WPC.com		N4850LLM N4850LLMWBP N4800LLMHE
INSTRUCTIONS	1. 90351 Handle / Valve Assembly 2. 90520AM Plunger Assembly, Metal 90524AM Plunger Assembly, Metal 90158AM Plunger Assembly, High-Elevation 3. 49478T 4. Air Filter*	
Model N4850LLM Model N4850LLMWBP Model N4800LLMHE	5. 10002 Screw, 1/4-20 x 1/2" 6. Red Line 7. Check Valve Retainer* 8. Check Valve* 9. Valve Release Lever Not Shown	
Rev. 0.2 / 06-19 32622 Instruction Sheet Premium NS	29333 Case, Aqua, 8" 64681 AAA Battery (if applicable) * Repair Kit 90160 for Cast Metal Cups (4, 7, 8 and Plunger Lube)	•.•• CE

SPECIFICATIONS

Product Description

Hand cups with a nominal diameter of 8" [20 cm] use vacuum to lift and carry loads, as follows: A manual pump removes air from between the rubber pad and the contact surface; a red line and an audio alarm (if applicable) on the pump's plunger serve as vacuum indicators; a check valve allows the user to repump the cup without removing it from the contact surface; and a release mechanism allows the cup to disengage completely.

Model Max. Elevation Max. Load Capacity* Min. Vacuum Level N4850LLM 171/2" Hg [-59 kPa] 5000' [1524 m] 125 lbs [57 kg] 17½" Hg [-59 kPa] N4850LLMWBP 5000' [1524 m] 125 lbs [57 kg] N4800LLMHE 12,000' [3658 m] 100 lbs [45 kg] 131/2" Hg [-46 kPa] *Maximum Load Capacity includes a 3:1 safety factor and requires the following: attachment on clean, smooth, nonporous flat surfaces; the minimum vacuum level listed above; and a friction coefficient of 1. This rating is based on tests of new hand cups attached to the upper, horizontal surface of static objects in ideal conditions. Many factors can reduce the capacity, including: lifting a load when the cup is attached to a vertical or inclined surface; or lifting a load that applies leverage to the cup. See www.WPG.com for more

information. Low Vacuum Audio Alarm (if applicable)

Volume: 70 dBA at 36" [91 cm]

Power Source: one AAA size, 1.2-1.5-volt alkaline battery; automatic on/off function

Load and Environmental Conditions

Use the cup on clean, relatively smooth, nonporous surfaces, at temperatures from 10° to 120° Fahrenheit [-12° to 49° Celsius]. Moisture or contaminants can reduce the slip resistance of the cup. The red-line indicator may not perform reliably at elevations above the Maximum Elevation listed above; see MAINTENANCE: Service.

OPERATION

To Test Audio Alarm (if applicable)

Prior to using the hand cup, make sure the audio alarm is functioning correctly and can be heard clearly over ambient sound in the work environment: While leaving the sound emission holes uncovered, depress the plunger slightly. The audio alarm should sound; if not, see MAINTENANCE: Service.

To Attach

- Position the hand cup on the contact surface so the red line will be visible if it should appear while lifting the load. CAUTION: Test the cup for staining or deformation of load surfaces with light colors or soft coatings
- 2) Pump the plunger until the cup attaches completely. When the red line is hidden, vacuum is sufficient for lifting.
- 3) Check the plunger frequently to make sure the cup remains securely attached. If the red line appears or (if applicable) the audio alarm sounds while lifting, set down the load immediately and pump the plunger until the red line is hidden and the audio alarm is silent again (see WARNINGS).

To Release

- 1) Set the load on a secure support.
- 2) Press the valve release lever until the cup disengages completely. CAUTION: Remove the cup when not in use.

MAINTENANCE

Service

Since aging and wear reduce the capacity of the rubber pad, it should be replaced at least once every 2 years or whenever damage is discovered (see Inspection).

If the hand cup features an audio alarm but it does not function normally (see

OPERATION), make sure a working battery is installed correctly (see TO REPLACE BATTERY, overleaf). If the condition persists, contact an authorized dealer or visit www.WPG.com for assistance.

If the hand cup does not function normally, the cup face may be dirty or the cup may require service. First clean the cup face according to the directions to follow. If the condition persists, contact an authorized dealer or visit www.WPG.com for assistance.

Cleaning

- 1) Remove the air filter from the cup face.
- 2) Use a clean sponge or lint-free cloth to apply soapy water or another mild cleanser to the cup face; see WARNINGS and www.WPG.com for more information. CAUTION: To prevent liquid from contaminating the pump, hold the cup face-down or cover the suction hole in the filter recess.3) Wipe all residue from the cup face.

4) Allow the cup to dry and reinstall the air filter.

Inspection

- Examine and test the cup regularly to make sure it does not exhibit the following faults:
- cuts or damage to sealing edges of rubber pad.
- cracks or dents in handle or pump.
- · reappearance of red line soon after attaching cup.
- sluggishness or dramatic changes in pump action.
- excessive glaze or stiffness of rubber pad.
- air filter missing from cup face.
- if applicable, failure of audio alarm to function correctly (see OPERATION).
- if applicable, corrosion or other indications of battery leakage inside battery chamber (see TO REPLACE BATTERY, overleaf).

Correct any faults before using the cup (see Service).

Storage

Store the cup in clean, dry condition within its protective carrying case. If the cup features an audio alarm and is used once a month or less often, remove the battery (see TO REPLACE BATTERY, overleaf) and store it separately, to prevent corrosion.

