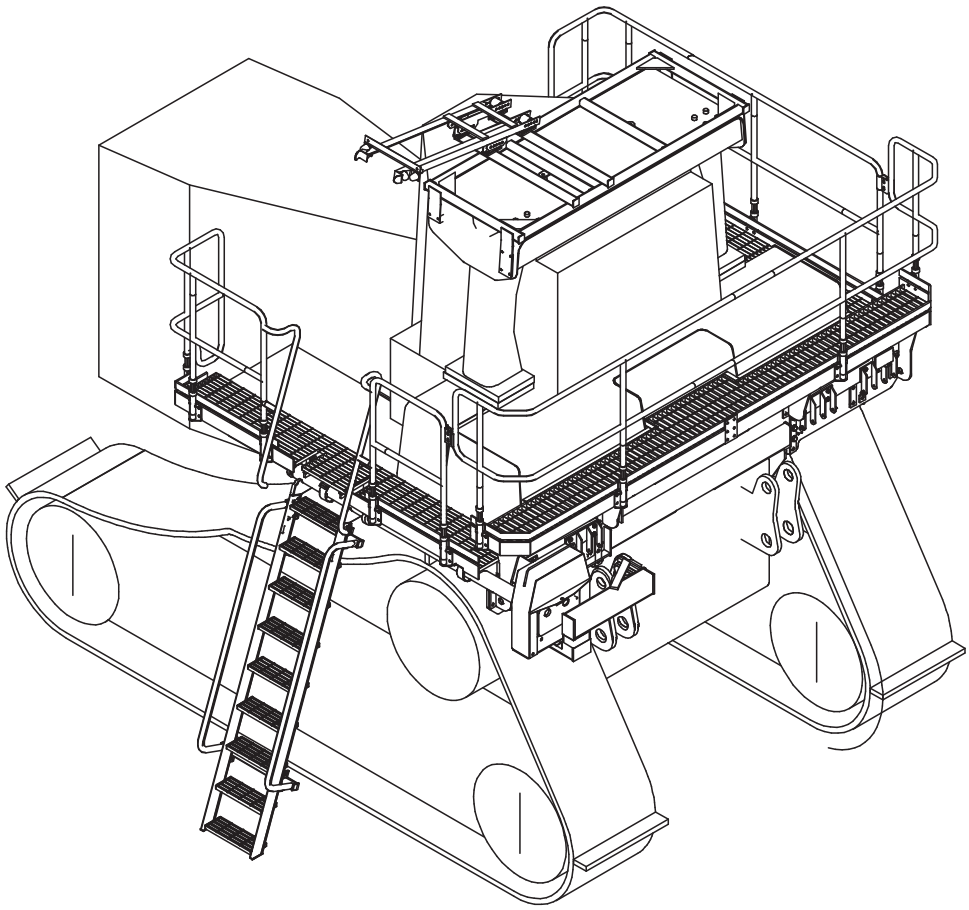
POWER STEP
(AUSTRALIA) PTY. LTD.

FOLDING LADDER

Manual for Cat D10T Dozer

Complete with Wrap-around Walkways

Includes HARNESS MASTER ELECTRICAL WIRING DETAILS AND DIAGRAMS.



Model No.: PSA-D10T-FL+RHWW
Serial No.: LD10T-008 & LD10T-009
Date Manufactured: 2007

FOLDING LADDER
Caterpillar D10T Dozer

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CONTENTS

FOLDING LADDER
Caterpillar D10T Dozer

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

Section 1

Installation and Mounting Instructions

See Drawing **22 286** & **22 053** (Page 4 & 5)

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, in the corners made by the mudguard top plate and vertical inner plate, and in the corner made by the rolled outer edge of the mudguard top plate. All the rear mounting pads fit hard against the folded rear mudguard infill. All these mounting pads have bevelled edges to clear existing welds in the corners. The rear mounting pads are all 'handed' in that the bevels are located to suit the requirements of one side of the machine or the other.

3. Measure forward from the back surfaces of the rear mounting pads and down from the top surface of the mudguard decks to locate the side mounting pads. Weld these mounting pads in position.

   Welding: Cat SP to AS1554
   8 cfw

FOLDING LADDER
Caterpillar D10T Dozer

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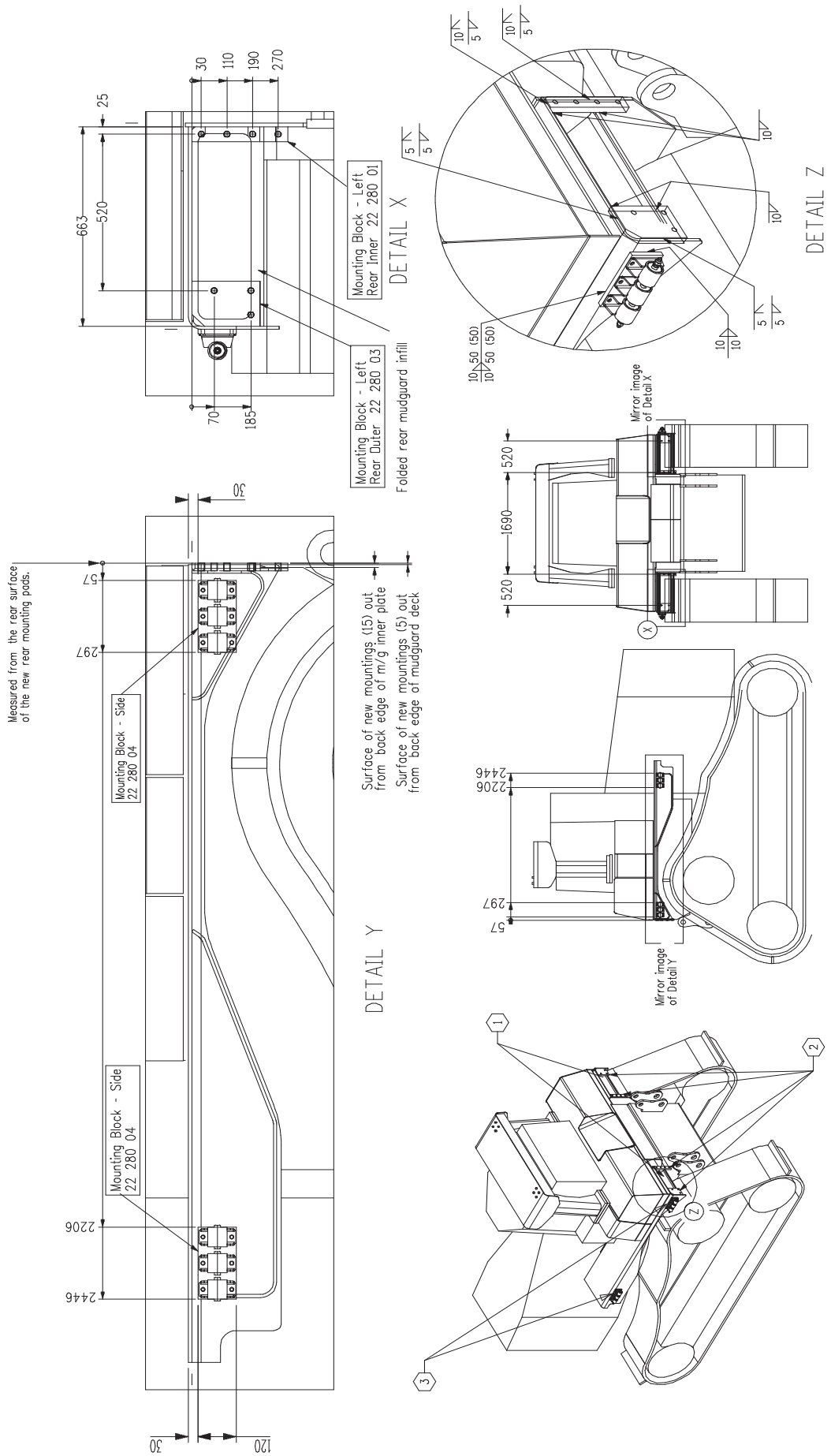
Section 1 Installation Instruction Drawings - 22 286



FOLDING LADDER
Caterpillar D10T Dozer

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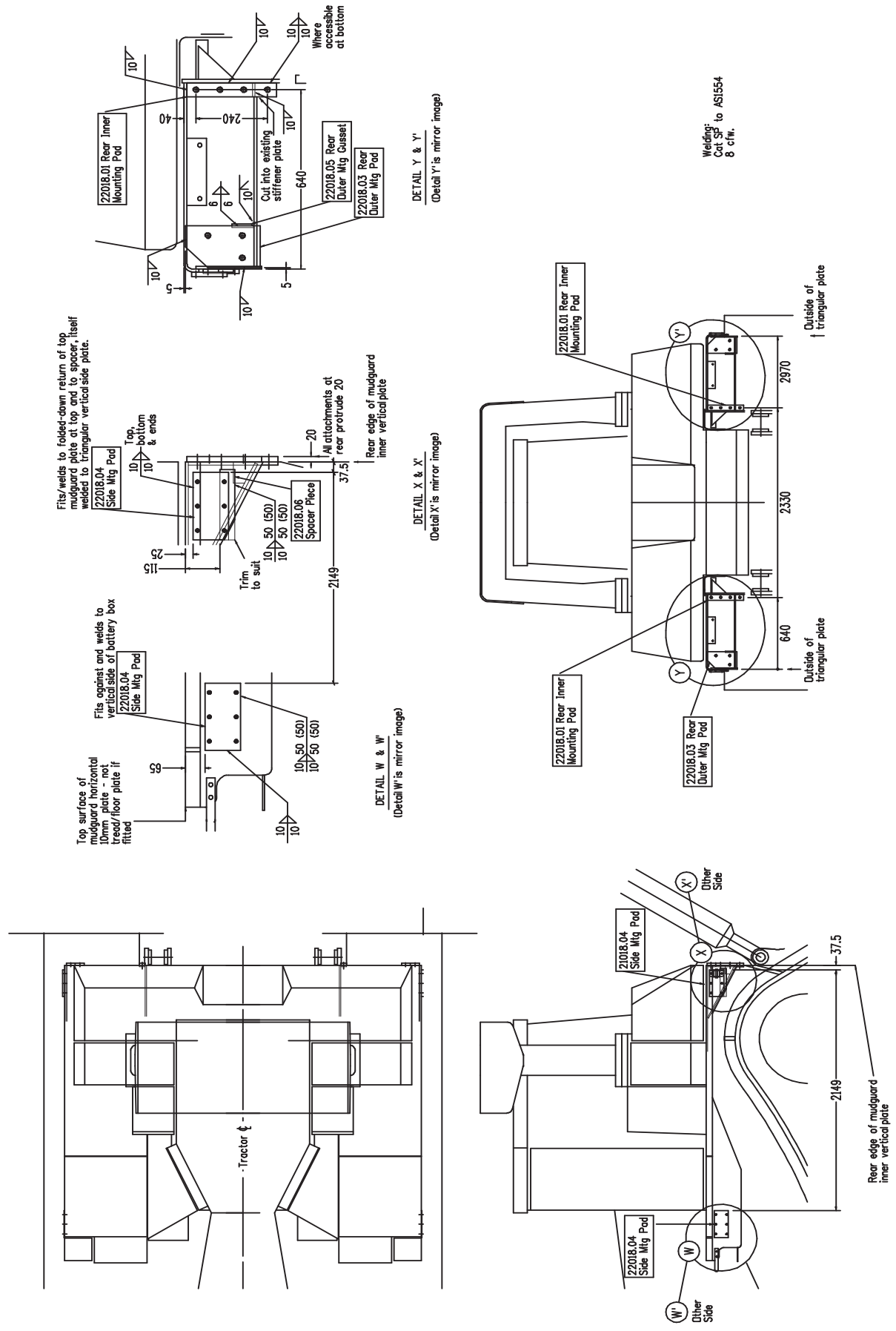
Section 1 Installation Instruction Drawings - 22 053



FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
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Section 1 Installation Instruction Drawings - 22 288

See Drawing **22 288 - Page 7**

Procedure

1. Fit Mounting Blocks per **Drg 22 286**

2. Per View 2, Spreader Plate: Fit Spreader Plate **22 287** to rear mounting blocks. Use Washer Plates **22 281** and washers under bolt heads - ensure maximum engagement of bolt threads in blind threaded holes. Washer Plates not shown in most Views in this drawing.

3. Per Views 3A & 3B, Isolators: Fit Isolator Brackets **21 930** (See aslso View 2). Fit Side Landing Beam **22 008** with Ladder Shaft and Drive already assembled, supported by Isolators.
   Similarly fit Right Side Landing on the right hand side of 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 Views 1, Complete Assembly and 4, PROP System:
   Attach PROP System Mounting Frame **22 091** atop cabin, on ROPS unless similar is already fitted by customer.Clamp PROP Mtg Beams **22 087** in position shown in View 4B and mount PROP **21 945**. Adjust position of Beams & PROP so that, with PROP attached to Isolators using middle holes (of set of 5), ladder gear drive is not loaded when ladder is fully raised. Weld Beams to Frame, 6cfw where visible from above.

