KOBELCO

SERVICE MANUAL

HYDRAULIC EXCAVATOR

SK430 III

SK430LC III

S5LS0004E

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YS00601~

Issued: March, 1995

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16. UPPER FRAME

Methods of dismantling and installing the upper frame vary with disassembly condition and crane capacity. Methods may be classified as below :
Upper swing body – cab = about 18 tons (39600 lbs)
Upper swing body – (cab + counterweight)
= about 10 tons (22000 lbs)
However, since the attachment is left detached, prepare a crane having a capacity sufficiently safe for the above weights.

16.1 PREPARATION FOR DISMANTLING AND INSTALLING UPPER FRAME

(1) Dismantling cab (Refer to Sect. 1 Cab.)
(2) Prevention of hydraulic oil leakage (Refer to Sect. 6 Hydraulic Tank.)
1) Discharge the pressure out of the hydraulic tank.
2) Install the suction stopper to the hydraulic tank.
(3) Disconnecting piping
1) Disconnect the pipes to the boom, arm and bucket at the boom foot.
2) Plug the hose ends and tag the hoses so they are not mixed up at reassembly operation.
3) Disconnect the harness for the boom work light. Then remove the attachment and the boom cylinder.
4) Disconnect the piping to the travel system at the top of the swivel joint.
5) plug and tag the hoses so they are not mixed up at reassembly.
6) Remove the capscrews that lock the swivel joint and take off cover (18) and dust cover (2).

16.2 DISMANTLING AND INSTALLING UPPER FRAME

(1) Dismantling
1) Lifting upper frame
- With counterweight :
Take off the engine cover and put eye bolts (M48) in the two tapped holes in the counterweight, and attach two chain hoists to the eye bolts.
Regarding the front, put two wire slings in the lifting holes at the boom foot pin holes.
- Without counterweight :
Take off the engine cover and leave the counterweight removed. (Refer to Fig. 52.)
Attach the jig bracket (Item 1,2), pin (Item 3) and plate (Item 4) shown in the figure (next page) to the frame at the mount of the counterweight with capscrews (M20×40), and put two chain hoists on the jig bracket.

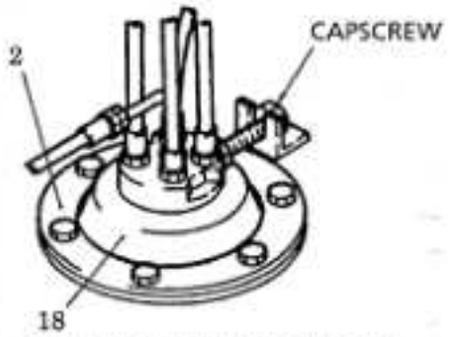


Fig. 49 Upper part of swivel joint

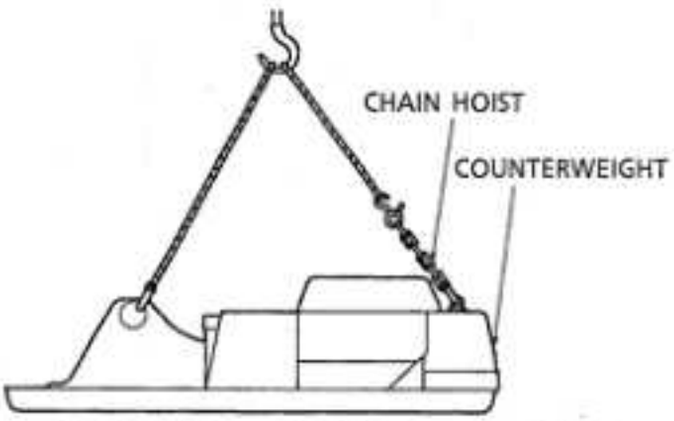


Fig. 50 Lifting method (with counterweight)

