

Product: 2007 Acura MDX Car Service Repair Workshop Manual
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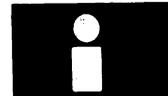


MDX

Service Manual 2007

Sample manual. Download All pages at:

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General Information

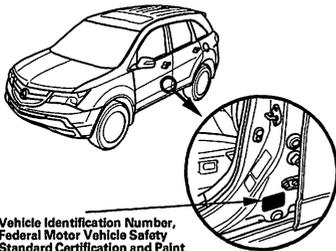
Chassis and Paint Codes

Vehicle Identification Number

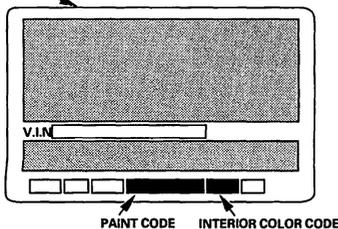
2HN YD2 8 2 * 7 H 500001



- a. Manufacturer, Make and Type of Vehicle**
2NH: Honda of Canada Mfg.,
Honda Canada Inc.,
Acura Multipurpose passenger vehicle
- b. Line, Body and Engine Type**
YD2: Acura MDX/J37A1
- c. Body Type and Transmission Type**
8: 5-door/5-speed Automatic
- d. Vehicle Grade (Series)**
USA models
2: MDX
3: TECH
4: TECH with Rear Entertainment System
5: SPORT
8: SPORT with Rear Entertainment System
Canada Model
2: MDX
5: TECH
8: ELITE
- e. Check Digit**
- f. Model Year**
7: '07
- g. Factory Code**
H: Alliston, Ontario Factory in Canada
- h. Serial Number**
000001—: Canada models
500001—: USA models

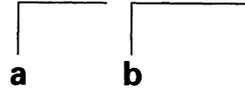


Vehicle Identification Number,
Federal Motor Vehicle Safety
Standard Certification and Paint
Code.
Vehicle Identification Number,
Canadian Motor Vehicle Safety
Standard Certification.



Engine Number

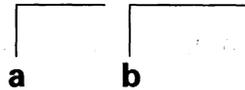
J37A1 - 1000001



- a. Engine Type**
J37A1: 3.7 L SOHC VTEC Sequential Multiport
Fuel-injected engine
- b. Serial Number**

Transmission Number

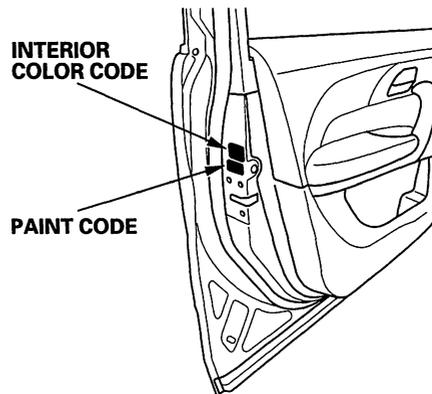
BYFA - 9000001



- a. Transmission Type**
BYFA: 5-speed Automatic
- b. Serial Number**

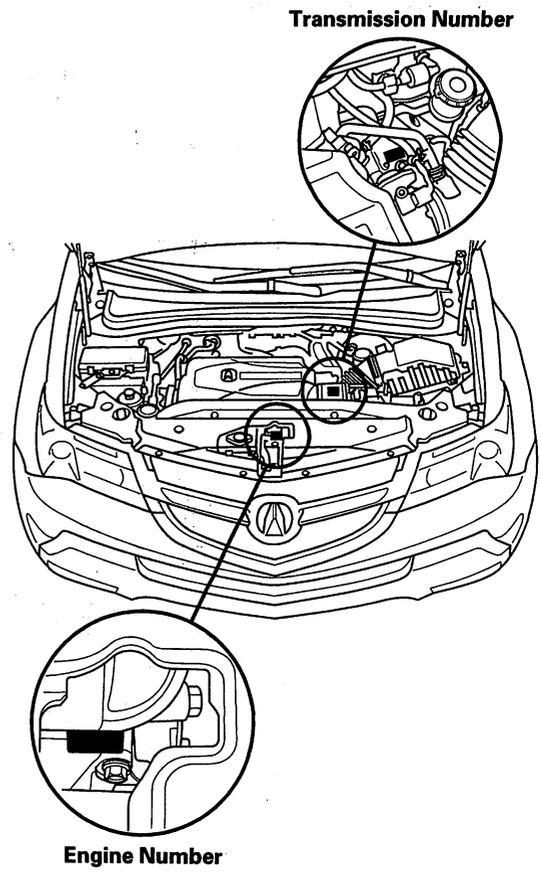
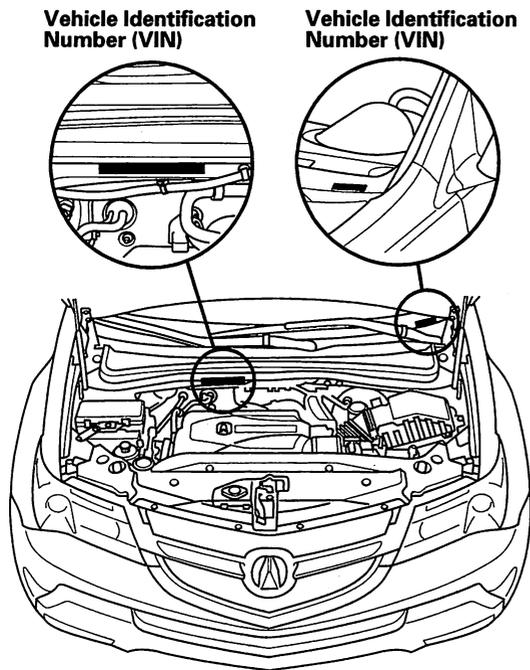
Paint Code

Code	Color	USA models	Canada models
B-533M	Steel Blue Metallic	○	○
G-525M	Aberdeen Green Metallic	○	○
NH-578	Taffeta White	○	
NH-677P	Aspen White Pearl	○	○
NH-689M	Billet Silver Metallic	○	○
NH-705M	Nimbus Gray Metallic	○	○
NH-707	Formal Black	○	○
R-529P	Dark Cherry Pearl	○	○
YR-545M	Desert Rock Metallic	○	





