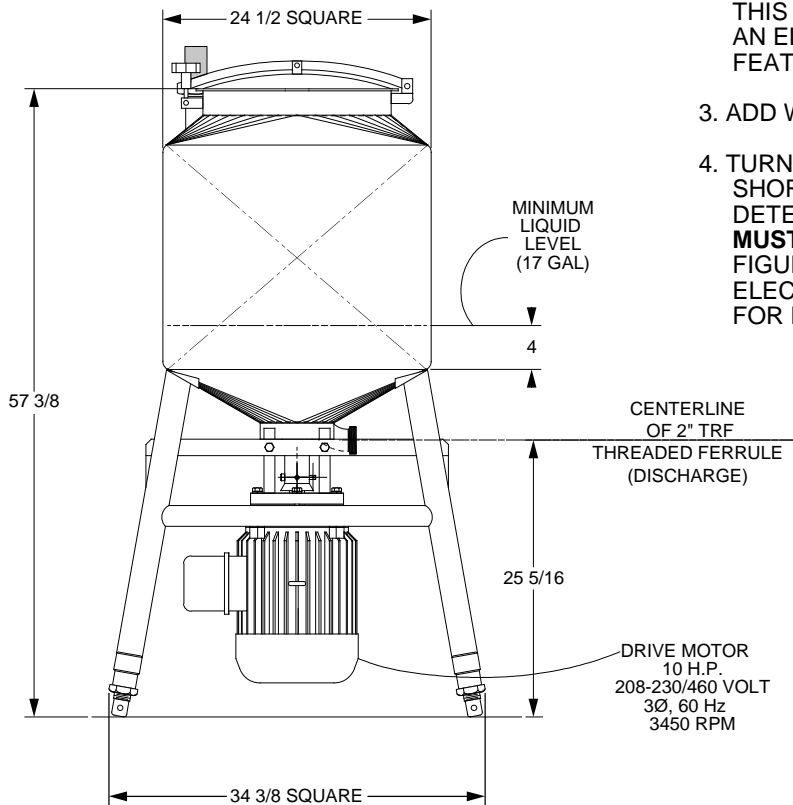
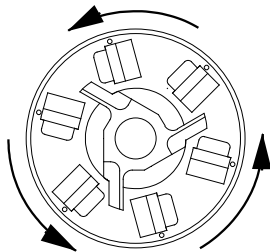


SETUP

1. POSITION BLENDER IN THE LOCATION IT IS TO BE USED. ADJUST FEET UNTIL BLENDER IS STABLE AND SIDES OF BLENDER BODY ARE VERTICAL (USING SPIRIT LEVEL AT ANY OF THE FOUR BLENDER BODY CORNERS WHILE ADJUSTING).
2. WIRE MOTOR TO ELECTRICAL POWER IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL ELECTRICAL CODES.. SEE NAMEPLATE ON MOTOR FOR WIRING SCHEMATICS. IF NOT OTHERWISE REQUIRED, THIS BLENDER SHOULD BE PROVIDED WITH AN ELECTRICAL DISCONNECT WITH LOCKOUT FEATURE.
3. ADD WATER TO BLENDER TO ABOUT 1/2 FULL.
4. TURN ON ELECTRICAL POWER FOR A VERY SHORT PERIOD (1 SECOND OR LESS) TO DETERMINE MOTOR ROTATION. THE IMPELLER **MUST** ROTATE COUNTERCLOCKWISE (SEE FIGURE 1). IF NECESSARY, DISCONNECT ELECTRICAL POWER AND REWIRE MOTOR FOR PROPER ROTATION.



THE WATER SEAL PROVIDED WITH THIS BLENDER IS RUGGED AND OF THE HIGHEST QUALITY. IT DOES, HOWEVER, REQUIRE CONSTANT LUBRICATION. THIS IS PROVIDED BY THE LIQUID BEING BLENDED. THE BLENDER SHOULD NEVER BE OPERATED WITH THE TANK LESS THAN ONE-THIRD FULL OF LIQUID.



