

***2005-2011 MUSTANG TIGER CAGE
INSTRUCTIONS MANUAL***



ridetech



Air Ride Technologies



TIGER CAGE

Thank you for purchasing our 2005 -2011 Mustang Tiger Cage. Please read through all of the instructions first and then start installing the kit.

We hope that you enjoy the added performance that this products brings to your Mustang.

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**2005-2011 MUSTANG TIGER CAGE MAIN
HOOP ASSEMBLY COMPONENTS LIST
PART #42150000**



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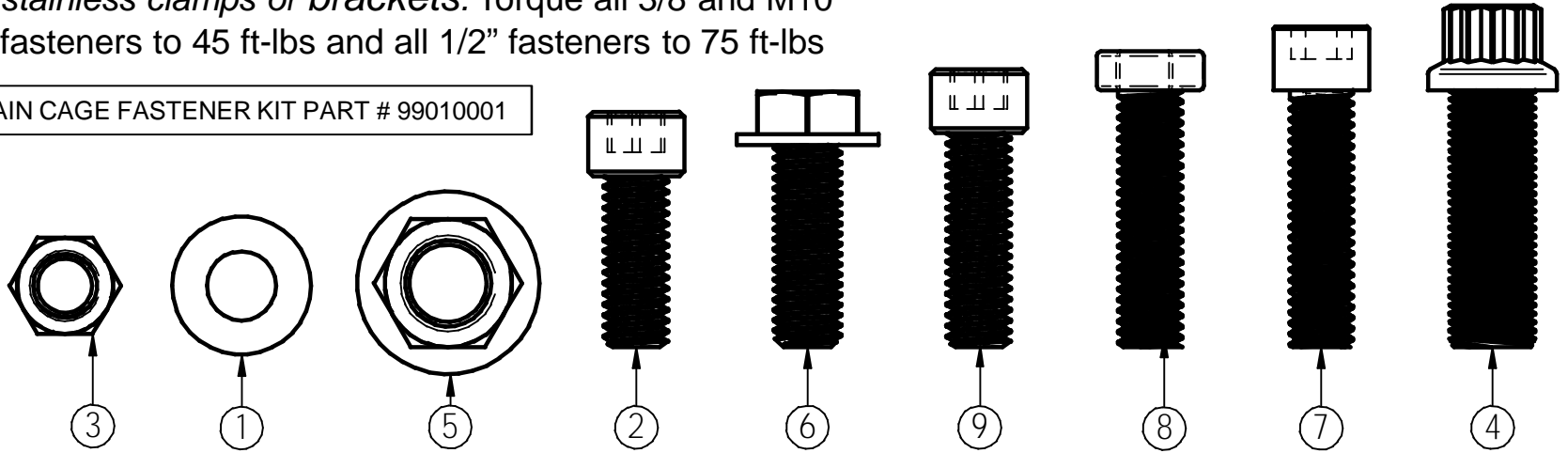
PART # 42150000 MAIN HOOP ASSEMBLY COMPONENTS:

<u>QTY.</u>	<u>PART #</u>	<u>DESCRIPTION</u>
2	42150001	MUSTANG PACKAGE TRAY LWR BRKT
1	42150002	MUSTANG WHLHSE BRKT UPPR LH
1	42150003	MUSTANG MAIN HOOP BRKT UPPR LH
1	42150004	MUSTANG WHLHSE BRKT UPPR RH
2	42150005	MUSTANG SPACER
1	42150006	MUSTANG MAIN HOOP BRKT UPPR RH
1	42150007	MUSTANG MAIN HOOP BRKT LWR RH
1	42150008	MUSTANG MAIN HOOP BRKT LWR LH
2	42150009	MUSTANG LWR PLATE
1	42150010	MUSTANG TRUNK BAR ASSM
1	42150011	MUSTANG ROOF ASSEMBLY PASSENGER SIDE
1	42150012	MUSTANG ROOF ASSEMBLY DRIVER SIDE
1	42150013	MUSTANG MAIN HOOP ASSEMBLY
2	49990005	TIGER CAGE ROLL BAR PIVOT PLATE (T002)
1	49990003	TIGERCLAMP P (THREADED)
1	49990001	TIGERCLAMP P
1	49990004	TIGERCLAMP D (THREADED)
1	49990000	TIGERCLAMP D
1	99010001	MUSTANG TIGER CAGE MAIN FASTENER ASSEMBLY
1		TUBE OF ANTI-SEIZE

FASTENER LIST MAIN HOOP ASSEMBLY

Use anti-seize on all fasteners that are threaded into stainless clamps or brackets. Torque all 3/8" and M10 fasteners to 45 ft-lbs and all 1/2" fasteners to 75 ft-lbs

MAIN CAGE FASTENER KIT PART # 99010001

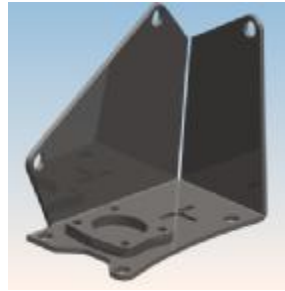


Item Number	Title	Material	Quantity
1	3/8" FLAT WASHER	Zinc	52
2*	3/8" X 16 - 1" LONG SS ALLEN HEAD	Nickel Plated Steel	8
3*	3/8"-16 LOCKING NUT	Zinc	34
4*	1/2" - 20 X 1 1/2" LONG 12 POINT FLANGE HEAD CAP SCREW	Nickel Plated Steel	2
5	1/2" - 20 HEX NUT	Nickel Plated Steel	2
6	M10 - 1.5MM 30MM LONG	Nickel Plated Steel	8
7*	3/8" - 16 x 1 1/2" long socket head cap screw	Nickel Plated Steel	6
8*	3/8" x 1 1/2" - 16 BOLT	Zinc	20
9*	3/8" - 16 x 1.25" length ss allen head	Nickel Plated Steel	8

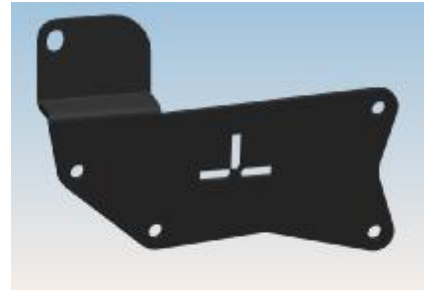
MUSTANG MAIN ASSEMBLY TIGER CAGE COMPONENTS



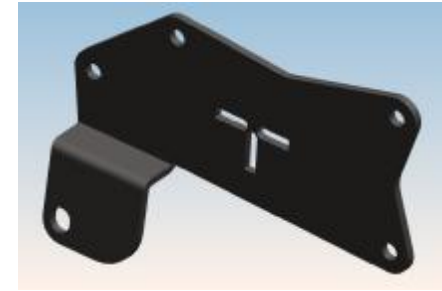
42150003
MUSTANG MAIN HOOP
BRKT UPPR L.H. QTY 1



42150006
MUSTANG MAIN HOOP
BRKT UPPR R.H. QTY 1



42150008 MUSTANG MAIN HOOP
BRKT LWR L.H. QTY 1



42150007 MUSTANG MAIN HOOP
BRKT LWR R.H. QTY 1

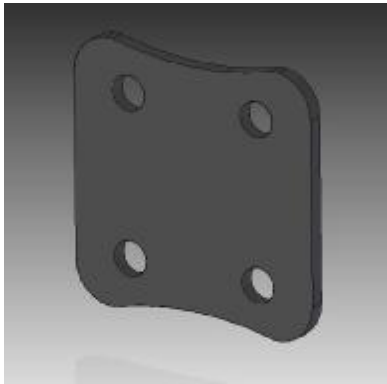


42150002 MUSTANG WHLHSE BRKT L.H. QTY 1



42150004 MUSTANG WHLHSE BRKT R.H.
QTY 1

MUSTANG MAIN ASSEMBLY TIGER CAGE COMPONENTS



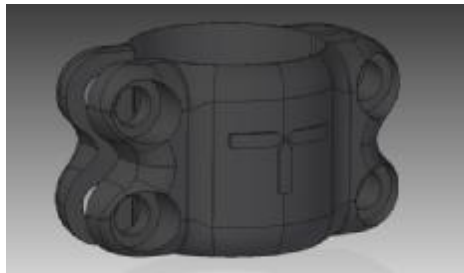
42150009 MUSTANG
LWR PLATE QTY 2



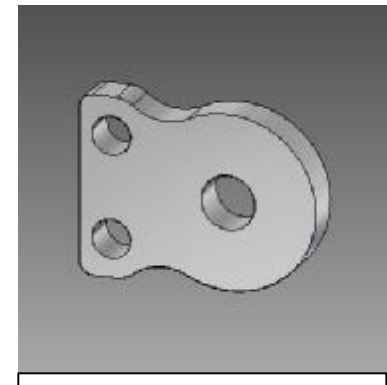
42150001 MUSTANG LOWER
PKG. TRAY BRKT. QTY 2



42150005 MUSTANG SPACER QTY 2



49990004 TIGER CAGE CLAMP QTY 1
49990000 QTY 1
49990003 QTY 1
49990001 QTY 1



49990005 TIGER CAGE
PIVOT PLATE QTY 2

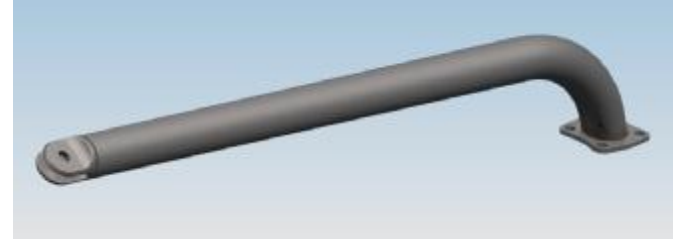
MUSTANG MAIN ASSEMBLY TIGER CAGE COMPONENTS



