



Job No.

Instructions concerning replacement and tensioning of V-belts (Engine 102.961)	13 – 335
Replacing and tensioning V-belts (Engine 102.961)	13 – 340
Checking condition and replacement of poly V-belt	13 – 342
Checking condition of poly V-belt	13-343
Removal and installation of tensioning device	13 – 345
Changes to the Poly V-belt tensioning device	13 – 346

13-335 Instructions concerning replacement and tensioning of V-belts

Adjusting data

V-belts (profile width in mm)	New V-belts (KG-scale on measuring instrument)	Used V-belts (KG-scale on measuring instrument)
9.5.	30	20-25
12.5	50	40-45

Special tool

Measuring instrument (Krikit) for measuring
V-belt tension



001 589 69 21 00

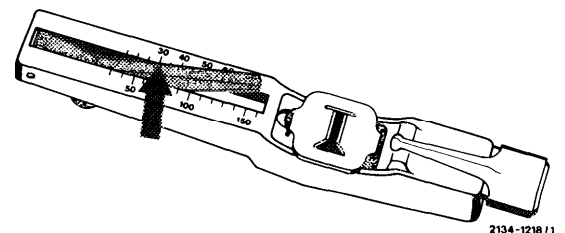
Checking condition of V-belts

Cracked, porous, burned or worn belts should be replaced.

Checking tension

For handling of instrument (Krikit) refer to operating instructions and renewing and tensioning V-belt (13-340).

The respective adjusting data refer to KG-scale (arrow) of measuring instrument.



2134-1218 F1

Used V-belts

Check tension of V-belts and compare with the values named in table for used V-belts (e.g. V-belts with profile width of 9.5 mm = adjusting value 20-25). Retension V-belt, if required.

Mounting and tensioning of new V-belts

Perfect mounting of a V-belt requires loosening of respective auxiliary unit or of tensioning device of V-belt to the extent that the belt can be easily mounted. In addition, the running surfaces for the V-belt on pulleys must be free of burr, rust and dirt.

Keep free of oil, grease, chemicals. Do not use belt wax or similar agents. Subsequent optimal adjustment of belt tension (for adjusting values refer to Table) serves to prevent complaints such as squeaking V-belts and low life.








In scope of maintenance jobs, mount V-belts prior to engine checkup and tension to value for new V-belts named in Table (e.g. V-belt. profile width 9.5 mm = adjusting value 30).

If the V-belt tension is checked during final acceptance or following a test drive, the value measured in such a case should be in agreement with the value named in Table for used V-belts (e.g. V-belt, with profile width 9.5 mm = adjusting value **20–25**). If required, retension V-belt.

13-340 Replacing and tensioning V-belts

V-belt dimensions and adjusting values

V-belt	A Refrigerant compressor	B Power steering pump	C Alternator Coolant pump	D Air pump ¹⁾
Dimensions	12.5 x 875	12.5 x 750	9.5 x 1005	9.5 x 1050 ²⁾ 9.5 x 1055 ³⁾
Adjusting value KG-scale (measuring instrument) used	new	50		30
		40-45		20-25

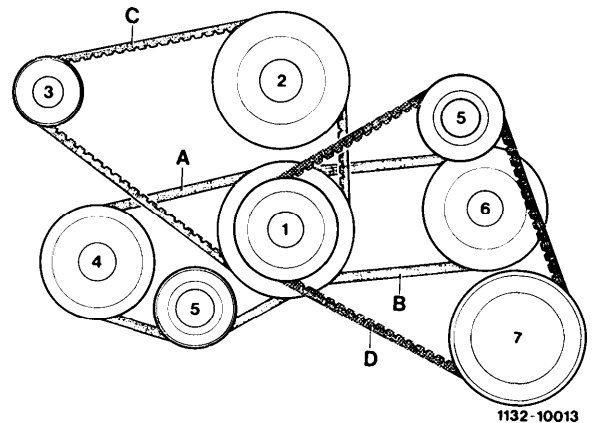
- 1) Model 123   
 3) Model 123   1981/1982 (up to January 1982).
 Model 123   starting January 1982, @starting 1983.

Special tool

Measuring instrument (Krikit)
for measuring V-belt tension



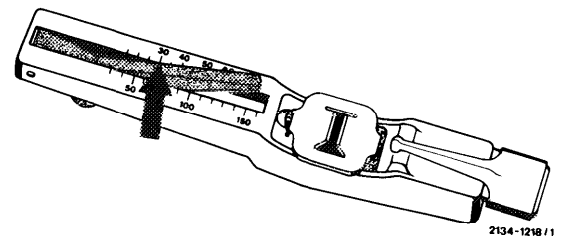
001 589 69 21 00



- 1 Crankshaft
- 2 Coolant pump
- 3 Alternator
- 4 Refrigerant compressor
- 5 Tensioning roller
- 6 Power steering pump
- 7 Air pump

Note

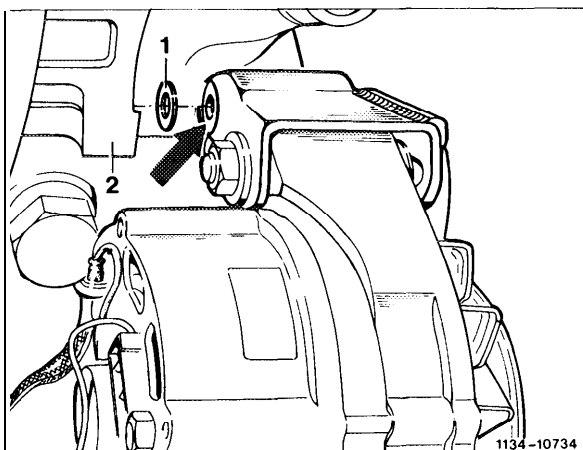
The adjusting values of V-belt tension named in Table refer to KG-scale (arrow) of measuring instrument.



2134-1218 / 1

To improve level location of holder (clamping bridge) on cylinder head (2) and to prevent alignment faults, a washer (1) 0.85 mm thick has been temporarily installed between holder and cylinder head. The washer is located in a recess of required depth (arrow) of holder.

Washer and holder with recess are not available as a spare part. In the event of repairs, install the holder (clamping bridge) used up to now without washer.



On engines 102.920 and 102.980 (model 123) in national versions **AUS** **S** since December 1981 and in national version **CH** since start of series, the tensioning wheel with fastening screw and holder (B, arrows) is installed instead of the tensioning screw with nut (A, arrows).

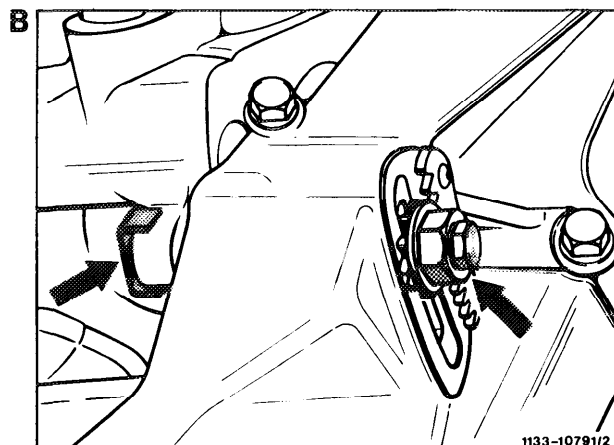
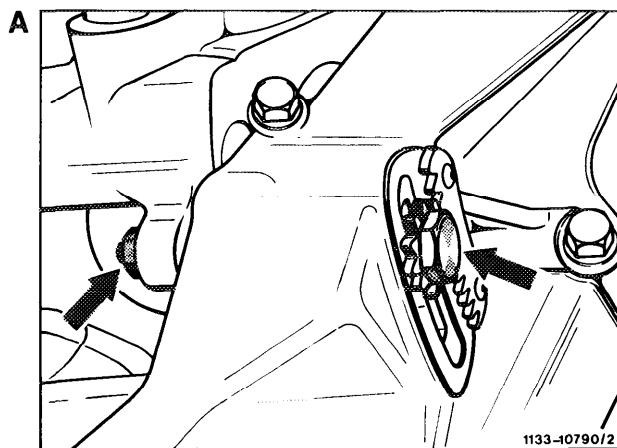
The modified tensioning components

Tensioning wheel part no. 102 234 00 25
 Holder part no. 102 230 02 40
 Hex. head screw part no. 000931 008257

can be installed in older engines also in the event of repairs.

A = tensioning components 1st version up to December 1981

B = tensioning components 2nd version starting December 1981



Start of series: December 1981

Model	Engine	Engine end no.		Chassis end no.
		transmission mech.	autom.	

123.220	102.920	054 079	015664	071207
---------	---------	---------	--------	--------

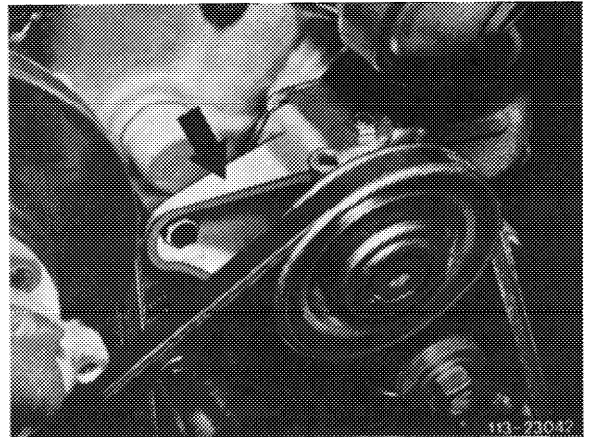
123.223	102.980	064759	043267	085725
---------	---------	--------	--------	--------

123.243				011893
---------	--	--	--	--------

To simplify mounting of V-belt for power steering pump drive the holder for tensioning holder of air pump V-belt on engines 102.920 and 102.980 (model 123) in national version (AUS) (S) has been modified.

The modified tensioning roller holder requires a longer V-belt of 9.5 x 1055 (formerly 9.5 x 1050) for air pump drive.

Together with V-belt 9.5 x 1055 part no. 007 997 00 92 the modified tensioning roller holder can also be installed in older engines in the event of repairs.



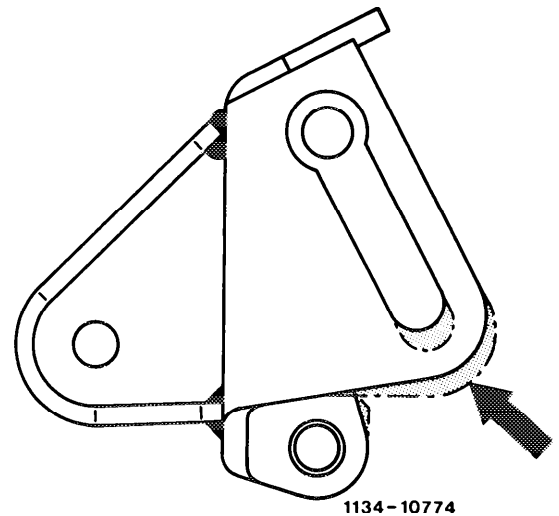
Start of series: January 1982

Model	Engine	Engine end no.		Chassis end no.
		mech.	autom.	
123.220	102.920	055058	015922	073682
123.223	102.980	065989	044251	088477
123.243				012147

Tensioning roller holder

Interrupted lines, dotted = 1st version

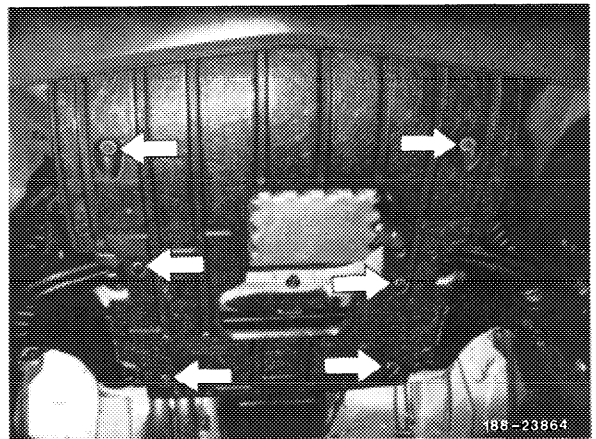
Continuous lines = 2nd version



Attention!

On model 201.024 the engine compartment lining below must be removed for tensioning V-belts.

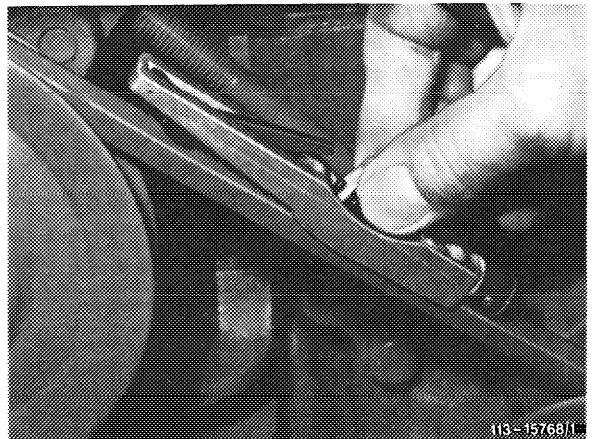
For this purpose, unscrew six sheet metal screws (arrows).



