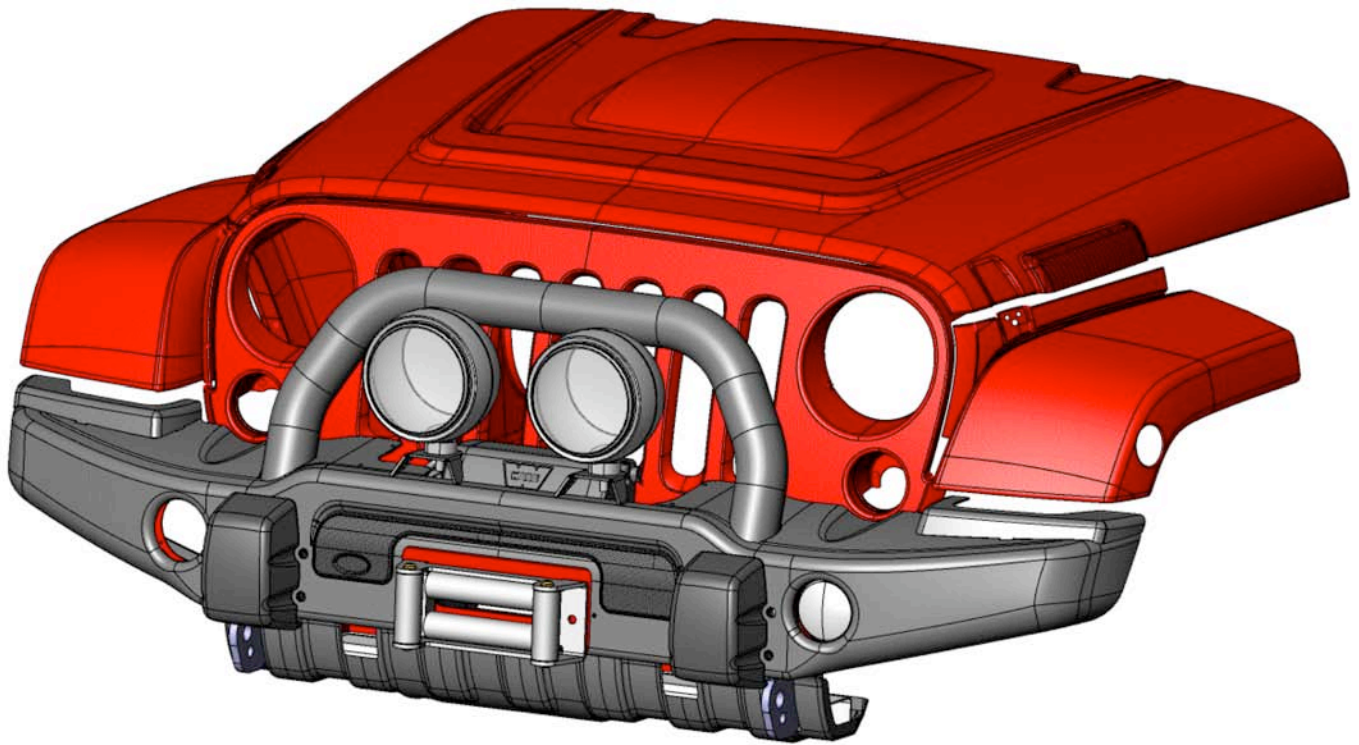




AMERICAN EXPEDITION
VEHICLES

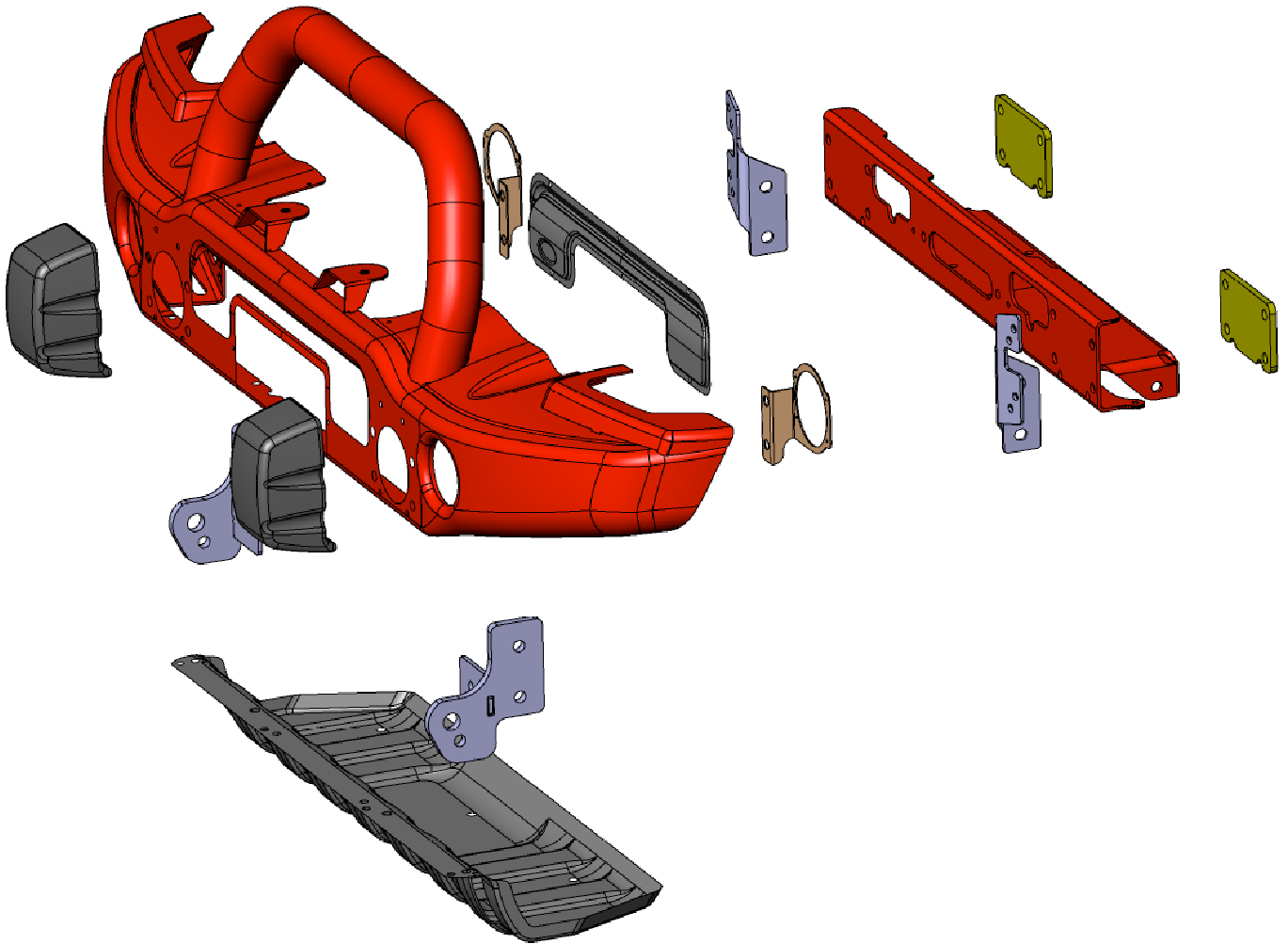
JK FRONT BUMPER KIT



Installation Guide



AMERICAN EXPEDITION
VEHICLES



EXPLODED VIEW SHOWN WITH OPTIONAL SKIDPLATE AND WINCH MOUNT



PLEASE READ BEFORE YOU START

TO GUARANTEE A QUALITY INSTALLATION, WE RECOMMEND READING THESE INSTRUCTIONS THOROUGHLY BEFORE BEGINNING ANY WORK. THESE INSTRUCTIONS ASSUME A CERTAIN AMOUNT OF MECHANICAL ABILITY AND ARE INTENDED FOR SOMEONE WHO IS FAMILIAR WITH AUTO BODY REPAIR AND MECHANICS.

Bumper kit Components	QTY	Tow hook kit components	QTY
Front Bumper	1	Tow Hook, right	1
Bumper brackets	2	Tow Hook, left	1
Fog lamp brackets	2	1/2 in. hex head bolt	6
Bumper spacers (3/8 inch)	2	1/2 in. flat washer	16
Crush can covers	2	1/2 in. locking nuts	4
Mesh	1	1/2 in. thin locking nuts	2
Mesh attach screws	5	Skid plate kit components	
1/2 in. Large button head bolts	7	Skid plate	1
1/2 in. Short button head bolt	1	3/8 in thread cutting bolt	4
1/2 in. hex head bolts	4	3/8 in. hex head bolt	4
1/2 in. locking nuts	9	3/8 in. flat washer	8
1/2 in. Thin locking nuts	3	3/8 in. locking nut	4
1/2 in. flat washers	15		
3/8 in. hex head bolts	4	Required Tools	
3/8 in. locking nuts	4	Center Punch	
3/8 in. flat washers	8	Common Hand Tools	
1/2 in. bolts	8	Metal Cutting Tool For Trimming (Die Grinder, Cut Off Wheel, Sawzall)	
1/2 in. flat washers	8	Touch Up Paint	
Winch mount components		File or De-Burring Tool	
1/2 in. hex head bolts	2	Jack or Lift	
1/2 in. locking nuts	2	Wax pencil for marking holes	
1/2 in. flat washers	4	Drill Motor	
Winch mount	1	Drill Bits	



