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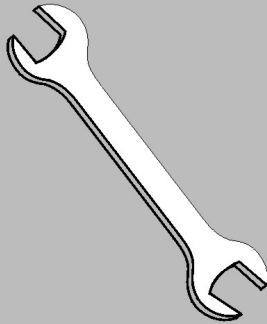
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# Kit Instruction—

## K25 0009

## K52 0001



# Please Read

## About the Manual Identifying Information on the Cover

The front cover displays pertinent identifying information for this manual. Most important, are the published manual number (part number) /ECN (date code). Generally, when a replacement manual is furnished, it will have the same published manual number, but the latest available ECN. This provides the user with the latest information applicable to his machine. Similarly all documents comprising the manual will be the latest available as of the date the manual was printed, **even though older ECN dates for those documents may be listed in the table of contents.**

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## References to Yellow Troubleshooting Pages

This manual may contain references to "yellow pages." Although the pages containing troubleshooting procedures are no longer printed on yellow paper, troubleshooting instructions, if any, will be contained in the easily located "Troubleshooting" chapter or section. See the table of contents.

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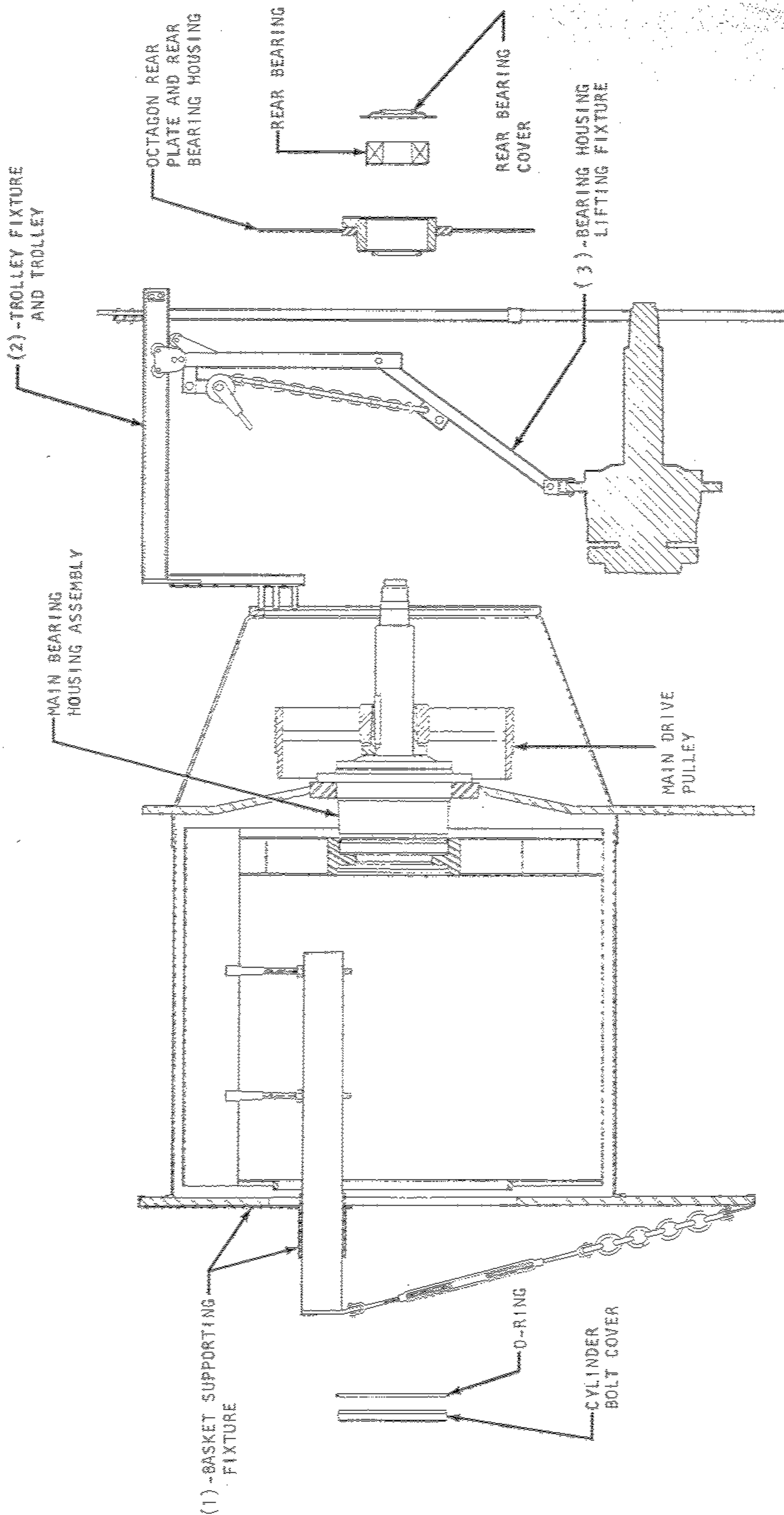
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52" AND 72" OPEN POCKET  
 BEARING REMOVAL AND INSTALLATION FIXTURE DIAGRAM  
 PELLERIN MILNOR CORPORATION

