# **Maintenance Safety**

All service items not detailed in this section should be performed by an Acura technician or other qualified mechanic.

**Important Safety Precautions** To eliminate potential hazards, read the instructions before you begin, and make sure you have the tools and skills required.

- Make sure your vehicle is parked on level ground, the parking brake is set, and the engine is off.
- To clean parts, use a commercially available degreaser or parts cleaner, not gasoline.
- To reduce the possibility of fire or explosion, keep cigarettes, sparks, and flames away from the battery and all fuel-related parts.

 Wear eye protection and protective clothing when working with the battery or compressed air.

## **AWARNING**

Improperly maintaining this vehicle or failing to correct a problem before driving can cause a crash in which you can be seriously hurt or killed.

Always follow the inspection and maintenance recommendations in this owner's manual.

### **Potential Vehicle Hazards**

- Carbon Monoxide poison from engine exhaust. Be sure there is adequate ventilation whenever you operate the engine.
- Burns from hot parts. Let the engine and exhaust system cool before touching any parts.

• Injury from moving parts. Do not run the engine unless instructed to do so

### **AWARNING**

Failure to properly follow maintenance instructions and precautions can cause you to be seriously hurt or killed.

Always follow the procedures and precautions in this owner's manual.

Some of the most important safety precautions are given here. However, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you should perform a given task.

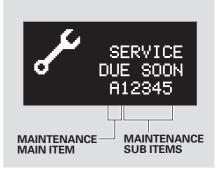
One of the most convenient and important features of the Multi-Information Display on your Acura is the Maintenance Minder.

Based on engine operating conditions and accumulated engine revolutions, the onboard computer in your Acura calculates the remaining engine oil life.

The system also displays the code for other scheduled maintenance items needing service.



The remaining engine oil life is displayed on the Multi-Information Display as a percentage when you turn the ignition switch to ON (II).



When the remaining engine oil life is 15 percent, you will see the message "SERVICE DUE SOON" along with all maintenance items that are needed at oil change time. Refer to page 199 for a complete list of the maintenance main items and sub items.

**CONTINUED** 



When the remaining oil life is less than 5 percent, you will see the message "SERVICE DUE NOW," with the same maintenance items vou saw when "SERVICE DUE SOON" was displayed. When you see this message, have the indicated maintenance performed as soon as possible.

Your Acura dealer will reset the display after completing the required maintenance service. You will see "OIL LIFE 100%" on the display the next time you turn the ignition switch to ON (II).

If maintenance service is done by someone other than your Acura dealer, reset the display as follows:

- 1. Turn the ignition switch to ON (II).
- 2. Press the  $\langle \text{ or } \rangle$  button repeatedly until the oil life is displayed.
- 3. Press and hold the Select/Reset button for 10 seconds. The Multi-Information Display will ask for a confirmation.
  - If you are sure you want to reset the display, press the Select/ Reset button to select "OK."
  - If you do not want to reset the display, press the < or >button to select "Cancel"

If you have the required service performed but do not reset the display, or reset the display without performing the service, the system will not show the proper maintenance intervals. This can lead to serious mechanical problems because you will no longer have an accurate record of when maintenance is needed.



If the indicated maintenance service is not done and the remaining engine oil life gets less than 0 percent, you will see the message, "SERVICE PAST DUE" on the display. Immediately have the service performed, and make sure to reset the display as previously described.

Your authorized Acura dealer knows your vehicle best and can provide competent, efficient service.
However, service at a dealer is not mandatory to keep your warranties in effect. Maintenance may be done by any qualified service facility or person who is skilled in this type of automotive service. Keep all receipts as proof of completion, and have the person who does the work fill out the Maintenance Record. Check your warranty booklet for more information.

We recommend the use of Acura parts and fluids whenever you have maintenance done. These are manufactured to the same high-quality standards as the original components, so you can be confident of their performance and durability.

**CONTINUED** 

#### U.S. Vehicles:

Maintenance, replacement, or repair of emissions control devices and systems may be done by any automotive repair establishment or individual using parts that are "certified" to EPA standards.

According to state and federal regulations, failure to perform maintenance on the items marked with # will not void your emissions warranties. However, Acura recommends that all maintenance services be performed in accordance with the intervals indicated by the Multi-Information Display.

Owner's Maintenance Checks You should check the following items at the specified intervals. If you are unsure of how to perform any check, turn to the appropriate page listed.

- Engine oil level Check every time you fill the fuel tank. See page 167.
- Engine coolant level Check the radiator reserve tank every time you fill the fuel tank. See page 167.
- Automatic transmission Check the fluid level monthly. See page 209.
- Brakes Check the fluid level monthly. See page 211.
- Tires Check the tire pressure monthly. Examine the tread for wear and foreign objects. See page 222.

