



# FT 150 VLX

## *Part's Manual*

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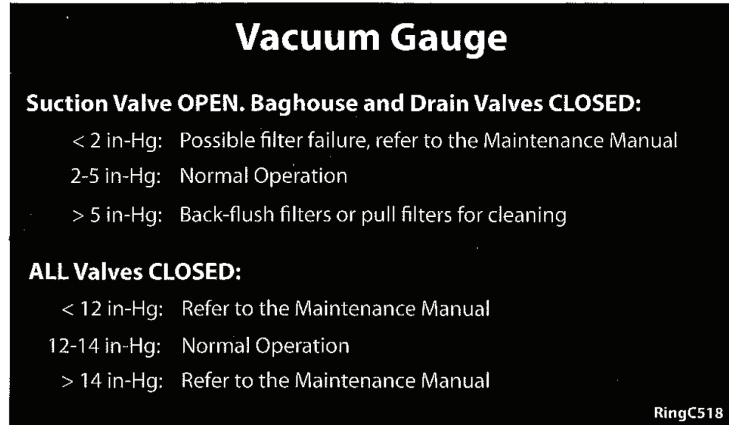
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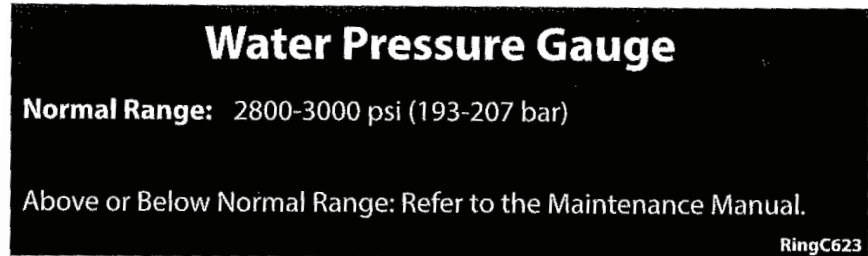
# Decals and Labels



**70000044-Decal: Battery Explosion/ Read Manual**



**RINGC518- Decal: Vacuum Gauge**

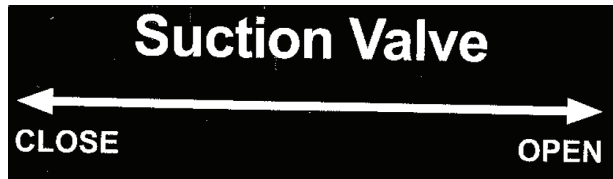


**RINGC517-Decal: Water Pressure Gauge**



**RINGC508- Decal: "Baghouse Drain Valve"**

## Decals and Labels



**RINGC408- Decal: "Suction Valve"  
(close- L open- R)**



**RINGC416- Decal:  
"Winterize Button"**



**Stay Clear of Moving Parts  
While This Machine is in  
OPERATION**

**RINGC468- Decal: "Warning  
Stay Clear of Moving Parts.."**



**RINGC414- Decal: "Water Drain  
Valve"**

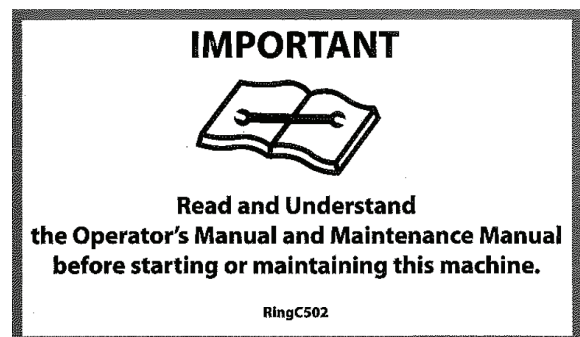


**RINGC481- Decal: WARNING STAY CLEAR**

# Decals and Labels



**RINGC503- Decal: "Trailer Warning"**



**RINGC502- Decal: "Important- Read and Understand..."**

# Decals and Labels

## Pre-Operation Checklist

IMPORTANT: Read the operators manual.

### Initial Settings

- Bag House Drain Valve ..... OPEN
- Dump Valve .....CLOSED
- Suction Valve .....CLOSED
- Rear Door and Rear Door Latch Lever. .... CLOSED and LOCKED
- Fluid Sector Valve. ....WATER
- Pressure/Vacuum Selector Valve (if equipped) .....NEUTRAL
- Water Pump Switch ..... OFF

### Daily Maintenance

- Bag House .....Drain
- Bag House Interior and Filters ..... Clean As Needed
- Bag House Drain Valve. .... Close at End of Day (to keep mice out)
- Fluid Levels .....Check: engine oil and coolant; blower oil; water pump oil; hydraulic oil
- Fuel Tank .....Fill at End of Day (to help prevent condensation)
- Hour Meter ..... Check (maintenance required every 100 hours)
- Machine ..... Overall Inspection \*
- Primary Shut-Off Assembly. ....Wash
- Vacuum Hose ..... Inspect
- Water Tank Level ..... 1/3 Capacity (minimum)
- Water Strainer. .... Flush and Inspect

\* Refer to the Operator Manual for more detailed information.

RingC37

## RINGC373- Decal: Prep-op, Check List

## **Decals and Labels**



**RINGC450- Decal: "Rear Door Latch Lever"**



**RINGC516- Decal: "Vacuum Gauge"**

## Decals And Labels



**2326324- Decal: WARNING: Explosive Fuel**



**C23813- Decal: "Gasoline"  
Red on White. 1.5 x 7"**



**7000C359- Decal: High Pressure Water Warning**



# Decals and Labels



**RINGC609- R Logo  
Large Decal**

**RINGC608- R  
Logo Small Decal**

**RINGC626**



**RINGC624**

**RINGC625**

**RINGC610**

# Decals And Labels



**7000C381- Decal: Vacuum Danger**

**RINGC412- Decal: "Dump Valve"  
(close-L, open-R)**



**7000C358- Decal: Pinch Points Warning**

## ***Decals And Labels***

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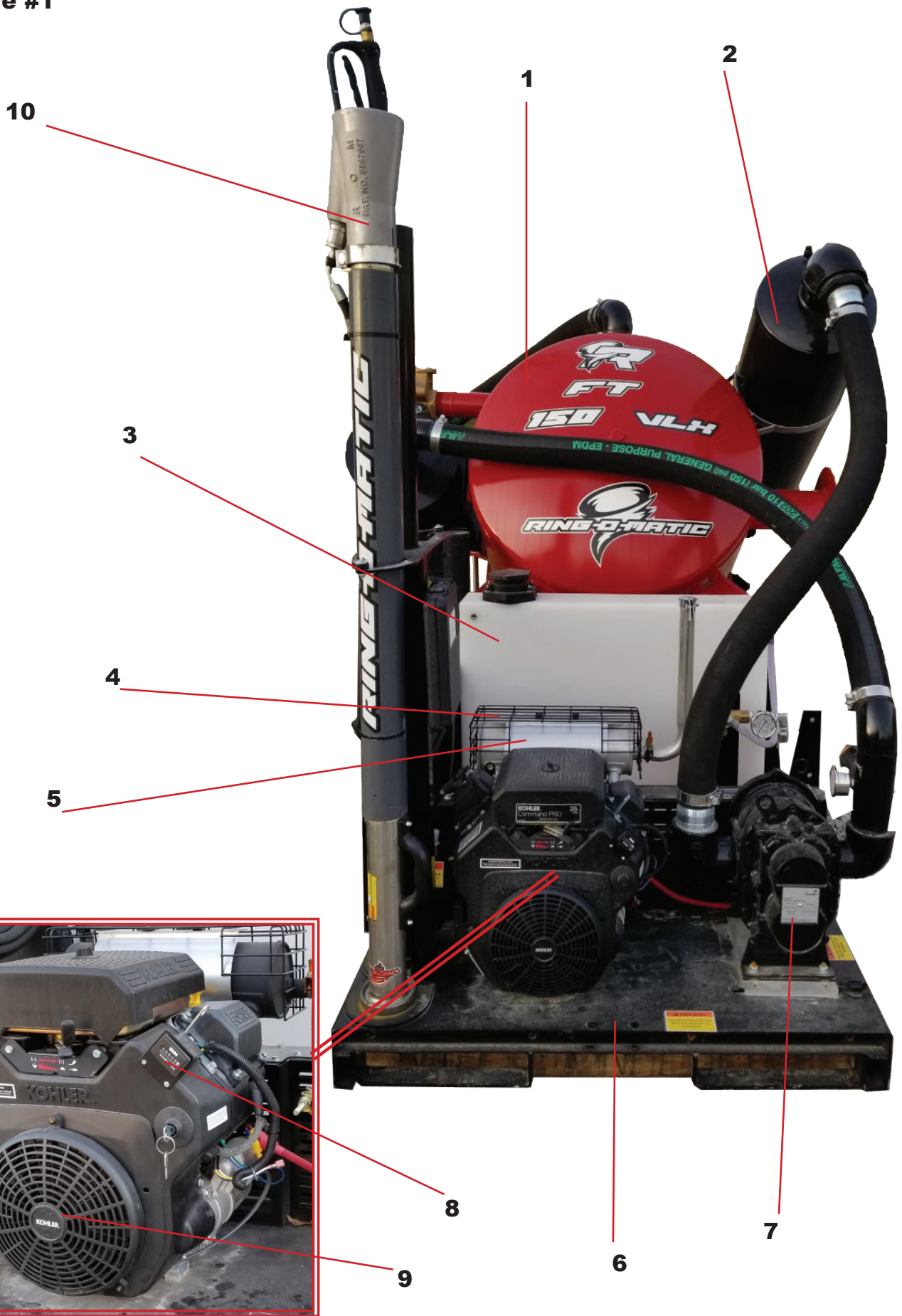
**RingC404: Decal: "Anitfreeze"**



