

General Information

Modifications = Headaches

Modifications to Honda products are not good things. They seem to have tentacles that stretch on for the life of the product. They can cause customer complaints and problems when troubleshooting. It's not good for your customer's satisfaction and your dealership's or Honda's reputation.

Whenever you're troubleshooting a customer complaint, always check to see if the customer has made any modifications to the original product. If the product has been modified, your troubleshooting may not be able to come straight from the "book."

You're going to have to find out how the modification may affect the customer's complaint. Remember, the troubleshooting in the shop manual may not be relevant, and the product warranty may not cover the repair.

If a customer modification causes strain on any component and directly or indirectly results in the customer complaint, the repair is not covered by the product warranty. Let's say a customer made a modification to the wiring harness and an electrical component fails, it probably will not be eligible for warranty consideration. However, if on the same unit a weld on the frame breaks apart (without signs of an accident), the frame may be covered under warranty. If you are in doubt, always call Techline before you get too deep in the repair (preferably before). You can save headaches for you and your customer.

Honda products are designed to provide long life and outstanding performance when operated as designed. When a product is modified for a specialized use, the modification may inadvertently compromise the performance and warranty of the product; not a good thing at all.

Charging System Troubleshooting

A Charging System Troubleshooting poster is being sent to all dealers to help diagnose charging system problems. If your dealership wants more posters, call Helm at (888) 292-5395 and order TE435.

Special Tool

Snowblower Tire Pressure Gauge

Honda 2-stage snowblowers have special low-pressure tires for good traction in snow and on ice. The recommended inflation pressure for these tires is only 8.5 psi. When over inflated, these special tires may become deformed and may not return to their original shape and size. Many automotive tire pressure gauges do not accurately measure pressure under 10 psi. Honda Special Tools has a low pressure tire gauge available: Tool Number YA884.

Call (888) 424-6857 and order yours today!

Also, it is a good idea to replace these tires as a set. If you replace only one tire, the new tire can have a slightly smaller diameter and can cause the snowblower to be uneven.



Earn Fifty Dollars

Help Make Repairs Easier

You often develop a better way to accomplish a task or procedure than those published by Honda. If you have a better way to repair some area of our product, please let us know.

If we publish your information, we will send you a gift certificate for \$50.00.

Send your tip to:
American Honda Motor Co., Inc.
Attention: PE Tech Tips
4900 Marconi Drive
Alpharetta, GA 30005



Ethanol and Honda Engines

Honda engines are designed and certified to run on regular unleaded gasoline. Honda product owner's manuals specify a maximum of 10% ethanol in gasoline for our products; other oxygenates are also listed. Honda engines are designed for good performance and efficient operation using gasoline containing from 0 to 10% ethanol.

Some interesting facts about ethanol include:

- Ethanol is produced from corn, soybeans, sugar cane, and other organic material. It is blended with gasoline (10% ethanol, 90% gasoline) to produce E10.
- Ethanol has less energy than gasoline, so it reduces fuel efficiency.
- Ethanol is an excellent solvent. In high concentrations it will clean and dissolve deposits, rust in the fuel system, and some fuel tank materials. The dissolved material can clog filters or pass through and leave deposits on carburetor jets.
- Ethanol is hygroscopic, which means it attracts and retains water. The lower the fuel level in the tank, the more likely you are to experience water contamination. Water from the air ends up in your fuel tank and engine.

E85, a mixture of 85% ethanol and 15% gasoline, has been in the news recently. E85 is an alternative fuel; it is not gasoline. Honda engines are not designed or certified to run on E85.

Refer to the owner's manual for your Honda to get information about the recommended fuels and the currently approved additives.

To help prevent water contamination problems when using E10, always keep your fuel tank full when storing your equipment.

Help for the Customer

Fuel System Preventive Maintenance

We've included two copies of Fuel System Preventive Maintenance for Honda Engines with this issue of Tech Tips. Hang one in your parts or service area for all of your customers to review, and keep one in the shop area for all of your employees to read.

Fuel Tank Nut Wrench

Here's a great Tech Tip submitted by Jack Murray of Harvester Small Engine in St. Peters, MO.

