ROCK TAMERS®
MUDFLAP SYSTEM

RT-RT108 | RT-RT110

INSTALLATION INSTRUCTIONS

VERSION 1.1

Thank you for choosing Clearview Accessories®

Clearview Accessories began in 2006, as a family run business owned by entrepreneur, Mike Cowan and his son-in-law, Jay Praag. In the years that followed, Mike and Jay turned their small family business with three full-time employees, into one of Australia's most respected 4WD and Touring Brands.

With a strong passion for the automotive industry, quality design and discipline in professional workmanship, our trust is built within our values of creating high quality ADR compliant designs.

Since our inception, our unrelenting commitment to creating solutions found nowhere else, has helped us establish our position as a leader in manufacturing unique 4wd and touring accessories. With an entrenched enterprising spirit, we are dedicated to creating value for, and delighting our customers.

From humble beginnings, Clearview Accessories has grown and today manufactures a range of unique, quality products for your next off-road adventure!

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Due to Clearview's Continuous Improvement Program, information may change without notice. Clearview takes no responsibility for the result of incorrect use of these installation instructions.

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Parts List for RT-RT108 and RT-RT110

Part No.	Qty.	U/M	Description
RT034	1	EA	Center Hub / Matte Black Finish*
RT035	2	EA	M10 Ball Mount Clamp Bolt*
RT036	2	EA	M10 Jam Nut*
RT037	2	EA	M10 Split Washer*
RT038	1	EA	M10 Flat Washer *
RT039	1	EA	Hub Arm R (Right) / Matte Black Finish*
RT040	6	EA	Hub Arm L (Left) / Matte Black Finish*
RT041	6	EA	M6 Arm Clamp Bolt*
RT032	2	EA	M6 Nylon Insert Hex Nut*
RT042	2	EA	M18 Arm Pivot Bolt*
RT043	2	EA	M18 Split Washer*
RT044	1	EA	M18 Flat Washer*
RT027	2	EA	5mm Allen Wrench - Solid (Black)
RT045	2	EA	Flap Support Rod (Stainless Sleeved)
RT046	2	EA	Rod End Cap
RT017	2	EA	Flap End Cap
RT018	2	EA	M5 Flap Retainer Bolt (Round Head)
RT047	2	EA	M5 End Cap Bolt (Hex Head)
RT019	4	EA	M5 Nylon Insert Hex Nut
RT048	2	EA	Flap Clamp / Matte Black Finish
RT022	2	EA	Mudflap (SS Trim Plate)
RT023	10	EA	M8 Flap Clamp Bolt
RT024	10	EA	M8 Flat Washer
RT025	10	EA	M8 Nylon Insert Hex Nut
RT026	1	EA	Bolt Hole Punch (Black)
RT028	2	EA	Rock Tamers Trim Plate
RT049	16	EA	Trim Plate Bolt (STAR PIN™)
RT030	16	EA	M6 Trim Plate Spacer
RT031	16	EA	M6 Flat Washer
RT032	16	EA	M6 Nylon Insert Hex Nut
RT050	1	EA	Locking STAR PIN™ Wrench (Black)
RT057	1	EA	2.5" Center Hub/Matte Black Finish.* (Only if RT-RT110 is purchased)
IM002	1	EA	RT-RT108/RT-RT110 Instruction Manual
*HUB ASSRMBLY - FACTORY ASSEMBLED			

If anything is missing, or damaged, please do not install your new Rock Tamers® and contact us on **03 8351 9933** or via: **info@clearviewaccessories.com.au**

Inch-Pounds (in-lbs)	Foot-Pounds (ft-lbs)	Newton-Meters (N-m)	Kilogram-Centimeters (kg-cm)
20	1.7	2.3	23
30	2.5	3.4	34
70	5.87	7.9	79
80	6.7	9.0	90
180	15	20	203
1500	125	169	1690

If anything is missing, or damaged, please do not install your new Rock Tamers® and contact us on **03 8351 9933** or via: **info@clearviewaccessories.com.au**

Tools Required:

- Wrench/Ratchet Wrench and socket sizes:
  – 8mm, 10mm, 13mm, 17mm, & 27mm (or a wrench adjustable up to 27mm)
  – Locking STAR PIN™ wrench (included in kit)
  – 5mm locking Allen wrench (included in kit)
- Utility knife
- Tape measure or yardstick.
- Straight edge for cutting guide at least 24” in length, or 61 cm long
- Hammer or mallet

CAUTION **WARNING**

- Read through the fitting instructions before installation of Clearview Accessories.
- Always install the accessory following the fitting instructions. Failure to do so may cause damage to the vehicle or the accessory and will void your warranty.
- Ensure all packaging materials are recycled and/or disposed of in accordance with local regulations.
- Safely store and protect any removed vehicle components.
- Remove all metal swarf and dust from all vehicle surfaces if the surface is used for accessory installation.
- Consumer assumes all risks associated with product performance after installation. Rock Tamers® will not protect everything and everyone from harm. Results may vary depending on road surface and conditions, vehicle types, weather conditions, installation, and driving input. Please apply common sense to your expectations relating to product performance.
- **Car Washes;** You must remove the mudflap system before entering any drive-through car wash.

EXHAUSTS:

Any modifications to the factory-installed exhaust system may void your manufacturer's warranty.

Adequate clearance must be maintained to prevent heat damage to the flaps. If this cannot be achieved we suggest fitting a 90degree dump or curved aluminum heat deflector to the tailpipe. This will divert hot gasses away from the flaps.

For vehicles with exhausts that cannot be diverted we suggest attaching an aluminum heat shield to the mud flap clamp bolts in the vicinity of the exhaust. This will deflect the heat while allowing the flap to move freely.

Common sense should prevail, if you feel your flaps are getting too hot because of the exhaust then have the modification done.

PERFORMANCE:
The static angle of the flaps can be increased up to 35 degrees from the vertical. This will enhance the performance of the flaps and help eliminate the chance of stones re-bounding back onto the tow vehicle. **When travelling, the flaps need to be sitting at about 45 degrees to be effective. Adjusting the static angle will help achieve this.**

Some Australian vehicles (for example the 200 series LandCruiser) require the center hub to be turned upside down which lowers the pivoting point of the support arms by about 35mm. Doing this lessens the angle required of the supporting arms, allowing the rear tailgate to be opened without damage.

If the center hub and supporting arms are mounted on a 200 series LandCruiser without this modification, you cannot open the rear tailgate. It is also important to increase the static angle of the flaps even more because the flaps sit further away from the vehicle.

Clearview Accessories provides a free Rock Screen with every set of Rock Tamers. This lightweight mesh insert is also available to be purchased separately for vehicles regularly travelling on gravel roads and off road driving. This insert, when fitted between the two flaps, will reduce the occurrence of stray stones, debris etc. rebounding off the A-frame of your tow vehicle. Available in two sizes: 750mm wide and 900mm wide.