REMOVAL OF THE FACTORY COMPONENTS

A. REMOVAL OF THE SKID PLATE

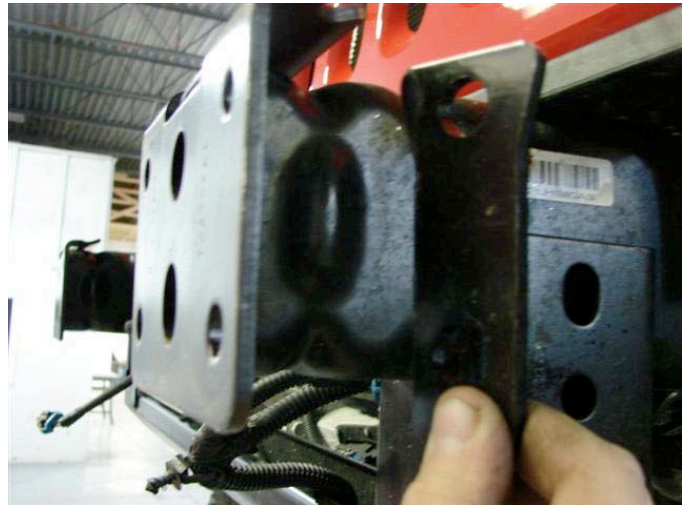
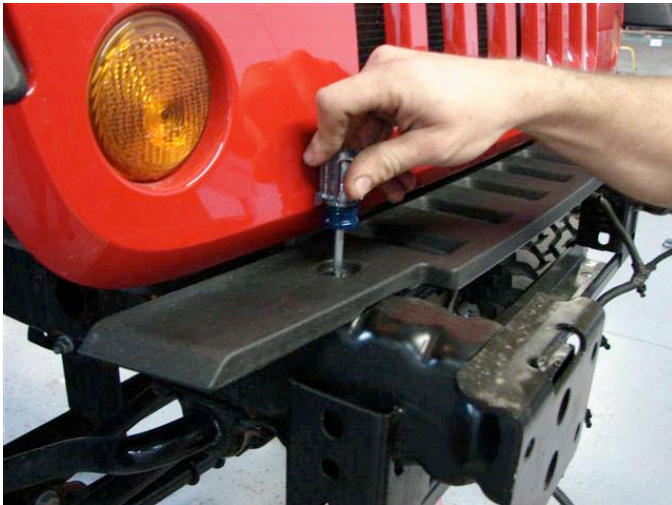
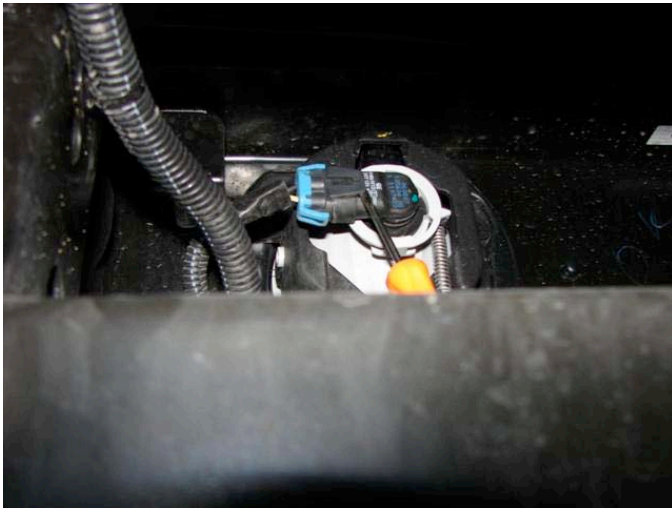
1. Remove the “scrivet” fasteners at the front of the skid plate. Use a Phillips screwdriver to back out the plastic pin and pull out the fastener. The pin will tend to spin. Use a flat screwdriver under the base of the fastener to apply pressure as you turn the screw.





B. REMOVAL OF THE FRONT BUMPER

1. Disconnect fog lamp wiring
2. Remove the 8 nuts attaching the bumper to the frame rails
3. Remove the plastic closeout panel in front of the grille.
4. Remove steel backing plates from inside frame rail

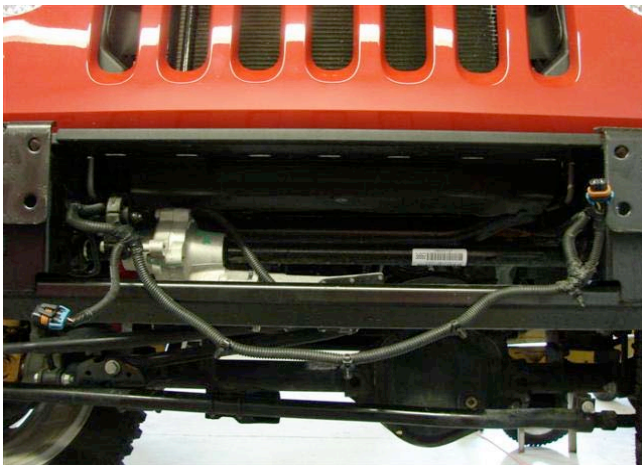




VEHICLE PREPARATION

A. MODIFY THE FOG LAMP WIRING

1. The fog lamps will be mounted further apart on your new AEV bumper, so the wiring harness needs to be re-positioned. This is accomplished by removing the factory conduit and re-routing the harness above the frame rails. **DO NOT CUT THE HARNESS**
2. Remove the tape from the wire harness at both ends to expose the loose wires
3. Remove the fog lamps from the factory bumper and attach them to the brackets supplied in the kit using the same screws
4. Temporarily position the lamps on the frame to simulate their new installed position and to give you a point of reference how long you need to make the new harness
5. Route harness along bottom of grille and fasten to power steering line using tie straps
6. Carefully re-position the harness so the connectors reach the new attaching points

