



# **VACMASTER® 23T TIER III DIESEL ABRASIVE VACUUMS**



**BUILT MARCO**  
**TOUGH**  
MARCO MANUFACTURED

## **PART NUMBERS AND SCHEMATICS GUIDE**

## Company Profile

Since 1944, Marco has developed a strong tradition of providing innovative and reliable products and services to the surface preparation and protective coatings industries. We are the world's premier provider of Abrasives, Blasting, Coating, Dust Collectors, Engineered Systems, Rental, Safety, Service, Repair, & Modernization, and Vacuums.

Through innovative designs and a total commitment to quality, Marco manufactures products that increase production rates, create a safer workplace, and reduce maintenance costs. Marco's industry experience, manufacturing capabilities, legendary customer service, product availability, logistics services, and technology leadership is your assurance that we deliver high quality products and services, providing the best value to you, our customer.

## The Marco Difference

- **Industry Experience** – With Marco on your team, you have access to expertise which can only come from decades of industry leadership. We have organized our engineering department, production specialists, customer operations, and safety support into a "Center of Competence." As a Marco customer, you have access to hundreds of years of cumulative experience related to your operations.
- **Manufacturing Excellence** – Marco is a U.S. based, ISO 9001:2008 certified manufacturer of equipment for the Surface Preparation and Protective Coatings industries. Marco's engineers benchmark the industry to ensure that we design and manufacture superior products that set the "Gold Standard" for performance, safety, and quality.
- **Legendary Customer Service** – Marco's legendary customer service team is staffed by friendly, highly-trained individuals who are focused on providing the highest level of product support, order accuracy, and customer satisfaction.
- **Product Availability** – We stock over 10,000 SKU's and have more than 45 shipping locations to serve North American and International markets for all major brands of blasting and coating equipment. As the largest provider of surface preparation and protective coatings equipment in the world, our inventory levels and product availability are unmatched.
- **Logistics Services** – Marco's in-house logistics team is dedicated to moving your shipment anywhere in the world. We move more than 14,000 truckloads every year, allowing you to save on freight costs by leveraging our buying power. Lower your process costs with a single invoice, which includes product and freight.
- **Technology Leadership** – Our website provides: Operator's Manuals, Part Numbers and Schematics Guides, SDS information, and Features & Specifications Guides, providing access to information 24/7. Our Extranet application allows you to receive quotes and place orders online. Our Intranet maintains a complete record of your purchase history to assist with ongoing support of your existing equipment and future purchasing decisions.

## Vision Statement

Marco is the world's premier provider of Abrasives, Blasting, Coating, Dust Collectors, Engineered Systems, Rental, Safety, Service, Repair, & Modernization, and Vacuums.

## Mission Statement

Marco provides strong leadership and innovation to the surface preparation and protective coatings industries. We dedicate our efforts to the continuous improvement of our products, services, processes, people, and most importantly, the quality of our customer's experience.

## Quality Statement

Marco is committed to providing superior quality in the design, manufacturing, distribution, rental, service, and repair of our products. Our ISO 9001:2008 certification extends throughout all operations in all locations. Continuous improvement of our processes and supply chain Integration comprise the core of our business strategy for delivering exceptional quality and value in all Marco products and services.

## Management Philosophy

We are a company dedicated to the success of every customer and associate. We discuss, debate, challenge, measure, and test our ideas. We will be boundless and limitless in our passion to improve. Through sound leadership and dedicated associates, we will ensure a long term, profitable future for Marco, our associates, customers, and suppliers.

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*Complete unit with tier III diesel engine no longer available. See Tier 4 options.*

## SPECIFICATIONS

<b>Capacity:</b>	MAX 3658 CFM
<b>Filter Cartridge Style:</b>	Acrylic-Coated Filter Bags 37 Required
<b>Filter Cleaning:</b>	Pulse System, 25–30 second intervals. Pulse Duration: 200–350 millisecond
<b>Vacuum:</b>	27" Hg
<b>Ducting Connections:</b>	6" I.D. Inlet with 4" adapter
<b>Inspection Ports:</b>	One 10" Viewable to Filters with access ports to hopper
<b>Material Removal:</b>	Automatic Direct Dump
<b>Blower:</b>	Rotary lobe, positive displacement with jet inlet
<b>Engine:</b>	Diesel, Tier 3, 250 Horsepower
<b>Fuel Capacity:</b>	Capacity: 116 Gallons    Type: Diesel
<b>Air Compressor:</b>	On Board 13 CFM
<b>Electrical System:</b>	12-Volt DC
<b>Engine Protection:</b>	Engine Monitoring System with automatic shutdown
<b>Fluid Specifications:</b>	Hydraulic Oil: H46 or equivalent, 2 gallon capacity Diesel Fuel: See Engine Operator's Manual for type, 116 gallon capacity Grease/Lubricator: Shell Alvania Grease EP or equivalent Alcohol Evaporator: Alcohol 99 Isopropyl, 32 oz. capacity Vibrator Lubricator: 4 oz. pneumatic air tool oil
<b>Unit Dimensions:</b>	Weight: 13,950 pounds (empty) Length: 22' 6" Width: 8' 2" Height: 11' 2" Raised Height: 18' 6" Dump Clearance: 8'

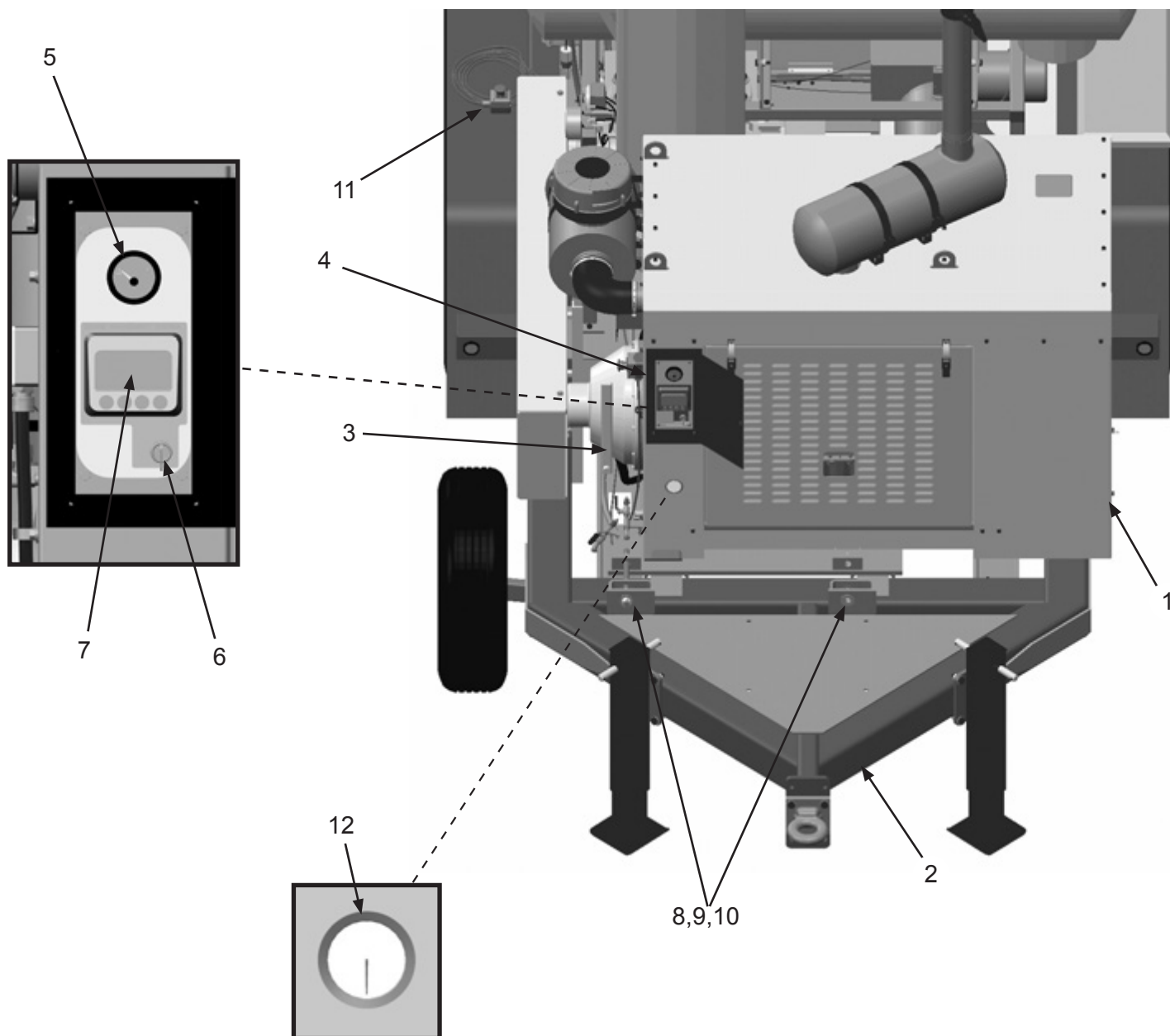
## PART NUMBERS AND SCHEMATICS

### Front Assembly

Item #	Part #	Description
<b>Fig. 1</b>		
1	10104812	Perkins Engine 250 Hp Tier III
2	10104776	Trailer
3	10103986	Clutch
4	10103972	Engine Control Panel
5	10104821	Wema Analog Fuel Level Gauge
6	10103974	Key Switch
—	10103970	Perkins Key
7	10103969	Murphy PowerView
8	10103440R	3/4-10 UNC GR8 Draw Bolt <i>(Two Required)</i>
9	10103418	Washer - 3/4" - Grade 8 <i>(Four Required)</i>
10	10103420	3/4-10 UNC Grade 8 Nut <i>(Four Required)</i>
11	10104071	Remote Emergency-Stop Station <i>(Includes 100 Ft. of Cord)</i>
12	10104820	Pressure Guage
—	10104126	Oil Filter
—	10103958	Primary Fuel Filter
—	10104117	Secondary Fuel Filter
—	10106547	Fuel Filter Water Bowl
—	10106593	Outer Air Filter
—	10106594	Inner Air Filter

