

# INSTALLATION - SERVICE INSTRUCTIONS

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Bulletin #21 page 1 of 2

## 9" Ford Pinion Supports

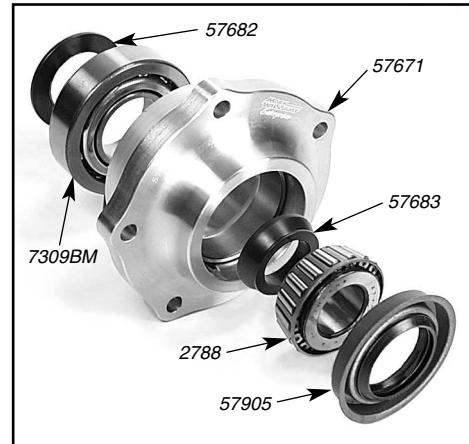
Aug 29, 2016

### PART NUMBERS:

57680.....Ball/tapered bearing pinion support assembly for 35 spline pinion (7/16" pinion studs).

### PARTS INCLUDED:

- | PART NUMBER: | DESCRIPTION  |
|--------------|--|
| 1 - 57671    | Aluminum pinion bearing housing with front bearing race installed.   |
| 1 - 248      | Pinion housing "O" ring.   |
| 1 - 57905    | Pinion seal.   |
| 1 - 2788     | Front Timken pinion bearing.   |
| 1 - 7309BM   | Modified angular contact ball rear pinion bearing.   |
| 1 - 57682    | Special hardened rear bearing shim.  |
| 1 - 57683    | Solid preload spacer (this spacer is machined to the proper thickness if part of complete support assembly). |
| 1 - 57606    | Flanged reducer bushings, set of 5 (for 3/8" pinion studs). Order separately if needed.                      |



### PRIMARY APPLICATIONS:

Drag racing. Must be used with 3.40 to 4.86 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" max. 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 the luberize coating on the gears.
- 2) The hardened bearing shim (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.
- 4) 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 (2788) into position.
- 5) 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 7-10 in/lbs (if re-assembling a support with used bearings the rotational drag can be 5-7 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).
- 6) 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.

### 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.

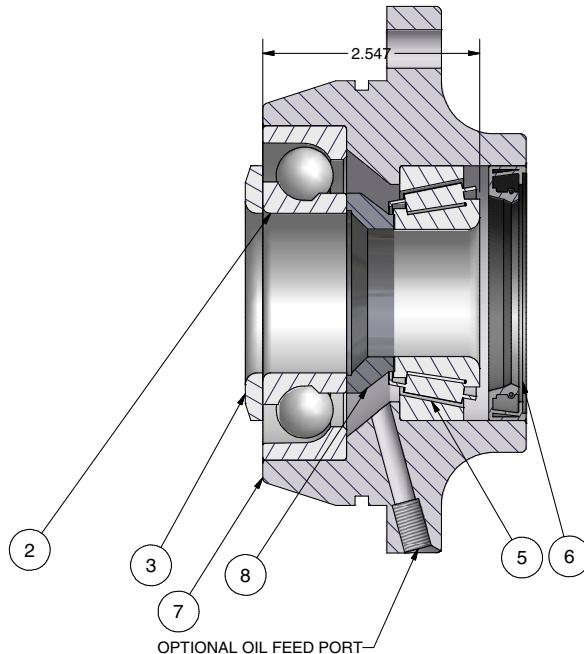
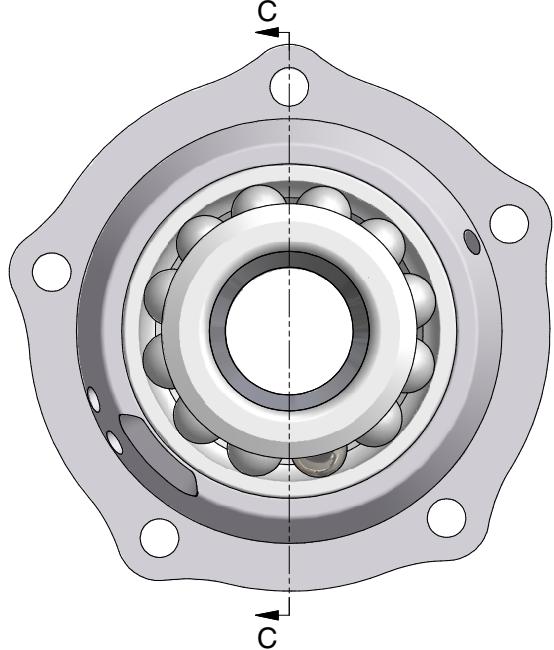
Pinion housing nuts (7/16-20) 40-45 ft/lbs.

### 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.

# Service instructions

## 0021 page 2 of 2



Parts List				
ITEM	QTY	PART NUMBER	DESCRIPTION	FILE NAME
2	1	7309BM	BALL BEARING, LARGE PINION, 1.8765" I.D.	7309BM.ipt
3	1	57682	SPACER, BALL/TAPER SUPPORT LARGE	000111IN.ipt
5	1	2788	BEARING-FRONT,LARGE FORD PINION 35SPLINE	2788-2729.ipt
6	1	57905	SEAL, 9" FORD LARGE PINION (21172)	21172.ipt
7	1	57671	PINION SUPPORT HOUSING (BALL BEARING)	000108IN.ipt
8	1	57684	SPACER, PRELOAD LARGE (35 SPLINE)	001913IN.ipt

MATERIAL	HEAT TREAT							
PROTECTIVE FINISH								
Z:\InventorFiles\Assembly_Files\AS004065IN.iam								
STOCK INFORMATION		MACHINING TOLERANCES						
BAR LENGTH:0	WEIGHT: 0	.XX	.XXX	.XXXX X'				
YIELDS PER BAR: 0		.015	.005	.0005 1/2"				
GROSS WEIGHT (PART): 0		SURFACE FINISH UNLESS NOTED VT25						
		SAVED DATE: 8/10/2016	PART NUMBER: 57680	CHANGE:				

  
**765 SOUTH PIERCE AVE, LOUISVILLE, CO 80027**  
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 CAD NO. AS004065IN.idw DRAWN BY \_\_\_\_\_ DATE 8/10/2016  
 TITLE PINION SUPPORT, ASSY BALL/TAPER LARGE