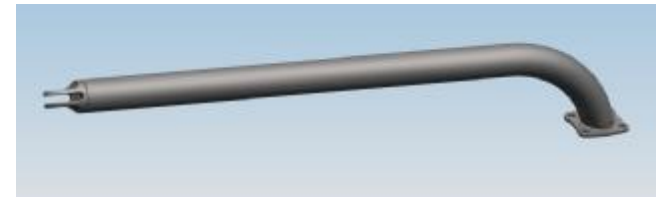
42150010
MUSTANG TRUNK BAR
QTY 1



42150013 MUSTANG MAIN HOOP
ASSEMBLY QTY 1

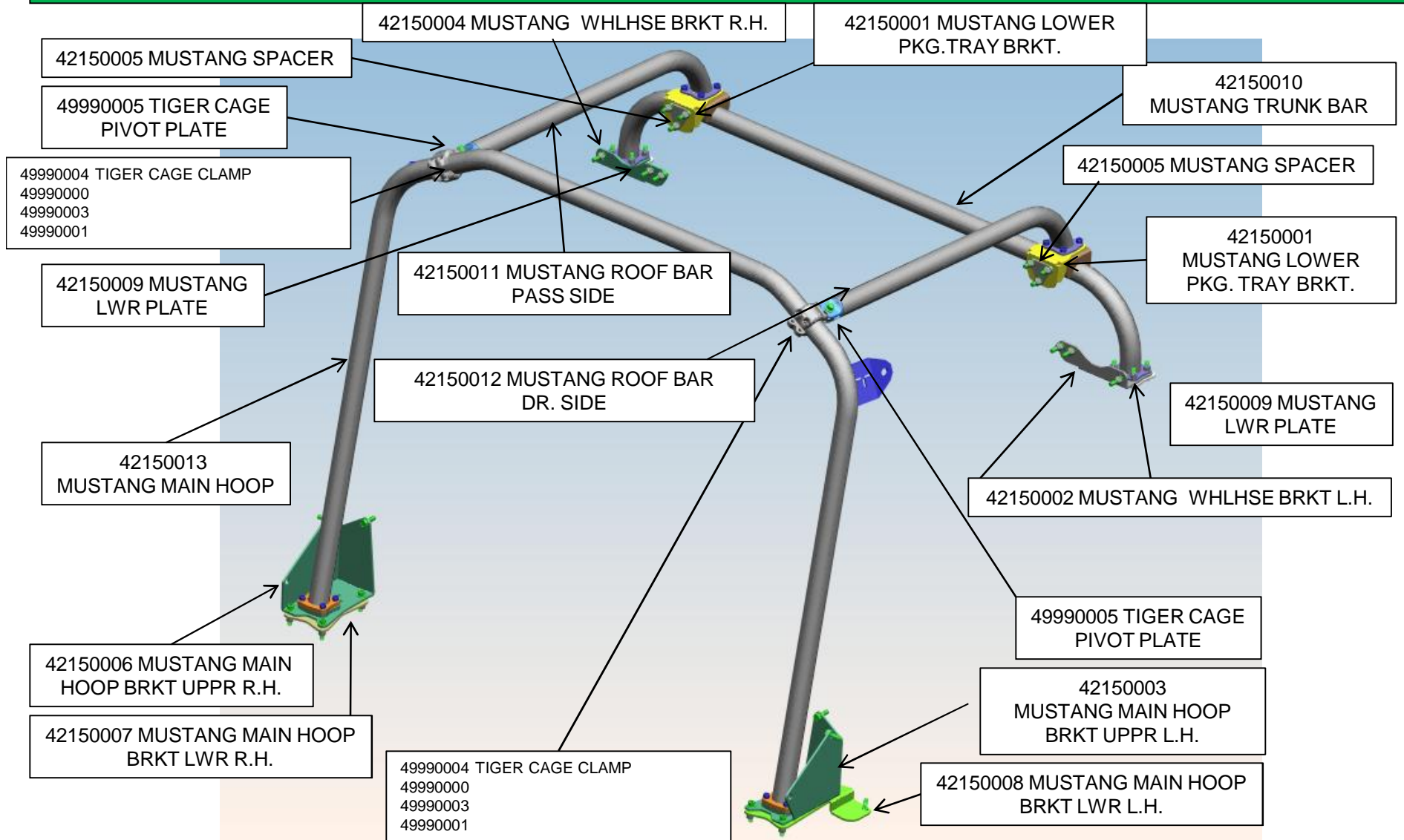


42150012 MUSTANG ROOF BAR
DR. SIDE QTY 1



42150011 MUSTANG ROOF BAR
PASS SIDE QTY 1

MUSTANG MAIN ASSEMBLY PART # 42150000



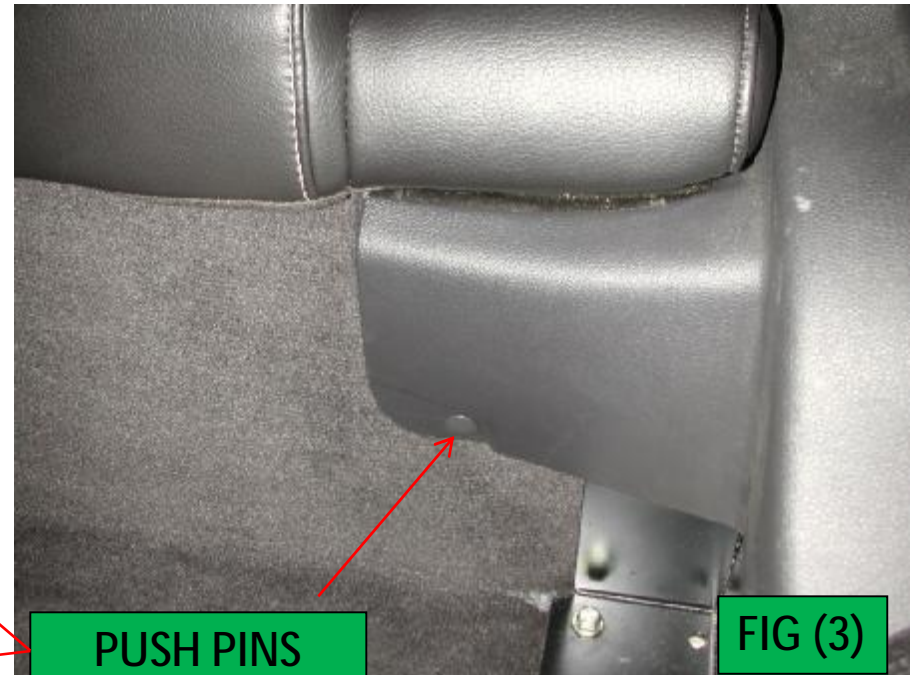
PARTS TO REMOVE BEFORE INSTALLATION



FIG (1)

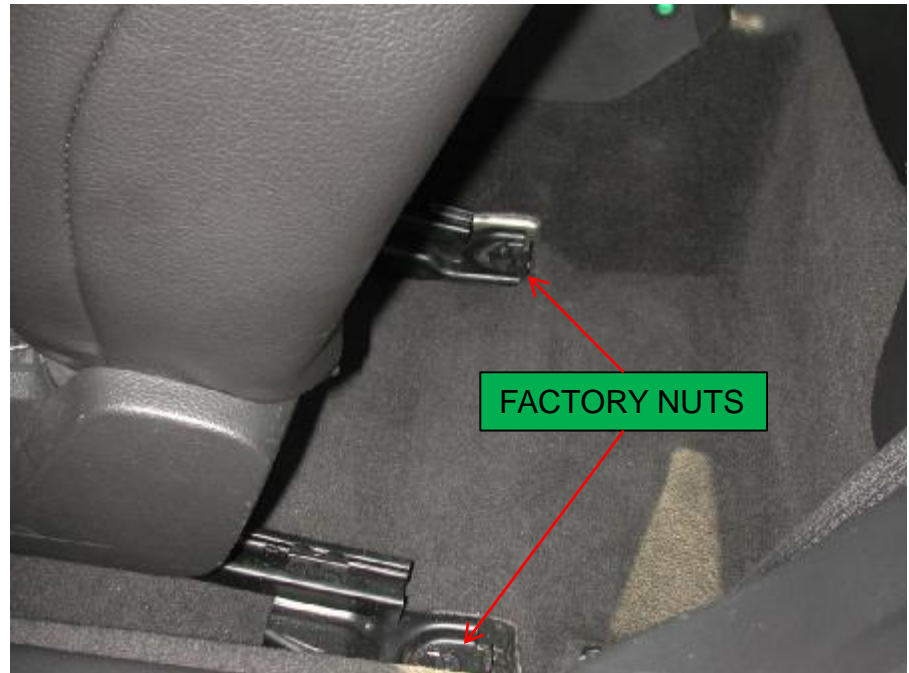
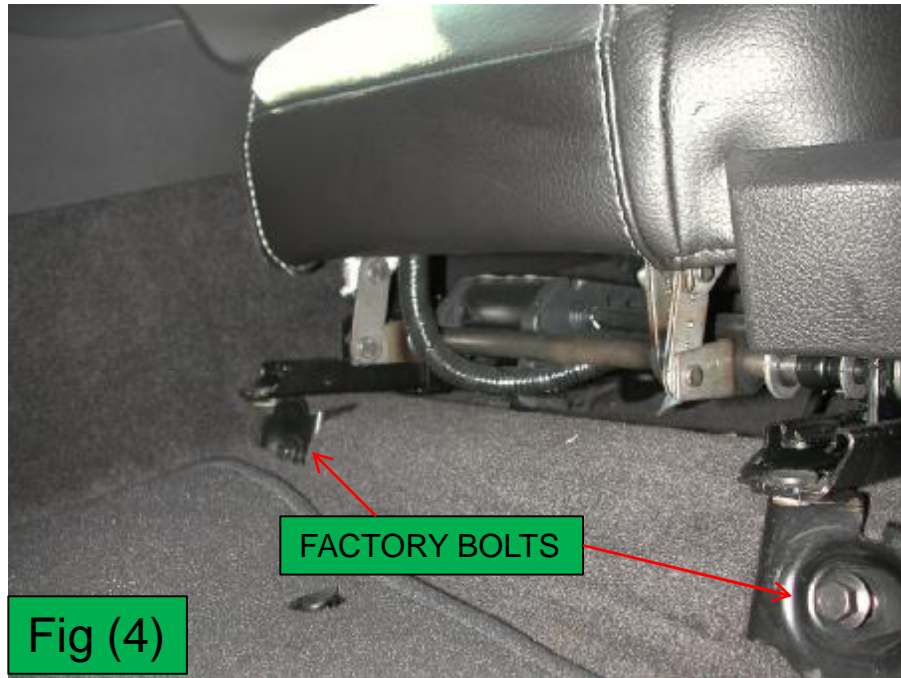
- First remove driver and passenger side quarter window trim panel. This panel is clipped over the flange in the door sill area and pushed up tight to the quarter window glass.

PARTS TO REMOVE BEFORE INSTALLATION



- There are three push pin fasteners that hold the trim panel to the body.
- One is located underneath the rear seat (*see fig2*) and the other is behind the upper rear seat panel (*see fig 3*).

PARTS TO REMOVE BEFORE INSTALLATION



- Removal of both front seats is recommended to allow you more access to install the tiger cage brackets.
- There are 2 bolts in the front of the seat, and two nuts in the rear of the seat that hold the seat to the floor pan (*see fig 4*).
- The lower seat belt bolt needs to be unbolted also for the installation.
- Another good idea that we do here at Ridetech is masking off the door jamb area to keep it from being scratched during the installation of the main hoop.

SEAT REMOVAL



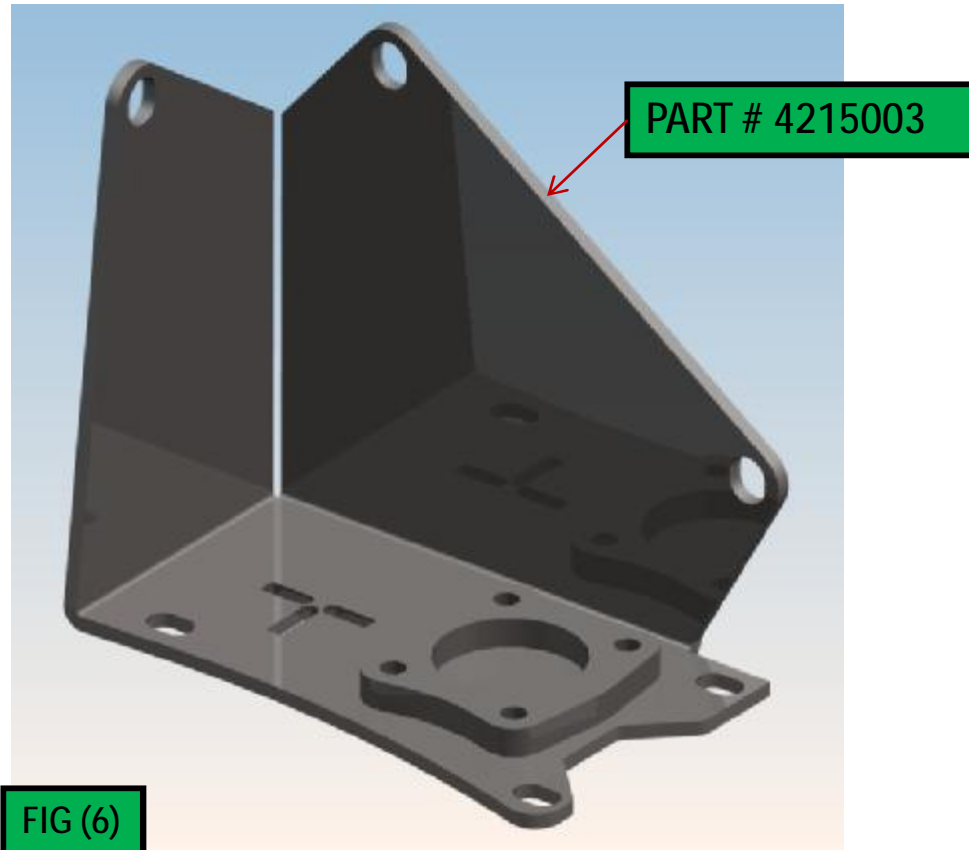
- Unplug two connectors, underneath the factory seats before removing the seats. (see fig5)
- Lift the back adjustment lever on the seat so that it is all the way forward and lift the seats out of the car.

