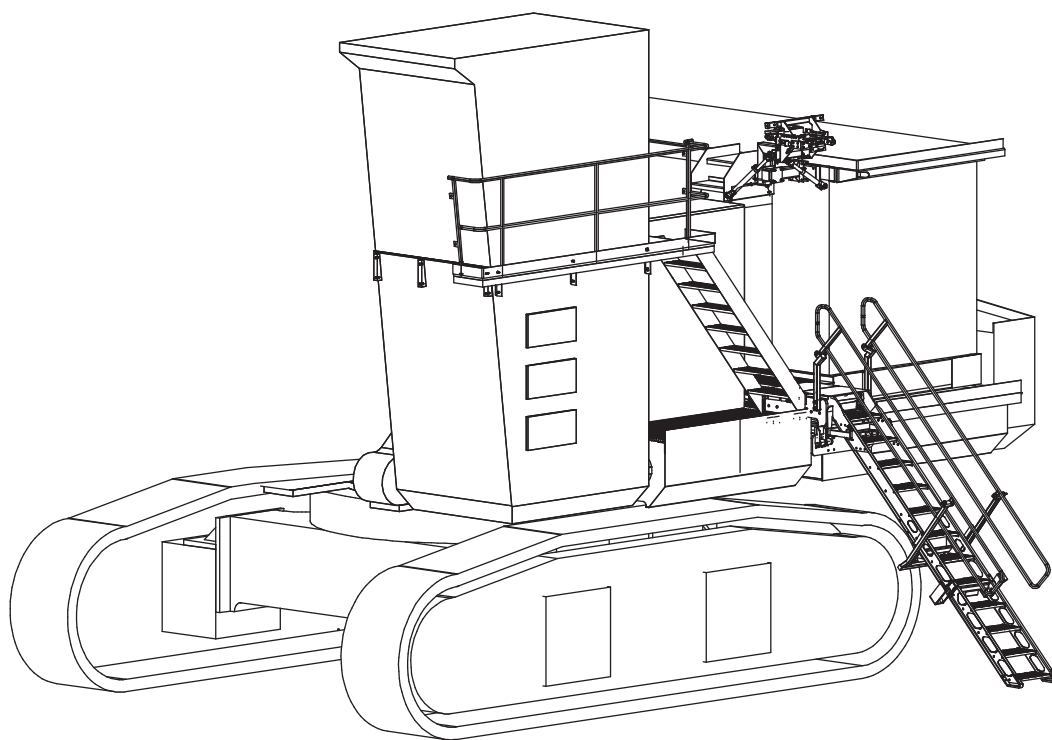


FOLDING STAIRWAY



Hitachi EX 1900-6 Excavator
(4'')



Serial No: EX1900-001 to ~
Model No: PSA-EX1900-LFS
Date Manufactured: May 2008

FOLDING STAIRWAY

Hitachi EX 1900-6



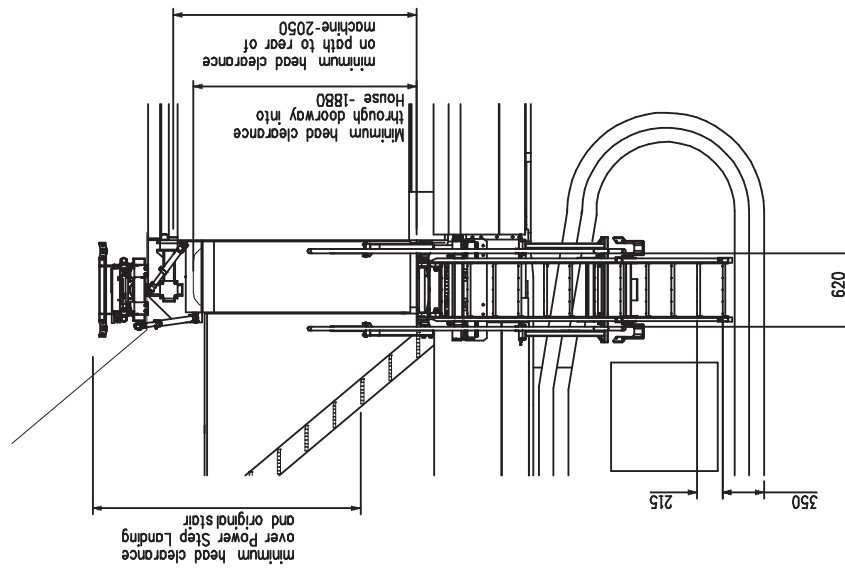
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4	General Arrangement - 23 225
5	Installation Drawings - General See 23 218 <ul style="list-style-type: none">- Structural See 23 219- Stair and Landing See 23 220- Flooring panels See 23 221- Doorway modifications See 23 222
9	Instructions - Latch Mounting - See 23 223 Instructions - Latch adjustment - See 23 224 Alterations - Engine module
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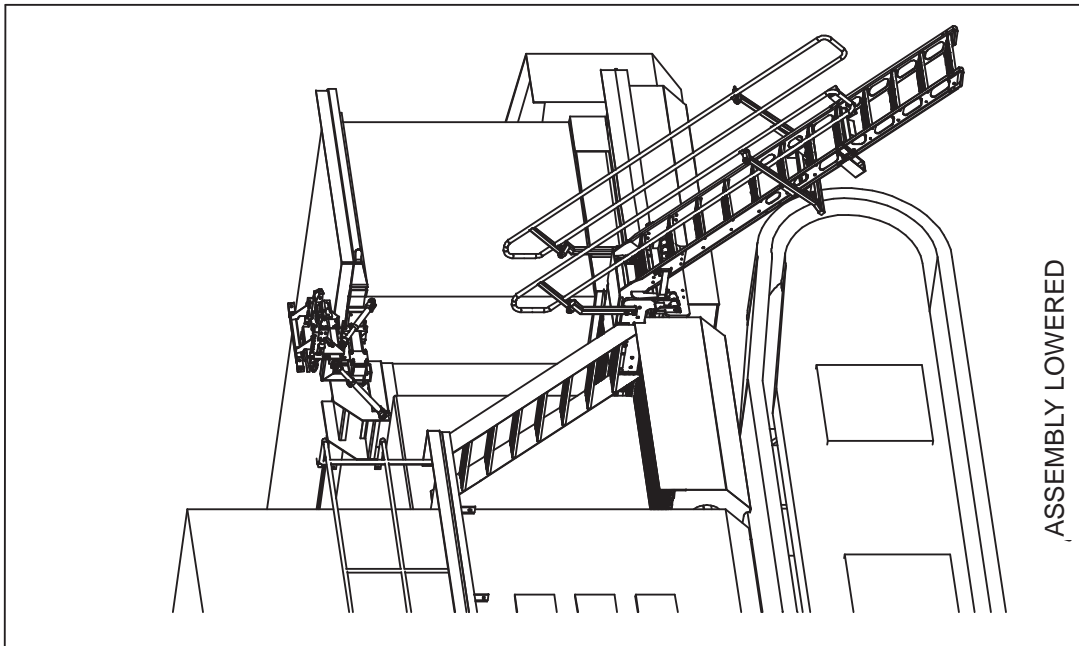
FOLDING STAIRWAY

Hitachi EX 1900-6

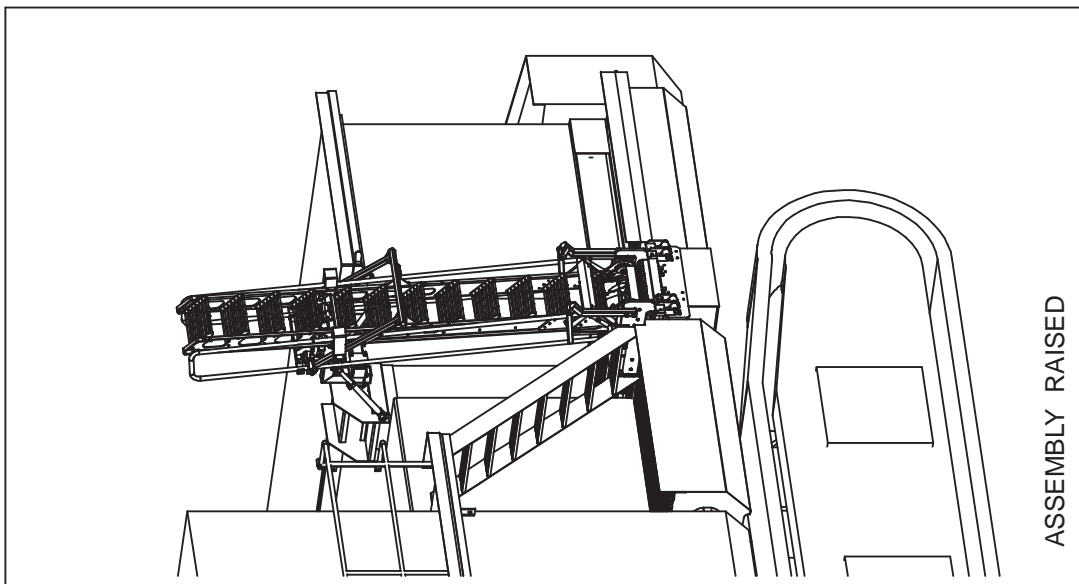
General Arrangement 23 225



DESIGN DIMENSIONS



ASSEMBLY LOWERED



ASSEMBLY RAISED

FOLDING STAIRWAY

Hitachi EX 1900-6



Section1 Installation and Mounting Instructions

NOTE

Follow all on-site/Mine lifting and safety procedures when installing Power Step Stairway to Excavator.

