

Transmission Type... FS5A-EL

Rebuilder's Kwik Reference Guide



Clutch Clearances

Forward Clutch	.059-.071"	Snap Ring
3 - 4 Clutch	.043-.055"	Snap Ring
Reverse Clutch	.039-.051"	Snap Ring
Low/Reverse Clutch	.087-.098"	Snap Ring
Direct Clutch	.043-.055"	Snap Ring
Reduction Brake	.059-.070"	Snap Ring

Adjusted By: Torque Specifications

Torque Converter Housing to Case	.16 Ft. Lbs.
Pump Halves	7 Ft. Lbs.
Pump to Case	.16 Ft. Lbs.
Valve Body (Primary & Secondary)	80 In. Lbs.
Valve Body to Case (Primary & Secondary)	80 In. Lbs.
Pan (Rear & Lower)	.62 In. Lbs.
End Cover	.16 Ft. Lbs.
2-4 Band Servo Cover	.10 Ft. Lbs.
Band Anchor Bolt	.30 Ft. Lbs.

Band Adjustment

2-4 Band (See Rebuilding Tips)	Band Anchor Bolt
--------------------------------	------------------

Unit End Plays

	<u>Location</u>	<u>Selective</u>
Total Unit .025-.050	End Cover	Bearing Race
*Differential Preload 12-20 In. Lbs.	Under Torque Converter Housing Bearing Cup	Shim
Transfer Shaft .010-.011	Under Torque Converter Housing Bearing Cup	Shim
*Final Drive Input Gear Preload 4.5-7.5	Between Bearings	Collapsible Spacer

*Rotating Torque

New 08/09

Transmission Type... FS5A-EL

Rebuilder's Kwik
Reference Guide



Clutch and Band Application Chart

Range	Mode	Gear	TCC	Engine Brakeing	Forward Clutch	3-4 Clutch	Reverse Clutch	Direct Clutch	2-4 Brake Band	Low and Reverse Brake	Reduction Brake	One-Way Clutch No. 1	One-Way Clutch No. 2	
P	-	Neutral												
R	-	Reverse		x			x			x	x			
N	-	Neutral												
D	*Power/ Normal	1GR			x						x	(x)	(x)	
		2GR		x	x				x		x		(x)	
		3GR		x	x	x					x		(x)	
		4GR		x		x				x	x		(x)	
		4GR ** TCC ON	x	x		x				x		x		(x)
		5GR			x		x		x	x				
		5GR ** TCC ON	x	x			x		x	x				

* = Automatically switches between POWER and NORMAL modes according to accelerator pedal depressing speed

** = Performs TCC operation in NORMAL mode

X = Operating

(X) = Transmits the torque only when driving

Transmission Type... FS5A-EL

Rebuilder's Kwik
Reference Guide



Solenoid Application Chart

Range	Mode	Gear	TCC	Engine Braking	Solenoid Valve (duty-cycle type)			Solenoid Valve (ON/OFF type)		
					Shift Solenoid A	Shift Solenoid B	Shift Solenoid C	Shift Solenoid D	Shift Solenoid E	Shift Solenoid F
P	-	Neutral			OFF	OFF	OFF	ON	OFF	ON
R	-	Reverse		x	OFF	OFF	OFF	OFF	OFF	ON
N	-	Neutral			OFF	OFF	OFF	ON	OFF	ON
D	Power/ Normal	1GR			OFF	ON	ON	OFF	OFF	ON
		2GR		x	OFF	OFF	ON	OFF	OFF	ON
		3GR		x	OFF	OFF	OFF	OFF	OFF	ON
		4GR		x	ON	OFF	OFF	ON	OFF	ON
		4GR TCC ON	x	x	ON	OFF	OFF	ON	ON	ON
		5GR		x	ON	OFF	OFF	ON	OFF	OFF
		5GR TCC ON	x	x	ON	OFF	OFF	ON	ON	OFF
M	Manual	1GR		x	OFF	OFF	ON	ON	ON	ON
		2GR		x	OFF	OFF	ON	OFF	OFF	ON
		3GR		x	OFF	OFF	OFF	OFF	OFF	ON
		4GR		x	ON	OFF	OFF	ON	OFF	ON
		4GR TCC ON	x	x	ON	OFF	OFF	ON	ON	ON
		5GR		x	ON	OFF	OFF	ON	OFF	OFF
		5GR TCC ON	x	x	ON	OFF	OFF	ON	ON	OFF

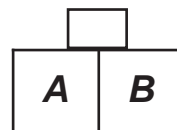
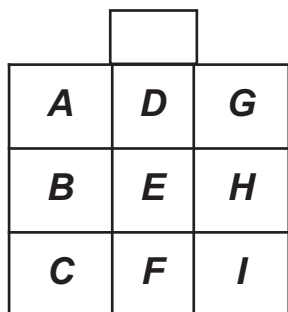
X= Operating

