

# ***ChemDry PowerHead AX™***

## ***Operator and Parts Manual***

**Carpet Cleaning Applicator with Patented Amplified Extraction Head**



MAN-33276 Rev. 1, April 15, 2011  
(182-160)

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# ***ChemDry PowerHead AX***

# 1 - Introduction

### **CONGRATULATIONS,**

You now have a REVOLUTIONARY piece of equipment that when coupled with the PowerBase™ 10 or PowerBase™ 5, incorporates the latest in ChemDry carpet cleaning technology. The ChemDry PowerHead AX™ features are designed to increase the productivity of you, the user, your technicians and your business, while decreasing the fatigue factor. With competition as strong as it is, you have not only invested in a specialized cleaning tool, but also a marketing tool that will enhance your professional image and the ChemDry brand.

Your foresight in acquiring and using ChemDry's patented "Hot Carbonating Extraction" technology will be rewarded with the knowledge that you are providing your customers with maximum cleaning effectiveness and the best cleaning process ChemDry has to offer. Using the ChemDry PowerHead AX™ will also enhance your technicians' image as professional carpet cleaning operators, rather than professional laborers.

Once again, congratulations for acquiring the ChemDry PowerHead AX™ and being an industry leader. Now more than ever, the competition will have to do that much more to compete with you!

### **AN EVOLUTION THAT HAD TO HAPPEN**

Your new ChemDry PowerHead AX™ has been precision engineered to bring you state-of-the-art in carpet cleaning. In the past, a wand-using technician had to supply all the pressure and motion when cleaning carpets. The weight distribution and rotary motion enables the Technician to maneuver the ChemDry PowerHead AX™ unit easily with less fatigue and back strain.

The electric motor of the ChemDry PowerHead AX™ drives a precision transmission that, in turn, rotates the Amplified Extraction cleaning head assembly. "The Natural®" III cleaning solution is injected through the center of the stainless steel gearbox shaft directly to the five spray jets. Soiled solution is then extracted from the carpet by five ChemDry exclusive patented extraction cleaning heads and drawn through the aluminum exhaust manifold to the Hot Carbonating Extraction (HCU) unit recovery tank.

### **CONSTRUCTION**

The base, manifolds, handle, gear box housing, and cleaning heads are all cast aluminum. Other parts are either metal, stainless steel or high impact plastic.

# ***ChemDry PowerHead AX***

## **APPROVALS/CERTIFICATIONS**

### **CSA Approved**

Your machine has been designed and tested to comply with the Canadian standard for this class of equipment. It has been tested under the following standard:

CAN/CSA-E335 - 1/3E-94 Safety of Household and  
Similar Electrical Appliances Part 1: General Requirements  
(Adopted IEC 335-1 (1991) (3rd Edition), with modifications)

If it is necessary to provide verification, your machine is labeled with an ETL mark.

### **CAUTION**

Do not remove or tamper with any part of the PowerHead AX; this may result in a non-compliance with the above standard.

For additional information please contact:

ChemDry Canada LTD.- 8472 Harvard Place, Chilliwack, BC, Canada, V2P 7Z5

Tel: (604) 795-9918 Toll Free: 1-800-665-9090 Fax: (604) 795-7071

**ChemDry PowerHead AX™ Serial Number:**\_\_\_\_\_



## WARNINGS, CAUTIONS AND NOTICES

### **WARNING**

Harris Research, Inc. uses this WARNING symbol throughout the manual to warn of possible injury or death.

### **CAUTION**

This CAUTION symbol is used to warn of possible equipment damage.

### **NOTICE**

This NOTICE symbol indicates that federal or state regulatory laws may apply, and also emphasizes supplemental information.

# ***ChemDry PowerHead AX***

## 2 - Machine Specifications

	<b>ChemDry PowerHead AX</b>
Length	58.42 cm (23 in.)
Base Width	38.1 cm (15 in.)
Height	109.22 cm (43 in.)
Weight	31.75 kg (70 lbs)
Motor	1/2 Hp, 120 V, 60 Hz 1,725 rpm Input, 130 rpm Output Totally Enclosed Fan-Cooled (TEFC) Permanently Lubricated Helical Gear Drive
Oil Capacity	0.355 litre (12 oz)
Star Head Plate	Replaceable, Spring Steel Arms
Cleaning Heads	Five Cast Aluminum
Solution Jets	Five Stainless Steel, 95015
Solution Strainer	Mesh, Stainless
Solution Valve	Stainless Steel, High Pressure
Cleaning Rate	Five Heads Rotating at 130 rpm = 650 Cleaning Passes/Minute
Handle Assembly	Foam Grips, Adjustable Height
Transportation Wheels	20.32 cm (8 in.) Diameter, 3.81 cm (1 1/2 in.) Wide; Grey, Nonmarking
Electric Cord	15.3 m (50 ft) 14/3

# ***ChemDry PowerHead AX***

## 3 - Assembly Instructions

To prepare your machine for use, follow these instructions:

1. Remove the machine from the packaging.
2. Inspect the machine carefully for any damage that may have occurred during shipping.
3. Check the gear box lubricant level (see page 6-3 of this Owner's Manual).
4. Attach the cleaning head to the base.
  - a. Lean the machine back and rest it on the handle.
  - b. Thread the star assembly (cleaning head) onto the exposed shaft in a counterclockwise direction.

### CAUTION

Remove the solid shipping plug from the top of the gear box and replace it with the vented plug provided before operating the machine (see Figure 3-1 and Figure 3-2). Failure to follow these directions may result in damage to the gear box and seal.



**Figure 3-1. Base with Cover**



**Figure 3-2. Base without Cover**

5. Re-attach the cover onto the PowerHead AX.

Your machine is now ready to operate.

## ***ChemDry PowerHead AX***

## 4 - Operating Instructions

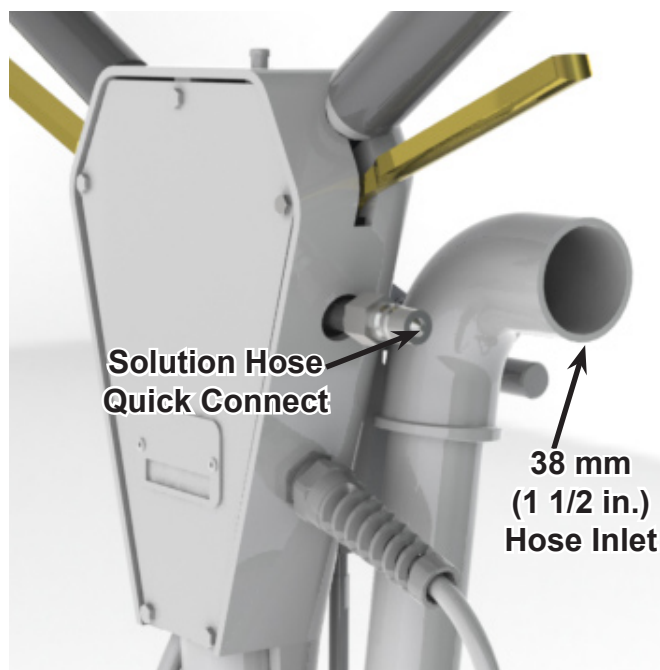
### PREPARATION

#### **Handle Adjustment**

Push the clamp forward to loosen the linkage. Adjust the handle to a comfortable height. Pull clamp back to lock in place.

#### **NOTICE**

Most technicians have found better control and less fatigue when the handle is in a low position - just around the hip line. There is an ideal position for each person which will ensure the PowerHead AX will do the work for you.



**Figure 4-1. Solution and Vacuum Hose Connections**

#### **Solution and Vacuum Hose Connections**

Your ChemDry PowerHead AX is equipped with one 440 stainless steel male quick connect for the solution hose and a 38 mm (1½ in.) vacuum hose inlet (refer to Figure 4-1) The vacuum inlet requires a 38 mm (1½ in.) I.D., and a 51 mm (2 in.) O.D. vacuum hose for proper air flow.

#### **NOTICE**

The vacuum hose must be in good condition to ensure maximum airflow.

#### **Electrical Cord Connection**

The 15 m (50 ft) electrical cord on your PowerHead AX is a detachable three-prong grounded line requiring a three-prong, 15 Amp receptacle. A three-prong to two-prong adapter may be used, providing its ground wire is properly attached to a grounded terminal.

# ChemDry PowerHead AX

## **⚠ WARNING**

Do not, under any circumstances, remove the ground prong from your PowerHead AX power cord. Serious injury or death may result.

### **CONTROL FUNCTIONS**

Control triggers are located on each side of the handle under the rubber hand grips.

As you operate the PowerHead AX, the trigger on your right-hand side controls the electric motor that drives the cleaning heads.

The Safety switch located on the top of the handle must be depressed while the trigger is pulled. Once the motor is running, the safety switch can be released. This must be done each time the trigger is released and the motor is restarted. This lockout will prevent accidental starting of the motor.



**Figure 4-2. PowerHead AX Maneuvers Like a Buffer**

On the left hand side, the trigger controls the low pressure carbonating solution spray. The air flows constantly while the PowerHead AX is in operation.

### **MANEUVERING THE POWERHEAD AX**

Your PowerHead AX maneuvers like a buffer (see Figure 4-2).

1. To move the PowerHead AX to the right, lift the handle slightly. The more you lift or lower the handle, the faster the PowerHead AX will move.
2. To move forward and backward, position the handle so that the unit remains stationary, then push forward or pull back. To familiarize yourself with your PowerHead, practice on an open carpeted area. Depress both the solution trigger and motor trigger and move the machine slowly in a 1 – 2 m (3 – 5 ft) arc, as shown in Section 5 of this manual.



# ChemDry PowerHead AX

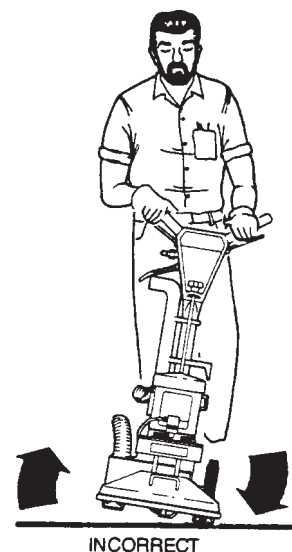
## CAUTION

Do not operate your PowerHead AX on dry carpets. The friction generated by the revolving cleaning heads may damage fibers in the carpet.

Once you have become familiar with the speed and movement of the machine, practice making it hover in one spot. (The hovering maneuver is useful for removing stubborn stains, as well as removing furniture indentations.)

## CAUTION

Do not tilt machine sideways while moving forward and backward (see Figure 4-3). A loss of control may result in damage to the unit or location.



**Figure 4-3. Incorrect Use of the Machine**

## EDGING TOOL

The edging tool is located on the front right-hand side of the PowerHead AX.

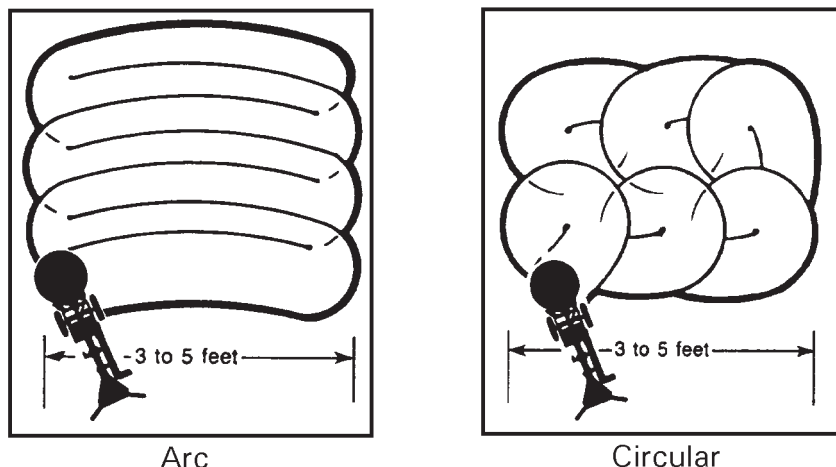
1. To remove, pull the edging tool upward until the alignment pin matches the large diameter of the key hole slot.
2. Pull the tool away from the PowerHead AX and it is ready to use.
3. When attaching it back onto the machine, rest the end of the tool on the lower elbow and slide the pin into the key hole slot.
4. Gently push the edging tool into the elbow until it is snug.

