



Overview:

The titanium wheel studs serve multiple purposes: reduced weight over OEM; coated surface to reduce the possibility of galling, a bullet tip to ease the nut threading process, and 2 extended length options.

Compatibility:

The wheel studs will fit any Viper 1992-2017. Open ended lug nuts are required due to the bullet tip. Hub centric wheels should always be used.

The studs can be installed using a Lisle 22800 tool and extra open-ended nut, both are available through DSE, although, a press is the ideal way to remove and install the studs.



Studs of each length installed on a Viper hub aside OEM studs for comparison

Construction:

A high-strength forging of 6AL-4V Titanium with rolled threads coated with a Teflon infused anodizing.

Weight:

Although longer than OEM, each length stud provides a weight savings over the OEM studs. (.3 lb per corner for the OEM length)

Ordering Information:

<http://dougshelbyengineering.com/Viper.html>

DSE-LN-TI-002: Titanium Wheel Stud, OEM 50mm Length (Requires Open Ended Lug Nuts)

DSE-LN-TI-003: Titanium Wheel Stud, Longer 63mm Length (1/2" Longer than OEM; requires Open Ended Lug Nuts)

DSE-LN-TI-004: Titanium Wheel Stud, Longer 75mm Length (1" Longer than OEM; requires Open Ended Lug Nuts)

Installation Guide:

- Follow the instructions for stud replacement in the service manual to remove and replace the wheel studs.
- Tools such as the Lisle 22800 tool mentioned above and a modified J-45270 Wheel Stud Press (or similar tools) can make installation easier. *It is not recommended to pound the OEM studs out with a hammer as wheel bearing damage may result.*
- For installation apply a generous amount of the red Resobond 970TS to the knurling of the stud. This serves several purposes, easier press fit, additional locking strength on the knurl, and sealing the knurl area from the elements.
- If using the Lisle 22800 tool for installation:
 - Use additional anti-seize on the stud and nut threads during stud installation.
 - Carefully limit use of the impact wrench to prevent buildup of heat or spinning the lug nut too quickly.
 - If the nut/stud become hot during installation allow to cool before proceeding to avoid galling.
 - Do not over tighten – only tighten until the flange just meets the back side of the hub or damage may result.
- If using the modified J-45270 Wheel Stud Press (or similar tool) for installation:
 - Carefully press the stud in from the back (flange side).
 - *Tip: cover the surface of the contact areas of the press (or hub) with tape to prevent hub surface marring.*

DSE will install studs on new wheel hubs with or without ceramic bearings, please contact for details.

Usage Guide and Tips:

A note on galling: Just like steel, titanium may gall (cold weld), however, these studs and the DSE titanium lug nuts have been coated with a durable Teflon-infused coating to greatly reduce the risk of this. The possibility of galling is increased with temperature, spinning speed, and load forces that the stud/nut are exposed to. Further reduce the risk of galling by never using an impact wrench to tighten or install the lug nuts on the studs, especially when hot.

- While the Teflon coated studs and lug nuts are less prone to galling than the OEM versions, hand tightening lug nuts with a torque wrench is recommended to preserve the finish. Do not use an impact wrench to tighten the lug nuts.
- Tightening studs/nuts when are hot is not recommended as the torque will be too tight once the studs cool.
- Only use hub centric wheels and spacers. Spacers are not recommended but must be hub centric if used.
- Take caution to avoid damage due to over-torque, under-torque or damaged threads.
- The coating provides a reduced-friction surface similar to anti-seize and therefore requires a torque adjustment to maintain the intended force. Torque the lug nuts to ~80% of the recommended torque spec (roughly 80 ft-lbs for Vipers – check torque specs for your model year).
- Tighten lug nuts in the recommended star pattern in stages (30 ft-lb 60 ft-lb, 80 ft-lb). Torque to 80% of spec .
- As with any lug nut, check the torque again after the first drive within 50 miles to ensure they are still tightened to spec.

Inspection and Maintenance:

- On track days check the torque before and after each session (on cool studs only, never tighten hot nuts/studs).
- Periodically inspect the coating on the threads. If significant damage or wear of the coating occurs over time use Permatex Anti-Seize or equivalent to prevent galling.
- Periodically inspect the threads, base, and back side flange of the wheel studs for signs of wear or damage. The stud should be immediately replaced at the first sign of physical damage to the stud.
- Main causes for stud failure include incorrect torque (over or under torque). Regularly use a hand-driven torque wrench to confirm torques.

RESBOND™ 907TS RED THREADLOCKER Use From -300°F to 2100°F

POTENTIAL HEALTH EFFECTS Primary Route Of Entry: Inhalation, Ingestion And Skin Irritation. Effects Of Overexposure: Currently, studies have shown that signs of slight dermatological irritation have occurred after prolonged skin contact. This product contains minor amounts of binders which burn out during first heat up. Emergency and First Aid Procedures Terminate Exposure.

EMERGENCY FIRST AID PROCEDURES Emergency and First Aid Procedures: Flush eyes with copious quantities of water. Get immediate medical attention for eyes. If swallowed, consult a physician immediately.

SPILL OR LEAK PROCEDURES Recommended Procedures: If spilled mix with water and disposed in approved industrial waste container. Hose down spilled wet cement paste with water immediately. Cement is not water soluble after setting up.

HANDLING AND STORAGE Storage: Keep containers sealed and clearly labeled. Handling: Keep container closed when not in use. Avoid getting powder in body openings, including: cuts, sores, mouth, etc. Wash hands thoroughly before eating or smoking.

Thank you for your purchase!

Your business is appreciated and customer satisfaction is our top priority! Don't hesitate to contact us via email with any questions or feedback. Word of mouth is the best form of advertising so if you are satisfied please spread the word!

Disclaimer of Liability:

Doug Shelby Engineering assumes no liability expressed or implied for the improper installation or use of this product or its components. Doug Shelby Engineering is NOT responsible for any damage, consequential or otherwise for equipment failure after installation.

Vehicle Modification:

Modification of your vehicle with the parts identified above may alter its stock performance; the buyer hereby expressly assumes all risks associated with any such modification.

Disclaimer of Warranty:

Seller disclaims any warranty express or implied with respect to the parts sold hereby whether as to merchantability, fitness for particular purpose, or any other matter.