

DYNATRAC

THE PERFORMANCE AXLE SPECIALIST

DynaLoc

Installation Instructions, Appendix A

① **INFORMATION:** Dynatrac has included an additional bushing in the DynLoc kit. Part DA60-0022-L will be referred to as a pilot bushing and has been added to the DynaLoc Bill of materials.

If you are installing the DynaLoc for the first time please read below.

1. Refer to step 9 of the instructions were the Inner Lock s about to be installed. At this point you will place the Pilot Bushing over the Inner Lock (Fig 2). There is a round edge on one side of the Pilot Bushing, make sure the round edge is facing the Inner Lock. Once the Pilot Bushing has been assembled with the Inner Lock you may install the part as shown in step 9. Once step 9 of the DynaLoc instructions has been completed proceed from step 10 and finish the installation.

If you are upgrading an existing DynaLoc kit with the Pilot Bushing Please read below.

2. Disassemble the DynaLoc kit until the Inner Lock has been removed as shown in step 9 of the instructions. At this point you will place the Pilot Bushing over the Inner Lock(Fig 2). There is a round edge on one side of the Pilot Bushing, make sure the round edge is facing the Inner Lock. Once the Pilot Bushing has been assembled with the Inner Lock you may install the part as shown in step 9. Once step 9 of the DynaLoc instructions has been completed proceed from step 10 and finish the installation.

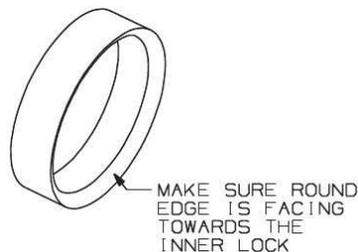


Figure 1, Pilot Bushing

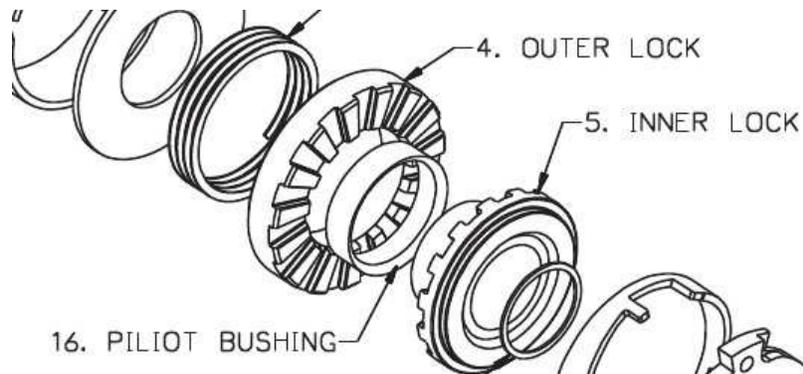


Figure 2, Pilot Bushing Assembly

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DynaLoc

INSTALLATION INSTRUCTIONS

Thank you for purchasing the DynaLoc Locking Hub from DynaTrac. The DynaLoc is the latest innovation in locking hub design. Your DynaLoc Locking Hubs will provide you with improved locking hub function, greater strength and a shorter profile for better clearance that reduces the chance of hub impacts on the trail. These installation instructions will aid you in installing your new DynaLoc locking hubs. Please note that some photos do not show the components lubricated with grease when the instructions say to do so. This was done to aid in the visibility of the photos. Whenever you are instructed to lubricate a particular component, you MUST do so for proper hub function. Before you begin please check to make sure you have all the indicated parts listed with the exploded view of the DynaLoc assembly on the last page of these instructions.

Happy wheeling!

REQUIRED INSTALLATION TOOL LIST:

- 3/16" Allen Wrench
- Pick Tool
- High-Quality Bearing Grease

STEP 1

The first step is to disassemble your existing locking hub setup and remove it from the hub and spindle assembly. Clean all grease and dirt out of the locking hub cavity and you are then ready to begin the installation of your new DynaLoc Locking Hubs.



(Note: Now may be a good time to inspect your wheel bearings and service and/or replace them as required.)

STEP 2A

The first step is to install the Spacer Ring. This is item #1 in the Exploded View (last page).



STEP 2B

The spacer must be seated firmly against the outer wheel bearing. You may find that a small screwdriver or pick maybe useful to push the ring down so that it seats on the bearing.



