SPECIFICATIONS

TEMPERATURE VERSUS RESISTANCE

Temperature Versus Resistance - B13 Automatic Transmission Fluid Temperature Sensor

Temperature	Resistance
140B°C (284B°F)	69 to 73 ohms
130B°C (266B°F)	86 to 90 ohms
120B°C (248B°F)	110 to 114 ohms
110B°C (230B°F)	140 to 144 ohms
100B°C (212B°F)	182 to 186 ohms
95B°C (203B°F)	211 to 215 ohms
90B°C (194B°F)	239 to 243 ohms
85B°C (185B°F)	279 to 283 ohms
80B°C (176B°F)	318 to 322 ohms
75B°C (167B°F)	374 to 378 ohms
70B°C (158B°F)	430 to 434 ohms
65B°C (149B°F)	509 to 513 ohms
60B°C (140B°F)	589 to 593 ohms
55B°C (131B°F)	705 to 709 ohms
50B°C (122B°F)	821 to 825 ohms
45B°C (113B°F)	994 to 998 ohms
40B°C (104B°F)	1.166 k to 1.170 kohms
35B°C (95B°F)	1.427 k to 1.431 kohms
30B°C (86B°F)	1.688 k to 1.692 kohms
25B°C (77B°F)	2.093 k to 2.097 kohms
20B°C (68B°F)	2.498 k to 2.502 kohms
15B°C (59B°F)	3.141 k to 3.145 kohms
10B°C (50B°F)	3.784 k to 3.788 kohms
5B°C (23B°F)	4.835 k to 4.839 kohms
0B°C (32B°F)	5.886 k to 5.890 kohms
-5B°C (23B°F)	7.652 k to 7.656 kohms
-10B°C (14B°F)	9.418 k to 9.422 kohms
-15B°C (5B°F)	12.463 k to 12.467 kohms
-20B°C (-4B°F)	15.509 k to 15.513 kohms
-25B°C (-13B°F)	20.941 k to 20.945 kohms
-30B°C (-22B°F)	26.374 k to 26.378 kohms
-35B°C (-31B°F)	36.431 k to 36.435 kohms
-40B°C (-40B°F)	46.489 k to 46.493 kohms

FASTENER SPECIFICATIONS



Fig. 1: Exploded View Of 1-3-5-6-7 Clutch Housing Assembly Components
Courtesy of GENERAL MOTORS COMPANY

1-3-5-6-7 Clutch Housing Assembly

Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
500	Turbine Shaft Seal	Yes	-	-	1-3-5-6-7 Clutch Assemble
501	Turbine Shaft Fluid Seal Ring [4x]	Yes	-	-	1-3-5-6-7 Clutch Assemble
503	Turbine Shaft Seal	Yes	-	-	1-3-5-6-7 Clutch Assemble
504	Turbine Shaft Fluid Seal Ring [3x]	Yes	-	-	1-3-5-6-7 Clutch Assemble
507	1-3-5-6-7 Clutch Piston Seal- Outer	Yes	-	-	1-3-5-6-7 Clutch Assemble
508	1-3-5-6-7 Clutch Piston Seal- Inner	Yes	-	-	1-3-5-6-7 Clutch Assemble
510	1-3-5-6-7 Clutch Piston Dam Seal	Yes	-	-	1-3-5-6-7 Clutch Assemble

Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
514	1-3-5-6-7 Clutch Backing Plate Retaining Ring	Yes	-	-	1-3-5-6-7 Clutch Assemble
517	1-3-5-6-7 Clutch Piston Dam Retaining Ring	Yes	-	-	1-3-5-6-7 Clutch Assemble
518	Turbine Shaft Retaining Ring	Yes	-	-	1-3-5-6-7 Clutch Assemble



Fig. 2: Exploded View Of 2-3-4-6-8 And 4-5-6-7-8 Reverse Clutch Housing Assembly Components
Courtesy of GENERAL MOTORS COMPANY

2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Housing Assembly

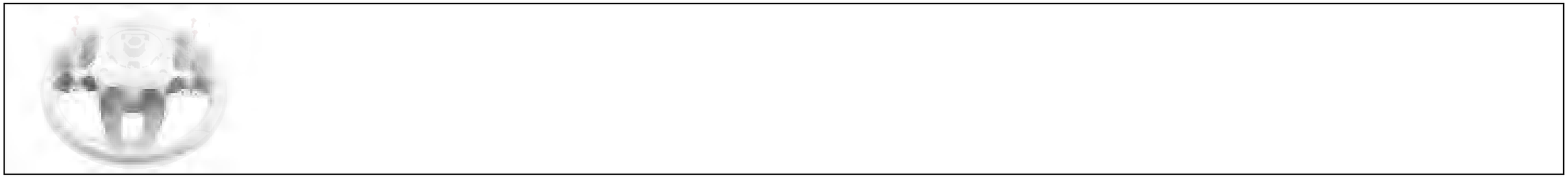
Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
522	2-3-4-6-8 Clutch Piston Dam Seal [2x]	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
523	4-5-6-7-8-Reverse Clutch Piston Stop Seal	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
524	4-5-6-7-8-Reverse Clutch Piston Seal	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
525	2-3-4-6-8 Clutch Piston Seal	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
528	2-3-4-6-8 Clutch Piston Dam Seal- Inner	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
530	2-3-4-6-8 Clutch Piston Dam Seal- Outer	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
531	2-3-4-6-8 Clutch Piston Dam Retaining Ring	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
533	4-5-6-7-8-Reverse Clutch Piston Seal	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
536	4-5-6-7-8-Reverse Clutch Piston Seal	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
538	4-5-6-7-8-Reverse Clutch Piston Dam Retaining Ring	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
543	4-5-6-7-8-Reverse Clutch Backing Plate Retaining Ring	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble
550	2-3-4-6-8 Clutch Backing Plate Retaining Ring	Yes	-	-	2-3-4-6-8 and 4-5-6-7-8 Reverse Clutch Assemble



Fig. 3: Exploded View Of Automatic Transmission Case Extension Assembly Components
Courtesy of GENERAL MOTORS COMPANY

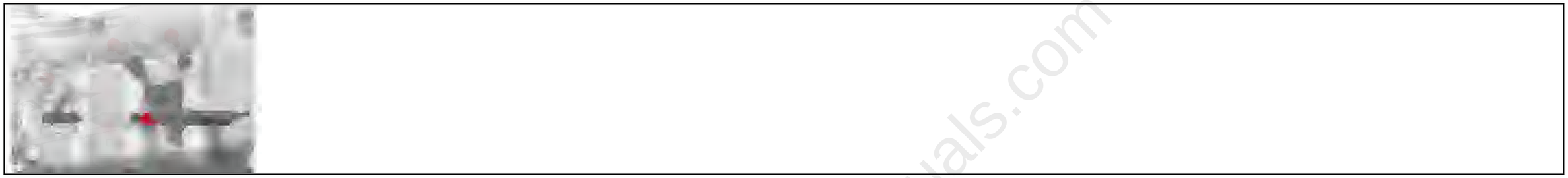
Automatic Transmission Case Extension Assembly

Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
400	1-2-3-4-5-Reverse Clutch Piston Dam Retaining Ring	Yes	-	-	Case Extension Assemble
401	1-2-3-4-5-Reverse Clutch Piston Dam Seal	Yes	-	-	Case Extension Assemble
407	Automatic Transmission Case Extension Hole Plug [2x]	Yes	-	11 N.m (97 lb in)	Case Extension Assemble
408	1-2-3-4-5-Reverse Clutch Piston Outer Seal	Yes	-	-	Case Extension Assemble
409	1-2-3-4-5-Reverse Clutch Piston O-Ring Seal	Yes	-	-	Case Extension Assemble
410	1-2-3-4-5-Reverse Clutch Piston Dam Inner Seal	Yes	-	-	Case Extension Assemble
414	Propeller Shaft Transmission Flange Fluid Seal	Yes	-	-	Propeller Shaft Transmission Flange Fluid Seal Installation