Transmission Type... FS5A-EL

Rebuilder's Kwik Reference Guide



Pin ID



Pin ID	Solenoid	Resistance	Wire Color
A + GND	SSA	1.0-4.2	Green
C + GND	SSB	1.0-4.2	Brown
G + GND	SSC	1.0-4.2	Black
B + GND	SSD	10.9-26.2	White
F + GND	SSE	10.9-26.2	RED
D + I	PCS-A	2.4-7.3	Blue + Orange
E + H	TFT	*	Yellow

Pin ID	Solenoid	Resistance	Wire Color
A + GND	PCS B	1.0-4.2	Green
B + GND	SSF	8.4-21.8	Black

TFT

Temperature	Resistance
-4 F	236-324K
32F	84.3-110
68F	33.5-42.0
104F	14.7-17.9
140F	7.08-8.17
176F	3.61-4.15
212F	1.96-2.24
248F	1.13-1.28
266F	0.87-0.98

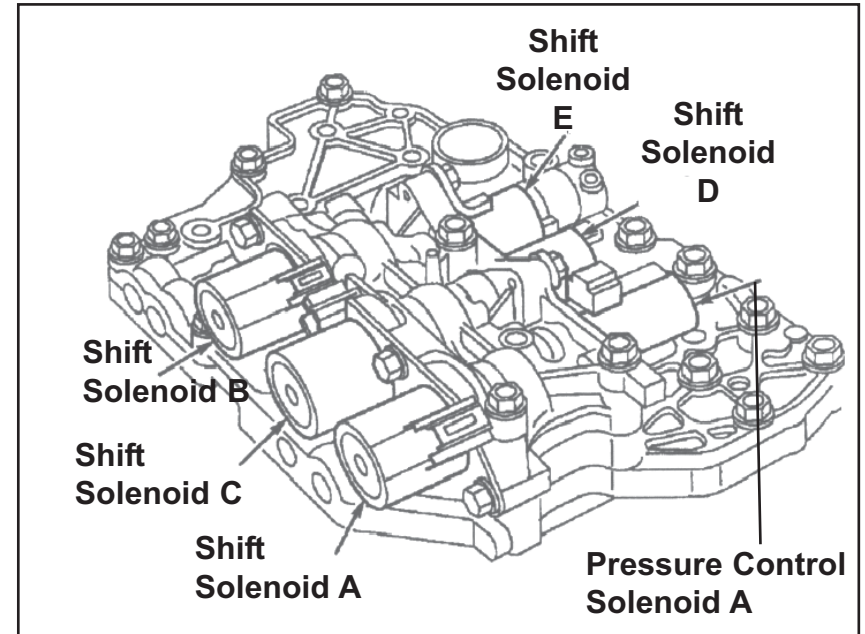
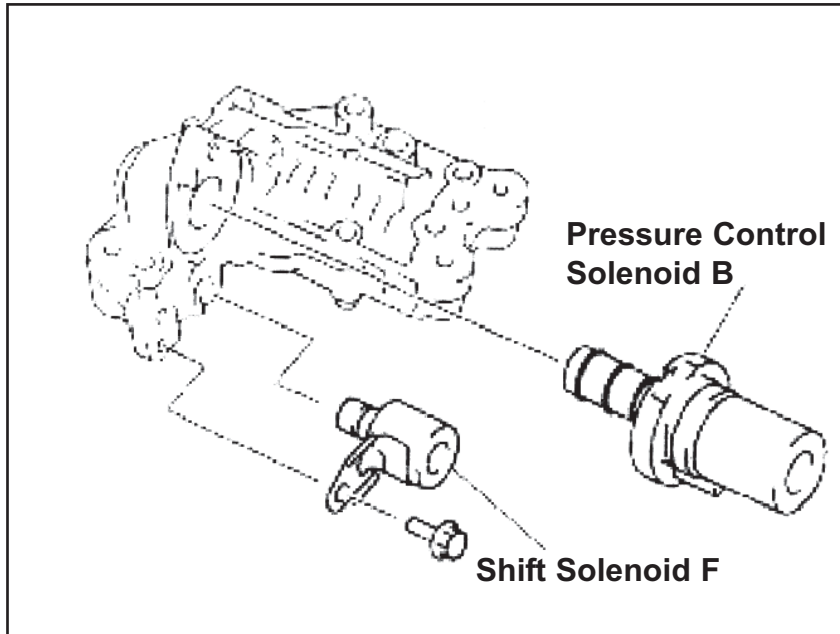
*See TFT Chart

