

2007 Acura RL

2005-08 MAINTENANCE Maintenance - RL

2005-08 MAINTENANCE**Maintenance - RL****LUBRICANTS AND FLUIDS**

For details of the lubrication points and type of lubricants to be applied, refer to the illustrated index and various work procedures (such as Assembly/Reassembly, Replacement, Overhaul, Installation, etc.) contained in each section.

LUBRICATION POINTS AND LUBRICANT SPECIFICATION

Item	Lubrication Points	Lubricant
A	Engine	Acura Motor Oil: American Honda P/N 08798-9023A (5W-20), Honda Canada P/N CA66806 (5W-20) Look for the API certification seal on the oil container. Make sure it says "For Gasoline Engines." SAE viscosity: See chart.
B	Automatic transmission	Acura Automatic Transmission Fluid (ATF-Z1): American Honda P/N 08200-9001A, Honda Canada P/N CA66689 Always use Acura ATF-Z1. Using a non-Acura ATF can affect shift quality.
C	Transfer assembly	Hypoid gear oil GL4 or GL5 Use a SAE 90 or SAE 80W-90 viscosity hypoid gear oil, API classified GL4 or GL5 only. Viscosity SAE 90: above 0°F (-18°C) SAE 80W-90: below 0°F (-18°C)
D	Rear differential	Acura Automatic Transmission Fluid (ATF-Z1): American Honda P/N 08200-9001A, Honda Canada P/N CA66689
E	Brake system (including VSA lines)	Acura DOT 3 Brake Fluid: P/N 08798-9008A Always use Acura DOT 3 Brake Fluid. Using a non-Acura brake fluid can cause corrosion and decrease the life of the system.
F	Brake booster clevis pin	Multipurpose grease
G	Battery terminals	
H	Fuel fill door	
I	Hood hinges and hood latch	
J	Trunk hinges	
K	Caliper piston boot, caliper pins, and boots	Honda Silicone Grease: P/N 08C30-B0234M
L	Power steering system	Acura Power Steering Fluid: P/N 08206-9002A Always use Acura Power Steering Fluid. Using any other type of power steering fluid or automatic transmission fluid can cause increased wear and poor steering in cold weather.
M	Air conditioning compressor	Compressor oil: DENSO ND-OIL 8 (P/N 38897-PR7-A01AH or 38899-PR7-A01) for refrigerant HFC-134a (R-134a)

N Cooling system

Acura Long Life Antifreeze/Coolant-Type 2: P/N OL999-9011A

API CERTIFICATION SEAL



Recommended Engine Oil

Engine oil viscosity for ambient temperature ranges

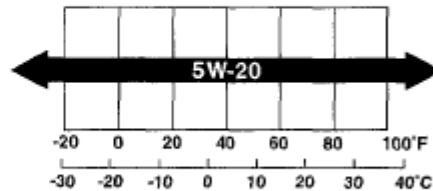


Fig. 1: Identifying API Certification Seal And SAE Engine Oil Viscosity Chart
Courtesy of AMERICAN HONDA MOTOR CO., INC.