## ***ChemDry PowerHead AX***

## 5 - Cleaning Information

### **CLEANING PATTERNS**

For regular carpet cleaning, use an overlapping arc pattern, two times over the same area (one pass with solution and one pass for drying). When cleaning carpets, first clean in circular pattern, then use the overlapping arc pattern to dry the area (see Figure 5-1).



**Figure 5-1. Recommended Cleaning Patterns**

### **NOTICE**

Dirtiest areas may require two or more cleaning passes. Using either pattern, you should develop a comfortable rhythm. To obtain maximum performance from your PowerHead AX, move it slowly and deliberately with a 50% overlap, giving it time to clean and extract. (Unlike a manual wand, the PowerHead AX is doing the work you had to do in the past) A steady pace rather than a frenzied one will increase efficiency and production and decrease fatigue.

The following cautions should be observed while cleaning:

### **CAUTION**

DO NOT operate your PowerHead AX over metal floor moldings. Damage to both the molding and the cleaning head will result.

### **CAUTION**

DO NOT operate your PowerHead AX on hardwood floors. Damage to the floor could result.

# ***ChemDry PowerHead AX***

## **CAUTION**

DO NOT operate your PowerHead AX over loose or unraveled carpet seams. The cleaning head may catch and cause further damage.

## **CAUTION**

DO NOT operate your PowerHead AX on concrete floors. Sharp edges will develop on the extraction heads which will damage carpet fibers.

## **CAUTION**

DO NOT clean over the edge of a loose carpet. Instead, clean only up to the edge. Damage may occur if the extraction heads catch the loose carpet.

## **SPECIAL INFORMATION**

During the cleaning of some plush carpets, you may notice a “pilling” effect. (Pilling occurs when fluffy particles appear on carpet surfaces; it is caused by fibers that loosen because of weak twist or snags.)

With a PowerHead AX, loose yarns form balls and are kicked aside as the cleaning heads revolve. This is normal when aggressive cleaning or even normal vacuuming takes place, as evidenced by a number of dead, loose yarns in the vacuum cleaner bag.

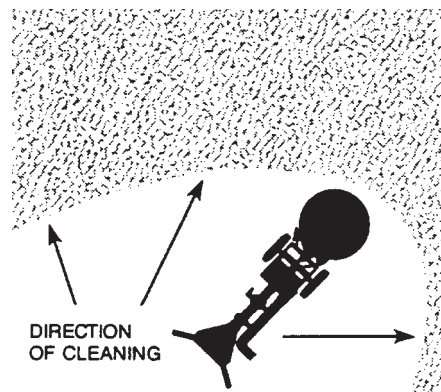
These loose yarns, in most cases, are short staple yarns or filler yarns used to give the carpet a denser appearance. Because your PowerHead AX weighs approximately 31 kg (70 lbs) and rests on five 100 mm (4 in.) cleaning heads, the yarns are not sucked up into the Amplified Extraction heads as they are with a vacuum cleaner or old-style cleaning wand.

## **CAUTION**

The PowerHead AX may cause further damage to older, rubber-backed, glued down carpets that may be delaminating with age. When in doubt, DO NOT use your PowerHead AX.

### CLEANING HINTS

1. Most cleaners customarily clean their way out of an area or room. With the PowerHead AX, it is possible to clean into an area or room, as shown in Figure 5-2, so that the hoses are dragged behind you during the cleaning process rather than kicked out of the way as you back out of an area. The “cleaning into” method works especially well in hallways or confined areas.
2. The PowerHead AX is a very aggressive carpet cleaning machine and will leave the carpet with a freshly-cleaned appearance. The carpet should be brushed or groomed after the cleaning process to remove any swirl marks left behind.



**Figure 5-2. Clean into an Area or Room**

The PowerHead AX has been very successful in restoring badly matted traffic lanes in front of doorways and sofas. Even pivot areas can be brought back to life again, in most cases. “Cornrowing” in hallways can also be eliminated with minimal effort.

## ***ChemDry PowerHead AX***

## 6 - Machine Maintenance

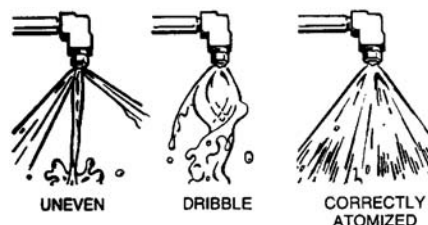
Good care and regular maintenance of your PowerHead AX will result in a long, dependable life for the unit. Keep in mind that your PowerHead AX will be in full view of your customer. A PowerHead AX that is dirty and unkempt in appearance can cause your business or professional image to suffer. You are offering your customer the latest in cleaning technology. Therefore, it is important that your company image reflect your desire to give your customer the best.

The surface finish on your PowerHead AX is a durable, baked on powder coating and is easily cleaned with a damp cloth. To further protect the finish, a light coat of good silicon base polish should be applied periodically.

Lubrication and maintenance play a key role in the life of your PowerHead AX. Hence, the following daily and periodic maintenance steps must be followed. Train yourself to maintain your unit on a regular schedule until it becomes habitual.

### DAILY MAINTENANCE

1. Inspect the power cord for cuts, breaks, etc. Repair or replace as needed.
2. Inspect the vacuum hoses for breaks or tears. Repair or replace as necessary.
3. Visually inspect your PowerHead AX for water leaks, wear damage to the cleaning heads and so forth. Repair or replace as necessary.
4. Check the jet spray for evenness (see Figure 6-1). An uneven spray will cause improper flow of the cleaning solution.



**Figure 6-1. Check Jet Spray for Evenness**

### **⚠ WARNING**

Do NOT spray the high pressure solution in your face or eyes. Bodily injury can result.



**Figure 6-2. Remove Cleaning Head**

5. Remove the Amplified Extraction cleaning head (see Figure 6-2). It unscrews in the same direction it turns during operation (or clockwise when looking at it from the underside).

## ChemDry PowerHead AX

6. Once you have loosened the assembly, spin it off with your hands. If the cleaning head is difficult to remove, you may use a 20 mm (3/4 in.) socket wrench on the exposed center nut located under the gear box cover. To prevent the gear box from turning, remove the gear box cover to expose the output shaft. The output shaft will accept a 16 mm (5/8 in.) wrench just below the rotary union.
7. Wash the cleaning heads and shroud assembly with a garden hose, being careful not to wet the electric motor assembly.
8. Clean any lint buildup from the cleaning heads and vacuum hoses (lint buildup will restrict proper air flow and prolong drying time).

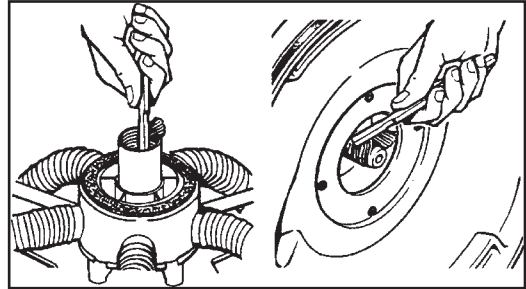


Figure 6-3. Remove Debris

### NOTICE

Before cleaning the head assembly, place the rubber stopper (available in the ChemDry Service Kit) inside the threaded bore of the hub. This will prevent debris from entering the solution lines and clogging the spray jets.

9. Clean off any debris that may have accumulated on then gear box shaft or the inside threaded bore of the hub (see Figure 6-3).
10. Lubricate the felt vacuum seal on top of the hub with a quality, 30 weight SAE motor oil (see Figure 6-4). Also, put a few drops into the hub threads.
11. Coat the shaft with TKX® All-Purpose lubricant (P/N 000-087-006 – see Figure 6-5). Re-install the vacuum head assembly onto the shaft by rotating it counterclockwise.

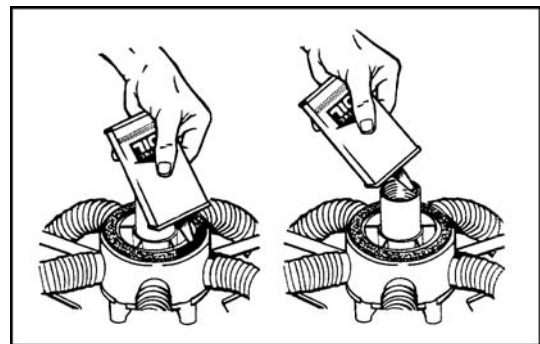


Figure 6-4. Lubricate Felt Vacuum Seal

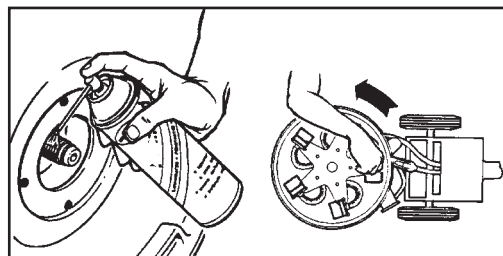


Figure 6-5. Lubricate the Shaft

### CAUTION

An accumulation of debris in the gear box, if not removed, may damage the gear box oil seal. This will result in loss of oil in the gear box. If the gear box is operated without oil, severe damage may occur.



## CAUTION

While rotating the vacuum head assembly in the counterclockwise position, make sure that it spins freely all the way down. If it begins to require the slightest finger tip pressure, unscrew it and brush off the threads. All it takes is the slightest grain of dirt or sand to obstruct the threads. If you turn too far onto a grain of dirt, the hub may become locked onto the shaft of the gear box.

## PERIODIC MAINTENANCE

Check the oil level in the gear box on a monthly basis. This is a permanently lubricated gear box. You do not need to change the oil. However, maintaining the proper oil level is important.

1. To check the oil level, remove the vent plug and look into the gear box.
2. Turn the cleaning head until you can see the inspection hole in the gear.
3. With the PowerHead AX sitting flat on a table or the floor, the oil level should be up to, but not above, the middle of the gear.
4. If oil needs to be added, use a quality 80 – 90 weight gear oil.

## NOTICE

When checking the oil level in the gear box, use a toothpick as a dip stick. The oil level should read 9.5 mm (3/8 in.) deep.

Examine the attached power cord and the internal wiring every 4 months for wear. If the cord needs to be repaired, it must be done by the factory or by an approved service agent.

# ChemDry PowerHead AX

## **Locking Mechanism**

If the locking mechanism becomes loose and fails to hold the handle in position, tighten it by following these simple steps:

1. Remove the retaining clip from one wheel, using a flat-bladed screwdriver (see Figure 6-6).
2. Remove the wheel from one side of the unit.
3. Ensure that the clamp is set to the locking position.
4. Tighten the setscrew as shown in Figure 6-7 to achieve the desired clamping force.
5. Re-install the wheel and retain with the original clip.
6. If the locking mechanism becomes loose again in the future, remove the wheel on the other side of the unit and tighten the other setscrew, in order to even up the wear on the clamping pins.