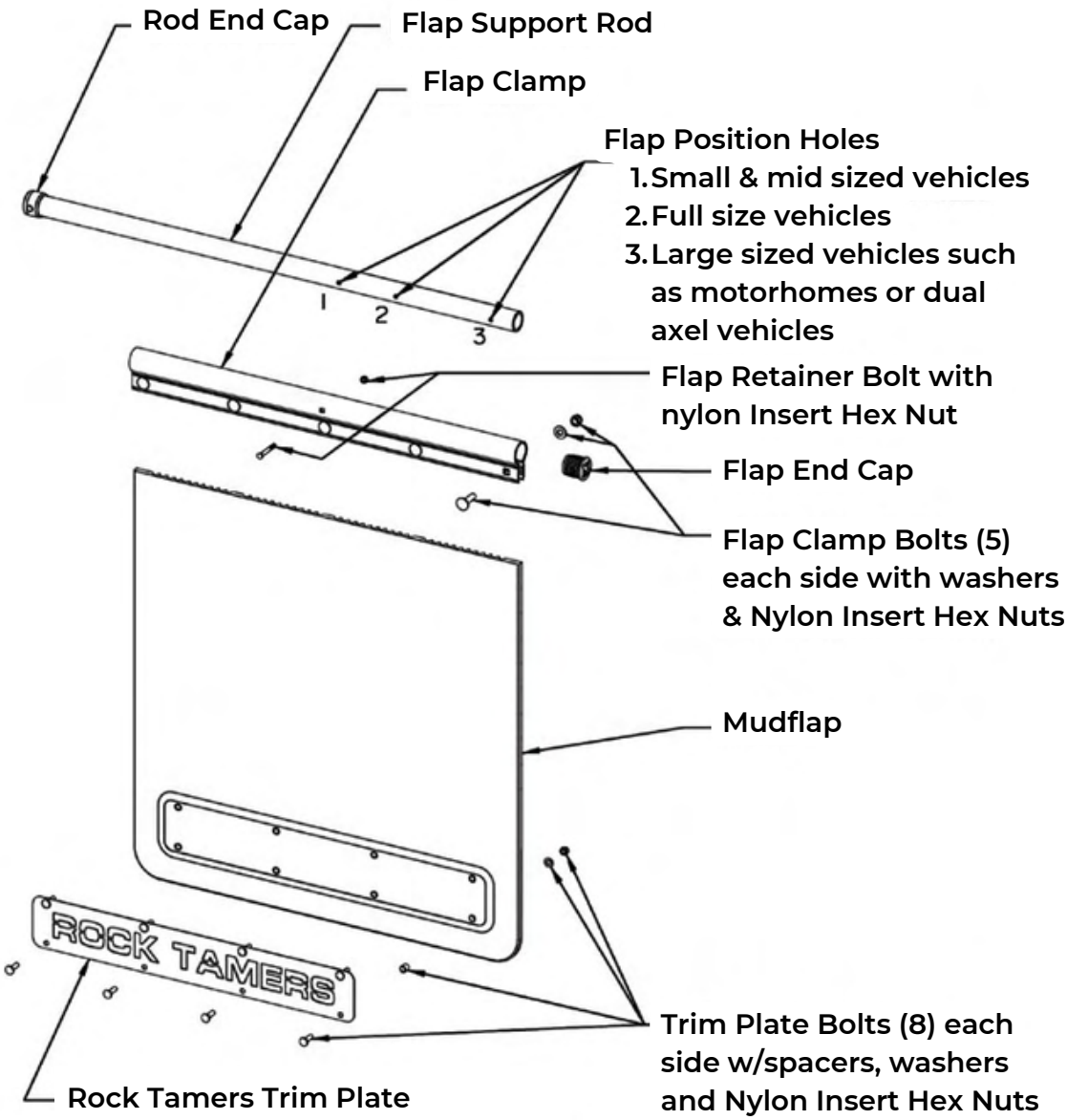
MAINTENANCE:

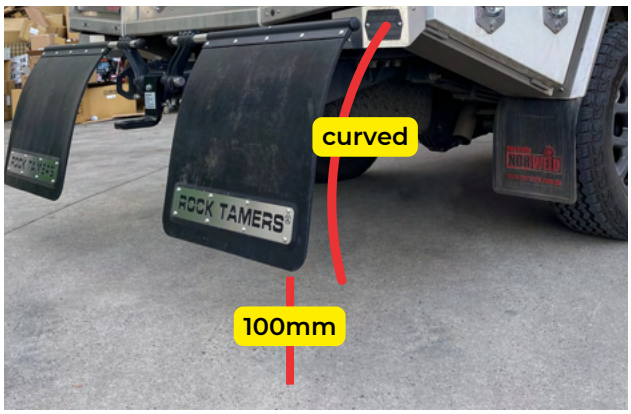
Car Washes: You must remove the mudflap system before entering any drive-through car wash.

Extend the life of your Rock Tamers: When not in use, spray the hub and fittings with a lanolin-based spray and wipe off excess. This will protect against corrosion etc. particularly when used salty conditions.

Before travelling, check all bolts to ensure that they are tight. For optimum service and life, check components and the torque on all bolts prior to each use.

Rock Tamers will not protect everything from harm. Results may vary depending on road surface and conditions, vehicle types, weather conditions, installation and driving input (particularly speed). Please apply common sense to your expectations relating to the product's performance.

