



## DCA4®

Water/Supplemental Cooling Additives

Maintenance Requirements Metric Version Using Antifreeze

The following DCA4® additive guidelines have been increased and the recommendations in this document supersede all other recommendations. A 50% antifreeze - 50% water mixture must be used because the new DCA4® concentration levels are dependent upon the presence of antifreeze. Antifreeze interacts with DCA4® to provide greater corrosion and cavitation protection. Special instructions regarding DCA4® level for those countries where antifreeze is not available can be requested through the Technical Service Department. The dosage of DCA4® must be increased to a higher concentration if antifreeze is not used in the engine.



### Precharge and Coolant Addition Guidelines

“Heavy Duty Coolant” is defined as a 50% antifreeze - 50% water mixture, precharged with 0,4 units per litre of DCA4®.

Use the precharge chart to determine how much DCA4® must be added to make a heavy duty coolant mixture, or add 1 litre of DCA4® (10 units) for every 25 litres of coolant. Either method will result in a concentration level of at least 0,4 units/litre. In addition, a service filter (chosen from the service chart) must also be added to ensure that an initial starting concentration of at least 0,5 units/litre is provided.

Any coolant added to the engine must be “Heavy Duty Coolant” to maintain the correct balance of antifreeze, water and DCA4®. Never add coolant which is not precharged with DCA4®. The cooling system must be precharged with “Heavy Duty Coolant” when a new engine is filled with coolant or when the coolant is replaced.

Heavy duty coolant must also be used to replace any coolant lost due to leaks, repairs or overflow. The majority of cavitation problems are caused by the addition of untreated coolant which quickly dilutes the DCA4® concentration and results in reduced liner protection.

### Service Guidelines

This service coolant filter must be replaced at every oil change. The amount of DCA4® specified by the service chart will cause the concentration to increase over time and this increased concentration is desirable and normal.

Replace any lost coolant with heavy duty coolant. The precharge chart determines the amount of DCA4® which must be added to water and antifreeze to provide a minimum of 0,4 units per litre (4 % Vol.) heavy duty coolant concentration.

The service chart determines the amount of DCA4® which must be added at each oil change.

**If the concentration is above 0,8 units/litre**

Do not replace the DCA4<sup>®</sup> filter or add DCA4<sup>®</sup> liquid until the concentration drops below 0,8 units/litre. The concentration must be tested at every subsequent oil change until the concentration level drops below 0,8 units/litre.

**If the concentration is between 0,3 and 0,8 units/litre**

Add the normal amount of DCA4<sup>®</sup> as specified in the service chart. The concentration is within the normal limits.

**If the concentration is below 0,3 units/litre**

Add both the normal amount of DCA4<sup>®</sup> as specified in the service chart and the amount specified in the precharge chart. This precharge action will raise the concentration to an acceptable level.

**3-Way-Test Kit**

Fleetguard's CC2602M and CC 2602AM Test Kits are the current kits used for testing DCA4<sup>®</sup> concentration levels and include a new metric colour test strip chart. Do not confuse the Metric test chart with the U.S. gallon chart. The "M" designation identifies this kit as the metric version of the U.S. gallon kit.

The test must be used:

- When excessive coolant loss occurs
- At least twice per year, more if desired
- If the concentration is known to be above the high limit of 0,8 units/litre. Test at each subsequent oil change until the concentration level drops below the high limit.

**Service chart**

The amount of DCA4<sup>®</sup> to add is shown in both units and litres

Cooling system Capacity (litres)	250 Hours		500 Hours	
	Units	Litres	Units	Litres
78-115	10	1.0	15	1.4
116-190	15	1.4	25	2.4
191-285	20	1.9	40	3.8
286-379	25	2.4	50	4.7
380-569	40	3.8	75	7.1

**Service chart (small systems e.g. Automotive)**

Add the number of DCA4<sup>®</sup> units as shown

Cooling system Capacity (litres)	Kilometres Hours	8,000	16,000	24,000	32,000	40,000
1-19		2	2	2	2	2
20-39		2	2	4	4	4
40-58		2	4	4	6	8
59-77		2	4	6	8	12

Note: To ensure correct precharge and servicing of a cooling system you can select the appropriate DCA4<sup>®</sup> water filter or the appropriate amount of DCA4<sup>®</sup> liquid. For larger systems a combination of filter(s) plus liquid can be used.



**DCA4<sup>®</sup> Liquid**

Part #	Units/Size
DCA60L	5 / 0,5L
DCA65L	20 / 1,9L
DCA75L	200 / 18,9L
DCA80L	2200 / 208L

**Important:**

Do not use the 3-Way Test Kit to omit or extend the service intervals unless the concentration level is above 0,8 units/litre. Add DCA4<sup>®</sup> to the cooling system on a regular basis as part of the regular maintenance procedure. The 3-Way Test Kit works with DCA2<sup>®</sup> and DCA4<sup>®</sup> and the concentration limits for DCA2<sup>®</sup> and DCA4<sup>®</sup> are the same. DCA2<sup>®</sup> and DCA4<sup>®</sup> can be mixed, but it is preferred that one type of chemical is used. The test strip containers are marked with an expiration date and the plastic containers must be securely tightened to protect the moisture sensitive strips. Discard the strips if there is any doubt about the test strip quality.

**DCA4<sup>®</sup> Filters**

Part #	Units	Thread Size
WF2070	2 Units DCA4	11/16-16 UN- 2B
WF2071	4 Units DCA4	11/16-16 UN- 2B
WF2072	6 Units DCA4	11/16-16 UN- 2B
WF2073	8 Units DCA4	11/16-16 UN- 2B
WF2074	12 Units DCA4	5,43 (137,92)
WF2075	15 Units DCA4	11/16-16 UN- 2B
WF2076	23 Units DCA4	11/16-16 UN- 2B

**Precharge chart - using Antifreeze**

Add the amount of DCA4<sup>®</sup> listed in the table below (equals 4% Vol. of cooling system capacity)

Cooling system Capacity (litres)	Amount of DCA4 required	
	Units	Litres
19-28	10	1.0
29-43	15	1.4
44-58	20	1.9
59-77	25	2.4
78-115	40	3.8
116-191	60	5.7
192-285	90	8.5
286-380	120	11.4
381-569	180	17.0

For ES (Extended Service) Water Filters Datasheet, please quote LI33028GB.



**Filtration**

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