

**CARDEV**

Oil Filtration and Coolant Handling Specialists



# 2S24V500

*Removes Contaminants*

*Extends Oil Life*

*Reduces Component Wear*

*Removes all Water*

*Saves Machine Downtime*

*Reduces Disposal Costs*

*Simple to Install & Use*

*Low Maintenance Costs*

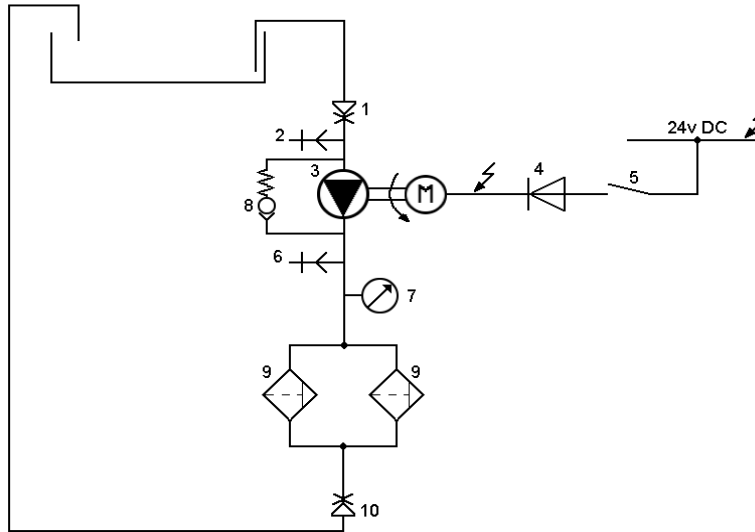
*Built in Sampling Points*



Cardev International Ltd

Ripon Way, Harrogate, HG1 2AU  
Tel: 01423 522911 Fax: 01423 530043  
Email: sales@cardev.co.uk or visit our  
website at: www.cardev.co.uk





OSCAR 2S-24V 500 SPECIFICATION			
Electric Motor (Permanent Magnet)	Volts	12v DC	24v DC
	Kws	0.07	0.18
	Amps	8.5	10.3
	RPM	750	1500
	Protection	IP55	
Pump Performance	Hydraulic Oil ISO46 @ 40°C	250 l/hr @ 1.5 bar	500 l/hr @ 2.5 bar
Pump Suction Lift	Self Priming to 5.5 metres		
Operating Temp.	10-95°C		
Rig Dimensions	Length :	576mm	
	Width:	265mm	
	Height:	450mm	
Rig Weight	40kg		
Filtration System	2 x SDU-H8		
Cartridge Type	2 x SDFC—Fitted as standard Supplied in boxes of 6		
Accessories	8 metres of reinforced 5/8" hose With quick release couplings		
Options	Anti-vibration mounting kit SDFC-P Cartridges for water based fluids		

# 2S-24V 500

# OPERATING INSTRUCTIONS



Industrial Filtration



Biodegradable Lubricants

## Description

The 2S-24V 500 Micron Filtration System is a compact free standing off line oil cleaning and filtration system, capable of removing fine dirt particles and totally removing water. Filter cartridges are also available for use on water based fluids

## Set Up Operation

1. Cut hose to suit IN or OUT requirements and connect as appropriate to the fluid reservoir.
2. Mount unit as near to reservoir as possible using optional magnets or anti-vibration mounts as appropriate or by bolting or welding.
3. Prime pump before use - pour oil down inlet hose.
4. Connect isolator switch to vehicle electrics.

Blue — Neutral  
Brown - Live

*Note: The unit has a diode built in to stop reverse operation of motor.*

## Starting

Turn ON/OFF switch to position 1.

## Cold Starting

If oil is thick, pressure may rise and the oil will by-pass through the pressure control valve at approx. 4 bar. As the oil warms up, the pressure control valve will automatically close.

## Cartridge Change Intervals

- When the oil pressure is 1.5 bar above normal.
- Where the pressure control valve is continuously open
- 200 hours or monthly.

## Cartridge Change Procedure

1. Switch off motor
2. Remove "IN" hose
3. Depress nodule on inlet coupling and run motor for 30 secs. to purge the units of oil.
4. Release lid securing bolt.
5. Remove cartridge using attached straps.
6. Change the cartridge and replace lid seal.
7. Replace lid and tighten firmly by hand.
8. Check for leaks.
9. Run for 10 mins. and confirm lid bolt secure.

## Performance Guide

To achieve optimum cleanliness, the contents of each tank should pass through the filter a minimum of 4-5 times. E.g. a 500 litre tank at 40°C will take approximately 4-5 hours to clean.

*Note: the above is a guide only, and results will depend on the contamination levels in each tank.*

## Electrical Switch

Position "1" - system running

Position "2" - system stopped

## Protection

Automatic pressure relief valve at 4.0 bar.