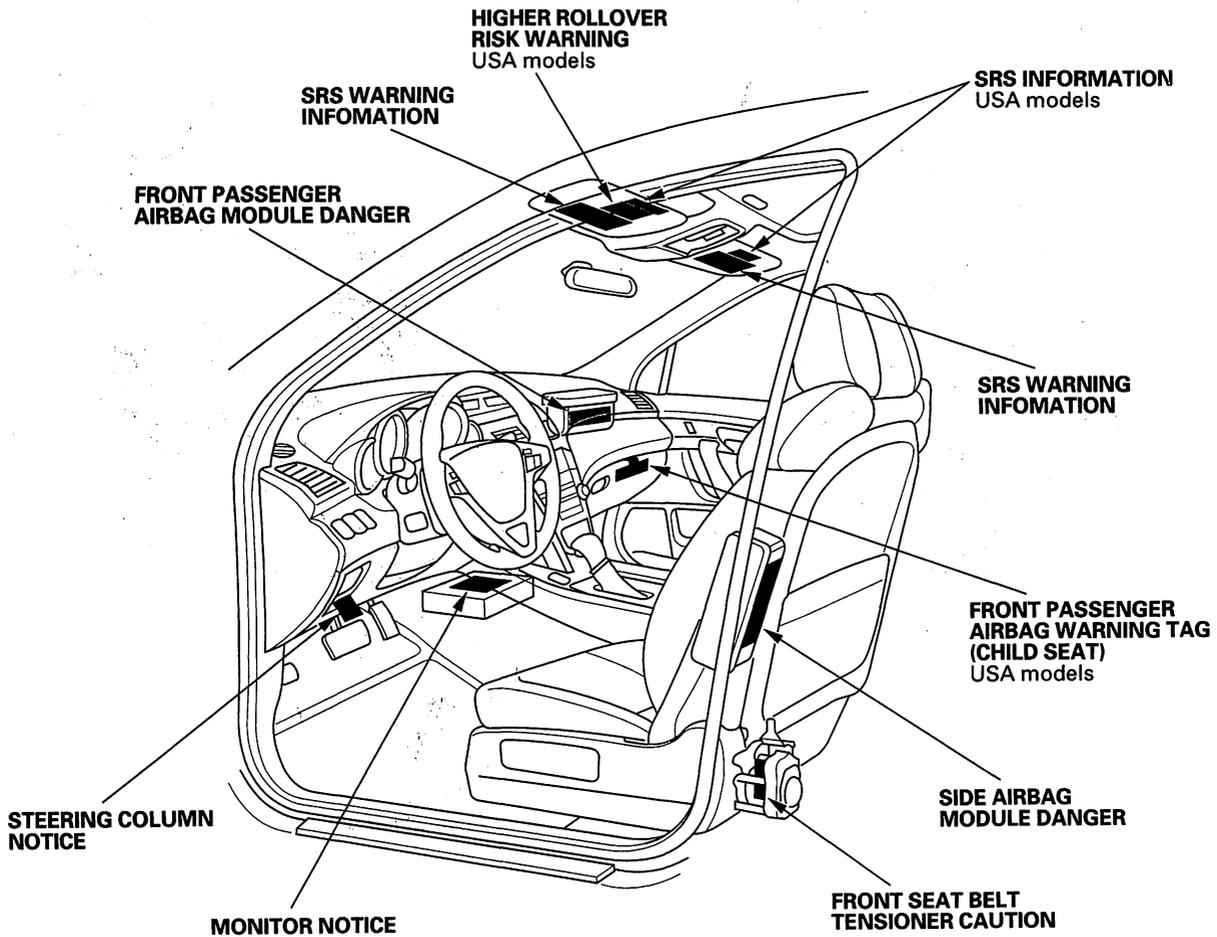
Identification Number Locations



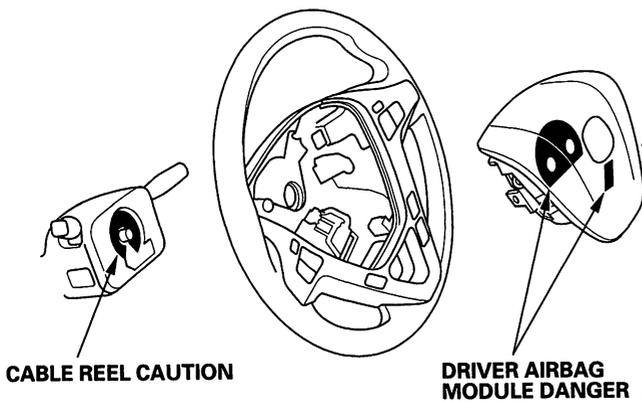
General Information

Danger/Warning/Caution Label Locations

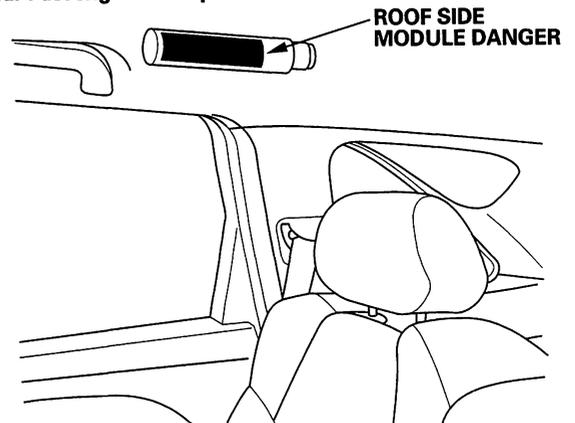
Front Passenger's Compartment:

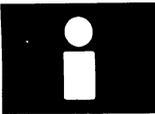


Steering Wheel:

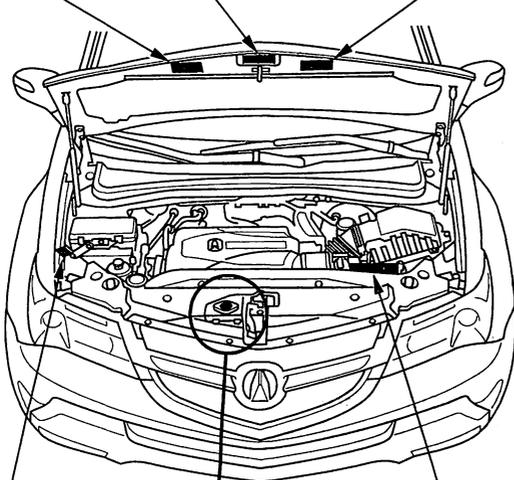


Rear Passenger's Compartment:



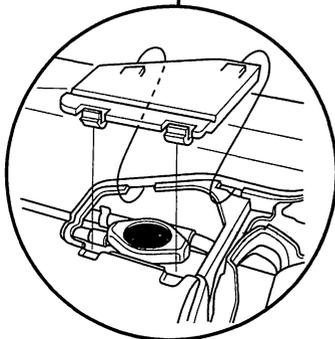


SRS WARNING
RADIATOR
INFOMATION
SERVICE INFOMATION
(Under-hood Emission
Control Infomation)



