

INSTALLATION MANUAL

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SUBJECT: INSTALLATION PROCEDURE OF ADDITIONAL FUEL FILTER FOR FILTRATION OF FUEL CONTAINING WATER & CONTAMINANT ON WA500-3

PURPOSE: To introduce local installation procedure for the additional fuel filter for filtration of low grade fuel (containing contaminants and water) onto WA500-3 (Tier II) wheel loaders

APPLICATION: WA500-3 Wheel Loaders, Serial Nos. 52001 and up

FAILURE CODE: A7W0Z9

DESCRIPTION:

1. Introduction

The additional fuel filter has been developed for filtration of low grade fuel (containing contaminants and water) for optional installation onto the WA500-3 (Tier II) wheel loaders. When locally installing this additional fuel filter, follow the procedure being outlined in this Service News.

1. This additional fuel filter for filtration of low grade fuel can remove foreign substance from the fuel and, at the same time, it can separate water from the fuel, thus preventing occurrence of troubles of the engine fuel injection system.
2. For the details of the modification and for the applicable areas where low grade fuel is being used, refer to page 2.

2. List of parts

No.	Part No.	Part Name	Q'ty	Remarks
1	600-319-3400	Filter	1	A cap as spare is supplied together
2	6217-71-6231	Head	1	
3	01435-01035	Bolt	4	
4	07286-00880	Hose	1	
5	07285-00125	Clip	1	
6	6217-71-6240	Bracket	1	
7	01436-01080	Bolt	2	
8	6217-71-6250	Bracket	1	
9	6206-81-9870	Spacer	2	
10	01436-01040	Bolt	2	
11	07271-01460	Hose	1	
12	07206-31014	Joint	1	
13	07005-01412	Gasket	2	
14	04434-52511	Clip	1	
15	07095-30318	Cushion	1	
16	01435-01020	Bolt	1	
17	6162-73-4670	Nipple	1	
18	6218-71-1932	Joint	1	
19	07206-31014	Joint	1	
20	07005-01412	Gasket	9	Including 6 pcs. of spare consumable parts
21	07102-20407	Hose	1	
22	04434-52711	Clamp	1	
23	07095-30420	Cushion	1	
24	01010-81020	Bolt	1	
25	01643-31032	Washer	1	
26	01573-10206	Seat	1	

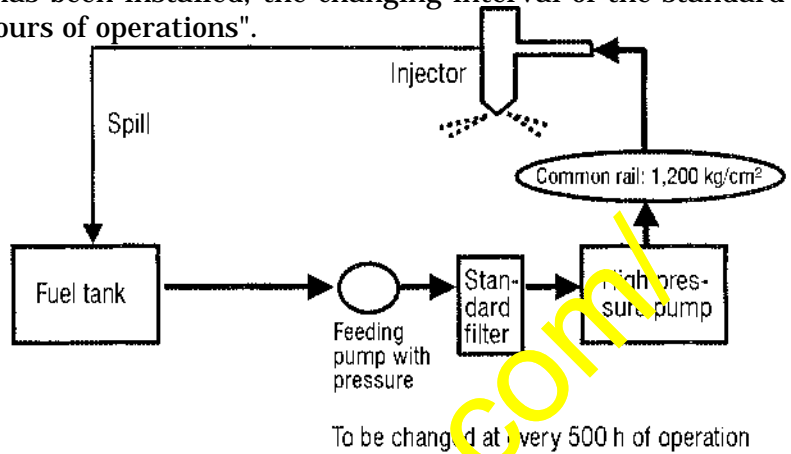
3. Details of the modification

When operating the WA500-3 wheel loaders in areas where low grade fuel is being used, it becomes necessary to install the additional fuel filter (being equipped with water separator).

When the additional fuel filter has been installed, the changing interval of the standard filter will become "every 1,000 hours of operations".

