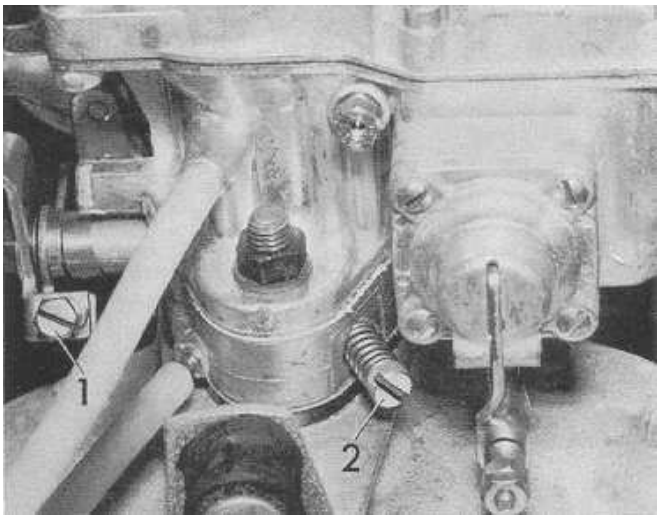
13 00 004 - Adjustment of engine idle speed/synchronising carburettors

Note: Adjust with engine at normal operating temperature Correct ignition timing and valve cearance are essential.

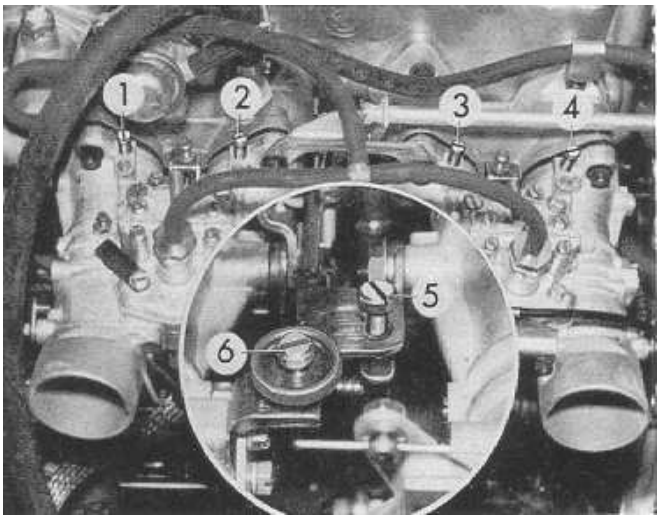
A) BMW 1602 - 2002-2002 A

Adjust the engine to 800 ± 100 rpm with the idling speed adjusting screw (1).
Tighten or loosen the idling speed mixture regulating screw (2) until the engine runs erratically.
This regulates the fuel. Adjust the idling speed mixture regulating screw (2) until the engine reaches maximum idling speed and runs smoothly
Adjust idling speed to 800 ± 100 rpm. Reset the idling speed mixture if necessary.



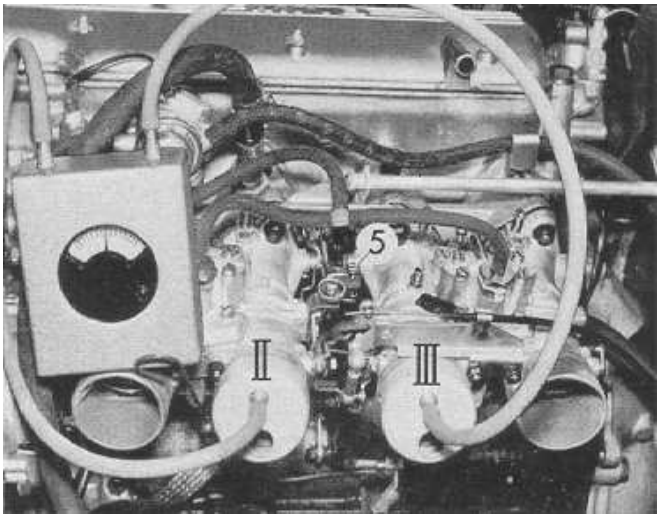
B) Twin-barrel carburettor models

Initial setting with engine stopped. Carefully tighten the four idling speed mixture regulating screws (1-4) until tight and then release by one half turn.
Unscrew the synchronizing screw (5) until it no longer contacts the throttle lever.
Unscrew the idling speed adjusting screw (6) as far as possible. Tighten the synchronizing screw (5) until it just contacts the throttle lever.
Screw in the idling speed adjusting screw (6) until contact is made and then tighten up a further turns.

