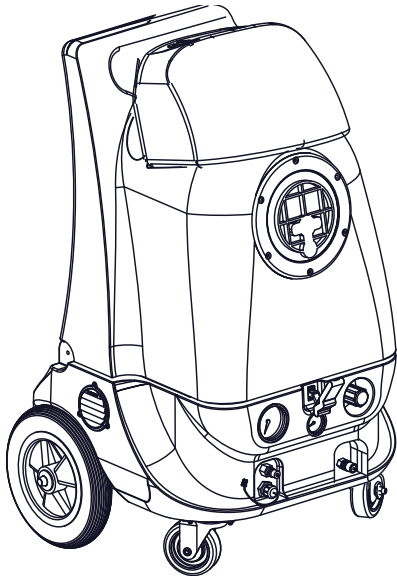




# TORRENT<sup>®</sup> HARD SURFACE CLEANER

120V



## INFORMATION & OPERATING INSTRUCTIONS

**DO NOT OPERATE MACHINE UNTIL YOU HAVE READ  
ALL SECTIONS OF THE INSTRUCTIONS  
IMPROPER USE OF THE MACHINE MAY RESULT IN PHYSICAL INJURY  
AND WILL VOID THE WARRANTY**

1. **DANGER: High pressure may cause severe injury.** Always wear safety glasses. **Never** direct the spray towards yourself, other people, or pets.
2. **Never** allow the spray to remain fixed in one spot.
3. Before each use, remove the spray tool from the hose, and check to make sure the spray nozzle is securely tightened to the spray tool. A loose nozzle could fly off during use.
4. If a leak occurs at the hose, **IMMEDIATELY** turn the machine off. Replace hose before restarting.
5. **Always** use a **defoamer** when foaming occurs to prevent vacuum motor damage.
6. Keep the machine from rain and snow, extremes in temperatures, and store it in a heated location. Use the machine indoors. Do not use outdoors.
7. **Never** adjust the pump pressure above 1200 psi.

# IMPORTANT SAFETY INSTRUCTIONS

This machine is only suitable for commercial use, for example in hotels, schools, hospitals, factories, shops, and offices other than normal residential housekeeping purposes.

When using any electrical appliance, basic precautions should always be followed, including the following:

**NOTE:** Read all instructions before using this machine.



## WARNING!

To reduce the risk of fire, electric shock, or injury:

- Never adjust the pump pressure above 1200 psi.
- Do not leave the machine unattended when it is plugged in. Unplug the unit from the outlet when not in use and before servicing.
- To avoid electric shock, do not expose to rain or snow. Store, and use, indoors.
- Do not allow to be used as a toy. Close attention is necessary when used near children.
- Use only as described in this manual. Use only the manufacturer's recommended attachments.
- Do not use with damaged cord or plug. If the machine is not working as it should, has been dropped, damaged, left outdoors or dropped into water, return it to a service center.
- Do not pull by the cord, use the cord as a handle, close a door on the cord, or pull the cord around sharp edges or corners. Do not run the machine over the cord. Keep the cord away from heated surfaces. To unplug, grasp the plug, not the cord.
- Do not handle the plug, the cord or the machine with wet hands.
- Extension cords must be 12/3 and no longer than 50 feet. Replace the cord or unplug immediately if the ground prong becomes damaged.
- Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
- Keep loose clothing, hair, fingers, and all parts of body away from openings and moving parts.
- Do not pick up anything that is burning or smoking, such as cigarettes, matches, or hot ashes, or any health endangering dusts. Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
- Turn off all controls before unplugging.
- Use extra care when cleaning on stairs.
- Connect to a properly grounded outlet only.
- Liquid ejected at the spray nozzle could be dangerous as a result of its temperature, pressure, and/or chemical content.

## RECORD:

Record the serial number and model of your new machine here:  
(and be sure to register your warranty)

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

Model: TORRENT

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

Write the name and phone number of the distributor from whom you purchased your Torrent: \_\_\_\_\_

\_\_\_\_\_

## INSPECTION:

Carefully unpack and inspect your TORRENT for shipping damage. Each machine is tested and inspected before shipping. Any shipping damage is the responsibility of the carrier. You should notify the carrier immediately if you notice damage to the box or to the machine or parts.