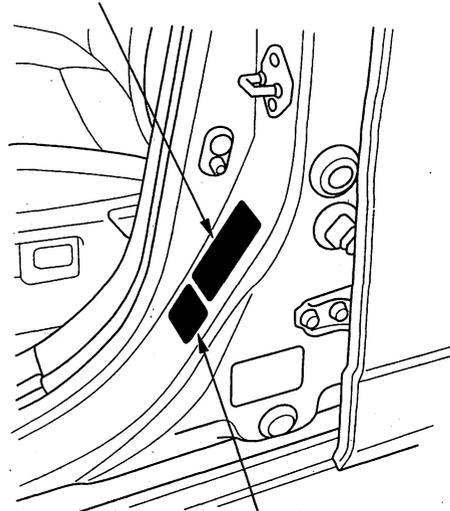
AIR CONDITIONING
INFORMATION

BATTERY DANGER



RADIATOR CAP DANGER

TIRE INFORMATION



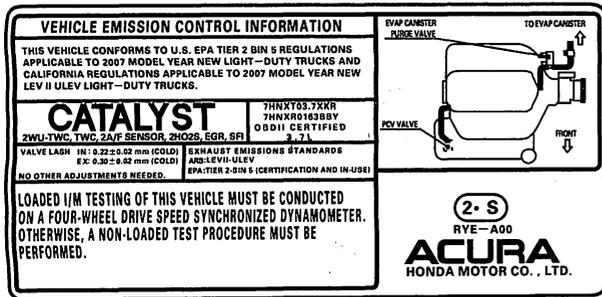
SIDE AIRBAG CAUTION
Located on driver's and passenger's
doorjamb (not shown)

General Information

Under-hood Emission Control Label

Emission Group Identification

Example:



FEDERAL in CANADA

THIS VEHICLE CONFORMS TO U.S. EPA TIER 2 BIN 5 REGULATIONS APPLICABLE TO 2007 MODEL YEAR NEW LIGHT-DUTY TRUCKS AND CALIFORNIA REGULATIONS APPLICABLE TO 2007 MODEL YEAR NEW LEV II ULEV LIGHT-DUTY TRUCKS.

Test Group and Evaporative Family

Test Group:

7 HNX T 03.7 XKR

a b c d e

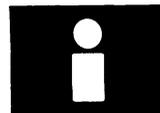
- a. Model Year
7: '07
- b. Manufacturer Subcode
HNX: HONDA
- c. Family Type
T: LDT
- d. Displacement Group
- e. Sequence Characters
XKR

Evaporative Family:

7 HNX R 0163 BBY

a b c d e

- a. Model Year
7: '07
- b. Manufacturer Subcode
HNX: HONDA
- c. Family Type
R: Refueling
- d. Canister Work Capacity
- e. Sequence Characters

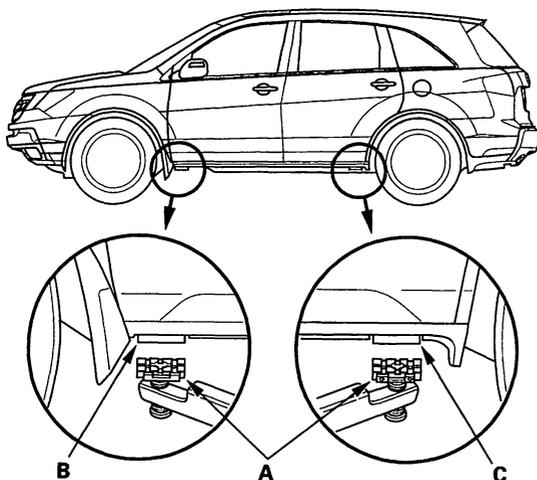


Lift and Support Points

NOTE: If you are going to remove heavy components such as the suspension or the fuel tank from the rear of the vehicle, first support the front of the vehicle with tall safety stands. When substantial weight is removed from the rear of the vehicle, the center of gravity can change causing the vehicle to tip forward on the lift.

Vehicle Lift

1. Position the hoist lift blocks (A) under the vehicle's front support points (B) and rear support points (C).



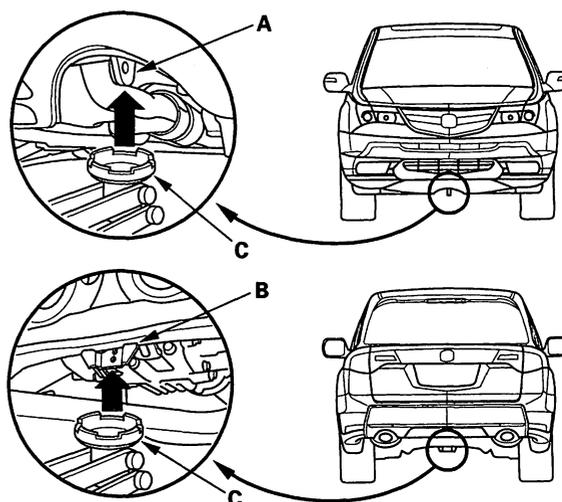
2. Raise the lift a few inches, and rock the vehicle gently to be sure it is firmly supported.
3. Raise the lift to its full height, and inspect the vehicle support points for solid contact with the lift blocks.

Safety Stands

To support the vehicle on safety stands, use the same support points (B and C) as for a vehicle lift. Always use safety stands when working on or under any vehicle that is supported only by a jack.

Floor Jack

1. When lifting the front of the vehicle, set the parking brake. When lifting the rear of the vehicle, put the gearshift lever in the P position.
2. Block the wheels that are not being lifted.
3. Position the floor jack under the front jacking bracket (A) or the rear jacking bracket (B). Center the jacking bracket on the jack lift platform (C) and jack up the vehicle high enough to fit the safety stands under it.



4. Position the safety stands under the support points and adjust them so the vehicle is level.
5. Lower the vehicle onto the stands.

General Information

Towing

If the vehicle needs to be towed, call a professional towing service. Never tow the vehicle behind another vehicle with just a rope or chain. It is very dangerous.

