

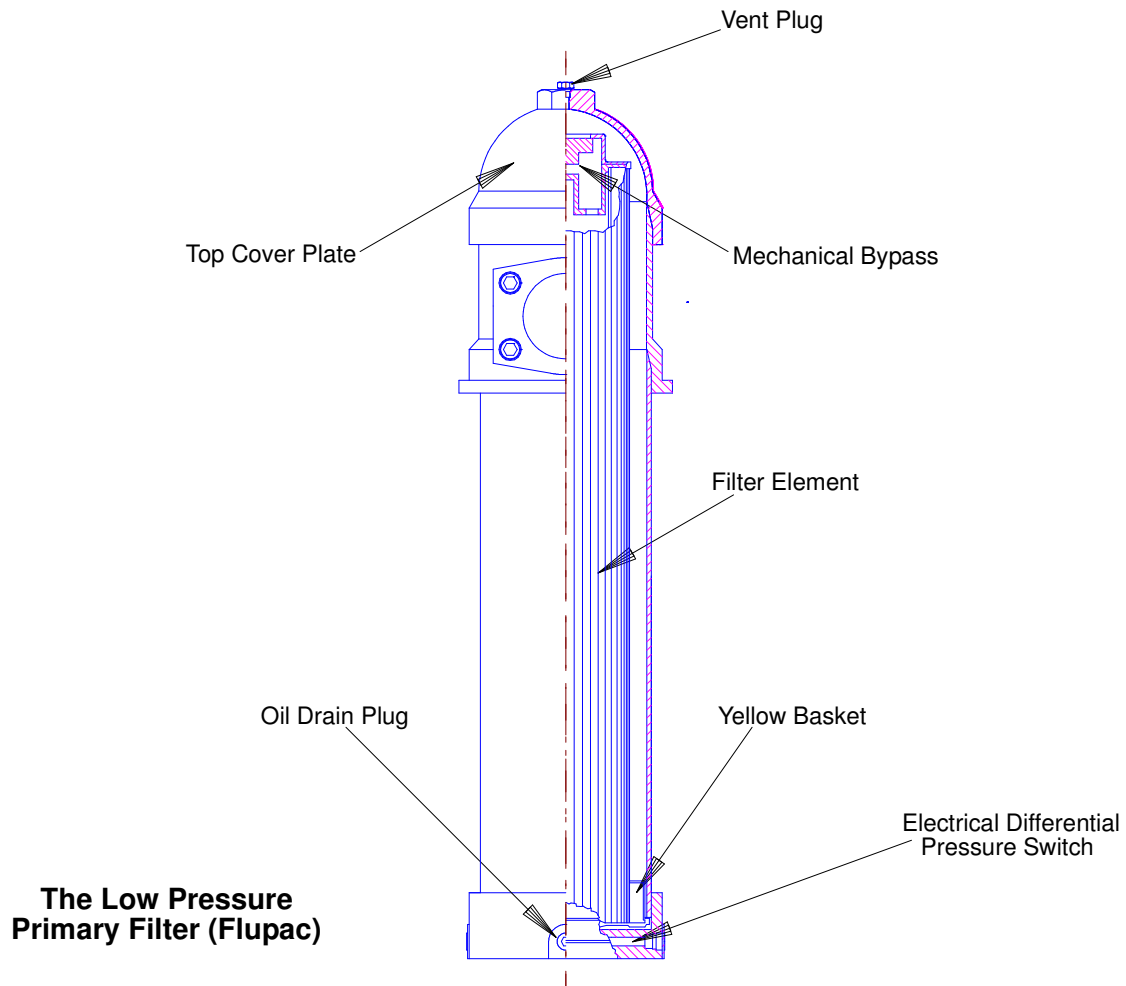
## LOW PRESSURE PRIMARY FILTRATION

**CATEGORY:** Mandatory At Next Maintenance

**SUMMARY:** CarnaudMetalbox Engineering recognise that a number of problems have been experienced by customers where the large primary Flupac filter on the power pack has either been incorrectly operated or managed. This has led to potentially contaminated oil flowing from the power pack into the bodymaker.

