

Model: 8776B
55 Gallon Drum
Fluid Dispensing Trailer
Phosphate Ester Fire Resistant Fluids

07/2019 – Rev. 01

REVISION
01

DATE
07/2019

TEXT AFFECTED
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 8776B 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
Website: www.malabar.com

1.4 SPECIFICATIONS

| | |
|---|---------------------------------------|
| Fluid Type | Phosphate ester fire resistant 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 | Purple 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 |
| 481-078 | Filter assembly | 1 |
| 481-051 | Filter element | 1 |
| 491-072 | Adjustable draw latch | 2 |
| 86392 | Bumper | 1 |
| 424-038 | Fluid hose end valve | 1 |
| 877690-2 | Gravity fill adapter | 1 |
| 736-098 | Q. D. coupler, 3/8 FPT | 2 |
| 736-099 | Q. D. nipple, 3/8 FPT | 2 |
| 736-100 | Q. D. coupler, 1/2 FPT | 1 |
| 736-101 | 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 |
| 96-5000-36-1 | Hydraulic pump | 1 |
| NAS1612-4 | 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 |
| 174190-1 | 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 |
| NAS1611-018 | Hose reel O-ring | 1 |
| 484-019 | Liquid level gauge | 1 |
| 877697 | Liquid level gauge palm button valve | 1 |

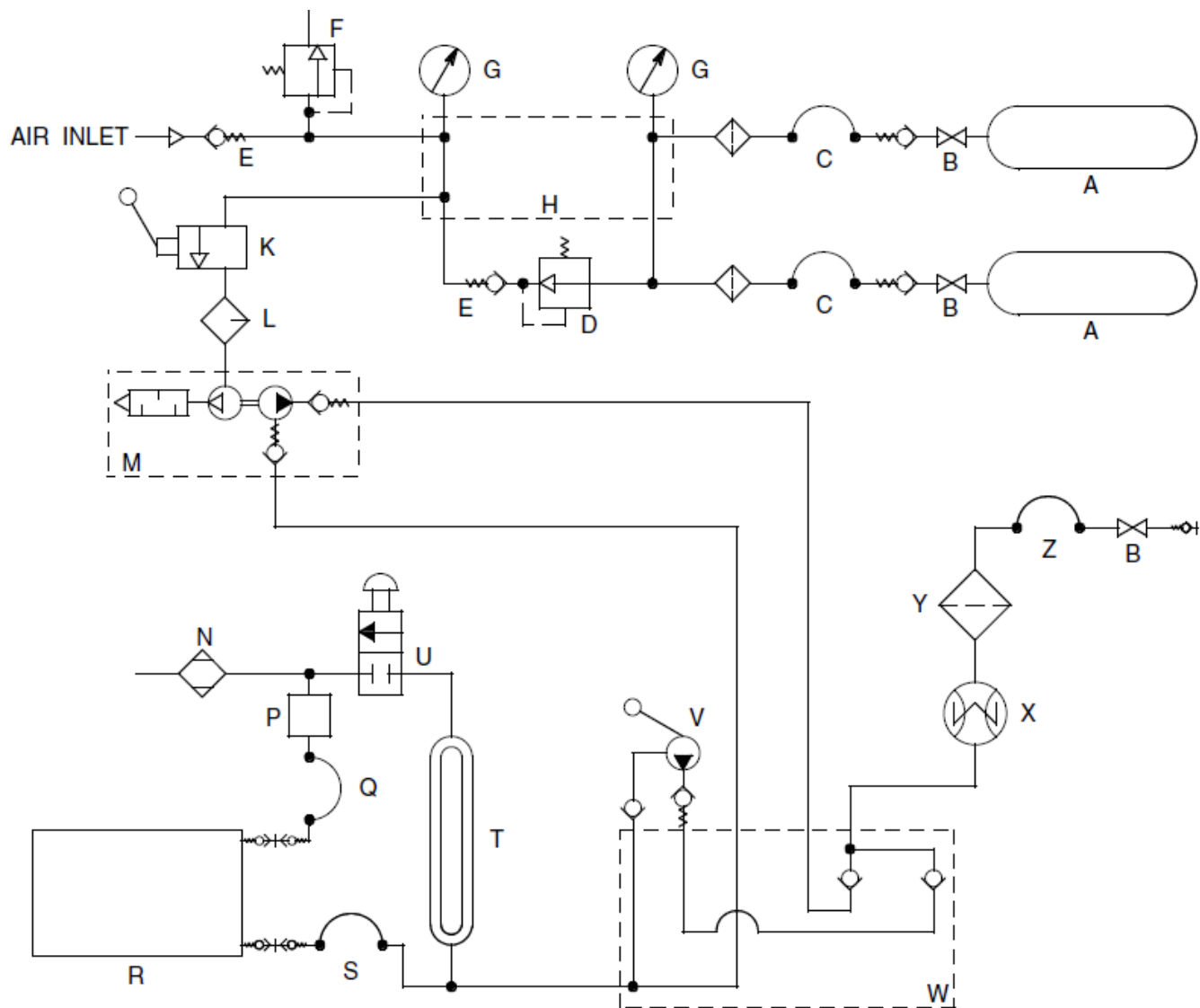
8.0 IN SERVICE SUPPORT

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.

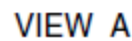
Pneumatic / Hydraulic Diagram



- A - GN2 BOTTLE
- B - SHUTOFF VALVE
- C - GN2 SERVICE HOSE
- D - PRESSURE REGULATOR
- E - CHECK VALVE
- F - AIR/NITROGEN RELIEF VALVE
- G - PRESSURE GAUGE
- H - PNEUMATIC MANIFOLD
- K - CONTROL VALVE
- L - LUBRICATOR
- M - AIR MOTOR & HYDRAULIC PUMP
- N - AIR VENT FILTER & DESICCANT DRYER

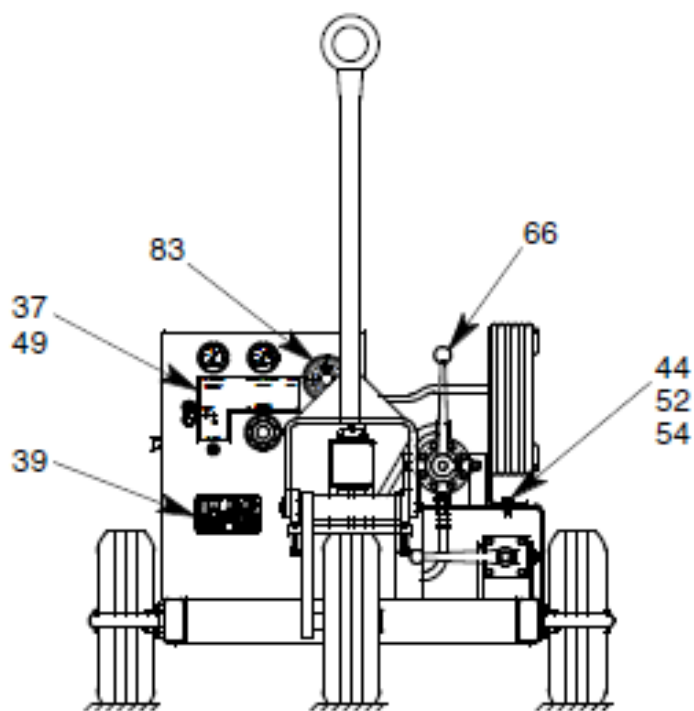
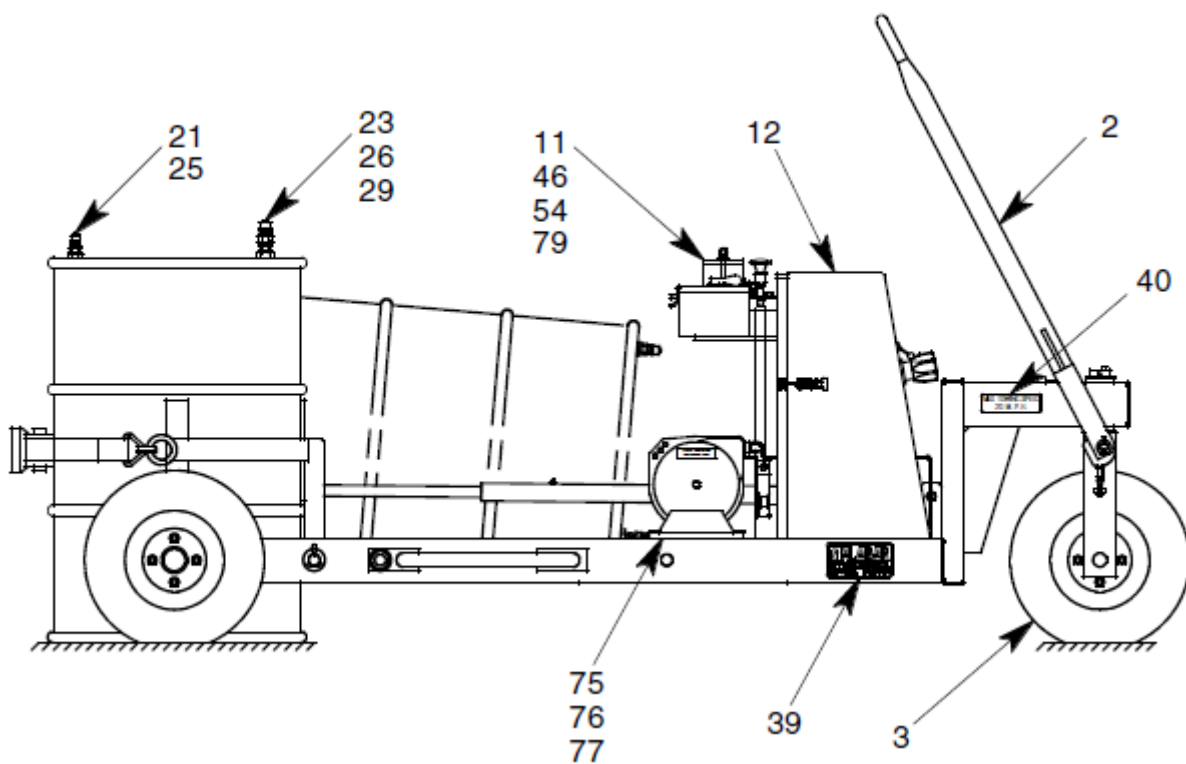
- P - OVERFLOW CONTAINER
- Q - AIR HOSE
- R - STANDARD 55 GALLON DRUM
- S - HYDRAULIC HOSE
- T - LIQUID LEVEL GAUGE
- U - PALM BUTTON VALVE
- V - HAND PUMP
- W - HYDRAULIC VALVE BLOCK
- X - FLUID METER
- Y - FILTER
- Z - FLUID DELIVERY HOSE

