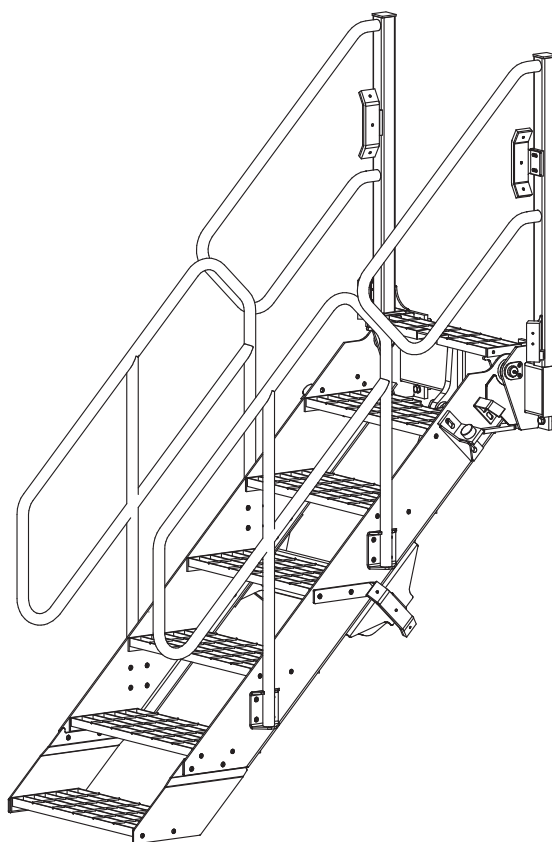


FOLDING STAIRWAY

Manual for Komatsu 930E Truck



Model No.: PSA-K930E-FS
Serial No.: K930E-001 al
Date of Manufacture: Nov. 2010

FOLDING STAIRWAY

Komatsu 930E Truck



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20	5-5 Electrical Cabinet Assy Parts List

FOLDING STAIRWAY

Komatsu 930E Truck



Section 1. Mounting and Installation Notes

See Page 4

NOTE

Follow all on-site/Mine lifting and safety procedures when installing PSFS to Truck.

PROCEDURE.

See Drawing 30-046 Page 4

1. Fit Mounting Beam 30 043 against the front left hand side of the custom Bumper/floor extension per the location shown in in **Views 2, 3A & 3B** and details shown in **Views 3A & 3B** and Details **Z-1** or **Z-2**
2. Fit the reinforcement under the custom front extension per **View 4**.
3. Alter handrails to suit.

Note: Leave the OEM access ladder on the left side in place as an emergency exit.

See Drawing 30-047 Page 5

Following on from Installation 1 (30 046)

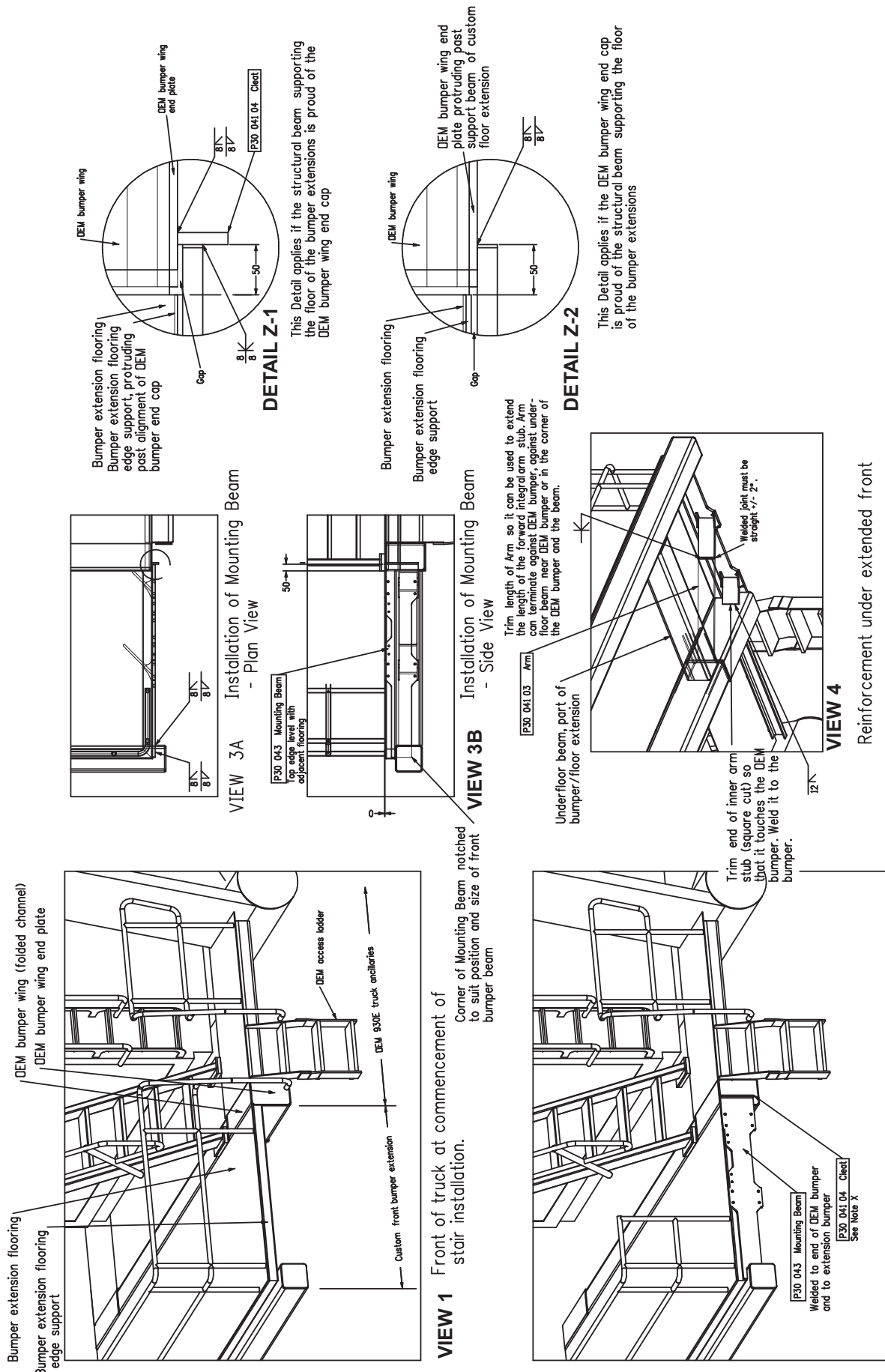
4. Bolt the Stair Assembly to the Mounting Beam per **View 1**.
5. With the stair lowered, bolt the Floor Infill to the Mounting Beam between the top tread of the stair and the floor of the front bumper platform of the truck.
6. Reinstall the OEM ladder handrail grips to suit, using Hand-rail Grips 30 044 welded to the fixed post of the Power Step Stair Set to suit if required. Close the gap in the altered bumper handrail to suit with the other Handrail Grip if required. Per **View 2**.
7. Fit the Power Step Hydraulic Power Unit in a location to suit, preferably under the OEM diagonal stairs in front of the truck radiator and pipe up the system hydraulics.