NOTES

PLEASE SEE THE DRAWINGS SUPPLIED WITH THIS MANUAL FOR FULL INSTALLATION INSTRUCTIONS AS BELOW

See Drawing 23-218 Page 5

1. Prepare the machine per View 1 (this drawing).
2. Assemble the stair set per View 2 (this drawing).
3. Undertake modifications to the excavator chassis per **Drg 23 219**.
- 4.. Undertake modifications to the extension floor at the roof level of the engine module, per **Drg 23 227**. See Page 8
5. Fit the stair per **Drg 23 220** See Page 7
6. Fit and or modify flooring panels per **Drg 23 221**
7. Fit the latch per **Drg 23 223**
8. Adjust the latch per **Drg 23 224**
9. Assess the access system for safety of operation, eg head clearance and report any problems to Power Step.
10. Put the removed OEM ladder and all removed flooring panels into storage, for re-instatement in event of damage to the Power Step system.

Use safe working practices at all times, including safe lifting and welding practices.

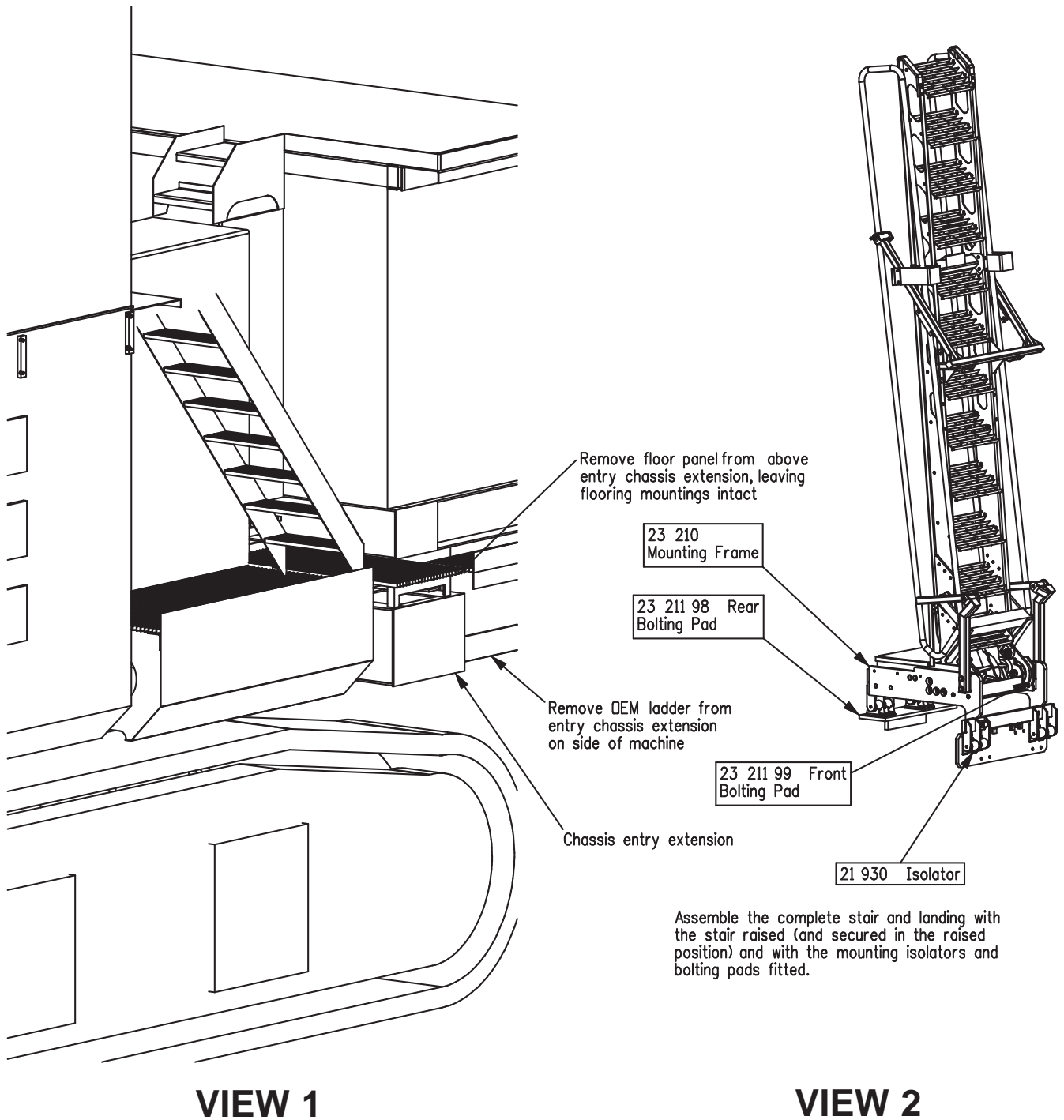
FOLDING STAIRWAY

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Section 1 Installation Instruction Drawings - 23 218

General Installation See Page 4



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Section 1 Installation Instruction Drawings - 23 220

See Page 7

NOTE

Follow all on-site/Mine lifting and safety procedures when installing Power Step Stairway to Excavator.

1. Sit the assembled stair and landing, with isolators and bolting pads fitted, down on the chassis entry extension. Existing flooring mounting frames should not interfere in this location. Per View 1.
2. Locate the landing and mountings on the chassis entry extension per the dimensions shown in View 2.2. Tackweld the Rear Bolting Pad to the upper surface of the entry chassis extension. (Ensure stair is raised when/before locking in landing location. If raised stair intereferes with landing extension on top of engine module, whole stair and landing assembly could be moved further forward on machine.)
3. Level the landing floor 2 or 3mm above the first tread of the fixed cabin stairway. Use wedges in the slots provided, or other means, to lift the front of the stairs to do so. Drill ~13 or ~14 holes in the face plate of the chassis entry extension where the OEM ladder came off, by matchdrilling the holes in the Front Bolting Pad or by other means. If holes cannot be drilled to match holes in Front Bolting Pad (eg because of location of original holes) or nuts cannot be fitted behind face plate (eg because of location of ribs or stiffeners), drill new holes through Front Bolting Pad and face plate to suit. Bolt Bolting Pad in plate with 8 - M12 bolts - do not weld in place.
4. Fully weld Rear Bolting Pad to upper surface of Chassis Entry Extension.
5. Locate and fix Power Unit under fixed cabin stair, fixings to suit - weld and/or bolt.

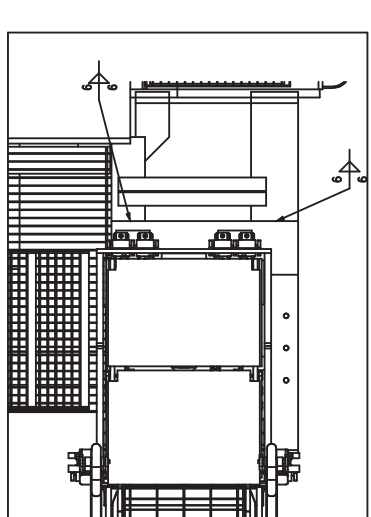
FOLDING STAIRWAY

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Section 1 Installation Instruction Drawings - 23 220