**RingC484: Decal "Fluid Selector Valve"**

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Figure #1

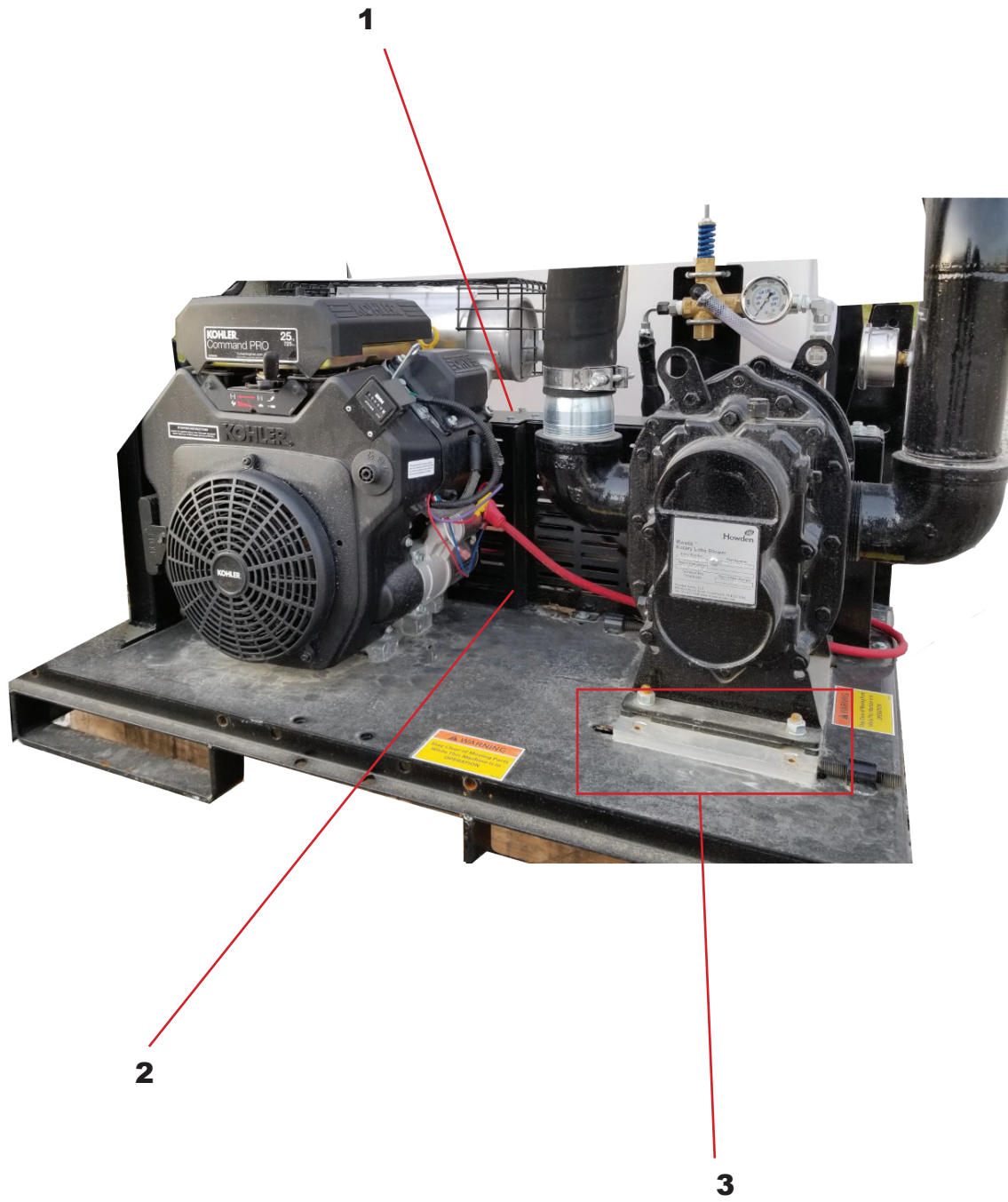


**Figure #1**

## **Engine & Main Components**

- # 1.....Part Number: 36ODX3/16NOM  
Description: 36" OD x 3/16 NOM STD F&D CS (Tank)**
  
- # 2.....Part Number: 55104TT  
Description: 4" Chambered Silencer URB-4**
  
- # 3.....Part Number: LDS 1120 x 007  
Description: 95 Gallon Drop-in Tank**
  
- # 4.....Part Number: 24 755 104-S  
Description: Kohler Muffler Guard Kit**
  
- # 5.....Part Number: 24 786 22-S  
Description: Kohler Offset muffler kit starter side discharge**
  
- # 6.....Part Number: BR150-21  
Description: Machine Frame Plate**
  
- # 7.....Part Number: 47 URAI  
Description: Roots 4" Blower**
  
- # 8..... Part Number: T41D45  
Description: Hour Meter, DC, Front Panel Mount w/ Clip for VL-55**
  
- # 9.....Part Number: CH740-3005  
Description: Kohler 725 cc 25 HP V Twin with mounted controls**
  
- # 10 See Tooling Options Pages**

**Figure #2**



**Figure #2**

**Belt Guard Components**

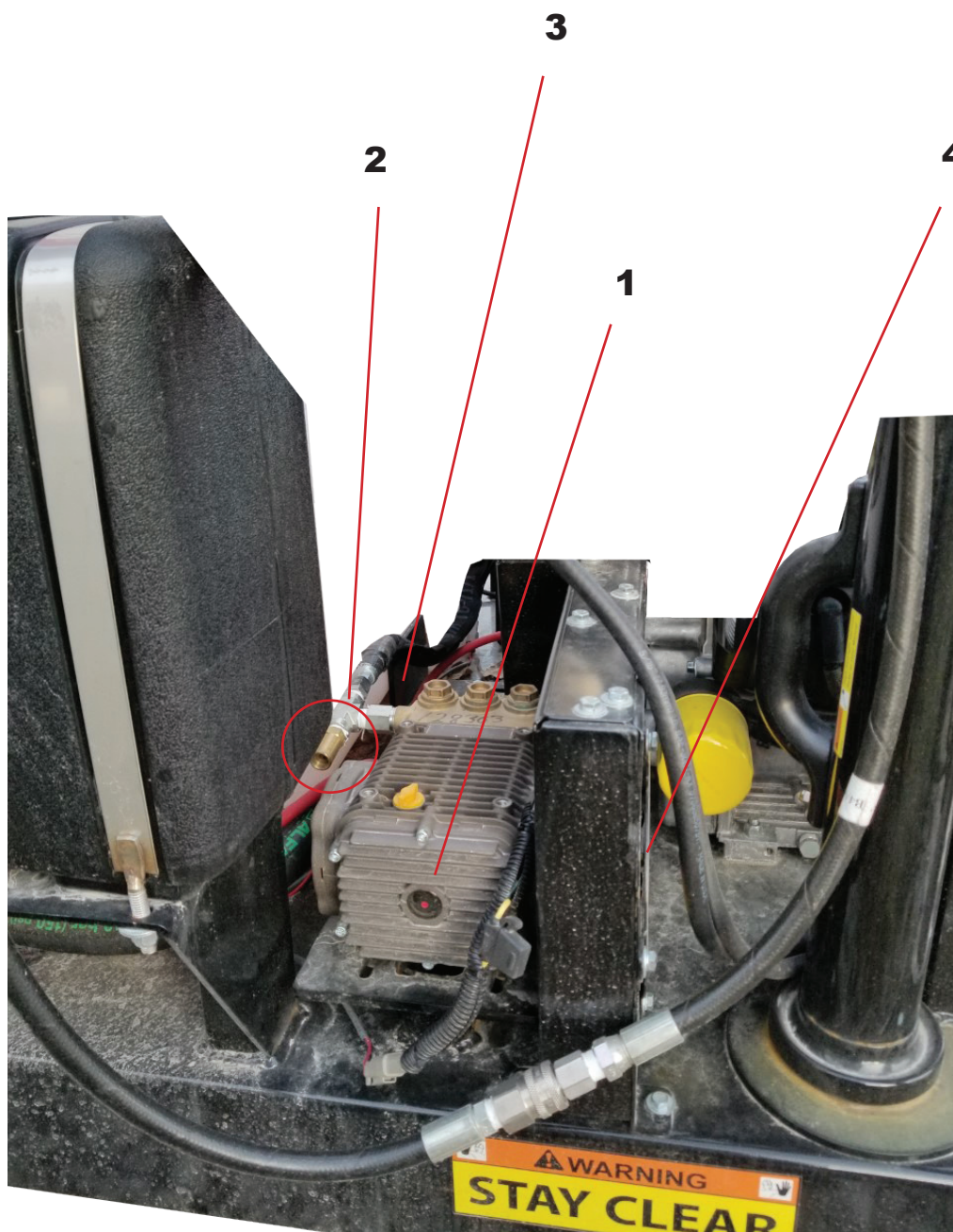
**#1.....Part Number: BR150-19  
Description: Belt Guard Top**

**#2.....Part Number: BR150-18  
Description: Belt Guard Bottom**

**#3.....Part Number: APP-907  
Description: \*\*\*\*\*Adapter plate  
needed for Roots Blower up grade for 47 URAI.**



**Figure #3**



**Figure #3**

## **Hydraulic Pump and Engine Components**

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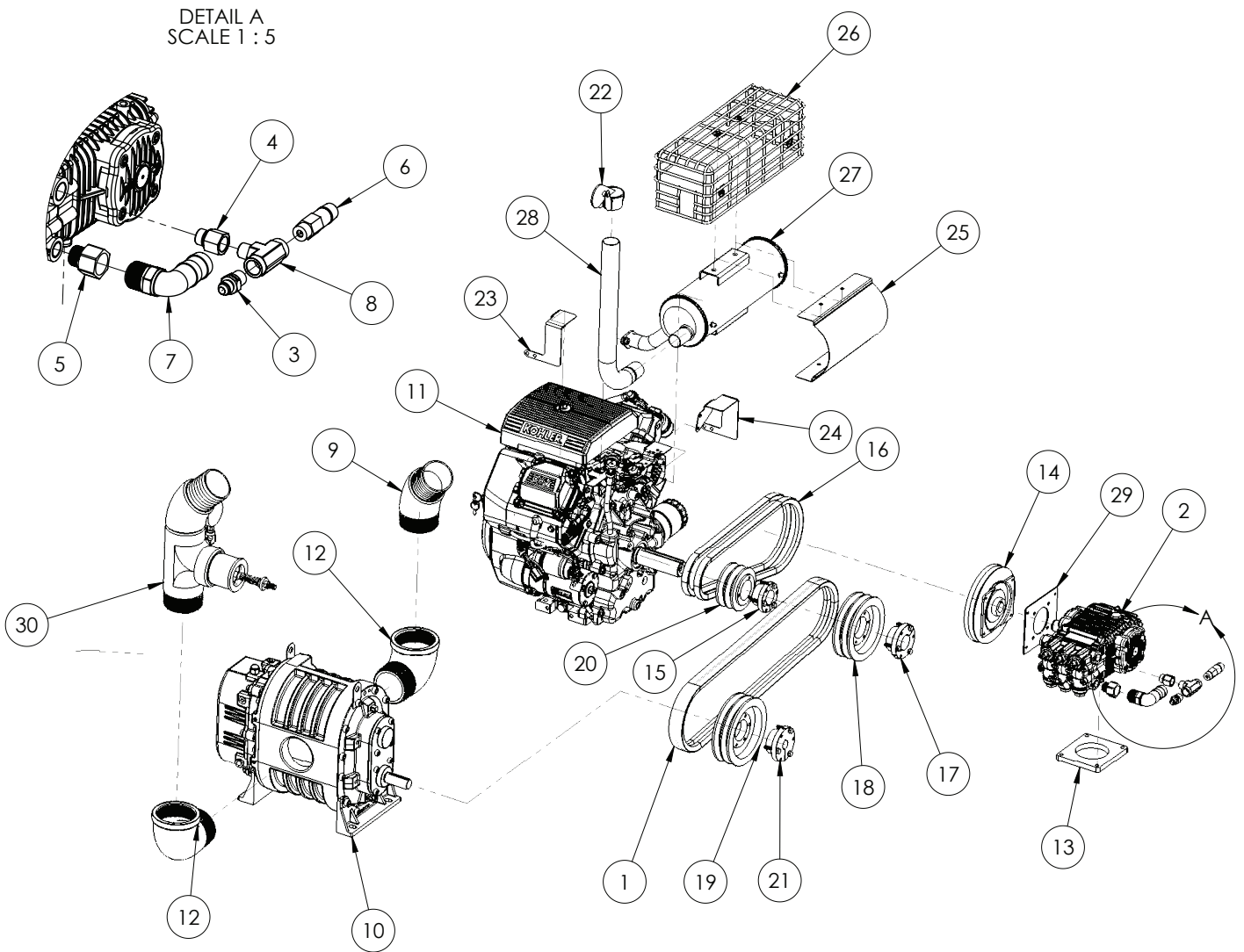
**#1.....Part Number: 6411.0100.00-L**  
**Description: FWS 3530 S Left Hand Drive Comet Pump**

