

Corsa Performance Marine Solenoid & Harness Testing Procedures



Solenoids/Actuators

Four-Wire Solenoid Testing Procedures (White Connector)

1. Disconnect solenoid from harness at quick disconnect and check terminals for corrosion. Terminal plugs should be locked in place to the connector and should not come out. If terminals come out of the connector easily, it may not be making good contact with its mating terminal.
2. If terminals are free of corrosion and are firmly held in place in connector, jumper wires directly to the battery, as indicated in the diagram and following test procedures, to determine if the solenoid is functioning properly.

(see diagram A and B)

Test pull coil circuit first then proceed to the hold coil circuit.

When test the pull coil, only make contact briefly (less than two seconds) as the pull coil draws up to 35 amps. The solenoid plunger should retract into the solenoid body. The plunger should return to its previous position when power is disconnected.

When testing the hold coil, contact can be made for a longer duration. Jumper the wires to the hold circuit as described in the diagram and manually move the plunger into the solenoid body. The hold coil only draws 0.7 amps and does not have the power to pull the plunger in. Plunger should stay in the solenoid until power is disconnected.

3. If the solenoid fails any of the above procedures or contacts are highly corroded; contact Corsa Performance for a replacement solenoid.

Three-Wire Solenoid Testing Procedure (Black Connector)

1. Disconnect solenoid from harness at quick disconnect and check terminals for corrosion. Terminal plugs should be locked in place to the connector and should not come out. If terminals come out to the connector easily, it may not be making good contact with the mating terminal.
2. If terminals are free of corrosion and are firmly held in place in connector, jumper wires directly to the battery, as indicated in the diagram and following test procedure, to determine if the solenoid is functioning properly.

(see diagram C)

Connect the black wire first, followed by the white wire. When the red wire is connected the solenoid, plunger should pull in and stay in until either the red or black wire is disconnected. The white and black wires should stay cool even after a few seconds have passed. When disconnected the solenoid should return to its previous position.

3. If the solenoid fails the above procedure, the white or black wires get hot, or the contacts are highly corroded; contact Corsa Performance for a replacement solenoid.

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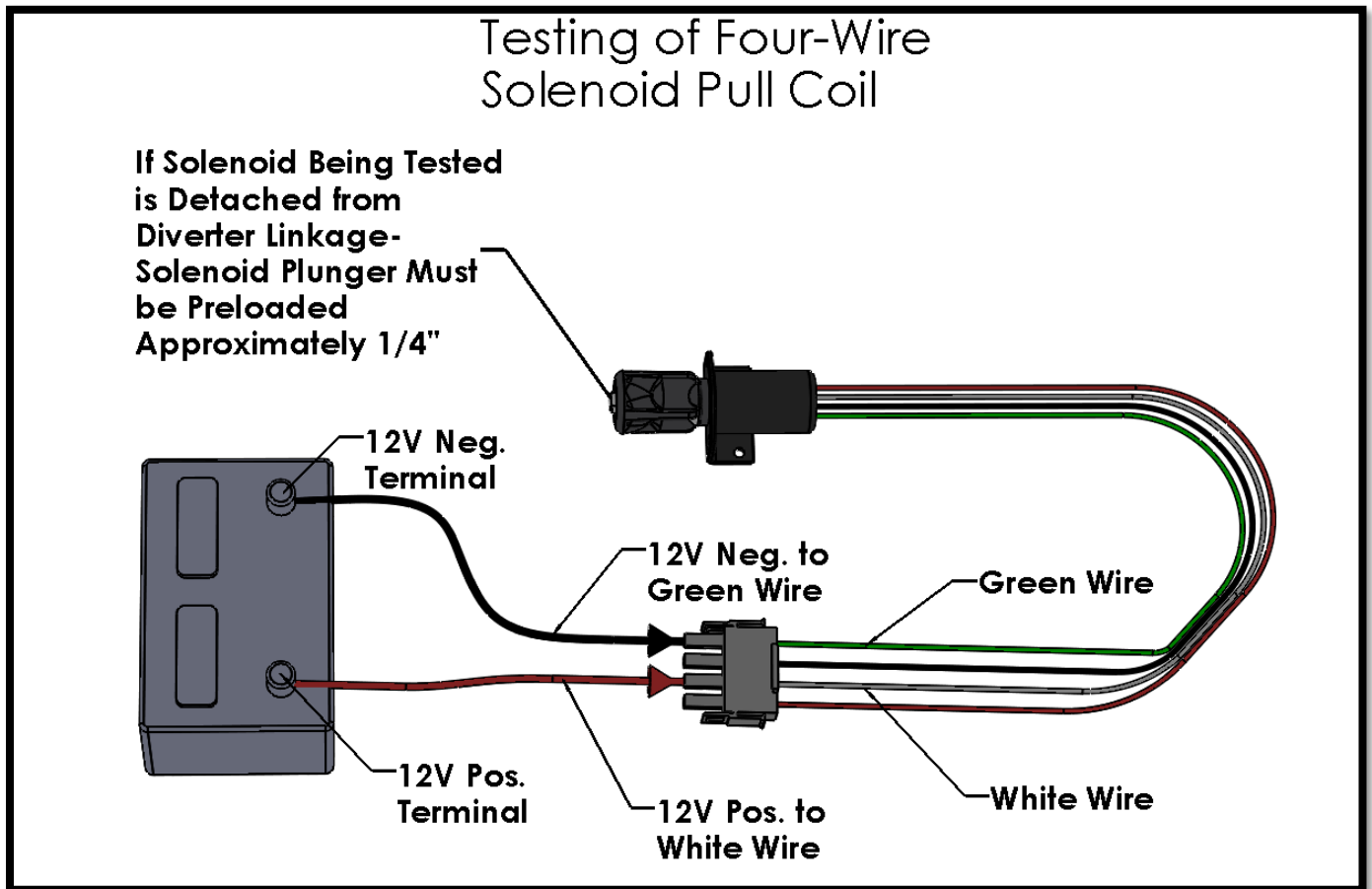


