



# INSTALLATION INSTRUCTIONS


## HD BUMPER AND WINCH MOUNTING KIT


Part Number: 70650, 70651, 73990  
Application: 05-NEWER FORD SUPER DUTY

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**

#### **INJURY HAZARD**

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

- q **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.
- q **Always** wear safety glasses when installing this kit. A drilling operation will cause flying metal chips. Flying chips can cause eye injury.
- q **Always** use extreme caution when cutting and trimming during fitting.
- q **Always** remove jewelry and wear eye protection.
- q **Never** lean over battery while making connections.
- q **Never route electrical cables:**
  - Across any sharp edges.
  - Through or near moving parts.
  - Near parts that become hot.
- q **Always** insulate and protect all exposed wiring and electrical terminals.
- q **Always** install terminal boots as directed in installation instructions.
- q **Always** use appropriate and adequate care in lifting components into place.
- q **Always** insure components will remain secure during installation and operation.
- q **Always** tighten all nuts and bolts securely, per the installation and operation instructions.
- q **Always** perform regular inspections and maintenance on the winch, winch mount and related hardware.

<b>⚠ Caution</b>	
<b>Moving Parts Entanglement Hazard</b>	
<b>Failure to observe these instructions could lead to minor or moderate injury.</b>	
q	<b>Always</b> take time to fully read and understand the installation and Operations Guide included with this product.
q	<b>Never</b> operate this product if you are under 16 years of age.
q	<b>Never</b> operate this product when under the influence of drugs, alcohol or medications.
<b>Read installation and operating instructions thoroughly.</b>	

<b>Notice</b>	
<b>Equipment Damage</b>	
q	<b>Always</b> 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.
<b>Read installation and operating instructions thoroughly.</b>	

**I. BEFORE YOU BEGIN**

**READ INSTALLATION INSTRUCTION THOROUGHLY.**

**II. TABLE OF CONTENTS**

Parts List	page 2
Tools Required	page 3
Torque Specifications	page 3
Installation	page 3-14
Maintenance/Care	page 15

**III. PARTS LIST**

<u>Part Number</u>	<u>Qty</u>	<u>Description</u>
70648, 70469, or 73041	1	BUMPER, FRONT, ARGENT GREY OR BLACK
70653	1	HARDWARE KIT
70654	1	LOWER MOUNTING BRACKET, LH
70655	1	LOWER MOUNTING BRACKET, RH
70656	6	SHIM
70657	1	FRAME SIDE PLATE, LH
70658	1	FRAME SIDE PLATE, RH
70659	1	FRAME BRACKET, LH
70660	1	FRAME BRACKET, RH
68649	1	16.5TI CONTROL BOX BRACKET
220512	1	LIGHT KIT (Not supplied with tubeless bumpers.)
73997	1	LIGHT PORT BACK PLATE KIT (Tubeless bumper only)

## IV. TOOLS REQUIRED

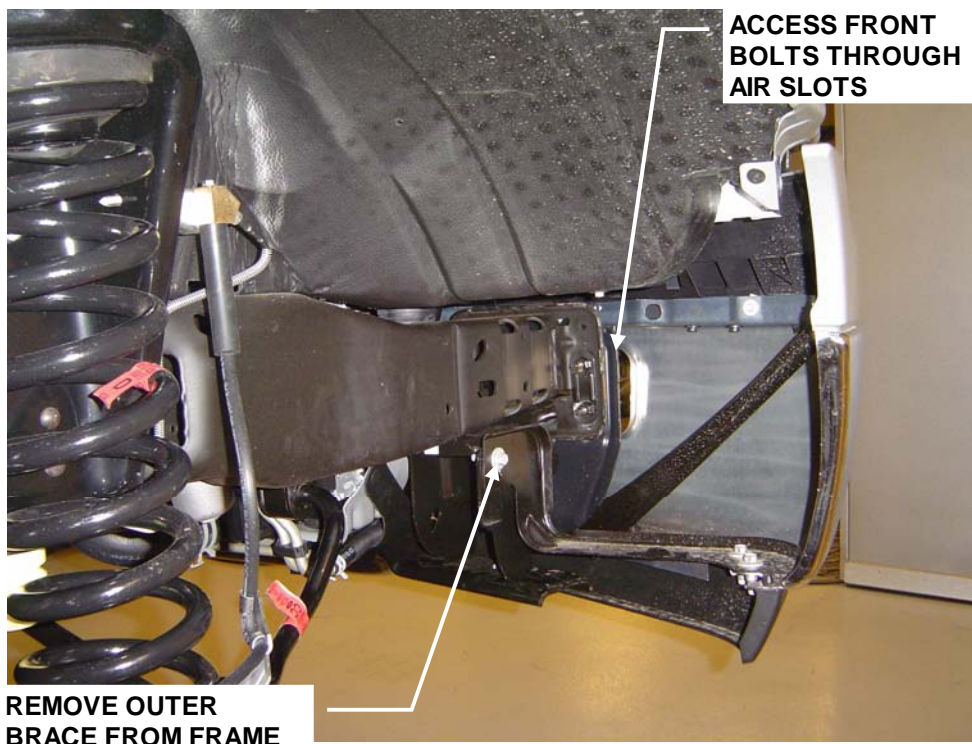
- METRIC SOCKET SET
- STANDARD SOCKET SET
- 3/8" DRIVE RATCHET
- 1/2" DRIVE RATCHET
- STANDARD WRENCH SET
- TAPE MEASURE
- TORQUE WRENCH

## V. TORQUE SPECIFICATIONS

¼	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	50lb. ft. (67.8 N-m)
½	75 lb. ft. (101.7 N-m)
5/8	90 LB. FT. (122 N-m)

## VI. INSTALLATION

**1.** Remove the factory front bumper. First remove the outer bumper support braces from the vehicle frame. Then remove the front mounting bolts accessed through the air slots in the bumper. Disconnect the wiring to the factory fog lamps if the vehicle is equipped with them. Discard bumper and outer support brackets. See **Figure 1**. Remove the factory tow hooks and discard.