PARTS TO REMOVE BEFORE INSTALLATION



- Remove the rear package tray carpeting, there are four push pins in the corners that hold the carpeting in place. They are located in the corners behind the quarter trim panels.

MUSTANG MAIN HOOP BRACKET UPPER L.H.PART # 4215003



- The first bracket to be installed into the Mustang is the Main Hoop Bracket Upper L.H. Part #42150003 (see fig 6).
- To install this bracket you need to remove the rear quarter window trim panel. (see fig 2)



EXISTING THREADED BOLT HOLE

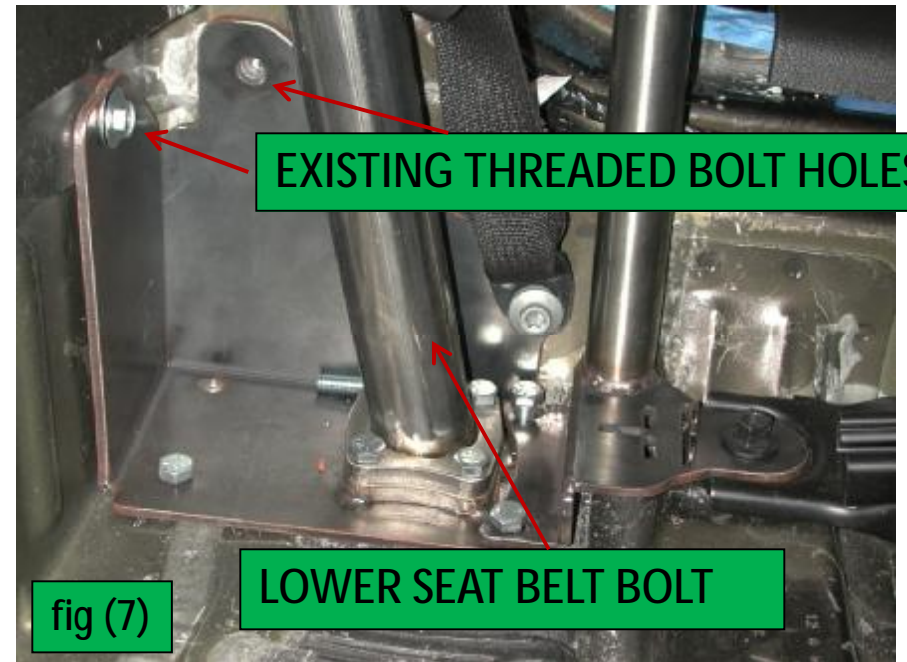


fig (7)

LOWER SEAT BELT BOLT

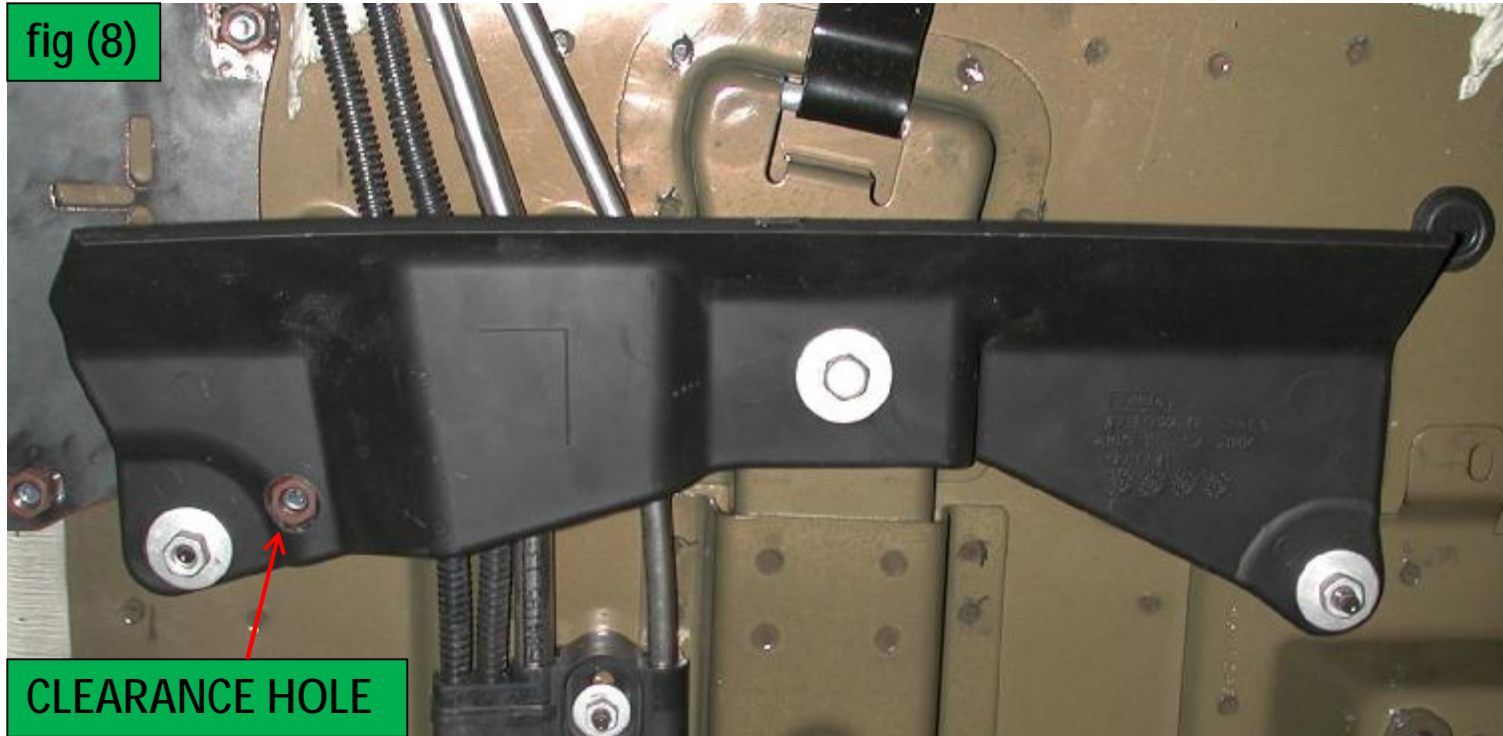
- Remove the carpeting or pull it back for access to the rear floor pan.
- Next, find the two existing holes in the rear kick up underneath the rear seat bottom cushion. These holes will be used with the new Mustang Main Hoop Bracket Upper (*Part # 42150003*) as shown in (*see fig 7*). Also the lower seat belt bracket will be utilized for another existing bolt hole.
- Install the two M10 – 1.5mm x 30mm long bolts (#6) into the existing threaded holes and then reinstall the lower seat belt bolt.
- The Main Hoop Bracket Upper can be used on top of the carpeting or underneath. It is recommended to install the bracket on the floor pan and drill all holes.
- On our installation we also removed the insulation under the carpet and scraped the sound deadener off of the floor pan so that we could have the bracket as close to the sheet metal as possible with the carpet installed.
- Once the bracket is located you can drill three 7/16" holes through the floor pan.
- After the holes are drilled in the floor pan than you can take all of the bolts back out and reinstall the carpet.
- Now you can mark the holes from underneath on the carpet and cut the carpet for the bolts.

INSTALLATION OF THE MAIN HOOP BRACKET UPPER L.H.



- Put the carpeting back into its original place and then set the Mustang Main Hoop Bracket Upper on top of it.
- Bolt the two M10-1.5mm x 30mm long bolts (#6) into the existing holes (*see fig7*).
- Bolt the lower seat belt back into it's factory location.
- Next reinstall the Quarter Trim Panel and it's pushpin fasteners.
- The picture above is what it should look like installed.

REMOVE FUEL LINE SHIELD



- Before installing the Lower Main Hoop Bracket you must take off the plastic shield that covers the fuel lines (see *fig 8*). This part can still be used on the car but you will have to modify it with a simple ½" hole drilled in it to allow clearance for the nut on the Mustang lower hoop bracket.

LOWER MAIN HOOP BRACKET

PART # 4215007

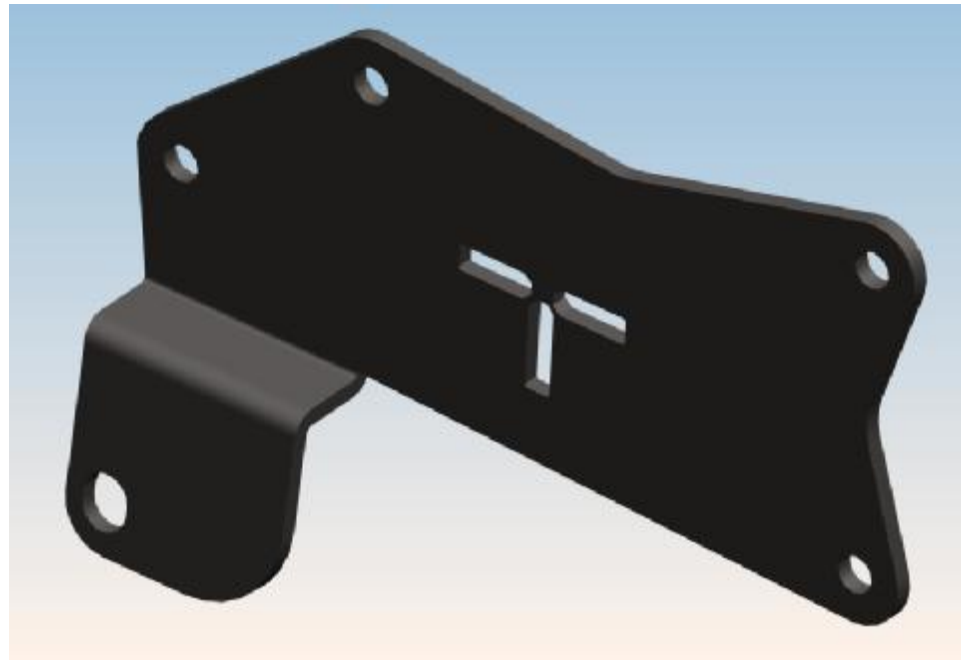


fig (9)

Now you are ready to install the lower bracket onto the bottom of the floor pan.
The Mustang lower main hoop bracket *(see fig 9)*

LOWER MAIN HOOP BRACKET

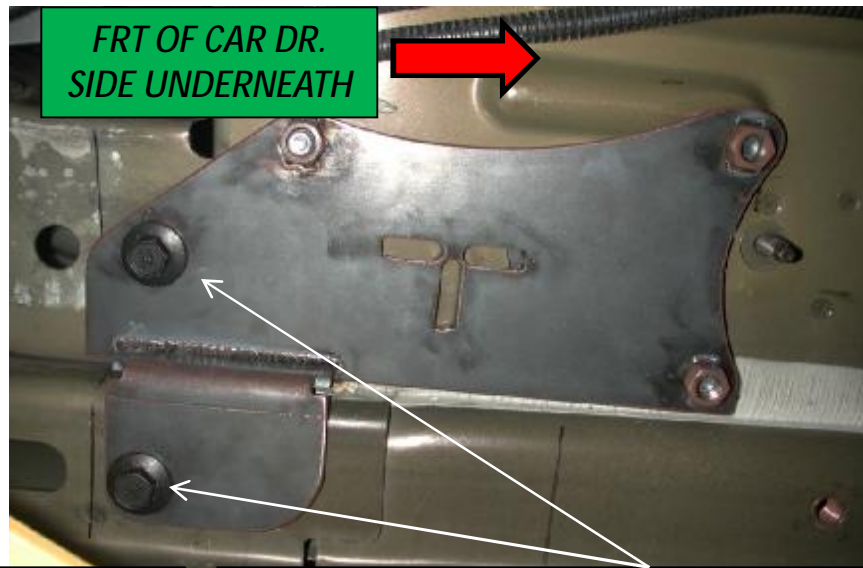


fig (10)

