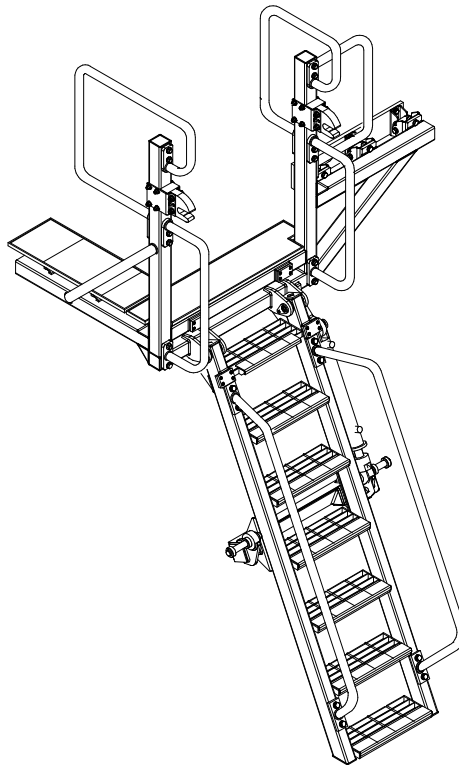


FOLDING STAIRWAY

Manual for Cat D8R Dozer



Model No.: PSA-CAT-D8R
Serial No.: D8R-001
Date Manufactured: March 2012

FOLDING STAIRWAY

Cat D8R Dozer



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17	5-4 Power Pack Parts List
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FOLDING STAIRWAY

Cat D8R Dozer

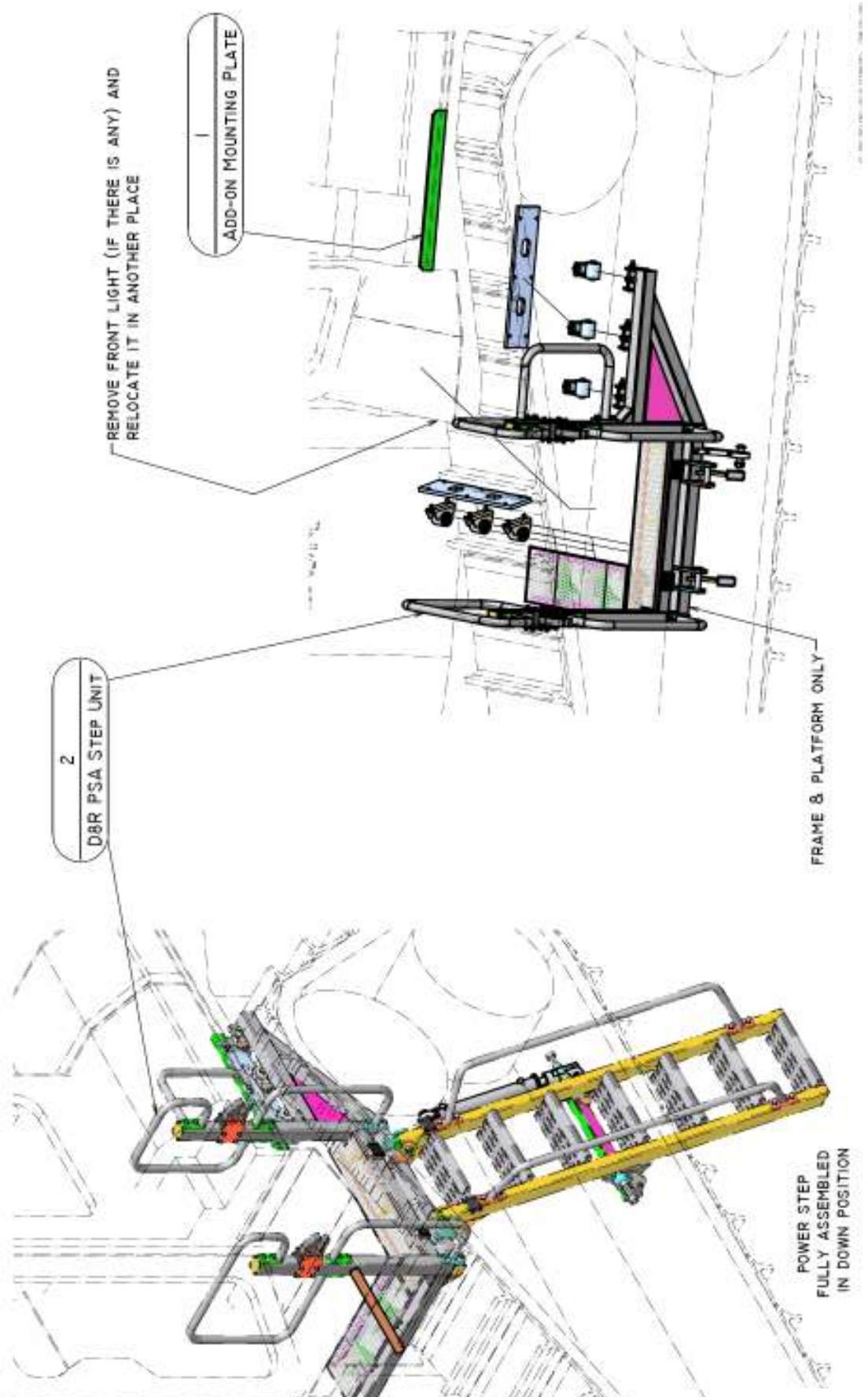
POWER STEP
(AUSTRALIA) PTY. LTD.

Section 1 Installation Drawings

PSA-CATD8R-INST-01-C Sheet. 1 of 4

See also PowerStep Mounting Procedure Document

NOTE
Follow all on-site/Mine lifting and safety procedures when installing PSFS to Loader



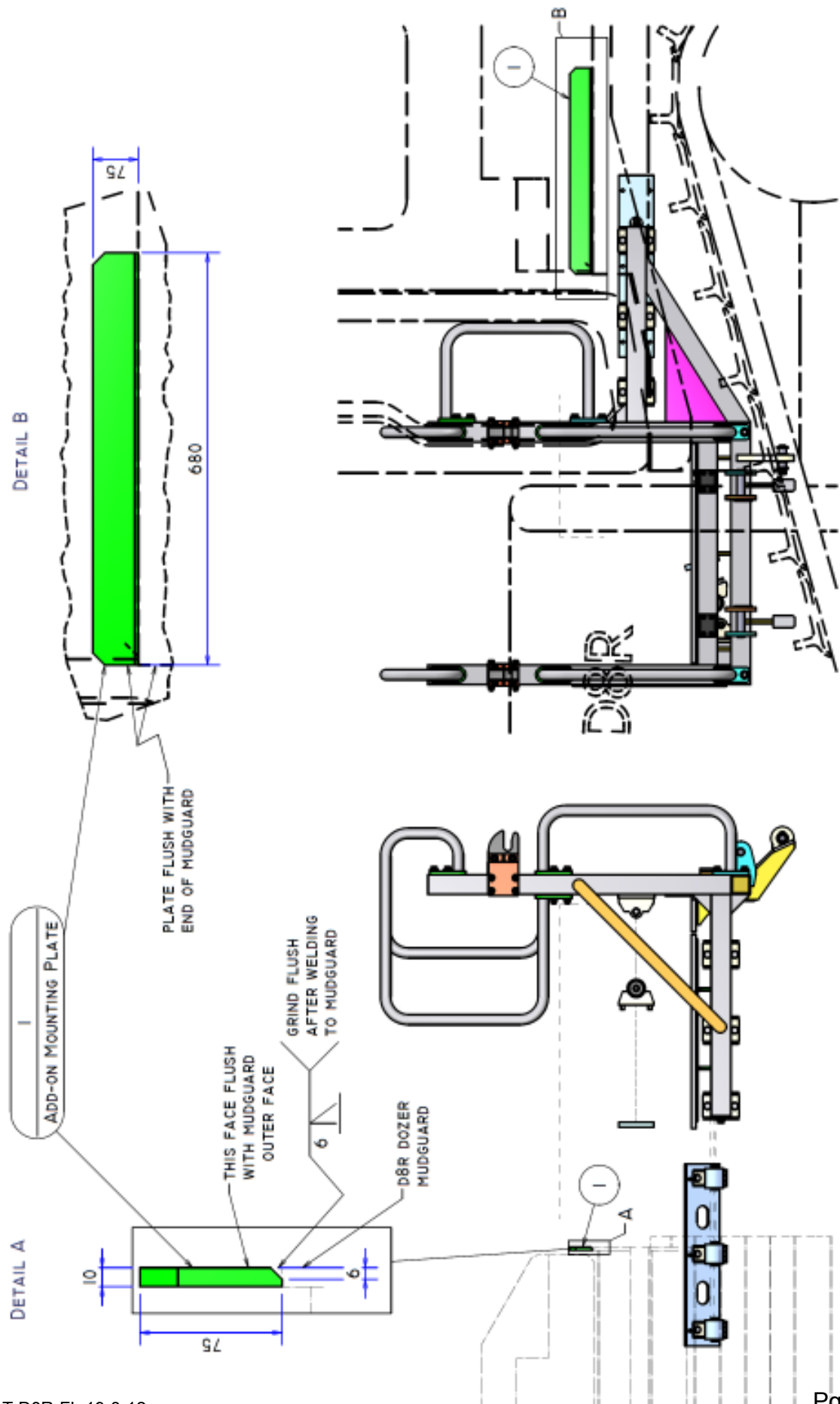
FOLDING STAIRWAY

Cat D8R Dozer

POWER STEP
(AUSTRALIA) PTY. LTD.