**#2.....Part Number: 33962**  
**Description: 1000-4000 PSI Pop off valve**

**#3.....Part Number: BR150-83**  
**Description: Water tank retention plate**

**#4.....Part Number: BR150-72**  
**Description: Clutch guard plate**

**Figure #4**

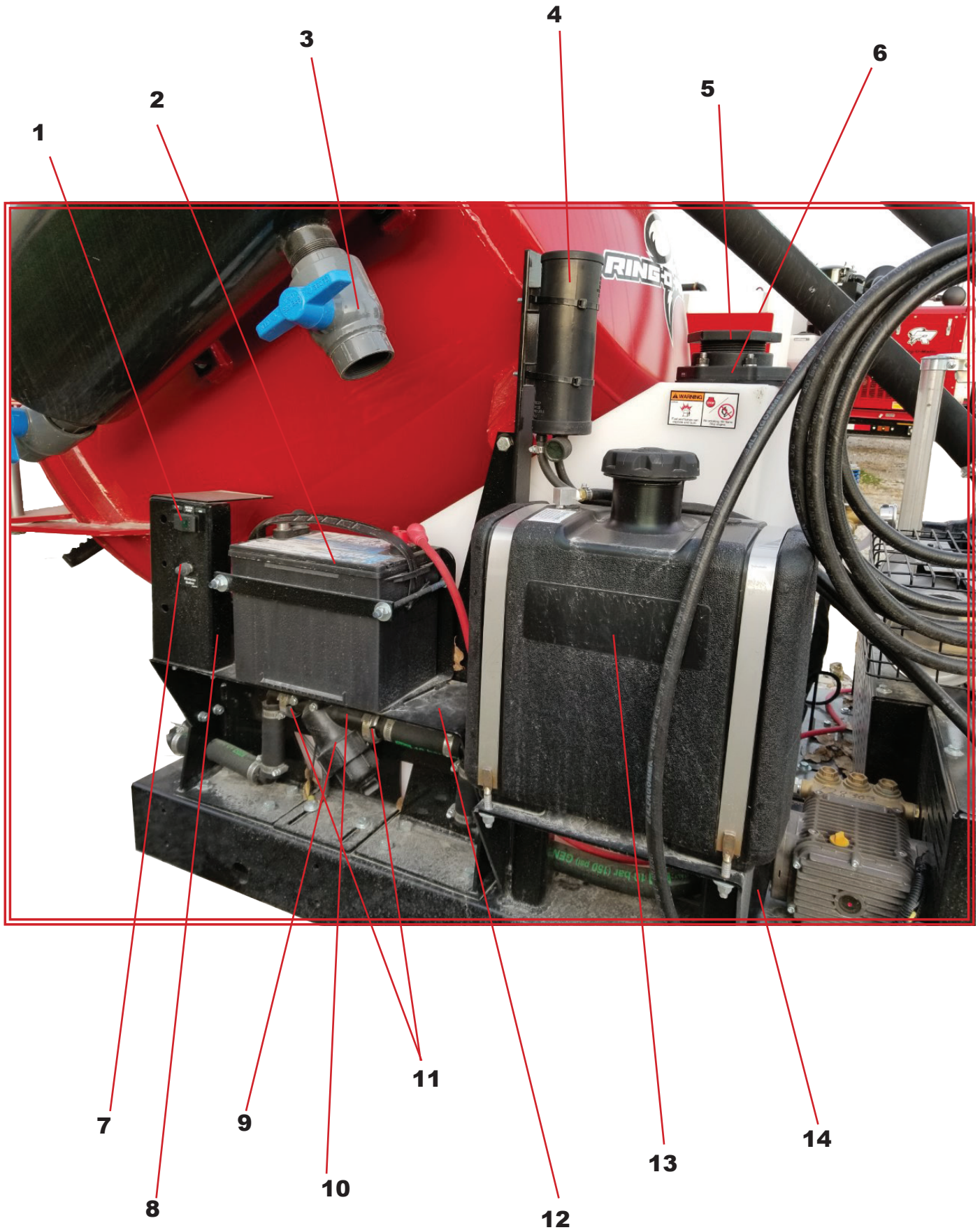


**\*\*For Blower maintenance, See Page. 47 w**

**Figure #4****Engine Breakdown**

<b>#</b>	<b>Part Number</b>	<b>Description</b>
#1	04213040	2/5VP6000 Belt
#2	6411.0100.00-L	Comet Water Pump
#3	SS-2404-06-06-FG	37 ° JIC Adapter
#4	3455-06-06	Thread Adapter
#5	3200-08-12	Pipe Adapter
#6	33962	1000-4000 PSI Pop-off Valve
#7	HB075/100-90	3/4" to 1" Pipe Elbow
#8	FG5604-06-06-06	Branch Tee
#9	275swt-34	3" 45 ° Thread By Barb Elbow
#10	4LPS GACBRA0188	4LP Bottom Drive Open Clearance Blower 4LP
#11	CH740-3005	KOHLER 725CC 25 HP V Twin
#12	M90ST3	STD Black 90 ° Street Elbow
#13	BR150-15	Water Pump Spacer Plate
#14	8201.0007.00	MAE-04A Two Groove Clutch
#15	00215299	SH 1-7 16" Quick Connect Bushing
#16	Ax39	Ax39 Gripnotch Belt
#17	00215299	SDS 1-7/16 Quick Disconnect Bushing
#18	00725934	SDS A5.2/B5.5 Quick Disconnect Sheave
#19	00725950	SDS A5.6/B5.9 Quick Disconnect Sheave
#20	00699782	2A3.2/B3.6 Quick Connect Sheave
#21	00215166	SDS 7/8" Quick Disconnect Bushing
#22	1.5RC	1 1/2" Rain Cap
#23	24_314_30	Left Exhaust Shield
#24	24_314_31	Right Exhaust Shield
#25	24_314_50-S	Muffler Heat Shield
#26	24_755_104-S	Muffler Cage
#27	24_786_22-S	Starter Side Offset Muffler Kit
#28	BR150-74	1 1/2" Exhaust Elbow
#29	APP-56 002	Water Pump to Clutch Adapter Plate
#30	See Vacuum Relief Valve Page	

Figure #5

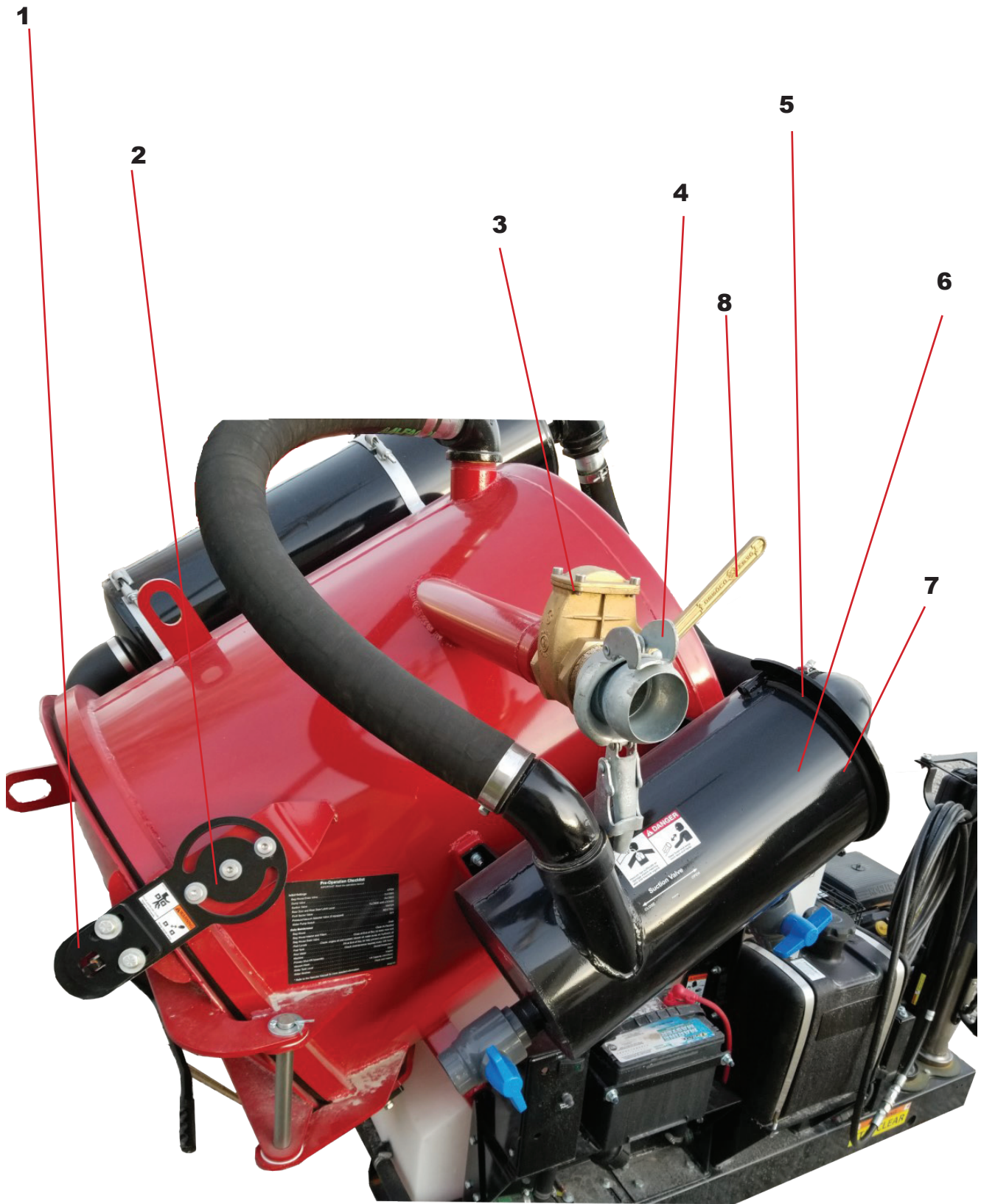


**Figure #5**

## **Control Panel, Battery and Fuel Tank**

- #1..... **Part Number: 502-0020-03**  
**Description: Rocker Switch/ Green lens**
  
