INSTALLATION INSTRUCTIONS

SEMI Hidden Kit

Part Number: 100022

Application: 2017 Toyota 4Runner

GENERAL SAFETY PRECAUTIONS

Your safety, and the safety of others, is very important. To help you make informed decisions about safety, we have provided installation and operating instructions and other information on labels and in this guide. This information alerts you to potential hazards that could hurt you or others. It is not possible to warn you about all potential hazards associated with this product, you must use your own good judgment.

CARELESS INSTALLATION AND OPERATION CAN RESULT IN SERIOUS INJURY OR EQUIPMENT DAMAGE. READ AND UNDERSTAND ALL SAFETY PRECAUTIONS AND OPERATING INSTRUCTIONS BEFORE INSTALLING AND OPERATING THIS PRODUCT.

This guide identifies potential hazards and has important safety messages that help you and others avoid personal injury or death. WARNING and CAUTION are signal words that identify the level of hazard. These signal words mean:

⚠WARNING signals a hazard that could cause serious injury or death, if you do not follow recommendations. ⚠CAUTION signals a hazard that may cause minor to moderate injury, if you do not follow recommendations.

This guide uses NOTICE to call attention to important mechanical information, and Note: to emphasize general information worthy of special attention.

⚠ WARNING

IMPACT AND MOVING PARTS ENTANGLEMENT HAZARD

Failure to observe these instructions could lead to severe injury or death

- **Always** take time to fully read the Instructions and/or Operations Guide, and/or Basic Guide to Winching Techniques, in order to understand your winch and its operations.
- **Always** use extreme caution when drilling on any vehicle. Make sure that all fuel lines, brake lines, electrical wires, and other objects are not punctured or damaged when/if drilling on the vehicle. Thoroughly inspect the area to be drilled (on both sides of material) prior to drilling, and relocate any objects that may be damaged. Failure to inspect the area to be drilled may result in vehicle damage, electrical shock, fire or personal injury.
- **Always** wear safety glasses when installing this kit. A drilling operation will cause flying metal chips. Flying chips can cause eye injury.
- **Always** use extreme caution when cutting and trimming during fitting.
- **Always** remove jewelry and wear eye protection.
- **Never** lean over battery while making connections.
- **Never** route electrical cables:
  - Across any sharp edges.
  - Through or near moving parts.
  - Near parts that become hot.
- **Always** insulate and protect all exposed wiring and electrical terminals.
- **Always** install terminal boots as directed in installation instructions.
- **Always** use appropriate and adequate care in lifting components into place.
- **Always** insure components will remain secure during installation and operation.
- **Always** tighten all nuts and bolts securely, per the installation instructions.
- **Always** perform regular inspections and maintenance on the plow mechanism, fasteners, cable and related hardware.
- **Always** replace all worn or damaged parts before operating.
- **Never** operate this WARN product with damaged or missing parts.

Read installation and operating instructions thoroughly.

WARN INDUSTRIES, INC. 12900 S.E. Capps Road,
Clackamas, OR USA 97015-8903, 1-503-722-1200, FAX: 1-503-722-3000
Customer Service: 1-800-543-9276
Dealer Locator Service: 1-800-910-1122
International Fax: 1-503-722-3005

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⚠ CAUTION

MOVING PARTS ENTANGLEMENT HAZARD

Failure to observe these instructions could lead to minor or moderate injury

- **Always** take time to fully read and understand the installation and Operations Guide included with this product.
- **Never** operate this product if you are under 16 years of age.
- **Never** operate this product when under the influence of drugs, alcohol or medications.

Read installation and operating instructions thoroughly.

NOTICE

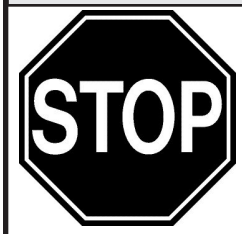
EQUIPMENT DAMAGE

- **Never** tow vehicle by attaching a tow bar to the eyelets on the bumper.
- **Never** attach tow bars directly to the bumper. Damage to bumper may occur. WARN bumpers are not designed to be used for flat towing. Consult with the manufacturer of your tow bar system for the proper vehicle tow bar brackets..

