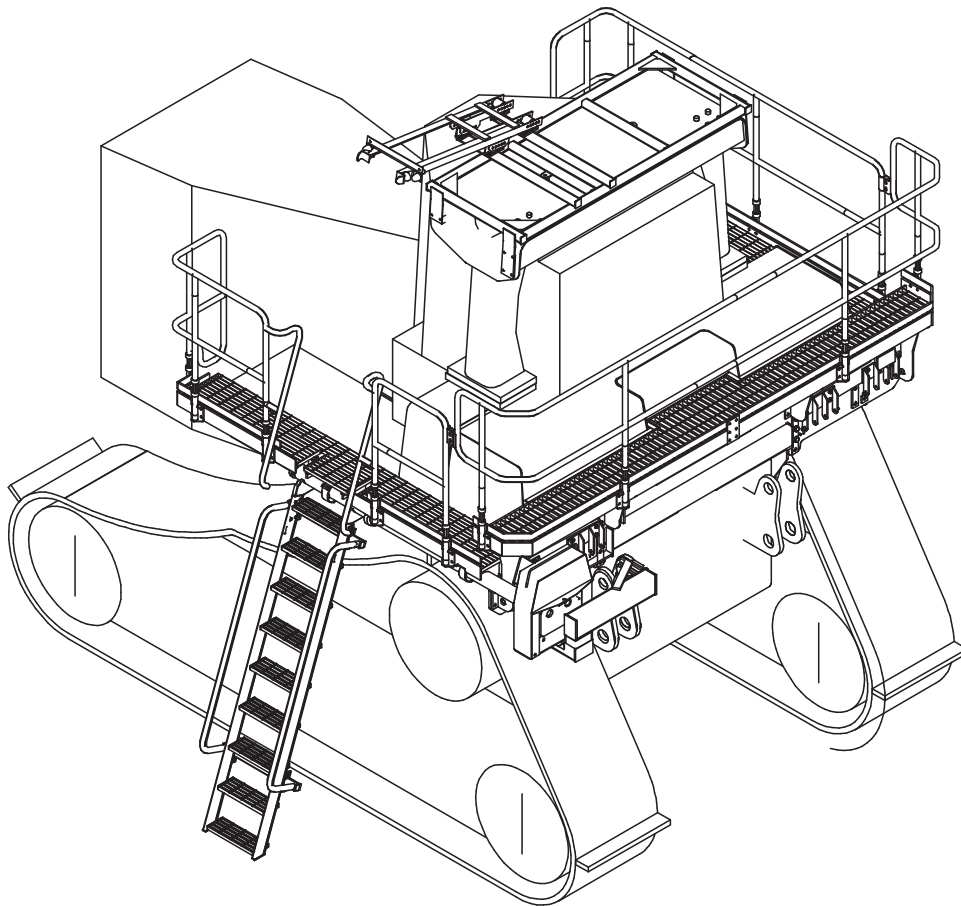




FOLDING LADDER

Manual for Cat D10R Dozer
Complete with Wrap-around Walkways



Model No.: PSA-D10R FL+RHWW
Serial No.: LD10RW-001 - ~
Date Manufactured: Oct 2006

FOLDING LADDER

Caterpillar D10R Dozer



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	Material Kit Supplied

FOLDING LADDER

Caterpillar D10R Dozer



NOTE

Follow all on-site/Mine lifting and safety procedures when installing Power Step Ladder System to the Dozer.

Section 1

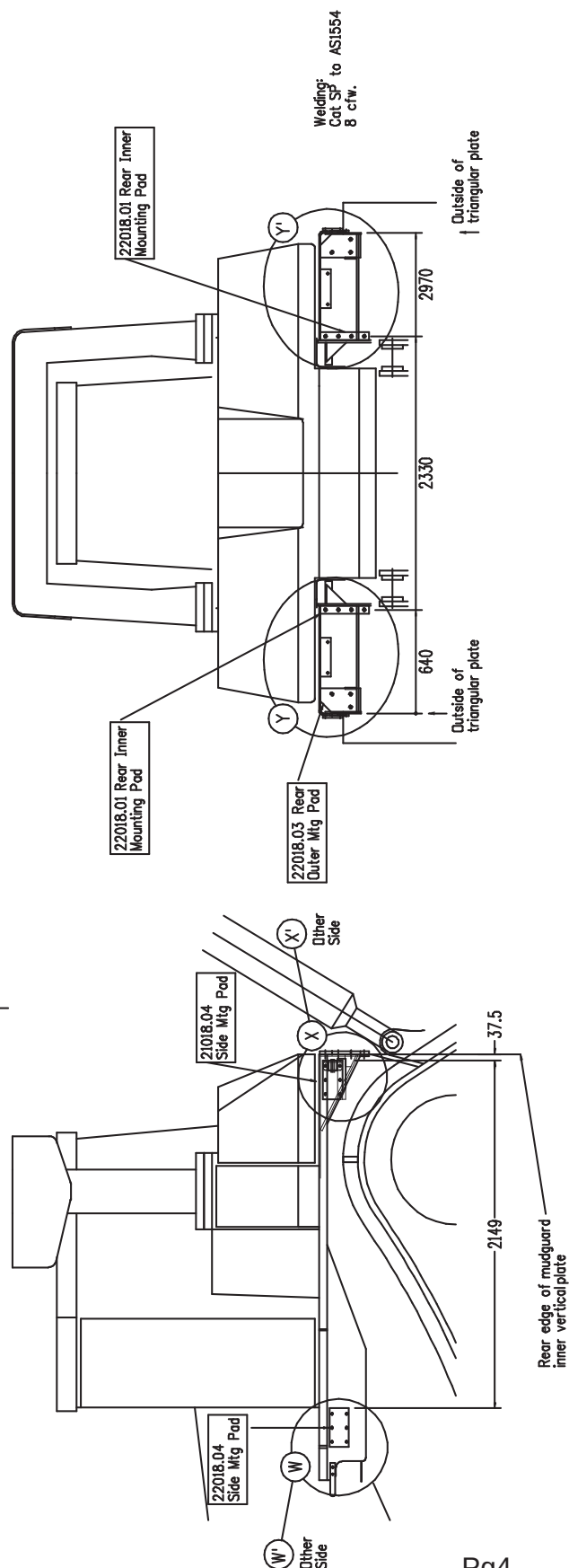
Installation and Mounting Instructions

See Drawing 22 053 (Page 4)

1. Remove grille plates from the rear of both mudguards. Remove the light and/or horn from the rear of the left-side mudguard. Draw out wiring for future re-use.
2. Weld the Mounting Pads to the rear of the mudguards:
against the mudguard vertical inner plate and up against the mudguard top plate (notch the inclined plate to suit to get the correct protrusion dimension), and at the outer top corner of the mudguards, this time set against the mudguard plates rather than in the corner. Fit the gusset piece to tie the Pad to the inclined plate.
3. Measure forward from the back edges of the mudguard plates and down from the top surface of the mudguard tops (mudguard plate/s not any added non-slip decking) to locate the side mounting pads. Weld these mounting pads in position.

Welding: Cat SP to AS1554
8 cfw

POWER STEP

[illegible]

FOLDING LADDER

Caterpillar D10R Dozer



Section 1 Installation Instruction Drawings - 22 054

See Drawings 22 054 - Page 6 & 7

Procedure

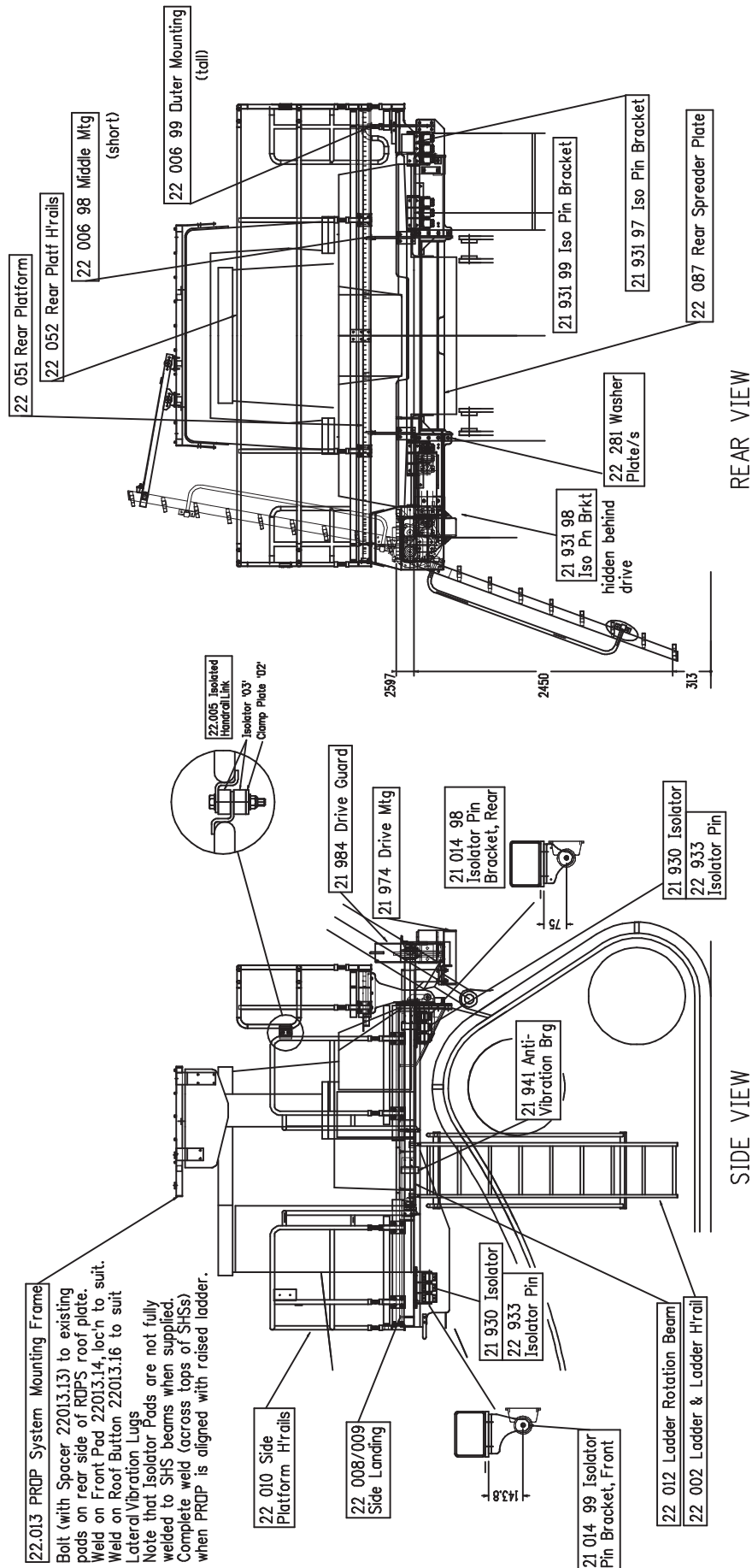
1. Fit Mounting Blocks per Drg 22 053
2. Per REAR VIEW: Fit Spreader Plate 22 287 to rear mounting blocks. Use Washer Plates 22.281 and washers under bolt heads.
3. Per VIEW 4A & 4B, Isolators: Fit Isolators 21 930 to Rear Spreader Plate. (See also REAR VIEW). Per SIDE VIEW also fit Isolators 21 930 to Side Mounting Pads. On left side fit Side Landing 22 017 with Ladder Shaft and Drive already assembled, supported by Isolators. Fit Isolator Pin Bracket/s to arm at rear of landing beam with pin to provide torsional restraint. Similarly fit Side Landing 22 016 on right side. Note that there are two patterns of Isolator Pin Bracket bolted under the beams of the Side Landings, 22 014 98 (shallow) at the rear and 22 014 99 (deep) at the front. Both are orientated so the hole for the isolator pin is close to the machine rather than away from the machine.
4. Fit Ladder. Using Spacers (within Actuator Cylinder Mounting 21 954), adjust drive so gears are not loaded when ladder is lowered.
5. Per SIDE VIEW, REAR VIEW and VIEW 5, PROP System:
Attach PROP System Mounting Frame 22 0013 atop cabin, on ROPS unless similar is already fitted by customer. Mount PROP 21 945 using middle holes (of set of 5). Try Ladder with PROP. Ladder and PROP must align (longways with machine). Adjust position of isolator mounting pads on frame if necessary then weld pads to frame with 6cfw across top of frame rhs member ie where visible from above. Adjust position of PROP (using choice of holes in set of 5) so ladder lies against buffers when fully raised without loading the drive gears ie, with light manual effort the ladder can be moved away from the buffers.
6. Per PLAN/SIDE/REAR VIEWS, fit Rear Walkway 22 051 & Handrails.