## CLEANING SOLUTIONS:

Select a proper pre-spray for the surface to be cleaned, and apply the pre-spray. Use a neutral pH rinse or detergent (6 to 9 pH) in the Torrent to prevent premature wear of the pump, seals, and other components. Damage caused by the use of improper or strong chemicals is not covered by warranty. Powders are not recommended.

## MAINTENANCE:

For optimum performance, flush the machine with clear water at the end of each working day. Once a month, minimum, run a flushing compound through the machine to break up any mineral or chemical build-up that may have formed. U.S. Products' "X-1500" is recommended.

Your Torrent is supplied with an HT Technology Triplex Plunger Pump, specifically designed to handle rigorous duty cycles and high temperatures. Seal life is expected to be 3000 hours.

This pump has an oil-bath crankcase, and a sight gauge is provided so you can view the oil level through a small opening in the front of the base compartment, directly below the ammeter gauge. The proper fill level is shown by a red dot. Oil changes are recommended every 500 hours, and on new machines an initial oil change is recommended at fifty hours. Use SAE-15W-40 oil. See PUMP MAINTAINENCE for more information. Note that the hoses above the fill port are on quick disconnects to simplify service.

The dump pump has an impeller that will require replacement when worn or when damaged by foreign objects. A replacement kit containing two impellers and gaskets is supplied with your Torrent, along with instructions on how to install the replacements.

Vacuum motors typically require brush replacement between 500 - 1000 hours.

Clean the body with an all purpose detergent, and protect it with an automobile interior polish. Lubricate the wheels, castors, and quick disconnects with an all-purpose silicone spray.

## SWITCH PLATE CONTROLS: (refer to Figure 1)

**Vacuum I Switch (1):** Turns on/off vacuum motor I.

**Vacuum II Switch (2):** Turns on/off vacuum motor II.

**Dump Pump Switch (3):** Turns on/off dump pump. Float switch on recovery tank automatically turns the pump on when the solution level in the tank reaches a pre-set level AND the switch is on the ON position.

**High Pressure Pump Switch (4):** Turns on/off the high pressure (400-1200 psi) pump.

**Dual Cord Sensor Light (5):** The green light will turn on only when the two power cords are plugged into separate circuits.

**Hour Meter (6):** Keeps track of the overall time the pump has been in use.

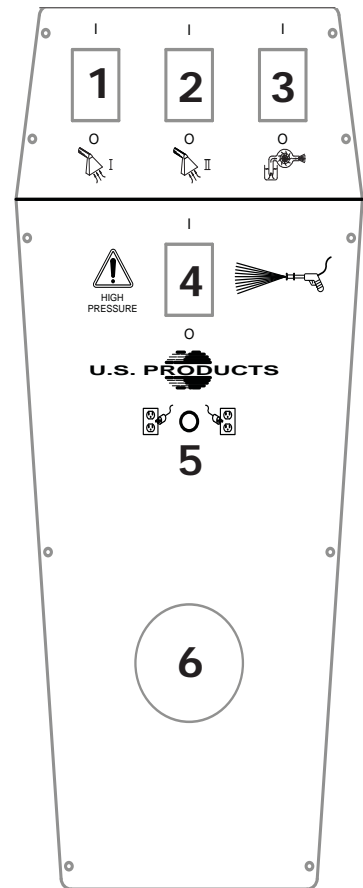


FIGURE 1

## FRONT PANEL: (refer to Figure 2)

**Pressure Gauge:** Measures outlet pressure of high pressure pump in pounds per square inch (psi).

**Ammeter:** Allows precise adjustment of the pump outlet pressure without overloading the pump motor. Proper adjustment for maximum pressure is at the break line between green and yellow.