Read installation and operating instructions thoroughly.

BEFORE YOU BEGIN

NOTICE



This product may interfere with driver assist systems such as adaptive cruise control and parking assist systems that have sensors or cameras installed in the bumpers or front grill area. If your vehicle is equipped with any of these systems or features, consult your vehicle owner's manual before installing this product. These systems may need to be disabled as a result of installing this product.

If your truck is equipped with an automatic transmission and the cooler is located in front of the radiator, you will need a control pack relocation kit. Contact customer service at: 1-800-543-9276 for details on which relocation kit is right for your vehicle.

TABLE OF CONTENTS

Tools Required....page 2
Torque Specifications....page 2
Parts List....page 3
Installation....page 4-9
Maintenance/Care....page 9

TOOLS REQUIRED

- Standard wrenches
- Standard sockets
- Hacksaw Blade with Handle (*fine tooth*)

TORQUE SPECIFICATIONS

Please use the recommended torque specifications when assembling this product unless otherwise specified in the instructions.

FASTENER SIZE	*FASTENER TORQUE*		*FASTENER SIZE*	*FASTENER TORQUE*	
	lb-ft	*(N.m)*		*lb-ft*	*(N.m)*
1/4"	*8*	*(11)*	*M4*	*(2)*	*3*
5/16"	*17*	*(23)*	*M5*	*(4.5)*	*6*
3/8"	*30*	*(40)*	*M6*	*(7.5)*	*10*
7/16"	*48*	*(66)*	*M8*	*(18)*	*25*
1/2"	*74*	*(100)*	*M10*	*(37)*	*50*
9/16"	*106*	*(144)*			
5/8"	*148*	*(200)*			
3/4"	*269*	*(364)*			

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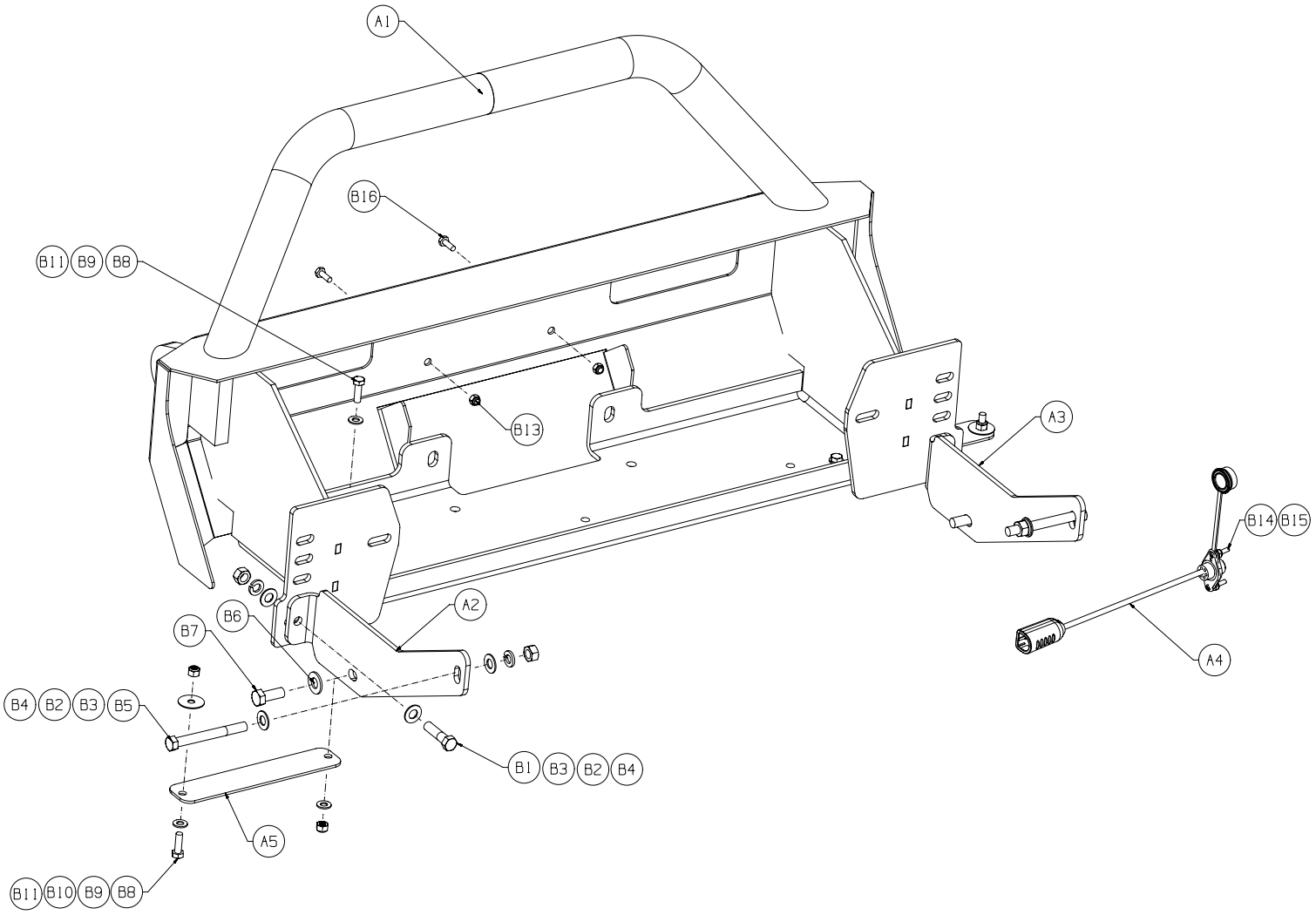
PARTS LIST

