

**Model: 8776A**  
**55 Gallon Drum**  
**Fluid Dispensing Trailer**  
**Turbine Oil/Petroleum Based Fluids**

11/2018 – Rev. 01

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Original release

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This product can not be modified without the written approval of Tronair, Inc. Any modifications done without written approval voids all warranties and releases Tronair, Inc., its suppliers, distributors, employees, or financial institutions from any liability from consequences that may occur. Only Tronair OEM replacement parts shall be used.



#### CAUTION!

**Aircraft manufacturer's specifications and instructions must be followed. In the event of contradiction between aircraft manufacturer's specifications and Malabar's, aircraft manufacturer's will prevail.**

## 1.0 PRODUCT INFORMATION

### 1.1 DESCRIPTION

The Malabar Model 8776A is a mobile unit designed primarily for handling and dispensing fluid from a standard 55 gal (208 l) drum. The unit is uniquely designed to utilize the original drum as a reservoir to prevent contamination from entering the system being serviced. The unit is equipped with tow handle & front wheel parking brake, three 16 inch diameter foam filled wheels, air motor & hydraulic pump assembly, 35 ft (10.7 m) fluid delivery hose with dispensing nozzle & shutoff valve at hose end, gravity fill adapter (customer specified couplings for pressure fill applications are available), air/nitrogen relief valve, air vent filter & desiccant dryer, storage box, drum attachment & rotating mechanism and the following optional equipment:

- Hand pump
- Retractable hose reel
- Ground static reel
- Liquid level gauge
- Fluid meter
- 3600 psig nitrogen bottles with CGA680 valves
- Nitrogen bottle racks with nitrogen regulator

The optional nitrogen bottle racks are designed to handle either 3600 psig or 2400 psig nitrogen bottles and come equipped with interface fittings for 3600 psig bottles with CGA680 valves. If nitrogen bottles with CGA580 valves are employed, CGA580 trailer interface fittings (nut part no. 719-041 and nipple part no. 719-039) are available for purchase from Malabar.

The fluid delivery pump may be driven from 90 psig shop air or the optional integral dual nitrogen bottles. Two 3600 psig nitrogen bottles will deliver approximately 70 gallons of fluid

### 1.2 MODEL & SERIAL NUMBER

Reference nameplate on unit

### 1.3 MANUFACTURER

**Malabar International**  
1 Air Cargo Pkwy East  
Swanton, Ohio 43558 USA

Telephone: (419) 866-6301 or 800-426-6301  
E-mail: [sales@malabar.com](mailto:sales@malabar.com)  
Website: [www.malabar.com](http://www.malabar.com)

### 1.4 SPECIFICATIONS

Fluid Type	Turbine oil/petroleum based fluids
Unit Weight (without nitrogen bottle & rack)	700 lbs (317.5 kg)
Unit Weight (with two nitrogen bottles & racks)	1400 lbs (635 kg)
Shipping Weight (without nitrogen bottle & rack)	900 lbs (408 kg)
Shipping Weight (with two nitrogen bottles & racks)	1600 lbs (725.7 kg)
Air Inlet	70-110 psig: 35 scfm
Usable Nitrogen Bottle Pressure	300 psig minimum
Fluid Delivery Rate (hydraulic pump)	4.5 gpm (17 lpm)
Fluid Delivery Rate (hand pump)	7 fluid ounce per stroke
Maximum Towing Speed	20 mph (32 kph)
Fluid Filter	10 micron nominal
Standard Finish	Yellow Skydrol resistant paint

## 2.0 SAFETY INFORMATION

### 2.1 USAGE AND SAFETY INFORMATION

To insure safe operations please read the following statements and understand their meaning. Also refer to your equipment manufacturer's manual for other important safety information. This manual contains safety precautions which are explained below. Please read carefully.



#### **WARNING!**

Warning is used to indicate the presence of a hazard that can cause **severe personal injury, death, and/or substantial property damage** if the Warning Notice is ignored.



#### **CAUTION!**

Caution is used to indicate the presence of a hazard, which will or can cause **minor personal injury or property damage** if the Caution Notice is ignored.

## 3.0 PREPARATION PRIOR TO FIRST USE

The unit is shipped fully assembled and ready to use.

## 4.0 TRAINING

### 4.1 TRAINING REQUIREMENTS

The employer of the operator is responsible for providing a training program sufficient for the safe operation of the unit.

### 4.2 TRAINING PROGRAM

The employer provided operator training program should cover safety procedures concerning use of the unit in and around the intended aircraft at the intended aircraft servicing location.

### 4.3 OPERATOR TRAINING

The operator training should provide the required training for safe operation of the unit.

**NOTE: Maintenance and Trouble Shooting are to be performed by a skilled and trained technician.**

## **5.0 OPERATION**

### **5.1 PRE OPERATION INSPECTION**

Each time the unit is to be used, inspect the following:

1. Check the frame structure for rigidity. Make sure all bolts are tightened.
2. Check hydraulic line connections for leaks. Tighten as required.
3. Check for hydraulic fluid leaks around the pump, manifold, liquid level gauge and hand pump.
4. Check hand pump for proper operation.
5. Check all tie-down straps for proper operation.
6. Check hand crank for proper operation.
7. Check front wheel parking brake for proper operation by raising tow handle toward the control panel.

### **5.2 OPERATING INSTRUCTIONS**

1. To load nitrogen bottles:
  - a. Rotate bottle racks to vertical position and insert quick release pins.
  - b. Attach nitrogen bottles to racks using straps provided.
  - c. Remove quick release pins and rotate bottle racks to full stop position.
  - d. Secure racks to frame using latches provided.
  - e. Store quick release pins in storage tubes.



#### **CAUTION!**

**Shutoff valves on nitrogen bottles must be closed when not in use or when making hose connections.**

- f. Attach nitrogen tailpiece hose assemblies to bottles.
2. To load 55 gallon drum:
  - a. With drum suction port oriented toward front of unit, attach drum to cradle using ratchet strap provided.
  - b. Raise tow handle to set parking brake.
  - c. Remove drum plugs and store in storage box.
  - d. Attach suction and vent couplings to drum.
  - e. Operate hand crank clockwise to rotate drum half way.
  - f. Attach suction hose to suction coupling on drum.
  - g. Attach fluid delivery hose to vent coupling on drum.
3. To prime hoses using nitrogen or compressed air:
  - a. Close control valve located on control panel.



#### **CAUTION!**

**Air relief valve (150 psig) must be installed at all times. If air relief valve is removed, it is possible to over pressurize the pneumatic system which could cause equipment failure and possible bodily injury.**

- b. Open shutoff valves on nitrogen bottles. Regulate nitrogen pressure to approximately 90 psig or connect air supply to air inlet connection (110 psig maximum).
- c. Open fluid delivery hose end valve and then control valve for 5-10 seconds to prime hoses.
- d. Close both hose end valve and control valve.
- e. Remove fluid delivery hose from vent coupling.
- f. Connect air vent hose to vent coupling.
- g. Operate hand crank to rotate drum to full stop.
4. To prime hoses using hand pump:
  - a. Open fluid delivery hose end valve and then operate hand pump 6-10 cycles to prime hoses.
  - b. Close fluid delivery hose end valve and remove hose from vent coupling.
  - c. Connect air vent hose to vent coupling.
  - d. Operate hand crank to rotate drum to full stop.
5. Press palm button valve to check fluid level in liquid level gauge.
6. Lower tow handle and tow unit to desired location.
7. Attach static reel cable to aircraft prior to dispensing.
8. To dispense fluid:
  - a. Connect gravity fill adapter to fluid delivery hose end coupling. Note: other hose end adapters may be used for pressure fill applications.
  - b. Proceed to dispense fluid using nitrogen or compressed air by opening control valve first and then fluid delivery hose end valve.
  - c. Proceed to dispense fluid using hand pump by opening fluid delivery hose end valve and then operate hand pump.
9. After dispensing fluid:
  - a. Close control valve and shutoff valves on nitrogen bottles or disconnect air supply hose.
  - b. Remove gravity fill adapter or other hose end adapter and store in storage box.
  - c. Retract fluid delivery hose and close hose end valve.

5.2 OPERATING INSTRUCTIONS *(continued)*



**CAUTION!**

**Always disconnect hoses on drum and nitrogen bottles prior to rotating.**

6.0 **MAINTENANCE**

6.1 **SERVICING**

Servicing the unit consists primarily of the following:

1. Grease tow handle, wheels, hand crank bearing and all pivot parts.
2. Fill air motor lubricator with SAE #10 oil.
3. Replace desiccant dryer silica gel when necessary (color changes from blue to pink).
4. Replace fluid filter every 13 weeks or sooner.
5. Tires are foam filled. Do not attempt to inflate tires.

6.2 **DISASSEMBLY INSTRUCTIONS**

When necessary to disassemble the unit, carefully inspect the following:

1. Check for corrosion, wear and condition of hand crank assembly.
2. Inspect condition of all hoses.
3. Check frame structure for damage.
4. Check all tie-down straps for wear.

6.3 **REPAIR AND REPLACEMENT**

No definite time schedule can be established for the overhaul of the unit for replacement of the various moving parts. The number of times the unit is used materially affects the life of the working parts. Each time the unit is disassembled, carefully repair or replace the following:

1. Replace all defective parts and missing parts.
2. Clean metal parts with cleaning solvent and dry with compressed air.
3. Lubricate all threads and bearings.

## 7.0 PROVISION OF SPARES

### 7.1 SOURCE OF SPARE PARTS

Spare parts may be obtained from the manufacturer:

**Malabar International**

1 Air Cargo Pkwy East

Swanton, Ohio 43558 USA

Telephone: (419) 866-6301 or 800-426-6301

E-mail: sales@malabar.com

Website: www.malabar.com

### 7.2 RECOMMENDED SPARE PARTS LISTS

Reference the following page(s) for Replacement Parts and Kits available.

The following spare parts are recommended and available upon request.

Part Number	Description	Qty
837795-1	Tow handle & brake assembly	1
837708-1	Hub & wheel assembly	3
877621	Spindle	2
481-074	Air vent filter & desiccant dryer	1
WF174195	Desiccant dryer silica gel	4 oz
481-077	Filter assembly	1
481-035	Filter element	1
491-072	Adjustable draw latch	2
86392	Bumper	1
424-038	Fluid hose end valve	1
877690-1	Gravity fill adapter	1
736-094	Q. D. coupler, 3/8 FPT	2
736-095	Q. D. nipple, 3/8 FPT	2
736-096	Q. D. coupler, 1/2 FPT	1
736-097	Q. D. nipple, 1/2 FPT	1
483-005	Breather	1
877693	Suction hose	1
95-5000-22-1	Air vent hose	1
877605	Pneumatic hose	1
877687	Placard, instruction	1
877607	Placard, control	1
9-7035	Nameplate	1
55998	Sticker, Malabar	3
75939	Sticker, towing	3
837668	Tow handle thrust washer	1
837779	Tow handle spindle	1
55925-222	Tow handle O-ring	1
495-001	Tow handle spring	2
371-009	Tow handle roll pin	1
492-142	Tire & wheel, foam filled	3
410-012	Cradle oilite bearing	2
55904-125	Cradle oilite bearing retaining ring	2
491-068	Cradle tie-down ratchet strap	1
877629	Hand crank screw	1
877637	Hand crank handle	1



7.2 RECOMMENDED SPARE PARTS LISTS (*continued*)

Part Number	Description	Qty
410-011	Hand crank taper roller bearing	1
471-002	Air motor lubricator	1
438-003	Air motor with muffler	1
45-5000-36	Hydraulic pump	1
MS28778-4	Hydraulic valve block O-ring	1
482-009	Nitrogen pressure gauge	1
482-010	Air/nitrogen regulated pressure gauge	1
473-083	Nitrogen regulator	1
421-030	Air/nitrogen check valve	2
425-001	Air/nitrogen relief valve	1
422-039	Air/nitrogen control valve	1
494-006	Nitrogen rack handle grip	2
837631	Nitrogen rack bottle strap	2
370-039	Nitrogen rack quick release pin	2
491-070	Nitrogen rack adjustable draw latch	2
837685-19	Tailpiece hose	1
837685-20	Tailpiece hose	1
174190	Hand pump	1
877693-2	Hand pump hydraulic hose	2
499-005	Hose reel without hydraulic hose	1
877694-1	Fluid delivery hose, 35' lg	1
499-009	Fluid delivery hose stop	1
484-018	Liquid level gauge	1
421-034	Liquid level gauge palm button valve	1

## **8.0 IN SERVICE SUPPORT**

Contact Malabar, Inc. for technical services and information. See Section 1.3 – Manufacturer.