Diagram "A" Four-Wire Solenoid Pull Coil Test

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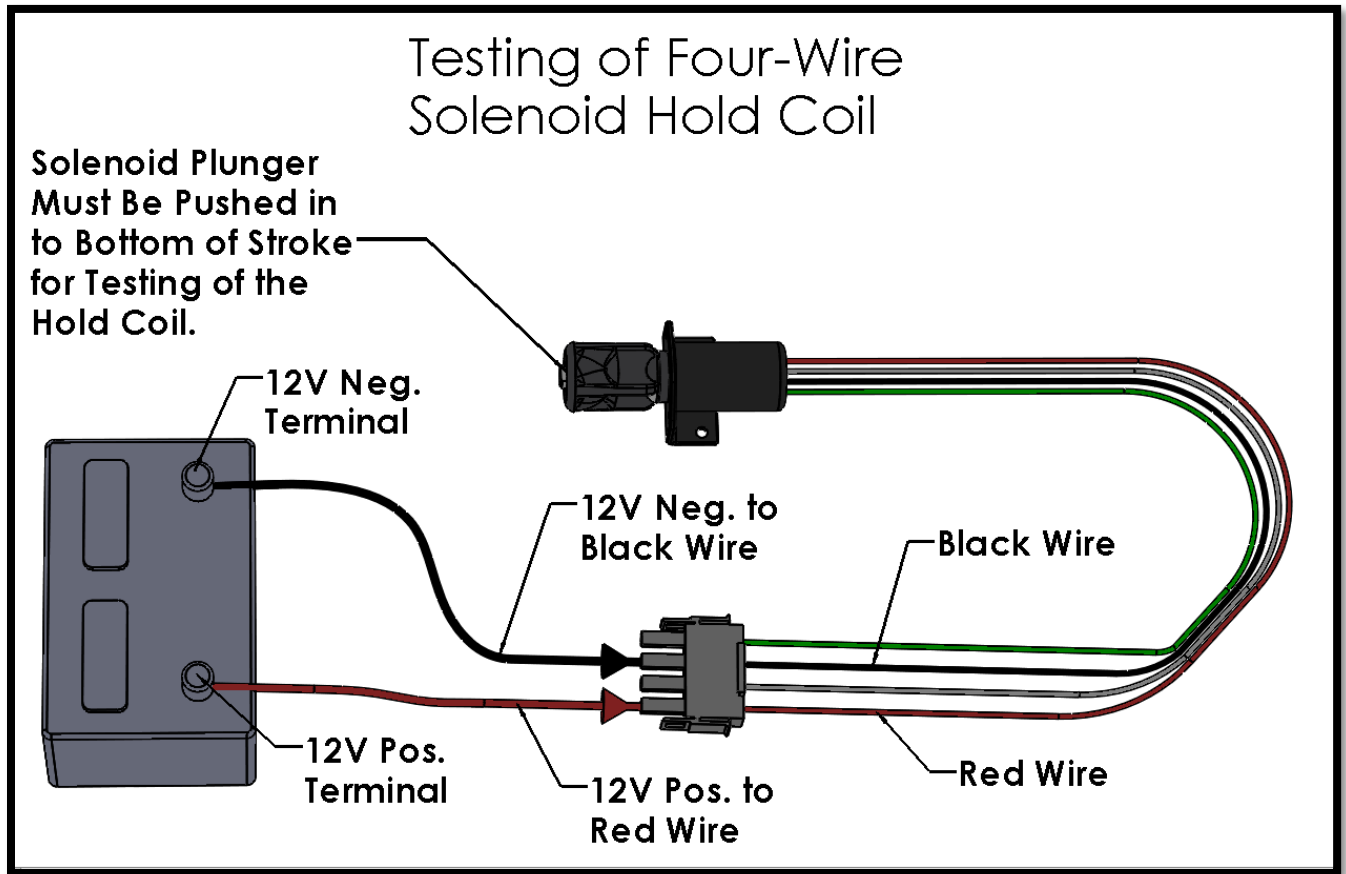