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



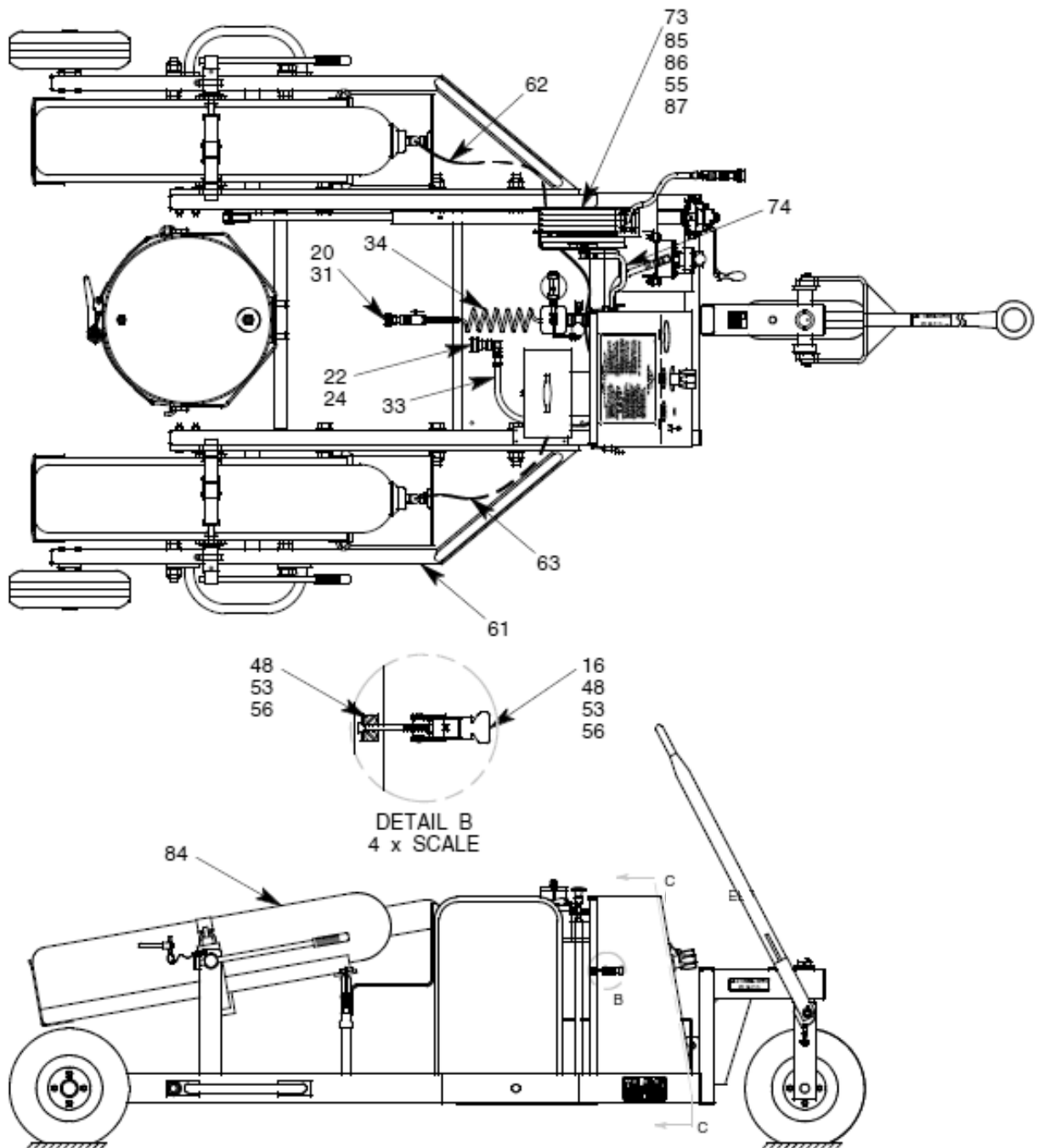
Parts List – Figure 1B

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



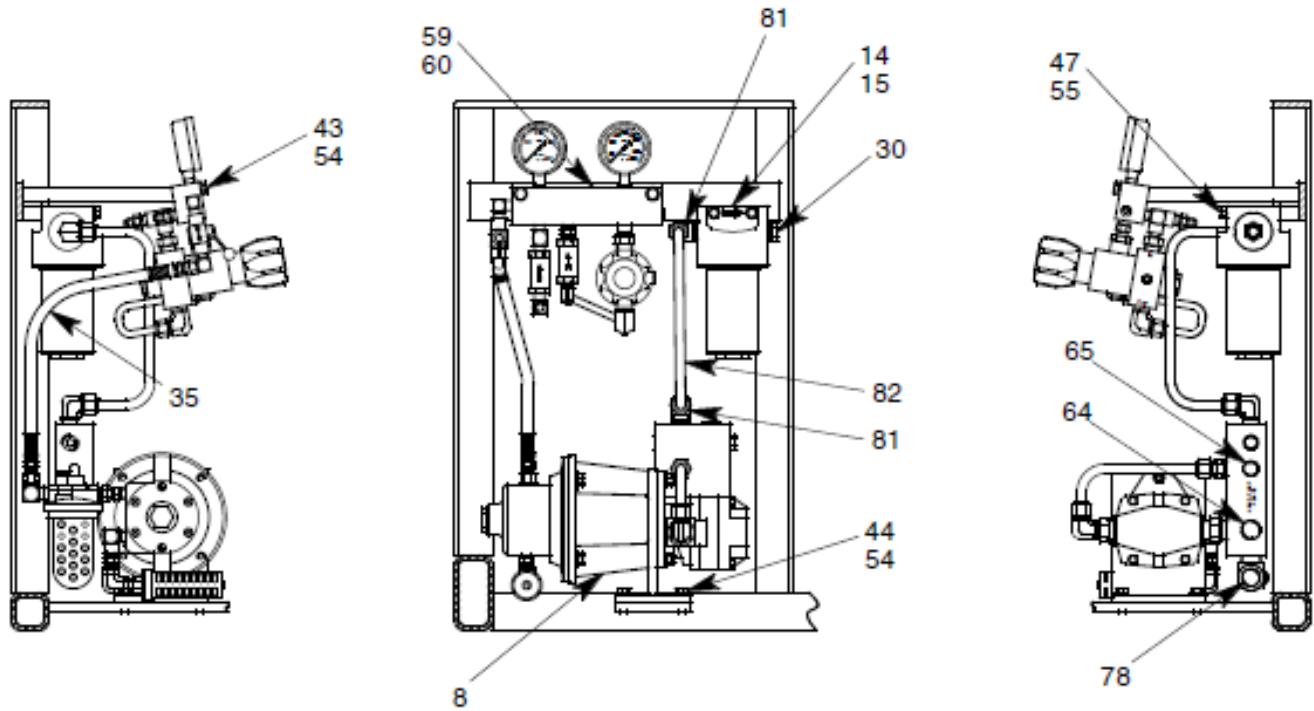
Parts List – Figure 1C

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



Parts List – Figure 1D

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



SECTION C - C

Parts List – Figure 1A – 1D

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 | 877608 | 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 | 481-078 | FILTER ASSEMBLY | 1 |
| 15 | 481-051 | FILTER ELEMENT | 1 |
| 16 | 491-072 | ADJUSTABLE DRAW LATCH | 2 |
| 17 | 86392 | BUMPER | 1 |
| 18 | 424-085 | 1/4 TURN VALVE | 1 |
| 19 | 877690-2 | GRAVITY FILL ADAPTER | 1 |
| 20 | 736-098 | Q. D. COUPLER, 3/8 FPT | 2 |
| 21 | 736-099 | Q. D. NIPPLE, 3/8 FPT | 1 |
| 22 | 736-100 | Q. D. COUPLER, 1/2 FPT | 1 |
| 23 | 736-101 | 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 | 2 |
| 44 | 321-011 | HHCS, 3/8 - 16 x 1" LG | 6 |