**Figure 6-6. Remove Retaining Clip with Screwdriver**



**Figure 6-7. Tighten Setscrew**

## **TRANSPORT AND/OR STORAGE**

Whenever your PowerHead AX is transported or stored, it is recommended that the cleaning head (star assembly) be removed. The machine will then sit flat on the floor and remain more stable, especially during transport.

## **FREEZE WARNING AND PROTECTION**

Your PowerHead AX can sustain damage from freezing, as can any equipment that functions with the use of water. Care must be taken to protect this tool from freezing just as you do your other equipment.

To protect it from freezing, simply blow air from a gas station air hose through the solution quick connect with the valve open.

This will blow all water from the valve, solution line, rotary union and jet assembly. Open and close the valve several times to ensure that all water is removed.





# 8 - Assemblies and Parts Lists

The following ChemDry PowerHead AX major assemblies are detailed in this section:

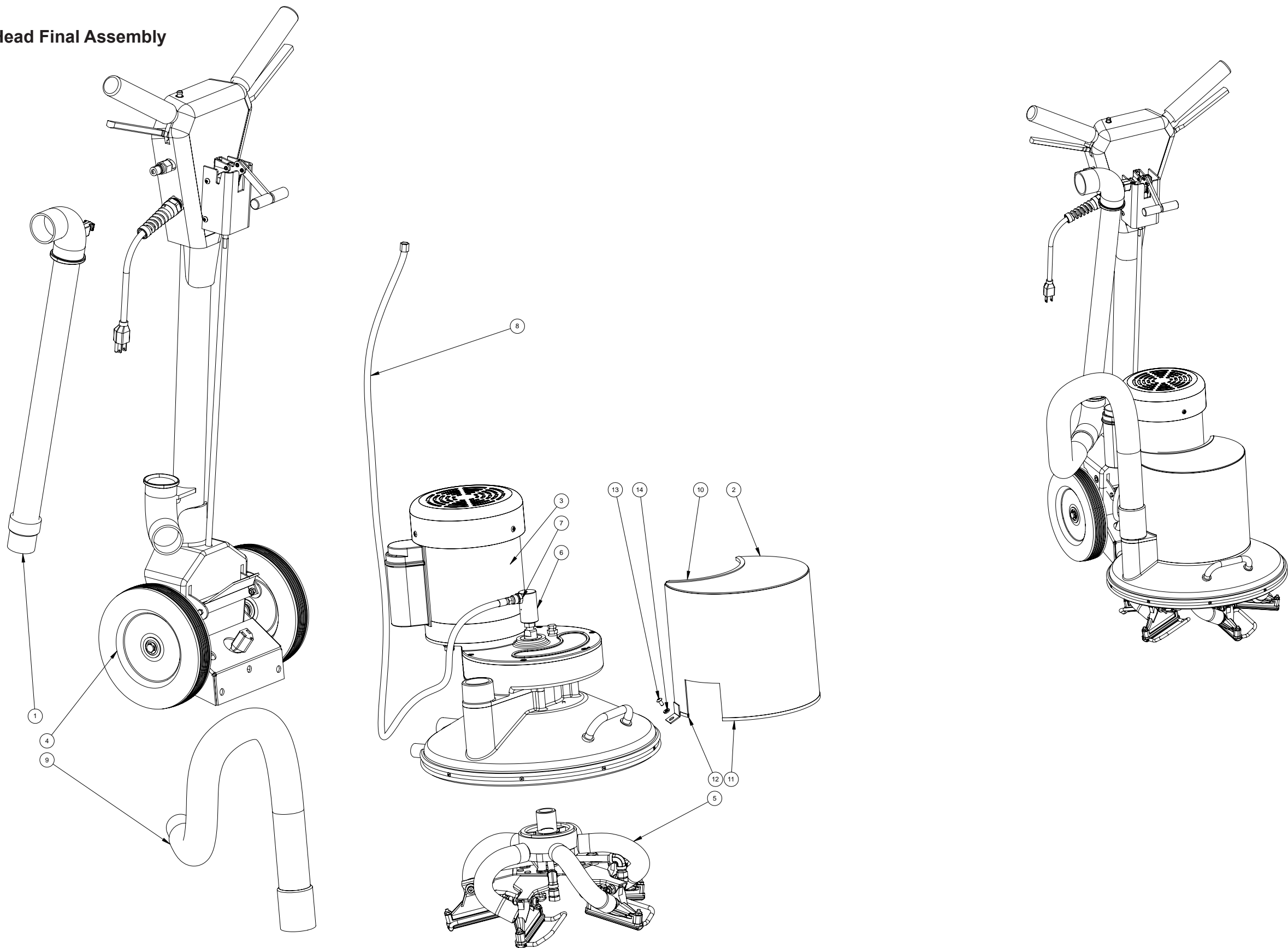
- Chem-Dry PowerHead Final Assembly Parts List
- Upper and Lower Handle Assembly Parts List
- Solution Valve Assembly Parts List
- Base and Drive Train Assembly Parts List
- Vacuum Head Assembly Parts List
- Vacuum Shoe and Skid Assembly Parts List
- Handle Locking Linkage Assembly Parts List
- ChemDry 120 V 60 Hz Rotary Extractor Assembly Parts List (P/N 604-999-018)

Table 8-1. ChemDry PowerHead AX Configuration

ChemDry PowerHead AX	Top Level P/N	Top Level Assembly Parts List			See This Page for Detailed Parts List
		P/N	Description	Qty	
ChemDry 120 V 60 Hz Rotary Extractor AX	700-041-018	000-052-517	Nipple, 1/4" S/S Close	1	Page 8-15 - 604-999-018 ChemDry Rotary Extractor
		000-057-047	Gasket, Felt Hub	2	
		000-105-018-1	Plate	1	
		000-178-006	Cord, 14/3 X 50 ft Gray M/F	1	
		604-999-018	ChemDry Rotary Extractor	1	

ChemDry PowerHead AX

Figure 8-1. Chem-Dry PowerHead Final Assembly  
6395 Rev. A



Chem-Dry PowerHead Final Assembly Parts List

Item	Part Number	Description	Qty
1	000-163-103	Assembly, Chem-Dry Edging Tool	1
2	000-041-251	Cover, Chem-Dry	1
3	--	Assembly, Base and Drive Train	1
4	--	Assembly, Upper and Lower Handle	1
5	604-053-004	Assembly, Vacuum Head	1
6	000-052-522	Rotary Union, S/S	1
7	000-052-521	Nipple, 1/8" NPT X 1/4" JIC	1

Item	Part Number	Description	Qty
8	000-068-127	Hose, 3/8" X 48 1/2" w/ Inserts	1
9	000-068-041	Hose, Base Out	1
10	000-131-027	Trim Lock X 1.00" Lg.	1
11	000-131-027	Trim Lock X 8.25 "Lg.	1
12	000-131-027	Trim Lock X 14.50" Lg.	1
13	000-143-107	Screw, #10-24UNC X 3/8" Lg. Button Head Socket	2
14	000-174-036	Washer, #10 Flat Rubber Backed	2