2 FACTORY 10 MM THREADED HOLES

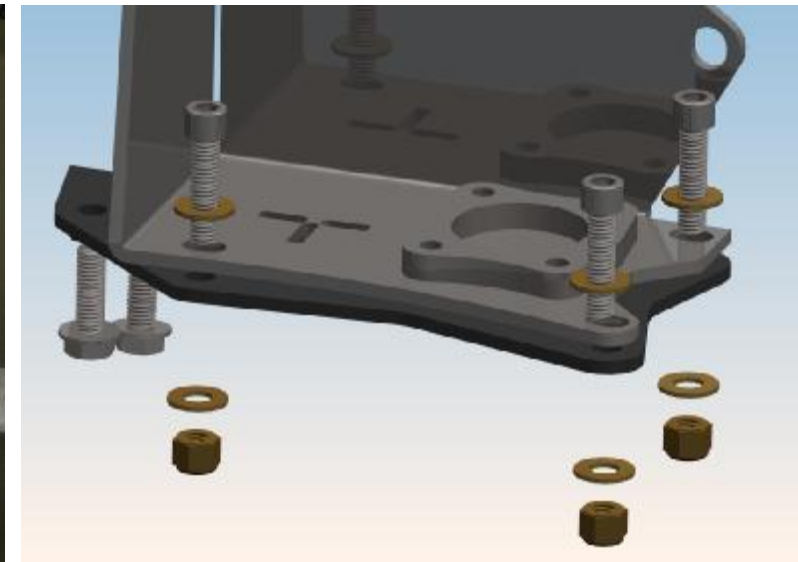
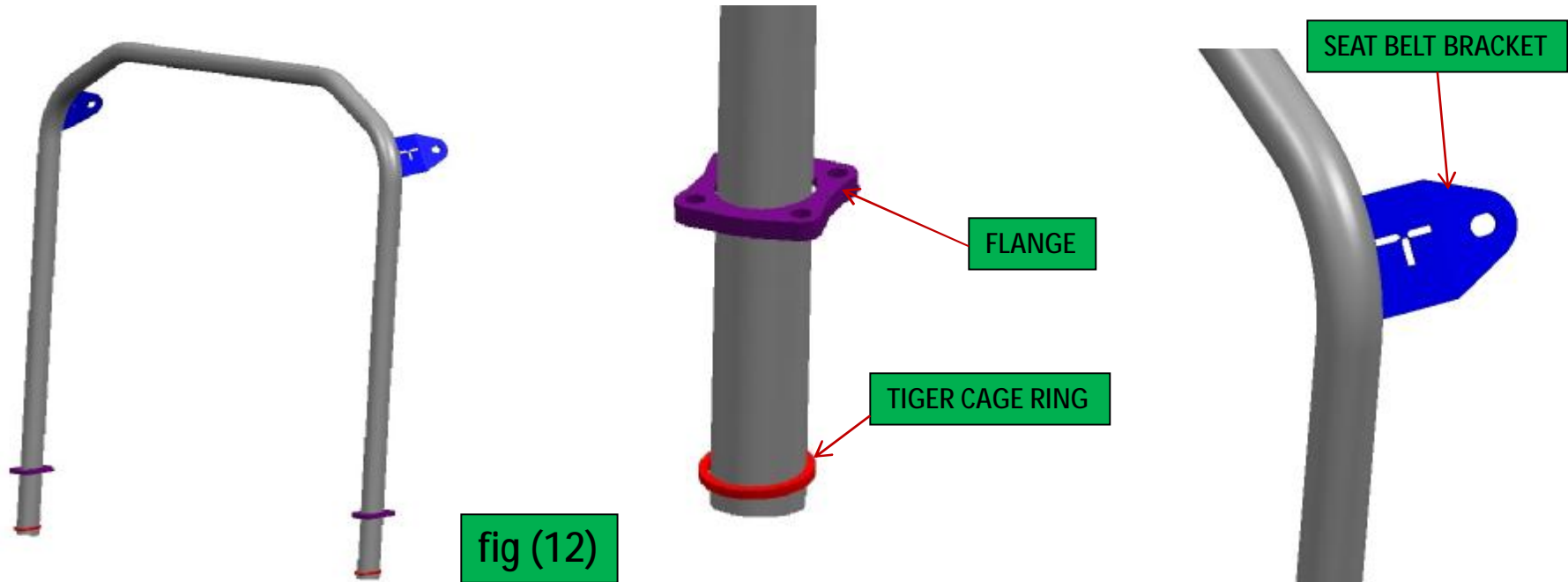


fig (11)

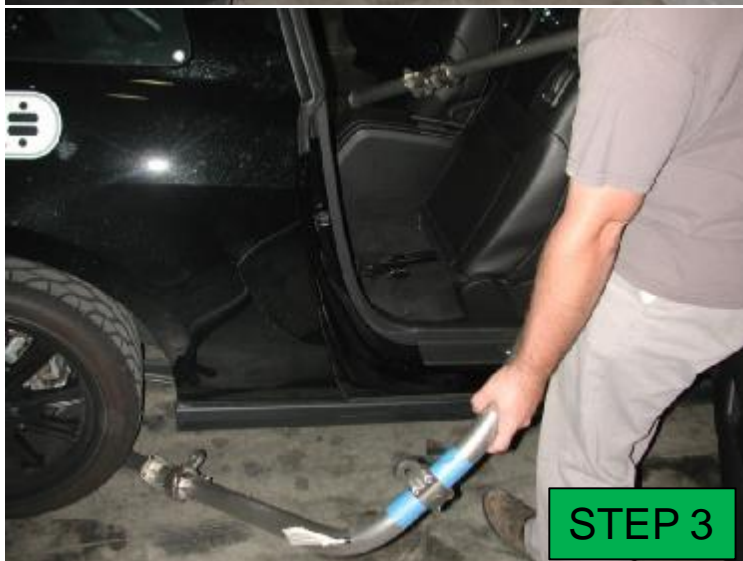
- The Mustang lower main hoop bracket (Part #4215007-8) also picks up two existing threaded holes from the factory as shown in (see fig 10).
- After these bolts are lined up, drop your existing bolts from the Mustang Upper Main Hoop bracket down into the lower bracket.
- Now install your 3/8" x 1 1/2" bolts (#8), 3/8" flat washers (#1) and 3/8"locking nuts (#3) to the bolts and thread in your 10mm-1.5mm x 30mm bolts (#6) to the existing holes. (see fig 11)
- Repeat the steps for the Upper and Lower Brackets from the driver side of the vehicle and apply them to the passenger side.

MAIN HOOP ASSEMBLY PART #42150013



- The next step in the Main Hoop Assembly installation is the main hoop itself (see fig 11).
- This hoop comes with both the tiger cage ring and the 4 bolt flange to fasten it to the main hoop bracket.
- It also has two upper brackets that line up to the factory seat belt harness bolt locations (see fig 16 page 22).
- The kit can be installed with factory 3 point safety belts or can have the optional 5 point harness that is sold as an option along with the seat belt bar. (Part # 42153000)

MAIN HOOP INSTALLATION INTO THE CAR



MAIN HOOP INSTALLATION

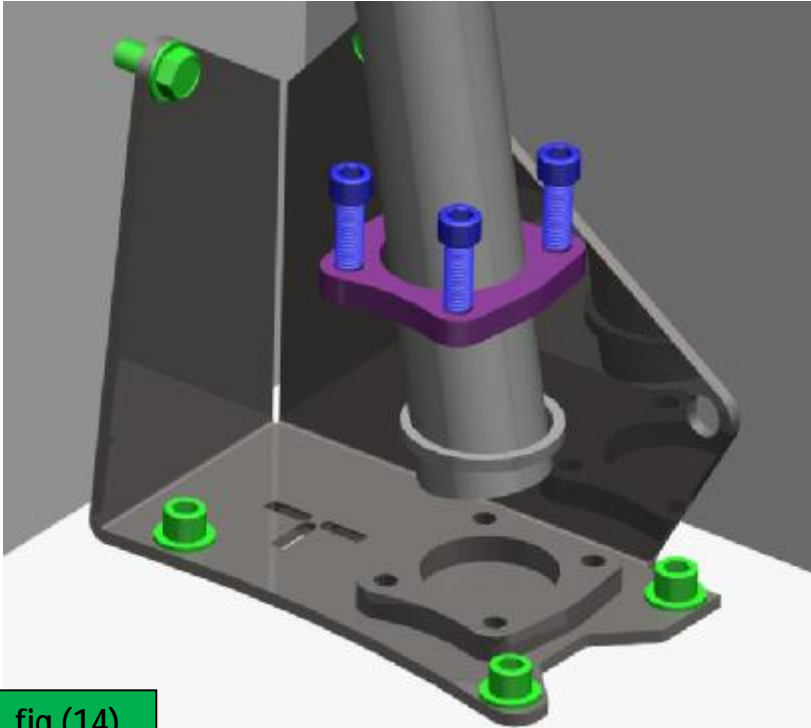


fig (14)

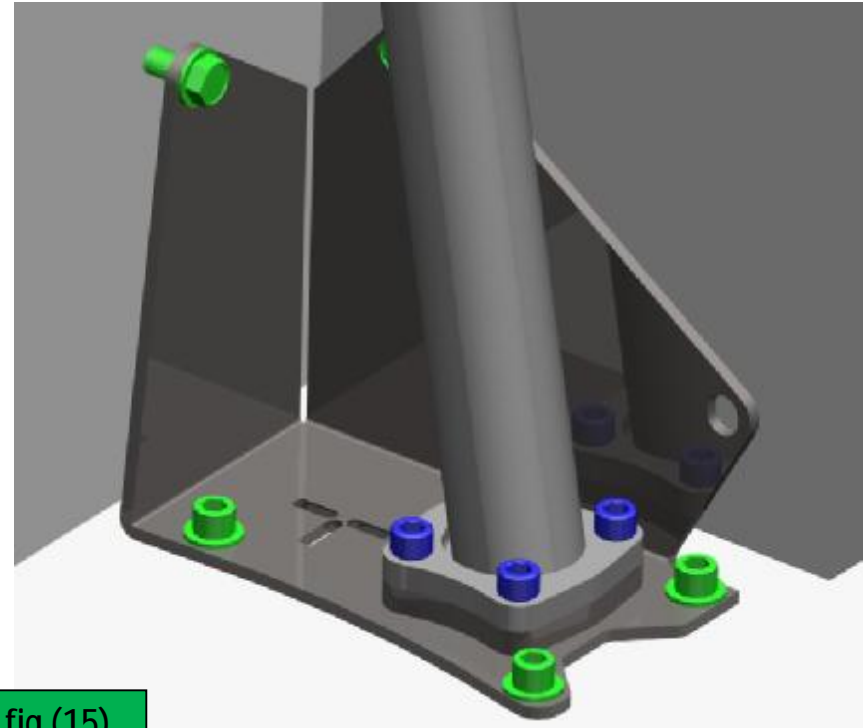


fig (15)

- Now the main hoop is in the car.
- The main hoop is now installed into the lower main hoop brackets.
- Line up the 4 bolt flange onto the flange welded to the lower main hoop bracket as shown (see fig 14).
- The ring on the tiger cage will sit down into this bracket and self align itself to the correct angle (see fig15).
- Once everything is lined up you can install the four 3/8" x 16 -1 (#2) bolts to the lower flange. It is important to leave the four bolts loose until you line up the seat belt upper bolts.