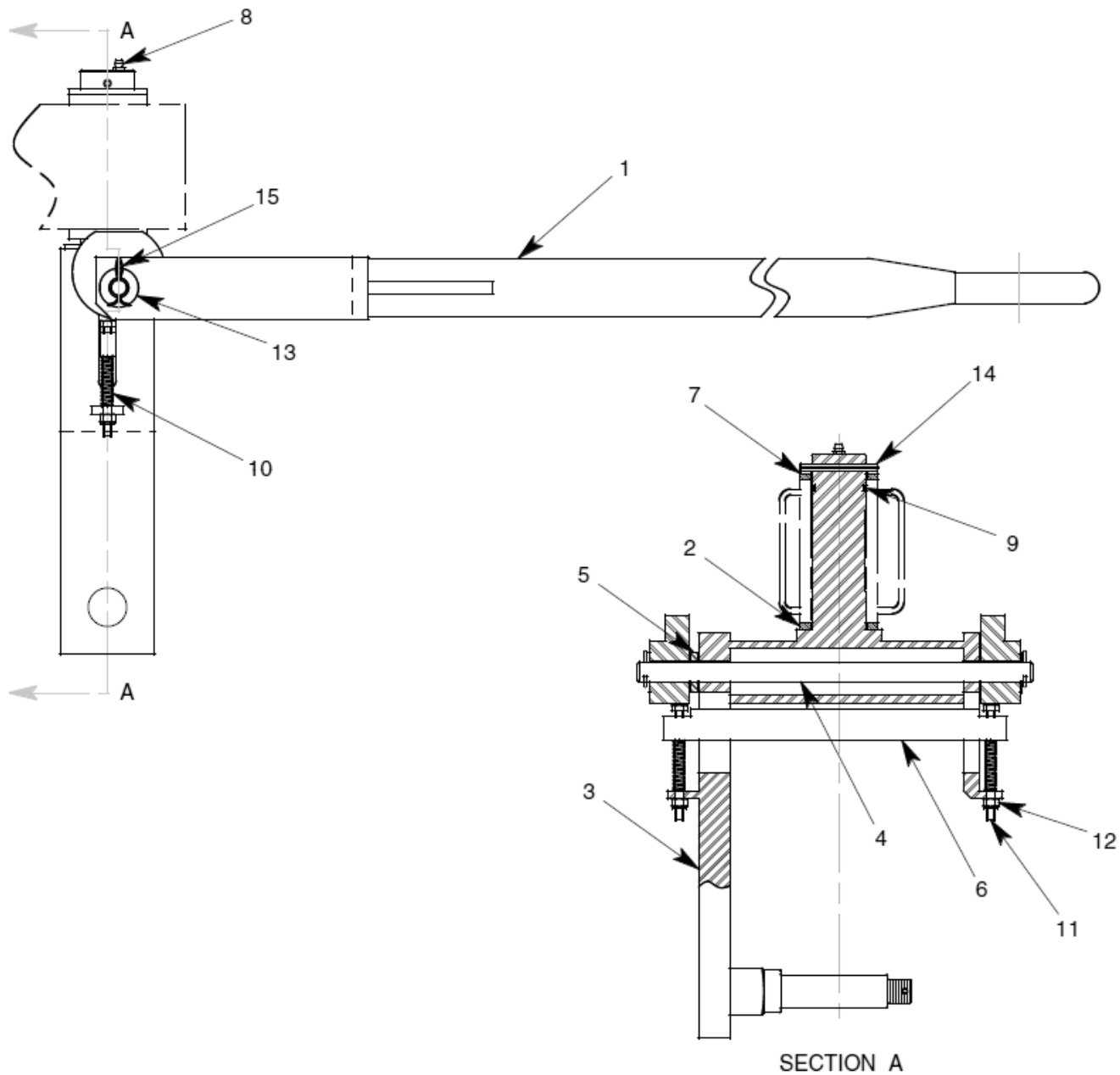
Parts List – Figure 1A -1D

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 | 4 |
| 46 | 321-104 | HHCS, 3/8 - 16 x 5/8 LG | 2 |
| 47 | 321-194 | HHCS, 5/16 - 18 x 3 1/2 LG | 2 |
| 48 | 326-012 | BHCS, #10 - 24 x 5/8 LG | 8 |
| 49 | 397-010 | SELF TAPPING SCREW, #6 | 17 |
| 50 | 355-026 | LOCKNUT, 1" - 8 | 4 |
| 51 | 355-001 | LOCKNUT, 3/8 - 16 | 8 |
| 52 | 351-002 | NUT, 3/8 - 16 | 2 |
| 53 | 351-007 | NUT, #10 - 24 | 8 |
| 54 | 363-003 | SPLIT LOCKWASHER, 3/8 | 14 |
| 55 | 363-002 | SPLIT LOCKWASHER, 5/16 | 6 |
| 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 | 877643-1 | 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 | 877698-1 | 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 | 877642 | 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 | 877875-2 | FLUID METER ASS'Y | 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 | 422-057 | CHECK VALVE, 1/4 FPT | 1 |

Parts List – Figure 2

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



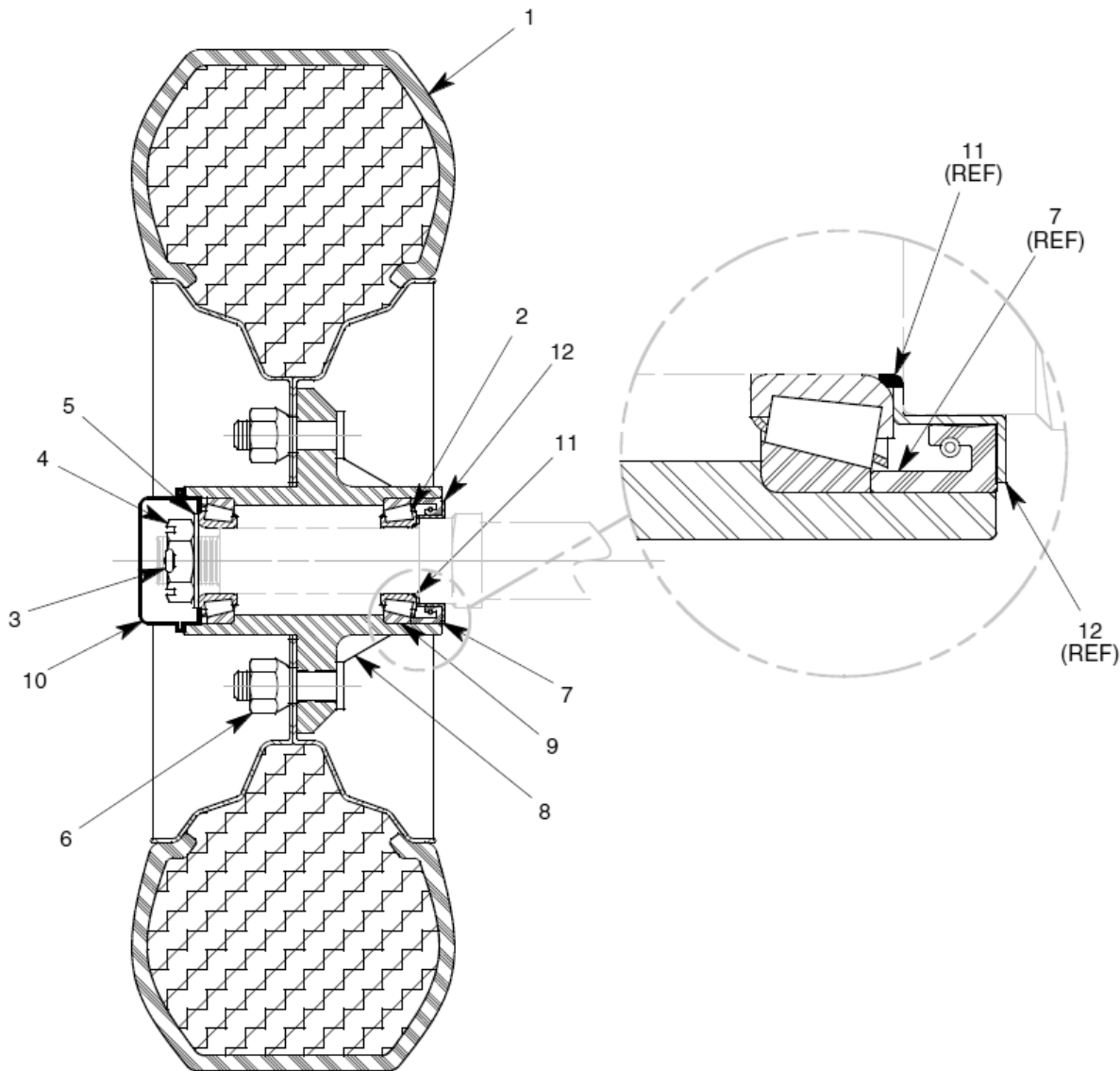
Parts List – Figure 2

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

| Item | Part Number | Description | Qty |
|------|-----------------|---|-----|
| | 837795-1 | Brake & Tow Handle Assembly; consist of: | |
| 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

