DUR-O-LINE SERIES

INSTALLATION AND OPERATING INSTRUCTIONS

Read all instructions carefully before starting compressor

UNPACKING INSTRUCTIONS

The two stage compressor was inspected at the factory and packaged to protect against shipping damage. When you unpack your unit, inspect for damage or missing parts. If there is any damage or missing parts, the transportation company's agent should make a notation to the effect on the Bill of Lading. Claims should be settled directly with the transportation company.

WIRING

Have a certified electrician connect the service wires to the switch, being sure that:

1. The electric box is large enough. Service of adequate ampere rating.

2. The supply line has the same electrical characteristics (voltage, cycles and phase) as the motor.

3. The line wire is the proper size and that no other equipment is operated from the same line. The following chart gives minimum recommended wire sizes for compressor installations. For longer lines use the next larger size wiring.

Various national and local codes and standards have been set up covering electrical apparatus and wiring. These should be consulted and local ordinances observed. Our recommended wire sizes may be larger than the minimum set up by local ordinances. If so the larger size wire should be used to prevent excessive line voltage drop. The additional wire cost is very small compared with the cost of repairing or replacing a motor electrically "starved" by the use of too small supply wires.

BELT GUARD

OSHA requires installation of totally enclosed belt guard covering the flywheel, belts and motor pulley.

BELTS

Install belts on compressor and motor pulleys. Belt tension should be adjusted to allow 3/8 to 1/2 inch deflection with normal thumb pressure. Also align belts using a straight edge against the face of the flywheel, touching the rim on both sides of the face. The belts should be parallel to this straight edge.

PIPING

If a pipe line is necessary, use the same size as the tank valve since too small piping restricts the flow of air. If over 100 feet long, use the next larger size.

Bury underground lines below the frost line and avoid pockets where condensation can gather and freeze.

Make certain all pipe joints are free from leaks.

Apply pressure before underground lines are covered.

Warning: At no time should the compressor be used in a gas well or in any application where natural gas is present.

INSTALLATION AND STARTING

INSPECTION: Check for possible damage in transit. All basic pumps are shipped with flywheel unmounted! Do not force flywheel on crankshaft. Use wedge in "slot" provided for easy assembly. Belt alignment and tension must be checked carefully!

MOUNTING: Install in a clean, dry, well ventilated location away from any source of heat such as a boiler or radiator. If unit is to be fastened to a foundation, all four feet must be firmly supported and shimmed to remove all stress from unit. Pump flywheel should be mounted towards wall with minimum clearance of 18" to allow for circulation of air and additional clearance if required for servicing.

LUBRICATION: Fill crankcase to level mark on oil gauge with an industrial R & O Oil having a minimum of 95 V.I. or SAE No. 30 non-detergent, single grade compressor oil. See Chart.

CAUTION: Turn power off before servicing.

Ambient Temp.	Viscosity at 100° SSU	ISO Viscosity CS+	SAE No.
0°-40°	250-350	46-68	20
40°-80°	450-550	100	30
80°-120°	650-750	150	40
Under 0° Consult Over 120° Factory			

MAINTENANCE, OPERATION AND CARE

PRESSURE AND SPEED: Never operate pump at pressures or speeds in excess of those recommended by factory. Every compressor assembly must have a safety valve installed and should be set at either the maximum tank working pressure or 25 P.S.I. over the actual pressure of the pump, whichever is less. Intermittent Operation, maximum 70%.

***DAILY:** Check for unusual noise, failure to compress, overheating, oil leaks and vibration. Correct before serious damage can develop. Drain all condensate from receiver and traps.

***WEEKLY:** Examine Intake Filter elements and if dirty, remove and clean or replace. Check oil level and add if necessary. Do not fill over level mark on sight glass! Keep compressor clean for efficient operation and appearance.

***MONTHLY:** Check and tighten all bolts and nuts as required (refer to torque chart). Check air connections for air leaks - tighten as required. Check belt tension.

NOTE: This is a standard maintenance procedure which "warranty" does not cover.

***QUARTERLY:** Inspect valves, clean if necessary.

NOTE: This is a standard maintenance procedure which "warranty" does not cover.

