



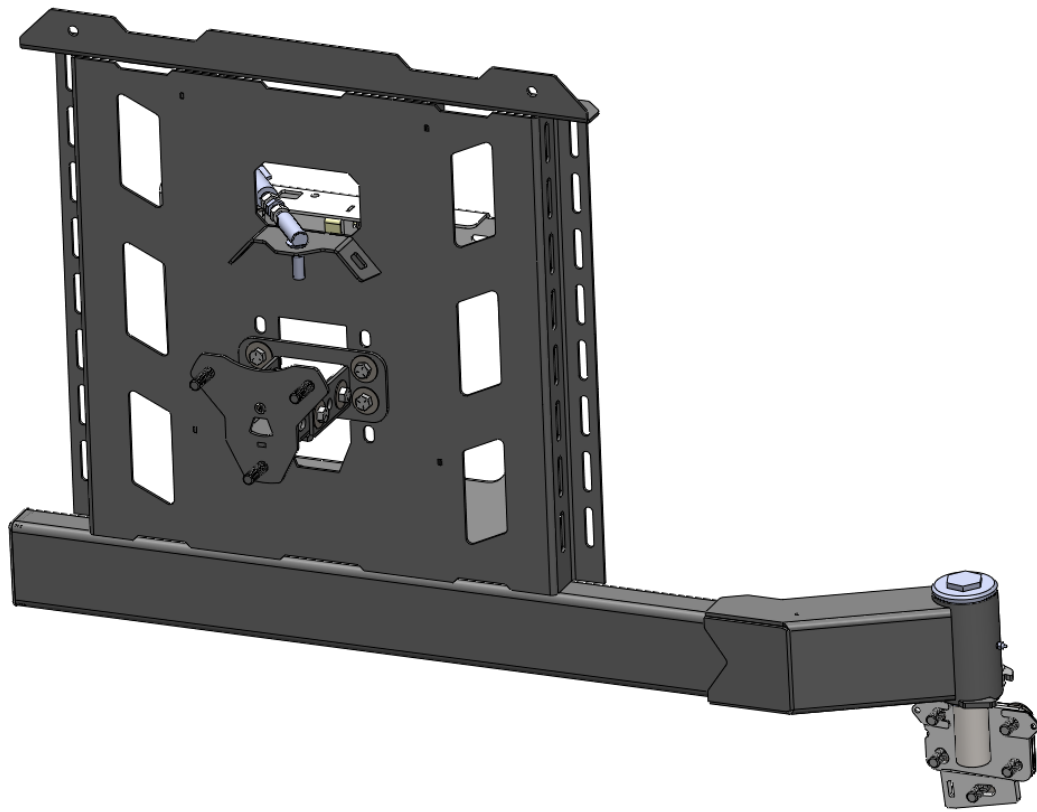
**DESTROYER SERIES**

**BRONCO**

2021 BRONCO  
REAR BUMPER TIRE CARRIER



**\*VERIFY YOU HAVE ALL THE COMPONENTS BEFORE STARTING THE INSTALLATION. REFER TO THE ENGINEERING DRAWINGS AT THE END OF THIS DOCUMENT FOR A COMPLETE PARTS LIST\***



## Spindle Installation

\*\*\*Be sure to read the instructions completely before beginning. Read the instructions for installing your Rear Bumper before starting the Tire Carrier installation. If you have rear parking sensors, it will be easier to install these before installing the Tire Carrier Spindle.\*\*\*

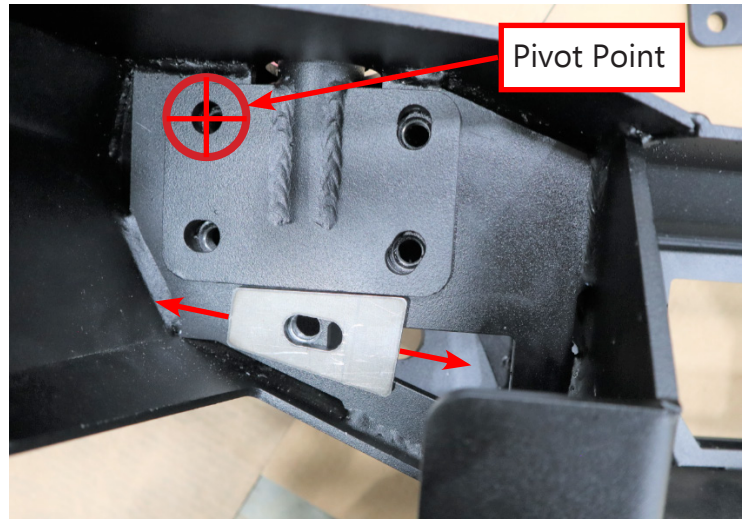
The Spindle for your new Tire Carrier is a separate component. This allows you to install the Spindle and Tire Carrier at any time. The Spindle is also adjustable to allow for perfect alignment to your Rear Bumper.

Start by inserting the Spindle into the Rear Bumper as shown here.

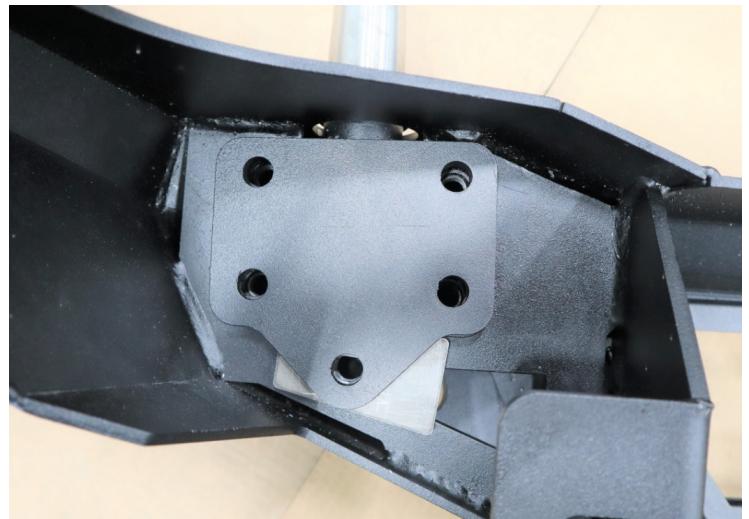


The Spindle Plate has 3 holes that are slotted and one hole that is the pivot. When installed, the Spindle will rotate slightly about the pivot.

Install the Stop Wedge as shown here. The stop wedge is used to support the spindle once in position. The Stop Wedge also has a slotted hole. This allows you to adjust the Stop Wedge side to side no matter what position the Spindle is set to.

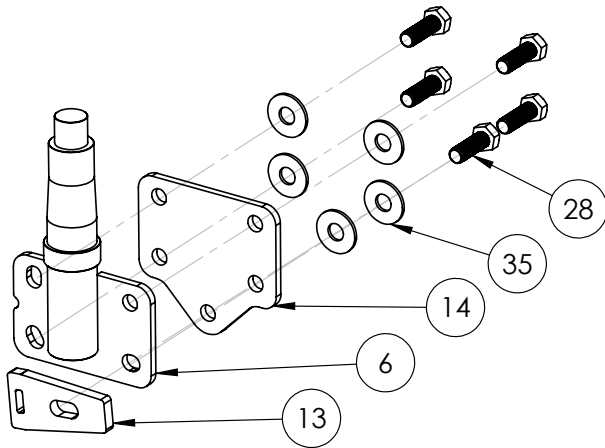


Place the Shear Plate over the Spindle and Stop Wedge as shown here.



Install the five Ø1/2" Hex Bolts and Washers. Just barely snug these bolts so that the Spindle is secure but still able to pivot slightly. If you have trouble pivoting the Spindle, try adjusting the Stop Wedge side to side.

Be sure the bolts thread in easily and completely. If a bolt does not go in easily, you may need to clean out the threads a little with a small brush or a tap. Also be sure you are using the correct bolt. You should not force a bolt because it can damage the threads.



Complete the Rear Bumper installation using the Rear Bumper instructions.



## Door Plate Installation

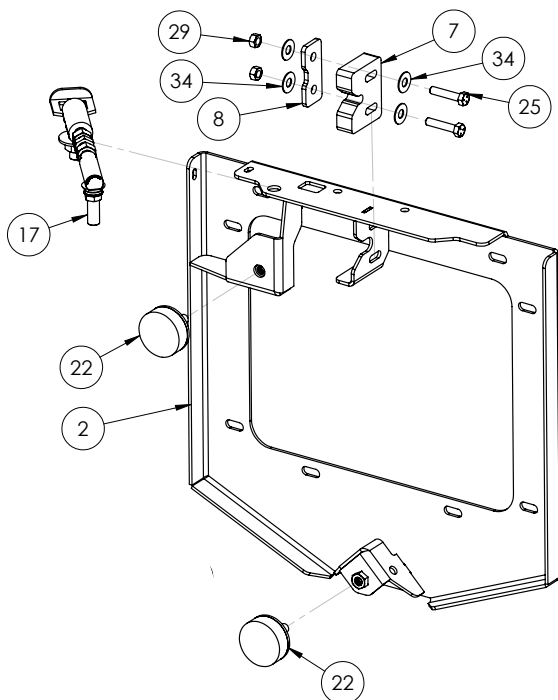
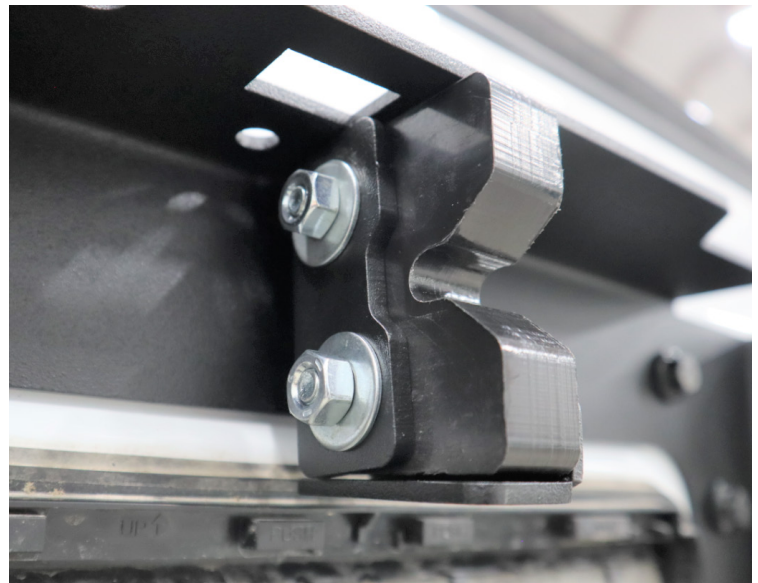
Remove your stock tire carrier and install the Door Plate as shown here using the 8 stock bolts. (Your actual Door Plate may look slightly different)



