

INTENDED FOR USE BY PROFESSIONAL EQUIPMENT OPERATORS

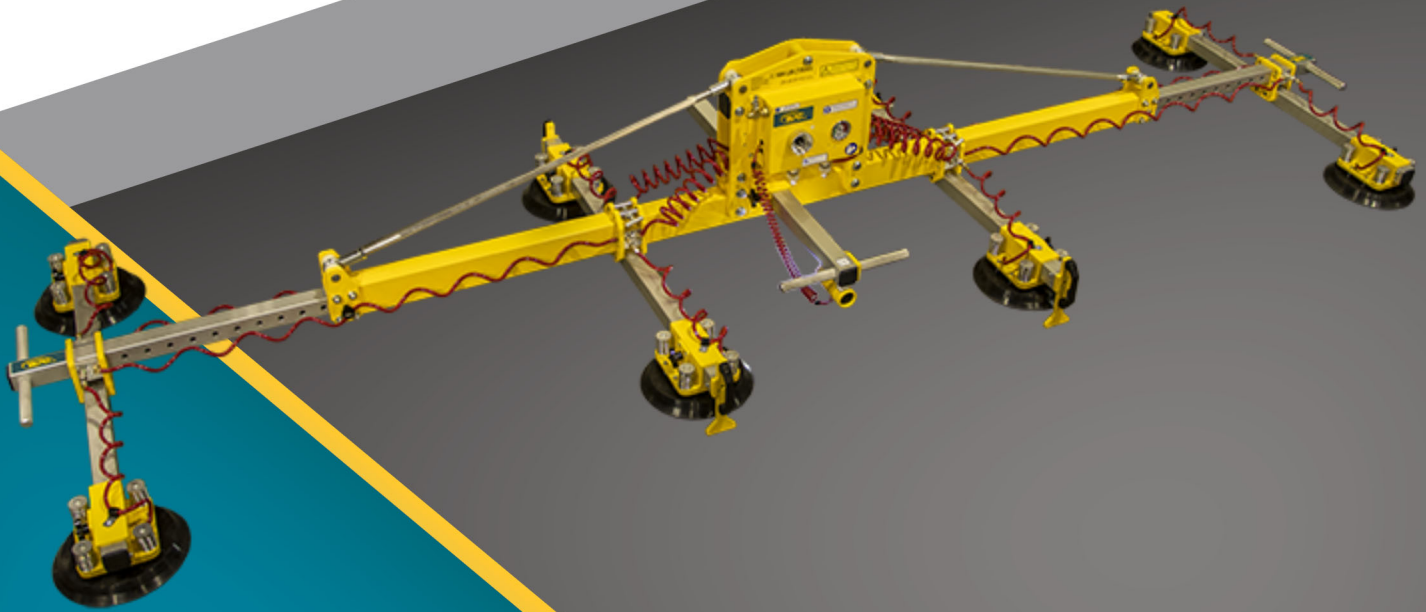
OPERATING INSTRUCTIONS



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www.WPG.com

 **READ AND UNDERSTAND BEFORE
OPERATING THIS EQUIPMENT**

APPLICABLE TO SERIAL NUMBERS 20211397
AND LATER.



FLEXR(L) SERIES FLAT LIFTER, AIR-POWERED

Model number: FLEXR8HV11AIR, FLEXRL8HV11AIR (shown)

Original Instructions © Wood's Powr-Grip Co., Inc.





TABLE OF CONTENTS

| | |
|---|-----------|
| SPECIFICATIONS | 3 |
| SAFETY | 6 |
| OPERATING FEATURES | 7 |
| FLEXR8HV11AIR FEATURES..... | 7 |
| FLEXRL8HV11AIR FEATURES | 7 |
| ASSEMBLY | 8 |
| TO CHANGE THE PAD FRAME CONFIGURATION | 10 |
| Extending/Retracting the Telescoping Pad Arms | 11 |
| Repositioning the Sliding Pad Arms | 12 |
| Repositioning the Sliding Pad Mounts | 12 |
| Connecting/Disconnecting Vacuum Hoses | 13 |
| INTENDED USE | 14 |
| LOAD CHARACTERISTICS..... | 14 |
| INDIRECT LOADING | 14 |
| OPERATING ENVIRONMENT | 15 |
| DISPOSAL OF THE LIFTER | 15 |
| OPERATION | 16 |
| BEFORE USING THE LIFTER..... | 16 |
| Taking Safety Precautions | 16 |
| Performing Inspections and Tests | 16 |
| TO ATTACH THE PADS TO A LOAD | 17 |
| Generating Airflow..... | 17 |
| Positioning the Lifter on the Load..... | 17 |
| Reading the Vacuum Gauge | 18 |
| TO LIFT AND MOVE THE LOAD..... | 19 |
| Interpreting the Vacuum Gauge | 19 |
| Monitoring the Vacuum Gauge..... | 19 |
| Controlling the Lifter and Load | 19 |
| In Case of a Power Failure..... | 20 |
| TO RELEASE THE PADS FROM THE LOAD | 21 |
| AFTER USING THE LIFTER..... | 22 |
| Storing the Lifter | 22 |
| Transporting the Lifter | 22 |

TABLE OF CONTENTS

| | |
|---|-----------|
| INSPECTIONS AND TESTS..... | 23 |
| INSPECTION SCHEDULE | 23 |
| TESTING | 24 |
| Lifter/Load Compatibility Test..... | 24 |
| Operational Tests | 25 |
| Vacuum Test..... | 25 |
| Rated Load Test..... | 26 |
| MAINTENANCE | 27 |
| VACUUM PAD MAINTENANCE..... | 27 |
| Pad Inspection | 27 |
| Pad Cleaning | 28 |
| REPLACEMENT PARTS..... | 29 |
| REGISTRATION AND LIMITED WARRANTY | 30 |
| TO REGISTER THIS WPG PRODUCT | 30 |
| ABOUT THE LIMITED WARRANTY | 30 |
| Obtaining Warranty Service or Repair Service..... | 30 |

