

**PARTS & SERVICE
NEWS**

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DATE	Feb. 21, 2000

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This PARTS & SERVICE NEWS supersedes the previous issue No. AT99164 dated Dec. 20, 1999 which should be discarded.

SUBJECT: REPAIR OF DOWEL PIN OF FRONT COVER ON S(A)6D125 ENGINE

PURPOSE: To introduce modification procedures to prevent occurrence of galling of the front cover dowel pins thereby to eliminate oil leakage through the front seal of the S(A)6D125 engines

APPLICATION: All the 125 engine
(Including the 6M117)

FAILURE CODE: A24010

DESCRIPTION:

1-1. Introduction

When installing the front cover of the S(A)6D125 engines, owing to insufficient engagement margin of the positioning dowel pins, the dowel pins may gall to cause the front seal to go out of alignment against the crank shaft resulting, possibly, in oil leakage occurring through the front seal. To prevent occurrence of the aforementioned failure, implement the modification introduced in this Service News following the modification procedures outlined therein.

1-2. Revised places:

3 places 	Feb. 21, 2000	Part No. for lay-down seal (without sleeve) deleted and description on lay-down seal partly changed.
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List of serial numbers of the applicable engines

No.	Applicable engine types	Already shipped engines	Engines being shipped newly from the factory		Remarks
		Serial numbers of the engines	Serial numbers of the engines	Starting from	
1	6D125-CJK-1	—	Next production and after		
2	6D125-G3-1	—	Next production and after		
3	6D125-GD-1	—	Next production and after		
4	6D125-GN-1	Up to #78484	#78485 and up	Mar. 99	
5	T6D125E-FH1-2	—	Next production and after		
6	T6D125E-GD-2	Up to #78651	#78652 and up	Mar. 99	
7	T6D125E-P-2	—	Next production and after		
8	S6D125-A2-1	Up to #64869	#64870 and up	Mar. 99	
9	S6D125-C1-1	Up to #70823	#70824 and up	Mar. 99	
10	S6D125-C2-1	—	Next production and after		
11	S6D125-CJK-1	—	Next production and after		
12	S6D125-FG1-1	—	Next production and after		
13	S6D125-FG2-1	—	Next production and after		
14	S6D125-FH1-1	Up to #69037	#69038 and up	Mar. 99	
15	S6D125-G1-1	Up to #78827	#78828 and up	Mar. 99	
16	S6D125-G2-1	—	Next production and after		
17	S6D125-G2-2	Up to #79026	#79027 and up	Mar. 99	
18	S6D125-G3-1	Up to #78449	#78450 and up	Mar. 99	
19	S6D125-G3-2	—	Next production and after		
20	S6D125-GA-1	—	Next production and after		
21	S6D125-GD-1	Up to #78827	#78828 and up	Mar. 99	
22	S6D125-GH-1	Up to #76575	#76576 and up	Mar. 99	
23	S6D125-GP-1	—	Next production and after		
24	S6D125-GN-1	Up to #78480	#78481 and up	Mar. 99	
25	S6D125-GT-1	—	Next production and after		
26	S6D125-P-1	Up to #78671	#78672 and up	Mar. 99	
27	S6D125-R-1	Up to #79021	#79022 and up	Mar. 99	
28	S6D125-R-2	—	Next production and after		
29	S6D125-W1-1	—	Next production and after		
30	S6D125-W2-1	—	Next production and after		