## Trouble Shooting System pumps slowly

- a. Check inlet hose is below oil level
- b. Check quick release couplings — remove to clean
- c. Check inlet hose for leaks and blockages
- d. Ensure cartridge has been changed
- e. If none of the above, check pump stator

## Contamination Monitoring

The 2S-24v 500 is fitted with 2 sample points for use with portable PMB 4000 particle counter or similar device.

Connect the appropriate pipes:

Red: high pressure - IN

Yellow: low pressure - return

This will enable an ISO rating/particle count to be taken whilst the system is in operation.

## Oil Sampling

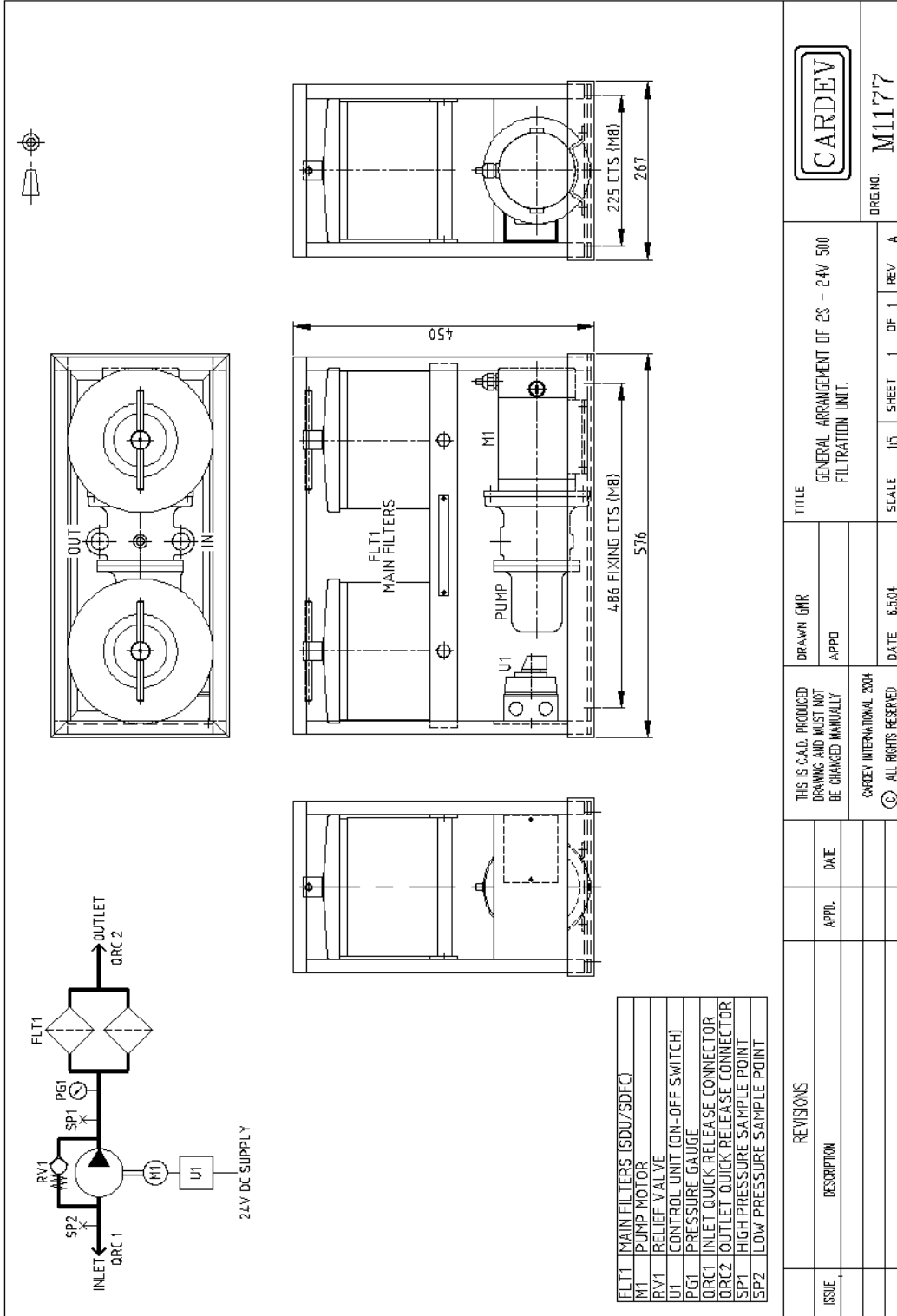
To take an oil sample, connect only to the red sample point. Wait for a steady flow before sampling.