- #2..... **Part Number: 24M4**  
**Description: 12 Volt Marine Battery**
  
- #3..... **Part Number: 4876k76**  
**Description: Low-Pressure PVC Ball Valve 2" NPT Female, Gray**
  
- #4..... **Part Number: 468856A**  
**Description: 550CC Carb banister with 1/4" ports**
  
- #5..... **Part Number: PLUG300**  
**Description: 3" Poly Pipe Plug**
  
- #6..... **Part Number: BF300**  
**Description: 3" x 3" Threaded Bolted Tank Flange**
  
- #7..... **Part Number: 691-172**  
**Description: Carling Pushbutton Switch 1-pole on-off screw, 125 volt panel mount**
  
- #8..... **Part Number: BR150-73**  
**Description: Control Panel**
  
- #9..... **Part Number: MLS100-40**  
**Description: 1" Flange Y-Strainer w/ 40 Mesh Screen**
  
- #10..... **Part Number: M100BRB**  
**Description: 1" Flange x 1" Hose Barb**
  
- #11..... **Part Nubmer: FC100**  
**Description: 1" Flange x 1" Hose Barb**
  
- #12..... **Part Number: BR150-41**  
**Description: BR150 Battery Shelf**
  
- #13..... **Part Number: 070591B-FL**  
**Description: 7 Gallon carb/epa fuel tank**
  
- #14..... **Part Number: BR150-42**  
**Description: BR150 Fuel tank shelf**

Figure #6



**Figure #6**

**Valve and Baghouse Components**

**#1..... Part Number: BR150-60  
Description: Pivot Latch Adjuster Plate**

**#2.....Part Number: BR150-59  
Description: Pivot Latch**

**#3.....Part Number: 1040MZ 3” MZ  
Description: Brazz Lever Gate Valve w Handle and Screw**

**#4.....Part Number: W1090820  
Description: 3” Ball X thread with Lever Closure Ring**

**#5.....Part Number: BR150-33 CR150  
Description: Baghouse lid plate**

**#6.....Part Number: BR150-39  
Description: Baghouse body weldmet**

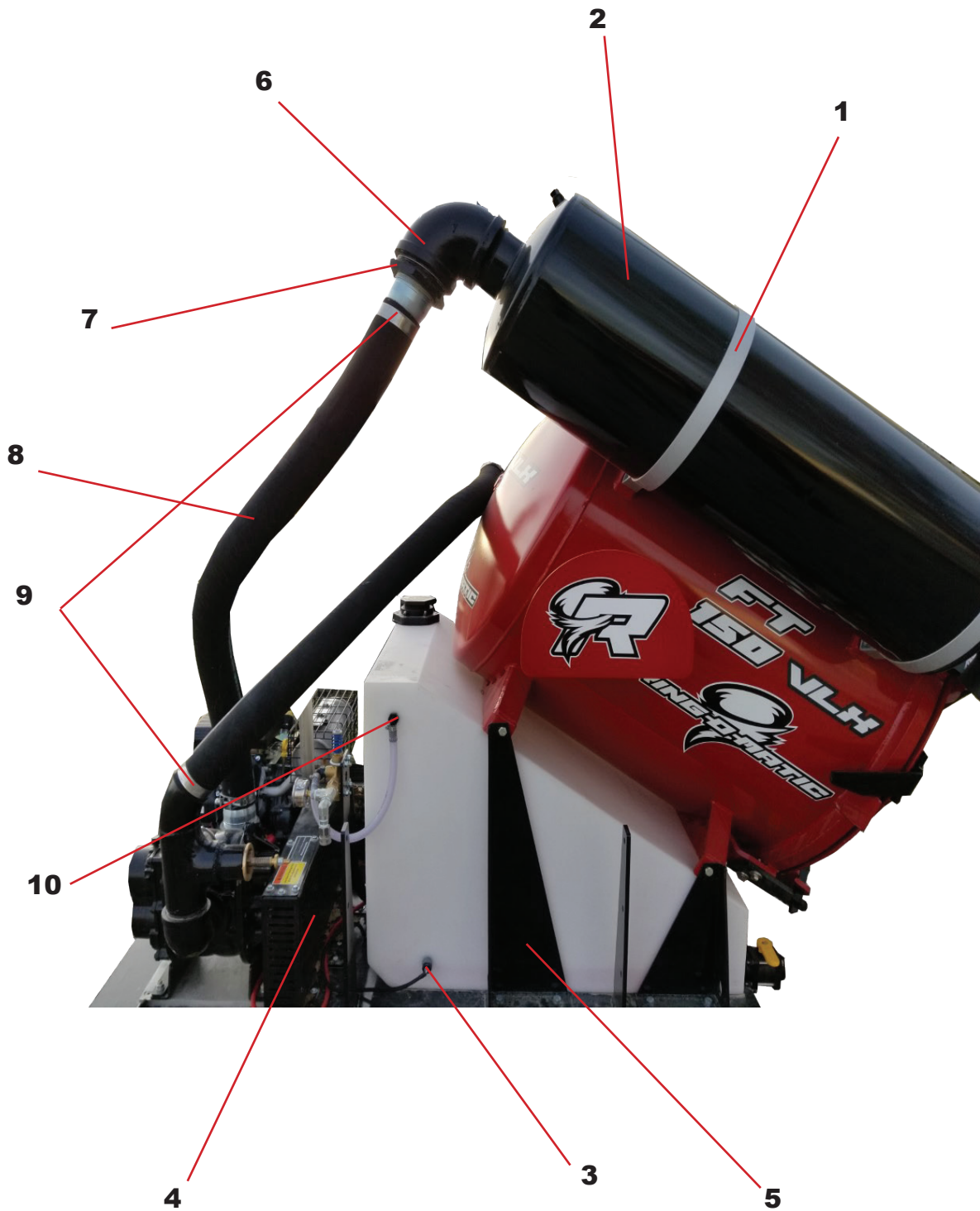
**\*\*\*\*\*Inside Baghouse**

**#7.....Part Number: P148646-016-340  
Description: 7.93”OD x 16.00” cartridge filter**

**#8.....Part Number: 1041-0005  
Description: Gate Valve Handle for 3” & 4”**



**Figure #7**



**Figure #7**

# **Silencer and Water Tank Components**

---

**# 1.....Part Number: Q27242**  
**Description: Mounting Bracket for URB-14 14"**  
**(Pair of 2)**

**#2.....Part Number 55104TT**  
**Description: 4" Chambered Silencer URB-4**

**#3.....Part Number: 15-650-PP**  
**Description: Erecta switch Liquid Level Water Sensor**

**#4.....Part Number: BR150-16**  
**Description: Belt guard Rear**

**#5.....Part Number: BR150-3**  
**Description: Tank Foot Support**

**#6.....Part Number: M903**  
**Description: 3" STD Black 90° Elbow**

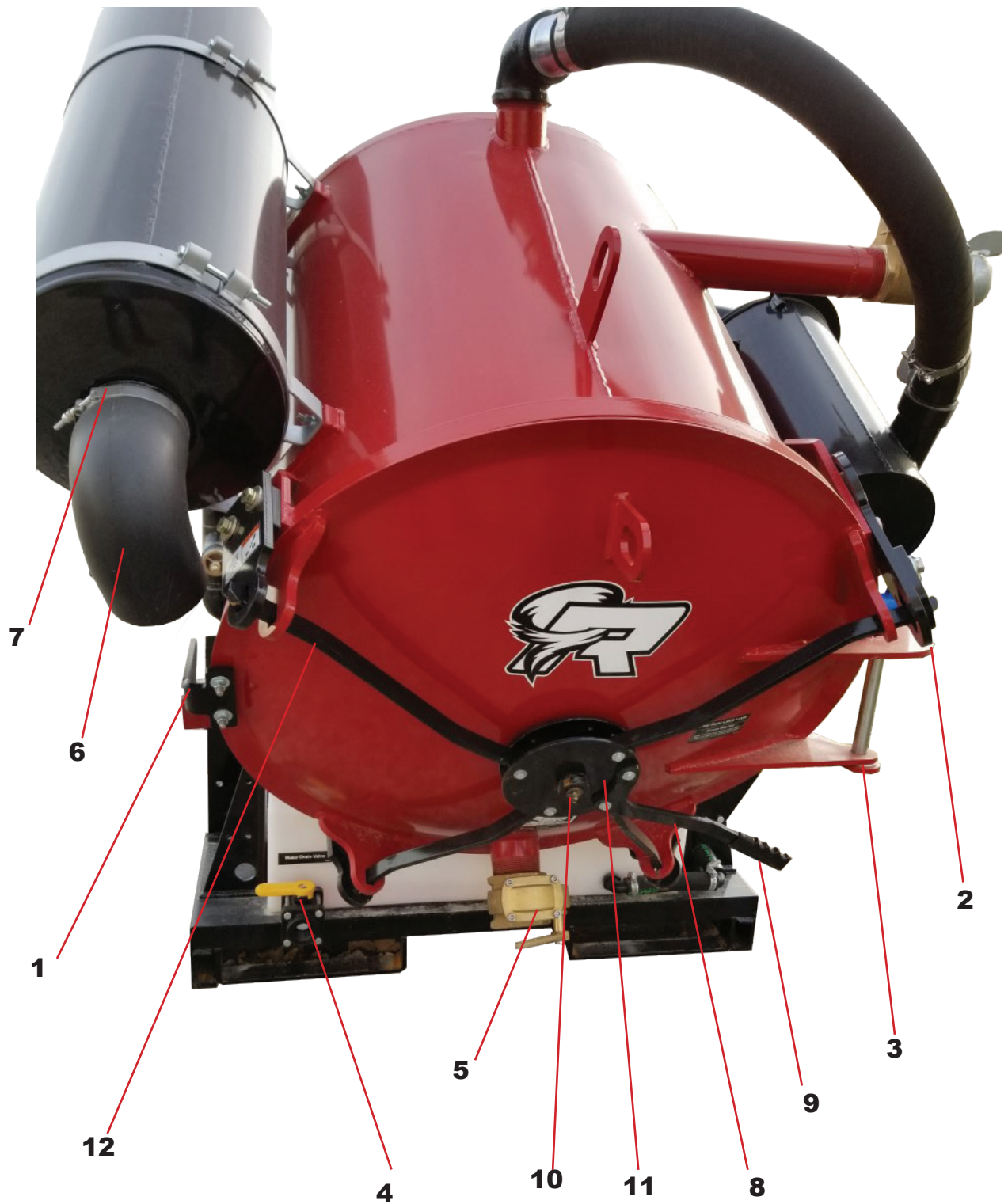
**#7.....Part Number: CIBU4X3**  
**Description: Black Cast Iron Hex Reducer Bushing**

