

## Outside Temperature Indicator Logic: '03 Pilot EX

If you're getting complaints from owners of '03 Pilot EXs that the outside temperature indicator doesn't read accurately, you may just need to explain how the logic works.

The temperature sensor for the indicator is mounted behind the front bumper. Because of this, the temperature reading can be affected by heat reflection from the road, engine heat, and even exhaust from surrounding traffic. To prevent bogus readings, the display uses a specific logic. Here's how it works.

CONDITIONS	LOGIC
The outside air is warmer than when the ignition switch was turned off [ACC (1) or LOCK (0)]	<ul style="list-style-type: none"> <li>If the ignition was turned off for less than <b>2 hours</b>, the displayed temperature when you turn the ignition switch to ON (II) stays at the ignition-off temperature until the vehicle has gone faster than <b>18 mph for 30 seconds</b>, then the display immediately updates to the measured outside air temperature.</li> <li>If the ignition switch was turned off for <b>2 hours</b> or more, the displayed temperature when you turn the ignition switch to ON (II) rises <b>1 degree every minute</b> until the measured outside air temperature is reached.</li> </ul>
The outside air is cooler than when the ignition switch was turned off [ACC (1) or LOCK (0)]	<ul style="list-style-type: none"> <li>If the ignition switch was turned off for less than <b>2 hours</b>, the displayed temperature when you turn the ignition to ON (II) is the ignition-off temperature. The displayed temperature then drops <b>1 degree every 2 seconds</b> until the reading matches the outside air temperature.</li> <li>If the ignition switch was turned off for <b>2 hours</b> or more, the displayed temperature is the measured outside air temperature.</li> </ul>

You can also force the indicator to display the measured temperature. Just turn the ignition switch to LOCK (0), remove the No. 13 (7.5A) Starter Signal fuse from the driver's under-dash fuse/relay box for **60 seconds**, then reinstall it. Turn the ignition switch to ON (II), and you're looking at the measured temperature. But don't forget, when you pull the No. 13 fuse, you must do the idle learn procedure and initialize the driver's window auto up/down feature.

## Thump From Sloshing Fuel Is OK

On '99-03 Odysseys and '03 Pilots, if your customer complains of a thumping from the passenger compartment when accelerating or braking, the culprit is probably sloshing fuel. When the fuel level is between 1/2 and 3/4 full, fuel sloshing in the long, narrow fuel tank can make a definite thump sound. This sound can't be stopped; it's just a normal characteristic of the vehicle.

## Rattling at 3,000 to 5,000 rpm: '00-01 S2000

On '00-01 S2000s, a heat shield-like rattle heard when accelerating through **5,000 rpm** or when decelerating from **4,000 to 3,000 rpm**, can be fixed by replacing the clutch disc. See S/B 00-054, *Buzzing From the Engine or Transmission While Decelerating*, found under Transmission/Driveline, for additional info. No need to worry about '02 S2000s; they come with the countermeasured clutch disc.

## Trailer Hitch Wiring: '02 CR-V

If you're installing a trailer hitch kit (P/N 08L92-S9A-100, H/C 6861041) on a '02 CR-V, did you know you can install either of *two* different kits?

The preferred trailer harness kit is P/N 08L92-S0X-100R1, H/C 6148639. Look up AII 23091-23255 in ISIS to install it.

There's also an alternate (long) trailer harness kit available, P/N 08L91-S9A-100, H/C 6861231. But it's more expensive, it's harder to install, and you need to look up another accessory installation instruction in ISIS to do it: AII 23981.

## Wind Noise From Hood Air Deflector: '03 Pilot

On '03 Pilots, the accessory hood air deflector (P/N 08P47-S9V-100, H/C 7115991) can stir up some noticeable wind noise when driving between **18 and 60 mph**. Until a countermeasure is developed, don't install this accessory yet.

## Growling When Accelerating at 2000 rpm: '00–03 S2000

If an owner of a '00–03 S2000 complains of a growling noise when accelerating at low engine speed (below **2000 rpm**), there's nothing wrong with the vehicle. It's a characteristic of the 6-speed M/T, and it isn't something you can just fix by replacing parts.

## Idle Learn Procedure: When and How to Do It

All Honda models with programmed fuel injection (PGM-FI) have the ability to learn and adjust the engine idle speed to optimize engine idle characteristics.