MAINTENANCE • TROUBLE SHOOTING • REPAIRS

SLOW PUMPING OR INSUFFICIENT PRESSURE

1. Clogged filter element–clean or replace.
2. Leaks in air lines–retighten or replace.
3. Insufficient air capacity–add compressor capacity–consult dealer.
4. Head valves–clean or replace.
5. Slipping belts–adjust or replace.

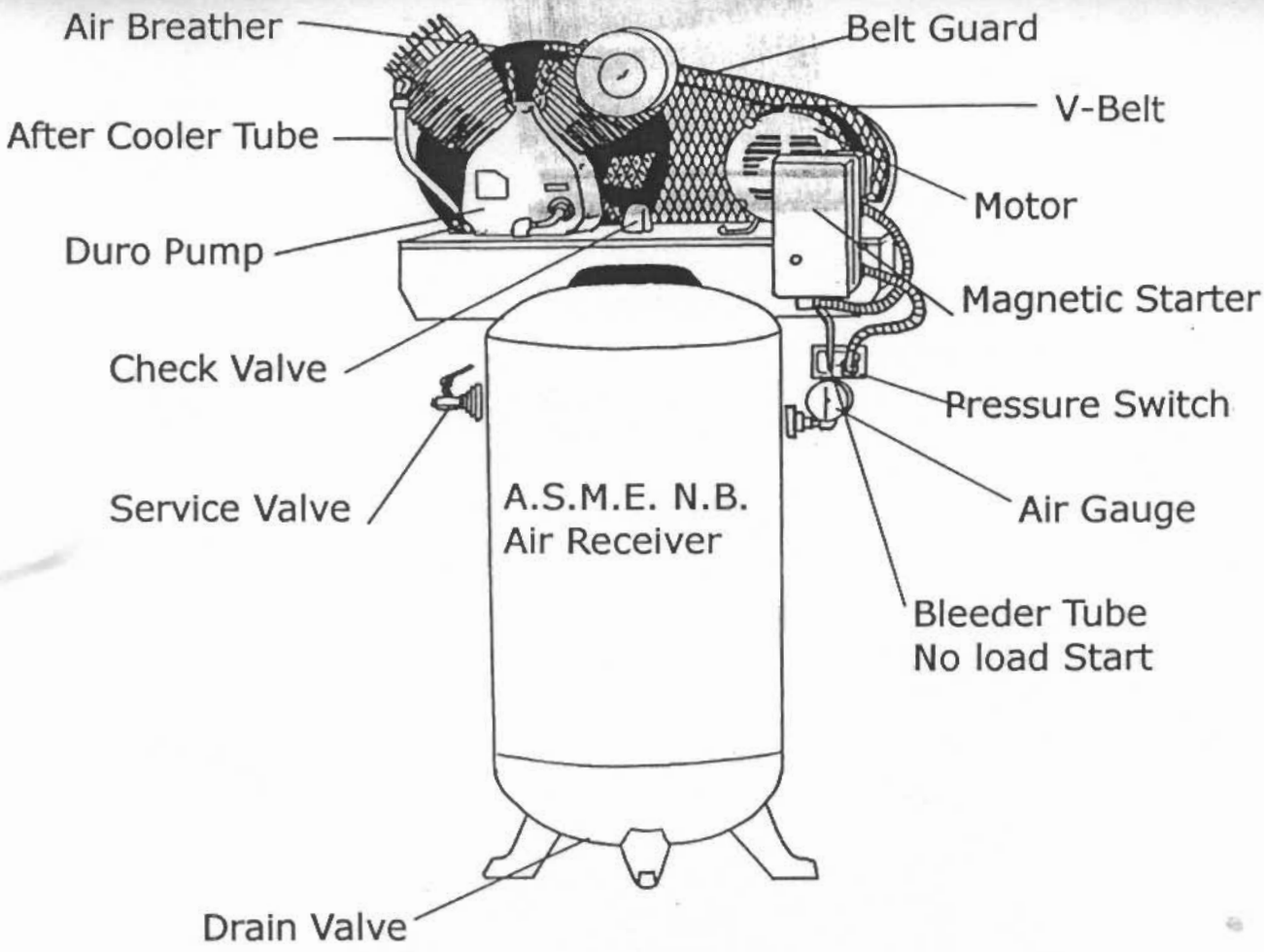
EXCESSIVE OIL CONSUMPTION

1. Too much oil–drain out excess to level mark on sight glass.
2. Worn rings–replace rings.
3. Clogged air intake filters–clean or replace.
4. Improper oil–consult oil chart.
5. Oil leaks–check and tighten all bolts and nuts. Replace gaskets if necessary. See "monthly" under "operation and care."
6. Duty cycle over 70%.