ID No.	Item No.	Description	Qty.
A1	100023	SEMI HIDDEN MOUNT	1
A2	99633	LH FRAME EXTENSION BRKT	1
A3	99629	RH FRAME EXTENSION BRKT	1
A4	14867	REMOTE EXTENSION	1
A5	99849	SUPPORT STRAPS	2

ID No.	Item No.	Description	Qty.
B1	15834	7/16 X 1 3/4 HEX BOLT	4
B2	2146	7/16 LOCK WASHER	4
B3	220026	7/16 FLAT WASHER	8
B4	2583	7/16 NUT	4
B5	32746	7/16-14 X 4 HEX BOLT	2
B6	9213	1/2 INCH FLAT WASHER	2
B7	13573	M12 BOLT	2
B8	1324	5/16 WASHER	6
B9	21331	CAP SCREW 5/16-18	4
B10	22262	5/16 FENDER WASHER	2
B11	2002	5/16-18 NUT	4
B12	100772	PLASTIC PLUG	2
B13	6725	1/4-20 LOCK NUT	2
B14	63241	10-24 LOCK NUT	2
B15	29382	10-24 ROUND HD SCREW	2
B16	1141	1/4-20 X 3/4 HEX BOLT	2



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1. Remove the push pull clips from the plastic cover over the radiator.

