

2021-2022 RAM TRX INTEGRATED WINCH INSTALLATION INSTRUCTIONS



SAFETY

Your safety is extremely important to us. Working on vehicles has ever-present hazards which require precautions at all times to avoid injury or death. We've outlined some precautions to take below in order to help you make informed decisions about your safety before installing this product. This is not an exhaustive list, and you must use your own good judgment before performing any work in each step of this installation.

ALWAYS:

- wear eye protection
- use tire blocks and emergency brake
- disconnect battery(s)
- use care when moving components
- route electrical cables away from moving parts
- identify all pinch points
- wear gloves
- identify slipping and tripping hazards
- wear steel toe footwear
- understand proper use of tools before use
- work on a flat surface
- use care when lifting components
- insulate cables
- jack your vehicle from the OEM's lifting points
- torque all fasteners to suggested specs
- remove any hazards before starting on the job

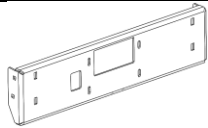
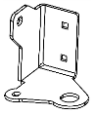





LIABILITY







All liability for installation and use of this product rests with the owner. Improper installation, maintenance, and operation can result in serious injury or death as well as equipment or vehicle damage. Use this product at your own risk.










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WINCH MOUNT COMPONENTS		QTY
	Steel Winch Mount Plate	1
	Driver's Side Frame Bracket	1
	Passenger's Side Frame Bracket	1
	Fairlead Mount Bracket	1
	OPTIONAL: Bumper Insert - Hole Pattern Dependent on Variation Ordered	1
	Skid Plate Standoff Bracket	2
	Oil Cooler Relocation Kit [100123] (Includes 2 brackets, and hardware kit)	1

100130 WINCH MOUNT HARDWARE		QTY
	M12x35mm (Short) Carriage Bolt	8
	M12x45mm (Long) Carriage Bolt	2
	M12 Pushnut Bolt Retainer	2
	M12 Disc/Flange Nut	8
	M10 x 30 Flanged Bolt	2
	M10 Flanged Nut	2

HOOK KIT		QTY
	Powder Coated Tow Hook with Heat Shrink	1
	M12 x 80 Stainless Steel Cap Screw	1
	Powder Coated 1/2" ID, 2" OD Washer	1
	M12 Flange Nut	1

CLUTCH RELOCATION KIT & HARDWARE (OPTIONAL)		QTY
	Replacement Cam Insert and Bearing Assembly	1
	M6x20mm Flat Socket Cap Screw	2
	M5 x 10mm Socket Head Cap Screw (Evo)	1
	M5x14mm Socket Cap Screw (X20)	1

SET UP

1. Read this entire document before performing any work.
2. Gather the tools required, outlined in **Table 1**.

Table 1

Tool List
○ 4mm and 8mm Allen keys
○ Appropriate Drive Ratchets
○ 8mm, 10mm, deep 17mm, 18mm, 19mm and 21mm Sockets
○ 18mm wrench
○ Plastic Pry Tool (recommended)
○ Flathead Screw Driver
○ Sawzall, Grinder with Zip Disk or Other
○ Hammer/Rubber Mallet
○ Electric Impact (recommended)
○ Torque Wrench
○ Transmission Jack/Floor Jack
○ Other tools dependant on hardware provided by winch manufacturer

3. Park your RAM TRX on flat ground, engage the emergency brake, block the tires, and disconnect the negative battery terminal.

WINCH PREPARATION

4. Unpack your winch and its components and set it on a workbench to be prepped for installation.
5. If you purchased the CLUTCH RELOCATION KIT for your select WARN or SMITTYBILT winch, Install that now using supplied instructions. Leave the handle off as that will be installed after the fairlead bracket. Scan the following code with your phone's camera for a video detailing this process.



6. If you purchased our Control box Relocation kit, we will install that now. Scan the following QR Code for a Video of this process for your WARN VR EVO. The Smittybilt kit installs in the same manner. Do not re-attach the extended wiring harness to the winch yet, that will be done once the hidden winch kit is installed.



7. Install the winch on the Winch Mount Plate as shown in **Figure 1** with hardware provided by your winch manufacturer. Make sure the square cut out in the Winch Mount Plate slides over the VICE Relocation Cam Insert, if installed.
8. Align the winch drum so it spools out roughly 1/3 the way up the opening in the Winch Mount Plate as indicated in **Figure 2**.



