

## Pedals — Group 29

### Clutch Pedal

Free movement of clutch pedal	25
Distance between center of clutch actuating lever eye and center of pedal shaft	45 $\pm$ 4

### Clutch and Brake Pedal Bearings

Bushing oversize	+ 0.02 to + 0.06
Internal diameter of bearing bushings	$\frac{27.040}{27.073}$
External diameter of mounting tube	$\frac{26.980}{26.959}$

## Adjustments — Group 30

### Adjustment of Accelerator Pedal

See Job No. 30-3

## Springs and Shock Absorbers — Group 32

### A. Springs

#### a) Front Springs

#### Color Code for Front Springs

Color Code	Standard springs Part No. 120 321 14 04	Harder springs for bad roads as an optional extra (SA 10014) Part No. 120 321 19 04
	Trim dimension measured at P <sub>normal</sub> in mm	
white	from 213 — 216	from 219.5 — 222
red	above 216 — 219	above 222 — 224.5
blue	above 219 — 222	above 224.5 — 227

In the case of the front springs, the varying trim dimensions are not equalized by spacers. When springs are replaced, only springs with the same color coding should therefore be installed on both sides.

## Test Values of Standard Front Springs

Part No.	Maximum front axle load capacity kg	Free length of spring in mm	Trim dimension, i. e. spring length under normal load in mm	Load		Spring rate for 100 kg of load in mm	Wire gage in mm	Mean coil diameter in mm	Number of coils
				P norm. kg	P max. kg				
120 321 14 04	770	339	216 <sup>+6</sup> <sub>-3</sub>	570	819	21.7	15.1	110 ± 1	8.5

## Test Values of Front Springs for Bad Roads (optional SA 10 014)

Part-No.	Maximum front axle load capacity kg	Free length of spring in mm	Trim dimension, i. e. spring length under normal load in mm	Load		Spring rate for 100 kg of load in mm	Wire gage in mm	Mean coil diameter in mm	Number of coils
				P norm. kg	P max. kg				
120 321 19 04	770	334	222 <sup>+5</sup> <sub>-2.5</sub>	570	844	19.7	15.25	110 ± 1	8
Color code as for standard springs, see page 00—2/17									

\* This spring is also suitable for the needs of sports enthusiasts.

## b) Rear Springs

### Color Code for Standard Rear Springs

Color code		Rear spring left Part No. 121 324 20 04 and Part No. 105 324 00 04*	Rear spring right Part-No. 121 324 21 04 and Part-No. 105 324 01 04*
		Trim dimension measured at P <sub>normal</sub> in mm	
white	1 line	from 170.5 — 172.5	from 171 — 173
	2 lines	above 172.5 — 174.5	above 173 — 175
	3 lines	above 174.5 — 176.5	above 175 — 177
red	1 line	above 176.5 — 178.5	above 177 — 179
	2 lines	above 178.5 — 180.5	above 179 — 181
blue	1 line	above 180.5 — 182.5	above 181 — 183
	2 lines	above 182.5 — 184.5	above 183 — 185
	3 lines	above 184.5 — 186.5	above 185 — 187
* For reasons of standardization, recent models are provided with the same rear springs as Model 219.			

## Color Code for Rear Springs for Bad Roads and for Export Rear Springs (optional, SA 10 113/1 or 2)

Color Code		Rear spring left		Rear spring right	
		Part No. 121 324 22 04	Part No. 180 324 26 04*	Part No. 121 324 23 04	Part No. 180 324 27 04*
		Trim dimension measured at P <sub>normal</sub> in mm			
white	1 line	from 182 — 184	from 186.5 — 188.5	from 182.5 — 184.5	from 187 — 189
	2 lines	above 184 — 186	above 188.5 — 190.5	above 184.5 — 186.5	above 189 — 191
	3 lines	above 186 — 188	above 190.5 — 192.5	above 186.5 — 188.5	above 191 — 193
red	1 line	above 188 — 190	above 192.5 — 194.5	above 188.5 — 190.5	above 193 — 195
	2 lines	above 190 — 192	above 194.5 — 196.5	above 190.5 — 192.5	above 195 — 197
blue	1 line	above 192 — 194	above 196.5 — 198.5	above 192.5 — 194.5	above 197 — 199
	2 lines	above 194 — 196	above 198.5 — 200.5	above 194.5 — 196.5	above 199 — 201
	3 lines	above 196 — 198	above 200.5 — 202.5	above 196.5 — 198.5	above 201 — 203
* For reasons of standardization, recent models are provided with the same rear springs as Model 220 S.					