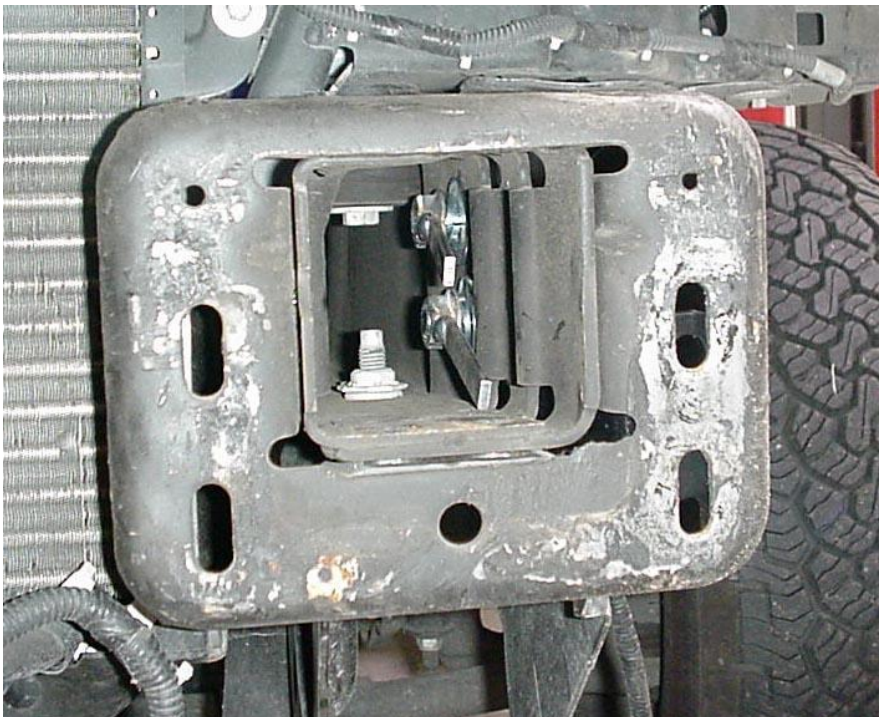
**Figure 1: Removal of factory bumper.**

2. Install the outer frame bracket to both sides of the vehicle. See **Figure 2 and 3**. Use the supplied 5/8 hardware. Insert a 5/8" bolt through the outer frame bracket and appropriate frame hole. Install a 5/8" flat washer, 5/8" lock washer and 5/8" nut with a steel anti-rotation stick welded to it onto each bolt, 2 on each bracket. Do not tighten these bolts at this time.