MAIN HOOP SEAT BELT BRACKET



- Now all you have to do is rotate the hoop toward the back of the car and look to see if the seat belt brackets are aligned with the existing holes in the quarter panel trim. (see *fig 16*)

FACTORY SEAT BELT PARTS



REMOVE

REMOVE



fig (17)



REMOVE

- When using the existing seat belts supplied from the factory there are a few pieces that can be left off.
- The Main hoop seat belt brackets use the existing bolts to fasten them back to the body. These factory harnesses have a plastic piece that can be reused or taken off, as we chose on or test car (see *fig 17*).

FACTORY SEAT BELT INSTALLATION

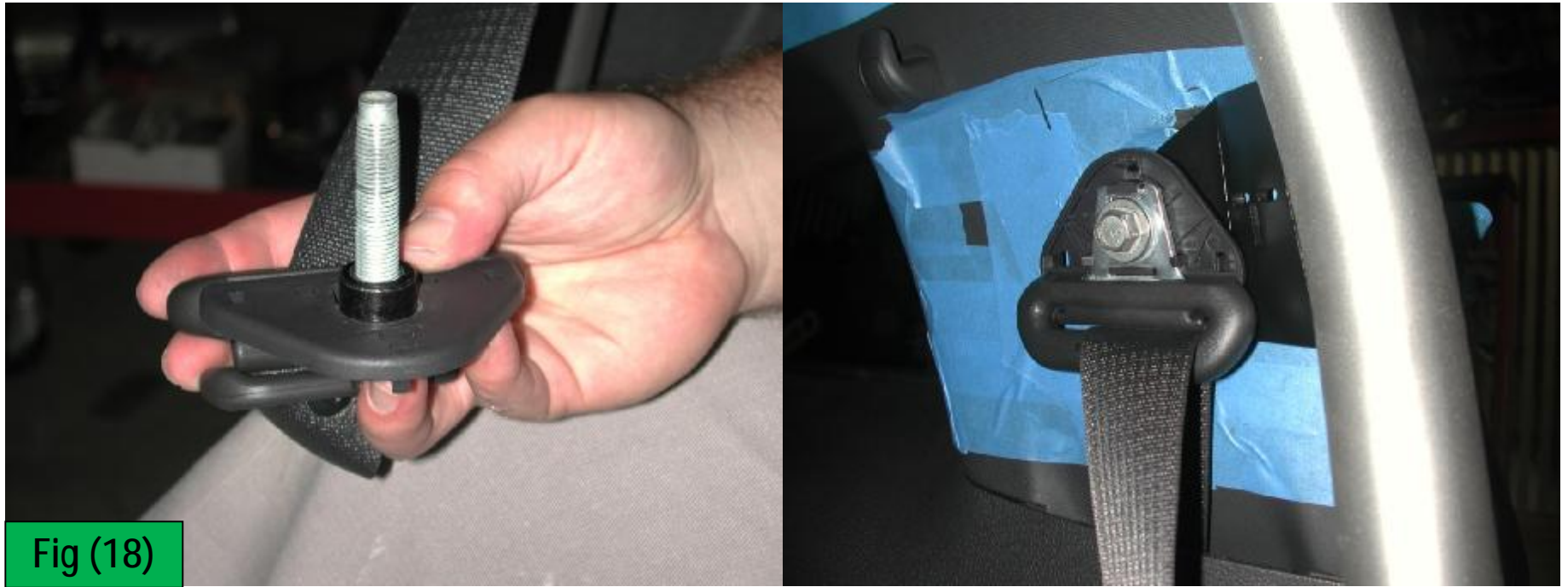
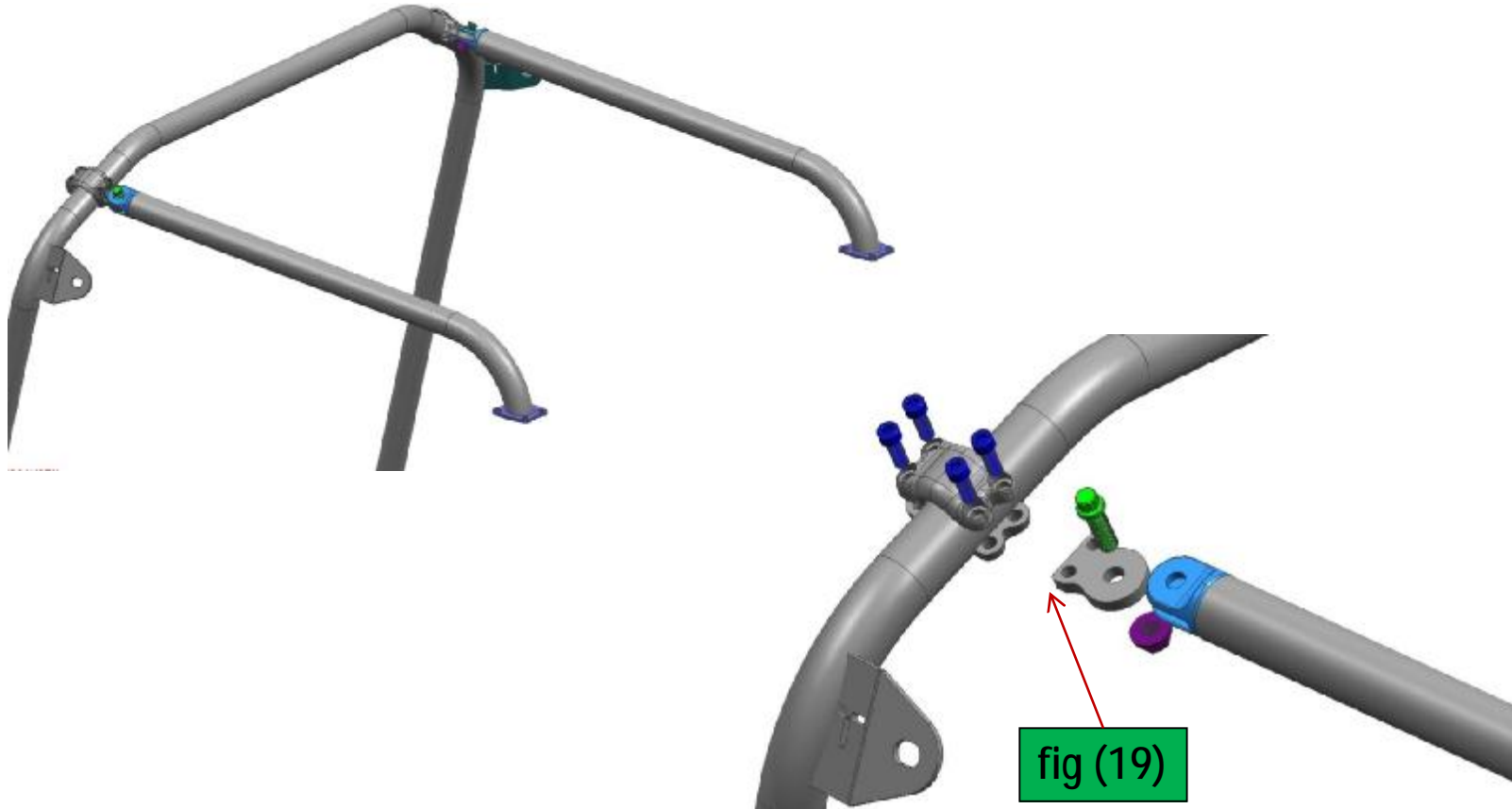


Fig (18)

- If you do remove the plastic piece make sure to get the spacers back behind the new bracket to offset it from the quarter trim panel. (see fig 18)
- After these bolts are bolted back in to factory location make sure the harness is not twisted.
- The seat belt should pivot on the bolt just like it did from the factory. Now that you have the main hoop installed the next step is the roof bars.

ROOF BAR INSTALLATION



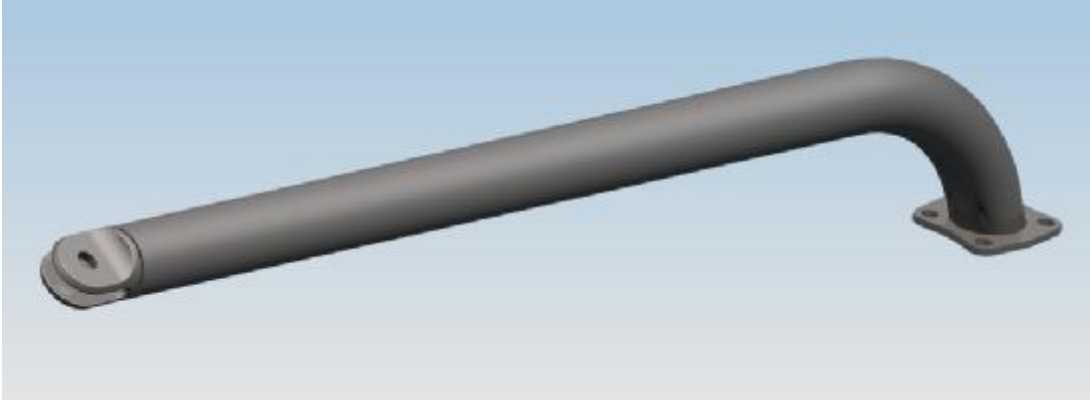
- Next it is time to install the roof bars to the main hoop.
- The roof bars are not interchangeable. When the clamp is installed the ends will be aligned as shown (see *fig 19*).
- The passenger side will be opposite of the driver side.
- These bars will be clamped on to the Main Hoop Bar.(see *fig 19*)
- Make sure the clamp is exactly where you want it before tightening as the clamp may scratch the tubing.

TIGER CLAMP

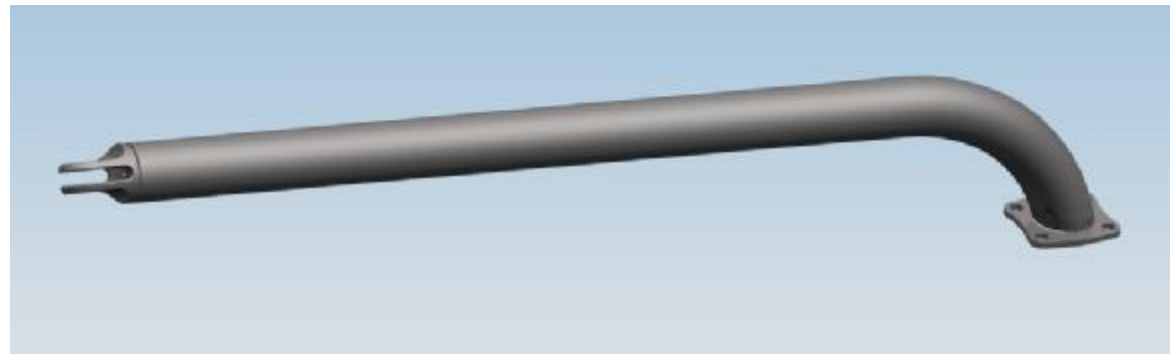


- In order to keep the "T" in the casting facing up, and the bolts facing the correct direction, there are two different direction clamps. Clamp half "A" will be mated to clamp half "B", Clamp half "C" will be mated to clamp half "D". Be very careful as to which clamp halves you are bolting together.
- In order to keep the "T" in the casting facing up, and the bolts facing the correct direction, there are two different direction clamps. Be very careful as to which clamp halves you are bolting together.
- A correctly assembled clamp should look like the one in the picture shown above; there should be a gap on one side for the tab to slide into.
- Assemble the clamps to the main hoop. Use clamp D on the driver side and clamp P on the passenger side.

