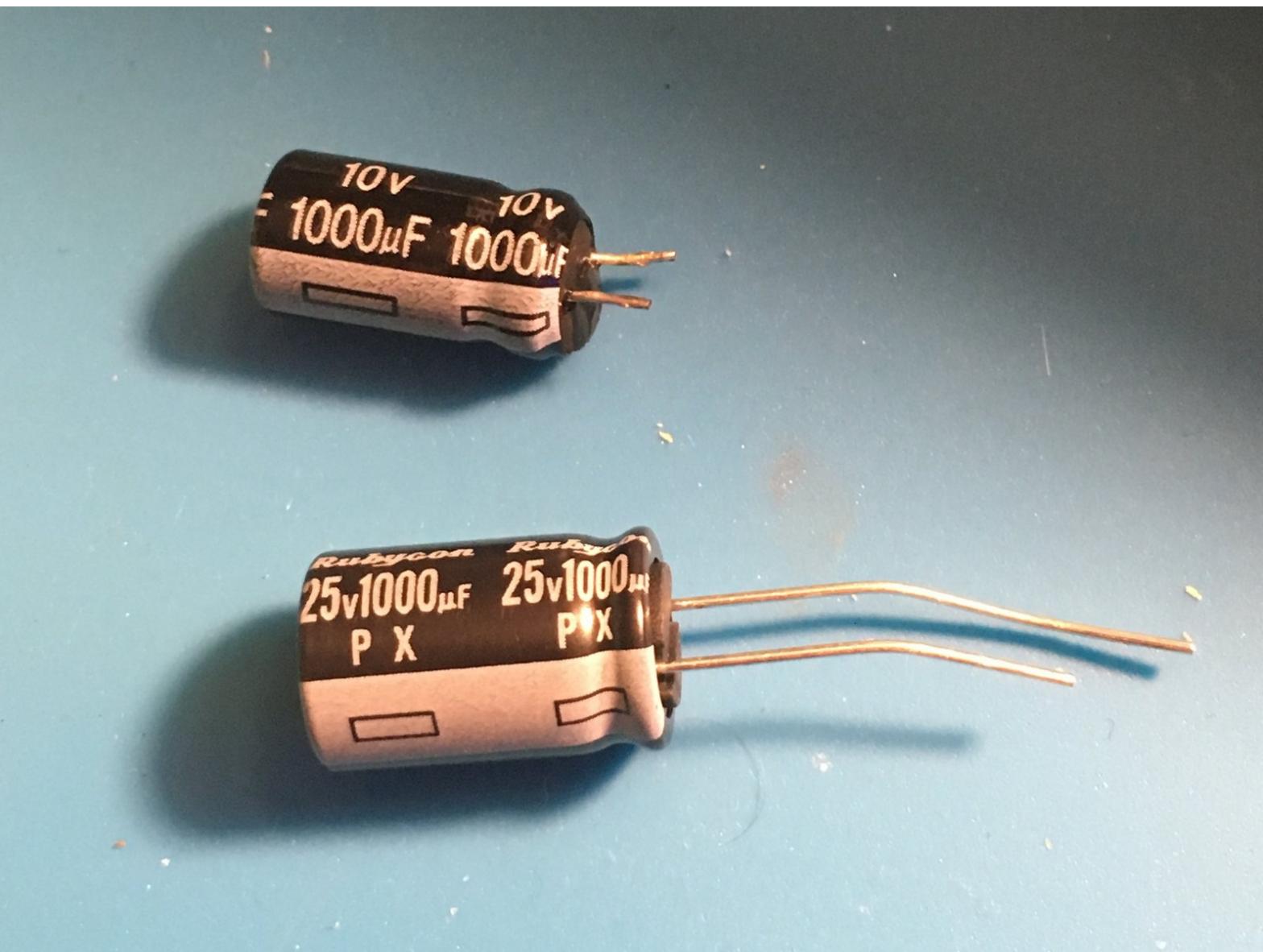




Philips DVP642 Capacitor (C316) Replacement

How to diagnose and replace a bad capacitor on a Philips DVP642 DVD Player

Written By: Travis



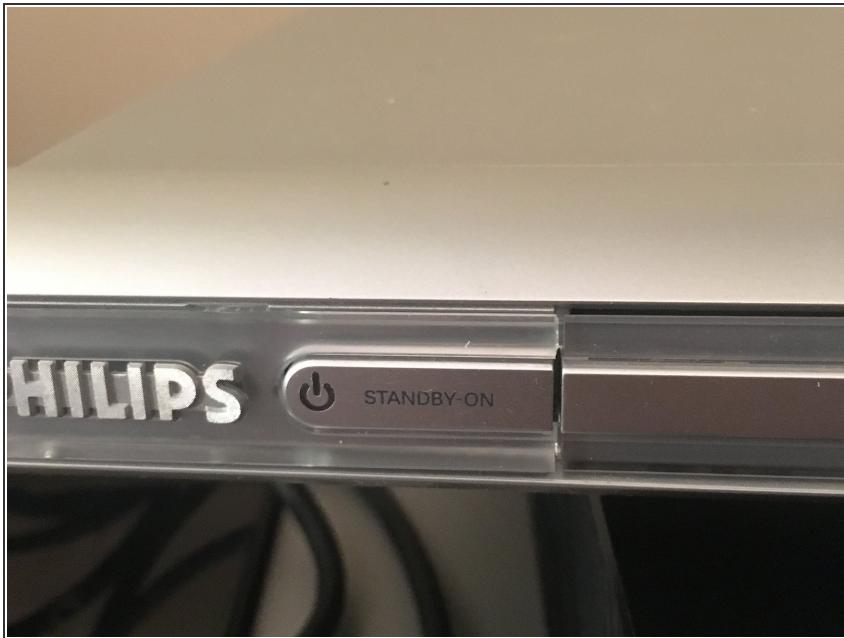
 **TOOLS:**

- Soldering Iron (1)
- Desoldering Pump (1)
- Capacitor Discharge Pen (1)
- Phillips #2 Screwdriver (1)
- Flush Wire Cutters (1)
- Large Needle Nose Pliers (1)
- Multimeter (1)

 **PARTS:**

- 25v 1000uF capacitor (1)

Step 1 — Standby Light



- If your Philips DVP642 DVD Player does not turn on, but your standby light is flashing, a failed capacitor might be your problem. The C316 capacitor is a very common fault on this model Philips, but it may not be the fault with yours. This guide should help you determine if this fix is for you.
- Replacing the capacitor is easy and cheap. Your local Radioshack should have them in the store or you can purchase them online for about \$.20 (digikey.com, mouser.com, jameco.com)

Step 2 — Unplug The Device



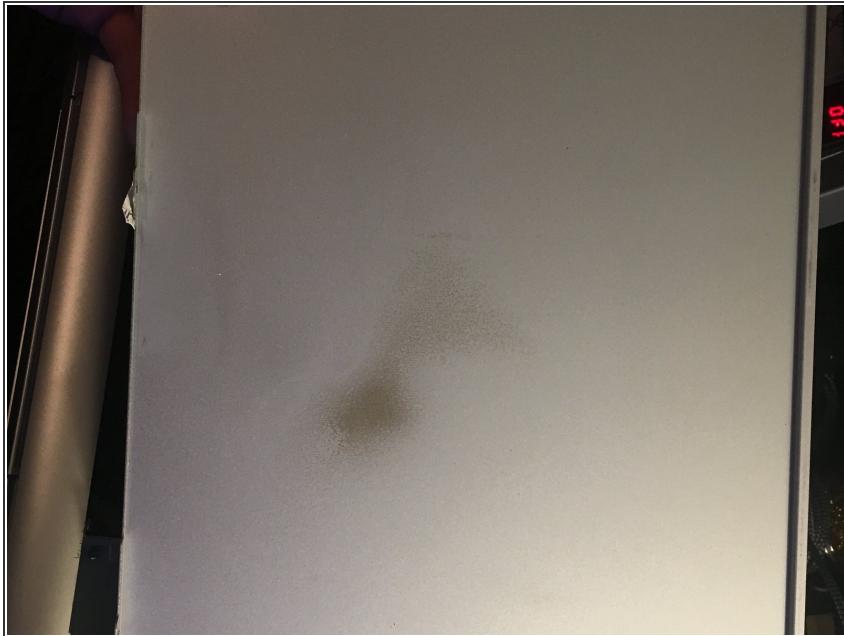
- Be sure to unplug your device from the wall BEFORE you open it.

Step 3 — Remove 8 Phillips Head Screws



- Remove 8 Phillips Head screws. There are 4 screws along the back and 2 on each side of the device.
- (Only the screws along the back that secure the lid need to be removed. Such as the one on the right in the first picture)
- There are 2 screws on each side.

Step 4 — Remove Top



- Remove the top of the device. It should lift right up.
- This is a good time to inspect the underside of the lid for clues. Pictured is the lid from another player with a no power issue. The failed components left a burn mark right above them.

Step 5 — Be Careful!



- Take care not to touch any of the components on the Power Supply Board. There could still be high voltage present.

Step 6 — Remove Power Supply Board



- The power supply board is the tan colored circuit board.
- There are 3 ribbon cables that need to be disconnected. One can only be disconnected at the Main Board. (green)
- Unscrew the 3 mounting screws and release the 4th corner of the board from the plastic standoff using a pair of needle nose pliers.

Step 7 — Remove Power Supply Board (Continued)



- Here's a better view of the plastic piece with the board removed. You're just squeezing the two little "wings" together while pulling up on the board. Be patient, it can be a little tedious.

