

KEEP FOR FUTURE REFERENCE



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INSTRUCTIONS

International Version

STOCK NUMBERS: 93780AM & 93780BM

VACUUM LOSS WARNING BUZZER



***READ ALL INSTRUCTIONS AND WARNINGS
BEFORE USING THIS PRODUCT***



DESIGNED FOR THE MATERIALS HANDLING PROFESSIONAL

SPECIFICATIONS

Stock Number: 93780AM & 93780BM

Description: The Vacuum Loss Warning Buzzer is an optional warning device with an independent power source. The Warning Buzzer monitors vacuum during lifter operation and sounds an audible alarm if the lifter fails to reach or maintain the vacuum level required for lifting. The monitoring system automatically turns on when the lifter attaches to a load, and automatically turns off when the load is released.

Power Source: 9 volts DC

Maximum Alarm Volume: 103 dBA at 2 ft [60 cm]

Weight: 1.1 lbs [0.5 kg]

Note: Make sure to add the weight of all options to the lifter weight when you are selecting appropriate hoisting equipment (see lifter's instruction manual).

Operating Temperatures: 50° to 104° F [10° to 40° C]

Function: Other vacuum indicators should tell the operator whether vacuum is adequate for lifting. The Warning Buzzer provides additional security by drawing attention to potentially dangerous conditions, in case the operator fails to monitor other indicators at the time.

Note: The Warning Buzzer only warns the operator of potentially dangerous conditions. The Warning Buzzer does not perform any other function and cannot substitute for care on the part of the operator.

Wiring Diagram: One or more wiring diagrams are provided in the final section of this *INSTRUCTIONS* manual for reference in servicing the Warning Buzzer or trouble-shooting a deficiency.

WARNINGS



Powr-Grip is pleased to offer the most reliable vacuum products available. Despite the high degree of security provided by the Warning Buzzer, certain precautions must be observed to protect the operator and others.



Never use a Vacuum Loss Warning Buzzer that is damaged, malfunctioning, or missing parts.

Always make sure the Warning Buzzer can be heard while operating the vacuum lifter.

Never lift a load when the Warning Buzzer or any other vacuum indicator signals inadequate vacuum.

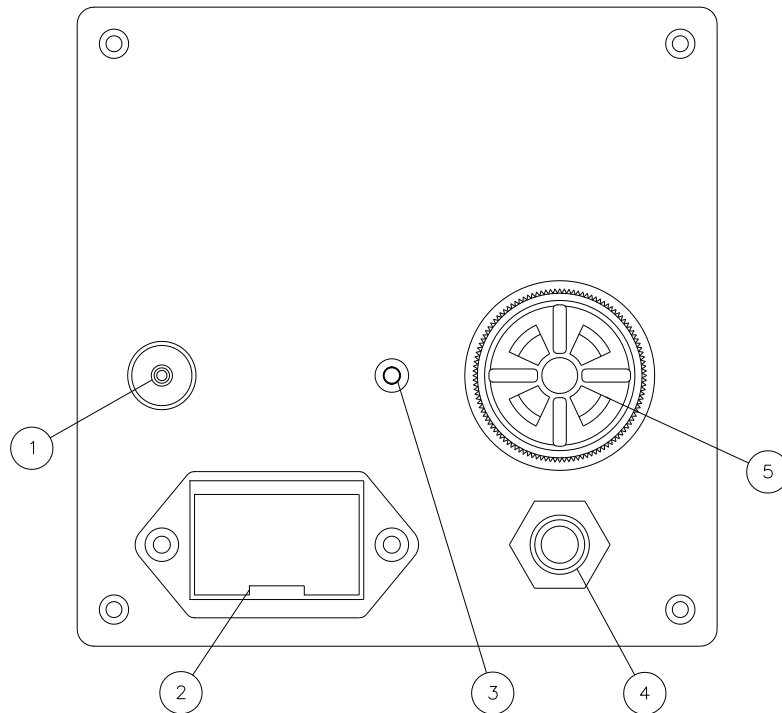
Never disconnect or otherwise disable the Warning Buzzer while operating the lifter.