Diagram "B" Four-Wire Solenoid Hold Coil Test

Corsa Performance Marine Solenoid & Harness Testing Procedures

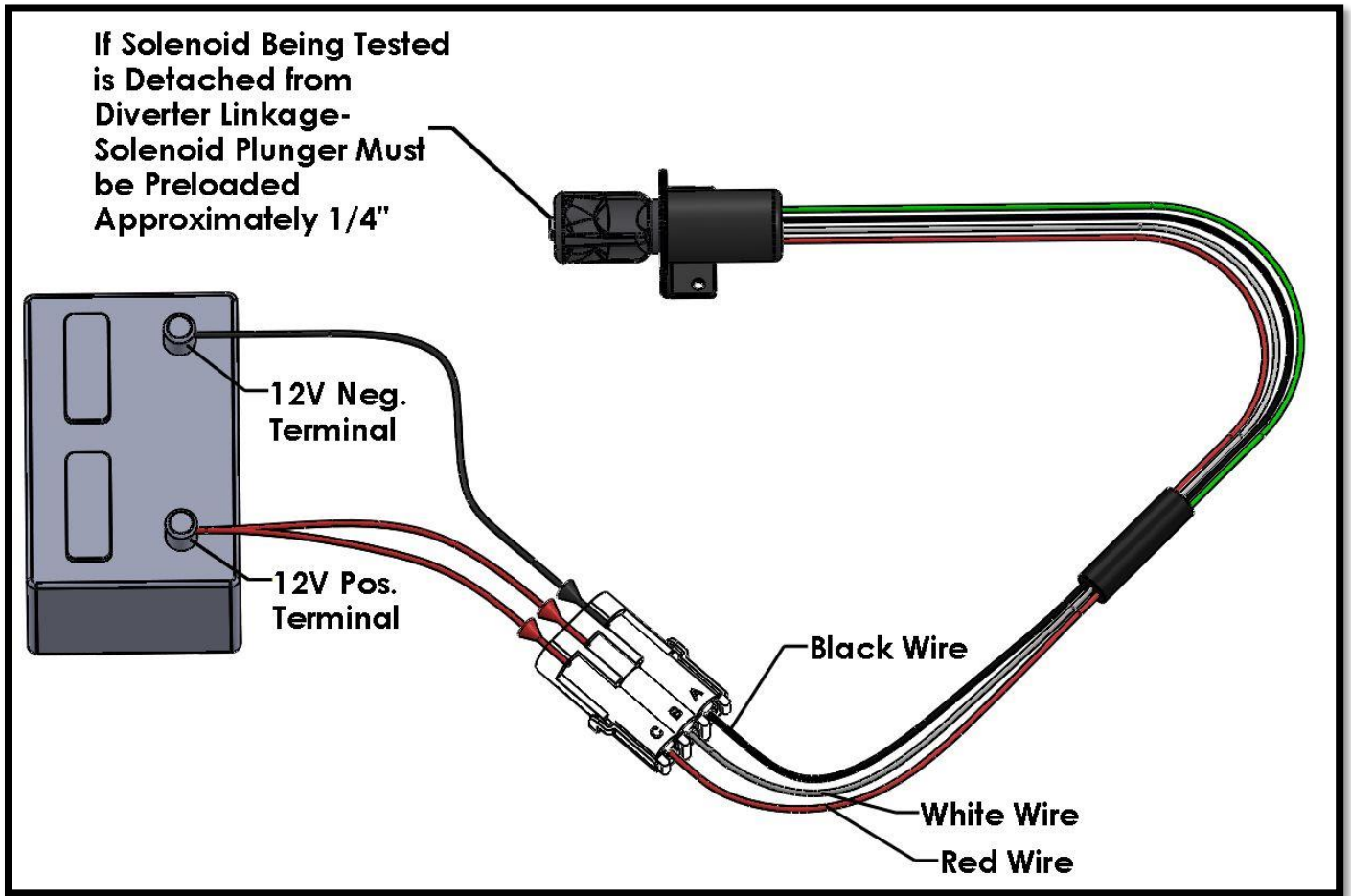


Diagram "C" Three-Wire Solenoid Test

Corsa Performance Marine Solenoid & Harness Testing Procedures



Harness Assemblies

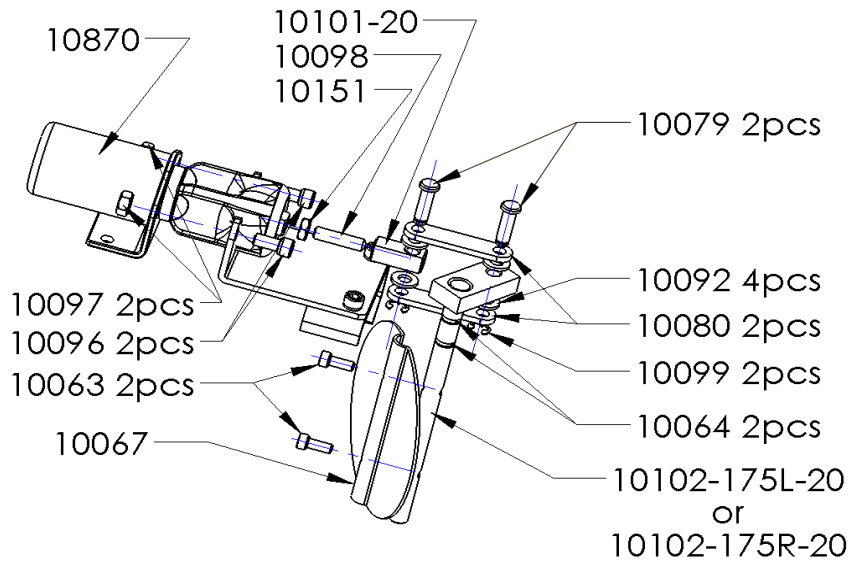
Testing Procedure for Four-Wire Solenoid Wiring Harness (White Connector)

1. Make sure that the ground connection and 12-volt positive connections are clean and free of corrosion. Due to the high current draw of the system, any terminal that does not make a complete contact may cause a failure condition.
2. Disconnect the solenoids from the harness at their respective quick disconnects. Check for any corrosion at these terminals, clean and retry harness operation if corrosion is found. Terminal plugs should be locked in place to the connector and should not come out. If terminals come out of the connector easily, it may not be making good contact with its mating terminal.
3. Place a test light or volt meter probe into the red and black wire terminals in the quick disconnect connector. With power supplied to the harness and the helm switch in the on position, current will flow between the red and black wires at 12V minimum.
4. Place the test light or volt meter probes into the green and white wire terminals. Have an assistant turn the switch to the "on" position. For a brief period, current will flow between the green and the white wires. After that time the current will be opened by a timer in the harness.
5. If harness fails to operate properly in any of the test procedures; contact Corsa Performance for possible replacement.

Testing Procedure for Three-Wire Solenoid Wiring Harness (Black Connector)

1. Make sure the ground connection and the 12-volt positive connections are clean and free of corrosion. Due to the high current draw of the system, any terminal that does not make a complete contact may cause a failure condition.
