

# POWERHORSE™

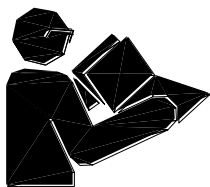
## Owner's Manual

### M157711C.1

ITEM NUMBER: 157711, 157712

SERIAL NUMBER:

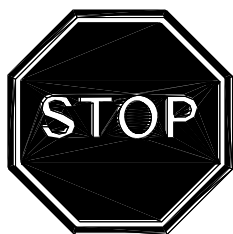
**Pressure Washer:** Machine that cleans dirty surfaces with high pressure water.



### **WARNING**

**Read this manual.**

Serious injury or death can result if safety instructions are not followed.



**Engine is shipped without oil.**

- Before starting engine, fill engine oil.
- See engine manual for engine oil requirements.

**Pump is shipped with oil.**

- Remove shipping plug and install vented fill cap.
- See pump oil cap section of this manual.

**Closely inspect all components.**

- If you have damaged components then: Contact the freight company that delivered the unit and file a claim.
- If you have missing components then: Contact Product Support at 1-866-443-2576.

FIG03020

**Any Questions, Comments, Problems or Parts Orders**  
***Call Powerhorse Product Support 1-866-443-2576***

## Hazard Signal Word Definitions






	<p>This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.</p>
	<p>DANGER (red) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</p>
	<p>WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p>CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.</p>
	<p>CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.</p>

fig01453

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# Important Safety Rules






	<h2 style="text-align: center;">⚠ WARNING</h2>
	<p><b>1.) Read owner's manual completely.</b>            Serious injury or death can result if safety instructions are not followed. You must be 16 or older to operate this machine. Keep untrained people away.</p> <p><b>2.) Skin puncture hazard.</b>            High pressure fluid can inject under skin resulting in serious injury including amputation. Do not direct spray at people or animals.            -If skin injection happens, seek IMMEDIATE surgical treatment.            -Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.            -Do not use unit if exterior hose damage is evident. Make sure all fittings are tight before starting. Relieve system pressure before servicing.            -Know how to stop engine and bleed pressures quickly. Be thoroughly familiar with the controls.            -Make sure accessories meet the unit's temperature and pressure limits.            -Stop engine, bleed pressure, and engage spray gun safety lock before leaving unit unattended.</p>
  	<p><b>3.) Risk of fire and explosion.</b>            Hot exhaust fumes from engine can cause fire. Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling fuel.            -Position muffler at least 7 feet from combustible objects.            -Before adding fuel, stop the engine and keep heat, sparks, and flame away. Do not add fuel when engine is running or still hot. No smoking near engine.            -Do not pump fuel directly into engine at gas station. Static charge can build and ignite fuel. Use a UL approved fuel container to transfer gas to the engine. Wipe up fuel spills immediately.            -Only store and handle fuel outdoors. Gasoline vapors can ignite if they collect inside an enclosure. Explosion can result.            -Do not change or add to exhaust system. Fire can result.            -Do not change or add fuel tanks or fuel lines. Fire can result.            -Before each use, check fuel tank and fuel lines for leaks. Any fuel leak is a fire hazard. Fix any fuel leaks before starting engine.            -During transportation take precautions to make sure pressure washer will not tip over and cause a fuel leak fire hazard.</p>
	<p><b>4.) Poisonous gas.</b>            This machine gives off carbon monoxide, a poisonous gas that can kill you. You CANNOT smell it, see it, or taste it.            -ONLY run machine outdoors and away from air intakes.            -NEVER run machine inside homes, garages, sheds, or other semi-enclosed spaces. These spaces can trap poisonous gases, EVEN IF you run a fan or open doors and windows.            If you start to feel sick, dizzy, or weak while using this machine, shut it off and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.</p>

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## Save These Instructions

# Important Safety Rules

## WARNING



### 5.) Risk of exposure to dangerous chemicals.

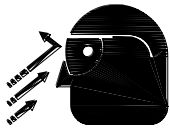
Serious injury or death can result if chemical manufacturer instructions are not followed.

- Wear protective gloves when handling and cleaning with chemicals.
- Understand all safety hazards and first aid for all chemicals being used.
- When cleaning filters, check if chemicals have been used and take any precautions that are recommended by the chemical manufacturer.
- Different chemicals may interact dangerously with each other, always follow chemical manufacturer directions before switching chemicals.
- Calculate the correct amount of chemical to mix, dispose of excess chemical per the manufacturer instructions.
- Never spray flammable liquids.



### 6.) Risk of electrocution.

Electricity can kill you. Keep water away from electrical outlets and electrical devices.



### 7.) Flying objects.

Small particles may fly out while spraying. Wear safety glasses. Serious eye injury can occur.

Make sure nozzle is secure before squeezing trigger. If nozzle is not secure it will become a projectile.



### 8.) Fall hazard.

Pressure washer creates puddles and slippery surfaces. Keep good footing and balance. Serious injury can occur.

- Wear footwear capable of maintaining a good grip on wet surfaces.
- Gun kicks back. Hold with both hands.
- Do not overreach or stand on unstable supports.
- Do not stand on ladders or scaffolding.
- Do not place pressure washer on soft or unstable ground.



## CAUTION

### 1.) Hot muffler.

You can be burned by muffler. Do not touch.

fig01846

# Warning Label Locations

## **WARNING**



**1.) Skin puncture hazard.** Do not direct spray at people or animals. Seek IMMEDIATE surgical treatment.



**2.) Risk of fire and explosion.** Do not add fuel when engine is running or still hot.



**3.) Breathing hazard.**

Poisonous fumes from engine can kill you. Do not operate indoors even if ventilated.



**4.) Risk of electrocution.**

Keep water away from electric outlets and electric devices.



**5.) Read owner's manual.**

Serious injury or death can result if safety instructions are not followed.

**Call 1-866-443-2576 to order new labels.**  
**Warning & Caution Decal: Part No. 781026**

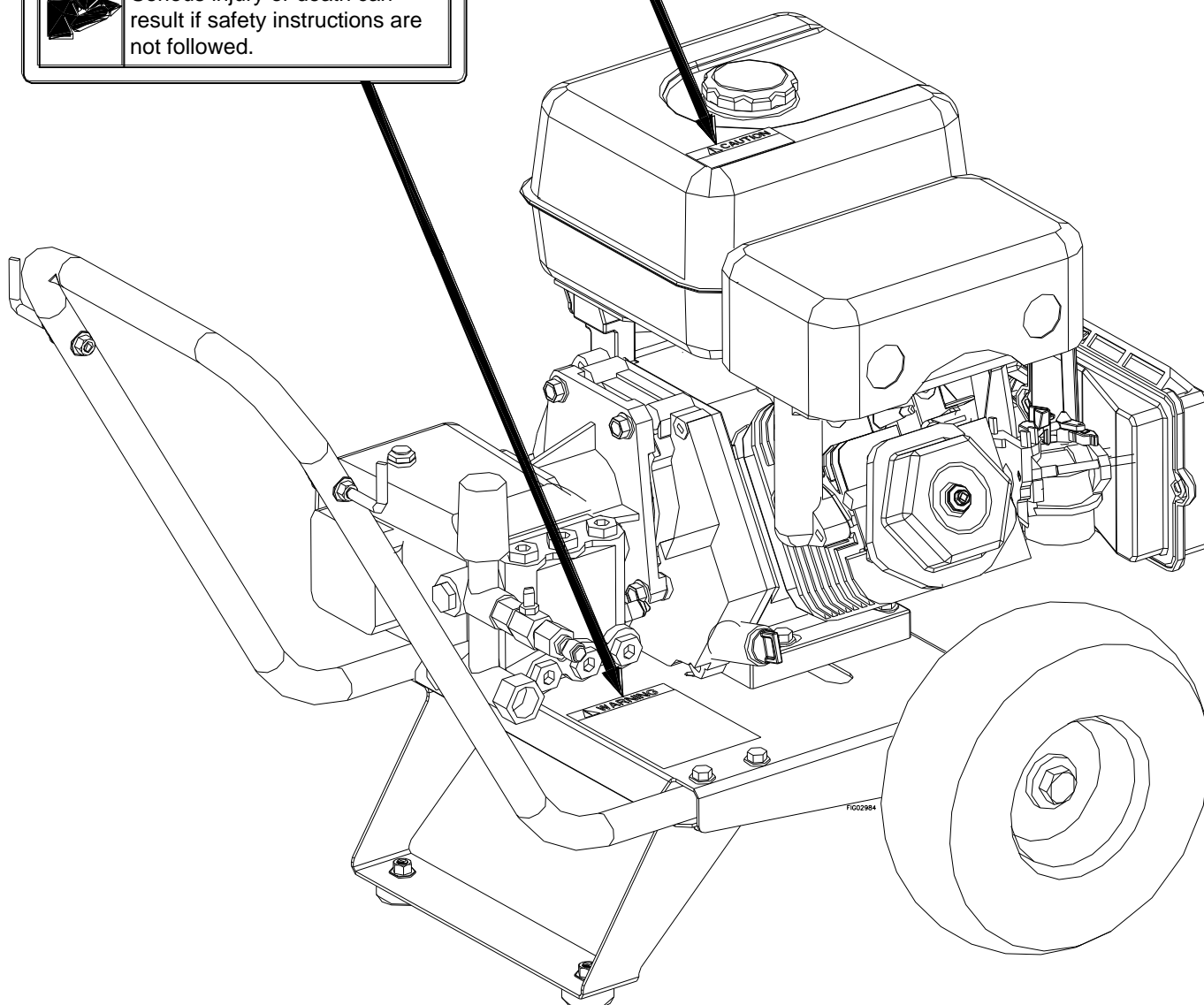
## **CAUTION**



**1.) Burn hazard.**

Do not touch hot muffler.

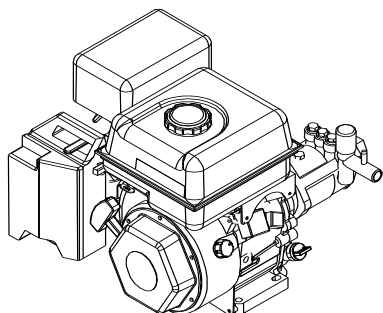
Part No. 38570



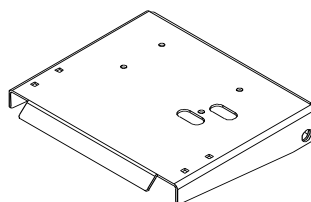
# Assembly Instructions

## **I.) Unpack**

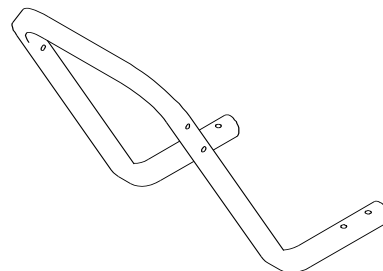
Your pressure washer is shipped in one box. Separate and identify the components.



