

# Installation, Operation and Maintenance of Air-powered Vibrators

## OPERATING AIR PRESSURE

Cleveland air powered vibrators will operate on continuous airline pressures within the range of 30-100 p.s.i.g. (pounds per square inch gauge). Optimum vibration efficiency is achieved when clean, lubricated, 60-80 p.s.i.g. continuous line air pressure is applied. Vibration intensity and frequency may be varied by use of a pressure regulator; vibration-intensity is in ratio to applied air pressure. Cleveland model FRL Lubro-Control is designed to keep unit free and clear of contaminants while regulating air flow to unit and maintaining continuous lubrication. FRL Control is supplied with complete installation and operation instructions.

## OPERATING VALVE

A quick acting full-ported valve is required to operate this vibrator. The Cleveland Vibrator Company has manual (hand and knee) and electrically operated valves. The pipe thread intake size of the operating valve should be the same as the vibrator pipe thread intake connection size. The valve should be installed within 10 feet of the vibrator and the connection should be complete with oil resistant air hose of ample capacity. Complete hose and male pipe thread fitting assemblies are available from The Cleveland Vibrator Company.

## LUBRICATION\*

Inject into the air stream just enough oil to create a fog that travels with the air and maintains an oil film on the moving part of this precision built vibrator. We recommend the use of automatic lubrication with Cleveland Vi bra-Lube lubricant. Install the lubricator within 15 feet of the vibrator where oil level can be observed. Further installation and operating information accompanies the lubricator.

## BOLTS (assembly and mounting)

Bolt diameter must correspond to the bolt hole size. Vibration will tend to loosen bolts and nuts during initial few hours of operation. **IMPORTANT.... RETIGHTEN ALL NUTS AND BOLTS UNIFORMLY AFTER 2 HOURS OF OPERATION AND INSPECT PERIODICALLY THEREAFTER. IF BOLT BREAKAGE OCCURS, REPLACE WITH HIGH TENSILE GRADE #5 BOLTS WHICH ARE AVAILABLE FROM THE CLEVELAND VIBRATOR COMPANY.**

## TROUBLESHOOTING

Cleveland air-powered vibrators are precision built and have been thoroughly tested at the factory for quality of material, workmanship and performance. These vibrators start and stop instantly and operate efficiently within a wide range of operating pressures if installed in accordance with Cleveland Vibrator Company recommendations. If however the vibrator fails to operate, check the following as causes of failure: A leaky operating valve; valve installed backwards (i.e. air supply entering exhaust); installation of operating valve more than 10 feet from vibrator; broken spring\*; insufficient volume of air to maintain vibrator operation; lack of lubrication; dirt or grit in the vibrator assembly. If after checking the above causes for trouble, it continues to persist, advise the factory or our local representative.

## SPRINGS\*

Not all vibrators require springs. The only function a spring serves is to push the piston into a starting position after the air supply has been turned off and the piston is motionless. If the vibrator is mounted so that the piston operates on about a 30° angle off horizontal, then gravity will pull the piston into a starting position and a spring is not necessary. When the piston of an air powered vibrator touches one or the other of the end heads of the vibrator assembly, it is in a starting position. Due to design changes in springs it is necessary to specify the type of spring required for replacement. Vibrator springs are either straight cylindrical type, or a conical type.

## FACTORY SERVICE AVAILABLE

If after extensive service, your vibrator does not function efficiently, it may be returned to the factory for reconditioning. The cost for this service is nominal. Quotation on request.

## PARTS

Certain parts may be replaced in the field. Parts price list for individual models are available upon request.

\*If the cap or body is stamped "Coated" the unit is treated with a space – age coating that allows it to run without lubrication. The vibrator can still be lubricated, if desired, but it is not necessary.

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