

Electric Oil Pump

OPM



OPM-115, OPM-220

Congratulations on purchase of this World Class Electric Oil Pump!

This is an AC Gear Oil Pump designed for use with AC Power. Pump uses 2 Sintered Powder Metal gears for suction & is designed for use with oils up to SAE 90 in addition to be used with Waste Oil & a variety of other media. In ideal condition, pump dispenses up to 4.4 GPM (16.6 Litres) at the pump outlet. The actual discharge varies depending on media being used, temperature, Hose Length etc.

Pump Comes in 2 Power Ratings

1. 115V AC, 60 Hz
2. 220V AC, 50/ 60 Hz

Rating is marked on the pump motor

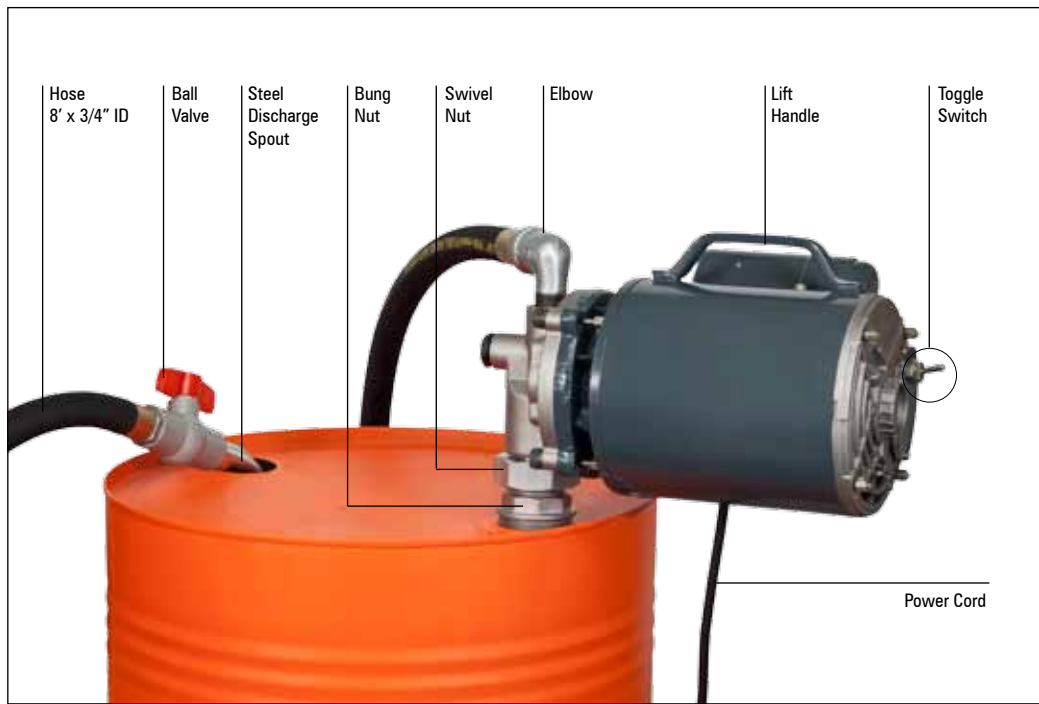
Since every country has different power sockets, it may so happen that the standard power socket provided with the pump may not fit directly into your power source. Use an adapter to convert the pin style on the pump to match with your power socket.