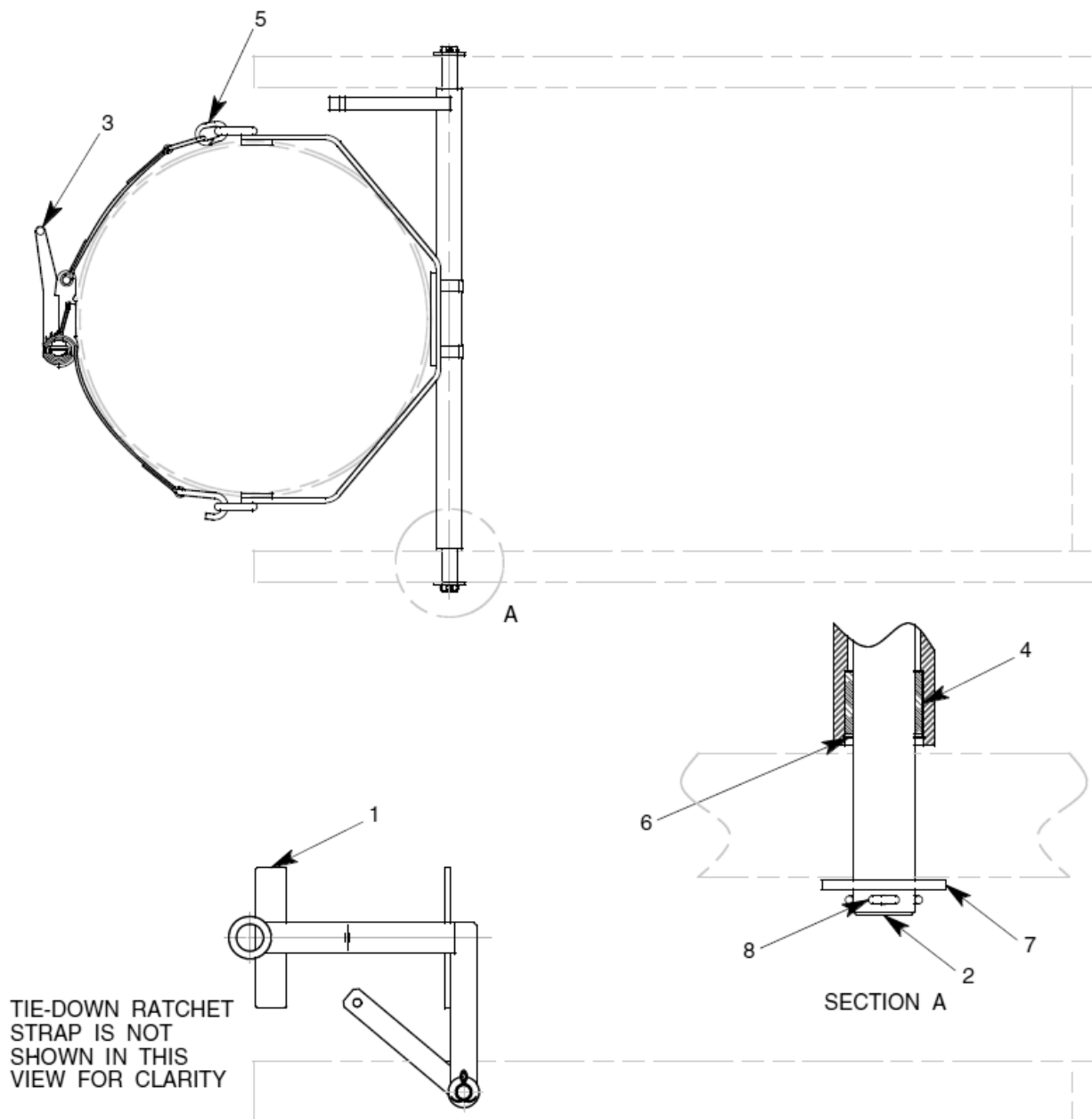
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



| Item | Part Number | Description | Qty |
|------|-----------------|--|-----|
| | 837708-1 | Hub & Wheel Assembly; consist of: | |
| 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

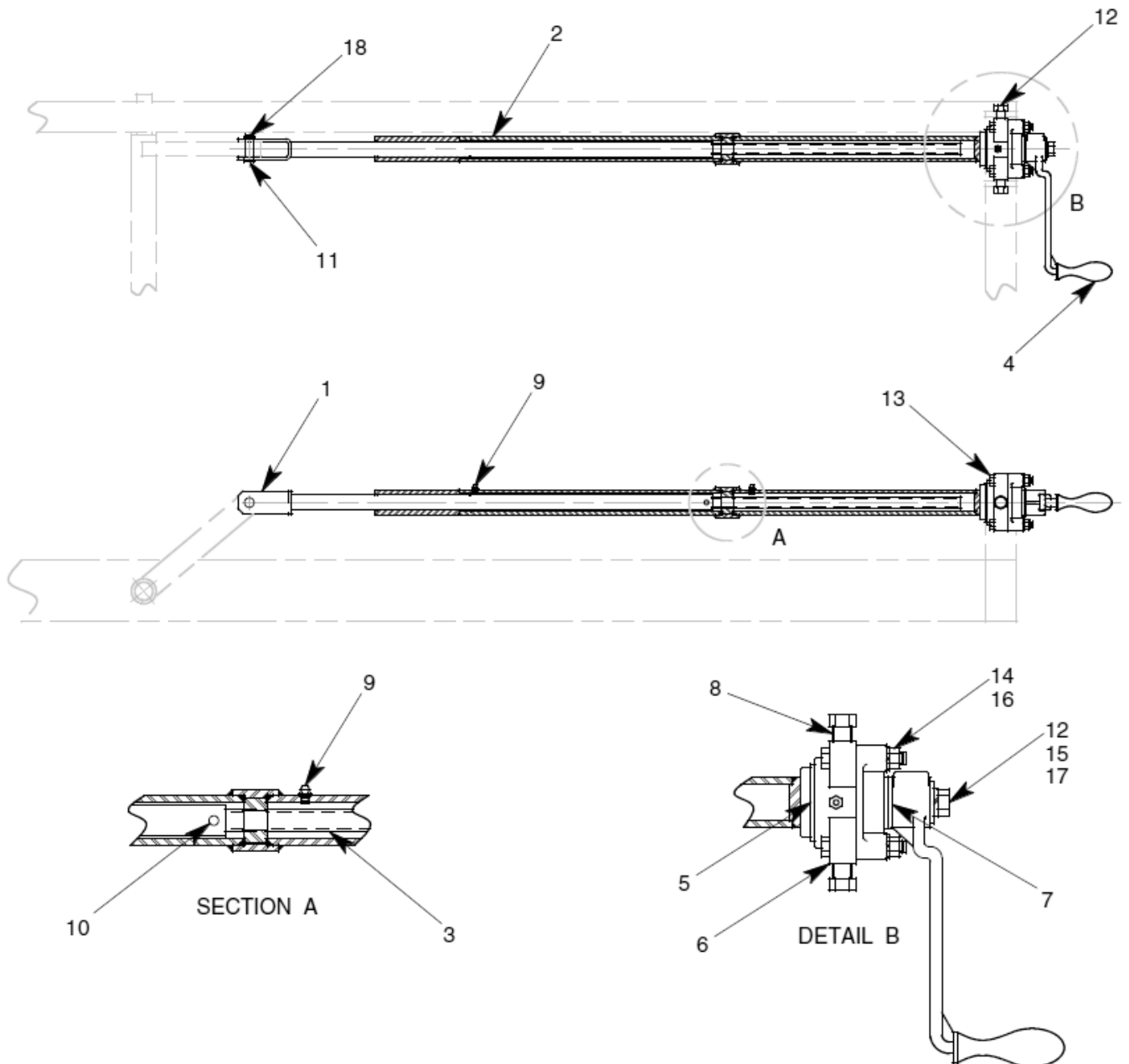
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



| Item | Part Number | Description | Qty |
|------|---------------|-------------------------------------|-----|
| | 877639 | Cradle Assembly; consist of: | |
| 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.



