

Remove the camshafts, and tighten the camshaft caps with 1.1 ~ 1.3 kg-m (95 ~ 113 in-lbs) of torque. Measure the vertical inside diameter of each bearing with a cylinder gauge. If it exceeds the service limit, replace the cylinder head and camshaft caps as a set since the camshaft caps are machined together with the cylinder head.

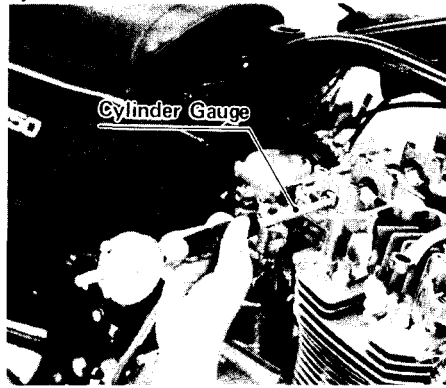


Table 16 Camshaft Bearing Inside Diameter

Standard	Service Limit
25.000~ 25.021 mm	25.06 mm

Camshaft run out

Remove the camshafts, and set each shaft in V blocks at the outside journals as shown in the figure. Measure the runout with a dial gauge set against the inside journal. If the runout exceeds the service limit, replace the camshaft.

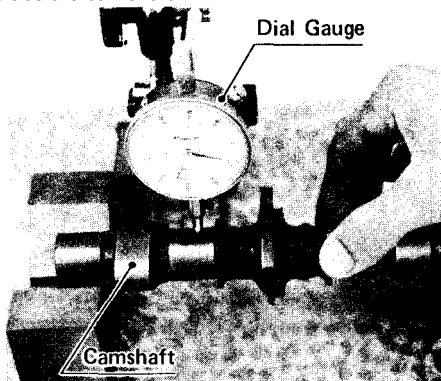


Table 17 Camshaft Runout

Standard	Service Limit
under 0.02 mm	0.1 mm

Camshaft chain, sprocket, and chain guide wear cause noise, accelerate wear, and could possibly lead to serious damage to the engine. If the chain tension can no longer be adjusted by the chain tensioner, either the camshaft chain or the chain guides must be replaced.

Camshaft chain wear

Remove the camshaft chain, hold the chain taut with a force of about 5 kg in some manner such as the one shown in Fig. 417, and measure a 20-link length. If the chain has lengthened beyond the service limit, replace it with a new one.

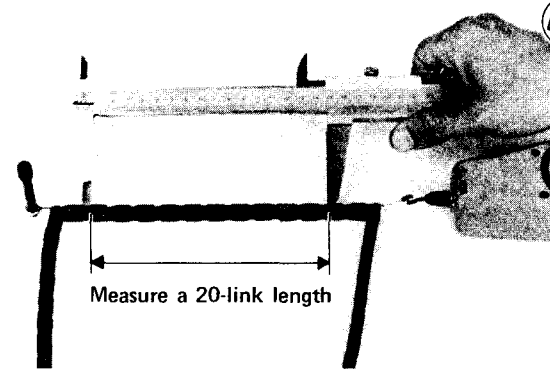


Table 18 Camshaft Chain Length

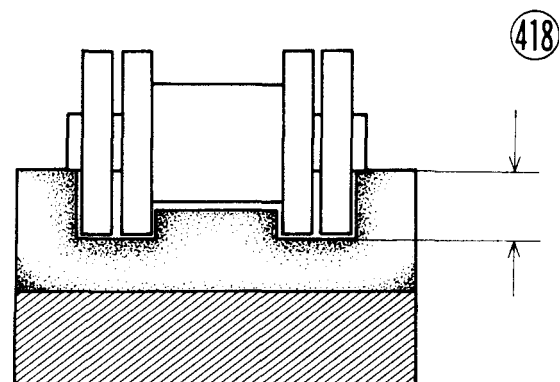
Standard	Service Limit
160.0 mm	162.4 mm

Chain guide wear

Remove the chain guides and sprocket, and inspect them visually. Replace a guide if the rubber or any other portion is damaged.

Measure the depth of the grooves where the chain links run. Replace a guide if the wear exceeds the service limit.

Chain Guide Rubber Wear



**Table 19 Camshaft Chain
Guide Wear**

Service Limit	
Upper	2 mm
Front Upper	2 mm
Front Lower	2 mm
Rear	4 mm