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Caterpillar D10R Dozer



Section 1 Installation Instruction Drawings - 22 054 Pg 1

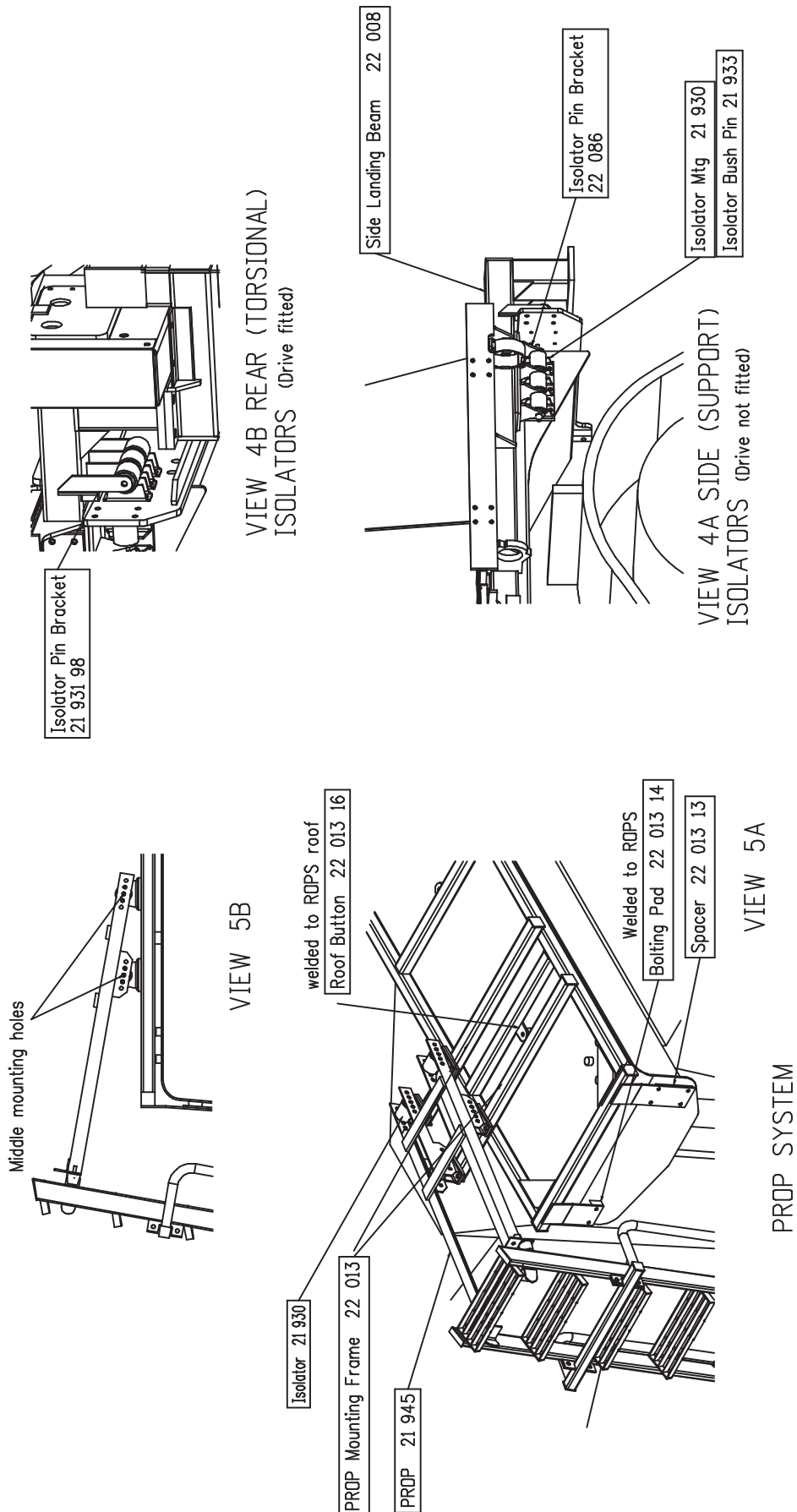


FOLDING LADDER

Caterpillar D10R Dozer



Section 1 Installation Instruction Drawings - 22 054 Pg2

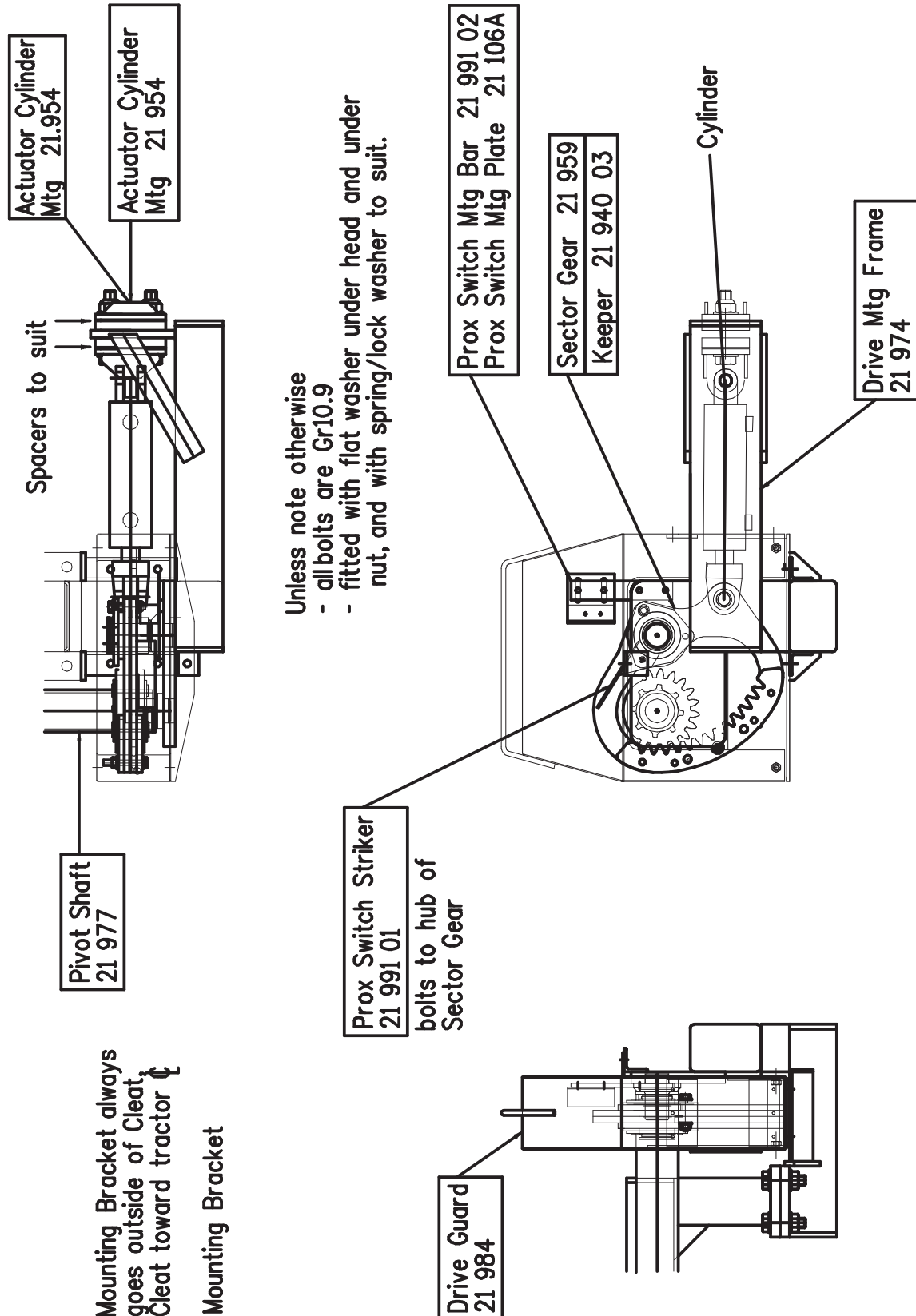


FOLDING LADDER

Caterpillar D10R Dozer



Section 1 Drive Arrangement - 22 054 Pg 3



DRIVE ARRANGEMENT

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Caterpillar D10R Dozer



Section 1 Installation and Mounting Instructions (cont.)

Maintenance Notes

NOTE

Follow all on-site/Mine lifting and safety procedures when installing Power Step Ladder System to the Dozer.