Figure 1

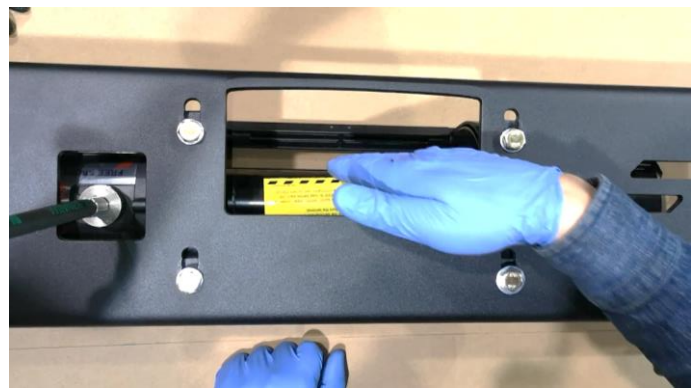


Figure 2

9. Install the Fairlead Mount on the winch plate as shown in **Figure 3** with four (4) M12x35 Carriage Bolts and M12 Flange-Nuts provided in the hardware kit. Leave these finger tight to allow for adjustment later.
10. If the Clutch Relocation Cam Insert is installed, install the bearing block as shown in **Figure 4** and fasten with the countersunk M6 hardware provided.



Figure 3



Figure 4

11. Install just one of the frame brackets (passenger side) with two (2) M12x35 Carriage Bolts and M12 Flange Nuts as shown Figure 5 for installation on the truck. Torque to **75 ft-lbs**. The other side will be installed on the truck frame in a later step.



Figure 5

VEHICLE PREPERATION

12. Remove the five (5) 8mm head, lower inner fender fasteners on both sides as shown in **Figure 6**. Remove the inner fenders and set them aside.
-

13. Disconnect the front bumper wiring connector located on the outside of the driver side frame rail at the front of the truck. Push the red lock tab out, release the pivot latch by pressing the lock tab as seen in **Figure 7** and pull the pivot latch.



Figure 6



Figure 7

14. Remove the TRX Skidplate. It is held in place with 6 fasteners, locations are circled in Figure 8 Below
15. Support the plastic bracket that holds the oil cooler. Remove the two fasteners circled in red on both sides, and then undo the fastener circled in yellow. The last fastener will not come out but it will detach the metal bracket. Refer to Figure 9

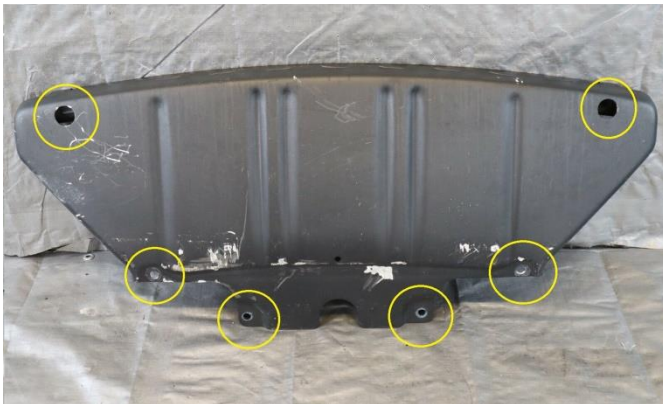


Figure 8

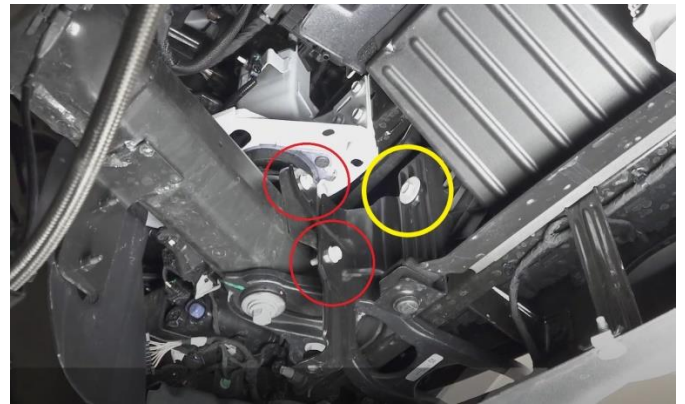


Figure 9

16. Now that you have access to the oil cooler, remove the fasteners (2 on bottom saddle and two on top) that hold it to the plastic mount. Use a zap strap to tie the cooler up and out of the way.
-

17. Remove the three (3) main bumper mounting nuts shown in **Figure 10** (18mm socket) on either side of the bumper. It is a good idea to leave one nut at the end of the stud threads so the bumper stays on until you are ready to remove it.
18. With a helper, remove the safety nuts left at the end of the stud threads and remove the bumper by pulling the bumper away from the truck as in **Figure 11**. It is also a good idea to place the bumper on a clean/soft surface that will not scratch it.