In case you need to extend the power cord, use a power cord extender with female socket that would fit into the power cord fitted onto the pump & the male end for the power source



PUMP CONSTITUENTS

1. Pump & Motor Assembly fitted with Lift Handle & Power Cord
2. Elbow
3. Suction Tube (2 parts)
4. Strainer Kit (to be used only with Waste Oil)
5. Hose Assembly consisting of 8' x 3/4" ID Hose, Ball Valve & Steel Discharge Spout
6. Bung Nut
7. Teflon Tape



ASSEMBLY & INSTALLATION (DRUM MOUNTING)

1. Wrap around Teflon tape on the following male threaded joints. This will ensure a leak-proof connection

- Male Threads on the Elbow
- Male Threads on the Fitting ends of the Hose
- Male threads between the 2 Suction Tube parts
- Male threads on the Suction tube end that fits into the pump inlet

2. **Now Fasten the Elbow into the pump outlet & hand tighten. Once you can no longer hand tighten, take a wrench & tighten the elbow by about 1/2 a turn. Open end of the Elbow should be facing away (not in the direction of the pump motor)**



3. Take the Bung Nut & fasten it onto the 2" opening on the Drum. Bung Nut has a large 2" thread & a small 1-1/2" thread. 2" thread goes into the drum, whereas the 1-1/2" thread is for connecting bung to the pump



4. In case the Bung Nut does not fit onto your drum, use a Drum Bung Converter. Note that bung supplied with the pump has 2" Pipe threads

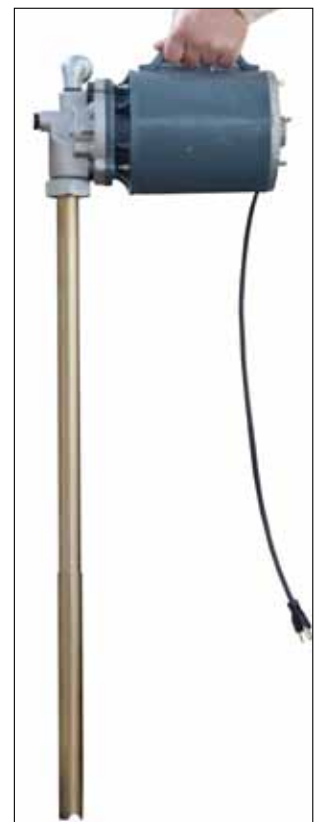
5. Connect the two halves of the Suction Tube. Suction tube is designed for use with tanks / drums which are 36" (914 mm) deep & has a total connected length of 34" (865 mm).

In case you are installing the pump on a tank that is deeper, you would have to get a standard 1" dia. tube with 1" NPT threads on one end. For shallower drums, cut the suction tube to the desired length.

Ensure that there is about 2" (50 mm) gap between the bottom of the tank / drum & inlet of the suction tube allowing for easy entry of media into the tube

6. **In case the pump is being used for dispensing waste oil, you must install a strainer using the strainer kit provided at the suction tube inlet**

7. Now connect the Suction Tube to the pump inlet. Hand tighten



8. Lift the Pump from the Handle. **Be careful as the motor is heavy.** Insert suction tube into the drum through the 2" opening on the drum. Use the Swivel Nut mounted at the pump inlet to fasten onto the Bung Nut. Hand tighten

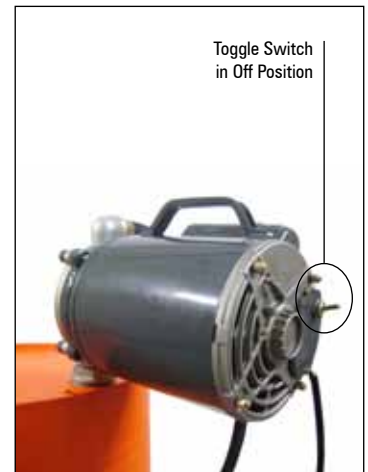


11. End of the Hose has a Ball Valve connected to it. **This is just a Non Drip Valve & not a control valve.** Ball Valve is further connected to a steel spout. Spout is designed to enter the 3/4" opening on the drum which acts as a nozzle holder



9. **Take about 30 ml of Oil being dispensed & pour it into the pump outlet through the elbow. This will ensure that the gear chamber stays lubricated & makes it easier for the pump to prime**