6. Per View 1: Fit Rear Walkway **22 282** Fit Handrails.

FOLDING LADDER
Caterpillar D10T Dozer

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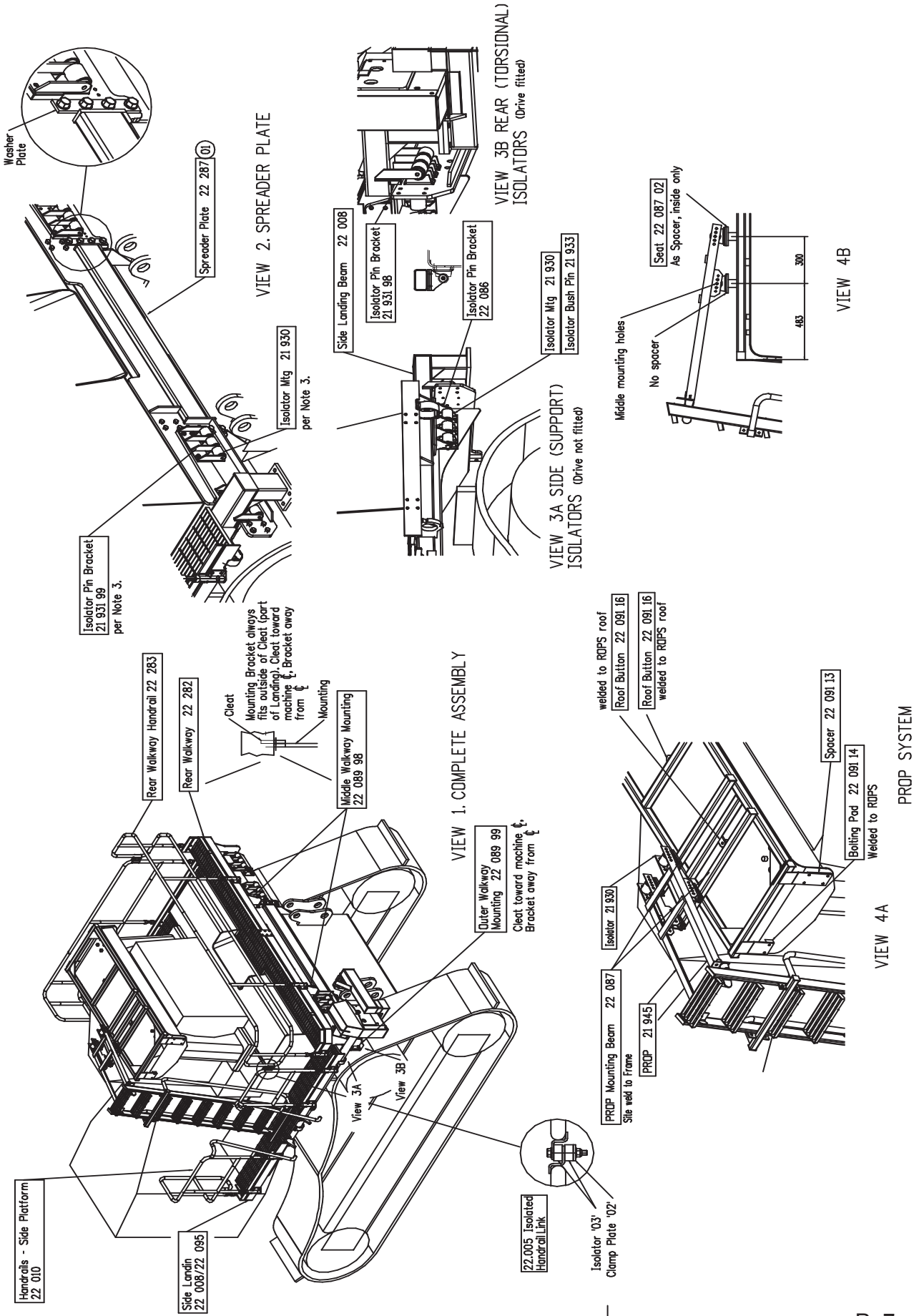
Section 1 Installation Instruction Drawings - 22 288



FOLDING LADDER
Caterpillar D10T Dozer

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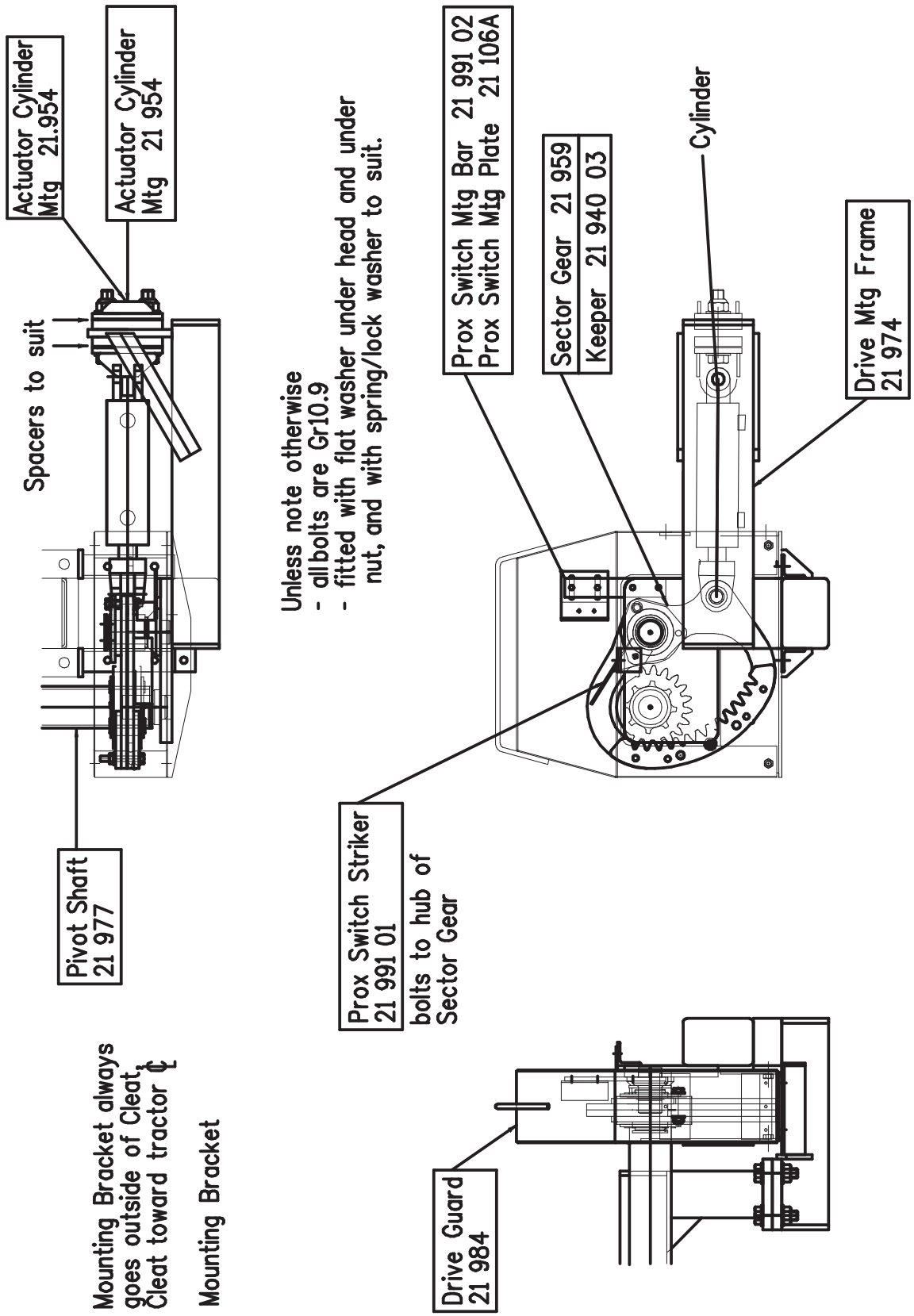
Section 1 Drive Arrangement - 22 288



DRIVE ARRANGEMENT

FOLDING LADDER
Caterpillar D10T Dozer

Section 1 Installation and Mounting Instructions (cont.)
Maintenance Notes

NOTE
Follow all on-site/Mine lifting and safety procedures when installing Power Step Landings to 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 D10T Dozer

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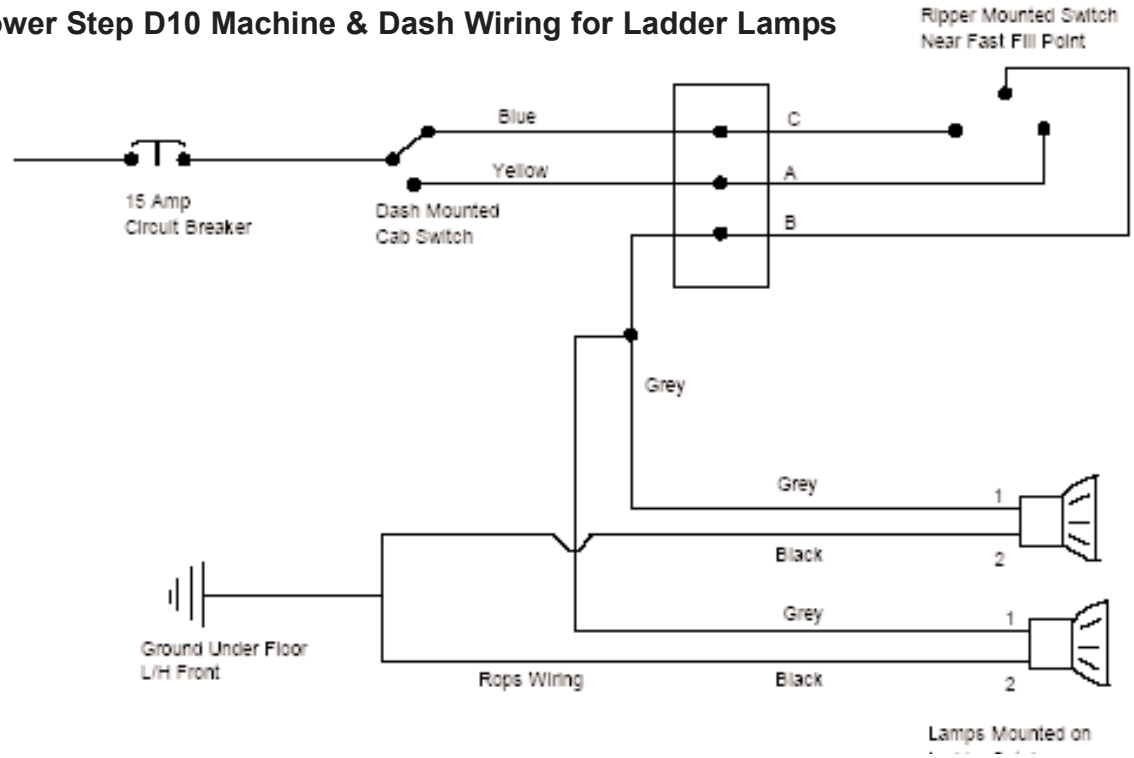
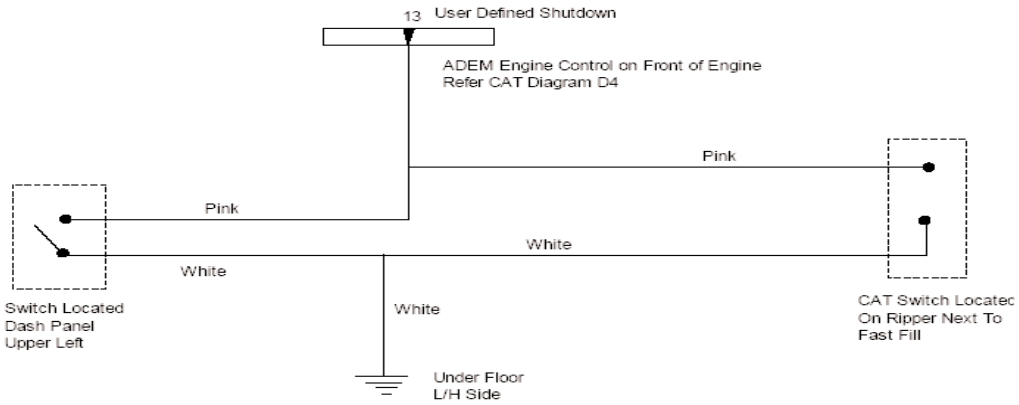
Section 2 Electrical System - Wiring Diagrams

Power Step D10 Machine & Dash Wiring for Ladder Lamps



Power Step D10 Shutdown Circuit



FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
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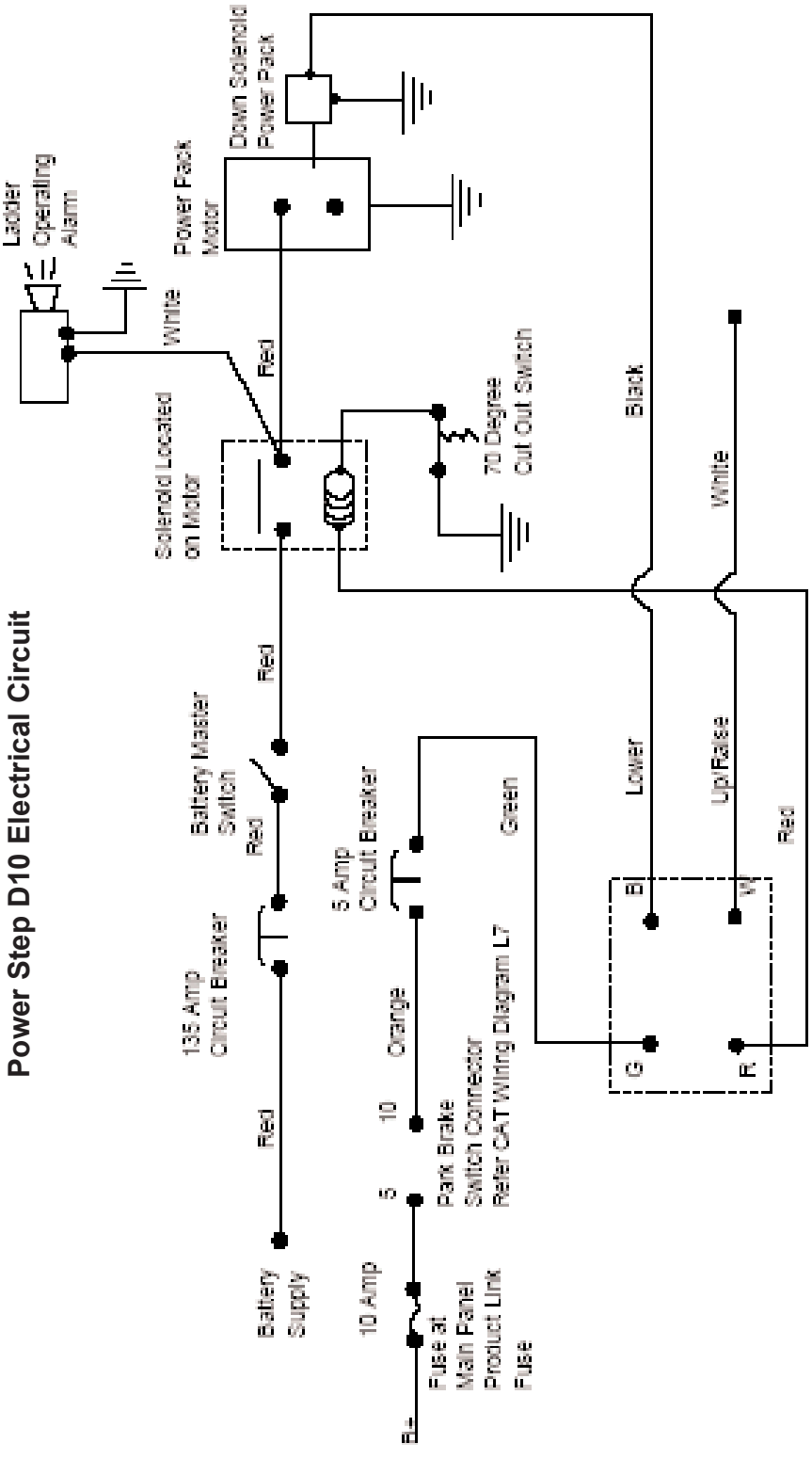
Section 2 Electrical System - Wiring Diagrams



Section 3 Recommended Maintenance Procedure

Daily

Visually check ladder 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. (Ladder 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 ladder lowered, and accessed from under the ladder.

