MERCURY MerCruiser **Service Bulletin**

☐ Warranty Information ☑ Service Information **Bulletin No. 2003-06**
☐ Parts Information

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V6 and V8 GMEFI with No Start, Engine Miss-Fire or Engine Shut-off Conditions

Models Affected

Model	Serial Number or Year
MCM V6 4.3L MPI	0M322781-0M645782
MCM V8 5.0L MPI	0M320415-0M642305
MCM V8 350 MPI	0M320590-0M642305
MCM V8 MX 6.2 MPI	0M320614-0M642305
MIE 350 MPI Tow Sports	0M310010-0M391684
MIE 350 MPI Inboard	0M310001-0M391684
MIE MX 6.2 MPI Inboard	0M310008-0M391737

Situation

Under certain conditions, an engine may experience one or more of the conditions listed.

Condition/Correction

No Start Condition

This usually occurs at first start-up of the day. After getting the engine started the first time, the engine starts well for the rest of the day. The problem can occur again the next outing. Areas with high humidity are more likely to experience this problem. Remove the HVS distributor cap as soon as possible after experiencing the problem. Look for droplets of moisture or condensation on the inside of the cap or on the rotor.

NOTE: *Do not confuse white powder on distributor cap electrodes as moisture. Moisture (droplets of water) has to be present under the cap.*

If droplets of water are present inside the cap, order a new HVS distributor. Distributors in Mercury Parts stock have a redesigned vent screen to allow better air circulation inside the cap to prevent the accumulation of moisture. Engines with a higher S/N than the ending S/N listed above have the new HVS distributor.

Description	Part Number
V6 HVS Distributor	888751A02
V8 HVS Distributor	884794A02

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Engine Miss-Fire Condition

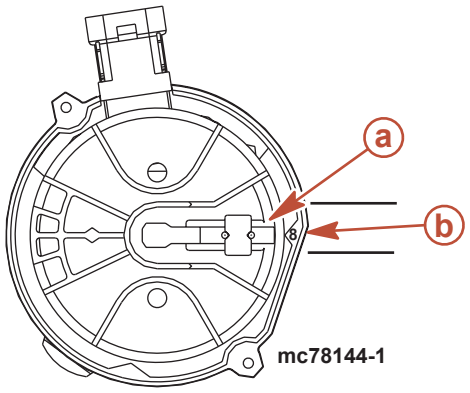
First, make sure it is not spark plugs or some other part that is causing this condition. If the other normal causes have been eliminated, then check the following as listed for each type of engine.

1. V6 and V8 engines
   a. Whenever looking at a HVS related problem make sure the rotor (under the cap) is tight on the distributor shaft. This is a pressed fit and you should not be able to rotate or remove the rotor/metal plate off of the shaft. If you can do either, order a new HVS Distributor.
   b. If there is corrosion or white, powder build-up on the HVS distributor cap electrodes or on the rotor, replace the rotor and distributor cap to correct the problem.

NOTE: *Ensure no moisture (droplets of water) is present.*

Description	Part Number
Cap for V6 HVS Distributor	888731
Cap for V8 HVS Distributor	884792
Rotor for V6 or V8 HVS Distributor	884790

2. V8 engines only: If the performance of 1a and 1b (above) does not resolve the problem, bring the engine to TDC (firing). Remove the HVS distributor cap and verify that the rotor is pointing at the correct timing mark, 8, on the HVS housing between the 2 lines shown below. If this is correct, reinstall the HVS cap. Mark a reference line on the HVS distributor and intake manifold (so you know where the distributor was located after you move it in the following step). Loosen the distributor's clamping screw and rotate the distributor 1-2 degrees clockwise (viewed from top), then retighten the distributor's clamping screw. The engine should now run well. If it does not, then you can return it back to the original line that you marked before.



a - Rotor tang **b -** "8" on housing

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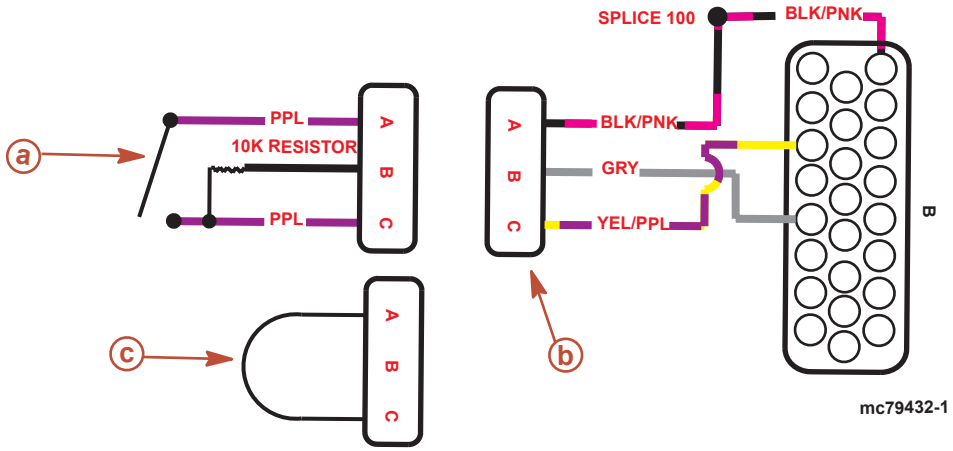
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⚠ CAUTION

When performing this test, the boat must be in the water. The drive unit will be difficult to get out of gear so do the test in an area that will allow the engine to be shut off in gear after the test so that the shift interrupt switch can be reconnected to the engine wiring harness again before proceeding back to the dock.

3. MCM V6 and V8 MPI Alpha engines only: If you have an Alpha engine with an engine miss-fire or if the engine shuts off above 1200 rpm, the problem may be caused by the shift interrupt switch. To determine if the interrupt switch is the cause, disconnect the switch from the engine wiring harness. Use a small jumper wire to go between the A and C terminals in the engine harness connector.



a - Shift interrupt switch
b - Engine harness connection
c - Jumper wire between A and C terminals

If the jumper wire corrects the engine running condition, a new ECM with the latest calibration should be installed. Alpha engines built above the S/N below have the new ECM 555. If an ECM is needed, order the correct one listed below.

Model Description	ECM Part Number	New ECM Starting Serial Number
MCM 4.3L MPI Alpha RWC or non Dry Joint Exhaust Manifold with FWC	864270T06	0M377671
MCM 4.3L MPI Alpha Dry Joint Exhaust Manifold with FWC	865000T02	0M378413
MCM 5.0L MPI Alpha RWC or non Dry Joint Exhaust Manifold with FWC	864271T05	0M603858
MCM 5.0L MPI Alpha Dry Joint Exhaust Manifold with FWC	865002T02	0M604008
MCM 350 MPI Alpha RWC or non Dry Joint Exhaust Manifold with FWC	864272T05	0M604450
MCM 350 MPI Alpha Dry Joint Exhaust Manifold with FWC	865004T02	0M604450

Engine Shut Off Condition Above 1200 rpm

See Step 3 under Engine Miss-Fire Condition. Replacement ECM P/N and starting engine S/N when the ECM went into production are listed.

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