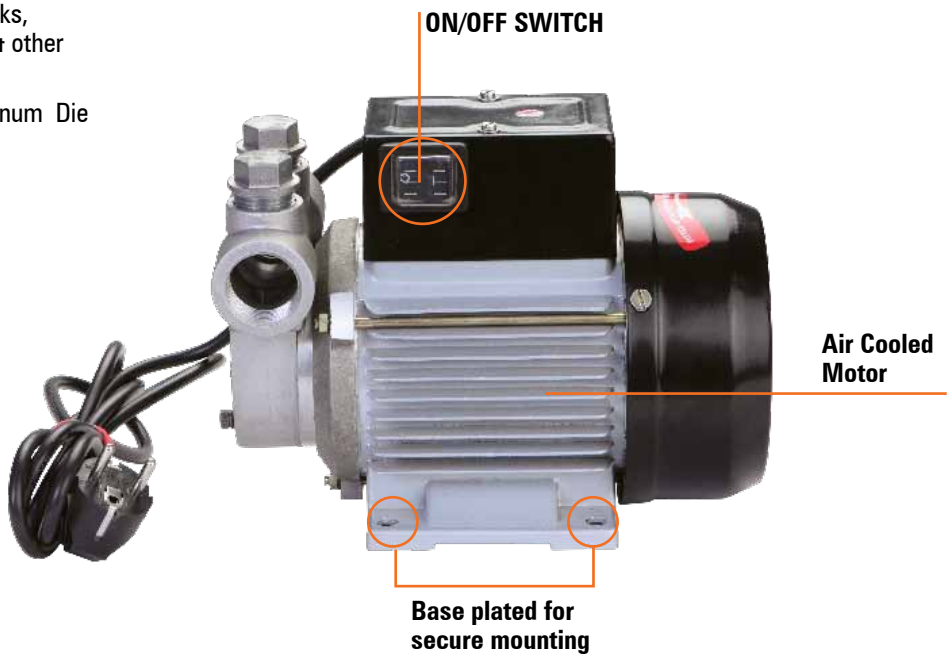
INSTRUCTION MANUAL S2060, Rev A

Continuous Duty Electric Fuel Pumps

CDP/115, CDP/220

Congratulations on purchase of this World Class Continous Duty Electric Fuel Pump !

- Diesel Transfer pump, ideal for stationary tanks, fixed fuel transferring systems, dispensers & other Industrial applications
- Light weight yet strong non corroding Aluminum Die Cast construction
- Self priming vane pump design
- Continuous Duty cycle with thermal overload protection
- Available in 115V & 220V
- Base Plate Style
- Pump inlet & outlet threaded 1" (F)
- Supplied with 2m long Power Cable
- Integrated ON/OFF Rocker Switch
- IP 54 Protection
- Internal Bypass valve included



