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Standard OZC-271®

MAINTENANCE AND DISASSEMBLY INSTRUCTIONS

A. General Operations Characteristics

1. The OZC-271 normally runs at 130 to 150 degrees F. It is not an indication of trouble if the outer surfaces of the Dia-Vac® Pump or motor are hot to the touch.

2. To check pumping efficiency, employ suitably damped gauges connected so as to dead-end either pressure or vacuum.

NOTE: Check each separately, One or the other port must be open during this test. Use 0-60 PSI pressure gauge and 0-30 inch hg. vacuum gauge, (or mercury manometer.)

Minimum pressure should be 40 PSIG for the .222 eccentric

Minimum vacuum should be 22 inches hg. For the .222 eccentric

3. The OZC-271 normally runs quietly, especially when both pressure and vacuum ports are connected into a closed system. An obvious knock or rattle could indicate a problem. Check through "Disassembly and Inspection Procedures" with particular attention to the tightness of all screw fasteners.

4. All bolts and screws except A19005 and A19006 should have one drop of Loctite® Removable 242® (or equivalent) on threads before tightening.

B. Maintenance Procedures

1. Motor oiling

No oiling or other lubrication addition is necessary at all with the Dia-Vac® pumps. Please note the Air driven GAST® motor does require SAE 10 oil lubrication for proper operation.

2. Diaphragm Replacement (See also Maintenance Procedure Below)

a.) Standard EPDM (part 4002 or complete repair kit 11009).

b.) Teflon® coated EPDM (part 4001 or complete repair kit 11005).

c.) Viton® (part 4003 or kit complete repair kit 11007).

d.) Teflon®/Viton® (part 4009 or kit 1 complete repair kit 11006)

e.) All-Teflon® (part 4009 or kit complete repair kit 11011)

The degree of usage and condition of operating temperatures or pressure will determine the rate of replacement of part or parts. For heavy loads (25-75 PSI) and constant operation the diaphragm should be inspected at least every six months.

For lighter loads (0-15 PSI or up to maximum vacuum) the diaphragm may operate successfully for a year or more. The corrosive content of the gas media being pumped can effect the recommended inspection and replacement cycle of the diaphragm.

***Diaphragms require close precision tolerance, therefore only OSI diaphragms should be used as replacements.**

C. Disassembly of Head Section and Service Diaphragm

1. Remove head section by unscrewing the four large bolts. A flat-bladed screw driver may be needed to gently pry the head free of the service diaphragm. **If you have Teflon® coating on the heads use caution not to scratch the surface.

2. The valve body can then be removed by unscrewing the two smaller screws (also accessible on the top of the head section). This part may be freed by gently tapping on these two screws after they have been loosened about three or four turns. When the valve body is removed, check all internal surfaces for any accumulation of dirt. The two valve discs can be wiped clean and replaced as long as they appear unaffected by usage. The valve gasket can be easily removed and should be inspected. As a matter of good practice, the valve discs and valve gasket should be replaced during any routine maintenance check of the head section. A once a year routine procedure is recommended.

3. The service diaphragm is secured by the single screw in its center. Remove this screw with a 5/32" Allen wrench. The diaphragm and its clamping plate should be easily lifted off. Some slight adherence to the metal may occur if the diaphragm has been in use for a long period. Before inserting the diaphragm cap screw (19007) apply a small amount of Teflon® paste or a Teflon® Washer seal (23001), (**do not use Teflon® tape**), then tighten the cap screw.

NOTE: When replacing the service diaphragm, be sure the four projecting studs of the base casting are properly located in the four outer holes provided in the diaphragm before the part is clamped in place. Be sure the diaphragm plate is firmly replaced with its center screw.

D. Disassembly of the Connecting Rod

1. Remove head section and service diaphragm as described in (C) above.

2. Remove the front plate from the face of the base casting by removing the four retaining screws.

3. Using a hex socket wrench, remove the hex head bolt on the connecting rod top surface. This will release the connecting rod cap (3001) which may then be lifted off.

4. The connecting rod assembly on single head units, including the counterweight, is held in place by the counterweight screw. This can be loosened by a 3/16" Allen wrench. The connecting rod assembly may then be slid off the motor shaft. On the dual and quad head units the assembly is held in place by the set screw. This can be loosened by a 1/8" Allen wrench and the assembly may then be slid off the motor shaft.