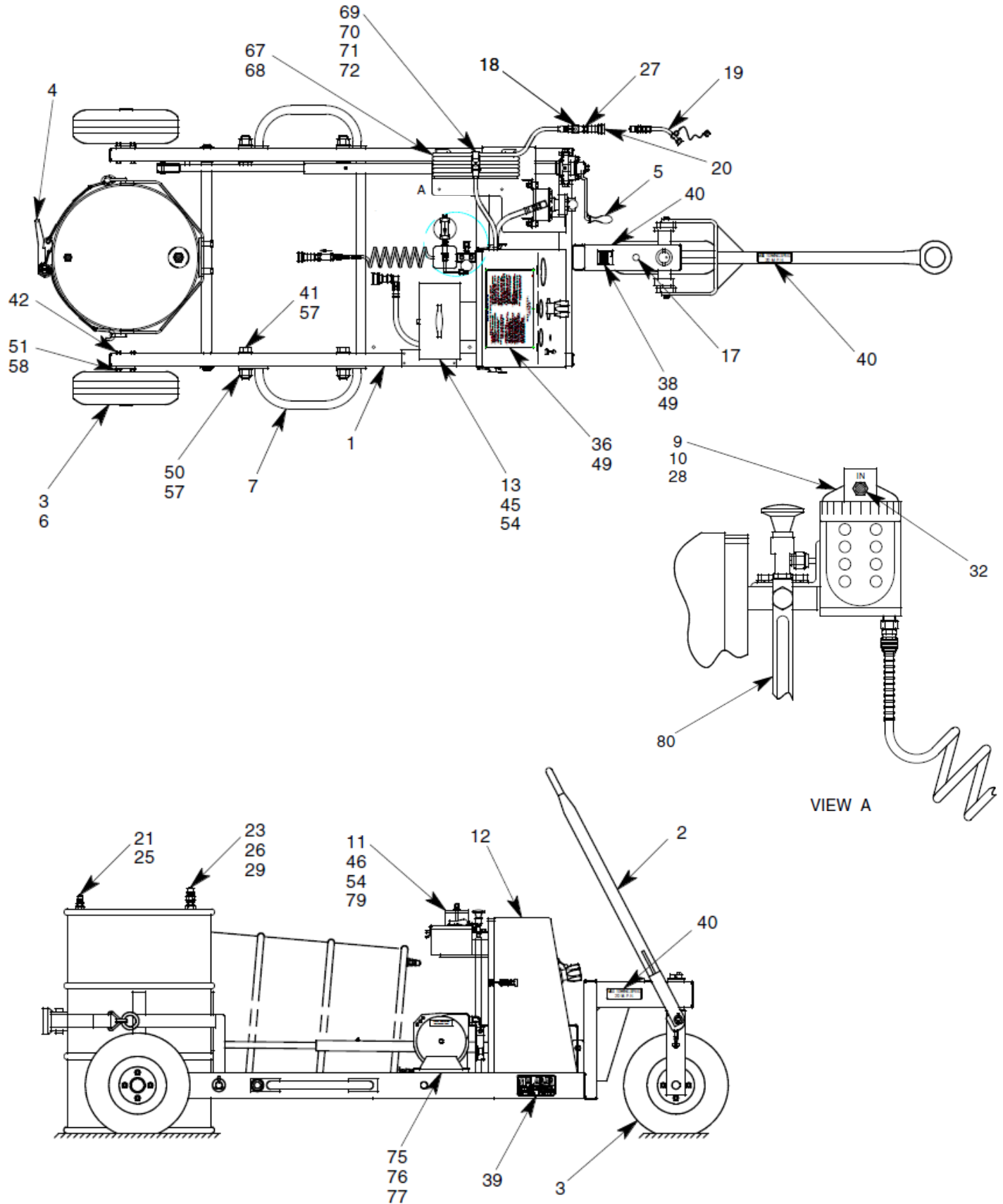
## **9.0 GUARANTEES/LIMITATION OF LIABILITY**

- I. Seller warrants each new product of its manufacture to be free from defects in material or workmanship, under proper, reasonable, and normal use and service.
- II. The warranty period shall be as follows:
  - A. For Malabar equipment, with the exception of Tripod Jacks, the warranty period is one (1) year after date of shipment.
  - B. For Malabar Tripod Jacks, the warranty period is three (3) years after date of shipment.
- III. Where Buyer claims an alleged defect in material or workmanship and so advises Seller in writing within ten (10) days after discovery thereof, then and in such event, Buyer shall return said equipment, transportation prepaid, to the Seller, provided such return is timely and within the above-mentioned warranty period. This warranty and liability of the Seller is expressly limited solely to replacement or repair of defective parts or goods, and return at Buyer's expense to Buyer after finding by Seller the product was defective prior to original shipment or, at the option of Seller, to providing refund to Buyer of the purchase price for said product.
- IV. It is further expressly understood and agreed that:
  - A. THERE IS NO WARRANTY, REPRESENTATION OF CONDITION OF ANY KIND, EXPRESS OR IMPLIED, (INCLUDING NO WARRANTY OF MERCHANTABILITY OR OF FITNESS) EXCEPT THAT THE MATERIAL SHALL BE OF THE QUALITY SPECIFIED IN APPLICABLE SPECIFICATIONS, AND NONE SHALL BE IMPLIED BY LAW. Except as otherwise provided herein, quality shall be in accordance with Seller's specifications. Final determination of the material for the use contemplated by Buyer is the sole responsibility of Buyer and Seller shall have no responsibility in connection with such suitability, and
  - B. Buyer's sole and exclusive remedy shall be repair or replacement of defective parts or goods by the Seller. Should the goods, in the judgment of Seller, preclude the remedying of the warranted defects by repair or replacement, the Buyer's sole and exclusive remedy shall be the refund of the purchase price, and
  - C. Seller shall not be liable for prospective profits or special, indirect or consequential damages, nor shall any recovery of any kind against Seller be greater in amount than the purchase price of the specific material sold and causing the alleged loss, damage or injury. Buyer assumes all risk and liability for loss, damage or injury to persons or property of Buyer or others arising out of use or possession of any product or part sold hereunder, and
  - D. Seller shall in no way be deemed or held to be obligated, liable or accountable upon or for any guarantees or warranties, express or implied, or created by statute or by operation of law or otherwise, in any manner of form beyond its express agreement above set forth, and
  - E. No warranty herein shall apply to any product which shall have been repaired or altered, unless such alteration or repair has been made by Seller or if, after return to and inspection by Seller, the product is found by Seller to have been subject to misuse, negligence or accident, and
  - F. No warranty of any nature is made by Seller as to any component forming a part of the product sold and Buyer shall receive only such warranties offered by such other manufacturer of such component, and
  - G. Seller does not assume nor does Seller authorize any other person to assume for it any other liability or make any warranty in connection with the sale of its products.



