

Specifications

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Standards and Service Limits

Engine Electrical (J35Z6)

Item	Measurement	Qualification	Standard or New	Service Limit
Ignition coil	Rated voltage		12 V	
	Firing order		1-4-2-5-3-6	
Spark plug	Type	NGK	ILZKR7B11	
	Gap		1.0-1.1 mm (0.039-0.043 in)	—
Ignition timing	At idle	In N or P	10 ± 2 ° BTDC	
	Check the red mark			
Drive belt	Tension		Auto-tensioner	
Alternator	Output	At 13.5 V and normal engine temperature	90A	
	Coil (rotor) resistance	At 68 °F (20 °C)	2.5 Ω	
	Slip ring O.D.		14.4 mm (0.57 in)	14.0 mm (0.55 in)
	Brush length		10.5 mm (0.41 in)	1.5 mm (0.06 in)
	Brush spring tension		3.24 N (0.33 kgf, 0.73 lbf)	—
Starter	Output		1.8 kW	
	Commutator mica depth		0.50-0.90 mm (0.020-0.035 in)	0.20 mm (0.008 in)
	Commutator runout		0.02 mm (0.001 in) max.	0.05 mm (0.002 in)
	Commutator O.D.		28.9-29.0 mm (1.138-1.142 in)	28.0 mm (1.10 in)
	Brush length		15.0-16.0 mm (0.59-0.63 in)	9.0 mm (0.35 in)
	Brush spring tension		22.26-27.07 N (2.27-2.76 kgf, 5.00-6.08 lbf)	—

Engine Electrical (J37A4)

Item	Measurement	Qualification	Standard or New	Service Limit
Ignition coil	Rated voltage		12 V	
	Firing order		1-4-2-5-3-6	
Spark plug	Type	DENSO	SXU22HCR11S	
	Gap		1.0-1.1 mm (0.039-0.043 in)	—
Ignition timing	At idle	In N or P	10 ± 2 ° BTDC	
	Check the red mark			
Drive belt	Tension		Auto-tensioner	
Alternator	Output	At 13.5 V and normal engine temperature	90A	
	Coil (rotor) resistance	At 68 °F (20 °C)	2.5 Ω	
	Slip ring O.D.		14.4 mm (0.57 in)	14.0 mm (0.55 in)
	Brush length		10.5 mm (0.41 in)	1.5 mm (0.06 in)
	Brush spring tension		3.24 N (0.33 kgf, 0.73 lbf)	—
Starter (M/T)	Output		1.6 kW	
	Commutator mica depth		0.4-0.5 mm (0.016-0.020 in)	0.15 mm (0.006 in)
	Commutator runout		0.02 mm (0.001 in) max.	0.05 mm (0.002 in)
	Commutator O.D.		28.0-28.1 mm (1.102-1.106 in)	27.5 mm (1.08 in)
	Brush length		15.8-16.2 mm (0.62-0.64 in)	11.0 mm (0.43 in)
Starter (A/T)	Output		1.8 kW	
	Commutator mica depth		0.50-0.90 mm (0.020-0.035 in)	0.20 mm (0.008 in)
	Commutator runout		0.02 mm (0.001 in) max.	0.05 mm (0.002 in)
	Commutator O.D.		28.9-29.0 mm (1.138-1.142 in)	28.0 mm (1.10 in)
	Brush length		15.0-16.0 mm (0.59-0.63 in)	9.0 mm (0.35 in)
	Brush spring tension		22.26-27.07 N (2.27-2.76 kgf, 5.00-6.08 lbf)	—

Engine Assembly (J35Z6, J37A4)

Item	Measurement	Qualification	Standard or New	Service Limit
Compression	Pressure (check the engine with the starter cranking)	Minimum	—	932 kPa (9.5 kgf/cm ² , 135 psi)
		Maximum variation	—	196 kPa (2.0 kgf/cm ² , 28 psi)

Cylinder Head (J35Z6)

Item	Measurement	Qualification	Standard or New	Service Limit
Head	Warpage		—	0.05 mm (0.002 in)
	Height		120.95—121.05 mm (4.762—4.766 in)	120.8 mm (4.76 in)
Camshaft	End play		0.05—0.20 mm (0.002—0.008 in)	0.20 mm (0.008 in)
	Camshaft-to-holder oil clearance		0.050—0.089 mm (0.0020—0.0035 in)	0.15 mm (0.006 in)
	Total runout		0.03 mm (0.001 in) max.	0.04 mm (0.002 in)
	Cam lobe height	Intake PRI	34.299 mm (1.3504 in)	—
		Intake SEC	35.621 mm (1.4024 in)	—
		Exhaust	36.760 mm (1.4472 in)	—
Valve	Clearance (cold)	Intake	0.20—0.24 mm (0.008—0.009 in)	—
		Exhaust	0.28—0.32 mm (0.011—0.013 in)	—
	Stem O.D.	Intake	5.485—5.495 mm (0.2159—0.2163 in)	5.455 mm (0.2148 in)
		Exhaust	5.450—5.460 mm (0.2146—0.2150 in)	5.420 mm (0.2134 in)
	Stem-to-guide clearance	Intake	0.020—0.045 mm (0.0008—0.0018 in)	0.08 mm (0.003 in)
		Exhaust	0.055—0.080 mm (0.0022—0.0031 in)	0.11 mm (0.004 in)
Valve seat	Width	Intake	1.25—1.55 mm (0.049—0.061 in)	2.00 mm (0.079 in)
		Exhaust	1.25—1.55 mm (0.049—0.061 in)	2.00 mm (0.079 in)
	Stem installed height	Intake	46.75—47.55 mm (1.841—1.872 in)	47.80 mm (1.882 in)
		Exhaust	46.68—47.48 mm (1.838—1.869 in)	47.73 mm (1.879 in)
Valve guide	I.D.	Intake	5.515—5.530 mm (0.2171—0.2177 in)	5.55 mm (0.219 in)
		Exhaust	5.515—5.530 mm (0.2171—0.2177 in)	5.55 mm (0.219 in)
	Installed height	Intake	21.20—22.20 mm (0.835—0.874 in)	—
		Exhaust	20.60—21.60 mm (0.811—0.850 in)	—
Rocker arm	Arm-to-shaft clearance	Intake	0.015—0.046 mm (0.0006—0.0018 in)	0.046 mm (0.0018 in)
		Exhaust	0.018—0.047 mm (0.0007—0.0019 in)	0.047 mm (0.0019 in)

Cylinder Head (J37A4)

Item	Measurement	Qualification	Standard or New	Service Limit
Head	Warpage		—	0.05 mm (0.002 in)
	Height		120.95—121.05 mm (4.762—4.766 in)	120.8 mm (4.76 in)
Camshaft	End play		0.05—0.20 mm (0.002—0.008 in)	0.20 mm (0.008 in)
	Camshaft-to-holder oil clearance		0.050—0.089 mm (0.0020—0.0035 in)	0.15 mm (0.006 in)
	Total runout		0.03 mm (0.001 in) max.	0.04 mm (0.002 in)
	Cam lobe height	Intake PRI	34.299 mm (1.3504 in)	—
		Intake SEC	35.932 mm (1.4146 in)	—
		Exhaust PRI	36.734 mm (1.4462 in)	—
		Exhaust SEC	37.370 mm (1.4713 in)	—
Valve	Clearance (cold)	Intake	0.20—0.24 mm (0.008—0.009 in)	—
		Exhaust	0.28—0.32 mm (0.011—0.013 in)	—
	Stem O.D.	Intake	5.485—5.495 mm (0.2159—0.2163 in)	5.455 mm (0.2148 in)
		Exhaust	5.450—5.460 mm (0.2146—0.2150 in)	5.420 mm (0.2134 in)
	Stem-to-guide clearance	Intake	0.020—0.045 mm (0.0008—0.0018 in)	0.08 mm (0.003 in)
		Exhaust	0.055—0.080 mm (0.0022—0.0031 in)	0.11 mm (0.004 in)
Valve seat	Width	Intake	1.25—1.55 mm (0.049—0.061 in)	2.00 mm (0.079 in)
		Exhaust	1.25—1.55 mm (0.049—0.061 in)	2.00 mm (0.079 in)
	Stem installed height	Intake	46.75—47.55 mm (1.841—1.872 in)	47.80 mm (1.882 in)
		Exhaust	46.68—47.48 mm (1.838—1.869 in)	47.73 mm (1.879 in)
Valve guide	I.D.	Intake	5.515—5.530 mm (0.2171—0.2177 in)	5.55 mm (0.219 in)
		Exhaust	5.515—5.530 mm (0.2171—0.2177 in)	5.55 mm (0.219 in)
	Installed height	Intake	21.20—22.20 mm (0.835—0.874 in)	—
		Exhaust	20.60—21.60 mm (0.811—0.850 in)	—
Rocker arm	Arm-to-shaft clearance	Intake	0.015—0.046 mm (0.0006—0.0018 in)	0.046 mm (0.0018 in)
		Exhaust	0.015—0.046 mm (0.0006—0.0018 in)	0.046 mm (0.0018 in)

Standards and Service Limits

Engine Block (J35Z6)