E. Replacement of the Connecting Rod

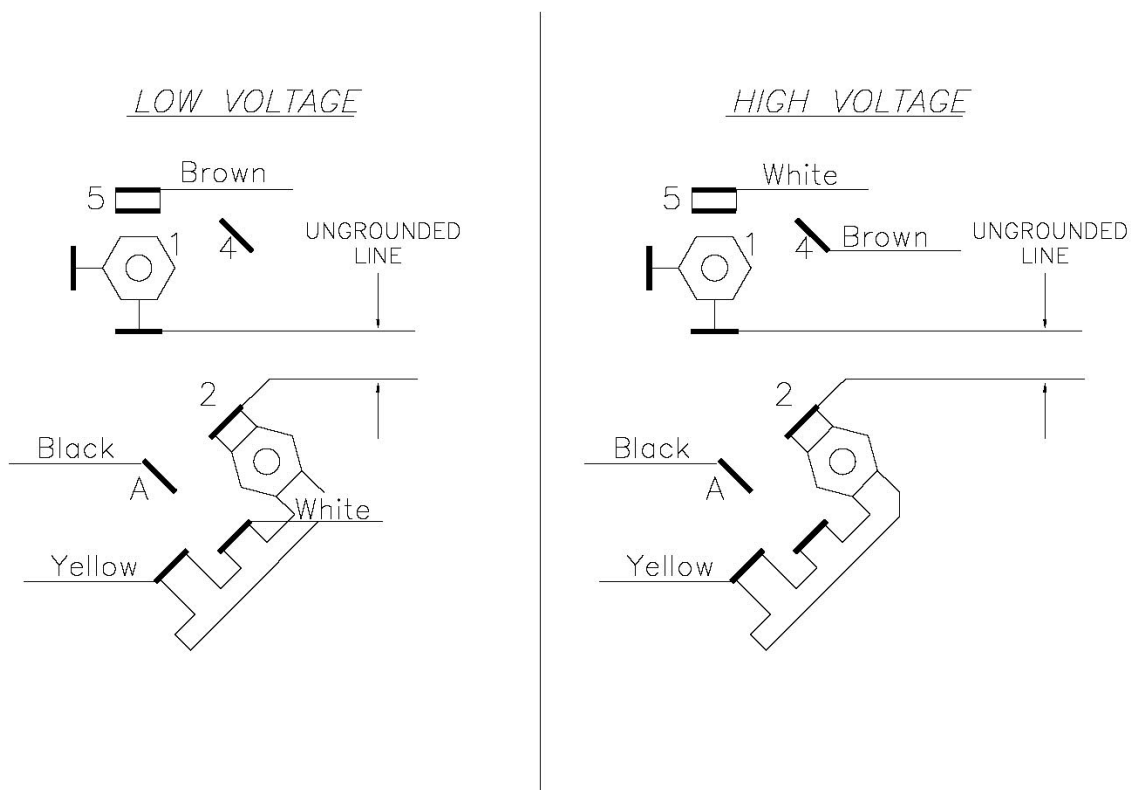
1. Replace the connecting rod assembly on the motor shaft, taking care to align set screw or counterweight screw as squarely as possible on the flat of the motor shaft.
2. Replace the connecting rod cap and connecting rod bolt. Tighten this assembly firmly with the hex socket wrench.
3. Put a new Service Diaphragm in place taking care to locate it over the four projecting studs on the top face of the base casting.

F. Related Torque Values / Running Amps

1. Head bolts - 110 inch pounds.
2. Valve body screws and Diaphragm plate screws - 70 inch pounds.
3. Connecting rod bolt - 250 inch pounds.