**#8.....Part Number: T202AA-300**  
**Description: Wire Reinforced Hose- 100' Uncut**

**#9.....Part Number: 1071**  
**Description: 3" Single Bolt Clamp**

**#10.....Part Number: HB050-90**  
**Description: 1/2" MPT x 1/2" Hose Barb**

Figure #8



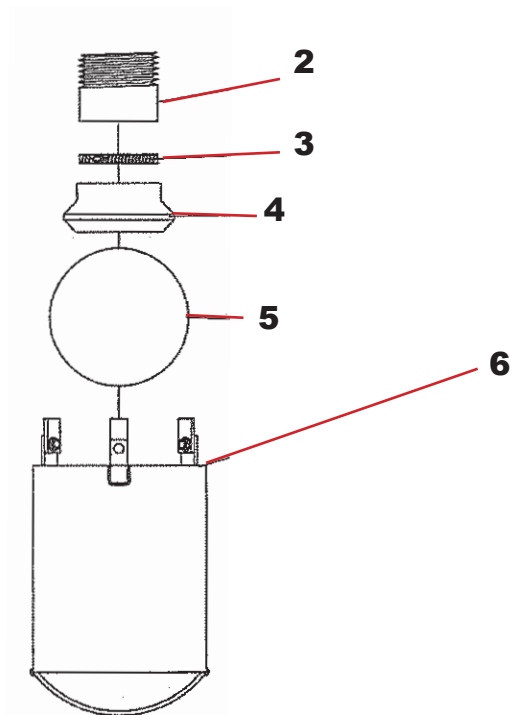
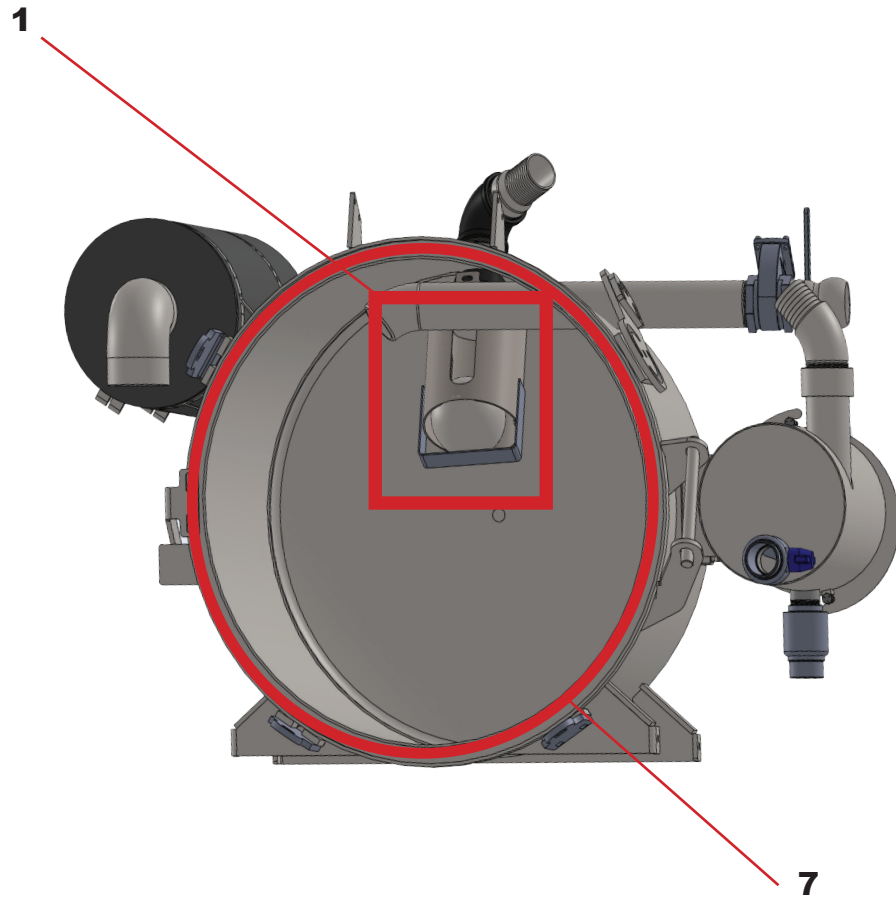
**Figure #8**

# **Door Components**

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- #1.....Part Number: BR150-58  
Description: Door Alignment tab**
- #2.....Part Number: BR150-22  
Description: Door hinge top**
- #3.....Part Number: BR150-23  
Description: Door Hinge Bottom**
- #4.....Part Number: V100FP  
Description: 1" FPT x 1" Port poly valve**
- #5.....Part Number: 1040MZ  
Description: 3" MZ Brass Lever Gate  
Valve with Handle and Screw**
- #6.....Part Number: 90L45  
Description: 4.5" ID x 90 Deg Rubber Elbow**
- #7.....Part Number: 5443K38  
Description: Type 430 SS Bolt Clamp 4 3/4 to 5-1/8 Dia**
- #8.....Part Number: HDPD-51  
Description: Door Lock Handle**
- #9.....Part Number: 97045K63  
Description: Console Handle Grip**
- #10.....Part Number: 60105  
Description: 1/4-28 Standard Zerk Grease Fitting  
.....Part Number: 34273  
Description: 1" ID x 1 3/4" OD x 1/2" W 1PC Collar (Behind #60105)**
- #11.....Part Number: HDPD-61  
Description: Door Wheel Weldment 6 & 4 Hole**
- #12.....Part Number: BR150-119  
Description: Door Locking Arm**

**Figure #9**



**Figure #9**

**Primary Shut-Off & Door Seal**

---

**#1 .....Part Number: 1014-0300-RM**  
**Description: 8" Stainless Steel Ball Cage Assembly 3" Thread, No**  
**Slots in Ball Cage**

**#2 .....Part Number: 1051-0000**  
**Description: 3" x 6" Weldable Nipple**

**#3 .....Part Number: 1090-0001**  
**Description: Hose Clamp for 1090 Seat**

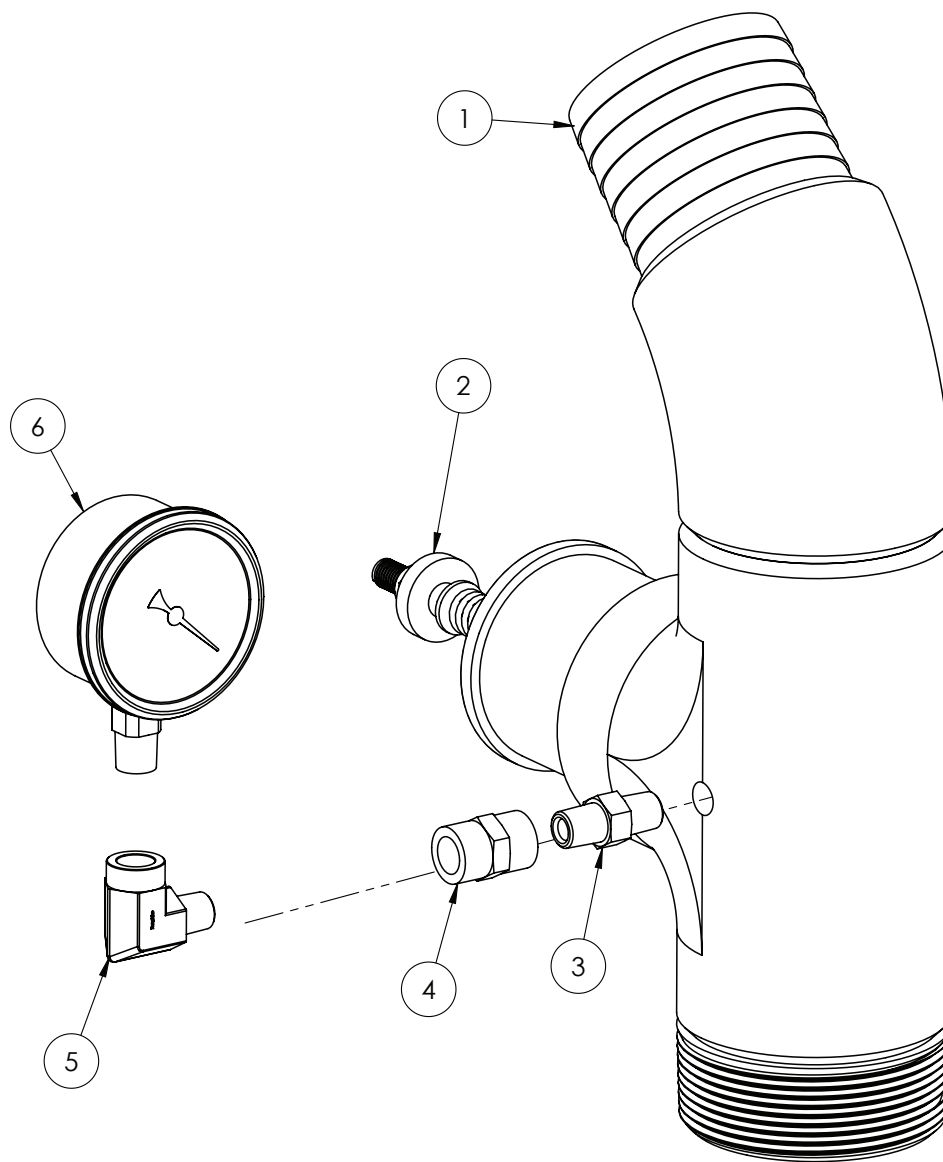
**#4 .....Part Number: 1090-0000**  
**Description: 3.5" Rubber Seat**