**NOTE:** Since voltage can vary from one power outlet to another, setting the pressure adjustment based on amp draw will extend the life of the motor by keeping the current within the correct range.

**Pressure Adjustment Knob** – Adjusts outlet pressure between 400 – 1200 psi. **Note:** you must trigger the tool and spray to see adjustment of pressure. Clockwise increases and counterclockwise decreases pressure. Let the pump run for about one minute, then adjust the pump using the ammeter for maximum pressure (set at the break line between green and yellow). For lower pressure, down to 400 psi, simply turn the knob counterclockwise - while spraying - and watch the pressure gauge.

**High Pressure Quick Disconnect** – Attachment for high pressure solution line.

**Auto-Dump Hose Fitting** – Male garden hose fitting to attach dump hose.

**Direct Feed-Hose Fitting** – Female garden hose fitting to attach the direct water feed-hose. The feed hose has a chemical siphon system and backflow preventer at the faucet end of hose.

**Oil Level View Port** - Allows viewing of the pump oil level sight-gauge.

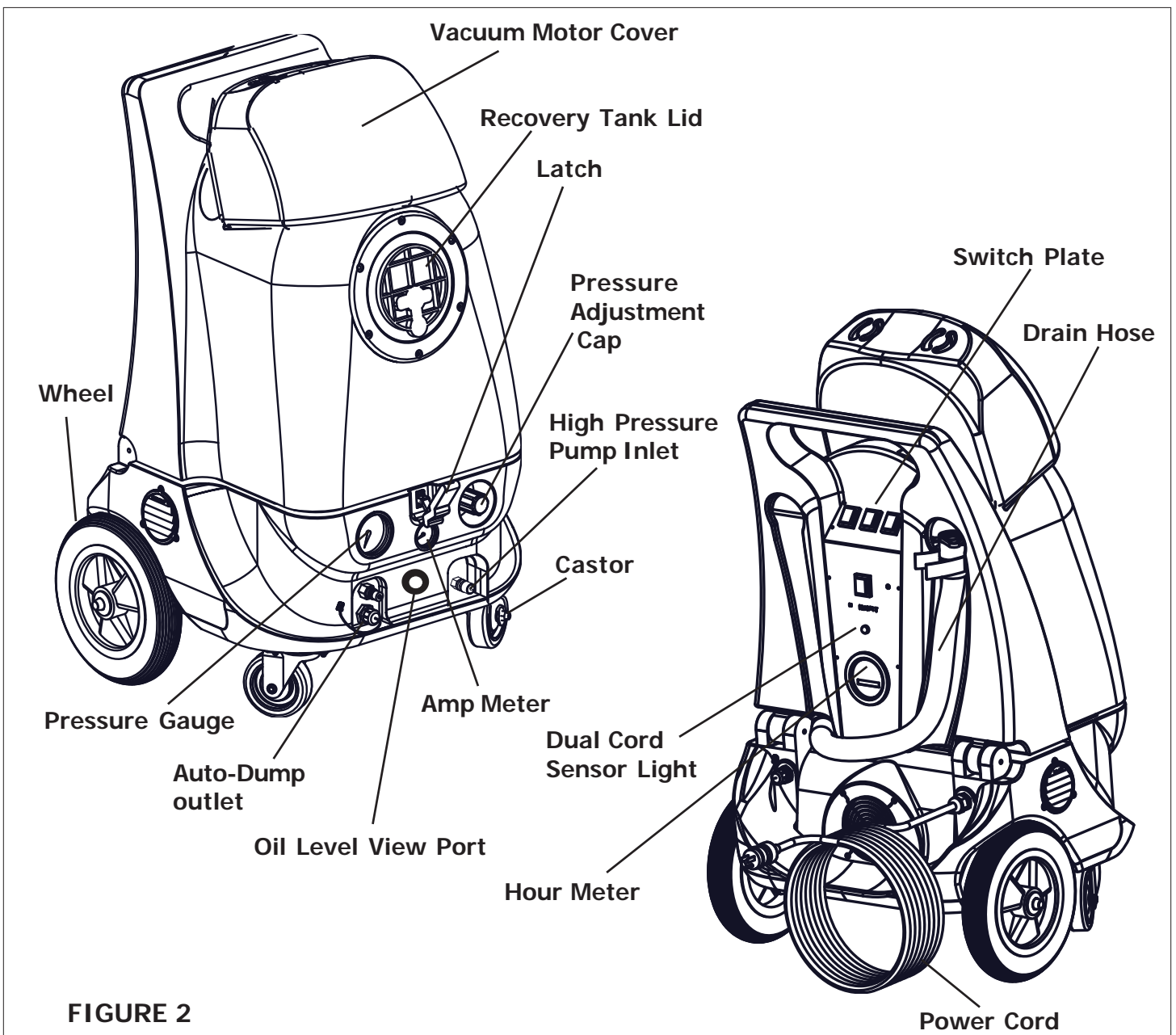
**RECOVERY TANK:** (refer to Figure 2)

