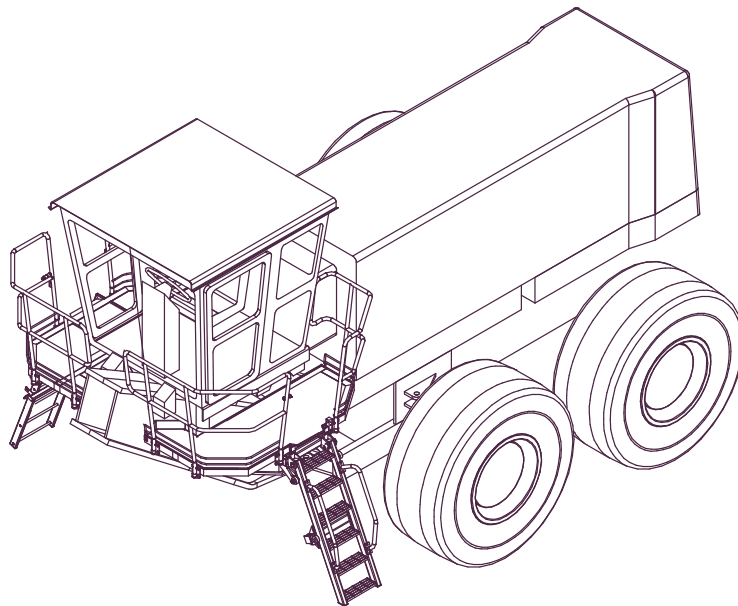




Power Step Access System for Caterpillar 24H Grader



Model No.: PSA-CAT24H-F/L
Serial No.: 24H-LAD-001HV~
Date Manufactured: 2012

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FOLDING LADDER

24H Caterpillar Grader



Section 1 Installation and Mounting Instructions

NOTE

Follow all on-site/Mine lifting and safety procedures when installing PowerStep Ladders to Grader.

Landing Mountings 22490

PROCEDURES 1 & 2 See Drawings Page 5.

1. On one side of the Grader, then on the other:

Clamp Mounting Brackets both sides of each cabin support post, as high up on the post as possible, ie hard up under the notched side plate. Grind bevels in Mounting Brkt components if nec. to clear welds on machine.

Cut/alter clamping plates if necessary to clear obstructions under cabin.

23 581 98 & 23 581 99 differ only in that '98' has clearance holes and '99' has threaded holes for the clamping bolts - install '98' & '99' in pairs positioned to give easiest access for tightening etc.

2. Hanger Plates are 'handed', with different tab lengths on either side to suit eccentric pin position in the cavity. Alter tab lengths if necessary to give lateral location to Mounting Brackets. Fit Hanger Plates over the ends of the existing cabin mounting pins (~50 approx) - 1 Hanger Plate per cabin mounting pin. The holes in the Hanger Plate are circular with a large horizontal slot. The slot MIGHT be needed to accommodate the keeper pin in the cabin mounting pins. The installation kit includes 2 - Replacement Keeper Pins **23 578 01** with socket head screws as keepers instead of split pins. These may be used IF the originals with split pins can't be accommodated. Whichever Keeper Pin is used, original or replacement, it is important that the assembly is fully secure. Use a thread lock compound such as Lok-tite if using the replacement pin with a screw as keeper.

PROCEDURES 3 & 4 See Drawings Page 6.

3. Fit **23 577 99** Middle Section, Mounting Beam by clamping it to the bottom flange of the machine's gooseneck beam, approximately in the position shown in View (B). Fit **23 577 98** Wing Beam to the Middle Section of the Mounting Beam, per the dimensions in Views (F) & (G). Tackweld (substantial) in position
4. Fit Brace Mounting, Clamp Plate and Bolts to front cabin mounting post, as shown in View H

NOTE : OEM Wiring Clamps & Buttons. May need to be moved to install Clamp Plates.

FOLDING LADDER

Caterpillar 24H Grader



Section 1 Installation and Mounting Instructions Cont.

ASSEMBLY - See Drawings Page 7.

Following on from **Drg 23 590** Landing Mountings,- see procedures 1 to 5
Per View 1:

1. Fit 7 isolators to the various bolting pads ,
 - 4 on the Mounting Brackets 23 581 98/99
 - 1 on top of 23 577 98 Wing Beam
 - 1 on the outside plate of 23 577 98 Wing Beam and
 - 1 on 23 580 98 Brace Mounting
2. Fit the Landings, **23 573** on the left side, **23 575** on the right side. Provide safe temporary means of holding the landing level until braces are fitted.
3. Fit **23 580 99** Brace at the rear of the landing and **23 570** Front Mounting Strut at the front of the landing
4. Fully weld the posts of the Wing Beams to the flanges on the Middle Section of the Mounting Beam. Full depth butt weld on the gussets and 6mm fillet x 75 long down each side of the posts.
The flange (to which the Mounting Beam clamps) tapers in width.If necessary weld blocks of mild steel to the clamp spacers to limit sideways movement. Do not weld to gooseneck beam.

Per View 2:

5. Fit the Power Unit to the Goose neck in front of windscreen

NOTE: Excessive thread on bolts may need to be cut off.

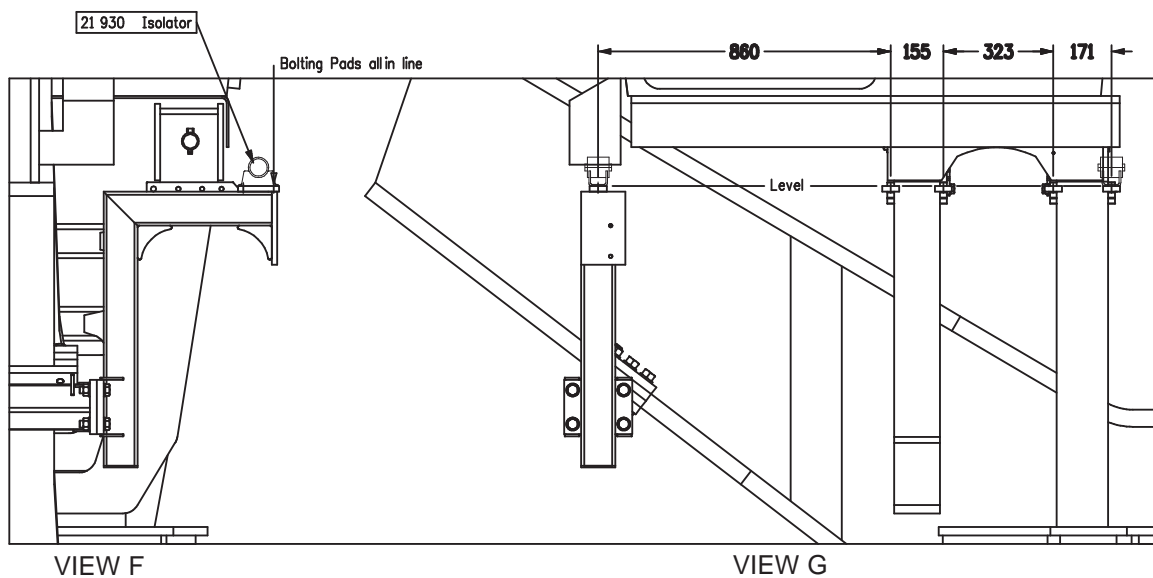
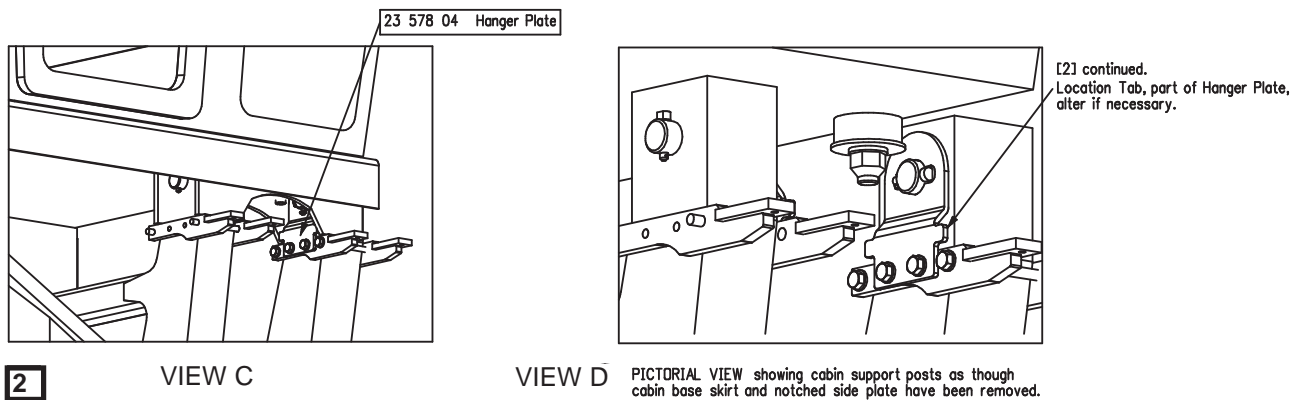
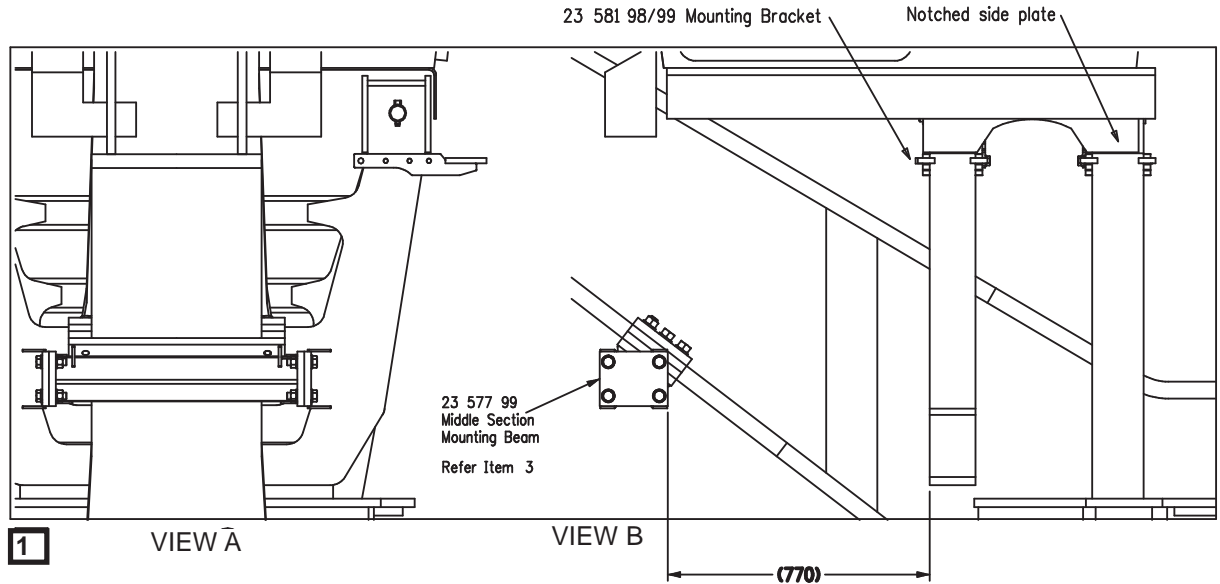
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Section 1 Installation Instruction Drawings - 23-590 Part 1