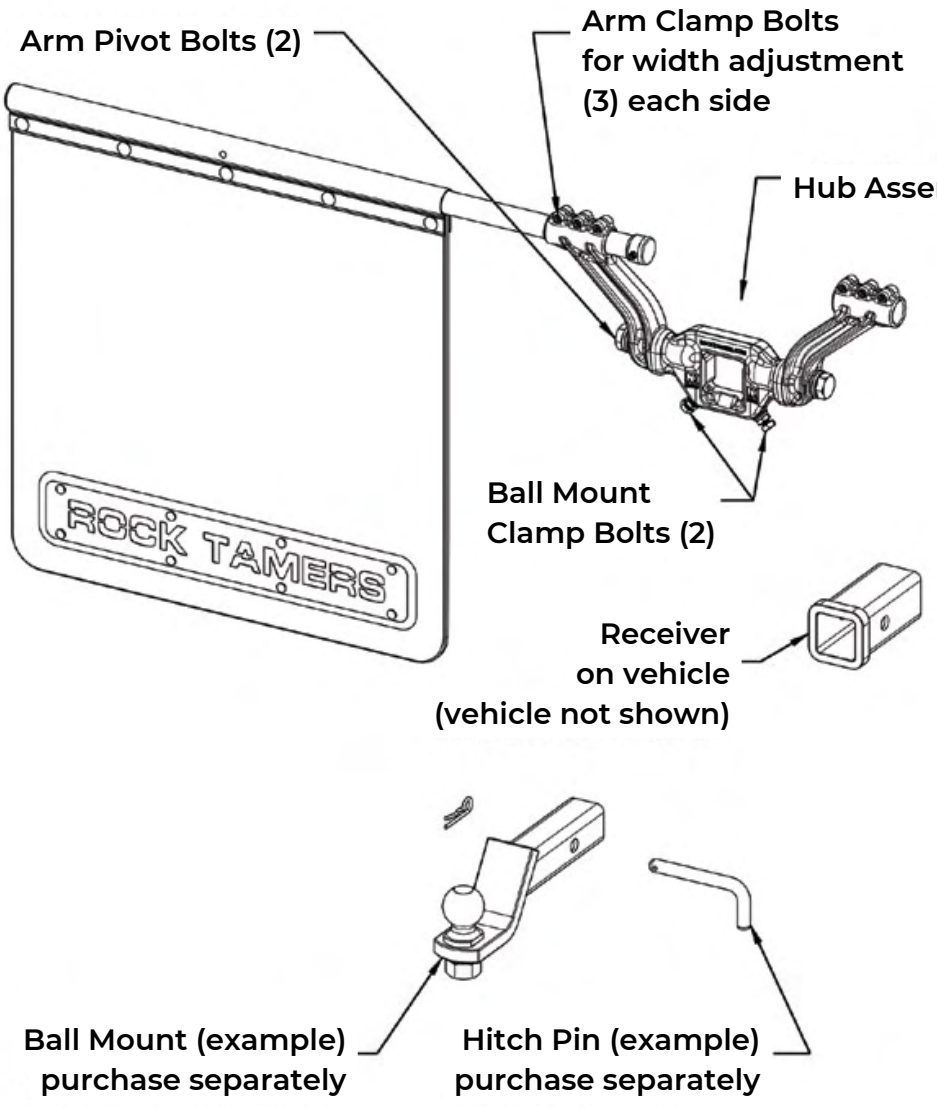




IMPORTANT

The lowest point of the mud flaps need to be a minimum of 100mm off the ground when hitched or fully loaded. Ensure the mudflaps are installed with a slight curve at the top so there is tension on the rubber, this will help provide maximum protection from rocks and debris etc. (See page 7)

IMAGE 1



Assembly Hints

Refer **Image 1** for component names and general definitions. Names in ALL CAPITALS refer to parts named in the illustrations.

It may be easier to assemble the system while attached to a BALL MOUNT on the vehicle. However, it may also be assembled on a floor or workbench.

The MUDFLAP length may require cutting to fit your specific vehicle. Be sure of the required length (minimum 100mm off the ground to bottom of mudflap) by measuring with full tongue weight attached.

Account for all parts listed in the Parts List.

1. Slide HUB ASSEMBLY onto BALL MOUNT and insert into vehicle RECEIVER HITCH.
Refer Images 2 & 3.

2. Secure the BALL MOUNT with HITCH PIN.

- Adjust HUB ASSEMBLY to desired position.

3. Tighten the two M10 BALL MOUNT CLAMP BOLTS to hold CENTER HUB in place.
(For assembly only)
Refer Image 3.

4. Loosen or Remove all three M6 ARM CLAMP BOLTS from each HUB ARM. Carefully insert the two FLAP SUPPORT RODS thru HUB ARMS. Place ROD END CAP over the end of rods, hex side facing away from the vehicle, insert END CAP BOLT through END CAP BOLT HOLE, tighten securely with M5 NYLON INSERT HEX NUT.
Refer Image 4.