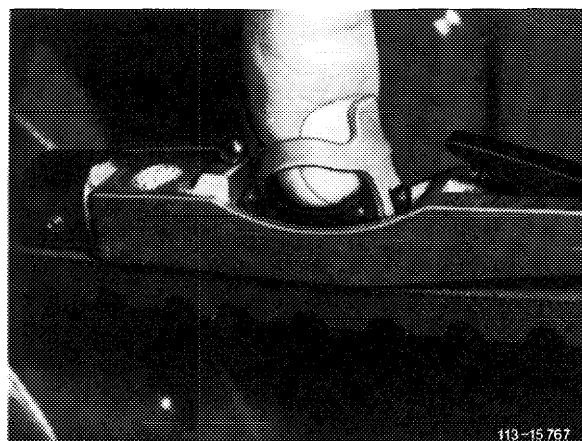
Handling of measuring instrument

For checking V-belt tension the measuring instrument can be held in various ways:

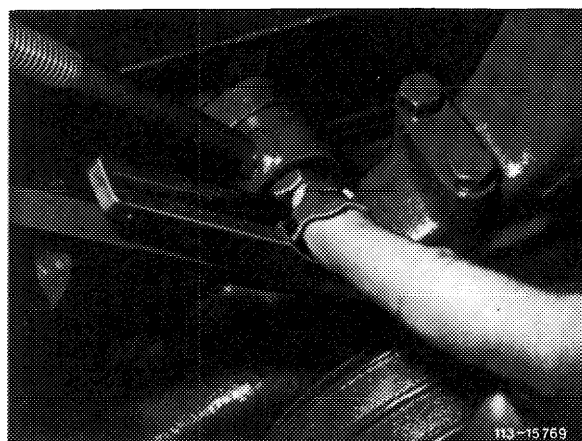
a) With thumb and forefinger against rubber loop, with the finger tips resting on push-button.



b) With forefinger from above in rubber loop.

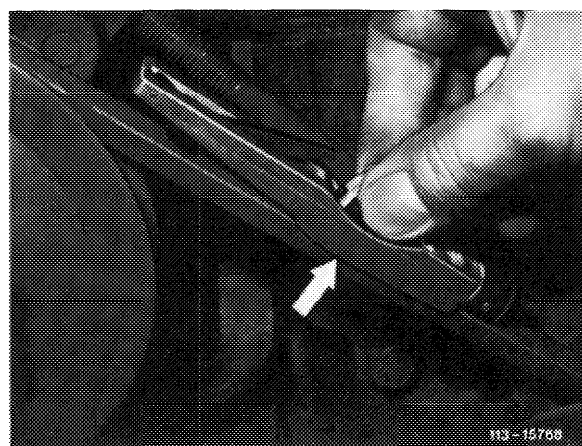


c) With forefinger laterally between rubber loop and push-button.



Testing

- 1 Lower indicator arm on measuring instrument.
- 2 Place measuring instrument on V-belt in center between pulleys. The lateral stop of the measuring instrument should rest laterally against V-belt (arrow).

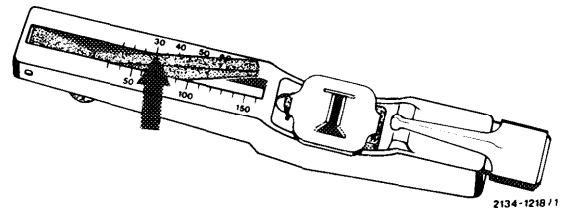


- 3 Exert a uniform, vertical pressure of V-belt upper surface by means of push-button, until click spring is audibly (or noticeably) disengaging.

Note: Upon disengagement of click spring, do not continue pushing on measuring instrument, since otherwise a wrong measuring value will be indicated.

4 Carefully lift measuring instrument from V-belt. Avoid knocking against instrument and do not change position of indicator arm.

5 Read adjusting value at point of intersection of indicator arm and upper scale (KG-scale, arrow), to which the indicated adjusting values are also referring.



Renewing

Check condition of V-belt.

Replace cracked, burned or worn V-belts.

1 Loosen tensioning device or units.

2 Mount V-belt without using force.

3 Tension V-belt.

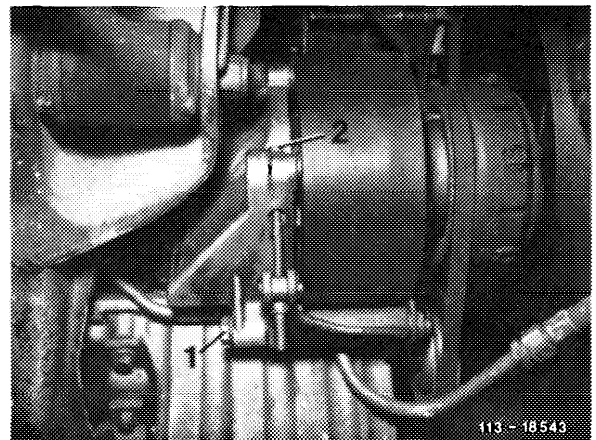
Tensioning

V-belt A refrigerant compressor

1 Loosen fastening screw (1).

2 Tension V-belt with tensioning screw (2).

3 Tighten fastening screw (1).

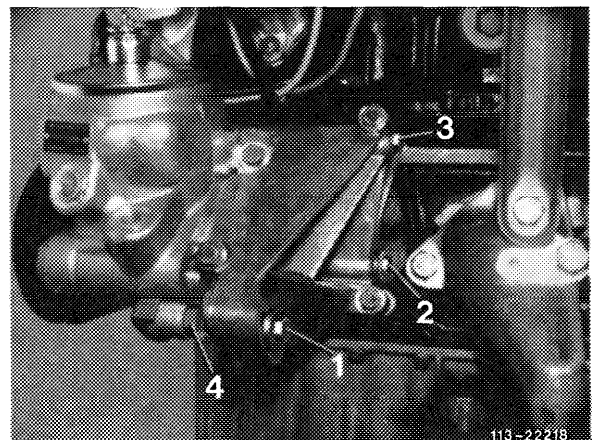


V-belt B power steering pump
standard version and (J) starting 1981

1 Loosen fastening screws (1, 2 and 3).

2 Tension V-belt with tensioning wheel (4).

3 Tighten fastening screws (1, 2 and 3).

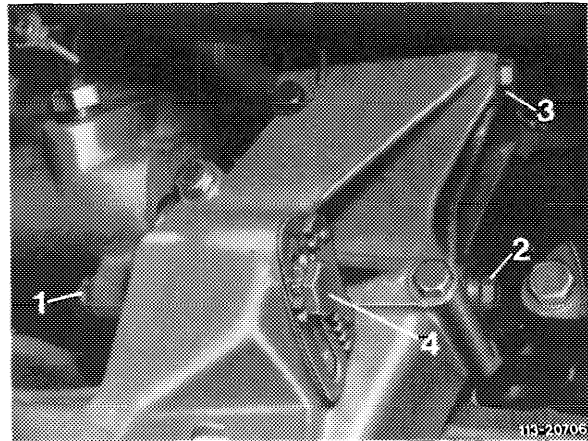


V-belt B power steering pump

(AUS) (S) 1981/1982

(1st version of tensioning components up to January 1982)

- 1 Loosen nut (1) and fastening screws (2 and 3).
- 2 Tension V-belt with tensioning screw (4).
- 3 Tighten nut (1) and fastening screws (2 and 3).



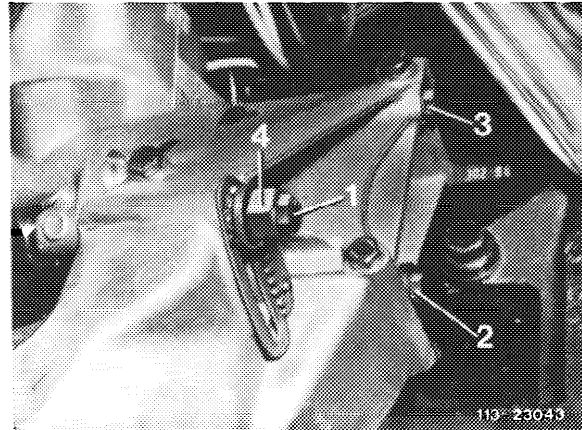
V-belt B power steering pump

(AUS) (S) starting 1982

(2nd version of tensioning components starting January 1982)

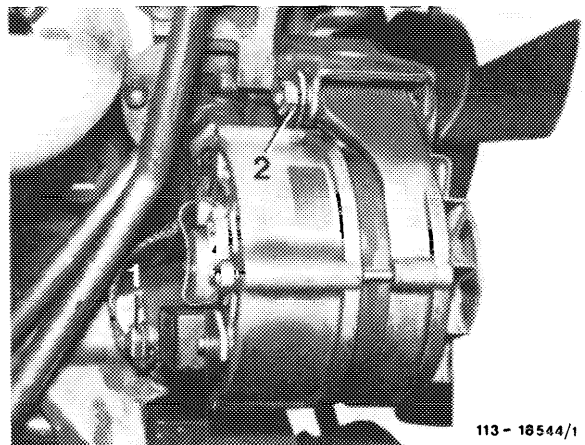
(CH) starting 1983

- 1 Loosen fastening screws (1, 2 and 3).
- 2 Tension V-belt with tensioning wheel (4).
- 3 Tighten fastening screws (1, 2 and 3).

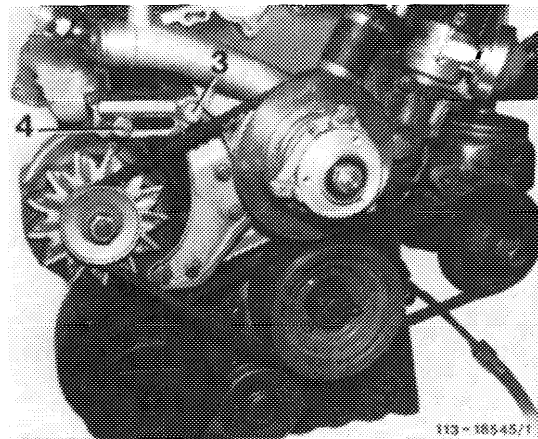


V-belt C alternator-coolant pump

- 1 Loosen nuts (1 and 2) and fastening screw (3).



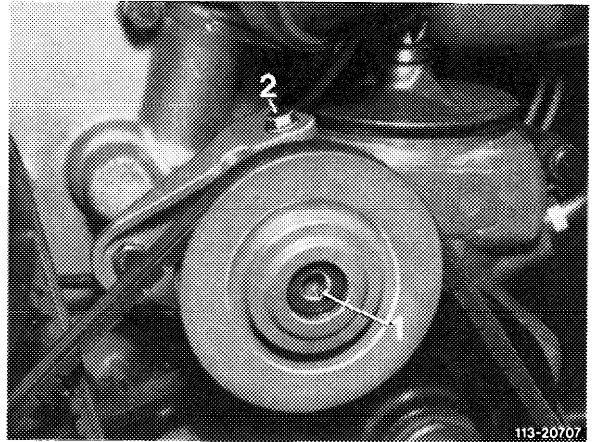
- 2 Tension V-belt with tensioning screw (4).
- 3 Tighten nuts (2 and 1) and fastening screw (3).



V-belt D air pump

(AUS) (S) starting 1981, (CH) starting 1983

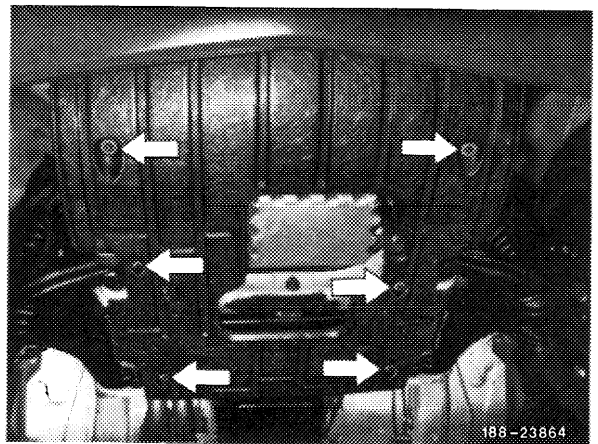
- 1 Loosen necked-down screw (1).
- 2 Tension V-belt with tensioning screw (2).
- 3 Tighten necked-down screw (1) to 25 Nm.



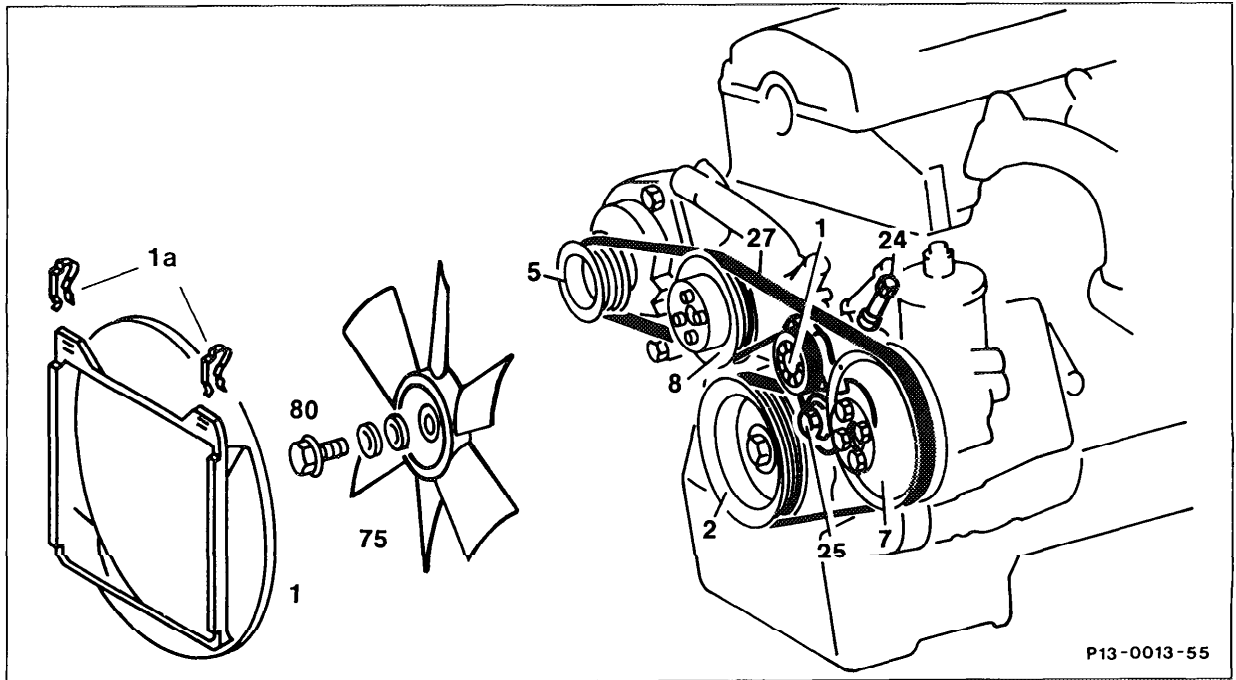
Attention!

