



Engine Oils for VME Artic Trucks --- Premature Piston Ring and Liner Wear

Over the last 18 months we have seen a selection of VME Artic truck engines A25, A30 & A35 where the piston rings and liners have worn prematurely and where dust entry has not been the cause. On strip down we have found that there has been extensive carbon deposits on the piston and this has been the cause of the liner and piston ring wear.

Other A25/A35 dumper engines have been stripped at 10,000 hours plus and have found to have relatively little wear and very clean pistons.

On examining the engine components where premature wear has occurred, we have seen the carbon build up on pistons indicating one major factor that the detergent and oil additives are not doing a sufficiently good job even though the oil that has been used meets and appears to exceed the oil specification in our operator handbooks. These are being changed.

Oil ingredients for the same oil brand name do change over the years to meet ever increasing demands and it appears that oils have been pushed to meet the North American built engine design and so cause our European designed engines to suffer.

In the case of VME Artic trucks we now recommend that the engine oil meets the European standard of CCMC D5 where it is normal to see a high detergent level of additive. You will see from the enclosed copy letter that we have circulated these revised oil recommendations to the oil suppliers and so they should be aware of the situation when you make contact with your supplier. We enclose a list of current oil brands that we have been advised meet the CCMC D5 specification.

In cases where we find piston ring and liner wear (bore polishing) on engines that have been run on Non CCMC D5 oil specification oil up to October 1994, then we will provide at a pro rata cost, piston and liner repairs from zero to 8000 hours even though the oil ingredients have been the root of the problem. This does not apply to engines that have suffered from dust or other contaminants.

Yours faithfully  
for VME Construction Equipment GB Ltd.

  
James Lavender  
Field Support Manager

Enc:

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# VME Construction Equipment GB Ltd

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At the time of this information we have been advised by the following oil companies that their specific brand name of oil meets CCMC D5 and so is suitable for VME Artic dumper engines and other Volvo engines in UK. (Issue updated but not generally distributed 11/10/94)

| <u>Supplier</u>      | <u>Brand Name</u>  |
|----------------------|--|
| VME GB Ltd           | Surecare 15W- 40 Part No 7070 (25 litre drum)                      |
| BP                   | Vanellus C3 Extra 15W-40   |
| Batofil              | Marathon 15W-40  |
| Castrol              | Turbomax 15W-40  |
| Century              | Centurion 15W-40   |
| Elf                  | Performance Trophy SHPD 15W-40                                     |
| Esso                 | Esso Super Diesel Oil TD 15W-40                                    |
| Fina                 | Kappa Extra 15W-40   |
| Gulf                 | Superfleet Special (GB) 15W-40                                     |
| Kuwait               | Q8 T700 15W/40   |
| Lubricants Engineers | LE 8800 Monolec Ultra Engine Oil 15W-40                            |
| Millers              | Truckmastekr XHPD 15W-40<br>Magnafleet SHPD 15W-40                 |
| Mobil                | Delvac XHP 15W-40<br>Delvac 1400 Super 15W-40<br>Delvac 1SHC 5W-40 |
| Morris               | Ring Free XHD Plus 15W-40  |
| Ovoline              | 551 LDX 15W-40 XHPD 15W-40   |
| Shell                | Myrina M Oil 15W-40  |
| Silkolene            | Turboline D Plus 15W-40  |
| Texaco               | Ursa Super TD 15W-40   |
| Total                | Rubia TIR XLD 15W-40   |
| Witham Oils          | Qualube SHPD 15W-40 11/10/94 JAL                                   |

# VME Construction Equipment GB Ltd

F425 Issue 1

## SERVICE INFORMATION

|   |  |                     |              |
|---|--|---------------------|--------------|
| DATE<br>25/7/94   |  | SECTION<br>Volvo L1 | PAGE<br>1(2) |
| DEPT<br>Service   |  |                     |              |
| ISSUED BY<br>Jim Lavender   |  |                     |              |
| APPROVED<br> |  |                     |              |

SEE BELOW

SUBJECT  
Axle Oils for Volvo BM Wet Brake Axles  
See Page 2 For General Oil Specifications

These axle oils are critical in order to have sufficient load bearing abilities and yet allow the brake plates to give sufficient braking performance. The additive package LZ 9990A is to date the only additive package that meets the VME requirements as noted in the specification VME WB 101.

- 1) In UK the following oil companies have advised us that their respective oils meet this VME WB 101 specification using LZ 9990A (Ref VME Service Bulletin L160 No 6R1)

| Supplier          | Brand Name               |
|-------------------|--------------------------|
| VME Surecare      | Pt No 7056               |
| BP                | Tractran 9               |
| Esso              | Torque Fluid 56          |
| Kuwait Petroleum  | Q8 T2200                 |
| Morris Lubricants | Liquimatic JDF           |
| Millers           | Millitran                |
| Mobil             | Mobilfluid 424           |
| Shell             | Shell Donax TD           |
| Silkolene         | Silktrans UTTO Trans Oil |
| Ovoline           | 583 Transmission Master  |
| Total             | Total Transmission MP    |
| Witham Oil        | Qualube BM Tran          |

- 2) All other UK oil companies as noted below, do not to day have a suitable blended oil, however their oil may be used on the basis that they supply an SAE 30 engine oil (not multigrade) and this is mixed with the VME Additive Pt No 11998605 at a 12% strength

|         |                       |
|---------|-----------------------|
| Castrol | Comma                 |
| Century | Lubrication Engineers |
| Elf     | Maxil                 |
| Texaco  | Repsol                |
|         | Tetrosyl              |

Axle Oils MUST be changed every 1000 hours, failure to use the correct oil and change periods is likely to result in premature failure of bearings and parts experiencing high loads.