ChemDry PowerHead AX

Figure 8-2. Upper and Lower Handle Assembly -View 1 of 3  
6394 Rev. G

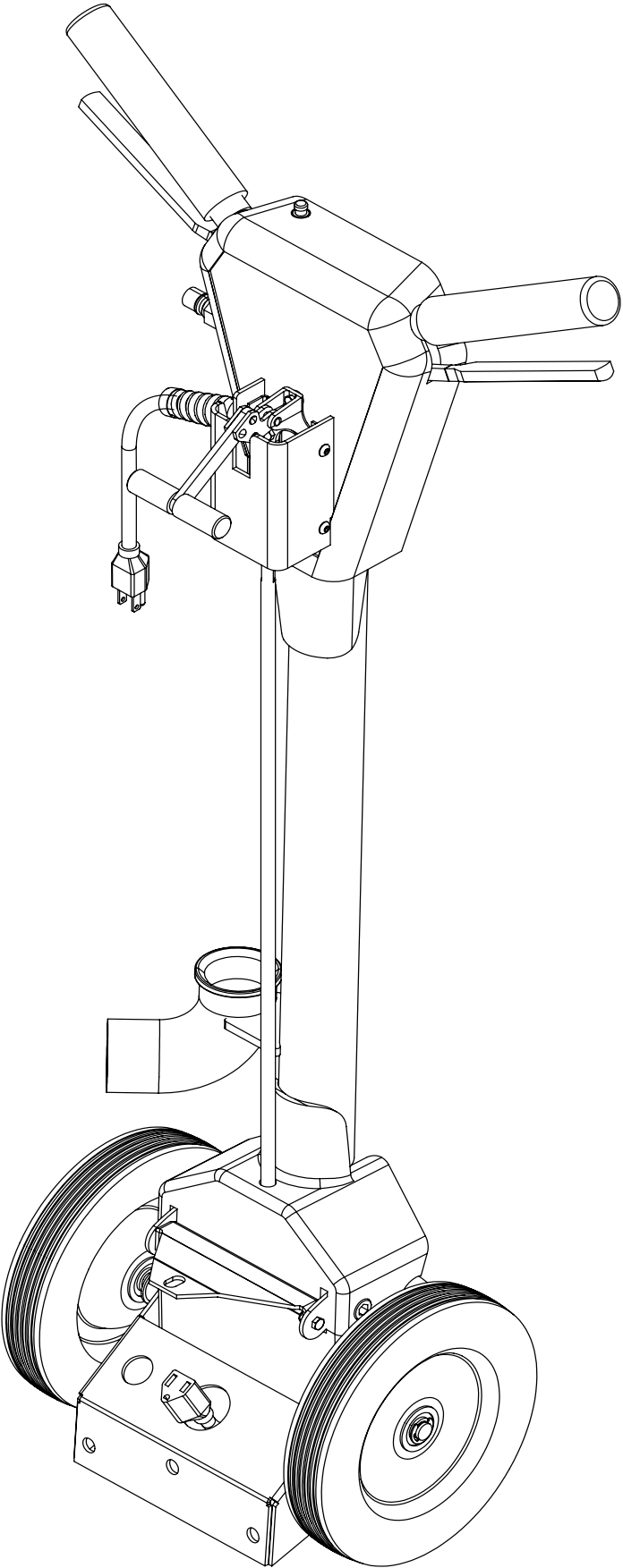
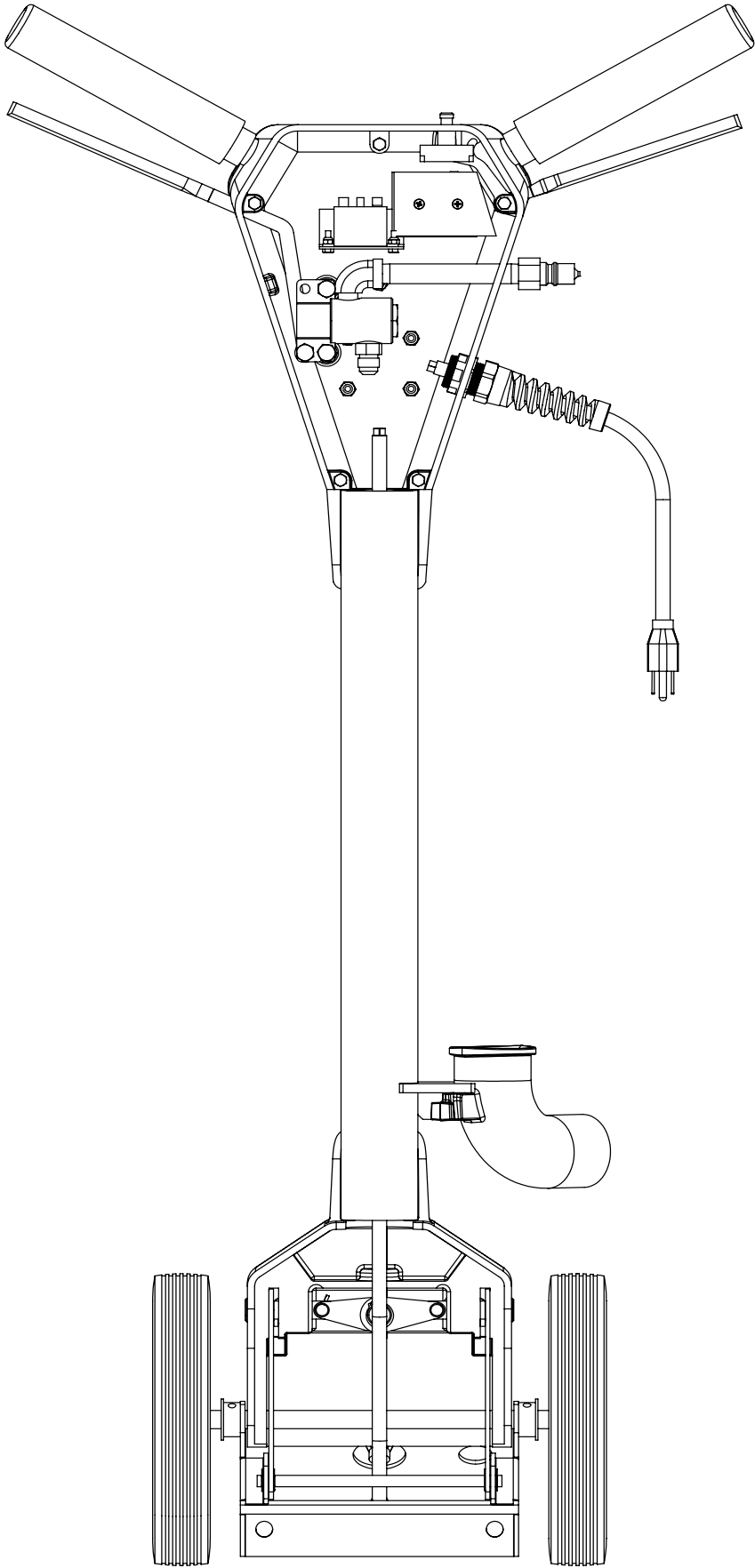
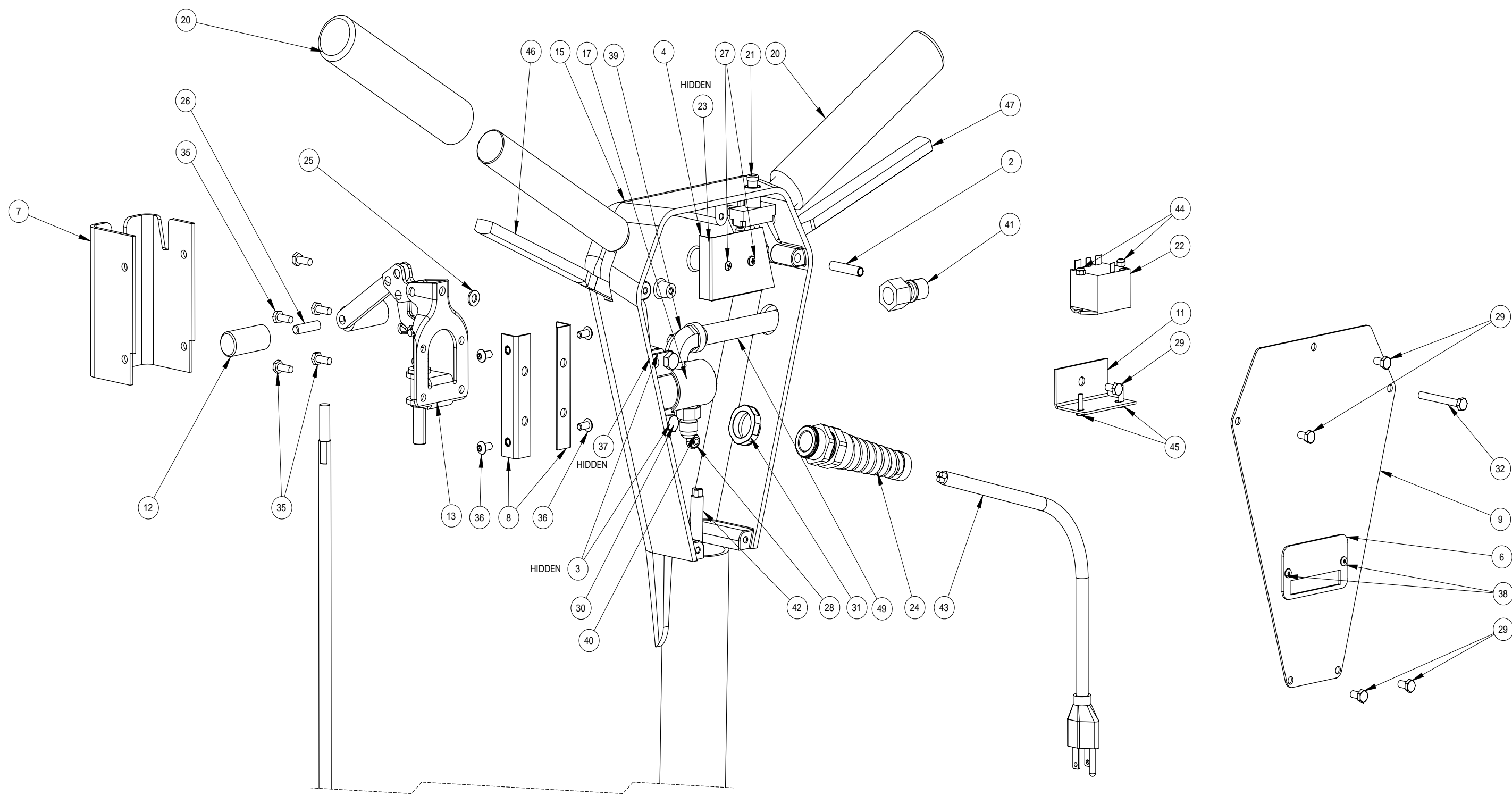


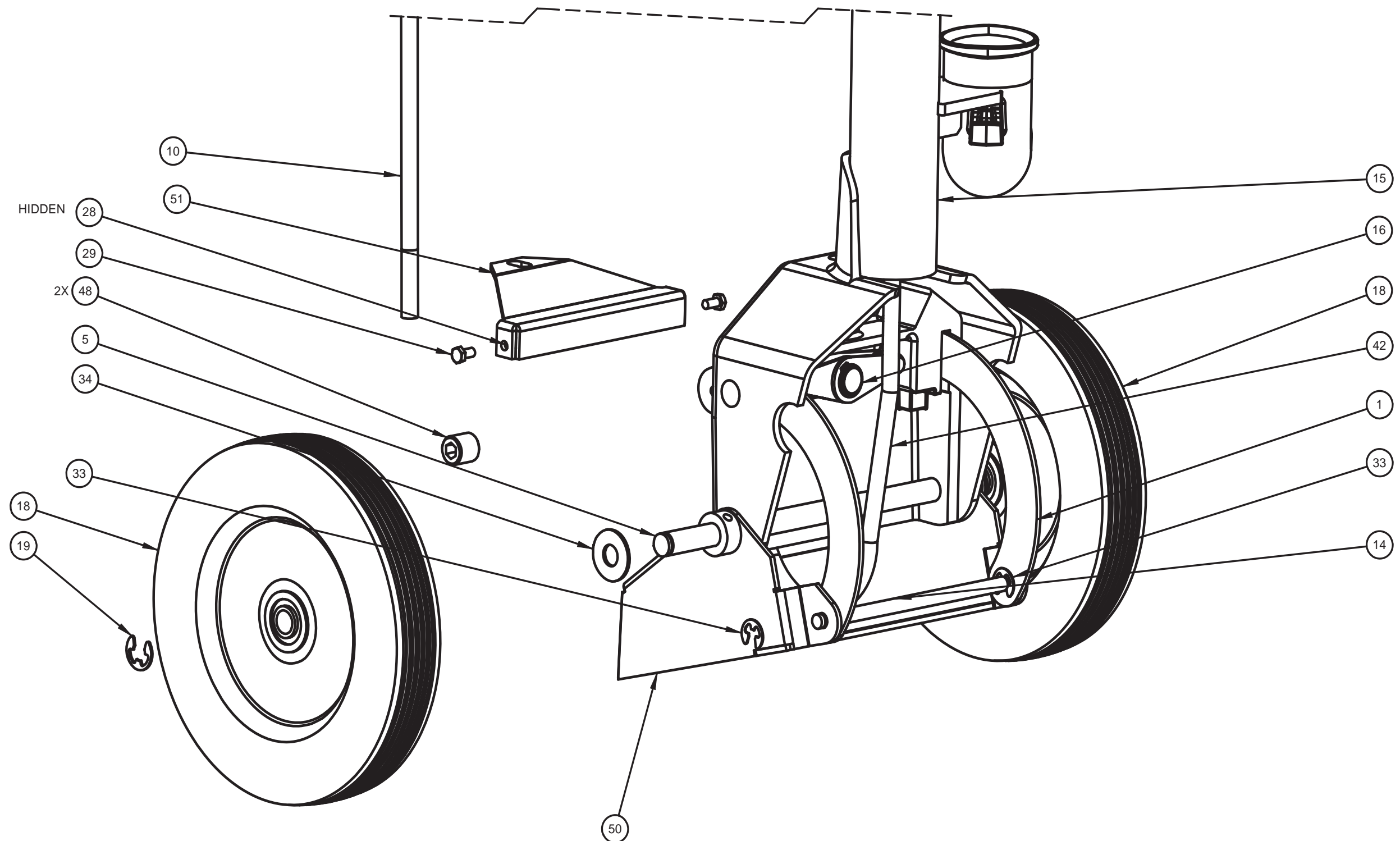


Figure 8-3. Upper and Lower Handle Assembly - View 2 of 3  
6394 Rev. G



## ChemDry PowerHead AX

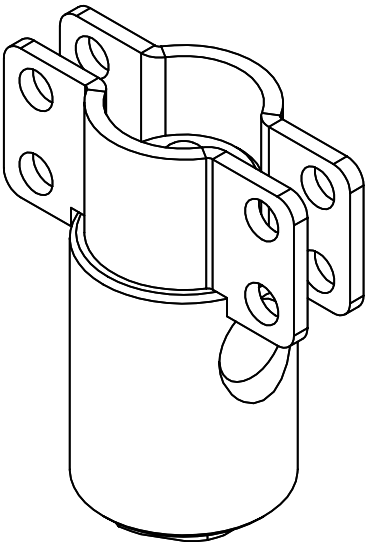
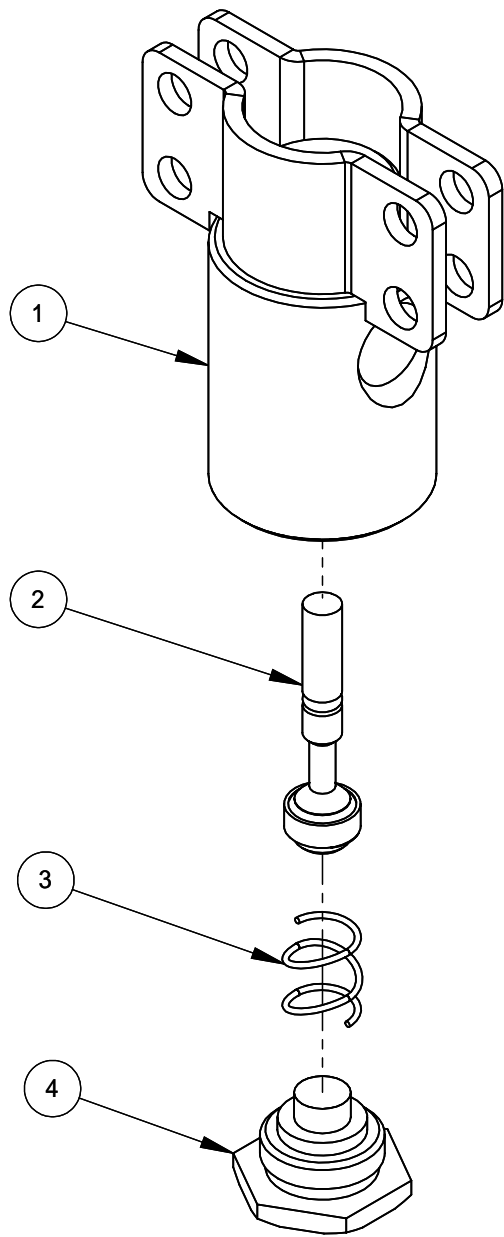
**Figure 8-4. Upper and Lower Handle Assembly -View 3 of 3**  
6394 Rev. G