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

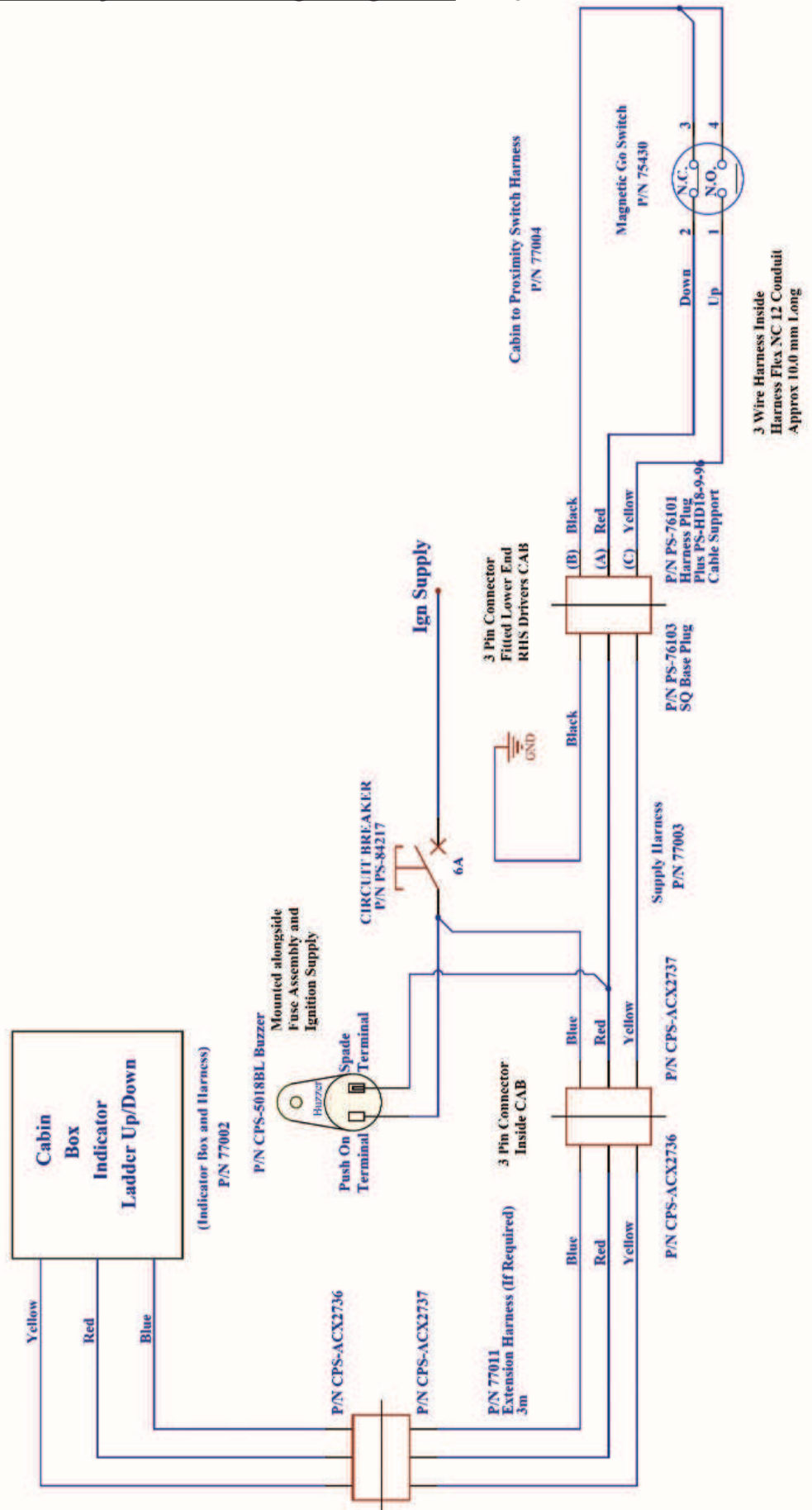
Caterpillar D10R Dozer



Section 2 Electrical System - Wiring Diagrams Page 1

0201-02
Sheet 1

LADDER UP/DOWN



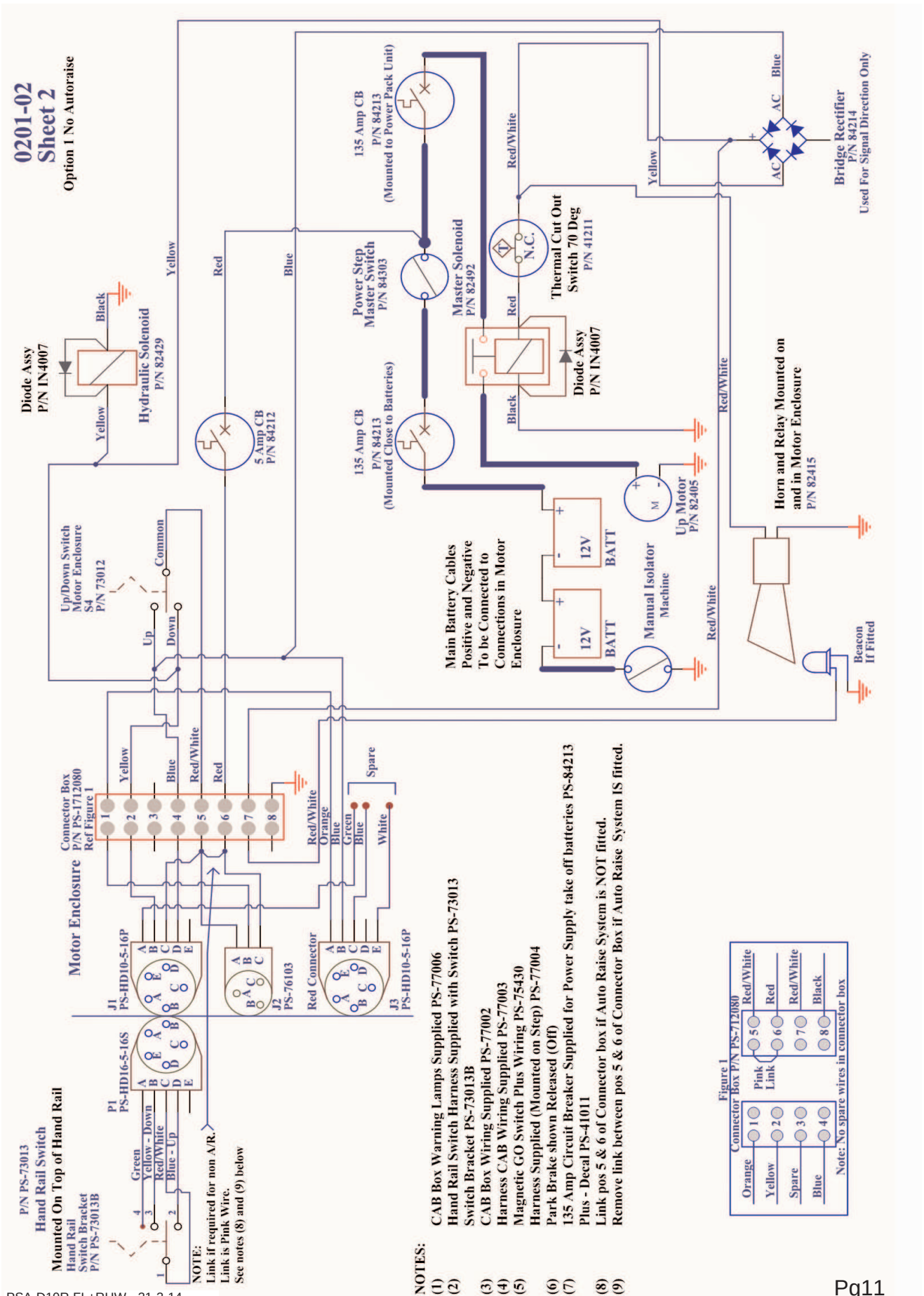
FOLDING LADDER Caterpillar D10R Dozer



Section 2 Electrical System - Wiring Diagrams

Page 2

Non Auto-Raise



FOLDING LADDER Caterpillar D10R Dozer



Section 2 Electrical System - Wiring Diagrams

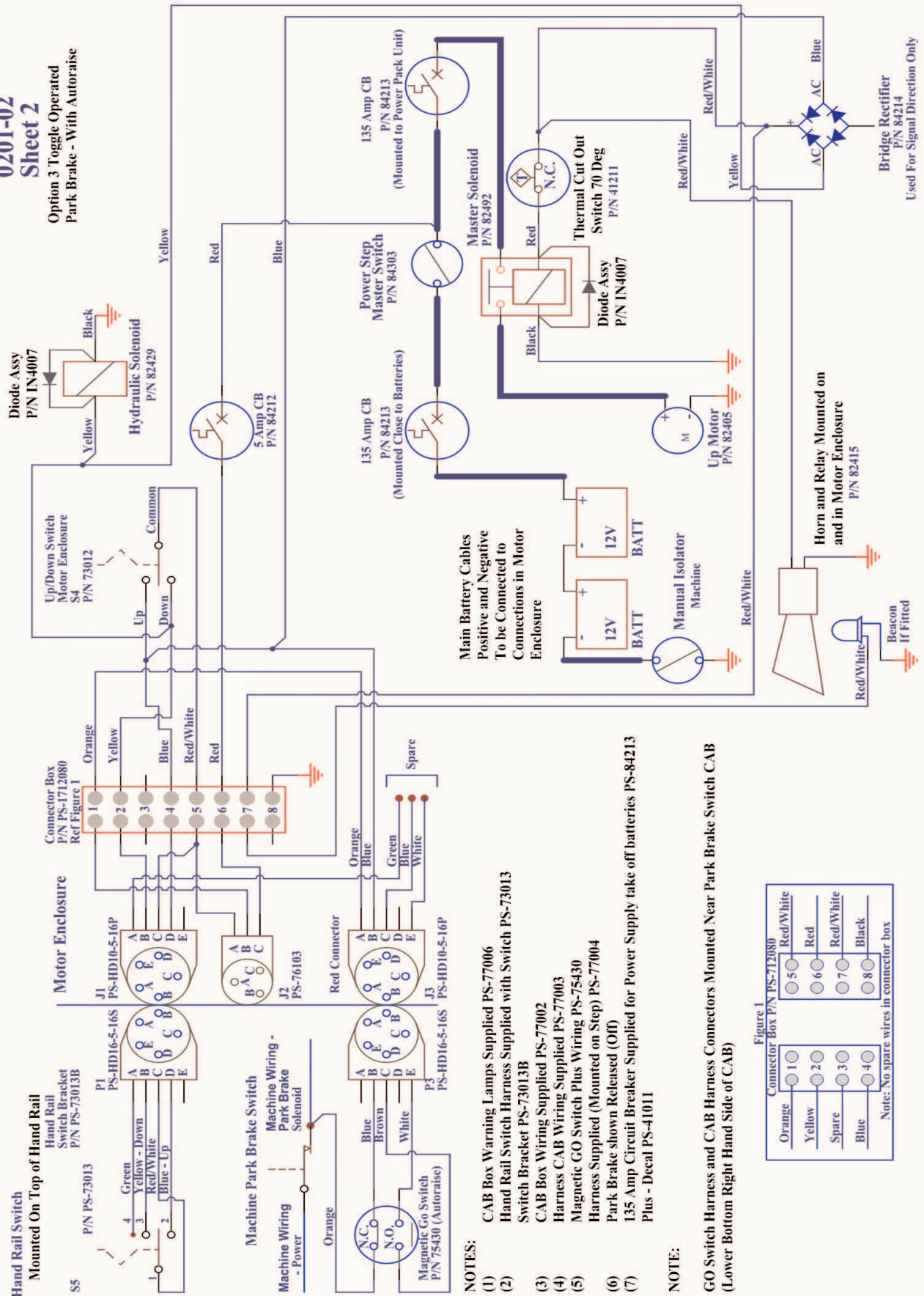
Page 3

Auto-Raise

Toggle Switch Operated

0201-02
Sheet 2

Option 3 Toggle Operated
Park Brake - With Autoraise



FOLDING LADDER

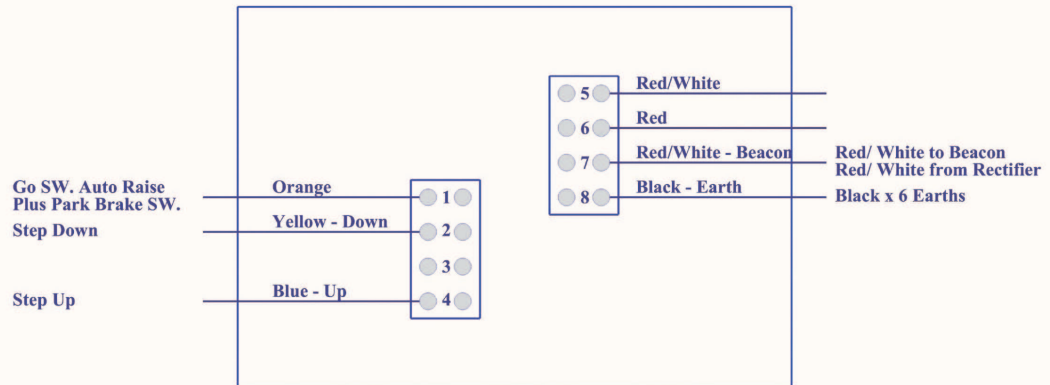
Caterpillar D10R Dozer



Section 2 Electrical System - Wiring Diagrams Page 4

0201-02
Sheet 5

WIRING HARNESS 1



Park Brake Harness - P/No 77006-PB

<u>Plug Term</u>	<u>Colour</u>		<u>Terminal ID.</u>	
(C)	Red	-	COM	Length 10m (Harness Flex No 12)
(A)	Red/White	-	N.C.	
(B)	Orrange	-	N.O.	

Go Switch Harness (Auto Raise) P/No 77009-AR

<u>Plug Term</u>	<u>Colour</u>		<u>Terminal ID.</u>	
(B)	Blue	-	No. 1 Terminal N.C. Contact	Length 10m (Harness Flex No 12)
(E)	White (Spare)	-	No. 2 Terminal N.O. Contact	
(A)	Orange	-	No. 3 Terminal N.C. Contact	
(C)	Brown (Spare)	-	No. 4 Terminal N.O. Contact	

Go Switch Harness (Cabin to Go Switch) P/No 77004 (Cabin Indicator Ladder Up/Down)

<u>Plug Term</u>	<u>Colour</u>		<u>Terminal ID.</u>	
(B)	Black	-	No. 1 Terminal N.C. Contact	Length 10m (Harness Flex No 12)
(B)	Black	-	No. 2 Terminal N.O. Contact	
(Bridge No. 1 and No. 2 in Go Switch)				
(A)	Red	-	No. 3 Terminal N.C. Contact	
(C)	Yellow	-	No. 4 Terminal N.O. Contact	

Hand Rail Switch Harness (P/No 77010) (Handrail SW to Power Pack Box)

<u>Plug Term</u>	<u>Colour</u>		<u>SW Contacts</u>		<u>Switch Terminal No.</u>	
(C)	Red/White	-	No 1	-	No 5	Length 10m (Harness Flex No 12)
(D)	Blue	-	No 2	-	No 4	
(B)	Yellow	-	No 3	-	No 2	
(A)	Green	-	No 4	-		

FOLDING LADDER
Caterpillar D10R Dozer



Section 2 Electrical System - Wiring Diagrams

Page 5

WIRING HARNESS 2

0201-02
Sheet 6

Go Switch

Auto - Raise Connection

N.C.	-	Orange	-	Blue
N.O.	-	Brown	-	White (Spare)

Go Switch - Cabin Indicator

Up/Down Lights Connection

N.C.	-	Red	-	Black		Linked
N.O.	-	Yellow	-	Black		

Hand Control Switch - Mounted on Hand Rails (P/No 73013)

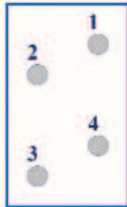
Power Step Wiring Harness (10m) and Connections Supplied

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



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Caterpillar D10R 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 the nipples on the rotation shaft and sector gears.

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.

Grease 4 grease nipples on rotation shaft and sector gears, all of these are accessible with the stairway lowered, and accessed from under the stairway.

Check and inspect all main bolts on stairway system.
Retorque if required.

Repeat daily check as above

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 LADDER

Caterpillar D10R Dozer



Section 4 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.

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 Dozer 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 Ladder

Ascend the ladder onto the landing of the Dozer.

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.