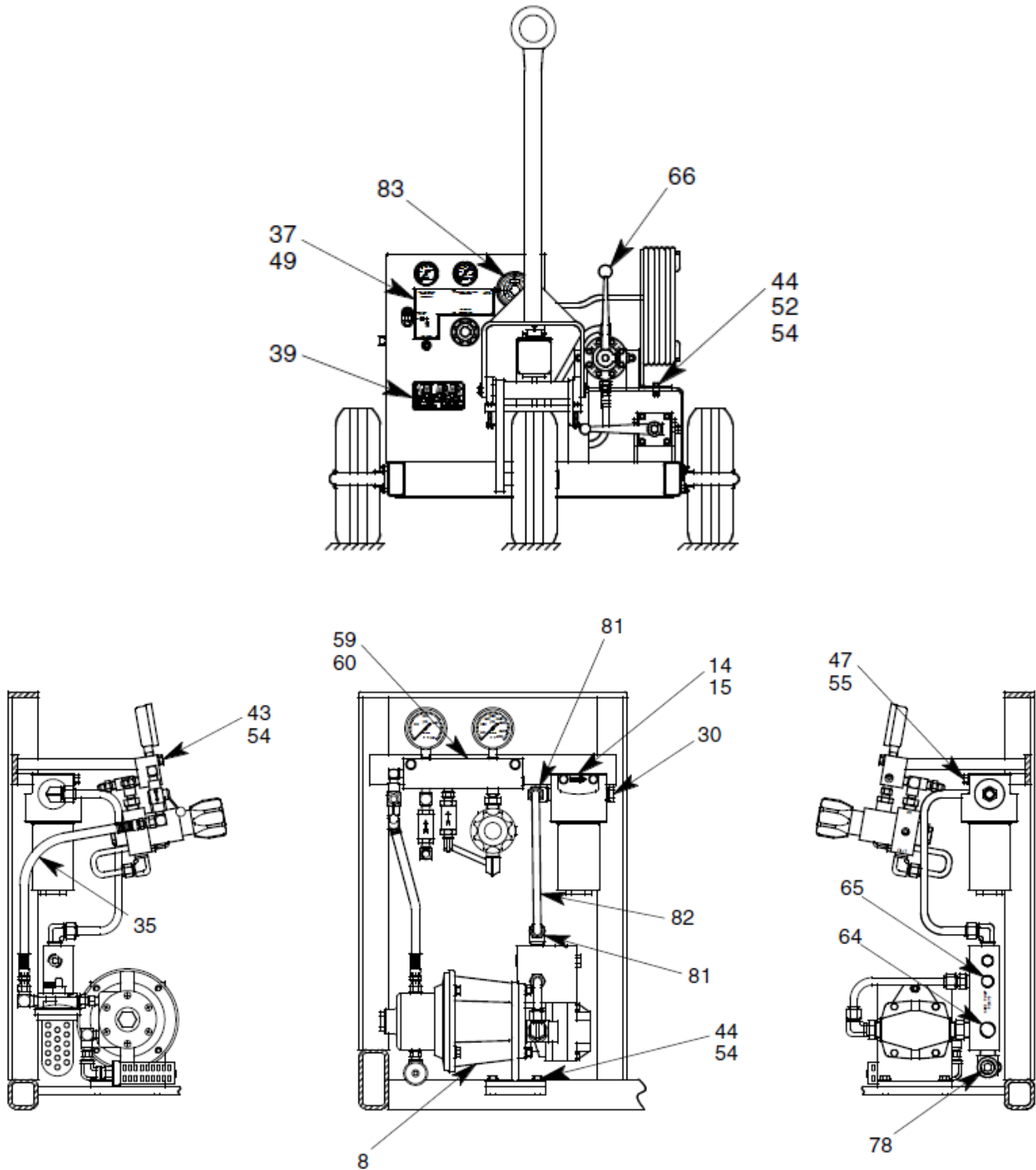
### Parts List – Figure 1A

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



### Parts List – Figure 1B

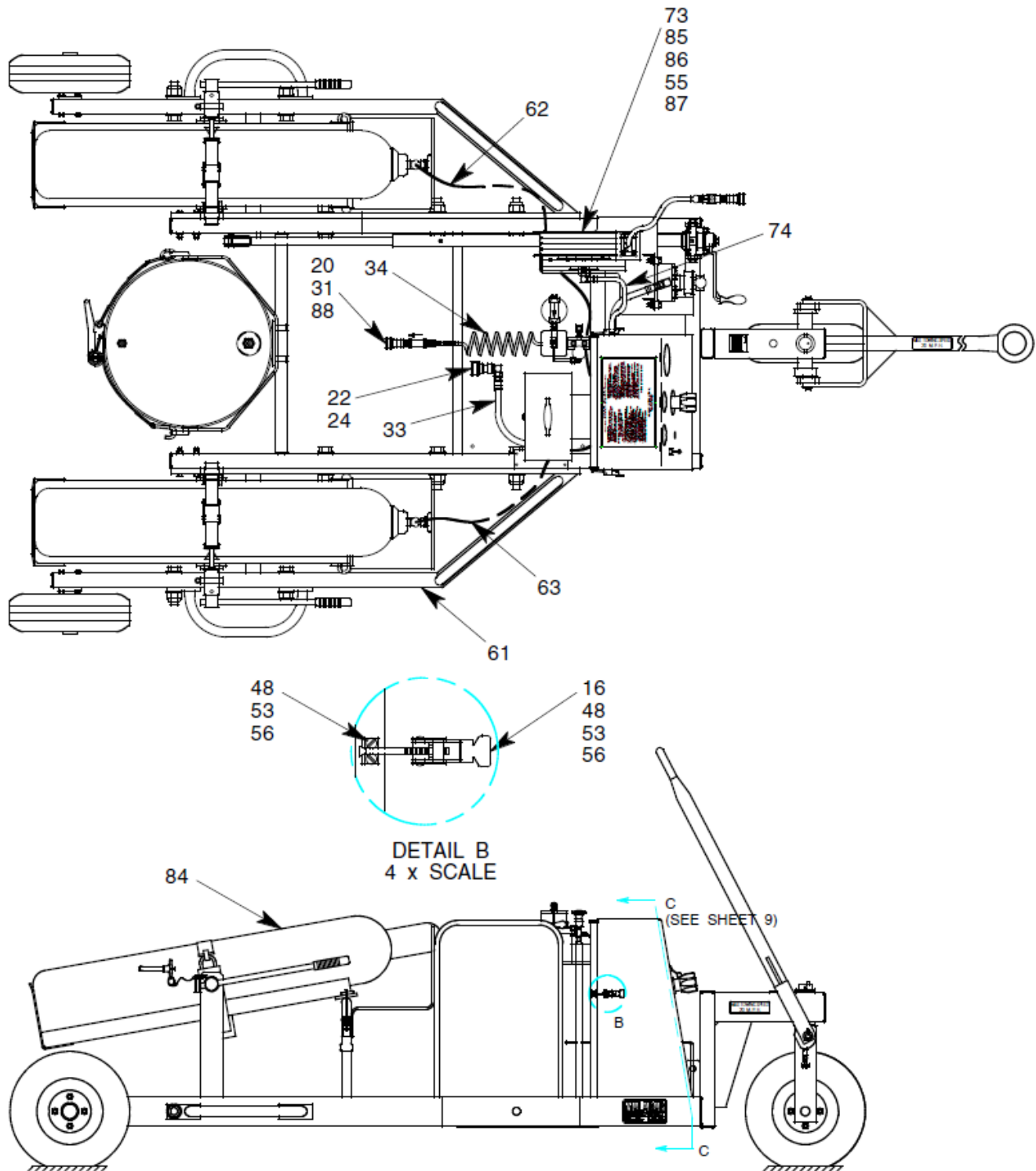
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



SECTION C - C  
2 x SCALE

### Parts List – Figure 1C

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



## Parts List – Figure 1A – 1C

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
1	877601	FRAME	1
2	837795-1	TOW HANDLE & BRAKE ASSY	1
3	837708-1	HUB & WHEEL ASSEMBLY	3
4	877639	CRADLE ASSEMBLY	1
5	877638	HAND CRANK ASSEMBLY	1
6	877621	SPINDLE	2
7	877663	WHEEL GUARD	2
8	877609	MOTOR & PUMP ASSEMBLY	1
9	481-074	DESICCANT AIR DRYER	1
10	481-075	SELICA GEL	1
11	877696	OVERFLOW CONTAINER	1
12	877668	CONSOLE	1
13	17753	STORAGE BOX	1
14	481-077	FILTER ASSEMBLY	1
15	481-035	FILTER ELEMENT	1
16	491-072	ADJUSTABLE DRAW LATCH	2
17	86392	BUMPER	1
18	424-038	1/4 TURN VALVE	1
19	877690-1	GRAVITY FILL ADAPTER	1
20	736-094	Q. D. COUPLER, 3/8 FPT	2
21	736-095	Q. D. NIPPLE, 3/8 FPT	1
22	736-096	Q. D. COUPLER, 1/2 FPT	1
23	736-097	Q. D. NIPPLE, 1/2 FPT	1
24	722-001	ELBOW, 1/2-37° x 1/2 MPT	1
25	711-095	NIPPLE, 3/4 MPT x 3/8 MPT	1
26	711-004	NIPPLE, 1/2 MPT	1
27	711-011	NIPPLE, 3/8 MPT	1
28	711-003	NIPPLE, 1/4 MPT	1
29	714-024	REDUCER, 2" MPT x 1/2 FPT	1
30	714-010	REDUCER, 1/2 MPT x 3/8 FPT	1
31	711-030	NIPPLE, 3/8 MPT x 1/4 MPT	1
32	483-005	BREATHER	1
33	877693	SUCTION HOSE	1
34	95-5000-22-1	AIR VENT HOSE	1
35	877605	PNEUMATIC HOSE	1
36	877687	PLACARD, INSTRUCTION	1
37	877607	PLACARD, CONTROL	1
38	9-7035	NAMEPLATE	1
39	55998	STICKER, MALABAR	3
40	75939	STICKER, TOWING	3
41	321-211	HHCS, 1" - 8 x 4 1/2 LG	4
42	321-007	HHCS, 3/8 - 16 x 3 1/4 LG	8
43	321-140	HHCS, 3/8 - 16 x 2" LG	1
44	321-011	HHCS, 3/8 - 16 x 1" LG	1

### Parts List – Figure 1A -1C

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

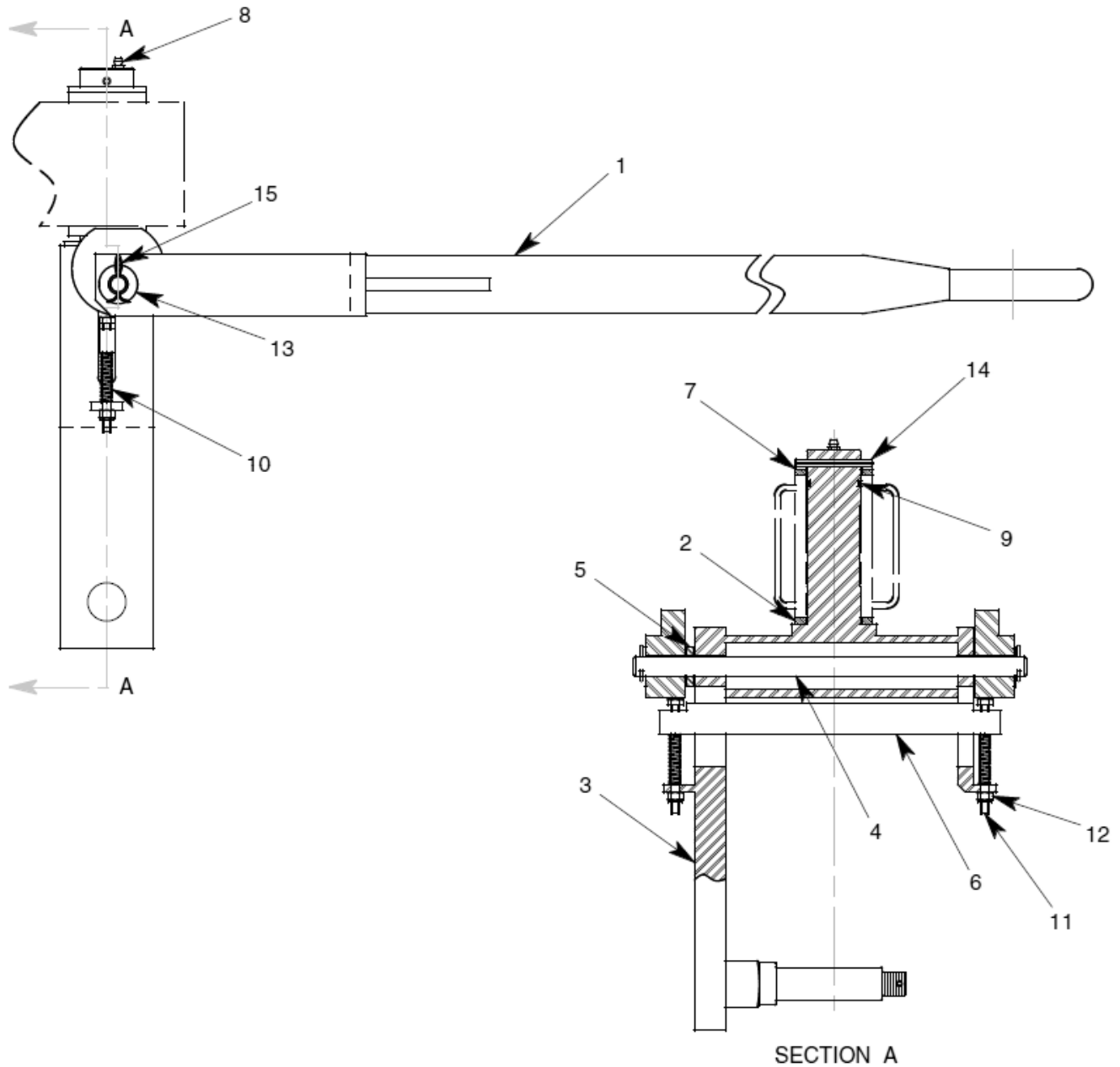
Item	Part Number	Description	Qty
45	321-043	HHCS, 3/8 - 16 x 1/2 LG	1
46	321-104	HHCS, 3/8 - 16 x 5/8 LG	1
47	321-194	HHCS, 5/16 - 18 x 3 1/2 LG	3
48	326-012	BHCS, #10 - 24 x 5/8 LG	2
49	397-010	SELF TAPPING SCREW, #6	2
50	355-026	LOCKNUT, 1" - 8	2
51	355-001	LOCKNUT, 3/8 - 16	2
52	351-002	NUT, 3/8 - 16	5
53	351-007	NUT, #10 - 24	8
54	363-003	SPLIT LOCKWASHER, 3/8	2
55	363-002	SPLIT LOCKWASHER, 5/16	2
56	363-009	SPLIT LOCKWASHER, #10	8
57	362-009	FLAT WASHER, 1" SAE	8
58	362-003	FLAT WASHER, 3/8 SAE	8
59	877613	MANIFOLD W/O GN2	1
60	877615-1	MANIFOLD WITH GN2	1
61	877680	GN2 BOTTLE TRAY ASSY	1
62	837695-1	TAILPIECE HOSE ASSEMBLY	1
63	837695-2	TAILPIECE HOSE ASSEMBLY	1
64	717-014	PLUG, 3/4 MPT	1
65	717-008	PLUG, 1/2 MPT	1
66	877643	HAND PUMP ASSEMBLY	1
67	877647	HOSE STAND	1
68	877694-1	FLUID DELIVERY HOSE	1
69	837724	HOSE STRAP	1
70	321-036	HHCS, 1/4 - 20 x 3/4 LG	1
71	351-001	NUT, 1/4 - 20	1
72	363-001	SPLIT LOCKWASHER, 1/4	1
73	877698-2	HOSE REEL ASSEMBLY	1
74	877694	HYDRAULIC HOSE	1
75	499-007	STATIC GROUND REEL	1
76	321-043	HHCS, 3/8 - 16 x 1/2 LG	4
77	363-003	SPLIT LOCKWASHER, 3/8	4
78	717-014	PLUG, 3/4 MPT	1
79	717-006	PLUG, 1/4 MPT	1
80	877641	LIQUID LEVEL GAUGE ASSY	1
81	722-013	ELBOW, 1/2 T x 1/2 MPT	2
82	732-001	TUBE, 1/2 OD x .049 W	AR
83	877875-1	FLUID METER ASSEMBLY	1
84	474-006	GN2 BOTTLE, 3600 PSIG	2
85	321-083	HHCS, 5/16 - 18 x 1" LG	4
86	362-002	FLAT WASHER, 5/16 SAE	8
87	351-012	HEX NUT, 5/16 - 18	4
88	422-056	CHECK VALVE, 1/4 FPT	1