IMAGE 2

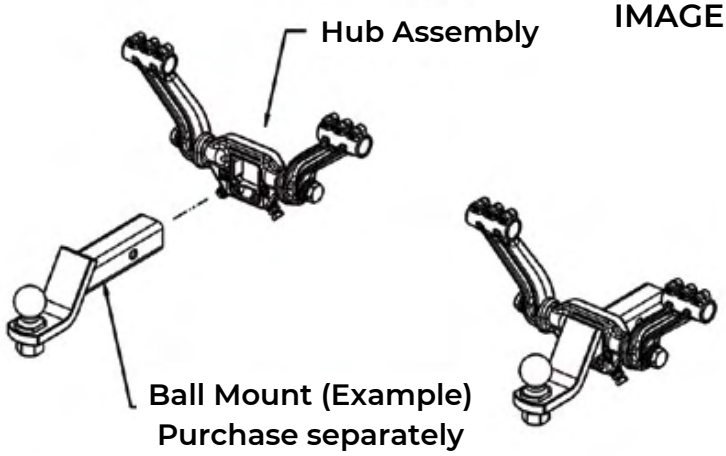


IMAGE 3

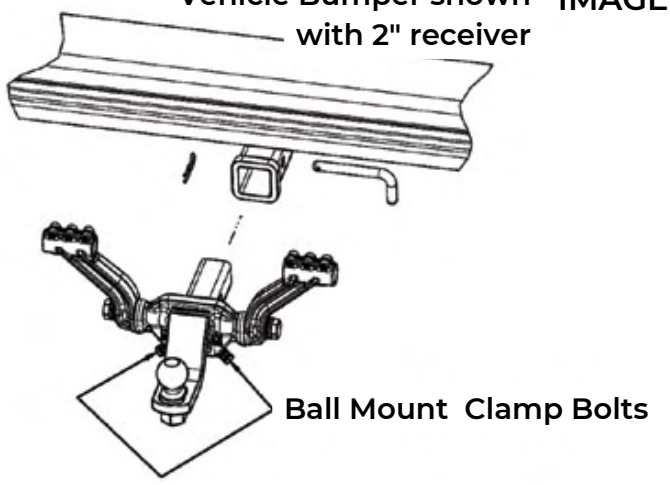


IMAGE 4

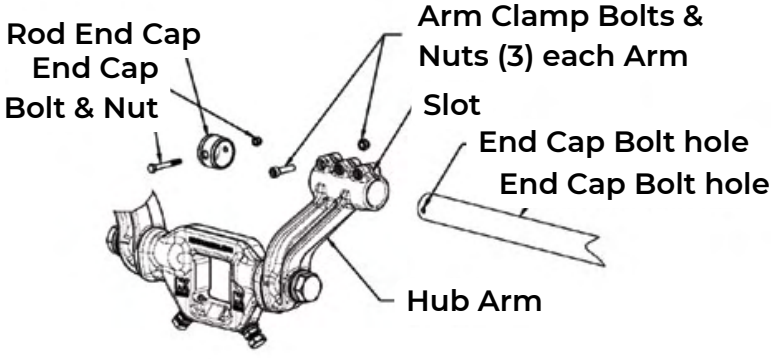
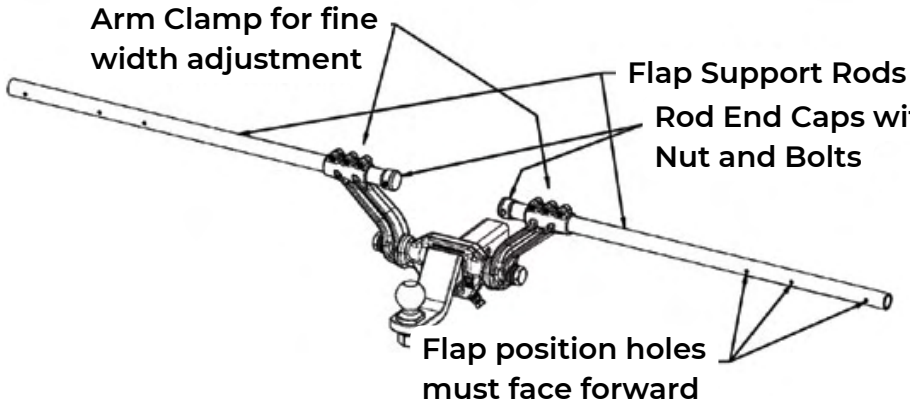


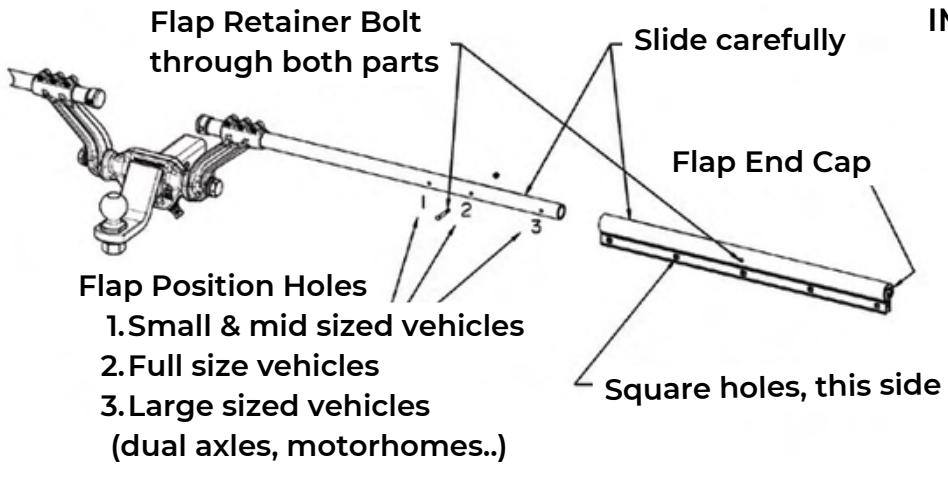
IMAGE 5



5. Re-install M6 ARM CLAMP BOLTS and M6 NYLON INSERT HEX NUTS back into HUB ARMS after the SUPPORT ROD is inserted. *(Do not tighten yet.)*

6. Position the left and right FLAP SUPPORT RODS so the width adjustment holes face forward horizontally. *Refer Image 5.*

IMAGE 6



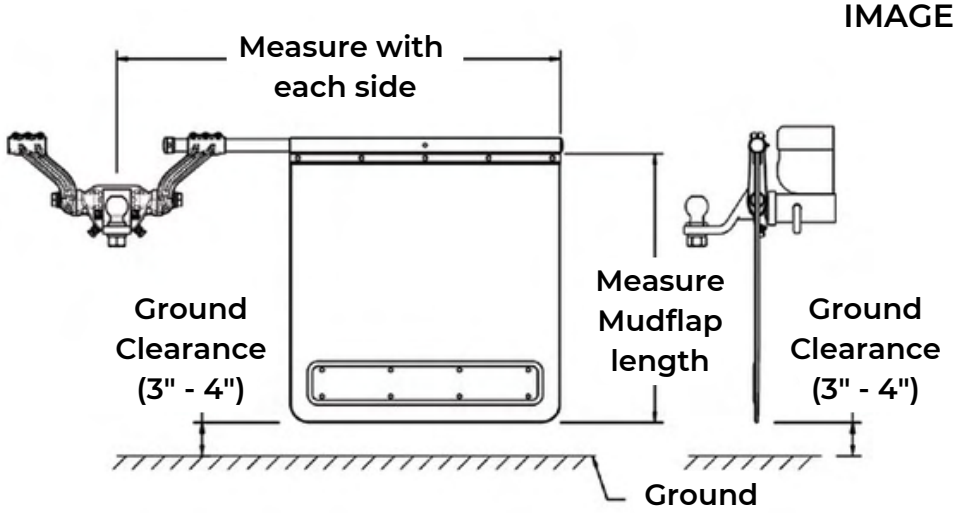
7. Slide FLAP CLAMPS over the FLAP SUPPORT RODS with square holes facing away from vehicle. Do not secure with FLAP RETAINER BOLTS yet.
Refer Image 6 for orientation of flap retainer bolt hole and flap support rod positioning holes.

- *NB: MUDFLAP not yet attached in Image 6.*

IMPORTANT: This next step is critical in ensuring that the MUDFLAP SYSTEM is properly installed. <u>All measurements should be made while tow vehicle has full tongue weight.</u> (Mudflap to be a minimum of 100mm off the ground)

8. Make sure SUPPORT RODS are level on both sides and measure the distance from the bottom of FLAP SUPPORT ROD to the ground. Subtract the desired **ground clearance (3"- 4" recommended or 75 mm – 100 mm).**
Refer Image 7.

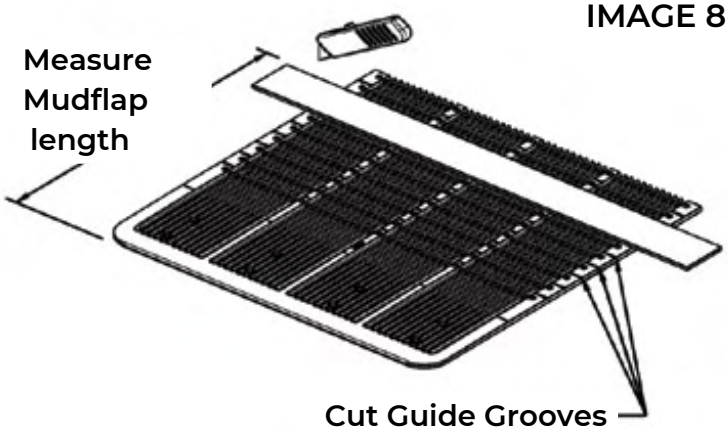
IMAGE 7



9. Lay MUDFLAP down with grooved side up on flat surface. Measure desired MUDFLAP length from the bottom up. Find the nearest pre-molded CUT LINE GROOVE and mark.
Refer Image 8.

