

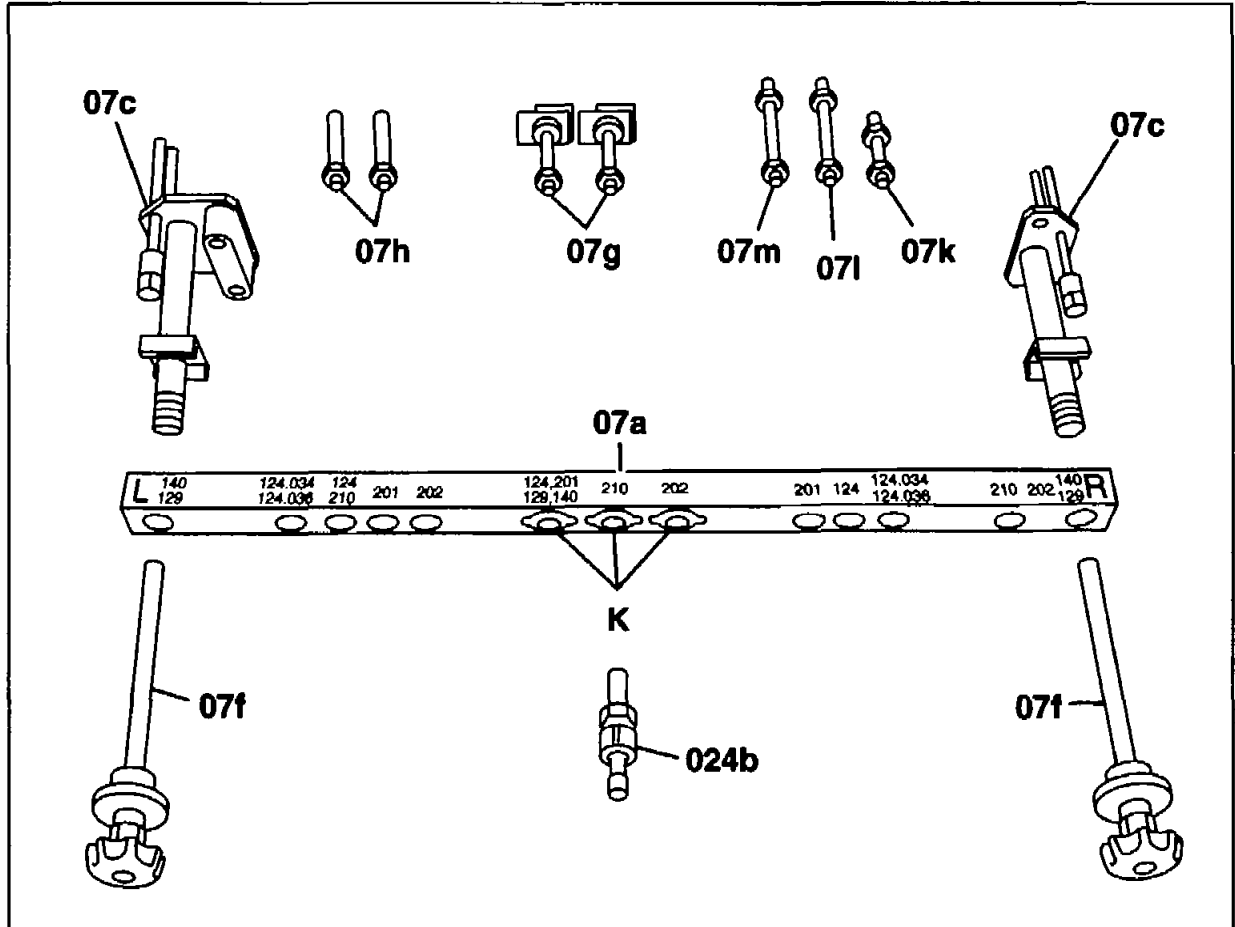
40-0400 Checking vehicles involved in or suspected of being involved in an accident

A. General

We recommend proceeding as follows for proper evaluation of vehicles involved in or suspected of being involved in an accident.

1. Measure vehicle optically or electronically, enter reading in data sheet.
2. If a clear diagnosis cannot be made by chassis measurement, perform the distance and comparison measurements.
These measurements are performed at the significant mounting and fastening points on the body and axle carriers.
3. The axle components on the front and rear axle can also be checked for accident damage individually as well as a complete unit (refer to 40-0405 to 40-0452).