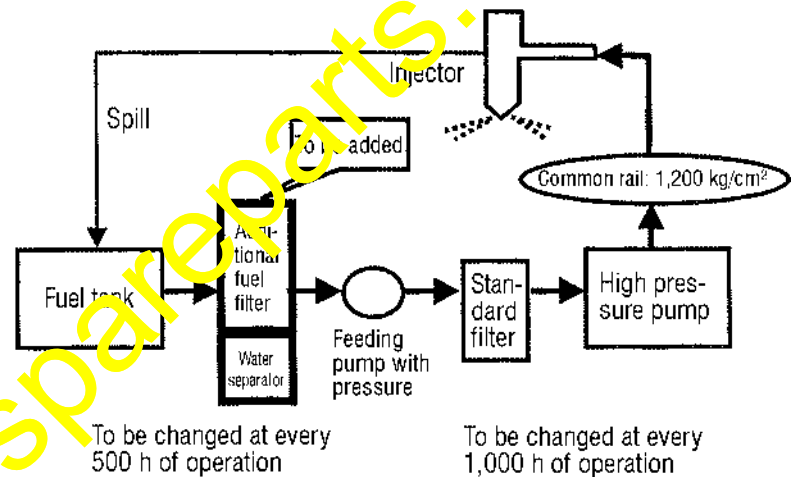
Applicable to standard areas:

(Japan, North America, Europe, Australia, etc.)



Applicable to areas where low grade fuel is being used:

(Asia, Africa, South America, Russia, etc.)



Common rail fuel injection system: Specification setting applicable to the local fuel characteristics

● Additional fuel filter and water separation filter applicable to low grade fuel (containing contaminants and water). Areas where standard adoption of the above is necessary: Asia, Africa (excluding South Africa), Russia, Central and South America, Near East, etc.

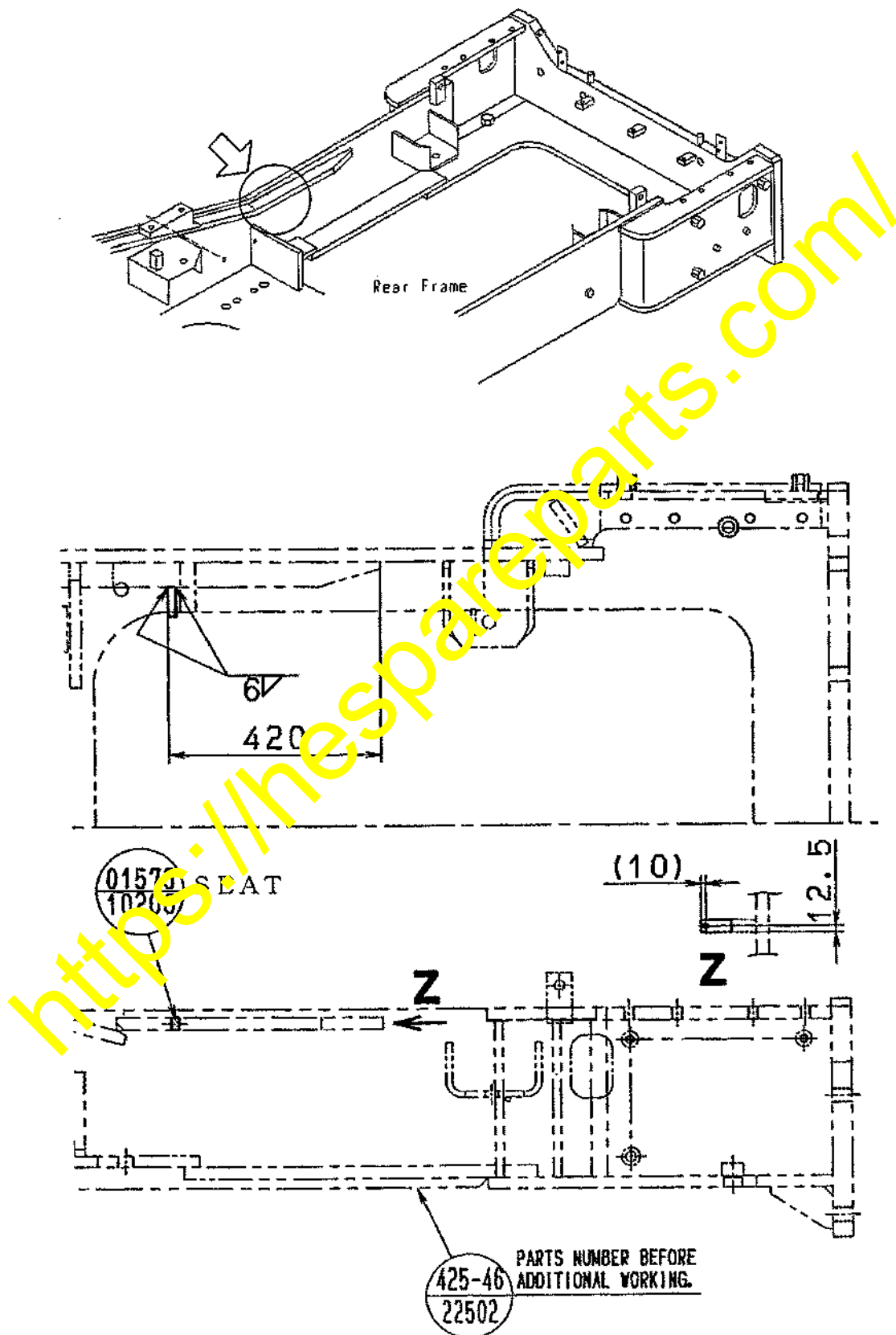
SKM 1340C/02
AVANTAGE SYSTEM
MANUFACTURED BY SKID STEER