**Pre-Filter:** 800 micron polyester mesh bag with quick-change cord lock. This filter hangs inside the tank from the recovery hose inlet piping. Check the pre-filter before operation and clean as required.

**Stainless Steel Filter:** 50-mesh filter screws into base of recovery tank. Inspect daily and clean as needed.

**Float Valve:** Located on the back wall in recovery tank, it automatically controls dump pump when switch is in ON position. Before each use, inspect the float to ensure it is in the proper position and clear of debris that would interfere with free operation.

**Recovery Tank Dump Hose:** Located on the rear of the recovery tank. Use this hose to manually drain the remaining recovered solution from the tank and during tank cleaning.



**FIGURE 2**

## OPERATION

1. Before each use, inspect the machine, hoses, and cleaning tools for cleanliness and completeness. Make sure hoses are in good condition and the spray nozzle(s) is tight.
2. Connect direct water feed hose (supplied with chemical feed and back flow preventer) to the water supply and to the machine. **NOTE:** see instructions on the following page for auto-fill and chemical injection.
3. Install the dump hose onto the brass hose fitting on the front of the machine, and place the open end of the hose in a drain. Add defoamer to the recovery tank. *Foaming can be persistent with hand floor cleaning; consider using defoamer (a dry flake works very well) applied directly to floor surface after the pre-spray and before the high pressure rinse.* Make sure the recovery tank drain hose is closed and the lid is tight on the recovery tank.
4. Connect the solution hose to the 1200 PSI Quick Disconnect on the front of the machine, and attach the tool to be used to the other end of the hose. **NOTE:** Always attach the solution hose before you turn the pump on.
5. Attach one end of the vacuum hose to the hose barb on the front of the recovery tank and the other end of the hose to the cleaning tool.
6. Turn on the water supply. **NOTE:** see instructions on the following page for auto-fill & chemical injection.
7. Plug in the left power cord (as viewed from behind the machine). Plug the other cord into another outlet. Do not connect both cords to the same outlet. The green, smart circuit locator light on the switch plate should light up. If the green locator light does not come on, check the circuit breaker box in the wall, and/or try different outlets until it does turn on. Although all systems in the machine may work correctly if you are not on two circuits, a circuit breaker in a wall panel may trip; if you make sure the green light is turned on, you will prevent tripped circuit breakers.
8. Pre-spray the area to be cleaned with a pump-up sprayer, or use a mop.
9. Point the tool in the proper direction. Turn on the high pressure pump.



**CAUTION: Make sure the solution line and tool are attached before turning the pump on. Extreme pressure will build up, and if the solution line and tool are not attached before starting the pump, you will have to open the machine and manually release the pressure by turning the bleeder valve (mounted on the pump assembly) counter-clockwise.**

10. Adjust the pump outlet pressure by turning the pressure adjustment cap. 400 -- 1200 psi.  
**NOTE: do not adjust the pump above 1200 psi.**
11. Turn on the vacuum and the dump pump. Begin cleaning **NOTE:** the dump pump will automatically turn on and off as the tank fills and empties.
12. When the job is finished, turn off the pumps and vacuums.
13. Run a few gallons of clean water through the system. Completely drain the recovery tank by placing the dump hose over a drain, or a bucket, and removing the cap. Disconnect the hoses from the cleaning tool.
14. Unplug the power cords.
15. Clean the machine and the tool.



