

YANMAR SERVICE NEWS

Subject	Procedure for Disassembling and Inserting Camshaft Bush, (Revised 1:6NY16, 6RY17, 6EY17·18·22, 6/8EY26 Added)		No. : 98-3-G-07-036-M-Rev.1 Date:Oct.1998 Revision: Jan.2015
Engine Model	Refer to below	Use	Marine Main & Aux. Engines; Industrial Engines
		Engine Nos.	_____

When the camshaft bush was worn in our diesel engines already shipped, (diesel engines using the rolled bushing), replace it as follows. Prepare the tools for disassembly and insertion. Engines using the oil-less bearing for the camshaft are excluded since disassembly and insertion are possible by hand.

1. Applicable models

- | | | |
|-------------------|----------------|--------------|
| ▪ 6~16NHL | ▪ S165(L) | ▪ 6~16SHL |
| ▪ 6NY16L | ▪ 6RY17 | ▪ 6EY17 |
| ▪ S185DL | ▪ M200(L) | ▪ M220(L) |
| ▪ 6N18(L) | ▪ 6EY18(A)L(W) | ▪ 6/8N21(L) |
| ▪ 6EY22(A)(L) (W) | ▪ T250 | ▪ T260(A)(L) |
| ▪ 6/8Z280(A)(L) | ▪ DY25, DY26 | ▪ 6N260(L) |
| ▪ 6/8EY26(L)(W) | ▪ 6/8N280(L) | ▪ 6/8N330(L) |

2. Disassembly and Insertion of Camshaft Bush

2.1 Tools

Three kinds of tool, (i.e., A, B and C), are necessary for each model. The shape and dimension of each tool are shown in Fig.1 and Table 1 respectively. Prepare the tool, (A, B and C), that suits your engine model. Concerning Tool C, prepare it to the shape, as shown in Fig.1, so that the shape of the outer circumference will not interfere with the cylinder block.

2.2 Disassembly

- 1) Extract the camshaft.
- 2) Insert Tool A into the camshaft bush and assemble the tool as shown in Fig.2 (for extraction).
- 3) Tighten the tightening nut for extracting the camshaft bush.

2.3 Insertion

- 1) Insert the tool A into the camshaft bush and assemble the tool as shown in Fig.3 (for insertion).
- 2) Tighten the tightening nut for inserting the camshaft bush.
- 3) Assemble the camshaft.

Note) Avoid chilled fit for the camshaft bush. Rolling bush will be distorted by the joint when chilled.

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Table 1 dimension of tool A, B and C

Applicable models	position	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	L ₁	L ₂	L ₃	L ₀ ⁽¹⁾	L ₄ ⁽¹⁾	I ₁ ⁽²⁾	I ₂ ⁽²⁾
6,8NHL, 6N160,N165(L)		106	100	76	76	105	100	106	66	32	34	210	220	25	13
12,16NHL		106	100	76	76	105	100	106	66	32	34	255	275		
S165(L),SHL ⁽⁴⁾		86	80	66	66	85	80	86	72	26	46	220	220		
6NY16L		86	80	66	66	85	80	86	64	26	38	210	220		
6RY17		106	100	76	76	105	100	106	66	32	34	210	220		
6EY17		110	104	80	80	109	104	110	66	32	34	225	235		
12,16SHL		86	80	66	66	85	80	86	64	26	38	250	275		
S185DL	Interme- diate ⁽³⁾	115	108	93	93	114	108	115	85	35	50	275			
M200(L)		115	108	93	93	114	108	115	93	35	58	285	315		
M220(L)		127	120	105	105	126	120	127	96	38	58	310			
6N18(A)(L)		127	120	105	105	126	120	127	85	38	47	270	275		
6EY18(A)L		127	120	105	105	126	120	127	85	38	47	270	275		
6/8N21(A)(L)		152	145	130	130	151	145	152	97	46	51	315	315		
6EY22(A)(L)		162	155	120	120	161	155	162	95	38	57	330	330		
T250, T260(A)(L)	Interme- diate ⁽³⁾	152	146	131	131	151	146	152	120	46	74	375	375		
Z280(A)(L)	Interme- diate ⁽³⁾	152	146	131	131	151	146	152	120	46	74	405	425		
6N260(L) ⁽⁴⁾		175	168	153	153	174	168	175	132	52	80	395			
6/8EY26(L)		180	173	158	158	179	173	180	137	52	85	400			
6/8N280(L) ⁽⁴⁾		175	168	153	153	174	168	175	141	52	89	425			
DY25,DY26		200	192	176	177	199	192	200	122	60	62	390			
6/8N330(L) ⁽⁴⁾		220	210	192	192	219	210	220	174	66	108	515	515		

Cautions

(1) L₀ shows the cylinder pitch and L₄ shows the bolt length of all M20 bolts.

(2) I₁,I₂ show the thickness of the grapple of Tool C.

(3) The reference bearing of S185DL, T250A, T260(A)(L),Z280(A)(L) is of the housing type. Accordingly, use the tool for the intermediate bearing only.

(4) In S165(L), SHL, N260(L), N280(L), N330(L), the width of the intermediate bearing and the reference bearing varies. The dimensions of the tools specified in the Table 1 attached correspond to the reference bearing. This is also usable for the intermediate bearing.