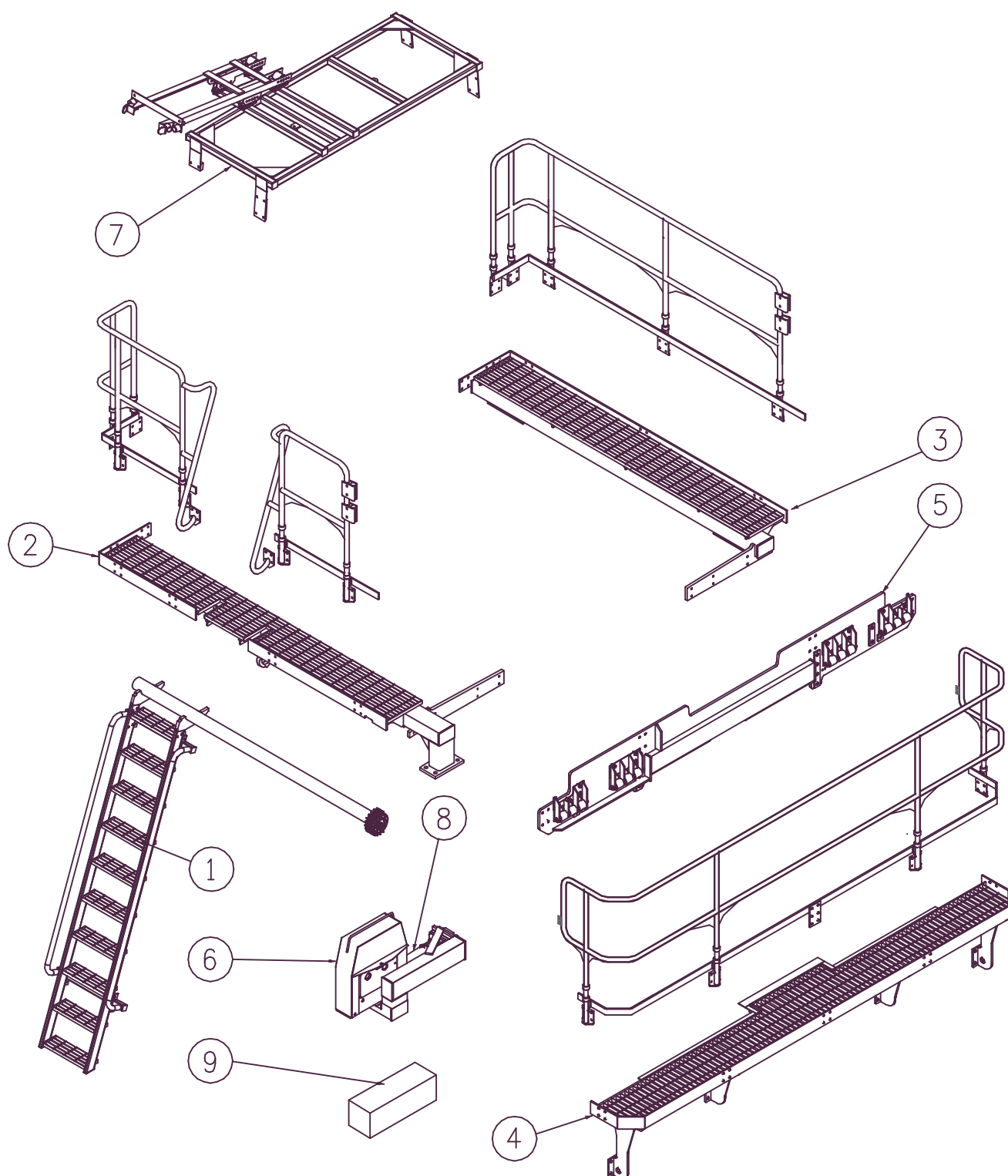
FOLDING LADDER

Caterpillar D10R Dozer



Section 5 Assembly Complete

PSA-D10R-RHW

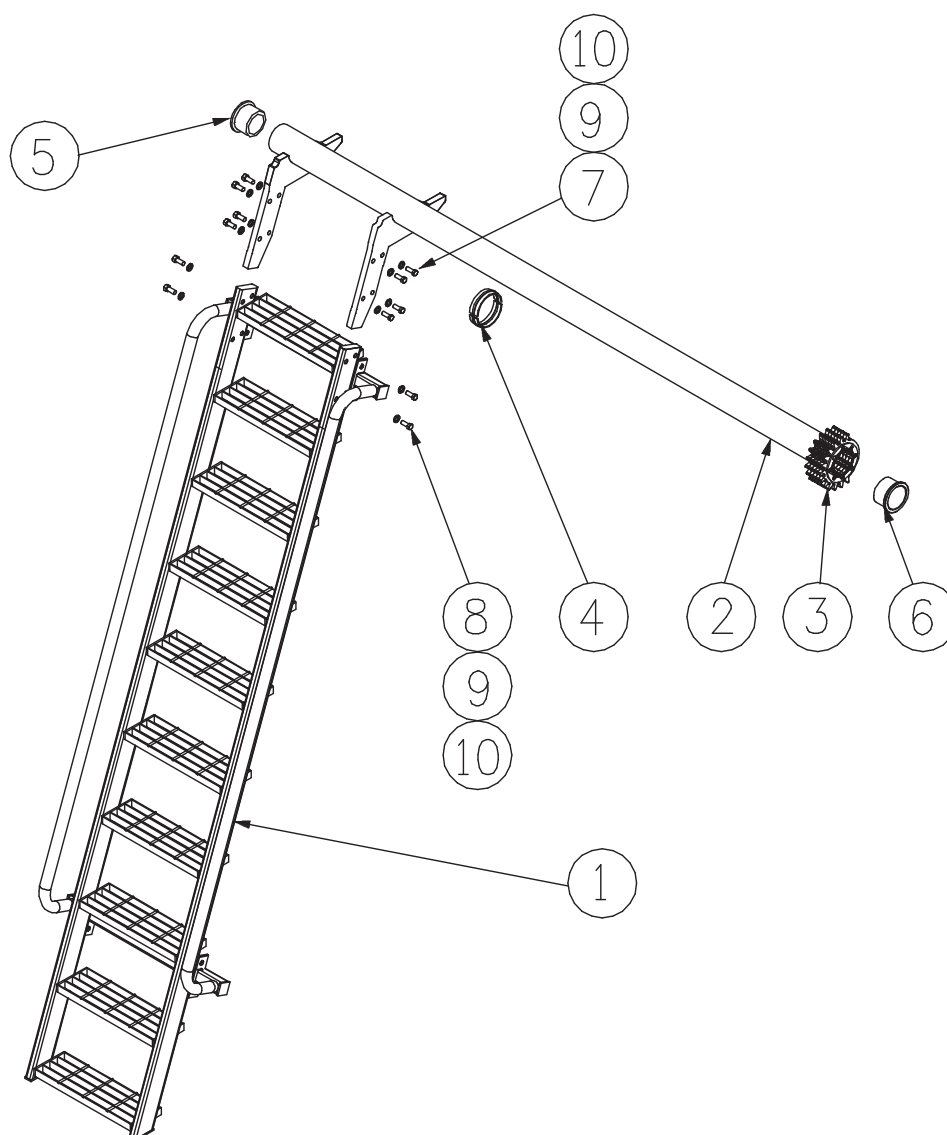


FOLDING LADDER

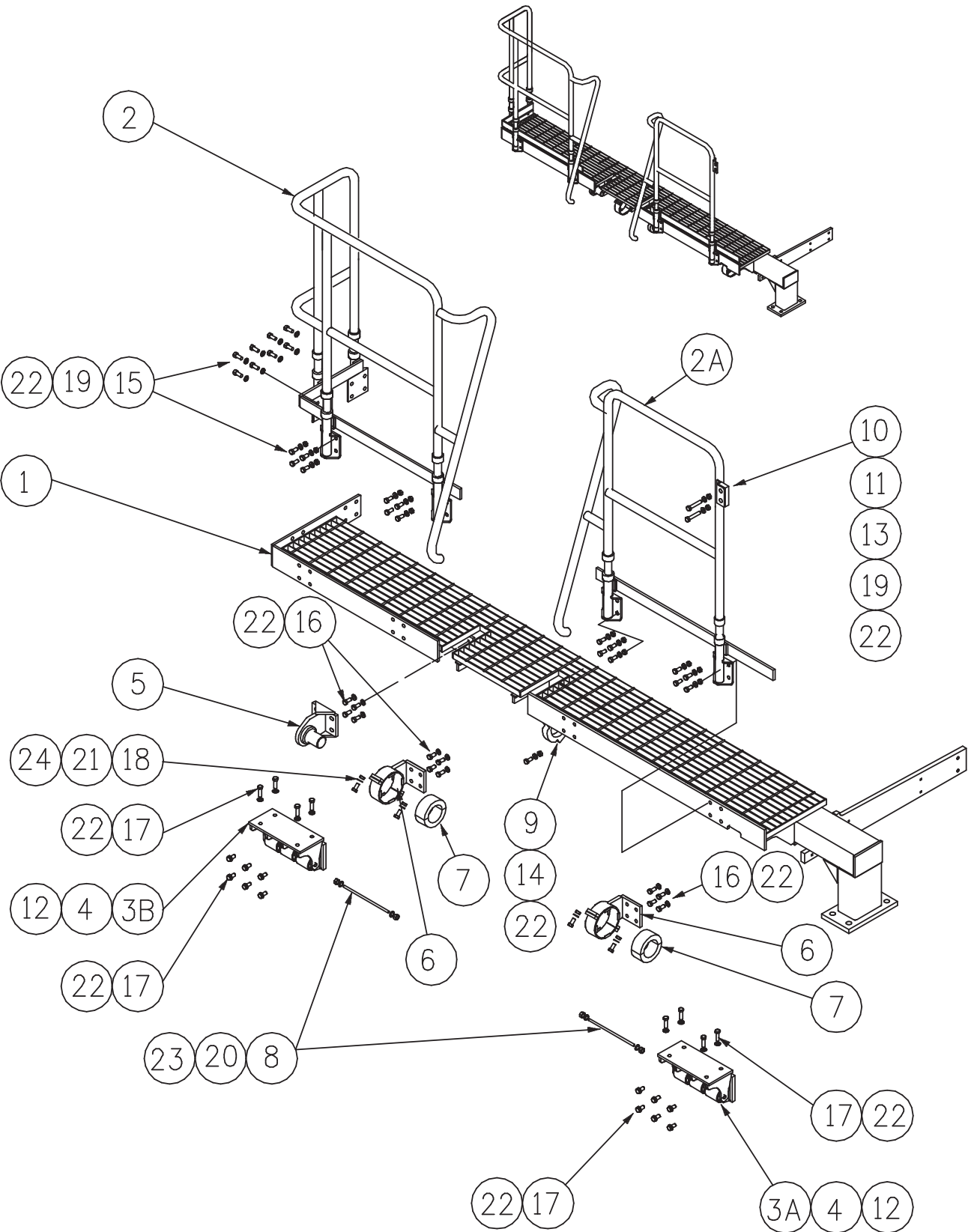
Caterpillar D10R Dozer



Section 5-1 Ladder Assembly



Item	Part No.	Part Name	Qty		
1	PS-22002	LADDER & HANDRAIL FABRICATION	1		
2	PS-22012	ROTATION SHAFT	1		
3	PS-21958	PINION & KEEPER PLATE	1	Set	
4	PS-21926-01	LADDER SHAFT PIVOT BUSH-MIDDLE	1		
5	PS-21926-02	LADDER SHAFT PIVOT BUSH-NON DRIVE END	1		
6	PS-21926-03	LADDER SHAFT PIVOT BUSH- DRIVE END	1		
7	CPS-M12X45ZP	BOLT-M12 x 45	8		
8	CPS-M12X30ZP	BOLT-M12 x 30	8		
9	CPS-M12NZIP	NUT-M12	16		
10	CPS-M12WH	WASHER-M12	34		

Section 5-2 Landing Assembly LHS PS- 22017A

FOLDING LADDER

Caterpillar D10R Dozer



Section 5-2 Landing Assembly LHS

PS-22017A

See Drawing Page 19

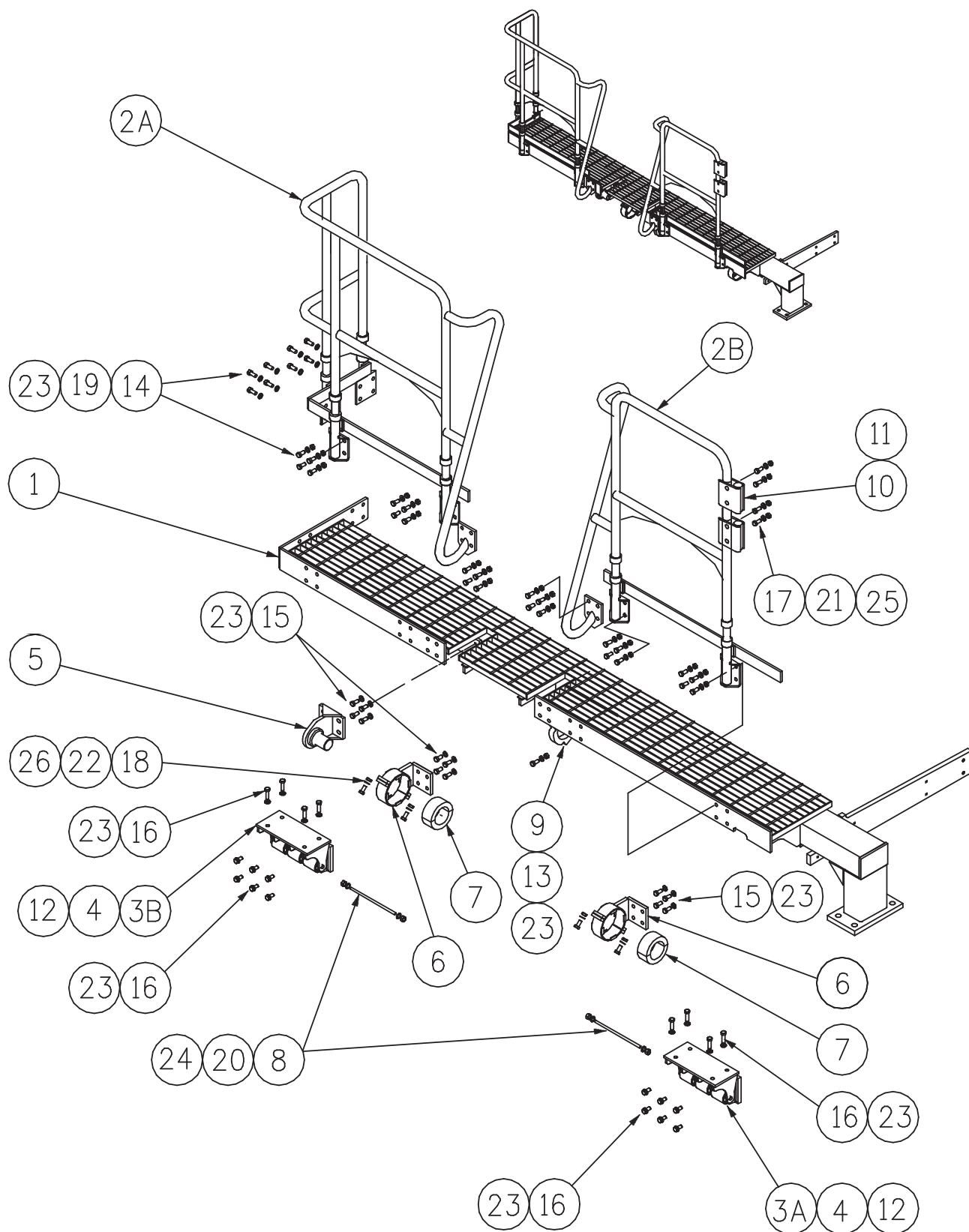
Item	Part No.	Part Name	Qty		
1	PS-22017	LANDING ASSEMBLY	1		
2	PS-22010-A	HANDRAIL-FRONT-LHS	1		
2A	PS-22010-B	HANDRAIL-REAR-LHS	1		
3A	PS-22014-98	ISOLATOR PIN BRACKET-REAR	1		
3B	PS-22014-99	ISOLATOR PIN BRACKET-FRONT	1		
4	PS-21930A	ISOLATOR MOUNTINGS ASSY.	6		
5	PS-21976	FRONT PIVOT PIN BRACKET	1		
6	PS-21941	ANTI VIBRATION BEARING	2		
7	PS-21941-06	RUBBER BUSH	2		
8	PS-21933	ISOLATOR BUSH PIN	2		
9	PS-21925	MIDDLE BEARING MOUNTING	1		
10	PS-22005-01	ANGLE BRACKET	2		
11	PS-22005-03/02	ISOLATOR RUBBER/CLAMP	2		
12	PS-22018-04	SIDE MOUNTING PAD	2		
13	CPS-M12X75ZP	BOLT-M12 x 75	2		
14	CPS-M12X65ZP	BOLT-SOCKET HEAD-M12 x 65	2		
15	CPS-M12X35ZP	BOLT-M12 x 35	24		
16	CPS-M12X30ZP	BOLT-M12 x 30	12		
17	CPS-M12X25ZP	BOLT-M12 x 25	20		
18	CPS-M8X35ZP	BOLT-M8 x 35	8		
19	CPS-M12NZP	NUT-M12	26		
20	CPS-1/2"NN	NUT-NYLOC-1/2"UNC	4		
21	CPS-M8NN	NUT-NYLOC-M8	8		
22	CPS-M12WH	WASHER-HARDENED-M12	76		
23	CPS-1/2"WH	WASHER-HARDENED-1/2"	4		
24	CPS-M8WH	WASHER-HARDENED-M8	16		

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Caterpillar D10R Dozer



Section 5-2 Landing Assembly LHS PS- 22017A-NG Upgraded Handrails
See Parts List Page 22



FOLDING LADDER

Caterpillar D10R Dozer



Section 5-2 Landing Assembly LHS PS- 22017A-NG Upgraded Handrails
See Drawing Page 21

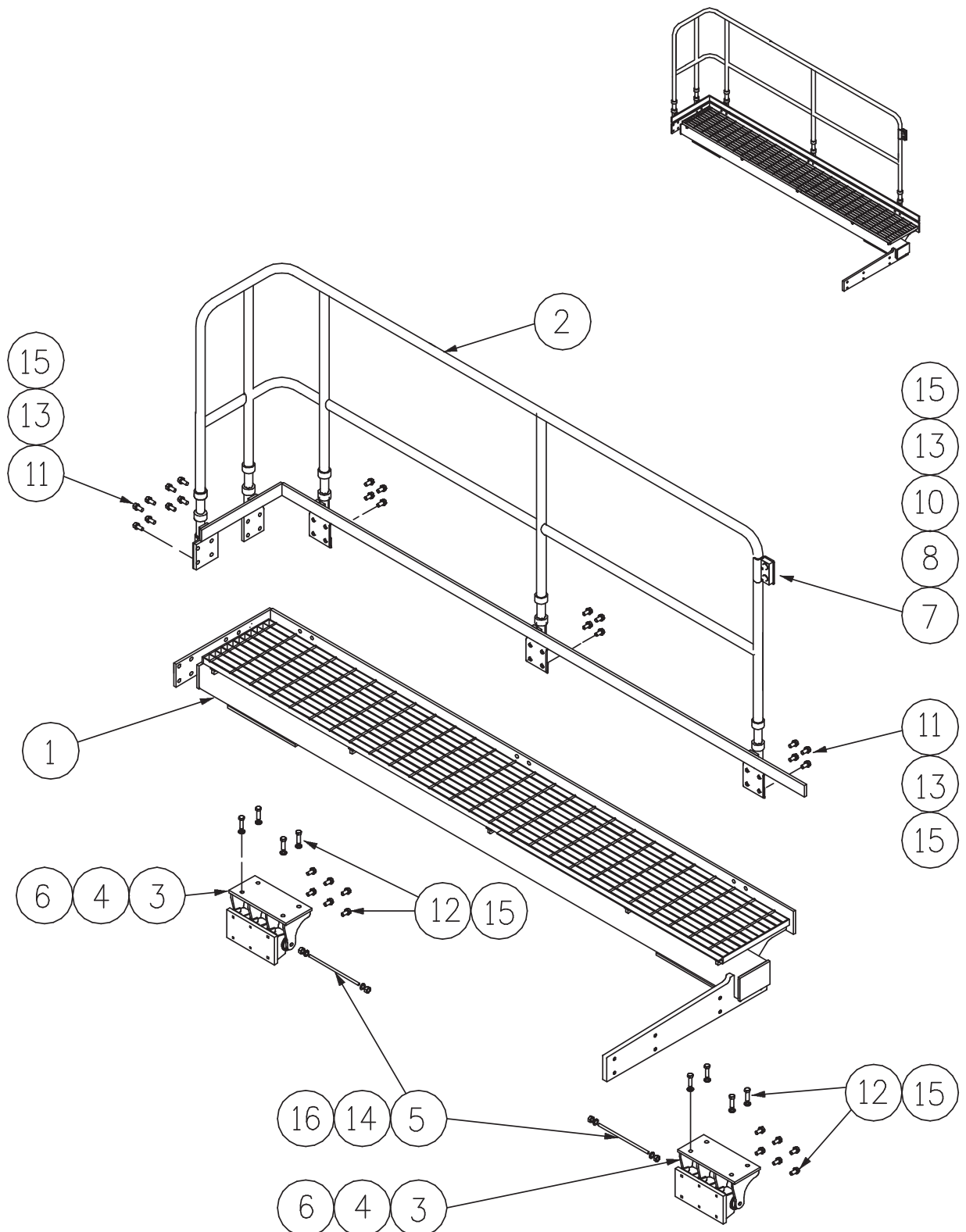
Item	Part No.	Part Name	Qty		
1	PS-22017	LANDING ASSEMBLY	1		
2A	PS-22010-A-NG	HANDRAIL-FRONT LHS- NEW GENERATION	1		
2B	PS-22010-B-NG	HANDRAIL-REAR LHS- NEW GENERATION	1		
3A	PS-22014-98	ISOLATOR PIN BRACKET-REAR	2		
3B	PS-22014-99	ISOLATOR PIN BRACKET-FRONT	6		
4	PS-21930A	ISOLATOR MOUNTINGS ASSY.	1		
5	PS-21976	FRONT PIVOT PIN BRACKET	2		
6	PS-21941-02	ANTI VIBRATION BEARING	2		
7	PS-21941-06	RUBBER BUSH	2		
8	PS-21933	ISOLATOR BUSH PIN	1		
9	PS-21925	MIDDLE BEARING MOUNTING	4		
10	PS-HRI-C11	RUBBER HOSE Pirtek IRR-032 x 120	4		
11	PS-HRI-A06	HANDRAIL POST - DOUBLE CLAMP ASSY.	2		
12	PS-22018-04	SIDE MOUNTING PAD	2		
13	CPS-M12X65ZP	BOLT-SOCKET HEAD-M12 x 65	2		
14	CPS-M12X35ZP	BOLT-M12 x 35	32		
15	CPS-M12X30ZP	BOLT-M12 x 30	12		
16	CPS-M12X25ZP	BOLT-M12 x 25	20		
17	CPS-M10X75ZP	BOLT-M10 x 75	4		
18	CPS-M8X35ZP	BOLT-M8 x 35	8		
19	CPS-M12NZP	NUT-M12	32		
20	CPS-1/2"NN	NUT-NYLOC-1/2"UNC	4		
21	CPS-M10NN	NUT-NYLOC-M10	4		
22	CPS-M8NN	NUT-NYLOC-M8	8		
23	CPS-M12WH	WASHER-HARDENED-M12	88		
24	CPS-1/2"WH	WASHER-HARDENED-1/2"	4		
25	CPS-M10WH	WASHER-HARDENED-M10	8		
26	CPS-M8WH	WASHER-HARDENED-M8	16		