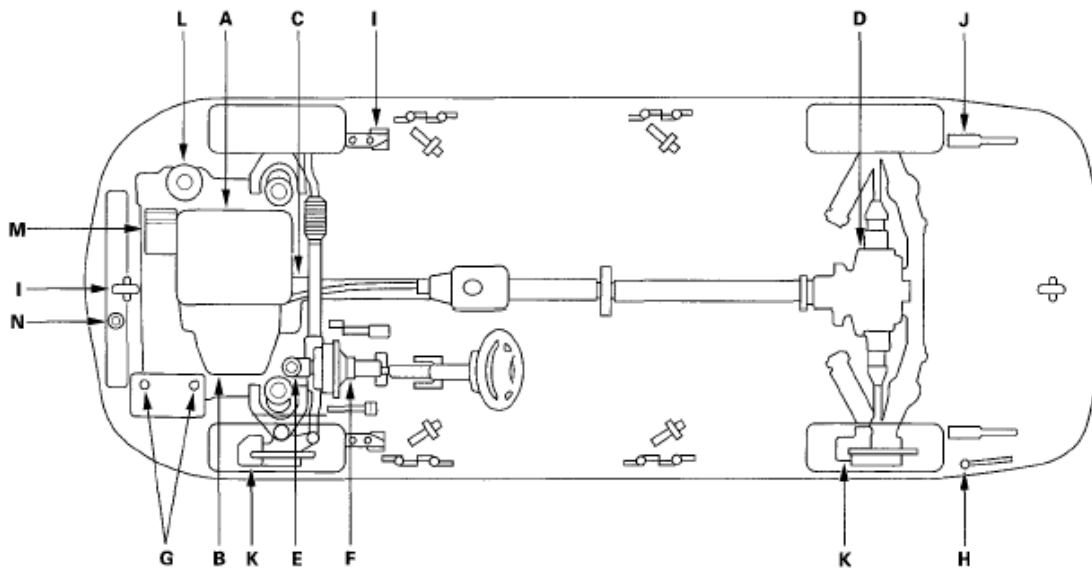


Fig. 2: Identifying Lubrication Points
Courtesy of AMERICAN HONDA MOTOR CO., INC.

MAINTENANCE MINDER

GENERAL INFORMATION

Multi-information Display

The maintenance minder is an important feature of the multi-information display. Based on engine operating conditions and accumulated engine revolutions, the RL's onboard computer (PCM) calculates the remaining engine oil life. The system also displays the codes for other scheduled maintenance items needing service.