Always keep other personnel far enough away from the lifter to avoid injury in the event of an unexpected load release.

Always remember that modifications to the Warning Buzzer may compromise its safety. Wood's Powr-Grip cannot be responsible for the safety of a Warning Buzzer that has been modified by the customer. For consultation, contact Wood's Powr-Grip (see LIMITED WARRANTY).

OPERATING FEATURES

Note: Components featured in the following instructions for installing, using or maintaining the Vacuum Loss Warning Buzzer are underlined> on their first appearance in each section.



1 VACUUM HOSE FITTING
CONNECTING TO IN-LINE FILTER

2 BATTERY HOLDER
3 BATTERY INDICATOR LIGHT

4 BATTERY TEST BUTTON
5 ALARM SHUTTER

INSTALLATION

- 1) Remove the Vacuum Loss Warning Buzzer from its protective packaging.
- 2) Follow the vacuum lifter's instruction manual to verify that it is in good working order before installing the Warning Buzzer.
- 3) Locate a place on the lifter where the Warning Buzzer can be mounted without interfering with the function or operation of the lifter.
- 4) Remove the cover of the Warning Buzzer to access the mounting screw holes.
- 5) Mount the Warning Buzzer on the lifter with four 10-32 screws. Note: It may be necessary to attach a mounting plate to the lifter; consult the lifter manufacturer for appropriate locations and allowable modifications.
- 6) Locate a section of the vacuum hose which always has vacuum when the lifter is attached to a load. Such a section often can be found near the lifter's air filter, between the filter and pads. The vacuum hose in this location must have enough flexibility and space to allow a new fitting to be spliced into the line.
- 7) Cut the vacuum hose and insert the 1/4" x 1/8" x 1/4" tee fitting supplied (or another fitting of appropriate size) to splice the vacuum hose together and to provide a 1/8" barb for a hose connecting to the Warning Buzzer.
- 8) Route 1/8" I.D. vacuum hose from the tee fitting to the Warning Buzzer. Make sure that the hose will not become kinked, pinched, cut, abraded, pulled or snagged while using the lifter, nor interfere with its operation.
- 9) Connect one end of the 1/8" I.D. vacuum hose to the tee fitting and the other end to the in-line filter connected to the vacuum hose fitting on the cover of the Warning Buzzer.
- 10) Test the vacuum setting as directed under MAINTENANCE: VACUUM SETTING ADJUSTMENT, and if necessary, adjust the setting as directed.
- 11) Reinstall the enclosure cover.
- 12) Test the Warning Buzzer as directed under MAINTENANCE: TESTING SCHEDULE.

OPERATION

BEFORE USING THE LIFTER

All of the following preparations must be completed prior to operating a vacuum lifter with the Vacuum Loss Warning Buzzer installed. The operator must read and understand this *INSTRUCTIONS* manual, including all **WARNINGS**. If necessary, contact Wood's Powr-Grip or an authorized dealer for assistance.

Perform all inspections and tests required by the INSPECTION and TESTING SCHEDULES (see MAINTENANCE). Test the strength of the Warning Buzzer's battery, as directed in BATTERY TEST AND REPLACEMENT (see MAINTENANCE).

 **WARNING: Make sure alarm is clearly audible over ambient noise at operator position.**

The volume of the alarm may be adjusted by rotating the alarm shutter on the Warning Buzzer's cover. Make sure the alarm is loud enough to be heard over any other noise that may be present while the lifter is in use: In addition, the alarm must be clearly audible at the maximum distance the operator may be from the lifter, as well as through any barriers or obstructions between the operator and the lifter. In order to be considered clearly audible, **the alarm volume must exceed ambient noise by at least 15 dBA at the operator position.**¹ Since the Maximum Alarm Volume is 103 dBA, ambient noise must not exceed 88 dBA under any circumstances. Furthermore, if ambient noise measures 88 dBA, the alarm volume must be set to maximum and the operator must remain within 2 ft [60 cm] of the Warning Buzzer, in order for it to be effective.