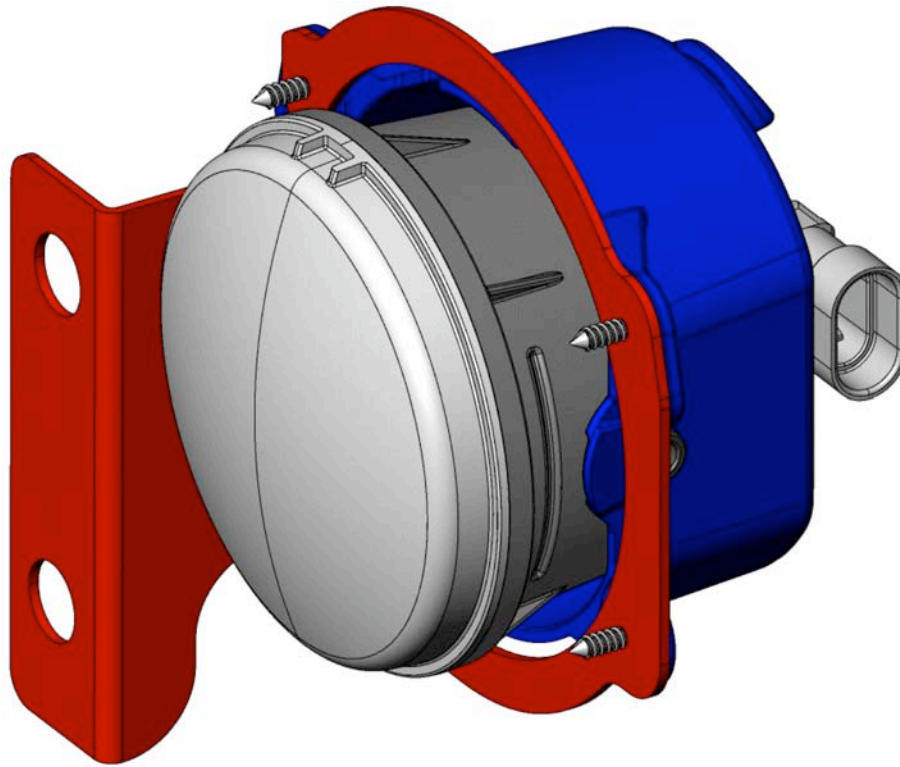


Original wiring position



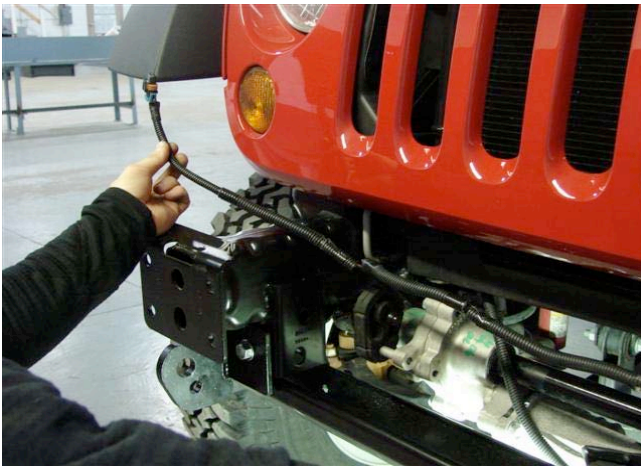
Remove tape





Original O.E. fog lamp shown on AEV fog lamp bracket

7. Re-tape and replace conduit on modified harness



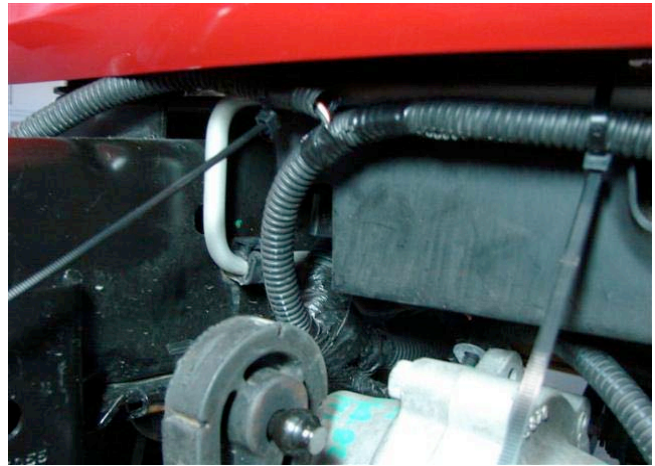
New harness length



Harness routed to fog lamps



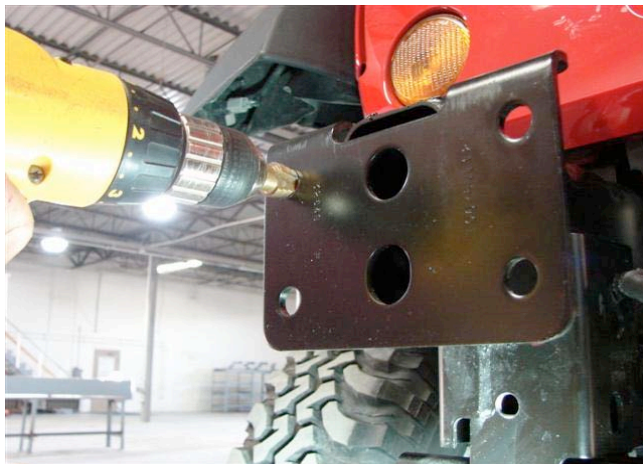
Fasten harness to power steering line



Route as shown

B. FRAME RAIL PREPARATION

1. Depending on your application, you may need to enlarge the two outer most upper holes in the factory frame rail and supplied winch mount. Check this by inserting a large bumper mounting bolt into the holes. If it does not pass freely through the holes, drill them out, de-burr, and apply rust inhibitor or touch up paint to prevent rusting
2. The passenger side factory frame rail tip may need to be trimmed depending on your winch selection. This example shows a Warn 9.5ti which required some trimming.



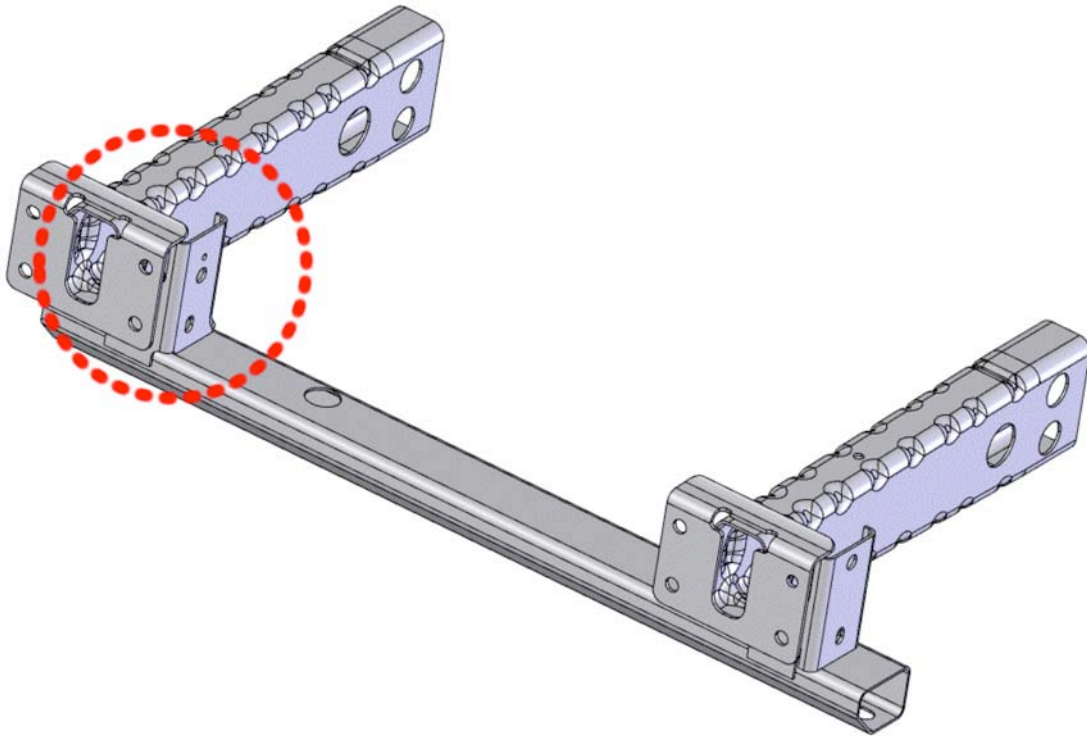
Drilling out the frame rail outer (upper) hole



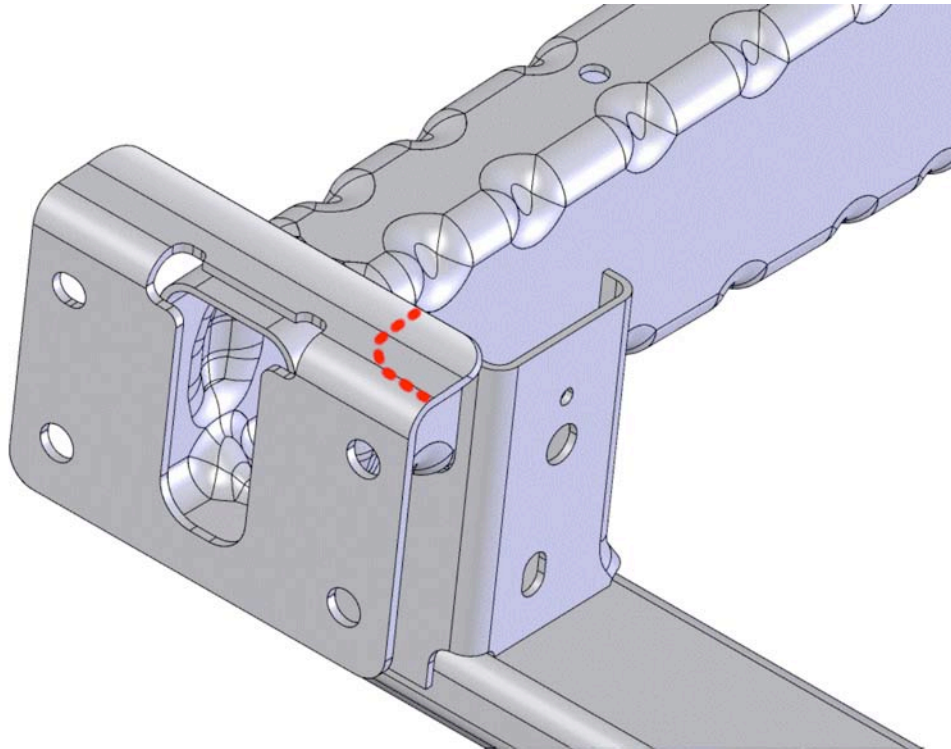
Drilling out the winch mount



AMERICAN EXPEDITION
VEHICLES



Front frame (detail shown below)



Close up of trimming area.

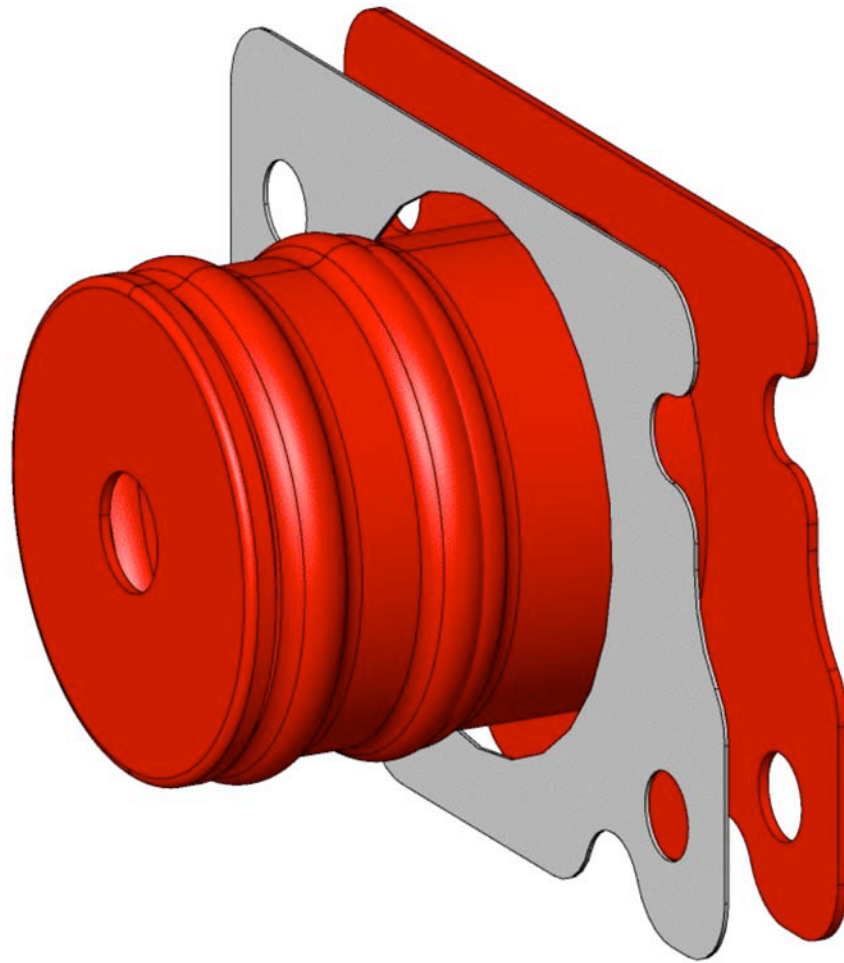
**** PLEASE NOTE - newer JK builds may already include this cutout ****



