

WELCH TURBO-MOLECULAR PUMP

Installation Instructions for External Seal Replacement Kit #41-4710

Parts: 1 #41-4291 Face Seal (5/16)
1 #41-4317 "O" Ring, 1-1/8" O.D.x 1 I.D.x 1/16" W
1 #41-4703 Allen Wrench (3/32)

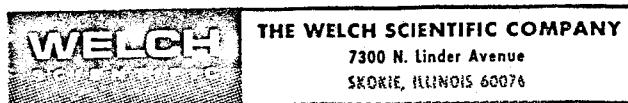
Procedure

- 1) It is very important to use a clean cornered, close fitting 3/32" Allen Wrench on the drive pulley set screw. A worn, soft, or misfitting wrench will damage this critical set screw and make removal or adjustment impossible.
- 2) Remove the drive belt pulley and the white ceramic disk.
- 3) Remove the two screws that hold the plate on the front of the cartridge seal assembly.
- 4) Pick out and discard the #41-4317 "O" Ring around the outside of the seal so that the seal will slip out.
- 5) To install new seal, replace new #41-4317 "O" Ring in position around the seal. Grease the brass seal case and push seal through ring as far as it will go.
- 6) Replace plate removed in step (3).
- 7) To replace new ceramic disk and pulley:
 - A. Make sure the rubber ring in the ceramic disk is facing the pulley.

NOTE: The shaft and the rubber ring in the ceramic should be dry and not oiled when installing the ceramic disk. The rubber must turn the ceramic without slipping.
 - B. Use the pulley to push ceramic disk on the shaft. This will keep the rubber ring from being pushed out.

- 8) To permit proper compression of the seal, the pulley should move freely on the shaft. For the pulley and ceramic disk to be properly positioned, the seal carbon face should be pushed in 1/32" and the pulley set screw tightened on the shaft flat to 30 inch pound torque. If the set screw is too loose, the pulley will rattle and back off causing the external face seal to leak.

February 29, 1968

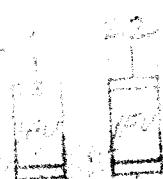




DATE	1965
NAME	John Doe
ADDRESS	123 Main Street
PHONE	555-1234
ITEM	Product A
QUANTITY	100
UNIT PRICE	\$10.00
TOTAL PRICE	\$1,000.00
SHIP TO	Customer Address
SHIP DATE	2023-09-15
REMARKS	None

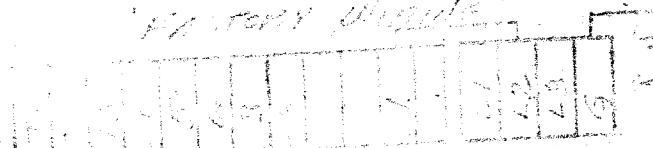
DATE	1965
NAME	John Doe
ADDRESS	123 Main Street
PHONE	555-1234
ITEM	Product A
QUANTITY	100
UNIT PRICE	\$10.00
TOTAL PRICE	\$1,000.00
SHIP TO	Customer Address
SHIP DATE	2023-09-15
REMARKS	None

FIRST MADE FOR CR 10381028



100 200

Customer Address



Customer Address

Customer Address

REVISED	PRINTS
1	Aug 15, 1965 Ref Drawing 62-3102 Rev A Date 10-1965
2	Aug 15, 1965 Ref Drawing 62-3102 Rev B Date 10-1965
3	Aug 15, 1965 Ref Drawing 62-3102 Rev C Date 10-1965