Upper and Lower Handle Assembly Parts List

Item	Part Number	Description	Qty	Item	Part Number	Description	Qty
1	000-107-096	Handle, Arc	2	27	000-143-048	Screw, #10-24UNC X 0.25" Lg. Pan Head Phillips	2
2	000-107-103	Trigger Pivot	1	28	000-094-034	Nut, #10-24UNC Nylock	7
3	000-154-001	Spacer, 1/4" X 5/16" - S/S Solution Valve	2	29	000-143-166	Screw, #10-24UNC X 3/8" Lg. Hex Head	7
4	000-108-014	Shield, Micro Switch	1	30	000-143-002	Screw, 1/4"-20UNC X 1.00" Lg. Hex Head	3
5	000-141-004	Axle, Wheel	1	31	000-094-036	Nut, 1/2" NPT Pipe Plastic	1
6	000-105-018	Plate, Serial I.D.	1	32	000-143-065	Screw, #10-24UNC X 1.75" Lg. Hex Head	1
7	000-041-543	Cover, Linkage Clamp, Coated	1	33	000-139-010	Ring, Snap (E-Clip) X 5/16"	4
8	000-015-987	Bracket, Linkage Clamp	2	34	000-174-006	Washer, 7/16" Flat	2
9	000-041-014	Plate, Back - Access	1	35	000-143-126	Screw, #10-24UNC X 0.50" Lg. Hex Head	5
10	000-141-007	Adjusting Rod Assembly Dry	1	36	000-143-107	Screw, #10-24UNC X 3/8" Lg. Button Head Socket	4
11	000-015-190	Bracket, AC Relay	1	37	000-094-009	Nut, 1/4"-20UNC Nylock	1
12	000-061-030	Handle, Dry 'T' Handle	2	38	000-040-003	Rivet, 1/8" X 5/16"	2
13	000-033-114	Clamp, Linkage - Modified	1	39	000-052-691	Elbow, 1/4" Street S/S	1
14	000-141-031	Rod, Handle Arc	1	40	000-052-506	Nipple, 1/4" MPT X 9/16"	1
15	000-061-019	Handle, Hi Speed - Weldment	1	41	000-052-516	Quick Connect, 440 Male w/ Viton Std	1
16	604-051-002	Assembly, Handle Locking Linkage	1	42	000-178-039	Cord, Power - 14/3 Gray X 42" w/ Female	1
17	000-169-047	Assembly - Valve, Solution - S/S	1	43	000-178-046	Cord, Power 14/3 Gray X 31" w/ Male	1
18	000-177-001	Wheel, 8"	2	44	000-094-063	Nut, #6-32UNC NyLock	2
19	000-139-009	Ring, Snap (E-Clip) X 1/2"	2	45	000-143-575	Screw, #6-32UNC X 0.50" Lg. Hex Head	2
20	000-061-004	Grip, Foam - Handle	2	46	000-167-009-07	Trigger, Handle - Left Hand	1
21	000-157-151	Switch, Chrome, Momentary	1	47	000-167-010-07	Trigger, Handle - Right Hand	1
22	000-157-042	Relay, AC Relay 120 V	1	48	000-143-609	Screw, 5/8-18 X 5/8Lg, Socket Hd Set	2
23	000-157-032	Switch, Micro	1	49	000-052-678	Nipple, 1/4 NPT X 4", Sch 80	1
24	000-108-012	Protector, Power Cord Relief	1	50	000-015-986	Bracket, Hi Speed Handle To Base Weldment	1
25	000-174-001	Washer, #10 Flat	1	51	000-015-006	Bracket, Head Stabilizer - Weldment	1
26	000-156-031	Stud, 1/4"-20UNC X 1.00" Lg.	1				

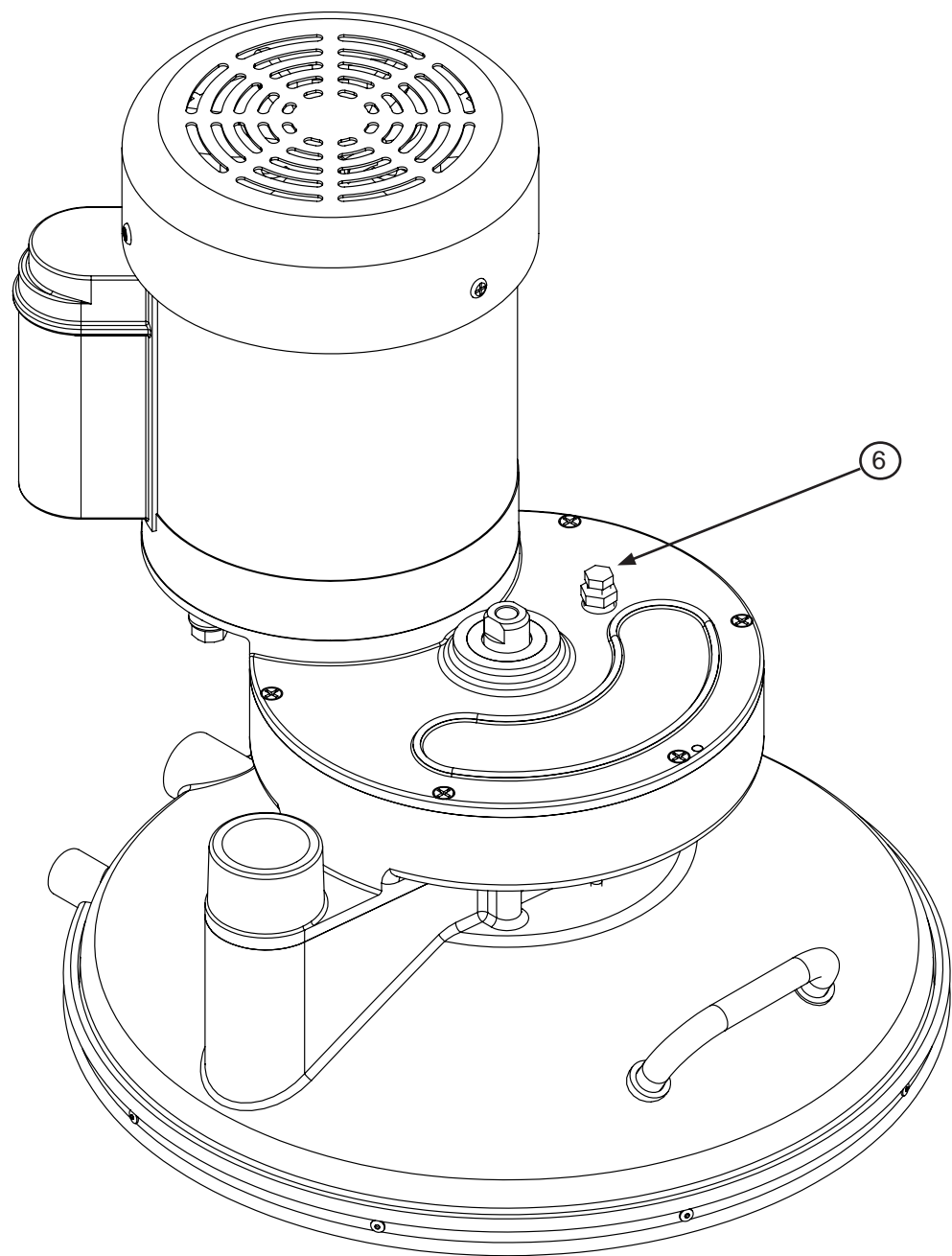
Figure 8-5. Solution Valve Assembly  
6406 Rev. B



Solution Valve Assembly Parts List

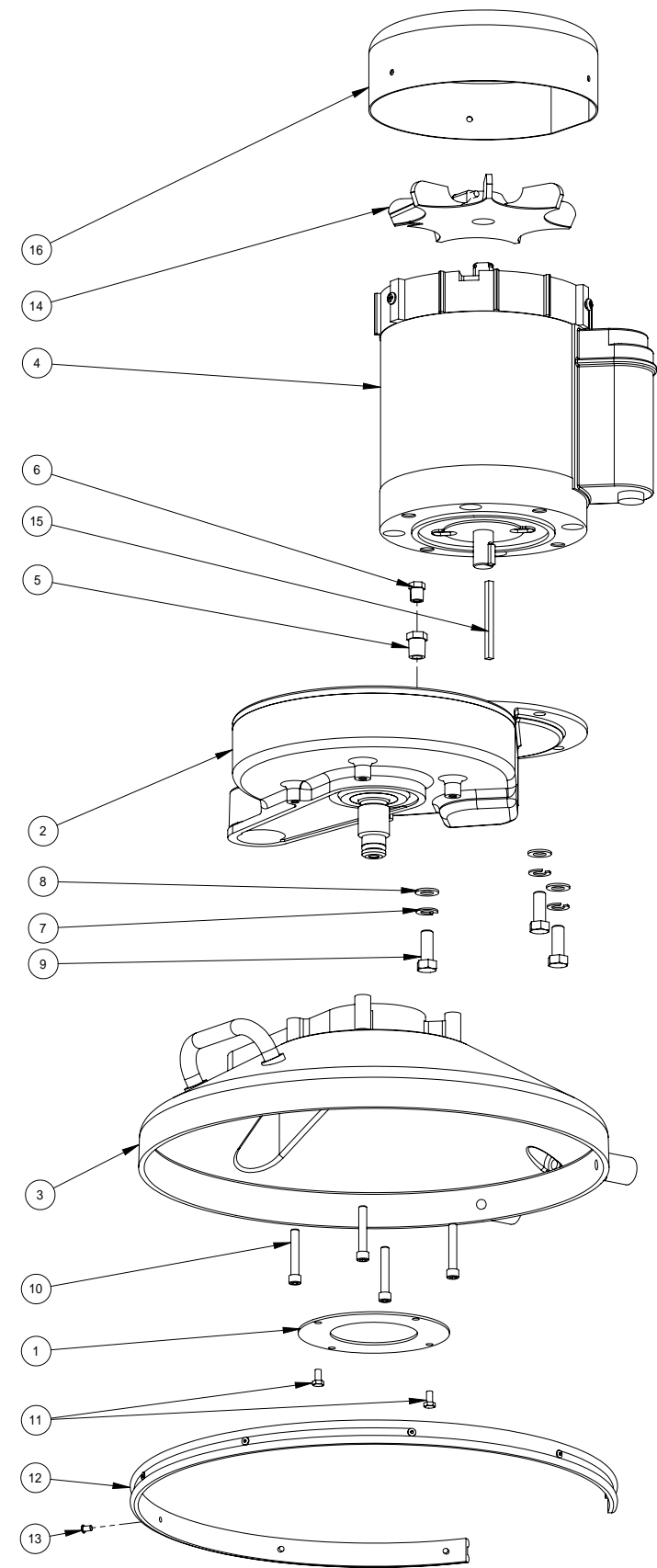
Item	Part Number	Description	Qty
1	600-012-001	Valve Body, S/S Welded	1
2	600-012-003	Valve Stem Assembly	1
3	000-155-003	Spring, H/M Solution Valve	1
4	000-027-026	Cap, S/S Solution Valve	1

Figure 8-6. Base and Drive Train Assembly  
6392 Rev. C



**NOTICE**

Prior to operating the machine, replace the shipping plug (number 6 in the drawing - P/N 000-106-001) with the vented plug (P/N 000-106-014). See page 3-1 in this manual for more information.



