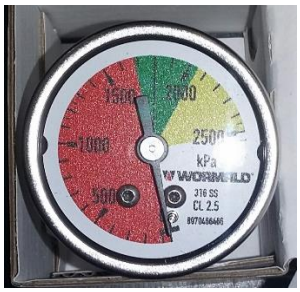
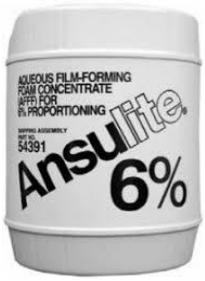
FLUORINE FREE FOAM REPLACEMENT GUIDE

This guide summarises the Wormald components that are required when converting a Wormald AFFF Foam-Water Vehicle Fire Suppression System with Fluorine Free foam solution. In addition to this guide the appropriate sections of the Wormald Loss of Pressure or Pressure to Operate Manuals shall also be followed.

Note: The conversion of Aqueous Film Forming Foam (AFFF) to Fluorine Free Foam (FFF) is based on specific policies that both State Governments and individual companies have determined for either that Australian State i.e. Queensland and South Australia or individual company policies.

Table 1- Foam Replacement Summary

Task	Original AFFF Component	New FFF Component	Reason
Discharge AFFF or de-pressurise, remove valve and decant foam solution. Contain waste AFFF for disposal via approved methods.	NA	NA	To remove old foam solution
Purge the ring main with nitrogen	NA	NA	To ensure no residual AFFF remains in the system ring main
Remove and replace O-rings and valve plunger.	N/A	Part No's: FOACTORING FOHEADPIST	Required as an annual service activity, not directly related to the change in foam agent.
Remove existing 1620 kPa gauge and replace with 1800 kPa gauge.		 Part No. FOW1800GAUGE	In increase in cylinder pressure was required to ensure adequate fire performance.

Remove the 1200 kPa low pressure monitoring switch and replace with new 1400 kPa monitoring switch.		 Part No. FOPRESSW14	The increase in cylinder pressure required the low-pressure monitoring switch set point to be adjusted.
After filling the cylinder with the correct volume of water, top up with the correct volume of Wormald FREEDOL SF foam concentrate (refer to table 2 overleaf).		 Part No. FREEDOLSF10L	The physical properties of the new foam mean a richer mix of foam is required to achieve an adequate level of fire suppression.
Replace cylinder valve and pressurise to 1800 kPa.	N/A	N/A	N/A
Remove the old label and install the new fluorine free label on the cylinder body.		 Part No's. FO25LABELFF FO45LABELFF FO65LABELFF FO106LABELFF	To correctly identify the cylinder contents.
Return to service.	N/A	N/A	N/A

Note: A selection of conversion kits have been assembled that contain all necessary components including foam concentrate to convert each available cylinder size to fluorine free foam. The master cylinder kits include the components to upgrade the Loss of Pressure system cylinder along with two actuators. The secondary cylinder kit suits all additional Loss of Pressure cylinders along with all Pressure to Operate cylinders.

Conversion Kit Part Numbers;

FO25MFFCONV	25 Litre Master Cylinder Fluorine Free Conversion Kit
FO25SFFCONV	25 Litre Secondary Cylinder Fluorine Free Conversion Kit
FO45MFFCONV	45 Litre Master Cylinder Fluorine Free Conversion Kit
FO45SFFCONV	45 Litre Secondary Cylinder Fluorine Free Conversion Kit
FO65MFFCONV	65 Litre Master Cylinder Fluorine Free Conversion Kit
FO65SFFCONV	65 Litre Secondary Cylinder Fluorine Free Conversion Kit
FO106MFFCONV	106 Litre Master Cylinder Fluorine Free Conversion Kit
FO106SFFCONV	106 Litre Secondary Cylinder Fluorine Free Conversion Kit

Table 2 – Fill Details for Fluorine Free Foam

Container Volume (litres)	Volume of Agent Foam Solution (litres)	Potable Water (litres)	Wormald 3F Foam Concentrate (litres)
25	19	16.5	2.5
45	35	30.5	4.5
65	50	43.5	6.5
106	80	70	10