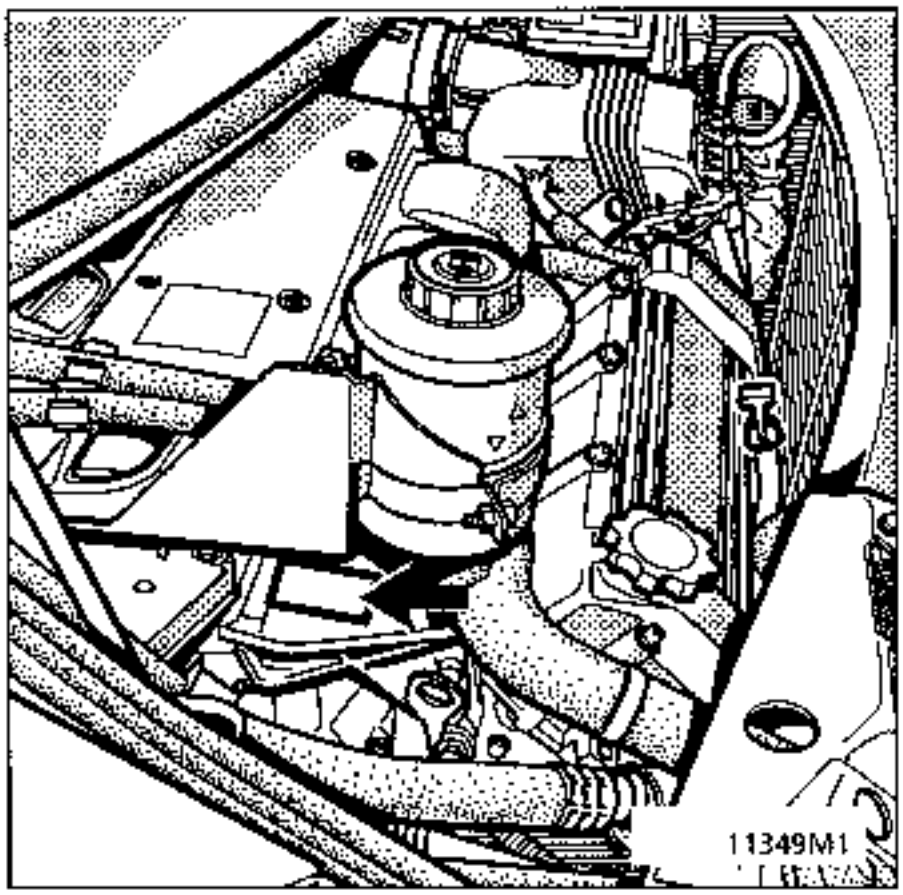
Vehicle type	Engine		Clutch type	Gearbox type
	Type	Capacity		
JE0A05 JE0A02	F3R 728 F3R 729	1998	215 DBRN 4400 converter 227	JC5 026 AT AD4 032
JE0E05 SE0E05 JE0J05	G8T 716 G8T 716 G8T 718	2188	B02300308 B02300308	PK1 050 PK1 050 JC5 026
JE0D02	Z7X 775	2963	converter 250	AT AD8 013

VEHICLE IDENTIFICATION

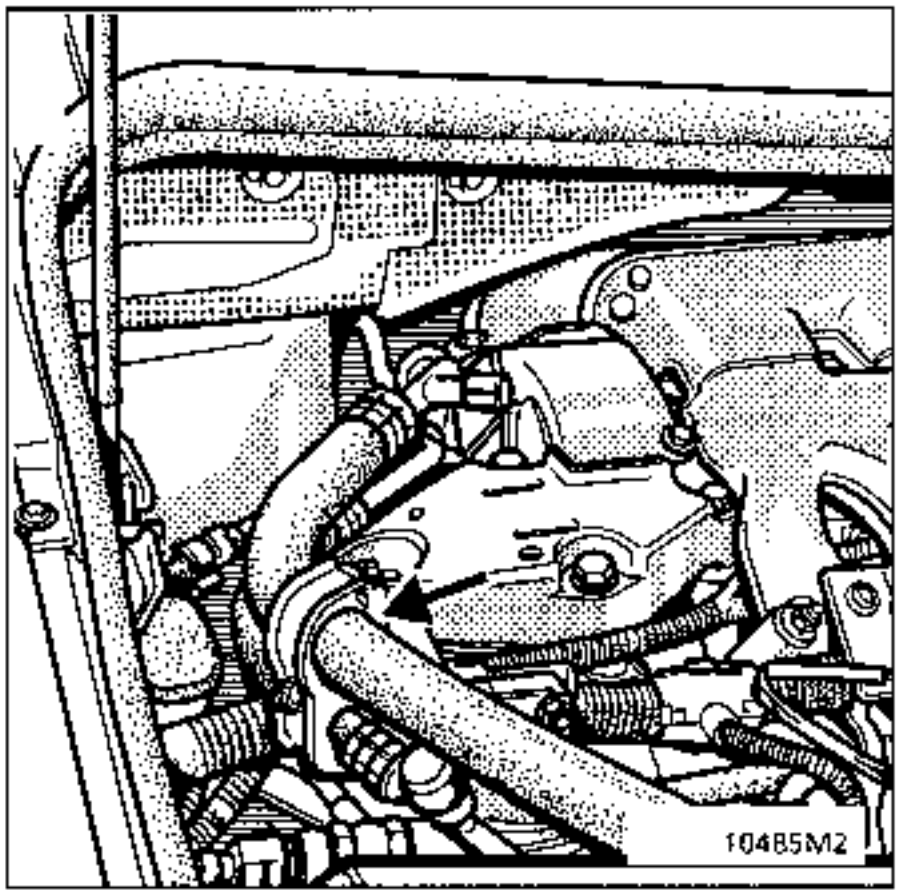
Example: JE0A

J: Body type (one box)
E: Project code
0A: Engine suffix

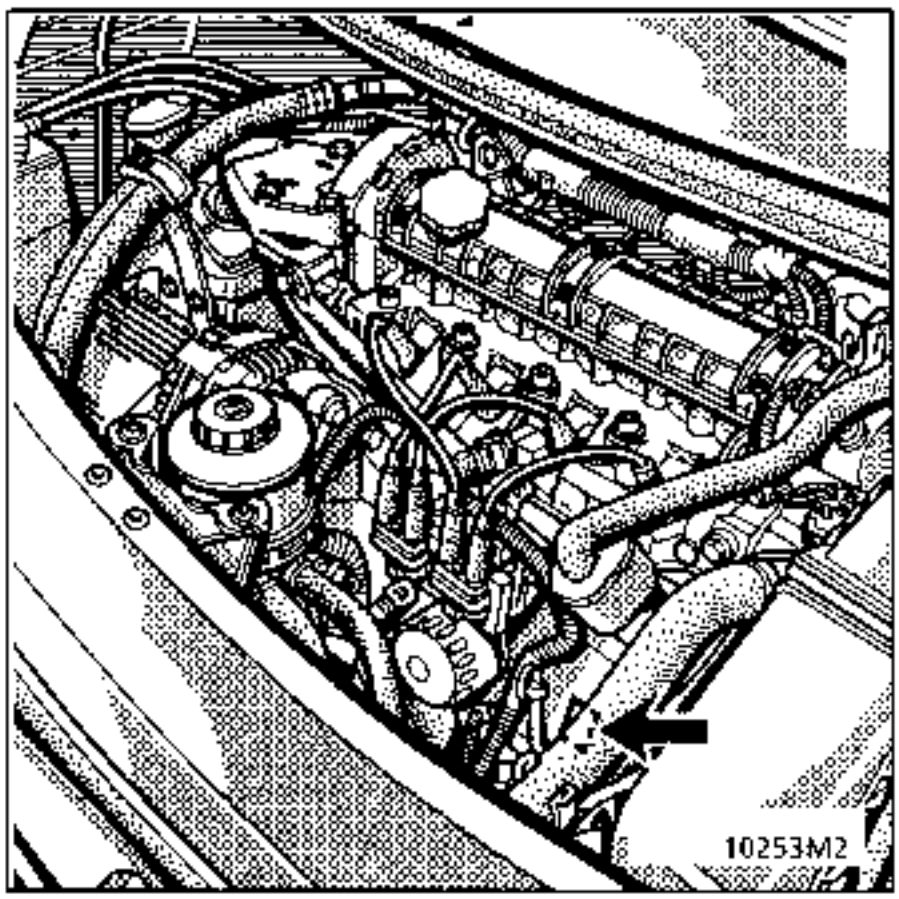
IDENTIFICATION OF Z7X ENGINE



IDENTIFICATION OF G8T ENGINE

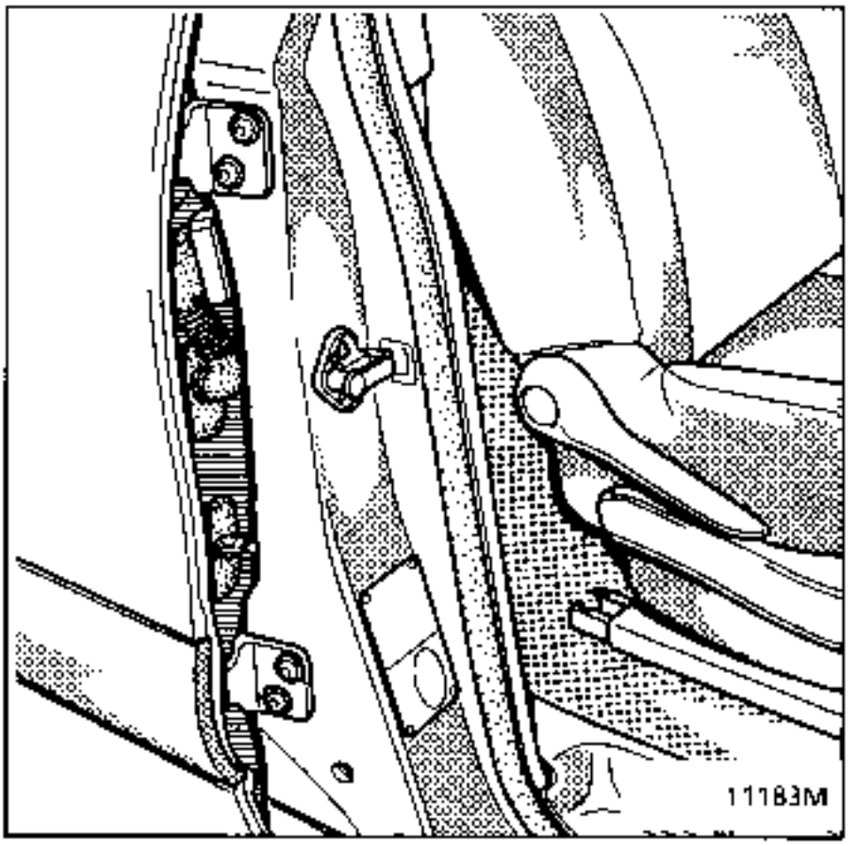


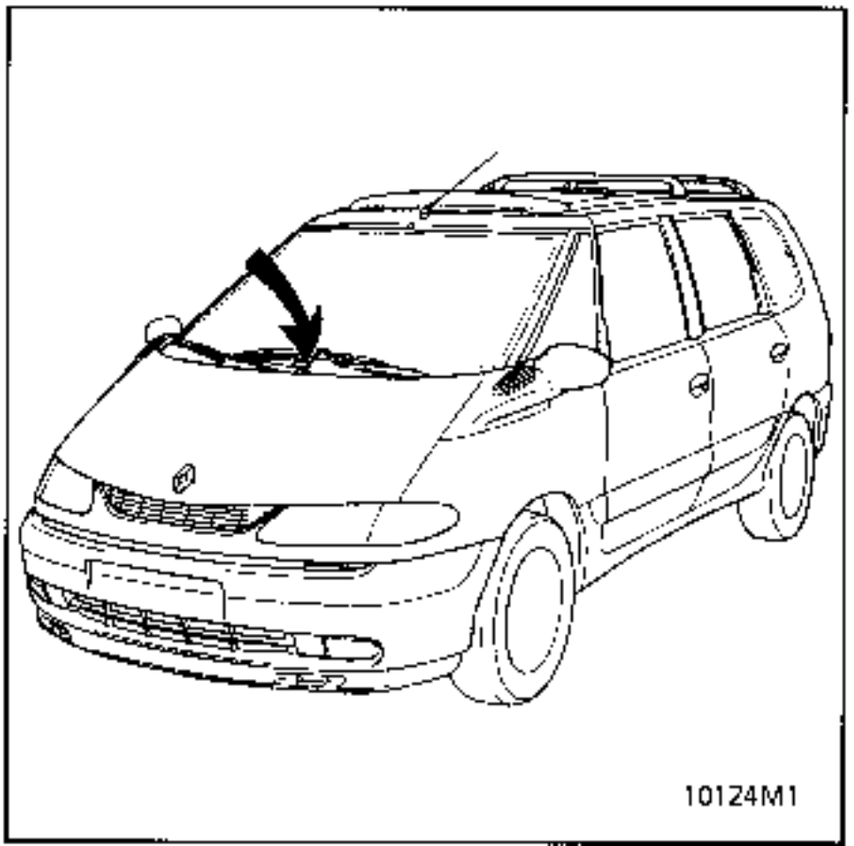
F3R ENGINE

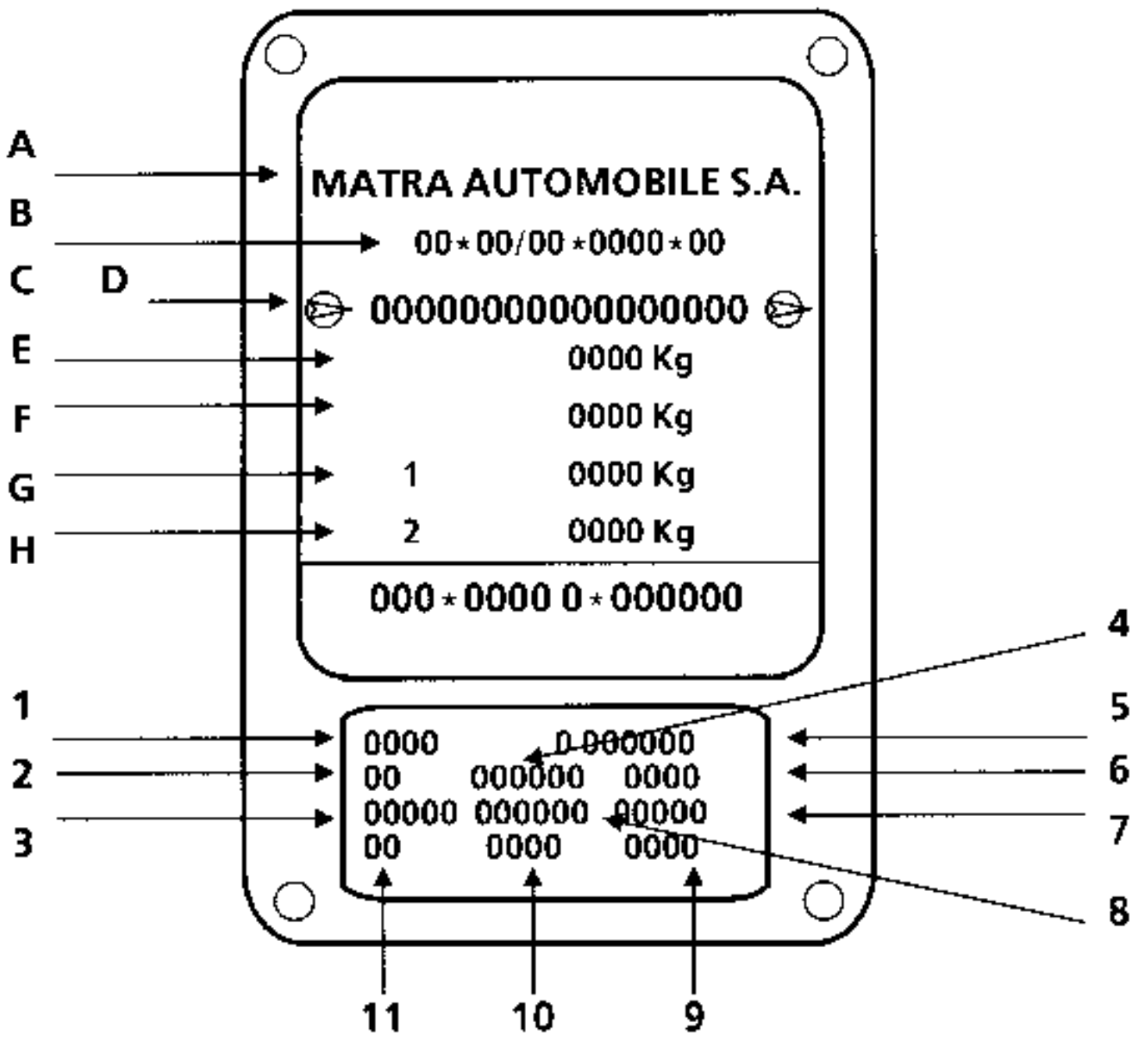


LOCATION OF MANUFACTURER'S PLATE

On the right hand centre pillar.
The chassis number is repeated under the windscreen.







This shows:

At A : the name of the manufacturer,
At B : the E.E.C. acceptance number,
At C : the type mines of the vehicle preceded by the world manufacturers identification code (VF8 corresponds to MATRA AUTOMOBILE),
At D : the chassis number,
At E : the total all up weight(P.T.M.A.)
At F : the maximum permitted total train weight (P.T.R. - vehicle loaded with trailer)
At G : the maximum permitted weight on the front axle (P.T.M.A. front axle)
At H : the maximum permitted weight on the rear axle (P.T.M.A. rear axle)

At 1 : the vehicle type,
At 2 : the equipment level,
At 3 : the paint grade and body colour reference,
At 4 : special edition or limited edition,
At 5 : a letter describing the factory of manufacture followed by the manufacturing number,
At 6 : additional factory optional equipment,
At 7 : the interior matching trim code,
At 8 : the seat trim,
At 9 - 10 : the parts catalogue symbol identification,
At 11 the technical features.

NOTE : Depending on the country of export, certain details might not be given. The plate described above shows all possible information.

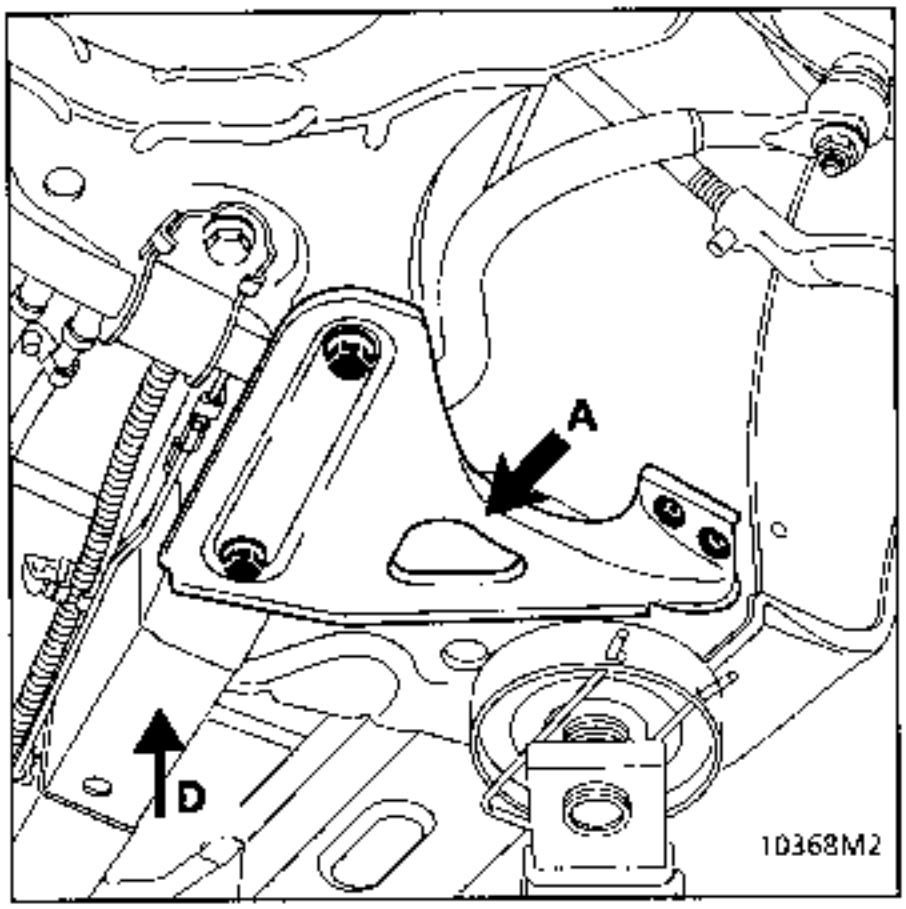
Safety symbol (special precautions to be taken when carrying out operations).

SPECIAL TOOLING REQUIRED		
Cha.	280 -02	Adaptable cross piece for trolley jack
Cha.	408 -01	Adaptable socket for trolley jack
Cha.	408 -02	

If a trolley jack is used, appropriate axle stands must always be used.

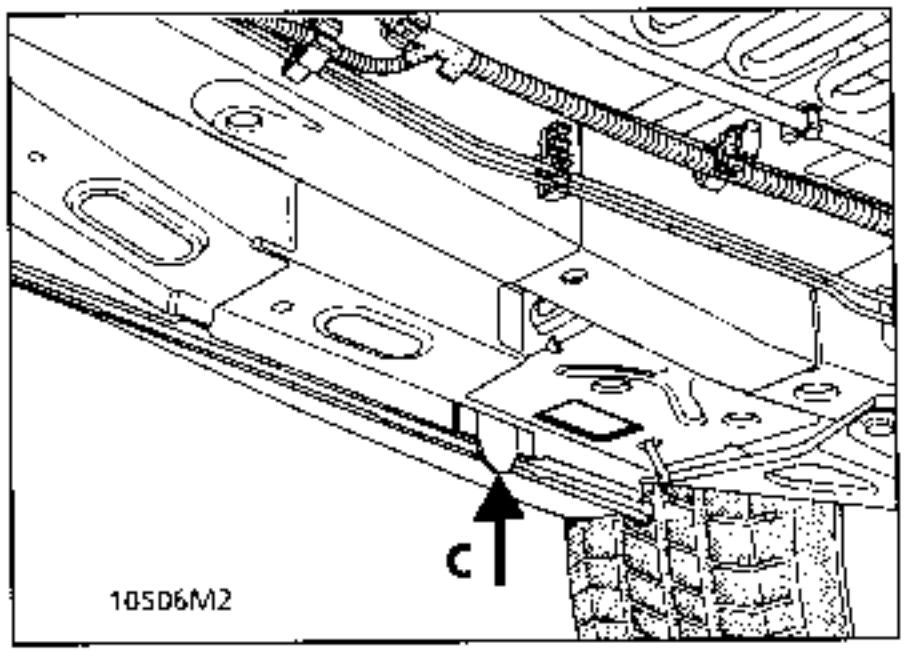
TROLLEY JACK

It is **forbidden** to lift the vehicle by supporting its weight under the front suspension arms, under the triangular reinforcements (A) for the front wheel arch or under the rear axle assembly cross member.



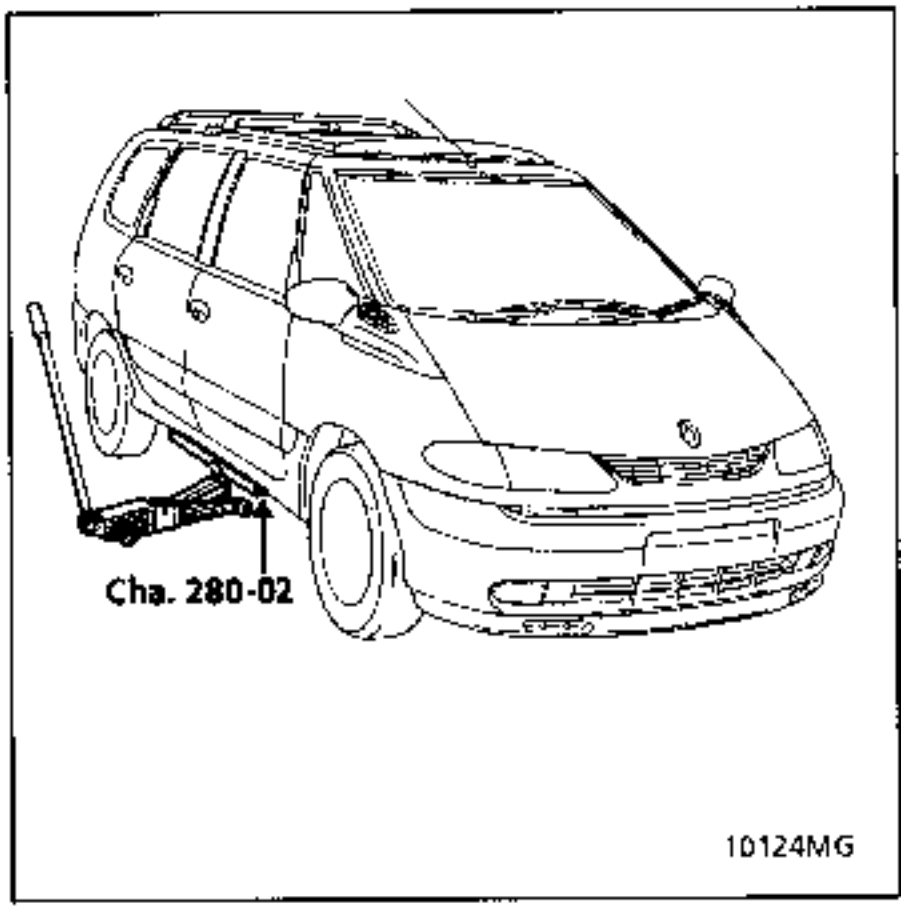
To lift at the front

Take the weight under the vehicle jacking point (C) or the front side member extension (D).



To lift at the rear

Take the weight under the vehicle jacking points.



