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I have a 1995 Chaparral 1930 ss with a mercruiser alpha one 4.3 lx engine. When I start the boat sometimes it doesnt turn over and makes a light thunk. I have replaced the starter and starter solenoid and cleaned all the battery contacts. the battery is fully charged. I just want to make sure that the solenoid is behind the trim pump and if anyone has any suggestions on how to replace it. I have attached a photo. Thanks for the help. Re: Mercruiser alpha one 4.3 lx solenoid replacement I have a 1995 Chaparral 1930 ss with a mercruiser alpha one 4.3 lx engine. When I start the boat sometimes it doesnt turn over and makes a light thunk. I have replaced the starter and starter solenoid and cleaned all the battery contacts. the battery is fully charged. I just want to make sure that the solenoid is behind the trim pump and if anyone has any suggestions on how to replace it. I have attached a photo. Thanks for the help. Ayuh,... Welcome Aboard,... Nope, that's the trim solenoid,... The slave solenoid will be on the motor,... look for yellow/ red wires,...Have ya ever pulled the mid/ aft spark plugs when ya get that Thunk, 'n looked for Water in the cylinders,..?? Re: Mercruiser alpha one 4.3 lx solenoid replacementThank you guys for the help. Ill have to pull the plugs once the rain lets up. That diagram is very helpful. Ill have to follow the wire from the stater solenoid to the slave solenoid. Working on a 2000 Bayliner Capri that I bought from an auction. This is my first time trying to start it. When I try to start all I get is one click thats coming from the slave solenoid on top of the engine and nothing else. Here is what I've tried so far: Jumping the 2 bolts on the slave solenoid does nothing but give off a few sparks. I've tried scrubbing the battery connections to no avail. I replaced the positive terminal on the starter along with the 90amp fuse because they were corroded. (I wasn't able to reach the negative terminal on the engine tho). But that didn't change anything. Then I went in with the multimeter. 12.7v at the battery. I checked the power in (Red/Purple) from the battery at the slave solenoid it showed 11.8v. The yellow red for the solenoid showed nothing by itself but I had someone turn the key and at the click it showed 11.8 aswell. I tested the same wire at the starter and it was getting 11.8v aswell. I assume this means the slave solenoid is working fine because its doing it job, which is sending power to the starter. From this testing I've concluded I either need a new starter or a new starter solenoid (the big one on the starter).I don't know what else to try before I take out the starter, which will be a nightmare given the limited space around the engine. Any thoughts suggestions would be appreciated? Working on a 2000 Bayliner Capri that I bought from an auction. This is my first time trying to start it. When I try to start all I get is one click thats coming from the slave solenoid on top of the engine and nothing else. Here is what I've tried so far: Jumping the 2 bolts on the slave solenoid does nothing but give off a few sparks. I've tried scrubbing the battery connections to no avail. I replaced the positive terminal on the starter along with the 90amp fuse because they were corroded. (I wasn't able to reach the negative terminal on the engine tho). But that didn't change anything. Then I went in with the multimeter. 12.7v at the battery. I checked the power in (Red/Purple) from the battery at the slave solenoid it showed 11.8v. The yellow red for the solenoid showed nothing by itself but I had someone turn the key and at the click it showed 11.8 aswell. I tested the same wire at the starter and it was getting 11.8v aswell. I assume this means the slave solenoid is working fine because its doing it job, which is sending power to the starter. From this testing I've concluded I either need a new starter or a new starter solenoid (the big one on the starter).I don't know what else to try before I take out the starter, which will be a nightmare given the limited space around the engine. Any thoughts suggestions would be appreciated? The battery is a little low, try to fully charge it before starting again. And if you shortcurcuit the poles of the starter solenoid, it should at least crank a little, clicking means your solenoid might be bad. But it is easy repair and pretty cheap one. Much cheaper than replacing the whole starter. The battery is a little low, try to fully charge it before starting again. And if you shortcurcuit the poles of the starter solenoid, it should at least crank a little, clicking means your solenoid might be bad. But it is easy repair and pretty cheap one. Much cheaper than replacing the whole starter. Battery isn't low (12.7v). You're getting a bit of a drop when cranking, but 11.8 should be enough to get it to turn over. Have you made sure that the engine turns over by hand? Have you tried jumping the terminals at the starter? There's a good troubleshooting section in the stickies... Is this a new to you boat?Do you know what it was doing before this issue? (I wasn't able to reach the negative terminal on the engine