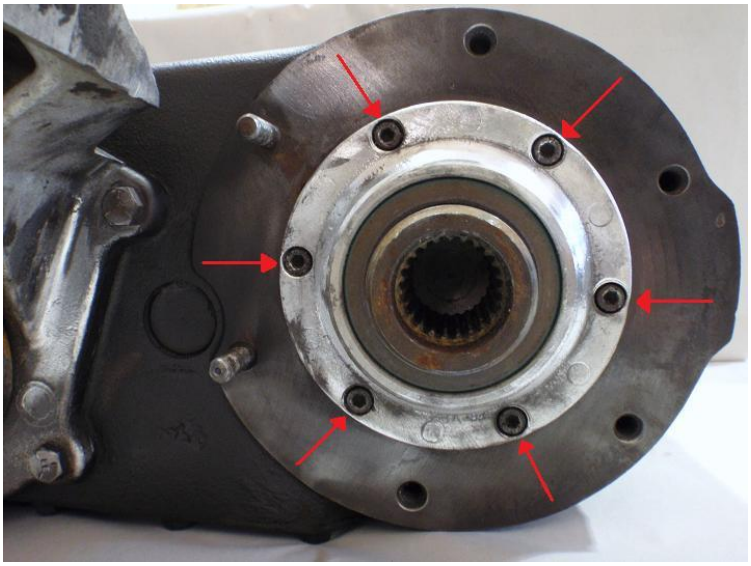
Installation Manual for your NWF BlackBox-i to Dana 300

Step 1:

Drain the Dana 300 by removing drain plug on underside of case (1/4” Allen key) and dispose of fluids appropriately.

Step 2:

Remove (6) Socket cap screws (3/8” Allen key) securing the input bearing retainer to the case.

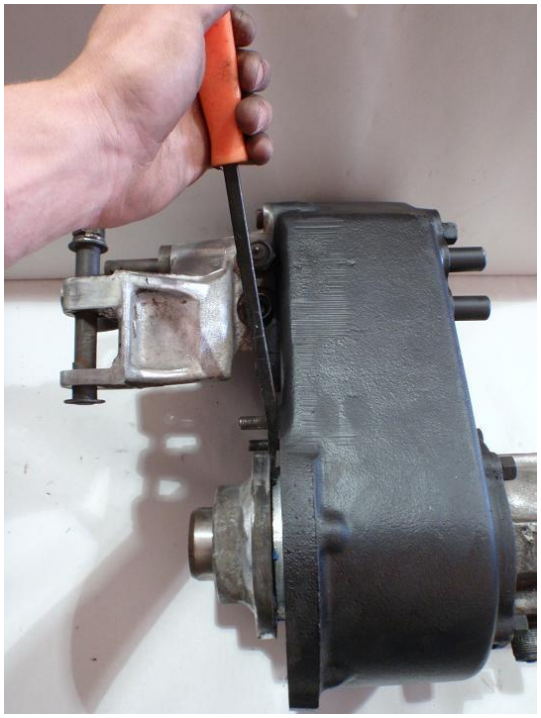


Step 3:

With a Rubber Mallet hit the Input Retainer to loosen it from the case.

Step 4:

Once you have room, use a small pry bar to separate input bearing retainer from the Dana 300 case.



Step 5:

Place removed input bearing retainer down on a flat clean surface, and remove snap ring using GOOD

