

# SPECIFICATIONS

## GENERAL SPECIFICATIONS

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Item	Specification
<b>Fluid</b>	
<b>CAUTION: MERCON®, MERCON® V and MERCON® SP are not interchangeable transmission fluids. The use of any other fluid or cleaning agents will cause internal transmission damage.</b>	
MERCON® SP Automatic Transmission Fluid XT-6-QSP (US); CXT-6-LSP12 (Canada)	MERCON® SP
<b>Fluid Capacities</b>	
All (transmission and fluid cooler)	10.5L (11 qt)
<b>Fluid Filter</b>	
Internal to the transmission	-
<b>Lubricants</b>	
Multi-Purpose Grease XG-4 and/or XL-5	ESB-M1C93-B
Automatic Transmission/Power Steering Dye 164-R3701 or equivalent	-
<b>Transmission Fluid Flow</b>	
Transmission fluid cooler fluid flow at 93°C (200° F)	0.6L (20 oz.) in 15 seconds at idle

## CLUTCH APPLICATION CHART

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Gear	Forward (A)	Direct (B)	Intermediate (C)	Low/ Reverse (D)	Overdrive (E)
Park				X	
Reverse		X		X	
Neutral				X	
1st Gear (M) Manual	X			X	
2nd Gear Manual	X		X		
3rd Gear Manual	X	X			
1st Gear D	X			X	
2nd Gear D	X		X		
3rd Gear D	X	X			
4th Gear D	X				X
5th Gear D		X			X
6th Gear D			X		X

## SOLENOID APPLICATION CHART

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Gear	SS A (VFS1) Proportional	SS B (VFS2) Inversely Proportional	SS C (VFS3) Proportional	SS D (VFS- 4) Inversely Proportional	PC A (VFS5) Inversely Proportional	TCC (VFS6) Proportional	SS E (SS1) ON/ OFF
Park				X	a		
Reverse		X		X	a		
Neutral				X	a		
1st Gear Manual	X			X	a	a	
2nd Gear Manual	X		X		a	a	
3rd Gear Manual	X	X			a	a	
1st Gear D	X			X	a	a	
2nd Gear D	X		X		a	a	
3rd Gear D	X	X			a	a	
4th Gear D	X			X	a	a	X
5th Gear D		X		X	a	a	X
6th Gear D (Overdrive)			X	X	a	a	X

<sup>a</sup> TCM Controlled

Gear Ratio	
1st	4.17 to 1
2nd	2.34 to 1
3rd	1.52 to 1
4th	1.14 to 1
5th	0.87 to 1
6th	0.69 to 1
Reverse	3.40 to 1

**NOTE:** All friction and steel plates use a wave design plate.

### END PLAY

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Item	Specifications
Forward Clutch (A)	0.5-0.9 mm (0.019-0.035 in)
Direct Clutch (B)	0.3-1.1 mm (0.011-0.043 in)
Intermediate Clutch (C)	0.5-0.9 mm

	(0.019-0.035 in)
Low/Reverse Clutch (D)	0.8-1.4 mm (0.031-0.055 in)
Overdrive Clutch (E)	0.3-0.7 mm (0.011-0.027 in)

## CLUTCH PLATE QUANTITY

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Component	Number of Frictions	Number of Separator Plates	Separator Plate Thickness	Number of Pressure Plates	Pressure Plate Thickness
Forward Clutch (A)	4	4	3.0 mm (0.11 in)	1	3.0 mm (0.11 in)
Direct Clutch (B)	4	4	2.1 mm (0.08 in)	1	3.9 mm (0.15 in)
Intermediate Clutch (C)	4	4	3.0 mm (0.11 in)	1	3.9 mm (0.15 in)
Low/Reverse (D)	4	4	2.1 mm (0.08 in)	Select	5.4 mm (0.21 in)
				Select	5.7 mm (0.22 in)
			2.1 mm (0.08 in)	Select	6.0 mm (0.23 in)
Overdrive Clutch (E)	6	6	6.15 mm (0.24 in)	1	3.0 mm (0.11 in)

**NOTE:** Shift speed ranges are approximate for all applications. For specific applications (engine, axle ratio, tire size and application), refer to the Automatic Transmission Specification booklet.

Always drive the vehicle in a safe manner according to driving conditions and obey all traffic laws.

## SHIFT SPEEDS

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Throttle Position	Shift	MPH	Km/H
Light Throttle TP Voltage 1.25 Volts	1-2	9	14
	2-3	16	26
	3-4	24	39
	4-5	32	51
	5-6	40	64
Closed Throttle	6-5	29	47
	5-4	24	39
	4-3	20	32
	3-2	7	11
	2-1	4	6

Wide Open Throttle (WOT)	1-2	30	48
	2-3	56	90
	3-4	80	138

## TORQUE SPECIFICATIONS

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Description	Nm	lb-ft	lb-in
Detent spring bolts	10	-	89
Dual converter Y-pipe bolts	40	30	-
Exhaust heat shield bolt	15	11	-
Flexplate inspection cover	35	26	-
Front pump bolts (inner)	15	11	-
Front pump bolts (outer)	10	-	89
Front pump stator-to-cover outer bolts	12	9	-
Ground cable nut	23	17	-
Manual control lever nut	18	13	-
Mechatronic bolts <sup>a</sup>	-	-	-
Output shaft flange nut	60	44	-
Park lever guide plate	10	-	89
Park pawl pin bolt	35	26	-
Rear fuel line bracket bolt	25	18	-
Rear transmission crossmember-to-frame nuts - horizontal	90	66	-
Rear transmission crossmember-to-frame nuts - vertical	80	59	-
Rear transmission insulator bracket-to-transmission bolts	48	35	-
Rear transmission insulator-to-crossmember nuts	103	76	-
Rear transmission insulator-to-bracket bolts	80	59	-
Selector lever bracket bolts	27	20	-
Starter B+ cable	12	9	-
Starter cable (small)	6	-	53
Starter motor bolts	26	19	-
Torque converter nuts	35	26	-
Transmission case bolts	48	35	-
Transmission control module (TCM) bolts <sup>a</sup>	-	-	-
Transmission fluid cooler tube bracket bolt	25	18	-
Transmission fluid cooler tube bracket nut	12	9	-
Transmission fluid fill plug	35	26	-
Transmission fluid pan bolts	14	10	-
Transmission shift control solenoid hold-down bracket bolt	6	-	53

<sup>a</sup> Specific tightening sequence required. See the appropriate procedures.