**FIGURE 1
REQUIRED IMPELLER ROTATION**

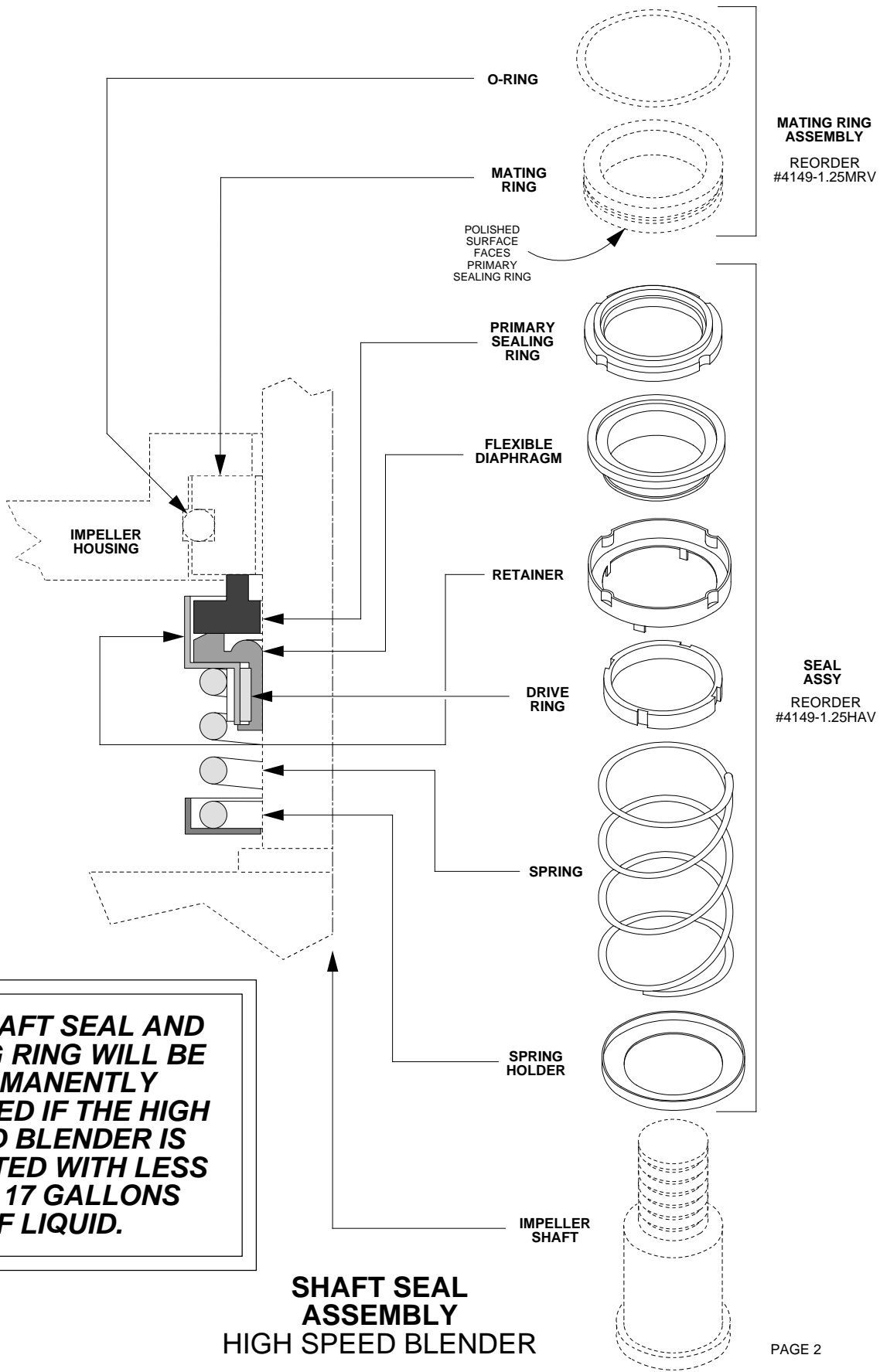
THE SHAFT SEAL AND MATING RING WILL BE PERMANENTLY DAMAGED IF THE HIGH SPEED BLENDER IS OPERATED WITH LESS THAN 17GALLONS OF LIQUID.

