

#1 Component Failure:

On-Board Charger 1-hr DIY

With 1 Socket & 2 Screwdrivers!

If you're handy with a soldering iron and you have the most common failure of the top-side diode, [click here for the first diode replacement post I've seen](#).

Someone mentioned not finding any videos. Update: Here's one: <https://youtu.be/12QQn8YcJWE>

Maybe that's because it's so easy nobody needs one!

\$980.00 at the stealership:

1. Remove 12V negative, HV fuse, 2 nuts then 6 bolts, all with 1/2" socket.
2. Remove 4 electrical plugs then 3 hose clamps.
3. Put new OBC in its place, reconnect, & bolt it down.

Details:

It would have been under an hour but I wasted ~20min reusing the stock hose clamps with no 3rd hand since I had Covid & didn't want to infect anyone. **Get 3 standard hose clamps that screw on in 1 minute from any hardware, home, or auto store:**

- **Two 26mm (#10: 9/16 to 1 1/8")**
- **One 15mm (#4: 1/4" to 5/8")**

1. With the car asleep, **disconnect the 12V & then the HV** fuse.
2. Keeping the back of the OBC dry, **pour some tap water over the hoses**, to rinse off dirt where coolant will drain.
3. **Remove the rear black cover** (2 nuts: 13mm or 1/2" socket) **& the 4 plugs****.
4. **Remove the 6 bolts** (also 1/2") & if needed for hose clamp access, lift the front of the OBC up & forward onto the black radiator frame.
5. Put something under the car to catch some coolant for reuse*.
6. **Twist off the clamps** with a screwdriver*** then twist the hose ends off & up out of the way, trying to catch some coolant below, & discard the old clamps.
7. Lift out the OBC, tipping the front end upwards & then pull the coolant-catcher out & empty the OBC into it.

Then just put the new OBC in, reattach plugs & hoses (with new clamps), re-bolt, put spilled coolant in reservoir, top off with distilled water, reconnect HV then 12V, & **never EVER plug in without surge**

protection at a home-style charger, even if it's at a workplace, or hardwired 240V. See ["Breakdown Avoidance" \(click here\)](#).

* Like a clean dishpan or takeout box or sliced-sideways water-gallon jug or milk carton.

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Tip by @4x4dirt:



A: Slide white part aft.

B: Press while sliding orange part ~3mm aft.

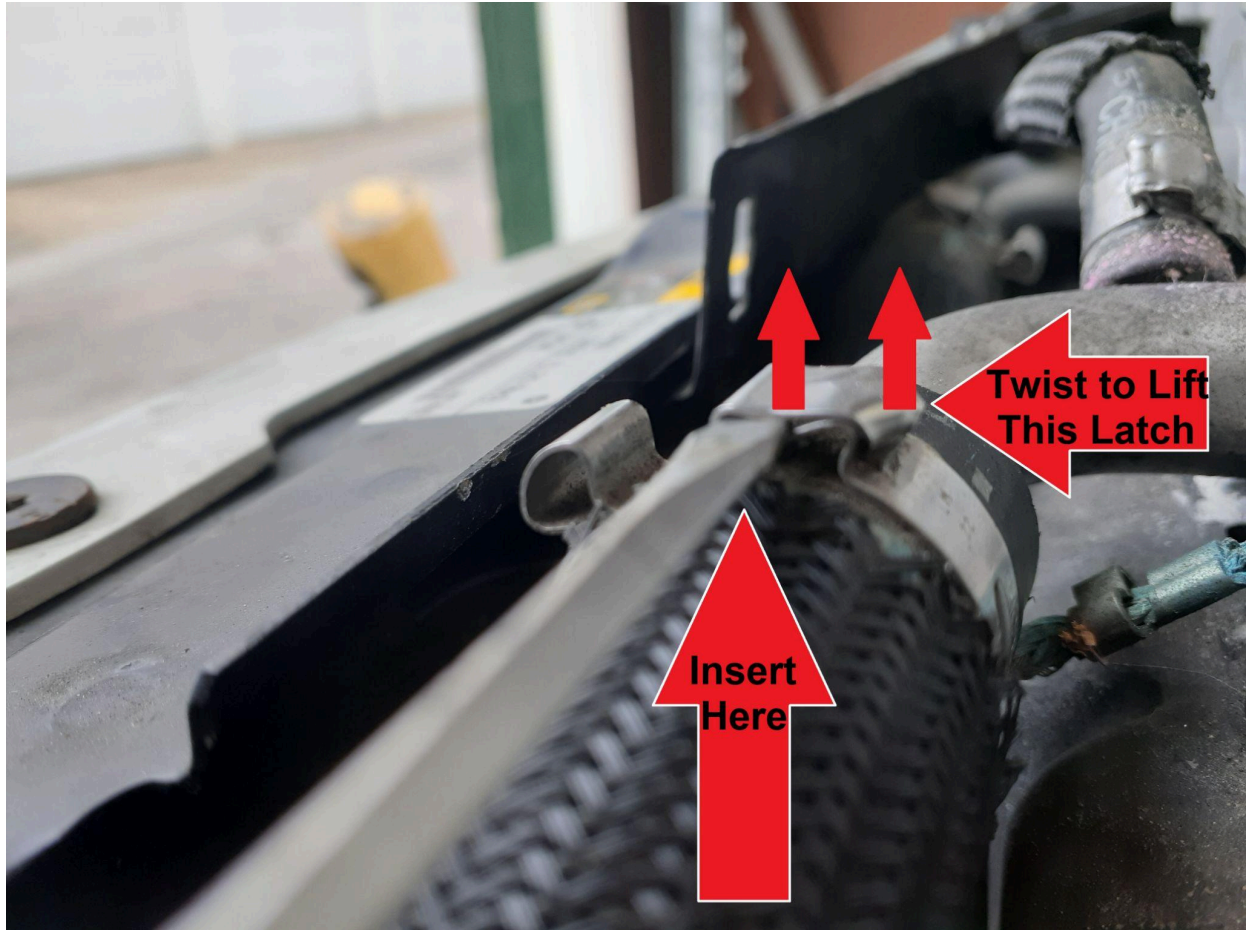
C: Pry tab up while pulling orange plug aft, all the way out.



*** Tips by @4x4dirt :

SMALL screwdriver:





Pic by @4x4dirt :

