG

Figure 1

## COMPONENT APPLICATION CHART



## COMPONENT APPLICATION CHART WITH TOW/HAUL "OFF"

Range/Gear	Fwd. Clutch	Int. Clutch	Direct Clutch	O.D. Clutch	Coast Clutch	Lo/Rev Clutch	O.D. Diode	Low Diode	Gear Ratio	Eng Brak
Park/Neut						ON (a) (c)				
Reverse			ON (d)		ON	ON (a)			2.88	
O.D.- 1st	ON (d)					ON (a) (c)	HOLD	HOLD	3.09	
O.D.- 2nd	ON (d)			ON			O/R	HOLD	2.20	
O.D.- 3rd	ON (d)	ON					HOLD	O/R	1.54	
O.D.- 4th (b)	ON (d)	ON		ON			O/R	O/R	1.09	
O.D.- 5th	ON (d)		ON				HOLD	O/R	1.00	
O.D.- 6th	ON (d)		ON	ON			O/R	O/R	0.71	
Man- 3rd	ON (d)	ON			ON		HOLD	O/R	1.54	YES
Man- 2nd	ON (d)			ON		ON (a)	O/R	HOLD	2.20	YES
Man- 1st	ON (d)				ON	ON (a)	HOLD	HOLD	3.09	YES

(a) PCM Calibration Controlled

(b) Cold Strategy

(c) 30 psi Until 5 kmh (3 mph)

(d) Clutch Applied Through Manual Valve Position

Copyright © 2008 ATSG

Figure 2