


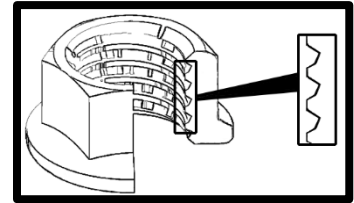
Title:	Spirallock™ Hardware			
Number:	PB_572	Release Date:	02/02/2022	
Revision Number:	3	Revision Date:	02/05/2025	
Chassis Type:	Arrow XT, Velocity, Impel, Saber, Enforcer, Quantum			
Component Description:	1/2", 5/8", and 3/4" fasteners on chassis			
Tools:	See Torque Tool Recommendations			

Subject:

Introduction of tri-cripp, Spirallock™ chassis/aerial hardware.

Purpose/Background:

- Pierce is replacing all 1/2", 5/8", and 3/4" Magni-black nuts with tri-cripp Spirallock™ nuts. This change from oval lock to Tri-cripp Spirallock™ only affects 1/2", 5/8", and 3/4" hardware.
- Spirallock™ fasteners are being used by Pierce® primarily on frame builds started in October 2021 (RFPs starting in February 2022).
- Spirallock™ nuts look similar to standard hardware but require higher torque specifications.
- Spirallock™ nut threads have a special wedge ramp at the foot of the thread allowing a continuous line of contact when a clamp load is applied.

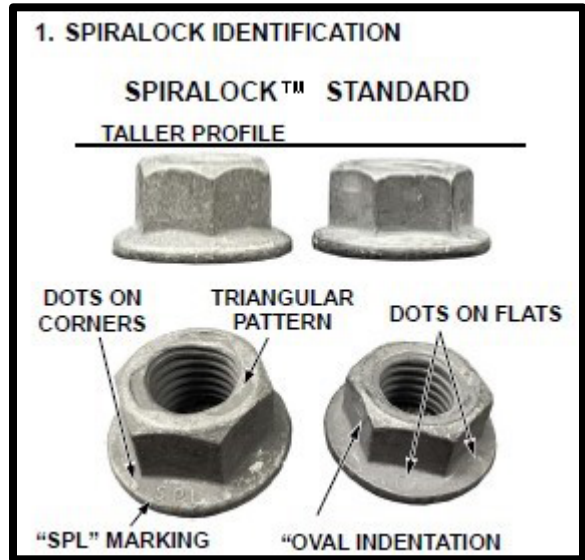


Hardware Identification:

Installed hardware is noted on the Aerial placard when applicable.

NOTE: The Aerial placard will denote what is installed on the apparatus at time of OEM build. If hardware is loose, we recommend changing to the Spirallock™ hardware on both sides and having the placard updated or noted in the customer's file.

However, suspension and other areas of installation require visual inspection during installation and service to determine appropriate torque values.
(see pictures to right for identification details).



Description/Procedure:

