

PARTS & SERVICE NEWS

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SUBJECT: INTRODUCTION OF IMPROVED SAFETY VALVE OF OIL FILTER ON SA6D170 ENGINE

PURPOSE: To introduce improved safety valve for the oil filter of the 6D170 Series engines

APPLICATION: 6D170 Engines, Serial Nos. Refer to pages 4 thru 7

FAILURE CODE: A5A099

DESCRIPTION:

1. Introduction

When #30 engine oil is being used with the 6D170 Series engines under low temperature environments of 0°C or less (outside air temperature), the oil channel resistance in the oil filter rises owing to the high viscosity of the engine oil and this may cause the safety valve to open when the engine is started especially, when the engine revolution is raised immediately after it is started.

Under such circumstances, dust, metal powder, etc. which otherwise are caught by the oil filter, pass through the safety valve to enter into respective lubricating sections through the main gallery resulting in metallic seizure failures.

This Service News will introduce an improved safety valve to prevent such failures.

2. List of parts

Part No.	Part Name	Q'ty	Remarks
6162-53-5102 (6162-53-5101)	Oil filter (Oil filter)	1 (1)	Ej1-2031 3/2 -
6162-53-5202 (6162-53-5201)	Oil filter (Oil filter)	1 (1)	Ej1-2032 3/2 -
6162-53-5303 (6162-53-5302)	Oil filter (Oil filter)	1 (1)	Ej1-2033 3/2 -
6162-53-5402 (6162-53-5401)	Oil filter (Oil filter)	1 (1)	Ej1-2034 3/2 -
6162-53-5702 (6162-53-5701)	Oil filter (Oil filter)	1 (1)	Ej1-2035 3/2 -
6162-53-5802 (6162-53-5801)	Oil filter (Oil filter)	1 (1)	Ej1-2036 3/2 -
6162-53-5902 (6162-53-5901)	Oil filter (Oil filter)	1 (1)	Ej1-2037 3/2 -
6162-54-5102 (6162-54-5101)	Oil filter (Oil filter)	1 (1)	Ej1-2038 3/2 -

Part numbers of the above oil filter assemblies have been changed due to the following component part changes.

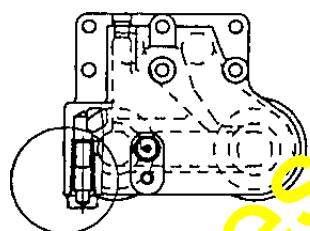
6162-55-5220 (6162-53-5450)	Valve (Valve)	1 (1)	
6162-55-5210 (6162-53-5420)	Cap (Cap)	1 (1)	
6162-53-5430 (6162-53-5430)	Packing (Packing)	1 (1)	Consumable part

3. Contents of the modification

- 1) The shape of the safety valve has been improved to let it move smoothly when the valve is opened and closed, thus increasing reliability, and preventing sticking failure of the valve.
- 2) The valve opening pressure for the safety valve has been brought up ($2.0 \pm 0.2\text{kg/cm}^2 \rightarrow 2.5 \pm 0.2\text{kg/cm}^2$) in order to prevent it from opening when the engine is started under low temperature environments.

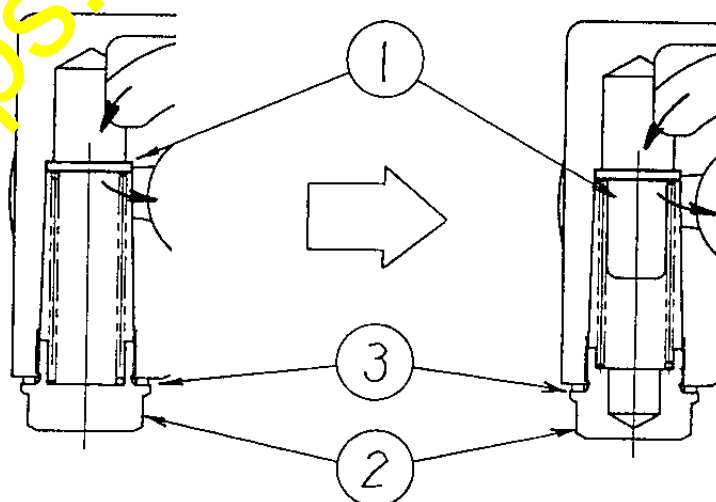
Valve opening pressure has been raised by modifying the cap shape and by changing the spring setting load.

Codes used in schematic diagrams below	Modification contents	Current part numbers (part names)	New part numbers (part names)
①	Improving the valve shape (To prevent valve sticking failures)	6162-53-5450 (Packing)	6162-55-5220 (Valve)
②	Raising the valve opening pressure (To prevent valve from opening when engine is started under low temperature environments)	6162-53-5420 (Cap)	6162-55-5210 (Cap)
③		6162-53-5430 (Packing)	6162-53-5430 (Packing)



Top view of the oil filter assembly

Safety valve



- 3) Remove the parts coded ①, ②, and ③ to replace with the improved new parts. Tightening torque for the cap ② should be 8 – 10kgm (7.84 – 9.80Nm)

