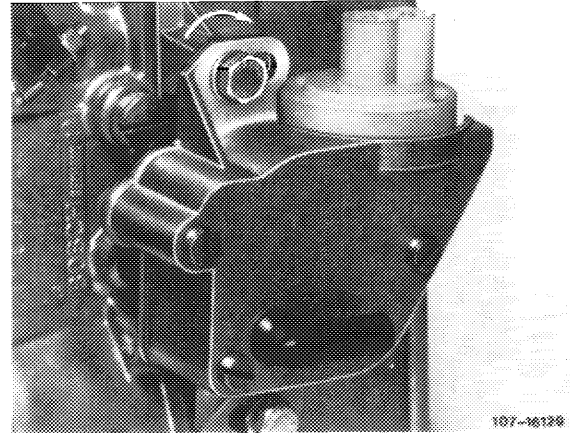
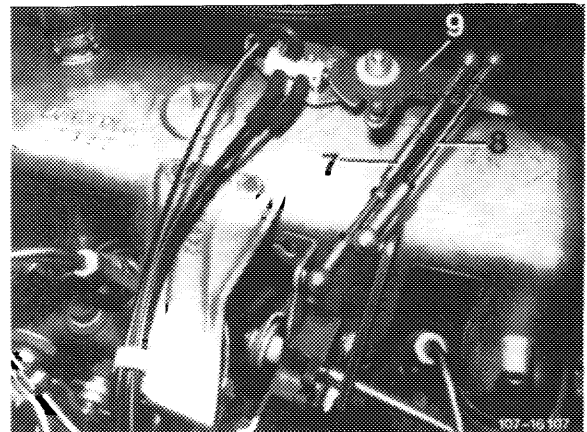


2 Adjust vacuum control valve. For this purpose, loosen fastening screws. Push regulating lever of injection pump to full load and turn vacuum control valve clockwise (arrow) up to noticeable stop. In this position, tighten fastening screws again.



3 Adjust and attach idle path rod (7) in fully extended condition and pull rod (8) to 137 mm, measure from center to center of ball head.

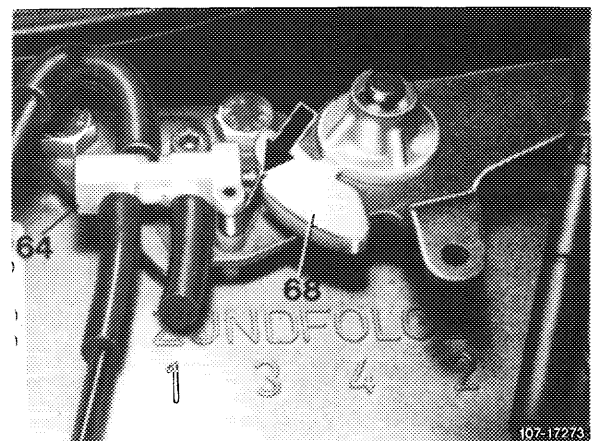


7 Idle path rod  
8 Pull rod

4 Adjust push rod (4) in such a manner that max. 0.5 mm play (refer to arrow) is available between control cam lobe of guide lever (68) and link of switchover valve (64). Regulating lever on injection pump should rest against idle speed stop, and idle path rod (7) should be completely extended.

**Attention!**

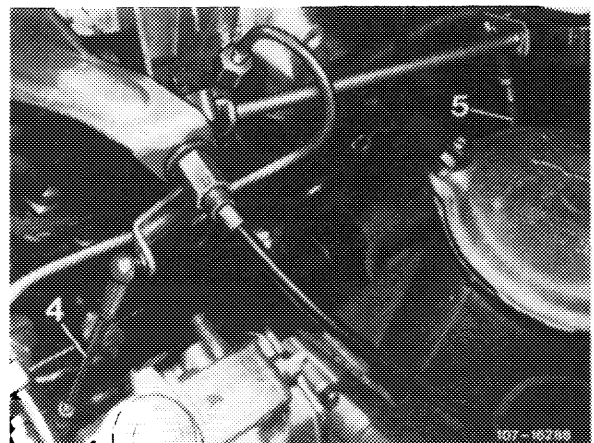
Do not actuate switchover valve in this position.



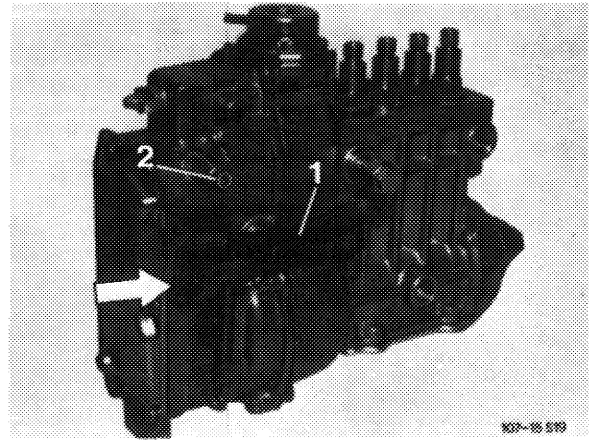
64 Switchover valve  
68 Guide lever

**Attention!**

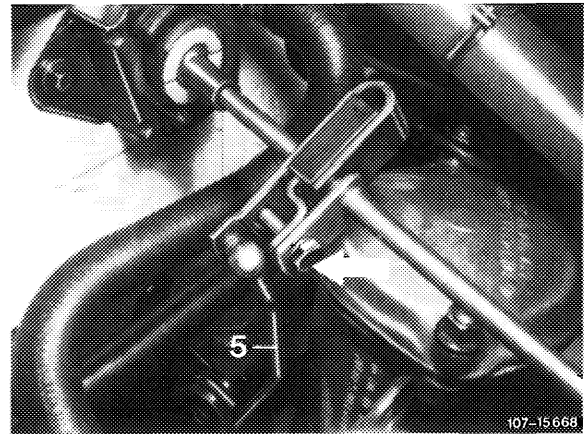
During lubricating jobs for regulating system, do not lubricate runway of plastic cam on guide lever.



7 Check full throttle stop. With engine stopped, step on accelerator pedal from inside vehicle down to stop of kickdown switch. Accelerator pedal and regulating lever should rest against full throttle stop (2). If required, adjust regulating linkage with adjusting screw (arrow) in such a manner that the regulating lever on injection pump (1) rests against full throttle stop (2).