**50 GALLON HIGH SPEED BLENDER
MODEL HS-1500**



FOOD ENGINEERING SERVICE
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7/10/96



THE SHAFT SEAL AND MATING RING WILL BE PERMANENTLY DAMAGED IF THE HIGH SPEED BLENDER IS OPERATED WITH LESS THAN 17 GALLONS OF LIQUID.

**SHAFT SEAL ASSEMBLY
HIGH SPEED BLENDER**

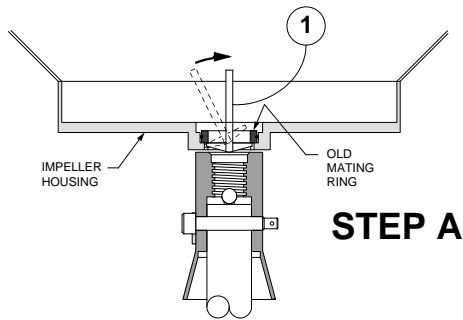
REPLACING SHAFT SEAL

THE HIGH SPEED BLENDER MUST BE DISCONNECTED FROM ELECTRICAL POWER THROUGHOUT THIS PROCEDURE.

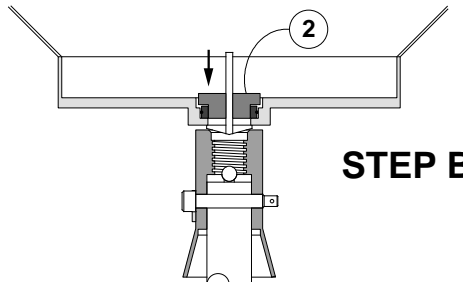
THE SHAFT SEAL OF THE HIGH SPEED BLENDER PROVIDES A COMPLETELY LEAK-TIGHT SEAL. SHOULD EVEN A VERY SMALL AMOUNT OF LIQUID BE SEEN TO BE LEAKING FROM THE BOTTOM OF THE BLENDER THE SEAL NEEDS IMMEDIATE REPLACEMENT. TO ACCOMPLISH THIS:

1. DISCONNECT THE HIGH SPEED BLENDER FROM THE ELECTRICAL POWER SOURCE.
2. REMOVE ONE OF CLEAR PLASTIC GUARDS LOCATED JUST ABOVE THE BLENDER DRIVE MOTOR.
3. ROTATE THE MOTOR COUPLING UNTIL A SIDE HOLE IN THE COUPLING IS EXPOSED AND HAVE ANOTHER PERSON INSERT THE END OF A DOWEL OR SCREWDRIVER INTO THIS HOLE TO PREVENT THE COUPLING FROM ROTATING.
4. OPEN THE MANWAY, REACH IN AND ROTATE THE IMPELLER COUNTERCLOCKWISE TO DISENGAGE IT FROM THE MOTOR.
5. PLACE IMPELLER ON WORK TABLE WITH SHAFT UP.
6. SLIP SPRING HOLDER, FLANGE UP, ONTO SHAFT.
7. SLIP SPRING ONTO SHAFT.
8. ENGAGE GROOVES OF DRIVE RING INTO EARS OF RETAINER.
9. INSTALL FLEXIBLE DIAPHRAGM INTO RETAINER/DRIVE RING UNTIL FULLY SEATED AND WITH BEAD ON BACK END OF DIAPHRAGM OUT AND OVER UPPER EDGE OF DRIVE RING.
10. SLIDE SUBASSEMBLY FROM STEP 9 ONTO IMPELLER SHAFT. SLIDE DOWN UNTIL APPROXIMATELY 1/2" OF THE IMPELLER SHANK PROTRUDES BEYOND THE LOWER FACE OF THE FLEXIBLE DIAPHRAGM.
11. APPLY A LIGHT COATING OF "PETRO-GEL" TO THE EXPOSED UPPER FACE OF THE FLEXIBLE DIAPHRAGM.
12. SLIP THE PRIMARY SEALING RING ONTO THE SHAFT AND SEAT IT WITHIN THE RETAINER, TAKING CARE TO ENGAGE THE NOTCHES OF THE SEAL WITH THE DEPRESSIONS IN THE RETAINER.
13. WITH THE MATING RING IN PLACE WITHIN THE IMPELLER HOUSING INSPECT THE CONDITION OF THE UPPER FACE OF THIS MATING RING. THIS FACE SHOULD HAVE A SILVER-COLORED MIRROR FINISH AND BE FREE OF NICKS OR HAIRLINE CRACKS. IF THE FACE IS DISCOLORED OR SHOWS SIGNS OF DAMAGE IT MUST BE REPLACED AT THIS POINT (SEE PAGE 4 OF THESE INSTRUCTIONS). OTHERWISE GO TO STEP 14 BELOW.
14. VERY CAREFULLY AND SLOWLY LOWER THE IMPELLER ASSEMBLY INTO THE IMPELLER HOUSING. AVOID HAVING THE END OF THE SHAFT CONTACT THE FACE OF THE MATING RING (THIS CAN CAUSE PERMANENT DAMAGE TO THE MATING RING).
15. AFTER THE IMPELLER HAS BEEN LOWERED AS FAR AS POSSIBLE, ROTATE THE IMPELLER CLOCKWISE UNTIL IT IS FULLY ENGAGED IN THE COUPLING LOCATED BETWEEN THE MOTOR SHAFT AND THE IMPELLER HOUSING. DO THIS WHILE HAVING SOMEONE PREVENT MOTOR COUPLING FROM ROTATING.
16. REINSTALL PLASTIC GUARD ABOVE MOTOR AND RECONNECT ELECTRICAL POWER.

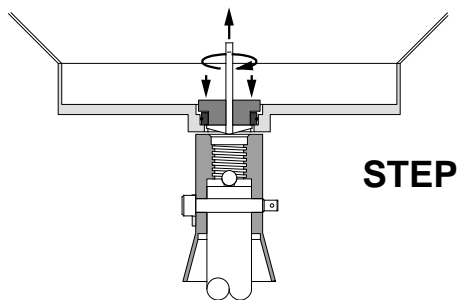
REPLACING MATING RING



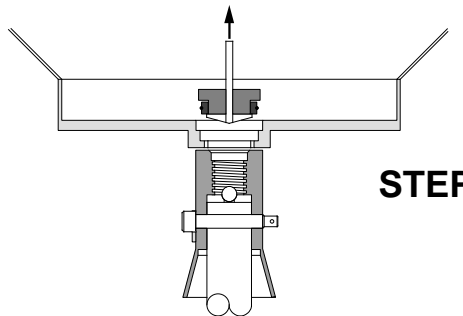
STEP A



STEP B



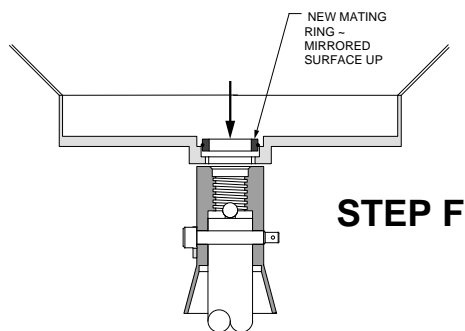
STEP C



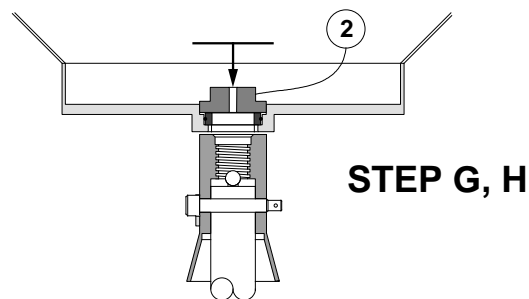
STEP D

FROM STEP 13 ON PAGE 3 (IF REQUIRED)