On model 201.024 install engine compartment lining after tensioning V-belts.

For this purpose, screw in the six sheet metal screws (arrows) and tighten to 3 Nm.



13-342 Removal and installation of Poly V-belt drive



Fan shroud (1)	remove, install, to do so remove, put on clamps (1a).
Fan (75)	unbolt, bolt up, 25 Nm (Number 1).
Bolt (25)	slacken 1/4 - 1/2 turn (Number 2).
Adjusting nut (24)	slacken sufficiently until Poly V-belt (27) can be removed (Number 3).
	Note
	Check Poly V-belt profile and tensioning device for wear (Number 4).
Poly V-belt (27)	put on, beginning with idler pulley (1) in the numerical sequence of the layout diagram (Number 5).
	Note
	Do not use any belt wax, etc.
	Check seating of the Poly V-belt.

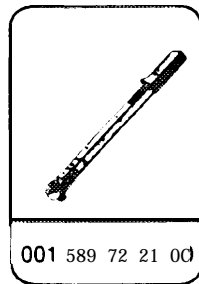
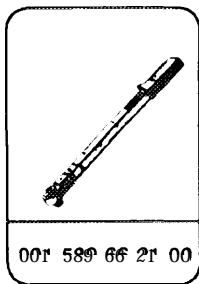
Adjusting nut (24)

on vehicles up to the mid-October 1986, turn to the right until the tip of the adjusting pointer is positioned as follows: without power steering above 5th marker, with power steering and air conditioning between the 8th and 9th graduation mark. On vehicles from October 1986 turn the adjusting nut to the right until the adjusting pointer is directly over the thick marker of the scale (Number 7).

Bolt (25)

tighten up. With across flats width 19 mm, 75 Nm. With across flats width 17 mm, 80 Nm.

Special tools



Note

Since June/July 1986 the material of Poly V-belts has been changed.

**Production breakpoint: June 1986
on vehicles with air conditioning and automatic air conditioning**

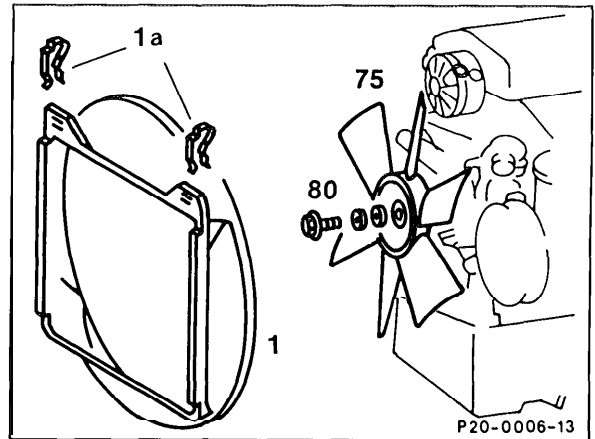
Model	Engine	Engine end No. Manual transmission	Engine End No. Automatic transmission	Vehicle chassis end No.	
				A	F
201.024 (USA)	102.985	003835	035535	307566	238297

Production breakpoint: October 1988

Model	Engine	Engine end No. Manual transmission	Engine end No. Automatic transmission	Vehicle chassis end No.	
				A	F
201.028	102.985	005673	043064	not recorded	289390

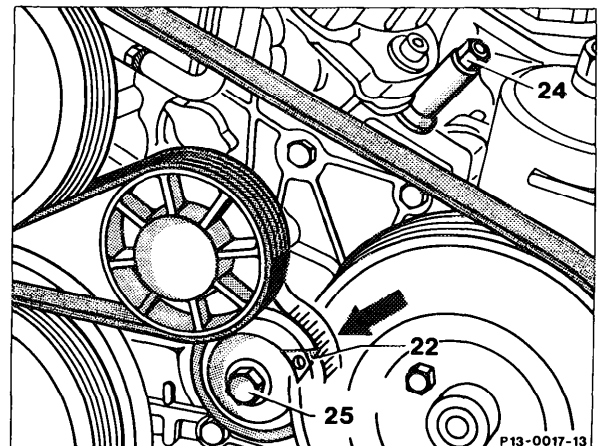
Removal and installation

1 Remove, install fan and fan shroud, tightening torque of the bolt (80), 25 Nm.



2 Loosen bolt (25) 1/4 - 1/2 turn.

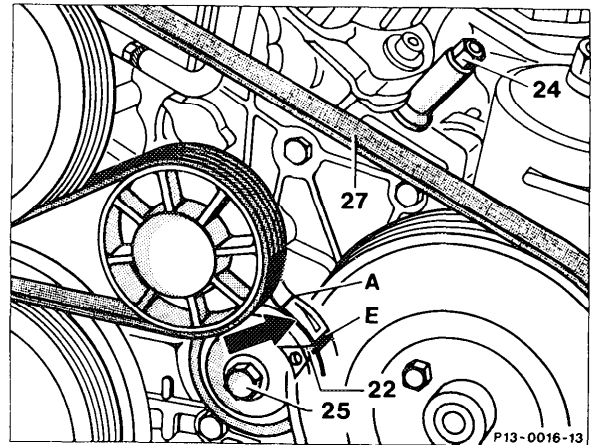
3 Release tension on the tensioning device with adjusting nut (24) (turn to the left), until the Poly V-belt (27) can be removed.



4 Check Poly V-belt profile and tensioning device for damage and contamination, replace if necessary (e.g. flattened bearing points, dents or other damaged points on the Poly V-belts etc.).

Note

On vehicles built up to mid-October 1986, slide the adjustment pointer (22) to the left, until the tip of the pointer is over the first graduation mark of the adjusting scale (arrow). On vehicles built since mid-October 1986, push the adjustment pointer to the left, until the tip of the pointer is over the thin line (A) of the adjusting scale.



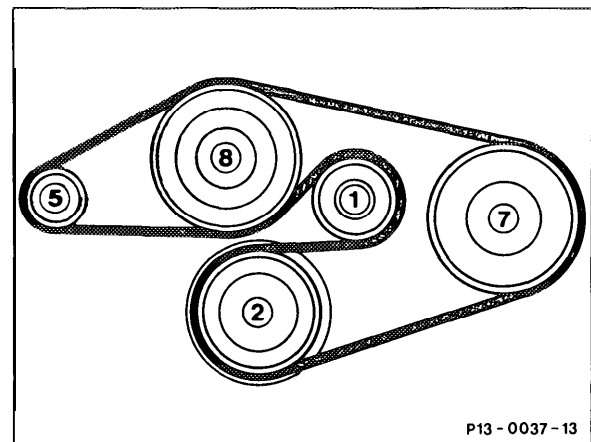
5 Install Poly V-belt: Begin at the idler pulley (1) in the numerical sequence of the layout diagram.

Note

Do not use any belt wax or similar products

6 Check seating of the Poly V-belt on the pulley.

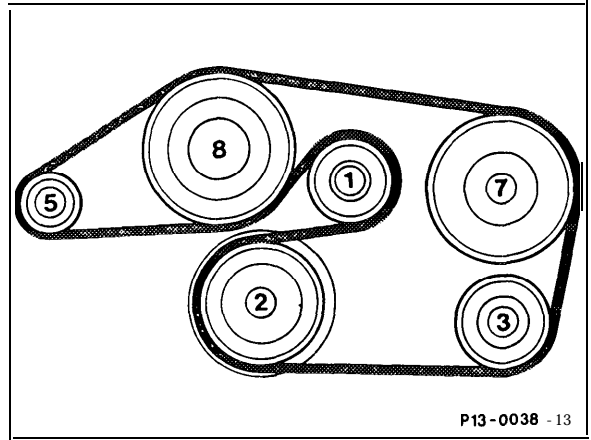
Layout diagram on vehicles with power steering
Belt length: 1885 mm



- 1 Idler pulley
- 2 Crankshaft
- 5 Alternator
- 7 Power steering pump
- 8 Engine coolant pump

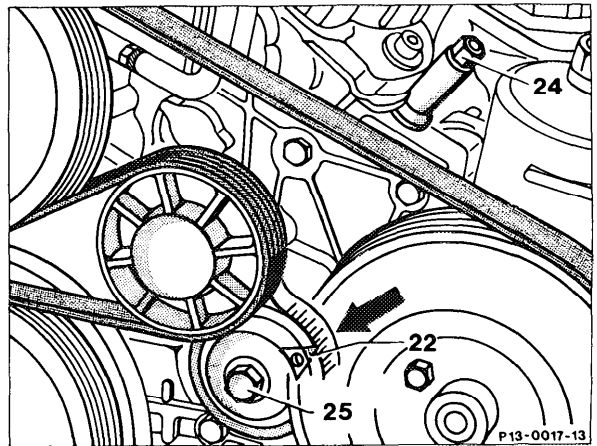
Layout diagram on vehicles with power steering and air conditioning/automatic climate control
Belt length: 1980 mm

- 1 Idler pulley
- 2 Crankshaft
- 3 A/C compressor
- 5 Alternator
- 7 Power steering pump
- 8 Engine coolant pump

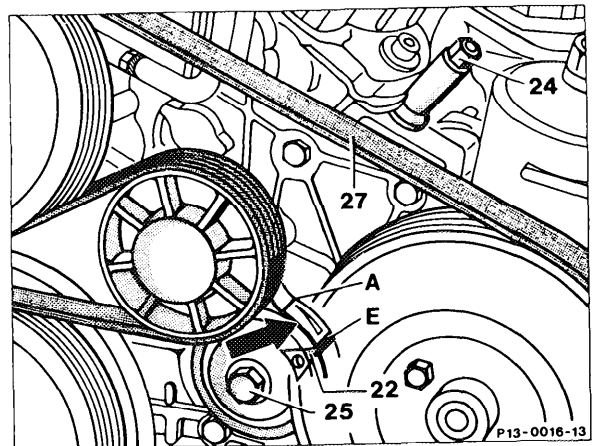


7 Tension Poly V-belt, to do this on vehicles built until mid-October 1986 turn the adjusting nut (24) to the right until the tip of the adjusting pointer (22) is located as follows:

- on vehicles with power steering or with power steering and air conditioning/automatic climate control between the 8th and 9th graduation mark.



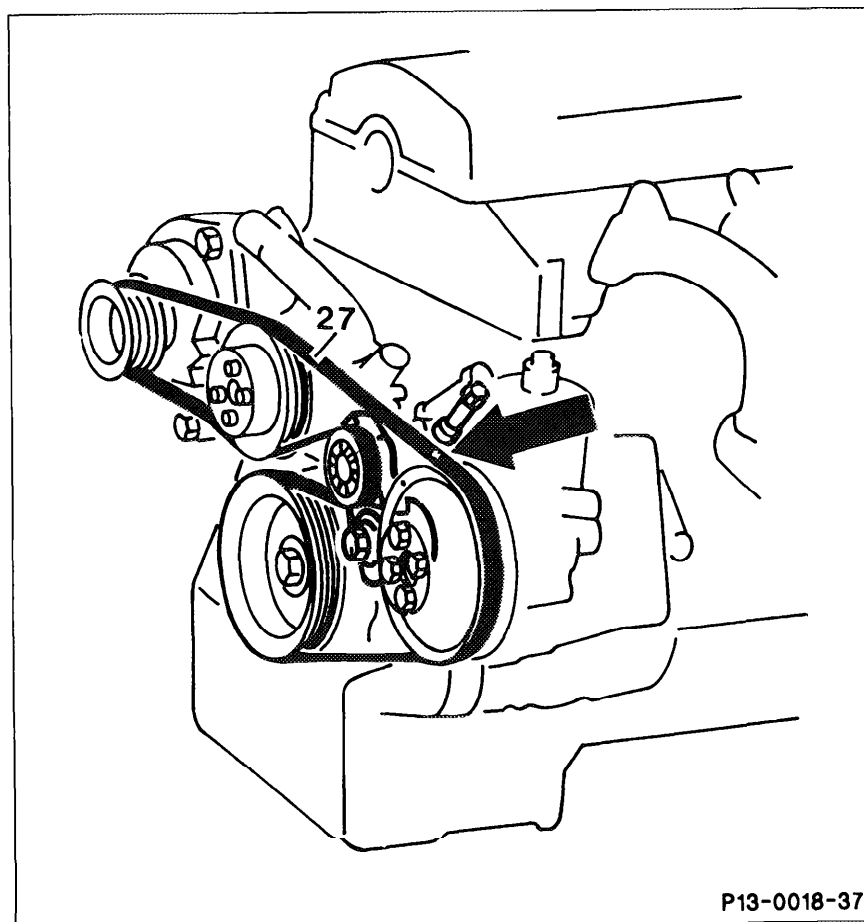
On vehicles built since mid-October 1986 turn the adjusting nut to the right until tip of the adjustment pointer is located directly over the thick line (E) on the adjusting scale.