MUSTANG ROOF BAR
PART # 42150011 L.H. AND PART # 42150012

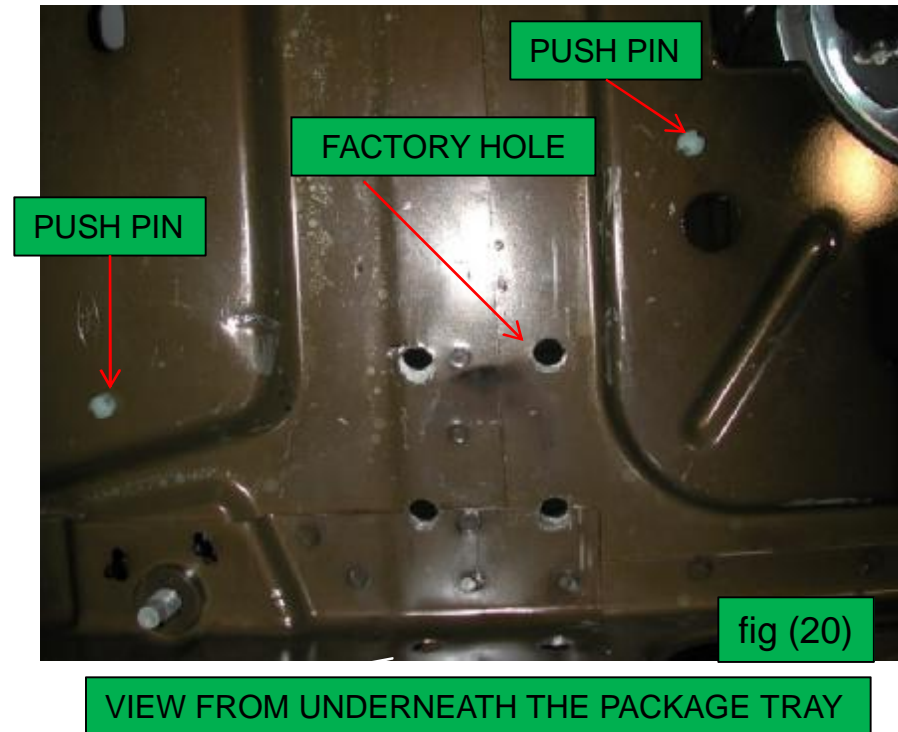


42150012 MUSTANG ROOF BAR
DR. SIDE



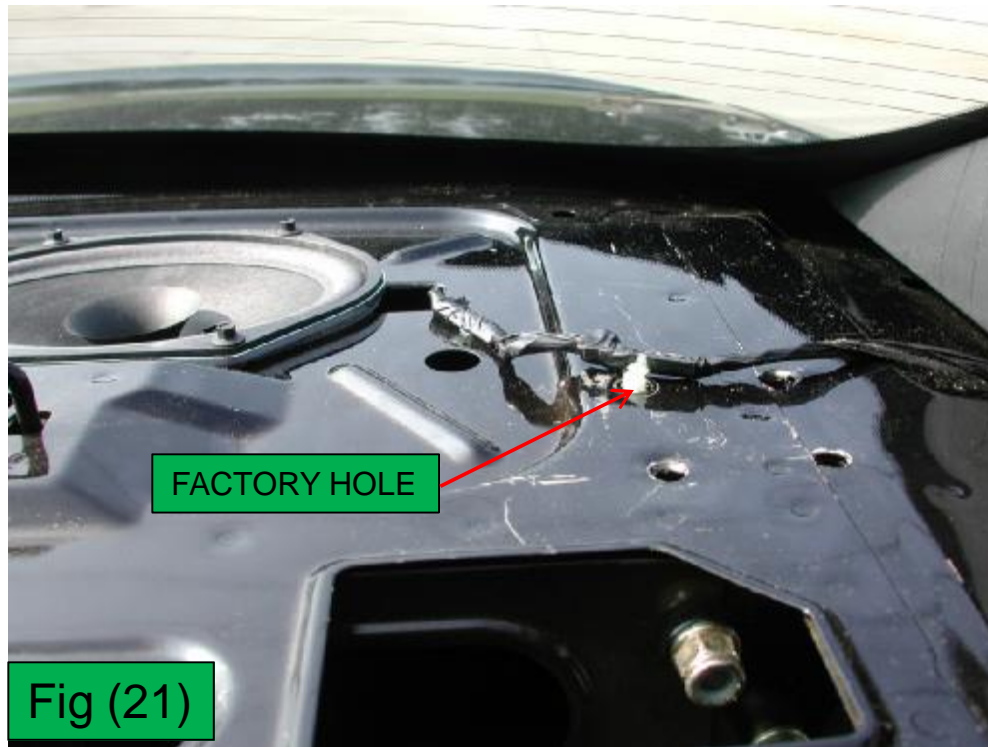
42150011 MUSTANG ROOF
BAR
PASS SIDE

ROOF BAR INSTALLATION



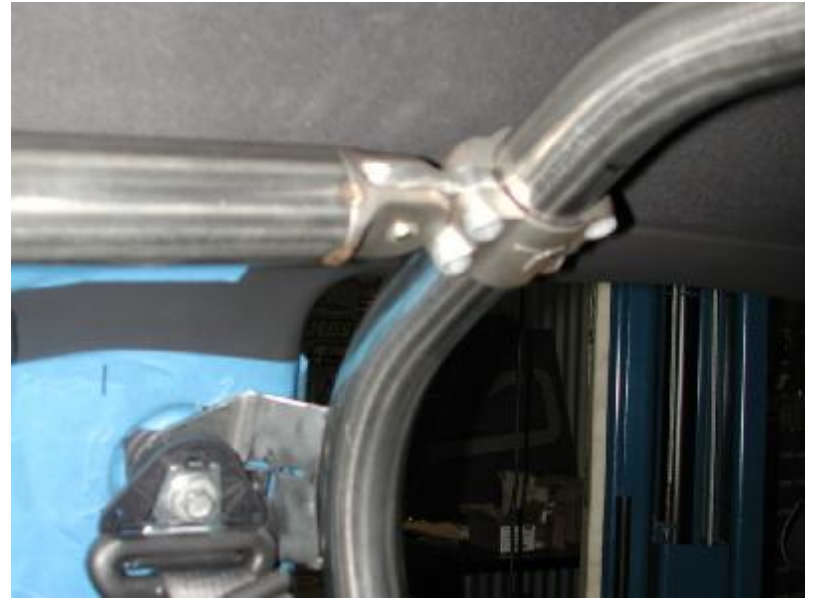
- Find the wire harness that is clipped into the package tray. There is a white pushpin that holds the harness in place. This harness is the same from driver to passenger side. The pushpin that is located in the depression of the package tray is the one you will use for the roof bar flange hole. (see *fig 20*)

ROOF BAR INSTALLATION



- Once the hole is located you can use the roof bar to line up the rear hole and mark the other holes that need to be drilled out. (see fig 21)

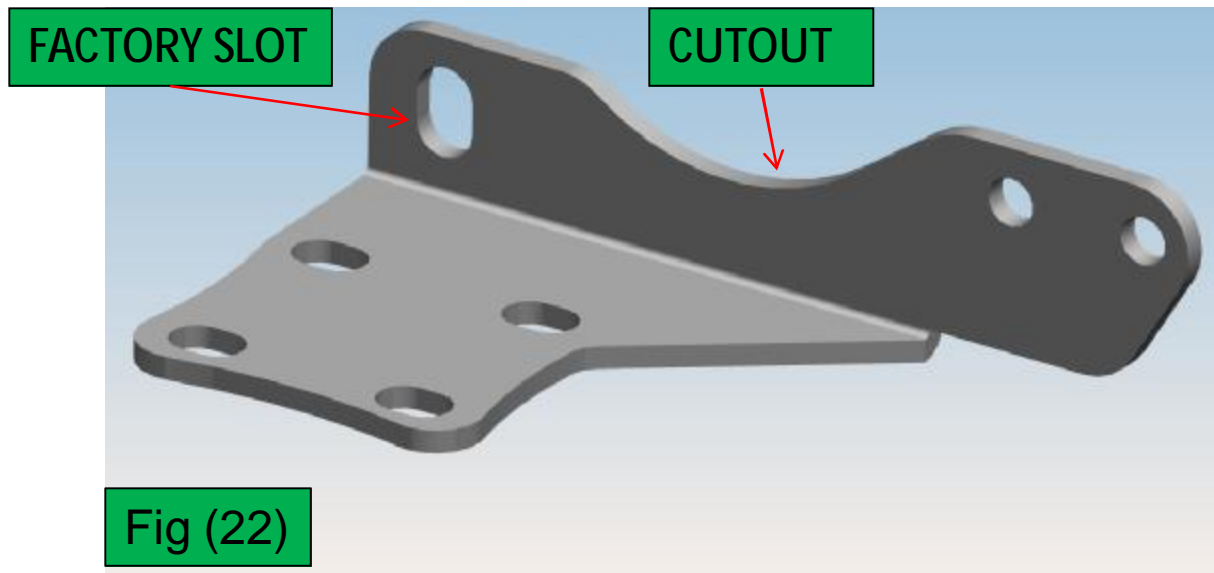
ROOF BAR INSTALLATION



- After the bars are loosely set in place mark the bolt holes using the factory wire clip hole for your alignment hole.
- Next bolt on your Tiger Clamp and Tiger clamp pivot plate to the Main Hoop using four 3/8"-16 x 1" Allen head bolts. (#2)
- Always tighten the tab side of the clamp first.
- Bolt the Roof bar to the Tiger Cage Pivot Plate using the 1/2"-20 12 point bolt (#4) and 1/2" -20 Hex nut (#5).
- Do not tighten the clamp all the way until all bars and mounts are in the car.
- Line up the rear flange hole of the Roof bar to the factory hole in the package tray.
- Mark the flange holes on to the package tray with a marker.
- Make sure to lower the trunk lid and look at the rear bars to make sure they are parallel. They should be parallel from side to side and also the clamps should be located in the same spot of the straight of the main hoop.
- Next move the door bar to the side and drill out four 7/16" holes through the package tray. It is easier to come from underneath the package tray. You can use the factory wire clip hole for reference.
- Now you will need to reinstall the package tray carpet, and mark the four holes for the roof bar flange.
- After the bolt holes are cut in the package tray carpeting you can move the Roof bar back into position.
- Now you can leave the Roof Bar bolted to the Main hoop Tiger Clamp. Line up the Roof bar flange with the holes.

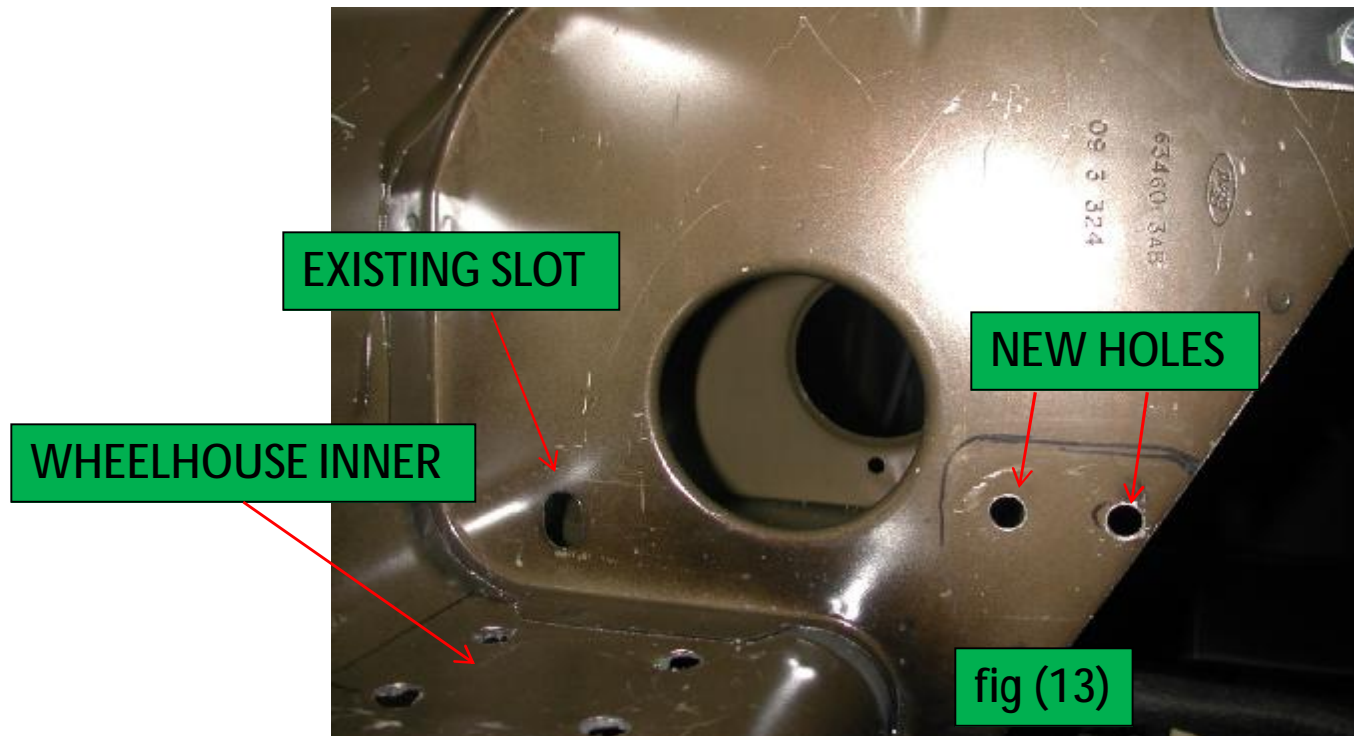
WHEELHOUSE BRKT INSTALL

PART # 4215002 L.H. AND PART #4215004 R.H.