SPECIFICATIONS

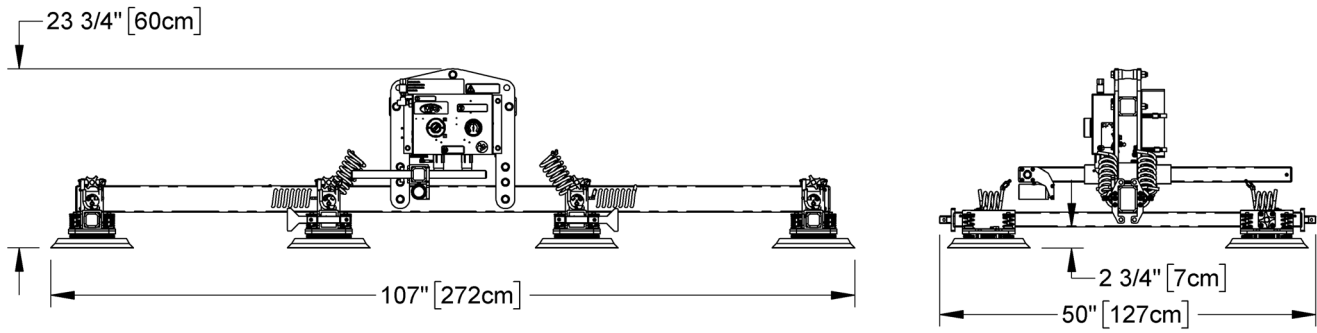
| | | |
|---|--|--|
| Product Description | Designed for use with hoisting equipment, FLEXR(L)-AIR lifters support loads using vacuum for lifting in the flat orientation. | |
| Model Number | FLEXR8HV11AIR | FLEXRL8HV11AIR (optional) |
| Pad Spread (to outer edges) | Maximum: 48" x 107" [122 cm x 272 cm] Minimum: 22¼" x 54" [57 cm x 137 cm] | Maximum: 48" x 154¼" [122 cm x 392 cm] Minimum: 22¼" x 114¼" [57 cm x 290 cm] |
|  Lifter Weight | 215 lbs [98 kg] | 245 lbs [111 kg] |
| Vacuum Pads (standard rubber) ¹ | Eight 10" [25 cm] nominal diameter, lipped (Model HV11) | |
|  Maximum Load Capacity ² | Per pad: 200 lbs [91 kg] Total: 1600 lbs [726 kg] | |
| Power Source | Compressed air, 80-150 psi [550-1035 kPa] line pressure, 5 SCFM [142 liters/minute] @ 80 psi [550 kPa] | |
| Product Options | <i>Available</i> with Spring-Shaft Pad Mounts. See separate instructions about other options. | |
|  Operating Elevation | Up to 6,000' [1,828 m] | |
|  Operating Temperatures | 32° — 104° F [0° — 40° C] | |
| Service Life | 20,000 lifting cycles, when used and maintained as intended ³ | |
| ASME Standard BTH-1 | Design Category "B", Service Class "0" | |
| Troubleshooting Guide | TST-016_GENERIC_LEAK_TEST_rev_2014-086 | |

1..... Available with other rubber compounds for special purposes (see www.wpg.com).

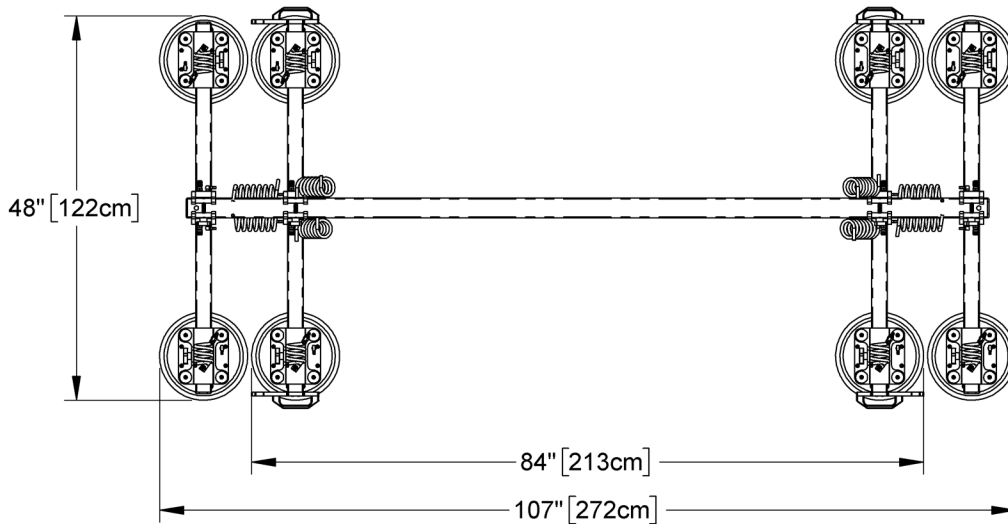
2..... The Maximum Load Capacity is rated at a vacuum of 16" Hg [-54 kPa] on clean, smooth, nonporous flat surfaces. Pad compound, load rigidity, strength, surface conditions, overhang, angle, center of gravity and temperature can also affect the lifting capacity. A "qualified person" should evaluate the effective lifting capacity for each use (see definition under "Rated Load Test").

3..... Vacuum pads, filter elements and other wear-out items are excluded.