8 Torque bolt (25).

Tightening torque:		
Across flats width	19 mm	75 Nm
Across flats width	17 mm	80 Nm

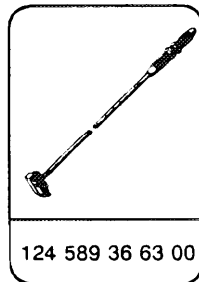
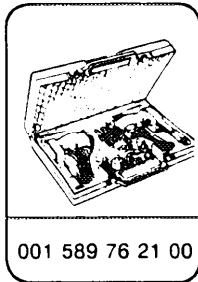
13-343 Checking condition of Poly V-belt



P13-0018-37

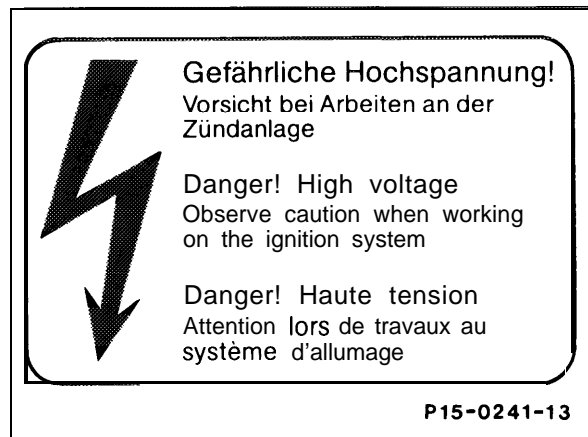
Ignition	turn off, pull off, refit cable 4 on switching unit. On injection engines remove, install the fuel pump relay module (Number 1).
Compression pressure recorder	connect 001 589 76 21 00 with adaptor 124 589 36 63 00 to positive battery terminal and terminal 50 (Numbers 2, 3 and 4).
Poly V-belt (27)	mark with chalk at a clearly visible point (arrow). Partly turn engine, check belt for damage (Numbers 5 and 6).

Special tools



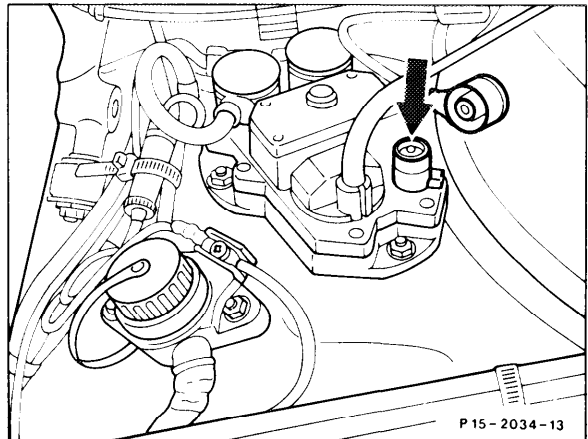
The engines are equipped with a distributor ignition system. Due to the high ignition voltage it is very dangerous to touch ignition system components (ignition coil, ignition cables, spark plug connectors, diagnostic connector), when:

- the engine is running
- the engine is being started
- the key in the ignition switch is in position 2 and the engine is turned by hand



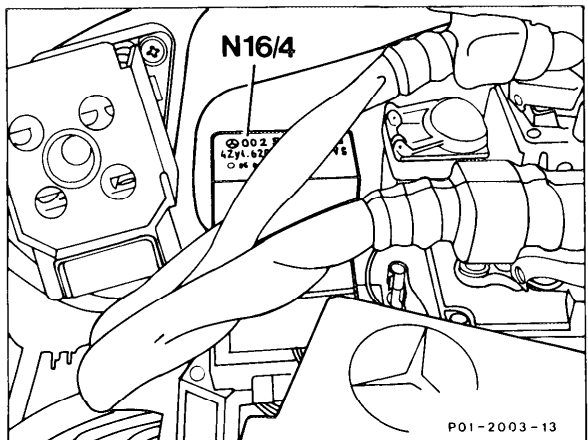
Testing

1 Switch off ignition. Pull off plug from ignition distributor sensor (green and black cable on the switching unit) (arrow).



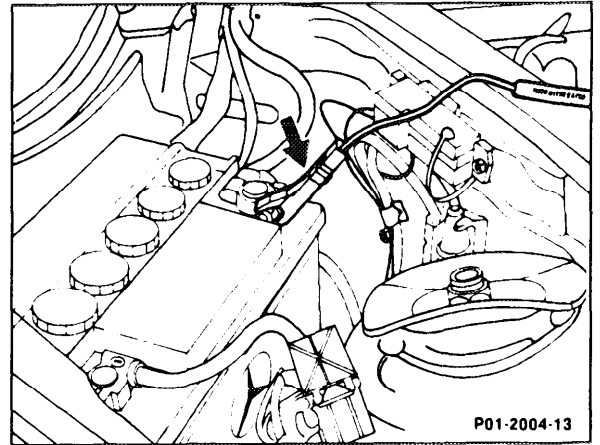
Note

On injection engines pull off fuel pump relay module (N16/4) before turning the engine, so that no fuel is injected.



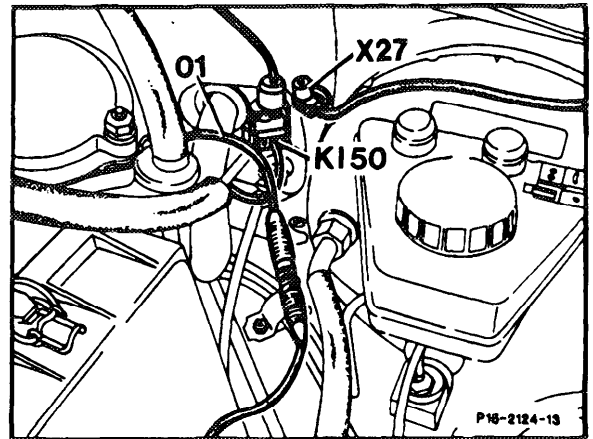
Shown on model 201

2 When connecting compression pressure recorder, connect one of the two crocodile clips (arrow) of the compression pressure recorder Part No. 001 589 76 21 00 to the positive battery terminal.



3 Pull off plug (X 27) from plug connector (terminal 50).

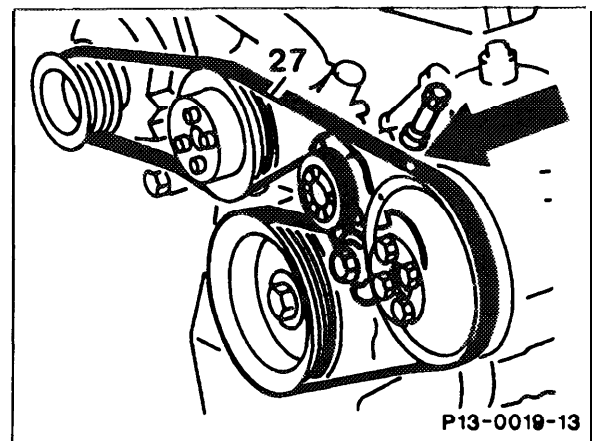
4 Connect plug of the adaptor lead (01), Part No. 124 589 36 63 00.



201 model

5 Mark Poly V-belt with chalk in a clearly visible position.

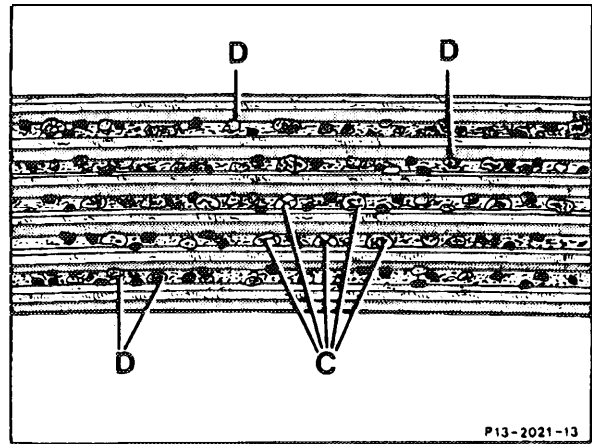
6 Turn engine partly with the compression pressure recorder Part No. 001 589 76 21 00 and the adaptor cable Part No. 124 589 36 63 00 and at the same time check Poly V-belt for damage. Terminate the process, when the marking is visible again (one full belt rotation).



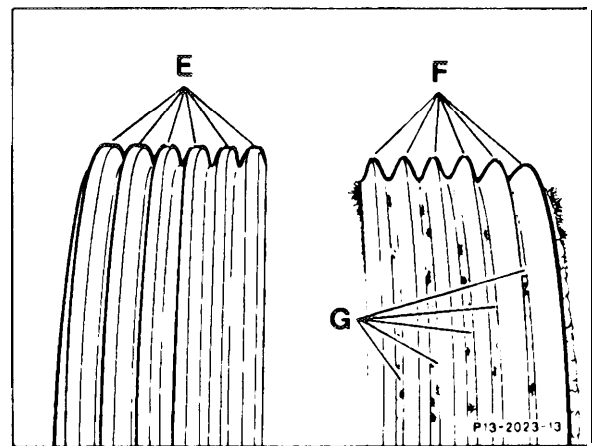
The Poly V-belt must be replaced, when the following forms of damage occur:

Forms of damage

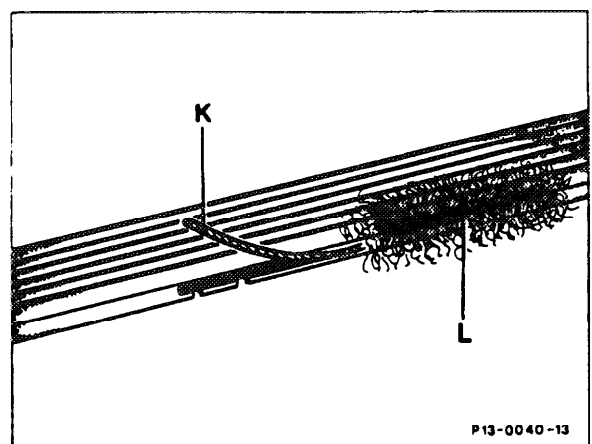
- Rubber nodules in the base of the ribs (C).
- Deposits of dirt or stones (D).



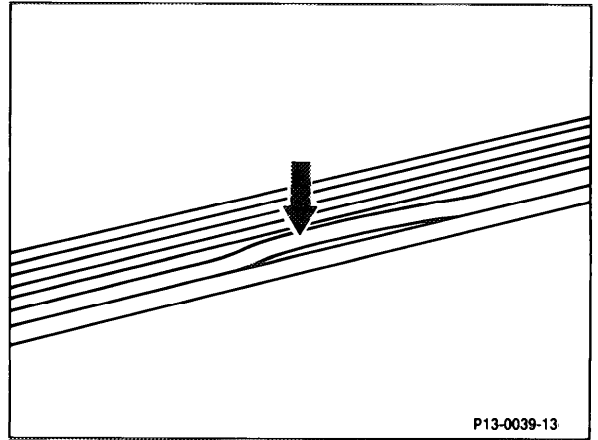
- Wear on flanks (F, ribs are triangular, when worn; ribs are trapezoidal when brand new E) and pulled strands are visible in the base of the ribs (G, brighter points).



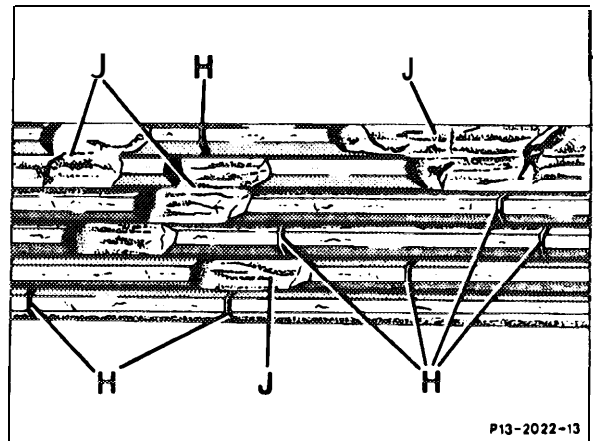
- Strands pulled out at the side (K) or frayed outer strands (L).



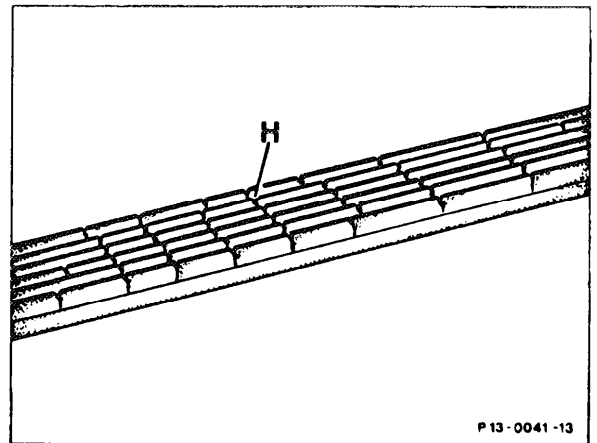
- Rib loosened from rib base (arrow).



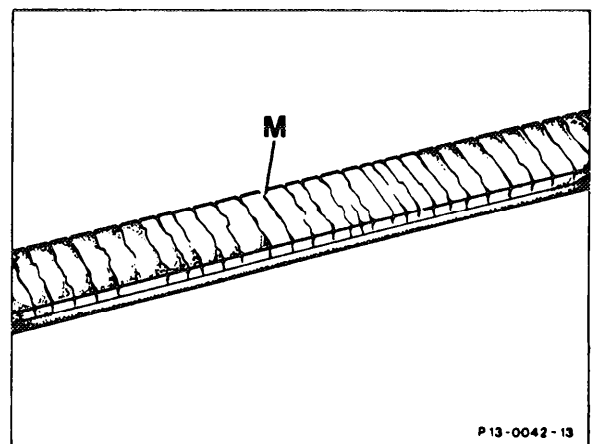
- Transverse cracks in the ribs (H) and/or ribs broken away (J).



- Transverse cracks (H) in several ribs.