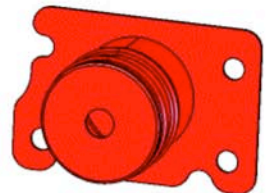
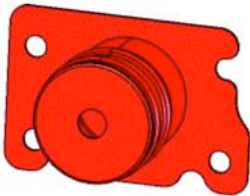
C: BUMPER PREPARATION

1. Your new AEV bumper was designed to accommodate the vehicle's factory "crush cans" that are specifically tuned for the vehicle air bag performance in low speed impacts. The crush cans are integral to the factory bumper beam and must be removed and re-installed on your AEV bumper.
2. Remove the bumper beam mounting bolts from the factory bumper
3. Remove bumper beam and place in a vise
4. Scribe a line approximately 3/8 of an inch outside the mounting holes on the bumper beam
5. Using a reciprocating saw or cut off wheel, remove the crush cans from the bumper beam, keeping the mounting holes in place
6. Use template (found at the end of this Installation Guide) to trim crush cans
7. Install the mesh into the bumper over the studs and tighten nuts
8. De-burr all cut edges and treat with corrosion inhibitor or touch up paint
9. Install crush cans into bumper
10. Install crush can covers and tighten bolts





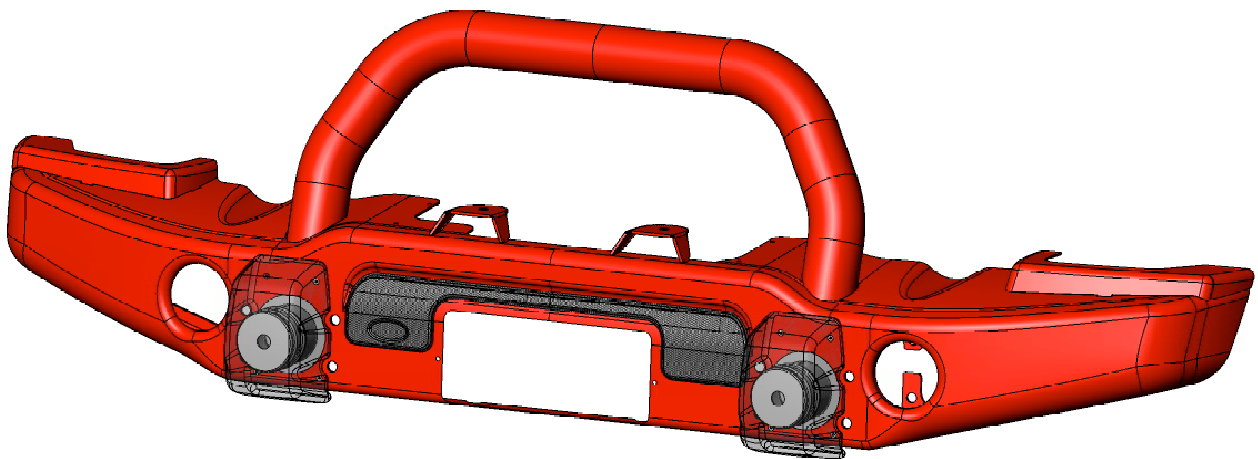
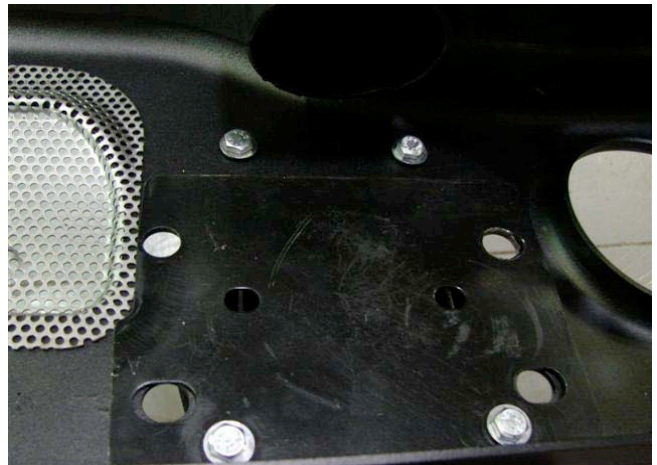
Use paper template (last page of this instruction manual) to trim factory crush cans to the proper shape.
Be certain to print this template at 100% and locate template off of bolt holes.
Double check the scale on your printout to be certain that your template is accurate.



Modified crush cans ready for installation



AMERICAN EXPEDITION
VEHICLES



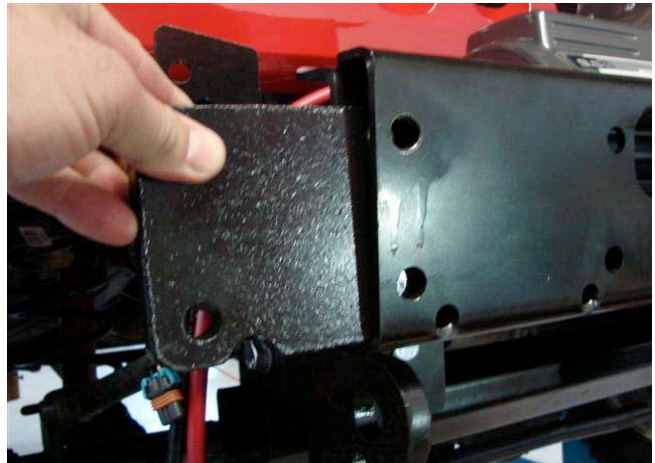
Crush can covers (shown transparent), crush cans and perforated vent assembled into bumper and ready for installation onto vehicle



INSTALLATION

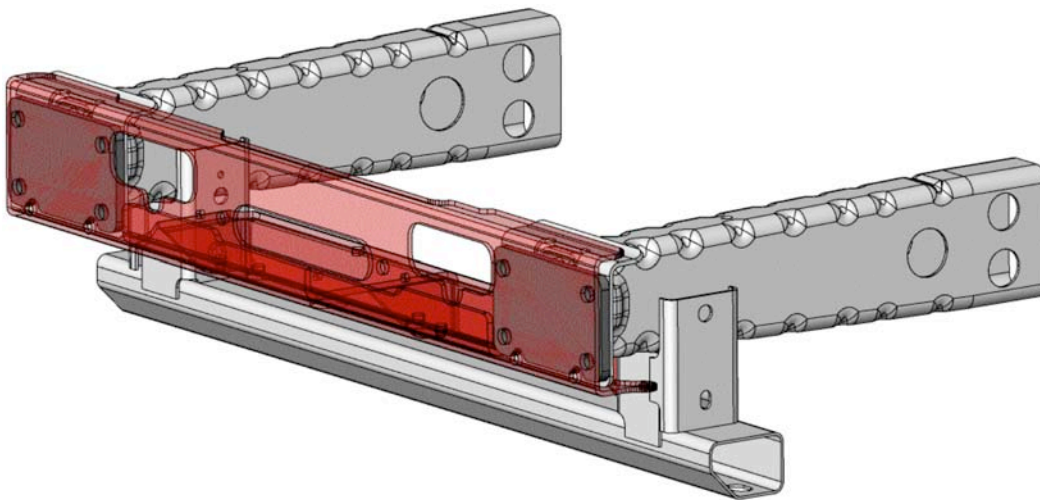
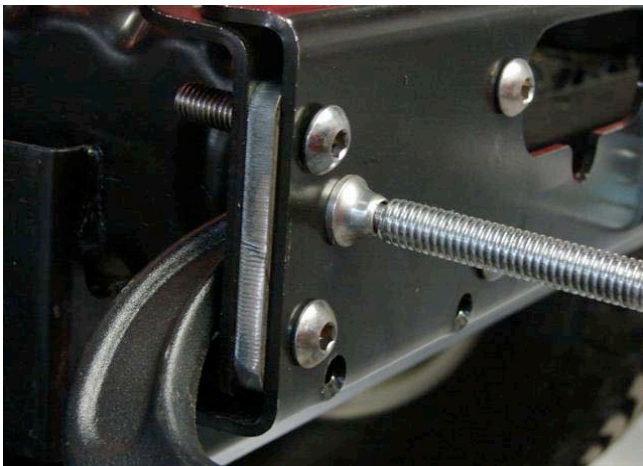
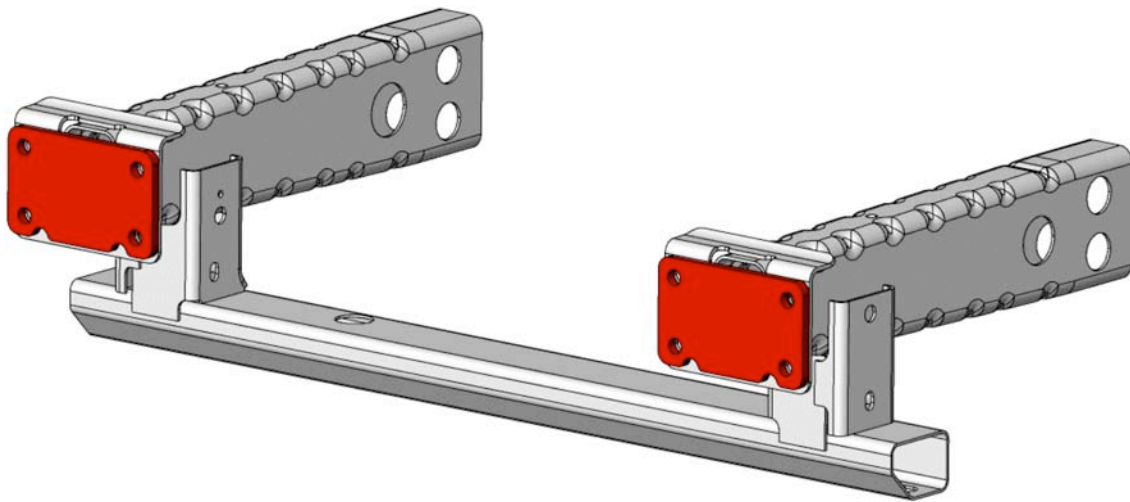
A. INSTALL WINCH MOUNT

