# CHINOOK PUMP OWNER'S MANUAL



READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING PUMP!

**DISTRIBUTED BY:** 

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#### **UNPACKING INSTRUCTIONS**

Your compressor was inspected at the factory and packaged to protect against shipping damage. Inspect your unit for damage or missing parts. If any damage occurs or parts are missing as a result of shipping, a notation to that effect should be made on the Delivery Receipt. Claims should be settled directly with the transportation company.

#### LUBRICATION

Prior to initial start-up, fill the crankcase to the designated level with a single viscosity, nondetergent oil. The oil sight gauge should be filled up to <sup>3</sup>/<sub>4</sub> full. You should be able to see a small bubble at the top of the sight gauge. Be sure not to fill above the indicated level. **DO NOT USE A DETERGENT OIL!** All models are splash lubricated by means of dippers on the connecting rods. The pump must be operated in a level position for proper lubrication.

#### <u>BELTS</u>

Install belts on compressor and motor pulleys. Belt tension should be adjusted to allow 3/8'' to  $\frac{1}{2}''$  deflection with normal thumb pressure.

#### **DRIVE PULLEYS**

Drive pulleys must be properly aligned and belt drive tension set to specifications. Improper pulley alignment and belt tension can cause motor overloading, excessive vibration and premature belt and/or bearing failure. As the compressor starts, check the rotation of the flywheel. The direction of the rotation must be counter-clockwise when facing the flywheel. Should the rotation be incorrect, disengage the power supply and check the motor wiring.

\*SPECIAL NOTE: Compressor flywheel has left-hand thread. Remove nut by turning clockwise.

To determine the correct motor pulley, use the formula below:

Motor Pulley = <u>Flywheel O.D. x Compressor RPM</u> Motor RPM

#### **GUARDS**

Guards should be designed to achieve the required degree of protection and still allow full air flow from the compressor sheave across the unit. When the compressor is installed, make sure the guard side is at least 18" away from a wall to provide adequate cooling of the motor and pump. <u>DO NOT RUN COMPRESSOR WITHOUT BELT GUARD INSTALLED</u>!

#### **OIL CAPACITY**

Pump Model #	<u>Oz's. of Oil</u>	Pump Model #	<u>Oz's. of Oil</u>
PMP11K3	6	PMP22K25	61
PMP11K8	12	PMP22K28	48
PMP12K11	17	PMP22K30	47
PMP12K12	15	PMP22K35	48
PMP12K17	34	PMP22K50	59
PMP12K18	34	PMP24K60	98
PMP22K22	61	PMP24K100	127
PMP22K24	61		

#### MAINTENANCE

Regular maintenance insures trouble-free operation. Your new compressor represents the finest engineering and construction available. However, even the finest machinery requires periodic maintenance. A good maintenance program will add years of service to your air compressor. The following is recommended as a minimum maintenance program. For your protection, disconnect power supply after each day's operation and drain air from system before any maintenance.

#### **BREAK-IN PERIOD**

Your new pump does not come filled with oil. By using the chart below, select the type of oil that best fits your application:

TEMPERATURE	<u>0° - 32°</u>	<u>32° - 55°</u>	<u>56° &amp; ABOVE</u>
NON-DETERGENT OIL	10 WT	20 WT	30 WT

**IMPORTANT:** Replace the oil after the first 50 hours (2 weeks) of operation. Re-torque the head bolts after the first 200 hours (4 weeks) of operation.

#### MAINTENANCE SCHEDULE

DAILY	1. Check oil level and fill as needed.
EVERY 2 WEEKS OR 100 HOURS	<ol> <li>Repeat daily procedure.</li> <li>Replace oil after first 50 hours of operation.</li> <li>Check drive belt and adjust if necessary.</li> </ol>
MONTHLY OR 200 HOURS	<ol> <li>Repeat above procedures.</li> <li>Change compressor oil.</li> <li>Check for air and oil leaks and correct.</li> <li>Tighten all hardware.</li> </ol>
ANNUALLY OR 2000 HOURS	<ol> <li>Repeat monthly procedures.</li> <li>Check the valves in the compressor and replace if damaged or worn.</li> </ol>