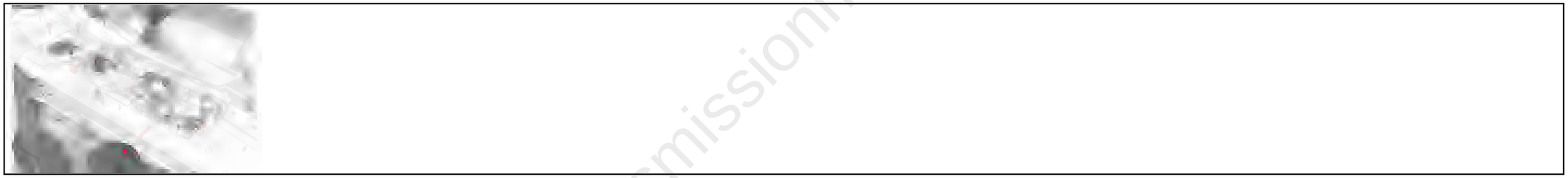
Automatic Transmission Manual Shift Auxiliary Position Switch

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Steering Wheel Bolt @ Automatic Transmission Manual Shift Auxiliary Position Switch [4x]	-	-	3.5 N.m (31 lb in)	• Automatic Transmission Manual Shift Auxiliary Position Switch Replacement - Left Side • Automatic Transmission Manual Shift Auxiliary Position Switch Replacement - Right Side



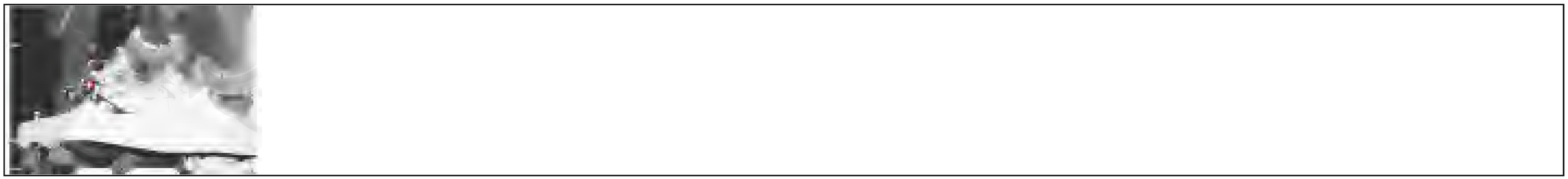
Automatic Transmission Range Selector Lever Cable and Bracket

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Automatic Transmission Range Selector Lever Cable Bolt	-	-	9 N.m (80 lb in)	Range Selector Lever Cable Replacement
2	Automatic Transmission Range Selector Lever Nut	-	-	30 N.m (22 lb ft)	Automatic Transmission Range Selector Lever Replacement
3	Automatic Transmission Range Selector Lever Cable Bracket Bolt [2x]	-	-	22 N.m (16 lb ft)	Range Selector Lever Cable Bracket Replacement



Automatic Transmission Range Selector Lever and Cable

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Automatic Transmission Control Bolt	-	-	9 N.m (80 lb in)	Transmission Control Replacement
2	Automatic Transmission Control Bolt	-	-	9 N.m (80 lb in)	Transmission Control Replacement
3	Automatic Transmission Range Selector Lever Bolt	-	-	9 N.m (80 lb in)	Range Selector Lever Cable Replacement
4	Automatic Transmission Control Bolt	-	-	9 N.m (80 lb in)	Transmission Control Replacement
5	Automatic Transmission Control Bolt @ Automatic Transmission Range Selector Lever Cable	-	-	9 N.m (80 lb in)	Range Selector Lever Cable Replacement
6	Automatic Transmission Range Selector Lever Cable Grommet Bolt	-	-	9 N.m (80 lb in)	Range Selector Lever Cable Replacement



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Automatic Transmission Range Selector Lever Cable Guide Nut

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Automatic Transmission Range Selector Lever Cable Guide Nut	-	-	9 N.m (80 lb in)	• Automatic Transmission Manual Shift Auxiliary Position Switch Replacement - Left Side • Automatic Transmission Manual Shift Auxiliary Position Switch Replacement - Right Side



Fig. 4: Exploded View Of Case and Associated Parts (1 of 2)
Courtesy of GENERAL MOTORS COMPANY

Case and Associated Parts (1 of 2)

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
2	Torque Converter Fluid Seal	Yes	-	-	Torque Converter Fluid Seal Installation
3	Automatic Transmission Case Front Cover Bolt M6 x 30 [11x]	Yes	-	**Automatic Transmission Case Front Cover Bolt Sequence**	Transmission Case Front Cover and Drive Link Installation
5	Automatic Transmission Case Front Cover Seal	Yes	-	-	Transmission Case Front Cover and Drive Link Installation
12	Automatic Transmission Fluid Baffle Bolt M6 x 25 [2x]	Yes	-	• First Pass: 4 N.m (35 lb in) • Final Pass: 45 degrees	Control Valve Assembly and Transmission Wiring Harness Installation
15	1-3-5-6-7 Clutch Fluid Seal Ring [2x]	Yes	-	-	Stator Shaft Support Assemble
17	Stator Shaft Support Bolt M8 x 33 [9x]	-	-	**Stator Shaft Support Bolt Sequence**	Stator Shaft Support Installation
18	Torque Converter Fluid Seal	Yes	-	-	Stator Shaft Support Assemble
19	Automatic Transmission Front Support Cover Gasket	Yes	-	-	Transmission Case Front Cover and Drive Link Installation
23	Automatic Transmission Case Extension Bolt M10 x 40 [6x]	-	-	**Automatic Transmission Case Extension Bolt Sequence**	Case Extension Assembly Installation
26	Automatic Transmission Case Extension Bolt - Model Dependant	-	-	**Automatic Transmission Case Extension Bolt Sequence**	Case Extension Assembly Installation



Fig. 5: Exploded View Of Case and Associated Parts (2 of 2)
Courtesy of GENERAL MOTORS COMPANY

Case and Associated Parts (2 of 2)

Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
36	Clutch Housing Fluid Passage Seal	Yes	-	-	Control Valve Assembly and Transmission Wiring Harness Installation
38	Automatic Transmission Fluid Baffle Bolt M6 x 25 [3x]	Yes	-	• First Pass: 4 N.m (35 lb in) • Final Pass: 45 degrees	Control Valve Assembly and Transmission Wiring Harness Installation
42	Manual Shift Detent Lever Spring Bolt	-	-	12 N.m (106 lb in)	Control Valve Assembly and Transmission Wiring Harness Installation

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Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
43	Control Valve Solenoid Body Bolt M6 x 68 [7x]	-	-	**Control Valve Body Bolt Sequence**	**Control Valve Assembly and Transmission Wiring Harness Installation**
44	Control Valve Solenoid Body Bolt M6 x 45 [4x]	-	-	**Control Valve Body Bolt Sequence**	**Control Valve Assembly and Transmission Wiring Harness Installation**
50	Automatic Transmission Fluid Pan Drain Plug	-	-	9 N.m (80 lb in)	**Transmission Fluid Level and Condition Check**
51	Automatic Transmission Fluid Pan Bolt M6 x 20 [15x]	-	-	**Automatic Transmission Fluid Pan Bolt Sequence**	**Transmission Fluid Pan and Filter Assembly Installation**



