

Test equipment

Stroboscope, revolution counter

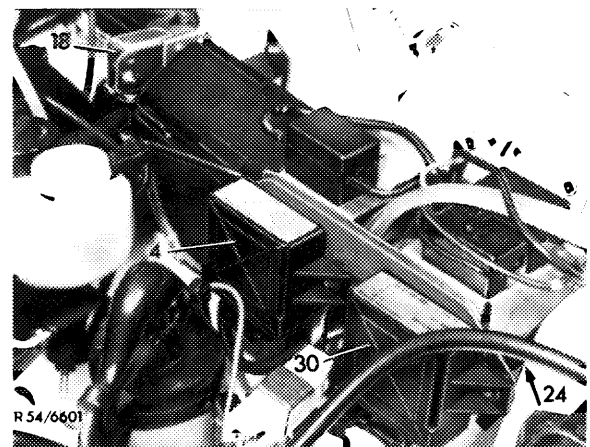
The following checks are to be performed with engine at operating temperature.

- Connect stroboscope and revolution counter. Start engine and run at idle speed.

Check ignition change-over with rpm switch (4)

- Check ignition timing at idle speed. Slowly increase engine speed. At approximately 2400/min., the ignition retard must be cancelled.

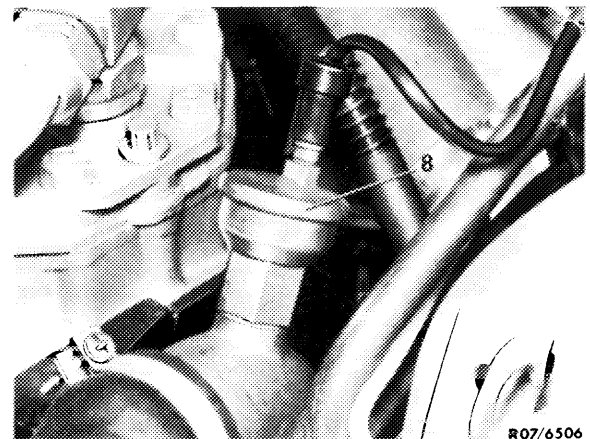
(Ignition firing point is advanced by approximately 10°). Below 2200/min., the ignition retard will be in effect.



Check ignition change-over with 100°C (212°F) temperature switch (8)

- Run engine at idle speed.

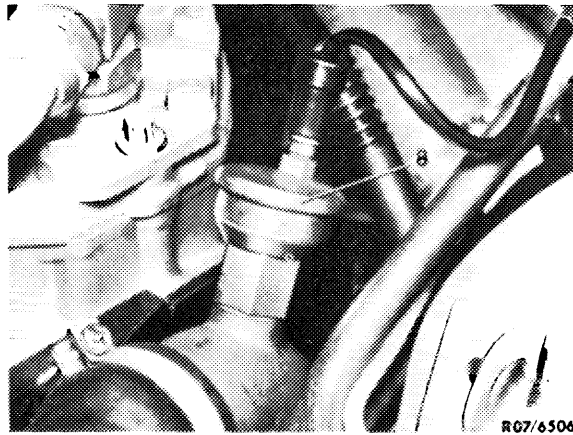
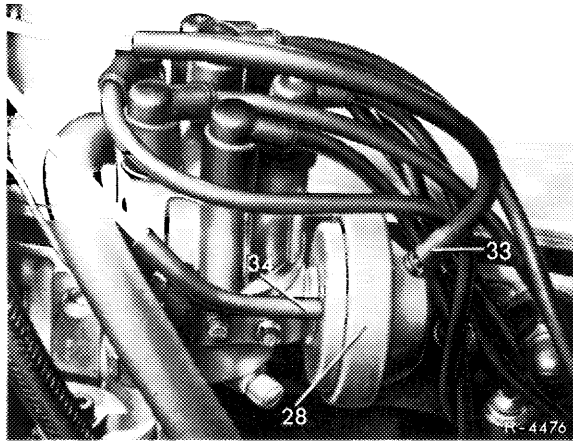
Contact the 100°C (212°F) temperature switch (8) to ground. This will cause the ignition timing to advance by about 10° and at the same time switch on auxiliary fan.



Engine 130.923 model year 1972

Test equipment

Stroboscope, revolution counter



The following checks are to be performed with engine at operating temperature:

- Connect stroboscope and revolution counter. Start engine and run at idle speed

Check ignition change-over with rpm switch.

- Check ignition timing at idle speed. Slowly increase engine speed.
- Above approximately 2400/min, the distributor vacuum control (28) must advance the ignition; under approximately 2200/min ignition must be retarded.