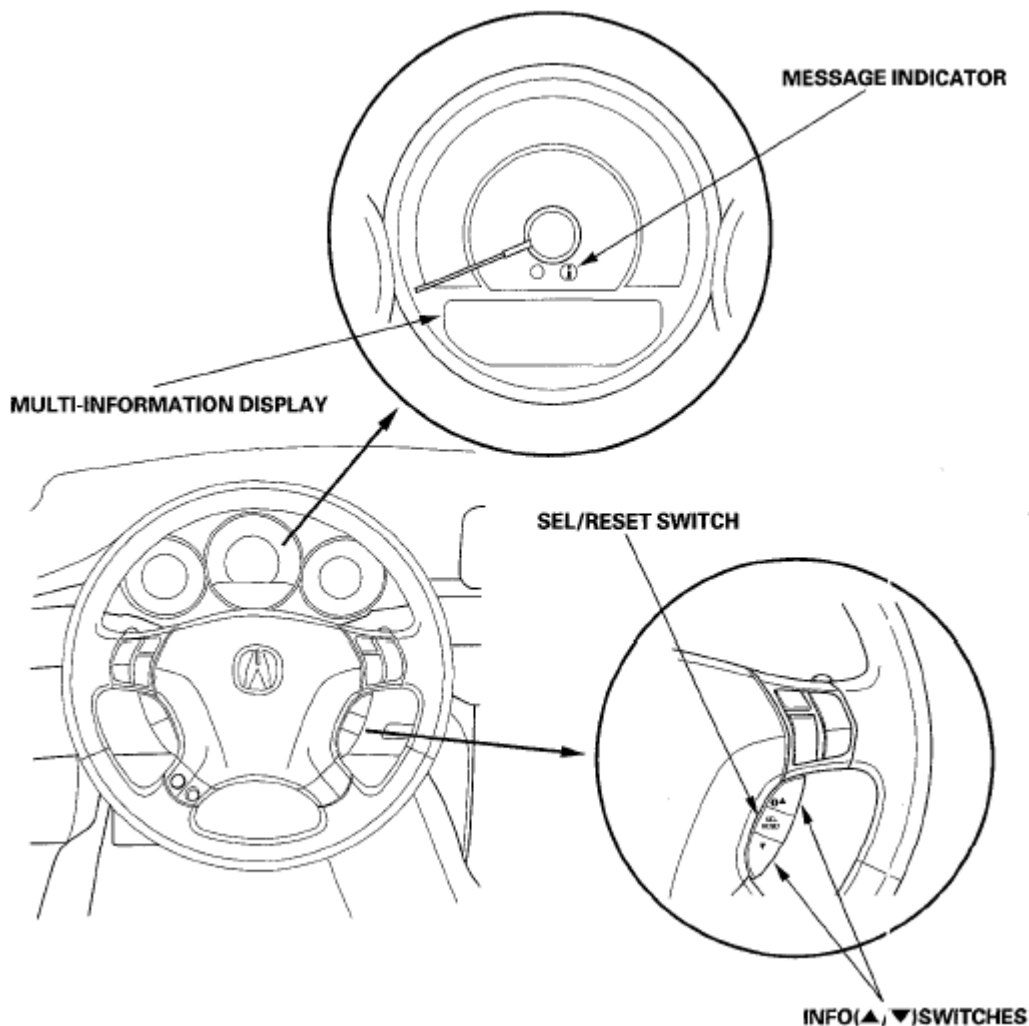


Fig. 3: Identifying Multi-Information Display, Message Indicator, SEL/Reset Switch And INFO Switches

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Service Information

1. The remaining engine oil life (A) is shown as a percentage on the multi-information display. To see the current engine oil life, turn the ignition switch to the ON (II) position, then push and release the Sel/Reset switch repeatedly until the engine oil life displays.



Fig. 4: Multi-Information Display - Engine Oil Life
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. When the ignition switch is in the ON (II) position, and the remaining engine oil life is 6 % to 15 %, the remaining engine oil life and other scheduled maintenance item(s) needing service are displayed. The maintenance system message "SERVICE DUE SOON" (A) also come on. To cancel the message,

press the Info switch. The display continues to show the remaining engine oil life (B) and the message indicator (C) until it is reset.

- Complete list of maintenance main items (D) (see **MAINTENANCE MAIN ITEMS**).
- Complete list of maintenance sub items (E) (see **MAINTENANCE SUB ITEMS**).

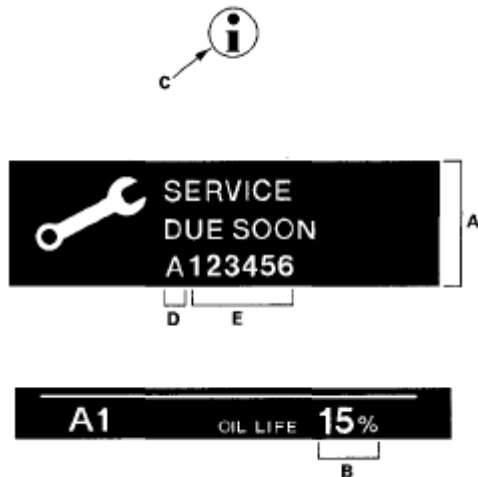


Fig. 5: Multi-Information Display - SERVICE DUE SOON
Courtesy of AMERICAN HONDA MOTOR CO., INC.

- When the ignition switch is in the ON (II) position, and the remaining engine oil life is 1 % to 5 %, the maintenance system message "SERVICE DUE NOW" is displayed along with the same maintenance item code(s). If the maintenance system message display is canceled, a "SERVICE" message appears.

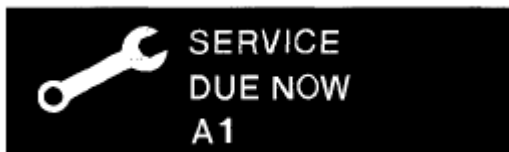


Fig. 6: Multi-Information Display - SERVICE DUE NOW
Courtesy of AMERICAN HONDA MOTOR CO., INC.

- When the ignition switch is in the ON (II) position, and the remaining engine oil life is 0 %, the maintenance system message "SERVICE PAST DUE" is displayed along with the same maintenance item code(s).



Fig. 7: Multi-Information Display - SERVICE PAST DUE
Courtesy of AMERICAN HONDA MOTOR CO., INC.

- If the indicated maintenance is not done, the "SERVICE PAST DUE" message shows a negative mileage, for example "-10," on the display. If the negative mileage is between 0 and -9, the message is

displayed for only a few seconds when the ignition switch is turned to the ON (II) position. The negative mileage (A) remains displayed after the vehicle is driven more than 10 miles (for USA models) or 10 km (for Canada models) after 0 % oil life is reached, and the display cannot be cancelled. This means the indicated maintenance item(s) should have been done more than 10 miles (or 10 km) ago.



