



Technical Bulletin #1861

Transmission: 6R80

Subject: Clutch and Solenoid Apply Charts

Application: 2011-up 6R80

Issue Date: July, 2018

6R80

Clutch and Solenoid Apply Charts

Clutch ID	Forward Clutch (A)	Direct Clutch (B)	Intermediate Clutch (C)	Low/Rev Clutch (D)	Overdrive Clutch (E)	Low OWC	TCC Clutch
Range				H			
P				H			
R		A		H			
N				H			
D-1st	A			H (a)		H	
D-2nd	A		H				Applied*
D-3rd	A	A					Applied*
D-4th	A				A		Applied*
D-5th		A			A		Applied*
D-6th			H		A		Applied*
1st Gear Manual	A			A			

A = Applied

H = Holding

(a) = Clutch released when vehicle speed is above 3 mph.

* = TCC operation available in 2 through 6 gears, dependant upon throttle position, transmission fluid temp and vehicle speed.

In 2011, Ford revamped its engine lineup in the F150 series vehicles. Gone were the familiar 4.6L and 5.4L engines and instead, four new engines were offered 3.5L Turbo V6, 3.7L Ti-VCT V6 with twin independent variable camshaft timing, 5.0L V8 and the, 6.2L V8. Along with these new engines, new features and changes were made to the 6R80. The biggest and most obvious change was the addition of a one-way clutch, designed to provide smoother 1-2 and 2-1 transitions, quicker downshifts, and improved fuel economy.

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In previous models without the one-way clutch, the D clutch applies throughout first gear. In the 2011-later models with the one-way clutch, the D clutch only applies until about 3 MPH; then the D clutch releases.

6R80 Solenoid Application Chart

Solenoid ID	SSE/SS1 ON/OFF	SSA/VFS1 (A) NL	SSB/VFS2 (B) NH	SSC/VFS3 (C) NL	SSD/VFS4 (D/E) NH	PCA/VFS5 NH	TCC/VFS6 NL
Range						X*	
P						X*	
R						X*	
N						X*	
D-1st		X	X		*X	X*	
D-2nd		X	X	X	X	X*	X*
D-3rd		X			X	X*	X*
D-4th	ON	X	X			X*	X*
D-5th	ON					X*	X*
D-6th	ON		X	X		X*	X*

X = Solenoid at high duty cycle approximately 850 mA

No "X" = Solenoid at low duty cycle is approximately 50 mA

X* = Modulated by the TCM ased on engine load and driving conditions

*X = Solenoid at 50 mA then to 850 mA

(D Clutch is ON during engagement then it is released at 3mph)

NH = Normally High, solenoid is inversely proportionate in operation.

(When solenoid is inversely proportionate, high amperage exhausts clutch.)

NL = Normally Low, solenoid is proportionate in operation.

(When solenoid is porportionate, high amperage applies clutch.)