**DANGER: Do NOT use any chemicals that may be flammable, explosive, or combustible.**



**CAUTION: Use care when handling hazardous chemicals.**



**CAUTION: Never leave the pump running when you are not actively using it.**

## SMART CIRCUIT LOCATOR

The green light will show the operator when the two cords are plugged into separate circuits. This helps to prevent tripping circuit breakers.

**NOTE:** when one cord is plugged in, the green light will be on dimly.

**NOTE:** if the green, circuit locator light does not illuminate when both cords are plugged in, then both cords are on the same circuit. Try other outlets with one of the cords until you get the locator light to come on.



## AUTO-FILL:

### Without Chemical Injection:

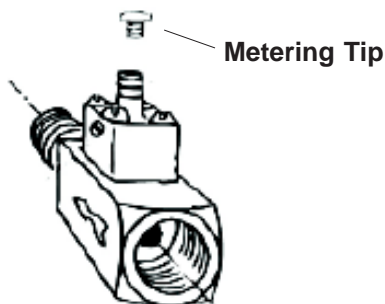
- ▶ Simply connect one end of the water supply hose to a convenient water supply, and connect the other end to the water inlet fitting on the machine. **NOTE:** hot water cleans better than cold water. When all set-up and ready to begin cleaning, turn the water supply ON.

### With Chemical Injection:

#### Chemical Supply:

- ▶ Place the container of concentrated chemical cleaner -- *use a product with a pH between 7 and 9 to avoid premature pump wear, which would void the warranty* -- in a sink or near the water supply.
- ▶ Insert the end of the clear tubing with the foot valve attached into the chemical container. **NOTE:** the ceramic weight at the foot valve will keep the valve at the bottom of the container.
- ▶ Connect the chemical injector to the threads on a water supply (utility sink, garden hose). Bring the clear tubing from the chemical container to the metering tip.

### CHEMICAL INJECTOR



METERING TIP FLOW RATES	
COLOR	OZ/GAL
TAN	0.45
ORANGE	0.636
TURQUOISE	1.1
PINK	1.38
GRAY	4.36

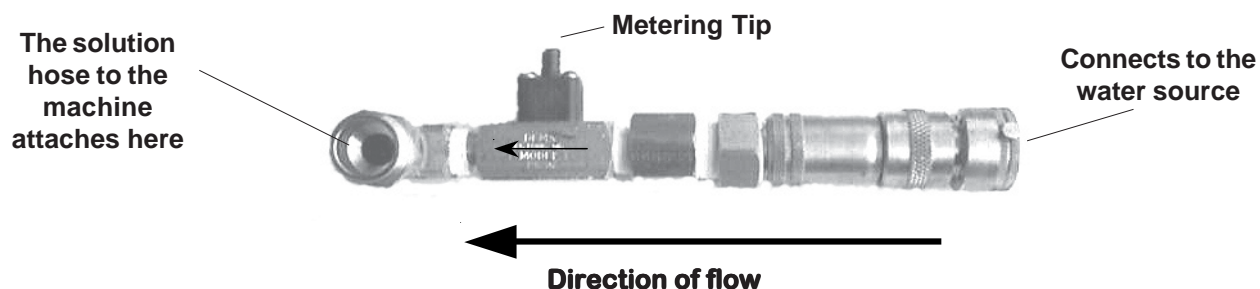
**NOTE:** the Turquoise tip is installed at the factory

The metering tip is replaceable. Change the metering tip to adjust the amount of chemical used per job. Refer to the flow rate chart above and included with your metering tips.

To change the metering tip, carefully unscrew the tip that is installed and replace it with the tip of your choice. Put the tip you removed in a safe and clean location.

