ACURA ServiceNews November 2005

Head Bolt Design Changed for V6 Engines

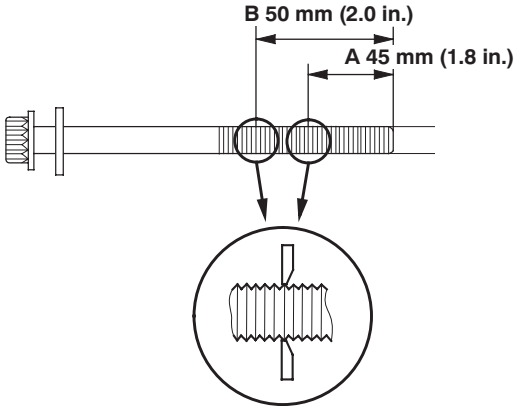
NOTE: This article applies only to '05 Acura V6-equipped models built in North America.

In July '05, our Ohio engine plant and Alabama factory changed the type of cylinder head bolts used to assemble V6 engines.

The original head bolts were **6-point, elasticity range** bolts. You tighten these bolts using a three-step torque method. The new head bolts are **12-point plasticity range** bolts. You tighten these bolts using a torque angle method.

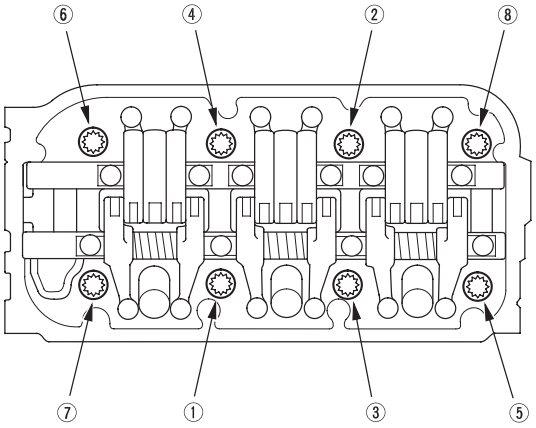
As a rule, you should *never* mix these two different bolt types. Mixing the bolts, or switching between their bolt tightening methods, could cause bolt failure or cylinder distortion. *Always* order the same type of head bolts that *originally* came with the engine. If, for instance, the engine came from the factory with 6-point bolts, *don't* order 12-point bolts, even if you're replacing all the bolts. The parts catalog lists both types of bolts for '05 vehicles. You can take the guesswork out of ordering if you've got the vehicle's engine number handy.

Before reusing 12-point bolts, you need to measure the bolt diameter in two places. If either diameter is less than **11.3 mm (0.44 in.)**, you *must* replace that bolt. If you're using 6-point bolts, you can keep using the same ones again and again, unless, of course, they're damaged.

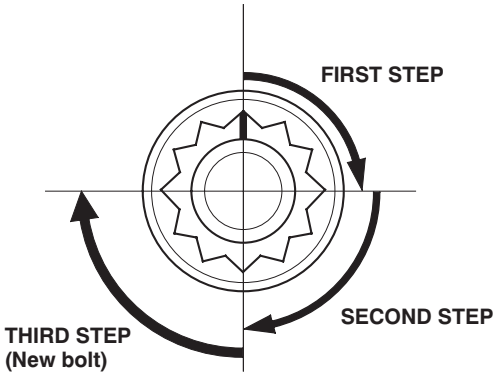


If you're using 6-point bolts, follow the three-step torque method in the appropriate S/M. If you're using 12-point bolts, follow the torque angle method in these steps:

1. Apply fresh engine oil to the threads and under each bolt head.
2. Use a beam-type torque wrench to torque the bolts in sequence to **29 N·m (22 lb-ft)**. If you're using a preset torque wrench, make sure you torque them slowly to prevent overtightening. If a bolt makes a noise while you're torquing it, loosen that bolt and torque it again from the first step.



3. When you're done torquing all the bolts, tighten them further in two steps (**90 degrees** per step) in sequence. If you're using a new bolt, tighten that bolt an extra **90 degrees**. If you tighten a bolt beyond the specified angle, remove that bolt and remeasure its diameter. Replace the bolt if needed. Don't loosen it back to the specified angle.



IMPORTANT: Make yourself a copy of this article, and keep it at your workstation. Not all S/Ms include this 12-point head bolt info yet. Those S/Ms will be revised at a later time.

Cruise *Downhill* Without Tapping the Brakes

The cruise control in '05–06 RLs has a cool driver convenience feature that lets you cruise *downhill* at your set cruising speed. Your speed seldom exceeds that setting, so you don't need to tap the brakes to keep it constant. (Of course, tapping the brakes cancels the cruise control.)

With the cruise control set, the A/T downshifts itself when the vehicle speed starts to exceed your set cruising speed. When the vehicle doesn't need additional engine braking, the A/T then upshifts to 5th gear.

Use a Steamer to Smooth Out Fabric Upholstery

A garment steamer and a stiff-bristle brush make a great team for removing those nasty wrinkles, lines, or impressions in fabric upholstery. You can buy an inexpensive, small, hand-held garment/fabric steamer from a number of different manufacturers. Some of these units even come with a handy built-in brush.

Once you've got your steamer, follow the manufacturer's instructions to get it ready for use. Then apply a generous amount of steam to the problem area. Keep the steamer moving slowly over the area until it's hot and moist.

A Word of Caution: Go easy on the steam if you're cleaning the front passenger seat in a vehicle with side airbags. Moisture can adversely affect or damage the OPDS sensors in the seat-back.

While the area is hot and moist, use a stiff-bristle brush, or the built-in brush if your steamer has one, to work the fabric back and forth and up and down. Stubborn areas might need more steam and brushing, so be patient and stay with it. It's worth the effort.

Getting Rid of Stains on Chrome or Stainless Steel

Unsightly stains on chrome or stainless steel trim around the door glass no longer means trim replacement. A good-quality chrome or aluminum polish, some careful masking to protect rubber molding and painted surfaces, and a little elbow grease, can work wonders to get back that showroom shine. A couple of good brands to try are Mothers PowerMetal™, or Meguiars All Metal Polish or NXT Generation™ All Metal Polish.

CHECK FUEL CAP, TIGHTEN FUEL CAP Messages

NOTE: This article applies to '05–06 RLs, '05–06 RSXs, '04–06 TLs, and '05–06 TSXs.

If a vehicle's fuel fill cap is loose or missing, and the ECM/PCM detects an EVAP system leak when it runs the EVAP monitor, the **CHECK FUEL CAP** message appears on the information display when the engine is started. (On '06 RLs, TLs, TSXs, and future Acura models, it's the **TIGHTEN FUEL CAP** message.) A temporary DTC is also stored in the ECM/PCM's memory. If this happens, there's really no need for the owner to bring the vehicle in for service. All he or she has to do is shut off the engine and make sure the fuel fill cap is in place and properly tightened (it's *one* or *three* clicks, depending on what's written on the cap).

Although the owner can cycle the message from the display with the reset button (the actual button name varies by model), the temporary DTC that's setting the message is still there. This means the message never really goes away. It can be cycled back with the reset button, and it comes on again if the ignition switch is cycled or the engine is restarted. This message keeps coming back until the EVAP monitor runs again and it detects no EVAP system leak. This could take several days, even weeks, depending on how often the vehicle is driven.

If, when the next EVAP monitor runs, the cap *wasn't* tightened or there's another EVAP system leak detected, the MIL comes on and the message goes off. A permanent DTC is now stored in the ECM/PCM's memory. If the owner now tightens the cap, the MIL should go off after the next EVAP monitor run, yet, this could still take days or weeks. If the MIL is still on after that monitor run, then it's time to bring the vehicle in for service.

If the vehicle comes into your shop with the fuel cap message or the MIL on, make sure the fuel fill cap is in place and properly tightened. Record the DTC, then clear it with the HDS, and run the EVAP system function test. If there's still a problem, press on with normal troubleshooting

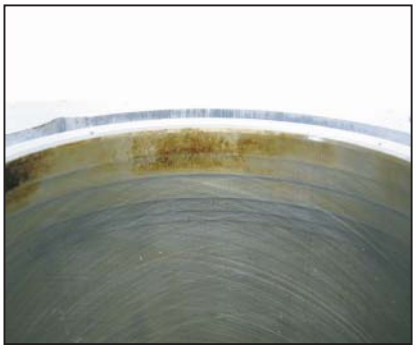
Why Do Connecting Rods Break?

Curious why connecting rods break? After all, these are heavy-duty parts specifically designed to endure punishing forces and temperatures. Yet, every once in a while they do bend or break and wind up as cool conversation pieces for a coffee table or desk.

Connecting rods break only after they've gotten bent. And they won't get bent unless the engine hydro-locks or the rod bearings fail.

When troubleshooting a bent or broken connecting rod, here are some things to consider:

- The number one culprit for connecting rod breakage is hydro-lock. This happens when liquid (water or fuel) entering the combustion chamber exceeds the chamber's volume. Since liquids don't compress, that extra volume in the chamber causes the rod to bend. You won't really notice anything wrong, until that bent rod finally gives out and breaks. This could happen if you're driving through deep, standing water and someone coming the other way splashes water over your hood. On very rare occasions, a bad ECM/PCM or fuel injector can cause too much fuel to enter a cylinder, causing hydro-lock and resulting in a bent rod. Before this happens, though, there are usually some kind of driveability problems that crop up and remain after the engine is fixed.
- A bent rod might not show any symptoms until it actually breaks. But bent rods leave a wider-than-normal carbon witness line in the cylinder because they're shorter. Typically, a healthy engine has a carbon line that's **6 mm** deep. An engine that's suffering from bent rods has a second carbon line that's **9 to 12 mm** deep.



- Connecting rod bearings fail for a number of reasons. To properly determine what actually caused a rod bearing to fail, you've got to take apart all rod bearings and main bearings and compare them side by side. If all or most of the bearings and journals show similar damage (scoring, exposed copper, or heat discoloration) the likely cause is oil starvation, poor maintenance, client abuse, or running the engine with an aftermarket power booster (nitrous oxide setup, supercharger, turbocharger). If only the bearing or journal for the failed rod looks bad but all the other ones look good (no scoring, no exposed copper or heat discoloration) and the crankshaft journals are smooth with no heat discoloration, then that particular bearing/clearance would be suspect.

Resetting the HFL Passcode in an ’05–06 MDX

Got a ’05–06 MDX owner who’s lost or forgotten his or her HandsFreeLink (HFL) passcode? You need to clear the old passcode with the HDS before he or she can add a new one. There’s just one small hitch, though: ’05 MDXs can’t talk with the HFL; they don’t have B-CAN.

To get the job done, you’ve got to pull the HFL unit out of your client’s vehicle, remove the HFL unit from an ’05–06 RL, ’04–06 TL, or ’06 TSX, and install your client’s unit. Once you’ve done that, connect the HDS to the 16P data link connector (DLC). From the **System Selection Menu**, select **Body Electrical**, **Hands Free Link**, **Inspection**, and then **Passcode Clear**. Follow the prompts. The HDS clears *only* the passcode. All phone entries and paired phones stay in the system. When you’re done, disconnect the HDS and reinstall the HFL units.

No “Keyless Remote Not Detected” Message

Here’s a heads-up if you’ve installed the updated AcuraLink control unit in a ’05 RL using S/B 05-022, *Product Update: AcuraLink Control Unit Causes Excessive Battery Drain, Refreshes XM Program Data Slowly, Does Not Receive Real-Time Traffic*. If you remove the keyless remote transmitter from the vehicle with the engine running and driver’s door closed, you won’t see a **Keyless Remote Not Detected** message on the navigation system display screen and no such message will be stored. In vehicles with the updated control unit and on all ’06 RLs, this message *only* shows up on the MID.

No “Pass. Airbag Off:” Message

Here’s another heads-up if you’ve installed the updated AcuraLink control unit in a ’05 RL using S/B 05-022, *Product Update: AcuraLink Control Unit Causes Excessive Battery Drain, Refreshes XM Program Data Slowly, Does Not Receive Real-Time Traffic*. If the **PASSENGER AIRBAG OFF** indicator comes on, a **Pass. Airbag Off:** message is stored and comes up on the navigation system display screen. In vehicles with the updated control unit and on all ‘06 RLs, this message comes up and is stored *only once*, no matter how many times the indicator comes on while driving.

OnStar System Status Light Is *Solid Red* After Update

NOTE: This article applies to ’05 MDXs with the navigation system and ’05 RLs.

Before you update the OnStar control unit using S/B 05-028, *Product Update: OnStar Control Unit May Lose Minutes*, first check if the OnStar system status indicator is *solid red*. If it is, there’s a problem with the system. You’ve got to fix that problem before you can move on. The update procedure only fixes the OnStar lost minutes problem.

If, after you’ve done the update procedure, the OnStar system status indicator is lit solid red, follow these steps to read and clear any DTCs stored in the control unit:

1. With the ignition switch turned to LOCK (0), press and hold the call answer/call end button.
2. Quickly cycle the ignition switch from LOCK (0) to ACCESSORY (I) four times within **6 seconds**. Leave the ignition switch in ACCESSORY (I) after the fourth cycle, then release the call answer/call end button. The indicator will blink the stored DTCs.
3. To clear any stored DTCs, wait until the OnStar system status indicator stops blinking and turns solid red. Then, within **2 seconds**, press and release the Onstar button.

For more info, see pages 22-472 and 22-473 of the ’03–06 MDX S/M or pages 23-168 thru 23-171 of the ’05 RL S/M. (Online, enter the keyword **ONSTAR**, and select **How to Troubleshoot the OnStar System** from the list.)

Warranty Parts Retention of Driveshaft Boots and Bands

We got a request recently from our Ohio factory to make sure all Acura dealerships save the boot band along with the old driveshaft boot when repairing driveshafts under warranty. The boot band includes important lot control numbers that the factory can use to track down any potential problems that could happen at the factory or during vehicle transport.

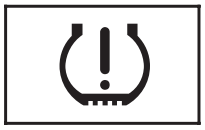
When you cut off the boot band, fold it over and stick it inside the old driveshaft boot. Hang onto these parts until you’re either asked to return them by the factory warranty group or you’re authorized to do your normal parts scrapping.

Know Your Low Tire Pressure and TPMS Indicators

NOTE: This article applies to '04–06 MDXs, '05–06 RLs, and '06 TLs.

Do you know the difference between the low tire pressure indicator and the **TPMS** indicator? Service clients sometimes get these two mixed up, so they might tell the service consultant "A light came on in my dash, and I think it's got something to do with tire pressure." If the RO doesn't clearly state which indicator is involved, knowing which one it is could mean the difference between a slam-dunk repair and a lot of wasted troubleshooting time and effort.

Low Tire Pressure Indicator - This *icon* indicator comes on when the tire pressure is **25%** below its recommended value listed on the driver's doorjamb sticker. (On RLs and TLs, you'll also see a **CHECK TIRE PRESSURE** message in the MID.) This value is always the recommended cold inflation value.



When this indicator comes on, the TPMS control unit sets one or more of these DTCs:

- TPMS DTC 11 (right-front low tire pressure)
- TPMS DTC 13 (left-front low tire pressure)
- TPMS DTC 15 (right-rear low tire pressure)
- TPMS DTC 17 (left-rear low tire pressure)

If this is the indicator the RO says came on, check the tire pressure against its recommended value. Check for a leak if you suspect there might be one; otherwise, set the tire pressure accordingly. Always check tire pressures when the tires are cold, and make sure you're using an accurate tire pressure gauge when you do. Accuracy can sometimes be an issue with these gauges, so it's a good idea to calibrate your tire pressure gauge often.

If the RO isn't clear about whether this indicator came on, and you don't see it on, a quick check with the HDS for TPMS DTC 11, 13, 15, or 17, will tell the story.

Something else to keep in mind: Colder weather means lower tire pressures. A **10°F** change in tire temperature changes tire pressure by **1 psi**. If the tire pressure was already below its recommended value—even by only **20%**—a big dip in temperature could cause the indicator to come on.

