

PARTS & SERVICE NEWS

REF NO.	AT02195
DATE	Jan. 15, 2003

SUBJECT: INTRODUCTION OF THE IMPROVED EXHAUST VALVE ON WA800/WA900

PURPOSE: To introduce the improved exhaust valve on WA800/WA900

APPLICATION:

WA800-1	Upto Serial Nos. #10730
WA800-2,	Upto Serial Nos. #10737
WA800-3,	Upto Serial Nos. #50027
WA900-1,	Upto Serial Nos. #10703
WA900-3,	Upto Serial Nos. #50023
WD900-3,	Upto Serial Nos. #50005

FAILURE CODE: A4B0FJ

DESCRIPTION:

1. Introduction

As for the above-mentioned engines, depending on the use, for the short margin of durability, the failure of exhaust valve cone (cone crack) may occur.

In this case, this is repaired by this service news.

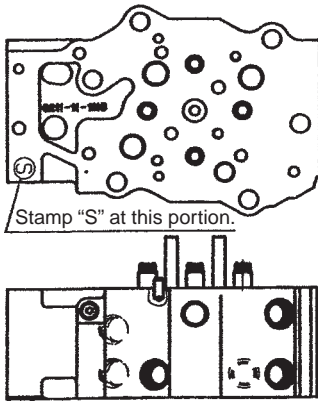
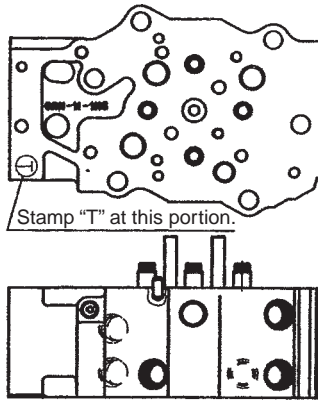
2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
6215-11-1320 (6210-11-1321)	Insert (Insert)	Replacement	24 (24)	
6210-41-4430 (6210-41-4430)	Spring (Spring)	Replacement	24 (48)	For Intake White as identification paint
6210-41-4440 (6210-41-4440)	Spring (Spring)	Replacement	24 (48)	For Intake White as identification paint
6215-41-4410	Spring	Addition	24	For Exhaust Blue as identification paint
6215-41-4420	Spring	Addition	24	For Exhaust Blue as identification paint
6210-41-4530 (6210-41-4530)	Seat (Seat)	Replacement	24 (48)	Install only for Intake
6215-41-4510	Rotator	Addition	24	Install only for Exhaust

3. Contents of improvement

(1) Change of exhaust valve seat

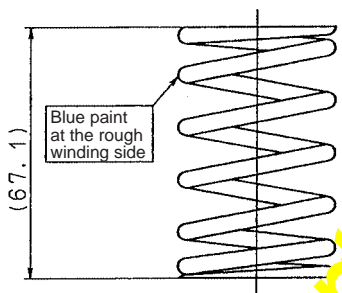
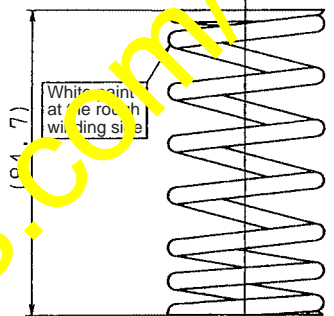
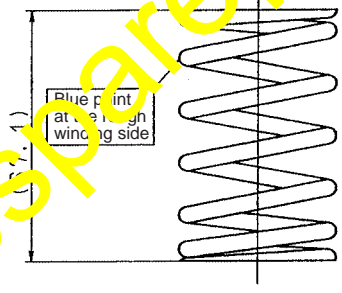
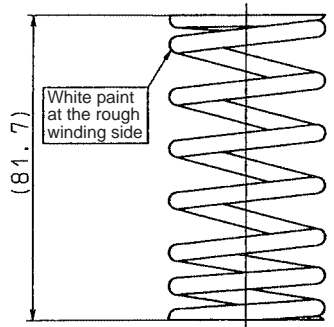


The material of exhaust valve seat is changed and the wearing of contact surface between the exhaust valve and the exhaust seat is improved. Therefore, the margin of durability for the exhaust valve is improved.