• Lights — Check the operation of the headlights, parking lights, taillights, high-mount brake light, and license plate lights monthly. See page 213.

Symbol	Maintenance Main Items
Α	Replace engine oil*1
В	Replace engine oil and oil filter
	Rotate tires
	Inspect front and rear brakes
	Check parking brake adjustment
	Inspect these items:
	<ul> <li>Tie rod ends, steering gear box, and boots</li> </ul>
	Suspension components
	Driveshaft boots
	Brake hoses and line (including ABS)
	All fluid levels and condition of fluids
	<ul> <li>Exhaust system<sup>#</sup></li> </ul>
	Fuel lines and connections#

- \*1: If the message, "SERVICE DUE NOW" does not appear more than 12 months after the display is reset, change the engine oil every year.
- #: See information on maintenance and emissions warranty in the first column on page 198.
- 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 if they are noisy.

Symbol	Maintenance Sub Items
1	Rotate tires
2	Replace air cleaner element If you drive primarily in dusty conditions, replace every 15,000 miles (24,000 km). Replace dust and pollen filter If you drive primarily in urban areas that have high concentrations of soot in the air from industry and from diesel-powered vehicles, replace every 15,000 miles (24,000 km). Inspect drive belt
3	<ul> <li>Replace transmission fluid         Driving in mountainous areas at very low vehicle speeds results in higher transmission temperatures.         This requires transmission fluid changes more frequently than recommended by the Maintenance Minder. If you regularly drive your vehicle under these conditions, have the transmission fluid changed at 60,000 miles (100,000 km), then every 30,000 miles (48,000 km).     </li> </ul>
4	<ul> <li>Replace spark plugs</li> <li>Replace timing belt and inspect water pump         If you drive regularly in very high temperatures (over         110°F, 43°C), or in very low temperatures (under-20°F,         -29°C), replace every 60,000 miles<sup>#</sup> (U.S.)/100,000 km         (Canada)</li> <li>Inspect valve clearance</li> </ul>
5	Replace engine coolant

## **Maintenance Record**

You or the servicing dealer can record all completed maintenance here. When maintenance is performed, record the mileage, circle the coded item(s) completed, and write in any other non-coded items (such as brake fluid replacement) below the codes. Keep the receipts for all work done on your vehicle.

Mileage		ainte rforr				Signature Date		
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	

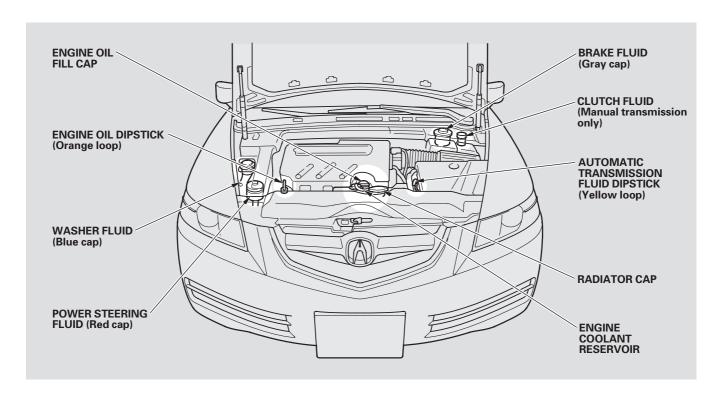
Mileage		inte forr		ce				Signature Date
<b>mi</b> km	Α	В	1	2	3	4	5	
<b>mi</b> km	Α	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	

## **Maintenance Record**

Mileage		inte rforr		ce				Signature Date
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	Α	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	
<b>mi</b> km	А	В	1	2	3	4	5	

Mileage		inte forr		се				Signature
	rei	1011	neu					Date
<b>mi</b> km	Α	В	1	2	3	4	5	
<b>mi</b> km	Α	В	1	2	3	4	5	
<b>mi</b> km	Α	В	1	2	3	4	5	
<b>mi</b> km	Α	В	1	2	3	4	5	
<b>mi</b> km	Α	В	1	2	3	4	5	
<b>mi</b> km	Α	В	1	2	3	4	5	
<b>mi</b> km	Α	В	1	2	3	4	5	

## **Fluid Locations**



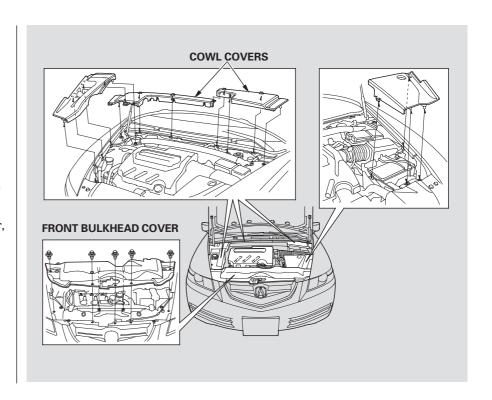
The component parts in the engine compartment are protected by several covers. You may need to remove the covers when you perform some simple maintenance work.

