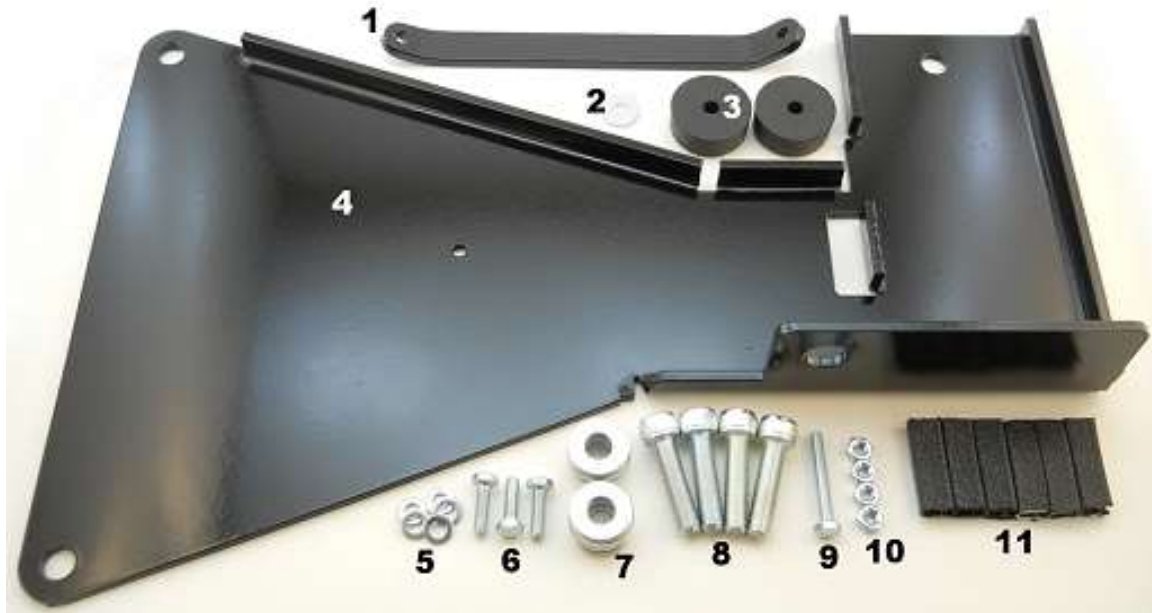


Installation instructions for JM2 Universal Cylinder Mount for Toyota FJ Cruiser

It is highly recommended that you use a thread lock compound such as Loctite brand on all threads to keep them from vibrating loose.

Please read these instructions entirely before starting.

This picture shows the components of the JM2. Parts will be referred to by the names & numbers shown here. If you are missing anything please email RefinedCycle@gmail.com.



JM2 Components

- 1 - JM2 Brace
- 2 - 1/4" Washer
- 3 - 5/8" Rubber Bumper (Qty. 2)
- 4 - JM2 Bracket
- 5 - M6 Washer (Qty. 5)
- 6 - M6-1.0x20 Bolt (Qty. 3)
- 7 - 3/8" Washer (Qty. 12)
- 8 - M10-1.25x40 Socket Head Cap Screw (Qty. 4)
- 9 - M6-1.0x40 Bolt
- 10 - M6 Nut (Qty. 4)
- 11 - Edge Trim (Qty. 6) (Not included in optional kits)

Optional Components Not Shown

RP1 Kit

- 1 - RP1 Bracket
- 2 - M6 Washer (Qty. 8)
- 3 - M6-1.0x20 Bolt (Qty. 4)
- 4 - M6 Nut (Qty. 4)

SDA Kit

- 1 - Small Dia. Adaptor
- 2 - M6 Washer (Qty. 4)
- 3 - M6-1.0x20 Bolt (Qty. 2)
- 4 - M6 Nut (Qty. 2)



Remove your spare tire, cover and camera if applicable and disconnect the camera wire from the spare mount if there is one connected to it.



Remove the two bolts and the two nuts holding the spare tire carrier to your door. When you remove the carrier, there will be 4 rubber washers on the bolts or stuck to the paint surface. If they are loose, carefully peel them off. If they are the newer, thinner style and are adhered pretty well, just leave them there. Either way, you will re-use them. If yours are torn up or you just want a replacement, they don't make the thick ones anymore so look into Toyota part # 51998-35020



If you are lucky, the studs will come out with the nuts.

If you aren't so lucky the nut will come off and the stud will remain. No worries, there are options. First, put some WD40, PB Blaster or other penetrating spray on the stud and take a lunch break while it soaks in.



Welcome back. Here are a few ways to remove the stud....