FOLDING LADDER

Caterpillar D10R Dozer



Section 5-3 Landing Assembly RHS PS- 22016A
See Parts List Page 24



FOLDING LADDER

Caterpillar D10R Dozer



Section 5-3 Landing Assembly RHS PS- 22016A

See Drawing Page 23

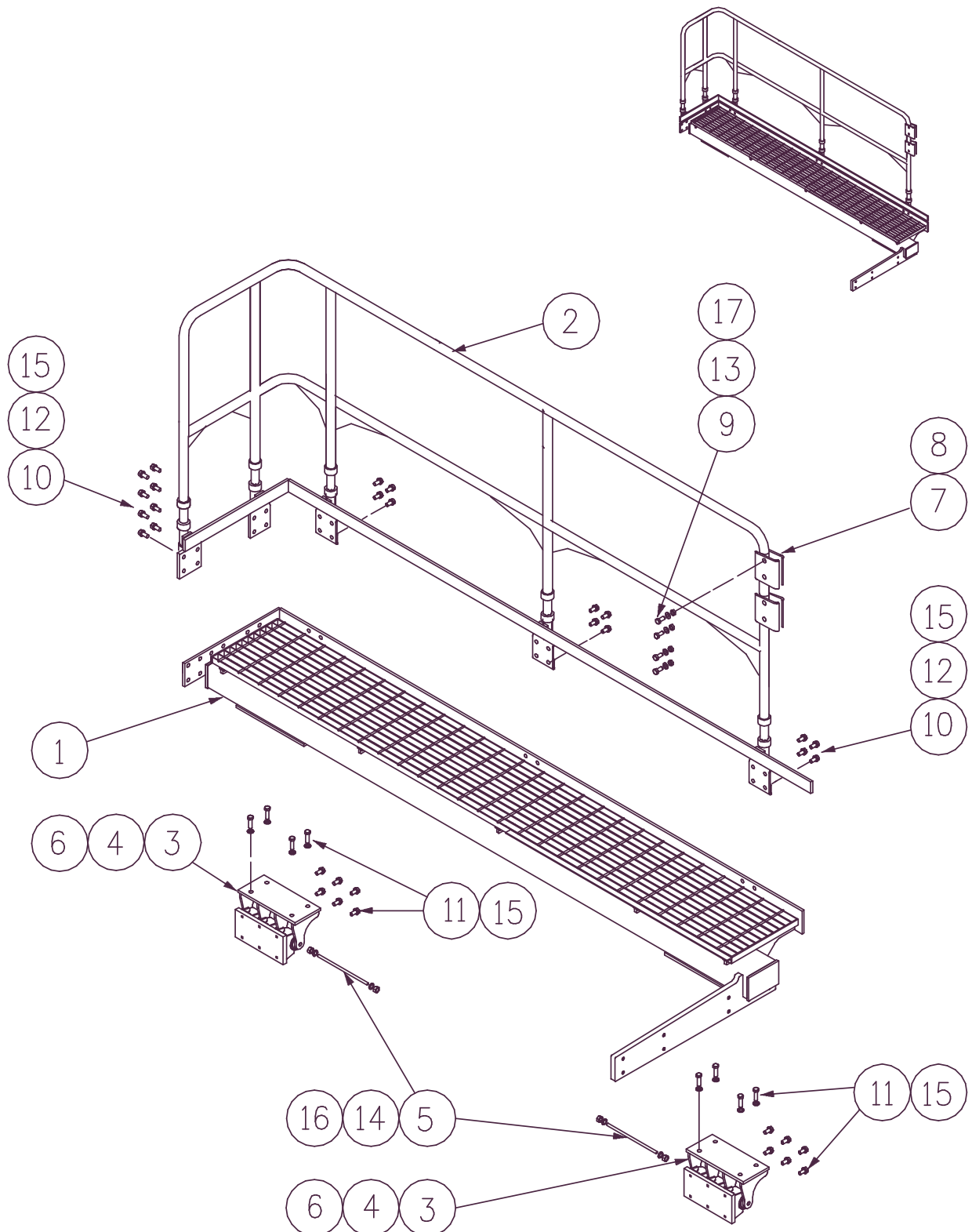
Item	Part No.	Part Name	Qty		
1	PS-22-284	LANDING ASSEMBLY RHS	1		
2	PS-22285	HANDRAIL RHS	1		
3	PS-22086	ISOLATOR PIN BRACKETS	2		
4	PS-21930A	ISOLATOR MOUNTING ASSY.	6		
5	PS-21933	ISOLATOR BUSH PIN	2		
6	PS-22018-04	SIDE MOUNTING PAD	2		
7	PS-22005-01	ANGLE BRACKET	4		
8	PS-22005-03	ISOLATOR RUBBER	2		
9	PS-22005-02	ISOLATOR CLAMP	2		
10	CPS-M12X75ZP	BOLT-M12 x 75	2		
11	CPS-M12X35ZP	BOLT-M12 x 35	20		
12	CPS-M12X25ZP	BOLT-M12 x 25	20		
13	CPS-M12NZP	NUT-M12	22		
14	CPS-1/2"NN	NUT-NYLOC-1/2" UNC	4		
15	CPS-M12WH	WASHER-HARDENED-M12	64		
16	CPS-1/2"WH	WASHER-HARDENED-1/2"	4		

FOLDING LADDER

Caterpillar D10R Dozer



Section 5-3 Landing Assembly RHS PS- 22016A-NG **Upgraded Handrails**
See Parts List Page 26



FOLDING LADDER

Caterpillar D10R Dozer



Section 5-3 Landing Assembly RHS PS- 22016A-NG **Upgraded Handrails**

See Drawing Page 25

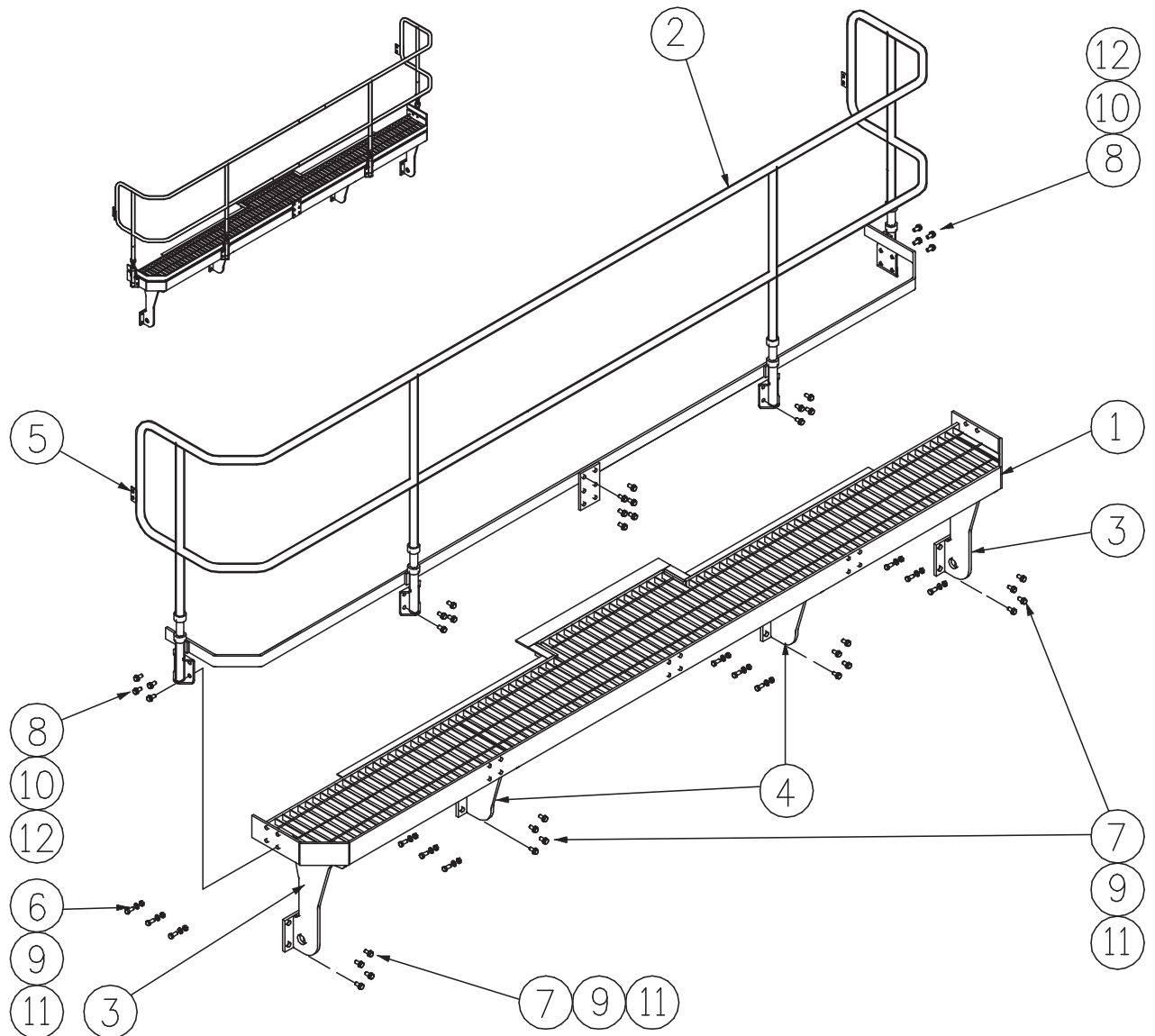
Item	Part No.	Part Name	Qty		
1	PS-22-616	LANDING ASSEMBLY RHS	1		
2	PS-22285-NG	HANDRAIL RHS- NEW GENERATION	1		
3	PS-22086	ISOLATOR PIN BRACKETS	2		
4	PS-21930A	ISOLATOR MOUNTING ASSY.	6		
5	PS-21933	ISOLATOR BUSH PIN	2		
6	PS-22018-04	SIDE MOUNTING PAD	2		
7	PS-HRI-A06	HANDRAIL POST - DOUBLE CLAMP ASSY.	2		
8	PS-HRI-C11	RUBBER HOSE Pirtek IRR-032 x 120	4		
9	CPS-M10X75ZP	BOLT-M10 x 75	4		
10	CPS-M12X35ZP	BOLT-M12 x 35	20		
11	CPS-M12X25ZP	BOLT-M12 x 25	20		
12	CPS-M12NZP	NUT-M12	22		
13	CPS-M10NN	NUT-NYLOC-M10	4		
14	CPS-1/2"NN	NUT-NYLOC-1/2" UNC	4		
15	CPS-M12WH	WASHER-HARDENED-M12	64		
16	CPS-1/2"WH	WASHER-HARDENED-1/2"	4		
17	CPS-M10WH	WASHER-HARDENED-M10	8		