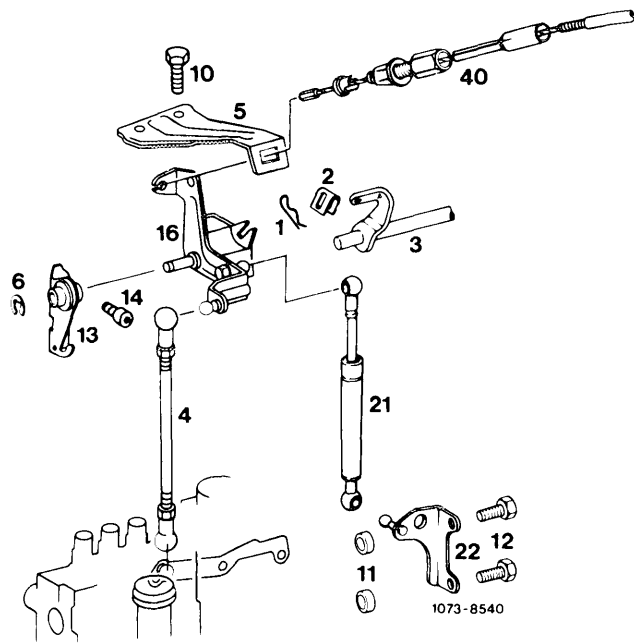


If the full throttle or idle speed stop is not attained with this adjustment, adjust connecting rod (5) from longitudinal regulating shaft to accelerator pedal to 213 mm, measured from center of ball socket to center of damping ring and attach.



### Engine regulation

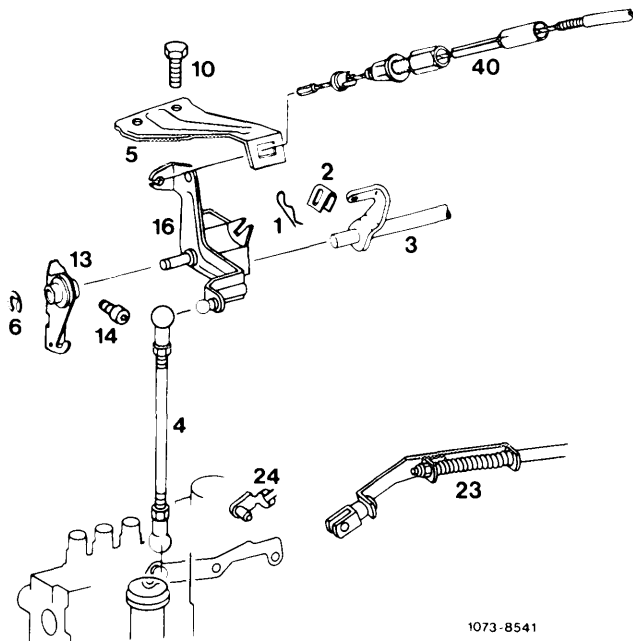
Engine 615, 616, 617 in model 123.1 with manual transmission  
M/RSF-injection pump with mechanical governor



- |                                 |                 |                                        |
|---------------------------------|-----------------|----------------------------------------|
| 1 Lock                          | 6 Lock          | 14 Hex socket screw                    |
| 2 Eye                           | 10 Hex screw    | 16 Angle lever                         |
| 3 Longitudinal regulating shaft | 11 Spacing ring | 21 Damper                              |
| 4 Push rod                      | 12 Hex screw    | 22 Holder                              |
| 5 Holder                        | 13 Bearing      | 40 Bowden wire for idle speed adjuster |

### Engine regulation

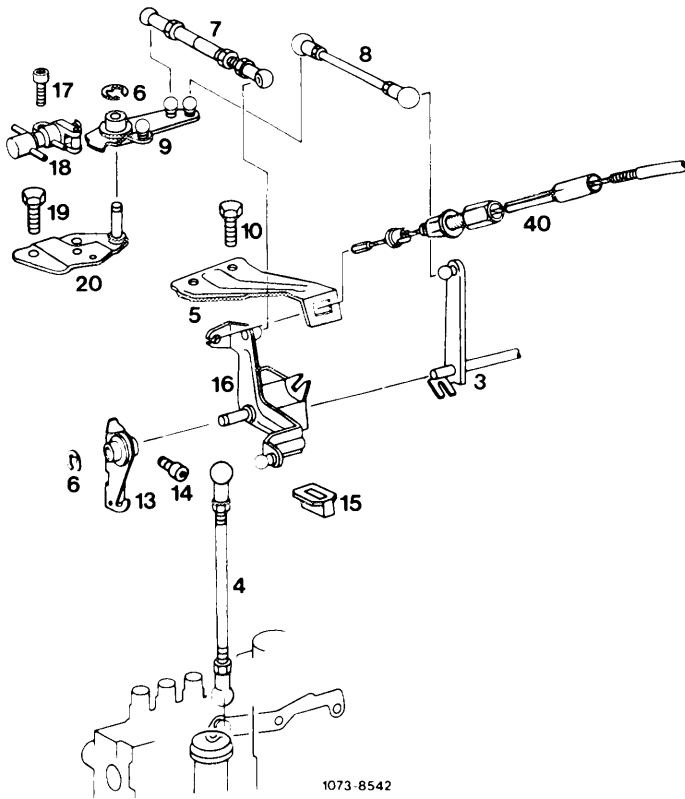
Engine 616 in model 123.1 with automatic transmission 1st version  
M/RSF-injection pump with mechanical governor



- |                                 |                     |                                        |
|---------------------------------|---------------------|----------------------------------------|
| 1 Lock                          | 6 Lock              | 23 Control pressure rod                |
| 2 Eye                           | 10 Hex screw        | 24 Lock for control pressure rod       |
| 3 Longitudinal regulating shaft | 13 Bearing          | 40 Bowden wire for idle speed adjuster |
| 4 Push rod                      | 14 Hex socket screw |                                        |
| 5 Holder                        | 16 Angle lever      |                                        |