FOLDING STAIRWAY

Komatsu 930E Truck



Section 1. Mounting and Installation Drawings 30-046

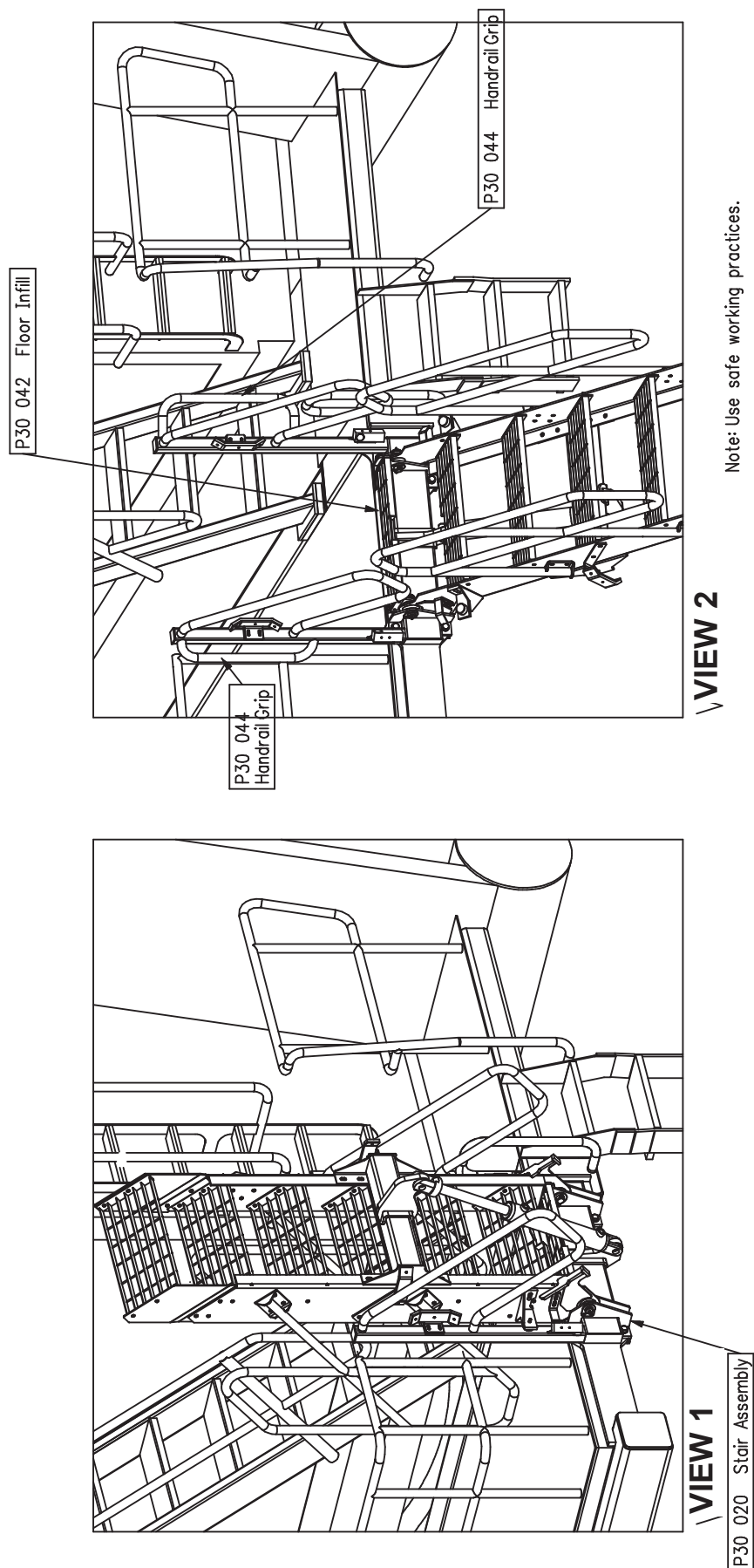


FOLDING STAIRWAY

Komatsu 930E Truck



Section 1. Mounting and Installation Drawings 30-047



FOLDING STAIRWAY

Komatsu 930E Truck



Section 2. Operating Procedure

To Lower Stair

- Position truck in a leveled, safe area (whenever possible).
- Ensure that the area below is clear of obstacles and people.
- Apply the park brake.
- Push the “Down” switch at the handrail and the stair will deploy.
- If the truck is parked in uneven ground, the bottom of the stair may touch the ground before the stair is in a fully lowered position; should this occur, descend the stair with caution.

To Raise the Stair

- Ascend the stair.
- Ensure area around the stair is clear of people.
- Push the “Up” switch at the handrail and the stair will stow vertically

OPERATING NOTES

NOTE: FLOW CONTROL VALVE ADJUSTMENT:

The valve should be positioned to restrict the flow and speed of the Power Step when lowering. Adjust the knob on top of the valve by turning left or right (clockwise) when the step is being lowered, until it is lowering at a safe and reasonable speed.

When it is adjusted, lock the adjusting knob by tightening the grub screw located on the side of the knob.

NOTE: MAGNETIC 'GO' SWITCH ADJUSTMENT:

The switch target trigger area is located on the opposite side and end from the cable entry point on the switch. Once it is mounted to the switch bracket, adjust the switch in or out from the stair steel trigger point, to be within 3mm - 10mm from touching each other when the stair is in the desired rest position.

[DO NOT EXCEED 10MM DISTANCE BETWEEN THE SWITCH AND STRIKER PLATE].
Test by raising and lowering the Power Step a couple of times and adjust again if necessary.

FOLDING STAIRWAY

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Section 3. Recommended Maintenance Procedure

Daily

Visually check stairway and structure for damage, loose components, handrails etc.

Check for hydraulic oil leaks from hydraulic cylinders, plumbing and hoses.

Notify the appropriate supervisor for any observed damage or malfunction.

500 Hours

- Grease on regular service.
- Check daily service as above.
- Open Power Pack cover and check inside the enclosure to ensure there are no oil leaks and that all switch gear and hose connections are tight. Clean enclosure and replace cover securely back in its original position

FOLDING STAIRWAY

Komatsu 930E Truck



Section 4. Assembly Complete - PSA-K930E-FS

See Pg 9

Item	Part No.	Part Name	Qty		
1	PS-30002-A	LANDING ASSEMBLY (Refer 4-2 for Details)	1		
2	PS-30020-A	STAIR STRUCTURE ASSEMBLY (Refer to 4-3 for Details)	1		
3	PS-62999-AH	HYDRAULIC CYLINDER (Refer to 4-4 for Details)	1		
4	PS-80103A-SLD	POWER PACK ASSEMBLY (Refer to 4-5 for Details)	1		