<i>Run Amps</i>	60Hz	50Hz
115v	2.8 - 3.0	3.4 - 3.6
230v	1.4 - 1.5	1.7—1.8

G. General Purpose Wiring Diagram (p/n-A13001)

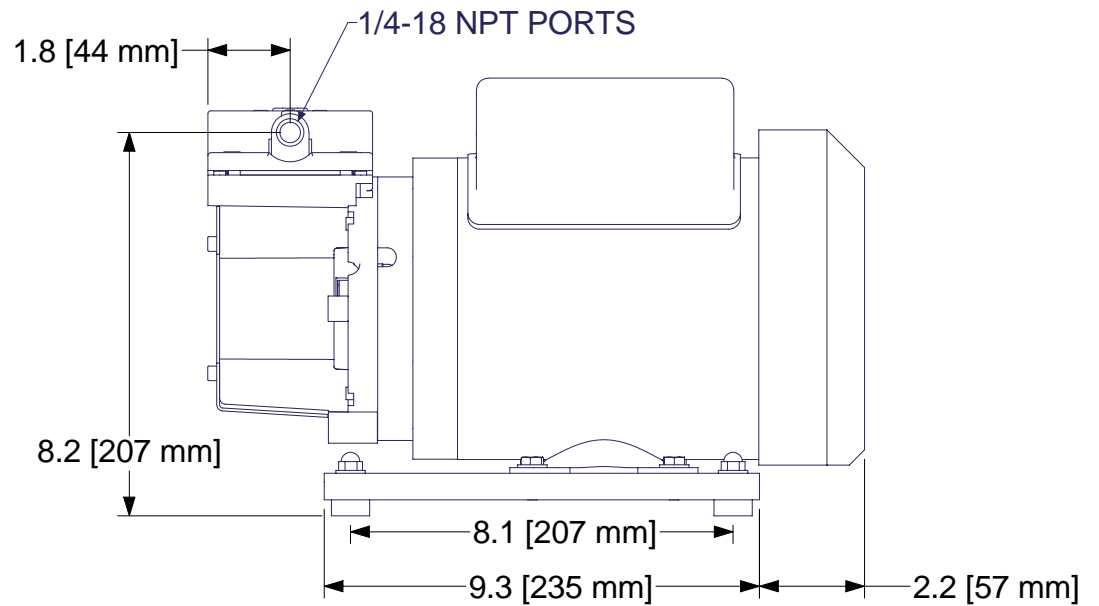
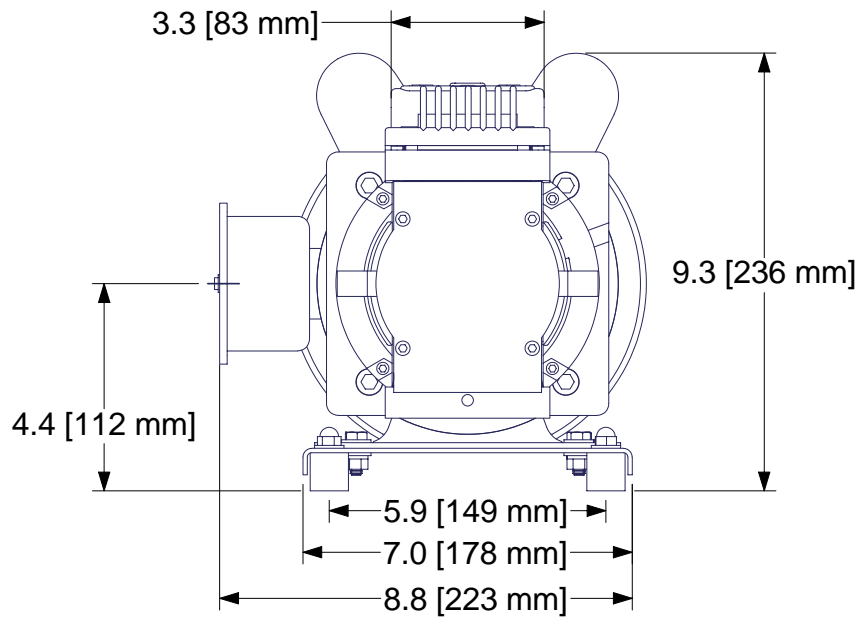
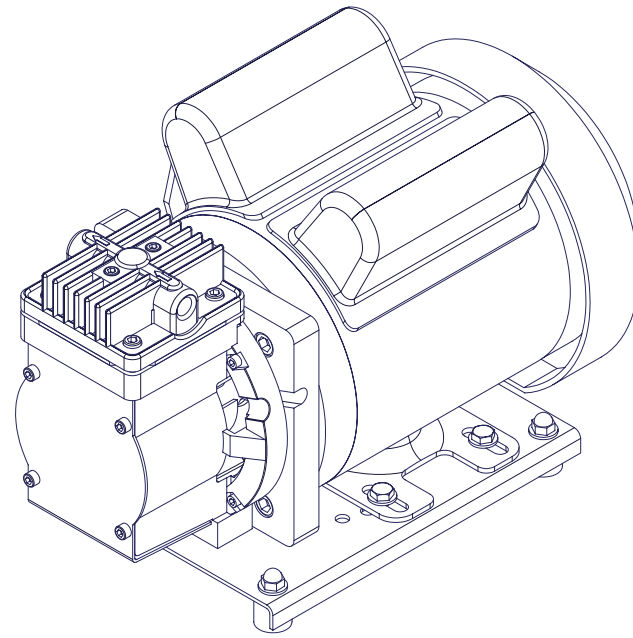
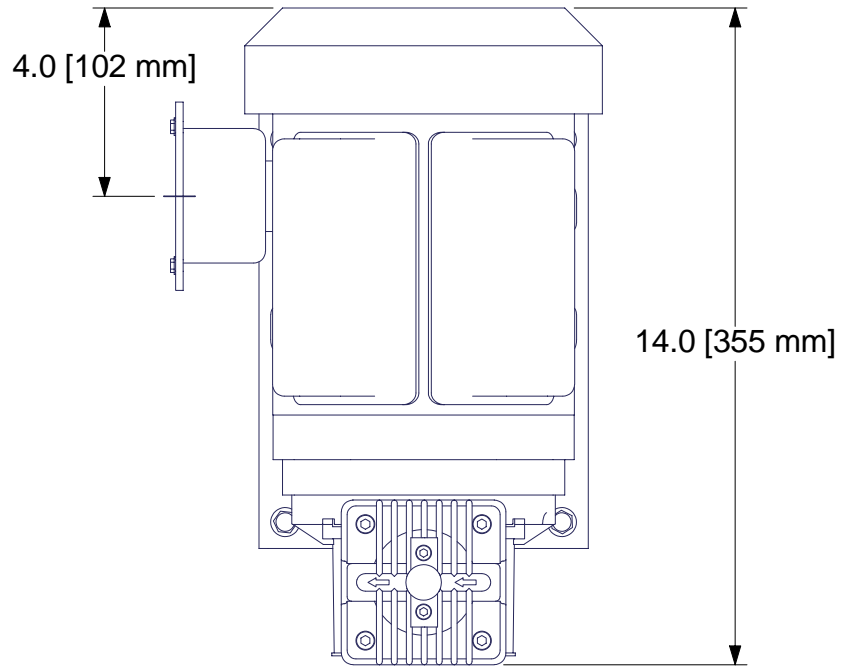