Step 8 — Discharge Capacitors



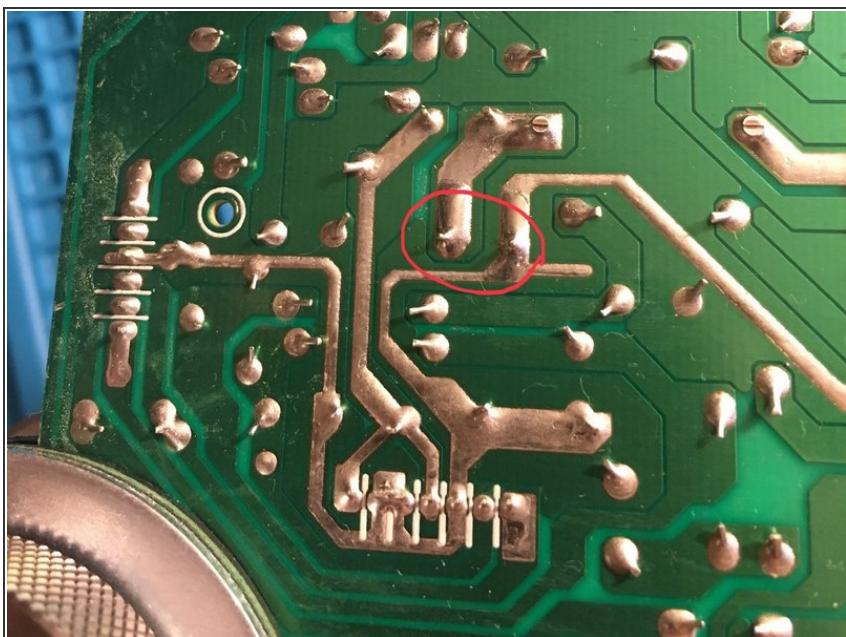
- Capacitors can store large amounts of electricity. It is advised that you take the time to discharge them using the proper tool and not just a screwdriver. Touch both leads with a resistor to do this safely.
- Use a multimeter to ensure that each capacitor is fully discharged.

Step 9 — Inspect The Capacitor



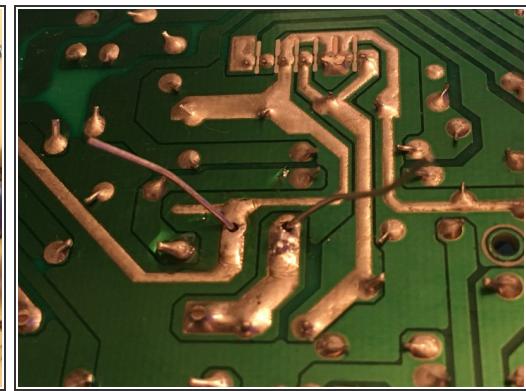
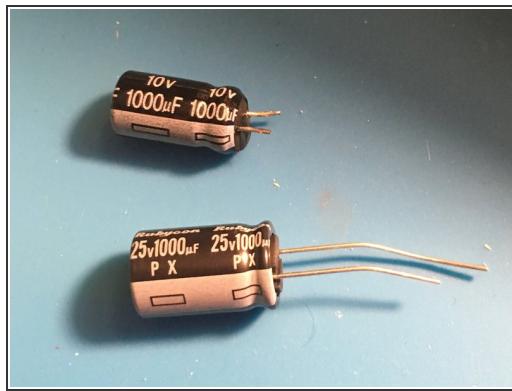
- If the top of the capacitor is bulging (or completely blown out) this is an indication that the capacitor has failed.
- If the capacitor is not bulging, it could still be bad. You can test this using a capacitance meter or an ESR meter.

Step 10 — Desolder The Capacitor



- The two joints indicated in the picture are the ones you need to desolder.
- Add a little bit of flux to the solder joints and tin the tip of your soldering iron.
- When the solder melts, use the desoldering tool to remove the solder.
- Remove the old capacitor

Step 11 — Solder The New Capacitor



- Be conscious of the orientation of the new capacitor. Electrolytic capacitors like this one are polarized and will only work in one direction.
- Notice that I am using a capacitor with the same capacitance, but a higher voltage rating. This only increases the voltage the capacitor can handle before failing, it does not raise the voltage of the circuit. It is important not to use a lower value, however. Be sure to use the correct capacitance (1000uF).
- The grey line indicates which side is negative. The negative side also typically has a shorter lead. On the board, the "shaded" half of the circle with the hashmarks is the negative side.
- Insert the new capacitor and bend the legs outward to help hold it in place when you turn the board over.
- Solder the leads and clip the excess length.

Step 12 — Reassemble



- Reassembly is the reverse of the disassembly process. Don't forget to reattach the ground wire under the screw that secures the board.

To reassemble your device, follow these instructions in reverse order.