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## SUBJECT

**N54 – Aftermarket "Engine Performance Tuning" Kits**

## MODEL

E60, E61 with N54 engine

E90, E92, E93 with N54 engine

E82, E88 with N54 engine

E71 with N54 engine

## SITUATION

Various aftermarket "N54 – Engine Performance Tuning" kits are being aggressively advertised to BMW owners.

Depending on the manufacturer, these modifications may consist of a "turbo-tuner control module" (piggyback box) plugged directly into the TMAP sensor / DME connector, waste-gates vacuum plumbing alterations, or the DME "performance" software programming.

In general, each aftermarket tuner claims a significant increase in engine power and torque of up to 40% over the stock N54 engine specifications (which are, respectively, 300 hp and 400 Nm).

These alleged performance gains are achieved by an increase of the turbochargers boost in a wide range of engine speeds, in some cases exceeding the maximum designed turbo pressure of 8.8 psi by 50%.

## INFORMATION

**None of the aftermarket "N54 Engine Performance Tuning" kits has been evaluated, tested, approved or endorsed by the BMW Development or Service Departments.**

Any alterations to the originally designed and installed turbochargers control system or to the DME software may increase a vehicle's emission levels and may compromise its OBD II compliance.

Moreover, to the best of BMW NA knowledge, none of the aftermarket "N54 Performance" kits have been certified (homologated) by the appropriate federal and state authorities (EPA/CARB) to meet street-legal emission requirements. BMW vehicles equipped with such "performance enhancement devices" without these certifications are not in compliance with EPA/CARB emission anti-tampering laws.

Excessive turbocharger boost increases engine temperatures resulting in pressures and forces which may damage engine internal components and or may cause premature turbochargers failure.

Due to increased engine output and the altered emissions characteristics, severe damage may be inflicted on emission control components, such as oxygen sensors and catalytic converters.

Excessive engine loads, above the designed levels, may also compromise long term reliability and longevity of other drivetrain components, such as: clutch transmission, transfer case, differentials, etc.

## WARRANTY INFORMATION

Modification of the vehicle or installation of any non-approved performance accessories or components attached to the vehicle which alters the original engineering and/or operating specifications or which results in damage to the other

original components voids the warranty coverage on the affected original Drivetrain and Emission Control components.

In general terms, the BMW warranty on Drivetrain and Emission Control components is void due to a modification where the modification, alteration or installation of a non-approved aftermarket part was responsible for the failure.

Please make sure to inform BMW customers considering purchase of an aftermarket "N54 Engine Performance" kit of the above legal and technical implications.

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