

TOOL USE INSTRUCTION

RIVIAN	TOOL NUMBER	TSN01760-300
	TITLE	HELICOIL REPAIR KIT - M5 x 0.8MM
	REV - DATE	REV 1 05/27/26

CONTENTS

[SAFETY](#)

[OVERVIEW](#)

[INITIAL SETUP](#)

[TOOL USE INSTRUCTION](#)

[Broken Bolt Extraction](#)

[Helicoil Repair](#)

[MAINTENANCE & STORAGE](#)

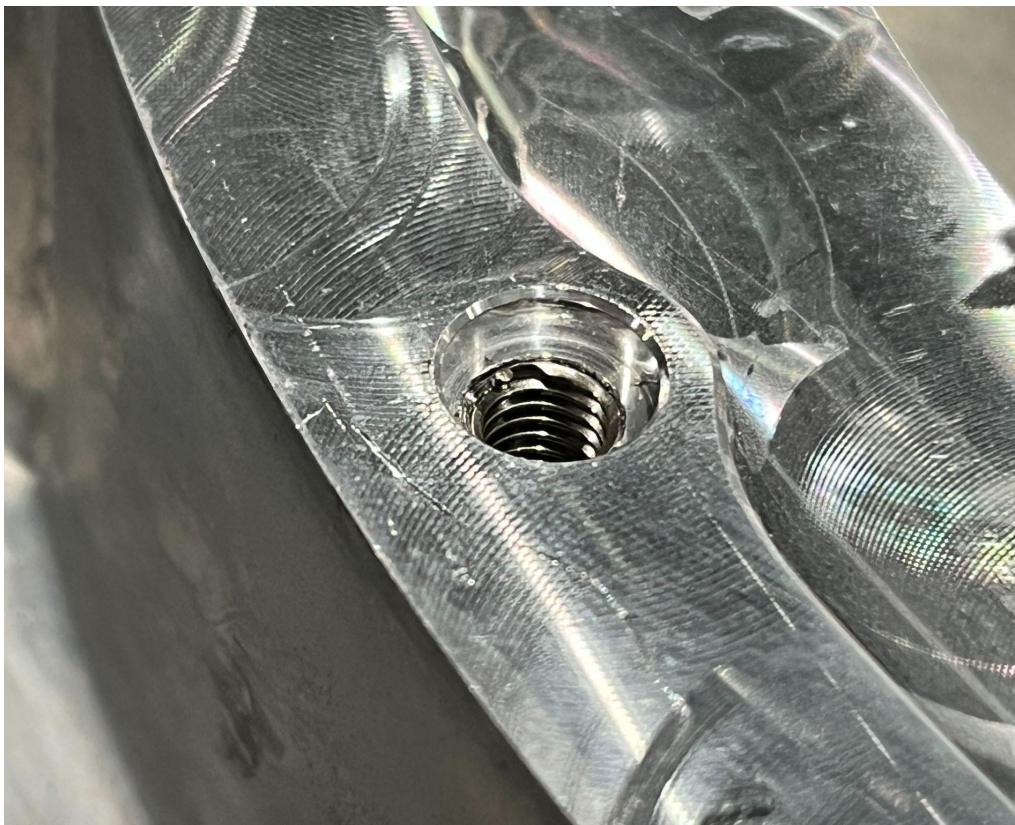
[SPARE PARTS](#)

[TROUBLESHOOTING](#)

[SYMBOL GLOSSARY](#)

TOOL FUNCTION

USED TO REPAIR ACCESS COVER THREADS IN THE R2 POWERHOUSE CASTING.





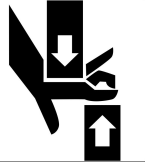


**WARNING**

Do not perform procedure if tool is damaged or missing parts. Consult the Rivian Service Tool Catalog for replacement components.

Failure to follow guidelines outlined in this document could result in injury and/or property damage.