Landing Mountings



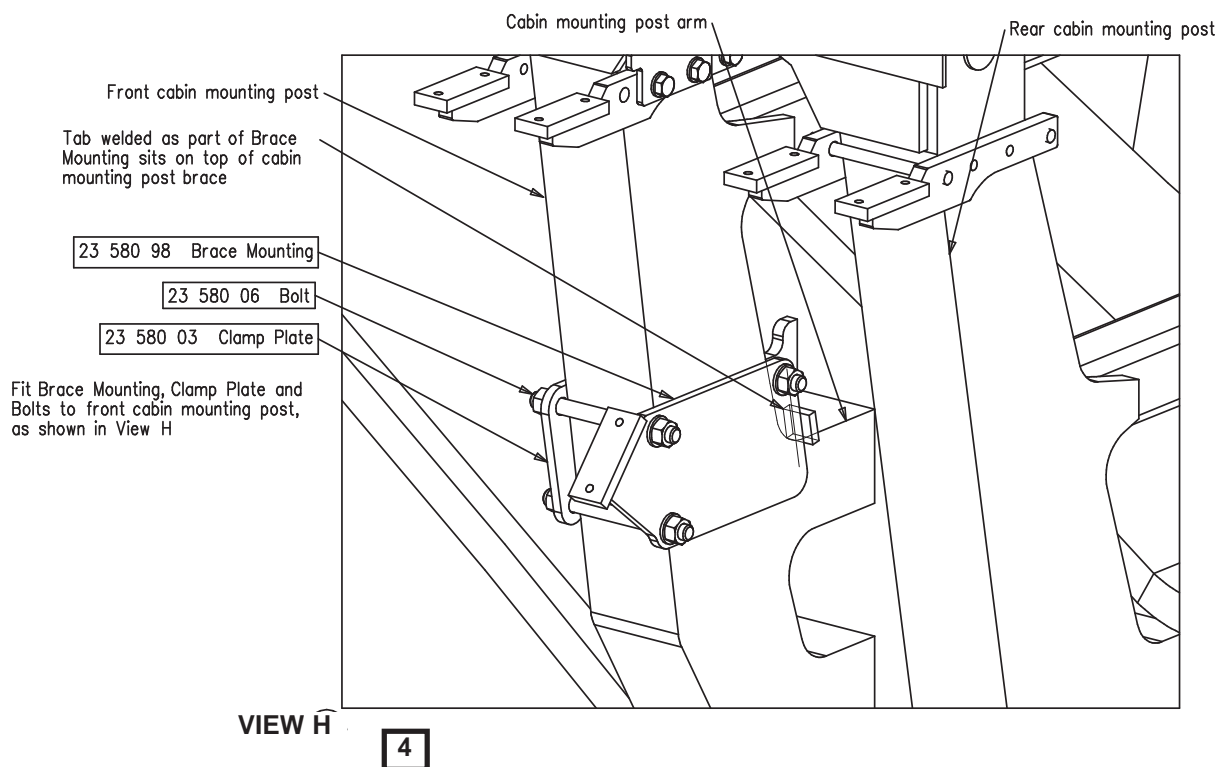
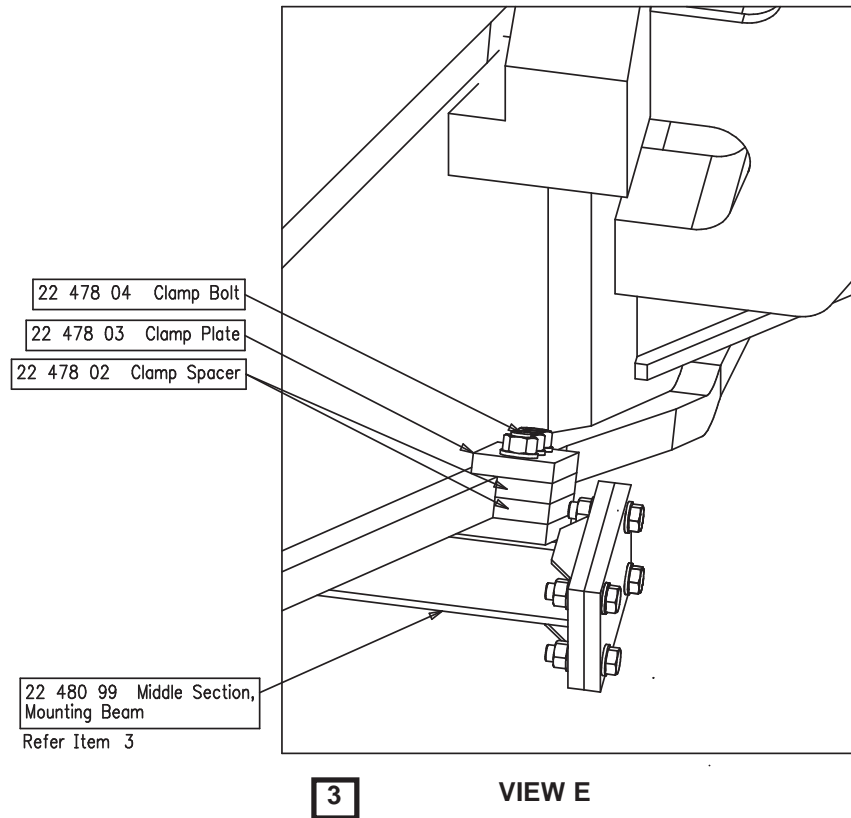
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Section 1 Installation Instruction Drawings - 23 590 Part 2

Landing Mountings Cont.



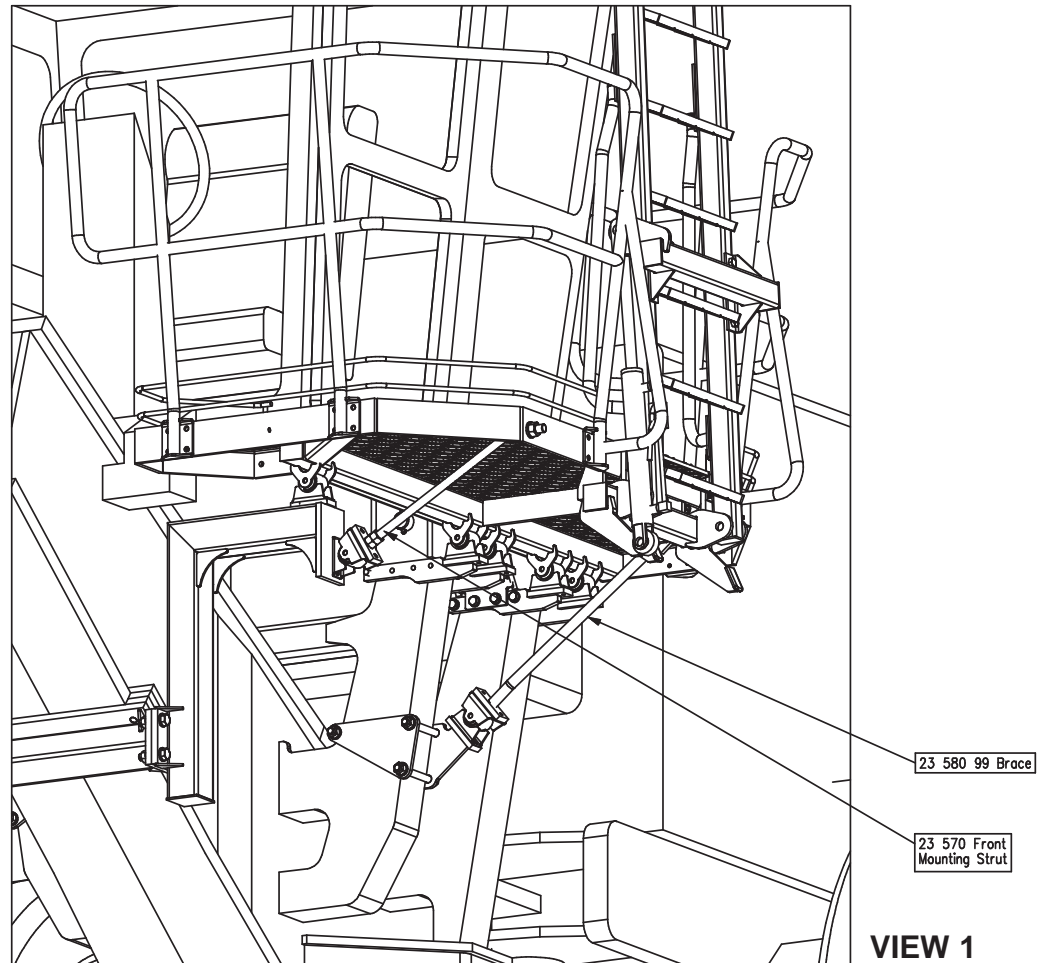
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Caterpillar 24H Grader

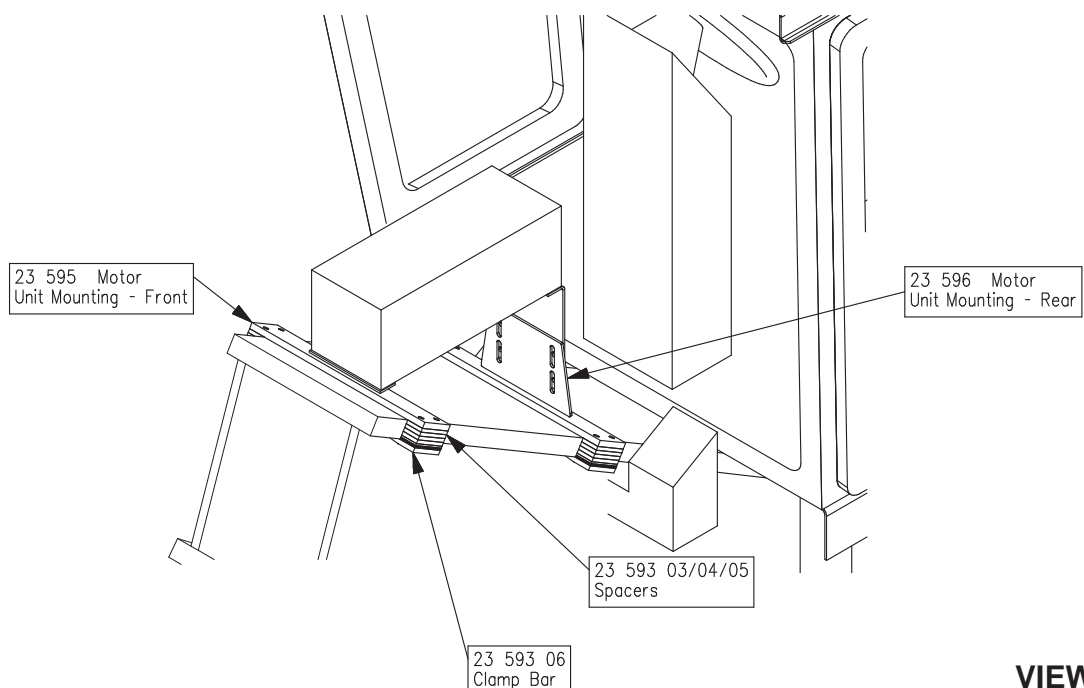


Section 1 Installation Instruction Drawings - 23 591

Actuator Ladder Mounting Cont.