Fig. 8: Multi-Information Display - SERVICE PAST DUE
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Resetting the Maintenance-Information Display

NOTE:

- The vehicle must be stopped to reset the display.
- If a required service is done and the display is not reset, or if the maintenance display is reset without doing the service, the system will not show the proper maintenance timing. This can lead to serious mechanical problems because; there will be no accurate record of when the required maintenance is needed.
- The engine oil life and the maintenance items can be reset independently only with the HDS.

1. Turn the ignition switch to ON (II) position.
2. If system message(s) are displayed, press the Info switch to cancel the display.
3. Push and release the Sel/Reset switch repeatedly until the engine oil life indicator is displayed.
4. Press and hold the Sel/Reset switch for about 10 seconds, the "OIL LIFE RESET" mode display appears.

NOTE:

- If you are resetting the display when the engine oil life is more than 15 %, make sure any maintenance item(s) requiring service are done before resetting the display.
- To cancel the "OIL LIFE RESET" mode, press the Info switch repeatedly until the "CANCEL" indicator displayed, then press the Sel/Reset switch.



Fig. 9: Multi-Information Display - OIL LIFE RESET
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Press Info switch repeatedly until the "RESET" indicator is displayed, then press the Sel/Reset switch.

The maintenance item code(s) will disappear, and the engine oil life will reset to "100."



Fig. 10: Multi-Information Display - Engine Oil Life
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

MAINTENANCE MAIN ITEMS

If the message "SERVICE DUE NOW" does not appear more than 12 months after the display is reset, change the engine oil every year.

NOTE:

- Independent of the maintenance messages in the multi-information display, replace the brake fluid every 3 years.
- Inspect idle speed every 160,000 miles (256,000 km).
- Adjust the valves during services A, B, 1,2 or 3 only if they are noisy.

MAINTENANCE MAIN ITEMS REFERENCE

Symbol	Maintenance Main Items
A	Replace engine oil (see ENGINE OIL REPLACEMENT). Engine oil capacity without oil filter: 4.0 L (4.2 US qt).
B	Replace engine oil and oil filter (see ENGINE OIL FILTER REPLACEMENT). Engine oil capacity with oil filter: 4.3 L (4.5 US qt).
	Check front and rear brakes (see COMPONENT LOCATION INDEX). <ul style="list-style-type: none"> • Check pads and discs for wear (thickness), damage, and cracks. • Check calipers for damage, leaks, and tightness of mounting bolts.
	Check parking brake adjustment (see PARKING BRAKE INSPECTION AND ADJUSTMENT). Number of clicks (5 to 6) when the parking brake pedal is pressed with 294 N (30 kgf, 66 lbf) of force.
	Inspect tie-rod ends, steering gearbox, and gearbox boots (see STEERING LINKAGE AND GEARBOX INSPECTION). <ul style="list-style-type: none"> • Check rack grease and steering linkage. • Check boots for damage and leaking grease. • Check fluid lines for damage or leaks.
	Inspect suspension components (see COMPONENT LOCATION INDEX). <ul style="list-style-type: none"> • Check bolts for tightness. • Check condition of ball joint boots for deterioration and damage.
	Inspect driveshaft boots (see DRIVESHAFT INSPECTION). Check boots for cracks and boot bands for tightness.
	Inspect brake hoses and lines including VSA lines (see BRAKE HOSE AND LINE INSPECTION). Check the master cylinder and VSA modulator-control unit for damage and leakage.
	Inspect all fluid levels and condition of fluids.

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- Engine coolant (see **COOLANT CHECK**)
- Automatic transmission fluid (ATF-Z1) (see **ATF LEVEL CHECK**)
- Rear differential fluid (see **REAR DIFFERENTIAL FLUID INSPECTION AND REPLACEMENT**)
- Power steering fluid (see **FLUID CHECK/REPLACEMENT**)
- Brake fluid (see **BRAKE SYSTEM BLEEDING**)
- Windshield washer fluid

Inspect exhaust system (see **EXHAUST PIPE AND MUFFLER REPLACEMENT**)*. Check catalytic converter heat shields, exhaust pipes, and muffler for damage, leaks, and tightness.

Inspect fuel lines (see **FUEL LINE INSPECTION**)*, and connections (see **FUEL LINE/QUICK-CONNECT FITTING PRECAUTIONS**)*. Check for loose connections, cracks, and deterioration; retighten loose connections and replace damaged parts.