Loosely install the Striker Plate and Striker Backup Plate using two Ø5/16 Hex Bolts, Nuts and Washers.

Install the two large Rubber Isolators.

Install the Quick Release Latch as shown using the Ø1/2" Hex Nut (Fine Thread) and 1/2" Washer. (The Quick Release Latch is pre-assembled for your convenience.) The spring loaded side of the latch will mount to the Door Plate.



## Tire Carrier Swing Arm Installation

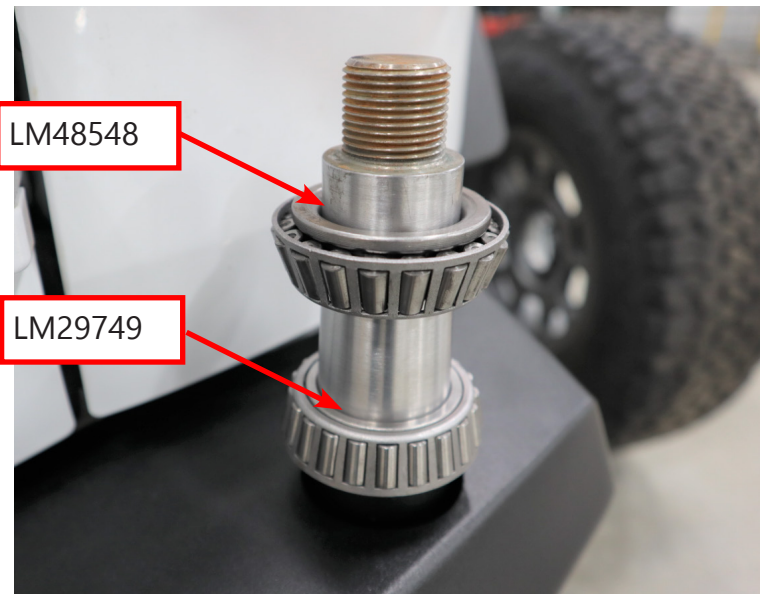
Check to make sure the bearings fit on the Spindle.

Place bottom bearing LM29749 onto the spindle, tapered side up. It should slide down all the way and spin freely.

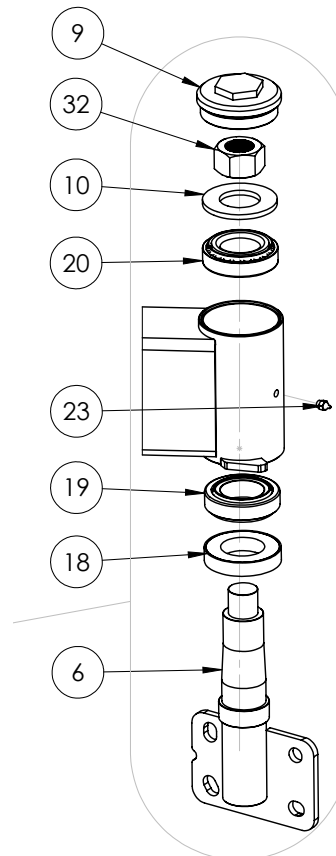
Place Top bearing LM48548 onto the spindle, tapered side down. It should slide down just a short distance and spin freely.

Make SURE to check the bearing number to be sure you have the correct one. The part number is etched on the bearing.

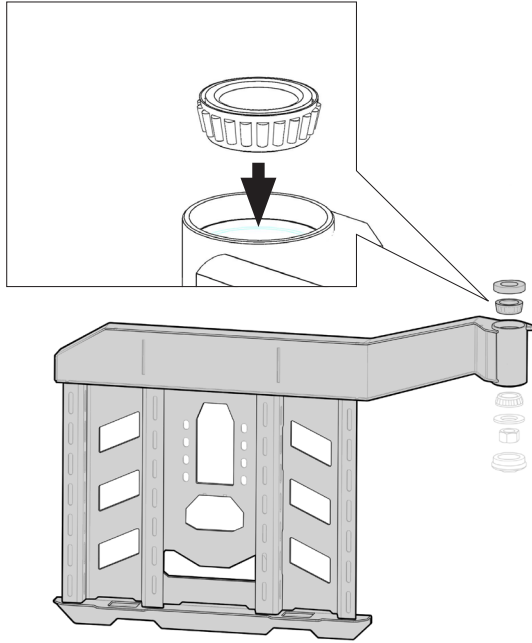
Be sure not to mix up the top and bottom bearings. If you have trouble getting the bearings all the way on, you may need to use a little grease or scotch brite pad.



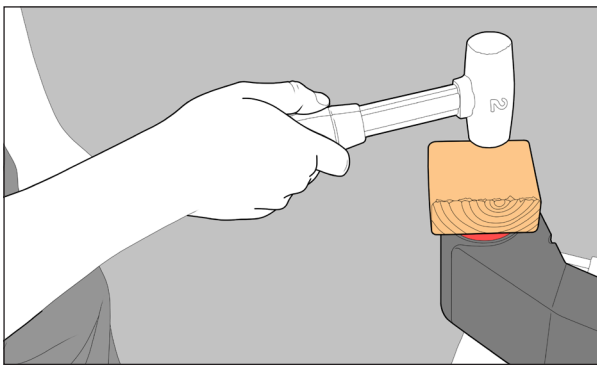
Now remove the bearings and pack them using red wheel bearing grease using the palm method. You can find an explanation and video of this online. Pack both bearings. Be sure to keep them separated so you don't get them mixed up.



Place the Bottom bearing LM29749 into the bottom of the Spindle Housing on the Tire Carrier Swing Arm. Be sure the tapered side is facing into the Housing. Its helpful to flip the Tire Carrier Swing Arm upside down before doing this so the bearing doesnt come unseated.



Place the Bearing Seal into the housing. The cupped side of the Bearing Seal should face into the housing. Lightly tap the seal into the housing opening using a hammer and a block of wood. Be careful to lightly and evenly tap the seal into place until its flush with the bottom of the housing.



Next with a helper, lower the Tire Carrier Swing Arm over the Spindle. Be careful not to damage the bearing or seal while doing this.

Once the Swing Arm is in place over the Spindle, drop the Top bearing into place.



Be sure the Top bearing is even and seated properly, then install the large Bearing Washer and Nut.

It is a good idea to add a little blue loctite to the Nut to prevent loosening. Slowly tighten the nut using a 1-1/2" Socket or wrench. Check the swing arm movement every 1/8th turn. The Swing Arm movement should not be restricted and should move freely. Overtightening could damage the bearings.

Install and tighten the Spindle Cap.



With the Tire Carrier Swing Arm installed, have a helper lift up on the end of the Swing Arm to pivot at the Spindle. Raise the end up approximately 1/2" above level.

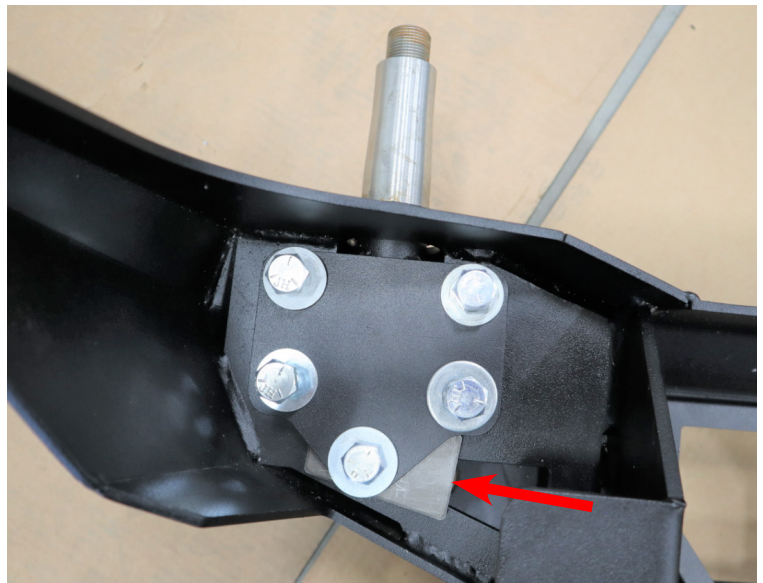
The 1/2" is a good starting point. Once you have installed your wheel and tire and all accessories you may need to adjust the Tire Carrier pivot up or down to be level again.