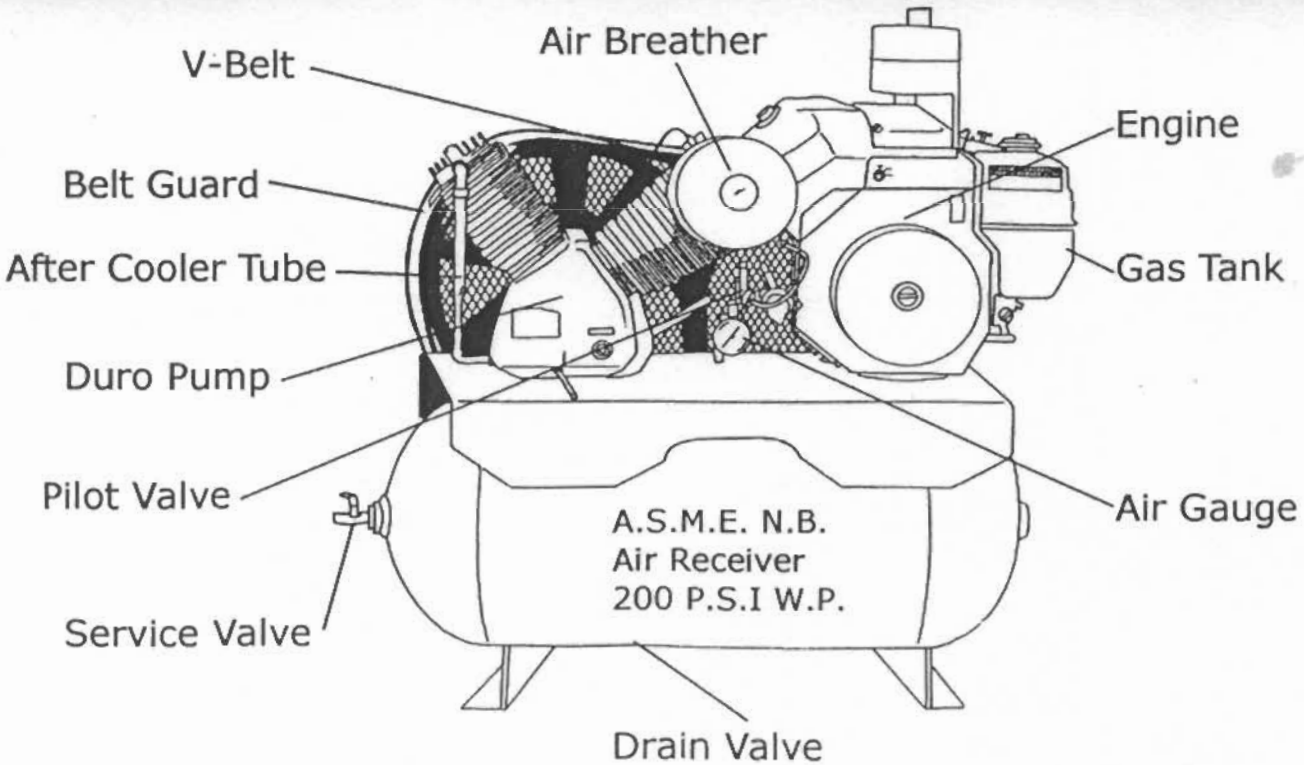
OVERHEATING

1. Pump running backwards–reverse rotation, must be CCW facing flywheel.
2. Inadequate ventilation–pipe intakes to outside and install filters to protect against weather and foreign objects.
3. High ambient–same as #2.
4. Restricted air intakes–clean or replace.
5. Loose or restricted valves–retighten or clean or replace.
6. Incorrect installation–allow 18" minimum between wall and flywheel.
7. Insufficient air capacity or excessive duty cycle.