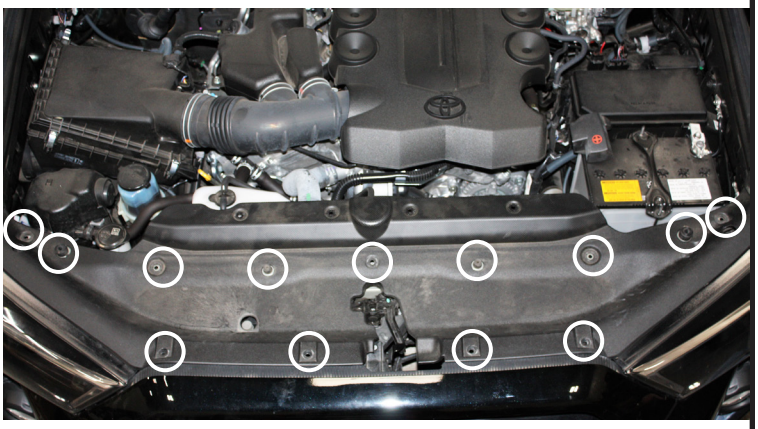

Figure 1

2. Remove the screw holding the top center of the grill and the two push pull clips towards the outer top side.

Figure 2

3. Remove the additional four push/pull clips along the backside of the grill and carefully remove grill completely.

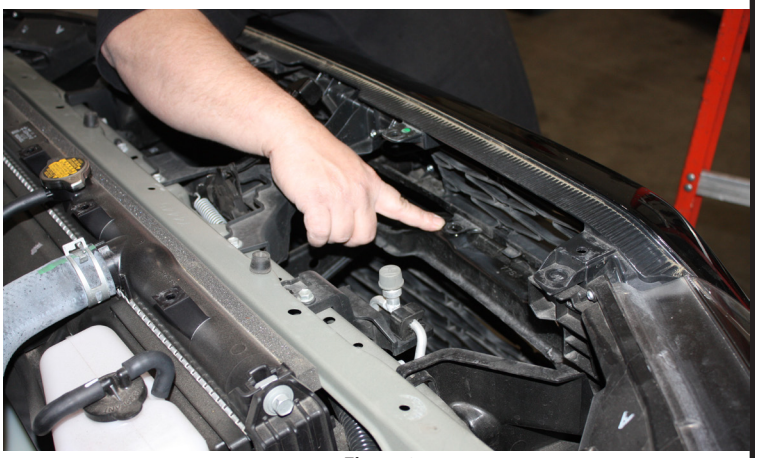

Figure 3

4. Remove the plastic skid plate and lower plastic piece.

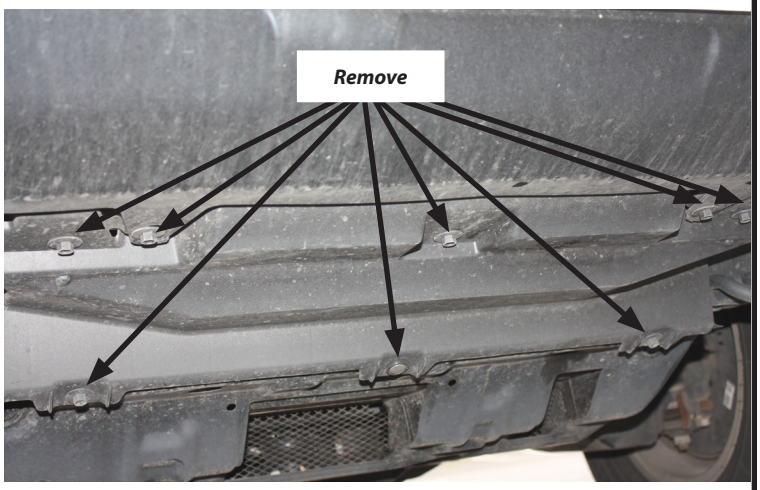

Figure 4

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5. Remove the three screws from the front wheel well (each side) separating the exterior plastic from the inner fender.

Figure 5

6. Carefully pull exterior plastic away from wheel well until plastic unsnaps from clip on vehicle.

Figure 6

7. Before removing the front clip reach in and unplug your fog lamps. With help gently start pulling the front clip from the vehicle making sure all connections release so not to damage plastic.

Figure 7

8. Remove the foam from the aluminum cross tube to access the six nuts.

9. Remove aluminum cross bar by removing the three nuts (each side) securing aluminum cross tube to frame extension brackets. ***NOTE: You will not be reusing cross bar.***

10. Remove the eight bolts securing the extension brackets to frame. Completely remove brackets - you will not be reusing.