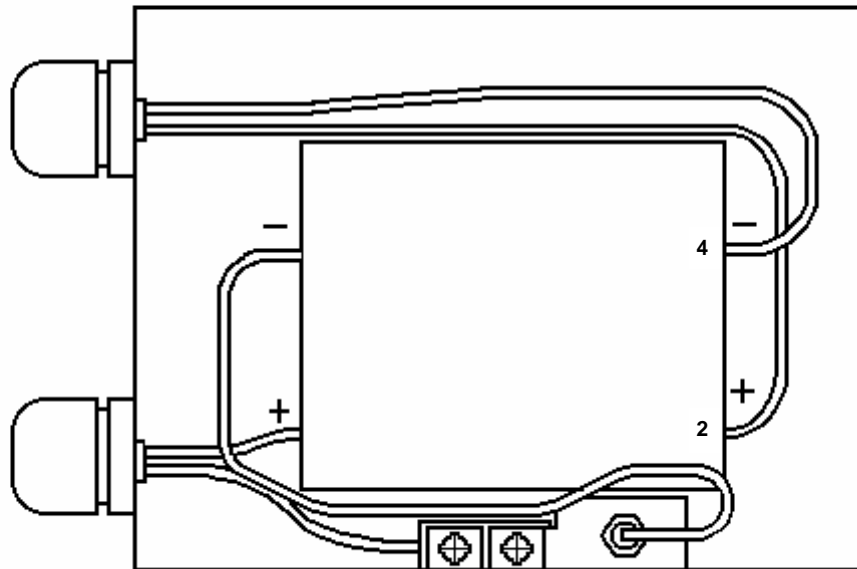
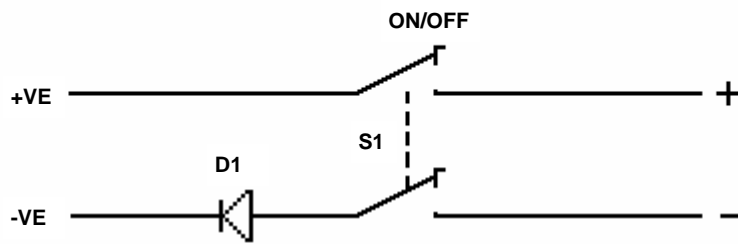
## Filtration Levels

Through a CARDEV filter SDFC, the level of filtration is ISO 4406, ISO <13/9 and the equivalent NAS 1638 class 4/5. Water is removed to below 0.05%.

## Guarantee

The 2S-24v 500 system carries a 12 month warranty on all parts. Full details are given on the guarantee attached to the system.





D1 = DIODE

# 2S-24V 500

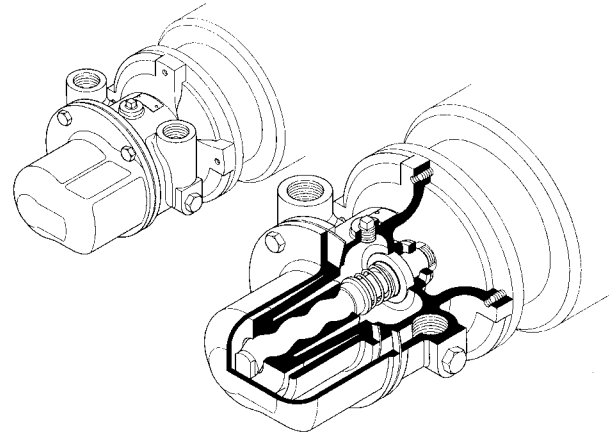
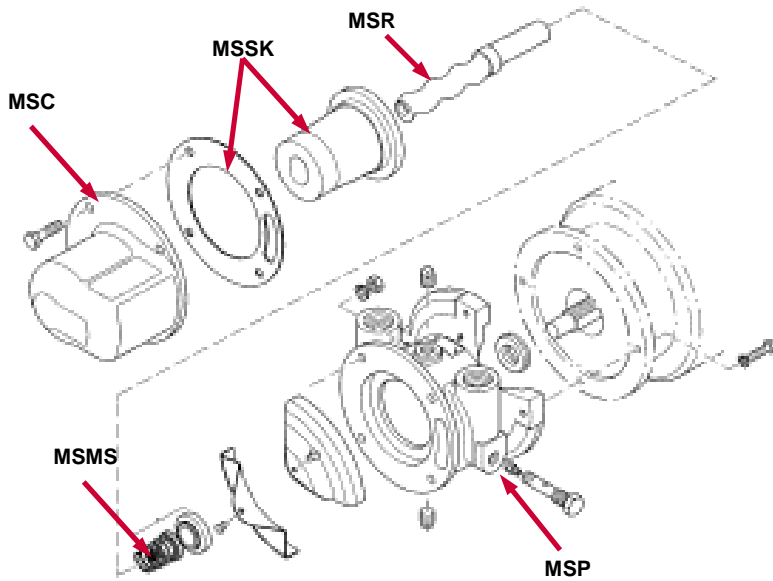
# PUMP / MOTOR



Industrial Filtration



Biodegradable Lubricants



### Stator

This is removed by undoing the four nuts and bolts securing the barrel which is then pulled off the body. This exposes the stator which can then be removed from the rotor.

