TOOL USE INSTRUCTION

RIVIAN		
	TOOL NUMBER	TSN00473-104
	TITLE	HEADLIGHT AIMER
	REV - DATE	REV A 06/12/26

CONTENTS

TOOL FUNCTION

Headlight Aiming

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	**CAUTION** Risk of • damage to vehicle or property • data disruption • voiding warranty	
2	**WARNING** Risk of minor injury	
3	**PPE REQUIRED** • eye protection • closed toe shoes	

SPECIFICATIONS
Weight: 97 lbs
Overall Dimensions:
Height: 63 in.
Size (Base): 24-1/4 in. X 22 in.
Size (Aimer Head): 22 in. X 16 in.
Voltage Rating: 120 VAC

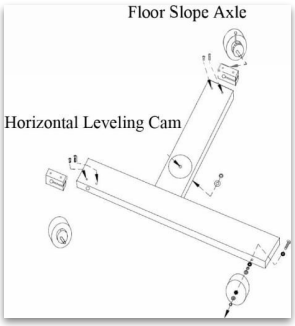
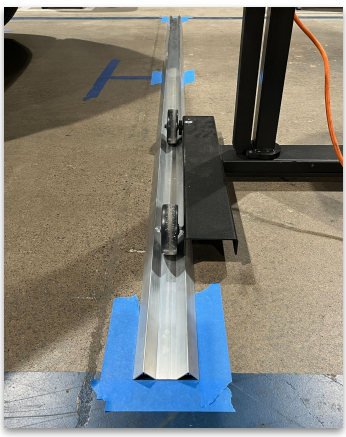
LABOR CODES
HEADLIGHT ADJUSTMENT - 821011019

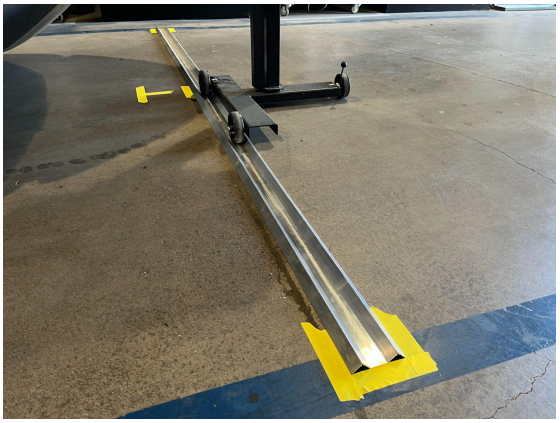
OTHER TOOLS REQUIRED

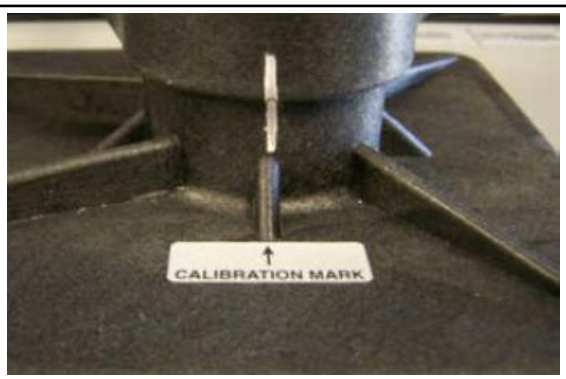
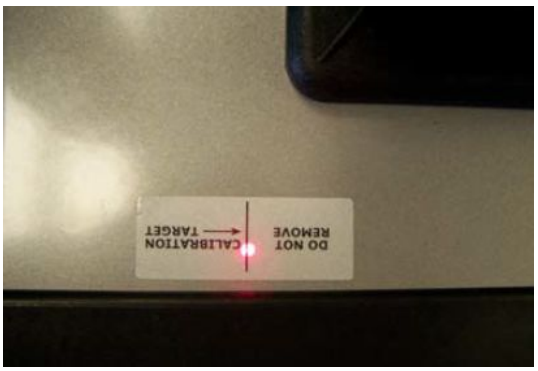
RiDE Diagnostic tool.