No.	Applicable engine types	Already shipped engines	Engines being shipped newly from the factory		Remarks
		Serial numbers of the engines	Serial numbers of the engines	Starting from	
31	SA6D125-C2-1	Up to #78473	#78474 and up	Mar. 99	
32	SA6D125-C3-1	Up to #78473	#78474 and up		
33	SA6D125-G1-1	Up to #79158	#79159 and up	Mar. 99	
34	SA6D125-G2-1	—	Next production and after		
35	SA6D125-G2-2	Up to #79022	#79023 and up	Mar. 99	
36	SA6D125-G3-1	Up to #78822	#78823 and up	Feb. 99	
37	SA6D125-G3-2	Up to #78433	#78434 and up	Mar. 99	
38	SA6D125-GD-1	—	Next production and after		
39	SA6D125-GH-1	—	Next production and after		
40	SA6D125-GJP-1	—	Next production and after		
41	SA6D125-GN-1	—	Next production and after		
42	SA6D125-GT-1	—	Next production and after		
43	SA6D125-M-1	Up to #79220	#79221 and up	Feb. 99	
44	SA6D125-P-1	—	Next production and after		
45	SA6D125-R-1	—	Next production and after		
46	SA6D125-W1-1	—	Next production and after		
47	SA6D125H-R-1	Up to #78742	#78743 and up	Feb. 16	
48	SA6D125HD-R-1	—	#78743 and up		
49	J6D125E-C1-2	—	#78743 and up		
50	J6D125E-CJK-2	—	#78743 and up		
51	J6D125E-FH1-2	—	#78743 and up		
52	J6D125E-G3-2	—	#78743 and up		
53	J6D125E-GD-2	—	#78743 and up		
54	J6D125E-V1-2	—	#78743 and up		
55	SAA6D125-G1-2	—	#78743 and up		
56	SAA6D125-G3-2	—	#78743 and up		
57	BE-SA125G	—	#78743 and up		
58	EG125CNBS-1	—	#78743 and up		
59	EG220-2	—	#78743 and up		
60	EG220-L-2	—	#78743 and up		

No.	Applicable engine types	Already shipped engines	Machines and engines being shipped newly from the factory		Remarks
		Serial numbers of the engines	Serial numbers of the engines	Starting from	
61	EG220A-L-2	—	#78743 and up	Feb. 99	
62	EG220B-2	—	#78743 and up		
63	EG220B-L-2	—	#78743 and up		
64	EG220BS-2	—	#78743 and up		
65	EG275-2	—	#78743 and up		
66	EG275B-2	—	#78743 and up		
67	EG300B-L-5	—	#78743 and up		
68	EG300BS-5	—	#78743 and up		
69	6M117A-1	Up to #62413	Production discontinued		
70	6M117A-2	Up to #63963	Production discontinued		
71	6M117A-3	Up to #10039	Production discontinued		
72	6M117AL-2	—	Production discontinued		
73	6M122A-1	Up to #10015	#10016 and up	Feb. 26	
74	6M125A-1	Up to #63739	#63740 and up	Oct. 8	
75	6M125A-2	Up to #10066	#10067 and up	Mar. 24	
76	EM655A-00	—	Production discontinued		
77	6N125-G1-1	—	#78743 and up	Feb. 16	
78	EH090-1	—	#78743 and up		