Mounting of Power Pack Drawing 23597



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Caterpillar 24H Grader



Section 1 Installation and Mounting Instructions (cont.)

Maintenance Notes

NOTE

Follow all on-site/Mine lifting and safety procedures when installing PowerStep Ladders to Grader.

WARNING

Raising the POWER STEP ladder 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 ladder must be used, please follow the following instructions:

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

Raise ladder by available means.

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

Lock in raised position.

Re-tighten hydraulic fittings.

SECURE THE LADDER 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 ladder 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 valve to restriction fitting.

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 LADDER

Caterpillar 24H Grader



Section 2 Recommended Maintenance Procedure

Suggested Service Procedure for Maintenance on Motor Grader Power Step

Daily

Visually check ladder handrails and structure for damage or any loose components.

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

Notify the appropriate supervisor for any observed damage or malfunction.

250 Hours:

Check oil level reservoir & top up if required.

Fill/Top up with same oil as used in machine hydraulics to within 25-35mm of top of hydraulic reservoir. As per reservoir decal.

Check Power Step for structural damage, oil leaks or any damaged electrical cables.

Repair/Replace as necessary.

Grease Cylinder Pins & check all pin locking bolts on ladder.

Grease the nipples on the ladder pins.

1000 Hours:

Check oil level in Reservoir

Fill/Top up with same oil as used in machine hydraulics to within 25-35mm of top of hydraulic reservoir. As per reservoir decal.

Check arm pins for wear in platform locating plates & mounting plates - rebush or repair as necessary.

Grease all pins, hydraulic cylinder and ladder.

6000 Hours:

Check Cylinder Bushes, replace if necessary. (Fitted to ladder and platforms)

Drain & refill hydraulic tank to correct level.

Check hydraulic hoses.

Remove Hydraulic Cylinder - Check cylinder pins for wear/damage replace if necessary.

Clean motor enclosure, bleed hydraulic system, check for leaks.

Grease the nipples on the hydraulic cylinder pins & ladder pins.

Check and inspect all main bolts on ladder system & isolators for wear.

Check all bolts and nuts. Torque if required.

Check all electrics & components for correct operation.

Repeat daily check as above.

Caution:

Whenever carrying out maintenance on the hydraulic cylinder, or hydraulic system, ensure that correct restriction orifice fittings are in place at the cylinder.

If 90° restriction orifice fitting is damaged, or has been replaced at some stage with a standard fitting, refer to repair parts list for correct Part No. & appropriate restriction.

Maintenance on the hydraulic system should only be carried out with the platform in the lowered position or locked in position with correct lifting device.

FOLDING LADDER

Caterpillar 24H Grader



Section 3 Operating Procedure

To Lower Ladder (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. Drop blade and rippers. 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 Grader is parked on uneven ground, the bottom of the ladder may touch the ground before the ladder is in the fully lowered position. Should this occur, descend the ladder with caution.

To Raise Ladder

Ascend the ladder onto the landing of the Grader. Ensure the area around the ladder is clear of people and equipment 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 LADDER

Caterpillar 24H Grader



Section 3 Operating Procedure - Checklist

POWERSTEPS SAFETY ACCESS SYSTEMS CATERPILLAR 24H MOTOR GRADER

General Operation:

<u>Hydraulic operation</u>	Raise Lower	Yes Yes	No No
<u>Lock Valve</u>	Holds ladder correctly	Yes	No
<u>Handrail Switch</u>	Operates ladder in both directions & as indicated on switch decal Cabin door closes.	Yes	No
<u>Cabin Switch</u>	Operates ladder in both directions and as indicated on switch decal.	Yes	No
	Cabin door closes.	Yes	No

Park brake interlock

Ignition On/Park Brake released (Ladder in down position) The ladder will rise in 5 seconds.	Yes	No
Ignition On/Park Brake applied The ladder should work up and down.	Yes	No
Ignition Off/Park Brake applied/Ladder lowered No alarms in cab.	Yes	No
Ignition On/Park Brake applied/Ladder lowered Audio visual in cabin operated.	Yes	No

Inspected By: _____ Date _____

Accepted By: _____ Date _____

Position: _____

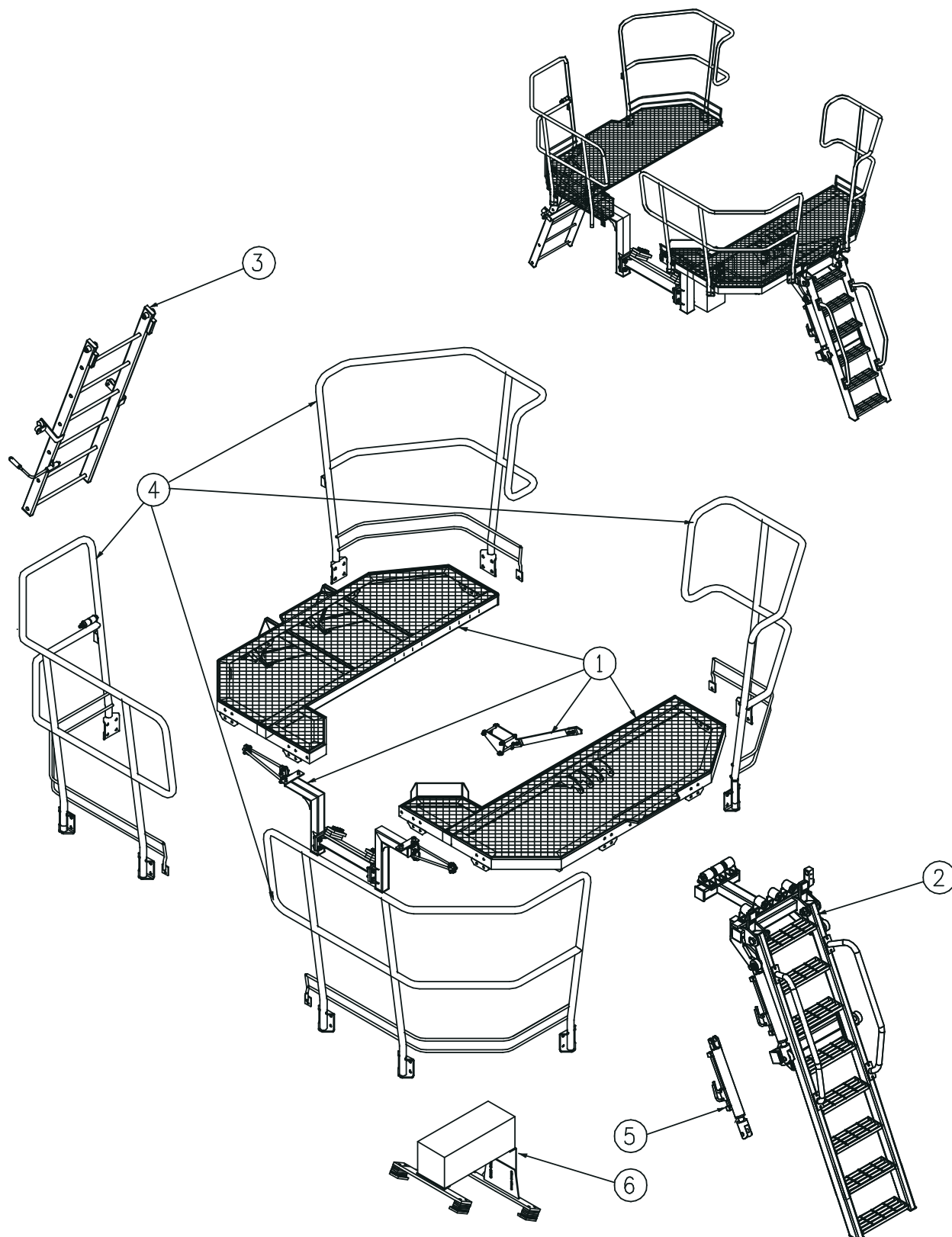
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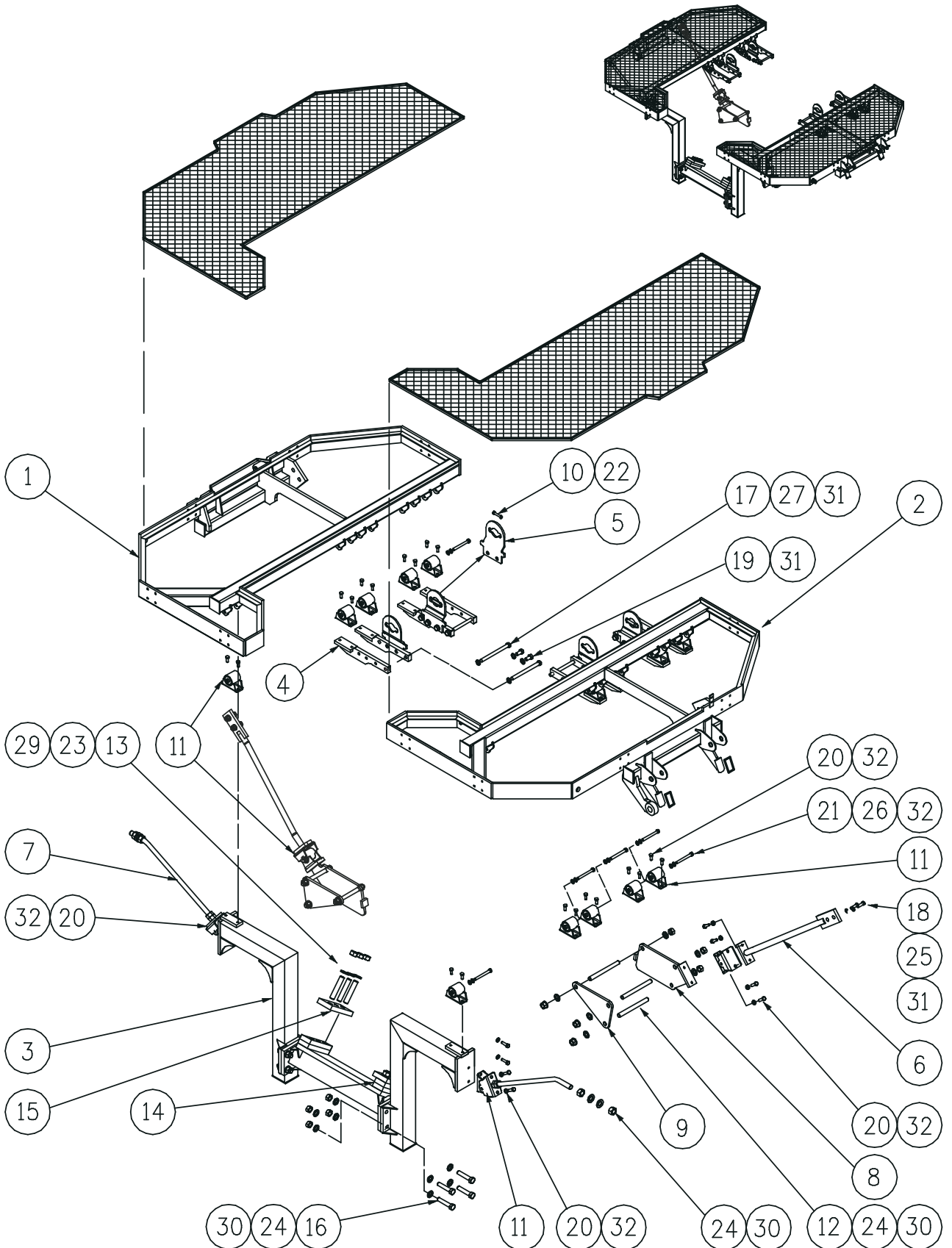
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Section 4 Assembly Complete



