# **INSTALLATION - SERVICE INSTRUCTIONS**

765 South Pierce Avenue Louisville, Colorado 80027

303-665-6901 800-525-1963 www.markwilliams.com



Bulletin #20 9" Ford Pinion Supports page 1 of 2

AUG 30, 2016

57671

**PART NUMBERS: DESCRIPTION** 

PARTS INCLUDED:

1 - 57671......Aluminum pinion bearing housing with front bearing race installed. 1 - -248.....Pinion housing "O" ring. 1 - 18817.....Pinion seal. 1 - 2790.....Front Timken pinion bearing. 1 - 7309B......Angular contact ball rear pinion bearing. 1 - 57674.....Flanged reducer bushing for rear pinion bearing. 1 - 57676.....Solid preload spacer (this spacer is machined to the proper thickness if part of complete support assembly).

7309B 1 - 57606......Flanged reducer bushings, set of 5 (for 3/8" pinion studs). Order separately if needed.



### **PRIMARY APPLICATIONS:**

Drag racing, Street and Oval track. Recommended for high RPM applications.

### **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 1.3125" max. If the shaft is too large it will affect the preload on the bearings. Measure pinion shaft and polish shaft if needed.
- 2) Support assemblies are supplied with rear pinion bearing installed in the housing and the flanged reducer bushing (57674) pressed into the rear bearing so it is necessary to install these 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 #57493 bearing puller. This tool is designed to fit under 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 57676 preload spacer down the pinion shaft to the rear bearing and put front the pinion bearing (2790) into position.
- 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 110-125 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 175 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).

Note: If a stock Ford yoke is to be used it will have to be shortened 1/2" on the splined end, this will allow full engagement of the pinion nut. This is due to the larger bearings in the MW support . In addition seal diameter must also be extended forward 3/8".

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.

### **TOROUE SPECS:**

Pinion Nut 110-125 ft/lbs unless higher torque required per step #4 above.

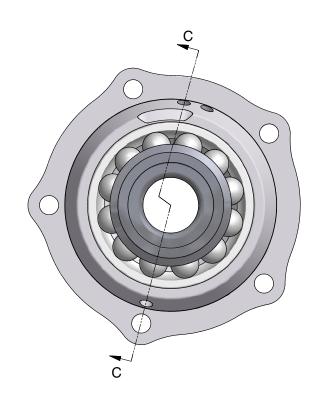
Pinion housing nuts (3/8-24) 30-35 ft/lbs.

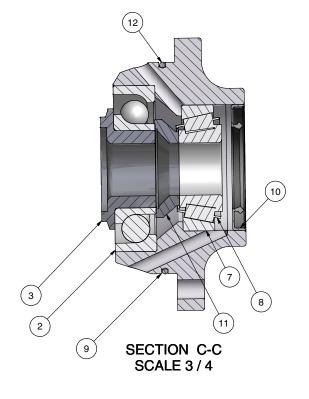
Pinion housing nuts (7/16-20) 40-45 ft/lbs.

## **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.

# PAGE 2 OF 2 SERVICE INSTRUCTION 20





	Parts List								
ITEM	QTY	PART NUMBER	DESCRIPTION	FILE NAME					
2	1	7309B-SP	BALL BEARING, 40 DEG. ANGULAR CONTACT	7309B-SP.ipt					
3	1	57674	SHIM, BALL/TAPER STD PINION & CERAMIC	001736IN.ipt					
7	1	2790	BEARING CONE, STD FORD FRONT PINION	2790.ipt					
8	1	2729	BEARING CUP, STD FORD FRONT PINION	2729.ipt					
9	1	57671	PINION SUPPORT HOUSING (BALL BEARING)	000108IN.ipt					
10	1	18817	SEAL, 9" FORD PINION STANDARD	18817.ipt					
11	1	57676	SPACER, PRELOAD ALL/TAPER (SMALL PINION)	002036IN.ipt					
12	1	-248	O-RING BUNA-N (FORD PINION CARRIER)	-248 O-RING.ipt					

MATERIAL	HEAT TREAT					Vaveyez	
					Enterprises 765 SOUTH PIERCE AVE, LOUISVILLE, CO 80027		
	PROTECTIVE FINISH			SH			
Z:\InventorFiles\Assembly Files	\AS00406	SIN iam		THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION. IT MAY NOT BE REPRODUCED, TRANSFERRED TO OTHER DOCUMENTS, DISCLOSED TO OTHERS, USED FOR MANUFACTURING OR ANY OTHER PURPOSE WITHOUT PRIOR WRITTEN PERMISSION.			
STOCK INFORMATION	MACHINING TOLERANCES			NCES	CAD NO. AS00406	bklus DATE 05-20-15	
BAR LENGTH: WEIGHT:	.xx	.xxx	.xxxx	X.	PINION SUPPORT, ASSY BALL/TAPER STANDARD		
YIELDS PER BAR:	.015	.005	.0005	1/2	SAVED DATE	PART NUMBER	CHANGE
GROSS WEIGHT (PART):	SURFACE FINISH UNLESS NOTED V125				8/30/2016	57670	