

2010 Transmission

Automatic Transmission - 6T30/6T40/6T45 - Equinox & Terrain

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Application	Ref No.*	Quantity	Size	Specification	
				Metric	English
A/Trans Control Bolt	-	-	-	8 N.m	71 lb in
A/Trans Flex Plate Bolt	-	-	-	60 N.m	45 lb ft
A/Trans Fluid Pump Bolt to Converter Housing					
• First Pass	200	8	M8x33	10 N.m	89 lb in
• Final Pass	200	8	M8x33	45°	
A/Trans Fluid Pump Cover Bolt	302	23	M6x25	12 N.m	106 lb in
Control Solenoid Valve Assembly (w/TCM and Body) to Case Bolt	4	12	M6x97	10 N.m	89 lb in
Control Solenoid Valve Assembly (w/TCM and Body) to Case Bolt	6	3	M5x40.5	7 N.m	62 lb in
Control Valve Body Assembly (Complete) Bolt	400	1	M5x40.5	7 N.m	62 lb in
Control Valve Body to Case Bolt	9	2	M6x53	11 N.m	97 lb in
Control Valve Body to Case Bolt	10	9	M6x60	11 N.m	97 lb in
Control Valve Body Cover Bolt	1	13	M6x30	12 N.m	106 lb in
Drain Plug	64	1	1/8"-27 NPTF	12 N.m	106 lb in
Fluid Level Hole Plug	63	1	1/8"-27 NPTF	12 N.m	106 lb in
Fluid Pressure Test Hole Plug	51	1	1/8"-27 NPTF	12 N.m	106 lb in
Front Differential Carrier Baffle Bolt - Converter Housing	204	2	M6x25	12 N.m	106 lb in
Front Differential Carrier Baffle Bolt - Case	61	2	M6x16	12 N.m	106 lb in
Input Shaft Support Bolt	57	3	M6x50	12 N.m	106 lb in
Input Speed Sensor Bolt	21	1	M6x23	9 N.m	80 lb in
Manual Shift Detent Spring	17	1	M6x16	12 N.m	106 lb in
Output Speed Sensor Bolt	15	1	M6x18	9 N.m	80 lb in
Torque Converter and Differential Housing Bolt					
• First Pass	27	15	M8x30	10 N.m	89 lb in
• Final Pass	27	15	M8x30	50°	
Torque Converter to Flywheel Bolt	-	-	-	60 N.m	45 lb ft
Transmission Bolt (1, 2, 3) - 6T40	-	-	-	75 N.m	56 lb ft
Transmission Bolt (4, 5) - 6T40	-	-	-	50 N.m	37 lb ft

Transmission Bolt (1, 2, 3, 4) - 6T45	-	-	-	75 N.m	56 lb ft
Transmission Bolt (5) - 6T45	-	-	-	50 N.m	37 lb ft
Transmission Bracket Mount to Mount Through Bolt	-	-	-	100 N.m	74 lb ft
Transmission Fluid Cooler Outlet Pipe Nut	-	-	-	22 N.m	17 lb ft
Transmission Fluid Cooler Pipe Inlet Nut	-	-	-	22 N.m	17 lb ft
Transmission Mount Bolt	-	-	-	62 N.m	46 lb ft
Transmission Mount Bolt - Left Side to Body	-	-	-	62 N.m	46 lb ft
Transmission Mount Bolt - Left Side to Transmission	-	-	-	50 N.m + 60-75°	37 lb ft
Transmission Mount Nut - Left Side to Body	-	-	-	62 N.m	46 lb ft
Transmission Mount Through Bolt	-	-	-	62 N.m	46 lb ft
Transmission Mount to Transmission Bolt	-	-	-	100 N.m	74 lb ft
Transmission Range Selector Cable Bracket Bolt	-	-	-	18 N.m	14 lb ft
Transmission Range Selector Lever Nut	-	-	-	20 N.m	15 lb ft
*Reference number refers to the component callout number in Disassembled Views					

TRANSMISSION GENERAL SPECIFICATIONS (6T40/45)

Name	6T40/6T45
RPO Codes	MH8, MH7
Production Location	Korea/China
Transmission Drive	Front Wheel Drive
Reverse Gear Ratio	2.94
1st Gear Ratio	4.584
2nd Gear Ratio	2.964
3rd Gear Ratio	1.912
4th Gear Ratio	1.446
5th Gear Ratio	1.000
6th Gear Ratio	0.746
Effective Final Drive Gear Ratio	2.89/3.17/3.87
Torque Converter Size - Diameter of Torque Converter Turbine	236 mm
Pressure Taps Line	Pressure
Transmission Fluid Type	DEXRON VI®
Transmission Fluid Capacity	8.0 L/8.5 Quarts

Transmission Type: 6	Six Forward Gears
Transmission Type: T	Transverse Mount
Transmission Type: 40/45	Product Series
Position Quadrant	P, R, N, D, * *(Refer to the applicable owner's manual)
Case Material	Die Cast Aluminum
Transmission Net Weight	81/85 kg (178/187 lbs)
Maximum Trailer Towing Capacity	N/A
Maximum Gross Vehicle Weight (GVW)	2100 kg (4,630 lbs)

FLUID CAPACITY SPECIFICATIONS (6T40/45/50)

