



HERO

MAKE INNOVATION

- D23 • D24 •
- D54 • D55 •
- D60 •

Manual Colorant Dispensers

OWNERS MANUAL



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WARRANTY

HERO offers a two year parts warranty and one year labor warranty on all of its manual dispensers. The warranty entitles the owner to parts replacement at no charge. The parts warranty is valid for any necessary replacement, whether caused by material, workmanship defect or simple wear, except as noted below.

Electric motors, timers and pneumatic motors warranted for twelve (12) months only.

The warranty is applicable to the original owner only and is non-transferable. The equipment must be operated and maintained in accordance with all instructions, precautions and warnings contained in the product manual. For the purpose of this warranty, damage caused by accident, abuse, improper cleaning or lack thereof, or improper operation, is not covered. Cleaning and general maintenance is the responsibility of the owner/operator and is not covered by the warranty.

HERO's liability is limited to the replacement of parts found to be defective or worn and does not include damage or other expenses of any kind incurred in connection with the purchase and use of the product.

All parts required for warranty service are invoiced to the client, with credit provided upon submission of a valid warranty claim. A valid claim lists the model number, serial number, date of installation, lists all parts used and provides for parts installation charges.

Major parts replacement may require the return of defective parts. If uncertain, contact HERO for further instruction. All returns must be authorized and no return will be accepted without a Return Merchandise Authorization (RMA) number.

All warranty work requests or claims must be directed to HERO Customer Service at any of the following:

Canadian Mail: 720 Eaton Way • Delta, BC • Canada • V3M 6J9

US Mail: P.O. Box 75 • Custer, WA • USA • 98240-0075

Phone: 604-522-6543

Fax: 604-522-8735

Email: customer care@hero.ca

Help Desk: 800-494-4376, option 1

Parts warranty includes shipping via a carrier and service type compatible with the nature of the equipment failure and as determined by an authorized HERO Customer Service Representative. When expedited delivery is not warranted, the customer may request and pay for the difference between such service and HERO's standard shipping method.

The labor warranty on units covers on-site and travel labor to and from the customer's location. An authorized HERO Customer Service Representative must approve all warranty repairs before any work is performed.

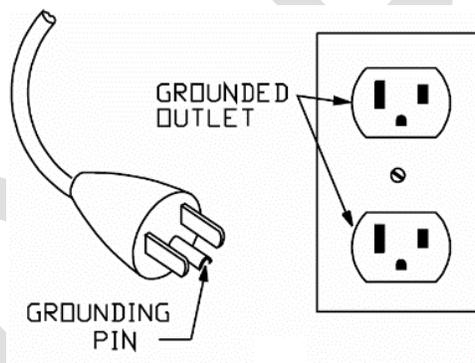
SAFETY WARNINGS

- To avoid electrical shock, unplug dispenser before servicing.
- To reduce the risk of electrical shock or injury, use indoors only.

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GROUNDING INSTRUCTIONS

- This product should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.
- **WARNING** - Improper installation of the grounding plug can result in a risk of electric shock. When repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.
- Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the product is properly grounded. Do not modify the plug provided; if it will not fit the outlet, have the proper outlet installed by a qualified electrician.
- This product is for use on a nominal 120-volt circuit, and has a grounding plug similar to the plug illustrated. Only connect the product to an outlet having the same configuration as the plug. Do not use an adapter with this product.



- Use only a 3-wire extension cord that has a 3-blade grounding plug, and a 3-slot receptacle that will accept the plug on the product. Make sure that your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. For lengths less than 50 feet, No. 16 AWG extension cords should be used. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

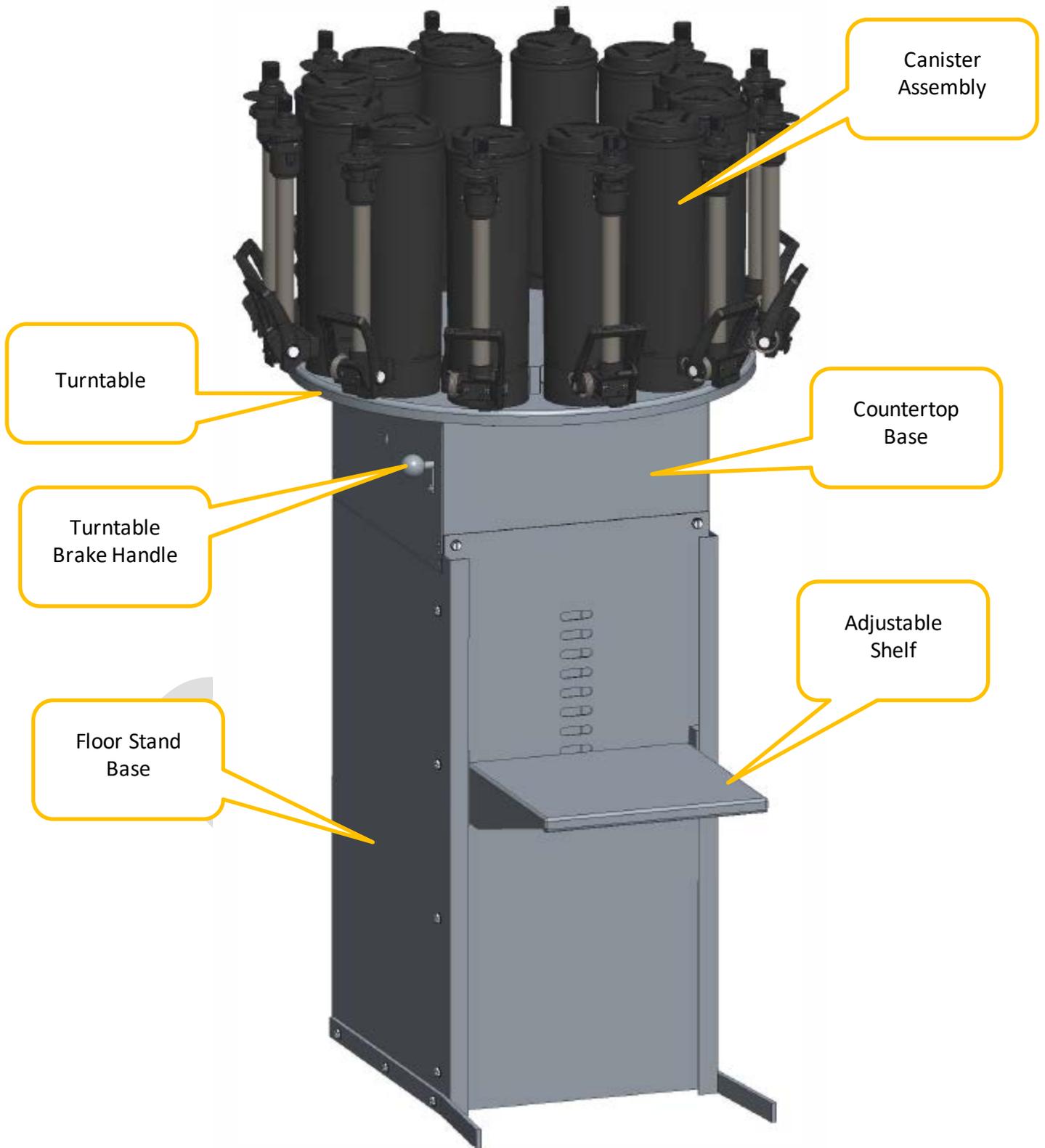
GENERAL INFORMATION

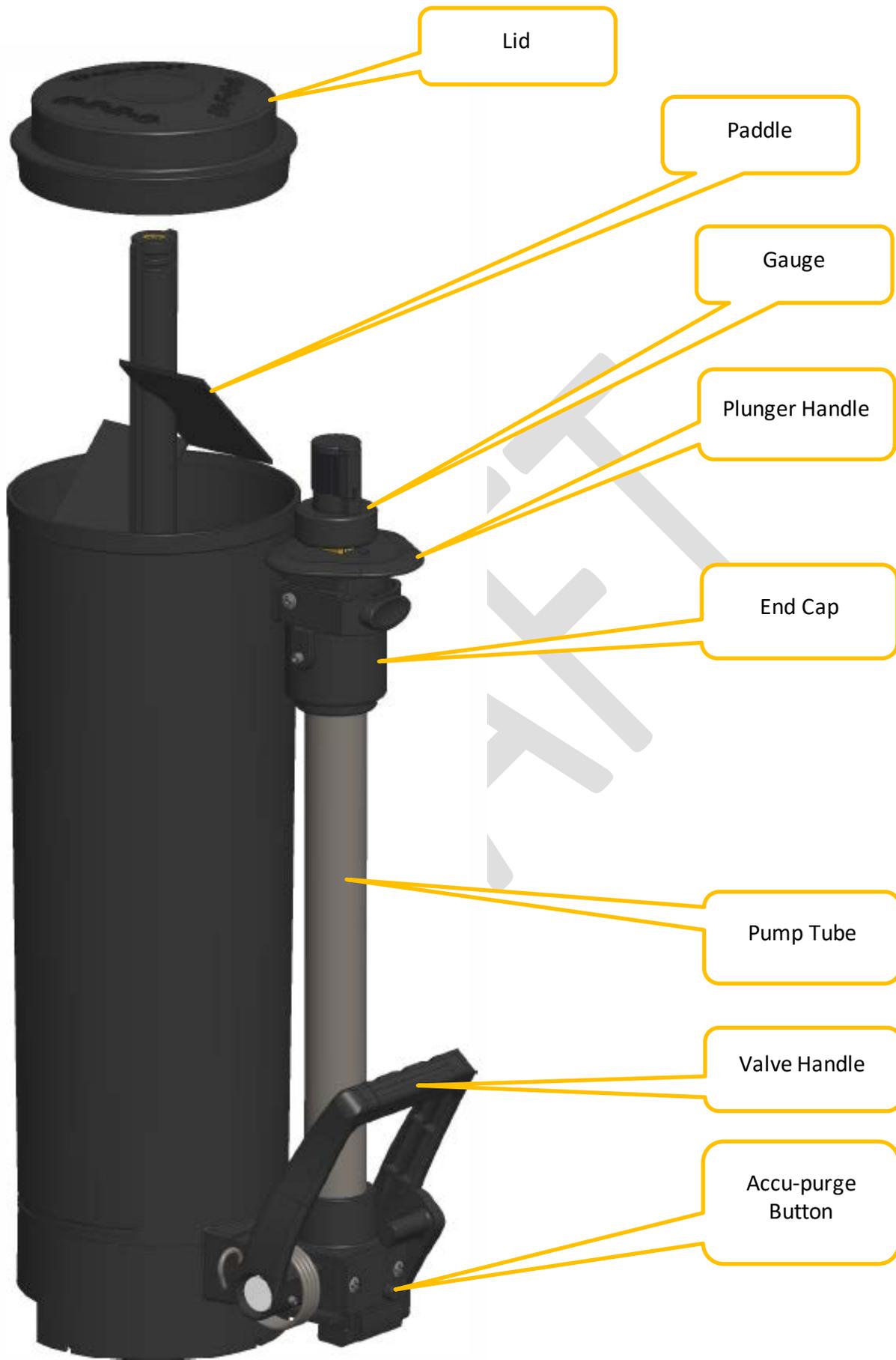
This manual provides general operating procedures for your manual colorant dispenser. Before operating the unit or starting any service procedure, carefully read this manual in its entirety. Contact HERO's Customer Service Department at 1-800-494-4376 or customercare@hero.ca for assistance, if needed.

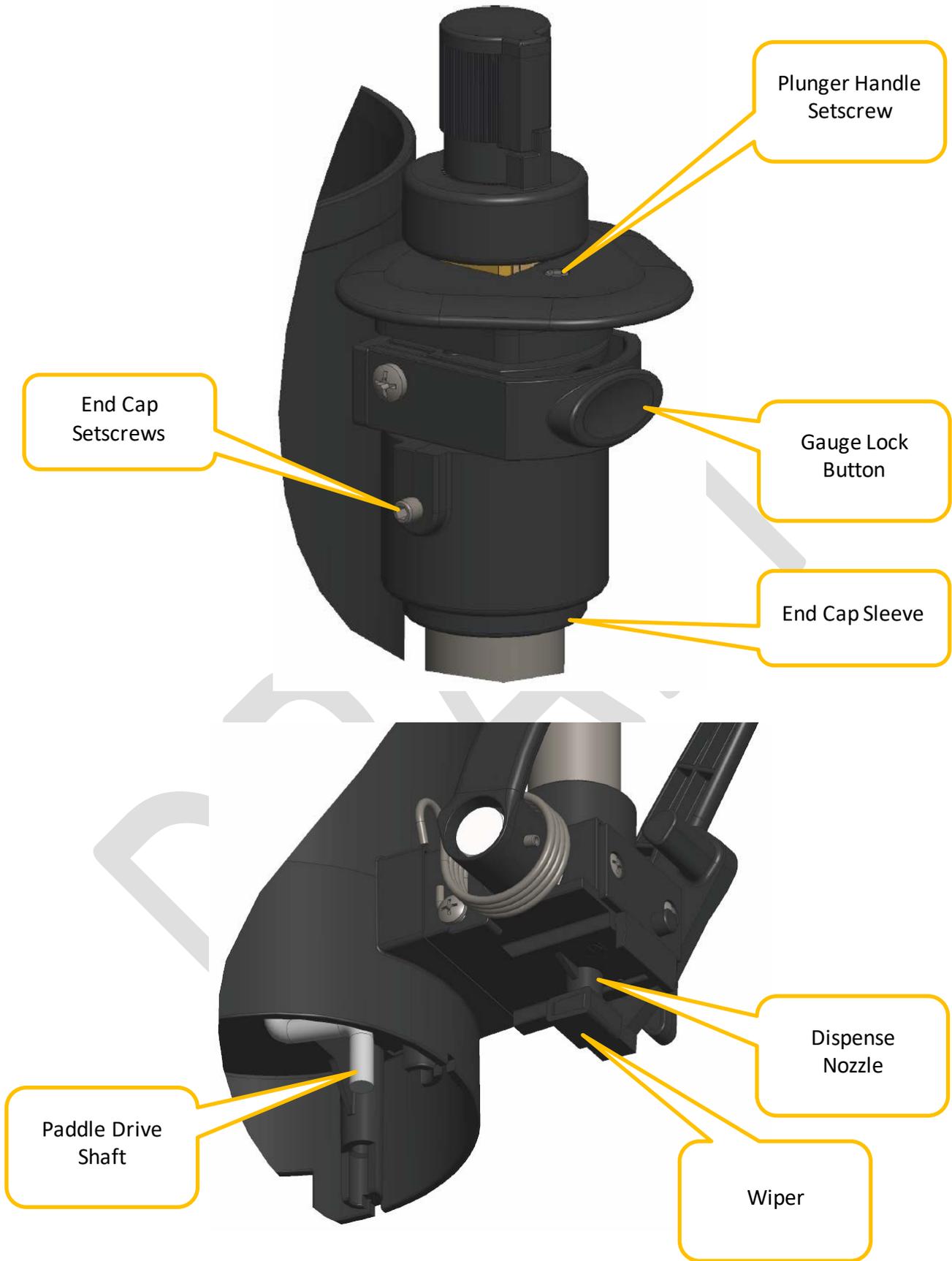
HERO D series colorant dispenser are precision measuring devices and should be treated as such. When operated and maintained in conjunction with the instructions contained within this manual, the equipment will provide a long and trouble free life. To ensure your complete satisfaction, please familiarize yourself with all operating and maintenance instructions.