To lift at the side

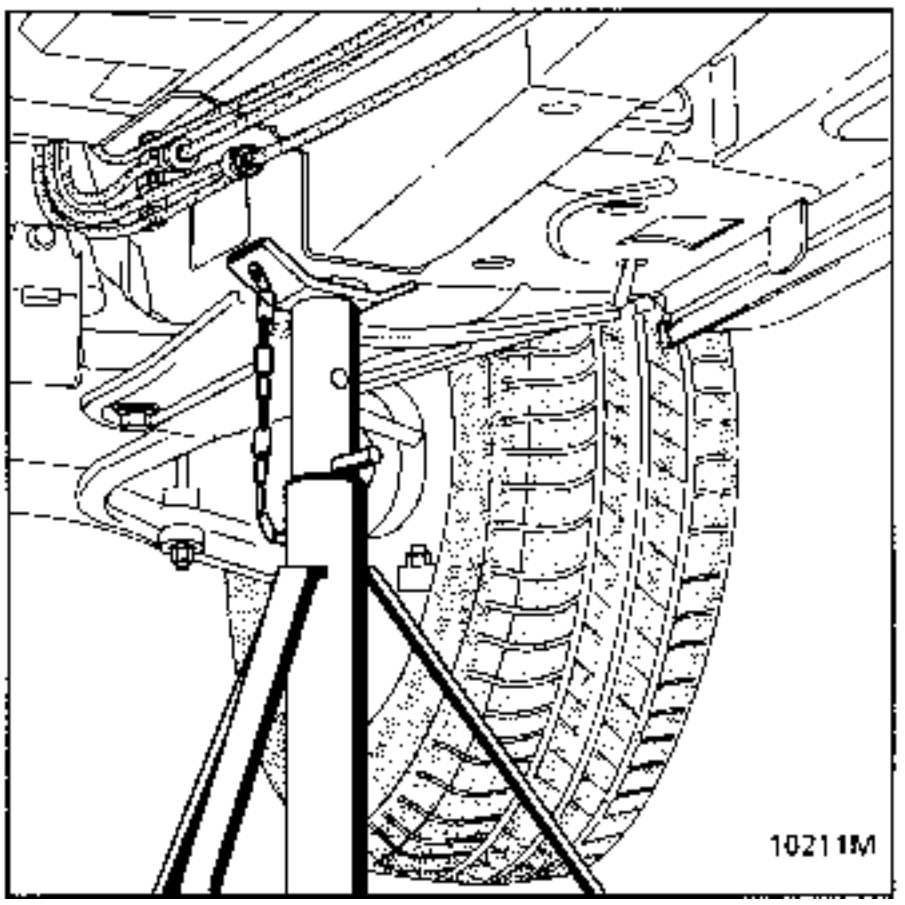
Take the weight under the plastic valance flange using cross piece **Cha.280.02 only** between the vehicle jacking points.

If a trolley jack is used, appropriate axle stands must always be used.

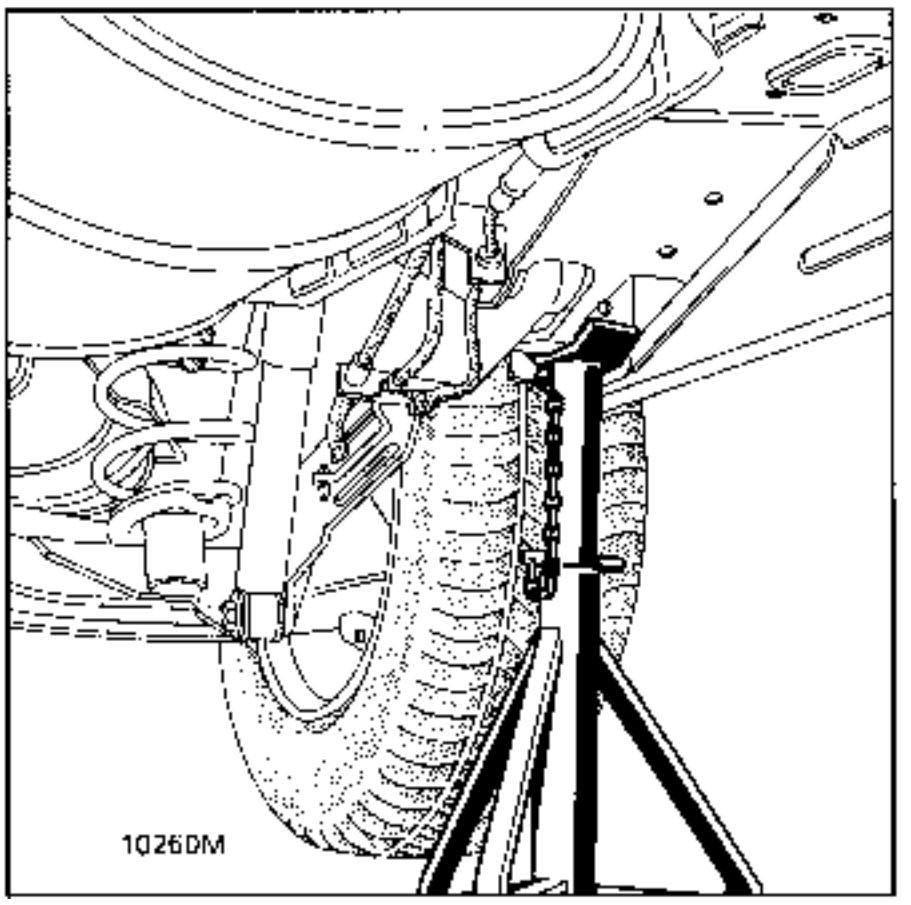
AXLE STANDS

When putting the vehicle on axle stands, they must be positioned:

- **at the front** under the side members behind the triangular reinforcements.

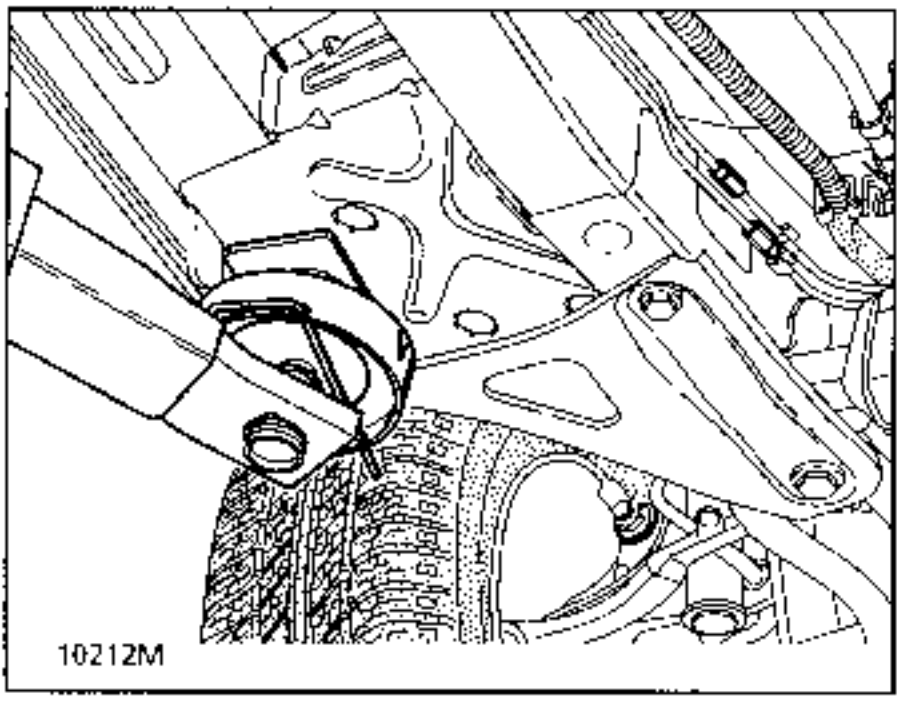


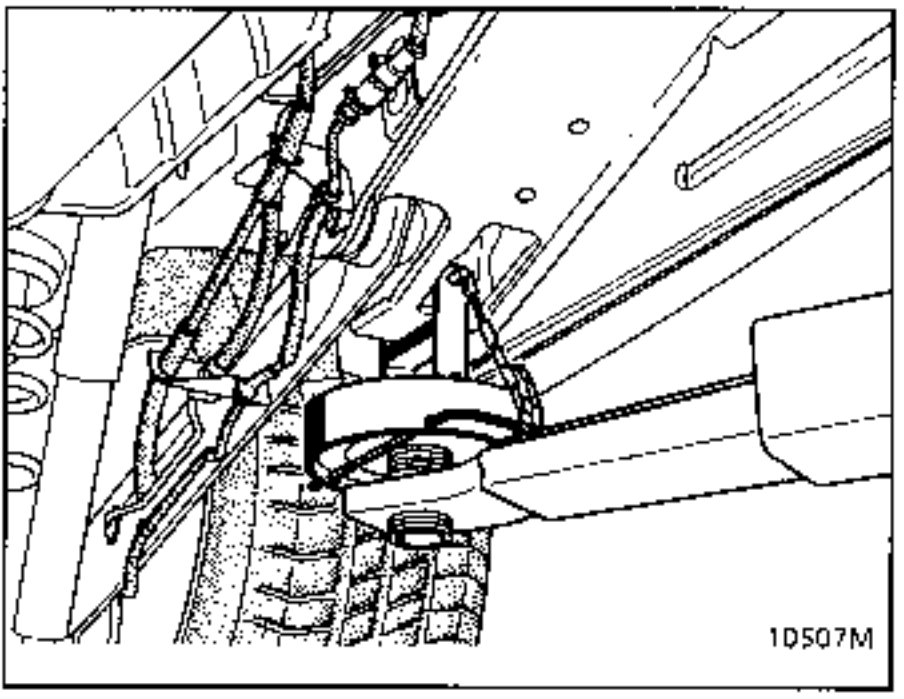
- **at the rear** under the suspension arm mounting points.



SAFETY INSTRUCTIONS

Never use a 2 post lift without the safety locking pads specially designed for the Espace.



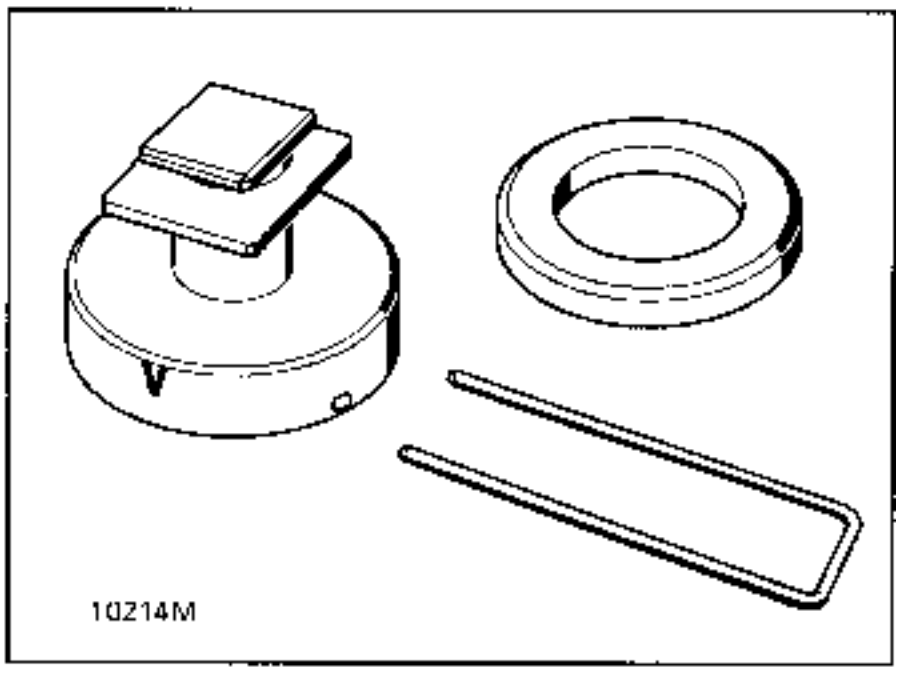


REMOVING - REFITTING THE ENGINE AND TRANSMISSION ASSEMBLY or REAR AXLE or FUEL TANK

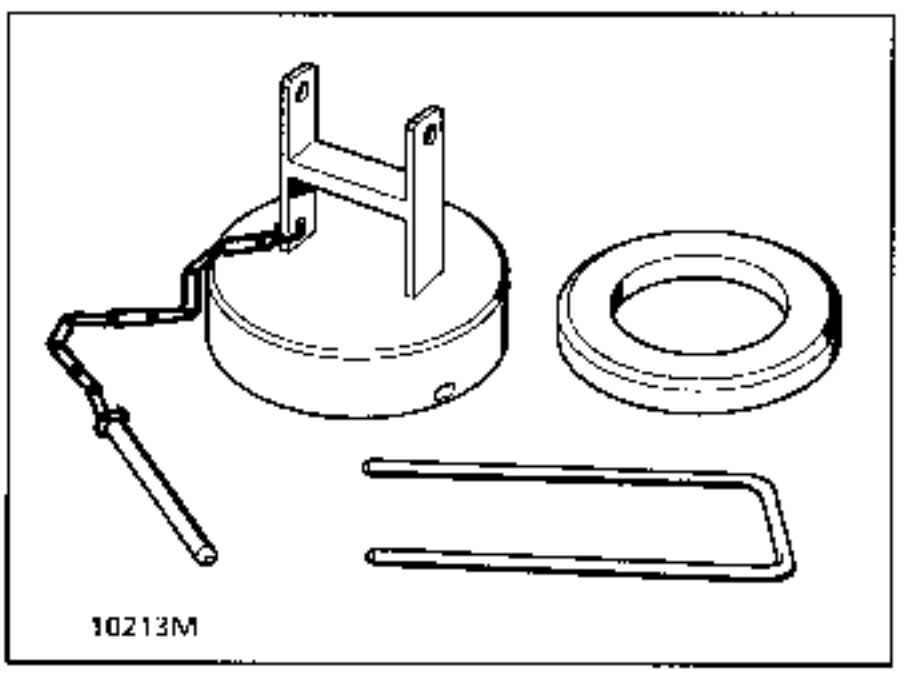
In these cases, the vehicle body must be secured to the arms of the 2 post lift using special pads.

Company FOG :
Part Number FOG 444 8056

FRONT



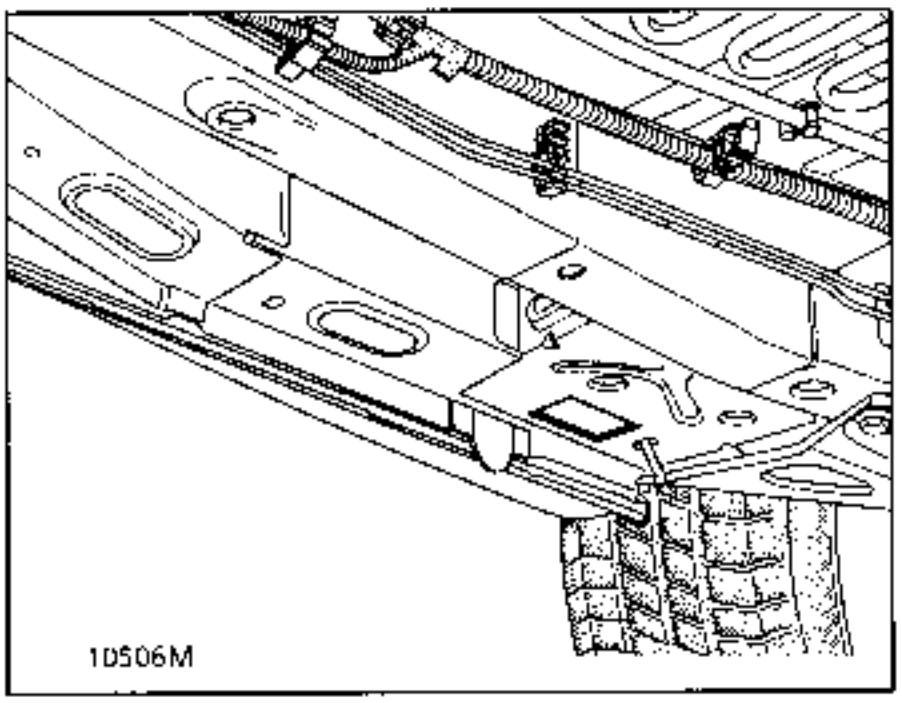
REAR

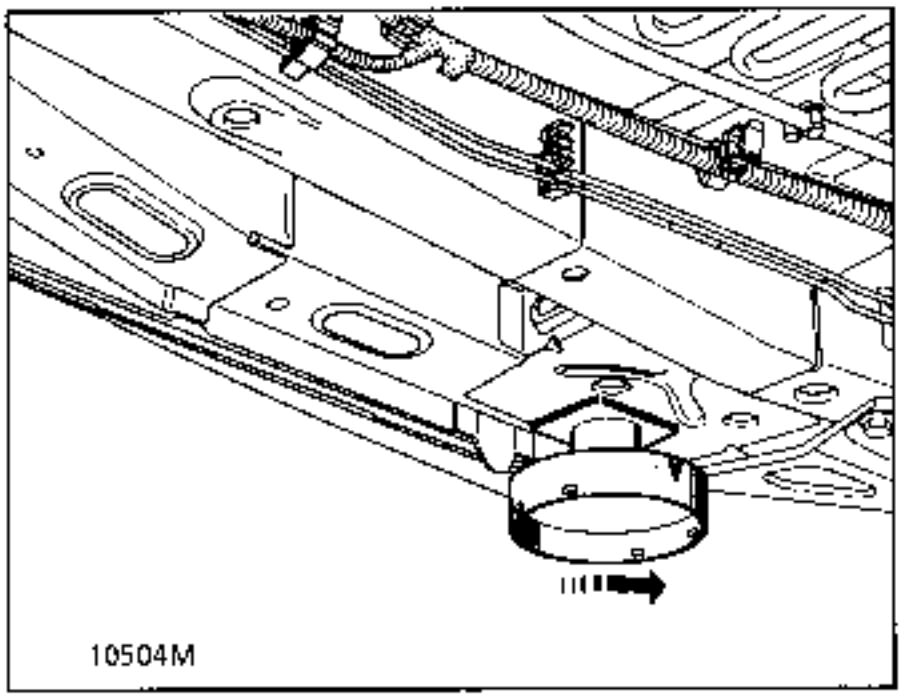


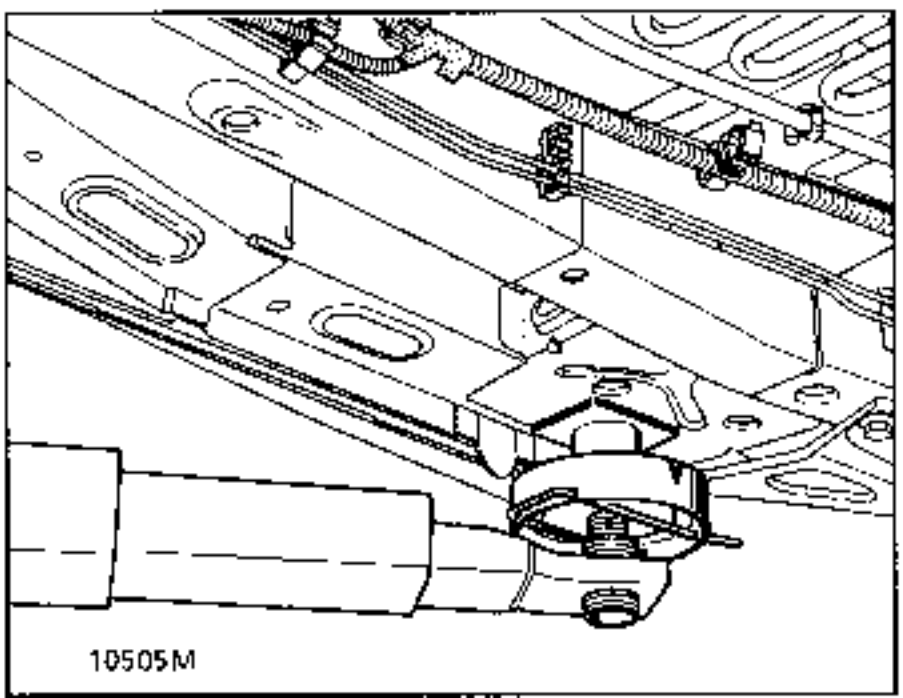
If this equipment or an equivalent is not available, strapping the vehicle to the arms of the lift is carried out under your own liability.

FITTING THE SAFETY PADS

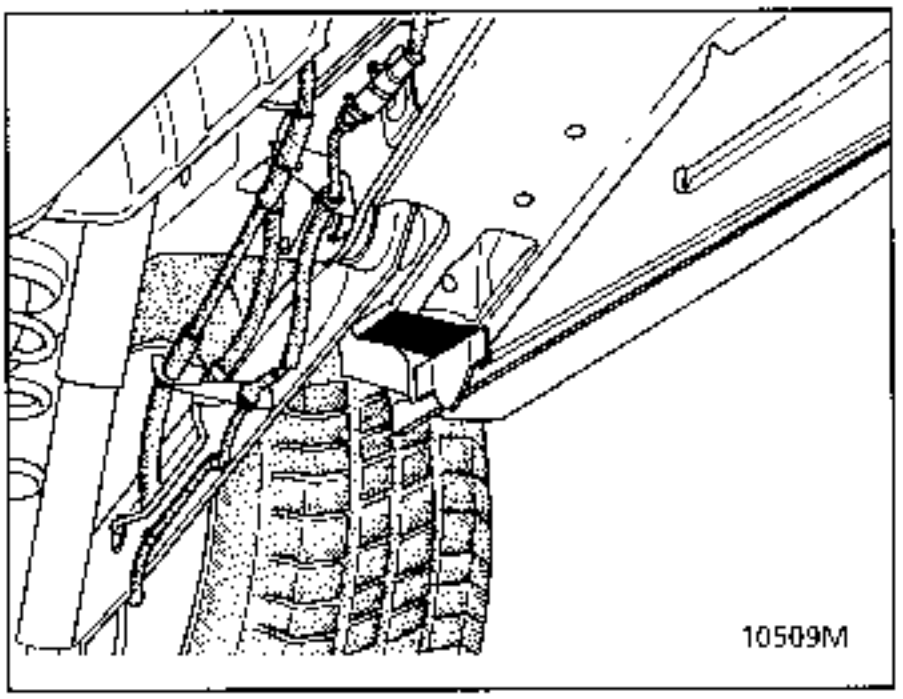
At the front:
Hang the pads from the body using the rectangular holes in the cross members. Turn them a quarter turn so that the "VE" on the pads is visible from the outside or from the inside, under the vehicle.

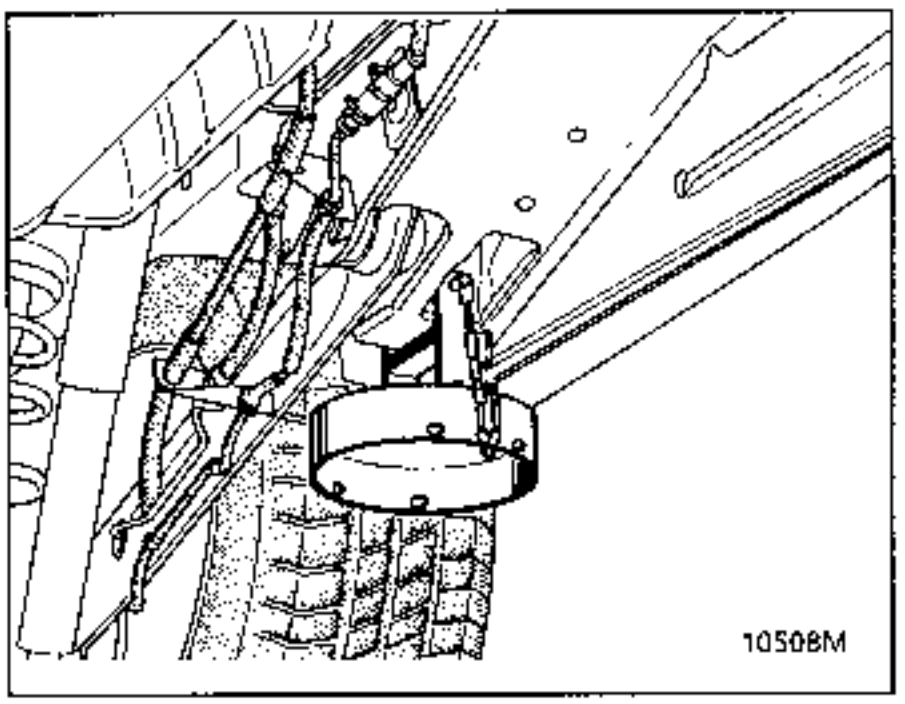

10506M

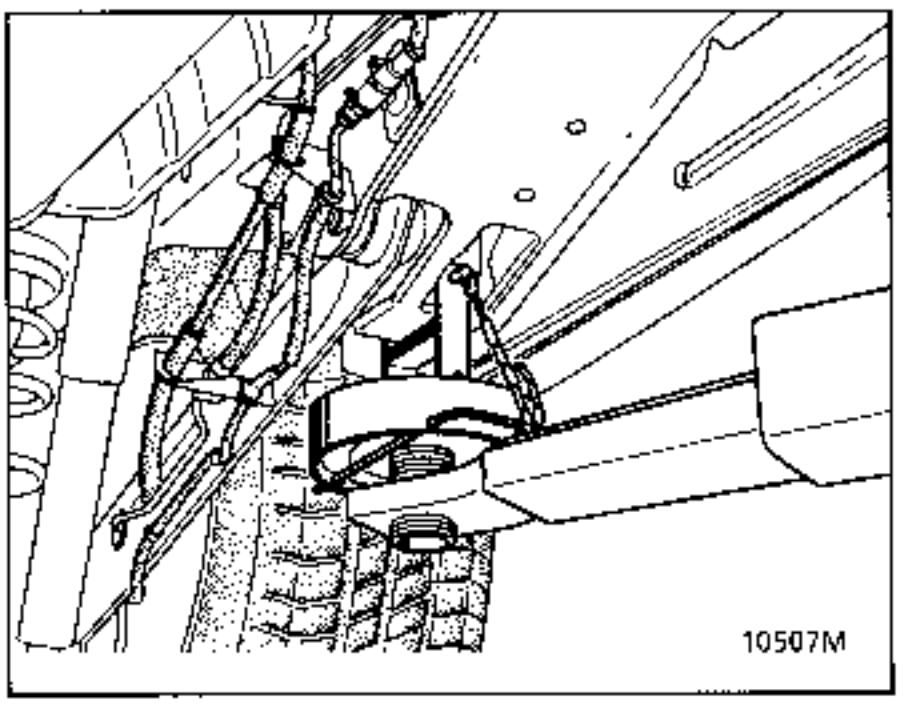

10504M


10505M

At the rear:
Hang the pads under the arm bearings and secure them using roll pins.