Fig. 6: Exploded View Of Clutch Assemblies and Associated Parts
Courtesy of GENERAL MOTORS COMPANY

Clutch Assemblies and Associated Parts

Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
78	Output Shaft Seal	Yes	-	-	**Reaction Carrier Assembly, Output Carrier, and Output Shaft Installation**



Fig. 7: Exploded View Of Control Valve Assembly Components (1 of 2)
Courtesy of GENERAL MOTORS COMPANY

Control Valve Assembly (1 of 2)

Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
300	Automatic Transmission Fluid Pump Bolt M6 x 28 [5x] 9.8 Grade	-	-	**Automatic Transmission Fluid Pump Bolt Sequence**	**Control Valve Body Assembly Assemble**
300	Automatic Transmission Fluid Pump Bolt M6 x 28 [5x] 10.9 Grade	-	-	**Automatic Transmission Fluid Pump Bolt Sequence**	**Control Valve Body Assembly Assemble**
302	Automatic Transmission Fluid Pump Seal	Yes	-	-	**Control Valve Body Assembly Assemble**
303	Automatic Transmission Fluid Pump Seal	Yes	-	-	**Control Valve Body Assembly Assemble**
311	Control Valve Channel Plate Spacer Plate	Yes	-	-	**Control Valve Body Assembly Assemble**
314	Control Valve Channel Plate Bolt M5 x 45 [8x]	-	-	**Control Valve Solenoid Body Bolt Sequence**	**Control Valve Body Assembly Assemble**
356	Automatic Transmission Wiring Harness Bracket Bolt M6 x 20	-	-	9 N.m (80 lb in)	**Control Valve Upper Body Assembly Cleaning and Inspection**

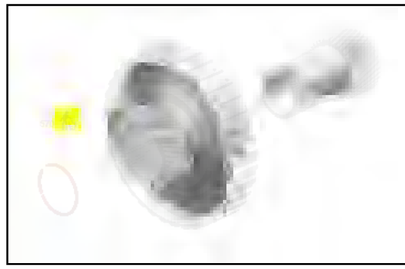
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Fig. 8: Exploded View Of Control Valve Assembly Components (2 of 2)
Courtesy of GENERAL MOTORS COMPANY

Control Valve Assembly (2 of 2)

Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
317	Control Valve Body Spacer Plate Retainer [2x]	Yes	-	-	Control Valve Body Assembly Assemble
318	Control Valve Body Spacer Plate	Yes	-	-	Control Valve Body Assembly Assemble
321	Automatic Transmission Auxiliary Fluid Accumulator Bolt M5 x 45 [3x]	-	B	8 N.m (71 lb in)	Auxiliary Fluid Accumulator Installation
321	Valve Body Bolt M5 x 45 [8x]	-	B	**Control Valve Solenoid Body Bolt Sequence**	Control Valve Body Assembly Assemble
398	Automatic Transmission Auxiliary Fluid Accumulator Bolt M4 x 15 [2x]	-	B	3 N.m (27 lb in)	Auxiliary Fluid Accumulator Installation
399	Automatic Transmission Auxiliary Fluid Accumulator Bleeder Valve	-	-	11 N.m (97 lb in)	Auxiliary Fluid Accumulator Installation



Input Sun Gear Assembly

Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
570	Input Sun Gear Retaining Ring	Yes	-	-	Input Sun Gear Overhaul



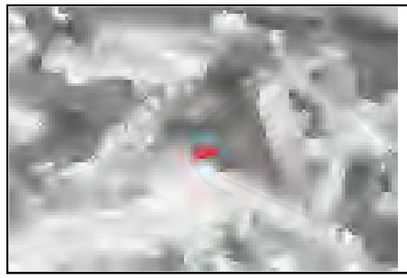
Fig. 9: Exploded View Of Park System Components
Courtesy of GENERAL MOTORS COMPANY

Park System Components

Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
600	Manual Shift Shaft Pin	Yes	-	-	Manual Shift Detent Lever with Shaft Position Switch Assembly and Park Pawl Actuator Installation

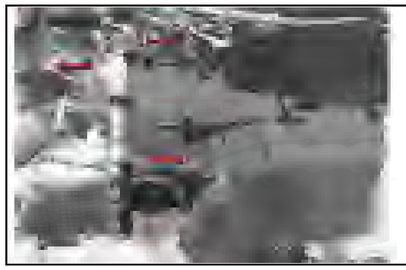
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Callout	Component Name	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
602	Manual Shift Shaft Seal	Yes	-	-	Manual Shift Shaft Seal Installation
605	Manual Shift Detent Lever Hub Pin	Yes	-	-	Manual Shift Detent Lever with Shaft Position Switch Assembly and Park Pawl Actuator Installation
606	Park Pawl Actuator Bracket Bolt [2x]	Yes	-	31 N.m (23 lb ft)	Manual Shift Detent Lever with Shaft Position Switch Assembly and Park Pawl Actuator Installation



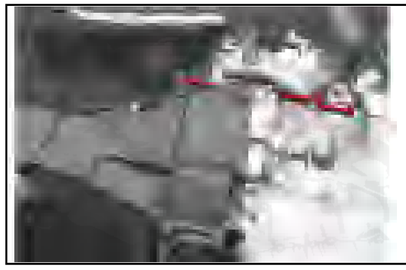
Torque Converter Bolt Specification

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Torque Converter Bolt [6x]	-	Yes	60 N.m (44 lb ft)	Transmission Replacement (Rear Wheel Drive) , or Transmission Replacement (All Wheel Drive)



Transmission Bolt and Stud (1 of 2)

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Transmission Bolt [4x]	-	-	58 N.m (43 lb ft)	Transmission Mount Replacement
2	Transmission Stud [2x]	-	-	58 N.m (43 lb ft)	Transmission Mount Replacement



Transmission Bolt and Stud (2 of 2)

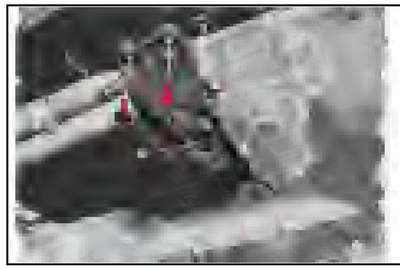
Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Transmission Bolt [2x]	-	-	58 N.m (43 lb ft)	Transmission Mount Replacement
2	Transmission Stud	-	-	58 N.m (43 lb ft)	Transmission Mount Replacement



Transmission Control Module Bracket

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Transmission Control Module Bracket Bolt	-	-	9 N.m (80 lb in)	Transmission Control Module Bracket Replacement

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Transmission Mount - AWD

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Transmission Mount Bracket Bolt [4x]	-	-	58 N.m (43 lb ft)	Transmission Mount Replacement
2	Transmission Mount Bolt	-	-	58 N.m (43 lb ft)	Transmission Mount Replacement