Here's a typical scenario to show just what we're talking about. The tire temperature was warm from driving (**90°F**) when the tire pressure was checked and set it to its recommended value. Your client then parked the vehicle outside and the outside temperature and the tire temperature plummeted to **10°F**. This **80°F** drop in tire temperature causes a corresponding **8 psi** drop in tire pressure. If the tire pressure gauge was off by **+ 1 psi**, now you're dealing with a **9 psi** change in tire pressure. This will cause the low tire pressure indicator to come on and the TPMS control unit to set a TPMS DTC. When the tire heats up from driving, the tire pressure rises and the indicator will go off. In cold weather, this could happen a lot.

TPMS Indicator - This *text* indicator comes on and *stays* on when there's a definite problem with the TPMS as a system. (On RLs, it's a **CHECK TPMS SYSTEM** message in the MID. On TLs, it this indicator plus the message.) The TPMS shuts off and stops monitoring tire pressures. If this indicator or message is on, use the HDS to check for set TPMS DTCs in the TPMS control unit and troubleshoot accordingly.

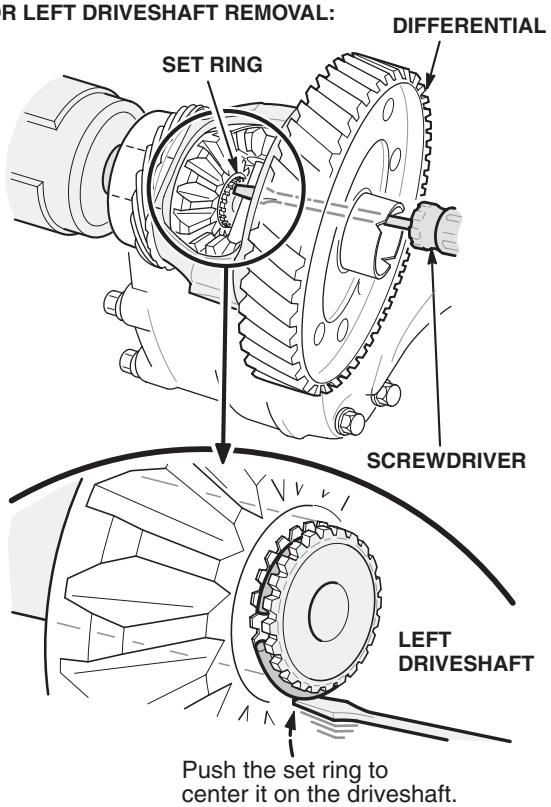
Removing a Stuck Left Driveshaft Revised 5/7/07

NOTE: This article applies to '99–03 3.2TLs.

To keep the left driveshaft properly mated to the differential, the set ring on the end of the inboard joint compresses as it goes through the differential side gear and then expands on the other side of the gear. If the set ring isn't centered when you pry out the inboard joint, the set ring will catch on the gear, causing the driveshaft to stick.

To remove a stuck left driveshaft, first remove the intermediate shaft. Then, looking into the right side of the differential, use a long, thin, flat-tip screwdriver to center the set ring on the end of the inboard joint. With the set ring centered, you should have no trouble prying the inboard joint away from the differential. But be careful not to damage the differential seal when you remove the driveshaft. And, to keep the inboard joint from pulling apart, make sure you remove the driveshaft by prying on the inboard joint, not by pulling on the driveshaft.

CENTERING THE SET RING FOR LEFT DRIVESHAFT REMOVAL:



Tips From Training: Honda & Penn College Partnership

Pennsylvania College of Technology in Williamsport, PA, recently became American Honda's newest partner in the Professional Automotive Career Training (PACT) program.

This associate-degree PACT program dovetails with Penn College's own unique combination of automotive and academic training to give tomorrow's service techs the skills they need to find work at Acura dealerships.

This college is the first partner school at which students can transfer into a four-year automotive technology management major to give them an even sharper edge in the working world. Students will leave Penn College with a solid understanding of Acura products and will be credited with about 65 percent of the training they'll need as service techs.

In addition to internship opportunities with sponsoring Acura dealerships throughout the mid-Atlantic region, American Honda provides special tools, a fleet of vehicles on which PACT students get to work on, and state-of-the-art instructor training.

The first PACT offerings will be in the Spring '06 semester, with the first internship opportunities coming up that following summer. Course work is taught by ASE-certified instructors, under the stringent guidelines of the National Automotive Technicians Education Foundation.

For more info about Penn College's PACT program, e-mail them at transportation@pct.edu. You can also call the School of Transportation Technology at **570-327-4516** or visit their website at *www.pct.edu/schools/tt*.

AUTOMOTIVE Youth Educational Systems YES ®

ACURA ServiceNews

BSN 31356-36310 (0705)

ACURA ServiceNews December 2005

Can't Turn Ignition Switch? Check for Locked Steering

Got a service client complaining he or she can't turn the ignition switch to start the engine? The reason could just be the steering column lock pin is engaged with the front wheels turned. Here's what typically happens:

Some folks use the steering wheel to help support themselves while climbing in or out of the vehicle. It's very common among elderly or disabled drivers. Doing this, though, turns the front wheels, which twists the tires against the ground, and applies torque to the steering column. With the ignition switch in LOCK (0), the steering column lock pin is engaged. But the applied torque on the steering column binds the lock pin, making it tough to turn the ignition switch. The ignition switch won't turn to ON (II) if the lock pin isn't disengaged from the steering column.

Tell your client there's nothing wrong with the ignition switch itself. All he or she needs to do is turn the steering wheel from side to side while turning the switch. This usually releases the lock pin so the engine can be started. In some cases, though, your client may need to give a good tug on the wheel. This could easily happen when parking on a hill and the wheels are turned sharply before the engine is shut off.

This problem is common to all Acura models, but on '05–06 RLs, it could be misunderstood as a keyless access problem.

Engine Cranks but Won't Start or Starts Then Stalls

Got an '05–06 RL owner complaining the engine cranks but it won't start or it starts and then stalls? The reason might just be the PCM auto-start feature. When your turn and hold the ignition switch to START (III) for at least **1 second**, this feature keeps the starter motor running for up to **15 seconds** or until the engine starts.

Normally, the ignition switch returns to ON (II) when you let go of the switch. But due to a rather hefty spring inside, the switch can jump back to ACC (I) if you let go of it too quickly. In ACC (I), the engine, climate control, and gauges are off, but the audio system and navigation system stay on. Vehicle owners think they've got an engine starting problem and report it on the service drive as either a crank but no start problem or an engine start then stall problem.

There's nothing wrong with the ignition switch. Just tell your service clients they just need to avoid letting go of the switch too soon.

Sidewall Cracking on Low-Profile Tires

Low-profile tires are the hot setup these days, and sure look cool, but you've got to keep the tire pressures up to spec or the sidewalls can crack. A low-profile tire in good condition can lose as much as **1 to 2 psi** of pressure every month, so it's a good idea to check and adjust tire pressures at least once a month.

If you've got a vehicle in your shop with cracked sidewalls on a tire that's still under warranty, refer your service client to the appropriate tire dealer (one that services that brand) for possible goodwill consideration. Keep in mind, though, any reimbursement will likely be prorated. If your dealership does business with The Tire Rack, contact them for your client. Tire warranty is handled by a tire dealer and isn't covered under the vehicle warranty.

Dead Power Socket? Keep Electrical Load Below Max

NOTE: This article applies to '05–06 RLs, '02–06 RSXs, and '04–06 TSXs.

The accessory power socket is made to handle a maximum electrical load of **120 watts (10 amps)**. Exceed that limit over a period of time, and the socket could overheat and cause an open circuit.

If you've got a vehicle in your shop with a dead accessory power socket, check for continuity between the center contact and the wire terminal. If you find an open circuit, remind your service client to keep the electrical load **below 120 watts** or the problem could wind up happening again.

Don't Test-Drive With MIL On or D Indicator Blinking

NOTE: This article applies to '01–03 3.2CLs, '01–06 MDXs, '99–04 3.5RLs, '05–06 RLs, '02–06 RSXs, '99–03 3.2TLs, '04–06 TLs, and '04–06 TSXs.

When the PCM detects a problem that turns on the MIL, starts the **D** indicator blinking, or both, it can revert to a backup mode or "limp home" mode. This mode differs depending on the A/T design, the cause of the malfunction or DTC, or both.

When you test-drive a vehicle, make sure you first clear all A/T DTCs. You can't evaluate the A/T if the MIL is on, the **D** indicator is blinking, or both are on.

In backup mode, some A/Ts let you manually shift while others let you shift only to certain gears that apply to its particular backup mode. Here are some common symptoms you get in backup mode:

- Harsh upshifting and downshifting
- Vehicle starts in 2nd gear and then shifts to 4th gear
- Vehicle starts in 2nd gear and then shifts to 3rd gear

When an A/T is in backup mode, service clients commonly complain about low power or lousy acceleration because the vehicle starts in 2nd or 4th gear.

Troubleshoot A/T and PGM-FI DTCs With the HDS

NOTE: This article applies to '03–06 MDXs, '05–06 RLs, '05–06 RSXs, '04–06 TLs, and '04–06 TSXs. These models have on-board snapshot (OBS) capability.

Got some A/T or PGM-FI DTC troubleshooting to do? Make the HDS your troubleshooting work buddy. *Don't* go with a generic scan tool. Only the HDS can send freeze/OBS data to Tech Line. This data is crucial for monitoring market trends and helping to identify root causes of problems.

Impact Wrench on Axle Nuts: A *Big* Taboo

Never use an impact wrench to torque axle nuts. Modern pneumatic impact wrenches can whip up a whopping **500 to 600 lb-ft** of torque. Axle nuts that are too tight can break the snout off the CV joints. They also increase rolling resistance in the wheel bearings. This not only cuts fuel economy, but causes excess preload that can lead to premature bearing wear and noise.

Fogged or Discolored Paint Under Wrap Guard

Moisture trapped under the plastic or white wrap guard can make the paint look fogged or discolored. Fortunately, there's an easy fix for this problem. Just carefully warm the paint with a hair drier or heat gun, and the moisture evaporates. To prevent damage to the paint or any plastic or rubber parts, don't let the drier temperature exceed **150°F**. You may need to do this heat treatment more than once, so just be patient.

Get Into the Habit of Doing a VIN Status Inquiry

We can't emphasize enough just how important it is to do a VIN status inquiry on the *i*N. It lists outstanding campaigns that need to be done on that vehicle. It's American Honda policy that any vehicle in for service must get all outstanding campaign repairs done as part of that service.

Doing a VIN status inquiry is quick and easy. From the *i*N main menu, just click on **SERVICE**, **Vehicle Information**, and then **VIN Status Inquiry**. Enter the VIN, and click on **Submit**. Any outstanding campaigns for that vehicle are listed. If there's a **C** to the right of the S/B number, that campaign has been completed.

Troubleshooting a Client's HandsFreeLink System Complaint

NOTE: This article applies to '05–06 MDXs, '05–06 RLs, '04–06 TLs, and '06 TSXs.

One of the cool features that reminds us we're now living in the 21st century is Acura's HandsFreeLink (HFL) system. With a compatible Bluetooth cell phone, you can place and receive calls while driving and never have to take your hands off the steering wheel.

As with any new, cutting-edge technology, though, it comes with a price. The HFL system can be a real challenge to troubleshoot and repair. HFL system problems are complicated by the fact that it's only one part of a much bigger system. You're not just dealing with the HFL system in the vehicle, but also your service client's phone, the navigation system (if so equipped), and even how your client interacts with the system (some problems simply stem from "pilot error"). And something else you need to keep in mind, the HFL system uses the phone to provide hands-free operation; it does nothing to step up phone performance. Any problems with static, poor signal strength, poor sound quality, or dropped calls are the phone's doings and not something you can fix by tinkering with the HFL system.

Here are some basic tips you can use to help get you off to a good start troubleshooting a client's HFL system complaint.

Before You Start

If your client calls ahead for an appointment, try to make it a waiter. This way, you've got both your client and the phone right there in your shop so you can get all the facts firsthand and check out the phone's functions.

If your client can't stick around your shop or won't leave the phone with you, then you'll need to find a compatible Bluetooth phone to troubleshoot with. But consider this, your client's phone could have some specific functional quirks that won't show up on the one you're using. Make sure your client understands this if he or she won't leave you the phone or can't stay long enough to demonstrate his or her concerns.

Talk to Your Client to Get the Facts

If you can have a one-on-one with your client, get as much info as you can about the complaint. Specific info on *where* and *when* the problem happens is key to successful troubleshooting This info will also help you determine if the HFL system is causing the problem or if something else might be the culprit.

Some clients may not be tuned into all this new technology stuff and could need your help. If you can, watch how your client uses the phone with the HFL system. Make sure he or she is using the right commands and steps called out in the vehicle's O/M. If the problem involves dialing a point-of-interest (POI) phone number in the navigation system, refer to the navigation system O/M.

Write down the phone's make, model number, passwords, phone name, and service provider. If the problem involved the navigation system, get the POI phone number your client was trying to dial.

Make sure you're working with a Bluetooth model phone with an approved Hands Free profile. Go to *www.acurahandsfreelink.com* for a complete list of approved phones. This website also has pairing instructions for each listed phone. Print out a copy of the pairing instructions for the model you're working on, and keep it handy.

Make sure your client's service provider account is active. An easy way to tell is to try making a local call with just the phone. If the call goes through, the account is good. If you're having trouble connecting to the AcuraLink server (in vehicles so equipped), make sure your client has data activated on the account, too. Remember, any problems making or receiving calls with just the phone is a *phone* problem.

Do a Function Check

Make sure the HFL system and the phone are powered up and the phone's battery level is good. A low battery level can cause functional issues in some phones. If the battery level is low, connect a battery charger to the phone.

Make sure the phone isn't set to a power saver mode. This could be set up in one of the menus and, if it is, the phone might not work with the HFL system.

Check the phone's signal strength. A weak signal could hamper its ability to make or receive calls or affect the sound quality during a call. If you're dealing with a weak signal, park the vehicle outside for better reception.

Try Duplicating the Problem

Using the info you gathered from your client, try duplicating the problem. Then refer to the troubleshooting info in section 22 of the appropriate S/M. (Online, enter the keyword **HFL**, and select from the list.). If you need help, call the HFL Customer Support Line at **888-528-7876**.

Guidelines to Avoid Needless A/T Replacement

Our factories and reman centers have been getting an increasing number of failed A/T cores that, after inspection, wind up checking out No Trouble Found (NTF). The inspection process typically includes a dynamometer test, an in-vehicle test, a high-temperature/high-pressure leak test, and often a thorough teardown analysis.

To avoid needless A/T replacement, make sure you follow these guidelines *to the letter*:

- **Test-drive the vehicle.** Unless there's an obvious problem, you've got to do a test-drive to check out your service client's complaint. We're now requiring the name of the service tech who checked out the problem be entered on the Warranty A/T Order form in the **Customer Contention** field
- **Check all fittings, lines, and hoses.** Many A/Ts get replaced for suspected leaks. Before ordering a reman A/T for a suspected leak, make sure all fittings, lines, and hoses are properly attached and any suspected leak just isn't residual ATF from an earlier service. Use a pressure washer to thoroughly clean the A/T, then check for leaks using Met-L-Chek D-70 Developer while following all manufacturer's instructions. Use a felt-tipmarker to circle the location of any leaks you find.
- **Do a full vehicle inspection.** If your client's complaint is about noise from the A/T, make sure other components such as worn tires or bad wheel bearings aren't the culprit.
- **Use only Honda ATF-Z1.** There's only *one* ATF that's suitable for Honda A/Ts, that's Honda ATF-Z1. Use of non-Honda ATF could result in poor shift quality or lockup clutch judder.

SRS DTC 81-64 or 85-64 After SRS Unit Replacement

Just replaced the SRS unit in a '03–06 MDX, and now you've got either of these SRS DTCs?