See Page 6

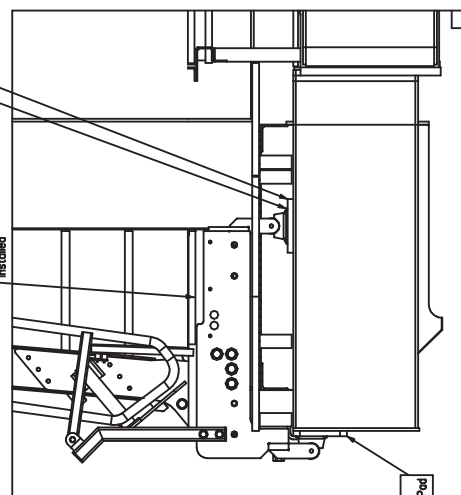


VIEW 2.1

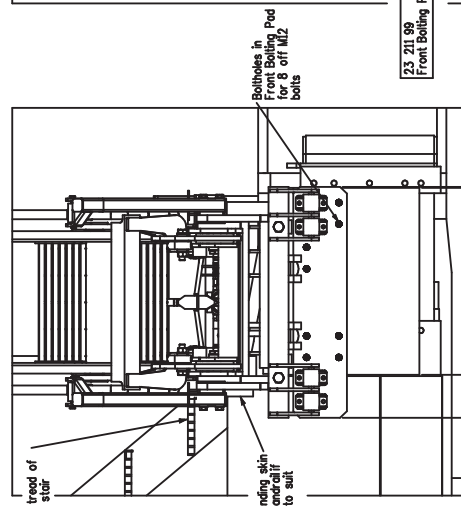
23 211 05
Packing Plate

23 211 98
Rear Bolting Pod

Landing floor 3mm above first
tread of fixed stair when first
installed



VIEW 2.3



VIEW 2.2

23 211 99
Front Bolting Pod

Bootholes in
Front Bolting Pod
for 8 off M2
bolts

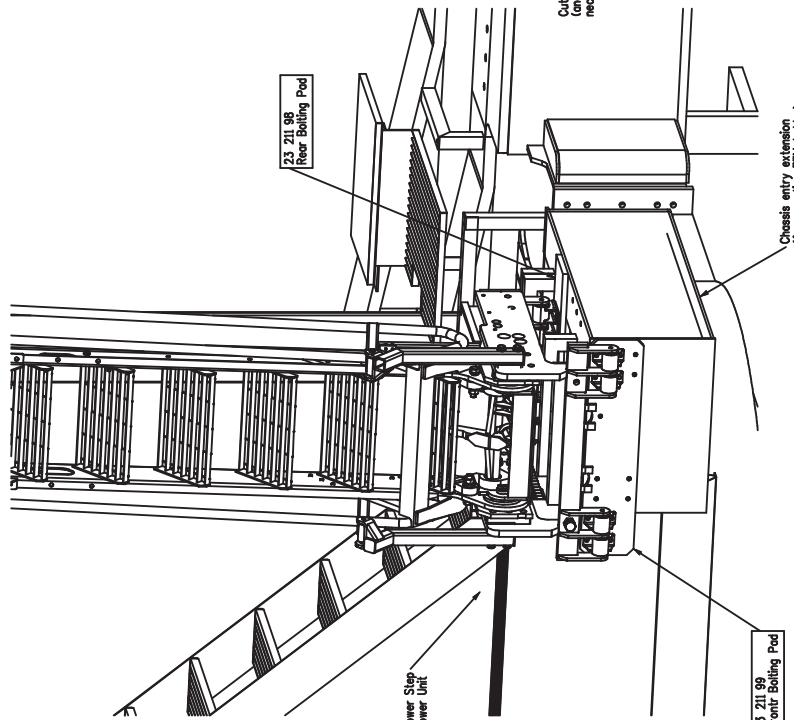
160

695

5

First tread of
fixed stair

Cut away landing skin
(and shift horizontal
necessary) to suit



VIEW 1

23 211 98
Rear Bolting Pod

Chassis entry extension
(for mounting IEM ladder)

Power Step
Power Unit

23 211 99
Front Bolting Pod

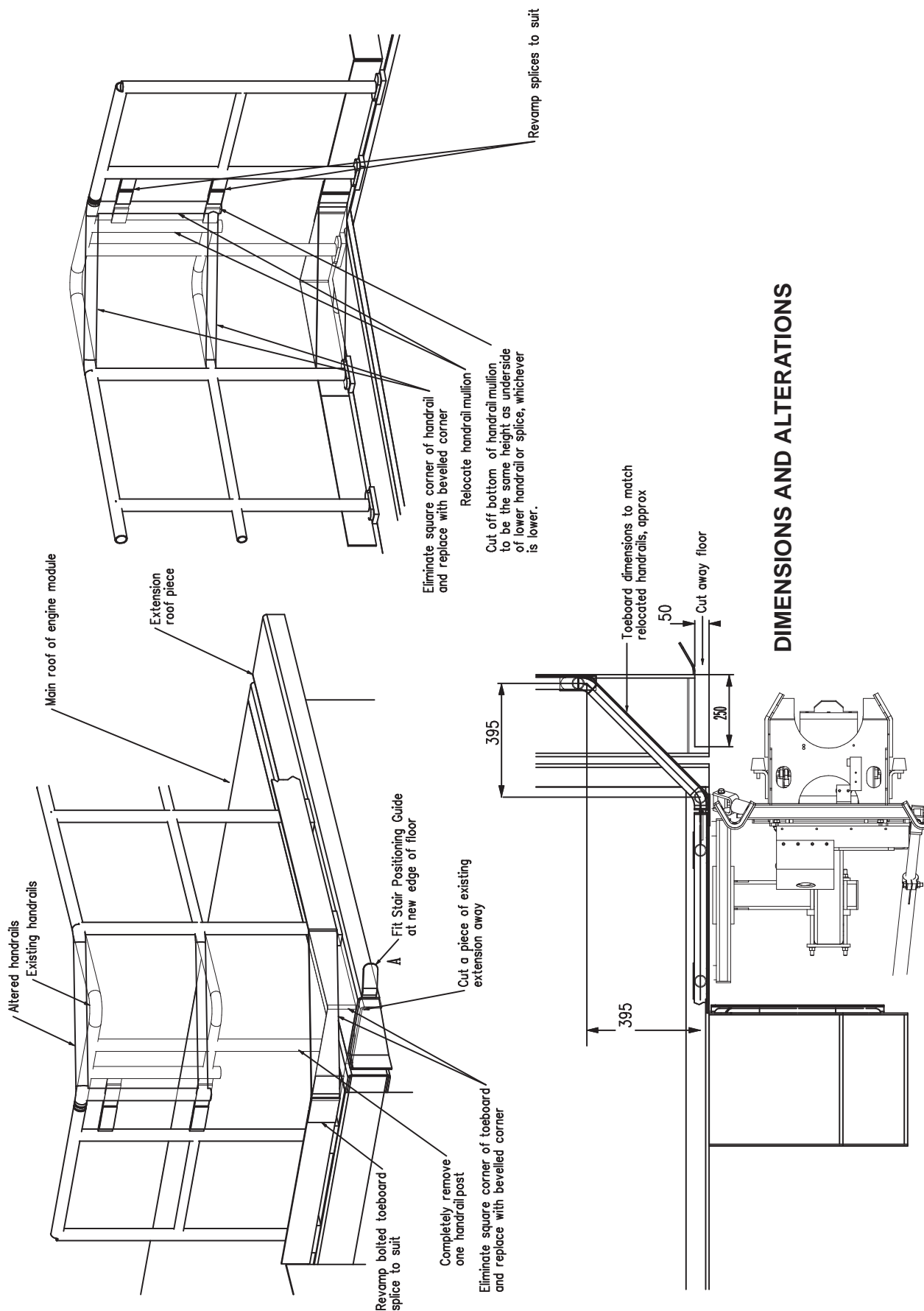
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Section 1 Installation Instruction Drawings - 23 227

Alterations - Engine Module



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Section 1 Installation Instructions - Latch Mounting 23 223

See Pages 10 & 11

Per Views 1 & 3

1. Weld Bolting Pads to the wall/roof corner member (folded channel) and fit Latch Mounting components.

Per View 2.

2. Fit the Latch Assembly to the latch mountings.
3. Using the stair's hydraulic system, raise the stair fully, i.e. fully extend the actuator cylinder. While in the raised position, push the stair away from the middle of the excavator to the outer limit of its free-moving slap range. By sliding any/all latch mounting components in their clamping attachments, adjust the position of the latch relative to the stair.

Per View 4.

4. Using Drawing 23 224, complete adjustment of the latch.

Per View 5.

5. Fit Anti-Vibration Struts to control vibration of the latch.
Locate struts generally as shown. Note, however:
 - the latch might have to be moved/adjusted to a different position in future to accommodate wear in the actuator mechanism etc, and the strut installation should be adjustable to suit.
 - ensure that the strut installations do give adequate head clearance to persons moving on the various walkways and stairs of the machine.
 - try the anti-vibration struts in your preferred location with the stair raised before welding mountings in place as handrails might interfere with struts
6. Weld the Stair Positioning Guide to the corner of the engine module floor extension, to guide the stair as it approaches the raised position.

Per View 3.3.