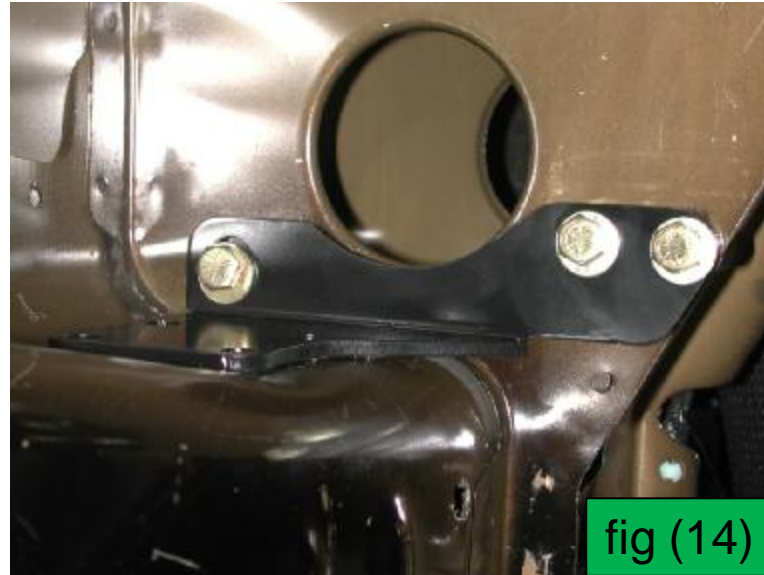
- This is the Wheelhouse Bracket L.H. side. (*PART # 4215002*) (*fig 22*) shown as it will look in the vehicle.
- The slot on the upper portion of the bracket will line up with a factory slot of the same size, also there is a cutout in the rear package tray reinforcement that will line up with the upper cutout.

WHEELHOUSE BRACKET INSTALLATION



- Now the Wheelhouse Rear Upper brackets need to be located in the trunk area on top of the wheel wells.
- These brackets line up with an existing slot that the factory has over by the quarter panel inner. (see *fig.13*)
- After locating this bracket mark the two holes on the sheet metal package tray reinforcement.
- Drill two 7/16" holes through the package tray reinforcement .

INSTALLED WHEELHOUSE BRACKET PART # 4215002 L.H.



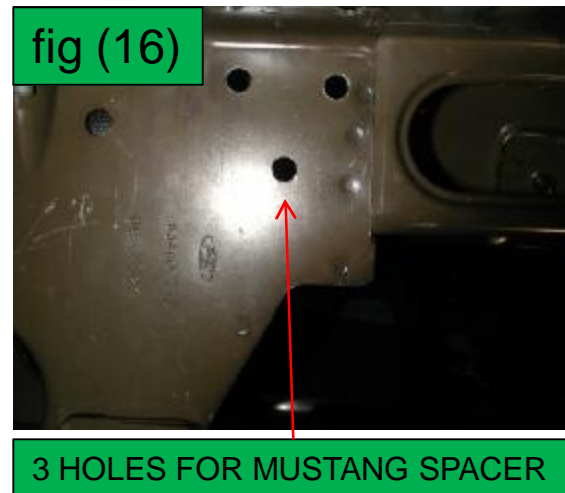
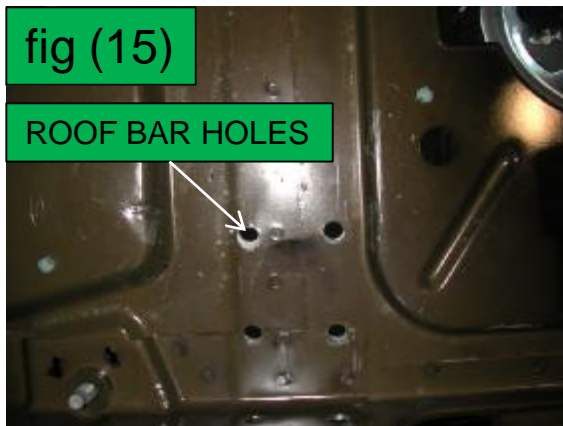
- Install three 3/8" – 16 x 1 ½ "(# 8) bolts into the holes and three 3/8" x 16 nuts (#3) nuts and six 3/8" flat washers (# 1). (see fig 14)
- Tighten these bolts down.
- Once these bolts are tight you are ready to move onto the next step.
- Mark the bolt holes on the wheel well with a sharpie.
- WARNING: BEFORE DRILLING ANY HOLES IN THE WHEEL WELL REMOVE THE REAR WHEELS FROM THE CAR.
- Use a 7/16" drill bit to drill the four holes in the wheel well.
- Drill the holes through the top of the wheel house.

MUSTANG PACKAGE TRAY LWR BRACKET PART #42150001



- This is the Mustang Package Tray Lower bracket (*PART # 4215001*) fits underneath the rear package tray and will align with the roof bar holes in the package tray.
- It is the same bracket and is used on both sides of the Mustang.

INSTALLATION OF MUSTANG PACKAGE TRAY LOWER BRACKET PART #42150001

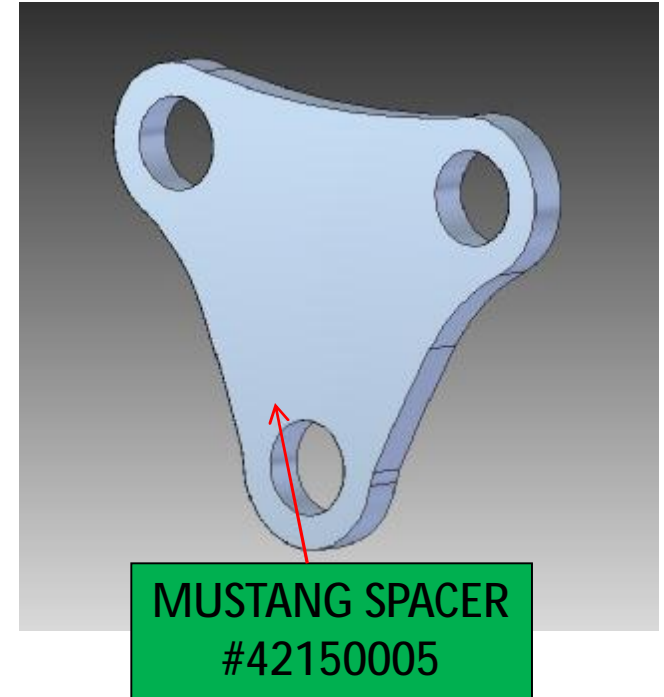


- First locate the existing holes from the roof bar underneath the package tray. (*fig 15*)
- Align the Mustang pkg. tray lower bracket to these holes.
- Now you can mark the 3 holes that need to be drilled through the package tray reinforcement. (*fig 16*)
- Drill three 7/16" holes into the package tray reinforcement. (*fig 16*) Making sure the 4 holes in the package tray still line up.
- Insert three 3/8" x 16 – 1 1/2" long (# 8) bolts with three 3/8" flat washers (#1) into the holes. (*see fig 17*)

INSTALLED MUSTANG PKG. TRAY LOWER BRACKET PART #42150001



fig (18)

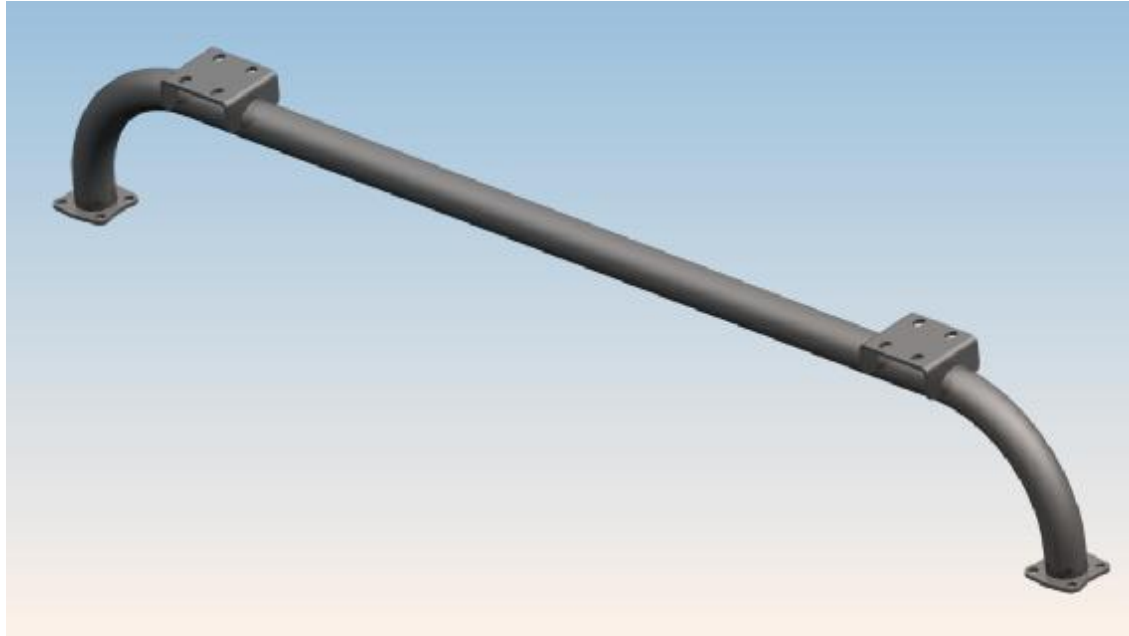


MUSTANG SPACER
#42150005

- Now we need to slide the Mustang spacer in the pocket shown in *(fig 18)*.
- The spacer is bolted inside of the package tray in a pocket by the seat belt retractor. *(see fig 18)*
- After sliding the spacer onto the three bolts, add three 3/8" flat washers (#1), and three 3/8" – 16 locking nuts (#3) *(fig 18)* and tighten.

MUSTANG REAR BAR

PART # 42150010



- This is the rear bar that is installed between the wheelhouses in the rear of the Mustang
- This bar not only adds strength to the Tiger Cage Roof Bars, it also ties the rear wheelhouses together.

