

PARTS & SERVICE NEWS

REF NO. AA98178A

DATE Sept. 17, 1999

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SUBJECT: IMPROVEMENT OF PIN AND BUSHING

PURPOSE: To introduce improved pins and bushings for use as the work equipment pin and bushing on WA700, WA800 and WA900 wheel loaders.

APPLICATION: WA700-1 Wheel Loaders, S/N 10001 thru 19999
 WA700-1L Wheel Loaders, S/N A20001 and up
 WA700-3 Wheel Loaders, S/N 50001 thru 50004
 WA800-1 Wheel Loaders, S/N 10001 thru 10499
 WA800-2 Wheel Loaders, S/N 10501 and up
 WA800-2L Wheel Loaders, S/N A20001 thru A20019
 WA800-2LC Wheel Loaders, S/N A20020 and up
 WA800-3 Wheel Loaders, S/N 50001 thru 50004
 WA900-1 Wheel Loaders, S/N 10001 thru 19999
 WA900-1L Wheel Loaders, S/N A20001 thru A20007
 WA900-1LC Wheel Loaders, S/N A20008 and up
 WA900-3 Wheel Loaders, S/N 50001 thru 50003

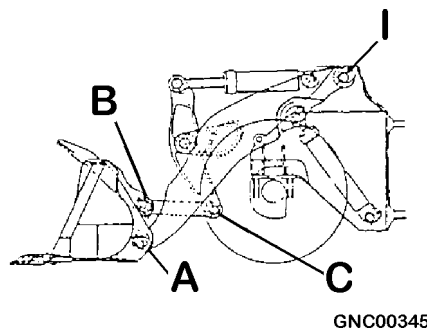
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DESCRIPTION:

1. Introduction

This Service News (P&SN) introduces improved pins (with controlled surface coarseness after plating and supplemented by buffing finish) and bushings (with supplementary rounding of the groove corners) which are effective to suppress squealing and galling of the work equipment pins on the WA700, WA800 and WA900 wheel loaders.

(The new improved pins have been prepared for all their locations with the work equipment and the new improved bushings have been prepared for sections A, B, C and I according to the designations in the schematic diagram given below.)



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2. List of necessary parts P3 to P5

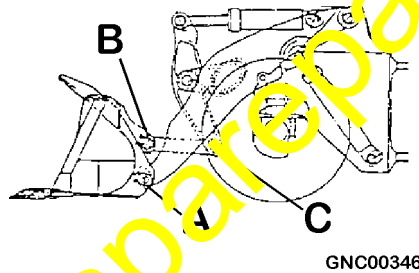
WA700-1, WA700-1L, WA700-3 P3

WA800-1, WA800-2, WA800-2L, WA800-2LC, WA800-3 and WA900-1
(S/N 10001 thru 10007) P4

WA900-1 (S/N 10008 and after or the Hi-Lift spec. WA900-1), WA900-1L, WA900-1LC,
WA900-3 P5



WARNING! Since the diameter of the pins being used at sections A, B and C is different with the WA900-1 (with the S/N 10008 and after and with Hi-Lift spec. WA900-1), be careful when ordering the parts



3. Contents of the modification P6

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6. Be sure to use molybdenum paste (LM-P) when installing or replacing these pins and bushings locally P12

2.

List of parts WA700-1, WA700-1L, WA700-3

Part No.	Part Name	Q'ty	Remarks
428-70-11261 (428-70-11260)	Pin (Pin)	1 (1)	A
428-70-11271 (428-70-11270)	Pin (Pin)	1 (1)	A
428-70-11281 (428-70-11280)	Pin (Pin)	1 (1)	B
427-70-11932 (427-70-11931)	Pin (Pin)	1 (1)	C
427-70-11942 (427-70-11941)	Pin (Pin)	2 (2)	D, E
428-70-11961 (428-70-11960)	Pin (Pin)	1 (1)	F
428-70-11971 (428-70-11970)	Pin (Pin)	2 (2)	G
428-70-11981 (428-70-11980)	Pin (Pin)	2 (2)	H
428-70-11991 (428-70-11990)	Pin (Pin)	2 (2)	I
427-70-11824 (427-70-11823)	Bushing (Bushing)	3 (3)	A, B
428-70-11833 (428-70-11832)	Bushing (Bushing)	1 (1)	C
428-70-11895 (428-70-11894)	Bushing (Bushing)	2 (2)	I
426-09-11110	Dust seal	8	Boom A, link B, C
427-09-11110	Dust seal	4	Boom I