Section 4-1 Landing Assembly



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Caterpillar 24H Grader



Section 4-1 Landing Assembly

See Drawing Page 13

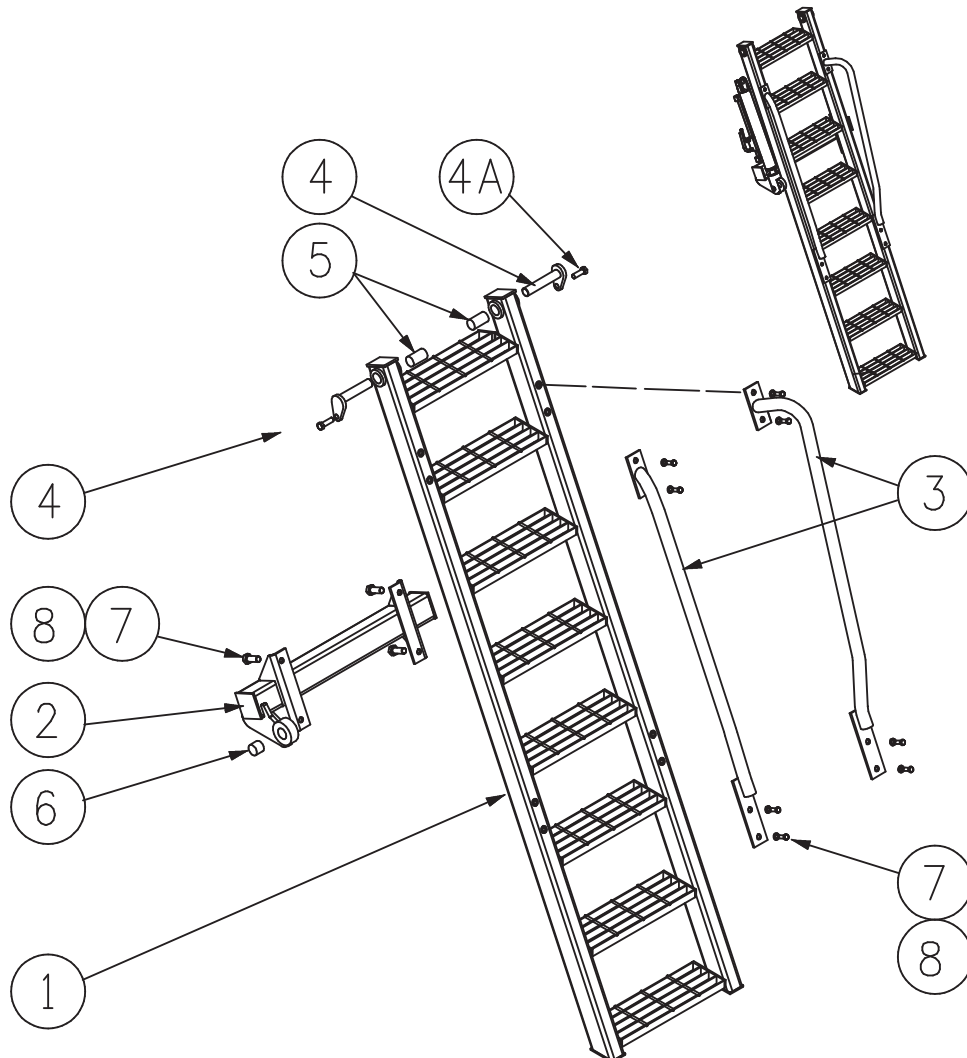
Item	Part No.	Part Name	Qty		
1	PS-23575	LANDING-RHS	1		
-	PS-23586-01	"DOWN" BUFFER PAD	2		
2	PS-23573	LANDING-LHS	1		
-	PS-23586-02	"UP" BUFFER PAD	2		
3	PS-23577	MOUNTING BEAM ASSEMBLY	1		
4	PS-23581	LANDING MOUNTINGS-REAR	1	Set	
5	PS-23581-04	HANGER PLATE	2	Set	
6	PS-24254	LANDING BRACE-REAR	2		
7	PS-23579	FRONT LANDING STRUT	2		
8	PS-23580-04	BRACE MOUNTING	2		
9	PS-23580-03	CLAMP PLATE (Brace Mounting)	2		
10	PS-23581-01	KEEPER PIN	4		
11	PS-21930A	ISOLATOR	14		
12	PS-23580-06	ROD-DIA 20- THREADED M20 x 220LG.	6		
13	PS-22478-04	CLAMP BOLT M24 x 130 (Thr. rod)	6		
14	PS-22478 02	CLAMPING SPACER	4		
15	PS-22478-03	CLAMP PLATE	2		
16	CPS-M20X75ZP	BOLT-M20 x 75	8		
17	CPS-M16X210ZP	BOLT-M16 x 210	8		
18	CPS-M16X60ZP	BOLT-M16 x 60	4		
19	CPS-M16X30ZP	BOLT-M16 x 30	8		
20	CPS-M12X20ZP	BOLT-M12 x 20	36		
21	CPS-M12x150ZP	BOLT-M12 x 150	8		
22	CPS-M6X20ZP	BOLT-M6 x 20 Socket hd.	2		
23	CPS-M24NZIP	NUT-M24	6		
24	CPS-M20NZIP	NUT-M20	8		
25	CPS-M16NZIP	NUT-M16	6		
26	CPS-M12NZIP	NUT-M12	36		
27	CPS-M16NN	NUT-NYLOC-M16	8		
28	CPS-M6NN	NUT-NYLOC-M6	2		
29	CPS-M24WH	WASHER-M24	6		
30	CPS-M20WH	WASHER-M20	8		
31	CPS-M16WH	WASHER-M16	32		
32	CPS-M12WH	WASHER-M12	36		

FOLDING LADDER

Caterpillar 24H Grader



Section 4-2 Main Ladder Assembly



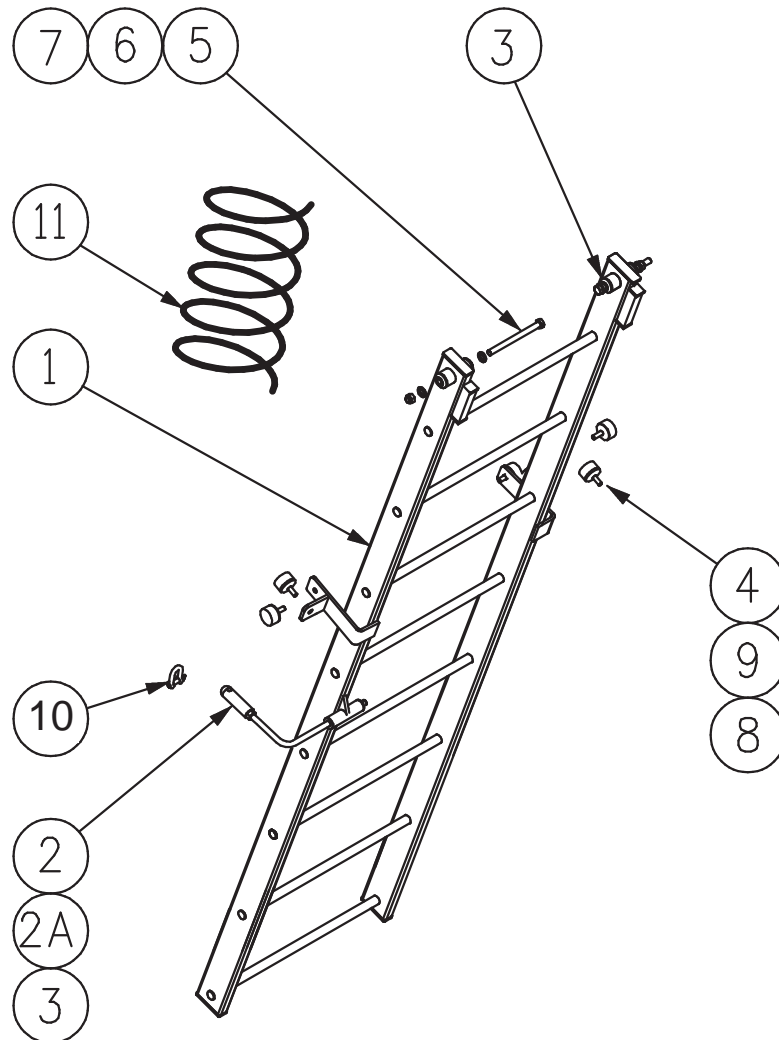
Item	Part No.	Part Name	Qty		
1	PS-23588A	LADDER ASSEMBLY (Including all Items)	1		
1	PS-23588	LADDER ONLY (Handrails not included)	1		
2	PS-23589	LADDER ACTUATOR BEAM	1	set	
3	PS-23587-LH/RH	HANDRAILS	2		
4	PS-23032	LADDER PIN	2		
5	CPS-M8X20ZP	BOLT-M8 x 20	2		
5A	PS-22463	LADDER HINGE BUSH	1		
6	PS-63009-B	PRESS IN BUSH	8		
7	CPS-M12X25ZP	BOLT-M12 x 25	2		
8	CPS-M12WH	WASHER-M12	2		