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## Parts List – Figure 2

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



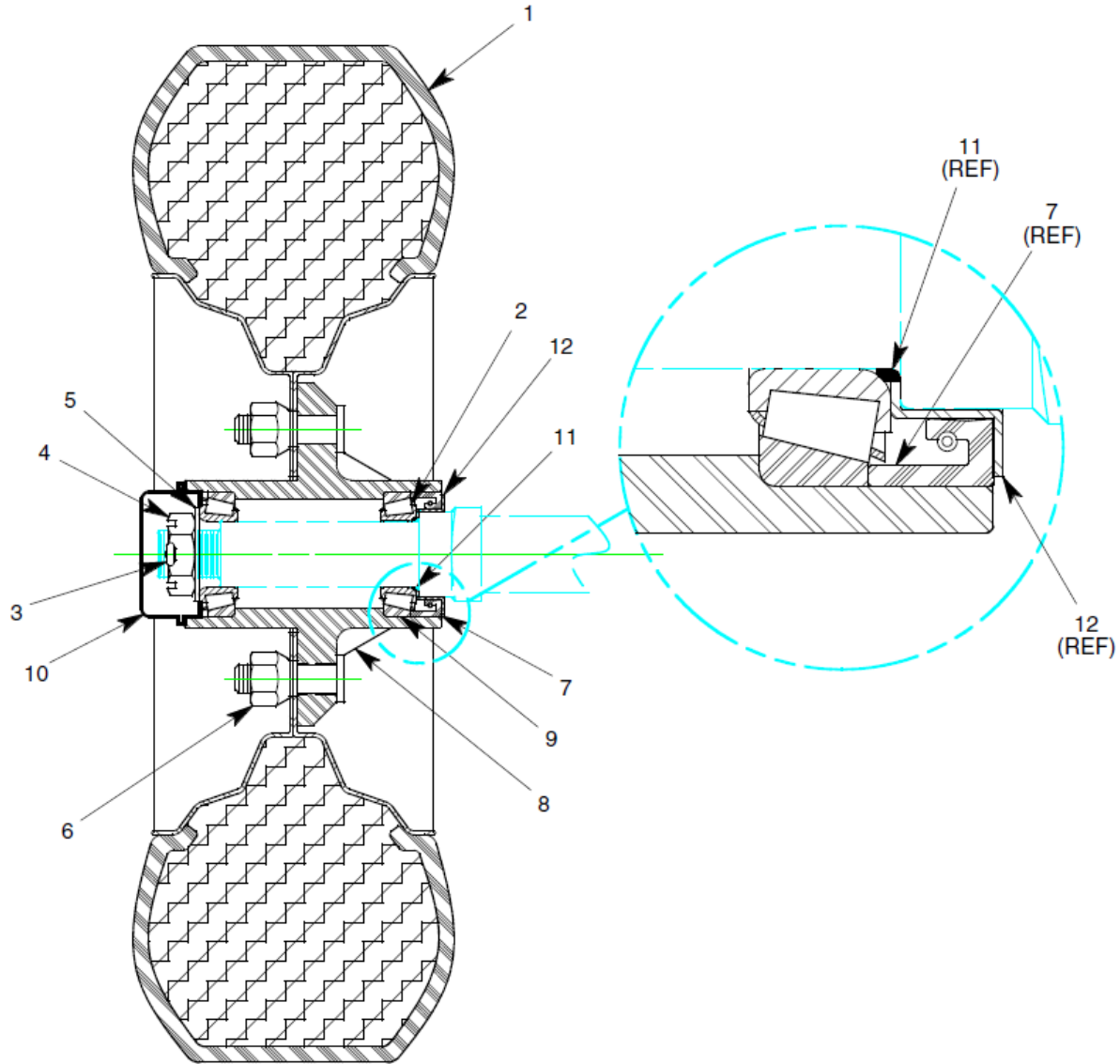
## Parts List – Figure 2

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
	<b>837795-1</b>	<b>Brake &amp; Tow Handle Assembly; consist of:</b>	
1	837705-1	TOW HANDLE	1
2	837668	THRUST WASHER	1
3	837715	FRONT FORK	1
4	837745	PIN	1
5	837746	SPACER	1
6	837781	BRAKE BAR	1
7	837671	WASHER	1
8	998-003	GREASE FITTING	1
9	55925-222	O-RING	1
10	495-001	SPRING	2
11	321-304	HHCS, 1/4 - 20 x 3-1/2 LG	2
12	355-002	LOCKNUT, 1/4 - 20	2
13	362-017	FLAT WASHER, 5/8	2
14	371-009	ROLL PIN, 1/4 x 2 1/2 LG	1
15	372-002	COTTER PIN, 3/32 x 1" LG	2

### Parts List – Figure 3

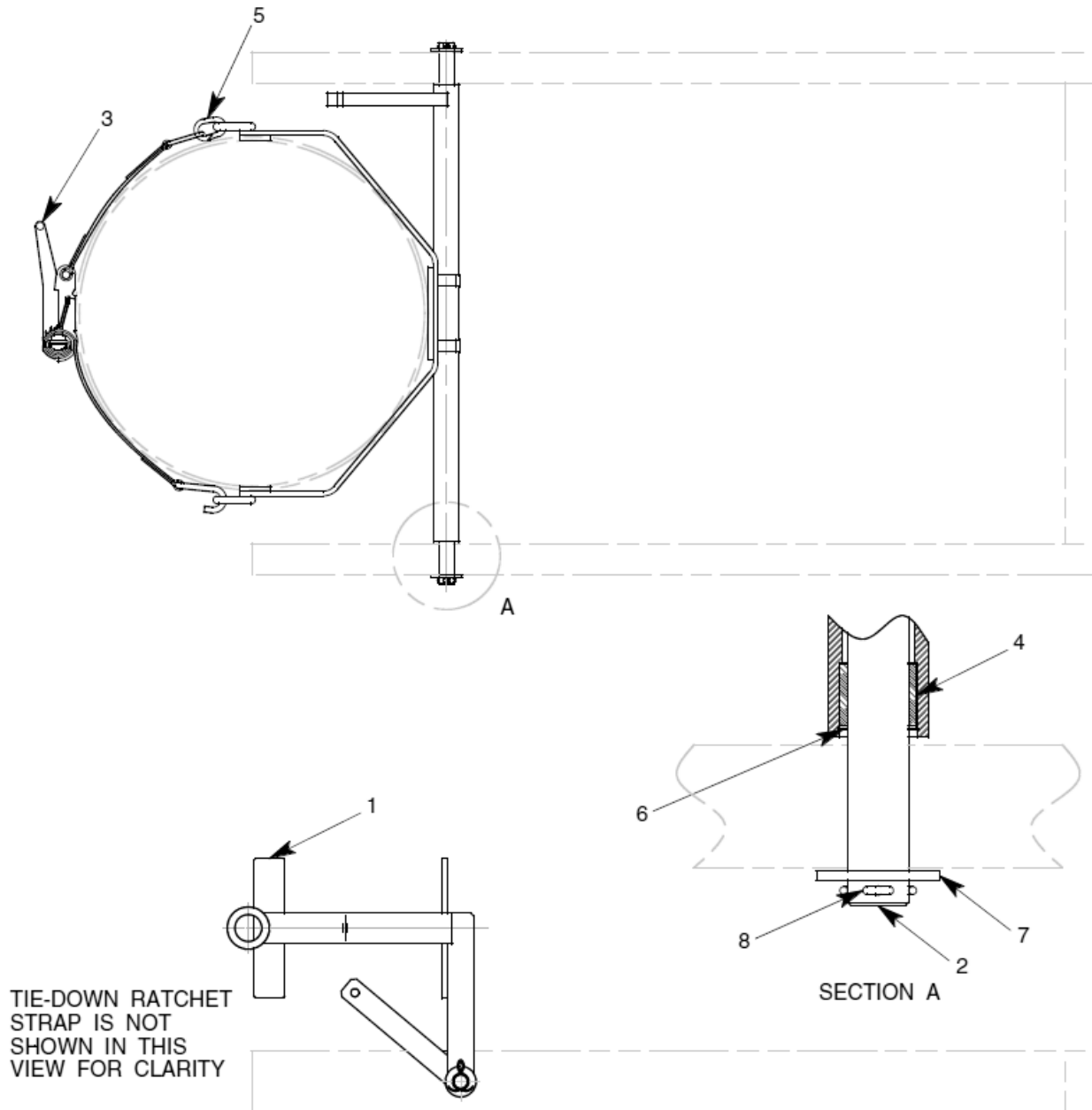
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	<b>837708-1</b>	<b>Hub &amp; Wheel Assembly; consist of:</b>	
1	492-142	TIRE & WHEEL ASSEMBLY	1
2	492-020	BEARING CONE	2
3	372-008	COTTER PIN, 1/8 x 1 1/2 LG	1
4	492-023	CASTLE NUT, 3/4 - 16	1
5	492-024	KEY WASHER	1
6	492-093	CONE NUT, 1/2 - 20	4
7	492-217	GREASE SEAL	1
8	492-017	HUB	1
9	492-019	CUP (PART OF ITEM 8)	2
10	492-021	DUST CAP	1
11	492-215	O-RING	1
12	492-216	Z-RING	1

### Parts List – Figure 4

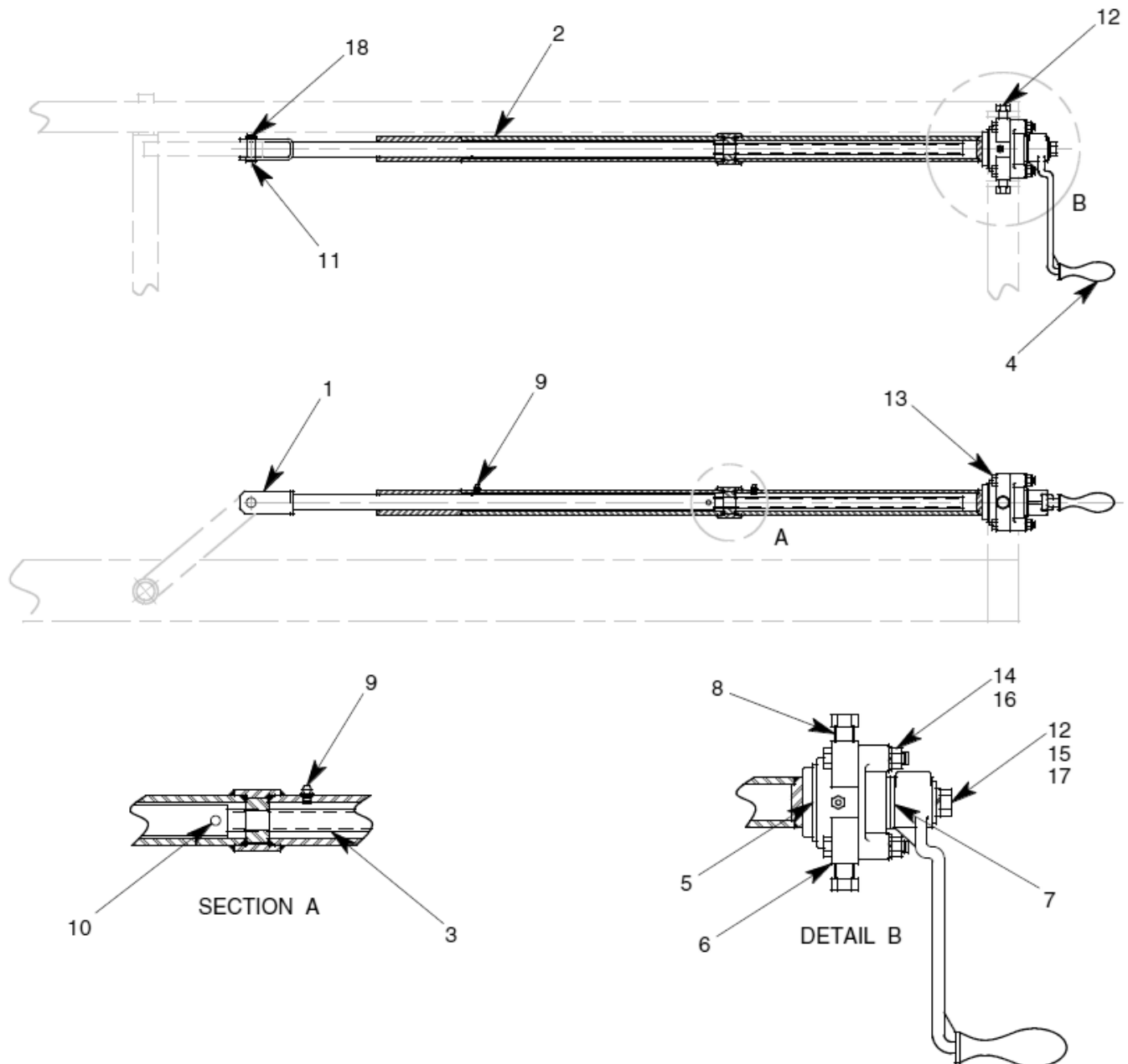
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	<b>877639</b>	<b>Cradle Assembly; consist of:</b>	
1	877635	CRADLE	1
2	877622	ROD	1
3	491-068	TIE-DOWN STRAP	1
4	410-012	OILITE BEARING	2
5	491-064	CHAIN CONNECTOR	1
6	55904-125	SPIROLOX RING	2
7	362-009	FLAT WASHER, 1" SAE	2
8	372-008	COTTER PIN, 1/8 x 1 1/2 LG	2