Emergency Towing

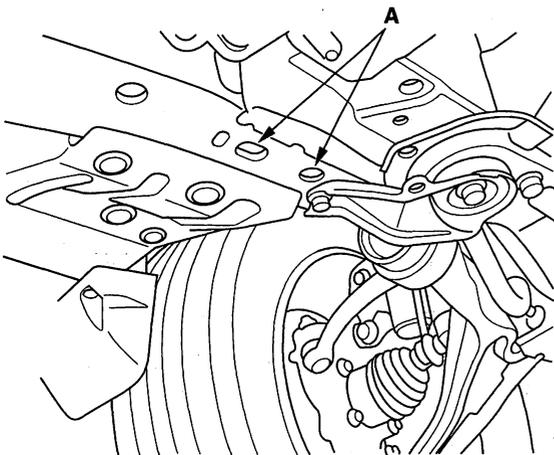
There are three popular methods of towing a vehicle.

Flat-bed Equipment — The operator loads the vehicle on the back of a truck. **This is the only way of transporting the vehicle.**

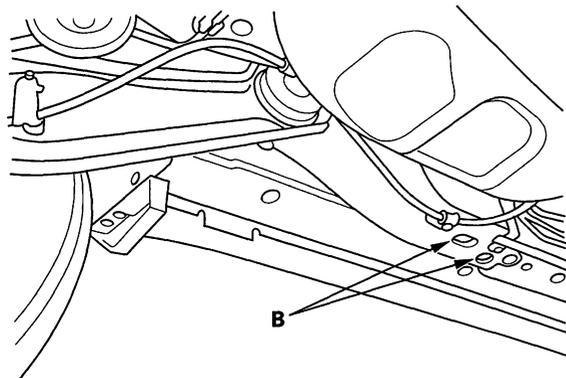
To accommodate flat-bed equipment, the vehicle is equipped with front tie down hook slots (A), and rear tie down hook slots (B).

The tie down hook slots can be used secure the vehicle to the truck.

Front:



Rear:



Towing Hook Installation

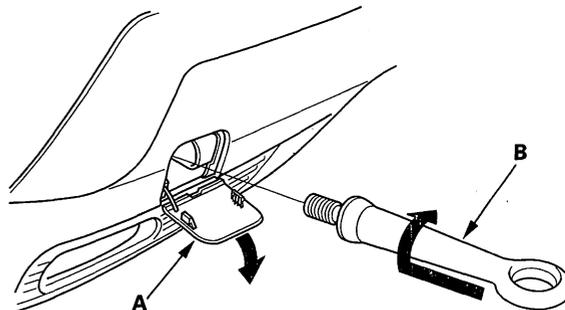
The detachable front towing hook is for towing very short distance, such as freeing the car. The hook mounts to the anchor in the front and rear bumper.

NOTICE

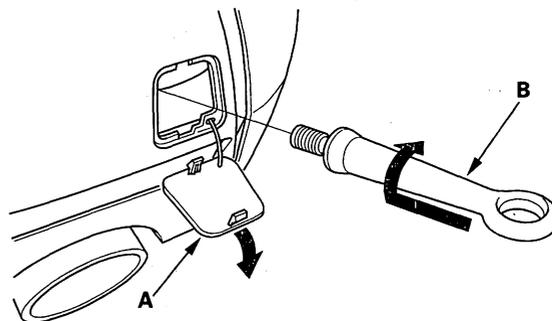
- To avoid damage to the vehicle, use the towing hook for straight flat ground towing only. Do not tow on an angle.
- The tow hook should not be used to tow the vehicle onto a flat-bed. Do not use it as a tie down.

1. Remove the cover (A) from the front bumper.

Front bumper:



Rear bumper:



2. Remove the towing hook placed behind a cover under the cargo area.
3. Screw in the towing hook (B), and tighten it securely by hand.



Wheel Lift Equipment — The tow truck uses two pivoting arms that go under the tires (front or rear) and lift them off the ground. The other two wheels remain on the ground. **Never tow the vehicle with wheel lift equipment.**

Sling-type Equipment — The tow truck uses metal cables with hooks on the ends. These hooks go around parts of the frame or suspension, and the cables lift that end of the vehicle off the ground. The vehicle's suspension and body can be seriously damaged if this method of towing is attempted. **This method of towing the vehicle is unacceptable.**

The only recommended way of towing the vehicle is on a flat-bed truck.

NOTICE

- Towing the vehicle with only two wheels on the ground will damage parts of the SH-AWD system. If the vehicle is damaged, it should be towed on a flat-bed truck or trailer.
- Trying to lift or tow the vehicle by the bumpers will cause serious damage. The bumpers are not designed to support the vehicle's weight.

General Information

Parts Marking

To deter vehicle theft, certain major components are marked with the vehicle identification number (VIN). Original parts have self-adhesive labels. Replacement body parts have generic self-adhesive labels. These labels should not be removed. The original engine or transmission VIN plates are not transferable to the replacement engine or transmission.

NOTE: Be careful not to damage the parts marking labels during body repair. Mask the labels before repairing the part.

Precautions for Super Handling All Wheel Drive (SH-AWD) System

This vehicle is equipped with the Super Handling All Wheel Drive (SH-AWD) system. The SH-AWD system distributes driving torque between the front and rear wheels when accelerating and when wheel spin occurs.

The SH-AWD system does not have a manual switch to disable the AWD system. Whenever service work requires spinning the front or rear wheels with the engine, always lift up and support the vehicle so all four wheels are off the ground.

Specifications

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Standards and Service Limits

Engine Electrical

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: IZFR6K11 DENSO: SKJ20DR-M11	
	Gap		1.0-1.1 mm (0.039-0.043 in.)	—
Ignition timing	At idle Check the <i>red</i> mark	In N or P position	10±2 ° BTDC	
Drive belt	Tension		Auto-tensioner	
Alternator	Output	At 13.5 V and normal engine temperature	130 A	
	Coil (rotor) resistance	At 68 °F (20 °C)	2.3 -2.7 k Ω	
	Slip ring O.D.		14.2-14.4 mm (0.56-0.57 in.)	13.8 mm (0.54 in.)
	Brush length		10.5 mm (0.41 in.)	1.5 mm (0.06 in.)
	Brush spring tension		2.94-3.53 N (0.30-0.36 kgf, 0.66-0.80 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 (0.0008 in.) max.	0.05 mm (0.002 in.)
	Commutator O.D.		28.9-29.0 mm (1.138-1.142 in.)	28.0 mm (1.102 in.)
	Brush length		15.0-16.0 mm (0.59-0.63 in.)	9.0 mm (0.35 in.)
	Brush spring tension (new)		22.3-27.3 N (2.27-2.78 kgf, 5.00-6.13 lbf)	

Engine Assembly

Item	Measurement	Qualification	Standard or New	Service Limit
Compression	Pressure	Minimum	930 kPa (9.5 kgf/cm ² , 144 psi)	—
	Check the engine with the starter cranking	Maximum variation	200 kPa (2.0 kgf/cm ² , 28 psi)	—

Cylinder Head

Item	Measurement	Qualification	Standard or New	Service Limit	
Head	Warpage		——	0.05 mm (0.002 in.)	
	Height		120.95—121.05 mm (4.7618—4.7657 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, primary		35.112 mm (1.3823 in.)	——
		Intake, mid		36.394 mm (1.4328 in.)	——
		Intake, secondary		35.112 mm (1.3823 in.)	——
Exhaust			36.389 mm (1.4326 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 spring	Free length	Intake	51.48 mm (2.027 in.)	——	
		Exhaust	51.05 mm (2.010 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	0.026—0.067 mm (0.0010—0.0026 in.)	0.067 mm (0.0026 in.)	
		Exhaust	0.026—0.077 mm (0.0010—0.0030 in.)	0.077 mm (0.0030 in.)	

