



9836

## VACUUM LEAK DETECTOR



### OPERATING INSTRUCTIONS & SERVICE MANUAL

Rev: A, 2/22/2007

TO REDUCE THE RISK OF INJURY AND EQUIPMENT DAMAGE  
USER MUST READ AND UNDERSTAND OPERATOR'S MANUAL.

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# SAFETY INSTRUCTIONS



## WARNING!

### **READ AND UNDERSTAND ALL INSTRUCTIONS**

Failure to follow all instructions listed below, may result in accident, fire and/or personal injury.

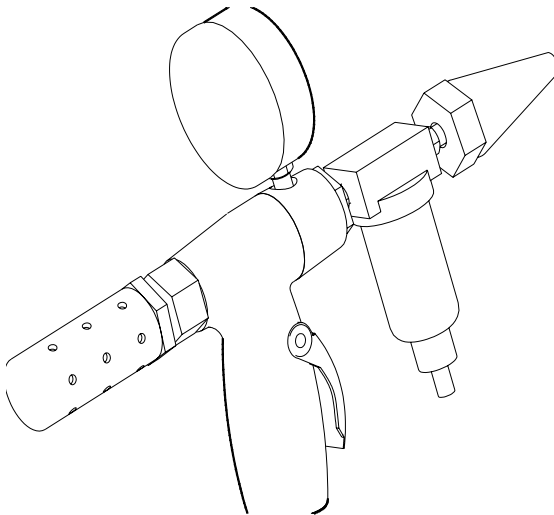
### **SAVE THESE INSTRUCTIONS**

1. Do not allow corrosive gases or foreign material to enter the unit. Moisture, oil-based contaminants, or other liquids must be filtered out.
2. Eye protection is always required when running motor.
3. Hearing protection is recommended when in close proximity to all operating air motors.
4. Dust mask, non-skid safety shoes, hard hat, gloves and other personal safety equipment must be used.
5. Stay alert, watch what you are doing, and use common sense when operating a power tool.
6. Dress properly. Do not wear loose clothing or jewelry.
7. Keep your work area clean and well lit.
8. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
9. Disconnect the tool from the air supply before installing, making any adjustment, changing accessories, servicing or storing tool.

## OPERATION

RECOMMENDED OPERATING AIR PRESSURE 90 PSI  
MAY BE OPERATED AT 80 TO 125 PSI

1. Compressed Air Supply — Use 90 PSI clean, dry shop air. Do not use moist or oil-laden air, Connect the Vacuum Leak Detector (VLD) (#42823) to the air supply by means of the operating hose assembly (#24360-0012).
2. Tube Nozzle — Select the correct tube nozzle for the tube to be tested. (See specifications above.) Thread the selected tube nozzle into the nozzle extension nipple (Key 4).
3. Tube Condition - Tubes to be tested should be free of visible liquids or other residues. If necessary, blow the tube inner diameter clean using clean, dry compressed air.
4. Tube Plugs — Plug far end of each tube to be tested with snap type tube plugs or T-handle tube plug (#42834-100X).

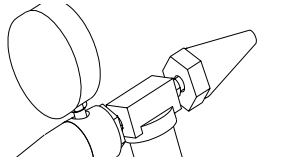


## OPERATION(CONT')

5. Seal the tube to be tested by pressing the rubber coated nozzle of the VLD into the near end of the tube.



6. Release compressed air to the VLD by depressing the VLD lever trigger. The tube under test will evacuate rapidly for a few seconds, as registered by the vacuum gage (Key 17) and at a slower rate as the vacuum continues to build up.
7. At some convenient gage reading, seal the evacuated tube by releasing the VLD trigger.
8. Observe the gage for a few seconds. A steady gage indicates a satisfactory tube. A falling vacuum indicates a leaky tube.



9. Test each tube in turn, repeating steps 5 through 8 above. NOTE: Before replacing a tube indicated faulty, it is a good idea to repeat the test, first checking the seals at the tube plug seat and at the VLD nozzle.