Note: Using the Warning Buzzer in wet environments may require the operator to take special precautions: Although the Warning Buzzer's exterior surfaces can tolerate some exposure to water vapor, they are not designed to be water-tight. Submerging the Warning Buzzer or using it in rain may damage its components; these and similar conditions must be avoided.

¹ Consult CE Standard EN 457 for alternative ways to determine whether the alarm is clearly audible to operators.

DURING LIFTER OPERATION

Using the Vacuum Loss Warning Buzzer does not supersede any safety practices required by the lifter's manufacturer. The operator must continue to respect all cautionary statements in the lifter instructions, even after the Warning Buzzer is installed.

 **WARNING: Warning Buzzer does NOT supersede required safety practices.**

Operate the vacuum lifter as directed in its operating instructions. The Warning Buzzer begins monitoring the lifter's vacuum level when the lifter attaches to a load. If the lifter fails to reach or maintain sufficient vacuum to lift the maximum load weight (see lifter specifications), the Warning Buzzer sounds an alarm. If the lifter subsequently attains this vacuum level, the alarm stops sounding.

 **WARNING: Do not attempt to lift load if alarm is sounding.**

If the alarm is sounding, do not attempt to lift the load; such an attempt could result in a load release and possible injury to the operator.

If the alarm sounds while you are lifting a load, make sure the lifter's vacuum gauge shows the minimum lifting level or higher, as defined in the lifter's operating instructions. If not, immediately move away and stay clear of the load until it can be lowered to the ground or a stable support.

 **WARNING: Stay clear of any suspended load while alarm is sounding.**

Discontinue lifter use until the cause of the vacuum loss can be determined. Using the lifter on contaminated, rough or porous surfaces may result in a vacuum loss, due to leakage between the vacuum pads and the load. Since the alarm may sound in such circumstances, consult the lifter's operating instructions to determine whether the lifter can be used to lift the load. If the vacuum loss is due to any other cause, perform inspection and maintenance as needed to identify and correct any deficiency before resuming normal operation of the lifter.

Note: Under normal circumstances, the alarm does *not* sound while the lifter is being attached to the load; however, the alarm *does* sound briefly while the load is being released in the regular way. This sound is normal for a Warning Buzzer that is working correctly; it simply indicates the loss of vacuum that occurs when the load is being released.

While the lifter is attached to a load, the battery indicator light automatically signals the condition of the Warning Buzzer's battery: A green light indicates that the battery is in good condition, whereas a red light indicates that the battery needs to be replaced. If a red light is showing, replace the battery as directed in BATTERY TEST AND REPLACEMENT to follow.

WHEN STORING THE LIFTER

When placing the lifter in storage, remove the Warning Buzzer's battery (see BATTERY TEST AND REPLACEMENT to follow).

MAINTENANCE

INSPECTION SCHEDULE

Perform inspections of the Vacuum Loss Warning Buzzer routinely, according to the following frequency schedule:

Frequent Inspection

(following every 20-40 hours' use; or whenever Warning Buzzer is out of service for 1 month or more)

- Test the battery strength (see BATTERY TEST to follow)
- Examine the in-line filter connected to the Warning Buzzer to make sure its desiccant has not been expended: The desiccant shows a *blue* coloration when new and turns progressively more *pink* as it absorbs moisture. When the desiccant is no longer effective, the filter must be replaced (see REPLACEMENT PARTS LIST).
- Test the Warning Buzzer for proper function (see OPERATION).

If any deficiency is detected during the inspection, correct it before using the Warning Buzzer, and perform the Periodic Inspection to follow.

Periodic Inspection

(following every 250-500 hours' use; or whenever Warning Buzzer is out of service for 1 year or more)

- Test the vacuum setting (see VACUUM SETTING ADJUSTMENT to follow).
- Keep a written record of all Periodic Inspections.