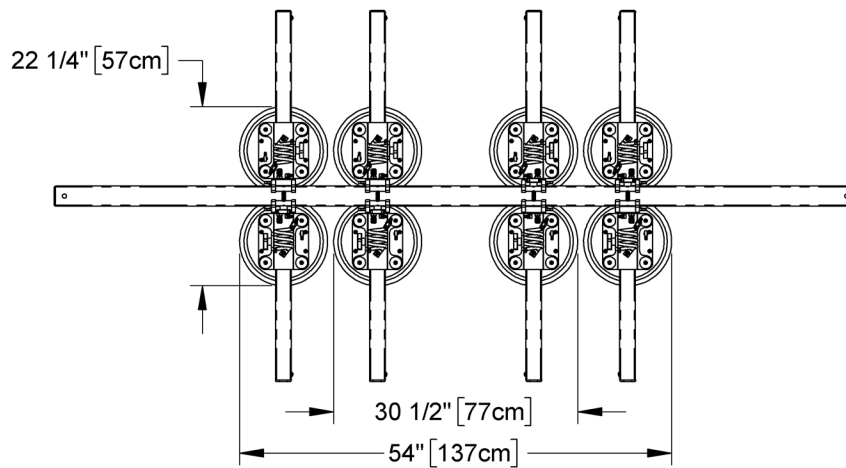
SPECIFICATIONS



MAXIMUM PAD SPREAD

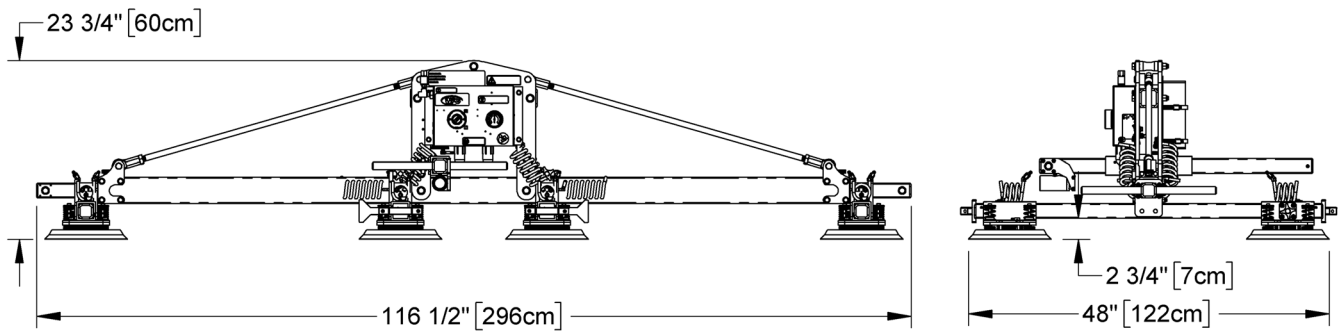


MINIMUM PAD SPREAD

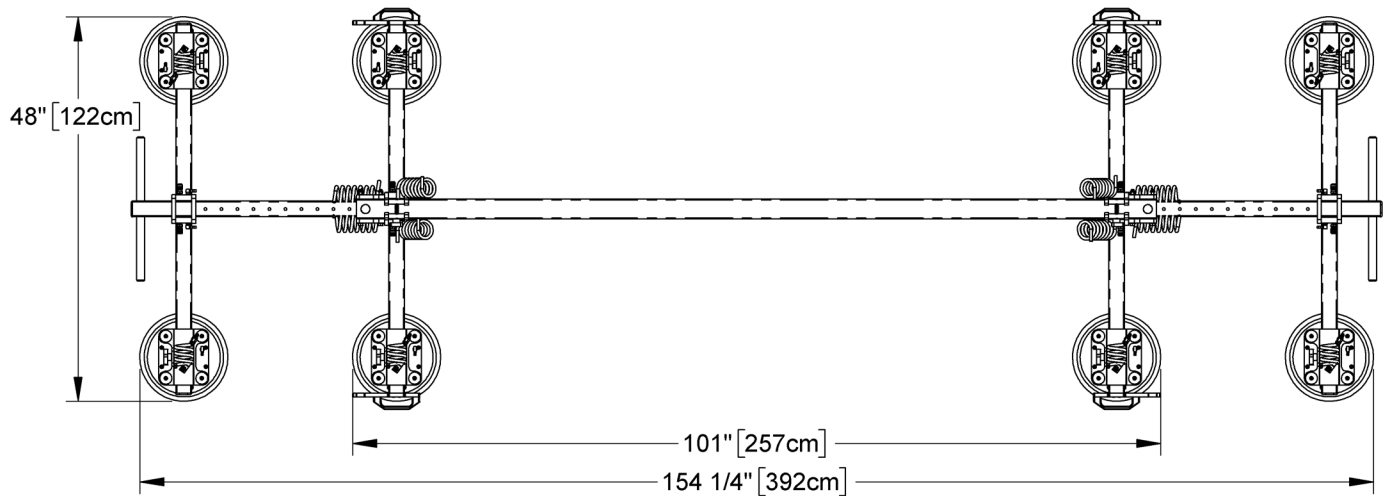


Note: Dimensions above are shown for a FLEXR8HV11AIR.

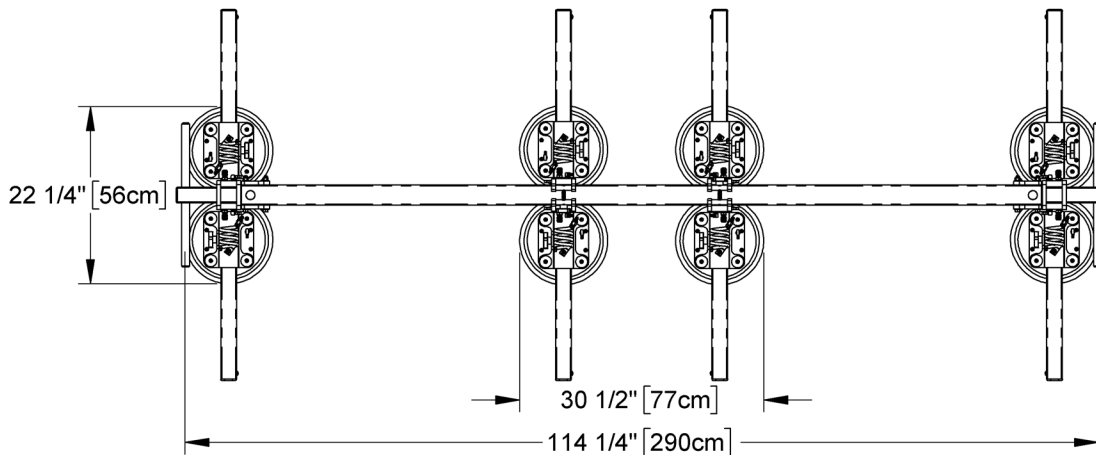
SPECIFICATIONS



MAXIMUM PAD SPREAD



MINIMUM PAD SPREAD



Note: Dimensions above are shown for an optional FLEXRL8HV11AIR.

SAFETY



Wear personal protective equipment that is appropriate for the load material. Follow trade association guidelines.



Do not remove or obscure safety labels.



Do not make any modifications to the lifter (see “LIMITED WARRANTY”).



Use the lifter only in an approved “OPERATING ENVIRONMENT” (see “INTENDED USE”).



Make sure to consider all possible effects of “INDIRECT LOADING” on lifting capacity (see “INTENDED USE”).



Do not use a lifter that is damaged, malfunctioning, or missing parts.



Do not use a lifter if the sealing edge of any vacuum pad is cut or otherwise damaged.



Do not use a lifter to lift cracked or broken glass.



Do not exceed the Maximum Load Capacity or lift loads the lifter is not designed for (see “INTENDED USE”).



Do not use a lifter if the Maximum Load Capacity or any safety label appears to be missing or obscured.



Make sure the contact surfaces of the load and vacuum pads are clean before attaching the lifter (see “MAINTENANCE”).



Position the vacuum pads correctly on the load before lifting (see “OPERATION”).



Do not lift a load if any vacuum indicator shows inadequate vacuum.



Keep unauthorized personnel away from the lifter, to avoid injury in case of an unintended load release.



Do not touch the vacuum release controls during a lift.



Do not allow people to ride on the lifter or the load.



Do not lift a load higher than necessary or leave suspended loads unattended.



Do not position a loaded or unloaded lifter over people.

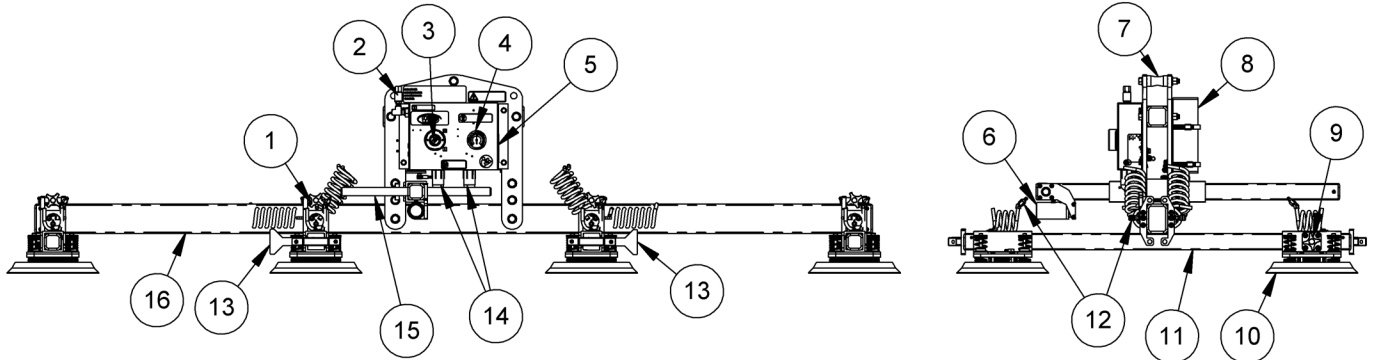


Before servicing a powered lifter, place the power control in the inactive position and, when possible, disconnect the power source.

OPERATING FEATURES

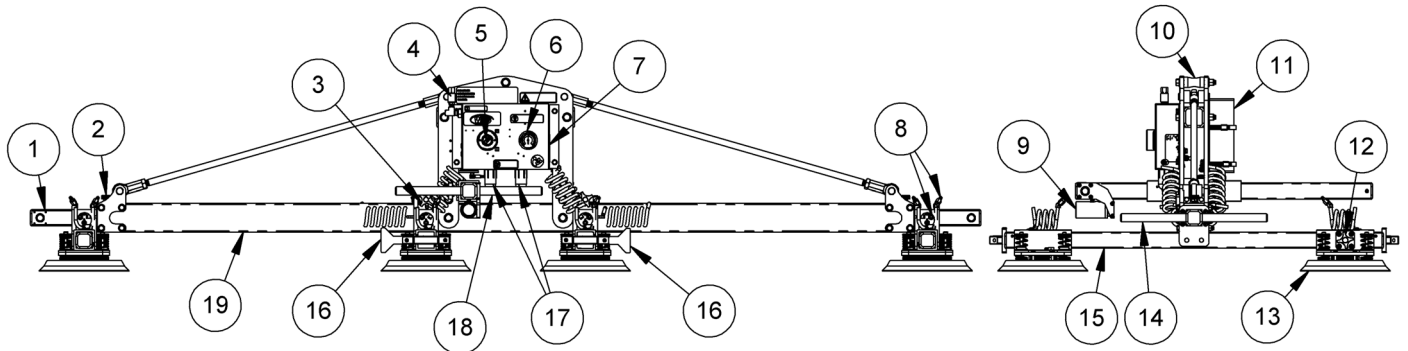
Features shown here are underlined> on their first appearance in each section following.