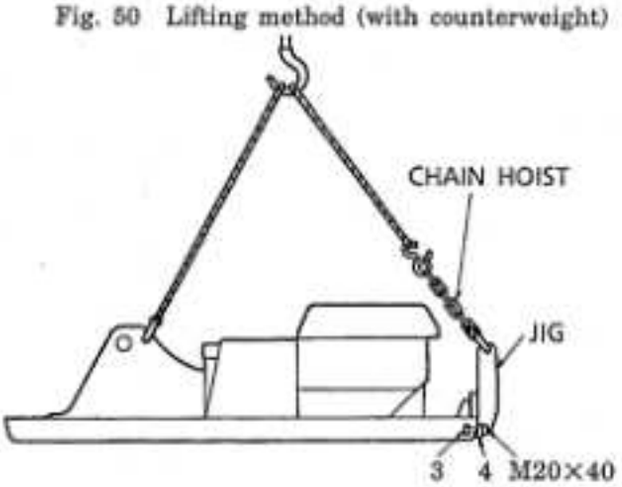


Fig. 51 Lifting method (without counterweight)

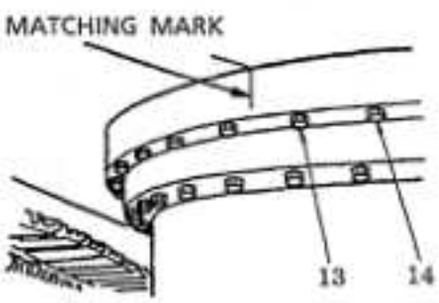


Fig. 52 Matching marks on swing bearing and upper frame

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2.3 MAINTENANCE STANDARD

(1) Clearance between pin and bushing

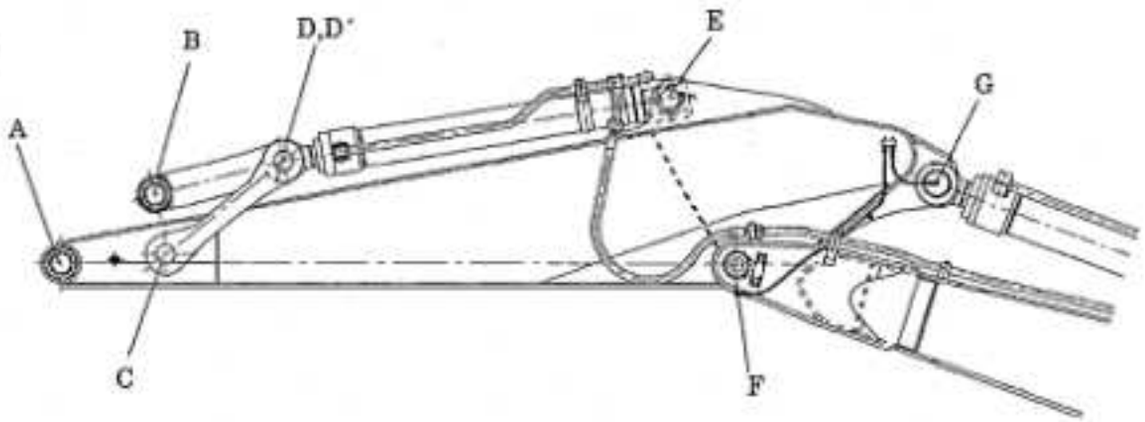


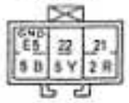
Fig. 9 Clearance between pin and bushing of arm section

Table 2 Unit: mm (in)