## PART NUMBERS AND SCHEMATICS

Figure 1: Front Assembly



## PART NUMBERS AND SCHEMATICS

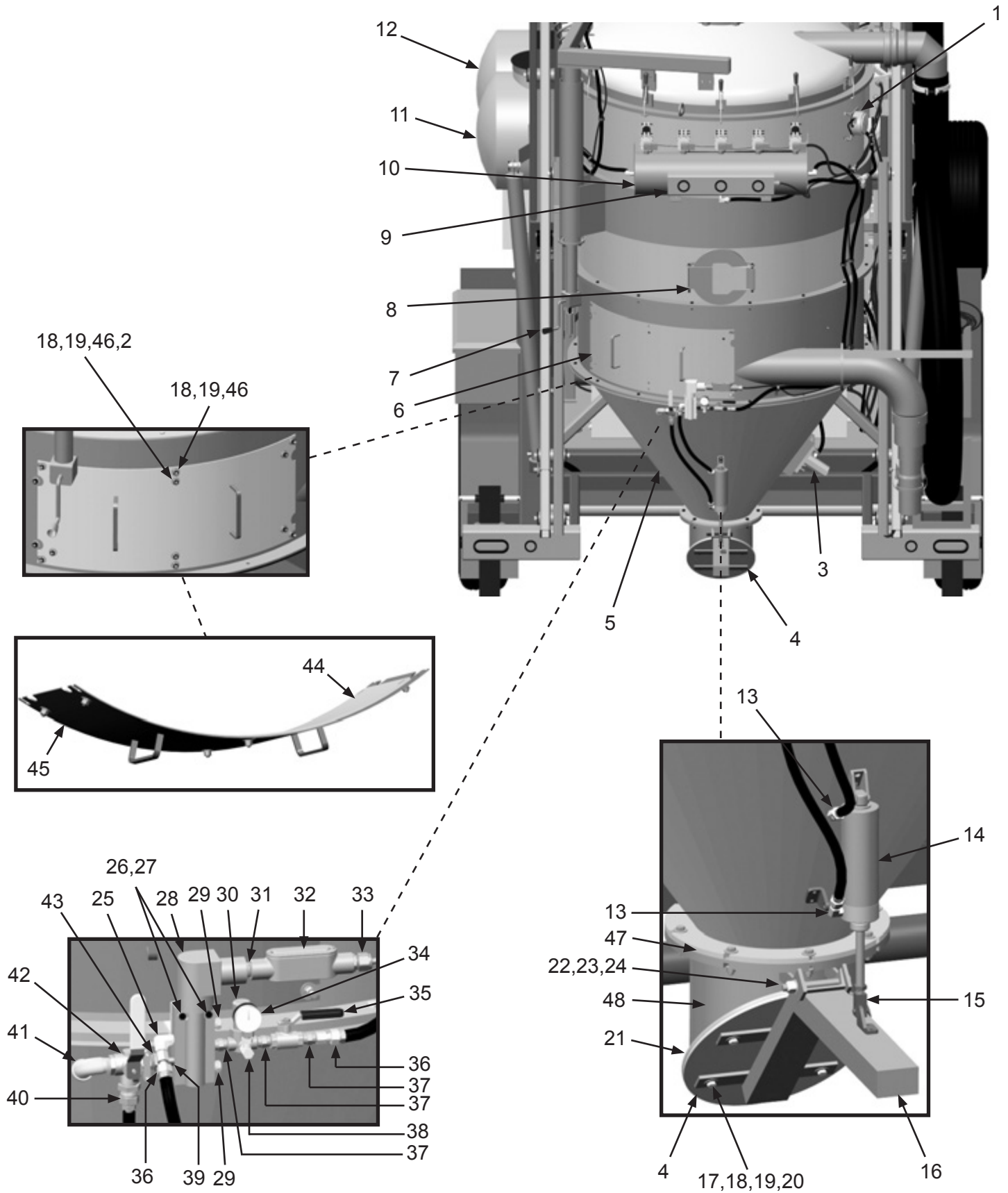
### Rear Assembly

Item #	Part #	Description
<b>Fig. 2</b>		
1	10104673	0-50" Differential Pressure Gauge
2	10104705	3/8-16 FH SQ Neck x 1" Bolt Zinc <i>(12 Required)</i>
3	10104665	APV Series Piston Vibrator
4	10104506	Dump Door
5	10104411	Vacuum Hopper Cone
6	10106511	Vacuum Wear Door
7	10104638	Bulldog Trailer Jack
8	10104439	Knappco Hatch
9	10105334	Marco® Vacuum Light Bar
10	10104498	Vacuum Header
11	10104770	Blower Exhaust Silencer
12	10104771	Blower Intake Silencer
13	20PFHA60UA0406	1/4" (M) x 3/8" (F) 90° Swivel <i>(Two Required)</i>
14	10104667	2.5" Pneumatic Cylinder
15	10104668	Piston Rod Clevis
16	10104507	Dump Arm
17	10104234	3/8-16 x 1-1/4 Hex Bolt Zinc <i>(Four Required)</i>
18	10101942	3/8" Flat Washer - Galvanized <i>(20 Required)</i>
19	10101936	3/8" Lock Washer - Zinc <i>(16 Required)</i>
20	10101938	3/8 -16 Hex Nut <i>(Four Required)</i>
21	10104512	Dump Door Gasket
—	10104511	Dump Door Internal Plate
22	20100160	1/2-13 x 4-1/2" Zinc Hex Bolt
23	10100674	1/2" Flat Washer <i>(Two Required)</i>
24	20100124	1/2-13 Hex Lock Nut - Zinc
25	20PFHA25UA0404	1/4" Male 90° Elbow
26	1019044	1/4-20 x 1-3/4" Zinc Bolt <i>(Two Required)</i>

Item #	Part #	Description
27	1012323	1/4-20 Zinc Lock Nut with Nylon Insert <i>(Two Required)</i>
28	10104670	Solenoid
29	1019024	Breather Vent
30	10104676	Series MPR Mini Pressure Relief
31	10L803035	1/2" Close Nipple
32	1019025	1/2" Straight Conduit Body
33	10104703	Cord Grip, 1/2" Nylon .2-.47 Diameter
34	10104678	1/8" Pressure Gauge 100 Psi
35	1080050	1/4" Ball Valve
36	20PFHA60SG0406	1/4" (F) x 3/8" (F) Swivel Union <i>(Two Required)</i>
37	20PFHA24SA0404	1/4" Hex Nipple <i>(Three Required)</i>
38	1014239	1/8" x 1/8" 90° Fitting
39	1011210	1/4" NPT x 1 1/2" Nipple
40	20PFHA60SA0806	1/2" (M) x 3/8" (F) Swivel Union
41	1011819	1/2" Street Elbow
42	20100571	1/2" NPT 3-Way Brass Ball Valve
43	1011818	1/2" x 1/4" Galvanized Bushing
44	10105189	Wear Door Liner
45	10105190	Wear Door
46	10101938	3/8 -16 Hex Nut GALV. <i>(12 Required)</i>
47	10104502	Dump Section Gasket
48	10104503	Vacuum Discharge Tube

## PART NUMBERS AND SCHEMATICS

Figure 2: Rear Assembly



## PART NUMBERS AND SCHEMATICS

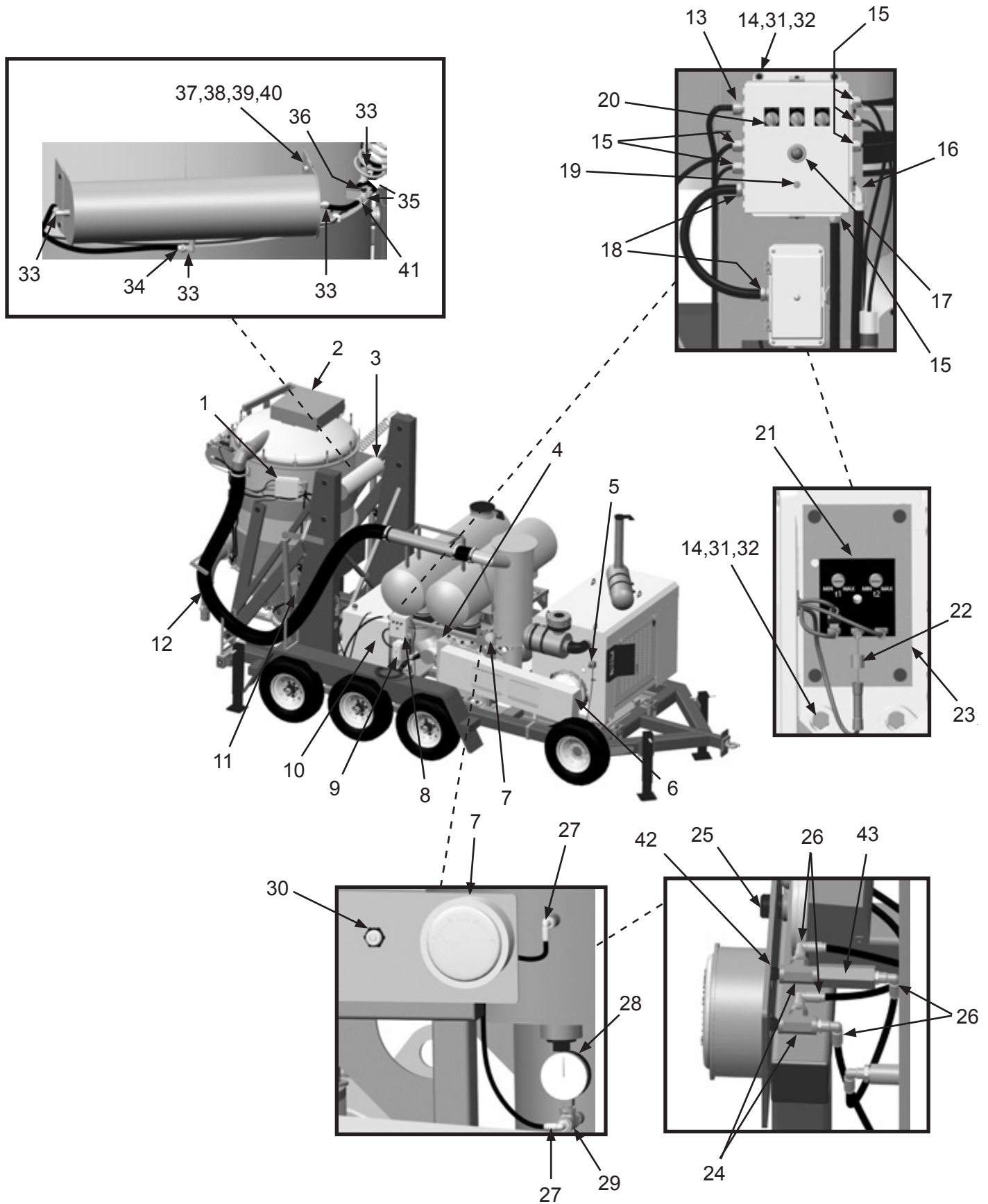
### Right Side Front Assembly

Item #	Part #	Description
<b>Fig. 3</b>		
1	—	Pulse Timer Control Box
2	10104559	Vacuum Butterfly Cover
3	10104493	Vacuum Aux Header
4	10104777	Blower Top Shaft Left Discharge
5	10104071	E-Stop Control Station
6	10104788	Vacuum Belt Guard Cover
7	10104673	0—50" Differential Pressure
8	10104614	10" x 8" x 4" Nema 4 Enclosure
9	10104615	8" x 4" x 5" Fiberglass Qr Latch Enclosure
10	10104704	116 Gal Rectangle Fuel Tank
11	10104674	Lubricator, 1/2" NPT 156 CFM
12	10VH620B	6" I.D. Vacuum Hose 20' Section
13	20RCG5050	1/2" NPT x .5—.625 Diameter Cord Grip
14	20100125	1/4-20 x 3/4" Zinc Hex Bolt <i>(Eight Required)</i>
15	10104703	1/2" NPT x .2—.47 Diameter Nylon Cord Grip <i>(Six Required)</i>
16	20RST9050	90° Liquid Tite Connection Fitting
17	10104692	12-Volt Pilot Light - Red
18	20RST50	Straight Liquid Tite Connection Fitting <i>(Two Required)</i>
19	10104686	10 Amp Circuit Breaker
20	10103305	Selector Switch - 2-Way <i>(Three Required)</i>
21	10106818	Vacuum Control Timer
22	10104109	6 Amp 50-Volt Rectifier
23	10105193	Enclosure Panel
24	20PFHA25VJ02	1/8" Female Tee <i>(Two Required)</i>
25	10104672	Differential Pressure Switch

Item #	Part #	Description
26	20100579	1/4" O.D. Tube x 1/8" NPT PTC Swivel <i>(Four Required)</i>
27	20PFBA31095614	1/4" Tube x 1/4" NPT 90° Fitting <i>(Two Required)</i>
28	10104677	Liquid Filled Vacuum Gauge
29	1011844	1/4" Pipe Tee Galvanized
30	10104073	1/2" Panel Lock Nut
31	10101940	1/4" Flat Washer - Galv <i>(Four Required)</i>
32	10101939	1/4-20 Stainless Steel Lock Nut with Nylon Insert <i>(Four Required)</i>
33	20PFHA60UA0606	3/8" (M) x 3/8" (F) 90° Swivel Union <i>(Four Required)</i>
34	10103631	3/8" Barb x 3/8" NPTF Brass <i>(Seven Required)</i>
35	1011809	3/8" NPT Tee <i>(Two Required)</i>
36	1011209	3/8 NPT Close Nipple
37	1011747	3/8-16 x 1" Bolt - Zinc <i>(Four Required)</i>
38	10101942	3/8" Flat Washer - Galv <i>(Four Required)</i>
39	10101936	3/8" Lock Washer - Zinc <i>(Four Required)</i>
40	10101938	3/8-16 Hex Nut - Galv <i>(Four Required)</i>
41	20PFHA60SA0606	Union Swivel 3/8" (M) x 3/8" (F) <i>(Two Required)</i>
42	10104048	6-32 x 3/8" L Pan Head Machine Screw <i>(Three Required)</i>
43	10108373	1/8" NPT Inline Air Filter
—	10106896	Blower Oil 100 <i>For below 0° F</i>
—	10106897	Blower Oil 150 <i>For 0 – 32° F</i>
—	10105254	Blower Oil 220 <i>For 32 – 90° F</i>
—	10106898	Blower Oil 320 <i>For above 90° F</i>

