	specification	Minimum specification with which it can be replaced
PETROL	ACEA A1*	ACEA A3 or ACEA A5*
	ACEA A2	ACEA A3
	ACEA A3	-
	ACEA A5*	ACEA A3
DIESEL	ACEA B1*	ACEA B3 or ACEA B5*
	ACEA B2	ACEA B3
	ACEA B3	ACEA B4
	ACEA B4	-
	ACEA B5*	ACEA B4
	ACEA C3	-

* engine oil enabling a reduction in fuel consumption.

3)API SPECIFICATION :

	specification	Minimum specification with which it can be replaced
PETROL	API SH	API SJ
	API SJ	API SL
	API SL	API SM
	API SM	-
DIESEL	API CF	-

4)CCMC/ACEA SPECIFICATION :

	specification	Minimum specification with which it can be replaced
Petrol	CCMC G4	ACEA A2
	CCMC G5	ACEA A2
DIESEL	CCMC PD2	ACEA A2

ENGINE: PRECAUTIONS FOR THE REPAIR

 **Note, one or more warnings are present in this procedure** 

1. SAFETY

1- GENERAL INFORMATION

All information contained in these manuals is intended exclusively for automotive industry professionals.

The documentation is intended to cover all vehicles in theRENAULTrange throughout the world, but may not cover equipment designed for use in specific countries.

The procedures and fault finding procedures recommended and described in this manual have been designed by automotive industry repair professionals.

1)GENERAL RECOMMENDATIONS

Observe basic principles of vehicle repair.

The quality of repair depends first and foremost on the care exercised by the person in carrying it out.

To ensure good repair:

- use recommended professional products and original parts,
- observe the tightening torques,
- observe the recommendations for parts that should always be replaced after removal, refitting or replacement operations,
-

clean and degrease the sections to be bonded, to ensure they bond correctly.

CAUTION

To ensure proper sealing, the gasket surfaces must be clean, dry and not greasy (avoid any finger marks).

CAUTION

Do not scrape the joint faces of the aluminium, any damage caused to the joint face will result in a risk of leaks.

The design quality of the vehicles demands that nothing be left to chance during repair. Consequently, parts or components must be refitted in their original positions (for example: heat shields, wiring routing, pipe routing).

Use professional products and apply them with care. For example, do not apply too much sealant to joint faces, in order to avoid plugging engine oil or coolant pipes.

CAUTION

Applying excess sealant could cause it to be squeezed out when parts are tightened. A mixture of sealant and fluid could damage certain components (engine, radiator, etc.).

2)SPECIAL TOOLING - EASE OF USE

The repair procedures have been designed using special tools; they must therefore be carried out using these tools to ensure a high degree of working safety and quality of repair.

The equipment we have approved has undergone careful research and testing, and must be used and maintained with care.

3)SAFETY

Certain devices and parts must be handled with particular attention to safety and cleanliness and, above all, with due care.

The safety symbol used in this manual indicates that special attention must be paid to the procedure or the tightening torque values.

Working safely:

- use suitable tools which are in good condition (use of "multi-purpose" tools, such as adjustable pliers, etc., should be avoided wherever possible),
- use supports and adopt a correct posture when performing heavy work or raising loads,
- check that the working area is clean and tidy during the operation,

- use personal protection (gloves, goggles, work shoes, masks, skin protection, etc.),
- always follow the safety instructions associated with the operation to be performed,
- do not smoke when working on vehicles,
- do not use harmful products in unventilated rooms,
- do not ingest any chemicals (brake fluid, coolant, etc.).

Respecting the environment:

- sort waste according to its particular qualities,
- do not burn discarded products (tyres, etc.).

4)CONCLUSION

The procedures contained in this document merit your attention. Please read them carefully in order to reduce the risk of injury, and avoid using incorrect procedures that could damage the vehicle or make it dangerous in use.

Following the recommended procedures will help you to provide a quality of service which will ensure the vehicles achieve the highest levels of performance and reliability.

Maintenance and repair operations must be carried out under the proper conditions to ensure that our vehicles run safely and reliably.

2. CLEANLINESS

1- RISKS RELATING TO CONTAMINATION

1)PROTECTIVE BAGS

Use hermetically-resealable plastic bags, using adhesive tape, for example, to store components which will be refitted and reused. Stored parts will therefore be less subject to the risk of contamination.

These are single-use bags: after use they must be discarded.