**#5 .....Part Number: 1076-0000**  
**Description: 6" Stainless Steel Float Ball**

**#6 .....Part Number: 1014-0101**  
**Description: 8" Ball cage with carbon steel weld tabs**

**#7 .....Part Number: BR150-112**  
**Description: FT 150 VLX Door Seal**

**Figure #10**



**Figure #10**

**Vacuum Relief Valve**

**#1 .....Part Number: BR150-12  
Description: BR Vacuum Relief Fitting**

**#2 .....Part Number: AW1035LS-S  
Description: 2" Acro Long Stem Brass Relief Valve SS**

**#3 .....Part Number: 5404-4  
Description: 1/4" -18 x 1/4" - 18 Male NPTF Hex Pipe Nipple**

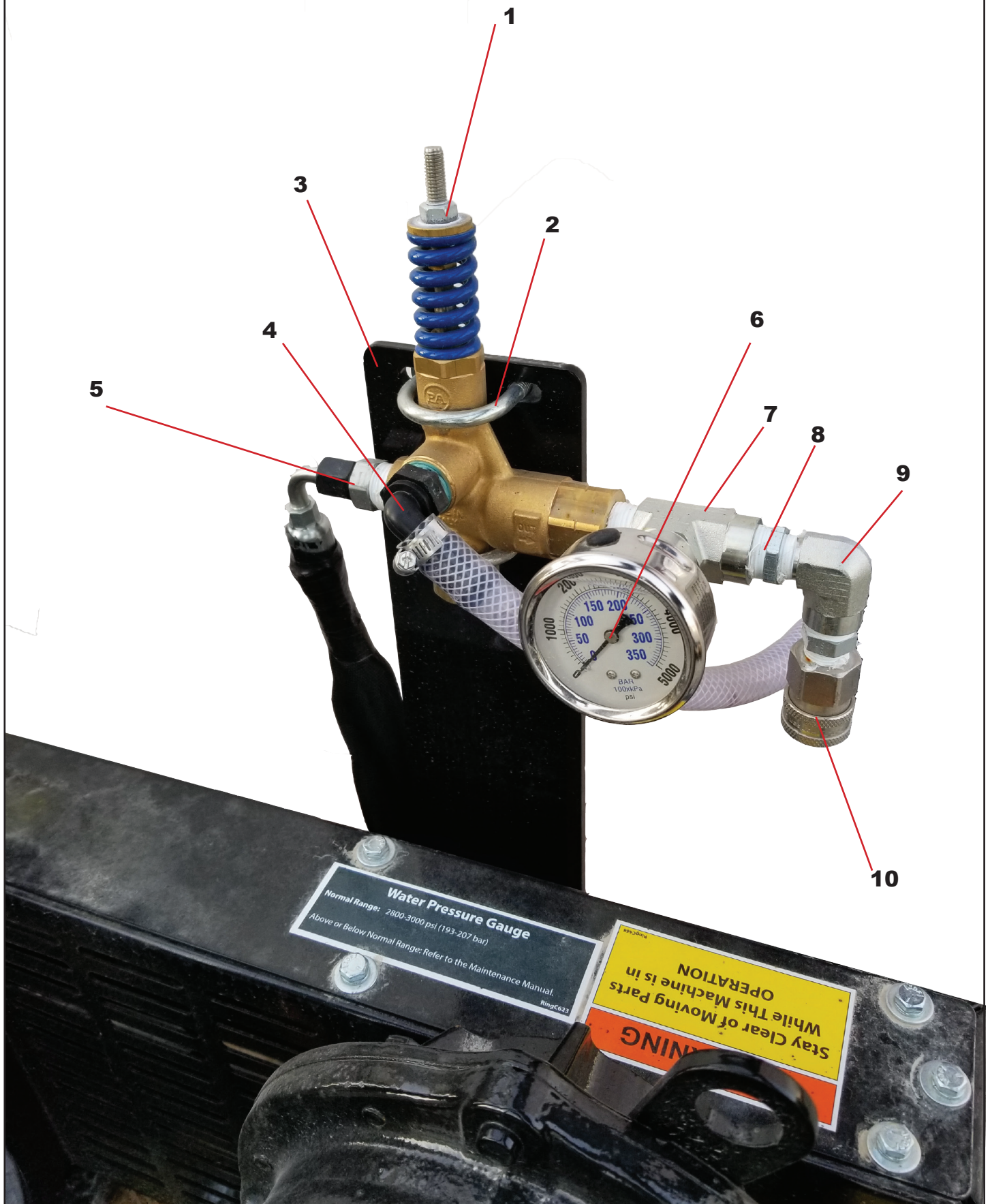
**#4 .....Part Number: 5000-04-04  
Description: 4FP-4FP**

**#5 .....Part Number: 5502-04-04  
Description: 4MP-4FP 90°**

**#6 .....Part Number: 202L-254A  
Description: 2 1/2" dial x 1/4" MPT 30"0 hg Vac PSI Glycerin Filled Center Back Mount  
Pressure Guage, SS Case.**



Figure #11



**Figure #11**

**Unloader Valve and Fittings**

- # 1.....Part Number: 7535  
Description: CAT Unloader Valve
  
- # 2..... Part Number: 31FUU0Z/-12  
Description: 5/16-18 RD U-Bolt 1 1/2 x 2 - 3/16
  
- # 3..... Part Number: BR150-66  
Description: Unloader Valve Mount
  
- # 4..... Part Number: HB050-90  
Description: 1/2" MPT x 1/2" Hose Barb 90°
  
- # 5..... Part Number: 2404-06-08  
Description: Straight Adaptor- 3/8 Male JIC 37° Flare x  
1/2 in Male Pipe
  
- # 6..... Part Number: 202L-254R  
Description: 2.5" Glycerine Filled Pressure Gauge, 5000 PSI
  
- \*Fitting behind gauge.....Part Number 5406-E-08-04  
Description: 6MP-4FP Short Hex 3/8"- 1/4" Reducer Bushing
  
- # 7..... Part Number: FG5602-08-08-08  
Description: 8MP-8FP-8FP Tee Forged
  
- # 8..... Part Number: D-5406-E08-06  
Description: Reducer Fitting 8MP-6FP
  
- # 9..... Part Number: 5502-06-06  
Description: 6MP-6FP-90 Forged
  
- # 10..... Part Number: 205545730  
Description: 3/8" FNPT Stainless Steel Socket 6300 PSI

Figure #12



**Figure #12**

**Carb Canister Components**

**#1.....Part Number: BR150-80**  
**Description: Carb Canister Mount**

**#2.....Part Number: 912612A**  
**Description: Carb Canister Brackets**

**Figure #13**



**Figure #13**

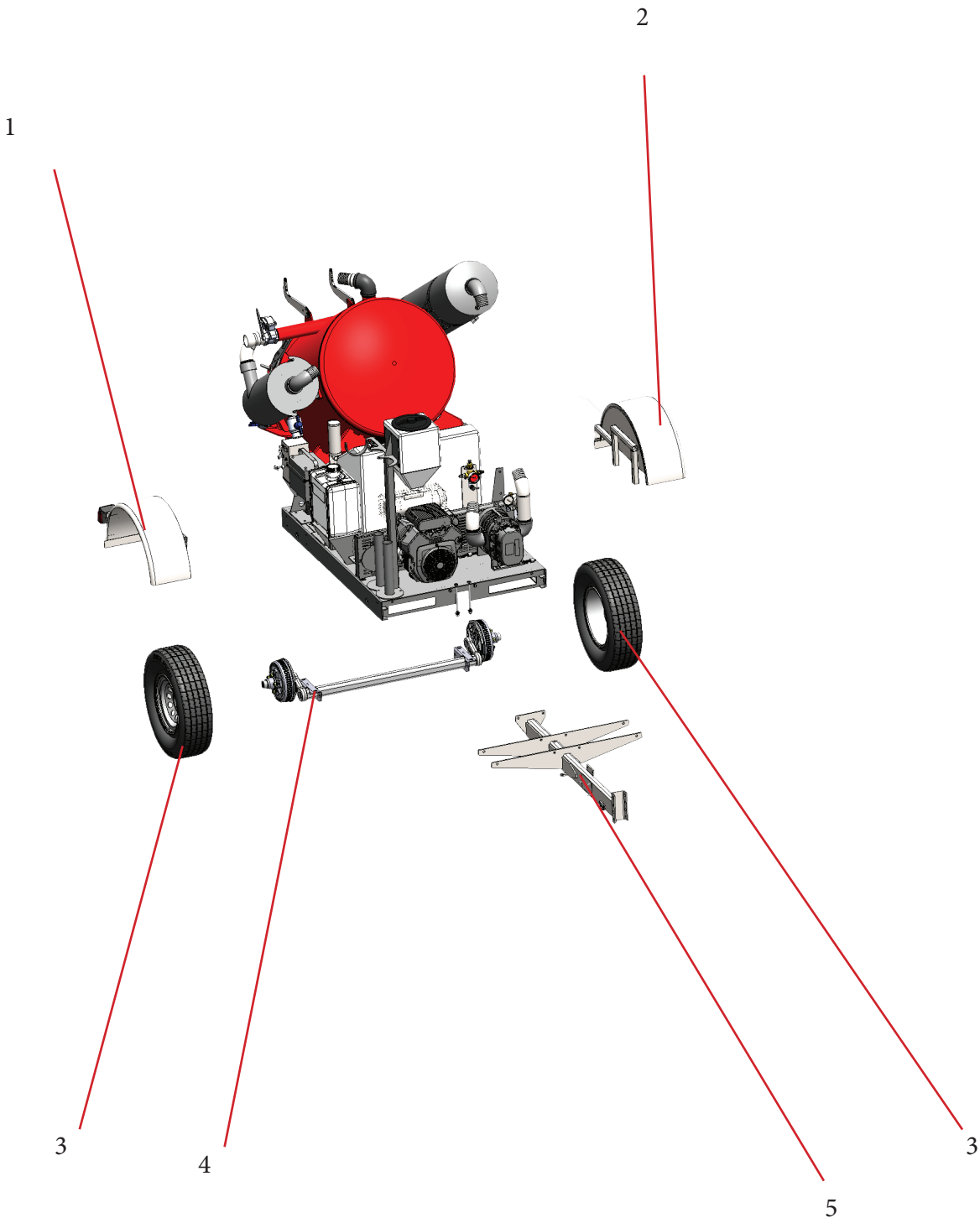
# ***Tool Rack and Manual Holder***

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- #1..... Part Number: BR150-68**  
**Description: Tool Rack Bottom**
  