## PART NUMBERS AND SCHEMATICS

Figure 3: Right Side Front Assembly



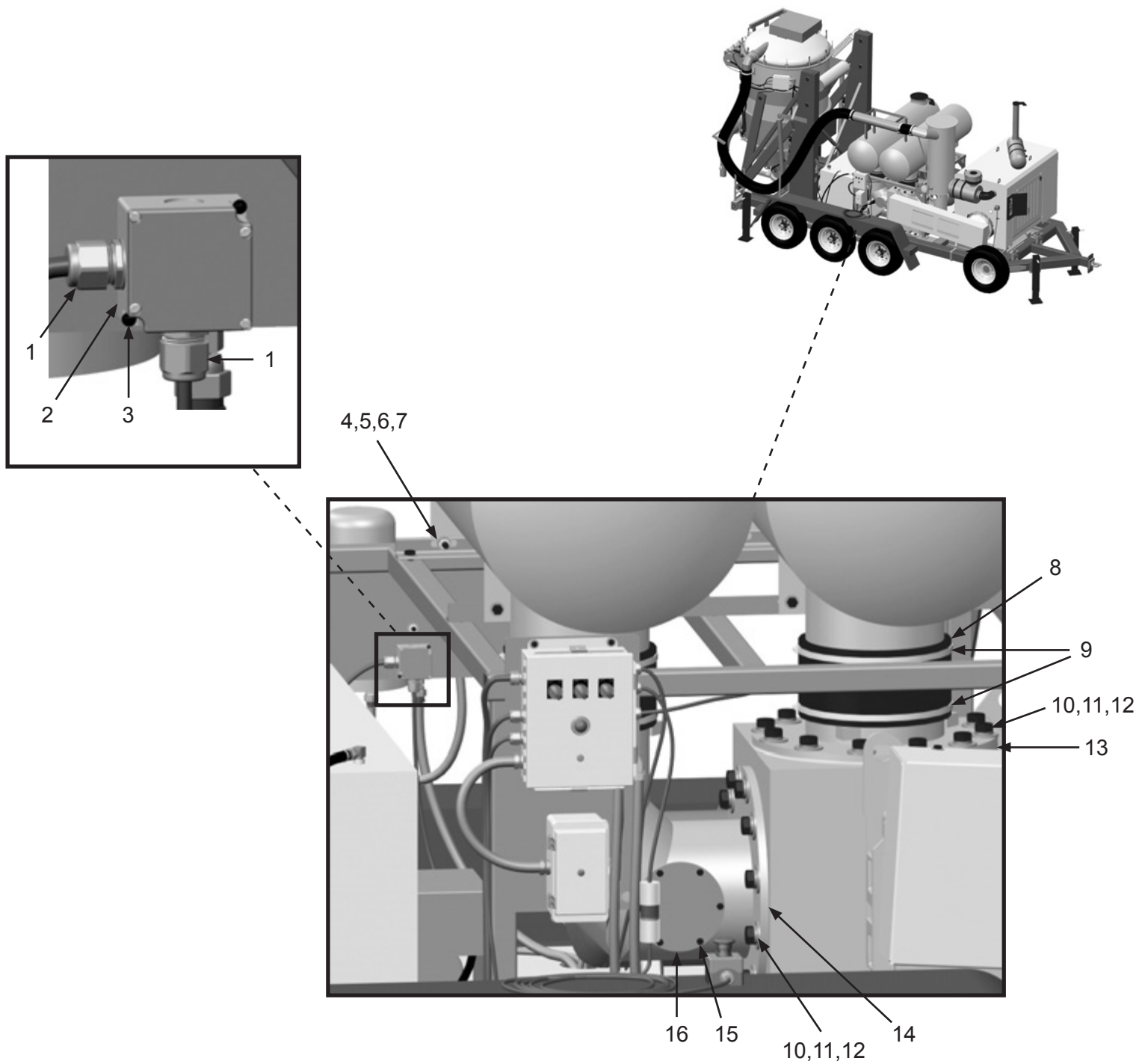
## PART NUMBERS AND SCHEMATICS

### Center Assembly

Item #	Part #	Description
<b>Fig. 4</b>		
1	10104703	1/2" Npt x .2—.47 Diameter Nylon Cord Grip <i>(Two Required)</i>
2	20000031	8-32 x 1-1/2" Machine Screw <i>(Two Required)</i>
3	10105897	Terminal Box
4	10101943	1/2-13 x 1-3/4" Hex Bolt <i>(Eight Required)</i>
5	10100674	1/2" Flat Washer <i>(16 Required)</i>
6	10100675	1/2" Lock Washer <i>(Eight Required)</i>
7	10101941	1/2-13 Hex Nut - Galvanized <i>(Eight Required)</i>
8	10104813	10-3/4" I.D. Hose <i>(Two Required)</i>
9	10103416	Banding Clamp <i>(Four Required)</i>
10	10104715	7/8-9 X 2" Grade 5 Zinc Bolt
11	10104716	7/8" Flat Washer - Zinc
12	10104717	7/8" Lock Washer - Zinc
13	10104772	Blower Intake Silencer Adapter
14	10104773	Silencer Exhaust Elbow
15	10100675	1/2" Lock Washer <i>(Four Required)</i>
16	10101941	1/2-13 Hex Nut - Galvanized <i>(Four Required)</i>

## PART NUMBERS AND SCHEMATICS

Figure 4: Center Assembly



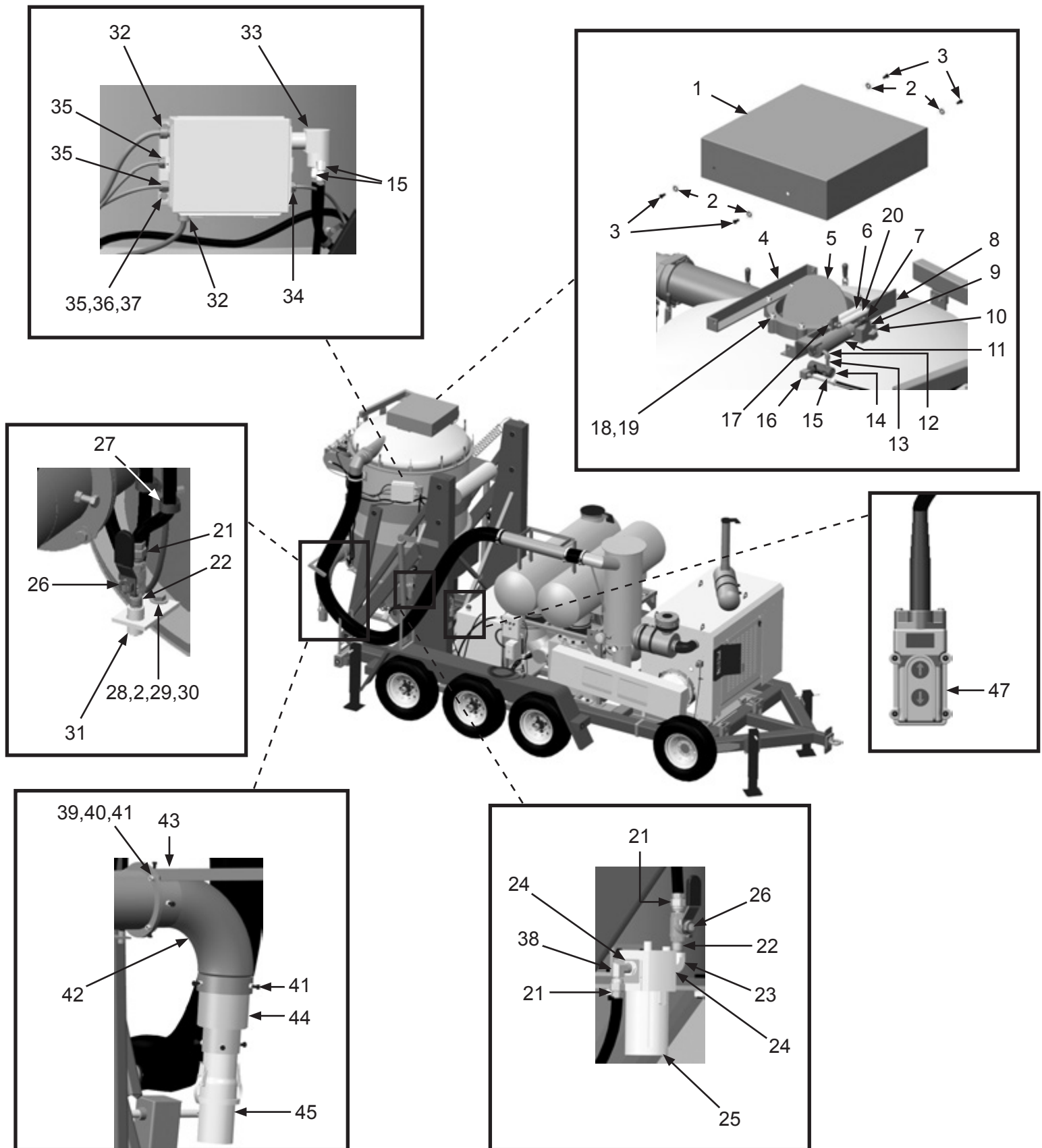
## PART NUMBERS AND SCHEMATICS

### Right Side Rear Assembly

Item #	Part #	Description	Item #	Part #	Description
<b>Fig. 5</b>			28	1028617	3/8-16 x 1-3/4" Shoulder Bolt
1	10104559	Vacuum Butterfly Cover	29	10101936	3/8" Lock Washer - Zinc
2	10101942	3/8" Flat Washer - Galvanized ( <i>Five Required</i> )	30	10101938	3/8 -16 Hex Nut
3	10103400	3/8-16 x 3/4" Bolt ( <i>Four Required</i> )	31	10104597	Airline Drain
4	10104554	Butterfly Cover Mount Weldment	32	20RCG5050	1/2" NPT x .5—.625 Diameter Cord Grip ( <i>Two Required</i> )
5	10104537	12" Butterfly	33	10104671	Vibrator Solenoid
6	10107175	6.5" Extension Spring	34	10104703	1/2" Npt x .2—.47 Diameter Nylon Cord Grip ( <i>Three Required</i> )
7	10104668	Piston Rod Clevis	35	10101939	1/4-20 Stainless Steel Lock Nut with Nylon Insert ( <i>Four Required</i> )
8	10104538	Vacuum Butterfly Cylinder Weldment	36	10101940	1/4" Flat Washer - Galvanized ( <i>Four Required</i> )
9	10104543	Butterfly Actuating Arm	37	20100125	1/4-20 x 3/4" Zinc Hex Bolt ( <i>Four Required</i> )
10	20100125	1/4-20 x 3/4" Zinc Hex Bolt	38	20PFHA60UA0606	3/8" (M) x 3/8" (F) 90° Swivel Union
11	10104667	2.5" Pneumatic Cylinder	39	10101942	3/8" Flat Washer - Galv. ( <i>Eight Required</i> )
12	1011824	1/4" Street Elbow	40	10101938	3/8 -16 Hex Nut GALV. ( <i>Four Required</i> )
13	1011217	1/4" x 2" Nipple Galvanized	41	1011747	3/8 -16 x 1" Bolt - Zinc ( <i>13 Required</i> )
14	10104669	Solenoid For Butterfly	42	10104546	Vacuum Inlet Elbow Long
15	20PFHA60UA0406	1/4" (M) x 3/8" (F) 90° Swivel ( <i>Three Required</i> )	—	10106732	Life Vacuum Inlet Elbow
16	10105287	Din Connector	43	10104496	Vacuum Inlet Insert
17	10104706	3/8-16 x 2-1/2" Thread Stud	44	10104550	Vac Inlet Adapter
18	10100674	1/2" Flat Washer ( <i>Eight Required</i> )	45	10107797	4" Quick Disconnect Coupling Assy
19	20100124	1/2 - 13 Hex Lock Nut ( <i>Eight Required</i> )	46	10107204	Remote Control Pendant
20	10107176	6.5" Long Extension Spring - Zinc	—	10105292	Alcohol 99 Isopropyl - 16 Oz
21	20PFHA60SA0606	Union Swivel 3/8" (M) x 3/8" (F) ( <i>Three Required</i> )			
22	1011209	3/8" NPT Close Nipple			
23	20PFHA25UG0606	3/8" Street Elbow			
24	20PFHA24SB0806	1/2" x 3/8" Reducing Bushing ( <i>Two Required</i> )			
25	10104674	Lubricator, 1/2" NPT 156 CFM			
26	1080060	3/8" NPT Full Port Brass Ball Valve ( <i>Two Required</i> )			
27	10103624	1" Rubber Cushioned Loop Clamp			