Item	Measurement	Qualification	Standard or New	Service Limit
Block	Warpage of deck		0.07 mm (0.003 in) max.	0.10 mm (0.004 in)
	Bore diameter		89.000—89.015 mm (3.5039—3.5045 in)	89.065 mm (3.5065 in)
	Bore taper	Difference between first and third measurement	—	0.05 mm (0.002 in)
	Reboring limit		—	0.25 mm (0.010 in)
Piston	Skirt O.D. at 16.0 mm (0.63 in) from bottom of skirt		88.975—88.985 mm (3.5029—3.5033 in)	88.965 mm (3.5026 in)
	Clearance in cylinder		0.015—0.040 mm (0.0006—0.0016 in)	0.08 mm (0.003 in)
Piston ring	Ring-to-groove clearance	Top	0.055—0.080 mm (0.0022—0.0031 in)	0.15 mm (0.006 in)
		Second	0.030—0.055 mm (0.0012—0.0022 in)	0.13 mm (0.005 in)
	Ring end gap	Top	0.20—0.35 mm (0.008—0.014 in)	0.60 mm (0.024 in)
		Second	0.40—0.55 mm (0.016—0.022 in)	0.70 mm (0.028 in)
		Oil	0.20—0.70 mm (0.008—0.028 in)	0.80 mm (0.031 in)
Piston pin	O.D.		21.962—21.965 mm (0.8646—0.8648 in)	21.954 mm (0.8643 in)
	Pin-to-piston clearance		-0.005—0.001 mm (-0.0002—0.0000 in)	0.004 mm (0.0002 in)
Connecting rod	Pin-to-rod clearance		0.005—0.014 mm (0.0002—0.0006 in)	0.019 mm (0.0007 in)
	Small end bore diameter		21.970—21.976 mm (0.8650—0.8652 in)	—
	Big end bore diameter		58.0 mm (2.28 in)	—
	End play		0.15—0.35 mm (0.006—0.014 in)	0.45 mm (0.018 in)
Crankshaft	Main journal diameter		71.976—72.000 mm (2.8337—2.8346 in)	—
	Rod journal diameter		54.976—55.000 mm (2.1644—2.1654 in)	—
	Rod/main journal taper		0.005 mm (0.0002 in) max.	0.010 mm (0.0004 in)
	Rod/main journal out-of-round		0.005 mm (0.0002 in) max.	0.010 mm (0.0004 in)
	End play		0.10—0.35 mm (0.004—0.014 in)	0.45 mm (0.018 in)
	Total runout		0.025 mm (0.0010 in) max.	0.030 mm (0.0012 in)
Crankshaft bearing	Main bearing-to-journal oil clearance		0.019—0.045 mm (0.0007—0.0018 in)	0.050 mm (0.0020 in)
	Connecting rod bearing-to-journal oil clearance		0.020—0.044 mm (0.0008—0.0017 in)	0.050 mm (0.0020 in)

Engine Block (J37A4)

Item	Measurement	Qualification	Standard or New	Service Limit
Block	Warpage of deck		0.07 mm (0.003 in) max.	0.10 mm (0.004 in)
	Bore diameter		90.000–90.015 mm (3.5433–3.5439 in)	90.065 mm (3.5459 in)
	Bore taper	Difference between first and third measurement	—	0.05 mm (0.002 in)
Piston	Skirt O.D. at 16.0 mm (0.63 in) from bottom of skirt		89.983–89.996 mm (3.5426–3.5431 in)	89.975 mm (3.5423 in)
	Clearance in cylinder		0.004–0.032 mm (0.0002–0.0013 in)	0.070 mm (0.0028 in)
Piston ring	Ring-to-groove clearance	Top	0.055–0.085 mm (0.0022–0.0033 in)	0.15 mm (0.006 in)
		Second	0.030–0.060 mm (0.0012–0.0024 in)	0.13 mm (0.005 in)
	Ring end gap	Top	0.30–0.40 mm (0.012–0.016 in)	0.60 mm (0.024 in)
		Second	0.40–0.55 mm (0.016–0.022 in)	0.70 mm (0.028 in)
		Oil	0.20–0.35 mm (0.008–0.014 in)	0.45 mm (0.018 in)
Piston pin	O.D.		21.962–21.965 mm (0.8646–0.8648 in)	21.954 mm (0.8643 in)
	Pin-to-piston clearance		-0.005–0.003 mm (-0.0002–0.0001 in)	0.004 mm (0.0002 in)
Connecting rod	Pin-to-rod clearance		0.005–0.014 mm (0.0002–0.0006 in)	0.019 mm (0.0007 in)
	Small end bore diameter		21.970–21.976 mm (0.8650–0.8652 in)	—
	Big end bore diameter		60.0 mm (2.36 in)	—
	End play		0.15–0.35 mm (0.006–0.014 in)	0.45 mm (0.018 in)
Crankshaft	Main journal diameter		71.976–72.000 mm (2.8337–2.8346 in)	—
	Rod journal diameter		56.976–57.000 mm (2.2431–2.2441 in)	—
	Rod/main journal taper		0.005 mm (0.0002 in) max.	0.010 mm (0.0004 in)
	Rod/main journal out-of-round		0.005 mm (0.0002 in) max.	0.010 mm (0.0004 in)
	End play		0.10–0.35 mm (0.004–0.014 in)	0.45 mm (0.018 in)
	Total runout		0.025 mm (0.0010 in) max.	0.030 mm (0.0012 in)
Crankshaft bearing	Main bearing-to-journal oil clearance		0.019–0.045 mm (0.0007–0.0018 in)	0.050 mm (0.0020 in)
	Connecting rod bearing-to-journal oil clearance		0.020–0.044 mm (0.0008–0.0017 in)	0.050 mm (0.0020 in)

Engine Lubrication (J35Z6, J37A4)

Item	Measurement	Qualification	Standard or New	Service Limit
Engine oil	Capacity	Engine overhaul	5.0 L (5.3 US qt)	—
		Oil change including filter	4.3 L (4.5 US qt)	—
		Oil change without filter	4.0 L (4.2 US qt)	—
Oil pump	Inner rotor-to-outer rotor radial clearance		0.04–0.16 mm (0.002–0.006 in)	0.20 mm (0.008 in)
	Pump housing-to-outer rotor radial clearance		0.07–0.19 mm (0.003–0.007 in)	0.20 mm (0.008 in)
	Pump housing-to-outer rotor axial clearance		0.02–0.07 mm (0.001–0.003 in)	0.12 mm (0.005 in)
	Oil pressure with oil temperature at 176 °F (80 °C)	At idle	69 kPa (0.7 kgf/cm ² , 10.0 psi) min.	—
		At 3,000 rpm	304 kPa (3.1 kgf/cm ² , 44 psi) min.	—

Standards and Service Limits

Cooling System (J35Z6, J37A4)

Item	Measurement	Qualification	Standard or New	Service Limit
Radiator	Coolant capacities (including engine, heater, hoses, and reservoir)	Engine overhaul	8.3 L (2.19 US gal)	—
		Coolant change	6.3 L (1.66 US gal)	—
	Coolant type		Acura Long Life Antifreeze/Coolant Type 2	
Coolant reservoir	Coolant capacity		0.69 L (0.182 US gal)	—
Radiator cap	Opening pressure		93—123 kPa (0.95—1.25 kgf/cm ² , 13.5—18 psi)	—
Thermostat	Opening temperature	Begins to open	169—176 °F (76—80 °C)	—
		Fully open	194 °F (90 °C)	—
	Valve lift at fully open		10.0 mm (0.39 in) min.	—

Fuel and Emissions (J35Z6)

Item	Measurement	Qualification	Standard or New	Service Limit
Fuel pressure regulator	Pressure with fuel pressure gauge connected		390—440 kPa (4.0—4.5 kgf/cm ² , 57—64 psi)	—
Fuel tank	Capacity		70.0 L (18.5 US gal)	—
Engine idle	Idle speed without load	In N or P	680 ± 50 rpm	
	Idle speed with high electric load (A/C switch on, temperature set to max cool, blower fan on high, rear window defogger on, and headlights on high beam)	In N or P	680 ± 50 rpm	

Fuel and Emissions (J37A4)

Item	Measurement	Qualification	Standard or New	Service Limit
Fuel pressure regulator	Pressure with fuel pressure gauge connected		390—440 kPa (4.0—4.5 kgf/cm ² , 57—64 psi)	—
Fuel tank	Capacity		70.0 L (18.5 US gal)	—
Engine idle	Idle speed without load	M/T in neutral	750 ± 50 rpm	
		A/T in N or P	700 ± 50 rpm	
	Idle speed with high electric load (A/C switch on, temperature set to max cool, blower fan on high, rear window defogger on, and headlights on high beam)	M/T in neutral	750 ± 50 rpm	
		A/T in N or P	700 ± 50 rpm	

Clutch

Item	Measurement	Qualification	Standard or New	Service Limit
Clutch pedal	Height from floor		156 mm (6.14 in)	—
	Stroke		130—140 mm (5.1—5.5 in)	—
Flywheel	Runout on clutch mating surface		0.3 mm (0.01 in) max.	0.4 mm (0.02 in)
Clutch disc	Rivet head depth		1.35—1.95 mm (0.053—0.077 in)	0.7 mm (0.03 in)
	Thickness		7.9—8.5 mm (0.31—0.33 in)	6.0 mm (0.24 in)
Pressure plate	Warpage		0.02 mm (0.001 in) max.	0.15 mm (0.006 in)
	Evenness of the height of the diaphragm spring fingers		0.6 mm (0.02 in) max.	0.8 mm (0.03 in)