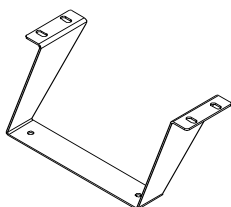
Engine/ Pump assembly



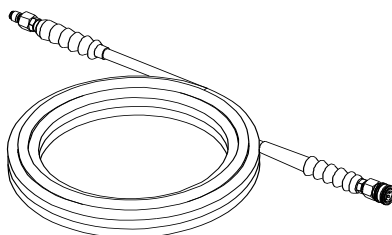
Base



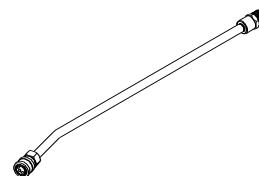
Handle



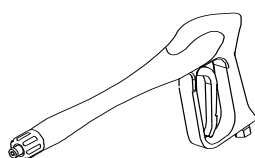
Leg



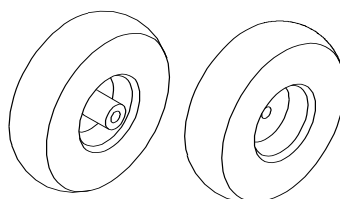
Pressure Hose



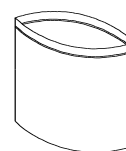
Lance



Spray Gun



Wheels



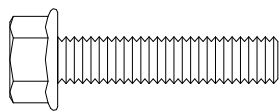
Hardware Bag

FIG02983

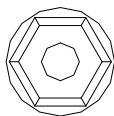
**Any Questions, Comments, Problems or Parts Orders**  
**Call Powerhorse Product Support 1-866-443-2576**

# Assembly Instructions

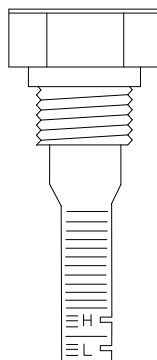
## II.) Hardware Bag



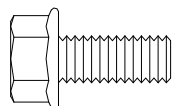
5/16" x 1-1/2" Bolt  
Qty - 8  
Part # 82017



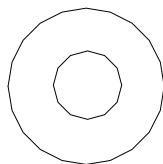
5/16" Nut  
Qty - 14,  
Part # 82019



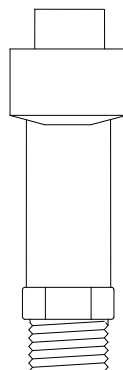
Breather Plug Tube  
with Dipstick  
Qty - 1  
157711 only



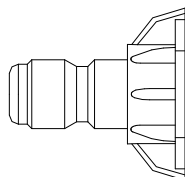
5/16" x 3/4" Bolt  
Qty - 2  
Part # 82015