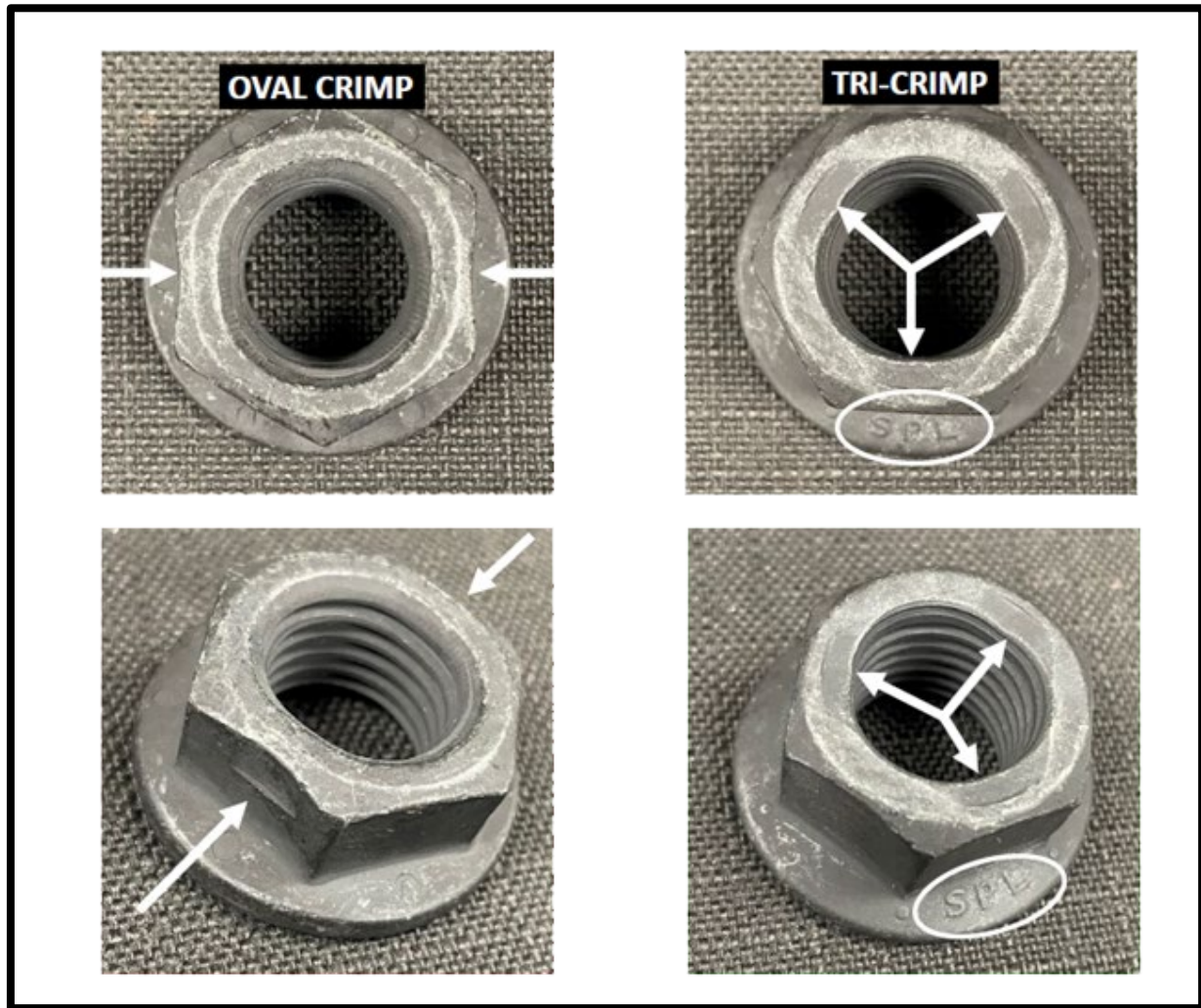
Spiralock™ nuts have higher torque specifications compared to standard fasteners as shown in the table below.

NOTE: A backing wrench must be used when torquing this hardware.

NOTE: If you have previously installed Spiralock™ nuts you do not need to re-torque to the new values. If you need to replace a Spiralock™ nut you must torque to the new value.

****DO NOT USE LOCTITE WITH THIS HARDWARE****

Oval Crimp Hardware			Spiralock™ (Tri-Crimp) Hardware		
Nut Size	Part Number	SOP Torque	Part Number	Old Torque	New Torque as of 06/07/2023
1/2"	82-3009	85 lb-ft	3665096	130 lb-ft	113 lb-ft
5/8"	82-3010	180 lb-ft	82-4065	250 lb-ft	250 lb-ft
3/4"	82-3011	285 lb-ft	82-4066	450 lb-ft	424 lb-ft



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These new torque values can also be found in our chassis operators manuals in the maintenance chapter under Frame Fasteners and in our service manuals under the Fastener Identification, Torque Specifications & Locking Mechanisms chapter.

Aerial Torque Box Application: All Aerials and Tillers, Excluding New 100 AAT (Ascendant Aerial Tower)

If determined to replace just 1 magni-black nut with the tri-crimp Spirallock™ nut on the torque box, then you **MUST** change all Torque Box hardware to the tri-crimp Spirallock™ along with ordering a new Data Placard to reflect the new Torque Value of the changed hardware on the Torque Box.

NOTE: Data Placard can be ordered through Pierce Parts Team.

Torque Tool Recommendations:

The following tools have been identified for better access to hard-to-reach hardware. It is critical that you use a backing wrench at all times. These may be found locally or online.

Part Number	Description 1	Description 2
4667271	KIT, TORQUE WRENCH, 150-800 NM	2 HEADS WITH 1.125 IN DRIVE
4666815	WRENCH, TORQUE, 150-800 NM	INTERCHANGEABLE HEADS
4666818	TORQUE WRENCH HEAD	1.125 IN SQR DRIVE, 5.75 IN L
4666820	TORQUE WRENCH HEAD, STEEL	1.125 IN DRIVE, 3.9375 IN L



NOTE: Currently installed hardware is not defective. You do not have to change all hardware to the Spirallock™. It is suggested, during periodic inspections, if hardware is loose, you may choose to replace the nut (new part number) and the bolt (original part number) to minimize future serviceability.

If any additional support is needed, please open a technical support incident on Pierceparts.com.

Revision Log		
Rev. #	Changes	Date
3	Updated formatting and Torque Tool Recommendations	02/05/2015