# DYNATRAC PRODUCTS V1.0

## 2000-2002 Dodge Hub Kit – Stage 2
## 4x4, Front Axle 35 Spline Shaft Upgrade Kit

**Some of the less common tools, which will be required:**

- 14mm, 12-point, ½" drive socket
- 1-11/16", 6 point socket
- Seal Driver
- Calibrated torque wrench.
- Anti-Seize compound.
- 4 quarts of high quality gear oil

**Preparation and Inspection Checks:**

1. Read all instructions completely. Only perform this installation if you are an experienced, fully equipped mechanic. Inspect all boxes and packing material to expose all the parts in the kit. Using the bill of material attached, verify that the kit is complete. Contact Dynatrac about any shortages at (714) 596-4461. Do not start the installation until you are sure you have everything you need. Allow yourself plenty of time. You will need anywhere from 5 to 10 hours depending on your skill and experience level.

   ⚠ **WARNING: Always wear proper safety equipment including safety glasses and gloves while working with tools. Improper use of tools and equipment can cause injury or death.**

   ⚠ **WARNING: Only perform this installation if you are an experienced, fully equipped mechanic.**

2. This kit can be used with or without a Dynatrac Stage-1 Free-Spin Hub Conversion Kit (P/N CR60-2X1104-E) for '00-'02, Dana 60F equipped, Dodge Trucks. If you are installing both kits. Familiarize yourself with the instructions of **BOTH** kits before proceeding. The instructions in this kit are written assuming you will **NOT** be installing both kits.

3. **This kit requires and does not** include a differential that has 35-spline side gears. The kit does not address the details of installing such a differential. If you do not have one, the stock diff can be upgraded with 35-spline side gears. The side gears can be purchased from Dynatrac. You may also choose to purchase a locking or limited-slip differential for extra performance and traction. Dynatrac stocks Detroit Lockers, ARB Airlockers, and Powr-Lok differentials which are all excellent products. Contact Dynatrac for assistance. These instructions DO NOT include the steps necessary to install or modify a 35-spline differential.

4. Test fit your new inner shafts fully into the 35 spline differential. They should go in completely, easily and rotate freely. If it will not go in and bottom out, contact Dynatrac for assistance.

5. It is a good idea to replace the U-joints when installing this kit. We have designed it to include new U-joints.

   ⓘ **INFORMATION: Replace old U-Joints if they are worn.**

6. Raise the front axle off the ground and secure with jack stands. Remove the wheels.

   ⚠ **WARNING: Always use appropriate jack stands when raising your vehicle. Never work under a vehicle that is not properly secured. Be sure to chock any wheels that are on the ground.**

**<u>Begin Front Axle Teardown:</u>**

7. Remove the differential cover and drain the gear oil. It is common for oil to leak into the axle housing tubes when the inner axles are pulled outward past the inner axle seals. It is best to thoroughly clean the inside of the axle tubes from any dirt, rust or oil residue BEFORE re-installing the axle shafts later in the install process.

8. Using the 1-11/16” socket and a long breaker bar (or impact gun), remove the cotter pin and the big nut at the center of the stock live spindle assembly. The nut can be very tight. Have someone step on the brake pedal to keep the stock hub from rotating if needed.

9. Remove the calipers and hang them securely from the frame without disconnecting the brake hoses. Remove the rotors.

10. **If truck is equipped with front ABS:** Remove the sensor and cable from the unit bearing. It is held in with only one (1) screw, and pulls straight out. Tie off and out of the way.

    ⚠ **CAUTION: Be careful not to damage the ABS sensor while removing it from the unit bearing.**

11. To remove the unit bearing assembly: Use ONLY a 14mm 12 point socket to remove the 4 bolts that hold the live spindle assembly to the knuckle. Other sockets may appear to fit, but may cause the bolt heads to become rounded off!! They are removed from the backside. Set aside unit bearing and the brake shield.

    ⚠ **WARNING: Do not use high heat to remove the live spindle from the knuckle, this can cause damage to the components and reduce their strength.**

12. Your truck is equipped with an axle disconnect mechanism in the RH axle tube. Remove the vacuum motor from the disconnect housing mid-way on the RH tube.

13. Remove the axle shaft assembly. It is only held in by tight seal tension at the differential. Use 1 or 2 pry bars between the yoke and the end of the axle housing to pull straight outward if necessary. Be careful not to damage your axle seals when removing the shafts. Set shafts aside.

14. At this time you must remove the differential and ring gear assembly to have access for the inner axle seal installation. Remove the bearing cap bolts. You should remove the differential and make certain that the carrier bearing races and the bearing caps are not mixed up. They must be re-installed in their exact original position. Now is the time to upgrade the differential to 35 spline side gears, or replace it with another differential that has 35 spline side gears. We recommend that this part of the job be performed by an experienced ring & pinion or axle mechanic.

**Begin Front Axle Reassembly:**

15. If you have not cleaned the inside of the axle tubes as discussed in Step 7. Do so at this time.

16. Assemble the new inner shafts to the stock outer shafts. **If you are installing Free-Spin Hub Conversion, refer to the instructions for that kit.**

17. There are 2 Axle Seal Housings provided for the ’00-’02 Dodge trucks. They are identical. Either one may be used on the LH or RH side.