FLEXR8HV11AIR FEATURES



- | | | |
|---------------------|--|---------------------------------|
| 1 SLIDING ARM CLAMP | 2 AIR SUPPLY CONNECTION | 3 AIR SUPPLY SWITCH |
| 4 VACUUM GAUGE | 5 Enclosure with VACUUM PUMP (venturi) | 6 MOVABLE VACUUM RELEASE BUTTON |
| 7 LIFT POINT | 8 VACUUM RESERVE TANK | 9 SLIDING PAD MOUNT |
| 10 VACUUM PAD | 11 SLIDING PAD ARM | 12 QUICK CONNECTORS |
| 13 PARKING STAND | 14 AIR FILTERS | 15 ADJUSTABLE CONTROL HANDLE |
| 16 PAD FRAME | | |

FLEXRL8HV11AIR FEATURES



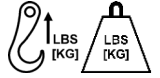
- | | | |
|--|------------------------|---------------------------------|
| 1 TELESCOPING PAD ARM | 2 PAD ARM LOCKING PIN | 3 SLIDING ARM CLAMP |
| 4 AIR SUPPLY CONNECTION | 5 AIR SUPPLY SWITCH | 6 VACUUM GAUGE |
| 7 Enclosure with VACUUM PUMP (venturi) | 8 QUICK CONNECTORS | 9 MOVABLE VACUUM RELEASE BUTTON |
| 10 LIFT POINT | 11 VACUUM RESERVE TANK | 12 SLIDING PAD MOUNT |
| 13 VACUUM PAD | 14 CONTROL HANDLE | 15 SLIDING PAD ARM |
| 16 PARKING FEET | 17 AIR FILTERS | 18 ADJUSTABLE CONTROL HANDLE |
| 19 PAD FRAME | | |

Note: Although some of the following photos do not show these specific lifters, they all illustrate how this kind of lifter functions.

For information about specific parts, see [“REPLACEMENT PARTS”](#) and/or any separate instructions for Product Options.

ASSEMBLY

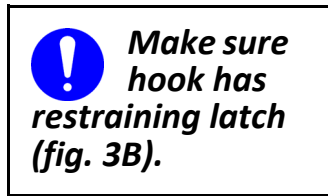
- 1) Remove all shipping materials and save them with the shipping container for future use.
- 2) Select a crane and/or hoist rated for the Maximum Load Capacity plus the Lifter Weight.



Note: Any lifter use must comply with all statutory or regulatory standards for hoisting equipment in your region.

- 3) Attach the hoisting hook to the lift point (fig. 3A).

3A



- 4) Use the hoisting equipment to remove the lifter from the shipping container. Avoid damaging the vacuum pads.
- 5) Retract the spring-loaded parking stands:

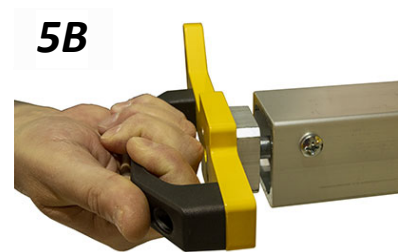
5.1) Pull the handle of a parking stand (fig. 5A).

5A



5.2) Rotate the handle 90° in either direction (fig. 5B). Then allow the spring to lock the handle in place.

5B



5.3) Repeat steps 5.1 and 5.2 with the other 3 parking stands.

- 6) Remove the pad covers (fig. 6A) and save them for future use.

6A



ASSEMBLY



- 7) Connect the lifter to an appropriate compressed air supply (figs. 7A-B — see Power Source under “SPECIFICATIONS”):

Install the female quick connector (supplied) on the compressed air line.



This service should be performed by qualified service personnel.

Caution: Make sure the air line is routed so that it does not become tangled or damaged during operation.

- 8) Perform tests as required under “TESTING”.

TO CHANGE THE PAD FRAME CONFIGURATION

Various pad frame configurations enable the lifter to match different load dimensions and weights. The illustrations in “SPECIFICATIONS” show the configurations’ maximum and minimum pad spreads for the standard pad frame (see page 4) and the optional extended-length pad frame (see page 5).

- 1) Choose the configuration that maximizes support across the load surface and minimizes load overhang (see “LOAD CHARACTERISTICS”).



Make sure pads are arranged symmetrically, to keep the load balanced.

- 2) Reposition pad arms (sliding and/or telescoping) and reposition sliding pad mounts as needed (see following sections):
 - To support the maximum load weight, you must connect all 8 vacuum pads (see “Connecting/Disconnecting Vacuum Hoses”).
 - To support larger load dimensions, you must move sliding pad arms outward. If the lifter is equipped with the optional extended-length pad frame, you must extend the telescoping pad arms, as well.
 - To support smaller dimensions and weights, you may retract sliding pad arms, reposition sliding pad mounts and/or disconnect vacuum hoses, ***provided the lifter still has sufficient capacity to support the load in question.***¹ If the lifter is equipped with the optional extended-length pad frame, retract the telescoping pad arms, as well.



Disconnecting any vacuum pad reduces lifting capacity.

1..... Whenever a quick connector is disconnected, the corresponding vacuum pad does not contribute to the lifting capacity, whether or not the pad is mounted on the pad frame.

ASSEMBLY

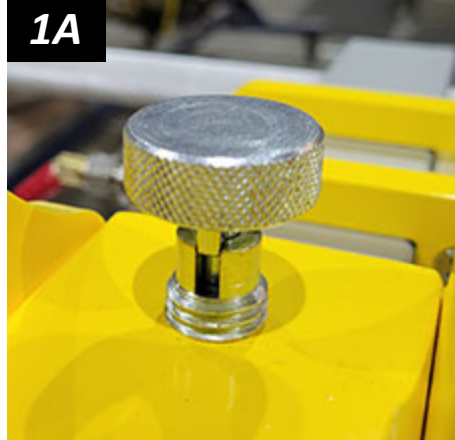
Extending/Retracting the Telescoping Pad Arms

Note: Only the optional FLEXRL8HV11AIR features telescoping pad arms.

1) Disengage the spring-loaded pad arm locking pin:

- **Pull the pin directly upward (fig. 1A):**

This allows the pad arm to slide into or out of the pad frame tube until the pin locks automatically at the next position.

