

Headlights & Dash Lights Dim With Electrical Load

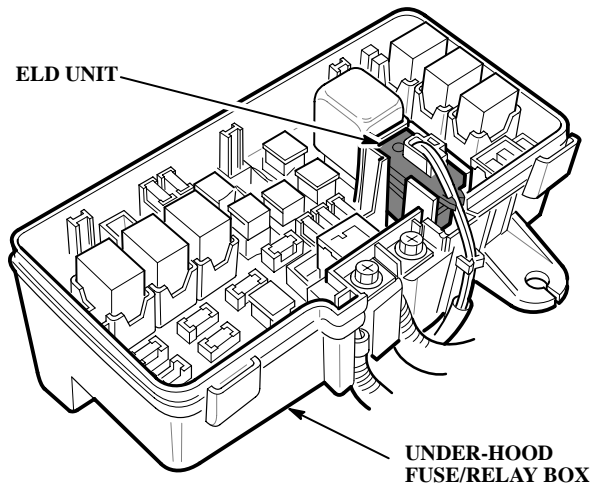
NOTE: This article applies to all Honda models except Passport.

Soon after the change from daylight savings time to standard time (the last Sunday in October), Tech Line gets numerous calls about flickering or dimming headlights and/or dash lights when the brakes or turn signals are used.

This flickering or dimming happens when the battery is supplying most of the current for the electrical load instead of the alternator (something a customer is more likely to notice when their headlights are turned on).

Since the early '90s, Honda vehicles have come with an electrical load detector (ELD) unit in the under-hood fuse/relay box. This unit allows the ECM/PCM to regulate the alternator (switch it between high output and low output) to provide the best combination of fuel economy and electrical system operation. The ELD sends a signal to the ECM/PCM that's proportional to the electrical demand. The ECM/PCM switches the alternator between high output and low output depending on several factors, which include electrical demand, battery charge level, and the driving cycle. When the alternator is in low output, the engine load is reduced and fuel economy improves.

If your customer complains about this flickering or dimming, tell them about the ELD unit and how it works. Unless the engine won't crank, or the vehicle has other symptoms of a weak battery, chances are the flickering or dimming isn't an electrical problem.



Clearing ABS Wheel Sensor DTCs

When some vehicles with ABS are run on a lift, the ABS control unit can set a wheel sensor DTC(s) and turn on the ABS indicator. Some wheel sensor DTCs keep the ABS indicator on until the vehicle is driven above 7 mph.

To turn off the ABS indicator, clear the DTC with a PGM Tester, and drive the vehicle above 7 mph. When the ABS control unit gets a normal vehicle speed input from all four wheels, it completes the ABS DTC clearing procedure and turns off the indicator.

Revised A/T Flushing Procedure

The original A/T flushing procedure was designed for simpler A/Ts that readily upshifted when you ran the vehicle on a lift. Some newer models, however, are reluctant to shift past 2nd gear when run on a lift. For these vehicles, make sure you use this procedure:

1. Raise the vehicle on a lift.
2. Drain the A/T, and refill it with Honda ATF-Z1.
3. Start the engine, move the shift lever to D4, and release the parking brake.
4. Press the accelerator pedal to raise the engine speed to 2,500 rpm.
5. If the A/T *does not shift* past 2nd gear, keep the engine speed at 2,500 rpm, and move the shift lever from D4 to Neutral, and back to D4.
6. Count the number of shifts, and watch the tachometer (or use a PGM Tester) to make sure the A/T shifts through all forward gears and goes into torque converter lockup.
7. Take your foot off the accelerator pedal, press the brake pedal to lower the vehicle speed to zero, then move the shift lever to Reverse and then to Neutral.
8. Repeat steps 4 through 7 *four more times*.
9. Repeat steps 2 through 7 *two more times*.
10. Drain the A/T, and reinstall the drain plug with a new washer.
11. Refill the A/T with Honda ATF-Z1.

Don't Forget Idle Learn Procedure: '01 Civic

On '01 Civics, if you do any of these actions, *you must do* the idle learn procedure so the ECM/PCM can learn the engine idle characteristics:

- Disconnect or fully discharge the battery
- Replace the ECM/PCM or unplug its connectors
- Do an ECU Reset with the PGM Tester
- Remove the No. 6 (15A) fuse from the under-hood fuse/relay box
- Remove the No. 19 (80A) fuse from the under-hood fuse/relay box
- Remove the PGM-FI main relays 1 and 2 (behind the glove box)
- Remove either of the wires from the under-hood fuse/relay box terminals
- Unplug any of the connectors from the back of the under-hood fuse/relay box
- Unplug the connector between the engine compartment wire harness and the ECM/PCM wire harness
- Disconnect ground G1 from the transmission housing

If you forget to do this procedure, the engine will idle rough or it will stall when the vehicle comes to a stop. To do the idle learn procedure:

1. Make sure *all electrical items* (lights, audio unit, A/C, etc.) are turned off, then start the engine.
2. Let the engine reach its normal operating temperature (the cooling fans cycle twice).
3. Let the engine idle (throttle fully closed) for 10 minutes.

