HERMETIC MOTOR
INSTRUCTION MANUAL

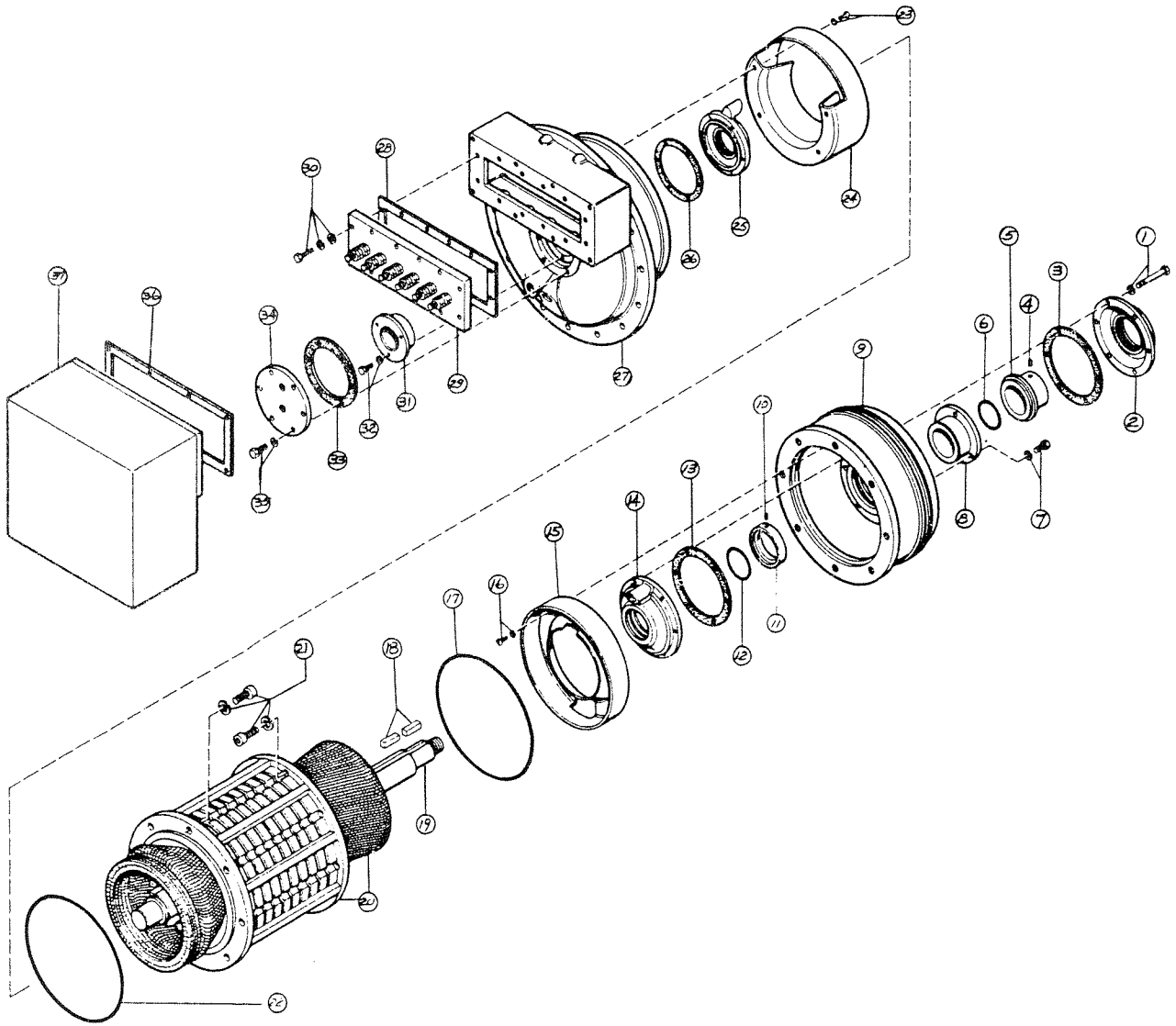
RCS

Hermetic
Freon Cooled
Frame 1500–1900

R1108A

HERMETIC TYPE SQUIRREL CAGE MOTORS

SLEEVE BEARING OIL LUBRICATED
FREON COOLED



1. Back Outside Cap Bolts and Washers
2. Back Outside Cap
3. Back Outside Cap Gasket
4. Back Lab Seal Set Screws
5. Back Lab Seal
6. Back Lab Seal "O" Ring
7. Back Bearing Screws and Washers
8. Back Sleeve Bearing
9. Back Bearing Bracket
10. Back Oil Thrower Set Screws
11. Back Oil Thrower
12. Back Oil Thrower "O" Ring
13. Back Inside Cap Gasket
14. Back Inside Cap
15. Back Air Deflector
16. Back Air Deflector Screws
17. Stator "O" Ring
18. Shaft Keys
19. Shaft and Rotor
20. Stator Core and Winding