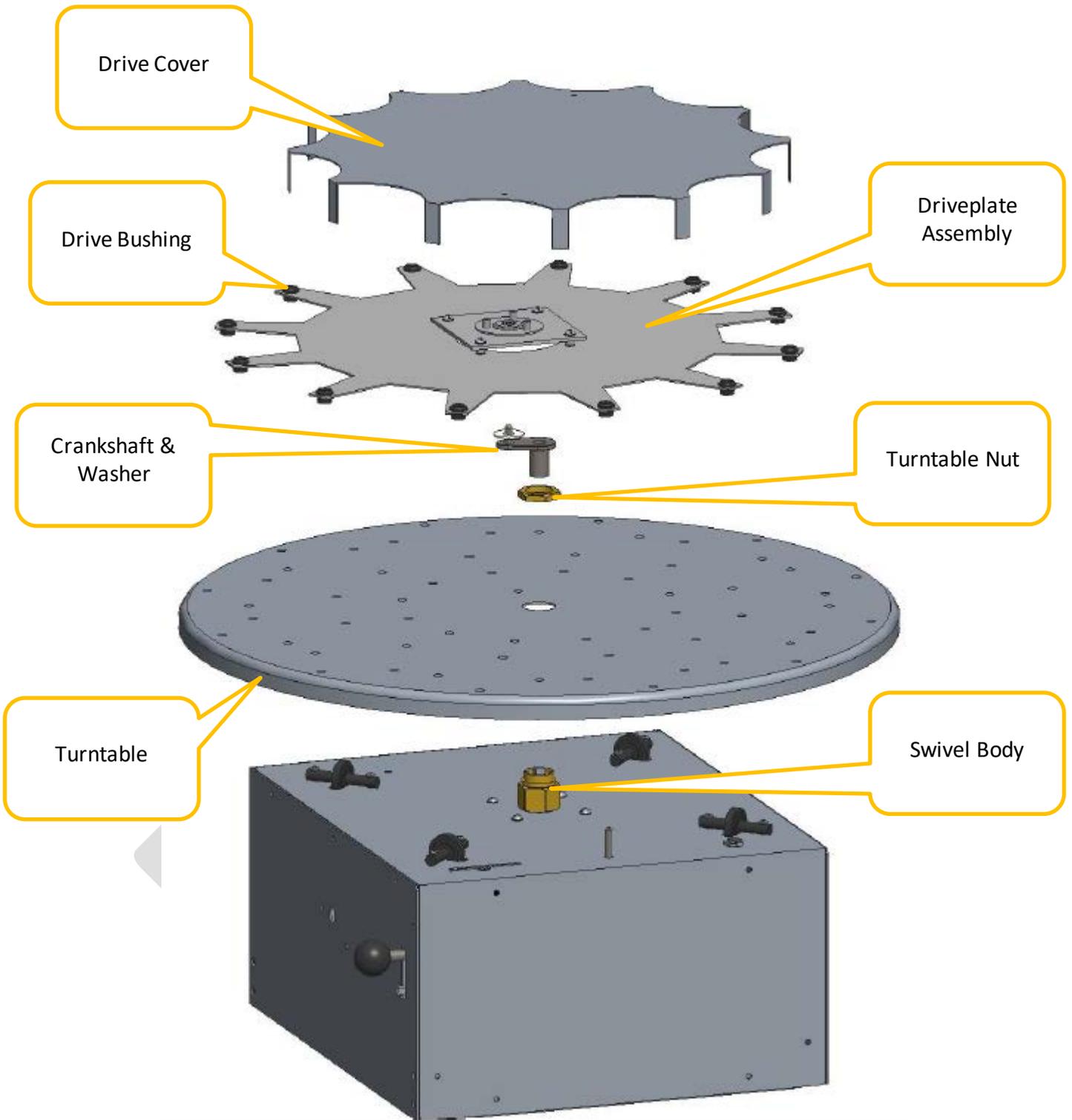
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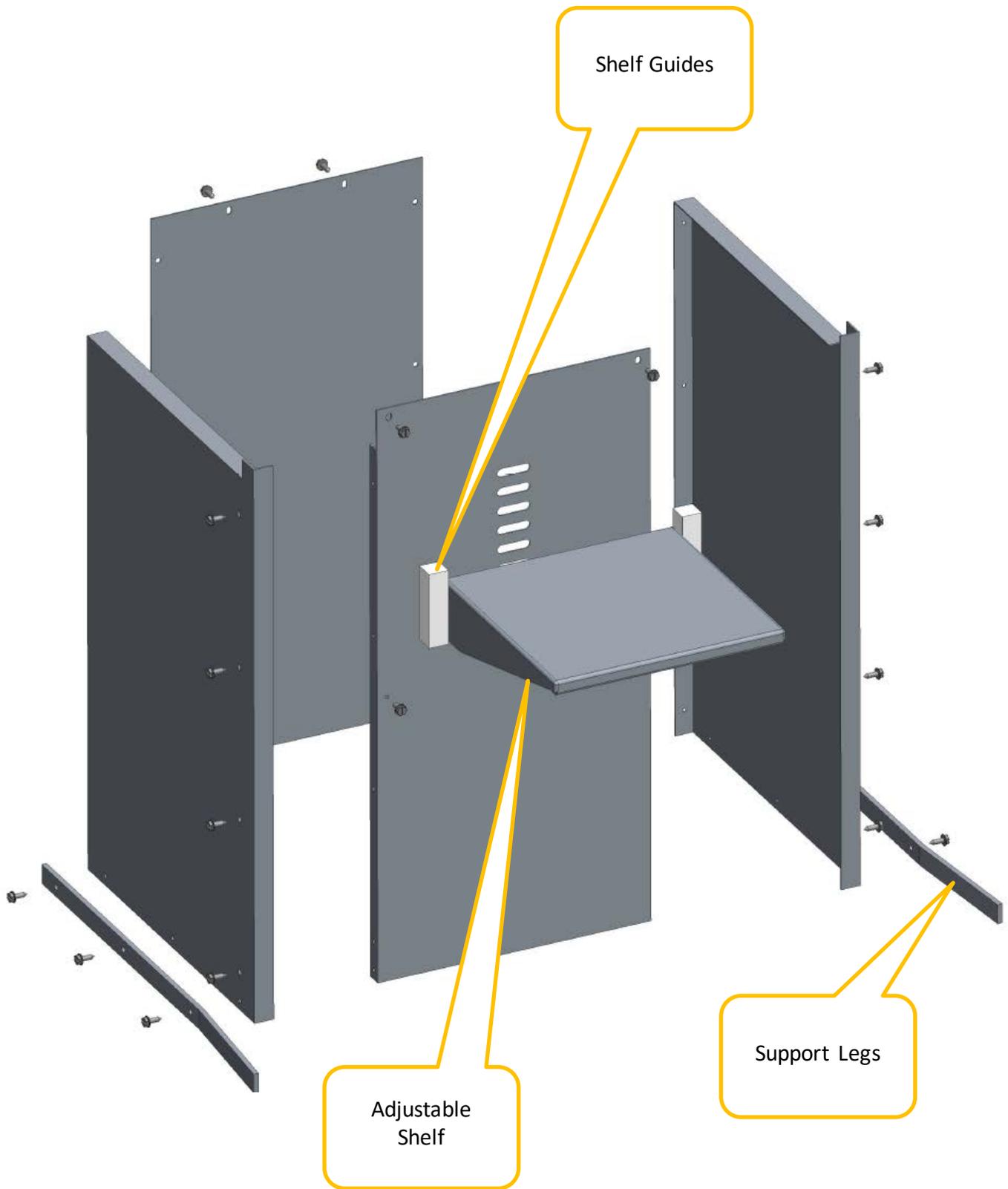
IDENTIFICATION











SETUP

Package Inspection

The D series colorant dispenser has been carefully inspected and calibrated to measure colorant with a high degree of accuracy. It should be carefully examined upon arrival to determine that the unit shows no signs of shipping damage. If any parts are found to be broken or damaged, immediately contact the carrier and arrange for an inspection of the concealed damage. Claims for damage must be made by you, the consignee, and not the shipper. The carrier accepts full responsibility for the safe delivery of merchandise upon pick-up from the shipper.

- Check the contents as you unpack and if any parts are missing, contact your supplier or HERO Products Group as soon as possible.
- Do not commence set-up until all required parts are available.

Package Contents – Counter Top Models

- Turntable
- Drive Plate Assembly
- Drive Cover
- Countertop Stand with attached pre-lubricated crankshaft and washer
- Canisters with calibrated gauges
- Bag containing canister mounting hardware
- Envelop which contained this manual, plus “Lettering”
- Bag containing spare parts
 - Three nozzle o-rings
 - Three spare nozzles (1 each of S, L & XL)
- Replacement seal and installation tool

Package Contents – Floor Stand Models

Floor stand models include all of the items from a counter top model plus the following:

- Floor stand
- Support legs with mounting hardware
- Adjustable tray
- Bag containing floor stand to countertop stand mounting hardware

Assembly

Refer to the **Identification** section of this manual to assist with part determination and placement.

1. Prepare an adequate working area to assemble the dispenser.
2. For counter top models, skip to step 6.
3. Place floor stand base assembly into desired location, ensuring base is level.
4. Attach support legs to base of cabinet. Support legs should extend out the front of the base and away from each other. Secure with provided screws.
5. Place adjustable tray into shelf rails noting the arrows on the nylon guides are pointing up.
6. Install the counter top assembly on to the floor stand and secure with the four screws supplied.
7. Remove the crankshaft and the turntable nut from the center swivel body.
8. Place the turntable onto the swivel body, with the rolled edge of the turntable facing down.

NOTE: Ensure that the turntable rotates freely on the small step on the swivel and not on the threaded portion of the swivel. Brake should be engaged in the “J” slot to allow constant rotation.

9. Install turntable nut and tighten.
10. Install the pre-lubricated crankshaft complete with nylon washer into swivel body. Ensure the crankshaft fits completely over the motor’s square drive shaft. The motor drive shaft extends from inside the floor stand up into the center of the swivel. When positioned correctly the crankshaft will rest directly on the swivel.
11. Place the drive plate onto the crankshaft, ensuring the crankshaft rotating arm is correctly located in the center bearing of drive plate. Take note of the “This side up” sticker on the drive plate.
12. Place drive cover over the drive plate.

NOTE: Drive cover must be installed prior to mounting canisters.

13. Rotate turntable until one drive plate arm and a canister mounting location are in line with one another.
14. Align the canister ensuring that the paddle drive shaft is engaged in the hole of the drive plate bushing at the end of each arm.

NOTE: The drive plate turns in an oscillating pattern, rather than a circle.

15. With the canister correctly positioned, secure from below the turntable with provided screws. Do not overtighten.
16. With one canister secured to the turntable, move to the position directly across from it and secure a second.
17. Continue mounting canisters, rotating the turntable as required.
18. When all canisters are attached, gently rotate turntable. Ensure all paddles are rotating freely and no binding or chattering is evident.

NOTE: If the paddles fail to complete an entire rotation, the canister drive shaft may not have been correctly installed in the drive plate. Remove canister and correct.

19. Plug in unit.

WARNING: The dispenser is equipped with an automatic timer that will activate when plugged in. To avoid accidental breakage or personal injury, ensure all assembly procedures have been completed prior to plugging in.

Pump Priming

With the unit assembled and canisters mounted, the following steps should be carried out to ensure that your machine is properly prepared for accurate and trouble-free dispensing. It is recommended that only one quart of colorant be used for the initial filling and priming. Additional colorant can be added once proper operation is achieved.

1. Place each can of colorant into a mixer or shaker for approximately five minutes (or as specified by the colorant manufacturer) to mix any settled pigment.
2. Remove canister lids.
3. Pour the contents of each can of colorant into individual canisters.

NOTE: Apply the canister identification letters to each canister as the colorant is added. Applying the letter to the stainless steel cylinder is the simplest reference.

4. Set the gauge of each pump to the maximum setting by depressing the spring loaded adjustment button and lifting the gauge by its handle.
5. Prime each cylinder by lifting the plunger handle to its maximum travel and then pressing it downwards fully. Do not open the valve during this process.
6. Repeat this plunger stroking process 5 - 6 times to ensure that the pump is completely filled with colorant and air is worked out of the system.
7. Place a clean can or container under the dispense nozzle.
8. Raise the plunger to its maximum travel.
9. Open the valve by pulling the handle down until it stops.
10. Push the plunger handle down fully to dispense colorant into the cup.
11. Close the valve.
12. Repeat this procedure until the colorant dispenses as a solid stream with no air bubbles.
13. Repeat above procedure for remaining pumps.
14. Return colorants to their respective canisters.
15. Your machine is now ready for use.

Note: Do not add colorant to the canisters while agitation is ongoing.

Timer

Every HERO D series dispenser is equipped with an automatic timer for colorant agitation. The timer operates for every 10 min every 7 hours at 110V 60Hz or 4 hours at 220V 50Hz. The timer requires no adjustment or attention on the part of the operator. When shipped, the timer has been set to initiate agitation as soon as the dispenser is plugged in.

The timer is located on the base next to the power cord. A decal is located next to the timer indicating the location of the start position. In order to rotate the timer adjustment knob you will require a flat screw driver. By rotating the adjustment knob the timer can be advanced to the start position. While rotating the knob a faint clicking sound will be heard. Rotate the dial through the “off” cycle until agitation begins. The “on” cycle is very short so rotation of the adjustment knob must be done very slowly. You should hear a loud click during rotation which indicates the “on” position and the start of agitation. Once the ten minute agitation cycle is complete the timer will then reactivate every seven or four hours.



**TO TURN TIMER ON SLOWLY
ROTATE CLOCKWISE UNTIL
FIRST LOUD CLICK**

ADJUST TIMER
with flat blade
screwdriver

DAILY ROUTINE CARE OF THE DISPENSER

It is recommended that the following daily routine be adopted to ensure trouble free operation of the dispenser.

1. Check the level of the colorant and top-up if required.
2. Set all gauges to maximum dispense. Raise and lower each plunger without opening valve. Repeat the procedure 10 times slowly.
3. With a damp cloth, wipe down stand, canisters and pumps, paying particular attention to pump nozzles to prevent accumulation of excess colorant which may dry out and cause erratic discharge or blockage.

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OPERATING INSTRUCTIONS

Colorant Selection

1. Ensure all gauges are set to zero before beginning.
2. Identify the colorant to be dispensed.
3. Release the table brake and rotate the table until the desired colorant is directly over the dispensing shelf.
4. Set the table brake to prevent rotation during dispensing.
5. Place an open can of paint under the dispense nozzle.
6. Confirm that there is sufficient colorant in the canister to complete the dispense. If the colorant level is too low, air will be drawn into the pump during the pump charging process and result in an inaccurate dispense.

Gauge Setting – Non-micro

TIP: If the dispense formula cannot be completed in a single dispense, multiple dispenses will be required. In this situation it is recommended to divide the dispense into equal parts to minimize the risk of errors due to gauge setting.

1. Identify the amount of colorant to be dispensed.
2. Depress the spring loaded button and lift the gauge by its handle to the required marking.
3. Release the spring loaded button and confirm that the gauge is locked in place.

Gauge Setting – Micro (optional)

TIP: If the dispense formula cannot be completed in a single dispense, multiple dispenses will be required. In this situation it is recommended to divide the dispense into equal parts to minimize the risk of errors due to gauge setting.

1. Identify the amount of colorant to be dispensed.
2. Depress the spring loaded button and lift the gauge by its handle to the required marking.
3. Release the spring loaded button and confirm that the gauge is locked in place.
4. Turn the micro knob to the desired dispense fraction.

Dispensing

1. With the gauge correctly set, slowly and gently lift the plunger handle until it reaches the gauge knob.
2. Continue to hold for a few seconds to ensure that the cylinder has completely filled with colorant.

NOTE: Do not open or operate the valve while charging the cylinder or air will enter the system and result in an inaccurate dispense.

3. With the plunger at the top and the cylinder full, pull the spring loaded valve handle downwards until it stops and hold in that position.
4. With the opposite hand, push the plunger down completely until it rests on the end cap.
5. Release the valve handle and allow it to return to the closed position.
6. Repeat the dispensing procedure as necessary to complete the formula.
7. Once all required colorants have been dispensed, gently lower the gauges manually to their zero position.

NOTE: Do not allow the gauges to drop down as doing so can damage them and result in dispensing inaccuracy.

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CARE & CLEANING

General Guidelines

- Don't drop gauges down into end cap. Lower gauges manually back into end cap to prevent damage.
- Keep the machine clean and practice good housekeeping to promote dispensing accuracy.
- Do not use the pump as a handle while rotating the turntable. Grab the edge of the turntable to rotate.
- Keep a copy of this manual and the reusable piston seal tool in a convenient place to assist in regular maintenance.
- Do not use metal or other hard objects to clear blocked nozzles as it may result in damage to the valve.
- Keep nozzles clean to prevent blockage from drying colorant. Nozzles are easily removed for cleaning.

Daily Maintenance

Keeping the nozzle wiper pad, clean and free of dried, dripping or collecting colorant is essential for trouble-free dispensing. It is recommended that the nozzle wiper arm and pad be cleaned daily with a cloth dampened with water or mineral spirits.

NOTE: Do not use harsh solvents such as lacquer thinner or MEK as damage may result.

Periodic Maintenance

If the dispenser is not being used on a regular basis, the following should be completed daily:

1. Ensure the canisters are topped up with colorant.
2. Open and close each valve five times.
3. Set gauge to the maximum position and stroke the plunger handle up and down three times.
4. Check valve handles, nozzles, seal arms and pads wear or damage and clean thoroughly.
5. Dispense a small amount of colorant into a clean container and return to canister. To prevent hardening of colorant in the nozzle and valve, it is essential to have regular colorant movement.