January 2002
HYDRAULIC SYSTEMS
REVISION: 01/13/02/1207

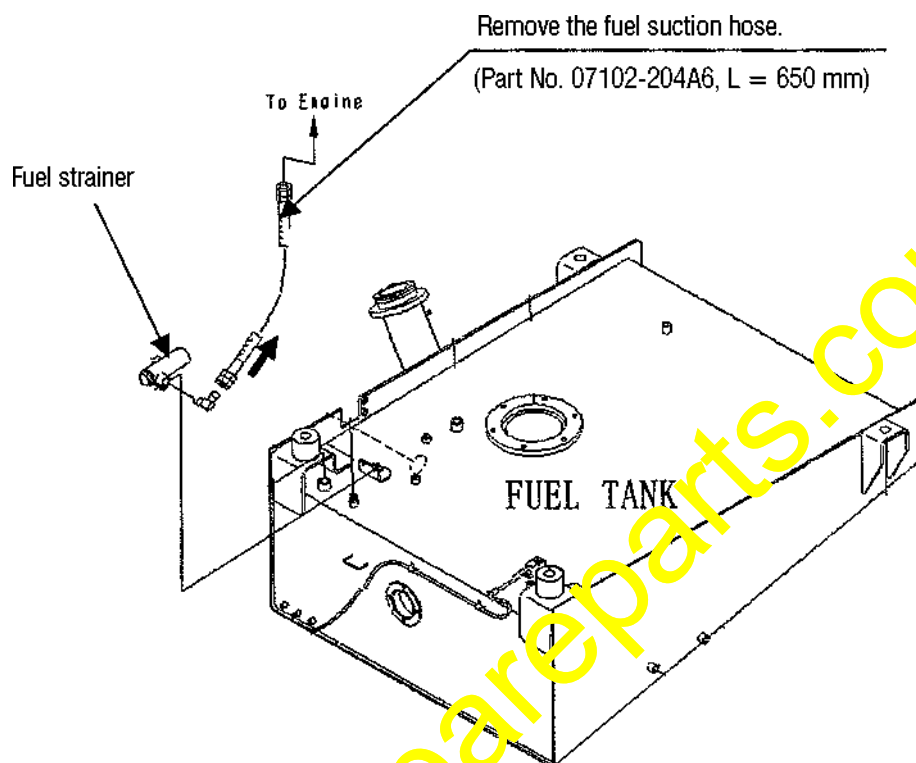
4. Additional working of the rear frame

Weld the seat to the arrowed section in the drawing shown below.

