

# SPECIFICATIONS

## GENERAL SPECIFICATIONS

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Item	Specification
<b>Fluid</b>	
MERCON V® is not interchangeable at this time with the current MERCON® service fluids. Check the transmission fluid level indicator to determine the correct fluid and refer to the Workshop Information/Owner publication to determine the correct service interval for the specific vehicle.	
Motorcraft MERCON® V Automatic Transmission Fluid XT-5-QM	MERCON® V
<b>Fluid Capacities</b>	
Refill Capacity Liters (Quarts) All applications	13.2L (13.9 quarts)
<b>Fluid Filter</b>	
In-Line Transmission Fluid Filter Kit XC3Z-7B155-AA	
In-Line Transmission Fluid Filter XC3Z-7B155-AB	
<b>Lubricants</b>	
Multi-Purpose Grease XG-4	ESR-M1C159-A

## LINE PRESSURE CHART

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Application	Range	Idle		WOT Stall	
		EPC	Line Pressure	EPC	Line Pressure
5.4L (3V)	P, N, OD, 2, 1	69-276 kPa (10-40 psi)	331-689 kPa (48-100 psi)	689-793 kPa (100-115 psi)	1,172-1,861 kPa (170-270 psi)
5.4L (3V)	R	138-207 kPa (20-30 psi)	551-689 kPa (80-100 psi)	586-655 kPa (85-95 psi)	1,379-1,930 kPa (200-280 psi)

## TORQUE CONVERTER STALL SPEED SPECIFICATIONS

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Engine	Min	Max
5.4L (3V)	1,853	2,184

## CLUTCH PRESSURE SPECIFICATIONS

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Transmission Pressures with TP at 1.5 Volts and Vehicle Speed Above 8 Km/h (5 MPH)					
Gear	EPC Tap <sup>(1)</sup>	Line Pressure Tap	Forward Clutch Tap	Intermediate Clutch Tap	Direct Clutch Tap
M1	275-344 kPa (40-50 psi)	689-827 kPa (100-120 psi)	620-758 kPa (90-110 psi)	0-34 kPa (0-5 psi)	0-34 kPa (0-5 psi)
M2	241-310 kPa (35-45 psi)	620-689 kPa (90-100 psi)	551-689 kPa (80-100 psi)	586-724 kPa (85-105 psi)	0-34 kPa (0-5 psi)
1	275-344 kPa (40-50 psi)	689-827 kPa (100-120 psi)	620-758 kPa (90-110 psi)	0-34 kPa (0-5 psi)	0-34 kPa (0-5 psi)

2	241-310 kPa (35-45 psi)	620-689 kPa (90- 100 psi)	551-689 kPa (80- 100 psi)	586-724 kPa (85-105 psi)	0-34 kPa (0-5 psi)
3	241-310 kPa (35-45 psi)	620-689 kPa (90- 100 psi)	551-689 kPa (80- 100 psi)	586-724 kPa (85-105 psi)	551-689 kPa (80-100 psi)
4	241-310 kPa (35-45 psi)	620-689 kPa (90- 100 psi)	0-34 kPa (0-5 psi)	586-724 kPa (85-105 psi)	551-689 kPa (80-100 psi)

(1) EPC readings will vary due to EEC strategy. These values are approximate pressures depending on circuit leakage. Actual clutch apply pressures should be within 0-103 kPa (0-15 psi) of line pressure. For additional information on testing, refer to the **Clutch Pressure Test**.

## BAND AND CLUTCH APPLICATION SPECIFICATIONS

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Gear	Overdrive Band	Intermediate Clutch	Low/Reverse Band	Reverse Clutch	Forward Clutch	Direct Clutch
REVERSE			A <sup>(1)</sup>	A <sup>(1)</sup>		
1st GEAR MANUAL LOW			A <sup>(1)</sup>		A <sup>(1)</sup>	
2nd GEAR MANUAL LOW	A <sup>(1)</sup>	A <sup>(1)</sup>			A <sup>(1)</sup>	
1st GEAR (D) (Overdrive)					A <sup>(1)</sup>	
2nd GEAR (D) (Overdrive)		A <sup>(1)</sup>			A <sup>(1)</sup>	
3rd GEAR (D) (Overdrive)		A <sup>(1)</sup>			A <sup>(1)</sup>	A <sup>(1)</sup>
4th GEAR (D) (Overdrive)	A <sup>(1)</sup>	A <sup>(1)</sup>				A <sup>(1)</sup>

(1) A = Applied

## BAND AND CLUTCH APPLICATION CHART B SPECIFICATIONS

### BAND AND CLUTCH APPLICATION CHART B SPECIFICATIONS

Gear	Intermediate One-Way Clutch		Planetary One-Way Clutch		Solenoid States		
	Drive	Coast	Drive	Coast	SSA	SSB	TCC
PARK					ON	OFF	HD (1)
REVERSE			NE <sup>(2)</sup>		ON	OFF	HD (1)
NEUTRAL					ON	OFF	HD (1)
1st GEAR MANUAL LOW			H <sup>(3)</sup>		ON	OFF	HD (1)
2nd GEAR MANUAL LOW	H <sup>(3)</sup>				OFF	OFF	EC <sup>(4)</sup>

1st GEAR (D) (Overdrive)			H <sup>(3)</sup>	OR <sup>(5)</sup>	ON	OFF	HD (1)
2nd GEAR (D) (Overdrive)	H <sup>(3)</sup>	OR <sup>(5)</sup>	OR <sup>(5)</sup>		OFF	OFF	EC <sup>(4)</sup>
3rd GEAR (D) (Overdrive)	OR <sup>(5)</sup>	OR <sup>(5)</sup>			OFF	ON	EC <sup>(4)</sup>
4th GEAR (D) (Overdrive)	OR <sup>(5)</sup>	OR <sup>(5)</sup>	OR <sup>(5)</sup>		ON	ON	EC <sup>(4)</sup>
<p>(1) HD = Hydraulically Disabled</p> <p>(2) NE = No Effect</p> <p>(3) H = Hold</p> <p>(4) EC = Electronically Controlled</p> <p>(5) OR = Overrunning</p>							

### SHIFT SPEED REFERENCE

**NOTE:** Shift speed ranges are approximate for all applications. For specific applications (engine, axle ratio and application), refer to the booklet. Do not exceed local speed laws.