IMPORTANT:
Before cutting and drilling/punching holes, make sure to place either a scrap piece of wood or thick cardboard underneath MUDFLAP to avoid any surface damage.

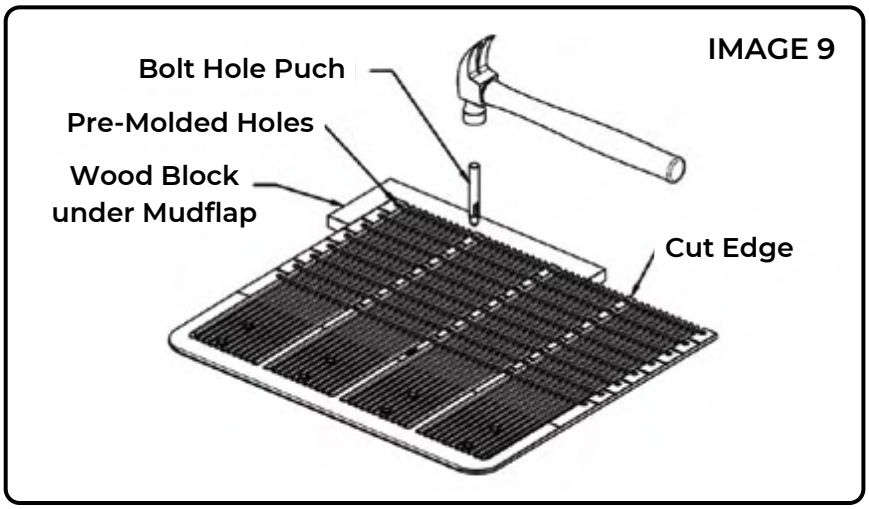
IMAGE 8



10. Use a sharp utility knife to cut through MUDFLAP using the groove and a straight edge as a guide. This may take several passes to completely cut through MUDFLAP. ***Refer Image 8.*** Repeat procedure for 2nd MUDFLAP.

IMPORTANT: Place a scrap piece of wood under the MUD FLAPS when punching or drilling holes, as the punch will dull and may damage the surface underneath.

11. Punch the top row of pre-moulded holes in the MUDFLAP using the included BOLT HOLE PUNCH.
Refer Image 9.



12. Assemble the cut end of the MUDFLAP into FLAP CLAMP by either sliding or pushing it down onto the top of the MUDFLAP with the square holes on the smooth side.

Note: Should it be difficult to slide MUDFLAP into FLAP CLAMP, lubricate the cut end of the MUDFLAP surface before inserting - i.e. a dry lubricant, such as WD40 Dry PTFE Lubricant may be used to help with Installation.

- Insert the five M8 FLAP CLAMP BOLTS through the square holes. Loosely attach the M8 FLAT WASHER and M8 NYLON INSERT HEX NUT to the back as shown. **(Do not tighten yet.)** ***Refer Image 10.*** Repeat for 2nd MUDFLAP.

13. Slide the FLAP CLAMP with the attached MUDFLAP over the FLAP SUPPORT ROD with the NYLON INSERT HEX NUTS facing your vehicle. Position the MUDFLAPS and FLAP SUPPORT RODS (left and right) as desired for your vehicle. Line up a small hole in FLAP CLAMP with one of the three flap adjustment holes in SUPPORT ROD depending on vehicle size.

- Inner Hole - for small and mid-sized vehicles
- Center Hole - for full-size vehicles
- Outer Hole - for large vehicles, such as dually trucks and small motor homes

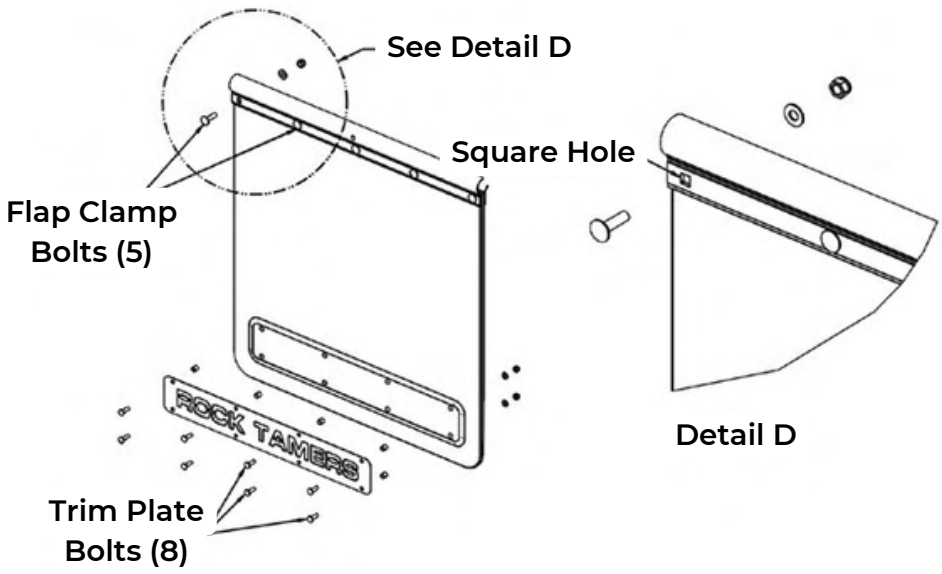
Finally, insert the small M5 FLAP RETAINER BOLT through the FLAP CLAMP and SUPPORT ROD and attach the M5 NYLON INSERT HEX NUT.
Refer Images 1 & 6. Repeat for 2nd MUDFLAP.

14. Assemble TRIM PLATES. Insert M6 TRIM PLATE SPACERS into holes in raised bottom portion of MUDFLAP. Attach the ROCK TAMERS TRIM PLATE with the eight M6 TRIM PLATE BOLTS (Locking STAR PIN™ [STAR PIN™ wrench included]), M6 FLAT WASHERS, and M6 NYLON INSERT HEX NUTS as shown in ***Image 10***. (20 in-lbs torque [10 mm socket or wrench]).

Repeat for 2nd MUDFLAP.

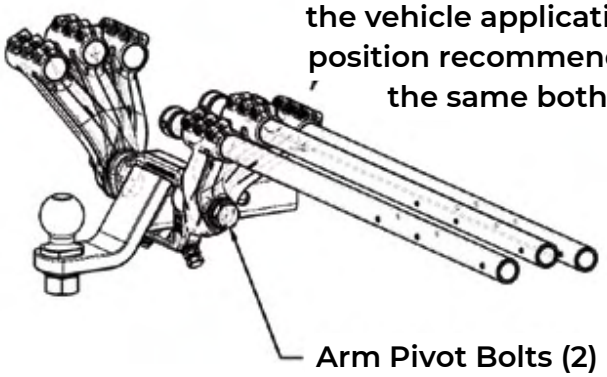
Note: DO NOT over-tighten, as it will damage the TRIM PLATE.