Manual Transmission and M/T Differential

Item	Measurement	Qualification	Standard or New	Service Limit
Manual transmission fluid	Capacity: use Acura MTF	Fluid change	2.1 L (2.2 US qt)	—
		Overhaul	2.5 L (2.6 US qt)	—
Mainshaft	End play		0.14–0.21 mm (0.006–0.008 in)	Adjust
	Diameter of ball bearing contact area (clutch housing side)		28.002–28.015 mm (1.1024–1.1030 in)	27.95 mm (1.100 in)
	Diameter of needle bearing contact area		47.984–48.000 mm (1.8891–1.8898 in)	47.93 mm (1.887 in)
	Diameter of ball bearing contact area (transmission housing side)		38.984–39.000 mm (1.5348–1.5354 in)	38.93 mm (1.533 in)
	Diameter of 4th/5th gears distance collar contact area		41.984–42.000 mm (1.6529–1.6535 in)	41.93 mm (1.651 in)
	Diameter of 6th gear distance collar contact area		38.984–39.000 mm (1.5348–1.5354 in)	38.93 mm (1.533 in)
	Runout		0.02 mm (0.001 in) max.	0.05 mm (0.002 in)
	Diameter of pilot bearing contact area		19.967–19.980 mm (0.7861–0.7866 in)	19.91 mm (0.784 in)
Mainshaft 3rd gear	I.D.		47.009–47.025 mm (1.8507–1.8514 in)	47.08 mm (1.854 in)
	Clearance	2nd-3rd	0.06–0.19 mm (0.002–0.007 in)	0.3 mm (0.01 in)
	Thickness		23.89–23.97 mm (0.941–0.944 in)	23.8 mm (0.94 in)
Mainshaft 4th, 5th gear	I.D.		47.009–47.025 mm (1.8507–1.8514 in)	47.08 mm (1.854 in)
	End play (distance collar side)		0.06–0.19 mm (0.002–0.007 in)	0.3 mm (0.01 in)
	Thickness		22.39–22.47 mm (0.881–0.885 in)	22.3 mm (0.88 in)
Mainshaft 6th gear	I.D.		53.010–53.029 mm (2.0870–2.0878 in)	53.08 mm (2.090 in)
	End play		0.06–0.19 mm (0.002–0.007 in)	0.3 mm (0.01 in)
	Thickness		25.89–25.97 mm (1.019–1.022 in)	25.8 mm (1.02 in)
Mainshaft 4th, 5th gear distance collar	I.D.		36.002–36.012 mm (1.4174–1.4178 in)	36.06 mm (1.420 in)
	O.D.		41.989–42.000 mm (1.6531–1.6535 in)	41.94 mm (1.651 in)
	Overall length		49.95–50.05 mm (1.967–1.970 in)	—
	Length of needle bearing contact area	4th, 5th	22.53–22.58 mm (0.887–0.889 in)	—
Mainshaft 6th gear distance collar	I.D.		39.002–39.012 mm (1.5355–1.5359 in)	39.06 mm (1.538 in)
	O.D.		47.989–48.000 mm (1.8893–1.8898 in)	47.94 mm (1.887 in)
	Length		26.03–26.08 mm (1.025–1.027 in)	—
Countershaft	Diameter of needle bearing contact area (clutch housing side)		43.974–43.990 mm (1.7313–1.7319 in)	43.92 mm (1.729 in)
	Diameter of ball bearing contact area (transmission housing side)		30.002–30.015 mm (1.1812–1.1817 in)	29.95 mm (1.179 in)
	Diameter of 2nd gear distance collar contact area		42.975–42.991 mm (1.6919–1.6926 in)	42.92 mm (1.690 in)
	Runout		0.02 mm (0.001 in) max.	0.05 mm (0.002 in)
	35 mm shim-to-bearing inner race clearance		0.04–0.10 mm (0.002–0.004 in)	Adjust
	Diameter of countershaft reverse gear contact area		45.934–45.950 mm (1.8084–1.8091 in)	45.88 mm (1.806 in)
Countershaft 1st gear	I.D.		59.010–59.029 mm (2.3232–2.3240 in)	59.08 mm (2.326 in)
	End play (reverse gear side)		0.04–0.17 mm (0.002–0.007 in)	0.28 mm (0.011 in)
	Thickness		22.91–22.99 mm (0.902–0.905 in)	22.86 mm (0.900 in)
Countershaft 2nd gear	I.D.		57.010–57.029 mm (2.2445–2.2452 in)	57.08 mm (2.247 in)
	Clearance	2nd-3rd	0.04–0.17 mm (0.002–0.007 in)	0.28 mm (0.011 in)
	Thickness		22.91–22.99 mm (0.902–0.905 in)	22.86 mm (0.900 in)

Standards and Service Limits

Manual Transmission and M/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Countershaft reverse gear	I.D.		45.970–45.988 mm (1.8098–1.8105 in)	46.04 mm (1.813 in)
	O.D.		53.987–54.000 mm (2.1255–2.1260 in)	53.93 mm (2.123 in)
	Length		23.03–23.08 mm (0.907–0.909 in)	—
Countershaft 2nd gear distance collar	I.D.		42.990–43.000 mm (1.6925–1.6929 in)	43.05 mm (1.695 in)
	O.D.		51.989–52.000 mm (2.0468–2.0472 in)	51.94 mm (2.045 in)
	Length		23.03–23.08 mm (0.907–0.909 in)	—
Reverse idler gear	O.D.		19.989–20.000 mm (0.7870–0.7874 in)	19.93 mm (0.785 in)
Reverse drive/driven gear	I.D.		30.007–30.020 mm (1.1814–1.1819 in)	25.07 mm (0.987 in)
5th synchro ring	Ring-to-gear clearance (ring pushed against gear)		0.70–1.49 mm (0.028–0.059 in)	0.4 mm (0.02 in)
6th synchro ring	Ring-to-gear clearance (ring pushed against gear)		0.73–1.44 mm (0.029–0.057 in)	0.4 mm (0.02 in)
3rd double cone synchro	Outer synchro ring-to-synchro cone clearance (ring pushed against gear)		0.70–1.19 mm (0.028–0.047 in)	0.3 mm (0.01 in)
	Synchro cone-to-gear clearance (ring pushed against gear)		0.48–1.04 mm (0.019–0.041 in)	0.3 mm (0.01 in)
	Outer synchro ring-to-gear clearance (ring pushed against gear)		0.51–1.17 mm (0.020–0.046 in)	0.6 mm (0.02 in)
4th double cone synchro	Outer synchro ring-to-synchro cone clearance (ring pushed against gear)		0.70–1.19 mm (0.028–0.047 in)	0.3 mm (0.01 in)
	Synchro cone-to-gear clearance (ring pushed against gear)		0.50–1.14 mm (0.020–0.045 in)	0.3 mm (0.01 in)
	Outer synchro ring-to-gear clearance (ring pushed against gear)		0.95–1.68 mm (0.037–0.066 in)	0.6 mm (0.02 in)
1st triple cone synchro	Outer synchro ring-to-synchro cone clearance (ring pushed against gear)		0.70–1.19 mm (0.028–0.047 in)	0.3 mm (0.01 in)
	Synchro cone-to-gear clearance (ring pushed against gear)		0.70–1.88 mm (0.028–0.074 in)	0.3 mm (0.01 in)
	Outer synchro ring-to-gear clearance (ring pushed against gear)		1.12–1.68 mm (0.044–0.066 in)	0.6 mm (0.02 in)
2nd triple cone synchro	Outer synchro ring-to-synchro cone clearance (ring pushed against gear)		0.70–1.19 mm (0.028–0.047 in)	0.3 mm (0.01 in)
	Synchro cone-to-gear clearance (ring pushed against gear)		0.70–1.88 mm (0.028–0.074 in)	0.3 mm (0.01 in)
	Outer synchro ring-to-gear clearance (ring pushed against gear)		1.12–1.68 mm (0.044–0.066 in)	0.6 mm (0.02 in)
Shift fork	Finger thickness	1st/2nd, 3rd/4th, 5th/6th	7.4–7.6 mm (0.29–0.30 in)	—
		Reverse	6.2–6.4 mm (0.24–0.25 in)	—
	Fork-to-synchro sleeve clearance		0.35–0.65 mm (0.014–0.026 in)	1.0 mm (0.04 in)
Reverse shift lever	Finger width		6.50–6.75 mm (0.256–0.266 in)	—
	Shift lever-to-reverse shift piece clearance		0.15–0.60 mm (0.006–0.024 in)	0.7 mm (0.03 in)
	Shift lever width at contact area (reverse shift piece side)		13.0–13.2 mm (0.51–0.52 in)	—
	Shift lever-to-shift fork clearance		0–0.4 mm (0–0.02 in)	0.5 mm (0.02 in)
Shift arm	I.D.		15.973–16.005 mm (0.6289–0.6301 in)	—
	Shift arm-to-shift piece clearance		0.26–0.57 mm (0.010–0.022 in)	0.75 mm (0.030 in)
	Shift piece width at contact area		13.6–13.8 mm (0.535–0.543 in)	—
M/T differential carrier	Backlash (measured with final driven gear)		0.6–1.2 mm (0.02–0.05 in)	—
	Carrier bearing starting torque (preload)		3.4–4.5 N·m (35–46 kgf·cm, 30–40 lbf·in)	Adjust