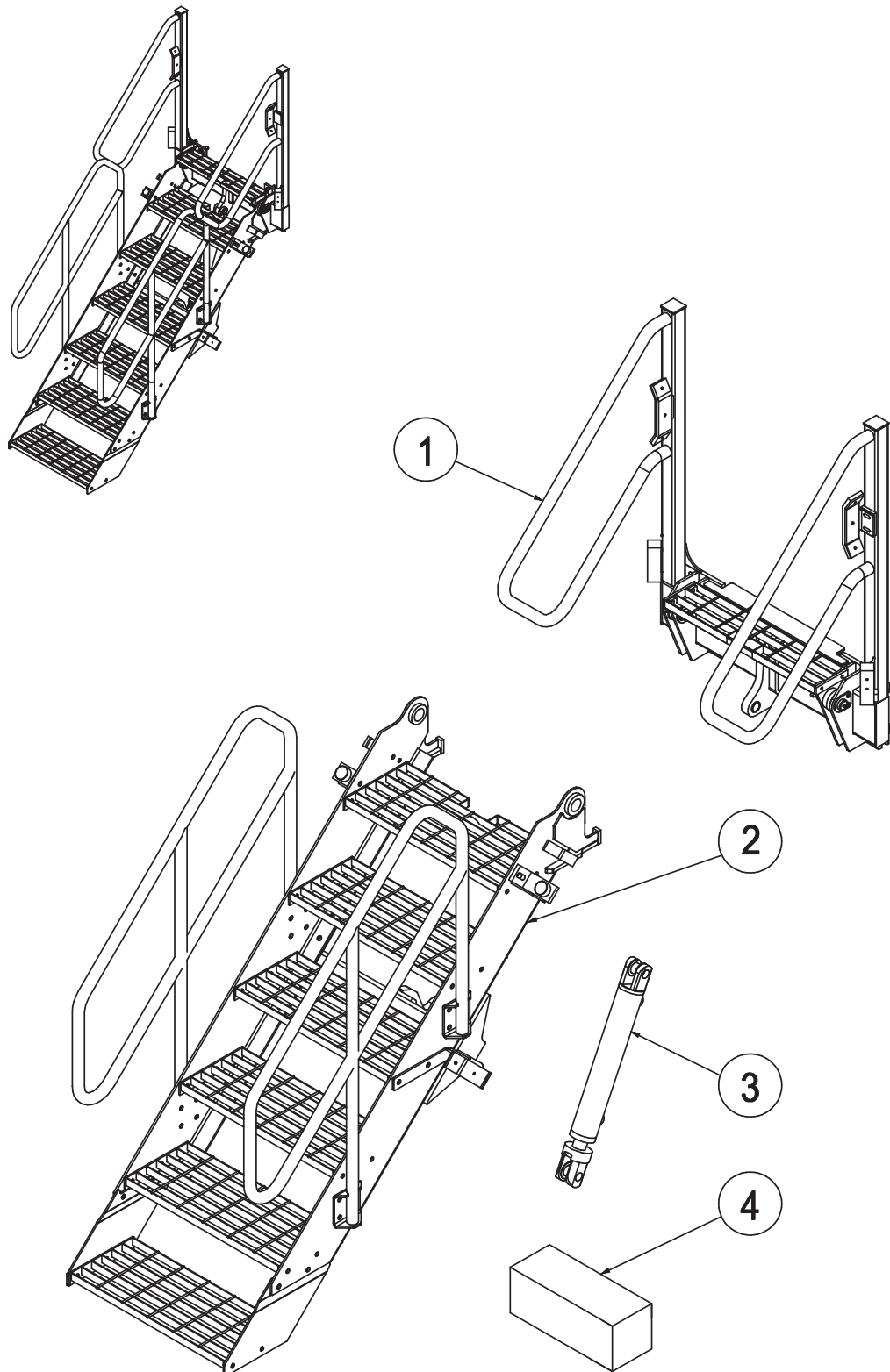
FOLDING STAIRWAY

Komatsu 930E Truck

Hydraulic Operation



Section 4 Assembly Complete PSA-K930E-FS

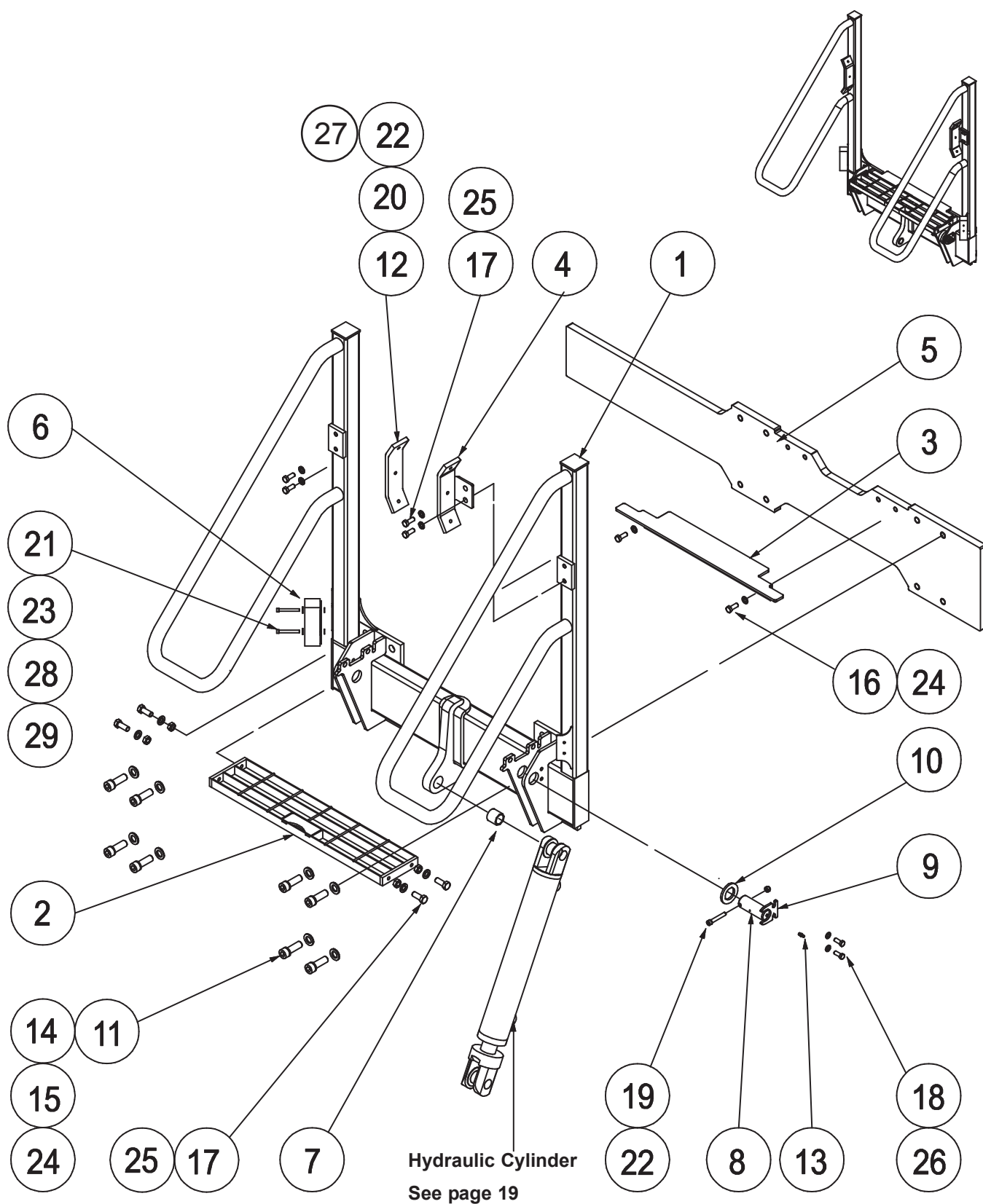


FOLDING STAIRWAY

Komatsu 930E Truck



Section 4-1 Landing Assembly PS-30002-A



FOLDING STAIRWAY

Komatsu 930E Truck



Section 4-1 Landing Assembly PS-30002-A

Parts List

See Drawing Pg 10

The Landing Assembly includes Items 1, 2, 3, 4, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 24, 25.

