MERCURY MerCruiser

Service Bulletin

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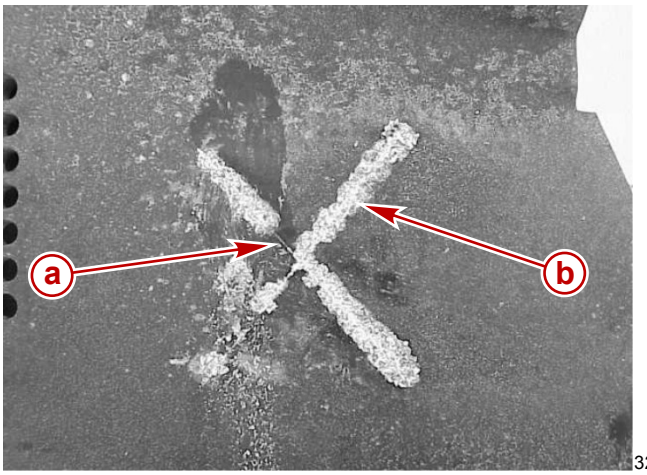
Circulate to: ☑ Sales Manager ☐ Accounting ☑ Service Manager ☑ Technician ☐ Parts Manager

Anti-Fouling Paint on Aluminum Drives

Situation

Marine growth is a common problem in saltwater environments. To prevent marine growth, many boaters use anti-fouling paint. Most modern anti-fouling paints contain copper. Copper retards marine growth but causes aluminum to corrode when both are immersed in salt water.

The following photograph illustrates this corrosion. It shows an aluminum drive coated with anti-fouling paint that contains copper. To simulate damage, we intentionally scribed the drive with an X to expose bare aluminum. The drive was then immersed in coastal seawater for three weeks.



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a - Original scribe mark
b - Mark after three weeks of corrosion

This test illustrates how quickly corrosion can spread on a damaged drive that is coated with copper-based anti-fouling paint if it is not properly repaired. Mercury Marine is currently testing both commercially available and experimental anti-fouling paints to provide clear product recommendations for our dealers and customers. We will provide a definitive recommendation after we complete this evaluation.

Correction

To minimize corrosion from copper-based anti-fouling paint on aluminum drives (standard and SeaCore products), we currently recommend the following:

- Use a paint with the lowest possible copper content that will adequately protect your boat from fouling in the waters where you do the majority of your boating.
- Before applying anti-fouling paint to the drive, properly repair the damaged area of the factory-painted surface to ensure that no bare aluminum is exposed. The original paint layer provides an important barrier that prevents copper ions from reaching the bare aluminum.
- Repair any damage to the factory-applied paint and ensure that no aluminum is exposed before applying anti-fouling paint. The original paint layer provides an important barrier that prevents copper ions from reaching the aluminum itself.
- Do not paint the anodes. These pieces of aluminum or zinc are meant to corrode as a method of protecting the aluminum drive. Replace an anode when 50% of its mass has eroded.

IMPORTANT: Do not use magnesium anodes in salt water. Magnesium, like copper, can damage aluminum in seawater.

To properly repair the paint if damage exposes bare aluminum:

1. Remove the anti-fouling paint in the affected area.
2. Apply the repair paint and let it cure.
3. Apply the anti-fouling paint.