## PART NUMBERS AND SCHEMATICS

Figure 5: Right Side Rear Assembly



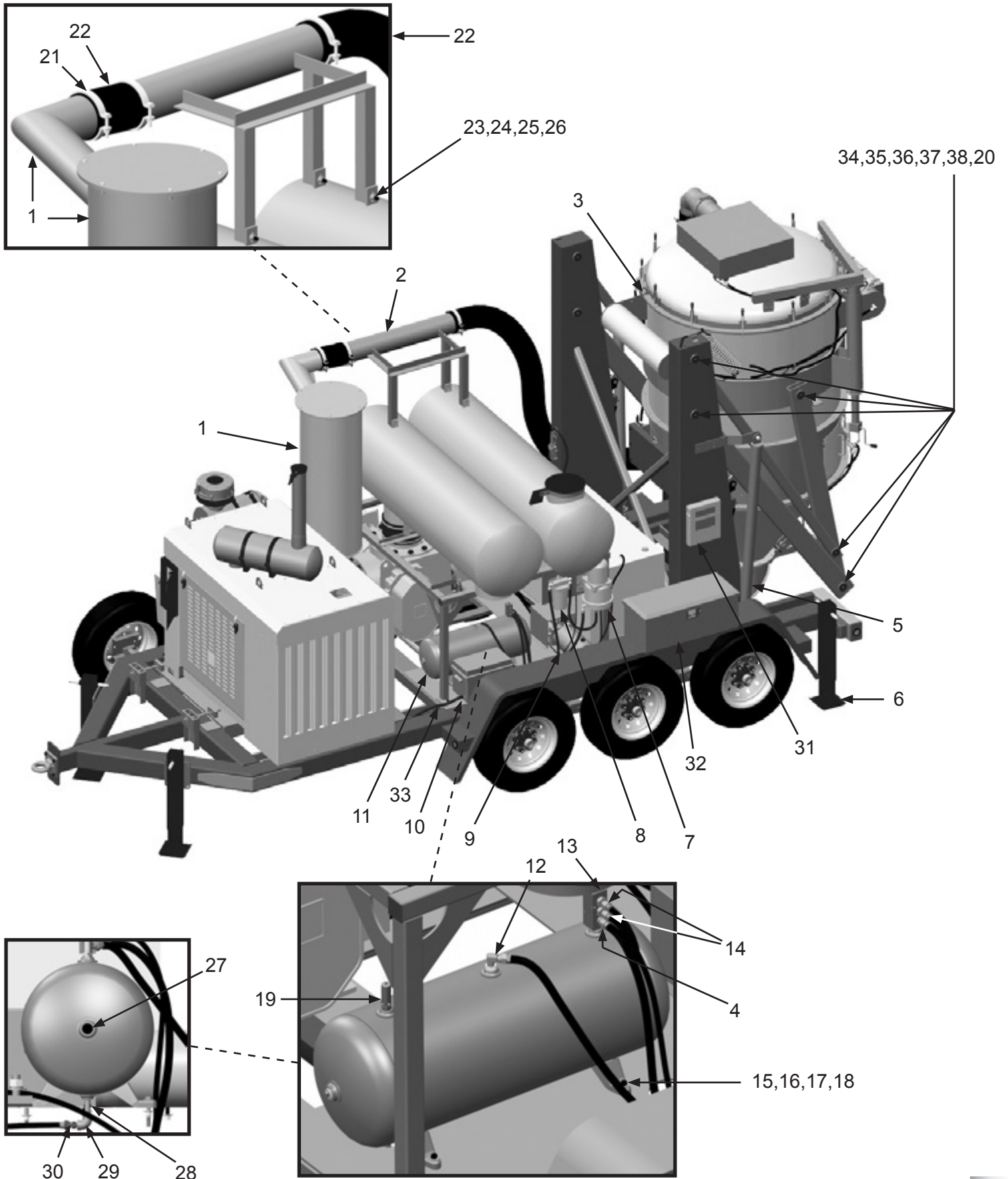
## PART NUMBERS AND SCHEMATICS

### Left Side Front Assembly

Item #	Part #	Description
<b>Fig. 6</b>		
1	10104766	Intake Filter Housing
2	10104795	Tube Extension Assembly
3	—	Hopper Assembly
4	20PFHA60SA0606	3/8" (M) x 3/8" (F) Swivel Union
5	10104608	Support Arm
6	10104082	Jack Stand
7	10104611	Air Dryer
8	10104612	Alcohol Evaporator
9	10105779	12-Volt DC Hydraulic Power Unit
10	10103342	Battery Box
11	10104610	Horizontal Pressure Tank - 15 Gallon
12	20PFHA60UA0606	3/8" (M) x 3/8" (F) 90° Swivel Union
13	10104618	3 Outlet Pressure Manifold
14	20PFHA60SA0604	3/8" (M) x 1/4" (F) Swivel Union <i>(Two Required)</i>
15	1028617	3/8-16 x 1-3/4" Shoulder Bolt <i>(Four Required)</i>
16	10101942	3/8" Flat Washer - Galvanized <i>(Eight Required)</i>
17	10101936	3/8" Lock Washer - Zinc <i>(Four Required)</i>
18	10101938	3/8-16 Hex nut <i>(Four Required)</i>
19	10104681	1/2" NPT Pressure Relief Valve
20	10104602	Vacuum Shoulder Pin
21	10104640	6" Double Bolt Clamp
22	10VH620B	6" I.D. x 20' Vacuum Hose
23	10101943	1/2-13 x 1-3/4" Hex Bolt <i>(Four Required)</i>
24	10100674	1/2" Flat Washer <i>(Eight Required)</i>
25	10100675	1/2" Lock Washer <i>(Four Required)</i>
26	10101941	1/2-13 Hex Nut - Galvanized <i>(Four Required)</i>
27	10DSHP75	3/4" Square Head Pipe Plug <i>(Two Required)</i>
28	1011217	1/4" x 2" Nipple Galvanized
29	1011832	1/4" 90° Elbow Galvanized
30	10SME025	1/4" NPT x 1/4" (F) Straight Swivel
31	10104273	Document Holder
32	10105896	Tool Box
33	10105865	Battery Cables, 156" Long
34	10104708	Straight Grease Zerk - 1/4"-28
35	10106402	5/8-11 Grease Zerk Thru Bolt
36	10106403	3/16" x 5/8" Dowel Pin
37	10101061	5/8" Lock Washer
38	10104600	Vacuum Pin Cap
—	10103341	Battery <i>(not shown)</i>

## PART NUMBERS AND SCHEMATICS

Figure 6: Left Side Front Assembly



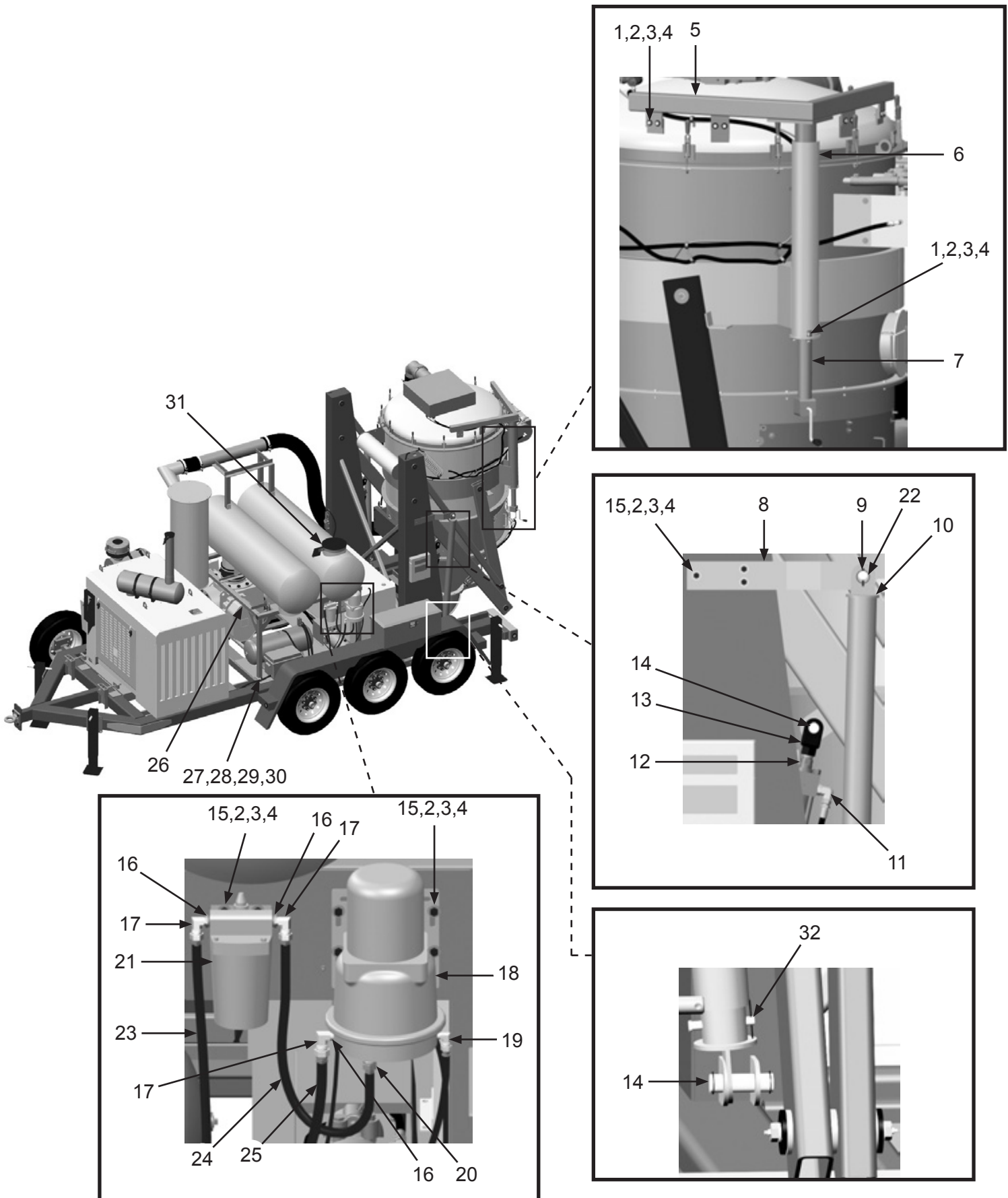
## PART NUMBERS AND SCHEMATICS

### Left Side Rear Assembly

Item #	Part #	Description
<b>Fig. 7</b>		
1	10104234	3/8-16 x 1-1/4" Hex Bolt Zinc <i>(Eight Required)</i>
2	10101942	3/8" Flat Washer - Galvanized <i>(40 Required)</i>
3	10101936	3/8" Lock Washer - Zinc <i>(11 Required)</i>
4	10101938	3/8 -16 Hex Nut <i>(11 Required)</i>
5	10104472	Vacuum Lid Lift
6	10104434	Vacuum Top Section
7	10104638	Bulldog Trailer Jack
8	10104728	Lift Arm Support Bracket <i>(Two Required)</i>
9	10104729	Lift Arm Support Bracket Pin <i>(Two Required)</i>
10	10104608	Support Arm Outer <i>(Two Required)</i>
—	10104605	Support Arm Inner <i>(Two Required) (not shown)</i>
11	10103308	Elbow - 90° - JIC 8 x SAE 10 <i>(Four Required)</i>
12	10104645	Vacuum Lift Cylinders <i>(Two Required)</i>
13	10104646	Lift Cylinder Clevis <i>(Two Required)</i>
14	10104647	1" x 3-1/8" Pin <i>(Four Required)</i>
15	1011747	3/8-16 x 1" Bolt <i>(12 Required)</i>
16	20PFHA24SB0806	1/2" x 3/8" Reducing Bushing <i>(Three Required)</i>
17	20PFHA60UA0606	3/8" (M) x 3/8" (F) 90° Swivel Union <i>(Three Required)</i>
18	10104611	Haldex Air Dryer
—	10106512	Desiccant Element Kit for Haldex Air Dryer <i>(not shown)</i>
19	1012326	1/4" (M) x 1/4" (F) 90° Swivel Union
20	20PFHA60SA0806	1/2" (M) x 3/8" (F) Swivel Union
21	10104612	Haldex Alcohol Evaporator
22	10105290	3/16" x 1-5/8" Pin
23	10105838	1/2" x 168" Stainless Steel Braided Hose Assembly with 1/2" (M) NPT Ends
24	10104684	3/8" x 2' Braided Hose
25	10104683	3/8" x 4-1/2' Braided Hose
26	10104778	Silencer Mount
27	10101943	1/2-13 x 1-3/4" Hex Bolt <i>(Four Required)</i>
28	10100674	1/2" Flat Washer <i>(Eight Required)</i>
29	10100675	1/2" Lock Washer <i>(Four Required)</i>
30	10101941	1/2-13 Hex Nut - Galvanized <i>(Four Required)</i>
31	10104824	8" Raincap
32	10104709	1/2" x 3-1/2" Pin - Zinc

## PART NUMBERS AND SCHEMATICS

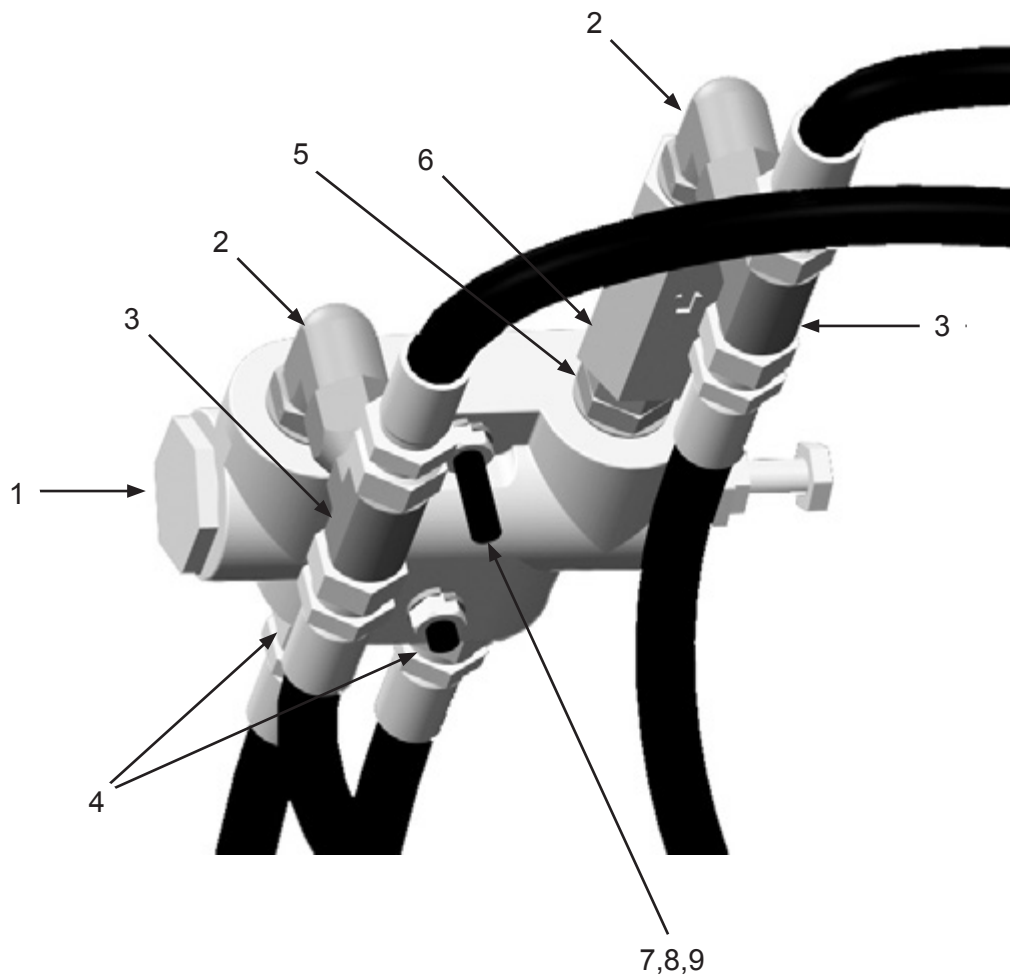
Figure 7: Left Side Rear Assembly



## PART NUMBERS AND SCHEMATICS

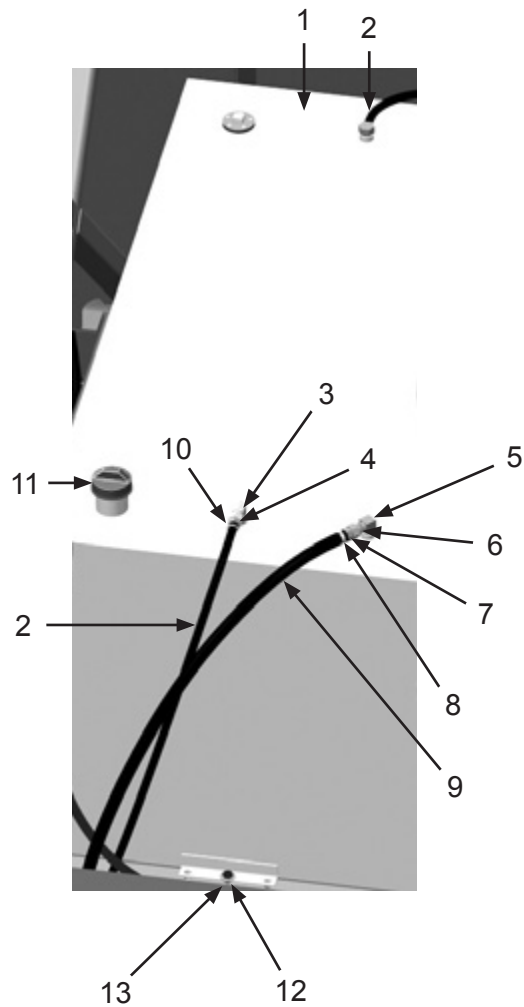
**Figure 8: Double Lock Valve Assembly**