### Parts List – Figure 5

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



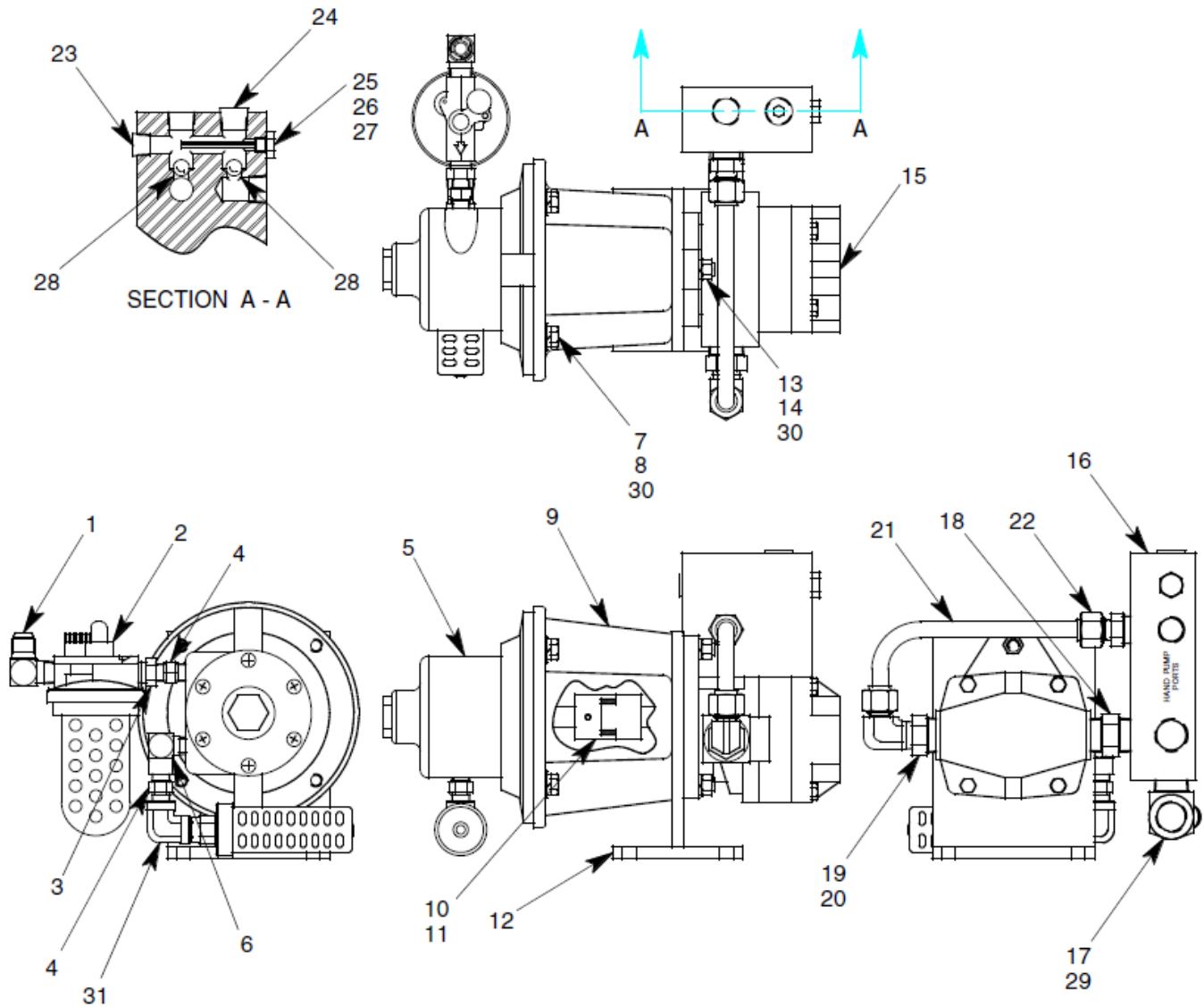
## Parts List – Figure 5

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
	<b>877638</b>	<b>Hand Crank Assembly; consist of:</b>	
1	877628	CLEVIS	1
2	877634	OUTER HAND CRANK	1
3	877629	SCREW	1
4	877637	CRANK HANDLE	1
5	410-011	TAPER ROLLER BEARING	1
6	877636	BEARING PLATE	1
7	410-013	OILITE BEARING	2
8	74578	SPACER	2
9	998-003	GREASE FITTING	2
10	374-004	DOWEL PIN, 5/16 x 7/8 LG	1
11	MS20392-7C45	FLAT HEAD PIN, 1/2 DIA	1
12	321-050	HHCS, 1/2 - 13 x 3/4 LG	3
13	321-062	HHCS, 3/8 - 16 x 2 1/2 LG	4
14	351-002	NUT, 3/8 - 16	4
15	363-004	SPLIT LOCKWASHER, 1/2	1
16	363-003	SPLIT LOCKWASHER, 3/8	4
17	361-005	FLAT WASHER, 1/2	1
18	372-001	COTTER PIN, 3/32 x 3/4 LG	1

### Parts List – Figure 6

When ordering replacement parts/kits, please specify model, serial number and color of your unit.





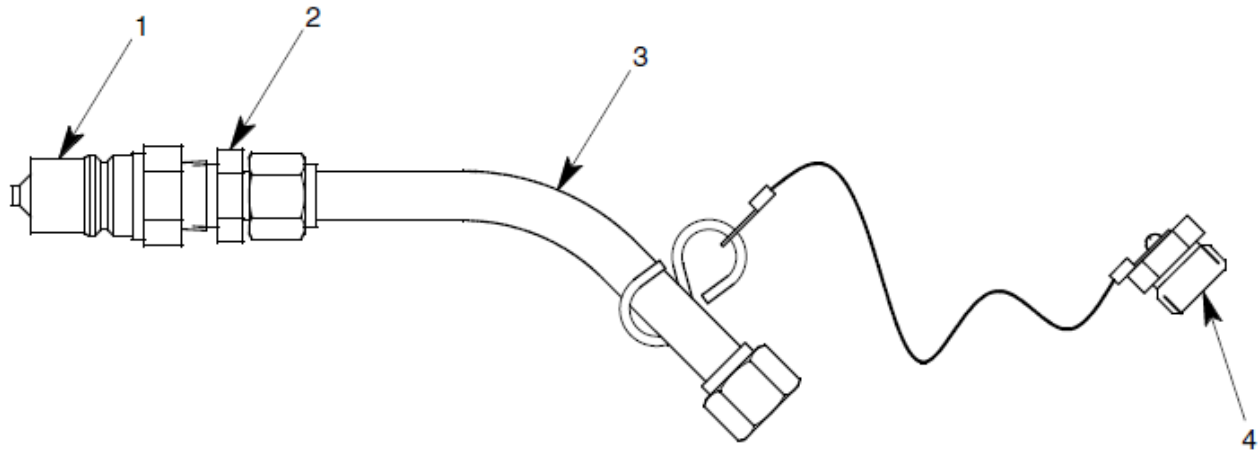
## Parts List – Figure 6

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
	<b>877609</b>	<b>Pump/Motor Assembly; consist of:</b>	
1	722-023	ELBOW, 3/8 - 37° x 3/8 MPT	1
2	471-002	LUBRICATOR	1
3	714-009	REDUCER, 3/8 MPT x 1/4 FPT	1
4	711-003	NIPPLE, 1/4 MPT	2
5	438-003	AIR MOTOR WITH MUFFLER	1
6	712-008	ELBOW, 1/4 MPT x 1/4 FPT	1
7	361-001	FLAT WASHER, 3/8	4
8	321-011	HHCS, 3/8 - 16 x 1" LG	4
9	438-005	PUMP/MOTOR ADAPTER	1
10	432-013	HALF COUPLING, 5/8 DIA	2
11	432-018	HYTREL SPIDER	1
12	877610	PUMP STAND	1
13	331-044	SHSS, 3/8 - 16 x 2" LG	2
14	351-002	NUT, 3/8 - 16	2
15	45-5000-36	HYDRAULIC PUMP	1
16	877640	VAVLE BLOCK	1
17	713-038	TEE, BRANCH, 3/4 NPT	1
18	711-036	NIPPLE, 3/4 MPT	1
19	714-006	REDUCER, 3/4 MPT x 1/2 FPT	1
20	722-013	ELBOW, 1/2 T x 1/2 MPT	1
21	732-001	TUBE, 1/2 OD x .049 W	AR
22	721-013	CONN., 1/2 T x 1/2 MPT	1
23	717-007	PLUG, 3/8 MPT	1
24	717-008	PLUG, 1/2 MPT	1
25	717-065	PLUG, AN814-4	1
26	MS28778-4	O-RING	1
27	371-055	ROLL PIN, 3/16 x 2 1/2 LG	1
28	412-006	STEEL BALL, 1/2 DIA	2
29	722-068	ELBOW, 45°, 1/2-37° x 3/4 MPT	1
30	363-003	SPLIT LOCKWASHER, 3/8	6
31	712-013	ELBOW, 1/4 FPT	1

### Parts List – Figure 7

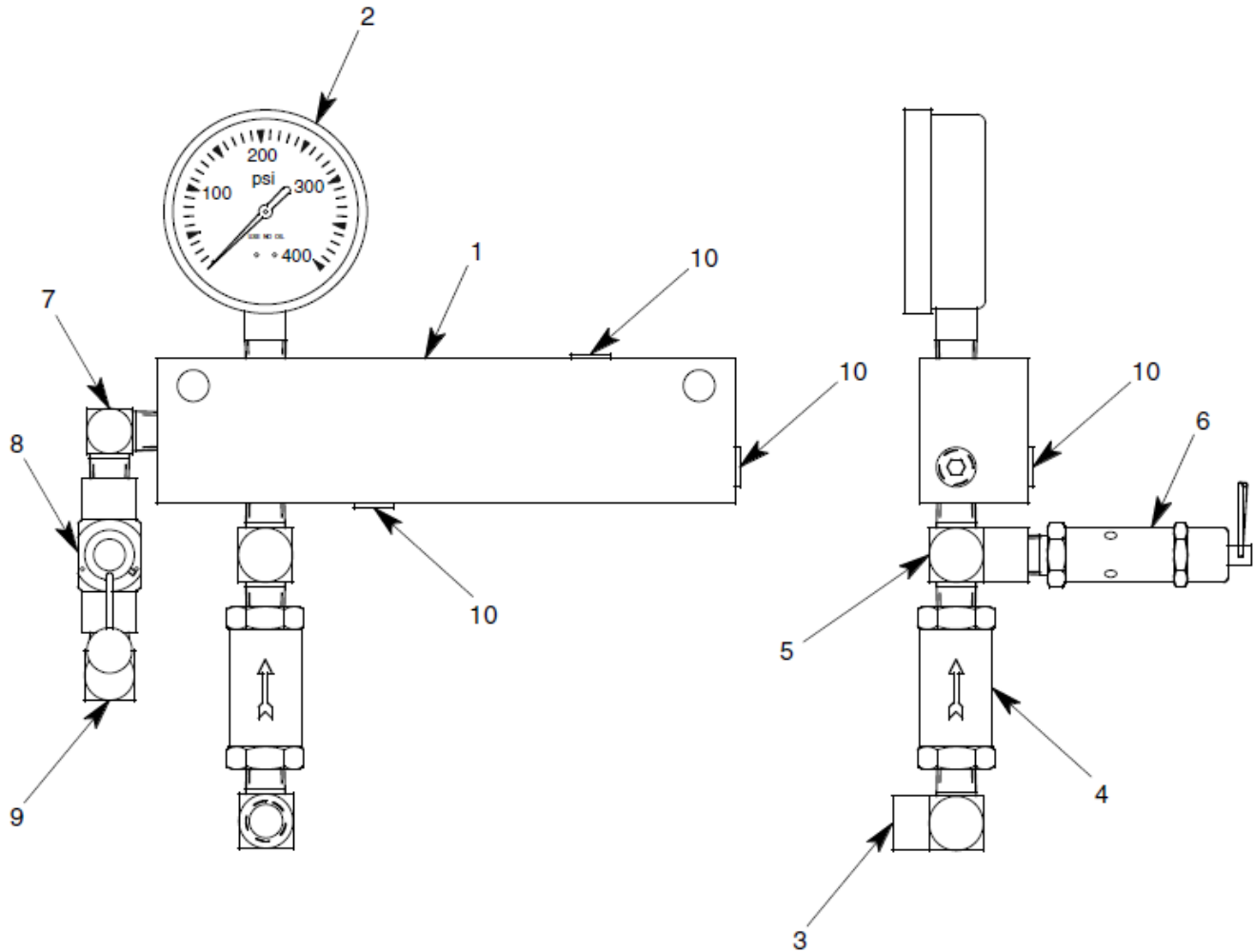
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	<b>877690-1</b>	<b>Gravity Fill Assembly; consist of:</b>	
1	736-095	Q. D. NIPPLE	1
2	721-132	CONN., 1/2 - 37° x 3/8 MPT	1
3	877688	GRAVITY FILL TUBE	1
4	877689	PLUG & CABLE ASSEMBLY	1