The idle learn procedure should be done whenever you do any of these actions:

- Reset, replace, unplug, or reprogram the ECM/PCM
- Disconnect or replace the battery
- Do engine work that requires R&R of the intake manifold or the throttle body

To allow the ECM/PCM adaptive idle speed system to learn and adjust the engine idle speed, here's what you do:

- Make sure all electrical items (A/C, audio unit, defogger, lights, etc.) are turned off, then start the engine.
- Let the engine reach its normal operating temperature (the cooling fans cycle twice; the coolant temperature is about **194° F**).
- Let the engine idle for at least **5 minutes** with the throttle fully closed and with all electrical items turned off.
- If the cooling fans cycle on while doing an adaptive idle learn, add the time the cooling fans are on to the 5 minute adaptive idle learn time.

## 2003 Accord Prelim ETM Lacks Connector Locations

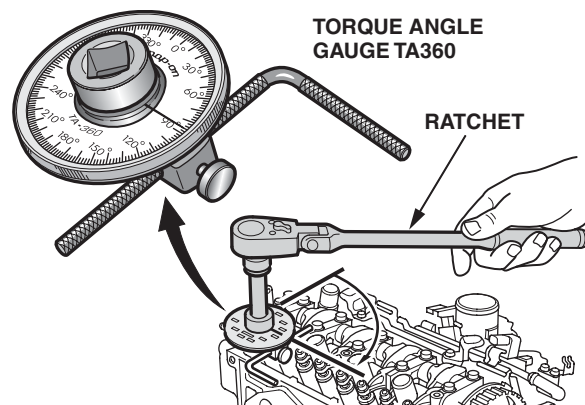
The 2003 Accord Preliminary ETM is now available in print and on ISIS. Here's an important thing to remember: This ETM doesn't include any graphics of the connectors or their locations. If you need this stuff, you'll find it on the pages titled "Connectors and Harnesses" in section 22 of the 2003 Accord S/M. The connector locations will be included, of course, in the final ETM.

## Tightening Bolts Using Torque and Angle

Most current mounting bolts for connecting rods, main journals, and cylinder heads use torque and angle to get the proper clamping force. Torque and angle bolts can be tightened more accurately. Accurate tightening reduces distortion that causes connecting rods, main journals, and cylinder heads to be "out of round."

When you're tightening torque and angle bolts to their initial torque spec, use the torque wrench that's in its most accurate range. For example, if the initial torque spec is **20 N·m (14 lb-ft)**, use a torque wrench with a maximum capacity of **40 N·m (28 lb-ft)**. This puts the desired torque at about **50 percent** of the wrench's total capacity or within the most accurate range of the tool. If you use a high-capacity torque wrench for low-torque fasteners, you'll get inaccurate torque results.

To get the proper torque angle, use Snap-on's Torque Angle Gauge TA360 or equivalent along with a ratchet.



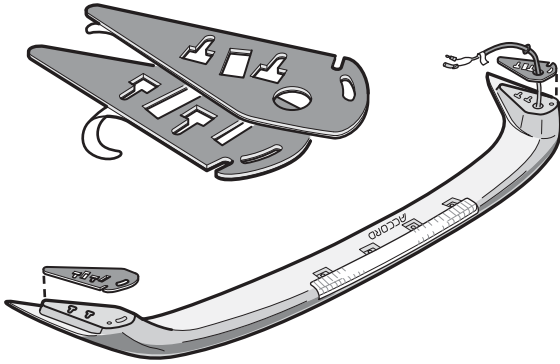
## Can a Small Oil Filter Be Replaced by a Large One?

For all Honda models, the answer is YES. The 65 mm diameter oil filter is directly interchangeable with the 80 mm diameter filter. Both filters use the same filtration media to do the job, and filter out at least **70 percent** of the particles that are **30 microns** or larger, and **85 percent** of the particles that are **40 microns** or larger.

- **Large filter:** P/N 15400-PLC-004, H/C 6475834 or P/N 15400-PLM-A01, H/C 6446231
- **Small filter:** P/N 15400-PT7-005, H/C 3630399 or P/N 15400-P0H-305, H/C 4908182

## Pad Kit Available for '98–02 Accord Trunk Spoiler

Did you know that if the black spoiler pads are poking out of the base of the trunk spoiler on a '98–02 Accord 4-door, you can replace just the pads without having to replace the entire spoiler? Honda parts stock has a base packing kit that contains two adhesive-backed black spoiler pads. Order P/N 08F13-S84-100R, H/C 5810999.



## Initializing the IMA Battery Level Gauge: '00–02 Insight

2000–02 Insights come from the factory with the IMA battery about half charged and the No. 18 (7.5A) IMA ECU fuse removed from the under-hood fuse/relay box for shipping. With the No. 18 fuse removed, the battery level gauge indicates a discharged battery.