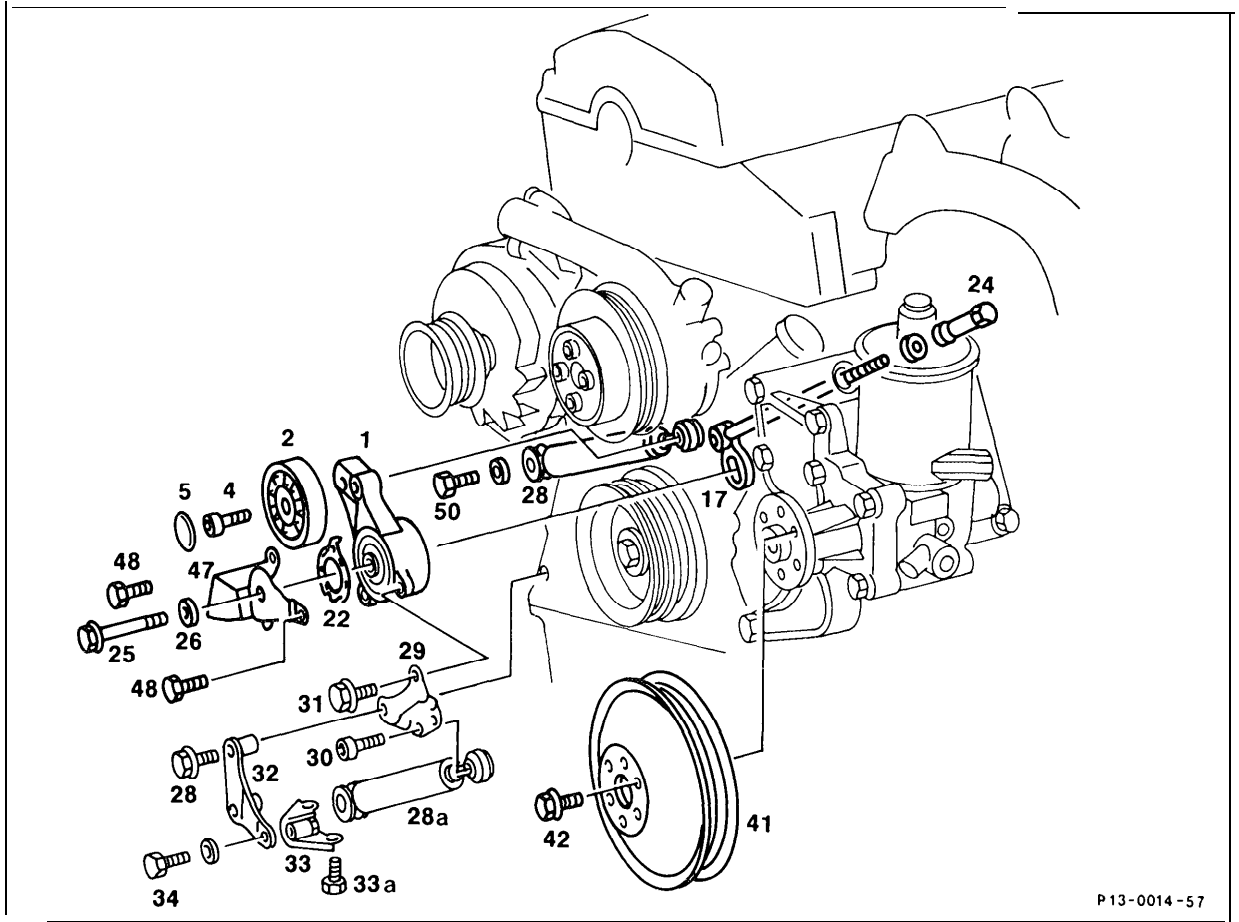


- Transverse cracks (M) on the back.



13-345 Installation and removal of Poly V-belt tensioning fixture

Preceding work:
Poly V-belt removed (13-342).



Without shock absorber

Adjusting screw (25)

unbolt, bolt up, remove, insert tensioning element (1) (Number 1).

Idler pulley (2)

unbolt, bolt up, to do this remove, install cover (5), 25 Nm.

With shock absorber strut of lower damping position

Shock absorber (28a)

unbolt, bolt up, together with the bracket (29). Bolts (31 and 34), 25 Nm (Number 3).

Bolt (25)

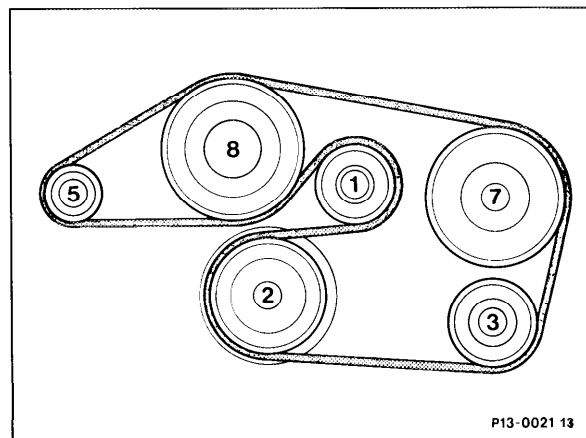
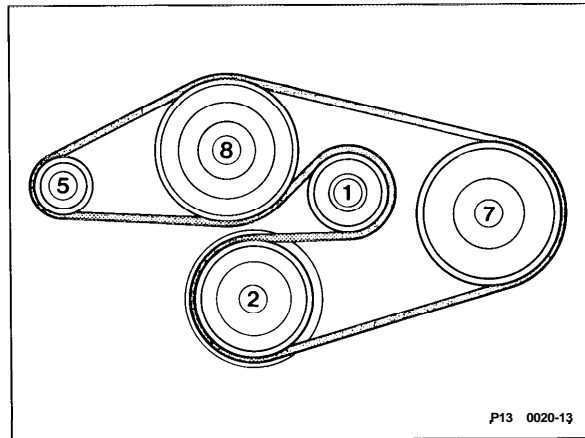
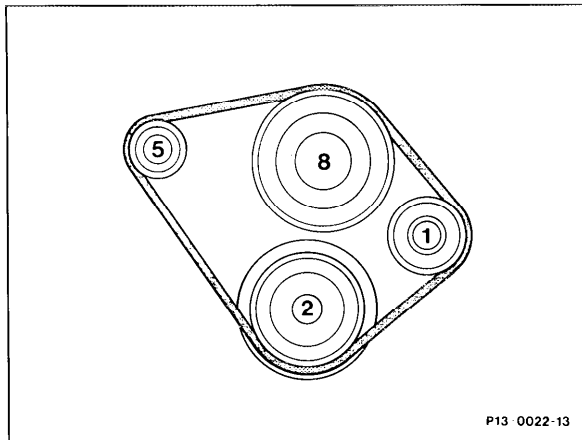
unbolt, bolt up, remove, install tensioning fixture (1).

With shock absorber strut of upper damping position

- Pulley (41) unbolt, bolt up, 30 Nm (Number 6).
- Idler pulley (2) unbolt, bolt up, 25 Nm.
- Shock absorber (28) unbolt, bolt up on the tension lever (1) and on the alternator bracket. Special tool 102 589 01 07 00 (Numbers 8 and 9).
- Bracket (47) unbolt, bolt up, 25 Nm (Numbers 10 and 11).
- Bolt (25) unbolt, bolt up, remove, install bracket (47) and tensioning fixture (1), (Number 12).

Dimensions

Belt layout	A	B	C
Belt length in mm	1020	1885	1980

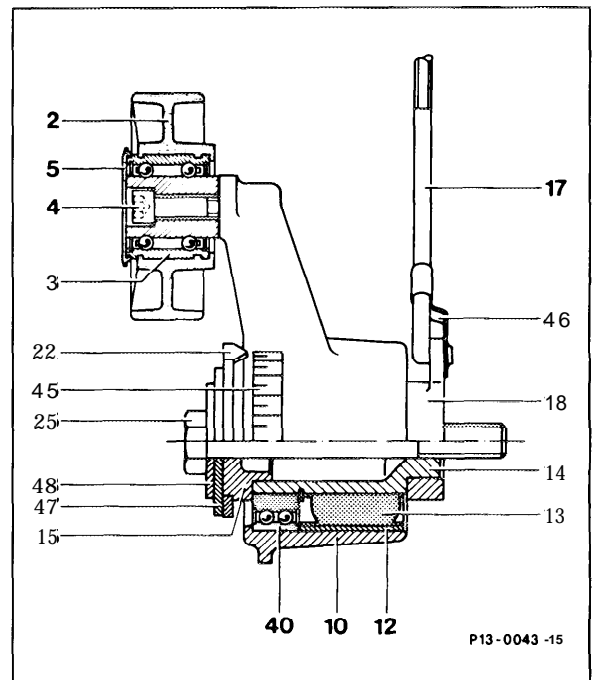


- 1 Idler pulley
- 2 Crankshaft
- 3 Refrigeration A/C compressor
- 5 Alternator
- 7 Power steering pump
- 8 Engine coolant pump

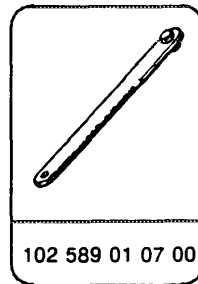
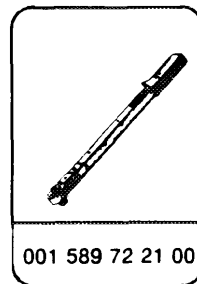
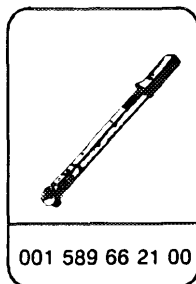
Note

The V-belt is tensioned by an automatic tensioning fixture. Through its construction and operation it guarantees an even belt tension over the whole engine speed range. This is achieved by a rubber element in the tensioning fixture, which has to be pre-tensioned by hand when installing a new Poly V-belt.

- 2 Idler pulley
- 3 Deep groove ball bearing
- 4 Hexagon socket screw
- 5 Sealing cover
- 10 Bracket-rubber bearing
- 12 Outer sleeve
- 13 Rubber bearing
- 14 Inner sleeve
- 15 Front sleeve
- 17 Connecting rod
- 18 Lever
- 22 Adjustment pointer
- 25 Bolt **M12 x 115**
- 40 Double roller bearing
- 45 Adjustment scale
- 46 Locking device
- 47 Bracket
- 48 Washer

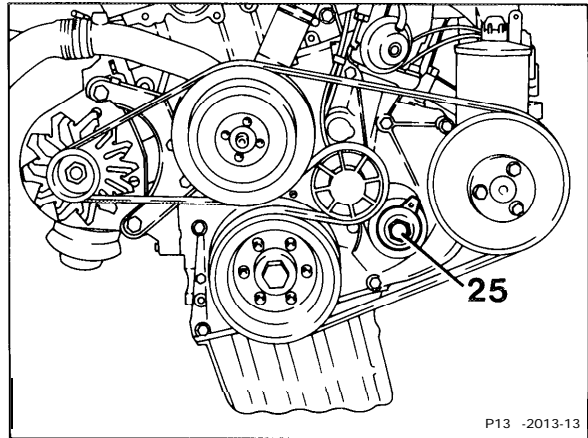


Special tools

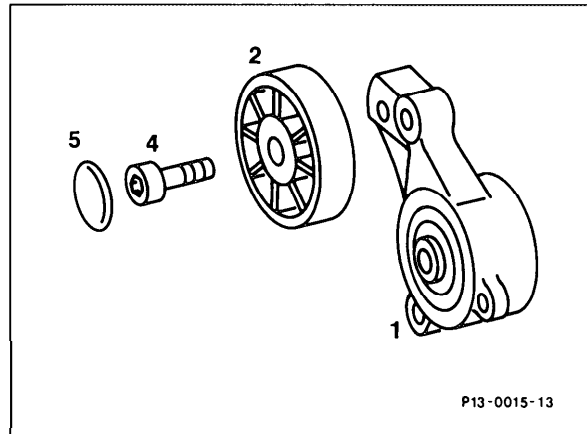


Removing and installing

1 On tensioning devices without shock absorber (1st design) unbolt, bolt up fixing bolt (25), remove belt tensioner.



2 Remove, press on sealing cover (5). Unbolt, bolt up hexagon socket screw (4) and remove idler pulley, tightening torque 25 Nm.

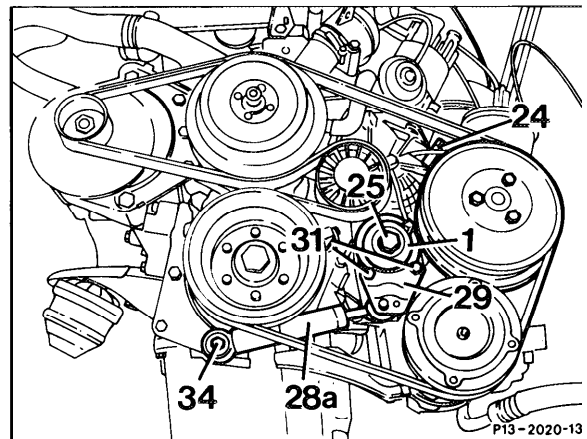


3 On tensioning devices with lower damping position

Unbolt shock absorber (28a) and bracket (29), to do this remove bolts (31 and 34).

4 Remove bolt (25) and remove tensioning fixture (1).

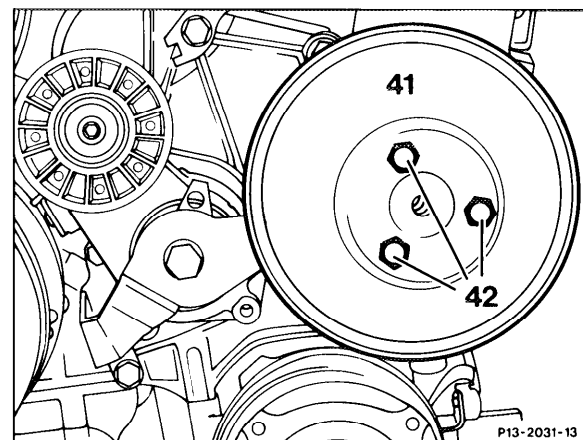
5 Unbolt idler pulley.



