

PARTS & SERVICE NEWS

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(C)

Page 1 of 8

SUBJECT: INTRODUCTION OF TRANSMISSION SPIN-ON TYPE OIL FILTER

PURPOSE: To introduce an improved oil filter for the transmission on wheel loaders.

APPLICATION: WA320-3L Wheel Loader Serial Number A30001 to A30493
 WA380-3L Wheel Loader Serial Number A50001 to A50493
 WA420-3L Wheel Loader Serial Number A30001 to A30175
 WA450-3L Wheel Loader Serial Number A30001 to A30361
 WA320-3MC Wheel Loader Serial Number A31001 to A31236
 WA380-3MC Wheel Loader Serial Number A51001 to A51187
 WA420-3MC Wheel Loader Serial Number A31001 to A31050
 WA450-3MC Wheel Loader Serial Number A31001 to A31034

FAILURE CODE: 15B0Z9

DESCRIPTION: A modified structure of the transmission oil filter on wheel loaders to a spin-on type cartridge structure. At the same time, the service life of the oil filter has been extended. This Service News will introduce the details of the modification. For already shipped vehicles not yet finished with this modification, the new type filter can be installed by replacing the filter assembly and the filter bracket at the same time.

MACHINE PREPARATION

1. Park the machine on a flat level surface, lower the work equipment to the ground. Shut off the engine and cycle the controls to remove any residual hydraulic pressure from the work equipment circuits. Turn the parking brake switch on and block the tires.
2. Remove the key from the ignition switch until the repairs are complete. Place a tag on the steering controls advising: "This machine is being repaired. It should not be started or moved for any reason until the tag is removed by the person doing the repairs."



WARNING: Observe all safety and precautionary standards as dictated by the environment and work conditions under which the equipment will be inspected, reworked and repaired. consult the "Shop Manual" and "Operator's and Maintenance Manual" and your "Komatsu district service manager" with any/all questions regarding safety.

Remark

These instructions are intended to supplement the service data contained in the appropriate "Shop Manual". Always refer to that manual for Removal, Installation, Disassembly and Reassembly instructions when not contained in this document.

ADDITIONAL MACHINES

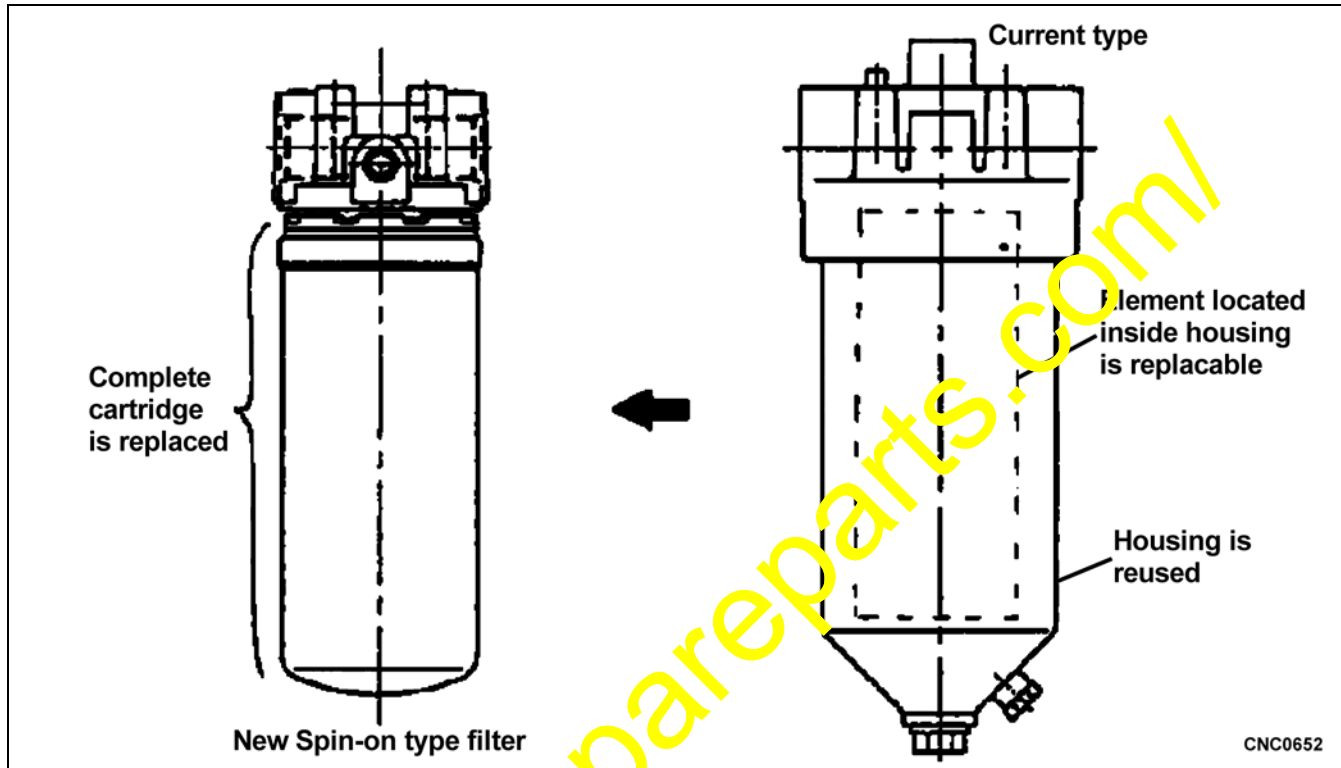
Models	Categorization	Serial numbers of the applicable machines	
		Shipped machines	Being shipped from factory
WA300-3 WA320-3	Standard Spec.	50001 to 53235 (T/MNo.-85039)	54001 - (T/MNo.85040-)
WA350-3 WA380-3	Standard Spec.	50001 - 53321 (T/MNo. - 88966)	54001- T/MNo. 88967-)
WA350-3 WA380-3	Hyper Spec.	60001 - 63059 (T/MNo.- 88966)	64001 - (T/MNo.- 88967-)
WA400-3 WA420-3	Standard Spec.	50001 - 53107 50001 - 53225 (T/MNo.-101189)	54001 - 53226 - T/MNo. 101211(-)
WA400-3 WA420-3	Hyper Spec.	60001 - 63010 T/MNo.- 101193)	64001- (T/MNo. 101206-)
WA450-3 WA470-3	Standard Spec.	50001 - 53281 50001 - 53126 (T/MNo.- 107055)	54001 - 53163- (T/MNo.107075)
WA450-3 WA470-3	Hyper Spec.	60001 - 63040 (T/MNo.- 107067, 107083)	64001 - T/MNo. 107072-)