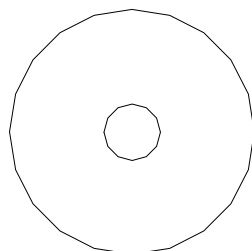
Grommet  
Qty - 5



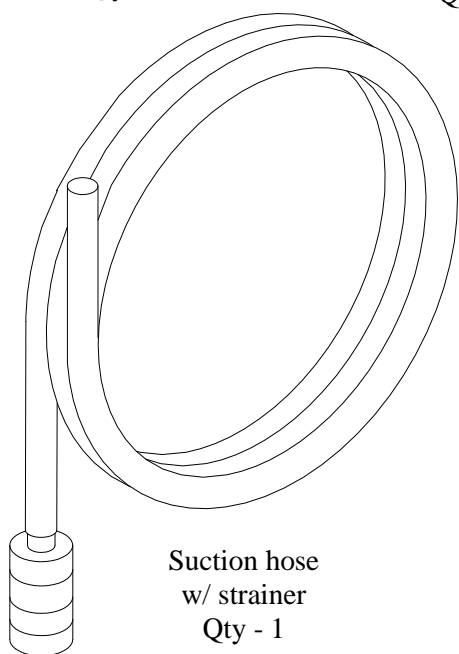
Vented Fill Cap  
Qty - 1  
157712 only



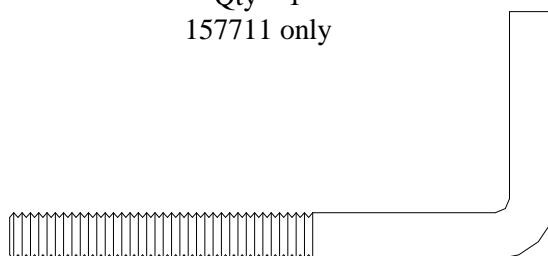
Nozzle  
Qty - 2



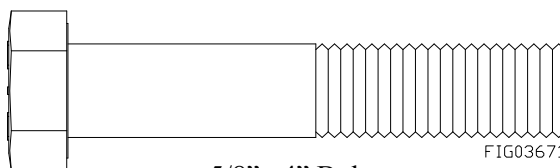
Rubber Foot  
Qty - 2



Suction hose  
w/ strainer  
Qty - 1

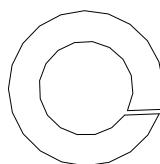


Hook  
Qty - 2

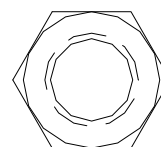


5/8" x 4" Bolt  
Qty - 2

FIG03671



5/8" Lock washer  
Qty - 2

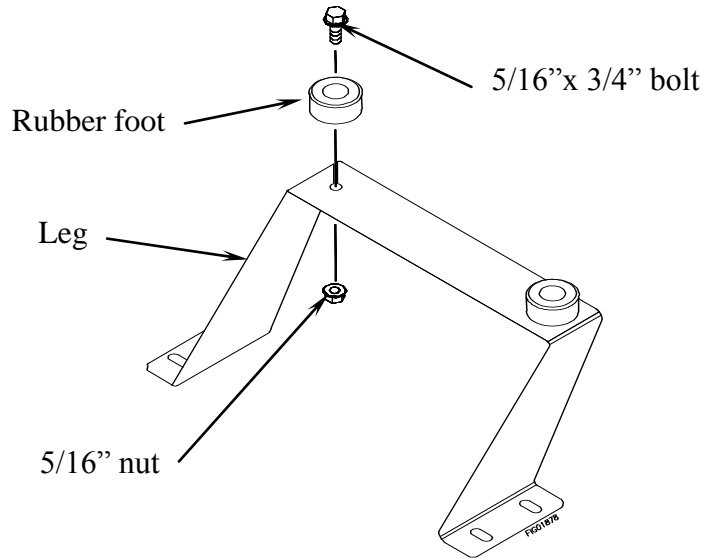


5/8" Nut  
Qty - 4

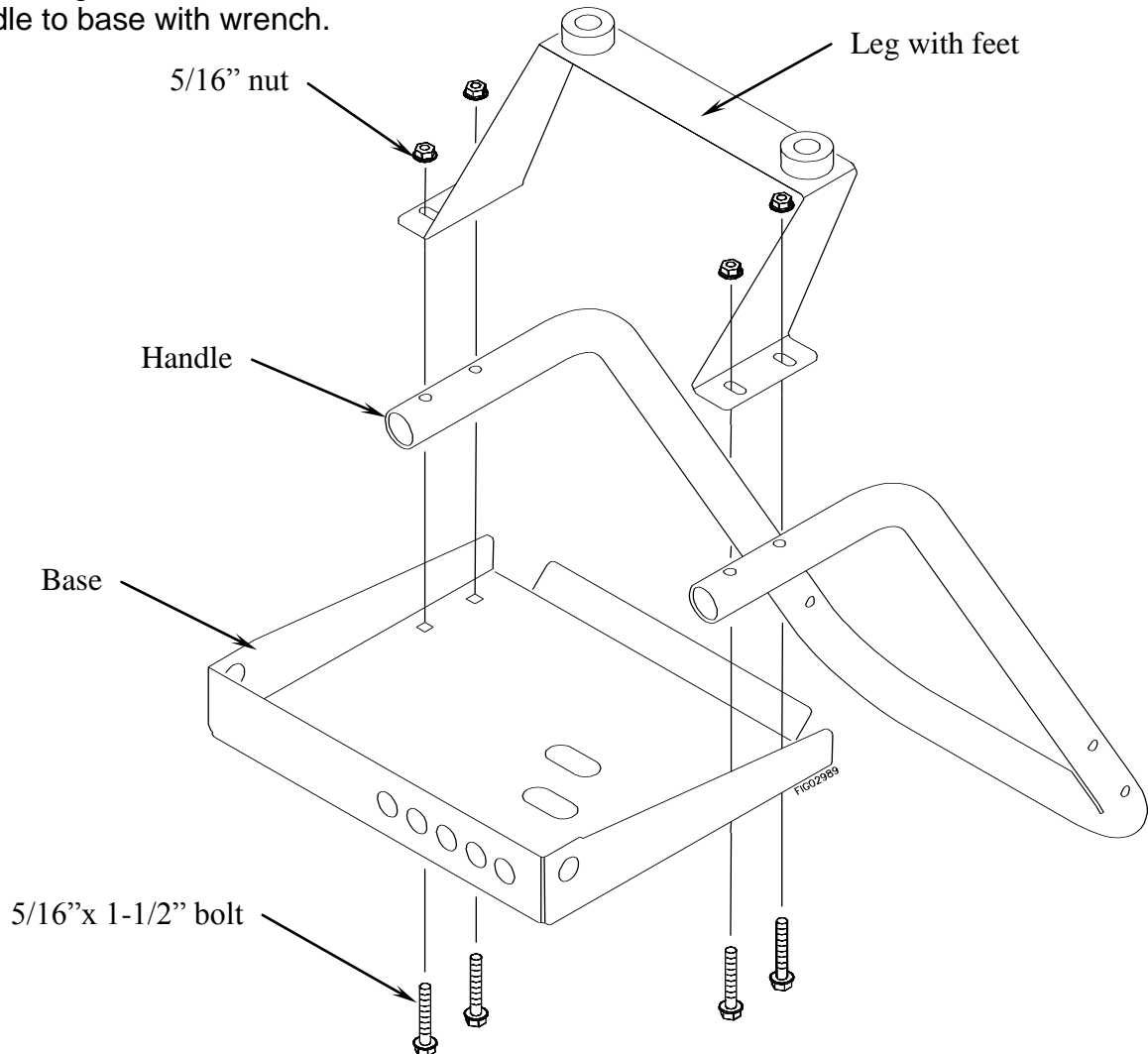
# Assembly Instructions

## III.) Cart Assembly

**Step 1.)** Fasten rubber feet onto leg with wrench.

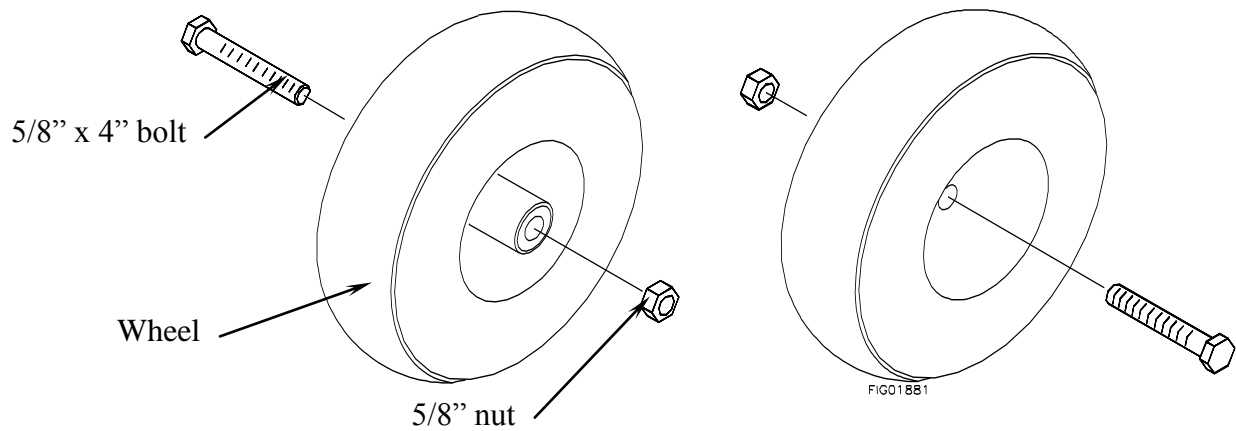


**Step 2.)** Fasten leg with feet and handle to base with wrench.

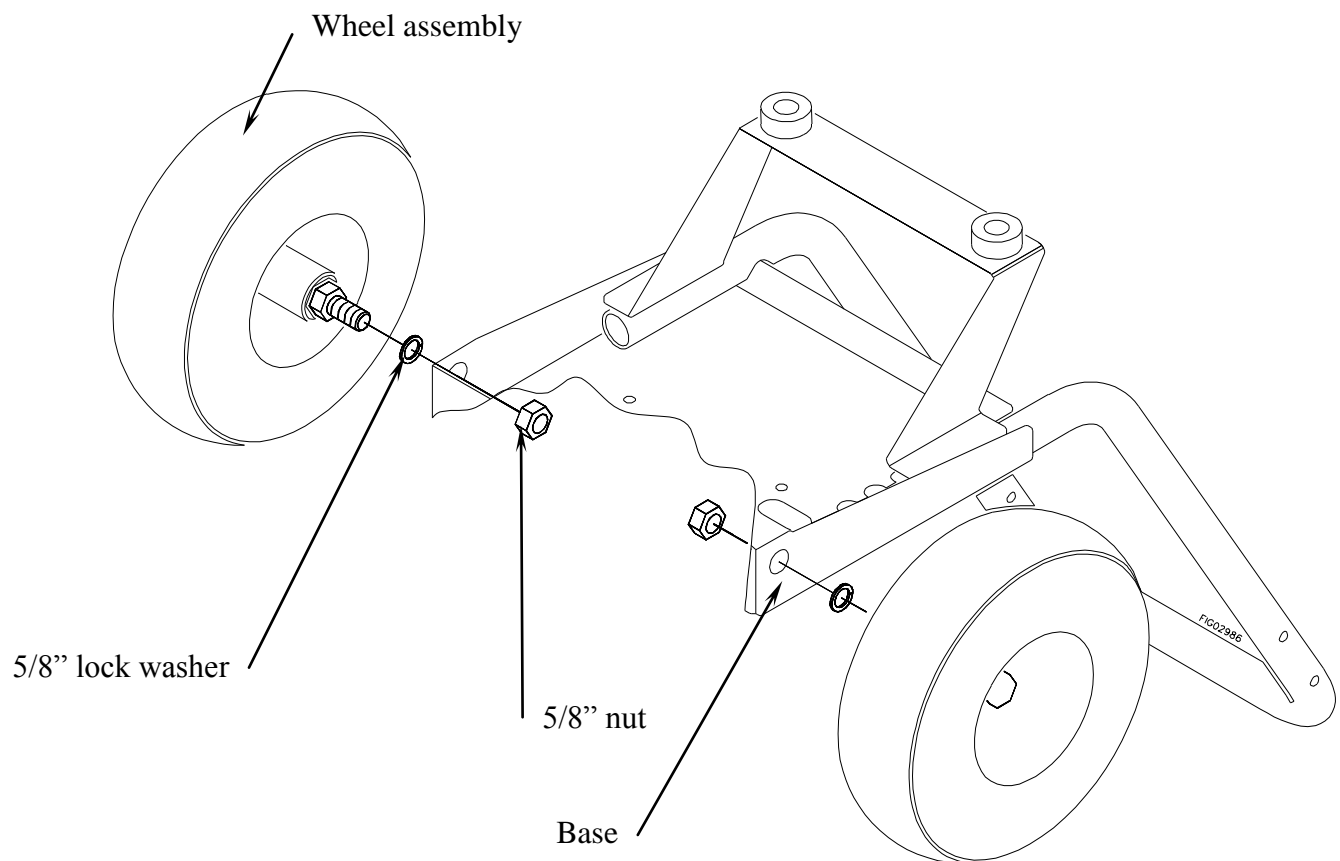


# Assembly Instructions

**Step 3.)** Slide 5/8" x 4" bolt through wheel and fasten with 5/8" nut hand tight.

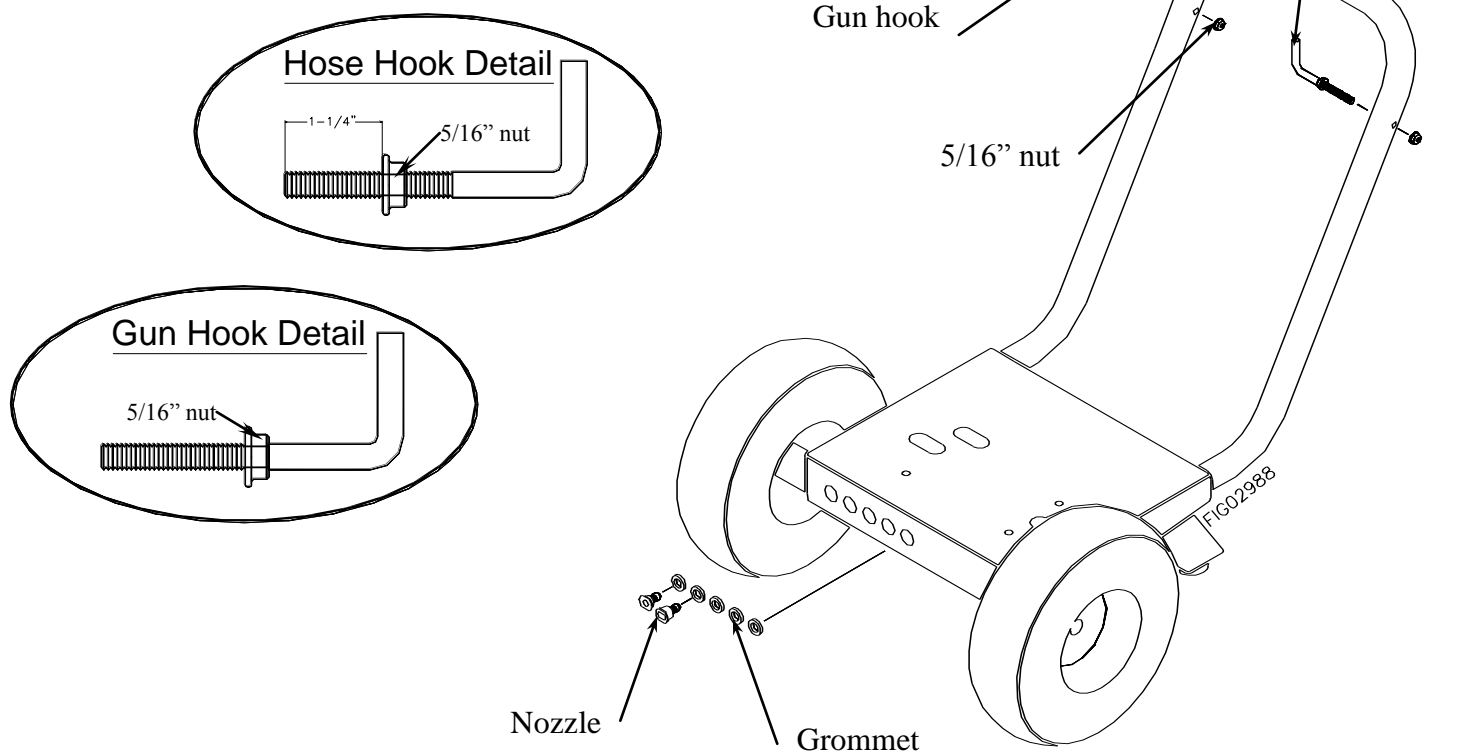


**Step 4.)** Fasten wheel assemblies to base with wrench. Check that wheels turn freely.

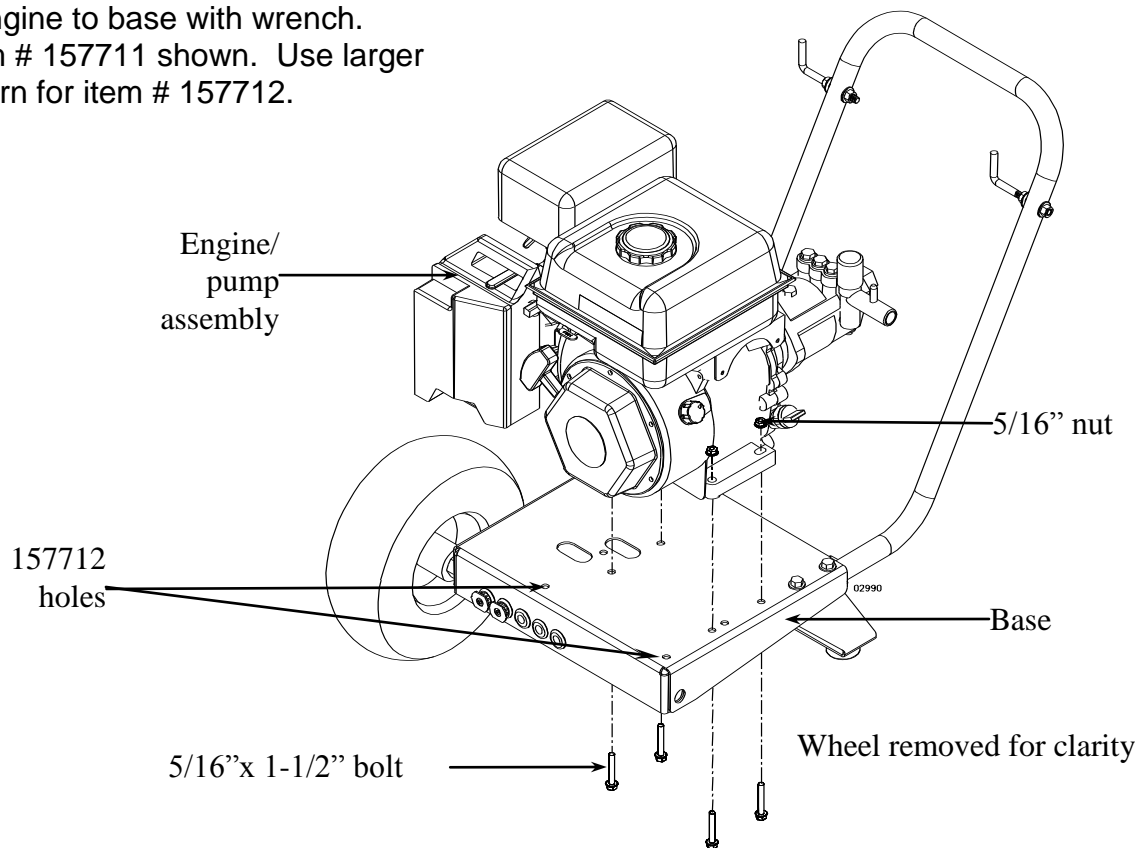


# Assembly instructions

**Step 5.)** Thread 5/16" nuts onto hooks, then fasten hooks to handle with wrench. Point hose hooks up.  
Press grommets into base, then press grommets into base.



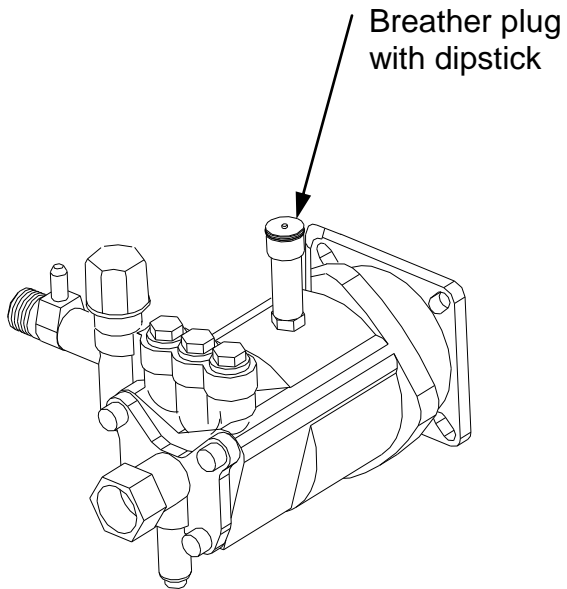
**Step 6.)** Fasten engine to base with wrench.  
Note: Item # 157711 shown. Use larger hole pattern for item # 157712.