FOLDING LADDER

Caterpillar 24H Grader



Section 4-3 Emergency Ladder Assembly



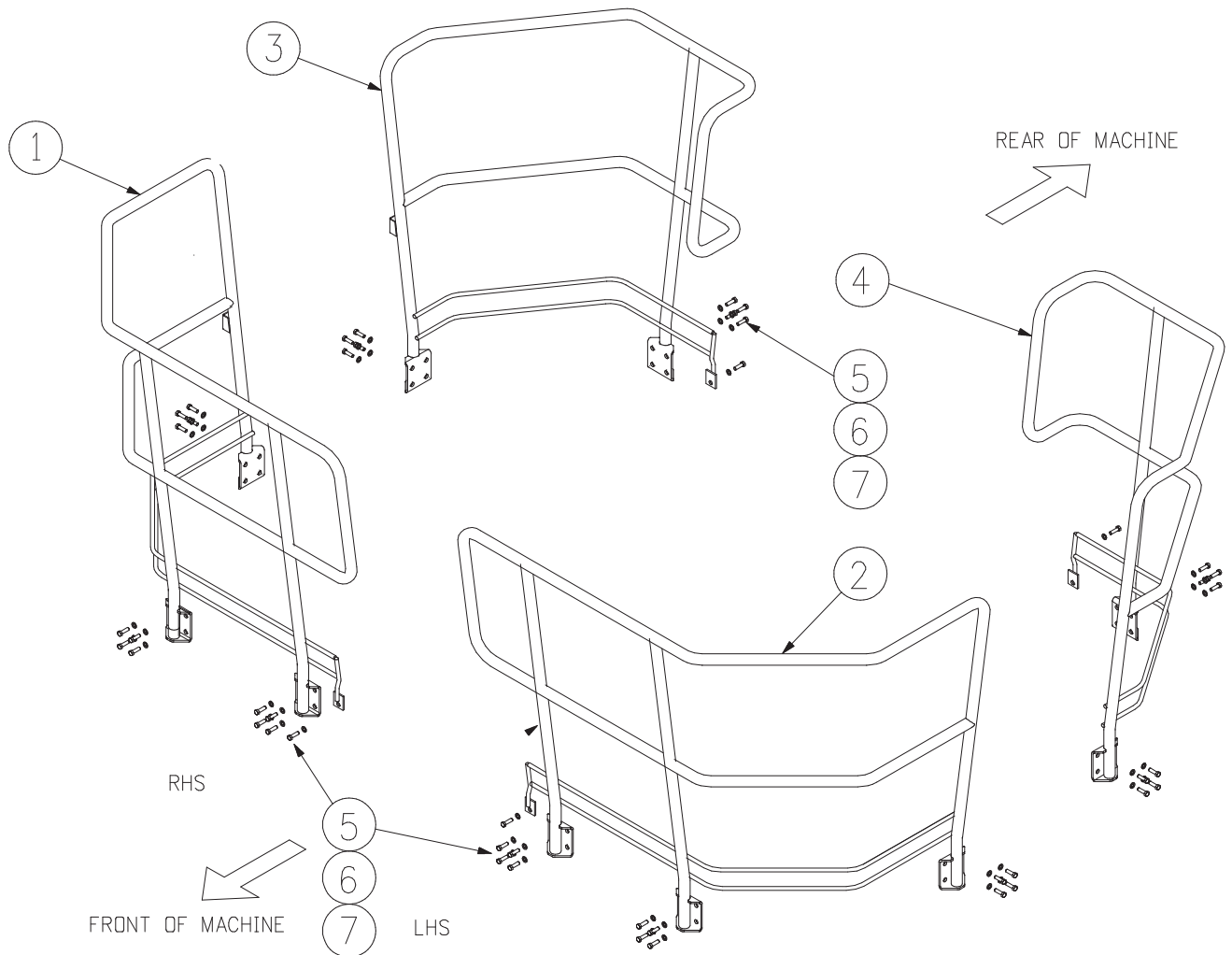
Item	Part No.	Part Name	Qty		
1	PS-23585	EMERGENCY LADDER	1		
2	PS-23854	CATCH ROD ASSEMBLY	1		
2A	PS-23854-99	CATCH MOUNTING	1		
3	PS-S245	BUSH- S245	4		
4	PS-1066553	BUFFER-RUBBER MACKAY M12402055	4		
5	CPS-M12X130ZP	BOLT-M12 x 130	2		
6	CPS-M12NN	NUT-NYLOC-M12	4		
7	CPS-M12WH	WASHER-M12	4		
8	CPS-M10WH	WASHER-HARDENED-10MM	4		
9	CPS-M10 DOMENUT	DOME NUT	4		
10	PS-19002	"D" SHACKLE	2		
11	CPS-ROPE-4MM	ROPE 4mm - 4 Meters	1		

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Caterpillar 24H Grader



Section 4-4 Handrails



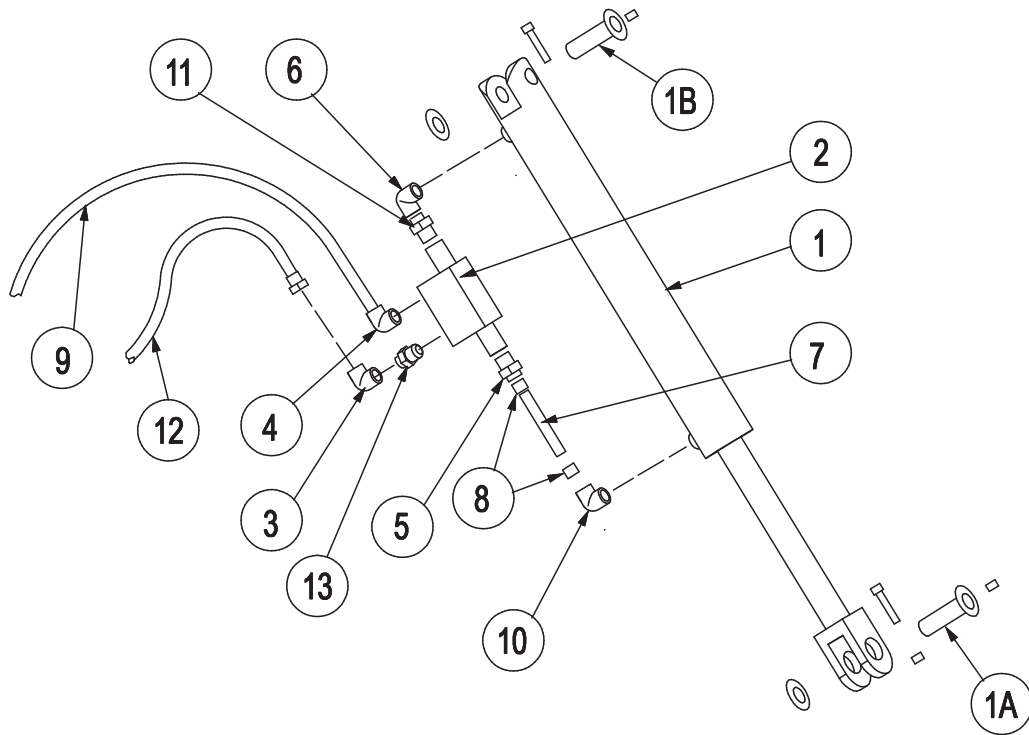
Item	Part No.	Part Name	Qty		
1	PS-23583-99	HANDRAIL-FRONT-RIGHT	1		
2	PS-23582-99	HANDRAIL-FRONT-LEFT	1		
3	PS-23583-98	HANDRAIL-REAR-RIGHT	1		
4	PS-23582-98	HANDRAIL-REAR-LEFT	1		
5	CPS-M12X30ZP	BOLT-M12 x 30	44		
6	CPS-M12NZP	NUT-M12	44		
7	CPS-M12WH	WASHER-M12	88		

FOLDING LADDER

Caterpillar 24H Grader



Section 4-5 Hydraulic Cylinder



PS-63011-HPK HARD PLUMBING KIT (Items 2-8 and 10-13)

Item	Part No.	Part Name	Qty		
1	PS-63011A	HYDRAULIC CYLINDER 9/16"UNO PORTS	1		
-	PS-63011-SK	SEAL KIT (NOT SHOWN)	1		
1A	PS-22468-01	PIN-ROD END (Incl. Washer Grease nipple & Bolt)	1		
1B	PS-22468-02	PIN-CYL END (Incl. Washer Grease nipple & Bolt)	1		
2	PS-63201	VALVE - PILOT OPERATED LOCKING	1		
3	PS-61151	FITTING - ELBOW-7/16" 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-61152-0.040"	FITTING - 0.040" RESTRICTION 90 DEG	1		
7	PS-61160-140MM	TUBE -140MM (Cut to size to fit)	2		
8	PS-61147	FERRULES	2		
9	PS-60051-3.5M	HOSE- HYDR. (9/6"JIC SWIVEL FITTING 3.5M)	1		
10	PS-61152-0.030"	FITTING - 0.03" RESTRICTION 90 DEG	1		
11	PS-61145	FITTING 9/16 JIC SWIVEL	1		
12	PS-60050-3.5M	HOSE- HYDR. (7/6"JIC SWIVEL FITTING 3.5M)	1		
13	PS-61153	FITTING - O RING 1/4"BSPPx 7/16"JIC	1		

