INSTALLATION MANUAL

REF NO.	BT02045A
DATE	Oct. 4, 2002

This INSTALLATION MANUAL supersedes the previous issue No. BT02045 dated Aug. 1, 2002 which should be discarded.

SUBJECT: INTRODUCTION OF REINFORCED TYPE DUST RING (BOOM TOP), AND EASY REMOVAL AND INSTALLATION OF THE DUST RING HOLDER ON WA1200-3

PURPOSE: To introduce newly developed reinforced and easy to change dust ring holder for the boom top section on WA1200-3 wheel loaders

APPLICATION: WA1200-3 Wheel Loaders, Serial Nos. 50001 thru 50012

FAILURE CODE: 771CZ9

DESCRIPTION:

1-1. Introduction

1) Muds and sand may accumulate in the bottom section of the groove of the dust ring holder in the boom top bucket hinge section on the WA1200-3 wheel loaders hindering the movement of the dust ring, thus making the dust ring incapable of adjusting to the positional deviation of the boom top boss leading, finally, to breakage of the dust ring holder.
This Installation Manual will introduce newly developed dust ring holder of the split type with which the bolt change can be easily made. The bolt size has also been increased from M12 to ~~M14~~.
Ⓐ M16

2) Regarding the maintenance (irregular maintenance)
When muds and sand have accumulated in the groove of the dust ring holder, remove the split type holder and clean the inside section of the groove.

1-2. Revised places:

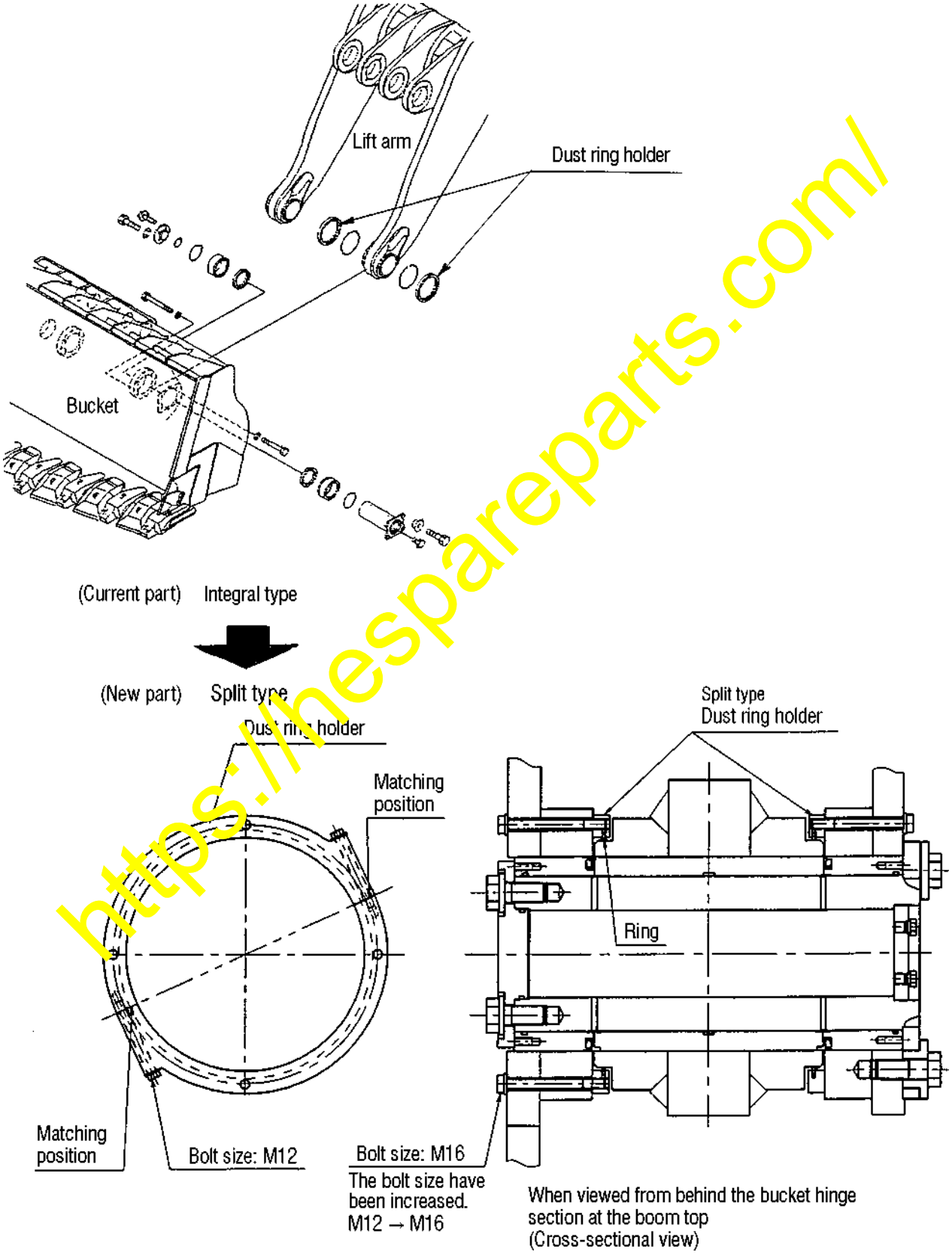
1 place Ⓐ	Oct. 4, 2002	The error in writing is corrected. (The size of bolt "M14"→"M16")