Section 1 Installation Drawings

PSA-CATD8R-INST-01-C Sheet. 2 of 4

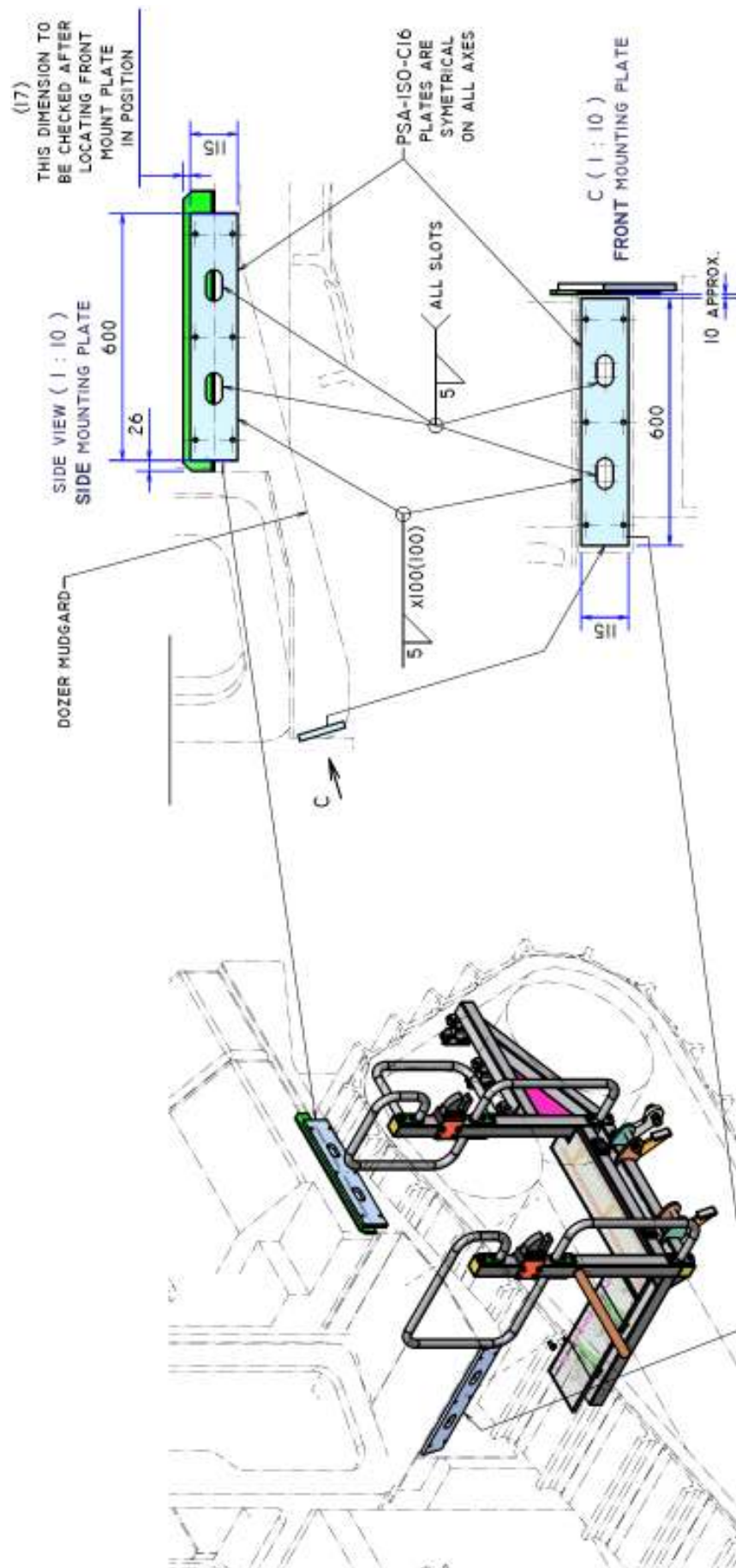


FOLDING STAIRWAY

Cat D8R Dozer

POWER STEP
(AUSTRALIA) PTY. LTD.

Section 1 Installation Drawings PSA-CATD8R-INST-01-C Sheet. 3 of 4

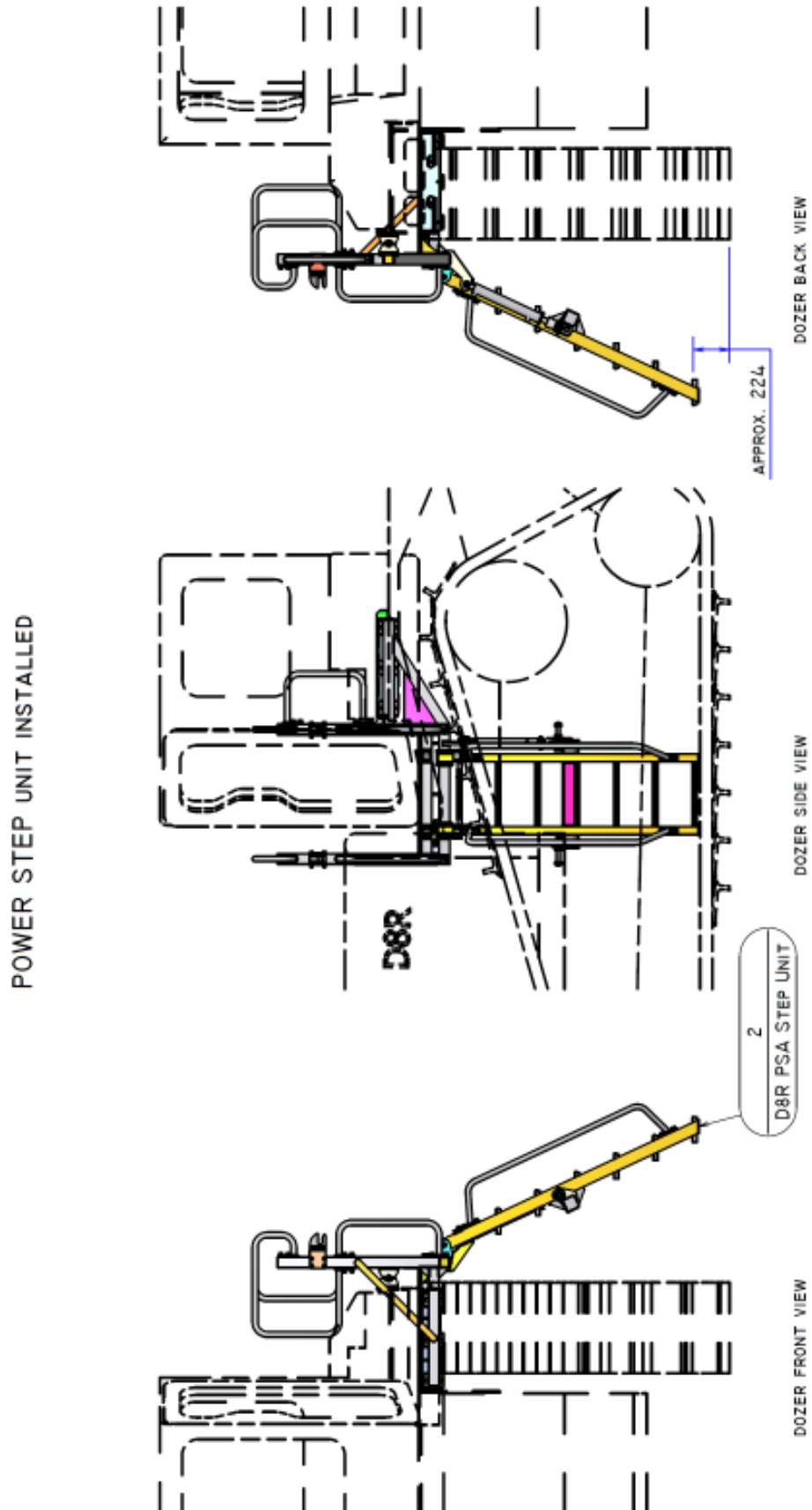


FOLDING STAIRWAY

Cat D8R Dozer



Section 1 Installation Drawings PSA-CATD8R-INST-01-C Sheet. 4 of 4



FOLDING STAIRWAY

Cat D8R Dozer



Section 1 Installation and Mounting Instructions (cont.)