Engine regulation

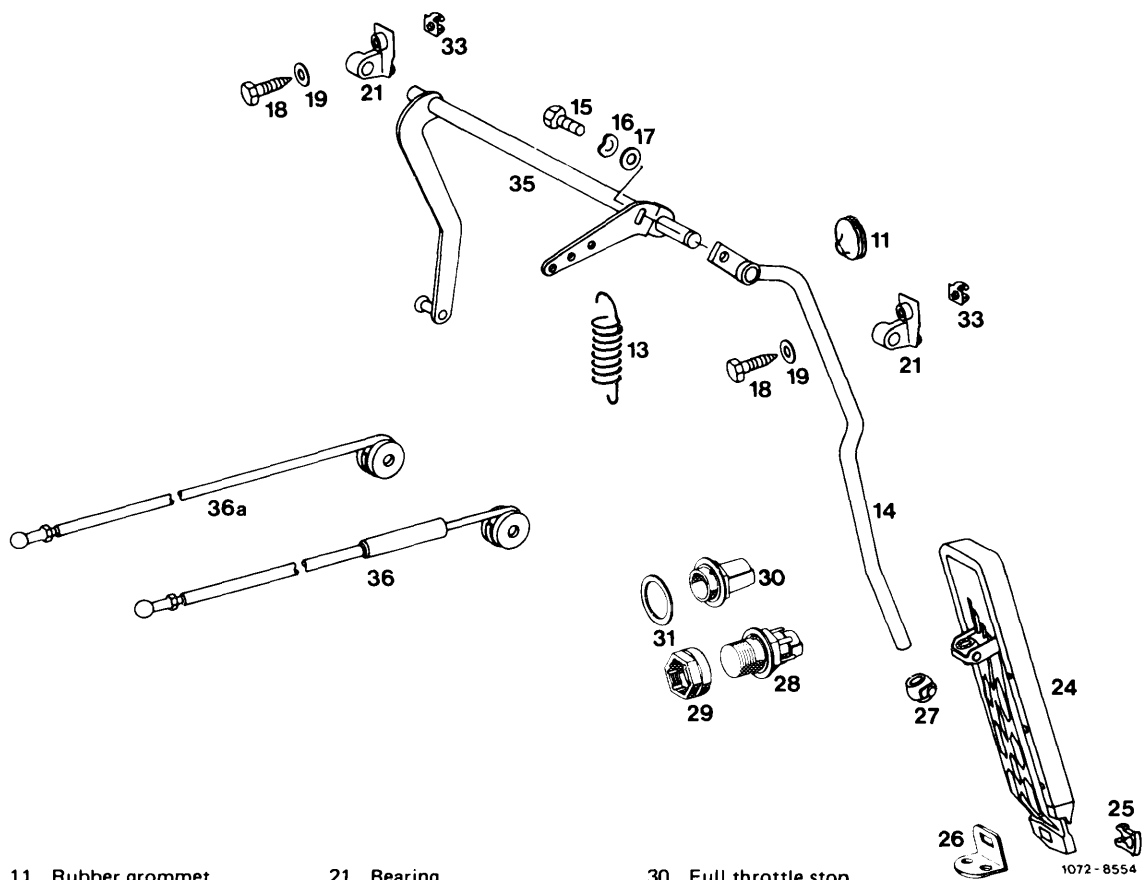
Engine 615, 616, 617 in model 123.1 with automatic transmission 2nd version  
M/RSF-injection pump with mechanical governor



- |   |                               |    |                  |    |                                     |
|---|-------------------------------|----|------------------|----|-------------------------------------|
| 3 | Longitudinal regulating shaft | 9  | Guide lever      | 17 | Hex socket screw                    |
| 4 | Push rod                      | 10 | Hex screw        | 18 | Vacuum control valve                |
| 5 | Holder                        | 13 | Bearing          | 19 | Hex screw                           |
| 6 | Lock                          | 14 | Hex socket screw | 20 | Bearing                             |
| 7 | Idle path rod                 | 15 | Plastic hub      | 40 | Bowden wire for idle speed adjuster |
| 8 | Pull rod                      | 16 | Angle lever      |    |                                     |

Chassis regulation with front wall regulating shaft model 115.1

Engine 615, 616 with M-injection pump, Engine 617 with MW-injection pump



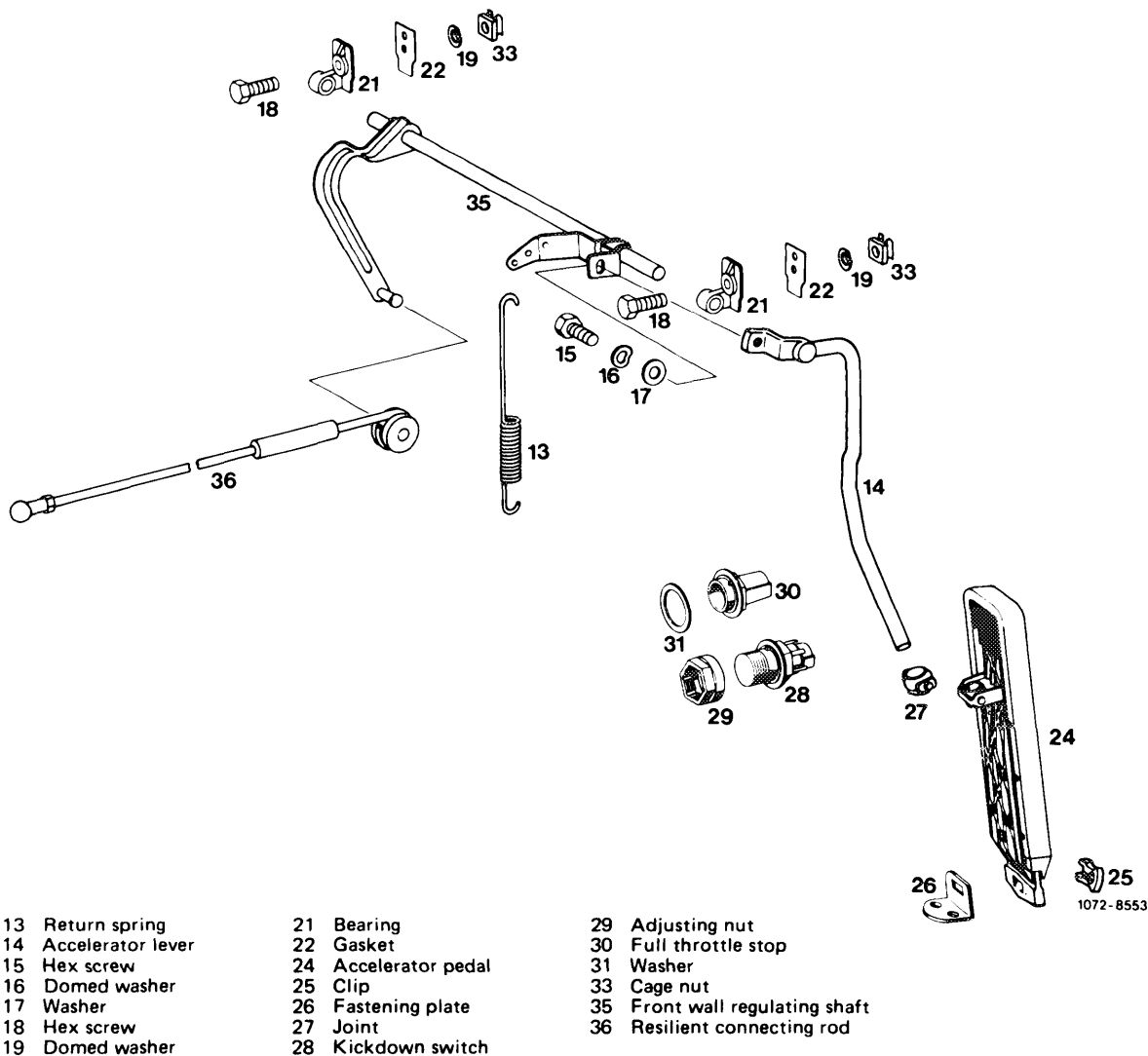
- 11 Rubber grommet
- 13 Return spring
- 14 Accelerator pedal
- 15 Hex screw
- 16 Domed washer
- 17 Washer
- 18 Hex screw
- 19 Domed washer

