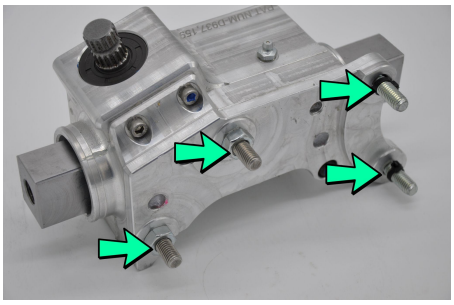
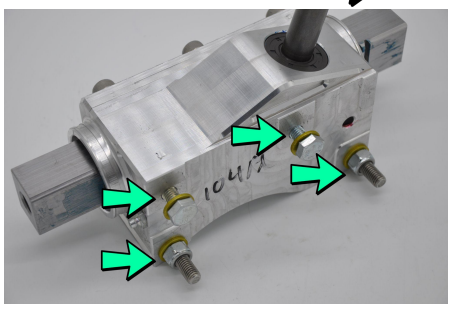
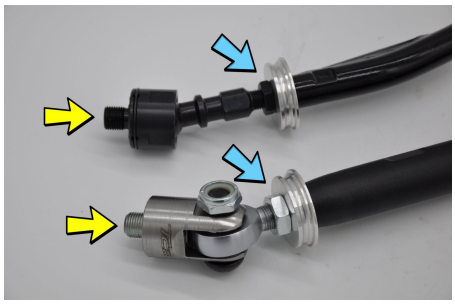
Billet Steering Rack Installation

1. **Greasing** - Grease ALL zerks with a high quality MARINE grease before installing. There should be enough grease in the zerks to where it is overflowing. This rack will hold approximately 100 pumps between all zerks.
2. **Center the bar** in the rack with even measurements sticking out of each side from the contact area of the clevis. (where clevis stops after installed).
   Defender - 1 ⅞” Maverick - 1 ¾” RZR Pro - 2 ¼” NBS Ranger - 2 ⅛”
3. **Loctite** -
   A). Apply **RED** Loctite to the installation bolts prior to tightening. Tighten the installation bolts to **40 ft lbs torque**. (In order to prevent damage, the rack MUST be tightly secured, but DO NOT over tighten the bolts either.)

   B). Apply loctite to the connection threads of the inner tie rod end/center clevis bolt prior to screwing it into the steering bar of the rack.
4. **Coin Placement** - Install the boot coin between the tie rod and the jam nut on the inner tie rod end or heim. (Please see photos below)

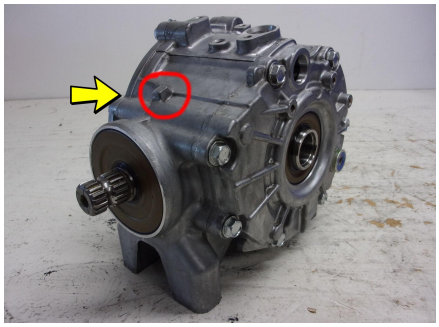




5. **Steering Module** - The steering module will need to be reset on Can-Am models in order to adjust the torque settings. This is to accommodate the larger rack. Please see the attached sheet.
6. **Steering Stops** - If needed, the steering stops must be at the ball joint. Most A-Arm dealers, such as Super ATV, will have a steering stop included with the newer A-Arms available.

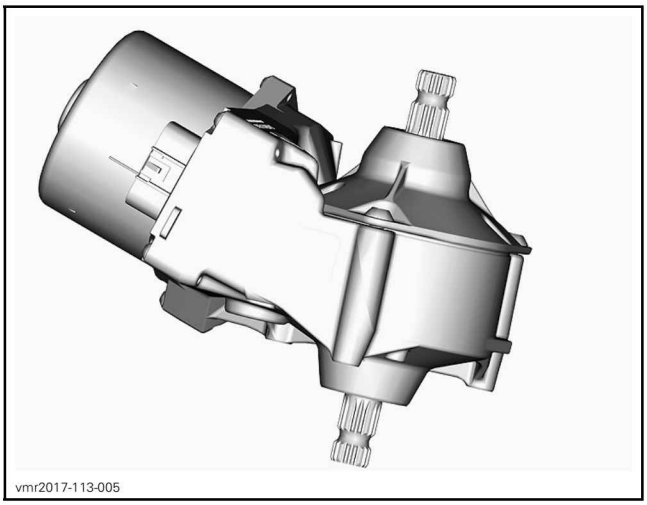
TIPS:

*** For more room for installation, move the front differential forward slightly.**

*** Can-am XMR Models** will have to have the mohawk shaved off of the front differential



*** NBS Ranger Racks -** Install the supplied hose over the heater line, between line and rack, where needed



DPS UNIT

The DPS module provides DC power to the motor. The amount and duration of that DC power is determined by the inputs to the DPS module.

The DPS motor does not "spin", but rather turns in very small increments based on the amount, duration, and direction of DC power delivered by the DPS module.

NOTE: Should the DPS unit fail, the vehicle steering is still available with moderate increase in steering effort.

Steering Torque Sensor

The steering column is connected to the shaft on the DPS unit. A small area of the DPS shaft is magnetized. Inside the DPS unit, a torque sensor surrounds the magnetized area of the DPS shaft.

When the steering is turned, torque is applied to the shaft which tends to twist it slightly, deforming the magnetic field in the shaft. The sensor detects the torque by measuring the deviation of the magnetic field.

The torque sensor is very sensitive and can detect very small changes in the magnetic field. The harder the steering is turned, the greater the magnetic deviation, the greater the power steering assist.

NOTICE **The internal torque sensor is very sensitive to external magnetic source. All components touching the DPS unit must be kept in a non-magnetic area and avoid any contact with components. If a magnetic source or part is in contact with the DPS shaft, or touching components, it will affect the torque reading values and inadvertently affect the behavior of the DPS unit.**

ADJUSTMENT

RESETTING THE TORQUE OFFSET

When replacing the following parts or adjusting steering alignment, the sensor torque offset **MUST** be reset to zero for proper system operation.

PART ADJUSTED OR REPLACED	WHAT TO DO
– DPS unit – Steering column – Tie rod – Tie rod end – Knuckle – Wheel bearing – Ball joint – Front suspension arm (lower/upper) – Steering alignment	Reset Torque Offset in **Setting, DPS**

1. Position the steering wheel at the center position.
2. Connect vehicle to the BRP diagnostic software BUDS2. Refer to *COMMUNICATION TOOLS* subsection.
3. Check if a software update is available and warranted for the DPS. Select:
   – **Flash** page.
   – **DPS** or **Vehicle** button.
   – **Flash** tab.

If an update is available, install it before resetting the torque offset.

REQUIRED CONDITIONS TO ALLOW THE RESET PROCEDURE
DPS unit temperature above freezing point.
Steering wheel should be free and centered. There MUST NOT be any effort applied to the steering column.
Torque sensor value must be within offset threshold value of ± 10Nm.
Engine not running.

4. To reset the torque offset, select:
   – **Settings** page.
   – **DPS** or **Vehicle** button.
   – **Initialization** tab.
5. Select **Torque Sensor Offset**.