IMAGE 10



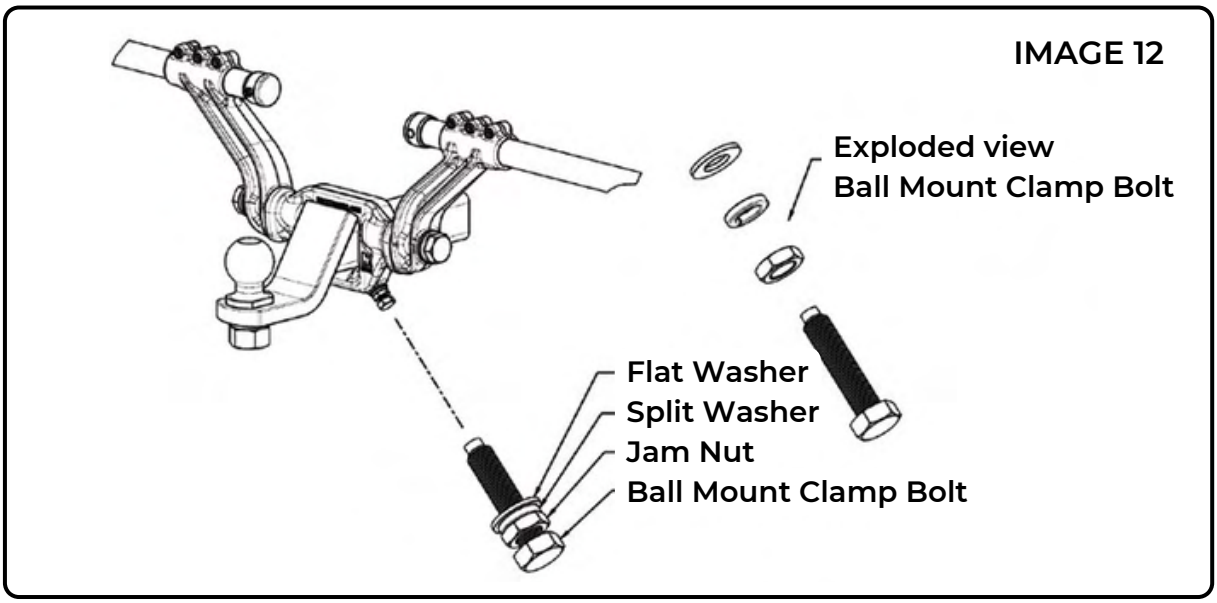
15. The ARMS of the HUB ASSEMBLY may be loosened and rotated to fit your vehicle application. The FLAP SUPPORT RODS must also be rotated slightly so the MUDFLAPS hang vertical.
Refer Image 11.

IMAGE 11



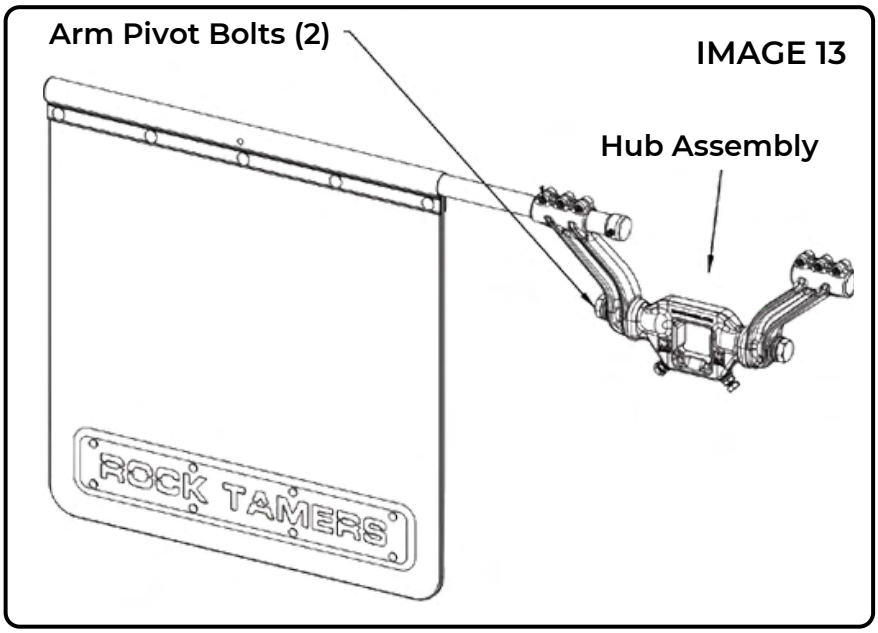
16. Finalise all positioning and adjustments. For all conversions see Torque conversion table on *Page 6*.

17. Make sure the M10 SPLIT WASHERS and M10 JAM NUTS remain loose on the M10 BALL MOUNT CLAMP BOLTS and finish tightening the M10 CLAMP BOLTS evenly onto BALL MOUNT. (120-180 in-lbs torque [17 mm socket or wrench]). Once the M10 BALL MOUNT CLAMP BOLTS are tight, tighten the M10 WASHERS AND JAM NUTS securely.
Refer Image 12.

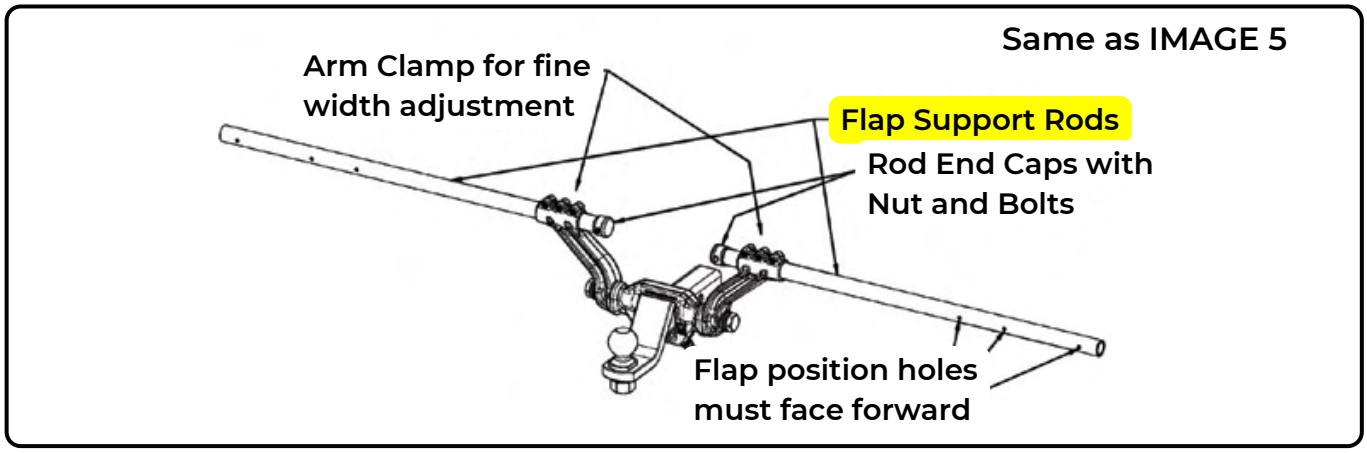


18. Tighten the large CENTER HUB M18 ARM PIVOT BOLTS. (1500 in-lbs torque [27mm socket or wrench]).
Refer Image 13.

Note: Make sure the ARM PIVOT BOLTS and SUPPORT RODS have sufficient clearance away from the bumper so that they do not rub up against it.

