

# MPS Installation Instructions for Viper & Sidewinder

Rev 0

## Parts List

Item	Qty
Formed Tie Rods	2
M10 Castle Nuts	4
M10 Bolt Drilled For Cotter Pin	2
M10 x 3mm Thick Shim Washer	2
MPS Linkage Arm	2
M10 x 2mm Thick Washer	4
M10 x 1 mm Thick Shim Washer	4
Tie Rod End drilled For Cotter Pin	2
Cotter Pin	4

1. Remove the tie rod ends from spindles. Next remove the outer tie rod end and transfer the left hand thread nut onto tie rod ends provided with the kit.
2. Attach the MPS arm to the spindle as shown in the photos. When looking down on the arm, it needs to curve in towards the tie rod and the laser etching on top. Install the slot over the spindle gusset from back to front rather than top to bottom to prevent scuffing exposed paint. The arm should fit snug on the gusset and may require use of a mallet to install it. One 3mm thick washer goes between the MPS arm and spindle. Install a 2mm thick washer under bolt head and nut. **Be sure to install the cotter pin**



3. Remove the push pins so the rubber boot can be pulled away to gain access to the inner tie rod connection. Loosen the jam nut and remove the stock tie rod.



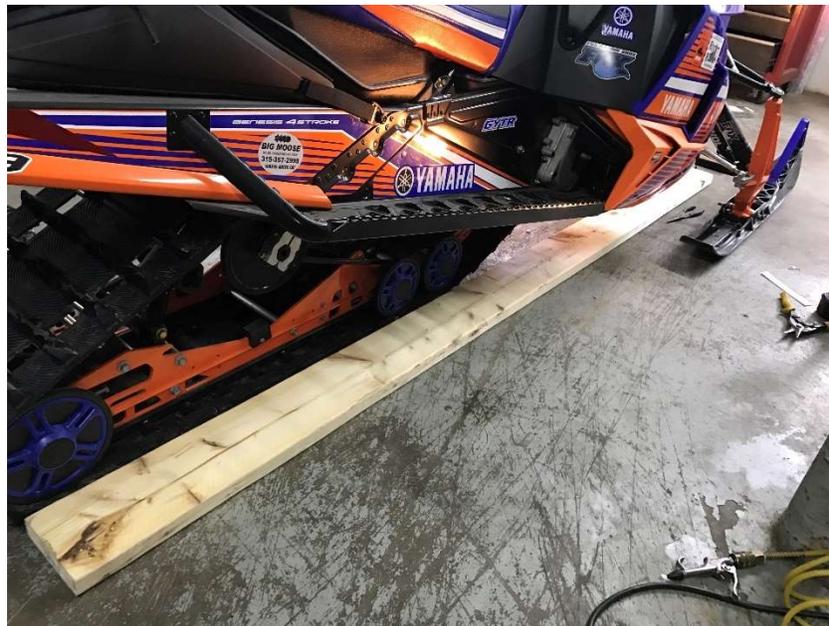
4. Thread the formed tie rods onto inner tie rod end. As a starting point just thread it against the jam nut and then position the bend in the tie rod towards the front of sled as shown in photo.



5. Install the outer tie rod ends provided with the kit. Install them so that the amount of threads exposed matches the inner tie rod end.
6. Attach the outer tie rod ends to the MPS arm. Each of the 3 holes will result in easier steering than the oem position. Hole number 1 will provide the easiest steering. Make sure both sides are the same. Be sure to install a 1mm shim washer on both sides of the MPS arm. Snug up the nut but do not install the cotter pin yet.

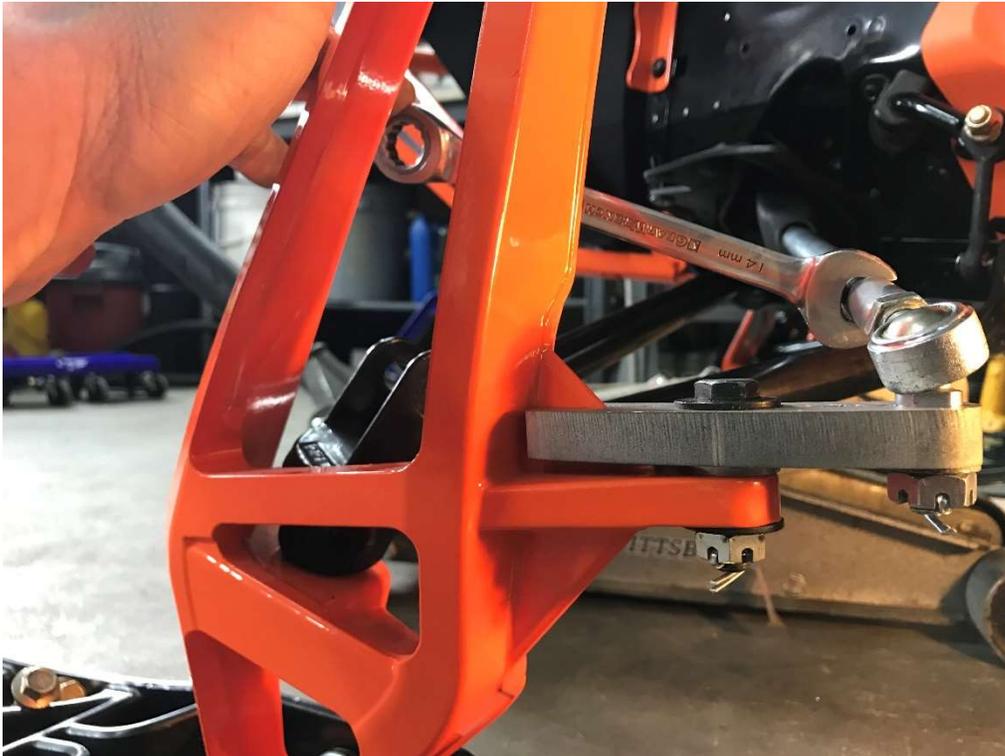


7. Next set your ski alignment. First ensure your handlebars are positioned straight. Then take a 6' level, or equivalent straight edge and lay it flush against track so it extends up parallel to the ski. Mark two points on your skis that are the same width, with one in front of spindle and the other behind the spindle. Measure distance from each mark to the straight edge. Perfect alignment would require both measurements to be equal. If toe in/out is desired then the measurements would not be equal.



8. To adjust the alignment, rotate tie rod in full 360 degree adjustments so the bend in tie rod remains towards the front of the sled. To do this you will have to turn handlebars to the appropriate side so the tie rod can clear the bulkhead opening when rotated. Once you've made your adjustment align handlebars straight again, and take new measurements. Repeat this process until you get the alignment desired. If a finer adjustment is needed unbolt the tie rod end from MPS arm, and rotate just the outer tie rod end.
9. Once you have both sides aligned proceed to tighten the inner tie rod jam nuts. Next put a wrench on the tie rod and rotate it front until it bottoms out. Rotate the outer ball joint so it bottoms out towards front as well as shown in photo, and then tighten the outer jam nut.

**Ensure that the tie rod bend is still facing forward. If not adjust accordingly.**



10. Tighten tie rod ball joint to the MPS arm and **install the cotter pin.**