tho). But that didn't change anything. Ayuh,.... Welcome Aboard,..... If the ground is as corroded as the positive, that could explain the voltage drop,.....Either dig deeper, 'n clean it, or jumper it to by-pass it for testin',..... This is my first boat, but I have experience in automotive so it's not too hard to figure out. I have no idea the last time this thing ran or what's wrong with it, auctions can be hit or miss. I did some more testing, I unplugged everything and just put a jumper cable to the starter with the ground on the starter body and the positive on the post. I then tried to jump the Yellow/Red wire which I believe should activate the starter.....and Nothing! To me, it looks like a dead starter or at the very least the solenoid on it.Is there any way I can test the starter itself and bypass the solenoid on it? I'm definitely not looking forward to removing the starter but I think I have to. This is my first boat, but I have experience in automotive so it's not too hard to figure out. I have no idea the last time this thing ran or what's wrong with it, auctions can be hit or miss. I did some more testing, I unplugged everything and just put a jumper cable to the starter with the ground on the starter body and the positive on the post. I then tried to jump the Yellow/Red wire which I believe should activate the starter.....and Nothing! To me, it looks like a dead starter or at the very least the solenoid on it.Is there any way I can test the starter itself and bypass the solenoid on it? I'm definitely not looking forward to removing the starter but I think I have to. Ayuh,..... If you jumper to the bottom stud on the starter's solenoid, the starter should spin, but the bendix will Not engage the motor,..... Ayuh,..... If you jumper to the bottom stud on the starter's solenoid, the starter should spin, but the bendix will Not engage the motor,..... Yup that's what I tried. No luck. I also tried jumping the other terminal on the starter solenoid and that did nothing either. I have a feeling that the starter was submerged or heavily drenched in water at some point in time. All the bolts are corroded and like I said the 90amp fuse on it was literally falling apart. Luckily starter for this engine is around $70, You know BOAT stands for Bring Out Another Thousand, so not much else I can do.Thank you guys for the help and for the fast replies. I will not hesitate to ask future questions because this definitely won't be the last issue. I hope it is, but I'm realistic. :/ Yup that's what I tried. No luck. I also tried jumping the other terminal on the starter solenoid and that did nothing either. I have a feeling that the starter was submerged or heavily drenched in water at some point in time. All the bolts are corroded and like I said the 90amp fuse on it was literally falling apart. Luckily starter for this engine is around $70, You know BOAT stands for Bring Out Another Thousand, so not much else I can do.Thank you guys for the help and for the fast replies. I will not hesitate to ask future questions because this definitely won't be the last issue. I hope it is, but I'm realistic. :/ Ayuh,.... Starters don't like to go swimmin', 'n fail shortly after they do,..... For the replacement, go with a permanent magnet starter,....1/2 the weight, 'n twice the power,.... Replaced starter on my 4.3 Mercruiser, new starter 3 terminals vice 4 on the old starter, any suggestions on wiring 3 terminals vice 4? Ayuh,..... Welcome Aboard,..... Ya got the wrong starter,..... 4th terminal is for running prime power to the fuel pump during cranking. Without it you will have trouble starting your motor.As Bondo said, wrong starter. You need the 4 terminal solenoid. Why not wire the fuel pump starting circuit off the yellow/red slave solenoid output lead? Why not wire the fuel pump starting circuit off the yellow/red slave solenoid output lead? Unless you use a relay, when the oil pressure comes up and applies power to that same yellow/red wire, it'll hold the starter on, permanently! Chris..... Unless you use a relay, when the oil pressure comes up and applies power to that same yellow/red wire, it'll hold the starter on, permanently! Chris..... Ah well, I have a relay in my setup, so would work fine. Unless people are specific on what they're working on, every engine is mine Also might have a mechanical fuel pump Now I'm just guessing here but with the 3 terminal vs 4 terminal solenoids...you need a 4 terminal if you have a points ignition, and/or electric fuel pumpyou can use a 3 terminal if you have electronic ignition and a mechanical fuel pump....S terminal = start, yellow/red wire from ignition switchR terminal = resistor bypass (purple wire with points ignition, to coil) it enables the coil to get full (non-resisted) voltage during cranking, needed with points ignition but not with electronic as far as I know. Can also be used to power your electric pump till oil pressure builds to close the oil pressure safety switch.Correct?On my '88 I still have the points ignition so I had to get a 4 terminal solenoid style starter. Now I'm just guessing here but with the 3 terminal vs 4 terminal solenoids...you need a 4 terminal if you