1. A fairlead should have been supplied with your winch. Install it to the winch mount, positioning the bolt from inside out
2. Place winch mount into position over the frame
3. Install the 3/8 inch spacer plates supplied between the rail tips and winch mount
4. Insert the (8) 1/2 inch bumper mounting bolts through the mounting holes
5. Firmly clamp the winch mount to the vehicle
6. Check mounting hole alignment by making sure all 8 bolts slide freely in and out of the holes
7. Un-clamp and re-position winch mount until the holes are properly aligned
8. With the winch mount clamped and holes aligned, bolt the winch mount to the lower frame attachment with a 1/2 inch hex head bolt
9. Use a flat washer under the head of the bolt, and under the large locking nut. Use an open end wrench to access the bolt head from the top of the frame rail
10. Remove the 8 bumper mounting bolts and clamps





AMERICAN EXPEDITION
VEHICLES

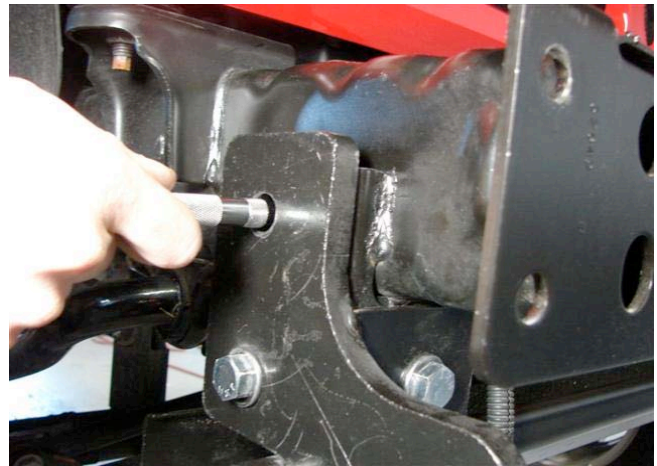
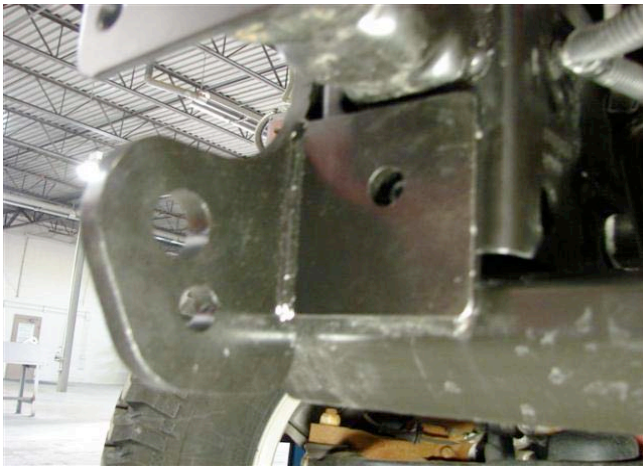


Winch mount (shown transparent) placed on the end of the frame rails with 3/8" spacers in place



B. INSTALL TOW HOOKS AND BUMPER BRACKETS

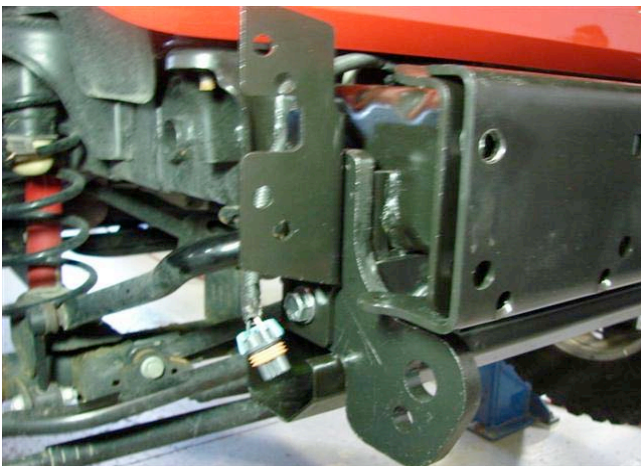
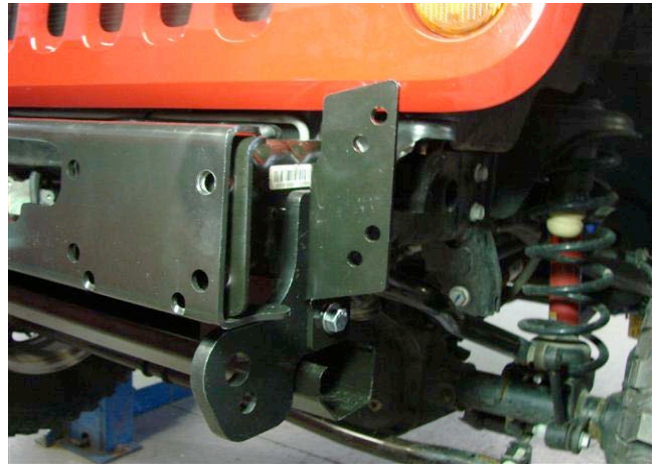
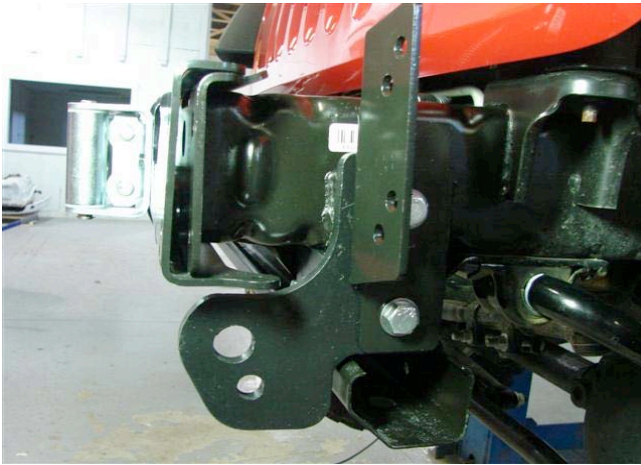
1. Place tow hook on the vehicle frame
2. Install 1/2 inch hex head bolt into lower hole on the side of the tow hook
3. While holding the tow hook into place against the frame, place a center punch through the upper attachment hole and mark the vehicle frame. This hole will allow for clearance of the attaching bolt
4. Continue holding the tow hook in place and center punch the frame at the front lower tow hook attaching point
5. Remove the tow hook and drill the holes previously marked with a 1/2 inch drill bit. It is much easier to drill a 1/8 inch pilot hole first
6. De-burr the drilled holes and paint them with corrosion inhibitor or touch up paint