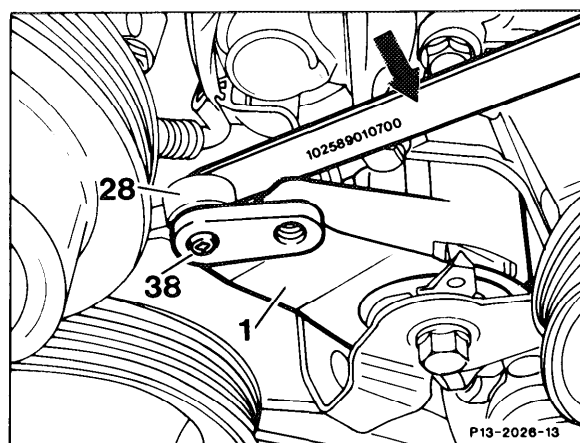
6 On tensioning devices with upper damper position

Unbolt, bolt up pulley (41) for oil pressure pump power steering, tightening torque 30 Nm.

7 Unbolt, bolt up, idler pulley (2), tightening torque 25 Nm.



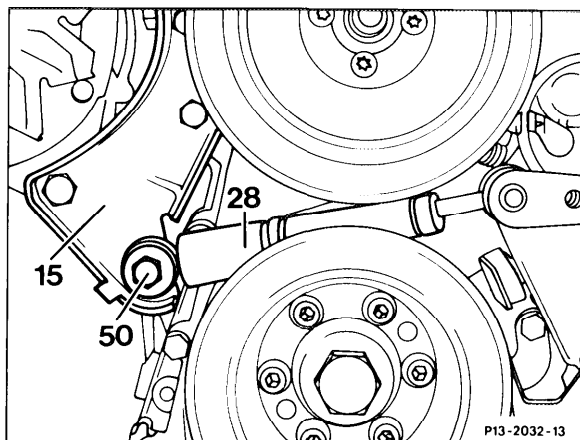
8 Unbolt shock absorber (28) at the tension lever (1), to do this hold in position with screwdriver 102 589 01 07 00 (arrow).



9 Unbolt, bolt up shock absorber (28) at the bracket (15) for alternator. Tightening torque 25 Nm.

Note

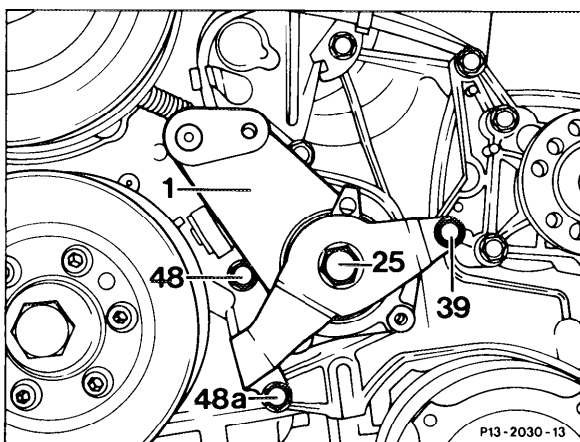
If a washer has been installed between the tensioning element (1) and shock absorber (28), refit this during assembly.



10 Unbolt nut from bolt (39) behind the power steering pump carrier.

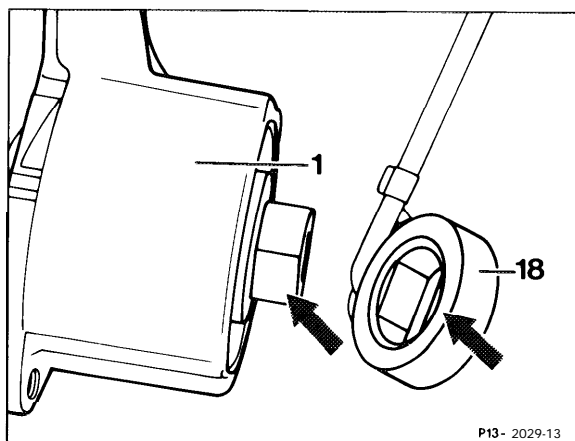
11 Unscrew bolts (48 and 48a).

12 Unscrew bolt (25), remove tensioning device (1) together with the pressed bracket (47).



Note

When installing tensioning fixture (1) put on lever (18) with the connecting rod to suit the tensioning element (arrows). Only fit the fixing bolt (25) loosely, do not tighten up. Tightening torque of M8 bolt 25 Nm.



13-346 Changes to the Poly V-belt tensioning device

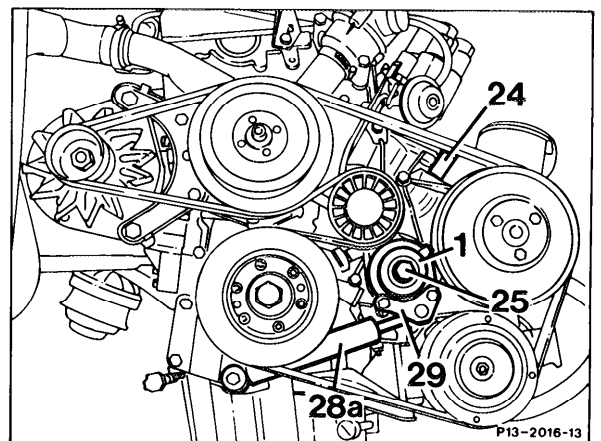
From December 1984 all 102 engines with automatic transmission and engines with manual transmission and air conditioning and automatic climate control have a revised tensioning device with an additional shock absorber. The revised design can also be installed on vehicles manufactured prior to this date.

Production breakpoint

Model	From chassis end No. A	From chassis end No. F
201.024	178818	068273*

* 201.024 model with automatic transmission from chassis end No. A174443/F 065148

Lay out of shock absorber for Poly V-belt tensioning device

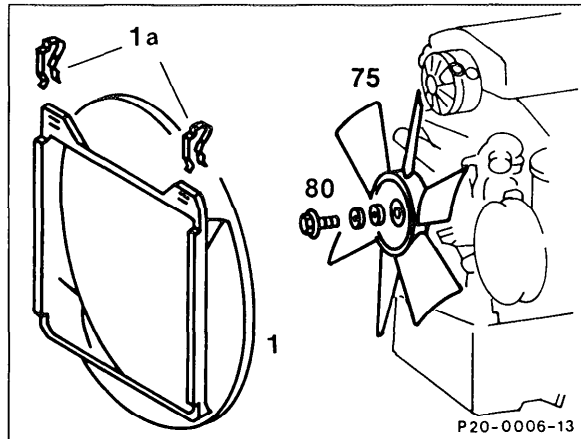


28a Shock absorber
1 Tensioning device

P13-2016-13

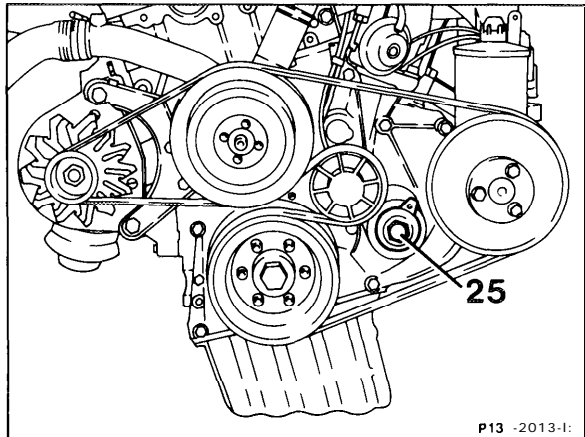
Scope of work for retroactive installation

1 Remove, install fan shroud (1) and fan (75), bolt tightening torque (80), 25 Nm.



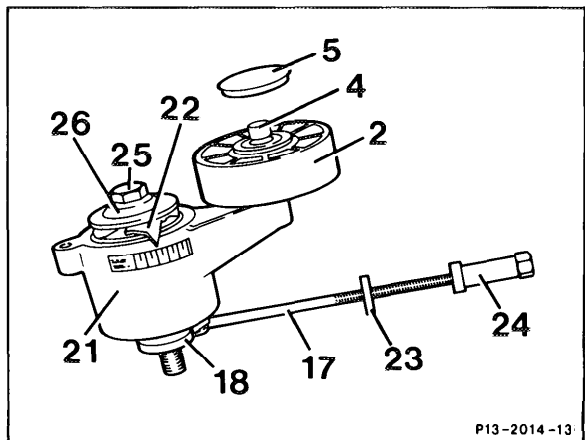
2 Remove, install Poly V-belt (13-342).

3 Unscrew fixing bolt (25) and remove belt tensioner (1).

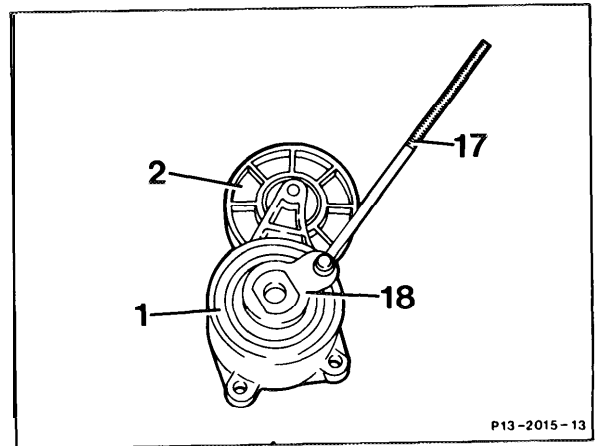


The following parts can be used again:

- Idler pulley (2)
- Bolt (4), tightening torque 30 Nm
- Sealing cover (5)
- Distance sleeve (21)
- Connecting rod (17)
- Lever (18)
- Ball socket (23)
- Adjusting nut (24)
- Adjustment pointer (22)
- Distance washer (26)
- Bolt (25)



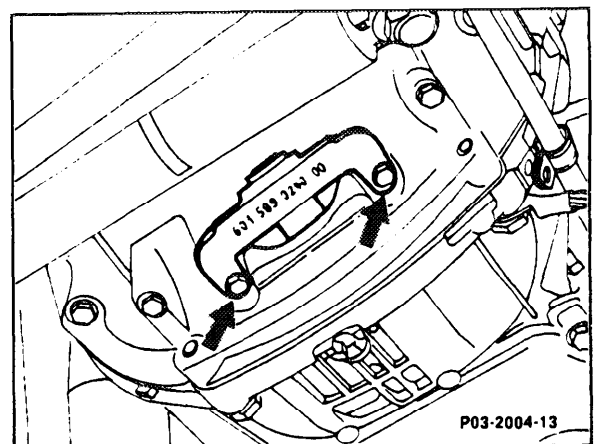
4 Complete revised tensioning device with the adopted parts. In so doing put lever (18) of the connecting rod (17) to suit the tensioning element.



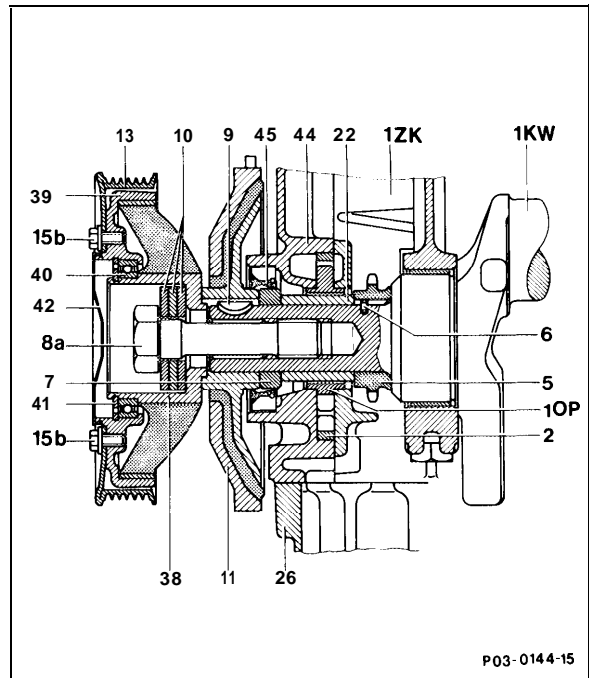
5 Install revised tensioning device. When doing this only do up the fixing bolt (25) loosely. Fit ball socket (23) under the adjusting nut (24). Bolt the adjusting nut to the connecting rod (17).

Before carrying out the work (Numbers 6 to 10), check whether the crankshaft pulley, rigidly connected with the vibration damper, has already been installed. If need be proceed with the work from (Number 11).

6 Fit holding interlock Part No. 601 589 02 40 00.



7 Unscrew bolt (8a). Remove pulley (13) and vibration damper (11).



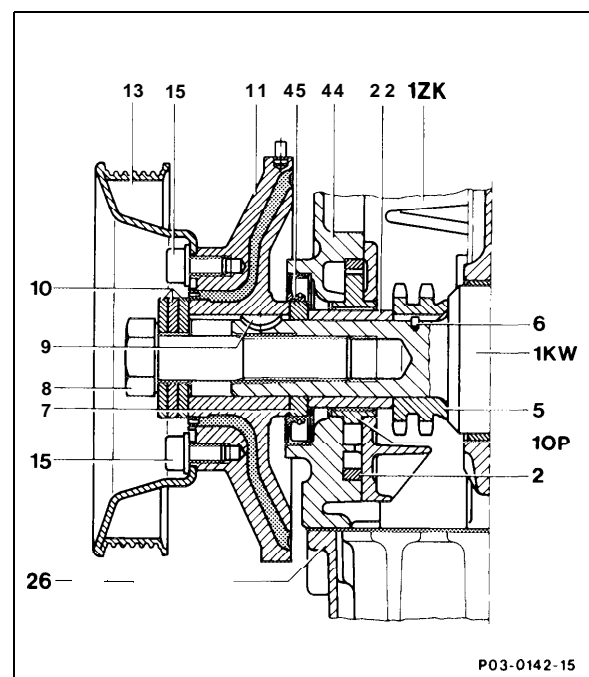
8 Install new vibration damper (11). Tighten up hexagon bolt (8) to 300 Nm.