NOTE: According to state and federal regulations, failure to do the maintenance items marked with an asterisk (*) will not void the client's emissions warranties. However, Acura recommends that all maintenance services be done at the recommended interval, to ensure long-term reliability.

MAINTENANCE SUB ITEMS

MAINTENANCE SUB ITEMS REFERENCE

Number	Maintenance Sub Items
1	Rotate tires, and check tire inflation and condition. Follow the pattern shown in the Owner's Manual.
2	Replace air cleaner element (see AIR CLEANER ELEMENT INSPECTION/REPLACEMENT). If the vehicle is regularly driven in dusty conditions, replace every 15,000 miles (24,000 km).
	Replace dust and pollen filter (see DUST AND POLLEN FILTER REPLACEMENT). <ul style="list-style-type: none">• If the vehicle is driven in urban areas that have high concentrations of dust, pollen, or soot in the air, replace every 15,000 miles (24,000 km).• Replace the filter whenever airflow from the heating and air conditioning system is less than normal.
	Inspect drive belt (see DRIVE BELT INSPECTION). Look for cracks and damage, and inspect auto tensioner; no adjustment is needed.
3	Replace automatic transmission fluid (see ATF REPLACEMENT) and transfer fluid (see TRANSFER ASSEMBLY FLUID REPLACEMENT). <ul style="list-style-type: none">• Driving in mountainous areas at very low vehicle speeds or trailer towing results in higher transmission and transfer temperatures. This requires transmission and transfer fluid changes more frequently than recommended by the maintenance minder. If the vehicle is regularly driven in these conditions, replace the transmission and transfer fluid at 60,000 miles (96,000 km), then every 30,000 miles (48,000 km).• Automatic transmission fluid capacity: 2.7 L (2.9 US qt), use Acura Automatic

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	Transmission Fluid (ATF-Z1). <ul style="list-style-type: none">• Transfer fluid capacity: 0.43 L (0.45 US qt), use hypoid gear oil GL4 or GL5.
4	<p>Replace spark plugs (see <u>SPARK PLUG INSPECTION</u>). Use IZFR6K11 (NGK) or SKJ20DR-M11 (DENSO).</p> <p>Replace timing belt (see <u>TIMING BELT REMOVAL</u>). If the vehicle is regularly driven in very high temperatures (over 110°F, 43°C, or in very low temperatures (under -20°F, -29°C), replace every 60,000 miles (USA)/ 100,000 km (Canada) and inspect water pump (see <u>WATER PUMP INSPECTION</u>).</p> <p>Inspect the valve clearance (cold) (see <u>VALVE CLEARANCE ADJUSTMENT</u>).</p> <ul style="list-style-type: none">• Otherwise adjust only if noisy.• Intake: 0.20-0.24 mm (0.008-0.009 in.), Exhaust: 0.28-0.32 mm (0.011-0.013 in.)
5	<p>Replace engine coolant (see <u>COOLANT REPLACEMENT</u>). Capacity (including the reservoir): 6.0 L (1.59 US gal), use Acura Long Life Antifreeze/Coolant Type 2.</p>
6	<p>Replace rear differential fluid (see <u>REAR DIFFERENTIAL FLUID INSPECTION AND REPLACEMENT</u>).</p> <ul style="list-style-type: none">• Driving in mountainous areas at very low vehicle speeds or trailer towing results; in higher level of mechanical (shear) stress to fluid. This requires differential fluid changes more frequently than recommended by the maintenance minder. If the vehicle is regularly driven in these conditions, have the differential fluid changed at 7,500 miles (12,000 km), then every 15,000 miles (24,000 km).• Capacity: Clutch chambers 2.7 L (2.9 US qt), Hypoid gear chamber 0.73 L (0.77 U 3 qt), use Acura Automatic Transmission Fluid (ATF-Z1).

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If engine electrical maintenance is required)

The Acura RL SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Acura dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Acura dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags and/or side airbags.
- Do not bump or impact the SRS unit, front impact sensors, or side impact sensors when the ignition switch is ON (II), or for at least 3 minutes after the ignition switch is turned OFF; otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.