

CLEANLOAD NEXUS

COUPLER FOR CLOSED TRANSFER WITH EASYCONNECT CAPS

P/N: PNR-CN100

INSTALLATION AND
OPERATION MANUAL



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1. SAFETY INFORMATION

READ THESE INSTRUCTIONS AND THEN KEEP THEM FOR REFERENCE: This manual contains important instructions that should be followed during installation, operation and routine maintenance of Cleanload Nexus.

SAFETY SYMBOLS

! This is the safety alert symbol. When you see this symbol do not ignore it! Look for one of the following signal words and be alert to the potential for personal injury:

▲ DANGER Warns about hazards that will cause serious personal injury, death or major property damage.

▲ WARNING Warns about hazards that can cause serious personal injury, death or major property damage.

▲ CAUTION Warns about hazards that will or can cause minor personal injury or property damage.

The word **NOTE** indicates special instructions that are important but not related specifically to hazards.



GENERAL SAFETY

Carefully read and follow all safety instructions in this manual and on the Cleanload Nexus itself. Failure to comply with the safety/operating instructions could result in personal injury and/or property damage and could lead to the loss of any claims for damages.

Ensure that you understand the Cleanload Nexus applications, limitations, and potential hazards. Keep safety labels fixed to Cleanload Nexus and in good condition. Replace any missing or damaged labels.

▲ WARNING The mounting and connections of Cleanload Nexus must be done by professionals who are trained in repair and maintenance of the sprayer.

- ▲ WARNING** For mounting on the sprayer only use hoses and fittings that meet the recommended specifications of the sprayer manufacturer.
- Only use pipe, hose, and hose fittings that have not been used before and meet the stated maximum pressure ratings of the Cleanload Nexus. Check all hoses for weakness or signs of wear before each use.
- ▲ WARNING** Regulations and recommendations for personal protective equipment (PPE) must be complied with.

	<p>When operating Cleanload Nexus use the Personal Protective Equipment (PPE) that is recommended on the agrochemical label.</p>
	<p>If no specific PPE is required by the agrochemical label wear gloves, protective glasses and a chemical resistant apron or overall when operating, maintaining or servicing Cleanload Nexus.</p>

Before using Cleanload Nexus:

- Ensure that the Cleanload Nexus is mounted securely on the sprayer or other mounting location.
- Always comply with regulations when choosing a suitable site for filling the sprayer with chemical.
- ▲ DANGER** Ensure that all hoses are securely connected, that the sprayer's suction is operating and that the Umbrella Valves are in place
- Only use containers that are fitted with an easyconnect cap. Do not remove and refit the cap to any other container except a container of water or cleaning agent that is used for cleaning the Cleanload Nexus as directed in this manual.
- Do not operate Cleanload Nexus at pressures outside of the range given in this manual.
- Only operate Cleanload Nexus at temperatures between 0° and 60°C (32° to 140°F).
- Do not attempt to transport or move Cleanload Nexus with a chemical container connected.
- Defective components and assemblies must be replaced immediately. Use original spare parts for replacement only.

After using Cleanload Nexus:

- ▲ CAUTION** Always clean the Cleanload Nexus according to the instructions.
- Comply with regulations on cleaning sprayers when cleaning the Cleanload Nexus.
- Do not leave concentrated agrochemicals in the Cleanload Nexus for extended periods after carrying out a transfer.
- Store Cleanload Nexus under protected, frost-free conditions and inaccessible to children and animals at all times.
- For winter storage or if freezing conditions are anticipated, clean the Cleanload Nexus according to instructions then additionally pass a 50/50 mixture of water and antifreeze through.
- Fit the Top Cover to protect Cleanload Nexus when not in use.
- Check if there is leakage from any part of the Cleanload Nexus or connecting hoses or if the handle is very difficult to rotate and rectify before next use.
- Do not attempt to maintain or repair Cleanload Nexus without the required training, tools and parts as any substitute could result in damage and failure of the Coupler. Instructions for maintenance and service are included in the Service and Maintenance Manual

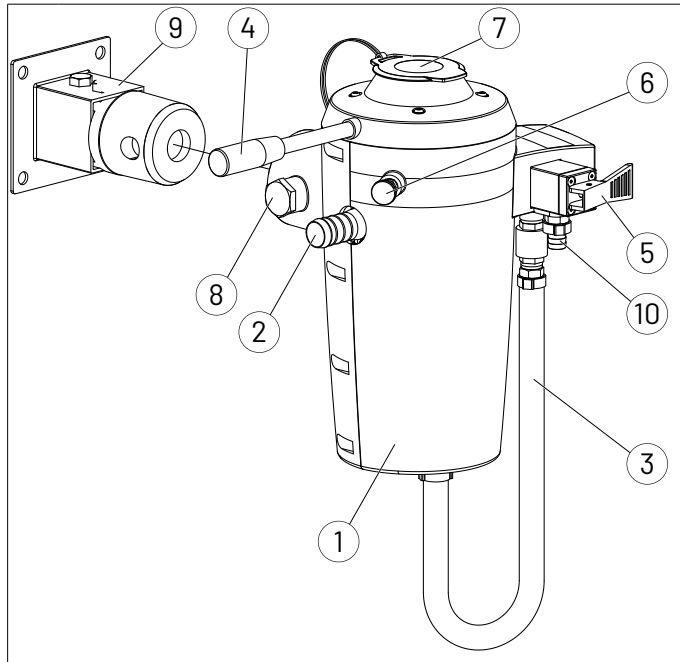
▲ CAUTION Hazardous substances alert

- Always drain and clean Cleanload Nexus before storage, servicing or disassembling for any reason.
- Always drain and clean Cleanload Nexus prior to returning to a service agent for maintenance or repair.
- Before attempting to carry out any maintenance or repair, make sure that you are wearing appropriate PPE.

2. LAYOUT & PARTS INCLUDED

NOTE: Cleanload Nexus is designed to be connected to the sprayer suction supply that is used for the induction bowl.



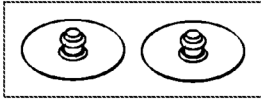
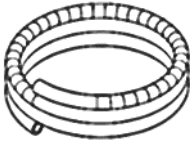
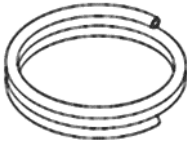
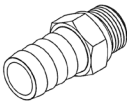
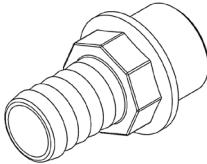
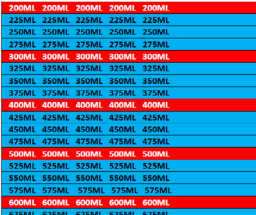
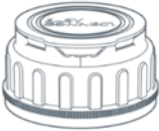
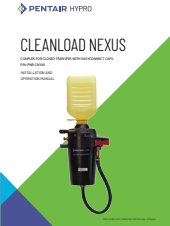
It must also be connected to a source of clean rinse water.



1	Cleanload Nexus Body
2	Suction Hosetail Outlet
3	Internal Rinsing Water Hose
4	Operating Handle (not attached at delivery). Screw into position shown.
5	Rinsing Water Lever
6	Lock Release Knob
7	Top Cover
8	Mounting fitting with bolt
9	Mounting Point (To be securely fitted to sprayer, wall, stand or bench)
10	Rinse Water Supply Inlet

For details of hose connection to the sprayer, see section 5.2.

Other Included Accessories & Fittings :


	P/N: 2910-0040 Hose Clamps 25mm for Suction Hose connection Qty: 2
	P/N:2910-0039 Ear clamps 22-25mm for Rinse Hose connection Qty: 2
	P/N: PNRNEX-KITUMB CTS Umbrella Valve kit QTY. 1 (a set of 2 valves)
	P/N: 2900-0111 Calibrated Suction Hose 1 inch (1 litre marked at 25 ml intervals) Length: 4m
	P/N: 2900-0112 Rinse Water Supply Hose 16 mm (I/D) Length: 2.5m
	P/N: 2420-0048 Hosetail adaptor 17mm to 3/8" BSP Qty. 1
	P/N: 2404-0479 Hosetail adaptor 1" BSP thread x 1" (25mm) Qty. 1
	P/N: 6030-0008 Labels for fixing to Suction Hose Qty. 1
	P/N: EC-CAP01 Easyconnect cap provided for cleaning only (Section 7.1) Qty. 1
	P/N: PNR-CN100-OIPM Operating and Installation Manual Qty. 1

3. SPECIFICATION

Model:	Cleanload Nexus
Part Number:	PNR-CN100
Rinse water pressure working range:	3.5 -7.0* bar (Optimum 5.0 bar)
Venturi suction working range:	- 0.4 to -1 bar
Cleanload Nexus Coupler weight:	8.5 kg
Maximum total weight of Cleanload Nexus Coupler including largest container:	28 kg
Size of container with which the system is designed to operate	1-15 liters
Time to empty and rinse a 15L container with 3.5 bar rinse water pressure (ISO 21191)	Approximately 2 minutes
Water volume required to effectively rinse (ISO 21191 test liquid at 3.5 bar) **	5 litre container: 31 litres
	10 litre container: 31 litres
	15 litre container: 32 litres

* Higher pressure than this should be restricted.

** Average based on tests with different container designs

 <p>PENTAIR Pentair International S.a.r.l. Avenue de Sevelin, 20 1004 LAUSANNE - Switzerland</p> <hr/> <p>CLEANLOAD NEXUS P/N: PNR-CN100</p>  <p>Serial number: 1234567890 / 0001 Manufacturing date: 08.2021 cleanloadnexus.com 9N323990</p> <p style="text-align: right;">MADE IN ITALY</p>	<p>The part number and additional identification information is recorded on the label fixed to the outer case of the Cleanload Nexus.</p>
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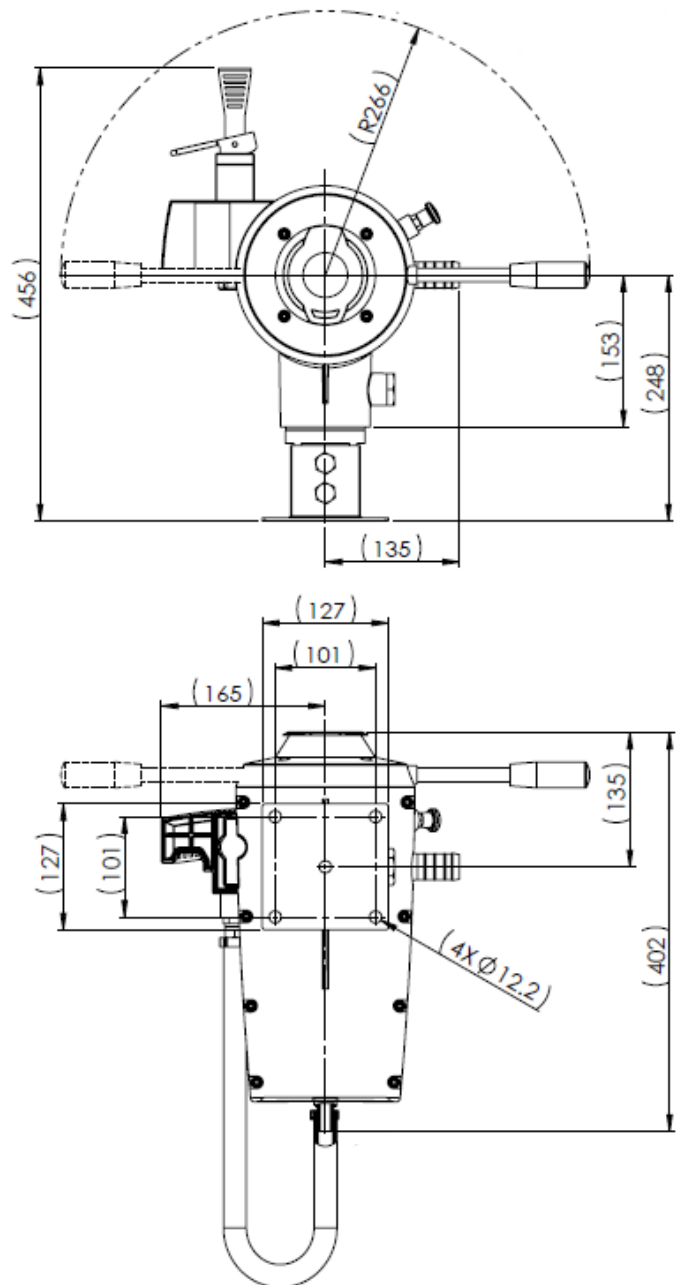
4. DESCRIPTION & INTENDED USES

Cleanload Nexus is intended for transferring liquid agrochemical products from packaging that is factory fitted with an easyconnect cap into the main tank of agricultural crop protection sprayers in order to prevent contamination of the operator and of the environment.