Application	Specification	
	Metric	English
Valve Body Cover Removal - Approximate Capacity	5.0-7.0 liters	5.3-7.4 quarts
Fluid Change - Drain Plug - Approximate Capacity	4.0-6.0 liters	4.2- 6.3 quarts
Overhaul - Approximate Capacity	8.0-8.5 liters	8.5-9.0 quarts

FLUID PUMP SELECTIVE SPECIFICATIONS

Fluid Pump Body Pocket Depth		Fluid Pump Gear Thickness	
Metric	English	Metric	English
12.617-12.625 mm	0.4967-0.4970 in	12.580-12.588 mm	0.4952-0.4955 in
12.626-12.636 mm	0.4970-0.4974 in	12.589-12.599 mm	0.4956-0.4960 in
12.637-12.645 mm	0.4975-0.4978 in	12.600-12.608 mm	0.4960-0.4963 in

RANGE REFERENCE

Range	Park	Reverse	Neutral	Drive						
				1st Braking	1st	2nd	3rd	4th	5th	6th
1-2-3-4 Clutch	-	-	-	Applied	Applied	Applied	Applied	Applied	-	-
3-5 Reverse Clutch	-	Applied	-	-	-	-	Applied	-	Applied	-
4-5-6 Clutch	-	-	-	-	-	-	-	Applied	Applied	Applied
2-6 Clutch	-	-	-	-	-	Applied	-	-	-	Applied
Low and Reverse Clutch	Applied*	Applied	Applied*	Applied	-	-	-	-	-	-
Low Clutch Assembly (OWL)	-	-	-	Holding	Holding	-	-	-	-	-

* = Applied with NO load

SHIFT SOLENOID VALVE STATE AND GEAR RATIO

Gear	Shift SOL 1	1-2-3-4 CL PC SOL 5 N.L.	2-6 CL PC SOL 4 N.L.	3-5 REV CL PC SOL 2 N.H.	LOW REV 4-5-6 CL PC SOL 3 N.H.	Gear Ratio
Park	ON	OFF	OFF	OFF	ON	-
Reverse	ON	OFF	OFF	ON	ON	2.940
Neutral	ON	OFF	OFF	OFF	ON	-
1st Braking	ON	ON	OFF	OFF	ON	4.584
1st	OFF	ON	OFF	OFF	OFF	4.584
2nd	OFF	ON	ON	OFF	OFF	2.964
3rd	OFF	ON	OFF	ON	OFF	1.912
4th	OFF	ON	OFF	OFF	ON	1.446
5th	OFF	OFF	OFF	ON	ON	1.000
6th	OFF	OFF	ON	OFF	ON	0.746

Effective Final Drive Ratio - 6T40/45 - 3.17/3.87
For shift solenoid 1, "ON" = Solenoid Energized (Pressurized) "OFF" = Solenoid De-energized (No Pressure).
For pressure control solenoids, "ON" = Pressurized, "OFF" = No Pressure

TRANSMISSION FLUID PRESSURE SWITCH LOGIC

Gear	TFP Switch States			
	TFP SW1	*TFP SW3	TFP SW4	TFP SW5
Park	Low	Low	Low	Low
Reverse	Low	Low	Low	Low
Neutral	Low	Low	Low	Low
Drive 1st - Engine Braking	High	Low	Low	Low
Drive 1st	High	High	Low	High
Drive 2nd	High	Low	Low	High
Drive 3rd	Low	High	Low	High
Drive 4th	High	High	Low	Low
Drive 5th	Low	High	High	Low
Drive 6th	High	Low	High	Low

High = 12V (Switch Open or Pressurized)
Low = 0V (Switch Closed or No Pressure)
Note: All TFP switches are normally closed (NC)
*TFP switch 2 does not exist

TRANSMISSION INTERNAL MODE SWITCH LOGIC

Gear Selector Position	Signal A	Signal B	Signal C	Signal P
Park	LOW	HI	HI	LOW
Park/Reverse	LOW	LOW	HI	LOW
Reverse	LOW	LOW	HI	HI
Reverse/Neutral	HI	LOW	HI	HI
Neutral	HI	LOW	HI	LOW
Neutral/Drive 6	HI	LOW	LOW	LOW
Drive 6	HI	LOW	LOW	HI
Drive 6/Drive 4	LOW	LOW	LOW	HI
Drive 4	LOW	LOW	LOW	LOW
Drive 4/Drive 3	LOW	HI	LOW	LOW
Drive 3	LOW	HI	LOW	HI
Drive 3/Drive 2	HI	HI	LOW	HI
Drive 2	HI	HI	LOW	LOW
Open	HI	HI	HI	HI
Invalid	HI	HI	HI	LOW
Invalid	LOW	HI	HI	HI

HI = Ignition voltage
LOW = 0 volts

SOLENOID VALVE PRESSURE

Line PC Solenoid Valve Pressure

Requested Pressure (kPa)	Actual Pressure	
	Metric	English
None	345-550 kPa	50-80 psi
200	690-900 kPa	100-130 psi
400	1100-1310 kPa	160-190 psi
600	1520-1725 kPa	220-250 psi
800	1860-2275 kPa	270-330 psi
1000	1860-2275 kPa	270-330 psi
1200	1860-2275 kPa	270-330 psi
1400	1860-2275 kPa	270-330 psi
1600	1860-2275 kPa	270-330 psi
1800	1860-2275 kPa	270-330 psi
2000	1860-2275 kPa	270-330 psi