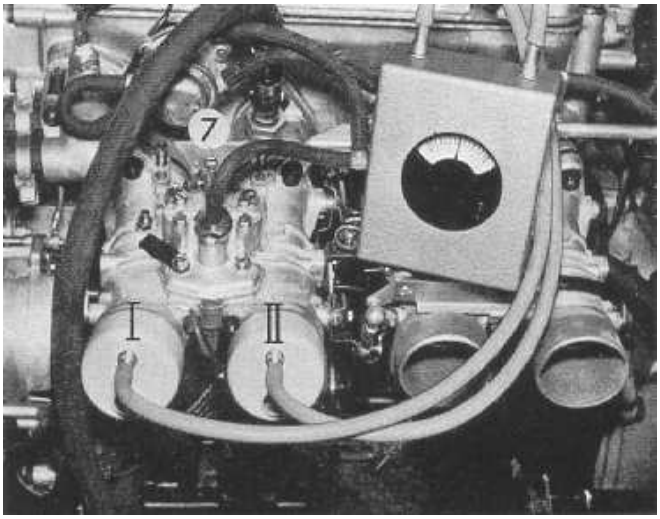


Synchronizing with engine running:
Remove air filter 13 71 000.
Start engine and adjust to 1200 rpm.
Adjust all four carburettors using the Unitester to equal volume of air flow
The airflow is correctly set when the indicator remains at zero.
Adjust carburettor II to coincide with carburettor III with the aid of the synchronizing screw (5).

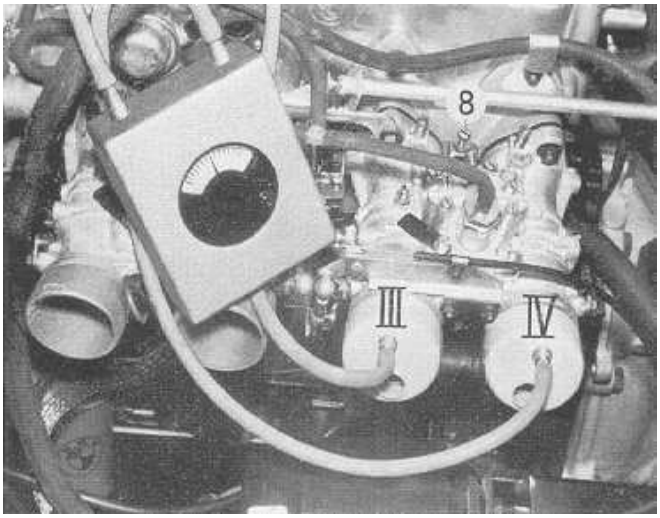
-> 13 71 000



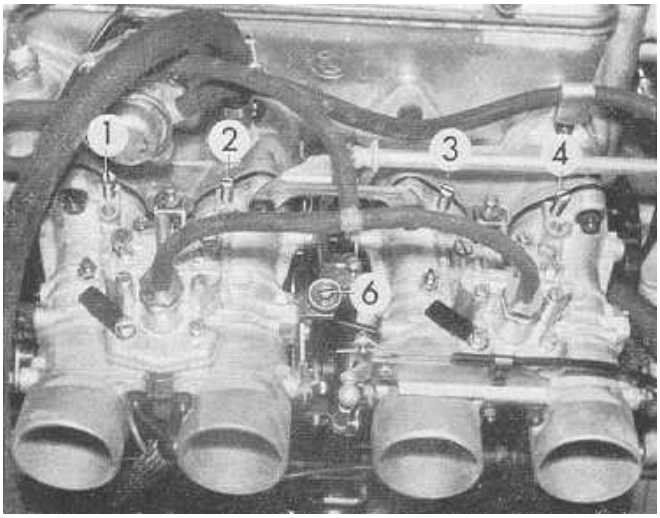
Adjust Carburettor I to coincide with carburettor II with the aid of the connecting screw (7).