## Color Code for Rear Springs for Special-Purpose Vehicles (optional, SA 10 154/1 or 2, and SA 10 155)

Color Code		Load Capacity (maximum rear axle load)		
		1100 kg		1250 kg
		SA 10 154/1 or 2		SA 10 155
		Rear spring left Part No. 121 324 12 04	Rear spring right Part No. 121 324 13 04	Rear springs, left and right Part No. 121 324 24 04
white	1 line	from 173.5 — 175.5	from 174 — 176	from 182 — 184
	2 lines	above 175.5 — 177.5	above 176 — 178	above 184 — 186
	3 lines	above 177.5 — 179.5	above 178 — 180	above 186 — 188
red	1 line	above 179.5 — 181.5	above 180 — 182	above 188 — 190
	2 lines	above 181.5 — 183.5	above 182 — 184	above 190 — 192
blue	1 line	above 183.5 — 185.5	above 184 — 186	above 192 — 194
	2 lines	above 185.5 — 187.5	above 186 — 188	above 194 — 196
	3 lines	above 187.5 — 189.5	above 188 — 190	above 196 — 198

## Color Code, Corresponding Notch Position and Use of Rubber Compensating Ring

Rear spring Color Code		Corresponding Notch Position	Rubber Compen- sating Ring
white	1 line	4	yes
	2 lines	3	yes
	3 lines	2	yes
red	1 line	1	yes
	2 lines	4	no
blue	1 line	3	no
	2 lines	2	no
	3 lines	1	no

## Test Values of Standard Rear Springs

Part No.	Load capacity (maximum front axle load**) kg	Free length of spring in mm	Trim dimension, i. e. spring length under normal load in mm	Load		Spring rate for 100 kg of load in mm	Wire gage in mm	Mean coil diameter in mm	Number of coils
				P norm. kg	P max. kg				
121 324 20 04 left	890	296	178.5 ± 8	627	867	18.75	16.2	135	5.25
121 324 21 04 right	890	293.5	179 ± 8	645	899	17.75	16.2	135	5.0
105 324 00 04* left	920	299.5	178.5 ± 8	644	848	18.75	16.2	135	5.25
105 324 01 04* right	920	296	179 ± 8	660	880	17.75	16.2	135	5.0

\* For reasons of standardization, recent models are provided with the same rear axle springs as Model 219. When replacing springs, make sure that matched springs are used at the left and at the right.

\*\* Within the limits indicated, the permissible rear axle load depends on the load capacity of the tire (see also Job No. 40 — 0, Section B., Tires, and Job No. 40 — 3, Section C., Wheel Adjustment Data).

**Test Values of Rear Springs (optional, SA 10 113/1 or 2,  
SA 10 154/1 or 2, and SA 10 155)**

Part No.	Load capacity (maximum rear axle load**) kg	Free length of spring in mm	Trim dimension, i. e. spring length under normal load in mm	Load		Spring rate for 100 kg of load in mm	Wire gage in mm	Mean coil diameter in mm	Number of coils
				p norm. kg	p max. kg				
Harder Rear Springs for Bad Roads and Export Rear Springs (optional, SA 10 113/1 or 2)									
121 324 2204 left	950	281	190 ± 8	697	1065	13.05	17.2	135	4.65
121 324 2304 right	950	279	190,5 ± 8	716	1108	12.38	17.2	135	4.4
180 324 26 04* left	950	294	194.5 ± 8	668	970	14.9	17.0	135	5.05
180 324 27 04* right	950	292	195 ± 8	686	1005	14.1	17.0	135	4.8
* For reasons of standardization, recent models are provided with the same rear springs as Model 220 S.									

**Note:** If the springs 121 324 22 04/23 04 are installed, the standard shock absorbers must be replaced by shock absorbers of shorter stroke and larger diameter (Part No. 180 326 02 00, or Part No. 121 326 03 00) (see Job No. 32 — 1, Sections B and C).

<b>Harder Rear Springs for Ambulances, Police Radio Cars, and for Special-Purpose Vehicles up to 1100 kg Rear Axle Load (optional, SA 10 154/1 or 2)</b>									
121 324 12 04 left	1100	279	181.5 ± 8	840	1168	11.62	18.0	135	5.0
121 324 13 04 right	1100	277	182 ± 8	864	1210	11.0	18.0	135	4.7
<b>Harder Rear Springs for Special-Purpose Vehicles such as Light Vans etc. up to 1250 kg Rear Axle Load (optional, SA 10 155)</b>									
121 324 24 04 left and right are identical	1250	264.5	190 ± 8	915	1510	8.14	19.2	135	4.5
* Within the limits indicated, the permissible rear axle load depends on the load capacity of the tires (see also Job No. 40 — 0, Section B, Tires, and Job No. 40 — 3, Section C, Wheel Adjustment Data).									

**Note:** If the springs 121 324 12 04/13 04 or 124 324 24 04 are installed, the standard type rubber buffer stops (Part No. 120 320 04 44) must be replaced by stops as per Part No. 120 320 04 44.

