

# INSTALLATION - SERVICE INSTRUCTIONS

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Bulletin #94 page 1 of 2 **9"-9-1/2" Ford Pinion Supports** August 25, 2016

## PART NUMBERS:

47680.....PINION SUPPORT, ASSY BALL/BALL 35 SPL. (7/16" pinion studs).

## DESCRIPTION

## PARTS INCLUDED:

See page two for item list and assemble view

## PRIMARY APPLICATIONS:

Drag racing. Must be used with Pro gears w/35 spline pinion.

## INSTALLATION OVERVIEW:

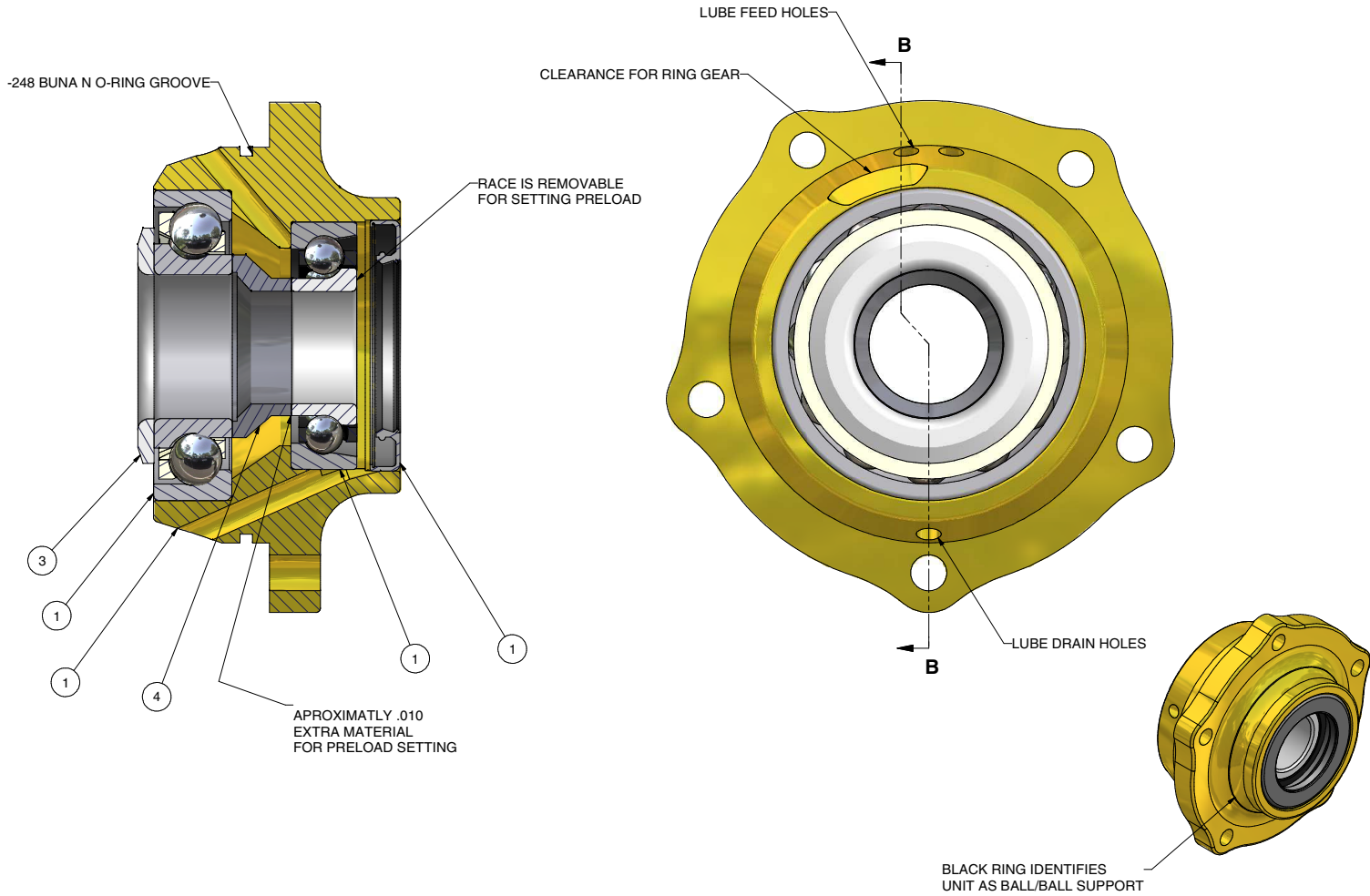
- 1) The diameter of the pinion shaft is very important!** MW pinion supports are pre-assembled and bearing preload determined based on a pinion shaft diameter of 1.8765". If the shaft is too large it will affect the preload on the bearings. The rear bearing in a Mark Williams support are manufactured with a bore size of 1.8760, this allows for a light press or slip fit the pinion with luberize coating. You might have to remove some of the luberize coating by polishing in a lathe for the proper fit.
- 2) The hardened bearing soacer washer (57682) is the first item to go on the pinion.** The large radius on the I.D. of the shim should face the gear of the pinion.
- 3) Support assemblies are supplied with rear pinion bearing installed in the housing so it is necessary to install these two pieces on the pinion as one unit.** When pressing the bearing and housing onto the pinion shaft it is best to use a short piece of tubing, with an I.D. large enough to slip over the pinion shaft, to push on the inner race of the bearing. This will prevent damage to the bearing.  
**Note:** To safely remove the rear bearing from the pinion without damage, use MW #57494 bearing puller. This tool is designed to fit under the shim behind the rear bearing which in turn contacts the inner race of the bearing. Pressure to the bearing housing and/or the outer race of the bearing will result in damage to the bearing.
- 3) Stand the pinion on end on the pilot stub.** Slide the 57683 preload spacer down the pinion shaft to the rear bearing and put front the pinion bearing (7308B1500) into position. The front bearing should be slip fit on the pinion. If not you might have to polish it for a slip on a lathe and fine emery cloth to obtain a slip fit.
- 4) Before installing the seal it is a good idea to check the bearing preload, even with a new assembly.** Install yoke or coupler on the pinion, install pinion nut and torque to 140 ft/lbs (if possible it is suggested to use a used pinion nut until final assembly). Rotate the pinion with an inch/lbs. torque wrench. The rotational drag should be 2-4 in/lbs If the rotational drag is too low step up the pinion nut torque in 10 ft/lbs increments and re-check the drag. Once the correct drag is achieved note the pinion nut torque. Maximum pinion nut torque is 200 ft/lbs. If the amount of drag is too high the preload spacer is too thin and should be replaced (new spacers will require machining).
- 5) With the bearing preload checked and/or set, remove the yoke or coupler, install the pinion seal, re-install the yoke or coupler.** Install a new pinion nut with Loctite and torque to the amount determined in step #4. The torque will increase with the seal.