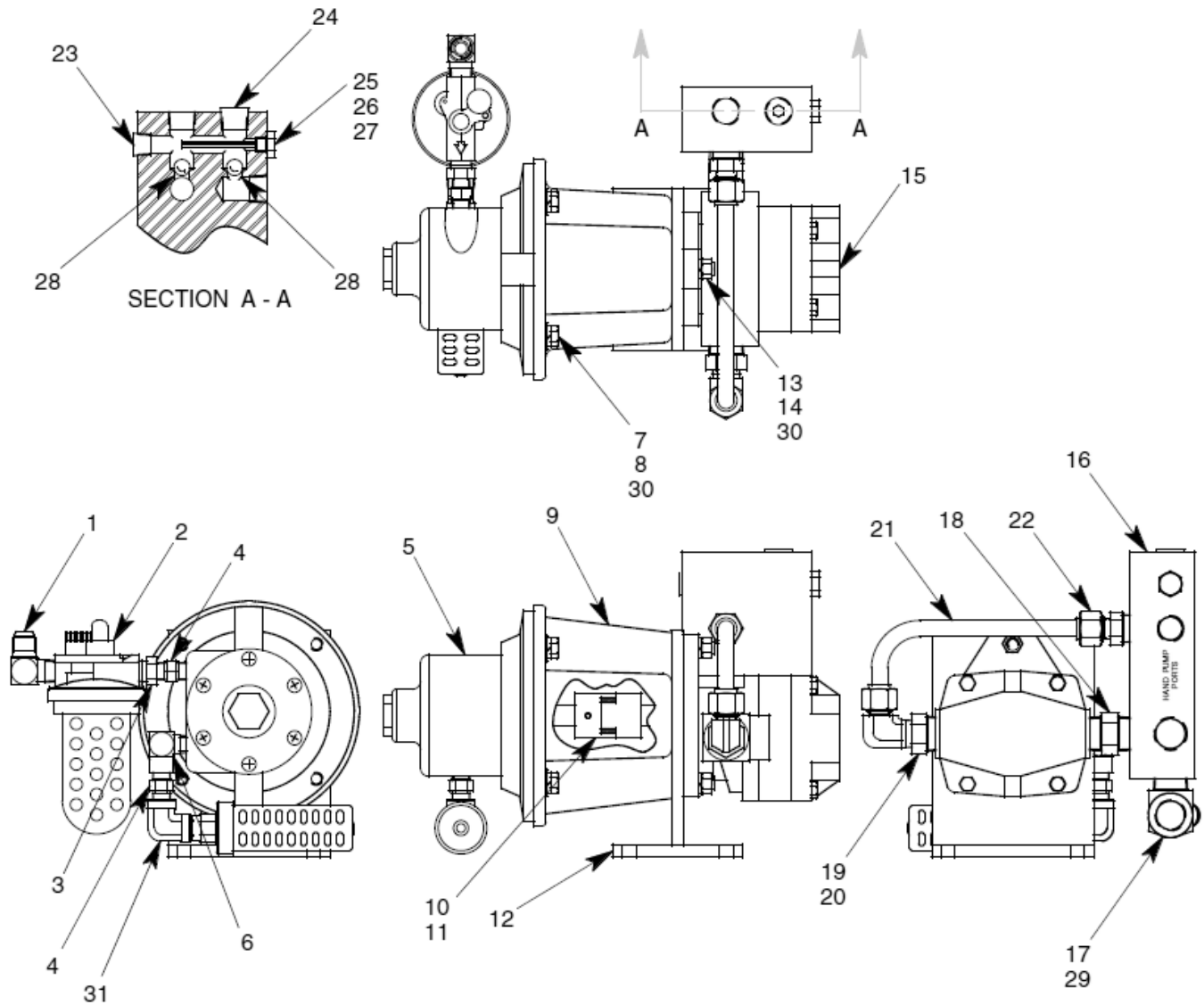
Parts List – Figure 5

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

| Item | Part Number | Description | Qty |
|------|---------------|---|-----|
| | 877638 | Hand Crank Assembly; consist of: | |
| 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.



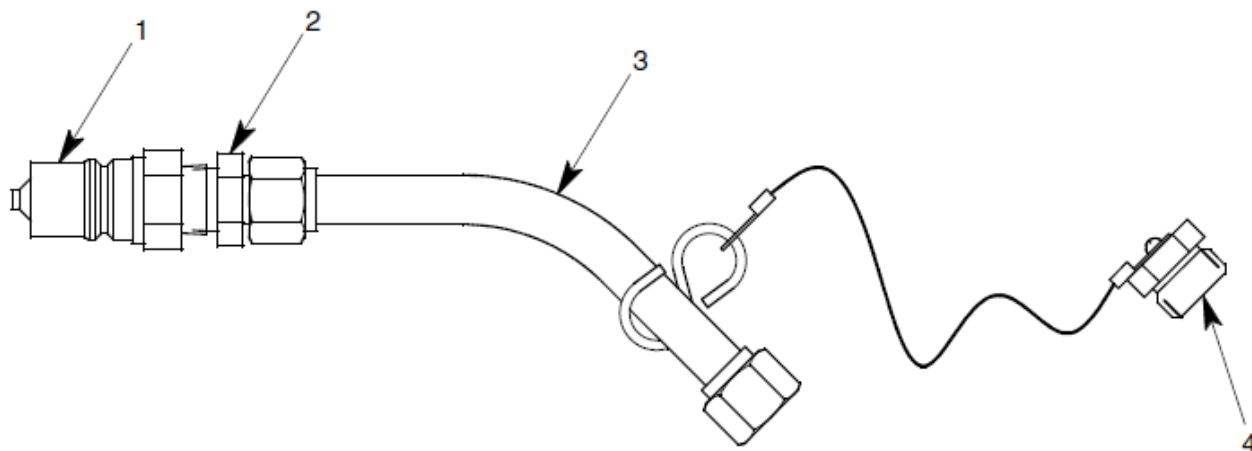
Parts List – Figure 6

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

| Item | Part Number | Description | Qty |
|------|---------------|---|-----|
| | 877608 | Pump/Motor Assembly; consist of: | |
| 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 | 96-5000-36-1 | 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 | NAS1612-4 | 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

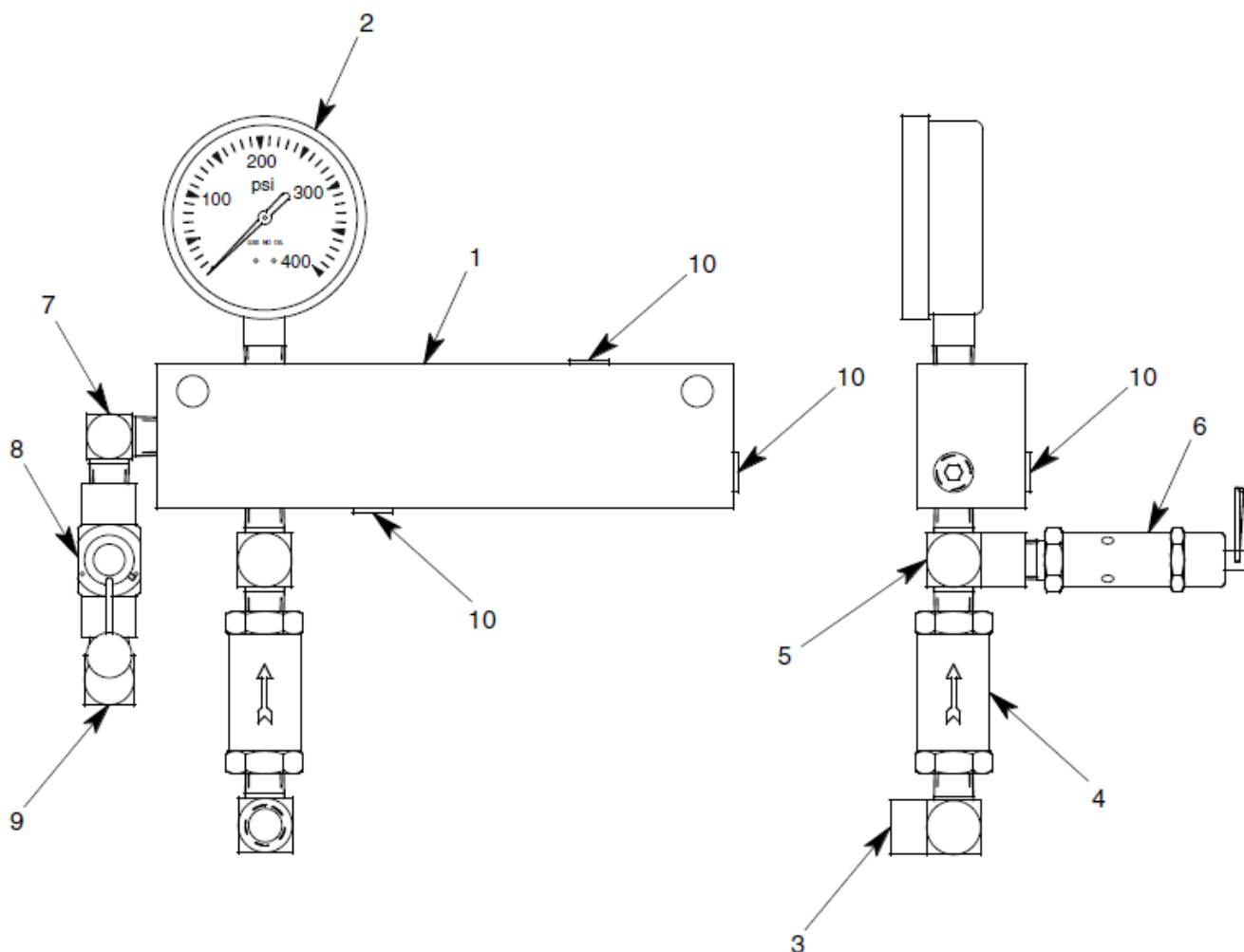
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



| Item | Part Number | Description | Qty |
|------|-----------------|---|-----|
| | 877690-2 | Gravity Fill Assembly; consist of: | |
| 1 | 736-099 | 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