Part Name	New	Old
Cylinder head ass'y (The material of exhaust valve seat is changed.)	6215-11-1300 Identification stamp "S"  Stamp "S" at this portion.	6215-11-1100 Identification stamp "T"  Stamp "T" at this portion.
	Exhaust valve seat	6215-11-1320 Sintered material of iron group

(2) Rotator addition to exhaust valve

By adding the valve rotator to the exhaust valve side, the stress occurred to the seat surface of exhaust valve is prevented from concentrating to the special places. Therefore, the durability margin of exhaust valve is improved.

In addition, in combination with this, the valve spring of exhaust side is changed.

	Part Name	New	Old
Exhaust side	Valve spring (outer)	6215-41-4410 (Blue as identification paint) 	6210-41-4430 (White as identification paint) 
	Valve spring (inner)	6215-41-4420 (Blue as identification paint) 	6210-41-4440 (White as identification paint) 
	Valve rotator	6215-41-4510 	None
	Lower seat	None	6210-41-4530 
Intake side	Valve spring (outer)	→	6210-41-4430 (White as identification paint)
	Valve spring (inner)	→	6210-41-4440 (White as identification paint)
	Valve rotator	→	None
	Lower seat	→	6210-41-4530

4. Repair procedure

When the damage is found on the exhaust valve, repair by the following procedures.

(1) Confirmation and replacement of the damaged part

As for the parts excluding the exhaust valve, fully confirm whether the damages are found or not. If the damages are found, replace all of the damaged parts.

(When the exhaust valve is damaged, due to the drop of fragments, the piston, liner, head, cone-rod, pin metal, valve guide, cross-head, rocker arm, etc. may be damaged. Therefore, check the each portion elaborately.)

(2) Installation of improved exhaust valve seat

Prepare the new head ass'y with the improved exhaust seats, which are described in the improved contents. (Confirm the identification stamp "S" on the head top surface.)

When the cylinder head, which was used for the cylinder excluding the cylinder with the damaged exhaust valve, is reused by replacing the exhaust seat, fully check that the damage of secondary failure is not found on the bottom surface, etc. and make it by stamping the X mark on the identification stamp "T". When the head is damaged, always replace with the new one by each head.

(3) Assembling intake valve, lower seat, spring, retainer

When using the new head, drive the stem seal to the valve guide. After that, assemble the intake valve, lower seat, spring, retainer, and cotter.

In addition, as for these parts, which are assembled to the intake side, all of them are same as the conventional ones.

Accordingly, there are no problems for reusing them. But, confirm that there are no secondary damages.

(Further, when assembling the valve spring, the side with white identification paint is the top one. When reusing the valve spring, if the paint is disappeared, assemble so that the top and bottom side are the same as they were assembled before removing them.)

(4) Assembling exhaust valve, rotator, spring, retainer

a) As for the exhaust valve, use the improved one, which is described in the already-issued service news AT98179. (The casting mark in the cone table is "PX".)

In addition, it seems that the exhaust valves are not at all damaged by the appearance, but the progression of metal fatigue is possible by the repeated stress. Therefore, always replace all ones with the new exhaust valves.

b) Next, assemble the rotator. In addition, the rotator has the function as the seat surface for the valve spring, too. Therefore, the lower seat is not required.

c) As for the valve springs, use ones, which have the identification paint blue, that is described in the item of improved contents. Further, when assembling the valve spring, the side with blue identification paint is the top one.

Note : Conventionally, the intake and the exhaust valve springs were commonly used. But, by this repair, they are not commonly used.

