

Transmission Type K4A 025 and K4B 050

Caution: All the adjusting jobs on automatic transmissions named below may be completed only when the front and rear axle are under the dead load of the vehicle; the vehicle should not be raised by means of stands, jacks etc., but **should rest on its wheels.**

Adjustment of Selector Rod and Starting Lock and Backup Light Switch

Steering Wheel Shift

Disconnect selector rod (7) on intermediate lever (3), as well as connecting rod (2) for starter locking switch (1). Loosen counter nut on ball socket (6). Place range selector lever (8) on transmission and

selector lever on steering wheel to position "N." Adjust selector rod lengthwise in such a manner that the ball socket is in alignment with the ball head on the intermediate lever (3). Connect selector rod on intermediate lever and tighten counter nut (Fig. 27-23/1).

Adjust connecting rod (2) lengthwise in such a manner that the actuating lever on the starter locking switch (1) is between the two white marking lines and attach.

Checkup: Actuation of the starter in the selector lever positions "N" and "P" should be possible, and impossible in the driving positions (R, 4, 3, 2).

Caution: Actuate brake during checkup!

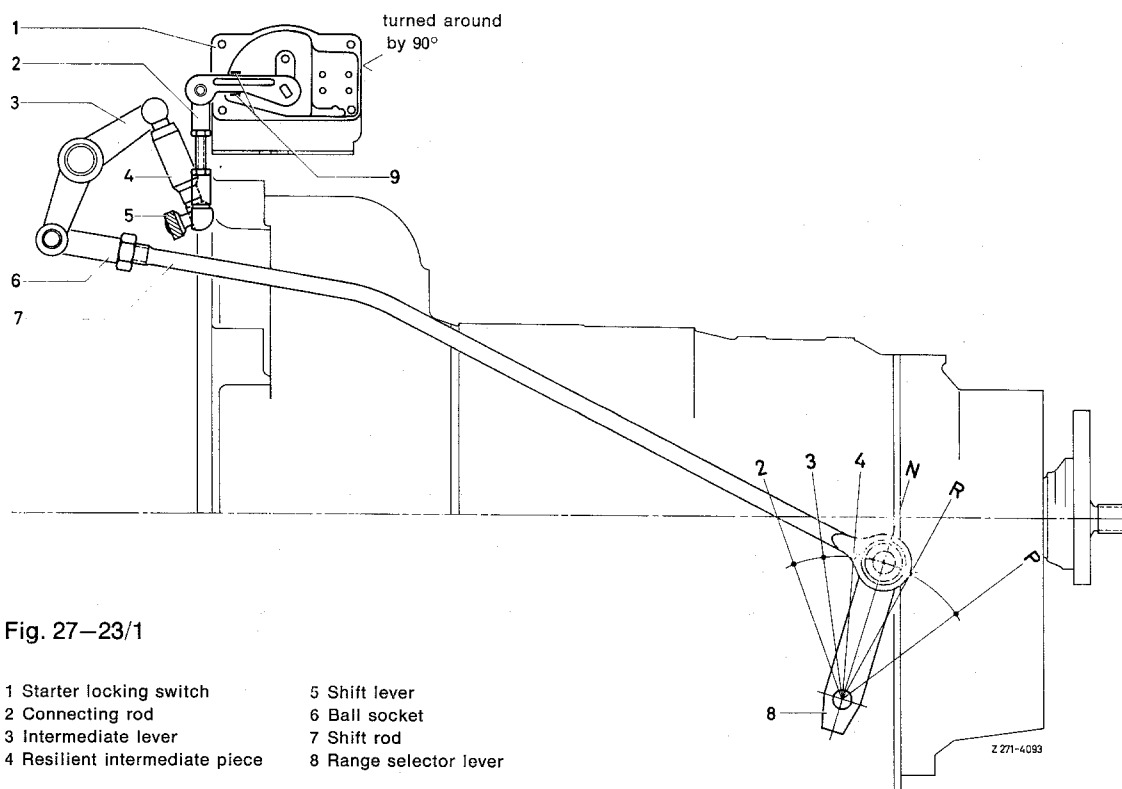


Fig. 27-23/1

- | | |
|--------------------------------|------------------------|
| 1 Starter locking switch | 5 Shift lever |
| 2 Connecting rod | 6 Ball socket |
| 3 Intermediate lever | 7 Shift rod |
| 4 Resilient intermediate piece | 8 Range selector lever |

Adjustment of Selector Rod and Starting Lock and Backup Light Switch

Floor Shift

Remove selector rod (4). Move range selector lever (6) and selector lever (1) to "N," making sure that a play of approx. 1 mm is available between the gate and the selector lever. Loosen fastening bolts for supplementary lever, adjust supplementary lever until the adjusting mark on its upper oblong hole is in alignment with the center line of the range selector lever (Fig. 27-23/1b), tighten fastening bolts. On Model 280 SL the supplementary lever is adjusted in such a manner that the center lines of both levers are in alignment (Fig. 27-23/1a). Press shift rod (4) on bearing journal on supplementary lever (5). Set adjusting eye (3) until it is in agreement with the bearing journal on the selector lever base (2). Fine adjustments, if required, may be made on the two oblong holes of the supplementary lever (5). Press shift rod on selector lever base (2) (Fig. 27-23/1a).