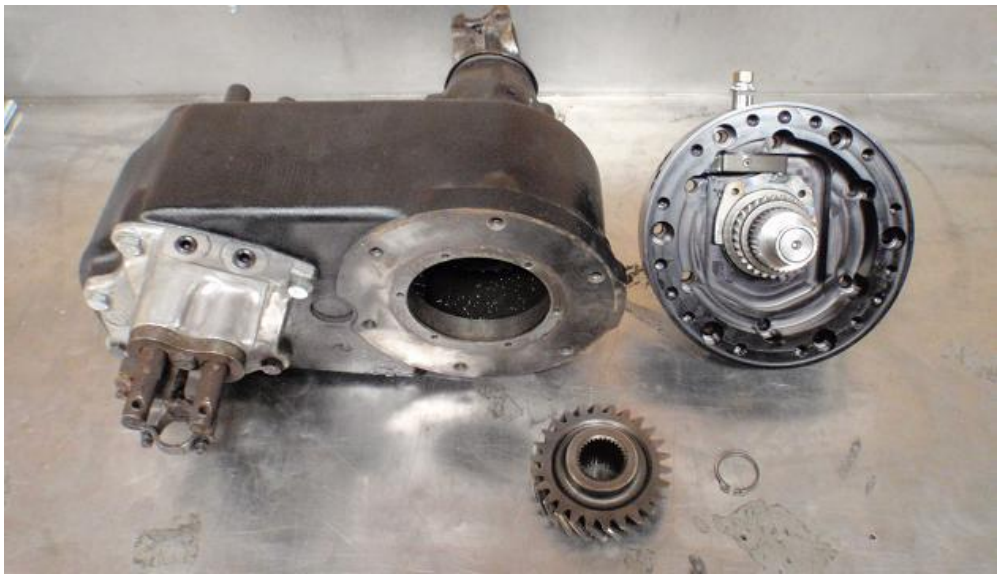
snap ring pliers. Put it aside as we will be using it later. This allows us to remove the input gear drive from input shaft.

Step 6:

Un-pack your NWF BlackBox-i shipment. You will find your BlackBox-i pre-assembled as one unit. Looking at the input side of the case (which looks like the clocking ring), remove the 6 Allen keys that hold the unit together. The case may separate into 2 pieces at this point. If it does not, using a 3/16" Allen Key, turn the 3 socket set screws clockwise, which are sunk into the input side of the BlackBox-i. After they separate, turn the Allen Key counterclockwise all until the socket set screw seats back in the BlackBox-i lid.

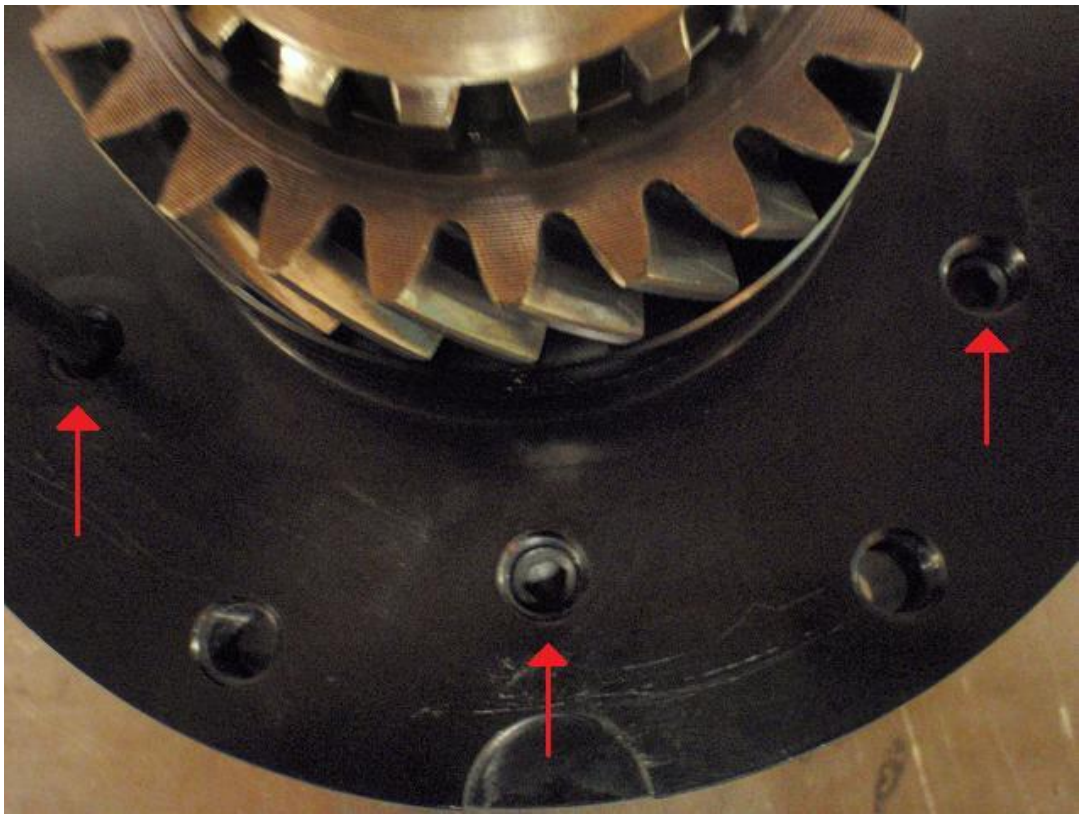
Step 7:

