

# TOOL USE INSTRUCTION

# RIVIAN

TOOL NUMBER TSN00781-300-B

TITLE KIT, DRIVE UNIT CRADLE

REV - DATE REV B - 6/20/2023

## CONTENTS

[OVERVIEW](#)

[SAFETY](#)

[INITIAL SETUP](#)

[TOOL USE INSTRUCTION](#)

[MAINTENANCE & STORAGE](#)

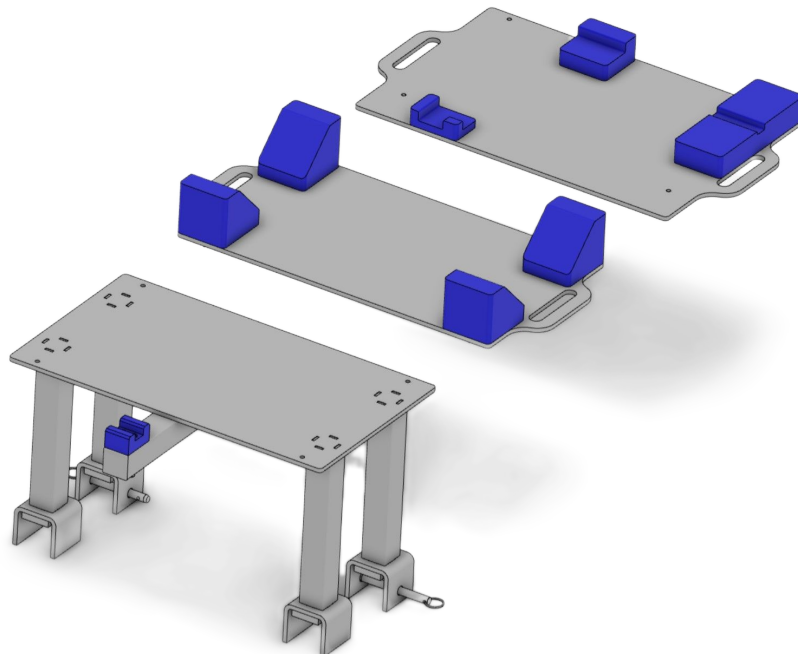
[SERVICE & REPLACEMENT PARTS](#)

[TROUBLESHOOTING](#)

[SYMBOL GLOSSARY](#)

## TOOL FUNCTION

TOOL IS USED TO SUPPORT THE ORIGIN AND THE ENDURO FRONT DRIVE UNIT DURING INSTALLATION/REMOVAL FROM AN EDV-500 OR EDV-700.