Misuse:

Any other uses are considered misuses and are prohibited. Contact Pentair or your local sprayer service agent with any questions regarding specific acceptable uses.

Operation outside of the recommended pressure and environmental ranges will void the warranty and could cause damage to property, serious injury, or death.



All dimensions are shown in mm.

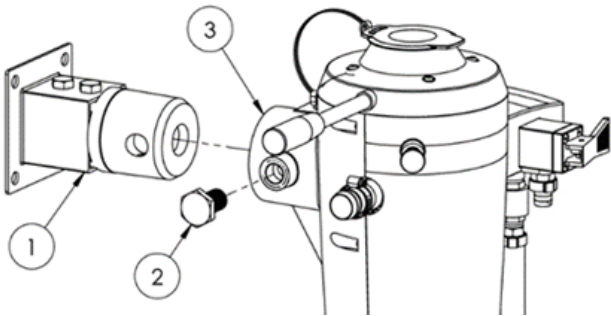
Prior to mounting the Cleanload Nexus, ensure that there is enough space for rotation of the Operating Handle and fitting a container.

- DO NOT operate with packaging that has not been factory fitted with easyconnect caps.
- DO NOT use with granules, powders or solids in suspension.
- DO NOT make any changes or modifications to Cleanload Nexus or its components, as this will result in a loss of warranty.
- DO NOT operate Cleanload Nexus under the influence of drugs or alcohol.
- DO NOT use in corrosive or explosive atmospheres.

5. INSTALLATION

5.1 Mounting Cleanload Nexus

Cleanload Nexus must be mounted securely onto a stable base. It should not move when the Operating Handle is turned.



Securely fit the Mounting Point (Ref. 1) to the sprayer, bench, wall or a stand.

In all cases, ensure that the mounting point is secure and will withstand a load of 28 kg. Slide the Mounting fitting (Ref. 3) of the Cleanload Nexus over the Mounting Point (Ref. 1) and secure with the Bolt (Ref. 2).



▲WARNING When installing Cleanload Nexus, ensure that all parts are properly connected.

The sprayer Suction Hose must not be closed off or obstructed. Prior to installation it is recommended that the sprayer suction is checked using a suitable vacuum gauge.

If in doubt, always consult your sprayer dealer or service agent for advice.

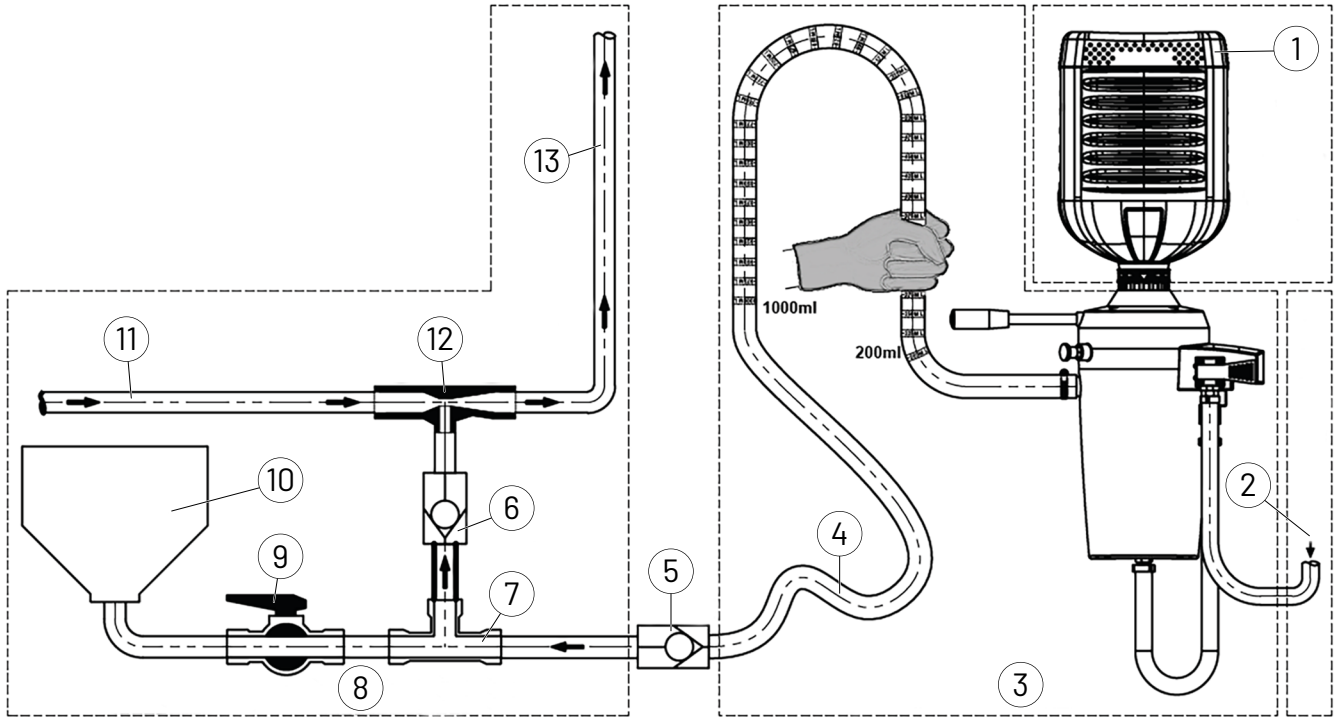
Recommendations:

- The Cleanload Nexus Operating Handle must not be mounted more than 130 cm above the ground or an operating platform.
- Cleanload Nexus should be mounted slightly above the point that the Suction Hose enters the sprayer inductor (venturi) to reduce filling time and improve cleaning. Avoid low points in the Suction hose where residue could collect.
- Install Cleanload Nexus close to the inductor (venturi) on the sprayer. Ensure that the Suction Hose will be long enough to be raised where it is being used for measuring as shown in section 5.2.
- **▲CAUTION** If mounting Cleanload Nexus permanently on the sprayer, ensure that it is protected against mud, dust and impact from branches, machinery etc.

5.2 Connection/Plumbing Cleanload Nexus

It is easiest to use Cleanload Nexus with sprayers that are already fitted with an induction bowl and inductor (venturi). In this case, a Tee fitting and a check valve (not included) should be fitted to divert the suction line to the Cleanload Nexus as shown below.

▲ CAUTION When connecting Cleanload Nexus to a sprayer, it must not be possible to shut off the suction line to Cleanload Nexus while in use.



1	Container fitted with easyconnect cap
2	Rinse water source
3	Cleanload Nexus
4	Calibrated Suction Hose
5	Check valve
6	Check valve
7	Tee

8	Sprayer induction area
9	Shut off valve
10	Induction bowl
11	Circulation line from sprayer pump
12	Inductor (venturi)
13	To sprayer tank (without restriction)

NOTE: Flow from the coupler to the check valve should only be downwards. If the venturi is located below the level of the Cleanload Nexus, the check valve may be fitted close to the venturi.

OR

If the venturi is located above the level Cleanload Nexus the check valve should be fitted into a part of the Suction Hose that is below the Coupler.

if the Cleanload Nexus is mounted on the sprayer the Suction Hose and the Rinse Water Supply Hose can be permanently plumbed into the sprayer.

If it is not mounted on the sprayer it may be connected temporarily during filling using suitable dry break connectors (not included).

For specific instructions on suitable connections for the sprayer please refer to instructions provided by the sprayer manufacturer.

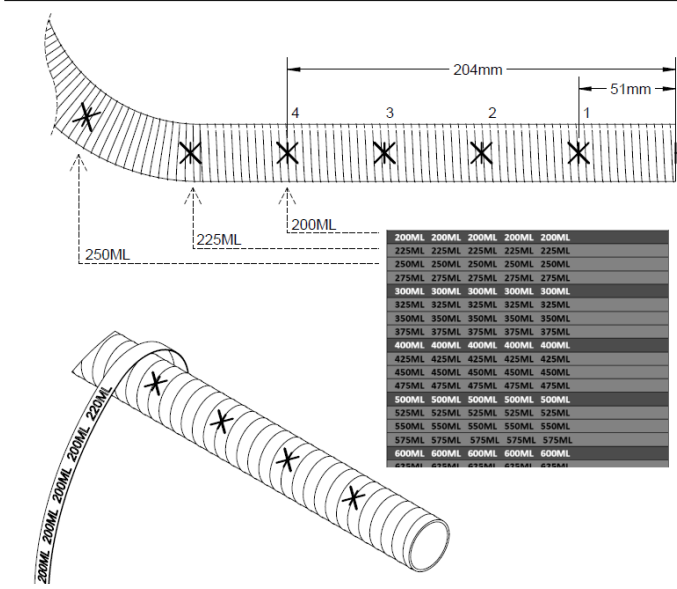
▲ WARNING The connection of Cleanload Nexus must be done by professionals who are trained in repair and maintenance of the sprayer.

▲ WARNING If Cleanload Nexus is not mounted correctly, it may result in malfunctioning, spillage of agrochemical and contamination of the operator and/or environment.

5.3 Connecting the Suction Hose

- **▲WARNING** Cleanload Nexus must always be connected to the sprayer suction to ensure effective emptying.
- It is recommended that the minimum system vacuum suction is -0.75 bar.
- Where it is planned to use the Suction Hose for measuring part containers, the hose should have sufficient length so that it can be raised above the Suction Hosetail Outlet when measuring and lowered again for emptying.

- **▲WARNING** Always ensure that the Suction Hose is secured and does not present a hazard when transporting.
- **▲WARNING** Replace the Suction Hose if it is damaged or badly stained.



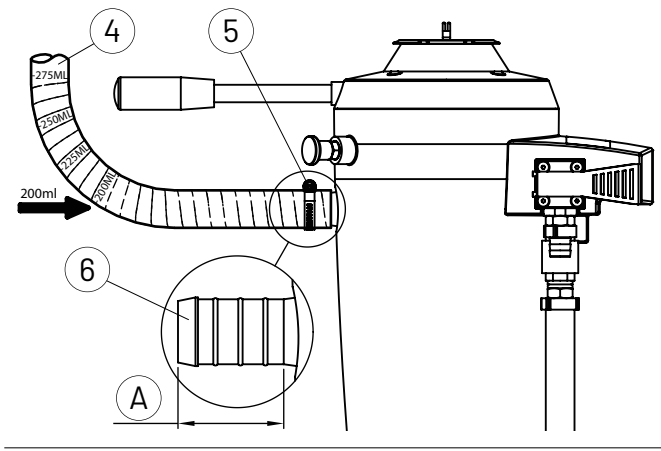
The Suction Hose is marked with stars (*). The distance between stars represents 25 ml of liquid volume.