- 21 Bearing
- 22 Gasket
- 24 Accelerator pedal
- 25 Clip
- 26 Fastening plate
- 27 Joint
- 28 Kickdown switch
- 29 Adjusting nut

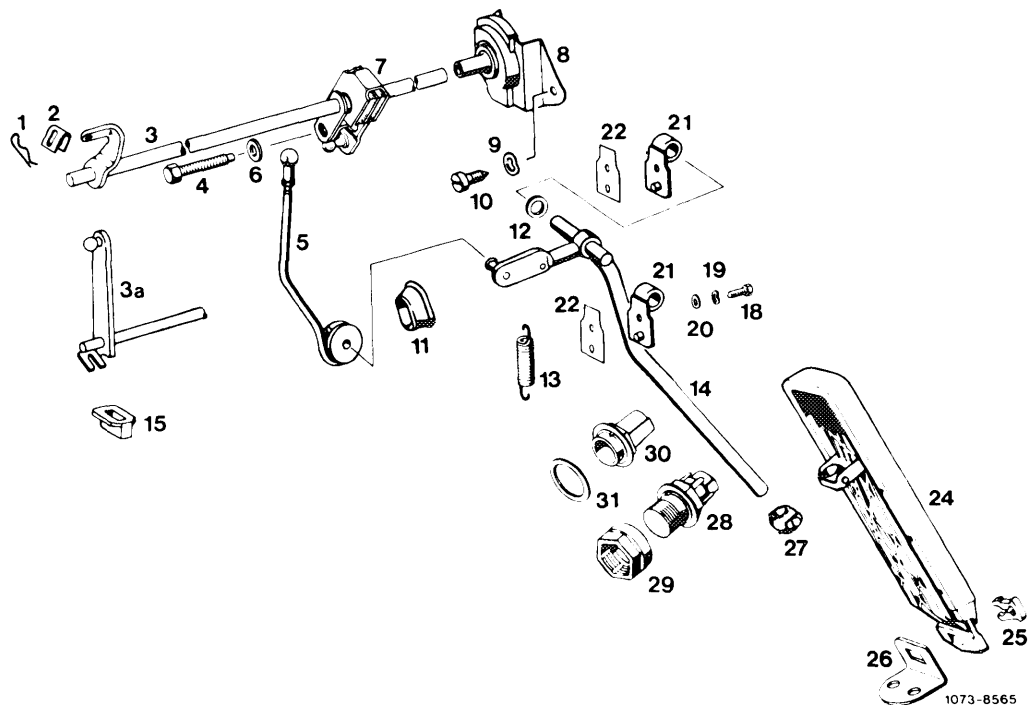
- 30 Full throttle stop
- 31 Washer
- 33 Cage nut
- 35 Front wall regulating shaft
- 36 Resilient connecting rod
- 36a Rigid connecting rod

Chassis regulation with front wall regulating shaft model 123.1

Engine 615, 616 with M-injection pump, Engine 616, 617 with MW-injection pump

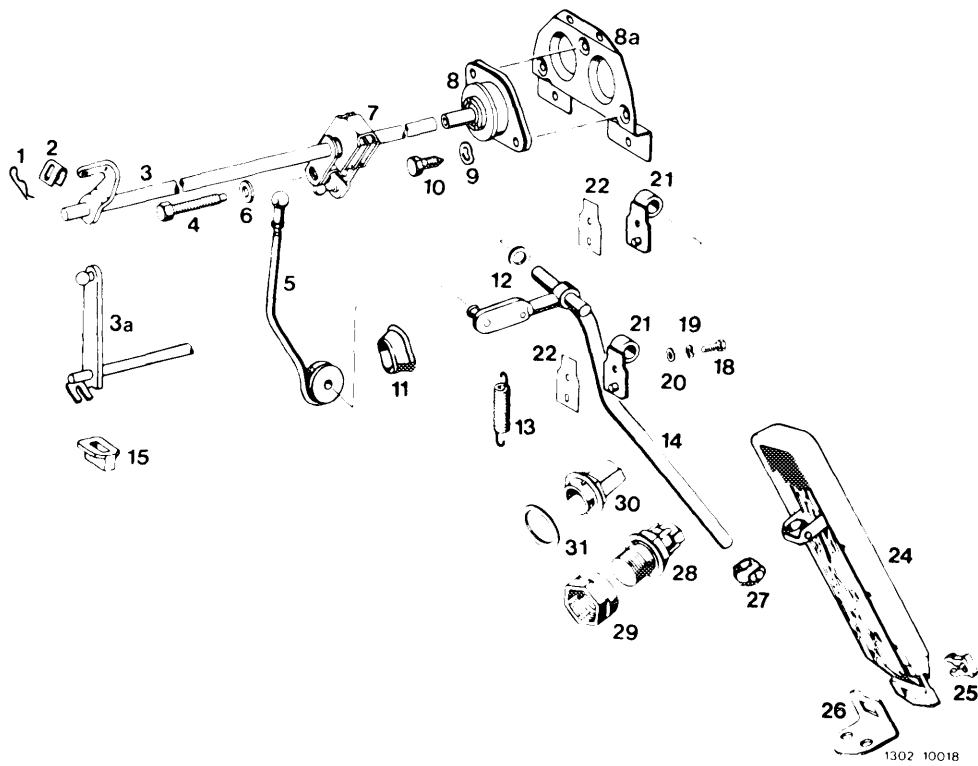


Chassis regulation with longitudinal regulating shaft model 123.1  
 Engine 615, 616, 617 with M/RSF-injection pump



- |                                                         |                         |                       |
|---------------------------------------------------------|-------------------------|-----------------------|
| 1 Lock, manual transmission                             | 10 Screw                | 22 Gasket             |
| 2 Spring, manual transmission                           | 11 Rubber grommet       | 24 Accelerator pedal  |
| 3 Longitudinal regulating shaft manual transmission     | 12 Plastic spacing ring | 25 Clip               |
| 3a Longitudinal regulating shaft automatic transmission | 13 Return spring        | 26 Fastening plate    |
| 4 Adjusting screw                                       | 14 Accelerator lever    | 27 Joint              |
| 5 Push rod                                              | 15 Plastic hub          | 28 Kickdown switch    |
| 6 Washer                                                | 18 Hex screw            | 29 Adjusting nut      |
| 7 Angle lever with damper                               | 19 Domed washer         | 30 Full throttle stop |
| 8 Bearing for regulating shaft                          | 20 Washer               | 31 Washer             |
| 9 Domed washer                                          | 21 Bearing              |                       |