Standards and Service Limits

Engine Block

Item	Measurement	Qualification	Standard or New	Service Limit
Block	Warpage of deck		0.07 mm (0.003 in.) max.	—
	Bore diameter		90.000—90.015 mm (3.5433—3.5439 in.)	—
Piston	Skirt O.D. at 16.0 mm (0.63 in.) from bottom of skirt		89.893—89.996 mm (3.5426—3.5431 in.)	—
	Clearance in cylinder		0.004—0.032 mm (0.0001—0.0013 in.)	0.08 mm (0.003 in.)
	Ring groove width	Top	1.240—1.255 mm (0.0488—0.0494 in.)	1.27 mm (0.050 in.)
		Second	1.220—1.235 mm (0.0480—0.0486 in.)	1.25 mm (0.049 in.)
Oil		2.805—2.825 mm (0.1104—0.1112 in.)	2.85 mm (0.112 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.)
		Oil	0.20—0.70 mm (0.008—0.028 in.)	0.80 mm (0.031 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—0.70 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		−0.0050 to +0.0010 mm (−0.00020 to +0.00004 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.)	—
	Large-end bore diameter		60.0 mm (2.36 in.)	—
	End play installed on crankshaft		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.)
	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.)
	Rod bearing clearance		0.020—0.044 mm (0.0008—0.0017 in.)	0.050 mm (0.0020 in.)

Engine Lubrication

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-to-outer rotor clearance		0.03—0.09 mm (0.002—0.004 in.)	0.20 mm (0.008 in.)
	Pump housing-to-outer rotor clearance		0.10—0.19 mm (0.004—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		70 kPa (0.7 kgf/cm ² , 10 psi)
At 3,000 rpm			490 kPa (5.0 kgf/cm ² , 71 psi)	

Cooling System

Item	Measurement	Qualification	Standard or New
Radiator	Coolant capacities (including engine, heater, hoses, and reservoir) Use Acura Long Life Antifreeze/ Coolant Type 2	Engine overhaul	9.2 L (2.43 US gal)
		Coolant change	7.3 L (1.93 US gal)
Coolant reservoir	Coolant capacity		0.7 L (0.19 US gal)
Radiator cap	Opening pressure		93—123 kPa (0.95—1.25 kgf/cm ² , 14—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

Item	Measurement	Qualification	Standard or New
Fuel pressure regulator	Pressure with regulator vacuum hose disconnected		390—440 kPa (4.0—4.5 kgf/cm ² , 57—64 psi)
Fuel tank	Capacity		79.5 L (21.0 US gal)
Engine idle	Idle speed without load	In N or P position	710±50 rpm
	Idle speed with high electrical 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 position	710±50 rpm

Standards and Service Limits

Automatic Transmission and A/T Differential

Item	Measurement	Qualification	Standard or New	Service Limit	
Automatic transmission fluid	Capacity	Fluid change	2.8 L (3.0 US qt)		
	Use Acura ATF-Z1	Overhaul	7.9 L (8.3 US qt)		
ATF pressure	Line pressure	At 2,000 rpm in N or P position	960—1,050 kPa (9.8—10.7 kgf/cm ² , 139—152 psi)	910 kPa (9.3 kgf/cm ² , 132 psi)	
	5th clutch pressure	At 2,000 rpm in D position	920—1,000 kPa (9.4—10.1 kgf/cm ² , 133—145 psi)	870 kPa (8.9 kgf/cm ² , 126 psi)	
	4th clutch pressure	At 2,000 rpm in D position	930—1,010 kPa (9.5—10.3 kgf/cm ² , 135—147 psi)	880 kPa (9.0 kgf/cm ² , 128 psi)	
	3rd clutch pressure	At 2,000 rpm in D position	930—1,010 kPa (9.5—10.3 kgf/cm ² , 135—147 psi)	880 kPa (9.0 kgf/cm ² , 128 psi)	
	2nd clutch pressure	At 2,000 rpm in M position 2nd gear	930—1,010 kPa (9.5—10.3 kgf/cm ² , 135—147 psi)	880 kPa (9.0 kgf/cm ² , 128 psi)	
	1st clutch pressure	At 2,000 rpm in M position 1st gear	930—1,010 kPa (9.5—10.3 kgf/cm ² , 135—147 psi)	880 kPa (9.0 kgf/cm ² , 128 psi)	
	1st-hold clutch pressure	At 2,000 rpm in M position 1st gear	750—840 kPa (7.6—8.6 kgf/cm ² , 109—122 psi)	700 kPa (7.1 kgf/cm ² , 102 psi)	
Torque converter	Stall speed Check with vehicle on level ground		1,950 rpm	1,800—2,100 rpm	
Clutch	Clutch end-plate-to-top-disc clearance	1st	—	1.15—1.35 mm (0.045—0.053 in.)	
		2nd	—	1.05—1.25 mm (0.041—0.049 in.)	
		3rd	—	0.9—1.1 mm (0.035—0.043 in.)	
		4th	—	0.75—0.95 mm (0.030—0.037 in.)	
		5th	—	0.75—0.95 mm (0.030—0.037 in.)	
		1st-hold	—	0.6—1.0 mm (0.024—0.039 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.)	35.5 mm (1.39 in.)
		5th		53.7 mm (2.11 in.)	51.7 mm (2.04 in.)
	Clutch disc thickness			1.94 mm (0.076 in.)	—
	Clutch plate thickness	1st		1.6 mm (0.06 in.)	When discolored
		2nd		1.8 mm (0.07 in.)	When discolored
		3rd		1.8 mm (0.07 in.)	When discolored
		4th		1.6 mm (0.06 in.)	When discolored
		5th		1.6 mm (0.06 in.)	When discolored
		1st-hold		1.8 mm (0.07 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	

