

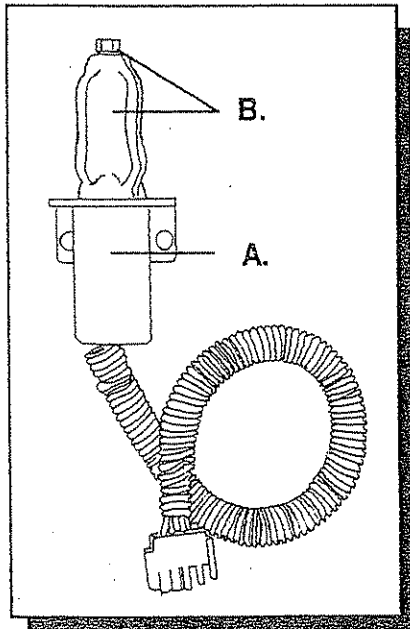
SOLENOID REPLACEMENT



Installation Instructions

At CORSA Performance we are committed to maintaining customer satisfaction long after the purchase of our product. For that reason, we have prepared this instruction manual to help you with your solenoid replacement. Carefully read through the following instructions and if at any point you have a problem or need clarification, please call; 1-800-486-0999, Monday - Friday 8 A.M. to 5 P.M. EST.

Please inspect the parts you have received with those listed below. Report any damaged or missing parts immediately.



- A. Solenoid
- B. Plunger with Boot and Spring
(Needed only if replacing solenoid and plunger)
- C. Plastic Template (Not shown)
- D. Small tube of Thread Lock (Not shown)

NECESSARY TOOLS

- 3/16" allen wrench
- 7/16" wrench
- Template - provided by CORSA
(only if replacing solenoid and plunger)
- 3/8" wrench
- standard screwdriver
- Thread Lock - provided by CORSA

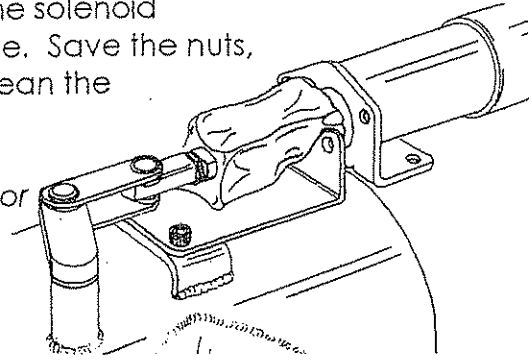
REMOVING OLD SOLENOID

- If your solenoid and plunger are bound together, go onto section for Removing Old Solenoid **and** Plunger.
- If your plunger moves freely, continue below. (You will need to replace the solenoid itself. The plunger, boot and spring you received on the new solenoid should be removed; it will not be needed for the replacement.)

Unclip the solenoid from the wiring harness. Then, use a 7/16" wrench and a 3/16" allen wrench to remove the solenoid from the diverter. If the solenoids have extension brackets, remove the solenoid from the bracket as shown. **Do not** remove the bracket from the diverter.

As you loosen the allen bolts, the solenoid will try to move because of the spring inside the plunger boot. Let the plunger boot come off the solenoid (or pull it), but be careful not to lose the spring inside. Save the nuts, bolts and spring for use on the new solenoid and clean the plunger shaft of any built up residue.

Now go to the section for *Installing New Solenoid or Installing New Solenoid with Extension Bracket.*

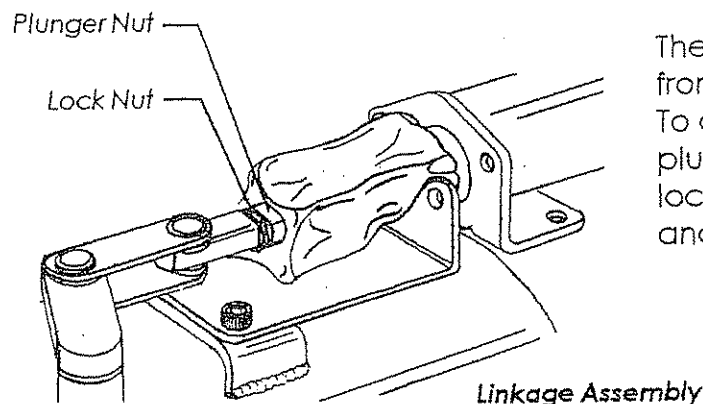


Removing solenoid from cutout with extension bracket.

REMOVING OLD SOLENOID AND PLUNGER

The first step is to remove the diverter from the engine. (WD-40 sprayed between the hoses and tubing will help break the seal and will also ease reinstallation.)

After removing the diverter from the boat, the next step is to unbolt the solenoid from the diverter using a 7/16" wrench and a 3/16" allen wrench. If your solenoids use extension brackets, unbolt the solenoid from the bracket as shown above. **Do not** remove the bracket from the diverter. (Save the nuts bolts and spring for later use)



The plunger will also have to be unscrewed from the linkage assembly on the diverter. To do this, use a 3/8" wrench on the plunger nut and a 7/16" wrench on the lock nut to loosen and remove the plunger and solenoid from the linkage.

