WHEEL BEARING NOTES -- BN6

YOUR CAR MAY VARY.
DRIVING WHEEL BEARINGS WITH TOOLS MADE FROM PVC PIPE.

Steve Gerow 6/30/02 Updated 8/6/02

DISCLAIMER--THIS IS ONLY INFO YOU CAN USE IF YOU WANT TO DO THE JOB YOURSELF. IT IS POSSIBLE TO DAMAGE EXPENSIVE PARTS IF YOU DO YOUR OWN WORK WITH HOMEMADE TOOLS. PROCEED AT YOUR OWN RISK. THIS INFORMATION REPRESENTS MY OWN EXPERIENCE AND MAY DIFFER FROM YOUR EXPERIENCE. I HIGHLY RECOMMEND TAKING YOUR BEARINGS OUT AND USING THEM WITH THIS INFORMATION IN THE ORDERING PROCESS. IF ORDERING BLIND, MAKE SURE THE BEARING HOUSE WILL ALLOW YOU TO RETURN INCORRECT BEARINGS.

REAR WHEEL BEARINGS:

Bearing Size (observed): 85mm(3.35") OD x 45mm (1.77") ID x 23mm (.9") thick.
2 rows of 12 balls, open (unsealed), captive balls. (Bearings are typically measured in Metric sizes.)

According to Healey owner Bob Coates, Sales Engineer at the Torrington Company, the following is the correct Rear Wheel Bearing spec: SKF pn: 4209ATN9 (1 required for each wheel).

FRONT WHEEL BEARINGS (Timken numbers observed on bearings):

Inside: Cup LM67010; Bearing LM67048
Outside: Cup 07196; Bearing 07087
Note: Timken's web site calls for "Set 2" & "Set 6" as specs for the front wheel bearings. Set 2 is incorrect if it doesn't include the numbers above. Order the numbers above and you'll be fine. "Set 2" was incorrect when ordered as such, but this may have been the bearing house's fault.

Rear Hub Seal: 2-7/8" OD x 2-1/16" ID
Front Hub Seal: 2-7/8" OD x 2" ID
Be careful to install these correctly, as they are almost the same size.

TESTING REAR WHEEL BEARINGS:

Bearing Supply Guy's test method:
Attempt to rock center section at right angles relative to outer section--should be no perceptible play.
Hold outer section and rotate center section quickly back and forth. If bearing's good there's no perceptible drag when you change direction.

The List of Timken parts from Jim Werner's site is compiled from Timken's web site. It refers to size "209L" for rear bearings. My local bearing guy told me Timken doesn't make ball bearings, so this is someone else's bearing repackaged. I checked with several bearing houses and they didn't have this bearing; the one I ordered from a house in Texas was incorrect. Suggest Moss for this one.

SEAL DRIVERS:

You'll be inserting the rear hub seals by pressing or tapping on the thin sheet metal edge, rather than hammering on the back, therefore if it's not done accurately the seal may be damaged with the possibility of gear oil leaking on your expensive brake shoes.

Parts required: PVC Pipe Fittings--

Rear Seal Driver Guide:
Use a 2-1/2" Slip-Fit Union, which is 3-5/16" OD, 2-7/8" ID. Cut off approximately 3/4" of length from this. The one I found was an accurate slip-fit into the hub.
Rear Seal Driver:
2-1/2" to 2" Reducer Bushing is used for tapping seal in place. It is a slip fit inside the ring you cut off the union above. Guide ring above ensures the Driver centers on the seal edges, which are thin.

Front Wheel Bearing Cup Drivers:
Inside Bearing (larger) 2" pvc pipe
Outside Bearing (smaller) 1-1/2" pvc pipe.

Inside Bearing Cup--cut off 1" section of 2" pipe; clean off edges, use square end for driving cup. Put bearing cup in freezer for a 15 minutes or so. Put hub in large saucepan of boiling water, bring to boil. I put hub on a piece of plywood and centered the pvc pipe on cup with 4" square of 2x4 on top of it and hit with sledge hammer. Make sure you drive cup in squarely. MAKE SURE YOU REFER TO PICTURES IN MANUAL FOR CORRECT DIRECTION OF CUP. Both are installed with their smaller bores inward toward the center of the hub.

Outside Bearing Cup--cut length of 1-1/2" pipe sufficient to stick up above hup (5" or so). Heat, Freeze and drive per above.

REAR OCTAGON NUT WRENCH--several people said a 2-3/16" 12 point socket will work. Haven't verified. I used a rectangular steel bar with tabs welded onto it which gripped opposite flats on the nut. Non-welding Idea: 1" square bar, 12-15" long, with recess ground to width of nut--needs checking out. Cut recess on table saw with carborundum blade. Hemphill's sells two inexpensive kinds of octagon wrench.

LONG-TERM UNTESTED FRONT WHEEL SHIMMING PROCEDURE:
FOLLOW AT YOUR OWN RISK!

I made shims from .005" and thinner brass for shimming the new front wheel bearings. This material can be cut with an Xacto knife. I think the most conservative, safest thing would be to make shims in order to get the wheel bearings correct, then replace with the same thickness in steel shims from Moss or whoever. Refer to Nock's Tech Notes for shimming procedure.