B. Preparations for distance and comparison measurement



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Suspension 202 589 02 63 00

07a	Carrier	07l	Threaded bolt model 202 right 202 589 02 63 32
07c	Mount with aligning bubble level	07m	Threaded bolt model 210 right 202 589 02 63 33
07f	Star-shaped handle with guide pin and knurled nut	024b	Retaining pin
07g	Threaded bolt with retaining clip		
07h	Self-tapping threaded bolt for models 124 and 201		
07k	Threaded bolt model 202, 210 left 202 589 02 63 31		

Vehicle

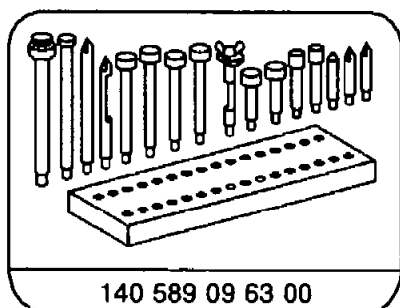
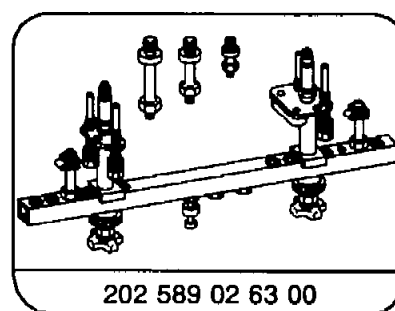
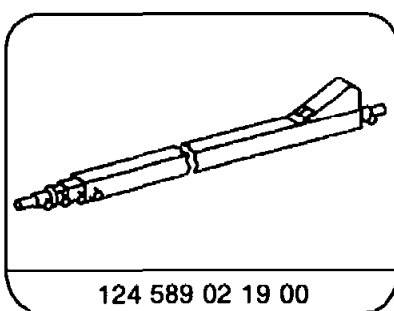
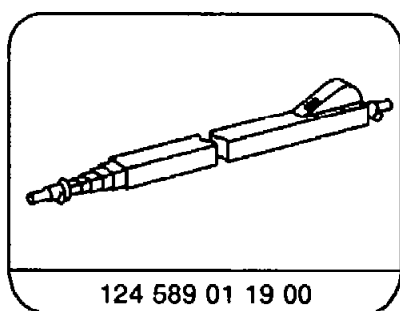
Align in longitudinal direction by loading with weights so that there is no inclination from front to rear. This is an essential requirement for the distance measurements "V4" and "H3". Measure the inclination along the door threshold e.g. with a spirit level.

Suspension components

Preassemble as shown corresponding to the vehicle model. First screw threaded bolts (07h, 07k) onto the body.

Threaded bolts (07h)	Screw into the check holes "k" (number 1).
Suspension (07) 202 589 02 63 00 with the star-shaped handles (07f)	Fasten with the threaded bolts (07h) and position horizontally by means of the spirit level and adjusting bolts (numbers 1 and 2).
Bracket 201 589 07 63 00	On model 201 up to 07/86, place in the check hole "k" in the frame floor and fasten in the center hole with the thumb screw, while moving the bracket into the upright position via the aligning bubble level (number 3).
Telescopic measuring rod	Insert at retaining pin (024b) for measuring point "K" (number 4).

Special tools



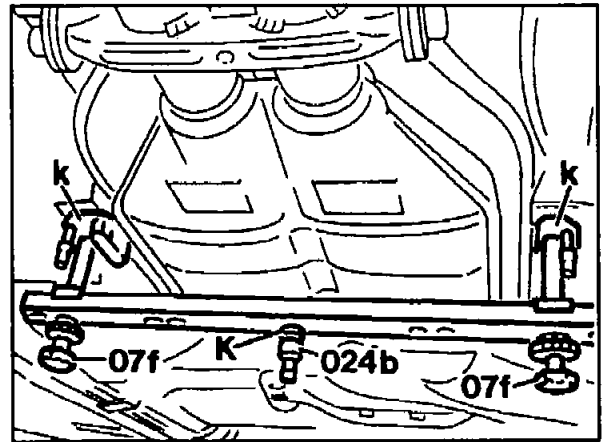
Equipment (shop-made)

Weights for vehicle load	2 × 5 kg
(for aligning the vehicle in the longitudinal direction)	5 × 10 kg
	5 × 20 kg

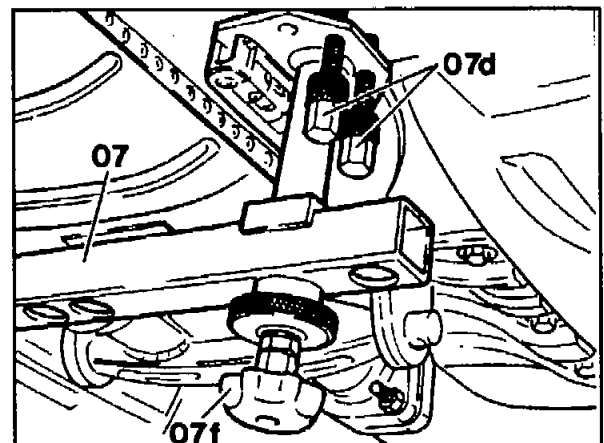
Installing suspension and measuring rods

1 Screw threaded bolts into the check holes "k". Fasten suspension using the star-shaped handles (07f) with the threaded bolts (07h). Screw in threaded bolts (024b) for mounting telescopic measuring rod in check hole "K".