INSTALLING NEW PLUNGER

Pull the new plunger off of the new solenoid, being careful not to lose the spring inside the boot. Put a few drops of thread lock inside the threaded end of the plunger and screw it onto the linkage assembly up to the lock nut.

INSTALLING NEW SOLENOID

Note: If your solenoids use extension brackets, skip to next section.

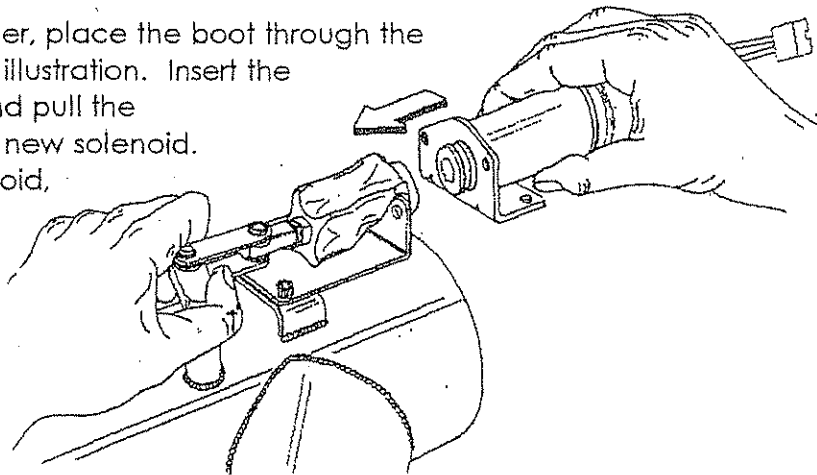
Place a drop of thread lock on the end of an allen bolt and position the new solenoid onto the diverter. Put the lower nut and bolt on first, but do not tighten completely. Then, with the spring around the plunger, move the solenoid until the plunger can slide into the hole on the solenoid. Carefully push the plunger into the solenoid compressing the spring until the top bolt can be inserted and then tightened lightly.

Next, pull the plunger boot over the lip on the solenoid to keep out any debris and then proceed to the section for Aligning the Solenoid.

INSTALLING NEW SOLENOID WITH EXTENSION BRACKET

With the spring around the plunger, place the boot through the extension bracket as seen in the illustration. Insert the plunger into the new solenoid and pull the plunger boot over the lip on the new solenoid. By holding the linkage and solenoid, compress the spring until the solenoid reaches the bracket and can be bolted together lightly. (This may be easier with two people.)

***Use thread lock
on all bolts.***



ALIGNING SOLENOID

Before the solenoid is completely tightened, it must first be aligned. To do this, slide the plunger in and out of the solenoid to feel for any binding. If it does not move freely, try to twist the solenoid or you may even have to slightly bend the bracket up or down until you reach the smoothest position. ***If the solenoid is not correctly aligned, it may eventually fail.*** After aligning the solenoid, completely tighten each allen bolt and test for binding again.

At this point, if you received a new wiring harness, turn off or disconnect the batteries and remove the old wiring. Refer to the enclosed wiring diagram for the new installation. After replacing the wiring, test the system and the new solenoid.

If you only had to replace the solenoid, connect the solenoid to the wiring harness and test the system for proper function.

If you had to replace the solenoid **and** the plunger, go onto next section.

VALVE ADJUSTMENT

NOTE: If only replacing solenoid, disregard this section.

To complete this step, the wiring harness needs to be connected to the diverters and batteries connected.

Turn on the diverters so the valves are open. Using the template provided and following the directions on it, slide the template into the inlet of the diverter. The slot in the template should slip over the valve for correct alignment. If it doesn't, unplug the harness from the solenoid so it can be adjusted as follows:

Using a 3/8" wrench, thread the plunger nut further up or down the linkage assembly. Then, plug the solenoid back in and use the template to test again. Repeat until the valve is aligned with the slot in the template and then tighten the lock nut against the plunger with a 7/16" wrench. ***If the valve is not correctly aligned, the force of the exhaust gases pushing on the valve could eventually cause the solenoid to fail.***

The last step is to reinstall the diverters. When the diverters are installed, make sure there are 2 clamps on the ends of each joint hose firmly clamping the hose around the tubing. The clamps should not be on an edge or in a gap in between the tubing. Also, all wires and cables should be clear of the linkage and exhaust system with no sharp bends in them.

*It is recommended to test the system for leaks. Double check all connections and clamps and run the system in water or with a fresh water hook-up **before** taking the boat out. **Failure to test the system could result in dangerous carbon monoxide and/or water build up in the engine compartment if the exhaust system leaks.***

Your installation is now complete. If you have any questions or comments regarding the installation or performance of your diverters, please call! **1-800-486-0999**



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