Hand-Held Scarifiers

Needleguns

Walk-Behind Scarifiers

Impact Tools

Sanders

Specialty Tools

Industrial Vacuums

High Efficiency Vacuum

6 Gallon Pneumatic Models

340.87506.01 – ULPA | 340.70506.01 – Wet/Dry | 340.001 - Backpack w/ULPA

*Vacuum Configurations**

Part	Description	Filtration	Material Pickup	Accessories Furnished
340.87506.01	Free-standing with Critical Filtration	U.L.P.A, 5-stage	Dry Pickup Only	10′ hose, filter & bag
340.70506.01	Free-standing, Wet/Dry	Wet - None Dry - 2-stage	Wet or Dry	10′ hose
340.001	Backpack with Critical Filtration	U.L.P.A, 5-stage	Dry Pickup Only	6′ hose, filter & bag

*Standard on all configurations listed above: Pneumatic powered, high efficiency, 6 gallon stainless steel tank.

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Contents

Chapter 1 – General Information

1.1 Introduction

This manual is furnished with each new DESCO Vacuum. This provides the necessary operating and preventive maintenance instructions. Operators must read and understand this manual before operating or servicing this machine.

This machine was designed to give you excellent performance and efficiency. For best results and minimal cost, please follow the general guidelines below:

- Operate the machine with reasonable care.
- Follow the manufacturers suggested maintenance instructions as provided in this booklet.
- Use only genuine Desco parts and filters for best results.

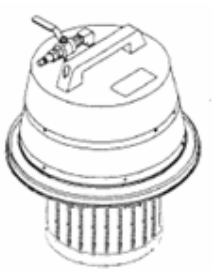
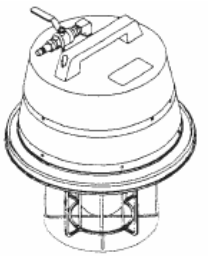
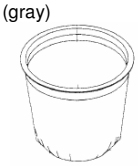
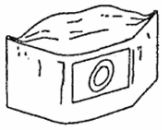
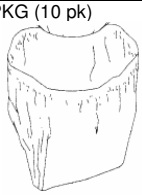
1.2 Technical Specifications

Power, air input	100psi @ 37 cfm, ½" hose minimum
Suction, air flow	166 cfm
Water lift	180"
Tank size	6 gal (22 ltr), stainless steel
Tank capacity, dry	.46 cu. ft (.013 m^3)
Hose size	1.5" x 10' (free standing) 1.5" x 6' (back pack)
Weight	22 lbs

1.3 Accessories

Part	Description
300.082	Vacuum hose 1.5" x 10', replacement, complete
340.000001	Vacuum hose 1.5" x 25', replacement, complete
300.039	Vacuum hose 1.5" x 25', extension, coupler required
340.390014	Inlet coupler, 1.5", w/swivel cuff
300.066	Hose cuff, 1.5"
340.490024.1	Tool kit, plastic, 7 piece
340.490025.1	Tool kit, aluminum, 11 piece

1.4 Consumables

Item	Configurations	
	Critical Filtration 340.87506.01 (Std.) 340.001 (Back Pack)	**Wet/Dry** 340.70506.01
ULPA Filter	340.110029  Pictured w/ULPA filter on vacuum head	n/a  Pictured w/wet-dry float-ball shut off.
Pre-Filter Sleeve	340.110030PKG (6 pk) 	*n/a*
Cloth Bag	340.805041 (gray) 	340.805041 (gray)  (Optional, dry only)
Paper Filter Protector	340.761177PKG (12 pk) 	340.761177PKG (12 pk)  (Optional, dry only)
Collection Bag	340.384003PKG (10 pk) 	*n/a*
Liner/Disposal Bag	340.802206PKG (10 pk)  (Optional)	*n/a*

1.5 Provisioning of Vacuum Consumables

Below are guidelines designed to give an idea of how many consumable items should be on hand to keep a vacuum system running efficiently. Actual consumable requirements vary widely due to the number of variables involved, including: tank size, debris volume, and particle size. As a result, there is no accurate way to predict consumable consumption. Therefore, the guidelines below should be used for initial provisioning. Once you have usage data, you can adjust to suit your actual needs.