Item #	Part #	Description
<b>Fig. 8</b>		
1	10104650	Double Lock Valve
2	10103309	Elbow - 90° - JIC 8 x SAE 8 <i>(Two Required)</i>
3	10105081	JIC 8 Tee <i>(Two Required)</i>
4	10104651	Union - Straight SAE 8 x JIC 8 <i>(Two Required)</i>
5	10103613	Union - Straight SAE 8 x SAE 8
6	10105288	Flow Restrictor SAE 8
7	10105286	5/16-18 x 2-1/2" Grade 5 Zinc Bolt <i>(Two Required)</i>
8	10L805014	5/16" Lock Washer <i>(Two Required)</i>
9	1035046	5/16-18 Nut <i>(Two Required)</i>



## PART NUMBERS AND SCHEMATICS

**Figure 9: Fuel Tank**



Item #	Part #	Description
<b>Fig. 9</b>		
1	10104704	116 Gallon Rectangle Fuel Tank
2	10103423	3/8" I.D. Fuel Hose ( <i>Per Foot</i> )
3	20PFHA60UA0606	3/8" (M) x 3/8" (F) 90° Swivel Union
4	10103631	3/8" Barb x 3/8" NPT Brass Female Fitting
5	10103617	Withdraw Tube - 16"
6	20PFHA60SA0606	3/8" (M) x 3/8" (F) Swivel Union
7	10103618	3/8" NPT x 1/2" Straight
8	10104064	Clamp - 1/2" I.D. Hose
9	10103619	1/2" Flexible Fuel Line ( <i>Per Foot</i> )
10	10104065	Oetiker Clamp - 3/8" I.D. Hose
11	10103968	Locking Fuel Cap with Keys
12	10104234	3/8-16 x 1-1/4" Hex Bolt Zinc ( <i>Two Required</i> )
13	10101942	3/8" Flat Washer - Galvanized ( <i>Two Required</i> )
—	10104631	Fuel Tank Rubber Cushioning Pad ( <i>not shown</i> )
—	10103620	3/8" Inline Filter ( <i>not shown</i> )

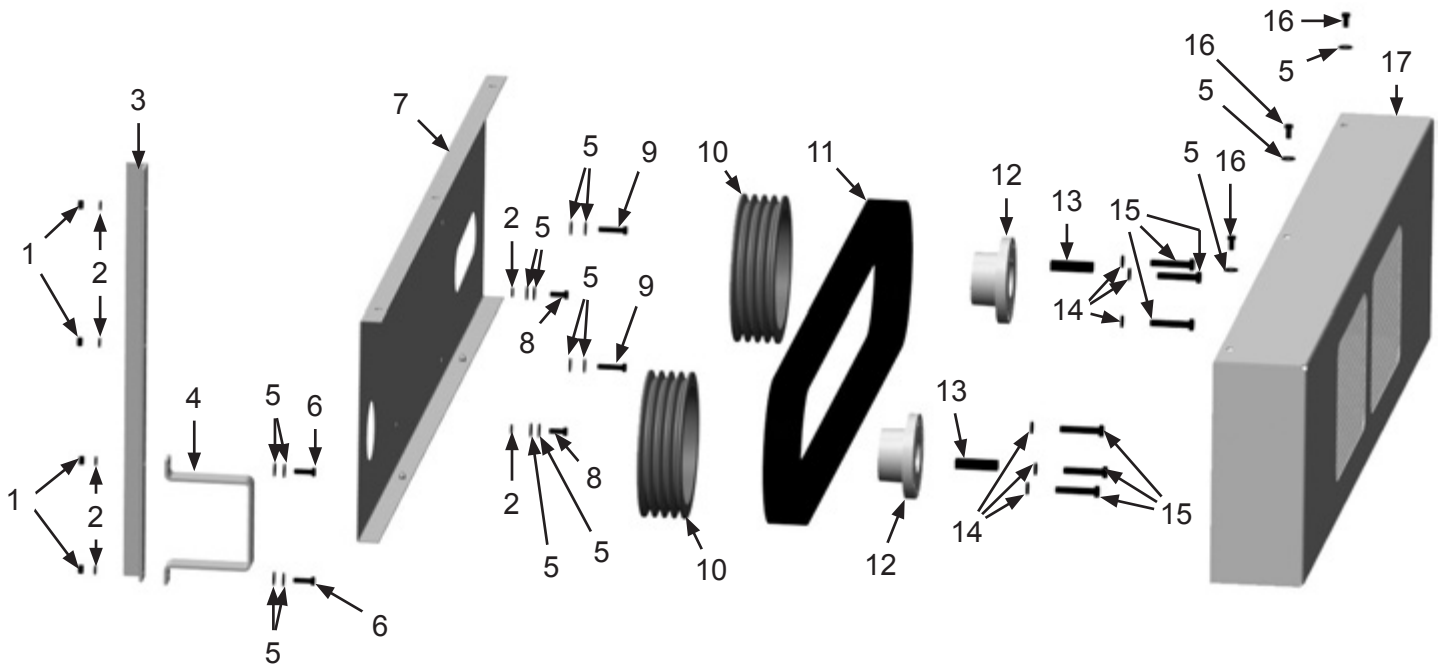
## PART NUMBERS AND SCHEMATICS

### Fan Belt Assembly

Item #	Part #	Description
<b>Fig. 10</b>		
1	10101938	3/8" Galvanized Hex Nut <i>(Four Required)</i>
2	10101936	3/8" Zinc Lock Washer <i>(Four Required)</i>
3	10104790	Vacuum Belt Guard Mount
4	10104793	Belt Guard Clamp
5	10101942	3/8" Galvanized Flat Washer <i>(15 Required)</i>
6	10104234	3/8-16 x 1-1/4" Hex Bolt Zinc <i>(Two Required)</i>
7	10104786	Belt Guard Back
8	1011747	3/8-16 x 1" Bolt <i>(Two Required)</i>
9	1028617	3/8-16 x 1-3/4" Shoulder Bolt <i>(Two Required)</i>
10	10103486	Sheave 10.30" <i>(Two Required)</i>
11	10104815	4/5vp 1320 Banded Belt
12	10103485	Bushing 2.5" Bore <i>(Two Required)</i>
13	10103643	5/8" Key Cut <i>(Two Required)</i>
14	10100675	1/2" Lock Washer <i>(Six Required) (Included with Item 12)</i>
15	10102820	1/2-13 x 2-3/4" Grade 5 Bolt <i>(Six Required) (Included with Item 12)</i>
16	10103400	3/8-16 x 3/4" Bolt <i>(Three Required)</i>
17	10104788	Belt Guard Cover

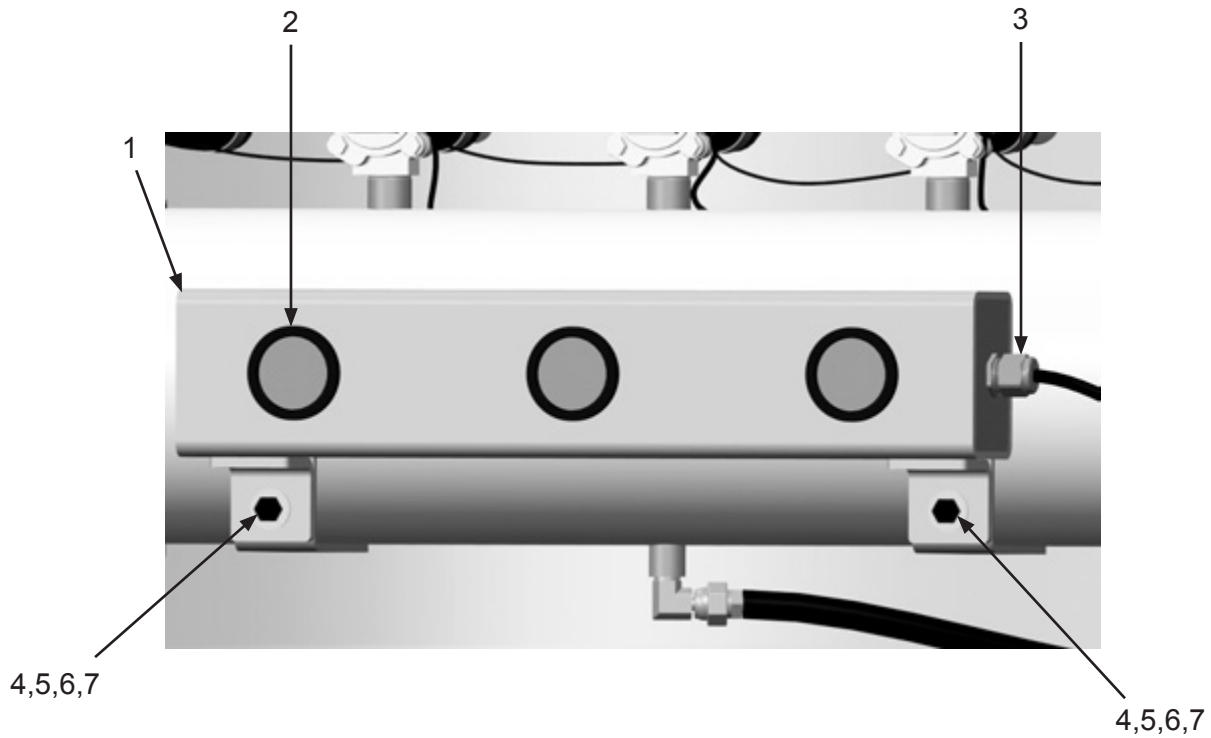
## PART NUMBERS AND SCHEMATICS

Figure 10: Fan Belt Assembly



## PART NUMBERS AND SCHEMATICS

Figure 11: Vacuum Light Bar



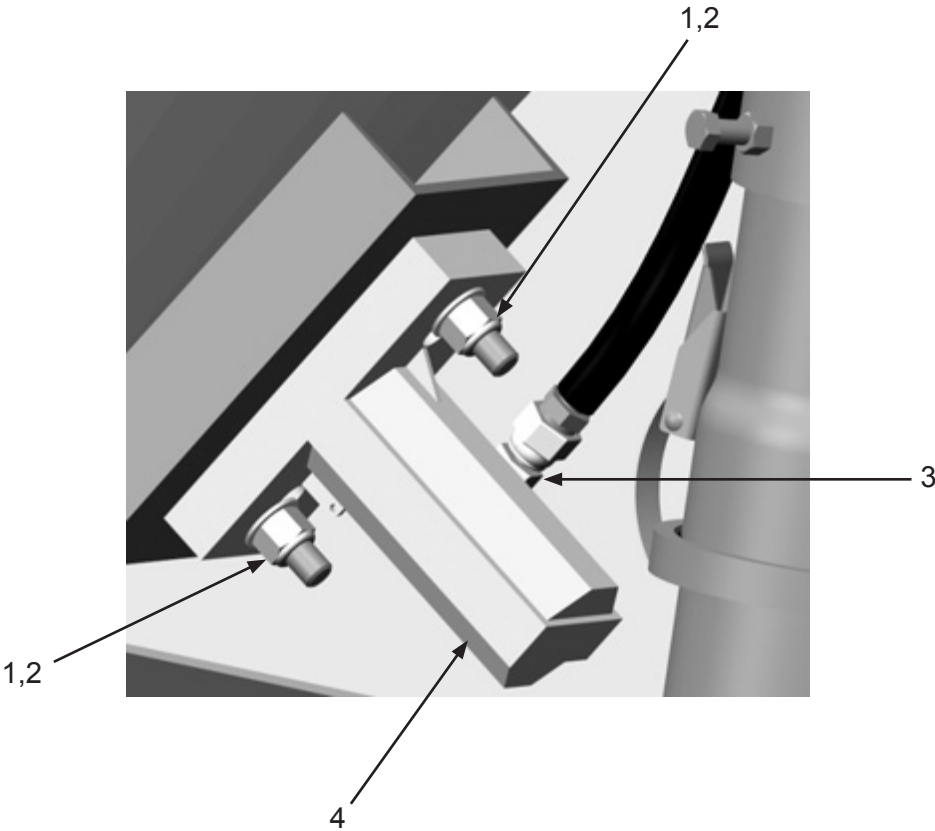
Item #	Part #	Description
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**Fig. 11**