Manual Transmission and M/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Oil pump	Inner rotor-to-outer rotor clearance		0.14 mm (0.006 in) max.	0.2 mm (0.01 in)
	Oil pump inner rotor I.D.		17.1–17.2 mm (0.67–0.68 in)	—
	Oil pump shaft O.D.		16.8–17.0 mm (0.66–0.67 in)	—
	Oil pump thrust clearance		0.03–0.13 mm (0.001–0.005 in)	0.15 mm (0.006 in)
	Outer rotor-to-clutch housing clearance		0.1–0.2 mm (0.004–0.008 in)	0.22 mm (0.009 in)
Shift piece	I.D.		14.000–14.068 mm (0.5512–0.5539 in)	—
	Shift fork width at contact area		12.8–13.0 mm (0.50–0.51 in)	—
	Shift piece-to-shift fork clearance		0.2–0.6 mm (0.01–0.02 in)	0.7 mm (0.03 in)
Select arm	I.D.		11.01–11.05 mm (0.433–0.435 in)	—
	Shift piece width at contact area		12.9–13.0 mm (0.508–0.512 in)	—
	Select arm-to-interlock clearance		0.05–0.25 mm (0.002–0.010 in)	0.5 mm (0.02 in)
Transfer output shaft	Diameter of bearing contact area	Transmission housing side	21.977–21.990 mm (0.8652–0.8657 in)	21.92 mm (0.863 in)
		Clutch housing side	40.002–40.018 mm (1.5749–1.5755 in)	39.95 mm (1.573 in)
	Thrust clearance		0.08–0.17 mm (0.003–0.007 in)	—
Transfer assembly	Diameter of transfer hypoid drive gear/shaft assembly at tapered roller bearing contact area	Transfer cover side	50.002–50.018 mm (1.9686–1.9692 in)	49.95 mm (1.9665 in)
		Transfer gear side	24.987–25.000 mm (0.9837–0.9843 in)	24.93 mm (0.9815 in)
	Diameter of transfer output shaft (hypoid gear) at tapered roller bearing contact area	Transfer gear side	40.002–40.018 mm (1.5749–1.5755 in)	39.95 mm (1.5728 in)
		Companion flange side	31.975–31.988 mm (1.2589–1.2594 in)	31.92 mm (1.2567 in)
	Transfer gear backlash		0.06–0.16 mm (0.002–0.006 in)	Adjust
Transfer assembly fluid	Capacity: Hypoid gear oil SAE 90 viscosity, API classified GL 4 or GL 5 only	Fluid change	0.43 L (0.45 US qt)	—
		Overhaul	0.45 L (0.48 US qt)	—

Automatic Transmission and A/T Differential

Item	Measurement	Qualification	Standard or New	Service Limit
Automatic transmission fluid	Capacity: use Acura ATF-Z1	Fluid change (with SH-AWD)	2.8 L (3.0 US qt)	—
		Fluid change (without SH-AWD)	3.3 L (3.5 US qt)	—
		Overhaul (with SH-AWD)	7.7 L (8.1 US qt)	—
		Overhaul (without SH-AWD)	7.5 L (7.9 US qt)	—
ATF pressure	Line pressure	At 2,000 rpm in N or P	950–1,010 kPa (9.7–10.3 kgf/cm ² , 140–146 psi)	900 kPa (9.2 kgf/cm ² , 130 psi)
	1st clutch pressure	At 2,000 rpm in 1st gear in S	940–1,020 kPa (9.6–10.4 kgf/cm ² , 140–148 psi)	890 kPa (9.1 kgf/cm ² , 130 psi)
	1st-hold clutch pressure	At 2,000 rpm in 1st gear in S	680–760 kPa (6.9–7.7 kgf/cm ² , 100–110 psi)	630 kPa (6.4 kgf/cm ² , 91 psi)
	2nd clutch pressure	At 2,000 rpm in 2nd gear in S	940–1,020 kPa (9.6–10.4 kgf/cm ² , 140–148 psi)	890 kPa (9.1 kgf/cm ² , 130 psi)
	3rd clutch pressure	At 2,000 rpm in 3rd gear in S	940–1,020 kPa (9.6–10.4 kgf/cm ² , 140–148 psi)	890 kPa (9.1 kgf/cm ² , 130 psi)
	4th clutch pressure	At 2,000 rpm in 4th gear in S	940–1,020 kPa (9.6–10.4 kgf/cm ² , 140–148 psi)	890 kPa (9.1 kgf/cm ² , 130 psi)
	5th clutch pressure	At 2,000 rpm in 5th gear in S	940–1,020 kPa (9.6–10.4 kgf/cm ² , 140–148 psi)	890 kPa (9.1 kgf/cm ² , 130 psi)
Torque converter	Stall speed		1,850 rpm	—
	Check with vehicle on level ground	Service limit	1,700–2,000 rpm	—

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Clutch	Clearance between clutch end-plate and top disc	1st	1.15–1.35 mm (0.045–0.053 in)	—
		1st-hold	0.6–1.0 mm (0.024–0.039 in)	—
		2nd	1.05–1.25 mm (0.041–0.049 in)	—
		3rd (with SH-AWD)	0.90–1.10 mm (0.035–0.043 in)	—
		3rd (without SH-AWD)	0.80–1.00 mm (0.031–0.039 in)	—
		4th, 5th	0.75–0.95 mm (0.030–0.037 in)	—
	Clutch return spring free length	1st	68.3 mm (2.69 in)	66.3 mm (2.61 in)
		2nd	48.3 mm (1.90 in)	46.3 mm (1.82 in)
		3rd	52.0 mm (2.05 in)	50.0 mm (1.97 in)
		4th	37.4 mm (1.47 in)	35.4 mm (1.39 in)
		5th (with SH-AWD)	53.69 mm (2.114 in)	51.69 mm (2.035 in)
		5th (without SH-AWD)	47.9 mm (1.89 in)	45.9 mm (1.81 in)
	Clutch disc thickness		1.94 mm (0.076 in)	—
	Clutch plate thickness	1st	1.6 mm (0.063 in)	When discolored
		1st-hold	1.8 mm (0.071 in)	When discolored
		2nd	1.8 mm (0.071 in)	When discolored
		3rd (with SH-AWD)	1.8 mm (0.071 in)	When discolored
		3rd (without SH-AWD)	2.0 mm (0.079 in)	When discolored
		4th, 5th	1.6 mm (0.063 in)	When discolored
	1st clutch end-plate thickness	Mark 1	3.1 mm (0.122 in)	When discolored
		Mark 2	3.2 mm (0.126 in)	When discolored
		Mark 3	3.3 mm (0.130 in)	When discolored
		Mark 4	3.4 mm (0.134 in)	When discolored
		Mark 5	3.5 mm (0.138 in)	When discolored
		Mark 6	3.6 mm (0.142 in)	When discolored
		Mark 7	3.7 mm (0.146 in)	When discolored
		Mark 8	3.8 mm (0.150 in)	When discolored
		Mark 9	3.9 mm (0.154 in)	When discolored
	1st-hold clutch plate B thickness		5.0 mm (0.197 in)	When discolored
	2nd, 3rd, 4th, and 5th clutch end-plate thickness	Mark 1	2.1 mm (0.083 in)	When discolored
		Mark 2	2.2 mm (0.087 in)	When discolored
		Mark 3	2.3 mm (0.091 in)	When discolored
		Mark 4	2.4 mm (0.094 in)	When discolored
		Mark 5	2.5 mm (0.098 in)	When discolored
		Mark 6	2.6 mm (0.102 in)	When discolored
		Mark 7	2.7 mm (0.106 in)	When discolored
		Mark 8	2.8 mm (0.110 in)	When discolored
		Mark 9	2.9 mm (0.114 in)	When discolored
Mainshaft	Diameter at startor shaft needle bearing contact area		22.984–23.000 mm (0.9049–0.9055 in)	When worn or damaged
	5th gear collar diameter at needle bearing contact area		39.981–39.991 mm (1.5741–1.5744 in)	When worn or damaged
	5th gear I.D.		46.000–46.016 mm (1.8110–1.8116 in)	When worn or damaged
	5th gear axial clearance		0.10–0.22 mm (0.004–0.009 in)	—
	5th gear collar length		48.7–48.8 mm (1.917–1.921 in)	—
	5th gear collar flange thickness		4.5–4.7 mm (0.18–0.19 in)	When worn or damaged
	Sealing ring thickness (31mm)		1.90–1.96 mm (0.075–0.077 in)	1.85 mm (0.073 in)
	Sealing ring groove width		2.025–2.060 mm (0.080–0.081 in)	2.08 mm (0.082 in)

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Countershaft	Diameter of bearing contact area	Torque converter housing bearing	40.505—40.515 mm (1.5947—1.5951 in)	When worn or damaged
		5th gear	34.975—34.991 mm (1.3770—1.3776 in)	When worn or damaged
	Diameter of 2nd gear at needle bearing contact area		61.975—61.991 mm (2.4400—2.4406 in)	When worn or damaged
	I.D. of gears	5th gear	41.000—41.016 mm (1.6142—1.6148 in)	When worn or damaged
		Idler gear	70.000—70.019 mm (2.7559—2.7566 in)	When worn or damaged
		Reverse gear	46.000—46.016 mm (1.8110—1.8116 in)	When worn or damaged
	Axial clearance of gears	2nd gear	0.005—0.040 mm (0.0002—0.0016 in)	—
		5th gear	0.12—0.27 mm (0.0047—0.0106 in)	—
		Idler gear	0.005—0.040 mm (0.0002—0.0016 in)	—
		Reverse gear	0.10—0.25 mm (0.0039—0.0098 in)	—
	Washer thickness (50.8 mm)	A	1.91 mm (0.0752 in)	When worn or damaged
		B	1.93 mm (0.0760 in)	When worn or damaged
		C	1.95 mm (0.0768 in)	When worn or damaged
		D	1.97 mm (0.0776 in)	When worn or damaged
		E	1.99 mm (0.0783 in)	When worn or damaged
		F	2.01 mm (0.0791 in)	When worn or damaged
		G	2.03 mm (0.0799 in)	When worn or damaged
		H	2.05 mm (0.0807 in)	When worn or damaged
		I	2.07 mm (0.0815 in)	When worn or damaged
		J	2.09 mm (0.0823 in)	When worn or damaged
		K	2.11 mm (0.0831 in)	When worn or damaged
		L	2.13 mm (0.0839 in)	When worn or damaged
		M	2.15 mm (0.0846 in)	When worn or damaged
		N	2.17 mm (0.0854 in)	When worn or damaged