Model 124, 201 as of 06/86

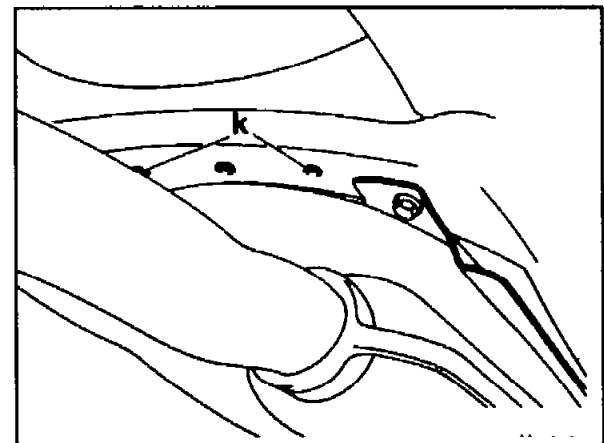


2 Adjust threaded bolts (07d) so that the bubble level is horizontal. Always ensure that all four threaded bolts (07d) are in contact to stabilize the suspension on the frame floor.

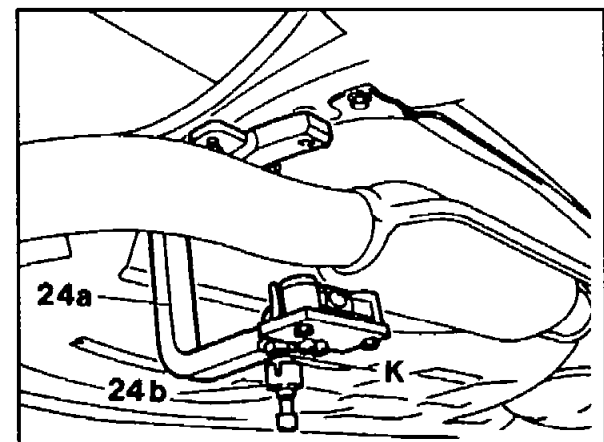


3 Attachment of bracket (24a) on model 201 up to 07/86:

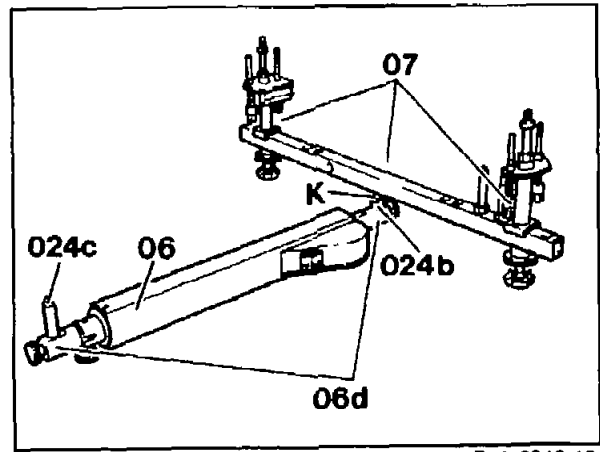
Remove these downstream of the plug connection on vehicles with a dual branch exhaust system.



Plug the bracket in the check hole "k" in the frame floor and fasten in the center hole using the thumb screw. Move the bracket upright via the aligning bubble level.