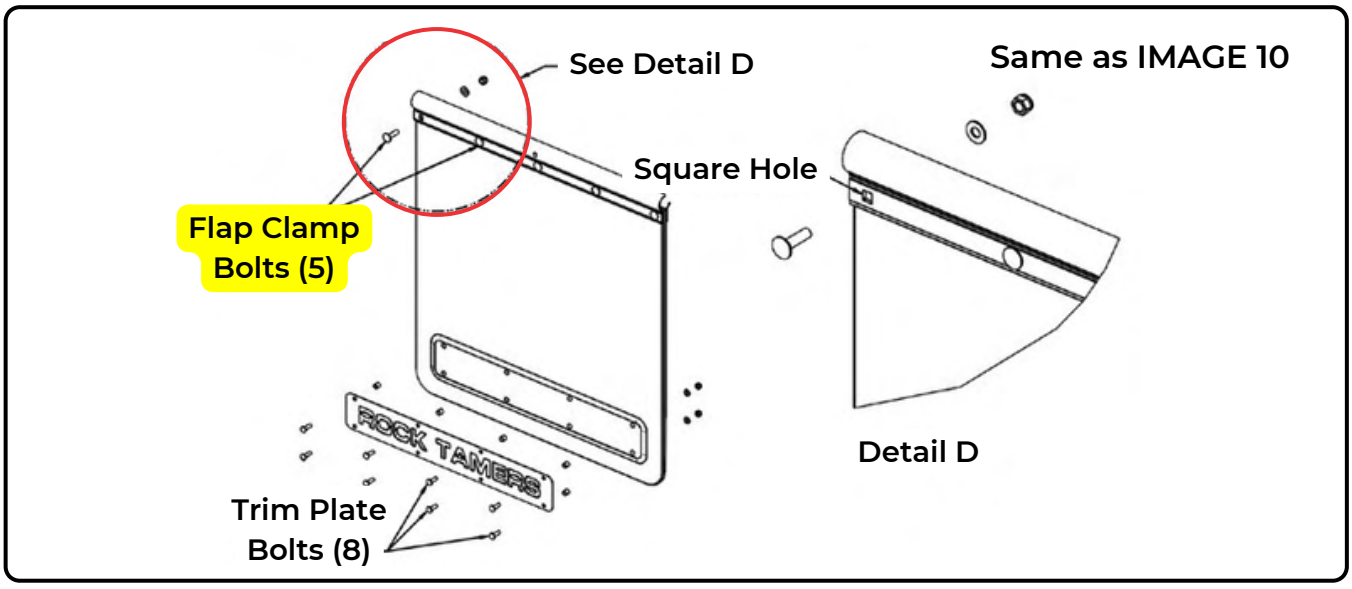


19. Finalise width adjustment of FLAP SUPPORT RODS by sliding them in or out of the HUB ARMS. *Refer Image 5.*



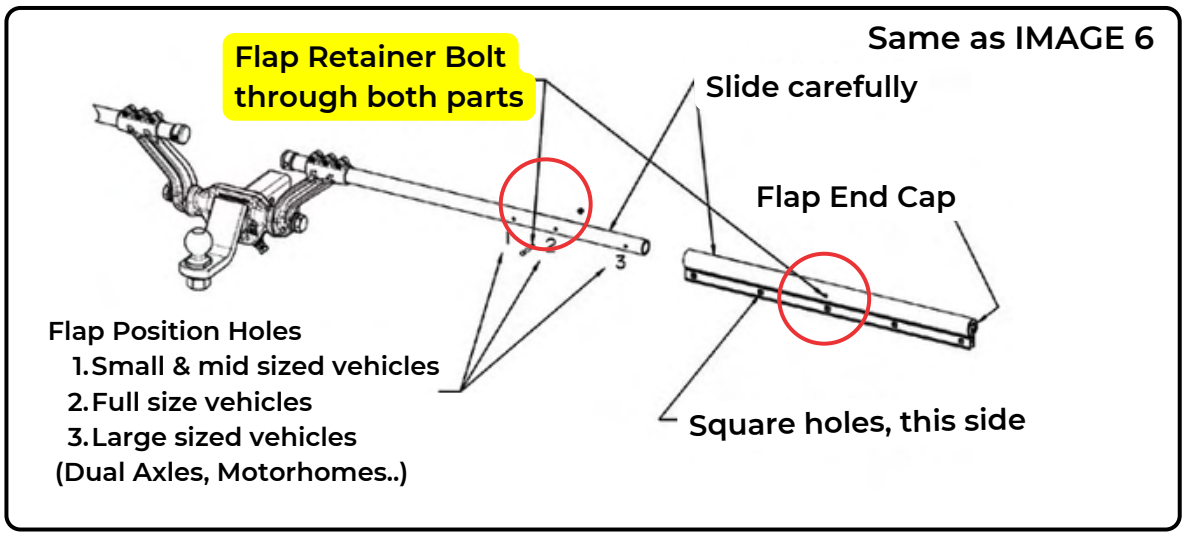
Note: It is recommended that the final MUDFLAP position extends a minimum of 2" from outer edge of tyre.

IMPORTANT: Evenly tighten the three M6 ARM CLAMP BOLTS beginning with the center bolt and moving from one to another on each side until all are tight. The SLOT will NOT close. (70-80 in-lbs torque [5mm ALLEN WRENCH])



20. Tighten the five M8 FLAP CLAMP BOLTS on each of the FLAP CLAMPS. *Refer Image 10.* (30 in-lbs torque [13mm socket or wrench])

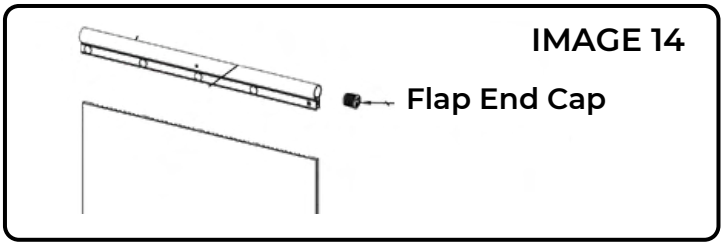
IMPORTANT: SUPPORT RODS MUST NOT BE ABLE TO ROTATE or MOVE IN HUB ARMS or FLAP CLAMPS.