STEP 2 COMPLETED

The finished Step 2 would look like this inside the hub.



STEP 3

Once the Spacer Ring is in place, the Base Plate, #2 in Exploded View, must be installed.



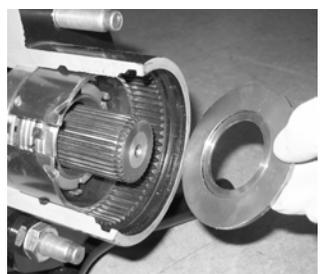
STEP 3-NOTE

Special Base Plate for application models; OEM GM '79-'91, Ford '78-'91 and Dodge '79-'93



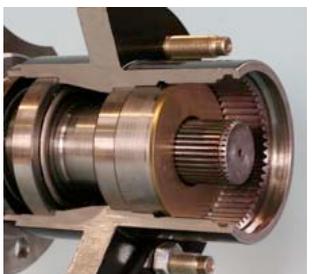
STEP 3-NOTE

Machined groove is to be installed inward towards spindle.



STEP 3 COMPLETED

The finished Step 3 would look like this inside the hub.



STEP 4

Using high-quality grease, lubricate the face of the axle shaft, the splines on the Spacer, the splines on the inside of the hub body.



STEP 5

Next, lightly lubricate the teeth on the Outer Lock ring, #4 in the Exploded View, with high-quality grease.



STEP 6

Place the Wave Spring, #3 in Exploded View, in the cavity on the back side of the Outer Lock.



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STEP 6 CONTINUED



STEP 6 COMPLETED

The finished Step 6 would look like this inside the hub.



STEP 7

Install the Wave Spring and Outer Lock into the wheel hub. Be sure that the Wave Spring is on the inside of the assembly, sitting on the base plate. Gently push them down a few times to ensure that they move up and down freely.



STEP 7 COMPLETED

The finished Step 7 would look like this inside the hub.



STEP 8

Next, lightly lubricate the teeth on the Inner Lock ring, #5 in the Exploded View, with high-quality grease.



STEP 9A

Place the Inner Lock over the axle shaft and slide it down until it seats in the down against the Outer Lock.



STEP 9B

Rotate the hub and Outer Lock as needed to ensure that the teeth in the Outer Lock and Inner Lock seat together.



STEP 10A

While pushing down on the Inner Lock, install the axle shaft snap ring into the groove in the axle.



STEP 10B

Note: It is easiest to spread the snap ring apart with your thumb and fingers and then rotate it down into place. The snap ring is #6 in the Exploded View.



STEP 11A

After installing the Axle Shaft Snap Ring, reach behind the hub assembly and push the axle shaft outward, while looking at the snap ring groove. The snap ring should seat in the groove complete. If it doesn't, fix the issue before proceeding to the next step.



STEP 12A

Next, install the Cam Crown, figure #7 in Exploded View, over the Inner Lock ensuring that it sit down on the Outer Lock. Note that the three cam ramps must face the outside of the hub assembly.



STEP 12B

Apply generous amounts of high-quality grease to the tops of the cam areas. (This is not shown in the photo but MUST be done).



STEP 13A

Ensure that the Cam Crown is seated fully before proceeding to the next step.



STEP 13 COMPLETED

The finished Step 13 would look like this inside the hub.



STEP 14

Lightly lubricate the back side of the Top Plate with high-quality grease. Note: the Top Plate is figure #8 in the Exploded View.



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STEP 15A

With the backside of the Top Plate lubricated, it is installed in the assembly with the recessed cutout facing the inside of the hub assembly.



STEP 15B

Place the Inner Lock over the axle shaft and slide it down until it seats in the down against the Outer Lock.



STEP 16

Ensure that the ears in the Top Plate are seated down into the slots in the Cam Crown, as seen here.



STEP 17A

While pushing down on the Top Plate, install the Hub Snap Ring into the groove in the wheel hub body. Note: It is easiest to spread the snap ring apart with your thumb and fingers and then rotate it down into place.



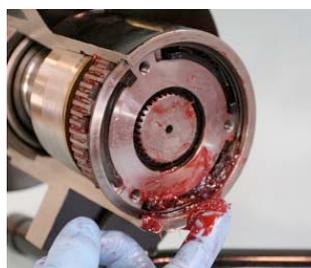
STEP 17B

The Hub Snap Ring is #9 in the exploded view. After installing the Hub Snap Ring, check to be sure that it is seated in the groove complete. If it isn't, fix the issue before proceeding to the next step.



