



Installation instructions for Cobra Venom 16X Magnum



Parts reference for installation

#1= magnum fins

#2= small button cap bolts and nylock nuts for adjusting the fins

#3= flat washers that are to be placed on either side of the fins during installation.

#4= long button cap 8mm bolts for installing the fins, washers, reverse gate and for reinforcing the mounts on the nozzle.

#5= the new bolt on side force stabilizer, reverse gate stop, and fin adjustment mounts

#6= Longer bottom bolt for mounting the side force stabilizer and nozzle to the pump.

#7= Thick flat washer

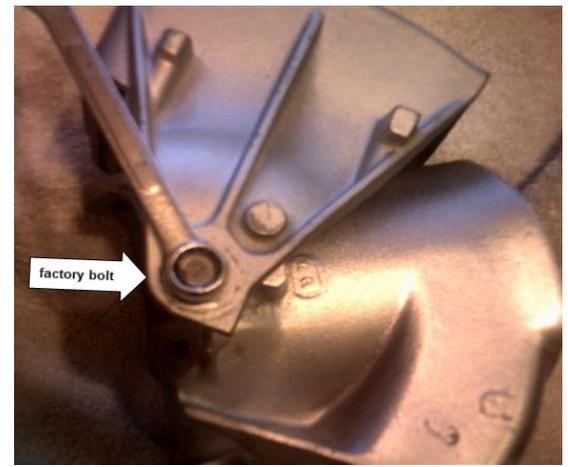
#8= thin flat bearing spacer washer.

#9= 5/8" by 1/4" bushing.

For best results be sure to follow the sequence in these instructions

Step 1:

Remove only one bolt that secures one side of the reverse hood. Be sure to take note of the factory bushing in the reverse gate. This bushing must be utilized when installing the new parts.

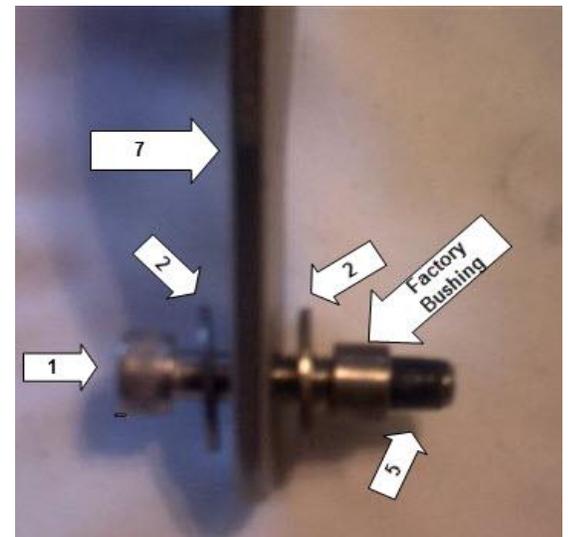


Step 2:

When installing steering units be sure to use the new bolts as they are considerably longer than the original ones. This reinforces the mounts on the nozzles as well as accommodating the extra parts. It is recommended that you use removable non permanent thread locking compound when installing these bolts.

1. Place a flat washer on the new bolt. Then with the writing on the steering unit facing out place this bolt in the end hole. See picture.
2. Place another flat washer on the bolt. See picture.
3. Reinstall the factory bushing after the flat washer.

This picture shows the factory bushing on the bolt after the washer to remind you that the bushing must be reinstalled for the reverse gates to operate properly.



Step 3:

Once the new bolt and washers are in place, do not tighten the bolt, for the time being leave some play. This makes for an easier installation,

REPEAT THESE STEPS FOR EACH OF THE STEERING UNITS.
(There are two per nozzle)



All New Side force stabilizer Installation

Once you have **ALL** the outer steering units installed on the nozzle(s), you can now install the side force stabilizer. We will tighten the top bolts on the fins later.

The side force stabilizer also serves as a reverse gate stop and it also accommodates the fin adjustments, it is very important to install this in the correct position. It has a sticker that tells you THIS SIDE UP.



Step 1:

The new stabilizer is made to fit on the bottom of the nozzle without the need to drill any holes. The picture on the right shows the nozzle upside down so you can see how this part fits on the bottom of the nozzle.

Remove the factory bolt from the bottom of the nozzle, locate the small factory bushing, we will be reinstalling this just as we did with the bushings on the reverse gate so take care not to misplace this.

Step 2:

Locate bolt number 6 shown in the first picture, place the thick washer listed as number 7 on the bolt, then place the bushing listed as number 9 on the bolt followed by the thin spacer washer listed as number 8, now place the factory bushing on the bolt and place this through the 5/8ths hole in the stabilizer. This bolt should have some thread locking compound on the threads before installing it in the pump.

Step3:

When you tighten the bolt, the stabilizer will maintain some free play, even though the bolt and bushings are tight the stabilizer was designed with some extra clearance, this is allows the nozzle to turn freely.

Once all the bolts on the fins are tightened the looseness will not be noticeable.

The new Magnum steering is compatible with both the plastic and metal reverse gates.



Once you have decided where you want to set your steering be sure to go back and tighten the top bolts on all the fins!

Adjusting your Cobra Venom 16X magnum steering

There are four positions for each steering unit. Each fin can be adjusted independently of the other giving you a possible variance of 16 different settings per nozzle. Number 3 in this picture indicates the adjustment bolt for each fin.

On single engine boats I would suggest that you begin with the fins set in the middle range, once you see how this works for your particular needs you can then decide if you want more or less influence and adjust the fins accordingly. If you are using the boat for water sports or operating in rough conditions you would do best to set them all the way down right from the start. Remember you can always change that setting later on.

For twin engine boats, the size of the hull will determine the amount of influence you want. This steering is very effective and smaller boats 18 feet in length or less should start off with the fins set toward the middle adjustments. The fins can also be staggered, setting the inner fins lower than the outer ones for more slow speed assistance and less high speed influence.

On the larger boats 21 to 24 foot hulls you may want to start with the fins all the way down or a stagger, setting the inner fins all the way down and the outer fins up all the way for slow speed assistance only or drop the outer fins down a notch at a time to increase the high speed influence. This extra high speed influence is good for towing water skiers, tubes, wakeboarding or for operating in rough conditions.

Remember it is **NEVER** a good idea to place yourself beneath the swim platform of a boat that is in the water. Please do not try to do adjustments with the boat in the water, remember safety first!

