

APPLICATION CASE HISTORY

No. 137

Polaris Sportsman 500 ATV Built With Henkel Technology

Creates unique competitive advantage for safety, comfort and performance

Polaris Industries, Inc. of Minneapolis has been manufacturing snowmobiles and other high-performance recreational vehicles since 1954. In 1985, they started manufacturing all-terrain vehicles for recreational use, as well as for use in farming, hunting, and construction. Located in an area of the country where snowmobiles, ATVs and personal watercraft are a way of life, it's no

wonder Polaris has become a leader in the industry. Today, Polaris markets over 14 different models of ATVs.

In Roseau, MN, at their largest manufacturing and field testing facility, Senior Product Coordinator, Jerry Endrizzi, says "Our design team looks to our Henkel representative whenever we need locking and sealing expertise." Mark Karl, a manufacturing manager, agrees, "Loctite® brand products are the best for our fastener, sealing and lubricating applications, and we also look to Henkel for impor-

tant applications assistance from design through production."

The newest ATV from the Polaris design team has a 498cc liquid-cooled engine that provides plenty of power for hard work or recreation. This revolutionary new ATV combines a low maintenance shaft drive with an inde-

pendent suspension to all wheels, providing the driver with both comfort and steady handling. In addition, the Sportsman 500 was designed using a state-of-the-art CAD system that enabled Polaris engineers to design an integrated, 38-component frame. Fewer pieces mean fewer potential stress points and a stronger overall vehicle. This frame is unique to the market – competitors'

frames have up to 120 parts.

On the ATV assembly line at Roseau, Group Leader Leroy Hamann says, "Not only are Loctite® brand products used to aid in the assembly of parts, but it would be hard to imagine our production line without them.

The Loctite® 587™ Blue High Performance RTV Silicone Gasket Maker is used to seal our critical leakproof areas, such as our strut housings and hubs, which hold oil for our push button, on demand all-wheel-drive. We also use it to seal the inner clutch cover. Loctite®

565™ PST® Thread Sealant is used on all of our metal and plastic threaded fittings for both antifreeze and oil applications. One of the pluses of this application is that the liquid can be added before the pipe sealant cures without leakage occurring. Henkel has become an important partner in the production of Polaris ATVs."



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Where Loctite® brand Products are used in the Polaris Sportsman 500 ATV:

- Loctite® brand Superflex® RTV Silicone Adhesive Sealants seal the splines of the transmission output shaft at the point where the rear brake disc is attached. The Loctite® Superflex® holds and provides a cushion for the disc.
- Loctite® 587™ Blue High Performance RTV Silicone Gasket Maker secures the magnetic all-wheel-drive hub coil wires to the hub-strut housing. The wires run down to coils assembled into the front two wheel hubs on all-wheel-drive models and are magnetized whenever the all-wheel-drive is engaged.
- 3. Loctite® 242® Threadlocker secures the bolts which fasten the front brake discs to the front wheel hubs.
- Loctite® 565™ PST® Thread Sealant is used on the magnetic drain plug located on the front wheel hubs of all-wheel-drive models, sealing the transmission fluid inside the wheel hubs.
- 5. Loctite® 271™ Threadlocker fastens the fan blade retaining nut on the cooling fans.
- Loctite® 587™ Blue High Performance RTV Silicone Gasket Maker secures the inner clutch seal to the inner clutch cover. Polaris' Variable Transmission housing requires a watertight seal.
- 7. Loctite[®] 565[™] PST[®] Thread Sealant seals the fittings on the coolant reserve tank.
- 8. Loctite® 587™ Blue High Performance RTV Silicone Gasket Maker seals and retains the wheel hub seal sleeve.
- 9. Loctite® 609™ Retaining Compound retains bearings in the drive and driven clutch assemblies.
- Mounting bolts are supplied with Loctite[®] brand pre-applied removable fastener coating for locking and securing the control arms.
- 11. Loctite® 242® Threadlocker fastens the half-shaft connector bolt securely in place.
- 12. Loctite[®] 565[™] PST[®] Thread Sealant pipe thread sealant seals the radiator thermal switch.



Loctite® 587™ Blue High Performance RTV Silicone Gasket Maker seals and retains the front wheel hub seal sleeve.



Loctite® 565™ PST® Thread Sealant is used on the magnetic drain plug found on the front wheel hub of all-wheel-drive model ATVs.



Loctite® 271™ Threadlocker is used to fasten down the cooling fan blade retaining nut.