Check ignition change-over with 100°C (212°F) temperature switch (8)

- Remove plug from 100°C (212°F) temperature switch and connect to ground. This should advance ignition.

Test equipment

Stroboscope, revolution counter

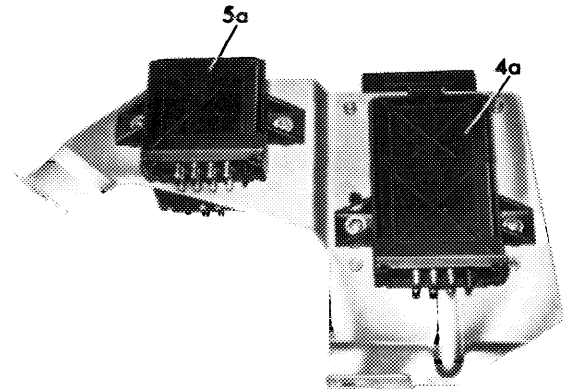
The following checks are to be performed with engine at operating temperature.

- Connect stroboscope and revolution counter, start engine and run at idling speed.

Check ignition change-over with rpm switch (4a)

- Check firing point at idling speed, slowly increase engine speed. Ignition retard should be cancelled above approx. 2500/min. This will adjust the firing point by 20° in direction advance.

Below 2200/min the ignition should be adjusted again in direction retard.



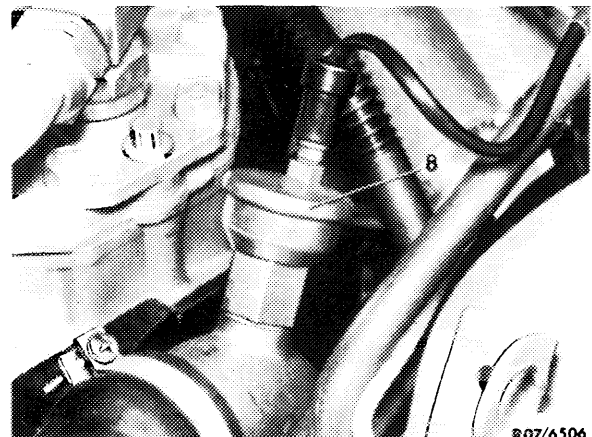
R07/6563

Check ignition change-over with 100°C (212°F) temperature switch (8)

- Pull plug from 100°C (212°F) temperature switch and connect to ground. Ignition retard should be cancelled and the auxiliary fan switched on.

Check ignition change-over when shifting 4th gear

For this test, the vehicle should be driven on a dynamometer or on the road. When changing from 3rd to 4th gear the ignition retard should be cancelled.



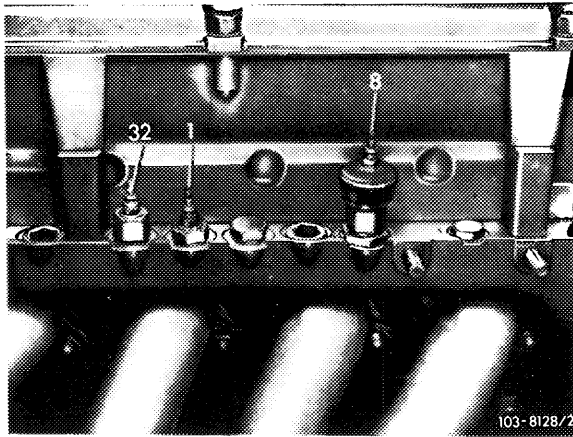
R07/6506

When changing back from 4th to 3rd gear below 2500/min the vacuum box on ignition distributor should be set to ignition retard.

Engine 110 model year 1973

Engine 110 model year 1974, Federal Emission Control System

The following checks are to be performed with engine at operating temperature:



Test No. 1

Disconnect the plug of the line to 17°C (62°F) temperature switch (7) in oil filter housing and connect to ground.

Result

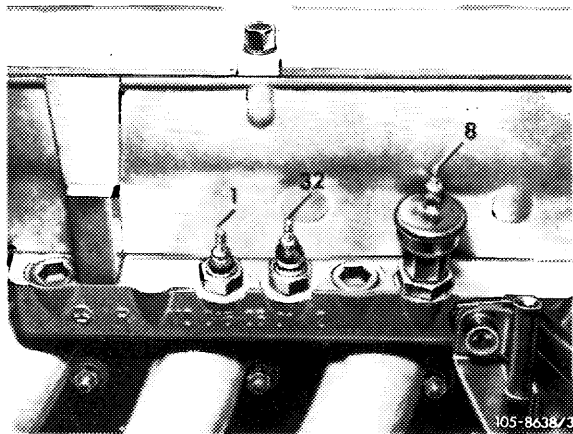
Engine speed should increase (ignition retard is cancelled).