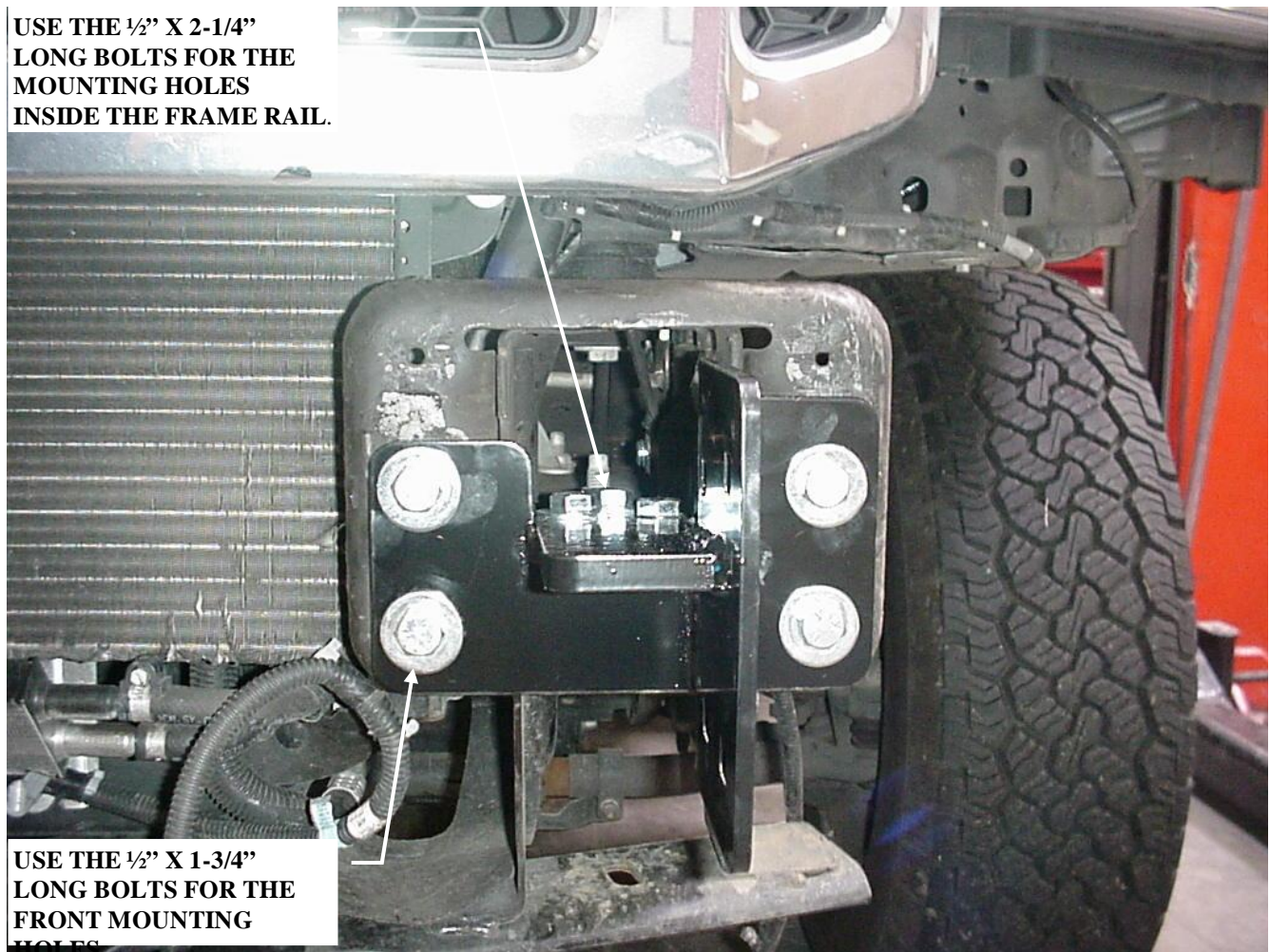
**INSTALL OUTER FRAME  
BRACKETS USING THE  
SUPPLIED 5/8"  
HARDWARE**

**Figure 2: installation of outer frame bracket.**

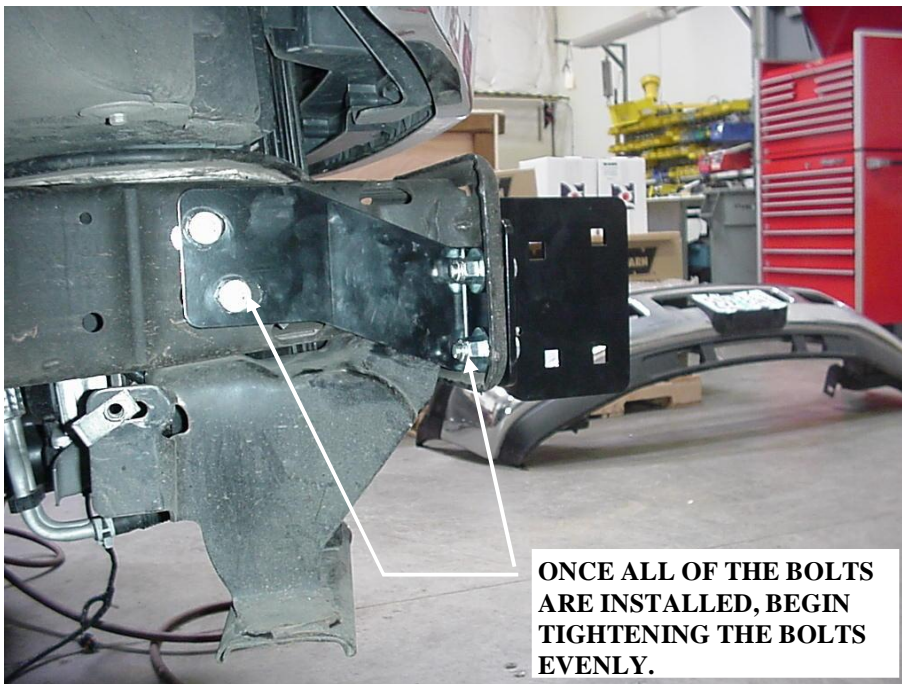


**Figure 3: 5/8" hardware.**

**3.** Install the main frame brackets to the vehicle frame. **See Figure 4** for appropriate left and right bracket locations. First install the main frame brackets using the 1/2" x 2-1/4" long bolts through the factory tow hook mounting holes inside the frame. Insert the frame bracket into the frame where the tow hooks used to mount. Take a 1/2" x 2-1/4" long bolt and flat washer and insert it through the frame bracket and frame. Install a 1/2" flat washer and 1/2" lock nut onto the bolt from the bottom. Repeat this for all three bottom frame holes on each frame bracket. The outermost bolt will not allow a flat washer to be installed onto the bolt. Do not tighten at this time. Install the supplied 1/2" x 1-3/4" long bolts with flat washers through the front of the frame bracket and the frame. Install a 1/2" flat washer and 1/2" lock nut onto each of the four front mounting bolts. The outer bolts will also go through the outer frame bracket. **See Figure 5.** Once all the bolts are installed on each side, begin tightening the bolts.