Figure 10



Figure 11

19. Remove the tow hooks by removing the one (1) 18mm head fastener and one (1) 21mm head fastener that secure them on either side. Note the 18mm head fastener has a retaining washer keeping it from being completely removed. A wrench, pliers or other can be used with a hammer as shown in **Figure 12** to remove it. Note if your truck model does not have tow hooks, still remove the 18mm head fastener on either side.



Figure 12

OIL COOLER RELOCATION MOUNT INSTALLATION

20. Remove two front shock external reservoirs from the front suspension bulkhead (directly below the engine) by undoing the 1 bolt holding the plastic clasp in place. This exposes the two fasteners that hold the mount to the bulkhead. Remove these two bolts and set the plastic clasp on top of the relocation bracket as shown in Figure 13 below.

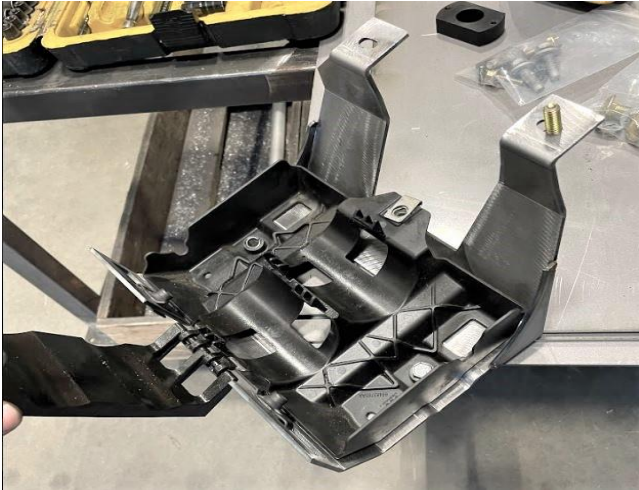


Figure 13



Figure 14

21. Install the assembly onto the bulkhead using the factory fasteners removed last step. Reinstall the two Bilstein shock reservoirs into the bracket and retain them by re-installing the factory bolt in the clasp as shown in Figure 14. Install the two 3/8" U-Nuts into holes on the bottom of the steel bracket.



Figure 15



Figure 16

22. Install the relocation kit's secondary bracket onto the main bracket as shown in Figure 15 using the 3/8x1 bolts (highlighted in yellow circle). Fasten the saddle removed in step 16 to the secondary bracket using the factory studs and nut (red circle)
23. Sit the oil cooler on the rubber saddle and line up the holes on the top of the oil cooler with the relocation bracket. Install the supplied M8x35mm fasteners in the top holes. The finished assembly shown in Figure 16

WINCH MOUNT INSTALLATION

24. Install the driver side tow hook with the driver side Frame Bracket sandwiched beneath as shown in **Figure 17**, with the tow hook hardware. Torque the front M14 fastener to **136 ft-lbs** and the rear M12 fastener to **85 ft-lbs**. Installing the Control Box Relocation Kit? Fasten the wires to the winch now. Refer to the installation instructions provided for your kit.
25. With a helper, a jack (preferably a transmission jack or similar) can be used to lift the winch mount assembly into position by hooking the passenger side Frame Bracket around the frame as shown in **Figure 18** below.



Figure 17



Figure 18

26. Install two M12x35 Carriage Bolts and Flange-Nuts (18mm) to mount the driver side Frame Bracket to the Winch Mounting Plate as shown in **Figure 19**. Again Torque these to **75 ft-lbs**.

27. Clamp the Frame Bracket with the Tow Hook on the passenger side and Torque the M14 to **136 ft-lbs** and the M12 to **85 ft-lbs**. The finishes assembly installed shown in Figure 20



Figure 19



Figure 20

BUMPER PREPARATION FOR REINSTALLATION

28. Set the bumper face down on a soft surface so the inside of the bumper is facing you. You will now remove the plastic dam located behind the main bumper mounting surface. To do this you will have to remove on each side : 9x 13mm head bolts (Yellow), 4x Torx Bolts (Green), and 4x 10mm Bolts (Blue) shown in Figure 21 below. Pry off the harness from main bumper mounting surface and remove it along with the plastic dam behind it. This will give you access to the bumper grill.