WARNING

Raising the POWER STEP platform by external means can create a vacuum in the hydraulic cylinder and create the opportunity to allow air into the hydraulic system, defeating the inherent safety features of the POWER STEP.

This must be avoided, to maintain safe operation of the POWER STEP.

In instances where the use of external means to raise the platform must be used, please follow the following instructions:

Loosen hard plumbed hydraulic lines on cylinder side of lock valve on cylinder.

Raise platform by available means.

Note: Make necessary arrangements to collect displaced oil, and be aware that air enters the piston side of the cylinder as platform is raised.

Lock in raised position.

Re-tighten hydraulic fittings.

SECURE THE PLATFORM IN THE RAISED POSITION, MECHANICALLY, CHAIN & TAGOUT THE POWER STEP

To recommission the POWER STEP:

Loosen hydraulic fittings on cylinder side of lock valve.

Note: Collect displaced oil.

Lower platform to lowest position, using alternate safety approved means, fully retracting cylinder. Ensure all personnel are clear of step radius.

Operate electrical control switch to purge air from the hydraulic line systems, lock valve and cylinder.

Tighten the hydraulic fittings either side of lock valves to restriction fittings.

Cycle step unloaded several times to purge all air from hydraulic system.

The Power Step will not operate correctly if there is any air in the hydraulic circuit (due to the incorrect operation of the lock valve).

FOLDING STAIRWAY

Cat D8R Dozer



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 2 grease nipples on hinge pins

Check main mounting bolts for torque.

Check hydraulic oil level in power pack and top up as necessary. (Stairway in raised position).

Top up using same hydraulic oil as used in hydraulics of machine.

Thoroughly check all electrical wiring for damage, replace as necessary.

Repeat daily check as above

5000 Hours

Change hydraulic oil in tank of hydraulic power pack (5.0 litres)

It is recommended that the same hydraulic oil be used in the power pack as the hydraulics of the machine.

Check and inspect all main bolts on stairway system.

Retorque if required.

Repeat daily check as above

FOLDING STAIRWAY

Cat D8R Dozer



Section 4 Operating Procedure

To Lower Stairway (from the machine)

Position machine in a level, safe area, away from the work face, whenever possible. Apply park brake and lower engine speed to idle.

Check that the area below the Ladder Access System is clear of people and obstacles, and lower ladder by operating the two position electrical switch adjacent to the ladder, to the down position by pressing the switch down.

Hold the switch in the down position until ladder is fully lowered.

If the truck is parked on uneven ground, the bottom of the stairway may touch the ground before the ladder is in the fully lowered position.

Should this occur, descend the ladder with caution.

To Raise Stairway

Ascend the ladder onto the landing of the Loader.

Ensure the area around the ladder is clear of people and standing to the side, clear of the area the handrails and ladder raises into, operate the electrical switch to the raise position (up).

Hold the switch in the up position until the ladder is in the fully raised position.

The ladder is now raised and stored.

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].

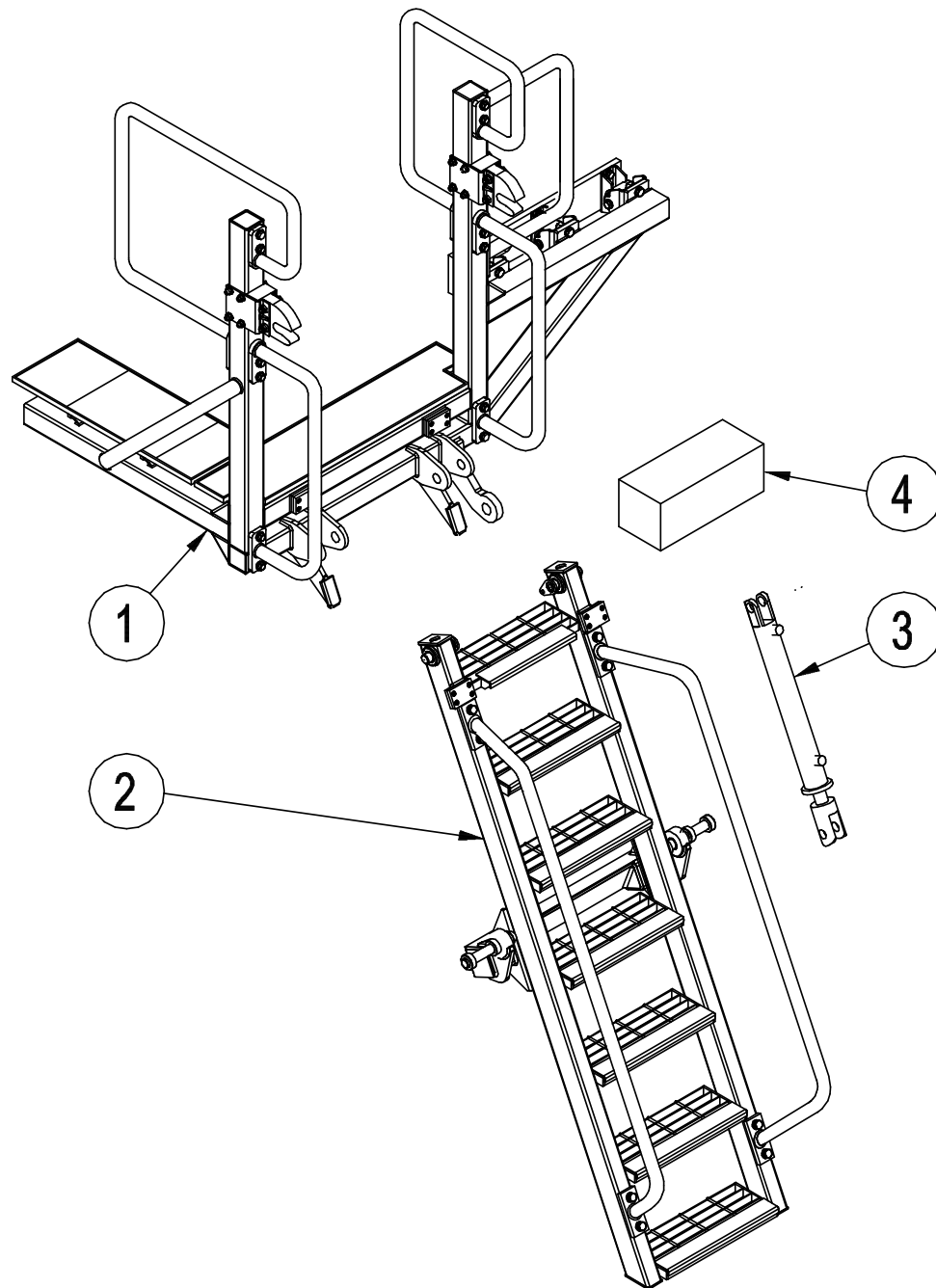
Test by raising and lowering the Power Step a couple of times and adjust again if necessary.