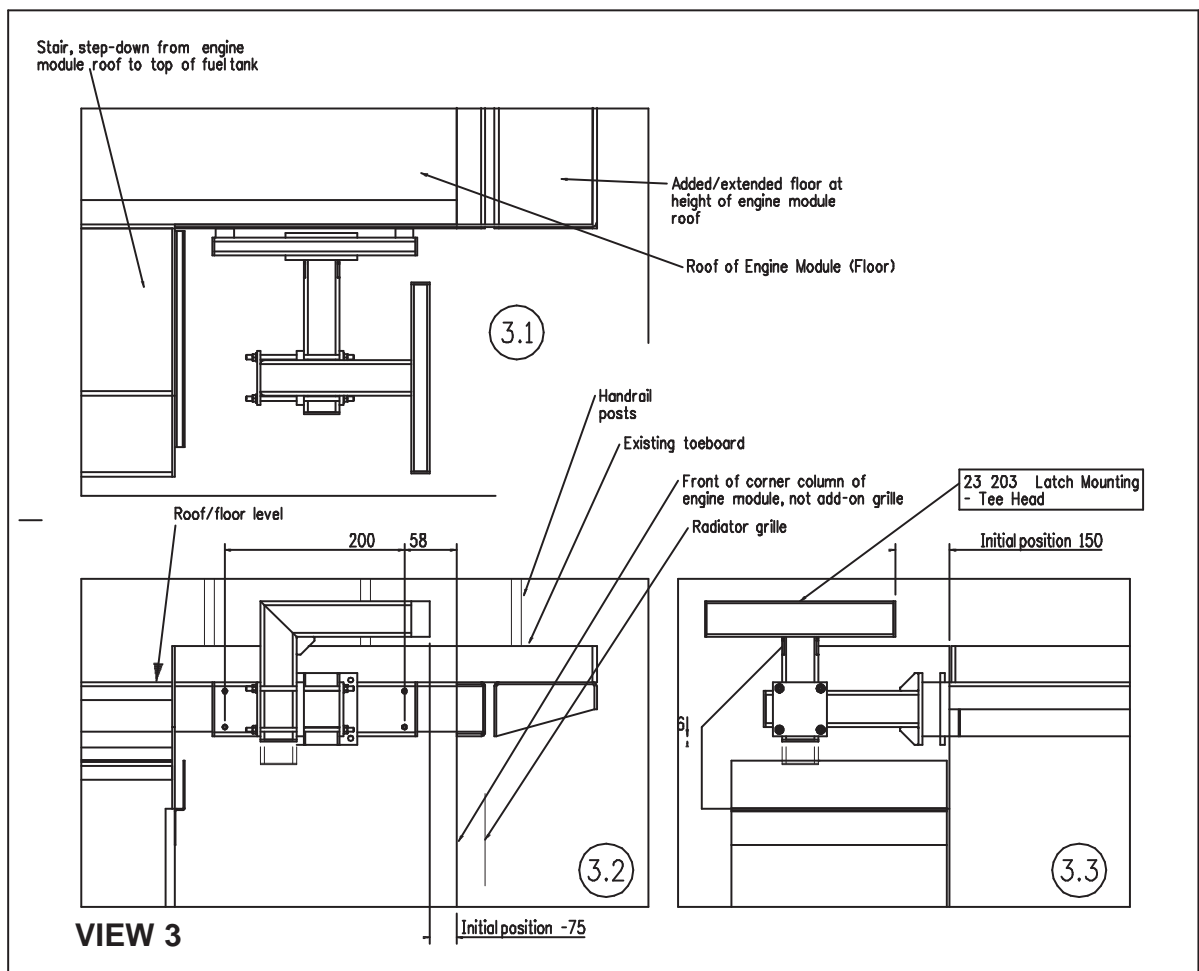
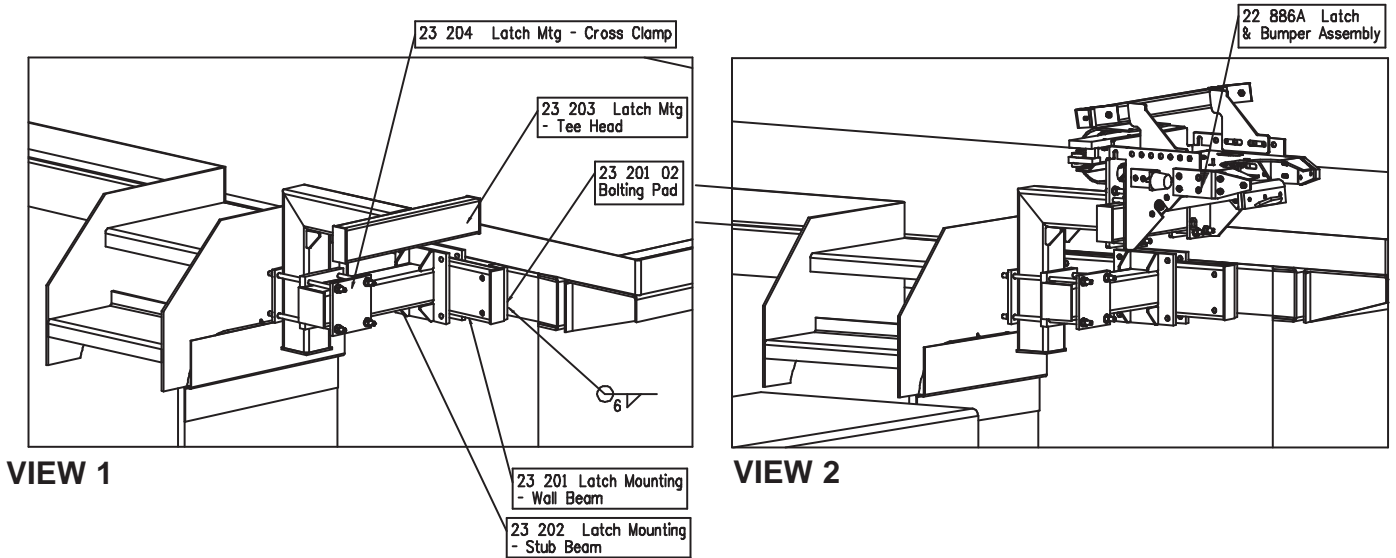
7. Cut the bottom off the vertical run of SHS, part of Latch Mounting - Tee Head (to improve head clearance) and re-fit closer plate.

FOLDING STAIRWAY

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Section 1 Installation Instructions - Latch Mounting - 23 223 Pg 1

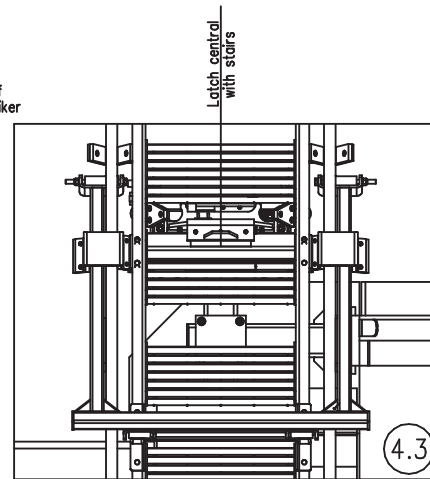
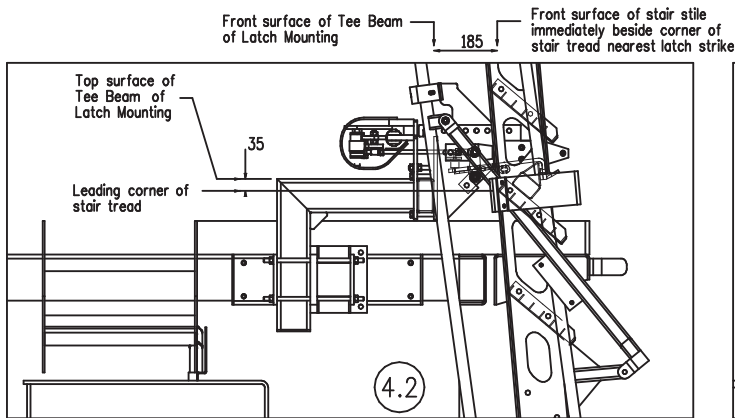
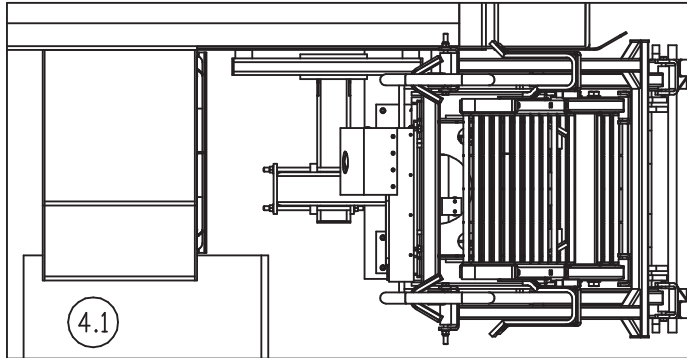


FOLDING STAIRWAY

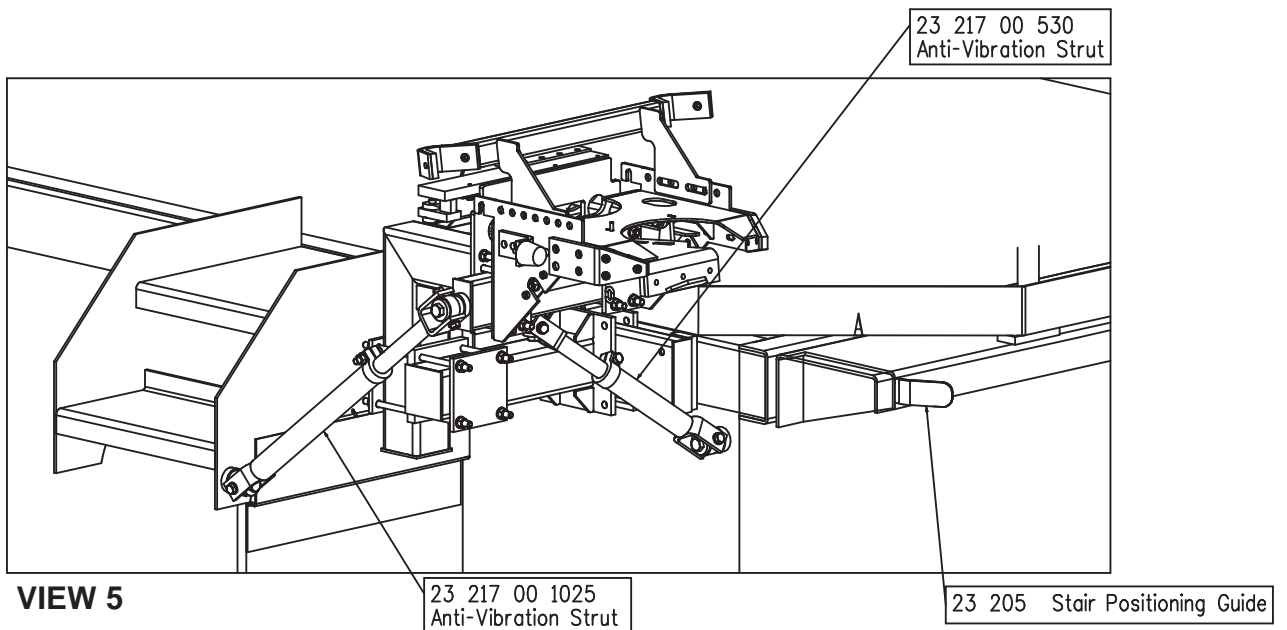
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Section 1 Installation Instructions - Latch Mounting - 23 223 Pg 2



VIEW 4



FOLDING STAIRWAY

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Section 1 Installation Instructions - Latch - 23 224 See Pg. 13