Test No. 2

Unplug 100°C (212°F) temperature switch (8) and connect to ground.

Result

Engine speed should increase (ignition retard is cancelled). Auxiliary fan should run.



Test No. 3

Turn on air conditioner.

Result

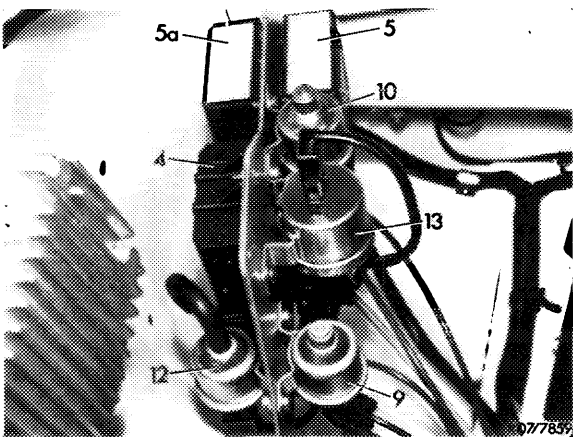
Engine speed should not drop (ignition retard is cancelled).

Test No. 4

Remove vacuum line from top of switch-over valve (12). Remove blue vacuum line from vacuum switch (13).

Result

Engine speed should increase (ignition retard is cancelled).



Test No. 5

Disconnect plug from connection at the relay support and ground male terminal 2 (wire color brown/white).

Result

Engine speed should increase (ignition retard is cancelled).

Test equipment

Revolution counter, stroboscope

The following checks are to be performed with engine at operating temperature:

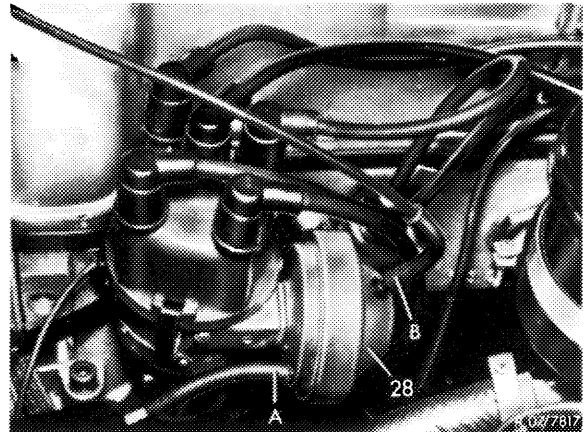
- Connect stroboscope and revolution counter, start engine and run at idling speed.

Check firing point without vacuum adjustment.

- Pull vacuum lines (A and B) from ignition distributor. Check firing point at 4500/min. Nominal value 42–48° BTDC.

Check firing point with vacuum adjustment in direction retard.

- Plug white vacuum line (A) to ignition distributor. Check firing point at 4500/min. Nominal value 32–42° BTDC.



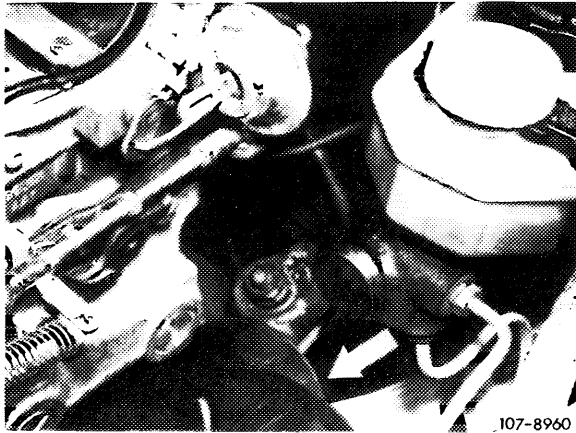
Check firing point with vacuum adjustment in direction advance.

- Plug red vacuum line (B) to ignition distributor. Pull-off white vacuum line.

Check firing point at 4500/min. Nominal value 48–58° BTDC.

Engine 110 model year 1974, California Emission Control System

The following checks are to be performed with engine at operating temperature.



Test No. 1

Disconnect the plug of line to 17°C (62°F) temperature switch in oil filter housing (arrow) and connect to ground.