## REMOVAL, INSTALLATION & SETTING MAIN BEARINGS & SEALS

### GENERAL DESCRIPTION:

The bearings used in this machine are double row, spherical roller self-aligning bearings (Link Belt or equal). The bearings are amply sized for the load. The front and rear bearings are firmly attached to the tapered shaft by means of bearing lockwashers and locknuts. The front bearing is the "Fixed" bearing in this design, and the rear bearing is the "Floating" bearing. Lubrication for the bearings is provided by grease passages shown on the bearing assembly drawings. Excess bearing lubricant leaks out through the two bearing cavity leakoffs.

The seals consist of two spring loaded lip type seals nearest the basket, followed by a shaft seal leadoff cavity, and backed up by a third grease retaining seal for the main bearing cavity. Lubrication for the first two seals is provided by means of a grease passage shown on the bearing assembly drawings. Excess seal lubricant leaks out through the seal cavity lubricant leakoff.

The front bearing housing incorporates a leakoff passage that will carry off any water that leaks past the main water seals. This will prevent any such water from entering the bearing cavity.

### HOW TO REMOVE THE FRONT BEARING ASSEMBLY AND REAR BEARING:

Refer to 52" and 72" Main Bearing Removal and Installation Drawing. Open door of machine and remove all power from machine. Lock open the brake inside the rear octagon by either blocking open with a piece of wood or disconnecting the brake cylinder. Lower motor mount so that the belts can be later removed from main drive pulley. Remove the door ring from the shell front. Rotate basket so that one rib is top center and install the basket supporting fixture (Item 1). Remove bolt cover in center of basket with a 5/16" Allen wrench. Remove 3 plugs (9/16" Allen wrench) for push off bolts and install 3 push off bolts hand tight. Remove rear bearing cover, bearing locknut and lockwasher, and using a hydraulic pump "break" rear bearing loose from shaft. Remove rear bearing grease line from rear housing, and remove octagon rear plate (24-3/4" bolts). You may leave the rear bearing housing attached to this plate. Install trolley fixture (Item 2) on octagon. Remove main drive pulley bushing and pulley from machine. Disconnect all grease lines from the front housing and remove the bolts which hold the housing to the shell back. Remove grease shield from front bearing housing. From inside basket use three threaded push out bolts to push shaft off of basket hub. Move main bearing housing away from shell back using the push out bolts on the bearing housing (inside octagon). As soon as it is possible, attach front bearing housing lifting fixture (Item 3) to insure that the housing does not drop. Remove front bearing housing and shaft from machine.

NOTE: Bearing Removal and Installation Fixtures are available from the factory on a loan or purchase basis. It is practically impossible to change seals successfully without using these Fixtures. You should contact the factory for full details and availability of the Fixtures at least four weeks before a contemplated bearing removal.

## HOW TO INSTALL NEW BEARINGS:

NOTICE: The most important ingredient in successful bearing and seal installation is CLEANLINESS. The bearing housing must be free of all foreign matter. The grease and leakoff passages must be blown clear and all foreign matter removed. You must have a clean work area. Keep your hands and tools free from grit and grime. (Wash your hands before actually inserting the bearing in the housing.) Foreign matter is, without a doubt, the most frequent cause of bearing failure, and one over which the manufacturer has no control.

BEFORE INSTALLING BEARINGS, YOU MUST USE A FEELER GAGE TO MEASURE THE INTERNAL CLEARANCE IN THE BEARING. READ THE SECTION "HOW TO ADJUST THE BEARING" BEFORE INSTALLING THE BEARINGS IN THE HOUSING.

Clean surfaces of basket hub and machines shell back surfaces to remove all old Loctite with metal wash and sand lightly. Clean mounting surface of bearing housing, shaft hub and rear bearing taper. Replace two new O-Rings in shell back liner seal, coating them with grease. Install a new O-Ring on the shaft hub. Apply Loctite primer to machine, housing, and shaft hub surfaces. Do not wipe clean. Apply Loctite 242 to primered surfaces (NOTE: Loctite will cure in  $\frac{1}{2}$  hour after mating parts are assembled, so make sure you have ample time to install housing before applying.)