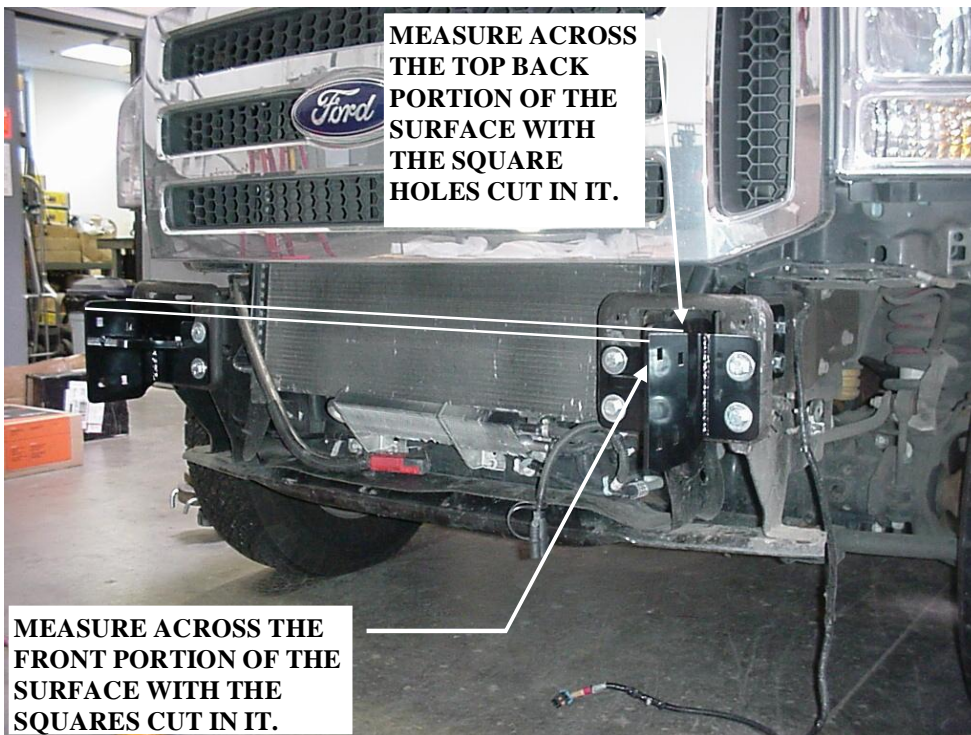


**Figure 4: Main frame brackets and bolt locations. (Driver's side shown)**



**Figure 5: Tighten the bolts.**

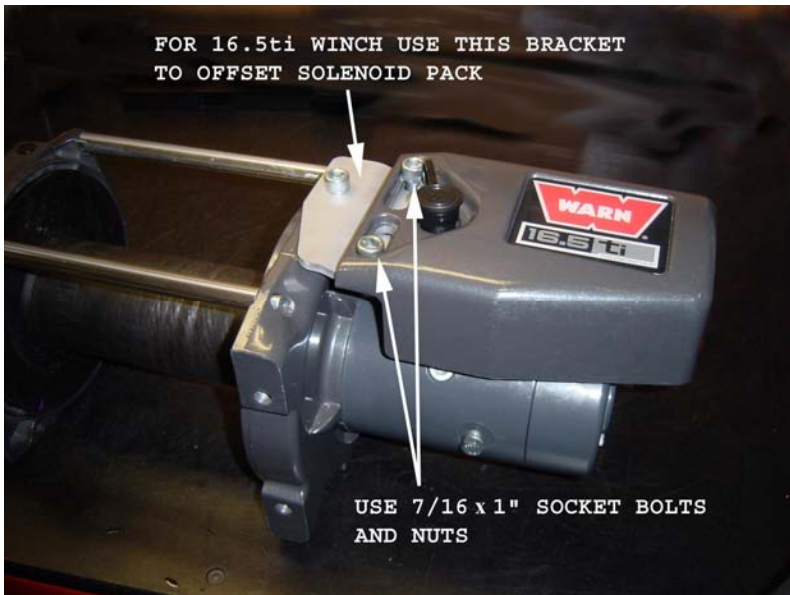
4. Once the bolts are tight, use a tape measure to make sure the main frame brackets are square to each other. Use **Figure 6** to help with this step. Measure across the top front of the frame brackets and then measure across the top back of the main frame bracket to make sure they are square. It may be necessary to loosen the bolts slightly to allow for the brackets to move. Both measurements should be equal.



**Figure 6: Square up the main frame brackets.**

5. Once the main frame brackets are square to each other, torque all of the mounting bolts using the supplied torque specification in the beginning of this instruction manual.

6. If you are installing a winch with this bumper installation, do so now. If you are installing a Warn 16.5ti winch, you must first install the supplied control pack relocation bracket to the winch and solenoid box before installing the winch. See Figure 7. Use the supplied hardware to mount the control pack. If you are installing a Warn M15 or M12, use the bracket or clamps supplied with the winch to mount the control pack. See Figure 8. Be sure to install the winch ground strap before installing winch.



