

5. Check and if necessary adjust to the same length the two spring-loaded connectors (6) at the front carburetor and lock them by tightening up the hexagon nut at the ball cup.

Note: When adjusting the length of the spring-loaded connectors, both the front angle relay lever (adjustment lever) (2) and the throttle valve lever (7) of the front carburetor must be against the stop in the idle position. Similarly, care should be taken to ensure that the connectors (6) are not extended, i. e., the spring pressure must not be overcome in order to obtain the required length.

6. When the connectors have been adjusted to the same length, press them into position on the two throttle valve levers (7). Now adjust the idle stop screw (10) accurately. To do this, back out the idle stop screw a little and screw it in again to the point where the throttle valve lever of the front carburetor is about to move. Then back out the idle stop screw $\frac{1}{8}$ of a turn. This will ensure that even if the ball joints are slightly worn there will be no play in the mechanism.
7. To adjust the rear carburetor, turn the hexagon nut (5a) toward the angle relay lever (1) until the throttle valve lever (7) is about to move. Then back out the hexagon nut (5a) $\frac{1}{8}$ of a turn and tighten up the milled nut (5).

Note: When adjusting the pull rod (4), do not tighten the hexagon nut (5a) too much toward the angle relay lever (1) since this would cause the throttle valve of the rear carburetor to be forced open. On the other hand, the hexagon nut (5a) must not be turned in too little since this would cause the rear connector (6) to be expanded when the milled nut (5) is tightened.

8. After adjusting, lock with the hexagon nut (5a).
9. Now adjust the idle stop screw (10) at the front angle relay lever (adjustment lever) (2) in such a way that there is approx. 0.1 mm play between the stop screw (10) and the stop pin (11).

Note: When the accelerator pedal is suddenly released the initial movement of the linkage generates a considerable shock force in the mechanism. Retracting the idle stop screw (10) has the effect of keeping to a minimum the force that has to be absorbed by the throttle valves. On impact, the spring-loaded connectors (6) are extended and the majority of the shock force developed is absorbed by the stop pin (11). This arrangement, by taking the strain off the throttle valves, virtually eliminates hammering of the idle adjustment screws (8).

10. In order to adjust the full load stop, slacken and back out the full load limiter screw (12) at the front angle relay lever (adjustment lever) (2). Now press the carburetor linkage into the full load position and screw in the full load limiter screw (12) toward the stop pin (11) so that the front angle relay lever (adjustment lever) (2) is just beginning to move. (The mechanical throttle valves of both Stage 1 and Stage 2 of both carburetors must be fully opened.) Then lock the limiter screw (12) by tightening the hexagon nut.
11. Once more check the functioning and the free movement of the control linkage and the actuating mechanism for the start mechanism on both carburetors.
Make sure at the same time that the vacuum valves with shock-absorbers move quite freely.

D. Adjustment of Idle

1. After adjusting the carburetor linkage, screw in the idle mixture adjustment screw (9) completely on both carburetors as far as it will go and then back it out exactly two turns (see Fig. M 31 S/5).
2. Warm up the engine to its normal working temperature (70—80° C. cooling water temperature) and then, by evenly adjusting the idle adjustment screws (8), adjust the idle to a speed of approx. $n = 800$ r.p.m., using Revolution Counter 000 589 12 21.
3. Adjust the two idle mixture adjustment screws (9) by screwing **evenly** in and out so that
 - a) the engine ticks over perfectly and
 - b) the highest possible idle speed is obtained.
4. Once more adjust the idle speed to approx. $n = 800$ r.p.m. by means of the idle adjustment screws (8).

By repeated slight correction of the position of the idle mixture adjustment screws (9), check whether the idle can be further improved. Then, if necessary, adjust the idle speed once more with the idle adjustment screws (8).

Note: When the idle is adjusted, the mechanical throttle valve of Stage 2 and the start mechanisms of both carburetors must be completely closed.