Position housing and shaft in machine, making sure the bottom of the housing (identified by the cast drain slot) is on the bottom. Install (3) long bolts loosely through the housing and into the shell back. Install (2) long bolts loosely through the basket and into the shaft to align the basket and shaft. Tighten the bearing housing bolts, drawing the housing into the shell back not more than  $\frac{1}{8}$  inch. Tighten the basket bolts drawing the basket onto the shaft one inch. Repeat this procedure, tightening the housing  $\frac{1}{2}$  inch and the basket  $\frac{1}{2}$  inch until both are seated firmly. CAUTION: MAKE CERTAIN BASKET DOES NOT CONTACT SHELL FRONT WHILE TIGHTENING HOUSING BOLTS AS MAIN BEARING COULD BE RUINED!! Torque housing and basket bolts to 500 ft. lbs.

Remove shaft alignment fixture. Reassemble the grease shield, main pulley, brake assy., and grease inlet lines. Locate belts on pulley. Remount the rear bearing mounting plate and bearing housing.

Hand pack the rear bearing with grease by rotating the inner race and rollers out of the outer race and forcing grease into all the rollers, making certain all rollers are covered with grease. Install the rear bearing using light taps of a soft mallet to gently drive the bearing into position. Now tighten lock nut to the proper internal bearing clearances, using the procedure explained in the section entitled: "How to adjust the bearings". Remove basket holding fixture and tighten belts.

NOTE: USE EXTREME CAUTION WHEN SUPPORTING THE BASKET, SHAFT AND HOUSING

Approximate Weights:

BASKET = 1200 lbs. (550KG)  
SHAFT AND HOUSING = 1000 lbs. (450 KG)  
PULLEY = 330 lbs. (150 KG)

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### HOW TO ADJUST THE BEARING (REAR ONLY):

The adjustment of the bearing is controlled by the amount that the bearing locknut is tightened. The adjustment of these bearings is a precise operation covered in the following section. These instructions must be followed carefully.

Before installing the bearing in the housing, stand the new bearing on the outer race on a clean flat surface. With a Feeler Gauge, accurately measure the existing clearance between the top rollers and the outer race. Make four such measurements and average them. This average is the "unmounted clearance". The clearance of the unloaded bearing will be between .0044" and .0051".

### BE SURE TO KEEP THE BEARINGS CLEAN AND FREE FROM ALL FOREIGN MATTER:

After the bearing is installed in the housing, slowly tighten the bearing Locknut until the internal clearance of the bearing has been reduced by .0015 minimum/.0025" maximum. (This is the diametral clearance reduction). The final internal clearance will be the unmounted clearance minus the clearance reduction. NOTE THAT THESE CLEARANCES ARE MEASURED IN THOUSANDTHS OF AN INCH - OR APPROXIMATELY ONE TENTH AS THICK AS NORMAL AUTOMOBILE BREAKER POINT CLEARANCES. YOU MUST HAVE A GOOD SET OF THICKNESS GAUGES TO SET THESE BEARINGS PROPERLY.

You must measure the clearance between the outer race and the rollers of both rows. Sometimes, when setting the bearings, all the load is taken by only one row (although the load would quickly equalize on both rows after the machine has run for only a few minutes). If all the load is taken by one row, you will get an erroneous clearance reading. It is, therefore, necessary to use the feeler gauge to measure the clearance of both rows of rollers. With the bearing in place on the machine it is admittedly rather difficult to get a feeler gauge back past the first row of rollers to measure the second. BUT IT MUST BE DONE! It is true that the bearing setting procedure for spherical self-aligning bearings requires skills and attention to detail far more exacting than those which are normally expected in repairing "run of the mill" laundry and drycleaning equipment. However, these bearings are the very best anti-friction devices available for the washer-extractor application and therefore, the tedious nature of the bearing adjustment must be accepted. We suggest that you visit your local bearing supplier, bring this instruction manual with you, and have him demonstrate in detail how this class of bearing must be adjusted, and how to use the feeler gauge to get the proper "reading".

When the proper internal clearance has been set, lock the nut by bending over the matching tab on the lockwasher; making sure that all unused tabs on the lockwasher are bent as near the nut as possible so that they will not rub against the bearing roller cage. CHECK EACH UNUSED TAB INDIVIDUALLY TO INSURE THIS.

IT IS MANDATORY THAT THE PROPER INTERNAL CLEARANCE BE SET IN THESE BEARINGS. THIS SETTING PROCEDURE PROVIDES TWO DESIRED RESULTS:

1. The setting of proper internal clearance in the bearing makes best use of the bearings anti-frictional values (thus preventing rapid failure).
2. The take-up adjustment insures that the bearing is tightly seated on the tapered shaft. (THIS IS MANDATORY.)