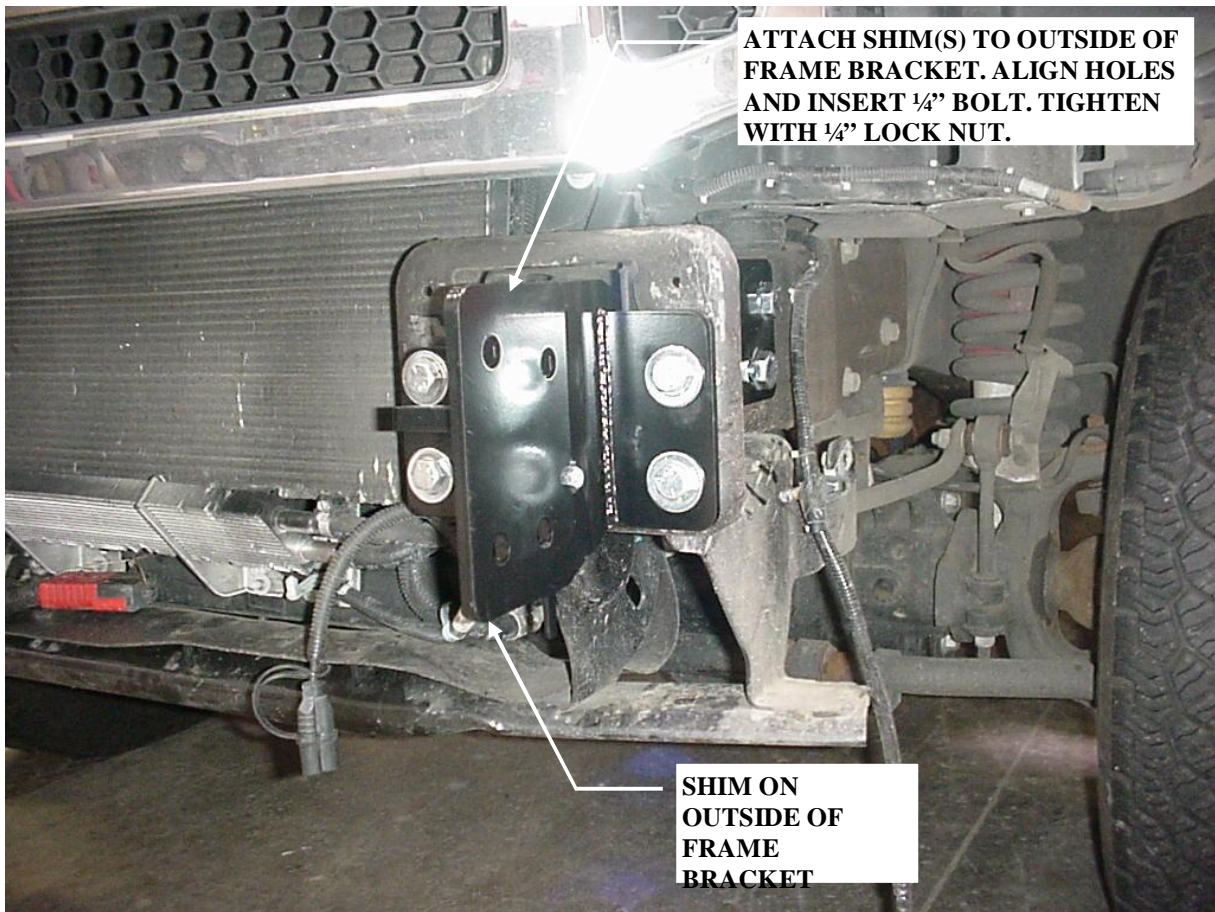
**Figure 7: 16.5ti Control Pack.**



## Figure 8: M15 Control Pack

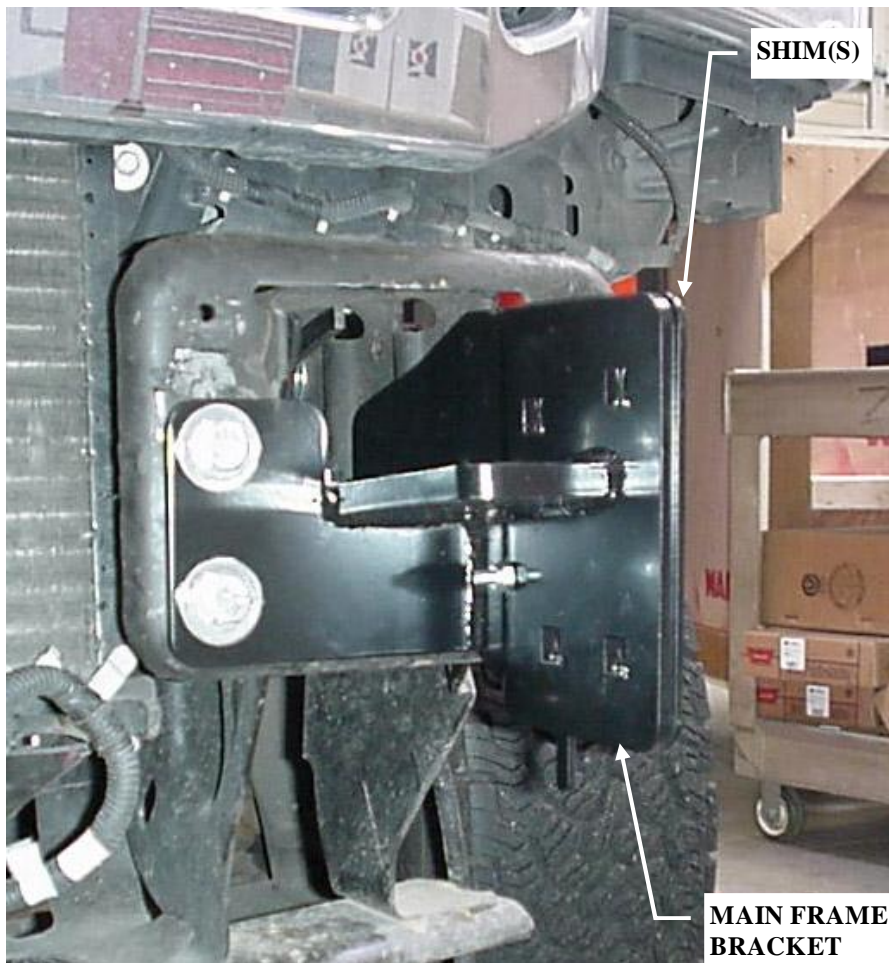
7. Once the control pack is installed on the winch, insert the winch into the bumper. The control pack should be facing up and the front of the winch should have the four mounting holes. Insert the winch by first tipping the end with the clutch lever up and inserting the control pack end in the bumper first. Then insert the clutch lever end in the bumper. Use the hardware supplied with the winch to properly mount the winch to the bumper. Following the instructions supplied with the winch for the proper bolt location. The winch comes with two different length 7/16" bolts, so read the instructions with the winch to ensure the proper locations.