- SRS DTC 81-64 (ECU serial number ID code inconsistent) (internal failure of the front passenger's seat weight sensor unit)
- SRS DTC 85-64 (ECU serial number ID code inconsistent) (internal failure of the OPDS unit)

To fix this problem, here's what you need to do:

1. Refer to the front passenger's weight sensor unit calibration procedure on page 23-32 of the '03–06 MDX S/M (Online, enter keyword **SRS**, select **How to Troubleshoot the SRS** from the list, and go to **Calibrating the Front Passenger's Weight Sensor Unit ('03–06 Models**.) Do steps 1 thru 3 of the calibration procedure.
2. Do step 4 of the procedure, and follow the screen prompts to initialize the seat weight sensor (SWS). After the initialization is done, turn the ignition switch to LOCK (0), then disconnect the HDS.
3. Wait **3 minutes**, then reconnect the HDS, and turn the ignition switch to ON (II).
4. Continue with steps 5 thru 18 of the procedure to complete the calibration.

AUTOMOTIVE Youth Educational Systems YES ®

ACURA ServiceNews

BSN 31536-33866 (0610)

Wireless Headphones Don't Work With the RES

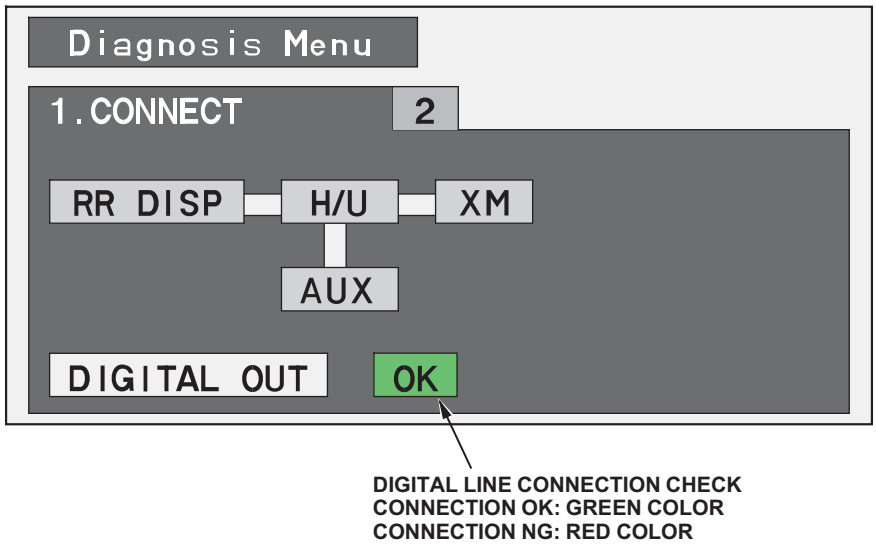
Currently Applies To: '07–08 MDXs with RES

Got a vehicle in your shop because the wireless headphones don't work with the RES, although they work just fine with the AM/FM radio, XM radio, or the in-dash disc changer? The digital audio lead, the digital audio sublead, or both could be the culprit. The audio for the wireless headphones is supplied by these leads to the rear controller and screen, which contains infrared sensors that transmit the digital audio signal to the headphones.

If either the lead or the sublead isn't securely plugged in at each end, or the lead or the sublead itself is bad, you can wind up with this problem.

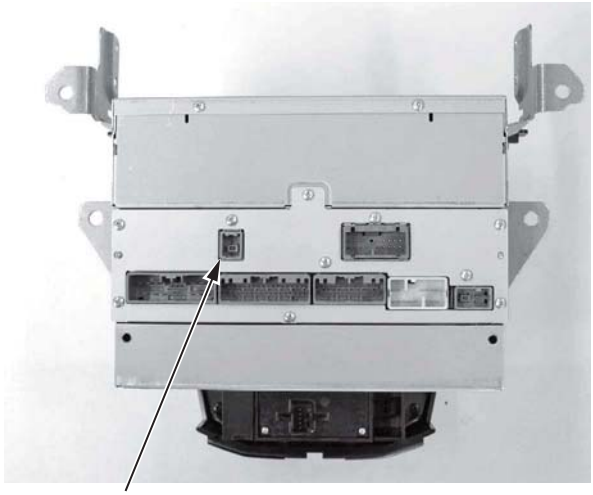
To check for and fix this problem, here's what you need to do:

1. Refer to pages 23-112 and 23-113 of the '07–08 MDX S/M, and enter the self-diagnostic function. (Online, enter keyword **HEADPHONES** and select **Wireless headphones do not work . . .** from the list.)
2. From the **Diagnosis Menu** on the overhead screen, select **1. CONNECT**. Check the **DIGITAL OUT** status.
   - If you see **NG** in a red box, go to step 3.
   - If you see **OK** in a green box, continue with normal troubleshooting.



3. Check the digital audio lead's connector at the rear controller and screen, and make sure that it's securely plugged in. Refer to page 23-134 of the S/M for details. (Online, enter keywords **REAR CONTROLLER**, and select **Rear Controller and Screen Removal/Installation** from the list.)
   - If **NG** in the red box now changes to **OK** in a green box, you've fixed the problem. Play a DVD in the DVD player and listen for audio in the headphones just to make sure.
   - If you still see **NG** in the red box, go to step 4.

4. Check the digital audio lead's connector and the digital audio sublead's connector in the right A-pillar, and make sure that they're securely plugged in. Refer to pages 20-78 thru 20-80 of the S/M for details. (Online, enter keywords **A-PILLAR** and select **Trim Removal/Installation - A-Pillar Trim** from the list.)
   - If **NG** in the red box now changes to **OK** in a green box, you've fixed the problem. Play a DVD in the DVD player and listen for audio in the headphones just to make sure.
   - If you still see **NG** in the red box, go to step 5.
5. Check the digital audio sublead's connector (connector F) at the back of the audio unit, and make sure that it's securely plugged in. Refer to page 23-90 of the S/M for details. (Online, enter keywords **AUDIO UNIT** and select **Audio Unit Removal/Installation** from the list.)
   - If **NG** in the red box now changes to **OK** in a green box, you've fixed the problem. Play a DVD in the DVD player and listen for audio in the headphones just to make sure.
   - If you still see **NG** in the red box, go to step 6.



CONNECTOR F
(2-GRY)

6. Refer to page 23-99 of the S/M, and replace both the digital audio lead (rear wire harness) (P/N 32153-STX-A00) and the digital audio sublead (P/N 39117-STX-A01). (Online, enter keywords **DIGITAL AUDIO** and select **Rear Entertainment System Component Location Index** from the list.)

   IMPORTANT: During removal, be really careful not to damage the lead or the sublead, or their connectors. Warranty Parts Inspection (WPI) needs those parts intact so that they can properly inspect and test them. And **do not** cut off the lead's or sublead's connectors just to make things easier to remove. If you do, your warranty claim will be rejected.

Get to Know the GNA600 Gateway Device

Currently Applies To: General Information

In the fall of 2006, each Acura dealership was sent a kit (P/N TDS35540402), which included a GNA600 Gateway Device along with a set of accessories for it.

The GNA600 replaces the Honda Interface Module (HIM). And like the HIM, it works as a communications gateway between the vehicle and a PC. As an Acura service tech, you need to get familiar with this tool—if you're not already. You need it to use HDS PC software and to update control units/modules. And it's the **only** tool that can update the AcuraLink (XM-HIP) control unit.

If you're new to the GNA600—or just a tad fuzzy on some of its operating details—here's some good info that will help get you up to speed:

- *Teradyne GNA600 Gateway Device User Guide for Acura Vehicles*
- S/B 07-027, *Updating the AcuraLink Control Unit*.
- S/B 01-026, *Updating Control Units/Modules*
- *Installation Instructions for HDS PC Software*

You'll find these documents in ISIS under **SEARCH BY PUBLICATION**. For the user guide and installation instructions, click on **Tool Information** and scroll down the list. For S/B 01-026 and S/B 07-027, click on **Service Bulletins**, and search by **Keyword**, **Section**, or **Year**.

IMPORTANT: Your PC must have outbound http (port 80) access to *ahmhds.com, and all users must have administrator rights to install, uninstall, and run the required applications.

Now Available: Extreme Cold Weather Antifreeze/Coolant Type 2

Currently Applies To: General Information

Acura's gone extreme when it comes to its engine coolant. Meet the latest member of the Acura Precision Crafted vital fluids family: Extreme Cold Weather Antifreeze/Coolant Type 2. This new brew is just the ticket when you're driving in areas where the mercury drops way down into the subzero zone.

Our normal engine coolant—Longlife Antifreeze/Coolant Type 2—is a **50%** concentration of antifreeze and water. It's formulated to work straight from the jug at temperatures as low as **-34°F**. But below that temperature, the coolant freezes up. And not even an accessory block heater can prevent it from doing so.

That's where Extreme Cold Weather Antifreeze/Coolant Type 2 comes in. When properly measured and added to the engine coolant, it raises the antifreeze concentration to **60%**, which lowers the coolant freezing point to **-62°F**. And it does this without affecting the original cooling system service interval, too.

The instructions for using this new coolant are on the back of the bottle. Here are what they say in a nutshell:

1. Look up the total engine coolant capacity for the vehicle that you're working on (see the applicable S/M or ISIS). You need to replace **20%** of that capacity with Extreme Cold Weather Antifreeze/Coolant Type 2. The chart below gives you a general idea of how much coolant to replace, but don't just rely on it. You still need to figure the actual amount.

If the Total Engine Coolant Capacity Is . . .	Replace This Amount of Engine Coolant
4.0 qt.	0.8 qt. (12.8 oz.)
7.0 qt.	1.4 qt. (1 qt., 6.4 oz.)
10.0 qt.	2.0 qt.
13.0 qt.	2.6 qt. (2 qt., 9.6 oz.)

2. Make sure that the engine and the radiator are cool to the touch, then remove the calculated amount of engine coolant from the radiator, and replace that amount with Extreme Cold Weather Antifreeze/ Coolant Type 2.
3. If needed, add fresh Longlife Antifreeze/Coolant Type 2 until the coolant level reaches the base of the filler neck.

   Handy Tip: Mark the reservoir with a grease pen to clearly show that the antifreeze concentration is now at **60%**. Keep it simple yet easily recognizable like **XC60** or **COOL60**. If sometime later you need to replace this coolant with normal coolant, the marking easily wipes off. You won't find this tip in the instructions; it's something new.

The front of the bottle includes some important do's and dont's. Here's the lowdown:

- **Never** dilute or mix Extreme Cold Weather Antifreeze/Coolant Type 2 with water. Doing so shortens the engine coolant service life and could harm the cooling system.
- **Never** exceed a **60%** concentration of antifreeze.
- If you're planning to drive in extremely hot weather conditions, you need to drain the engine coolant from the radiator and coolant reservoir and replace it with fresh Longlife Antifreeze/Coolant Type 2. If you don't do this, the engine could overheat.

This new fluid is now available from Acura parts stock. It comes in 1-quart bottles. Order P/N OL999-9020.

NOTE: The bottle is labeled **Honda Genuine**, not **Acura Precision Crafted Fluids**. Don't worry, you ordered the right stuff.

VSA Activation Indicator On After VSA Modulator-Control Unit R&R

Currently Applies To: ’03–06 MDXs, ’07–08 RDXs, ’05–08 RLs, ’04–08 TLs, and ’04–08 TSXs

Just replaced the VSA modulator-control unit (VSA modulator assembly), but now the VSA activation indicator is on? Try doing the VSA sensor neutral position memorization in the applicable S/M. (Online, enter keywords **VSA SENSOR** and select **VSA Sensor Neutral Position Memorization** from the list.)

NOTE: For RDXs, this procedure is called VSA system steering angle sensor center point writing. (Online, enter keywords **STEERING ANGLE** and select **VSA System Steering Angle Sensor Center Point Writing** from the list.)

The VSA activation indicator should go out when you’re done, but if it’s still on . . . continue with normal troubleshooting.

VSA DTC 66 After VSA Modulator-Control Unit Replacement

Currently Applies To: ’00–04 3.5RLs

Just replaced the VSA modulator-control unit (VSA modulator assembly), but now you’ve got a VSA DTC 66 (pressure sensor)? Try doing the precharge brake line bleeding procedure in the applicable S/M. (Online, enter keyword **PRECHARGE** and select **Precharge Brake Line Bleeding** from the list.)

When you’re done, **manually** clear this DTC. **Don’t** try clearing it with the HDS or you’ll wind up with a VSA DTC 98—a bogus DTC. (To learn more about this problem, see the December ’04 *ServiceNews* article “HDS Software Bug Causes Bogus VSA DTC 98.”)

After doing the bleeding procedure and manually clearing DTC 66, you should be done with this repair. But if that DTC just won’t go away . . . then check out the VSA DTC 66 troubleshooting procedure. (Online, enter keywords **DTC 66** and select **DTC Troubleshooting: 66** from the list.)

Intermittent Communication Loss Between VSA System and HDS

Currently Applies To: ’00–04 3.5RLs

The VSA modulator-control unit (VSA modulator assembly) messaging isn’t fully compatible with the HDS. This causes an intermittent communication loss between the two units. You’ll notice a repeating pattern of communication loss and restoration. Unfortunately, there’s really nothing that you can do about this intermittent communication loss; it’s considered a normal characteristic of the VSA system.

If you’re using the HDS to do the steering angle sensor neutral position memorization, make sure that you start this procedure just as soon as the communication is restored. If you don’t act quickly, there’s simply not enough time for sensor memorization to wrap up before the communication is lost again.

MIL On With DTC P0171 or P0172? Check for an Aftermarket Air Intake

Currently Applies To: ’07–08 MDXs and ’07–08 RDXs

Got a vehicle in your shop with the MIL on and either DTC P0171 (fuel system too lean) or DTC P0172 (fuel system too rich)? Check to see if the vehicle has an aftermarket air intake system. If it does, you’ve probably found the culprit.

Aftermarket air intake systems can throw off the MAF sensor, causing either of these DTCs to set. Even worse, they can cause **serious** engine damage, which **is not** covered by warranty! (For more info, take a look at “Cold Air Intake Systems and Low-Restriction Air Filters: A Word to the Wise” in the April ’05 issue of *ServiceNews*.)

The airflow characteristics of these aftermarket systems can vary from one to the other. The MAF sensor provides feedback to the PCM to get the proper air/fuel ratio. If the long term fuel trim exceeds the specified limits, the PCM will set one of those DTCs. Check out the Advanced Diagnostics in ISIS for the specific DTC limits of the vehicle that you’re working on.

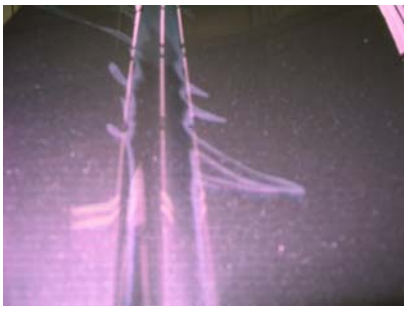
If the vehicle’s got an aftermarket air intake system, have the service consultant talk with your client. He or she can either have the air intake system returned to stock (and return later if the DTC comes back), or he or she can take up this problem with the maker of the aftermarket air intake system.

Of course, if the vehicle already has a stock air intake system . . . then it’s high time to troubleshoot.

Stained Paint Under the Wrap Guard? It's Just Trapped Moisture

Currently Applies To: General Information

Trapped moisture under the plastic or white wrap guard can make even the best factory paint job look stained, fogged, or discolored.


Fortunately, there's an easy fix for this problem, and all you need is a hair dryer or a heat gun. Just carefully warm the paint, and that trapped moisture evaporates. To avoid damaging the paint or any plastic or rubber parts, apply the heat in a circular motion and make sure that the surface temperature stays **under 150°F**.

You may need to do this heat treatment more than once to get rid of that moisture . . . so just be patient and take your time.

A Troubleshooting Guide to HandsFreeLink - Part 5 of 5

Currently Applies To: '05–08 MDXs, '07–08 RDXs, '05–08 RLs, '04–08 TLs, and '06–08 TSXs

Last month, we introduced the fourth of a five-part series of articles to help you understand the HandsFreeLink® (HFL) and to troubleshoot problems tied to it. In that article we discussed what to do when your service client's cell phone won't automatically connect to the HFL or your client is having problems receiving and placing calls with the HFL. This month, we'll wrap things up with a handy glossary of HFL terms.