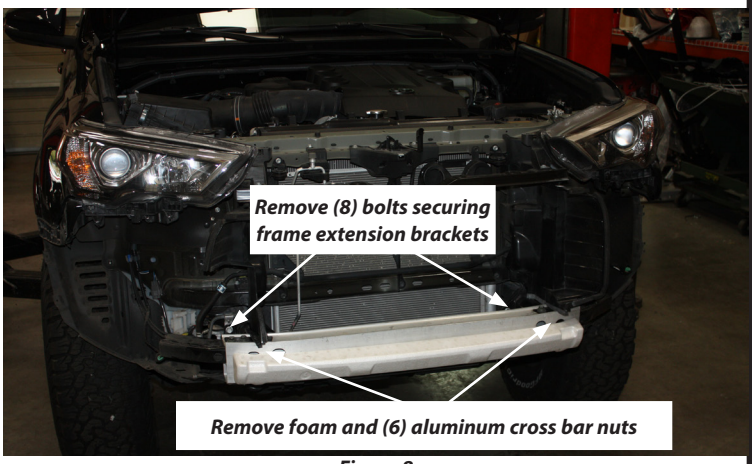

Figure 8

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11. Attach the left and right side frame extension brackets (A2) to vehicle frame, using the 7/16-14 X 4 bolt (B5), flat washer (B3), lock washer (B2) and nut (B4) and the M12 bolt (B7) and 1/2" flat washer (B6).

TIPS:

Drop metal skid plate down to allow access to install.

The 7/16 bolt goes through the rear of the bracket and through the frame, see exploded view on page 3.

The 12mm bolt will screw into the vehicles existing threaded hole.