### Parts List – Figure 8

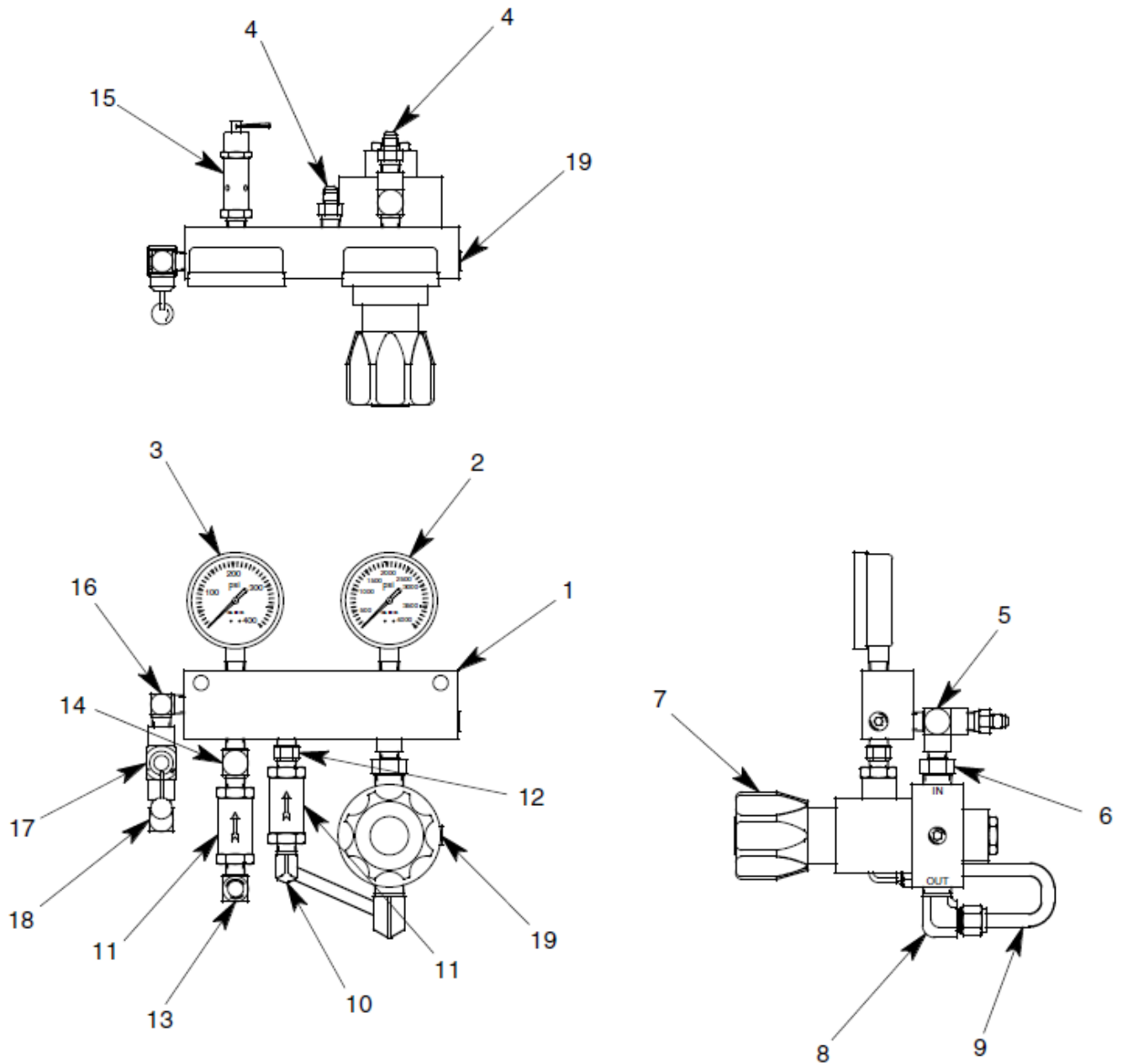
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	<b>877613</b>	<b>Manifold Assembly Without GN2 Service; consist of:</b>	
1	877614	MANIFOLD BLOCK	1
2	482-010	GAUGE, 0 - 400 PSIG	1
3	712-006	ELBOW, 1/4 MPT x 1/4 FPT	1
4	421-030	CHECK VALVE, 1/4 FPT	1
5	713-043	TEE, FEMALE BRANCH, 1/4 NPT	1
6	425-001	AIR RELIEF VALVE	1
7	712-088	ELBOW, 1/4 MPT	1
8	422-039	THROTTLING VALVE	1
9	722-108	ELBOW, 3/8 - 37° x 1/4 MPT	1
10	717-006	PLUG, 1/4 MPT	5

### Parts List – Figure 9

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



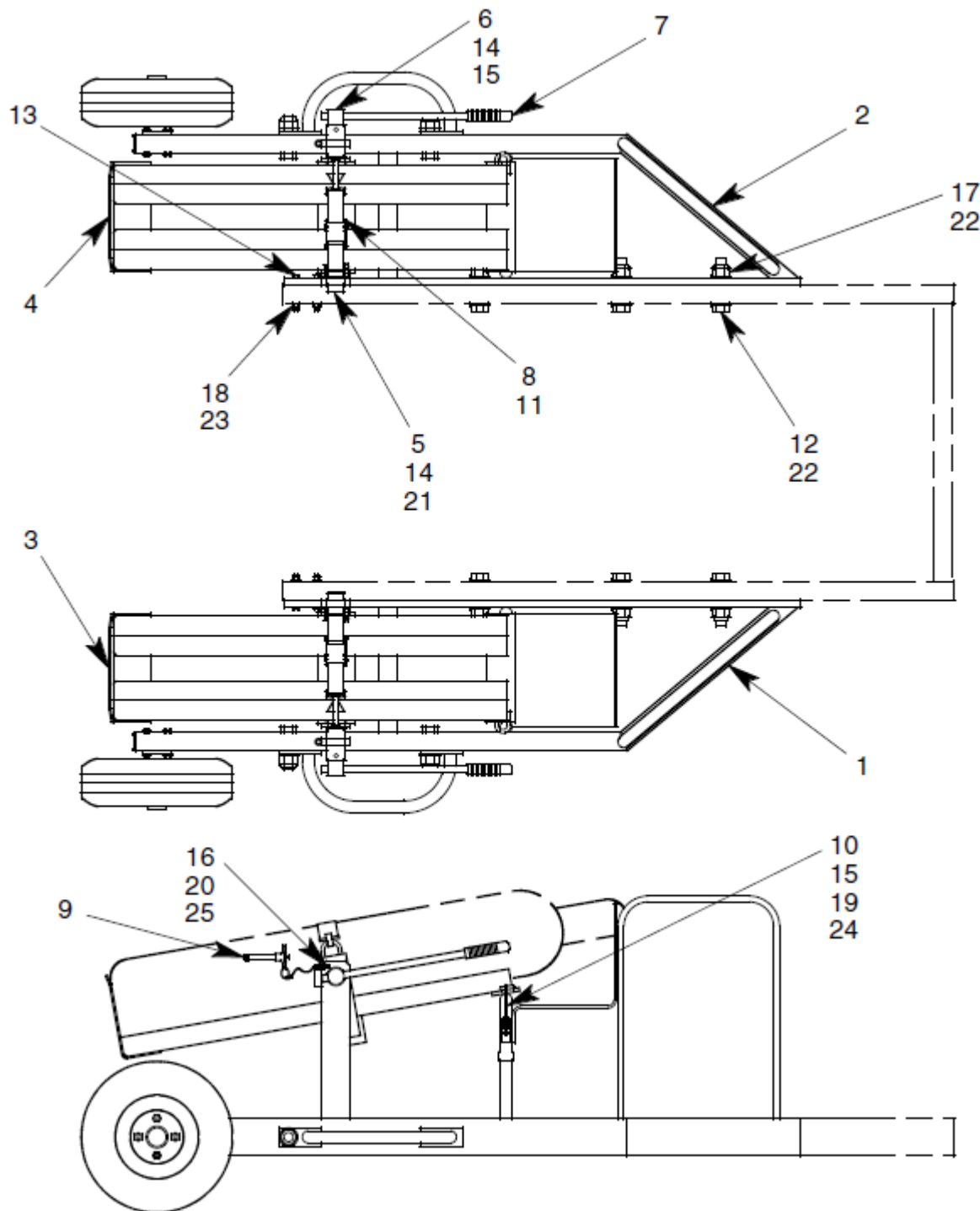
### Parts List – Figure 9

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
	<b>877615-1</b>	<b>Manifold Assembly With GN2 Service; consist of:</b>	
1	877614	MANIFOLD BLOCK	1
2	482-009	GAUGE, 0 - 4000 PSIG	1
3	482-010	GAUGE, 0 - 400 PSIG	1
4	721-015	CONN., 1/4 37° x 1/4 MPT	2
5	713-012	TEE, RUN, 1/4 NPT	1
6	711-079	NIPPLE, 1/2 MPT x 1/4 MPT	1
7	473-083	REGULATOR	1
8	722-015	ELBOW, 3/8 T x 1/2 MPT	1
9	732-002	TUBE, 3/8 OD X .049 W	AR
10	722-014	ELBOW, 3/8 T X 1/4 MPT	1
11	421-030	CHECK VALVE, 1/4 FPT	2
12	711-094	NIPPLE, 1/4 MPT	1
13	712-006	ELBOW, 1/4 MPT x 1/4 FPT	1
14	713-043	TEE, FEM. BRANCH, 1/4 NPT	1
15	425-001	AIR RELIEF VALVE	1
16	712-088	ELBOW, 1/4 MPT	1
17	422-039	CONTROL VALVE	1
18	722-108	ELBOW, 3/8 - 37° x 1/4 MPT	1
19	717-006	PLUG, 1/4 MPT	2