1	10105334	Vacuum Light Bar <i>(Includes Item #2)</i>
2	10104086	2" Round LED Red Clearance Light <i>(Three Required)</i>
3	10104703	Cord Grip, Nylon 1/2" NPT .2-.47 Diameter
4	10101942	3/8" Flat Washer - Galvanized <i>(Four Required)</i>
5	10101936	3/8" Lock Washer - Zinc <i>(Two Required)</i>
6	1011747	3/8-16 x 1" Bolt <i>(Two Required)</i>
7	10101938	3/8-16 Hex Nut <i>(Two Required)</i>

# PART NUMBERS AND SCHEMATICS

Figure 12: Pneumatic Piston Vibrators



Item #	Part #	Description
<b>Fig. 12</b>		
1	20100124	1/2-13 Hex Lock Nut - Zinc ( <i>Two Required</i> )
2	10100674	1/2" Flat Washer ( <i>Two Required</i> )
3	20PFHA60UA0406	1/4" (M) x 3/8" (F) 90° Swivel Union
4	10104665	APV Series Piston Vibrator

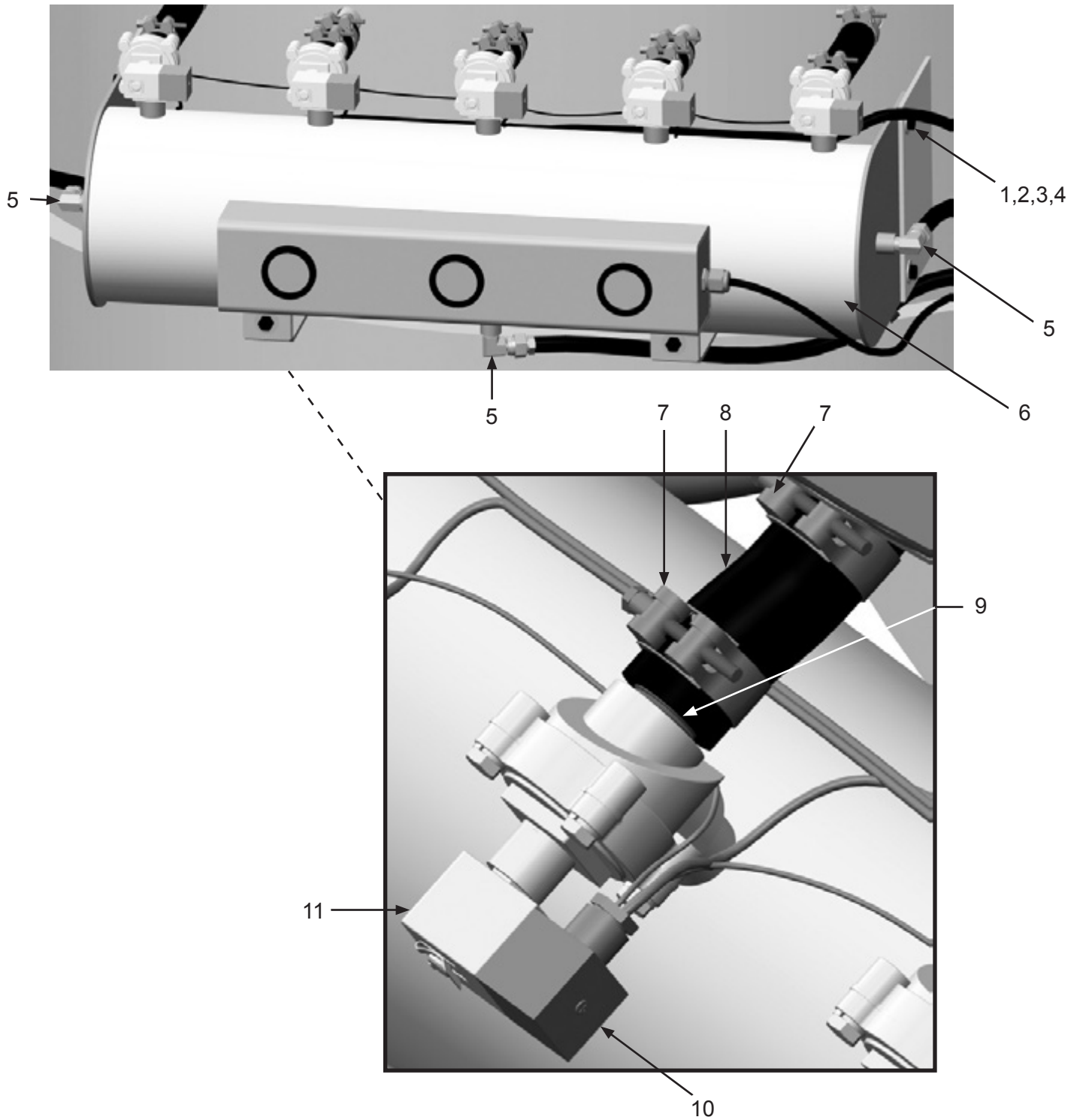
## PART NUMBERS AND SCHEMATICS

### Pulser System Assembly

Item #	Part #	Description
<b>Fig. 13</b>		
1	10101942	3/8" Flat Washer - Galvanized <i>(Eight Required)</i>
2	10101936	3/8" Lock Washer - Zinc <i>(Four Required)</i>
3	1011747	3/8-16 x 1" Bolt <i>(Four Required)</i>
4	10101938	3/8-16 Hex Nut <i>(Four Required)</i>
5	20PFHA60UA0606	3/8" (M) x 3/8" (F) 90° Swivel Union
6	10104498	Vacuum Header
7	10103736	T-Bolt Hose Clamp For 1" I.D. <i>(10 Required)</i>
8	10106509	Air Hose 1" ID 200 psi - Red
9	10104500	3/4" NPT x 1-1/2" Toe Nipple <i>(Five Required)</i>
10	10105287	Din Connector <i>(Included with Item #16) (Five Required)</i>
11	10104666	3/4" Diaphragm Valve with Solenoid <i>(Five Required)</i>
—	10107192	Pilot Valve Repair Kit
—	10107193	Diaphragm Repair Kit

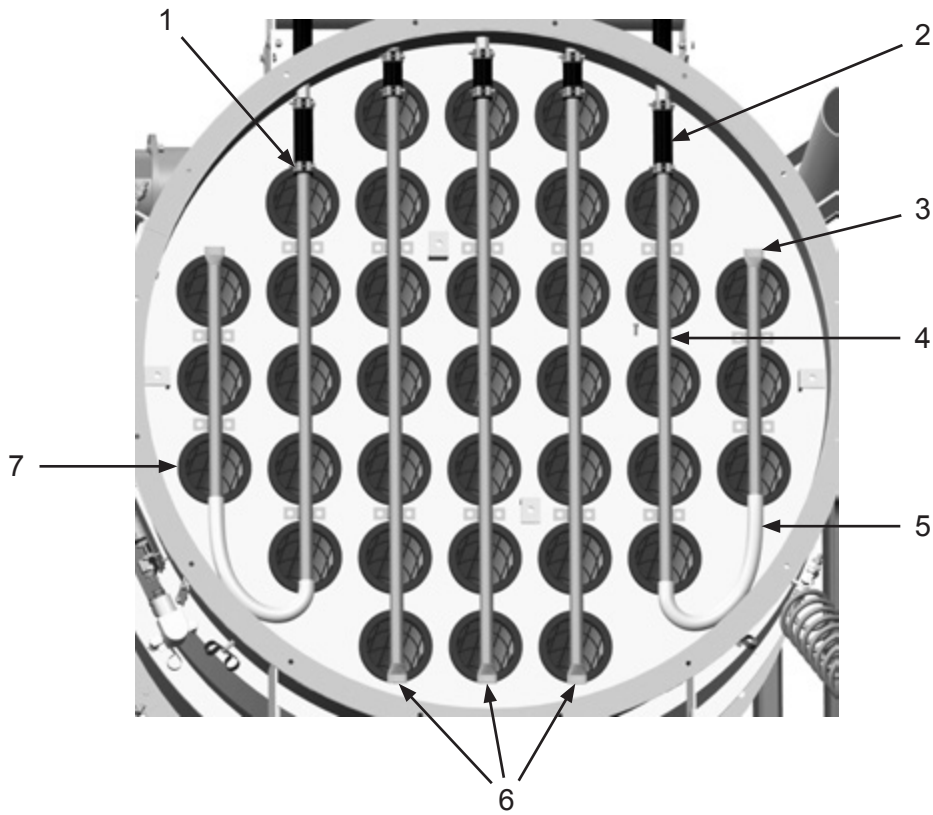
## PART NUMBERS AND SCHEMATICS

Figure 13: Pulser System Assembly



## PART NUMBERS AND SCHEMATICS

Figure 14: Filter Bag Pulsers



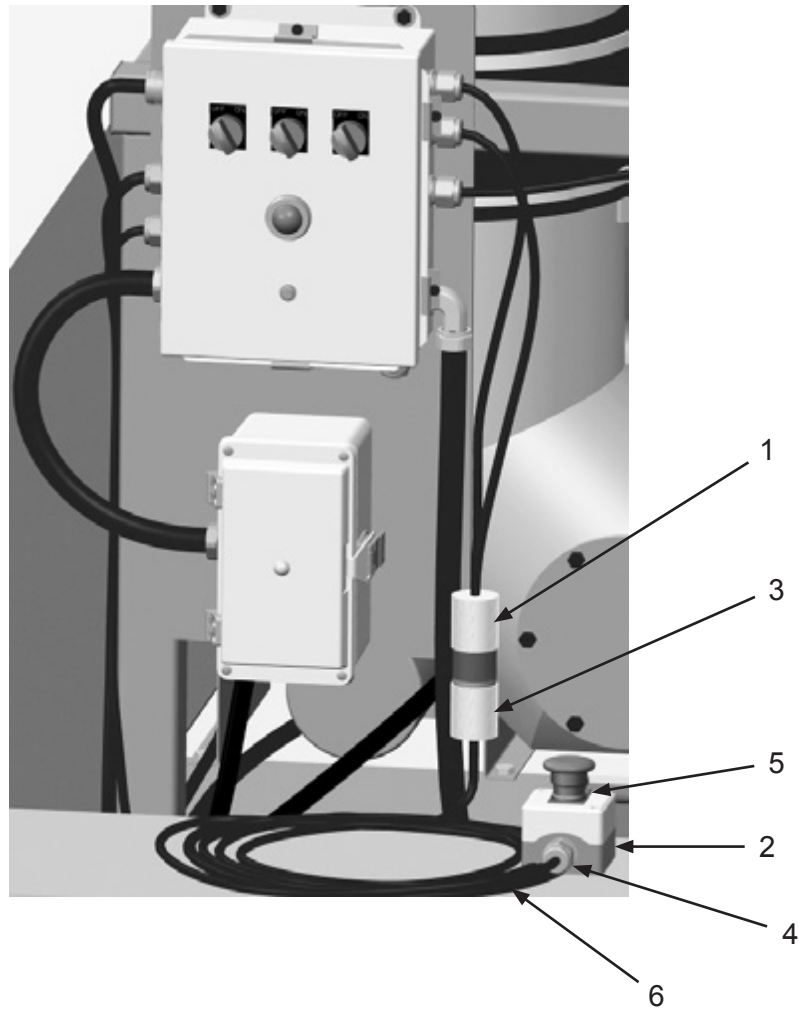
Item #	Part #	Description
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**Fig. 14**

1	10103736	T-Bolt Hose Clamp For 1" I.D. <i>(10 Required)</i>
2	10103654	1-1/4" 75W Marine Hose - 100 PSI <i>(Five Required)</i>
3	10104563	Pulser System Short Blowpipe <i>(Two Required)</i>
4	10104566	Pulser System Medium Blowpipe <i>(Two Required)</i>
5	10104680	1" Flexible Tubing For Blowpipes <i>(Two Required)</i>
6	10104568	Pulser System Long Blowpipe <i>(Three Required)</i>
7	10104633	Vacuum Baghouse Filter <i>(37 Required)</i>
—	10104634	Vacuum Baghouse Filter Cage <i>(37 Required)</i>

## PART NUMBERS AND SCHEMATICS

Figure 15: Emergency-Stop Stations



Item #	Part #	Description
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**Fig. 15**

—	<b>10107200</b>	<b>Remote Emergency-Stop Station</b> (Includes Item #'s: 2, 4, 5, and 6 (100'))
1	1015552	Female twist lock plug two prong
2	10104071	E-Stop Control Station
3	1015551	Male Twist Lock Plug Two Prong
4	10104703	Cord Grip Nylon 1/2"-NPT .2-.47 Diameter
5	10104063	Legend Plate - Emergency Stop
6	1015540	16/2 Xtreme Duty Power Cord - Red
—	1015009	8-32 x 1" Pan Head Phillips Screw (Four Required)
—	20000021	8-32 Zinc Nut (Four Required)
—	20000018	#8 Zinc Lock Washer (Four Required)
—	20000019	#8 Zinc Flat Washer (Four Required)