The bowden wire (7) actuating the starting lock and backup light switch should be set in such a manner that the engine can be started only in the selector lever positions "N" and "P." In all other

positions the starting lock should become effective. In addition, the backup lights of the vehicle should light up in selector lever position "R." Any required adjustment should be made on the adjusting stop (8) (Fig. 27-23/1a).

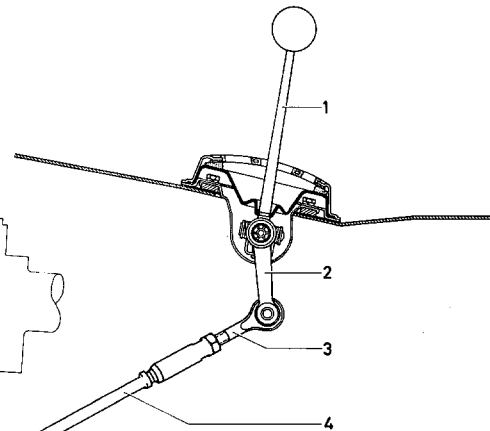
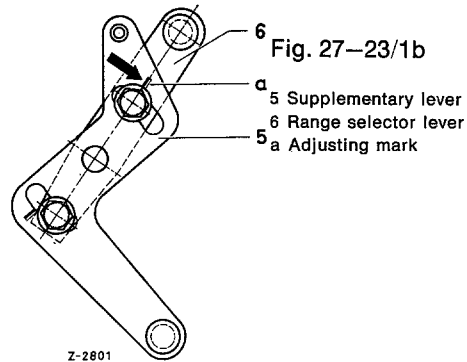
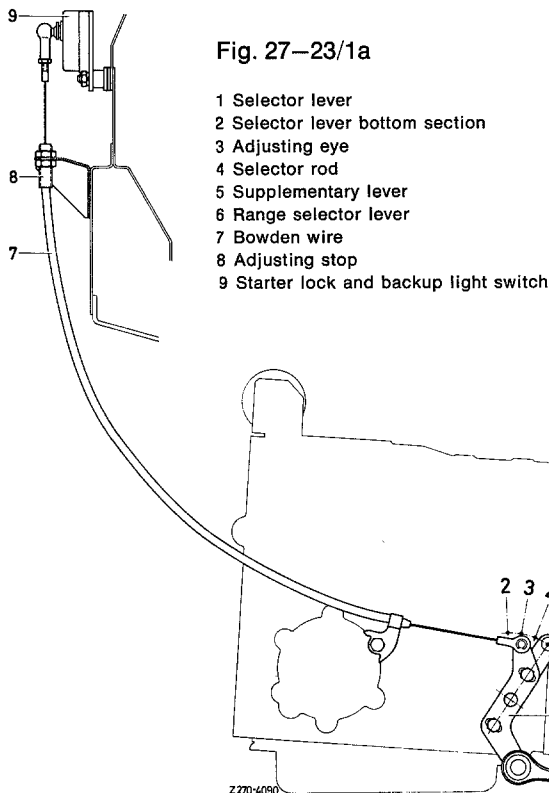
Adjustment of Selector Lever Indication

Steering Wheel Shift

The selector lever indication is adjusted in selector lever position "N." The bowden wire (3) from the shift tube to the selector lever indication can be adjusted lengthwise by means of a knurled nut (4) on selector lever indication (Fig. 27-23/2). For this purpose, loosen counter nut (5) and tighten again upon adjustment.

Adjustment of Kickdown Switch

Unscrew kickdown switch (4) from cover plate (2) of jacket tube in the direction of the engine compartment after loosening counter nut (3) (Fig. 27-23/4). Check accelerator pedal and linkage for easy operation and make operable, if required. The accelerator pedal should move easily from partial throttle and full throttle position into idling speed position.