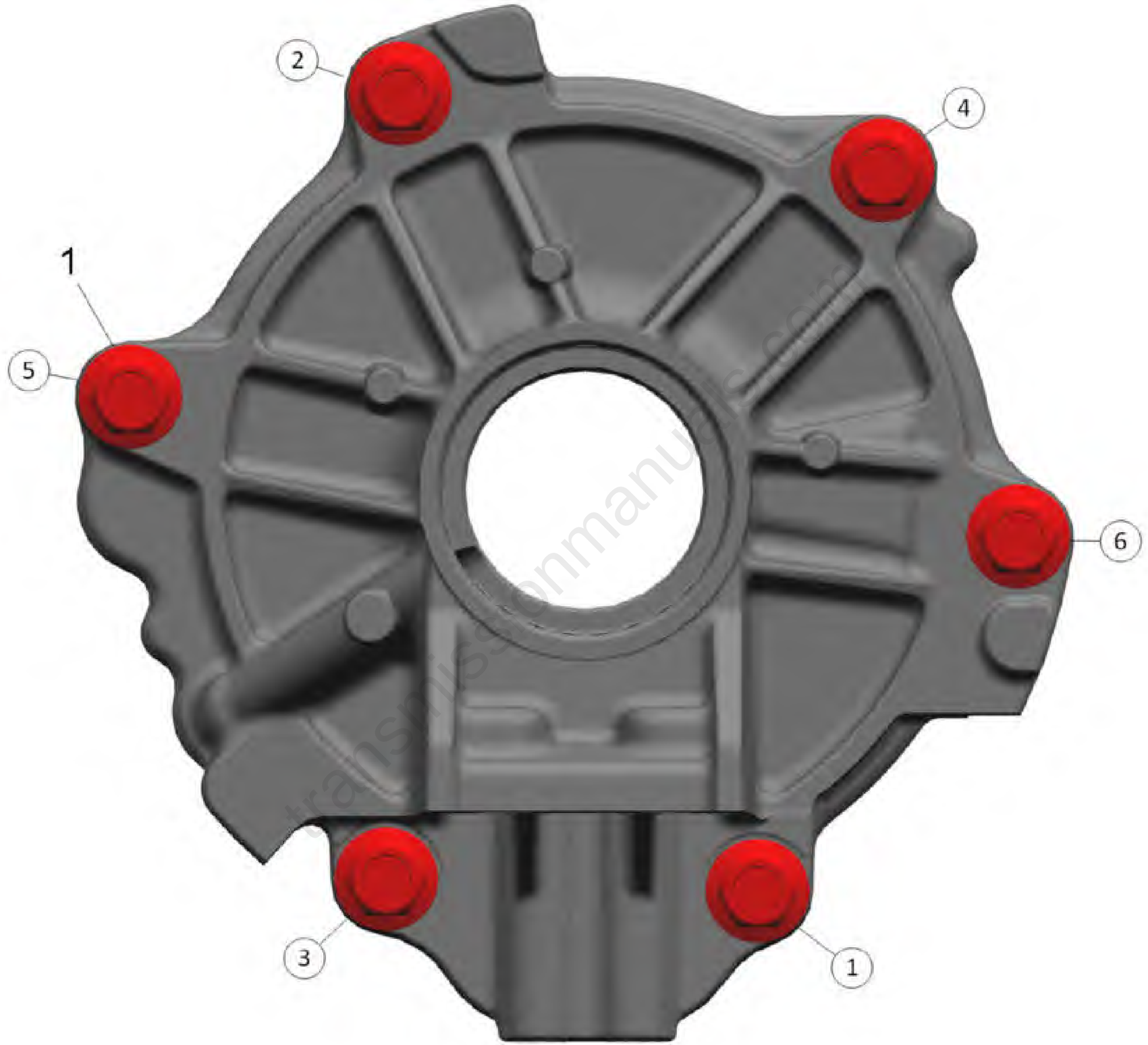


Transmission Mount - RWD

Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Transmission Mount Bracket Bolt [4x]	-	-	58 N.m (43 lb ft)	Transmission Mount Replacement
2	Transmission Mount Bolt [2x]	-	-	58 N.m (43 lb ft)	Transmission Mount Replacement

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Automatic Transmission Case Extension Bolt Sequence

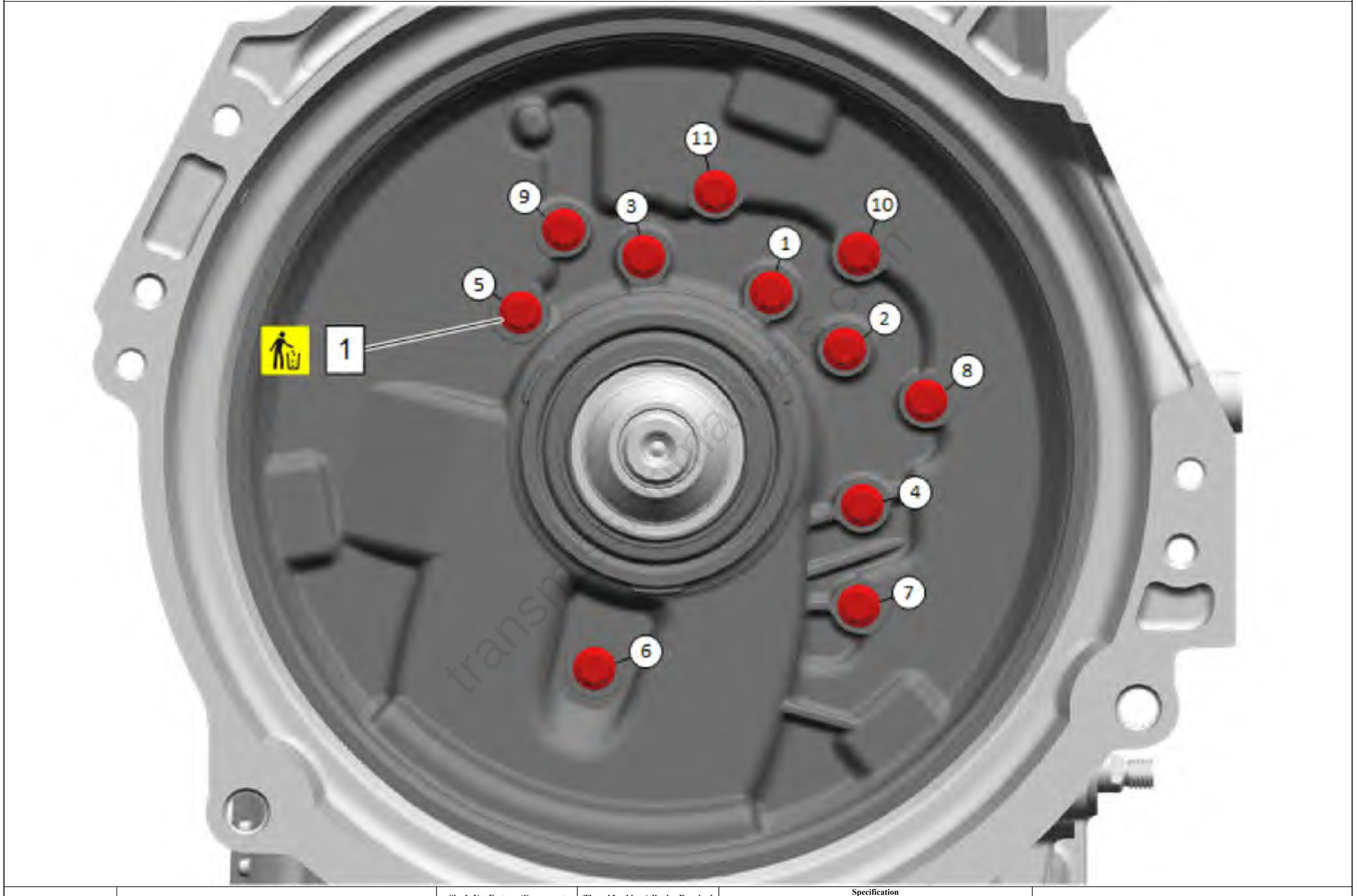


Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Automatic Transmission Case Extension Bolt-M10 x 40 [6x]	-	-	• First Pass: 22 N.m (16 lb ft)	Case Extension Assembly Installation