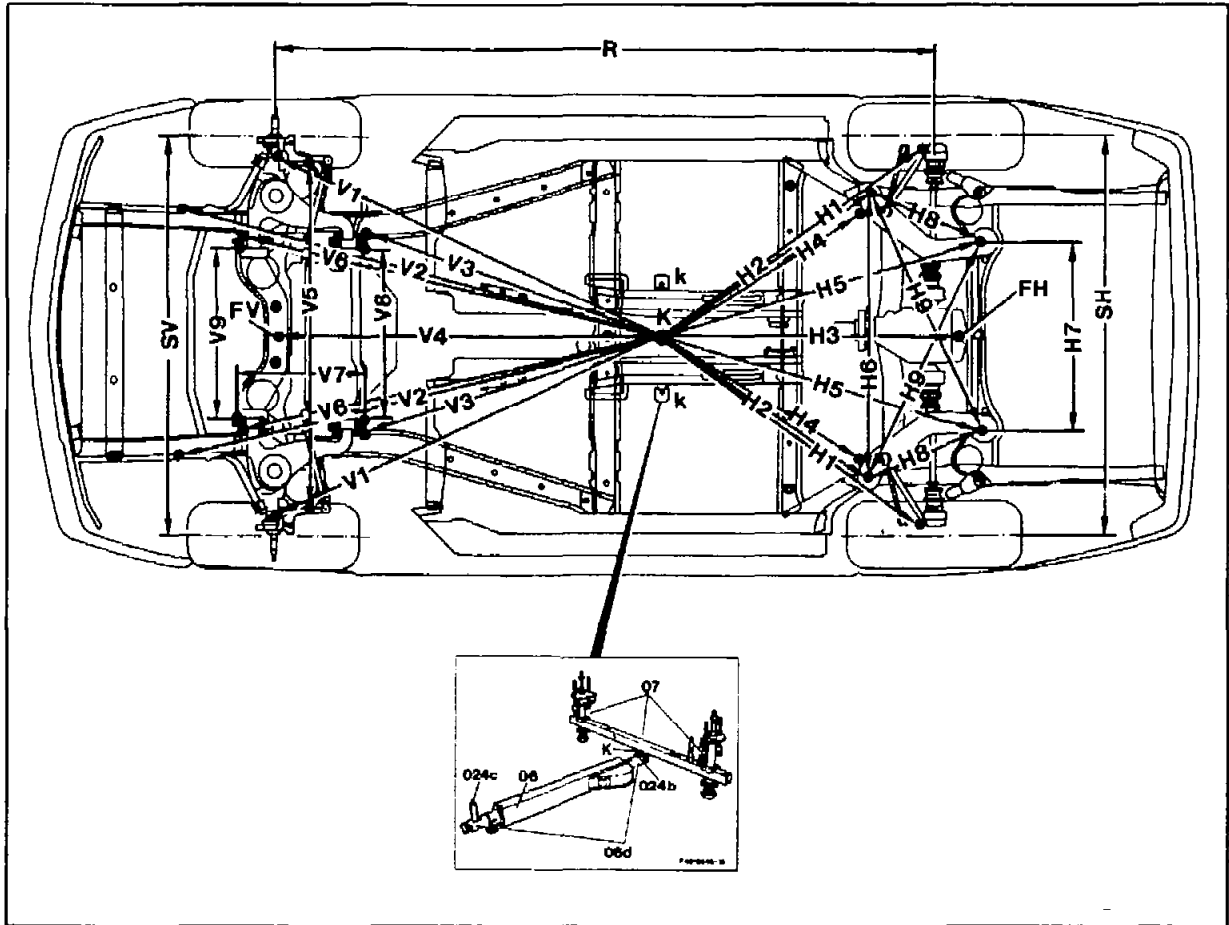


4 Insert the telescopic measuring rod (06) with connecting sleeves (06d) on the retaining pin (024b). In each case, insert the measuring tip/pin for the corresponding distance/comparison measurement.



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C. Distance and comparison measurement at front and rear axles



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k Check holes in body floor
 K Check hole in suspension (07)
 R Wheelbase
 FV Locating hole in front axle cross member

FH Locating hole in rear axle center piece assembly
 SV Track width at front axle
 SH Track width at rear axle

Measurements V1-V9 and H1-H9 Perform using telescopic measuring rod (06), measuring range 415-925 mm part no. 124 589 01 19 00, measuring range 920-2600 mm part no. 124 589 02 19 00.

Use appropriate measuring pins/tips from the measuring socket set for telescopic measuring rod.

Data

Measurement	Permissible difference between left and right or distance in mm.	
	Model 124	Model 201
Front axle		
V1 ¹⁾	8	
V2	4	
V3	3	
V4	1187.5 ± 3 1457.5 ± 3 ²⁾	1160 ± 3
V5	1236 ± 3	1176,5 ± 3
V6	3	
V7	429 ± 2 529 ± 2 ²⁾	429 ± 2
V8	653 ± 3	593 ± 3
V9		588 ± 3
Rear axle		
H1	4	
H2	3	
H3 on rear axle center piece ∅ 168 mm	1636 ± 5 Saloon ⁴⁾ 1551 ± 5 Coupé 2286 ± 5 Special long body ³⁾	1515 ± 5
	∅ 185 mm	1655 ± 5 Saloon ⁴⁾ 1570 ± 5 Coupé, convertible 2305 ± 5 Special long body ³⁾ 2455 ± 5 Long saloon
	∅ 210 mm	1647 ± 5 Saloon ⁴⁾ 1562 ± 5 Coupé, convertible
H4	4	
H5	6	
H6	1070 ± 2	1000 ± 2
H7	702 ± 2	632 ± 2
H8	3	
H9	3	

¹⁾ A prerequisite for evaluation of dimension "V1" is that the values for camber and caster at the left and right front wheels are within the permissible tolerances (refer to 40-0320).

²⁾ 4MATIC only.

³⁾ Special long body with 3600 mm wheelbase, e.g for ambulances and funeral cars.

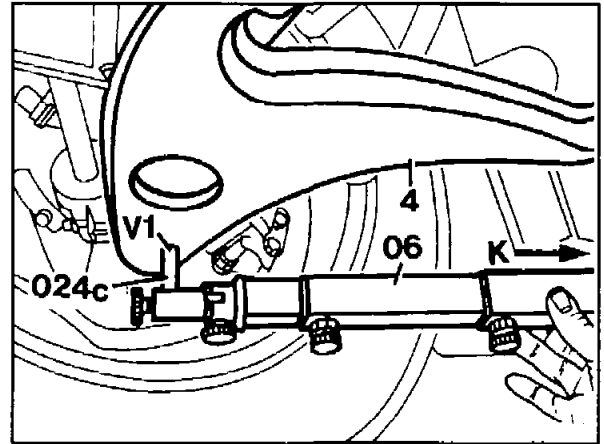
⁴⁾ Saloons, T-saloons and special bodies with 2800 mm wheelbase.



Front axle

1 Measure distance "V1" from check hole "K" to 8 mm dia. hole in wishbone (4) from left to right or for 4MATIC vehicles at center of the outer threaded bolt.