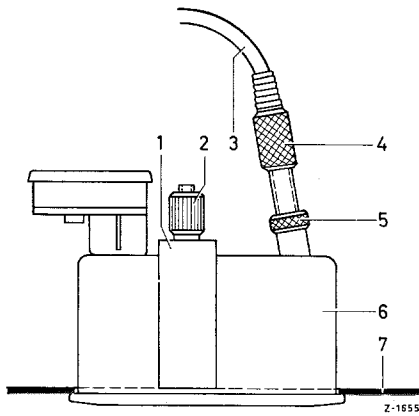


Fig. 27-23/2

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|----------------|--------------------|
| 1 Clamp | 5 Counter nut |
| 2 Clamping nut | 6 Housing |
| 3 Bowden wire | 7 Instrument panel |
| 4 Knurled nut | |

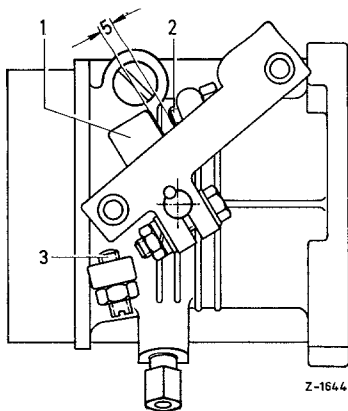


Fig. 27-23/3

- | | |
|------------------------|---------------------|
| 1 Throttle valve lever | 3 Idling speed stop |
| 2 Full load stop | |

Screw kickdown switch into cover plate of jacket tube until the throttle valve lever (1) is approx. 5 mm in front of the full load stop (2) on throttle valve (Fig. 27-23/3), with the accelerator pedal resting against the kickdown switch (position B). When the accelerator pedal is depressed to kickdown (position C) a play of approx. 1 mm must be still available between the throttle valve lever and the full load stop on the venturi control unit. The adjusting lever on the injection pump, on the other hand, should rest against the full load stop (applies only to vehicles with injection engine).

Adjustment of Kickdown Linkage

If no kickdown downshifts occur, the function of the kickdown linkage must be checked and the modulating pressure must be measured.

Inspection of Kickdown Linkage:

For this purpose, actuate accelerator pedal with the ignition switched on and the engine stopped:

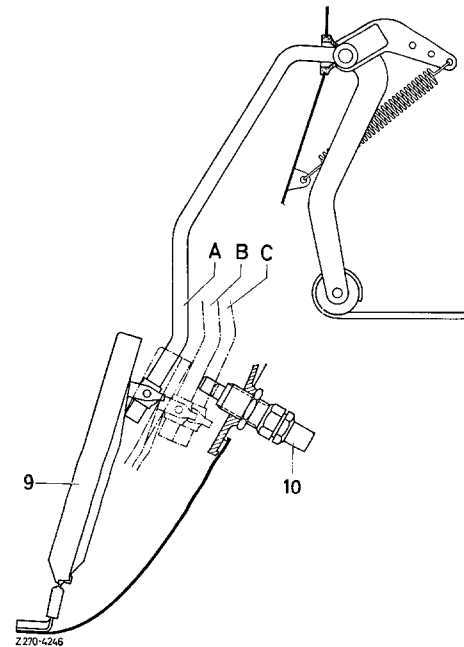


Fig. 27-23/4

- | | |
|---------------------|--------------------------|
| 9 Accelerator pedal | A Idling speed position |
| 10 Kickdown switch | B Full throttle position |
| | C Kickdown position |

Accelerator pedal not actuated: idling throttle position, linkage moves toward the rear.

Accelerator pedal lightly actuated: partial to full throttle position, linkage is moving to center position.

Accelerator pedal completely depressed: kickdown position, linkage is moving forward.

If the double lift solenoid is not moving the kickdown linkage into these three positions, there is either an electrical failure (not enough terminal voltage, short circuit etc.) or the actuating shaft (1) for the modulating pressure transmitter in the brake band piston cover or the modulating pressure transmitter (4) itself are stuck (Fig. 27-23/5).

Actuate accelerator pedal lightly with right foot while simultaneously actuating kickdown switch with left tip of foot. Read kickdown modulating pressure on pressure gauge (value refer to Job No. 27-0).