FOLDING LADDER

Caterpillar D10R Dozer



Section 5-4 Landing Assembly - Rear PS- 22051A



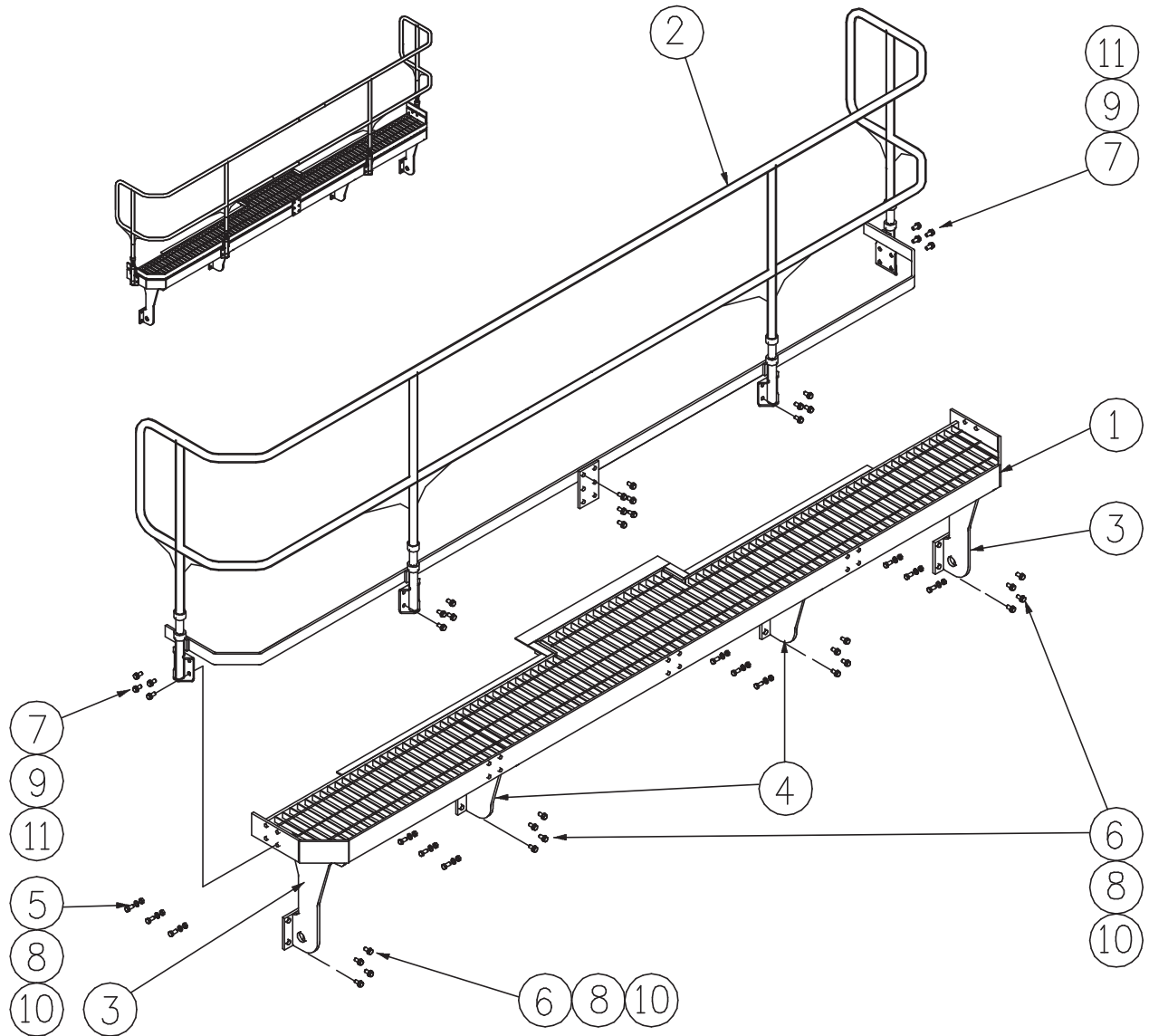
Item	Part No.	Part Name	Qty		
1	PS-22051	LANDING - REAR	1		
2	PS-22052	HANDRAILS- REAR	1		
3	PS-22006-99	WALKWAY MOUNTING-OUTER	2		
4	PS-22006-98	WALKWAY MOUNTING-INNER	2		
5	PS-22005-01	ANGLE BRACKET	2		
6	CPS-M16X50ZP	BOLT-M16 x 50	12		
7	CPS-M16X35ZP	BOLT-M16 x 35	16		
8	CPS-M12X40ZP	BOLT-M12 x 40	22		
9	CPS-M16NZIP	NUT-M16	12		
10	CPS-M12NZIP	NUT-M12	22		
11	CPS-M16WH	WASHER-HARDENED-M16	40		
12	CPS-M12WH	WASHER-HARDENED-M12	42		

FOLDING LADDER

Caterpillar D10R Dozer



Section 5-4 Landing Assembly - Rear PS- 22051A-NG **Upgraded Handrails**



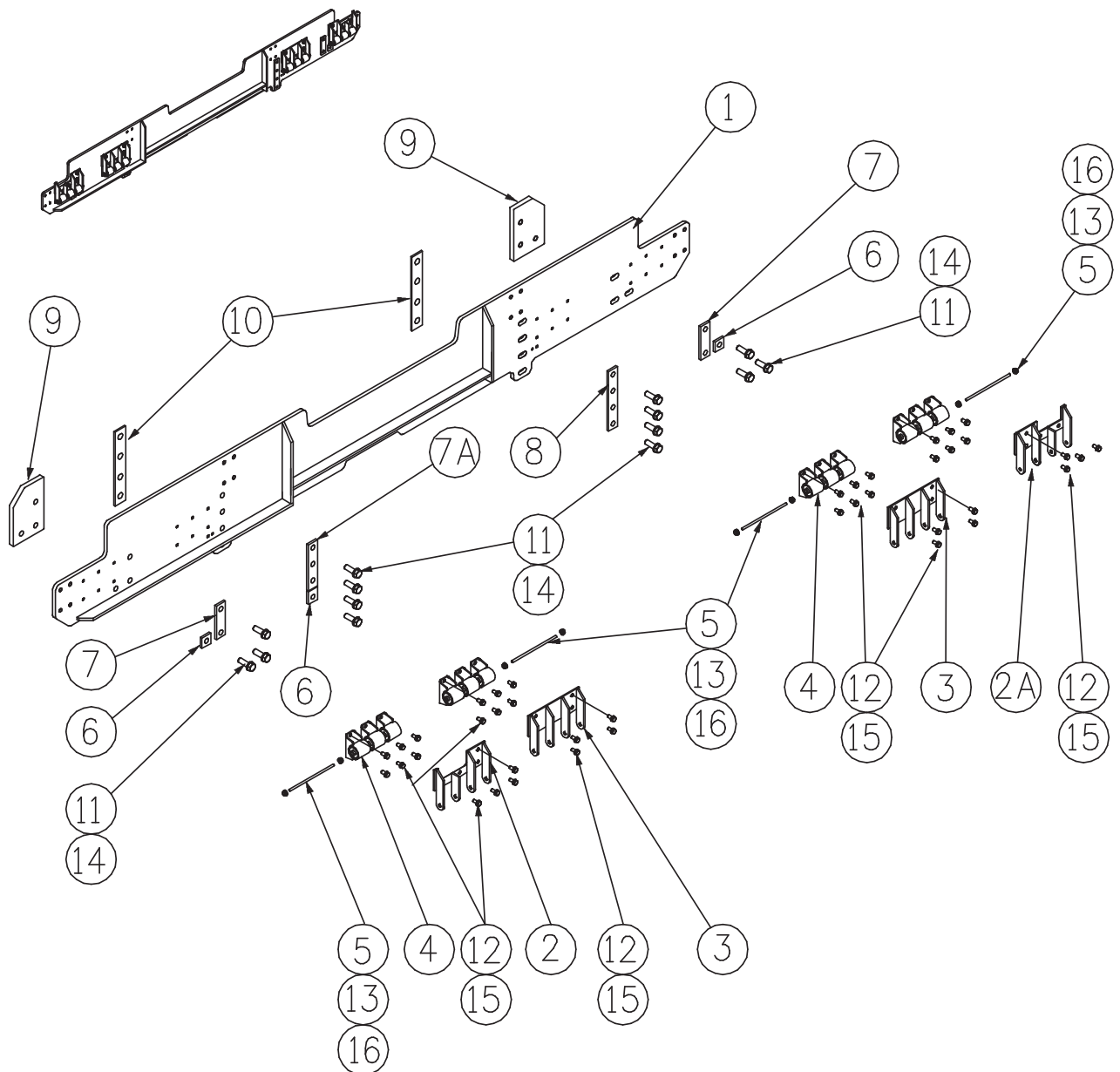
Item	Part No.	Part Name	Qty		
1	PS-22051	LANDING - REAR	1		
2	PS-22052-NG	HANDRAILS- REAR- NEW GENERATION	1		
3	PS-22006-99	WALKWAY MOUNTING-OUTER	2		
4	PS-22006-98	WALKWAY MOUNTING-INNER	2		
5	CPS-M16X50ZP	BOLT-M16 x 50	12		
6	CPS-M16X35ZP	BOLT-M16 x 35	16		
7	CPS-M12X40ZP	BOLT-M12 x 40	22		
8	CPS-M16NZP	NUT-M16	12		
9	CPS-M12NZP	NUT-M12	22		
10	CPS-M16WH	WASHER-HARDENED-M16	42		
11	CPS-M12WH	WASHER-HARDENED-M12	44		

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Section 5-5 Spreader Assembly PS-22287A- D10R
See Parts List Page 30



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Section 5-5 Spreader Assembly PS-22287A- D10R

See Drawing Page 29

Item	Part No.	Part Name	Qty		
1	PS-22287	SPREADER	1		
2	PS-21931 98	ISOLATOR PIN BRACKET-OUTER LHS	1		
2A	PS-21931-97	ISOLATOR PIN BRACKET-OUTER RHS	1		
3	PS-21931-99	ISOLATOR PIN BRACKET-INNER	2		
4	PS-21930A	ISOLATOR MOUNTINGS	12		
5	PS-21933	ISOLATOR BUSH PIN	4		
6	PS-22281-04	WASHER PLATE - (1 Hole)	3		
7	PS-22281-03	WASHER PLATE - (2 Holes)	2		
7A	PS-22281-02	WASHER PLATE - (3 Holes)	1		
8	PS-22281-01	WASHER PLATE - (4 Holes)	1		
9	PS-22018-03	MOUNT BLOCK REAR OUTER	2		
10	PS-22018-01	MOUNT BLOCK REAR INNER	2		
11	PS-M20X50ZP	BOLT-M20 x 50	14		
12	CPS-M12X25ZP	BOLT-M12 x 25	40		
13	CPS-1/2"NN	NUT-NYLOC-1/2" UNC	8		
14	PS-M20WH	WASHER-HARDENED-M20	14		
15	CPS-M12WH	WASHER-HARDENED-M12	40		
16	CPS-1/2"WH	WASHER-HARDENED-1/2"	8		

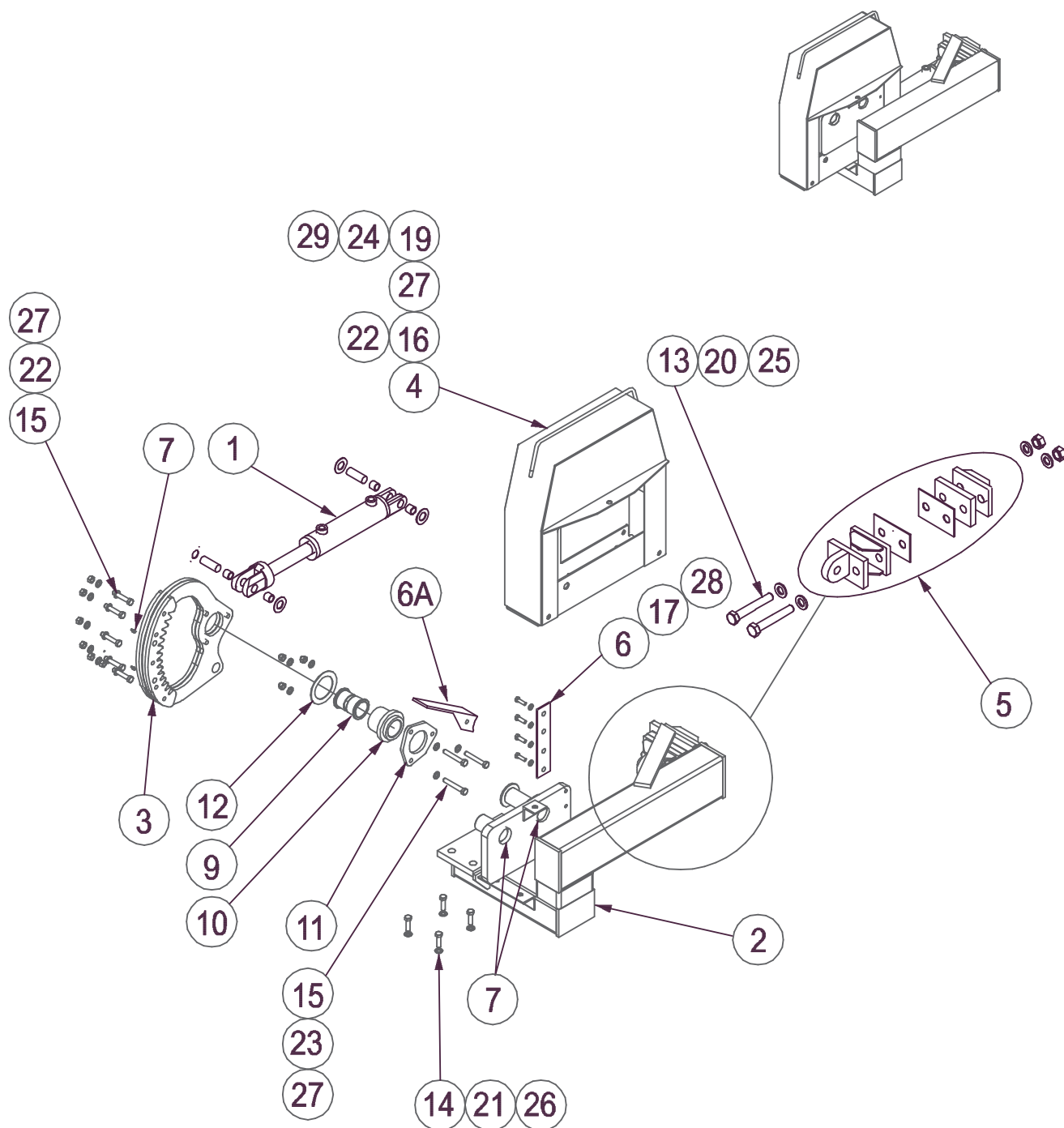
FOLDING LADDER

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Section 5-6 Drive Unit Assembly

See Parts List Page 32



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Section 5-6 Drive Unit Assembly