2. List of parts

Part No.	Part Name	Q'ty	Remarks
42C-70-11642 (42C-70-11640)	Dust ring holder (Dust ring holder)	8 (8)	
01436-01220	Bolt	8	
01011-81655 (01011-81250)	Bolt (Bolt)	8 (8)	
01011-81650 (01011-81240)	Bolt (Bolt)	4 (4)	
01011-81645	Bolt	4	
01643-31645 (01643-31232)	Washer (Washer)	16 (16)	
42C-70-11421	Seal dust	4	These are replacement parts at the disassembly work of this modification.
07000-15130	O-ring	2	
07000-15240	O-ring	4	

3. Details of the modification
   The dust ring holder has been modified into the split type so that the holder can be replaced easily.

("Integral type" has been modified to the "split type")



4. Modification procedure

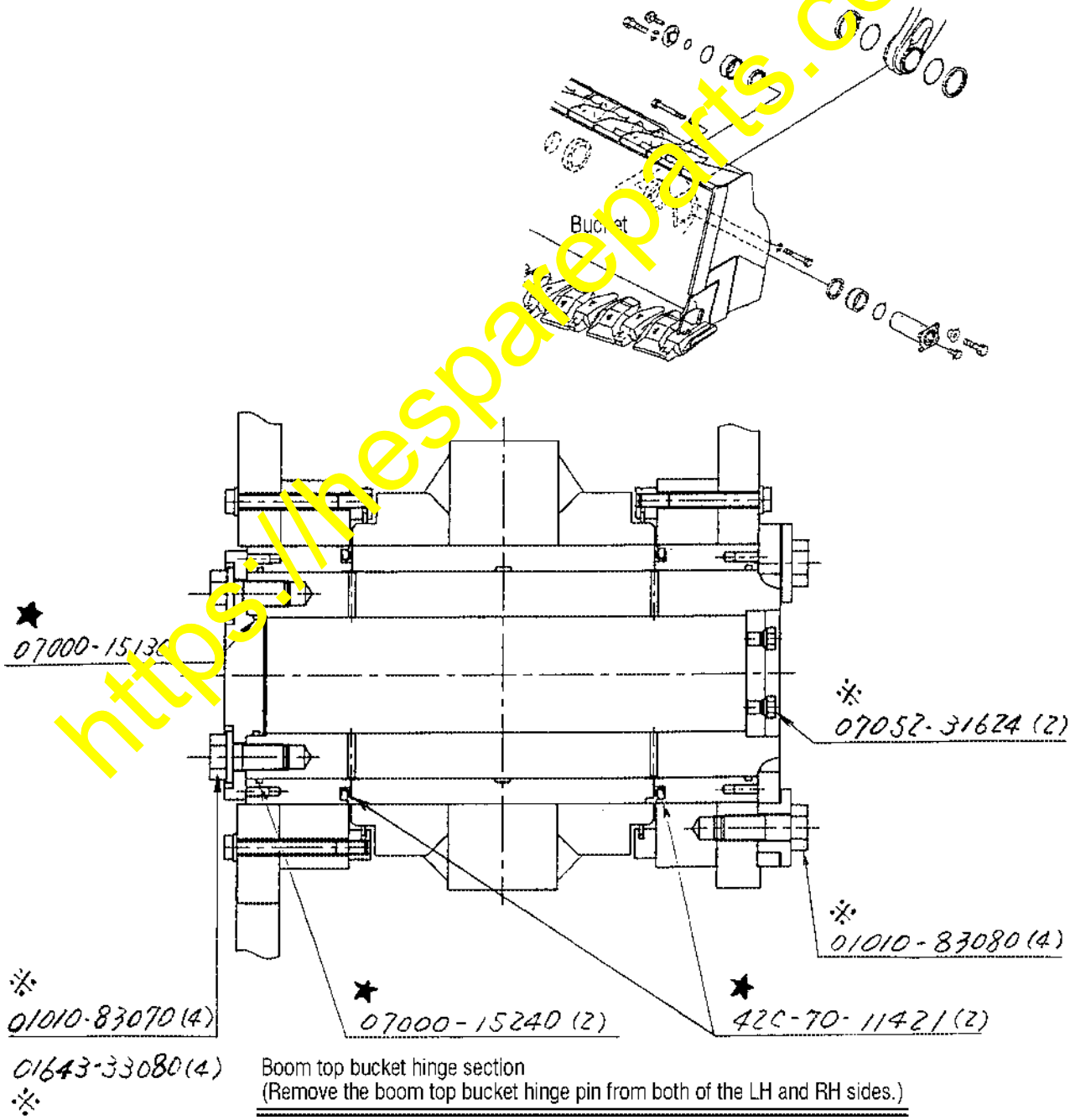
(1) Removing the boom top bucket hinge pin (Remove the boom top bucket hinge pin from both of the LH and RH sides.)