10509M


10508M


10507M

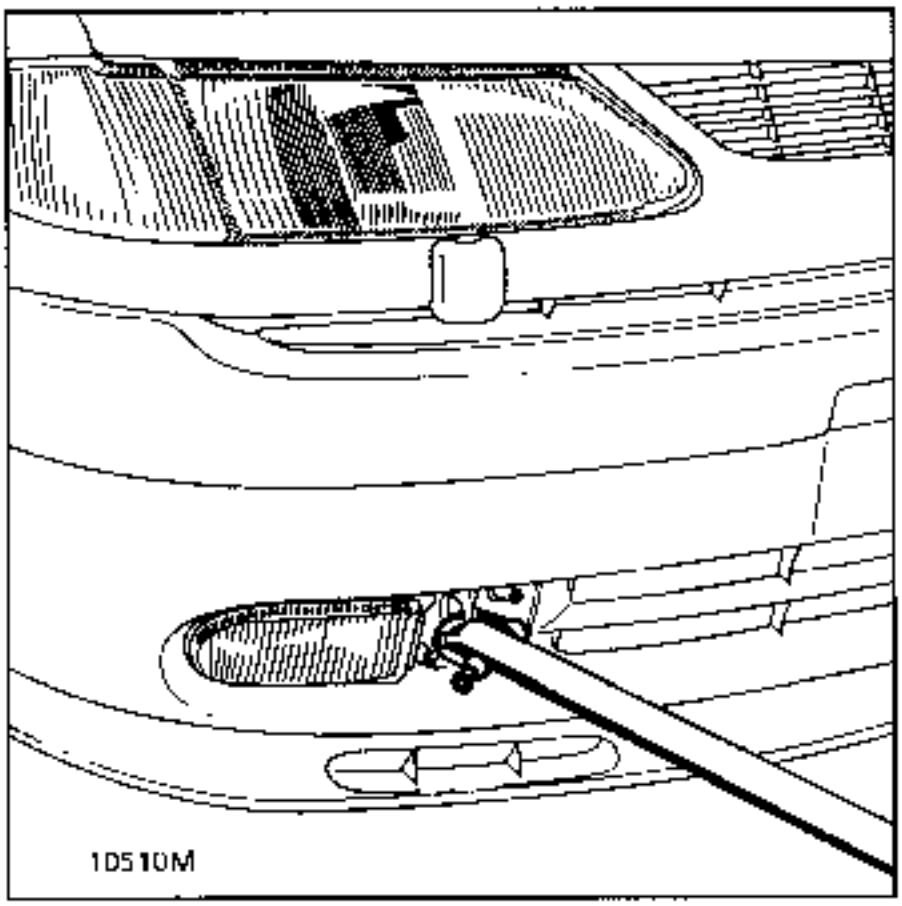
Fit **the lift into position** aligning the lift pads with the four vehicle pads and fit the four safety forks.

OBSERVE THE LEGAL TOWING REQUIREMENTS OF THE COUNTRY YOU ARE IN.

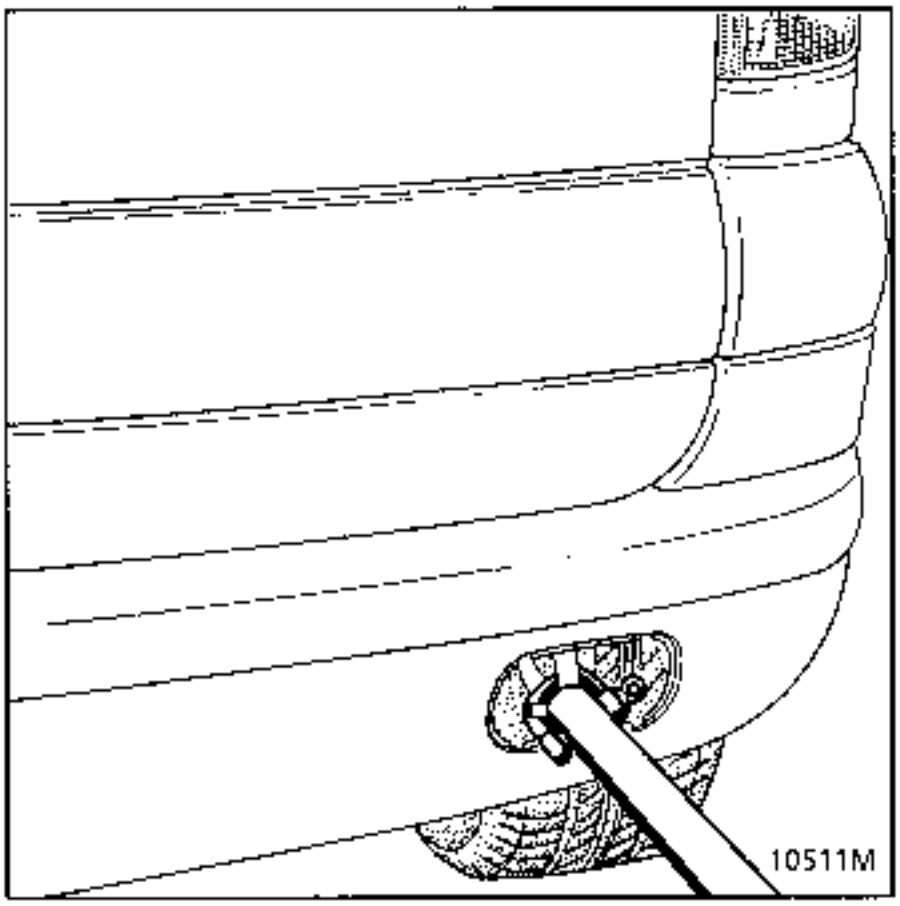
NEVER USE THE DRIVESHAFTS AS ATTACHMENT POINTS.

The towing points may only be used for towing the vehicle on the road. They should never be used for removing the vehicle from a ditch or for any other similar breakdown operation or to lift the vehicle, either directly or indirectly.
They may be used for winching purposes by placing a shackle between the towing eye and the winch hook.

FRONT



REAR



Remove the cover from the left of the front right hand foglight or the rear cover on the right hand side of the bumper and fit the shackle into the ring.

TOWING A VEHICLE WITH AUTOMATIC TRANSMISSION

The front of the vehicle should be raised, but if this is not possible, the vehicle may be towed with the wheels on the ground under exceptional circumstances, under the following conditions:

Only tow the vehicle at a speed less than 25 mph (40 km/h) and for not more than 31 miles (50 km).

SECURING ON TRANSPORTER VEHICLES

Use the front left hand side member ring and the two eyes located behind the rear bumper.

DESCRIPTION	PACKAGING	PART NUMBER
LUBRICANTS		
• ***MOLYKOTE "BR2"*** *for main bearing journal faces, thrust pad guide tubes, clutch fork pads, lower suspension arm bearings, steering box, driveshaft splines, gearbox end.*	*1 kg tin*	*77 01 421 145*
• ***MOLYKOTE "33 Medium"*** *tubular rear axle rings* *anti-roll bar rings.*	*100 g tube*	*77 01 028 179*
• ***ANTI-SEIZE*** *(high temperature grease) Turbo etc.*	*80 ml tube*	*77 01 422 307*
• ***"MOBIL CVJ" 825 Black star or MOBIL EXF57C*** *for driveshaft joints*	*180 g sachet*	*77 01 366 100*
• ***MULTIPURPOSE LUBRICANT*** *wheel sensor*	*Aerosol*	*77 01 422 308*
• ***WHITE GREASE*** *rear seat rail slides* *front and rear seat runners*	*Aerosol*	*77 01 422 747*
• ***ELF multi*** *Wheel bolts*		
MECHANICAL SEALANTS		
• ***Perfect-seal "LOWAC"*** *coating fluid for seals.*	*100 g tube*	*77 01 417 404*
• ***Mastic*** *for sealing exhaust pipe unions.*	*1.5 kg tin*	*77 01 421 161*
• ***RHODORSEAL 5661*** *for driveshaft roll pin holes*	*310 ml cartridge*	*77 01 421 042*
• ***AUTO joint blue*** *sealing paste.*	*100 g tube* *45 g tube*	*77 01 396 227* *77 01 397 027*
• ***AUTO joint gold*** *sealing paste for V6 engine timing cover*	*100 g tube*	*77 01 422 751*

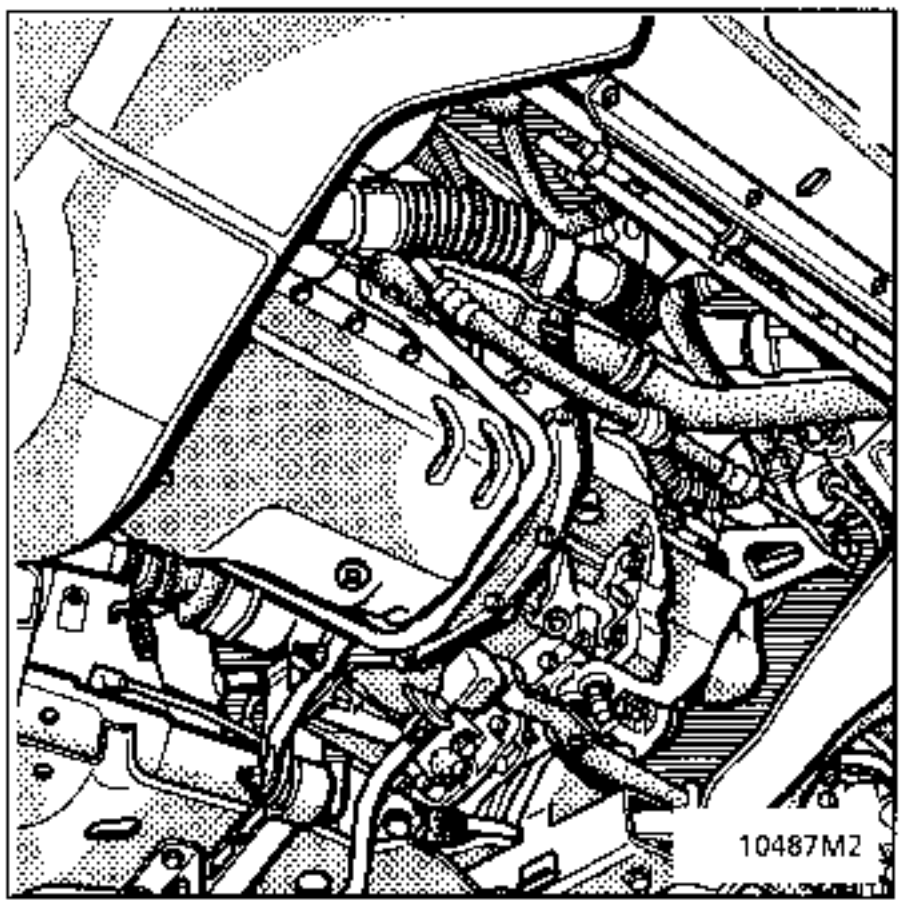
DESCRIPTION	PACKAGING	PART NUMBER
MECHANICAL SEALANTS		
• ***AUTO joint grey*** *sealing paste.*	*100 g tube*	*77 01 422 750*
• ***LOCTITE 518*** *for sealing the gearbox housing.*	*24 ml syringe*	*77 01 421 162*
• ***Leak detector***	*Aerosol*	*77 11 143 071*
ADHESIVES		
• ***"LOCTITE - FRENETANCH"*** *stops bolts slackening and allows them to be released (crankshaft pulley mounting)*	*24 cc bottle*	*77 01 394 070*
• ***"LOCTITE - FRENBLOC"*** *locks bolts (brake calipers)*	*24 cc bottle*	*77 01 394 071*
• ***"LOCTITE SCELBLOC"*** *for bonding bearings. driveshaft splines, stub-axle end*	*24 cc bottle*	*77 01 394 072*
• ***"LOCTITE AUTOFORM"*** *for bonding the flywheel to the crankshaft.*	*50 cc bottle*	*77 01 400 309*
• ***" CONTACT ADHESIVE "*** *Special automotive product*	*800 ml*	*77 01 406 771*
• ***"BLACK ADHESIVE TAPE"*** *Width 19 mm for sealing headlining*		*77 01 417 366*
• ***"DOUBLE SIDED TAPE"*** *Width 10 mm for headlining*	*50 M*	*6025 109 787*
• ***MASTIC BEAD*** *for door vinyl panels*	*2.5M*	*77 01 423 330*
LUBRICANT CLEANING AGENTS		
• ***"NETELEC"*** *unseizes, lubricates.*	*Aerosol - 150 g*	*77 11 171 287*
• ***NC1 cleaner*** *electrical contact cleaner*	*Aerosol*	*77 01 422 379*
• *Injector cleaner*	*355 ml can*	*77 01 423 189*
• *Super concentrated unseizing agent*	*Aerosol - 420 ml*	*77 01 407 689*
• ***"DECAPJOINT " (FRAMET)*** *for cleaning the gasket faces of aluminium cylinder heads*	*Aerosol*	*77 01 405 952*
• ***"BRAKE CLEANER"***	*Aerosol - 400 ml*	*77 01 421 282*

DESCRIPTION	PACKAGING	PART NUMBER
VARNISHES		
• *"CIRCUIT PLUS"* *varnish for repairing heated screens*	*Bottle*	*77 01 421 135*
• *"CONTACT PLUS"* *varnish for repairing rear screen supply terminals*	*Kit*	*77 01 422 752*
BRAKES		
• *Brake fluid*	*Bottle - 1 litre DOT4* *0.5 litre DOT4*	*77 01 422 312* *77 01 421 940*
AIR CONDITIONING		
• ***SANDEN SP - 20*** *Oil for fixed displacement compressor*	*250 ml (R134a)*	*77 11 143 700*

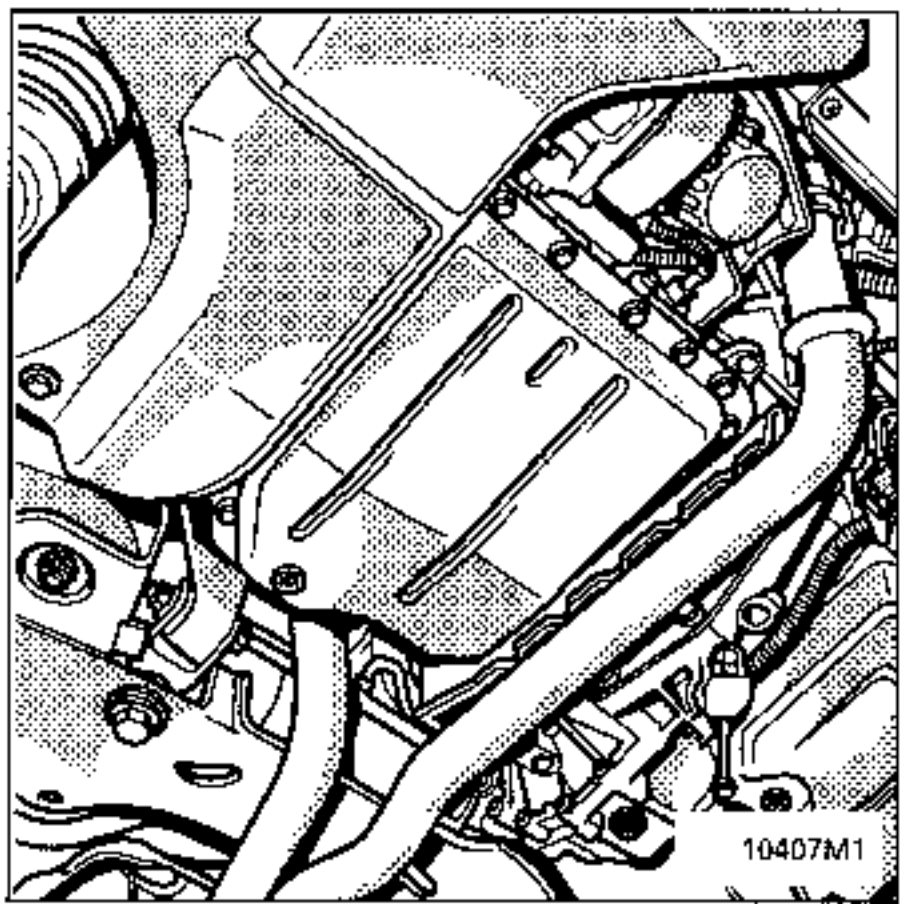
TOOLING REQUIRED
Engine drain plug spanner

DRAINING:

F3R ENGINE



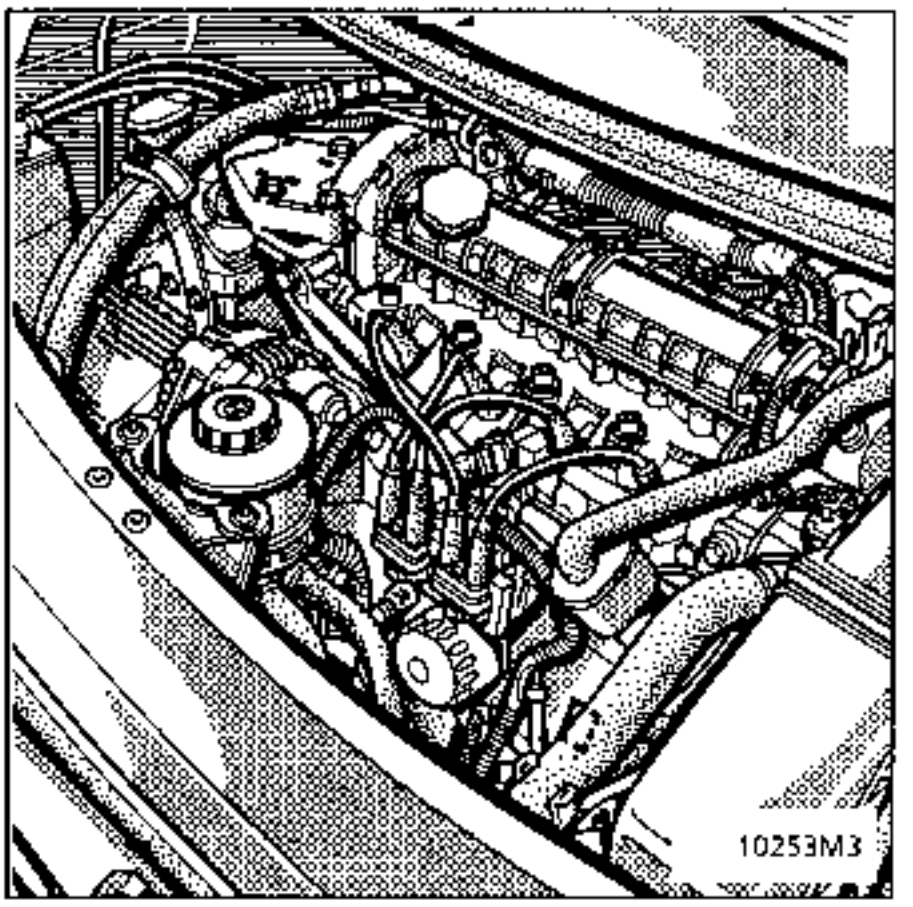
Z7X ENGINE



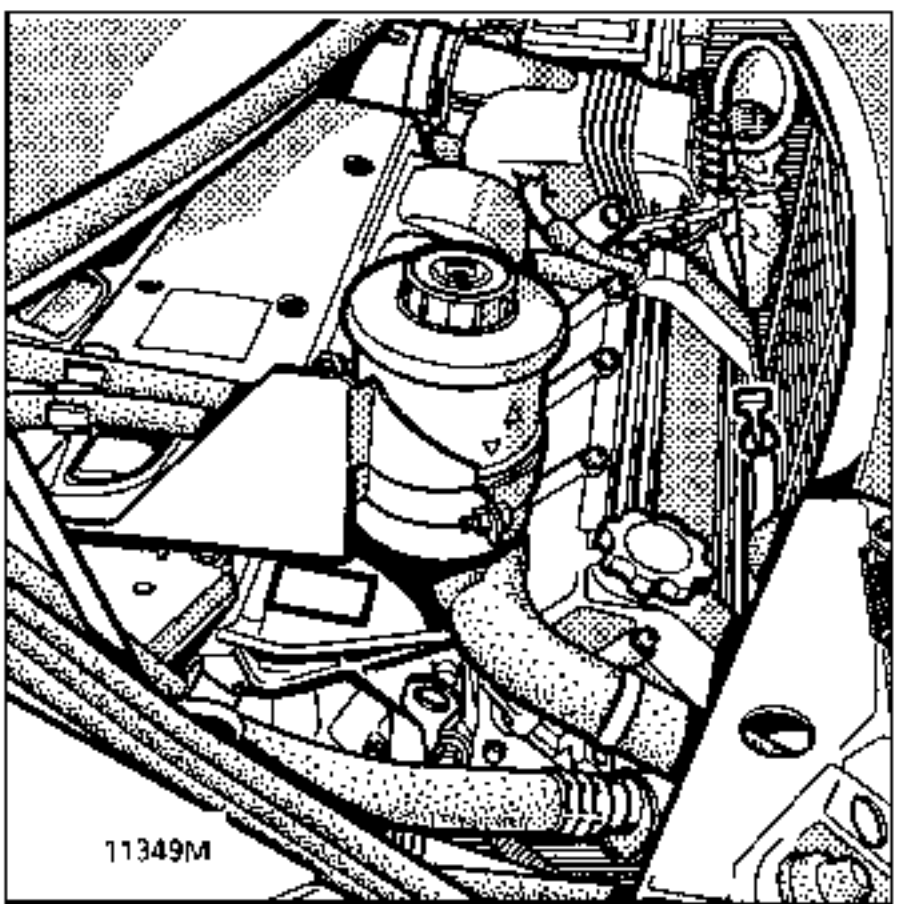
FILLING:

Refer to section 07 for the volume of oil required.

F3R ENGINE



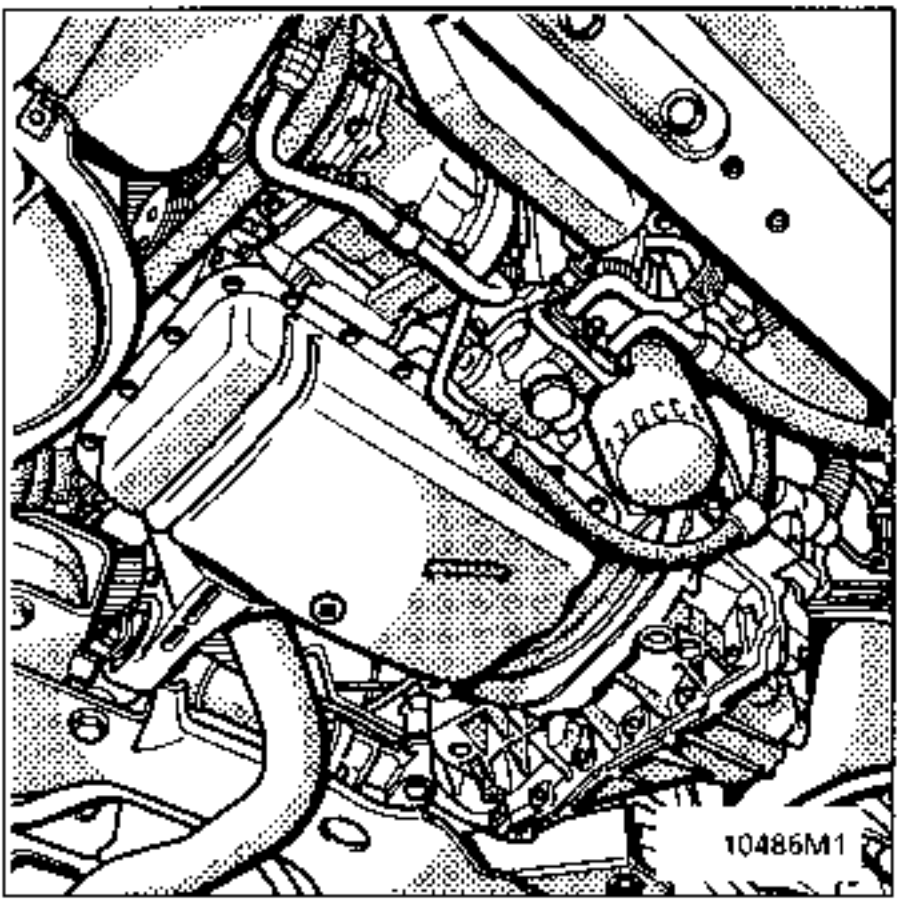
Z7X ENGINE



TOOLING REQUIRED
Engine drain plug spanner Clean funnel

DRAINING :

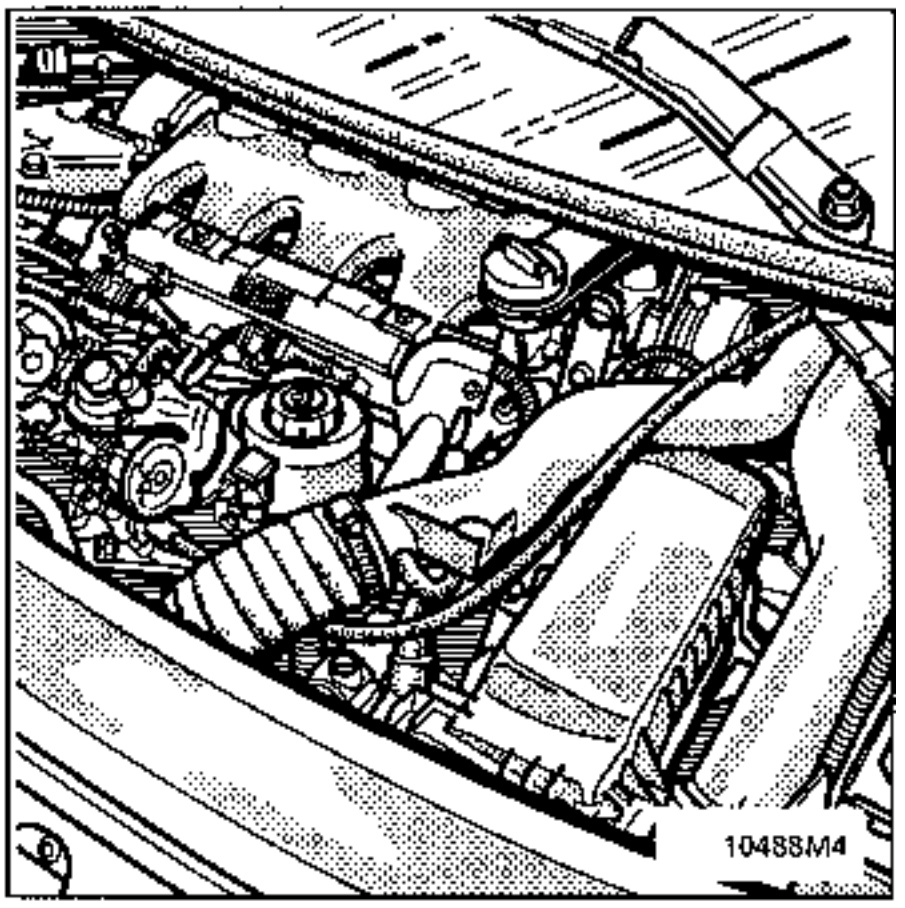
G8T Turbo ENGINE



FILLING:

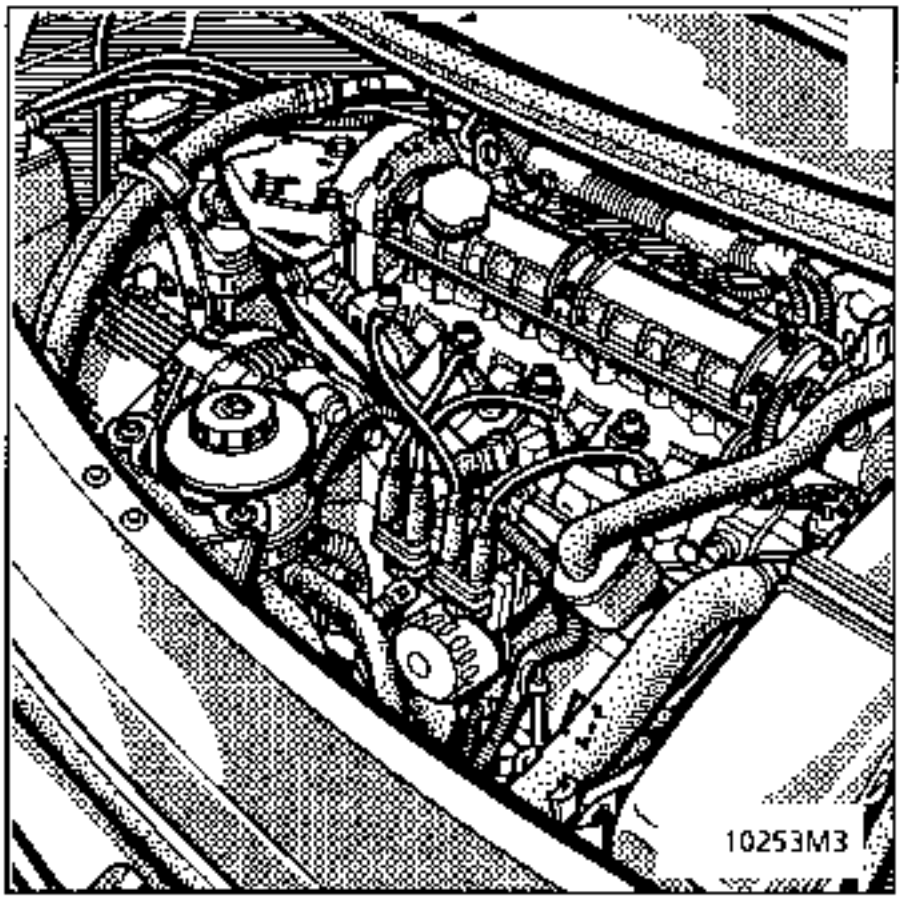
Refer to section 07 for the volume of oil required.