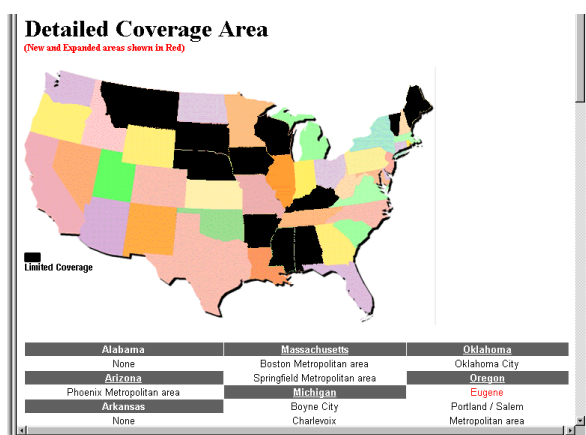
Make sure you follow these steps. Driving the vehicle *is not enough*. The ECM/PCM *will only learn* the engine idle characteristics when the engine is allowed to idle with all electrical loads off.

Install PDI Fuses With Ignition Switch OFF

When you install fuses during PDI, make sure you do it with the ignition switch OFF. If you do it with the engine running, it can trigger DTCs, causing you unnecessary diagnosis time.

Navi System Coverage: '00–01 Odyssey EX

On '00–01 Odyssey EXs, the navigation system provides map coverage for freeways and major highways in the continental U.S. and detailed coverage for about 100 metropolitan areas nationwide. You can find the detailed coverage areas in the Navigation System Owner's Manual or online at www.honda2001.com [Click on: MODELS, ODYSSEY, ODYSSEY MENU, ORDER NAV SYSTEM DVDs, DETAILED COVERAGE AREAS (VERSION 2.03).]



Navi System DVD Version 2.03 Available

The latest DVD (version 2.03) is now available for the navigation system on '00–01 Odyssey EXs. If you need this latest version, or a replacement for a lost or damaged DVD, you can purchase it by ordering P/N DVDH002203J from either of these sources:

- The Honda DVD Navigation Software Order Line at **888-291-4675**, Monday through Friday, between 8:00 a.m. and 4:00 p.m. PT.
- The Honda automobile website at www.honda2001.com [Click on: MODELS, ODYSSEY, ODYSSEY MENU, ORDER NAV SYSTEM DVDs.]

Sloshing Noise from Fuel Tank: '99–01 Odyssey

On '99–01 Odysseys, the fuel tank may make a sloshing noise if it's half full. And if the tank is very close to full, the noise can sound like a thump from the rear floor. This noise is considered to be a characteristic of the vehicle. *Do not try to repair it.*

Coping With Static Shock

Static shock can be irritating to downright painful. That's because when you get shocked from what's commonly called "static electricity" it's really *high voltage* electricity. Depending on conditions, it can actually reach a potential of *several thousand volts*, and the drier the air, the greater your chances of getting shocked.

What Causes Static Shock

Static electricity appears whenever the quantities of positive and negative electrical charges in something aren't perfectly equal. Normally the positives cancel the negatives, and everything behaves electrically neutral. But if two insulators of different materials contact each other, then the electrical charges of the material transfer between the surfaces. One surface ends up with **more** negative charges than positive, and has a *negative charge imbalance*. The other surface has **fewer** negative charges than positive, so it has a *positive charge imbalance*. Both surfaces are electrically charged and a high potential voltage exists between them.

As long as these surfaces stay together, their electrical charges cancel each other out. But if you separate them, you also separate their polarities (a positive charge stays with one, a negative charge with the other). Now the potential voltage between the two surfaces rises dramatically. If you bring the two surfaces back together, at some point, the opposite polarities jump the gap and rejoin, producing a high-voltage spark.

From our little science lesson, you can see what happens in dry weather when you step out of the vehicle and get shocked closing the door. Your body becomes electrically charged from your clothes (an insulator) contacting the seats and seat-backs (a different insulator). When you step out, you're taking just one polarity of charge along with you, while the seat keeps the opposite polarity. At the same time, the seat is causing the entire vehicle to become electrically charged by a process called "Faraday's Icepail Effect." The potential voltage between you and the vehicle now surges up to 10,000 or even 20,000 volts. If you're wearing shoes, especially those with rubber soles, the charge has no chance to leak to ground. So when you reach out to close the door, which is grounded to the vehicle, the opposite polarities rejoin at your finger and ZAP!, you get shocked.