12. With the Toggle Switch on the Motor in the upward position (switched off), connect the power cord to the AC Outlet



10. Take the Hose Assembly & connect the threaded end onto the Elbow at the pump outlet. Hose has a hex nut at the threaded end which can be tightened to the elbow using a wrench

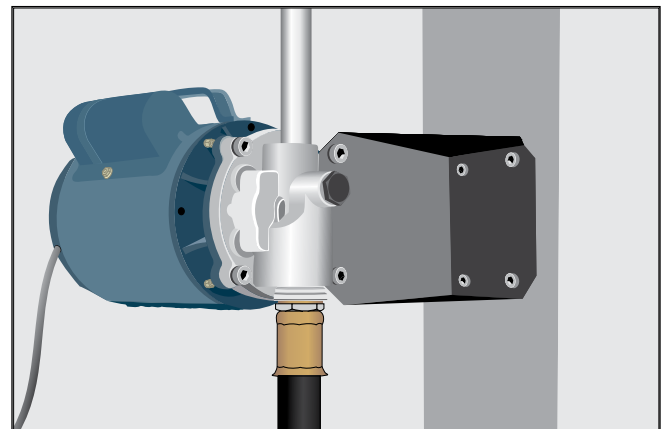


13. The pump is now ready for use

PUMP INSTALLATION (IN-LINE)

This pump can additionally be mounted on a wall for In-Line operation. This is particularly done in a shop environment where the pump may be used with Waste Oil. **Note that for Waste Oil Application, use the Strainer kit provided with the pump & install Strainer at the bottom of the suction tube.**

Pump can be installed using a Mounting Bracket (not provided, but can be ordered separately). This bracket is a simple right angle bracket with two mounting holes that use the motor mounting holes on one side of the motor to attach the pump to the bracket. The bolts used to mount the pump to the motor are removed and then reinstalled through the two holes in the mounting bracket. The other leg of the bracket has 4 mounting holes to mount the bracket to a wall or post. The pump is mounted such that the suction port is down and the outlet port is pointing up. The plumbing back to the storage tank normally goes up from the pump to an overhead pipe to route the plumbing back to the storage tank. A Suction Hose / Tube is installed at the inlet with a strainer where the waste oil enters the hose/tube



PUMP OPERATION

1. Switch On Power from the AC Outlet
2. **Make sure that the Ball Valve is in open position (valve parallel to the hose)**
3. Dispensing Spout should be facing the container into which media is to be dispensed
4. Now Switch On the Motor by Pressing the Toggle Switch Down
5. In less than a minute, the pump will be primed & media will start dispensing from the Steel Outlet Spout
6. Dispensing Action can be stopped by Switching off the Toggle Switch on the Motor. It is suggested not to close Ball Valve to Stop flow.
7. Motor is Air Cooled & Thermally Protected which means that the pump can be run for a very long time. If due to any reason, the motor gets heated, it will stop automatically
8. **The pump however must never be run dry (no media in the drum) as that can possibly cause irreparable damage to the motor**
9. In case ball valve is used to control flow & is closed with the motor on, there will be no media flowing out of the discharge spout; instead media will go back into the pump. Pump has a built-in Bypass valve that will get activated & bypass the media. **The ball valve however must never be kept close for more than 5 minutes with the motor switched on**
10. Once Dispensing is completed, switch off the toggle switch & disconnect the power cord from the AC outlet
11. Store the Discharge Spout into the 3/4" hole on the drum

Ball Valve is not designed to be used to control flow, but used primarily as a non drip which is closed after motor is shut down