OVERVIEW

SPECIFICATIONS

Weight: ~22.7 kg  
Overall Dimensions: 576 mm x 387 mm x 404 mm

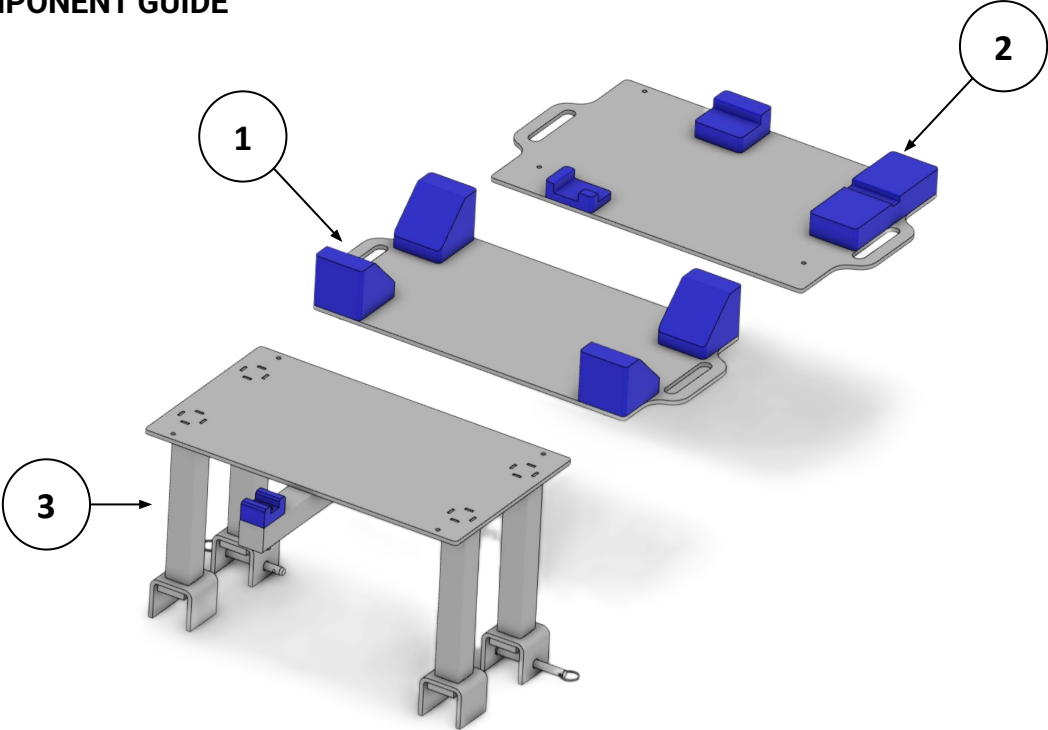
LABOR CODES

465515011, Subframe, Front (Remove and Reinstall)  
381010010, Drive Unit, Front (Remove and Replace)

OTHER TOOLS REQUIRED

TSN00542-300-B (NCT04609326) - SUBFRAME SUPPORT JIG, (R1/RPV)  
TSN00483-100-A (NCT04663342) - POWERTRAIN LIFT, 2500 LB. CAP.

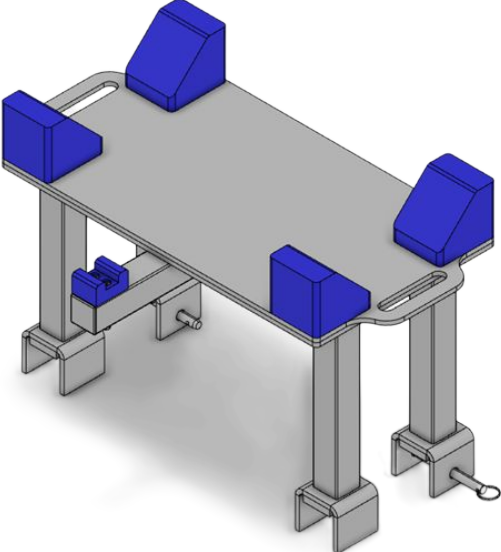
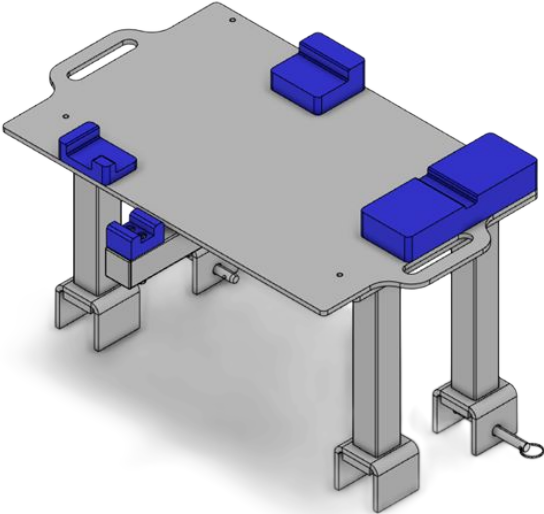
COMPONENT GUIDE



ITEM	QTY	NAME	TOOL P/N
1	1	DRIVE UNIT CRADLE, ORIGIN PLATE	TSN00781-201-A
2	1	DRIVE UNIT CRADLE, ENDURO PLATE	TSN00781-202-A
3	1	BASE, DRIVE UNIT CRADLE	TSN00781-200-A