Auto Answer

This cell phone setting forces incoming calls to automatically be answered by the handset. Make sure this feature is disabled when you're using the HFL, since it may interfere with the HFL answering incoming calls. Set the phone to **Send Only**, **Any Key**, **Multi Key**, or a similar answer option.

Answer Options

These cell phone settings let you choose how you'd like to answer an incoming call on the handset. The answer option can affect incoming calls on the HFL.

Authorized Connection

This cell phone setting lets the phone automatically connect to the HFL without first asking you for permission. In some cases, it can affect the phone's ability to properly route sound to the HFL.

Bluetooth Power

This cell phone setting turns the Bluetooth power on or off. When you're using the HFL, make sure that the Bluetooth power is turned on.

Discovery Mode

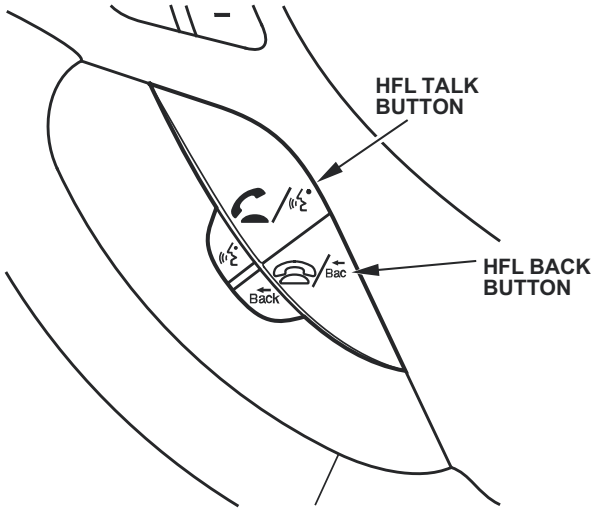
This cell phone setting lets the HFL find the phone during the pairing process. You must have the phone in Discovery Mode in order to pair it to the HFL.

Downloaded Ringtones

These are special ringtones that your client gets from websites, a mobile phone store, or other source, to customize his or her phone. They can be parts of favorite tunes, sound effects, etc.

HFL Back Button

This button on the steering wheel lets you end a call or go to a previous prompt on the HFL menu. Pressing that button twice or holding it down takes you back to the HFL main menu.



HFL Talk Button

This button on the steering wheel lets you give voice commands. Always press it and wait for the single beep before giving a command.

Hard Reset

When you do a hard reset, it clears the saved settings in the cell phone and restores it to the factory defaults. Do a hard reset only as a last resort.

Linking

This is when your paired cell phone is actively ready to use the HFL. You can pair up to six phones to the HFL, but only one phone can be linked at a time. If you've got two paired phones in your vehicle, only the phone that's linked can use the HFL. The other phone must be used like a regular handset.

Pairing

A description for linking two Bluetooth devices together. In this case, you're linking a cell phone to the HFL. After the pairing process is done, the devices can recognize each other and communicate wirelessly by way of Bluetooth.

Soft Reset

This helps restore the cell phone's basic functions. To do a soft reset, turn off the phone power, remove the battery and reinstall it, then turn the power back on.

Software Version

This refers to the software version that's loaded into the cell phone. The software version that was tested and found to be compatible with the HFL may be listed in the HFL website. Not all software versions, though, are compatible with the HFL.

Standard Ringtone

These are the ringtones that are factory-installed on the cell phone.

Radiator Damage From Doing A/C System Repairs

Currently Applies To: ’05–06 RLs

We’ve noticed an increasing number of radiators being replaced shortly after doing A/C system repairs. Inspection of these radiators tells us that they’re getting damaged during these repairs. To avoid damage, make sure that you’re really careful when you’re working near the radiator. Any damage to the radiator that comes from doing A/C system repairs **is not** covered under Acura warranty.

Ticking, Creaking, Popping, or Rattling From Front Door

Currently Applies To: '04–08 TLs and '04–08 TSXs

Some vehicles can make an annoying ticking, creaking, popping, or rattling from the front door when you're driving with the window all the way up. The noise goes away, though, when you lower the window just a bit.

This noise comes from a stick/slip action of the door weatherstrip. A thin coat of silicone grease will get rid of that noise, but after a few months . . . it just comes back.

To get rid of that noise for good, here's what you need to do:

1. Use isopropyl alcohol to clean the surface under the front door weatherstrip.
2. Cut a **22-inch** length of 1/4-inch Squeak Reduction Tape (P/N 70200-ALL-999).
3. Lift up the weatherstrip at the upper corner of the door, and apply half the tape **across** the top of the door surface, pressing firmly with your fingers to ensure a good bond. Then apply the other half of the tape **down** the back of the door surface just the same way. When you're done, press down on the tape where it wraps around the corner (you want a nice, smooth contour with no edges sticking up).

4. Apply Shin-Etsu Silicone Grease (P/N 08798-9013) to the inside of the front door weatherstrip.

   Handy Tip: A long pipe cleaner makes a great tool for applying the grease. Most retail craft stores carry long pipe cleaners and sell them in bundles of cool, assorted colors.

   - Fold over the end of the pipe cleaner (so there's no sharp edges), and insert that end all the way down into the tube of grease so that you coat the pipe cleaner.

- Insert the coated pipe cleaner into the door weatherstrip's **upper** vent hole, and feed it in as far as you can so that just the end is sticking out.

- Use your fingers to spread the grease and massage it into the weatherstrip.

- Pull out the pipe cleaner, and repeat this for the door weatherstrip's **lower** vent hole.

5. Repeat steps 1 thru 4 for the other front door.
6. Go out for a test-drive to make sure that the noise is gone.
   - If the noise is gone, you're done with this repair.
   - If the noise is still there, go to step 7.

7. Use isopropyl alcohol to clean the vehicle body where the door weatherstrip makes contact.
8. Cut two **11-inch** lengths of 1/4-inch Squeak Reduction Tape.
9. Starting at the upper corner next to the B-pillar, apply one length of tape **across** the vehicle body, pressing firmly with your fingers to ensure a good bond. When you're done, apply the other length of tape **down** the vehicle body the same way.

10. Repeat steps 7 thru 9 for the other front door.

SRS Units With Deployment DTCs: What You Should Know

Currently Applies To: All models with SRS

Got a vehicle with the SRS indicator on? Before you start troubleshooting the SRS, check the SRS unit for deployment DTCs. Those DTCs mean that the vehicle was in a collision in which one or more SRS components (seat belt tensioners, seat belt buckle tensioners, airbags, side airbags, side curtain airbags, etc.) deployed.

To ensure driver and passenger safety, every applicable S/M gives specific instructions on what to do after an SRS deployment. (Online, enter keywords **SRS DEPLOYMENT**, and select **Component Replacement/Inspection After SRS Deployment** from the list.) For each deployed component, there's a list of SRS components that must be replaced. **The SRS unit must be replaced with a new one after every deployment**.

Deployment sets specific DTCs, depending on what components deployed. Once those DTCs are set, the SRS indicator comes on and stays on. And those DTCs are **permanent**—you **can't** clear them. Keep in mind that a vehicle that was involved in a collision may come back from a body shop with the SRS indicator on simply because the necessary SRS components weren't replaced after the collision.

If the SRS unit has deployment DTCs, it's a good idea to check out the vehicle history and to look at the undercarriage for any signs of impact damage; you may need to replace other SRS components. **Always** check the SRS component replacement list in the applicable S/M or in ISIS, and make sure that all required parts were installed. And double-check the part numbers to make sure that those parts are the right ones for that vehicle.

Be aware that some aftermarket companies claim that they can "reset" the SRS indicator and clear crash data from OEM SRS units after a deployment. **Acura does not support any reset procedure after deployment.** Data storage is only one function of the SRS unit; there are other components in the unit that could have been damaged in the deployment. The **only** repair is to replace the SRS unit. If an SRS unit is reused after a deployment, it may not work properly and may lead to serious injury or death.

And one more thing, replacement of SRS components due to deployment from a collision **is not** covered by Acura warranty. **Do not** return an SRS unit to Warranty Parts Inspection (WPI) if it's got deployment DTCs. If their inspection and investigation reveals that a collision was involved, your claim could be debited.

So if you've got an SRS unit with deployment DTCs, **always** replace it with a new one but **do not** file a warranty claim or return the unit to WPI. Our best advice: If you're not sure how to proceed with the repair work . . . just talk to your DPSM.

Navi Display Won't Switch to Night Mode With Headlights Turned On

Currently Applies To: '07–08 MDXs, '00–04 3.5RLs, '05–08 RLs, '04–08 TLs, and '04–08 TSXs

Got a vehicle in your shop because the navigation system display screen won't automatically switch to **Night** mode when you turn on the headlights? The reason could be the dash illumination control setting.

NOTE: Depending on the vehicle that you're working on, this control could be a knob, a button, or a pair of buttons.

If the control is set to full brightness when the headlights are on, it overrides automatic display mode switching and the display screen stays in **Day** mode no matter if the headlights are on or off. This comes in handy if you're driving in daylight with the headlights on but you want the display screen bright so that it's easier to read.

To fix this problem, here's what you need to do:

1. Start the engine.
2. Turn on the headlights, and adjust the dash illumination control setting from full brightness down a few clicks to middle brightness.
3. Turn off the headlights, and shut off the engine.
4. Start the engine again.
5. Cover the sunlight sensor on the dashboard with a towel to keep any light from reaching it.
6. Turn on the headlights, and watch the display screen.
   - If the display screen switches to **Night** mode, you're done with this repair. Remove the towel from the sunlight sensor.
   - If the display screen stays in **Day** mode, refer to the Navigation System section of the applicable S/M and continue with normal troubleshooting.

For more info on automatic display mode switching and for recommended display mode settings, check out **System Set-up** in the applicable O/M.

Poor XM, CD, Aux Device Sound Quality; Weak Volume From Speakers

Currently Applies To: ’07–08 MDXs, ’07–08 RDXs, ’05–08 RLs, and ’04–08 TLs

Dolby PL (ProLogic) II can create simulated surround sound from an audio signal that’s recorded with two-channel stereo audio sources. It’s designed to work with sources from the audio system (CDs, XM radio, DVD audio, etc.) as well as auxiliary devices such as an iPod. Depending on the audio source, sometimes there’s not enough info embedded in the audio signal for the PL II to process things properly. As a result, service clients might complain of poor sound quality or weak volume from the front or rear speakers.

If you get a vehicle in your shop for this sort of problem, check to see if the PL II is turned on. You’ll see an indication in the audio display if it is. The exact text for that indication and its location can vary by model and trim level, so refer to **Adjusting the Sound** in the applicable O/M for details.

If the PL II is turned on, have your client demonstrate the problem. If that’s not possible, then try duplicating the complaint as best you can. Now turn off the PL II and see what happens. If the problem goes away, have the service consultant explain to your client that some material may sound better with the PL II turned off. If the problem is still there, refer to the Audio, Navigation, and Telematics section of the applicable S/M and continue with normal troubleshooting.

Important Change to Warranty Audio Order System

Currently Applies To: All ’02 and earlier Acura models

The Warranty Audio Order system supplies reman audio units, navigation units, and RES units for vehicles covered by normal warranty. Beginning **January 1, 2008**, reman audio and navigation units for all ’02 and earlier models are no longer available through this system.

If you need to repair a vehicle that’s out of warranty, see **OUT-OF-WARRANTY REPAIR (BACK TO ’82 UNITS)** on page 5 of S/B 06-001, *Audio, Navigation, and RES Unit In-Warranty Exchange, and Audio and DVD Player Out-of-Warranty Repair*, for instructions.

Excessive Steering Wheel Shimmy and Chassis Vibration - Part 5 of 5

Currently Applies To: General Information

Last month, we introduced the fourth in our five-part series of articles dealing with the issue of steering wheel shimmy and chassis vibration and what it takes to find and fix the problem. In that article, we gave you step-by-step instructions for balancing the wheels using a commercially available wheel balancer such as the Hunter GSP9700, matching the wheels to the hubs, and calibrating the wheel balancer when needed. In this month's article—the last of this series—we'll wrap things up with a discussion on how to read tire/rim runout using the GSP9700 and how to properly mount a tire to a rim.

Reading Tire/Rim Runout With a GSP9700

Excessive tire/rim runout under load can cause vehicle vibration that wheel balancing simply won't fix. To reduce the effect of runout, you've got to find the **radial force variation (RFV)** of each tire and rim, and then match the tires to the rims by indexing their peak RFV areas. Matching tires to rims this way helps to cut down on wheel vibration.

To accurately read tire/rim runout, you need equipment that can simulate road force on a wheel and show you the peak RFV area on the tire and on the rim. The GSP9700—besides being a wheel balancer—can accurately calculate peak RFV readings on tires and rims. If your service shop **doesn't** have a GSP9700, visit Hunter's GSP9700 website at *www.GSP9700.com* and find another shop in your area that does.

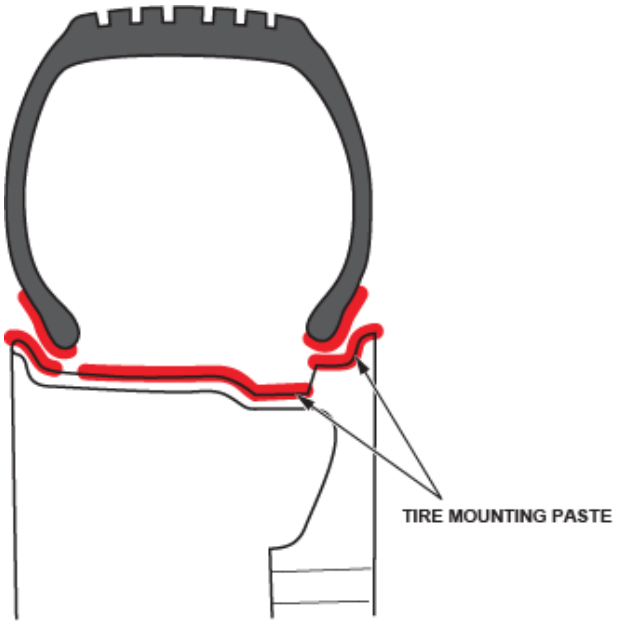
NOTES:

- If you've got to replace tires, **always** use OEM tires. For replacement tires, call The Tire Rack at **877-327-8473**.
- Make sure that this repair procedure gets followed **to the letter**, whether it's done in your service shop or by an outside vendor.
- RFV consists of four parts: **total indicated runout (TIR)**, **1st harmonic radial force variation (RFV-1)**, **2nd harmonic radial force variation (RFV-2)**, and **3rd harmonic radial force variation (RFV-3)**. All tire/rim matching done in this repair procedure is based on RFV-1.
- The rest of this repair procedure refers to RFV as **road force measurement (RFM)**; it's Hunter's trade name.
- To check the wheel balancing calibration, see **Calibrating the Wheel Balancer** in part 4 of this series or refer to the operator's manual.
- To check the RFM calibration (you need to do this about once a week), use the calibration tools that came with the wheel balancer and follow the on-screen instructions.

1. To make sure that you're getting the right tire/rim runout readings, raise the vehicle so that all four wheels are off the ground within **10 minutes** of completing your test-drive. (You must do this to avoid temporary flat spots that could affect the wheel balance.)
2. Make sure that all four tire pressures read exactly as listed on the driver's doorjamb sticker.
3. Mark each tire's position (L/F, R/F, L/R, and R/R).
4. Remove all wheel weights and clean off any mud from the rims. (Wheel weights would keep you from reading RFM, and any extra weight would cause wheel imbalance.)
5. Clean out any pebbles, mud, or other debris trapped between the tire treads. (Anything causing a bump on the tires would throw off RFM and balancer readings.)
6. Inspect the wheels for damage. (Tire or rim damage can cause high RFM readings and wheel imbalance.)
7. Make sure that the arbor and baseplate threads on the wheel balancer are clean.