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Countershaft (cont'd)	Washer thickness (50.8 mm)	O	2.19 mm (0.0862 in)	When worn or damaged
		P	2.21 mm (0.0870 in)	When worn or damaged
		Q	2.23 mm (0.0878 in)	When worn or damaged
		R	2.25 mm (0.0886 in)	When worn or damaged
		S	2.27 mm (0.0894 in)	When worn or damaged
		T	2.29 mm (0.0902 in)	When worn or damaged
		U	2.31 mm (0.0909 in)	When worn or damaged
		V	2.33 mm (0.0917 in)	When worn or damaged
		W	2.35 mm (0.0925 in)	When worn or damaged
		X	2.37 mm (0.0933 in)	When worn or damaged
		Y	2.39 mm (0.0941 in)	When worn or damaged
		Z	2.41 mm (0.0949 in)	When worn or damaged
		AA	2.43 mm (0.0957 in)	When worn or damaged
		AB	2.45 mm (0.0965 in)	When worn or damaged
	Washer thickness (61 mm)	A	1.525 mm (0.0600 in)	When worn or damaged
		B	1.505 mm (0.0593 in)	When worn or damaged
		C	1.485 mm (0.0585 in)	When worn or damaged
		D	1.465 mm (0.0577 in)	When worn or damaged
		E	1.445 mm (0.0569 in)	When worn or damaged
		F	1.425 mm (0.0561 in)	When worn or damaged
		G	1.405 mm (0.0553 in)	When worn or damaged
	Thrust washer thickness (35 x 47 mm)		3.00 mm (0.118 in)	When worn or damaged
	Reverse selector hub O.D.		55.885—55.900 mm (2.2002—2.2008 in)	When worn or damaged
	Reverse gear collar O.D.		39.979—40.000 mm (1.5740—1.5748 in)	When worn or damaged
	Cotter thickness	4th gear	1.99—2.02 mm (0.078—0.080 in)	—
		2nd gear	7.49—7.52 mm (0.295—0.296 in)	—

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary shaft	Diameter of 1st gear collar at needle bearing contact area		38.981–38.991 mm (1.5347–1.5351 in)	When worn or damaged
	Diameter of bearing contact area	2nd gear	43.986–43.999 mm (1.7317–1.7322 in)	When worn or damaged
		Torque converter housing bearing	32.002–32.015 mm (1.2599–1.2604 in)	When worn or damaged
		Torque converter housing bearing (shaft end side)	28.592–28.608 mm (1.1257–1.1263 in)	When worn or damaged
	I.D. of gears	1st gear	44.000–44.013 mm (1.7323–1.7328 in)	When worn or damaged
		2nd gear	50.00–50.02 mm (1.969–1.969 in)	When worn or damaged
	Axial clearance of gears	1st gear	0.100–0.145 mm (0.004–0.006 in)	—
		2nd gear	0.060–0.488 mm (0.0024–0.0192 in)	—
	Thrust washer thickness (52 mm)	A	2.705 mm (0.106 in)	When worn or damaged
		B	2.680 mm (0.106 in)	When worn or damaged
		C	2.655 mm (0.105 in)	When worn or damaged
		D	2.630 mm (0.104 in)	When worn or damaged
		E	2.605 mm (0.103 in)	When worn or damaged
		F	2.580 mm (0.102 in)	When worn or damaged
		G	2.555 mm (0.101 in)	When worn or damaged
		H	2.530 mm (0.100 in)	When worn or damaged
		I	2.505 mm (0.099 in)	When worn or damaged
		J	2.480 mm (0.098 in)	When worn or damaged
		K	2.455 mm (0.097 in)	When worn or damaged
		L	2.430 mm (0.096 in)	When worn or damaged
		M	2.405 mm (0.095 in)	When worn or damaged

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary shaft (cont'd)	Thrust shim thickness (65 mm)	0A	0.80 mm (0.031 in)	When worn or damaged
		A	0.84 mm (0.033 in)	When worn or damaged
		B	0.88 mm (0.035 in)	When worn or damaged
		C	0.92 mm (0.036 in)	When worn or damaged
		D	0.96 mm (0.038 in)	When worn or damaged
		E	1.00 mm (0.039 in)	When worn or damaged
		F	1.04 mm (0.041 in)	When worn or damaged
		G	1.08 mm (0.043 in)	When worn or damaged
		H	1.12 mm (0.044 in)	When worn or damaged
		I	1.16 mm (0.046 in)	When worn or damaged
		J	1.20 mm (0.047 in)	When worn or damaged
		K	1.24 mm (0.049 in)	When worn or damaged
		L	1.28 mm (0.050 in)	When worn or damaged
		M	1.32 mm (0.052 in)	When worn or damaged
		N	1.36 mm (0.054 in)	When worn or damaged
		O	1.40 mm (0.055 in)	When worn or damaged
		P	1.44 mm (0.057 in)	When worn or damaged
		Q	1.48 mm (0.058 in)	When worn or damaged
		R	1.52 mm (0.060 in)	When worn or damaged
		S	1.56 mm (0.061 in)	When worn or damaged
		T	1.60 mm (0.063 in)	When worn or damaged
		U	1.64 mm (0.065 in)	When worn or damaged
		V	1.68 mm (0.066 in)	When worn or damaged
		W	1.72 mm (0.068 in)	When worn or damaged
		X	1.76 mm (0.069 in)	When worn or damaged
		Y	1.80 mm (0.071 in)	When worn or damaged
		Z	1.84 mm (0.072 in)	When worn or damaged

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary shaft (cont'd)	Thrust shim thickness (65 mm)	AA	1.88 mm (0.074 in)	When worn or damaged
		AB	1.92 mm (0.076 in)	When worn or damaged
		AC	1.96 mm (0.077 in)	When worn or damaged
		AD	2.00 mm (0.079 in)	When worn or damaged
		AE	2.04 mm (0.080 in)	When worn or damaged
		AF	2.08 mm (0.082 in)	When worn or damaged
		AG	2.12 mm (0.083 in)	When worn or damaged
		AH	2.16 mm (0.085 in)	When worn or damaged
		AI	2.20 mm (0.087 in)	When worn or damaged
		AJ	2.24 mm (0.088 in)	When worn or damaged
		AK	2.28 mm (0.090 in)	When worn or damaged
		AL	2.32 mm (0.091 in)	When worn or damaged
		AM	0.76 mm (0.030 in)	When worn or damaged
	1st gear collar length		63.3—63.4 mm (2.4921—2.4961 in)	—
	Sealing ring thickness (29mm)		1.91—1.97 mm (0.075—0.078 in)	1.86 mm (0.073 in)
	Sealing ring groove width		2.025—2.060 mm (0.080—0.081 in)	2.08 mm (0.082 in)
	Feed pipe bushing I.D.	1st clutch	11.518—11.530 mm (0.4535—0.4539 in)	11.545 mm (0.4545 in)
		1st-hold clutch	6.018—6.030 mm (0.2369—0.2374 in)	6.045 mm (0.2380 in)
	ATF feed pipe O.D.	1st clutch	11.47—11.48 mm (0.4516—0.4520 in)	11.45 mm (0.4508 in)
		1st-hold clutch	5.97—5.98 mm (0.2350—0.2354 in)	5.95 mm (0.2343 in)

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Intermediary shaft	I.D. of 3rd gear		36.000–36.016 mm (1.4173–1.4179 in)	When worn or damaged
	Axial clearance of 3rd gear		0.005–0.045 mm (0.0002–0.0018 in)	—
	Washer thickness (26.5 mm)	A	1.05 mm (0.041 in)	When worn or damaged
		B	1.13 mm (0.044 in)	When worn or damaged
		C	1.21 mm (0.048 in)	When worn or damaged
		D	1.29 mm (0.051 in)	When worn or damaged
		E	1.37 mm (0.054 in)	When worn or damaged
		F	1.45 mm (0.057 in)	When worn or damaged
		G	1.53 mm (0.060 in)	When worn or damaged
		H	1.61 mm (0.063 in)	When worn or damaged
		I	1.69 mm (0.067 in)	When worn or damaged
		J	1.77 mm (0.070 in)	When worn or damaged
		K	1.85 mm (0.073 in)	When worn or damaged
		L	1.93 mm (0.076 in)	When worn or damaged
		M	2.01 mm (0.079 in)	When worn or damaged
		N	2.09 mm (0.082 in)	When worn or damaged
		O	0.97 mm (0.038 in)	When worn or damaged
	Splined washer thickness (53 mm)	A	3.995 mm (0.1573 in)	When worn or damaged
		B	4.015 mm (0.1581 in)	When worn or damaged
		C	4.035 mm (0.1589 in)	When worn or damaged
		D	4.055 mm (0.1596 in)	When worn or damaged
		E	4.075 mm (0.1604 in)	When worn or damaged
		F	4.095 mm (0.1612 in)	When worn or damaged
		G	4.115 mm (0.1620 in)	When worn or damaged
		H	4.135 mm (0.1628 in)	When worn or damaged
		I	4.155 mm (0.1636 in)	When worn or damaged
		J	4.175 mm (0.1644 in)	When worn or damaged
		K	4.195 mm (0.1652 in)	When worn or damaged
		L	4.215 mm (0.1659 in)	When worn or damaged
		M	4.235 mm (0.1667 in)	When worn or damaged
		N	4.255 mm (0.1675 in)	When worn or damaged
	Cotter thickness		2.99–3.02 mm (0.1177–0.1189 in)	—
	Sealing ring thickness (35mm)		1.89–1.95 mm (0.0744–0.0768 in)	1.84 mm (0.0724 in)
	Sealing ring groove width		2.025–2.060 mm (0.080–0.081 in)	2.08 mm (0.082 in)