Recommended Initial Provisioning

Stage	Item	Vacuum Systems Provisioned								
		1 Vacuum			2 Vacuums			3 Vacuums		
		Qty Rec	Pkg Qty	Order Pkgs	Qty Rec	Pkg Qty	Order Pkgs	Qty Rec	Pkg Qty	Order Pkgs
1	Collection Bag	20	10	**2**	30	10	**3**	40	10	**4**
2	Paper Filter Protector	10	10	**1**	20	10	**2**	30	10	**3**
3	Cloth Bag	2	1	**2**	3	1	**3**	4	1	**4**
4	Pre-Filter Sleeve	2	6	**1**	3	6	**1**	4	6	**1**
5	ULPA Filter	1	1	**1**	2	1	**2**	3	1	**3**

1.6 Critical Filtration and Vacuum Efficiency

- **Efficiency** is a balance of: 1) maintaining effective particle removal as measured by the ULPA specification while, 2) maintaining rated vacuum air flow as measured in cubic feet per minute (CFM).
- **Maintaining air flow** volume is critical to maintain the level of cleanliness required by the process.
- **Air flow declines** as particulate embeds in the filter fabric. As a result, efficiency decreases as filter use increases.
- **Efficiency is maintained** by checking and servicing filters often – before vacuum air flow declines significantly.
- **Multi-stage filtration is sacrificial.** Meaning each filtration stage sacrifices itself to save the next stage. Changing early filtration stages often (such as collection bag & filter protector) will greatly extend the life of the later filtration stages. **Key to understand** is that besides being an efficiency measure, this is also an **economy measure** as the early stages of filtration are far less expensive than the ULPA filter.

1.7 Filtration Stages and Maintenance Steps

1) ***Collection Bag*** – A disposable container where dust particles are accumulated for disposal.
   - *Particle containment efficiency*: 90% at 5 microns, *Typical Life*: Up to 12.5 hours
   - Check space available every 4 hours of operation. More often for heavy volume pickup.
   - Change when ¾ full. Change more frequently when collecting fine dust particles, such as concrete dust.
   - Always change. Never empty and reuse.
   - Always check stages 2-5 when changing collection bag.

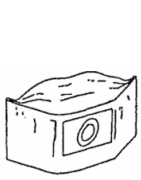
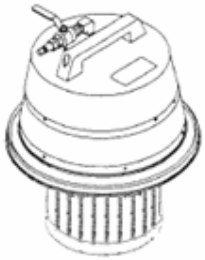
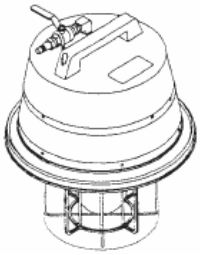
2) ***Paper Filter Protector*** – A disposable filter designed to catch particles that pass through the collection bag (Stage 1) and to protect the cloth bag (Stage 3).
   - *Particle containment efficiency*: 97% at 5 microns, *Typical Life*: Up to 25 hours
   - Change when compromised: punctured, visibly contaminated or air flow is restricted.
   - If not visibly compromised, change with every second collection bag.
   - Always change. Never clean and reuse.
   - When replaced, stage 1 should also be replaced.

3) ***Cloth Bag*** – A reusable filter designed to catch particles that pass through the Paper Filter Protector (Stage 2) and to protect the Pre-Filter Sleeve (Stage 4).
   - *Particle containment efficiency*: 95% at 3 microns, *Typical Life*: Up to 125 hours
   - Always change when vacuum has been used with HAZMAT. Never clean and reuse.
   - Reusable only when you are certain the vacuum has not been used for HAZMAT. Clean by vacuuming exterior of the bag with a second vacuum.
   - Change when compromised: punctured, visibly contaminated or air flow is restricted.
   - When replaced, stages 1 and 2 should also be replaced.

4) ***Pre-Filter Sleeve*** – A reusable filter designed to catch particles that pass through the Cloth Bag (Stage 3) and to protect the ULPA filter (Stage 5).
   - *Particle containment efficiency*: 99% at 1-3 microns, *Typical Life*: Up to 250 hours
   - Always change when vacuum has been used with HAZMAT. Never clean and reuse.
   - Reusable only when you are certain the vacuum has not been used for HAZMAT. Clean by vacuuming exterior of the sleeve with a second vacuum.
   - Change when compromised: punctured, visibly contaminated or air flow is restricted.
   - When replaced, stages 1, 2 and 3 should also be replaced.