8. Make sure that all mating surfaces between the wheel and the wheel balancer are clean, then mount the wheel.

   NOTE: Use the GSP9700 Centering Check Feature (it's on software version 2.1 or higher) to check for a possible centering error between the rim and the wheel balancer.
9. Use the wheel balancer to find the initial RFM readings (pounds and peak locations) of the tire, the rim, and the tire/rim combination. For more info, see the operator's manual. If the RFM is **higher than 10 lbs**, do the match mounting procedure in the manual. If the RFM is still higher than 10 lbs after you've done that, replace that tire.
10. After you've found the problem wheel, remount the tire.
    - Let all the air out of the tire, and break the bead seal from the rim.
    - Clean off any dirt, tar, or rocks from the rim, and inspect the tire bead area for any debris that could keep the bead from properly sealing on the rim.
    - Use tire mounting paste to coat all the areas where the tire touches the rim (inner and outer tire beads, rim flange, middle of the rim). **Never** use soap and water or a silicone spray. If your shop doesn't have tire mounting paste, there are a number of brands available at your local retail auto supply store. If the vehicle's got TPMS, be careful not to get any of that paste on the TPMS sensor.



    - Seat the tire beads on the rim by fully inflating the tire to the max pressure shown on the sidewall.
    - Let all the air out, then inflate the tire to the recommended cold inflation pressure that's listed on the driver's doorjamb sticker.
11. Mount the wheel on the vehicle, and go out for a test-drive. If the vibration is gone, congratulations—you're done with this repair! But if it's still there . . . you may need to look at other things that could be causing it.

Some Final Thoughts

So there you have it. In this five-part series, we've looked at what it takes to find and fix a steering wheel shimmy and chassis vibration problem. We showed you how to do a proper test-drive to help you gather the critical info you need for an accurate diagnosis. We discussed the various kinds of vibrations and their causes. We then gave you the fixes. We walked you through the process of balancing the wheels and matching them to the hubs. And for those situations where that doesn't do the trick, we showed you how to read tire/rim runout with a Hunter GSP9700 wheel balancer and properly mount a tire.

As an Acura service tech, you've got one primary goal: fix it right the **first** time. As you can see, there's no quick fix when it comes to steering wheel shimmy and chassis vibration problems. In fact, the work more often resembles something right out of the pages of a "whodunnit" novel with lots of twists and turns and you're the detective. To successfully solve the case (fix your client's vehicle), you've got to be methodical, persistent, and patient. Sometimes you've got to follow your hunches, even think outside the box, in order to get the job done. It's not easy work, but with your training and experience—and the tools and the resources we provide—you can make it happen.

A Troubleshooting Guide to HandsFreeLink - Part 4 of 5

Currently Applies To: '05–08 MDXs, '07–08 RDXs, '05–08 RLs, '04–08 TLs, and '06–08 TSXs

Last month, we introduced the third of a five-part series of articles to help you understand the HandsFreeLink® (HFL) and to troubleshoot problems tied to it. In that article we discussed those dreaded dropped calls. This month, we'll show you what to do when your service client's cell phone won't automatically connect to the HFL or your client is having problems receiving and placing calls with the HFL.

"My cell phone won't automatically connect to the HFL"

When you get into the vehicle, the cell phone should automatically connect to the HFL. But if your client complains that it doesn't . . . here's what you need to do:

1. Make sure that the phone's Bluetooth® power is turned on.
2. Make sure that the phone is properly paired to the HFL.
3. Try doing a soft reset by turning off the phone and turning it back on.
4. Check to see if the phone has an **Always Ask/Trust, Authorize Device**, or similar option. If so, make sure that the phone is set to **Never Ask**, **Authorize Device**, **Trust**, etc. (The actual setting name will depend on the cell phone maker and wireless carrier).
5. Check the phone's battery charge level and signal strength. Pairing the phone requires a near fully charged battery and a good, strong signal.

"I can't receive calls with the HFL"

If your client complains that he or she can't receive calls with the HFL, those calls may be getting routed to the cell phone instead of the HFL. You'll know this is what's happening if your client says something like "I can't hear the caller, but he (or she) can hear me just fine."

1. Make sure that the phone's Bluetooth power is turned on.
2. Make sure that the cell phone is paired to the HFL and that it's linked.
3. Check the phone's answer options. The ideal setting for use with the HFL is a multi-key or any-key answer. If the phone is set to flip open to answer, your client should change that setting to any-key answer or just leave the phone flipped open when using the HFL.
4. Make sure that **Auto Answer** is disabled. If it's enabled, the HFL can't accept any incoming calls.
5. Try doing a soft reset by turning off the phone and turning it back on.
6. Make sure that the battery is fully charged and there's a good, strong signal.
7. Find out if your client has downloaded specific ring tones or ringer IDs to specific callers. If so, your client should return them to a standard ring tone.
8. Find out if your client is using the correct buttons on the steering wheel. Clients often confuse the HFL and navigation Talk buttons. Your client should be pressing the HFL Talk button, **not** the HFL Back button. You'll hear **one** beep when you press the Talk button and **two** beeps when you press the Back button.

"I can't place calls with the HFL"

If your client complains that he or she can't place calls with the HFL, find out if your client is actually doing it with the HFL (he or she is using voice commands) or with the cell phone itself.

If calls are being placed with the HFL (voice commands):

1. Make sure that the phone's Bluetooth power is turned on.
2. Make sure that the cell phone is paired to the HFL and that it's linked.

3. Find out if your client is using the correct buttons on the steering wheel and is properly going through the calling process. Clients often confuse the HFL and navigation Talk buttons. Before each command, your client should be pressing the HFL Talk button, **not** the HFL Back button. You'll hear **one** beep when you press the Talk button and **two** beeps when you press the Back button.
4. Check to see if the phone has an **Always Ask/Trust, Authorize Device**, or similar option. If so, make sure that the phone is set to **Never Ask**, **Authorize Device**, **Trust**, etc. (The actual setting name will depend on the cell phone maker and wireless carrier).
5. Try doing a soft reset by turning off the phone and turning it back on.

If calls are being placed with the cell phone:

Every call will stay in the handset until it's transferred to the HFL. To continue a call using the HFL, you must use the Transfer command. During an active call, press and release the HFL Talk button on the steering wheel and say "Transfer."

The Bottom Line

Most problems dealing with connection to the HFL or receiving and placing calls with the HFL wind up being due to the cell phone itself and **not** the HFL. It's always a good idea to read your RO carefully or check with the service consultant before you start any troubleshooting of the HFL; it could save you needless time and effort. In next month's *ServiceNews*, we'll introduce the fifth and final article of this series. That article will include a handy glossary of HFL terms.

Airbag ON/OFF Switch Kits No Longer Available From CALHAC

Currently Applies To: General Information

Beginning March 1, 2008, you won't be able to order any airbag ON/OFF switch kits from CALHAC. If you get a vehicle in your shop to have an airbag ON/OFF switch installed, make sure that the service consultant lets your client know this. If you get a vehicle in your shop to have an airbag ON/OFF switch removed, go ahead and remove it.

American Honda will reimburse your dealership and your client **$100.00** each after the switch has been removed. For help with reimbursement, call Acura Client Services at **800-382-2238**.

NOTE: If your dealership has any vehicles in its previously-owned vehicle inventory equipped with an airbag ON/OFF switch, that switch must be removed before the vehicle is sold.

New Software for HDS: Version 2.013.011

Currently Applies To: General Information

During the week of February 18, 2008, each Acura dealership was sent a new CD containing HDS software version 2.013.011. This new CD bears a gray label that reads **HDS VER 2.013.011**, and it's dated February 2008. Your system administrator should have this software already loaded onto the master server.

Here's some important info on 2.013.011:

- It includes new reprogramming software to support an upcoming product update for the AcuraLink in '08 RLs.
- It improves the ABS/VSA system function learning test.

Check Out the Latest Word on A/T Flushing

Currently Applies To: General Information

Some A/T repair procedures call for flushing the trans using Acura Precision Crafted ATF-Z1 (and no substitutes). Problem is, where do you find the info to do that? It's **not** listed in the S/Ms and if you do an ISIS search, you'll find a few *ServiceNews* articles on this subject, but they're rather dated, and none of them say the same thing.

NOTE: The term "flushing" refers to repeatedly draining and refilling the trans with Acura Precision Crafted ATF-Z1. Don't confuse it with aftermarket flush systems. American Honda still strongly recommends that you avoid using them on any Acura vehicle.

The original procedure was written for simpler A/Ts that readily upshifted when you ran the vehicle on a lift. But A/Ts have come a long way since then, and most of the newer ones balk at shifting past 2nd gear when on a lift, unless you work the shift lever a certain way.

In light of all this, we thought it was high time that the A/T flushing procedure got a facelift. So here's the latest word on flushing that works for all A/Ts:

1. Set the parking brake, and raise the vehicle on a lift.
2. Drain the trans, and refill it with Acura Precision Crafted ATF-Z1. Refer to the applicable S/M or to ISIS for details.
3. Start the engine, shift into Drive, and release the parking brake.
4. Push down on the accelerator pedal to raise the vehicle speed to **2,500 rpm**.
   - If the trans shifts past 2nd gear, go to step 5.
   - If the trans **won't** shift past 2nd gear, keep the engine speed at 2,500 rpm and shift from Drive to Neutral and back to Drive. Then go to step 5.
5. Make sure that the trans shifts through all the forward gears and goes into torque converter lockup.
6. Let off the accelerator pedal, and press the brake pedal to drop the vehicle speed to zero. Shift into Reverse and then into Neutral.
7. Shift into Drive, and repeat steps 4 thru 6 **four more times**.
8. Set the parking brake, and repeat steps 2 thru 6 **two more times**.
9. Drain the trans, and reinstall the drain plug with a new sealing washer.
10. Refill the A/T with ATF-Z1.

Hour Meter Tells You When to Replace ATF Cooler Cleaner Filters

Currently Applies To: All models with an in-radiator ATF cooler

To ensure top-notch performance of the ATF Cooler Cleaner (P/N GHTTTCF6H), you've got to replace its two magnetic nonbypass spin-on filters on a regular basis. And the time to do that is after cleaning a hundred ATF coolers or after **20 hours** of cooler cleaner operation. But let's face it, keeping track of how many ATF coolers you've cleaned or how many hours you've run the cooler cleaner can be a real hassle, especially in a busy shop. Hey, who's got the time? So, we've come up with a clever solution: a vibration hour meter.

Last November, each Acura dealership was sent a kit containing one of these hour meters along with a set of color-illustrated instructions on how to install it. The meter mounts directly to the cooler cleaner pump and automatically senses vibration when the pump is running. Vibration is displayed in hours and 1/10ths of an hour. The meter displays **0.0 hours** when you first install it. Each cooler cleaning takes 12 minutes (0.2 hour)—six minutes (0.1 hour) in each direction. So when you're done with the job, the meter racks up **0.2 hour**. When the meter reaches **20 hours**, it's time to replace those spin-on filters.

The meter doesn't reset, so you need to make note of the hours displayed on the meter when you replace the filters. The next filter replacement will be due when the meter reaches the next 20 hours. To make it easy, here's a tip: Write down the projected hours for the next filter replacement on an adhesive-backed label, and stick it on one of the new filters after mounting. It's like putting those static cling service reminder stickers on your service clients' windshields.

If you get into the habit of replacing the spin-on filters on a regular basis, the cooler cleaner will perform as it was designed every time you use it.

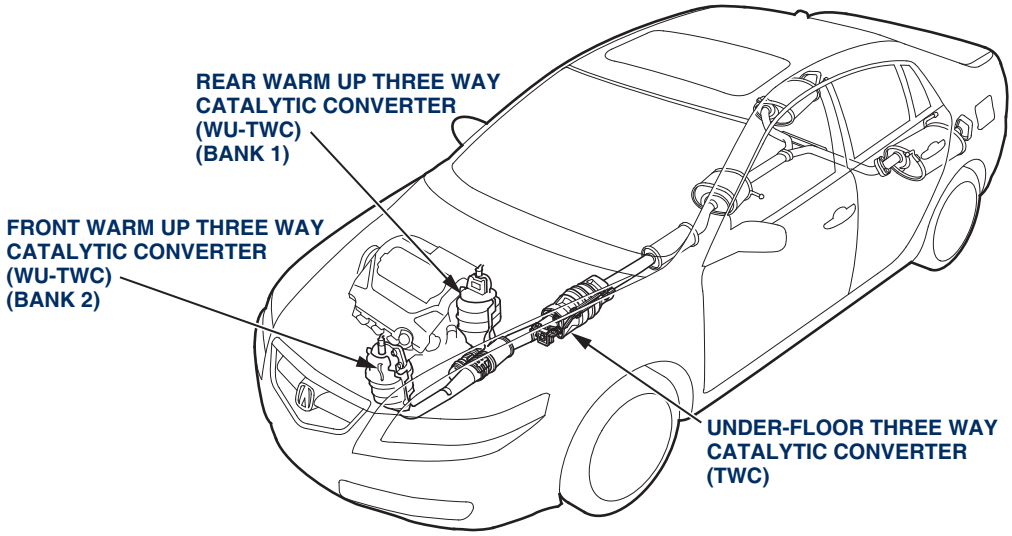
DTC P0420 or P0430 Comes Back After Catalytic Converter R&R

Currently Applies To: '03–08 MDXs, '05–08 RLs, and '04–08 TLs

Just replaced a catalytic converter for DTC P0420 (rear bank catalyst efficiency below threshold [bank 1]) or DTC P0430 (front bank catalyst efficiency below threshold [bank 2]), but now that DTC is back? You may have replaced the wrong catalytic converter!

Acura's compact V6 engine uses **three** catalytic converters:

- The front warm up three way catalytic converter (WU-TWC) that's bolted to the front cylinder head
- The rear WU-TWC that's bolted to the rear cylinder head
- The under-floor TWC that's downstream and mounted to exhaust pipe A



Both of the WU-TWCs are monitored and can set DTCs. Each bank has a specific DTC: P0420 for bank 1 and P0430 for bank 2. The under-floor TWC **isn't** monitored and won't set any DTCs. If you replaced the under-floor TWC or the wrong WU-TWC for the DTC that was set, you'll wind up with that same DTC.

To fix the problem, replace the WU-TWC that's responsible for the set DTC. Then use the HDS to clear that DTC.

VSA Activation Indicator Stays On After Doing S/B 07-041

Currently Applies To: ’05–07 RLs, ’04–06 TLs, and ’04–07 TSXs

Just wrapped up doing S/B 07-041, *Brake Pedal Is Low and Feels Soft*, but the VSA activation indicator is still on? Refer to the applicable S/M or to ISIS and do the VSA sensor neutral position memorization procedure. If you forget to do this procedure, the VSA activation indicator will stay on whenever you’ve got the ignition switch turned to ON (II).

Moonroof Won't Work After a Jump Start

Currently Applies To: '07–08 MDXs

If the engine was jump-started because of a dead battery, the auto reverse feature and the moonroof motor may not work. To fix this problem, you'll need to reset the moonroof control unit. You'll find the resetting steps listed on page 22-357 of the '07–08 MDX S/M or in ISIS, but we thought you might appreciate having them listed right here to save you some time:

1. Close all the doors and the tailgate.
2. Turn the ignition switch to LOCK (0).
3. Press and hold the center of the moonroof switch (tilt), and turn the ignition switch to ON (II).
4. Release the moonroof switch, and turn the ignition switch to LOCK (0).
5. Repeat steps 3 and 4 **four more times**.
6. Pull and hold the moonroof switch (open) for **3 more seconds** after the moonroof is fully opened.
7. Push and hold the moonroof switch (close) for **3 more seconds** after the moonroof is fully closed.
8. Make sure that the moonroof control unit is reset by using the auto open and auto close feature.

Excessive Steering Wheel Shimmy or Chassis Vibration - Part 4 of 5

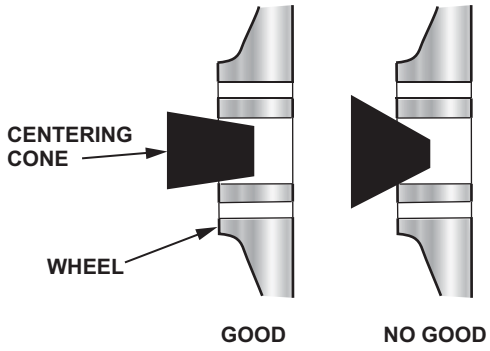
Currently Applies To: General Information

Last month, we introduced the third in our five-part series of articles dealing with the issue of steering wheel shimmy and chassis vibration and what it takes to find and fix the problem. In that article, we explored the mysterious world of phase matching. This month, we'll look at what it takes to fix these vibration problems. In this article, we'll walk you through the process of balancing the wheels using a commercially available wheel balancer such as the GSP9700, matching the wheels to the hubs, and calibrating the wheel balancer when needed.