FOLDING STAIRWAY

Cat D8R Dozer



Section 5 Assembly Complete



FOLDING STAIRWAY

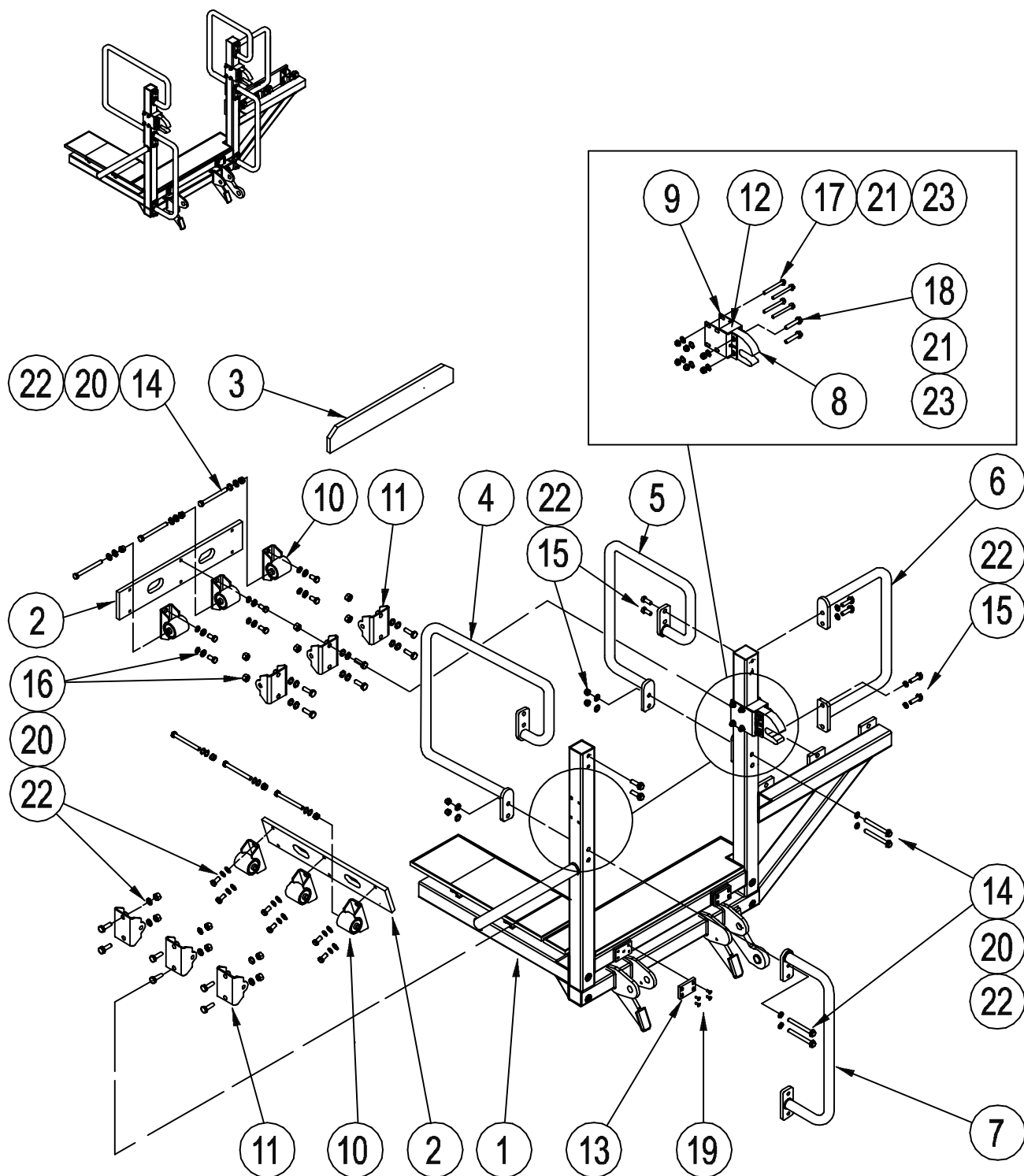
Cat D8R Dozer



Section 5.1 Main Frame & Mounting Assembly

PS-FRA-A01

See Parts List Pg. 12



FOLDING STAIRWAY

Cat D8R Dozer



Section 5.1 Main Frame and Mounting Assembly

PS-FRA-A01

See Drawing Page 11

Item	Part No.	Part Name	Qty		
1	PS-FRA-B01	MAIN FRAME ASSEMBLY	1		
2	PS-ISO-C16	MOUNTING PLATES (Side & Front)	2		
3	PSA-D8R-C01	MOUNTING PLATE - ADD-ON	1		
4	PS-HRI-B03-01	HANDLE A	1		
5	PS-HRI-B03-02	HANDLE B	1		
6	PS-HRI-B02-03	HANDLE C	1		
7	PS-HRI-B03-04	HANDLE D	1		
8	PS-LOC-A06	NYLON STAIR GUIDE/PARK	2		
9	PS-LOC-B02	MOUNT BRACKET WELDMENT (Set)	2		
10	PS-21930A	ISOLATOR ASSEMBLY	6		
11	PS-ISO-C01	ISOLATOR MOUNTING	6		
12	PS-LOC-C20	RUBBER BLOCK	2		
13	PS-STR-C48	BUFFER PAD	2		
14	CPS-M12X110ZP	BOLT-M12 x 110	10		
15	CPS-M12X25ZP	BOLT-M12 x 25	4		
16	CPS-M12X20ZP	BOLT-M12 x 20	24		
17	CPS-M10X90ZP	BOLT-M10 x 90	8		
18	CPS-M10X60ZP	BOLT-M10 x 60	4		
19	CPS-M6X16ZP	BOLT-M6 x 16-C/Sunk Head	8		
20	CPS-M12NN	NUT-M12-NYLOC	34		
21	CPS-M10NZP	NUT-M10	12		
22	CPS-M12WH	WASHER-HARDENED-M12	52		
23	CPS-M10WH	WASHER-HARDENED-M10	12		

FOLDING STAIRWAY

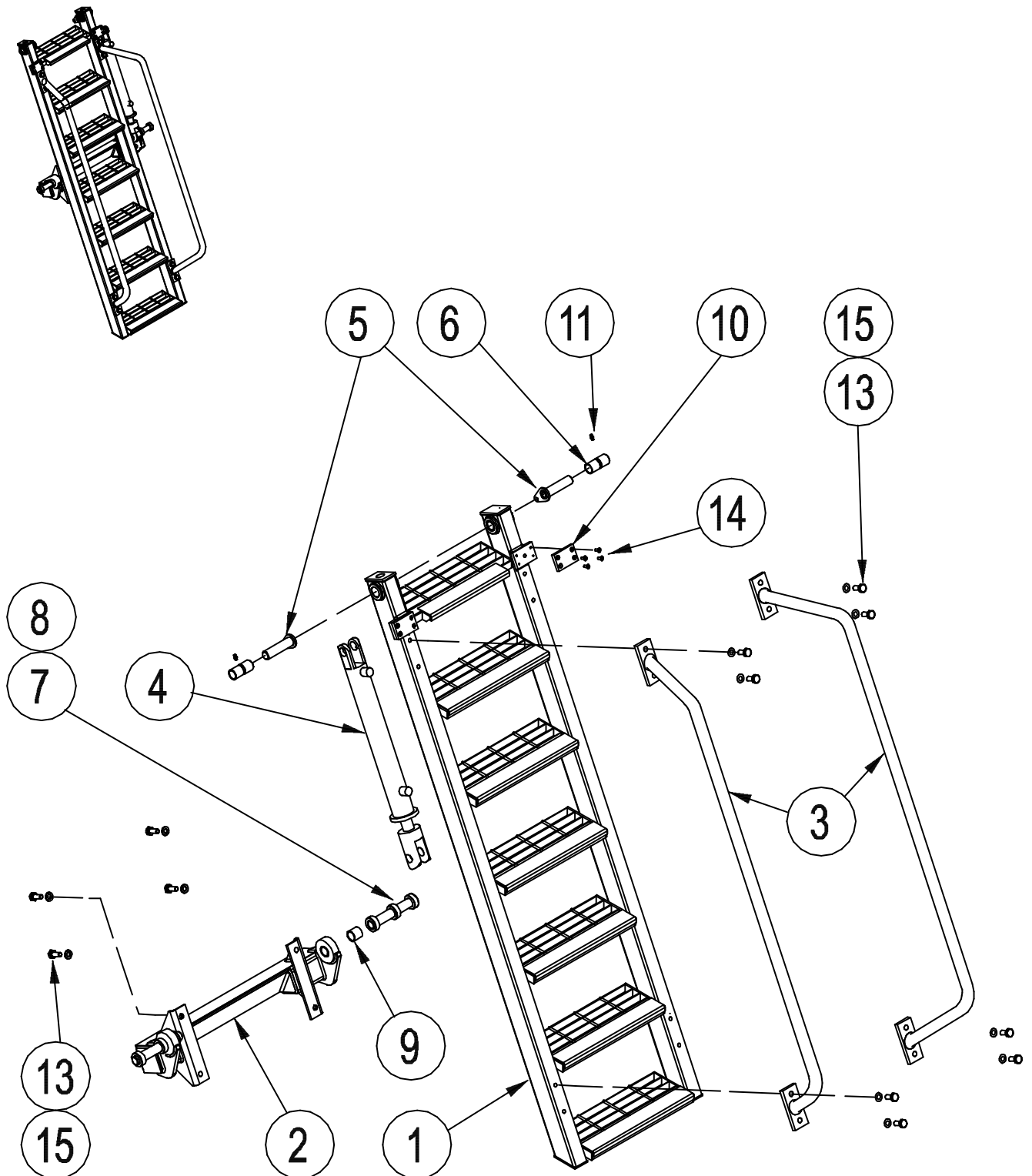
Cat D8R Dozer



Section 5-2 Stair Assembly

PS- STR-A02

See Parts List Page 14



FOLDING STAIRWAY

Cat D8R Dozer



Section 5-2 Stair Assembly

PS- STR-A02

See Drawing Page 13

Item	Part No.	Part Name	Qty		
1	PS-STR-B03	STAIR FABRICATION (7 Tread)	1		
2	PS-STR-B05	ACTUATOR BEAM	1		
3	PS-STR-B04	STAIR HANDRAILS (Set- LH & RH)	2		
4	PS-63011	HYDRAULIC CYLINDER	1		
5	PS-23032	STAIR PIVOT PIN	2		
6	PS-22463	LADDER HINGE BUSH	2		
7	PS-LOC-C19	ROUND BAR	2		
8	-	COLLAR (Unbrako 1x 1 5/8 x 5/8)	4		
9	PS-C23-045-06	BUSH-(Stair Actuator Beam)	2		
10	PS-STR-C48	BUFFER PAD (Rubber)	2		
11	PS-61006-2	GREASE NIPPLE-M6	2		
12	-	SET SCREW-M6	2		
13	CPS-M12X25ZP	BOLT-M12 x 25	12		
14	CPS-M16X16ZP	BOLT-M6 x 16 Cap screw C/Sunk	8		
15	CPS-M12WH	WASHER-HARDENED-M12	12		