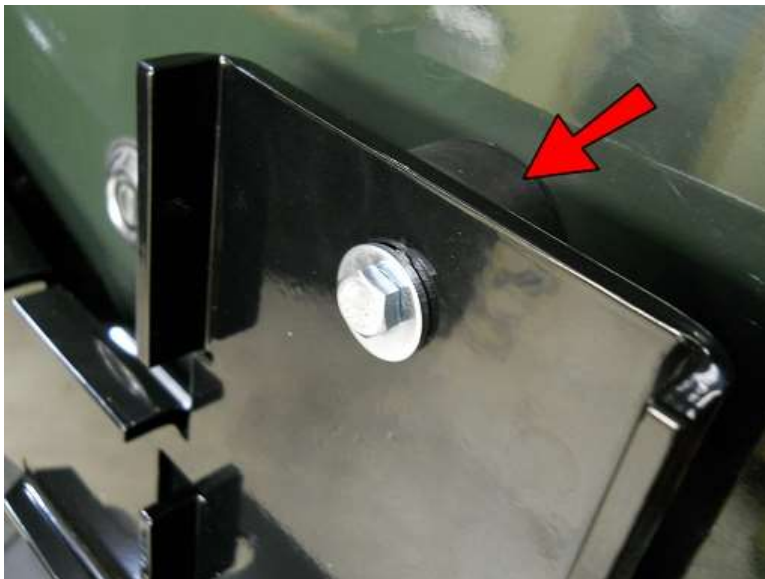
If you have access to the star shaped tool for the end of the stud, use that. Your dealership should have one also.

You can lightly hammer on a 9/32 socket. (This works surprisingly well.)

You can try vise grips.

You can grind the end square to get a better grip with vise grips.

You can thread the nut back on a few turns, then weld the nut to the stud in the middle so you don't mess up the hex edges. Then just use a socket to turn the stud out. Don't worry, you won't re-use the studs.



You have 2 choices how you want to connect the 5/8" Rubber Bumper and now is the time to decide.....

No Drill Method: Connect the Rubber Bumper to the JM2 so that it rests against the door. (You will get more vibration of the JM2 on bumpy terrain and more movement when you close the door and in time it will probably rub paint off.)

Drill Method: Connect the JM2 directly to the door with the bumper in between. (This is the preferred and highly recommended method for stability.)

You can always come back and complete the Drill Method at a later point, but you will need to undo some installation steps such as the JM2 Brace and the M10 Bolts.

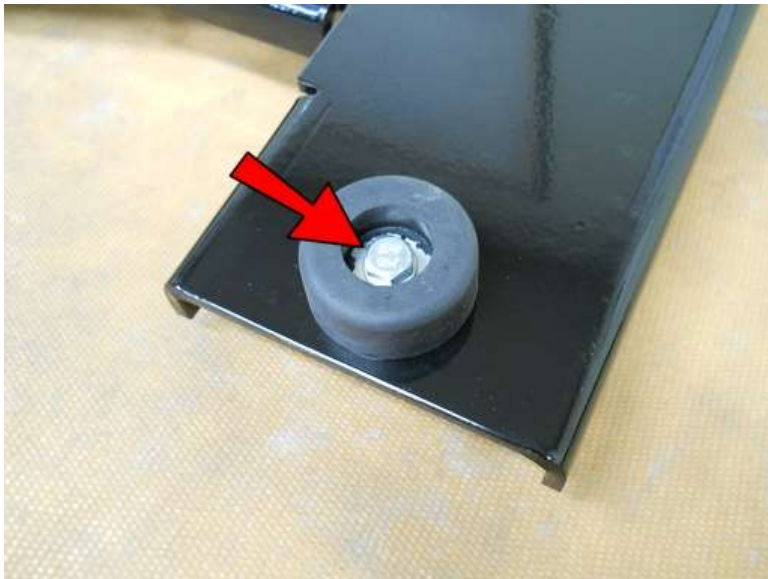
Complete the "**No Drill Method:**" on the next page **or** skip to "**Continue Here**".