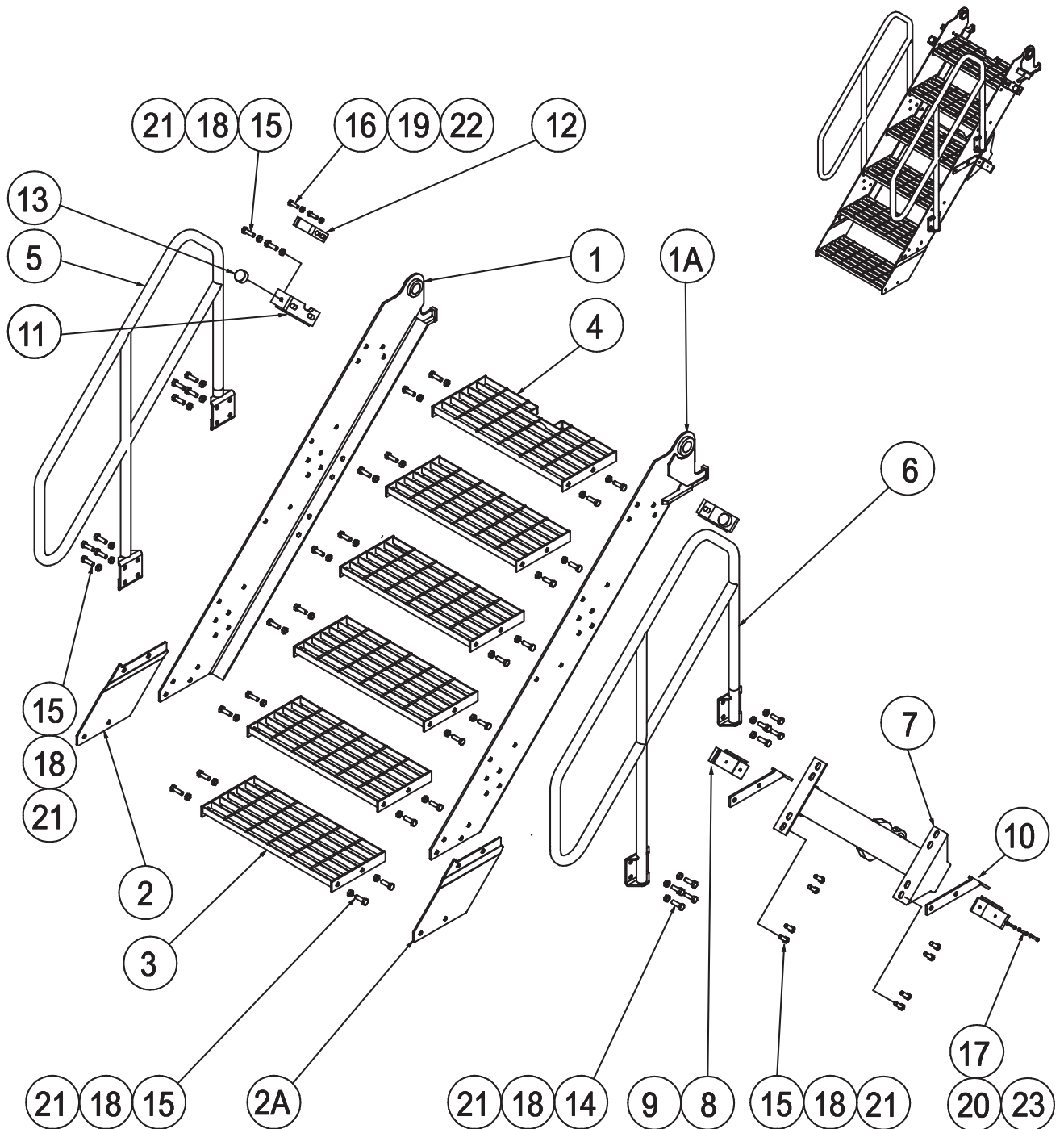
Item	Part No.	Part Name	Qty		
1	PS-30-002	LANDING FRAME-BASE	1		
2	PS-30-001	LANDING DECK-STEP TREAD	1		
3	PS-30-042	LANDING FLOOR INFILL	1		
4	PS-30-021-01	HANDRAIL BUMPER	2		
5	PS-30-043	MOUNTING BEAM	1		
6	PS-75430	GO- SWITCH	1		
7	PS-30-008-02	BUSH-(Ertalon)	2		
8	PS-30-009-01	STAIR HINGE PIN	2		
9	PS-30-009-02	HEAD PLATE	2		
10	PS-30-009-03	WASHER-(Dia 55)	2		
11	PS-23679	SPECIAL WASHER(M16 Mod.)	8		
12	PS-30-021-02	HANDRAIL BUMPER LINER	2		
13	PS-61006-2	GREASE NIPPLE-M6 Str.	2		
14	CPS-M16X45ZP	BOLT-M16 X 45 Bolt	6		
15	CPS-M16X40ZP	BOLT-M16 X 40 Socket head	2		
16	CPS-M16X30ZP	BOLT-M16 x 30 (For infill)	2		
17	CPS-M10X30ZP	BOLT-M10 x 30	6		
18	CPS-M8X16ZP	BOLT-M8 x 16	4		
19	CPS-M6X50ZP	BOLT- M6 x 50 Socket head	2		
20	CPS-M6X20ZP	BOLT-M6 x 20 Pan Head	6		
21	CPS-BSW3/16"X2	BOLT - (Go Switch)	4		
22	CPS-M6NN	NUT-NYLOC-M6	8		
23	CPS-BSW3/16"NUT	NUT-3/16"S/S NUT	4		
24	CPS-M16WH	WASHER - HARDENED - M16	6		
25	CPS-M10WH	WASHER - HARDENED - M10	6		
26	CPS-M8WH	WASHER - HARDENED - M8	4		
27	CPS-M6WH	WASHER - HARDENED - M6	8		
28	CPS-WS/SPRING	WASHER-SPRING-3/16"	4		
29	CPS-WS/S3/16"X1/2"	FLAT WASHER- S/S-3/16"	8		

FOLDING STAIRWAY

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Section 4-2 Stair Assembly PS-30020-A



FOLDING STAIRWAY

Komatsu 930E Truck



Section 4-2 Stair Assembly PS-300020-A

Parts List

See Drawing Page 12

The Stair Assembly includes Items 1, 1A, 2, 2A, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 21, 22.

Item	Part No.	Part Name	Qty		
1	PS-30-019 F	STAIR STILES FABRICATION-FRONT	1		
1A	PS-30-019 R	STAIR STILES FABRICATION-REAR	1		
2	PS-30-018 F	STAIR EXTENSION-FRONT	1		
2A	PS-30-018 R	STAIR EXTENSION-REAR	1		
3	PS-30-014	STAIR TREADS	5		
4	PS-30-015	STAIR TREAD (Modified)	1		
5	PS-30-016-98	HANDRAIL-FRONT	1		
6	PS-30-016-99	HANDRAIL-REAR	1		
7	PS-30-006	STAIR ACTUATOR ATTACHMENT	1		
8	PS-30-021-01	HANDRAIL BUMPER (Matched Pair)	2		
9	PS-30-021-02	HANDRAIL BUMPER LINER	2		
10	PS-30-011 LH/RH	HANDRAIL BUMPER MOUNTING(pair)	2		
11	PS-30-012 LH/RH	STAIR BUFFER BRACKET (Matched Pair)	2		
12	PS-30-010	GO SWITCH TRIGGER	2		
13	PS-40002	RUBBER STOP	2		
14	CPS-M12X40ZP	BOLT-M12 x 40	16		
15	CPS-M12X30ZP	BOLT-M12 x 30	46		
16	CPS-M10X30ZP	BOLT-M10 x 30	4		
17	CPS-M6X20ZP	BOLT-M6 x 20 Pan Head	6		
18	CPS-M12NZP	NUT-M12	72		
19	CPS-M10NZP	NUT-M10	4		
20	CPS-M6NZP	NUT-M6	6		
21	CPS-M12WH	WASHER-HARDENED-M12	72		
22	CPS-M10WH	WASHER-HARDENED-M10	8		
23	CPS-M6WH	WASHER-HARDENED-M6	6		