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

Repeat daily check as above

FOLDING LADDER
Caterpillar D10T Dozer

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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 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 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.

FOLDING LADDER
Caterpillar D10T
Dozer

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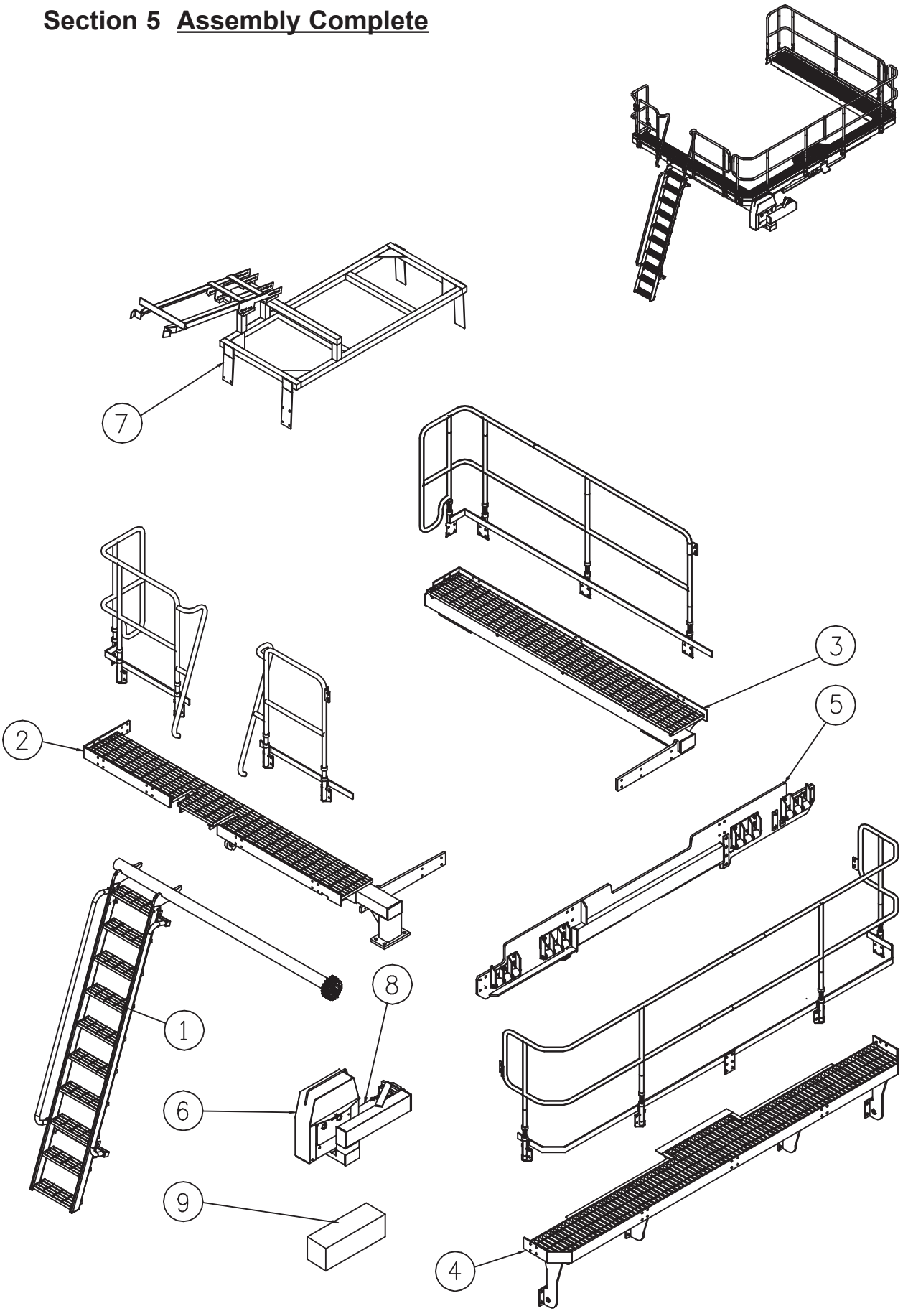
Section 5 Assembly Complete



FOLDING LADDER
Caterpillar D10T Dozer

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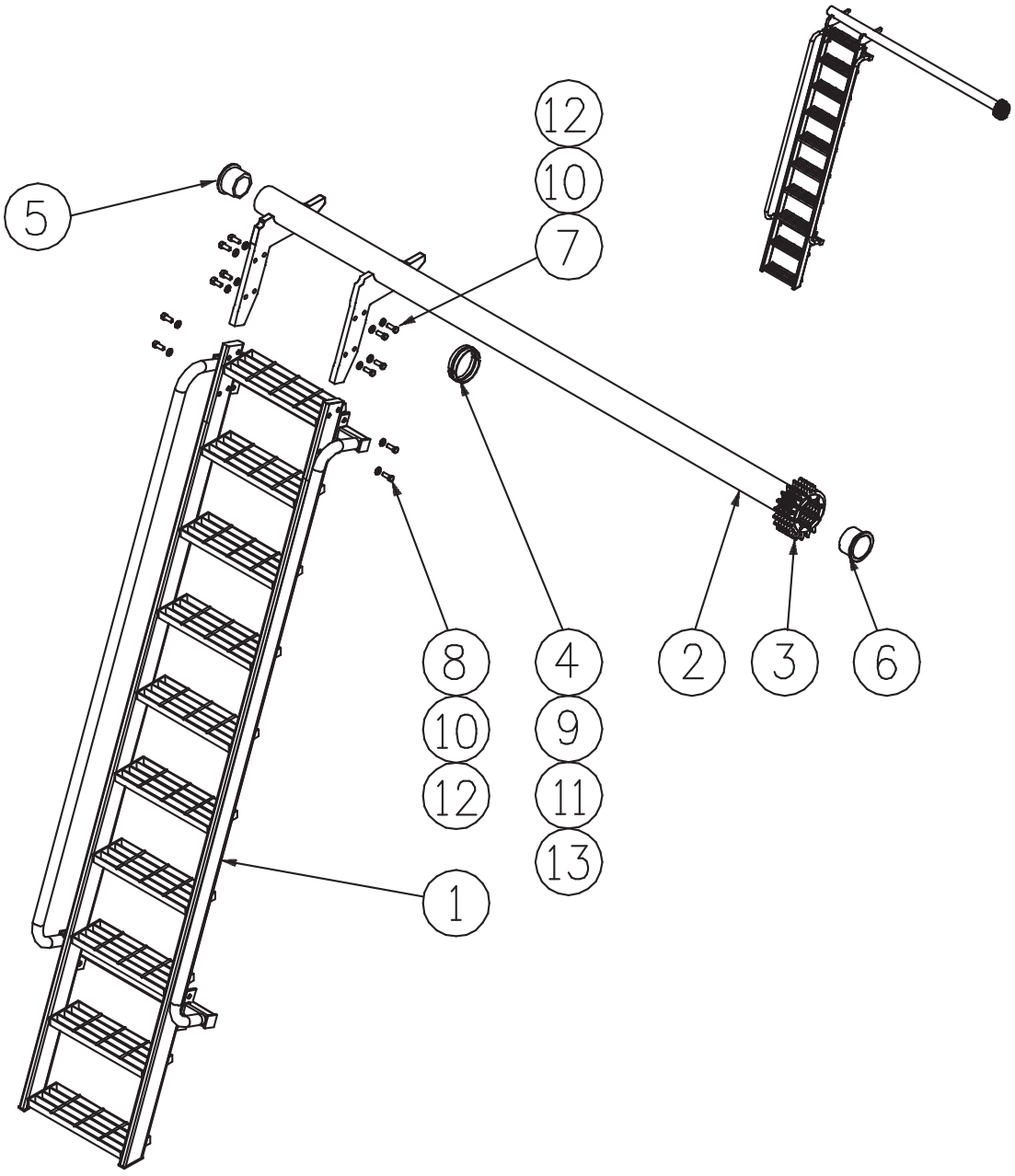
Section 5-1 Ladder Assembly



FOLDING LADDER
Caterpillar D10T Dozer

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Section 5-1 Ladder Assembly
See Drawing Page 15

Item	Part No.	Part Name	Qty		
1	PS-22002	LADDER & HANDRAIL FABRICATION	1		
2	PS-22012	ROTATION SHAFT	1		
3	PS-21958-01	PINION	1		
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-M12X50ZP	BOLT-M12 x 50	8		
8	CPS-M12X20ZP	BOLT-M12 x 20	8		
9	CPS-M8X35ZP	BOLT-M8 x 35	8		
10	CPS-M12NZP	NUT-M12	8		
11	CPS-M8NZP	NUT-M8	8		
12	CPS-M12WH	WASHER-M12	8		
13	CPS-M8WH	WASHER-M8	8		

FOLDING LADDER
Caterpillar D10T Dozer

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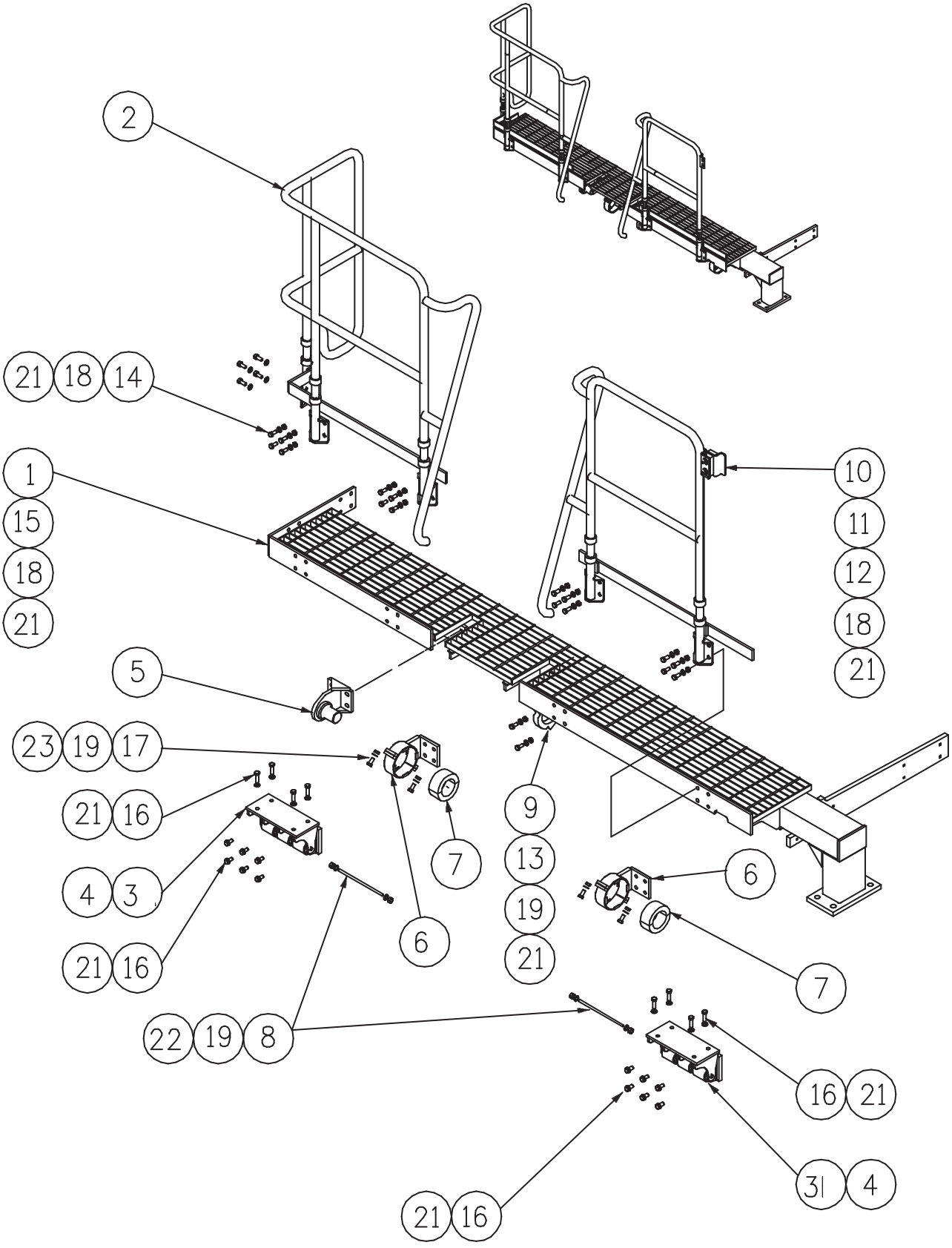
Section 5-2 Landing Assembly LHS