No Drill Method:

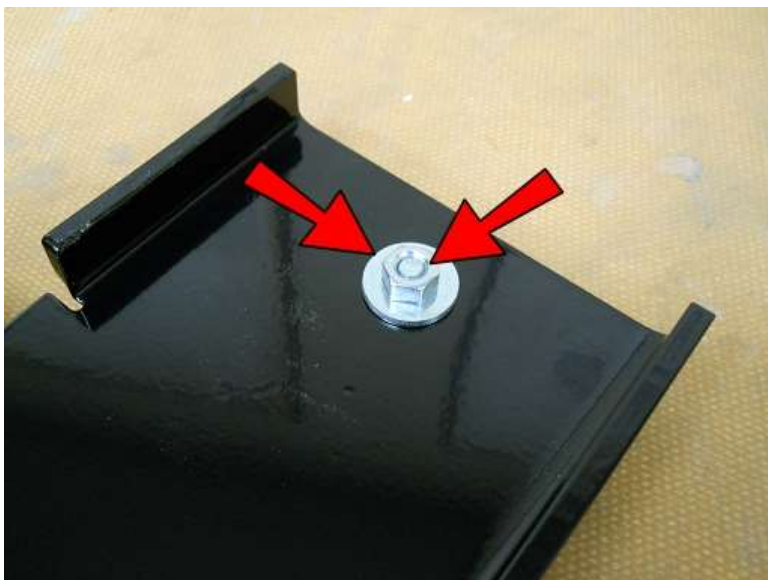
Place an M6 Washer onto an M6-1.0x20 Bolt.



Place the Bolt and Washer into the recessed side of the 5/8" Rubber Bumper and into the hole from the back of the JM2 as shown.



On the other side, secure the Bumper with a 1/4" Washer and an M6 Nut.



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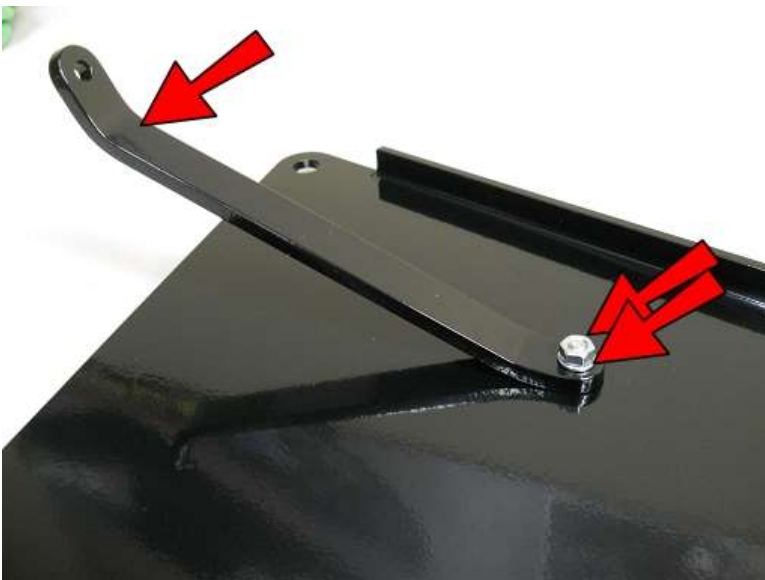
Place an M6 Washer onto an M6-1.0x20 Bolt.



Insert the Bolt and Washer into the back side of the JM2 as shown, then flip it over and wrap a towel around the end of the JM2. This will protect from scratching your paint or the plastic door handle cover while installing.



Place the end of the JM2 Brace with the less angled bend, onto the Bolt and JUST hand tighten an M6 Washer and M6 Nut on.





Place a 3/8" Washer on each of the four M8-1.25x40 Socket Head Cap Screws.



Insert them into the spare carrier.



On the LEFT side of the spare tire carrier, place THREE 3/8" Washers and one of the rubber washers removed earlier onto each one. (Note: If you also have our JM1 or JM3, only use 1 washer here.)

(Later models had a thin stick on plastic washer instead of the thick rubber ones. If your washers are not reusable you can get the stick on ones from Toyota, Part #51998-35020 or you can wrap some electrical tape around the Zinc Washer to protect the paint.)

Now put the carrier back onto the door with just the left side bolts but don't tighten them yet.



Place the JM2 onto the two Screws on the right side of the carrier. Place a 3/8" Washer and one of the rubber washers removed earlier onto the back side and hand tighten only.



Remove the towel that you had wrapped around this end and rest the right side bent edge on a bumper and if you haven't already installed a bumper at the top using the No Drill Method, then just slide one in for spacing as shown, then go ahead and tighten all four M10 Screws holding the tire carrier on.



Hold the Brace level and push it against the carrier with one hand as you mark the hole with the other.



If you have a punch it makes it a lot easier to create just a small divot to help keep the drill from wandering on the curved, angled surface. A Phillip's screwdriver might work too.



Drill a 1/4" hole on your mark. Then put a dab of paint on the exposed metal to protect it.



Place another M6 Washer onto an M6-1.0x20 Bolt.



Place the Bolt into the Brace and into the JM2.