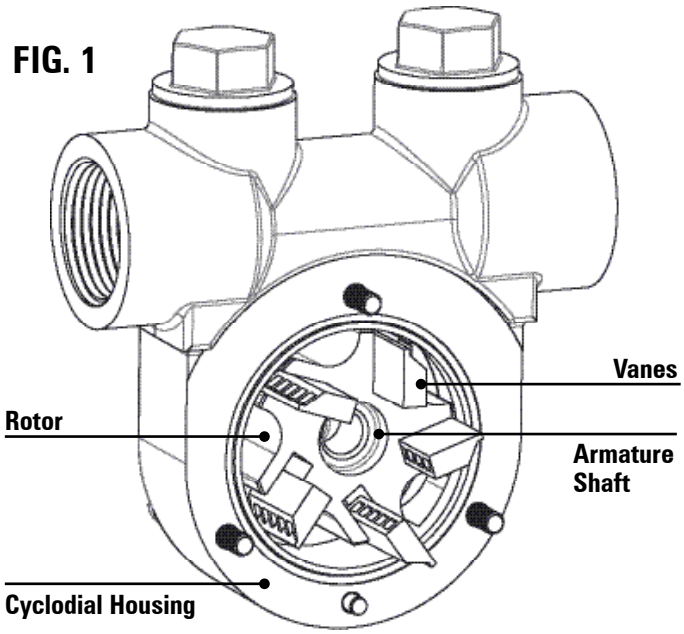
SPECIFICATIONS

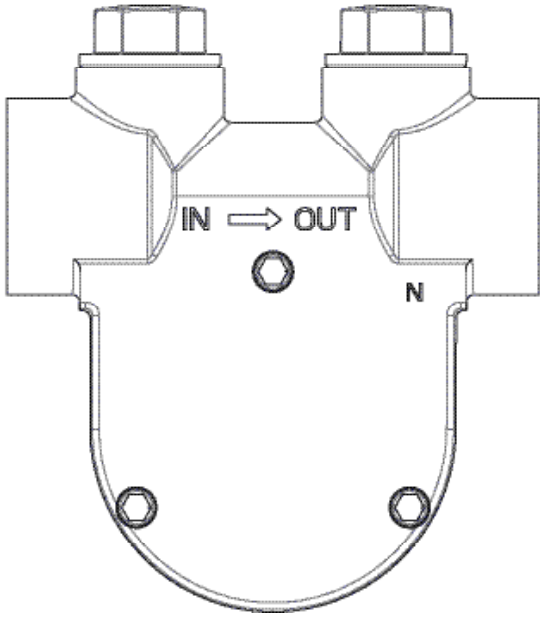
	220V AC	115V AC
Flow rate (at pump outlet)	Upto 15 GPM (56 LPM)	Upto 15 GPM (56 LPM)
Motor	1/2 HP 220V AC, 50/60 Hz	1/2 HP 115V AC, 60 Hz
RPM	2800	3400
Internal Bypass Valve	YES	YES
Inlet / Outlet	1" BSP (F) / 1" NPT (F)	1" NPT (F)
Power Cable Length	2 Meter	2 Meter
Duty Cycle	Continuous Duty	Continuous Duty

PUMP WORKING

This is a Vane Type Pump driven by an electric motor. A slotted rotor (carrying five vanes) is eccentrically supported in a cycloidal housing forming a crescent – shaped cavity.
When the motor starts, the rotor, being attached to the armature shaft with a key, starts rotating. As the shaft reaches 2800 RPM, centrifugal force and hydraulic pressure push the vanes to the walls of the housing. It generates sufficient suction to draw fluid into the pumping chamber through inlet port. Fluid enters the pockets created by vanes, rotor and cover plate.
As the rotor continues to rotate, the vanes sweep the fluid to the opposite side of the crescent where it is squeezed through outlet port into the delivery hose.

FIG. 1





PUMP INSTALLATION (Refer to EXPLODED VIEW - Page 3)

1. **Preliminary Inspection.**
   - Check the pump has not suffered any damage during transport or storage.
   - Clean the inlet and outlet opening, removing any dust or residual packing material.
   - Make sure that the motor shaft turns freely.
   - Check that the electrical specifications correspond to those required to operate this pump.
2. **Positioning the pump**
   - The pump can be installed in any position (pump axis vertical or horizontal)
   - Attach the pump using screws of adequate diameter
3. **Connecting the Tubing**
   - Before connection make sure that the tubing and the suction tank are free of dirt and the thread residue that could damage the pump and its accessories.

     Before connecting the delivery tube partially fill the pump body with diesel fuel to facilitate priming

PUMP OPERATION

1. After making the electrical connections, switch ON the pump using Rocker Switch located on the side of pump base.
2. Ensure that the open end of the suction hose / tube is properly dipped in fuel.
3. The pump will now prime. When discharge is not needed, switch OFF the motor & disconnect from the power supply.

