

Ultra-X Upgrade Instructions

Tools needed:

- 1 - Sawzall/or grinder with cutting wheel
- 2 – ½" wrenches
- 2 – 7/16" wrenches
- 1 – 3/8" wrench or nut driver
- 1 – Phillips screwdriver

Drain & flush the tank
Drain oil & gas
Remove top & bottom hood covers

From rear of unit, right-hand side, unplug kill wire from coil. Unplug starter wiring from left-hand side. (see pic 1)

From front of unit remove covers on engine and unplug voltage regulator from red charging wire coming from engine.

With the ½" wrenches remove the 3 bolts holding engine to frame. Clean this part of the frame before adding new motor plate. Use the same 3 holes to bolt motor plate to frame. (see pic 2) With engine removed grind down hopper control bracket using template as guide. (see pic 3)

Remove the stock shift rod. ½" and 7/16" wrench

Cut all wire ties – careful not to cut any wiring. Undo the battery and ground wire. Starting with the plug-in to the battery remove the main harness. DO NOT remove neutral safety wiring or its switch. Remove pump and starter switches. Tip unit on its nose. Remove hoses from pump and remove pump with 3/8" nut driver. (see pic 4,5 & 6)

The output hose between hopper and tank must be rerouted. Facing the unit the 3/8 elbow and hose, point to the right. They now need to point left. Route the hose so that it moves down the left side of the frame. About 6" down from the tank cut 3/8 clear hose and add black shut-off valve. Route it so that it will end up under top hood cover. (see pic 7,8 & 9)

Remove old gearbox and spinner, using 3/8 wrench and Phillips screwdriver. Using sawzall or hand grinder cut as flush as possible old gearbox bracket. This is needed in order for new bracket to fit. (see pic 10, 11 & 12)

Install new pump/spray valve bracket using old battery holes in frame. Install spray lever and cable. (see pic 13 & 14)

Remove handgrip from left handle (standing behind unit) and attach spray lever. Run spray cable from lever to right side of handle bar tubing. (see pic 15)

Route between hopper and tank past the drape and under to spray valve. Attach z bend of spray cable into lower hole of spray valve. Return spring will go into hole. Push spray cable tab into hole to lock sheathing to bracket.

Blue braided hose (attached to old pump) needs to be cut to attach to spray valve. (see pic 13, 14, 15, 16, 17, 18, 19)

Attach pump to new bracket using (4-5) white nylon washers in between bracket and pump arm. Use nylon washer(s) on locking end to keep pump arm from shifting from side to side and lock into place using 3/8 hair pin.

With small "L" tension bracket lock one end to pump arm using 1/4" clevis pin and hairpin. (see pic 20)

Run hanger bolt (threaded end) through other hole in "L" tension bracket and secure with 1/4" locknut. Slip hole in hanger bracket over clevis pin welded to pump/spray valve bracket and lock into place using 3/8 hairpin. (see pic 21)

Attach new pump elbow to 3/8 clear hose, run on top of pump arm to pump (trim if needed).

Attach blue braided hose to other pump elbow and to pump. (see pic 13-19)

New bracket and gearbox.

Install new gearbox using the 3 new screws, 3 1/2 " long.

Space gearbox from new "L" bracket using 2 nylon spacers per screw. Use the (3) 10x24 lock nut to hold the above to bracket. (see pic 22,23, & 24)

Attach spinner to new gearbox and line up with hole in bottom of hopper. Make sure spinner plate is straight before installing bracket backing. (see pic 25, 26 & 27)

Use 4 bolts with lock washers and nuts to lock into place.

Cut away plastic wrap on foil from around transaxle output shaft. Clean shaft with wire brush and add pulley. (see pic 28, 29 & 30)

Attach pulley to gearbox shaft as well as pump pulley to pump. Line these up with transaxle output pulley. Lock pulleys in place. (see pic 31 & 32)

Installing clutch

Slip on 3 large washers, then sealing washer, rubber side down. Clutch, engine washer (black) lock washer and bolt.

Attach motor to new motor plate using 4 bolts, nuts, lock washers, and flat washers. Thread the 4 nuts $\frac{3}{4}$ of the length of the bolt and slip on flat washer then lock washer. Start each of them as you may need to wiggle the engine to get them started. Once started begin to wrench each of the 4 bolts. Be careful not to force, they will bottom out on the old motor plate. Next tighten down the 4 nuts, locking the motor to the frame. (see pic 33, 34, 35)

Route the throttle cable up to throttle lever. Gas and oil engine. Plug in kill wire to engine and start. Unit should only start in neutral. If it should start in gear, STOP ENGINE and call 1-800-346-2001 for tech.

Run water into the tank. Make sure new shut off valve is on, open valve under tank. Unit must be moving – run in gear. Squeeze spray lever, water should flow from valve under tank. It may take running a few seconds to push out all the air. Once you get a steady flow, shut off valve and open 3 way valve to make sure unit is spraying.

Before starting the engine, refer to your new Honda owner's manual for proper safety and operating instructions.

- 1 Open fuel valve on carb (push black arm forward to open, back to shut off)
- 2 Make sure kill switch is on
- 3 Put shift lever in neutral
- 4 Choke engine as necessary
- 5 Pull starter, allow engine to warm then check RPM (3550-3650) at full throttle.

Never shift the transmission while the machine is moving. May cause serious bodily injury and/or damage to the transmission.

Stopping the Engine

Turn kill switch to "off" close fuel shut-off valve. To avoid flooding the cylinder, close fuel valve when transporting or tipping the machine on its nose. Follow all safety precautions as stated in your operating manual that you received with your machine when new.

When ordering belts or engine parts, be sure to tell the sales person you are ordering for the Ultra X.

Any questions or problems call 1-800-346-2001 and ask for Pat.



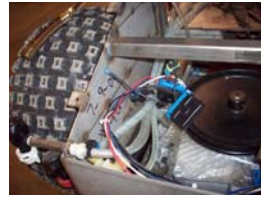
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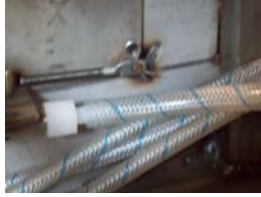
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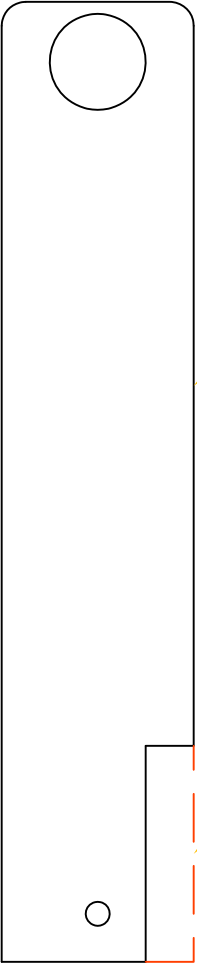
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Cut Out Template

Grind Out