(This seat is to be used to fasten the hose.)



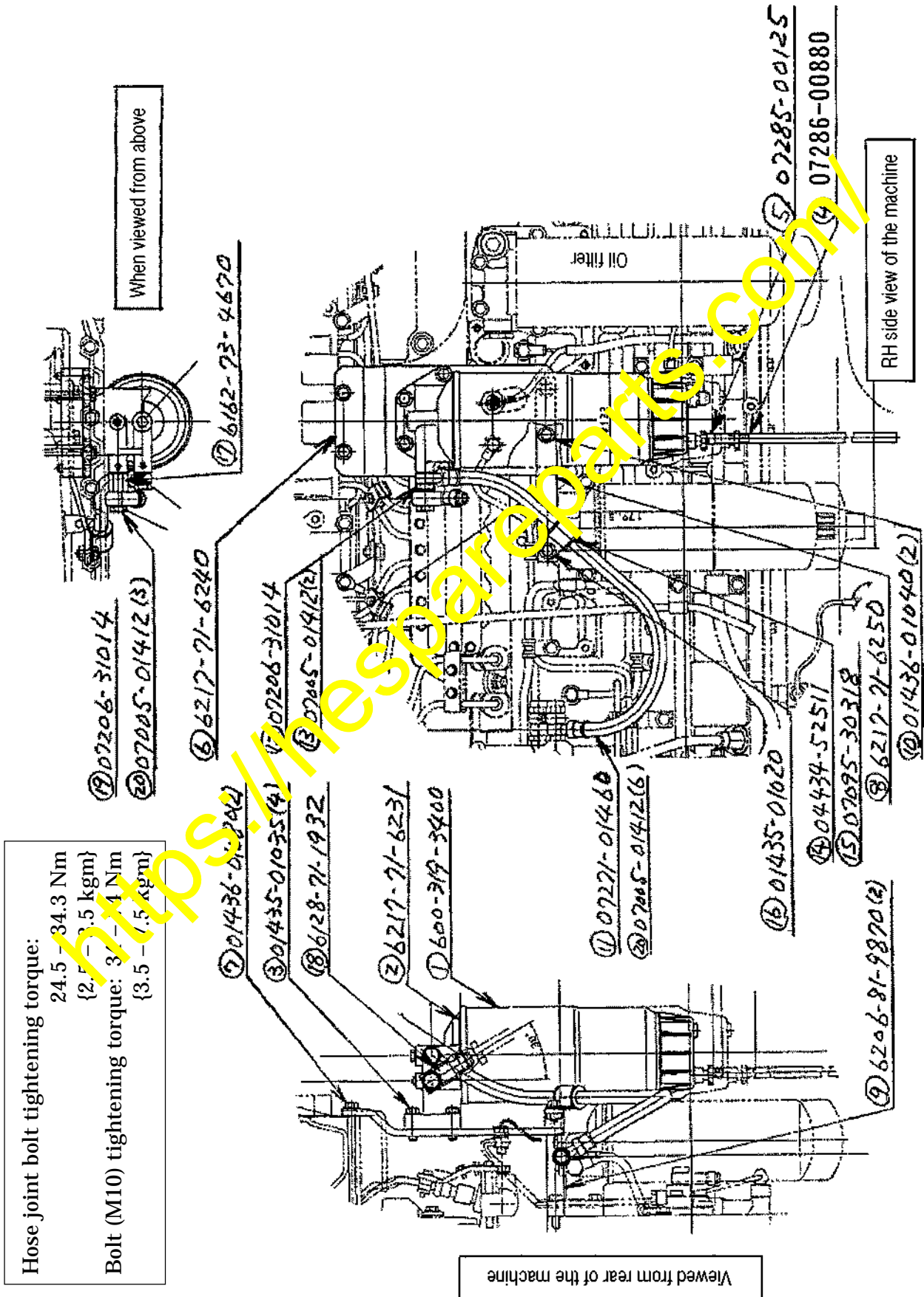
5. Removal of the hose
Remove the fuel suction hose.



