

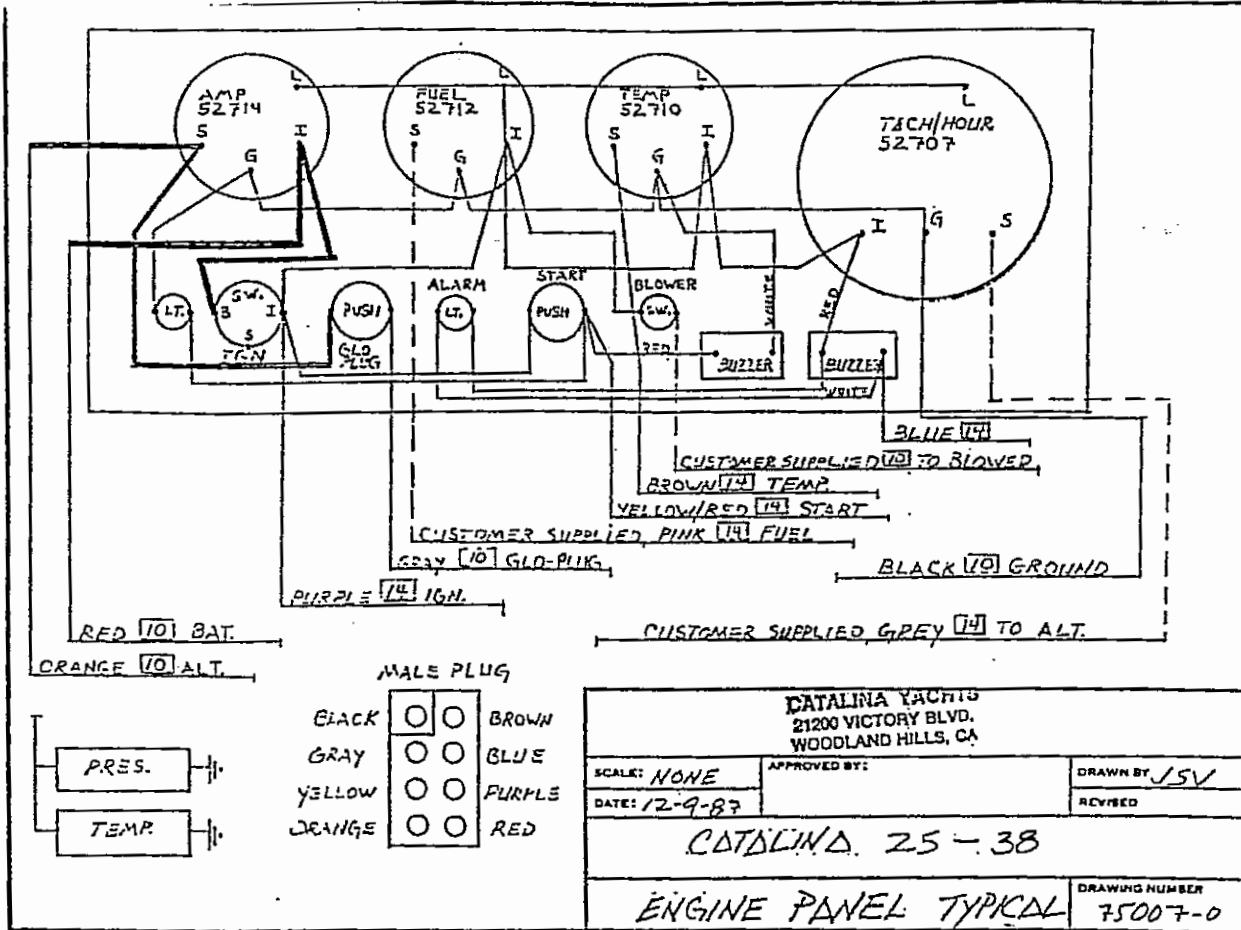
DESCRIPTION OF UPGRADE, HARN-80

HIS MODIFICATION WILL REPLACE THE 8-WAY MOLDED PLUGS BETWEEN THE ENGINE AND EXTENSION HARNESS, AND THE 8-WAY MOLDED PLUGS BEHIND THE ENGINE PANEL WITH 12-POST EURO TERMSTRIPS. THE AMMETER ON THE ENGINE PANEL WILL BE REPLACED WITH A VOLTMETER, TO ALLOW A CHANGE IN THE WIRING FROM THE ALTERNATOR TO THE BATTERY THAT WILL GREATLY IMPROVE THE CHARGING CIRCUIT.