Clean the Dana300 input gear removed in step 5 and install it on the output side of the BlackBox-i base. Follow this with the snap ring removed in the same step.



Step 8:

If not preinstalled, Install the (6) 7/16" Socket Set Screws into the inner circle of the backside of the BlackBox-i Base. (This Step is No longer Necessary)



Step 9:

Apply a thin layer of Gasket sealant to the backside of the BlackBox-i and carefully slide the BlackBox-i into the Dana 300 case. Because the holes of the Dana 300 case are not uniform, the BlackBox will only go onto the Dana 300 in a specific rotation. Line up all 6 holes and slide the cases together.

Step 10:

Fasten the Blackbox-i to the Dana 300 case by using the (6) 3/8" x 2 1/4" Socket Cap Screws and 3/8" Nordlock washers.

Step 11:

Position yourself in front of where your BlackBox-i is going to mount on your transmission (or transmission adapter if not directly compatible). Using a caliper, measure out the distances between holes. You will find one distance is larger than the others. Mark this position.

Step 12:

Repeat step 11, this time locating the largest distance between adjacent mounting holes on the BlackBox. As you would assume, the 'wide' part of the BlackBox-i must join to the back of the 'wide' part of the transmission.

Step 13:

Apply a thin bead of gasket sealant around the lip of the BlackBox-i where the two 'halves' of the BlackBox join. With the Orientation you determined in step 12, join the lid of the BlackBox-i to the base of the BlackBox-i assembly using the supplied 3/8" x 3" Socket Cap Screw so that the output of the Dana will be approximately where you want it.

Step 14:

Using a transmission jack, position the assembled BlackBox-i/Dana300 behind your transmission. Make a notation on where the studs need to be placed in the BlackBox-i to line up with the holes on the back of the transmission so you get your ideal clocking for the front output of the Dana 300. Once you determine where one stud is to be threaded into the BlackBox, the other 5 are positioned uniformly around.

** If you are using an adapter on the back of your transmission to mate the BlackBox - it may be easier to take it off the transmission and position it on the BlackBox as a reference first.

Thread the short coarse thread into the BlackBox-i by first locking two 3/8" NC nuts together on the stud, and turning the top nut with either a 9/16" wrench or socket.

Step 15:

The BlackBox-i is shipped with (2) brass 3/8"NPT plugs, Install the Plugs into the 2 Lowest Holes.

Step 16:

Fill the Blackbox-i with 1/2 Quart of 75/90w via the hole and the top. Now thread in the supplied brass breather fitting into the same hole. Extend the breather by attaching a rubber hose (not included) to the

breather fitting and clamp it. A good place to route it is up to the top of your engine bay.

Fill the Dana300 to OEM Spec.

Step 17:

Install the Cable Shifter onto the Blackbox-i. The instructions to do this are found back in the BlackBox Tech Section.

Step 18:

Reposition the assembly behind the transmission and fasten down with the (6) 3/8" NC Nuts on the studs installed in Step 14.

Step 19:

You are required to fabricate a cross member which properly supports the Dana300/BlackBox-i assembly. Failure to do so could result in broken parts on your Blackbox-i, Dana300 transfer case, and drive train.