PART LISTING

Part Number	Description	Qty.	Remark
714-07-28700	FILTER ASSEMBLY	1	--
(419-15-14800)	(FILTER ASSEMBLY)	(1)	--
714-07-28710	CARTRIDGE	1	When changing the cartridge only
(424-16-11140)	(CARTRIDGE)	(1)	
714-07-18760	SUPPORT	1	For the WA400 through WA470
(714-07-14571)	(SUPPORT)	(1)	
714-12-18780	SUPPORT	1	Consumable parts necessary for this modification
(714-12-18751)	(SUPPORT)	(1)	
07002-03734	O-RING	2	

MODIFICATION PROCEDURES

As explained below, we have modified the structure of the oil filter for the transmission on the WA300-3 through WA470-3 wheel loaders. The current type replaces the element only, the new type (spin-on type) has the housing and the element integrated into a cartridge which is replaced. At the same time, we have extended the service life of the oil filter.



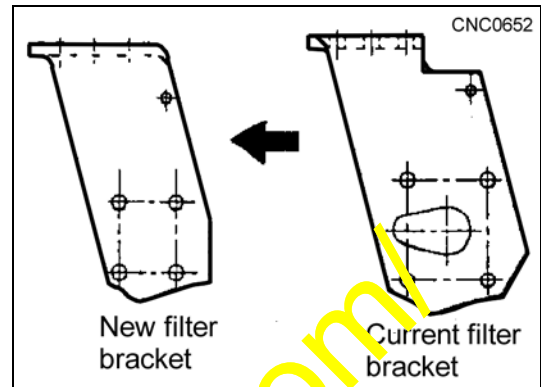
★ Service Interval Comparison

Part Number information	Spin-on type filter with prolonged service life	Current filter type
Part number of filter assemblies	714-07-28700	419-15-14800
Part number of the parts to be replaced periodically	714-07-28712 (Cartridge)	424-16-11140 (Element)
Element/cartridge replacement interval	First replacement after delivery of machine: 250 hours and after every 1,000 hours of operation	First replacement after delivery of machine: 250 hours and after every 500 hours of operation
Reference information	Transmission case oil replacement intervals every 1,000 hours	

Also, because of the change to the filter assembly, the filter mating surface mounting is now different and it becomes necessary to change the filter bracket also.