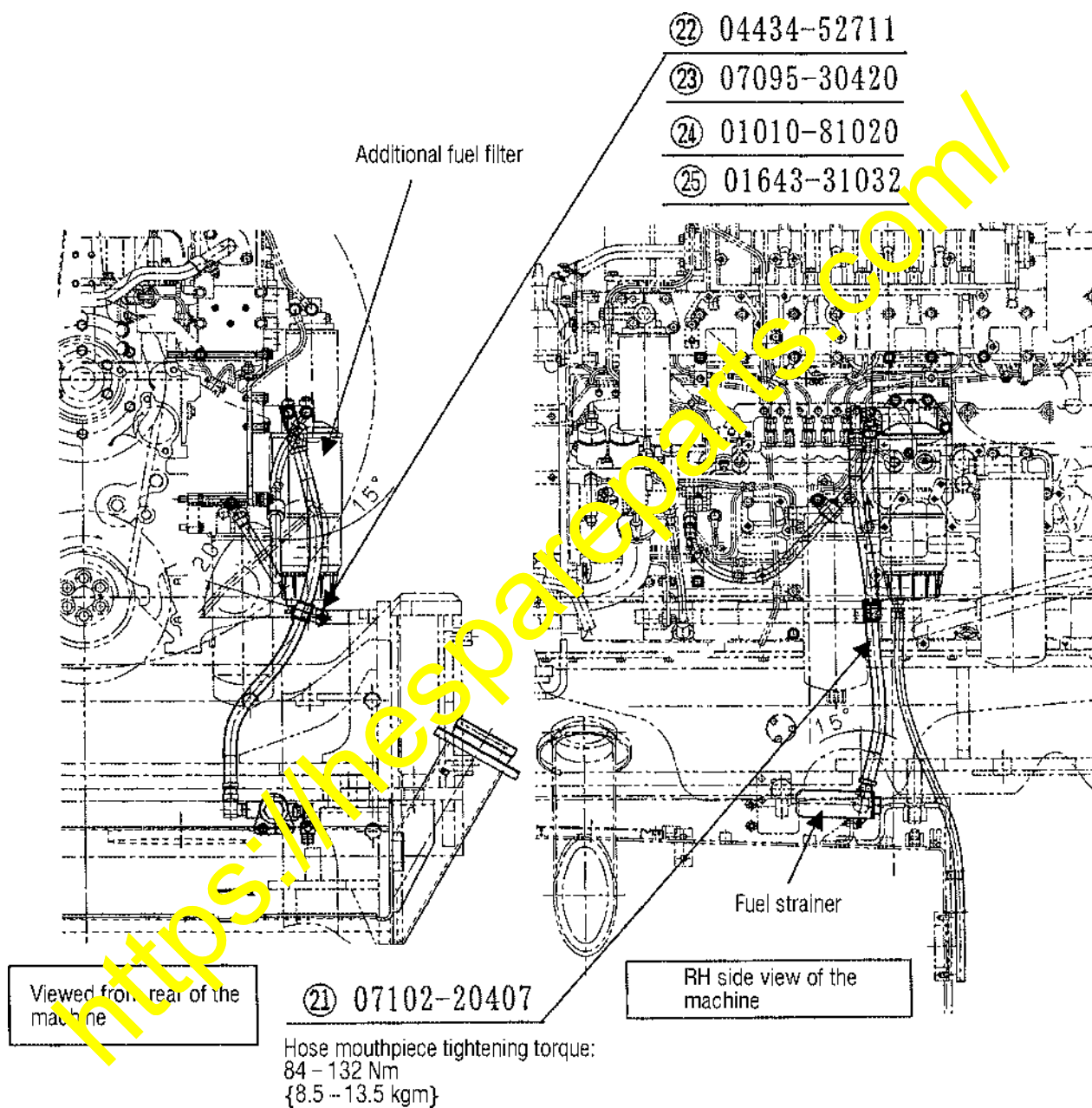
<https://hespareparts.com/>

6. Installation procedure

- 1) Install the additional fuel filter to the engine according to the drawing shown below. When installing the filter, refer to the installation procedure for the filter described on page 8 and 9.