5) ***ULPA Filter*** – A disposable filter designed to catch particles that pass through the Pre-filter Sleeve (Stage 4).
   - *Particle containment efficiency*: 99.999% at 0.12 microns, *Typical Life*: Up to 1,000 hours
   - Change when compromised: punctured, visibly contaminated or air flow is restricted.
   - Always change. Never clean and reuse.
   - When replaced, stages 1, 2, 3 and 4 should also be replaced.

1.8 Filtration Component Assembly

Installation Procedure	Configurations	
	Critical Filtration 340.87506.01 (Std.) 340.001 (Back Pack)	**Wet/Dry** 340.70506.01
1. Liner/Disposal Bag a. Place in bottom of tank. b. Roll bag sides to lay flat c. When changing collection bag, un-roll liner with full collection bag inside.	340.802206PKG (10 pk)  (Optional)	*n/a*
2. Collection Bag a. Unfold and fan-out bag b. Place bag in bottom of tank. c. Slide bag opening on tube over o-ring.	340.384003PKG (10 pk)   	*n/a*
3. Cloth Bag a. Place paper filter protector over cloth bag. b. Place filter protector and cloth bag in tank	340.805041 (gray) 	340.805041 (gray)  (Optional, dry only)
Paper Filter Protector	340.761177PKG (12 pk) 	340.761177PKG (12 pk)  (Optional, dry only)
4. Pre-Filter Sleeve a. Slide sleeve over ULPA filter.	340.110030PKG (6 pk) 	*n/a*
5. ULPA Filter a. Place ULPA filter on vacuum head. b. Fasten ULPA filter with 8 Phillips head screws. c. Place vacuum head on tank.	340.110029  Pictured w/ULPA filter on vacuum head	n/a  Pictured w/wet-dry float-ball shut off.

Chapter 2 – Safety Precautions

 PLEASE READ AND FOLLOW ALL WARNINGS 

2.1 Read Operating Instructions

Always become familiar with all the instructions and warnings before operating any machine or power tool.

2.2 Hazardous Material and Safety

Safety is your primary concern when working with or near hazardous material (HAZMAT). This applies to yourself, your co-workers and the environment in which you are working. In this regard, please observe the following:

- ***Your Responsibility*** – It is your responsibility to understand the risks of the substances being cleaned and other job site hazards. Then put in place safety precautions to address the hazards that are situation appropriate.
- ***Situation Appropriate*** – Safety practices for HAZMAT handling are *substance dependent* and safety precautions must be *situation appropriate*. For risks and mitigating precautions, consult a qualified *safety professional*.
- ***Personal Protection Equipment*** – Safety precautions may require use of personal protection equipment. This may include: A. Eye protection (goggles), B. Respiratory protection (mask or respirator), C. Skin protection (gloves and/or other protective clothing), and/or D. Other safety precautions. For risks and mitigating precautions, always consult a qualified *safety professional*.
- ***Safety Professional*** – For substance and situation appropriate safety handling guidelines, always consult an appropriate safety professional, such as an Industrial Hygienist or Radiological Protection professional.
- ***Regulatory Compliance*** – Procedures for safe handling and disposal of HAZMAT should conform to EPA and local regulations.
- ***Scope of Manual*** – The scope of this manual is general safety, use and maintenance required to safely operate the vacuum unit. Health and safety risks directly related to the specific HAZMAT being handled is not covered in this manual.

2.3 Static Electricity Warning

Air operated equipment can generate static electricity during use. Static dissipating arching can be generated and occur if equipment and accessories are not grounded. Risk of explosion is possible if operated near explosive materials or vapors. Do not operate this equipment near flammable materials such as solvents, thinners, fuels or grain dust.

Chapter 3 – Operating Instructions

3.1 Pre-Operation

3.1.1 Inspection

- *Physical Inspection* – Carefully inspect the vacuum head and tank for physical damage that would affect safety or performance. For example, inspect: 1) tank for punctures, 2) head/tank gasket for proper seal, 3) tank latches are securely holding vacuum head on tank. Correct or repair as required.
- *Filtration Consumables* – Inspect filtration components to insure they are properly installed and have remaining life that is sufficient to complete the task at hand. See section 1.7 for inspection and maintenance guidelines.

3.1.2 Jobsite Setup

- *Locate Vacuum* – Position vacuum unit on stable ground within hose reach of work site. Secure vacuum to stationary object if necessary to insure safety.
- *Install Suction Hose* – Attach clasp end of hose to vacuum tank and cuff end of hose to vacuum tool.
- *Install Air Pressure Hose* – Attach vacuum to compressed air power source using an air hose. For optimum performance, the vacuum unit requires clean, dry air delivered at 100psi @ 37 cfm. A ½" minimum diameter air hose is recommended.