1/2"

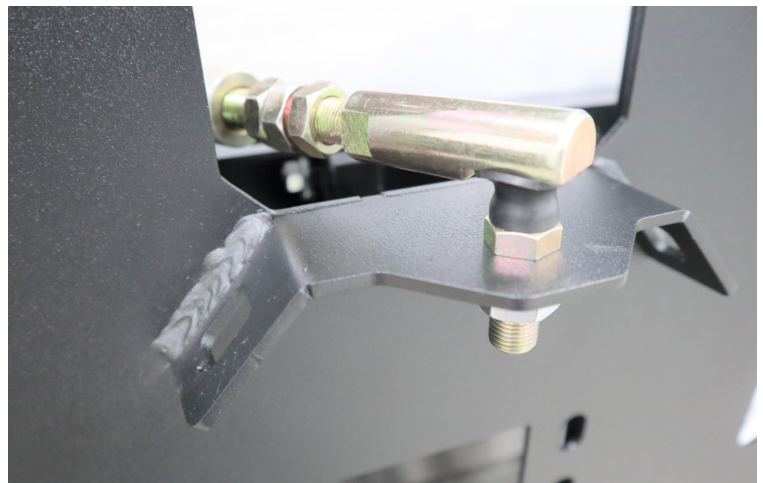


With your Tire Carrier held in position, push the Stop Wedge so that it is "wedged" under the Spindle. Then snug tight the five Hex Bolts that mount the Spindle and Stop Wedge. The Stop Wedge will support the weight of the Tire Carrier Swing Arm for now.

Once the installation is complete, you will torque these bolts to approx 60 ft-lbs.



Attach the other side of the Quick Release Latch to the Tire Carrier as shown here.



You can adjust the latch by turning the jack screw on the latch (middle nut). This changes the distance between the Tire Carrier and the tailgate.

**\*\*\*Close the tailgate with the Tire Carrier attached before adjusting the jack screw.\*\*\***



Adjust the Quick Release Latch jack screw so that the Tire Carrier is parallel with the back of the Bronco and parallel with the bumper.

The Tire Carrier should be parallel with the bumper and not too far in or out on the driver side.



TO LATCH or UNLATCH THE TIRE CARRIER:

#### UNLATCH:

With the tailgate open, stand between it and the Bronco. Your tailgate should be at least half way open. Push the thumb pad on the Quick Release Latch to release it from the stud on your Door Plate.

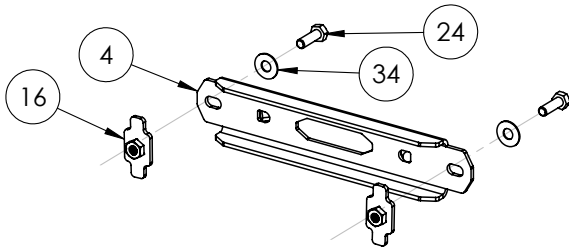
#### LATCH:

Open your tailgate at least half way. Press the thumb pad on the Quick Release Latch and engage it over the stud on your Door Plate.

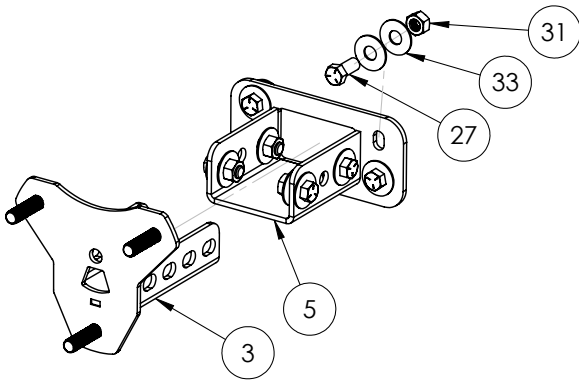
You will not be able to latch or unlatch the Tire Carrier with the tailgate closed.

Open your Tire Carrier and install the Alignment Guide **behind** the slotted rails on the Tire Carrier using Ø5/16 Hex Bolts and the Tabbed Hex Nut. The Alignment Guide should meet up with the Striker on the Door Plate. Leave these loose for now while you finish the installation.

This Alignment Guide should install on the 5th slot up, but could be different on your Bronco.

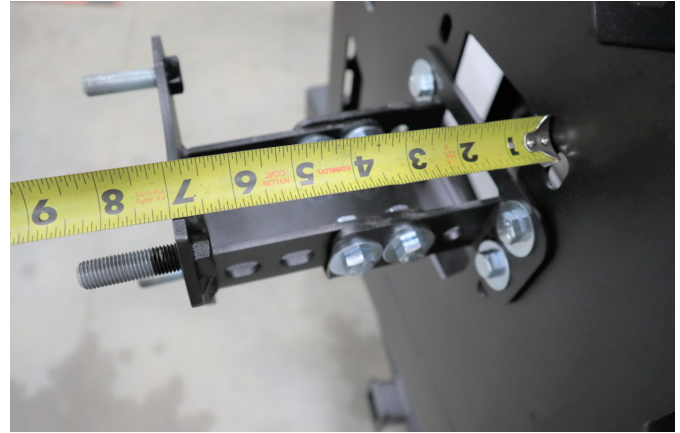


Install the Tire Mount and Tire Mount Bracket onto the Swing Arm using 7/16" Hex Bolts, Nuts and Washers. Measure the radius of your tire then transfer that measurement up from the top of the bumper to find the optimal position for your Tire Mount. We mounted ours in the middle position for a 35" tire.



Lay your spare tire on the floor and measure up from the floor to the back of the wheel. Transfer this measurement to the Tire Carrier Swing Arm. This will help get you close for setting the position of the Tire Mount. Subtract about a 1/4"-1/2" from the measurement to ensure your tire squeezes up on the Back Plane of the Tire Carrier Swing Arm. This may take a little trial and error to get the position set correctly.

Mount your spare tire and tighten the lug nuts. Make sure your tire is squeezed against the Back Plane and then check the gap between the Tire Mount and the back of your wheel.

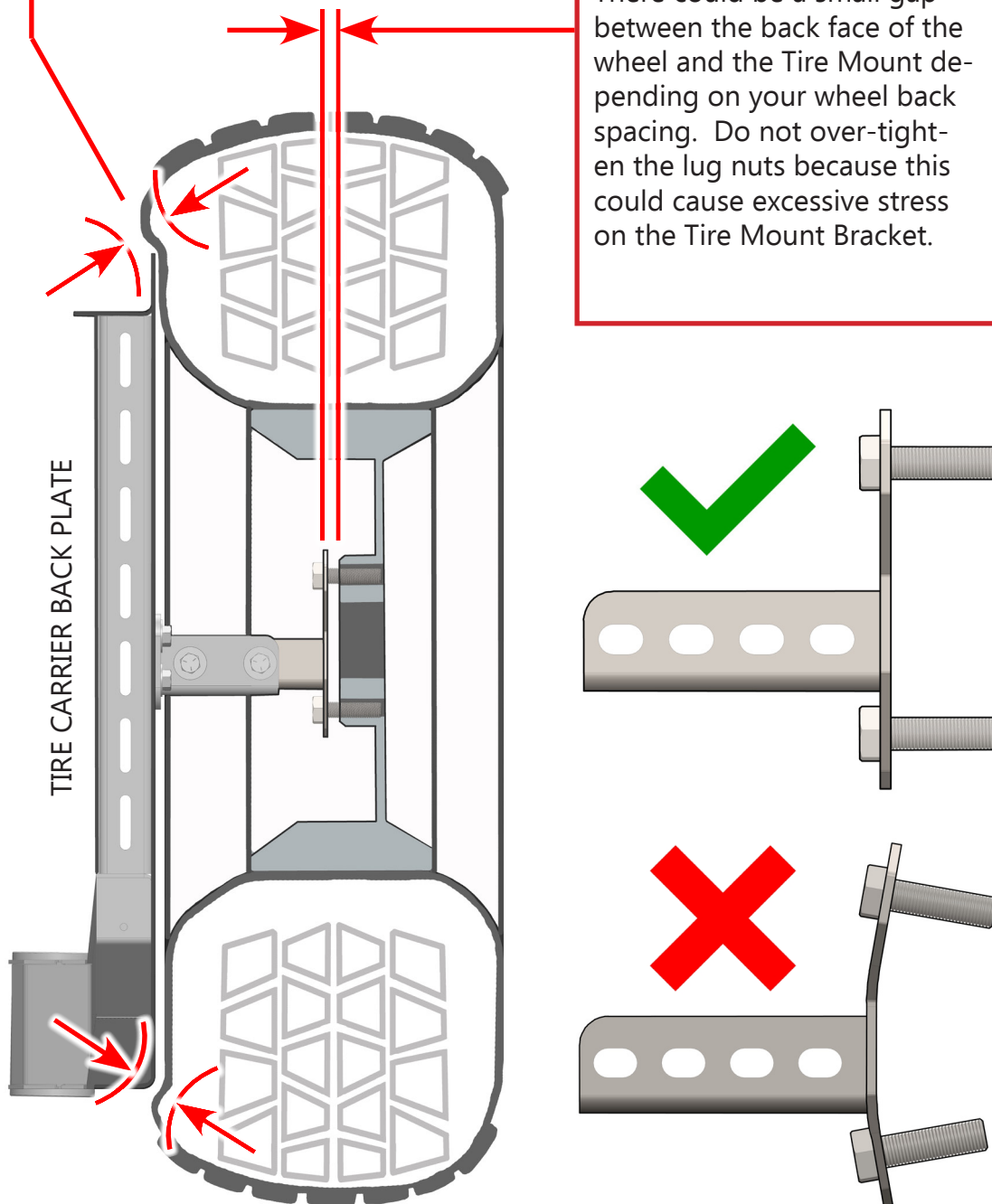


With the tire mounted, there could be a small gap between the back of the wheel and the Tire Mount approximately 1/4"-1/2". This is ok because the tire is pressed against the Tire Carrier Back Plane. The tire should be tight against the Back Plane and not able to wiggle side to side or up and down. This keeps the tire from shaking on the tire carrier.



