



INSTALLATION INSTRUCTIONS

WINCH MOUNTING KIT

Part number: 88070

Application: 2011+ Ford F150 Ecoboost

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 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 and operation.
- Always perform regular inspections and maintenance on the winch, winch mount and related hardware.

Read installation and operating instructions thoroughly.

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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

- Always refer to the Installation and Specification Guide, supplied in the winch kit, for all wiring schematics and specific details on how to wire this WARN product to your vehicle.
- Never use the tow hooks as an anchor point when double lining a winch.
- Never use the mounting kit as an anchor point when double lining a winch.

Read installation and operating instructions thoroughly.

NOTES

This kit is designed for installation on vehicles equipped with factory tow loops. Vehicles equipped with factory tow loops have front valances that are shaped to allow easy installation of mounting kit brackets. If this kit is to be installed on a vehicle not equipped with factory tow loops, significant trimming of the plastic valance may be required. That specific trimming information is not supplied here.

TABLE OF CONTENTS

Parts List.....	page 3
Tools Required.....	page 2
Torque Specifications.....	page 2
Installation.....	page 4-5
Maintenance/Care.....	page 6

TOOLS REQUIRED

5/8" Socket	3/4" Socket	15/16" Socket	3/8" Ratchet
11/16" wrench	3/4" Wrench	15/16" Wrench	6" Extension 3/8" Drive
Diagonal Cutters	Screw drivers	Pliers	

TORQUE SPECIFICATIONS

1/4	8 lb. ft. (10.8 N-m)
5/16	17 lb. ft. (12.5 N-m)
3/8	30 lb. ft. (40.7 N-m)
7/16	50 lb. ft. (67.8 N-m)
1/2	75 lb. ft. (101.7 N-m)

PARTS LIST

Reference	Part Number	Qty	Description
A1	88185	1	Beam Assembly
A2	88151	1	Bottom Bracket LH
A3	88152	1	Bottom Bracket RH
A4	88146	1	Center Bracket LH
A5	88147	1	Center Bracket RH
A6	79852		Carrier Assembly
B1	68896	2	5/8-11 X 6-BOLT
B2	68959	4	5/8" WASHER
B3	6820	2	5/8" LOCK WASHER
B4	6821	2	5/8" NUT
B5	22535	6	1/2-13 X 1-3/4 BOLT
B6	1145	12	1/2" WASHER
B7	2596	10	1/2" LOCK WASHER
B8	1323	6	1/2" NUT
B9	7165	8	7/16-14 X 1 1/2 BOLT
B10	220026	22	7/16" WASHER
B11	2146	14	7/16" LOCK WASHER
B12	2583	14	7/16" NUT
B13	18120	4	1/2-13 X 2 1/4, BOLT
B14	11124	6	7/16-14 X 1 1/2 CARRIAGE BOLT
B15	38453	4	1/2" NUT ASSY
B16	88148	8	SHIM
B17	79913	2	SPACER