21. Stator Core and Bracket Bolts and Washers
22. Stator "O" Ring
23. Front Air Deflector Screws
24. Front Air Deflector
25. Front Inside Cap (Bolts and Washers not shown)
26. Front Inside Cap Gasket
27. Front Bearing Bracket
28. Terminal Board Gasket
29. Terminal Board Assembly
30. Terminal Board Bolts and Washers
31. Front Sleeve Bearing
32. Front Bearing Screws and Washers
33. Front Outside Cap Gasket
34. Front Outside Cap
35. Front Outside Cap Bolts and Washers
36. Conduit Box Gasket (Supplied by the Trane Co.)
37. Conduit Box (Supplied by the Trane Co.)

REQUIRED ORDER INFORMATION

1. Motor Serial Number
2. Part Name

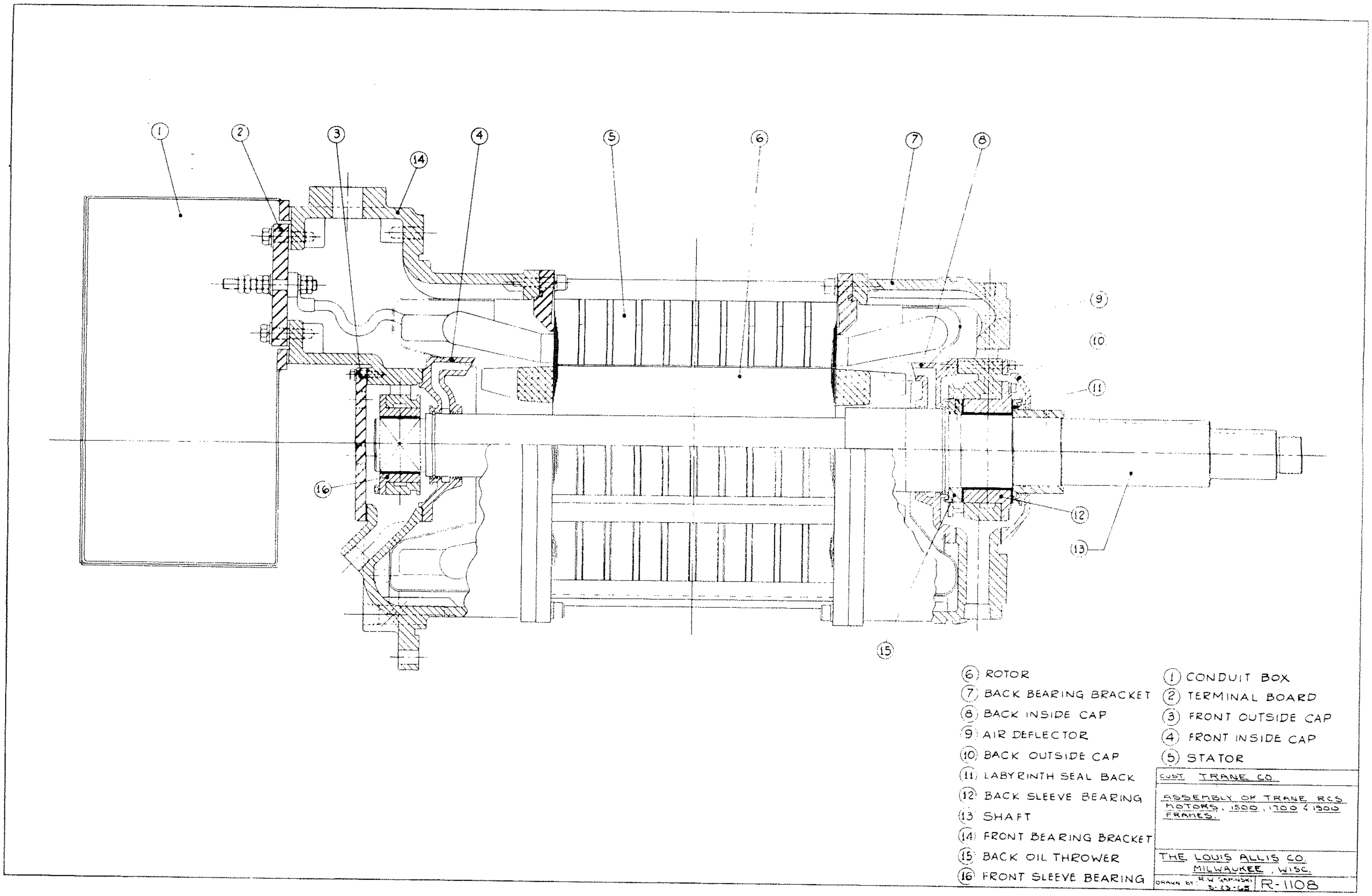
THE LOUIS ALLIS CO.
A DIVISION OF LITTON INDUSTRIES