## TORQUE SPECS:

Pinion Nut 140 ft/lbs unless higher torque required per step #4 above.  
Pinion housing nuts (3/8-24) 30-35 ft/lbs.  
Pinion housing nuts (7/16-20) 40-45 ft/lbs.

## MAINTENANCE REQUIREMENTS:

Periodic visual inspection. Periodic inspection of bearings and races for excessive heat (discoloration) or wear (pitting). It is recommended that gear oil be changed once a season after initial break-in.



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Parts List				
ITEM	QTY	PART NUMBER	DESCRIPTION	FILE NAME
1	1	47672	PINION SUPPORT HOUSING (BALL BALL)	004361IN.ipt
2	1	7309BM	BEARING, ANGULAR CONCACT 7309 1.875 BORE	AS004265IN.iam
3	1	57682	SPACER, BALL/BALL /TAPER SUPPORT LARGE	000111IN.ipt
4	1	47683	SPACER, PRELOAD BALL/BALL LARGE .745	004370IN.ipt
5	1	7308B1500	BEARING, 3BALL BEARING, FRONT PINION, 1.500" I.D.	AS004364IN.iam
6	1	21267	SEAL, PINION, HE AND 47680 SUPPORT	21267.ipt

MATERIAL	HEAT TREAT	
	PROTECTIVE FINISH	
755 SOUTH PIERCE AVE LOUISVILLE, CO 80027 PHONE: 303.650.1000 FAX: 303.650.1001 WWW.WALTCO.COM		
Z:\wep\mof\Files\Assembly_Files\AS004371IN.iam		AS004371IN.idw
STOCK INFORMATION		MACHINING TOLERANCES
Ball Length	XX .XXX XXXX X	
Ball Diameter	.015 .005 .005 .02	
Surface Finish (Ra)	SURFACE FINISH UNLESS NOTED V.P.F.	
PINION SUPPORT ASSY BALL/BALL LARGE		8/25/2016 47680