G8T Turbo ENGINE

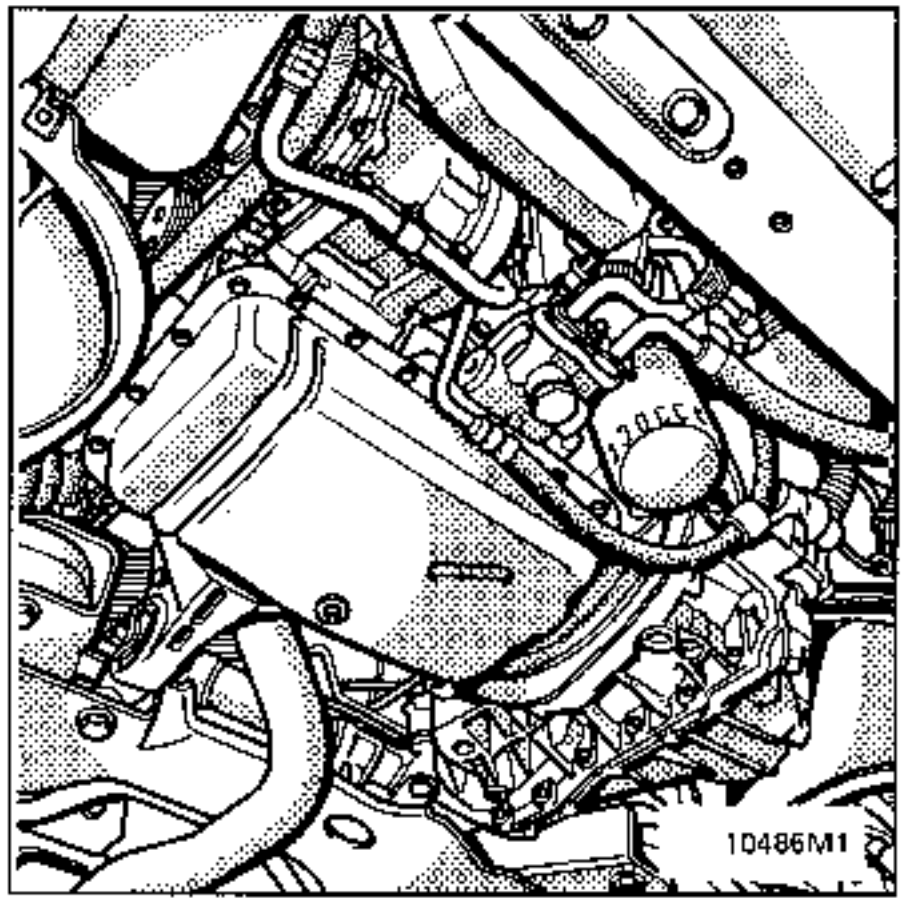


TOOLING REQUIRED	
Filter wrench, diameter 76 mm	Mot. 1329
Filter wrench, diameter 86 mm	Mot. 1280 - 01

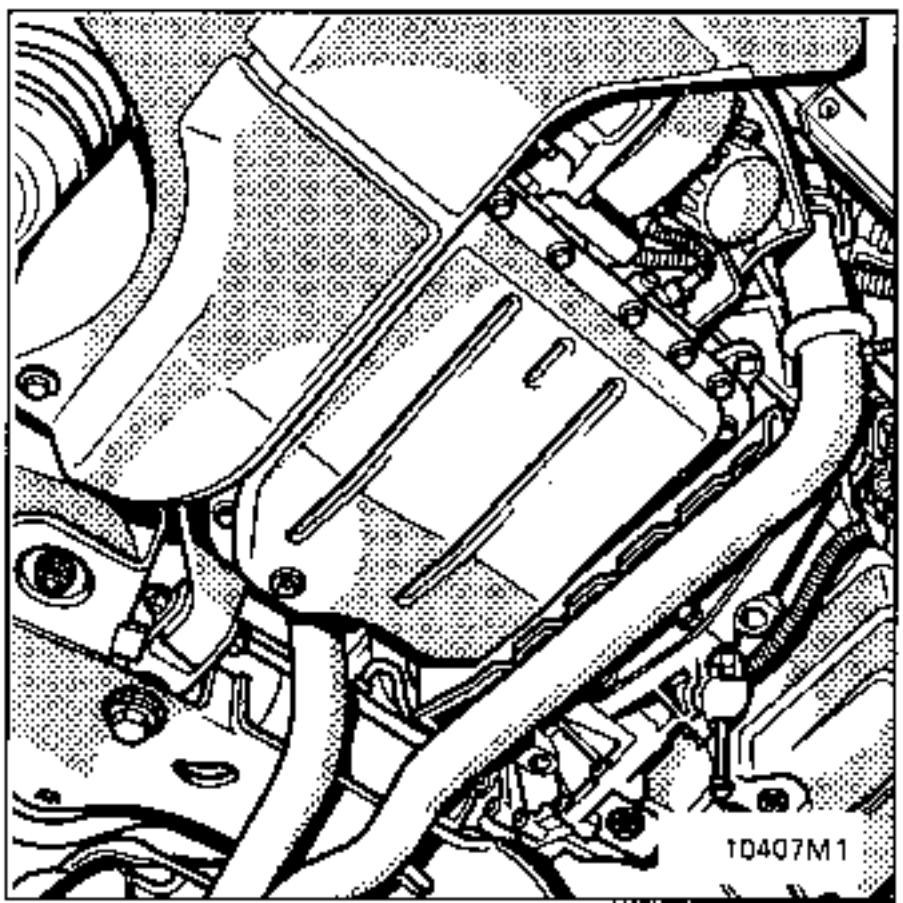
F3R ENGINE



G8T turbo ENGINE



Z7X ENGINE

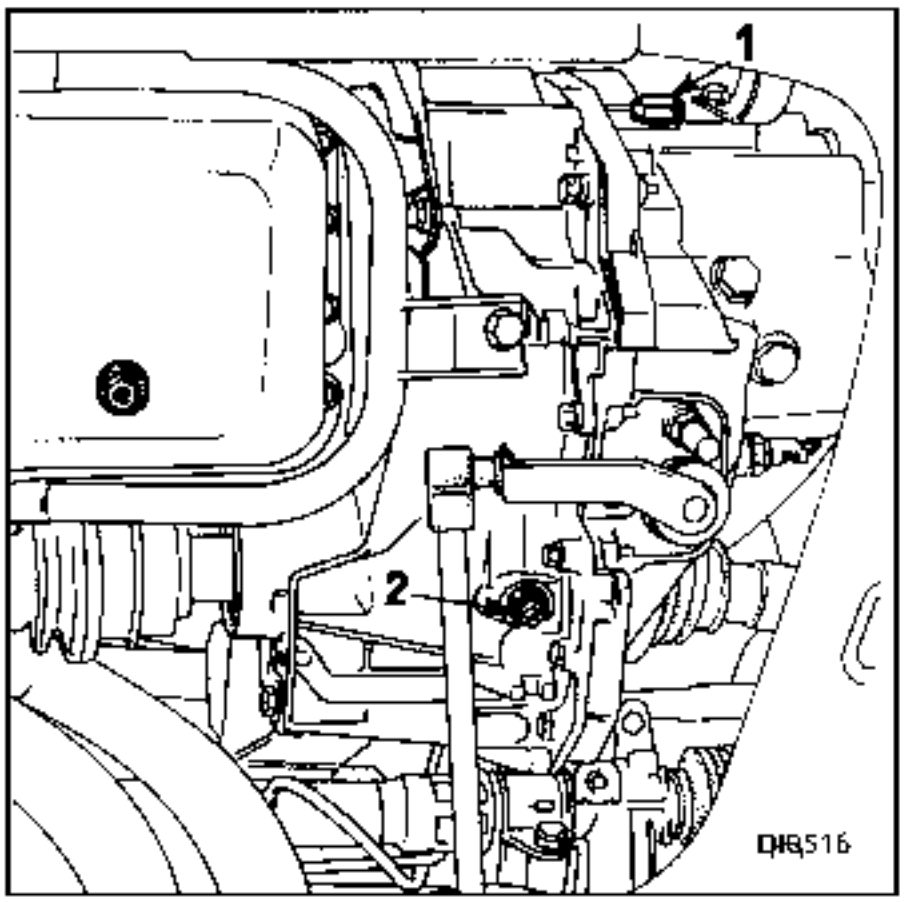


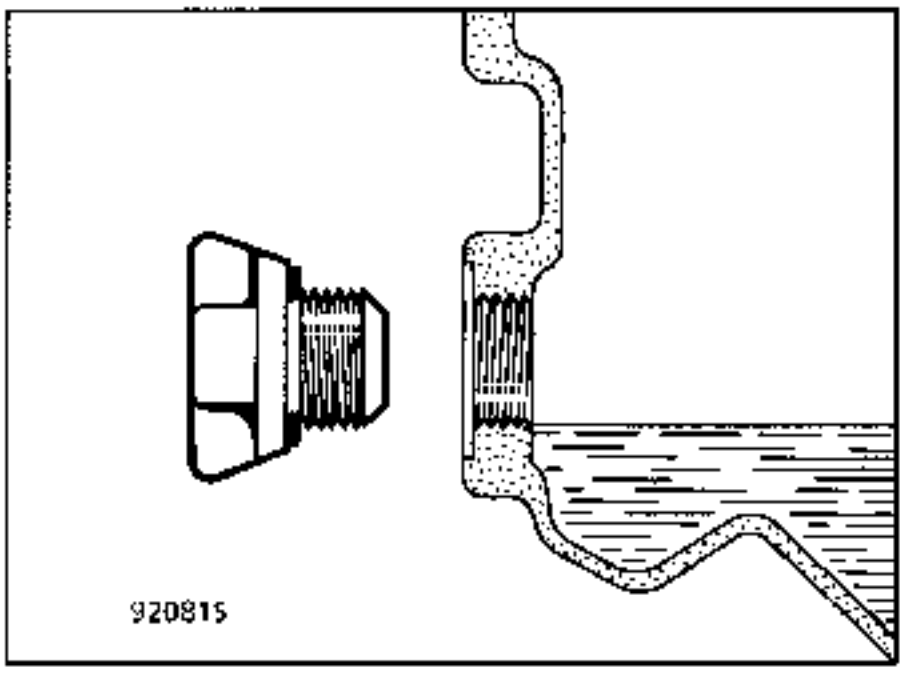
DRAINING : plug (2)

FILLING : plug (1)

Refer to section 07 for the volume of oil required.

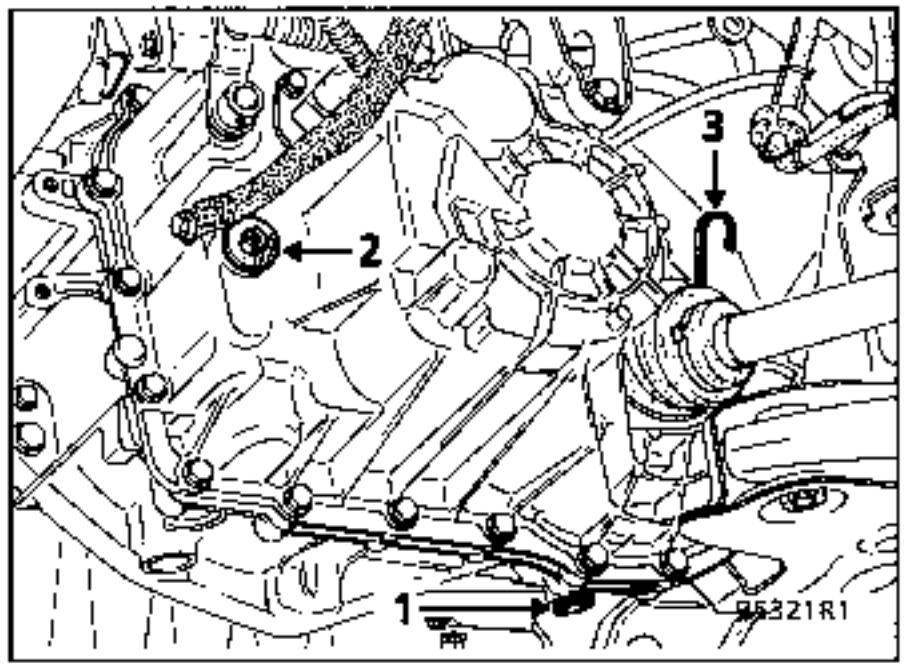
JC5 GEARBOX





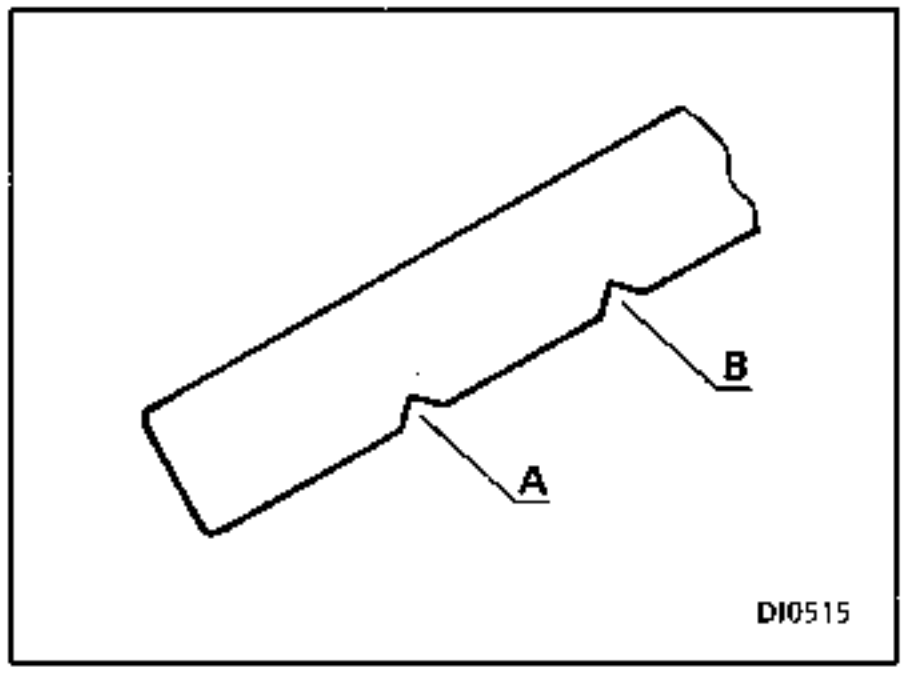
Fill to the level of the aperture.

PK1 GEARBOX



LEVEL:

The level must be checked using the dipstick



SPECIAL TOOLING REQUIRED	
B. Vi. 1213	AT drain spanners
M.S. 1019 -10	XR25 test kit

AD8 TRANSMISSION

DRAINING

FINAL DRIVE

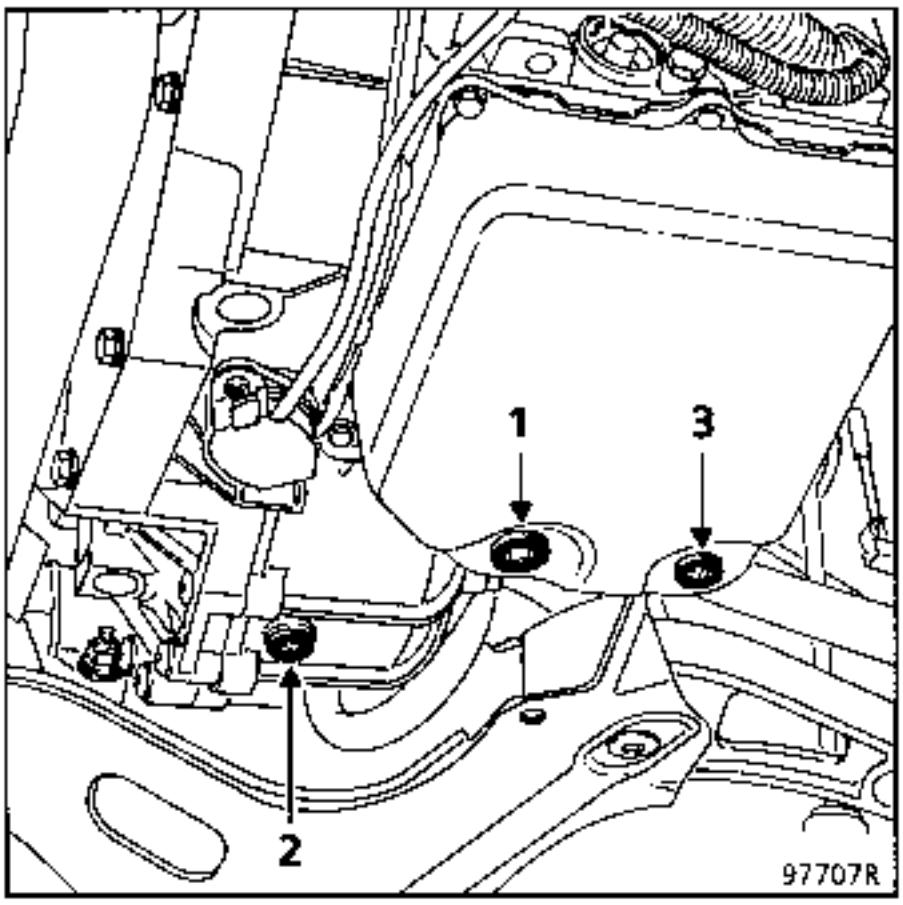
The final drive is not drained - it is filled for life.

If, however, it needs to be drained, remove plug (2).

MECHANISM

The mechanism is drained by removing plug (1) with the triangular pattern (B. Vi. 1213).

Plug (3) is a level checking plug (square pattern).

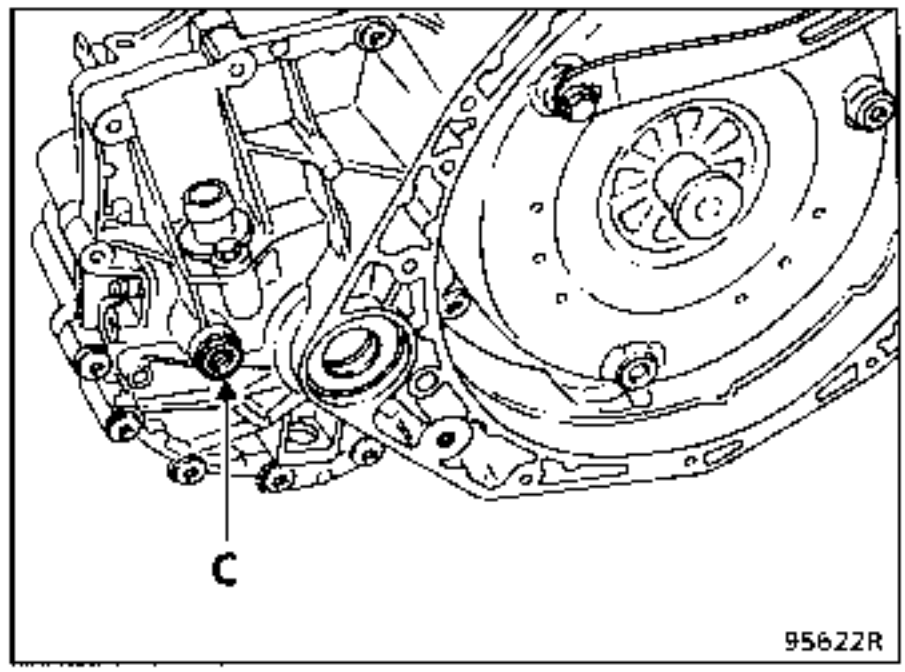


FILLING

Refer to section 07 for the volume of oil required.

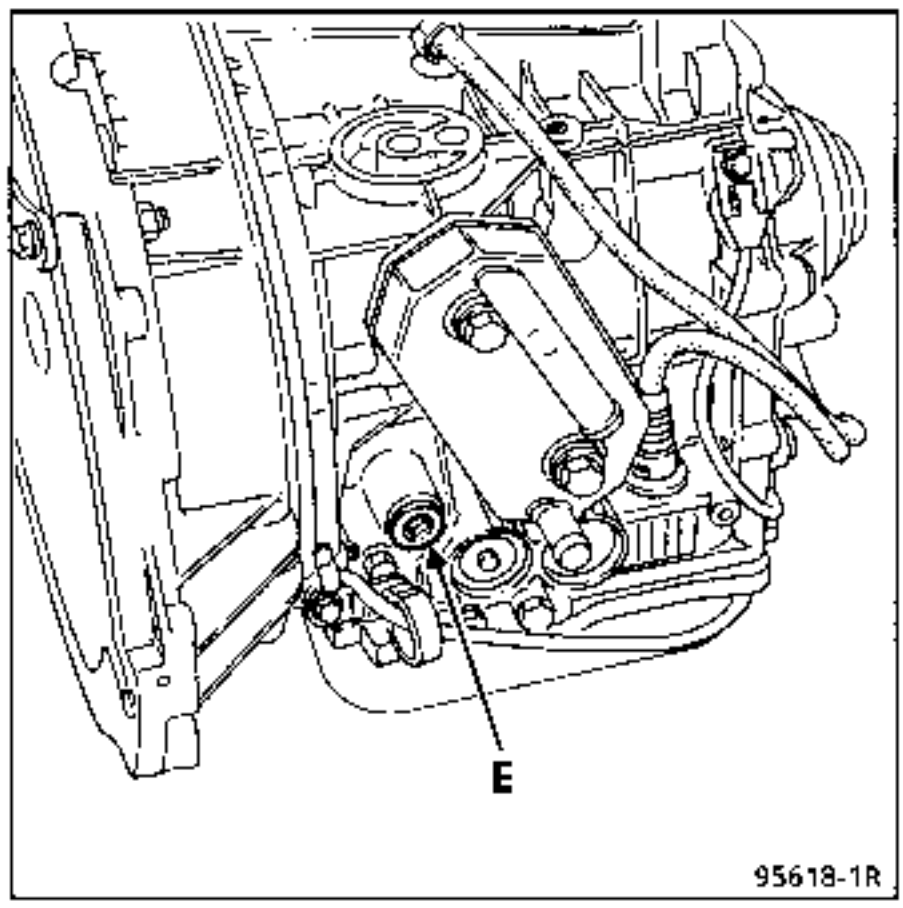
FINAL DRIVE

Filling and checking the level is carried out after removing plug (C) by overflow after injecting oil.



MECHANISM

The mechanism is filled after removing plug (E).



Use a funnel fitted with a 15/100 filter mesh to avoid the introduction of foreign bodies into the recommended oil.

The level MUST be checked using the following method.

Before doing this:

- if the automatic transmission sump has been removed, fill with 4 litres of oil (if just an oil change is being carried out, fill with 3.5 litres of oil),
- if just the level is being checked, add 0.5 litres of recommended oil.

1. Put the vehicle on a four post lift, automatic transmission at ambient temperature.
2. Start the engine, selector lever in Park.
3. Connect the XR 25, ISO selector on S8, enter D14, enter 4TA2, then # 04
4. Lift the vehicle and let the engine run until it reaches a temperature of 60° C.
5. When the required temperature has been reached, engine running, open the level checking plug (3) - see diagram on page 05-5 ; let the excess oil run out for approximately 20 seconds.
   Refit the plug.
6. Measure the volume of oil collected:

   If it is less than 0.5 litres , the level is incorrect, close level checking plug, top up the level then add 0.5 litres of oil before repeating all the measurement operations.