Note

Replace the necked-down bolt (8a) M18 x 1.5 x 75 by the hexagon bolt (8).

9 Install new pulley (13). Tighten up combination screw (15) to 20 Nm.

10 Remove holding interlock.

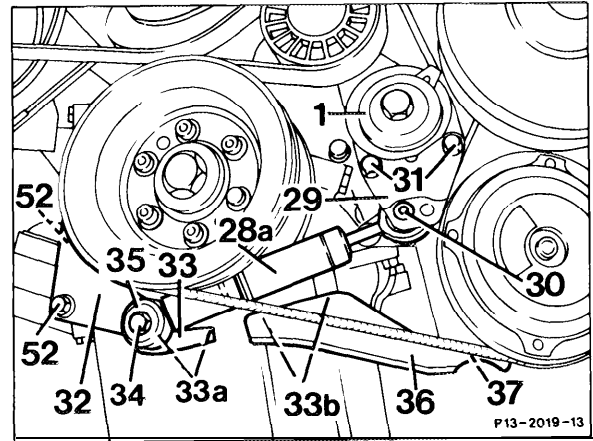


11 On vehicles with air conditioning and automatic climate control install a shorter bracket (36).

Tightening torque:

Bolt (37) 20 Nm
 Bolts (33b) 8 Nm

12 Attach bracket (33) to oil pan. Use fixing bolts M6 X 25 (33a), tightening torque 8 Nm.

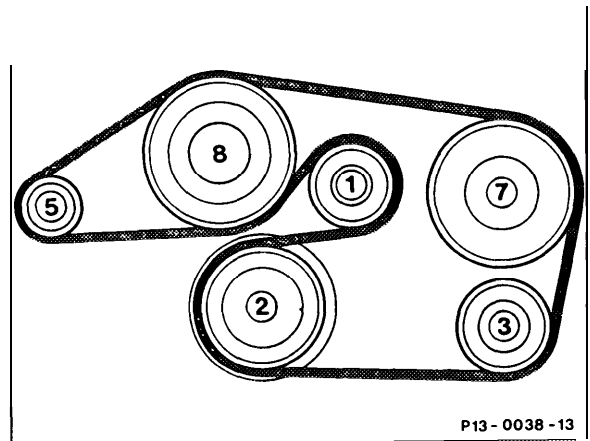


13 Install bracket (32) to timing case cover. Use fixing bolt M8 X 70 (52), tightening torque 20 Nm.

14 Install shock absorber (28a) with fixing bolt M8 X 50 (30 and 34) to the brackets (29 and 32), tightening torque 20 Nm.

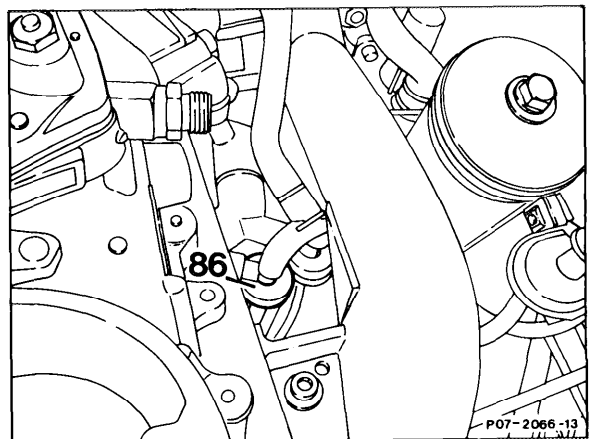
15 Put on Poly V-belt, beginning with the idler pulley (1) in numerical sequence.

- 1 Idler pulley
- 2 Crankshaft
- 3 A/C compressor
- 5 Alternator
- 7 Power steering pump
- 8 Engine coolant pump

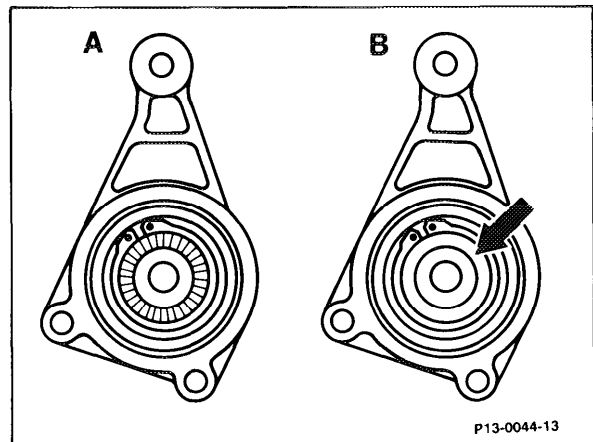


16 Tension Poly V-belt (13-342).

17 Install fan and fan shroud.



The teeth on the inner sleeve (arrow) have been deleted in order to achieve a high security against loosening or breakage of the fixing bolt.



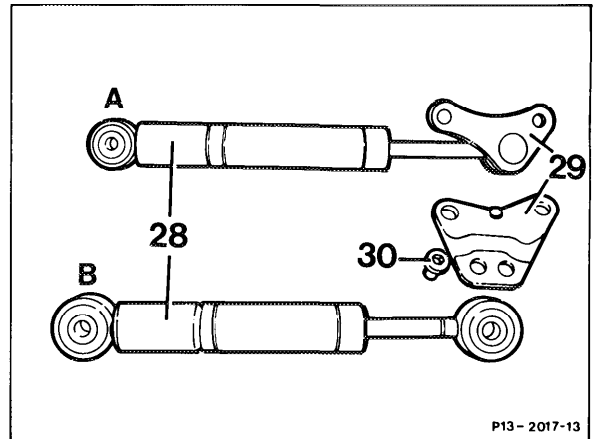
A 1st design
B 2nd design

Production breakpoint: May 1985

Model	Engine	Engine end No. Manual transmission	Engine end No. Automatic transmission	Vehicle chassis end No.	
				A	F
201.024 (USA)	102.985	002015	017298	221198	115103

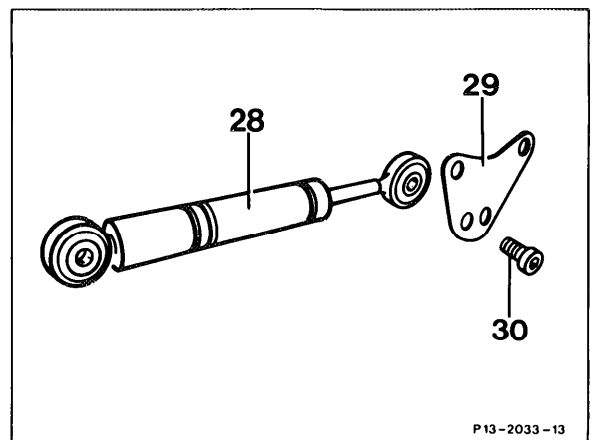
As of June 1985 model 201.02 has a revised shock absorber. The differences are the outside diameter of the attachment eye, the length of the shock absorber housing and the bracket (29), which is no longer welded to the shock absorber. The revised shock absorber can also be installed on vehicles produced prior to this date.

A 1st design
B 2nd design



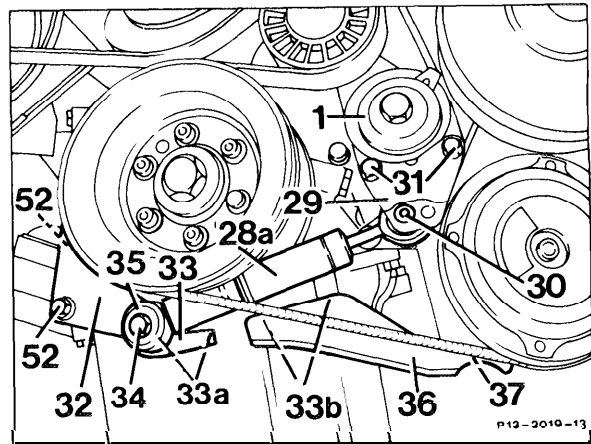
Repair note

The bracket (29) is to be attached to the shock absorber with the hexagon socket screw M6 x 25 (30) in accordance with the table.



Engine	Manual transm.	Automatic transm.	Up to engine end No.	From engine end No.	Bracket on shock absorber bore	
					A	B
102.985	X		002293			X
	X			002294	X	
		X	019688			X
		X		019689	X	

Parts		Part No.
All engines	Shock absorber (28a)	1022000714
	Bracket (29)	102 202 21 40
	Hexagon socket screw M8 x 14 (30)	007984 008063



Production breakpoint

Model	Chassis or vehicle identification end No.	
	A	F
201.024	227434	124444

The fixing bolt for the belt tensioning device M12 x 115 has a longer thread (100 mm, previously 30 mm).

Production breakpoint: April 1986

Model	Engine	Engine end No. Manual transm.	Engine end No. Autom. transm.	Vehicle chassis end No.	
				A	F
201.024 (USA)	102.985	003644	033262		218169

Since June 1986 Poly V-belts with revised material (as on engine 601, 602 and 603) have been installed.

Production breakpoint: June 1986

on vehicles with air conditioning or automatic climate control

Model	Engine	Engine end No. Manual transm.	Engine end No. Autom. transm.	Vehicle chassis end No.	
				A	F
201.024 (USA)	102.985	003835	035535		238297

Production breakpoint: July 1986

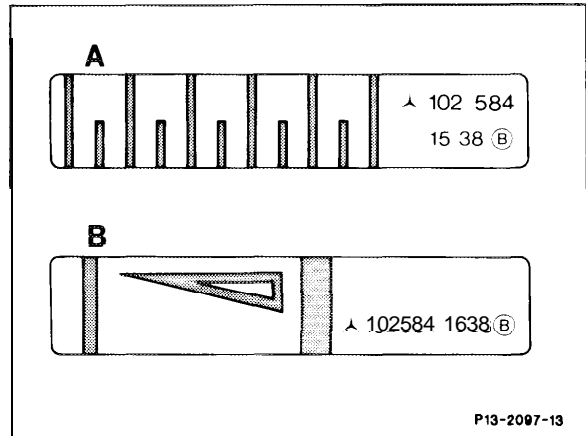
On vehicles without air conditioning or automatic climate control

Model	Engine	Engine end No. Manual transmission	Engine end No. Automatic transmission
201.024 (USA)	102.985	004020	037758

From April to July 1986 a Poly V-belt produced by the Conti Company has been installed (only on vehicles without air conditioning/automatic climate control).

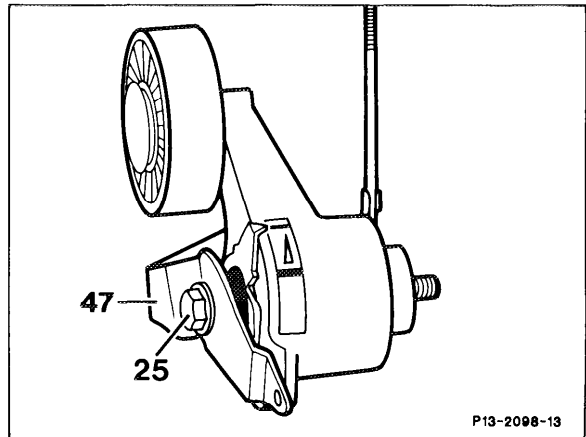
Since October 1986 an adhesive plate with revised adjustment scale for tensioning the Poly V-belt has been progressively introduced on the tensioning device.

A Adhesive plate 1st design
 B Adhesive plate 2nd design



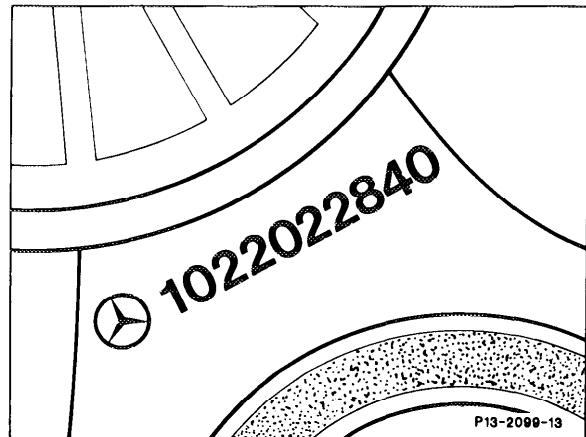
As of January 1987 a revised tensioning fixture has been installed (102.985 engine as of July 1986). This tensioning fixture has an additional pressed bracket (47), a collar screw (25), previously hexagon bolt, and a reinforced bracket for the tensioning device.

25 Collar screw
 47 Pressed
 bracket



This reinforced bracket is to be identified by the cast-in Part No. 102 202 28 40.