Electric Motor Driven

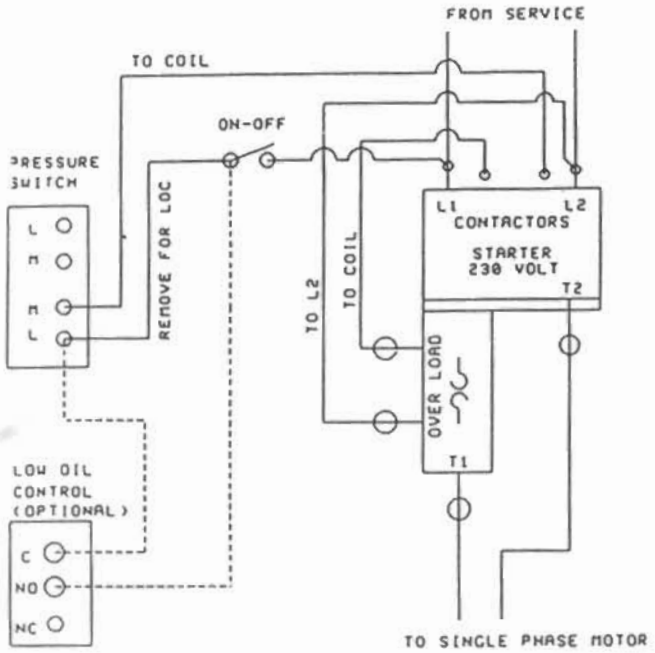


Gasoline Engine Driven

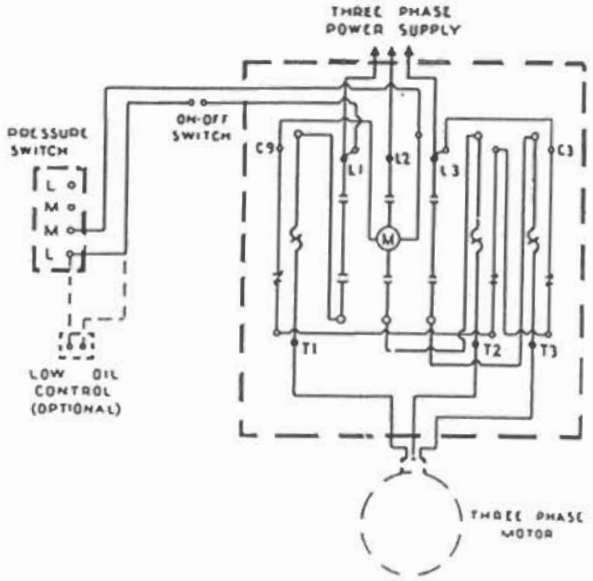


MAGNETIC STARTER WIRING DIAGRAMS

SINGLE PHASE



THREE PHASE



PRESSURE SWITCH

Connection Diagrams

Reset Pressure Range

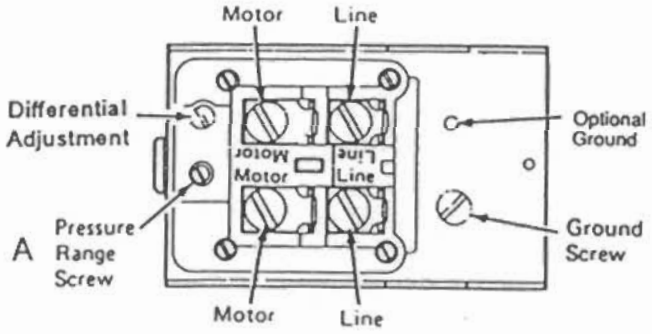
A. Turn clockwise to increase and counter-clockwise to decrease pressure.

Differential Adjustment*

B. Turn clockwise to increase and counter-clockwise to decrease pressure.

*Differentials listed are averages only.

Note: Reverse action switches close (cut-in) on rising pressure.



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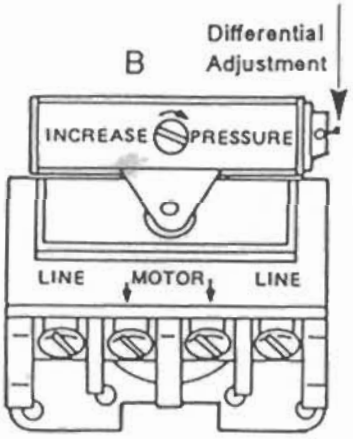

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