SERVICE INSTRUCTIONS

For technical support, contact HERO Customer Service at 800-494-4376 or customer@hero.ca.

CAUTION: Remove power to the dispenser prior to performing any service operations.

Piston Seal Replacement

1. Remove gauge from canister.
2. Loosen the two set screws from the end cap assembly and allow sleeve (if equipped) to drop down around the pump cylinder.
3. Remove the entire end cap / plunger assembly from the cylinder, lifting vertically.



4. Clean colorant from piston assembly.
5. Place plunger shaft in a vice using soft jaws. Do not over tighten the vise.
6. Unthread and remove plunger handle from shaft.
7. Slide end cap assembly off plunger shaft.
8. Remove the screw securing the piston seal to the shaft.
9. Set aside the washer, seal support and screw for later reuse.
10. Discard used seals.

NOTE: Screw is secured with thread locking compound and may be difficult to remove. Ensure the correct size and type of screwdriver is used to facilitate removal. If unable to remove screw, cut away old seal with a knife and apply a small amount of heat to the screw to soften the locking compound and allow easier removal.

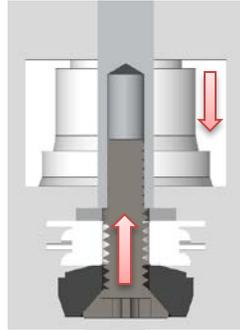
11. Remove the new seal from installation tool.

NOTE: The piston seal will begin to expand as soon as removed from the cylinder or tool. If the seal remains out of the cylinder or tool for longer than 5 minutes, the seal should be inserted into the tool to compress it prior to installation into the cylinder.

12. Assemble seal lower support, new seal and washer onto screw. Apply 2 drops of Loctite 271 (or equivalent) to screw threads.
13. Screw assembly into end of plunger shaft.

NOTE: Tighten only until seal can no longer be rotated by hand. Do not over tighten as it may result in difficult or stiff operation of the plunger.

14. Remove plunger shaft from vise and slide installation tool over the plunger shaft and onto the seal.



15. Place the assembled plunger shaft over the top of the pump cylinder. The seal tool will fit onto the top of the cylinder.



16. Gently press plunger shaft down, while rotating slightly, to insert the seal into the cylinder.
17. Continue pushing until the assembly is fully within the cylinder.
18. With the piston assembly now contained within the cylinder, lift the installation tool up and off the plunger shaft. Store the tool for future use as replacement seals are sold without the tool.
19. Raise seal to just below the top of the cylinder and inspect for damage caused during installation. The sealing edge should not be curled, nicked or in any other way damaged.
20. Place the end cap assembly over plunger shaft and firmly down onto the cylinder.
21. Attach plunger handle to the plunger. HERO recommends using Loctite 401 on the threads. **DO NOT OVER TIGHTEN.**
22. Press the plunger shaft down as far as it can go. The plunger handle should be firmly against the end cap and cylinder.
23. Slide the end cap sleeve (if equipped) up the cylinder and into the end cap assembly.
24. Be sure holes in sleeve and end cap are aligned to allow set screws to engage on the cylinder.

25. While keeping the plunger shaft pressed down and the end cap sleeve in place, secure the end cap to cylinder with set screws. DO NOT OVER TIGHTEN.
26. Install the gauge and check the calibration. Recalibrate if necessary.
27. Prepare the pump for usage by following priming instructions.

Valve Replacement

1. Working from below the turntable, remove the three screws securing the canister while being careful not to spill colorant.
2. Lift the canister from the turntable and transfer the colorant to a clean container.
3. Rinse the canister of residual colorant.
4. Remove the two screws holding the valve to the canister base. These screws are accessed from the bottom of canister.
5. Unthread the cylinder / end cap assembly from the valve and set aside.
 - Do not use tools to remove.
6. Thread the cylinder / end cap assembly into the new valve. The cylinder must be firmly hand tightened and the use of glue (Loctite 401 or equivalent) on the cylinder threads is recommended.
 - Do not use any tools to tighten.
7. Reinstallation of the cylinder may result in the end cap being out of alignment with the valve. To align the end cap assembly with valve, loosen the end cap set screws slightly and rotate the endcap. Once aligned, tighten the set screws.
8. Install the o-ring into the valve body and reassemble to the canister.
9. Install nozzle and o-ring from the old valve onto the new valve.
10. Reattach the canister to turntable.
11. Add colorant and prime the pump.

Gauge Calibration – Non-micro (2 oz. only)

NOTE: Gauges are precise measuring devices and they have been factory calibrated and matched to a specific canister. Moving a gauge to any other canister will negate the calibration and result in inaccurate dispensing. Should a new gauge be required, the following process must be completed to calibrate it.

1. Remove the old gauge from the pump.
2. Back out the setscrew in the plunger handle by two turns.
3. Obtain the new gauge.
4. Note the number on the bottom of the label on the face of the gauge and locate in column A of the table.

A	B	C
Gauge Decal Part Number	Setting Position	Feeler Gauge Thickness
BL-5001 - 1/32 US	½ Shot	.054"
BL-5006 - 1/48 US	½ Shot	.038"
BL-5007 - 1/96 US	½ Shot	.038"
BL-5011 - 1/64 US	1 Shot	.054"
BL-5021 - 1/48 USM	½ Shot	.038"

5. Insert the new gauge into the pump.
6. Set the gauge in the position shown in the following chart. (column B)
7. Raise the plunger handle until it contacts the gauge stop and cannot be raised any further.
8. Insert the appropriate feeler gauge (column C) into the gap between the plunger handle and the end cap being sure it aligns with the setscrew.
9. Turn set screw clockwise until contact with the feeler gauge is made. Do not over tighten.
10. The feeler gauge should be able to be pulled out from the canister with only a very slight drag.

New Gauge Calibration – Micro

NOTE: Gauges are precise measuring devices and they have been factory calibrated and matched to a specific canister. Moving a gauge to any other canister will negate the calibration and result in inaccurate dispensing. Should a new gauge be required, the following process must be completed to calibrate it.

1. Confirm that the plunger handle is tight on the plunger shaft.
2. Insert new gauge into canister.
3. Set gauge to first locking hole (position zero).
4. Make sure the micro knob is set to zero.
5. Apply thread locking compound to the setscrew and insert into micro knob. Tighten set screw so that the set screw makes contact. DO NOT over tighten.
6. Check the gauge locking operation to ensure the gauge locks in on the zero setting. Over tightening will prevent the locking pin from engaging properly.
7. Rotate the micro-knob and return it to zero.
8. Confirm that no movement can be perceived by trying to raise the plunger handle.
9. Place cap on micro-knob.

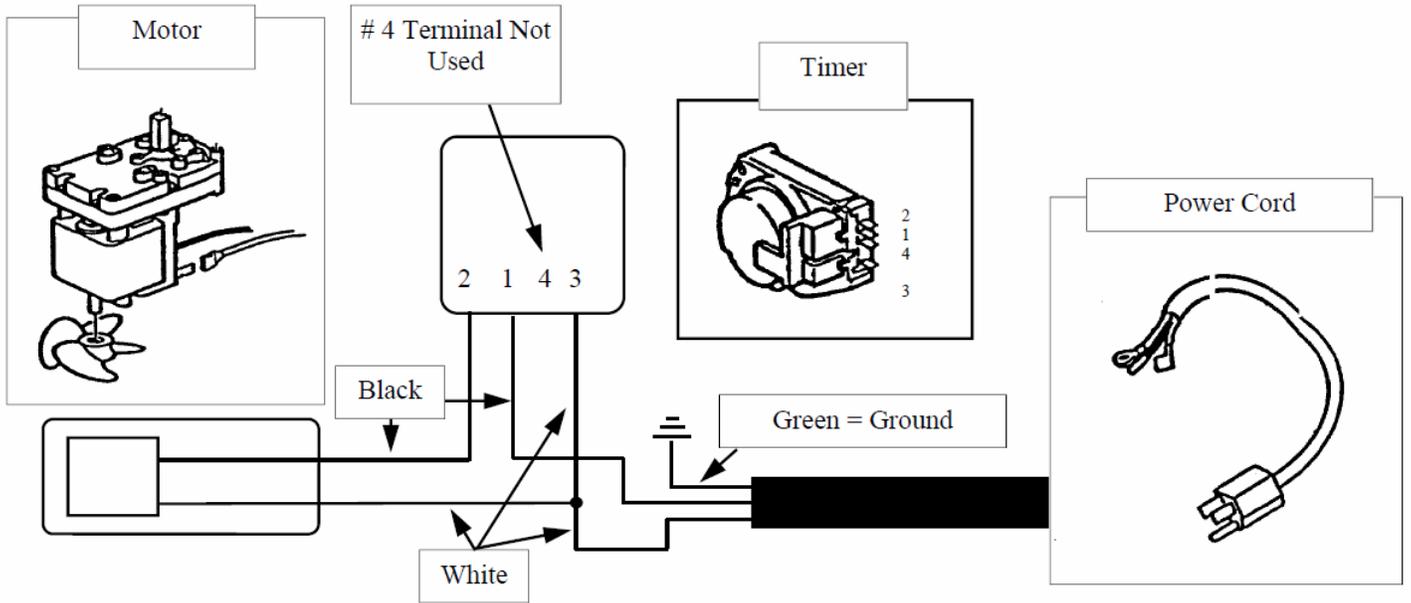
Gauge Recalibration – Micro

If gauges have been moved from one canister to another the gauges will have to be recalibrated.

To recalibrate the gauges, follow the procedure above, except instead of adjusting the set screw in the center of the gauge, adjust the setscrew in the plunger handle.

WIRING DIAGRAM

Models rated 110V 60Hz are wired as shown below. Models rated 220V are similar.



TROUBLESHOOTING

For technical support, contact HERO Customer Service at 800-494-4376 or customercare@hero.ca.

PROBLEM	CAUSE	SOLUTION
Intermittent spurts of colorant from the nozzle during dispensing	Low colorant level, allowing air into the pump cylinder.	Fill canister and operate the plunger several times, without opening the valve. Dispense colorant into a paper cup to remove the air.
	Pump not properly primed	Prime pump
End cap twists or lifts during operation.	End cap loose on cylinder.	Push down end cap onto the cylinder, and lightly tighten the two set screws until it can no longer be twisted by hand.
Canister is loose on turntable.		Tighten the mounting screws
Colorant appears on the piston shaft, and or gauge.	Worn or loose piston seals.	Refer to replacement of piston seals page 12.
Colorant does not dispense easily.	Nozzle is clogged or too small.	Clear nozzle of obstructions. If problem continues, use a larger nozzle. (three extra nozzles are supplied with unit.)
	Colorant is too heavy	Thoroughly clean out canister and refill with new colorant.
Pump tube is loose on the canister.	Pump attaching bolts are loose.	Remove canister and tighten the bolts
Colorant leaks around the outlet nozzle	Nozzle O-Ring is lost or damaged.	Inspect or replace.
Colorant leaks around the Accu-purge button	Leaking O-Ring	Clean or replace O ring as required
Colorant leaks from side of dispenser handle.	Worn or damaged valve barrel O-Ring	Replace valve assembly
Gauge line does not line up with plunger handle	Loose plunger handle	Tighten plunger handle.

SPECIFICATIONS

Overall Dimensions

	D23 / D24		D54 / D55		D60	
No. Canisters	12	16	12	16	12	16
Height – Countertop	23"	23"	29"	29"	31"	31"
Height – Floor Stand	51"	51"	58"	58"	60"	60"
Width	28"	31"	28"	31"	28"	31"
Depth	28"	31"	28"	31"	28"	31"

Electrical

	D23 / D24	D54 / D55	D60
Voltage	120 VAC	120 VAC	120 VAC
Frequency	60 Hz	60 Hz	60 Hz
Current	3 A	3 A	3 A

Capacity

	D23 / D24	D54 / D55	D60
Canister	2.5 Qt	2.5 Qt	4.5 Qt
Pump	2 oz	7 oz	7 oz

Canister Material

	D23	D24	D54	D55	D60
Nylon	x		x		
Stainless Steel		x		x	x

Environmental Conditions

Supply Voltage	Not to exceed -10% to +5% of rated voltage
Ambient Temperature	50 - 105°F (10 - 40°C)
Installed Location	Indoors Only; Level Surface