1. Per **View 1**, adjust the stair bottom-travel stops so the stair declines to 45 Deg. Check that the stair landing remains level when the stair is declined, that is, the flexible isolators do not deform so much that the landing is out of level by 3mm or more and must be adjusted by adding/removing Packing Plates (see **View 2.3, Drg 23 220**). If necessary, adjust the stair actuator mechanism inside the landing so that no mechanism components are loaded when the stair is declined to 45Deg, ie, the stair rests within its' 'slap' range when declined to 45Deg.
2. Raise the stair to its' stowed position, actuator cylinder fully extended.
 - a. per View 2.2, locate the Latch Assembly centrally between the stair stiles
 - b. with the stair near the outer limit of its' 'slap' range (ie away from the { of the excavator), locate the mounting 'Tee Beam' and latch back plate approx 185 from the front of stair stile, per View 2.1.
 - c. adjust the Stile Buffer into contact with the stair stile (both stiles).
3. Adjust the latch:
 - a. per View 3, adjust the position of the Catch on its' pivot bracket so there is about 3mm gap between the catch rubber and the striker face.
 - b. per View 3, adjust the position of the Latch Closed Bumper so the Latch Striker will contact the Catch Leader and open the latch when the stair approaches its' raised position
 - c. per View 3, adjust the Latch Open Bumper so the Catch will not hit the stair tread above when the latch is opened, but can be opened 7 - 10mm above the height of the Latch Striker.
4. Adjust the actuator operation, all per View 4:
 - a. initially attach the Latch Actuator Linkage at hole 2 on the Sector Bracket.
 - b. with the Latch Actuator Cylinder fully extended, set the length of the Actuator Linkage so that the Catch rises to the position established in iii.c above, 7-10mm above the peak of the Latch Striker.
 - c. with the cylinder still fully extended, check that the Catch can be lowered to the position established in iii.b above, against the Latch Closed Bumper.
 - d. check that the actuator cylinder can be retracted to its' fully closed length without loading the mechanism and linkages and drawing the catch lower and further compressing the Latch Closed Bumper.
 - e. if these requirements are met, the actuator and linkage are properly adjusted. If the conditions cannot be met, move the Latch Actuator Linkage to Hole 3 on the Sector Bracket and repeat steps iv.b - iv.e
5. Check that everything moves freely and functions properly, ie the latch secures the stair when raised and releases it when required for lowering.
6. Adjust the Handrail Hook 22 888, (see View 2.1). The handrail Hook does not pull the handrail into the handrail rest, but rather controls vibration by limiting movement of the Handrail Link. During the stair's raising and lowering cycle, the handrails and/or handrail link need more space in the handrail hook than when stowed in the raised position - adjust to provide sufficient space.
7. Go back to Drg 23 223

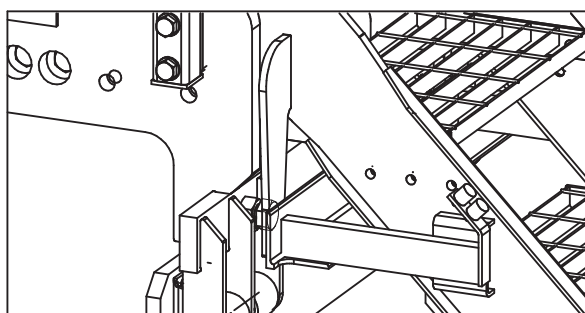
FOLDING STAIRWAY

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Section 1 Installation Instructions - Latch - 23 224

See Procedure Page 12

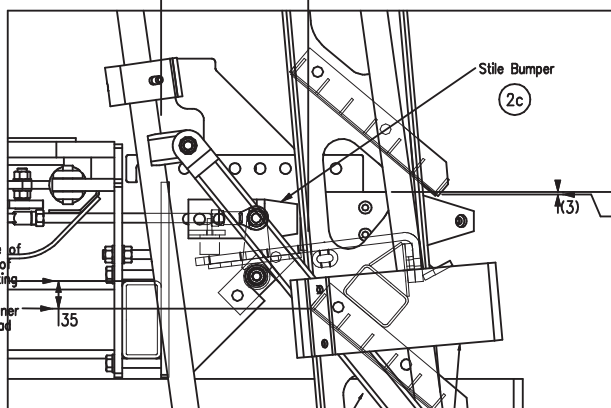


VIEW 1

Front surface of Tee Beam of Latch Mounting, back of latch mounting plate

185
2b

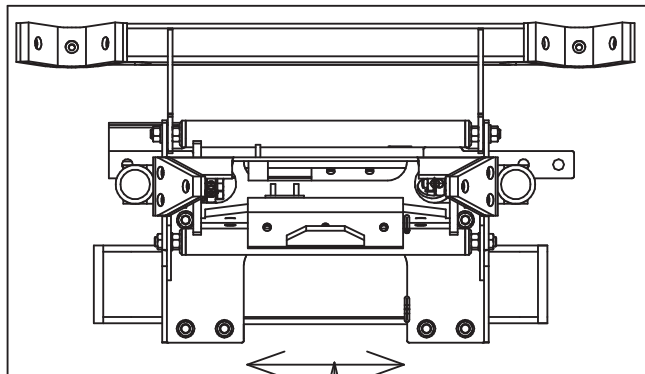
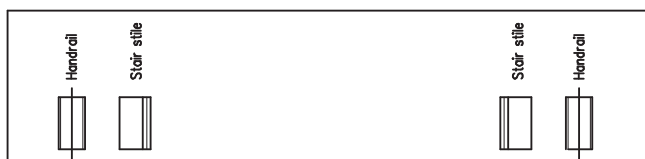
Front surface of stair stile immediately beside corner of stair tread nearest latch striker



VIEW 2.1

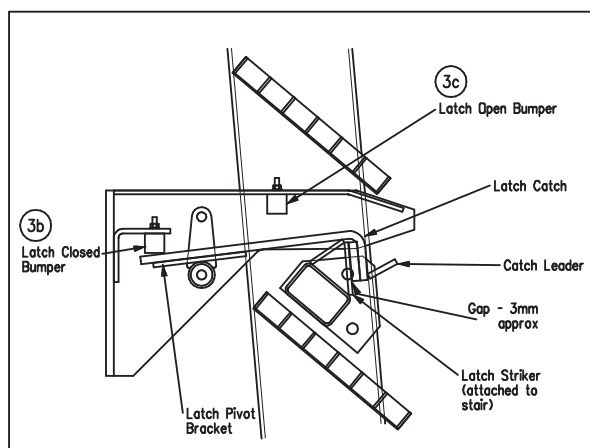
22 890 Handrail Link

22 888 Handrail Hook

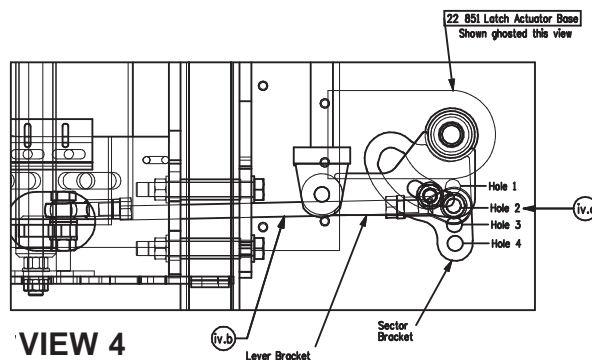


VIEW 2.2

2a



VIEW 3



VIEW 4

FOLDING STAIRWAY

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Section 2 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.

Check all rubber stops

Notify the appropriate supervisor for any observed damage or malfunction.

500 Hours

Grease all grease nipples. Lower or raise stairway for accessibility.

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 (10.0 litres).

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

Grease all grease nipples. Lower or raise stairway for accessibility.

Retorque all main mounting bolts

Repeat daily check as above.

FOLDING STAIRWAY

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Section 3 Operating Procedure

To Lower Stairway (from the machine)

Position excavator in a level, safe area, away from the work face, whenever possible. Position the excavator body square to the tracks, lower bucket, apply park brake and lower engine speed to idle.

Descend stairway behind cabin to lower walkway.

Check that the area below and behind the Folding Stairway is clear of people and obstacles, and lower stairway by operating the two position electrical switch adjacent to the stairway, to the down position by pressing the switch down.

Hold the switch in the down position until stairway is fully extended and lowered.

If the Excavator is parked on uneven ground, the bottom of the stairway may touch the ground before the Stairway is in the fully extended and lowered position.

Should this occur, descend the stairway with caution.

Bottom of stairway is designed to rest on the ground in the fully lowered and extended position, but can be used in the fully lowered position without resting on the ground.

To Raise Stairway

Ascend the stairway onto the lower walkway of the Excavator

Ensure the area around the stairway is clear of people and standing to the side, clear of the area the handrails and stairway will rise up to, operate the electrical switch to the raise position (up).

Hold the switch in the up position until the stairway is in the fully raised position and is secured correctly by the Latch Acuator.

The stairway is now raised and stored.

OPERATING NOTES

NOTE: FLOW CONTROL VALVE ADJUSTMENT:

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

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

NOTE: MAGNETIC 'GO' SWITCH ADJUSTMENT:

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

[DO NOT EXCEED 10MM DISTANCE BETWEEN THE SWITCH AND STRIKER PLATE].