Your tire should squeeze against the Back Plane of the Tire Carrier at the top and the bottom.

There could be a small gap between the back face of the wheel and the Tire Mount depending on your wheel back spacing. Do not over-tighten the lug nuts because this could cause excessive stress on the Tire Mount Bracket.



## **WARNING!**

To prevent excessive tire shaking, your tire must be squeezed and making contact with the Tire Carrier Back Plate. Failure to do so could lead to Tire Bracket failure and the loss of your tire.

## Alignment Guide & Rubber Bumper Adjustment

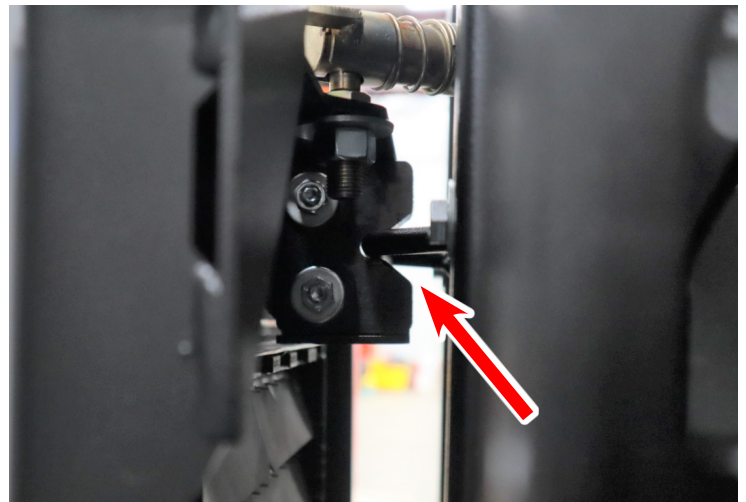
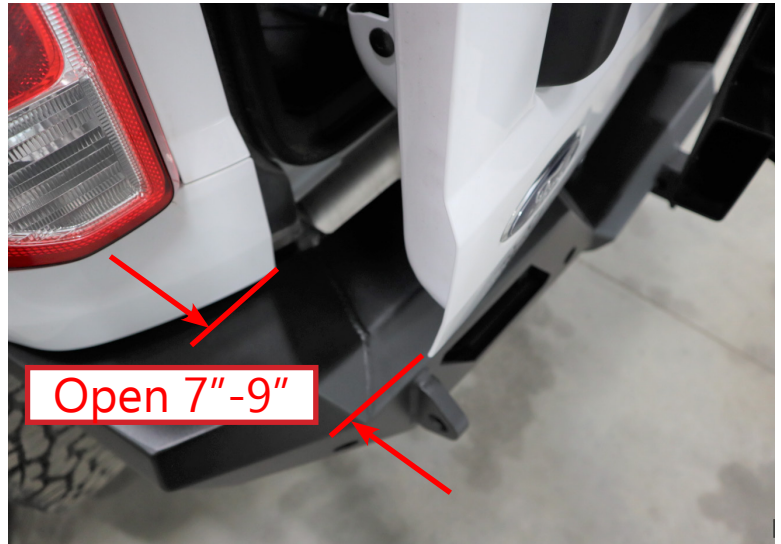


**\*\*The Tire Carrier should be fully loaded before making adjustments to the Alignment Guide\*\***

\*\*With the Tire Carrier fully loaded, the position of the Alignment Guide could shift down slightly due to the extra weight. You may need to re-adjust to compensate for the offset\*\*

Attach the spring loaded Quick Release Latch so the Tire Carrier and the tailgate swing together. As you close the tailgate, the Alignment Guide will travel upwards at an angle. The Alignment Guide bar should center up with the plastic Striker Plate as shown when the tailgate is open 7-9".

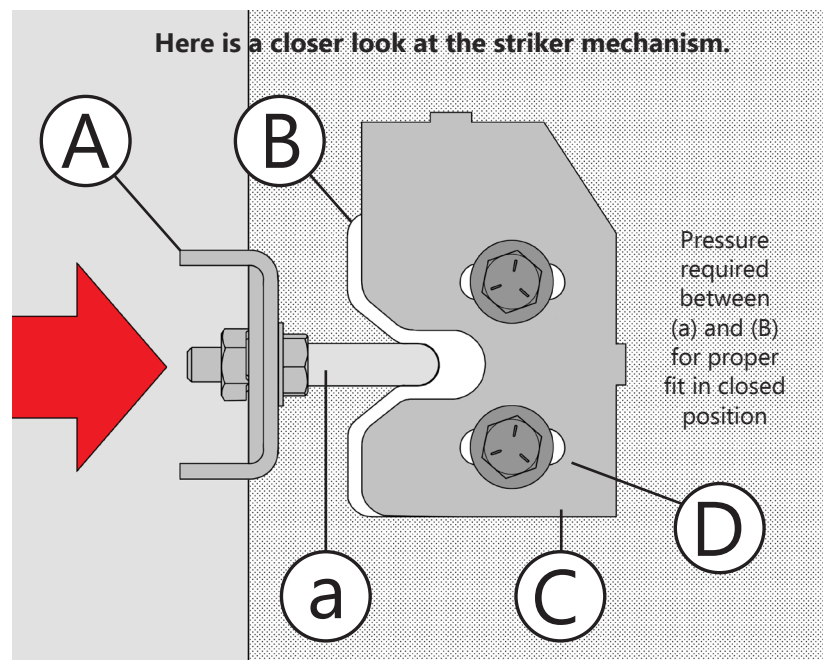
Tighten the two hex bolts to secure the Alignment Guide in this position.



The Alignment Guide and plastic Striker Plate should be engaged completely with the door open 7-9 inches.

The Alignment Guide bar **(a)** should be centered to the cutout in the Striker Plate **(B)** which is mounted on the Door Plate **(C)** and they should be making contact.

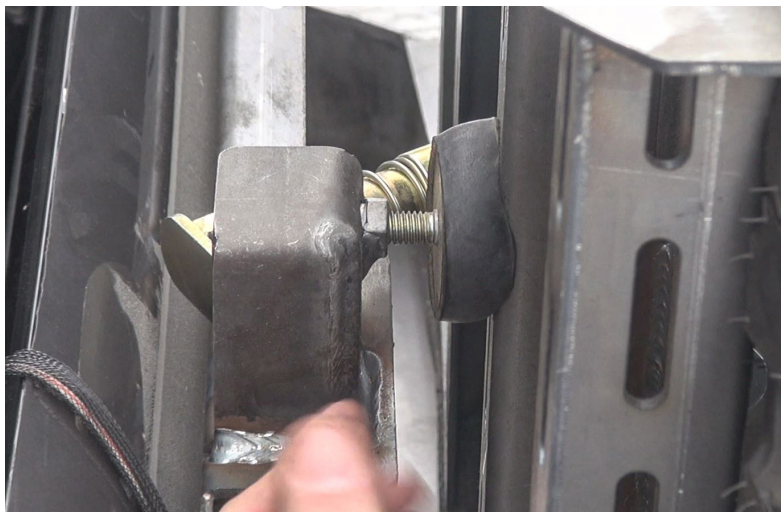
Tighten the Striker Plate Bolts **(D)** thoroughly. This way there will be a slight pressure exerted between **(a)** on **(B)** and it will help prevent the carrier from rattling.



With the tailgate and Tire Carrier open 7-9", adjust the Rubber Isolators so that they just make contact with the Tire Carrier.

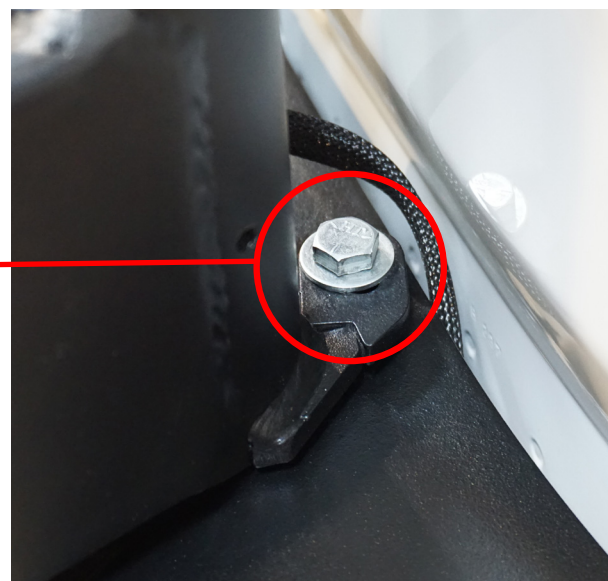
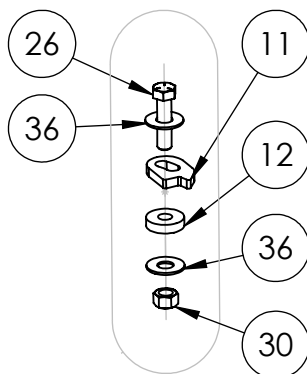
As you continue to close the Tire Carrier, the Rubber Isolators will compress and help keep the Tire Carrier rattle free.