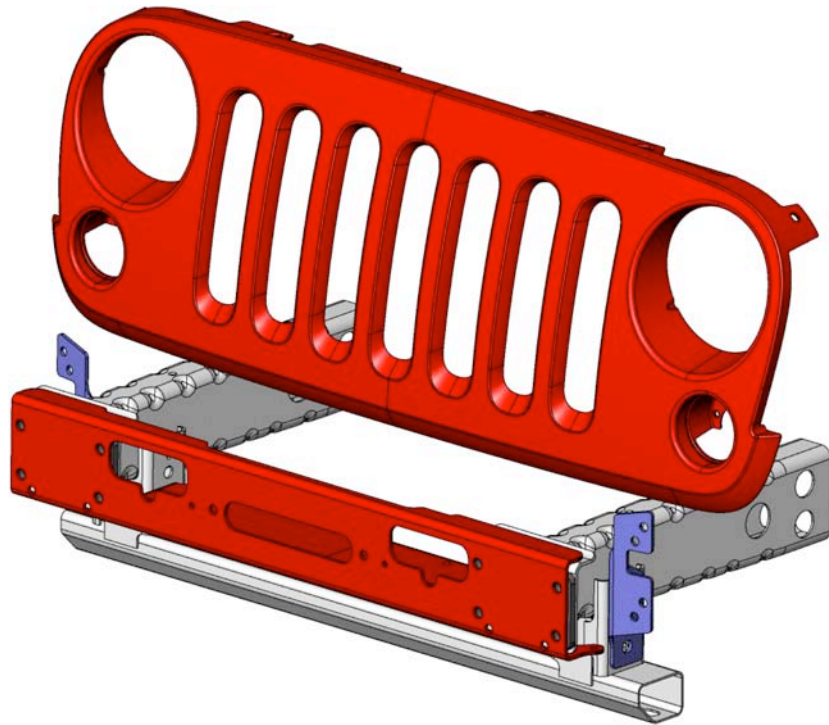




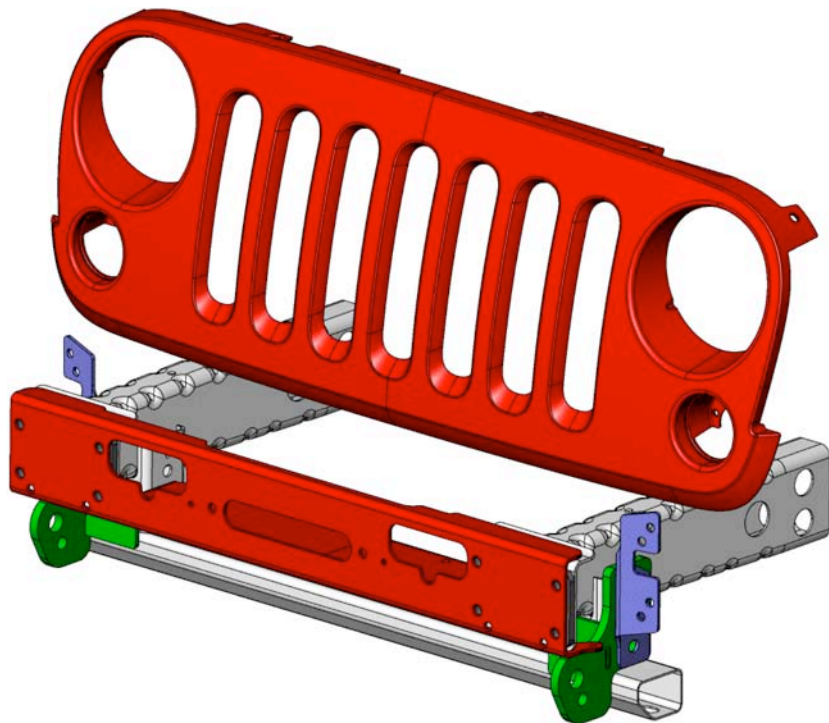
A M E R I C A N E X P E D I T I O N
V E H I C L E S

7. Place the tow hook back into position and install a 1/2 inch hex head bolt into the front attachment point.
8. Place two washers between the tow hook and frame at this point to ensure a flat mounting surface
9. Install the bumper mounting brackets to the tow hook mounting holes
10. Tighten the bolts, beginning with the lower outside. Use an open end wrench to access the nut from the top of the frame rail
11. Install the upper bolt, using the thin locking nut supplied in the kit
12. Torque all bolts





Bumper bracket shown without optional tow hook / tow loop

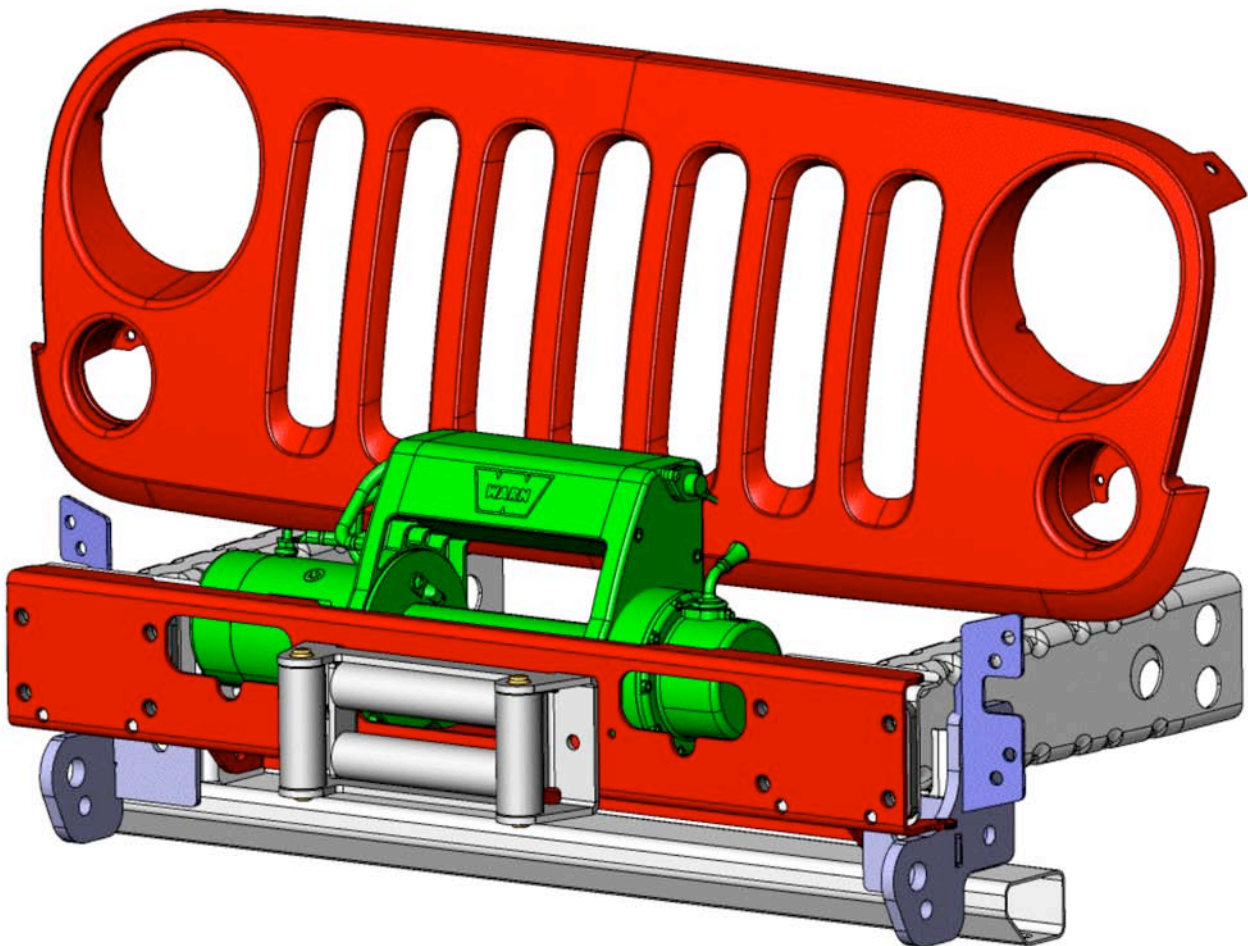


Bumper bracket shown with optional tow hook / tow loop



C. INSTALL BUMPER

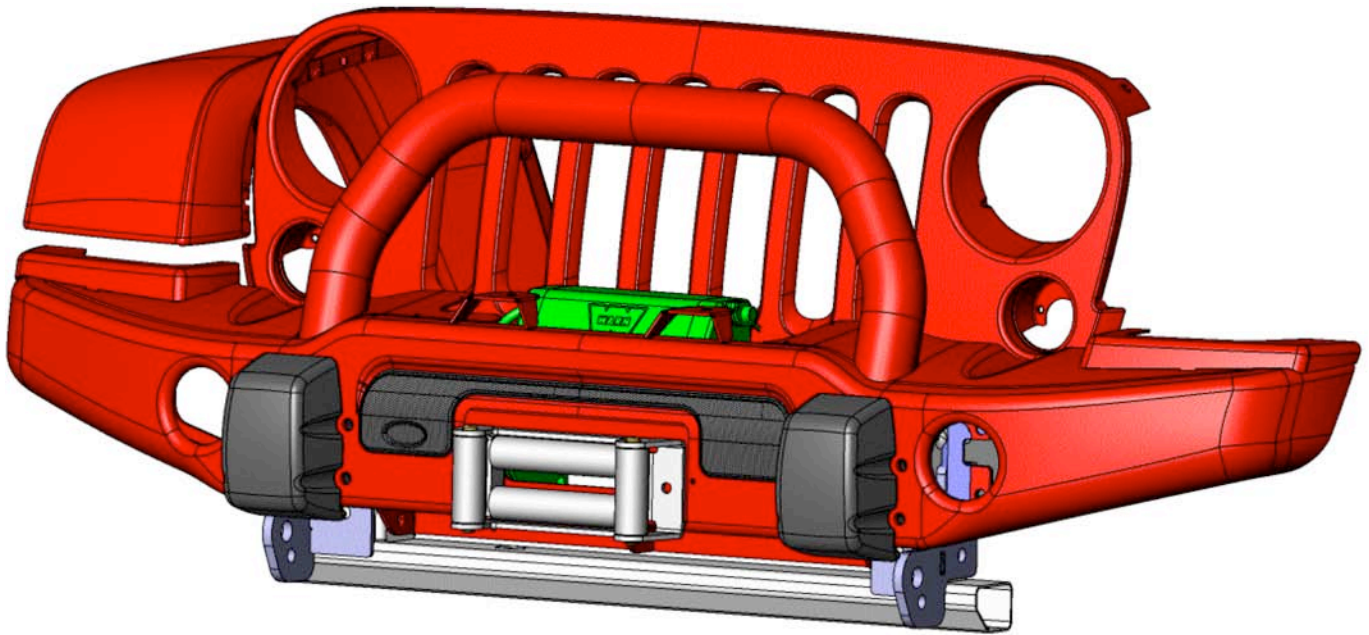
1. Place winch onto winch mount. Route wiring over stabilizer bar. Do not install winch mounting bolts at this time
2. If you are using a roller style fairlead, removal of the vertical rollers will make bumper installation easier and help avoid scratching the bumper
3. Using the assistance of a helper, carefully set the bumper onto the vehicle. **BE CAREFUL NOT TO SCRATCH THE PLASTIC FENDER FLARES**
4. Insert the 1/2 inch button head fasteners through the bumper, winch mount, spacer plate, and frame rail in all 8 locations
5. **NOTE: THE SHORT BOLT SUPPLIED MUST BE USED IN THE PASSENGER SIDE UPPER MOST INNER LOCATION. USING A LONG BOLT HERE WILL INTERFERE WITH THE WINCH MOTOR**