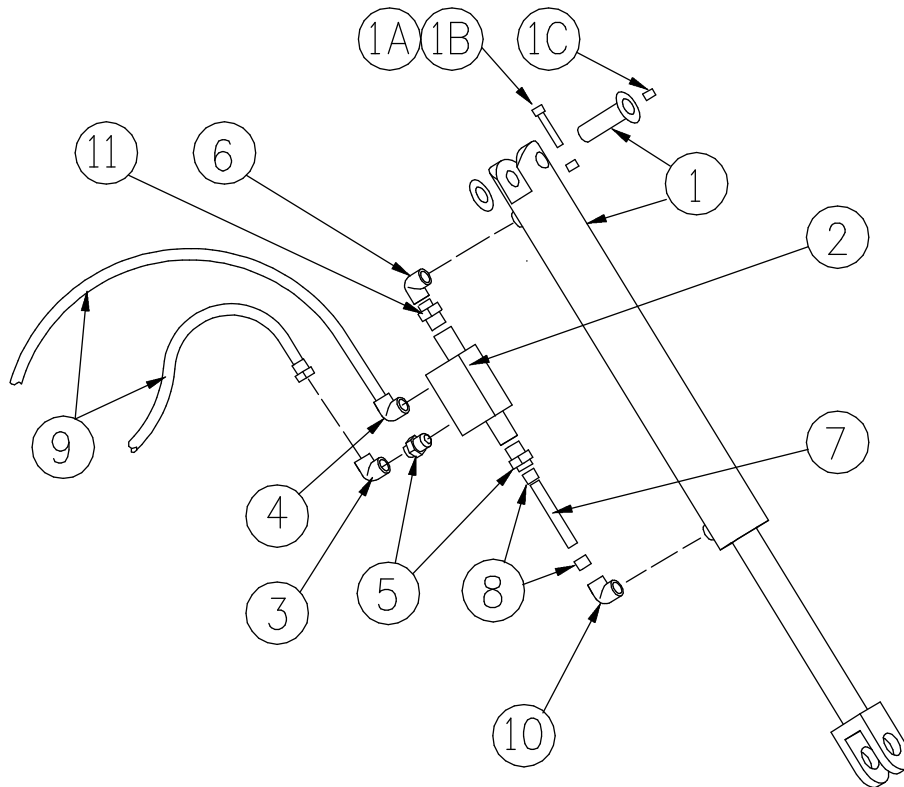
FOLDING STAIRWAY

Cat D8R Dozer



Section 5-3 Hydraulic Cylinder Assembly P/No. PS-63011-AH

See Also Drawing Pg. 16



Item	Part No.	Part Name	Qty		
1	PS-63011	HYDRAULIC CYLINDER 9/16"UNO PORTS	1		
-	PS-63011-SK	SEAL KIT (NOT SHOWN)	1		
-	PS-LOC-C19	PIN-TOP	1		
-	PS-22468-03	WASHER	1		
1A	CPS-M6X60SS	BOLT-M6 x 60 ST/ST	2		
1B	CPS-M6NN	NUT-NYLOC-M6 S/S	2		
1C	PS-61006-2	GREASE NIPPLE	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	1		
6	PS-61158-0.040"	FITTING - 0.040" RESTRICTION 90 DEG	1		
7	PS-61160-140MM	TUBE -140MM (Cut to size to fit)	1		
8	PS-60031-FT	FERRULES	2		
9	PS-60051-2.8	HOSE- HYDR. (9/6"JIC SWIVEL FITTING 2.8M)	2		
10	PS-61158-0.030"	FITTING - 0.03" RESTRICTION 90 DEG	1		
11	PS-61145	FITTING 9/16 JIC SWIVEL	2		

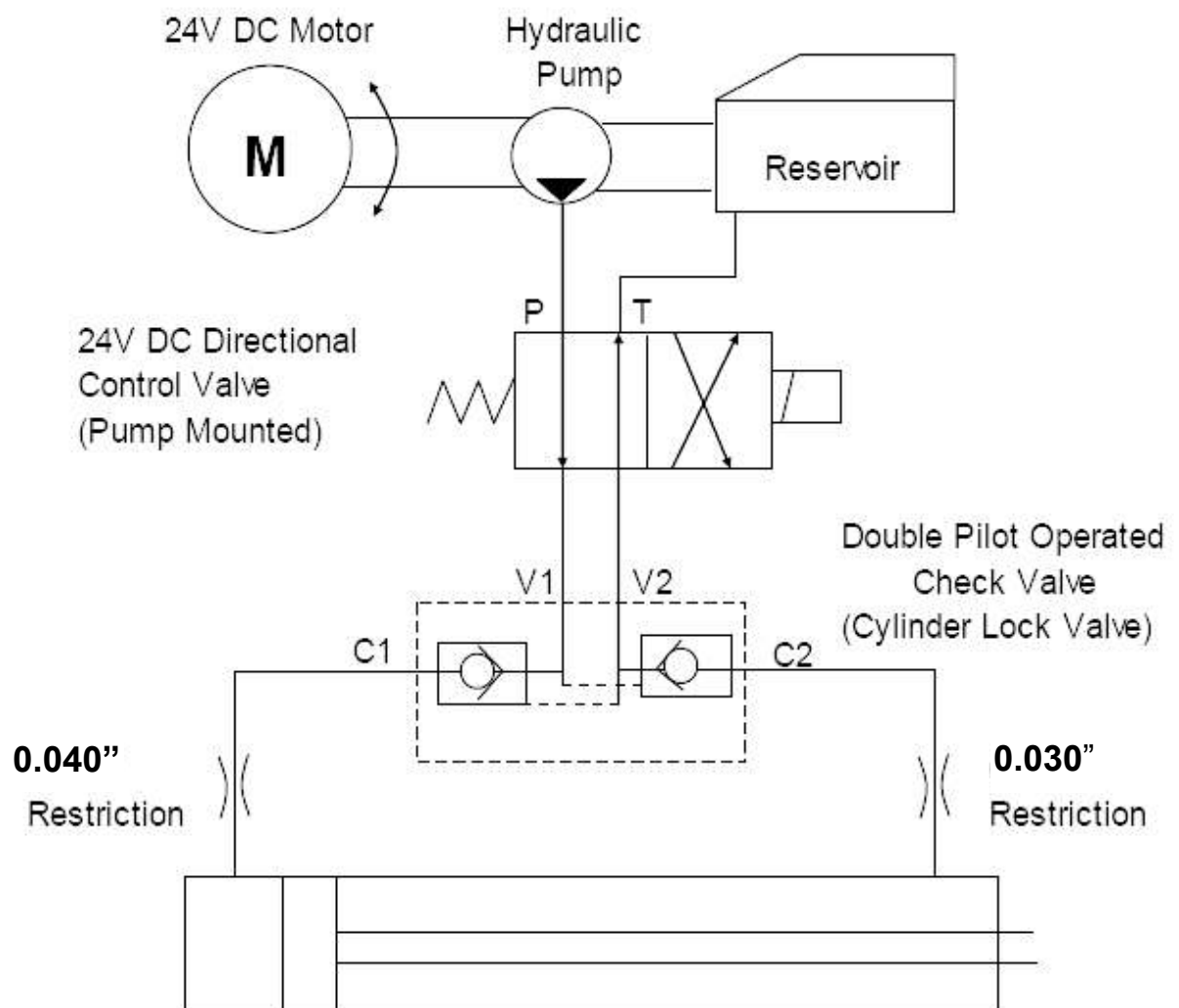
FOLDING STAIRWAY

Cat D8R Dozer



Section 5-3 Hydraulic Cylinder (Valve Diagram)

Double Acting Hydraulic System with
directional Control Valves and Cylinder
Lock Valves