With the Rubber Isolators now adjusted, double check to make sure your Striker Bar and Plate are still aligned. You may need to re-adjust them.



## Swing Stop Installation

Install the Tire Carrier Swing Stop. Be sure to adjust it to allow the Swing Arm to open completely and allow full use of your tailgate and tighten securely. If you have accessories mounted on your tire carrier, you can adjust this slightly to help avoid the accessories hitting the Bronco when you open the Swing Arm.



\*\*\*The Swing Stop is designed to allow the Tire Carrier Swing Arm to rest in the open position when the Bronco is out of level. It is also a safety feature that will help stop the Tire Carrier Swing Arm from swinging around and damaging your Bronco. Repeatedly allowing the Swing Arm to swing around uncontrolled could damage the Swing Stop. Always open the Swing Arm and allow it to gently rest against the Swing Stop.\*\*\*

## Tire Carrier Level Adjustment (if needed)

Now with the installation almost complete and the Tire Carrier weighted with your Spare Tire, and accessories, double check that the Swing Arm of the Tire Carrier is parallel with the Bumper.

If it is a little high or low you can adjust this by loosening the Spindle. If you make this adjustment you will also need to re-adjust your Alignment Guide and plastic Striker.

Parallel

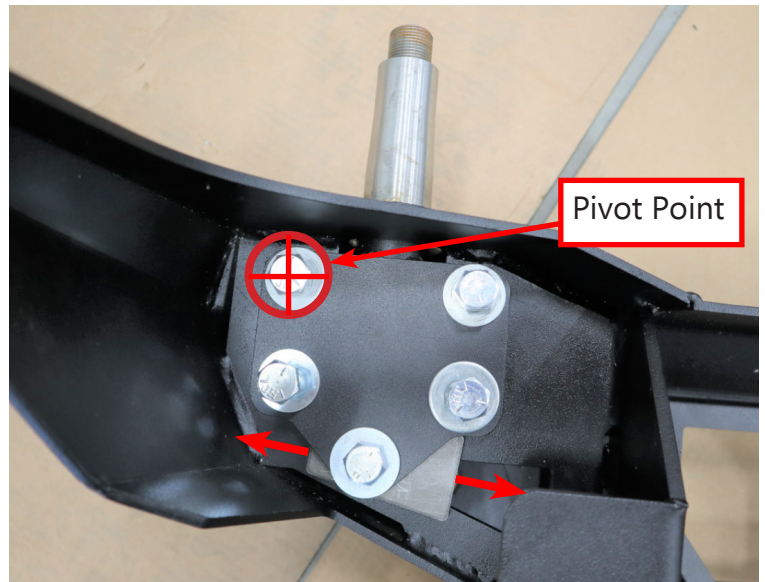


You can make this adjustment with the spare tire and the Swing Arm attached to the Rear Bumper.

Loosen the five Hex Bolts shown here. You will need a helper to hold the spare tire and Swing Arm in the parallel position. Or use some tall jack stands.

The Stop Wedge will likely be under pressure and "wedged" in place. You will need to pry it loose while pivoting the Spindle. Pry the Stop Wedge towards the center of the bumper to loosen it.

Once in the correct position make sure the Stop Wedge is again "wedged" in place and tighten all five Hex Bolts.



Once the installation is complete, you will torque these bolts to approx 60 ft-lbs.

## Tire Carrier Level Adjustment (continued - if needed)

Next check to make sure the Tire Carrier Swing Arm is not leaning backwards. The Swing Arm should be vertical or leaning towards the Bronco slightly.

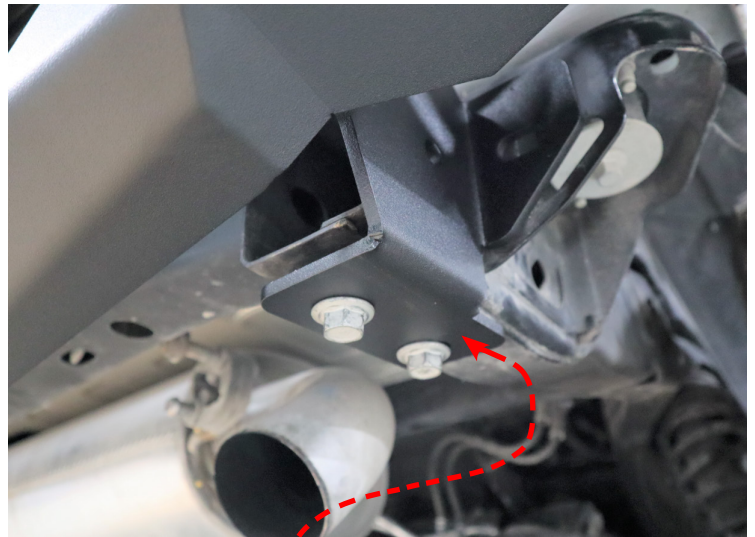
It should not be leaning away from the Bronco. If it is leaning away you can adjust it as shown below but you will also have to re-adjust your Striker Bar and Thumb Latch and Rubber Isolators.



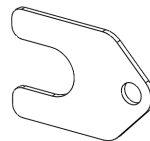
To lean the Tire Carrier Swing Arm toward the Bronco tailgate, you can insert the provided shims between the frame rail and the bumper mount in the position shown here.

You will have to loosen all the bumper mounting bolts but you should not have to remove them. Support the bumper at the hitch with a jack or jack stands when doing this.

Placing up to two shims between the frame rail and the bumper mount at this bolt location on both sides of the bumper will cause the bumper to pivot upwards slightly when the bolts are tightened.



Insert Shims Here



That completes the installation! Be sure to double check that all your bolts are tight!!!