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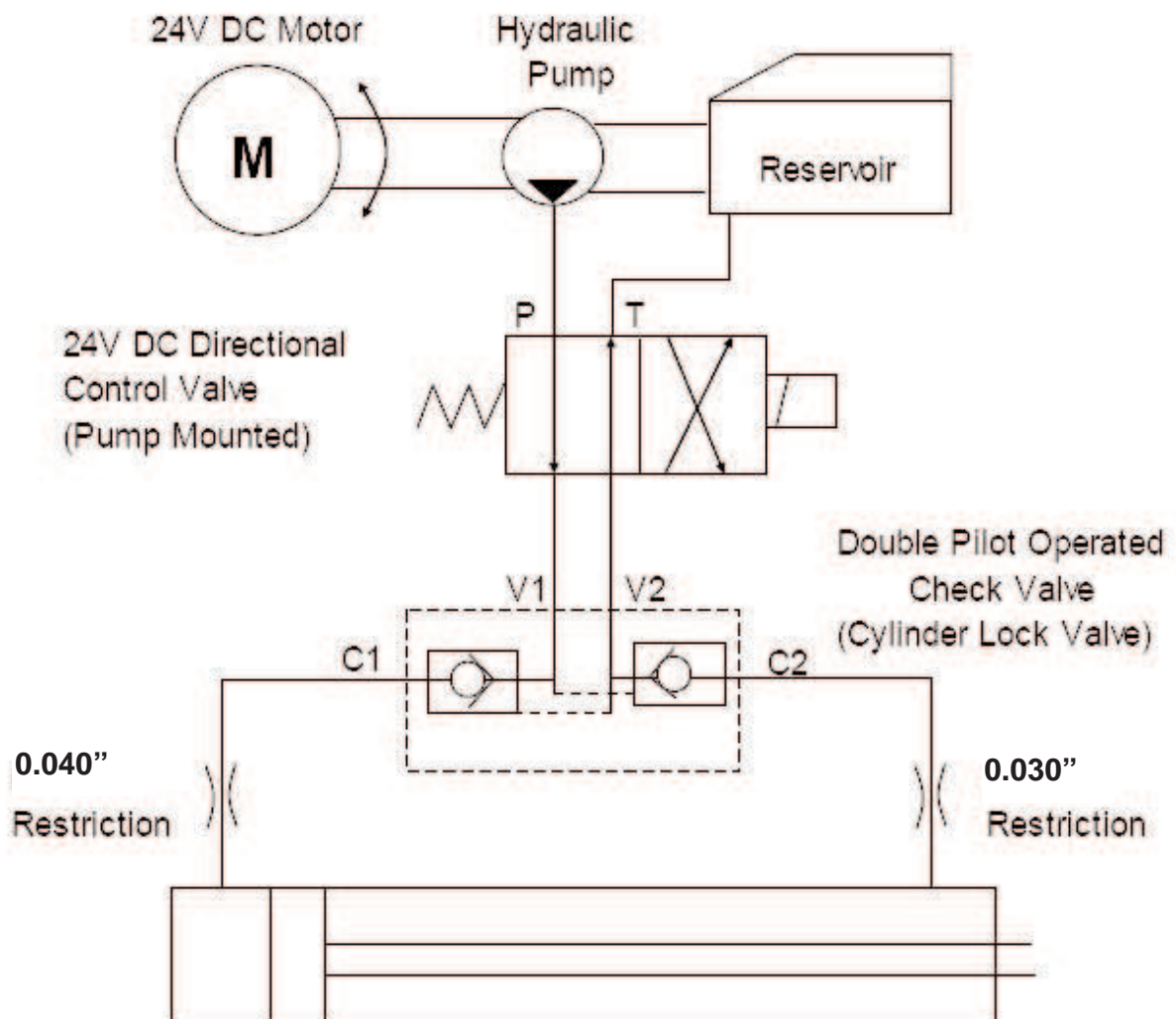
Caterpillar 24H Grader



Section 4-5 Hydraulic Cylinder - (Valve Diagram)

See also Drawing Page 18

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



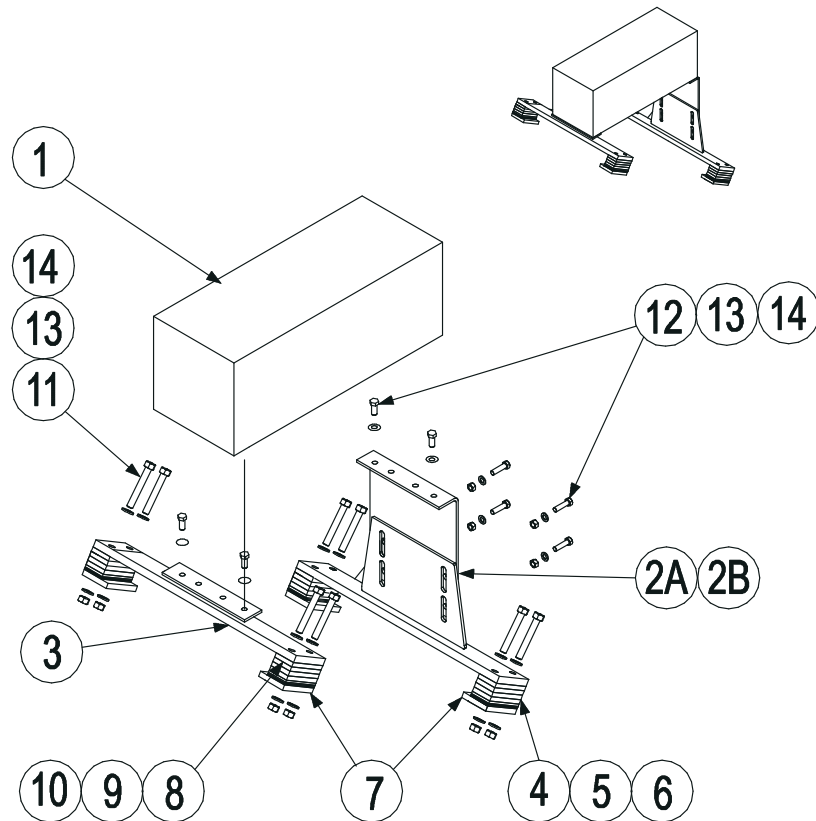
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Section 4-6 Power Pack Enclosure & Mounting

See also Installation Pg.7 View 2



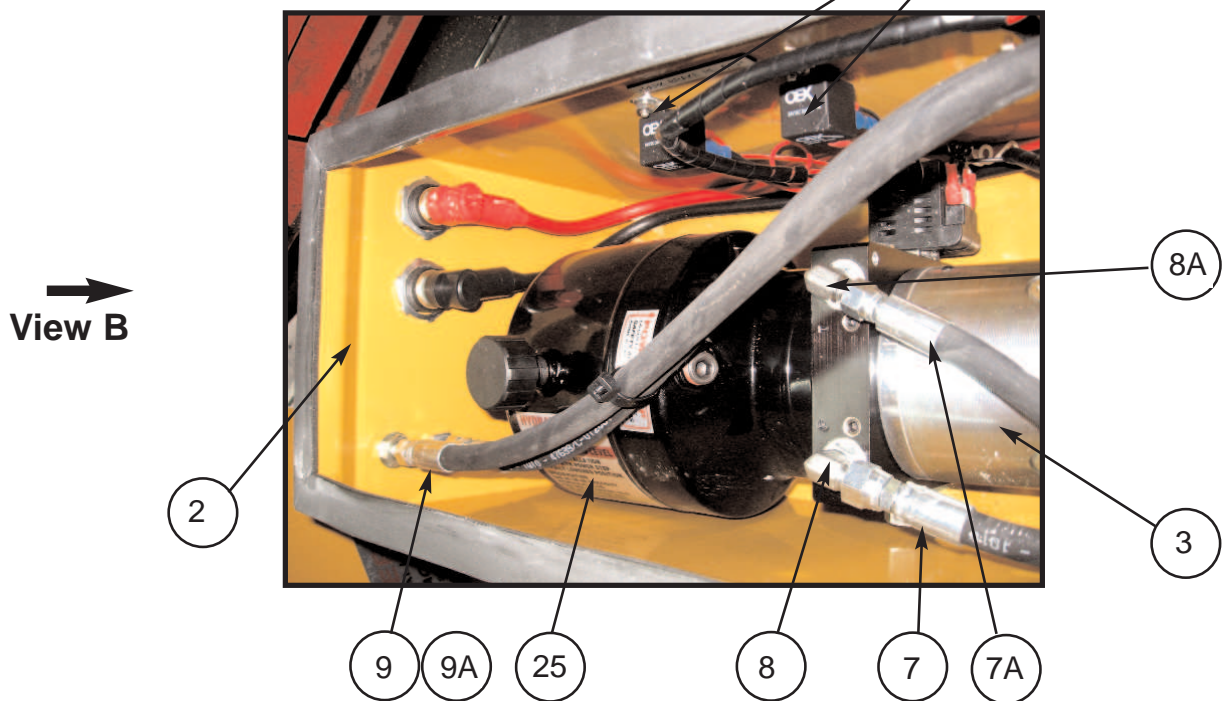
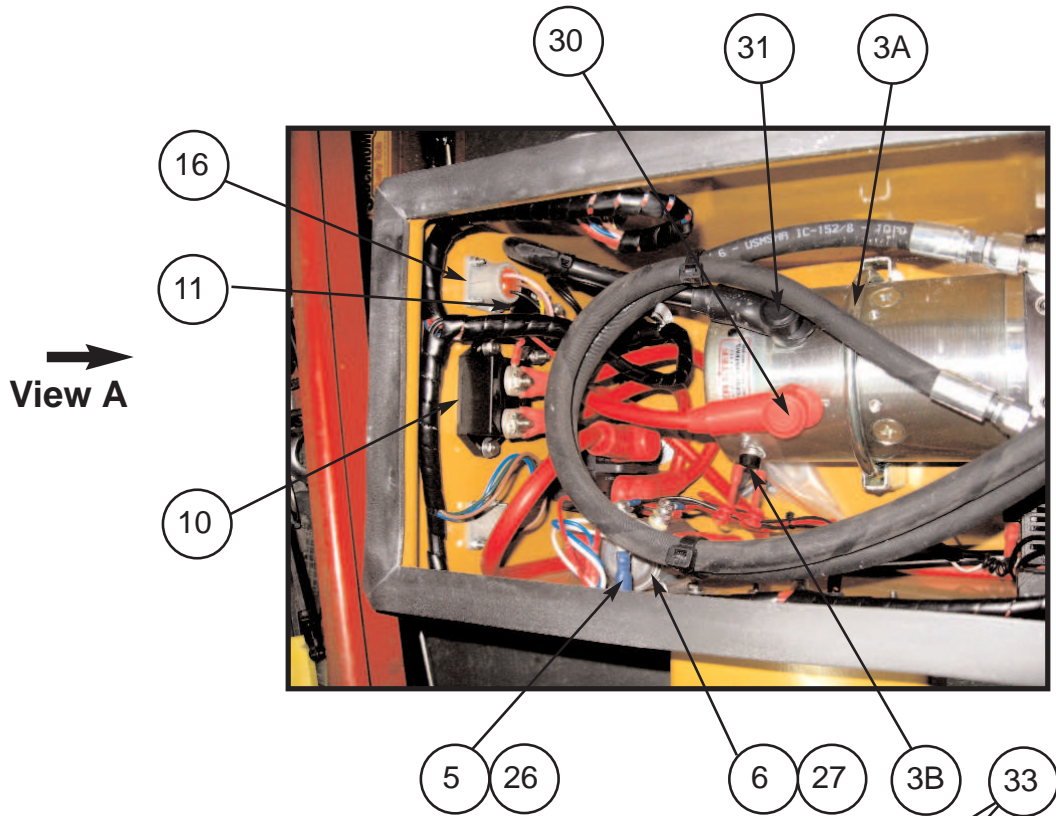
Item	Part No.	Part Name	Qty		
1	PS-80103A-SLD-24H/M	POWER PACK (See also page 31)	1		
2A	PS-23596	MOTOR UNIT MOUNTING-REAR	1		
2B	PS-23594	REAR SEAT	1		
3	PS-23595	MOTOR UNIT MOUNTING-FRONT	1		
4	PS-23593-03	SPACER-10mm	8		
5	PS-23593-04	SPACER-5mm	2		
6	PS-23593-05	SPACER-2mm	4		
7	PS-23593-06	CLAMP BAR	4		
8	PS-23593-07	SPACER-10mm	8		
9	PS-23593-08	SPACER-5mm	2		
10	PS-23593-09	SPACER-2mm	4		
11	PS-M12X175	THREADED ROD-M12 x 175	8		
12	PS-M12X30ZP	BOLT-M12 x 30	8		
13	CPS-M12NZP	NUT-M12	16		
14	CPS-M12WH	WASHER-M12	32		