**NOTE:** the Turquoise tip is installed at the factory.

### CHEMICAL INJECTOR & WATER CONNECTION ASSEMBLY



## **PUMP MAINTENANCE:**

### **Oil Change:**

The first oil change is required after the first 50 hours of use. Impurities will get into the oil during the break-in phase, and it is necessary to change the oil to remove the contamination that can lead to premature pump wear. After this initial oil change, we recommend changing the oil in the pump every three months or 300 hours of use.

**NOTE:** in locations with high humidity and/or wide, daily temperature ranges, it is possible for some condensation to appear inside the pump crankcase. Condensation is evident if the oil looks white and/or milky. While a small amount of condensation in the crankcase is not a problem, a large amount of water in the oil (20% or more of the liquid is water) requires oil changes more frequently.

**NOTE:** the pump in your Torrent is in the front of the base compartment. The drain plug is located on the left side of the pump, near the bottom. The dip stick (and oil fill port) is on the top of the pump. The front of the pump contains an Oil Level Indicator that can be seen through a hole in the front of the base compartment. The indicator is a clear view window with a yellow plate showing. A red dot in the center of the yellow plate indicates the oil fill mark. The oil level should be at or just slightly above the red dot.

**NOTE:** It is a good idea to run the pump for a few minutes before changing the oil, but be sure to unplug the machine before you begin the process of changing the oil.

Use **11.8 ounces of SAE 15W-40** oil in your pump. Follow the steps below to correctly change the oil in your Torrent pump.

1. Unplug the machine. Put the machine on a plastic sheet to protect the flooring surface from oil.
2. Open the latch and raise the tank. Prop the tank open so your hands are free to work on the pump. Move the two hydraulic hoses that pass over the pump out of the way by disconnecting them at the quick disconnects at unloader valve assembly.
3. Place a two-cup or larger container under the hole in the base, at the front of the machine, to catch the oil as it drains from the pump.
4. Loosen the dip stick.
5. Loosen and remove the plug in the bottom of the left side of the pump. Let the oil drain out until the pump is empty.
6. Remove the dip stick. **NOTE:** take care not to let oil drip onto the pump or other components.
7. Pour a few ounces of fresh oil into the pump, at the dip stick hole, and let it drain through to flush out any impurities. Be careful not to spill any oil on the pump or elsewhere.
8. Replace the pump drain plug. Tighten.
9. Carefully pour about 11 ounces of fresh oil into the pump. Give it a little time to settle.
10. While watching the oil level at the Oil Indicator window (on the front of the pump head), carefully pour a little more oil into the pump until the level reaches the red dot in the window.
11. Once the oil has reached the correct level, install the dip stick.
12. Clean up any/all oil that may have spilled or dripped inside the base of the machine.
13. Let the tank down. Move the machine away from the oil in the container on the floor.
14. Clean up any oil that has spilled. Pick up the container of drained oil, the plastic sheet, the oil container(s) and dispose of all of it according to environmental regulations.



## TORRENT PUMP MAINTENANCE SCHEDULE

It is critical that you maintain your pump properly in order to get the performance and longevity that it can provide.

Change the oil in your pump after the first 50 hours of operation, then follow this maintenance schedule.

<b>TASK</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>AS NEEDED</b>
Inspect and clean pump inlet filters	X		
Check oil for correct level and consistency	X		
Check pump for oil and water leaks	X		
Check fittings for proper tightness		X	
Change Oil every 500 hours <small>after the first one at 50 hours</small>			X
Packing Change			X
Valve Change			X

**NOTE:** if the oil shows signs of contamination (milky or discolored) change it immediately, and replace the packings.

Keep a record of each task performed and the date completed.