STEP 18

Liberally lubricate inside of the hub and all the surfaces with grease.



STEP 19

Wipe any excess grease off the outer face of the hub before continuing with the install.



STEP 20

Lubricate the Knob O-ring, #11, and the O-ring groove in the Lock Knob, #10. Then install the O-ring on the Lock Knob. Lubricate the tops of all three (3) ears and inside of bezel, #13.



STEP 21

The Lock Knob MUST be installed in the hub assembly with the ear located opposite the DynaTrac logo facing the X or locked position on the hub Bezel. The Lock knob can be installed in the Bezel and then rotated around to this position before installation. (Note: the Bezel is #13 on the Exploded View.)



STEP 22

Ensure that the DynaTrac logo is facing the X or locked position, and that the ear is under the X when in place before proceeding with the installation.



STEP 23A

Place the Lock Knob and Bezel assembly into the wheel hub opening. Make sure the tabs of the ears locate on the low side of the Crown Cam ramps.



STEP 23B

Rotate the Bezel and Lock Knob assembly as one unit until the screw holes line up with the threaded holes in the top plate.



STEP 24

Place the nylon washers over the Socket Head Cap Screws. Use a single drop of Loctite 242 Blue per screw. Install the three bolts in the hub Bezel holes. Torque to 60-65 in/lbs using a 3/16 Allen wrench.



Note:
DO NOT over tighten the screws. Over tightening will cause the knob to bind.

STEP 25

Rotate the Lock Knob a few times to ensure that your new DynaLoc locking hubs will lock and unlock. If they don't recheck the assembly to ensure that everything was installed properly.



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LOCKED

This is what your hub with DynaLocs installed will look like in the Locked "X" position.



UNLOCKED

This is what your hub with DynaLocs installed will look like in the Un-Locked "O" position.



CLEARANCE COMPARISON

The DynaLoc locking hub is considerably shorter than the stock or other aftermarket hubs for the Dana 60 front axle. A lower hub profile will reduce hub impacts with rocks and other obstacles on the trail.

STOCK



DYNALOC



OPERATION

The DynaLoc manual locking hubs are designed with the highest level of form and function in mind. A single short turn will lock or unlock the hubs. With the "DYNATRAC" logo turned to the "X" position the hub is locked, turned to the "O" the hub is unlocked.