FOLDING STAIRWAY

Caterpillar 24H Grader

Section 4-6 Power Pack PS-80103A-SLD-24H/M

See Parts List Pg 24



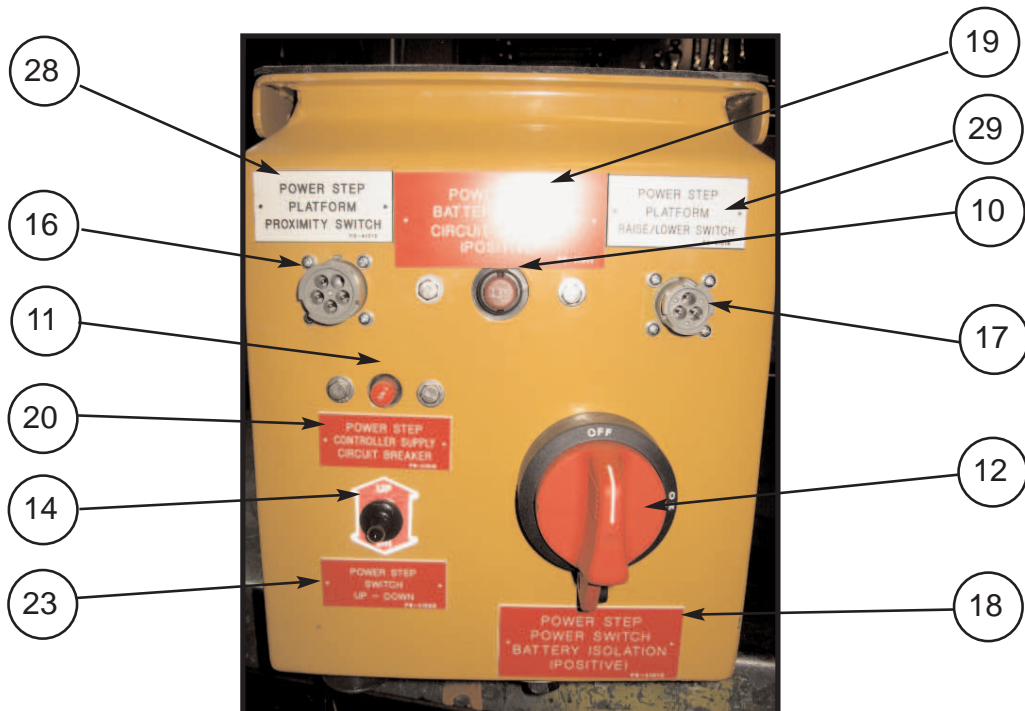
FOLDING STAIRWAY

Caterpillar 24H Grader

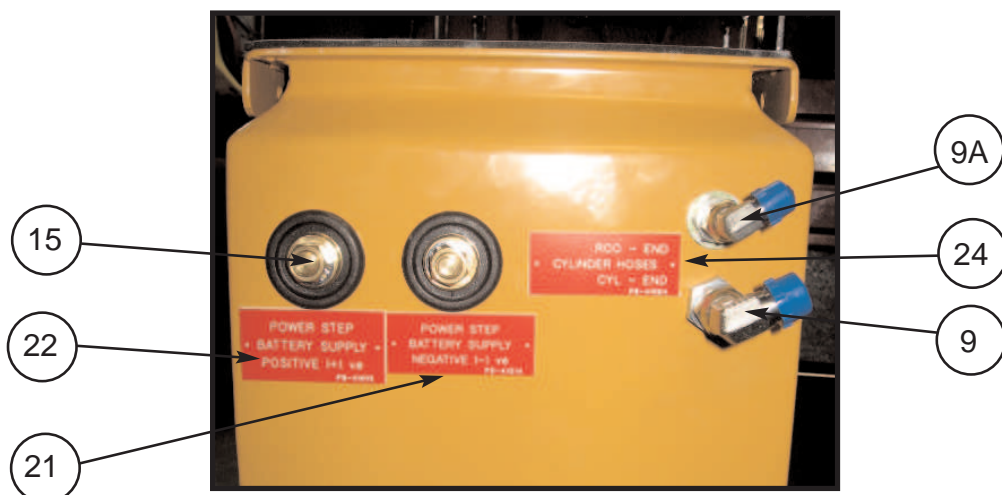


Section 4-6 Power Pack PS-80103A-SLD-24H/M

See Parts List Pg 24



View A



View B

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

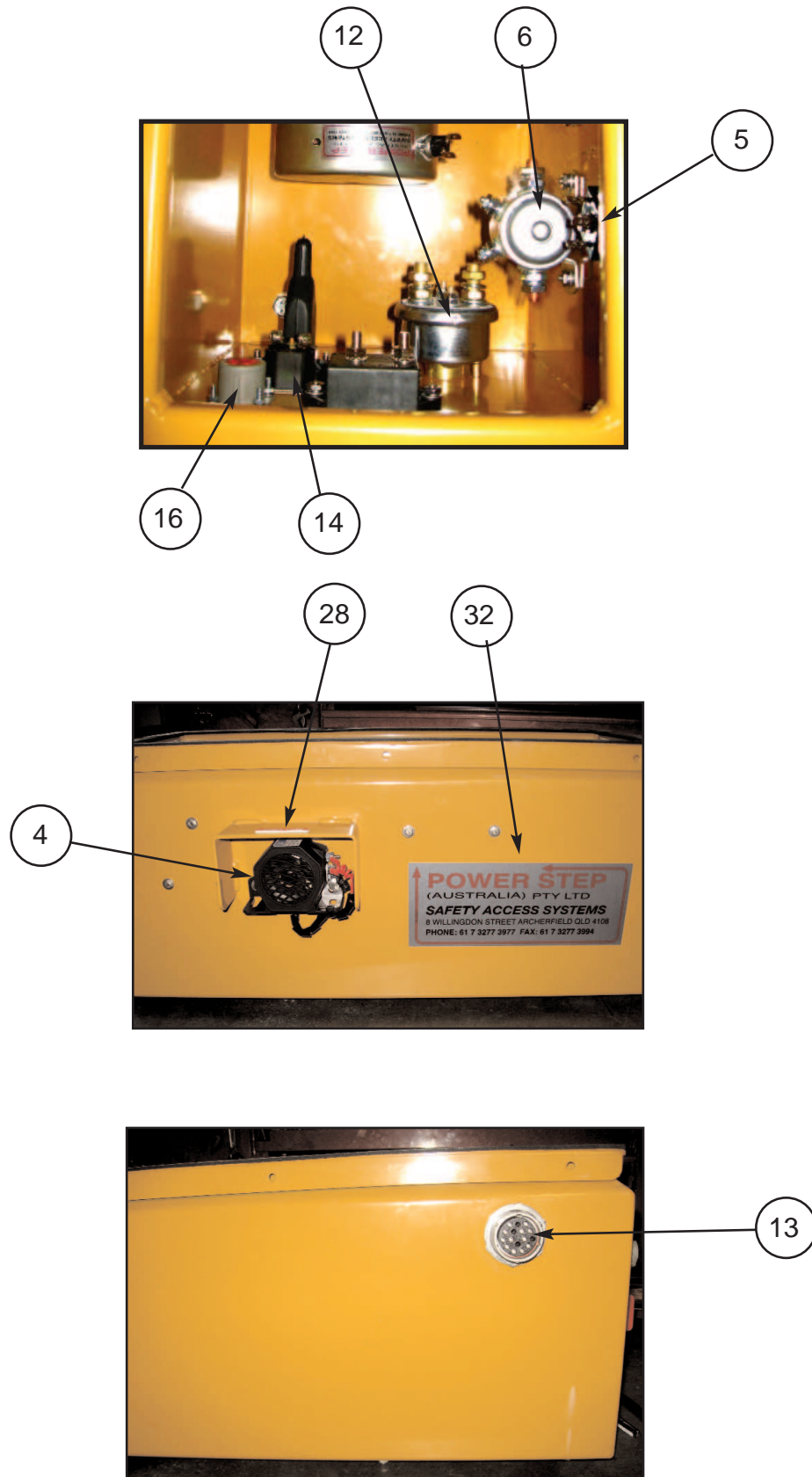
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Caterpillar 24H Grader



Section 4-6 Power Pack PS-80103A-SLD-24H/M

See Parts List Pg 24



FOLDING LADDER

Caterpillar 24H Grader



Section 4-6 Power Pack PS-80103A-SLD-24H/M

See Photos Page 21,22 and 23.