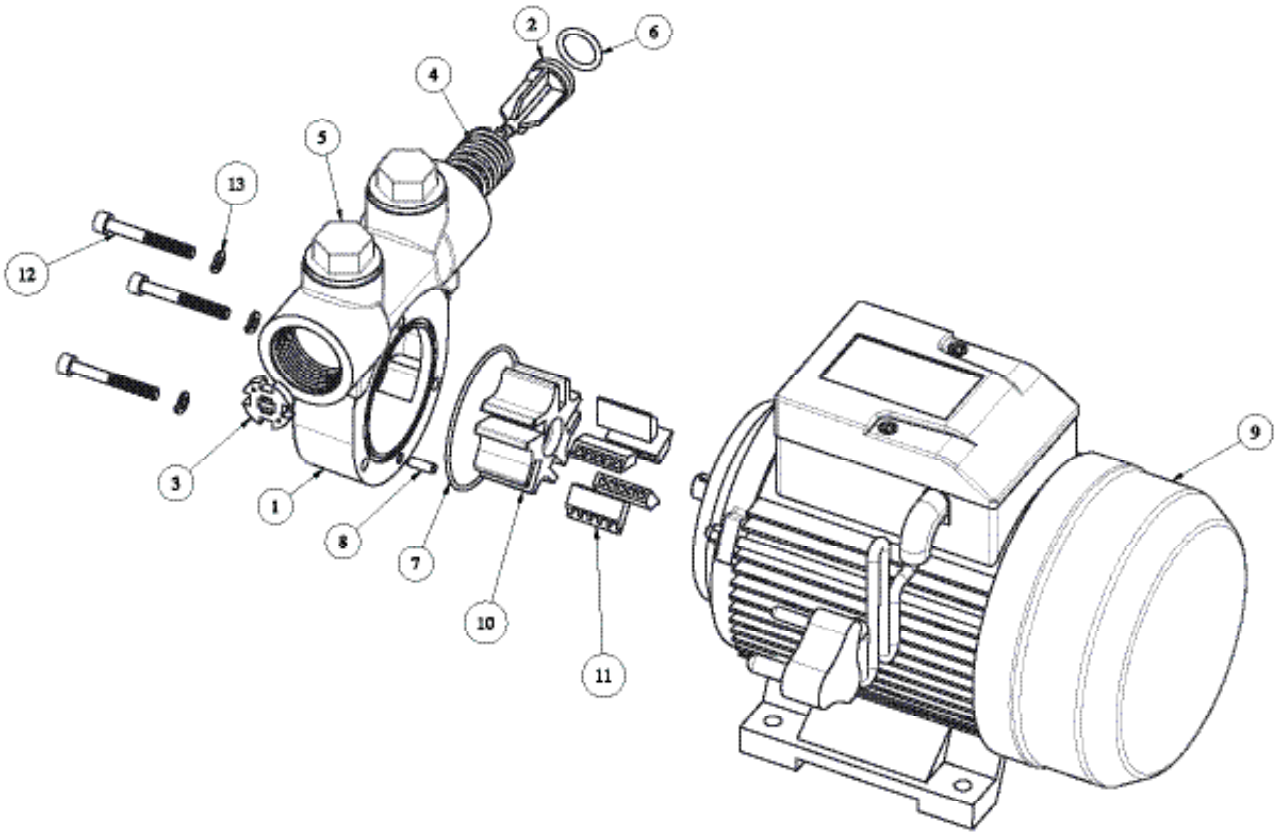
CAUTION

- The suction height (from the pump to the lowest fuel level) should not be greater than 1 metre.
- The tank must be vented or the pump may not prime, or it may lose its prime due to a vacuum in the tank.
- A filter should be installed at the suction line to ensure a clean supply of fuel to the pump.

EXPLODED VIEW FOR ELECTRIC FUEL PUMP - 115V AC & 220V AC

PUMP ASSEMBLY

FIG. 2



PARTS LIST FOR Continuous Duty Electric Fuel Pump

PUMP ASSEMBLY

REFERENCE NUMBER	DESCRIPTION	QUANTITY
1	Pump Body	1
2	Relief Popet Valve	1
3	Spring Retainer	1
4	Relief Valve Spring	1
5	Plug	2
6	O-Ring	1
7	O-Ring	1
8	Dowel Pin	1
9	Motor	1
10	Rotor	1
11	Vane	5
12	Allen Bolt	3
13	Spring Washer	3