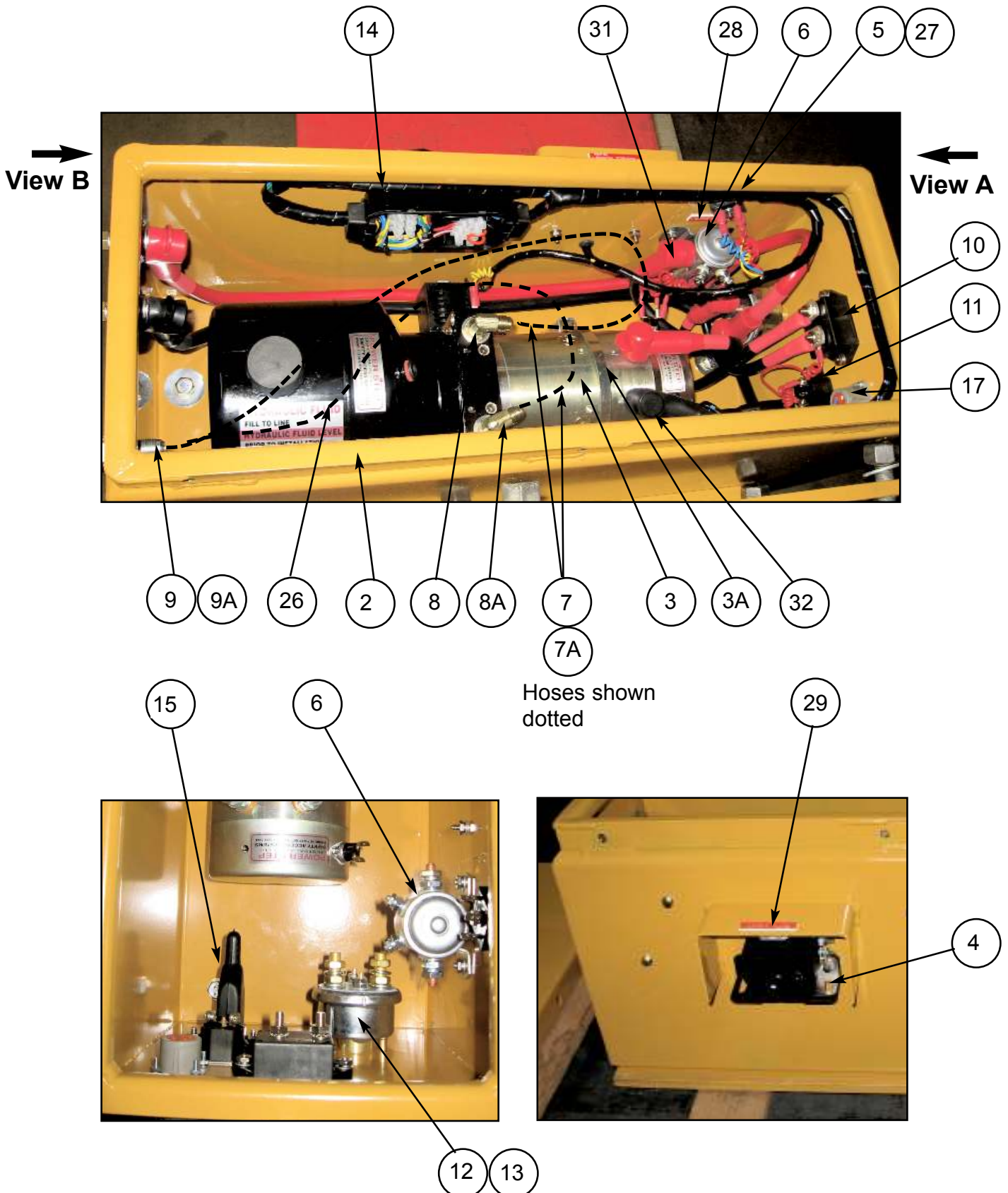
FOLDING STAIRWAY

Cat D8R Dozer



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

See Parts List Pg 19



FOLDING STAIRWAY

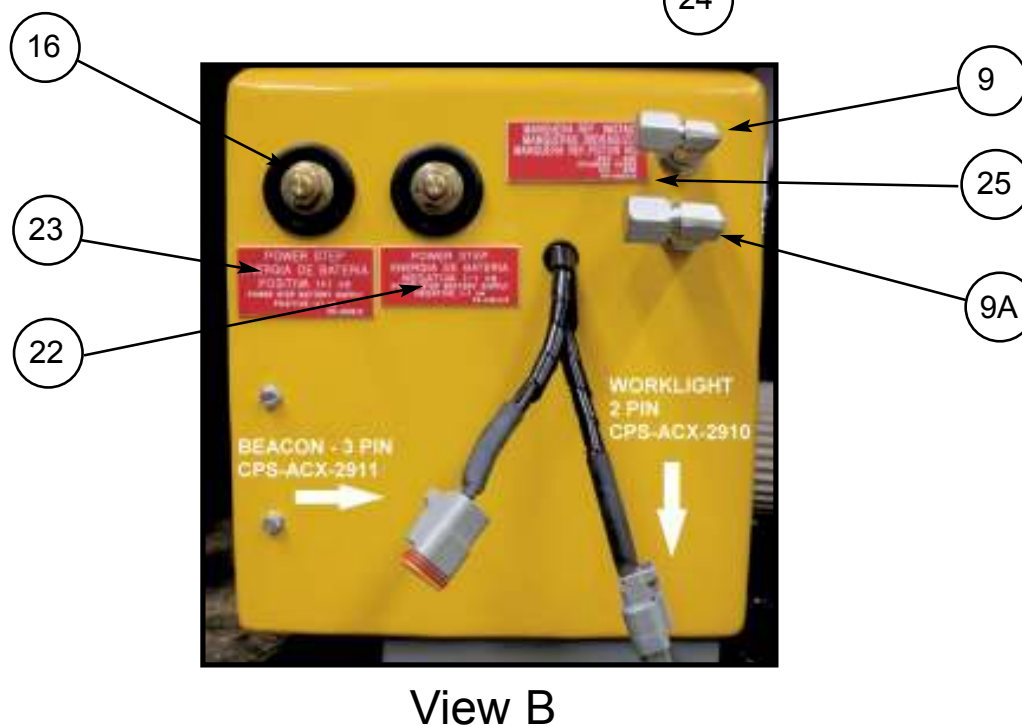
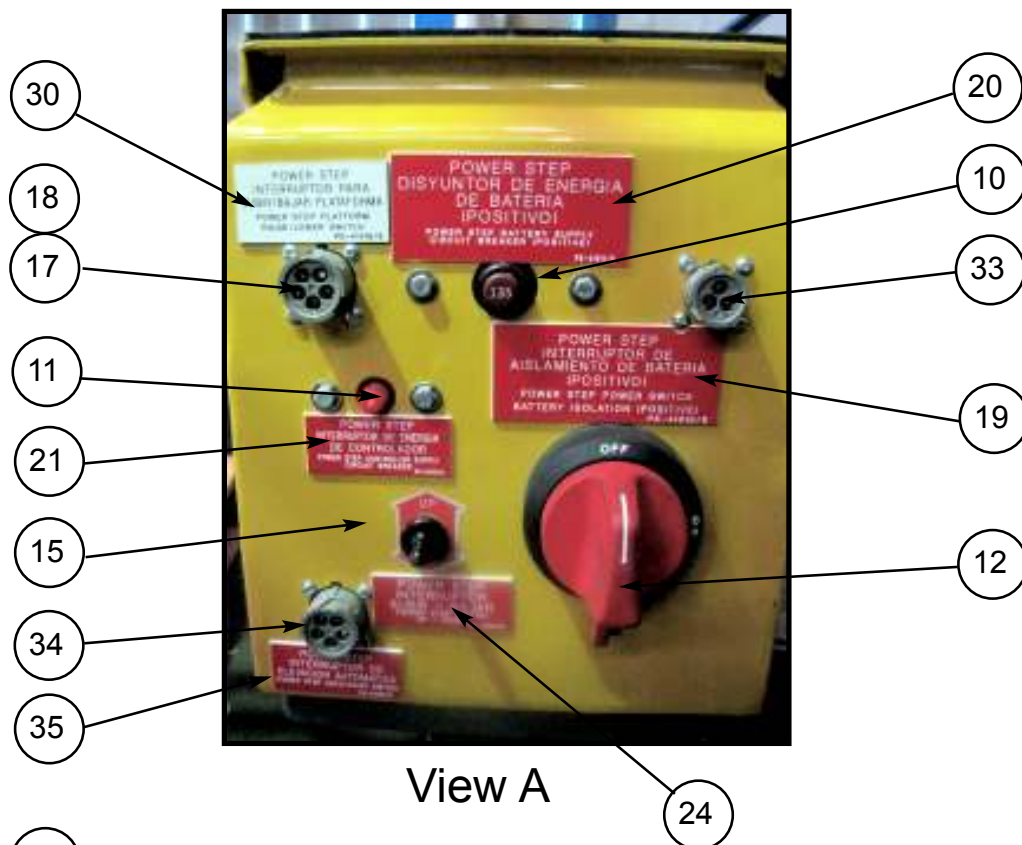
Cat D8R Dozer



Section 5-4 Power Pack

PS-80103A-SLD

See Parts List Pg 19



NOTE.