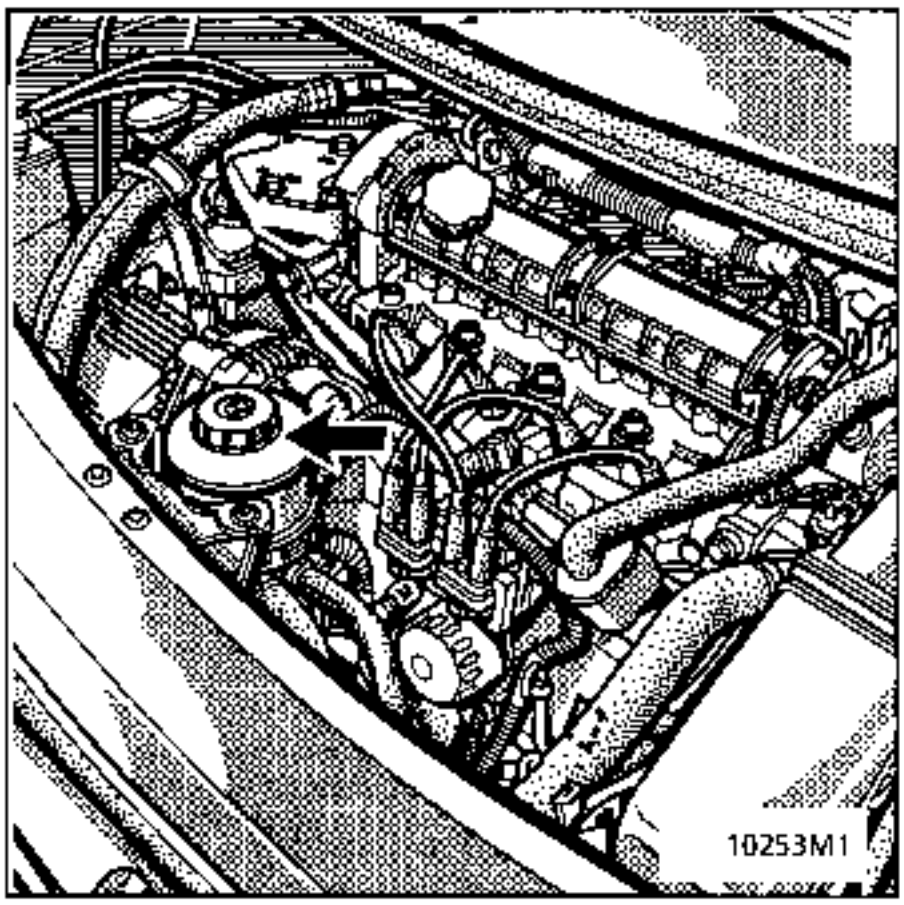
   If the amount of oil collected is greater than or equal to 0.5 litres the level is correct. Close the plug - the operation is complete.

CHECKING THE LEVEL

POWER ASSISTED STEERING PUMP LEVEL

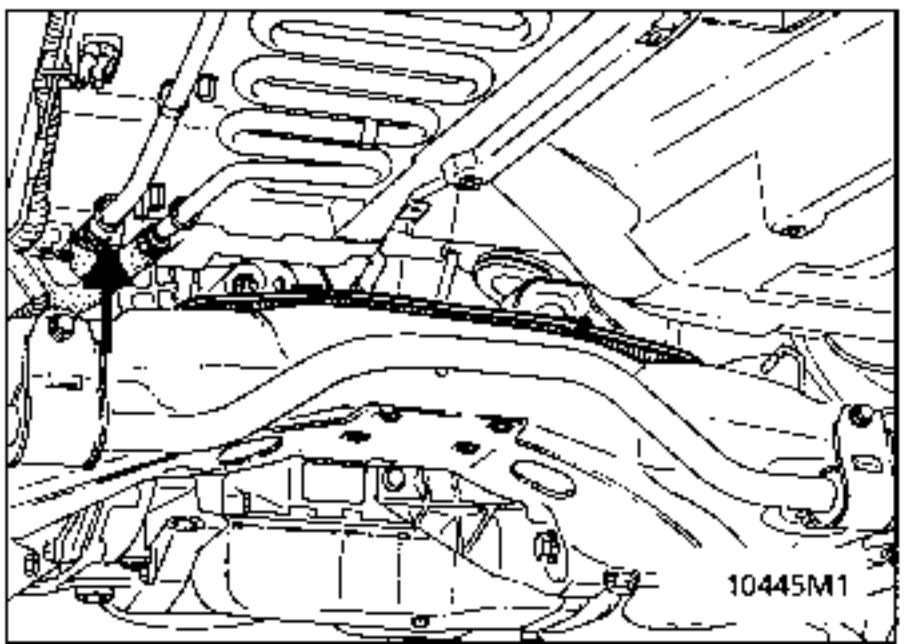
For topping up or filling, use **ELF RENAULTMATIC D2 or MOBIL ATF 220 oil**.

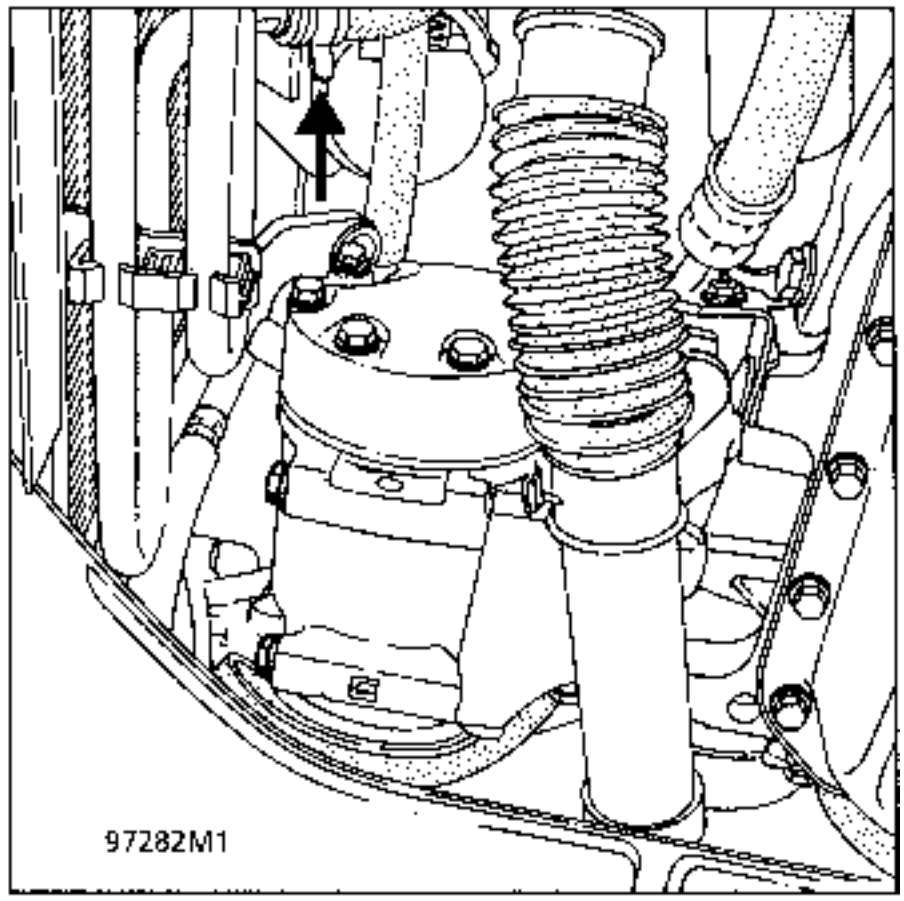
The level, when correct, should be visible between the **MIN** and **MAX** marks on the reservoir (1).



DRAINING

With the engine running, turn the steering wheel from lock to lock 5 times to heat the oil in the circuit.
Turn the engine off.
Place a tray under the power assisted steering cooler.
Drain the system by disconnecting the low pressure hose from the cooler and leaving the fluid to run out for 15 minutes.





Gently move the steering wheel from lock to lock 3 times in succession.

FILLING - BLEEDING

Reconnect the low pressure hose to the cooler.

Fill the reservoir to the maximum mark with new oil.

Gently move the steering wheel from lock to lock 3 times in succession.

Top up the level in the reservoir.

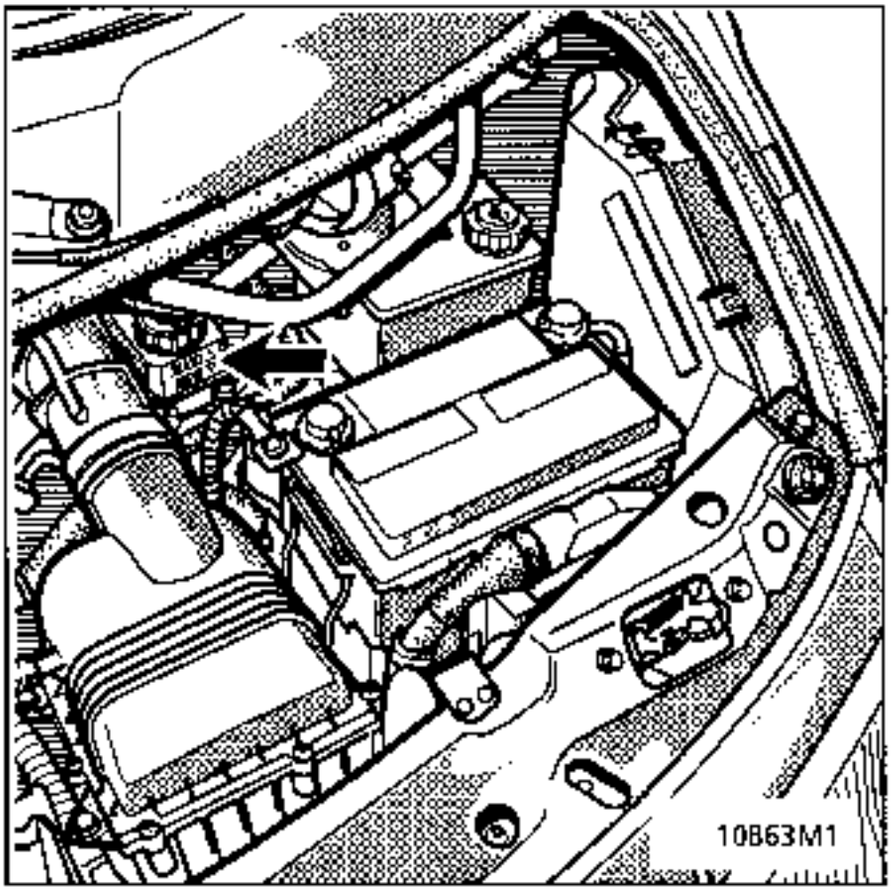
Start the engine, gently move the steering wheel from lock to lock 3 times once more then top up the level.

CHECKING THE LEVEL

BRAKE FLUID LEVEL

For topping up and filling, use a brake fluid which meets **standards SAEJ 1703 DOT4.**

The level, when correct, should be visible between the **MINIMUM** and **MAXIMUM** marks on the reservoir.



REPLACEMENT

Bleed the complete system:

- on a vehicle without ABS , see section 30 .

- on a vehicle with ABS , see section 38 .

REPLACEMENT

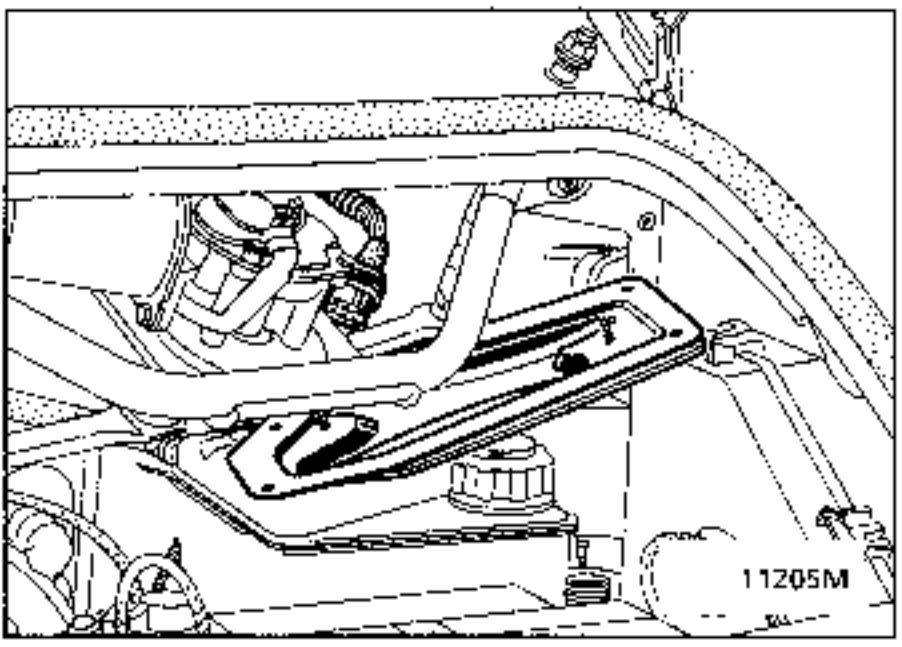
Both filter cartridges must be replaced in the same operation.

Disconnect the battery and the wiper motor connector.

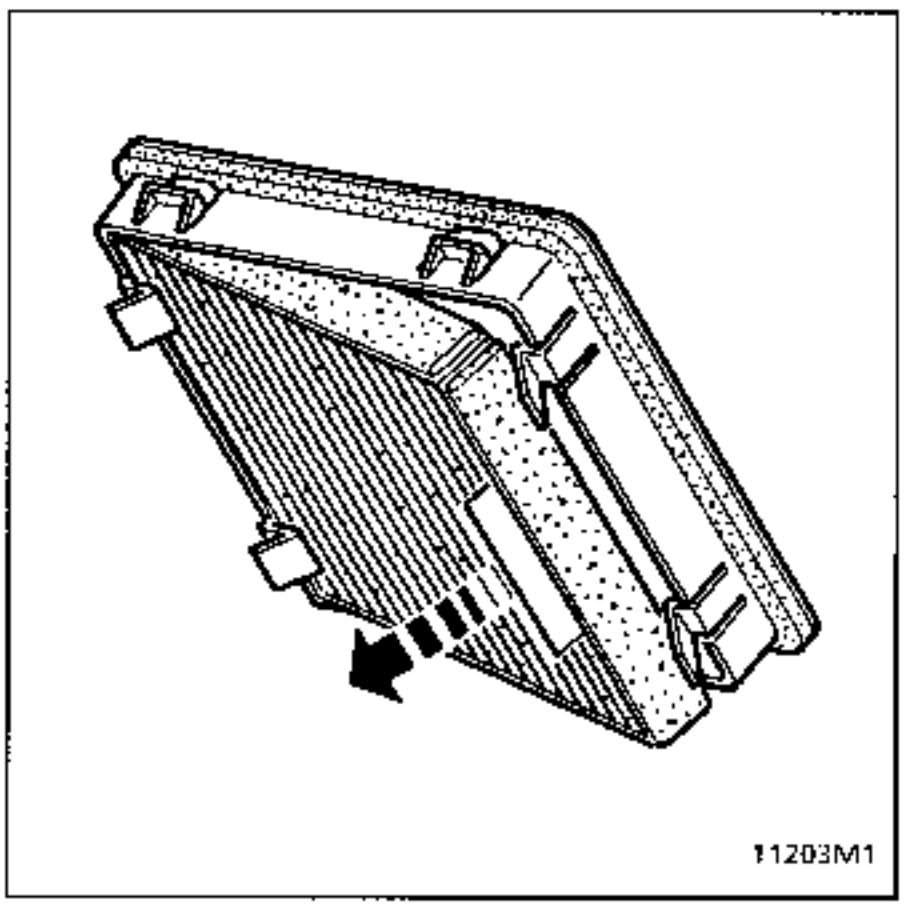
Position the wipers vertically against the windscreen by moving the drive bars.

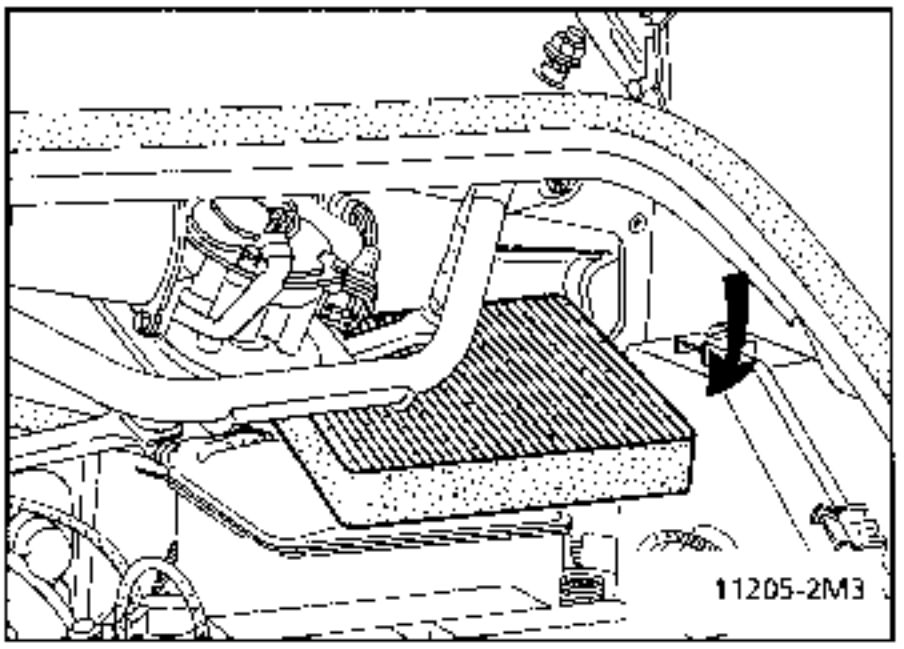
Remove the soundproofing.

Remove the cover panels from the shock absorber turret locations.

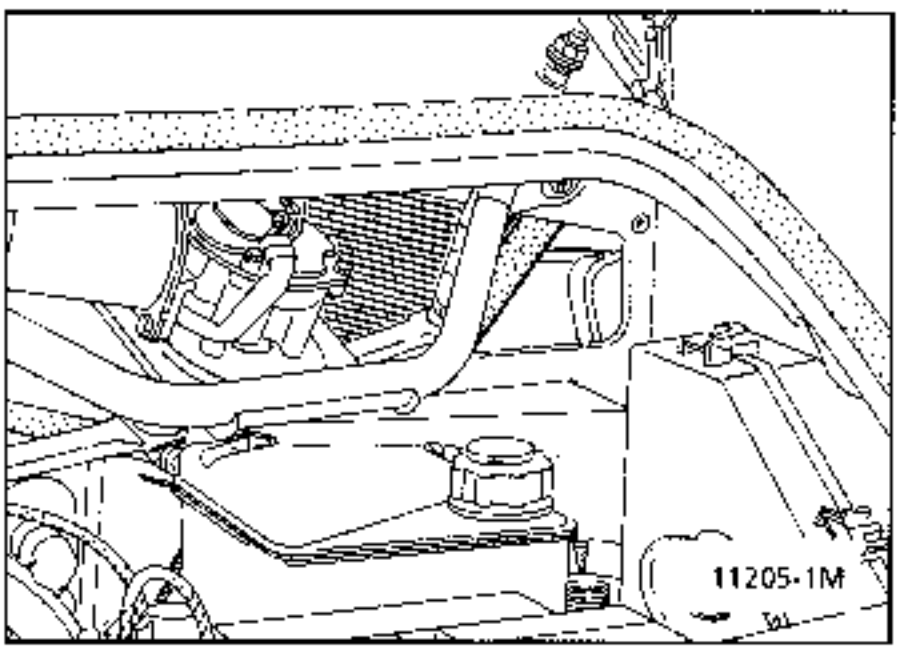


Remove the old cartridge, holding it by the tab and bringing it out in the same direction as the cover panel.





Fit the new filter cartridge, with the tab at the bottom on the outside, and fit it into the diagonal location.



Refit the cover plates and soundproofing.

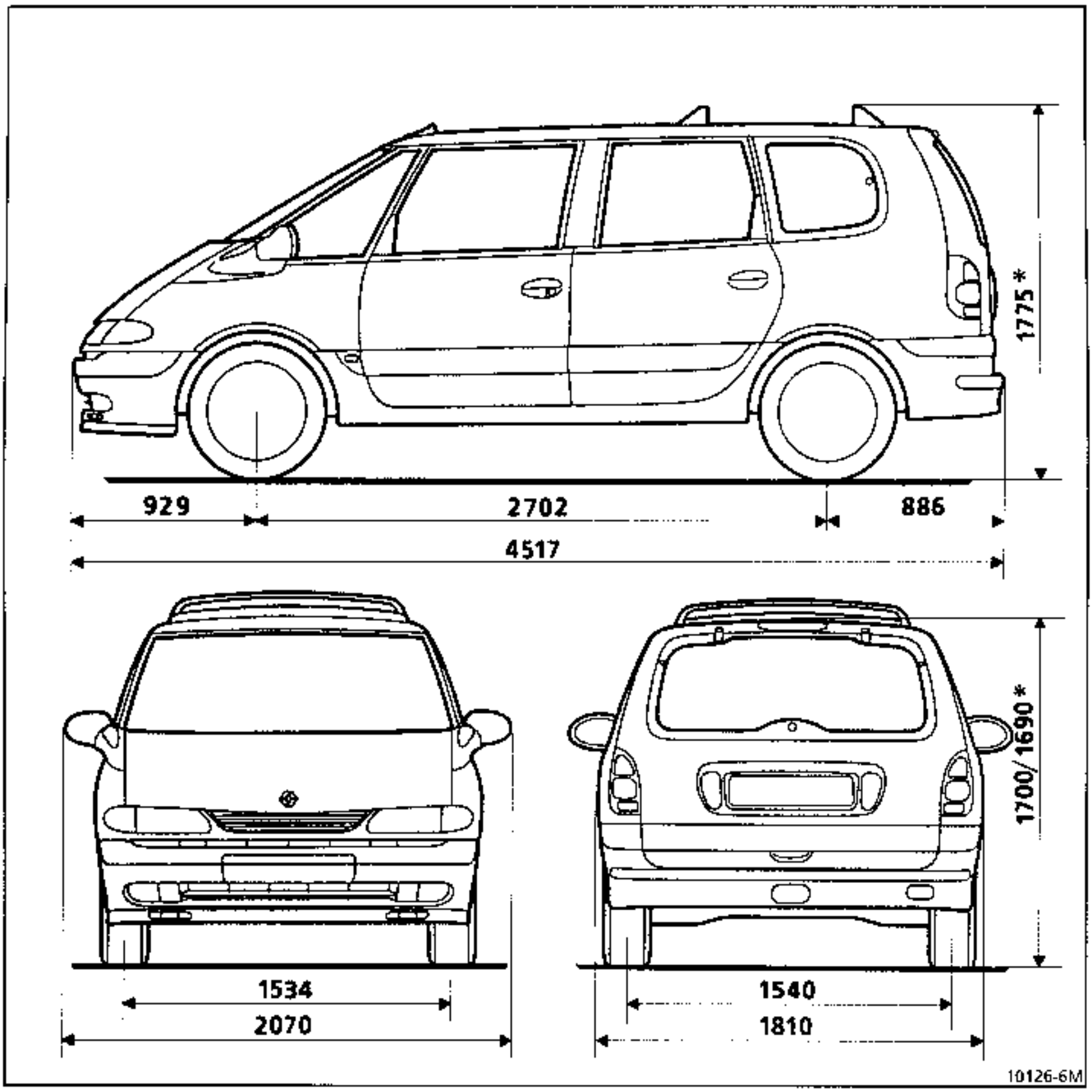
Reconnect the wiper motor connector.

Reconnect the battery.

The wipers will return to the park position when the ignition is turned on.

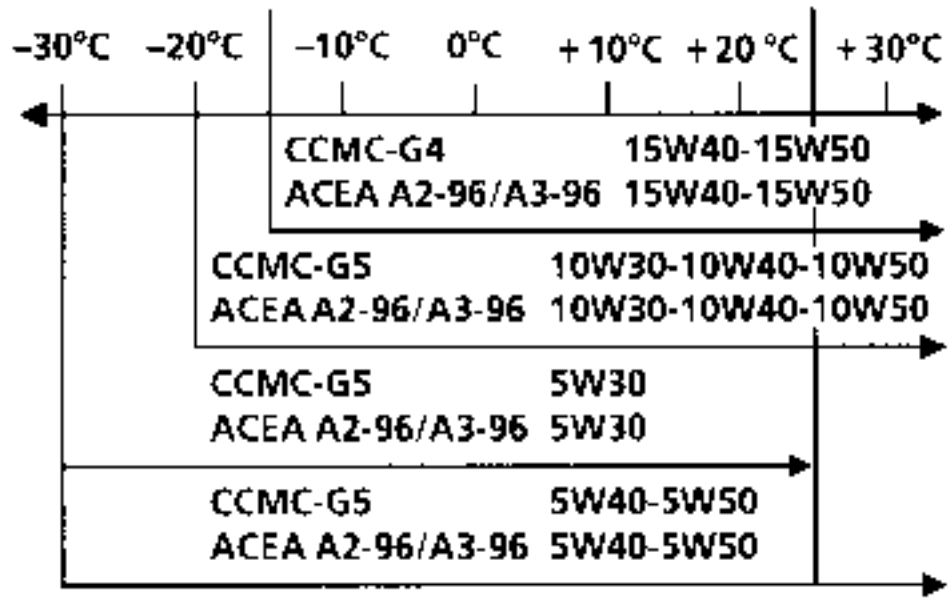
Reset the clock.

