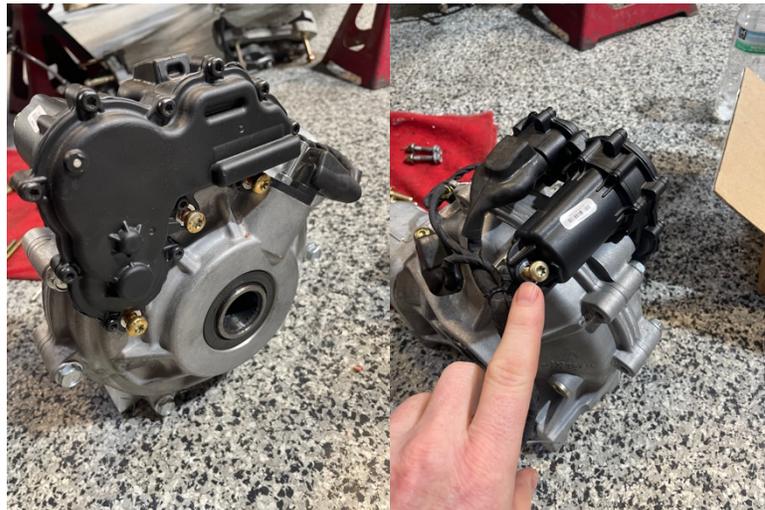


Mav R Front Frame Plate Gusset Kit

Install Instructions

- Pre-Install Prep:
 - Front Differential must be removed for this install. You must disassemble your front suspension in a manner that will allow you to remove both front axles from the differential.
 - Front Bulkhead removal is necessary.
 - Radiator removal is not necessary but tilted up away from frame is the recommended method.
- Disconnect the front drive shaft, as well as all electrical connectors from the front differential. Remove the clear vent hose.
- Remove the four differential mounting bolts under the frame with a 15mm socket.
- Carefully remove the differential from the frame. Take care not to break any electrical components.
- Remove the four torx head screws from the driver side of the differential locking solenoid housing and another longer torx head screw on the top with a **T30 torx bit**.



- Remove the solenoid assembly from the differential by pulling straight out to the driver side, exposing the spur gear.
- Remove the two OEM M8 hex head case bolts from the front of the differential as shown.
- You will need to take a small amount of material off the rib shown on the top bolt hole of the housing to make room for the new fasteners and bracketry. Grind/File this rib down roughly 1/8".



- Using the provided **M8x1.25 tap**, carefully thread the tap into the two open bolt holes, the same direction of the OEM bolts. Screw the tap into the aluminum housing until you have roughly $\frac{1}{2}$ " of the tap exposed on the opposite side.



- Back the tap out and install the provided **M8x1.25 – 60mm long hex head bolts with flat washers** using a 13mm socket. Tighten these bolts according to manufacturer specifications.
- Slide the **30418-6 Differential Spine** over the ends of the new hardware and install the provided **M8x1.25 flanged locknuts**. Tighten these nuts by hand.
- By reversing removal process, reinstall the differential locking solenoid assembly onto the diff.
- Upper Frame Prep:
 - Using the **30418-9 Upper Drill Template**, mark the bottom hole as shown by aligning the template with the frame contours and existing hole. Drill pilot hole with **$\frac{3}{16}$ " drill bit**. Drill final hole to **$\frac{15}{32}$ "**. Repeat for each side.



- Using a **1 1/32" drill bit**, drill the existing two rivets & enlarge rivet holes out as shown in the front frame. Discard OEM plate that was held by rivets.
- Clean any burrs left over.
- Install the large **30418-1 Front Frame Plate** into the frame, pushing it up against the front from the inside. You may need to angle the plate forward and get the top inserted first, then swing the bottom into place.



- Align the holes in the front of the frame with the new plate. It will be helpful to insert the OEM front a-arm bolts into the frame and through the new frame plate for alignment purposes.
- Install the provided **M8x1.25-16mm flanged hex head bolt** into the top center hole and thread into the new plate loosely.



- If installing **30413-2 Front Lower Nut Retainer Kit**, prepare the frame for installation now.
 - Drill rivets and enlarge holes in front lower area of frame shown with **17/64" drill bit**. Use the optional **chamfer bit** to countersink the holes for the flat head hardware provided. These holes should align themselves with the new front frame plate previously installed.



- Load the nut retainer up with the two provided **M14x2.0 flanged locknuts**.
- Install the nut retainer against the back of the new front frame plate and attach by screwing the provided **M6x1.0 flat head screws** into the countersunk holes threading into the nut retainers loosely. Thread the lower a-arm mounting bolts into the new M14 nuts loosely as well.



- Thread the two provided **M8 x 1.25-16mm Flange Head bolts** into the outer holes loosely as shown.



- If all plate holes appear to be aligned with the frame holes, tighten the two outer **M8-16mm bolts** & the top center **M8x1.25-16mm hex head bolt**, then the two **flat head M6x1.0 screws**.



- Remaining frame prep:
 - Using **30418-8 Driver Side Drill Template** and **30418-7 Passenger Side Drill Template**, place each template under the frame where the differential sits and align the holes as shown. Using a **3/16" drill bit**, drill the pilot holes into the sides of the frame for each. Drill holes to **11/32"** afterward.



- Clean any burrs left over.
- Reinstall the differential into the frame.
- Slide the driveline over the pinion shaft.



- Mount the differential with the four provided **M10x1.5-30mm flange head bolts** along with the OEM flat washers.



- Install pinch bolts back into front driveline.



- Reconnect all electrical connectors to the front differential.
 - **Do not** connect the vent hose at this time.
- Install **30418-2L & 30418-2R Gusset Back Leg** as shown using the four **M8 x 1.25-16mm Flange Head bolts** & four **M10 x 1.50-30mm long Flange Head bolts**. Install bolts



loosely.

- Frame variance must be taken into consideration during these steps of installation. You may need to ream drilled holes in a certain direction to get new parts to bolt up on your specific frame.
- Set the **30418-3 Gusset Tie Bar** on top of the Back Legs as shown and attach using the remaining four **M8 x 1.25-16mm Flange Head bolts**.
- Once all M8 – 16mm & M10 – 30mm bolts are started, tighten hardware passing through the frame first, then bolts through the Tie Bar last. Tighten all **EXCEPT** the two **TOP M10-30mm bolts** installed 2 steps back. These will need to be removed to re-install the OEM bulkhead at the end of installation.
- Reconnect the clear vent hose to the differential by inserting through the LH cutout hole in the **30418-3 Gusset Tie Bar** as shown.



- At the front of the machine, install the **30418-5 - Diff Attachment** bracket to connect the previously installed **30418-6 – Diff Spine** to the **30418-1 Front Frame Plate**. Reference photos provided.
 - Use the two provided **M8x1.25-20mm long flange head bolts** to thread into the Front Frame Plate through the Diff Attachment bracket. Run these bolts up so the bracket is flat against the Front Frame Plate, but not tight.



- Use two more provided **M8x1.25-20mm long flange head bolts** with two **M8x1.25 Nylon Locknuts** to attach the bracket to the Diff Spine.



- Make sure bracket is sitting flat against both mating surfaces before fully tightening hardware.
- Reverse the disassembly of the Front Bulkhead, Radiator, and Front Suspension to complete the installation.