ACURA ServiceNews May 1995

Trans Shifts Harshly After Changing ATF

Complaints of harsh upshifts and downshifts after changing the automatic transmission fluid (ATF) may be caused by the brand or quality of the replacement ATF. All ATFs are *not* the same.

The factory fill and the recommended replacement ATF for all Acuras is Honda Premium Formula Automatic Transmission Fluid. We have nothing against the other major ATF manufacturers, but our ATF was specifically formulated for our transmissions. Their fluids weren't. You *can* use Dexron II, IIe, or III, but expect a noticeable change in shift quality (and possible complaints from customers).

2.5TL/'95 NSX: PGM Tester Readings

The current version of the PGM Tester Program card (4.01) does not contain the "Troubleshoot Mode" for the '95-96 2.5TL and the '95 NSX. If you have a PGM-FI problem with any of these models before the next program card release, follow the troubleshooting procedures in the appropriate S/M, and use the PGM Tester like a generic scan tool.

When you use the PGM Tester like a generic scan tool, you'll find that some of the Data List and Snapshot readings use scales that differ from a true generic scan tool and the S/M. If you have any diagnostic trouble codes (DTCs) for the throttle position (TP) sensor, the engine coolant temperature (ECT) sensor, or the intake air temperature (IAT) sensor, call Tech Line so they can help you interpret those sensor readings.

Flywheel Resurfacing

Because of the stepped pressure plate mounting surface on all our cars, flywheel resurfacing is not recommended. The flywheel should be replaced if

- The friction surface runout exceeds the S/M specifications, or
- The friction surface is deeply grooved, or
- The flywheel has heat cracks that may affect its integrity.

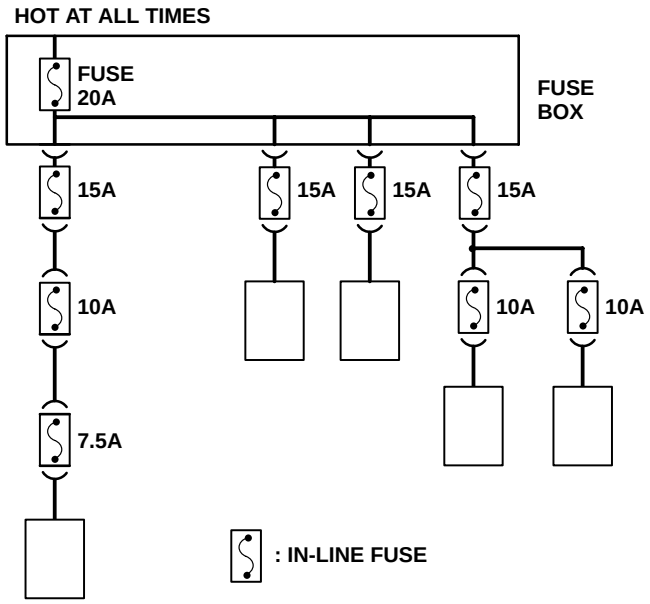
Small heat spots, some slight discoloration, or slight grooves are *not* reasons to replace the flywheel. In those cases, simply replace whatever clutch parts are needed, and button it up.

Isolate Shorts With In-Line Fuses

Locating short circuits is often time-consuming and frustrating, but here's a way to ease some of the pain. Use in-line fuses to isolate the portion of the circuit that's overloading the car's fuse.

Use your ETM to identify and locate the connectors in the problem circuit. Remove the terminal from the connector where you want to add the in-line fuse, and find matching terminals in the terminal pin kits (T/N 07JAZ-003000B or 07QAZ-003020B). Add a matching male and female terminal to an in-line fuse holder such as Radio Shack's P/N 270-1213 (or an equivalent).

When you install the in-line fuses, use a lower capacity fuse at each subsequent in-line fuse adapter (highest capacity nearest the fuse box, lowest capacity nearest the component). Never increase the capacity of the fuse box fuse; the short may damage the wire harness. After all the in-line fuses are installed, operate all the components on the circuit. Based on which in-line fuse blows, you've isolated which portion of the circuit (or which component) is shorted.



