



Tech.Cust.Service VS-2010 bl/Zr/fm	BMW 2002 turbo Group: Engine	Munich, June '74 11 06 74(892) e
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Ref: Engine - BMW 2002 turbo

Dear Sirs,

Here are the latest hints for adjusting, e.g. checking of the BMW 2002 turbo engine:

1. The CO content has to be set at max. 4.5% corresponding to the best possible idling effect. If you do not obtain a satisfactory idling effect by this CO-value - "sawing" - please check the ignition advance curve. At an idling speed of 800 - 950 rpm, the timing point has to be at -2 to -8° crankshaft. In order to check this retard, mark the pulley with a paint-dot, 1° on the crankshaft = 1 mm/0.039". It is useful to mark 5 mm/0.195" ATDC as an average. This measurement is done with vacuum advance connected! The centrifugal timing control is equilibrated at 1,500 rpm with $25^\circ \pm 2^\circ$ on the crankshaft. Check the timing point $25^\circ \pm 2^\circ$ BTDC mark at 2,500 rpm.
2. When dismantling the flange connection exhaust manifold -turbine housing or when exchanging these parts, the flange surfaces have to be checked for flatness max. 1 mm/0.039" in order to avoid leakage and tension breaks.
3. The following parts might be the reason for an extraordinary blue discolouring of the exhaust gases:

Radial sealing of the injection pump is defective. Oil penetrates via the pneumatic control into the combustion chamber. Check the pressure line to the altitude control, e.g. line to the air-collector for oil traces. Have injection pump repaired via service of Messrs. Schäfer Einspritztechnik.
4. Via leaky bearings the turbo charger presses oil out of the engine oil circuit. Check the pressure line to the air collector for oil traces. At fast driving in long curves, for short periods oil can come out via the crank-case ventilation and can be burnt. However, this is harmless.
5. Please check the charger intake manifold at all cars serviced by you during their next inspection. When the radiator hose clamp is unfavourably positioned, it might chafe at the charger intake manifold.

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6. Leakage at the bellows of the altitude control shows up by extension of the bellows (lower CO-value). When the car is not driven over distances with large differences in altitude - height above sea-level -, as a preliminary remedy - when no bellows are in stock - you can adjust the corresponding setting-screws on the altitude control.

Yours very truly,
BAYERISCHE MOTOREN WERKE
Aktiengesellschaft
Service Division

ppa.

i.V.

Flohn

Dünzl