service bulletin



NUMBER: 80-12 **DATE**: 6/6/80

CIRCULATE TO: SERVICE MANAGER PARTS MANAGER MECHAN**ICS**

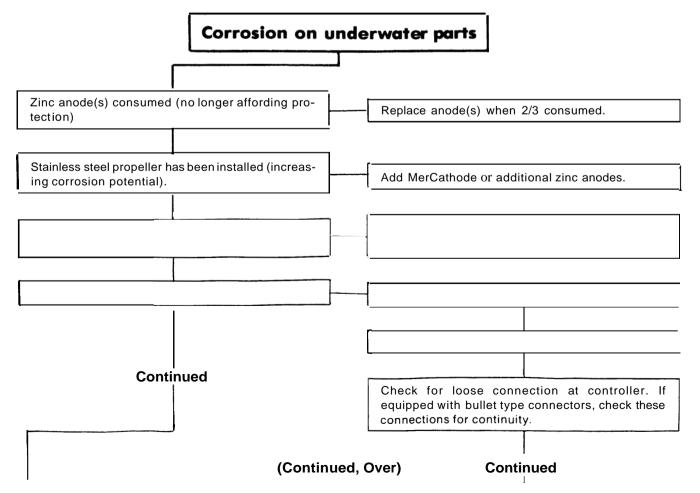
CORROSION TROUBLESHOOTING

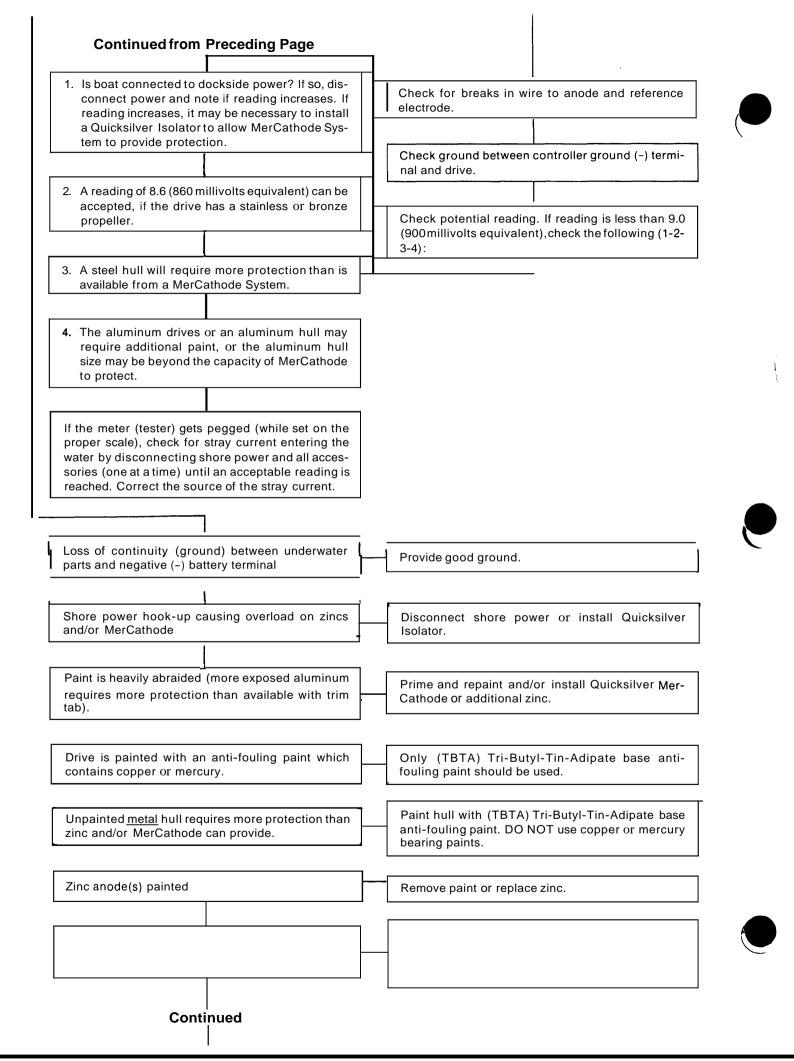
(Attach Bulletin Reference Sticker to Section I Index Page of Your Service Manuals.)

The first signs of corrosion are paint blistering (starting on sharp edges) below the water line with white corrosion products forming on these exposed metal areas. As the corrosion becomes more advanced, the exposed metal areas start eroding away, thus causing pitting of the metal.

If these signs appear on the underwater parts of the drive unit, use the following troubleshooting chart to help find cause of corrosion and its remedy.

IMPORTANT: Paint blistering and white corrosion products, that form on sharp edges below the water line, should not be confused with calcareous (calcium carbonate) deposits which usually form <u>uniformly</u> over the <u>entire surface</u> (painted and unpainted) when the unit is receiving adequate cathodic protection. The deposits are related in part to the calcium and magnesium concentration levels in the water.





Continued from Preceding Page With a MerCathode tester in the water, disconnect Stray current corrosion (if an electric current flowelectrical components (one at a time) until tester ing along a metallic conductor leaves the metal for a indicates stray current has been eliminated. Elimiwater path, it will cause ionization of the metal, and nate or repair electrical fault. an area of rapid corrosion is created) Provide ground between trim cylinders and drive unit to receive protection from zinc or MerCathode; Power Trim cylinders only corroded all underwater parts must maintain a good ground path to battery negative (-) terminal. Multiple batteries wired incorrectly Make sure wiring is done in approved manner. Battery charger which uses shore base power (110v) Make sure charger is connected properly. improperly connected to batteries Corrosion continues after unit is removed from Wash exterior and flush interior with fresh water. water (salt crystals remain on the surface and high humidity causes the electrolyte to form). Corrosion and/or salt buildup between mating Exclude moisture from between mating parts with Quicksilver Perfect Seal. parts Stainless steel shaft is corroding. (Fish line or other material tightly wrapped around shaft will eliminate Remove foreign material from shaft. oxygen from its surface, thus allowing corrosion.) This is known as crevice corrosion. Stainless steel propeller or shaft is corroding. [Fouling deposits (marine growth) or burying stainless in Remove fouling deposits and prevent wetted sursand or silt for a long period of time may cause faces from being covered by sand and/or silt. breakdown of protective oxide film, and rapid corrosion will occur.] Aluminum is corroding in area where lubrication is applied. (Lubricants containing graphite com-Use only approved Quicksilver Lubricants. pounds create a galvanic cell which causes aluminum to corrode.) DO NOT: Never clean an aluminum casting with a wire brush. (Steel particles become entrapped in the aluminum Use nylon or bristle brush. surface and set up small galvanic cells.) Never use magnesium anodes (this may over-Use only zinc anodes. protect aluminum).