WA800-1, WA800-2, WA800-2L, WA800-2LC, WA800-3, WA900-1 (S/N 10001 - 10007)

Part No.	Part Name	Q'ty	Remarks
427-853-1131 (427-853-1130)	Pin (Pin)	1 (1)	A
427-853-1141 (427-853-1140)	Pin (Pin)	1 (1)	A
427-70-11611 (427-70-11610)	Pin (Pin)	1 (1)	B
427-70-11932 (427-70-11931)	Pin (Pin)	1 (1)	C
427-70-11942 (427-70-11941)	Pin (Pin)	2 (2)	D, E
427-70-11964 (427-70-11963)	Pin (Pin)	1 (1)	F
427-70-11972 (427-70-11971)	Pin (Pin)	2 (2)	G
427-70-11982 (427-70-11981)	Pin (Pin)	2 (2)	H
427-70-11993 (427-70-11992)	Pin (Pin)	2 (2)	I
427-70-11824 (427-70-11823)	Bushing (Bushing)	3 (3)	A, B
428-70-11833 (428-70-11832)	Bushing (Bushing)	1 (1)	C
428-70-11895 (428-70-11894)	Bushing (Bushing)	2 (2)	I
426-09-11110	Dust seal	8	Boom A, link B, C
427-09-11110	Dust seal	4	Boom I

(Remarks) Since the pin diameter is different with the WA900-1 wheel loaders with the S/N 10008 and UP, and with the Hi-Lift spec. WA900-1, use the parts on the list of necessary parts given on the next page.

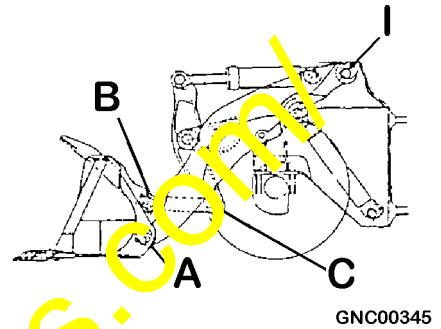
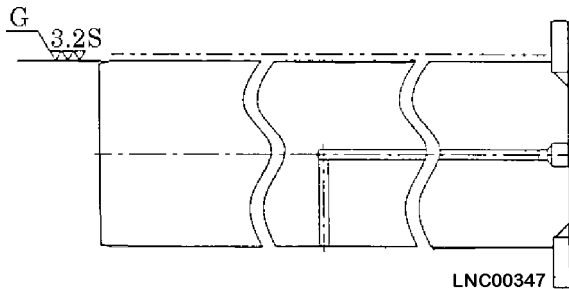
WA900-1 (S/N 10008 and UP, with Hi-Lift spec), WA900-1L, WA900-1LC, WA900-3

Part No.	Part Name	Q'ty	Remarks
427-N42-1161 (427-N42-1160)	Pin (Pin)	2 (2)	A
427-N42-1151 (427-N42-1150)	Pin (Pin)	1 (1)	B
427-N42-1121 (427-N42-1120)	Pin (Pin)	1 (1)	C
427-70-11942 (427-70-11941)	Pin (Pin)	2 (2)	D, E
427-70-11964 (427-70-11963)	Pin (Pin)	1 (1)	F
427-70-11972 (427-70-11971)	Pin (Pin)	2 (2)	G
427-70-11982 (427-70-11981)	Pin (Pin)	2 (2)	H
427-70-11993 (427-70-11992)	Pin (Pin)	2 (2)	I
427-N42-1133 (427-N42-1132)	Bushing (Bushing)	4 (4)	A, B, C
428-70-11895 (428-70-11894)	Bushing (Bushing)	2 (2)	I
427-09-11120	Dust seal	8	Boom A, link B,C
427-09-11110	Dust seal	4	Boom I