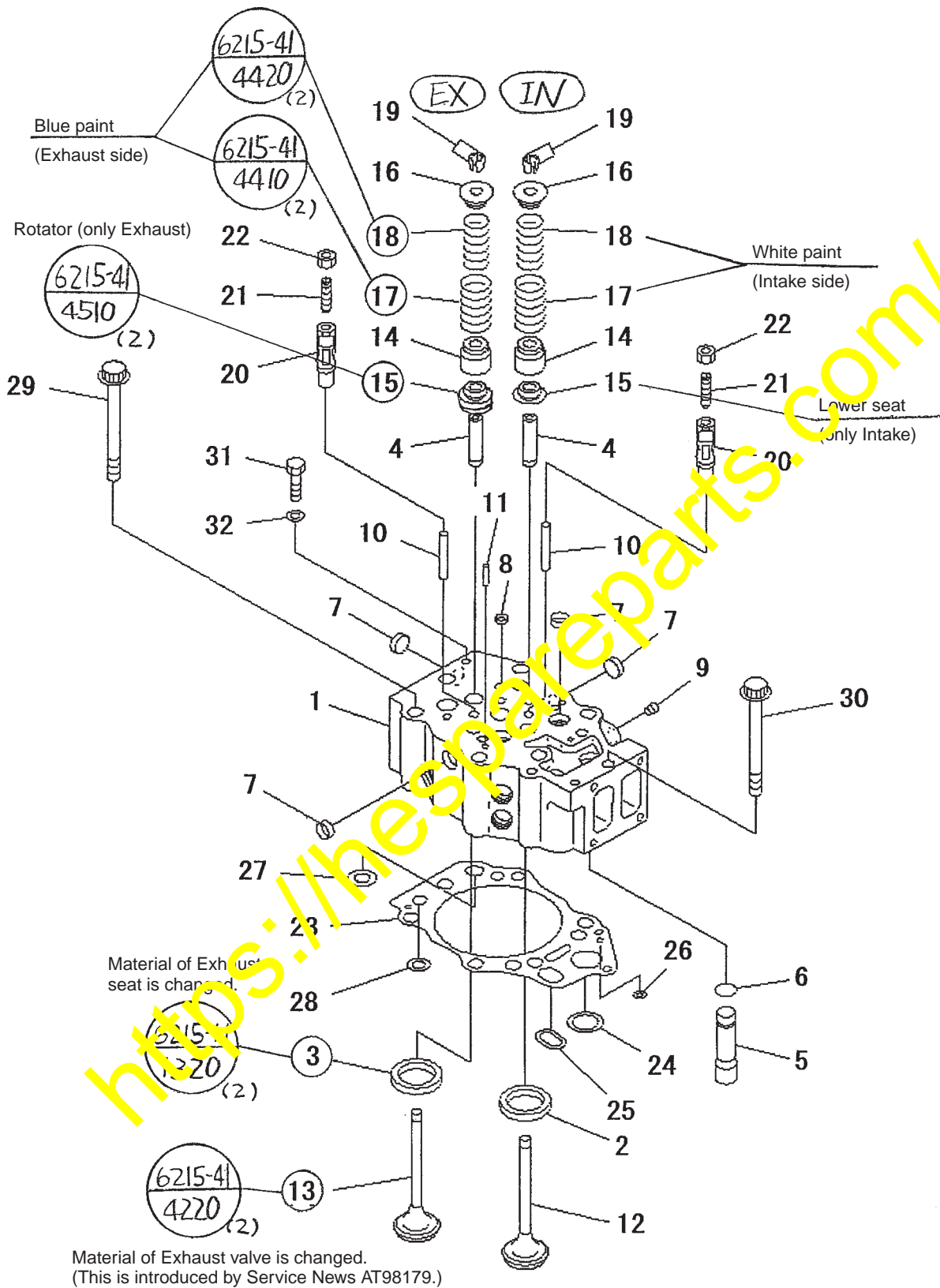
Because they differ in the longitudinal dimensions, if they are mistakenly used, the serious failures such as the valve dropout occur. In addition, as for the rotator and the lower seat, the thickness is different. For this reason, if the corresponding valve springs are not assembled, similarly the valve dropout occurs. Therefore, fully take care for the mis-assembling.

(5) Engine reassembling

By following Shop Manual, reassemble the engine.

Replace the consumable parts such as the head gasket with the new ones.

<https://hespareparts.com/>



Parts enclosed by a circle are changed.

PND2301

Material No. _____ / _____

Old part No. _____ New part No. _____

(Service news), prompt design change execution ser. No.)

(Change part No.: _____ → _____)

No.	Applicable model	Applicable machine engine serial No.		Execution date	No.	Applicable model	Applicable machine serial No.		Execution date
		Machine already shipped	Machine shipped from plant				Machine already shipped	Machine shipped from plant	
1	WA800-1	~ 12732	From next time		31	WA800-1	~ 10730	From next time	
2	WA800-2	~ 12732	From next time		32	WA800-2	~ 10737	From next time	
3	WA800-3	~ 13117	13161 ~		33	WA800-3	~ 50027	50028 ~	
4	WA900-1	~ 12721	From next time		34	WA900-1	~ 10705	From next time	
5	WA900-3	~ 13090	13113 ~		33	WA900-3	~ 50025	50024 ~	
6	WD900-3	~ 12446	From next time		34	WD900-3	~ 50005	50006 ~	
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