FOLDING STAIRWAY

Komatsu 930E Truck

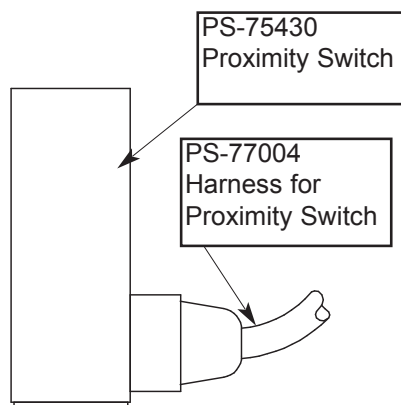
Hydraulic Operation



Section 4-3. Electrical Controls

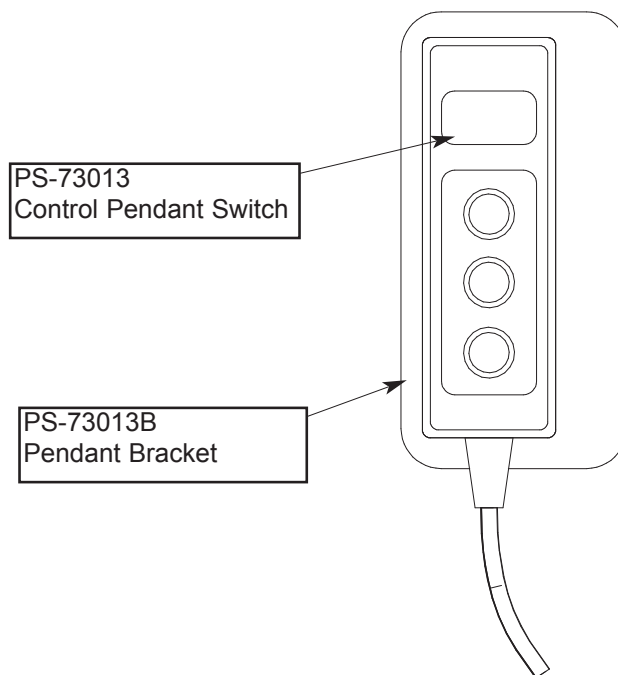
Proximity Switch Assembly

Mounted on Fixed Landing



Control Pendant Switch

Mounted on Handrail



Cab Harness & Equipment

Refer Wiring Harness Drawing Page 15-18



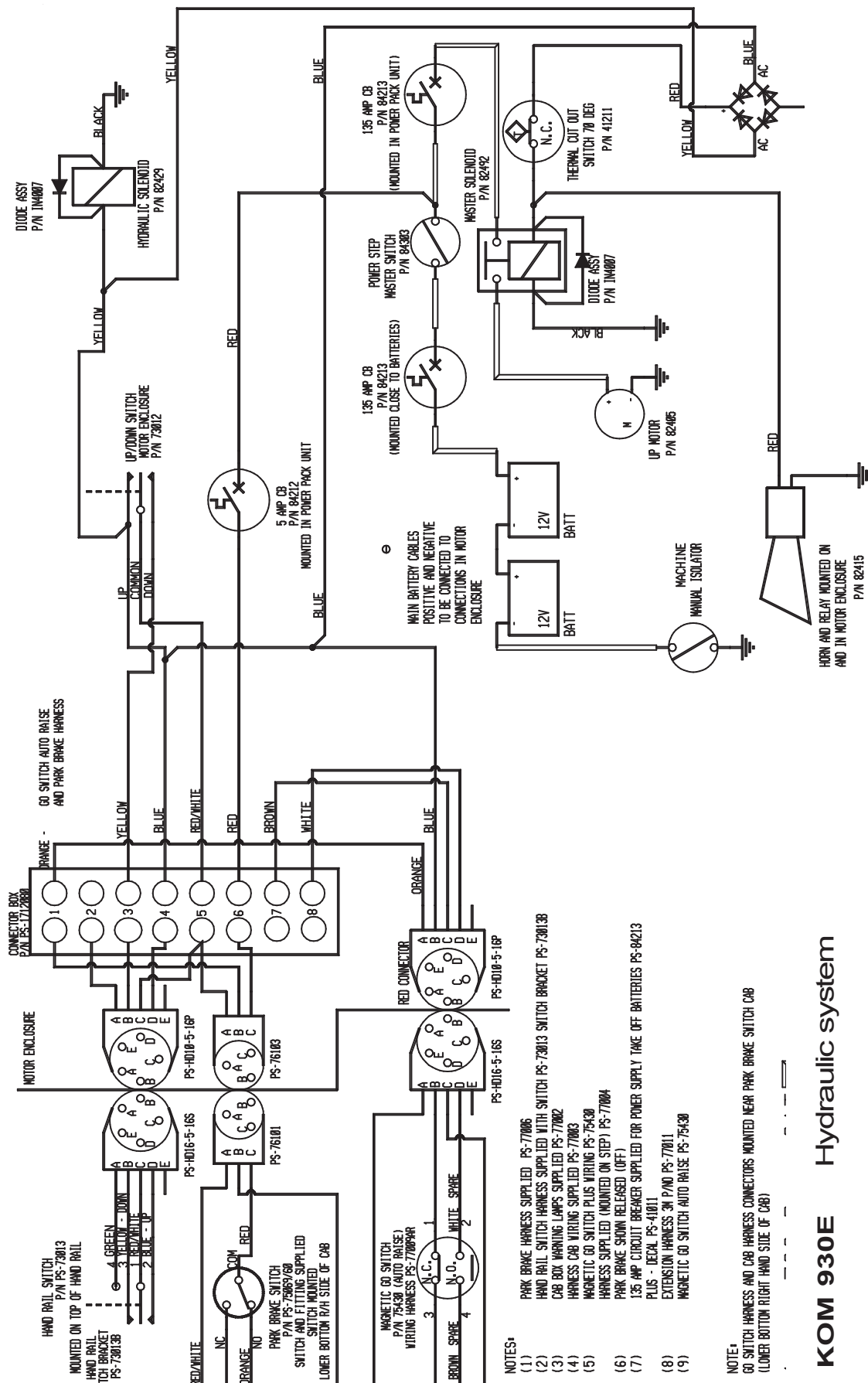
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Komatsu 930E Truck

Hydraulic Operation



Section 4-3 - Electrical System Wiring Diagram - Pg 1



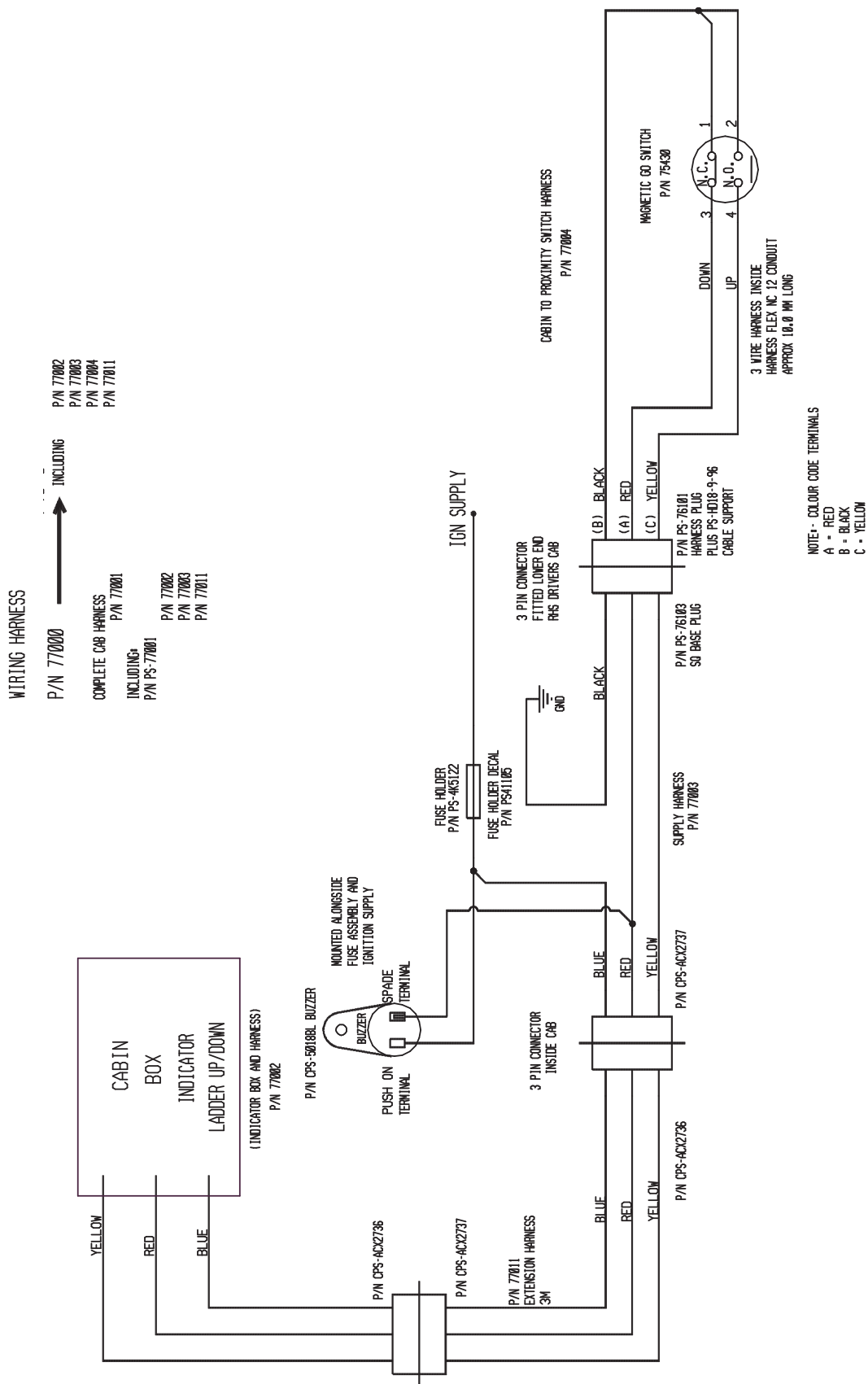
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Komatsu 930E Truck