List of seal numbers of the applicable engines and chassis

No.	Applicable machine models (Applicable engine types)	Already shipped machines and engines	Machines and engines being shipped newly from the factory		Remarks
		Serial numbers of the chassis	Serial numbers of the chassis	Starting from	
		Serial numbers of the engines	Serial numbers of the engines		
80	D50A-17 (6D125)	Up to 82709	82722 and up	Feb. 19	
		#77233	#78163		
81	D50P-18 (6D125)	Up to 84163	—		
		#77438	—		
82	D60E-8 (6D125)	—	—	Mar. 16	
		#78444	#79192		
83	D70LE-1 (6D125)	—	—		
		#72199	—		
84	GD623A-1 (6D125)	Up to 30429	30430 and up	Mar. 2	
		#77737	#79115		
85	D53-17 (6D125E-2)	Up to 82716	82727 and up	Mar. 24	
		#78428	#79013		
86	D53A-18 (6D125E-2)	Up to 83243, (83245)	(83244), 83246 and up	Mar. 25	
		#78623	#78624		
87	D53P-18 (6D125E-2)	Up to 84176 – (84182)	84177 and up	Mar. 4	
		#78630	#79014		
88	D58E-1 (6D125E-2)	Up to 82721	82727 and up	Feb. 19	
		#78303	#79304		
89	D58P-1 (6D125E-2)	Up to 81662	81663 and up	Feb. 22	
		#78634	#78640		
90	D65E-12 (6D125E-2)	Up to 62933	62934 and up	Feb. 22	
		#78744	#78745		
91	GD605A-5 (6D125E-2)	Up to 4754	4755 and up	Jun.3	
		#77415	#80463		
92	D65EX-12 (S6D125)	—	—		
		#62159	—		
93	GD705A-4 (S6D125)	—	—	Feb. 23	
		#78375	#78450		
94	HD205-3 (S6D125)	Up to 2068	2069 and up	Mar. 12	
		#76811	#79022		
95	PC400-5 (S6D125)	Up to 20419	20420	Mar. 17	
		#77255	#79128		
96	PC400-5-EC (S6D125)	Up to 20419	20420	Mar. 17	
		#77255	#79128		
97	UP-PC400-5 (S6D125)	—	—		
		#76909	—		
98	WA470-3 (S6D125)	Up to 53173	53174 and up	Feb. 22	
		#78485	#78486		
99	WA470-JK-3 (S6D125)	—	—	Oct. 22	
		#73976	#81876		
100	WF450T-1 (S6D125)	Up to 10136	—		
		#78173	—		
101	CS210-1 (S6D125E-2)	Up to 11006	11007	Mar. 15	
		#78319	#79033		
102	D60P-12 (S6D125E-2)	Up to 62675	62735 and up	Mar. 5	
		#78592	#78952		
103	D65EX-12 (S6D125E-2)	Up to 62940	62941	Feb. 16	
		#78562	#78563		
104	D75S-5 (S6D125E-2)	Up to 16590	16591 and up	Apr. 28	
		#77950	#80083		

No.	Applicable machine models (Applicable engine types)	Already shipped machines and engines		Machines and engines being shipped newly from the factory		Remarks	
		Serial numbers of the chassis	Serial numbers of the engines	Serial numbers of the chassis	Serial numbers of the engines		Starting from
		Serial numbers of the chassis	Serial numbers of the engines	Serial numbers of the chassis	Serial numbers of the engines		
105	D85-21 (S6D125E-2)	Up to 37330 #78601	37331 and up #78959		Mar. 5		
106	GD705A-4 (S6D125E-2)	Up to 13030 #77786	13031 and up #79978		Apr. 22		
107	LW250-5 (S6D125E-2)	Up to 50348, (50401) #76226	50349 and up #79982		Apr. 27		
108	GH320-2-E (SA6D125E-2)	Up to 12040 #77093	12041 #80411		May 31		
109	HD255-5 (SA6D125E-2)	Up to 1244 #78665	1245 and up #78666		Mar. 10		
110	PC400-6 (SA6D125E-2)	Up to 32262 #78490	32263 and up #78491		Feb. 18		
111	PC400-AC-6 (SA6D125E-2)	— #78690	— #78691		Feb. 16		
112	WA450-3 (SA6D125E-2)	— #78756	— #78757		Feb. 16		
113	WA450-AD-3 (SA6D125E-2)	— #78722	— #79032		Mar. 3		
114	WA470-DZ-3 (SA6D125E-2)	— #78364	— #79105		Mar. 11		
115	WA470-HH3E (SA6D125E-2)	— #78740	— #79111		Mar. 4		
116	WF450T-3-E (SA6D125E-2)	— #75549	53002 and up #78773		Feb. 24		