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Reverse idler gear	Gear shaft O.D.		13.99—14.00 mm (0.5508—0.5512 in)	When worn or damaged
	I.D.		18.007—18.020 mm (0.7089—0.7094 in)	When worn or damaged
	I.D. of transmission housing of gear shaft contact area		14.006—14.024 mm (0.5514—0.5521 in)	—
	Thrust washer thickness	Transmission housing side	1.00—1.05 mm (0.039—0.041 in)	—
		Holder side	1.00—1.05 mm (0.039—0.041 in)	—
	Axial clearance		0.07—0.38 mm (0.003—0.015 in)	—
ATF pump	ATF pump thrust clearance		0.03—0.06 mm (0.001—0.002 in)	0.07 mm (0.003 in)
	Clearance between ATF pump gear and main valve body	Drive gear	0.210—0.265 mm (0.0083—0.0104 in)	—
		Driven gear	0.070—0.125 mm (0.0028—0.0049 in)	—
	ATF pump driven gear I.D.		14.016—14.034 mm (0.5518—0.5525 in)	When worn or damaged
	ATF pump driven gear shaft O.D.		13.980—13.990 mm (0.5504—0.5508 in)	When worn or damaged
Stator shaft	I.D. at needle bearing contact area	Torque converter side	27.000—27.021 mm (1.0630—1.0638 in)	When worn or damaged
		ATF pump side	31.000—31.025 mm (1.220—1.221 in)	—
	I.D. at mainshaft sealing ring contact area		31.000—31.025 mm (1.220—1.221 in)	31.05 mm (1.222 in)
Reverse shift fork	Fork finger thickness		5.90—6.00 mm (0.232—0.236 in)	5.4 mm (0.213 in)
Park gear and pawl	—		When worn or damaged	
Regulator valve body	Shift fork shaft bore I.D.		14.000—14.010 mm (0.5512—0.5516 in)	—
	Shift fork shaft/servo valve bore I.D.		37.000—37.039 mm (1.4567—1.4582 in)	37.045 mm (1.4585 in)
	Mainshaft sealing ring contact I.D.		31.000—31.025 mm (1.220—1.221 in)	31.05 mm (1.222 in)
Main valve body	Intermediary shaft sealing ring contact I.D.		35.000—35.025 mm (1.3780—1.3789 in)	35.05 mm (1.3799 in)
ATF guide collar	Secondary shaft sealing ring contact I.D.		29.000—29.021 mm (1.1417—1.1426 in)	29.05 mm (1.1437 in)

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Main valve body spring (see page 14-298)	Shift valve A spring	Wire diameter	0.9 mm (0.035 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	50.5 mm (1.988 in)	—
		No. of coil	23.3	
	Shift valve B spring	Wire diameter	0.8 mm (0.031 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	49.1 mm (1.933 in)	—
		No. of coil	21.7	
	Shift valve E spring	Wire diameter	0.7 mm (0.028 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	42.4 mm (1.669 in)	—
		No. of coil	17.6	
	Relief valve spring	Wire diameter	1.0 mm (0.039 in)	—
		O.D.	9.6 mm (0.378 in)	—
		Free length	28.1 mm (1.106 in)	—
		No. of coil	7.7	
	Torque converter check valve spring (with SH-AWD)	Wire diameter	1.1 mm (0.043 in)	—
		O.D.	8.6 mm (0.339 in)	—
		Free length	34.3 mm (1.350 in)	—
		No. of coil	10.1	
	Torque converter check valve spring (without SH-AWD)	Wire diameter	1.1 mm (0.043 in)	—
		O.D.	8.6 mm (0.339 in)	—
		Free length	35.0 mm (1.378 in)	—
		No. of coil	12.6	
	Modulator valve spring	Wire diameter	1.6 mm (0.063 in)	—
		O.D.	10.4 mm (0.409 in)	—
		Free length	33.5 mm (1.319 in)	—
		No. of coil	9.8	
	CPC valve A spring	Wire diameter	0.7 mm (0.028 in)	—
		O.D.	6.1 mm (0.240 in)	—
		Free length	17.8 mm (0.701 in)	—
		No. of coil	7.9	
	Servo control valve spring	Wire diameter	0.9 mm (0.035 in)	—
		O.D.	9.6 mm (0.378 in)	—
		Free length	30.2 mm (1.189 in)	—
		No. of coil	8.4	
	Lubrication control valve spring	Wire diameter	0.9 mm (0.035 in)	—
		O.D.	8.7 mm (0.343 in)	—
		Free length	25.0 mm (0.984 in)	—
		No. of coil	7.2	
	Lock-up timing valve spring	Wire diameter	0.6 mm (0.024 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	30.9 mm (1.217 in)	—
		No. of coil	11.1	
	Lock-up shift valve spring	Wire diameter	1.0 mm (0.039 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	35.5 mm (1.398 in)	—
		No. of coil	18.2	

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary valve body spring (see page 14-300)	CPC valve B spring	Wire diameter	0.7 mm (0.028 in)	—
		O.D.	6.1 mm (0.240 in)	—
		Free length	17.8 mm (0.701 in)	—
		No. of coil	7.9	—
	CPC valve C spring	Wire diameter	0.7 mm (0.028 in)	—
		O.D.	6.1 mm (0.240 in)	—
		Free length	17.8 mm (0.701 in)	—
		No. of coil	7.9	—
	Shift valve C spring	Wire diameter	0.8 mm (0.031 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	49.1 mm (1.933 in)	—
		No. of coil	21.7	—
	Shift valve D spring	Wire diameter	0.7 mm (0.028 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	42.4 mm (1.669 in)	—
		No. of coil	17.6	—
	Reverse CPC valve spring	Wire diameter	0.8 mm (0.031 in)	—
		O.D.	6.1 mm (0.240 in)	—
		Free length	24.4 mm (0.961 in)	—
		No. of coil	14.6	—
	Reverse control valve spring	Wire diameter	0.8 mm (0.031 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	49.1 mm (1.933 in)	—
		No. of coil	21.7	—
Regulator valve body spring (see page 14-301)	3rd accumulator spring	Wire diameter	3.1 mm (0.122 in)	—
		O.D.	19.6 mm (0.772 in)	—
		Free length	41.4 mm (1.630 in)	—
		No. of coil	5.5	—
	Cooler check valve spring	Wire diameter	0.9 mm (0.035 in)	—
		O.D.	6.7 mm (0.264 in)	—
		Free length	31.5 mm (1.240 in)	—
		No. of coil	14.2	—
	Regulator valve spring A	Wire diameter	1.85 mm (0.073 in)	—
		O.D.	14.7 mm (0.579 in)	—
		Free length	86.9 mm (3.421 in)	—
		No. of coil	16.2	—
	Regulator valve spring B	Wire diameter	1.4 mm (0.055 in)	—
		O.D.	8.8 mm (0.346 in)	—
		Free length	44.0 mm (1.732 in)	—
		No. of coil	12.0	—
	Stator reaction spring	Wire diameter	5.5 mm (0.217 in)	—
		O.D.	37.4 mm (1.472 in)	—
		Free length	30.3 mm (1.193 in)	—
		No. of coil	2.1	—
	Lock-up control valve spring (Type A)	Wire diameter	0.7 mm (0.028 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	42.9 mm (1.689 in)	—
		No. of coil	14.2	—
	Lock-up control valve spring (Type B)	Wire diameter	0.8 mm (0.031 in)	—
		O.D.	6.6 mm (0.260 in)	—
		Free length	44.3 mm (1.744 in)	—
		No. of coil	25.5	—