If any deficiency is detected during the inspection, adjust the vacuum setting as directed under VACUUM SETTING ADJUSTMENT to follow.

Infrequent Use

If the Warning Buzzer is used less than 1 day in a 2-week period, perform the Periodic Inspection *each time before using the Warning Buzzer.*

TESTING SCHEDULE

Perform these tests when installing the Vacuum Loss Warning Buzzer *initially* and *each time following a repair or modification*. Correct any deficiency and retest before using the Warning Buzzer.

- Perform a vacuum leak test as directed in the lifter's instruction manual.
- Test all features and functions of the Warning Buzzer (see OPERATING FEATURES, OPERATION and MAINTENANCE).

Note: See MAINTENANCE topics to follow for additional directions about inspecting and testing specific Warning Buzzer components.

MAINTENANCE SCHEDULE

Although the Vacuum Loss Warning Buzzer does not require maintenance on a routine basis, maintenance must be performed whenever a deficiency is indicated by routine inspections or tests. Any maintenance warranted must be performed before resuming normal use of the Warning Buzzer.

BATTERY TEST AND REPLACEMENT

The Vacuum Loss Warning Buzzer is designed so its battery can be tested while the lifter is not running or attached to a load: Press the battery test button and observe the color of the battery indicator light (note that the buzzer sounds, also, if the button is held more than a few seconds). A *green* light indicates that the battery is in good condition, whereas a *red* light indicates that the battery does not have sufficient energy to power the Warning Buzzer. If a red light is showing, replace the battery, as follows:

- 1) Insert a coin or screwdriver in the slot at the bottom of the battery holder and press inward.
- 2) While continuing to press in, press up on the battery holder. The battery tray should slide out easily.
- 3) Remove the battery from the tray.
- 4) Install a new 9-volt battery, matching the polarity marked on the battery with the polarity marked on the tray.
- 5) Slide the battery tray into the battery holder until the tray snaps into place.
- 6) Retest the Warning Buzzer.

VACUUM SETTING ADJUSTMENT

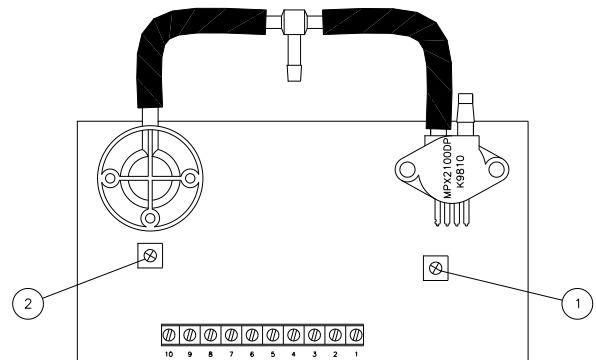
Function and Conditions Requiring Adjustment

If the Vacuum Loss Warning Buzzer is functioning normally, its monitoring system is activated at a low vacuum level, which is attained as the lifter attaches to a load. Vacuum should continue to increase until it reaches the level required for lifting the maximum load weight (hereafter, the "minimum lifting level"), as indicated in the lifter's operating instructions. If vacuum fails to increase steadily toward the minimum lifting level, the alarm sounds until a strong trend of increasing vacuum resumes. Additionally, if vacuum reaches the minimum lifting level and subsequently falls below it, the alarm sounds until vacuum starts a strong increasing trend again. The monitoring system shuts off only when vacuum falls below the initial activation level, which normally happens as the load is released. If the Warning Buzzer fails to function in these ways, it requires adjustment or repair.

Adjustment Procedure

- 1) Remove the screws that secure the enclosure cover, and slide the circuit board assembly outward, in order to access the adjustment screws.
- 2) Make sure both adjustment screws are turned to the maximum counter-clockwise position of their range (about 3/4's turn), prior to making any adjustments.
- 3) Apply the lifter to an appropriate test surface (see lifter's operating instructions).