Result

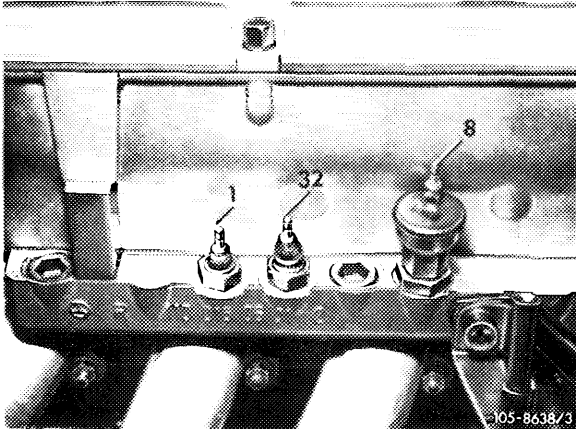
Engine speed should increase (ignition retard is cancelled).

Test No. 2

Unplug 100°C (212°F) temperature switch (8) and connect to ground.

Result

Engine speed should increase (ignition retard is cancelled). Auxiliary fan should run.

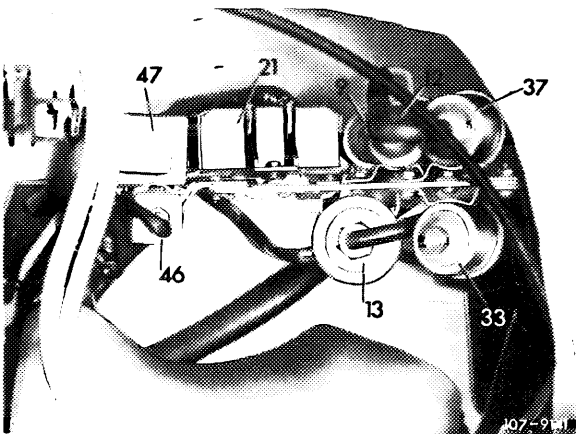


Test No. 3

Turn on air conditioner.

Result

Engine speed should not drop (ignition retard is cancelled).



Test No. 4

Remove vacuum line on top of switch-over valve (12). Remove blue vacuum line on vacuum switch (13).

Result

Engine speed should increase (ignition retard is cancelled).

Test equipment

Revolution counter

The following checks are to be performed with engine at operating temperature:

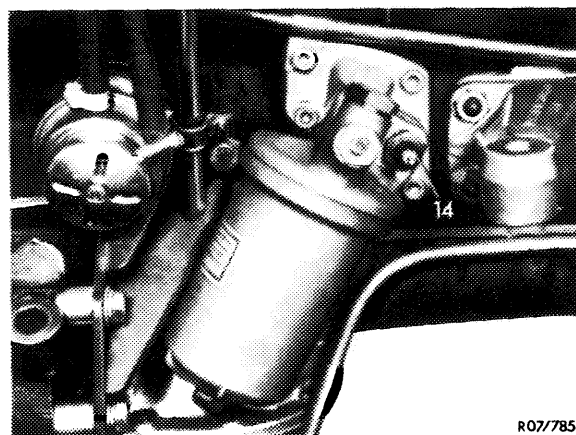
Run engine to operating temperature at idle.

Test No. 1

Disconnect the plug of line to the 25°C (77°F) temperature switch (14) in oil filter housing and connect to ground.

Result

Engine rpm should increase (ignition vacuum advance is effective).



R07/7858

Test No. 2

Increase engine speed to approximately 2500/min and then remove the red vacuum line at the distributor.

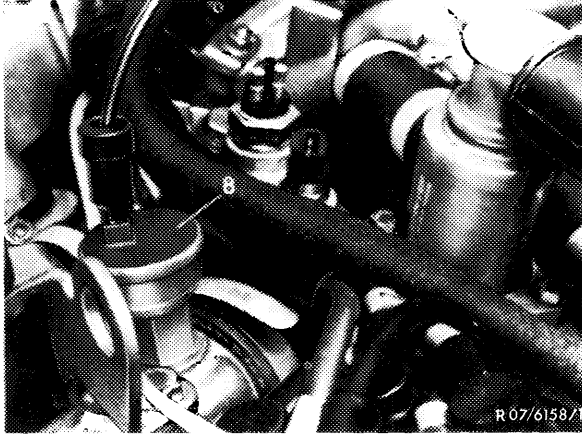
Result

Engine rpm should drop slightly (ignition vacuum advance is cancelled).

Engine 117 Model year 1974

The following checks are to be performed with engine at operating temperature:

Run engine to operating temperature at idle.



Test No. 1

Unplug 100°C (212°F) temperature switch (8) and connect to ground.

Result

Engine speed should increase (ignition retard is cancelled). On model 116 the auxiliary fan should operate.

Test No. 2

Switch on air conditioning.

Result

Engine speed should increase slightly (ignition retard is cancelled).