- #2.....Part Number: BR150-71**  
**Description: Tool Rack Weldment**
  
- #3.....Part Number: 90000-0016**  
**Description: Manual Holder**

**\*See Tooling Options Starting on Page 41**

Figure #14



**Figure #14**

# **Trailer Option**

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**#1 ..... Part Number: BR150-98  
Description: Right Fender Weldment**

**#2 ..... Part Number: BR150-94  
Description: Left Fender Weldment**

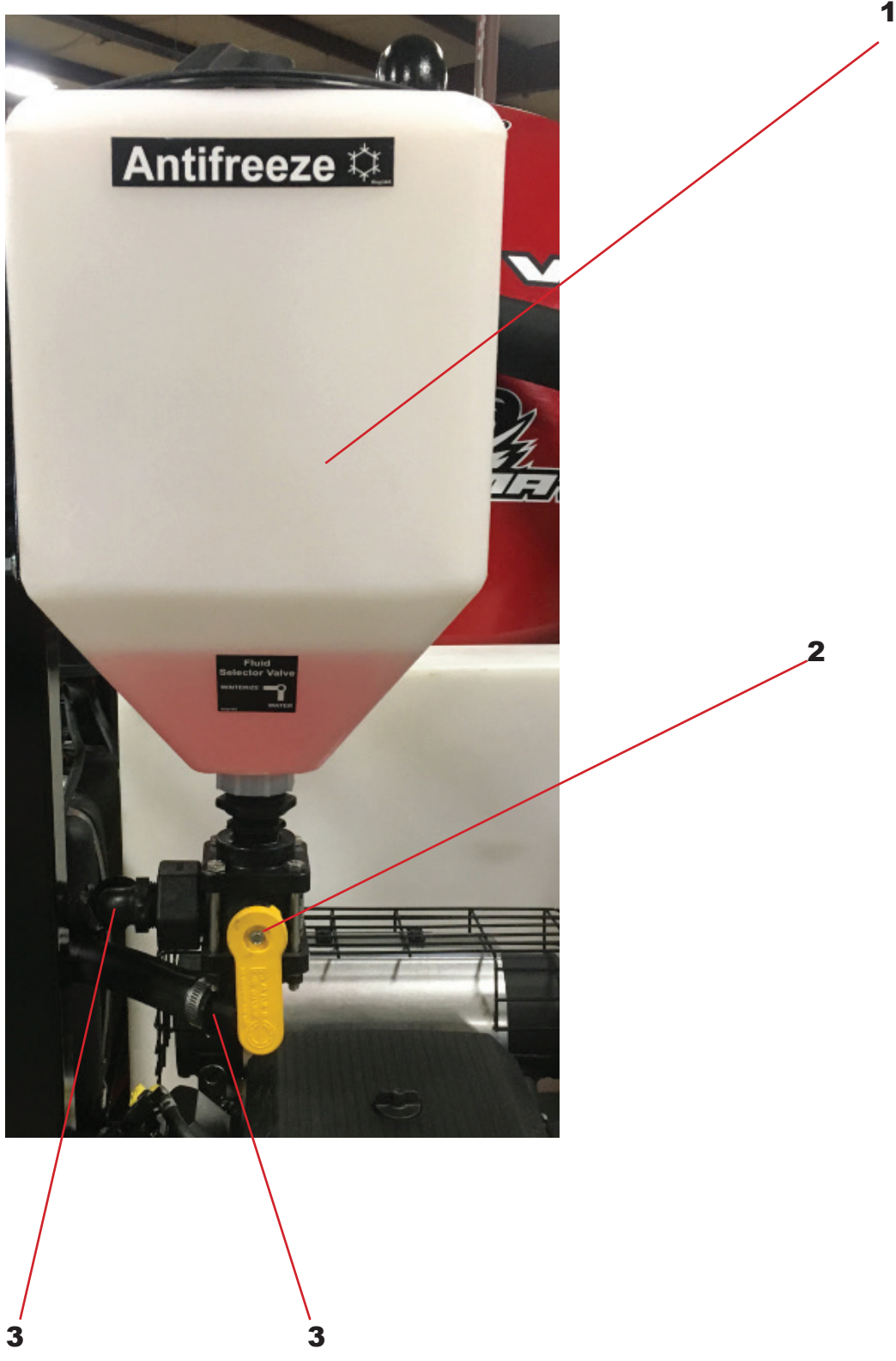
**#3 ..... Part Number: 156SM- ST225RBD-S  
Description: ST225/75R15 LRD Radial & 15x6 545 silver mod wheel**

**#4 ..... Part Number: 10F35545EEZ0582045001  
Description: 10F 4.0K 545 ELEC EZ 58.25 HF 45BKT 0DEG AXLE**

**#5 ..... Part Number: BR150-88  
Description: Tounge Weldment**



**Figure #15**



**Figure #15**

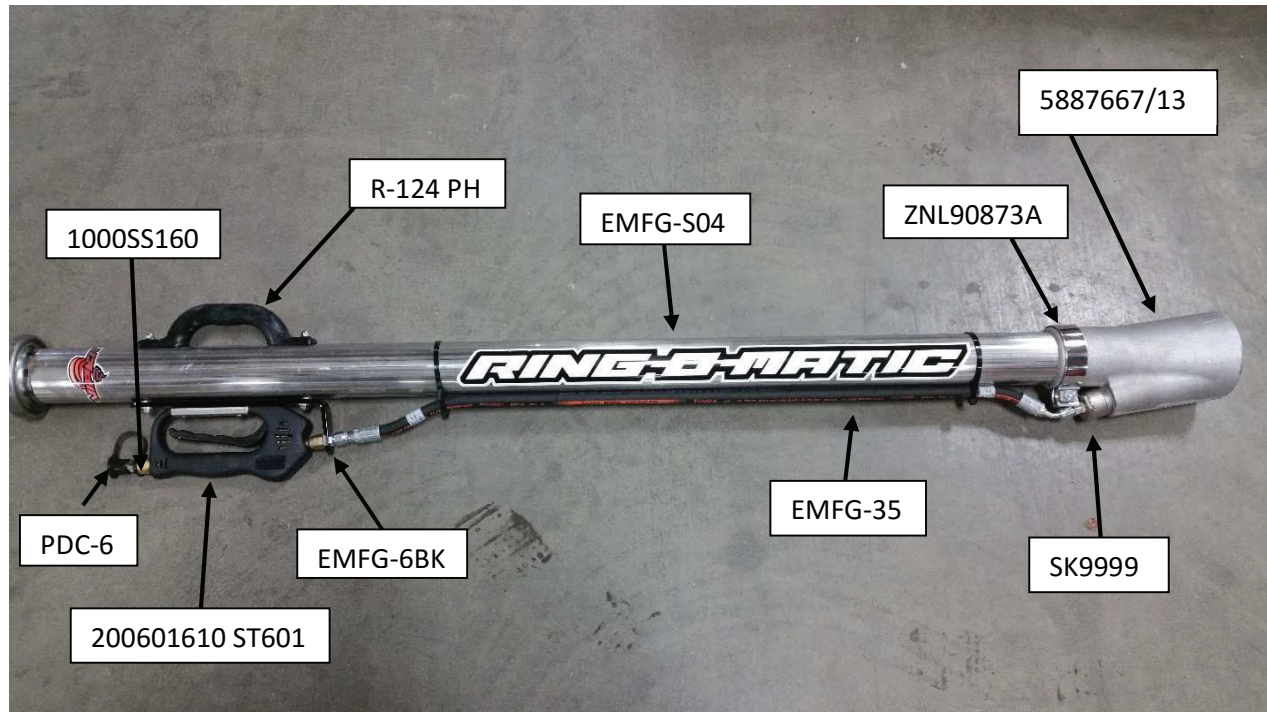
**Antifreeze Option**

**#1.....Part Number: ACE5CBT  
Description: 5 Gallon Cone Bottom Tank**

**#2.....Part Number: V100SL  
Description: 1" Side Load 3-Way Ball Valve**

**#3.....Part Number: HB10090- EL1010  
Description: 1' MPT X 1" Hose Barb 90°**

## Viper Stainless Steel Potholing Tool



Part numbers and descriptions.

P/N: 5887667/13. Description: 3" Emulsifier cone fitted for SS nozzle.

P/N: ZNL90873A. Description: Clamp 3" stainless.

P/N: SK9999. Description: 30-degree stainless steel industrial nozzle.

P/N: EMFG-35. Description: 6100 PSI 3/8" 45-degree. Female JIC swivel x straight female JIC swivel cyclo jet excavator gun, high pressure hose.

P/N: EMFG-S04. Description: 59 3/4" suction pipe.

P/N: R-124 PH. Description: Plastic grip handle.

P/N: EMFG-6BK. Description: Grip bracket.

P/N: 1000SS160. Description: 3/8" MNPT stainless steel plug, 6300 PSI.