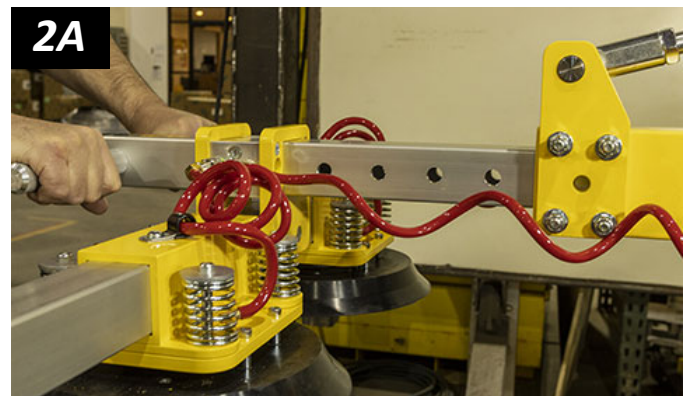


- **Pull the pin directly**

upward AND twist the pin (fig. 1B). This allows the pad arm to slide without locking. Twist the pin again to allow automatic locking.



2) Slide the pad arm to the desired position (fig. 2A).



3) Make sure the locking pin is engaged so the pad arm is secured in position (fig. 3A).



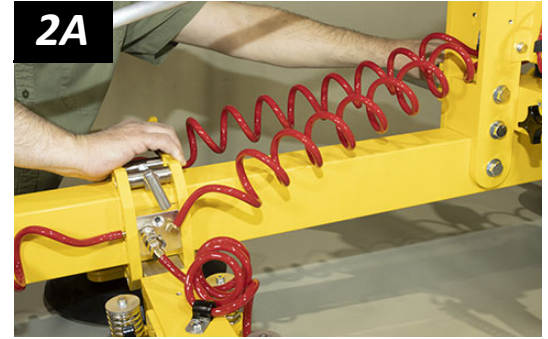
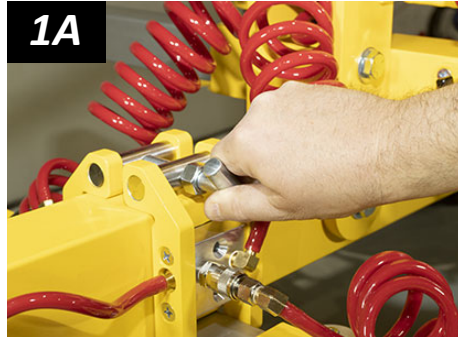
4) Repeat steps 1-3 to similarly reposition the other pad arm.

Note: Position both telescoping pad arms at an equal distance from the center, to maximize the lifter's stability.

ASSEMBLY

Repositioning the Sliding Pad Arms

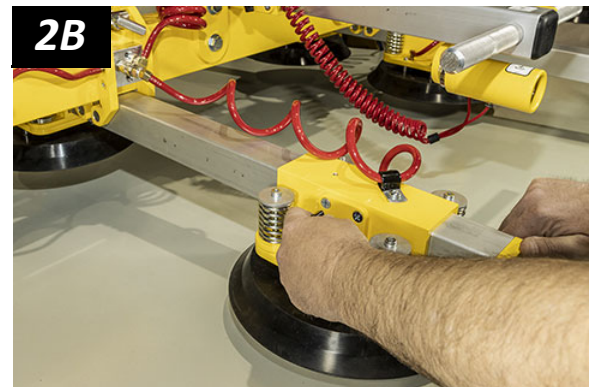
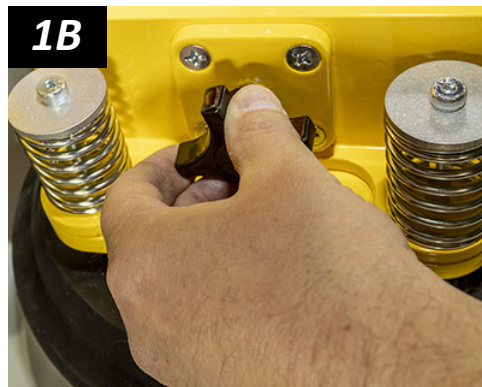
- 1) Loosen a sliding arm clamp (fig. 1A).
- 2) Move the sliding pad arm to the desired position along the pad frame (fig. 2A).
- 3) Tighten the clamp, to secure the sliding pad arm.
- 4) Repeat steps 1-3 to similarly reposition the other sliding pad arm.



Note: Position sliding pad arms at an equal distance from the center (fig. 3A), to maximize the lifter's stability.

Repositioning the Sliding Pad Mounts

- 1) Loosen the knob on the side of a sliding pad mount (fig. 1B).
- 2) Slide the pad mount to the desired position along the sliding pad arm (fig. 2B).
- 3) Tighten the knob, to secure the pad mount.
- 4) Repeat steps 1-3 to similarly reposition other pad mounts, as needed.



Note: Position the pad mounts at an equal distance from the center of their pad arm, to maximize the lifter's stability.

ASSEMBLY

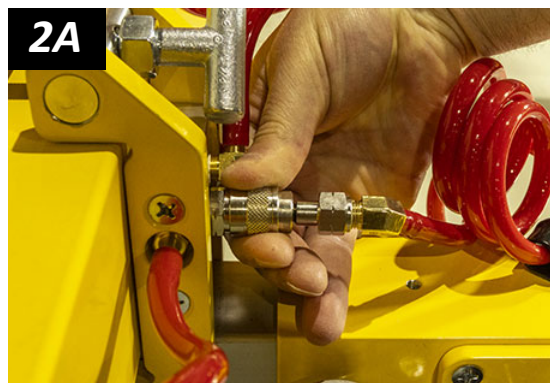
Connecting/Disconnecting Vacuum Hoses

- To *connect* a vacuum hose, push the male and female ends of the quick connector together until they lock (figs. 1A-B).



Make sure quick connectors seal completely and all vacuum hoses function correctly (see "Vacuum Test").

- To *disconnect* a hose, move the release ring on the female end until the quick connector separates (figs. 2A-B).



INTENDED USE

LOAD CHARACTERISTICS

Make sure the vacuum lifter is intended to handle each load according to these requirements:



Do NOT lift explosives, radioactive substances or other hazardous materials.



- The load weight must not exceed the Maximum Load Capacity.
- The load must be a single piece of relatively nonporous material with a flat and relatively smooth contact surface.^{1, 2} To determine whether the load is too porous or rough, perform a “[Lifter/Load Compatibility Test](#)”.
- The load's surface temperature must not exceed the Operating Temperatures.³
- The load's *minimum* length and width are determined by the current Pad Spread (see “SPECIFICATIONS”).
- The load's *maximum* length and width are determined by its allowable overhang.⁴



Note: Standard vacuum pads can stain or deform load surfaces with light colors or soft coatings. Test such surfaces for damaging effects before using the lifter on them.⁵

INDIRECT LOADING

Make sure to account for dynamic loading or other inadvertent loading that can negatively affect lifting capacity, such as:



Indirect loading can reduce lifting capacity.

- Weight amplification that results when a loaded vacuum lifter abruptly starts/stops moving, changes direction or bounces up and down (eg, when a telehandler transports a loaded lifter across rough terrain).
- External force that effectively increases the weight of a lifter’s attached load (eg, when a load of sheet material reacts to wind gusts).

1..... Although concave vacuum pads can also attach to some curved loads, curvature can reduce lifting capacity. Contact WPG for more information.

2..... A “single piece” of material includes curtainwall assemblies, unitized glazing systems and similar construction units.

3..... Vacuum pads made from a heat-resistant rubber compound can enable you to lift loads with higher surface temperatures. Contact WPG or an authorized dealer for more information.