ChemDry PowerHead AX

Base and Drive Train Assembly Parts List

Item	Part Number	Description	Qty
1	000-105-008	Plate, Seal	1
2	000-059-001	Gear Box - Complete	1
3	000-006-011	Base w/ Handle - Weldment	1
4	000-091-015	Motor, 1/2 HP TEFC-H/S	1
5	000-052-059	Bushing, 1/4" MPT X 1/8" FPT	1
6	000-106-001	Plug, 1/8" NPT*	1
7	000-174-057	Washer, 3/8" Lock	3
8	000-174-055	Washer, Flr Tech Latch Pivot	3

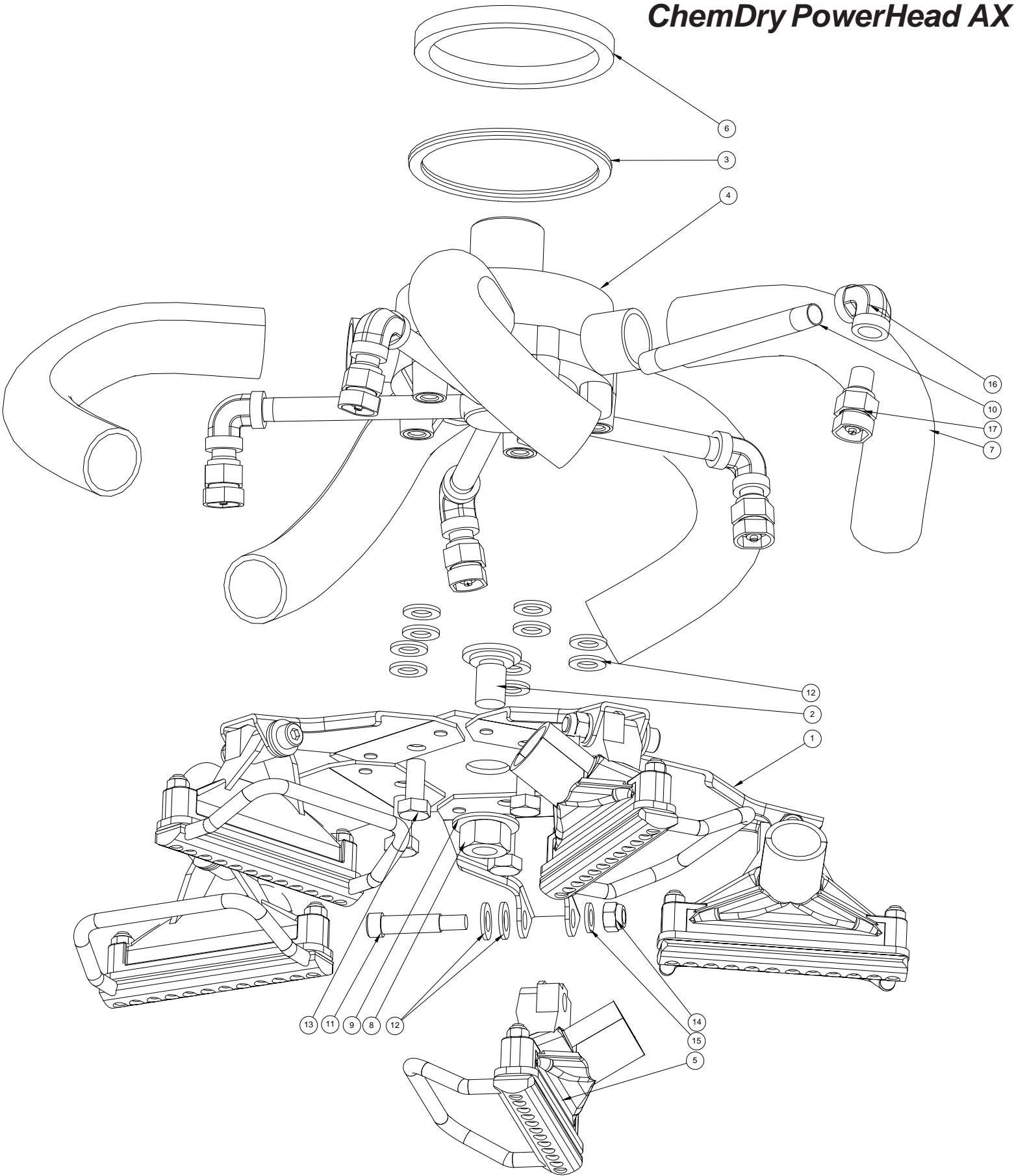
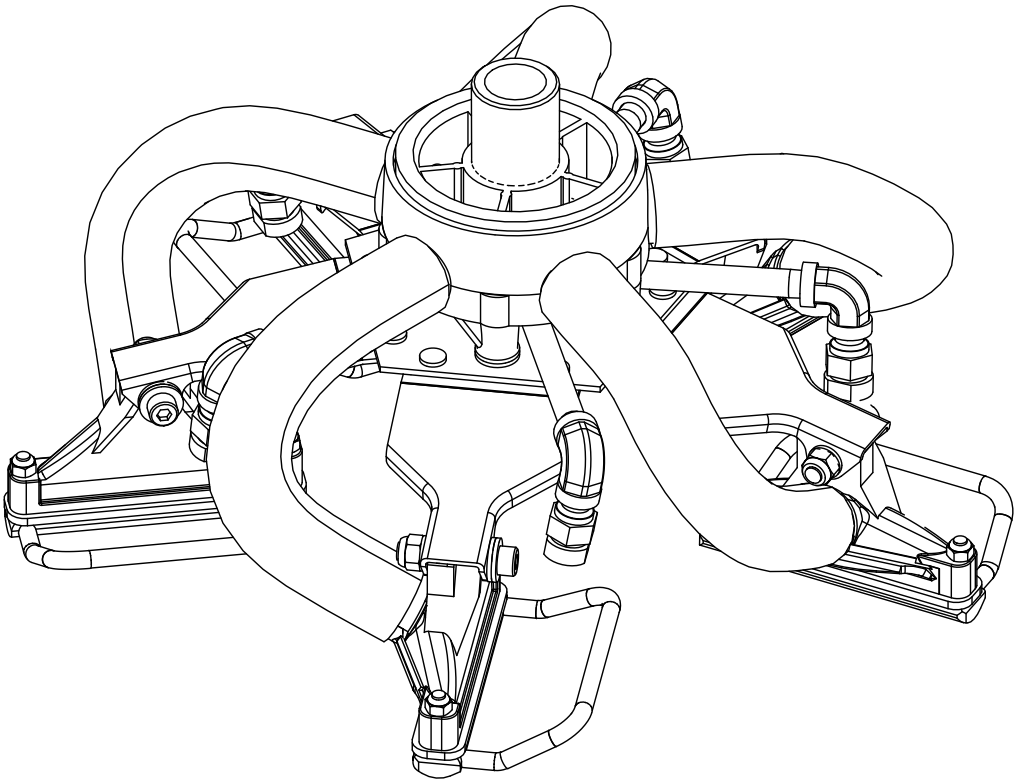
Item	Part Number	Description	Qty
9	000-143-096	Screw, 3/8"-16UNC X 1.00" Lg. Hex Head	3
10	000-143-075	Screw, 1/4"-20UNC X 1.50" Lg. Socket Head	4
11	000-143-166	Screw, #10-24UNC X 3/8" Lg. Hex Head	2
12	000-131-014	Gasket, Roto Shroud	1
13	000-040-003	Rivet, 1/8" X 5/16"	8
14	000-050-002	Fan, Motor	1
15	000-077-012	Key, 3/16" X 2.5" Lg. Class 2 Fit	1
16	000-041-479	Cover, 1/2 HP TEFC Motor - Gray	1

NOTICE

\* Prior to operating the machine, replace the shipping plug (P/N 000-106-001) with the vented plug (P/N 000-106-014). See page 3-1 in this manual for more information.



Figure 8-7. Vacuum Head Assembly  
6408



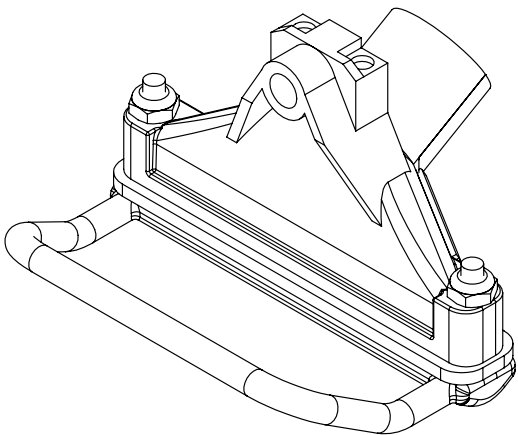
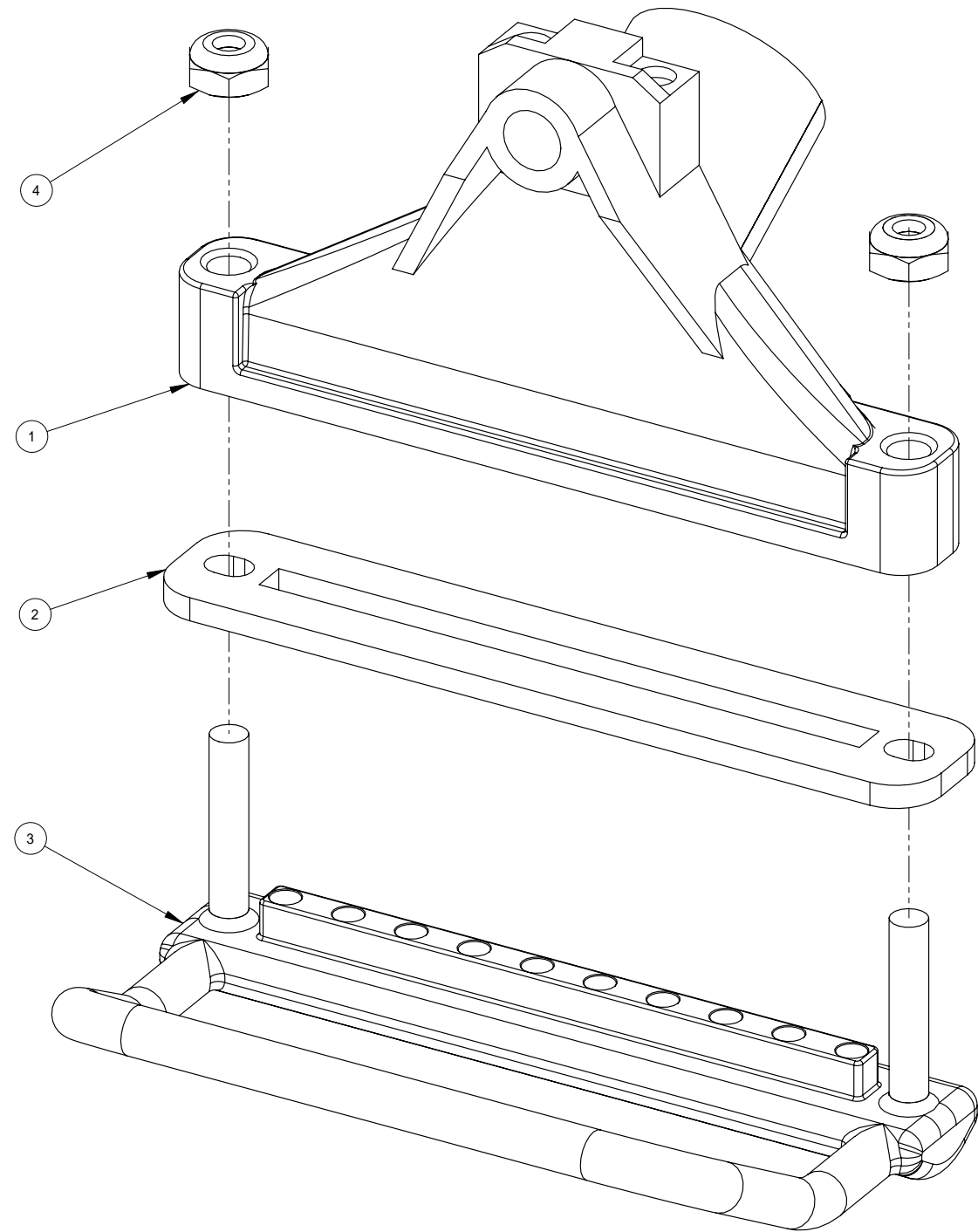
ChemDry PowerHead AX