COMPONENT GUIDE

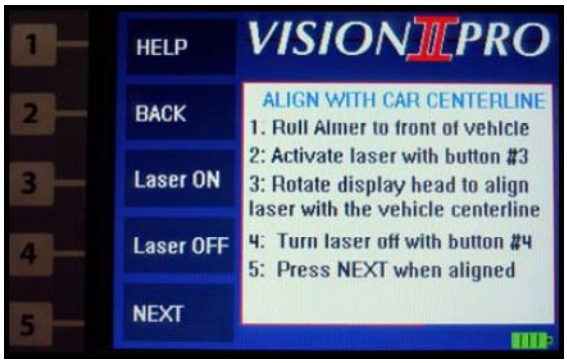
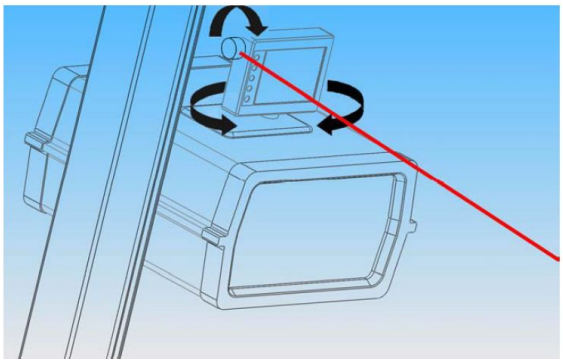
ITEM	QTY	RIVIAN TOOL ID	DESCRIPTION
1	1	TSN00473-104-A	AMERICAN AIMERS VISION II PRO HEADLIGHT AIMER.

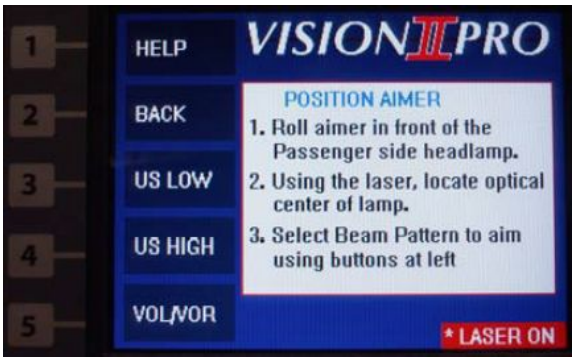
1	Assemble Aimer & Perform Initial Setup Following The Included Instruction Manual That Was Included With The Aimer..	
2	If Possible, Designate An Area In The Shop To Performing Aiming.	
3	Layout markings on the floor to indicate wheel position.	
4	Place track so Aimer is 16 - 18” away from the headlights of the vehicle. Ensure the track is as close to perpendicular to the Vehicle markers as possible. **NOTE** If not in a high traffic area, the track can be permanently secured to the floor.	

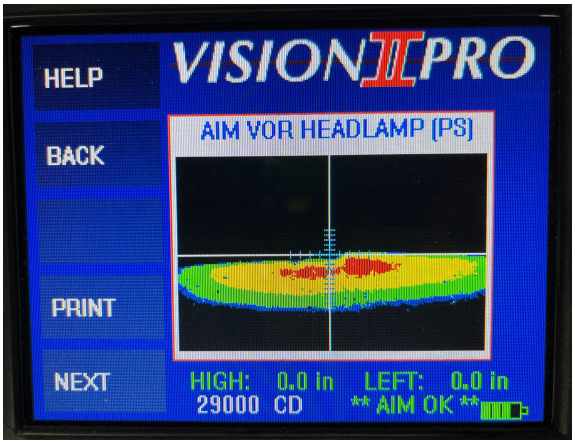
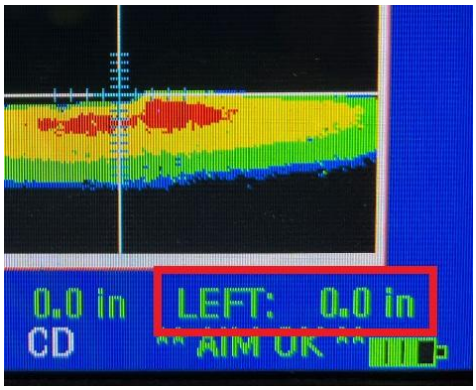
5	**ALIGNMENT TRACK** When placed under the front set of wheels of aimer it will roll straight and true over dirt and cracks. (Recommended for best results). **NOTE** The track is not mandatory to use but it helps keep the aimer in the correct position as well as create smooth path over rough surfaces.	

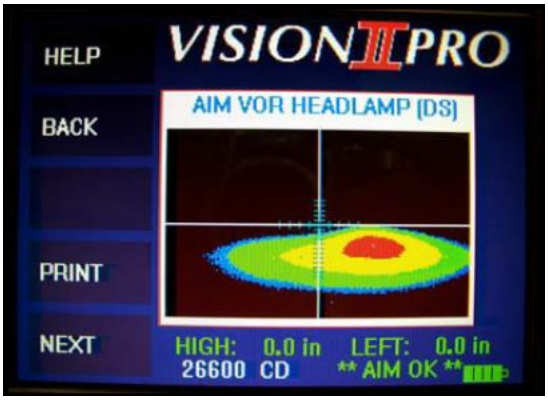
1	It is recommended that you verify calibration before using your headlight aimer for the first time and on a monthly basis. There are three things that get calibrated during this process (1) Internal Digital Level (2) Vehicle Misalignment Sensor (3) Vehicle Centerline Laser. To get started, from the Main Menu select the Options button (5) then select the CAL button (4).	
2	Level Aimer.	
3	Locate the calibration marks located on the back of the LCD screen and rotate the bezel until the 2 marks are perfectly aligned as shown.	
4	Rotate the laser knob on the side of the bezel and verify the laser dot hits the 2 calibration targets on the top of the aimer case as shown. If adjustment is needed, you can adjust the set screws on the side of the laser knob until the dot hits both calibration targets.	

