

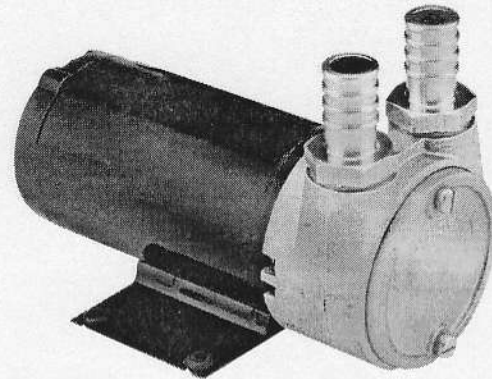
## 23590 12/24V Transfer Pump

### Features

- Self priming up to 1.8 metres
- Maximum differential pressure 1.5 bar
- Maximum flow - 26 l/min @ 0.5 bar diff pressure
- Suitable for hydraulic oil, etc up to 150 cSt
- Full range of installation accessories

### Typical applications

- General transfer duties
- Pumping of hydraulic systems on vehicles in construction and forestry industries†



### Specifications

**Temperature Range :** -20°C to +40°C

**Pump Body :** Aluminium

**Rotor :** Sintered Iron

**Vanes :** PTFE Filled Ryton

**Shaft :** Stainless Steel

**Seal :** Nitrile Lip Seal

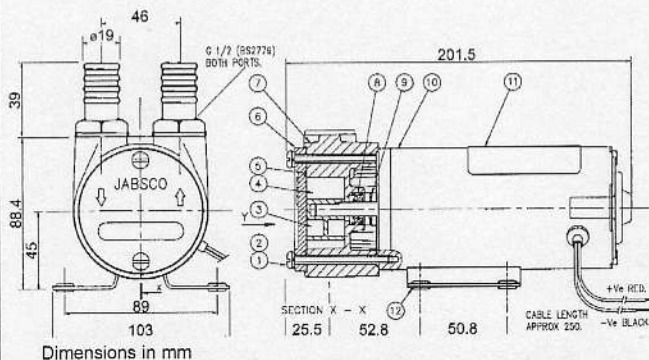
**Ports :** Vertical 1/2" BSP or 19mm hose adaptors (3/4")

**Motor :** 12V or 24V DC permanent magnet, corrosion resistant IP44 protected

**Duty :** 30 mins @ +20°C 0.5 bar differential pressure  
15 mins @ +20°C 1.0 bar differential pressure

### Model Range

12v model, 1/2" BSP int, Iron	23590-2010
24v model, 1/2" BSP int, Iron	23590-2110
19mm Hose adaptor kit	23533-1100B



### Parts List

Key	Description	Qty	Part No.
1	Screw	2	X3002-166C
2	Spring washer	2	SP1602-0240
3	Rotor*	1	23591-0000
4	Vane*	5	45716-0100
5	O-Ring*	1	X1990-131
6	Endcover	1	23875-0050
7	Body	1	23874-2060
8	Seal*	1	SP2701-52
9	Slinger*	1	6342
10	Motor	12 Volt	1 98012-9273
		24 Volt	1 98012-9272
11	Grommet	4	SP2900-12
12	Fuse Holder	1	X5501-018
13	Fuse	12V / 20A	1 SP2005-0120B
		24V / 10A	1 Y5292-02

Service kit contains items marked \*

Service Kit 1 SK399-0201

### Note

All performance information is based on diesel fuel at 20°C (68°F). On production product, this may vary by up to 10%.

Maximum recommended total head of diesel fuel is 6 metres.

**Current Draw** 12V = 17 Amps @ 0.5 bar diff/press  
24V = 8 Amps @ 0.5 bar diff/press

**Maximum Current** 12V = 20 Amps  
24V = 10 Amps

**WARNING** Explosion hazard. Do not pump gasoline, solvents, thinners or other flammable liquids. To do so can cause an explosion resulting in injury or death.



# 23590 Hydraulic Oil Transfer Pump

6/00

## Installation, Operating, Service & Safety Instructions

### Installation

- Mount pump horizontally, this position gives the best priming performance. If mounted vertically, motor should be uppermost.
- 19mm bore is the minimum hose size recommended.
- Do not mount pump, more than 1.5 metres above the liquid to be pumped. Maximum total head 3 metres. Avoid long pipe runs, 5 metres maximum.
- Do not pump debris, if there is a risk of particles, a suction strainer with mesh size of 500 microns should be used to protect the pump. Open area should be 1100mm<sup>2</sup>.
- Electrical connections - Connect black wire to negative (-) supply (or earth of negatively earthed vehicles). The red wire to the positive (+) supply. This will ensure correct rotation. Ensure electrical supply is adequately rated for maximum amp draw and wiring is fused in line with recommendations.

### Operating instructions

- Check direction of flow with the arrows on the pump, and position hoses accordingly.
- With suction hose immersed in liquid, switch on pump.
- If pump fails to prime within a few seconds, check the following:-
  - (1) There are no leaks on the suction side
  - (2) Battery is up to nominal voltage
  - (3) Fuse has not blown
  - (4) Maximum priming height has not been exceeded
- After liquid transfer, switch off pump. Observe maximum duty times.
- Dry running:- Pre-operational dry running should be limited to 30 seconds. Post operational dry running can be avoided if pump is mounted horizontally with ports uppermost. Sufficient liquid will be trapped in the pump to run for up to 20 minutes without damage, with no further incoming liquid.

### Service instructions - Dismantling

- Disconnect electrical supply
- Remove pipe work and pump from its mounting.
- Remove endcover screws, gently slide body and endcover assembly from motor shaft and place on workbench with endcover uppermost. Remove endcover and O-ring, remove rotor and vanes. To remove seal turn body over, if there is no evidence of leakage leave lip seal in place, otherwise gently prise out with a screwdriver taking care not to damage seal bore.

### Service instructions - Assembly

- Once pump has been dismantled O-ring must always be replaced. Replace vanes, rotor and seals if required.
- Clean all parts to remove any dirt or grit.

Note:- This pump rotates anti-clockwise, when viewed from pump end.

- (1) Push new seal into housing and grease lip.
- (2) Smear oil on shaft and slide on slinger.
- (3) Stand motor in a vertical position with shaft uppermost and fit body.
- (4) Fit rotor onto shaft (on pumps with metal rotor, it should be fitted with relief slot on trailing edge) and apply a few drops of oil into each slot.
- (5) Insert the five new vanes into the rotor slots with the radius on the leading edge.
- (6) Smear grease into the endcover O-ring groove and fit new O-ring.
- (7) Place endcover on body, secure with the two slotted screws and spring washers, through the body into the motor and tighten.

### Safety warning

- Motor is not flame proof.
- Do not use for pumping petrol / gasoline, or products with flashpoints below 37°C
- Observe maximum duty times.
- Motor may become hot during use.
- Always use with a fuse fitted.
- Do not dry run.

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