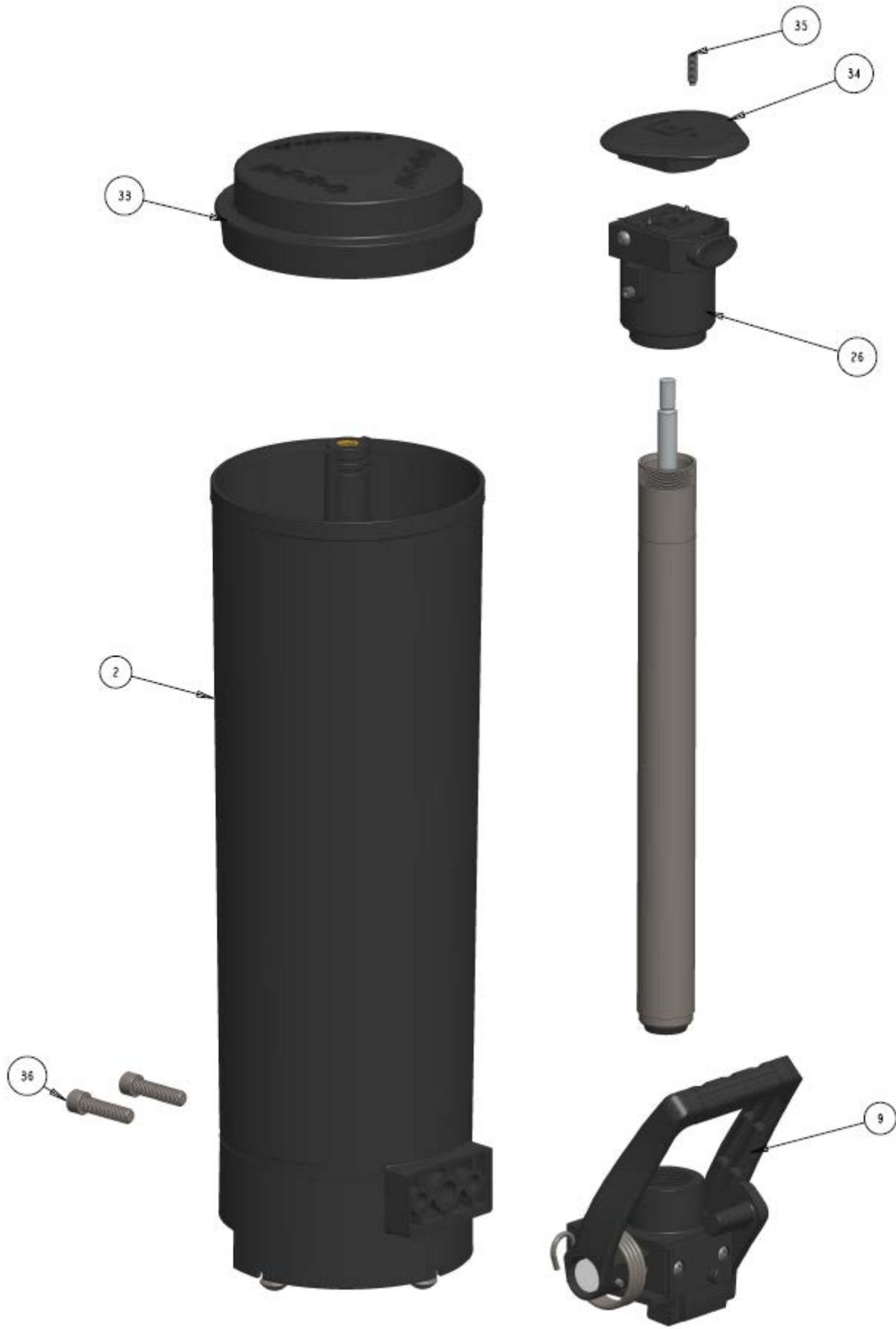
Parts List

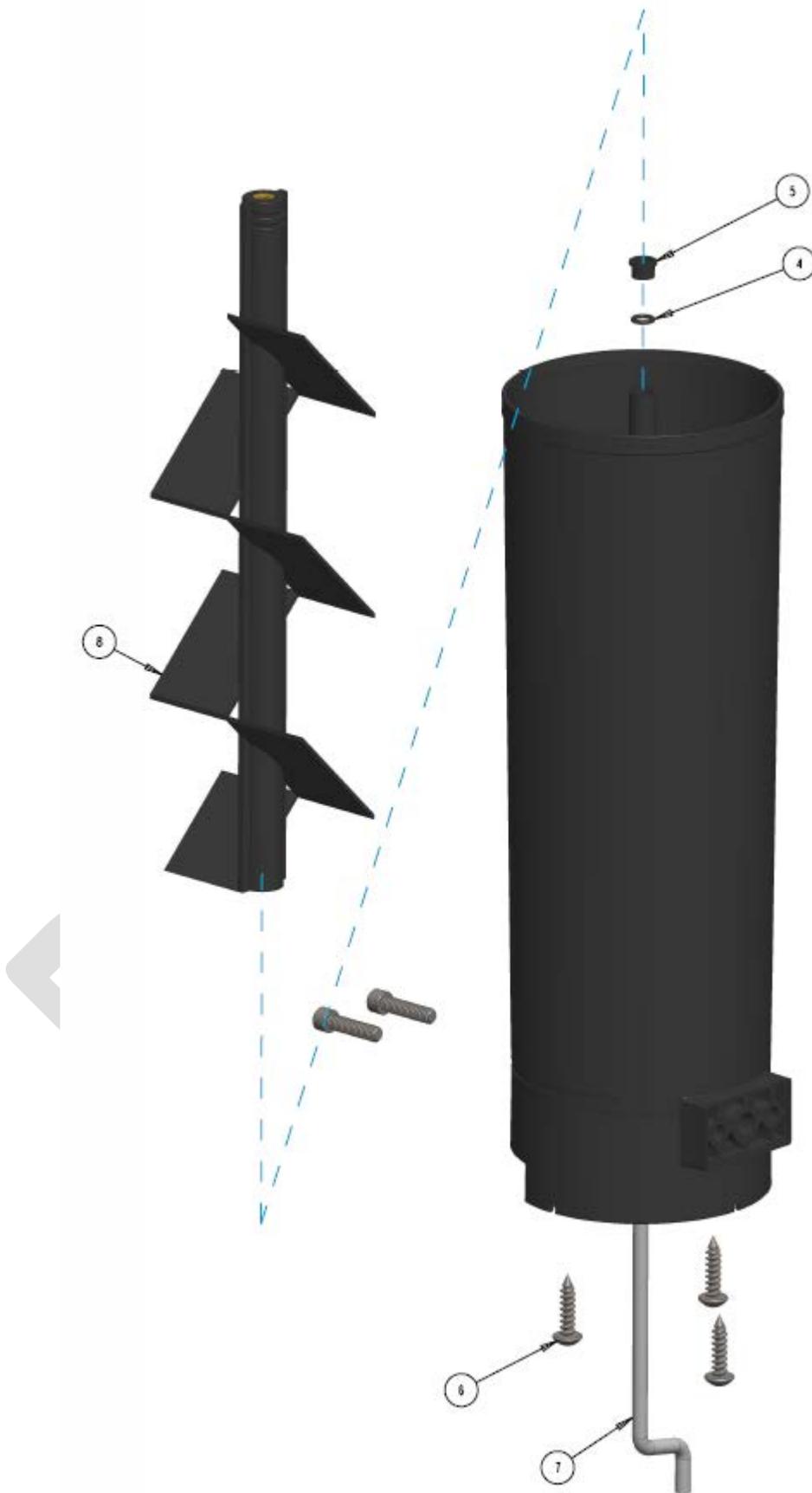
NOTE: Some parts may not be available as individual items and may only be sold as part of a sub-assembly. Contact HERO Customer Care for details.

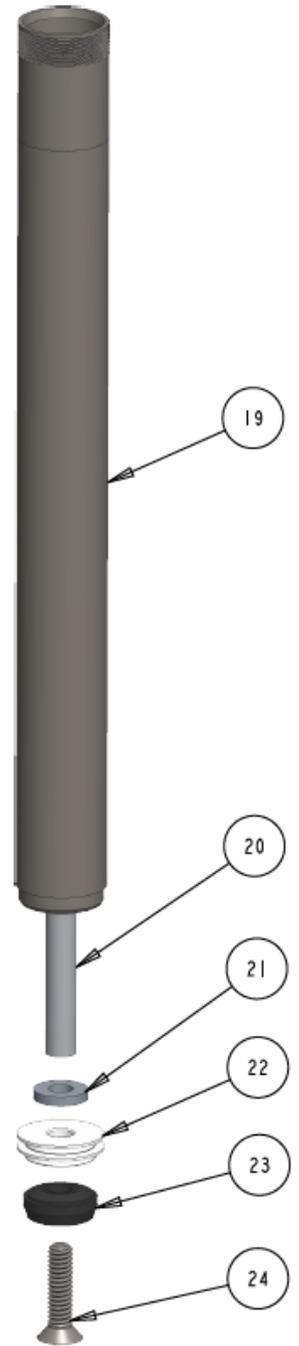
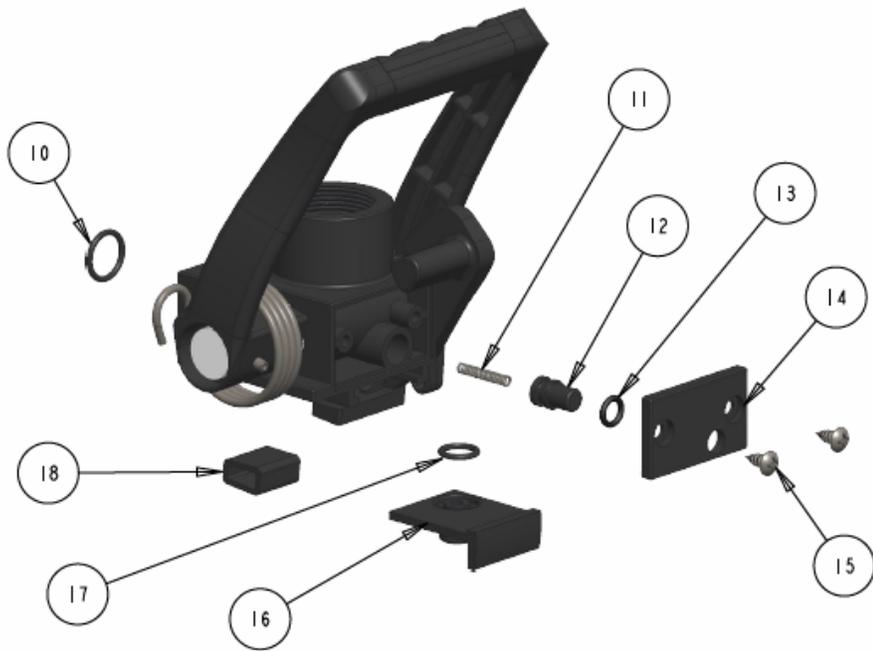
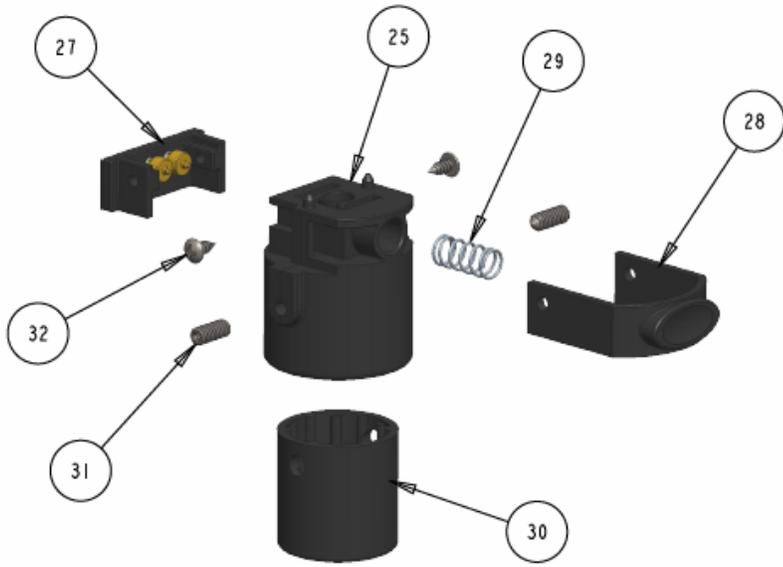
D23 Canister

ITEM	DESCRIPTION	PART NO.
1	CNSTR & PMP ASSY 23P LESS GA.	BL-1700-04
2	CNSTR 2.5QT W/ PADL & DRV SHFT	BL-1541
3	CNSTR 2.5QT POLYMER	BL-1540
4	O-RING PADDLE BUSHING	BL-1105
5	BSHNG, PADDLE SPRT TUBE	BL-1095
6	SCREW, #14X1 PAN HD PH DRV TYPE B PLTD	HW30629P
7	DRIVE SHFT PADDLE 2.5QT	BL-1115
8	PADDLE ASSY 2.5QT	BL-1530
9	VLV ASSY W/ NZL	BL-1555P-125
10	O-RING VALVE BODY	BL-1136
11	SPRING ACCU PURGE	BL-1400
12	PISTON ACCU PURGE	BL-1405
13	O-RING ACCU PURGE	BL-1402
14	VALVE PLATE	BL-1132
15	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
16	NOZZLE, MEDIUM 0.125	BL-1186
17	O-RING	BL-1192
18	SEAL, OUTLET NOZZLE PAD	BL-1176
19	CYLINDER 2oz	BL-1080
20	SHAFT, PLUNGER 2oz	BL-1005
21	WASHER, FLAT #12 MS809 SS	HW5032
22	SEAL 2oz	BL-1065
23	PLUNGER SEAL SUPPORT 2oz	BL-1066
24	SCREW 1/4-20 X 1 FLT HD PH DRV SS	HW30623
25	END CAP ASSY 2oz	BL-1501
26	END CAP	BL-1015
27	PIN BAR ASSY	BL-1505
28	LOCK BAR, GUAGE	BL-1030
29	SPRING, LOCK BAR	BL-1032
30	SLEEVE, END CAP	BL-1025
31	SETSCREW SKT HD 10-24X1/2 CONE PT	HW2075
32	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
33	LID, CANISTER	BL-1085
34	HANDLE, PLUNGER	BL-1000
35	SETSCREW SKT HD 8-32X1/2 HALF DOG	HW2062
36	CAPSCREW SKT HD 1/4-20X1 GR8 BLK	HW1017

OPTIONAL PARTS, SERVICE KITS & TOOLS	
DESCRIPTION	PART NO.
SEAL KIT; INCLUDES ITEM 22 & INSTALL TOOL	BL-1510
SEAL INSTALLATION TOOL	BL-1067
ACCU PURGE KIT; INCLUDES ITEMS 11 & 13	BL-1620
VALVE ASSY LESS NOZZLE; ITEM 9 LESS ITEM 16	BL-1555P
NOZZLE, SMALL 0.094	BL-1185
NOZZLE, LARGE 0.188	BL-1187
NOZZLE, EXTRA LARGE 0.220	BL-1188





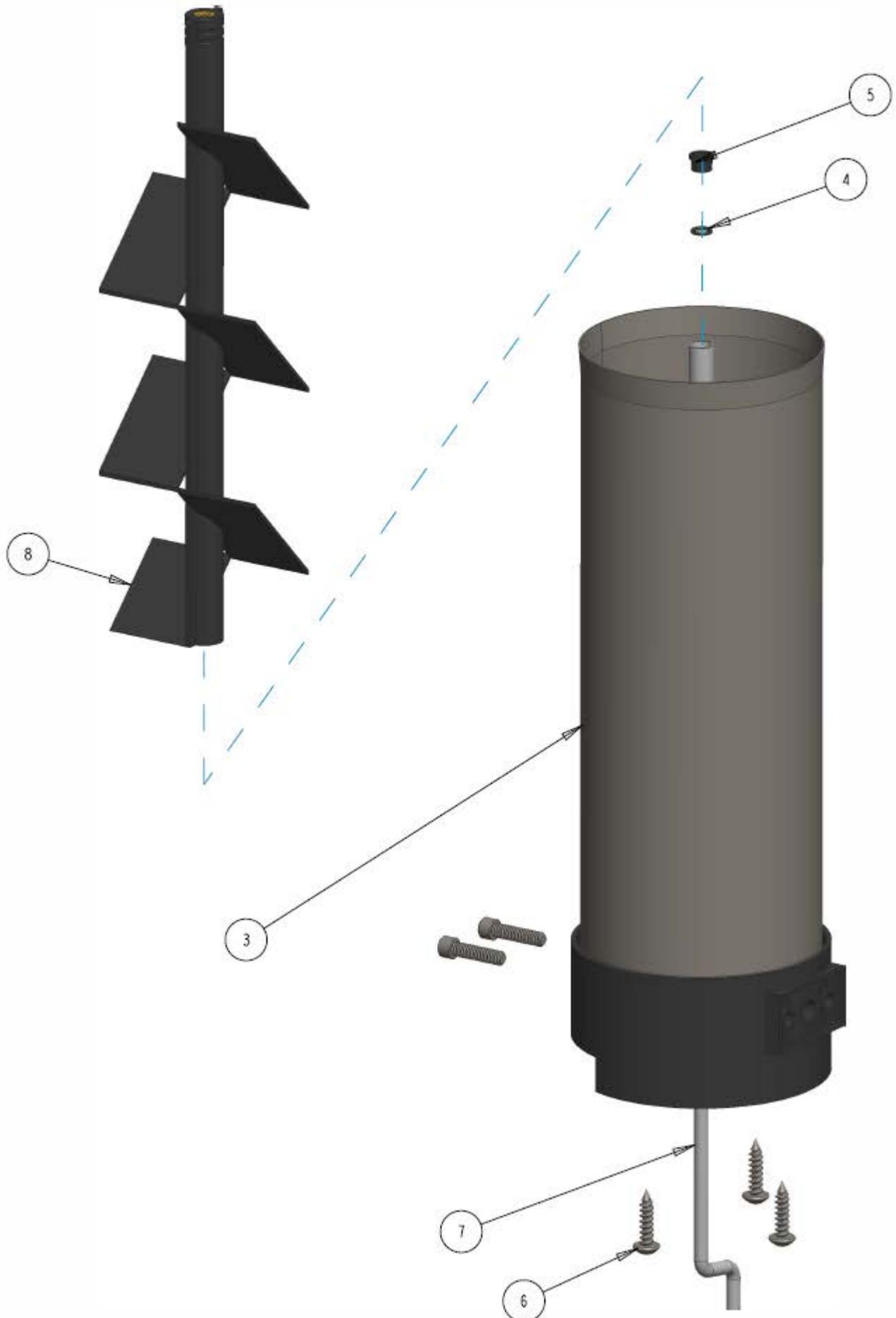


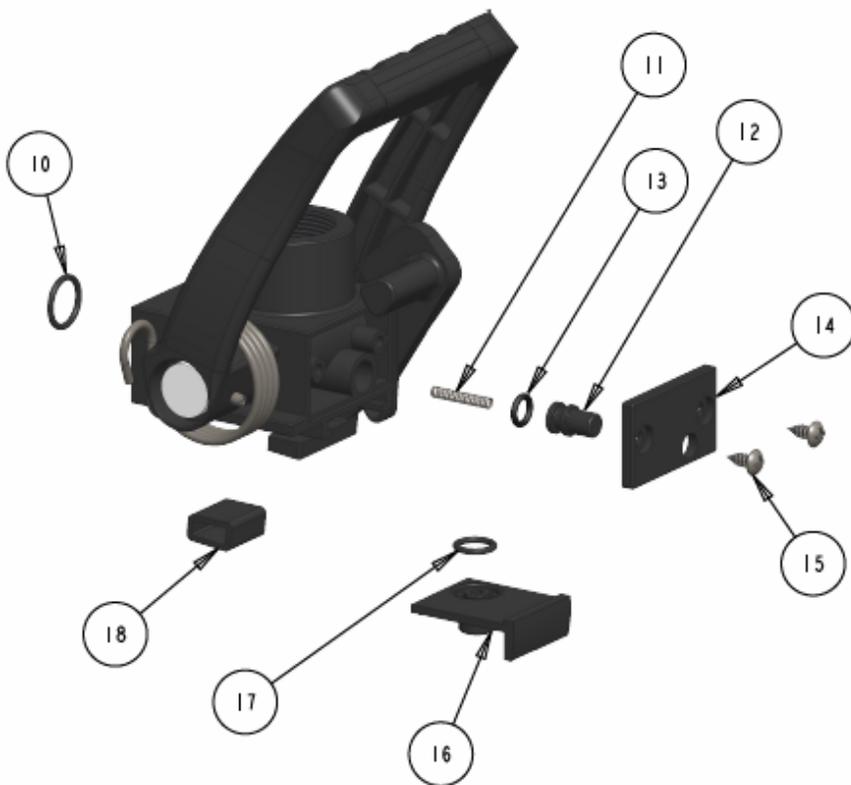
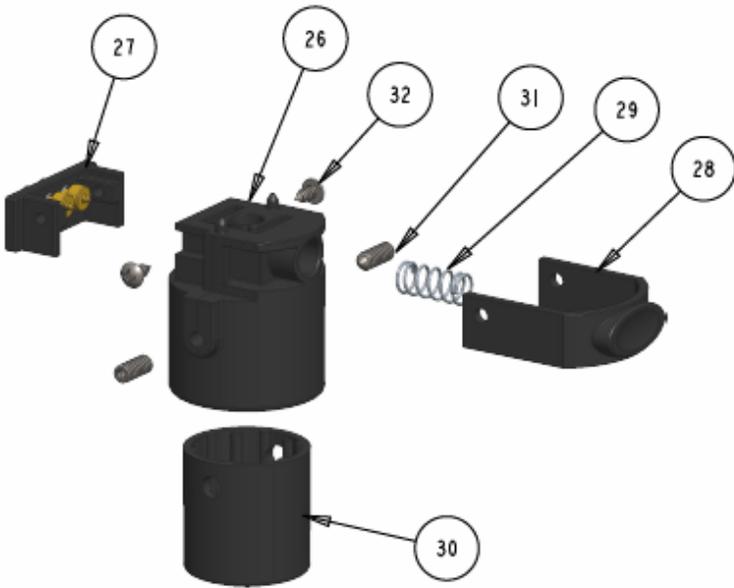
D24 Canister

