

# PARTS & SERVICE NEWS

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- SUBJECT:** DUAL CRANKING MOTOR MODIFICATION KIT
- PURPOSE:** To introduce a kit for relocating engine cranking motors for increased reliability.
- APPLICATION:** Komatsu HD1500-5 Dump Trucks, A30039 - A30072
- FAILURE CODE:** AB30BK
- DESCRIPTION:** Dual Cranking Motor Modification Kit (XK0221)

Some trucks in operation may experience premature failures of the lower engine cranking motor. The primary cause of these failures is due to the orientation of the main engagement solenoid with respect to the centerline of the cranking motor. The orientation of the lower cranking motor solenoid is angled approximately nine degrees downward from the horizontal plane through the cranking motor centerline. Refer to Figure 1. This downward angle allows debris and dust to enter and settle inside of the solenoid cavity. As the cavity becomes fully contaminated, the mechanism fails and prevents the cranking motor from engaging. As a result, the upper cranking motor will be used at a higher duty cycle torque, which in turn may lead to premature failure of the upper motor, as well.

Increased reliability is achieved by preventing dust and debris from entering and settling inside of the solenoid cavity. Angling the solenoid upward will help prevent intrusion of foreign materials.

A modification kit has been developed to fully relocate the lower cranking motor. The installation of the kit entails removing the lower cranking motor from the RH side of the engine and installing a new and different cranking motor in the upper LH side of the engine. The new cranking motor is a different part number than the previous cranking motor and is necessary for installation on the LH side of the engine. If in good condition, the removed cranking motor may be kept as a replacement part for the existing upper RH cranking motor.

Refer to Table 1 for a complete listing of the contents of the kit. A drawing containing installation instructions is included in the kit.

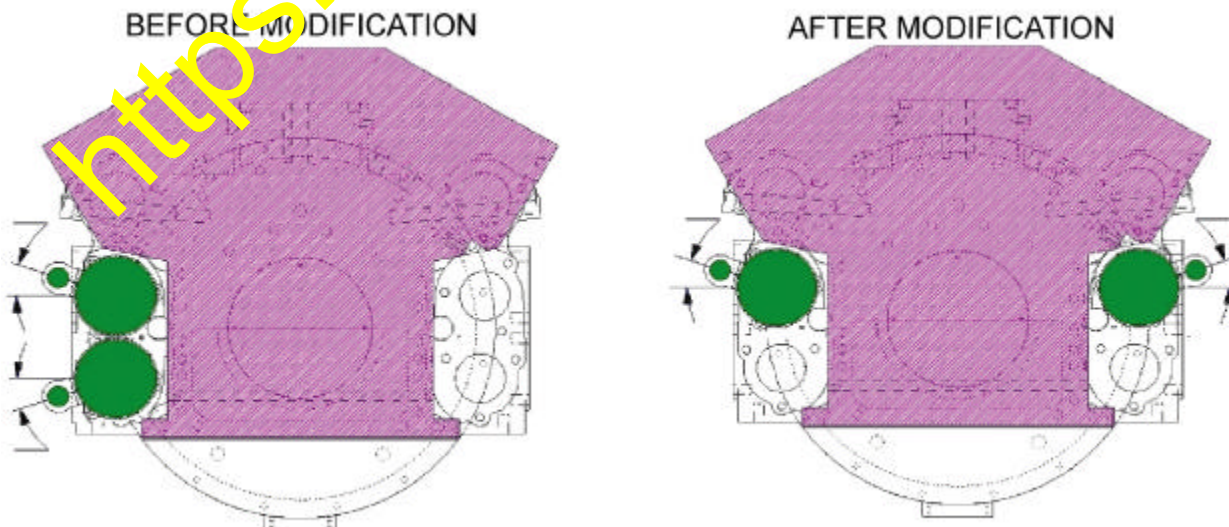


FIGURE 1. BEFORE AND AFTER KIT INSTALLATION

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TABLE 1. DUAL CRANKING MOTOR MODIFICATION KIT (XK0221)		
Part Number	Description	Quantity
EK6491	Drawing, Electric Cranking Motor Relocation	1
01572-21619	Seat	2
09842-A0481	Decal, Jump Start Warning	2
EJ2534	Pad, Tapped	6
MM0464	Flatwasher	14
MM0474	Lockwasher	12
MM0181	Nut	10
EJ2623	Rod, Threaded	4
CH4052	Cable	1
CH4051	Cable	1
01010-81635	Bolt	2
281-70-15870	Plate	2
EH1785	Cleat, Cable	16
CH4151	Cable	1
EK6493	Sleeving, High Temperature/Fire	1
CH4438	Cable	1
CH3876	Cable	1
01571-02032	Seat	8
01011-81620	Bolt	2
EK6494	Sleeving, Clamp Wrap	12
EH1790	Rod, Threaded	4
BF4994	Cranking Motor, Electric	1
CH4437	Cable	1
EK6498	Bracket	1
01010-81235	Bolt	2
01643-31232	Washer	2
MM0577	Nut, Welded	2
WA4712	Clamp, Hydra Zorb	1
WA3559	Channel	1
PB0044	Sleeve, Insulating	1
DC4979	Clamp, Worm Drive	2
MM0466	Flatwasher	4
MM0470	Lockwasher	2
MM0177	Nut	2
MM0595	Capscrew	2
ED8937	Cleat, Cable	16
CH5201	Cable	1
TN2590	Spacer, Hose	9
07095-30627	Cushion, Hose	1
04434-53412	Clip	1
EK8728	Sleeve, Shrink	1