List of applicable machines, vehicles and engines

No.	Model names	Serial numbers of applicable machines, vehicles and engines			
		Already shipped products		Products shipped newly from the factory	
		Engines	Chassis	Engines	Chassis
1	BR1600JG-1	- 18953		Next production and after	
2	D155A-1B	Has not been produced.	—	—	—
3	D275A-2	- 19541		19542 -	
4	D355A-3B	Has not been produced.	—	—	—
5	D375A-1	- 17480		Next production and after	
6	D375A-2	- 19508		Next production and after	
7	D375A-3	- 19643	- 17537	19644 -	17538 -
8	HD465-3	- 17267	- 2440	—	Has not been produced.
9	HD465-3C	- 15256	- 2440	—	Has not been produced.
10	HD465-5	- 19624	HD465: 4704 HD605: - 1045	19654 -	HD465: 4705 - HD605: 1046 -
11	PC1000-1	- 18633	- 10463	18826 -	10464 -
12	PC1100-6	- 19663	- 10123	19666 -	10124 -
13	PC1100-HA-6	- 19626	- 10123	19627 -	10124 -
14	WA600-1	- 19570	- 11596	19571 -	11597 -
15	WA600-3	- 19625	- 50137	19673 -	50138 -
16	WA700-1	- 18779	- 10139	18780 -	10140 -
17	WA700-3	- 19660	- 50013	19661 -	50014 -
18	WA700-AP-1	- 19470	- 10139	19471 -	10140 -
19	WD600-1	- 19319	- 10138	19320 -	10143 -
20	BE-D155A-1	CKD	—	—	—
21	BE-D355A-3	CKD	—	—	—

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No.	Model names	Serial numbers of applicable machines, vehicles and engines			
		Already shipped products		Products shipped newly from the factory	
		Engines	Chassis	Engines	Chassis
22	BE-PC1000-1	CKD	—	—	—
23	EG480-1	- 16863	—	Next production and after	
24	EG480-L-2	- 17798	—	Next production and after	
25	EG480A-L-2	- 15226	—	Next production and after	
26	EG480B-1	- 16863	—	Next production and after	
27	EG480B-L-2	- 17798	—	Next production and after	
28	EG500-1	- 16863	—	Next production and after	
29	EG500B-1	- 16863	—	Next production and after	
30	EG500BS-1	- 16839	—	Next production and after	
31	EG580-1	- 17684	—	Next production and after	
32	EG580B-1	- 17684	—	Next production and after	
33	EG580B-L-1	- 17684	—	Next production and after	
34	EG600-1	- 17684	—	Next production and after	
35	EG600B-1	- 17684	—	Next production and after	
36	EG600BS-1	- 17495	—	Next production and after	
37	EPSA6D170-A-1	- 19519	—	Next production and after	
38	EPSA6D170-B-1	Has not been produced.	—	—	—
39	S6D170-G2-1	- 17522	—	Next production and after	
40	S6D170-G3-1	- 11656	—	Next production and after	
41	SA6D170-A-1	Has not been produced.	—	—	—
42	SA6D170-B-1	- 19619	—	Next production and after	

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		Already shipped products		Products shipped newly from the factory	
		Engines	Chassis	Engines	Chassis
43	SA6D170-C2-1	- 17636	—	Next production and after	
44	SA6D170-W1-1	- 17638	—	Next production and after	
45	SA6D170A-C2-1	- 19507	—	Next production and after	
46	SA6D170A-G1-1	- 19635	—	19636 -	
47	SA6D170A-G2-1	- 19355	—	Next production and after	
48	SA6D170A-G3-1	- 19371	—	Next production and after	
49	SA6D170A-GA-1	- 17684	—	Next production and after	
50	SA6D170A-GD-1	- 19507	—	Next production and after	
51	SA6D170A-GH-1	- 19578	—	Next production and after	
52	SA6D170A-GN-1	- 19600	—	Next production and after	
53	SA6D170A-GT-1	- 19507	—	Next production and after	
54	SA6D170A-M-1	- 19513	—	Next production and after	
55	SA6D170A-P-1	- 19355	—	Next production and after	
56	SA6D170B-C2-1	- 19619	—	Next production and after	
57	SA6D170B-G1-1	- 19581	—	19638 -	
58	SA6D170B-G2-1	- 19619	—	Next production and after	
59	SA6D170B-G3-1	- 17185	—	Next production and after	
60	SA6D170B-GA-1	- 15226	—	Next production and after	
61	SA6D170B-GD-1	- 18958	—	Next production and after	
62	SA6D170B-GH-1	- 19571	—	Next production and after	
63	SA6D170B-GT-1	- 18958	—	Next production and after	

List of applicable machines, vehicles and engines

No.	Model names	Serial numbers of applicable machines, vehicles and engines			
		Already shipped products		Products shipped newly from the factory	
		Engines	Chassis	Engines	Chassis
64	SA6D170B-P-1	- 18958	—	Next production and after	
65	SA6D170B-R-1	- 19575	—	Next production and after	
66	SAA6D170-G3-1	- 19527	—	Next production and after	
67	6M160A-1	- 17131	—	Next production and after	
68	6M170A-1	- 10017	—	10018 -	
69	6M170B-1	- 16851	—	Next production and after	
70	EM680A-1	- 15492	—	Next production and after	
71	J6D170AE-GD-1	- 19610	—	Next production and after	
72	J6D170BE-GD-1	—	—	Next production and after	
73	BE-B60-1	CKD	—	—	—
74	BE-SA170AG-1	CKD	—	—	—
75	A6D170E-W2-2	- 18302	—	Next production and after	
76	A6D170E-WJK-2	- 18606	—	Next production and after	
77	6N170-G1-1	- 16756	—	Next production and after	
78	SA6N170-G1-1	- 16832	—	Next production and after	