Item	Measurement	Qualification	Standard or New	Service Limit
Clutch (cont'd)	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
Stator shaft	I.D. at needle bearing contact area	Torque converter side	27.000—27.021 mm (1.063—1.064 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.)
ATF pump	Gear-to-body thrust clearance		0.03—0.06 mm (0.001—0.002 in.)	0.07 mm (0.003 in.)
	Gear-to-body clearance	Drive gear	0.210—0.265 mm (0.008—0.010 in.)	—
		Driven gear	0.070—0.125 mm (0.003—0.005 in.)	—
	Driven gear I.D.		14.016—14.034 mm (0.5518—0.5525 in.)	When worn or damaged
Driven gear shaft O.D.		13.980—13.990 mm (0.5504—0.5508 in.)	When worn or damaged	
Reverse shift fork	Fork finger thickness		5.90—6.00 mm (0.220—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.)
Mainshaft	Diameter at stator 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 collar length		48.7—48.8 mm (1.917—1.921 in.)	—
	5th gear collar flange thickness		4.5—4.7 mm (0.177—0.185 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.)	—
	Sealing ring thickness		1.90—1.96 mm (0.074—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.)

(cont'd)

Standards and Service Limits

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

Item	Measurement	Qualification	Standard or New	Service Limit	
Countershaft	Diameter at 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 (2.2400—2.2406 in.)	When worn or damaged	
	Reverse gear collar O.D.		39.979—40.000 mm (1.5740—1.5748 in.)	When worn or damaged	
	Reverse selector hub O.D.		55.885—55.900 mm (2.200—2.201 in.)	When worn or damaged	
	Cotter thickness	4th gear		1.99—2.02 mm (0.078—0.080 in.)	—
		2nd gear		7.74—7.52 mm (0.295—0.296 in.)	—
	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—2.7567 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.)	—
	61 mm washer thickness	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
	50.8 mm washer thickness	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	
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		
	35 x 47 mm thrust washer thickness		5.97—6.00 mm (0.2350—0.2362 in.)	When worn or damaged	

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary shaft	Diameter at 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
	Diameter of 1st gear collar at needle bearing contact area		38.975—38.991 mm (1.5344—1.5351 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 (1.9685—1.9693 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—0.228 mm (0.0024—0.0090 in.)	—
	52 mm thrust washer thickness	M	2.405 mm (0.095 in.)	When worn or damaged
		L	2.430 mm (0.096 in.)	When worn or damaged
		K	2.455 mm (0.097 in.)	When worn or damaged
		J	2.480 mm (0.098 in.)	When worn or damaged
		I	2.505 mm (0.099 in.)	When worn or damaged
		H	2.530 mm (0.100 in.)	When worn or damaged
		G	2.555 mm (0.101 in.)	When worn or damaged
		F	2.580 mm (0.102 in.)	When worn or damaged
		E	2.605 mm (0.103 in.)	When worn or damaged
		D	2.630 mm (0.104 in.)	When worn or damaged
		C	2.655 mm (0.105 in.)	When worn or damaged
		B	2.680 mm (0.106 in.)	When worn or damaged
	A	2.705 mm (0.106 in.)	When worn or damaged	
1st gear collar length		63.3—63.4 mm (2.4921—2.4961 in.)	—	
Sealing ring thickness		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.)	
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.)	
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.)	

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Standards and Service Limits

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

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary shaft (cont'd)	65 mm thrust shim thickness	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
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		

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.)	—	
	Cotter thickness		2.99—3.02 mm (0.1177—0.1189 in.)	—	
	Sealing ring thickness		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.)	
	53 mm splined washer thickness	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
	26.5 mm washer thickness	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	
Reverse idler gear	Gear shaft O.D.		13.99—14.00 mm (0.5508—0.5512 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.)	—	
	I.D.		18.007—18.020 mm (0.7089—0.7094 in.)	When worn or damaged	
	Axial clearance		0.07—0.38 mm (0.003—0.015 in.)	—	
	Thrust washer thickness	Transmission housing		0.97—1.05 mm (0.038—0.041 in.)	—
		Holder side		0.97—1.05 mm (0.038—0.041 in.)	—

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Standards and Service Limits

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

Item	Measurement	Qualification	Standard or New			
			Wire Diameter	O.D.	Free Length	No. of Coil
Main valve body spring (see page 14-347)	Torque converter check valve spring		1.1 mm (0.043 in.)	8.6 mm (0.339 in.)	35.0 mm (1.378 in.)	12.6
	Lock-up shift valve spring		1.0 mm (0.039 in.)	6.6 mm (0.260 in.)	35.5 mm (1.398 in.)	18.2
	Shift valve E spring		0.7 mm (0.028 in.)	6.6 mm (0.260 in.)	42.4 mm (1.669 in.)	17.6
	Shift valve A spring		0.9 mm (0.035 in.)	6.6 mm (0.260 in.)	50.5 mm (1.988 in.)	23.3
	Shift valve B spring		0.8 mm (0.031 in.)	6.6 mm (0.260 in.)	49.1 mm (1.933 in.)	21.7
	Modulator valve spring		1.6 mm (0.063 in.)	10.4 mm (0.409 in.)	33.5 mm (1.319 in.)	9.8
	CPC valve A spring		0.7 mm (0.028 in.)	6.1 mm (0.240 in.)	17.8 mm (0.701 in.)	7.9
	Servo control valve spring		0.9 mm (0.035 in.)	9.6 mm (0.378 in.)	30.2 mm (1.189 in.)	8.4
	Lubrication control valve spring		0.9 mm (0.035 in.)	8.7 mm (0.343 in.)	25.0 mm (0.984 in.)	7.2
	Lock-up timing valve spring		0.6 mm (0.024 in.)	6.6 mm (0.260 in.)	30.8 mm (1.213 in.)	11.1
	Relief valve spring		1.0 mm (0.039 in.)	9.6 mm (0.378 in.)	28.1 mm (1.106 in.)	7.7
Secondary valve body spring (see page 14-349)	CPC valve C spring		0.7 mm (0.028 in.)	6.1 mm (0.240 in.)	17.8 mm (0.701 in.)	7.9
	Shift valve D spring		0.7 mm (0.028 in.)	6.6 mm (0.260 in.)	42.4 mm (1.669 in.)	17.6
	Reverse CPC valve spring		0.8 mm (0.031 in.)	6.1 mm (0.240 in.)	24.4 mm (0.961 in.)	14.6
	Shift valve C spring		0.8 mm (0.031 in.)	6.6 mm (0.260 in.)	49.1 mm (1.933 in.)	21.7
	CPC valve B spring		0.7 mm (0.028 in.)	6.1 mm (0.240 in.)	17.8 mm (0.701 in.)	7.9
	Reverse control valve spring		0.8 mm (0.031 in.)	6.6 mm (0.260 in.)	49.1 mm (1.933 in.)	21.7
Regulator valve body spring (see page 14-350)	3rd accumulator spring		3.1 mm (0.122 in.)	19.6 mm (0.772 in.)	41.4 mm (1.630 in.)	5.5
	Coolant check valve spring		0.9 mm (0.035 in.)	6.7 mm (0.264 in.)	31.5 mm (1.240 in.)	14.2
	Lock-up control valve spring		0.7 mm (0.028 in.)	6.6 mm (0.260 in.)	42.9 mm (1.689 in.)	14.2
			0.8 mm (0.031 in.)	6.6 mm (0.260 in.)	44.3 mm (1.744 in.)	25.5
	Regulator valve spring B		1.4 mm (0.055 in.)	8.8 mm (0.346 in.)	44.0 mm (1.732 in.)	12.0
	Regulator valve spring A		1.85 mm (0.073 in.)	14.7 mm (0.579 in.)	86.9 mm (3.421 in.)	16.2
	Stator reaction spring		5.5 mm (0.217 in.)	37.4 mm (1.472 in.)	30.3 mm (1.193 in.)	2.1