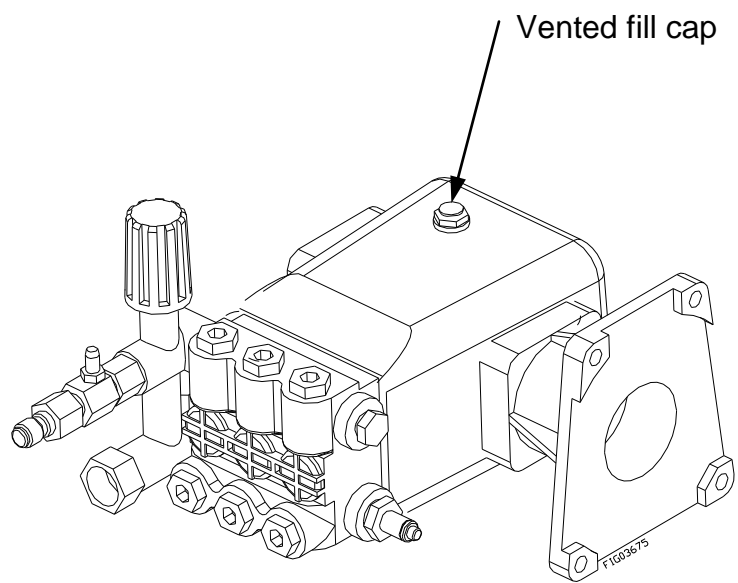
# Assembly instructions

**Step 7.)** Remove shipping plug from the pump and replace with the supplied cap or plug found in the hardware bag.

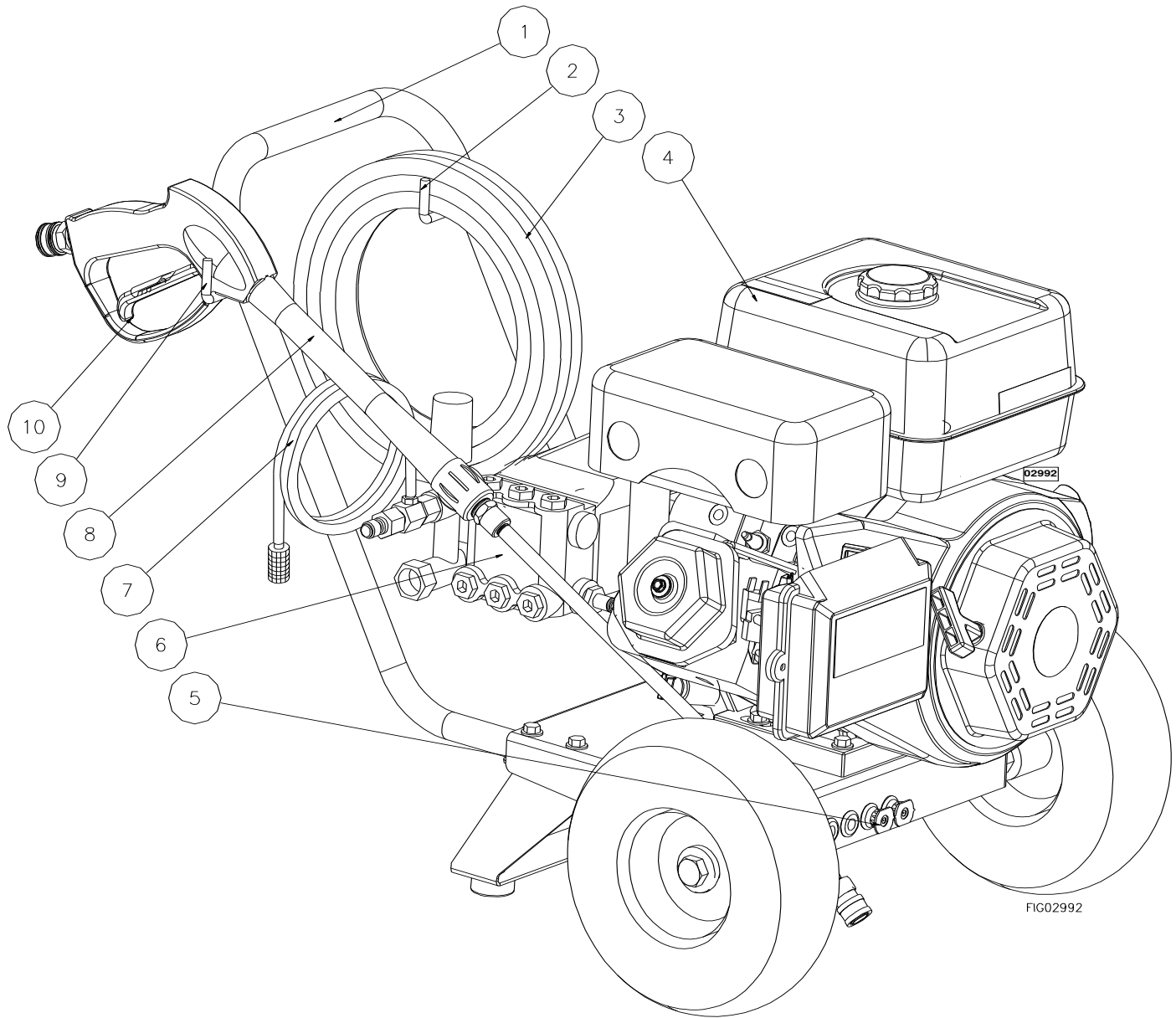
**157711**



**157712**

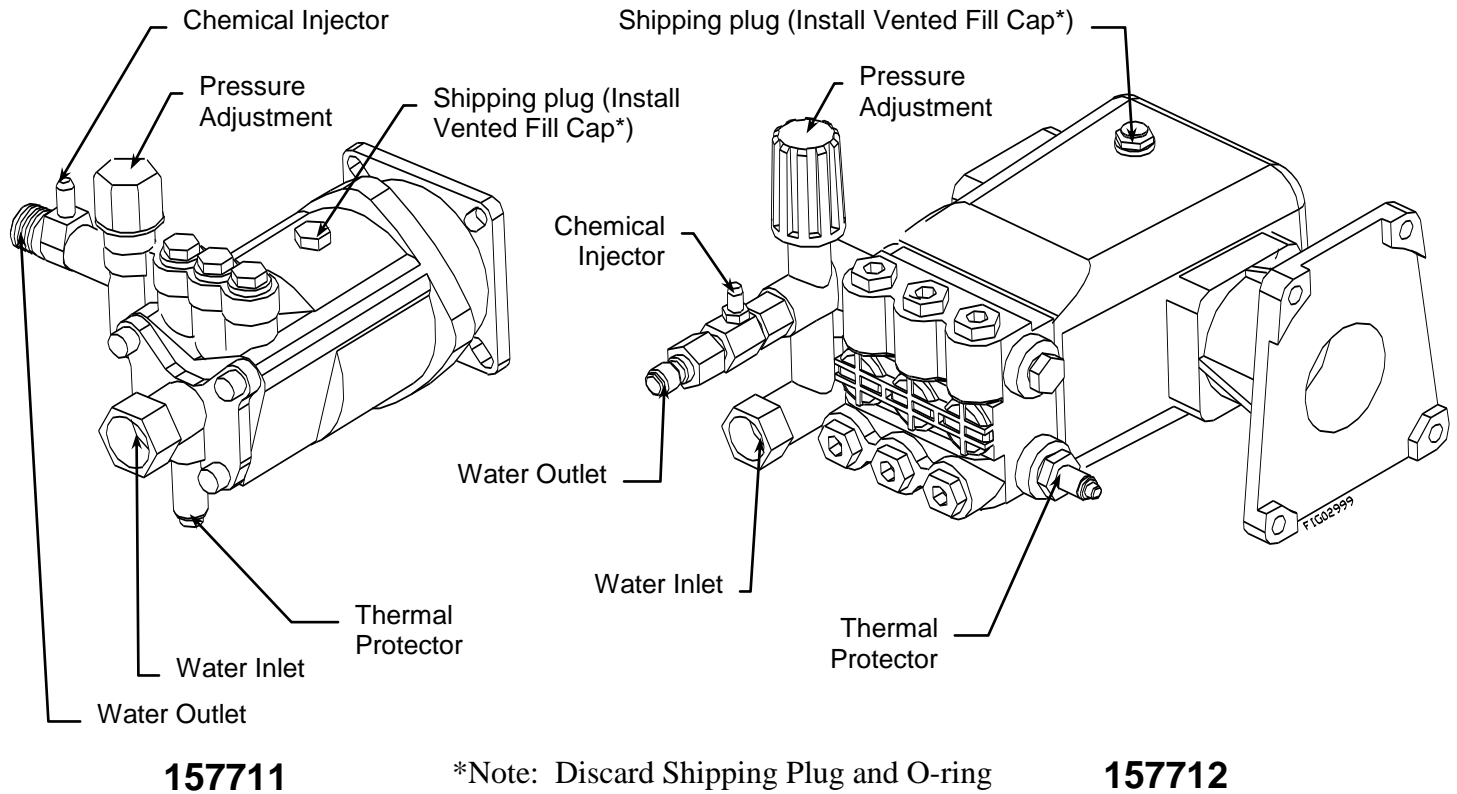


# Machine Component Identification



1. **Handle.** Designed for easy cart movement.
2. **Hose Hook.** Store pressure hose on hook.
3. **Pressure Hose.** Attach couplers to gun and water outlet.
4. **Engine.** Powerhorse engine provides years of reliable use.
5. **Nozzles.** Change nozzles for different spray patterns.
6. **Water Pump.** Inspect for loose/broken parts prior to each use.
7. **Chemical Hose.** Submerge in cleaning solution.
8. **Spray Gun.** Always use two hands for safe operation.
9. **Gun Hook.** Store gun here.
10. **Trigger.** Actuate to allow pressurized water to flow out of spray gun.

# Pump Oil Cap and Pump Component Identification



## Operation Instructions

### Water Supply

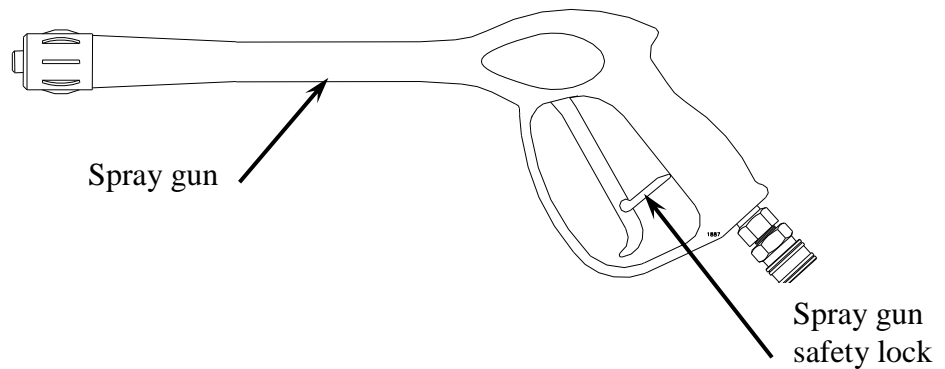
- 1.) Make sure the water supply is clean. Debris can cause excess pump wear and reduce performance.
- 2.) An insufficient water supply will damage your pump. Make sure the water supply is steady and is 20% over the rated flow of your pump. Use a stopwatch to time how long it takes to fill a 5-gallon bucket with your garden hose. For the 157711, the bucket must be filled faster than 100 seconds. For the 157712, the bucket must be filled faster than 60 seconds.
- 3.) The water supply garden hose must have an inside diameter of at least 5/8". If the hose is more than 100 ft. long, the diameter must be at least 3/4".
- 4.) Never use a reservoir tank as a water source. Drawing water out of a tank may cause pump cavitation and damage to your pump. This pressure washer is designed for a pressurized water source such as a city water faucet. However, the water source pressure must not exceed 115 psi (8 bar).
- 5.) Always use a flexible rubber hose for your water supply. Do not use rigid piping.

**Any Questions, Comments, Problems or Parts Orders**  
***Call Powerhorse Product Support 1-866-443-2576***

# Operation Instructions

## Spray Gun Safety Lock

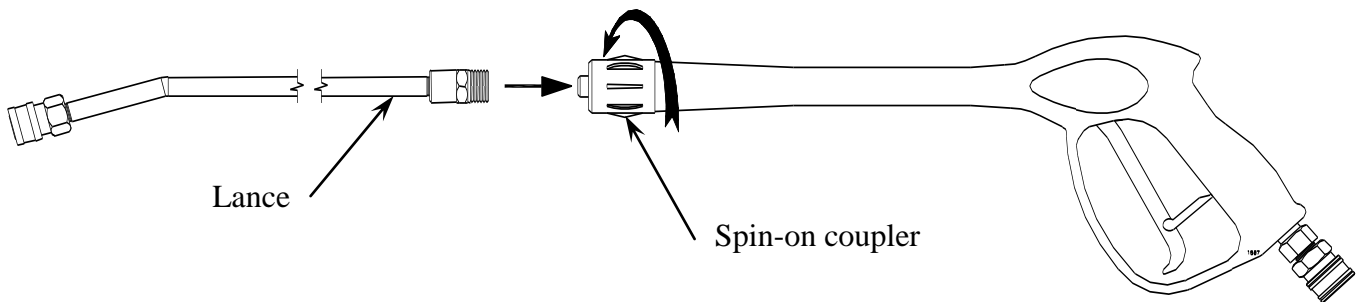
When not spraying, use the spray gun safety lock to prevent accidental high-pressure discharge.



