

LOCTITE*Adhesives for more
reliable assemblies***APPLICATION CASE HISTORY****No. 129****Loctite Products Tough Enough For Tigersharks***Design Solutions from Loctite on Arctco's Tigershark Personal Watercraft**Arctco depends on Loctite products in the assembly of the Tigershark Personal Watercraft***Situation:**

Arctco Sales, Inc. has been building Arctic Cat snowmobiles for years. So when they decided to launch a line of personal watercraft, they assembled all of their problem-solving suppliers from the beginning. Loctite had a long track record in providing solutions for their snowmobile line. According to Ron Ray, Vice President of Manufacturing, "we think of Loctite as an extension of our engineering team, providing value-added technology and cost-effective design solutions throughout our assembly. We literally put Loctite on our design team in the product development phase."

Solution:

Arctco's line of personal watercraft sees diverse environments. The products must:

- 1) withstand long-term salt water exposure;
- 2) be impervious to gasoline and oil;
- 3) withstand constant shock and vibration; and
- 4) exhibit no leaks in the jet pump area.

According to Joe Lesmeister, Manufacturing Engineer, "if it's a vibration or sealing application, Loctite is the first company we call because we want to do it right from the beginning. For example, we considered using a rubber-stamped gasket in the jet pump, but had continuous failures in our tests. Loctite offered their formed-in-place silicone to prevent water leaks – and it worked – 100% of the time!"

*(Continued on reverse)***Loctite Americas**

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Results:

Loctite products are used throughout the Tigershark watercraft assembly, as outlined below:

Silicone Gasketing Products

- > Sealing the jet pump to fiberglass inlet, acting as a gasket to prevent water leaks.
- > Sealing the exhaust outlet.
- > Sealing the trim rod boot.
- > Sealing the front bow-eye.
- > Sealing the flotation foam holes in the liner.

Anaerobic Permanent Threadlocking and Retaining Compounds

Note: All hardware is primed with Loctite Primer N.



- > Locking stainless steel studs in wear ring.
- > Locking stainless steel screws, which attach ride plate to wear ring and venuri.
- > Securing the expansion chamber to the manifold with stainless steel screws into aluminum.
- > Securing the carbs into the intake manifold with stainless hardware.
- > Holding the motor plate to the engine using stainless steel fasteners into aluminum.
- > Securing the stainless steel hardware.
- > Retaining the stainless steel motor mounts to backing plates in liner.
- > Securing the stainless steel studs into aluminum intake manifold.
- > Locking rear tow hook jam nuts.
- > Locking stainless steel screws attaching the ride plate to the backing bars.
- > Seating the stainless steel stud and U-bolt.

Anaerobic Removable Threadlocking Compounds

- > Securing the coupler on the crankshaft of the engine.
- > Holding the grease zerts in the coupler and bearing housing in place.
- > Bonding the stainless steel intake manifold hardware into aluminum.
- > Securing the flame arrestor with stainless steel fasteners into aluminum.
- > Bonding stainless steel cable adjustment nuts.



Other Loctite Products Used

- > Seal all gas and oil tank fittings to tank with thread sealants.
- > Bond hatch and seat seal seams together with cyanoacrylate.
- > Bond plastic knobs and nuts on reserve and choke assemblies with cyanoacrylate.
- > Protect motor mount bolts holding the engine to mounts with lubricating compounds.



Lee Carriere, Buyer for Arctco, says, "whenever we are in a jam or need to fix a problem, we call the Loctite sales representative, and a suggested solution (product) is on my desk the following day – **now that's service!**"