SAFETY GUIDELINES

1	<p>DANGER</p> <ul style="list-style-type: none"> ● Risk of electrocution or electric shock if HV is not disabled prior to performing repair. 	
2	<p>DANGER</p> <p>Risk of major injury such as</p> <ul style="list-style-type: none"> ● fire ● death 	
3	<p>PPE REQUIRED</p> <ul style="list-style-type: none"> ● eye protection ● gloves ● ASTM class 0 electrical-protection gloves 	
4	<p>CAUTION</p> <p>Risk of</p> <ul style="list-style-type: none"> ● damage to vehicle or property ● data disruption ● voiding warranty 	
5	<p>CAUTION</p> <p>Risk of Pinch Point</p> <ul style="list-style-type: none"> ● keep hands and fingers clear of all moving parts. 	



SPECIFICATIONS

- HELICAL INSERT, PRONGLESS, M5X0.8
- DRILL BIT, 5.3MM SIZE, 41.4MM DEPTH
- SHANK ADAPTER, 1/4" HEX TO 7/32" ROUND BIT, 2.15" LG
- HELICAL TAP, M5X0.8, BOTTOMING
- TAP HOLDER, 0.110"-0.191" SHANK SIZE, 3/8" SQUARE DRIVE
- EZ-OUT EXTRACTOR, TRADE SIZE 1
- LEFT-HAND DRILL BIT, 5/64" BIT SIZE
- SHANK ADAPTER, 1/4" HEX TO 5/64" ROUND BIT, 1.75" LG
- PRONGLESS INSTALL TOOL, M5X0.8 SIZE

LABOR CODES

302115010 - Access Panel, HV Battery, Rear, Upper (Remove and Replace)

OTHER TOOLS REQUIRED

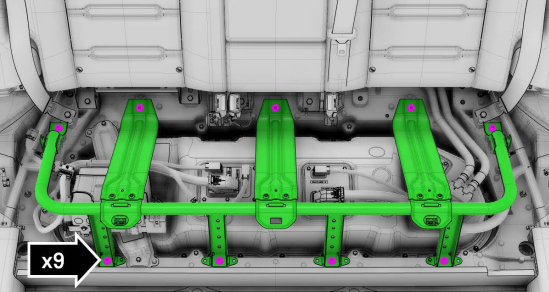
TSN00396-102-A - AUTOMATIC CENTER PUNCH
 TSN01620-100-A - EPR-8 5-LOBE TORX SOCKET
 TSN00340-101-A - M18 FUEL 1/2" DRILL DRIVER







COMPONENT GUIDE

ITEM	QTY	RIVIAN TOOL ID	DESCRIPTION
1	1	TSN01760-300-A	HELICOIL REPAIR KIT - M5 x 0.8MM







1	<p>Follow Labor Code: 302115010 - Access Panel, HV Battery, Rear, Upper (Remove and Replace) to remove all necessary components to gain access to the Power House lid.</p>	
	<p>Go to Broken Bolt Extraction</p> <p>Goto Helicoil Repair</p>	



1	BROKEN BOLT EXTRACTION Use this process in the event a fastener is over torqued and the head breaks off.	
2	Remove the retainer washer with a pick tool.	
3	Start by using TSN00396-102-A - AUTOMATIC CENTER PUNCH to create a punch mark in the center of the broken bolt	
4	Ensure a defined punch mark is located in the center of the broken fastener.	