				• Final Pass: 55 degrees	

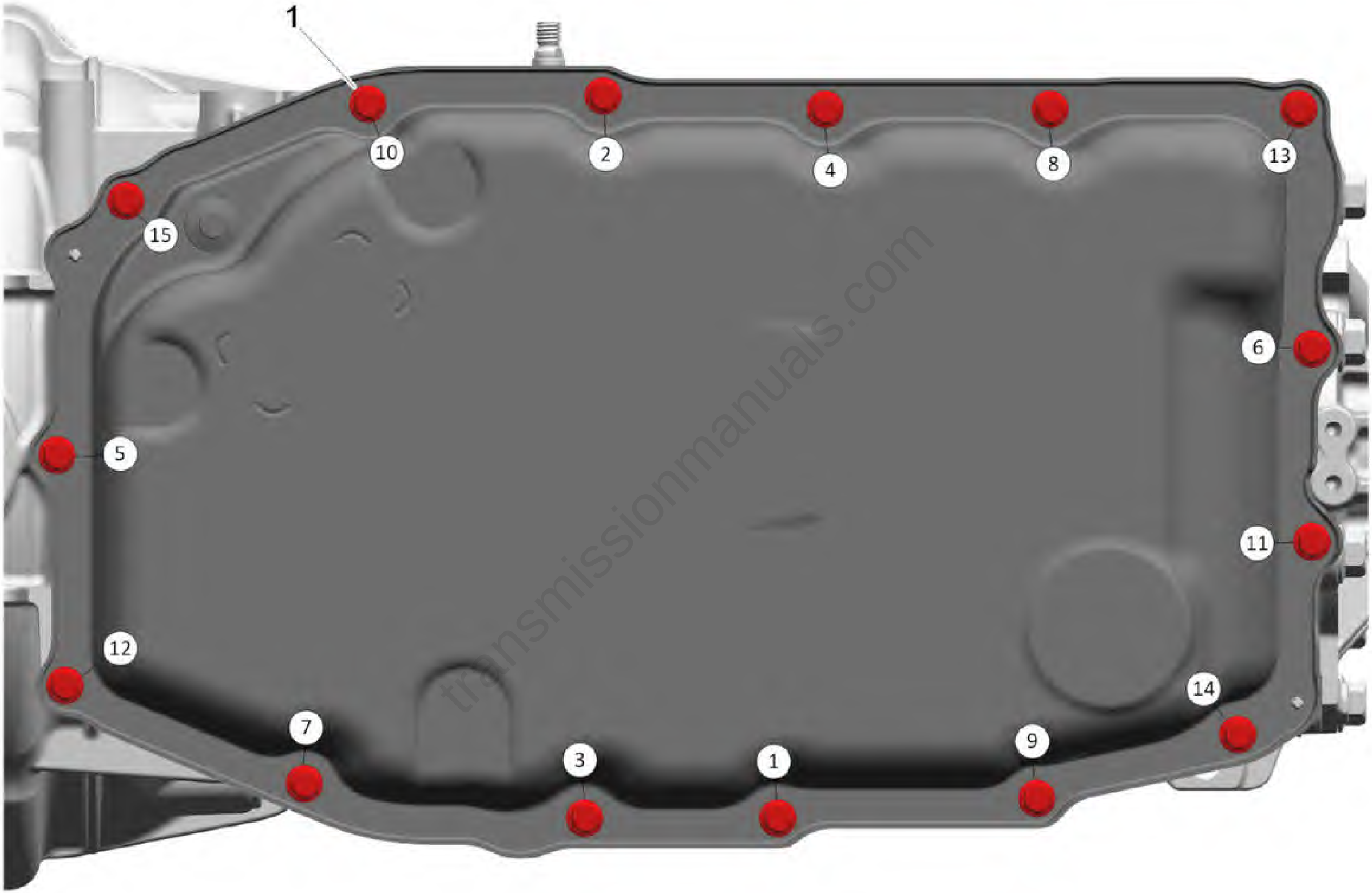
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Automatic Transmission Case Front Cover Bolt Sequence



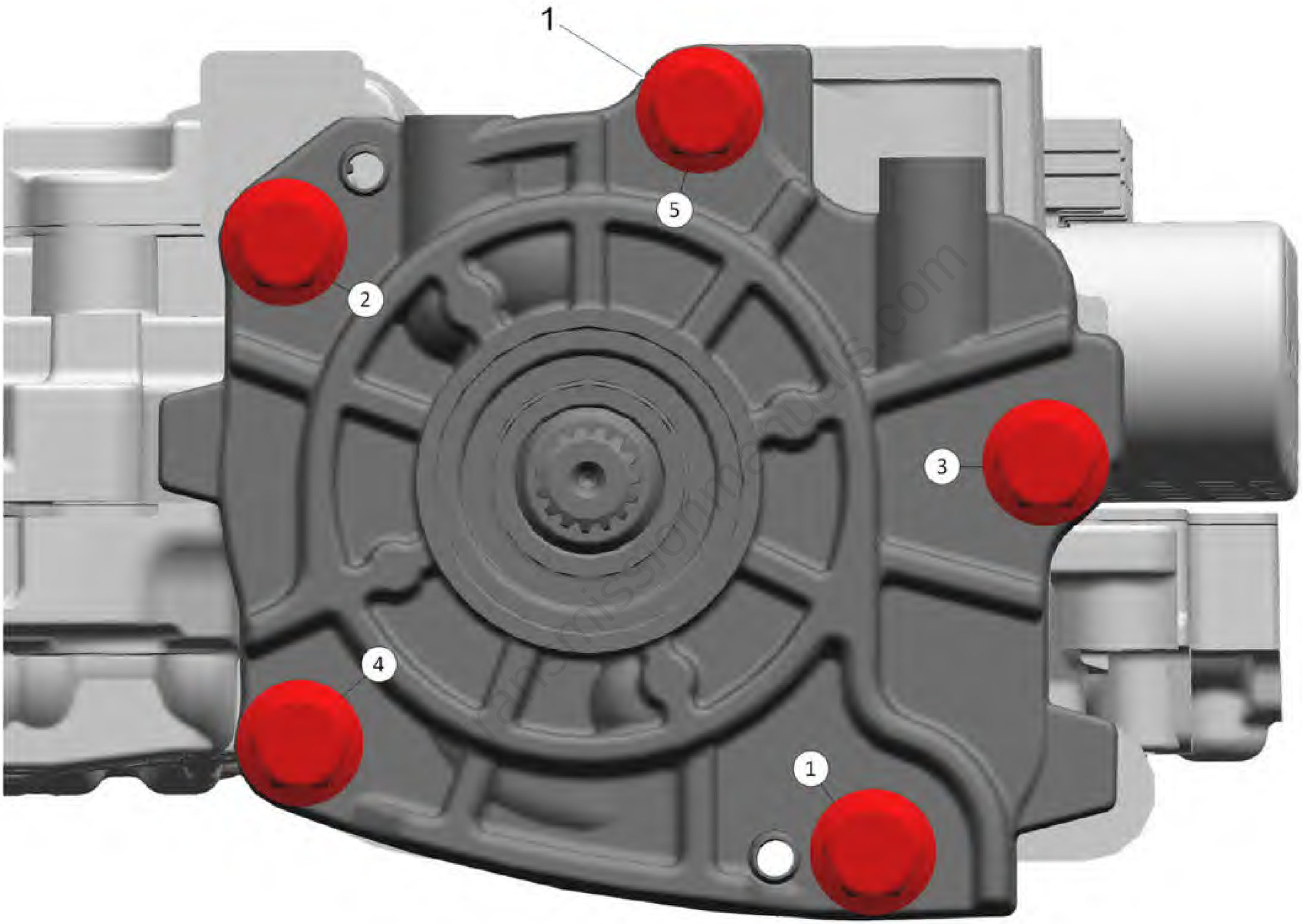
Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Automatic Transmission Case Front Cover Bolt-M6 x 30 [11x]	Yes	-	9 N.m (80 lb in)	Transmission Case Front Cover and Drive Link Installation