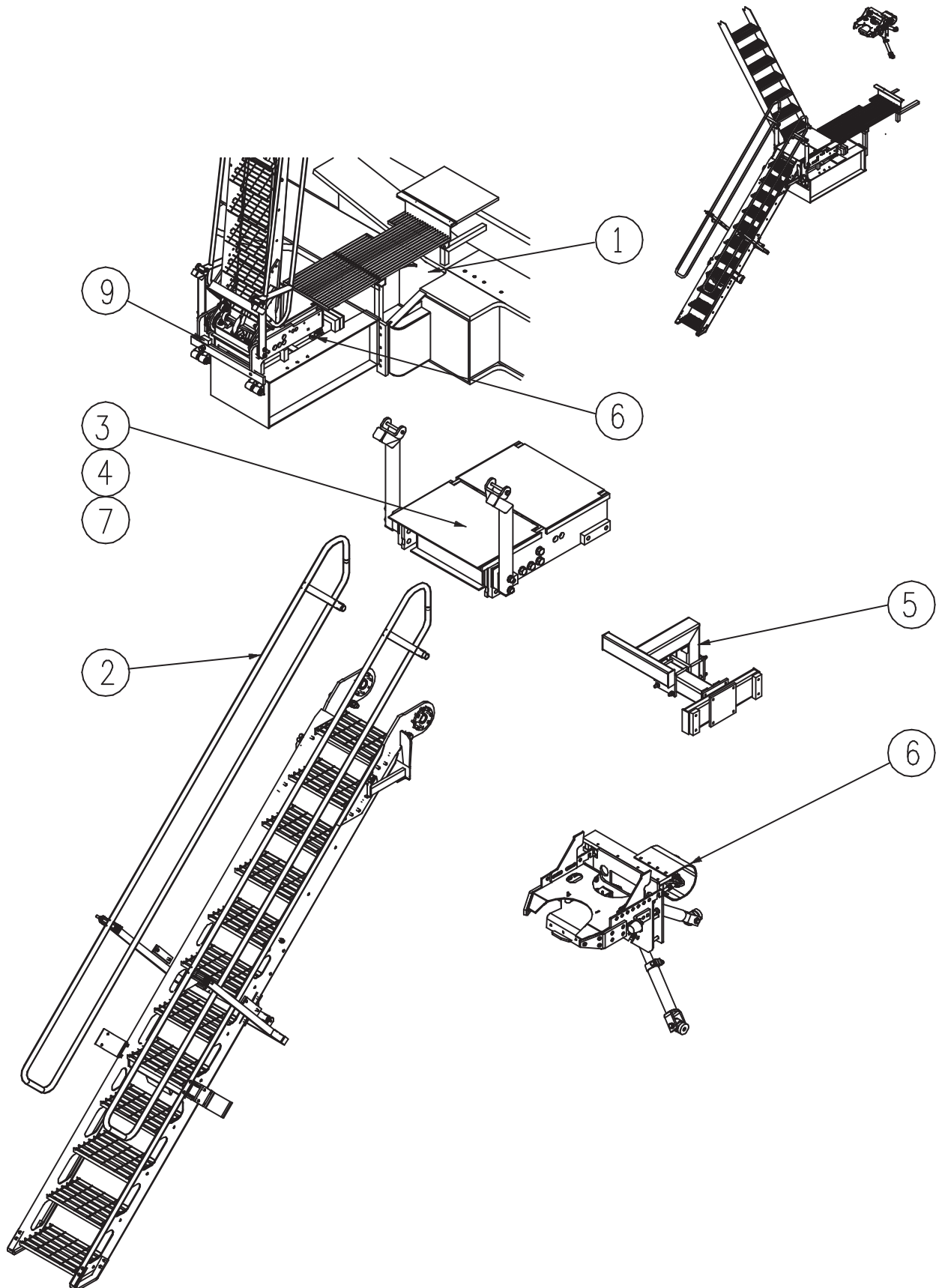
Test by raising and lowering the Power Step a couple of times and adjust again if necessary.

