Fisher & Paykel Drain Pumps

F/P now uses 3 different types of pumps, look under the machine to see the correct pump. They are:

1. 1 Clip to the bowl pump (early washing machines)
2. 2 Inverter pump
3. 3 Synchronous pumps (late washing machines)

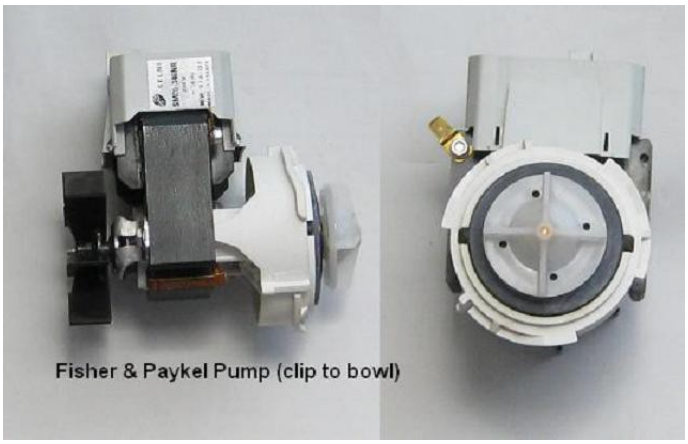

Illustration 1: FP005

Fisher & Paykel Clip to Bowl drain pump.
Orginal pump specifications are:
Selni Pump SM00-246NR
230V 50Hz
80W, 0.7A
Made In France
Part Number 420324P Or FP005

F/P had a dispute with the pump manufacture and FP can no longer supply these pumps. There are 2 choices for replacement:

1. Used pump. These are tested and use 0.8a or less and have no sign of water leaking through the seal.
2. Substitute pump. These have a Hoover motor with a FP clip to the bowl end on them. They work well on the early PCB (Blue, Green, Yellow but may have problems with the Gray and Brown PCB with surface mount component. They have different resistance.

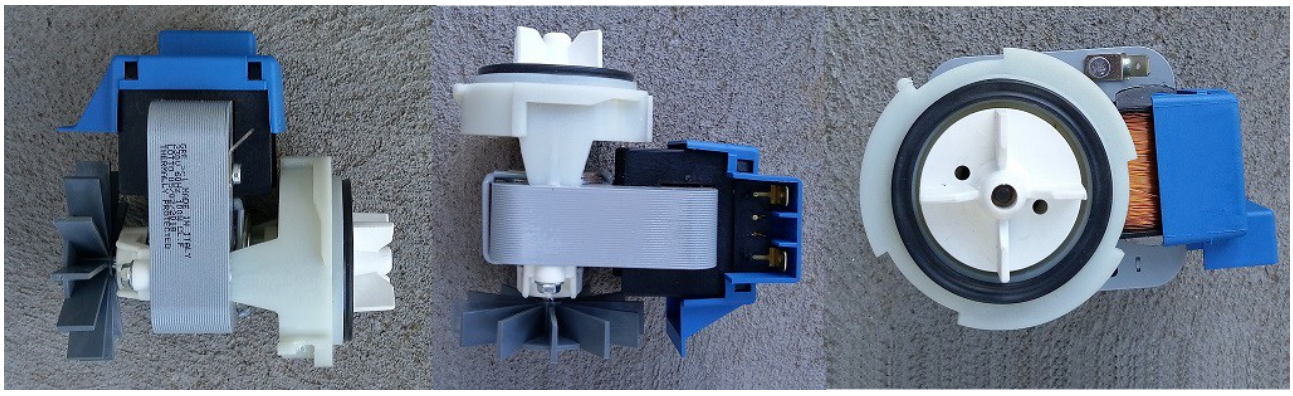

Illustration 2: FP005 Substitute pump

Service notes.
These pumps usually only need to be cleaned, but if they use too much current and run very hot they need to be replaced. Measure the pump current using an inline ammeter (Appendix 1 **). It should be between 0.6 to 0.8A. If it uses 1.0a or more it should be replaced. Alternative, the resistance should be 33Ohms.
F/P error codes are listed in Information.

Remove pump. (**)
Take the washing machine outside, will spill the water!
Lay the machine on its FRONT on a mat, ones with lid lock rest on a chair.
(keep water off electronic/ components!)
Remove electrical connections.
Push the plastic clip down and rotate pump out.

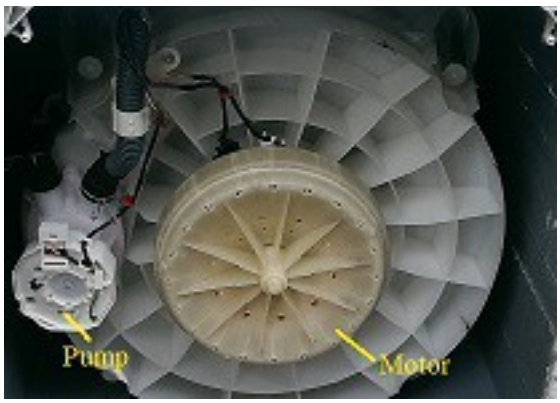

Illustration 3: Inverter Pump

Repairing the Pump
The pump can fail in 3 ways, The winding can fail, and may have discoloured windings and the pump will use more than 0.8A. In coastal areas, the join in the laminations can corrode causing excessive motor current. The seal between the pump and the motor wears and leaks, if left long enough it will cause the winding to fail. The leaking seal is evidence by slug on the motor side of the seal. Try and make one good pump out of two.

** Information: Extract /summary from book 'Australian Appliance/Washing Machine Repairs', see my web page for Information for details.

Inverter Pumps
Replacement not recommended. When the pump blocks it takes out the main PCB (fails in a thin track/fuse plus other components). Best to cut looses! The idea was good to use a high-efficiency motor but the design was lacking. FP quickly replaced the pump on the next model with the synchronous pump. See below .

Synchronous Pump
The synchronous pump or magnetic pump are now used on the later model washers. (check under the washer!) they use a slightly larger pump, but a universal pump can be fitted with no problems. It will have enough power and will last long enough. A UN1087 screw-on pump is a replacement. LG has done a similar thing.

Illustration 4: Synchronous Pump
Top F/P pump, Bottom UN1087