Most of the covers can be removed simply by pulling them straight up.

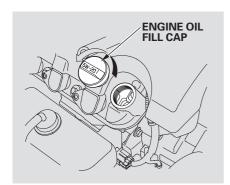
To remove the left or right cowl cover, push the tabs inward and pull the cover straight up.

To remove the front bulkhead cover. first remove the four holding clips using a flat-tipped screwdriver.

When reinstalling the covers, make sure the pins and tabs are in their proper positions.



# **Adding Engine Oil**



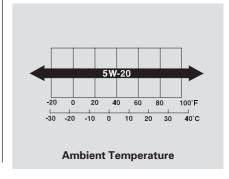
Unscrew and remove the engine oil fill cap on top of the valve cover. Pour in the oil slowly and carefully so you do not spill. Clean up any spills immediately. Spilled oil could damage components in the engine compartment. Install the engine oil fill cap, and tighten it securely. Wait a few minutes, and recheck the oil level (see page 167). Do not fill above the upper mark on the dipstick; you could damage the engine.

Recommended Engine Oil
Oil is a major contributor to your
engine's performance and longevity.
Always use a premium-grade 5W-20
detergent oil displaying the API
Certification Seal. This seal indicates
the oil is energy conserving, and that
it meets the American Petroleum
Institute's latest requirements.



Honda Motor Oil is the preferred 5W-20 lubricant for your vehicle. It is highly recommended that you use Honda Motor Oil in your vehicle for optimum engine protection. Make sure the API Certification Seal says "For Gasoline Engines".

The oil viscosity or weight is provided on the container's label. 5W-20 oil is formulated for year-round protection of your Acura to improve cold weather starting and fuel economy.



## Adding Engine Oil, Changing the Oil and Filter

#### Synthetic Oil

You may use a synthetic motor oil if it meets the same requirements given for a conventional motor oil: it displays the API Certification Seal and it is the proper weight. You must follow the oil and filter change intervals shown on the Multi-Information Display.

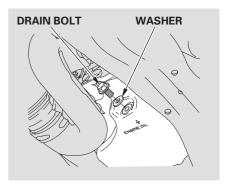
### **Engine Oil Additives**

Your Acura does not require any oil additives. Additives may adversely affect your engine's or transmission's performance and durability.

Changing the Oil and Filter Always change the oil and filter according to the maintenance messages shown on the Multi-

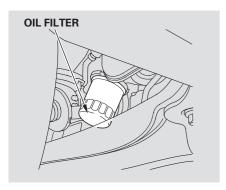
Information Display. The oil and filter collect contaminants that can damage your engine if they are not removed regularly.

Changing the oil and filter requires special tools and access from underneath the vehicle. The vehicle should be raised on a service stationtype hydraulic lift for this service. Unless you have the knowledge and proper equipment, you should have this maintenance done by a skilled mechanic.



- 1. Run the engine until it reaches normal operating temperature, then shut it off
- 2. Open the hood, and remove the engine oil fill cap. Remove the oil drain bolt and washer from the bottom of the engine. Drain the oil into an appropriate container.

## **Changing the Oil and Filter**



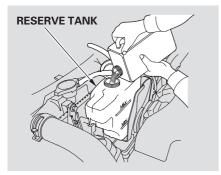
- Remove the oil filter, and let the remaining oil drain. A special wrench (available from your Acura dealer) is required.
- 4. Install a new oil filter according to the instructions that come with it

- 5. Put a new washer on the drain bolt, then reinstall the drain bolt.Tighten it to:
  - 29 lbf·ft (39 N·m , 4.0 kgf·m)
- 6. Refill the engine with the recommended oil.Engine oil change capacity (including filter):
  - 4.5 US qt (4.3 l)

- 7. Replace the engine oil fill cap. Start the engine. The oil pressure indicator should go out within 5 seconds. If it does not, turn off the engine and check your work.
- 8. Let the engine run for several minutes, then check the drain bolt and oil filter for leaks.
- 9. Turn off the engine, let it sit for several minutes, then check the oil level on the dipstick. If necessary, add more oil.

**NOTICE:** Improper disposal of engine oil can be harmful to the environment. If you change your own oil, please dispose of the used oil properly. Put it in a sealed container, and take it to a recycling center. Do not discard used oil in a trash bin or dump it on the ground.

#### **Adding Engine Coolant**



If the coolant level in the reserve tank is at or below the MIN line, add coolant to bring it up to the MAX line. Inspect the cooling system for leaks. Always use Honda All Season Antifreeze/Coolant Type 2. This coolant is pre-mixed with 50 percent antifreeze and 50 percent water. Never add straight antifreeze or plain water.