★ An example of the bracket change

The filter bracket for the WA400-3 through WA470-3

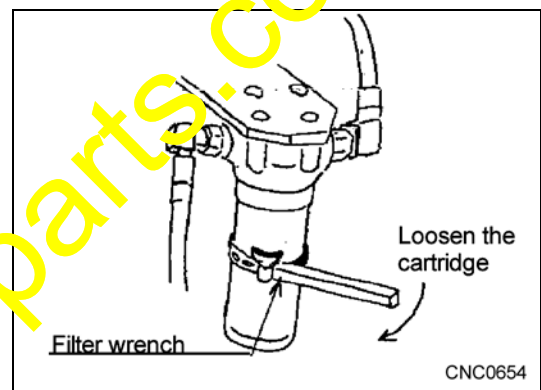


★ Cartridge Replacement Procedures With The Spin-on Type Filter

Outlined below are the cartridge replacement procedures with the spin-on type filter.

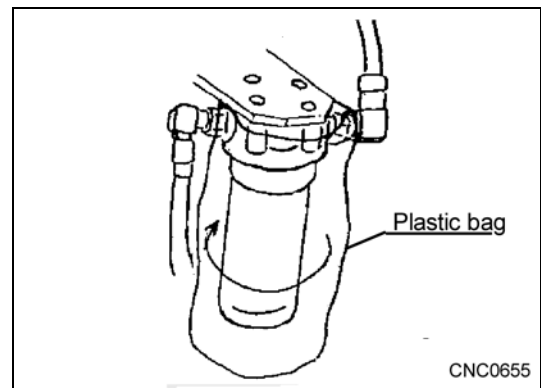
REMOVAL PROCEDURES

1. Loosen the cartridge using the filter wrench (09019-08035).
2. Gradually turn the cartridge by hand until it comes off.



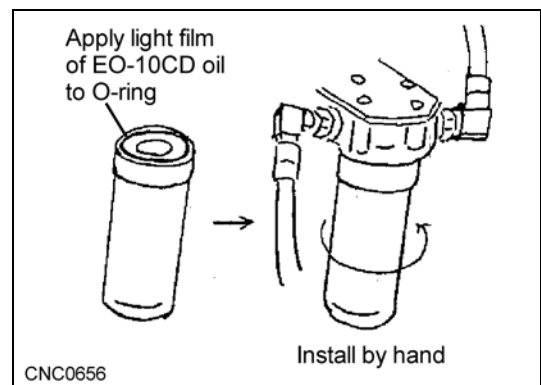
Remark

Since oil remaining inside the cartridge and the piping flows out when the cartridge is separated, cover the cartridge with a plastic bag in which the spare cartridge was wrapped to prevent oil from spilling.



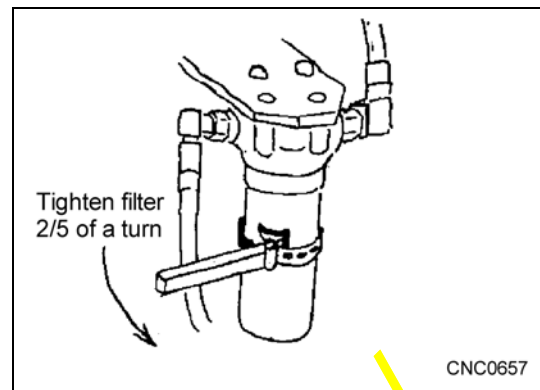
INSTALLATION PROCEDURES

3. After applying clean oil EO-10CD over the O-ring placed on the mating surface of the cartridge, turn the cartridge manually until the O-ring comes in contact with the mating surface.

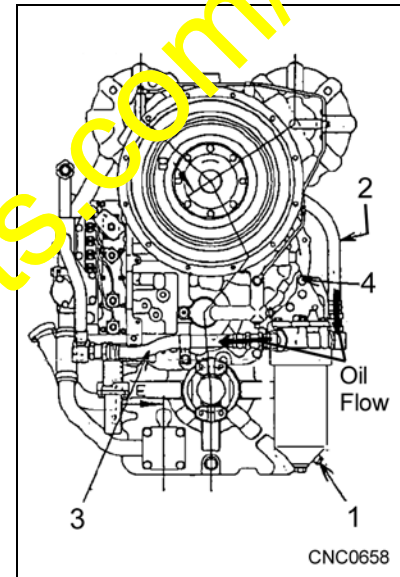


4. From the position where the O-ring has come in contact with the mating surface, turn the cartridge $\frac{2}{5}$ of a turn using the filter wrench.