5	Verify that the bubble in the level vial is still level. Then Verify the bezel calibration marks are perfectly aligned and the Laser dot is hitting both calibration targets, then push button (5) Save. The calibration is stored in the internal memory and the aimer is ready for use.	
6	Using RiDE: Select precision ride height mode.	
7	**AIM LAMPS** From the main menu, press the “AIM LAMPS” button (2).	

8	**ALIGN AIMER** Roll the aimer to the center of the vehicle and activate the centering laser by pressing button (3). When the alignment laser is energized, the aimer will continue to beep and display the message “LASER ON” at the bottom of the monitor screen. Rotate the LCD display to position the laser dot on the centerline point of the vehicle on the windshield (Rear view mirror, Laser target). Next, position laser on a point representative of the centerline of vehicle (Bumper, Hood Ornament, Center of Grill or point on facia) adjust the LCD display and roll aimer right to left until the laser is intersecting both center points by turning the laser knob up and down. Turn laser off button (4) then press the next button (5) this will save the offset value for this aim.	 
9	Verify the lens of the Aimer is 16”-18” away from the vehicle.	

10	**POSITION AIMER TO LAMP (PASSENGER SIDE)** At this screen the lamp alignment laser is energized and will continue to beep and the screen will display the message “LASER ON”. Roll the aimer in front of the Passenger Side headlamp, place laser on the Focal Center or fiduciary mark.	
11	**Headlight Focal Center** Gen1 R1 Gen 2 R1 	EDV R2 
12	Set the Brake Handle. Select the lamp type to be aimed LOW/HIGH/VOL/VOR/FOG. After the headlamp type is selected it will de-energize the laser. **Gen1: VOR** **Gen2: VOL** **EDV: VOR** **R2: VOL**	

13	**Aim Lamp** The selected lamp type is displayed across the top of the aim screen above the lamp pattern. The measurement of the aim-point are displayed at the bottom of screen, these numbers represent how far the aim is off at 25’ in front of the vehicle. The value is either in inches or centimeters depending on what has been selected in the main menu screen. Adjust lamp as indicated on the screen, if aim is correct, the aimer will beep and you will get an **AIM OK** message on the display. **NOTE** The hash marks on the Horizontal Line represent 2 inches between the Lines at 25’. The hash marks on the Vertical Line represent 4” inches between lines at 25’ feet.	
14	**IMPORTANT** The Vision II Pro Aimer does not recognize horizontal adjustment wit VOL or VOR headlights. The display will always show 0.0 in. Adjust pattern so the Cut-off is at the vertical centerline.	

15	Once aiming is complete on the P/S headlight Move the aimer to the D/S & repeat the procedure.	
16	Press the “NEXT” button (5) after aim has been completed and the aimer will display “AIM COMPLETE” push the “NEXT” button (5) again returns you to the “MAIN MENU”.	

BASIC MAINTENANCE GUIDE

TASK	FREQUENCY
Calibration process.	Monthly
Clean aimer lens.	Monthly
Charge battery.	After each use.
Return to designated storage location.	After Each Use

FOR OTHER ITEMS NOT SHOWN, CONTACT RIVIAN SERVICE TOOL ENGINEERING

ITEM	DESCRIPTION	SUPPLIER + PART NUMBER
1	Battery Charger	American Aimers - # 3-100-75
2	Battery Pack	American Aimers - # 3-100-25

PROBLEM	SOLUTION
Laser Centerline Dot Misaligned or Not Visible.	The vehicle centerline laser or laser knob has shifted out of calibration, or the battery is low.
Aimer Not Tracking Straight / Inconsistent Readings	Rough shop floor surfaces, debris, or cracks disrupting the unit's alignment.
Display Constantly Shows 0.0 in. for Horizontal Adjustments	When aiming these lamps (e.g., Gen1 VOR, Gen2 VOL, EDV VOR, or R2 VOL), manually adjust the headlight beam pattern so that the sharp cut-off line aligns directly at the vertical centerline.
Display Fails to Register "AIM OK"	Incorrect headlight type selected in the menu, or vehicle ride height is uncalibrated.
Initial Calibration Fails After Powering on Aimer.	If aimer is positioned in front of a headlight or bright light during initial calibration, calibration will fail.

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	11/08/2024	Initial release