100 200 300

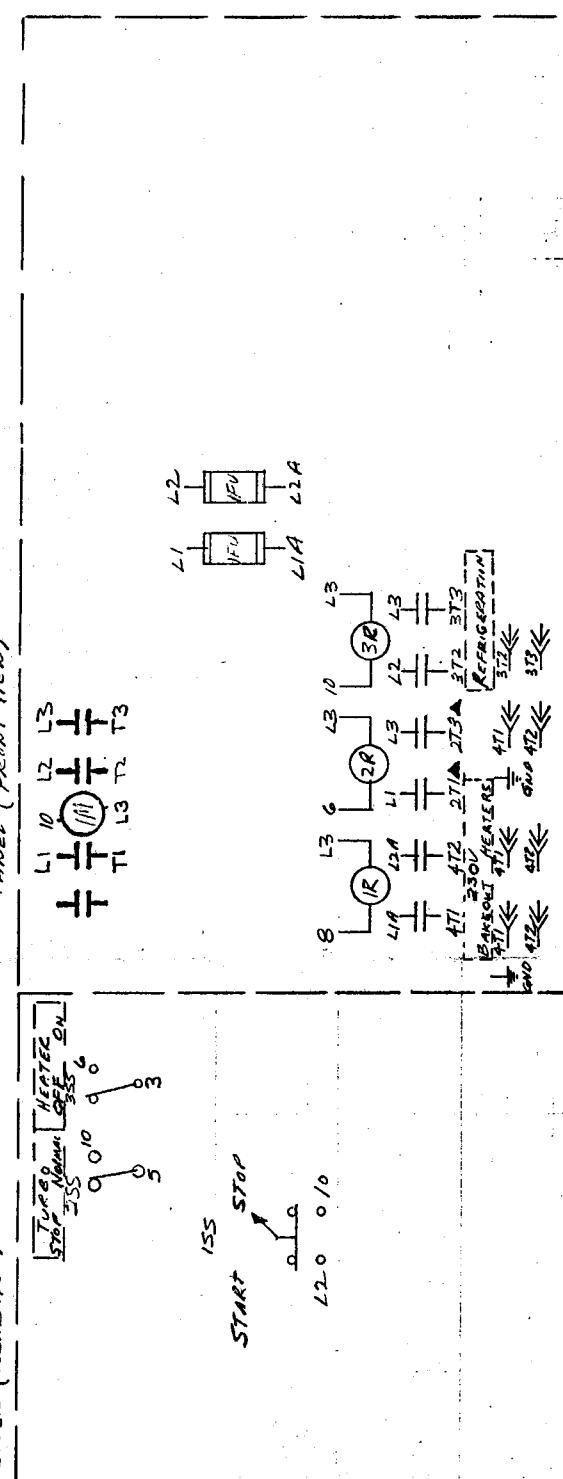
ON RS
ON DINHARD

GENERAL ELECTRIC		55-505900	
		CONT ON SHEET FL SH NO. /	
UNLESS OTHERWISE SPECIFIED USE THE FOLLOWING:		REV NO.	
APPLIED PRACTICES SURFACES		TOLERANCES ON MACHINED DIMENSIONS	
-		DECIMALS	
+		FRACTIONS	
-		+ -	

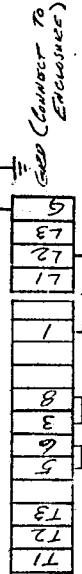
DIAGRAM CONNECTION		TITLE	
FIRST MADE FOR CR 14251102A		DIAGRAM, CONNECTION	
SH NO. 11		SH NO.	

Cover (Front View)

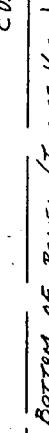
Panel (Front View)



FACTORY WIRING



CUSTOMER WIRING



Bottom of Panel (Inside View)

PRINTS TO		REVISIONS	
1 7/15/64 643189 PRT		1 7/15/64 643189 PRT	
2 7/22/64 643189		2 7/22/64 643189	
3 7/22/64 1965		3 7/22/64 1965	
4 7/22/64 1965		4 7/22/64 1965	

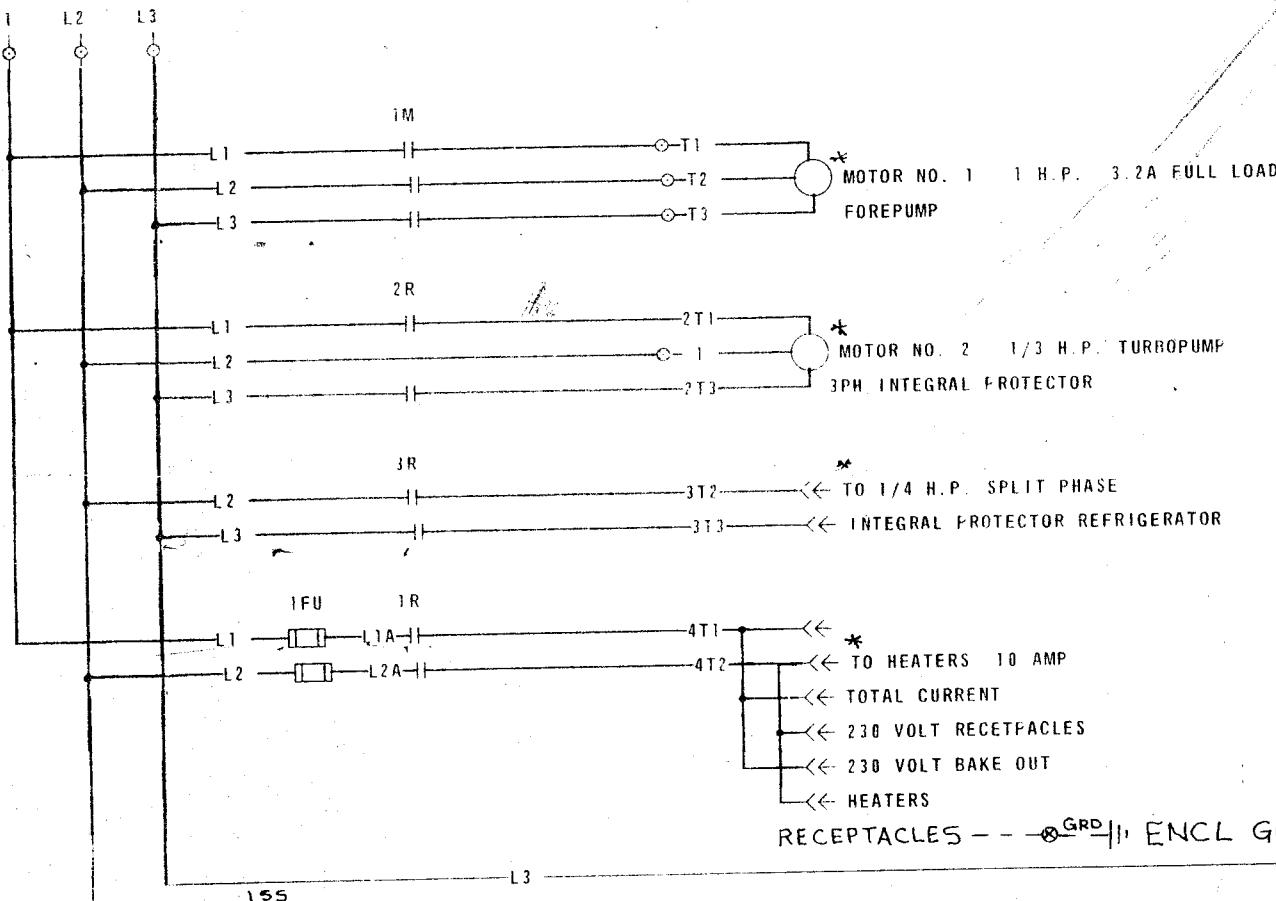
MADE BY G. Johnson Jan. 13, 1964 APPROVED BY GPC		DIV. ON DEPT. 55-505900	
SPECIFIED Jan. 13, 1964		LOCATION CONT. ON SHEET FL SH NO. /	
BLOCK DIAGRAM		11	