have a points ignition Merc never put points on the 4.3. It will be Thunderbolt. On my '88 I still have the points ignition so I had to get a 4 terminal solenoid style starter. That's because you're still running OMC hardware... OP, are you sure you have a MARINE starter?Chris. But since Merc uses the oil pressure switch as a safety shut off for the electric fuel pump they would still use the 4 terminal solenoid (terminal R) to power the pump till oil pressure builds... Merc never put points on the 4.3. It will be Thunderbolt. I thought that was the case, but manual #7 has a section on a prestolite points system?Edit: NVM, that's for the 3.8l v6, which I've never seen in the wild I believe the 3.8 liter was the predecessor to the 4.3GM had a number of these 90* V6s years ago....They were all cut down 90* V8s, starting with Buick's 3.8 from the mid 60s which was used for a few years....then sold the tooling to AMC....who used it in Jeeps...then GM bought it back during the gas crisis (1973/1974) and it was used in Buicks, Oldsmobiles and Pontiacs...Chevrolet meanwhile carried on with the 4.2 liter straight 6 which was actually a better engine in some ways, being in perfect primary and secondary balance compared to the shaky V6s until they were given the split journal crankshaft and later the balance shaft. Chevrolet got in the act with a 229 cu in V6, which became the 3.8. Now I don't know for sure but the 3.8 might have been a cut down 5.0 V8 just as the 4.3 was a cut down 5.7. The bore and stroke of the 3.8 and the 5.0 are nearly identical, like the 5.7 and 4.3 are. The easy way to tell a Buick V6 from the Chevrolet V6 was that the distributor was in the front, just like a Buick V8 whereas the Chevrolets all had them in the rear. I thought that was the case, but manual #7 has a section on a prestolite points system?Edit: NVM, that's for the 3.8l v6, which I've never seen in the wild The 229 (3.8L V6) was only used by Merc for a coupe of years, 1983-1984. I have a 2006 Mercruiser 4.3, sometimes it starts right up but usually it takes 5 or 6 tries. I have read other threads and found the attached trouble shooting a starting system. It makes it easy and everything checked out until I got to the slave solenoid. Again to clarify, my issue; I turn the key and just hear a click. I'll do this a number of times and finally it will immediately turn over and start. On the attached instructions #4 for testing the slave with attest light, it says to touch terminal J and it should light up. It does not but if I touch terminal k, the one closest to the two small terminals I get light. In #12 when I recheck J, its the same thing and I cannot get the small terminal M to light when the key is turned to start. They say this indicates a wiring problem between the neutral safety switch and the slave. HERE IS THE KICKER - If I jump the slave, the starter turns right over BUT my slave solenoid is hooked up backwards from the attached diagram - it shows the yellow wire connected to the large terminal closest to the two small terminals and the red wire on the opposite end. On mine, the red wire is hooked up to the K terminal closest to the two small terminals. This probably explains why J won't test light and why K will -because its wired backwards. Is this true is it wired backwards? if so why does it start after a few tries? I thought about switching the wires but thought if it is correct, it might fry something. my solenoid looks just like the one in the diagram.Any help is appreciated! Re: mercruiser 4.3 starting problem slave soleniod too many letters. The heavy yellow/ red stripe goes to a large lug of the slave. the red/purple goes to the other large lug.a small yellow/red stripe comes from the neutral safety and goes to a small lug, the other small lug has a ground wire attached. Re: mercruiser 4.3 starting problem slave soleniod Hello and welcome aboard. First, can we ask for an engine serial number please. This is important for us to determine exactly which model 2006 4.3 you have. Switching the wires on the solenoid will not harm it in any way, it also won't change anything. The solenoid is just an ON/OFF switch. With the key turned (and held) to START you should have light on both large terminals of the solenoid. If you hear it click, but only one terminal has power, the solenoid is faulty... Replace it...Chris.... Re: mercruiser 4.3 starting problem slave soleniod Thanks for the replies.The serial number is 0W362424 Family 5M9XM04.3GME. I did not check both large terminals with the key held to start but I will tomorrow. Otherwise, if it doesn't matter which large terminal the wires are connected to, it sounds like it may be the neutral safety. Wiggling the shifter didn't seem to make any difference when trying to start it. Thanks Re: mercruiser 4.3 starting problem slave soleniod If you hear the solenoid clicking, it's not the safety switch...Chris..... Re: mercruiser 4.3 starting problem slave soleniodJust when I thought I was making progress...went down to the boat tonight to check bot slave contacts when the switch was at start and I couldn't get a click of the solenoid. I know it has clicked before and not started but not tonight. How