21. Tighten the M5 FLAP RETAINER BOLTS on each side. *Refer Image 6.*

IMPORTANT: FLAP RETAINER BOLTS are not intended to hold FLAP CLAMP on FLAP SUPPORT ROD. The RETAINER BOLTS must be used for proper positioning and safety.

22. Complete the assembly by inserting the FLAP END CAPS into the FLAP CLAMPS.
Refer Image 14.



Insert the Rock Tamers Bolt Bumpers into the bolts.
Refer Image 15

23. The ROCK TAMERS® Mudflap System is now ready to use. As a final safety procedure, check bolts to ensure that they are tight and properly assembled. For optimum service and life, check components and the torque on all bolts prior to each use.
Refer Image 16.

HOW TO INSTALL ROCK TAMERS MESH INSERTS 33.5” (850mm)

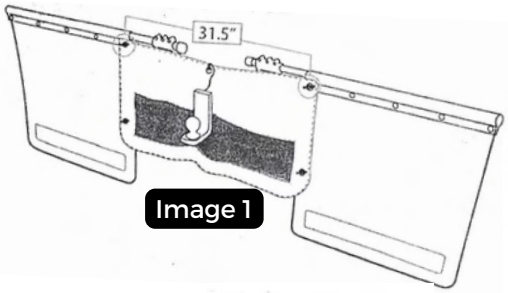


Image 1

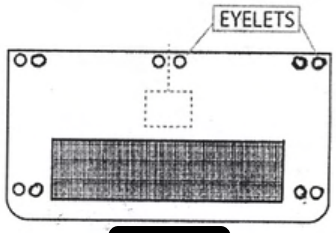


Image 2

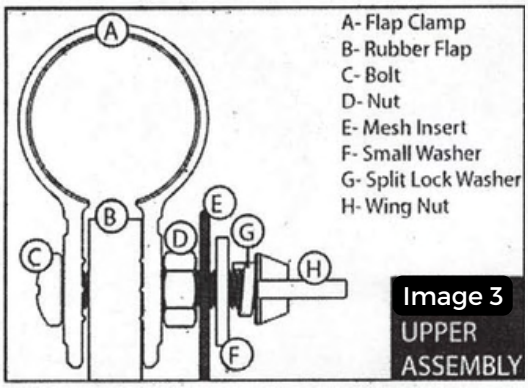


Image 3 UPPER ASSEMBLY

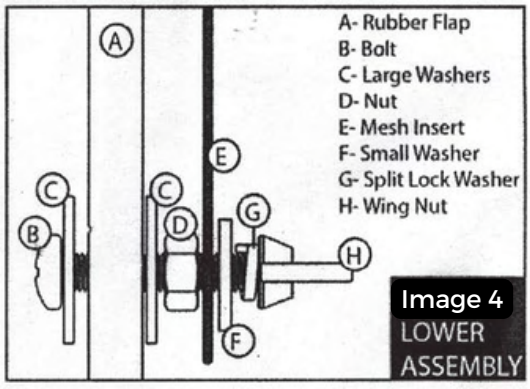


Image 4 LOWER ASSEMBLY

1. Set width of rubber flaps to approximately 31.5” (800mm) between the first Flap Clamp Bolts on each side *(see Image 1)*.
2. Remove the 2 Flap Clamp Bolts, replace them with 2 included bolts with thread facing away from vehicle. Lock bolts into position using a nut, tighten to 30 in-lbs *(see Image 3)*. *NOTE THAT HARDWARE SHOULD BE SAVED FOR FUTURE USE.
3. Place the Mesh Insert on these bolts, mark the location of the hole and slot that will be cut for the ball-mount on the Mesh Insert.
4. With the Mesh Insert still in place, mark the location of the lower 2 eyelets on the rubber flaps.
5. Place the Mesh Insert on a scrap piece of wood and cut the hole and slot using a sharp blade. *(see dotted line in Image 2)* *NOTE THAT THE SLOT, IF REQUIRED, SHOULD BE CUT BETWEEN THE 2 TOP CENTRE EYELETS.
6. Drill 1/4” (6mm) holes in the rubber flaps, corresponding with the markings from the lower eyelets. *NOTE THAT THE RUBBER FLAPS SHOULD BE PLACED ON A SCRAP PIECE OF WOOD, ON A SOLID SURFACE.
7. Insert a bolt, with 1 large washer, into the hole in the rubber flap with the thread facing away from the vehicle.
8. Place another large washer over the lower bolt, then lock the bolt into position using a nut (see Image 4).
9. Repeat steps 7 & 8 on the other rubber flap.
10. Place the Mesh Insert over the 4 bolts and secure in place using 4 small washers, 4 split lock washers and 4 wing nuts.
11. Lace the 2 top centre eyelets together using zip tie or string (not included).

NOTE

- Additional access slots can be cut for power leads, chains, etc.
- The Mesh Insert is a disposable item and available for purchase from Clearview Accessories.
- The life of the Mesh Insert will vary depending on road conditions and speed.
- A loose-fitting mesh will last longer than a tight-fitting mesh.

Clearview® Rock Tamers® are designed and manufactured to the highest quality standards. We stand behind our Products with a 12-Month Manufacturer's Warranty.

Clearview Accessories® warranty applies to the original purchaser only. Please ensure that your receipt is kept in a safe place. A receipt will be required to make a warranty claim on any Clearview® product. If we determine that a Clearview® Product is defective in materials or workmanship during the Warranty, we will either repair or replace the product. Repair or replacement is solely at the discretion of Clearview Accessories®.

Please ensure that you fit the Clearview® products in accordance with the product information provided and all relevant vehicle safety and compliance laws; and use the Clearview® product for the purpose for which it was originally designed. This warranty does not apply to failure or damage caused by incorrect or faulty fitment, accidental or intentional damage, alteration, acts of nature, vandalism, collision, road hazards or adverse conditions, misuse, abuse or neglect of the Clearview® product, including improper repair or maintenance or failing to repair and maintain the product, failure of other products, operation of the product outside of its environmental or technical specifications, or repair or modification carried out by anyone other than Clearview Accessories®. No charges will be accepted for external labour or materials without the prior advice or clearance from Clearview® claims team. Clearview Accessories warranty does not cover any scratches or chips.

Clearview® Products are not designed to be modified for convenient use in alternative applications. Alteration, modification, or manipulation of our products will void all warranty with Clearview Accessories®.

All claims under this warranty should lodged through our website warranty section https://www.clearviewaccessories.com.au/about/warranty/ with the detail of the fault, proof of purchase, proof of identification and vehicle fitment details where relevant. If your claim is accepted for defects in material or workmanship Clearview® will, at its discretion, offer to repair, replace parts, or return and refund.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. In the event of a minor failure, the company reserves the right to choose to repair or replace the product.

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CLEARVIEW ACCESSORIES

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