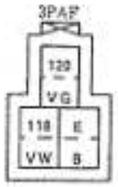
No.	Item	Standard dimension			Clearance			Remedy
		Pin dia	Tolerance on pin dia	Tolerance on bushing bore dia	Standard value	Reference value for remedy	Serviceability limit	
A	Arm cylinder (arm side)	∅100 (∅3.9370)	−0.070 (−0.0028) −0.130 (−0.0051)	+0.375 (+0.0148) +0.320 (+0.0126)	0.39 (0.015) ↓ 0.51 (0.020)	2.5 (0.098)	3.0 (0.118)	Replace bushing or pin
B	Bucket link (bucket side)							
C	Idler link (connected part of arm)							
D	Bucket cylinder (rod side)			+0.250 (+0.0098) +0.050 (+0.0020)	0.12 (0.004) ↓ 0.38 (0.015)			
D'	Bucket link (cylinder side)			+0.375 (+0.0148) +0.320 (+0.0126)	0.39 (0.015) ↓ 0.51 (0.020)			
E	Bucket cylinder (arm side)			+0.250 (+0.0098) +0.050 (+0.0020)	0.12 (0.005) ↓ 0.38 (0.015)			
G	Arm cylinder (arm side)	∅120 (∅4.7244)						
F	Connecting part of arm and boom		±0.02 (±0.0008)	+0.395 (+0.0156) +0.340 (+0.0134)	0.22 (0.0087) ↓ 0.315 (0.0124)			

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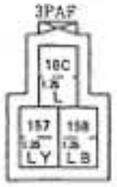
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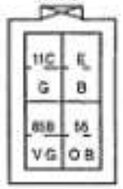
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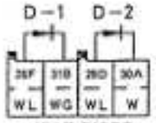
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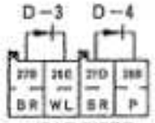


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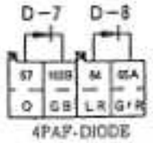
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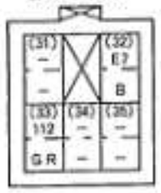
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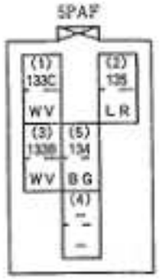


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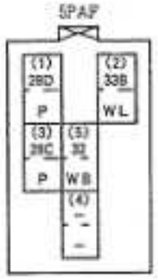
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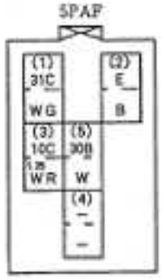
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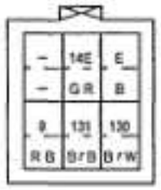
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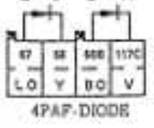
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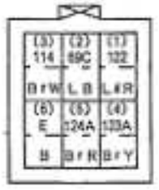


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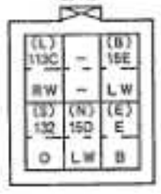