3.2 Operation

3.2.1 Power On/Off

The vacuum is powered with compressed air. Power – or air flow – is controlled with a ball valve. The valve handle travels one quarter (1/4) turn from off to on.

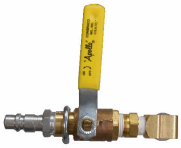
- **Off** – to turn off air flow, rotate handle in the clockwise direction.
- **On** – to turn on air flow, rotate handle in the counterclockwise direction.

Off Position

On Position

3.2.2 Power Sequence

Note: *This paragraph applies only when the vacuum is used in conjunction with a tool with a dust collection system.*
The *power on/off sequence* is **critical** to effective dust containment. The vacuum must be turn on before the tool started and the vacuum must remain on until the tool has come to a complete stop.

Sequence	First Action	Second Action
On	Vacuum **On** 	Tool **On** 
Off	Tool **Off** 	Vacuum **Off** 

3.2.3 Periodically Check Airflow

Vacuum airflow is vital to maintaining performance and efficiency. Vacuum efficiency is a balance of: 1) maintaining effective particle removal as measured by the ULPA specification while, 2) maintaining rated vacuum air flow as measured in cubic feet per minute (CFM).

The key factors affecting airflow and, therefore, performance are listed below. Be sure to check these at periodic intervals.

1. *Compressed air power source* – Optimum performance is obtained when air is delivered at 100psi @ 37 cfm. A minimum hose diameter of ½" is recommended.
2. *Filter maintenance* – Dirty filters reduce air flow. See paragraph 1.7 for filtration stages and maintenance steps.

Chapter 4 – Maintenance

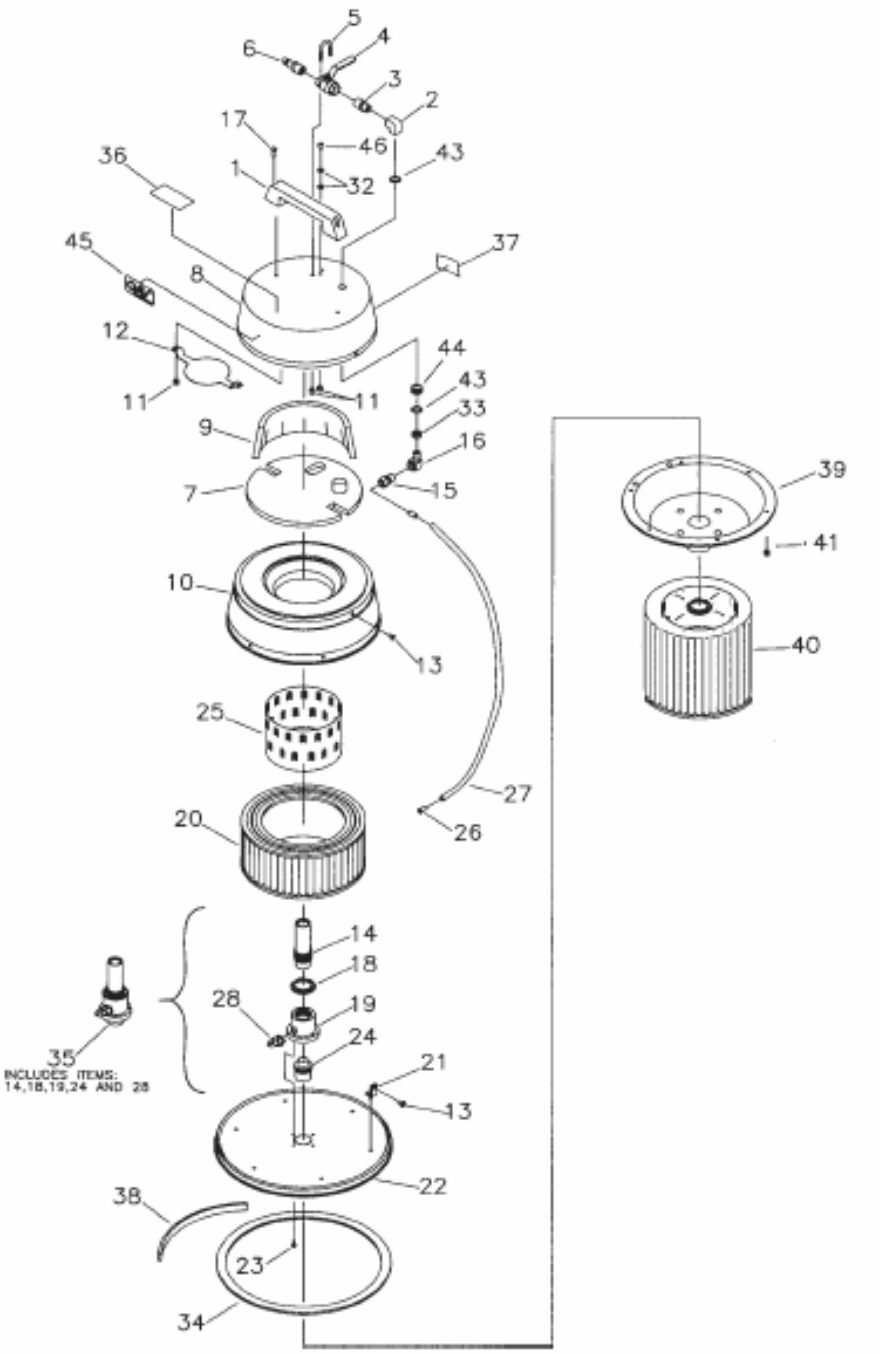
- No user serviceable components are employed in the vacuum lid power head.
- No lubrication of the motor is required.
- All service and repair should be performed by qualified vacuum service representative or technician.