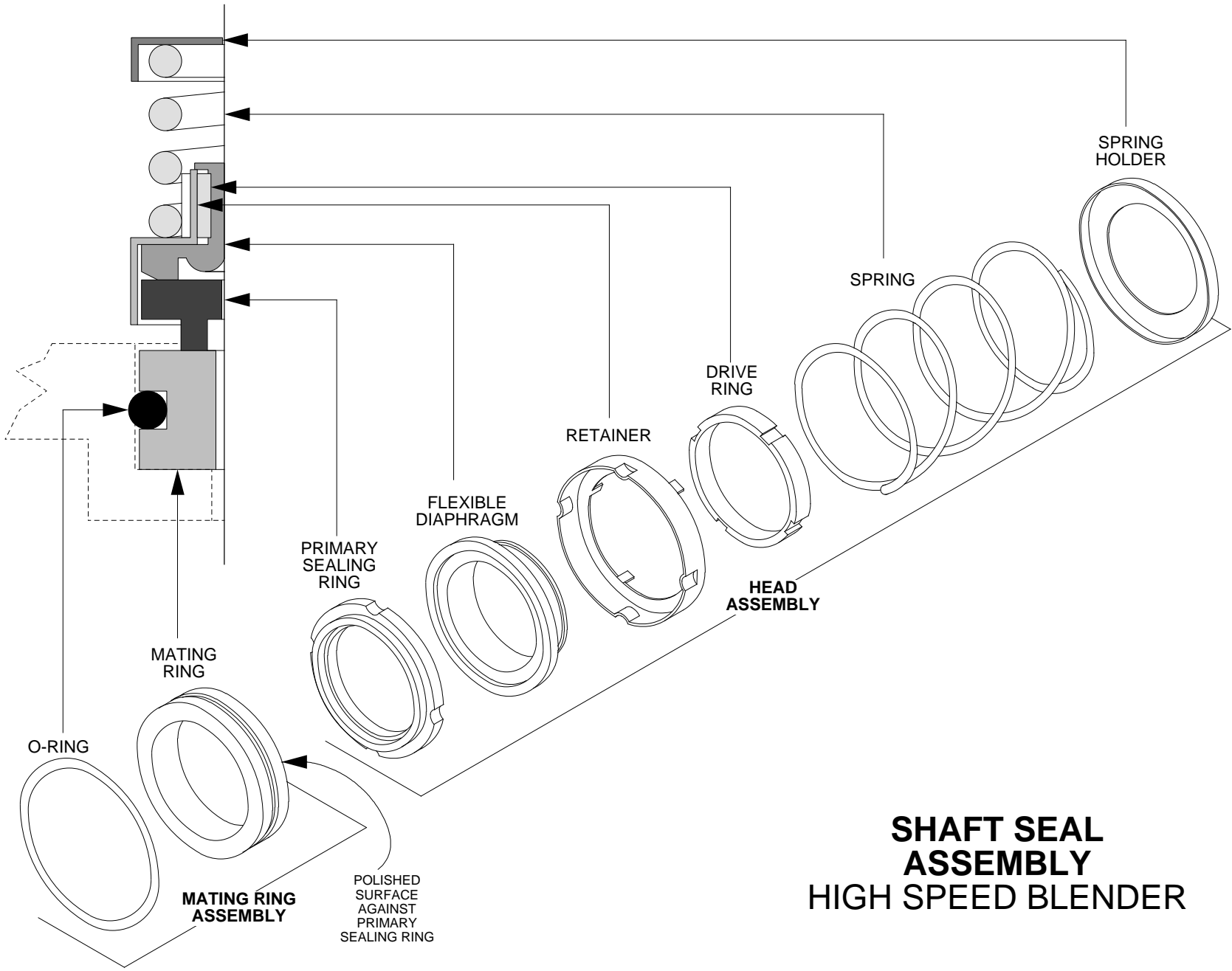
- A. SLIP T-TOOL (#1) THROUGH MATING RING AND STAND HANDLE UPRIGHT.
- B. SLIP INSERTION/EXTRACTION GUIDE (#2), SMALLER DIAMETER DOWN, OVER HANDLE OF T-TOOL.
- C. WHILE HOLDING DOWN LIGHTLY ON THE GUIDE PULL UP AND ROTATE T-TOOL UNTIL IT WILL NO LONGER ROTATE.
- D. PULL UP ON T-TOOL TO EXTRACT SEAL MATING RING.
- E. CHECK THAT O-RING FOR NEW MATING RING IS IN PLACE.
- F. WITH SHINY SURFACE OF MATING RING FACING UP, CENTER AND LOWER IT INTO IMPELLER HOUSING UNTIL O-RING COMES TO REST ON EDGE OF HOLE IN HOUSING .
- G. LOWER INSERTION/EXTRACTION GUIDE (#2), LARGE DIAMETER DOWN, ONTO MATING RING.
- H. PRESS DOWN EVENLY AND FIRMLY ON GUIDE UNTIL MATING RING IS FULLY SEATED.
- K. RETURN TO STEP 14 ON PAGE 3.