ITEM	DESCRIPTION	PART NO.
1	CANISTER & PUMP ASSY 24 LESS GAUGE	BL-1730-04
2	CNSTR 2.5QT SS W/PAD & DRV SHFT	BL-1581
3	CANISTER ASSY 2.5QT SS	BL-1580
4	O-RING PADDLE BUSHING	BL-1105
5	BSHNG, PADDLE SPRT TUBE	BL-1095
6	SCREW, #14X1 PAN HD PH DRV TYPE B PLTD	HW30629P
7	DRIVE SHFT PADDLE 2.5QT	BL-1115
8	PADDLE ASSY 2.5QT	BL-1530
9	VLV ASSY W/ NZL	BL-1555P-125
10	O-RING VALVE BODY	BL-1136
11	SPRING ACCU PURGE	BL-1400
12	PISTON ACCU PURGE	BL-1405
13	O-RING ACCU PURGE	BL-1402
14	VALVE PLATE	BL-1132
15	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
16	NOZZLE, MEDIUM 0.125	BL-1186
17	O-RING	BL-1192
18	SEAL, OUTLET NOZZLE PAD	BL-1176
19	CYLINDER 2oz	BL-1080
20	SHAFT, PLUNGER 2oz	BL-1005
21	WASHER, FLAT #12 MS809 SS	HW5032
22	SEAL 2oz	BL-1065
23	PLUNGER SEAL SUPPORT 2oz	BL-1066
24	SCREW 1/4-20 X 1 FLT HD PH DRV SS	HW30623
25	END CAP ASSY 2oz	BL-1501
26	END CAP	BL-1015
27	PIN BAR ASSY	BL-1505
28	LOCK BAR, GUAGE	BL-1030
29	SPRING, LOCK BAR	BL-1032
30	SLEEVE, END CAP	BL-1025
31	SETSCREW SKT HD 10-24X1/2 CONE PT	HW2075
32	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
33	HANDLE, PLUNGER	BL-1000
34	SETSCREW SKT HD 8-32X1/2 HALF DOG	HW2062
35	LID, CANISTER	BL-1085
36	CAPSCREW SKT HD 1/4-20X1 GR8 BLK	HW1017

OPTIONAL PARTS, SERVICE KITS & TOOLS	
DESCRIPTION	PART NO.
SEAL KIT; INCLUDES ITEM 22 & INSTALL TOOL	BL-1510
SEAL INSTALLATION TOOL	BL-1067
ACCU PURGE KIT; INCLUDES ITEMS 11 & 13	BL-1620
VALVE ASSY LESS NOZZLE; ITEM 9 LESS ITEM 16	BL-1555P
NOZZLE, SMALL 0.094	BL-1185
NOZZLE, LARGE 0.188	BL-1187
NOZZLE, EXTRA LARGE 0.220	BL-1188



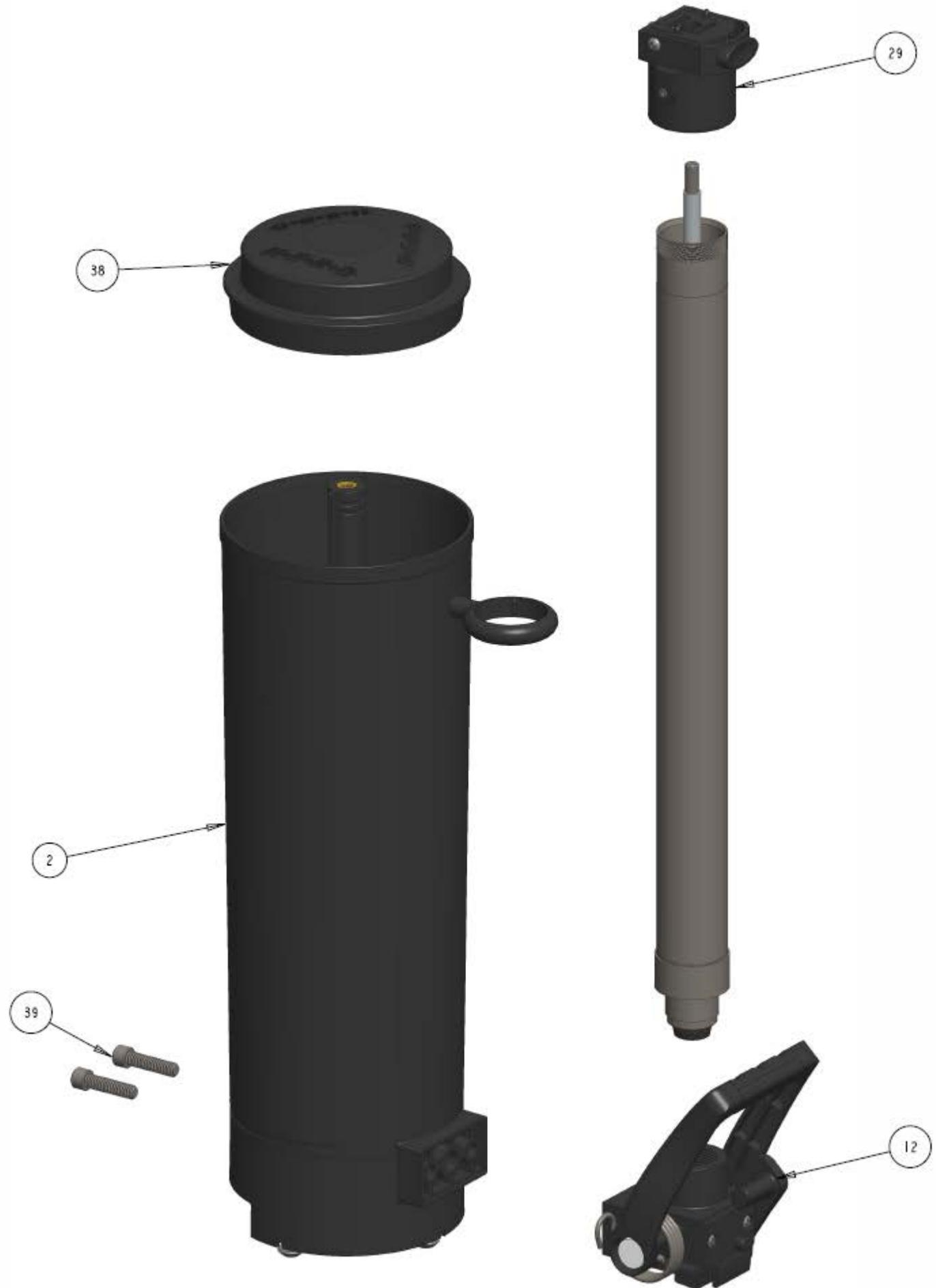


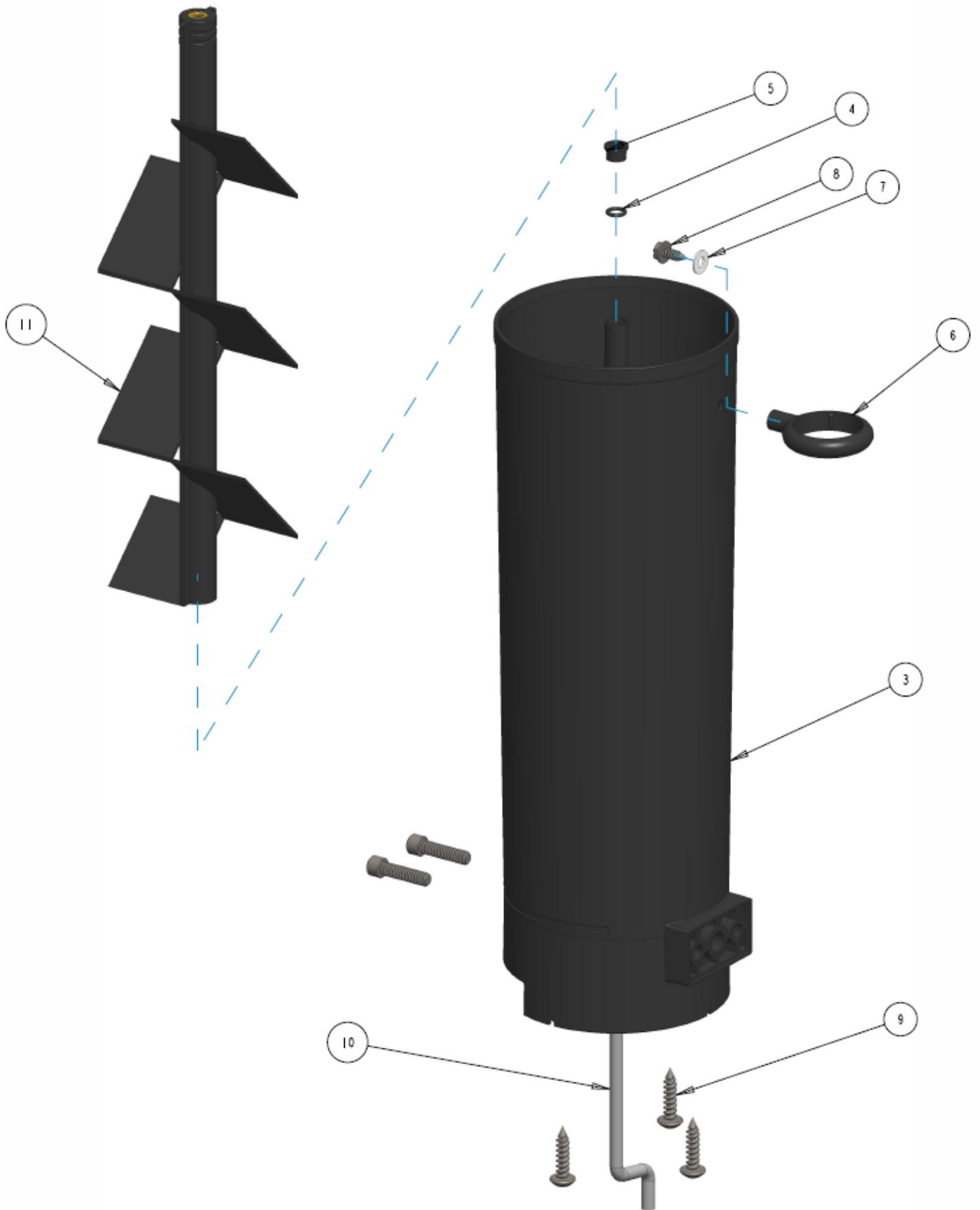


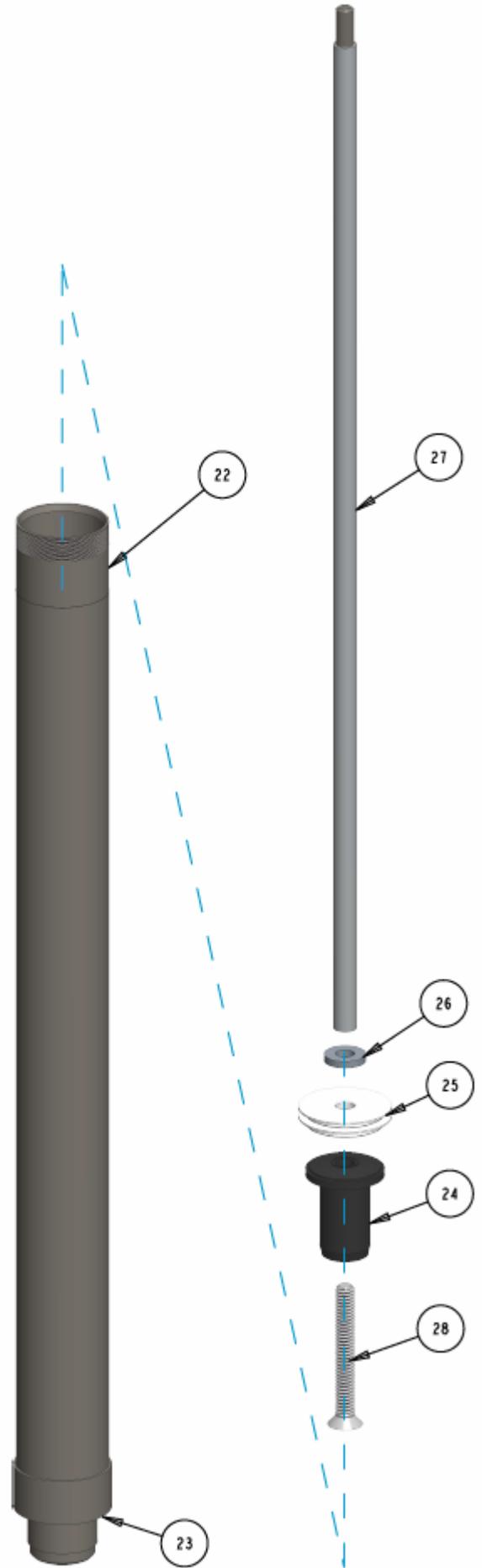
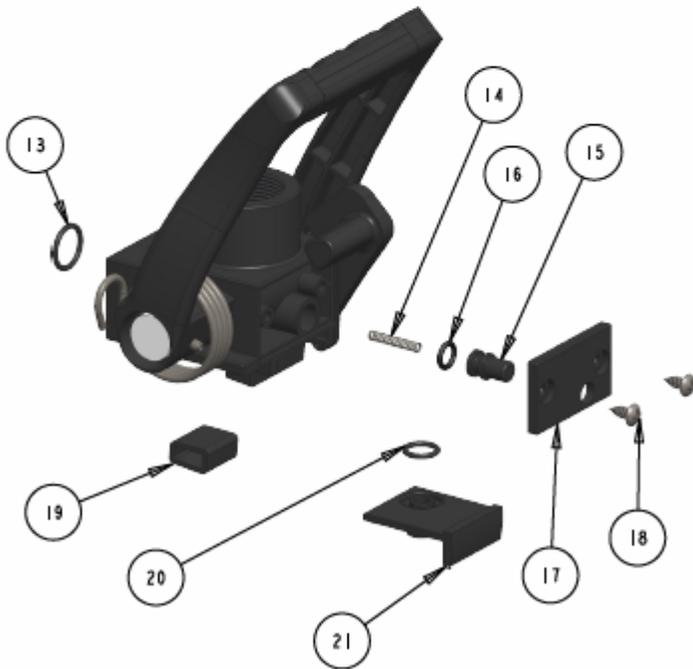
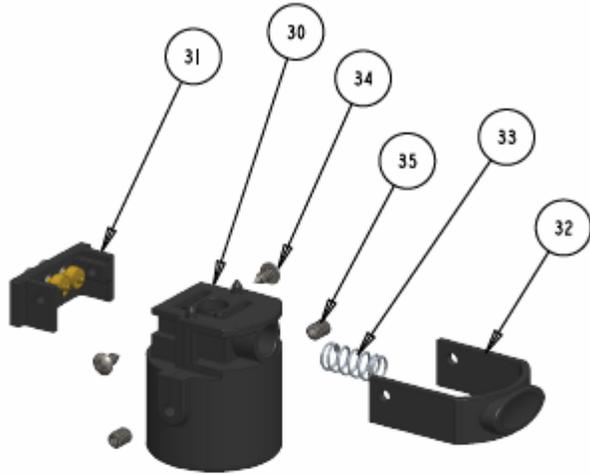
D54 Canister