Automatic Transmission Fluid Pan Bolt Sequence



Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Automatic Transmission Fluid Pan Bolt-M6 x 20 [15x]	-	-	10 N.m (89 lb in)	Transmission Fluid Pan and Filter Assembly Installation

Automatic Transmission Fluid Pump Bolt Sequence

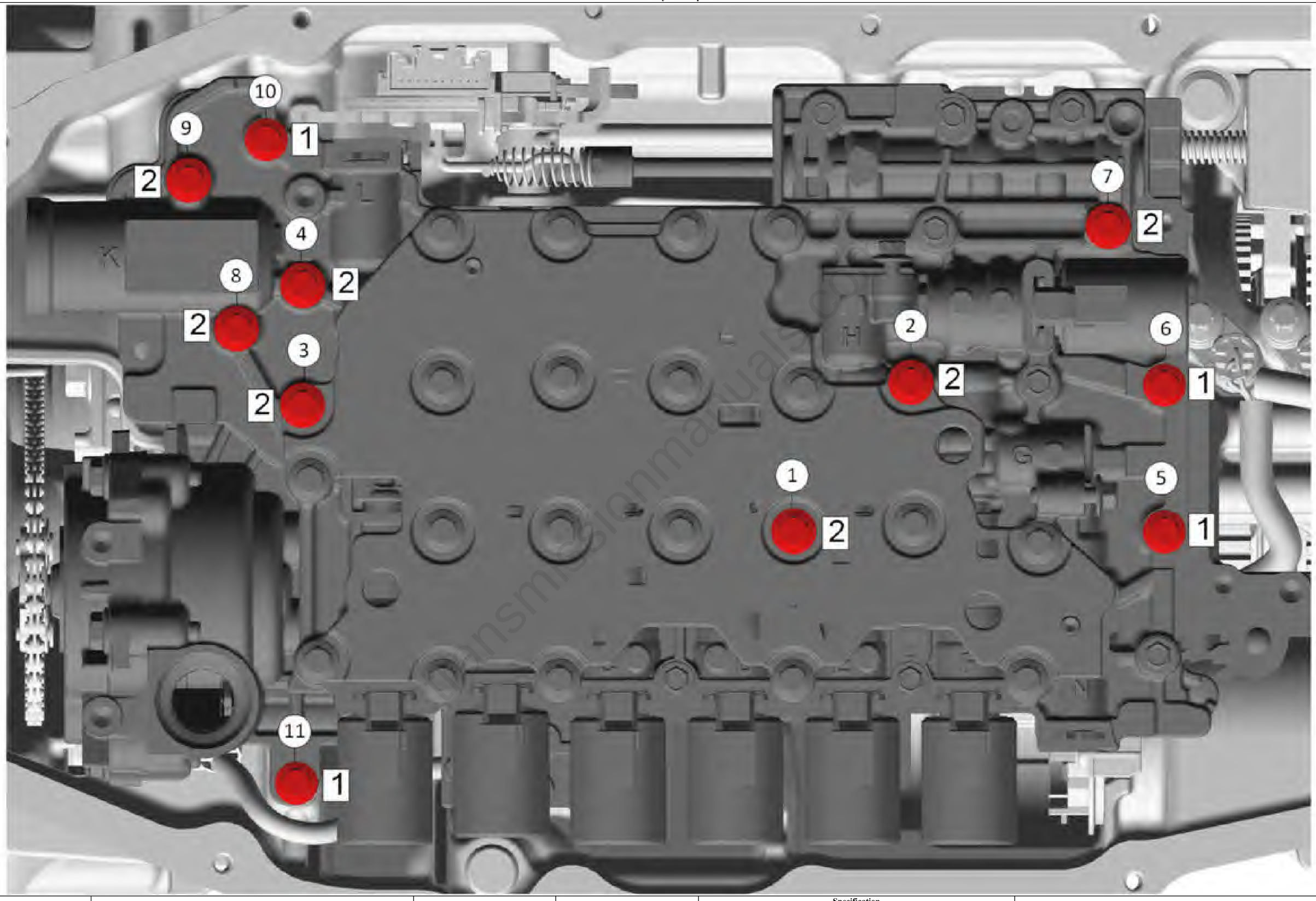


Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Automatic Transmission Fluid Pan Bolt-M6 x 28 [5x] 9.8 Grade	-	-	10 N.m (89 lb in)	Control Valve Body Assembly Assemble

1	Automatic Transmission Fluid Pump Bolt-M6 x 28 [5x] 10.9 Grade	-	-	13 N.m (115 lb in)	Control Valve Body Assembly Assemble

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Control Valve Body Bolt Sequence