CONFIGURATION GUIDE





Origin DU Cradle	Enduro DU Cradle
	

**WARNING**

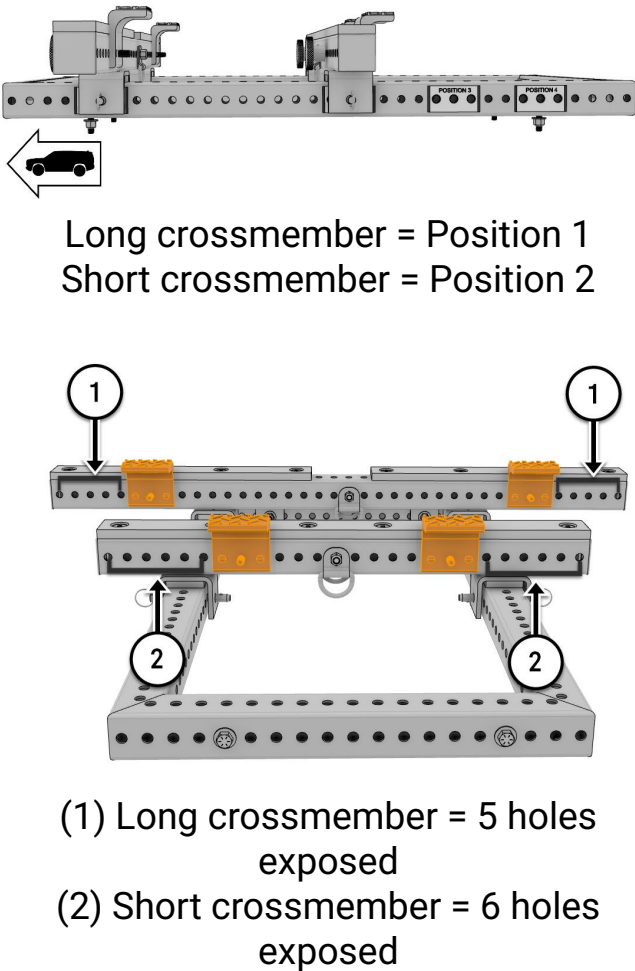
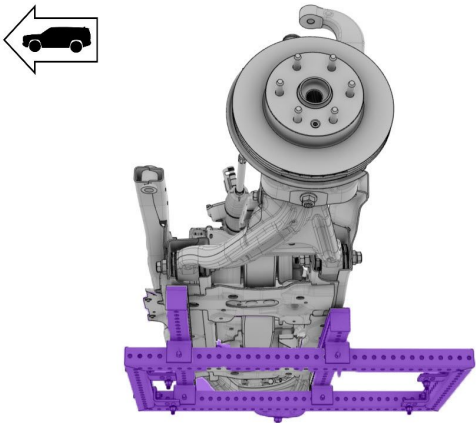
Do not perform procedure if tool is damaged or missing parts. Consult the Rivian Service Tool Catalog for replacement components.

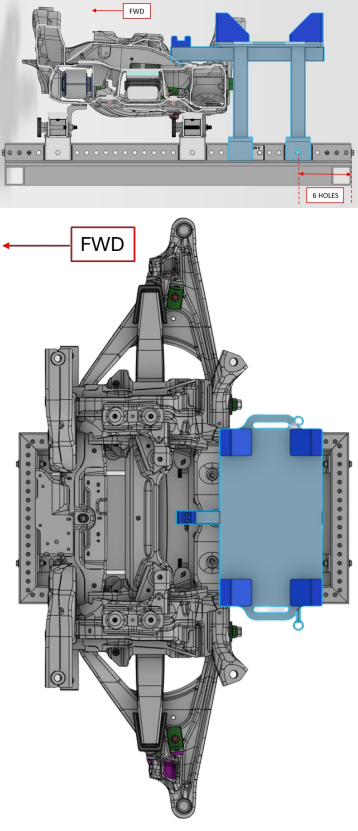
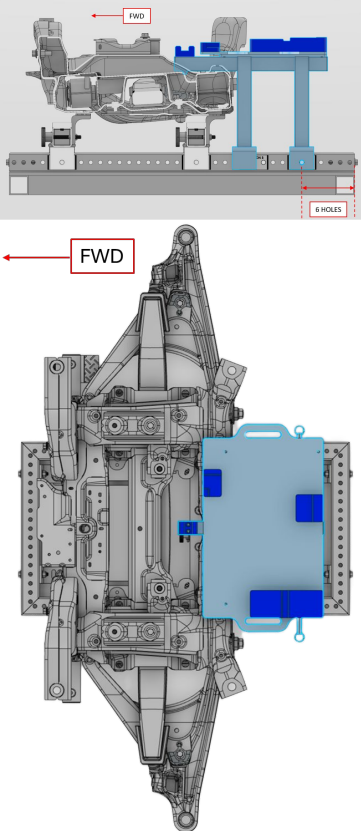
Failure to follow guidelines outlined in this document could result in injury and/or property damage.