### Distribution

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|  | DEPT<br>Service           |                     |              |
|  | ISSUED BY<br>Jim Lavender |                     |              |
| SUBJECT<br>Axle Oils for Volvo BM Wet Brake Axles<br>See Page 2 For General Oil Specifications | APPROVED                  |                     |              |

LUBRICANTS FOR CURRENT VME MACHINES THIS IS PAGE 2 OF SERVICE INFORMATION 25/7/94 PAGE 1 SHOWS 26-Jul-94 DATE LAST PRINTED JAL DISTRIBUTION

| MODEL                                       | ENGINE                                    | VME GB<br>PT NO | TRANSMISSION  | VME GB<br>PT NO | REAR/FRONT AXLE<br>SLEW/TRAVEL G/B                         | VME GB<br>PT NO | DROPOX  | VME GB<br>PT NO | HYDRAULIC   | VME GB<br>PT NO | GREASE   | VME GB<br>PT NO |
|---|---|-----------------|---|-----------------|--|-----------------|---|-----------------|---|-----------------|--|-----------------|
| ALL unless<br>listed<br>below<br>"Specials" | API CD<br>15W/40<br>Preferred<br>CCMC. D5 | 7000            | ENGINE OIL API CD<br>MEETING ALLISON C3<br>10W/30 OR 15W/40 | 7020            | GEAR OIL GL 5<br>SAE 90 OR<br>SAE 85W/140                  | 7008            | ENGINE OIL API CD<br>MEETING ALLISON C3<br>10W/30 OR 15W/40 | 7020            | ENG OIL<br>API CD/CE<br>10W, 10W/30<br>15W/40 OR<br>HYD OIL ISO 46<br>VI Index >130 | 7020<br>7019    | LITHIUM BASED<br>NLGI NO2<br>+EP ADDITIVES                             | 7042            |
| L508 FROM<br>S/N 9011                       | AS TOP LINE                               | 7000            | AS TOP LINE   | 7020            | VME WP 101<br>See Page 1                                   | 7056            | N/A   |                 | AS TOP LINE   | 7020            | AS TOP LINE  | 7042            |
| L150 TO S/N<br>1233                         | AS TOP LINE                               | 7000            | AS TOP LINE   | 7020            | SAE 90 GL 5 LS<br>(LIMITED SLIP 5-6)                       | 7057            | SAE AS TRANS  | 7020            | AS TOP LINE   |                 | AS TOP LINE  | 7042            |
| L708<br>L150 FROM<br>S/N 1234<br>L180       | AS TOP LINE                               | 7000            | AS TOP LINE   | 7020            | VME WP 101<br>See Page 1                                   | 7056            | SAE AS TRANS  | 7020            | AS TOP LINE   | 7020            | AS TOP LINE  | 7042            |
| L190B/L270B<br>L320                         | API CE OIL<br>15W/40                      | 7000            | APICD SAE30 ENG OIL<br>TO C4 ALLISON SPEC                   | 7058            | SAE 90 GL 5 LS<br>LIMITED SLIP 5-6                         | 7057            | N/A   |                 | AS TOP LINE   | 7020            | AS TOP LINE  | 7042            |
| ZETTELMEYER<br>1801 & UP                    | SEE CUMMINS<br>BELOW                      | 7000            | AS TOP LINE   | 7020            | SAE 90 GL 5 LS<br>LIMITED SLIP 5-6                         | 7057            | N/A   |                 | AS TOP LINE   | 7020            | AS TOP LINE  | 7042            |
| CUMMINS<br>ENGINES                          | API CE OIL<br>15W/40                      | 7000            |   |                 |  |                 |   |                 |   |                 |  |                 |
| A25<br>A25B/C<br>A30<br>A35                 | AS TOP LINE                               | 7000            | ATF DEXRON 2 D  | 7051            | AS TOP LINE  | 7008            | SAE 90 GL 5<br>OR 85W/140                                   | 7008            | AS TOP LINE   | 7020            | AS TOP LINE  | 7042            |
| R50, R60, R65<br>R85B                       | SEE CUMMINS<br>ABOVE                      | 7000            | APICD SAE30 ENG OIL<br>TO C4 ALLISON SPEC                   | 7058            | AS TOP LINE  | 7008            | N/A   |                 | AS TOP LINE   | 7020            | AS TOP LINE  | 7042            |
| AKERMAN<br>EXCAVATORS                       | AS TOP LINE                               | 7000            | PUMP GB & SLEW PAN<br>GEAR OIL GL5<br>85W/140               | 7008            | TRAVEL G/B<br>GEAR OIL GL5<br>85W/140<br>SLEW GB<br>SAE 90 | 7008<br>9057    | WHEELED MACHINES<br>GEAR OIL GL5<br>85W/140                 | 7008            | HYD OIL<br>ISO VG 32  | 7023            | LITHIUM BASED<br>NLGI NO2<br>+1-3% MOLY DIS<br>AUTO LUBE<br>NLGI N 000 | 14485<br>7059   |

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