### GENERAL TROUBLESHOOTING

#### IF THIS

#### CHECK THIS

<b>Pump or Vac Does Not Turn On</b>	<p>Check the circuit breakers in the wall. If both cords were on one circuit the breaker may have tripped. The switches should light up when turned ON. Check the switch to make sure it is working.</p>
<b>Pump Pressure is Low</b>	<p>Check the spray tip(s) for proper size or excessive wear. The pressure relief valve may be stuck open, or the seat may be worn. Check the inlet filters for dirt or debris. The pump inlet or outlet valves may be dirty or damaged.</p>
<b>Vacuum Suction is Low</b>	<p>Make sure the tank lid is closed tightly, the drain hose is closed tightly, and the recovery hose is tight at the vac inlet hose barb and at the tool. Check the hose for cracks.</p>
<b>Water Leaking from Pump</b>	<p>Worn packing in pump.</p>
<b>Oil Leaking from Pump</b>	<p>Worn piston seals. Misaligned oil seal O-Ring. Bad bearing. Damaged crankcase.</p>

# TORRENT®

## PART LIST

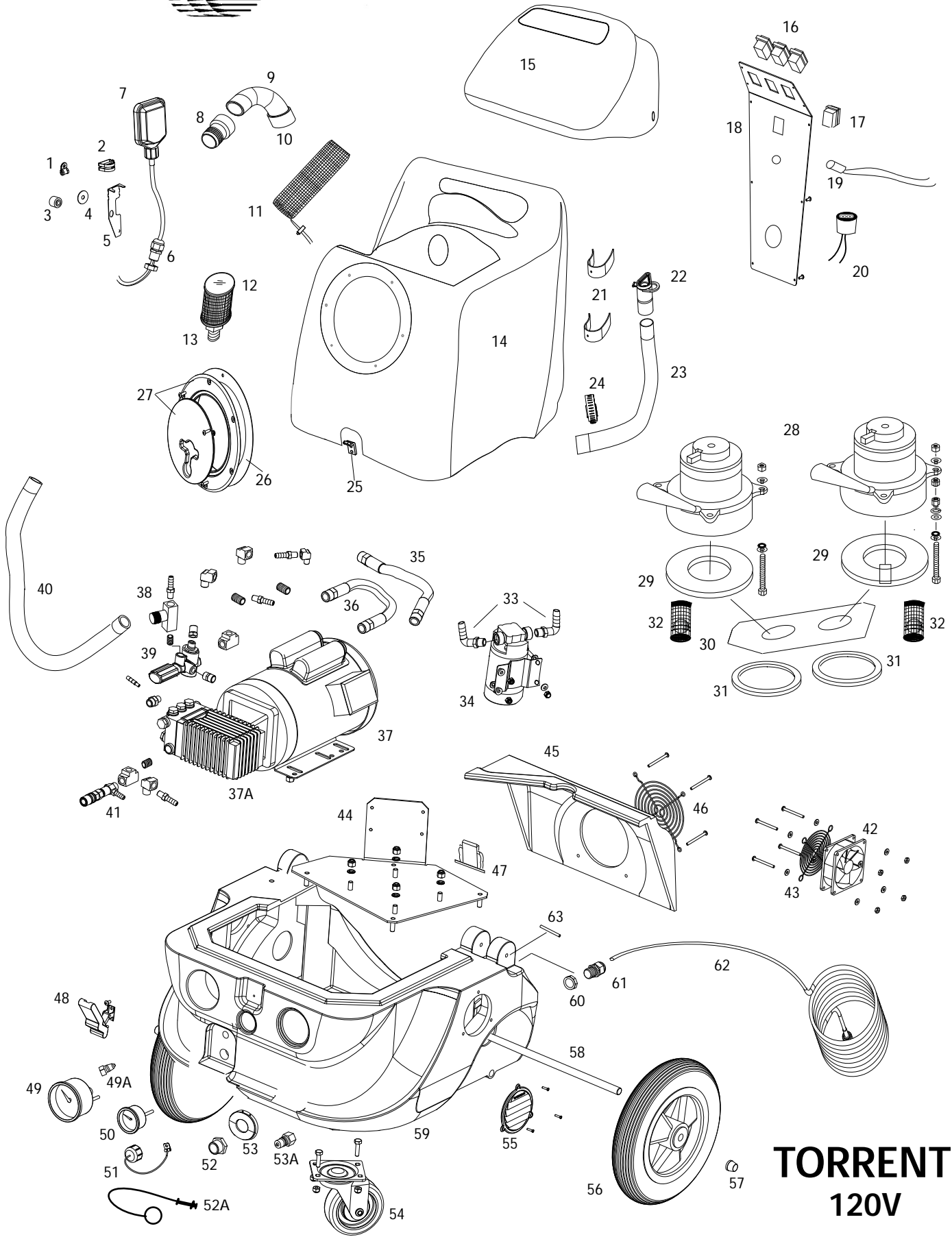
### 120V

<u>ITEM #</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>ITEM #</u>	<u>PART #</u>	<u>DESCRIPTION</u>
#1	196	Clamp, cable	#41	1489	Valve, thermal protection
#2	166	Hose clamp	#42	411A	Fan, cooling
#3	1349	Spacer	#43	410	Guard, fan
#4	290	Washer, rubber	#44	1501	Plate, pump & motor mounting
#5	1350	Bracket, float	#45	FP526	Cover, rear
#6	230	Cord retainer	#46	2015	Guard
#7	2068	Float, switch, 90°	#47	1495	Transformer, for amp meter
#8	2077	Hose Barb, 1-1/2"	#48	909A	Latch
#9	1463	Elbow, 45°, ABS	#49	1165	Gauge, pump pressure
#10	1464	Bushing, 2", slip	#50	219	Quick disconnect, 1/4 fpt
#11	1428	Strainer bag, vacuum inlet	#51	237	Cap, with chain