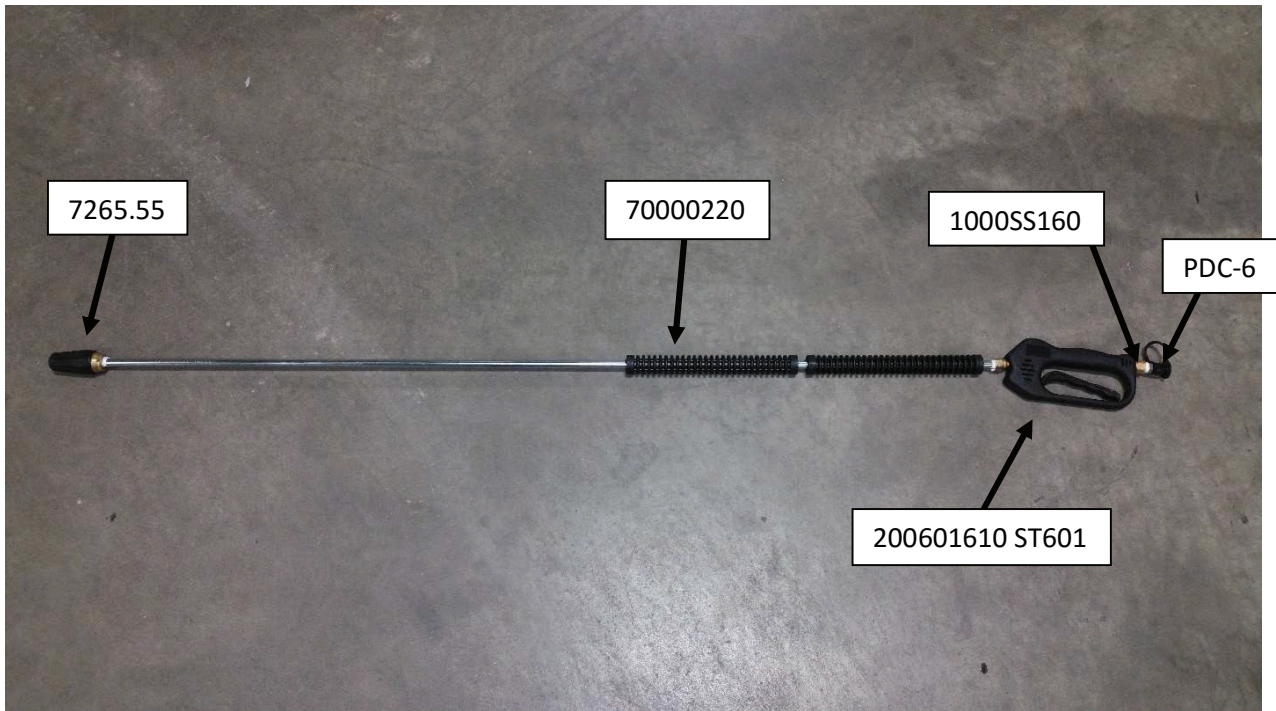
P/N: PDC-6. Description: 3/8" snap-tite cap for quick coupler.

P/N: 200601610 ST601. Description: Trigger gun.

If the entire potholing tool is needed, please use:

P/N: ADDON-34. Description: Viper stainless steel potholing tool standard 5'.

## 5' Potholing Lance



Parts breakdown. ADDON-42

P/N: 7265.55. Description: Cat turbo nozzle.

P/N: 70000220. Description: 60" lance molded grip.

P/N: 1000SS160. Description: 3/8" MNPT stainless steel plug, 6300 PSI QP8MS.

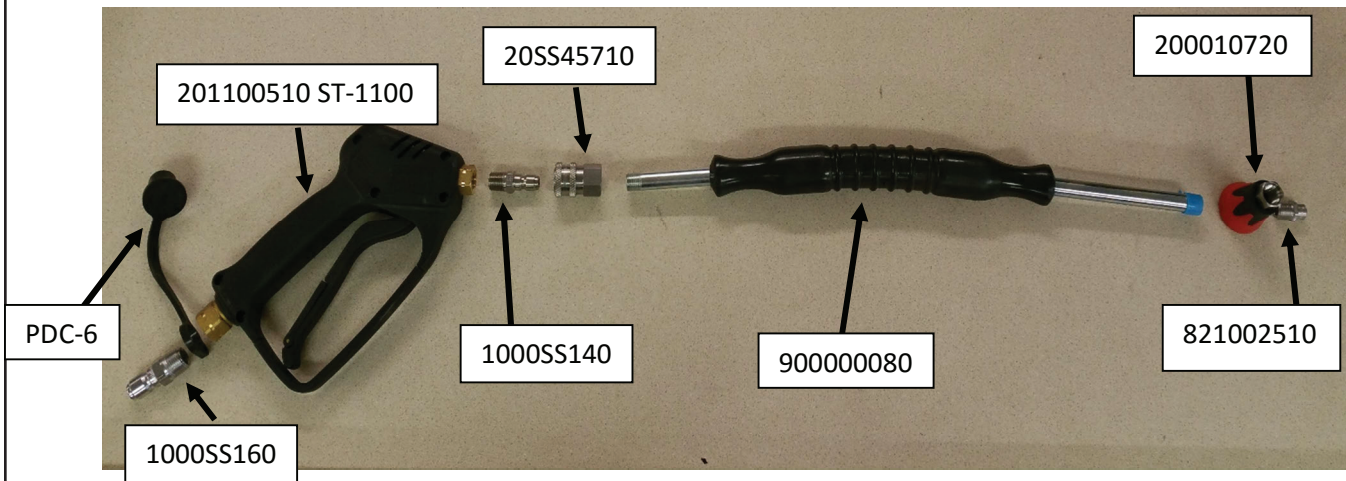
P/N: PDC-6. Description: 3/8" snap-tite cap.

P/N: 200601610 ST601. Description: Trigger gun.

If the complete standard 5' lance is needed, please use:

P/N: ADDON-42. Description: 5' Potholing lance.

## Flex Wand



Part numbers and descriptions.

P/N: PDC-6. Description: 3/8" snap-tite cap for emulsifier quick coupler.

P/N: 1000SS160. Description: 3/8" MNPT stainless steel plug, 6300 PSI QP8MS.

P/N: 201100510 ST-1100. Description: ST-1100 spray gun 3/8" inlet X 1/4" outlet, 3050 PSI.

P/N: 1000SS140. Description: 1/4" MNPT stainless steel plug, 7500 PSI QP4MS.

P/N: 20SS45710. Description: 1/4" stainless quick coupler, female NPT QS4FS.

P/N: 900000080. Description: Flex wand.

P/N: 821002510. Description: Nozzle NV.

P/N: 200010720. Description: Nozzle protector.

If all parts are needed, please use:

P/N: JVSW-2. Description: Flex wand complete.

## **Stainless Steel & Dielectric Viper Potholing Tools**



Part numbers and descriptions.

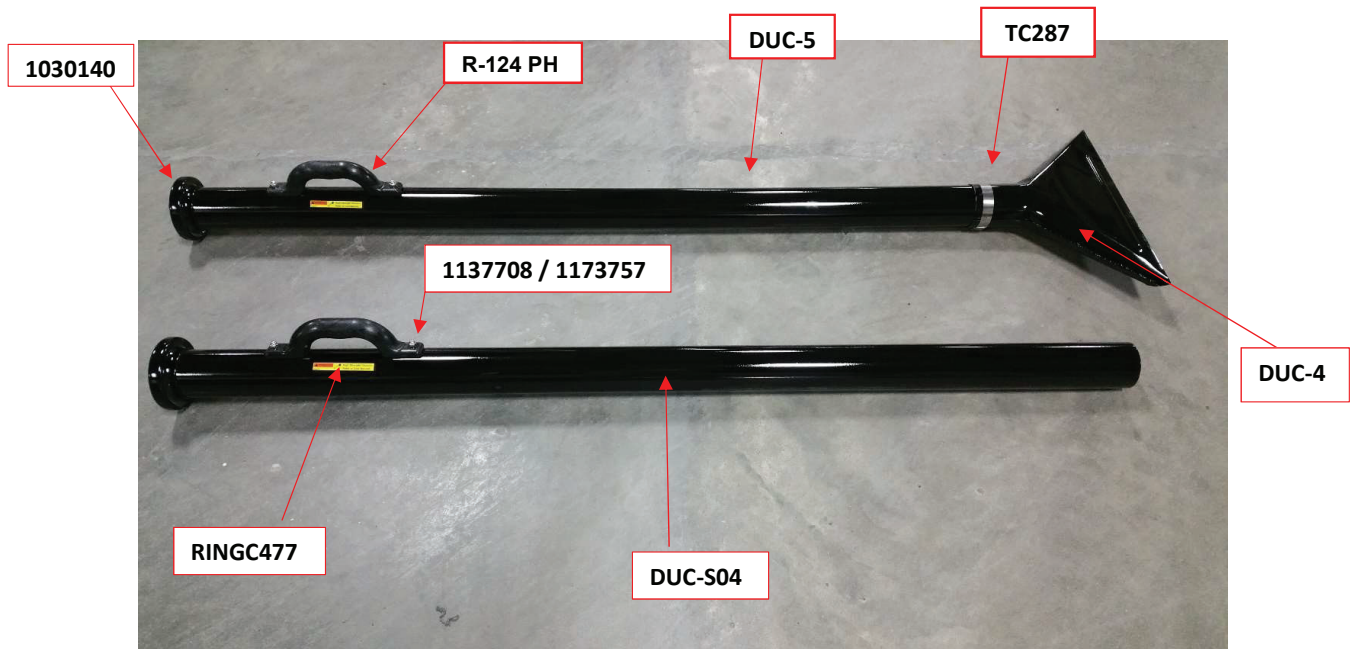
P/N: ADDON-02

Description: Viper Dielectric potholing tool, 3"x 5'.

P/N: ADDON-34

Description: Viper Stainless Steel potholing tool, 3" x 5'.

## Suction Tube & Duc Bill



Part numbers and descriptions.

P/N: 1030140. Description: 3" Rubber Sealing Water O-Ring

P/N: R-124 PH. Description: Plastic Handle

P/N: TC287. Description: 2" Single T-Bolt SS Hose Clamp

P/N: DUC-4. Description: Duckbill Head

P/N: 1137708. Description: ¼-20 Acorn Cap Nut

P/N: 1173754. Description: 1/4 – 20 x ¾ Stainless Steel Button Socket

P/N: RINGC477. Description: Decal "High Strength Vacuum"

P/N: DUC-S04. Description: 60" Duckbill Suction Pipe

If the entire product is needed, please use:

P/N: DUC-5. Description: Duckbill/Lawnsweep Assembled 3" x 5'

## **Roots Blower Oil & Care**

**Different kinds of grease are not interchangeable with a Roots Blower. Unsuitable grease will cause caking and bearing failure. We recommend using Roots grease.**

**Part Number: T20019001**

**The exterior temperature plays a key role in the weight of oil your blower will need. The 220 is recommended for ambient temperatures of 95°F and below. The 320 is for ambient temperatures of 95 °F and above.**

**The Roots 47 Blower will take 12.7 oz of oil. The Roots 59 blower will take 16 oz. of oil. If you are unsure of what model blower you have, this information can be found on the silver tag on the blower, facing outward of the machine.**

<b>Oil</b>	<b>Part Number</b>
<b>220</b>	<b>13106001</b>
<b>320</b>	<b>13106007</b>

**Oil and grease can be bought by the quart or by the case.**