8. Due to the tolerances in the vehicle frame, mounting brackets and the bumper it will be necessary to attach shims to the frame brackets to ensure a good fit to the bumper. The bumper was designed to have two shims attached to each frame bracket. This allows the bumper to be moved side to side for a proper fit to the vehicle body. The first step is to measure the width across the frame brackets from outside of frame bracket to outside of the other frame bracket. This same measurement was done in step 4. After measuring the outside width across the frame brackets, measure the inside width of the bumper. The frame brackets fit inside the center cavity of the bumper, thus this measurement should be smaller. Determine the difference between the two dimensions. Each shim is an 1/8" thick. Determine the number of shims required to make up the difference in the measurements. For example, if there is a 3/8" difference, then 3 shims will be required. Install one shim to the outside of either frame bracket and the remaining two shims to the outside of the opposite frame bracket. Use a 1/4" bolt and nut to secure the shim to the frame bracket. **See Figure 9 and 10.**





**Figure 9: Attaching shim(s) to Frame Bracket.**



**Figure 10: Shim(s) attachment to Frame Bracket.**

**9.** Once the proper amount of shims have been attached to the frame brackets, the bumper can be installed. The easiest and most careful way to install the bumper without damaging the bumper and /or vehicle is to use a floor jack under the bumper and someone to help guide the bumper into place. Place something of the floor jack to keep it from scratching the bumper. Gently set the bumper on the floor jack and center it so it is balanced. Slowly jack the bumper up and guide it into the vehicle. Watch the frame brackets to make sure you are lined up. As the bumper gets close to being in position, make sure that the headlight tubes do not touch the vehicle fenders. Once the bumper is positioned into the frame bracket, look at the clearance between the head light tubes and the fenders. If there is more gap on one side, it may be necessary to move a shim from one frame bracket to the opposite side to move the bumper away from the fender. See **Figure 11**.

<b>⚠ Caution</b>	
<b>Falling Parts Hazard</b>	
<b>Failure to observe these instructions could lead to minor or moderate injury.</b>	
q	<b>Always</b> take time to make sure that the bumper is centered on the jack.
q	<b>Always</b> get help when lifting heavy objects.
<b>Read installation and operating instructions thoroughly.</b>	

WARN INDU

71225A1

The Warn HD Bumper was designed to fit close to the body to achieve a clean looking fit of the bumper. If there is more gap on one side, remove a shim from the side of the frame bracket and add it to the opposite side. (For tubeless bumpers, adjust bumper for equal distance from bumper end to fender.)