If Honda antifreeze/coolant is not available, you may use another major-brand non-silicate coolant as a temporary replacement. Make sure it is a high-quality coolant recommended for aluminum engines. Continued use of any non-Honda coolant can result in corrosion. causing the cooling system to malfunction or fail. Have the cooling system flushed and refilled with Honda antifreeze/coolant as soon as possible.

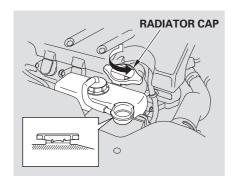
If the reserve tank is completely empty, you should also check the coolant level in the radiator

## **AWARNING**

Removing the radiator cap while the engine is hot can cause the coolant to spray out, seriously scalding you.

Always let the engine and radiator cool down before removing the radiator cap.

# **Engine Coolant, Windshield Washers**



- When the radiator and engine are cool, relieve any pressure in the cooling system by turning the radiator cap counterclockwise, without pressing down.
- Remove the radiator cap by pushing down and turning counterclockwise.

- The coolant level should be up to the base of the filler neck. Add coolant if it is low.
   Pour the coolant slowly and carefully so you do not spill. Clean up any spill immediately; it could damage components in the engine compartment.
- 4. Put the radiator cap back on and tighten it.
- 5. Pour coolant into the reserve tank. Fill it to halfway between the MAX and MIN marks. Put the cap back on the reserve tank.

Do not add any rust inhibitors or other additives to your vehicle's cooling system. They may not be compatible with the coolant or engine components.

#### Windshield Washers

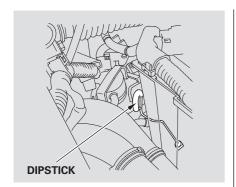
Check the fluid level in the windshield washer reservoir at least monthly during normal use.

On Canadian models: If the fluid level is low, a message will be shown on the Multi-Information Display.

Fill the reservoir with a good-quality windshield washer fluid. This increases the cleaning capability and prevents freezing in cold weather. When you refill the reservoir, clean the edges of the windshield wiper blades with windshield washer fluid on a clean cloth. This will help to condition them.

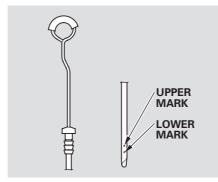
NOTICE: Do not use engine antifreeze or a vinegar/water solution in the windshield washer reservoir. Antifreeze can damage your vehicle's paint, while a vinegar/water solution can damage the windshield washer pump. Use only commercially-available windshield washer fluid.

### **Automatic Transmission Fluid**



Check the fluid level with the engine at normal operating temperature.

- 1. Park the vehicle on level ground. Shut off the engine.
- 2. Within 60 to 90 seconds, remove the dipstick (yellow loop) from the transmission, and wipe it with a clean cloth
- 3. Insert the dipstick all the way into the transmission securely.



- 4. Remove the dipstick, and check the fluid level. It should be between the upper and lower marks.
- 5. If the level is below the lower mark, add fluid into the filler hole to bring it to the upper mark.

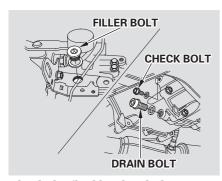
Always use Honda ATF-Z1 (Automatic Transmission Fluid). If it's not available, you may use a DEXRON® III automatic transmission fluid as a temporary replacement. However, continued use can affect the shift quality. Have the transmission flushed and refilled with Honda ATF-Z1 as soon as it is convenient. To thoroughly flush the transmission, the technician should drain and refill it with Honda ATF-Z1, then drive the vehicle for a short distance. Do this three times. Then drain and refill the transmission a final time.

6. Insert the dipstick all the way back in the transmission

The transmission should be drained and refilled with new fluid when this service is shown on a maintenance message in the Multi-Information Display.

## **Manual Transmission Fluid**

#### **Manual Transmission Fluid**



Check the fluid level with the transmission at normal operating temperature and the vehicle sitting on level ground. Remove the check bolt, and look for transmission fluid coming out of the bolt hole. If a small amount of fluid drips out of the bolt hole, reinstall the check bolt.

If no fluid comes out, remove the filler bolt. Slowly add Honda Manual Transmission Fluid (MTF) until it starts to run out of the check bolt hole. Let the fluid run out until it stops, then reinstall the check bolt and the filler bolt.

If Honda MTF is not available, you may use an SAE 10W-30 or 10W-40 viscosity motor oil with the API Certification seal that says "FOR GASOLINE ENGINES" as a temporary replacement. However, motor oil does not contain the proper additives, and continued use can cause stiffer shifting. Replace as soon as it is convenient.

The transmission should be drained and refilled with new fluid when this service is shown on a maintenance message in the Multi-Information Display.