	TOOL	DESCRIPTION
Mot.	1265 / 1265-01	Fork for disconnecting fuel unions
Mot.	1311 -01	T piece for measuring fuel pressure
Mot.	1368 . 1369	Wrench for slackening and arming
Mot.	1370 . 1376	accessories belt tensioner - G8T engine
Mot.	1390	Support for removal - refitting of engine and transmission assembly
Mot.	1394	Wrench for pressostat 27
Mot.	1395	Unlocking tool for quick release unions on heater matrix
Mot.	1397	Wrench for slackening fuel sender unit nut
Elé.	1391	Fault finding bornier for heating / ventilation - air conditioning controls
Dir.	1282 .01	Pipe wrench - length 17 for high pressure PAS union
Dir.	1282 .02	Pipe wrench - length 19 for low pressure PAS union
Dir.	1303 -01	Tool for setting steering box
Dir.	1306 -02	Bar retaining tool
Dir.	1408	Plastic pliers for adjusting steering column universal joint
Tav.	1261 / 1261-01	Extractor for lower wishbone ball joint
Tav.	1274	Tool for replacing rubber bushes on lower wishbone
Sus.	1193	Pneumatic cushion centring tools
Rou.	1392	Mandrel for extracting front hub bearing
Fre.	1396	Socket for removing brake servo
Car.	1218	Dashboard protector
Car.	1219 -01	Jigs for fitting body panels
Car.	1393	"Téléphérique" for removing dashboard
Car.	1407	Front end panel jig
Car.	1409	Repair bench traction vice jaws

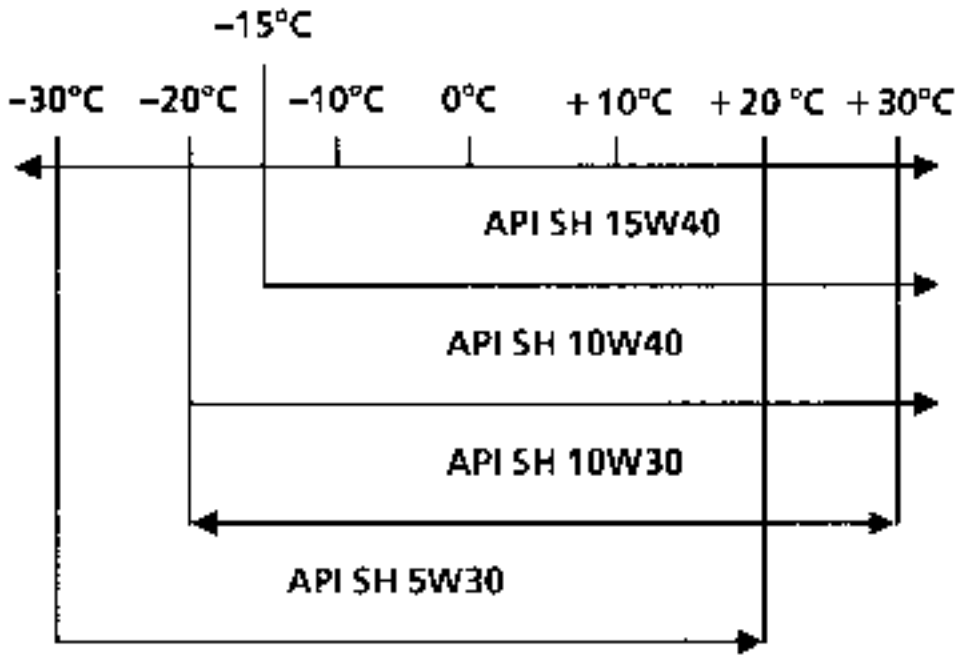


* Unladen
** Depending on version
Dimensions in millimetres

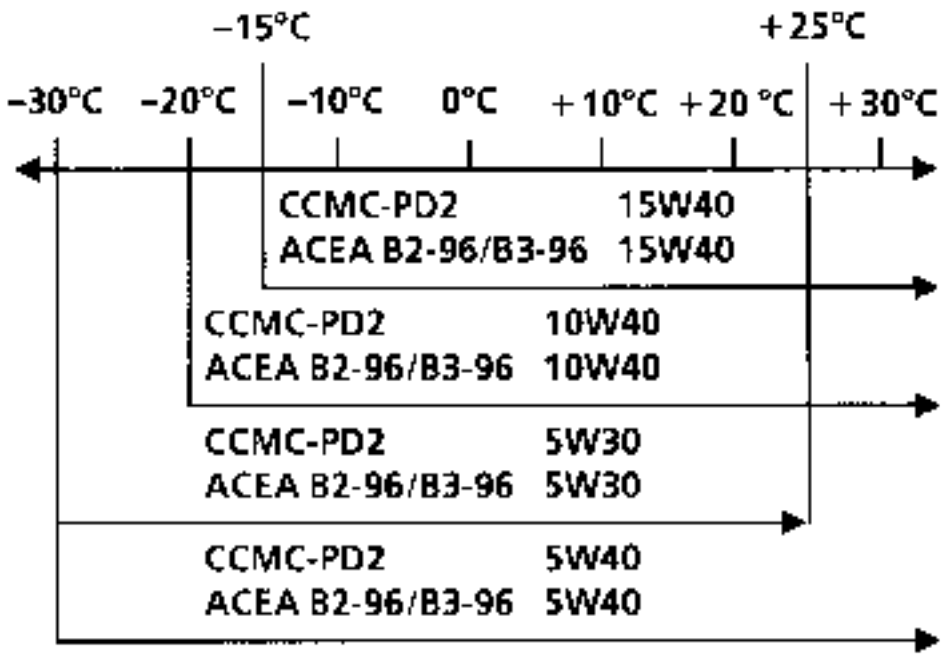
Components	Capacity in litres	Grade
Petrol engine (oil)	When draining	E.E.C. country
F3R	5.5	
Z7X	6.5 with oil filter	

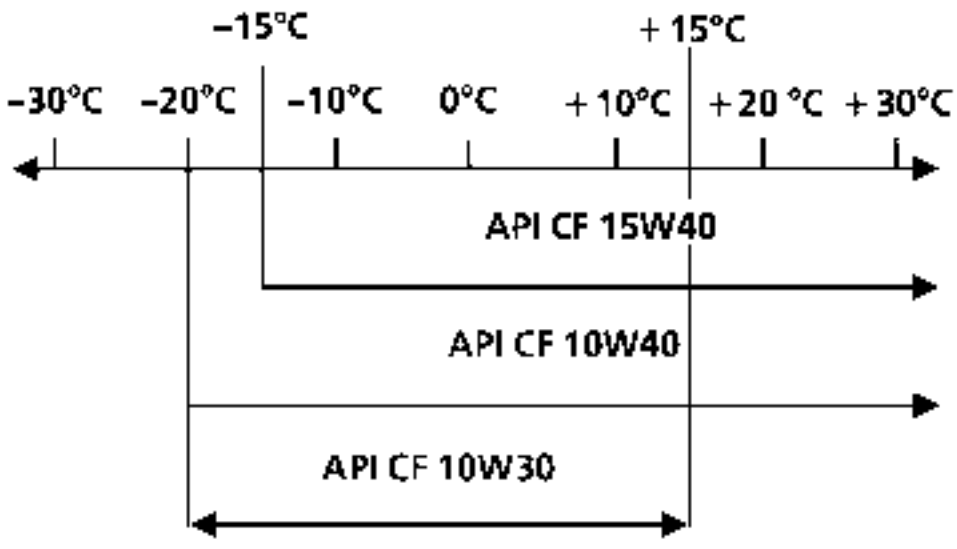


Other countries



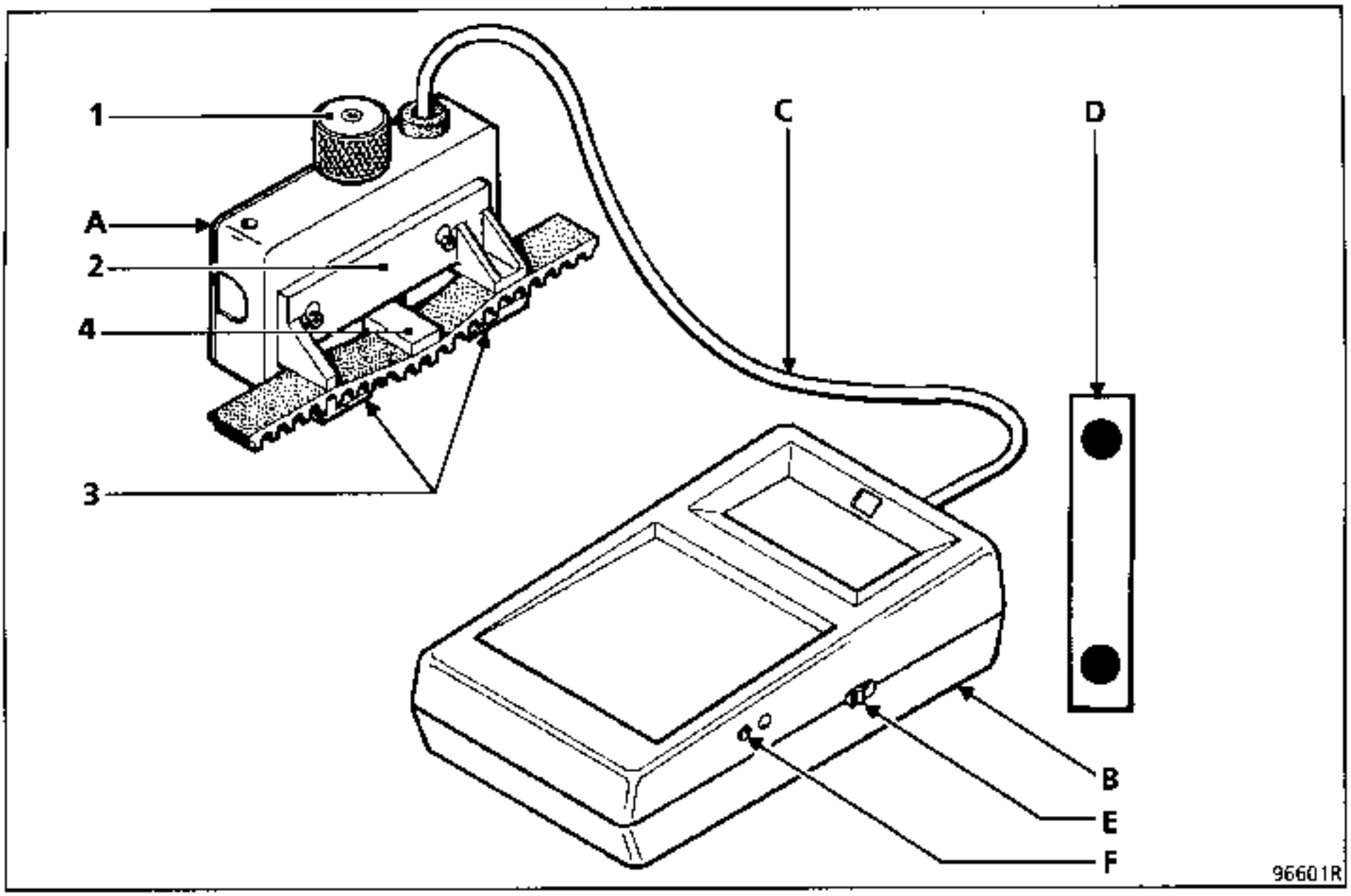
Components	Capacity in litres	Grade
Diesel engine (oil)	When draining	E.E.C. country
G8T Turbo	7.2 with oil filter (0.7 litres for the oil filter)	Other countries





Components	Capacity	Grade	Notes
Manual gearbox JC5 PK1	 3.1 litres 2.3 l. min. 2.8 l. max.	All countries: TRANSELF TRX 75 W 80 W (API GL5 or MIL-L 2105 C or D standards)	
Automatic transmission AD4 AD8	After draining 4.6 litres 4.0 litres	ELF RENAULT MATIC D2 (D20104) or: MOBIL ATF 220 (D20104 or D21412) TEXAMATIC 4011	
Brake circuit	Normal : 0.7 ABS : 1	SAE J 1703 and DOT 4	Brake fluids must be approved by the Technical Department
Fuel tank	approx. 80 litres	Unleaded petrol/diesel	
Power assisted steering	Separate reservoir 1.1 litres	ELF RENAULT MATIC D2 or MOBIL ATF 220	
Cooling circuit F3R G8T turbo Z7X	 approx. 7 litres 9 litres 10 litres	GLACÉOL RX (type D) Only add coolant of the same type	
Air conditioning circuit F3R Z7X G8T Turbo	in grammes 880 ± 30 880 ± 30 800 ± 30	Refrigerant fluid R134a	

SPECIAL TOOLING REQUIRED	
Mot. 1273	Tool for checking belt tension



A Sensor
B Display
C Connecting cable
D Calibration checking plate

Principle

The sensor, through the presser button (1), the presser (2) and the outer lugs (3), applies a constant force to the belt.

The reaction from the belt is measured using a test piece (4) fitted with strain gauges.

Any movement on the gauges creates a variation in their electrical resistance. This variation, once it has been converted by the device, is displayed on the display in SEEM units (US).

Calibrating the device

The device is set in the factory, however it must be recalibrated every six months.

Procedure

Resetting zero:

- switch the device on (button E) with the presser button (1) face down,
- if 0 is displayed, do not touch anything,
- if nothing is displayed, check the condition of the 9 volt battery in the device ,
- if a value other than 0 is displayed, adjust screw (F) until 0 is obtained.

Checking the calibration

Switch the device on (button E).

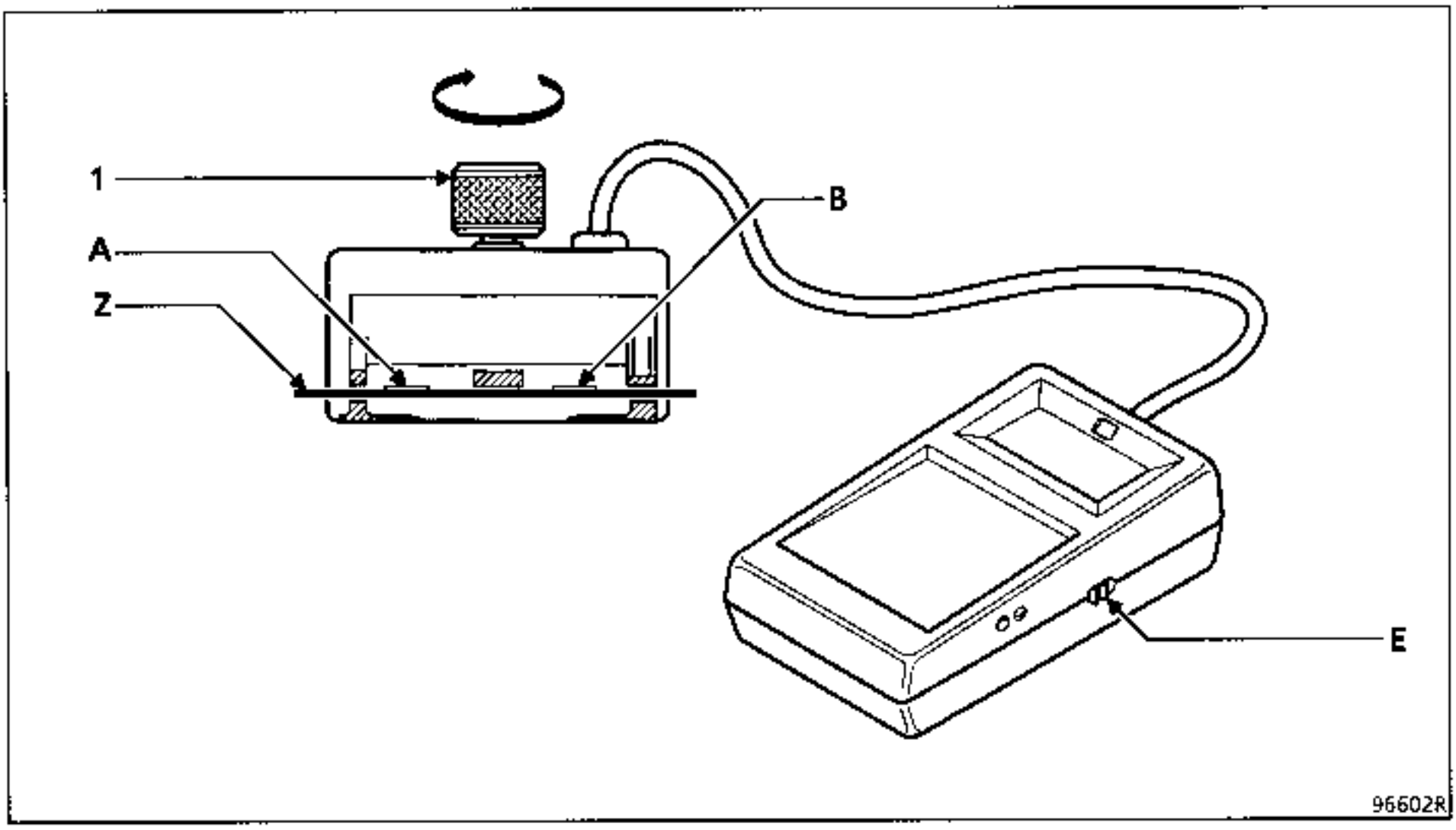
Position the calibration spring plate (Z) on the sensor as shown on the diagram (control value engraved towards the top, (A) minimum value, (B) maximum value).

Tighten the presser button (1) until it goes "CLICK - CLICK - CLICK".

Check that a value X between the values (A and B) ($A \leq X \leq B$) is displayed.

Note: it may be necessary to perform several preliminary tests in order to obtain the correct value.
If the correct value if still not obtained after several attempts, contact SEEM.

NOTE : each device has its own calibration spring plate and they are not interchangeable.



1 Knurled button (presser)
A, B } Calibration plate control value
Z Calibration plate

SEEM

For further information contact your After Sales Head Office.

GENERAL INSTRUCTIONS:

- Never refit a belt which has been removed, replace it.
- Never retighten a belt for which the tension reading is between the fitting value and the minimum operating value.
- When checking, if the tension is below the minimum operating value, change the belt.

MULTITOOTH BELT

Tensioning process

Engine cold (ambient temperature).

Fit the new belt.

Position the sensor of **Mot. 1273** on the point marked (→).

Turn the wheel of the sensor until it disengages (three "CLICKS").

Tension the belt until the recommended fitting value is displayed on **Mot. 1273** .

Lock the tensioner, check it, adjust the value.

Turn the crankshaft over three times.

Check that the tension value is within the fitting tension tolerance, otherwise readjust it.

NOTE :

Never refit a belt which has been removed.

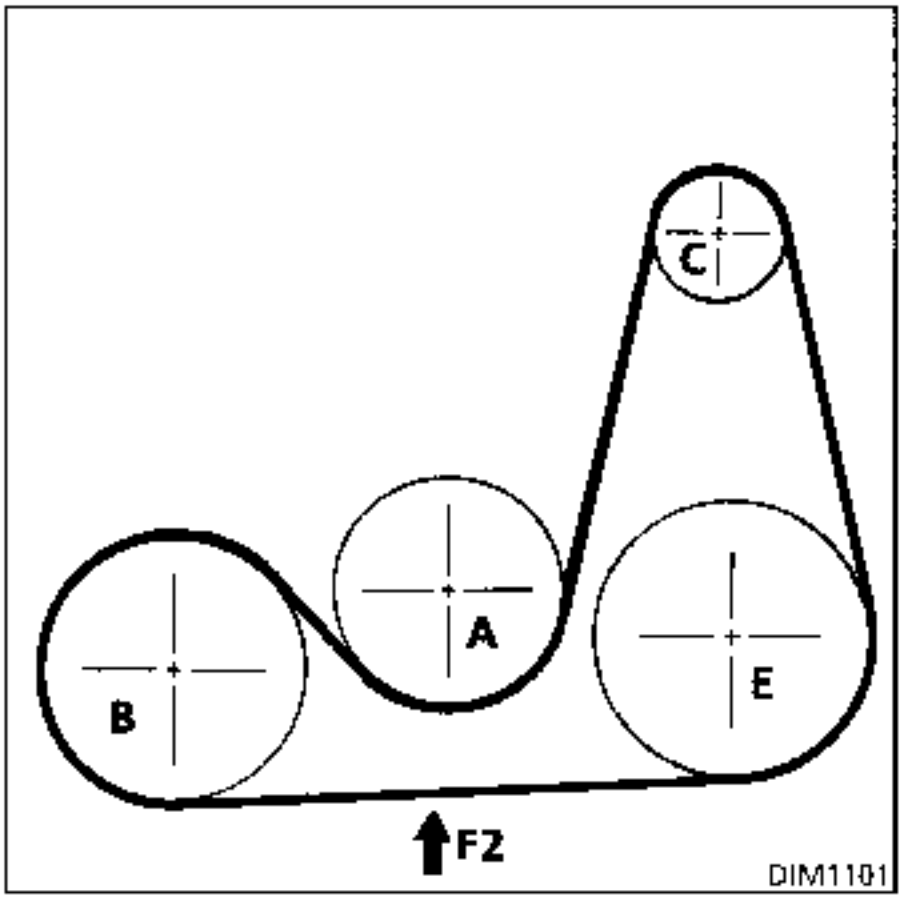
Replace the belt, if the tension is **below the minimum operating tension.**

Small cuts or cracks do not mean that the belt has to be replaced.

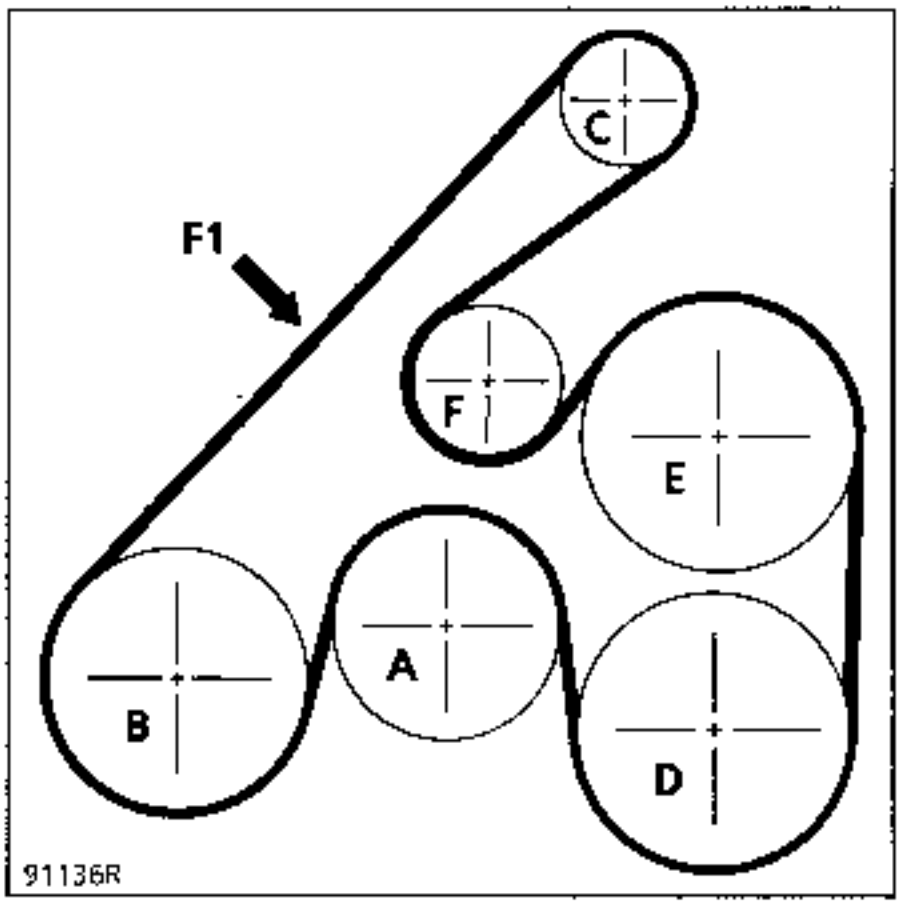
Tension (US – SEEM unit)	Power assisted steering belt(F2) multitooth (5 vees)	Air conditioning belt (F1) multitooth (5 vees)
Fitting, new belt	107 ± 3 US	109 ± 3 US
Minimum operating, old belt	62 US	62 US

A Water pump
B Crankshaft
C Alternator
D Air conditioning compressor
E Power assisted steering pump
F Eccentric tensioner
→ Point for checking belt tension

VEHICLE without AIR CONDITIONING



VEHICLE with AIR CONDITIONING



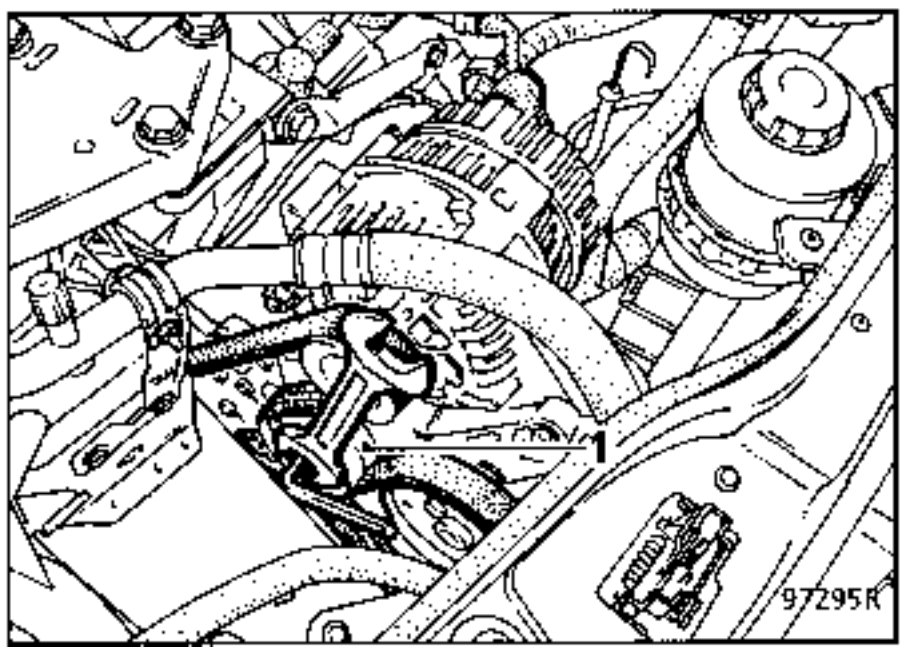
TENSIONER ACTION METHOD
To tension a new belt

An eccentric tensioner is fitted to both versions.

Remove the wheel and the right hand wheel arch.

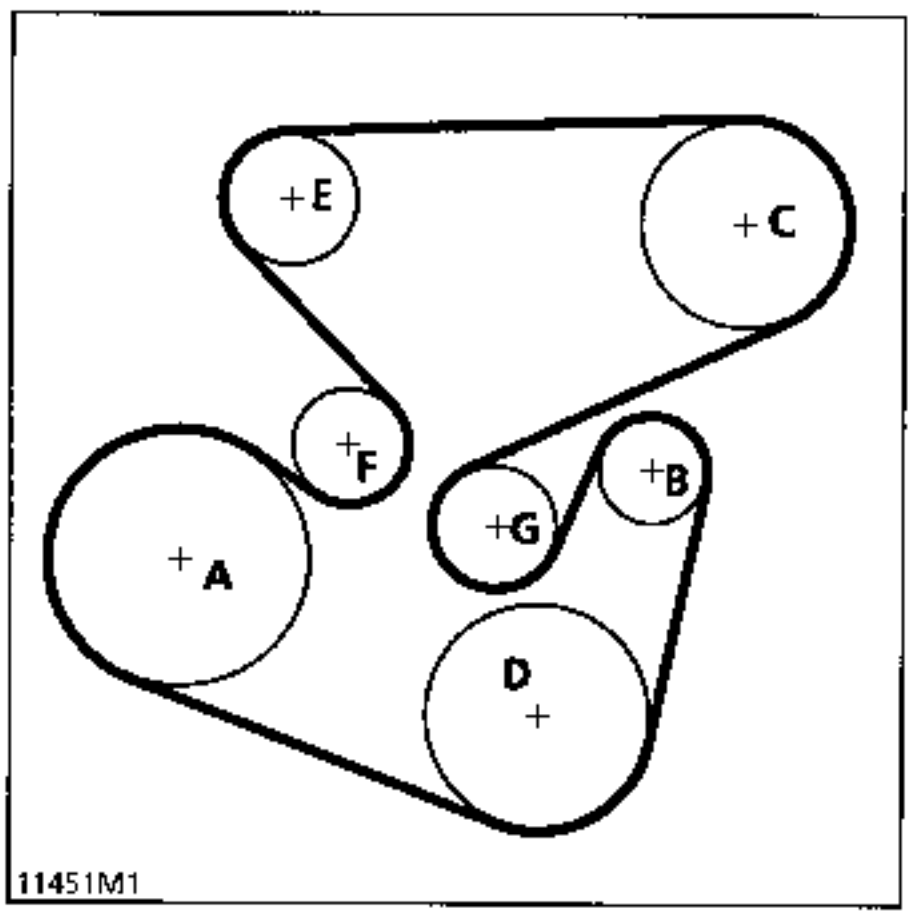
Fit the sensor of tool **Mot. 1273** on the belt at **F1** or **F2** via the wheel arch.