PUMP SPECIFICATIONS

	115V AC Pump	220V AC Pump
Flow	Upto 4.4 GPM (16.6 LPM)	Upto 4 GPM (15 LPM)
Motor	½ HP 115V AC , 60 Hz. , Single Phase	½ HP 220V AC , 50/60 Hz , Single Phase
Amp	9 Amp	6 Amp
RPM	1720	1440 / 1720
Construction – Pump Housing	Aluminium Die Cast	Aluminium Die Cast
Mechanism	Gear Pump	Gear Pump
Gear Material	Sintered Powder Metal	Sintered Powder Metal
Internal By-Pass Valve	Yes	Yes
Suction Pipe	34" Long x 1" OD	34" Long x 1" OD
Hose	8' long x 3/4" ID	8' Long x 3/4" ID
Bung Adapter	2" Threaded	2" Threaded
Inlet	1" NPT (F)	1" NPT (F)
Outlet	3/4" NPT (F)	3/4" NPT (F)
Dispensing Nozzle	Ball Valve	Ball Valve
Power Cable	Included	Included
Air Cooled	Yes	Yes
Max. Viscosity of Oil	SAE 90	SAE 90
Max. Working Pressure	65 PSI (4.5 BAR)	65 PSI (4.5 BAR)
Thermal Protection	Yes	Yes

WETTED COMPONENTS

Aluminium, Steel, Cast Iron, Nylon, NBR, Zinc, Polypropylene

RECOMMENDED USE

Oils up to a viscosity of SAE 90, Synthetic Oils, Antifreeze*, Used Oil, Hydraulic Fluids, Cutting Oils, Oil based herbicides, Non Flammable Oil Based Solvents, Liquid Soap* etc.

* for use with water based fluids, the additive to water must contain corrosion inhibitors

DO NOT USE WITH

Fuels, Corrosive Media, Acids, Chemicals, Lacquers, Paint Thinners etc.