For convenience, a set of stickers is provided that can be fixed to the Suction Hose to show the measured volume.

To apply a sticker, attach the side of the label with no text first, then wrap the label back over itself and secure.

Attach the first sticker marked '200 ml' so that it is covering the * that is **4th from the end of the hose** as shown. 200 ml is the lowest volume that can be measured.

Attach the other stickers aligned on the printed stars sequentially up the length of the hose from the first 200 ml sticker.

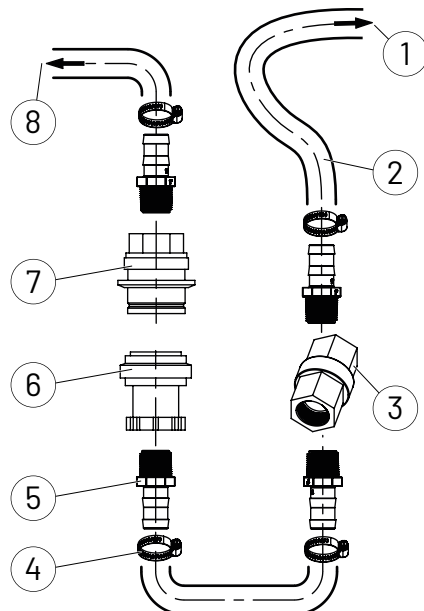


Place a hose clamp (Ref. 5) over the Suction Hose.

Connect the end of the labelled Suction Hose (Ref. 4) that reads "200ml" to the Suction Hose Outlet (Ref. 6).

Push the Suction Hose (Ref. 4) firmly onto the Suction Hosetail Outlet (Ref. 6) so that it is fully engaged to the Hosetail Length (A). This is necessary for accurate measuring.

Secure the hose clamp (Ref. 5).



The other end of Suction Hose should be connected to the suction line that supplies the sprayer tank.

▲WARNING A suitable 1" check valve must be fitted in the suction line to prevent the risk of backflow of line contents into the Cleanload Nexus. The check valve should be fitted after the measuring portion of the hose using suitable Hosetail adaptors/clamps as shown in the diagram.

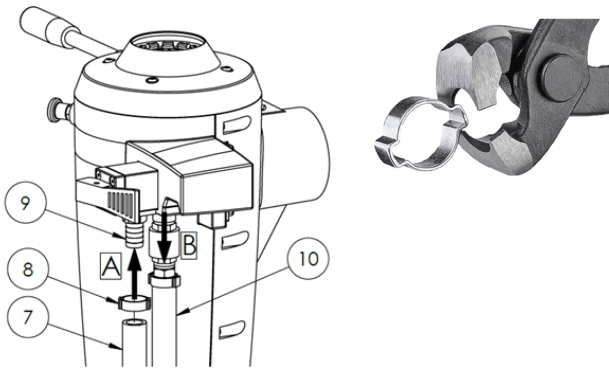
After rinsing, the Suction Hose should always be empty between the check valve and the Cleanload Nexus.

The diagram shows an example of a temporary suction connection using suitable male and female dry break connectors. These connectors are not included.

1	To CLEANLOAD NEXUS	5	1" Hosetail connector
2	Calibrated part of hose	6	Female dry break connector
3	Check valve	7	Male dry break connector
4	Hose clamp	8	To sprayer suction

5.4 Connecting the Rinse Water Supply Hose

- Cleanload Nexus must be connected to a clean water source.
- Where possible use at least 5 bar rinse water pressure for optimum container cleaning.
- Always ensure that the Rinse Water Supply Hose is secured and does not present a hazard when using or transporting the Cleanload Nexus.



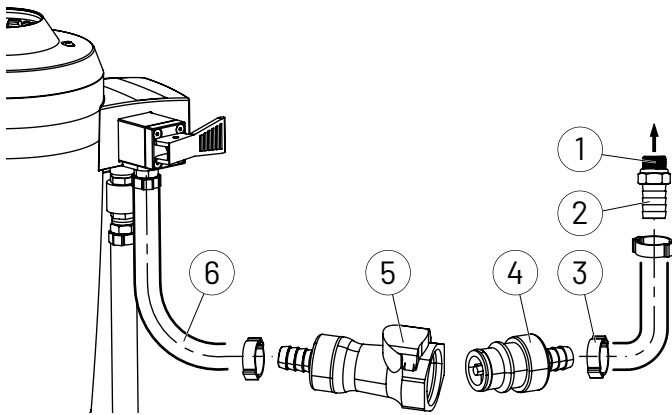
The Rinse Water Supply Hose (Ref. 7) connects to the Rinse Water Supply Hosetail (Ref. 9) at position A.

Cleanload Nexus is supplied with the Internal Rinse Water Hose (Ref. 10) and a check valve already connected at position B.

Place one of the Ear Clamps (Ref. 8) over the Rinse Water Supply Hose (Ref. 7) and push the hose securely onto the Rinse Water Supply Hosetail (Ref. 9). Use a crimping tool to securely connect the hose.

▲WARNING Ensure the hose is securely fitted before turning on the water supply.

A Hosetail with 3/8" thread and a 22-15 mm ear clamp are provided to connect the other end of the Rinse Water Supply Hose (Ref. 7) to a suitable external supply.



The water can be drawn from either the same supply as the induction bowl or from an alternative clean water supply.

The diagram shows an example of a temporary rinse water supply connection using male and female dry break connectors. (not included).

1	To clean water source	4	Male dry break connector
2	Hosetail connector	5	Female break connector
3	Hose clamp	6	Rinse water hose

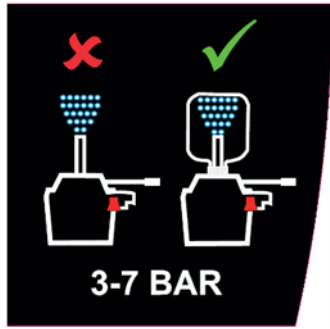
6. OPERATION

6.1 Preparation for use

- Set-up the tractor/sprayer in the same way as when filling via the induction bowl (refer to instructions from your sprayer manufacturer).
- The Cleanload Nexus Operating handle must always be closed (handle fully to the left) when a product container is not attached. This ensures that all valves inside the Cleanload Nexus are closed and no air or liquid movement can occur.
- Ensure that all sprayer suction available is allocated to the Cleanload Nexus suction line. For example by shutting off the suction to the induction bowl with a suitable valve.
- Start the sprayer filling pump to create suction.
- Check that clean water is connected to Cleanload Nexus, but DO NOT operate the Rinse Water Lever at this stage.



▲WARNING The suction must always be turned on and drawing from the Cleanload Nexus before a container is attached.

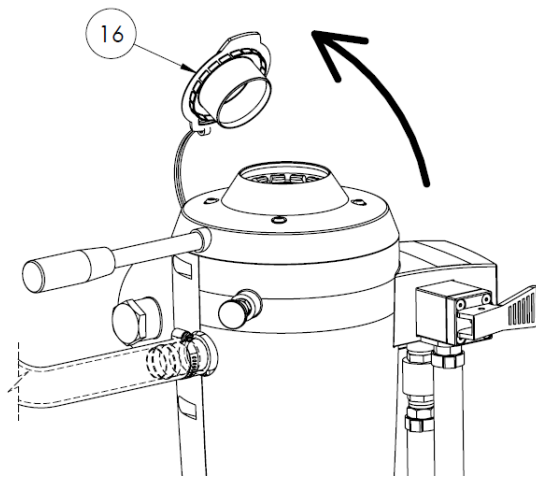


▲WARNING Do not pull or push the Rinse Water Lever when there is no container attached and/or when not in the correct rinsing positions.

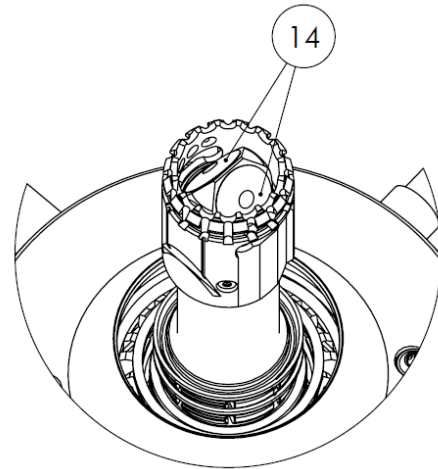


▲WARNING When rinsing, only rotate the container to the left (clockwise). If unsure which way to turn, refer to the label that is fixed to the Cleanload Nexus.

6.2 To secure a container to the Cleanload Nexus.



Remove the Top Cover (Ref. 16) from the Cleanload Nexus.



▲CAUTION Check that the Umbrella Valves are in place before use.

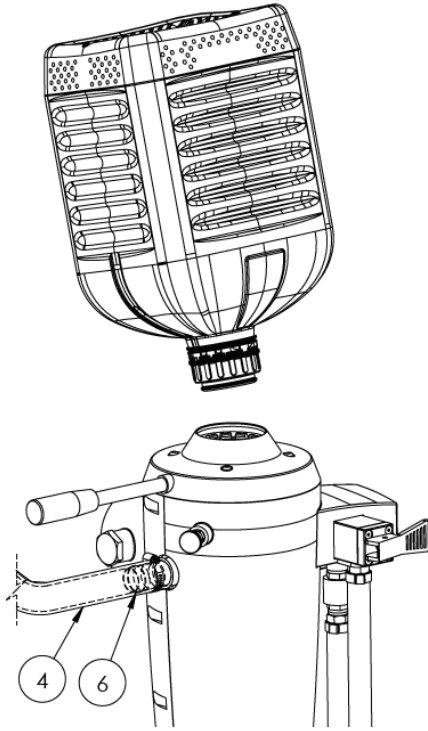


▲WARNING Ensure that the easyconnect cap is tightly screwed onto the container and there is no risk of leakage.

Remove the dust cover from the easyconnect cap.



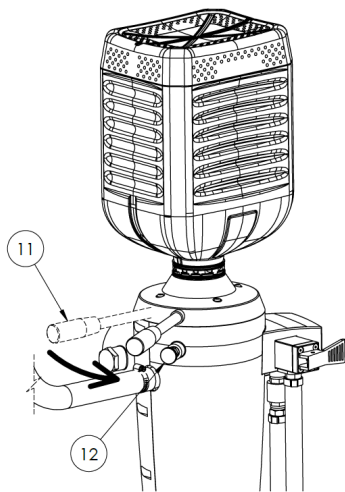
▲WARNING Visually check that the easyconnect inner plug is in place (but do not push it!).



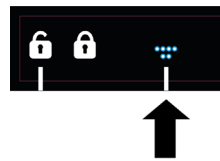
Invert the container and place it onto the Cleanload Nexus as shown. The flange on the easyconnect cap should locate in place, support the container with one hand.

▲WARNING

Check once again that the Suction Hose (Ref. 4) is securely fitted to the Outlet Hosetail (Ref. 6), and that suction is drawing from the Cleanload Nexus.