**300 LBS MAX.**

**Specifications:**

**Max Tire size:**  
40" without accessory mounts  
38" with accessory mounts

**Weight Limits:**  
300 lbs Max combined weight  
(includes tire, accessories and accessory mounts)

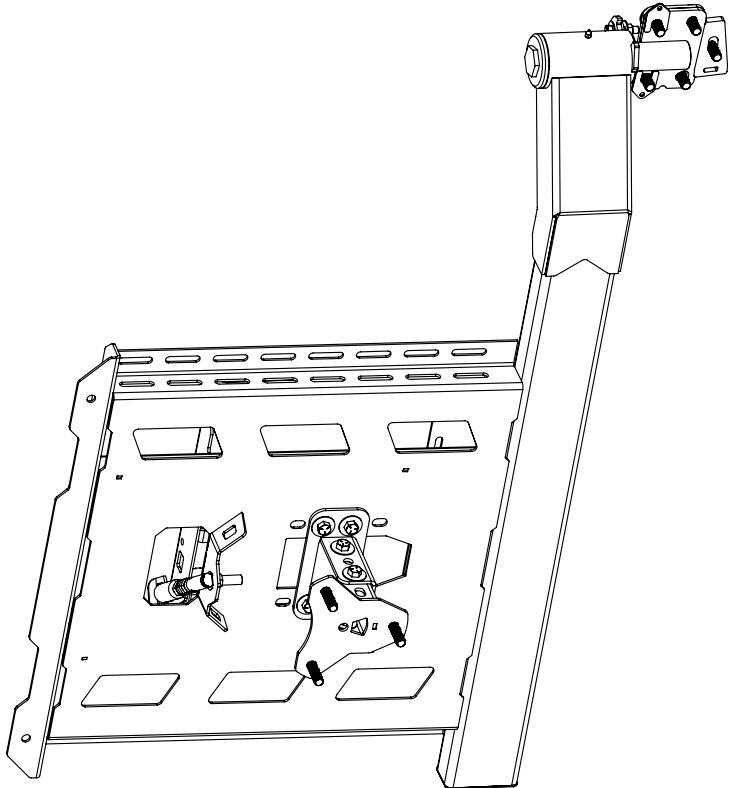

**\*\*Only install one accessory per side. Do not double stack accessories\*\***

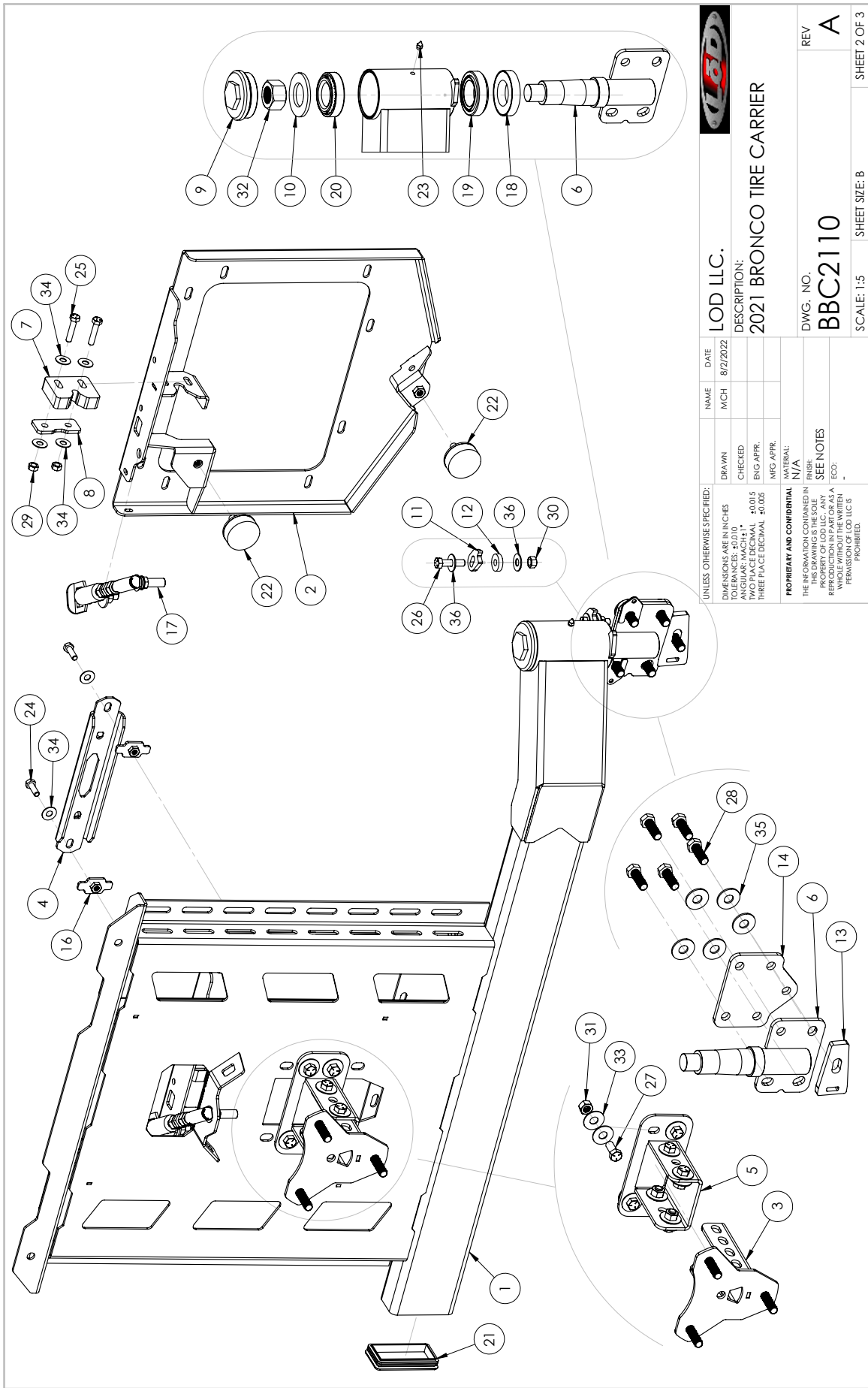
## **\*\*Maintenance\*\***

### **Tire Carrier & Swing Arm:**

- Once per year or as needed, add bearing grease to the Tire Carrier Swing Arm Spindle via the grease fitting on the side of the spindle. We suggest using a Lithium type automotive multi-purpose grease or wheel bearing grease (Red) that is water resistant.
- Periodically check and re-tighten all fasteners. Adjust the swing arm isolators and latch to ensure rattle free operation.
- Periodically check your Bumper and Tire Carrier and accessory mounts for scratches, dings, or rust spots which can happen over time or after heavy use. It is important to address these areas as soon as possible to prevent rust and corrosion from spreading. We recommend using Rustoleum® brand Black Semi-Gloss Protective Enamel (oil based). Apply using a foam brush by dabbing to match the powder coat texture.



		<b>NOTES:</b> 1. BBC2110 = BARE STEEL OPTION 2. BBC2111 = BLACK POWDER COAT 3. WEIGHT = APPROX 75.68 LBS				<b>2021 BRONCO TIRE CARRIER</b>		DWG. NO. <b>BBC2110</b> <b>BBC2111</b>		REV <b>A</b>		SCALE: 1:6    SHEET SIZE: B    SHEET 1 OF 3	
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	UNLESS OTHERWISE SPECIFIED:	DRAWN	CHECKED	ENG APPR.	MFG APPR.	MATERIAL	FINISH	SEE NOTES	ECQ	PROHIBITED
1	4BBC2100-02	BRONCO TIRE CARRIER SWING ARM	1	DIMENSIONS ARE IN INCHES TOLERANCES: ±0.010 ANGULAR: MACH ±1° HOLE PLACEMENT: ±0.015 THREE PLACE DECIMAL ±0.005	INCH	8/2/2022							
2	4BBC2100-01	BRONCO TIRE CARRIER DOOR PLATE	1										
3	4BBC2100-04	BRONCO DESTROYER TIRE MOUNT 6X5.5	1										
4	4JBC1800-04	ALIGNMENT GUIDE	1										
5	4JTC1001-04	TIRE MOUNT BRACKET	1										
6	4BBC2100-08	SPINDLE	1										
7	2JTC1001-43	POLYMER STRIKER PLATE	1										
8	2JTC1001-55	STRIKER BACKUP PLATE	1										
9	2JTC1002-03	SPINDLE CAP	1										
10	2JTC1001-22	BEARING WASHER	1										
11	2JBC1800-10	SWING STOP	1										
12	2JBC1800-11	SWING STOP SPACER	1										
13	2BBC2100-20	STOP WEDGE	1										
14	2BBC2100-19	SHEAR PLATE	1										
15	2BBC2100-23	TIRE CARRIER SHIM PLATE	4										
16	THN31182PGR5-01	TABBED HEX NUT 5/16-18 ZINC PLATE GR5	2										
17	4JTC1001-09	QUICK RELEASE LATCH	1										
18	450068	TIMKEN BEARING SEAL 450068	1										
19	LM29749	BOTTOM TAPERED BEARING	1										
20	LM48548	TOP TAPERED BEARING	1										
21	HP1009	HOLE PLUG 2.00 X 4.00"	1										
22	2JTC1001-52	RUBBER ISOLATOR	2										
23	2JTC0701-10	GREASE FITTING 1/4-28	1										
24	HB311816ZPGR5	HEX BOLT 5/16-18 X 1.00 ZINC PLATE GR5	2										
25	HB311824ZPGR5	HEX BOLT 5/16-18 X 1.50 ZINC PLATE GR5	2										
26	HB381624ZPGR5	HEX BOLT 3/8-16 X 1.500 ZINC PLATE GR5	1										
27	HB431416ZPGR5	HEX BOLT 7/16-14 X 1.00 HEX BOLT ZINC PLATE GR5	8										
28	HB501324ZPGR5	HEX BOLT 1/2-13 X 1.50 HEX BOLT ZINC PLATE GR5	5										
29	HN3118ZPGR5	HEX NUT 5/16-18 ZINC PLATE GR5	2										
30	HN3816ZPGR5	HEX NUT 3/8-16 ZINC PLATE GR5	1										
31	HN4314ZPGR5	HEX NUT 7/16-14 ZINC PLATE GR5	8										
32	HN1014ZPGR5	HEX NUT 1-14 ZINC PLATE GR5	1										
33	FW4318ZP	FLAT WASHER Ø7/16 X 1.25" ZINC PLATED	16										
34	FW3114ZP	FLAT WASHER Ø5/16" X .875" ZINC PLATE	6										
35	FW5022ZP	FLAT WASHER Ø1/2" X 1.375" ZINC PLATE	5										
36	FW3816ZP	FLAT WASHER Ø3/8" X 1.00 ZINC PLATE	2										



UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES		MCH	8/2/2022
TOLERANCES: ±0.010		DRAWN	
ANGULAR: MACH: ±1°		CHECKED	
HOLE LOCATIONS: ±0.015		ENG APPR.	
THREE PLACE DECIMAL: ±0.005		MFG APPR.	
<b>PROPRIETARY AND CONFIDENTIAL</b>		MATERIAL	N/A
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LOD LLC. REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF LOD LLC IS PROHIBITED.		FINISH	
		SEE NOTES	
		ECO:	
		DWG. NO.	BBC2110
		REV	A
		SCALE: 1:5	SHEET SIZE: B
			SHEET 2 OF 3



LOD LLC.

DESCRIPTION:  
2021 BRONCO TIRE CARRIER



**2021 BRONCO  
DESTROYER SERIES**

**TIRE CARRIER  
SHIPPING SHEET**

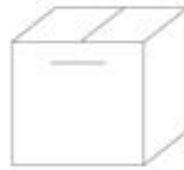
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Packaged by:

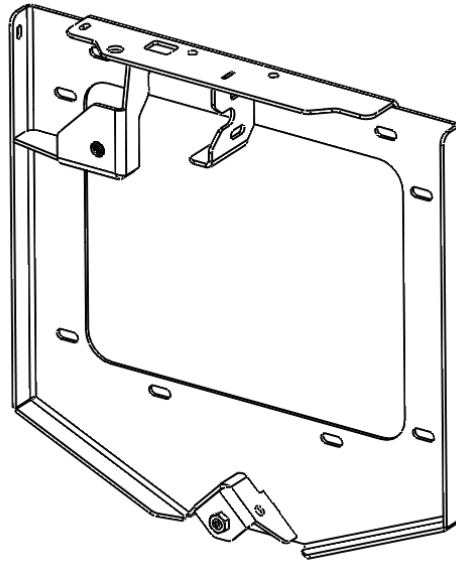
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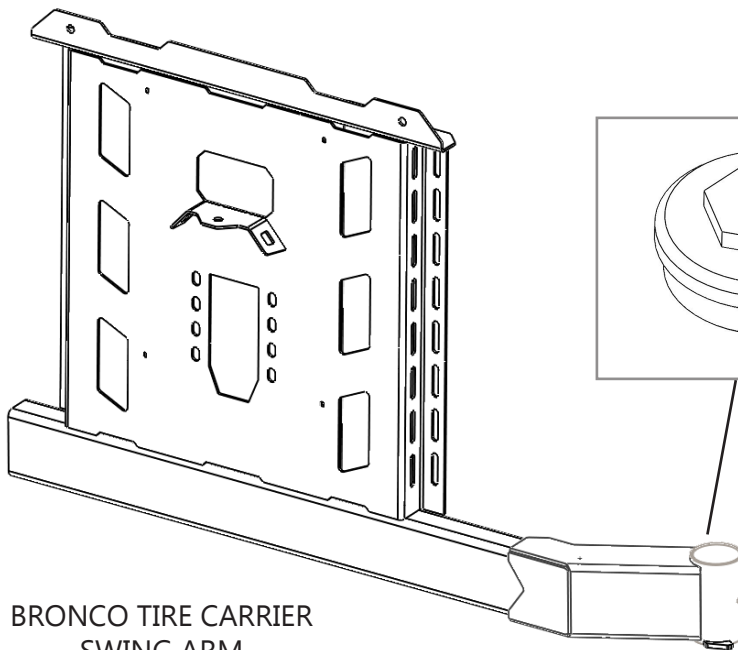