See Drawing Page 31

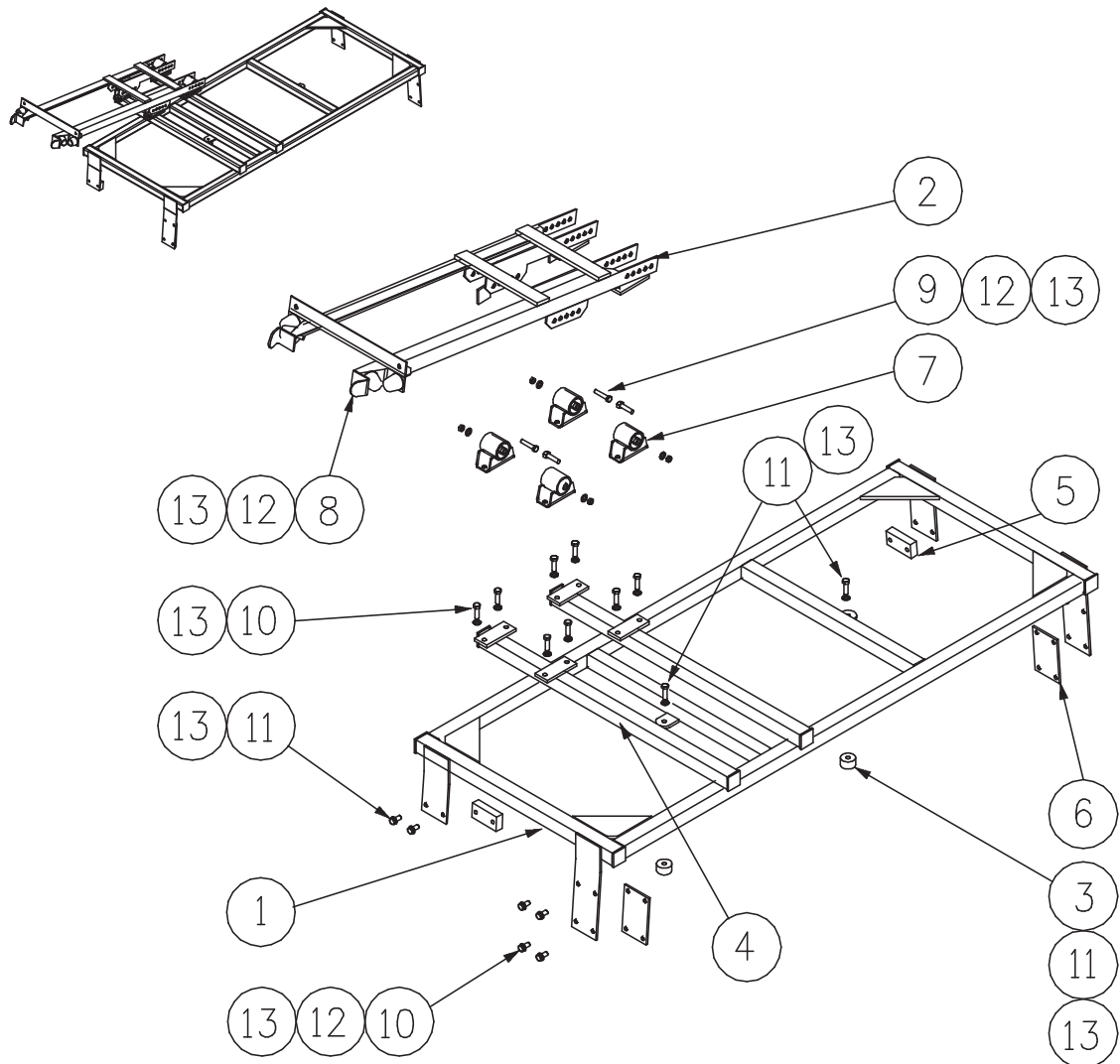
Item	Part No.	Part Name	Qty		
1	PS-63014	HYDRAULIC CYLINDER (Refer Page 22)	1		
2	PS-21974	DRIVE MOUNTING FRAME	1		
3	PS-21959	SECTOR GEAR	1		
4	PS-21984	DRIVE GUARD	1		
5	PS-21954	ACTUATOR CYL. MOUNTING ASSEMBLY	1		
6	PS-21991-02	MOUNTING BAR-PROXIMITY SWITCH	1		
6A	PS-21991-01	STRIKER	1		
7	PS-61006-2	GREASE NIPPLE M6 STR.	4		
8	PS-21940-03	PIVOT PIN KEEPER PLATE	1		
9	PS-21959-09	SECTOR GEAR BUSH	2		
10	PS-21959-08	SECTOR GEAR HUB	1		
11	PS-21959-05	CLAMP RING	1		
12	PS-21959-06	SPACER RING	1		
13	PS-M24X120ZP	BOLT-M24 x 120	2		
14	CPS-M20X65ZP	BOLT-M20 x 65	4		
15	CPS-M12X70ZP	BOLT-M12 x 70	8		
16	CPS-M12X25ZP	BOLT-M12 x 25	10		
17	CPS-M10X30ZP	BOLT-M10 x 30	4		
18	CPS-M10X15ZP	BOLT-M10 x 15	4		
19	CPS-M5X15ZP	BOLT-M5 x 15	6		
20	PS-M24NN	NUT-NYLOC-M24	2		
21	PS-M20NZP	NUT-M20	4		
22	CPS-M12NZP	NUT-M12	14		
23	CPS-M12NN	NUT-NYLOC-M12	3		
24	CPS-M5NN	NUT-NYLOC-M5	6		
25	CPS-M24WH	WASHER-HARDENED-M24	4		
26	CPS-M20WH	WASHER-HARDENED-M20	8		
27	CPS-M12WH	WASHER-HARDENED-M12	20		
28	CPS-M10WH	WASHER-HARDENED-M10	12		
29	CPS-M5WH	WASHER-HARDENED-M5	12		

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Caterpillar D10R Dozer



Section 5-7 PROP Assembly PS- 22013A



Item	Part No.	Part Name	Qty		
1	PS-22013	PROP MOUNTING FRAME	1		
2	PS-21945	PROP	1		
3	PS-22091-16	ROOF BUTTON	2		
4	PS-22087	PROP MOUNTING BEAM	2		
5	PS-22091-14	BOLTING PAD	2		
6	PS-22091-13	SPACER	2		
7	PS-21930A	ISOLATOR MOUNTING	4		
8	PS-40003	BUFFER	4		
9	CPS-M12X120	BOLT M12 x 120	4		
10	CPS-M12X40ZP	BOLT-M12 x 40	8		
11	CPS-M12X25ZP	BOLT-M12 x 25	14		
12	CPS-M12ZP	NUT-M12	20		
13	CPSM12WH	WASHER-HARDENED-M12	38		

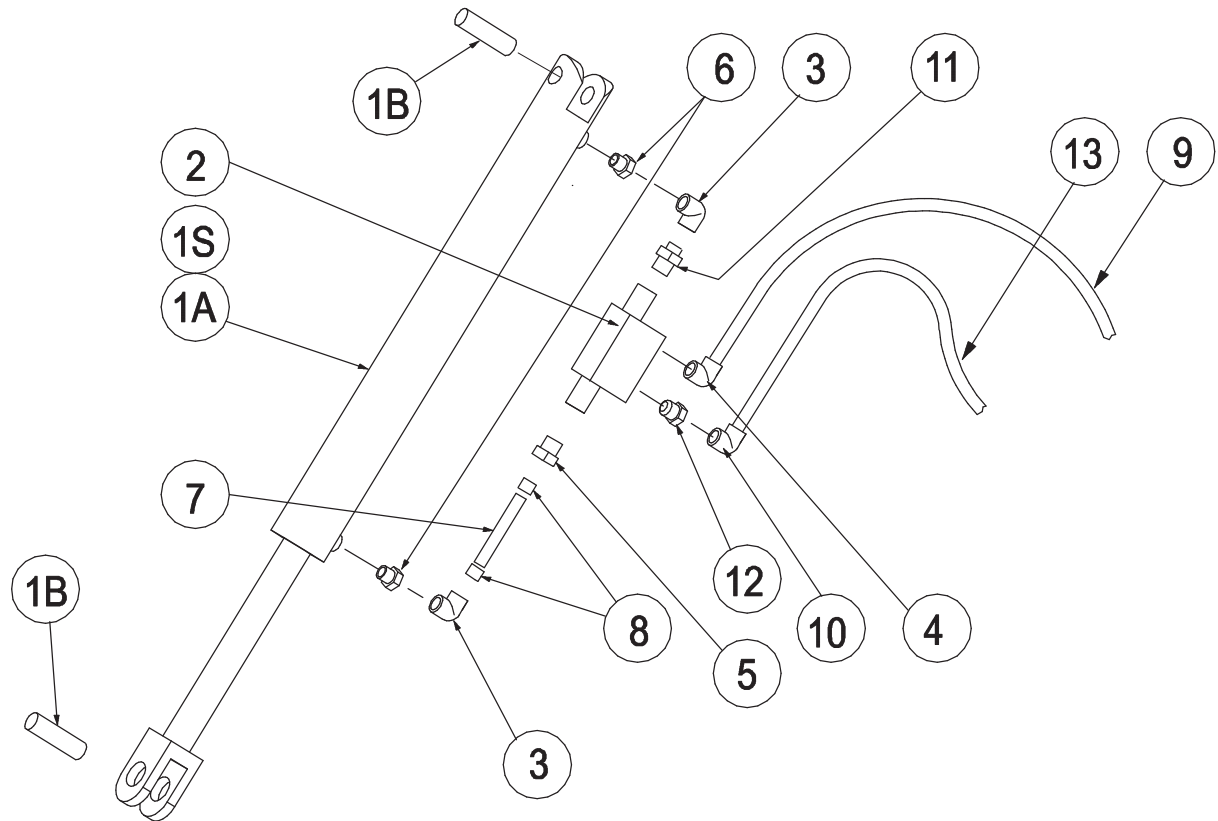
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Caterpillar D10R Dozer



Section 5-8 Hydraulic Cylinder

Incl. Items 1A,1B,2,3,4,5,6,7,8,9,11,12,13.



Item	Part No.	Part Name	Qty		
1A	PS-63014A	HYDRAULIC CYLINDER	1		
1B	PS-63014-P	PIN - CYLINDER- (WITH RETAINER)	2		
1S	PS-63011K	SEAL KIT (NOT SHOWN)	1		
2	PS-63201	VALVE - PILOT OPERATED LOCKING	1		
3	PS-61158-0.30	FITTING - RESTRICTION 90 DEG	2		
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-61163	REDUCER JIC x BSPP	2		
7	PS-61160	TUBE	2		
8	PS-60047	FERRULES/NUTS 2 x each	1		
9	PS-60051-2.8	HOSE- HYDR. (9/6" JIC SWIVEL FITTING 2.8M)	1		
10	PS-61151	FITTING-ELBOW 7/16" JIC	1		
11	PS-61145	FITTING-SWIVEL 9/16" JIC	1		
12	PS-61153	FITTING-O RING 1/4" BSP x 7/16" JIC	1		
13	PS-60050-2.8	HYDR. HOSE 7/16" SWIVEL FITTINGS	1		

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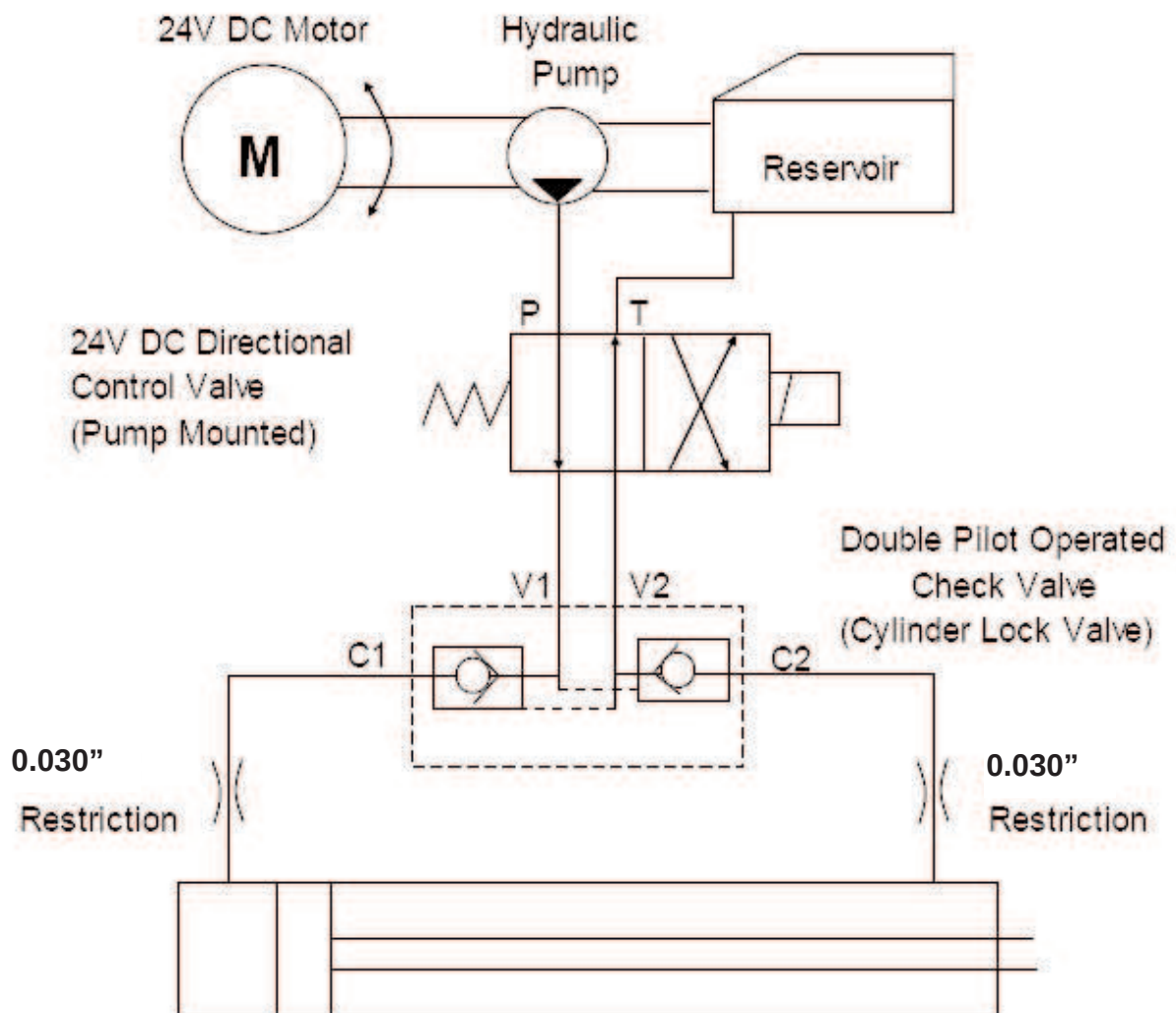
Caterpillar D10R Dozer



Section 5-8 Hydraulic Cylinder (Valve Diagram)