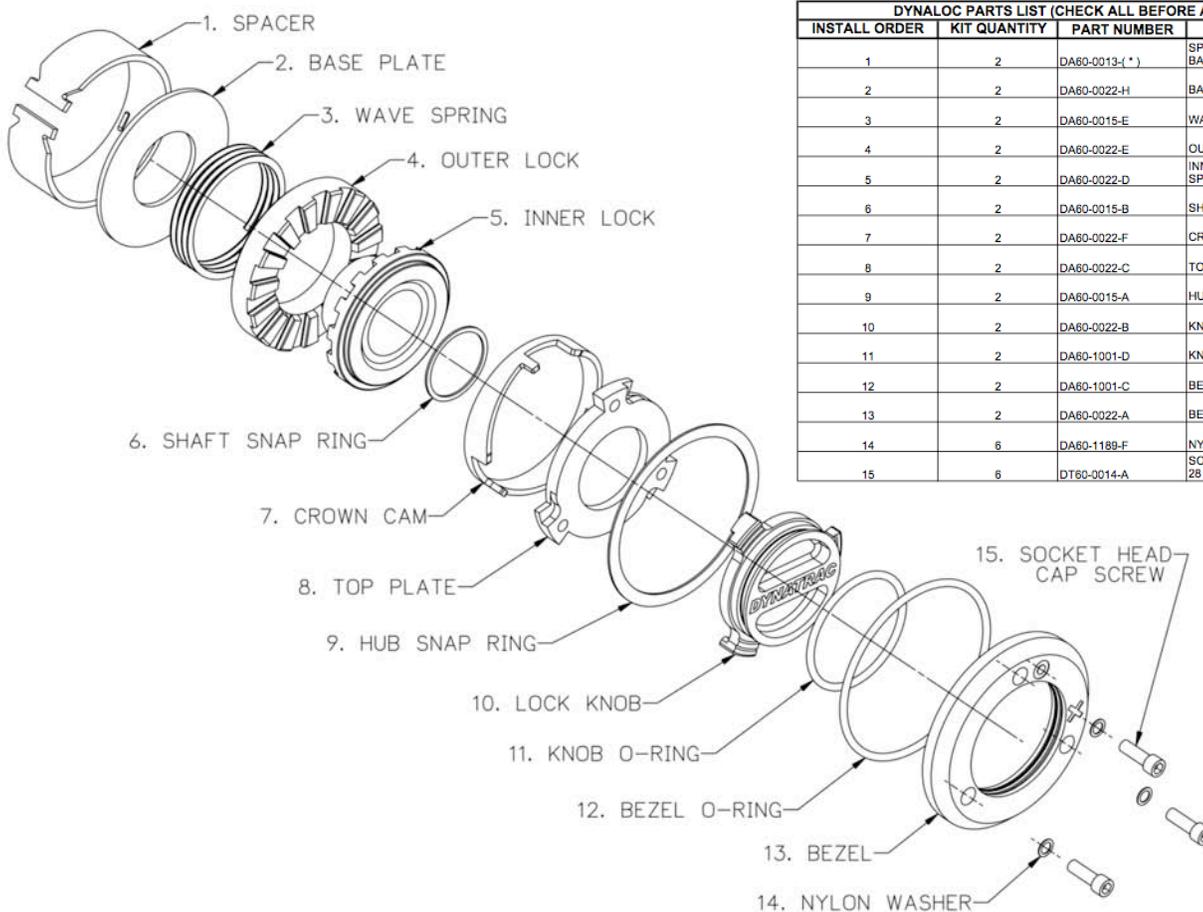
Always engage Dynaloc manual locking hubs into the locked position while in two-wheel drive or in neutral with the parking brake set. After engaging the transfer case into four-wheel drive, ease into the throttle as you begin driving. **DO NOT** accelerate at a high rate of speed when initially driving. This will ensure the DynaLoc manual locking hubs are engaged properly.

To test for sure that hubs are fully locked, on asphalt or concrete turn the steering wheel fully either left or right and slowly drive forward. If the vehicle lurches forward the front hubs are locked and driving. If the vehicle turns as it would in two-wheel wheel drive the hubs are not locked and inspection will be needed to diagnose the problem. After any amount of time driving in four-wheel drive, the hubs may be difficult to unlock. This is normal.

When disengaging the hubs to the unlocked position, set the parking brake on level ground and shift the transfer case into two-wheel drive or neutral. If the transfer case is difficult to shift, drive the vehicle a few feet forward or backwards to relieve some of the drive line tension.

Always refer to the vehicle owner's manual for operation of the transfer case in and out of four-wheel drive.

If at any time the vehicle is taken into water where the hubs become submerged, it is recommended the hubs be disassembled and inspected for damage and contamination. At that time, if all parts are good, they should be thoroughly cleaned and re-lubricated before being re-assembled. Recommended service in dry climates is once every 12 months, wet climates is once every 6 months. When driving in water and mud, inspect daily.



DYNALOC PARTS LIST (CHECK ALL BEFORE ASSEMBLY)			
INSTALL ORDER	KIT QUANTITY	PART NUMBER	NAME
1	2	DA60-0013-(*)	SPACER *(PART NUMBER IS BASED ON APPLICATION)
2	2	DA60-0022-H	BASE PLATE
3	2	DA60-0015-E	WAVE SPRING
4	2	DA60-0022-E	OUTER LOCK
5	2	DA60-0022-D	INNER LOCK 35 SPLINE (30 SPLINE, DA60-0022-I)
6	2	DA60-0015-B	SHAFT SNAP RING
7	2	DA60-0022-F	CROWN CAM
8	2	DA60-0022-C	TOP PLATE
9	2	DA60-0015-A	HUB SNAP RING
10	2	DA60-0022-B	KNOB
11	2	DA60-1001-D	KNOB O-RING
12	2	DA60-1001-C	BEZEL O-RING
13	2	DA60-0022-A	BEZEL
14	6	DA60-1189-F	NYLON WASHER
15	6	DT60-0014-A	SOCKET HEAD CAP SCREW 1/4-28 X 3/4