- 2) Install the hose (connecting between the fuel strainer and the additional fuel filter) according to the drawing shown below.



7. Installation procedure for the filter and air bleeding procedure

Install the filter and carry out air bleeding following the procedure being described below.

! WARNING

- Immediately after the engine is stopped, all parts are at high temperature, so do not replace the filter immediately. Wait for the engine to cool down before starting the operation.
- The inside of fuel piping system of the engine is under high-pressure when the engine is running. When replacing the filter, wait for at least 30 seconds after the engine stops to let the internal pressure go down before replacing the filter.
- Do not bring any fire or spark close.
- Be careful when opening the air bleed plug at the fuel filter head and the air bleeder of the supply pump. The system is still under pressure and fuel may spurt out.

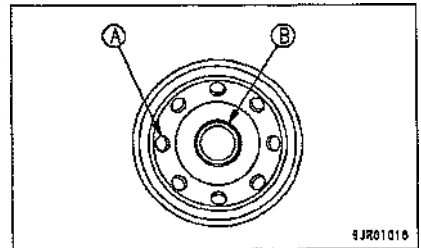
NOTICE

- Genuine Komatsu fuel filter cartridges use a special filter that has highly efficient filtering ability. When replacing the filter cartridge, always use a genuine Komatsu part.
- The common rail fuel injection system used on this machine consists of more precise parts than the conventional injection pump and nozzle.
If any part other than a genuine Komatsu filter cartridge is used, dust or dirt may get in and cause problems with the injection system. Always avoid using substitute parts.
- When carrying out inspection or maintenance of the fuel system, pay more attention than normal to the entry of dirt. If dirt is stuck to any part, use fuel to wash it off completely.

- (1) Filling clean fuel into the additional fuel filter cartridge, and applying engine oil lightly on the packing surface, install the additional fuel filter cartridge to the filter head.

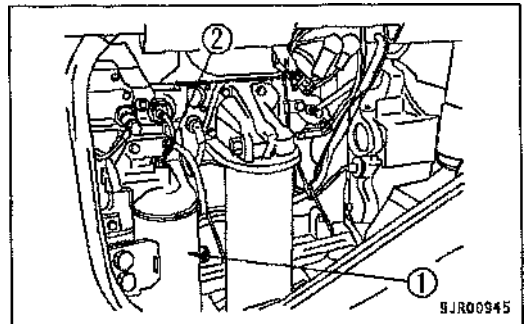
Be sure to use clean fuel to fill and, at the same time, be careful for dust, etc. not to mix into the fuel. Pour the fuel through the small hole (A) (dirty side) at 8 places but do not pour it through the center section hole (B) (clean side).

→ Refer to page 9 for details.



- (2) When installing the additional fuel filter, after the packing surface has come in contact with the filter head seal surface, turn it by 1/2 to 3/4 turn further. If the filter cartridge is tightened excessively, the packing may be damaged to cause possible fuel leakage or, if it is tightened insufficiently, fuel may also leak through the gap of the packing. Therefore, be sure to observe the above tightening turn.

- (3) After finishing installation of the additional fuel filter cartridge, loosen the air bleeder plug (2). (The air bleeder plug is being installed to the filter head section of the standard fuel filter (1).)



- (4) Loosen the knob of the priming pump (3) and carry out pumping to confirm if the fuel comes out through the air bleeder plug (2).

- (5) Tighten the air bleeder plug (2).
Tightening torque: 7.8 - 9.8 Nm {0.8 - 1 kgm}

- (6) Loosen the air retarder (4) of the supply pump.