Operación Hidráulica



Section 4-3 - Electrical System - Wiring Diagram - Pg 2



KOM 930E Hydraulic Operation

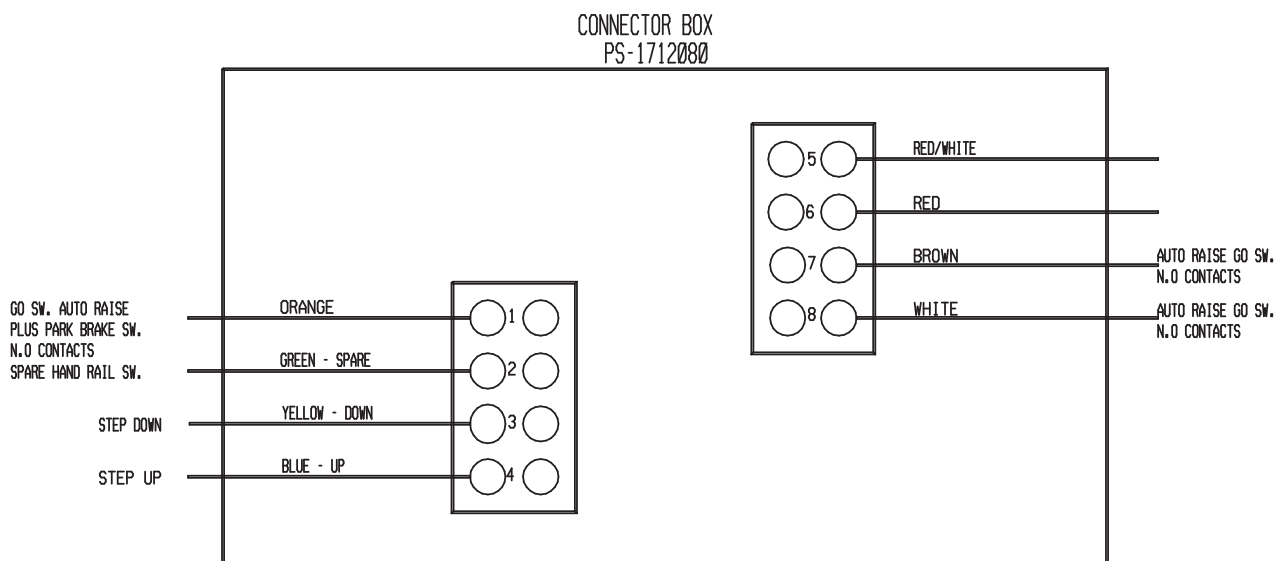
FOLDING STAIRWAY

Komatsu 930E Truck

Hydraulic Operation



Section 4-3 - Electrical System Wiring Harness - Pg 3



PARK BRAKE HARNESS	-	P/N PS-77006-PB	3 PIN PLUG CONNECTOR PINS MOTOR ENCLOSURE	
RED	-	COM	(C)	LENGTH 10M
RED/WHITE	-	N.C.	(A)	(HARNESS FLEX NO 12)
ORANGE	-	N.O.	(B)	

GO SWITCH HARNESS (AUTO RAISE)	-	P/N PS-77009-AR	5 PIN PLUG CONNECTOR PINS MOTOR ENCLOSURE	
BLUE	-	NO 1 TERMINAL N.C. CONTACT	(B)	LENGTH 10M
WHITE (SPARE)	-	NO 2 TERMINAL N.O. CONTACT	(D)	(HARNESS FLEX NO 12)
ORANGE	-	NO 3 TERMINAL N.C. CONTACT	(A)	
BROWN (SPARE)	-	NO 4 TERMINAL N.O. CONTACT	(C)	

GO SWITCH HARNESS (CABIN TO GO SWITCH) (CABIN INDICATOR LADDER UP/DOWN)	-	P/N PS-77004	3 PIN PLUG CONNECTOR PINS LOWER R/H OUTSIDE CAB	
BLACK	-	NO 1 TERMINAL N.C. CONTACT	(B)	LENGTH 10M
BLACK (BRIDGE NO 1 AND NO 2 IN GO SW)	-	NO 2 TERMINAL N.O. CONTACT		(HARNESS FLEX NO 12)
RED	-	NO 3 TERMINAL N.C. CONTACT	(A)	
YELLOW	-	NO 4 TERMINAL N.O. CONTACT	(C)	

HAND RAIL SWITCH HARNESS (P/NO 77010) (HANDRAIL SW TO POWER PACK BOX)			5 PIN PLUG CONNECTOR PINS MOTOR ENCLOSURE	
COLOUR	SW CONTACTS	TERMINAL NO		
RED/WHITE	- NO 1 -	NO 5	(C)	LENGTH 10M
BLUE	- NO 2 -	NO 4	(D)	(HARNESS FLEX NO 12)
YELLOW	- NO 3 -	NO 3	(B)	
GREEN	- NO 4 -	NO 2	(A)	

FOLDING STAIRWAY

Komatsu 930E Truck

Operación Hidráulica



Section 4-3 - Electrical System - Wiring Harness Pg-4

GO SWITCH

AUTO - RAISE

N.C.	-	BLUE	-	ORANGE
N.O.	-	BROWN	-	WHITE (SPARE)

GO SWITCH - CABIN INDICATOR P/S-77002

SUPPLIED WITH CONNECTOR P/N CPS-ACX2736

UP/DOWN LIGHTS

N.C.	-	RED	-	BLACK] LINKED
N.O.	-	YELLOW	-	BLACK	

HAND CONTROL SWITCH - MOUNTED ON HANDRAILS - P/N 73013

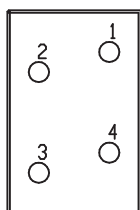
POWER STEP WIRING HARNESS (10M) AND CONNECTIONS SUPPLIED

CONTACTS

1	-	RED/WHITE	-	POWER SUPPLY
2	-	BLUE	-	UP SWITCH
3	-	YELLOW	-	DOWN SWITCH
4	-	GREEN	-	START SOL MOTOR [FRS POWER PACK ONLY (SPARE)]

PENDANT SWITCH

STANDARD SWITCH WIRING AND CONNECTIONS



P/N PS-77013

HARNESS AND CONNECTIONS SUPPLIED WITH SWITCH P/N 77013 (NOT REQUIRED)

1	-	POWER	-	GREEN] [FRS POWER PACK SYSTEM ONLY]
2	-	UP SWITCH	-	WHITE	
3	-	DOWN SWITCH	-	BLACK	
4	-	START/SOL MOTOR	-	RED	