Example of how assembly should look prior to bumper fitment



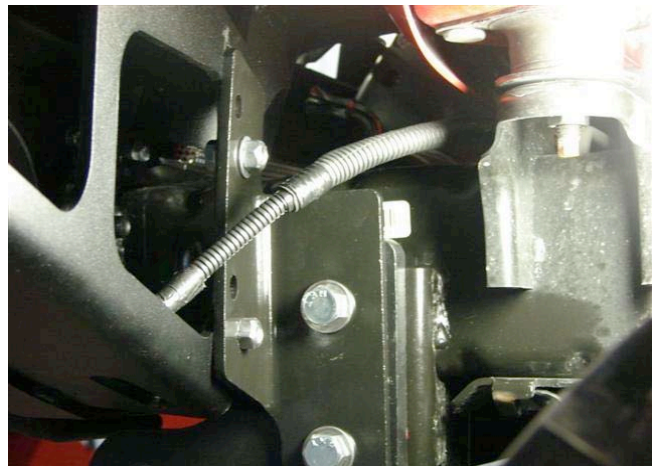
AMERICAN EXPEDITION
VEHICLES





A M E R I C A N E X P E D I T I O N
V E H I C L E S

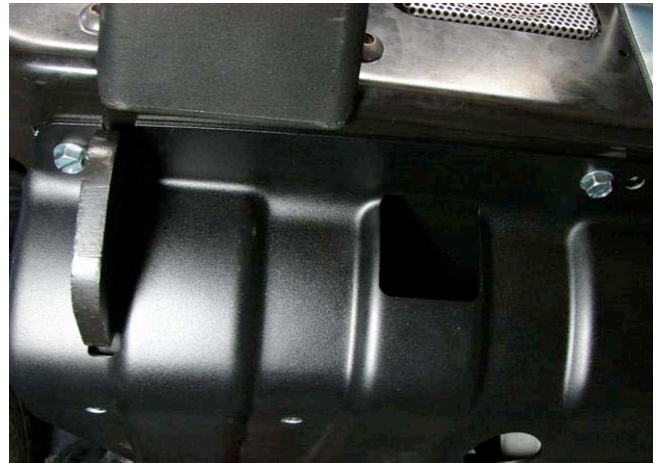
6. Slide the winch to one side and reach behind the bumper from the top to access the threads. Use flat washers and large locking nuts in all locations except for #5 above, which uses a thin locking nut and no washer
7. Tighten the 4 inner bolts slowly, while a helper makes sure the bumper is held in a vertical position. The mounting face should be flat against the winch mount
8. Install the fog lights on the brackets and put them into place on the outer bumper mounting bolts
9. Place flat washers and large locking nuts on the outer bolts. Slowly tighten and torque into place
10. After the face bolts are tight, use the 3/8 bolts, washers, and lock nuts to fasten the rear bumper brackets to bumper
11. Re-attach fog lamp wiring
12. Attach winch to winch mount using fasteners supplied by the winch manufacturer





A. INSTALL SKID PLATE

1. Hold skid plate in position under bumper
2. Insert two self threading hex head bolts into outer mounting holes
3. Start threading bolts into position and snug. Do not tighten at this time
4. Insert two self threading hex head bolts into the inner mounting holes under bumper
5. While holding skid plate up tightly against underbody, mark the 4 rear mounting holes and center punch
6. Remove skid plate
7. Drill holes marked in #5 using a 3/8 inch drill bit
8. De-burr and treat holes with rust inhibitor or touch up paint
9. Re-install skid plate
10. Re-install the 4 self threading bolts in the front mounting holes
11. Use (4) 3/8 inch bolts, flat washers, and locking nuts in the rear mounting location
12. Torque all bolts



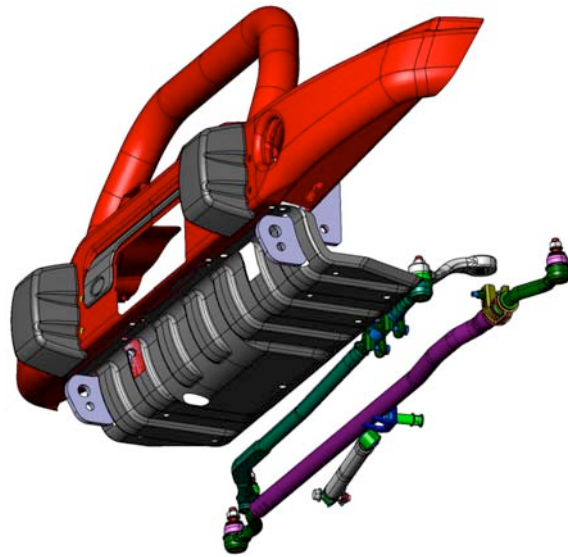
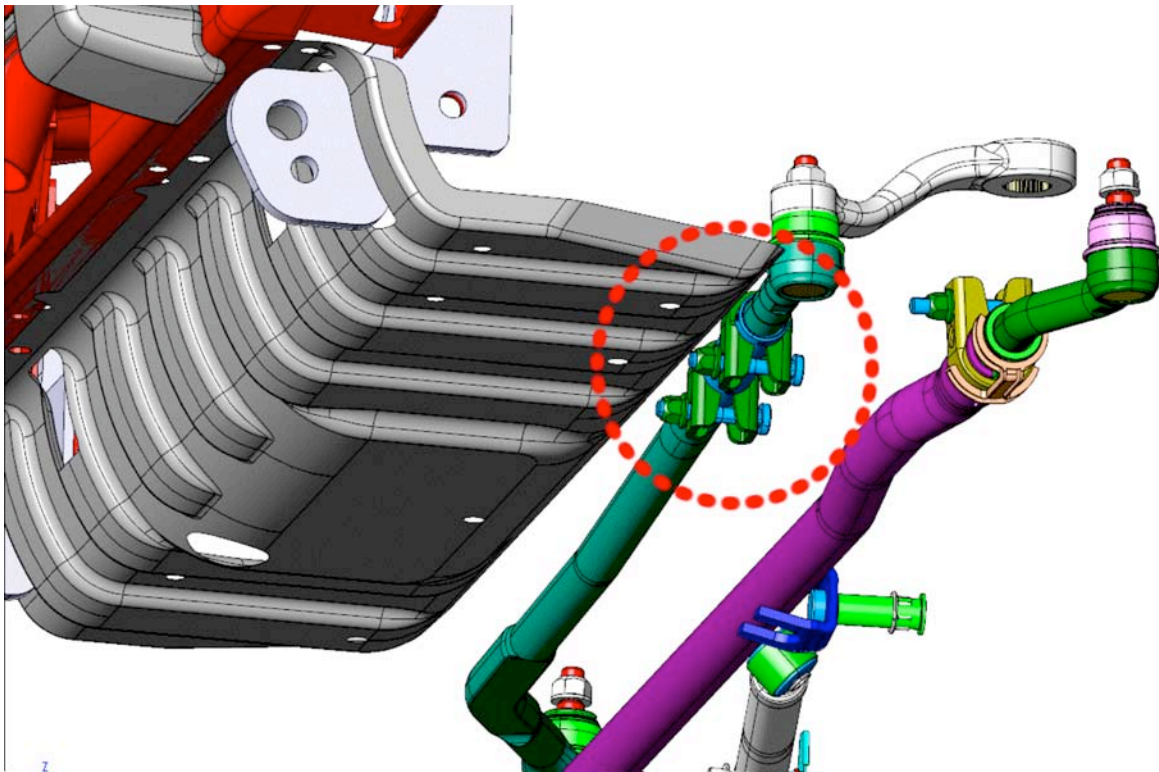