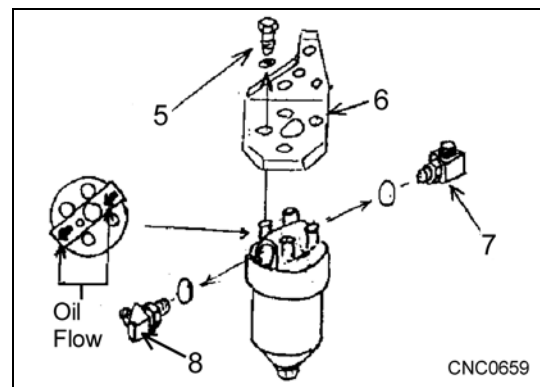
★ Outlined below are the procedures for employing the new spin-on type filter on the already shipped machines.(WA300-3/320-3/350-3/380-3)



1. Remove the drain plug (1) of the filter to drain oil remaining inside the filter.
2. Disconnect the inlet hose (2) and outlet hose (3) from the filter.
3. Unscrew the filter bracket mounting bolts (4) to remove the filter and the bracket altogether in an assembled state.



4. Unscrew the filter mounting bolts (5) to separate the filter from the bracket (6).
5. Remove the inlet elbow (7) and outlet elbow (8) from the filter.
6. Install the inlet elbow (7) and outlet elbow (8) removed in above (5) to the new filter.



Remark

Adjust the mounting angles of these elbows to the same angles when they were installed to the current filter.

Remark

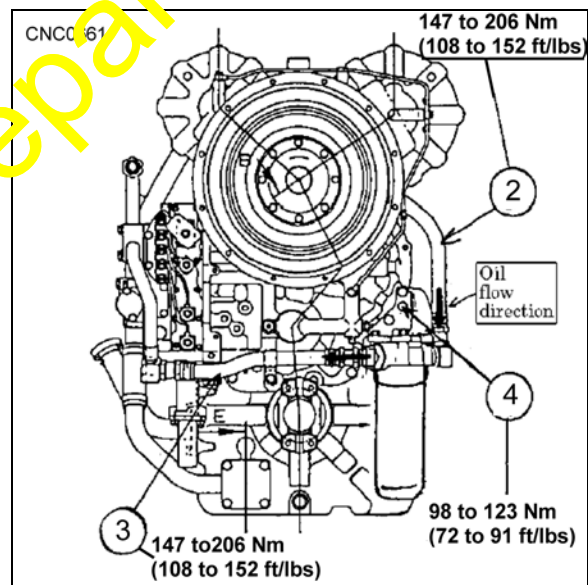
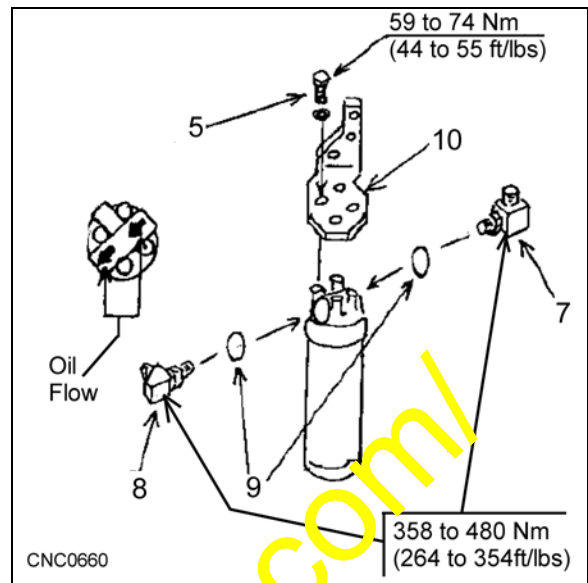
Replace the O-rings (9) with new ones.