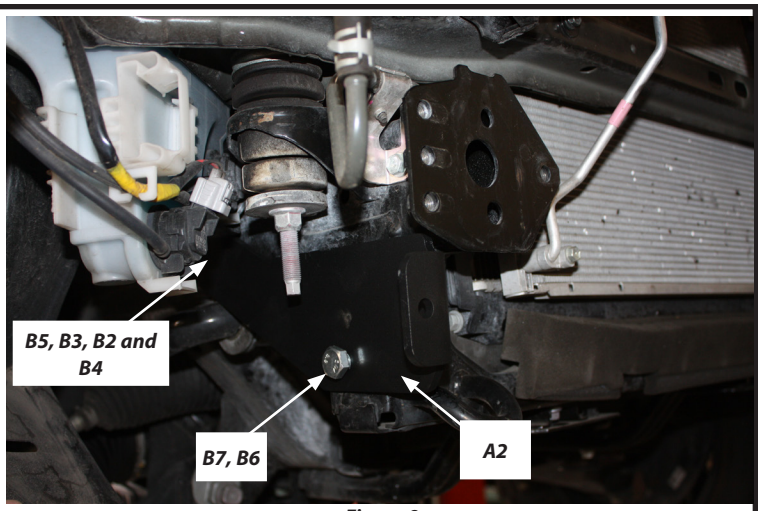

Figure 9

12. Do not tighten until winch mount is installed. Repeat for other side.

13. Remove the plastic shrouds (each side) of radiator. ***NOTE: You will be reinstalling.***

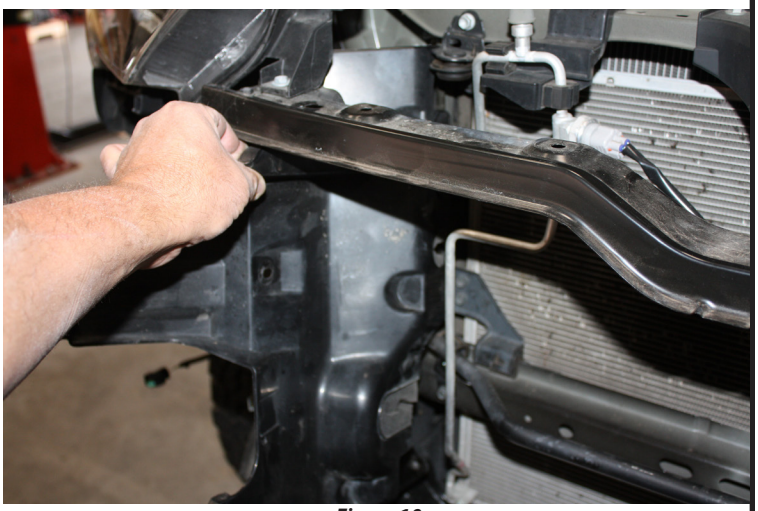

Figure 10

⚠ CAUTION

- **Always** use assistance when moving or lifting heavy parts.

14. With assistance, align the mount (A1) to stock frame rail and new extension bracket (each side).

    Loosely, attach to frame rail and extension bracket. *NOTE: Refer to exploded view on page 3.*

    a. Reinstall the four previously removed hex head bolts (each side).
    b. Install provided hardware (B1, B3, B2 and B4).

    Using slots in mount, center the mount to front of vehicle. Once centered, tighten hardware.

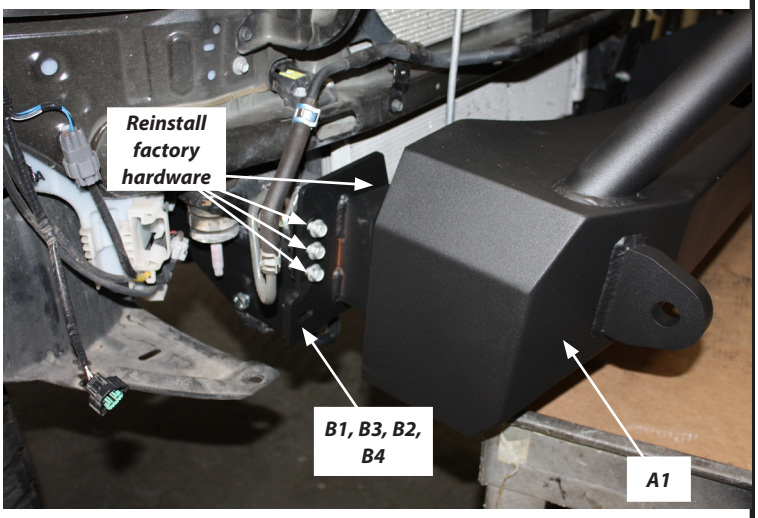

Figure 11

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HINT: If you are installing a WARN synthetic winch, be sure to install rope to winch BEFORE installing winch to mount.

15. Install fairlead, per instructions found in winch kit.

16. Install winch to mount per winch kit instructions.

17. Run rope through fairlead.

18. Make wire connections per winch kit install instructions.

Figure 12

19. Re-install plastic shrouds (each side) of radiator. ***HINT: You will need cut shrouds to fit around new mount.***

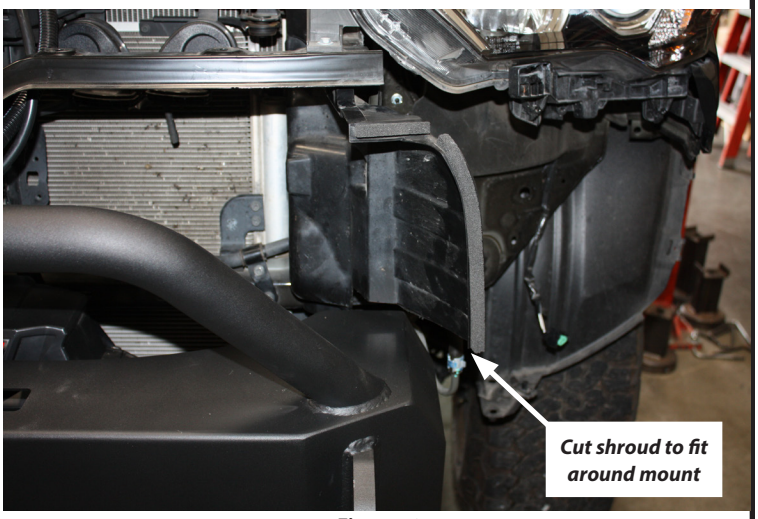

Figure 13

Modifying front plastic:

20. Remove center portion of plastic.

    a. Use 1" wide tape mark off area to trim, as shown in the picture. ***NOTE: The tape will help protect the areas you don't want your cutting tool to scratch.***

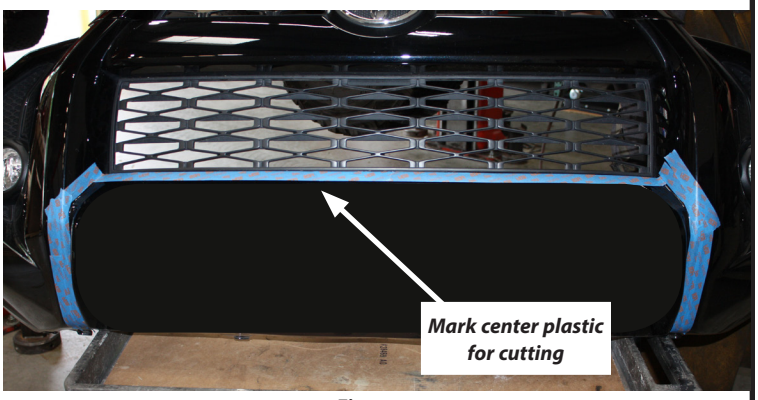

Figure 14

21. Using a reciprocating fine tooth air saw or the like; cut to the <u>inside</u> edge of the tape. Try not to cut the tape.

    Be sure to leave nice clean edges on all sides *(use a small disk sander to clean any rough edges)*.

22. Once center portion of plastic is removed. Cut off the two tabs in the center of plastic piece.

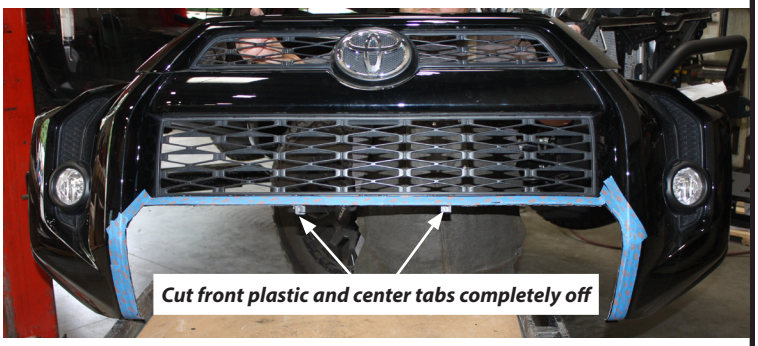

Figure 15

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23. Re-install the modified front plastic over the top of the mount.

24. Plug fog lamps in.

Figure 16

25. Snap/clip plastic back into place near wheel well.

26. Install the three screws from the front wheel well (each side) separating the exterior plastic from the inner fender.

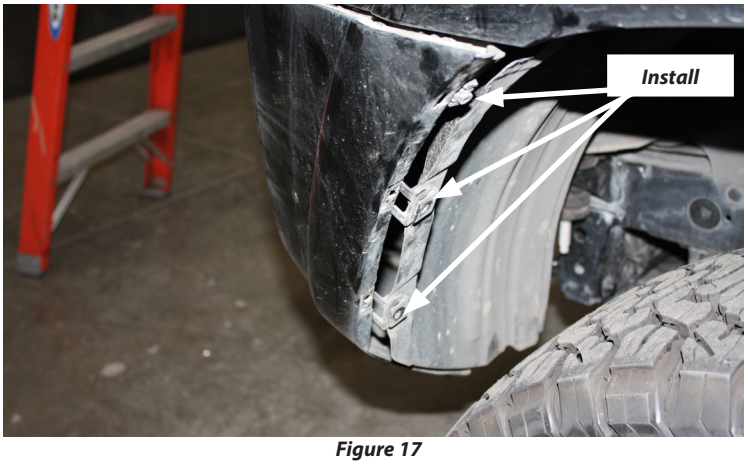

Figure 17

27. Re-install grill, by reattaching the four push/pull clips along the backside of the grill.

Figure 18

29. Re-install the screw holding the top center of the grill and the two push pull clips towards the outer top side.

Figure 19

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30. Re-install the push pull clips from the plastic cover over the radiator.