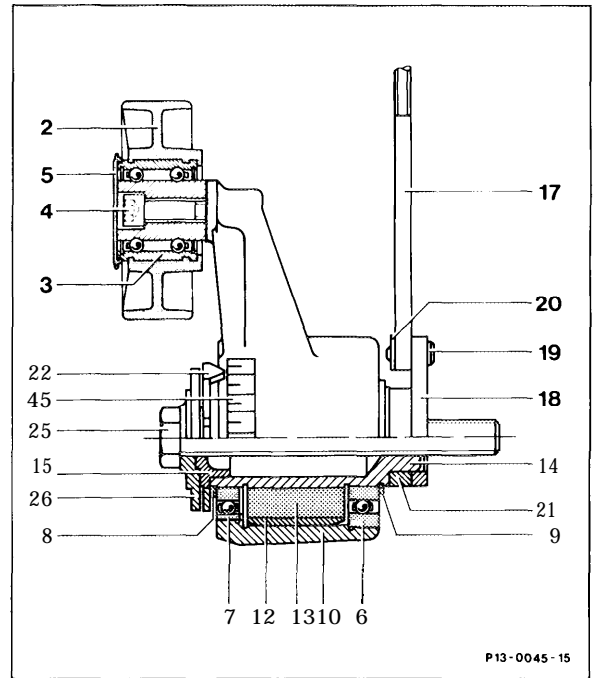
Remforced
 bracket



Changes to the tension lever

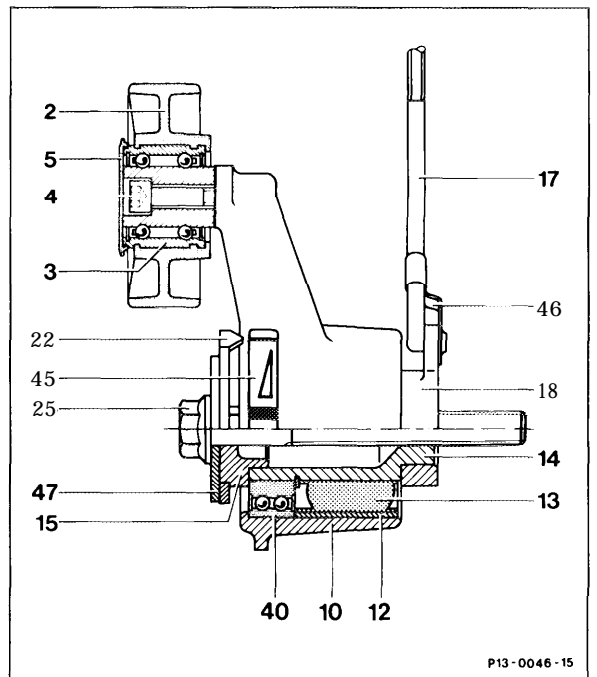
1st design

Two single row ball bearings (6 and 7), wide rubber bearing (13), hexagon bolt (25) 12 x 115 mm, tension lever (18) and distance sleeve (21), tie rod (17), attached to the tension lever (18) with bolt (19) and secured with clips (20).



2nd design

A double row angular ball bearing (40), narrower rubber bearing (13), collar screw (25) M12 x 110 mm, one piece tension lever (18), tie rod (17), attached to the tension lever (18) with sheet metal locking device (46).



Production breakpoint: July 1986

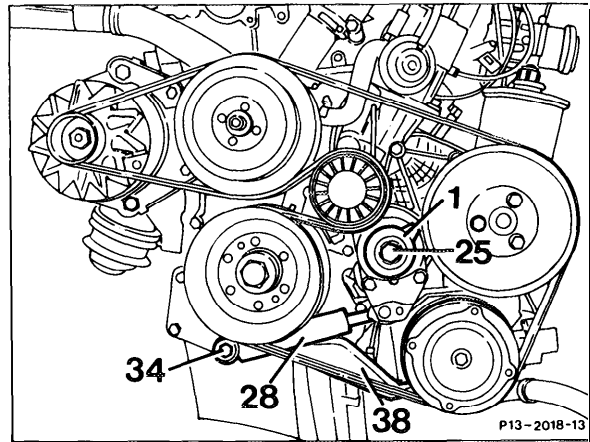
Model	Engine	Engine end No. Man. transmission	Engine end No. Autom. transm.	Vehicle chassis end No.	
				A	F
201.028	102.985	004036	037882	322007	257172

Production breakpoint: November 1986

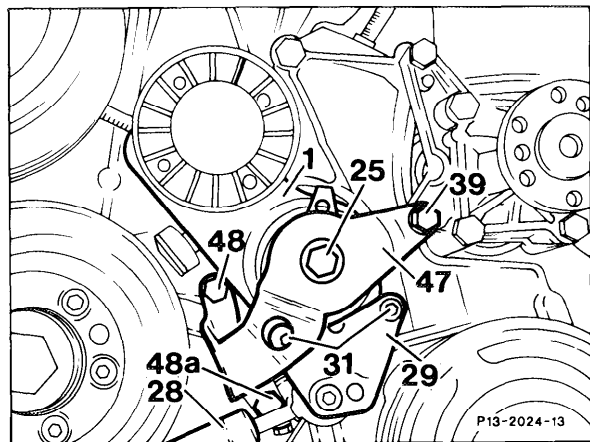
Model	Engine	Engine end No. Man. transmission	Engine end No. Autom. transm.	Vehicle chassis end No.	
				A	F
201.024 (USA)	102.985	007271	046061	-	304297

Fit revised tensioning device retroactively

- 1 Remove Poly V-belt (13-342).
- 2 Remove lower engine compartment panelling.
- 3 Loosen bolt (34) and swing shock absorber (28) downwards. Completely unscrew bolt (25) and remove tensioning fixture (1).



- 4 Remove pulley for power steering pump.
- 5 Undo nut from bolt (39) behind power steering pump/A/C compressor support.
- 6 Remove bolts (48 and 48a).



7 Install revised tensioning device with pressed bracket (47). Grease collar screw (25) M12 x 110 on the thread and the support area and screw in. Assemble adjusting nut.

8 Attach pressed bracket (47) with longer bolts.

Bolt (39) M8 x 95
(48) M8 x 45
(48a) M8 x 55

Torque the nut of bolt (39) and bolts (48 and 48a), tightening torque 25 Nm.

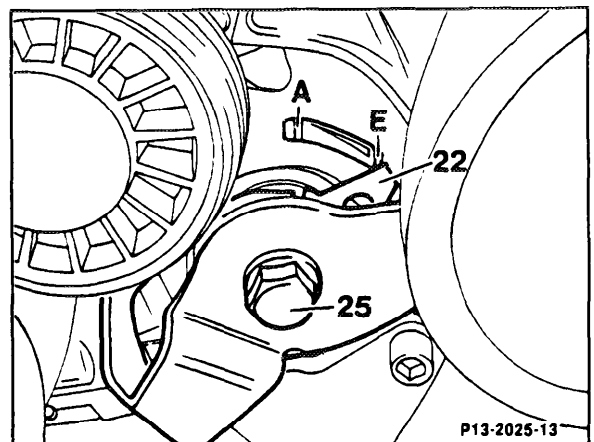
9 Install power steering pump pulley, tightening torque 30 Nm.

10 Attach bracket (29) and shock absorber (28) to tensioning fixture. Torque bolts (37 and 34), tightening torque 20 Nm.

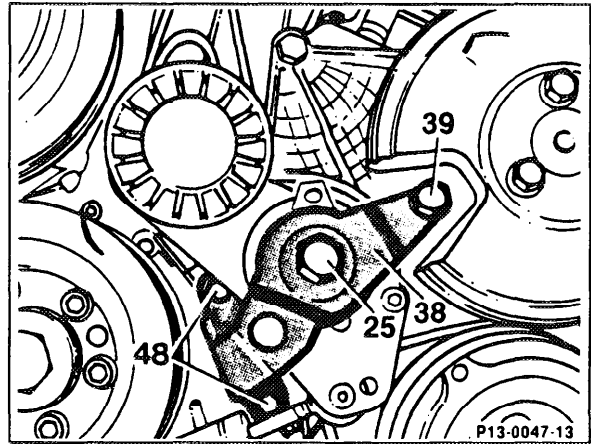
11 Install Poly V-belt (13-342).

12 Install engine compartment panelling.

13 Push adjustment pointer (22) to the left until the tip is directly over the scale marking (A). Then turn the adjusting nut (24) to the right until the tip of the adjustment pointer is directly over the scale marking (E). Tighten up collar screw (25), tightening torque 80 Nm.



As of January 1987 the collar screw (25)
 M12 x 110 has been changed to a hexagon bolt
 with washer M1 2 x 115.

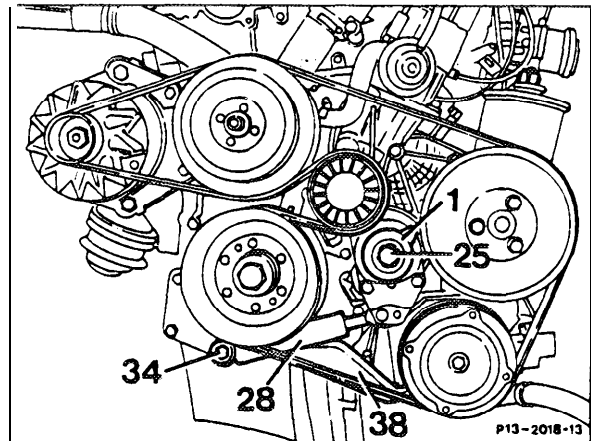


Production breakpoint: January 1987

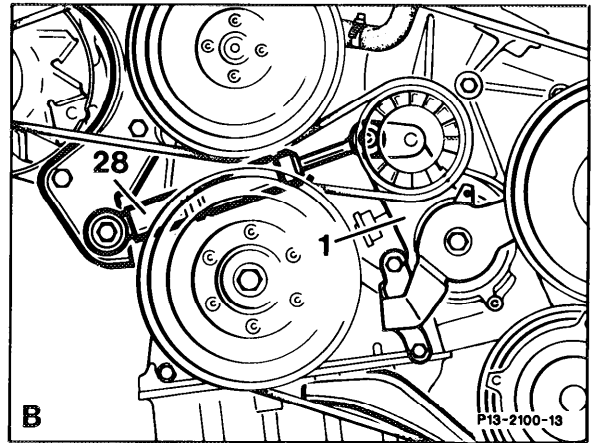
Model	Engine	Engine end No. Manual transmission	Engine end No. Automatic transmission
201.028	102.985	009464	049226

Revised fitting position of the shock absorber

As of November 1987 the shock absorber has
 been installed overhead (previously underneath).



A Lower fitting position (1st design).



A Upper fitting position (2nd design)

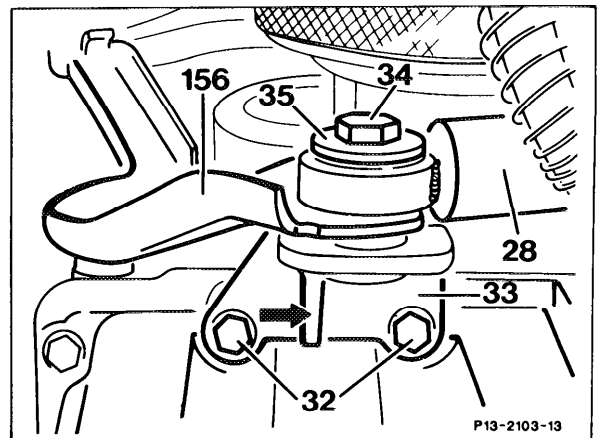
The following parts have been changed:

- Shock absorbers;

Note

In the event of repair **do not confuse** the shock absorbers for the upper and lower fitting position. The shock absorber Part No. 102 200 12 14 (overhead) can be fitted for the shock absorber Part No. 102 200 08 14 (underneath). On engines prior to November 1987 the overhead shock absorber cannot be installed retroactively.

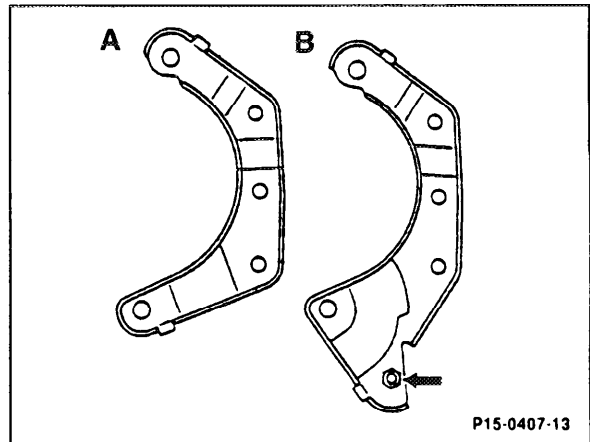
- Tensioning device with additional cast eye (B) for fixing the shock absorber.



A 1st design
B 2nd design

- Coolant pump (see group 20)
- Vibration damper (see group 03)
- Pressed bracket (B) for attaching alternator with M8 welded nut for attaching the shock absorber (arrow).

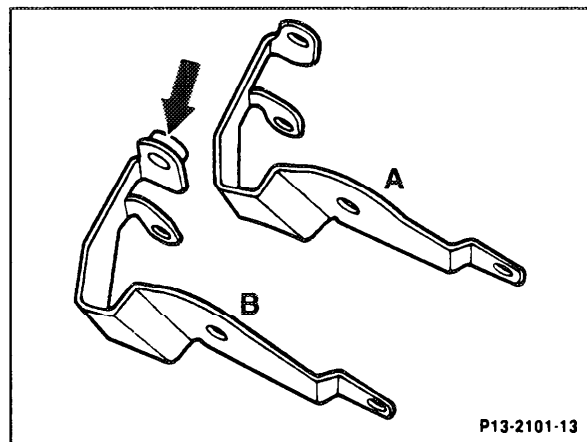
A 1st design
B 2nd design



Production breakpoint: November 1987

Model	Engine	Engine end No. Man. transm.	Engine end No. Autom. transm.	Vehicle chassis end No.	
				A	F
201.028	102.985	020298	064022	421492	445940

As of January 1988 the bracket (B) for supporting the tensioning device has been fitted with a welded-on eye (arrow).



Production breakpoint: January 1988

Model	Engine	Engine end No. Man. transm.	Engine end No. Autom. transm.
201.028	103.985	022013	067143