- 4) While the lifter's vacuum generating system is activated, slowly turn adjustment screw #1 in the clockwise direction (about 1/4 turn) until the Warning Buzzer functions as described in the preceding discussion. To make sure the alarm sounds immediately after vacuum falls below the minimum lifting level, create a controlled leak and observe the Warning Buzzer activity in relation to the vacuum level registered on the vacuum gauge.



ADJUSTMENT SCREWS #1 & #2

- 5) Release and reapply the lifter to the test surface several times, to verify that the buzzer is functioning correctly.

REPLACEMENT PARTS LIST

Stock No.	Description	Qty.
65438	1/8" ID Vacuum Hose	1
64752	Audio Alarm - 5-15 V DC - Panel Mount	1
64691	9-Volt Alkaline Battery	1
64200	Push-Button Test Switch	1
56496AM	Circuit Board Assembly	1
53126	1/4" x 1/8" x 1/4" Barbed Brass Tee Fitting	1
16101AM	In-Line Filter	1
15210	1/8" Barbed Nylon Tee Fitting	1

***SERVICE ONLY WITH IDENTICAL REPLACEMENT PARTS
SUPPLIED BY OR APPROVED BY WOOD'S POWR-GRIP CO., INC.***

LIMITED WARRANTY

Powr-Grip products are carefully constructed, thoroughly inspected at various stages of production, and individually tested. They are warranted to be free from defects in workmanship and materials for a period of one year from the date of purchase.

If a problem develops during the warranty period, follow the instructions hereafter to obtain warranty service. If inspection shows that the problem is due to defective workmanship or materials, Powr-Grip will repair the product without charge.

WARRANTY DOES NOT APPLY WHEN:

Modifications have been made to the product after leaving the factory.

Rubber portions have been cut or scratched during use.

Repairs are required due to abnormal wear and tear.

The product has been damaged, misused, or neglected.

If a problem is not covered under warranty, Powr-Grip will notify the customer of costs prior to repair. If the customer agrees to pay all repair costs and to receive the repaired product on a C.O.D. basis, Powr-Grip then will proceed with repairs.

TO OBTAIN REPAIRS OR WARRANTY SERVICE

For purchases in *North America*:

Contact the Technical Service Department at Wood's Powr-Grip Co. When factory service is required, ship the complete product--prepaid--along with your name, address and phone number to the street address hereafter.

For purchases in *all other localities*:

Contact your dealer or the Technical Service Department at Wood's Powr-Grip Co. for assistance.

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ALL DIMENSIONS ARE IN INCHES (mm) UNLESS NOTED OR LABELED OTHERWISE. TOLERANCES: DECIMAL FRACTIONAL ANGULAR X.XX ±N/A XXX ±N/A X' ±N/A * X.XXX ±N/A		TYPE: STANDARD DIRECTORY: 722-VW01 [W01] FILE (SHEET):	
DO NOT SCALE DRAWING DRAWN: L. RENNER DATE: 08/07/2002 CHECKED: <i>CL</i> APPROVED: <i>CLM</i>		THIS DRAWING IS THE PROPERTY OF WOOD'S POWR-GRIP CO., INC. IT IS LOANED WITH THE UNDERSTANDING THAT NEITHER IT NOR ANY INFORMATION CONTAINED THEREIN WILL BE COPIED, PUBLISHED OR TRANSMITTED TO OTHERS WITHOUT EXPRESS WRITTEN PERMISSION. LAUREL, MONTANA U.S.A.	
VACUUM LOSS WARNING BUZZER N/A VACUUM LOSS WARNING BUZZER WIRING DIAGRAM D722-W01 [W01]		SIZE: A NONE SCALE: 1 REV: 1 ECN NUMBER: 1982 DATE: 06/13/2008 BY: LER	

NOTES:
 1) ALL WIRES ARE 20 GA. UNLESS OTHERWISE NOTED.