STEP F



STEP G, H



**SHAFT SEAL
 ASSEMBLY
 HIGH SPEED BLENDER**

SEAL INSTALLATION INSTRUCTIONS:

1. LAY IMPELLER SHAFT-UP ONTO WORK TABLE.
2. SLIP **SPRING HOLDER**, FLANGE UP, ONTO SHAFT.
3. SLIP **SPRING** ONTO SHAFT.
4. ENGAGE **DRIVE RING** GROOVES INTO EARS OF **RETAINER**.
5. INSTALL **FLEXIBLE DIAPHRAGM** INTO **RETAINER/DRIVE RING** UNTIL FULLY SEATED.
6. SLIDE ASSEMBLY FROM STEP 5 ONTO IMPELLER SHAFT. SLIDE DOWN FAR ENOUGH SO THAT ABOUT 1/2" OF THE IMPELLER SHAFT SHANK PROTRUDES ABOVE THE FACE OF THE **FLEXIBLE DIAPHRAGM**.
7. APPLY A LIGHT COATING OF "PETRO-GEL" TO THE EXPOSED FACE OF THE **FLEXIBLE DIAPHRAGM**.
8. SLIP THE **PRIMARY SEALING RING** ONTO THE SHAFT AND SEAT IT IN THE **RETAINER**, BEING SURE TO ALIGN THE NOTCHES OF THE SEAL WITH THE DEPRESSIONS IN THE **RETAINER**.
9. CLEAN THE ENTIRE RECESS OF THE IMPELLER HOUSING.
10. WIPE A VERY SMALL AMOUNT OF "PERTO GEL" ONTO THE **O-RING** WHICH IS INSTALLED ON THE **MATING RING**.
11. CAREFULLY ALIGN THE **MATING RING** WITH THE LOWER RECESS OF THE IMPELLER HOUSING. THE POLISHED SURFACE OF THE **MATING RING** MUST BE UP.
12. WITH GENTLE, EVEN PRESSURE APPLIED AT 3 OR 4 POINTS, PRESS THE **MATING RING** DOWN UNTIL IT IS SEATED IN THE HOUSING. **DO NOT FORCE**.
13. VERY CAREFULLY AND **SLOWLY** LOWER THE IMPELLER ASSEMBLY INTO THE HOUSING. AVOID HAVING THE END OF THE SHAFT CONTACT THE FACE OF THE **MATING RING** (THIS CAN DAMAGE THE **MATING RING** BEYOND REPAIR).
14. WHEN THE IMPELLER IS LOWERED AS FAR AS IT WILL GO, ROTATE THE IMPELLER CLOCKWISE UNTIL IT IS FULLY ENGAGED IN THE COUPLING BELOW.