YANMAR DIESEL SERVICE NEWS No. : 99-2-G-04-039-L Color of Crankshaft Temper Date: Apr. 19, 1999 **Applications** Engine All models Model Applicable

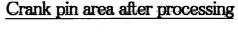
Inquiries on the color of crankshaft temper have often been sent to us. Some misunderstand this to be discoloring due to crankshaft seizure. In order to avoid such misunderstanding, we would like to inform you about the color of the tempering as follows:

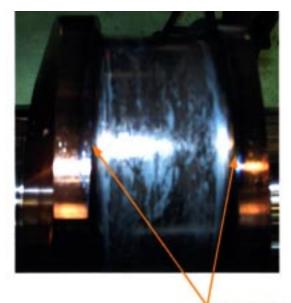
Engine Nos.

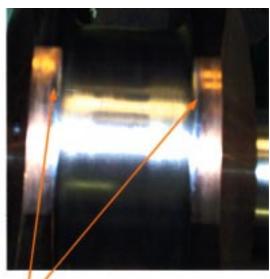
The crankshaft journals and pins are provided with induction hardening to raise surface hardness (HS 65~85) and wear resistance.

This induction hardening causes the surface of the journals and crank arm near the pin to be discolored, as shown in the photos below. (temper color due to extreme heat treatment). Journals and pins are processed after induction hardening and the color on these parts is removed, but there is no processing on the arm so the color remains there. This is not an abnormality.

Crank pin area after induction hardening







Color of Tempering

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