

Hard Starting of Hot Engine – 45/50 (4-Stroke)

Models Affected

Mariner and Mercury

45/50 (4-Stroke)

There have been two possible problem conditions identified by customer complaints:

Condition 1: Hard starting of hot engine or after heat soak.

Engine will not start with the key alone. At times, it is possible to start the engine by working the fast idle lever along with several key turns. At other times, even using the fast idle lever will not start the engine. The engine typically has been run at WOT or until heat stabilized, then left to heat soak for at least 15 minutes up to 45 minutes.

High temperatures under the cowl, especially around the fuel pump and carburetor assemblies, are creating rapid vaporization of the fuel. Within 15 to 20 minutes of heat soak there is little to no fuel near the fuel pump inlet and outlet lines. This in turn, has created an extremely rich air mixture under the cowl, especially in the carburetor body where the vents are located. When the key is turned for starting, the choke plates shut via the choke solenoid, introducing additional fuel to an already rich condition, causing difficult starting.

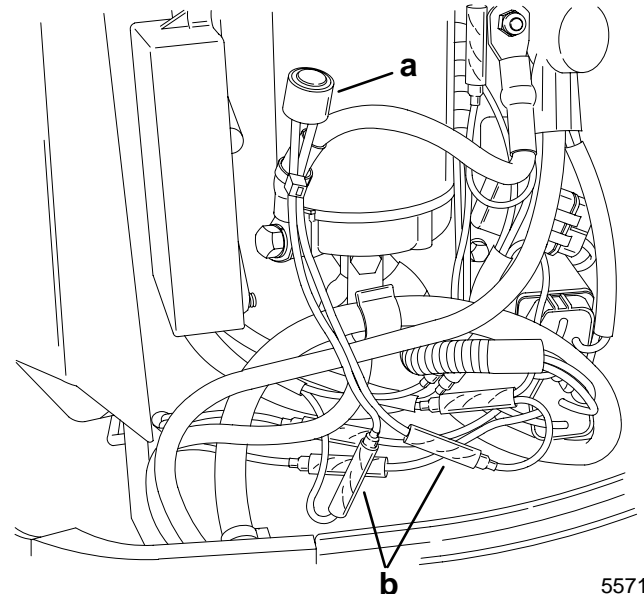
Condition 2: Rough running or stalling after heat soak.

Once the engine has been started after heat soak, the rough running can be attributed to “vapor lock” around the fuel pump inlet and outlet lines. As the bowl fuel level decreases, the fuel pump sends mostly vapor and a little gas for refill. The vapor goes to the top two carburetors, the fuel goes to the bottom two carburetors, thus the engine runs on only the bottom two cylinders. If fuel in the system is depleted before the fuel pump primes itself, the engine stalls.

Correction

CONDITION 1

A Thermostat Switch Kit (P/N 87-852420A1) has been developed as a field fix, for outboards with this hot starting condition. The Thermostat Switch, when installed, will break (deactivate) the automatic choke solenoid ground when under cowl temperatures reach 110° F (61° C).



55719

a - Thermostat Switch

b - In-Line Connection with Automatic Choke Solenoid Ground

WARM ENGINE STARTING PROCEDURES WITH KIT INSTALLED

1. Advance the neutral fast idle speed feature on the remote control to the full fast idle speed position when starting. Return idle speed to normal after engine has started.

NOTE: For tiller handle models, advance the tiller throttle grip slightly.

2. If engine fails to start with the fast idle lever, check the fuel primer bulb. If soft, squeeze several times until it feels firm.

CONDITION 2

Once the engine has started after heat soak with Thermostat Switch Kit installed, it will run rough. After a minute or two the engine will clear and run smooth again. The operator can also keep the engine running by pumping the primer bulb.

Warranty

Outboards with either of the described hard starting conditions, will be covered by a special warranty for two (2) years from the date of sale to the original owner to assure customer satisfaction.

Complete warranty claim listing.

- Outboard Serial Number
- Qty. 1 P/N 87-852420A1 Thermostat Switch Kit
- Labor Code: NJC 0.5 hours
- Failure Code: 399
- Failure Mode: 00

US and CANADA

Complete/process claim via Midas or return warranty claim form.

INTERNATIONAL

Follow instructions issued by Marine Power International office or by your distributor.