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The motor is not running	Lack of electric power	Check the electrical connections and the safety systems
	Rotor jammed	Check for possible damage or obstruction of the rotating components
The motor turns slowly when starting	Low voltage in the electric power line	Bring the voltage back within the anticipated limits
Low or no flowrate	Low level in the suction tank	Refill the tank
	Foot valve blocked	Clean and/or replace the valve at suction tube end
	Filter clogged	Clean the filter
	Excessive suction pressure	Lower the pump with respect to the level of the tank or increase the cross-section of the tubing
	High loss of head in the circuit(working with the by-pass open)	Use shorter tubing or of greater diameter
	By-pass valve blocked	Dismantle the valve, clean and/or replace it
	Air entering the pump or the suction tubing	Check the seals of the connections
	A narrowing in the suction tubing	Use tubing suitable for working under suction pressure
	Low rotation speed	Check the voltage at the pump. Adjust the voltage and/or use cables of greater cross-section
	The suction tubing is resting on the bottom of the tank	Raise the tubing
Increased pump noise	Irregular functioning of the by-pass	Dispense until the air is purged from the circuit
	Air present in the diesel fuel	Verify the suction connections
Leakage from the pump body	Seal damaged	Check and replace the mechanical seal

! WARNING

- Always wear protectiongear like safety goggles, gloves, apron, and ear plugs while operating the pump.
- Never smoke near the pump. Do not use the pump near a source of spark / open flames.
- DO NOT underany circumstances put your fingers inside the pump with the electric power connected. Serious injury can occur.
- Always switch off the motor after use, so that media cannot leak in case any of the pump component fails.
- Before switching on themotor, check hoses for sign of wear, leak or loose fittings
- When changing the working fluid, at least 1 litre of new fluid should be discarded to avoid mixing of fluids.
- Use only genuine factory parts for repair.

WETTED COMPONENTS

Aluminum, NBR, Steel, Nylon

RECOMMENDED USE

Diesel & Kerosene

DO NOT USE WITH

Fluids with a flash point below 100°F (38°C), such as Gasoline & Alcohol, Sparking could result in explosion causing fatal injury.

MAINTENANCE & REPAIR

General Precautions

- Switch off the pump motor and disconnect from the power supply before carrying out any maintenance.
- Before dismantling the pump, disconnect it from all the accessories.
- Be careful when fitting O-rings and seals. Replace them with new ones when they are removed from the pump. Always lubricate them with oil or grease before fitting. They must never be threaded over sharp edges when being fitted.

RECOMMENDED TOOLS

1. Combination Wrench (Size 8mm, Size 22 mm)
2. Allen Key (5 mm)
3. Slotted Screwdriver

VANE REPLACEMENT

1. Remove 3 Allen Bolts using Allen Key (size 5 mm), Remove Suction body, Rubber Washer, Vanes, Rotor & Key from Housing. Replace vanes if damaged or worn.

2. Use a wrench and remove the Hex Plug. Remove the Valve Spring & Bypass Valve. Clean or replace if required.
3. Replace Vane kit by repeating steps 1-2 in reverse order ensuring :

- Correct orientation of vanes as shown
- Smooth movement of Bypass valve against the force of Valve Spring. Do not over tighten Hex Plug.
- Ensure all mating surfaces are clean before reassembly. Apply minor grease on all O rings & Seals before reassembly.
- Always loosen / tighten the bolts in an even & diagonal pattern. First tighten all bolts by hand & finally tighten each bolt by 1 FULL turn using a tool of correct size.

MOTOR KIT REPLACEMENT

1. Loosen the two Screws with a slotted head screw driver.

2. Remove Switch Cover and disconnect the couplers attached to it.
3. Grab the Locking clips of the Rocker switch & press from inside to remove the switch.
4. Remove three Allen Key (Size 5). Remove the suction body, Vanes, Rotor, & key from the housing.

SERVICE PARTS

1. Vanes
2. Valve Spring
3. Rocker Switch

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