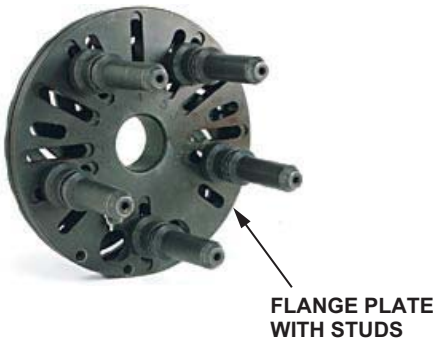
Editor's Note: *Although we mentioned in the last article that this one would be about tire/rim runout and proper tire mounting, we thought it would be more effective to cover wheel balancing, hub matching, and calibration at this time. We'll cover tire/rim runout and proper tire mounting in the fifth and final article of this series.*

Balancing the Wheels

1. Before you start, drive the vehicle to heat up the tires, then raise the wheels on a lift **within 10 minutes** of completing your drive. (You must do this to avoid temporary flat spots that could affect the wheel balance.)
2. Use the proper centering cone attachment for the wheel that you're balancing. The centering cone must have a **low taper** and fit inside the hub bore.

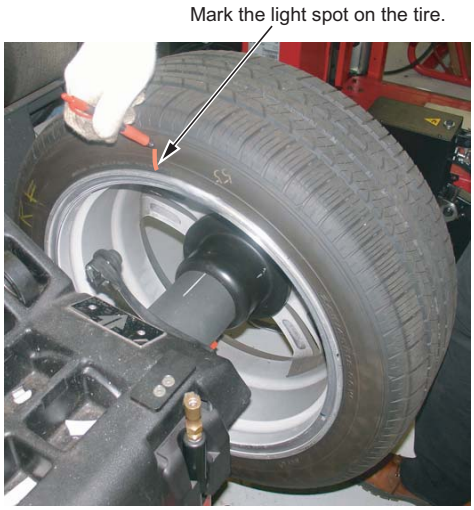


3. Mount the wheel onto the wheel balancer shaft, and secure it in place using the proper attachments. If the wheel has a lot of flat surface around its hub bore, a rubber cup attachment works just fine. But if it has a lot of uneven surfaces (some newer model wheels do because of their elaborate design), you've got to use a flange plate with studs like the one shown here to ensure accurate center mounting.



4. Make sure that the wheel balancer is calibrated. If it needs calibration, go to **Calibrating the Wheel Balancer**.
5. Set the wheel balancer to **dynamic balance**.
6. Turn off the measurement rounding feature (you want the measurements to read in **1-gram increments**).
7. Balance the wheel until its total imbalance reads **less than 5 grams** on each side.
8. Do a **static balance**.
   - If your shop has an on-vehicle finish balancer like the one that's shown here, follow the instructions for the balancer and do a static balance. Then test-drive the vehicle. If the vibration goes away, you're done with this repair. If it's still there, you may need to measure the tire/rim runout using a Hunter GSP9700 and do tire/rim matching.

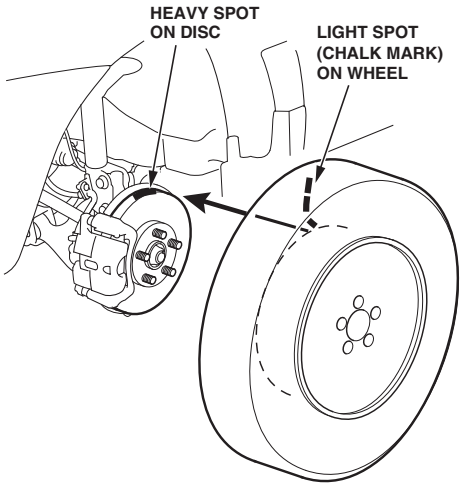
   - If your shop **doesn't** have an on-vehicle finish balancer, set the wheel balancer to **static balance**. Turn off the measurement rounding feature (you want to read measurements in **1-gram increments**). Measure the imbalance of the wheel, but **don't** add any weight. Use chalk for the tire and a permanent marker for the inner rim flange to mark where the weight should go. This is the **lightest** spot of the wheel. The light spot should be **less than 5 grams**. When you're done, go to **Matching the Wheels to the Hubs**.



Matching the Wheels to the Hubs

1. Match the **light** spot on the wheel to the **heavy** spot on the front brake disc and hub assembly. The heavy spot is that ground-off area on the edge of the disc, although not all vehicles have these markings.

2. Turn the brake disc by hand so that the heavy spot is facing straight up.
3. Mount the wheel to the hub with the light spot (chalk mark) facing straight up. You want to get the heavy spot on the disc and the light spot on the wheel to line up as closely as possible. The wheel studs may keep you from getting a perfect match, but that's OK. Then test-drive the vehicle. If the vibration goes away, you're done with this repair. If it's still there, you may need to measure the tire/rim runout using a Hunter GSP9700 and do tire/rim matching.



4. If you can't find the heavy spot on the disc, mount the wheel and test-drive the vehicle. If you notice that there's still too much vibration, remove the wheel, mark one of the studs with a felt-tip pen for reference, then remount the wheel onto the next stud to the right of your reference. Test-drive the vehicle. If the vibration goes away, you're done with this repair; otherwise, repeat this process until you find the ideal mounting location. If the vibration still won't go away, you may need to measure the tire/rim runout using a Hunter GSP9700 and do tire/rim matching.

Calibrating the Wheel Balancer

Do this procedure when you're balancing a wheel type or size that you've never balanced before, when you suspect that there's a problem with your wheel balancer, or after you've done about 100 wheel balances.

1. Turn off the measurement rounding feature (you want the measurements to read in **1-gram increments**).
2. Balance a damage-free alloy wheel and tire assembly until both the inner and outer rims read **zero** imbalance.
3. Loosen the wing nut attachment, turn the wheel half a turn (180°), retighten the wing nut, and recheck the balance.
   - If the imbalance reads **5 grams or less**, the zero calibration is OK. Rebalance the wheel to read **zero**, then go to step 5 to check the static balance.
   - If the imbalance reads **more than 5 grams**, go to step 4.
4. Loosen the wing nut attachment, turn the wheel a quarter turn (90°), retighten the wing nut, and recheck the balance.
   - If the imbalance now reads **5 grams or less**, the wheel isn't centered on the wheel balancer. Make sure that you're using the proper centering cone, cup, and wing nut for the wheel that you're balancing. If you're not sure, check out the operator's manual or ask the manufacturer what attachments you need. When you've got the proper attachments, go back to step 1.
   - If the imbalance still reads **more than 5 grams**, the wheel balancer needs calibrating, repair, or both. Call the manufacturer for the nearest repair representative.
5. Mount a 5-gram weight to the **outer** rim, and recheck the balance. The wheel balancer should read **5 ± 2 grams** of imbalance that's **170° to 190°** from that 5-gram weight.
   - If **5 ± 2 grams** of imbalance was read, the static balance calibration is OK. Go to step 6 to check the dynamic balance.
   - If **5 ± 2 grams** of imbalance wasn't read, the wheel balancer needs calibrating. Call the manufacturer for the nearest repair representative.
6. At **180°** from the weight that you added to the outer rim, mount a 5-gram weight to the **inner** rim and recheck the balance. The wheel balancer should read **5 ± 2 grams** of imbalance **170° to 190°** from both of the weights that you mounted.
   - If **5 ± 2 grams** of imbalance was read, the dynamic balance calibration is OK, and the wheel balancer is ready for use.
   - If **5 ± 2 grams** of imbalance wasn't read, the wheel balancer needs calibrating. Call the manufacturer for the nearest repair representative.

The Bottom Line

Most steering wheel shimmy or chassis vibration problems can be fixed by balancing the wheels and matching them to the hubs. But if that doesn't do the trick, you may need to measure the tire/rim runout. Excessive runout under load can cause vibration that wheel balancing won't fix. We'll discuss that subject, along with proper tire mounting, in the fifth and final article of this series in next month's *ServiceNews*.

A Troubleshooting Guide to HandsFreeLink - Part 3 of 5

Currently Applies To: '05–08 MDXs, '07–08 RDXs, '05–08 RLs, '04–08 TLs, and '06–08 TSXs

Last month, we introduced the second of a five-part series of articles to help you understand the HandsFreeLink® (HFL) and to troubleshoot problems tied to it. In that article we talked about what to do when your service client is having a tough time pairing his or her cell phone. In this article, we'll discuss what to do about dropped calls.

Those Dreaded Dropped Calls

Just mention "dropped calls" to a die-hard cell phone user, and you get grimaces and growls. Service clients may blame those dropped calls on the HFL, but most of the time, though, they're really the fault of the cell phone or wireless carrier. The HFL doesn't directly handle the cell phone signal; it just lets the cell phone transmit the audio over the vehicle's audio system.

Before you troubleshoot for dropped calls, you need to make sure that certain cell phone settings are **disabled**. If they **aren't** disabled, here's what could happen:

- ***Auto Answer:*** Incoming calls will be routed to voice mail.
- ***Always Ask/Trust, Authorize Device, or Similar Setting:*** Each time the HFL tries to link to the cell phone, the cell phone will ask if you want to connect. If you don't allow that connection, the HFL won't work. For permission, the cell phone must be set to **Never Ask**, **Authorize Device**, etc. (based on the cell phone maker and the wireless carrier). Check out the cell phone's operating manual for more info.
- ***Flip Open to Answer:*** The cell phone must stay flipped open in the vehicle. If it's flipped closed, the incoming calls will be routed to voice mail.

Check with the service consultant to find out whether your client's number of dropped calls is higher while using the HFL than when using the cell phone just by itself. Clients often mistake problems with their cell phones or wireless carriers for problems with the HFL itself. Remember, the HFL **can't** control or determine these items:

- Cellular connection quality
- Signal strength
- Cellular coverage
- Weather conditions that can affect cellular signals

When you're working on a vehicle for a dropped-call problem, you need to know your client's answers to these questions:

- *Can you show me what the problem is*?
- *Do you drive the same route on a regular basis?*
- *Does the call drop in the same location?*
- *Does the call drop at the same time of the day or night?*
- *Where do you keep your cell phone when the problem happens?*
- *Have you compared the number of dropped calls using the HFL to the number of dropped calls using the cell phone just by itself?*
- *Does your cell phone have a retractable antenna?*

If they're not written on your RO, check with the service consultant.

Many of the reasons for dropped calls aren't even related to the HFL. For example:

- If the number of dropped calls is about the same when your client uses the HFL than when using the cell phone by itself, it's likely due to the cell phone or the wireless carrier.
- If the cell phone has a retractable antenna, it must be fully extended to get the highest signal strength.
- Keeping the cell phone in a purse, a metal briefcase, under the seat, in the glove box or center console, or in the trunk can have a negative affect on signal reception.

- If your client notices that the calls tend to drop in the same areas, the HFL may be working just fine, but something about that area cuts cellular coverage to a point where the call drops.
- There are gaps in the cellular coverage. While driving, a call gets typically passed from one transmission tower to another. If you happen to be driving through an area where there's a coverage gap between towers, the call drops.
- Mountains or hills, as well as tall buildings, bridges, or other large structures, can block or interfere with cellular signals.
- Thunder storms, heavy rain, or overcast skies can affect signal strength.
- The cell phone's battery charge level can affect signal reception. A low battery can reduce the cell phone's ability to boost the antenna's power and work properly, especially in low signal strength areas. Some cell phone makers give up signal transmission and reception strength for battery life. As the battery gets weaker, the signal strength may also get weaker. Some cell phones may work better than others in low signal strength areas—especially with a partially charged battery, and depending on whether or not the retractable antenna (if equipped) is fully extended. On cell phones with a retractable antenna, always make sure that it's fully extended to get the highest signal strength and to extend battery life.

The Bottom Line

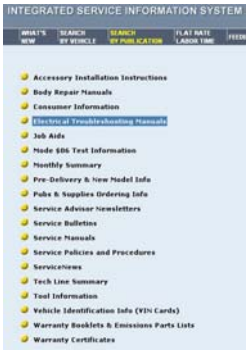
Dropped calls are a fact of life with cell phone use. Most of the time, they're due to problems with the cell phone or the wireless carrier and **not** the HFL. So make sure that you read the RO carefully or check with the service consultant before you start troubleshooting the HFL; it could save you needless time and effort. In next month's *ServiceNews*, we'll show you how to troubleshoot problems connecting to the HFL as well as receiving and placing calls.

Check Out the *New* ISIS!

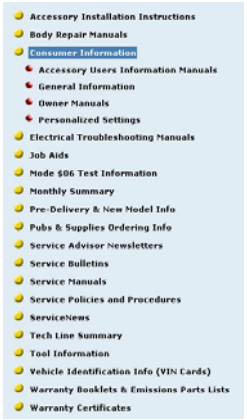
Currently Applies To: General Information

This year, everyone seems to be talking about change. And speaking of change . . . we've recently made some important changes to the **SEARCH BY PUBLICATION** feature in ISIS that we'd like you to know about. Here's the lowdown:

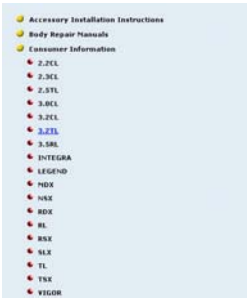
- We've arranged the main menu in alphabetical order so that it's easier and faster to find things. And we've whittled down that menu from 22 publication types to 19 by grouping certain ones together and moving **ISIS Information** over to **WHAT'S NEW** (it's now listed under **Acura System Enhancements**).



- We've revamped the **Consumer Information** submenu to include the **Accessory User's Information Manuals** and **Owners Manual's**. We've also added **General Information** and **Personalized Settings** to that menu.



- We've made it easier to find things in the **Accessory User's Information Manuals, Body Repair Manuals, Electrical Troubleshooting Manuals**, and **Owner's Manuals** submenus by breaking out all supported Acura models in alphabetical order. Just click on a listed model, and you'll see a complete listing of the available manuals for that model.



And this is just the beginning; more changes are on the way. So check out our handiwork. We think you'll like what we've done —it's the **new** ISIS!

ACURA ServiceNews December 2007

Helping you fix it right the *first* time - *every* time

Excessive Steering Wheel Shimmy or Chassis Vibration - Part 3 of 5

Last month, we introduced the second in our five-part series of articles dealing with the issue of steering wheel shimmy and chassis vibration and what it takes to find and fix the problem. In that article, we discussed different types of tire-induced vibrations (cold start, constant, and intermittent) and how to interpret them. We also mentioned something about steering wheel shimmy and how tire phase matching can affect it. In this article, we'll delve deeper into the world of phase matching.

Phase Matching: A Matter of Balance

In our last article, we said that steering wheel shimmy can be caused by static tire imbalance, and it can be either constant or intermittent. If just one front tire is out of balance, the shimmy can be constant. But if both front tires are out of balance, the shimmy can be intermittent. And that's due to what we're calling phase matching.

The most critical speed for tire-induced vibration is from **55 to 65 mph**. At those speeds, a tire spins at a rate of anywhere from **10 to 15 times per second**. When two out-of-balance tires are spinning so that their heavy spots hit the road at different times, they're said to be **out of phase**, and at a certain point, their vibrations can actually cancel each other out. But if both tires are spinning so that their heavy spots are now hitting the road at the same time, they're said to be **in phase**, and their vibrations can actually add together. When those vibrations cancel each other out, you get steering wheel shimmy. When they add together, you get chassis vibration (floorboard shake), although in some vehicles, the steering can be more sensitive than the floor.