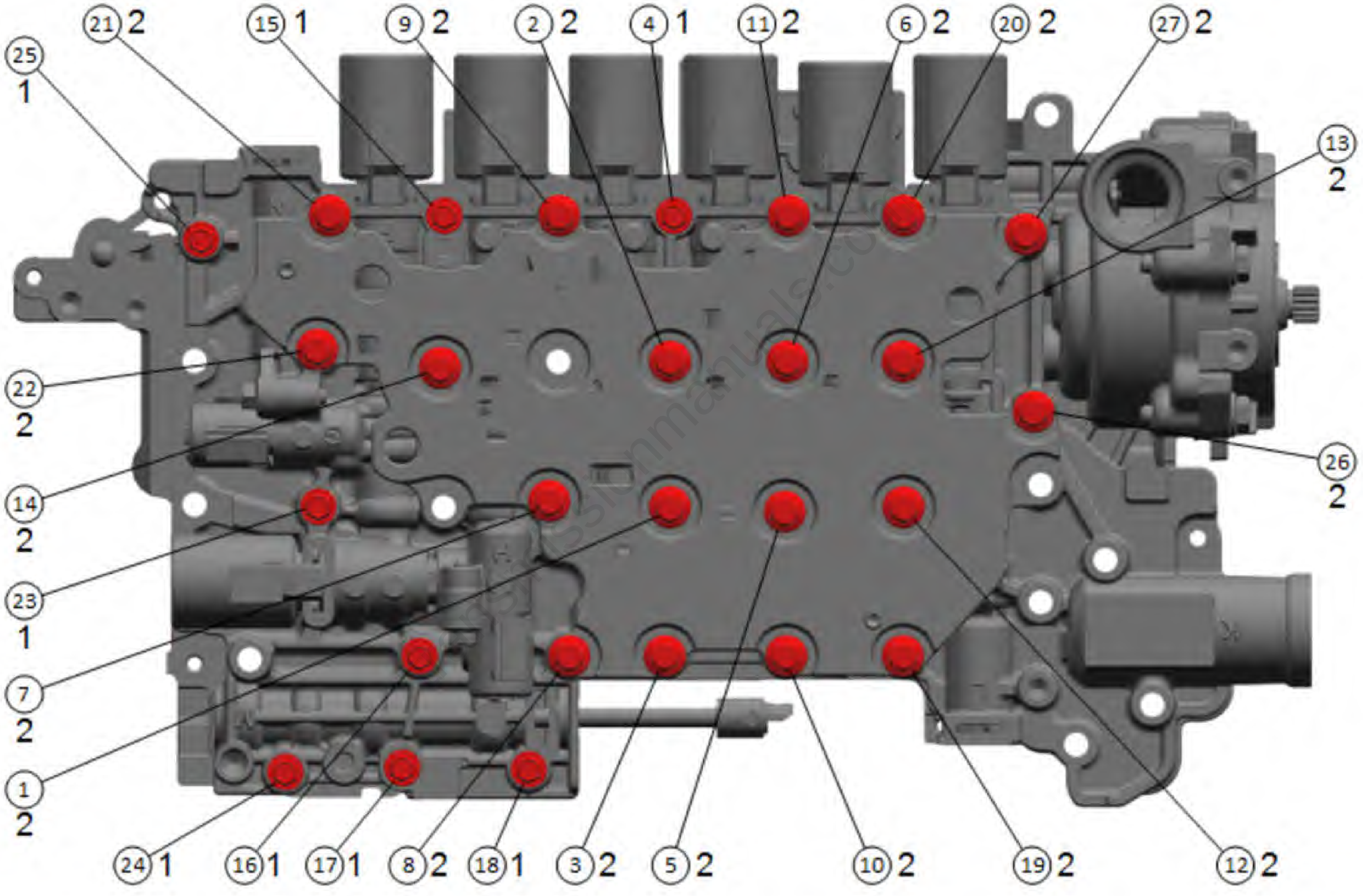


Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure

				Metric (English)	
1	Control Valve Solenoid Body Bolt-M6 x 45 [4x]	-	-	9 N.m (80 lb in)	Control Valve Assembly and Transmission Wiring Harness Installation
2	Control Valve Solenoid Body Bolt-M6 x 68 [7x]	-	-	9 N.m (80 lb in)	Control Valve Assembly and Transmission Wiring Harness Installation

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Control Valve Solenoid Body Bolt Sequence



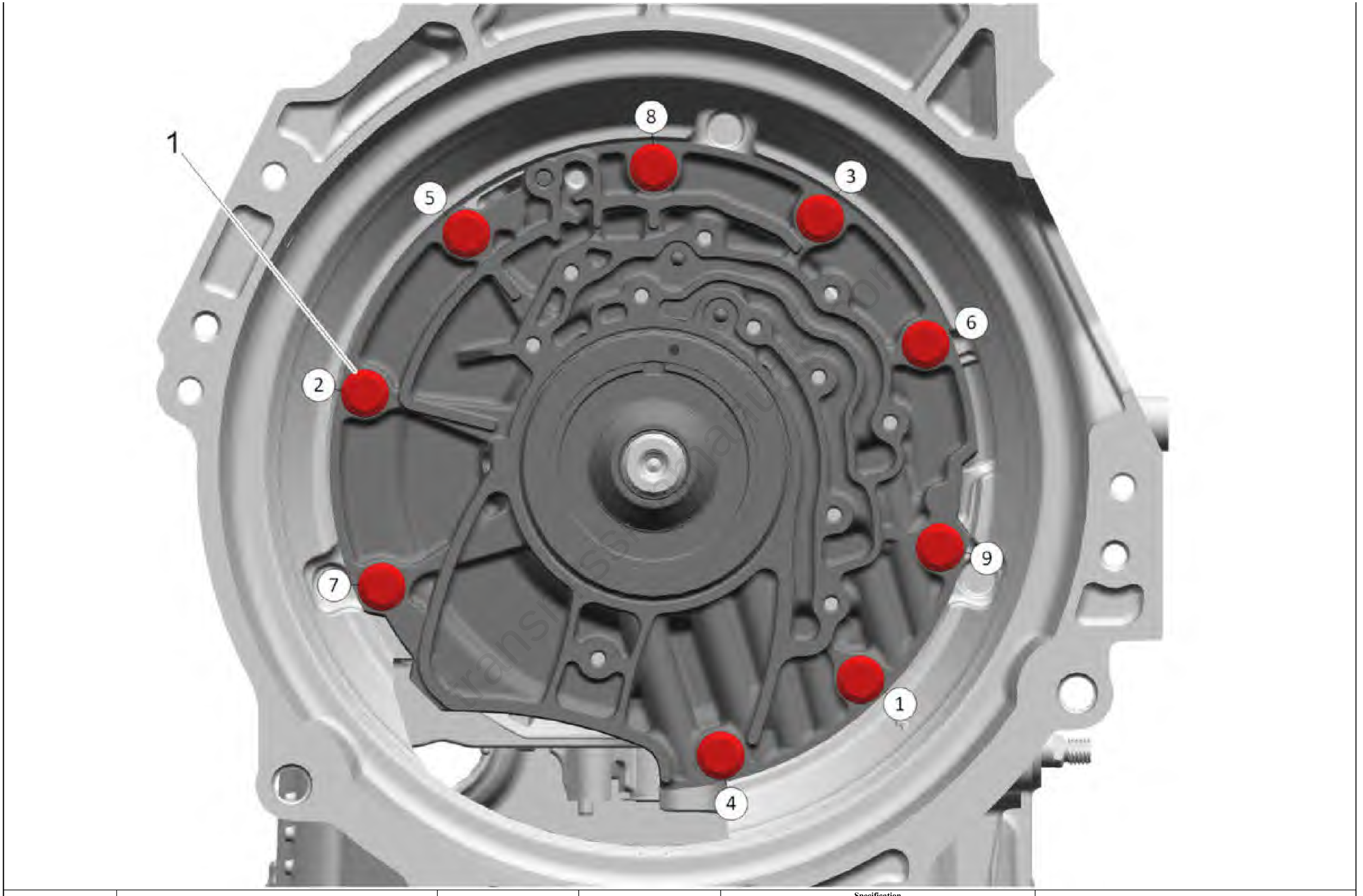
Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure

				Metric (English)	
1	Valve Body Bolt-M5 x 45 [8x]	-	-	8 N.m (71 lb in)	Control Valve Body Assembly Assemble
2	Control Valve Channel Plate Bolt-M5 x 55 [19x]	-	-	8 N.m (71 lb in)	Control Valve Body Assembly Assemble

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Stator Shaft Support Bolt Sequence

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Callout	Component Name [Component Quantity]	Single Use Fastener/Component	Thread Locking Adhesive Required	Specification	Procedure
				Metric (English)	
1	Stator Shaft Support Bolt-M8 x 33 [9x]	-	-	35 N.m (26 lb ft)	Stator Shaft Support Installation

TRANSMISSION GENERAL SPECIFICATIONS

Name	8L45	8L90	8L90
RPO Codes	M5N, M5T	M5U, M5X	MQE
Production Location	Toledo, OH (USA) Silao (Mexico)	Toledo, OH (USA)	Toledo, OH (USA)
Transmission Drive	Rear Wheel Drive	Rear Wheel Drive	Rear Wheel Drive
1st Gear Ratio	4.62	4.560	4.560
2nd Gear Ratio	3.04	2.971	2.971
3rd Gear Ratio	2.07	2.075	2.075
4th Gear Ratio	1.66	1.688	1.688
5th Gear Ratio	1.26	1.270	1.270
6th Gear Ratio	1.000	1.000	1.000
7th Gear Ratio	0.85	0.845	0.845
8th Gear Ratio	0.66	0.652	0.652
Reverse	3.93	3.818	3.818
Torque Converter Size - Diameter of Torque Converter Turbine	238 mm	258 mm	237 mm 262 mm
Pressure Taps	Line Pressure	Line Pressure	Line Pressure
Transmission Fluid Type	DEXRONB® HP	DEXRONB® HP	DEXRONB® HP
Transmission Type: 8	Eight Forward Gears	Eight Forward Gears	Eight Forward Gears
Transmission Type: L	Longitude Mount	Longitude Mount	Longitude Mount
Transmission Type: 45/90	Product Series	Product Series	Product Series
Position Quadrant	P, R, N, D, M	P, R, N, D, M	P, R, N, D, M
Case Material	Die Cast Aluminum	Die Cast Aluminum	Die Cast Aluminum
Transmission Net Weight (Approximate)	80 kg (176 lb)	95 kg (210 lb)	98 kg (216 lb)
Maximum Trailer Towing Capacity	Refer to applicable owner's manual	Refer to applicable owner's manual	Refer to applicable owner's manual