The low pressure lubrication system on the bodymaker feeds a number of key areas, in particular the crankshaft main bearings. It is therefore especially important that this oil is maintained in a good state, by ensuring that the oil filtration system is functioning as it is supposed to.

This information bulletin is applicable to the low pressure primary filtration systems on all 5000 Bodymakers.



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## LOW PRESSURE PRIMARY FILTRATION

### TECHNICAL DETAILS

The current recommendation for the large primary Flupac filter is to use a 6 Bar bypass element, with a 5 Bar electrical differential pressure switch in the filter housing. This will give indication, via the PLC and message display, when the pressure across the filter rises to 5 Bar. The filter element should be changed at this point. It is not safe to fit a filter element with a lower bypass rating than the electrical differential pressure switch rating, since this could lead to contaminated oil bypassing the filter, without the operator being notified.

Previous power packs have had lower rating elements and electrical switches fitted - these can still be used, but again the filter element must have a higher rating than the electrical differential pressure switch. The current and previous switches and elements are shown below, with both their proprietary codes and the CarnaudMetalbox eight digit code, for use when ordering spares from us. These can be found on the metal flats of the electrical pressure switch and the base of the filter element.

**Table 1: Electrical Differential Pressure Switches**

Proprietary Code	CarnaudMetalbox Code	Description
VM2C0	23673613	2 Bar Operation
VM5C0	23673615	5 Bar Operation

**Table 2: Filter Elements**

Proprietary Code	CarnaudMetalbox Code	Description
2600-R-10-BN/HC	23674952	3 Bar Operation
2600-R-10-BN/HC-B6	23673576	6 Bar Operation
2600-R-10-BN/HC-AM-B6	23674945	6 Bar Operation

If the filter element has the letters AM in the Proprietary code, this denotes water removal capability - this will not affect the bypass rating and the filter can be used interchangeably with similar bypass rated elements.

When ordering new filter elements, it is important that the element mechanical bypass rating is larger than the pressure switch rating, details of which should be made clear at the time of ordering. If you currently have the VM2CO electrical switch, it is possible to fit the VM5CO switch providing that the 6 Bar bypass elements are used. This will allow the filtration system to remove more debris from the oil before the filter needs changing.

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### STANDARD OPERATING PROCEDURE FOR CHANGING THE LOW PRESSURE PRIMARY FILTER ELEMENT

The filter element should be changed using the following procedure:

- 1) When the "Low Pressure Filter Blocked" message appears, switch off all pumps,
- 2) Loosen the vent plug by two turns to release the pressure,
- 3) Open the oil drain plug and collect the dirty oil in a suitable container,
- 4) Loosen the cover plate by turning anti-clockwise and lift off,
- 5) Remove the dirty element, with the yellow basket attached, by lifting it completely clear of the housing,
- 6) Remove and clean the yellow basket of any debris,
- 7) Check the O-ring under the top cover plate for damage and replace if necessary,
- 8) Fit the clean yellow basket to the new element.
- 9) Fit the new element into the housing,
- 10) Reapply grease to the cover plate thread with Shell Alvania or similar,
- 11) Screw on the cover plate and check that the vent plug is still loose.
- 12) Screw the oil drain plug in securely.
- 13) Start the main pump, and when oil seeps past the vent plug, tighten it securely.
- 14) The filter is now ready to operate.

The high capacity yellow basket (proprietary code 818121, CarnaudMetalbox code 23677661) must be retained and fitted to the new filter. This basket collects all the debris that falls from the filter when the pressure is released upon changing the filter and stops it entering the power pack tank.

For further information about the low pressure primary filtration details, please contact one of the references at CarnaudMetalbox Engineering detailed below, quoting Technical Bulletin number **TB5000-010**.

Note A complete Library of Technical Bulletins is accessible on the Company Web site