During PDI, after you've reinstalled the No. 18 fuse, you need to initialize the battery level gauge. Here's how:

1. Remove the No. 15 (40A) EPS fuse from the under-hood fuse/relay box.
2. Start the engine, and hold the engine speed at **3,500 rpm** until the battery level gauge reaches at least the halfway mark.
3. Turn off the engine, and reinstall the No. 15 fuse.

## Remove Driver's Dashboard Lower Cover Carefully

If you need to remove the driver's dashboard lower cover on a '03 Accord, be extremely careful doing it. The plastic material it's made from is rather thin and breaks easily even when you use trim removal tools. Refer to page 20-110 of the 2003 Accord S/M for details.

## Remote Transmitters Aren't Interchangeable

On '99–03 Odyssey EXs, if a new keyless remote transmitter can't be programmed or it doesn't work after it's programmed, chances are you're using the wrong transmitter for that model. The transmitters for the '99–00 EX and the '01–02 EX aren't interchangeable. To tell which transmitter is which, look at the FCC ID code that's on the back of the transmitter. Here's a handy chart to help you:

FCC ID	M/Y	P/N	H/C
E4EG8DN	'99-00	72147-S0X-A01	5932702
0UCG8D-440H-A	'01-03	72147-S0X-A02	6554174

## Tighten Ground G201 to Avoid Electrical Problems

On '99–02 Odysseys, if ground G201 is cross-threaded or loose, you may notice some or all of these symptoms:

- DTC P1298 (ELD circuit high voltage) sets.
- The ABS indicator comes on.
- The TCS indicator comes on.
- The windshield wipers run with the rotary switch turned to OFF.
- The cruise control doesn't work.

Ground G201 is on the right side of the engine compartment, next to the windshield washer reservoir. If the mounting bolt is loose, clean the body and terminal surfaces, and tighten the bolt. If the bolt is cross-threaded, use a tap to straighten out the threads, clean the body and terminal surfaces, and tighten the bolt.

## Measuring Parasitic Current Draw

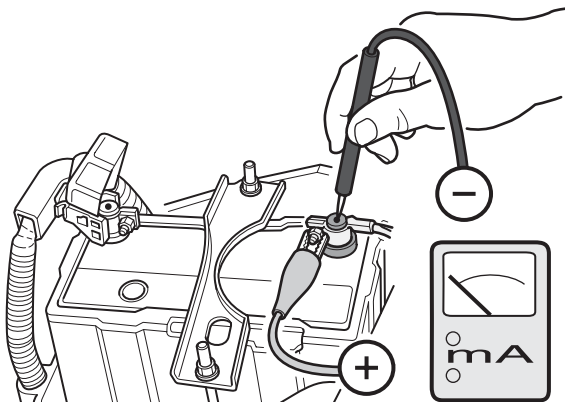
Parasitic current draw: Think of it as the price we pay for all of that high-tech car stuff we've grown so accustomed to. It's the low but constant draw of current on the battery caused by the memory registers in ECM/PCMs, radios, clocks, security systems, multiplex and most control systems.

Normally, this current draw is so small that you need to measure it in **milliamps (one thousandth of an amp)**. Newer models draw between **3 mA** and **13 mA**, but older models can draw as much as **50 mA**. And a current draw of more than **50 mA** can discharge the battery.

If you drive the vehicle daily, parasitic current draw really isn't an issue; the charging system does its job and juices up the battery. But it can become a problem if you let the vehicle sit for a long time, especially if the battery was partially discharged when you parked the vehicle, or the parasitic current draw was high. Left unchecked, the current draw on the battery can drain it to the point where the engine doesn't start.

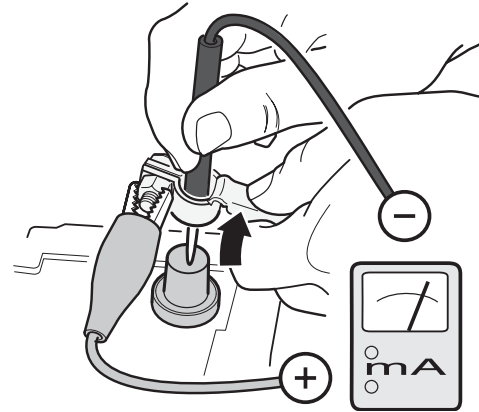
If you have a weak or drained battery after the vehicle's been sitting for a while, here's a simple procedure to measure the amount of parasitic current draw:

1. Make sure all switches are turned off, then remove the ignition key. Wait at least **5 minutes** for all current reduction timers to turn off (sleep mode).
2. Loosen (but don't remove) the negative battery cable.
3. Set your ammeter to the **10A** scale if it doesn't have an auto-range capability.
4. Use an alligator clip to connect your ammeter's positive lead to the negative battery terminal.