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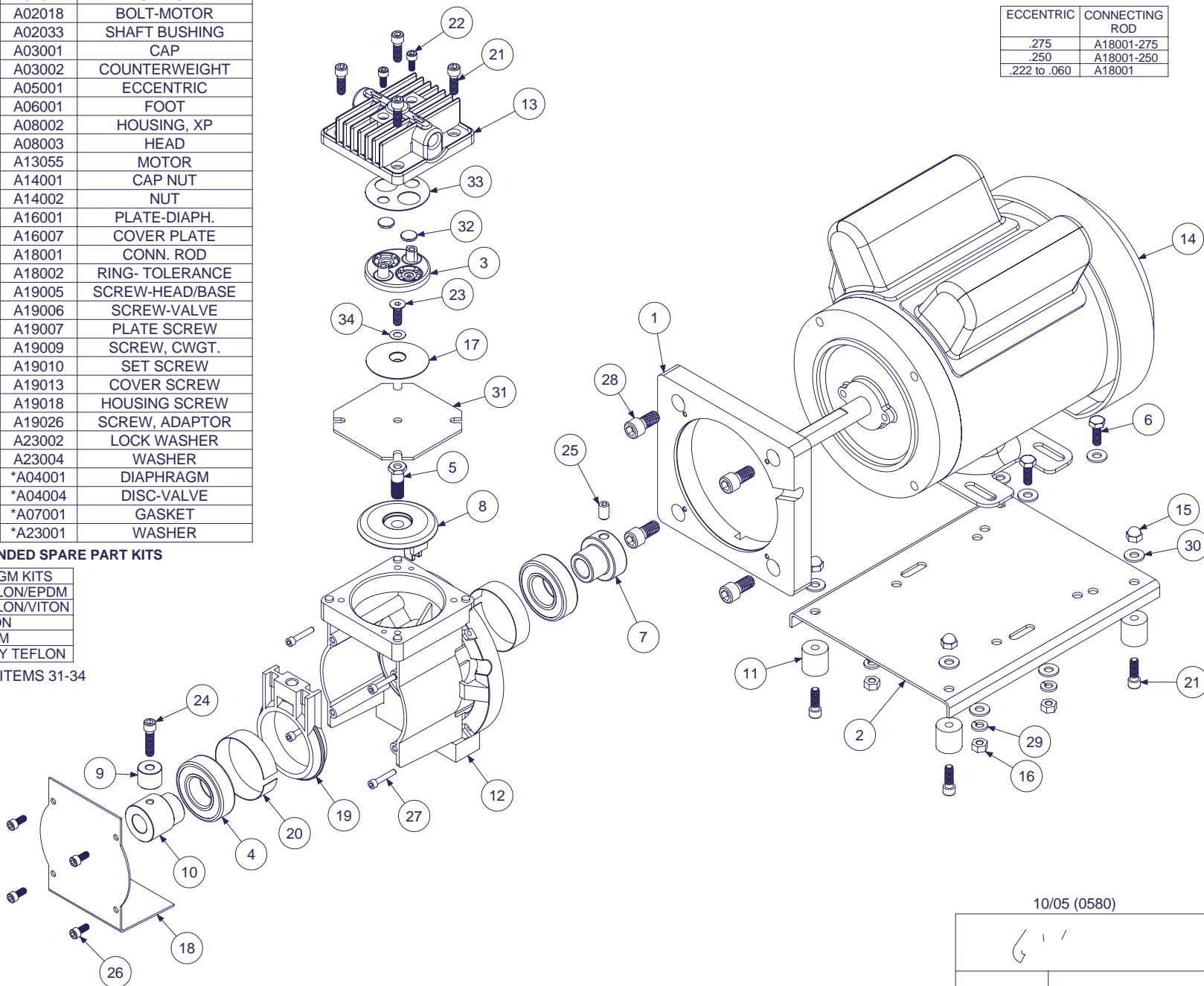
Parts List