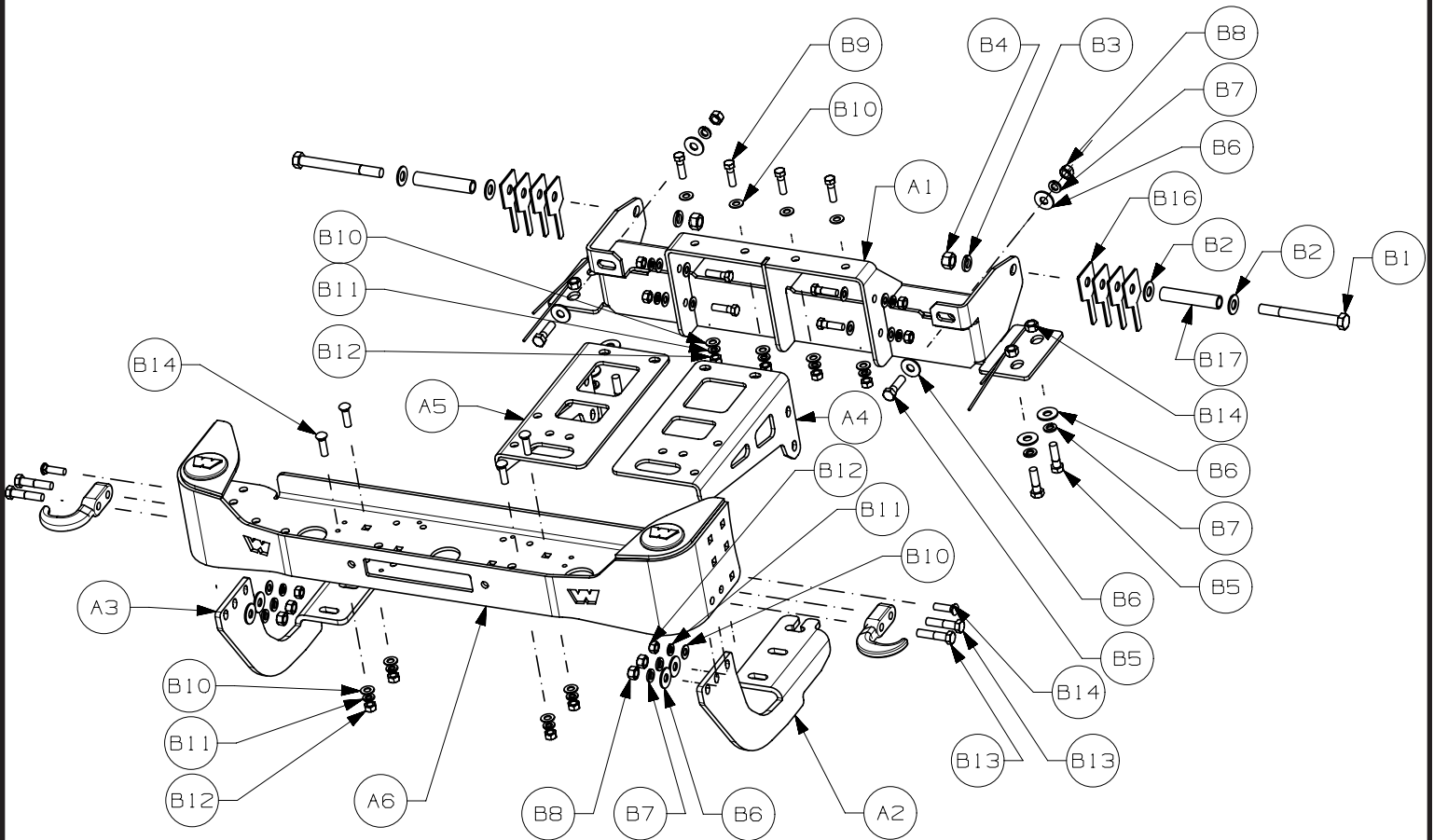


Figure 1

INSTALLATION INSTRUCTIONS

Bumper Removal and Installation

1. Disconnect fog lamp wiring if applicable.
2. Remove factory air dam if vehicle is equipped with one (one bolt per side).
3. Remove hood latch release lever.
4. Remove bumper. Bumper is held in place with 4 fasteners at the frame and 2 fasteners on top.
5. Remove factory tow loops (2 bolts per side). Tow loops and hardware will not be used.
6. Remove backing plates from bumper. Backing plate is held on with 4 bolts per side.
7. Install tow hooks using fasteners (B, B7, B8, B13)



Figure 2



Figure 3

8. Reassemble bumper brackets and install brackets back onto bumper with inboard stud removed.
9. Slide the beam assembly into position between the frame rails from underneath the vehicle.
10. Install rear fasteners (B1, B2, B3, B4) along with shims (B16) and tube spacers (B17). Do not tighten at this time.



Figure 4

INSTALLATION INSTRUCTIONS

11. Temporarily install fasteners (B5 and B14) in one location to hold assembly up in place.
12. Position bumper back onto vehicle.
13. Reinstall OEM fasteners removed in step 4 on outer bumper mounting studs.
14. Install fasteners (B5, B6, B7, B8) in the inner mounting location where studs were removed in step 6.
15. Remove fastener installed in step 11.
16. Position the left and right bottom brackets (A2, A3) into position through the bumper openings. The flange of the brackets fit between the beam assembly (A1) and vehicle frame. Install fasteners (B5, B6, B7, B14) fasteners. Do not tighten at this time.
17. Position the center brackets A4, A5 to the beam assembly through the front opening of the bumper. Install fasteners (B9, B10, B11, and B12). The side bolts should be installed from the inside outwards. Do not tighten at this time.
18. Place the winch carrier on top of the center bracket and over the bottom brackets.
19. Install top fasteners (B10, B11, B12, B14) to secure carrier assembly (A6) to center brackets (A4, A5).
20. Install side fasteners (B10, B11, B12, B14) to secure carrier assembly (A6) to bottom brackets (A2, A3)
21. Install tow hooks using fasteners (B, B7, B8, B13)
22. Tighten all fasteners starting with the winch carrier assembly A6) and work towards the beam assembly (A1)
23. Reinstall the hood latch release lever removed in step 4.
24. Reinstall the air dam removed in step 3.
25. Reconnect the fog lamp wiring disconnected in step 1.
26. The kit is now ready for the winch or other accessories to be installed.