Chapter 5 – Troubleshooting

Malfunction	Probable Cause	Solution
Loss of vacuum air flow	Filter(s) clogged	Check & replace filters as needed. See paragraph 1.7 for further information.
	Inadequate compressed air power source	Check air supply and verify that it is delivering 100psi @ 37cfm
		Check air hose. A minimum ½" hose is required.
	Other malfunction	Contact your Desco representative for evaluation and repair assistance.

Chapter 6 – Schematics

6.1 Vacuum Head Drawing – ULPA Configuration



6.2 Vacuum Head Parts List – ULPA Configuration

Ref	Part Number	Qty	Description
1	340.460001	1	Handle
2	340.700028	1	3/8 X 3/8 Brass Elbow
3	340.420017	1	Hex Nipple Reducer
4	340.701009	1	.50 Valve
5	340.712105	1	U-Bolt
6	500.164	1	.50 Coupler
7	340.700033	1	Dome Felt
8	340.700031	1	Top Cover
9	340.700032	1	Felt Liner
10	340.700030	1	Filter Cover-Outer Housing
11	340.712667	15	1/4-20 SS Nyloc Nut
12	340.700034	1	Air Deflector
13	340.710178	9	1/4-20 x .50 SCR-MC STPL
14	340.700012	1	Venturi Exhaust Tube
15	340.420008	1	Male Connector
16	340.830062	1	3/8 x 3/8 Brass ST90
17	340.713002	2	BLT HH 1/4-20 x .75 #5
18	340.700014	1	Locking Nut
19	340.700011	1	Venturi Housing
20	340.700037	1	Exhaust Filter
21	340.832106	6	Bracket Mounting Tab
22	340.700029	1	Bottom Pan
23	340.712536	4	SCR-THMC 10-24 x .62 STPL
24	340.700013	1	Venturi Intake
25	340.700038	1	Perforated Shield
26	340.420011	2	Brass Insert
27	340.700025	1	Poly Hose 20” Long
28	340.420009	1	Male Elbow 469F
32	340.711504	4	WSR-Flat ¼ SS
33	340.829285PLT	1	Spacer-Zinc Plated
34	340.480052	1	Gasket, Rubber .25x.87x.50
35	340.700010	1	Venturi Assembly
36	340.715003	1	Decal, Air Pressure
37	340.715029	1	Decal, Serial Name Plate
39	340.700041	1	ULPA Adapter
40	340.110029	1	ULPA Filter
41	340.711106	8	Scr-ST-A 10x.75 PL
43	340.711513	2	WSR-Flat .689x1.06x.029 SS
44	340.260274	1	Grommet
45	340.715388	1	Decal, QAV
46	340.710180	1	Scr-MC TR HD ¼-20x.75