Item	Part No.	Part Name	Qty		
1	PS-80103A-SLD	POWER PACK ASSEMBLY (Incl. Items 2 to 33)	1		
2	PS-21107-METAL	MOTOR ENCLOSURE- SEALED	1		
3	PS-80103A	POWER PACK	1		
3A	PS-80103-CLAMP	CLAMP ELECTRIC MOTOR-POWER PACK	1		
3B	PS-84201-100	HEAT SENSOR	1		
4	PS-82415	AUDIBLE ALARM	1		
5	PS-84214	BRIDGE RECTIFIER	1		
6	PS-82492	SOLENOID 24V START MOTOR	1		
7	PS-60051-900MM 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" JIC.	1		
8A	PS-61150	HYDRAULIC FITTING 7/16" JIC.	1		
9	PS-61177	HYDRAULIC FITTING 9/16" JIC.	1		
9A	PS-61176	HYDRAULIC FITTING 7/16" JIC.	1		
10	PS-84213	135A CIRCUIT BREAKER	1		
11	PS-84212	5A CIRCUIT BREAKER	1		
12	PS-84303	ISOLATION SWITCH - (INCLUDING BRACKET)	1		
13	PS-HD34-24-16SN	16 PIN PLUG	1		
14	PS-73012	TOGGLE SWITCH KIT	1		
15	PS-82493	BATTERY FEED STUDS	2		
16	PS-HD10-5-16P	5 PIN SOCKET	1		
17	PS-HD10-3-16P	3 PIN SOCKET	1		
18	PS-41010	DECAL ELECTRICAL	1		
19	PS-41011	DECAL ELECTRICAL	1		
20	PS-41012	DECAL ELECTRICAL	1		
21	PS-41013	DECAL ELECTRICAL	1		
22	PS-41014	DECAL ELECTRICAL	1		
23	PS-41023	DECAL ELECTRICAL	1		
24	PS-41024	DECAL HYDRA-HOSES	1		
25	PS-41041	DECAL OIL TANK	1		
26	PS-41019	DECAL BRIDGE RECTIFIER	1		
27	PS-41017	DECAL SOLENOID	1		
28	PS-41018	DECAL PROXIMITY SWITCH	1		
29	PS-41016	DECAL RAISE/LOWER SWITCH	1		
30	PS-73010	RUBBER BOOT RED	4		
31	PS-73009	RUBBER BOOT BLACK	2		
32	PS-41022	DECAL - POWER STEP	1		
33	PS-82417	PARK BRAKE RELAY	2		
34	PS-632020	FLOW CONTROL VALVE ASSEMBLY	1		Not Shown

FOLDING LADDER

Caterpillar 24H Grader



Section 4-7 Electrical System



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Caterpillar 24H Grader



Section 4-7 Electrical System

Item	Part No.	Part Name	Qty		
1	PS-ACX0917	BLACK BATTERY CABLE 10M	1		
2	PS-ACX0918	RED BATTERY CABLE 10M	1		
3	PS-77017	GO SWITCH HARNESS	1		
4	PS-73013	HAND CONTROL	1		
5	PS-75402-24H/M	MAIN HARNESS	1		
6	PS-NC12	12MM HARNESS FLEX	1		
7	PS-NC16	16MM HARNESS FLEX	1		
8	PS-NC20	20MM HARNESS FLEX	1		
9	PS-77019	PARK BRAKE HARNESS	1		
10	PS-75051N	MAIN CONTROL BOX	1		
11	NPN	HYDRAULIC HOSE CLAMPS	1		Installation Only
12	NPN	MANUALS AND CD	1		Installation Only
13	NPN	BATTERY LUGS AND BOOTS	1		Installation Only
14	NPN	SPARE BOLTS	3		Installation Only
15	PS-75430	PROXIMITY SWITCH	1		
16	PS-HD36-24-16PN-ASSY	HARNESS PLUG	1		
17	NPN	WIRING BUTTONS AND CLAMPS	1		Install. Kit only
18	PS-84213	135AMP C/BREAKER AND DECAL	1		
19	PS-3E7689	PARK BRAKE PRESSURE SWITCH	1		
20	PS-73013-B	HAND CONTROL BRACKET	1		with item 4
21	PS-77018	HAND CONTROL HARNESS	1		with Item 4

WARNING

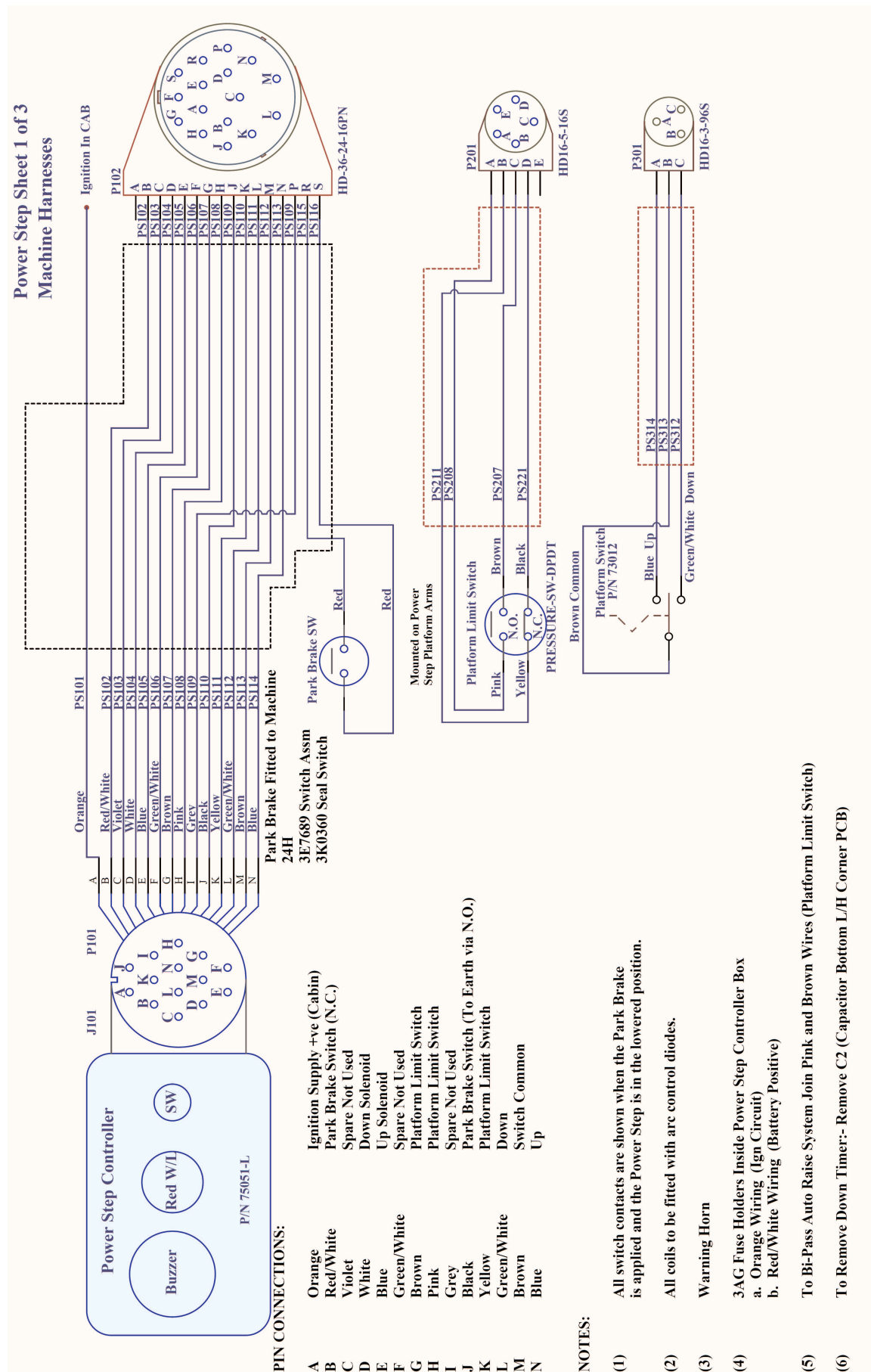
**LOW OR FAULTY BATTERIES WILL VOID
WARRANTY ON THE POWER PACK AND ALL
ELECTRICAL SWITCHES AND COMPONENTS**

FOLDING LADDER

Caterpillar 24H Grader



Section 4-7 Electrical System - Wiring Diagram 1.



POWER STEP

Section 4-7 **Power System - Wiring Diagram 2.**

Power Step Sheet 2 of 3
Motor Enclosure

Terminal Block J102 (From Main Harness):

- A: Red/White PS402
- B: White PS404
- C: Blue PS405
- D: Brown PS407
- E: Pink PS408
- F: Black PS410
- G: Yellow PS411
- H: Green/White PS412
- I: Brown PS413
- J: Blue PS414
- K: Red PS415
- L: Red PS416
- M: Red PS417
- N: Red PS418
- O: Red PS419

Terminal Block J201 (To Platform Limit Switch):

- A: Pink PS408
- B: Yellow PS411
- C: Brown PS407
- D: Black PS421
- E: Blue PS414

Terminal Block J301 (To Platform Raise/Lower Switch):

- A: Brown PS413
- B: Green/White PS412
- C: Blue PS414

Components and Connections:

- RLY1 (Rly P/N ACX1943D):** 30, 87A, 86, 85
- RLY2 (Rly P/N ACX1943D):** 30, 87A, 86, 85
- MANUAL-ISOL (P/N 84303):** Motor-SOL P/N 82402
- Thermal Cut Out Switch 70 Deg (P/N 84201):** N.C.
- MOTOR (P/N 82405):** 135 Amp CB P/N 84213
- Diode Assy (P/N 1N4007):** HVD-SOL P/N 82429
- Bridge Rectifier (P/N 84214):** AC
- Horn Mounted on Motor Enclosure (P/N 82415):** AC
- 12V BATT:** Machine MANUAL-ISOL
- 5 Amp CB (P/N 84212):** Red

Used for Signal Direction Only

FOLDING LADDER

Caterpillar 24H Grader



Section 4-7 Electrical System - Parts List

Power Step Sheet 3 of 3 Parts List

Item	Part Number	Quantity	Description
1	PS-73012	1	Platform Switch (Kit)
2	PS-75051-L	1	Controller
3	PS-75430	1	Platform Limit Switch
4	PS-82402	1	Motor Solenoid
5	PS-82405	1	Pump Motor
6	PS-82415	1	Horn
7	PS-82429	1	Hydraulic Solenoid
8	PS-84201	1	Thermal Cut Out
9	PS-84212	1	5 Amp Circuit Breaker
10	PS-84213	1	135 Amp Circuit Breaker
11	PS-84214	1	Bridge Rectifier
12	PS-84303	1	Power Step Master Switch
Park Brake Switch			
13	A 16 H/G Air Pressure	1	Pressure Switch - 16H Motor Grader
15	PS-82417	2	Change Over Relay
13	B 24H Hydraulic Pressure PS-3E7689	1	Pressure Switch - 24H Motor Grader
14	PS-3K0360	1	Seals and O-Ring
15	PS-82417	2	Change Over Relay
13	C Caterpillar Track Type Tractor PS-3E7689	1	Pressure Switch - Caterpillar Track Type Tractor
14	PS-3K0360	1	Seals and O-Ring
15	PS-82417	2	Change Over Relay

Pressure Switch Connections

PS-85433

Pin 1 Common

Pin 2 N.C.

Pin 4 N.O.

PS-3E7689

Pin A Common

Pin C N.C.

Pin B N.O.