Chassis regulation with longitudinal regulating shaft 2nd version  
 Model 123.1  
 Engine 615, 616, 617 with M/RSF-injection pump



- |    |                                                          |    |                      |    |                    |
|----|----------------------------------------------------------|----|----------------------|----|--------------------|
| 1  | Lock, manual transmission                                | 10 | Screw                | 25 | Clip               |
| 2  | Spring, manual transmission                              | 11 | Rubber grommet       | 26 | Fastening plate    |
| 3  | Longitudinal regulating shaft,<br>manual transmission    | 12 | Plastic spacing ring | 27 | Joint              |
| 3a | Longitudinal regulating shaft,<br>automatic transmission | 13 | Return spring        | 28 | Kickdown switch    |
| 4  | Adjusting schrew                                         | 14 | Accelerator lever    | 29 | Adjusting nut      |
| 5  | Push rod                                                 | 15 | Plastic hub          | 30 | Full throttle stop |
| 6  | Washer                                                   | 18 | Hex. screw           | 31 | Washer             |
| 7  | Angle lever with damper                                  | 19 | Domed washer         |    |                    |
| 8  | Bearing for regulating shaft                             | 20 | Washer               |    |                    |
| 8a | Plate                                                    | 21 | Bearing              |    |                    |
| 9  | Domed washer                                             | 22 | Gasket               |    |                    |
|    |                                                          | 24 | Accelerator pedal    |    |                    |





## E. Engine 616, 617 in model 123.1 (USA) 1980 with MW-injection pump

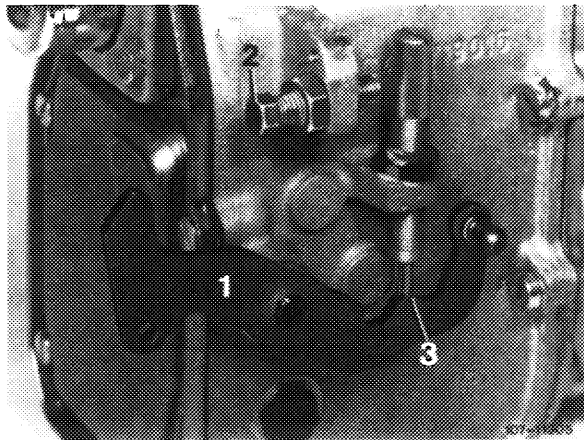
### Length of regulating linkage

Idle path rod (60 in Fig. item 8) in extended condition	154 mm
Pull rod (61 in Fig. item 8)	137 mm
Push rod (5 in Fig. item 6)	186 mm
Connecting rod (5 in Fig. item 7)	122 mm

### Adjustment

- 1 Check regulating linkage for easy operation and distortion. Replace damaged parts, if required.
- 2 Disconnect all regulating rods.
- 3 Check whether regulating lever (1) of injection pump rests against idle speed stop (3).

- 1 Regulating lever
- 2 Full throttle stop
- 3 Idle speed stop

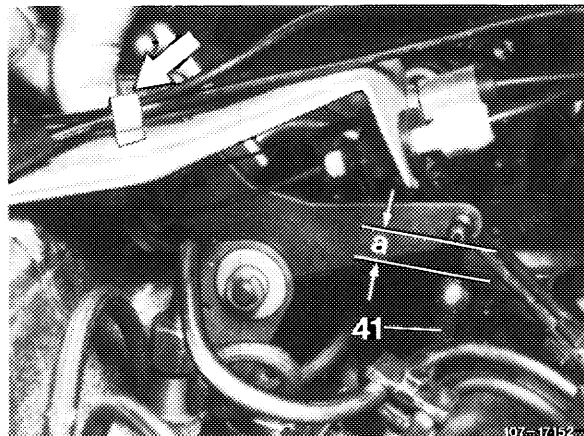


### Attention!

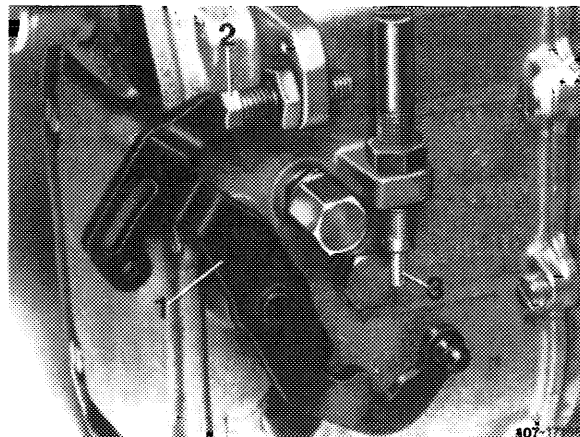
On engine 616, push rod (41) should be covered with an insulating hose.

### Vehicles with manual transmission

- 4 Adjust push rod (41). For this purpose, push shutoff lever (arrow) against stop. Adjust push rod in such a manner that 5–6 mm clearance (distance "a") is available between bottom edge of ball head and upper edge of ball socket. Attach push rod.

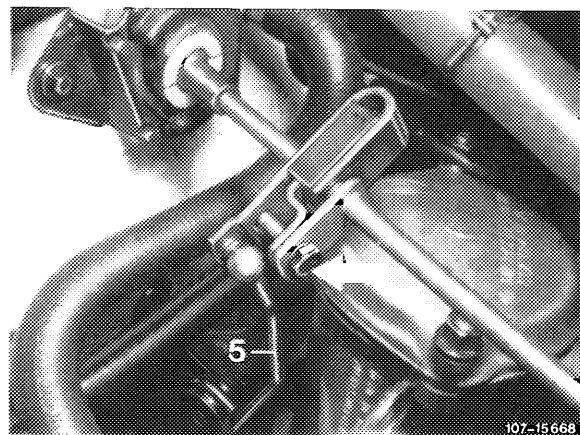


5 Check full throttle stop. With engine stopped, step on accelerator pedal from inside vehicle down to stop. Accelerator pedal and regulating lever (1) should then rest against full load stop of injection pump (2). If required, adjust regulating linkage by means of adjusting screw in such a manner that the regulating lever rests against full throttle stop (2) on injection pump (1).



- 1 Regulating lever
- 2 Full throttle stop
- 3 Idle speed stop

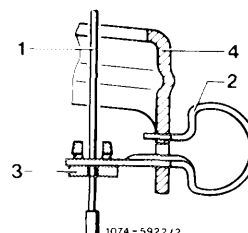
6 If full throttle or idle speed stop (3) is not attained with this adjusting screw, adjust push rod (5) from longitudinal regulating shaft to accelerator pedal to 186 mm, measured from center of ball socket to center of damping ring.



**Attention!**

If the regulating linkage is not moving to full throttle, check whether contour spring for idle speed adjuster is correctly installed.