To secure the container to the Cleanload Nexus, move the Operating Handle (Ref. 11) towards the right (anticlockwise) until it passes the closed padlock symbol and stop when it is aligned with the Lock Release Knob (Ref 12) and the droplet image as shown:



The container is now securely connected to the Cleanload Nexus. It should be possible to hear the suction at this handle position.

▲CAUTION Do not leave Cleanload Nexus in this position for an extended period due to the risk of introducing air to the tank and causing foaming.

Depending on whether the container will be partially emptied (section 6.3) or completely emptied (section 6.4) a different procedure is now required.

6.3 Procedure for partially emptying a container

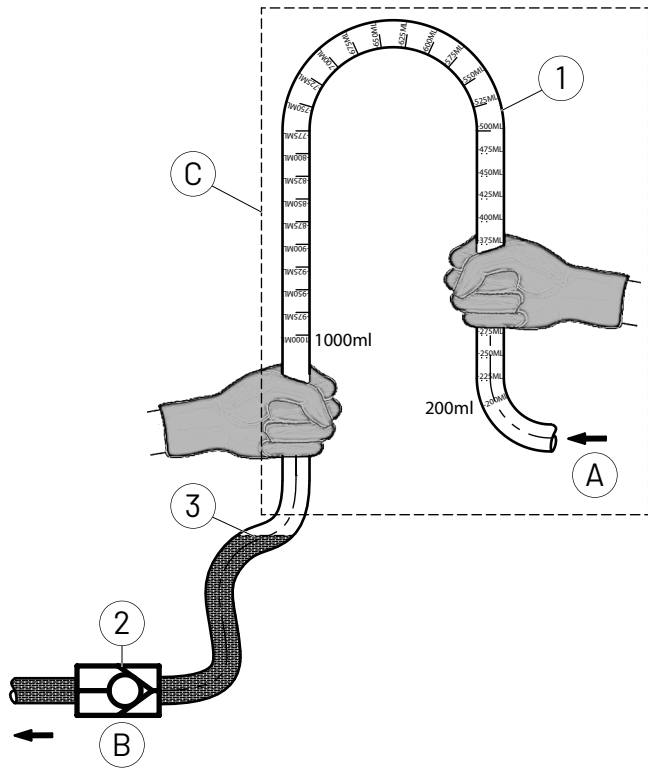
Always partially empty the first container in a spray load rather than the last. If there is any problem with the measurement of this container it may be fully discharged and the measurement carried out on the next container.

▲CAUTION If there is any error or issue encountered during measurement, return the handle to the empty jug marking shown.



At this point, the outlet from the container is closed and the best option can be determined.

For advice on what to do if the plug on the easyconnect cap becomes dislodged from the probe during measuring see Section 9(8; easyconnect cap) on page 24.

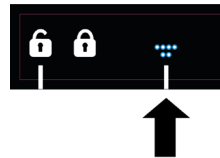


NOTE: Prior to measuring chemical, it is recommended to practice controlling the flow using a container filled with water.

At very high suction, the flow can prove difficult to control, so it is recommended to reduce the pump speed thereby decreasing suction. The optimum suction for partial dosing is -0.4 bar.

To measure using the scale marked on the Suction Hose, first ensure the hose is fully drained of any liquid.

With suction drawing from the Cleanload Nexus and the Operating Handle at the Lock Release Knob position and the droplet image as shown:

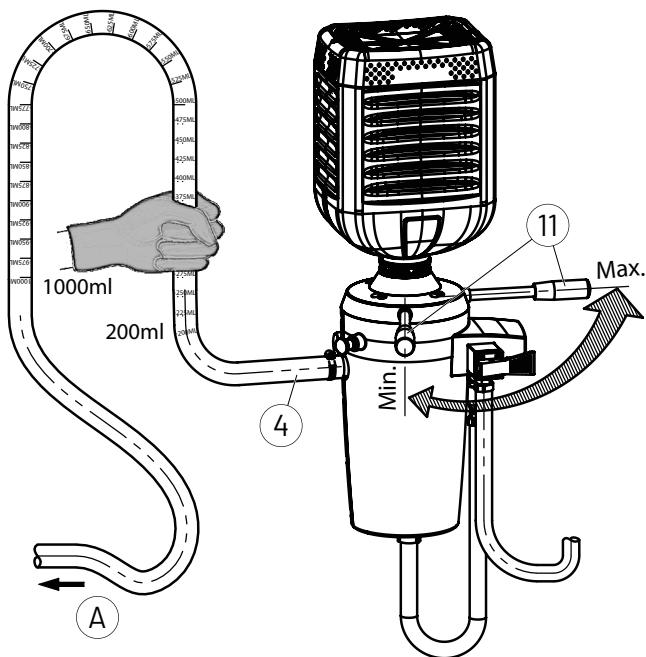


Lower the Suction Hose below the Hosetail Outlet until any residual liquid (Ref 3) drains beyond the check valve (Ref 2).

Then raise the Calibrated Suction Hose (Ref. 1) back above the Hosetail Outlet and identify the required calibration marking on the hose, hold the hose in the left hand at that calibration mark.

A - From Cleanload Nexus

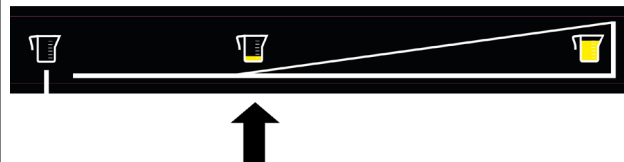
B - To sprayer suction



Now take hold of the Operating handle (Ref.11) with the right hand.

IMPORTANT: Prior to initiating flow, keep the Suction Hose held up above the Cleanload Nexus Hosetail Outlet (Ref. 4) as shown so that the liquid level never drops.

To initiate partial emptying, carefully rotate the Operating Handle (Ref. 11) to the beginning of the measuring zone as shown by the arrow.



The exact point that flow begins will depend on the sprayer set up. Move the handle slowly and incrementally while closely observing the outlet for flow to begin.

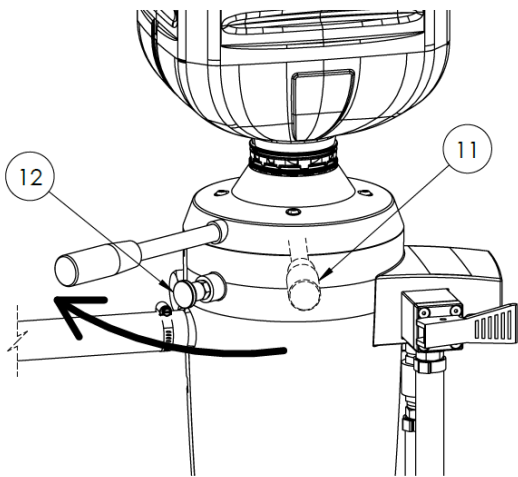


NOTE: Be patient as the flow will begin slowly and can start abruptly if the handle is rotated too far.

Watch the level rise up the Suction Hose, keeping the hose in a raised position to prevent air pockets forming.

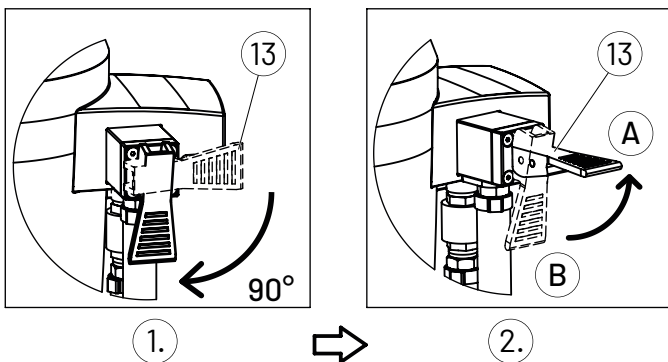
As the liquid approaches the desired calibration mark, move the handle back to the left. The flow stops when the handle passes the beginning of the measuring zone.





Once the desired quantity has been dispensed, move the Operating Handle (Ref. 11) back to the Lock Release Knob (Ref. 12), when you will hear it engage and it will not rotate any further.

CAUTION Hold the Suction Hose tightly at arms length because kickback is likely.



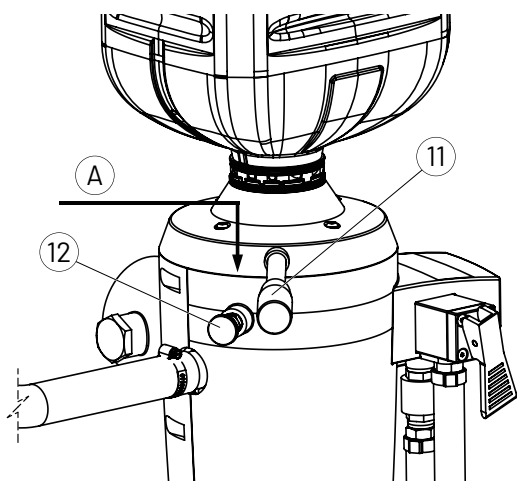
At this point, the outside of the easyconnect cap must be rinsed.

CAUTION This rinse procedure also removes chemical residue from the internal parts of Cleanload Nexus, so it must always be carried out correctly to eliminate the risk of contamination.

To activate rinse, rotate the Rinse Water Lever (Ref. 13) 90 degrees clockwise (1) and raise it (2) to release rinse water.

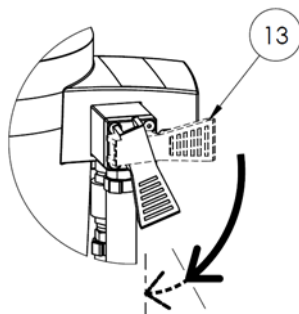
NOTE: when the Rinse Water Lever is in the raised 'ON' (position 1), the Operating Handle cannot be moved.

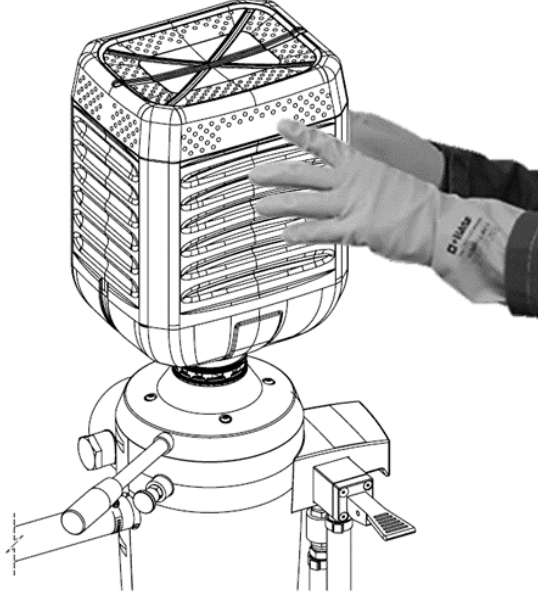
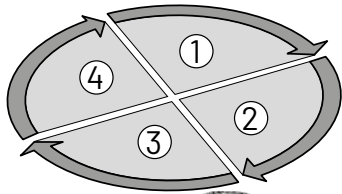
A	ON	B	OFF
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NOTE: If the Operating Handle (Ref. 11) is NOT in the correct rinse position (A), the Rinse Water Lever (Ref. 13) will rotate partially but not engage or operate rinse.

CAUTION The Rinse Water Lever should turn and engage smoothly. If it does not, then check the Operating Handle is aligned with the Lock Release Knob. Never attempt to force the Rinse Water Lever.