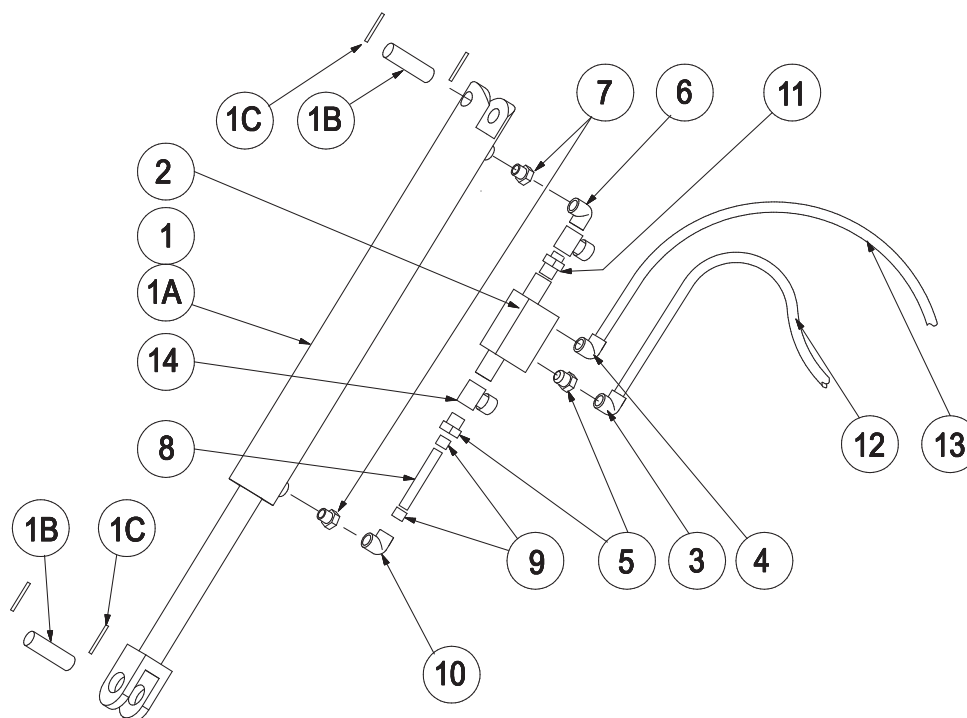
FOLDING STAIRWAY

Komatsu 930E Truck

Operación Hidráulica



Section 4-4 - Cilindro Hidráulico PS-62999-AH



NOTE: HYDRAULIC CYLINDER ASSEMBLY P/No PS- 62998-AH includes Part No.s 1 to 12

Item	Part No.	Part Name	Qty		
1	PS-62999-A	HYDRAULIC CYL. (with hard plumbing)	1		
	PS-62999-HPK	HARD PLUMBING KIT	1		
1A	PS-62999-A	HYDRAULIC CYLINDER 2 1/2"	1		
1B	PS-62999-P	PIN - CYLINDER	2		
1C	CPS-M4X50ZP	SPLIT PIN-M4-CLEVIS PIN-BOTTOM & TOP	4		
1S	PS-63103	SEAL KIT (Not shown)	1		
2	PS-63201	VALVE - PILOT OPERATED LOCKING	1		
3	PS-61159	FITTING - ELBOW-9/16" JIC	1		
4	PS-61154	FITTING - ELBOW- O RING 1/4BSPPx9/16" JIC	1		
5	PS-61157	FITTING - O RING 1/4BSPPx 9/16" JIC	2		
6	PS-61158-5MM	FITTING - 1 mm RESTRICTION 90 DEG	1		CYL. END
7	PS61163	REDUCER JIC x BSPP	2		
8	PS-61160	TUBE (Cut to suit) 110mm	1		
9	PS-61147	FERRULES	2		
10	PS-61158-1MM	FITTING - 1mm RESTRICTION 90 DEG	1		ROD END
11	PS-61145	FITTING- 9/6" JIC SWIVEL	1		
12	PS-61143	CAP	2		
13	PS-60051-3.5	HOSE- HYDR. (9/6" JIC SWIVEL FITTING)	2		
14	PS-PS-61183	TEE FITTING	2		