**SAFETY GUIDELINES**

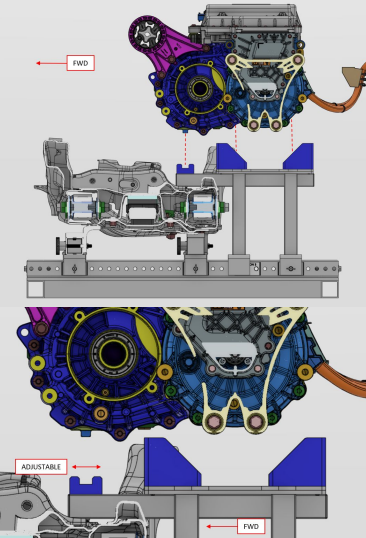
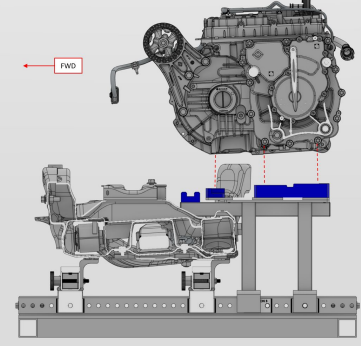
1	<b>PPE Required</b> <ul style="list-style-type: none"> <li>Eye Protection, Gloves, Closed Toe Shoes</li> </ul>	
2	<b>CAUTION:</b> <ul style="list-style-type: none"> <li>Risk of damage to wire harnesses and coolant hoses when lowering the drive unit. Use a spotter to make sure all components are clear prior to raising or lowering the tool.</li> </ul>	
3	<b>PRIOR TO USAGE:</b> <ul style="list-style-type: none"> <li>Visually inspect drive unit cradle for damage prior to use.</li> <li>Operate the powertrain lift to ensure functionality. Refer to manufacturer's specifications for proper maintenance.</li> <li>Verify presence of (2x) 7/16" Dia, 3-1/2" long, quick release pins.</li> </ul>	
4	<b>CAUTION:</b> <ul style="list-style-type: none"> <li>Do not perform procedure if any equipment is missing or damaged.</li> </ul>	

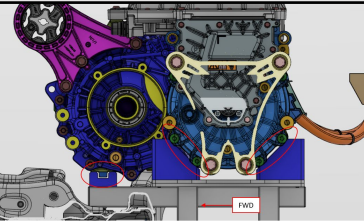
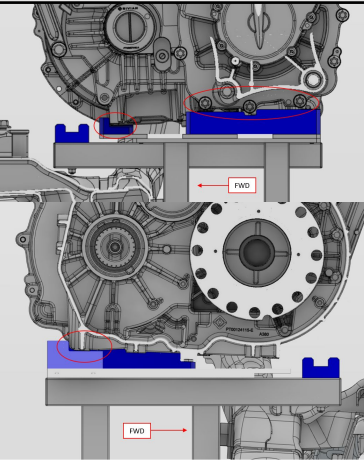


Step	Directions	Visual Aid
1	Setup subframe cross members as shown.	 <p>Long crossmember = Position 1 Short crossmember = Position 2</p> <p>(1) Long crossmember = 5 holes exposed (2) Short crossmember = 6 holes exposed</p>
2	Lower the EDV FRT subframe from the vehicle. Reference the service manual for procedure, labor code 465515011.	

Step	Directions	Visual Aid (Origin)	Visual Aid (Enduro)
3	<p>With the subframe still on the powertrain lift table, attach the cradle to the subframe fixture as shown using qty. 2, 7/16" Dia, 3-1/2" long, quick release pins.</p>		
4	<p>Ensure all 12v harnesses and coolant lines are disconnected from the drive unit. Reference the service manual for procedure, labor code 381010010.</p>		



Step	Directions	Visual Aid (Origin)	Visual Aid (Enduro)
5	<p>Slowly raise the powertrain lift up to the drive unit, aligning the center support with the bottom side of the gearbox housing.</p> <p><b>⚠ Note:</b> The center support can be adjusted forward and backward to make contact with the underside of the Origin gearbox housing. This support is not used on the Enduro DU. Hand torque the M6 nuts (x2) after support is adjusted.</p>		

Step	Directions	Visual Aid (Origin)	Visual Aid (Enduro)
6	<p>The drive unit is properly supported when the motor housing makes contact with all of the supports</p>		
7	<p>Remove bolts attaching drive unit to EDV frame and slowly lower the drive unit from the vehicle.</p> <p><b>⚠ Note:</b> Always have a spotter on each side of the vehicle when lowering the drive unit to make sure all wire harnesses and coolant hoses clear the vehicle.</p>		