5. Hold the ammeter's negative lead firmly against the negative battery post.

6. Slide the negative battery terminal over your ammeter's negative lead, and read the current draw. If your ammeter's range is too high to accurately read milliamps, lower the range so you can.



To isolate the parasitic current draw to a single circuit, remove fuses in the circuit one at a time until the current draw drops. Refer to the appropriate ETM to identify the components on the circuit. Unplug components one at a time to find the cause of the high parasitic current draw.

For more info on alternators and parasitic current draw, refer to S/B 92-001, *Charging System Testing*, found under Electrical, and to the article "Parasitic Draw Test Clarifications" in the March '92 issue of *ServiceNews*.

## SRS Indicator On With DTCs 3-2 and 4-2: '98-00 CR-V

In '98-00 CR-Vs, high resistance in the seat belt tensioner circuit can cause the SRS indicator to come on and SRS DTC 3-2 (increased resistance in the driver's seat belt tensioner), SRS DTC 4-2 (increased resistance in the passenger's seat belt tensioner), or both to set. To fix this problem, clear the DTCs, and see if they come back. If one or both of the DTCs come back, do the troubleshooting in the Restraints section of the 1997-01 CR-V S/M. If none of the DTCs come back, replace the affected seat belt/tensioner assembly.

## Tailgate Doesn't Unlock With Remote: '97-01 CR-V

Have a 1997-01 CR-V owner complaining that the tailgate doesn't unlock with the remote transmitter? Before doing any diagnosis or repair, first make sure your customer has the right transmitter for the keyless entry system installed. The CR-V has two different remote transmitters for the accessory keyless entry system that aren't interchangeable with each other. The factory-installed system also has two different transmitters that aren't interchangeable. So, if you use the wrong transmitter (for example, the '97-98 transmitter on a '99-01 vehicle), the doors will lock and unlock, but the tailgate latch doesn't budge. Use these handy charts for reference:

### Accessory Remote Transmitter

M/Y	P/N	H/C	P/N on Remote Transmitter
'97-98	08E61-S10-100	5299292	08E61-S10-1M0-01
'99-01	08E61-S10-101	6132963	08E61-S10-1M1-01

### Factory Remote Transmitter

M/Y	P/N	H/C	P/N on Remote Transmitter
'98	72147-S10-A51	5771746	P/N SET: 30511-0KA, Tx: 72147-KA
'99-01	72147-S10-A52	6088074	P/N SET: 30511-KA, Tx: 72147-KA

On an interesting note, although you can't use the early transmitters with the later systems (and vice versa), you can replace the more costly factory transmitter with the less expensive accessory transmitter of the same vintage.

## Differential Gear Oil for S2000s

Here's an update to the article we posted in the October '01 issue of *ServiceNews* (see "GL6 Gear Oil *Not* Available for S2000 Differentials"). You can actually fill up the differential with any SAE 75-90 or 80-90 viscosity hypoid gear oil that's classified GL5 or GL6, not just SAE 90.

## ECM/PCM Removal and Replacement: '03 Accord

The ECM/PCM in '03 Accords has a self-shutdown feature that writes data to memory and does diagnostic functions for up to **18 hours** after you turn the ignition switch to LOCK (0). To keep from losing data or permanently damaging the ECM/PCM, do this procedure before you unplug the ECM/PCM:

1. With the ignition switch turned to ON (II), connect the PGM Tester to the 16P data link connector (DLC). Turn on the PGM Tester.
2. Select **CURRENT DATA** to establish communication between the PGM Tester and the ECM/PCM. You must have the PGM Tester connected and communicating with live ECM/PCM data on the screen before you turn the ignition switch to LOCK (0).
3. Turn the ignition switch to LOCK (0).
4. Exit to **MENU**. Select **SCS**, and follow the screen prompts to ground the 16P DLC. Don't press the **EXIT** key (you'll drop out of the SCS mode). Once the DLC is grounded, you can safely unplug the ECM/PCM.

Using this procedure to short the SCS stops the data writing process that would normally happen right after you turn the ignition switch to LOCK (0). If you short the SCS before you turn the ignition switch to LOCK (0), the ECM/PCM goes into one-trip mode, which doesn't stop the data writing process nor prevent ECM/PCM damage. If you disconnect the negative battery cable before you unplug the ECM/PCM, the ECM/PCM doesn't get damaged but it will lose the CKP pattern and idle learn data.

## New PGM Tester Software Accommodates '03 Accord

PGM Tester software version SN310P has some new functions to accommodate the '03 Accord.