6.3 Vacuum Head Drawing – Wet-Dry Configuration

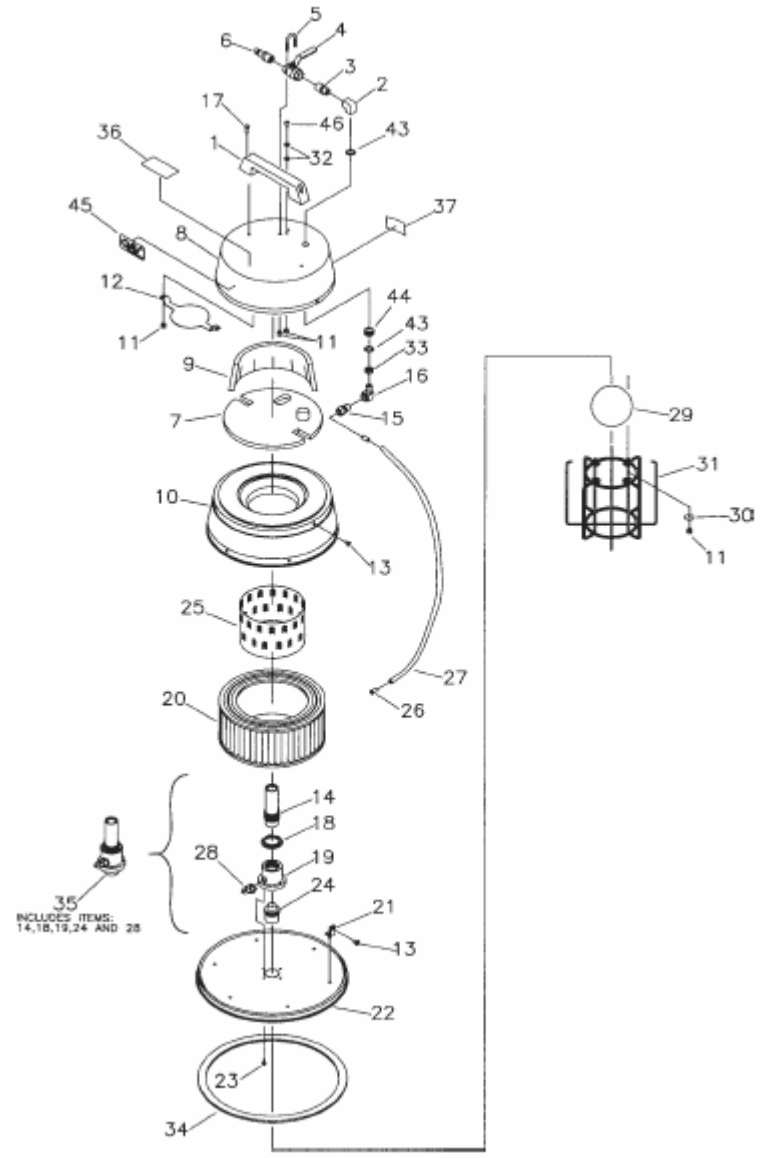
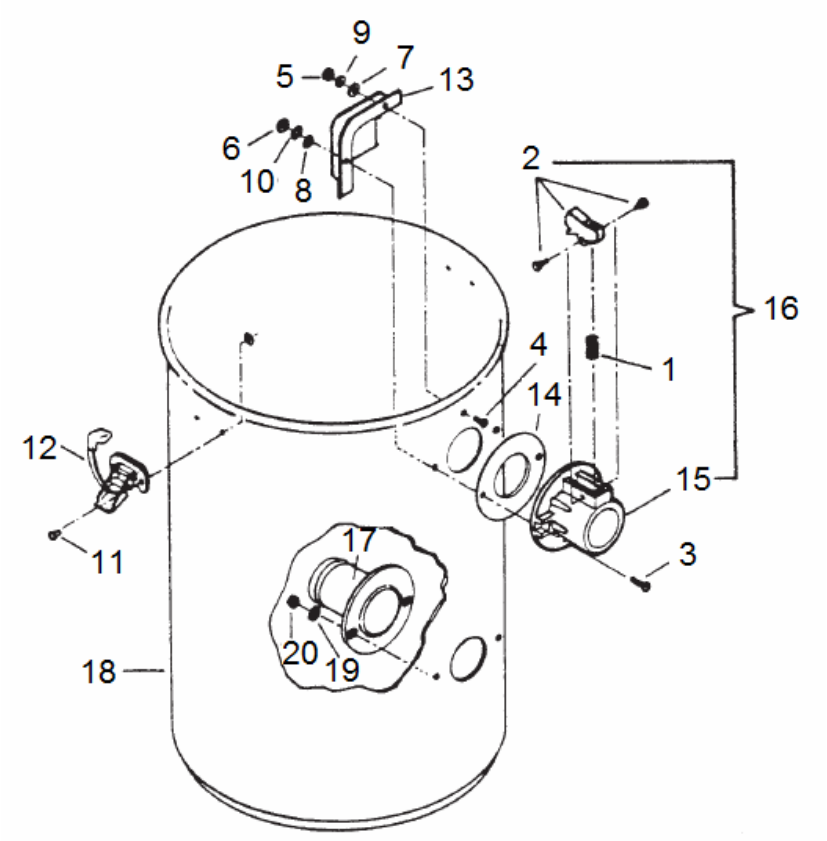