HERMETIC TYPE SQUIRREL CAGE MOTORS

SLEEVE BEARING OIL LUBRICATED
FREON COOLED

Hermetic
Freon Cooled
Frame 1500–1900

R1108



1. Conduit Box
2. Terminal Board
3. Front Outside Cap
4. Front Inside Cap
5. Stator
6. Rotor
7. Back Bearing Bracket
8. Back Inside Cap
9. Air Deflector
10. Back Outside Cap
11. Labyrinth Seal Back
12. Back Sleeve Bearing
13. Shaft
14. Front Bearing Bracket
15. Back Oil Thrower
16. Front Sleeve Bearing

NEW PAGE

PRICES AND OTHER DATA SUBJECT TO CHANGE WITHOUT NOTICE

REQUIRED ORDER INFORMATION

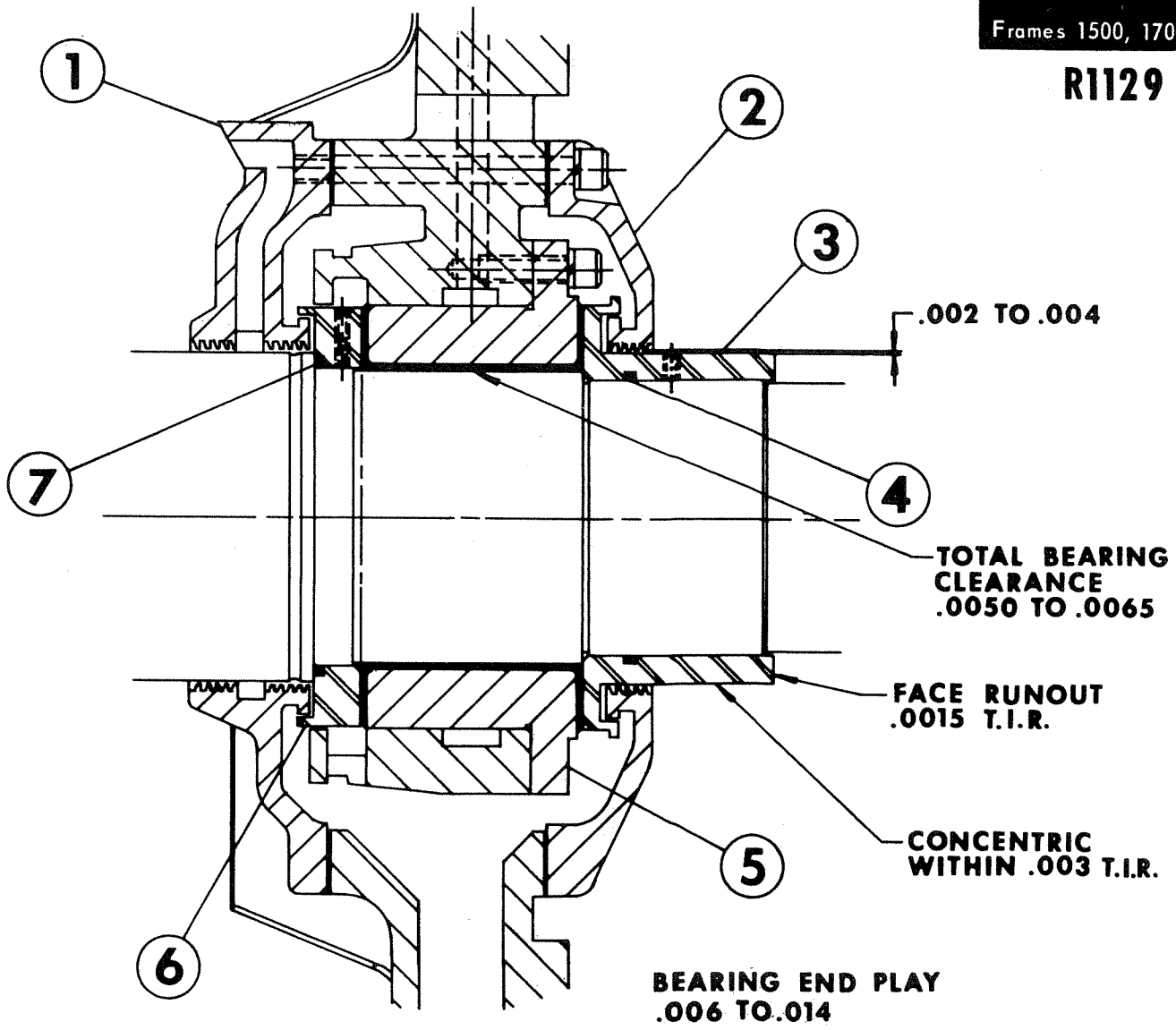
1. Motor Serial Number
2. Part Name

HERMETIC TYPE SQUIRREL CAGE MOTORS

BEARING CONSTRUCTION

RCS
Back Sleeve Bearing
Oil Lubricated
Frames 1500, 1700, 1900

R1129



1. Back Inside Cap
2. Back Outside Cap
3. Shaft Labyrinth Seal
4. "O" Ring for Shaft Labyrinth Seal
5. Sleeve Bearing
6. Back Inside Oil Thrower
7. "O" Ring for Inside Oil Thrower

DESIGN FEATURES

CONSTRUCTION

Back Sleeve bearings used in RCS, Hermetic type motors frame 1500, 1700, and 1900 are of one piece construction. The bearing is a push fit in the bearing bracket and held in position by three bearing retaining bolts.

The inside thrower is a push fit on the shaft and is held in position by set screws. The inside thrower is equipped with an "O" ring, note that the inside cap must be placed in position on the shaft before inside thrower is placed in position.