### **TROUBLESHOOTING & SOLUTIONS**

PROBLEM Knocking	<ul> <li><u>POSSIBLE CAUSE</u></li> <li>1. Lack of oil in crankcase</li> <li>2. Worn piston pin</li> <li>3. Worn main bearings</li> <li>4. Worn connecting rod</li> <li>5. Excessive crankshaft end play</li> <li>6. Dirty or defective check valve</li> <li>7. Piston hitting head due to foreign matter or carbon deposits.</li> </ul>	<ul> <li><u>CORRECTIVE ACTION</u></li> <li>Add oil</li> <li>Replace pin</li> <li>Replace bearings</li> <li>Replace inserts or rod assembly</li> <li>Take to Service Center</li> <li>Clean or replace</li> <li>Inspect, repair or replace valves &amp; pistons</li> </ul>
Overheating Compressor	<ol> <li>Poor ventilation</li> <li>Dirty cooling surfaces</li> <li>Dirty or defective check valve</li> <li>Restricted air intake</li> <li>Low oil level</li> <li>Unit not run on level surface</li> <li>Dirty or defective reed valve</li> </ol>	<ol> <li>Move compressor to allow for better ventilation</li> <li>Clean compressor pump</li> <li>Clean or replace</li> <li>Replace filter</li> <li>Add non-detergent, single viscosity oil</li> <li>Level unit</li> <li>Clean valve plate and replace valves</li> </ol>
Low Discharge Pressure or Pumps Slowly	<ol> <li>Air leaks</li> <li>Broken or dirty valves</li> <li>Restricted air intake</li> <li>Blown gaskets</li> <li>Defective gauges</li> <li>Dirty or defective check valve</li> <li>Compressor too small for application</li> </ol>	<ol> <li>Check system for air leaks.</li> <li>Replace or clean valves &amp; valve plates</li> <li>Replace filter element</li> <li>Replace gaskets</li> <li>Replace gauges</li> <li>Clean or replace check valve</li> <li>Consult dealer for larger ROLAIR compressor</li> </ol>
Compressor Fails to Attain Proper RPM's	<ol> <li>Defective check valve</li> <li>Defective pilot valve</li> </ol>	<ol> <li>Repair or replace check valve</li> <li>Repair or replace pilot valve</li> </ol>
Oil in the Discharge Air	<ol> <li>Worn piston rings</li> <li>Compressor air intake restricted</li> <li>Restricted crankcase breather</li> <li>Excessive oil in basic compressor pump</li> <li>Wrong oil viscosity</li> </ol>	<ol> <li>Replace rings</li> <li>Replace filter</li> <li>Clean crankcase breather</li> <li>Check gauge and adjust to proper oil level</li> <li>Drain &amp; replace with non-detergent single viscosity oil</li> </ol>
Excessive Oil Consumption	<ol> <li>Restricted or dirty air filter</li> <li>Crankcase is over-filled with oil</li> <li>Valves not seating properly</li> <li>Worn piston rings</li> </ol>	<ol> <li>Clean or replace air filter</li> <li>Drain oil &amp; refill to proper oil level</li> <li>Clean crankcase breather</li> <li>See ROLAIR Service Center</li> </ol>
Water in Crankcase	<ol> <li>Compressor does not run long enough to get hot and vaporize the moisture</li> <li>Compressor too large for application</li> <li>Incorrect or inferior grade of oil</li> </ol>	<ol> <li>Consult dealer about smaller ROLAIR compressor</li> <li>Consult ROLAIR dealer</li> <li>Change oil in compressor</li> </ol>

## AIR COMPRESSOR OPERATION

#### **LUBRICATION**

Prior to daily operation, make a habit of checking the oil level in your compressor pump. A sight gauge on the outside of the pump's crankcase is provided to make the job easier. Always maintain the oil level to read 2/3 full on the sight gauge. Oil levels over this amount will result in oil blowing past the rings or through the crankcase breather. Lower amounts of oil will result in insufficient lubrication of moving parts.

Reciprocating compressors will consume a certain amount of oil under normal operation. If you are concerned about your oil consumption, monitor and record oil consumption daily and consult your local dealer. When filling your crankcase with oil, be sure to use a single viscosity, non-detergent oil. **DO NOT USE A DETERGENT OIL!!** 



OIL SIGHT GAUGE

**Oil Type Table** 

Temperature	0° - 32°	33° - 55°	56° & Above
Non-detergent Straight Weight	10 WT	20 WT	30 WT

#### **IMPORTANT**

Unit must be level when in operation.