3. Contents of the modification

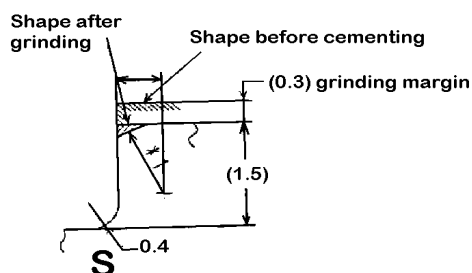
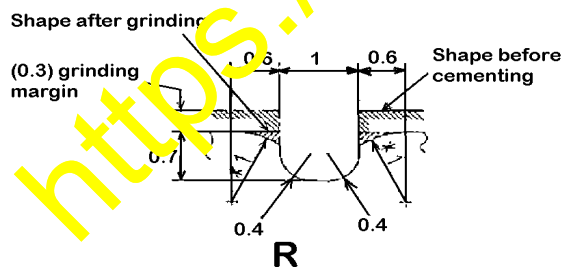
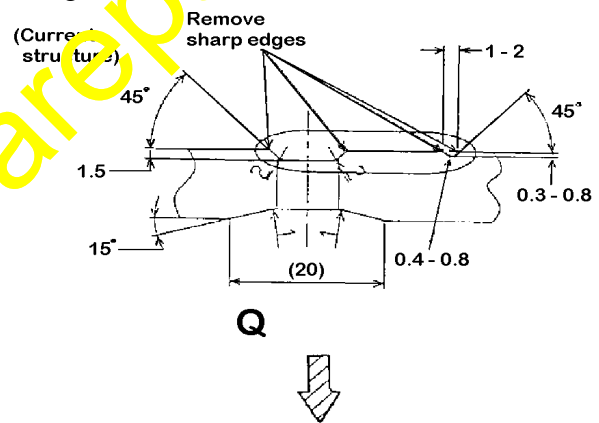
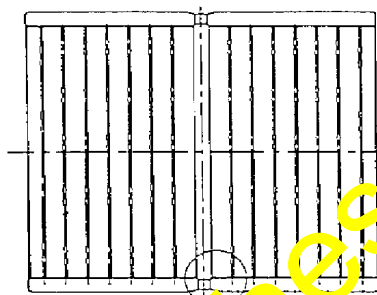
A. Pin:

- The surface coarseness after plating is being duly controlled and a buffing finish has been supplemented to improve the surface accuracy of the pins for use at sections A, B, C, and I.
- The dimension given in the drawing indicates the dimension after plating and the surface coarseness should be 3.2S or less.
- The pins should be finished by buffing after application of plating.

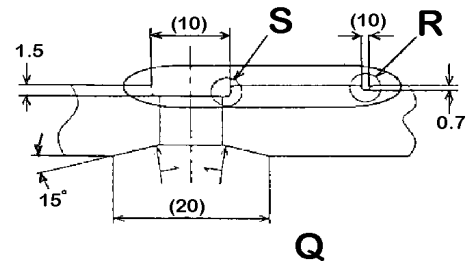


B. Bushing:

- The edge load, which causes squeaking and galling of the work equipment pin, at the grease groove corners of the bushing has been alleviated by supplementation of corner rounding for the grease groove of the bushing.



- (New structure)
- Corner rounding has been supplemented to the grease groove of the bushing. (Refer to the detail drawings for sections "S" and "R".)



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4. Installation procedures

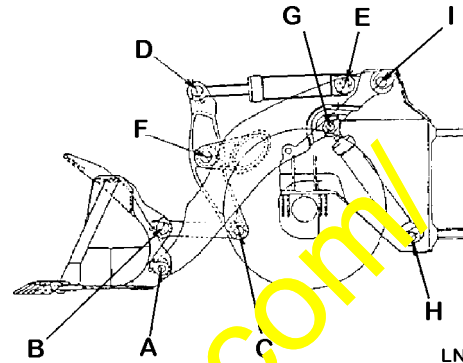
Refer to the Shop Manual when installing the parts listed below. Meanwhile, when installing or replacing them locally, be sure to use the molybdenum paste (LM-P).

Refer to P&SN "AT96202" on use of the molybdenum paste.



WARNING! When replacing the bushing, replace the dust seal with the new part at the same time. Also, be sure to remember that the bushing is directional at the bucket link section.

(Regarding the part numbers of the applicable dust seal and the direction of the bushing, refer to pages 9 and 10.)