Secure with an M6 Washer and M6 Nut. Don't forget that Loctite mentioned at the beginning!



Now go back and tighten the other end.



The next several pages are the "**Drill Method**". If you already installed your bumper, skip to "**Continue Here**".

Use a small screwdriver to carefully pop the round covers out of the door panel and remove the exposed bolts. Open the glass window. The rest of the panel is held by snaps. Gently pry the door panel away from the door unsnapping one at a time. Lift the panel up over the window latch.



Remove the clear plastic cover, or at least peel the left side off. Be careful that black tar adhesive can be messy if it gets on anything. (I used this opportunity to replace that plastic with some sound insulating fabric when I put it back together.)

Now close the door again.



Place a Bumper as shown with the holes centered.



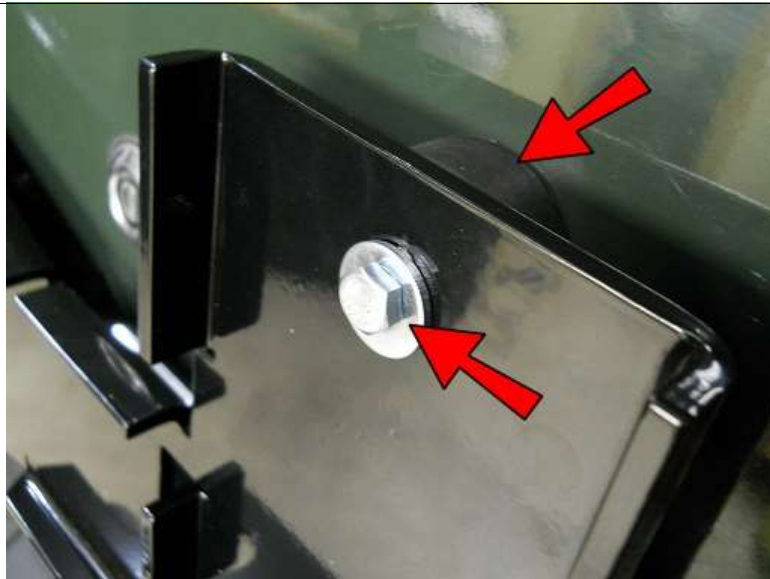
Using the Bumper hole as a guide and the same 1/4" drill bit used earlier, drill just a quick center mark on the door.



Remove the Bumper for now and drill the hole completely through the door. Then put a dab of paint on the exposed metal to protect it.



Place a 1/4" Washer onto an M6-1.0x40 Bolt.



Put the bumper back in place, with the FLAT edge toward the door. Center it on the hole, making sure the top edge is flush with the top edge of the JM2 and insert the Bolt.



Place another Bumper on the bolt on the inside of the door, again with the FLAT edge toward the door. Secure with an M6 Washer and M6 Nut. It will not get completely tight because you are just squishing the rubber. Get it snug so that you can see the rubber on the outside of the door slightly compressing. Then add a second M6 Nut. Loctite is very important on this one in particular.



Re-install the door panel. Those clips are pretty good about not breaking in my experience, but if you do break any, they are available and inexpensive at a dealership.

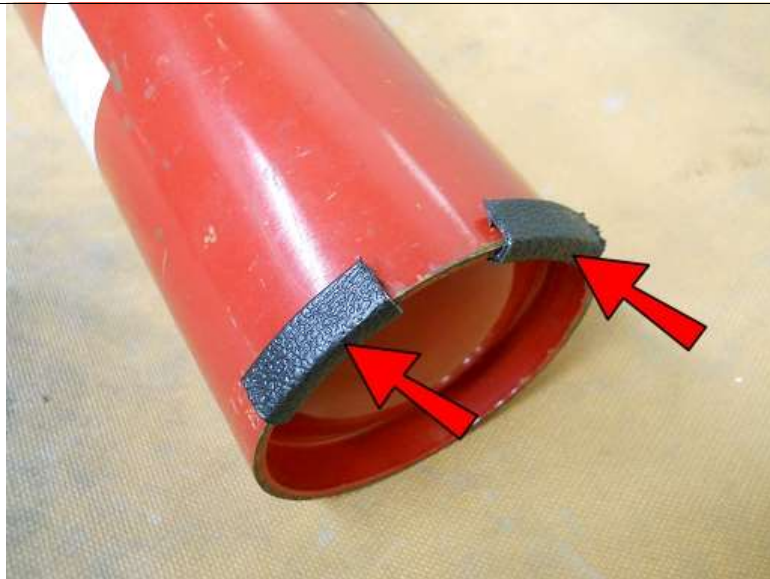
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For any cylinder larger than 8" diameter, place the 4 Edge Trim pieces as shown.

