Troubleshooting Procedures
for ANVER Mechanical Vacuum Lifters

Single Pad Lifters type 150 S through 750 S

Multipad Lifters with Vacuum Generators type No. 150 M through 1000 M

Anver vacuum lifters have been engineered and built to provide trouble-free, satisfactory use. They are carefully checked and tested before they are shipped.

The following trouble shooting procedures will help you to correct any equipment problems which might occur.

Problems and their corrections are listed in the order of probability and should be checked in this order.

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PROBLEM - LIFTER SLOWLY LOSES VACUUM

A. ***Possible cause - damaged sealing ring(s):***

1. Check sealing rings for any cuts in lip or sealing ridges.
2. Discard damaged seals immediately and replace with new.
3. Clean underside of sealing rings, especially the sealing ridges; dirt may be trapped between sealing ring and grooves in vacuum pads.

B. ***Possible cause - Surface condition of load:***

1. Surface has debris, heavy corrosion or mill scale.
2. Use lifter on clean loads and brush off loose debris, dirt, scale, chips, etc.
3. Do not use lifter on badly rusted, pitted, or very scaly loads.

C. ***Possible cause - damage to vacuum conduit:***

1. Check flexible vacuum tubing for cuts or tears.
2. Check for loose fittings or hose clamps.
3. Make certain that shut off valves are completely closed on any vacuum pads not being used.
4. Replace damaged tubing, pipe or fittings.
5. All pipe threads must be sealed with a teflon pipe thread sealant.

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D. ***Possible cause - Loose or damaged vacuum gauge:***

1. Replace damaged vacuum gauges.
2. When replacing gauges, use teflon tape on threads to insure tight seal.

E. ***Possible cause - dirty valve seat or loose or damaged rubber valve disc on piston rod valve assembly:***

1. Lift piston out of cylinder housing and check and clean valve seat.
2. If valve seat is damaged, disassemble generator, following instructions in manual.
3. Replace old or damaged valve sealing disc.

F. ***Possible cause - damaged vacuum generator:***

1. Structural damage to the vacuum generator housing or to the flange of a vacuum pad may cause a loss of vacuum.
2. Consult factory for replacement or repair of damaged components.

PROBLEM - LIFTER RAPIDLY LOSES VACUUM:

A. ***Possible cause - Misapplication of lifter.***

1. Load may be too heavy or too dirty.
2. Pads may not be completely seated on load surface or may be covering holes or welds.
3. Load may be too long for lifter (See bulletin 3-75-10).
4. Use lifter only as described in bulletin 3-75-12.

B. ***Possible cause - Damaged sealing diaphragm:***

1. If piston had failed to ‘bottom out’ and has been forced down or if a load was suddenly dropped, the sealing diaphragm may have been torn.
2. Remove outer circle of bolts on housing cover and lift out piston assembly.
3. Check for damage to diaphragm.
4. Lifting should be done from uprights on cover and not from piston rod (remove chain from pulley blocks and reattach directly to uprights) -The most likely area for damage to diaphragm is adjacent to the hold-down clamping ring.
5. Replace torn diaphragm following procedure indicated in disassembly instructions.

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PROBLEM - LIFTER RAPIDLY LOSES VACUUM: ***Cont.***

6. Never start disassembling the vacuum generator without consulting your instruction manual.

C. ***Possible cause - Shut off valve left open for pads not used:***

1. Make certain shut off valves are completely closed to any vacuum pads not in use.

PROBLEM - MECHANICAL MALFUNCTION OF LIFTER, LIFTER DOES NOT OPERATE

A. ***Possible cause - Misapplication of lifter, lifter is being used on loads that are not suitable for handling:***

1. Lifter should be used on only non-porous materials.
2. Vacuum pads should not be placed over holes and should be entirely on load surface.
3. Refer to bulletin 3-75-12, section A.

B. ***Possible cause - Twisted or jammed sling chains:***

1. Make certain double sling chain is not twisted or jammed on chain pulley blocks.
2. Make certain chain pulley blocks can move freely when turned by hand.

PROBLEM - PISTON FAILS TO 'BOTTOM OUT' WHEN SLING CHAIN IS SLACKENED:

A. ***Possible cause - The double rolling diaphragm is convoluted upon itself:***

1. Failure of air inlet valve, located on the top of the generator, valve seat is stuck.
   a. Release by pushing button on top of valve.
   b. After valve has been freed, ease piston back down by hand by rotating piston rod.

B. ***Possible cause - Leak in pressure compensation chamber.***

1. Leakage may occur around air inlet valves if seal is broken.
2. For generators type 500 St 500 M and 750 M, leakage may occur at interface between chamber and cover because of damaged seal.
3. For 1000 M generator, a damaged fitting or tubing between top of cylinder and pressure chamber may cause pressure loss.
4. Find leak by applying a weak solution of liquid soap to problem areas, stopping the leak.

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PROBLEM - PISTON FAILS TO 'BOTTOM OUT' ***Cont.***

C. ***Possible cause - A sudden surge of the piston, possibly due to a load dropping can cause the piston to bind up.***

1. Depress the button on the air inlet valve and gently work the piston down by rocking the piston rod.
2. If this fails, remove the air inlet valve and blow low pressure air (15-30 psi) into the generator through the open air inlet valve hole and work the piston down by rocking the piston rod.

D. ***Possible cause - Improper lubrication or foreign material on the diaphragm.***

1. Remove outer circle of bolts on housing cover and lift out piston assembly.
2. Wipe off old lubricant with clean cloth and relubricate with talcum powder, rubbing thoroughly into all exposed rubber surfaces.

E. ***Possible cause - Diaphragm is bound up between inside diameter of piston and diaphragm guide.***

1. Remove outer circle of bolts on housing cover and lift out piston assembly.
2. Free diaphragm by evenly prying between housing cover and clamping ring.
3. Take care not to puncture the diaphragm.
4. When doing this work, lifting should be done from uprights on cover and not from piston rod (remove chain from pulley blocks and re-attach directly to uprights).
5. Check for damage to the diaphragm and replace diaphragm if needed.

F. ***Possible cause - Cold weather can stiffen diaphragm when lifter is stored at 20°F or below.***

1. If the lifter has been exposed to a cold environment (below 35°F), the mechanical valve mechanism, sealing ring, and rolling diaphragm may be cold and stiff. To prevent damage to the internal rolling diaphragm, and to ensure proper sealing of the rubber sealing ring, allow the unit to remain in a heated area for a few hours prior to operation.
2. If this is not possible, 'cycle' lifter several times to relax the diaphragm and to make sure that the piston will 'bottom out'.

G. ***Possible cause - Damage to the generator housing may cause the piston to bind.***

1. Consult factory for repair or replacement of housing.

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