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Accumulator body spring (see page 14-302)	1st accumulator spring A	Wire diameter	2.3 mm (0.091 in)	—
		O.D.	19.6 mm (0.772 in)	—
		Free length	60.8 mm (2.394 in)	—
		No. of coil	9.5	—
	1st accumulator spring B	Wire diameter	2.5 mm (0.098 in)	—
		O.D.	12.8 mm (0.504 in)	—
		Free length	46.0 mm (1.811 in)	—
		No. of coil	9.5	—
	1st-hold accumulator spring	Wire diameter	2.0 mm (0.079 in)	—
		O.D.	13.1 mm (0.516 in)	—
		Free length	42.9 mm (1.689 in)	—
		No. of coil	9.8	—
	2nd accumulator spring	Wire diameter	3.1 mm (0.122 in)	—
		O.D.	19.6 mm (0.772 in)	—
		Free length	53.4 mm (2.102 in)	—
		No. of coil	7.5	—
	4th accumulator spring	Wire diameter	3.3 mm (0.130 in)	—
		O.D.	19.6 mm (0.772 in)	—
		Free length	39.1 mm (1.539 in)	—
		No. of coil	5.8	—
	5th accumulator spring A	Wire diameter	2.4 mm (0.094 in)	—
		O.D.	19.6 mm (0.772 in)	—
		Free length	65.5 mm (2.579 in)	—
		No. of coil	12.0	—
	5th accumulator spring B	Wire diameter	2.6 mm (0.102 in)	—
		O.D.	13.2 mm (0.520 in)	—
		Free length	50.5 mm (1.988 in)	—
		No. of coil	10.1	—
A/T differential carrier	Pinion shaft contact area I.D.		18.000—18.025 mm (0.7087—0.7096 in)	—
	Driveshaft contact area I.D.		30.025—30.055 mm (1.182—1.183 in)	—
	Clearance between carrier and pinion shaft		0.013—0.054 mm (0.0005—0.0021 in)	0.1 mm (0.004 in)
	Clearance between carrier and driveshaft		0.045—0.096 mm (0.002—0.004 in)	0.13 mm (0.005 in)
	Clearance between carrier and intermediate shaft		0.080—0.126 mm (0.003—0.005 in)	—
	Tapered roller bearing starting torque (preload)	For new bearing	3.9—5.1 N·m (40—52 kgf·cm, 35—45 lbf·in)	Adjust
		For reused bearing	3.6—4.8 N·m (37—49 kgf·cm, 32—43 lbf·in)	Adjust
A/T differential pinion gear	Backlash		1.4—2.0 mm (0.055—0.079 in)	—
	I.D.		18.042—18.066 mm (0.7103—0.7113 in)	—
	Clearance between pinion gear and pinion shaft		0.055—0.095 mm (0.0022—0.0037 in)	0.12 mm (0.005 in)

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Transfer output shaft	Diameter of bearing contact area	Transmission housing side	21.977–21.990 mm (0.8652–0.8657 in)	21.92 mm (0.8630 in)
		Torque converter housing side	40.002–40.018 mm (1.5749–1.5755 in)	39.95 mm (1.5728 in)
	Axial clearance		0–0.39 mm (0–0.015 in)	—
	Thrust washer thickness (28.5 mm)	A	1.82 mm (0.0717 in)	When worn or damaged
		B	1.84 mm (0.0724 in)	When worn or damaged
		C	1.86 mm (0.0732 in)	When worn or damaged
		D	1.88 mm (0.0740 in)	When worn or damaged
		E	1.90 mm (0.0748 in)	When worn or damaged
		F	1.92 mm (0.0756 in)	When worn or damaged
		G	1.94 mm (0.0764 in)	When worn or damaged
		H	1.96 mm (0.0772 in)	When worn or damaged
		I	1.98 mm (0.0780 in)	When worn or damaged
		J	2.00 mm (0.0787 in)	When worn or damaged
		K	2.02 mm (0.0795 in)	When worn or damaged
		L	2.04 mm (0.0803 in)	When worn or damaged
		M	2.06 mm (0.0811 in)	When worn or damaged
		N	2.08 mm (0.0819 in)	When worn or damaged
		O	2.10 mm (0.0827 in)	When worn or damaged
		P	2.12 mm (0.0835 in)	When worn or damaged
		Q	2.14 mm (0.0843 in)	When worn or damaged
		R	2.16 mm (0.0850 in)	When worn or damaged
		S	2.18 mm (0.0858 in)	When worn or damaged
		T	2.20 mm (0.0866 in)	When worn or damaged
		U	2.22 mm (0.0874 in)	When worn or damaged
		V	2.24 mm (0.0882 in)	When worn or damaged
		W	2.26 mm (0.0890 in)	When worn or damaged
		X	2.28 mm (0.0898 in)	When worn or damaged
		Y	2.30 mm (0.0906 in)	When worn or damaged
		Z	2.32 mm (0.0913 in)	When worn or damaged
		AA	2.34 mm (0.0921 in)	When worn or damaged

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Transfer assembly	Diameter of transfer hypoid drive gear/shaft assembly at tapered roller bearing contact area	Transfer cover side	50.002–50.018 mm (1.9686–1.9692 in)	49.95 mm (1.9665 in)
		Transfer gear side	24.987–25.000 mm (0.9837–0.9843 in)	24.93 mm (0.9815 in)
	Diameter of transfer output shaft (hypoid gear) at tapered roller bearing contact area	Transfer gear side	40.002–40.018 mm (1.5749–1.5755 in)	39.95 mm (1.5728 in)
		Companion flange side	31.975–31.988 mm (1.2589–1.2594 in)	31.92 mm (1.2567 in)
	Transfer gear backlash		0.06–0.16 mm (0.002–0.006 in)	Adjust
	Tapered roller bearing total starting torque (preload)		2.64–4.23 N·m (26.9–43.1 kgf·cm, 23.3–37.4 lbf·in)	Adjust
Transfer assembly fluid	Capacity: Hypoid gear oil SAE 90 viscosity, API classified GL 4 or GL 5 only	Fluid change	0.43 L (0.45 US qt)	—
		Overhaul	0.45 L (0.48 US qt)	—

Rear Differential

Item	Measurement	Qualification	Standard or New	Service Limit
Rear differential fluid	Capacity: use Acura ATF-Z1	Fluid change	2.53 L (2.67 US qt)	—
		Overhaul	2.77 L (2.93 US qt)	—

Steering

Item	Measurement	Qualification	Standard or New	Service Limit
Steering wheel	Rotational play measured at outside edge		0–10 mm (0–0.39 in)	—
	Initial turning load measured at outside edge with engine running		29 N (3.0 kgf, 6.6 lbf)	—
Gearbox	Angle of rack guide screw loosened from locked position		10±5°	

Suspension

Item	Measurement	Qualification	Standard or New	Service Limit
Wheel alignment	Camber	Front	–0° 30' +30' –45'	
		Rear	–1° 00' +30' –45'	
	Caster	Front	3° 48' ±45'	
		Rear	2±2 mm (0.08±0.08 in)	
	Total toe-in	Front	0±2 mm (0±0.08 in)	
		Rear	2±2 mm (0.08±0.08 in)	
	Front wheel turning angle	Inward	38° 06' ±2°	
		Outward (reference)	30° 24' ±1°	
Wheel	Runout	Axial	0–0.7 mm (0–0.03 in)	2.0 mm (0.08 in)
		Radial	0–0.7 mm (0–0.03 in)	1.5 mm (0.06 in)
Wheel bearing	End play	Front	0–0.05 mm (0–0.002 in)	—
		Rear	0–0.05 mm (0–0.002 in)	—

Brakes

Item	Measurement	Qualification	Standard or New	Service Limit
Parking brake	Number of clicks when lever pulled with 196 N (20 kgf, 44 lbf) of force		6 to 8 clicks	
	Drum I.D.		189.9—190.0 mm (7.476—7.480 in)	191.0 mm (7.520 in)
	Shoe lining thickness		3.4 mm (0.13 in)	1.0 mm (0.04 in)
Brake pedal	Pedal height (carpet moved aside) (M/T)		156 mm (6.14 in)	—
	Pedal height (carpet moved aside) (A/T)		155 mm (6.10 in)	—
	Free play		1—5 mm (0.04—0.20 in)	—
Brake disc	Thickness	Front	27.9—28.1 mm (1.10—1.11 in)	26.0 mm (1.02 in)
		Rear	10.9—11.1 mm (0.43—0.44 in)	9.0 mm (0.35 in)
	Runout		—	0.04 mm (0.0016 in)
	Parallelism		—	0.015 mm (0.0006 in)
Brake pad	Thickness	Front	11.5—12.2 mm (0.45—0.48 in)	1.6 mm (0.06 in)
		Rear	9.6—10.2 mm (0.38—0.40 in)	1.6 mm (0.06 in)

Air Conditioning

Item	Measurement	Qualification	Standard or New	Service Limit
Refrigerant	Type		HFC-134a (R-134a)	
	Capacity of system		500—550 g (17.6—19.4 oz)	—
Refrigerant oil	Type		DENSO ND-OIL 8 (P/N 38897-PR7-A01AH)	
	Capacity of components	Condenser (including receiver/dryer)	35 mL (1 1/5 fl-oz)	
		Evaporator	35 mL (1 1/5 fl-oz)	
		Each line and hose	10 mL (1/3 fl-oz)	
		Receiver/dryer	10 mL (1/3 fl-oz)	
		Compressor	82 mL (2 7/9 fl-oz)	
Compressor	Field coil resistance	At 68 °F (20 °C)	3.9—4.3 Ω	
	Pulley-to-pressure plate clearance		0.35—0.60 mm (0.014—0.024 in)	—