2. Disconnect the solenoids from the harness at their respective quick disconnects. Check for any corrosion at these terminals, clean and retry harness operation if corrosion is found. Terminal plugs should be locked in place to the connector and should not come out. If terminals come out of the connector easily, it may not be making good contact with its mating terminal.
3. Place a test light or volt meter probe into the white and black wire in the quick disconnect connector. With power supplied to the harness, current will flow between the white and black wires continuously at 12V minimum.
4. Place the test light or volt meter probe into the red and black wire terminals in the quick disconnect connector. With power supplied to the harness, current will flow between the white and black wires continuously at 12V minimum.
5. If harness fails to operate properly in any of the test procedures; contact Corsa Performance for possible replacement.

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|-----|---------------|--|-----|
| 1. | 10067 | Valve Disc * | (2) |
| 2. | 10102-175L-20 | Left Facing Shaft** | (1) |
| 3. | 10102-175R-20 | Right Facing Shaft** | (1) |
| 4. | 10101-230 | 3/8 Square assembly with nut and screw * | (2) |
| 5. | 10099 | 7/32 E-Clip * | (4) |
| 6. | 10097 | ¼-20 Solenoid nuts * | (4) |
| 7. | 10096 | ¼-20 Solenoid screws * | (4) |
| 8. | 10092 | ¼ flat washer * | (8) |
| 9. | 10080 | Transfer link * | (4) |
| 10. | 10079 | Grooved pin * | (4) |
| 11. | 10064 | Viton O-Rings ** | (4) |
| 12. | 10063 | 10-24 Valve disc screws ** | (4) |
| 13. | 10114 | Alignment tool (not pictured) | (1) |
| 14. | 10870 | Solenoid (sold separately) | |
| 15. | 10826 | Repair kit contents * | |
| 16. | 10102-REPL | Shaft kit replacement kit ** | |