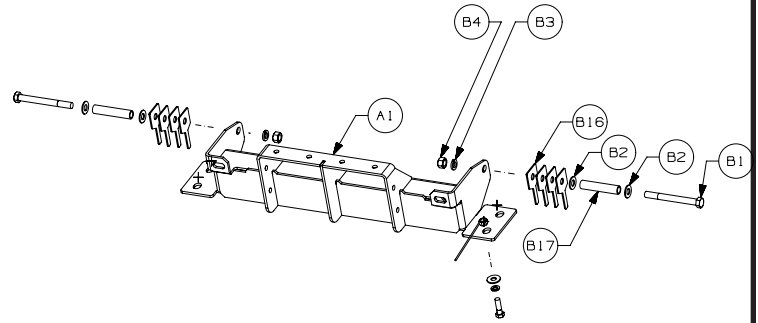


Figure 5

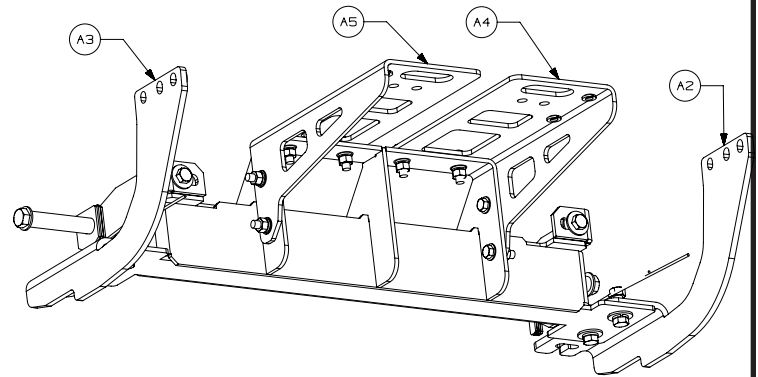


Figure 6

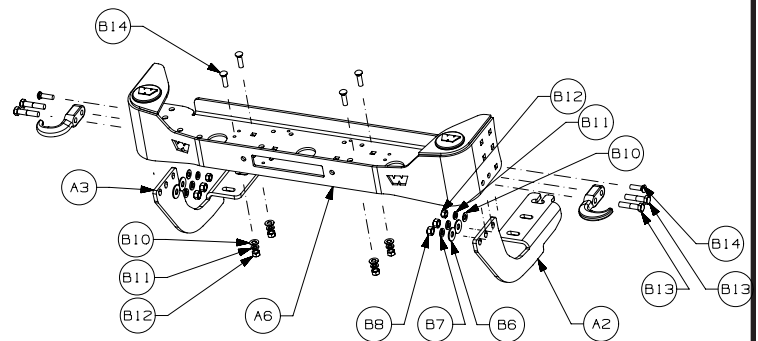


Figure 7

Warn Industries Stainless Steel Truck Accessories

What to expect:

Polished stainless steel combines the beauty of a chrome-like appearance with extreme durability and corrosion resistance. With a minimum amount of care, the appearance will last almost indefinitely. Unlike plating or coatings, there is nothing to peel off or wear away that would allow corrosion underneath.

The actual appearance may not be exactly like new chrome in either the degree of luster or color. There may be fine polishing lines visible up close and small differences between mating parts of an assembly. A grille guard, for instance, may have small differences between the round tubing and the flat plate. The backside of a part may not be as highly polished as the front. However, part of the beauty and appeal of stainless actually lies in the smooth “hand-worked” appearance.

There also is a possibility that small rust spots can appear on stainless products. They are usually due to minor iron contamination on the surface as a result of normal manufacturing and handling processes. This minor rust, if it occurs at all, is easy to remove and will not tend to spread.

Recommended care:

Regular washing with fresh water and mild car wash detergents followed by rinsing and drying with a soft towel is the best minimum care. Beyond that, any cleaner/wax recommended for automotive finishes will work well to remove minor stains and scuffs, enhance the shine and provide protection. Always use clean soft cotton cloths. In most cases, this will be all that is required for many years. For more serious blemishes or a rust spot, use a cream metal polish recommended for stainless, aluminum, etc. Try to rub in the direction of the original polishing lines.

Ultimately, any stainless part can be restored to a brilliant shine with power buffing processes.

⚠ CAUTION

Do not use steel wool or any type of metal scraper. Do not use “Scotch Brite” pads or abrasive powdered cleaners. Do not try to clean with muriatic acid or any other acid.

Stainless Fasteners

Stainless steel fasteners are included in many of the stainless kits. These fasteners provide similar corrosion resistance and appearance as the rest of the kit. However, stainless fasteners are prone to galling when installed in similar stainless material. It is a good idea to apply a small amount of anti-seize compound to the threads when installing them. Care should also be taken when tightening the fasteners to prevent rounding or deforming the corners of the bolts. Make sure the wrenches are the correct size and fit properly. In the case of socket heads, the wrench should have sharp, un-worn edges. With a few precautions during assembly the products should provide years of service.

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