ITEM	DESCRIPTION	PART NO.
1	CANISTER & PUMP ASSY 54P LESS/GAUGE	BL-1760
2	CANISTER 2.5QT 54P W/PADDLE	BL-1543
3	CNSTR 2.5QT POLYMER	BL-1540-SR
4	O-RING PADDLE BUSHING	BL-1105
5	BSHNG, PADDLE SPRT TUBE	BL-1095
6	SUPPORT RING	BL-1328
7	WASHER, FLAT #10 X 7/16 X 0.032THK NYLON	HW5022
8	#10 SELF TAP SCREW	HW30492
9	SCREW, #14X1 PAN HD PH DRV TYPE B PLTD	HW30629P
10	DRIVE SHFT PADDLE 2.5QT	BL-1115
11	PADDLE ASSY 2.5QT	BL-1530
12	VLV ASSY W/ NZL-LARGE	BL-1555P-188
13	O-RING VALVE BODY	BL-1136
14	SPRING ACCU PURGE	BL-1400
15	PISTON ACCU PURGE	BL-1405
16	O-RING ACCU PURGE	BL-1402
17	VALVE PLATE	BL-1132
18	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
19	SEAL, OUTLET NOZZLE PAD	BL-1176
20	O-RING	BL-1192
21	NOZZLE, LARGE	BL-1187
22	CYLINDER, 7 OZ.	BL-1600
23	COUPLER, CYLINDER 7OZ	BL-1320
24	SEAL SUPPORT, PLUNGER 7OZ	BL-1311
25	SEAL, 7OZ	BL-1310
26	WASHER, FLAT #12 MS809 SS	HW5032
27	SHAFT, PLUNGER 7OZ	BL-1300
28	SCREW 1/4-20 X 2 FH PHIL SS	HW30655
29	END CAP ASSY 7oz	BL-1502
30	END CAP	BL-1015
31	PIN BAR ASSY	BL-1505
32	LOCK BAR, GUAGE	BL-1030
33	SPRING, LOCK BAR	BL-1032
34	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
35	SETSCREW 10-24X5/16 CONE PT	HW2070
36	HANDLE, PLUNGER	BL-1000
37	SETSCREW SKT HD 8-32X1/2 HALF DOG	HW2062
38	LID, CANISTER	BL-1085
39	CAPSCREW SKT HD 1/4-20X1 GR8 BLK	HW1017

OPTIONAL PARTS, SERVICE KITS & TOOLS	
DESCRIPTION	PART NO.
SEAL KIT; INCLUDES ITEM 25 & INSTALL TOOL	BL-1590
SEAL INSTALLATION TOOL	BL-1312
ACCU PURGE KIT; INCLUDES ITEMS 14 & 16	BL-1620
VALVE ASSY LESS NOZZLE; ITEM 12 LESS ITEM 21	BL-1555P
NOZZLE, SMALL 0.094	BL-1185
NOZZLE, MEDIUM 0.125	BL-1187
NOZZLE, EXTRA LARGE 0.220	BL-1188



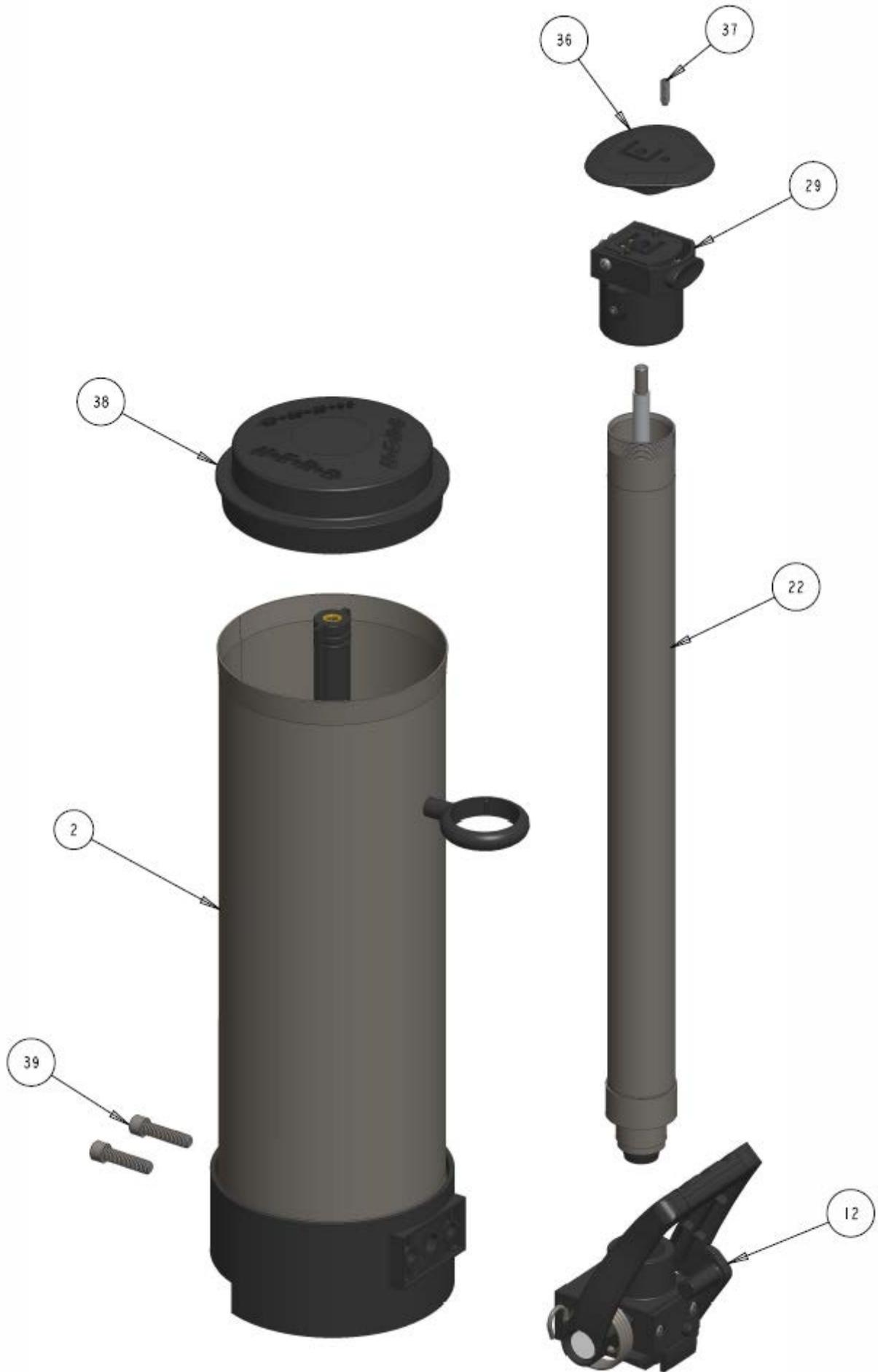


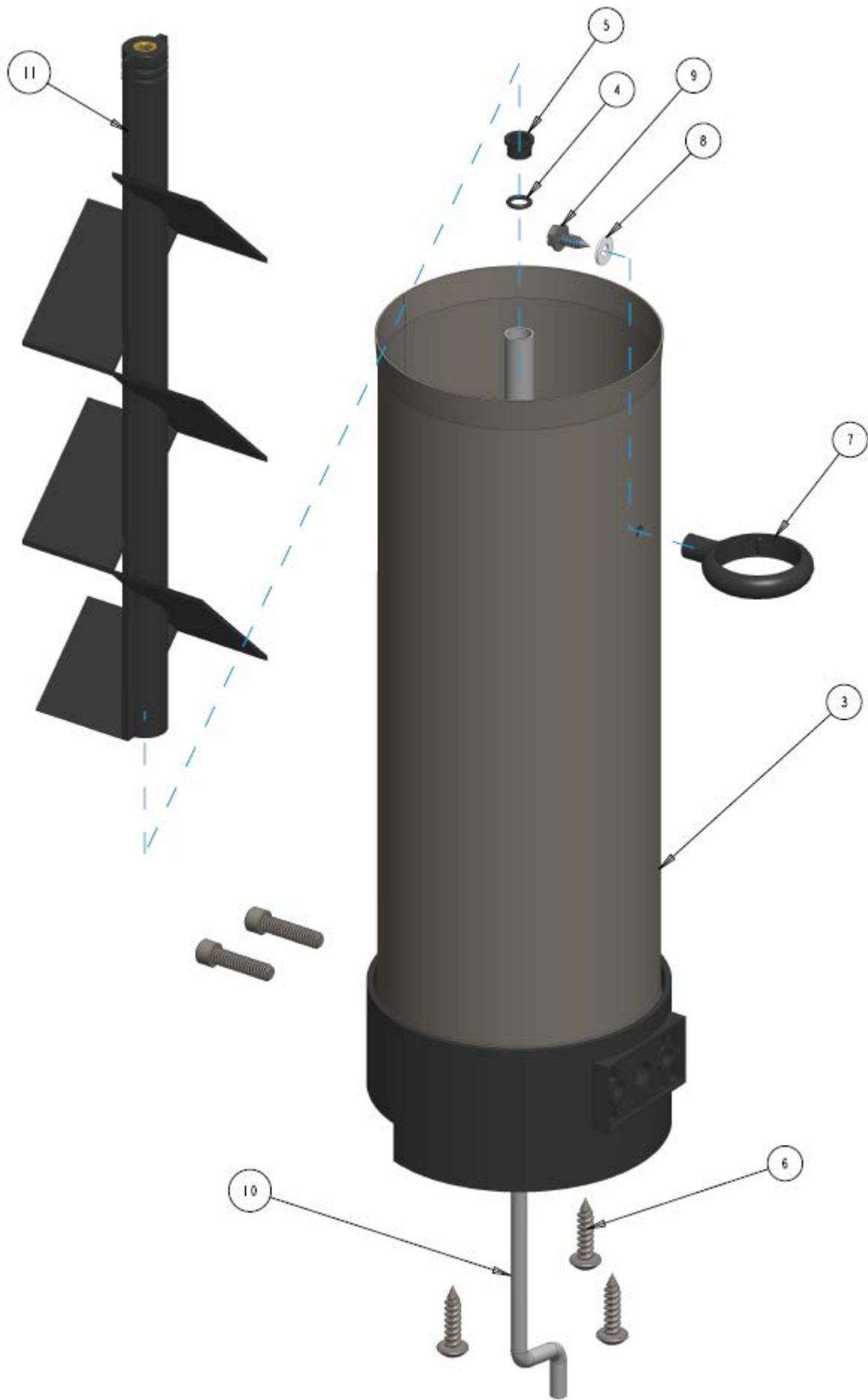


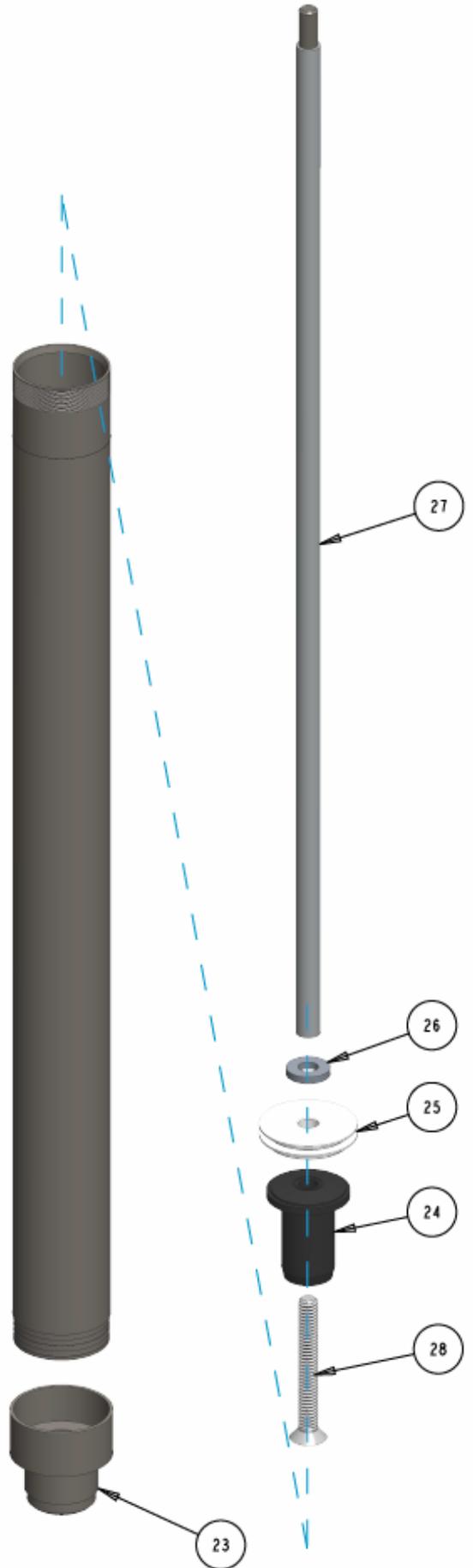
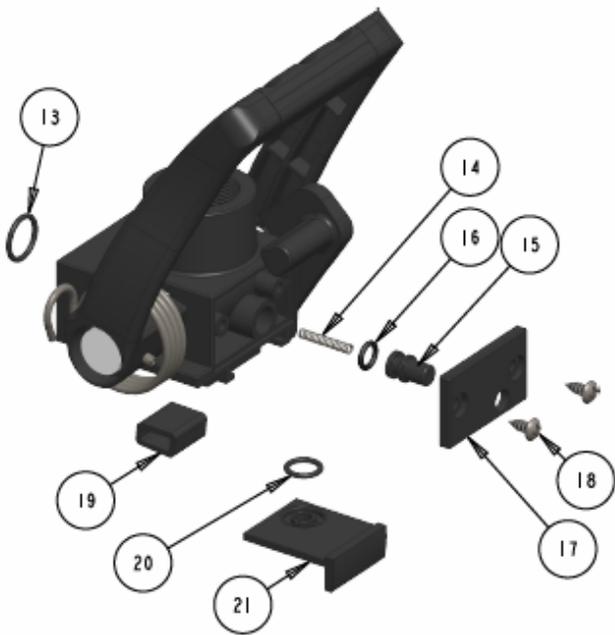
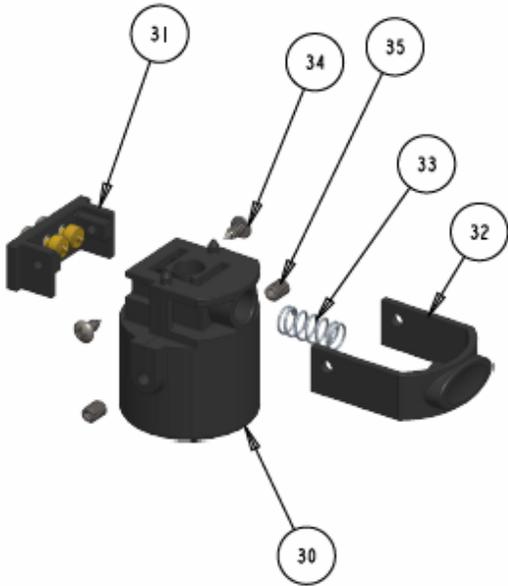
D55 Canister

ITEM	DESCRIPTION	PART NO.
1	CANISTER & PUMP ASSY 55SM LESS GAUGE	BL-1775
2	CNSTR 2.5QT SS W/PAD & DRV SHFT	BL-1581-SR
3	CANISTER ASSY 2.5QT SS	BL-1580-SR
4	O-RING PADDLE BUSHING	BL-1105
5	BSHNG, PADDLE SPRT TUBE	BL-1095
6	SCREW, #14XI PAN HD PH DRV TYPE B PLTD	HW30629P
7	SUPPORT RING	BL-1328
8	WASHER, FLAT #10 X 7/16 X 0.032THK NYLON	HW5022
9	#10 SELF TAP SCREW	HW30492
10	DRIVE SHFT PADDLE 2.5QT	BL-1115
11	PADDLE ASSY 2.5QT	BL-1530
12	VLV ASSY W/ NZL-LARGE	BL-1555P-188
13	O-RING VALVE BODY	BL-1136
14	SPRING ACCU PURGE	BL-1400
15	PISTON ACCU PURGE	BL-1405
16	O-RING ACCU PURGE	BL-1402
17	VALVE PLATE	BL-1132
18	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
19	SEAL, OUTLET NOZZLE PAD	BL-1176
20	O-RING	BL-1192
21	NOZZLE, LARGE	BL-1187
22	CYLINDER, 7 OZ.	BL-1600
23	COUPLER, CYLINDER 7OZ	BL-1320
24	SEAL SUPPORT, PLUNGER 7OZ	BL-1311
25	SEAL, 7OZ	BL-1310
26	WASHER, FLAT #12 MS809 SS	HW5032
27	SHAFT, PLUNGER 7OZ	BL-1300
28	SCREW 1/4-20 X 2 FH PHIL SS	HW30655
29	END CAP ASSY 7oz	BL-1502
30	END CAP	BL-1015
31	PIN BAR ASSY	BL-1505
32	LOCK BAR, GUAGE	BL-1030
33	SPRING, LOCK BAR	BL-1032
34	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
35	SETSCREW 10-24X5/16 CONE PT	HW2070
36	HANDLE, PLUNGER	BL-1000
37	SETSCREW SKT HD 8-32X1/2 HALF DOG	HW2062
38	LID, CANISTER	BL-1085
39	CAPSCREW SKT HD 1/4-20X1 GR8 BLK	HW1017