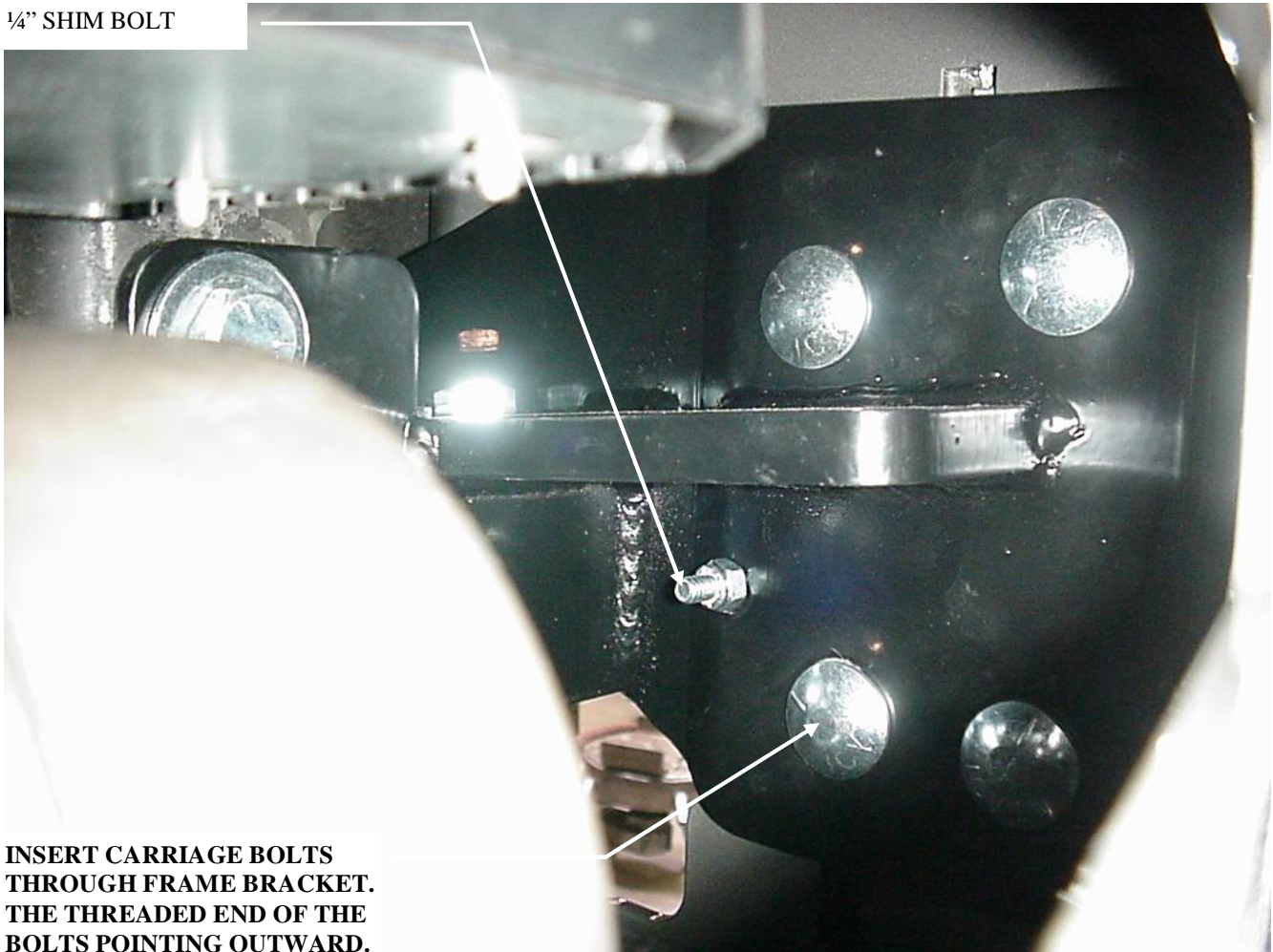


**ADJUST THE SHIM  
PLACEMENT TO  
GET AN EQUAL GAP  
BETWEEN THE  
HEAD LIGHT TUBE  
AND THE FENDER.**

**Figure 11: Shim adjustment and bumper to body clearance.**

**10.** Once the bumper is positioned side to side through shim adjustment, line up the holes in the bumper to the holes in the frame brackets. Upon lining the holes up, insert a ½” Carriage bolt (round head, square neck) through the frame bracket and the bumper. The bolts **MUST** be installed through the frame bracket first for proper fit of the square neck on the bolts into the square holes in the frame brackets. **See Figure 12.**