## DISASSEMBLY

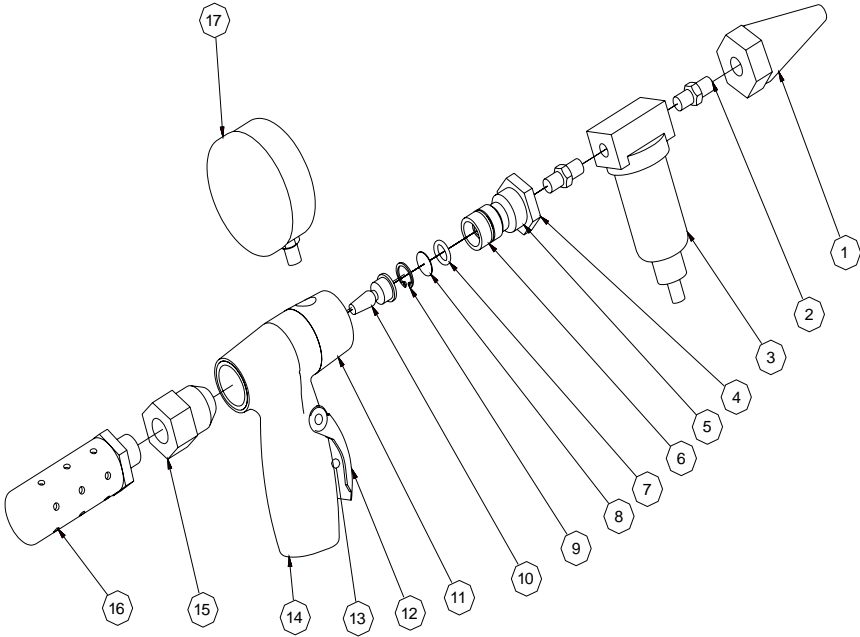
MUFFLER - A clogged muffler (Key 116) will limit the VLD vacuum to less than the 19 to 25 inches of mercury. To check the muffler, compare the VLD vacuums produced with and without the muffler. If the difference between the vacuums exceeds 3 inches of mercury, a clogged muffler is indicated. Unthread the muffler from the VLD. Flush and blow dry with clean, dry compressed air. Rethread the muffler to the VLD assembly. Frequent necessity to clean the muffler usually indicates unclean compressed air and/or unclean tubes under test. In these cases an air line filter is recommended for the compressed air line. As necessary, this filtered air should be used to blow tubes under test clean of liquids or other debris.

VENTURI - A clogged venturi chamber will limit the VLD vacuum. To inspect the venturi chamber, unthread Muffler and Jet Sleeve (Key 16 & 15). Unthread check valve (Key 4). Reach into the Insert (Key 11) from the muffler side and carefully press jet needle (Key 10) out of the assembly. Inspect jet needle; rinse clean as necessary. Wipe jet needle seat with a clean rag and blow out with clean, dry compressed air. Reassemble. (The jet needle is essential in formation of the vacuum and is manufactured to exacting requirements. Handle with care.)

VACUUM GAGE INLET - Unsatisfactory vacuum gage (Key 17) readings may be due to a clogged gage inlet. Unthread Check Valve (Key 4). This will reveal a small gage inlet port in the Check Valve. Be sure this port is clear. Reassemble.

CHECK VALVE DISC - When compressed air is shut off, the VLD check valve (Key 4) automatically closes, sealing the evacuated tube. Had the Check Valve Disc (Key 8) become clogged with debris prior to shut off, it will not seal and the tube under test will fill with air incorrectly indicating a leaky tube. To correct this condition, unthread the VLD check valve. Remove retainer (Key 9). Remove and wipe the check valve disc clean. Flush and air dry the disc valve seat. Reassemble.

## PARTS LIST



Key	Description	Part No.	Qty.
1	Nozzle	41460-100X	1
2	Pipe Fitting	9540	2
3	Filter	41608-0001	1
4	Check Valve	42827	1
5	O-Ring	28171	1
6	O-Ring	51856	1
7	O-Ring	50824	1
8	Check Valve Disc	41464	1
9	Retainer	41465	1
10	Jet Needle	42828	1
11	Insert	42830	1
12	Lever	42832	1
13	Valve	7018	1
14	Body	42824	1
15	Jet Sleeve	42829	1
16	Muffler	41362	1
17	Vacuum Gage	41332	1

## TROUBLE-SHOOTING

PROBLEM	CAUSE & SOLUTION
<b>VLD pull no vacuum or low vacuum</b>	<ol style="list-style-type: none"> <li>1. Clogged muffler —see pg. 5 for disassembly instructions.</li> <li>2. Clogged Venturi chamber —see pg. 5 for disassembly instructions.</li> <li>3. Clogged gage inlet —see pg. 5 for disassembly instructions.</li> <li>4. Inadequate air supply —make sure air supply provides 22 SCFM @90psi</li> </ol>
<b>VLD does not hold the vacuum; falling pointer at vacuum gage</b>	<ol style="list-style-type: none"> <li>1. Clogged Check Valve Disc —see pg. 5 for disassembly instructions.</li> <li>2. Leak in vacuum system —check all connections and apply Teflon tape to seal.</li> <li>3. Worn Nozzle —replace if necessary</li> </ol>

## MAINTENANCE

VLD maintenance is performed as necessary and should be done more frequently due to dirty compressed air and/or dirty tubes under test. Cleaning should be done periodically on internal parts such as Muffler, Jet Needle, Jet Sleeve, Check Valve, Check Valve Disc, Vacuum Gage Inlet.

# SPECIFICATIONS

<b>Air Supply Pressure</b>	90 psi
<b>Air Consumption</b>	22 CFM
<b>Air Inlet</b>	3/8" NPT
<b>Vacuum Range</b>	19-25 inches of Mercury

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