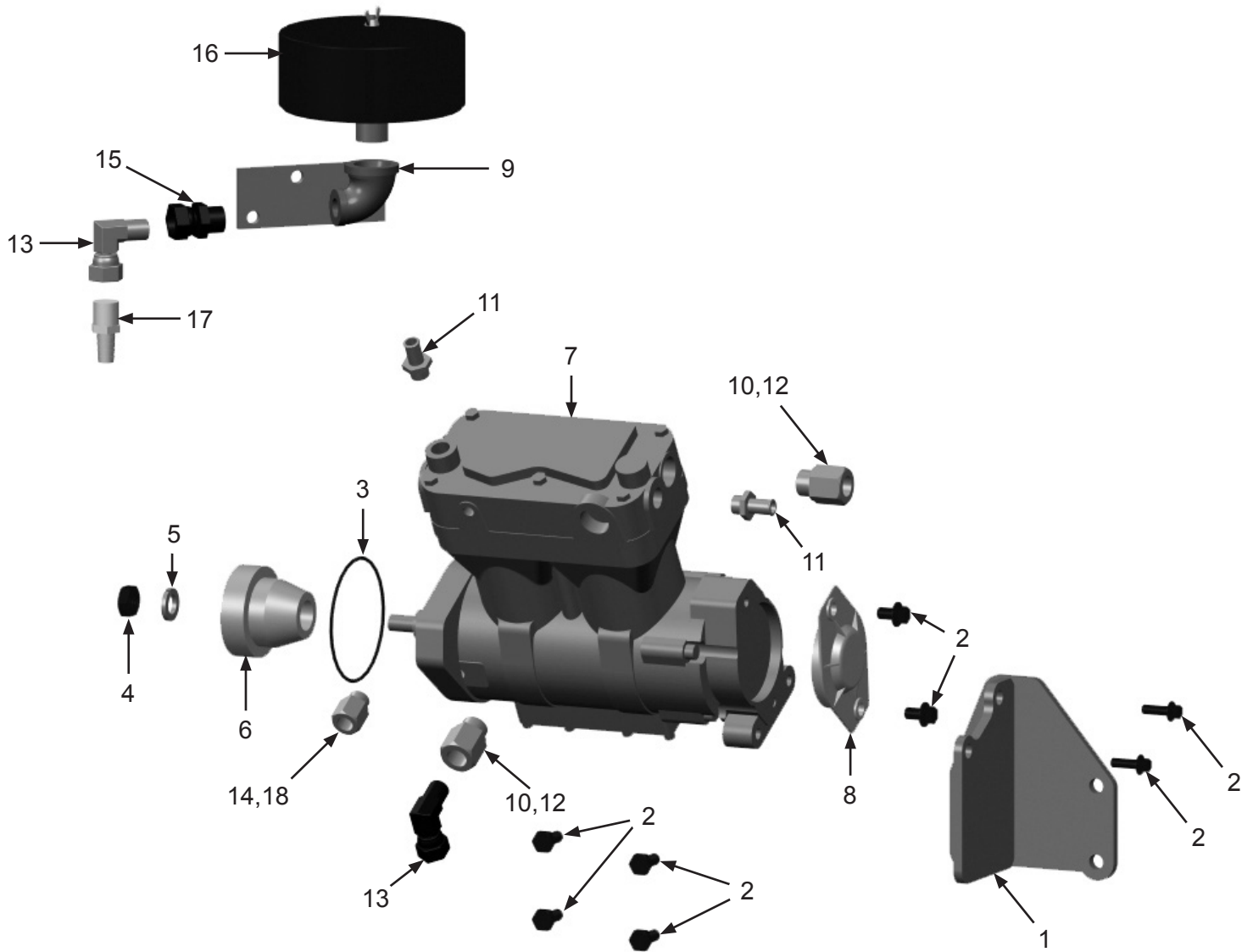
## PART NUMBERS AND SCHEMATICS

### Compressor Assembly

Item #	Part #	Description
<b>Fig. 16</b>		
1	10108346	Compressor Bracket
2	10106956	Bolt ( <i>Eight Required</i> )
3	10106601	SAE A O-Ring
4	10108347	5/8-11 Hex Nut
5	10108348	5/8" Lock Washer
6	10108349	Compressor Gear
7	10108350	Compressor Only - T418478
8	10106035	SAE A 2-Bolt Cover With O-ring
9	10106364	Assembly - Plate with 1/2" x 1" 90° Elbow
10	10106358	1/2" NPT Female x M26 Male
11	10106604	Fitting ( <i>Two Required</i> )
12	10106359	M26 Bonded Seal
13	20PFHA60UA0808	1/2" (M) x 1/2" (F) 90° Swivel Union ( <i>Two Required</i> )
14	10106356	1/4" NPT Female x M12 Male
15	20PFHA60SA0808	1/2" M x 1/2" F Swivel Union
16	10105870	Filter Assembly
17	10103507	1/2" Barb x 1/2" NPTF Brass
18	10106357	M12 Bonded Seal
—	10106395	Compressor Kit <i>Includes items #s: 1,3,4,5,6,8,9,16</i>
—	10108495	Ball Bearing Service Kit ( <i>Includes: Ball Bearing, SAE Connector, M8 Screw, O-Ring, M6 Screws, Sump Plate Gaskets, Front Flange Gasket</i> )
—	10108496	Cylinder Head Kit ( <i>Includes: Complete Cylinder Head, Cylinder Head Bolts, Cylinder Head Gasket</i> )
—	10108497	ESS Kit ( <i>Includes: ESS Pistons, Cover Gasket, Screws, O-Rings, Springs, Balance Pistons, Grease Tubes</i> )
—	10108498	Piston Kit ( <i>Includes: Tapered Scraper Rings, Scraper Rings, Circlips, Pistons, Piston Pins</i> )
—	10108499	Gasket Kit ( <i>Includes: Cylinder Head Gasket, Valve Plate Gasket, Sump Plate Gaskets, O-Ring</i> )
—	10108500	General Service Kit ( <i>Includes: Cylinder Head Gasket, Valve Plate Gasket, Sump Plate Gaskets, O-Rings, Crankcase Gasket, Delivery Reeds, Inlet Reeds</i> )

## PART NUMBERS AND SCHEMATICS

Figure 16: Compressor Assembly



## PART NUMBERS AND SCHEMATICS

### Compressor Governor

Item #	Part #	Description
<b>Fig. 17</b>		
1	10PAF025	1/4" x 1/4" Push on Fitting ( <i>Three Required</i> )
2	20PFHA60SA0204	1/8" (M) x 1/4" (F) Swivel Union ( <i>Two Required</i> )
3	20PFHA25VJ02	1/8" Female Tee
4	1035046	5/16-18 Nut ( <i>Two Required</i> )
5	10L805014	5/16" Lock Washer ( <i>Two Required</i> )
6	1012905	1/8" Breather Muffler
7	10105816	Compressor Governor
8	1014112	5/16-18 x 3-1/4" Hex Bolt ( <i>Two Required</i> )
9	10105717	1/8" Hollow Hex Pipe Plug Male ( <i>Three Required</i> )
10	20PFHA24SA0202	1/8" Hex Nipple

### Figure 17: Compressor Governor



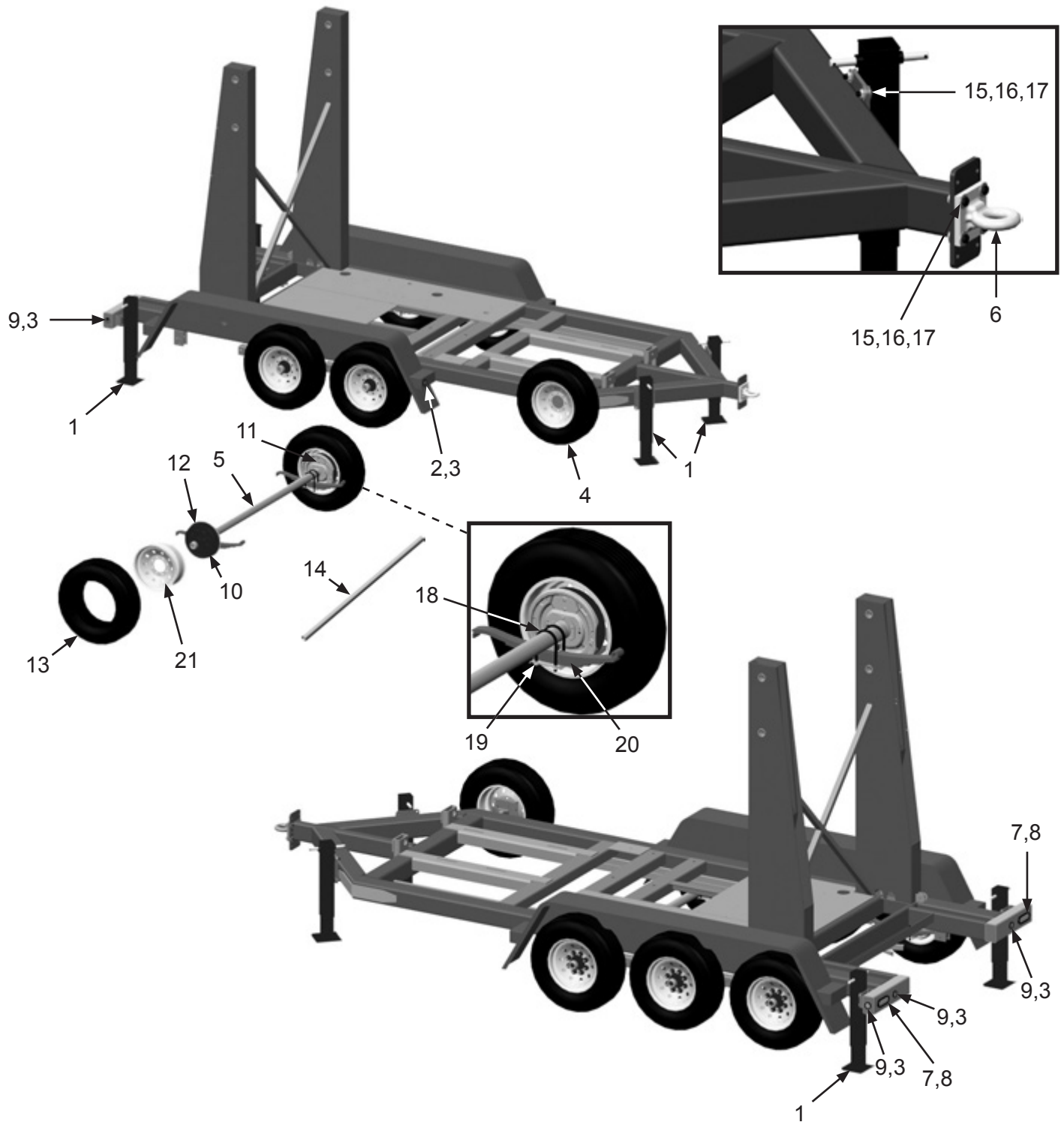
## PART NUMBERS AND SCHEMATICS

### Trailer

Item #	Part #	Description
<b>Fig. 18</b>		
—	<b>10104333</b>	<b>Highway Trailer</b>
1	10104141	10,000 # Heavy Spring Loaded Jack <i>(Four Required)</i>
2	10104087	2" Round LED Amber Clearance Light <i>(Two Required)</i>
3	10104088	2" Round Rubber Grommet <i>(Six Required)</i>
4	10104089	16 - 8 Hole Pattern Rim with Tire <i>(Seven Required)</i>
5	10106084	7,000 # Axle With Electric Brakes, Complete With Hubs And Springs 89" HF x 71" SC
6	10104079	Pintle Hitch with Flat Plate
7	10104085	Oval Rubber Grommet <i>(Two Required)</i>
8	10104084	Oval LED Red Tail Light <i>(Two Required)</i>
9	10104086	2" Round LED Red Clearance Light <i>(Four Required)</i>
10	10106086	Axle Hub Only - No Bearings or Seal <i>(Two Required)</i>
11	10106087	Left-Hand Electric Brake Assembly <i>(Two Required)</i>
12	10106088	Right-Hand Electric Brake Assembly <i>(Two Required)</i>
13	10104096	Tire - ST235/80R/16 - 10-ply <i>(Seven Required)</i>
14	10106085	Axle Beam/Tube Only
15	10105746	5/8 x 2-1/2" Gr 8 Bolt <i>(20 Required)</i>
16	10105747	5/8 Reverse Lock Nut <i>(20 Required)</i>
17	10103398	5/8" Flat Washer <i>(40 Required)</i>
18	10106089	Trailer Axle U-Bolt
19	10106090	Trailer Axle U-Bolt Nut
20	10106091	Trailer Axle Leaf Spring
21	10107126	16 x 6 8-Hole White Rim
—	10105826	Redline 12V - 5AH Battery Sealed
—	10104081	Breakaway Kit
—	10104142	Wire Harness - Complete <i>(Front, Middle &amp; Rear)</i>
—	10105827	Breakaway Switch with Pin
—	10104769	3/8" x 41" Safety Chain with Hook
—	10103879	2" x 6" x 6" Red/White Conspicuity Tape
—	10105829	Cable With Plug
—	10105826	Redline 12V - 5AH Battery Sealed