**Clear:** A new clear command has been added that clears DTCs without clearing stored idle learn and CKP pattern learn data.

**CKP Pattern Learn Procedure:** If you unplug the ECM/PCM or disconnect the battery, you must do the idle learn procedure as well as the new CKP pattern learn procedure.

**OBD II Status:** A new OBD II status screen shows the readiness condition of a system. This is useful in verifying a repair for a particular DTC.

You'll also find these functions described in the 2003 Accord S/M.



## Q & A on Automatic Transmission Remanufacturing Program

**Question:** *When do I use the ATR Program?*

**Answer:** Anytime you repair an A/T under warranty (this includes goodwill and VSC), you must install a reman A/T and torque converter. This also applies to any time you need to disassemble the A/T to repair an internal failure. In fact, disassembling an A/T under warranty isn't allowed. Reman A/Ts are also available for non-warranty repairs. See PIB A96-0018, *Customer-Pay Automatic Transmission Remanufacturing (ATR) Program*.

**Question:** *How do I know if the A/T has an internal failure?*

**Answer:** Check ISIS for any applicable S/Bs or *ServiceNews* articles. If you can't fix the problem using ISIS, go to the troubleshooting procedures in the A/T section of the appropriate S/M. If the DTC (or troubleshooting) suggests a faulty solenoid, replace the solenoid. Don't order a reman A/T unless solenoid replacement takes more disassembly than just removing the oil pan. Drain the ATF through a paint strainer to capture any metallic and non-metallic particles. If the strainer collects an abnormal amount of particles, the A/T most likely has internal damage and must be replaced.

**Question:** *How do I order a reman A/T?*

**Answer:** For a warranty repair, call the ATR order desk at **888-997-7278**. When you call, make sure you have this info handy:

- Your dealer number
- The year, model, VIN, and mileage of the vehicle you're working on
- Transmission Number of the failed A/T
- Repair Order number, Warranty Claim number, or both
- Customer info (name, phone number, details of the complaint)
- Diagnostic info (road test observations, retrieved DTCs and freeze data)

**Question:** *Who do I call if I've got questions about the ATR Program?*

**Answer:** For paperwork- or administrative-related questions, call the ATR order desk at **888-997-7278**. For technical questions not answered in the appropriate S/M, S/Bs, or *ServiceNews* articles, call Tech Line at **800-824-6632**.

**Question:** *Do I need a Tech Line reference number to order a reman A/T?*

**Answer:** No.

**Question:** *What year and model A/Ts are available through the ATR Program?*

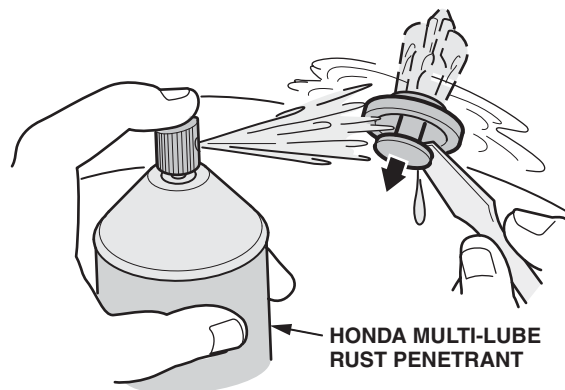
**Answer:** Most current models are available and all future models will be. For the latest application info, call the ATR order desk at **888-997-7278**.

## Aftermarket Devices Can Cause A/T DTC P1705

If an aftermarket security system, starter cutoff device, or remote starter is plugged into the starter cut relay circuit on an A/T-equipped '96-02 Accord or '98-03 Civic, or a '98-03 Odyssey or '03 Pilot, the PCM could "think" the A/T is in two gears at the same time and set A/T DTC P1705 [transmission range switch (short to ground)]. Before you troubleshoot for this DTC, make sure you've unplugged all aftermarket devices from the starter cut relay circuit.

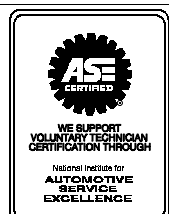
## Body Clip Removal Tip

On '98-02 Accords, '96-02 Civics, '99-03 Odysseys, and '03 Pilots, plastic body clips covered with dirt or road grime are a real bear to remove and can break easily because of it. Before you try removing body clips for the bumper and other underbody components, spray a shot of Honda Multi-Lube Rust Penetrant (P/N 08732-0003, H/C 2962629) onto the top of the clip. The spray lubricates the plastic so the clip pops out more easily with less chance of breaking.



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ASN 24266 (0209)