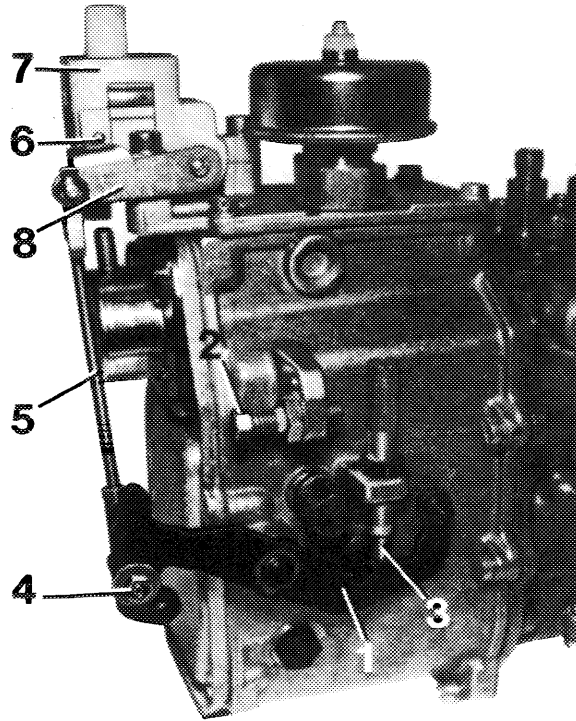
- 1 Cable control for idle speed increase
- 2 Contour spring
- 3 Plastic scleeve
- 4 Guide lever



**Vehicles with automatic transmission**

7 Check whether connecting rod (5) is correctly adjusted. For this purpose, push regulating lever (1) to full throttle stop (2). The actuating lever (8) should have max. 0.5 mm play up to full load stop (6). If required, adjust connecting rod (5) by means of adjustable ball head (4). Set connecting rod (5) to 122 mm, measured from center of ball socket to center of linkage. Attach connecting rod.

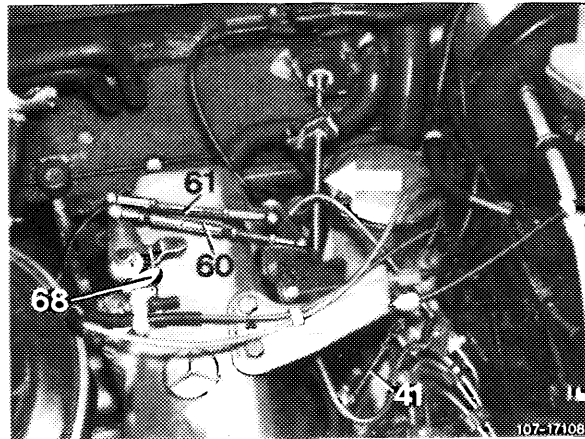
- 1 Regulating lever
- 2 Full throttle stop
- 3 Idle speed stop
- 4 Adjustable ball head
- 5 Connecting rod
- 6 Full load stop on vacuum control valve
- 7 Vacuum control valve
- 8 Actuating lever for vacuum control valve



107-17189

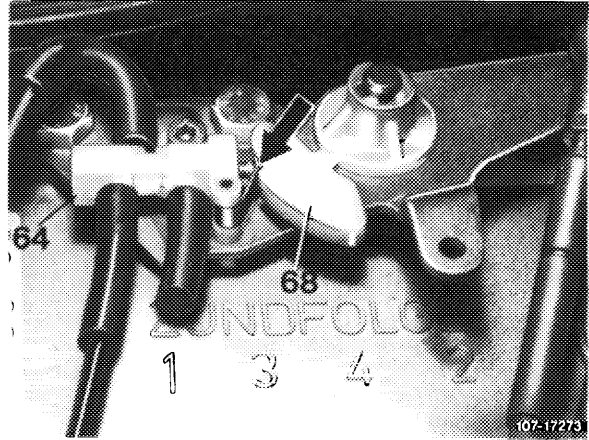
8 Adjust idle path rod (60) in fully extended condition and pull rod (61) to 137 mm, measured from center to center of ball head. Attach pull rod (61).

- 41 Push rod
- 60 Idle path rod
- 61 Pull rod



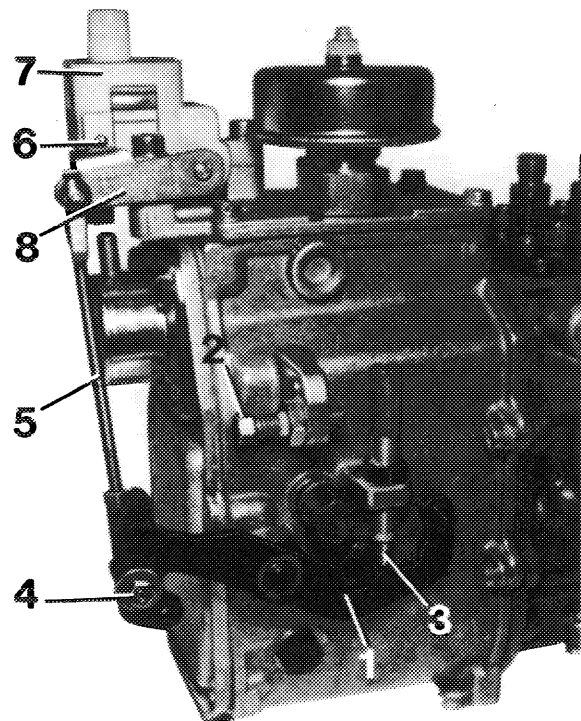
107-17109

9 Adjust push rod (41) in such a manner that max. 0.5 mm play is available between control cam lobe of guide lever (68) and link of switch-over valve (64) (arrow). Regulating lever (1) should rest against idle speed stop (3).



**Attention!**

During lubricating jobs for regulating system, do not lubricate runway of plastic cam on guide lever.