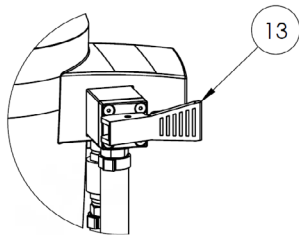


Activate rinse for 10 seconds then rotate the container by 90 degrees to the left (clockwise) and then release the Rinse Water Lever. Repeat 3 more times for a total of 40 seconds for optimum rinsing of the outside of the easyconnect cap and the inside of the Cleanload Nexus.

▲ CAUTION Rotate the container only to the left (clockwise).

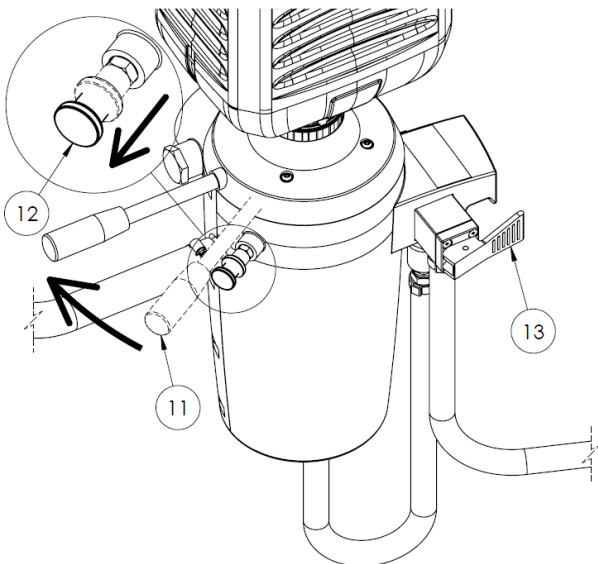
▲ CAUTION Never rotate the container anti-clockwise as the easyconnect cap may become loose.

1-4 10 seconds at each position.



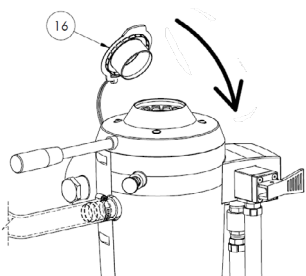
After cleaning the outside of the easyconnect cap and inside of the Cleanload Nexus, release the Rinse Water Lever (Ref. 13).

Ensure that the Rinse Water Lever has returned to the horizontal position shown.



The container can now be released by pulling the Lock Release Knob (Ref. 12) and at the same time moving the Operating Handle (Ref. 11) to the left.

Secure the partially empty container with the other hand to keep it stable prior to lifting it off.



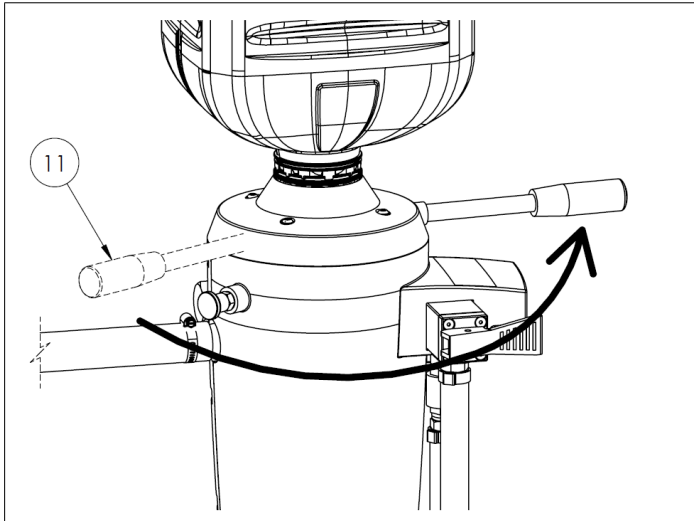
Put the dust cover back on the easyconnect cap for protection during storage.

If this is the last container, ensure that the Cleanload Nexus cleaning procedure detailed in section 7.1 is completed.

Replace the Top Cover (Ref 16) onto the Cleanload Nexus before beginning spraying operations.

The remaining contents of the partially used container can be used in the future with Cleanload Nexus, in the same way as a new container.

6.4 Procedure for completely emptying a container



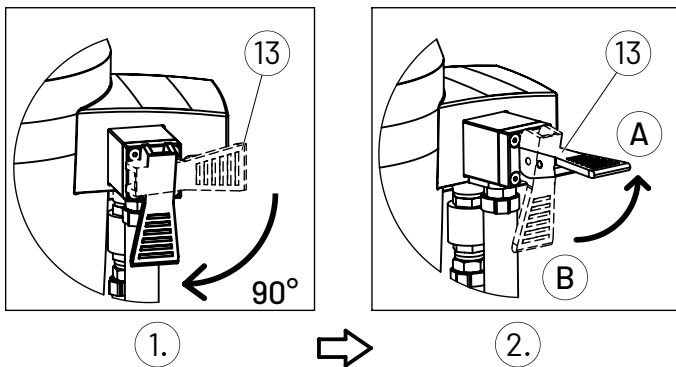
After following the instructions in sections 6.1 and 6.2.

Turn the Operating handle (Ref. 11) all the way to the right (anti clockwise).



This will quickly drain the container.

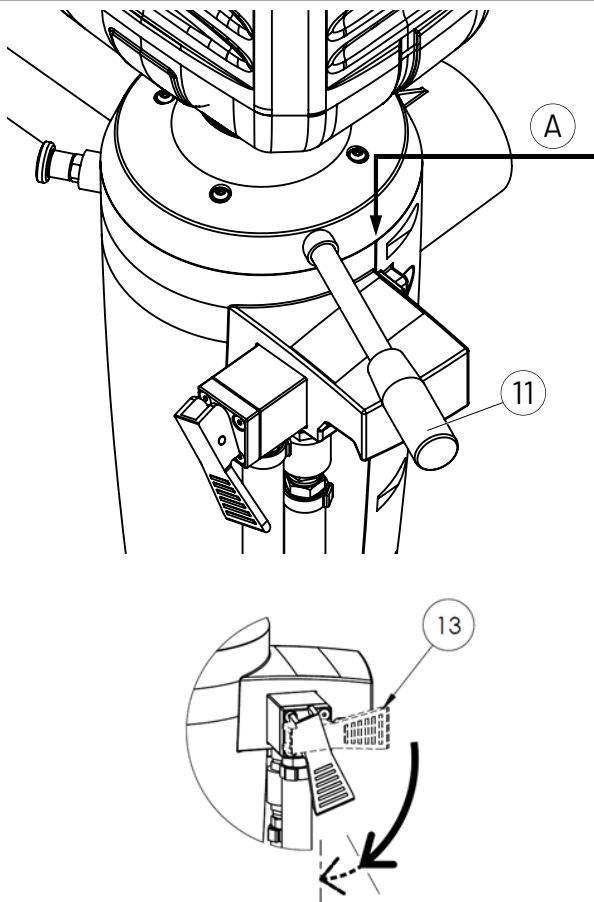
When the container is empty, the inside of the chemical container can be rinsed.



To activate rinse, rotate the Rinse Water Lever (Ref.13) 90 degrees clockwise (step 1) and raise it to release rinse water (step 2).

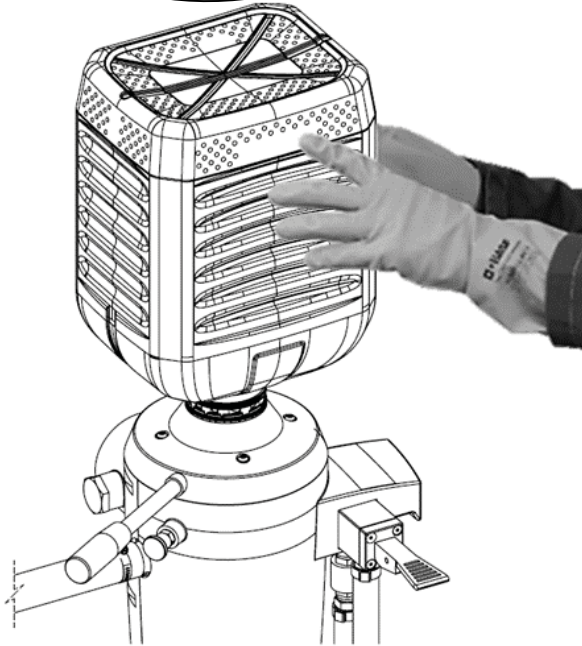
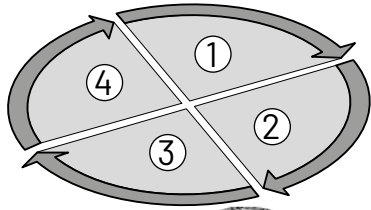
NOTE: When the Rinse Water Lever is in the raised 'ON' (position 1), the Operating Handle cannot be moved.

A	ON	B	OFF
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NOTE: The Operating Handle (Ref. 11) must be at the correct rinse position (fully to the right at position A). If the handle is not aligned correctly the Rinse Water Lever (Ref. 13) will rotate partially but it will not be possible to raise it or operate rinse.

CAUTION The Rinse Water Lever should turn and engage smoothly. If it does not, then check the Operating Handle is fully to the right. Never attempt to force the Rinse Water Lever.



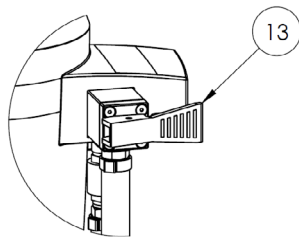
Activate rinse for 15-20 seconds then rotate the container 90 degrees to the left (clockwise) and then release the Rinse Water Lever. Repeat 3 more times for a total of 60-80 seconds.

Adjust the rinsing time to ensure that the container is visually clean. The rinse time required will vary according to the container and chemical used.

CAUTION Only rotate the container in a clockwise direction.

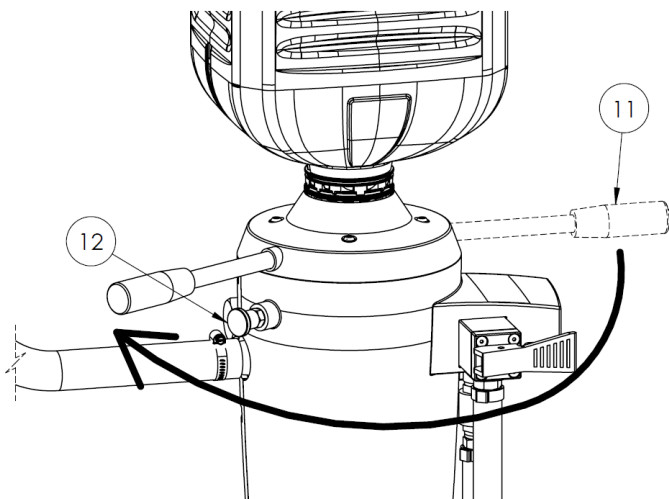
CAUTION Never rotate the container anti-clockwise or the easyconnect cap may become loose.

1 - 4	15-20 seconds at each position.
-------	---------------------------------

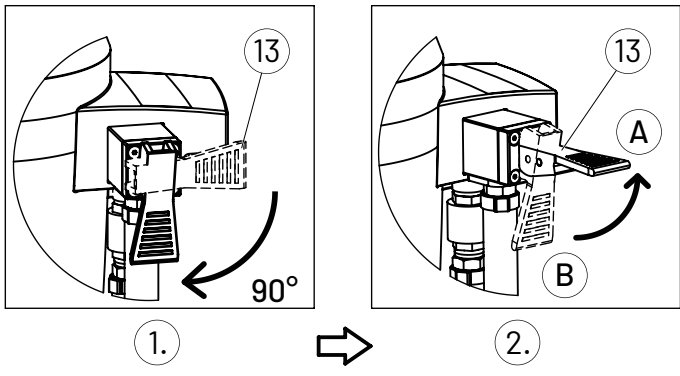


After cleaning the inside of the container, release the Rinse Water Lever (Ref. 13).