See also Drawing Page 34

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

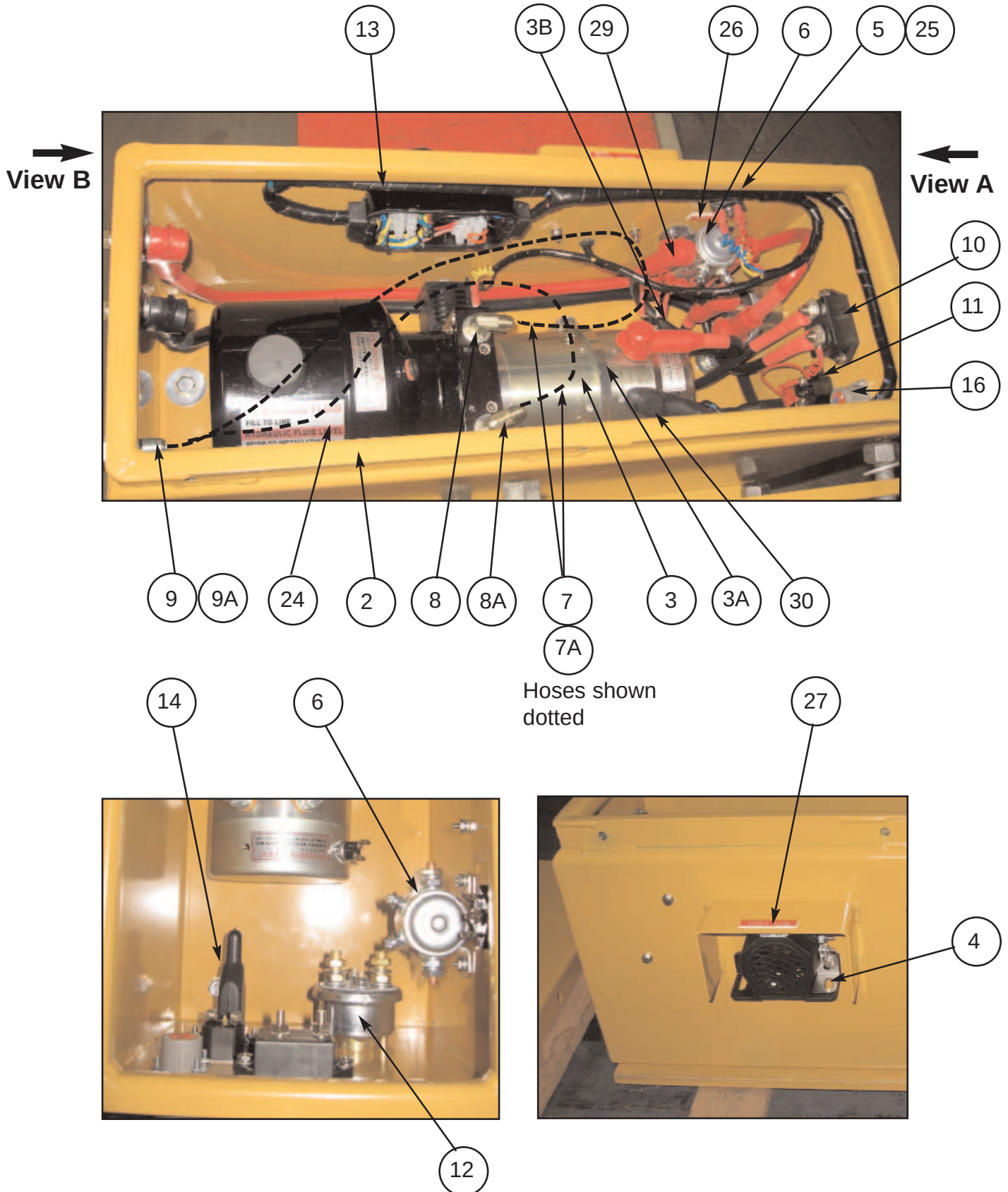


FOLDING LADDER Caterpillar D10R Dozer



Section 5-9 Power Pack (Electrical Controls & Accessories)

See Parts List Pg 38

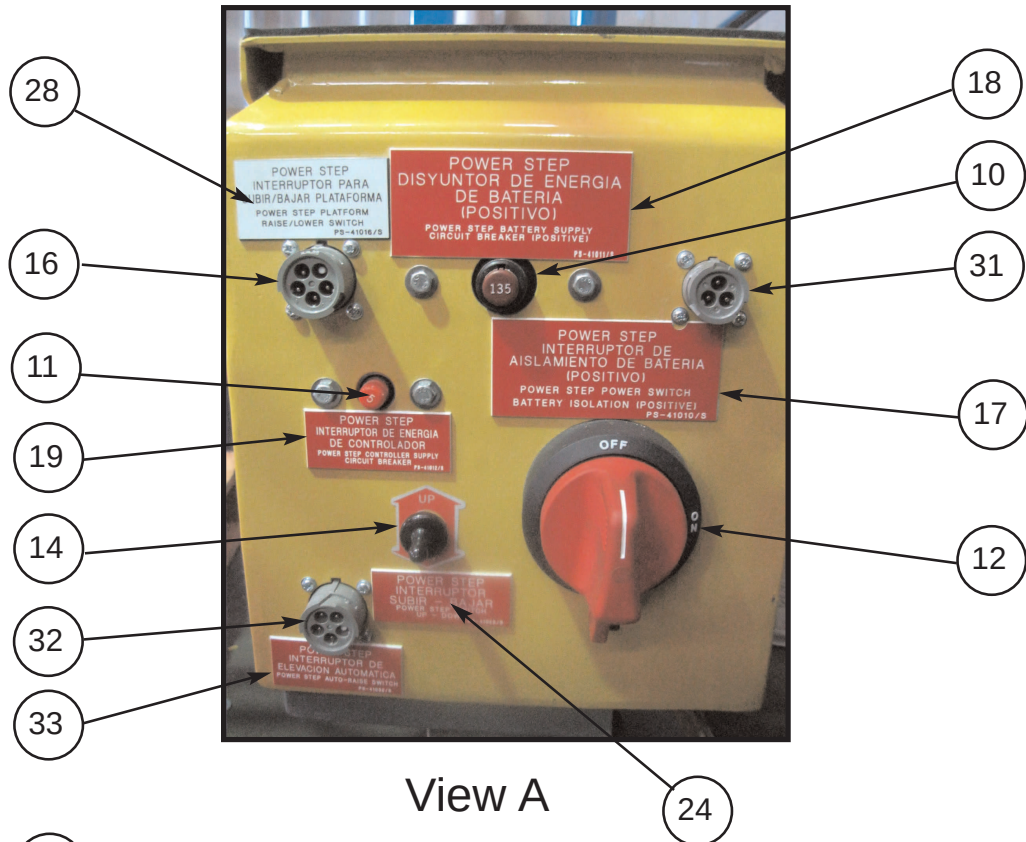


FOLDING LADDER Caterpillar D10R Dozer

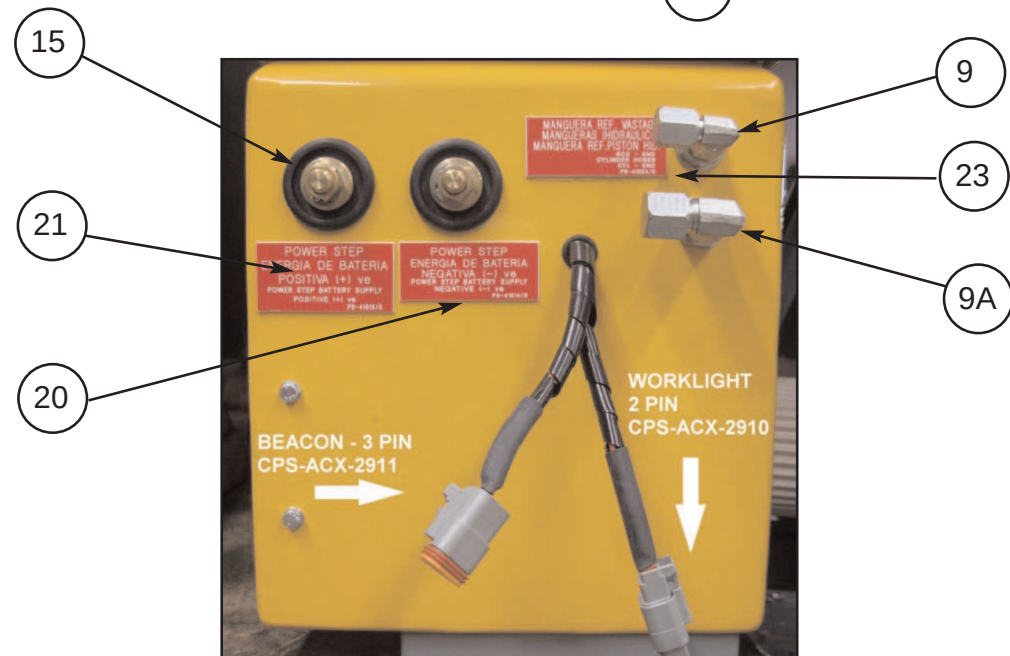


Section 5-9 Power Pack (Electrical Controls & Accessories)

See Parts List Pg 38



View A



View B

NOTE.

THE RELIEF PRESSURE OF THE POWERPACK IS TO BE SET TO 2800SI.
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 LADDER

Caterpillar D10R Dozer



Section 5-9 Power Pack (Electrical Controls & Accessories)

See Photos Pg 36 & 37

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		
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"	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	5A CIRCUIT BREAKER	1		
12	PS-84303	ISOLATION SWITCH	1		
13	PS-1712080	SEALED WIRING BOX	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-41010	DECAL-Battery Isolation	1		
18	PS-41011	DECAL-Battery Supply C/B-135A	1		
19	PS-41012	DECAL-Controller Supply C/B-10A	1		
20	PS-41013	DECAL-Battery Supply-Positive	1		
21	PS-41014	DECAL-Battery Supply-Negative	1		
22	PS-41023	DECAL-Up/Down	1		
23	PS-41024	DECAL HYDRAULIC-HOSES	1		
24	PS-41041	DECAL OIL TANK	1		
25	PS-41019	DECAL BRIDGE RECTIFIER	1		
26	PS-41017	DECAL SOLENOID	1		
27	PS-41018	DECAL ALARM	1		
28	PS-41016	DECAL RAISE/LOWER SWITCH	1		
29	PS-73010	RUBBER BOOT RED	6		
30	PS-73009	RUBBER BOOT BLACK	3		
31	PS-HD10-3-16P	3 PIN SOCKET (PARK BREAK)	1		
32	PS-HD10-5-16P	5 PIN SOCKET (AUTO-RAISE)	1		
33	PS-41032	DECAL AUTO-RAISE SOCKET	1		
34	PS-60051-2.8M	HYDRAULIC HOSE 9/16" x 2.8M	1		Not Shown
35	PS-60050-2.8M	HYDRAULIC HOSE 7/16" x 2.8M	1		Not Shown

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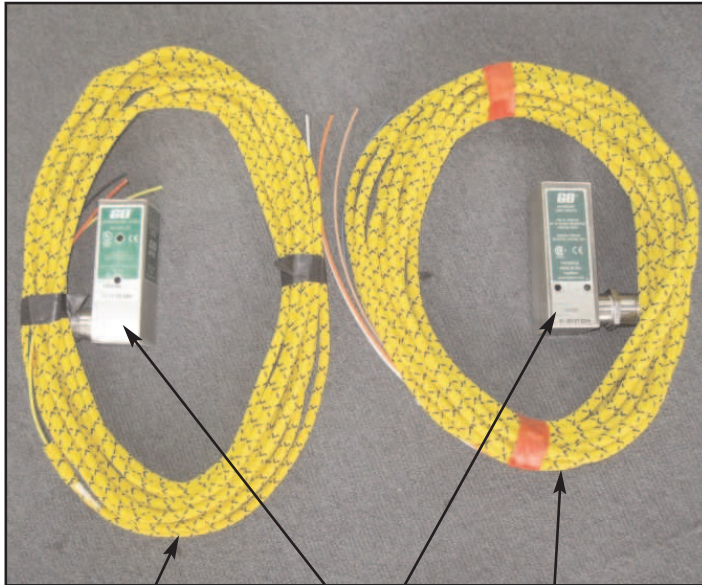


Section 5-10 Electrical Controls

Refer also Wiring drawings page 10 - 14

Proximity Switch Assembly

Mounted on Fixed Landing



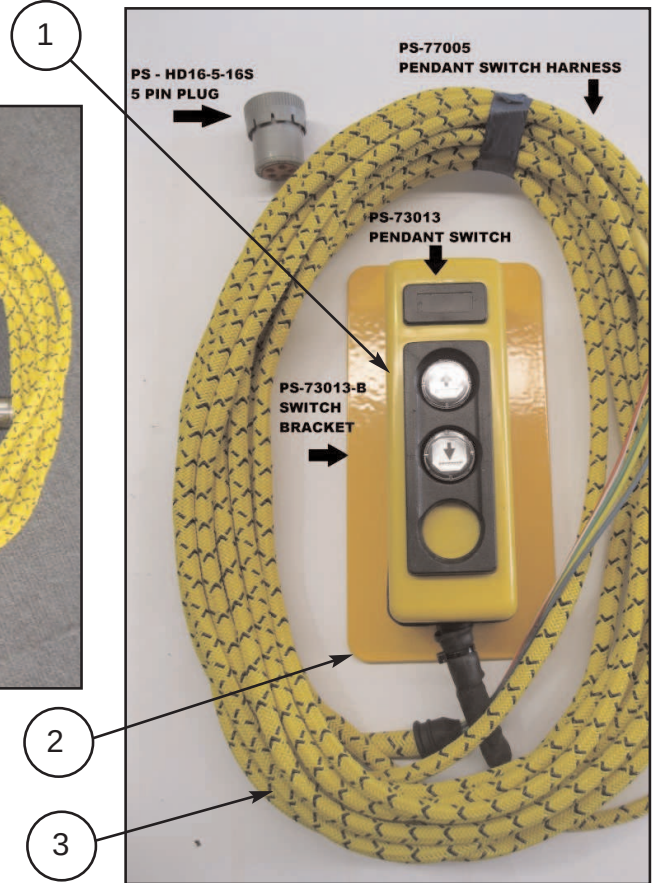
5

6

4

Control Pendant Switch

Mounted on Handrail



1

2

3

Cab Harness & Equipment

Refer Wiring Harness Drawings



7

8

FOLDING LADDER

Caterpillar D10R Dozer



Section 5-10 Electrical Controls

Refer also Wiring Drawings

See Photos Page 39

Item	Part No.	Part Name	Qty		
1	PS-73013	CONTROL PENDANT SWITCH	1		
2	PS-73013-B	CONTROL PENDANT BRACKET	1		
3	PS-77005	HAND RAIL SWITCH HARNESS	1		
4	PS-77009AR	AUTO RAISE HARNESS	1		Optional only
5	PS-77004	CABIN TO SWITCH HARNESS	1		
6	PS-75430	PROXIMITY SWITCH	2		1 x Optional
7	PS-77002	CABIN BOX LED LIGHT INDICATOR	1		
8	PS-77003	WIRING HARNESS IN CABIN	1		

WARNING

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

FOLDING LADDER

Caterpillar D10R Dozer



Material Kit supplied

PS-P/PACK-ISO. KIT