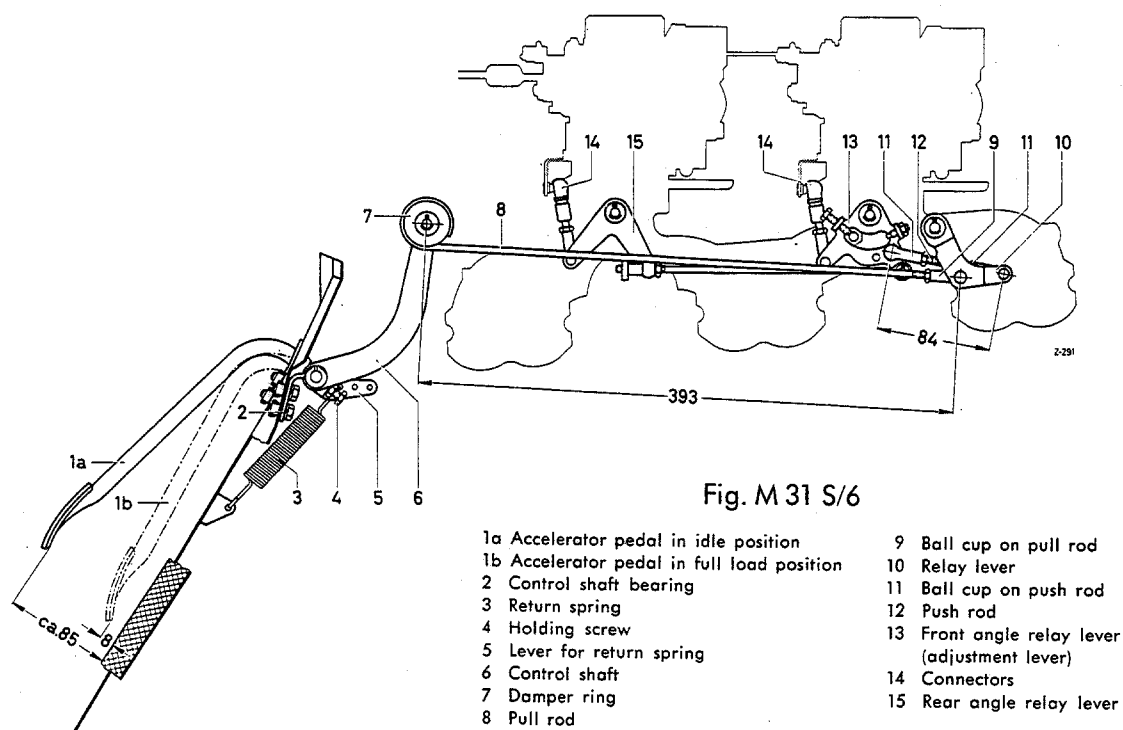
E. Adjustment of Accelerator Pedal

1. Check the position of the accelerator pedal in the idle position and in the full load position. The distance of the accelerator pedal from the rubber floor mat should be appr. 85 mm in the idle position, and appr. 8 mm in the full load position (Fig. M 31 S/6).

Note: A minimum distance of appr. 8 mm in the full load position is necessary, since otherwise there is a danger that the accelerator pedal may come to rest against the rubber floor mat too early with the result that the throttle valves are not fully opened.

The check must be made by a second mechanic.

The distance of appr. 85 mm in the idle position is necessary for correct foot position.



2. To correct the position of the accelerator pedal (1) check the length of the pull rod (12). The distance from ball cup connector center to ball cup connector center must be 84 mm. After adjustment lock the ball cup connectors (11) by means of the hexagon nuts.
 3. Check the length of the push rod (8). The distance from bolt center on lever of control shaft (10) to ball cup connector center must be 393 mm. After adjustment lock the ball cup connectors (9) by means of the hexagon nuts.
 4. After adjustment of the push rod and pull rod recheck the position of the accelerator pedal (1).
- Note:** If after adjustment the distance is still not correct check whether the accelerator pedal (1) is bent. If that is the case the pedal must be straightened.