WARNING

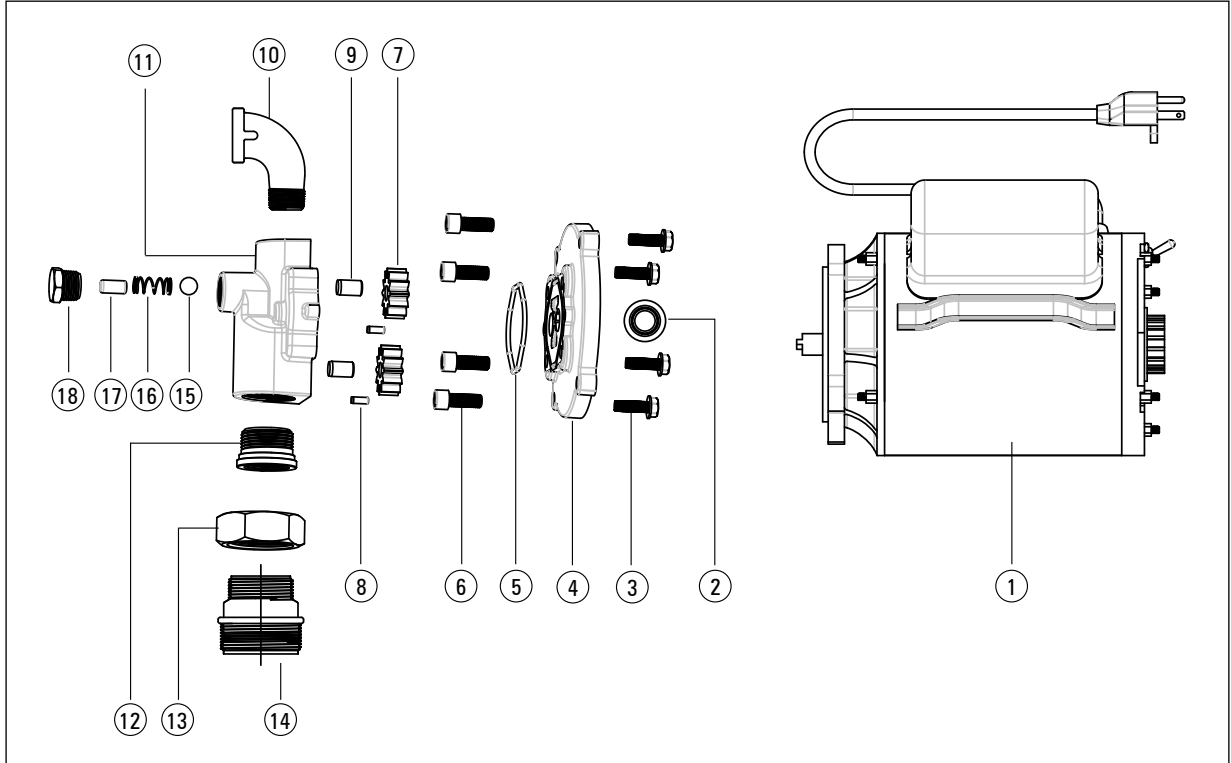
This is not a fuel pump

TROUBLESHOOTING

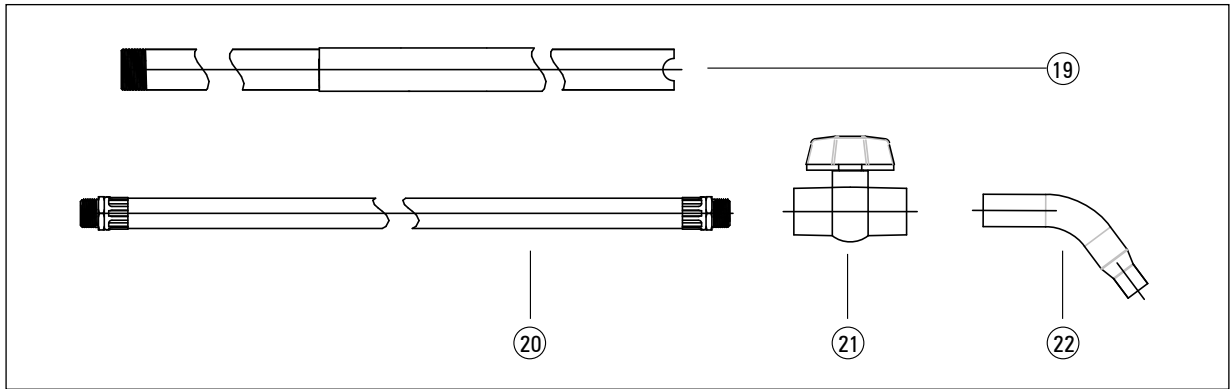
PROBLEM	CAUSE	SOLUTION
Motor runs but pump will not prime	Oil level low	Refill tank / Drum
	Inlet suction screen clogged (used oil)	Remove and clean or replace
	Air leak in suction tube (19)	Inspect all joints in suction tube (19), make sure all threaded joint have sealant applied
	Air lock in system	Insert about 8 oz. (240 ml) of oil through the Elbow (10) into the pump outlet & then operate the pump
	Motor does not run at proper speed	Check electric connections. Ensure supply voltage is at proper level
	Worn or damaged gears (7)	Remove cover (4) and inspect gears (7). Replace if worn or damaged
Oil leaking in motor mount	Faulty or damaged motor shaft seal (2)	Replace shaft seal (2)
	Operating pump extended time with spout (22) closed	Do not exceed 5 minutes of operation with spout (22) closed.
Unit pumps but output flow is low	Clogged inlet suction screen (used oil)	Clean or replace
	Air leak in suction tube (19)	Check to make sure all joint in suction tube are sealed
	Suction tube (19) too close to tank bottom	Suction tube (19) must have a 2 in. (50 mm) minimum clearance
	Tank empty	Refill tank
	Worn or damaged gears (7)	Remove cover (4) and inspect gears (7). Replace if worn or damaged
	Damaged motor (1)	Replace motor (1)
Motor stalls when nozzle is closed	Clogged suction tube (19), hose (20), or spout (22)	Inspect and clean
	Bypass relief valve is stuck	Inspect relief valve, making sure ball (15) is free. Replace if damaged
	Low supply voltage	Check supply voltage
	Gears (7) damaged and binding	Inspect gears (7). Gears should turn freely. Replace if damaged
Motor overheating	Faulty motor (1)	Replace motor (1)
	Gears (7) binding	Check to make sure gears (7) turn freely on shaft (9)
	Operating pump extended time with spout (22) closed	Do not exceed 5 minutes of operation with spout (22) closed
	Clogged inlet suction screen	Clean or replace
	Clogged suction tube (19), hose (20), or spout (22)	Inspect and clean if required
Switch will not turn pump on	Operating pump more than 30 minutes continuous duty	Limit operation to 30 minutes per hour
	Blown fuse or circuit breaker	Check electrical supply
	Electrical problem	Check that supply voltage is proper and getting to pump
	Defective switch	Check and replace motor if defective
	Damaged or defective motor (1)	Check motor (1), replace if damaged or defective