FOLDING STAIRWAY

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Section 4 Assembly Complete

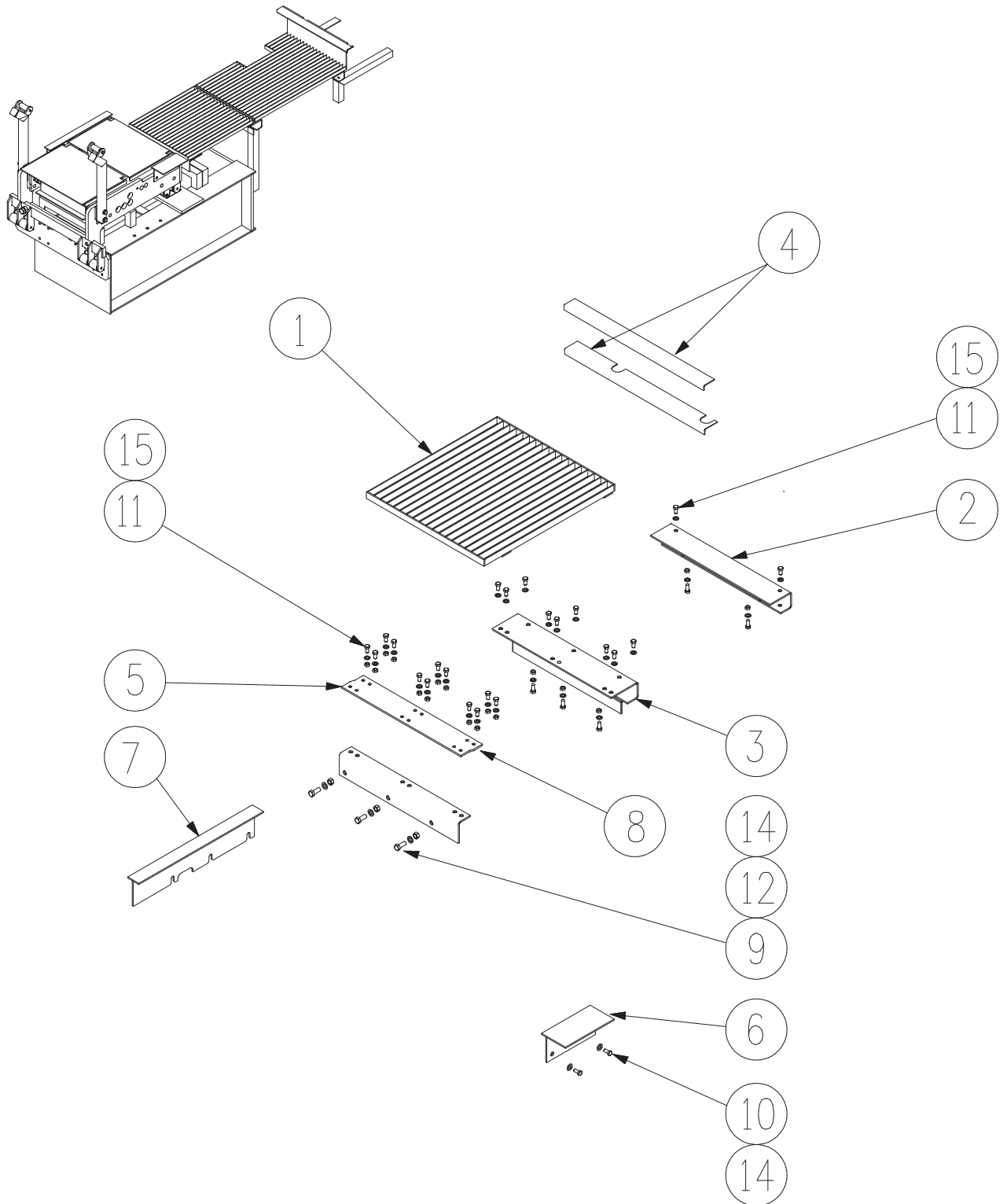


FOLDING STAIRWAY

Hitachi EX 1900-6



Section 4-1 Floor & Landing Assembly



FOLDING STAIRWAY

Hitachi EX 1900-6



Section 4-1 Flooring Panels

See Drawing Pg.17

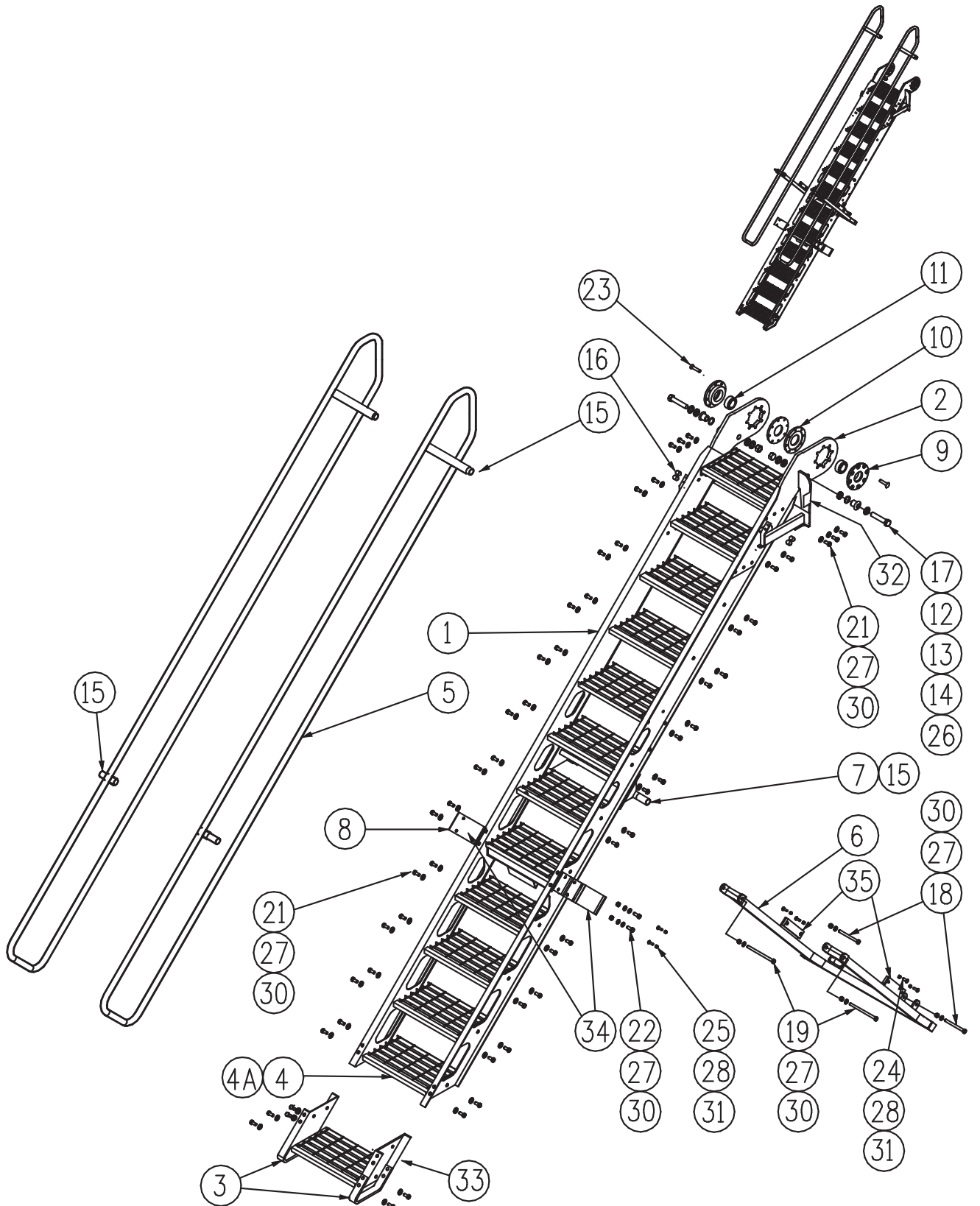
Item	Part No.	Part Name	Qty		
1	PS-23215	FLOORING PANEL	1		
2	PS-23212 99	FLOOR SUPPORT INNER	1		
3	PS-23212 98	FLOOR SUPPORT OUTER	1		
4	PS-23214 99	FLOORING EDGE	1		
5	PS-23213	FLEXIBLE FLOORING (conveyor belting)	1		
6	PS-23214 98	FLOORING INFILL REAR	1		
7	PS-23214 97	FLOORING INFILL FRONT	1		
8	PS-23214 01	FLOORING PANEL SUPPORT	1		
9	CPS-M12X25ZP	BOLT-M12 x 25 Socket Hd.	8		
10	CPS-M12X20ZP	BOLT-M12 x 20	10		
11	CPS-M10X25ZP	BOLT-M10 x 25 Socket Hd.	22		
12	CPS-M12NZP	NUT-M12	22		
13	CPS-M10NZP	NUT-M10	22		
14	CPS-M12WH	WASHER-HARDENED-M12	10		
15	CPS-M10WH	WASHER-HARDENED-M10	22		

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Section 4-2 Stair Assembly PS-22810A



FOLDING STAIRWAY

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Section 4-2 Stair Assembly PS-22810A

See Drawing Page 19

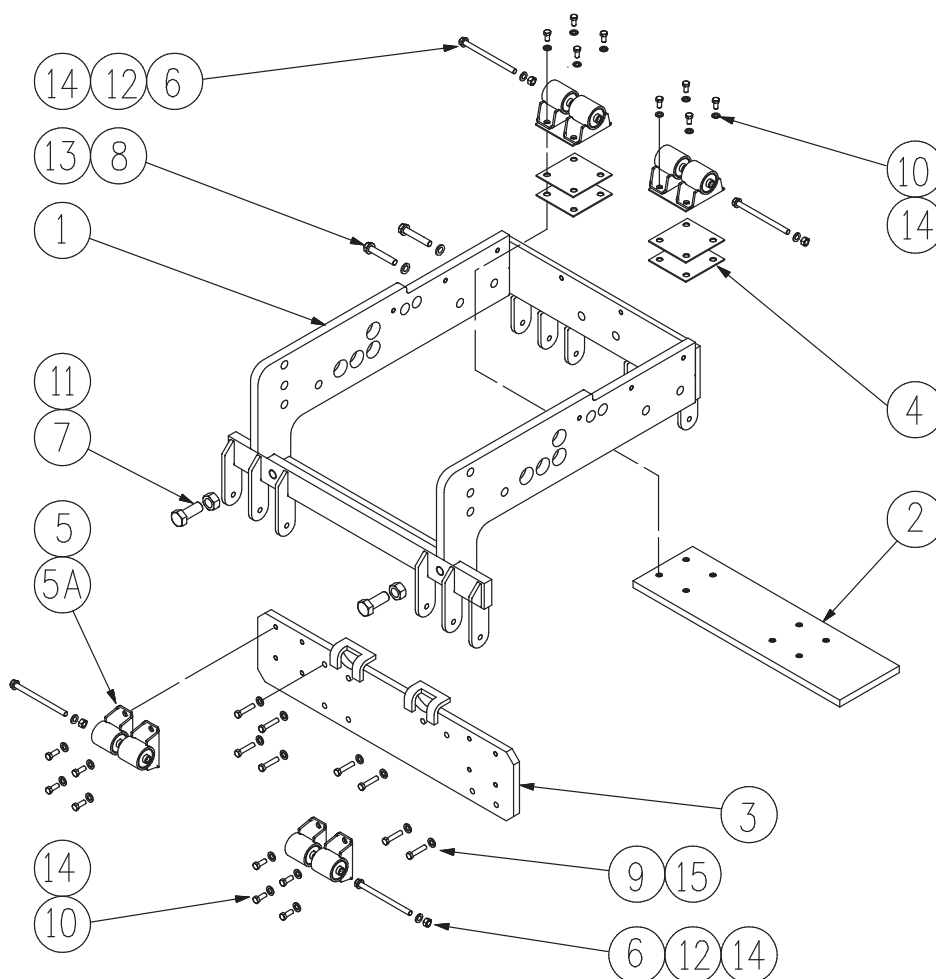
Item	Part No.	Part Name	Qty		
1	PS-22810	STAIR (Stiles 12 Tread)	1		
2	PS-22806	STILE HEAD	2		
3	PS-22802	STILE FOOT	2		
4	PS-22805	STAIR TREADS	13		
4A	PS-32266-SAN	NON SLIP NOSING	13		
5	PS-22889	HANDRAIL	2		
6	PS-22890	HANDRAIL LINK	2		
7	PS-22804	HANDRAIL LINK MOUNTING	1		
8	PS-22888	HANDRAIL HOOK	2		
9	PS-22809 01	HINGE BEARING FLANGE OUTER	2		
10	PS-22809 02	HINGE BEARING FLANGE INNER	2		
11	PS-GE-40ES	HINGE BEARING SKF GE 40 ES	2		
12	PS-22809 05	LINK STUB	2		
13	PS-22809 06	SPECIAL WASHER 36dia x 7	4		
14	PS-22809 07	CRUSH WASHER 36dia x 2.75 Nylon	4		
15	PS-S245	BUSH	12		
16	PS-40006	BUMPER RUBBER	4		
17	CPS-M20X100ZP	BOLT-M20 x 100 - link stub bolt	2		
18	CPS-M20X150ZP	BOLT-M12 x 150	2		
19	CPS-M20X120ZP	BOLT-M12 x 120	2		
20	CPS-M12X50ZP	BOLT-M12 x 50	10		
21	CPS-M12X45ZP	BOLT-M12 x 45	68		
22	CPS-M12X25ZP	BOLT-M12 x 25	4		
23	CPS-M10X35ZP	BOLT-M10 x 35 c-sunk socket hd.	16		
24	CPS-M8X25SK	BOLT-M8 x 25 c-sunk socket hd.	4		
25	CPS-M8X12ZP	BOLT-M8 x 12 pan hd.	8		
26	CPS-M20NZP	NUT-M20	2		
27	CPS-M12NZP	NUT-M12	86		
28	CPS-M8NZP	NUT-M8	8		
29	CPS-M20WH	WASHER-HARDENED-M20	4		
30	CPS-M12WH	WASHER-HARDENED-M12	172		
31	CPS-M8WH	WASHER-HARDENED-M8	16		
32	PS-22838-03	GO SWITCH STRIKER	2		
33	PS-22837	STAIR EXTENSION	2		1 LH & 1 RH
34	PS-22888-03	RUBBER PAD	2		
35	PS-22890-08	RUBBER PAD	2		

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Section 4-3 Mounting Cradle PS-23210A



Item	Part No.	Part Name	Qty		
1	PS-23210	FRAME	1		
2	PS-23211 98	REAR BOLTING PAD	1		
3	PS-23211 99	FRONT BOLTING PAD	1		
4	PS-23211 05	PACKING PLATE	4		
5	PS-21930A	ISOLATOR MOUNTINGS	8		
5A	PS-S229	ISOLATORS	8		
6	PS-23 210 01	ISOLATOR BOLT-M12 x 220 (or thr.rod)	4		
7	PS-M24X60ZP	BOLT-M24 x 60	2		
8	CPS-M20X50ZP	BOLT-M20 x 50	10		
9	CPS-M12X60ZP	BOLT-M12 x 60	8		
10	CPS-M12X20ZP	BOLT-M12 x 20	16		
11	CPS-M24NZP	NUT-M24	2		
12	CPS-M12NN	NUT-NYLOC-M12	8		
13	CPS-M20WH	WASHER-HARDENED-M20	10		
14	CPS-M12WH	WASHER-HARDENED-M12	24		