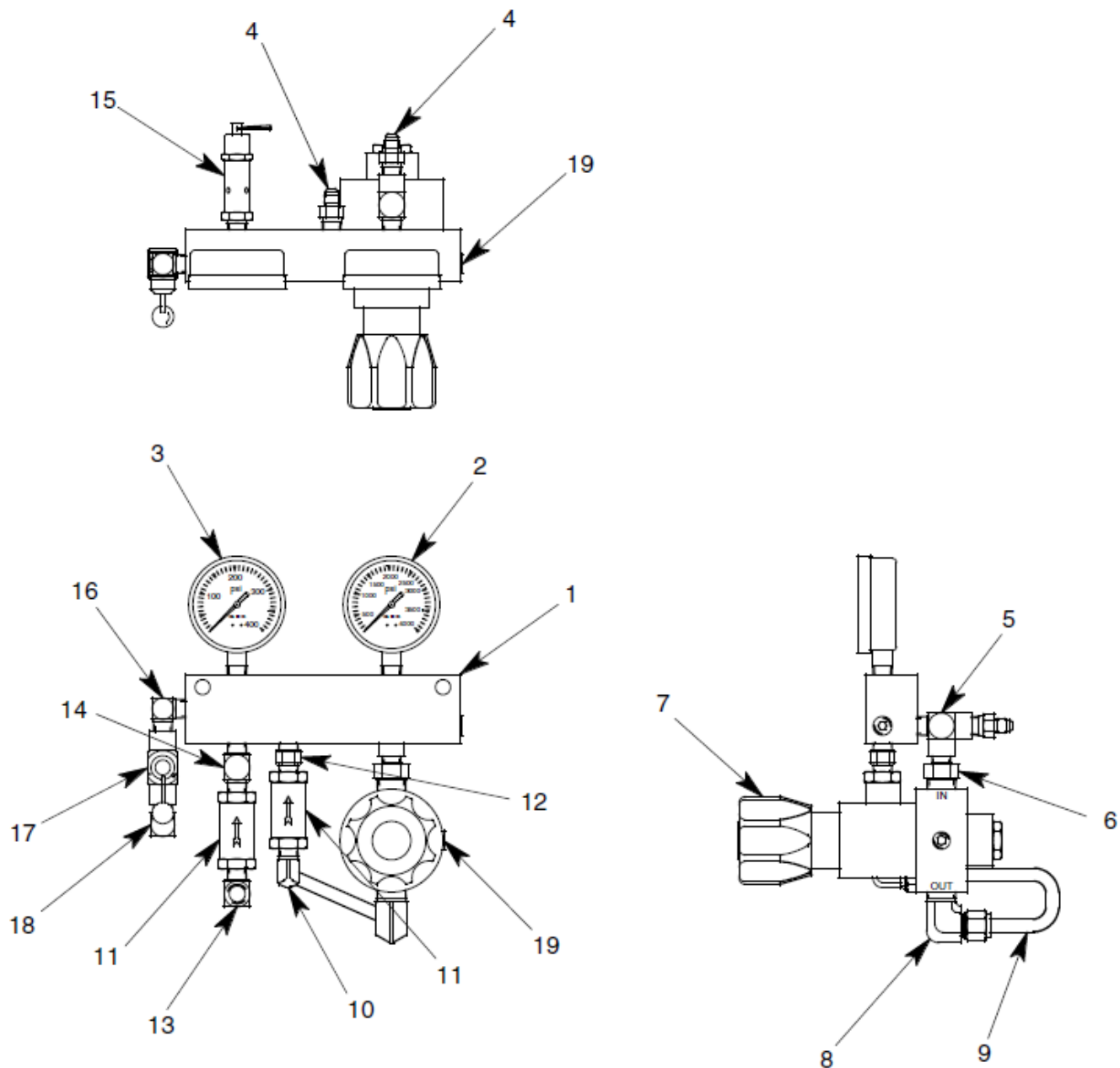
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



| Item | Part Number | Description | Qty |
|------|---------------|---|-----|
| | 877613 | Manifold Assembly Without GN2 Service; consist of: | |
| 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.



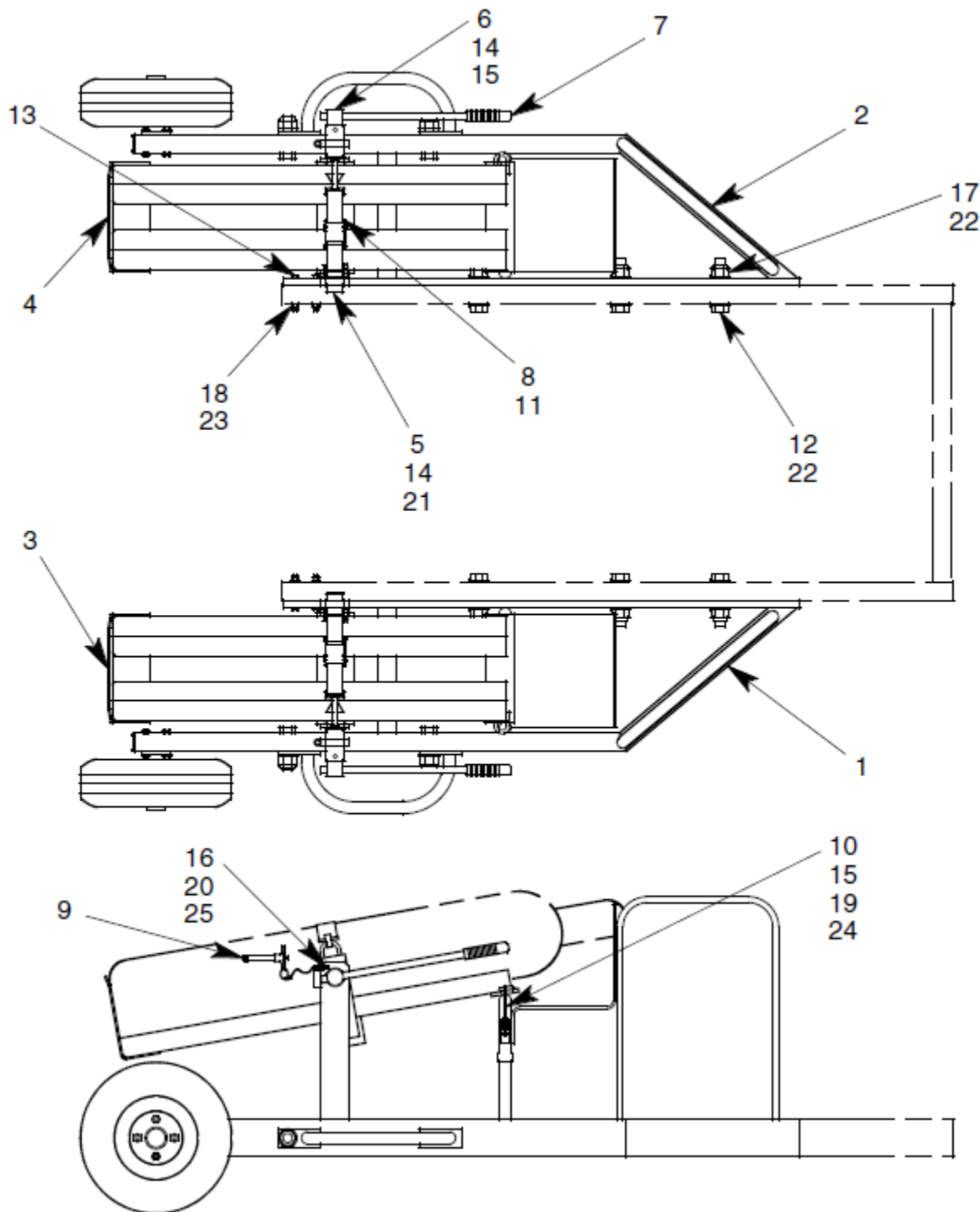
Parts List – Figure 9

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

| Item | Part Number | Description | Qty |
|------|-----------------|--|-----|
| | 877615-1 | Manifold Assembly With GN2 Service; consist of: | |
| 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.



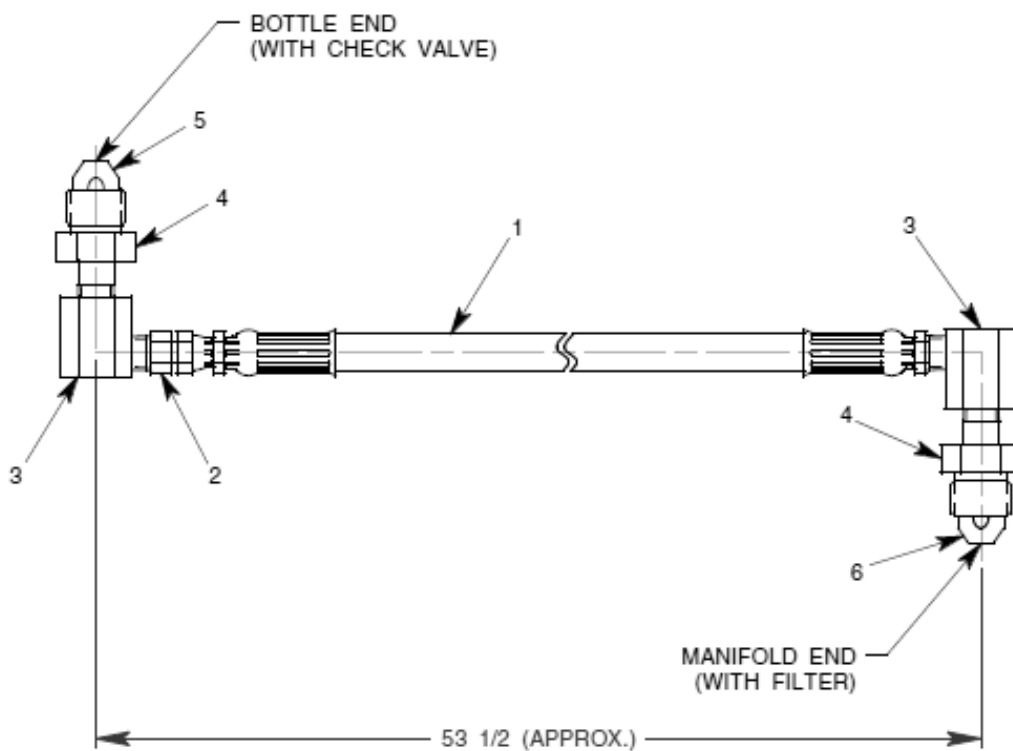
Parts List – Figure 10

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

| Item | Part Number | Description | Qty |
|------|---------------|--|-----|
| | 877680 | GN2 Bottle Tray Assembly; consist of: | |
| 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 1/2 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