## PART NUMBERS AND SCHEMATICS

Figure 18: Trailer



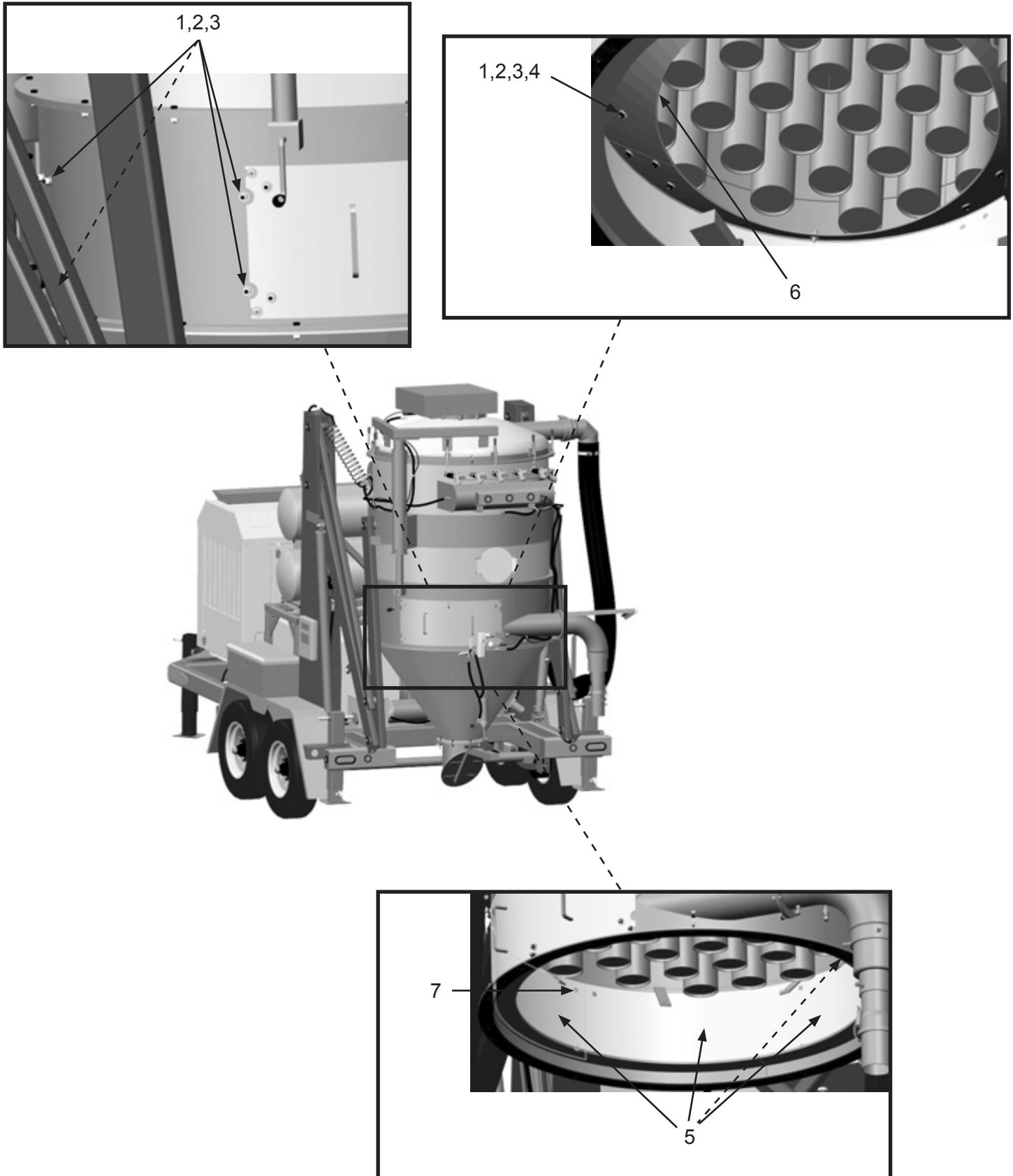
## PART NUMBERS AND SCHEMATICS

### Wear Plates and Baffles

Item #	Part #	Description
<b>Fig. 19</b>		
1	10101942	3/8" Flat Washer - Galvanized <i>(35 Required)</i>
2	10101936	3/8" Lock Washer - Zinc <i>(35 Required)</i>
3	10101938	3/8 -16 Hex Nut <i>(35 Required)</i>
4	1011747	3/8-16 x 1" Bolt <i>(15 Required)</i>
5	10104489	Vacuum Wear Plates <i>(Four Required)</i>
6	10104490	Vacuum Baffle <i>(Three Required)</i>
7	10104705	3/8-16 FH Sq Neck x 1" Bolt Zinc <i>(16 Required)</i>

## PART NUMBERS AND SCHEMATICS

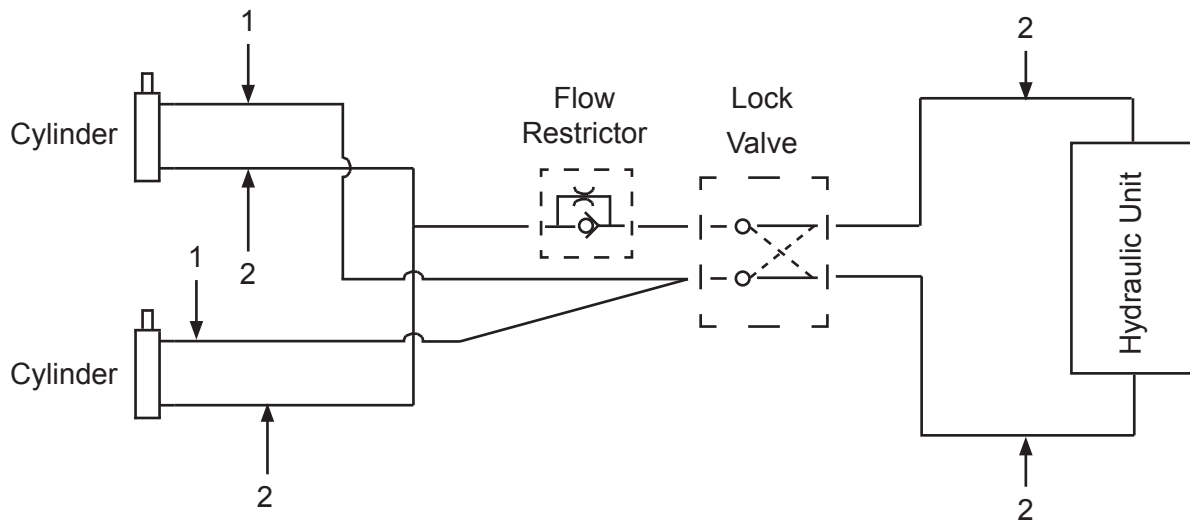
Figure 19: Wear Plates and Baffles



## PART NUMBERS AND SCHEMATICS

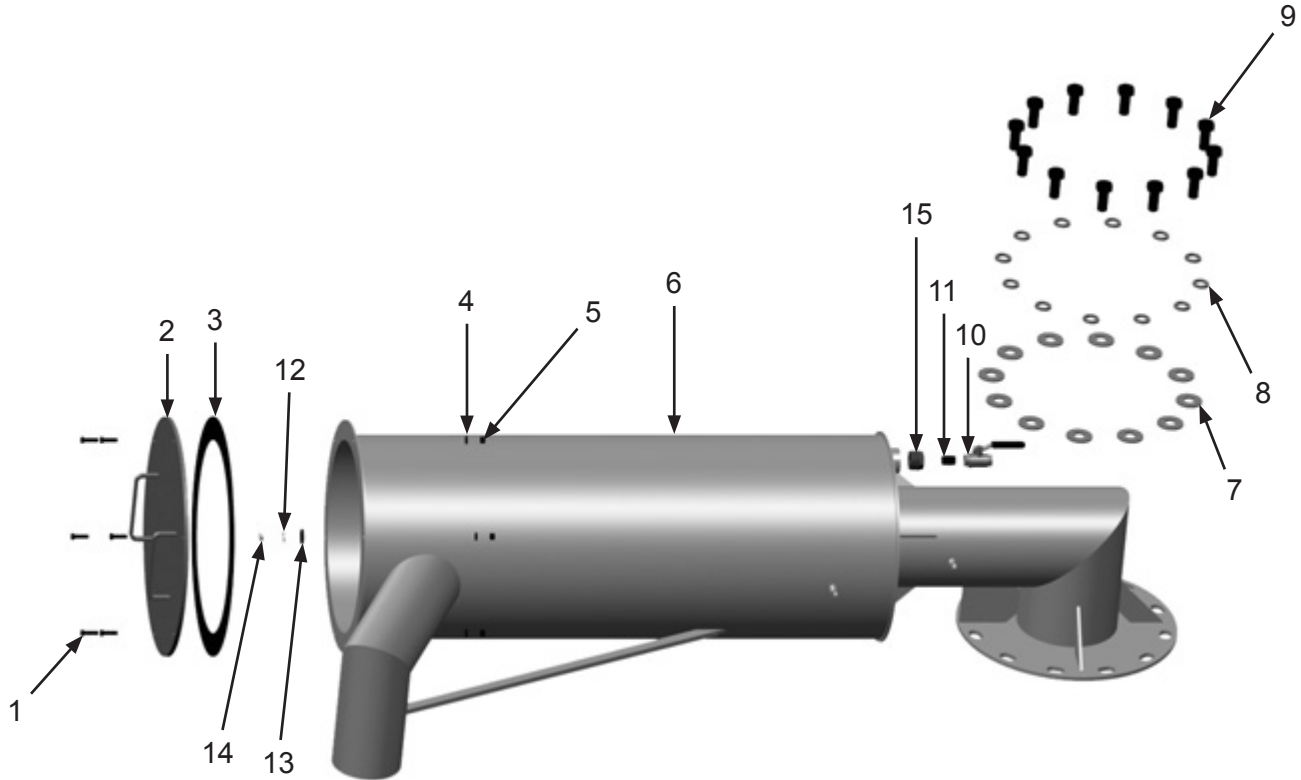
**Figure 20: Hydraulic Hoses**

Item #	Part #	Description
<b>Fig. 20</b>		
1	10104664	Hydraulic Hose 3/8" x 8' - 2600 PSI
2	10104663	Hydraulic Hose 3/8" x 5' - 2600 PSI



## PART NUMBERS AND SCHEMATICS

**Figure 21: Intake Filter Housing**



Item #	Part #	Description
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**Fig. 21**





1	10104234	3/8-16 x 1-1/4" Hex Bolt Zinc
2	10106508	Intake Filter Housing Cap
3	10104727	Air Filter Housing Gasket
4	10101936	3/8" Lock Washer - Zinc
5	10101938	3/8-16 Hex Nut - Galvanized
6	10107973	Intake Filter Housing
7	10104716	7/8" Flat Washer
8	10104717	7/8" Lock Washer
9	10104715	7/8-9 x 2" Zinc Bolt
10	10L363	1/2" Npt Full Port Ball Valve
11	10L803035	Galvanized 1/2" Close Nipple
12	10100674	1/2" Flat Washer
13	10102005	Rubber Washer 1.25OD x .375ID x .13
14	10101941	1/2-13 Hex Nut - Galvanized
15	1011820	1-1/4" x 1/2" Bushing - Galvanized
—	10102253	Filter Cartridge


## PART NUMBERS AND SCHEMATICS

Part Numbers	VACUUM HOSE						
	Vacuum Hose I.D.	Length	Cover Material	Reinforcement Material	Vacuum HG	Liner	Hose Color
10VH11250	1-1/2"	50 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Black
10VH225	2"	25 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH250	2"	50 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH200	2"	100 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH2550	2-1/2"	50 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH325	3"	25 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH350	3"	50 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH300	3"	100 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH425	4"	25 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH450	4"	50 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH400	4"	100 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH550	5"	50 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH500	5"	100 Ft.	Pliovic®	Pliovic® PVC Helix	29 In.	Polyurethane	Blue
10VH620B	6"	20 Ft.	PVC	PVC Helix	25 In.	Polyurethane	Black
10VH625	6"	25 Ft.	Pliovic®	Pliovic® PVC Helix	25 In.	Polyurethane	Blue
10VH650	6"	50 Ft.	Pliovic®	Pliovic® PVC Helix	25 In.	Polyurethane	Blue
10VH600	6"	100 Ft.	Pliovic®	Pliovic® PVC Helix	25 In.	Polyurethane	Blue
10VH825	8"	25 Ft.	Pliovic®	Pliovic® PVC Helix	25 In.	Polyurethane	Blue
10VH850	8"	50 Ft.	Pliovic®	Pliovic® PVC Helix	25 In.	Polyurethane	Blue

## PART NUMBERS AND SCHEMATICS

	Part Numbers	VACUUM HOSE REDUCERS
		Size
	10106712	8" x 4"
	10106716	6" x 4"
	10106872	6" x 5"

	Part Numbers	WYE ADAPTERS
		Size
	10106719	4" x 2" x 2"
	10107485	6" x 2" x 2"
	10106723	6" x 4" x 4"
	10106727	8" x 4" x 4"

	Part Numbers	VACUUM HOSE MENDERS			
		Vacuum Hose I.D.	Mender Length	Thickness	Material
	10HM2	2"	8"	1/8"	Steel
	10HM3	3"	9"	1/8"	Steel
	10HM4	4"	10"	1/8"	Steel
	10HM5	5"	11"	1/8"	Steel
	10HM6	6"	12"	1/8"	Steel
	10HM8	8"	14"	1/8"	Steel

## LITERATURE REFERENCES

### **Vacmaster® 23T Tier III Diesel Abrasive Vacuums**

105M126	Features & Specifications Guide – Vacmaster® 23T Tier III Diesel Abrasive Vacuums
106M126	Part Numbers & Schematics Guide – Vacmaster® 23T Tier III Diesel Abrasive Vacuums
1090126	Operator's Manual – Vacmaster® 23T Tier III Diesel Abrasive Vacuums
109V044	Operator's Manual - Perkins® Engine
109V039	Operator's Manual - Murphy PowerView®
109V520	Operator's Manual - Blower
109V040	Operator's Manual - Hydraulic Motor
109V582	Operator's Manual - Behnke Trailer

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[illegible]

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