#12	2069	Screen, vac inlet	#52	1184	Hose connector
#13	1168	Nipple, PVC	#52A	1522B	Plug, brass
#14	FP522	Tank, recovery	#53	1502,1547	Clamp collar, 2 pc
#15	FP523	Cover, Vacuum Motors	#53A	1522A	Quick disconnect, female
#16	2123	Switch, SPDT, motor ON/OFF	#54	905	Castor, 4"
#17	2123	Switch, SPDT, Heat	#55	928B	Louver, black, 3"
#18	1434A	Switch plate, Torrent, 120V	#56	2084	Wheel, 10"
#19	227	Light, green, 240V	#57	27A	Axle cap
#20	423	Hour meter	#58	910	Axle
#21	1130	Strap, velcro	#59	FP527	Base compartment, drilled
#22	1060C	Cap, drain hose	#60	2320A	Nut, plastic
#23	1060B	Hose, drain	#61	230	Retainer, cord
#24	156	Hose clamp	#62	495A	Power cord, 25 ft
#25	909A	Latch strike	#63	801	Hinge pin
#26	1129	Gasket, under lid			
#27	2070B	Lid, recovery tank access			
#28	408E	Vacuum motor			
#29	2013A	Gasket, for vacuum motor			
#30	MA-9	Manifold, vac motor			
#31	1477	Gasket, under vacuum screen			
#32	929A	Filter, ball float, vac shut-off			
#33	1081	Elbow / hose barb			
#34	957	Pump, auto-dump			
#35	1507	Hose, 17"			
#36	1505	Hose, 15"			
#37	1491	Motor, pump drive, no pump			
#37A	FP524	Pump, complete with brass			
#38	1513	Valve, needle, pressure relief			
#39	1488	Valve, unloader			
#40	1506	Hose, 21"			

### Miscellaneous Parts & Assemblies

FP525	Pump & motor, complete
	Pump rebuild kit, valve assemblies
FP195D	Vac hose & pressure line 25' complete
FP497	Chemical injector
FP520	Replacement fan
956A	50' dump hose
1490	Water Inlet filter assembly

# U.S. PRODUCTS



**TORRENT**  
**120V**

# TORRENT<sup>®</sup> HARD SURFACE CLEANER

120V

NOTES:



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Coeur d'Alene, Idaho

VISIT US AT: <http://www.usproducts.com>