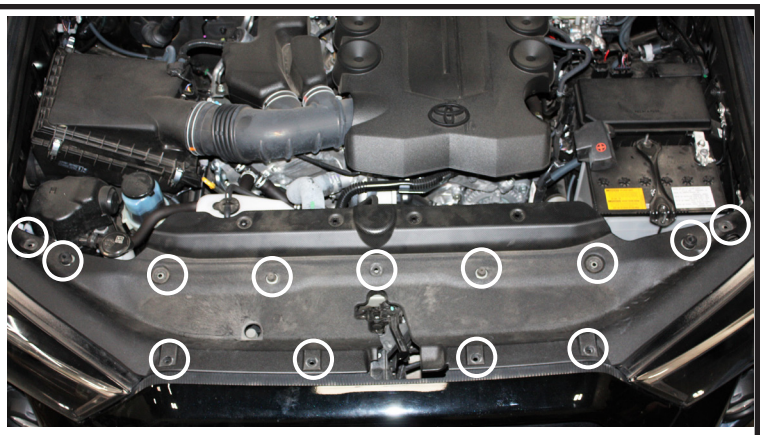

Figure 20

31. Use the straps (A5) and the 5/16 hardware (B11, B10, B9 and B10) to attach the lower plastic to the mount. NOTE: The fender washer (B10) is used on the side of the strap that attaches the plastic. The plastic has a large hole that needs a fender washer.

32. Install the remote plug end (A4), in desired location, with the hardware supplied in the kit.
33. Your installation is now complete. Tighten all hardware at this time.

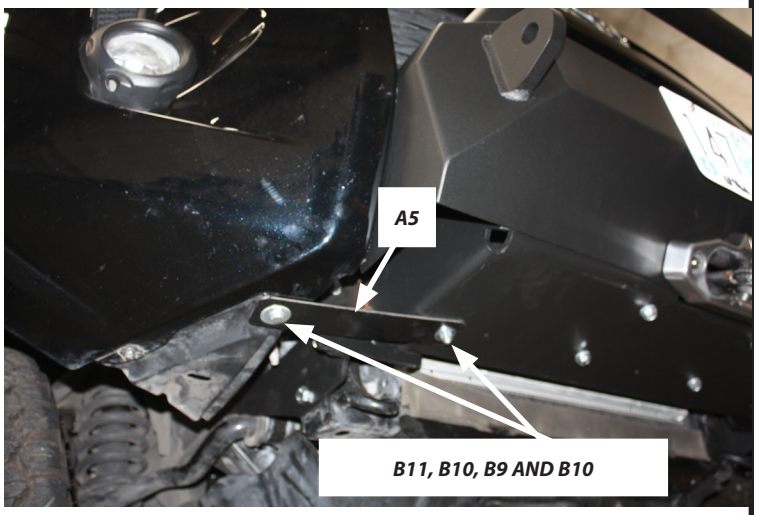

Figure 21

MAINTENANCE / CARE

1. Inspect all parts on the winch, winch mount, and related hardware prior to each use. Replace all hardware that appears rusted or deformed.

2. Inspect all nuts and bolts on the winch, winch mount and related hardware prior to each use. Tighten all nuts that appear to be loose. Stripped, fractured, or bent bolts or nuts need to be replaced.

3. Check all cables prior to use. Replace cables that look worn or frayed.

4. Check all moving or rotating parts. Remove debris that may inhibit the part from moving freely.

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