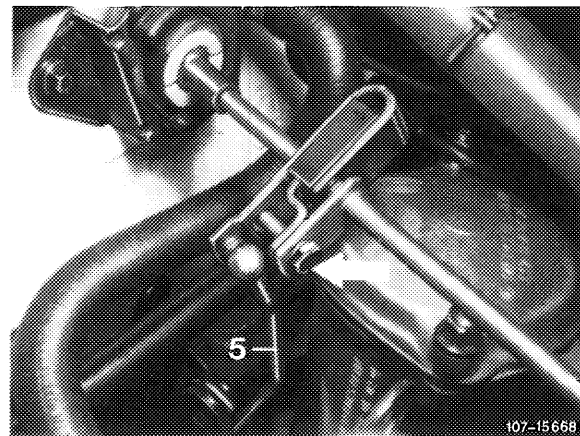
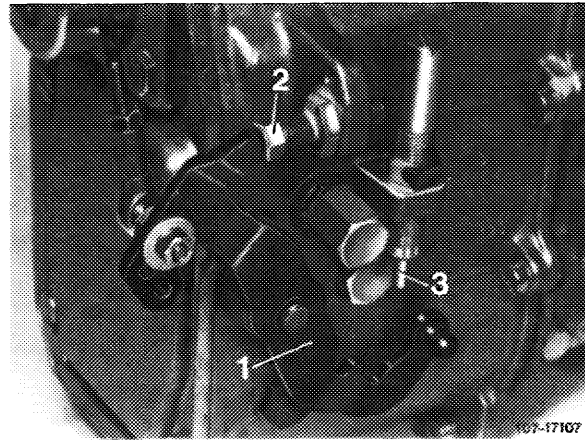


- 1 Regulating lever
- 2 Full load stop
- 3 Idle speed stop
- 4 Adjustable ball head
- 5 Connecting rod
- 6 Full load stop on vacuum control valve
- 7 Vacuum control valve
- 8 Actuating lever for vacuum control valve

107-17189

10 Check full throttle stop. With engine stopped, step on accelerator pedal from inside vehicle up to stop on kickdown switch. Accelerator pedal and regulating lever (1) should then rest against full throttle stop of injection pump (2). If required, adjust regulating linkage with adjusting screw (arrow) in such a manner that the regulating lever rests against full throttle stop (2) on injection pump (1).

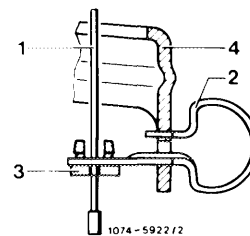
- 1 Regulating lever
- 2 Full throttle stop
- 3 Idle speed stop



**Attention!**

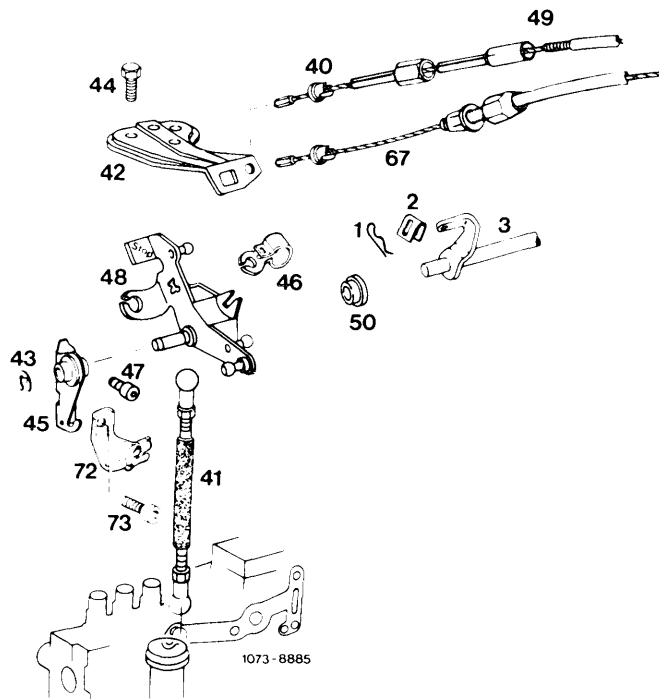
If regulating linkage is not moving to full throttle, check whether contour spring for idle speed adjuster is correctly installed.

- 1 Cable control for idle speed increase
- 2 Contour spring
- 3 Plastic sleeve
- 4 Guide lever



Engine regulation  
 Engine 616 in model 123.1  
 MW-injection pump with mechanical governor  
 (USA) 1980

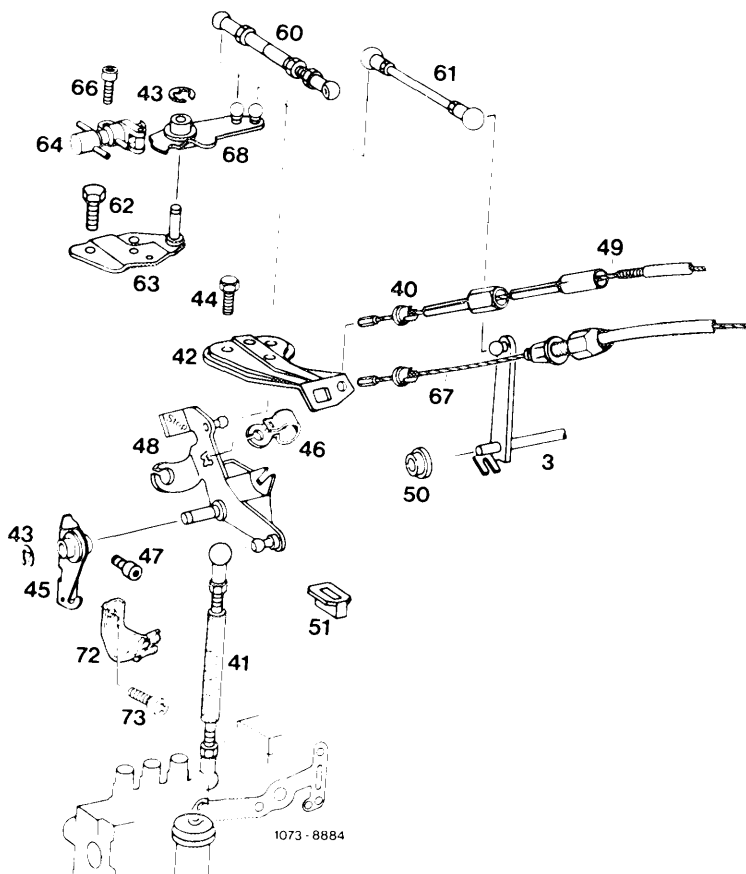
Vehicles with manual transmission



- |    |                                                    |    |                   |    |                                         |
|----|----------------------------------------------------|----|-------------------|----|-----------------------------------------|
| 1  | Lock                                               | 42 | Holder            | 48 | Angle lever                             |
| 2  | Spring                                             | 43 | Fuse              | 49 | Bowden wire for idle speed adjuster     |
| 3  | Longitudinal regulating shaft, manual transmission | 44 | Hex. screw        | 50 | Plastic bushing                         |
| 40 | Plastic sleeve                                     | 45 | Bearing           | 67 | Bowden wire for cruise control/Tempomat |
| 41 | Push rod                                           | 46 | Contour spring    | 72 | Holder                                  |
|    |                                                    | 47 | Hex. socket screw | 73 | Hex. socket screw                       |

Engine regulation  
 Engine 616, 617 in model 123.1  
 MW-injection pump with mechanical governor  
 (USA) 1980