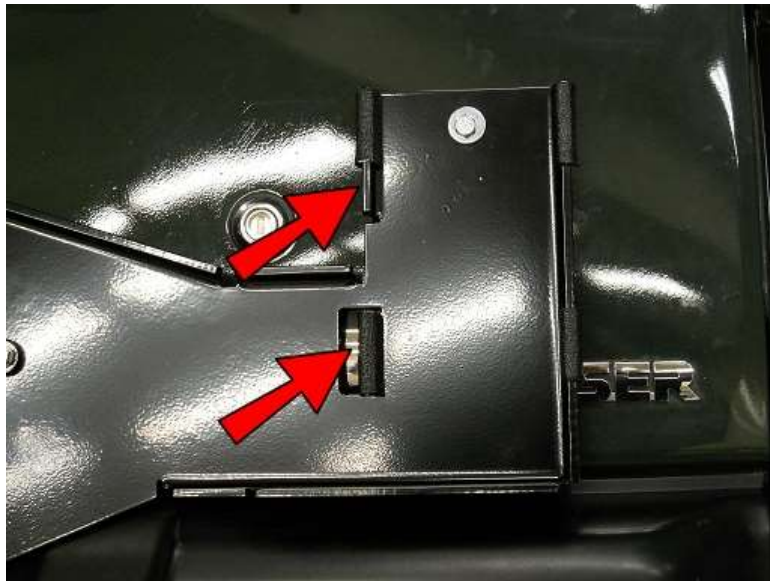


For any cylinder smaller than 8" diameter, attach an optional Small Dia. Adaptor Kit as shown, using the bolts, washers and nuts and place the 4 Edge Trim pieces on the adaptor as shown.





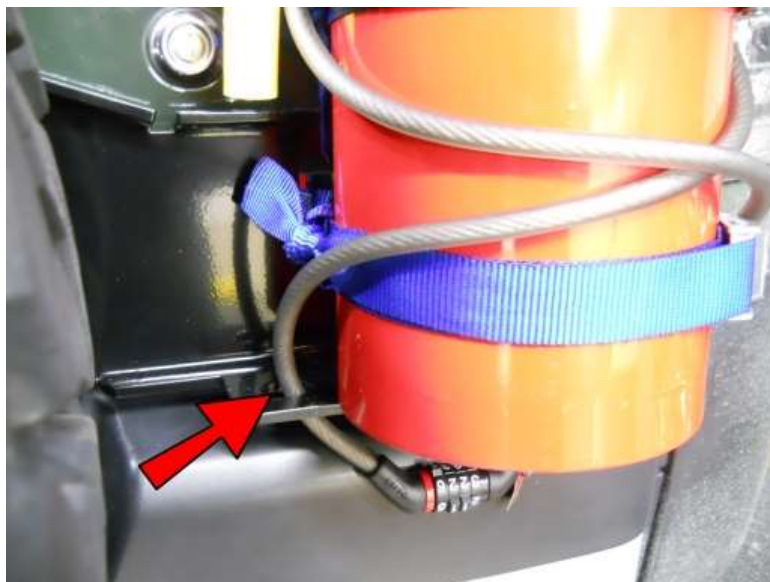
A couple of extra Edge Trim pieces are included to place onto the bottom of any cylinder that has a lip such as a fire extinguisher or a propane tank. If you are mounting any other metal cylinder without a lip, you should pad it somehow so that the metal surfaces are protected.



You can use a variety of straps such as cinch straps, ratchet straps, stainless steel hose clamps or spring loaded T-bolt clamps.

Bungee straps or anything that can flex are not recommended for stability.

Whatever strap you choose, insert them where the 2 arrows indicate, and bring them around the back of the mount to secure.



This hole is for locking your cylinder to your JM2 Mount. You can use a bike combo lock cable as shown or any other cable or chain secured with a padlock in that hole. If you are mounting a fire extinguisher, remember to remove the lock prior to hitting the trail so it is readily available!



If you received the optional RP1 attachment, start by putting four washers onto the four M6 Bolts.



Insert 2 of them into the bottom of the optional bracket.



Insert that into the 2 holes on the bottom of the JM2.



Insert the other 2 bolts with washers into the 2 holes on the top of the optional bracket then into the JM2. (Your bracket may differ slightly).

Now secure all 4 bolts with washers and nuts.

Finally, attach the components for your optional accessory.

It is recommended that at this point you double check that ALL connections are tight. Replace your spare and camera and that's it!

Enjoy! And remember....Not all who wander are lost!