- Remove the bucket hinge pin referring to the Local Assembly Procedure Manual or the Shop Manual. (An extract from the Shop Manual is being indicated on page 6.)

(Note)

① When replacing the dust ring holder, change the dust seal and O-ring, which are the internal component parts of the pin section, to new parts. (Parts marked ★)

② ※ marked part numbers are being indicated in the drawing so that the same parts can be prepared in case these parts are lost after removal.

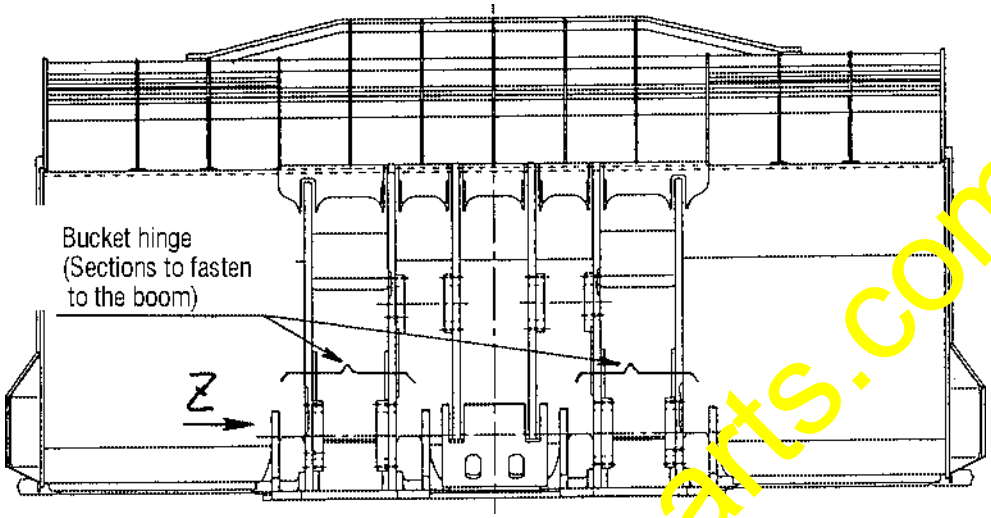


Boom top bucket hinge section
(Remove the boom top bucket hinge pin from both of the LH and RH sides.)