FOLDING LADDER
Caterpillar D10T Dozer

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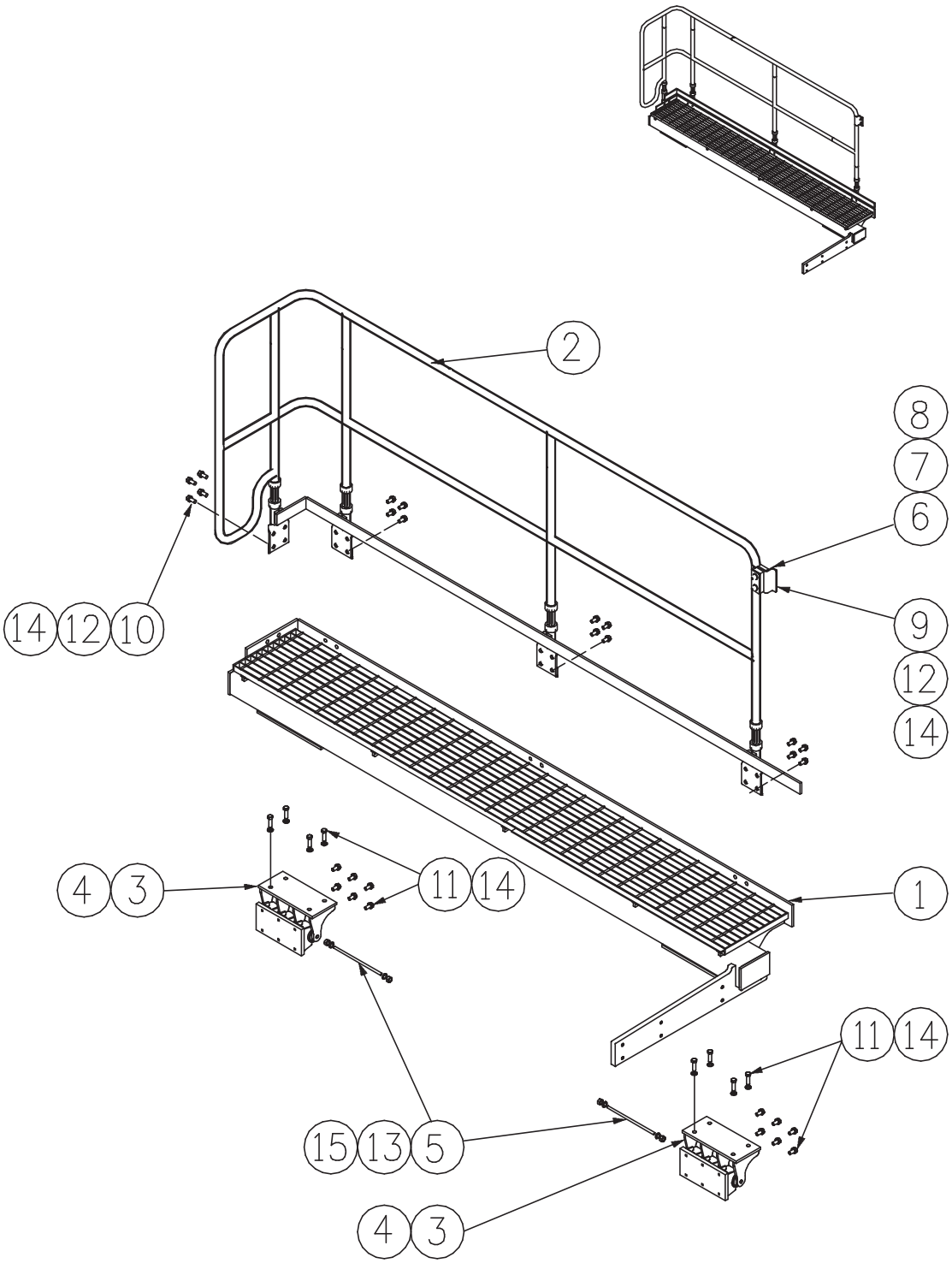
Section 5-2 Landing Assembly LHS

See Drawing Page 17

Item	Part No.	Part Name	Qty		
1	PS-22017	LANDING ASSEMBLY	1		
2	PS-22010	HANDRAIL	1		
3	PS-22086	ISOLATOR PIN BRACKETS	2		
4	PS-21930	ISOLATOR MOUNTINGS	6		
5	PS-21976	FRONT PIVOT PIN BRACKET	1		
6	PS-21941-02	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	CPS-M12X75ZP	BOLT-M12 x 75	2		
13	CPS-M12X65ZP	BOLT-SOCKET HEAD-M12 x 65	2		
14	CPS-M12X40ZP	BOLT-M12 x 40	20		
15	CPS-M12X30ZP	BOLT-M12 x 30	6		
16	CPS-M12X25ZP	BOLT-M12 x 25	20		
17	CPS-M8X35ZP	BOLT-M8 x 35	8		
18	CPS-M12NZP	NUT-M12	22		
19	CPS-1/2”NN	NUT-NYLOC-1/2”UNC	4		
20	CPS-M8NN	NUT-NYLOC-M8	8		
21	CPS-M12WH	WASHER-HARDENED-M12	50		
22	CPS-1/2”WH	WASHER-HARDENED-1/2”	4		
23	CPS-M8WH	WASHER-HARDENED-M8	8		

FOLDING LADDER
Caterpillar D10T Dozer

Section 5-3 Landing Assembly RHS



FOLDING LADDER
Caterpillar D10T Dozer

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Section 5-3 Landing Assembly RHS
See Drawing Page 19

Item	Part No.	Part Name	Qty		
1	PS-22-016	LANDING ASSEMBLY RHS	1		
2	PS-22285	HANDRAIL RHS	1		
3	PS-22086	ISOLATOR PIN BRACKETS	2		
4	PS-21930	ISOLATOR MOUNTINGS	6		
5	PS-21933	ISOLATOR BUSH PIN	2		
6	PS-22005-01	ANGLE BRACKET	2		
7	PS-22005-03	ISOLATOR RUBBER	2		
8	PS-22005-02	ISOLATOR CLAMP	2		
9	CPS-M12X75ZP	BOLT-M12 x 75	2		
10	CPS-M12X40ZP	BOLT-M12 x 40	16		
11	CPS-M12X25ZP	BOLT-M12 x 25	20		
12	CPS-M12NZP	NUT-M12	16		
13	CPS-1/2”NN	NUT-NYLOC-1/2” UNC	4		
14	CPS-M12WH	WASHER-HARDENED-M12	38		
15	CPS-1/2”WH	WASHER-HARDENED-1/2”	4		

FOLDING LADDER
Caterpillar D10T Dozer

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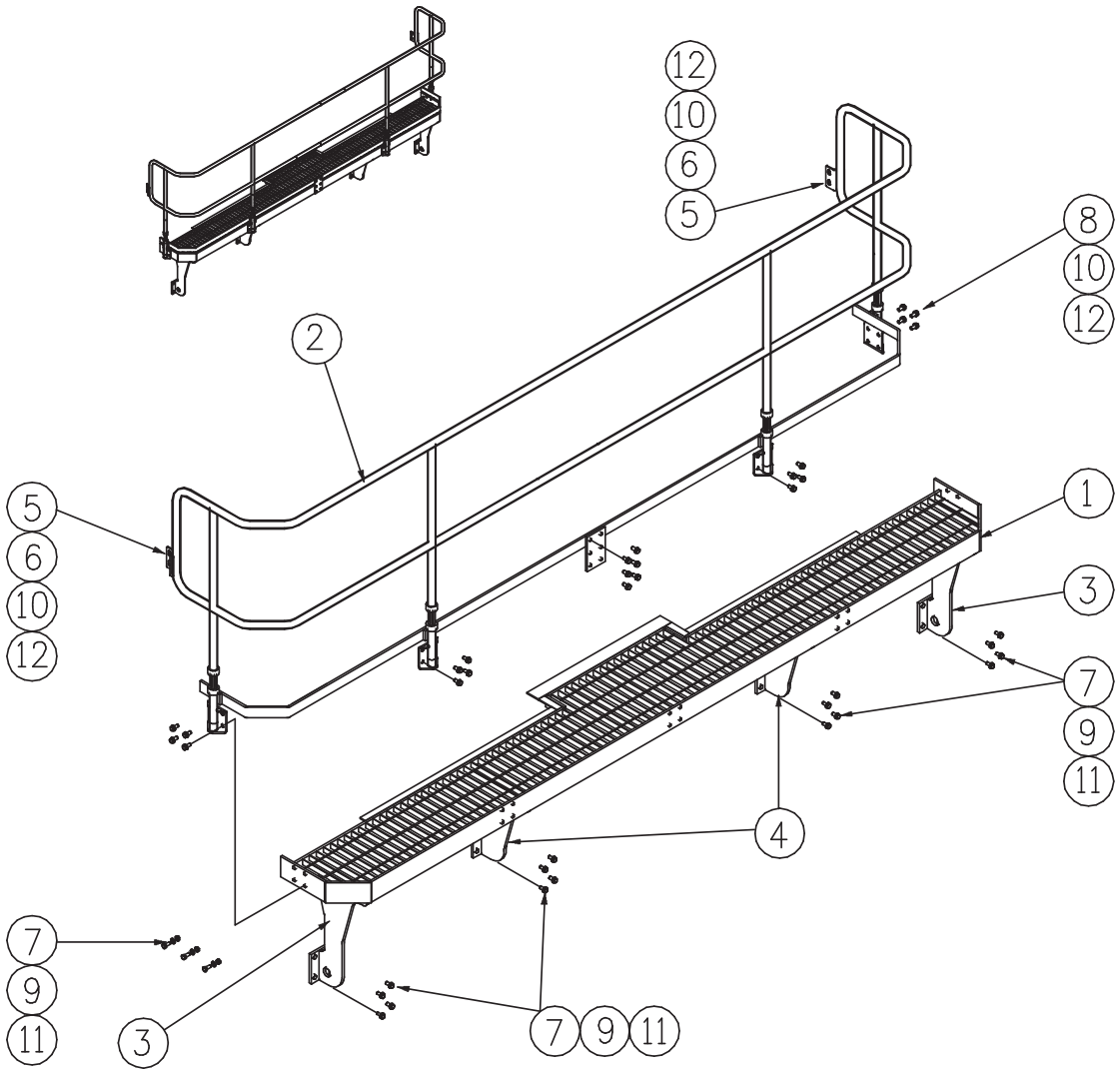
Section 5-4 Landing Assembly - Rear



Item	Part No.	Part Name	Qty		
1	PS-22282	LANDING - REAR	1		
2	PS-22283	HANDRAILS- REAR	1		
3	PS-22089-99	OUTER WALKWAY MOUNTING	2		
4	PS-22089-98	INNER WALKWAY MOUNTING	2		
5	PS-22005-01	ANGLE BRACKET	2		
6	PS-22005-03	ISOLATOR RUBBER	4		
7	CPS-M16X35ZP	BOLT-M16 x 35	28		
8	CPS-M12X40ZP	BOLT-M12 x 40	22		
9	CPS-M16NZP	NUT-M16	28		
10	CPS-M12NZP	NUT-M12	26		
11	CPS-M16WH	WASHER-HARDENED-M16	28		
12	CPS-M12WH	WASHER-HARDENED-M12	22		

FOLDING LADDER
Caterpillar D10T Dozer

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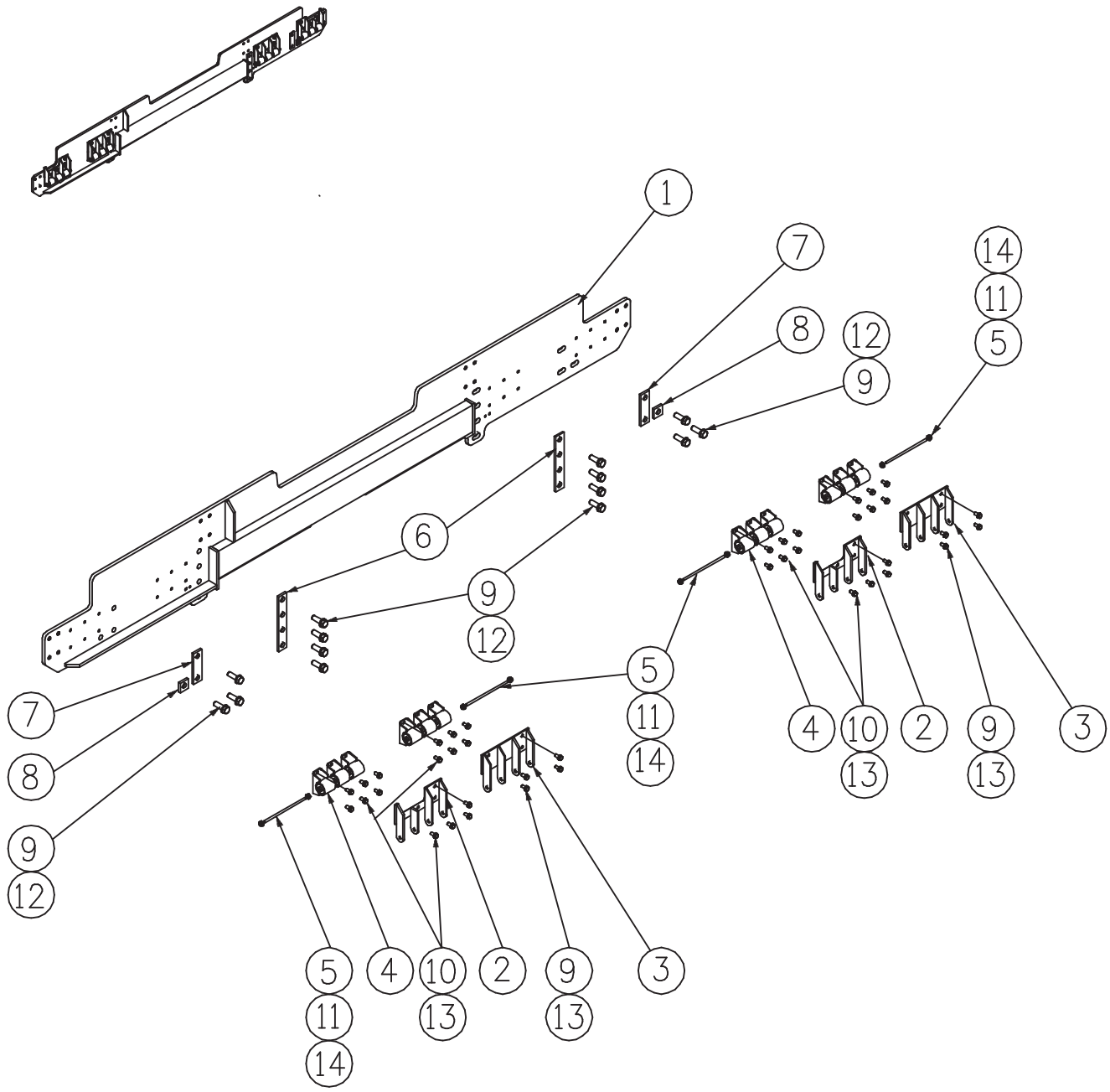
Section 5-5 Spreader Assembly