### Parts List – Figure 10

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



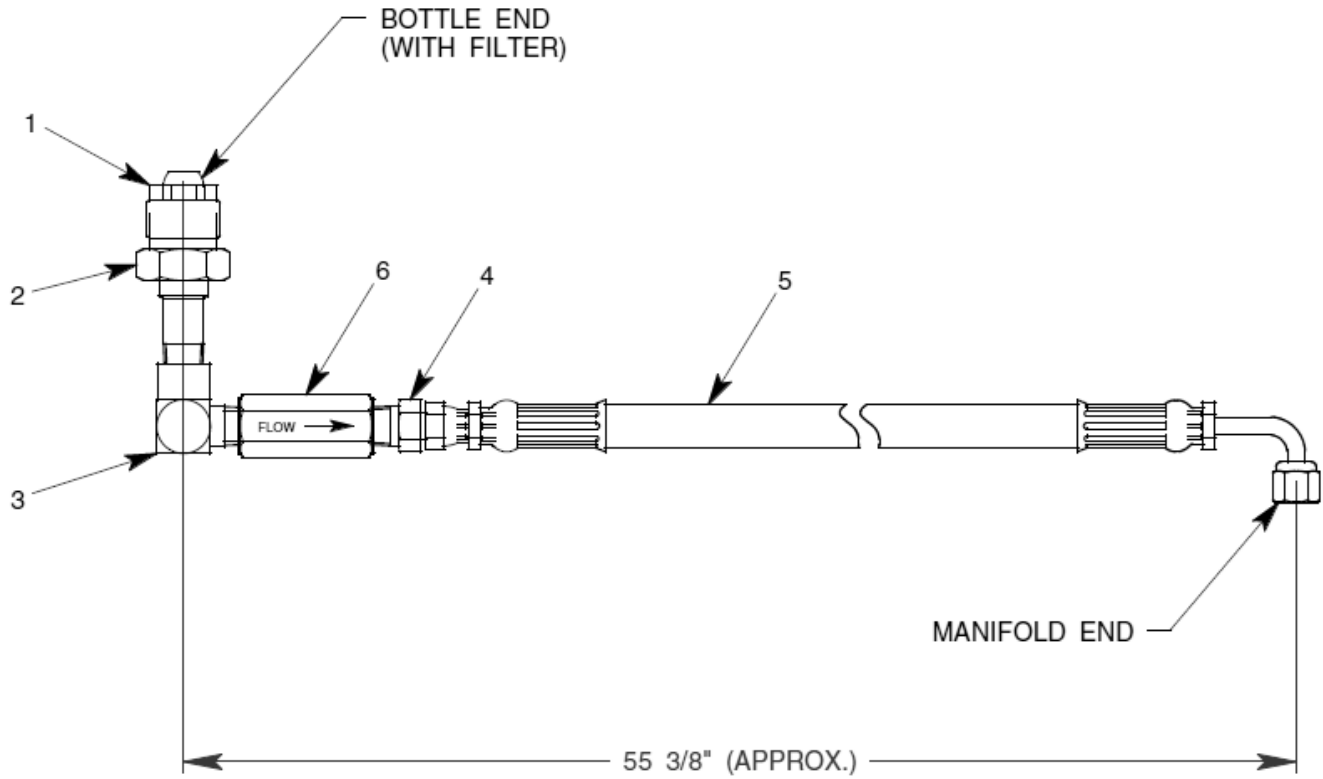
### Parts List – Figure 10

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
	<b>877680</b>	<b>GN2 Bottle Tray Assembly; consist of:</b>	
1	877679L	FRAME, LEFT	1
2	877679R	FRAME, RIGHT	1
3	877602L	TRAY, LEFT	1
4	877602R	TRAY, RIGHT	1
5	877672-1	PIVOT STUD	2
6	877673	TRAY HANDLE	2
7	494-006	HANDLE GRIP	2
8	837631	GN2 BOTTLE STRAP	2
9	370-029	QUICK RELEASE PIN, 1/2 DIA	2
10	491-070	ADJUSTABLE DRAW LATCH	2
11	375-001	STRAP CONNECTOR	2
12	321-271	HHCS, 1" – 8 X 5" LG	6
13	321-038	HHCS, 3/8 – 16 X 3 ½ LG	8
14	321-152	HHCS, 3/8 - 16 x 1" LG GR 5	4
15	321-137	HHCS, 1/4 - 20 x 2" LG	4
16	321-224	HHCS, #10 - 24 x 1 1/4 LG	2
17	355-026	LOCKNUT, 1" - 8	6
18	355-001	LOCKNUT, 3/8 - 16	8
19	355-030	LOCKNUT, 1/4 - 20	4
20	355-023	LOCKNUT, #10 - 24	2
21	363-003	SPLIT LOCKWASHER, 3/8	4
22	362-009	FLAT WASHER, 1" SAE	12
23	362-003	FLAT WASHER, 3/8 SAE	8
24	362-001	FLAT WASHER, 1/4 SAE	4
25	362-031	FLAT WASHER, #10 SAE	2

### Parts List – Figure 11

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

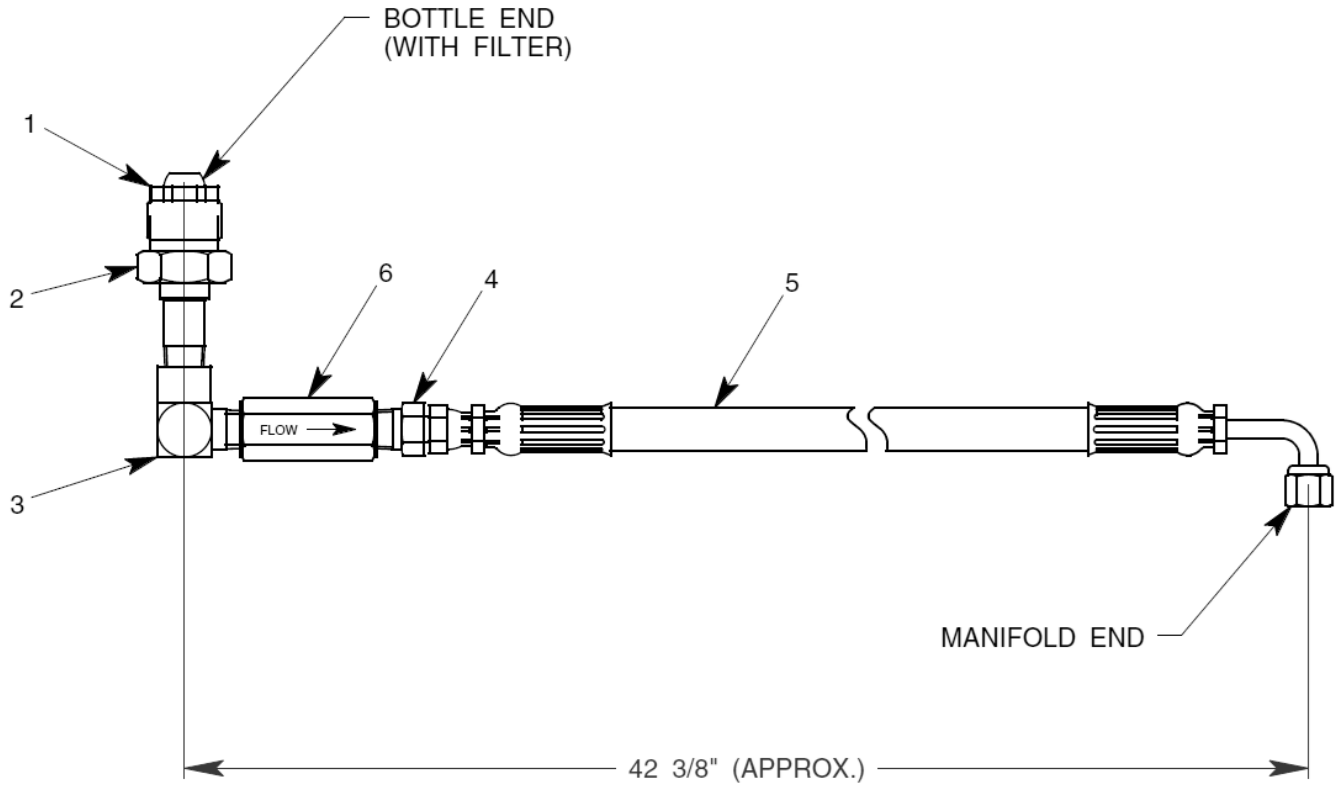


Item	Part Number	Description	Qty
	<b>837695-1</b>	<b>Nitrogen Tail Piece Hose Assembly; consist of:</b>	
1	719-050	CGA680 NIPPLE W/FILTER	1
2	719-051	CGA680 NUT	1
3	712-008	ELBOW, 1/4 NPT	1
4	721-015	CONN., 1/4 37° x 1/4 MPT	1
5	877685-19	TAILPIECE HOSE	2
6	422-065	CHECK VALVE, 1/4 FPT	2



### Parts List – Figure 12

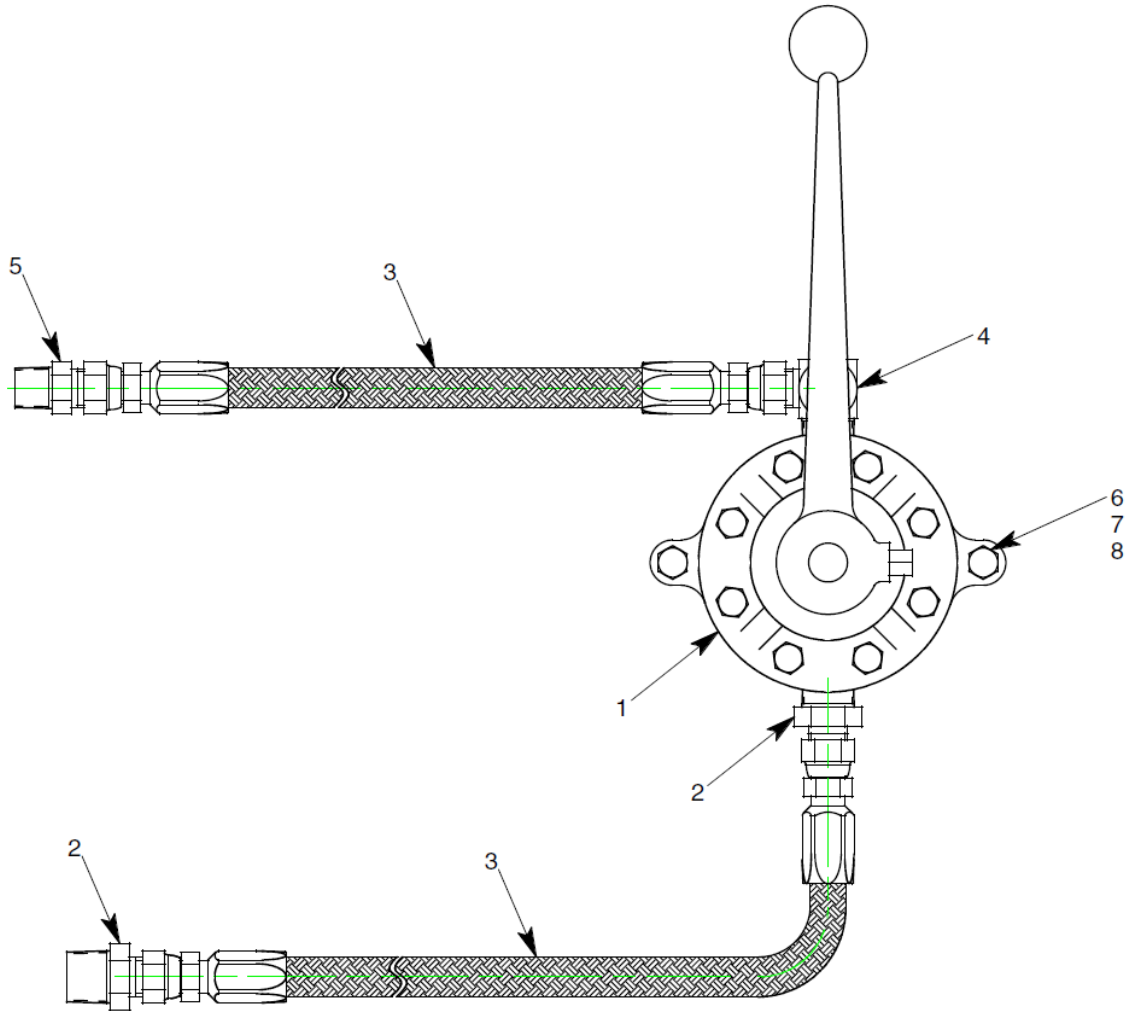
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	<b>837695-2</b>	<b>Nitrogen Tail Piece Hose Assembly; consist of:</b>	
1	719-050	CGA680 NIPPLE W/FILTER	1
2	719-051	CGA680 NUT	1
3	712-008	ELBOW, 1/4 NPT	1
4	721-015	CONN., 1/4 37° x 1/4 MPT	1
5	877685-20	TAILPIECE HOSE	2
6	422-065	CHECK VALVE, 1/4 FPT	2