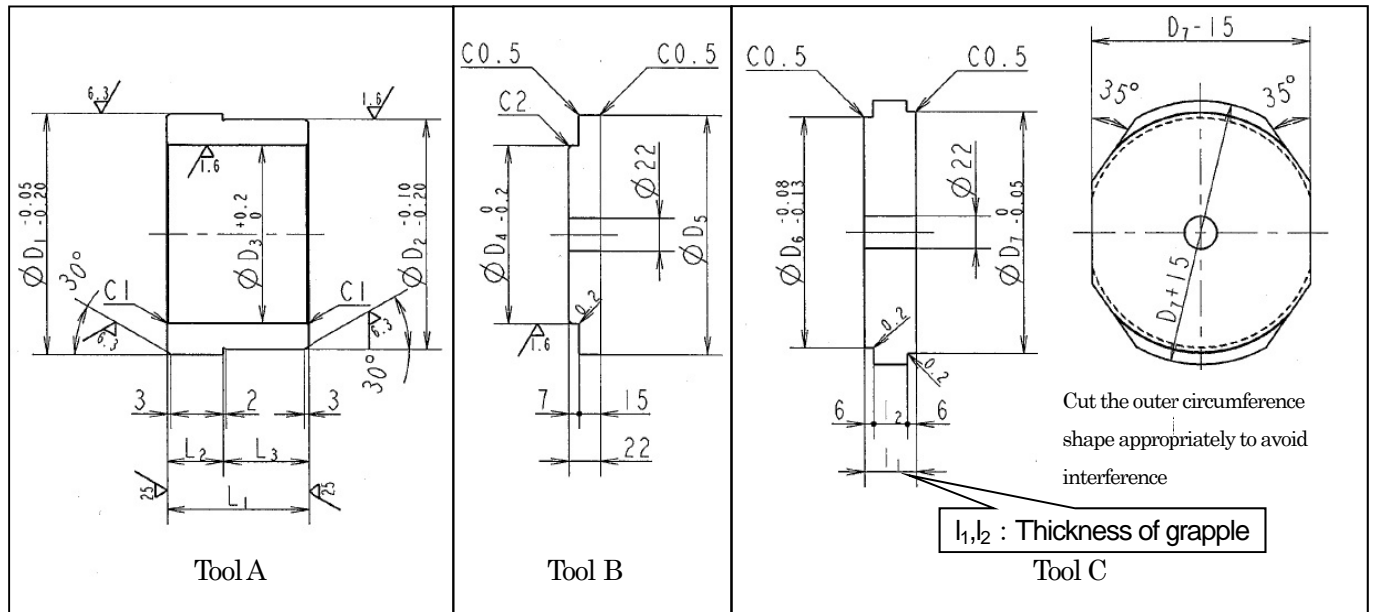


Fig.1 Tool A, B and C

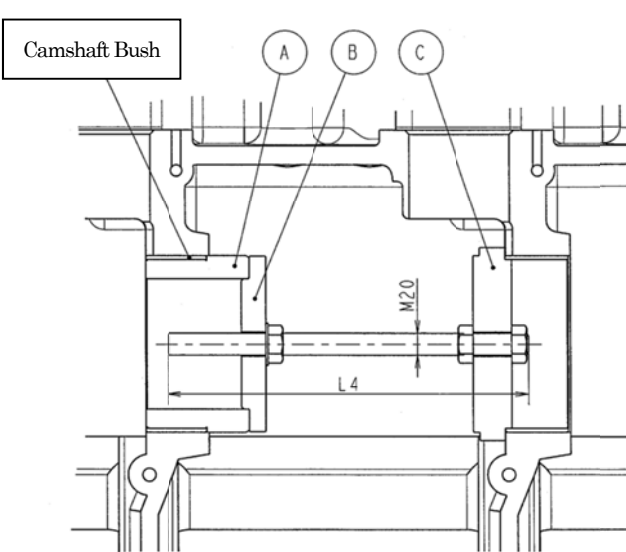


Fig.2 (for extraction).

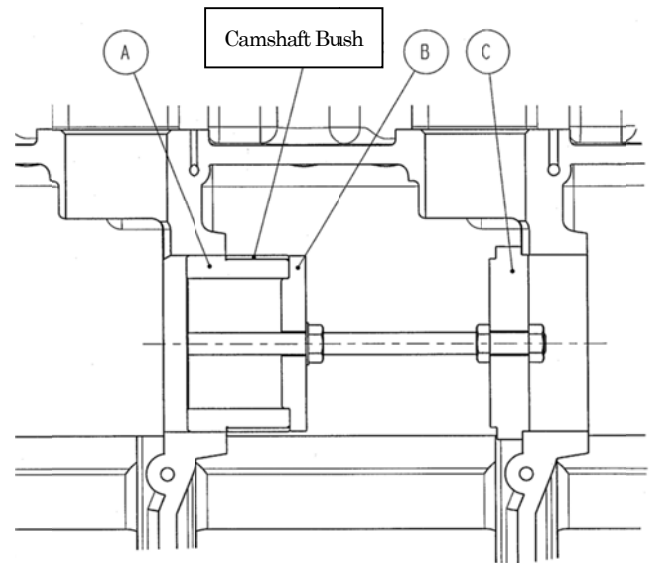


Fig.3 (for insertion)