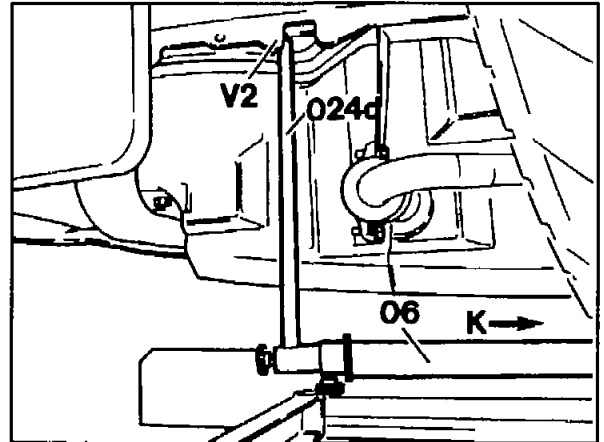
Use measuring tip (024c) 140 589 09 63 29.



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2 Measure distance "V2" from check hole "K" to front edge of recess in body side member, left to right.

Use measuring tip (024d) 140 589 09 63 03.

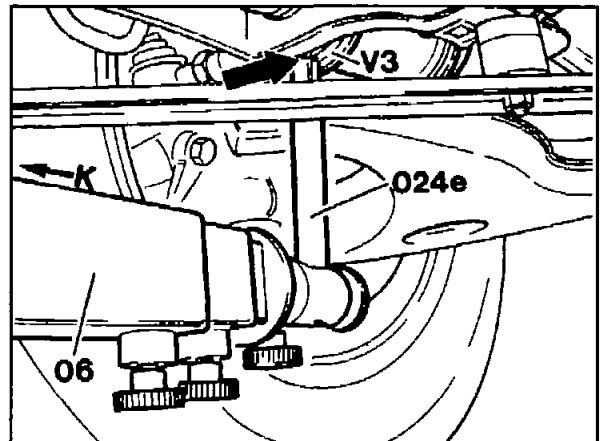


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3 Measure distance "V3" from check hole "K" to rear wishbone mount on body side member, left to right.

Use center rubber mount on the inside of the bearing bracket (see arrow) as a measuring point, mark center, if necessary.

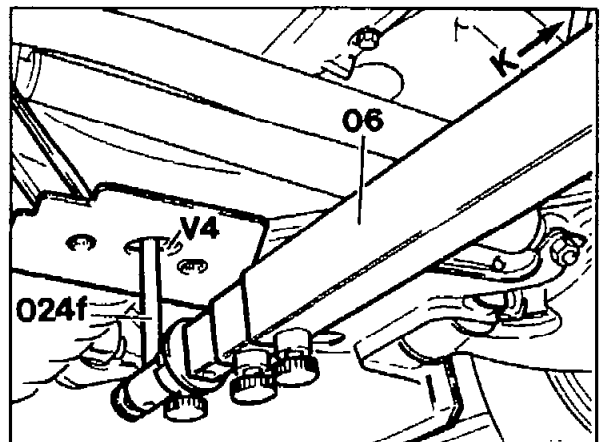
Use measuring tip (024e) 140 589 09 63 02.



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4 Measure distance "V4" from check hole "K" to locating hole "FV" in body cross member for front axle.

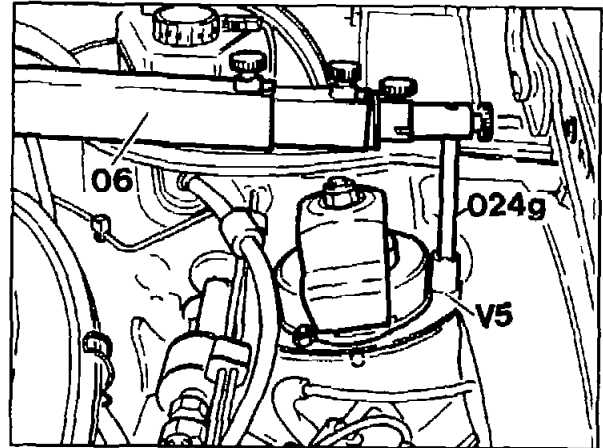
Use measuring tip (024f) 140 589 09 63 01.



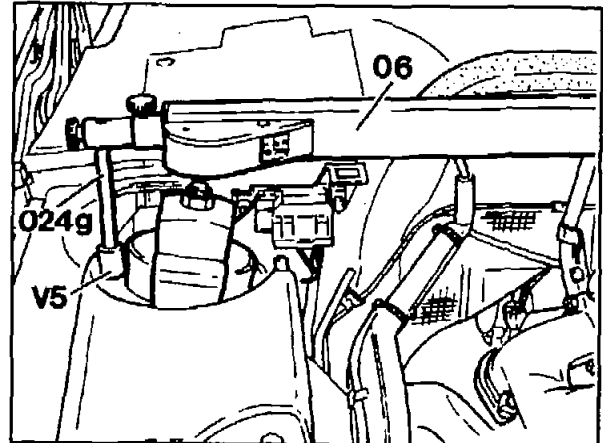
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5 Distance measurement "V5" of the outer hexagon nuts for the upper damper strut mount on the left and right of the front end.
Use measuring sensor (024g) 140 589 09 63 05.

