

# ACEA-98 DETAIL OF CHANGES

The most significant changes in the 1998 sequence requirements are summarised as follows:

## A1-98

For gasoline engines designed to use low friction oils with high temperature/high shear values down to a minimum of 2.9 mPas. As these oils are more specifically intended to produce fuel economy benefits, a fuel economy test sequence is now included which positively quantifies a minimum requirement. The M111E fuel economy test uses a 4-cylinder, 2 litre, 16 valve engine with electronic multiport fuel injection. It measures fuel economy improvements compared with a SAE 15W/40 reference oil RL 191. ACEA considers this CEC-L-54-T-96 test the only valid comparator against which fuel economy improvements should be made.

There is no restriction on the viscosity grade of the oil other than the requirements to meet shear stability and high temperature/high shear requirements. Manufacturers may indicate specific viscosity requirements related to ambient temperature.

Data from the 1996 issue may be reassessed to demonstrate compliance with the viscosity increase requirement in the TU3M Test. These oils may be unsuitable for use in some engines.

### Sequence IIIE

Higher severity in viscosity increase at 40°C i.e. reduced from 200% to 100%, matching the A3 requirements, although max. cam and lifter wear increased slightly from 60µ to 64µ.

### Peugeot TU3M High Temperature test

Increase in severity in the ring sticking and piston varnish requirements.

Data from the 1996 issue may be reassessed to demonstrate compliance with the viscosity increase requirements.

Oil consumption to be now reported.

### MB 111E Fuel Economy

Oils are now required to demonstrate a minimum improvement of 2.5% compared with a reference oil.

### Foaming Tendency

A further measure at 150°C has been introduced.

### Oil Elastomer Compatibility

Some slight relaxation has been allowed in certain of the requirements.

## A2-96 ISSUE 2

Conventional oils for mainstream gasoline engine use. Again, these oils may not be suitable for use in some high performance engines. There is no restriction on the viscosity grade of the oil other than the requirements to meet shear stability and high temperature/high shear requirements.

Manufacturers may indicate specific viscosity requirements related to ambient temperature.

### Sequence IIIE

Max. cam and lifter wear increased slightly from 60µ to 64µ.

### Peugeot TU3M High Temperature test

No change in severity although oil consumption to be now reported.

### Foaming Tendency

A further measure at 150°C has been introduced.

### Oil Elastomer Compatibility

Some slight relaxation has been allowed in certain of the requirements.

## A3-98

For high performance gasoline engines and/or long drain intervals. There is no restriction on the viscosity grade of the oil other than the requirements to meet shear stability and high temperature/high shear requirements. Manufacturers may indicate specific viscosity requirements related to ambient temperature.

Data from the 1996 issue may be reassessed to demonstrate compliance with the viscosity increase requirement in the TU3M Test.

### Peugeot TU3M High Temperature test

No change in severity although oil consumption to be now reported.

### Foaming Tendency

A further measure at 150°C has been introduced.

### Oil Elastomer Compatibility

Some slight relaxation has been allowed in certain of the requirements.

## B1-98

Oils for use in passenger car or light van diesel engines designed to use low friction oils with high temperature/high shear values down to 2.9 mPas. As with A1, as these oils are more specifically intended to produce fuel economy benefits, the M111E fuel economy test sequence is now included which positively quantifies a minimum requirement. There is no restriction on the viscosity grade of the oil other than the requirements to meet shear stability and high temperature/high shear requirements. Manufacturers may indicate specific viscosity requirements related to ambient temperature. In the medium temperature dispersivity test, the XUD 11ATE engine will be replaced by the XUD 11BTE, which is a modern version with an electronic fuel injection system. It is anticipated that the tests for viscosity increase and piston merit on the new engine will be given 'T' test status sometime in 1998.

These oils may be unsuitable for use in some engines.

### MB OM 602A

Fit for purpose limits (see below) have been introduced for viscosity increase at 40°C, bore polishing, cylinder wear and oil consumption.

### High Temperature Dispersivity (XUD 11ATE engine then XUD 11BTE)

Data for viscosity increase and piston merit to the 1996 issue of these sequences may be re-assessed to demonstrate compliance with the requirement as detailed in the Equivalency Guidelines in Appendix E of the ATIEL Code of Practice.

### MB 111E Fuel Economy

Oils are now required to demonstrate a minimum improvement of 2.5% compared with a reference oil.

### Foaming Tendency

A further measure at 150°C has been introduced.

### Oil Elastomer Compatibility

Some slight relaxation has been allowed in certain of the requirements.

## B2-98

Oils for use in most passenger car or light van diesel engines although these oils may not be suitable for use in some high performance engines. There is no restriction on the viscosity grade of the oil other than the requirements to meet shear stability and high temperature/high shear requirements. Manufacturers may indicate specific viscosity requirements related to ambient temperature.

### MB OM 602A

Fit for purpose limits have been introduced for viscosity increase at 40°C, bore polishing, cylinder wear and oil consumption.

### High Temperature Dispersivity (XUD 11ATE engine then XUD 11BTE)

Data for viscosity increase and piston merit to the 1996 issue of these sequences may be re-assessed to demonstrate compliance with the requirement as detailed in the Equivalency Guidelines in Appendix E of the ATIEL Code of Practice.

### Oil Elastomer Compatibility

Some slight relaxation has been allowed in certain of the requirements.

### Foaming Tendency

A further measure at 150°C has been introduced.

## B3-98

Oils for high performance passenger car diesel engines and/or long drain intervals. There is no restriction on the viscosity grade of the oil other than the requirements to meet shear stability and high temperature/high shear requirements. Manufacturers may indicate specific viscosity requirements related to ambient temperature.

### MB OM 602A

Fit for purpose limits have been introduced for viscosity increase at 40°C, bore polishing, cylinder wear and oil consumption.