WARNINGS

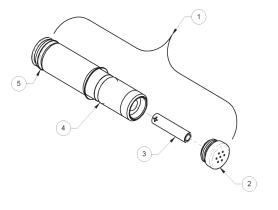
Failure to observe WARNINGS could damage the hand cup or the load, or cause injury to the user.

- Do not use the cup to lift loads that exceed the Maximum Load Capacity or the effective capacity (see SPECIFICATIONS).
- Do not use the cup to support a person.
- Do not place the cup face against surfaces which could damage the sealing edges.
- Avoid conditions that could cause the cup to slip or to disengage prematurely, such as: contaminants, cuts or scratches in the cup face or contact surface; applying the cup to porous materials; or applying pressure against the cup edge.
- Do not use the cup to lift when the red line is visible. If the red line reappears frequently or (if applicable) the audio alarm sounds frequently, discontinue use and see MAINTENANCE: Service.
- Do not allow anything to interfere with free movement of the plunger while the cup is attached.
- Do not touch the valve release lever while lifting.
- Do not use harsh chemicals (such as solvents or gasoline) or unauthorized rubber cleaners and conditioners to clean the cup.
- If applicable, avoid contact with battery leaks because they contain chemicals that could damage eyes, skin, clothing or the plunger assembly.
- If applicable, do not expose a battery to excessive heat (see SPECIFICATIONS: Environmental Conditions), because this could cause the battery to explode.



PLUNGER ASSEMBLY WITH LOW VACUUM AUDIO ALARM

- 1. Plunger Assembly with Audio Alarm (WBP)
- 2. Plunger Cap with Sound Emission Holes
- 3. AAA Battery
- 4. Red Line 5. U-Cup



Installation

Limited Warranty

See overleaf for SPECIFICATIONS, OPERATION, MAINTENANCE and WARNINGS.

TO INSTALL PLUNGER ASSEMBLY

Grasp the head of the old plunger assembly and pull it straight out from the handle. If the plunger assembly is too tight to be removed this way, it is best to return the cup to the factory for repair.

Wrap a small dowel or rod with a soft, lint-free cloth and wipe the inside of the handle, to make sure it is clean and dry (lubricant-free). Carefully examine the inside of the handle for scratches and contaminants, using a flashlight for illumination. Scratches between the mid-point and the closed end of the handle can cause

leakage. Scratches near the open end of the handle rarely present a problem. Make sure that no old lubricant remains inside the handle.



Using a soft swab, apply a ring of new lubricant around the inside of the handle, at a point about 1" [25 mm] from the closed end. Keep the open end of the handle as dry (lubricant-free) as possible. Silicone lubricant is recommended and available in appropriate quantities by contacting Wood's Powr-Grip Customer Service. Do not use improper lubricants in the handle.

Insert the U-cup end of the plunger assembly into the handle, and push

until the plunger assembly begins to tighten; then seat the plunger assembly with one strong, swift motion. Operate the plunger to spread the lubricant, thoroughly coating the outside of the U-cup by twisting the plunger as it moves. Then leak-test the hand cup as directed in the following section.

TO LEAK-TEST HAND CUP

Attach the hand cup to a clean, smooth, scratch-free piece of glass or metal for approximately 2 hours. The audio alarm and the red line on the plunger serve as low vacuum indicators: If the audio alarm *does not* sound and red line *does not* appear during the test period, the cup is usable; if the audio alarm *does* sound or the red line *does* appear, discontinue use until the problem is corrected. See MAINTENANCE: Service (overleaf) for more instructions.

TO REPLACE BATTERY

Test the audio alarm regularly (see OPERATION: To Test Audio Alarm, overleaf) and replace the battery as necessary. CAUTION: Follow the battery manufacturer's instructions for correct handling, storage and disposal of batteries.

- 1) Hold the plunger and turn the plunger cap counter-clockwise to loosen it.
- 2) Remove the plunger cap and the old battery.
- 3) Install a new battery in the battery chamber, making sure to orient the positive

end (+) toward the red line and the negative end (-) toward the plunger cap. CAUTION: Do not reverse battery polarity, because the audio alarm will not function.

4) Reinstall the plunger cap, turning clockwise to tighten it securely.

LIMITED WARRANTY

Wood's Powr-Grip vacuum cups 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 one year from the date of purchase. If a problem develops during the warranty period, return the complete product as directed below. If inspection shows that the problem is due to defective workmanship or materials, the product will be repaired or replaced without charge.

WARRANTY DOES NOT APPLY WHEN:

Rubber portions have been cut or scratched during use. Repairs are required due to abnormal wear and tear. The product has been abused, misused or neglected. Alterations have been made to the product.

A problem not covered under warranty will be corrected automatically, unless the customer includes a written request for notification of costs prior to repair. Otherwise the customer assumes all responsibility for repair costs and agrees to receive the repaired product on a C.O.D. basis.

TO OBTAIN WARRANTY SERVICE

For purchases in North America:

- Please include your name, address and phone number;
- Indicate WARRANTY RETURN;
- Ship product-prepaid-DIRECTLY TO MANUFACTURER at:
 - Wood's Powr-Grip Co., Inc.
 - 908 West Main
 - Laurel, MT 59044 U.S.A.

For purchases in all other localities:

• Return product to point of purchase.

RETAIN THIS INFORMATION FOR YOUR RECORDS.

Purchased From
Date Purchased
Model No.
Serial No. (if present)