Item	Measurement	Qualification	Standard or New			
			Wire Diameter	O.D.	Free Length	No. of Coil
Accumulator body spring (see page 14-351)	4th accumulator spring		3.3 mm (0.130 in.)	19.6 mm (0.772 in.)	39.1 mm (1.539 in.)	5.8
	2nd accumulator spring		3.1 mm (0.122 in.)	19.6 mm (0.772 in.)	53.4 mm (2.102 in.)	7.5
	1st accumulator spring A		2.3 mm (0.091 in.)	19.6 mm (0.772 in.)	60.8 mm (2.394 in.)	9.7
	1st accumulator spring B		2.5 mm (0.098 in.)	12.8 mm (0.504 in.)	46.0 mm (1.811 in.)	9.5
	5th accumulator spring A		2.4 mm (0.094 in.)	19.6 mm (0.772 in.)	65.5 mm (2.579 in.)	12.0
	5th accumulator spring B		2.4 mm (0.094 in.)	13.2 mm (0.520 in.)	50.5 mm (1.988 in.)	10.1
	1st-hold accumulator spring		2.0 mm (0.079 in.)	13.1 mm (0.516 in.)	42.9 mm (1.689 in.)	9.8

Item	Measurement	Qualification	Standard or New	Service Limit
A/T differential carrier	Pinion shaft contact area I.D.		18.000—18.025 mm (0.7087—0.7096 in.)	—
	Carrier-to-pinion shaft clearance		0.013—0.054 mm (0.0005—0.0021 in.)	0.1 mm (0.004 in.)
	Driveshaft contact area I.D.		30.025—30.055 mm (1.182—1.183 in.)	—
	Carrier-to-driveshaft clearance		0.045—0.096 mm (0.002—0.004 in.)	0.13 mm (0.005 in.)
	Carrier-to-intermediate shaft clearance		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.)
For used bearing			3.6—4.8 N·m (37—49 kgf·cm, 32—43 lbf·in.)	Adjust
A/T differential pinion gear	Backlash		0.05—0.15 mm (0.002—0.006 in.)	—
	I.D.		18.042—18.066 mm (0.7103—0.7113 in.)	—
	Pinion gear-to-pinion shaft clearance		0.055—0.095 mm (0.0022—0.0037 in.)	0.12 mm (0.005 in.)

(cont'd)

Standards and Service Limits

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

Item	Measurement	Qualification	Standard or New	Service Limit	
Transfer output shaft	Diameter at 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.)	—	
	28.5 mm thrust washer thickness	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		
Transfer assembly fluid	Capacity Hypoid gear oil SAE 90 or SAE 80W-90 viscosity, API classified GL4 or GL5 only	Fluid change	0.43 L (0.45 us qt)		
		Overhaul	0.45 L (0.48 us qt)		
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	

Rear Differential

Item	Measurement	Qualification	Standard or New
Rear differential fluid	Capacity	Fluid change	2.53 L (2.67 US qt)
	Use Acura ATF-Z1	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 with engine running		0—10 mm (0—0.39 in.)	
	Starting load measured at outside edge with engine running		29 N (3.0 kgf, 6.6 lbf)	If higher, check gearbox and pump
Gearbox	Angle of rack guide screw loosened from locked position		15±5°	
Pump	Output pressure with shut-off valve closed		8,920—9,420 kPa (91—96 kgf/cm ² , 1,290—1,370 psi)	
Power steering fluid	Capacity	Reservoir capacity	0.34 L (0.36 US qt)	
	Use Acura Power Steering Fluid	System overhaul	1.03 L (1.09 US qt)	

Suspension

Item	Measurement	Qualification	Standard or New	Service Limit
Wheel alignment	Camber	Front	-0°30'±1°	
		Rear	-0°30'±45'	
	Caster	Front	4°12'±35'	
		Total Toe-in	Front	0±2 mm (0±0.08 in.)
		Rear	2±2 mm (0.08±0.08 in.)	
	Front wheel turning angle	Inside wheel	38°12'±2°	
Outside wheel		31°44' (Reference)		
Aluminum wheel	Runout	Axial	0—0.3 mm (0—0.01 in.)	2.0 mm (0.08 in.)
		Radial	0—0.3 mm (0—0.01 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.)	