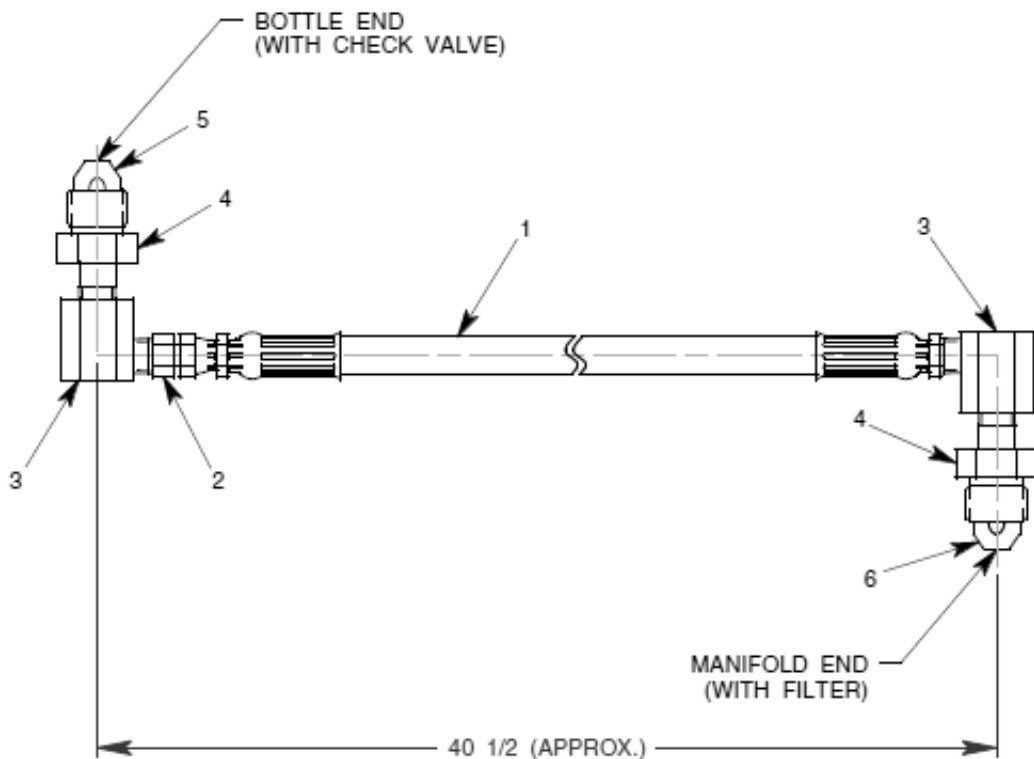
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



| Item | Part Number | Description | Qty |
|------|-----------------|--|-----|
| | 877686-1 | Nitrogen Service Hose Long; consist of: | |
| 1 | 877685-1 | NITROGEN SERVICE HOSE | 1 |
| 2 | 721-015 | CONN., 1/4 37° x 1/4 MPT | 1 |
| 3 | 719-042 | BODY, 1/4 FPT | 2 |
| 4 | 719-041 | NUT, .960 - 14 NGO | 2 |
| 5 | 719-040 | CHECK VALVE, 1/4 MPT | 1 |
| 6 | 719-039 | FILTER, 1/4 MPT | 1 |

Parts List – Figure 12

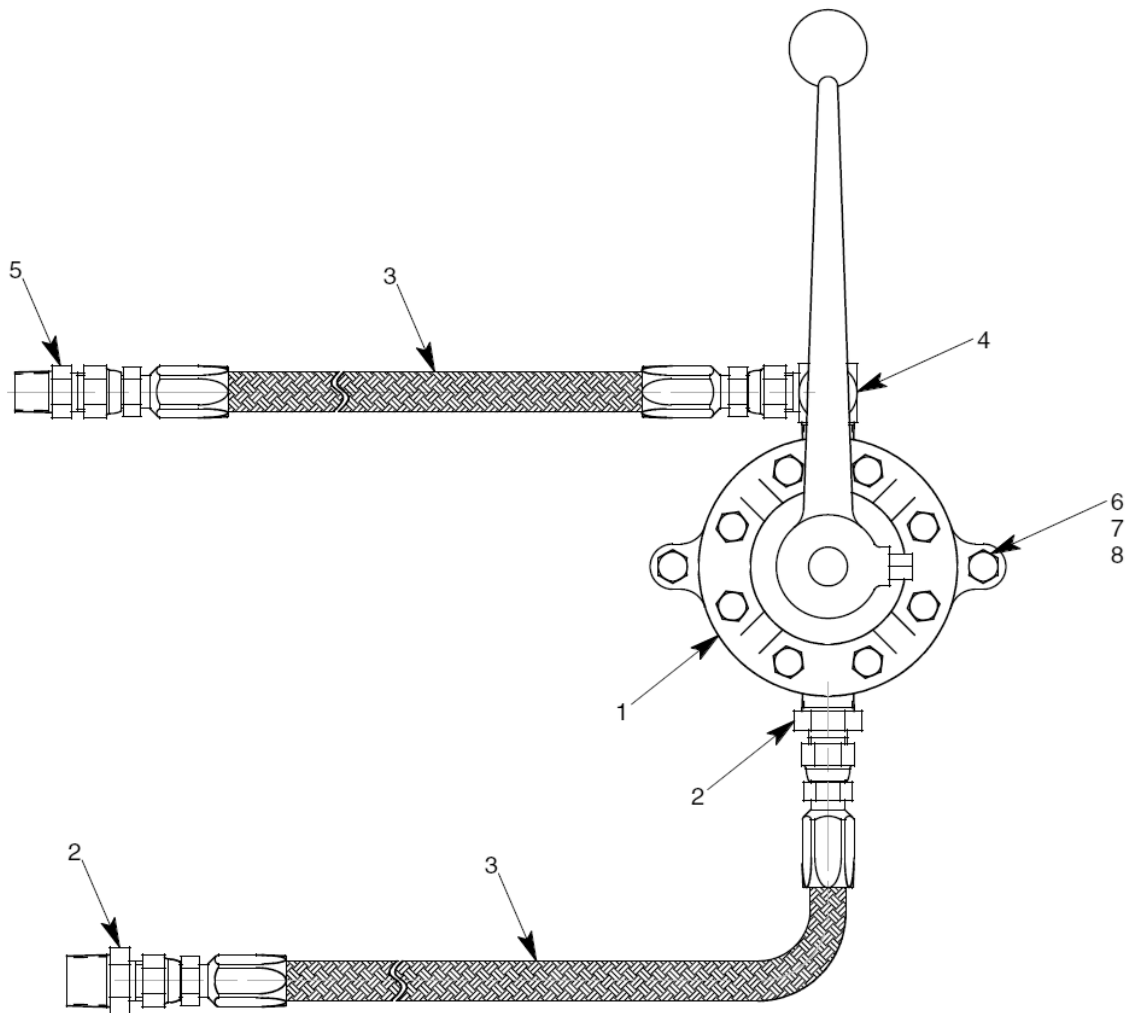
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



| Item | Part Number | Description | Qty |
|------|-----------------|---|-----|
| | 877686-2 | Nitrogen Service Hose Short; consist of: | |
| 1 | 877685-2 | NITROGEN SERVICE HOSE | 1 |
| 2 | 721-015 | CONN., 1/4 37° x 1/4 MPT | 1 |
| 3 | 719-042 | BODY, 1/4 FPT | 2 |
| 4 | 719-041 | NUT, .960 - 14 NGO | 2 |
| 5 | 719-040 | CHECK VALVE, 1/4 MPT | 1 |
| 6 | 719-039 | FILTER, 1/4 MPT | 1 |

Parts List – Figure 13

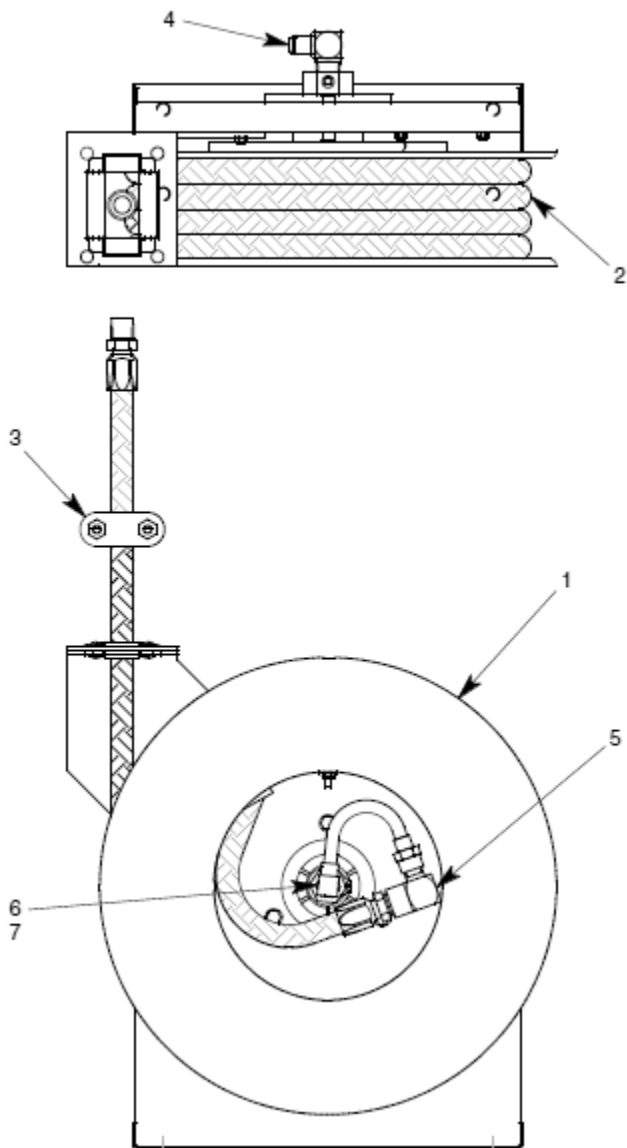
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



| Item | Part Number | Description | Qty |
|------|-----------------|--|-----|
| | 877643-1 | Hand Pump Assembly; consist of: | |
| 1 | 174190-1 | 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