Figure 1 – Wet/Dry Setup

6.4 Vacuum Head Parts List – Wet/Dry Configuration

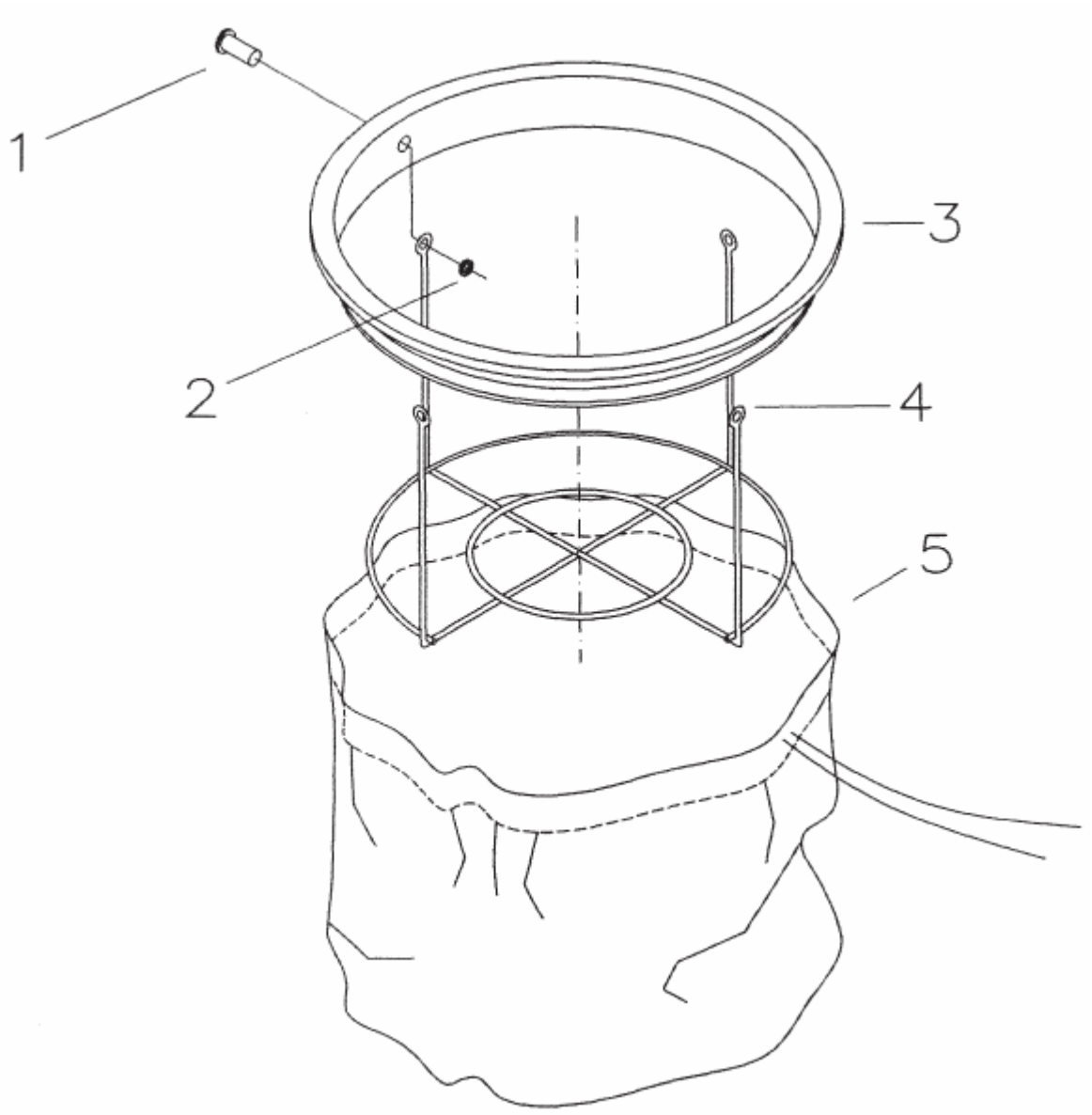
Ref	Part Number	Qty	Description
1	340.460001	1	Handle
2	340.700028	1	3/8 X 3/8 Brass Elbow
3	340.420017	1	Hex Nipple Reducer
4	340.701009	1	.50 Valve
5	340.712105	1	U-Bolt
6	340.701010	1	.50 Coupler
7	340.700033	1	Dome Felt
8	340.700031	1	Top Cover
9	340.700032	1	Felt Liner
10	340.700030	1	Filter Cover-Outer Housing
11	340.712667	15	1/4-20 SS Nyloc Nut
12	340.700034	1	Air Deflector
13	340.710178	9	1/4-20 x .50 SCR-MC STPL
14	340.700012	1	Venturi Exhaust Tube
15	340.420008	1	Male Connector
16	340.830062	1	3/8 x 3/8 Brass ST90
17	340.713002	2	BLT HH 1/4-20 x .75 #5
18	340.700014	1	Locking Nut
19	340.700011	1	Venturi Housing
20	340.700037	1	Exhaust Filter
21	340.832106	6	Bracket Mounting Tab
22	340.700024	1	Bottom Pan
23	340.712536	4	SCR-THMC 10-24 x .62 STPL
24	340.700013	1	Venturi Intake
25	340.700038	1	Perforated Shield
26	340.420011	2	Brass Insert
27	340.700021	1	Poly Hose 32” Long
28	340.420009	1	Male Elbow 469F
29	340.380046	1	Hollow Rubber Ball
30	340.712761	4	WSR-FLat .25x1.01x.06 SS
31	340.380045CTD	1	Float Cage Assembly
32	340.711504	4	WSR-Flat ¼ SS
33	340.829285PLT	1	Spacer-Zinc Plated
34	340.480052	1	Gasket, Rubber .25x.87x.50
35	340.700010	1	Venturi Assembly
36	340.715003	1	Decal, Air Pressure
37	340.715029	1	Decal, Serial Name Plate
38	340.480053	1	Rubber Locating Ring
39	340.750801	1	Water Shut-Off Adapter
40	340.760231MCH	1	Adapter
41	340.760260	1	Spring
42	340.760234	1	Lint Filter Bag
43	340.711513	2	WSR-Flat .689x1.06x.029 SS
44	340.260274	1	Grommet
45	340.715388	1	Decal, QAV
46	340.710180	1	Scr-MC TR HD ¼-20x.75