## Attaching the Lance

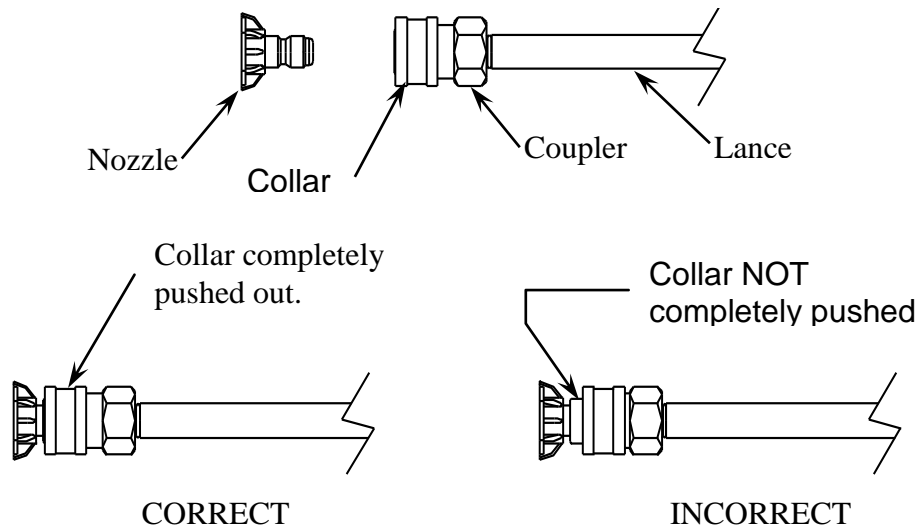
Tighten spin-on coupler hand tight.

Note: The o-rings make the seal so there is no need to tighten with a wrench.



## Installing Nozzles

To install a nozzle, pull back the collar and push the nozzle into the coupler. Once the connection is made, pull on the nozzle to make sure it is secure.



# Operation Instructions

## WARNING

### Flying objects.

Make sure nozzle is secure before squeezing trigger. If nozzle is not secure it will become a projectile. Serious injury can occur.

FIGURE 1

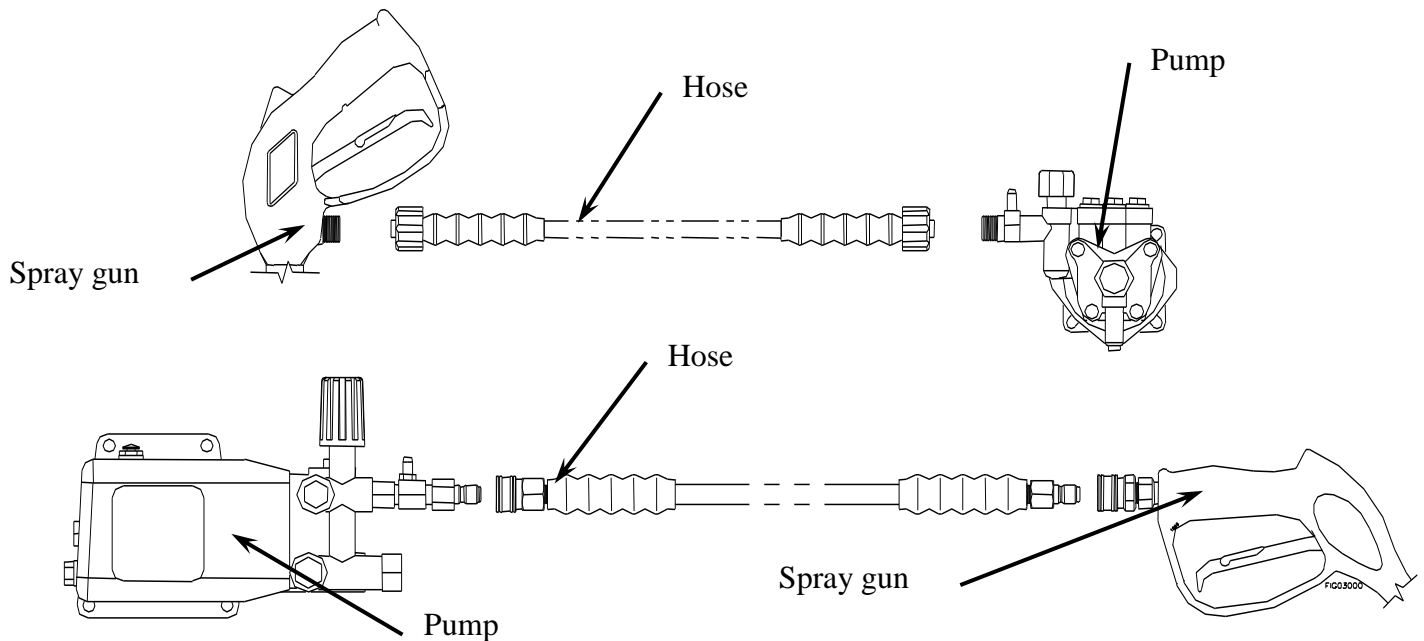
### Attaching the Pressure Hose – 157711 only

- To attach the pressure hose to the pump, thread the pressure hose's 22mm coupler onto the water pump's outlet hand tight.
- To attach the pressure hose to the spray gun, thread the pressure hose's 22mm coupler onto the spray gun's inlet hand tight.

Note: The o-rings make the seal so there is no need to tighten with a wrench.

### Attach Quick Connect Couplers – 157712 only

- To install the hose onto the pump, pull back the collar and push the hose into the coupler on the pump.
- To install the hose onto the spray gun, pull back the collar on the spray gun and push the hose into the coupler on the spray gun.
- Once the connections are made, pull on the hose to make sure it is secure.



# Operation Instructions

## **Start-Up Instructions**

1. Attach garden hose to water inlet.
2. Attach pressure hose to water outlet and gun.
3. Attach spray gun to lance.
4. Turn water supply ON.
5. Squeeze trigger to purge air from pump.
6. Insert nozzle.
7. Start engine.

## **Shut-Down Instructions**

1. Turn engine OFF.
2. Turn water supply OFF.
3. Squeeze trigger to relieve system pressure.
4. Remove garden hose.
5. Remove pressure hose.

## **⚠ WARNING**



### **Skin puncture hazard.**

High pressure fluid can inject under skin resulting in serious injury including amputation. Do not direct spray at people or animals.

-If skin injection happens, seek IMMEDIATE surgical treatment.

-Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.

-Do not use unit if exterior hose damage is evident. Make sure all fittings are tight before starting. Relieve system pressure before servicing.

-Know how to stop engine and bleed pressures quickly. Be thoroughly familiar with the controls.

-Make sure accessories meet the unit's temperature and pressure limits.

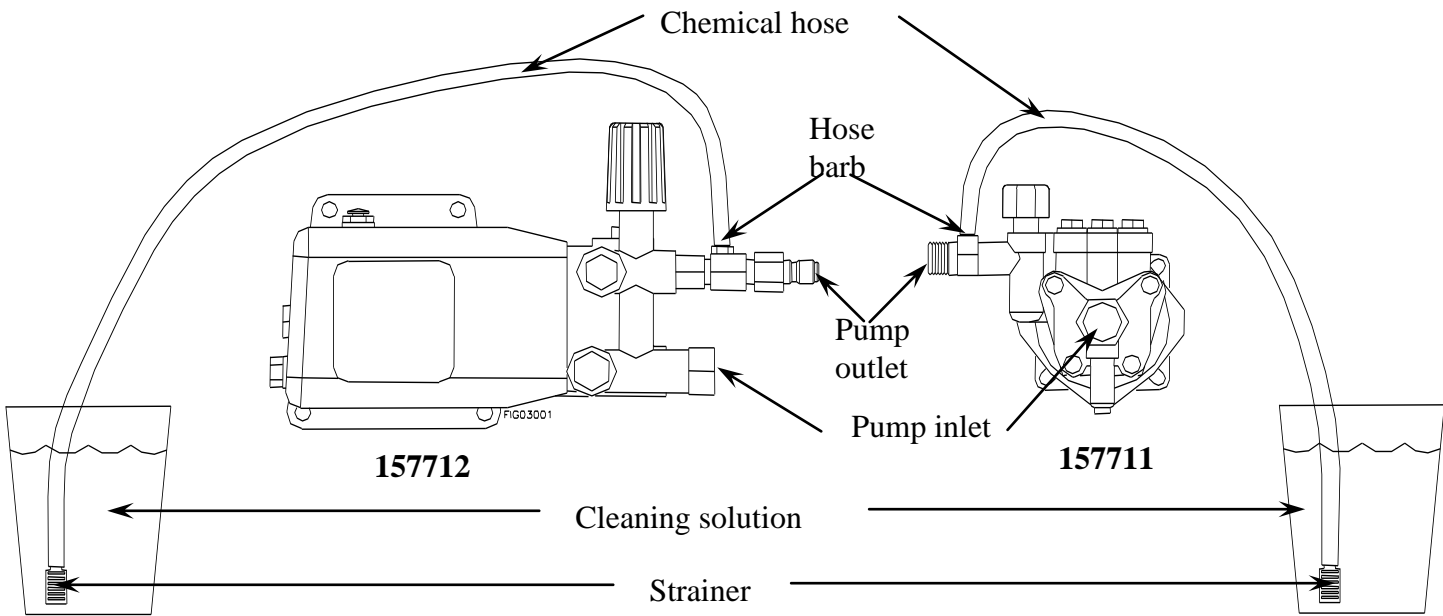
-Stop engine and bleed pressures before leaving unit unattended.

fig01863

# Operation Instructions

## Applying Chemicals

- 1.) Install the black nozzle to spray chemicals onto the cleaning surface.
- 2.) Attach the chemical hose to the hose barb next to the pump outlet.
- 3.) Start the pressure washer according to the start-up instructions.
- 4.) Submerge chemical hose in cleaning solution.
- 5.) Squeeze the spray gun trigger. The chemical injector will draw the chemical into the water stream.
- 6.) Apply chemicals evenly onto the cleaning surface. Allow the chemicals to react with the dirt, then clean at high pressure with green nozzle.
- 7.) Never use more chemical than is necessary to clean the surface.
- 8.) Rinse chemical injector by following steps 1 through 4 with clean water.



**⚠ WARNING**

## Risk of exposure to dangerous chemicals.

Serious injury or death can result if chemical manufacturer instructions are not followed.

- Wear protective gloves when handling and cleaning with chemicals.
- Understand all safety hazards and first aid for all chemicals being used.
- When cleaning filters, check if chemicals have been used and take any precautions that are recommended by the chemical manufacturer.
- Different chemicals may interact dangerously with each other, always follow chemical manufacturer directions before switching chemicals.
- Calculate the correct amount of chemical to mix, dispose of excess chemical per the manufacturer instructions.
- Never spray flammable liquids.



# Maintenance

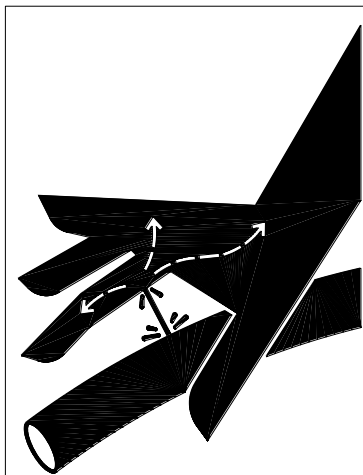
## Maintenance Mode

Before performing any maintenance on the pressure washer, it must be placed in maintenance mode.

- 1.) Turn off engine.
- 2.) Turn off water supply.
- 3.) Squeeze trigger to relieve system pressure.
- 4.) Unplug spark plug wire from spark plug, (see engine owner's manual).

## Maintenance Schedule

What to Check	When To Check	What to Do
Inlet Filter	Each Use	Visually inspect and clean inlet filter with clear water.
Pressure Hose	Each Use	Visually inspect pressure hose and hose couplings. Replace hose if any of the following is evident: hose coupling is damaged, wire mesh is exposed or damaged, hose is permanently kinked or flattened, outer hose cover is blistered or loose.
Bolts	Each Use	Tighten any loose bolts.
Engine Oil	See engine manual	See engine manual for oil change instructions
Pump Oil	After 1 <sup>st</sup> 50hrs, then 3mo/500hr	Change pump oil. See pump oil change instructions. (On page 20)



## **⚠ WARNING**

### **Skin injection hazard.**

High pressure fluid can inject under skin resulting in serious injury including amputation.

-Make sure all fittings are tight before applying pressure. Relieve system pressure before servicing.

-Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.

-If skin injection happens, seek immediate "Surgical Treatment".

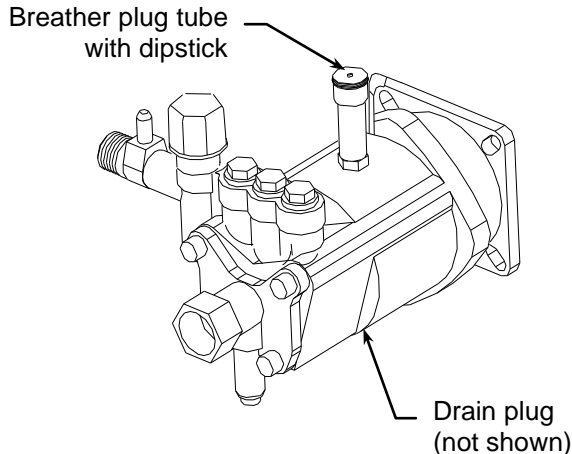
fig01454

# Maintenance

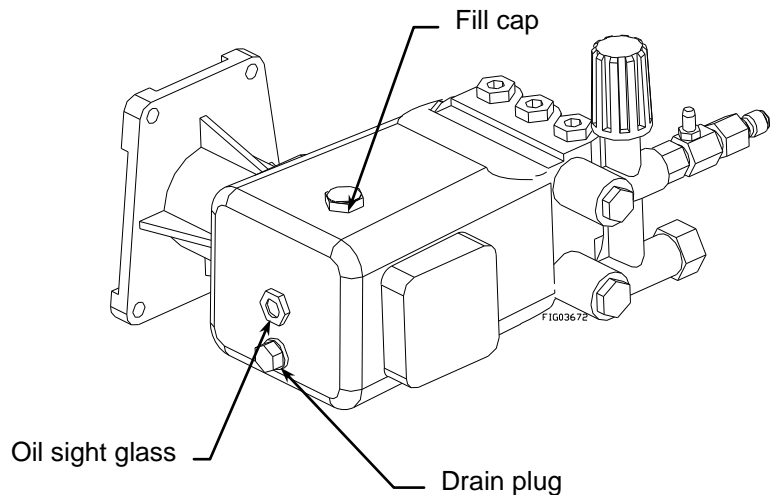
## Pump Oil Change

- 1.) Place a suitable container below the pump to catch the used oil. Remove drain plug.
- 2.) Allow the used oil to drain completely. Reinstall drain plug.
- 3.) Please dispose of used oil in a manner that is compatible with the environment. We suggest you take used oil in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash; pour it on the ground or down the drain.
- 4.) With the pump in a level position add oil to the pump, (see capacities and oil type below).

**157711**



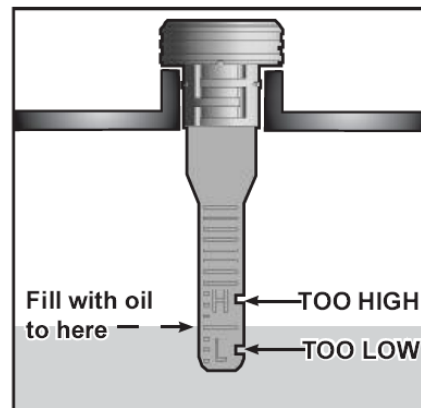
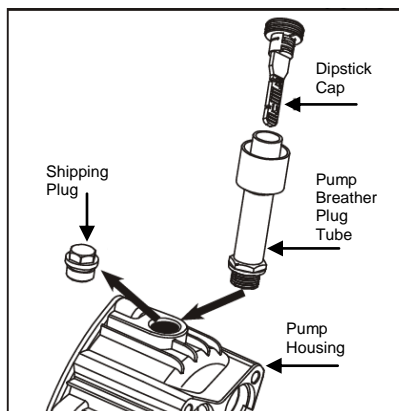
**157712**



	Oil Capacity	Type
<b>157711</b>	5oz (150mL)	SAE 30 non-detergent
<b>157712</b>	20.3oz (600mL)	SAE 30 non-detergent

## Checking Oil Level for 157711

- 1.) Turn off engine, allow it to cool and disconnect the spark plug wire.
- 2.) Twist the dipstick cap until the arrow on the cap lines up with the arrow on the breather plug tube. Remove the dipstick from the breather plug tube. Then remove the breather plug tube from the pump.
- 3.) Wipe the dipstick off with a clean dry cloth. Insert the dipstick cap into the pump housing and remove it. The oil level should be at least to the lower "L" notch on the dipstick, but not above the upper "H" notch. Add above recommended oil as needed.
- 4.) Thread the pump breather plug tube back into the pump housing.
- 5.) Align the arrow on the dipstick cap with the arrow on the breather plug tube, insert it, and twist it to secure. Reconnect the spark plug.



# Storage

## Long Term Storage

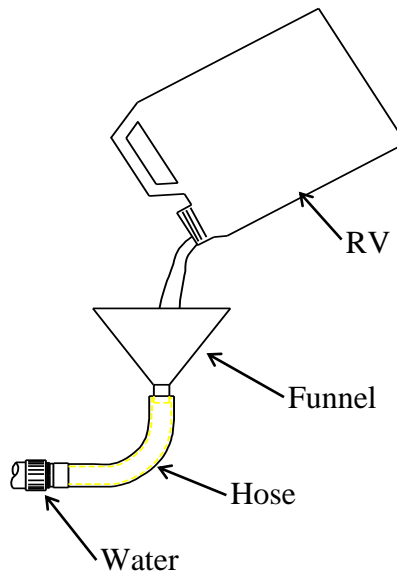
Follow the engine owner's manual for storing the engine.

## Winter Storage

Protect your pump, hose, and gun from freezing.

Items needed: 12" piece of garden hose or equivalent, funnel and RV antifreeze (approximately 6 oz.)

- 1.) Follow the storage instructions listed above.
- 2.) Disconnect spark plug cable. Make sure the engine start switch is OFF, and the fuel valve is OFF.
- 3.) Attach the garden hose with funnel to the pump inlet (see illustration).
- 4.) Pour RV antifreeze into the funnel, pull the engine recoil until antifreeze comes out the pump outlet.
- 5.) Drain all water from the high pressure hose. Depress trigger on gun and drain all water out of gun/lance.



## Troubleshooting

Problem	
Engine will not start	SOLUTION: A
Low/Surging pressure or no water flow	SOLUTION: B, C, D, E, F, G
No chemical injection	SOLUTION: H, I, J, K
Cause	Solution
<b>A-</b> Engine starting instructions not followed	See engine manual for starting instructions
<b>B-</b> Insufficient water supply	See water supply section of this manual
<b>C-</b> Plugged pump inlet filter	See maintenance section of this manual
<b>D-</b> Wrong nozzle	Make sure high pressure nozzle is being used
<b>E-</b> Plugged nozzle	Remove nozzle, check for blockage
<b>F-</b> Worn nozzle	Replace nozzle
<b>G-</b> Leak in pressure hose	Replace pressure hose
<b>H-</b> Wrong nozzle	Make sure chemical nozzle is being used
<b>I-</b> Back pressure from extra long pressure hose	Use standard length hose
<b>J-</b> Leak in chemical siphon hose	Replace hose – use hose clamps if necessary
<b>K-</b> Chemical strainer not submerged	Make sure strainer is completely submerged

## Specifications

### 157711

PSI (bar)	3000 (207)
GPM (l/min)	2.5 (9.4)
Max Water Temp	140°F (60°C)
Dimensions L x W x H	31.14" x 22.14" x 24.35"
Weight	75 lbs

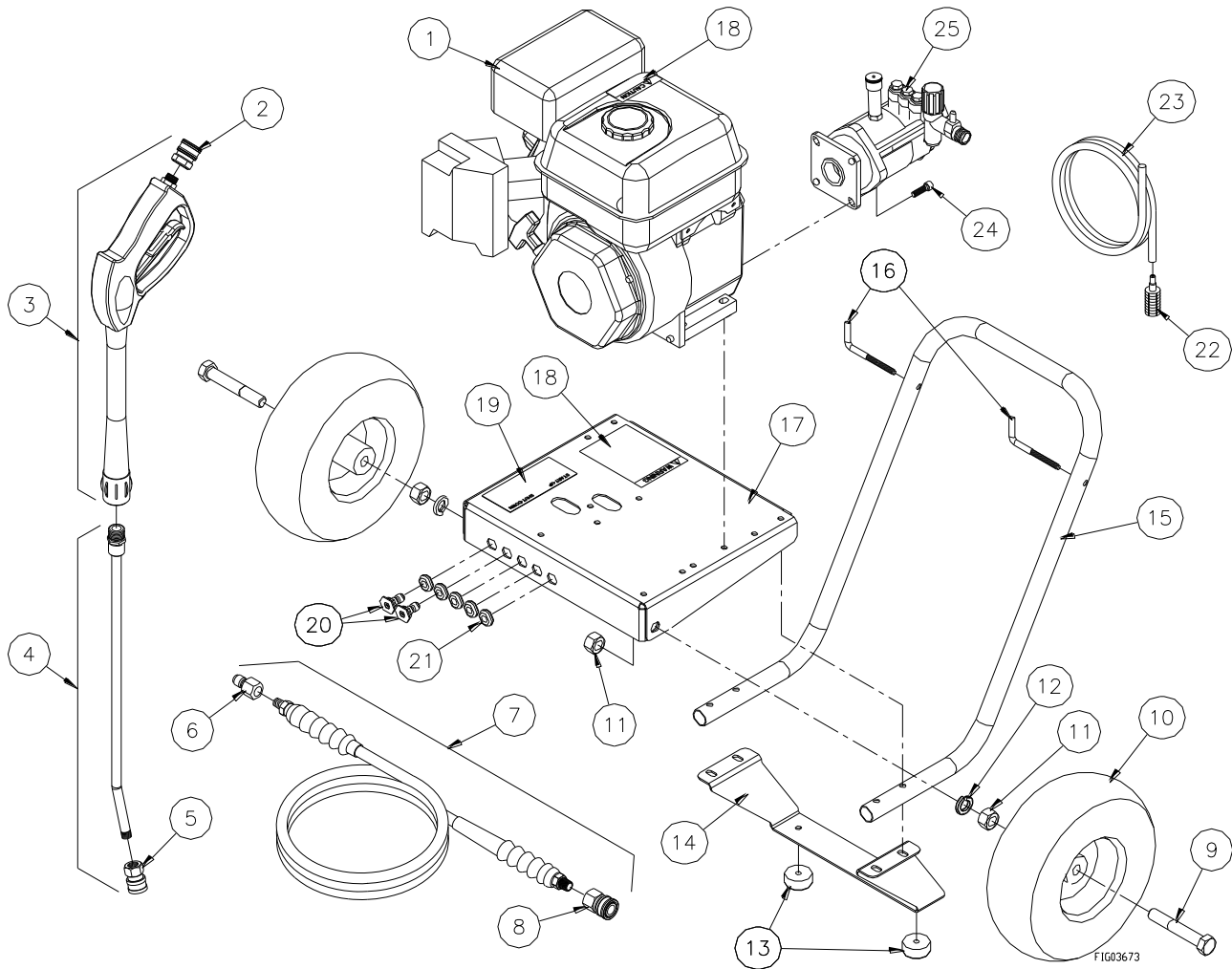
### 157712

PSI (bar)	3500 (241)
GPM (l/min)	4.0 (15.1)
Max Water Temp	140°F (60°C)
Dimensions L x W x H	31.88" x 22.14" x 24.35"
Weight	130 lbs