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BSN 17171 (9505)

Vehicle “Pulls” to One Side at Highway Speeds

If you ever find yourself with a repair order that reads “Car pulls to right (or left) at highway speeds,” do yourself a favor: Verify the customer’s complaint before doing anything else. Why? Because you’d be surprised at what makes some customers think their cars are “pulling.” (Service advisors take heed.) Here are some examples:

- *Steering wheel off center:* Some customers will say their cars “pull” just because the steering wheel isn’t centered when the car is going straight. Then they’re really convinced it pulls when they try to center the steering wheel *and* drive straight!
- *Crosswinds and passing trucks:* Some customers will say that their cars pull only under certain conditions. When pressed for more details, it often turns out that the car only pulls when driving on a section of highway that has very strong crosswinds or when being overtaken by fast-moving 18-wheelers.
- *Sloped and crowned roads:* This is the most common cause of “pulling” complaints. Virtually all roads are sloped or “crowned” to some degree to allow for drainage, and it’s natural for the car to head down the slope or “follow the crown.”

Before you test-drive the car, check all four tires. Ideally, all four tires should be the same size, brand, and type. At a minimum, the two front tires must match each other and the two rear tires must match each other. None should show any extreme or unusual wear. If the tires don’t meet these criteria, it’s a waste of time to evaluate the pull. If the tires look OK, check the tire pressures before you go for a drive. If the tire pressures are way out of spec, especially side to side, you may have found the problem.

After setting the tire pressures, try to drive the car under the same conditions experienced by the customer. If possible, drive the same sections of road, and have the car loaded (side-to-side) the same as the customer usually does.

Since it’s not always practical to drive the same section of road that the customer drives, you should find a section of road near your dealership for evaluating pull. The ideal “test road” would have at least two lanes, have both a left and a right crown, and have a 55-65 mph speed limit.

If you can’t find this ideal section of road, then find two sections of road with at least two lanes: one section with a left crown and one section with a right crown. Then get real familiar with your test road; use it for other test drives as much as possible. The more familiar you are with how an “average“ car handles on your test road, the easier it’ll be to evaluate a car with an *alleged* pulling problem.

While driving, relax your grip on the steering wheel so you can feel the pull, and try it on both left- and right-crowned roads. If the pull is hardly noticeable and always in the same direction as the crown, no adjustment or repairs are necessary; the car is just following the crown. If the car always pulls in the same direction, even against the crown, then check the tires and the alignment.

Tires: Swap the front tires side to side, and recheck the direction and severity of the pull. (Use the same section of road.) If swapping the front tires eliminates the pull, you’re done. If the pull is the same, go to “Alignment.” If the pull is now in the opposite direction, one of the front tires is the cause.

The next step is to isolate the front tire that’s at fault, and rotate it to the rear. (Obviously, you can only do this if all four tires are the same.) Switch the left front tire with the left rear tire. If the pull is gone, you’re done. If the pull is the same, switch the right front tire with the left rear tire. If the pull changed direction (after the first front-to-rear swap), switch the left front tire with the right rear tire. If the pull is now gone, you’re done. If not, go to “Alignment.”

Alignment: Put the car on an “approved” alignment rack (see S/B 89-020, *Required Special Tools and Equipment*), and record all the alignment settings.

The side-to-side difference in front wheel camber (camber stagger or cross camber) should be 30’ (0.5 degrees) or less. Pull caused by camber stagger will always be toward the side with more positive camber. Eliminate or reduce the camber stagger by loosening and shifting the rear beam, the lower control arm pivots, and the upper control arm pivots as needed. Retorque all suspension fasteners to make sure that they don’t slip and change the alignment settings.

The side-to-side difference in front wheel caster (cross caster) should be 30’ (0.5 degrees) or less. Pull caused by cross caster will always be toward the side with less caster. If the cross caster is more than 30’, refer to the appropriate S/M to determine if the caster is adjustable. If the caster is adjustable, equalize it to within 30’ (0.5 degrees).

After setting the camber and caster, recheck the front and rear toe settings. If necessary, reset the toe to the normal specifications.