## B. Shock Absorbers

### a) Front Shock Absorbers

#### Standard Type

Designation Color Make	Part No.	Dimensions of Shock Absorber in mm			Adjustment and Acceptance Values at n = 100 rpm		
		Outside diameter D	Stroke H	Compressed L	Stroke mm	Pull kg	Pressure kg
Front shock Absorber for Control Arm* 120 330 12 08 and 120 330 13 08							
Sov 26 x 130 black Fichtel & Sachs	000 323 60 00 (without reinforcement plate)	38.4	130	239 + 2	25	35	5
	121 323 00 00** (with reinforcement plate)				50	140	10
					100	310	30
T 40 x 130 black Stabilus	000 323 56 00 (without reinforcement plate)	44	130	244.5 + 2	25	35	5
	121 323 01 00** (with reinforcement plate)				50	140	10
					100	310	30
Front Shock Absorber for Control Arm* 180 330 00 08 and 180 330 01 08							
Sov 26 x 130 black Fichtel & Sachs	120 323 00 00	38.4	130	239 + 2	25	35	5
					50	140	10
					100	310	30
T 40 x 130 black Stabilus	120 323 01 00	44	130	244.5 + 2	25	35	5
					50	140	10
					100	310	30
<p>* For reasons of standardization, on recent models the lower control arms (Part No. 120 330 12 08 or 13 08) have been replaced by the types used on Model 220 S (Part Nos. 180 330 00 08 and 180 330 01 08). On these control arms, the through-way hole for the shock absorber is larger (58 mm diameter instead of previously 48 mm diameter). For this reason, the shock absorber mounting has had to be changed accordingly. <b>When ordering, please make sure that the right type of shock absorber is specified.</b></p> <p>** Only shock absorbers with reinforcement plates are supplied as replacements.</p>							

#### Shock Absorber for Bad Roads and Export Shock Absorbers (optional, SA 10 113/1 or 2)

Designation Color Make	Part No.	Dimensions of Shock Absorber in mm			Adjustment and Acceptance Values at n = 100 rpm		
		External diameter D	Stroke H	Com- pressed L	Stroke mm	Pull kg	Pressure kg
T 50 x 130 black Stabilus	180 323 03 00*	56	130	244.5 <sup>+2</sup>	25 50 100	65 <sup>*</sup> 230 330	8 12—15 30
<p>* If these shock absorbers are installed later, control arms with a small through-way hole (48 mm diameter, Part No. 120 330 12 08/13 08) must be replaced by control arms with a larger through-way hole (58 mm diameter, Part No. 180 330 00 08/01 08).</p>							

#### Shock Absorbers for Special-Purpose Vehicles (optional, SA 10 154/1 or 2, and SA 10 155)

Identical with Standard Type

## b) Rear Shock Absorbers

### Standard Type

Designation Color Make	Part No.	Dimensions of Shock Absorber in mm			Adjustment and Acceptance Values at n = 100 rpm		
		External diameter D	Stroke H	Com- pressed L	Stroke in mm	Pull kg	Pressure kg
Tov 30 x 140 red Fichtel & Sachs	121 320 03 31 (without reinforcement plate)	46	$140^{+1}_{-3}$	$251^{+2}$	25	90	20
	121 326 00 00* (with reinforcement plate)				50	200	25
					100	$370 \pm 20$	$35 \pm 5$
T 40 x 140 red Stabilus	000 326 41 00 (without reinforcement plate)	44	$140^{+1}_{-3}$	$254^{+2}$	25	80	20
	121 326 01 00* (with reinforcement plate)				50	220	30
					100	380	43
*Only shock absorbers with reinforcement plates are supplied as replacements.							

### Shock Absorbers for Bad Roads and Export Shock Absorbers (optional, SA 10 113/1 or 2)

Designation Color Make	Part No.	Dimensions of Shock Absorber in mm			Adjustment and Acceptance Values at n = 100 rpm		
		External diameter D	Stroke H	Com- pressed L	Stroke mm	Pull kg	Pressure kg
T 50 x 130 red Stabilus	180 326 02 00	55	130	$254.5^{+2}$	25	80	20
					50	220	30
					100	$380^{+20}_{-18}$	$43 \pm 5$

### Shock Absorbers for Special-Purpose Vehicles (optional, SA 10 154/1 or 2 and SA 10 155)

Designation Color Make	Part No.	Dimensions of Shock Absorbers in mm			Adjustment and Acceptance Values at n = 100 rpm		
		External diameter D	Stroke H	Com- pressed L	Stroke mm	Pull kg	Pressure kg
Tov 36 x 130 red Fichtel & Sachs	000 326 45 00 (without reinforcement plate)	55	130	242 + 2	25	80	20
	121 326 03 00* (with reinforcement plate)				50	220	30
					100	380 + 20 - 18	43 ± 5
* Only shock absorbers with reinforcement plates are supplied as replacements.							