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

**Any Questions, Comments, Problems or Parts Orders**  
***Call Powerhorse Product Support 1-866-443-2576***

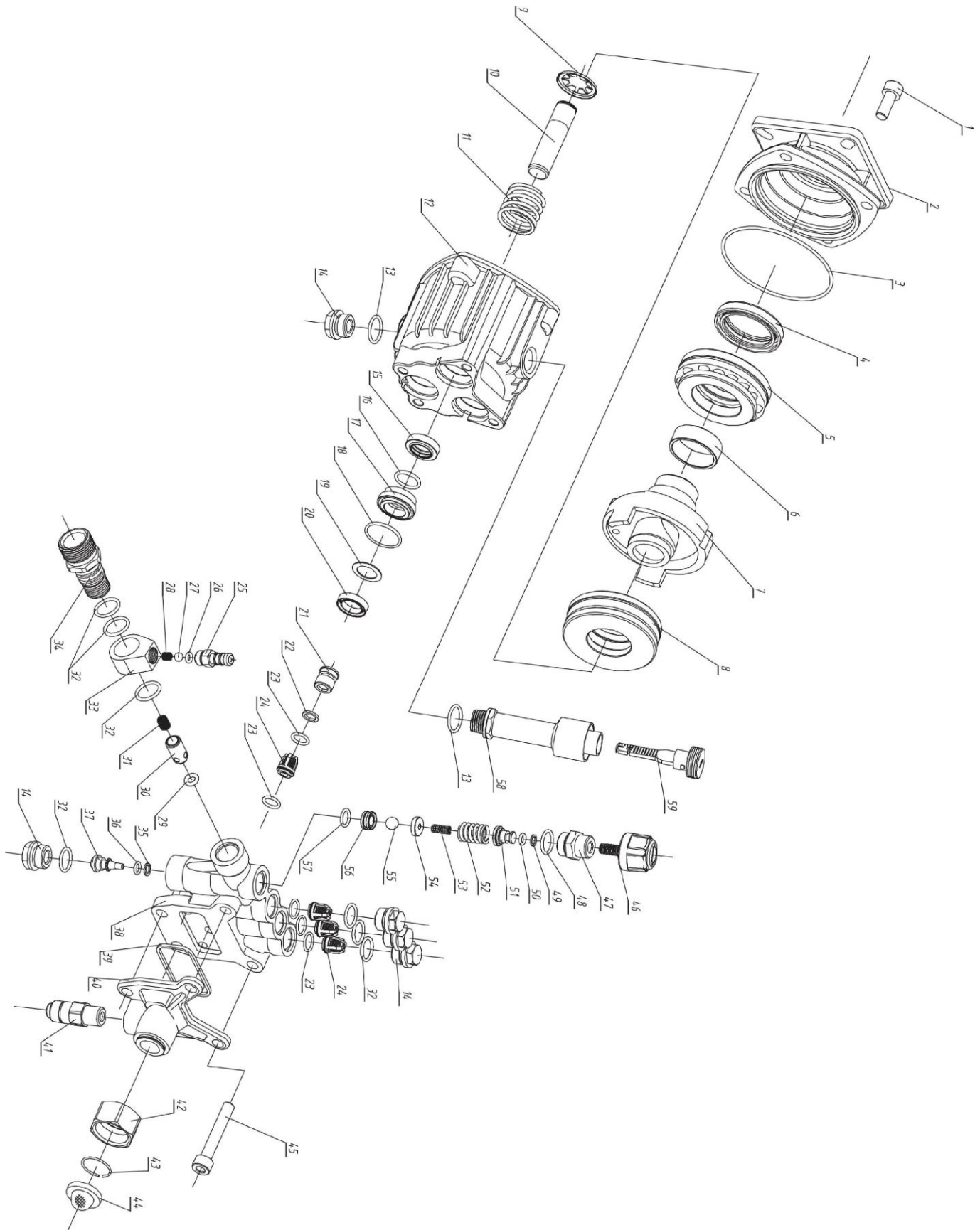
# Parts Explosion M157711 - Rev C.1



REF#	PART#	DESCRIPTION	QTY	MODEL
1	780150 780353	208cc PowerHorse 414cc PowerHorse	1	157711 157712
2	777914	Hose quick Coupler	1	157712
3	780828 780829	Spray gun	1	157711 157712
4	779166	Lance	1	All
5	777904	Nozzle quick coupler	1	All
6	777915	Hose Quick Couple Nipple	1	157712
7	780841 38524	High Pressure Hose	1	157711 157712
8	777914	Hose Quick Coupler	1	157712
9	82124	5/8" - 4" Bolt	2	All
10	780832	Wheel	2	All
11	82125	5/8" Nut	4	All
12	82127	5/8" Lock Washer	2	All

REF#	PART#	DESCRIPTION	QTY	MODEL
13	2215	Rubber Foot	2	All
14	780766	Leg	1	All
15	780767	Handle	1	All
16	38509	Gun/Hose Hook	2	All
17	780765	Base	1	All
18	781026	Warning & Caution Decal	1	All
19	781027	Instruction Decal	1	All
20	781025 780831	Nozzle 2 pack, #3.0 Nozzle 2 pack, #4.0	1	157711 157712
21	35198	Grommet	5	All
22	221222	Chemical strainer	1	All
23	777165	Chemical hose	5 ft	All
24	82234 82023	Pump Bolt	4	157711 157712
25	785761 780361	Pump	1	157711 157712

# 157711 Pump Exploded View – Rev C.1



# 157711 Pump Exploded View – Rev C.1

Item	Description	Part #	Qty
1	Socket head screw	781361	1
2	Pump basal flange	Kit #1	1
3	O-ring 80X2.4	Kit #1	1
4	Radial shaft seal FB36-50-7	Kit #1	1
5	Angular contact bearing	N/A	1
6	Wearable sheath	N/A	1
7	Wobble plate	N/A	1
8	Front bearing (51307B)	N/A	1
9	Spring disk	N/A	1
10	Plunger	N/A	1
11	Plunger spring	N/A	1
12	Crankcase	N/A	1
13	O-ring 14.2X1.9	781373	2
14	Outlet plug	Kit #5	5
15	Oil seal	Kit #2	3
16	O-ring 15X2.2	Kit #2	3
17	Spacer	Kit #2	3
18	O-ring 21.8X1.9	Kit #2	3
19	Water seal	Kit #2	3
20	Compaction washer	Kit #2	3
21	Inlet plug	N/A	3
22	Washer	N/A	3
23	O-ring 9.8X1.9	781383 or Kit #3	9
24	Valve	781384 or Kit #3	6
25	Hose barb	Kit #4	1
26	O-ring Ø3.68X1.78	Kit #4	1
27	Steel ball	Kit #4	1
28	Small cone spring	Kit #4	1
29	O-ring 5.3X2.65	Kit #4	1
30	Outlet cone valve	Kit #4	1

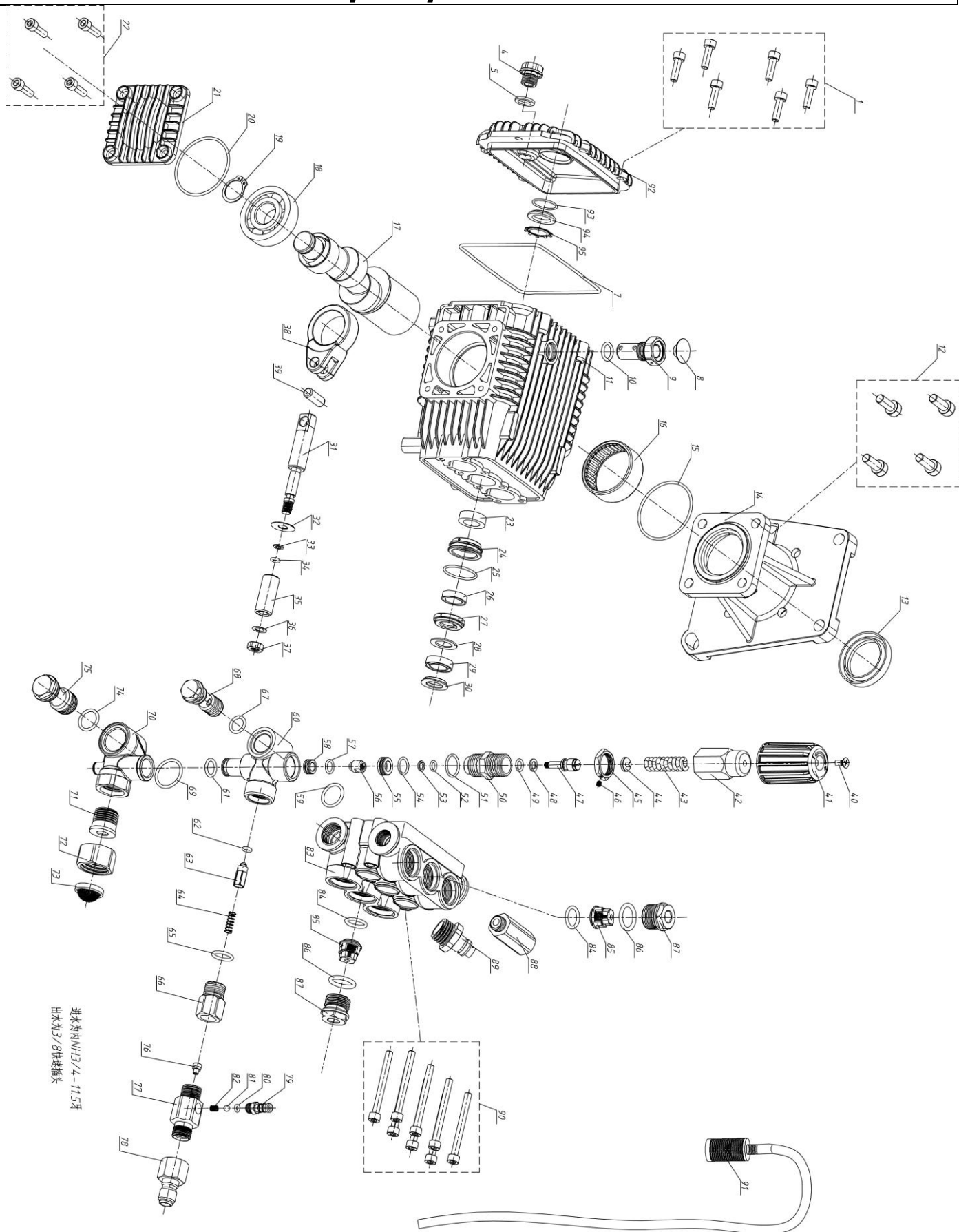
Item	Description	Part #	Qty
31	Cone valve spring	Kit #4	1
32	O-ring 14.2X1.9	Kit #4 Or Kit #5	7
33	Hose barb seat	Kit #4	1
34	Outlet nut M22x1.5-14	Kit #4	1
35	Back up ring 9X6.2X1.2	Kit #5	1
36	O-ring 6X1.78	Kit #5	1
37	Back water valve core	Kit #5	1
38	Pump head	N/A	1
39	Inlet water seal	Kit #6	1
40	Inlet water body	Kit #6	1
41	Thermal relief valve	781401	1
42	Inlet swivel nut	Kit #7	1
43	Clip ring	Kit #7	1
44	Water filter	Kit #7	1
45	Socket head screw M8X50	N/A	4
46	Adjusting screw	Kit #8	1
47	Adjusting screw plug	Kit #8	1
48	O-ring 15X2.5	Kit #8	1
49	Back up ring 8.4X5.3X1.2	Kit #8	1
50	O-ring 5.2X1.9	Kit #8	1
51	Spring holder	Kit #8	1
52	Big pressure spring	Kit #8	1
53	Small pressure spring	Kit #8	1
54	Ball holder	Kit #8	1
55	Steel ball 8.7	Kit #8	1
56	Back water valve port	Kit #8	1
57	O-ring 9.25X1.78	Kit #8	1
58	Breather Plug Tube	Kit #9	1
59	Dipstick		