The shaft labyrinth seal is a push fit on the shaft and is also equipped with an "O" ring.

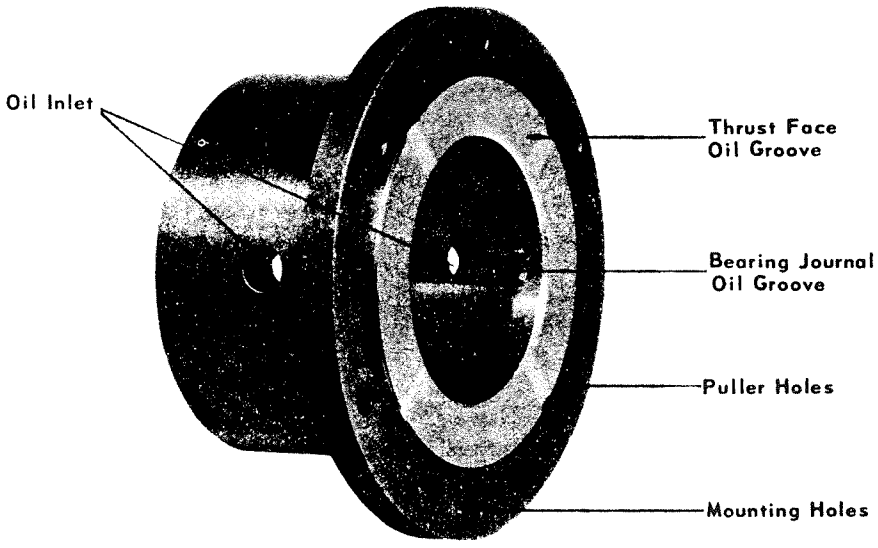
LUBRICATION

The bearing is pressure lubricated. A pressure of approximately 15 psi is desired for best operating conditions. The oil enters at the top of the bearing (oil inlet) and flows to the shaft bearing journal through two holes 180 degrees apart on the horizontal centerline. The oil flows along the grooves on each side of the bearing. The shaft journal acting as a pump builds up an oil film in the bearings. The shaft rides on this oil film resulting in what is termed thick film hydrodynamic lubrication. The oil leaves the bearing at each end and goes to the drain and sump system.

PROCEDURE FOR DISASSEMBLY

1. Bearing Cap Nuts
2. Outside Bearing Cap
3. Shaft Labyrinth Seal
4. Bearing Retaining Bolts
5. Insert Bearing Retaining Bolts in tapped holes in bearing. Turn bolts and bearing will be pulled from bearing bracket.
6. Bearing Bracket Bolts (not shown)
7. Bearing Bracket
8. Inside Slinger Set Screws
9. Inside Slinger
10. Inside Bearing Cap.

To reassemble, the bearing is pressed into the bearing bracket and the parts assembled in reverse of the above procedure.



Sleeve Bearing