INSTALLATION, OPERATION, AND SERVICING INSTRUCTIONS KRUG MODEL G HAND PUMP

The Krug Pump is a precision engineered instrument . It does not require skilled mechanics to install; easy to operate, and in most cases, the servicing required can be done by the purchaser themselves.

However, for best results, and to add extra life to your pump, care should be exercised in both installing and servicing your pump. The simple rules outlined below will aid you in installing and servicing your Krug Hand Pump. It will also serve you in minor trouble-shooting. By experience with hundred of field tests on Krug pumps throughout the country, we have found that inmost failures the

trouble is generally caused by failures of auxiliary equipment rather than in the pump itself. Therefore we want to emphasize that it is most important that you proper hose, fittings, and valves when you install your pump. It will save you time, trouble, work, and money in the end.

- when installing the Krug Hand Pump, National Board of Fire Underwriters Pamphlet 58 should be followed.
- A good, solid base or platform of concrete should be constructed on which the pump can be securely bolted. The top of the concrete base should be at ground level for maximum hand leverage.
- 3. A VAPOR RETURN LINE SHOULD BE INSTALLED IN ALL CASES WHERE THE KRUG PUMP IS USED FOR FILLING TRUCK AND TRACTOR TANKS. The vapor return line equalizes the pressure in the mobile take with the pressure of the storage tank. Engine heat, and very often during the summer months, outside temperature may cause a build up of pressure inside the mobile tank, and unless the pressure has been equalized, it would be impossible to fill the mobile tank. Upon opening the valve on the equalizing line after it has been installed, extreme care should be exercised as the excess flow check valve on the mobile tank outlet may snap shut. If this should happen, close the manual shut off valve momentarily until it is possible to hear the excess flow check valve snap open again. The open the shut-off valve

very, very slowly.

4. Tighten the packing gland very evenly, use only sufficient pressure to stop packing form leaking and still allow easy travel of connecting rod. It is recommended that you do not use a wrench to tighten the packing gland nuts. Occasionally, a wrench may be necessary to overcome the friction caused by paint, rust or imperfect threads, ect., in which case extreme care should be exercised. The connecting rod should be lubricated with oil or grease. Frequency depends upon use.

- 5. DO NOT FORCE THE PISTON AGAINST STOPS.
- use only U.L. approved packing which my be ordered from your dealer or contacting Krug Products.
- 7. Should the pump fail to operate properly, it could be from one of the following causes:
 - Check valve not sealing properly due to foreign matter on valve seal.
 - 2. Valve in piston not sealing properly.
 - 3. Piston rings may be worn to the extent that they allow liquid to by-pass.

Should any of the above causes be your trouble, have a competent qualified mechanic remedy the trouble or return it to be repaired.

- 8. Should pump require an excessive amount of physical pressure to operate, stop pumping and investigate. The trouble could be from one or more of the following cases.
 - If filling a mobile tank you my be working against excessive pressure built up in the mobile tank. Correct by checking the excess flow check valve in the vapor return line.
 - 2. The excess flow check valve at the storage tank withdrawal may have snapped shut. To correct, close the shut off valve on the liquid line to the pump and wait a few moments until valve reopens. It may be necessary to install a larger excess flow check valve on the storage tank.
 - Packing may be adjusted far too tight. Correct by loosening the packing, lubricating, and readjust.
- 9. Handle should be center position (straight up and down) when allowing fuel to flow freely through pump without manual operation. When pump is not in use, be sure to keep handle in forward position to avoid weathering of the connecting rod. However, due to pressure in the lines and in the pump cylinder, you will probably get a hydraulic action which will force the handle to the our position. To avoid this, uses a light weight chain to secure the handle in the forward position.





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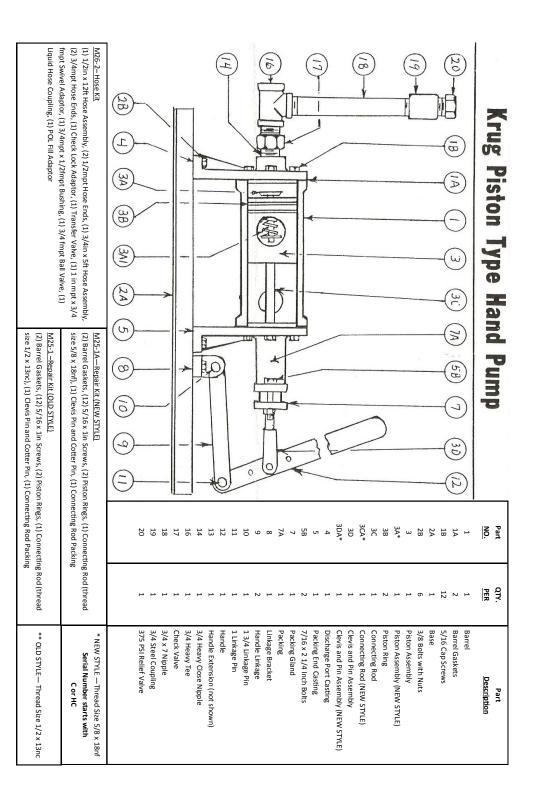
Krug Model G Hand Pump

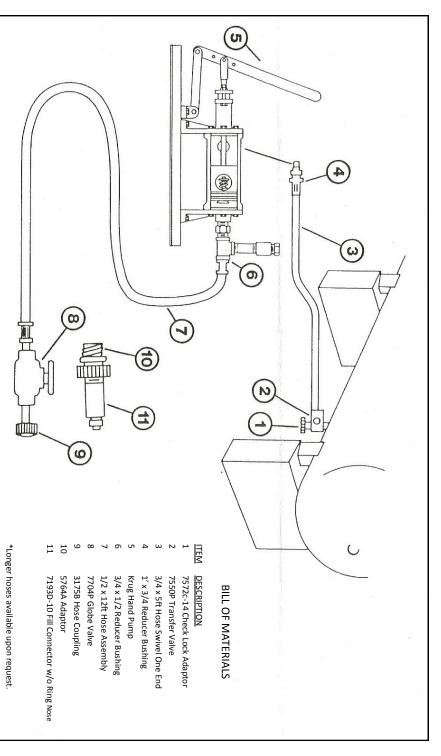
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*Vapor return assemblies available upon request.