PARTS DRAWING FOR OPM-115 & OPM-220

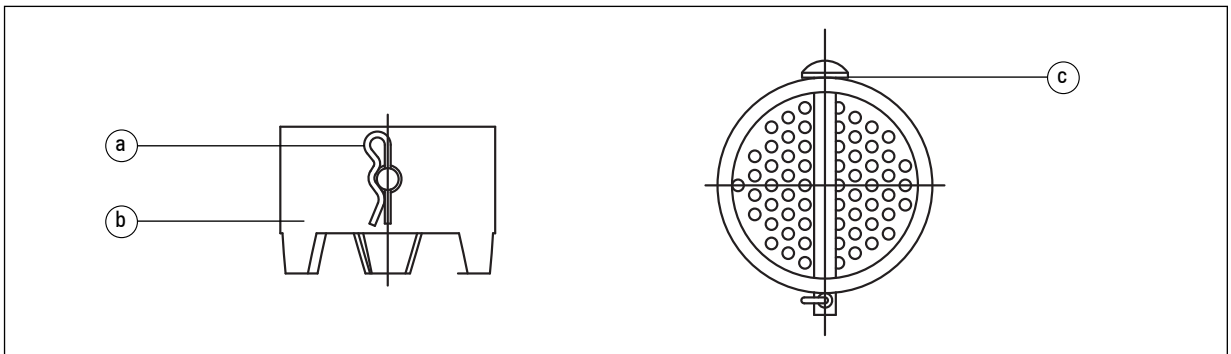
PUMP ASSEMBLY



HOSE & SUCTION TUBE ASSEMBLY



STRAINER KIT (FOR USE WITH WASTE OIL)



PARTS LIST FOR OPM-115 & OPM-220

PUMP ASSEMBLY

REFERENCE NUMBER	DESCRIPTION	QUANTITY
1a	Motor, 115V AC, 60 Hz	1
1b	Motor, 220V AC, 50/ 60 Hz	1
2	Shaft Seal	1
3	Cap Screw, M8 x 1.25	4
4	Body Cover	1
5	O-Ring	1
6	Screw, 3/8-16 UNS	4
7	Pump Gear	2
8	Dowel	2
9	Gear Shaft	2
10	Elbow, 3/4" NPT	1
11	Pump Body	1
12	Bung Fitting	1
13	Swivel Nut	1
14	Bung Nut	1
15	Ball, Relief Valve	1
16	Spring, Relief Valve	1
17	Pin, Dowel, Steel, 3/8 x 3/4	1
18	Plug, 1/2" NPT	1

HOSE & SUCTION TUBE ASSEMBLY

REFERENCE NUMBER	DESCRIPTION	QUANTITY
19	Suction Tube	2
20	Hose, 8' x 3/4" ID	1
21	Ball Valve	1
22	Discharge Spout	1

STRAINER KIT (FOR USE WITH WASTE OIL)


REFERENCE NUMBER	DESCRIPTION	QUANTITY
a	Cotter pin	1
b	Strainer	1
c	Rivet	1



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