*Link Here (If applicable) to Tooling Maintenance Guide (TMG)*

### BASIC MAINTENANCE GUIDE

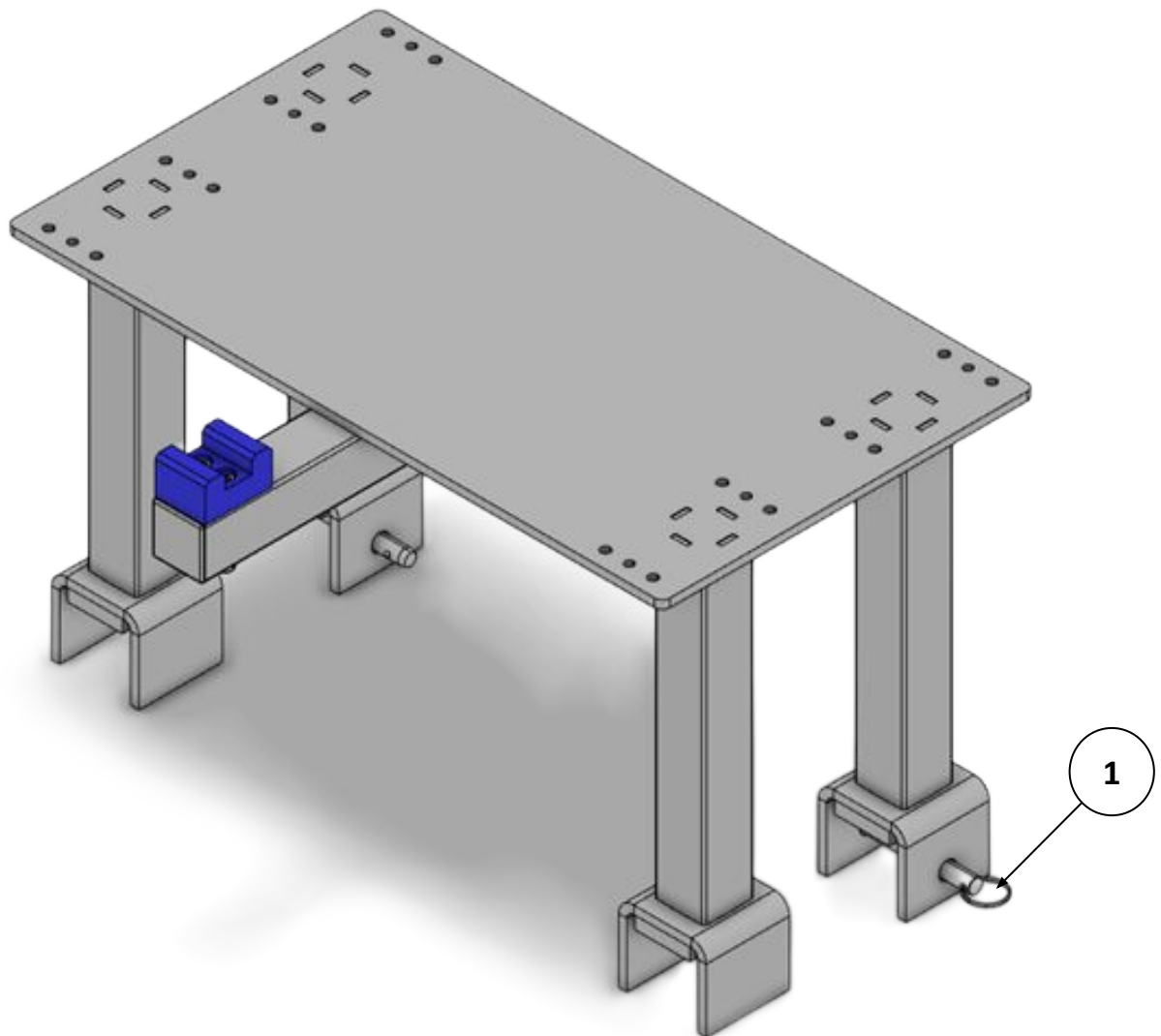
TASK	FREQUENCY
Verify all components are accounted for	Before and after every use
Inspect all components for damage	Before and after every use



## SERVICE & REPLACEMENT COMPONENTS

FOR OTHER ITEMS NOT SHOWN, CONTACT RIVIAN SERVICE TOOL ENGINEERING

ITEM	DESCRIPTION	SUPPLIER + PART NUMBER
1	QUICK RELEASE PIN - 7/16" DIA, 3-1/2" LONG, 18-8 SS	MCMaster-CARR 98404A467



## TROUBLESHOOTING

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PROBLEM	SOLUTION
If the fitment of either TSN00781-201-A ASSY, ORIGIN CRADLE BASE or TSN00781-202-A ASSY, ENDURO CRADLE BASE does not sit flush onto TSN00781-200-A BASE, DRIVE UNIT CRADLE	Enlarge the mating dowel holes accordingly by using a drill and drill bit.





### **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

### **IMPORTANT**

Instructions to successfully complete a task

### **NOTE**

Useful information

## REVISION LOG

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REV	DATE	CHANGE DESCRIPTION
A	8/12/2022	Initial release
B	6/20/2023	Updated Tool Use Instructions to match latest tool revision.

