mercruiser STERN DRIVES & INBOARDS

service bulletin

TO: SERVICE MANAGER ☐ TECHNICIANS ☒
PARTS MANAGER ☐

No. 97-5

Multiple EFI Engine Battery Precautions

Models

MCM, MIE Engines with Electronic Fuel Injection.

Situation

Alternators: They are designed to charge the battery that supplies electrical power to the engine that the alternator is mounted on. When batteries for two different engines are connected, one alternator will supply all the charging current for both batteries. Normally, the other engine's alternator will not be required to supply any charging current.

EFI Electronic Control Module (ECM): The ECM requires a stable voltage source. During multiple engine boat operation, an electrical onboard device may cause a sudden drain of voltage at the engine's battery. The voltage may go below the ECM's minimum required voltage. Also, the idle alternator on the other engine may now start charging and this could cause a voltage 'spike' in the engine's electrical system. In either case, the ECM could shut off. When the voltage returns to the range that the ECM requires, the ECM resets itself. The engine will now run normally. This ECM shut down usually happens so fast that the engine just appears to have an 'ignition miss'.

Recommendations

Batteries: Boats with multi-engine EFI power packages require each engine to be connected to its own battery. This ensures that the engine's Electronic Control Module (ECM) has a stable voltage source.

Battery Switches: While engines are running, battery switches should be positioned so each engine is running off its own individual battery. DO NOT run engines with battery switches in "BOTH" or "ALL" position. In an emergency, another engine's battery can be used to start an engine with a dead battery.

Battery Isolators: Isolators can be used to charge an auxiliary battery used for powering accessories in the boat. They should not be used to charge the battery of another engine in the boat.

Generators: The generator's battery should be considered in the same manner as another engine's battery.

provided by http://www.crowleymarine.com