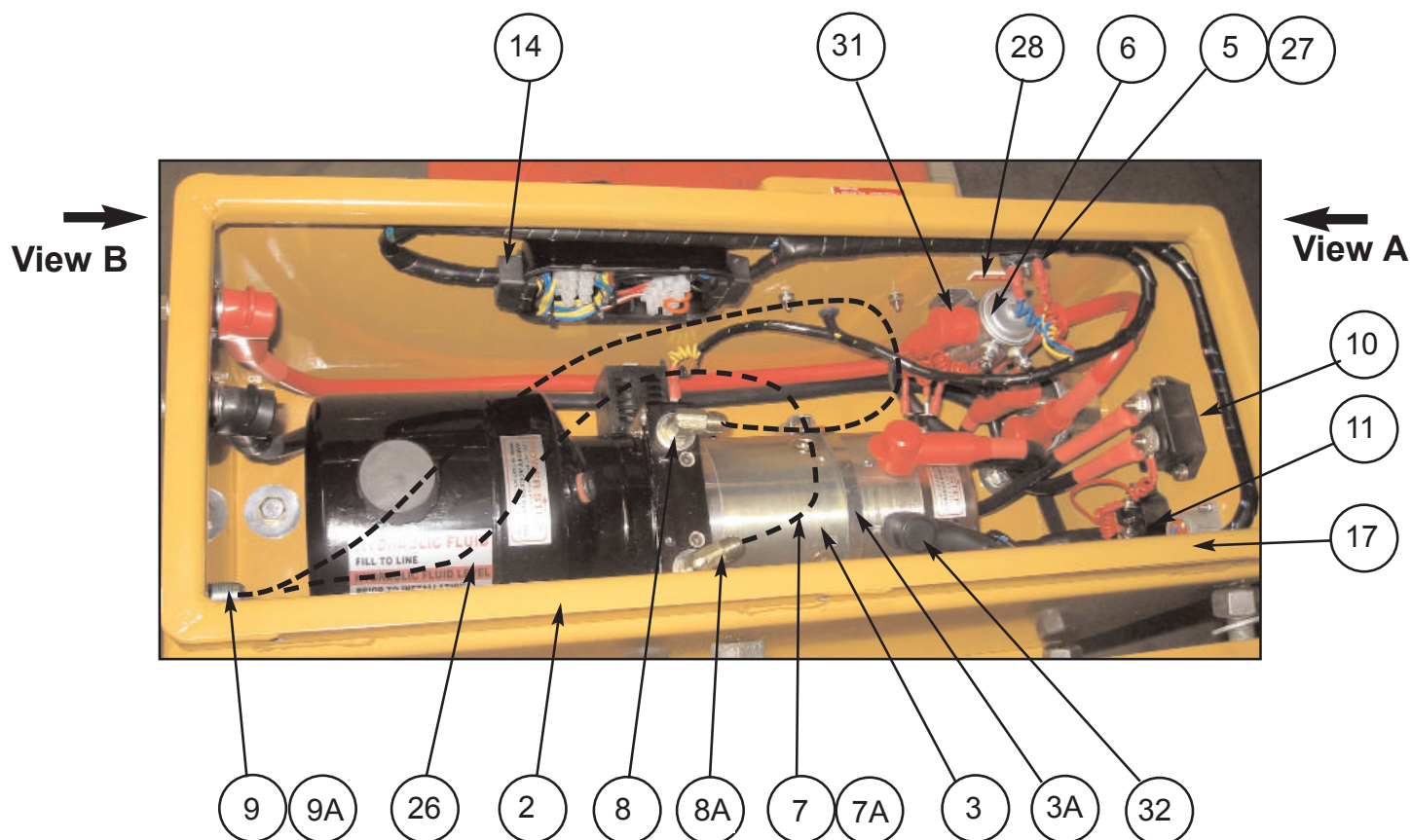
FOLDING STAIRWAY

Komatsu 930E Truck

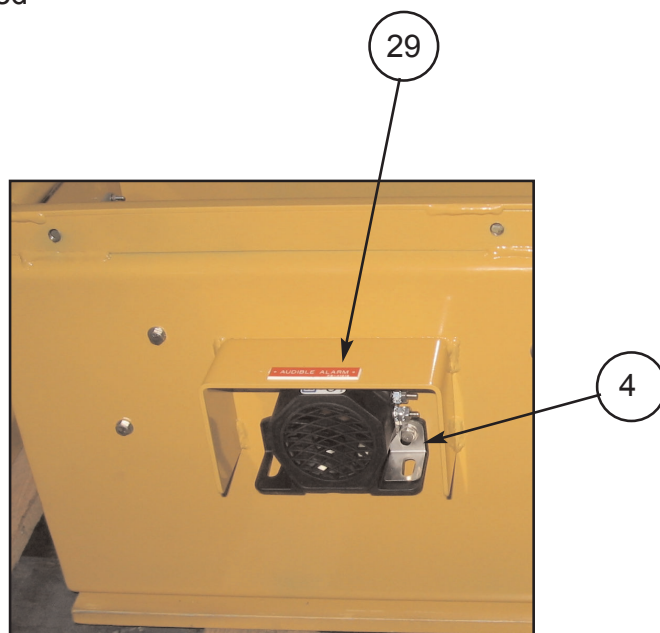
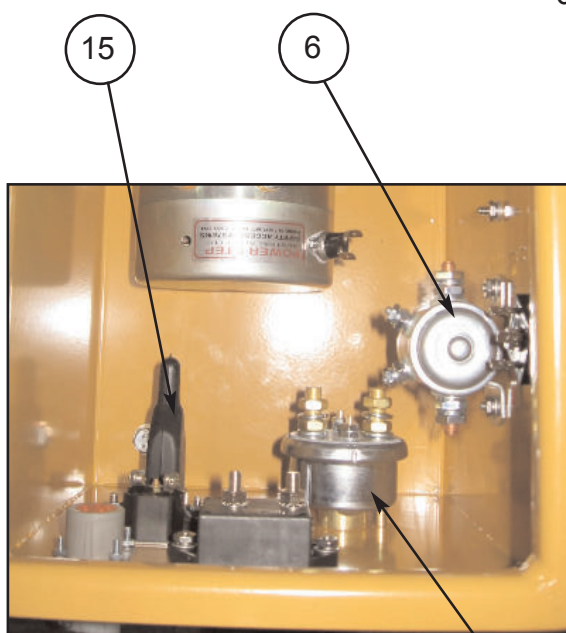
Hydraulic Operation



Section 4-5 Power Pack PS-80103A-SLD



Hoses shown
dotted



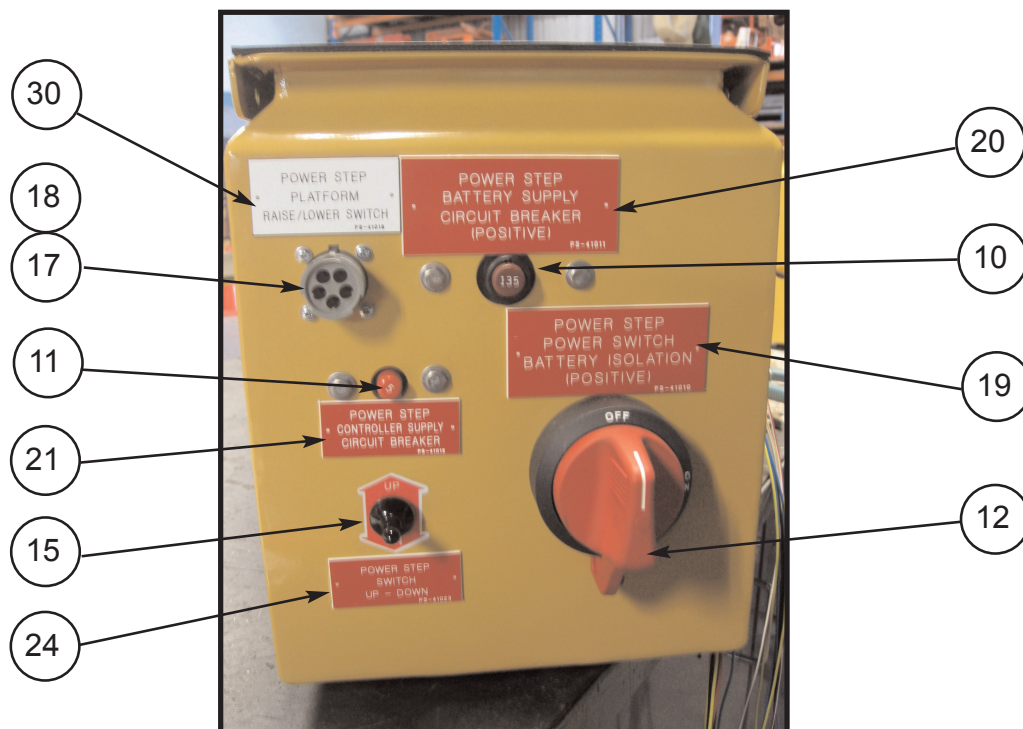
FOLDING STAIRWAY

Komatsu 930E Truck

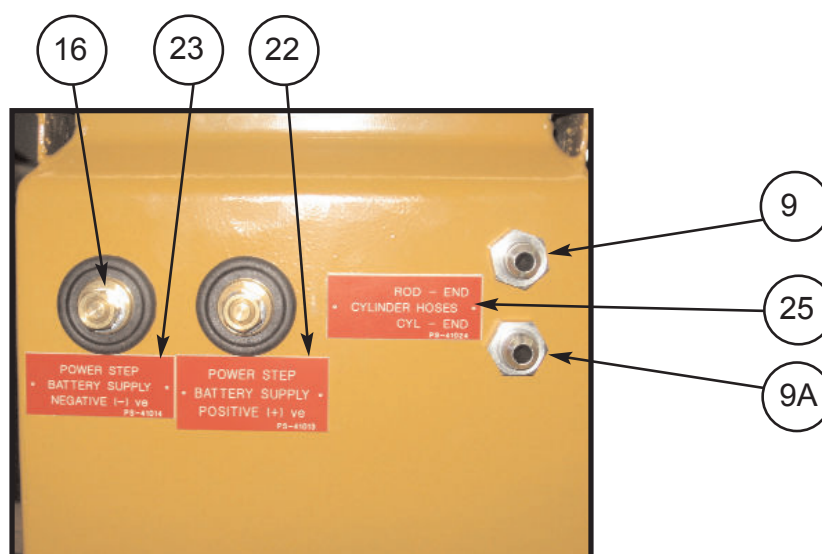
Hydraulic Operation



Section 4.5 Power Pack PS-80103A-SLD



View A



View B

FOLDING STAIRWAY

Komatsu 930E Truck

Hydraulic Operation



Section 4.5 Power Pack PS-80103A-SLD

See Photos Pag.20,21

Item	Part No.	Part Name	Qty		
1	PS-80103A-SLD	POWER PACK ASSEMBLY	1		
2	PS-21107-METAL	MOTOR ENCLOSURE- SEALED ST/ST	1		
3	PS-80103A	POWER PACK	1		
3A	PS-80103-CLAMP	CLAMP ELECTRIC MOTOR	1		
4	PS-82415	AUDIBLE ALARM	1		
5	PS-84214	BRIDGE RECTIFIER	2		
6	PS-82402	SOLENOID 24V START MOTOR	1		
7	PS-60050-900MM	HYDR. HOSES 9/16"JIC STRAIGHT SWIVEL	1		
8	PS-61152	HYDRAULIC FITTING	1		
9	PS-61177	HYDRAULIC FITTING	2		
10	PS-84213	135A CIRCUIT BREAKER	2		
11	PS-84212	10A CIRCUIT BREAKER	2		
12	PS-84303	ISOLATION SWITCH	1		
13	PS-84303-B	ISOLATION SWITCH BRACKET	1		
14	PS-1712080	SEALED WIRING BOX	1		
15	PS-73012	TOGGLE SWITCH KIT	1		
16	PS-82493	BATTERY FEED STUDS	1		
17	PS-HD10-5-16P	5 PIN SOCKET	1		
18	PS-HD10-5-16S	5 PIN PLUG	2		
19	PS-41010	DECAL-Battery Isolation	1		
20	PS-41011	DECAL-Battery Supply C/B-135A	1		
21	PS-41012	DECAL-Controller Supply C/B-10A	1		
22	PS-41013	DECAL-Battery Supply-Positive	1		
23	PS-41014	DECAL-Battery Supply-Negative	1		
24	PS-41023	DECAL-Up/Down	1		
25	PS-41024	DECAL HYDRAULIC-HOSES	1		
26	PS-41041	DECAL OIL TANK	1		
27	PS-41019	DECAL BRIDGE RECTIFIER	1		
28	PS-41017	DECAL SOLENOID	1		
29	PS-41018	DECAL ALARM	1		
30	PS-41016	DECAL RAISE/LOWER SWITCH	1		
31	PS-73010	RUBBER BOOT RED	3		
32	PS-73009	RUBBER BOOT BLACK	1		