Left measuring point



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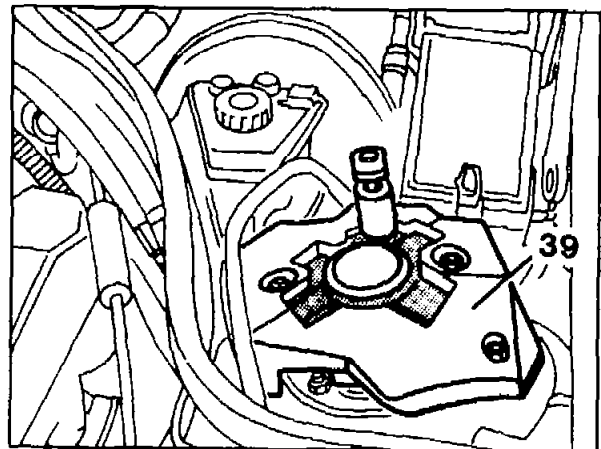


Right measuring point

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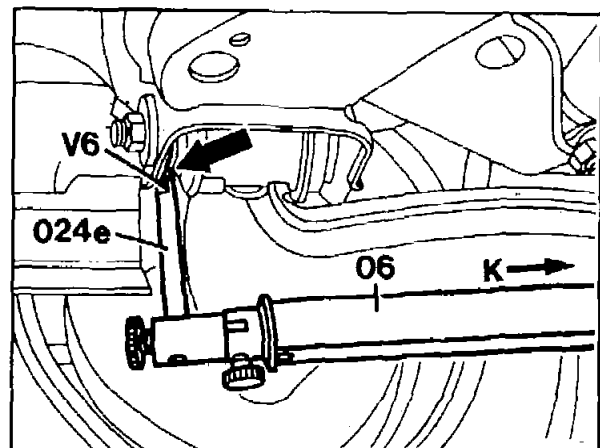
Note model 124.06

Remove vibration damper (39) on the dome of the left front spring strut.



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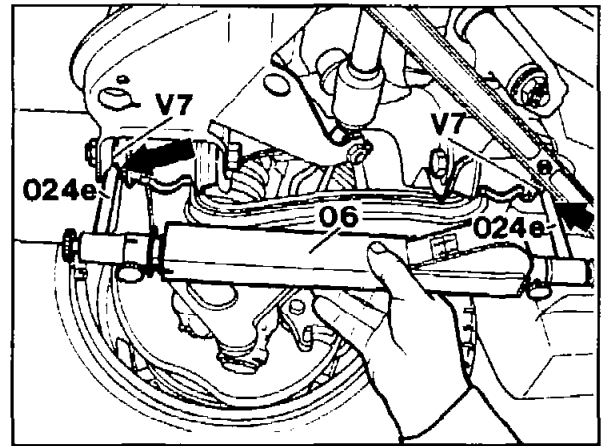
6 Measure distance "V6" from check hole "K" to the front wishbone mount on the front axle cross member on the left and right of the body.
Use center rubber mount on the inside of the bearing bracket (see arrow) as a measuring point, mark center, if necessary.
Use measuring tips (024e) 140 589 09 63 02.



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7 Measure distance "V7" between front and rear wishbone mounts on inside of bearing brackets.

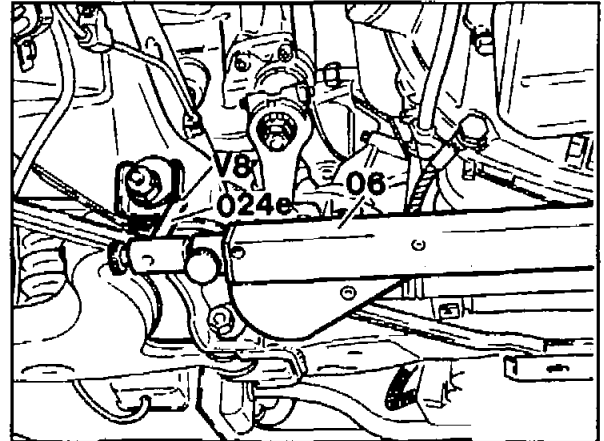
Use measuring tips (024e) 140 589 09 63 02.



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8 Measure distance "V8" between left and right rear wishbone mounts (inside width) on outside of eccentric bolt guides.

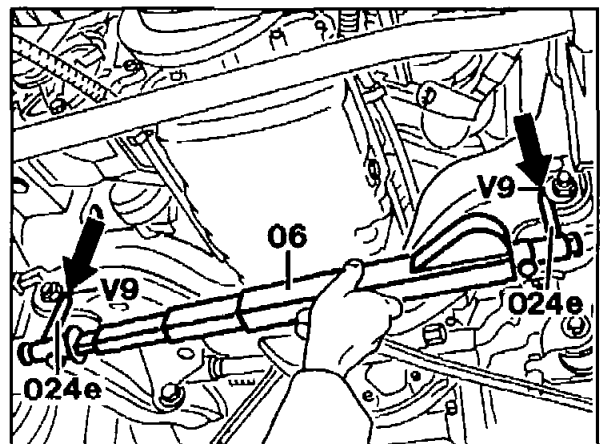
Use measuring tips (024e) 140 589 09 63 02.