As the tires continually come into and out of phase, the steering wheel shimmy continually comes and goes. You feel it grow, reach a peak, and then diminish, over and over again. And when you drive on a curved road or change lanes, that shimmy will happen even more often. For instance, when you turn to the left, the outside tire must travel farther than the inside tire, so it spins **faster**. This constant changing in spin rate while making turns results in more frequent vibration cancelling-and-adding action than you'd get just cruising down a straight road.

One final note on phase matching: The cause of each tire-induced vibration doesn't need to be the same for phase matching to happen. It's entirely possible to have one tire with a poorly seated bead while the other one has a heavy spot.

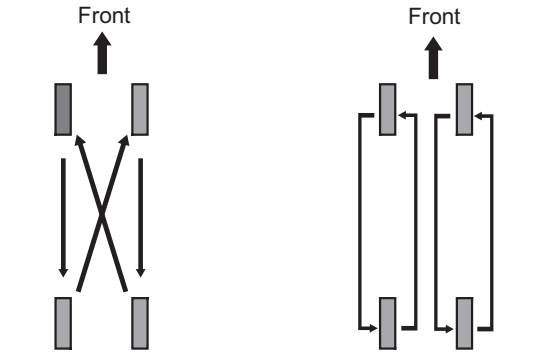
The Bottom Line

So far, we've talked about test-driving your service client's vehicle to identify wheel vibrations. We've then looked at how to interpret those vibrations, and we've explored phase matching in some detail. In the next issue of *ServiceNews*, we'll get into the fix-it side of things, starting with how to read rim runout using the GSP9700 wheel balancer and how to properly mount a tire on a rim.

Replacing Just Two Tires? Mount New Tires *on the Rear*

Currently Applies To: All models except NSXs

To increase tire life and distribute wear more evenly, tires should be rotated at the recommended maintenance intervals. And they should be rotated using the applicable tire rotation pattern that's shown in the O/M. That tire rotation pattern assumes that all four tires have the same amount of wear. So it's reasonable to assume that if you follow the maintenance intervals and stick to the pattern, all four tires should wear slowly and evenly and only need replacement as a four-tire set.



(For Non-directional Tires and Wheels)

(For Directional Tires and Wheels)

Of course, in the real world . . . that simply doesn't happen, so uneven tire wear is a common problem.

If you get a vehicle in your shop that, due to lack of proper rotation, has just two worn tires needing replacement, where should you mount those new tires, on the front or the rear? Well, here's the answer:

*If you're replacing just two tires**, always** mount the new tires **on the rear**.*

With those new tires on the rear, the vehicle can deliver the best overall handling on wet roads.

A Troubleshooting Guide to HandsFreeLink - Part 2 of 5

Currently Applies To: ’05–08 MDXs, ’07–08 RDXs, ’05–08 RLs, ’04–08 TLs, and ’06–08 TSXs

Last month, we introduced the first of a five-part series of articles to help you understand the HandsFreeLink® (HFL) and to troubleshoot problems tied to it. In that article we talked about how to check your service client’s cell phone’s compatibility with the HFL. In this article, we’ll discuss what to do when your client is having a tough time pairing his or her phone.

Dealing With Pairing Problems

Many pairing problems can be fixed simply by tweaking the phone settings. Make sure that the Bluetooth® feature is turned on. To conserve battery power, phone makers often set the default to disable Bluetooth. Cell phones may provide procedures to temporarily power on Bluetooth or power it on. Turn on the Bluetooth feature, and pair the phone to the HFL. To make sure that the phone is successfully linked, turn off the phone and turn it back on and then make or receive a call using the HFL.

When Bluetooth is on, other hands-free accessories such as earpieces or headsets may automatically reconnect to the phone when you turn on that accessory or move it within range of the phone. If this happens, the phone won’t connect to the HFL when you get into the vehicle. Before the HFL can connect, you’ve got to unlink that hands-free accessory from the phone. If it’s not obvious how to do that, refer to the cell phone’s operating manual.

Some phones have an Auto Answer setting that works with a headset. Make sure that this setting is turned off or the HFL can’t accept any incoming calls. If that setting is on, the HFL is blocked from answering incoming calls, and every call will go directly to voice mail. This situation can cause your client to think that his or her phone isn’t paired to the vehicle.

Up to six Bluetooth-compatible phones can be paired to the HFL. If you try to pair an additional phone, the HFL won’t tell you that you can’t; it simply won’t work. To check how many phones are currently paired, press and release the HFL Talk button on the steering wheel. After the beep, say “Phone setup.” The HFL responds with “Phone setup options are status, pair, edit, delete, and list.” Press and release the Talk button. After the beep, say “List.” The HFL responds by listing the name of each paired phone. When all paired phones have been read, the HFL says “The entire list has been read. Returning to the main menu.” Count the number of phones called out by the HFL. If you count six, you’ve got to delete one phone before you can pair an additional one.

Pairing Tips

Here are some handy tips to help ensure a successful pairing:

1. Make sure that the cell phone is compatible with the HFL.
2. Make sure that Bluetooth is turned on.
3. Make sure that the cell phone’s battery is fully charged and there’s a good, strong signal.
4. Make sure that you’re using the HFL Talk and Back buttons on the steering wheel, **not** the navigation buttons.
5. If you’re trying to pair a BlackBerry® or a Palm Treo™ device, make sure that you’re pressing the shift key on the device when entering the four-digit pass code. If you don’t press the shift key, you may be entering letters instead of numbers. The HFL **doesn’t** recognize letters.
6. If you can’t get the phone to pair with the HFL, try doing a soft reset by turning off the phone and turning it back on.

For more info on pairing, refer to the cell phone’s operating manual or go to *www.acura.com/handsfreelink*. In next month’s *ServiceNews*, we’ll deal with troubleshooting those dreaded dropped calls.

VSA Indicator On With VSA DTC 91? Read This First

Currently Applies To: ’07–08 MDXs

Got a vehicle in your shop with the VSA indicator on and VSA DTC 91 (F-CAN communication)? Before you consider replacing the VSA modulator-control unit (VSA modulator assembly), remember what this DTC is all about. VSA DTC 91 sets when one of the other vehicle systems sets a DTC or when the VSA system has other DTCs and sends an error message by way of F-CAN to the VSA modulator-control unit. Every other system has the potential to set this DTC. Even low battery voltage can be a culprit.

So, if you’ve got VSA DTC 91, know that it’s **not** a problem with the VSA modulator-control unit, but with another component in the VSA system or something else in another system. Use the HDS to check all systems for DTCs, then troubleshoot those other DTCs first.

CMBS DTC 103 After VSA Modulator-Control Unit Replacement

Currently Applies To: ’06–08 RLs

Replacing the VSA modulator-control unit? Make sure that you’re installing the right replacement unit. If you install a replacement unit that’s made for a vehicle **without** the collision mitigation braking system (CMBS) on a vehicle **with** CMBS, you’ll wind up with CMBS DTC 103 (CMBS brake control prohibition).

You can avoid this problem by referring to this handy chart:

	RL	RL Hawaii	RL Alaska	Technology Package	CMBS/PAX Package
2006	57110-SJA-A02	57110-SJA-A02	57110-SJA-A02	N/A	57110-SJA-A92
2007	57110-SJA-A02	57110-SJA-A02	N/A	57110-SJA-A02	57110-SJA-A92
2008	See Note	See Note	N/A	See Note	57110-SJA-A92

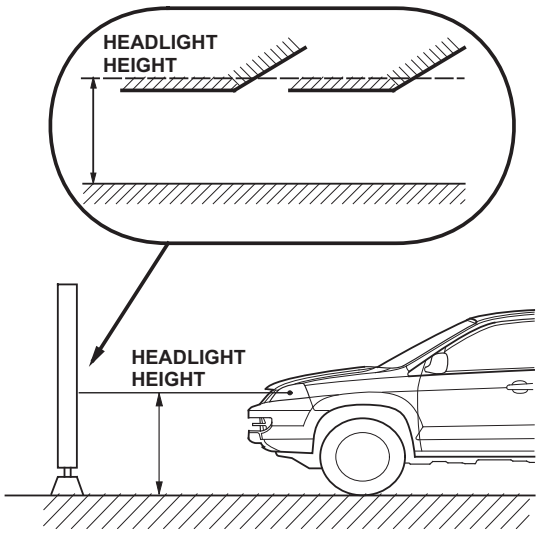
NOTE: VIN JH4KB16..8C000001 thru JH4KB16..8C002636, use 57110-SJA-A02.
VIN JH4KB16..8C002637 thru JH4KB16..8C999999, use 57110-SJA-A03.

Always Refer to Applicable S/M When Adjusting Headlights

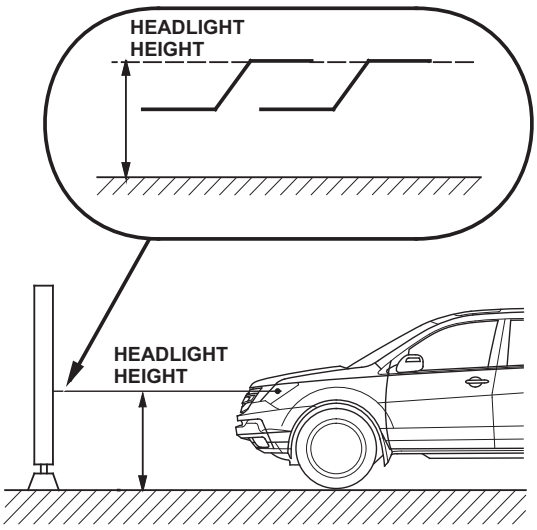
Whenever you’re adjusting the headlights, *always* refer to the procedure in the applicable S/M or in ISIS. Adjustment procedures can vary from model to model and from model year to model year, depending on what type of headlight is being used.

To show you just what we mean, here are two S/M excerpts from different model year MDXs. The ’03 MDX has a visually optically aligned left (VOL) style of headlight; you adjust the headlight just below the headlight height. The ’08 MDX has a visually optically aligned right (VOR) style of headlight; you adjust the cut line to the headlight’s height.

VOL STYLE:



VOR STYLE:



Seat Won't Go to Memorized Driving Position When Opening Door

Currently Applies To: '07–08 MDXs, '05–08 RLs, and '04–08 TLs

Got a vehicle in your shop because the driver's seat won't go to its memorized position when you open the door? Here's what you need to do to find and fix the problem:

1. Using a keyless remote, lock and unlock the doors.
2. Check to see if the remote is linked by opening the driver's door and turning the ignition switch to ON (II).
   - If you see **WELCOME DRIVER 1** or **WELCOME DRIVER 2** in the MID, the remote is linked. Go to step 3.
   - If you don't see **WELCOME DRIVER 1 or WELCOME DRIVER 2** in the MID, you need to link the remote. Press and hold the remote's LOCK and UNLOCK buttons at the same time until the LED on the remote blinks once (it's twice for RLs), then release the buttons. Go to step 3.
3. Adjust the seat to a new position, and store that position in memory.
   - Press and release the **MEMO** button on the driver's door.
   - Immediately press and hold the memory **1** button until you hear two beeps. The indicator in the button comes on, telling you that the seat position is now stored.
4. Adjust the seat again. Then press the memory **1** button until you hear a beep, and release it.
   - If the seat goes back to its memorized position, go to step 6.
   - If the seat doesn't go back to its memorized position, troubleshoot the DPMS according to the applicable S/M or ISIS (MDXs and TLs) or go to step 5 (RLs).
5. Check the **MEMORY POSITION LINK** setting in the MID.
   - If **MEMORY POSITION LINK** is set to **OFF**, set it to **ON**. Then go to step 6.
   - If it's already set to **ON**, go to step 6.
6. Open the driver's door, and make sure that the interior lights come on with the ceiling light switch in the door activated (center) position. (The DPMS must see a door open signal from the door switch circuit.)
   - If the interior lights come on, troubleshoot the DPMS according to the applicable S/M or ISIS.
   - If the interior lights don't come on, test the driver's door switch and replace it if needed.

New Software for HDS: Version 2.012.013

During the week of December 10, 2007, each Acura dealership was sent a new CD containing HDS software version 2.012.013. This new CD sports a lime green label that reads **HDS VER 2.012.013**, and it's dated December 2007. Your system administrator should have this software already loaded onto the master server.

Here's some important info on 2.012.013:

- It includes updated ECM/PCM software for various models.
- It enhances the verbiage for the data list parameter help screen.
- It includes an updated internal file transfer schedule.

AUTOMOTIVE Youth Educational Systems YES ®

ACURA ServiceNews

BSN 38433 (0712)

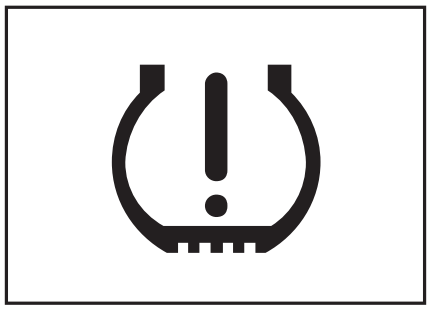
ACURA ServiceNews November 2007

Helping you fix it right the *first* time - *every* time

Inflating Tires for Low Tire Pressure Indication *Is Not* a Warranty Repair

Currently Applies To: Acura models with TPMS

Throughout this year, we've run a handful of articles telling you about the low tire pressure indicator in Acura vehicles with TPMS. And in each of those articles, we've hammered home the point that this indicator is like a "low fuel indicator" for the tires; its sole purpose is to warn you that one or more of the tires is low on air. We've also stressed that any repairs claimed for low tire pressure or normal tire pressure loss **is not** covered by Acura warranty unless the cause is traced to a manufacturer defect. Yet we keep seeing warranty claims for inflating the tires just to turn off that little indicator.



According to NHTSA regulations, the low tire pressure indicator **must** come on when the tire pressure is **25 percent below** the listed recommended cold inflation pressure. To guard against tolerance variations, the low tire pressure indicator in Acura vehicles with TPMS is set to come on when the tire pressure drops to around **20 percent**. All Acura O/Ms recommend that the tire pressures be checked and set at least **once per month**. And they should be checked **cold**, which means that the vehicle has been sitting for at least **3 hours** or driven for less than **1 mile**.

All tires—even those in good condition—lose tire pressure naturally for a number of reasons, but mainly because they're porous. It's common to lose up to **1.5 psi per month**. Secondly, it's a scientific fact that tire pressure drops with a drop in temperature. You can count on a loss of **1 psi** for every **10 degrees** of temperature drop. Here's what can typically happen:

> It's August 1, and the outside temperature is a balmy 80°F. The vehicle owner checks and sets his or her tire pressures to 32 psi—just like it says on the driver's doorjamb sticker and in the O/M. We fast forward to November 1, and the outside temperature is now a nippy 50°F. The owner checks the tire pressures, but now they're reading only 25 psi, and on top of that, the low tire pressure indicator in the dashboard is on and the TPMS control unit has set a low tire pressure DTC.

It's really the vehicle owner's responsibility to check and set the tire pressures; otherwise, that low tire pressure indicator is going to be coming on. And in cold weather . . . that could happen a lot. If you get a vehicle in your shop because the low tire pressure indicator is on or has been intermittently coming on, before you start any sort of troubleshooting, remember what that low tire pressure indicator is telling you. It's **not** saying there's a problem with the TPMS, so hold off on heavy troubleshooting.

To make things right, first check the tire pressures. If they're lower than the recommended cold inflation pressures, fill the tires to their recommended pressures. If the low tire pressure indicator stays on after you've done that, drive the vehicle **over 30 mph** for about **1 minute**—the indicator should go out. If it goes out, you're done with this repair. If it stays on—or you suspect there's a leak—then it's high time to start troubleshooting. And although one or more of the low tire pressure TPMS DTCs (11, 13, 15, or 17) will have been set in the TPMS control unit, don't bother clearing them—they just stay in memory.

So here's the bottom line: The low tire pressure indicator is like a "low fuel indicator" for the tires. Normal tire pressure loss **is not** covered by Acura warranty, unless it's traced to a manufacturer defect. So that means adding air to the tires just to turn off the indicator **is not** a warranty repair. Think of it as just a maintenance thing—it's really no different than filling up the fuel tank when the low fuel indicator comes on.