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WA700-1, WA700-1L, WA700-3

	Pin			Bushing		
	P/N	Q'ty	Outer diameter	P/N	Q'ty	Outer diameter
A (LH)	428-70-11261	1	ø160	427-70-11824	2	ø160
(RH)	428-70-11271	1	ø160			
B	428-70-11281	1	ø160	427-70-11824	1	ø160
C	427-70-11932	1	ø160	428-70-11833	1	ø160
D	427-70-11942	1	ø180	Equal to the current part		
E	427-70-11942	1	ø180			
F	428-70-11961	1	ø200			
G	428-70-11971	2	ø160			
H	428-70-11981	2	ø160			
I	428-70-11991	2	ø200	428-70-11895	2	ø200

WA800-1, WA800-2, WA800-2L, WA800-2LC, WA800-3, WA900-1 (S/N 10001 Thru 10007)

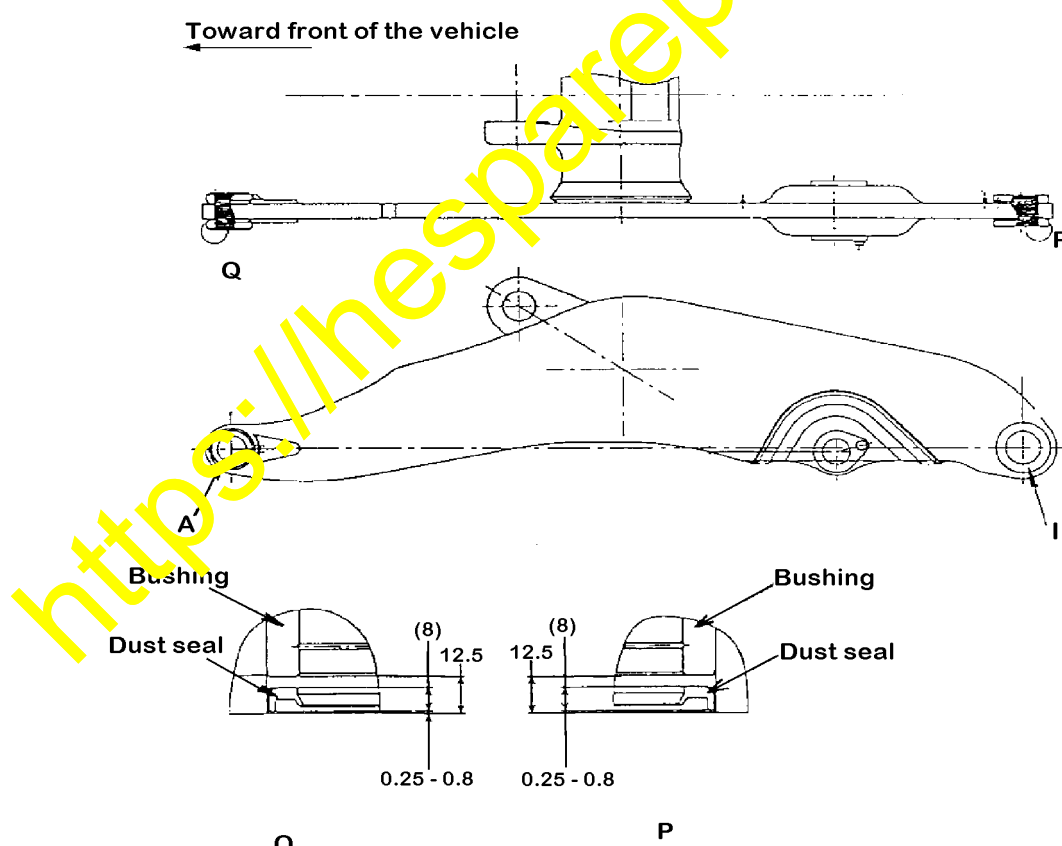
	Pin			Bushing		
	P/N	Q'ty	Outer diameter	P/N	Q'ty	Outer diameter
A (LH)	427-853-1131	1	ø160	427-70-11824	2	ø160
(RH)	427-853-1141	1	ø160			
B	427-70-11611	1	ø160	427-70-11824	1	ø160
C	427-70-11932	1	ø160	428-70-11833	1	ø160
D	427-70-11942	1	ø180	Equal to the current part		
E	427-70-11942	1	ø180			
F	427-70-11964	1	ø200			
G	427-70-11972	2	ø180			
H	427-70-11982	2	ø180			
I	427-70-11993	2	ø200			

WA900-1 (S/N 10008 and UP, Hi-Lift spec) WA900-1L, WA900-1LC, WA900-3

	Pin			Bushing		
	P/N	Q'ty	Outer diameter	PN	Q'ty	Outer diameter
A	427-N42-1161	2	ø180	427-N42-1133	2	ø180
B	427-N42-1151	1	ø180	427-N42-1133	1	ø180
C	427-N42-1121	1	ø180	427-N42-1133	1	ø180
D	427-70-11942	1	ø180	Equal to the current part		
E	427-70-11972	1	ø180			
F	427-70-11964	1	ø200			
G	427-70-11972	2	ø180			
H	427-70-11982	2	ø180			
I	427-70-11993	2	ø200			