Image enlarged below

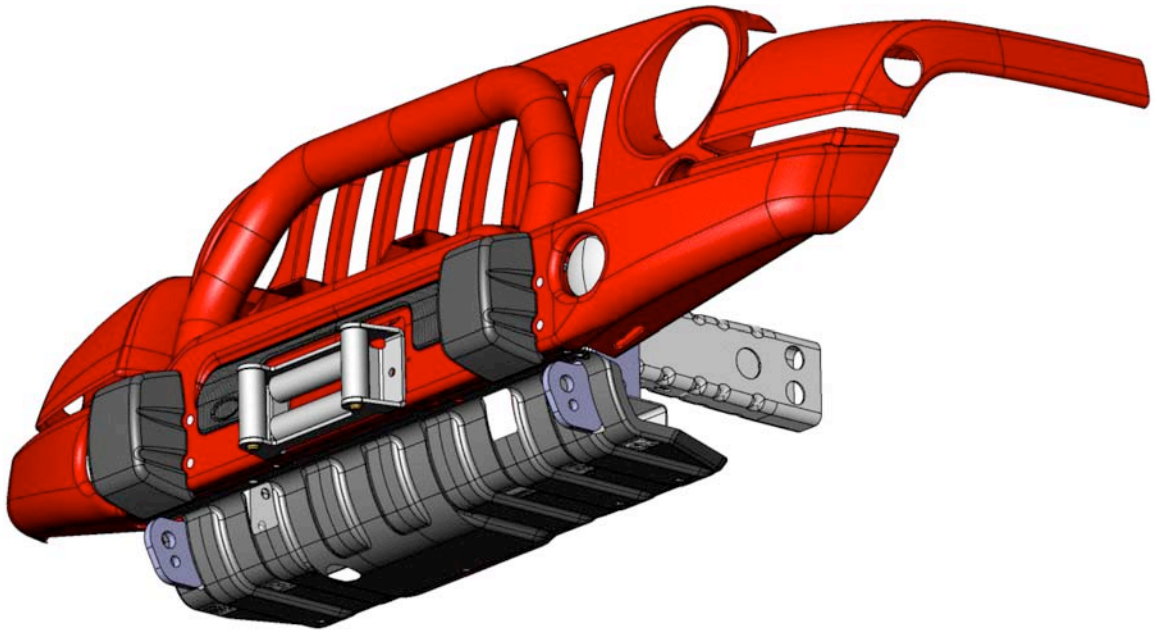
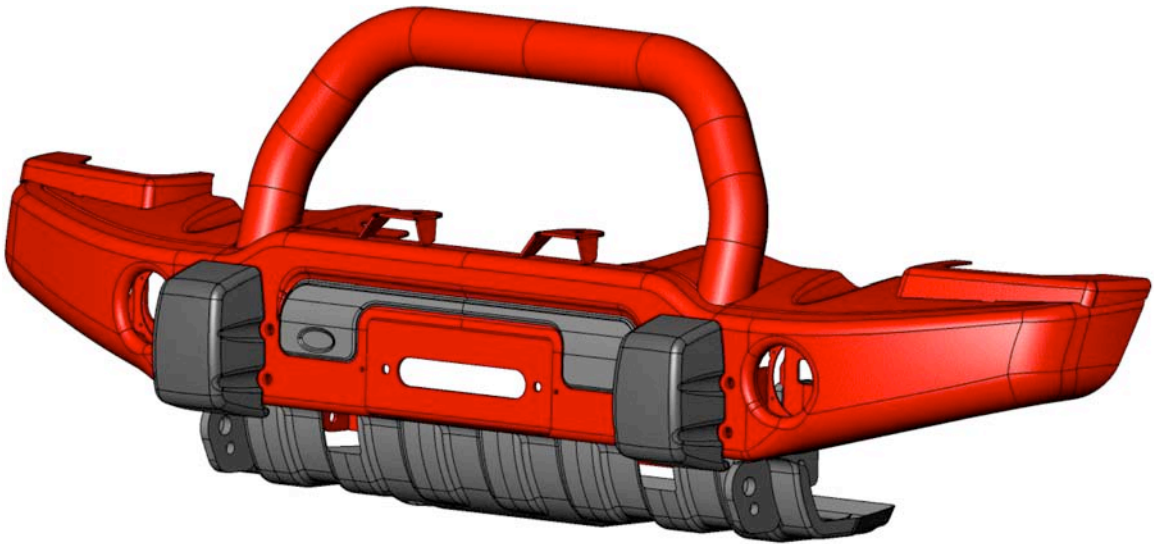


- WARNING -

Check for clearance between drag link adjuster clamps and skidplate. Place bolts vertical and rearward.



AMERICAN EXPEDITION
VEHICLES



Completed Assembly



A M E R I C A N E X P E D I T I O N
V E H I C L E S

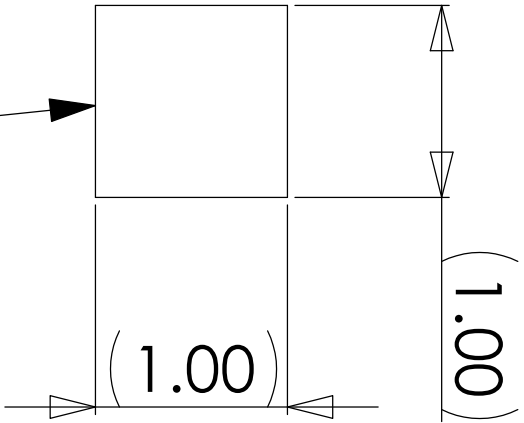
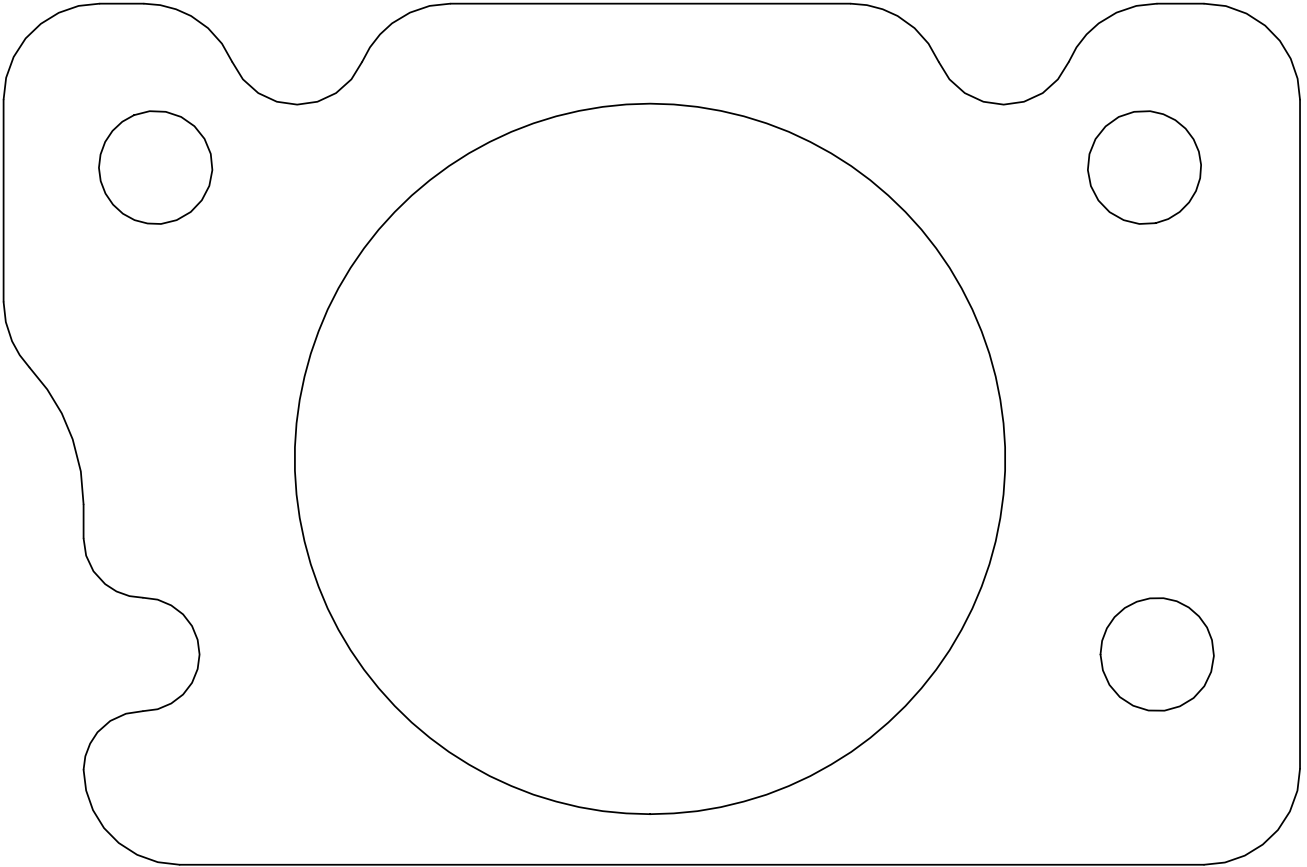
COMMENTS OR QUESTIONS?

American Expedition Vehicles

Phone: 406.251.2100

Email: tech@aev-conversions.com

Website: <http://www.aev-conversions.com>



CHECK PRINT SCALE
BOX SHOULD BE 1"
SQUARE.