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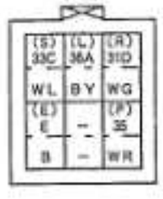
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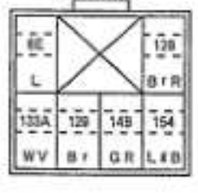
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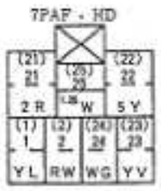
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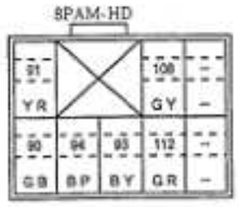
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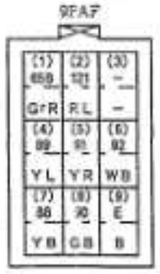
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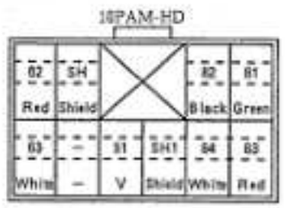
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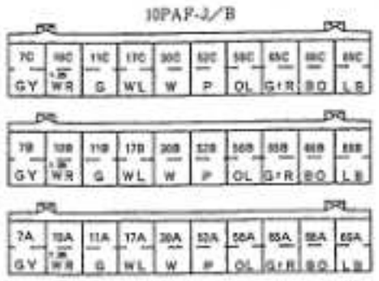
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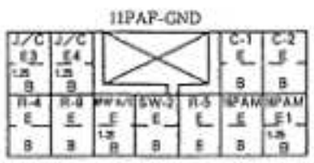
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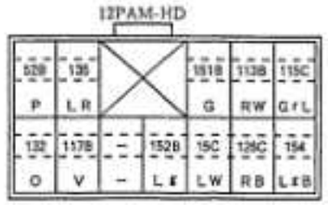
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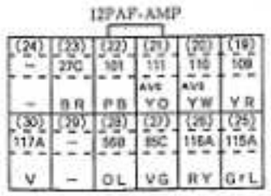
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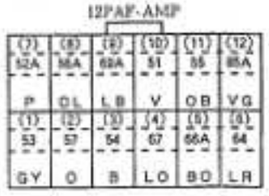
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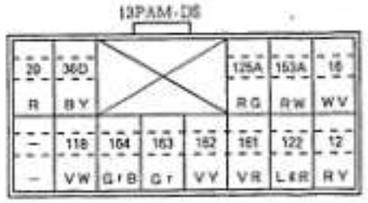
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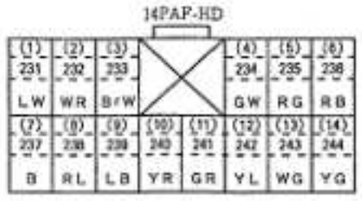
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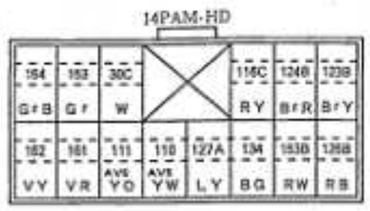
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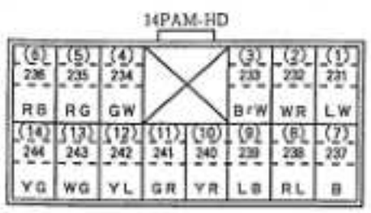
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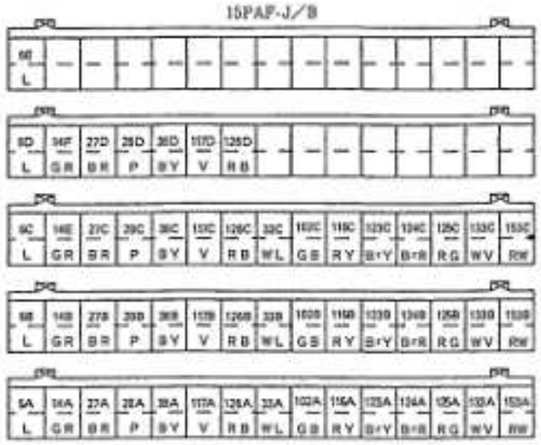
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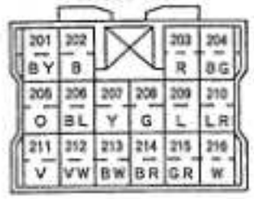
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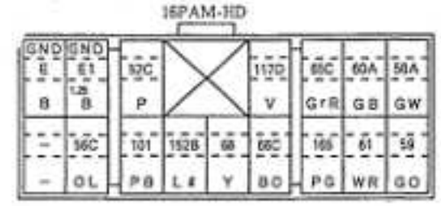
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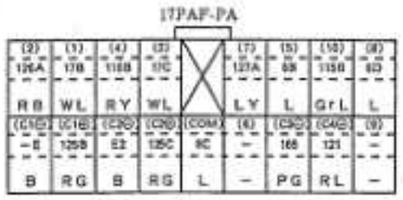
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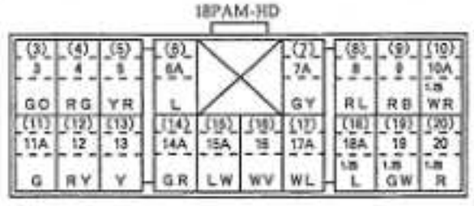
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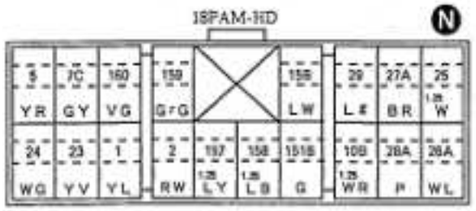
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J/C-ORANGE

J/C-GRAY

J/C-GRAY

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