Ensure that the Rinse Water Lever has returned to the horizontal position shown.



Once the container is empty and clean, move the Operating Handle (Ref. 11) back to the Lock Release Knob (Ref. 12), when you will hear it engage and it will not rotate any further.



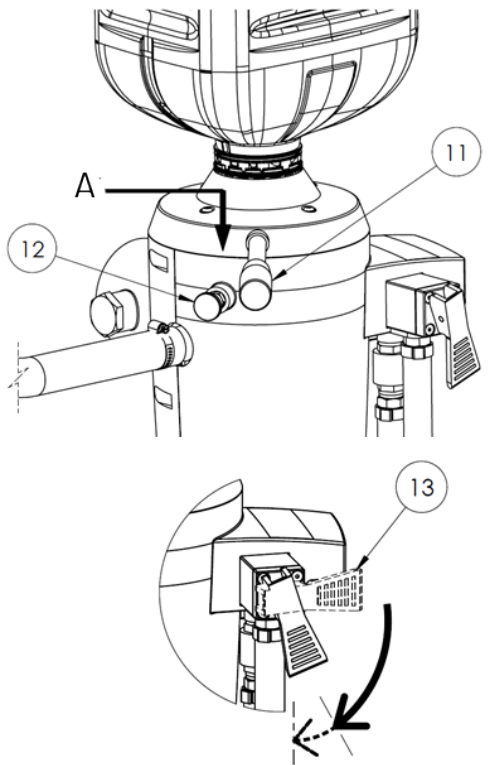
At this point, the outside of the easyconnect cap must be rinsed.

CAUTION This rinse procedure also removes chemical residue from the internal parts of Cleanload Nexus, so it must always be carried out correctly to eliminate the risk of contamination.

To activate rinse, rotate the Rinse Water Lever (Ref. 13) 90 degrees clockwise (1) and raise it (2) to release rinse water.

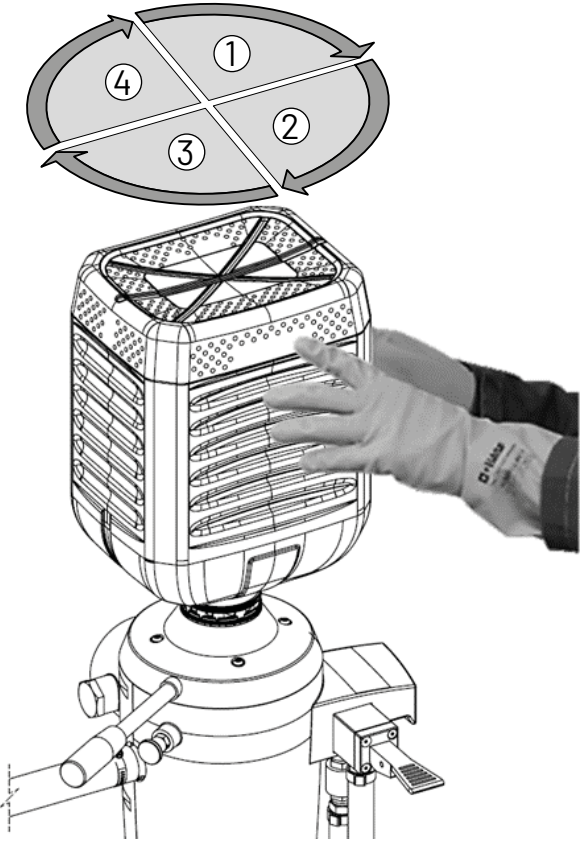
NOTE: when the Rinse Water Lever is in the raised 'ON' (position 1), the Operating Handle cannot be moved.

A	ON	B	OFF
---	----	---	-----



Note: If the Operating Handle (Ref. 11) is NOT in the correct rinse position (A), the Rinse Water Lever (Ref. 13) will rotate partially but not engage or operate rinse.

CAUTION The Rinse Water Lever should turn and engage smoothly. If it does not, then check the Operating Handle is aligned with the Lock Release Knob. Never attempt to force the Rinse Water Lever.



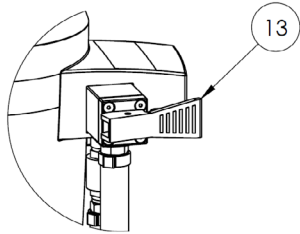
Activate rinse for 10 seconds then rotate the container by 90 degrees to the left (clockwise) and then release the Rinse Water Lever. Repeat 3 more times for a total of 40 seconds for optimum rinsing.

CAUTION Only rotate the container in a clockwise direction.

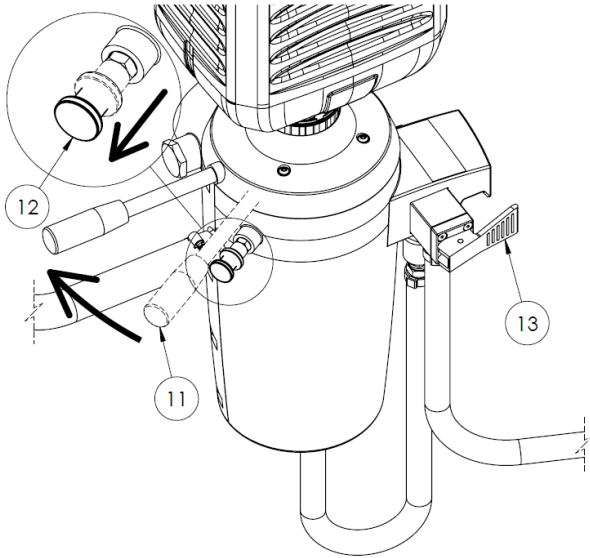
CAUTION Never rotate the container to the right (anti-clockwise) or the easyconnect cap may become loose

1 - 4	10 seconds at each position.
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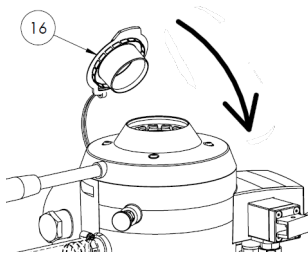
After cleaning the outside of the easyconnect cap and internal parts of Cleanload Nexus, release the Rinse Water Lever (Ref. 13).
 Ensure that the Rinse Water Lever has returned to the horizontal position shown.



The container can be released by pulling the Lock Release Knob (Ref. 12) and at the same time moving the Operating Handle (Ref. 11) to the left.



Detach the empty and clean container from the Cleanload Nexus.
 Prior to disposal the container can be pushed onto a drip tray spike, this will push the plug into the container and allow any residual rinse water to drain out.



If this is the last container, ensure that the Cleanload Nexus cleaning procedure detailed in section 7.1 is completed.
 Replace the Top Cover (Ref 16) onto the Cleanload Nexus before beginning spraying operations.

7. CLEANING & MAINTENANCE

7.1 Cleaning Cleanload Nexus

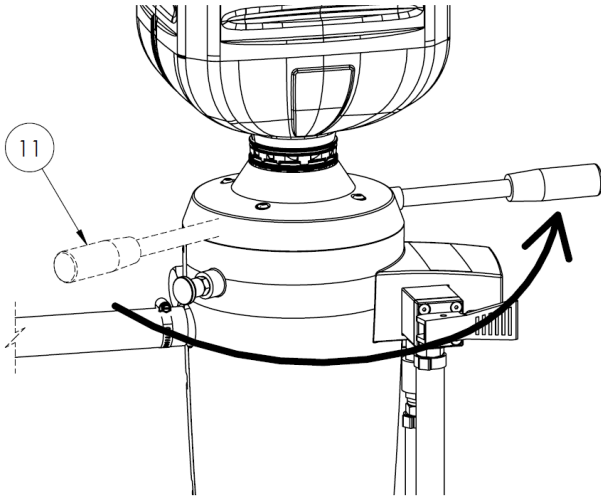
IMPORTANT: The following procedure must be followed after filling the sprayer to ensure that the internal parts of the Cleanload Nexus and the Suction Hose are kept clean and free of chemical residues.

WARNING When cleaning Cleanload Nexus, always wear the recommended personal protective equipment.

NOTE: Cleanload Nexus is not automatically cleaned when using any of the sprayers cleaning programs.

Pay special attention to cleaning when changing crops and/or chemical product.

Be careful when disconnecting Cleanload Nexus and hoses from the sprayer. Residues might be left in the hoses and on connections.



Before cleaning, ensure the clean water supply is connected and that the suction is on and drawing from the Cleanload Nexus.

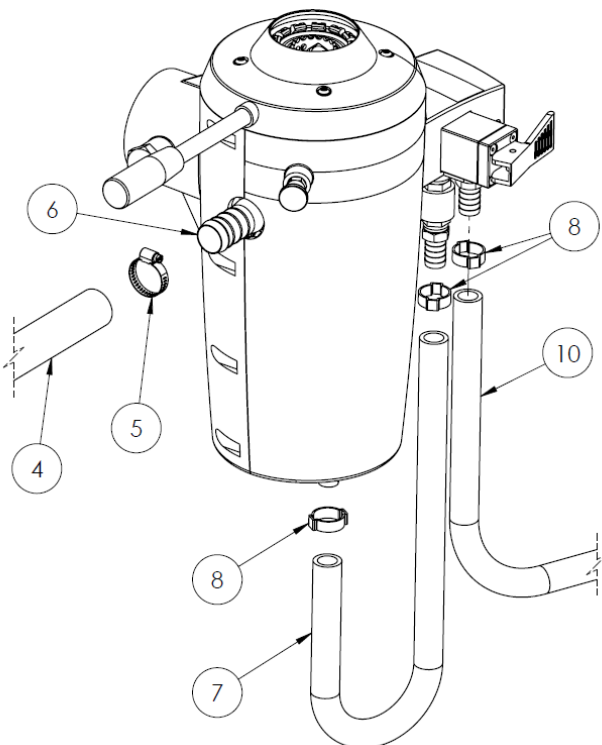
Fill a 10-litre container with clean water or a suitable cleaning liquid and securely fit a clean easyconnect cap (one cap is supplied for this purpose).

Secure the container onto the Cleanload Nexus as described in Section 6.2 of this manual.

Fully discharge the contents from the container and follow the rinsing procedure described in Section 6.4.

NOTE: Ensure that this final rinse procedure is carried out with CLEAN water. Failure to do this could result in contamination remaining in the Cleanload Nexus and hoses and damage to the Cleanload Nexus.

7.2 Storing Cleanload Nexus



It is recommended that Cleanload Nexus is disconnected and removed from the sprayer or mounting location when it is not in use.

Prior to removal:

Ensure that the Cleanload Nexus has been cleaned according to the instructions in Section 7.1.

Disconnect the Suction Hose (Ref.4) and Rinse Supply Hose (Ref. 7 & 10). The ear clamps that secure the rinse hose can be removed using a bolt cutter.

NOTE: New ear clamps (22-25mm) will be required to reconnect the rinse hoses.

To winterize, discharge a container of anti-freeze through the Cleanload Nexus. Collect excess anti-freeze as it flows from the Hosetail Outlet (Ref. 6) and store / dispose of in accordance with guidelines.