Standards and Service Limits

Brakes

Item	Measurement	Qualification	Standard or New	Service Limit
Parking brake	Number of clicks when pedal pressed with 294 N (30 kgf, 66 lbf) of force (reference)		9 to 11 clicks	
	Drum I.D		210.0—210.1 mm (8.268—8.272 in.)	211.0 mm (8.307 in.)
	Shoe lining thickness		3.9 mm (0.15 in.)	1.0 mm (0.04 in.)
Brake pedal	Pedal height (carpet removed)		178 mm (7 in.)	
	Free play		1—5 mm (0.04—0.20 in.)	
Master cylinder	Piston-to pushrod clearance		0 mm (0 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	10.6—11.2 mm (0.42—0.44 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
Refrigerant	Type		HFC-134a (R-134a)
	Capacity of system	Dual	600—650 g (20.3—22.0 oz)
Refrigerant oil	Type		DENSO ND-OIL 8 (P/N 38897-PR7-A01AH or 38899-PR7-A01)
	Capacity of components	Condenser	35 mL (1 1/6 fl-oz)
		Evaporator (front)	40 mL (1 1/3 fl-oz)
		Evaporator (rear)	30 mL (1 fl-oz)
		Each line and hose	10 mL (1/3 fl-oz)
Compressor	125—137 mL (4 2/9—4 5/8 fl-oz)		
Compressor (DENSO)	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		4,844 mm (190.7 in.)	
	Overall width		1,954 mm (77.0 in.)	
	Overall height		1,733 mm (68.2 in.)	
	Wheelbase		2,750 mm (108.3 in.)	
	Track	Front		1,720 mm (67.7 in.)
		Rear		1,715 mm (67.5 in.)
	Ground clearance		207 mm (8.15 in.)	
	Seating capacity		Seven (7)	
WEIGHT (USA)	Gross Vehicle Weight Rating (GVWR)		5,292 lbs	
WEIGHT (CANADA)	Gross Vehicle Weight Rating (GVWR)		2,700 kg	
ENGINE	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 (mL) (224 cu in.)	
	Compression ratio		11.0	
	Valve train		Belt driven, SOHC VTEC 4 valves per cylinder	
	Ignition system		DLI (Distributorless Ignition)	
	Lubrication system		Forced, wet sump, with trochoid pump	
	Oil pump displacement	At 6,000 rpm		58.4 L (61.7 US qt)/minute
	Water pump displacement	At 6,000 rpm		172 L (182 US qt)/minute
	Fuel required			Premium UNLEADED gasoline with 91 Pump Octane Number or higher
STARTER	Type		Gear reduction	
	Normal output		1.8 kW	
	Nominal voltage		12 V	
	Hour rating		30 seconds	
	Direction of rotation		Counterclockwise as viewed from gear end	
AUTOMATIC TRANSMISSION	Type	BYFA	Electronically-controlled automatic, 5-speed forward, 1 reverse	
	Primary reduction		Direct 1:1	
	Gear ratio	1st		2.697
		2nd		1.606
		3rd		1.071
		4th		0.766
		5th		0.538
		Reverse		1.888
	Final reduction	Type		Single helical gear
Gear ratio			4.533	

(cont'd)

Design Specifications

Item	Measurement	Qualification	Specification
STEERING	Type		Hydraulic power-assisted rack and pinion
	Gear ratio		47.4
	Overall ratio		17.0
	Turns, lock-to-lock		3.29
	Steering wheel diameter		380 mm (15.0 in.)
SUSPENSION	Type	Front	Independent strut with stabilizer, coil spring
		Rear	Independent multi-link with trailing arm, stabilizer, coil spring
	Shock absorber front and rear	Without active damper system	Telescopic, hydraulic, nitrogen gas-filled
		With active damper system	Magnet rheological variable active damper
TIRES	Size of front and rear tires		P255/55R18 104H
	Size of spare tire		T165/80D17 104M
WHEEL ALIGNMENT	Camber	Front	-0° 30'
		Rear	-0° 30'
	Caster	Front	4° 12'
		Total Toe-in	Front
		Rear	2 mm (0.08 in.)
	Front wheel turning angle	Inside wheel	38° 12'
		Outside wheel	31° 44'
SAI at camber (kingpin axis)		12° 48'	
BRAKES	Type of service brake	Front	Power-assisted self-adjusting ventilated disc
		Rear	Power-assisted self-adjusting solid disc
	Type of parking brake		Foot type mechanical actuating, rear wheels
	Pad friction surface area (swept area)	Front	63.5 cm ² (9.84 sq in.) x2
		Rear	25.3 cm ² (3.92 sq in.) x2
Parking brake shoe friction surface area		60.2 cm ² (9.33 sq in.) x2	
AIR CONDITIONING	Cooling capacity	Front	3,506 kcal/h (13,910 BTU/h)
		Rear	1,728 kcal/h (6,860 BTU/h)
	Compressor	Type/Manufacturer	Swash plate/DENSO
		Number of cylinders	10
		Capacity	177 mL/rev. (10.8 cu in./rev.)
		Maximum speed	8,400 rpm
		Lubricant capacity	125 mL (4 2/9 fl-oz)
		Lubricant type	ND-OIL 8 (DENSO)
	Condenser	Type	Corrugated fin
	Evaporator	Type	Corrugated fin
	Blower	Type	Stabilized swirling flow
		Motor input (Front)	245 W/12 V
		Motor input (Rear)	115 W/12 V
		Speed control (Front)	Infinite variable
		Speed control (Rear)	Infinite variable
		Maximum capacity (Front)	525 m ³ /h (18,510 cu ft/h)
		Maximum capacity (Rear)	275 m ³ /h (9,695 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)			35 W maximum at 12 V
Refrigerant	Type	HFC-134a (R-134a)	
	Quantity (Dual)		600—650 g (20.3—22.0 fl oz)

Item	Measurement	Qualification	Specification	
ELECTRICAL RATINGS	Battery		12 V—76 AH/20 HR, 65 AH/5 HR	
	Fuses	Main under-hood fuse/relay box		120 A, 60 A, 50 A, 40 A, 30 A, 20 A, 15 A, 7.5 A
		Under-hood fuse/relay box		40 A, 30 A, 20 A, 15 A, 10 A 7.5 A
		Under-dash fuse/relay box		30 A, 20 A, 15 A, 10 A, 7.5 A
		Rear fuse/relay box		40 A, 30 A, 20 A, 10 A, 7.5 A
	Light bulbs	Headlight high beam		12 V—60 W
		Headlight low beam		12 V—35 W (HID)
		Daytime running light		12 V—60 W
		Front turn signal lights		12 V—24 CP
		Front side turn signal lights		LED
		Front parking lights		12 V—3 CP
		Front side marker light		12 V—3 CP
		Fog light		12 V—55 W
		Rear turn signal lights		12 V—21 W
		Brake/taillights		LED/LED
		Rear side market light		12 V—3 CP
		High mount brake light		LED
		Back-up lights		12 V—18 W
		License plate lights		12 V—3 CP
		Ceiling light		12 V—8 W
		Cargo area light		12 V—5 W
		Front map light		12 V—5 W
		Rear map light		12 V—6.2 W
		Ambient light		LED
		Vanity mirror lights		12 V—2 W
		Glove box light		12 V—3.4 W
		Door courtesy light		12 V—2 CP
Gauge lights			LED	
Indicator lights		14 V—1.4 W, 10 V—0.6 W		