Vacuum Head Assembly Parts List

Item	Part Number	Description	Qty	Item	Part Number	Description	Qty
1	000-107-089	Star, Assembly	1	10	000-052-515	Nipple, 1/8" NPT X 4" Lg.	5
2	000-143-045	Screw, 1/2" Modified Star Removal Bolt	1	11	000-143-162	Screw, 5/16" X 1" Lg. Stripper - 1/4"-20UNC	5
3	000-139-001	Ring, Plastic	1	12	000-174-049	Washer, 5/16" Flat	20
4	000-107-040	Rotary Extractor - Harris Plastic Hub	1	13	000-143-012	Screw, 5/16"-18UNC X 3/4" Lg.	5
5	000-064-022	Rotary Extractor Vacuum Shoe and Skid	5	14	000-094-009	Nut, 1/4"-20UNC Nylock	5
6	000-057-047	Gasket, Rotary Extractor Felt Hub	1	15	000-174-003	Washer, 1/4" Flat	5
7	000-068-174	Hose, 1" Vacuum - Gray	5	16	000-052-513	Elbow, 1/8" F X F	5
8	000-094-019	Nut, 1/2"-13UNC Hex	1	17	000-076-079	Jet, Quick Release	5
9	000-174-006	Washer, 7/16" Flat	1				



Figure 8-8. Vacuum Shoe and Skid Assembly  
6407 Rev. A

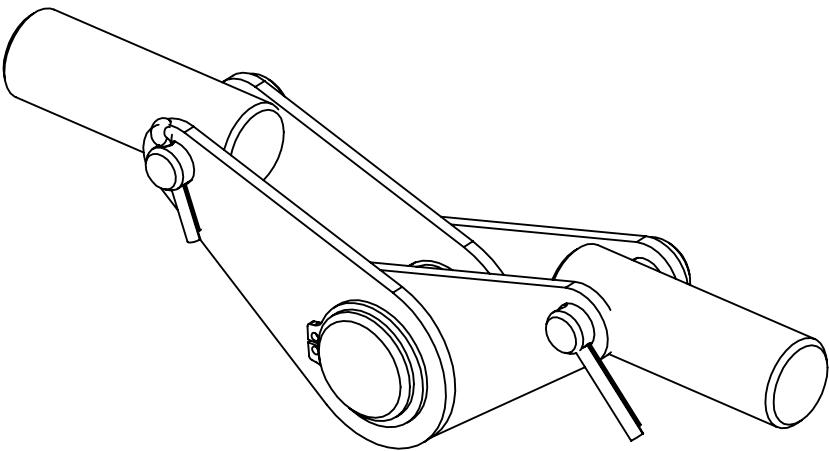
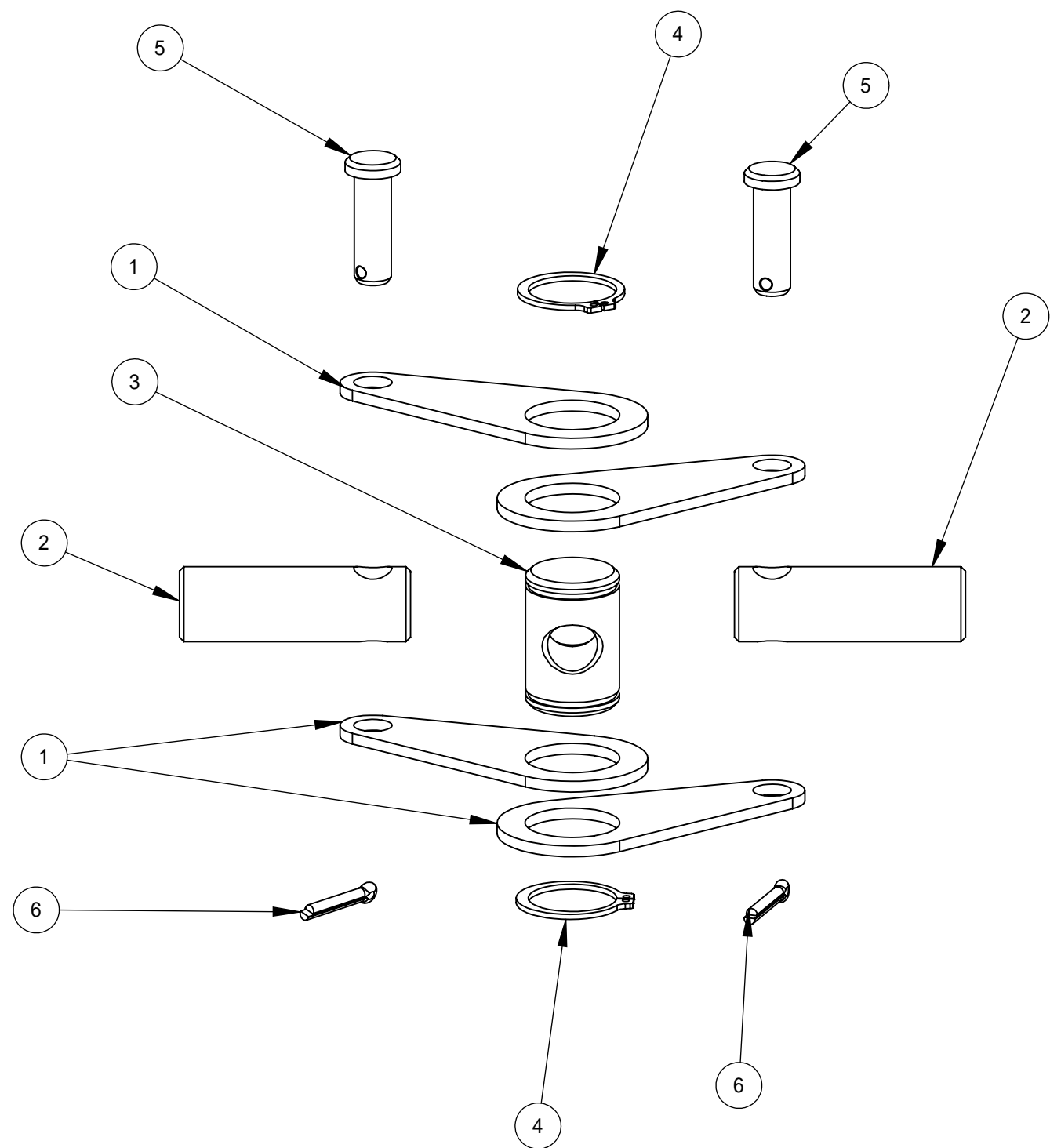


Vacuum Shoe and Skid Assembly Parts List

Item	Part Number	Description	Qty
1	000-064-011	Shoe, 4" Vac Head - Weldment	1
2	000-057-048	Gasket, Vacuum Head	1
3	000-107-049-07	Skid, Vented	1
4	000-094-058	Nut, #10-32UNF - Nylock	2

ChemDry PowerHead AX

Figure 8-9. Handle Locking Linkage  
6390 Rev. A



Handle Locking Linkage Assembly Parts List

Item	Part Number	Description	Qty
1	000-107-097	Link	4
2	000-107-256	Plunger	2
3	000-094-030	Adjusting Nut	1
4	000-139-006	Ring, 5/8" Snap	2
5	000-103-012	Pin, 1/4" X 7/8" - Clevis	2
6	000-103-013	Pin, Cotter	2

ChemDry 120 V 60 Hz Rotary Extractor Assembly Parts List (P/N 604-999-018)

Part Number	Description	Qty	Part Number	Description	Qty
000-001-065	Adapter, Edge Tool - Painted	1	000-081-138	Label, CSA	1
000-006-011	Base, w/Handle - Coat	1	000-091-015	Motor,1/2 HP TEFC-H/S	1
000-015-006	Bracket, Head Stabilizer	1	000-094-019	Nut, 1/2-13 Hex	1
000-015-986	Bracket, Handle-To-Base	1	000-094-030-07	Nut, Adjusting, Linkage	1
000-015-987	Bracket, Linkage Clamp	2	000-094-036	Nut, 1/2" NPT Pipe Plastic	1
000-033-010	Clamp, Size 32 Hose	2	000-103-012	Pin, 1/4 X 7/8" Clevis	2
000-033-114	Clamp, Linkage - Modified	1	000-105-008	Plate, Cast Base	1
000-041-014	Cover, Handle Access - Gray	1	000-106-001	Plug,1/8" Brass	1
000-041-251	Cover, Gear Box - Coated	1	000-106-014	Plug, Gear Box Vent	1
000-041-543	Cover, Linkage Clamp	1	000-106-124	Plug, Pipe, 1/4", Flush Fitting	1
000-052-059	Bushing,1/4 M X 1/8	1	000-107-040	Hub, Vacuum	1
000-052-432	Cuff,1 1/2" Gray	1	000-107-089	S/S Heat Treated Star	1
000-052-506	Nipple,1/4" MPT X 9/16-18 37 Degr. JIC S/S	1	000-107-096	Handle Arc	2
000-052-513	Elbow,1/8" F X F S/S	5	000-107-097	Link	4
000-052-515	Nipple,1/8" X 4" S/S	5	000-107-103	Trigger Pivot	1
000-052-516	Quick Connect, 440 Male	1	000-107-256	Plunger, Locking	2
000-052-521	Nipple, 1/8" X 1/4" JIC	1	000-108-012	Protector, Power Cord Relief	1
000-052-522	Rotary Union, S/S	1	000-108-014	Shield, Micro Switch	1
000-052-678	Nipple,1/4" NPT X 4"	1	000-108-126	Guard, Plastic Base	1
000-052-691	Elbow, 1/4" Street S/S	1	000-125-089	Tube, Clear 1 1/4"	1
000-057-047	Gasket, Felt Hub	1	000-131-123	1/2" Shrink Tubing	1
000-059-001	Gear Box Complete	1	000-139-001	Ring, Plastic	1
000-060-007	Grommet, 3/8 Rubber	2	000-139-006	Ring, 5/8" Snap	2
000-061-004	Handle, Foam Grip - Closed	2	000-141-004	Axle, Hi Speed Wheel	1
000-061-030	Handle, Clamp "T" (Raw)	2	000-141-007	Rod Assembly, Handle Adj. Clamp	1
000-064-022	Assembly, Head, Skid	5	000-141-031	Rod, Handle Arc	1
000-068-041	Hose, Base Out	1	000-143-045	Screw, 1/2" Mod	1
000-068-112	Hose, 1" Vacuum - Gray	3	000-143-162	Screw, 5/16 X 1" Strip	5
000-068-127	Hose, 3/16"X 48 1/2 w/ 7/16 JIC Ends	1	000-156-031	1/4-20 X 1" S.S.	1
000-076-079	Jet, 95015	5	000-157-032	Switch, Micro	1
000-081-121	Label Set, Harris Research	1	000-157-149	Relay, AC Relay 120 V	1