ADHESIVES, FLUIDS, LUBRICANTS, AND SEALERS

Application	Type of Material	GM Part Number	
		United States	Canada
Automatic Transmission Fluid	DEXRONB®HP	19417577	19418066
Propeller Shaft Transmission Flange	Adhesive	89021297	10953488
Propeller Shaft Transmission Flange Nut	Adhesive	89021297	10953488

APPROXIMATE FLUID CAPACITIES

Application	Specification	
	Metric	English
8L45 or 8L90		
Pan Removal and Filter Replacement - Approximate Capacity	7.0 liters	7.4 quarts
Overhaul - Approximate Capacity (Transmission Volume Only)	10.3 liters	10.88 quarts
Complete Trans System - Approximate Capacity (Including Cooler Volume)	10.8 liters	11.41 quarts

CLUTCH BACKING PLATE RETAINING RING SPECIFICATIONS

2-3-4-6-8 Clutch Backing Plate Retaining Ring

Clutch Pack Travel Specification - 1.24 - 1.86 mm (0.049 - 0.073 in)		
Retaining Ring Thickness		Ring Identification Color
Metric	English	
NOTE: **After measuring clutch pack travel, determine if the measurement is within the specification. If the measurement is not within the specification, measure the thickness of the existing retaining ring, and then choose a thicker or thinner retaining ring that will bring the measurement within specification.**		
1.88 - 1.98 mm	0.074 - 0.078 in	Purple
2.20 - 2.30 mm	0.087 - 0.090 in	Yellow
2.53 - 2.63 mm	0.100 - 0.104 in	Light Blue
2.85 - 2.95 mm	0.112 - 0.116 in	No Color
3.17 - 3.27 mm	0.125 - 0.129 in	Orange
3.49 - 3.59 mm	0.137 - 0.141 in	Dark Green
3.82 - 3.92 mm	0.150 - 0.154 in	White

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4-5-6-7-8 Reverse Clutch Backing Plate Retaining Ring

Clutch Pack Travel Specification - 1.24 - 1.86 mm (0.049 - 0.073 in)		
Retaining Ring Thickness		Ring Identification Color
Metric	English	
NOTE: **After measuring clutch pack travel, determine if the measurement is within the specification. If the measurement is not within the specification, measure the thickness of the existing retaining ring, and then choose a thicker or thinner retaining ring that will bring the measurement within specification.**		
1.88 - 1.98 mm	0.074 - 0.078 in	Purple
2.20 - 2.30 mm	0.087 - 0.090 in	Yellow
2.53 - 2.63 mm	0.100 - 0.104 in	Light Blue
2.85 - 2.95 mm	0.112 - 0.116 in	No Color
3.17 - 3.27 mm	0.125 - 0.129 in	Orange
3.49 - 3.59 mm	0.137 - 0.141 in	Dark Green
3.82 - 3.92 mm	0.150 - 0.154 in	White

1-3-5-6-7 Clutch Backing Plate Retaining Ring

Clutch Pack Travel Specification - 1.50 - 2.10 mm (0.059 - 0.083 in)		
Retaining Ring Thickness		Ring Identification Color
Metric	English	
NOTE: **After measuring clutch pack travel, determine if the measurement is within the specification. If the measurement is not within the specification, measure the thickness of the existing retaining ring, and then choose a thicker or thinner retaining ring that will bring the measurement within specification.**		
2.42 - 2.52 mm	0.095 - 0.099 in	Purple
2.76 - 2.86 mm	0.109 - 0.113 in	Silver
3.10 - 3.20 mm	0.122 - 0.126 in	Yellow
3.44 - 3.54 mm	0.135 - 0.139 in	Light Blue
3.78 - 3.88 mm	0.149 - 0.153 in	Orange

1-2-3-4-5 Reverse Clutch Backing Plate Retaining Ring

Clutch Pack Travel Specification - 0.93 - 1.80 mm (0.037 - 0.071 in)		
Retaining Ring Thickness		Ring Identification Color
Metric	English	
NOTE: **After measuring clutch pack travel, determine if the measurement**		

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Clutch Pack Travel Specification - 0.93 - 1.80 mm (0.037 - 0.071 in)		
Retaining Ring Thickness		Ring Identification Color
Metric	English	
is within the specification. If the measurement is not within the specification, measure the thickness of the existing retaining ring, and then choose a thicker or thinner retaining ring that will bring the measurement within specification.		
3.06 - 3.16 mm	0.120 - 0.124 in	Light Blue
3.39 - 3.49 mm	0.133 - 0.137 in	Orange
3.71 - 3.81 mm	0.146 - 0.150 in	Dark Green
4.04 - 4.14 mm	0.159 - 0.163 in	Yellow
4.36 - 4.46 mm	0.172 - 0.176 in	Purple

1-3-5-6-7 CLUTCH THRUST BEARING WASHER SPECIFICATIONS

Transmission End Play Specification - 0.20 - 0.79 mm (0.008 - 0.031 in)		
1-3-5-6-7 Clutch Thrust Bearing Washer Thickness		Ring Identification Color
Metric	English	
NOTE: **After measuring end play travel, determine if the measurement is within the specification. If the measurement is not within the specification, measure the thickness of the existing washer, and then choose a thicker or thinner washer that will bring the measurement within specification.**		
2.277 - 2.377 mm	0.090 - 0.094 in	Brown
2.463 - 2.563 mm	0.097 - 0.101 in	Purple
2.649 - 2.749 mm	0.104 - 1.108 in	Black
2.835 - 2.935 mm	0.112 - 0.116 in	Pink
3.021 - 3.121 mm	0.119 - 0.123 in	Plain
3.207 - 3.307 mm	0.127 - 0.130 in	Dark Blue
3.393 - 3.493 mm	0.134 - 0.138 in	Light Green
3.579 - 3.679 mm	0.141 - 0.145 in	White
3.769 - 3.865 mm	0.148 - 0.152 in	Light Blue

RANGE REFERENCE

Range Reference Table

Range	Gear	1 - 3 - 5 - 6 - 7 Clutch	4 - 5 - 6 - 7 - 8 Reverse Clutch	2 - 3 - 4 - 6 - 8 Clutch	1 - 2 - 7 - 8 Reverse Clutch	1 - 2 - 3 - 4 - 5 Reverse Clutch
Park	P	-	-	-	Applied*	Applied*
Reverse	R	-	Applied	-	Applied	Applied
Neutral	N	-	-	-	Applied*	Applied*
D	1st	Applied	-	-	Applied	Applied
	2nd	-	-	Applied	Applied	Applied
	3rd	Applied	-	Applied	-	Applied
	4th	-	Applied	Applied	-	Applied
	5th	Applied	Applied	-	-	Applied
	6th	Applied	Applied	Applied	-	-
	7th	Applied	Applied	-	Applied	-
	8th	-	Applied	Applied	Applied	-

*Applied with no load.

TRANSMISSION RANGE SENSOR DUTY CYCLES

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Transmission Range Sensor Duty Cycle

NOTE: **Verify the values with a scan tool.**

Transmission Range	Transmission Range Sensor 1	Transmission Range Sensor 2
Park	12 to 18%	82 to 88%
Reverse	36 to 42%	58 to 64%
Neutral	48 to 54%	46 to 52%
Drive	60 to 66%	34 to 40%
Manual/Low	70 to 76%	24 to 30%

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