¼” SHIM BOLT



**INSERT CARRIAGE BOLTS THROUGH FRAME BRACKET. THE THREADED END OF THE BOLTS POINTING OUTWARD.**

**Figure 12: Carriage bolt placement.**

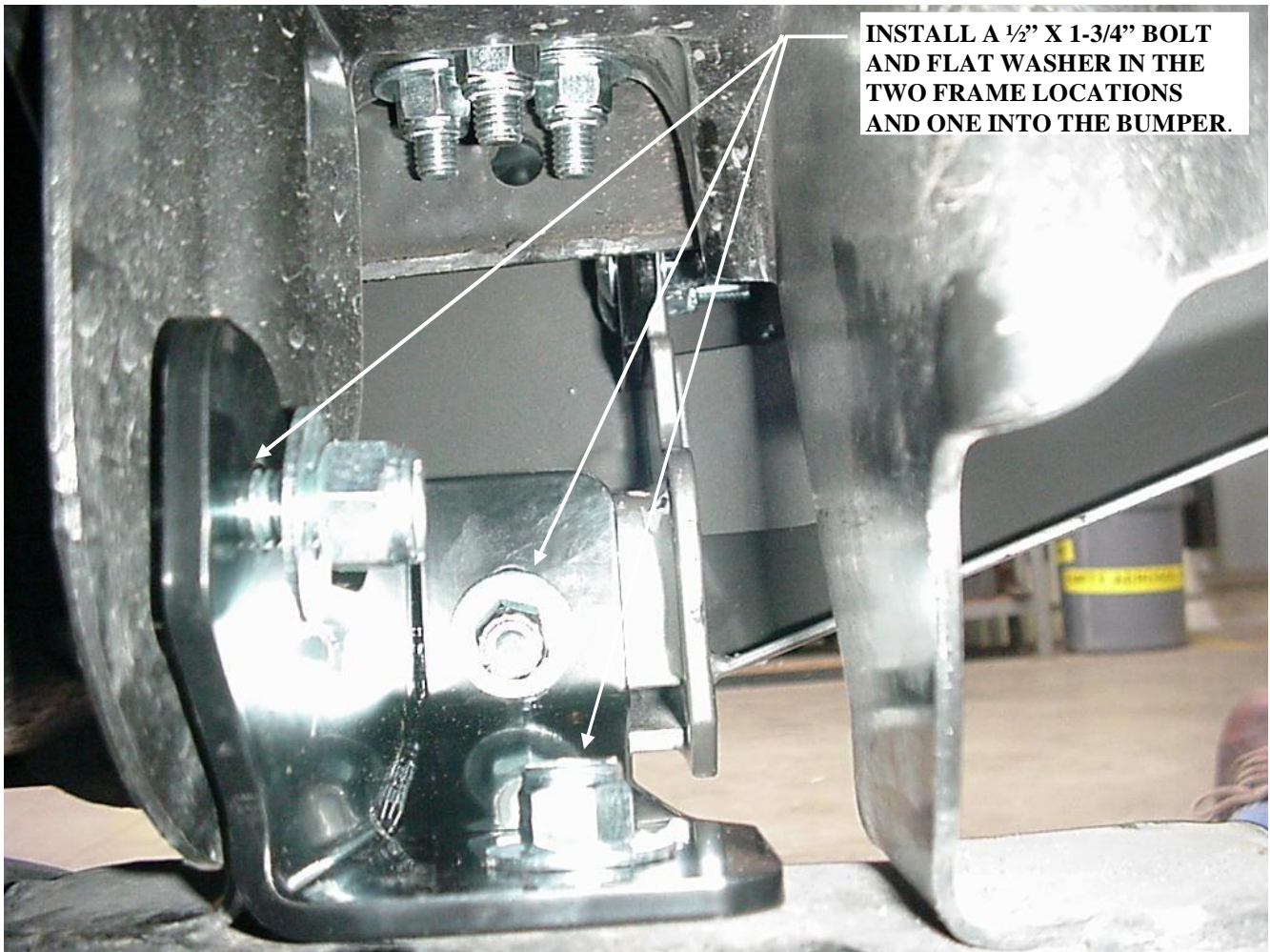
**11.** Once the four bolts are installed on each side of the bumper, attach a ½” flat washer and ½” lock nut onto each of the eight bolts. Now the bumper can be positioned up and down to properly fit the bumper to the bottom of the headlights and the grille. Once this position is found, evenly tighten all eight. Torque the ½” bolts to the torque specification in the beginning of this manual. **See Figure 13.**



**Figure 13: Tightening of bumper bolts. Driver's side shown.**

**12.** Install the lower mounting brackets. The bracket fits into the vehicle blocker beam. See **Figure 14** for proper placement of the brackets. Once the brackets are positioned properly, attach a ½" x 1-3/4" long bolt

with flat washer through each of the two mounting holes on the blocker beam and the hole in the back bottom edge of the bumper. Install a ½” flat washer and lock nut onto each bolt. Evenly tighten all three bolts on each bracket to ensure a good fit to the mating surfaces. Once all of the bolts are tight, torque them to the torque specification in the beginning of this manual.



**Figure 14: View from behind blocker beam looking forward. Passenger’s side shown.**

**13.** Double-check all of the bumper mounting bolts for proper torque.

**14.** Install the supplied driving lights to the brackets in the bumper light ports. (Not supplied with tubeless bumper.) Follow the instructions supplied with the lights for the proper torque and wiring. For tubeless bumpers, if not installing lights, install backing plates supplied with bumper to cover the back of the light port. It is recommended to leave a small gap between the light port and the backing plate to allow water to pass through and reduce damage to the painted surfaces.

See Figure 15.



**Figure 15: Light Mounted to Bumper.**

**16.** Install the front license plate to the front of the bumper under the winch fairlead opening. Two holes are provided for attaching the license plate. Use the supplied ¼” bolts, flat washers and lock nuts and torque to the stated specification at the beginning of this manual.

**15.** Refer to the winch manual for proper routing of the winch cables.

**⚠WARNING**

**READ THE VEHICLE’S OPERATOR MANUAL, WINCH OPERATOR MANUAL, AND ALL WARNING LABELS PRIOR TO OPERATION OF WINCH.**

**THE BUMPER AND WINCH MOUNTING INSTALLATION IS NOW COMPLETE. PROCEED TO SECTION IV TITLED "MAINTENANCE/CARE".**

**⚠ WARNING**

**FAILURE TO SECURELY TIGHTEN ALL BOLTS ON THE WINCH PLATE, WINCH, AND FAIRLEAD CAN RESULT IN PRODUCT FAILURE, WHICH MAY RESULT IN VEHICLE DAMAGE AND OPERATOR INJURY OR DEATH. DOUBLE CHECK THAT ALL BOLTS ARE SECURELY TIGHTENED PRIOR TO USE.**

**VII. 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.

**⚠ WARNING**

**PERFORM REGULAR INSPECTIONS ON THE WINCH, WINCH MOUNT, AND RELATED HARDWARE. NEVER OPERATE THE WINCH WITH DAMAGED OR MISSING PARTS. FAILURE TO FOLLOW THIS WARNING MAY CAUSE VEHICLE DAMAGE AND OPERATOR INJURY OR DEATH.**