### Parts List – Figure 13

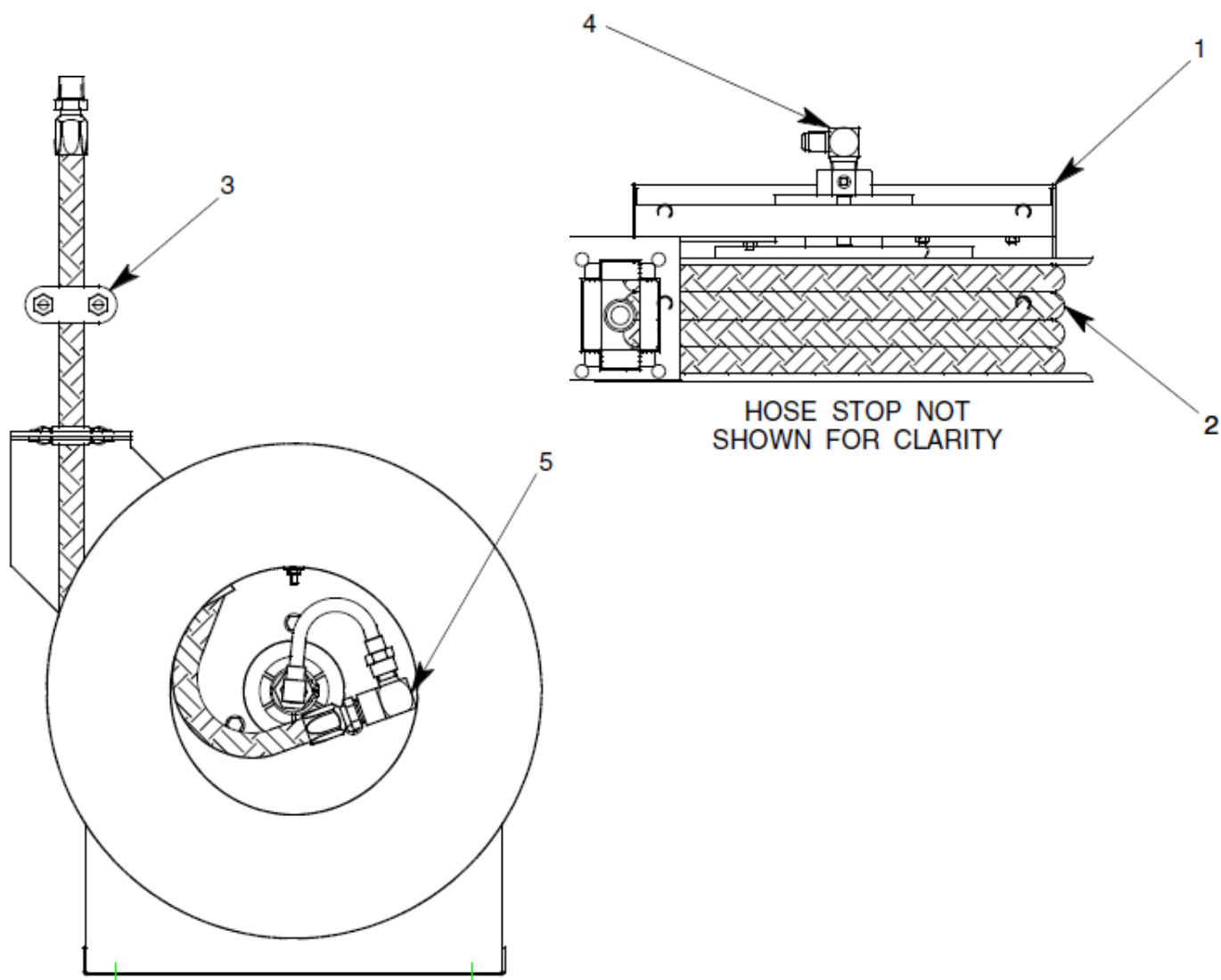
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	<b>877643</b>	<b>Hand Pump Assembly; consist of:</b>	
1	174190	HAND PUMP	1
2	721-131	CONN., 1/2 - 37° x 3/4 MPT	2
3	877693-2	HYDRAULIC HOSE, 20" LG	2
4	722-070	ELBOW, 1/2 - 37° x 3/4 MPT	1
5	721-001	CONN., 1/2 - 37° x 1/2 MPT	1
6	321-028	HHCS, 3/8 - 16 x 1 1/2 LG	2
7	363-003	SPLIT LOCKWASHER, 3/8	2
8	351-002	NUT, 3/8 - 16	2

### Parts List – Figure 14

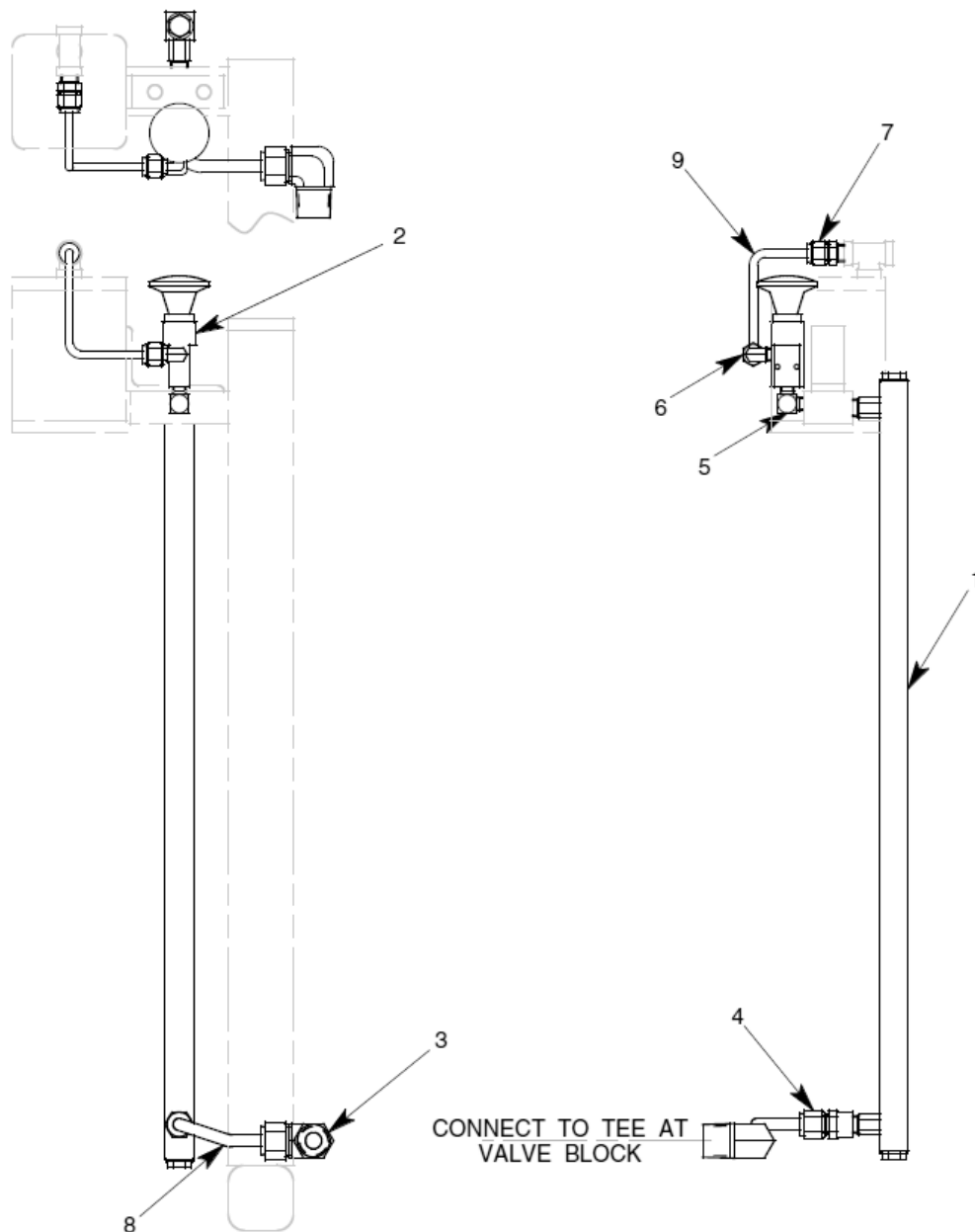
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	<b>877698-2</b>	<b>Hose Reel Assembly; consist of:</b>	
1	499-005	HOSE REEL WITHOUT HOSE	1
2	877694-1	HYD HOSE, 35 FT LG	1
3	499-009	HOSE STOP	1
4	722-023	ELBOW, 3/8 – 37° X 3/8 MPT	1
5	712-031	ELBOW, 1/4 MPT X 3/8 FPT	1

### Parts List – Figure 15

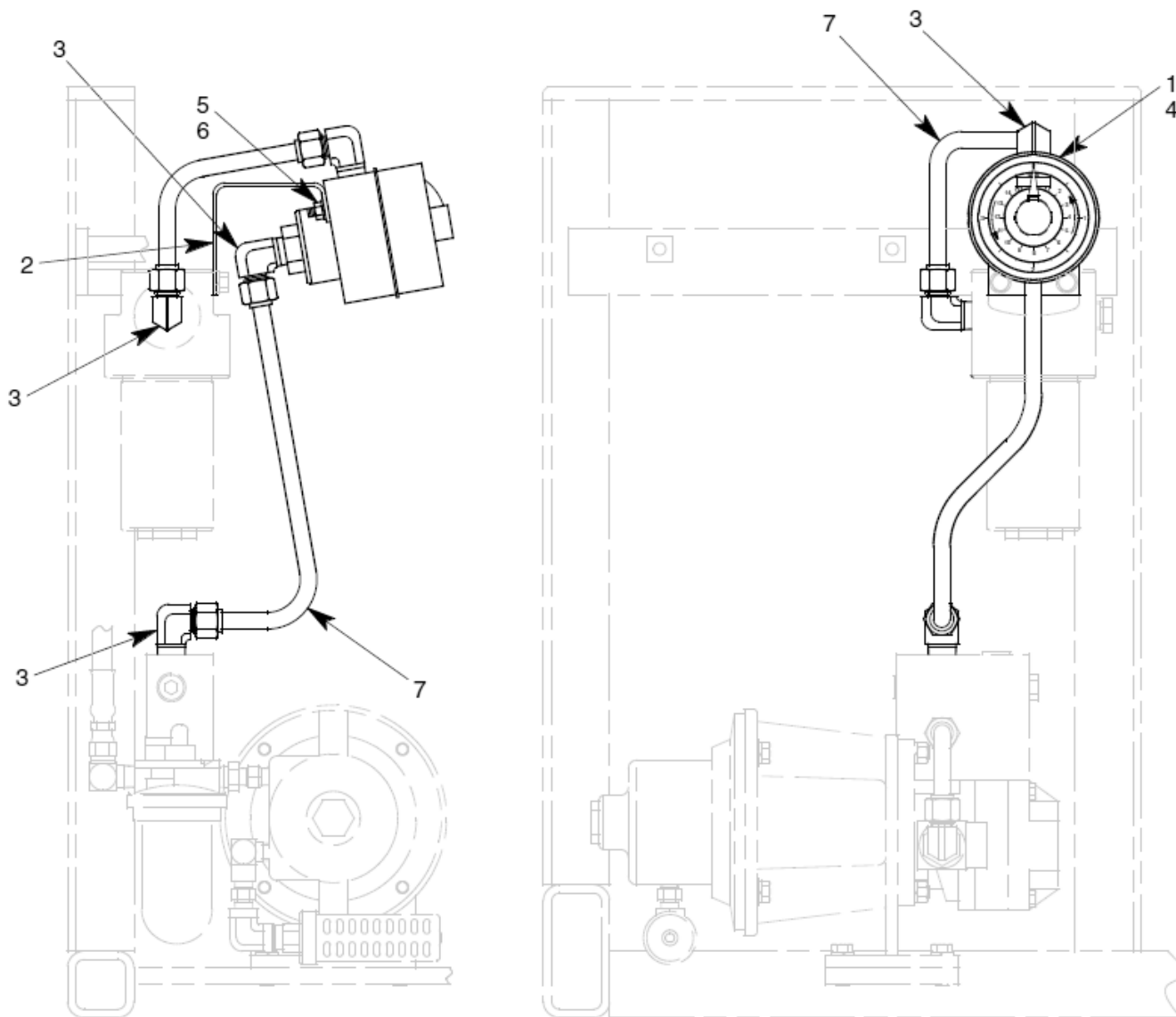
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	<b>877641</b>	<b>Liquid Level Gauge Assembly; consist of:</b>	
1	484-018	LIQUID LEVEL GAUGE	1
2	421-034	PALM BUTTON VALVE	1
3	722-049	ELBOW, 3/8 T x 3/4 MPT	1
4	721-008	CONN, 3/8 T X 1/4 FTP	1
5	712-089	ELBOW, 1/8 MPT	1
6	722-011	ELBOW, 1/4 T X 1/8 MPT	1
7	721-012	CONN, 1/4 T X 1/4 MTP	1
8	732-024	TUBE, 3/8 OD X .035 W	AR
9	732-003	TUBE, 1/4 OD X .035 W	AR

### Parts List – Figure 16

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	<b>877875-1</b>	<b>Fluid Meter Assembly; consist of:</b>	
1	486-018	FLUID METER	1
2	877876	BRACKET	1
3	722-013	ELBOW, 1/2 T X 1/2 MPT	4
4	321-036	HHCS, 1/4 - 20 X 3/4 LG	2
5	351-001	NUT, 1/4 - 20	2
6	363-001	SPLIT LOCKWASHER, 1/4	2
7	732-001	TUBE, 1/2 OD x .049 W	AR