FOLDING LADDER
Caterpillar D10T Dozer

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Section 5-5 Spreader Assembly
See Drawing Page 22

Item	Part No.	Part Name	Qty		
1	PS-22287	SPREADER	1		
2	PS-21931 98/97	ISOLATOR PIN BRACKET-OUTER	2		
3	PS-22931-02	ISOLATOR PIN BRACKET-INNER	2		
4	PS-21930	ISOLATOR MOUNTING	12		
5	PS-21933	ISOLATOR BUSH PIN	4		
6	PS-22281-04	WASHER PLATE-INNER	2		
7	PS-22281-03	WASHER PLATE-CENTER	2		
8	PS-22281-01	WASHER PLATE-OUTER	2		
9	PS-M20X60ZP	BOLT-M20 x 60	14		
10	CPS-M12X25ZP	BOLT-M12 x 25	40		
11	CPS-1/2”NN	NUT-NYLOC-1/2” UNC	8		
12	PS-M20WH	WASHER-HARDENED-M20	14		
13	CPS-M12WH	WASHER-HARDENED-M12	40		
14	CPS-1/2”WH	WASHER-HARDENED-1/2”	8		

FOLDING LADDER
Caterpillar D10T Dozer

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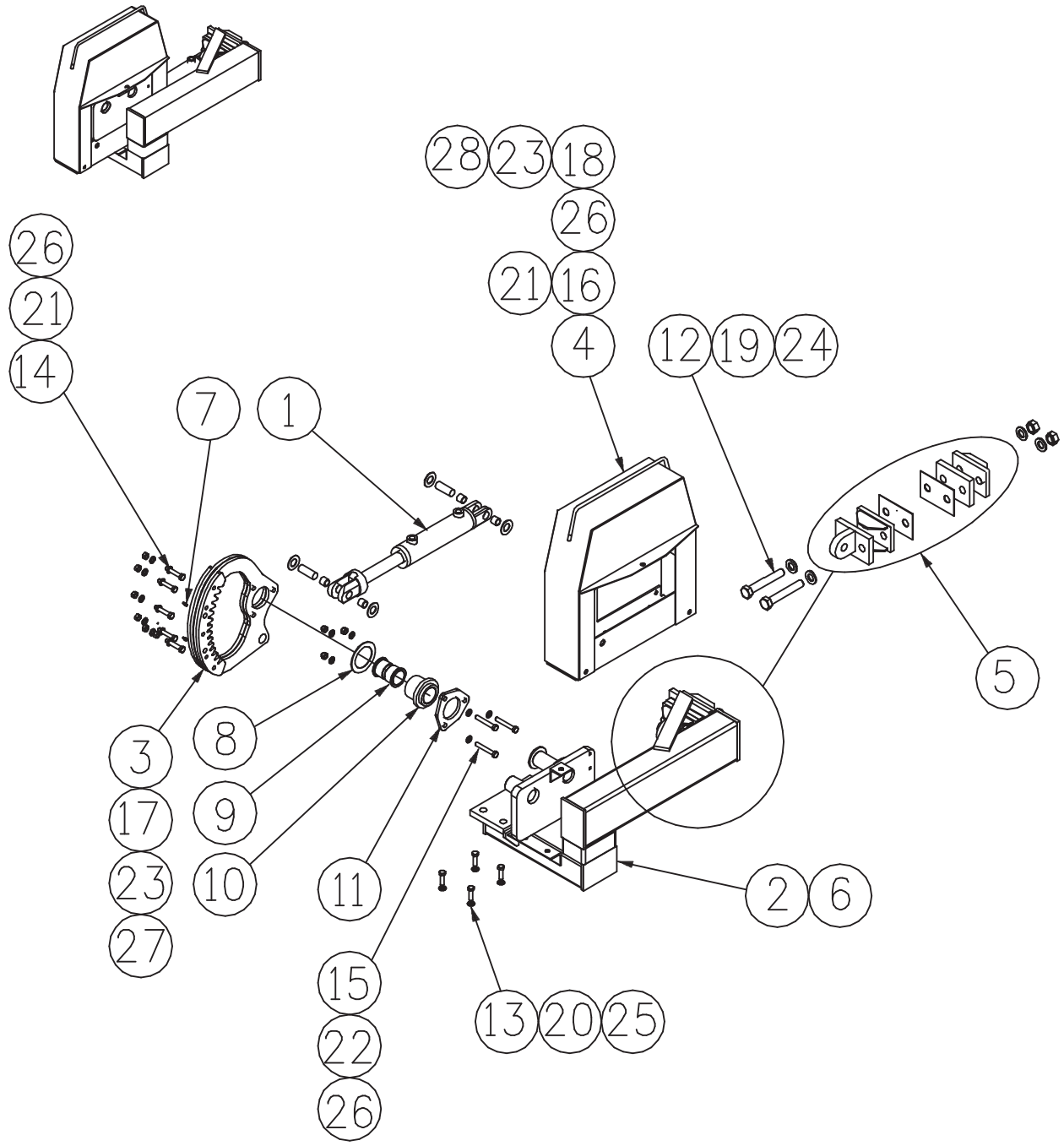
Section 5-6 Drive Unit Assembly



FOLDING LADDER
Caterpillar D10T Dozer

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Section 5-6 Drive Unit Assembly

See Drawing Page 24

Item	Part No.	Part Name	Qty		
1	PS-63014	HYDRAULIC CYLINDER	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	PROXIMITY SWITCH PLATES	1		
7	PS-61006-2	GREASE NIPPLE M6 STR.	2		
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-M24X150ZP	BOLT-M24 x 150	2		
13	PS-20X65ZP	BOLT-M20 x 65	4		
14	CPS-M12X80ZP	BOLT-M12 x 80	5		
15	CPS-M12X65ZP	BOLT-M12 x 65	3		
16	CPS-M12X25ZP	BOLT-M12 x 25	9		
17	CPS-M10X15ZP	BOLT-M10 x 15	4		
18	CPS-M5X15ZP	BOLT-M5 x 15	6		
19	PS-M24XNN	NUT-NYLOC-M24	2		
20	PS-M20NZP	NUT-M20	4		
21	CPS-M12NZP	NUT-M12	9		
22	CPS-M12NN	NUT-NYLOC-M12	3		
23	CPS-M5NN	NUT-NYLOC-M5	6		
24	CPS-M24WH	WASHER-HARDENED-M24	2		
25	CPS-M20WH	WASHER-HARDENED-M20	4		
26	CPS-M12WH	WASHER-HARDENED-M12	17		
27	CPS-M10WH	WASHER-HARDENED-M10	4		
28	CPS-M5WH	WASHER-HARDENED-M5	6		

FOLDING LADDER
Caterpillar D10T Dozer

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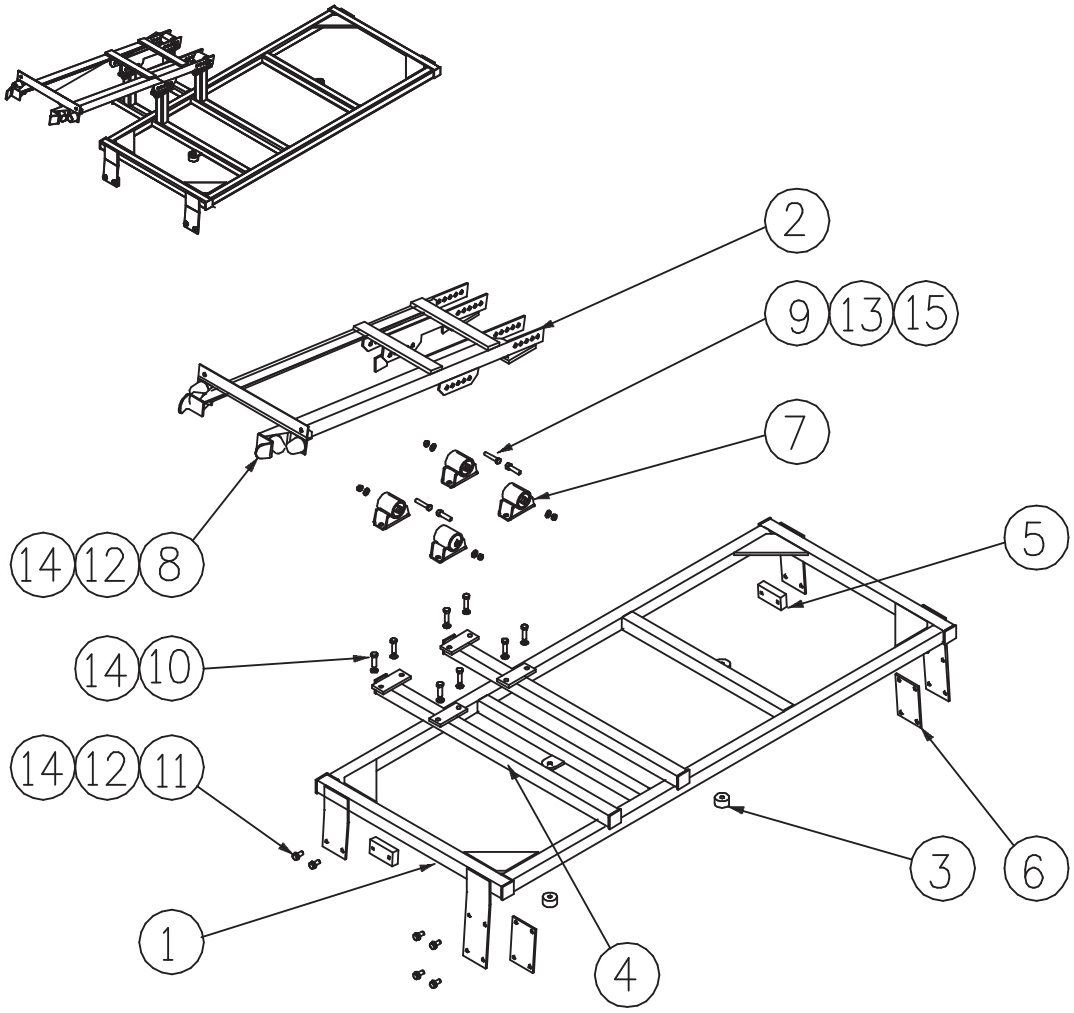
Section 5-7 PROP Assembly



Item	Part No.	Part Name	Qty		
1	PS-22091	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-21930	ISOLATOR MOUNTING	4		
8	PS-40003	BUFFER	4		
9	CPS-1/2"UNC	ISOLATOR PIN 1/2" x 4.5"	4		
10	CPS-M12X40ZP	BOLT-M12 x 40	8		
11	CPS-M12X25ZP	BOLT-M12 x 25	22		
12	CPS-M12ZP	NUT-M12	14		
13	CPS-1/2"NN	NUT-NYLOC-1/2" UNC	4		
14	CPSM12WH	WASHER-HARDENED-M12	22		
15	CPS-1/2"WH	WASHER-HARDENED-1/2"	4		

FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
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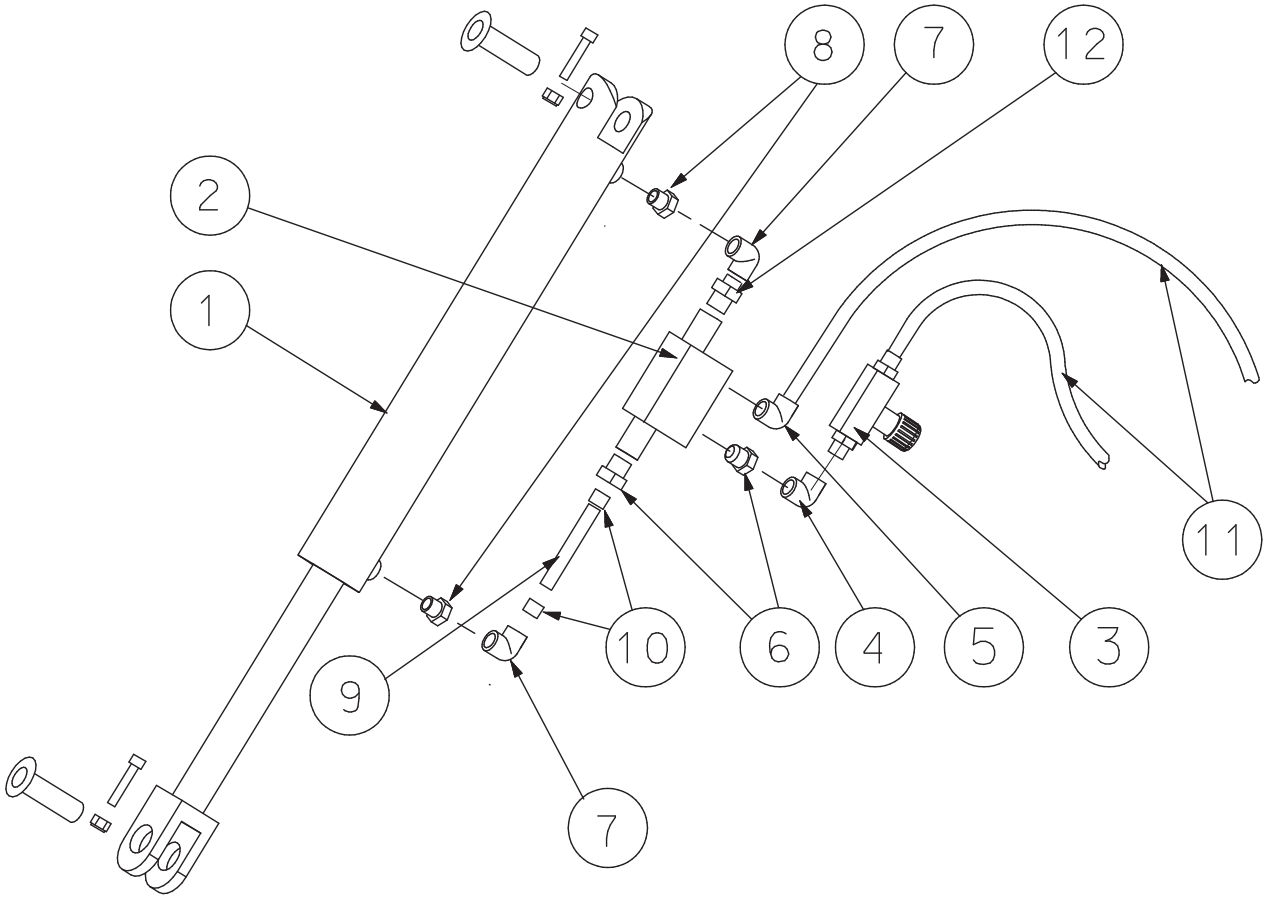
Section 5-8 Hydraulic Cylinder

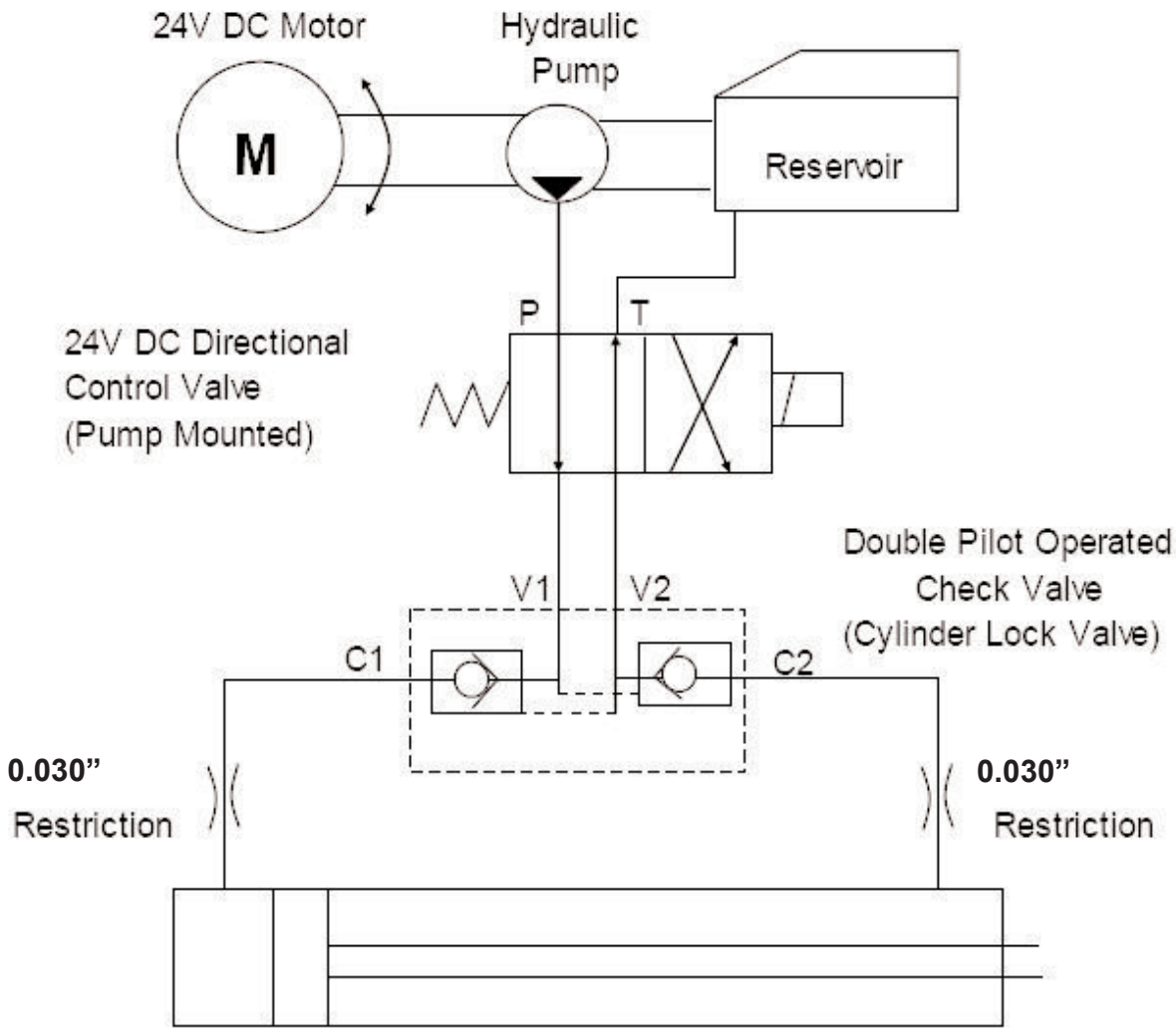


Item	Part No.	Part Name	Qty		
1	PS-63014	HYDRAULIC CYLINDER	1		
-	PS-63011K	SEAL KIT (NOT SHOWN)	1		
2	PS-63201	VALVE - PILOT OPERATED LOCKING	1		
3	PS-63202	FLOW CONTROL VALVE	1		
4	PS-61159	FITTING - ELBOW-9/16” JIC	1		
5	PS-61154	FITTING - ELBOW- O RING 1/4BSPPx9/16”JIC	1		
6	PS-61157	FITTING - O RING 1/4BSPPx 9/16”JIC	2		
7	PS-61158-0.30	FITTING - 0.030” RESTRICTION 90 DEG	2		
8	PS61163	REDUCER JIC x BSPP	2		
9	PS-61161	TUBE	1		
10	PS-60047	FERRULES	2		
11	PS-60051-2.8	HOSE- HYDR. (9/6”JIC SWIVEL FITTING 2.8M)	2		
12	PS-61145	FITTING 9/16 JIC SWIVEL	1		

Section 5-8 Hydraulic Cylinder (Valve Diagram)

See also Drawing Page 27

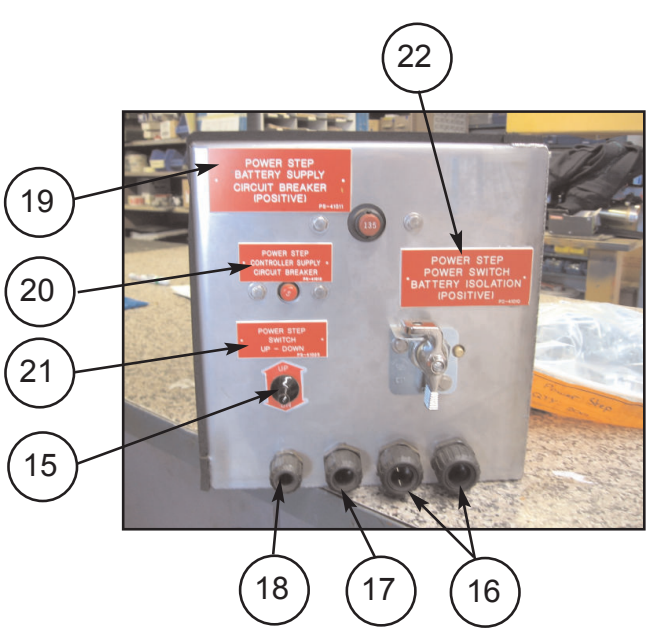
Double Acting Hydraulic System with directional Control Valve and Cylinder Lock Valve

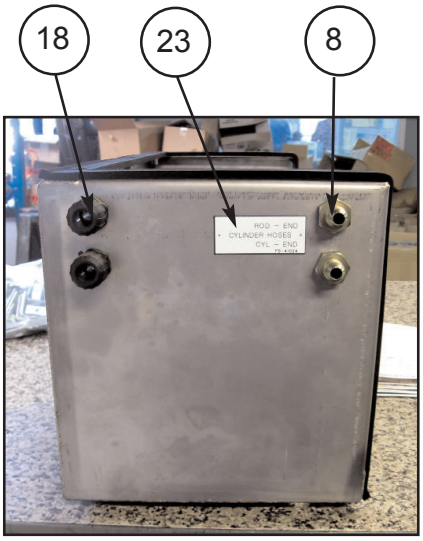


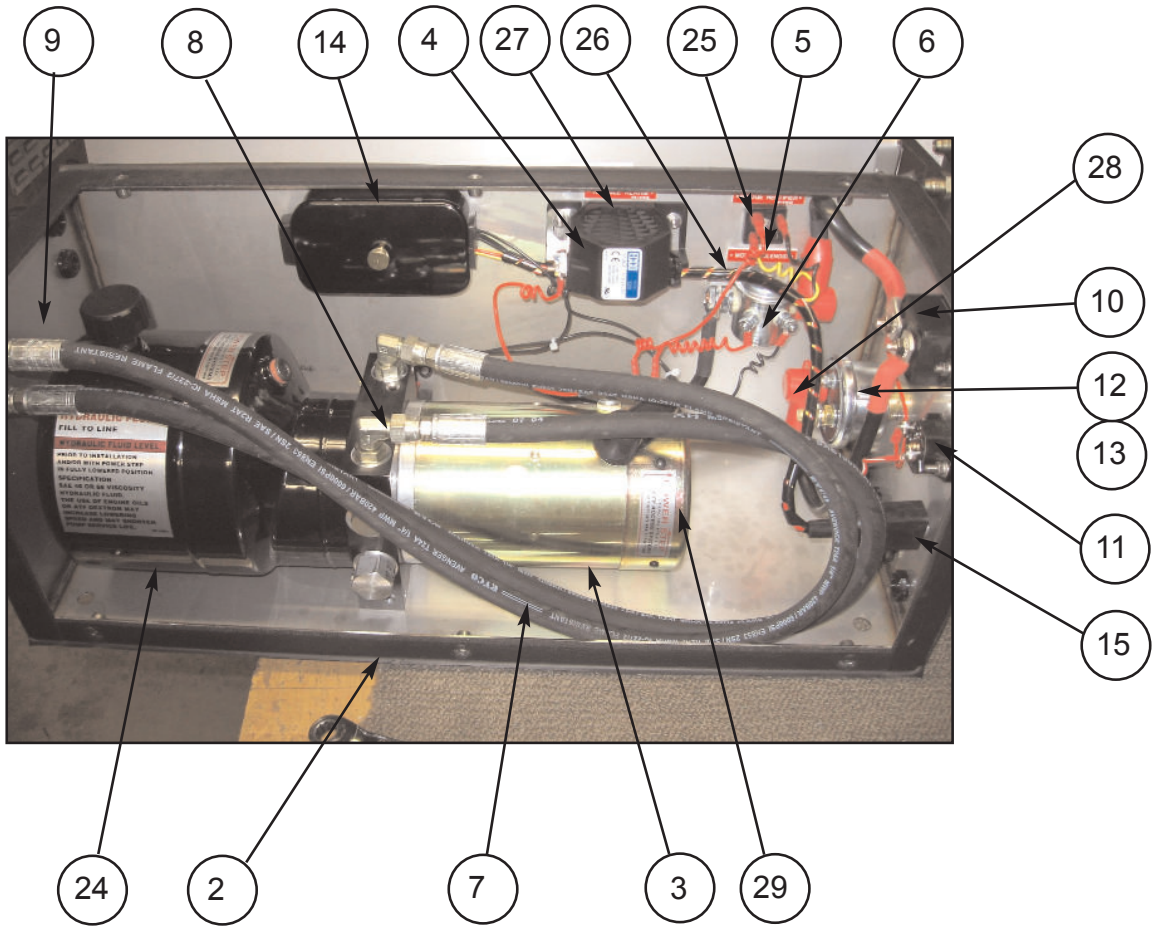
FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
(AUSTRALIA) PTY. LTD.

Section 5-9 Power Pack







FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
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Section 5-9 Power Pack
See Photos Page 29

Item	Part No.	Part Name	Qty		
1	PS-80103A-SS	POWER PACK ASSEMBLY (Incl. Items.2-11)	1		
2	PS-21107SS	MOTOR ENCLOSURE- SEALED ST/ST	1		
3	PS-80103A	POWER PACK	1		
4	PS-75024	AUDIBLE ALARM	1		
5	PS-84214	BRIDGE RECTIFIER	1		
6	PS-82402	SOLENOID	1		
7	PS-60050-900MM	HYDR. HOSES 9/16"JIC STRAIGHT SWIVEL	2		
8	PS-61152	HYDRAULIC FITTING	2		
9	PS-61177	HYDRAULIC FITTING	2		
10	PS-84213	135A CIRCUIT BREAKER	1		
11	PS-84212	5A 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	CPS-CAB20M20	WIRE HARNESS GLAND	2		
17	CPS-CAB16M20	WIRE HARNESS GLAND	1		
18	CPS-CAB12M16	WIRE HARNESS GLAND	3		
19	PS-41011	DECAL ELECTRICAL- 135 Amp circuit Breaker	1		
20	PS-41012	DECAL ELECTRICAL-5 Amp circuit Breaker	1		
21	PS-41023	DECAL ELECTRICAL-Up/Down Switch	1		
22	PS-41010	DECAL ELECTRICAL- Isolation S/W	1		
23	PS-41024	DECAL HYDRA-HOSES	1		
24	PS-41041	DECAL OIL TANK	1		
25	PS-41019	DECAL SOLENOID	1		
26	PS-41017	DECAL BRIDGE RECTIFIER	1		
27	PS-41018	DECAL ALARM	1		
28	PS-73010	RUBBER BOOT RED	3		
29	PS-73009	RUBBER BOOT BLACK	1		

Access System Electrical Overview

The Power Step electrical control system has been designed to cater for every conceivable circumstance in the mining industry.