4..... The allowable overhang is the amount of load material that can extend sideways beyond the vacuum pads without breaking or otherwise being damaged. This depends on the load material, its thickness, and the angle of handling (if any). Since every material has different physical properties, the allowable overhang must be evaluated separately for each load type. Contact WPG or an authorized dealer for more information.

5..... Alternative rubber compounds are available for these purposes. Contact WPG or an authorized dealer for more information.

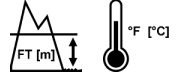
INTENDED USE

OPERATING ENVIRONMENT

Make sure the lifter is suitable for each work environment, given the following restrictions:

- This lifter is not intended for any environment that is dangerous to the operator or damaging to the lifter. Avoid environments containing explosives, caustic chemicals and other dangerous substances.
- The work environment is limited by the Operating Elevation and Operating Temperatures.^{1, 2}
- The lifter is not designed to be watertight. Do not use it in rain or other unsuitable conditions.

 **Never use lifter in dangerous environments.**



Moisture can reduce lifting capacity.

CE/UKCA – A secondary positive holding device is required to lift loads on construction sites.

DISPOSAL OF THE LIFTER

After the Service Life of the lifter has ended (see “SPECIFICATIONS”), dispose of it in compliance with all local codes and applicable regulatory standards.

1..... Although lifter use may be possible at higher elevation, lifting capacity is reduced whenever the lifter is unable to attain vacuum in the green range on the vacuum gauge. Contact WPG for more information.

2..... Special provisions may allow the lifter to operate outside the specified temperature range. Contact WPG for more information.

BEFORE USING THE LIFTER

Determine whether the vacuum lifter is capable of each intended task (see “SPECIFICATIONS” and “[INTENDED USE](#)”). Then complete the following preparations:

Taking Safety Precautions

- Be trained in all industry and regulatory standards for lifter operation in your region.
- Follow trade association guidelines about precautions needed for each load material.



Read all directions and safety rules before using lifter.



Always wear appropriate personal protective equipment.

Performing Inspections and Tests

- Follow the “[INSPECTION SCHEDULE](#)” and “[TESTING](#)”.
- Service each air filter whenever its bowl contains liquid or other contaminants or its element appears dirty (see “AIR FILTER MAINTENANCE” in [SERVICE MANUAL](#)).



Examine air filters regularly and service when needed.


OPERATION

TO ATTACH THE PADS TO A LOAD

Generating Airflow

Place the air supply switch in the “on” position (| — fig. 1A).



 **Never place air supply switch in "off" position (○) while operating lifter.**

Any interruption of airflow during lifter operation could result in an unintentional load release and personal injury.

Positioning the Lifter on the Load

- 1) Make sure the contact surfaces of the load and vacuum pads are clean (fig. 1B — see “[Pad Cleaning](#)”).¹



- 2) Adjust the center control handle:

- 2.1) Loosen the knob that allows the adjustable control handle's sliding arm to move (fig. 2B).



- 2.2) Slide the arm to the desired position (fig. 2C).



- 2.3) Tighten the knob, to secure the arm.

Note: When determining the sliding control handle arm's position, an operator should consider how the vacuum release button can be moved as well (see “[TO RELEASE THE PADS FROM THE LOAD](#)”).

1..... Since oil damages the rubber in standard pads, the load surface must be free of oil unless the lifter is equipped with optional oil-resistant pads (see “[REPLACEMENT PARTS](#)”).

OPERATION

3B



3) Center the pad frame on the load (fig. 3B), to avoid unexpected load movement or release.¹

Off-center loading could result in personal injury, as well as damage to the lifter or load.

 **Always center pad frame on load.**

4) Make sure all vacuum pads will fit on the load and will be loaded evenly. Consult the Per-Pad Load Capacity.



5) Place the vacuum pads in contact with the load surface. Make sure the vacuum pads seal completely against the load.²

Reading the Vacuum Gauge

A vacuum gauge shows the current vacuum level in positive inches of Hg and negative kPa:

- Green range (≥ 16 " Hg [-54 kPa]): Vacuum level is sufficient to lift the maximum load weight (fig. 1A).
- Red range (< 16 " Hg [-54 kPa]): Vacuum level is **not** sufficient to lift the maximum load weight (fig. 2A).



If it takes more than 5 seconds for the vacuum level to reach 5" Hg [-17 kPa], press on any vacuum pad that has not yet sealed.

Once the pads have sealed, the lifter should be able to maintain sufficient vacuum for lifting, except when used above the maximum Operating Elevation.³ If it does not, perform the “[Vacuum Test](#)”.


1..... The lifter is designed to handle the maximum load weight when its center of gravity is positioned within 2" [5 cm] of the pad frame's center point.


2..... Although a vacuum pad may become distorted during shipping or storage, this condition should correct itself with continued use.

3..... If the lifter is used above the maximum Operating Elevation (see “SPECIFICATIONS”), it may not be able to maintain sufficient vacuum for lifting. Contact WPG for more information.

To LIFT AND MOVE THE LOAD


Interpreting the Vacuum Gauge

 Vacuum is sufficient to lift the Maximum Load Capacity whenever the vacuum gauge registers in the green range.

 **Never lift load unless vacuum gauge registers in the green range, because premature lifting could result in load release and personal injury.**

Monitoring the Vacuum Gauge

Monitor the vacuum gauge (fig. 1B) throughout the entire lift.

 **Make sure the vacuum gauge remains completely visible.**

The vacuum pump runs continuously to maintain sufficient vacuum for lifting the maximum load weight.

However, if the ***vacuum gauge shows a level less than 16" Hg [-54 kPa]:***

- 1) Keep everyone away from a suspended load until it can be safely lowered to a stable support.

 **Stay clear of any suspended load while gauge warns of insufficient vacuum.**

- 2) Stop using the lifter until the cause of the vacuum loss can be identified: Conduct the “[Pad Inspection](#)” and perform the “[Vacuum Test](#)”.
- 3) Correct any faults before resuming normal operation of the lifter.



OPERATION

Controlling the Lifter and Load

When the lifter is ready, use the hoisting equipment to raise the lifter and load as needed.

Use a control handle (circled in fig. 1A) to keep the lifter and load in the required position.

Once there is enough clearance, you may move the load as required.



In Case of a Power Failure

A vacuum reserve tank helps maintain vacuum temporarily in the event of a power failure. Although the lifter is designed to support the load for at least 5 minutes without power, this depends on many factors, including the “[LOAD CHARACTERISTICS](#)” and the condition of the vacuum pads (see “[VACUUM PAD MAINTENANCE](#)”).

If a power failure occurs, keep everyone away from a suspended load until it can be safely lowered to a stable support. Correct any faults before resuming normal operation of the lifter.



Stay clear of any suspended load during power failure.

OPERATION

TO RELEASE THE PADS FROM THE LOAD

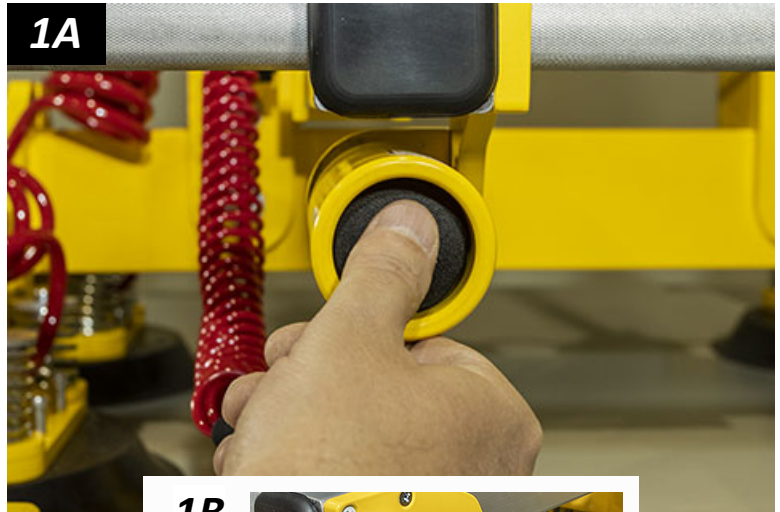
! *Make sure load is at rest and fully supported before releasing vacuum pads.*

- 1) Press the vacuum release button, to break the vacuum seal (fig. 1A).