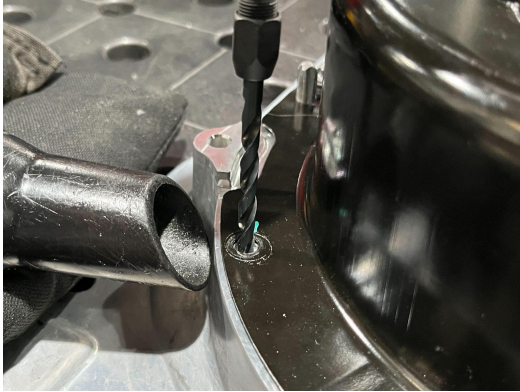
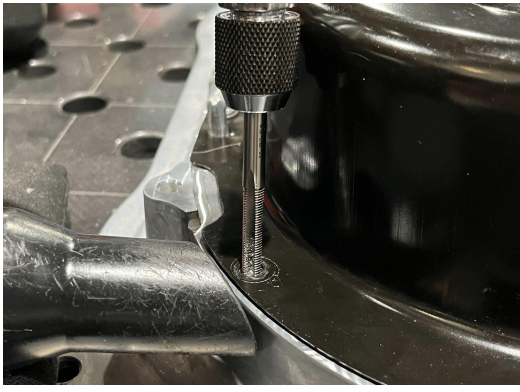
5	<p>Next drill a hole in the center of the broken fastener using 5/64" LEFT-HAND DRILL BIT and SHANK ADAPTER. Use a vacuum to remove any chips created by drilling.</p>	
6	<p>Drill hole no less than 10mm deep.</p>	
7	<p>Using a small hammer, tap EZ-OUT EXTRACTOR, TRADE SIZE 1 into the hole in the broken fastener. Only use enough force to engage extractor into the broken bolt.</p> <p>IMPORTANT Excessive force could cause the extractor to break.</p>	
8	<p>Using a small ratchet and the TAP HOLDER slowly turn the EZ-OUT EXTRACTOR counter clockwise to remove the broken fastener from the battery casting.</p>	







9

After a successful extraction thoroughly inspect the threads in the battery casting. If the threads show any sign of damage, perform the THREAD REPAIR PROCEDURE.



1	<p>THREAD REPAIR PROCEDURE</p> <p>Use this process in the event of damaged or stripped threads.</p>	
2	<p>First, drill out the existing threads using 5.3MM DRILL BIT and SHANK ADAPTER. Use a vacuum to remove any chips created by drilling.</p> <p>NOTE Drill to the base of the existing hole, but no further. About 20mm.</p>	
3	<p>Next, Tap hole using HELICAL BOTTOMING TAP, M5X0.8 and TAP HOLDER. Tap hole a minimum of 15mm.</p> <p>NOTE Lubrication or cutting oil is not necessary during tapping.</p>	
4	<p>Use a vacuum and or light air pressure to remove metal chips from the hole.</p> <p>CAUTION Be careful to not force metal chips past the Access Panel seal into the Battery Housing.</p>	



5	<p>Following the instructions supplied with the PRONGLESS INSTALL TOOL to set the depth adjustment and load insert in preparation for installation.</p>	
6	<p>Place the tool perpendicular to the tapped hole. Rotate the Mandrel clockwise until the insert is slightly below flush with the top of the hole.</p>	
7	<p>Rotate the Mandrel counterclockwise until it exits completely out of the installed insert.</p>	
8	<p>Installation complete.</p>	



1

Install new fastener & ensure proper torque can be achieved.

See Service Manual for torque specification.



BASIC MAINTENANCE GUIDE

TASK	FREQUENCY
Check all parts for damage or wear.	Before Each Use
Store all components together & return to designated storage location.	After Each Use