Adjust the tensioner using a 7 mm allen key for the centre locking bolt and a 22 mm open wrench for the tensioner roller (1).

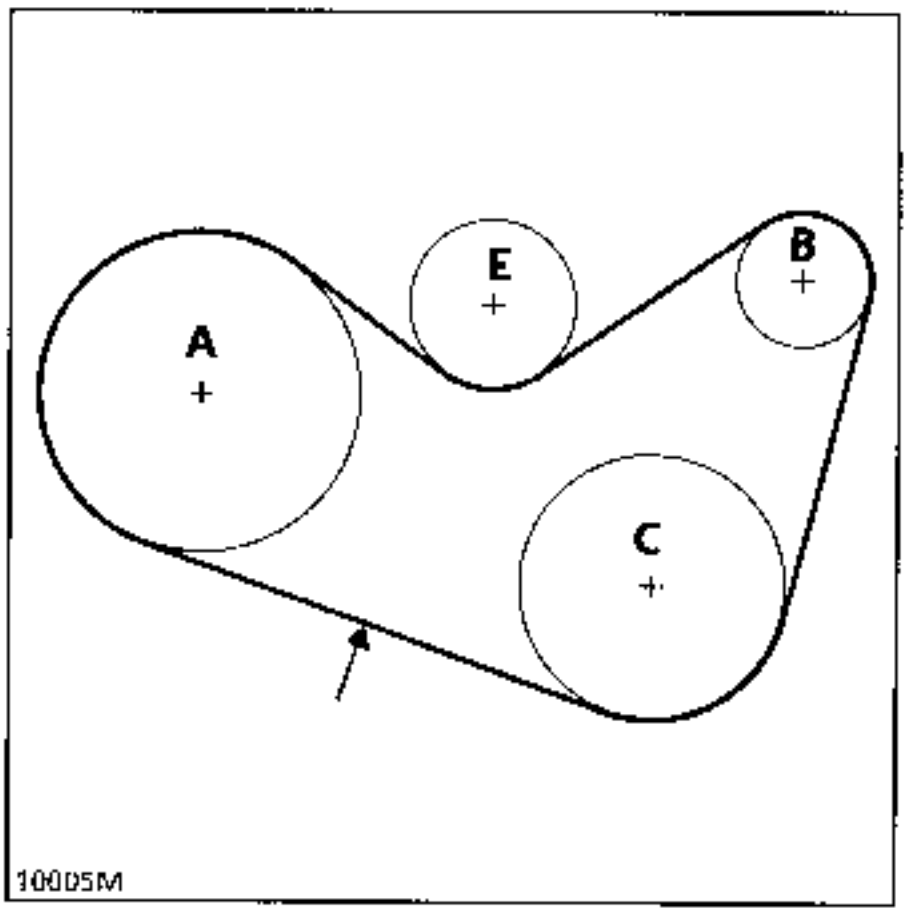


Tension (US – SEEM unit)	Alternator belt with PAS or AC (F) multitooth (5 vees)
Fitting, new belt	116 ± 8 US
Minimum operating, old belt	63 US

VEHICLE with AIR CONDITIONING



VEHICLE without AIR CONDITIONING



A Crankshaft

B Alternator

C Power assisted steering pump (for a vehicle with air conditioning)

D Air conditioning compressor or power assisted steering pump

E Eccentric tensioner roller

F Automatic tensioner

G Roller

» Point for checking belt tension

TENSIONER ACTION METHOD
To tension a new belt

Remove the wheel and the right hand wheel arch.

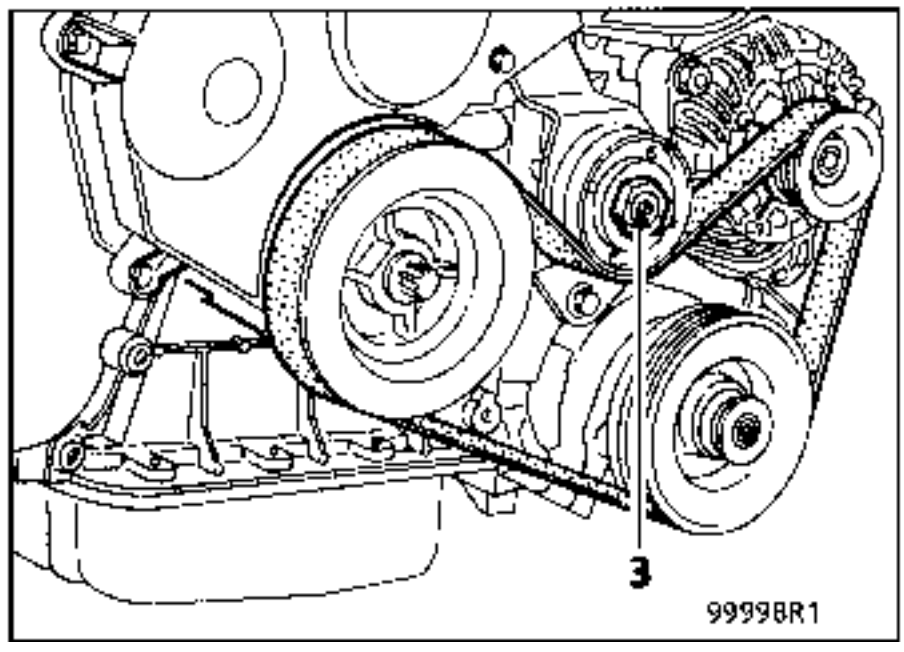
Place the sensor of tool **Mot. 1273** on the part of the belt marked F3 or F4 via the wheel arch.

Two cases:

Version with air conditioning
has an automatic tensioner with constant action - no retensioning required.

Version without air conditioning
has an eccentric tensioner.

Adjust the tensioner using a 7 mm allen key for the centre locking bolt (3) and a 22 mm open wrench for the tensioner roller.

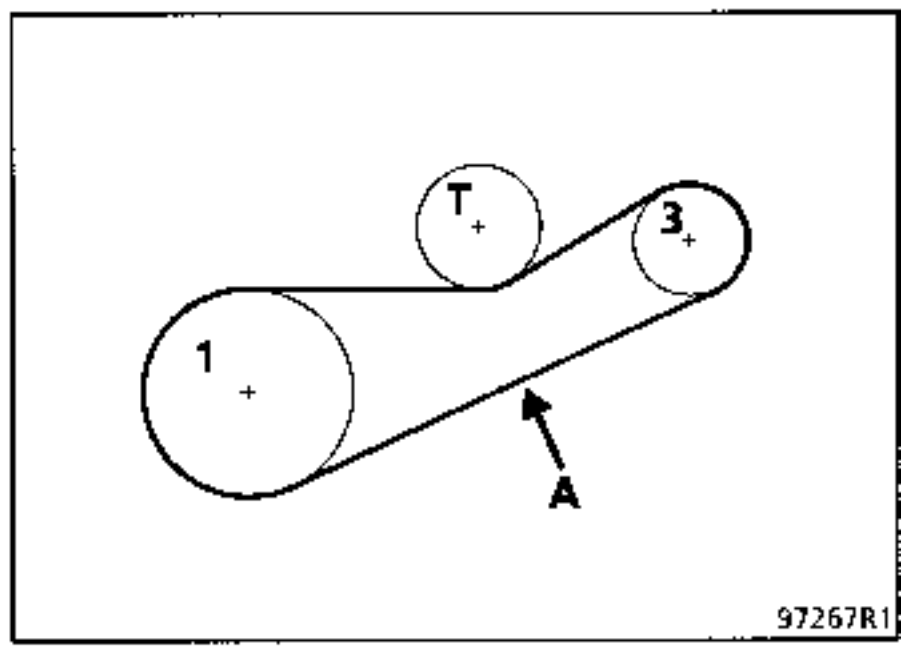


Tension (US = SEEM unit)	Power assisted steering belt (D) multitooth (4 vees)	Air conditioning belt (C) multitooth (5 vees)	Alternator belt (A) multitooth (4 vees)
Fitting, new belt	94 ± 4 US	102 ± 6 US	91 ± 5 US
Minimum operating, old belt	56 US	57 US	50 US

VEHICLE with AIR CONDITIONING

0 Camshaft
1 Crankshaft
2 Water pump
3 Alternator
4 Power assisted steering pump
5 Air conditioning compressor
T Tensioner
→ Point for checking belt tension

4 v belt



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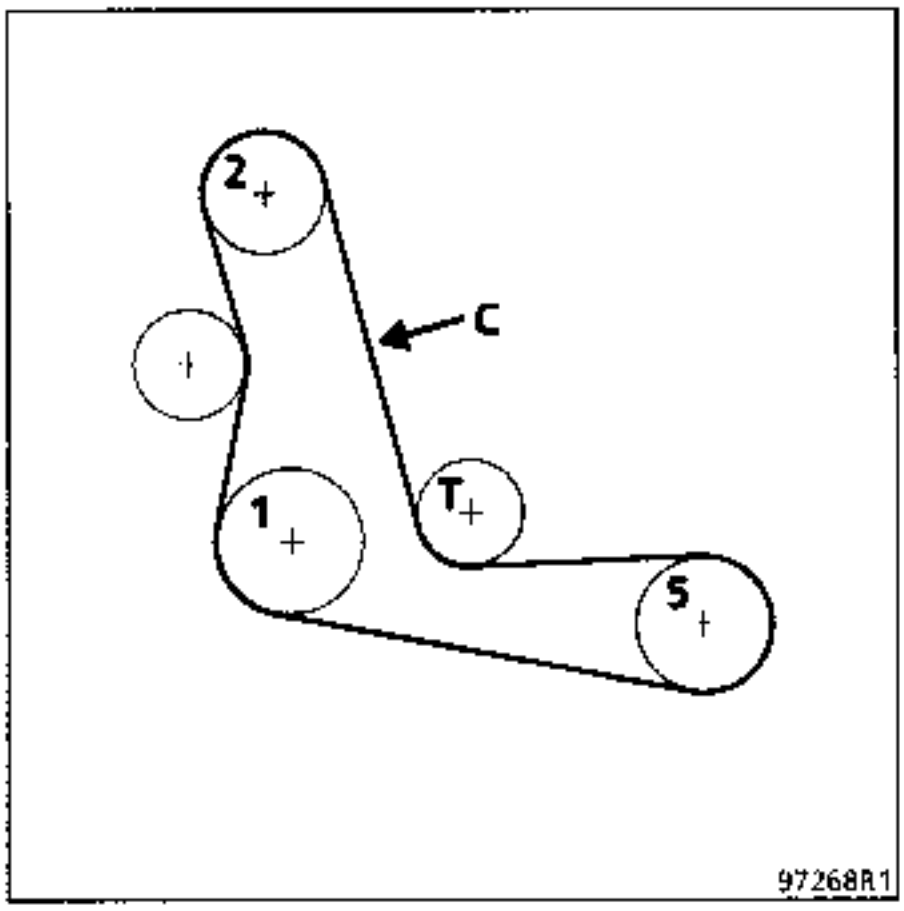
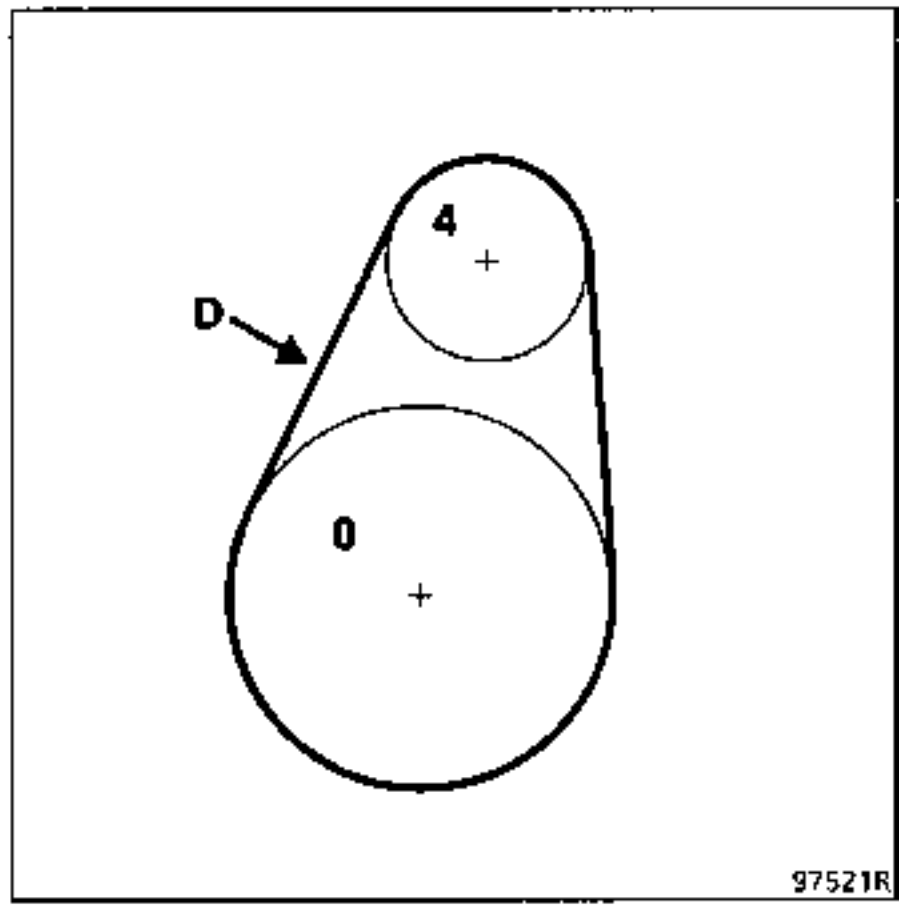
5 v belt



97268R1



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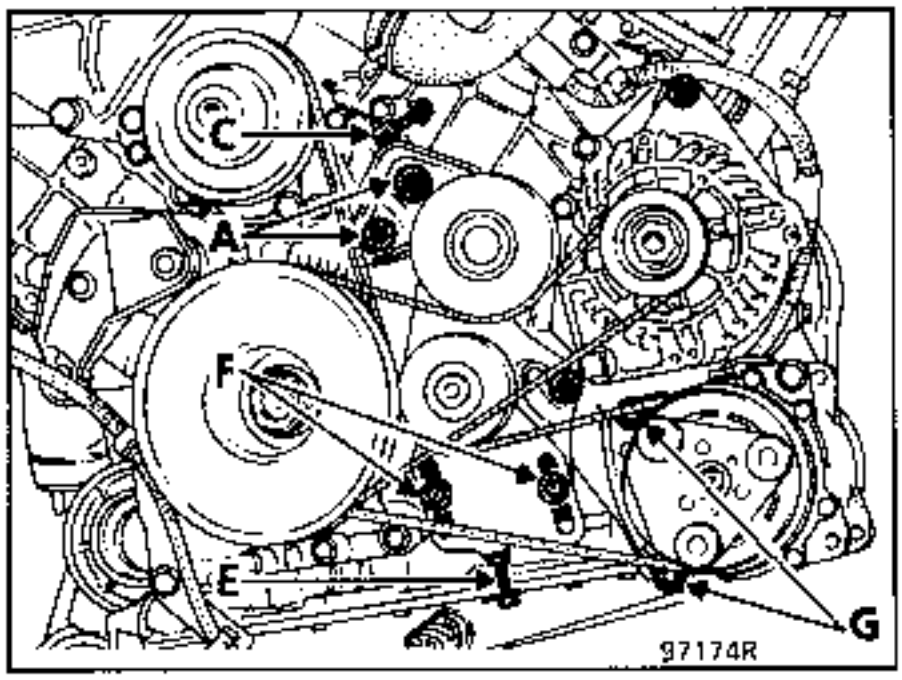


ALTERNATOR TENSION

Angular movement tensioner

Slacken the 2 bolts (A).

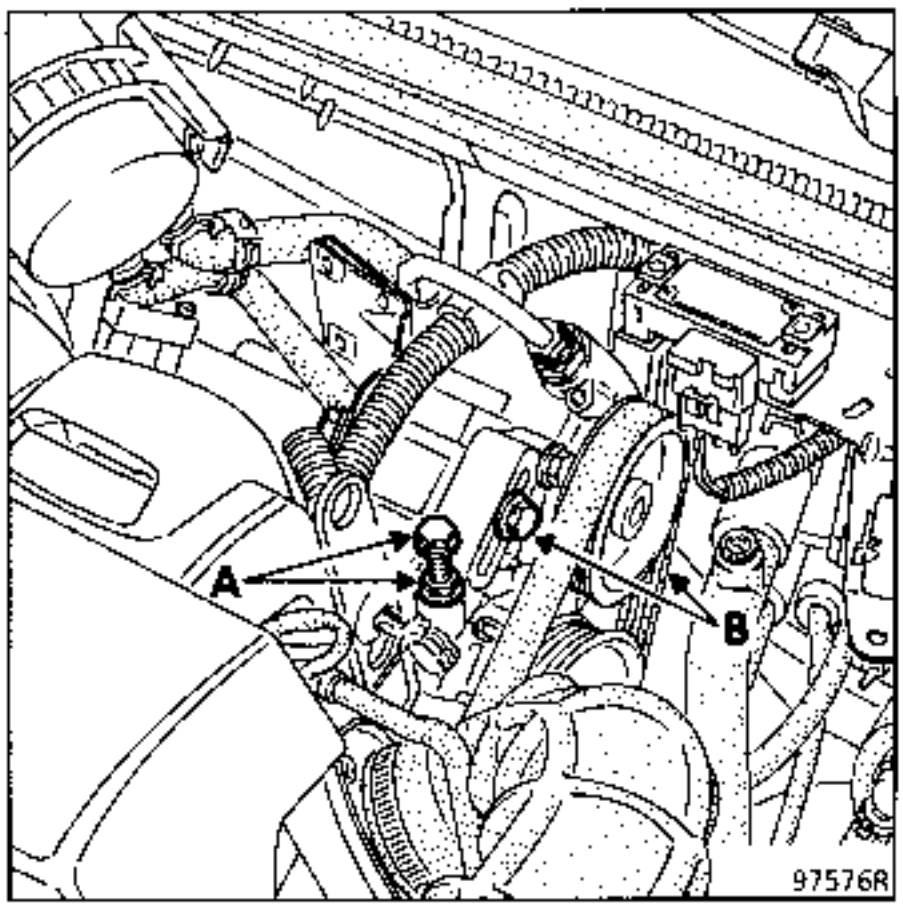
Adjust bolt (C)until the required tension value is obtained on the display of **Mot.1273.**

AIR CONDITIONING COMPRESSOR TENSION

Slide tensioner

Slacken the 2 bolts (F).

Adjust bolt (E)until the required tension value is obtained on the display of **Mot.1273.**



PAS PUMP TENSION

Angular movement tensioner

Adjust (A) to adjust the tension.

Tighten bolts (B).

Tensioning process

Engine cold (ambient temperature).

Fit the new belt.

Position the sensor of **Mot. 1273**.

Turn the wheel of the sensor until it disengages (three "CLICKS").

Tension the belt until the recommended fitting value is displayed on **Mot. 1273**.

Lock the tensioner, check it and adjust the value.

Turn the crankshaft over three times .

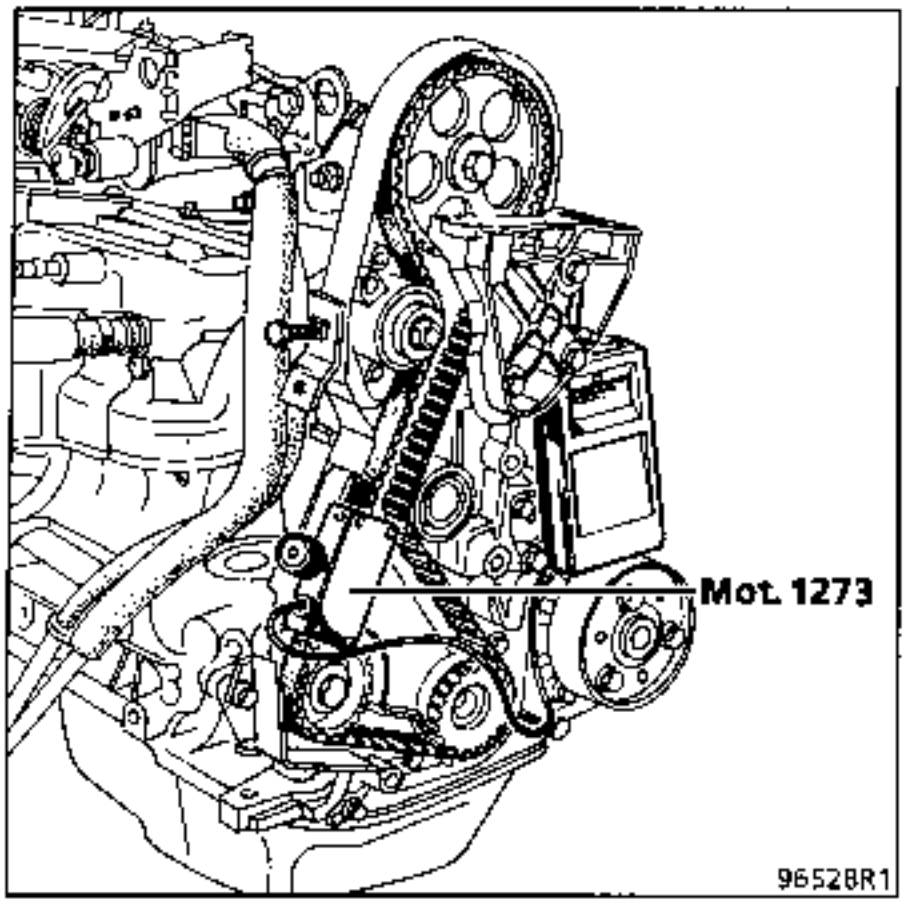
Check that the tension value is **within the fitting tension tolerance (± 10%), otherwise readjust it.**

NOTE :

Never refit a belt which has been removed.

Replace the belt if the tension is **below the minimum operating tension**.

F3R Engine



Belt tension (in SEEM units)

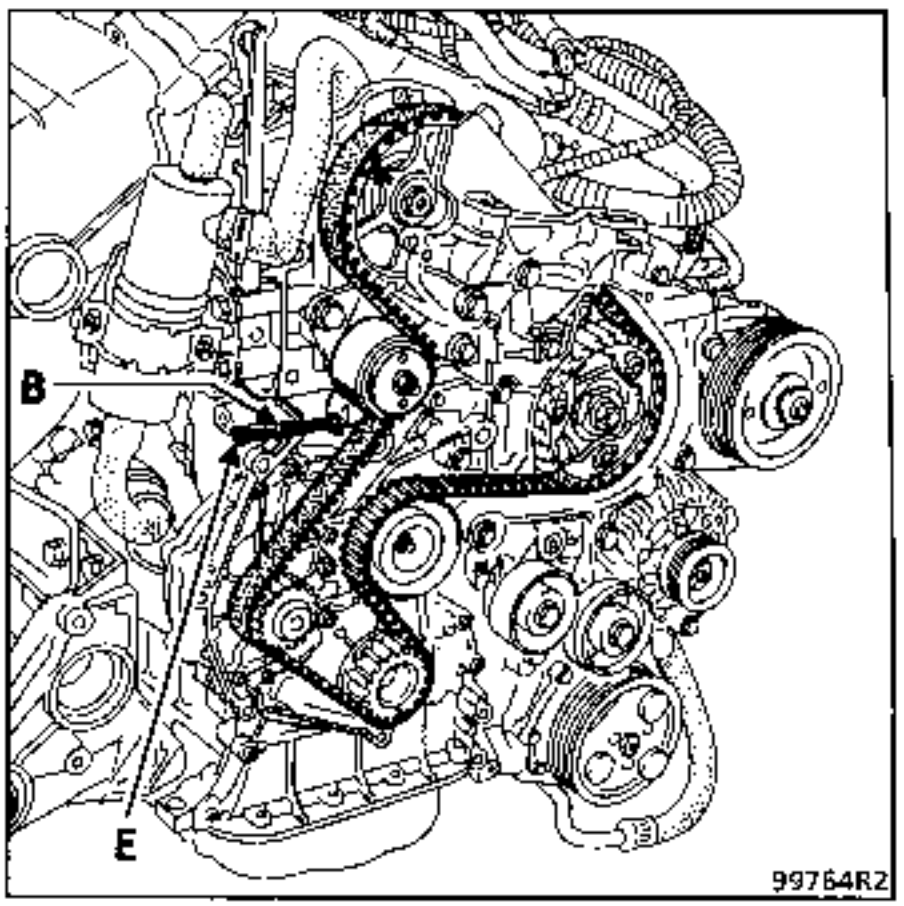
Fitting new belt: **29 U.S.**

Minimum operating: **27 U.S.**

REPLACEMENT :

See section 11.

G8T Turbo Engine



Automatic belt tensioning

Fitting:

See section 11.

REPLACEMENT :

Does not require tool Mot. 1273 .

Automatic tensioner operates on fitting as during operation.

F3R ENGINE

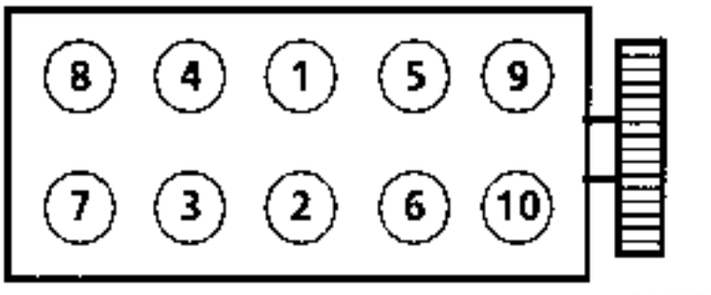
METHOD FOR TIGHTENING THE CYLINDER HEAD

All bolts must be systematically renewed after removal.

Using engine oil, lubricate the threads and under the heads of the bolts.

REMINDER: to ensure that the bolts are correctly tightened, using a syringe, remove any oil which may be in the cylinder head mounting holes.

Tighten the bolts in the order given below:



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1st tightening to 3 daN.m.

2nd tightening (angle) : **50° ± 4°**

Wait at least 3 minutes.

Slacken bolts (1) and (2) by 180° then:

1st retightening to 2.5 daN.m.