2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
Notice on variation of contents (Refer to "Individual contents" following as additional information.)				
6150-41-2440 (6150-41-2430)	Pin (Pin)	Replacement	2 (2)	
Individual contents <Part 1: Front covers> (They differ depending on the engine specs. Select proper set referring to the individual parts catalogue.)				
6150-21-3141 (6150-21-3140)	Cover (Cover)	Replacement	1 (1)	
6150-21-3182 (6150-21-3181)	Cover (Cover)		1 (1)	
6150-21-3241 (6150-21-3240)	Cover (Cover)		1 (1)	
6150-21-3281 (6150-21-3280)	Cover (Cover)		1 (1)	
6150-21-3411 (6150-21-3410)	Cover (Cover)		1 (1)	
6150-23-3141 (6150-23-3140)	Cover (Cover)		1 (1)	
6150-21-3251 (6150-21-3250)	Cover (Cover)		1 (1)	
6150-21-3431 (6150-21-3430)	Cover (Cover)		1 (1)	
6151-22-3251 (6151-22-3250)	Cover (Cover)		1 (1)	
6150-22-3141 (6150-22-3140)	Cover (Cover)		1 (1)	
6150-22-3181 (6150-22-3180)	Cover (Cover)		1 (1)	
6152-22-3141 (6152-22-3140)	Cover (Cover)		1 (1)	
6150-21-3311 (6150-21-3310)	Cover (Cover)		1 (1)	
6150-25-3113 (6150-25-3112)	Cover (Cover)		1 (1)	Front cover for the marine spec. engines and generator spec. engines for Messrs. NTT
6150-21-3820 (6150-21-3820)	Gasket (Gasket)		1 (1)	Consumable part
6150-21-3830 (6150-21-3830)	Gasket (Gasket)		2 (2)	Consumable parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
6152-25-3122 (6152-25-3121)	Cover (Cover)	} Replacement	1 (1)	Front cover for the marine spec. engines
6150-21-3820 (6150-21-3820)	Gasket (Gasket)		1 (1)	Consumable part
6150-21-3830 (6150-21-3830)	Gasket (Gasket)		2 (2)	Consumable parts
6150-21-3122 (6150-21-3121)	Cover (Cover)		1 (1)	
6150-21-3131 (6150-21-3130)	Cover (Cover)		1 (1)	
6150-21-3271 (6150-21-3270)	Cover (Cover)		1 (1)	
6150-21-3212 (6150-21-3211)	Cover (Cover)		1 (1)	
6150-21-3112 (6150-21-3111)	Cover (Cover)		1 (1)	

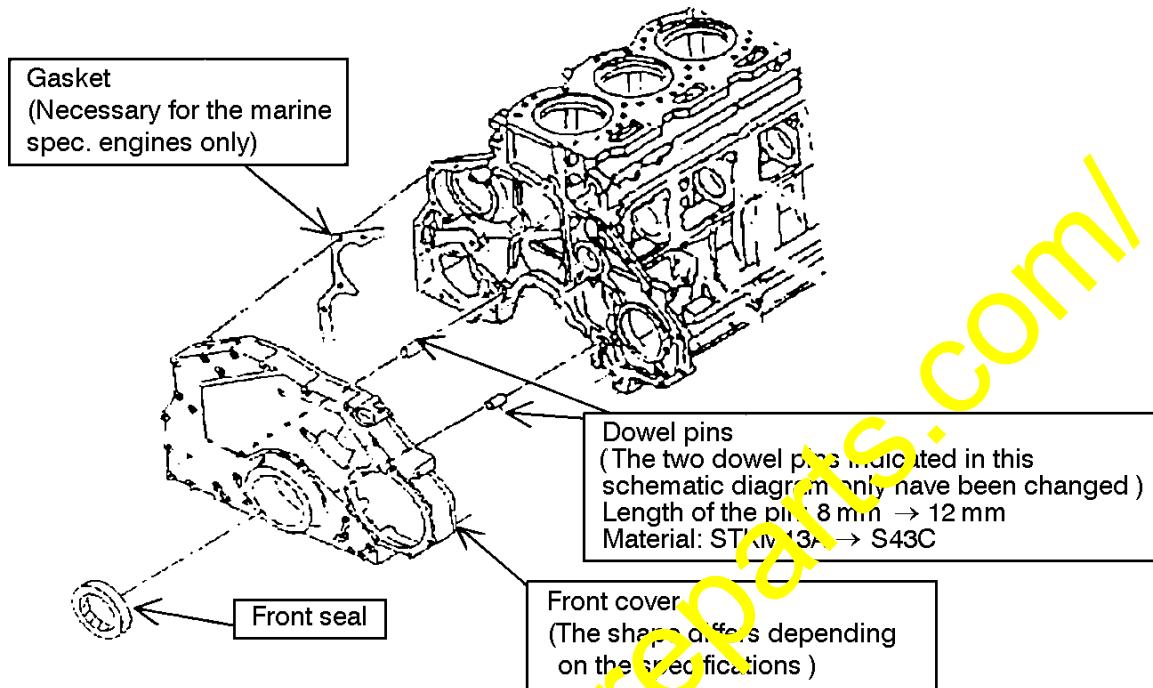
Individual contents <Part 2: Consumable parts (Front seal)>

(They differ depending on the engine specs. Select proper one from the front seal types listed below.)