* * * * UPGRADE PROCEDURE * * (REFERENCE CATALINA DWG. NO. 250-50009-0) * *

- 1 - DISCONNECT THE BATTERY POWER CABLES.
- 2 - LOCATE THE 8-WAY MOLDED PLUGS IN THE HARNESS, WHICH ARE ABOUT 18" FROM THE ENGINE, RECTANGULAR IN SHAPE, AND COVERED WITH BLACK TAPE. REMOVE THE TAPE FROM THIS AREA. CUT ALL WIRES NEXT TO THE PLUGS ON BOTH SIDES, AND REMOVE THE PLUGS. STRIP 1/4" OF INSULATION OFF THE END OF EACH WIRE, AND SEPARATE THE ORANGE WIRE FROM THE OTHER SEVEN.
- 3 - TO PREVENT CORROSION, AND TO MAKE A SOLID MECHANICAL AND ELECTRICAL CONNECTION, YOU MUST MELT SOLDER ON THE END OF EACH WIRE, EXCEPT THE ORANGE WIRE COMING FROM THE ALTERNATOR. ATTACH ALL OTHER WIRES TO THE TERMSTRIP, MATCHING COLOR TO COLOR AS SHOWN ON THE HARNESS SKETCH.
- 4 - WRAP SOME SCRAP WIRE AROUND THE HARNESS NEAR THE TERMSTRIP, AND SUSPEND THE HARNESS HORIZONTALLY COMING FROM THE ENGINE, TO KEEP IT OUT OF THE BILGE, AND TO MINIMIZE TENSION ON THE TERMSTRIP.
- 5 - REMOVE THE BATTERY CABLE FROM THE POSITIVE POST ON THE STARTER MOTOR. CRIMP THE SUPPLIED RING TERMINAL TO THE ORANGE WIRE THAT IS COMING FROM THE ALTERNATOR, AND ATTACH THE WIRE TO THE STARTER POST. RE-INSTALL THE BATTERY CABLE TO THE POST, ON TOP OF ORANGE ALTERNATOR WIRE. SPRAY THE POST WITH WATER REPELLANT, AND SECURE THE NUT.
- 6 - REMOVE THE ENGINE CONTROL PANEL FROM THE MOUNTING POSITION, LOCATE THE 8-WAY MOLDED PLUGS ABOUT 18" BEHIND THE PANEL. REMOVE TAPE FROM THIS AREA, CUT ALL WIRES ON BOTH SIDES OF THE PLUGS AND REMOVE THE PLUGS.
- 7 - REMOVE THE ORANGE WIRE THAT WENT FROM THE RUBBER PLUG TO THE ENGINE CONTROL PANEL, AND DISCARD IT, BECAUSE IT IS NO LONGER REQUIRED IN THE CIRCUIT. STRIP 1/4" OF INSULATION OFF THE ENDS OF ALL THE OTHER WIRES. SOLDER-TIN THE END OF EACH WIRE, AND ATTACH ALL WIRES TO THE TERMSTRIP, MATCHING COLOR TO COLOR AS SHOWN ON THE HARNESS SKETCH.
- 8 - VISUALLY MATCH WIRES ON BACK OF AMP METER TO "ORIGINAL WIRING" SKETCH. DISCONNECT WIRES, REMOVE AMP METER, AND REPLACE IT WITH THE VOLTMETER.
- 9 - REMOVE WIRE FROM "B" TERMINAL OF IGNITION SWITCH, CONNECT IT TO THE "I" TERM OF IGNITION SWITCH, AND CONNECT OTHER END TO THE "I" TERM OF THE VOLTMETER. CONNECT RED WIRE FROM HARNESS TO "B" TERM OF IGNITION SWITCH. CONNECT WIRE FROM "GLOW PLUG" SWITCH TO "I" TERMINAL OF VOLTMETER. RECONNECT "GROUND" WIRE(S) AND "LIGHT" WIRE TO "G" AND "L" TERMINALS ON THE VOLTMETER.
- 10 - DO NOT CONNECT ANY WIRES TO "S" TERMINAL OF THE VOLTMETER.
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- 11 - MATCH WIRES ON BACK OF PANEL TO "MODIFIED WIRING WITH VOLTMETER" SKETCH
- 12 - REPLACE THE ENGINE CONTROL PANEL. RE-CONNECT BATTERY CABLES, START THE ENGINE AND CHECK PANEL & ENGINE OPERATION BEFORE EXTENDED USE OF BOAT.

ORIGINAL WIRING (WITH AMMETER)



MODIFIED WIRING (WITH VOLTMETER)

