

# Technical Bulletin

## Toyota Supra - Head Gasket Failures

**Applicable References:** ADT36277, ADT36232, ADT39203, ADT39129, ADT39821, ADT39844, ADT39843, ADT39317, ADT39417

**Applications:** Toyota Supra 3.0 Turbo & Non Turbo Models 1986>1993

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We have encountered several instances of head gasket failure on the Toyota Supra 3.0 turbo and non turbo models resulting from engine overheating. It is our understanding that, if the engine is allowed to overheat, cylinder head distortion is very likely, resulting in a very expensive repair.

The following points summarise our experiences with this model and will assist you in the diagnosis and prevention of Supra head gasket failures.

### Thermostat

Inspect the condition and operation of the thermostat ensuring no silt has built up around the aperture. Test and replace as a matter of course.

### Radiator maintenance (unseen blockage)

The cooling capacity of the radiator is very well matched to the engine. However, if the radiator is allowed to 'silt' or block slightly, it may not be able to cope with the cooling demand which could cause the engine to overheat (normally this would occur between 60,000 and 80,000 miles). It is good practice to have the radiator replaced or flushed by a specialist periodically during servicing and essential after a head gasket failure.

### Water leaks

Inspect the cooling system for leaks or perished components and repair or replace them immediately. Special attention should be made to the water pump spindle, heater pipes, coolant pipes and blanking rubbers in and around the engine compartment.

### Cylinder block corrosion

On high mileage vehicles the cylinder block surface may be prone to corrosion. In severe cases this may cause water leaks and overheating. Little can be done to prevent this problem, except to ensure that the correct type and quantity of anti-freeze is maintained during the vehicle life. It is essential to check the cylinder block for corrosion around the water passages during the head repair.

### Damage from overheating

If the engine is allowed to overheat, the cylinder head is prone to distortion and 'twist' which may be difficult to detect. Please note that the cylinder head may be skimmed to within the manufacturers tolerances but, in some cases, the cylinder head or block distortion may be too great.



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