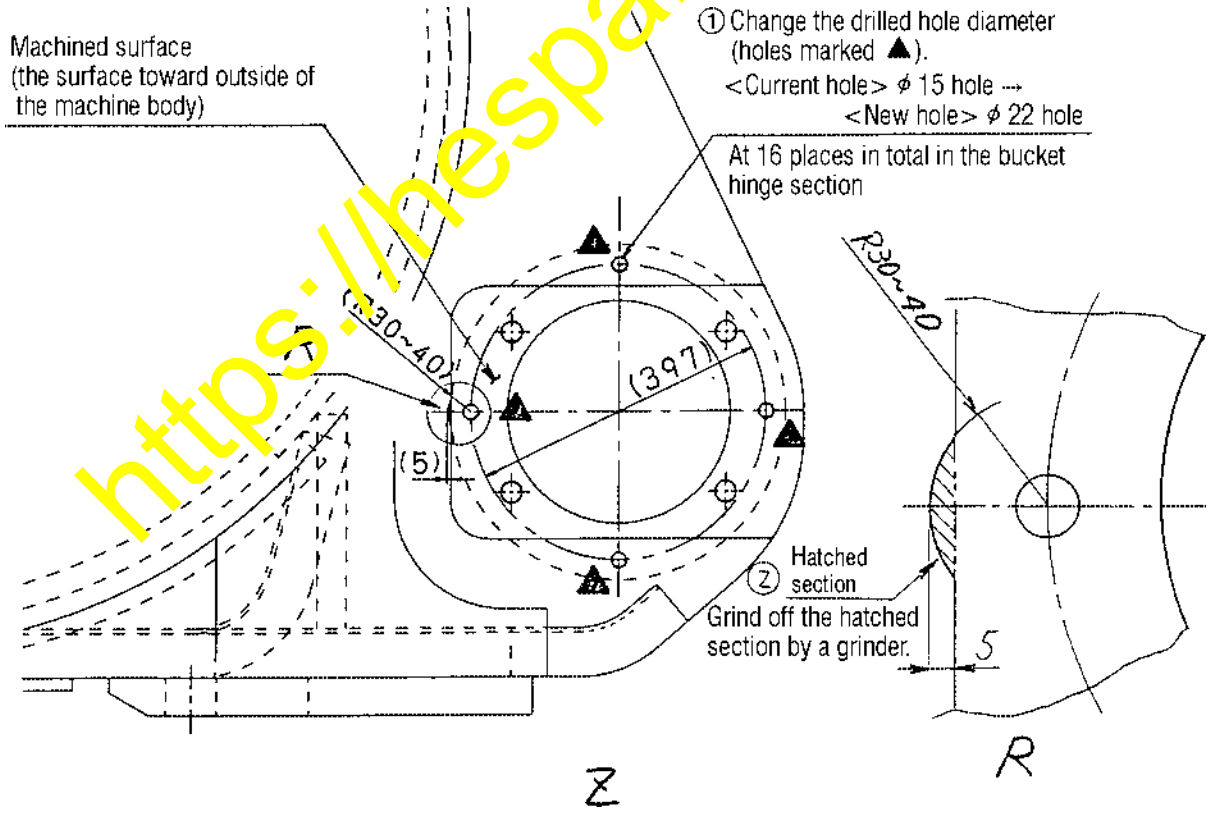
(2) Additional working for the bucket hinge

① Change the drilled hole diameter in the bucket hinge section.
<Current hole> ϕ 15 hole → <New hole> ϕ 22 hole

② Grind off the hatched section on the machined surface (the surface toward outside of the machine body) of the bucket hinge by a grinder.