Adjust carburettor III to coincide with carburettor IV, with the aid of the connecting screw (8).
During the setting process increase the rpm several times so that the plugs do not soot up.



After the synchronizing sequence is complete set the mixture regulating screws (1- 4) to the best setting for smooth running.
Set the idling speed using the idling speed setting screw (6) to 800 ± 100 rpm and if necessary reset the mixture regulating screws (1 - 4).

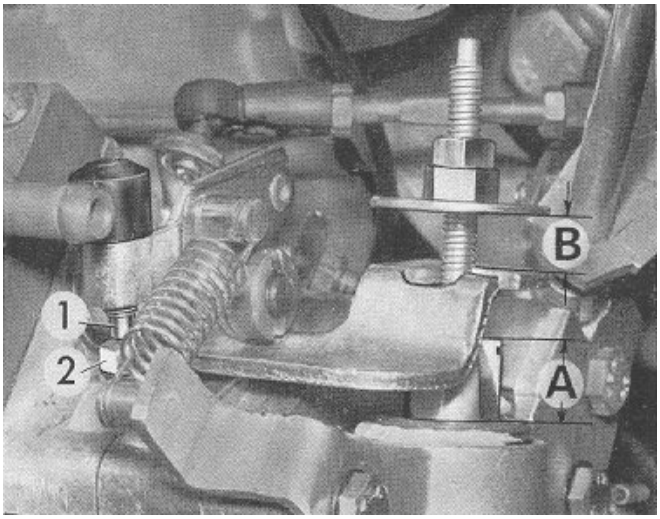


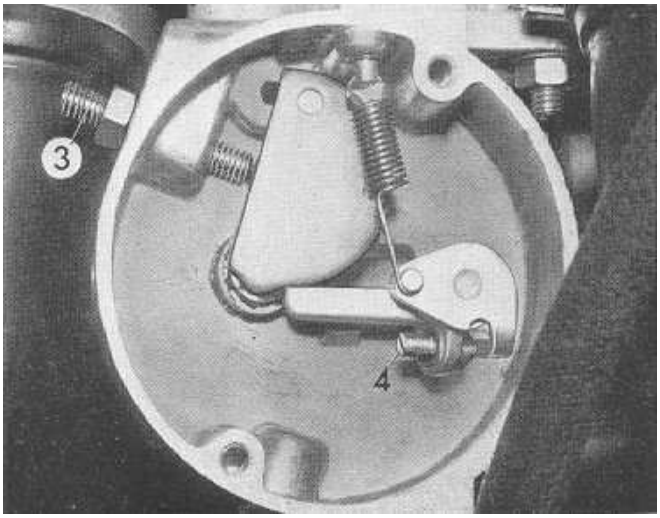
C) Injection models

Engine at operating temperature.
The air regulating cone of the warm-up runner must project by at least 9 ÷ 10 mm (0.35 ± 0.39 in.) (A).
Distance (B) from enrichment lever to collar nut should amount to 4 mm (0.157 in.).
Threaded pin (1) must be in full contact with stop screw (2).
If any of these data are not reached, check setting of warm-up runner in cold condition 13 51 024.
If, after resetting of the warm-up runner, the prescribed data are still not reached yet, the thermo-element is defective and the warm-up runner has to be renewed 13 51 031.

-> 13 51 024

-> 13 51 031





Set idling speed to 900 ± 50 rpm on screw (3).
Adjust idling CO emissions on screw (4) to 2 ÷ 3 Vol.. Turning screw inwards - less CO emissions.
Possible change of idling speed may be corrected on screw (3).