



Ozone Solutions

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INCORPORATED

OZC-161

MAINTENANCE AND DISASSEMBLY INSTRUCTIONS

A. General Operations Characteristics

1. Normal motor coil temperatures may be 160° - 180° F. Winding insulation is Class B.
2. Surrounding temperatures of the pump should remain between 40°-104° F (5° - 40° C)
3. Match electrical power to motor - Serious damage will occur to the motor if wired to an improper voltage.
4. Do not start pump with load of pressure or vacuum on pump head. Additional motor options are available to start under load conditions. Please contact ADI or your local representative for details.
5. Pumps are intended for gaseous operation, eliminate liquids entering pump. It is recommended that the pump is installed at the highest point within the system to prevent the possibility of condensate entering the pump. Additionally pump should be installed in a location protected from moisture contact.
6. Nominal running amps for General Purpose OZC-161® at 115/230 volts are 1.03 / 0.51
Nominal running amps for OZC-161 at 230 volts are 0.95
7. Ensure that your OZC-161 pump environment and sample application do not exceed motor capabilities. OZC-161 General Purpose motors cannot be used in explosive or flammable gas applications or be located in a hazardous environment. Please contact ADI customer service for clarification.

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.
0-30 inch hg. vacuum gauge, (or mercury manometer.)

Maximum pressure should be 35 PSIG.
Maximum vacuum should be 20 inches Hg.



B. Maintenance Procedures

1. For all pump parts refer to parts illustration sheet for specific model type. When reassembling pumps it is recommended that a medium strength thread locker such as Loctite® 242® be used on all screws except A19005 and A19006.
2. Motor oiling - No oiling or other lubrication addition is necessary. All bearings are pre-lubricated and shielded from external contamination.
3. Diaphragm Replacement
 - a) Teflon® coated EPDM (part #A04301 or kit #11305) - Satisfactory operation can be attained for periods of 12 months or more under conditions of light pressure or vacuum loads.
 - b) Viton® /Nomex (part #A04303 or kit #11307) - same as *a* above.

C. Disassembly of Head Section and Service Diaphragm

1. Remove head section by unscrewing the four large bolts (part #A19005). 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.
3. When the valve body is removed, check all internal surfaces for any accumulation of dirt. The two valve discs (part #A04004) can be wiped clean and replaced as long as they appear unaffected by usage. The valve gasket (part #A07001) 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.
4. The service diaphragm is secured by the single screw (part #A19301) in its center. Remove this screw with a 5/32" Allen wrench. The diaphragm and its 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.
5. When replacing the service diaphragm, a Teflon washer (part #A23001) should be inserted under the head of the diaphragm cap screw. This is added insurance against small gas leaks through screw heads and may be essential in vacuum applications where outside air contamination cannot be tolerated. After tightening the screw, the excess Teflon should be trimmed away.

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 (refer to part E. for Related Torque Values)

D. Disassembly and Replacement of the Connecting Rod

1. Remove head section and service diaphragm as described in (C) above. When this is done and the front screen has been removed, the connecting rod assembly may be taken out (refer to exploded view drawing). Gently pry up and remove the connecting rod cap (part #3301) which is held in place by the diaphragm screw.
2. Loosen but do not remove the counterweight screw. This is accessible from the top of the pump base casting and will require a 5/32" hex Allen wrench. The connecting rod assembly, including counterweight and fan, will then slide off the motor shaft.
3. To replace the connecting rod assembly, align the flat section on the motor shaft with the counterweight screw (part #A19309) before sliding the assembly in place. Slide the assembly onto the shaft without letting the connecting rod and housing come in contact (connecting rod should be approximately 1/16 inch from housing). Be careful to maintain the alignment of the flat on the shaft and the counterweight screw when sliding the assembly in place. Tighten the counterweight screw.
 - a) Please pay close attention when disassembling dual stage pumps as front and rear fans are not interchangeable.
 - b) After prolonged use, the connecting rod assembly may "freeze up" on the motor shaft. A wheel puller may be needed to free the part. When replacing the eccentric assembly, the motor shaft should be lightly coated with a graphite or MDS based lubricant to facilitate future removal.

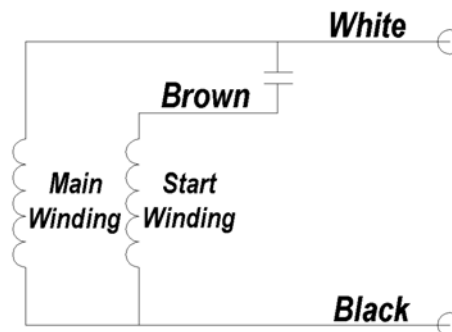
E. Related Torque Values

1. Head bolts (A19005) - 110 inch pounds.
2. Valve body screws (A19006)- 70 inch pounds
3. Diaphragm plate screws (A19301) - 70 inch pounds

F. Mini General Purpose Motor Amps

Run. Amps	115v	230v
	1.03	.51

G. Wiring Diagram (General Purpose Motor)



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"We Pass Your Gas"