Window Film Can Block Electronic Device Signals

Many aftermarket high-performance metallic and ceramic automotive window films can actually block signals associated with common electronic devices such as cell phones, a GPS antenna for a navigation system, or keyless remotes. They can also create audio reception issues and even interfere with a tire pressure monitoring system.

If you're working on an Acura vehicle for a keyless remote or a TPMS problem—and you suspect that window film is the culprit—here's a tip: Try lowering the windows all the way down. If the problem goes away, the window film is blocking the signal.

NOTE: This tip **won't** work for reception problems associated with the audio unit (AM, FM, and XM) or the GPS antenna. For those problems, you need to find out what type of window film was applied.

Blue Arrows Mean One-Way Traffic

Currently Applies To: ’08 MDXs, RDXs, RLs, TLs, and TSXs

Here’s something to kick up your product knowledge: The navigation system has a new feature that displays blue arrows to indicate one-way traffic.

This feature works **only** when you select **ICON OPTIONS** from the icon bar, **Other icons** from the **Select category for icon settings:** screen, and **ONE WAY (1/20 mile)** from the **Select other icons:** screen.

Male Voice Prompts Gone From ’08 Navi DVDs

Currently Applies To: ’05–08 MDXs, ’07–08 RDXs, ’05–08 RLs, ’07–08 TLs, and ’06–08 TSXs

Here’s something you need to know about: To make room for more points of interest and other features, we’ve removed all male voice prompts from current ’08 production navigation systems. This also applies to the **white** and **green** navigation system update DVDs that are available from the Honda Navigation Disc Fulfillment Center, so it affects owners of older vehicles who want to upgrade their DVDs.

As a result, the navigation system user’s manual in some early production ’08 vehicles may show the **SETUP** screens that were available to change the voice prompt from female to male. Future releases of those manuals will be revised to eliminate that option.

And if that’s not confusing enough, some early production ’08 vehicles may have come with a ’07 production navigation system DVD, which includes those now-absent male voice prompts. If the vehicle also came with a 2nd release navigation system user’s manual, that manual won’t match the DVD since it mentions nothing about those prompts.

SRS Indicator On With SRS DTC 81-79 After Body Work

Currently Applies To: ’03–08 MDXs, ’07–08 RDXs, ’05–08 RLs, ’05–08 TLs, and ’06–08 TSXs

Got a vehicle that’s back from the body shop with the SRS indicator on and SRS DTC 81-79 (front passenger’s weight sensors drift check failure, front passenger’s weight sensors initial check failure)? Binding of the seat base, the seat weight sensors, or both can cause this problem. Here’s how you fix it:

1. Loosen all four front passenger’s seat base mounting bolts.
2. Grab a hold of the seat, and give it a good shaking. (This neutralizes the seat base.)
3. Tighten the seat base mounting bolts according to the applicable S/M.
4. Do the seat weight sensor calibration procedure in the applicable S/M using the measured weight.

   Handy Tip: A case (**6 gallons**) of Acura Precision Crafted Longlife Antifreeze/Coolant Type 2 makes an ideal measured weight for seat weight sensor calibration. It weighs about **58 pounds**. Nevertheless, **always** check the actual weight before entering it in the HDS.

No *Negative* A/F Sensor Output With Gen Scan Tools

Currently Applies To: ’07 MDXs and ’07 TLs

Here’s something you need to keep in mind when troubleshooting: If you’re using a generic scan tool to read the A/F sensor output, the tool **doesn’t** show you negative (rich) values. Whenever the output is negative, you’ll always see **0 mA**.

Interior Lights Stay On With Doors Closed

Currently Applies To: ’07 RDXs

A bad multiplex integrated control unit (MICU) in the driver’s under-dash fuse/relay box can cause the interior lights to stay on when:

- The front ceiling light switch is in the “door activated” (center position).
- All the doors are closed.
- The ignition switch is turned to LOCK (0).

When you slide the front ceiling light switch to the off position, the interior lights go out. To fix this problem, replace the MICU.

Excessive Steering Wheel Shimmy or Chassis Vibration - Part 2 of 5

Last month, we introduced the first article in a five-part series that will look at the whole issue of steering wheel shimmy and chassis vibration and what it takes to fix the problem. In that article, we gave you a step-by-step procedure to test-drive your service client's vehicle. The final step of that procedure was to test-drive a known-good vehicle and compare your two test-drives. If your client's vehicle was similar or better than the known-good, you were told the vibration was a normal characteristic of the vehicle. This article deals with the situation where your client's vehicle was noticeably worse than the known-good. Before you can move ahead, you've got to interpret the vibration.

Cold Start Vibrations

Temperature/Time-Related Flat Spots

When you park a vehicle overnight in cold temperatures or park it for a few days, weeks, or months, the tires can form what are commonly called flat spots. These flat spots can cause a noticeable vibration when traveling at low speeds that goes away after just a few miles of driving.

Due to their construction and materials, many heavy-duty and high-performance tires have a memory— meaning they continue to remember the position in which they were last parked when you begin driving again. Unfortunately, that memory can become a problem when the tires go through wide swings in ambient temperature, or they've been sitting overnight in cold temperatures or for a long period of time.

When a tire is suspended in the air (there's no load on it), each of the sidewall cords has the same tension. As the tire rolls on the ground, each of those sidewall cords goes from a relaxed state to a loaded state for every rotation. And this happens about **800 times every mile**. This constant deflection generates heat, which makes the tires more flexible. But once you park the vehicle and those tires start to cool, the spot that's touching the ground (the tire's footprint) flattens and the cords around that spot relax as the tire presses down from the weight of the vehicle. The cords at the top of the tire, however, are held at their maximum tension. If it's cold overnight or you don't drive the vehicle for a while, the tire will remember its position, forming a flat spot. After a cold start, the axle rises and falls in response to that flat spot, causing a noticeable vibration. But as tire warms up, it softens, and normally rounds out. With the axle now riding steady, the vibration goes away.

A flat spot can be just temporary, where the tire rounds out after it warms up. But sometimes it can also be permanent in which the tire's memory effectively destroys its ride quality. A flat spot's severity often depends on the tire's size, its construction, the load it's under, the ambient temperature, and how long it's been sitting and at what temperature. If the tire has a temporary flat spot, **don't** replace the tire just because of it. Of course, if that flat spot is permanent, the only real cure is tire replacement.

Abrasion-Related Flat Spots

Tires can also develop flat spots if the brakes lock up causing them to skid. This is more likely to happen in vehicles without ABS or VSA or if you misuse the parking brake. Since these flat spots are obviously permanent, the only real cure is tire replacement.

Constant Vibrations

A badly mounted tire bead can cause vibrations that you can feel right through the seat, the floor, and the steering column while driving. The steering wheel can also shimmy. In rare cases, more than one tire can be the culprit. If the tire looks new—and you suspect a badly mounted bead—you need to measure the tire/rim runout if you've got access to a Hunter GSP 9700 wheel balancer. If you don't have access to one, you need to mount a known-good stock tire and rim and test-drive your customer's vehicle under the same conditions that are listed on your RO. We'll be discussing exactly how to do this in future articles of this series.

Intermittent Vibrations

Vibrations that you can feel while driving that come from tires, rims, hubs, and brakes happen when you're going **50 mph or faster**. And they tend to get stronger when you reach about **70 mph**.

NOTE: If you feel the vibration **only** when you're driving between **45 and 55 mph**, this article **doesn't** apply. You may be dealing with a vibration from another source.

Intermittent wheel vibration normally **isn't** affected by these factors:

- Engine speed
- Gear selection (this includes Neutral)
- Engine load
- Hill climbing
- Acceleration
- Deceleration

But if it **is** affected by one these factors . . . then stop right here. You may be dealing with a vibration from another source (exhaust, engine, A/C, etc.).

(cont'd)

Excessive Steering Wheel Shimmy . . . (cont'd)

Often, the wheel vibration is intermittent because of tire phase matching.

Steering Wheel Shimmy

Steering wheel shimmy can be caused by static tire imbalance. Static balance is simply the wheel's weight distribution while it's **at rest**. When one part of the wheel (the tire, rim, hub, or brake disc) is heavier by **more than 7 grams**, you can feel this as a shimmy. If one wheel is out of balance, the shimmy will be constant. If two wheels are out of balance, it will be intermittent because of phase matching.

You may notice that the vibration tends to come and go more often when driving on curved roads. This is a good indication of phase matching. In the next issue of *ServiceNews*, we'll discuss phase matching in a lot more detail.

Security System Sounds by Itself

Currently Applies To: '07–08 MDXs, '07–08 RDXs, '05–08 RLs, '04–08 TLs, and '04–08 TSXs

When the security system sounds, the B-CAN stores the last input (security breach history data) that set off the alarm. If you've got a vehicle in your shop because the security system sounded by itself for no apparent reason, you can use the HDS to access that stored history data to help you find and fix the problem. Once you've found and fixed the problem, you'll then want to use the HDS to clear that history data before you wrap things up. Here's how you do it:

To access the last security breach history data:

1. Connect the HDS to the 16P DLC.
2. Turn the ignition switch to ON (II).
3. From the **System Selection Menu**, select **BODY ELECTRICAL**.
4. From the **Mode Menu**, select **Security**.
5. From the **Security Menu**, select **HISTORY DATA**.
6. Scroll down and select the last entry posted.

To clear the last security breach history data after you've found and fixed the problem:

1. Return to the **Security Menu**, and select **HISTORY CLEAR**.
2. Turn the ignition switch to LOCK (0).
3. Disconnect the HDS.

Accessory Trunk Spoiler Is Loose or Lifting Up

Currently Applies To: '04–08 TLs

If you get a vehicle in your shop with an accessory trunk spoiler that's loose, that's lifting up on either end or bowing in the middle, or is doing both, check to see if the flange nuts are securely in place and tighten them if needed. If the trunk spoiler is still loose or lifting up, chances are it wasn't installed properly and the holes for the studs are misaligned.

To fix the problem, you've got to replace the spoiler, since the adhesive from the original one is probably no good. For a quality job, make sure you follow the installation instructions carefully. Clean the trunk lid, then use the two templates A and B from the kit to see if the original holes in the trunk are properly aligned. If they are, go ahead and mount the replacement spoiler and torque the flange nuts to spec. If they aren't properly aligned, use a round file to open up the holes until they are, then apply paint to the holes to prevent rust. When the paint is dry, mount the replacement spoiler and torque the flange nuts to spec.

A Troubleshooting Guide to HandsFreeLink - Part 1 of 5

Currently Applies To: All '06–08 vehicles with HandsFreeLink

One of the cool features that reminds us the future is now is Acura's HandsFreeLink® (HFL) system. With a compatible Bluetooth® cell phone, you can receive and place calls while driving and never have to take your hands off the steering wheel.

As with any new, cutting-edge technology, though . . . it comes with a price. The HFL system can be a tough challenge to troubleshoot and repair. HFL system problems are complicated by the fact that it's only one part of a much bigger system. You're not just dealing with the HFL system in the vehicle, but also your service client's cell phone, the navigation system (if the vehicle has it), and even how your client works the HFL system (some problems simply stem from "pilot error"). And something else you need to keep in mind: The HFL system uses the cell phone to provide hands-free operation; it does nothing to kick up performance. Any problems with static, poor signal strength, poor sound quality, or dropped calls are the cell phone's or their wireless carrier's doings and **not** something you can fix by tinkering with the HFL system.

(cont'd)

A Troubleshooting Guide . . . (cont'd)

This article is the first of a five-part series of articles to help you understand the HFL system and to troubleshoot problems tied to it. We begin the series with a discussion on how to check a cell phone's compatibility with the HFL system. In future articles, we'll show you how to troubleshoot problems with pairing, problems with dropped calls, and problems with receiving and placing calls. And finally—as an extra bonus—we're going to toss in a handy glossary of terms that deal specifically with the HFL system.

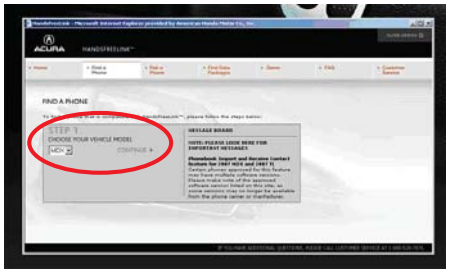
Checking Cell Phone Compatibility

The HFL system works **only** with approved Bluetooth-enabled cell phones with a hands-free profile. The most important step in troubleshooting an HFL problem is to identify your client's cell phone model, the software version it's loaded with, and your client's wireless carrier. Not all cell phones with Bluetooth and a hands-free profile are compatible with the HFL system. If you're not sure that the cell phone you're working with is compatible with the HFL system, call HandsFreeLink Consumer Support at **888-528-7876** and a representative will answer your questions. You can also visit their website at *www.acura.com/handsfreelink*.

Here's the best way to make sure that the phone you're working with is compatible:

1. Log onto *www.acura.com/handsfreelink.*
2. Click on **Find a Phone**.

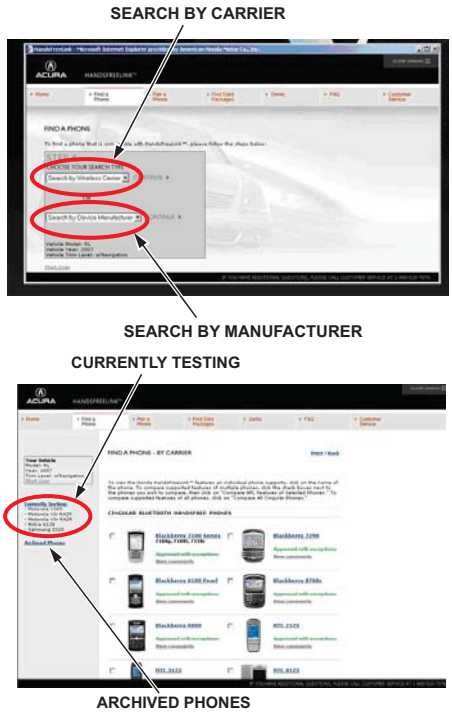
3. Choose the vehicle model that you're working on, then click on **CONTINUE**.



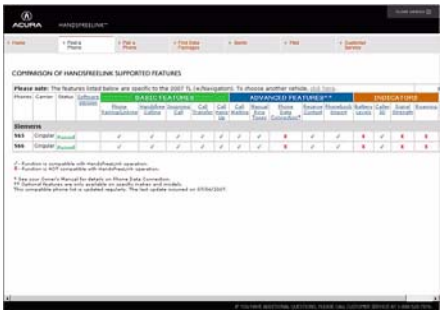
4. Choose the vehicle model year, then click on **CONTINUE**.

5. Choose the vehicle trim level, then click on **CONTINUE**.

6. Choose your search type (you can search by either carrier or device manufacturer), then click on **CONTINUE**. You'll see a list of all current model phones that have been tested with the Acura HFL system. If you don't see the phone that you're working with on this list, look under the **Currently Testing** list and the **Archived Phones** list. If you don't see your phone listed anywhere on the website, consider it to be incompatible with the HFL system.



7. If you see the phone model that your client is using, click on it. You'll see the HFL supported features for that phone.



NOTES:

- The approved, archived, and currently testing phone model lists are always changing, so make sure you check them whenever you've got a vehicle with an HFL issue.
- New phones are added as they're approved.
- A phone can be removed from the approved list if a software bug is discovered that makes that phone incompatible. The phone can be added back to the approved list if the device manufacturer fixes the bug.
- If the software bug is fixed, a new software version is created and may be listed in the Supported Features section of the phone.
- The Acura website now includes the software versions that are tested and approved. When software versions are listed, you need to know which version is loaded on the phone that you're working with to help you troubleshoot your client's complaint.

If you can't get onto the Acura website, call HandsFreeLink Consumer Support at **888-528-7876** for further help. It's open **Monday thru Friday** from **6:00 a.m. to 6:00 p.m. CST**; **Saturday** from **7:00 a.m. to 6:00 p.m. CST**; and **Sunday** from **8:00 a.m. to 6:00 p.m. CST**.

In the next issue of *ServiceNews*, we'll discuss what to do when you have pairing issues.

AUTOMOTIVE Youth Educational Systems YES ®

ACURA ServiceNews

BSN 38291 (0711)