6.5 Tank Assembly



Ref	Part	Description	Qty
1	340.390002	Spring, .275 O.D.	1
2	340.390001	Trigger with pins	1
3	340.712824	SCR-MC 10-24 x .75 ST PL	2
4	340.710530	SCR-MC 8-32 x .50 bras	1
5	340.711304	Nut, hex, 8-32 ST PL	1
6	340.711310	Nut, hex, 10-32, ST PL	2
7	340.711502	WSR, flat, #8	1
8	340.711503	WSR, flat #10	1
9	340.711542	WSR, lock, #8	1
10	340.711543	WSR, helical lock, #10	2
11	340.711915	Rivet, .19 x .28 x .37 HD STNI	4
12	340.761054	Latch	2
13	340.900035	Deflector, intake	1
14	340.390087	Gasket	1
15	340.390101	Intake, aluminum	1
16	340.390110	Intake assy, aluminum	1
17	340.750118	Tube assy	1
18	340.900093	Tank, 6 gal, SS, low intake	1

6.6 Bag Assembly



Item	Part Number	Qty	Description
1	340.711909	4	Rivet Pop .19x.44 AL
2	340.712764	4	Washer #10 SS
3	340.760244MCH	1	Plastic Bag Frame w/Hole
4	340.760406PLT	1	Bag Frame 6 gal Plated OPTIONAL
5	340.805040	1	Bag, Cloth Bag Only 6G
***	340.800056	1	Bag Assy. w/Frame 6gal