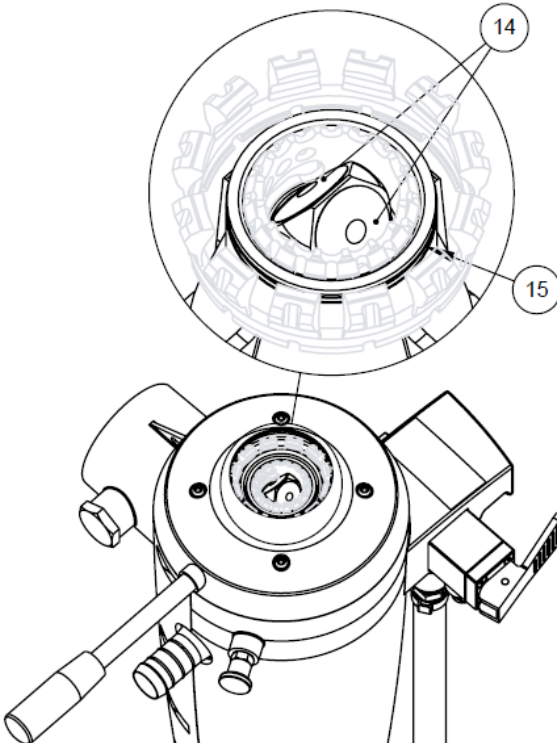
When storing Cleanload Nexus:

- Ensure that it is secure and inaccessible to children and animals.
- It is always stored in frost free conditions.

7.3 Maintenance of Cleanload Nexus

ITEM	Type	SERVICE & INSPECTION PERIOD			
		Before every Use	After filling the sprayer	Annually	Before Storing
Orange Umbrella Valves at the top of the Cleanload Nexus probe are in place and show no visible damage (see 7.4 below).	Inspection	X	X		
No damage or leaks are visible to hoses, fittings and couplings	Inspection	X			
Suction is connected and drawing from Cleanload Nexus in the specified range. Rinse water is connected and operating at the specified pressure.	Inspection	X			
The containers that will be used are factory fitted with easyconnect caps and have not been previously unscrewed or otherwise modified.	Inspection	X			
The Cleanload Nexus mounting point is secure on the sprayer or stand and no damage or wear is evident.	Inspection	X			
The Operating Handle moves smoothly without any noise or vibration.	Inspection		X		
Connect a 10L container fitted with an easyconnect cap and filled with clean water or a suitable cleaning liquid. Observe for leaks from the Cleanload Nexus and check that transfer is smooth and progressive in the measuring zone (see sections 7.1 and 7.2 above).	Maintenance and Inspection		X		X (with antifreeze solution)
Inspect for any visible chemical residue contamination at the top of the Cleanload Nexus, hoses, fittings and couplings and if necessary rectify with the cleaning procedures described in section 7.1.	Inspection		X		
Always ensure to refit the Cleanload Nexus Top Cover after use.	Refit		X		
Annual service carried out by a trained and qualified service agent. ▲ CAUTION This is essential to maintain internal o-ring condition.	Service			X	

7.4 Inspection and replacement of Umbrella Valves



Inspect the orange Umbrella Valves (Ref. 14) prior to every use. Ensure that they are in place, sitting flush against their seating and that there is no damage, dirt or chemical residue apparent.

Visually check the top o-ring (Ref. 15) that seals the easyconnect cap against the Cleanload Nexus. It must be in place and not damaged.

▲WARNING These parts must be in place and in good condition before Cleanload Nexus is used.

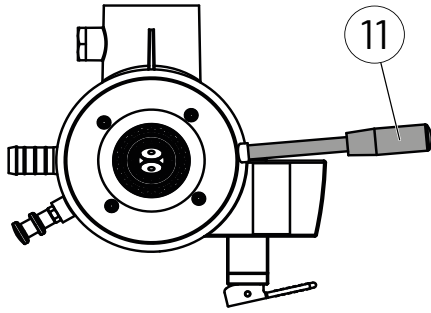
Umbrella Valves may be damaged or displaced during use. If this happens they should be replaced.

2 spare Umbrella Valves are provided with each new Cleanload Nexus and are also available in pairs as a spare part (P/N PNRNEX-KITUMB).

NOTE: If Umbrella Valves are missing consider investigating whether they are trapped in the suction line at check valves or dry break couplings and remove them.

If you are in any doubt about the reason for loss of the Umbrella Valves or how to carry out this replacement procedure consult a Cleanload Nexus service agent.

Instructions to replace Umbrella Valves

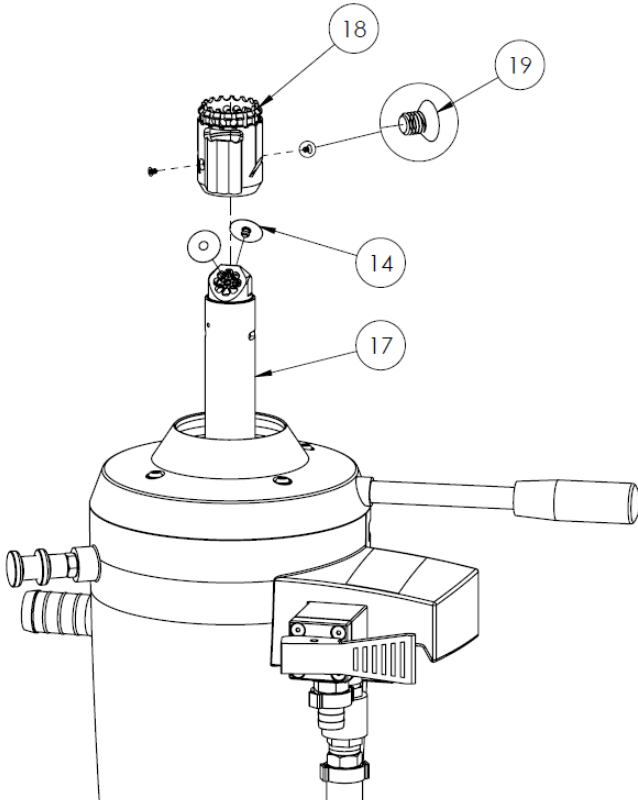


This operation can be carried out with the Cleanload Nexus fitted in position and with the Suction Hose and Rinse Water Hose connected to the sprayer.

▲WARNING Always ensure that suction and rinse supplies cannot be accidentally operated during this procedure.

Turn the Operating Handle (Ref. 11) fully to the right (anti-clockwise) as shown.

This will raise the Probe Head.

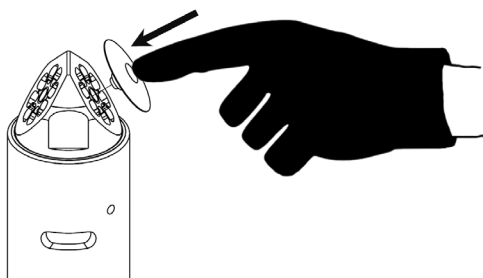


Using a T10 Torque driver, remove the 2 screws (Ref. 19) holding the Probe Head (Ref. 18) to the probe assembly (Ref. 17).

Remove the Probe Head from the probe assembly, this will expose the two orange Umbrella Valves.

Remove both Umbrella Valves (Ref. 14) from their mountings by pulling with gloved fingers, ensuring that the gloves are clean. Discard the used Umbrella Valves.

Inspect the faces of the valve mountings to ensure they are free from debris, dirt and chemical residue before proceeding.



Take the new Umbrella Valves and place the protruding mounts into the corresponding central hole in each valve mounting.

Place your clean gloved finger centrally over the top of each valve and push firmly into position.

The valves should be securely retained with their edges flush to the metal surface. If in doubt, repeat with another Umbrella Valve.

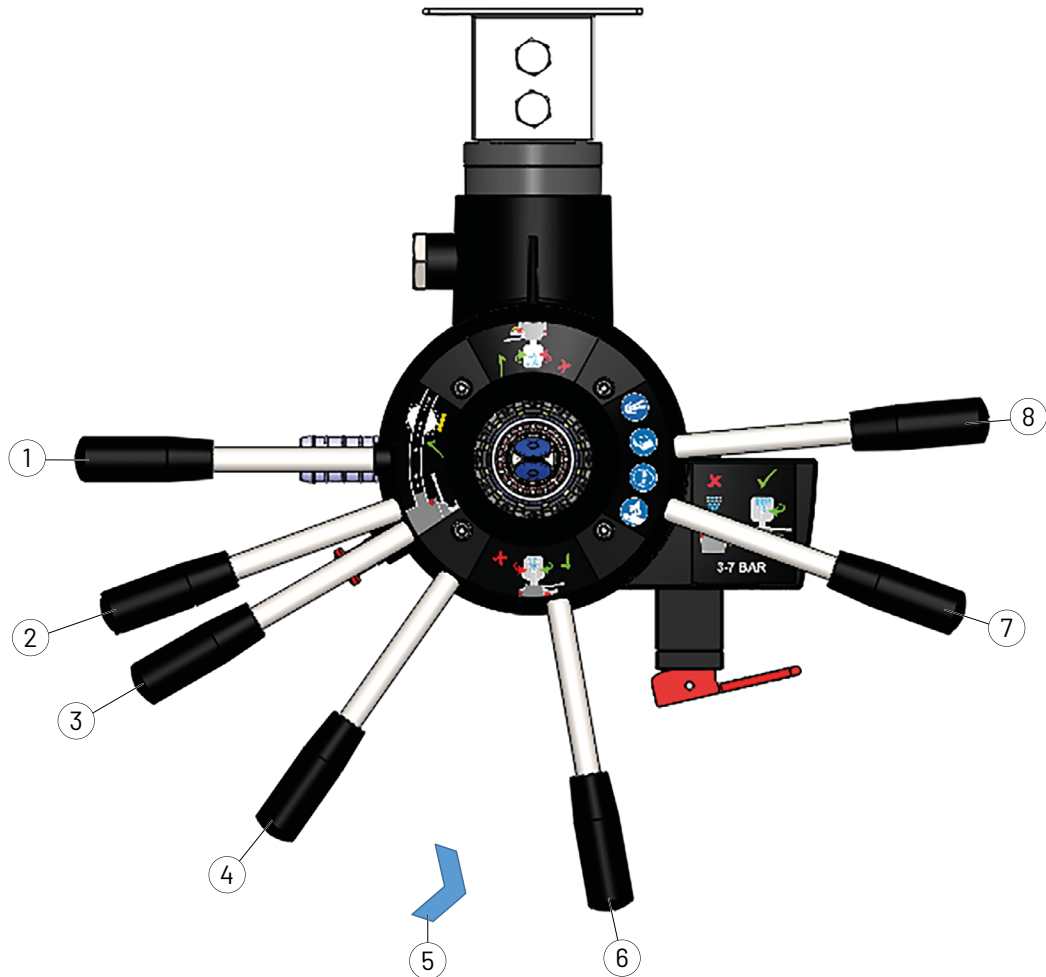
Reinsert the Probe Head (Ref 18) and screw in the 2 Torx screws (Ref. 19). It helps to line up the holes on the Probe Head with the holes in the probe assembly before placing this part back in place.









▲CAUTION Do not overtighten these screws.

After screwing the screws back, rotate the handle back to the start position to finish the procedure.

If you have any concerns about effective operation, for service, spare parts and service advice contact your sprayer dealer or service agent.