Transmission Type... FS5A-EL

Rebuilder's Kwik
Reference Guide



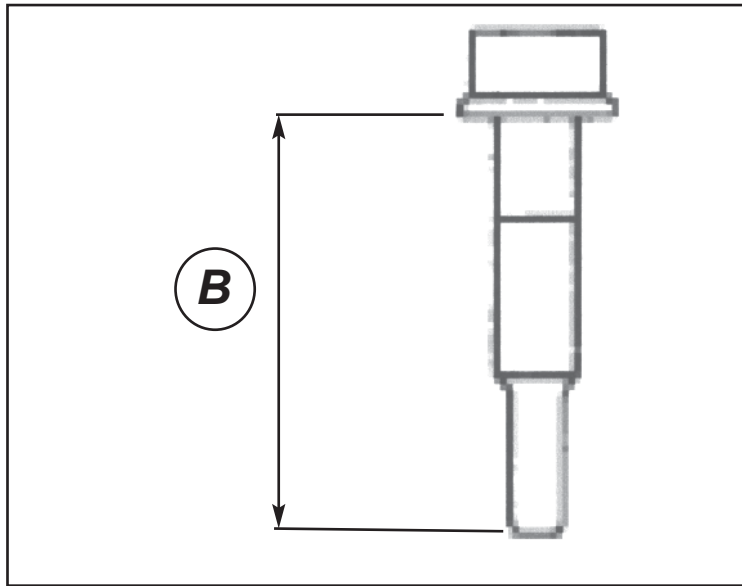
Solenoid Identification



Transmission Type... FS5A-EL



Tips for Rebuilding - Band Adjustment

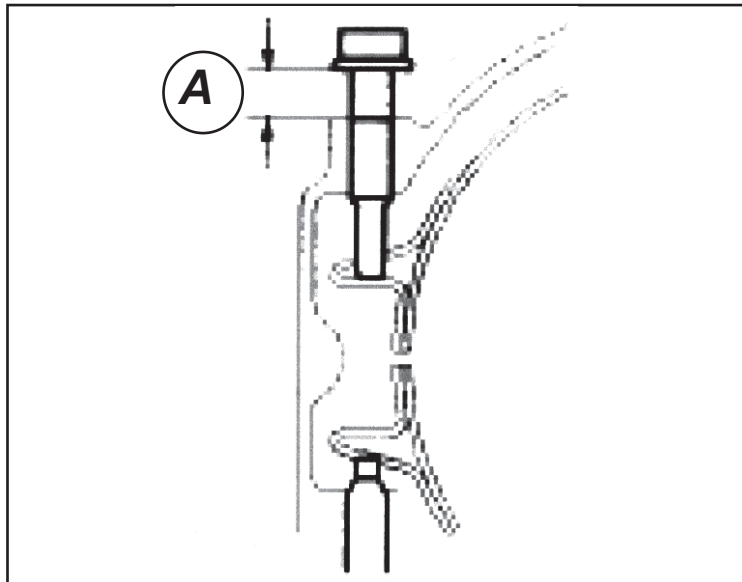


Find appropriate bolt between 2.36 - 2.75 inches long. Install bolt and tighten to 43 In Lbs.

Measure Dimension "A"
Measure Dimension "B"

Calculate required band anchor bolt length

$B - A = C$
 $C - 4 = D$
 $C - 4.7 = E$
Select Anchor Bolt that falls between dimensions D+E