Hardware Kit  
(contents  
may vary)



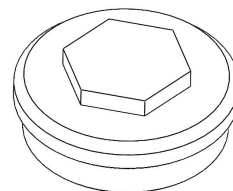
BRONCO TIRE CARRIER  
DOOR PLATE  
4BBC2100-01

**(x1)**



BRONCO TIRE CARRIER  
SWING ARM  
4BBC2100-02

**(x1)**



SPINDLE CAP  
2JC1002-03

**(x1)**



\*Installed in Tire Carrier Swing Arm



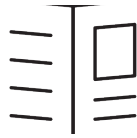
**2021 BRONCO  
DESTROYER SERIES  
TIRE CARRIER  
HARDWARE KIT**

Packaged by:

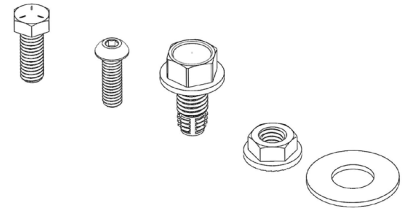
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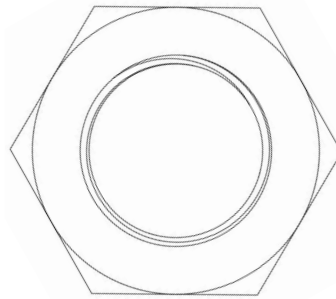
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INSTRUCTION  
SHEET



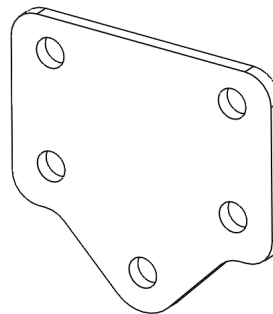
BOLT KIT  
(may vary)



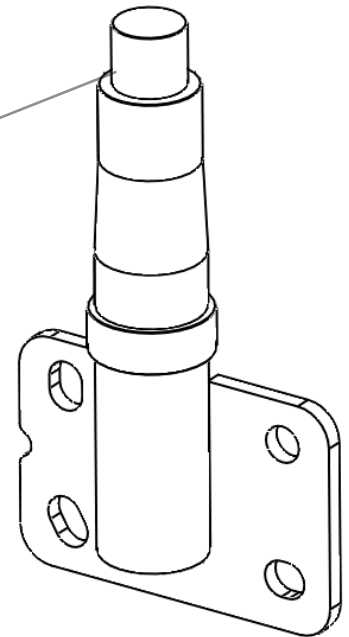
HEX NUT 1-14  
(36370)  
**(x1)**



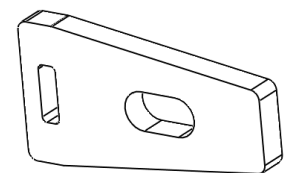
\*installed on tire carrier spindle\*



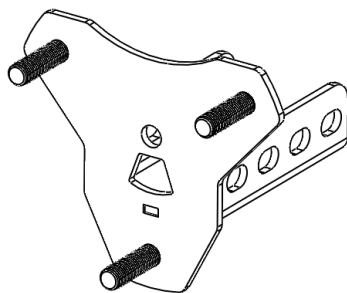
SHEAR PLATE  
2BBC2100-19  
**(x1)**



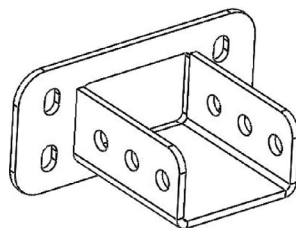
SPINDLE  
4BBC2100-08  
**(x1)**



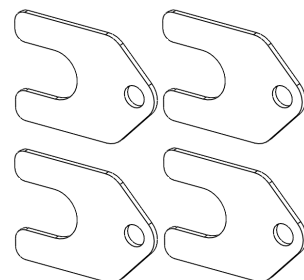
STOP WEDGE  
2BBC2100-20  
**(x1)**



BRONCO TIRE MOUNT 6X5.5  
4BBC2100-04  
**(x1)**

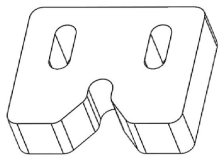


TIRE MOUNT BRACKET  
4JTC1001-04  
**(x1)**

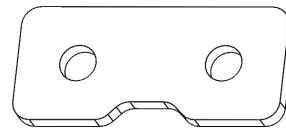


SHIM PLATE  
2BBC2100-23  
**(x4)**

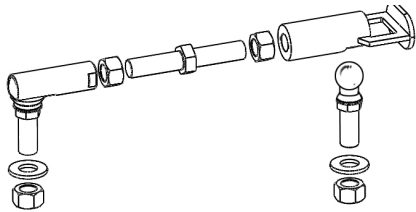




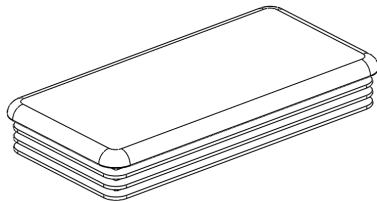
POLYMER STRIKER  
PLATE  
2JTC1001-43  
**(x1)**



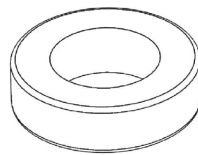
STRIKER BACKUP  
PLATE  
2JTC1001-55  
**(x1)**



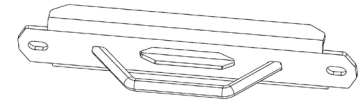
QUICK RELEASE LATCH  
4JTC1001-09  
**(x1)**



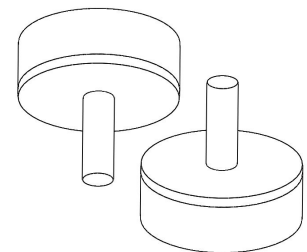
HOLE PLUG 2.00"X 4.00"  
HP1009  
**(x1)**



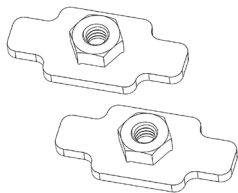
BEARING SEAL  
450068  
**(x1)**



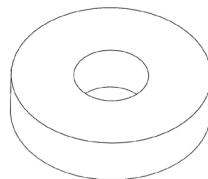
ALIGNMENT GUIDE  
4JBC1800-04  
**(x1)**



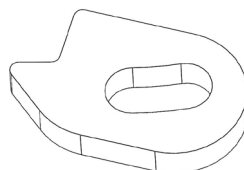
RUBBER ISOLATOR  
2JTC1001-52  
**(x2)**



TABBED HEX NUT  
5/16-18  
THN3118ZPGR5-01  
**(x2)**



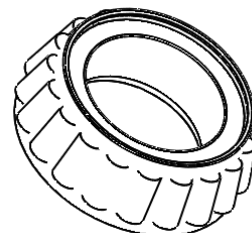
SWING STOP SPACER  
2JBC1800-11  
**(x1)**



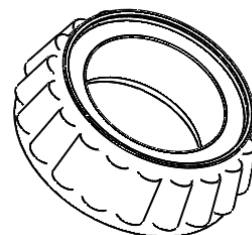
SWING STOP  
2JBC1800-10  
**(x1)**



GREASE FITTING  
1/4-28  
(58771)  
**(x1)**



TOP  
TAPERED  
BEARING  
LM48548)



BOTTOM  
TAPERED  
BEARING  
LM29749)





**2021 BRONCO  
DESTROYER SERIES**

TIRE CARRIER

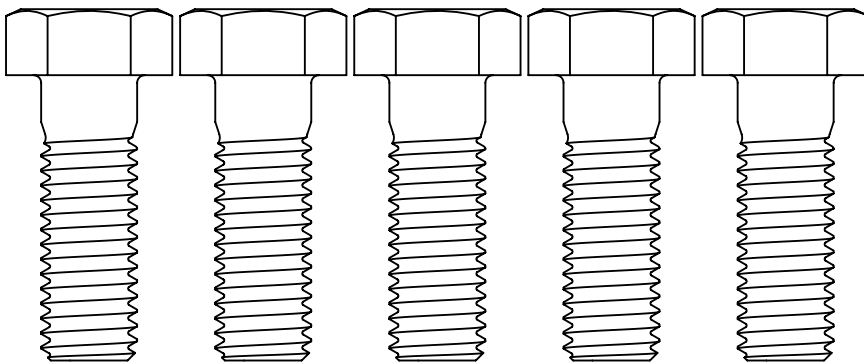
Bolt Kit

Packaged by:

\_\_\_\_\_

On:

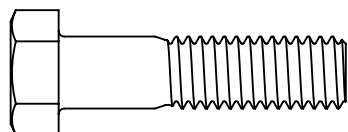
\_\_\_\_\_



HEX BOLT 1/2-13 X 1.50"

(113209)

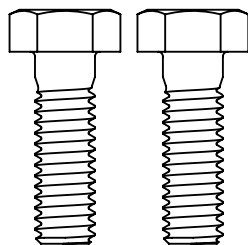
(x5)



HEX BOLT 3/8-16 X 1.50"

(13109)

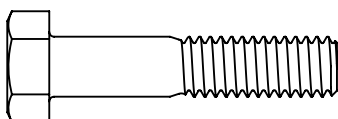
(x1)



HEX BOLT 5/16-18 X 1.00"

(113055)

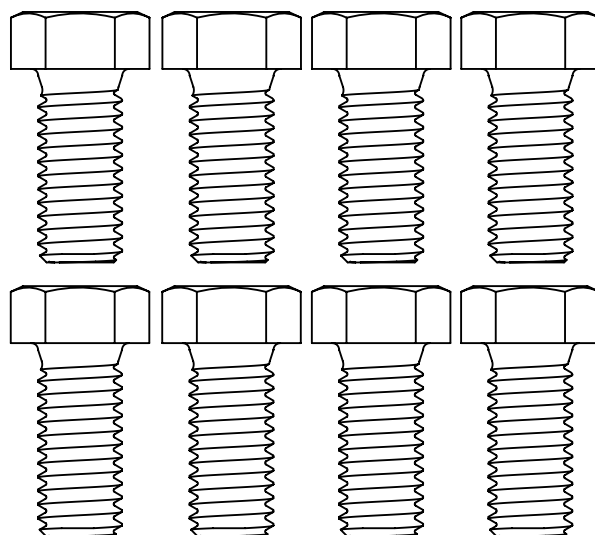
(x2)



HEX BOLT 5/16-18 X 1.50"

(13059)

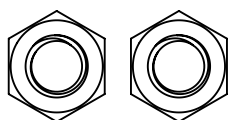
(x1)



HEX BOLT 7/16-14 X 1.00"

(13155)

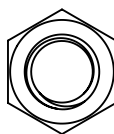
(x8)



HEX NUT 5/16-18

(36304)

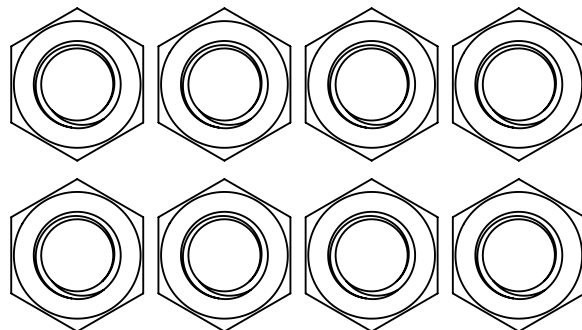
(x2)



HEX NUT 3/8-16

(36306)

(x1)

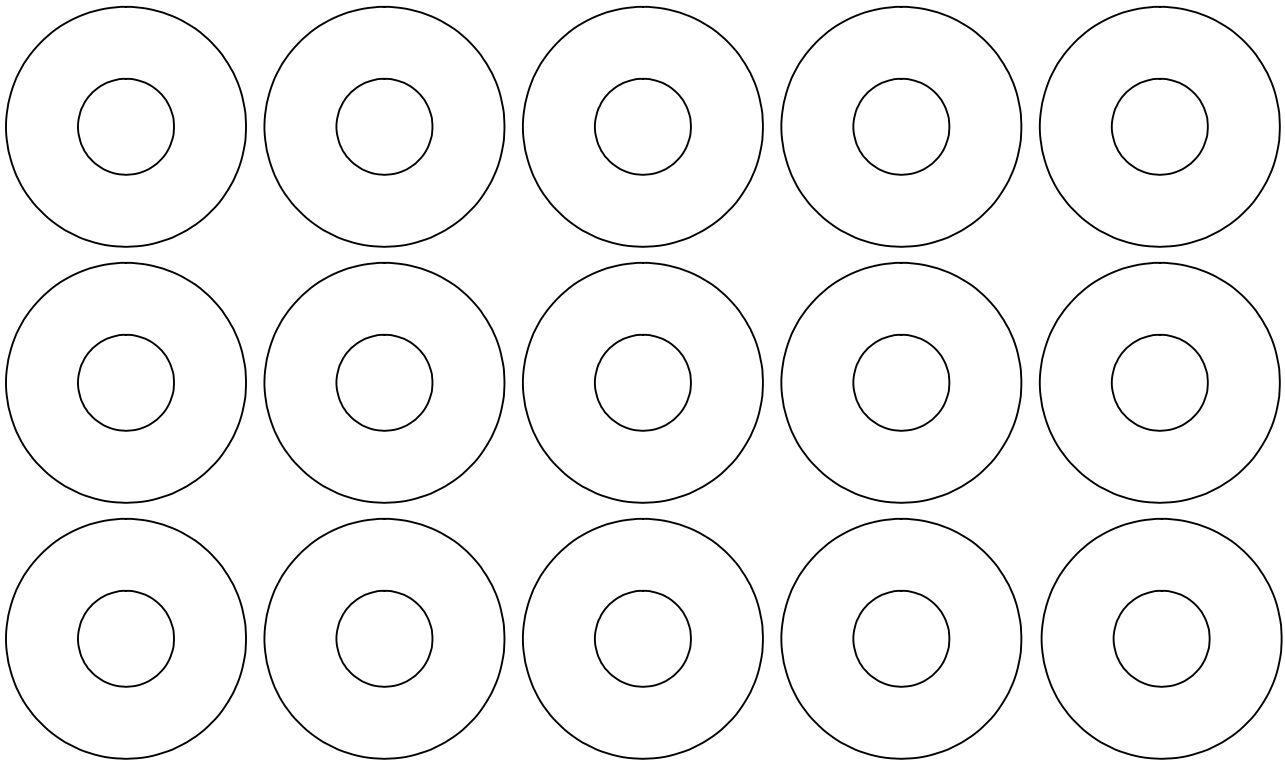


HEX NUT 7/16-14

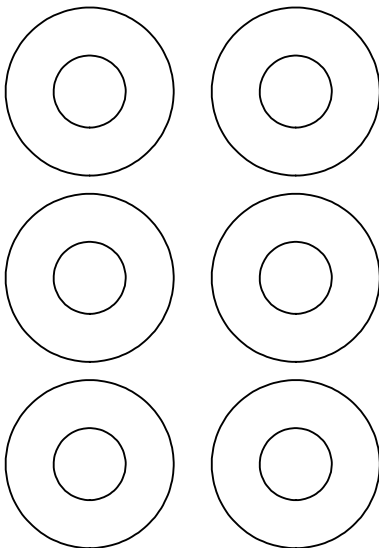
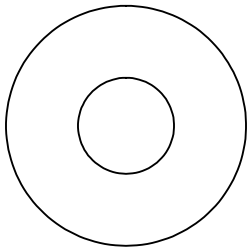
(36308)

(x8)

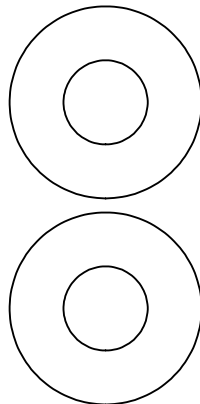




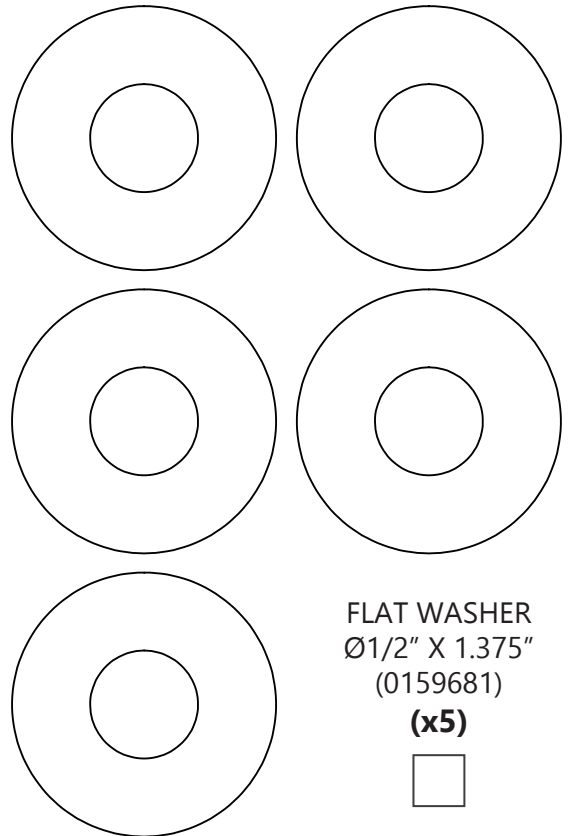
FLAT WASHER  
Ø7/16" X 1.25"  
(33010)  
**(x16)**



FLAT WASHER  
Ø5/16" X .875"  
(1133006)  
**(x6)**



FLAT WASHER  
Ø3/8" X 1.00"  
(0159679)  
**(x2)**



FLAT WASHER  
Ø1/2" X 1.375"  
(0159681)  
**(x5)**