▲ Denotes Customer Connection

55-162215

WELCH SCIENTIFIC CR143B11024 REQ. 677 32700

230V 3PH 60 CYC



NOMENCLATURE

1M SIZE 00 CONTACTOR

1R, 2R, CR120E RELAY

3R

1SS CR2940 SEE SWITCH

2SS, 3SS TOGGLE SWITCH

—○— TERMINAL BOARD POINT

* EXTERNAL DEVICE

2SS CLOSED IN ON POSITION

3SS CLOSED IN ON POSITION

1	May 15, 1964 Del Hippert 64-3189	3 Aug. 10, 1965 G. Burgess
2	Oct 2, 1964 B. Haun 64-3373	

MADE BY D Kton Jan 9, 1964

ISSUED Jan. 13, 1964

APPR GENERAL PURPOSE CONTROL DEPT.

BLOOMINGTON, ILLINOIS

55-162215

CONT FL

SH 1

WELCH TURBO-MOLECULAR PUMP

Installation Instructions for External Seal Replacement Kit # 41-4710

Parts: 1 # 41-4317 "O" Ring
1 # 41-4703 Allen Hex Key 3/32W
1 # 41-4734 Outer Seal
1 # 41-4736 Outer Seal Mating Face
1 # 41-4736 Outer Seal Drive Ring
1 # 41-4737 Outer Seal Drive Disc
1 # 41-4765 Allen Hex Key 1/8W

Procedure

- 1) It is very important to use a clean cornered, close fitting 3/32" Allen Wrench on the drive pulley set screw. A worn soft, or misfitting wrench will damage this critical set screw and make removal or adjustment impossible.
- 2) Remove the drive belt pulley and the white ceramic disk.
- 3) Remove the two screws that hold the plate on the front of the cartridge seal assembly.
- 4) Pick out and discard the # 41-4317 "O" Ring around the outside of the seal so that the seal will slip out.
- 5) To install new seal, replace new # 41-4317 "O" Ring ~~opposite side~~ around the seal. Grease the brass seal case and push seal through ring as far as it will go.
- 6) Replace plate removed in step (3).
- 7) To replace new ceramic disk and pulley:
 - A. Make sure the rubber ring in the ceramic disk ~~is~~ facing the pulley.

NOTE: The shaft and the rubber ring in the ~~ceramic~~ should be dry and not oiled when installing the ceramic disk. The rubber must turn the ceramic without slipping.

B. Use the pulley to push ceramic disk on the shaft. This will keep the rubber ring from being pushed out.

- 8) To permit proper compression of the seal, the pulley should move freely on the shaft. For the pulley and ceramic disk to be properly positioned, the seal carbon face should be pushed in 1/32" and the pulley set screw tightened on the shaft flat to 30 inch pound torque. If the set screw is too loose, the pulley will rattle and back off causing external face seal to leak.

THE WELCH SCIENTIFIC COMPANY
7300 N. LINCOLN AVENUE
SKOKIE, ILLINOIS 60077