difficult is the neutral safety to change out? I'm use to working on little British cars! Again I appreciate your help. Thanks Re: mercruiser 4.3 starting problem slave soleniod Before you go pulling the control box apart, just verify that it is the neutral switch.Put your test light on the small terminal of the solenoid with the yellow/red wire. That should light when you turn the key to START... If it does and you still don't get a 'click', then replace the solenoid. If the light doesn't come on, then you'll find 2 wires (also yellow/red) coming from the control box. Follow those wires, they should lead back to the key switch (or close by). You'll find they are connected by a nut and bolt. To test the neutral switch, just join those wires together (don't unhook them, just join them). That effectively takes the neutral switch out of the circuit. If the solenoid now clicks, yes, the neutral switch is at fault. Chris..... Last edited: Aug 8, 2013 Re: mercruiser 4.3 starting problem slave soleniodThanks Chris. I'll let you know what I find. Re: mercruiser 4.3 starting problem slave soleniodMake sure all your contacts are clean use a little emery paper to rough them up, the solenoid being intermittent in my case has always been the starter solenoid not the slave and a tap usually confirms it, Re: mercruiser 4.3 starting problem slave soleniod I found two sets of connections between the switch and the NS. One set was blade connections and one set was bullets. Moving them around, I was able to get a solenoid click. Working them a little more I got the engine to crank every time. Tomorrow I will clean them well. The only other issue I have is a trim gauge that works intermittently. I'll clean those connections too and cross my fingers. Chris, you asked for my serial number - what did it tell you? I'm not sure which model engine or drive I have.Thanks to all for the help. This is a great forum and I appreciate you taking the time to help me. You turn the key on the dashboard of your boat and nothing happens. With the key in the Run position, the gauges on the dash activate, the audible low oil-pressure warning sounds, but the starter on the engine fails to activate and start the motor. Since the gauges work, chances are the starting battery is charged. Since the starter doesnt engage and even slowly try to start the motor, chances are the battery isnt just low on energy. You probably need to replace one of the two starter solenoids present on MerCruiser engines. Items you will need HelperReplacement solenoidSmall wrenches12-volt test lightDigital camera Locate the two solenoids on your boat's motor. One (called a slave solenoid) sits on the top of the engine block and is easy to access. This solenoid has two heavy-gauge red wires attached to it and a small-gauge red/yellow wire. The second solenoid is similar to an automotive engine design and sits atop the starter motor. That starter motor is located on the lower port side of the engine (lower right if you are in the boat, facing the stern, looking at the engine). Depending on the boat, deck and engine mounting system, getting at the second solenoid can range from fairly easy to nearly impossible. Check the slave solenoid with a 12-volt test light first. Clip the ground wire of the test light to the negative pole of the battery or metal part of the engine. With the key in the "Off" position, touch the point of the test light to each of the heavy wire terminals. One should be hot, the other cold. The small, red/yellow wire should likewise be cold. Continue touching the red/yellow wire terminal and have your helper turn the key switch to the "Start" position. The light should turn on as that wire is energized. Now touch the large wire terminal, which was cold. Have the helper again turn the switch to the Start position. If the solenoid is working, switching the key to "Start" will energize that wire. Check the master solenoid by touching the test light to the heavy post to which the red wire from the slave solenoid attaches. It should energize as the helper turns key to Start. Keep the key in "Start" and touch the post just below which is attached to a copper strap leading down into the starter motor. If it isnt energized, the main solenoid is malfunctioning. (If it does energize but the starter motor doesnt spin, you have starter problems.) Photograph the solenoid to be replaced with a digital camera to view upon during reassembly to insure the new one is remounted and rewired correctly. (A hand-drawn diagram will work as well.) Disconnect the positive battery terminal. Change the slave solenoid by detaching the wires, unbolting the old solenoid, and replacing and reattaching the wires. To change the main solenoid, the starter motor must first be removed from the main engine, then the wires removed, then the solenoid removed from the starter motor. Reverse the procedure, then reinstall the starter and hook up the battery; the boats motor should start.

Startmotor mercruiser 4.3. 4.3 mercruiser starter replacement. Mercruiser 4.3 starter solenoid wiring diagram. Mercruiser 4.3 starter location. Where is the starter on a 4.3 mercruiser. Mercruiser 5.0 starter solenoid location.