- (7) Carry out pumping of the priming pump (3) to supply the fuel until air foam stop coming out from the air bleeder (4). After that, tighten the air bleeder (4).
Tightening torque: 4.9 - 6.9 Nm {0.5 - 0.7 kgm}

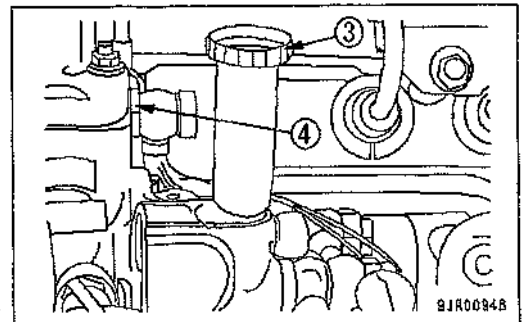
- (8) Carry out pumping until the movement of the priming pump becomes tight.

- (9) Pushing down the knob of the priming pump (3), tighten it.

- (10) Start the engine and inspect the filter seal area for oil leakage.

If the fuel is leaking, re-check the filter cartridge for tightening.

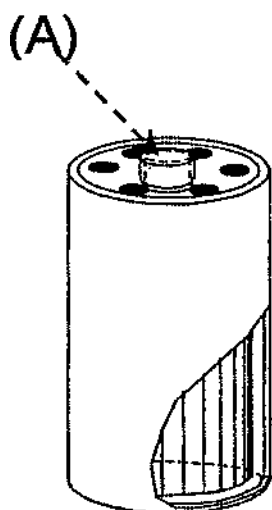
In case the fuel is still leaking with the filter cartridge tightened, remove the filter cartridge using the filter wrench to check if the packing surface is not damaged or if foreign substance is not caught. If the packing surface is damaged or if foreign substance is caught, replace the cartridge with a new part and repeat the above procedure (1) through (10).



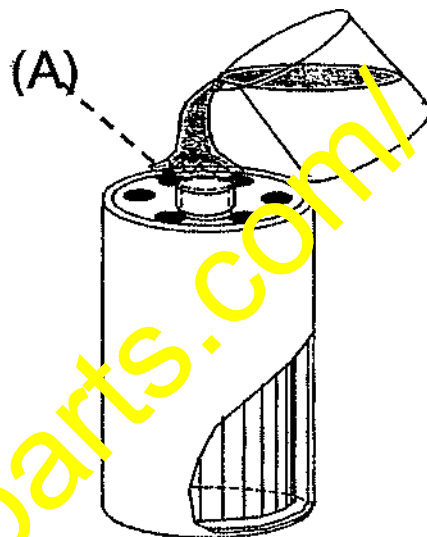
Replacement procedure for the fuel filter cartridge (How to pour the fuel)

When replacing the fuel filter cartridge, pour the fuel into the filter in advance following the procedure described below.

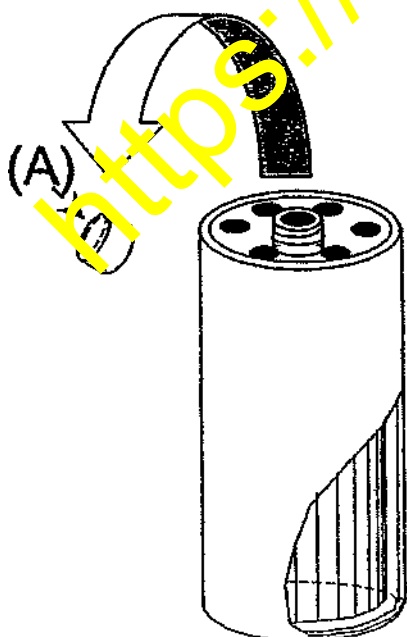
- ① Before pouring the fuel, make sure the cap (A) is being installed.



- ② With the cap (A) installed, pour the fuel into the filter.



- ③ After fully filling the filter with the fuel, remove the cap (A) and discard the removed cap.



- ④ After lightly applying the engine oil onto the surface of the fuel filter packing, install it to the filter head and, after the packing surface has come in contact with the filter head seal surface, tighten it by 1/2 to 3/4 turn.