INSTALLATION OF THE MUSTANG REAR BAR PART #42150010



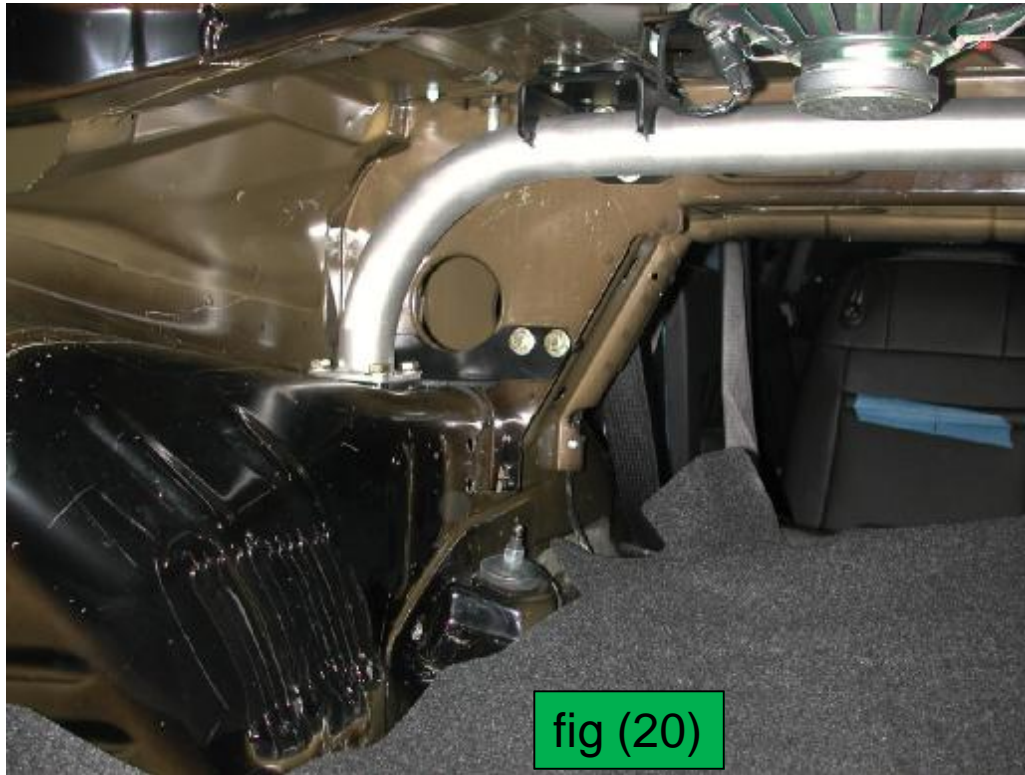
- The Mustang rear bar is installed by first having both of the Mustang wheelhouse brackets located and also the Mustang Package Tray lower brackets.
- **WARNING: THE REAR BAR IS STAMPED WITH DRIVER AND PASSENGER SIDE, MAKE SURE YOU HAVE IT ALIGNED CORRECTLY BEFORE INSTALLING.**
- Now that you have the bar inside the trunk you can move it forward into the top of the wheelhouses.
- The best way to get the bar into place is to roll it up to the existing Mustang Package Tray Brackets. (see above)
- Next install four 3/8" – 16 x 1 1/4" Allen head bolts (#9) through the roof bar flange and the Mustang Package Tray Lower bracket

INSTALLATION OF THE MUSTANG REAR BAR PART #42150010



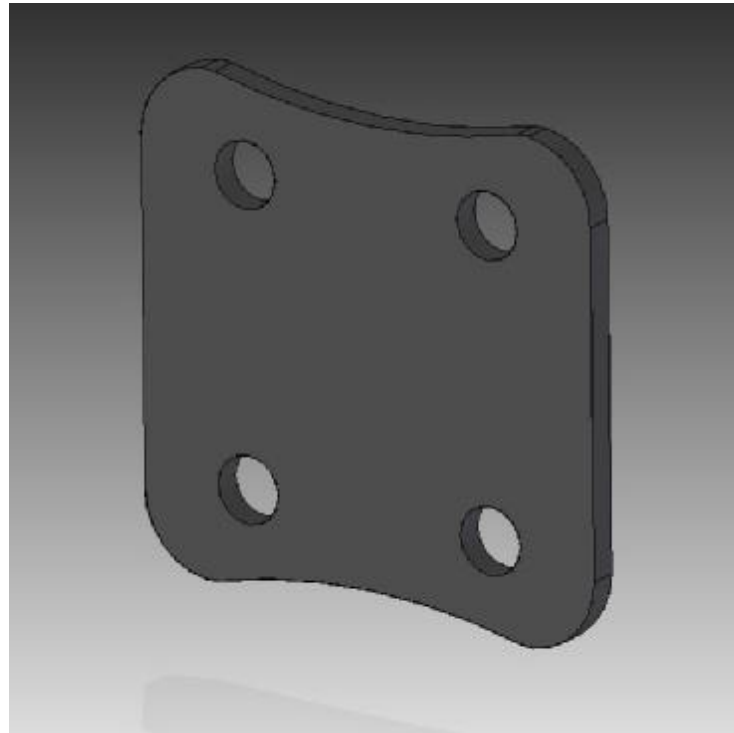
- Install four 3/8" flat washers (#1) and four 3/8" – 16 locking nuts (#3) underneath the Rear Bar Upper Bracket. (see *fig 19*)
- These bolts are easier to tighten using a swivel on a long extension.

MUSTANG REAR BAR INSTALLED



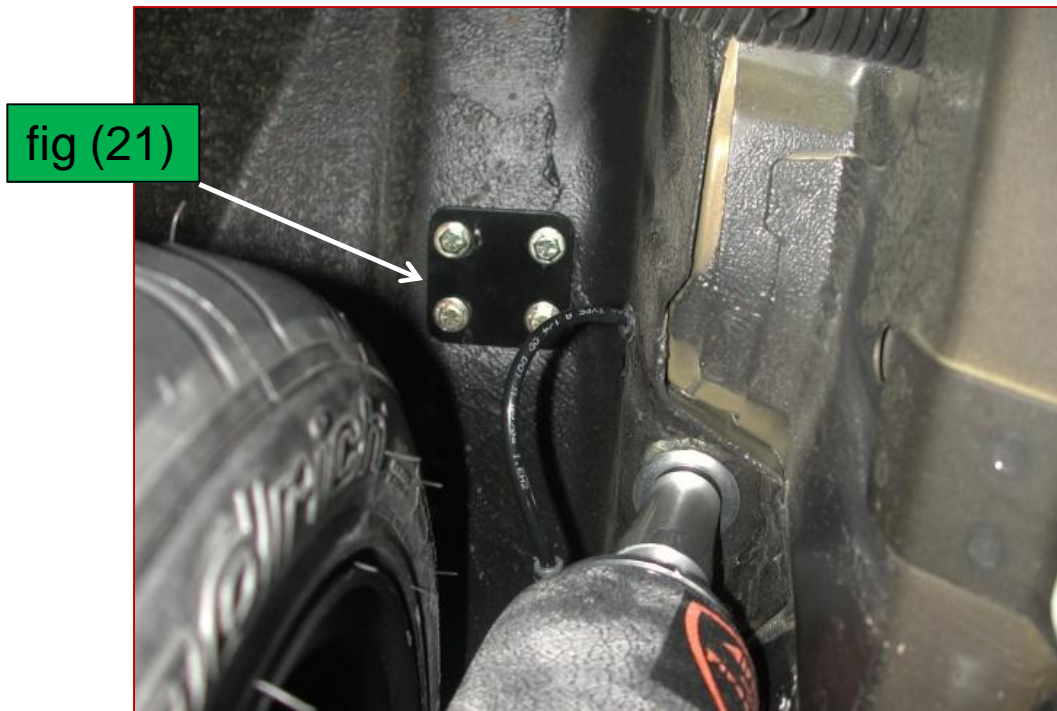
- This is what the installed Mustang Rear Bar will look like when it is bolted in place. You can mount this bar on top of the carpeting or underneath. (*see fig 20*)
- Now you can install the Mustang lower plate that is bolted inside the wheel well.

MUSTANG LOWER PLATE PART # 4215009



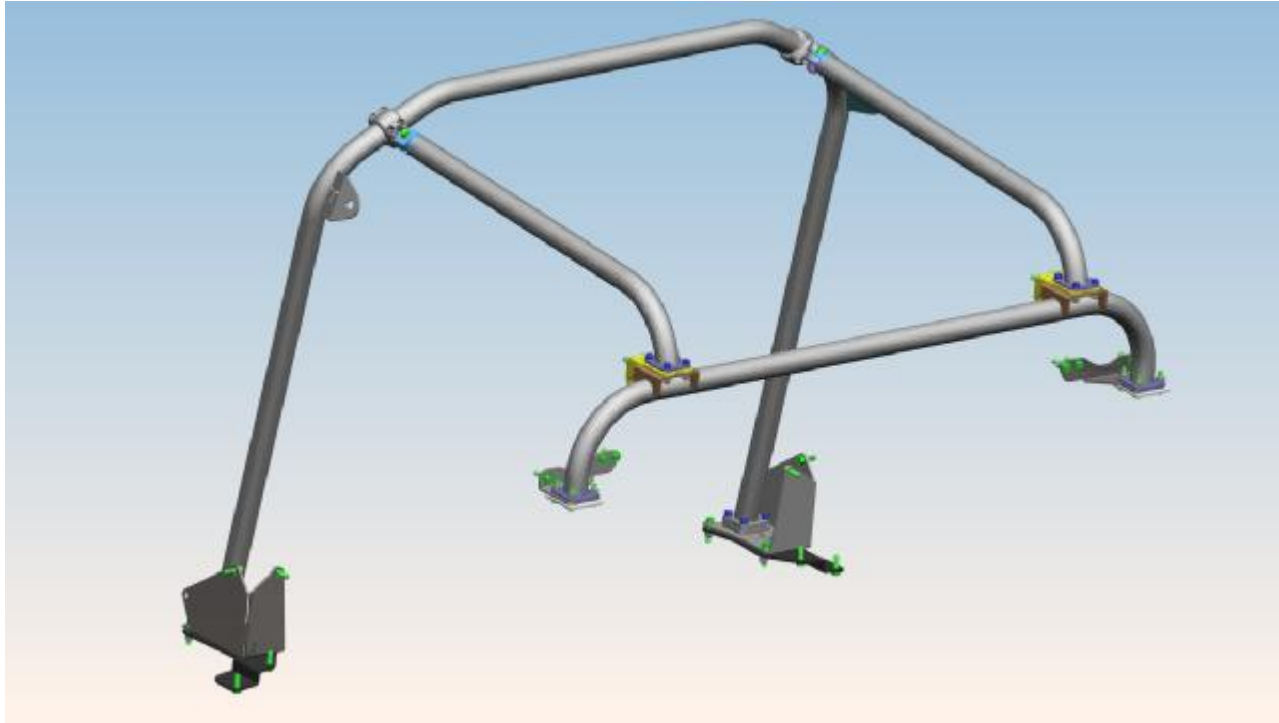
- This part is the Mustang lower plate (*Part# 4215009*) and it is bolted underneath the wheelhouse brackets.

INSTALLATION OF MUSTANG LOWER PLATE PART #4215009



- This plate is installed underneath the wheel house in the top of the wheel well.
- The plate will line up with the holes drilled for the wheelhouse upper bracket. (*fig 21*)
- After the bracket is lined up use four 3/8" - 16 x 1 1/2" bolts (#8), with eight 3/8" flat washers (#1), and four 3/8" -16 locking nuts (#3). (*see fig 21*)
- Tighten the bolts down.

COMPLETED INSTALLATION OF MAIN HOOP ASSEMBLY



- Now you can tighten all of the nuts and bolts on all of the components in the kit.
- Don't forget to tighten the following brackets:
- Mustang Package tray bracket
- Mustang Rear Bar Flange
- Mustang Roof Bars
- Tiger Clamps on Roof Bars
- Wheelhouse Upper Brackets
- Main Hoop Upper Bracket and Lower Bracket
- Main Hoop Seat Belt Brackets
- Main Hoop flange bolts