

Circulate to: Sales Manager Accounting Service Manager Technician Parts Manager

1100, 1350, 1550, and 1650 Battery Cable Routing

Models Affected

Models Covered	Serial Number or Year
1100, 1350, 1550, and 1650	All

Scope

Worldwide

Situation

An electromagnetic field is created when higher current passes through battery cables. If these cables are located too near the crankshaft position sensor, they will affect the sensor's signal and adversely affect engine performance. Therefore, engine battery cables and other cables carrying higher current such as alternator/isolator leads, trim pump, and auxiliary power must not be routed closer than 76.2 cm (30 in.) to the front of an 1100, 1350, 1550, or 1650 engine. Cables mounted closer than this to the crankshaft position sensor will result in engines failing to start or crank, misfiring, or performing poorly. The engine failing to crank may disengage before the Smart Start abort fault occurs.

Inspection/Correction

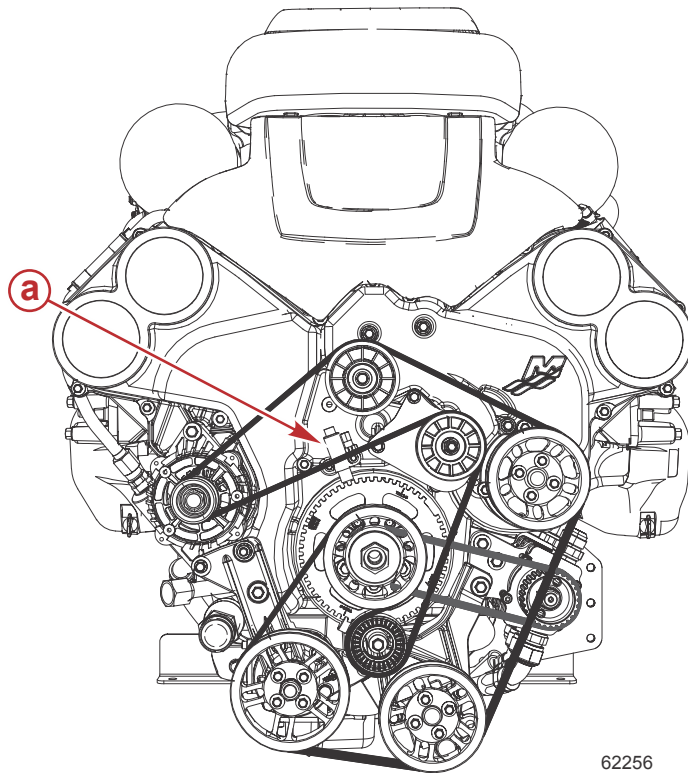
When diagnosing a running issue on a 1100, 1350, 1550, or 1650 engine, use the G3 tool to see if there is RPM with the key in the on position and not cranking, if so, the Smart Start thinks the engine is running. Observe the engine RPM while cranking and starting the adjacent engine. If an attempt is made to start the engine with false RPM, the Smart Start will stop the engine from cranking, normally within one crankshaft revolution. Ensure that both the positive and negative battery cables are at least 76.2 cm (30 in.) from the crankshaft position sensor or the front of the engine—ensure that the positive and negative battery cables are running adjacent to each other. Also, ensure that the battery ground bonding cable is attached to the rear of the engine on the ground stud and is at minimum the same gauge wire as used on the battery leads. Refer to the installation manual or service manual for identifying the proper location.

Note that attaching a ground cable to the front of the engine will position it closer than the required minimum distance of 76.2 cm (30 in.) from the crankshaft position sensor, and will result in the engine failing to start, misfiring, and performing poorly.

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The negative and positive battery cables should be routed together (paired) when possible to balance and reduce the disruptive effects of either cable's electromagnetic field.



a - Crankshaft position sensor

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Warranty

Mercury product warranty covers defects in materials and workmanship performed in the assembly of the Mercury product. In this case, where the problem is the result of the rigging performed by the boatbuilder or dealer who installed the batteries and cables, the warranty if applicable, is assumed by the party who performed the rigging.

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