### Rotor

This is removed by holding the motor shaft with a spanner on the two flats on the shaft and unscrewing the rotor with the aid of a second spanner on the flats on the end of the rotor. The threads are LEFT HAND and so the rotor should be screwed in a clockwise direction (when looking at the end of the rotor.) Removal of the rotor also releases the mechanical seal and care should be taken not to damage the mating sealing edges.

### Seal

If this is disturbed or removed because of damage, when replacing or fitting a new seal, ensure it is correctly assembled before re-fitting into the pump. The rubber seal and stationary seat should be pressed into the body housing and the rotating portion assembled on to the rotor shaft before screwing the rotor back on to the motor shaft which is then locates the mechanical seal with its correct tension.

### To Re-Fit

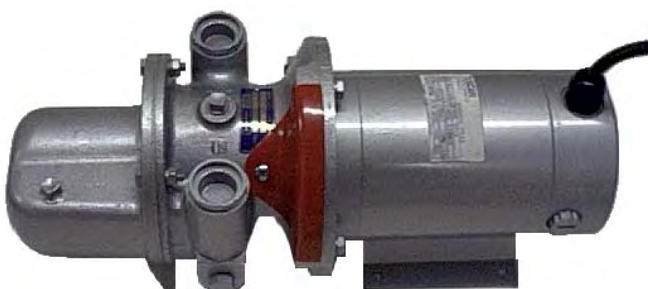
The reverse procedure is used to that of dismantling.

## START-UP PROCEDURE

Pumps must be filled with liquid before starting. The initial filling is not for priming purposes, but to provide the necessary lubrication of the stator until the pump primes itself.

When the pump is stopped, sufficient liquid will normally be trapped in the rotor/stator assembly to provide lubrication upon re-starting.

If, however, the pump has been left standing for an appreciable time, moved to a new location, or has been dismantled and re-assembled, it must be refilled with liquid and given a few turns before starting.



PUMP  
CM11

MOTOR  
CM11M

2S-24V 500

# SPARE PARTS LIST



Industrial Filtration



Biodegradable Lubricants



ELECTRICAL SWITCH  
SW1/2S24

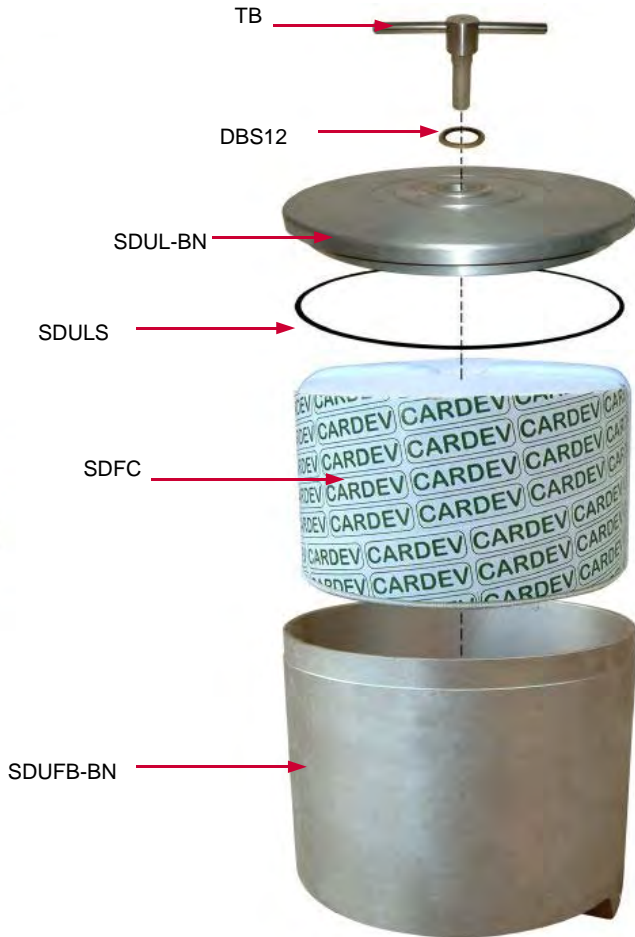


PRESSURE GAUGE  
PG160F

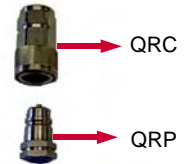


DUMP VALVE  
DV12 4.0BAR

## SDUH8



HOSE & COUPLING SET (COMPLETE)  
OS1/224VDRS



QUICK RELEASE COUPLING SET  
QRS08



MOTOR BRUSH SET  
CM11BS