THE RELIEF PRESSURE OF THE POWERPACK IS TO BE SET TO 2800PSI.
IF THE POWERPACK IS REPLACED,THIS RELIEF PRESSURE WILL NEED TO BE
RESET USING INLINE GAUGES.
FAILURE TO DO SO MAY RESULT IN ACCIDENT OR INJURY

FOLDING STAIRWAY

Cat D8R Dozer



Section 5-4 Power Pack

PS-80103A-SLD

See Photos Pg 17 & 18

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	1		
6	PS-82492	SOLENOID 24V START MOTOR	1		
7	PS-60050-900MM 9/16"	HYDR. HOSES 9/16" JIC STRAIGHT SWIVEL	1		
7A	PS-60050-900MM 7/16"	HYDR. HOSES 7/16" JIC STRAIGHT SWIVEL	1		
8	PS-61152	HYDRAULIC FITTING 9/16"	1		
8A	PS-61150	HYDRAULIC FITTING 7/16"	1		
9	PS-61177	HYDRAULIC FITTING 9/16"	1		
9A	PS-61176	HYDRAULIC FITTING 7/16"	1		
10	PS-84213	135A CIRCUIT BREAKER	1		
11	PS-84212	10A CIRCUIT BREAKER	1		
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	2		
17	PS-HD10-5-16P	5 PIN SOCKET	1		
18	PS-HD10-5-16S	5 PIN PLUG	1		
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	6		
32	PS-73009	RUBBER BOOT BLACK	3		
33	PS-HD10-3-16P	3 PIN SOCKET (PARK BREAK)	1		
34	PS-HD10-5-16P	5 PIN SOCKET (AUTO-RAISE)	1		
35	PS-41032	DECAL AUTO-RAISE SOCKET	1		

FOLDING STAIRWAY

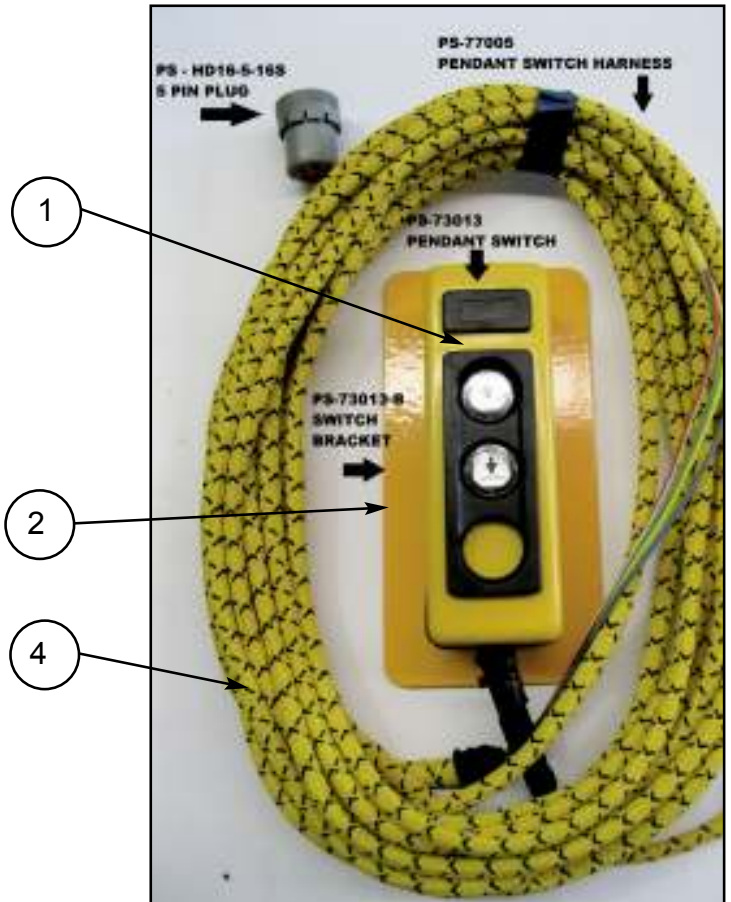
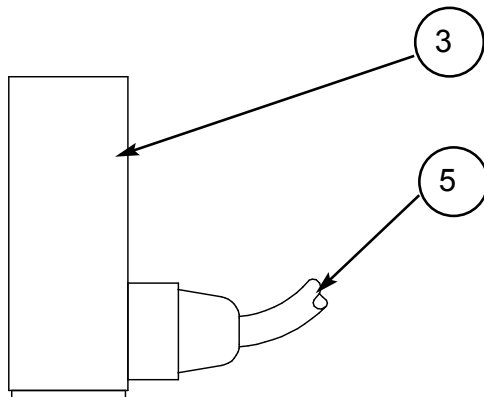
Cat D8R Dozer



Section 5-5 Electrical Controls

Control Pendant Switch
Mounted on Handrail

Proximity Switch Assembly
Mounted on Fixed Landing



Cab Harness & Equipment
Refer Wiring Harness Drawings



FOLDING STAIRWAY

Cat D8R Dozer



Section 5-6 Electrical Controls

See Page 20

Item	Part No.	Part Name	Qty		
1	PS-73013	CONTROL PENDANT SWITCH	1		
2	PS-73013-B	CONTROL PENDANT BRACKET	1		
3	PS-75430	PROXIMITYSWITCH	1		
4	PS-77005	HAND RAIL SWITCH HARNESS	1		
5	PS-77004	PROXIMITY MAGNETIC SWITCH HARNESS	1		
6	PS-77002	CABIN BOX LED LIGHT INDICATOR	1		
7	PS-77003	WIRING HARNESS	1		