ChemDry PowerHead AX

ChemDry 120 V 60 Hz Rotary Extractor Assembly Parts List (P/N 604-999-018 - continued)

Part Number	Description	Qty
000-157-151	Switch, Chrome Momentary	1
000-167-009-07	Trigger, Left Hand	1
000-167-010-07	Trigger, Right Hand	1
000-169-047	Valve, S/S Solution	1
000-169-215	Valve, Vacuum Breaker	1
000-174-006	Washer, 7/16 Flat	1

Part Number	Description	Qty
000-174-030	Washer, 5/8" I.D. X 7/8"	2
000-177-001	Wheel, 8" Hi Speed	2
000-178-039	Cord, 14/3 X 42" Modified	1
000-178-046	Cord, 14/3 X 31" Gray Modified	1
604-051-020	Handle, Coated	1

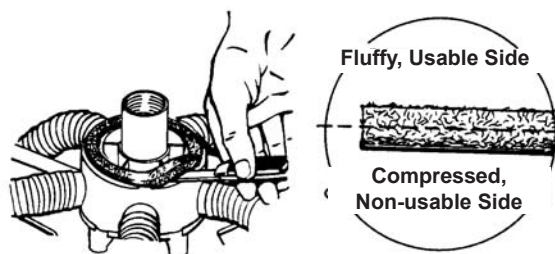
## 9 - Repair and Replacement

### **FELT VACUUM SEAL REPLACEMENT:**

The felt vacuum seal plays an important part in the optimum performance of your ChemDry PowerHead AX™. If it is worn or unlubricated, it will not form a proper seal. Lack of a proper seal will impair the vacuuming capabilities of the unit and therefore leave behind more water in the carpet than is desirable.

To replace the vacuum seal:

1. First, remove the vacuum head assembly as previously described.
2. Using a pocket knife or similar tool, carefully pry the seal up and lift it out. If the seal appears worn or glazed so that it will not lubricate well, turn it over (see Figure 9-1). If that does not work, or if it is damaged, replace it with a new seal.
3. The manufacturer recommends changing the felt seal after 10 hours of use. Replace it with a seal that has been pre-soaked in a quality 30 weight SAE motor oil .
4. Press the seal in place and saturate it with the motor oil. If a flattened seal will be re-used, place the used seal in an oil bath to rejuvenate it.



**Figure 9-1. Carefully Pry Seal Up and Lift Out**

### **NOTICE**

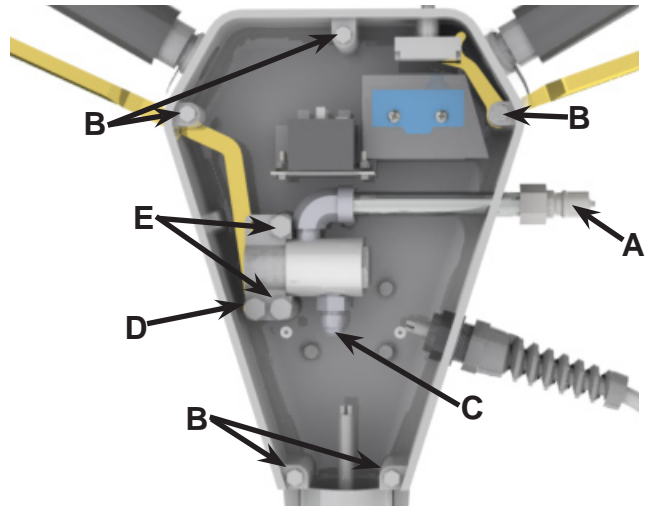
A tuna fish can is the right size and shape for the oil bath and does not require a large amount of oil (a plastic container for this purpose is included in the ChemDry Service Kit).

# ChemDry PowerHead AX

## HIGH PRESSURE VALVE ASSEMBLY

In the event that the valve assembly needs to be replaced, follow this procedure (see Figure 9-2).

1. Remove the 440 male quick connect (A) with a wrench.
2. Remove the five hex head screws (B) in the back plate on the handle and lift the back panel off.
3. Disconnect the stainless steel hose from the bottom of the valve assembly (C).
4. Remove the bolt (D) holding the trigger.
5. Remove the two bolts (E) holding the valve assembly in the handle.
6. The valve may now be rebuilt or replaced.



**Figure 9-2. Valve Assembly Parts**

## NOTICE

If the valve has been frozen, inspect it for leakage before re-installing the back plate.

# 10 - Troubleshooting

The following tables list the problem in the middle column and the possible solution(s) in the right column.

## 1.0 LOW VACUUM FLOW AT THE CLEANING HEADS

1.1	Hub not sealing properly.	Replace felt seal with a lubricated one.
1.2	Restricted air flow.	Remove cleaning head and clear all vacuum lines and heads of debris.
1.3	Low vacuum flow from power source.	Refer to Troubleshooting section of source equipment manual.

## 2.0 LOW WATER FLOW AT CLEANING HEADS (INDICATED BY IRREGULAR WATER TEMPERATURE)

2.1	Restricted jets.	Remove jets and clear them of debris.
2.2	Kinked or clogged solution hose.	Remove hose. Repair or replace.
2.3	Cleaning hub not properly threaded.	Remove cleaning hub from shaft. to shaft. Clean and rethread onto shaft.

## 3.0 WATER LEAK AT ROTARY UNION

3.1	Foreign matter in rotary union seal.	Dismantle rotary union. Clean. Re-assemble and install.
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## 4.0 WATER LEAK AT VALVE

4.1	Ruptured plunger or valve O-ring.	Repair or replace damaged plunger O-ring, seal. Check for freeze damage.
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## 5.0 LOSS OF OIL FROM GEAR BOX

5.1	Loose or ruptured oil seal.	Replace damaged oil seal. Refill gear box with oil.
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## 6.0 NO POWER

6.1	ChemDry PowerHead AX wiring or power source.	Have an electrician inspect unit for possible wiring or motor problems.
6.2	Overloaded power source.	Locate an unused power source.
6.3	Gear box.	Repair or replace gear box.

## 7.0 HEAD WOBBLES DURING OPERATION

7.1	One leg of cleaning head is bent.	Straighten leg.
-----	-----------------------------------	-----------------

# ***ChemDry PowerHead AX***



# 11 - Limited Warranty Plan

The manufacturer, through Harris Research Inc., (HRI) and ChemDry Canada Ltd., (CDC) ,warrants ChemDry PowerHead AX™ machines of its manufacture to be free from defects in material and workmanship if properly installed, maintained, and operated under normal conditions with competent supervision. No person, agent, representative or dealer is authorized to give any warranties on behalf of HRI/CDC, nor to assume for HRI/ CDC any other liability in connection with any HRI products. This warranty shall extend to the original purchaser/leasee of said equipment for the periods listed below from date of acquisition. If the ChemDry Franchisee without the written consent of CDC makes repairs or replacements, the warranty shall cease to be in effect.

Machinery, equipment and accessories furnished by CDC but manufactured by others, are warranted only to the extent of the original manufacturer's warranty to CDC unless otherwise specified in the listing below.

CDC agrees, at its option, to repair at the point of shipment, or to replace without charge, any parts or parts of products of manufacture, which within the specified warranty period shall be proved to CDC's satisfaction to have been defective when shipped, provided the ChemDry Franchisee promptly notifies CDC, in writing, of such alleged defect. CDC will pay all freight and transportation charges within Canada, via normal ground shipping means, for replacement of parts covered under this warranty.

This warranty covers parts, as specified, and does not cover labor which may be necessary in completing repairs. CDC's liability to the ChemDry Franchisee, whether in contract or in tort arising out of warranties, representation, instructions, or defects from any cause shall be limited to repairing or replacing the defective part or parts. To qualify for warranty coverage, defective parts must be returned to CDC within 30 days. No warranty liability whatsoever shall attach to CDC unless and until CDC has received payment in full for the warranted machine or part.

Except as stated in this section and in the proceeding section and except as to title, there are no guarantees or warranties of merchantability, fitness, performance or otherwise, express, implied or statutory, and CDC shall have no liability for consequential, incidental or other damages howsoever caused.

All components not specifically referenced in the schedule below are covered under this warranty for a period of one (1) year, excepting those parts which are considered, by HRI/ CDC, to be expendable in normal use, including, but not limited to paint, labels and other cosmetic parts or features.

# ***ChemDry PowerHead AX***

Freezing of any water or chemical related component will VOID all warranties on water or chemical related components, internal or external, of this equipment.

Deposits and buildup in the water or chemical systems due to hardness in the water used or chemicals that results in chemical deposits will VOID all warranties on affected components.

All recommended maintenance must be performed by authorized service personnel.

Records of periodic maintenance must be kept and copies may be required to be furnished to CDC before this warranty is honored.

## **COVERAGE SCHEDULE**

Frame, Handle, Body	3 years
Gear Box	1 year
Motor	1 year
Valves, Hoses	1 year

# ChemDry PowerHead AX

## WARRANTY REGISTRATION

To activate your warranty protection, ChemDry Canada Ltd., (CDC) must receive this completed form within 30 days of receipt of equipment by Franchisee.

Upon receipt, your ChemDry PowerHead AX will be registered enabling you to receive updates, **Product Support Bulletins** and other important factory communications.

This warranty registration is subject to the terms, limitations and conditions of the then current **ChemDry PowerHead AX™ Protection Plan**.

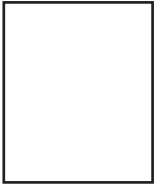
If you have any questions, contact the Technical Department at:

Telephone: 1-604-795-9918  
Fax: 1-604-795-7071  
Email: info@chemdry.ca

<b>Serial #:</b>	
<b>Date of Acquisition:</b>	
<b>Franchise Name:</b>	
<b>Franchise #:</b>	
<b>Street Address:</b>	
<b>City:</b>	<b>Province:</b>
<b>Postal Code:</b>	<b>Telephone #:</b>
<b>Franchisee Signature:</b>	

ChemDry Canada LTD.  
8472 Harvard Place  
Chilliwack, BC, Canada, V2P 7Z5

Tape Edges



**CHEMDRY CANADA LTD.**  
**8472 HARVARD PLACE**  
**CHILLIWACK, BC**  
**CANADA, V2P 7Z5**

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Tape Edges