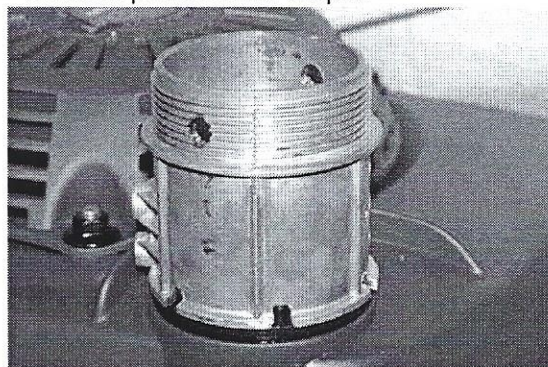
This handy tool will help you remove and reinstall plastic fuel tank nuts quickly and easily for recall service bulletin #79. Here's how to make your own.

Purchase a 2-inch EMT electrical connector (2-inch aluminum conduit coupler). They're about \$3.00 at national hardware chain stores.

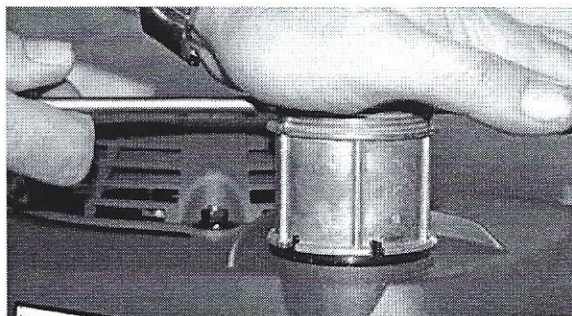
1. With the fuel cap removed, slide the coupler over the top of the fuel tank.
2. Mark the locations of all six fuel nut ribs. Make each mark 2 mm wide and 5 mm long.



3. Use a die grinder or hack saw blade to remove the material in the marked area.
4. Drill two 1/4-inch to 3/8-inch holes through the threaded portion of the coupler.



5. Insert a screwdriver into the drilled holes for leverage when removing or installing a fuel tank nut.



Fuel System Preventive Maintenance for Honda Engines

Fuel deterioration is a significant issue affecting carbureted engines. This may cause engine hard starting, fluctuating or no idle, hunting or surging at full throttle, or low power. Current gasoline formulations have a limited shelf life when exposed to heat and air, and can deteriorate in as little as 3 to 4 weeks. So if your equipment is only used once a month or so, storage preparation should be considered. You cannot avoid the problem, but you can prevent it easily and inexpensively.

When exposed to air or heat, the fuel in a carburetor's float bowl begins to oxidize, turning into a varnish-like or gummy substance that will restrict or block the carburetor jets. All carburetor float bowls are vented to the atmosphere, allowing the fuel to oxidize at a slow, steady rate.

The gasoline in the equipment's tank is also exposed to the air through the tank's vent. To slow the deterioration of gasoline in the tank, keep as much air as possible out of the tank by keeping the tank full during periods of storage.

The *Distributor's Limited Warranty* does not cover fuel system damage or engine performance problems resulting from improper storage.

You can either drain the gasoline from the fuel tank and carburetor or use a fuel stabilizer.

Using a Fuel Stabilizer

Use a fuel stabilizer if you will use the equipment on an infrequent basis, less than one year between uses.

To counteract the deterioration of gasoline, use a fuel stabilizer at the recommended ratio. The amount of stabilizer required varies, depending on how long the fuel will be stored. Follow the manufacturer's instructions listed on the fuel stabilizer container. If you use your equipment less than twice monthly, you should keep fuel stabilizer in the equipment's fuel tank at all times. Be sure you run your engine for at least 10 minutes after adding the stabilizer. This allows the stabilized fuel mixture to reach and fill the carburetor.

Draining the Fuel

It is suggested that you drain the fuel tank and carburetor for long term storage (one year or longer). Even fuel stabilizer will not prevent fuel deterioration problems when the equipment is in long-term storage. The volatile components of the fuel will vaporize and flow out the fuel tank vent and carburetor vent, leaving gummy non-volatile deposits in the fuel system.

In many cases, you can simply run the equipment out of fuel. Or the fuel can be drained from the fuel tank by removing the carburetor float bowl drain bolt (if applicable), leaving the fuel valve open, and draining the fuel into an appropriate container for proper disposal.

Your owner's manual describes the procedure for proper storage of your equipment. See the STORAGE or HELPFUL TIPS AND SUGGESTIONS chapter of your owner's manual.