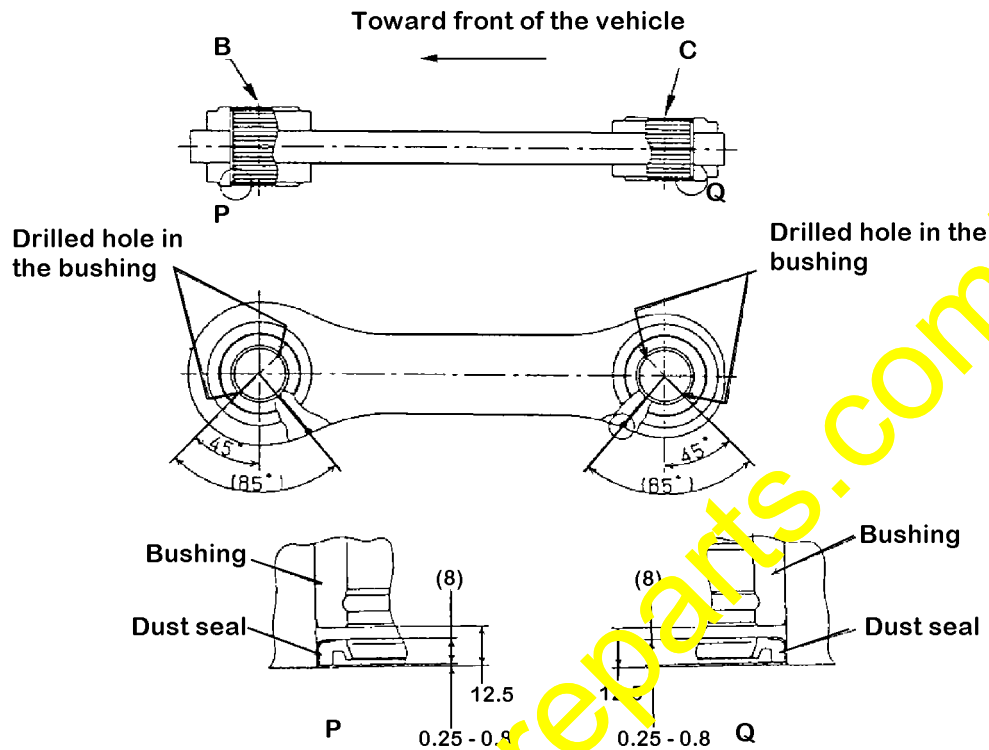
Part numbers of the applicable dust seals.

Using locations		Boom	
		A	I
WA700-1, WA700-1L, WA700-3	STD	426-09-11110 (4)	427-09-11110 (4)
WA800-1, WA800-2, WA800-2L, WA800-2LC, WA800-3, WA900-1 (S/N 10008 thru 10009)	STD	426-09-11110 (4)	427-09-11110 (4)
	Hi-Lift	426-09-11110 (4)	427-09-11110 (4)
	L&C	426-09-11110 (4)	427-09-11110 (4)
WA900-1 (S/N 10008 and UP, Hi-Lift spec), WA900-1L, WA900-1LC, WA900-3	STD	427-09-11120 (4)	427-09-11110 (4)
	Hi-Lift	427-09-11120 (4)	427-09-11110 (4)



WARNING! When installing the dust seal, pay attention to the direction of its lip. GNC00350

Part numbers of the applicable dust seals.



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Using locations		Link	
		B	C
WA700-1, WA700-1L, WA700-3	STD	426-09-11110 (2)	427-09-11110 (2)
WA800-1, WA800-2, WA800-2L, WA800-2LC, WA800-3, WA900-1 (S/N 10008 thru 10009)	STD	426-09-11110 (2)	427-09-11110 (2)
	Hi-Lift	426-09-11110 (2)	427-09-11110 (2)
	L&C	426-09-11110 (2)	427-09-11110 (2)
WA900-1 (S/N 10008 and UP, Hi-Lift spec), WA900-1L, WA900-1LC, WA900-3	STD	427-09-11120 (2)	427-09-11120 (2)
	Hi-Lift	427-09-11120 (2)	427-09-11120 (2)



