





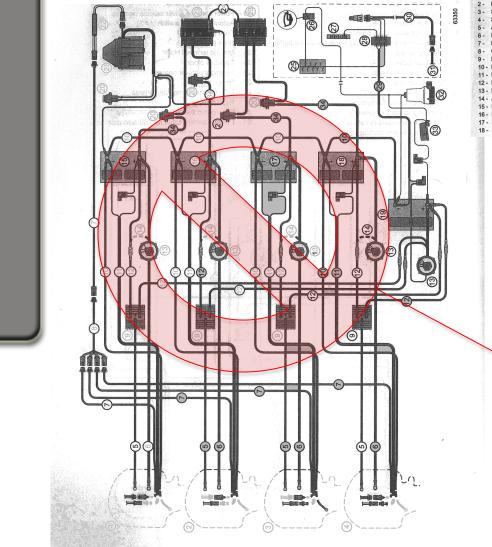
Inboard or outboard applications, not every engine would require its own set of batteries for engine starting events.





SINCE 1969

Quad-Engine Battery Architecture Diagram



Outboard Installation 300 19 - Auxiliary battery 1 - Port outside engine 20 - 60-amp MAXI fuse Port inside engine 21 - Power steering pump Starboard inside engine 22 - Power steering driver module harness 4 - Starboard outside engine 23 - Automatic power switch (APS) Alternator wire 24 - APS jumper cable 15.24 cm (6 in.) or less; 8 gauge 6 - Positive battery cable PVC at 105 °C (221 °F) Power steering signal harness 25 - Fuse panel 8 - Quad engine power steering signal harness adapter 26 - Bilge pump switch 9 - Battery isolator 27 - Ground terminal block 10 - Negative battery cable 28 - Terminal block 11 - DTS power harness 29 - Accessory power harness 12 - Fused harness 30 - Relay harness 13 - Battery switch 31 - DTS command module harness 14 - Alternate connection option 15 - Port outside engine starting battery 32 - Bilge pump 33 - Bilge pump float switch 16 - Port inside engine starting battery 34 - Positive battery cable with 60-amp MAXI fuse 17 - Starboard inside engine starting battery 18 - Starboard outside engine starting battery

This architecture can and will be simplified, more efficient, cost effective and yet become more robust & reliable when supercapacitor technology is incorporated for engine starting requirements. Although not the fully engineered solution, this concept is sound. KBI has approximately ten thousand (10,000) successful commercial engine staring applications, many approaching fifteen (15) years in service. The technology is mature. The marine industry should get on board.