Vehicles with automatic transmission



- |    |                               |    |                                     |    |                                         |
|----|-------------------------------|----|-------------------------------------|----|-----------------------------------------|
| 3  | Longitudinal regulating shaft | 47 | Hex. socket screw                   | 63 | Holder                                  |
| 40 | Plastic sleeve                | 48 | Angle lever                         | 64 | Switchover valve                        |
| 41 | Push rod                      | 49 | Bowden wire for idle speed adjuster | 66 | Hex. socket screw                       |
| 42 | Holder                        | 50 | Plastic bushing                     | 67 | Bowden wire for cruise control/Tempomat |
| 43 | Lock                          | 51 | Plastic hub                         | 68 | Guide lever                             |
| 44 | Hex. screw                    | 60 | Idle path rod                       | 72 | Holder                                  |
| 45 | Bearing                       | 61 | Pull rod                            | 73 | Hex. socket screw                       |
| 46 | Contour spring                | 62 | Hex. screw                          |    |                                         |



## F. Engine 616 in model 123.1 (USA) 1981 with MW-injection pump

### Length of regulating linkage

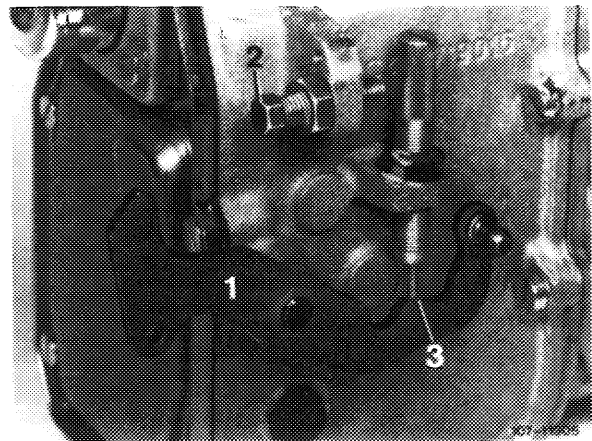
Idle path rod (60 in Fig. item 9) in extended condition	154 mm
Pull rod (61 in Fig. item 9)	137 mm
Push rod (5 in Fig. item 6)	186 mm
Connecting rod (5 in Fig. item 8)	122 mm

### Adjustment

- 1 Check regulating linkage for easy operation and distortion. Renew damaged parts, if required.
- 2 Disconnect all regulating rods.
- 3 Check whether regulating lever (1) of injection pump rests against idle speed stop (3).

#### Attention!

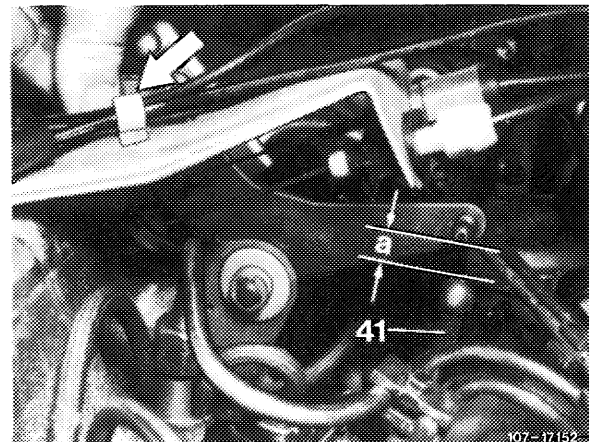
Push rod (41) should be covered with an insulating hose.



- 1 Regulating lever
- 2 Full throttle stop
- 3 Idle speed stop

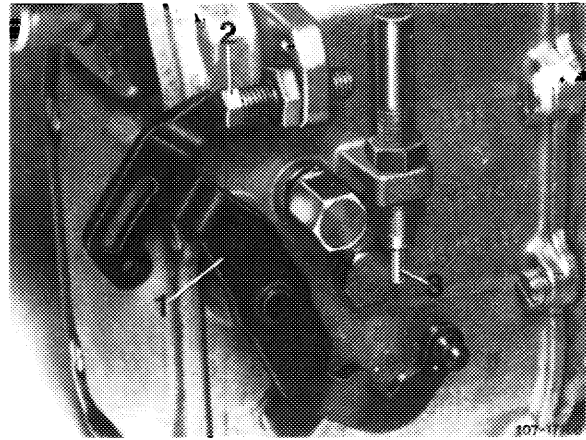
### Vehicles with manual transmission

- 4 Adjust push rod (41). For this purpose, push shutoff lever (arrow) against stop. Adjust push rod in such a manner that a clearance of 5–6 mm (distance "a") is available between bottom edge of ball head and upper edge of ball socket. Connect push rod.

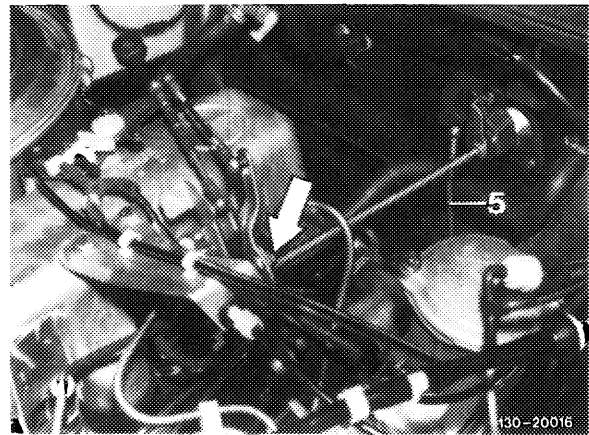


5 Check full throttle stop. With engine stopped, step down on accelerator pedal from inside vehicle up to stop. Accelerator pedal and regulating lever (1) should then rest against full throttle stop (2) of injection pump. If required, adjust regulating linkage with adjusting screw (arrow in Fig. item 6) in such a manner that regulating lever (1) rests against full throttle stop (2) of injection pump.

- 1 Regulating lever
- 2 Full throttle stop
- 3 Idle speed stop



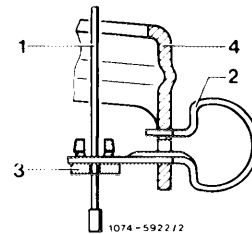
6 If full throttle or idle speed stop (2 or 3) is not attained with this adjustment, adjust push rod (5) from longitudinal regulating shaft to accelerator pedal to 186 mm, measured from center of ball socket to center of damping and connect.



**Attention!**

If regulating linkage is not moving to full throttle stop, check whether contour spring for idle speed adjuster is correctly installed.

- 1 Cable control for idle speed increase
- 2 Contour spring
- 3 Plastic sleeve
- 4 Guide lever



7 Adjust Bowden wire for cruise control/Tempomat. For this purpose, push shutoff lever up to stop. Bowden wire should then rest free of tension against regulating lever.

If required, adjust Bowden wire with adjusting nut (arrow). Release shutoff lever (idle speed position). This will provide Bowden wire with the required play (arrow).

arrow = Bowden wire for cruise control/Tempomat