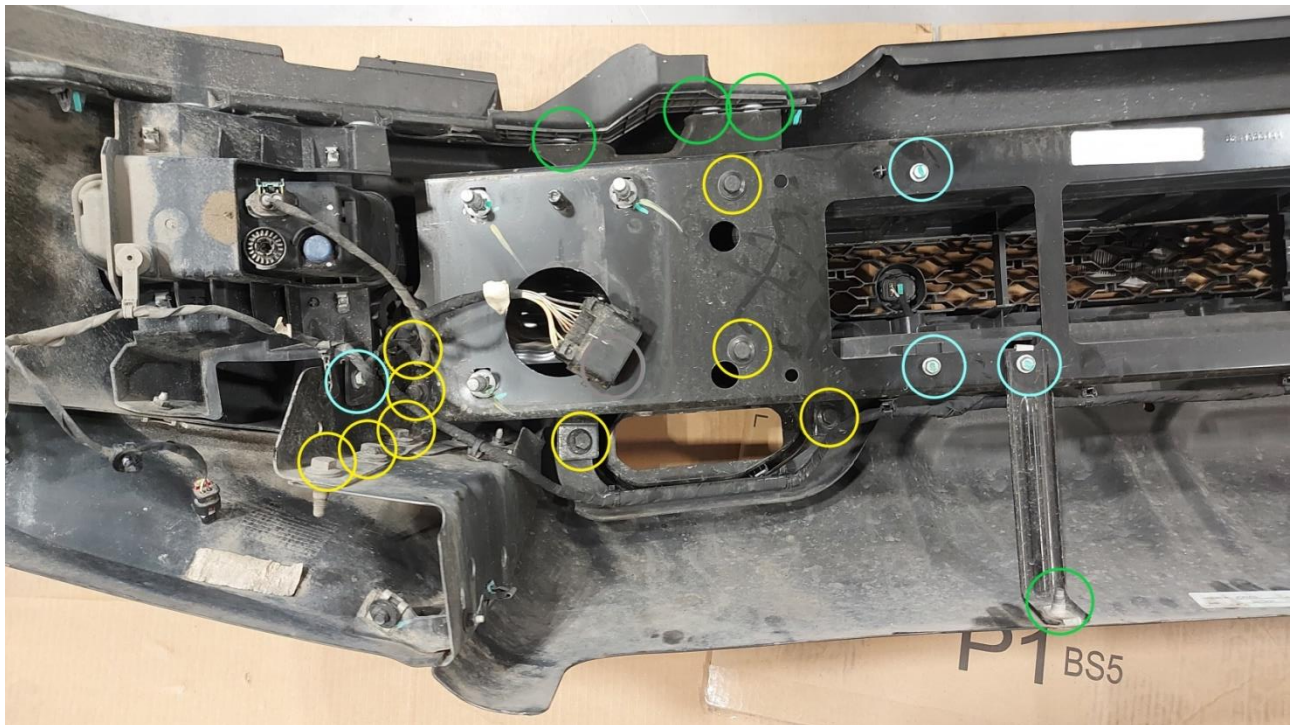


Figure 21



Figure 22

29. A portion of the sheet metal on removed plate inside the bumper needs to be removed to allow clearance for the Fairlead Mount. The marked area can be seen in **Figure 23**. Note to wear proper PPE based on your method to cut the sheet metal: safety glasses, face shield, gloves, long sleeves, hearing protection etc.

30. Deburr the cut edges, the result can be seen in **Figure 24**.



Figure 23



Figure 24

31. Remove the eleven (11) upper fasteners (8mm) and lower 10 plastic clips that hold the mesh insert in the bumper. Shown in Error! Reference source not found.. Hold onto these fasteners. A small pry tool is best to pop the clip and then push it out.

32. Remove the front side of the mesh insert by starting at one end and pulling the top side out the front of the bumper as shown in **Figure 25**.
33. If you did not purchase out bolt in insert, cut 20.75" out of the center of the insert. When doing this we taper the cut towards the center ~45 degrees so it matches the fairlead mount. If you purchased our insert skip to the next step.
34. Install the VICE Replacement Cover, reusing four (4) of the 8mm stock fasteners per side, as shown in **Figure 26**. Note: LED insert shown.