8. OPERATING HANDLE FUNCTIONS



1		0° CONTAINER LOOSE SUCTION CLOSED	5		PROBE ENGAGED WITH PLUG IN CAP AND MOVES IT UPWARDS INTO CONTAINER SUCTION CLOSED
2		25° CONTAINER SECURE SUCTION CLOSED	6		110° SUCTION OPENS PROGRESSIVELY FROM HERE
3		30° CAP RINSE SUCTION OPEN	7		160° SUCTION FULLY OPEN
4		50° SUCTION CLOSED	8		185° CONTAINER RINSE POSITION SUCTION OPEN

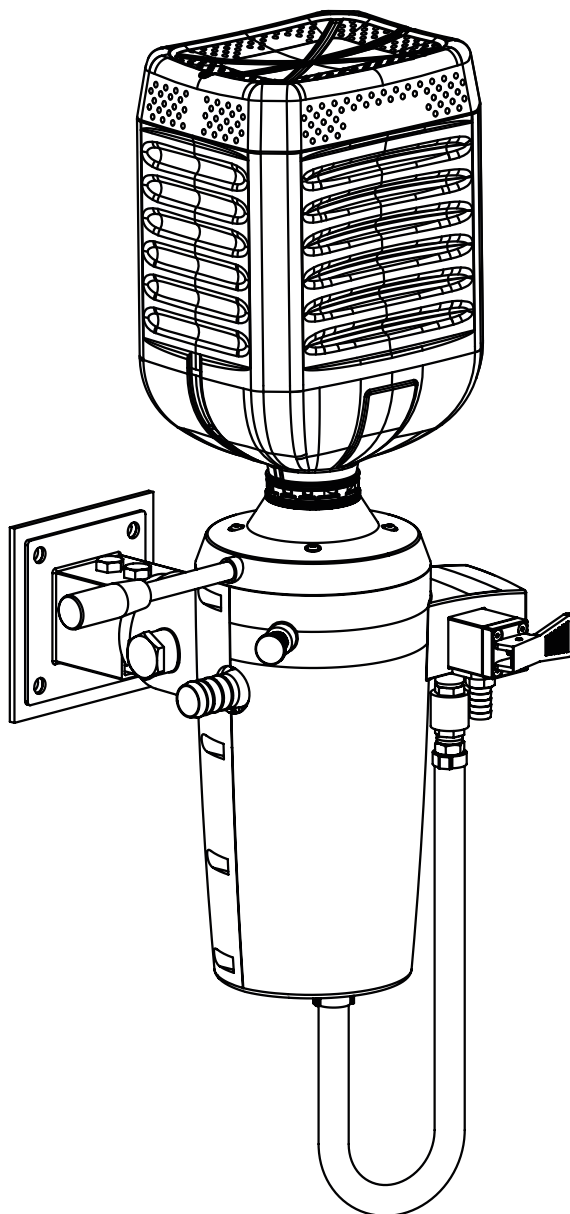
9. TROUBLESHOOTING

In the event of malfunction or a fault developing, please immediately stop using the Cleanload Nexus and seek advice. Below are some problems that may be encountered and their possible causes.

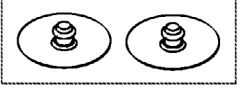
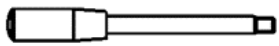

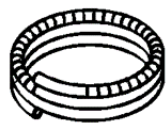
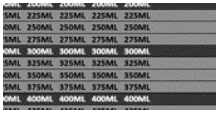
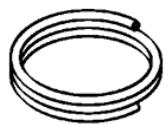

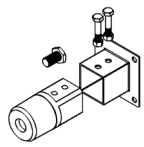
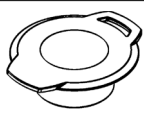

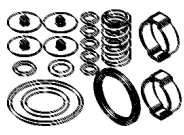
	General Function of Cleanload Nexus	
	Slow or incomplete emptying due to low suction.	Insert a suction gauge in the line to check suction pressure, if necessary review the inductor (venturi) specification of the sprayer.
	Poor rinsing of container or cap.	Rinse pressure must be a minimum 3.5 bar.
	① Operating Handle	
	Hard to turn.	Consult a trained service technician.
	Will not turn at all.	Check rinse water lever (6) is not engaged.
		Check chemical residue and cleaning regime or consult a trained service technician.
	Makes a noise.	Consult a trained service technician.
	Flow is hard to control when partial dosing.	Reduce sprayer suction pressure, e.g. by adjusting the pump speed, the optimum suction for dosing is -0.4 bar.
	② Hosetail Outlet	
Leak from Hosetail.	Secure hose clamp.	
Foaming in suction line.	Check for air leaks.	
③ Lock Release Knob		
Fails to stop Operating Handle on return.	Consult a trained service technician.	
Fails to release operating handle on return.	Consult a trained service technician.	
④ Outer Casing		
Leak through outer casing, seen at the base.	Rinse water, constant flow.	Rinse valve fault, check the four retaining screws (A) for tightness or consult a trained service technician.
	Rinse water, intermittent.	Back flow from the Suction Hose may be escaping into casing. Ensure that a Check Valve is installed in the suction line.
	Is it chemical?	Immediately stop using and consult a trained service technician.
⑤ Rinse Water Hoses		
Leaking.	Check and tighten connections.	
⑥ Rinse Water Lever		
Will not engage.	Check Operating Handle is in one of the 2 rinse positions or or consult a trained service technician.	
Will not disengage.	Consult a trained service technician.	
⑦ Top of Coupler		
Liquid emerges or pools around the top of the probe head when no container is attached.	Constant when there is rinse water supply.	Rinse valve fault, check the four retaining screws (A) for tightness or consult a trained service technician
	Intermittent, only when suction is switched off.	Back flow from the Suction Hose may be escaping into casing. Ensure that a Check Valve is installed in the suction line.
⑧ Easyconnect Container		
After measuring a partial container, and when rinsing the outside of the cap, rinse water is seen to enter the container.	The plug from the easyconnect cap has become dislodged and entered the container	Move the Operating Handle to closed position then EITHER: Fully discharge the container by moving the Operating Handle fully to the right and then rinse as usual. OR to retain the remaining contents inside the container, with the container still locked onto the Cleanload Nexus invert both the Cleanload Nexus and the container to drain the contents back into the container which can then be carefully removed.

9.1 Fault recording sheet

Use this sheet to mark and describe any faults you experience and send it to your Cleanload Nexus Service Agent.



10. SPARE PARTS LIST

SPARE PARTS AVAILABE FROM PENTAIR	
	P/N: PNRNEX-KITUMBSP
	CTS Umbrella Valve Kit (2 valves)
	P/N: 2420-0047SP Operating Handle CTS
	P/N: 2420-0046SP
	Rinse Valve Lever CTS
	P/N: 2900-0111SP
	Hose Metering CTS (1 inch x 4m).
	P/N: 6030-0008SP
	Labels for Metering Hose CTS.
	P/N: 2900-0112SP
	Hose Rinse Water Supply CTS (16mm x 2.5m).
	P/N: 2420-0020SP
	Hosetail Outlet Body CTS
	P/N: PNRNEX-KITMNTSP
	CTS Mounting Kit.
	P/N: 2420-0034SP
	Top Cover CTS.
	P/N: 2420-0054SP
	Top Cover String CTS.
	P/N: PNRNEX-KITSER
	Service Kit.

DEALER/OEM SUPPLIED PARTS	
	1" Non Return Valve for suction line.
	Dry Break Connector for Suction Hose (for off-sprayer installation).
	Dry Break Connector for Rinse Water Supply Hose (for off-sprayer installation).
	Threaded Hosetail Adaptors and Clamps. 1" Hosetail Suction Hose. 17 mm for Rinse Water Hose.
	Tees to connect suction line and rinse lines into the induction bowl supply hoses.
	Rinse water pressure booster pump (if pressure < 3.5bar).
	Stand or bracket for mounting off sprayer (if required).
	Crimping tool for securing ear clamps.

11. WARRANTY

Hypro/SHURflo (hereafter, "Hypro") agricultural products are warranted to be free of defects in material and workmanship under normal use for the time periods listed below, with proof of purchase.

- Pumps and Closed Transfer Systems: one (1) year from the date of purchase.
- Accessories: ninety (90) days from the date of purchase.

This limited warranty will not apply to products that were improperly installed, misused, misapplied, damaged, altered, or incompatible with fluids or components not manufactured by Hypro. Buyer must give Hypro notice in writing of any alleged defect that is covered by the warranty (together with all identifying details, including the serial number, the type of equipment, and the date of purchase) within thirty (30) days of the discovery of such defect during the warranty period. Hypro assumes no responsibility or liability if alterations, non-authorized design modifications and/or non-OEM replacement parts are incorporated.

Hypro's obligation under this limited warranty policy is limited to the replacement of the product. All returns will be tested per Hypro's factory criteria. Where products are found not to be defective (under the terms of this limited warranty), then the Buyer must pay return packing and freight charges. Where products are tested and found to be covered by this limited warranty, then Pentair will pay for return packing and freight charges. Hypro reserves the right to choose the method of transportation.

This limited warranty is in lieu of all other warranties, expressed or implied, and no other person is authorized to give any other warranty or assume obligation or liability on Hypro's behalf. Hypro shall not be liable for any labor, damage or other expense, nor shall Hypro be liable for any indirect, incidental or consequential damages of any kind incurred by the reason of the use or sale of any defective product.

Return Procedures

All products must be flushed of any chemical (ref. OSHA section 1910.1200 (d)(e)(f)(g)(h)) and hazardous chemicals must be labelled/tagged before being shipped* to Hypro for service or warranty consideration. Hypro reserves the right to request a Material Safety Data Sheet from the returnee for any pump/product it deems necessary. Hypro reserves the right to "disposition as scrap" products returned which contain unknown fluids. Hypro reserves the right to charge the returnee for any and all costs incurred for chemical testing, and proper disposal of components containing unknown fluids. Hypro requests this in order to protect the environment and personnel from the hazards of handling unknown fluids. Be prepared to give Hypro full details of the problem, including the model number, date of purchase, and from whom you purchased your product. Hypro may request additional information, and may require a sketch to illustrate the problem. Contact the appropriate Hypro Service Department to receive a Return Merchandise Authorization number (RMA#). Returns are to be shipped with the RMA number clearly marked on the outside of the package. Hypro shall not be liable for freight damage incurred during shipping. Please package all returns carefully. All products returned for warranty work should be sent shipping charges prepaid.



US/Canada

HYPRO / PENTAIR
Attention: Service Department
375 Fifth Avenue NW
New Brighton, MN 55112
Service: 800-468-3428
Fax: 651-766-6618
Technical: 800-445-8360
hypro.technical@pentair.com

Europe

HYPRO EU Ltd.
Station Road
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Cambridge CB24 3DS UK
Service/Technical:
+44 1954 260097
Fax: +44 1954 260245
euagorders@pentair.com

**South America &
Central America**

Pentair Water do Brasil LTDA
Av. Marginal Norte da Via
Anhanguera, 53.700
Jundiai/SP - Brasil
CEP 13206-245
Tel: (11) 3378-5400
vendas.pwdb@pentair.com

**All Other Regions
HYPRO / PENTAIR**

Attention: Service Department
375 Fifth Avenue NW
New Brighton, MN 55112
Service: 800-468-3428
Fax: 651-766-6618
Technical: 800-445-8360
hypro.technical@pentair.com

*Carriers, including U.S.P.S., airlines, UPS, ground freight, etc., require specific identification of any hazardous material being shipped. Failure to do so may result in a substantial fine and/or prison term. Check with your shipping company for specific instructions.