OPTIONAL PARTS, SERVICE KITS & TOOLS	
DESCRIPTION	PART NO.
SEAL KIT; INCLUDES ITEM 25 & INSTALL TOOL	BL-1590
SEAL INSTALLATION TOOL	BL-1312
ACCU PURGE KIT; INCLUDES ITEMS 14 & 16	BL-1620
VALVE ASSY LESS NOZZLE; ITEM 12 LESS ITEM 21	BL-1555P
NOZZLE, SMALL 0.094	BL-1185
NOZZLE, MEDIUM 0.125	BL-1187
NOZZLE, EXTRA LARGE 0.220	BL-1188



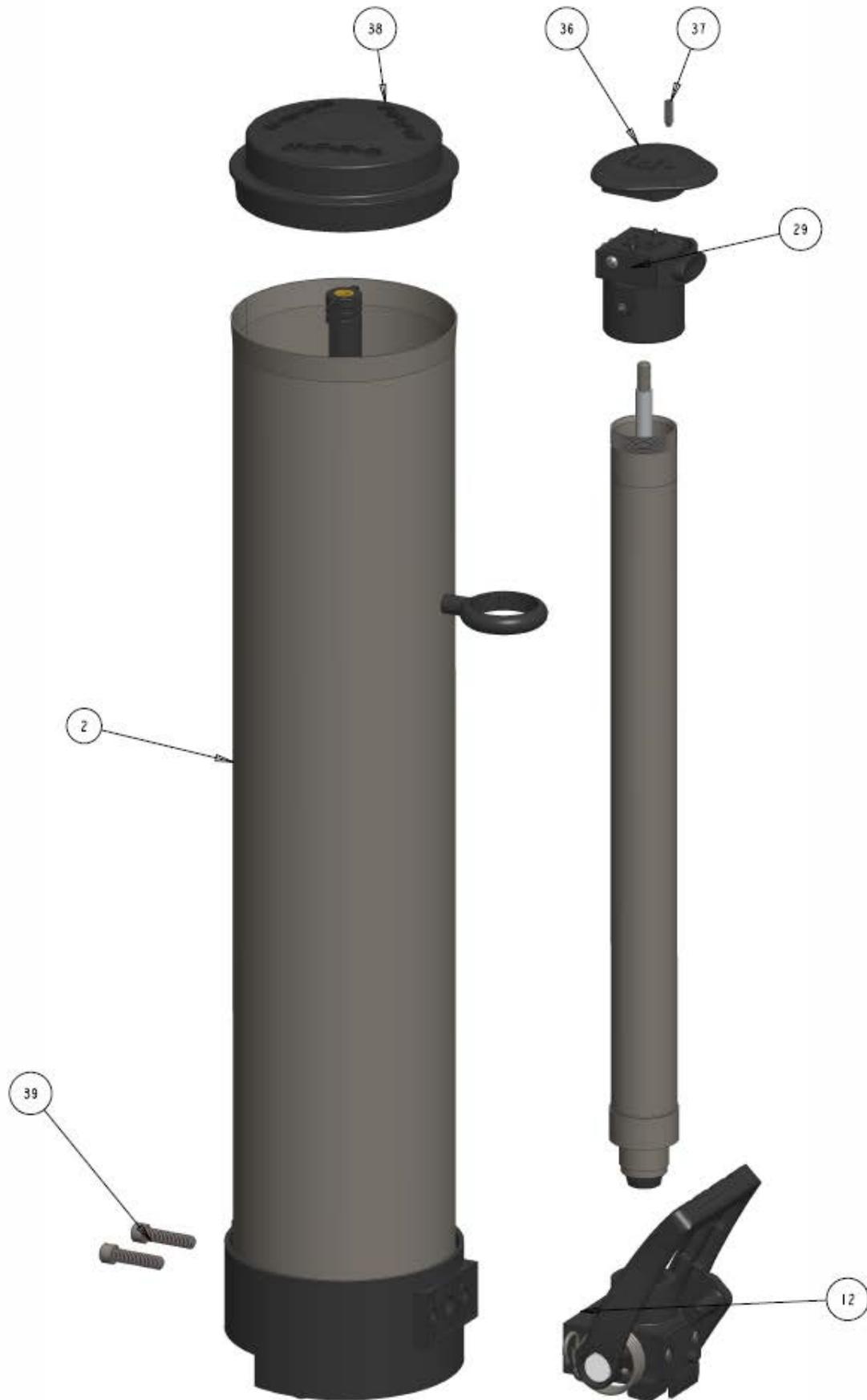


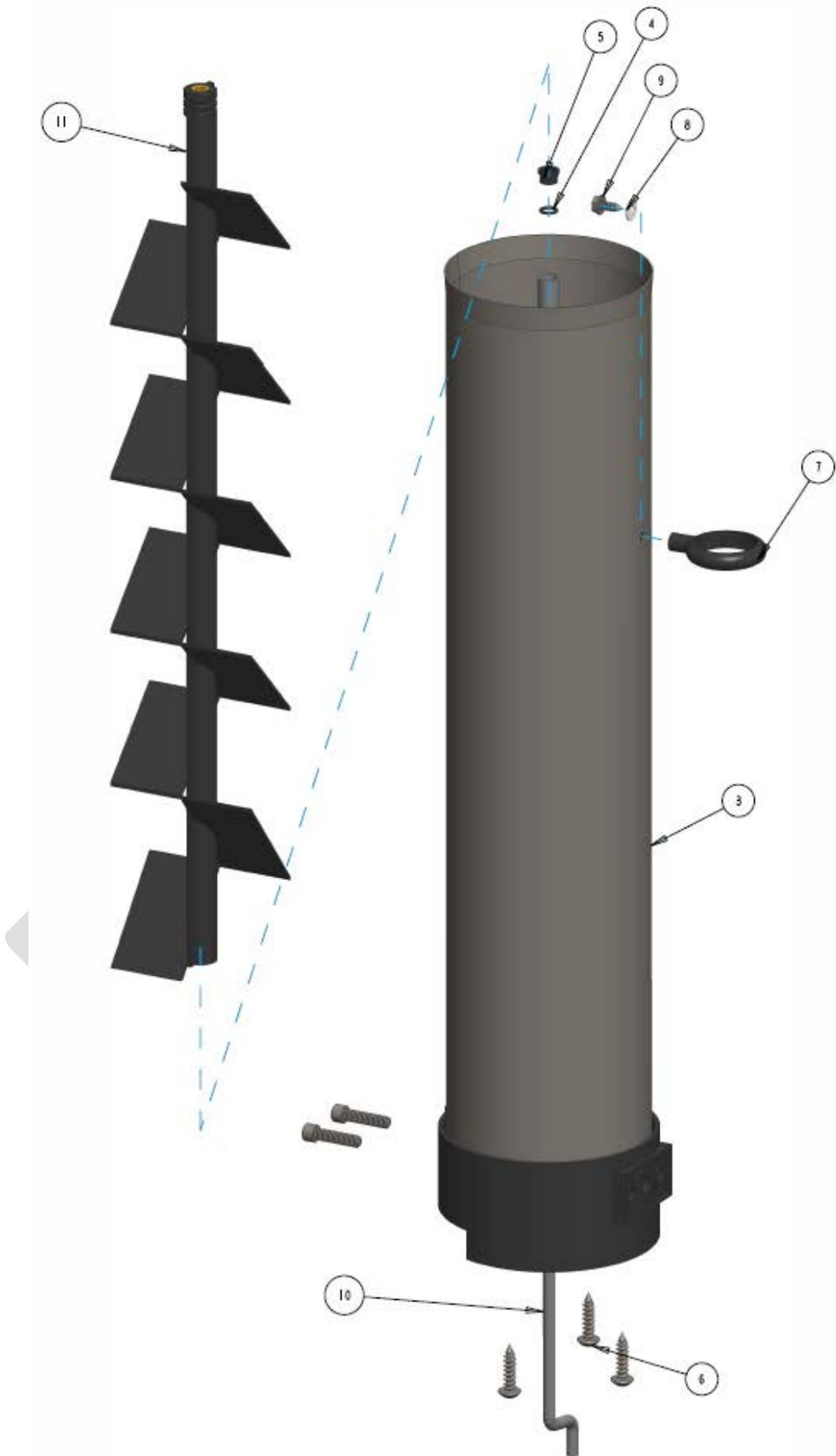


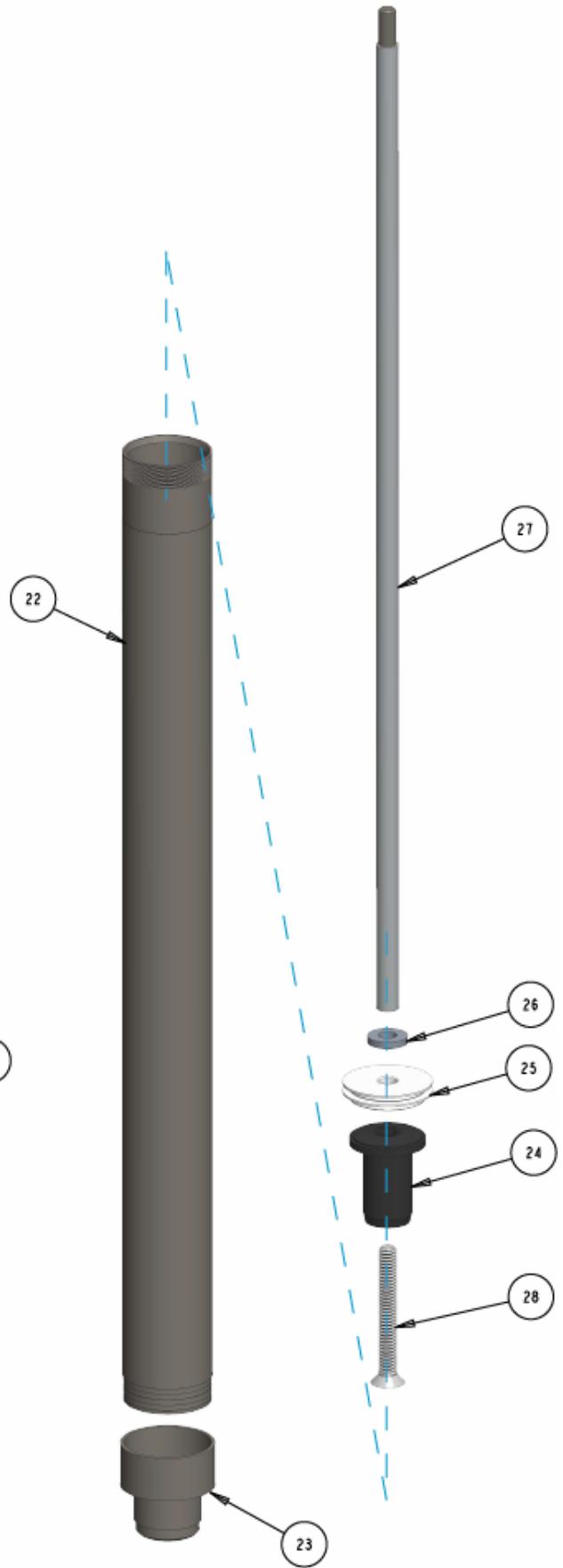
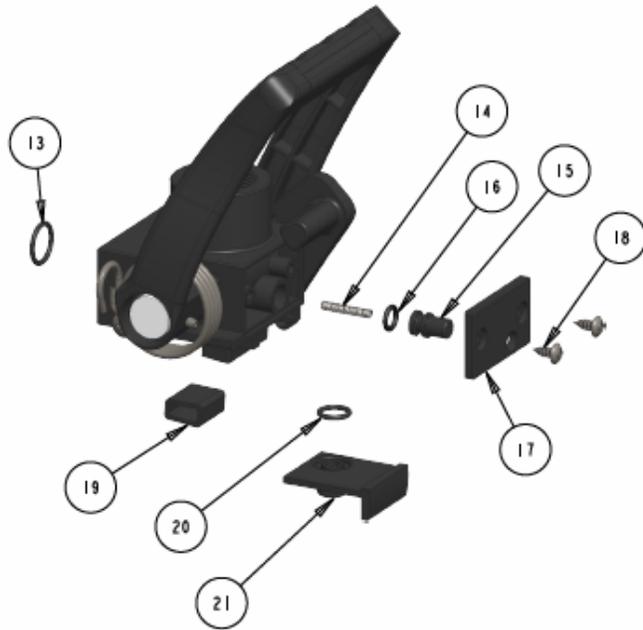
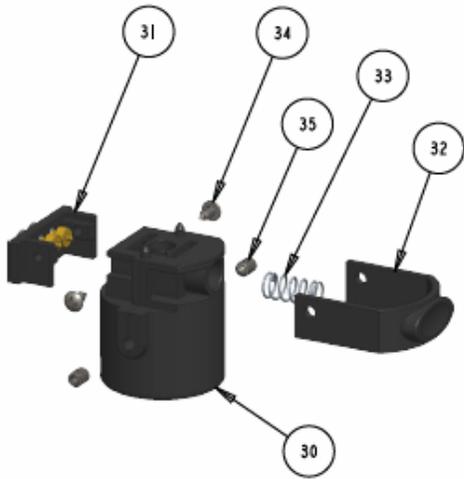
D60 Canister

ITEM	DESCRIPTION	PART NO.
1	CANISTER & PUMP ASSY D60 LESS GAUGE	BL-1780
2	CNSTR 4.5QT SS W/PAD & DRV SHFT	BL-1611
3	CANISTER ASSY 4.5QT SS	BL-1610
4	O-RING PADDLE BUSHING	BL-1105
5	BSHNG, PADDLE SPRT TUBE	BL-1095
6	SCREW, #14X1 PAN HD PH DRV TYPE B PLTD	HW30629P
7	SUPPORT RING	BL-1328
8	WASHER, FLAT #10 X 7/16 X 0.032THK NYLON	HW5022
9	#10 SELF TAP SCREW	HW30492
10	DRIVE SHAFT, PADDLE 4.5QT	BL-1340
11	PADDLE ASSY, 4.5QT	BL-1630
12	VLV ASSY W/ NZL-LARGE	BL-1555P-188
13	O-RING VALVE BODY	BL-1136
14	SPRING ACCU PURGE	BL-1400
15	PISTON ACCU PURGE	BL-1405
16	O-RING ACCU PURGE	BL-1402
17	VALVE PLATE	BL-1132
18	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
19	SEAL, OUTLET NOZZLE PAD	BL-1176
20	O-RING	BL-1192
21	NOZZLE, LARGE	BL-1187
22	CYLINDER, 7 OZ.	BL-1600
23	COUPLER, CYLINDER 7OZ	BL-1320
24	SEAL SUPPORT, PLUNGER 7OZ	BL-1311
25	SEAL, 7OZ	BL-1310
26	WASHER, FLAT #12 MS809 SS	HW5032
27	SHAFT, PLUNGER 7OZ	BL-1300
28	SCREW 1/4-20 X 2 FH PHIL SS	HW30655
29	END CAP ASSY 7oz	BL-1502
30	END CAP	BL-1015
31	PIN BAR ASSY	BL-1505
32	LOCK BAR, GUAGE	BL-1030
33	SPRING, LOCK BAR	BL-1032
34	SCREW SHT MTL #6X5/16 PAN HD PH DRV SS	HW30051P
35	SETSCREW 10-24X5/16 CONE PT	HW2070
36	HANDLE, PLUNGER	BL-1000
37	SETSCREW SKT HD 8-32X1/2 HALF DOG	HW2062
38	LID, CANISTER	BL-1085
39	CAPSCREW SKT HD 1/4-20X1 GR8 BLK	HW1017