When the bucket is viewed from the rear side



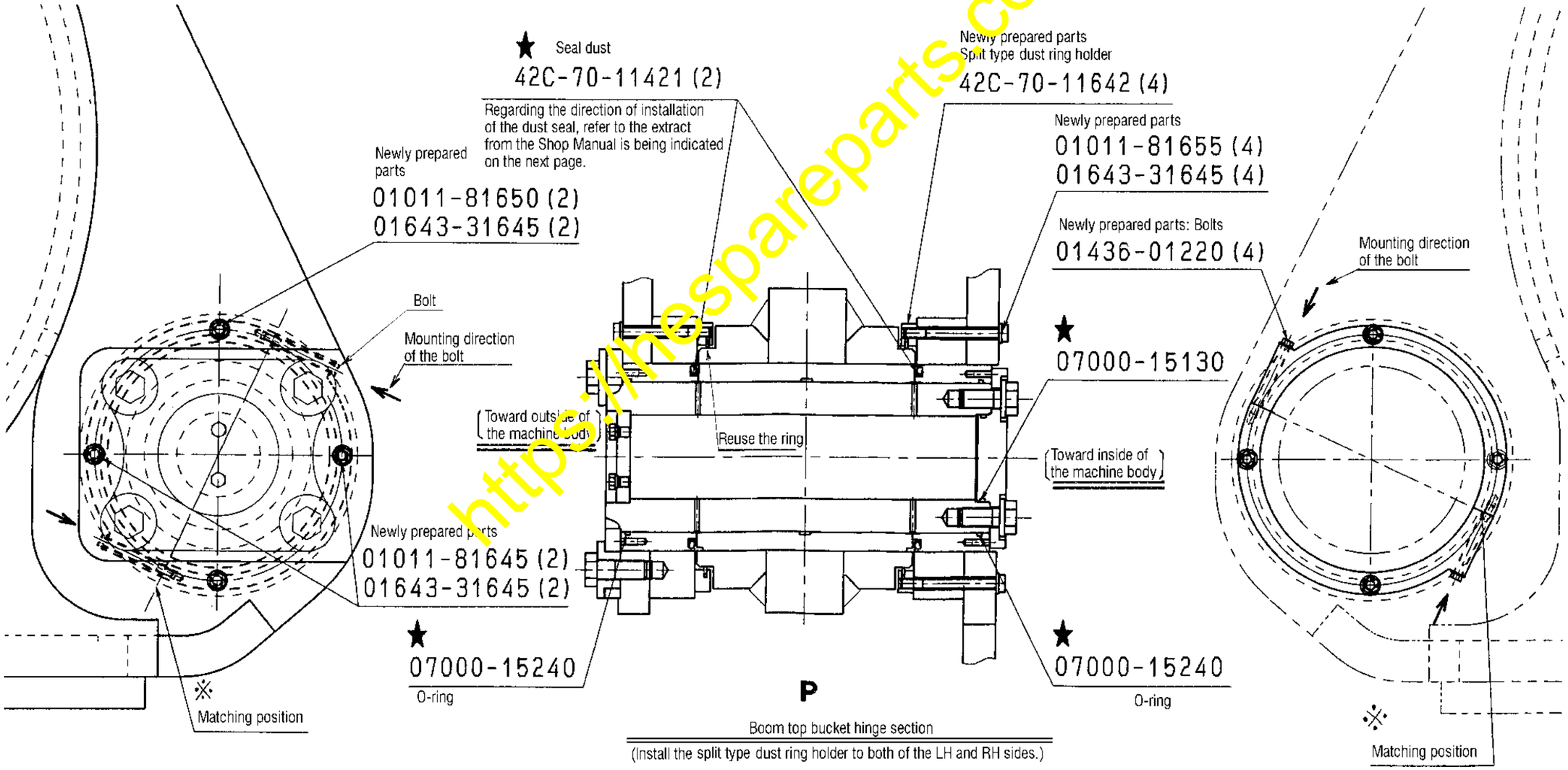
(3) Installing the split type dust ring holder (Install the split type dust ring holder to both of the LH and RH sides.)

- Install the split type dust ring holder.
  Also, replace the dust ring holder mounting bolts at the same time. (Install the bolts from the arrowed direction being indicated in the drawing.)
- Install the bucket hinge pin referring to the Local Assembly Procedure Manual or the Shop Manual. (An extract from the Shop Manual is being indicated on page 6.)

(Note)
- When replacing the dust ring holder, change the dust seal and O-ring, which are the internal component parts of the pin section, to new parts. (Parts marked ★)
- The matching position (marked ※) of the dust ring holder and the mounting direction of the bolts (marked →) should be as shown in the drawing below.
  (A position where rocks, muds and sand will not come in direct contact is to be selected.)

- Refer to the Table below regarding the tightening torque.