WARNING

**LOW VOLTAGE BATTERIES WILL HARM THE FUNCTION
OF THE POWER PACK AND THE CONTROL SWITCHES.**

**DAMAGE RESULTING DUE TO LOW VOLTAGE
BATTERIES WILL VOID WARRANTY ON ALL
ELECTRICAL COMPONENTS.**

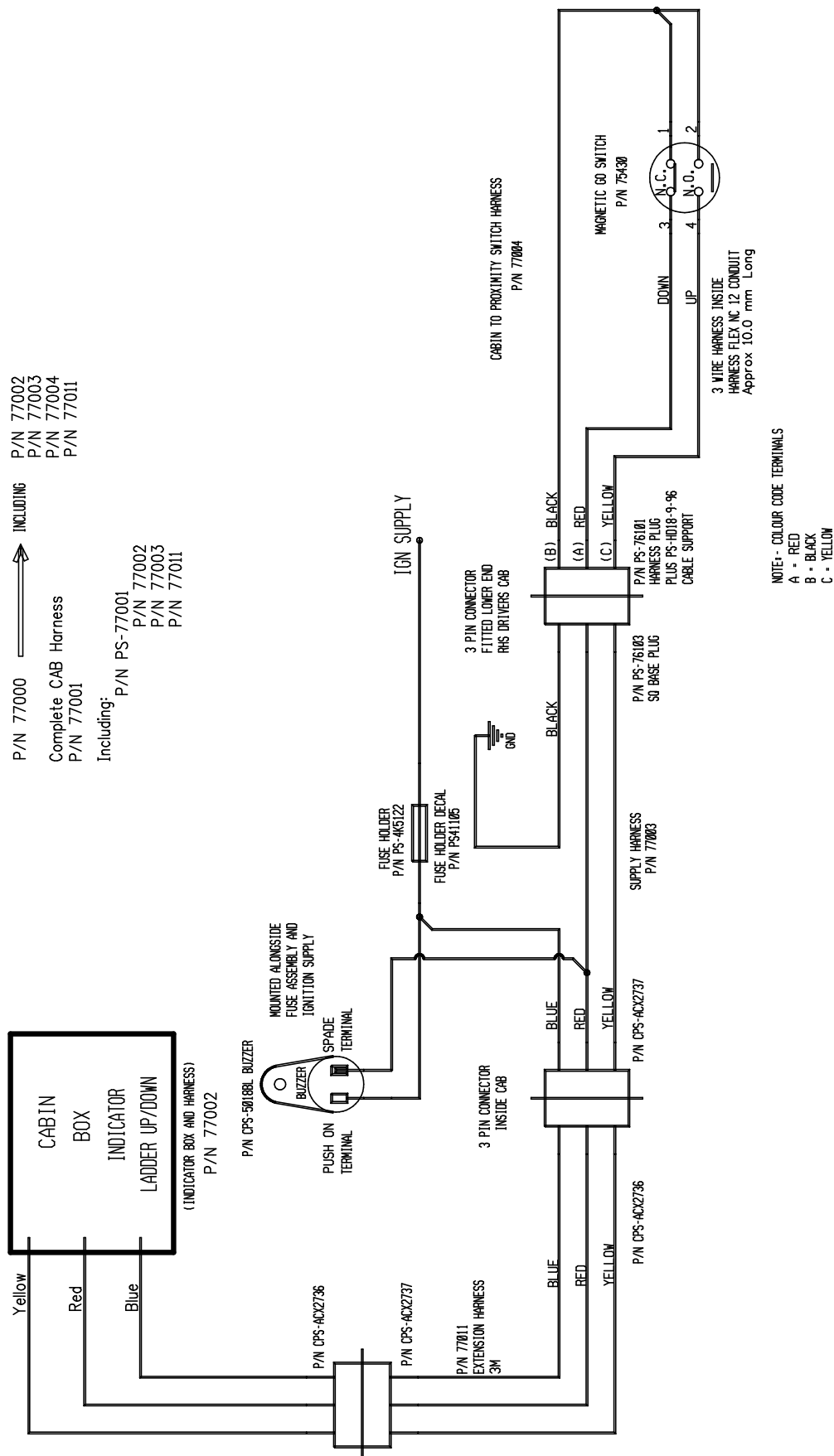
FOLDING STAIRWAY

Cat D8R Dozer



Section 5-5 Electrical Controls Wiring Harness

WIRING HARNESS

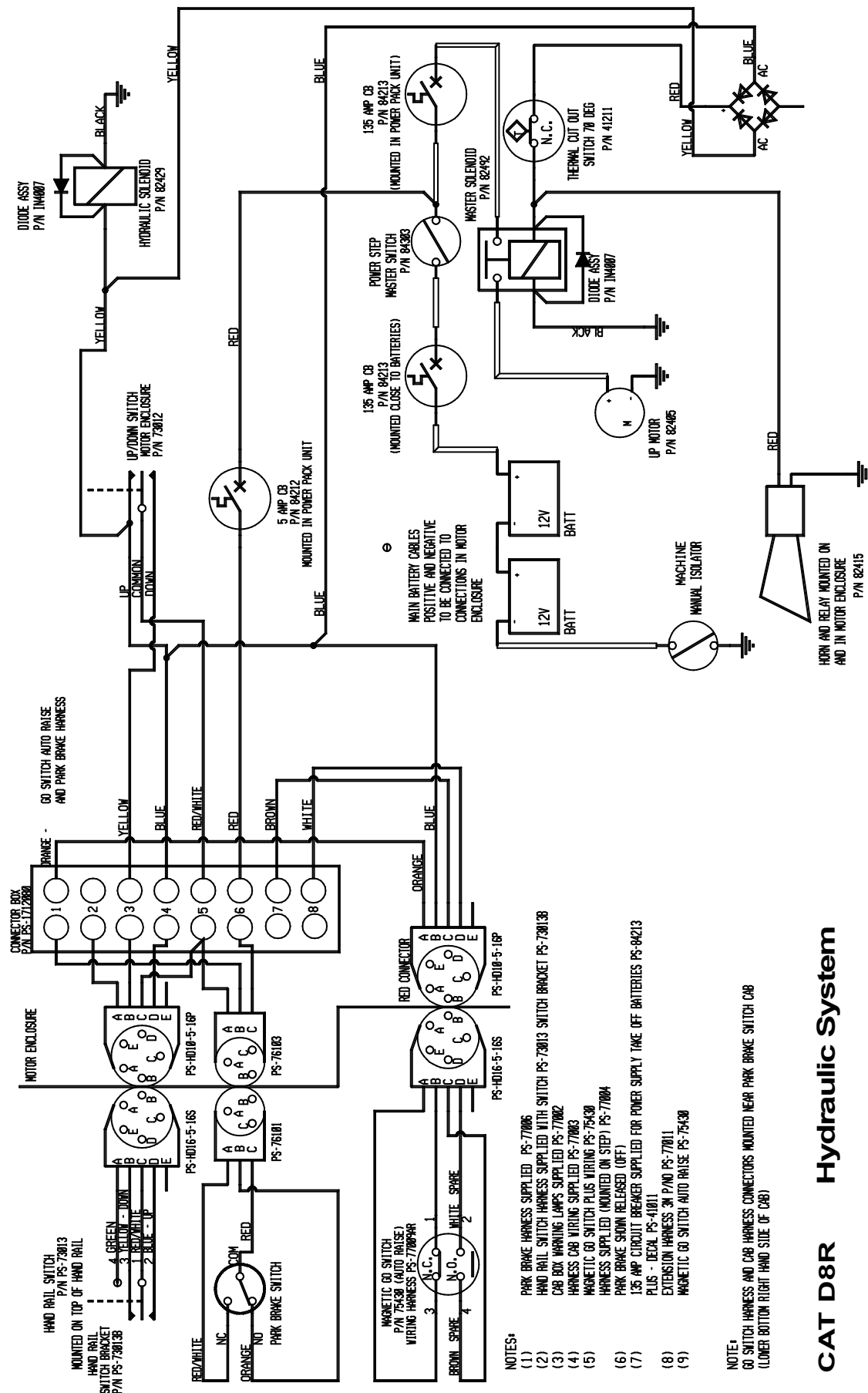


FOLDING STAIRWAY

Cat D8R Dozer



Section 5-5 Electrical Controls Electrical Layout 1.



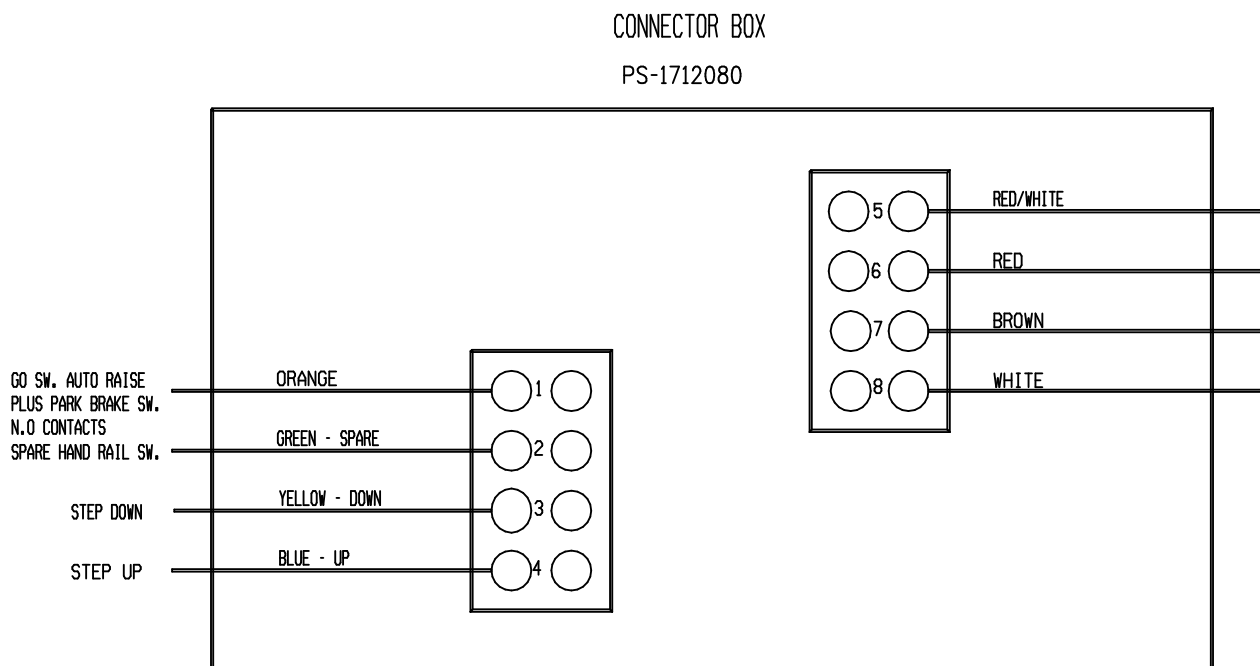
CAT D8R Hydraulic System

FOLDING STAIRWAY

Cat D8R Dozer



Section 5-5 Electrical Controls Electrical Layout 2.



GO SWITCH HARNESS (CABIN TO GO SWITCH) - P/N PS-77004
(CABIN INDICATOR LADDER UP/DOWN)

BLACK -
BLACK -
(BRIDGE NO 1 AND NO 2 IN GO SW)
RED -
YELLOW -

NO 1 TERMINAL N.C. CONTACT
NO 2 TERMINAL N.O. CONTACT
NO 3 TERMINAL N.C. CONTACT
NO 4 TERMINAL N.O. CONTACT

3 PIN PLUG CONNECTOR PINS
LOWER R/H OUTSIDE CAB

(B)
(A)
(C)

LENGTH 10m
(HARNESS FLEX NO 12)

HAND RAIL SWITCH HARNESS (P/N 77010)
(HANDRAIL SW TO POWER PACK BOX)

COLOUR	SW CONTACTS	TERMINAL NO
RED/WHITE	NO 1	NO 5
BLUE	NO 2	NO 4
YELLOW	NO 3	NO 3
GREEN	NO 4	NO 2

5 PIN PLUG CONNECTOR PINS
MOTOR ENCLOSURE

(C)
(D)
(B)
(A)

LENGTH 10m
(HARNESS FLEX NO 12)

FOLDING STAIRWAY

Cat D8R Dozer



Section 5-5 Electrical Controls Electrical Layout 3.

WIRING HARNESS

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

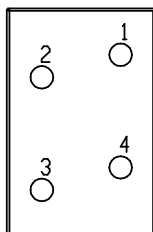
POWER STEP WIRING HARNESS (10M) AND CONNECTIONS SUPPLIED

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

Cat D8R Dozer



Material Kit supplied

PS-P/PACK-ISO. KIT