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9 Measure distance "V9" between left and right front wishbone mounts (inside width) on outside of eccentric bolt guides.

Use measuring tips (024e) 140 589 09 63 02.

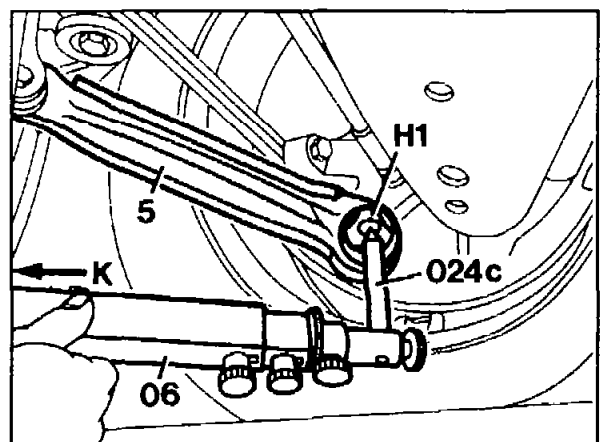


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Rear axle

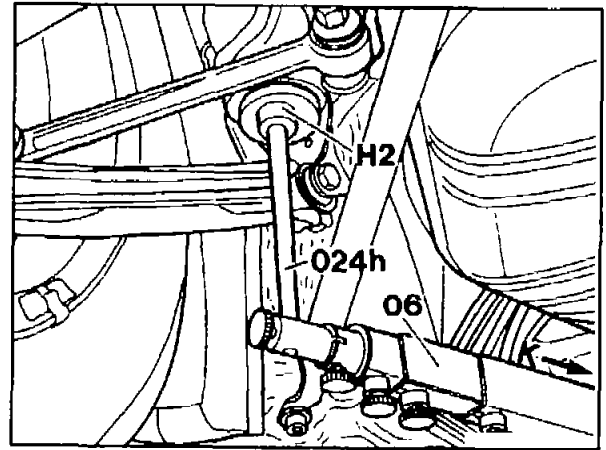
10 Measure distance "H1" from check hole "K" to center of hexagon bolt for rear thrust arm mount (5) on wheel carrier, left to right.

Use measuring tips (024c) 140 589 09 63 29.



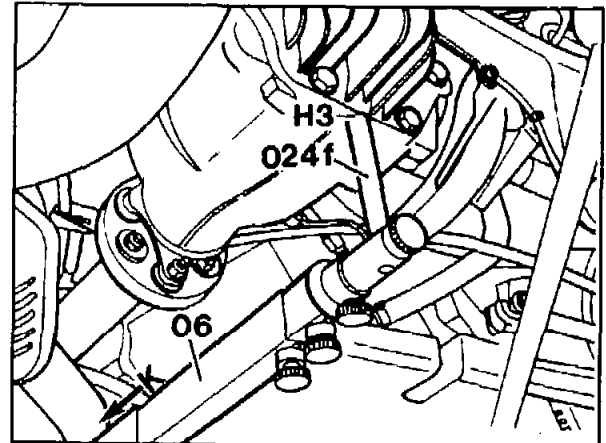
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11 Measure distance "**H2**" from check hole "K" to hexagon bolt in front mount for rear axle carrier on body floor, left to right.
Use measuring socket (024h) 140 589 09 63 11.



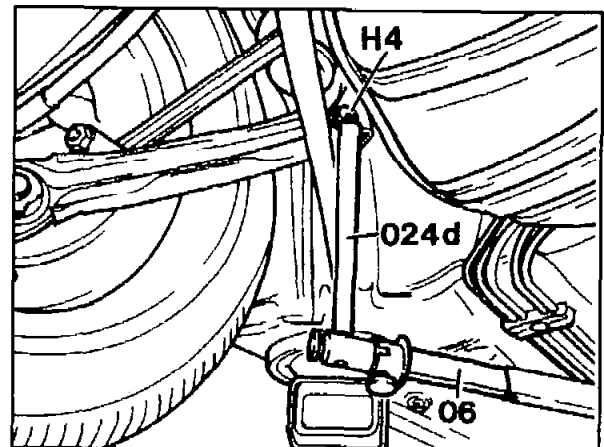
P40-2030-13

12 Measure distance "**H3**" from check hole "K" to locating hole "FH" in rear axle center piece assembly.
Use measuring tip (024f) 140 589 09 63 01.