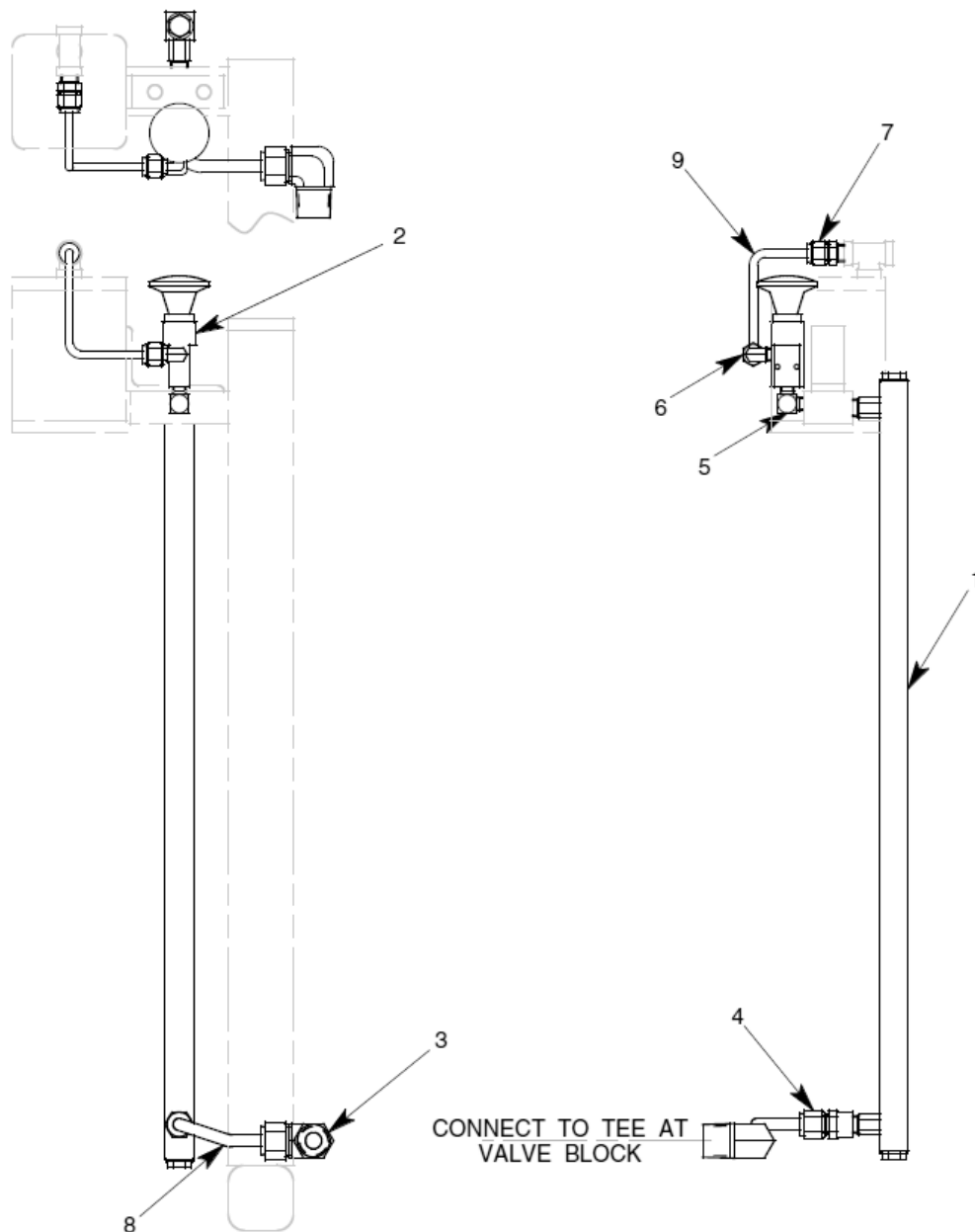
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



| Item | Part Number | Description | Qty |
|------|-----------------|--|-----|
| | 877698-1 | Hose Reel Assembly; consist of: | |
| 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 |
| 6 | NAS1612-8 | O-RING | 1 |
| 7 | NAS1611-012 | O-RING | 1 |

Parts List – Figure 15

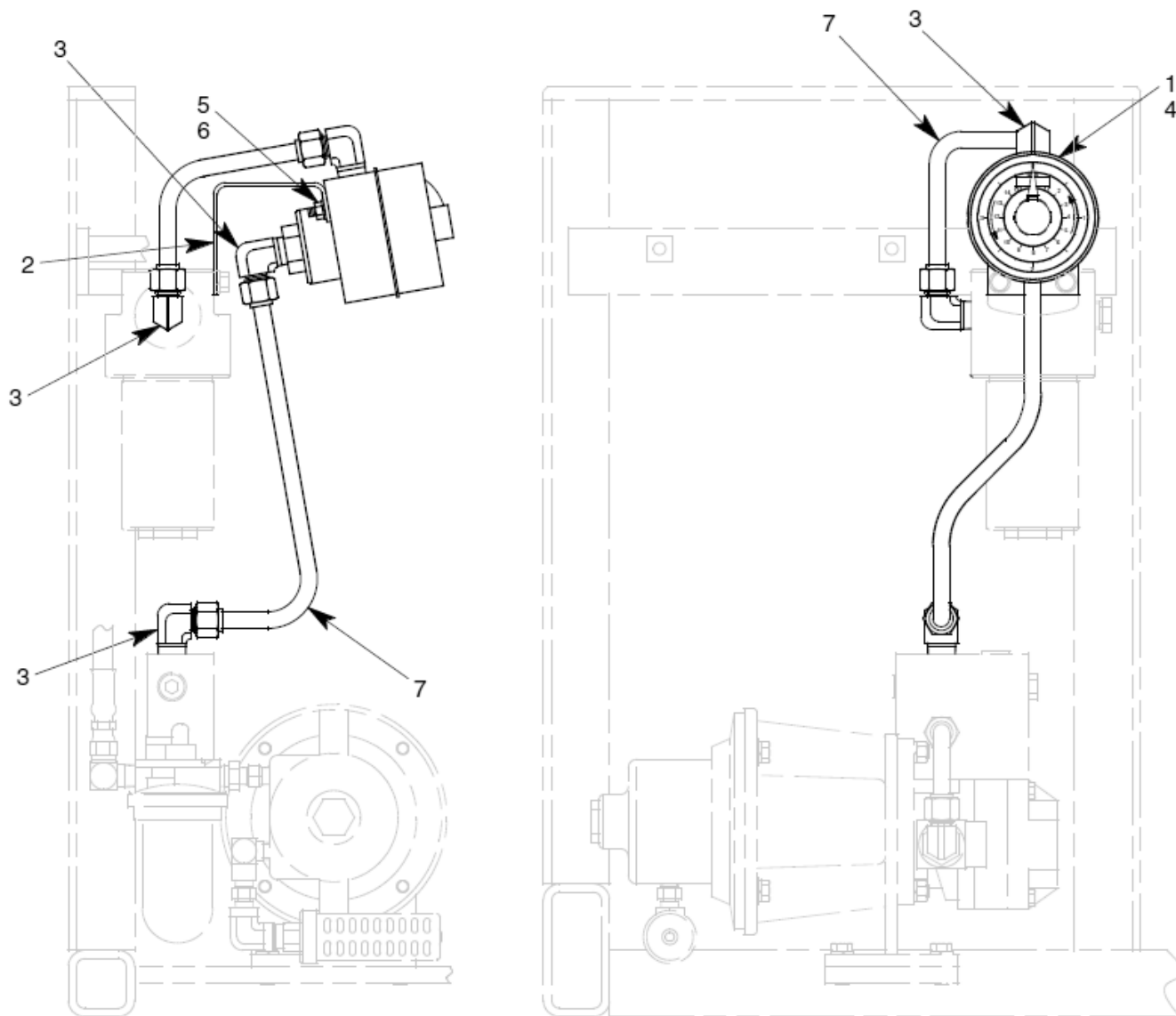
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



| Item | Part Number | Description | Qty |
|------|---------------|---|-----|
| | 877642 | Liquid Level Gauge Assembly; consist of: | |
| 1 | 484-019 | LIQUID LEVEL GAUGE | 1 |
| 2 | 877697 | 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 |
|------|-----------------|--|-----|
| | 877875-2 | Fluid Meter Assembly; consist of: | |
| 1 | 486-019 | 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 |