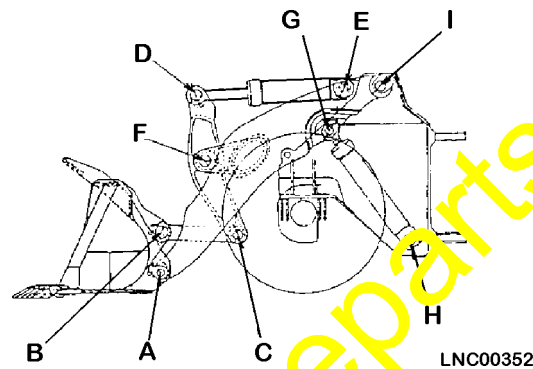
WARNING! Direct the drilled hole of the bushing according to the designations given in the above drawing.



WARNING! When installing the dust seal, pay attention to the direction of its lip.

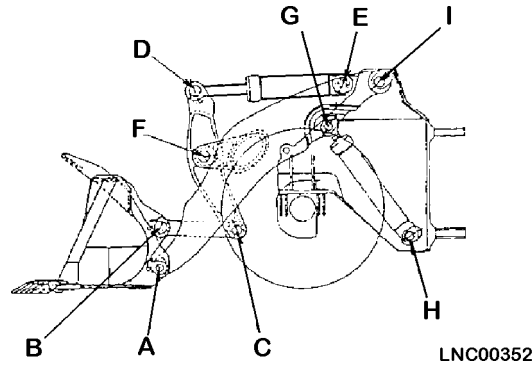
5. Recommendations on greasing.
- a. Manual greasing intervals:
- Under ordinary operation: Every 100 hours
(According to the Operation and Maintenance Manual)
 - Under harsh conditions: Every 10 hours (Refer to the P&SN "A910189".)
- b. Greasing quantity when using the automatic greaser and the greasing intervals thereof

(For vehicles equipped with the Lincoln Centromatic System, we recommend the following greasing quantity and greasing intervals.)



Greasing quantity and greasing intervals for the WA700-1, WA700-1L, WA700-3

Steps			1st step	2nd step	3rd step
Operation hours			30 hours	150 hours	After 150 hour
		Injector x number of units	Greasing q'ty (cc/hr)	Greasing q'ty (cc/hr)	Greasing q'ty (cc/hr)
Timer intervals			10 min.	20 min.	20 min.
A	Bucket hinge	SL-1 x 4	31.2	15.6	7.8
B	Bucket link (front)	SL-1 x 1	7.8	3.9	3.9
C	Bucket link (rear)	SL-1 x 1	7.8	3.9	3.9
D	Bucket cylinder (rod)	SL-1 x 1	7.8	3.9	1.95
E	Bucket cylinder (bottom)	SL-1 x 1	7.8	3.9	1.95
F	Bell crank (center)	SL-1 x 2	15.6	7.8	3.9
G	Boom cylinder (rod)	SL-1 x 1	7.8	3.9	1.95
H	Boom cylinder (bottom)	SL-1 x 1	7.8	3.9	1.95
I	Boom pivot	SL-1 x 1	7.8	3.9	3.9



Greasing quantity and greasing intervals for the WA800-1, WA800-2, WA800-2L, WA800-2LC, WA800-3 WA900-1, WA900-1L, WA900-1LC, WA900-3

Steps		1st	2nd	3rd
Operation hours		30 hours	150 hours	After 150 hours
Injector x number of units		Greasing q'ty (cc/hr)	Greasing q'ty (cc/hr)	Greasing q'ty (cc/hr)
Timer intervals		10 min.	10 min.	10 min.
A	Bucket hinge	SL-11 x 1	49.2	49.2
B	Bucket link (front)	SL-1 x 4	15.6	3.9
C	Bucket link (rear)	SL-1 x 4	31.2	15.6
D	Bucket cylinder (rod)	SL-1 x 1	7.8	3.9
E	Bucket cylinder (bottom)	SL-1 x 1	7.8	3.9
F	Bell crank (center)	SL-1 x 2	15.6	7.8
G	Boom cylinder (rod)	SL-1 x 1	7.8	3.9
H	Boom cylinder (bottom)	SL-1 x 1	7.8	3.9
I	Boom pivot	SL-1 x 3	23.4	23.4

6. Be sure to use molybdenum paste (LM-P) when installing or replacing these pins and bushings locally.
 - Refer to the P&SN "AT96202" that introduces the precautions to be taken when making local assembly of the work equipment.