Note: The vacuum release button's housing, which is magnetically secured to the pad frame, can be moved to allow an operator to remotely release the pads (figs. 1B-C).

⊘ *Do not move lifter until pads release completely, because such movement could result in load damage or personal injury.*

- 2) After the load is successfully released, move the lifter away.
- 3) Before you lift another load, perform the Every-Lift Inspection (see ["INSPECTION SCHEDULE"](#)).



OPERATION

AFTER USING THE LIFTER

1) Place the air supply switch in the “off” position (○ — fig. 1A).

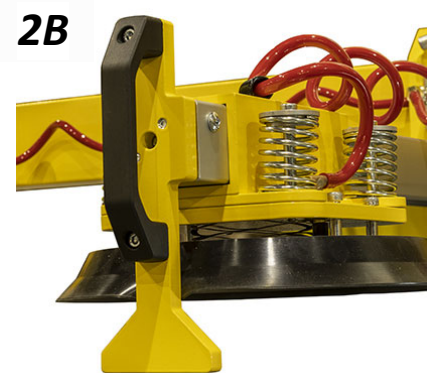


2) Extend the parking stands:

2.1) Pull the spring-loaded handle of a parking stand (fig. 2A).



2.2) Rotate the handle 90° and allow the spring to lock the handle in the position shown in fig. 2B.



2.3) Repeat steps 2.1 and 2.2 with the other 3 parking stands.

3) Use the hoisting equipment to lower the vacuum lifter gently onto the parking stands. Then detach the hoisting hook from the lift point.

Caution: Do not set lifter on surfaces that could soil or damage vacuum pads.

Storing the Lifter

1) Disconnect the compressed air supply (see “ASSEMBLY”).

2) Use the covers supplied to keep the vacuum pads clean (fig. 2C).



3) Store the vacuum lifter in a clean, dry location.

Transporting the Lifter

Secure the lifter in the original shipping container with the original shipping materials or equivalent.

INSPECTIONS AND TESTS

INSPECTION SCHEDULE

Perform inspections according to the following frequency schedule. If any fault is found, correct it and perform the next most frequent inspection before using the vacuum lifter.

Note: If a lifter is used less than 1 day in a 2-week period, perform the Periodic Inspection before using it.

| Action | Every Lift | Frequent ¹ (every 20-40 hrs) | Periodic ² (every 250-400 hrs) |
|--|------------|--|--|
| Examine <u>vacuum pads</u> for contaminants or damage (see “Pad Inspection”). | ✓ | ✓ | ✓ |
| Examine load surface for contaminants or debris. | ✓ | ✓ | ✓ |
| Examine controls and indicators for damage. | ✓ | ✓ | ✓ |
| Examine lifter’s structure for damage. | | ✓ | ✓ |
| Examine vacuum system for damage (including <u>vacuum pads</u> , fittings and hoses). | | ✓ | ✓ |
| Examine <u>air filters</u> for conditions requiring service (see “AIR FILTER MAINTENANCE” in SERVICE MANUAL). | | ✓ | ✓ |
| Perform “Vacuum Test” . | | ✓ | ✓ |
| Check for unusual vibrations or noises while operating lifter. | | ✓ | ✓ |
| Examine entire lifter for evidence of: <ul style="list-style-type: none"> • looseness, excessive wear or excessive corrosion • deformation, cracks, dents to structural or functional components • cuts in vacuum pads or hoses • any other hazardous conditions | | | ✓ |

1..... The Frequent Inspection is also required whenever the lifter has been out of service for 1 month or more.

2..... The Periodic Inspection is also required whenever the lifter has been out of service for 1 year or more. Keep a written record of all Periodic Inspections. If necessary, return the lifter to WPG or an authorized dealer for repair (see [“REGISTRATION AND LIMITED WARRANTY”](#)).

TESTING

Perform the following test to determine whether or not a load surface is too porous or rough:

Lifter/Load Compatibility Test

- 1) Make sure the vacuum generating system is functioning correctly (see “[Vacuum Test](#)”).
- 2) Thoroughly clean the load surface and the vacuum pads (see “[Pad Cleaning](#)”).
- 3) Place the load in the flat position on a stable support.
- 4) Attach the vacuum pads to the load as previously directed.
- 5) After the vacuum level appears in the green range on the vacuum gauge, place the air supply switch in the “off” position (○).
- 6) Raise the load a minimal distance, to make sure it is supported by the lifter.
- 7) Watch the vacuum gauge: **Starting from a vacuum level of 16" Hg [-54 kPa], the lifter must maintain a vacuum level greater than 12" Hg [-41 kPa] for 5 minutes.**¹ If not, lifting this load requires additional precautions (eg, a load sling). Contact WPG for more information.
- 8) Lower the load *after* 5 minutes or *before* the vacuum level diminishes to 12" Hg [-41 kPa].



Take precautions in case load should fall during test.

1..... Under CE and UKCA requirements, the lifter must maintain a vacuum level **greater than 8" [-27 kPa]**.

INSPECTIONS AND TESTS

Perform the following tests before placing the lifter in service *initially, following any repair,* when directed in the “*INSPECTION SCHEDULE*”, or *whenever necessary*:

Operational Tests

Test all features and functions of the lifter (see “OPERATING FEATURES” and “OPERATION”).

Vacuum Test

- 1) Clean the faces of the vacuum pads (see “*Pad Cleaning*”).
- 2) Use a test load with weight equal to the Maximum Load Capacity, a clean, smooth, nonporous surface and other appropriate “*LOAD CHARACTERISTICS*”.¹
- 3) Attach the lifter to the test load as previously directed.
- 4) After the vacuum level appears in the green range on the vacuum gauge, raise the load a minimal distance and place the air supply switch in the “off” position (○).
- 5) Watch the vacuum gauge: *The vacuum level should not decrease by more than 4" Hg [-14 kPa] in 5 minutes.*
- 6) Lower the load after 5 minutes or whenever a lifter fails the test, and release the load as previously directed.
- 7) Qualified service personnel must correct any fault in the vacuum system before returning the lifter to service.



Take precautions in case load should fall during test.



Never use lifter that has failed test.



This service must be performed by qualified service personnel.

1..... The load should have either a flat surface or no more curvature than the lifter is designed for, if any.

INSPECTIONS AND TESTS

Rated Load Test¹

The following steps must be performed or supervised by a qualified person:²

1) Use a test load that weighs 125% ($\pm 5\%$) of the Maximum Load Capacity and has the appropriate “LOAD CHARACTERISTICS”.



2) Attach the vacuum pads to the load as previously directed.

3) Position the load to produce the greatest stress on the lifter consistent with “INTENDED USE”.

4) Raise the load a minimal distance and leave it suspended for 2 minutes.



Take precautions in case load should fall during test.