If the pressure is too low, there is first a possibility that the linkage (2) or the angle lever (3) on the double lift solenoid are worn out. Check up by

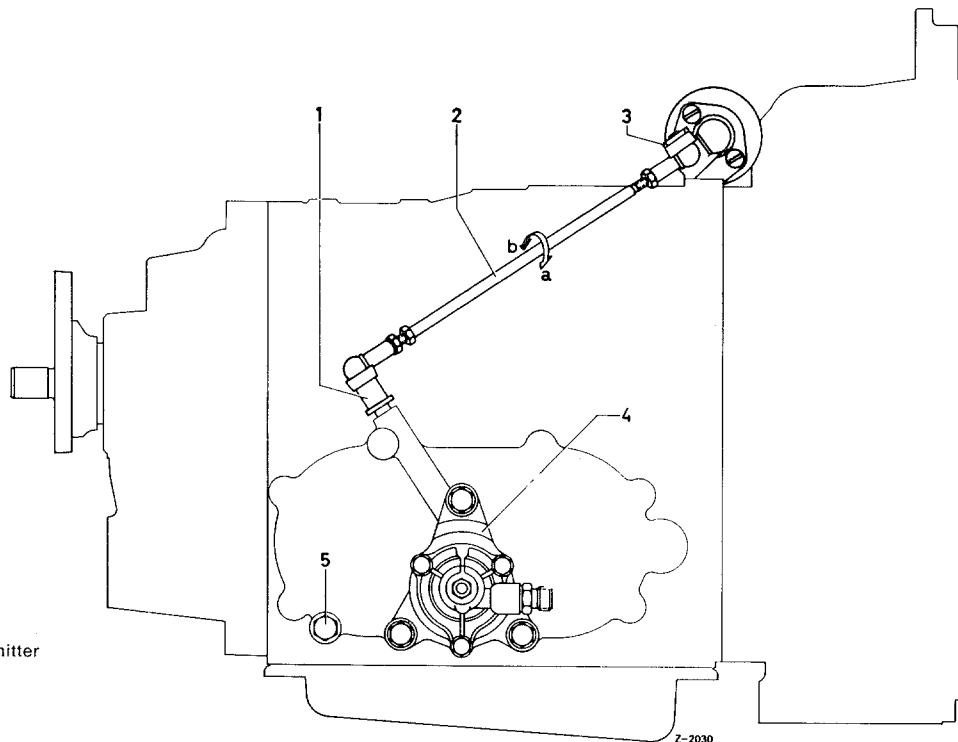


Fig. 27-23/5

- 1 Actuating lever
- 2 Linkage
- 3 Angle lever
- 4 Modulating pressure transmitter
- 5 Measuring connection for modulating pressure

shaking on angle lever (3) of the double lift solenoid in kickdown position (accessible from passenger compartment through transmission tunnel opening). Remove clearance or replace angle lever, if required.

Measuring of Kickdown Modulating Pressure:

For this purpose, connect pressure gauge (scale end value 6 kp/cm²) to measuring connection (5) (Fig. 27-23/5), disconnect vacuum line from modulating pressure transmitter and run engine at idling speed.

The kickdown modulating pressure is adjusted by extending the linkage (2) or the turnbuckle by rotating in direction "a" (pressure reduction) or by shortening in direction "b" (pressure increase). Following adjustment and in addition to the kickdown modulating pressure, always check the basic pressure (value refer to Job No. 27-0), which should never exceed its top limit.

Note: General adjustment of modulating pressure refer to Job No. 27-25, Section D.

Adjustment of Idling Throttle Switch (Rotary Switch on Throttle Valve)

If the idling throttle switch on a venturi control unit or carburetor has been replaced, new adjustments are required. A checkup of the adjustments is required, whenever trouble in the electric lines of the automatic transmission (for example racing of engine, slipping of servo members, no brake shifts when driving down slopes above 1,200 m above sea level) occurs. This requires a revolution counter and an inspection lamp. Checkup and adjustment of idling throttle switch should be made only with the engine at operating temperature, that is, at a cooling water temperature of at least 80° C.

Note: Prior to running an engine to operating temperature, disconnect cables from idling throttle switch.

Checking the Idling Throttle Switch:

Disconnect both cables on idling throttle switch. Connect one terminal of the idling throttle switch to ground, the other to terminal of inspection lamp. Connect inspection lamp to positive pole of battery.

With the hand brake pulled, run engine at idling speed and place selector lever in one of the driving positions. The inspection lamp should now light up and should extinguish only under slight acceleration (this applies also to engines which are provided with a lifting solenoid for maintaining constant speed).

Connect revolution counter to engine and check shutting-off speed. Move selector lever to position "N" or "P" and accelerate slowly. Check speed increase on revolution counter: when the shutoff speed is attained (refer to Job No. 27-0) the inspection lamp should be extinguished at the latest.

If the inspection lamp does not yet extinguish when the shutoff speed is attained, the idling speed switch requires adjustment.

Adjustment of Idling Speed Switch:

Lightly loosen fastening bolts of idling speed switch and turn idling throttle switch until the inspection lamp extinguishes. Tighten fastening bolts again and repeat check once again.

Note: On injection engines the idling throttle switch is attached to the pertinent throttle valve member with two bolts, on carburetor engines with only one.