OPTIONAL PARTS, SERVICE KITS & TOOLS	
DESCRIPTION	PART NO.
SEAL KIT; INCLUDES ITEM 25 & INSTALL TOOL	BL-1590
SEAL INSTALLATION TOOL	BL-1312
ACCU PURGE KIT; INCLUDES ITEMS 14 & 16	BL-1620
VALVE ASSY LESS NOZZLE; ITEM 12 LESS ITEM 21	BL-1555P
NOZZLE, SMALL 0.094	BL-1185
NOZZLE, MEDIUM 0.125	BL-1187
NOZZLE, EXTRA LARGE 0.220	BL-1188







Counter Top Base

ITEM	DESCRIPTION	PART NO.
1	BODY * SWIVEL CD	BL-2065
2	NUT * SWIVEL CD	BL-2070
3	NUT * TURNTABLE CD	BL-2075
4	BEARING * SWIVEL BODY NEEDLE STYLE	BL-2016
5	CRANKSHAFT	BL-2010A
6	WASHER, CRANKSHAFT	BL-2020
7	LEVER * BRAKE CD	BL-3100
8	KNOB BRAKE	BL-3105
9	PIN COTTER 1/8X1 PLTD	HW6086
10	SPRING * BRAKE CD	BL-3110
11	PIN COTTER 5/32X1-1/4 PLTD	67/17
12	ROLLER WHEEL ASSY LESS SPACER &SCREWS	BL-3505-1
13	SPACER, ROLLER WHEEL ASSY	BL-3505-2
14	SCREW, SHT MTL #8X3/4 PAN HD PHIL	HW3032P
15	TIMER, NIDEC TMDJ	BL-2000
16	SCREW, SHT MTL #6 X 1/2 SELF TAP PLTD	HW3009P
17	SPACER, ALUM. 3/8X.196X1/8THK	BL-2008
18	MOTOR, 110VAC 60HZ	BL-2004
19	WASHER * INT. LOCK #10 PLTD	HW5010P
20	SCREW, 10-32 X 1-1/2 RND PLTD	HW3050P
21	PLATE, BOTTOM COUNTER BASE	BL-3210
22	BUMPER	BL-3215
23	SCREW SHEET METAL 8 X 3/4 PLTD	HW3032P
24	SCREW, 10-32X1/2 RD PLTD	HW3041P
25	NUT, HEX 10-32 PLTD	HW4010P
26	HEYCO 1200 / SR 6N3-4	85-16

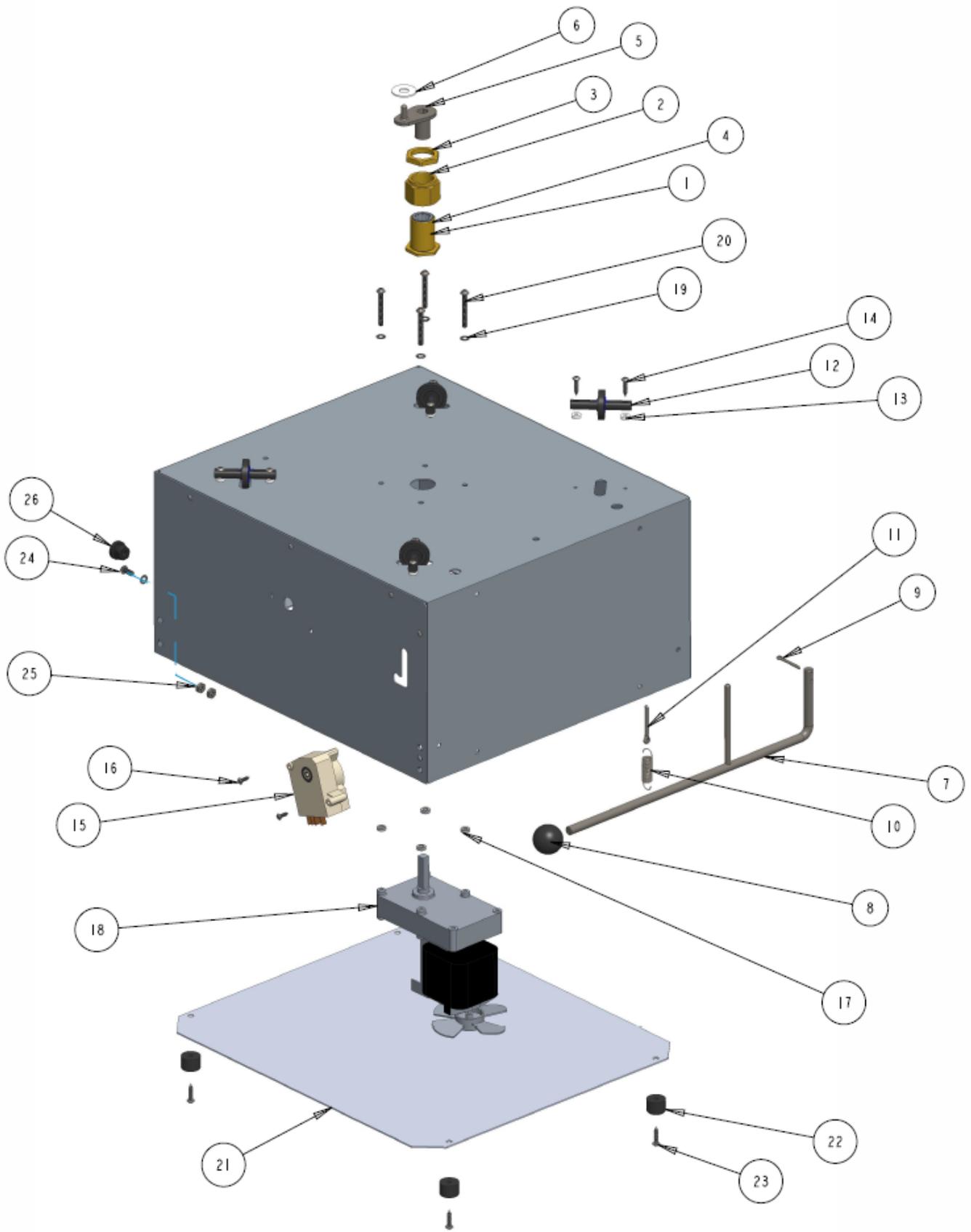
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OPTIONAL PARTS, SERVICE KITS & TOOLS	
DESCRIPTION	PART NO.
SWIVEL ASSY KIT; INCLUDES ITEMS 1-4	BL-3511
CRANKSHAFT & WASHER KIT; INCLUDES ITEMS 5 & 6	BL-2510
BRAKE ASSY KIT; INCLUDES ITEMS 8-11	BL-3600

* BL-2005 replaces BL-2004 on 220V 50Hz dispensers

* BL-2001 replaces BL-2000 on 220V 50Hz dispensers

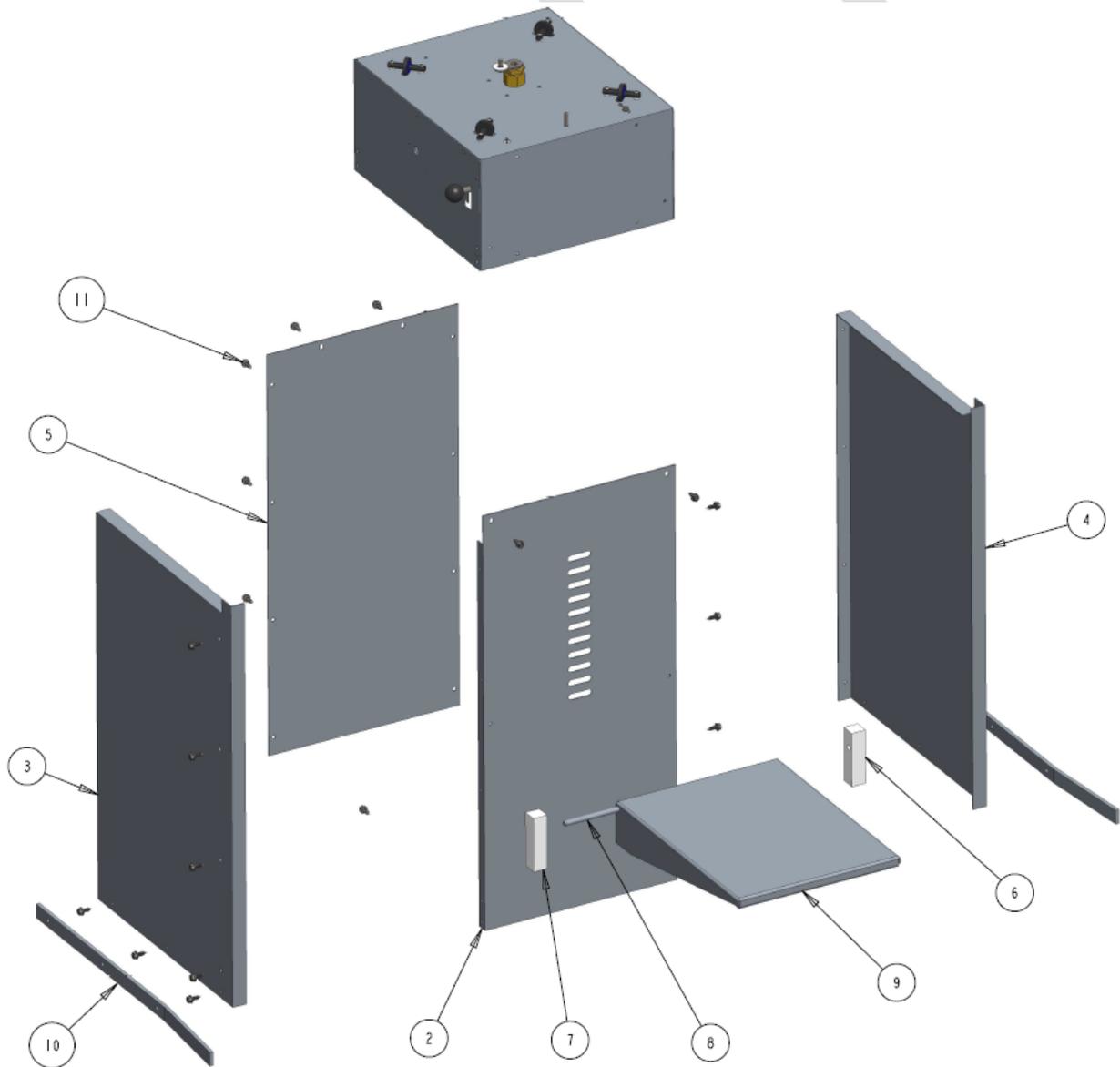


Floor Stand Base

ITEM	DESCRIPTION	PART NO.
1	FLOOR STAND 23/24 16P	BL-3761 *
2	FRONT PANEL * NEW CD	BL-3354
3	SIDE PANEL * LEFT	BL-3352
4	SIDE PANEL * RIGHT	BL-3351
5	BACK PANEL * NEW CD	BL-3353
6	GLIDE ADJ TRAY - RIGHT	BL-3358-R
7	GLIDE ADJ TRAY - LEFT	BL-3358-L
8	ROD * ADJUSTABLE TRAY FLOORSTAND	BL-3357
9	TRAY ADJ. FLOORSTAND 16P	BL-3359 *
10	LEG * CABINET SUPPORT	BL-3300
11	SCREW, SHT MTL #14X3/4 WHW PLTD	HW3066P

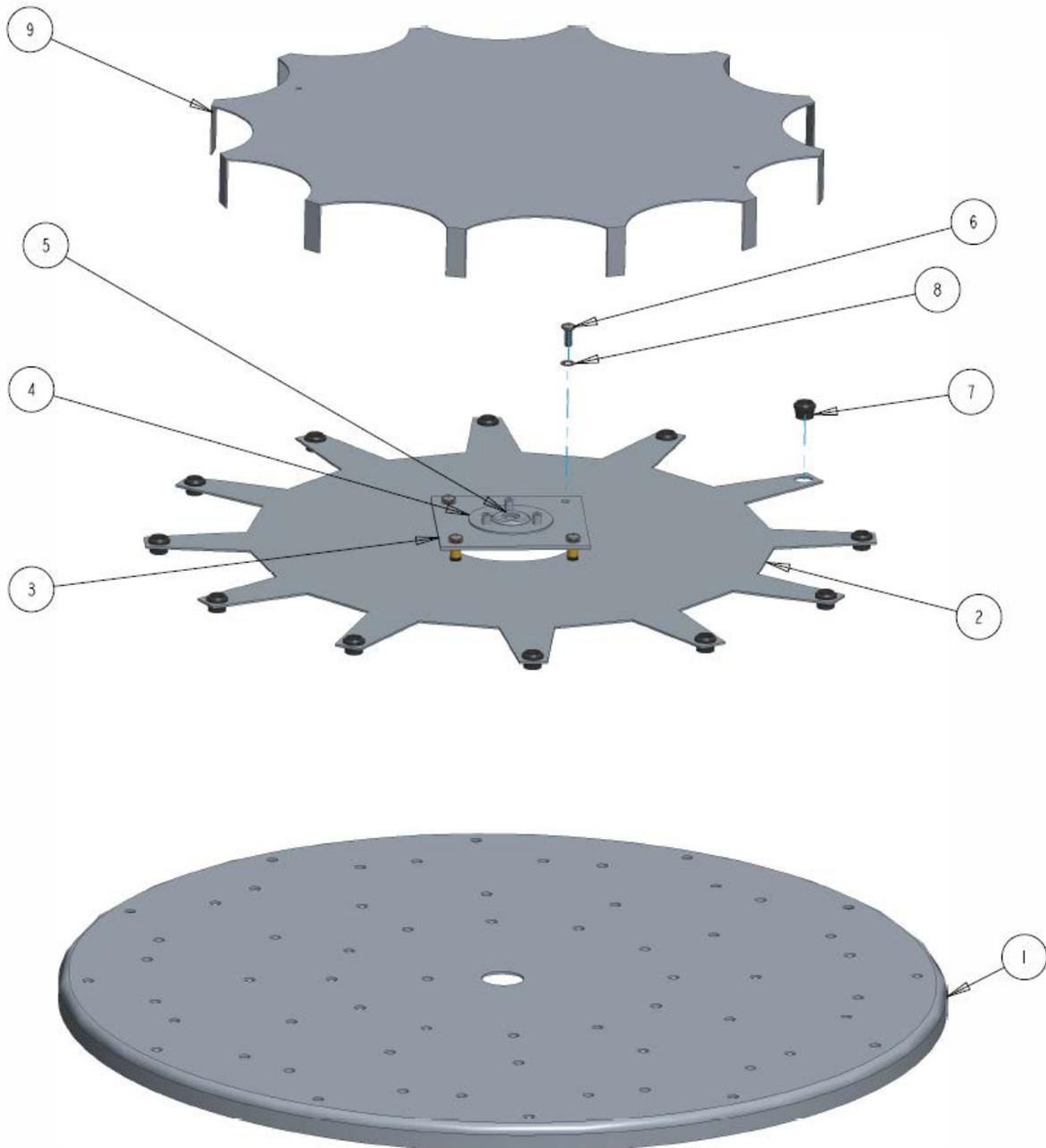
* BI-XXXX replaces BL-3761 for 12 position floor stand

* BI-XXXX replaces BL-3359 for 12 position floor stand



Turntable & Drive Plate – 12 Position

ITEM	DESCRIPTION	PART NO.
1	TURNTABLE 12 POSITION	BL-3000W
2	DRIVE PLATE - 12 POSITION	BL-2045
3	PLATE * BEARING CNTR DRV	BL-2040
4	FLANGE * BEARING CD	BL-2025
5	BEARING * DRIVE PLATE CD	BL-2030
6	SCREW, 10-32 X 1/2 RD HD COMBO	HW3041P
7	BUSHING * DRIVE PLATE CD	BL-2047
8	WASHER * INT. LOCK #10 PLTD	HW5010P
9	DRIVE COVER - 12 POSITION	BL-2050W



Turntable & Drive Plate – 16 Position

ITEM	DESCRIPTION	PART NO.
1	TURNTABLE * 16 POSITION CD	BL-3010W
2	DRIVE PLATE * 16 POSITION	BL-2055
3	PLATE * BEARING CNTR DRV	BL-2040
4	FLANGE * BEARING CD	BL-2025
5	BEARING * DRIVE PLATE CD	BL-2030
6	SCREW, 10-32 X 1/2 RD HD COMBO	HW3041P
7	BUSHING * DRIVE PLATE CD	BL-2047
8	WASHER * INT. LOCK #10 PLTD	HW5010P
9	DRIVE COVER * 16 POSITION	BL-2060W