Band Anchor Bolt Length Specifications

1.417	1.437
1.467	1.476
1.496	1.506
1.535	1.486
1.516	

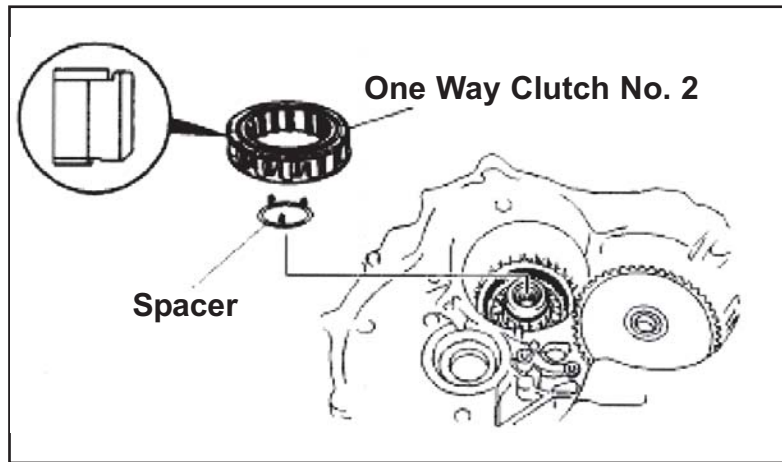
Transmission Type... FS5A-EL

Rebuilder's Kwik
Reference Guide

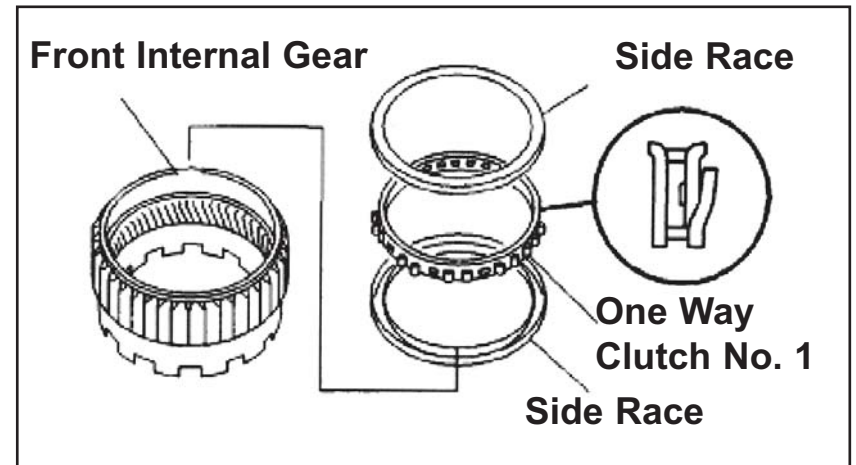


Tips for Rebuilding

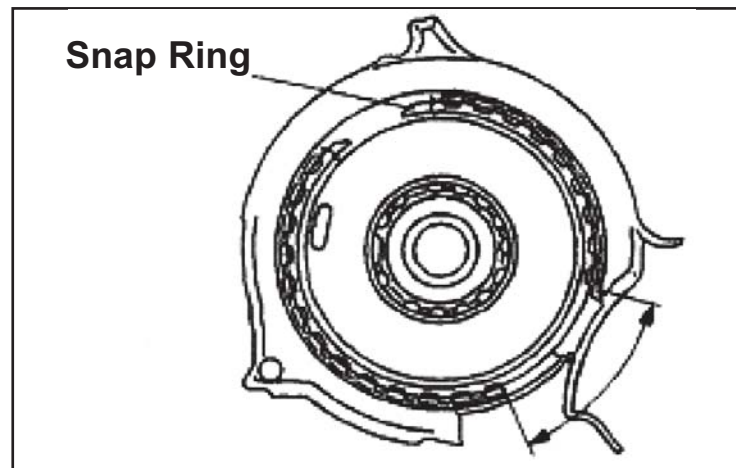
Sprag Assembly



One Way Clutch No. 2



One Way Clutch No. 1

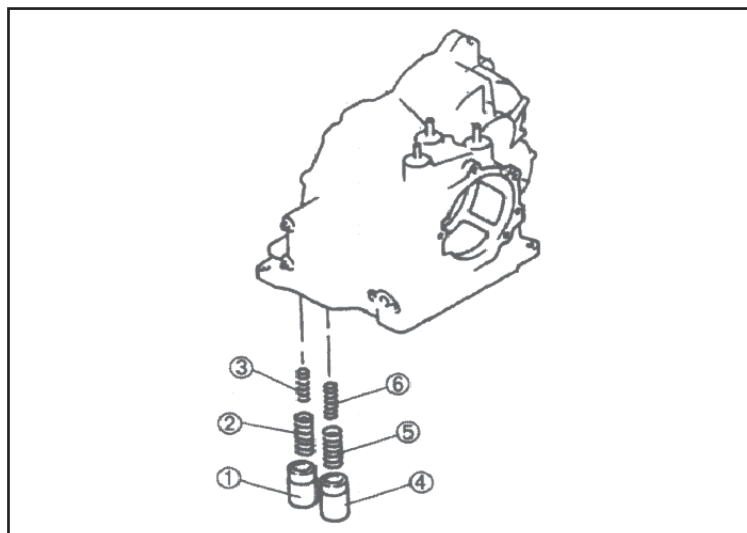


Reduction Brake Snap Ring Location

Transmission Type... FS5A-EL



Tips for Rebuilding - Accumulator Spring ID



1	Servo apply accumulator
2	Servo apply accumulator large spring
3	Servo apply accumulator small spring
4	Forward accumulator
5	Forward accumulator large spring
6	Forward accumulator small spring

ACCUMULATOR SPRING SPECIFICATIONS				
Spring	Outer diameter mm (in)	Free Length mm (in)	No. of coils	Wire diameter mm (in)
Servo apply accumulator large spring	21.0 (0.827)	67.8 (2.669)	10.3	3.5 (0.138)
Servo apply accumulator small spring	13.0 (0.512)	67.8 (2.669)	17.1	2.2 (0.087)
Forward accumulator large spring	21.0 (0.827)	75.0 (2.953)	10.7	2.3 (0.091)
Forward accumulator small spring	15.6 (0.614)	49.0 (1.929)	7.7	2.4 (0.094)