 6711-21-3521 (6711-21-3521)	Seal (Seal)	< Engine specification > for stationary service generators	1 (1)	Lay-down seal (without sleeve)
6151-29-3230 (6151-29-3230)	Seal (Seal)		1 (1)	Lay-down seal (for repair, with sleeve)
6150-21-3230 (6150-21-3230)	Seal (Seal)	< Engine specification > For other engines than the above	1 (1)	Radial-lip seal

3. Contents of the modification

The shape and material of the dowel pin have been changed and the processing method for the front cover has been modified to increase the engagement margin of the dowel pin with the front cover to improve the precision of front seal alignment.

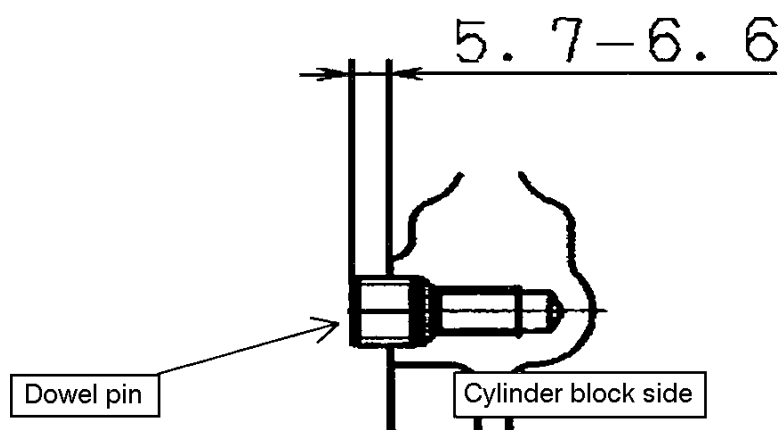


4. Reasons for the change

When installing the front cover, because of insufficient engagement length of the positioning dowel pin, the dowel pin may make galling to cause the front seal to go eccentric against the crank shaft resulting, possibly, in oil leakage occurring through the front seal.

5. Modification procedure

- (1) Replace the front cover, etc. referring to the Shop Manual for the $\phi 125$ engines. Meanwhile, since it is necessary to insert a gasket with the marine spec. engines [between the front cover and the cylinder block], be sure to install the gasket properly.
- (2) Adjust the projection of the new dowel pins to engage with the cylinder block after this modification to the designation given in the schematic diagram indicated below.



(3) Handling of the lay-down front seal and its replacement procedures
(Engine specs.: Service generator spec. engines)

Since the effect of the lay-down seal is greatly influenced by handling of the seal, be sure to observe the following precautions, at least, when replacing them.

- ~~The seals being provided as spare parts are equipped with a molded resin inner cylinder. This molded resin inner cylinder works as a guide when making the assembly and it also works to protect the seal. Consequently, do not remove it until the seal will be installed under any circumstances.~~



- Since the seal available as spare part for repair use is being sleeved, handle it carefully.
- Before installing the seal, thoroughly remove flaws, burrs and rust from the edge of the end face of the shaft, sliding surface of the lips and the housing. Also, carefully wipe to clean oil and grease from the surfaces.
- When installing the seal, always keep the shaft and the seal lip section dry and do not apply oil or grease under any circumstances.

Meanwhile, for more details, refer to the Service News listed below of previous issuances.



- ~~Service News No A930226 "Introduction of replacement procedures for teflon seals (lay-down seals)"~~
- Service News No AT98169 "Introduction of sleeved front seals available as spare parts"