The system has been built to withstand all the environmental issues normally associated with mining and some additional features not yet seen on any current systems.
These features include:

1) Universal application wiring system. The one wiring system has been designed to adapt to any machine with any site requirement.

2) All system switches are illuminated for clear visibility in darkness.

3) The system incorporates a park brake release option which, in most cases, can utilise the original park brake system pressure switch to control the ladder system. This feeds a signalback which can be plugged into the OEM harness to tell the machines' original system the park brake status.

4) The system has an optional boarding light option which can be operated from inside the cab or at ground level (optional), the boarding ladder circuit is controlled by an adjustable timer set to approximately three minutes, the operator need only press either of the momentary boarding light switches once, to activate the timer. The lights will illuminate for three minutes or until the park brake is released which also turns the lights off. The boarding lights will not activate if the park brake is released (if the park brake option is used).

5) The system will raise the ladder automatically when the park brake is released and will not allow the ladder to be lowered if the park brake is released (if the park brake option is used).

6) The system will only sound the cabin alarm when the park brake is released and the ladder is not fully home (if the park brake option is used).

7) The system will automatically raise the ladder should it creep down over a period of time while the machine is in service while the park brake is released (if the park brake option is used).

8) The system is designed with a dual tone alarm (external) which will be mounted on the rear of the box. This can be extended to mount anywhere else on the machine using the optional extension cables. The system has a pre-movement tone and an actual movement tone. When the up button, down button or park brake is released the premovement alarm will sound for three seconds to warn personnel in the vicinity that the ladder is about to move, then when the ladder actually moves it changes tone until the ladder has completed its movement stroke.

9) If the ladder becomes stuck mid way or, a hydraulic hose fails, the alarm will continue to sound until the power is switched off, but the hydraulic motor will only run for one minute on the motor protection timer. The motor protection timer prevents the hydraulic motor from running to destruction should the ladder not reach its top or bottom stroke for whatever reason.

10) Once the ladder has been raised and reached its top proximity switch the hydraulic motor will run for an additional three seconds to ensure it is fully stowed.

11) This system also features optional locks which are for any electric or electric over hydraulic function which may need to be locked out to prevent damage to the ladder system (i.e.) swing and/or travel on excavators. This can be used with or without the park brake system. The system has N.O. and N.C. options and can be used easily integrated into any system to inhibit swing/travel until the ladder is fully raised.

12) This system also features an optional door proximity switch; this switch if used, is designed to prevent the ladder from being raised if the cab door is ajar. It is a N.O. proximity thus; if this option is not used the bypass plug must be fitted. If the cab door is accidentally opened whilst the ladder is being raised, it will stop and then continue once the cab door is closed again.

13) Motion delay can be inhibited by removing Diode 6 to inhibit the delay in the upward direction. Diode 7 can be removed to inhibit the delay in the downward direction.

14) Mounted in the optional Boarding Lamp Switch Housing is an additional lower button, this is to enable the operator to operate the down function from an alternative position, one or more of these stations can be used.

15) Should the park brake system not be used, a by-pass plug must be fitted otherwise the alarm in the cab will not operate. In this condition the alarm in the cab will operate whenever the step is not fully home (up). We recommend during shutdowns or extended periods of time when the machine is to be worked on with the ladder down, the system be isolated.

16) The system must have both the up (top) and down (bottom) Proximity Switches used.

17) The timers are all set for different functions and must not be interchanged.

18) The circuit breakers used are called alternative function circuit breakers which mean if they "trip out" on over current the supply must be cut and then re-applied to re-set them - turn the system off and then back on.

19) The kit is supplied with a 120 amp Circuit Breaker/Bracket Assembly. We recommend taking the power supply from the isolated side of the battery isolator (If positive is isolated) or the battery itself. The circuit breaker should be mounted as close to the battery positive terminal as possible, using the cable lug covers for all exposed connections and a minimum of 3AWG/3B+S battery cable. Larger cable is recommended on a long cable run. Suitable cable protection and cable restraints should be used in accordance with normal good practice.

FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
(AUSTRALIA) PTY. LTD.

Section 5-10 Electrical Controls

Refer also Wiring Drawings Page 10 & 11.

FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
(AUSTRALIA) PTY. LTD.

Section 5-10 Electrical Controls

Refer also Wiring Drawings Page 10 &11.
See Photo Page 33.

Item	Part No.	Part Name	Qty		
1	PS-73013	HAND CONTROL SWITCH ASSEMBLY	1		
-	PS-73013B	BRACKET	1		
-	PS-73005	HARNESS	1		
			1		
2	PS-75430	PROXIMITY SWITCH ASSEMBLY	1		
-	PS-75430A	BRACKET	1		
-	PS-75430B	BRACKET	1		
-	PS-75402	HARNESS	1		
3	-	MANUALS	1		
4	-	INSTALLATION DRAWINGS	-		
5	PS-41011	DECAL FOR 135A CIRCUIT BREAKER	1		
6	PS-84213	135A CIRCUIT BREAKER	1		
7	PS-76001	CONTROL BOX	1		
8	PS-77003	CONTROL BOX HARNESS	1		
9	PS-63202	FLOW CONTROL VALVE	1		
10	PS-60051-2.8M	HYDRAULIC HOSES	1		
11	PS-21107-SS	ENCLOSURE-ST. STEEL(for Power Pack)	1		

FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
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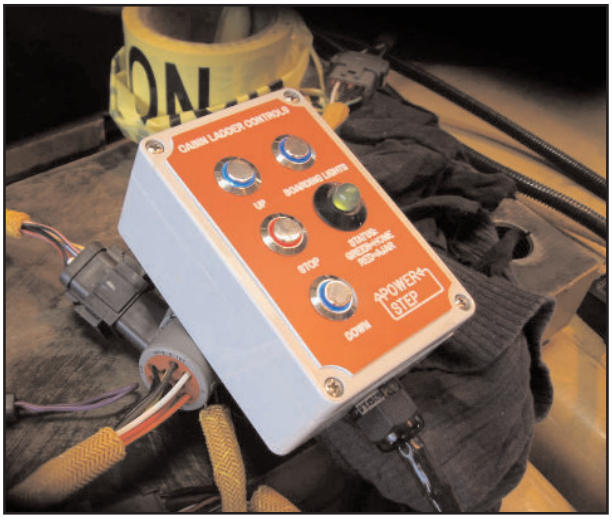
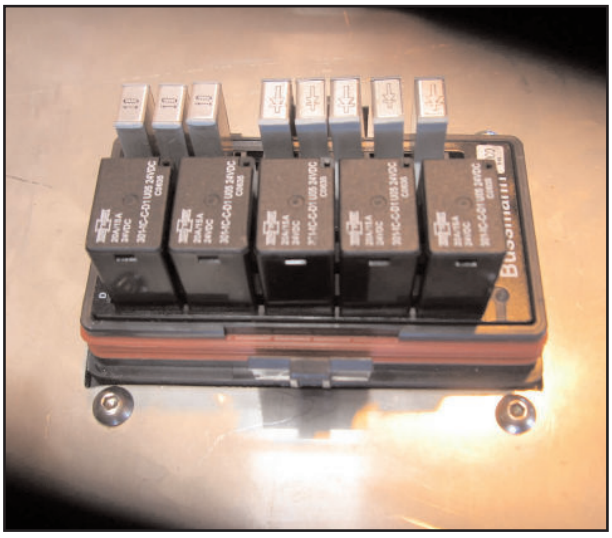
Section 5-10 Electrical Controls (Cont.)

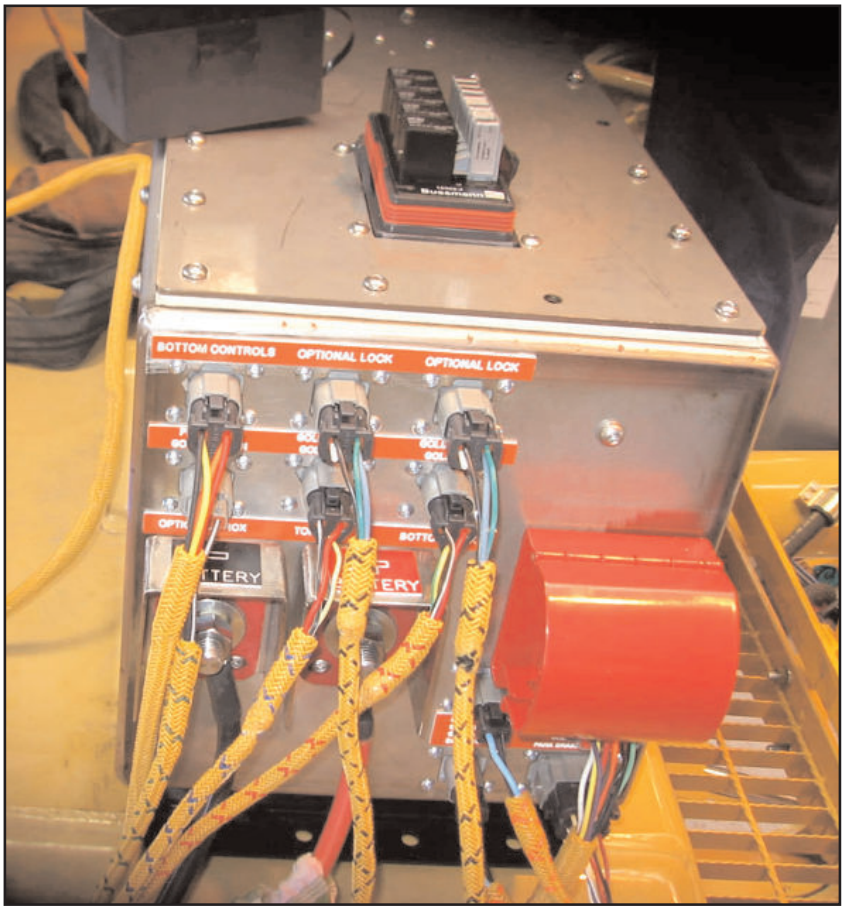


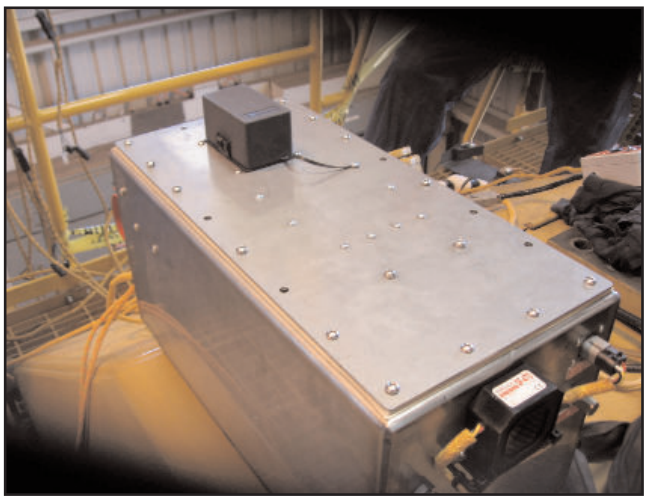


FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
(AUSTRALIA) PTY. LTD.

