

TECHNICAL MANUAL

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE MANUAL
INCLUDING REPAIR PARTS LIST
FOR**

BLAST CLEANING MACHINE

**MODELS 15L, 25L, 35W, 100, 200E,
300LEA, 300-LA, & 600-LA
P.K. LINDSAY COMPANY, INC.)
(NSN 4940-00-277-2999)**

HEADQUARTERS, DEPARTMENT OF THE ARMY

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HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 10 April 1981

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR, Rock Island, IL 61299. A reply will be furnished direct to you.

NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom this blast cleaning machine is issued.

Manufactured by: P.K. Lindsay Company, Inc.
Deerfield, New Hampshire 03037

Procured under Contract No. DAAA09-77-C-6072

This technical manual is an authentication of the manufacturer's commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

MODELS 15L, 25L, 35W, 100, 200E, 300LEA, 300-LA & 600-LA

OPERATING INSTRUCTIONS & PARTS LIST

1. The choice of nozzle size is limited by the c f m air capacity of the compressor. For fast cutting or cleaning, the nozzle should be no larger than will permit the compressor to maintain 80 pounds pressure when blowing continuously. Thus 3/32" or 7/64" nozzles should be used with a Model 15 compressor, 5/32" nozzles with Model 40, 3/16" nozzles with Model 55, 1/4" nozzles with Model SO or Model 125, 5/16" nozzles with Model 150-A and Model 150-P. For most work the operator should wear for protection a Model CH helmet and a glove for the hand holding the nozzle. To make sure that abrasive does not settle in the sand hose, use only 1/2" sand hose with 3/32", 7/64" and 5/32" nozzles. Use 3/4" hose with 3/16" and 1/4" nozzles and 1" hose with 5/16" and 3/8" nozzles. When heavy steel shot or grit is used, the next smaller sand hose size should be used.
2. When the sandblast is equipped with 3/32" or 7/64" nozzles, the sand should be dried and uniformly graded of about #30 screen, or #36 if electric furnace abrasive is used. With larger nozzles proportionately coarser grit may be used. The funnel screen is for removing foreign material from the abrasive and is not fine enough for grading the abrasive.
3. To fill the sandblast, close the mixing valve by pulling the control lever toward the moisture separator. Fill the tank with abrasive, using the sieve while doing so. Connect the air hose to the air inlet valve on the moisture separator and close the valve. On Models 15-L, 25-L, 35-W, 100 and 200-E, shake the filler plug to clean the abrasive off the rubber lip and pull the plug in place so that there is no leak and the pressure will hold it there as you open the air valve on the side of the moisture separator. On Models 300LEA, 300L-A and 600L-A, close the air inlet valve at the hose connection on the moisture separator, start the compressor and allow it to build to full pressure. After the compressor has reached full pressure, open the air inlet valve wide. The flow of air will automatically close the sandblast filler plug and pressurize the sand tank. To relieve the pressure in order to refill the tank or change nozzles, shut off the air inlet valve and open the pressure release valve on the top of the moisture separator. Relieve the pressure from the tank in this way every time you stop using it EVEN FOR TWO OR THREE MINUTES. The reason for this is that air standing in the tank under pressure condenses moisture which tends to clog the mixing valve. Open drain cock at bottom of moisture separator frequently to remove moisture. When using a compressor such as a rotary-type with an automatic blow-down feature, a check valve should be located between the compressor and the sandblast to prevent back flow of abrasive into the compressor when air is released by the automatic blow-down device.
4. When you are ready to sandblast, start opening the mixing valve by moving the control lever out-ward from the tank. The valve first passes air only, then increasing amounts of sand. Start by moving the lever gradually so as not to go past the correct position (particularly when using a long hose length). You can tell when it is cutting by the cutting effect of the abrasive when it hits the material and the feeling of force with which the abrasive rebounds from it. Occasionally the nozzle may become clogged and it will be necessary to remove it, clean it out, and blow out the sand hose.
5. You will note that a small amount of air continues to come through the nozzle when the control lever is released. If you desire to shut off the air completely, close the air inlet valve and open the pressure release valve as explained in paragraph #3. With considerable use the valve washers #45 and valve plate #36 wear enough to interfere with accurate regulation of the volume of sand. These parts, including valve cushions #25, should then be replaced.
6. The nozzles should be changed whenever they wear sufficiently to lose their cutting power at lower than SO p s i.
7. To empty the sandblast, put the nozzle holder without the nozzle in a suitable container. To prevent abrasive from being blown out, cover the bucket with a board or burlap and reduce the pressure on the sandblast to about 10 pounds, by partly closing the air inlet valve and opening the drain cock. After this has been done, push the control lever to the position marked purge. When using steel shot, it is well to empty the tank every time you are through using it to avoid caking the shot from rust. Even sand should not be allowed to stand in the tank for long periods.
8. To test the entire outfit for loss of pressure due to an air leak, move the compressor and sandblast units close together and force the sandblast nozzle tightly against a flat rib on the rubber tire of the compressor. Allow the compressor to build up to SO pounds pressure on the sandblast gauge and shut it off. If the unit holds the same pressure for a reasonable length of time while all the sandblast controls are in their operating positions, there are no serious air leaks.