2nd tightening (angle) : **123° ± 7°.**

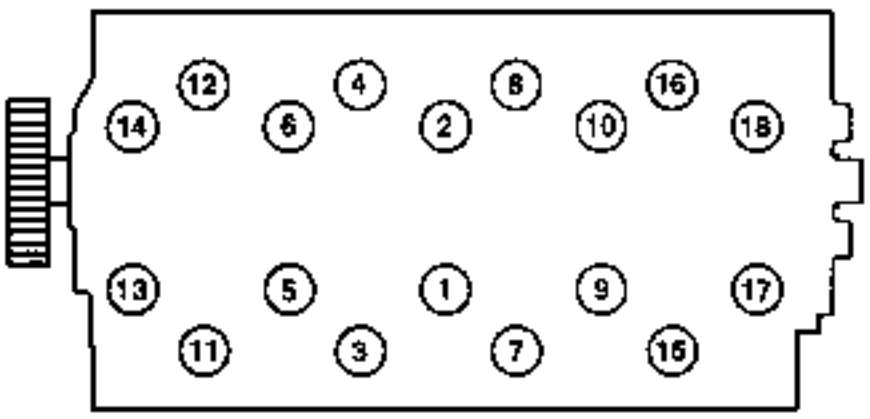
Repeat the slackening and retightening operation for bolts 3-4, 5-6, 7-8, 9-10.

There is no cylinder head retightening operation.

G8T ENGINES - METHOD FOR TIGHTENING THE CYLINDER HEAD

Preseating the gasket: tighten all the bolts to **2 daN.m**, then angle tighten according to the table below in the recommended order 1 to 18.

Bolt reference	Tightening angle ± 2° (in degrees)	Bolt length (in mm)
1, 5, 9, 13, 17	215	185 with washer
2, 6, 10, 14, 18	240	185 without washer
3, 7, 11, 15	160	103 with washer
4, 8, 12, 16	246	207.5 without washer



96780S

Seating the gasket: wait 3 minutes stabilisation time.

- **Tightening :**
  - slacken bolts 1 and 2until they are completely free,
  - tighten bolts 1 and 2 to **2 daN.m** then angle tighten according to the table below,

  - slacken bolts 3, 4, 5, 6until they are completely free,
  - tighten bolts 3, 4, 5, 6 to **2 daN.m** then angle tighten according to the table below,

  - slacken bolts 7, 8, 9, 10until they are completely free,
  - tighten bolts 7, 8, 9, 10 to **2 daN.m** then angle tighten according to the table below,

  - slacken bolts 11, 12, 13, 14until they are completely free,
  - tighten bolts 11, 12, 13, 14 to **2 daN.m** then angle tighten according to the table below,

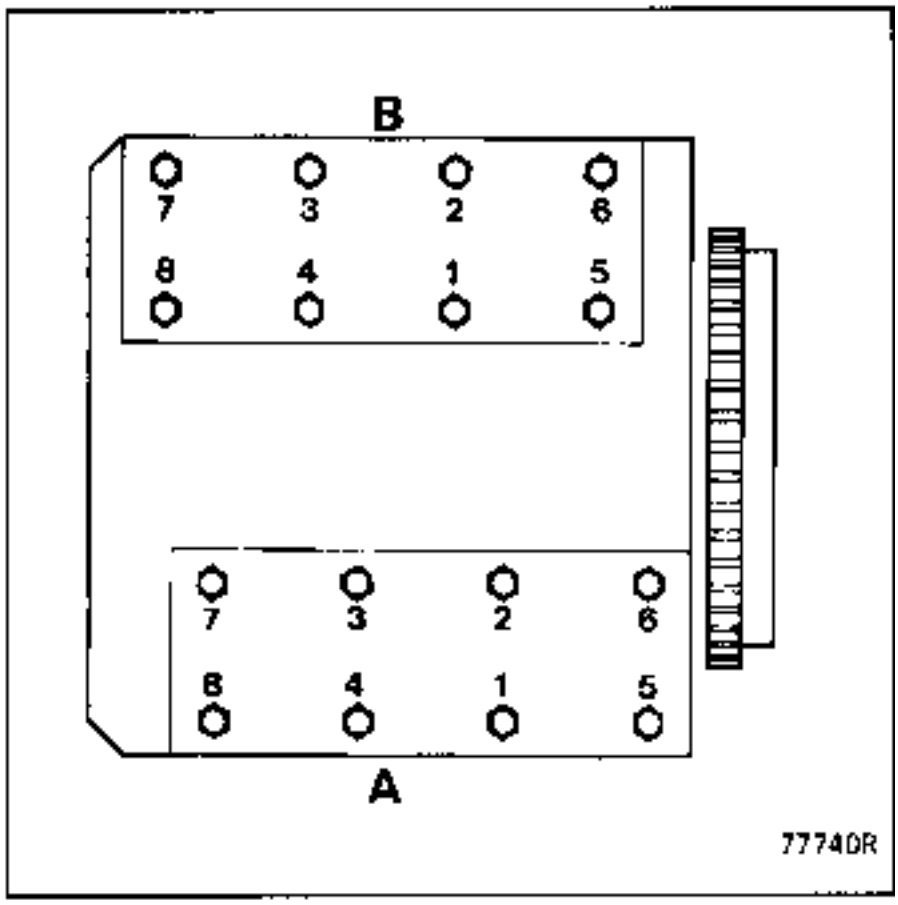
  - slacken bolts 15, 16, 17, 18until they are completely free,
  - tighten bolts 15, 16, 17, 18 to **2 daN.m** then angle tighten according to the table below,

Bolt reference	Tightening angle ± 6° (in degrees)	Bolt length (in mm)
1, 5, 9, 13, 17	296	185 with washer
2, 6, 10, 14, 18	301	185 without washer
3, 7, 11, 15	243	103 with washer
4, 8, 12, 16	322	207.5 without washer

Z7X ENGINE

METHOD FOR TIGHTENING THE CYLINDER HEADS

Tighten in the order given below:



New cylinder head gaskets:

Tighten to **6 daN.m**. in the recommended order.

Slacken, pre-tighten to **4 daN.m.**

Then angle tighten:

180° in the recommended order

Adjust the valve clearances.

Run the engine to bring it up to temperature:
2000 rpm for 15 minutes.

Retightening:
This operation is carried out when the engine is cold (after the engine has been stopped for a minimum of 6 hours).

Additional angle tightening:

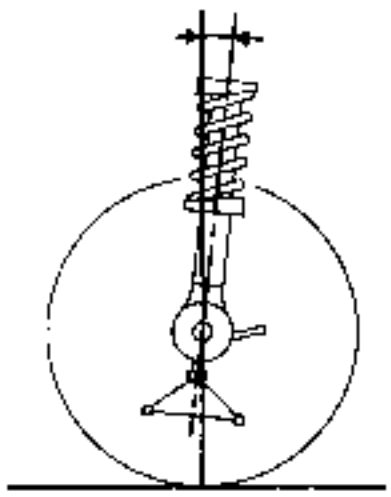
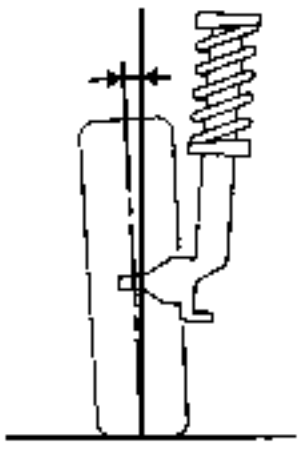
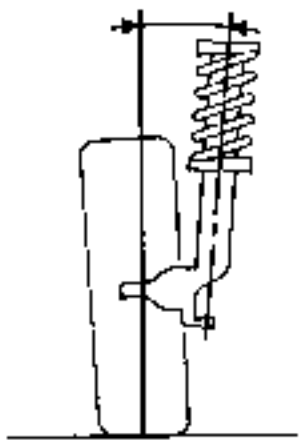
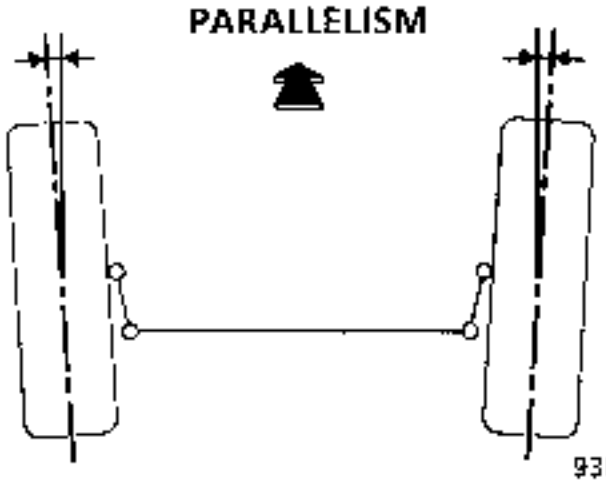
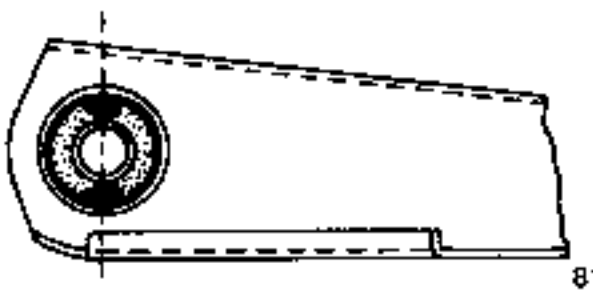
50° without prior slackening.

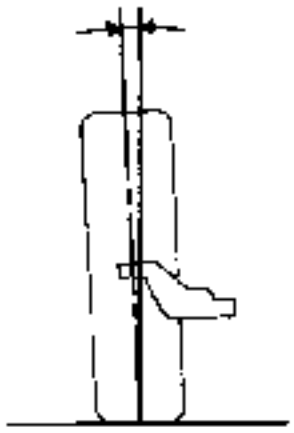
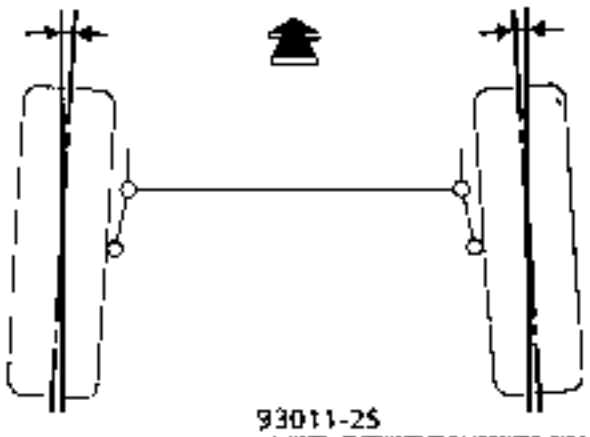
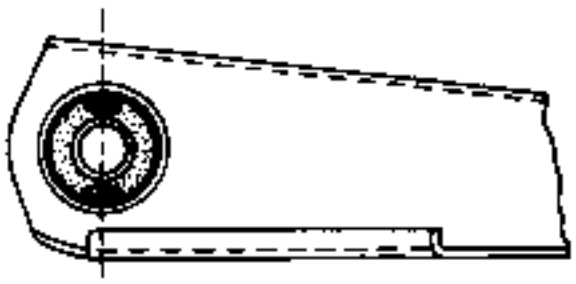
There is no cylinder head retightening operation.

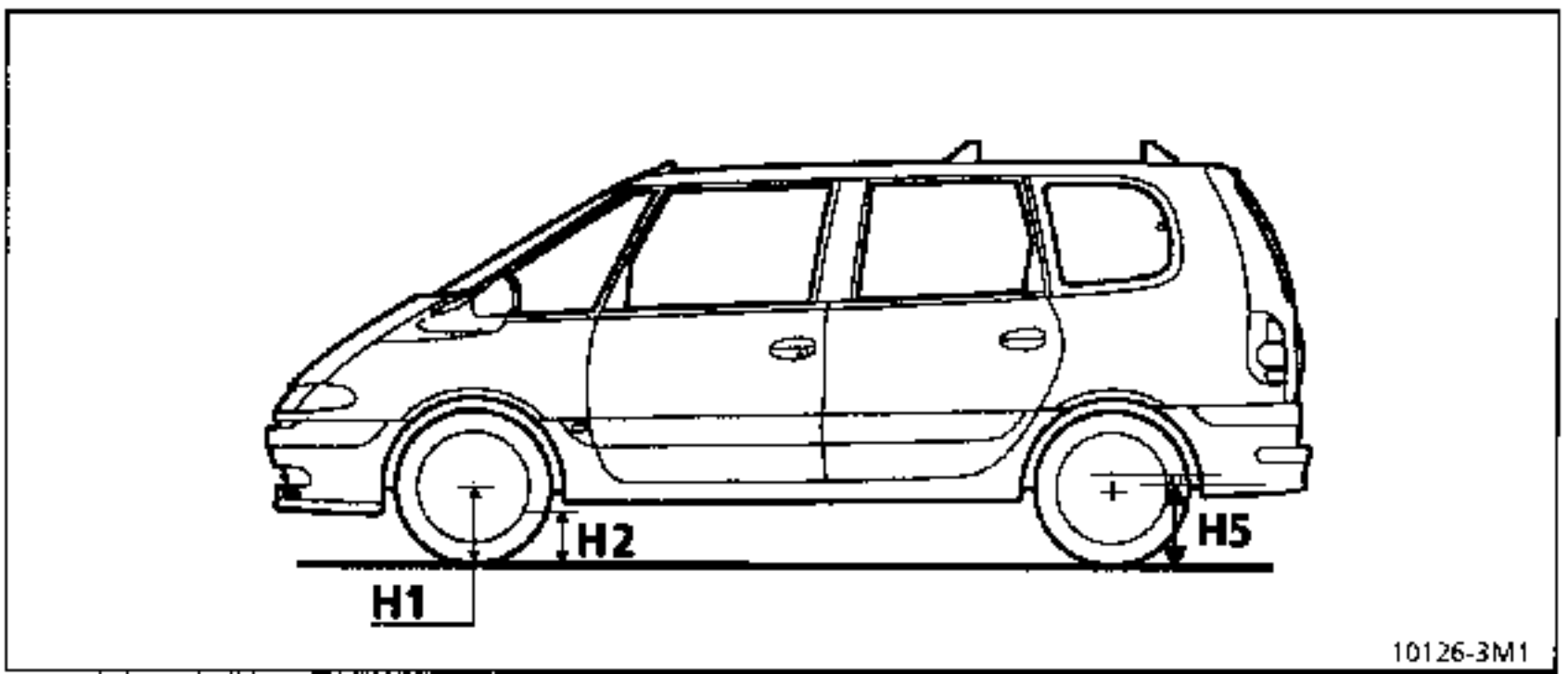
	JEO A	JEO E SEOE JEOJ	JEO D
FRONT BRAKE (dimensions in mm)			
Calliper piston diameter	54	60	60
Disc diameter	280	280	280
Disc thickness	24	24	24
Minimum disc thickness*	21.8	21.8	21.8
Lining thickness (including backing plate)	18	18	18
Minimum lining thickness (including backing plate)	6	6	6
Maximum disc run-out	0.07	0.07	0.07
REAR BRAKE (dimensions in mm)			
Wheel cylinder diameter / calliper piston diameter	22.2	22.2	36
Drum diameter	228.5	228.5	–
Maximum drum diameter after regrinding	229.5	229.5	–
Disc diameter	–	–	265
Disc thickness	–	–	10.5
Minimum disc thickness*	–	–	9.5
Lining thickness (including backing plate)	7	7	15
Minimum lining thickness (including backing plate)	2.5	2.5	7.5
MASTER CYLINDER (dimensions in mm)			
Diameter	23.8	23.8	23.8

(*) Brakes discs cannot be repaired.
They must be replaced if large scratches or excessive wear occur.

Types JE0A - JE0D - JE0E - JE0F . SE0E

ANGLES	VALUES	POSITION OF FRONT AXLE	ADJUSTMENT
CASTOR  93012-15	3°30′ 3°19′ 3°04′ 2°51′ } ± 30′ Maximum left / right difference = 1°	H5 H2 = 242 mm H5 - H2 = 252 mm H5 H2 = 265 mm H5 – H2 = 275 mm	NOT ADJUSTABLE
CAMBER  93013-15	+0°45′ -0°37′ -0°40′ -0°43′ } ± 30′ Maximum left / right difference = 1°	H1 – H2 = 23 mm H1 H2 = 110mm H1 – H2 = 120mm H1 – H2 = 140mm	NOT ADJUSTABLE
KINGPIN  93014-15	8°48′ 11°27′ 11°40′ 12°05′ } + 30′ Maximum left / right difference = 1°	H1 – H2 = 23 mm H1 – H2 = 110mm H1 – H2 = 120mm H1 - H2 = 140mm	NOT ADJUSTABLE
PARALLELISM  93011-15	(For 2 wheels) (toe-out) 0°10′ ± 10′ (1 ± 1 mm) measured on rim diameter 405 mm	UNLADEN	Adjustable by rotating track rod sleeves
RUBBER BUSHES  8160351	–	UNLADEN vehicle on its wheels	–

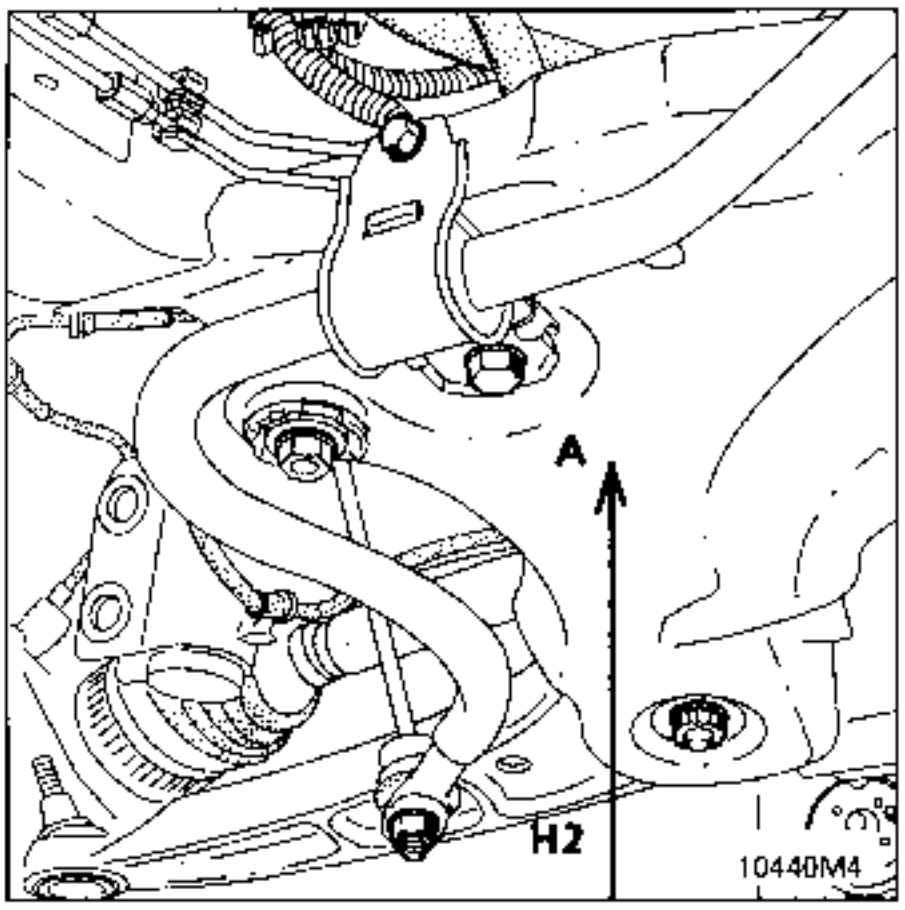
ANGLES	VALUES	POSITION OF REAR AXLE	ADJUSTMENT
CAMBER  93013-25	– 1° ± 10′	UNLADEN	NOT ADJUSTABLE
PARALLELISM  93011-25	- 0° 20′ ± 10′ (Toe-in)	UNLADEN	NOT ADJUSTABLE
RUBBER BUSHES  81603S1	LOADED H5 = 408mm Vehicle on its wheels		



10126-3M1

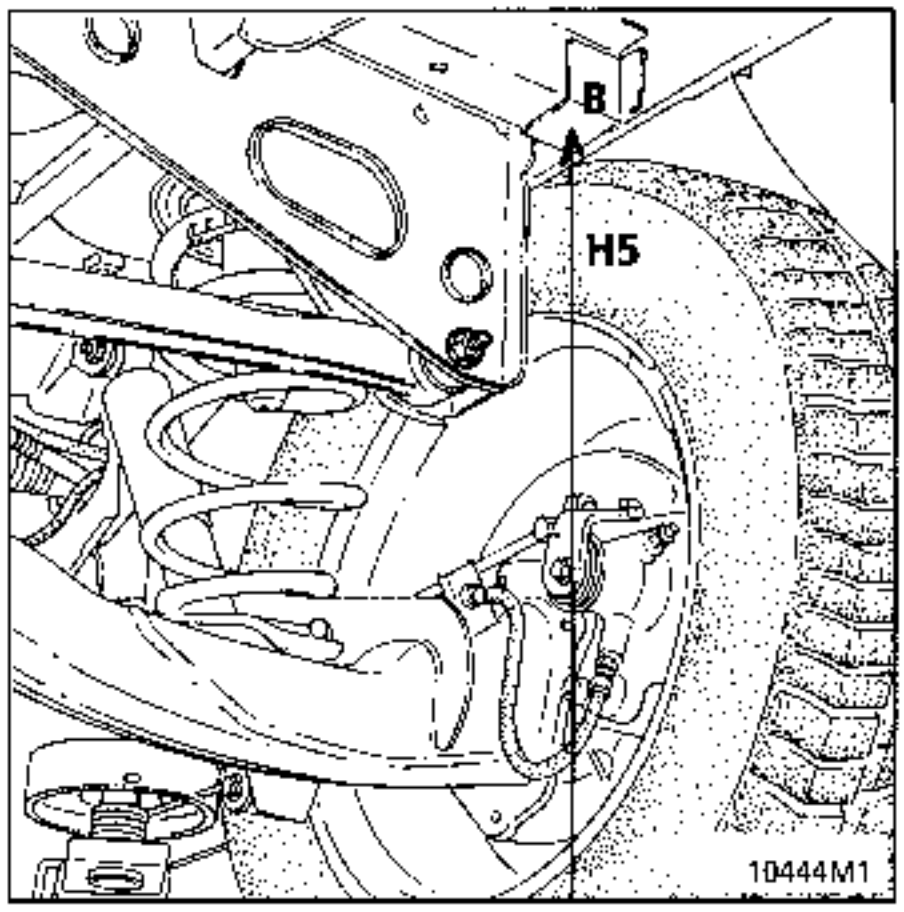
AT THE FRONT

Measure on the sub-frame vertically from point (A)
H2 : distance between the sub-frame and the plane on which the wheels rest.



AT THE REAR

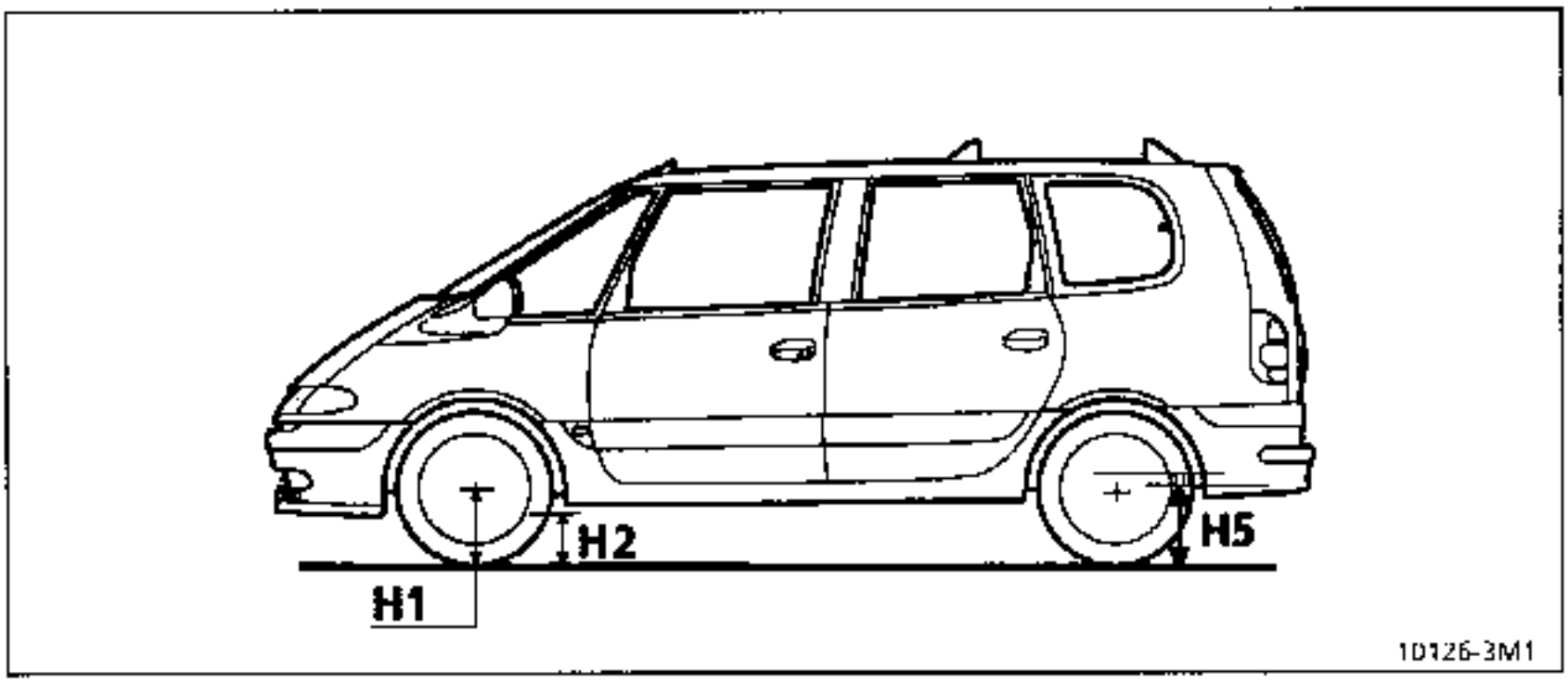
Measure on the floor 3rd row cross member vertically from point (B)
H5 – distance between the cross member and the plane on which the wheels rest.



Type of tyres	195/65 R15 91 T	205/65 R15 94 T	205/65 R15 94 H
Type of vehicles	JE0A	JE0E - SE0E JE0J	JE0D
Type of rims	6.5 J 15	6.5J15	6.5J15
Type of chains	17 or 14 mm	14 mm	14 mm

Only vehicles WITHOUT ABS are fitted with limiters which are load sensitive.

They are checked and adjusted when the vehicle is laden or the rear axle assembly compressed.



Type of tyres	H 5	Test pressure (BARS)	
		Front	Rear
195/65/15	403 + 2mm	100	53 to 65
205/65/15	413 + 2mm	100	53 to 65