### SHIFT SPEED REFERENCE

Throttle Position	Shift	MPH	Km/H
Closed Throttle	4-3	11-25	18-40
	3-2	11-25	18-40
	2-1	4-10	6-16
Light Throttle	1-2	9-17	14-27
	TP Voltage	2-3	15-35
1.25 Volts	3-4	19-47	31-76
Wide Open	1-2	32-45	51-72
	2-3	60-80	97-129
Throttle	3-2	58-88	93-142
	2-1	36-34	58-55

### SENSOR RESISTANCE READINGS SPECIFICATIONS

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Component	Readings (ohm)
SSA	20-30 ohms
SSB	20-30 ohms
EPC	2.48-5.66 ohms
TCC	10-16 ohms
OSS	400-500 ohms
TSS	480-590 ohms

### SELECTIVE THRUST WASHER SPECIFICATIONS

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Item	Specifications
Green thickness mm (inch)	1.217-1.371 (0.050-0.054)
Yellow thickness mm (inch)	1.727-1.828 (0.068-0.072)
Natural thickness mm (inch)	2.159-2.260 (0.085-0.089)
Red thickness mm (inch)	2.590-2.692 (0.102-0.106)
Blue thickness mm (inch)	3.022-3.124 (0.119-0.123)

## FORWARD CLUTCH PACK SPECIFICATIONS

### FORWARD CLUTCH PACK SPECIFICATIONS

Item	Specifications
Clearance mm (inch)	1.83-2.29 (0.072-0.090)
Snap ring thickness mm (inch)	1.72-1.83 (0.068-0.072)
	1.93-2.03 (0.076-0.080)
	2.13-2.23 (0.084-0.088)
	2.34-2.44 (0.092-0.096)

## REVERSE CLUTCH PACK SPECIFICATIONS

### REVERSE CLUTCH PACK SPECIFICATIONS

Item	Specifications
Clearance mm (inch)	1.27-1.94 (0.050-0.076)
Snap ring thickness mm (inch)	1.524-1.625 (0.060-0.064)
	1.880-1.981 (0.074-0.078)
	2.235-2.337 (0.088-0.092)
	2.591-2.692 (0.102-0.106)

## DIRECT CLUTCH PACK SPECIFICATIONS

### DIRECT CLUTCH PACK SPECIFICATIONS

Item	Specifications
Clearance mm (inch)	1.65-2.08 (0.065-0.082)
Snap ring thickness mm (inch)	1.270-1.372 (0.050-0.054)
	1.625-1.727 (0.064-0.068)
	1.981-2.083 (0.078-0.082)
	2.337-2.438 (0.092-0.096)

## INTERMEDIATE CLUTCH PACK SPECIFICATIONS

### INTERMEDIATE CLUTCH PACK SPECIFICATIONS

Item	Specifications
Clearance mm (inch)	41.7322-42.5958 (1.643-1.677)
Selective steel plate mm (inch)	1.702-1.803 (0.067-0.071)
	1.956-2.057 (0.077-0.081)
	2.210-2.311 (0.087-0.091)
	2.464-2.565 (0.097-0.101)

## TORQUE SPECIFICATIONS

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Description	Nm	lb-ft	lb-in
Transmission crossmember bolts	90	66	
Exhaust hanger bolts	40	30	
Shift cable bracket bolts	25	18	
Transmission mount nuts	103	76	
Transmission mount bolts	80	59	
Transmission fluid pan bolts	14	10	
Front driveshaft bolts	103	76	
Front pump bolts	27	20	
Front pump support bolts	23	17	
Harness electrical connector bolt	5		44
Inspection cover bolts	34	25	
Main control valve body bolts	10		89
Main control valve body cover plate bolts	10		89
Main control valve body separator plate bolts	10		89
Main control valve body reinforcement plates	10		89
Manual lever shaft inner nut	31	23	
Manual lever shaft outer nut	33	24	
Transmission fluid cooler tube case fittings	31	23	
Transmission fluid cooler tube nut fittings	18	13	
Transmission fluid cooler bolts	15	11	
Pressure tap plugs	12	9	
Rear driveshaft bolts	103	76	
Starter bolts	26	19	
Battery ground wire	23	17	
Starter electrical connector	12	9	
Starter electrical connector (small terminal)	6		53
TCC solenoid bolt	10		89
Torque converter nuts	36	27	
Digital transmission range (TR) sensor bolts	9		80
Transmission case retaining bolts	48	35	
Output shaft speed (OSS) sensor bolt	12	9	
Turbine shaft speed (TSS) sensor bolt	11	8	
Transmission vent tube	20	15	
Manual control valve detent lever spring bolt	10		89
Extension housing bolts	27	20	
Exhaust heat shield-to-crossmember bolt	15	11	
Starter B+ cable	12	9	
Starter ground wire	23	17	