How to Prevent Static Shock

Now that you know what causes static shock, what can be done to prevent it? Here are some helpful tips to pass along to your customers:

- Avoid wearing clothes that contribute to static shock. Clothes made from wool or from synthetic materials such as nylon, polyester, or plastic, put a greater electrical charge on your body than clothes made from cotton or other materials. (A '98 study done in the UK recorded peak body voltages of 21,000 volts when wearing nylon clothes, 9,000 volts for wool clothes, and 7,000 volts for cotton clothes.) Also, consider choosing leather upholstery instead of fabric. Fabric upholstery creates a greater charge imbalance than leather does.
- Shoe soles create a charge imbalance and work as insulators as well. To avoid getting shocked, don't wear rubber-soled shoes—they create a significant charge imbalance, and when you step out of the vehicle, the insulating properties of rubber keep the charge from leaking to ground. Try wearing thin, leather-soled shoes instead.
- Try getting into the habit of holding your keys as you step out of the vehicle, then grip one of the keys firmly by the metal, and tap the door lock cylinder with the tip of the key. The spark will still jump, but it won't be painful. The tip of the key will take the spark's punishment instead of your tender finger.
- Try spraying the seats, seat-backs, floor mats, and carpet with some anti-static liquid such as ScotchGard or Static Gard, or your own brew from mixing 1 part liquid fabric softener with 10 parts water. This spray treatment dampens the surfaces making them slightly conductive, so the separated charges can instantly flow back together. This treatment generally lasts up to 3 months. On vehicles with side airbags, don't get the front passenger's seat too wet, or it may trigger the SIDE AIRBAG indicator (see the article *Side Airbag Indicator Comes On* in the November '00 edition.)
- If you get shocked when you drive up and touch outside objects that are grounded (mail boxes, toll booths, drive-up ATMs, etc.), the vehicle itself has probably created a charge imbalance. Waiting several seconds before touching any outside objects that are grounded can sometimes allow the charge to dissipate.

CVT Repair Quick Reference Chart

Here's a handy chart to help you find published service bulletins and ServiceNews articles with repair procedures for CVT complaints on '96–00 Civic HXs. When you have a vehicle with one or more of these listed symptoms, check the appropriate bulletin or article before you reach for the S/M. We'll update this chart periodically as new information becomes available.

Year and Model	Symptom	Repair Procedure	Repair Procedure Location
'96–98 Civic HXs	Engine Idle fluctuates between 900 and 1,600 rpm at cold start, with the shift lever in Drive or Reverse	Replace the transmission control module (TCM), and flush the CVT fluid.	S/B 99-069
	Engine speed fluctuates 200 to 300 rpm when cruising between 2,000 and 3,000 rpm	Replace the TCM.	S/B 99-068
'96–00 Civic HXs	Transmission whines with the shift lever in Drive	Drain and refill the transmission with Honda ATF-Z1 or CVT fluid. If the vehicle is driven under severe driving conditions, replace the fluid at 15,000 miles.	S/N 12/97 S/N 9/00
	Transmission whines with the shift lever in Reverse	Refer to the article CVT Basics .	S/N 7/96

Clean Fluid Leaks or Spills Before Troubleshooting


On the assembly line, it's fairly common to have small fluid leaks or spills while engines, transmissions, rear differentials, etc., are being assembled, installed, or filled with lubricant. If these leaks or spills *are not wiped off* of components before the vehicle leaves the assembly line, they could be mistaken later for symptoms of component, gasket, or seal failure. To save yourself from doing unnecessary repairs, make sure you thoroughly clean any components you're troubleshooting, then check for leaks.

Winter Tires Available For '00 Insight

The '00 Insight comes with all season tires designed to minimize rolling resistance and provide good handling in dry, wet, and most light snow-covered road conditions. For driving in severe winter conditions, you can now order winter tires. Contact your local Bridgestone dealer, and ask for model Blizzak MZ-02 (Bridgestone P/N 096857-165/65R14 79Q). Make sure you order four tires; *winter tires must be mounted on all four wheels*.

S/M Fix: Hub/Bearing and Rear Drum Replacement

If you're holding on to that dog-eared, grease-stained copy of the 1999 or 1999–00 Odyssey S/M, you need to make a change to the rear suspension hub/bearing replacement procedure (this procedure also covers rear drum replacement). Make sure you add this line to the end of step 7 on page 18-23: *If the drum does not come off easily, back off the brake adjuster one full turn (23 teeth)*. Better yet, recycle those old books. (That's why we print cumulative S/Ms.) Instead, use the 1999–01 Odyssey S/M; it already has this info.


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