Section 5-10 Electrical Controls (Power Pack)





FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
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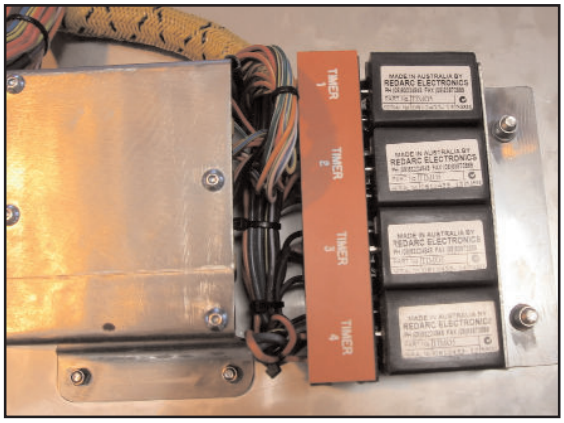
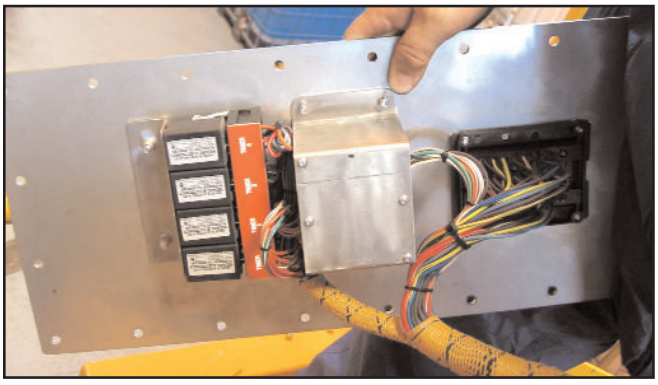
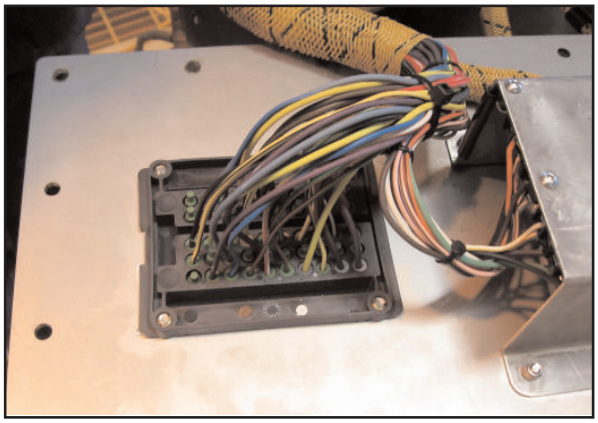
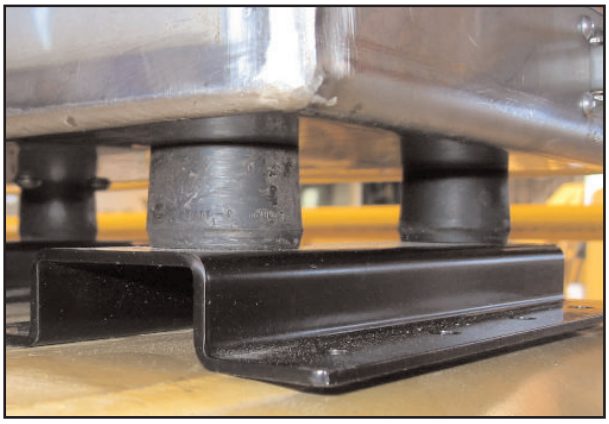
Section 5-10 Electrical Controls (Power Pack)



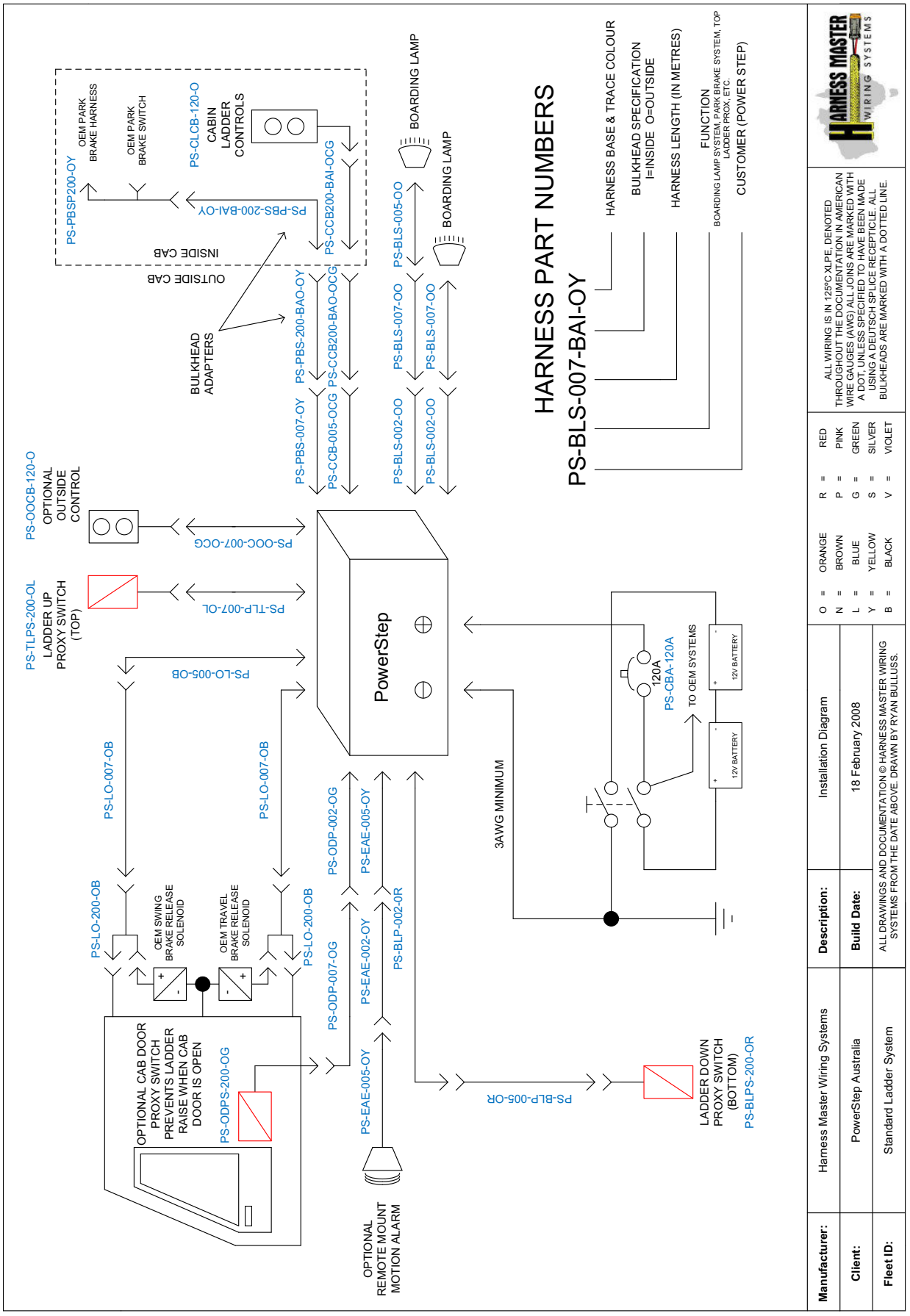






FOLDING LADDER
Caterpillar D10T Dozer

Section 5-10 Electrical Controls - Installation Diagram



FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
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Section 5-11 Bill of Materials

1	PS001 KEVI 2080	Box Part 1	1
2	PS002 KEVI 2081	Box Part 2	
3	PS005 rev 1	Box Lid	1
4	KEVI 2094	Motor Cradle	1
5	KEVI 2092	Buss Bar (Long)	1
6	KEVI 2093	Buss Bar short	1
7	KEVI 2073	Powder coated mount 3mm M/S	3
8	9W 4361	Rubber Mount	6
9	0161CZ114F	'U' Bolt	1
10	KEVI 2072	C/Breaker Mount	1
11	521-967	'U' Bolt Nut M10 S/Steel	2
12	08-SDLM120	C/Breaker 120A	1
13	W-B-M10	Weld on Buttons	4
14	PS004 KEVI 2077	Relay Retainer	1
15	PS003 KEVI 2078	Cab enclosure mount	1
16	PS006 KEVI 2079	Stencil	1
17	KEVI 2023	Through Bolts Shroud	2
18		Engraving Material	
19	120x80x55	Enclosure cabin	1
20		Resistor 1K	2
21	S0930	Red LED mom push button	1
22	S0933	Blue LED mom push button	3
23	S6121	Sonar	1
24	DF470	External Alarm	1
25	09488-00620	Nut Serts Ali (M6)	44
26	E2EX10E2	Proximity Sw U/P/DN	2
27	MWS 11	Lid Seal	1.6m
28	15303-4-0-4	Fuse Board Assy	1
29	TBA	Fuse Board Screws	4
30	21210	Bussman 10A C/Breaker	2
31	21220	Bussman 20A C/Breaker	1
32	22903-6V	Bussman Diode	6
33	TIM05	Timer TI	4
34	V23333Z1001A008-E	Relay Base	5
35	131207024	Bussman style Relay	5
36	301-1C-C-D1 U05 24VDC C0635	Alternative Bussman style relay	
37	KEVI 2074	Proximity Brackets	2
38	12110845	Fuse board terminal	50
39	12015323	Wire Seal	50
40	KM 24 B	Solenoid 24V C/Duty	1
41		Hydraulic Kit	1
42		'P' Clamps	10
43	SY2965-Red	Battery Cable Boot positive	5
44	SY2965-BLK	Battery Cable Boot negative	3
45	171-821	Bulkhead Screws	44
46	521-923	Bulkhead Nuts	44
47	LY4N 24vdc	4 Pole Relay	2

FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP
(AUSTRALIA) PTY. LTD.

Section 5-11 Bill of Materials

48	PTF 14AE	4 Pole Relay Base	2
49	5935	Tri-colour LED	1
50	Yet to Design & Allocate Part No	Relay mounting plate	1
51	HM PSIH	Internal wiring harness	1
52	PYC-A1	Relay Clips	2 pairs
53	521-967	⅜ UNC Stainless Nyloc	6
54	9S – 8752	⅜ UNC Oil	6
55	183-8632	Stainless M4x10 Dome hex capscrew	60
56	521-923	Stainless Nyloc Nuts M4	60
57	521-939	Stainless Nyloc Nuts M5	
58	183-8660	Stainless M5x10 Dome Lead Cap Screws	12
59	183-8698	Stainless M5 x 16 Dome Lead Cap Screws	12
60	183-8727	Stainless M6 x 16 Dome Lead Cap Screws	50
61	183-8733	Stainless M6 x 20 Dome Lead Cap Screws	10
62	521-945	Stainless M6 x Nyloc nuts	12
63	527-381	M4 Stainless washers	120
64	527-397	M5 Stainless washers	20
65	527-404	M6 Stainless washers	60
66	249-429	RS Components Sonar currently used	
67	PS-IBWH-00-0B	Inside Cab Harness optional Boarding light Switch Control Enclosure	1
68	A22L-GG	Green illuminated push button	1
69	A22L-GA	Blue illuminated push button	1
70	1722-00	Lamp Holder + colour	2
71	A22-10	N.O. Contacts	2
72		Gland M16	1
73	A22-24AGA/9BA	Green LED Globe insert	1
74	A22-24AAA/9BA	Blue LED Globe insert	1
75	HM	Engraved logo	1
76	PS003 KEVI2079	Stainless steel bracket	1
77	KEVI 2022	Through bolt shroud	2
78	PS-EAE-005-OY	External Alarm EXT. (5m – yellow)	
79	PS-PBS-002-OY	Park Brake System loom (2m – yellow)	
80	PS-PBS-005-OY	Park Brake System loom (5m yellow)	
81	PS-PBS-007-OY	Park Brake System loom (7m yellow)	
82	PS-PBS-200-OY	Park Brake System Loom ADP (200 – yellow)	
83	PS-PBS-200-BAO-OY	'P' Brake Bulkhead Adaptor (200 – yellow)	
84	PS-PBS-200-BAI-OY	'P' Brake Bulkhead ADP. (200 yellow)	
85	PS-ODPS-200-OG	Optional Door Prox. Sensor (200 – Green)	
86	PS-CBA-120 A-O	Circuit Breaker Assembly – 120A	
87	PS-OOCB-120-O	Outside operational control box	
88	PS-PBS-BP-O	Park Brake System Bypass plug	
89	PS-ODP-BP-O	Optional Door Prox. Plug Bypass	
90	PS-CLCB-120-O	Cabin ladder control box	
91	PS-BLSA-280-O'O'	Boarding lamp system Ext. Alarm (280 – Orange)	
92	PS-TLPS-200-OL	Top Ladder Proximity Sensor (200 – Blue)	
93	PS-BLPS-200-OR	Bottom Ladder Proximity Sensor (200 – Red)	

FOLDING LADDER
Caterpillar D10T Dozer

POWER STEP (AUSTRALIA) PTY. LTD.

Section 5-11 Bill of Materials

94	PS-BLS-200-O'O'	Boarding lamp system (Adaptor Link)	
95	PS-ODP002-OG	Optional Door Prox. Loom CAT gold/green (2m)	
96	PS-ODP-005-OG	Optional Door Prox. Loom (5m)	
97	PS-ODP-007-OG	Optional Door Prox. Loom (7m)	
98	PS-TLP-002-OL	Top Ladder Prox. Loom (2m – Blue)	
99	PS-TLP-005-OL	Top Ladder Prox. Loom (5m – Blue)	
100	PS-TLP-007-OL	Top Ladder Prox. Loom (7m – Blue)	
101	PS-BLP-002-OR	Bottom Ladder Prox. Loom (2m – Red)	
102	PS-BLP-005-OR	Bottom Ladder Prox. Loom (5m – Red)	
103	PS-BLP-007-OR	Bottom Ladder Prox. Loom (7m – Red)	
104	PS-LO-002-OB	Lockout Loom (2m – Black)	
105	PS-LO-005-OB	Lockout Loom (5m – Black)	
106	PS-LO-007-OB	Lockout Loom (7m – Black)	
107	PS-LO-200-OB	Lockout Loom Adaptor (200 – Black)	
108	PS-OOC-002-OCG	Outside optional control (2m Cat Gold)	
109	PS-OOC-005-OCG	Outside optional control (5m Cat Gold)	
110	PS-OOC-007-OCG	Outside optional control (7m Cat Gold)	
111	PS-BLS-002-O'O'	Boarding Lamp System (2m – Orange)	
112	PS-BLS-005-O'O'	Boarding Lamp System (5m – Orange)	
113	PS-BLS-007-O'O'	Boarding Lamp System (7m – Orange)	
114	HMBC-B-25-240-0812-90-1B+S (3)	Length 240 Black	
115	HMBC-R-25-150-0812-90-1B+S(3)	Length 150 Red	
116	PS-CCB-002-OCG	Cabinet Control Box Extention (2m – Cat Gold)	
117	PS-CCB-005-OCG	Cabinet Control Box Extention (5m – Cat Gold)	
118	PS-CCB-007-OCG	Cabinet Control Box Extention (7m – Cat Gold)	
119	PS-CCB-200-BAO-OCG	Cabinet Control Box Bulkhead ADP. (200 – Cat Gold)	
120	PS-CCB-200-BAI-OCG	Cabinet Control Box Bulkhead ADP. (200 – Cat Gold)	
121	PS-EAE-002-OY	External Alarm Ext. (2m – yellow)	

HARNESS MASTER BATTERY CABLES

HMBC-R25-400-1010-00-1

- Harness Master
- Battery Cable
- Colour
  - R – Red
  - B – Black
  - O - Orange
- Cross Sectional Area in mm^2
- Cable Length Centre of eye to Centre of Eye
- Eye size one End
- Eye size other end
- End Lugs. Degrees Rotation 00˚, 90˚, 180˚
- Special Modifications