5) Once the test is completed, lower the load for release as previously directed.

6) Inspect the lifter for any stress damage, and repair or replace components as necessary to successfully pass the test.



Never use lifter that has failed test.

7) Prepare a written report of the test and keep it on file.

1..... An equivalent simulation may also be used. Contact WPG for more information.

2..... A “qualified person” has successfully demonstrated the ability to solve problems relating to the subject matter and work, either by possessing a recognized degree in an applicable field or a certificate of professional standing, or by possessing extensive knowledge, training and experience.

MAINTENANCE

Note: Refer to **SERVICE MANUAL #36112** when applicable.

VACUUM PAD MAINTENANCE

The Maximum Load Capacity is determined by testing of clean, new, standard rubber vacuum pads on clean, dry, regular glass. **If the lifter is used under any other conditions, a qualified person must first determine the effective lifting capacity.**¹



Long-term exposure to heat, chemicals or UV light can damage vacuum pads. Replace pads every 2 years or more often when necessary.

Pad Inspection

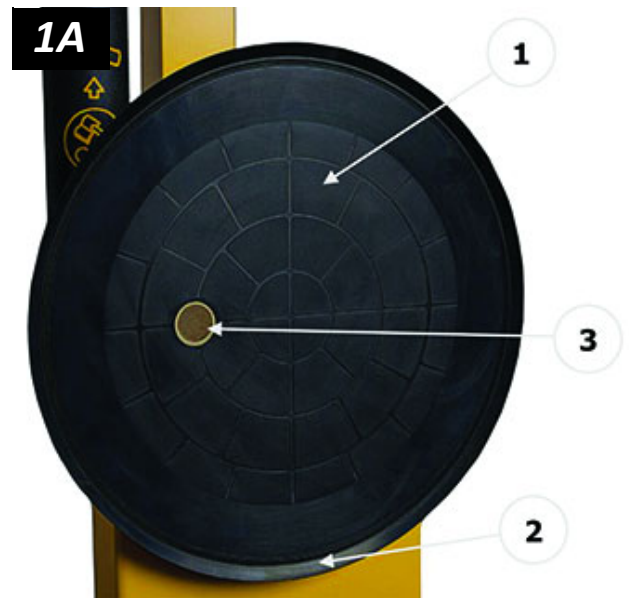
Inspect each vacuum pad (fig. 1A) according to the “**INSPECTION SCHEDULE**” and correct the following faults before using the lifter (see “**REPLACEMENT PARTS**”, when applicable):

- Contaminants on the face (item 1 in fig. 1A) or sealing edges (item 2 in fig. 1A).
- Filter screen (item 3 in fig. 1A) missing from face.



Replace any pad that has damaged sealing edges.

- Nicks, cuts, deformation or abrasions in sealing edges.
- Wear, stiffness or glaze.



1..... A “qualified person” has successfully demonstrated the ability to solve problems relating to the subject matter and work, either by possessing a recognized degree in an applicable field or a certificate of professional standing, or by possessing extensive knowledge, training and experience.

Pad Cleaning

- 1) Regularly clean the face of each vacuum pad (fig. 1A), using soapy water or other mild cleansers to remove oil, dust and other contaminants.



Never use harsh chemicals on vacuum pad.

Solvents, petroleum-based products (including kerosene, gasoline and diesel fuel) or other harsh chemicals can damage vacuum pads.



Never use rubber conditioners on vacuum pad.

Many rubber conditioners can leave a hazardous film on vacuum pads.

- 2) Prevent liquid from entering the vacuum system through the suction hole on the pad face.
- 3) Wipe each pad face clean, using a clean sponge or lint-free cloth to apply the cleanser.¹
- 4) Allow each pad to dry completely before using the lifter.

1A



¹..... A brush with bristles *that do not harm rubber* can help remove contaminants clinging to sealing edges. If these cleaning methods are not successful, contact WPG or an authorized dealer for assistance.

REPLACEMENT PARTS

| Stock No. | Description | Qty. |
|-----------|--|------|
| 93022 | Quick Connector — Male End | 8 |
| 65439CH | Vacuum Hose — 3/32" ID x 5/32" OD x 96" Length — Coiled — Red | 2 |
| 65441 | Vacuum Hose — 0.245" ID x 3/8" OD x 48" Length — Coiled — Red | 8 |
| 65440 | Vacuum Hose — 0.245" ID x 3/8" OD — Red | * |
| 65438 | Vacuum Hose — 1/8" ID x 1/4" OD — White | * |
| 65014 | Pad Spring — Wave Type | 8 |
| 53124 | Pad Fitting — Elbow — 5/32" ID — Long Stem | 8 |
| 49606T | Vacuum Pad — Model HV11 / 10" [25 cm] Diameter — Lipped — Oil-Resistant (option) | 8 |
| 49605T | Vacuum Pad — Model HV11 / 10" [25 cm] Diameter — Lipped (standard) | 8 |
| 49190 | End Plug — 2-1/2" x 3-1/2" x 1/4" Tubing Size | ** |
| 49150 | End Plug — 2-1/2" x 2-1/2" x 1/4" Tubing Size | ** |
| 49122 | End Plug — 2" x 2" x 1/4" Tubing Size | ** |
| 36112 | Service Manual — Compressed Air | 1 |
| 29353 | Pad Cover | 8 |
| 16056M | Quick Connector — Female End | 8 |
| 15799 | Plastic Knob — 1/2-13 x 2-1/2" | 4 |
| 15792DM | Plastic Knob — 1/2-13 x 3/4" | 9 |
| 15791 | Plastic Pull Handle | 4 |
| 15630 | Pad Filter Screen — Large | 8 |
| 10904 | Shoulder Bolt — Socket Head — 5/16" x 1" x 1/4-20 Thread (for mounting pads) | 32 |

* Quantity as required; sold by the inch (approx 2.5 cm).

See **SERVICE MANUAL #36112** for additional parts.

**SERVICE ONLY WITH IDENTICAL REPLACEMENT PARTS,
AVAILABLE AT WPG.COM OR THROUGH AN AUTHORIZED WPG DEALER**

REGISTRATION AND LIMITED WARRANTY

TO REGISTER THIS WPG PRODUCT

Go to the [PRODUCT REGISTRATION](#) page at [wpg.com](#) and complete the form. Registration keeps you advised of important updates and notifications, and simplifies inquiries to WPG regarding your product. Registration is **not** required to activate your Limited Warranty (see next section).

ABOUT THE LIMITED WARRANTY



Note: Read the [WARRANTY RETURN FORM](#) at [wpg.com](#) for important details about the Limited Warranty.

Wood's Powr-Grip® (WPG) products are warranted to be free from defects in manufacturing and materials for 1 year from the date of purchase.

If a problem develops during the warranty period, follow the instructions below to obtain warranty service. If inspection shows that the product has a defect, WPG will repair or replace the product without charge.



Obtaining Warranty Service or Repair Service

For customers in the U.S. and Canada: Go to the [EXCHANGES, REPAIRS, & WARRANTIES](#) page at [wpg.com](#) and click the applicable link. Alternatively, you may contact the WPG Technical Service Department (see contact information at right).

For customers in all other localities: Contact the WPG Technical Service Department (see contact information at right) or your dealer for assistance.

Address:

Wood's Powr-Grip Co., Inc.
908 West Main St.
Laurel, MT 59044 USA

Email:

contactus@wpg.com

Phone:

800-548-7341 or 406-628-8231