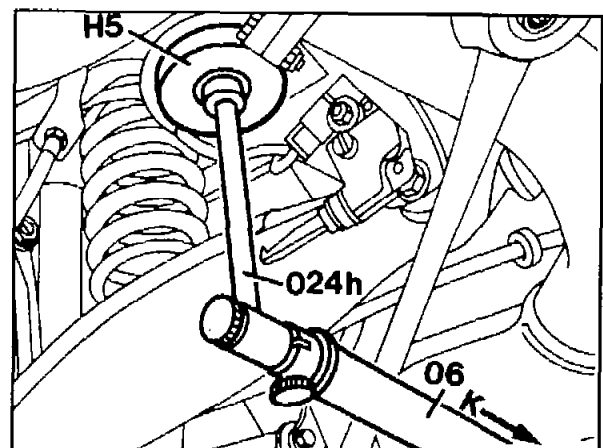
P40-2032-13

13 Measure distance "**H4**" from check hole "K" to center of hexagon bolt for front thrust arm on rear axle carrier, left to right.
Use measuring tip (024d) 140 589 09 63 03.



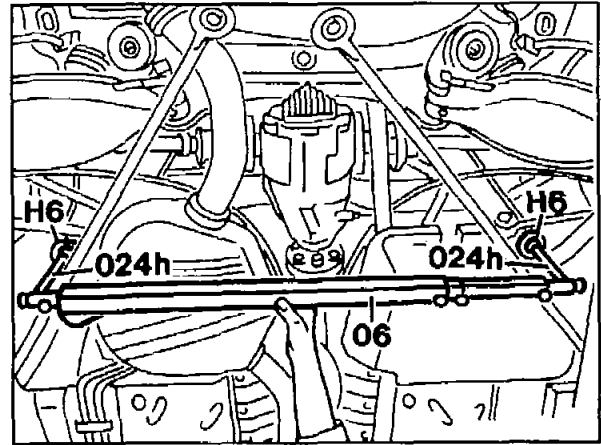
P40-2222-13

14 Measure distance "**H5**" from check hole "K" to hexagon bolt in rear mount for rear axle carrier on body floor, left to right.
Use measuring socket (024h) 140 589 09 63 11.



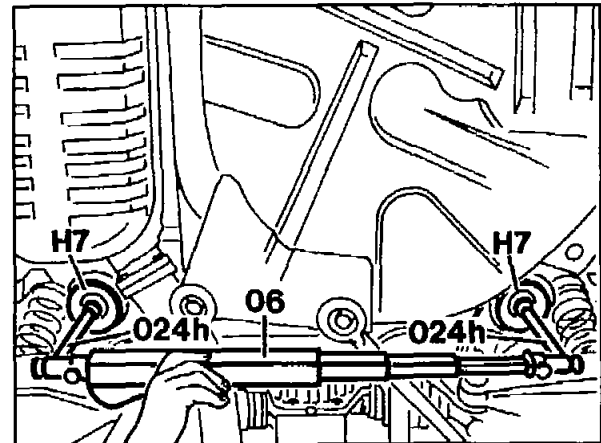
P40-5228-13

15 Measure distance "H6" at hexagon bolts in front mount for rear axle carrier.
Use measuring socket (024h) 140 589 09 63 11.



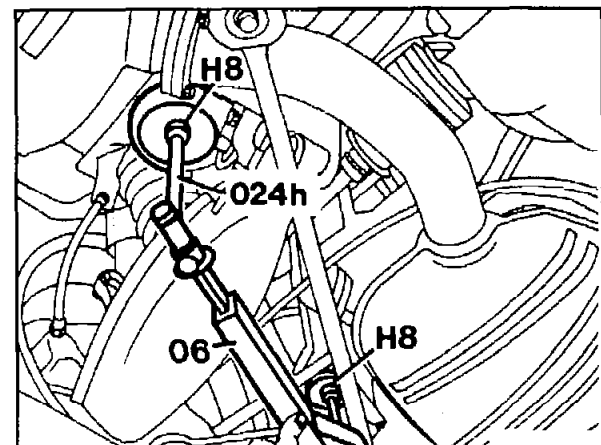
P40-2028-13

16 Measure distance "H7" at hexagon bolts in rear mount for rear axle carrier.
Use measuring socket (024h) 140 589 09 63 11.



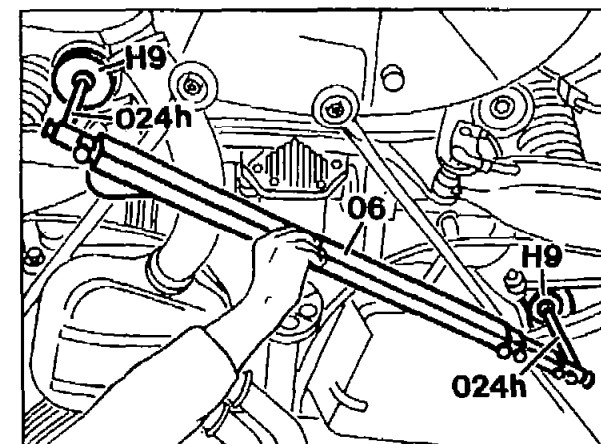
P40-2027-13

17 Measure distance "H8" between hexagon bolts in front and rear mounts for rear axle carrier.
Use measuring socket (024h) 140 589 09 63 11.



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18 Measure distance "H9" diagonally between hexagon bolts in front and rear mounts for rear axle carrier, left and right.
Use measuring socket (024h) 140 589 09 63 11.



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