7. Using the bolts (5) removed in the above Paragraph (4), install the new bracket to the new filter.

Remark

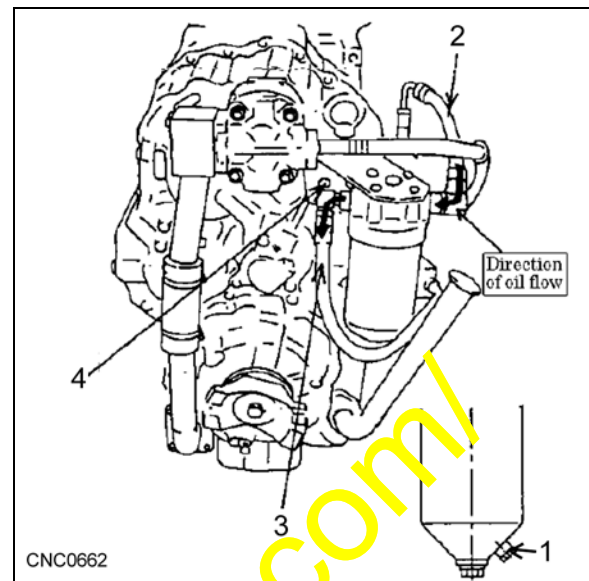
When installing the filter, direct the arrow mark indicating the oil flow direction provided on the upper surface of the filter mating surface according to the designation given in the schematic diagrams indicated at right. If you install the filter in the wrong direction, the filter will break.

8. Install the sub-assembly of the new bracket and the new filter using the bracket mounting bolts (4) which were removed according to the above Paragraph (3).
9. Reconnect the inlet hose (2) and outlet hose (3) to the filter.

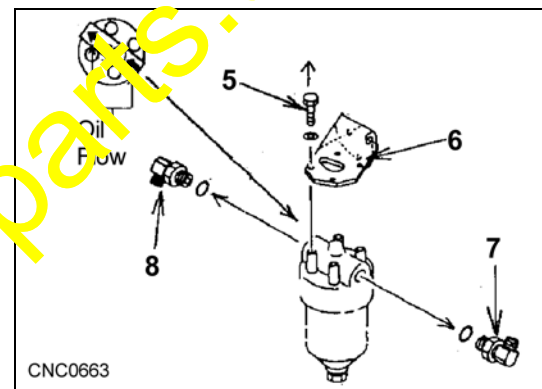


★ Outlined below are the procedures for employing the new spin-on type filter on the already shipped vehicle. (WA400-3/420-3/450-3/470-3)

1. Remove the drain plug (1) of the filter to drain oil remaining inside the filter.
2. Disconnect the inlet hose (2) and outlet hose (3) from the filter.
3. Unscrew the filter bracket mounting bolts (4) to remove the filter and the bracket altogether in an assembled state.



4. Unscrew the filter mounting bolts (5) to separate the filter from the bracket (6).
5. Remove the inlet elbow (7) and outlet elbow (8) from the filter.
6. Install the inlet elbow (7) and outlet elbow (8) removed in above (5) to the new filter.



Remark

Adjust the mounting angles of the elbows to the same angles when they were installed to the current filter.

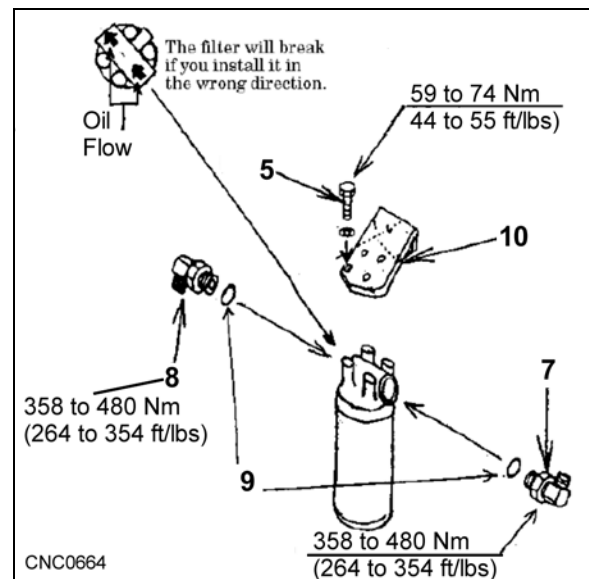
Remark

Replace the O-ring (9) with new ones.

7. Using the bolts (5) removed in the above Paragraph (4), install the new bracket to the new filter.

Remark

When installing the filter, direct the arrow mark indicating the oil flow direction provided on the upper surface of the filter mating surface according to the designation given in the schematic diagrams indicated at right. If you install the filter in the wrong direction, the filter will break.



8. Install the sub-assembly of the new bracket and the new filter using the bracket mounting bolts (4) which were removed according to the above Paragraph (3).
9. Reconnect the inlet hose (2) and outlet hose 3 to the filter.