18. The new axle seals in the kit **ARE NOT IDENTICAL**, but look similar. Make certain that you install them in the correct position, or you WILL have a leak. They are as follows:

| Position | DT P/N | CR P/N | National P/N |
|---|---|---|---|
| LH (Drivers) | CR60-1175-B | 15522 | 472213 |
| (Note: this seal has a slightly smaller lip inside diameter) | | | |
| RH (Pass) | CR60-1175-A | 16061 | 1999 |
| (Note: this seal has a slightly LARGER lip inside diameter) | | | |

19. Press the new axle seals into the axle seal housings.

20. Coat the seal bore on the inner end of the LH axle tube with a small amount of silicone. Press the LH inner axle seal and seal housing assembly into the tube from inside the pumpkin.

21. Perform the same operation on the seal and seal housing assembly that presses into the Disconnect Housing in the middle of the RH tube.

22. Coat the lips of both inner seals with grease.

23. Now is the time to re-install your 35 spline differential. Make certain that the carrier bearing races and the bearing caps are not mixed up. They must be re-installed in their exact original position. Now is the time to upgrade the differential to 35 spline side gears, or replace it with another differential that has 35 spline side gears. We recommend that this part of the job be performed by an experienced ring & pinion or axle mechanic.

24. Coat the seal surfaces on the inner shafts lightly with grease at the end of the shaft that is going into the differential.

25. Carefully insert each shaft assembly into the axle housing. Be careful not to get any dirt or other contamination on the shaft as you install it, as it could damage the bearings and seals. Guide the shaft up into the inner seal and differential gears. Use a rubber mallet to tap the end of the shaft inward until it stops. You may have to rotate the shaft to align the splines in the differential.

26. Replace the brake shield and unit bearing assembly. Make sure the shields are not on backwards, or the shield will not allow the rotor to be installed. Position the ABS sensor block at the 12 o'clock position.

27. Reuse your four (4) spindle mounting bolts (9/16-18 x 1.25") to secure the spindle to the knuckle. Apply Lock-tite 271 to the bolts. Tighten the bolts to 85 ft-lbs in a criss-cross pattern. Make sure the spindle is firmly seated and there are no gaps between the knuckle, shield, or spindle.

**⚠ WARNING: Use a calibrated torque wrench on all bolts. Always torque bolts in the order listed.**

28. Check the shaft assembly for some endplay in and out. There MUST be at least some endplay. The grease may make it difficult to feel the end play, so you may want to pry the shaft in and out several times using screwdrivers at the U-joint until you are certain that end play is present. DO NOT CONTINUE IF THERE IS NO END PLAY. Also look inside the disconnect housing. Make sure the seal is riding on the axle shaft seal surface of the RH mid-shaft.

    ⚠ **WARNING: Do not continue if there is no endplay in the shaft assembly after installation. Contact Dynatrac for assistance.**

29. **ABS Equipped Only**: Insert the ABS Sensor into the spindle. Use the stock screw to secure it. Secure the ABS sensor wiring as it was before you removed it from the original unit bearing so that it is clear of all moving components.

30. Install the stock brake rotor over the outside of the wheel hub and hold it in place with two (2) lug nuts. Route the cable for the ABS sensor so it will NOT touch the inside of the rotor during vehicle operation. Rotate the rotor 360° to make sure that there is no interference with any other components.

    ⚠ **WARNING: Make sure that the ABS sensor cable is secure and clear of the rotor.**

31. Put the caliper back over the rotor and secure using your original caliper bolts with some Lock-tite 271. Tighten bolts to factory specifications. Spin the rotor and make certain that the caliper has adequate clearance from the brake rotor.

32. Your truck was equipped with an axle disconnect mechanism in the RH axle tube. Use silicone to seal and reinstall the vacuum motor on the disconnect housing. The vacuum motor will continue to operate, but have no effect on the operation of the axle.

33. Put the big castle nut back on the tip of the outer shaft and tighten. Replace the cotter pin.

34. Install your wheels on the new hubs and tighten your lug nuts to 110 ft-lbs.

35. Refill the axle to the previously noted level and test drive.

    ⚠ **WARNING: Failure to properly refill the axle with Gear Oil can cause serious gear and bearing failure which could result in serious injury or death.**

36. Recheck bolt torque on lug nuts after test-driving.

37. Verify the proper gear oil level after a test drive.

38. Check the torque on your lug nuts every 500 miles.

> ⚠ **WARNING: Failure to check bolt and lugnut torque can cause serious accident, component failure, serious injury or death.**

## Bill of Material

# 00' - 02' Dodge "Free Spin" Hub Kit Stage 2
# CR60-2X3219-A

| Description | Quantity | Dynatrac P/N |
|---|---|---|
| Axle U-joint | 2 | DA60-3249-A |
| Seal Housing | 2 | CR60-3248-B |
| Inner Shaft - Right | 1 | CR60-3219-B |
| Inner Shaft - Left | 1 | DA60-3220-B |
| Seal - Right | 1 | CR60-1175-A |
| Seal - Left | 1 | CR60-1175-B |