Design Specifications

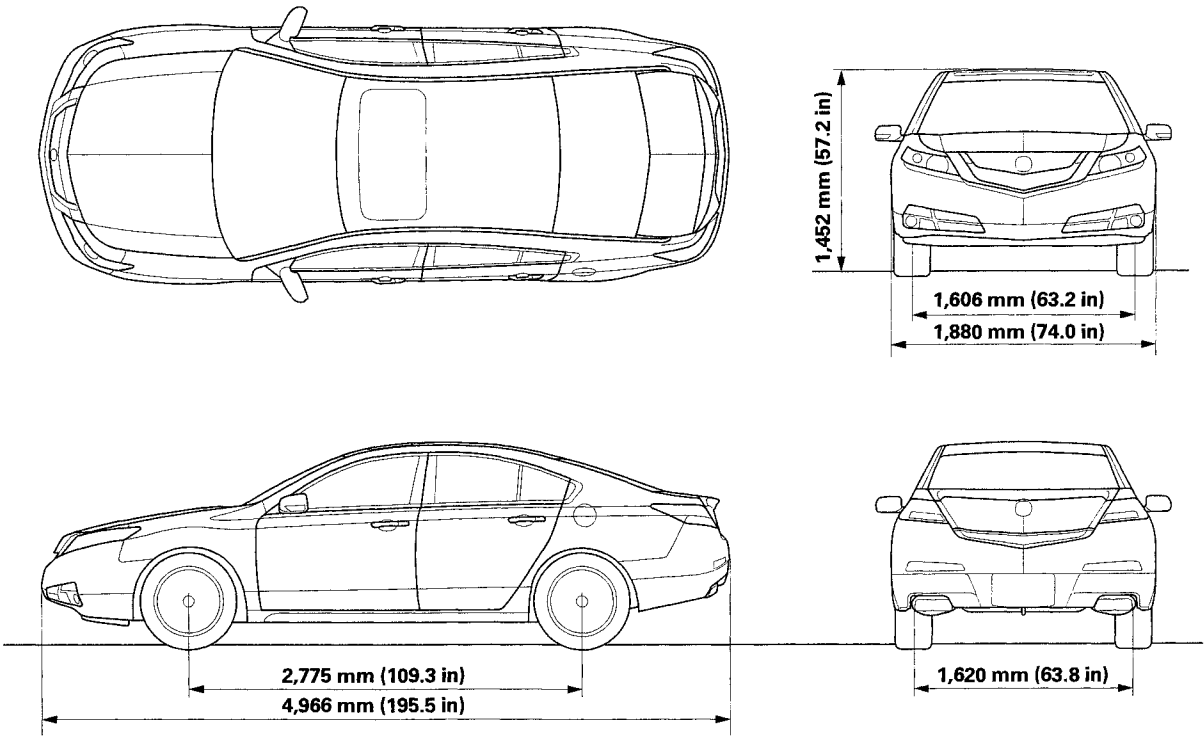
Item	Measurement	Qualification	Specification
DIMENSIONS	Overall length		4,966 mm (195.5 in)
	Overall width		1,880 mm (74.0 in)
	Overall height		1,452 mm (57.2 in)
	Wheelbase		2,775 mm (109.3 in)
	Track	Front	1,606 mm (63.2 in)
		Rear	1,620 mm (63.8 in)
	Seating capacity		Five (5)
WEIGHT	Gross Vehicle Weight Rating (GVWR)	J35Z6 engine	2,130 kg (4,696 lbs)
		J37A4 engine	2,235 kg (4,927 lbs)
ENGINE (J35Z6)	Type		Water cooled, 4-stroke SOHC VTEC V6 gasoline engine
	Cylinder arrangement		60 ° V6-cylinder, transverse
	Bore and stroke		89.0 x 93.0 mm (3.50 x 3.66 in)
	Displacement		3,471 cm ³ (212 cu in)
	Compression ratio		11.2
	Valve train		Belt drive, SOHC VTEC 4 valves per cylinder
	Lubrication system		Forced, wet sump, with trochoid pump
	Fuel required		Premium UNLEADED gasoline with 91 Pump Octane Number or higher
ENGINE (J37A4)	Type		Water cooled, 4-stroke SOHC VTEC V6 gasoline engine
	Cylinder arrangement		60 ° V6-cylinder, transverse
	Bore and stroke		90.0 x 96.0 mm (3.54 x 3.78 in)
	Displacement		3,664 cm ³ (224 cu in)
	Compression ratio		11.2
	Valve train		Belt drive, SOHC VTEC 4 valves per cylinder
	Lubrication system		Forced, wet sump, with trochoid pump
	Fuel required		Premium UNLEADED gasoline with 91 Pump Octane Number or higher
STARTER	Type		Gear reduction
	Nominal output	M/T	1.6 kW
		A/T	1.8 kW
	Nominal voltage		12 V
	Hour rating		30 seconds
	Direction of rotation		Counterclockwise as viewed from drive end
CLUTCH	Type		Single plate dry, diaphragm spring
MANUAL TRANSMISSION	Type		Synchronized, six-speed forward, one reverse
	Primary reduction		Direct 1:1
	Gear ratio	1st	3.625
		2nd	2.115
		3rd	1.529
		4th	1.125
		5th	0.847
		6th	0.686
		Reverse	3.656
	Final reduction	Type	Single helical gear
		Gear ratio	3.842
AUTOMATIC TRANSMISSION	Type		Electronically-controlled automatic, five-speed forward, one reverse, three-element torque converter with lock-up clutch
	Primary reduction		Direct 1:1
	Gear ratio	1st	2.697
		2nd	1.606
		3rd	1.071
		4th	0.694
		5th	0.491
		Reverse	1.888
	Final reduction	Type	Single helical gear
		Gear ratio (J35Z6)	4.312
		Gear ratio (J37A4)	4.533

Item	Measurement	Qualification	Specification
STEERING	Type		Electrical power-assisted rack and pinion
	Overall ratio		13.96
	Turns, lock-to-lock		2.7
	Steering wheel diameter	Without SH-AWD With SH-AWD	370 mm (14.6 in) 374 mm (14.7 in)
SUSPENSION	Type	Front Rear	Independent double wishbone with stabilizer, coil spring Independent multilink with stabilizer, coil spring
	Shock absorber	Front and rear	Telescopic, hydraulic, nitrogen gas-filled
TIRES	Size (without SH-AWD)	Front and rear Spare	P245/50R17 98V T135/80D17 103M
	Size (with SH-AWD)	Front and rear Spare	P245/45R18 96V 245/40ZR19 94Y (Optional) T135/80D17 103M
WHEEL ALIGNMENT	Camber	Front Rear	—0° 30' —1° 00'
	Caster	Front	3° 48'
	Total toe-in	Front Rear	0 mm (0 in) 2 mm (0.08 in)
	Front wheel turning angle	Inward Outward (reference)	38° 06' 30° 24'
BRAKES	Type of service brake	Front Rear	Power-assisted self-adjusting ventilated disc Power-assisted self-adjusting solid disc
	Type of parking brake		Mechanical actuating, rear wheels
	Pad friction surface area (swept area)	Front Rear	59.2 cm ² (9.18 sq in) x 2 34.4 cm ² (5.33 sq in) x 2
	Parking brake shoe friction surface area		45.6 cm ² (7.07 sq in) x 2
AIR CONDITIONING	Compressor	Type	Swash plate/DENSO
		Capacity	154.4 mL (9.42 cu in)/rev
		Maximum speed	7,600 rpm
		Lubricant capacity	70 mL (2 3/8 fl-oz)
		Lubricant type	DENSO ND-OIL 8
	Condenser	Type	Corrugated fin
	Evaporator	Type	Corrugated fin
	Blower	Type	Radial
		Motor type	250 W/12 V
		Speed control	Infinitely variable
		Maximum capacity	545 m ³ (19,247 cu ft)/h
	Temperature control		Air-mix type
	Compressor clutch	Type	Dry, single plate, poly V-belt drive
		Electrical power consumption at 68 °F (20 °C)	42 W maximum at 12 V
	Refrigerant	Type	HFC-134a (R-134a)
		Capacity	500—550 g (17.6—19.4 oz)

Design Specifications

Item	Measurement	Qualification	Specification
ELECTRICAL RATINGS	Battery		12 V—72 Ah/20 HR (12V—60 Ah/5 HR)
	Fuses	Under-hood fuse/relay box	120 A, 70 A, 60 A, 50 A, 40 A, 30 A, 20 A, 15 A, 10 A, 7.5 A
		Driver's under-dash fuse/relay box	20 A, 15 A, 10 A, 7.5 A
		Passenger's under-dash fuse/relay box	20 A, 15 A, 10 A, 7.5 A
		Auxiliary under-dash fuse/relay box	7.5 A
	Light bulbs	Headlight high beam	12 V—60 W (HB3)
		Headlight low beam (HID)	12 V—35 W (D2S)
		Fog lights	12 V—55 W (H11)
		Front turn signal/parking lights	12 V—24/2.2 CP
		Side turn signal lights	LED
		Front side marker lights	12 V—3 CP
		Rear turn signal lights	12 V—21 W
		Brake/taillights	LED
		Rear side marker lights	12 V—3 CP
		High mount brake light	LED
		Back-up lights	12 V—16 W
		License plate lights	12 V—5 W
		Ambient light	LED
		Trunk light	12 V—5 W
		Front individual map lights	LED
		Rear individual map lights	LED
		Door courtesy lights	12 V—3.4 W
		Glove box light	12 V—1.4 W
		Vanity mirror lights	12 V—2 W
		Gauge lights	LED
		Indicator lights	LED
		Console box light	12 V—1.4 W
		Footwell lights	LED
	Washer reservoir	Capacity (USA models)	2.5 L (2.64 US qt)
		Capacity (Canada models)	5.5 L (5.81 US qt)

Body Specifications



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