

SERVICE NEWS

Date: Sep, 27, 2011

(KAWASAKI ELECTRO-HYDRAULIC STEERING GEAR)

No.: E8-11-002 A

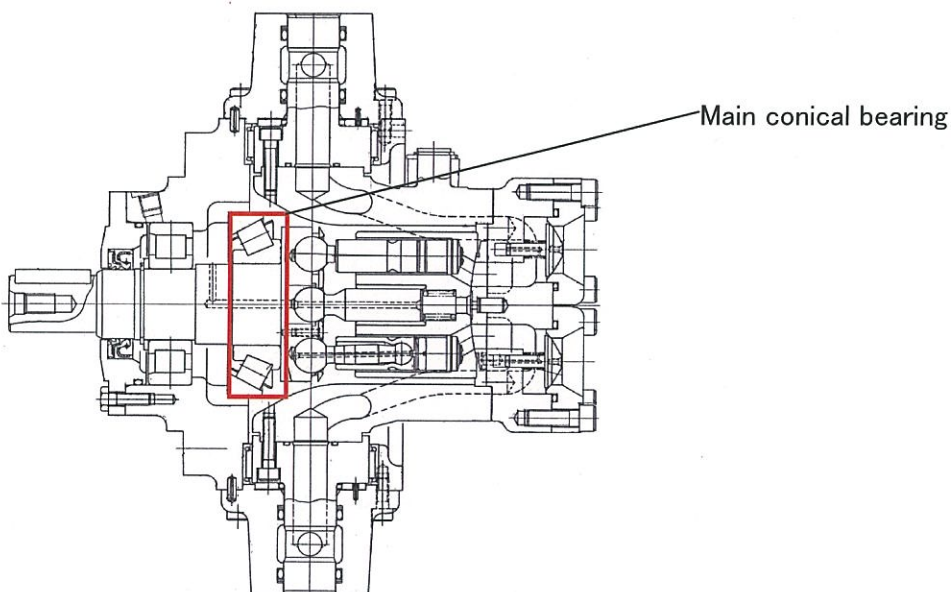
Subject Rated life of bearings for hydraulic pump for steering gear

Many bearing components are used in hydraulic pump of our electro-hydraulic steering gear. Because bearing components are consumable, they require periodic replacement and maintenance. If they were used under abnormally worn-out conditions, pump failure is feared to be resulted. Replacement standard under rated operation state is set up for bearing, and service life of bearing at places where loading is the heaviest is shown below.

1.Types of hydraulic pump to be targeted:LV-030, LV-060, LV-090, LV-120, LV-180, LV-260 and LV-500

2.Recommended replacement standard of bearing components

1)Place to be focused:Main conical bearing



3.Recommended replacement standard at operating conditions(usable pressure) of hydraulic pump of each type.

As to applicable bearing replacement standard of our hydraulic pump of each type, theoretical calculations at usable pressure can be worked out as follows in the table.

1)Recommended replacement standard(reference value) at usable pressure when rated revolution was set at 1750rpm(Except, 1150rpm for LV-500).

Pump size	LV-030	LV-060	LV-090	LV-120	LV-180	LV-260	LV-500	(Unit: Hr)
Usable pressure	LV-030	LV-060	LV-090	LV-120	LV-180	LV-260	LV-500	
5MPa	400,000	450,000	400,000	400,000	480,000	480,000	620,000	
7.5MPa	102,000	117,000	102,000	107,000	124,000	124,000	161,000	
10MPa	40,000	45,000	40,000	40,000	48,000	48,000	62,000	

- From the above table, we recommend periodic overhaul maintenance in 5 to 10 years.
 - Also, sealing material like O-ring and the like requires periodic replacement due to aged deterioration like deformation or hardening.
 - Because wearing condition largely fluctuates according to purity of hydraulic oil, usable environment and usable conditions, periodic inspection of hydraulic oil shall be recommended.
- (We set up usable limit at NAS 11)

KAWASAKI HEAVY INDUSTRIES, LTD. PRECISION MACHINERY COMPANY
QUALITY ASSURANCE DIVISION CUSTOMER SERVICE DEPARTMENT