ITEM	QTY	PART #	DESCRIPTION
1	1	A01046	ADAPTOR
2	1	A02002	BASE, XP
3	1	A02005	VALVEBODY
4	2	A02011	BEARING
5	1	A02014	ROD BOLT
6	4	A02018	BOLT-MOTOR
7	1	A02033	SHAFT BUSHING
8	1	A03001	CAP
9	1	A03002	COUNTERWEIGHT
10	1	A05001	ECCENTRIC
11	4	A06001	FOOT
12	1	A08002	HOUSING, XP
13	1	A08003	HEAD
14	1	A13055	MOTOR
15	4	A14001	CAP NUT
16	4	A14002	NUT
17	1	A16001	PLATE-DIAPH.
18	1	A16007	COVER PLATE
19	1	A18001	CONN. ROD
20	2	A18002	RING- TOLERANCE
21	8	A19005	SCREW-HEAD/BASE
22	2	A19006	SCREW-VALVE
23	1	A19007	PLATE SCREW
24	1	A19009	SCREW, CWGT.
25	1	A19010	SET SCREW
26	4	A19013	COVER SCREW
27	4	A19018	HOUSING SCREW
28	4	A19026	SCREW, ADAPTOR
29	4	A23002	LOCK WASHER
30	12	A23004	WASHER
31	1	*A04001	DIAPHRAGM
32	2	*A04004	DISC-VALVE
33	1	*A07001	GASKET
34	1	*A23001	WASHER

*RECOMMENDED SPARE PART KITS

DIAPHRAGM KITS	
11005	TEFLON/EPDM
11006	TEFLON/VITON
11007	VITON
11009	EPDM
11011	3-PLY TEFLON

INCLUDES ITEMS 31-34



ECCENTRIC	COUNTER WEIGHT	COUNTER WEIGHT SCREW
.275 to .250	A03002	A19009A
.222 to .200	A03002	A19009
.180 to .150	A03002A	A19009
.120 to .100	A03002B	A19009
.080 to .060	NONE	NONE

ECCENTRIC	CONNECTING ROD
.275	A18001-275
.250	A18001-250
.222 to .060	A18001

ALTERNATE AND OPTIONAL PARTS	
PART #	DESCRIPTION
A02005	VALVEBODY - 316ss
A02006	VALVEBODY - ALUM
A02007	VALVEBODY - CARP 20
A02009	VALVEBODY - 316ss TFE CO
A02010	VALVEBODY - ALUM TFE CO
A02019	VALVEBODY - CARP 20 TFE CO
A02023	VALVEBODY - HAST C
A02024	VALVEBODY - HAST C TFE CO
A04001	DIAPHRAGM - TEFLON/EPDM
A04002	DIAPHRAGM - EPDM
A04003	DIAPHRAGM - VITON
A04009	DIAPHRAGM - TEFLON/VITON
A04011	DIAPHRAGM - 3 PLY TEFLON
A08003	HEAD - 316ss
A08004	HEAD - ALUM
A08005	HEAD - CARP 20
A08007	HEAD - 316ss TFE CO
A08008	HEAD - ALUM TFE CO
A08009	HEAD - CARP 20 TFE CO
A08020	HEAD - HAST C
A08021	HEAD - HAST C TFE CO
A16001	PLATE - 316ss
A16002	PLATE - ALUM
A16003	PLATE - CARP 20
A16005	PLATE - 316ss TFE CO
A16006	PLATE - ALUM TFE CO
A16019	PLATE - CARP 20 TFE CO
A16020	PLATE - HAST C
A16021	PLATE - HAST C TFE CO
A07001	GASKET - CARBON TEFLON
A07906	GASKET - EPDM
A07901	GASKET - VITON
A03045	POWER CORD, 115V
A03046	POWER CORD, 230V

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