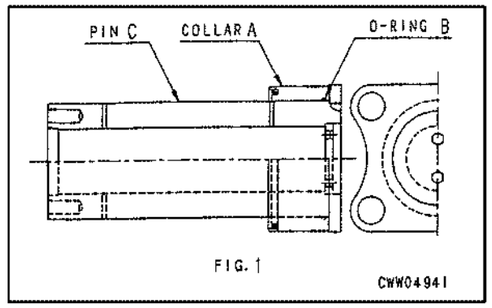
Bolt tightening torque (when using an impact wrench)		
	Nm	kgm
M12	54 – 123	5.5 – 12.5
M16	147 – 309	15 – 31.5



Installation procedure for the oil sealed pin

1. Install O-ring (A) to collar (B) and insert them into pin (C).

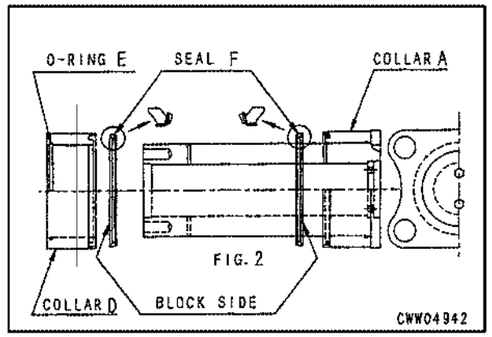
2. Clean the bore and outer surface of bushing of assembling parts (boom, bellcrank, cylinder, bucket, bucket link) after inspection of damage or dent. Apply the gear oil (API, GL-5, 80W/90) to outside of pin lightly.



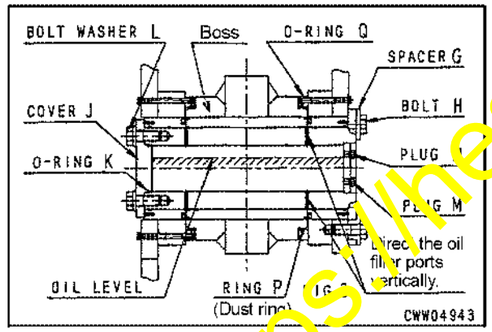
3. Install O-ring (E) to collar (D).

4. Install seal (F) to collar (A) and (D).
Direction of seal is as follows. (The black surface of seal to be toward the collar)
(Pay attention to the direction of the seal)

5. Clean the bore of pin (boom, bellcrank, frame, bucket) after inspection of damage or dent.
Apply the anti seizing coat (LC-G or LM-P) to inside of bore lightly.



6. Put the ring (Q) which has installed in ring (P) at section G-G. See following dwg. (Dust ring)

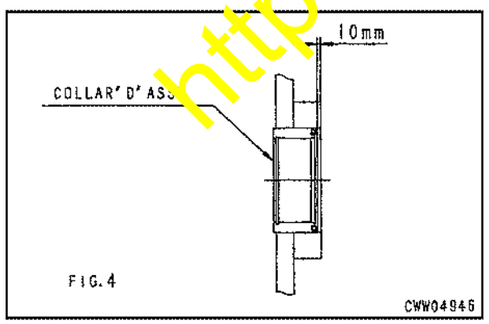


7. Overlap both center of pin (C) ass'y and collar (D) ass'y to the center of bore of pin. And insert them into the bore.
If the collar ass'y (D) put into the bore, see Fig. 4.

8. Install pin by bolt (H) and spacer (G).
Rotate the pin to vertical position of oil filler holes at section D-D.

9. Install O-ring (K) to flange (K), and install to pin.

10. Cap the bottom filler hole by plug (M). And fill the gear oil (API, GL-5, 80W/90) up to the upper fill hole.



11. Cap the upper filler hole by plug (N).
Tightening torque:
157 – 255 Nm {16 – 26kgm}

12. See the part No. on each section drawings.
Unspecified tightening torque shall be conform to KES. 04. 123. 1. (Impact wrench table)

13. Inspect the less of oil leakage. Squeaking and heating at pin portion.
If find out of order, decompose at pin portion.

14. Oil type of sealed pin
Grade: API, GL-5, viscosity: 80W/90, outside temperature: –30°C – +50°C