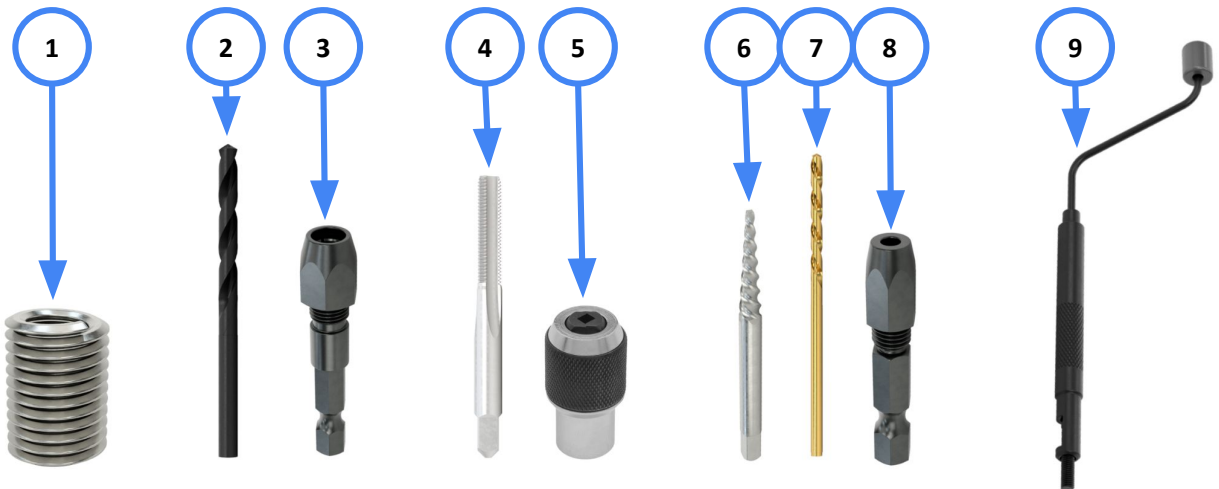


SPARE PARTS

TSN01760-300 HELICOIL REPAIR KIT - M5 x 0.8MM

FOR OTHER ITEMS NOT SHOWN, CONTACT RIVIAN SERVICE TOOL ENGINEERING

ITEM	DESCRIPTION	SUPPLIER + PART NUMBER
1	HELICAL INSERT, PRONGLESS, M5x0.8, 10MM LG, PACK OF 10	MCMaster-CARR - 91990A428
2	DRILL BIT, 5.3MM SIZE, 41.4MM DEPTH	MCMaster-CARR - 2958A86
3	SHANK ADAPTER, 1/4" HEX TO 7/32" ROUND BIT, 2.15" LG	MCMaster-CARR - 3185A52
4	HELICAL TAP, M5x0.8, BOTTOMING	MCMaster-CARR - 91709A530
5	TAP HOLDER, 0.110"-0.191" SHANK SIZE, 3/8" SQUARE DRIVE	MCMaster-CARR - 8334A31
6	EZ-OUT EXTRACTOR, TRADE SIZE 1	MCMaster-CARR - 2563A11
7	LEFT-HAND DRILL BIT, 5/64" BIT SIZE	MCMaster-CARR - 3474A28
8	SHANK ADAPTER, 1/4" HEX TO 5/64" ROUND BIT, 1.75" LG	MCMaster-CARR - 3185A42
9	PRONGLESS INSTALL TOOL, M5x0.8 SIZE	MCMaster-CARR - 91049A626



PROBLEM	SOLUTION
The Insert is Too Tight, Loose, or Cross-Threading	Wrong Drill or Tap size used. Always check your kit and verify that you are using the correct tap. If you used a standard tap, the hole is ruined for that size insert.
The Insert Stays Stuck in the Installation Tool / Protrudes	The hole was not tapped deep enough. A tap should go roughly 1/4 turn deeper than the intended final depth of the insert. If the mandrel bottoms out before the insert is fully seated, the tool will jam.
The Cross-Bolt Binding (Cross-Threading the Fastener)	If the initial drill bit or STI tap was entered at an angle, the insert sits crookedly. Always keep your drill and tap completely perpendicular to the surface. Use a tap guide block if doing it freehand is a concern
The Insert Spins or Backs Out with the Bolt	The hole was drilled slightly oversized, or the host material is extremely soft and vibrating, preventing the spring-loaded outer tension of the coil from gripping the walls.





DANGER

Risk of electrocution or electric shock



WARNING

Risk of minor injury



DANGER

Risk of major injury such as

- fire
- chemical or poison
- crushing / maiming
- death



CAUTION

Risk of

- damage to vehicle or property
- data disruption
- voiding warranty



CAUTION

Risk of Pinch Point

- keep hands and fingers clear of all moving parts.



PPE REQUIRED

IMPORTANT

Instructions to successfully complete a task

NOTE

Useful information

REV	DATE	CHANGE DESCRIPTION
1	05/27/2026	Initial release