Figure 25



Figure 26

35. Remove the inside bumper mounting stud on both sides of the bumper as shown in **Figure 27**, this can be done by hitting it back with a hammer.
36. Replace the inside bumper mounting stud on both sides with the longer M12x45 Carriage Bolts provided in the hardware kit and secure with the retaining washers as shown in **Figure 28**.

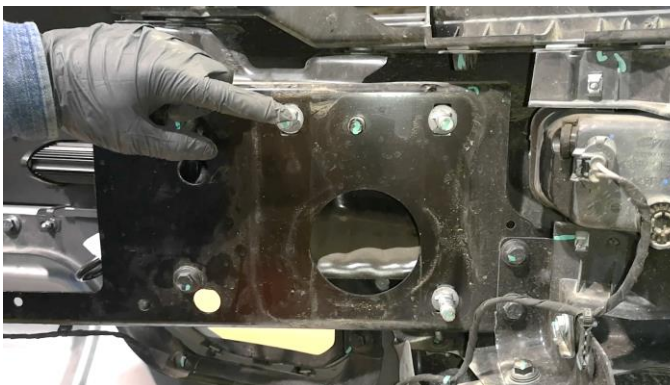


Figure 27



Figure 28

37. If the 8" LED light bars were purchased, install them using the supplied stainless button head hardware as shown in **Figure 29**.
38. If your vehicle is equipped with parking sensors, transfer them from your plastic insert into the VICE Replacement Cover as shown in **Figure 30**. Make sure the plug position is as shown. If the plug is on the top or bottom sensors may detect the ground and cause your sensors to not work properly. Reinstall the bumper mounting plate into the bumper (without the air dam) Reinstall all the fasteners removed in S



Figure 29



Figure 30

BUMPER INSTALLATION

39. Before the bumper goes on the truck, we have to move the lower headlight panels out of the way. Grip the bottom lip of the panel with one hand [Figure 31]; hold the grill (close to the panel) with another. Pull on the panel swiftly to detach the tabs that secure it in place. You will have to use some force to free the tabs shown in Figure 32.

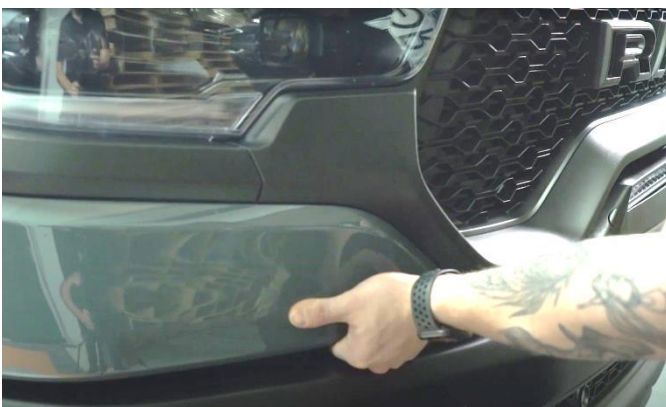


Figure 31



Figure 32

40. Pull the panel away so 4 clips are exposed [Figure 32]. This will allow you room to slide the bumper back on.
41. With a helper install the bumper back on the truck, being careful as shown in Error! Reference source not found. .
42. Install the three (3) stock bumper mounting nuts (18mm) on both sides of the bumper and torque to **75 ft-lbs.**
43. Reconnect the front bumper wiring connection.
44. Install and tighten the Hook Anchor with the supplied stainless M12 button head and washer in the configuration shown in Error! Reference source not found.. Also install the fairlead with hardware provided by you winch manufacturer.



Figure 33

45. Tighten the Fairlead Mount that was previously left finger tight to **75 ft-lbs.**
46. If the Clutch Relocation Kit was purchased, install the clutch handle in the Relocation Bearing with the fastener shipped with your Clutch Handle Relocation Kit
47. Reinstall the lower headlight body panels by pressing them back into the plastic retaining clips.
48. Install the 2 Skidplate Mounting Brackets. These are the ¼" thick Z shaped brackets. The slotted end slips over the M12 tow hook bolt (the most rearward one) Leave this finger tight until the skid plate is installed.
49. ReInstall the TRX Skidplate using Factory Hardware. Use the supplied M10 nuts to secure the two front fasteners that attach to the brackets installed in the last step. Torque to 55 ft lbs.
50. Install the lower inner fenders with the five (5) 8mm head fasteners on either side.

51. Connect your winch to the battery as per the winch manufacturer installation instructions.
52. After 100 km of driving and after the first use of the winch, check all fasteners and re-torque the hardware to the specifications previously outlined. ENJOY!