N/A – part not available to order

## 157711 Pump Kits – Rev C.1

Kit #	Description	Item #	Items Included	Qty	Kit Part #	Kit Qty Needed
1	Flange w/ Seal Kit	2	Pump basal flange	1	782837	1
		3	O-ring 80X2.4	1		
		4	Radial shaft seal FB36-50-7	1		
2	Seal Kit	15	Oil seal	1	782843	3
		16	O-ring 15X2.2	1		
		17	Spacer	1		
		18	O-ring 21.8X1.9	1		
		19	Water seal	1		
		20	Compaction washer	1		
3	Valve Kit	23	O-ring 9.8X1.9	1	781122	6
		24	Valve	1		
4	Outlet Kit w/ Injector	25	Hose barb	1	782838	1
		26	O-ring Ø3.68X1.78	1		
		27	Steel ball	1		
		28	Small cone spring	1		
		29	O-ring 5.3X2.65	1		
		30	Outlet cone valve	1		
		31	Cone valve spring	1		
		32	O-ring 14.2X1.9	1		
		33	Hose barb seat	1		
		34	Outlet nut M22x1.5-14	1		
5	Valve Cap Kit	14	Outlet plug	1	782839	5
		32	O-ring 14.2X1.9	1		
		35	Back up ring 9X6.2X1.2	1		
		36	O-ring 6X1.78	1		
		37	Back water valve core	1		
6	Inlet Flange Kit	39	Inlet water seal	1	782840	1
		40	Inlet water body	1		
7	Inlet Kit	42	Inlet swivel nut	1	782841	1
		43	Clip ring	1		
		44	Water filter	1		
8	Unloader Kit	46	Adjusting screw	1	782842	1
		47	Adjusting screw plug	1		
		48	O-ring 15X2.5	1		
		49	Back up ring 8.4X5.3X1.2	1		
		50	O-ring 5.2X1.9	1		
		51	Spring holder	1		
		52	Big pressure spring	1		
		53	Small pressure spring	1		
		54	Ball holder	1		
		55	Steel ball 8.7	1		
		56	Back water valve port	1		
		57	O-ring 9.25X1.78	1		
9	Breather Plug with Dipstick Kit	58	Breather Plug Tube	1	785819	1
		59	Dipstick	1		

# 157712 Pump Exploded View – Rev C.1



# 157712 Pump Exploded View – Rev C.1

Item	Description	Part #	Qty	Item	Description	Part #	Qty
1	Screw M6*16	N/A	6	50	Valve body	Kit #11	1
4	Drain plug	Kit #1	1	51	O-ring Ø17.17*1.78	Kit #11	1
5	Gasket, drain plug	Kit #1	1	52	O-ring Ø6.08*1.78	Kit #11	1
7	O-ring Ø110*3	Kit #2	1	53	Backup ring 6.2*9*1.2	Kit #11	1
8	Cover, oil plug, Black	Kit #3	1	54	O-ring Ø 12.42*1.78	Kit #11	1
9	Oil plug	Kit #3	1	55	Seat, valve body	Kit #11	1
10	O-ring Ø12.6*1.8	Kit #3	1	56	Bullet	Kit #11	1
11	Crankcase	N/A	1	57	O-ring Ø9.25*1.78	Kit #11	1
12	Screw M8*20	N/A	4	58	Seat	Kit #11	1
13	Oil seal, crankshaft 40*52*7	Kit #4	1	59	O-ring Ø18.2*2.4	Kit #11	1
14	Flange	Kit #4	1	60	Outlet Tee connector	Kit #11	1
15	O-ring Ø51.8*2.2	Kit #4	1	61	O-ring Ø11.6*2.4	Kit #11	1
16	Needle roller bearing NK42/20	N/A	1	62	O-ring Ø4.2*2.4	Kit #11	1
17	Crankshaft	N/A	1	63	Checking valve	Kit #11	1
18	Ball bearing 6304	N/A	1	64	Spring	Kit #11	1
19	Clip Ø20	N/A	1	65	O-ring Ø15*2.5	Kit #11	1
20	O-ring Ø51.8*2.2	Kit #5	1	66	Outlet connector	Kit #11	1
21	Cover, crankshaft	Kit #5	1	67	O-ring Ø12.2*2.4	Kit #11 or Kit #8	1
22	Screw M8*16	N/A	4	68	Outlet banjo bolt	Kit #11 or Kit #8	1
23	Oil seal, plunger	Kit #6	3	69	O-ring Ø23.4*2.4	Kit #11	1
24	Locating ring	Kit #6	3	70	Inlet Tee connector	Kit #11	1
25	O-ring Ø 26.7*1.78	Kit #6	3	71	Inlet connector	Kit #11	1
26	Low pressure seal	Kit #6	3	72	Swivel nut	Kit #11	1
27	Compaction ring	Kit #6	3	73	Water filter	Kit #11	1
28	Compaction flake	Kit #6	3	74	O-ring Ø16.2*2.4	Kit #11 or Kit #8	1
29	High pressure seal	Kit #6	3	75	Inlet banjo bolt	Kit #11 or Kit #8	1
30	Supporting ring	Kit #6	3	76	Water injection tube	Kit #11 or Kit #9	1
31	Plunger rod	N/A	3	77	Soap injector	Kit #11 or Kit #9	1
32	Checking ring	Kit #7	3	78	3/8 quick connect plug	Kit #11 or Kit #9	1
33	Backup ring	Kit #7	3	79	Soap suction nozzle	Kit #11 or Kit #9	1
34	O-ring	Kit #7	3	80	O-ring Ø3.68*1.78	Kit #11 or Kit #9	1
35	Ceramic pipe	Kit #7	3	81	Ball	Kit #11 or Kit #9	1
36	Plain washer	Kit #7	3	82	Spring	Kit #11 or Kit #9	1
37	Fix nut M8	Kit #7	3	83	Manifold head	N/A	1
38	Connecting rod	N/A	3	84	O-ring Ø15.54*2.62	Kit #10	6
39	Fix pin Ø9*23	N/A	3	85	Valve	Kit #10	6
40	Fix screw M6*5	Kit #11	1	86	O-ring Ø18*2.65	Kit #10	6
41	Plastic cap, knob	Kit #11	1	87	Valve plug	N/A	6
42	Knob	Kit #11	1	88	Pop off valve	782191	1
43	Spring	Kit #11	1	89	Thermal relief valve	782192	1
44	Spring seat	Kit #11	1	90	Bolt M8*65	N/A	8
45	Jam nut	Kit #11	1	91	Siphon filter	782194	1
46	Fix screw M4*4	Kit #11	1	92	Crankcase Cover	Kit #2	1
47	Valve rod	Kit #11	1	93	O-ring	Kit #1	1
48	Backup ring 8.2*11*1.2	Kit #11	1	94	Oil Gauge	Kit #1	1
49	O-ring Ø7.65*1.78	Kit #11	1	95	Spring Disk	Kit #1	1

N/A – part not available to order

## 157712 Pump Kits – Rev C.1

Kit #	Description	Items Included		Qty	Part #	Kits Qty Needed
1	Oil Drain Plug & Sight Glass Kit	4	Drain plug	1	784969	1
		5	Gasket, drain plug	1		
		93	O-ring	1		
		94	Oil Gauge	1		
		95	Spring Disk	1		
2	Crankcase Cover Kit	7	O-ring Ø110*3	1	784968	1
		92	Crankcase Cover	1		
3	Breather Cap w/dipstick Kit	8	Cover, oil plug, Black	1	782846	1
		9	Oil plug	1		
		10	O-ring Ø12.6*1.8	1		
4	Flange w/Seal Kit	13	Oil seal, crankshaft 40*52*7	1	782847	1
		14	Flange	1		
		15	O-ring Ø51.8*2.2	1		
5	Crankshaft Cover Kit	20	O-ring Ø51.8*2.2	1	782848	1
		21	Cover, crankshaft	1		
6	Seal Kit	23	Oil seal, plunger	3	782849	1
		24	Locating ring	3		
		25	O-ring Ø 26.7*1.78	3		
		26	Low pressure seal	3		
		27	Compaction ring	3		
		28	Compaction flake	3		
		29	High pressure seal	3		
		30	Supporting ring	3		
7	Plunger Kit	32	Checking ring	1	782878	3
		33	Backup ring	1		
		34	O-ring	1		
		35	Ceramic pipe	1		
		36	Plain washer	1		
		37	Fix nut M8	1		
8	Banjo Bolt Kit	67	O-ring Ø12.2*2.4	1	782852	1
		68	Outlet banjo bolt	1		
		74	O-ring Ø16.2*2.4	1		
		75	Inlet banjo bolt	1		
9	Chemical Injector Kit	76	Water injection tube	1	782853	1
		77	Soap injector	1		
		78	3/8 quick connect plug	1		
		79	Soap suction nozzle	1		
		80	O-ring Ø3.68*1.78	1		
		81	Ball	1		
		82	Spring	1		
10	Valve Kit	84	O-ring Ø15.54*2.62	6	782850	1
		85	Valve	6		
		86	O-ring Ø18*2.65	6		

## 157712 Pump Kits – Rev C.1

Kit #	Description	Items Included		Qty	Part #	Kits Qty Needed
11	Unloader Kit	40	Fix screw M6*5	1	782851	1
		41	Plastic cap, knob	1		
		42	Knob	1		
		43	Spring	1		
		44	Spring seat	1		
		45	Jam nut	1		
		46	Fix screw M4*4	1		
		47	Valve rod	1		
		48	Backup ring 8.2*11*1.2	1		
		49	O-ring Ø7.65*1.78	1		
		50	Valve body	1		
		51	O-ring Ø17.17*1.78	1		
		52	O-ring Ø6.08*1.78	1		
		53	Backup ring 6.2*9*1.2	1		
		54	O-ring Ø 12.42*1.78	1		
		55	Seat, valve body	1		
		56	Bullet	1		
		57	O-ring Ø9.25*1.78	1		
		58	Seat	1		
		59	O-ring Ø18.2*2.4	1		
		60	Outlet Tee connector	1		
		61	O-ring Ø11.6*2.4	1		
		62	O-ring Ø4.2*2.4	1		
		63	Checking valve	1		
		64	Spring	1		
		65	O-ring Ø15*2.5	1		
		66	Outlet connector	1		
		67	O-ring Ø12.2*2.4	1		
		68	Outlet banjo bolt	1		
		69	O-ring Ø23.4*2.4	1		
		70	Inlet Tee connector	1		
		71	Inlet connector	1		
		72	Swivel nut	1		
		73	Water filter	1		
		74	O-ring Ø16.2*2.4	1		
		75	Inlet banjo bolt	1		
		76	Water injection tube	1		
		77	Soap injector	1		
		78	3/8 quick connect plug	1		
		79	Soap suction nozzle	1		
		80	O-ring Ø3.68*1.78	1		
		81	Ball	1		
		82	Spring	1		

## Limited Warranty

Dear Valued Customer:

The Powerhorse Product you just purchased is built with the finest material and craftsmanship. Use this product properly and enjoy the benefits from its high performance. By purchasing a Powerhorse product, you show a desire for quality and durability.

Like all mechanical equipment this unit requires a due amount of care. Treat this unit like the high quality piece of machinery it is. Neglect and improper handling may impair its performance. Please thoroughly read the instructions and understand the operation before using your product.

### Limited Warranty

Powerhorse shall warranty any piece of equipment manufactured, or parts of equipment manufactured, to be free from defects in material or workmanship for a period of 2 years for noncommercial/nonrental use and a period of 90 days for commercial/rental use from the date of purchase by user. This warranty applies to the original purchaser of the equipment and is non transferable. Verification of purchase is the responsibility of the buyer. Parts will be replaced or repaired at no charge, except when the equipment has failed due to lack of proper maintenance. Any misuse, abuse, alteration or improper installation or operations will void warranty. Determining whether a part is to be replaced or repaired is the sole decision of Powerhorse.

**NOTE:** Some services performed by parties other than Powerhorse may void warranty.

**This warranty covers parts only. It will not provide for replacement of complete products due to defective parts. Components not manufactured by Powerhorse are guaranteed by their manufacturer and can be serviced at factory-authorized locations near you. Any costs incurred due to replacement or repair of items outside of a Powerhorse approved facility is the responsibility of the buyer and not covered under warranty. Powerhorse can supply you with the service center location in your area.**

This warranty specifically excludes the following; failure of parts due to damage caused by accident, fire, flood, windstorm, acts of God, applications not approved by Powerhorse in writing, corrosion caused by chemicals, use of replacement parts which do not conform to manufacturer's specifications, and damage caused by vandalism. Additional exclusions: loss of running time, inconvenience, loss of income, or loss of use, including any implied warranty of merchantability of fitness for a specific use.

Warranty does not cover items subject to normal wear such as tires, receptacles or any part subject to direct physical contact by the public. This warranty does not cover any personal injury or damage to surrounding property caused by failure of any part.

This warranty is in lieu of any other warranty expressed or implied and Powerhorse assumes no other responsibility or liability outside that expressed within this warranty.

Please fill in the following information and have it on hand when you call in on a warranty claim.

Customer Number: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Powerhorse Serial Number: \_\_\_\_\_

Item Number: \_\_\_\_\_



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