

General

Take care when levering mating components apart and scraping off gasket residue.
Loosen cylinder head bolts in stages from the centre and radially outwards.
Alloy headed engines must be cold.
Flatten distorted sealing faces of pressed metal components.
Keep old gaskets to confirm that the new gaskets are suitable. Do not reuse any old gaskets.
Replace all damaged bolts, studs, nuts, and washers. Ensure all threads are thoroughly cleaned and lightly lubricated with a thin film of engine oil or a non-hardening sealant, if the bolts protrude into a water jacket.
Never re-use torque-to-yield head bolts.
Test thermostats to specification. Replace if the engine has overheated.
Replace damaged or partially blocked radiators. Ensure the radiator core has been thoroughly cleaned after the engine has been rebuilt.
Use a coolant additive as recommended by the engine manufacturer to reduce or eliminate internal corrosion.
Install moulded or cut rubber gaskets, other than dynamic / lip seals, totally dry.

Cylinder Head

Head and block surfaces must be undamaged with distortion or out of flatness no more than 0.05mm (.002") along and across the sealing faces.
The recommended surface finish for head and block sealing faces is between 1 and 2.5 micrometres Ra (40 and 100 microinches Ra). This finish is achievable by either grinding or milling. Strictly adhere to head thickness limits. Excessive machining can cause detonation and lead to engine failure. Repair corrosion damage prior to machining.
Ensure that aluminium alloy cylinder heads are of sufficient hardness to retain the required clamping force.
Thoroughly clean and degrease components prior to assembly.
Lightly lubricate threads with a thin film of engine oil or a non-hardening sealant if the bolts protrude into a water jacket.
No chemical sealants should be used in conjunction with the application of these head gaskets. Sequentially tighten bolts, with the engine cold, in three stages as specified by the engine manufacturer for each application. Some variation to three stage assembly may be required for engines where angular torqueing is specified.

MOST IMPORTANT

Lubricate all contact faces between the underhead of bolts, nuts, washers, and the cylinder head, as this greatly reduces the effects of friction. Failure to do so will prevent the correct clamping load being achieved.

Valve Stem Seals

Take care to avoid damage to the sealing lip. Lubricate the lip with engine oil prior to assembly. Use a special fitting tool where the seal is a press fit on the guide.

Dynamic / Lip Seals

Apply a liberal coating of oil on the sealing lip with the inside of the lip towards the inside of the engine. Use special assembly tools to avoid damage to the sealing lip.