Service Letter

SL2025-774

Four-stroke Small bore October 2025

Action code: WHEN CONVENIENT

Rework of crankshaft journals

Concerns

GenSets: L16/24, L21/31(DF-M), L27/38, L23/30H, L23/30DF, L28/32H, L28/32DF
Propulsion: L21/31, L27/38, L23/30A, L28/32A, V28/32A
Stationary: L16/24S, L21/31S, L27/38S, L23/30S, L28/32S, V28/32S, V28/32H

Summary

This Service Letter specifies the limits for reducing main bearing and crank pin journals

References

SL2018-667, Ridge wear at crankpin journals
SL2025-773, Alternative dimensions of crankshaft and thrust bearings

Attached

Work card M5100103-01, Checking true run on main bearing journals

In-situ machining is a well-proven repair method. However, it has some limitations especially in the alignment of the crank web journal in relation to the main bearings.
We therefore consider this repair method as an “emergency repair” that can be accepted for rework of not more than 2 crank pin journals. If more journals need to be machined, Everllence recommends to replace the crankshaft with a new one before sending the damaged crankshaft to a qualified repair shop for machining.

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Rework of crankshaft journals

General machining limits:

L16/24 = No reduction possible
L21/31 = Reduction of up to 5.00 mm on all journals, no restrictions
L27/38 = Reduction of up to 5.00 mm on all journals, no restrictions
L23/30DF and L28/32DF = Maximum reduction on all journals is 2.00 mm

L23/30H and L28/32H/V
One journal can be reduced by up to 5.00 mm diameter and the others by up to 1.00 mm.
Or all journals can be reduced by up to 2.00 mm.

Material removal beyond 5.00 mm is not possible for any engine type.

After the rework, the hardness of the journals must be within:

220 and 265 HBrinell for 23 and 28 type engines
225 and 300 HBrinell for L16/24, L27/38 and L32/40 engines
270 and 335 HBrinell for L21/31 engines

Note: Bearings with oversize on the outer diameter are not available.

In addition to the above limits, please also pay attention to the true run limits for the crankshaft mentioned in the work card M5100103-01.

Reduction beyond the above-mentioned machining limits requires torsional vibration calculations, for this service please contact your local PrimeServ agent or our Everllence PrimeServ departments as follows.

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Yours sincerely,

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