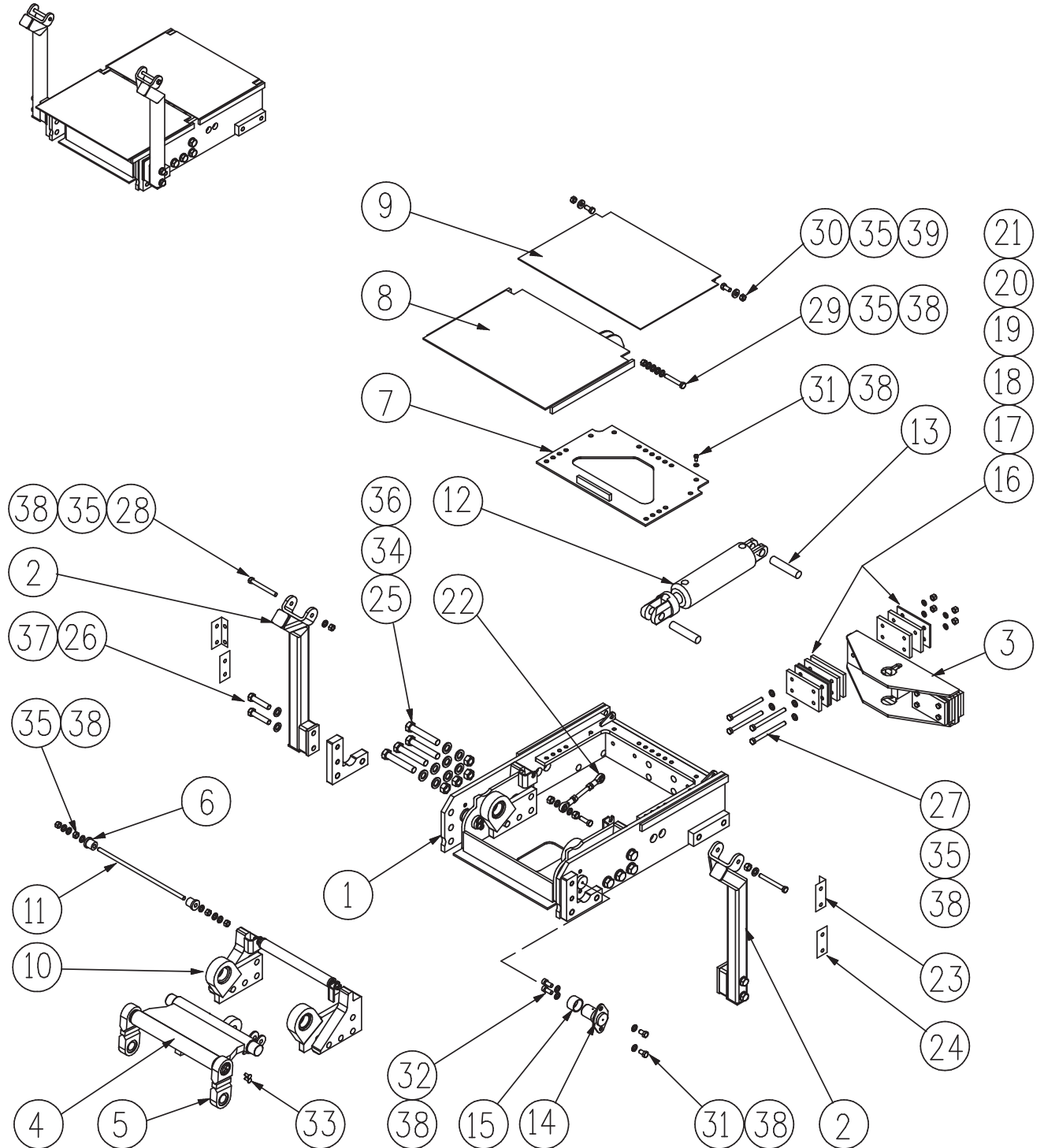
FOLDING STAIRWAY

Hitachi EX 1900-6



Section 4-4 Stair Landing Assembly PS-22827A

See Parts List pg. 23



FOLDING STAIRWAY

Hitachi EX 1900-6



Section 4-4 Stair Landing Assembly PS-22827A

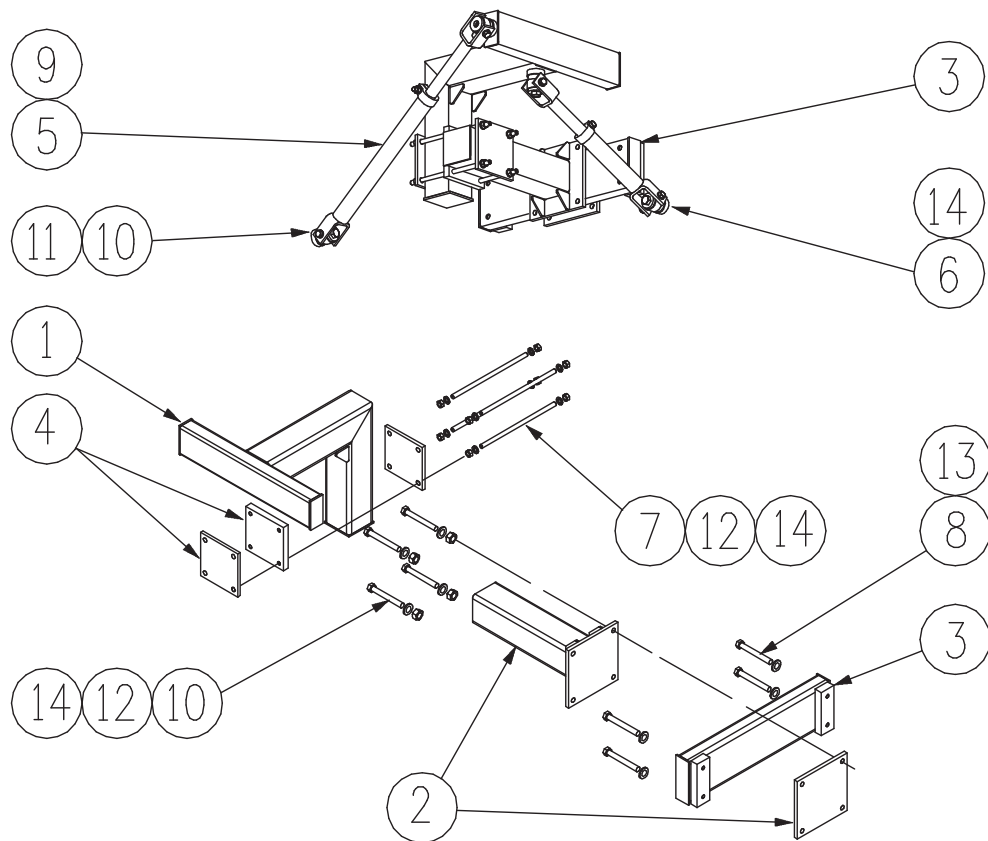
Item	Part No.	Part Name	Qty		
1	PS-22827	LANDING FABRICATION	1		
2	PS-22891	HANDRAIL POST	2		
3	PS-22892	ACTUATOR CYLINDER MOUNTING	1		
4	PS-22825	BELL CRANK	1		
5	PS-22824	LIFTING LINK	2		
6	PS-S245	BUSH-RUBBER-S245	2		
7	PS-22818 99	BRACE	1		
8	PS-22814	FRONT LID	1		
9	PS-22815	BACK LID	1		
10	PS-22820 99	BEARING ASSEMBLY	2		
11	PS-22821 99	LID HINGE SHAFT	1		
12	PS-63019-A	HYDRAULIC CYLINDER	1		
13	PS-63019-P	CYLINDER PIN	2		
14	PS-22809 99	HINGE PIN	2		
15	PS-22809 09	HINGE PIN CAP	2		
16	PS-22892 07	BUFFER PAD-150 x 90 x 12thk (Alum.)	8		
17	PS-22892 08	CLAMP PAD-150 x 90 x 12mm PI	2		
18	PS-22892 09	SPACER PAD-Type 1 - 150 x 90 x 1mm	4		
19	PS-22892 10	SPACER PAD-Type 2 - 150 x 90 x 2mm	4		
20	PS-22892 11	SPACER PAD-Type 3 - 1mm PI. 150 x 90	2		
21	PS-22892 16	SPACER PAD-Type 4 - 150x 90 x 12mm(Alum.)	8		
22	PS-22826	LID CONTROL LINK ASSEMBLY	1		
23	PS-22838-01	SWITCH MOUNTING	2		
24	PS-22838-02	SWITCH NUT PLATE	2		
25	CPS-M20X120ZP	BOLT-M20 x 120	8		
26	CPS-M16X120ZP	BOLT-M16 x 120	4		
27	CPS-M12X130ZP	BOLT-M12 x 130	8		
28	CPS-M12X120ZP	BOLT-M12 x 120	2		
29	CPS-M12X75ZP	BOLT-M12 x 75	2		
30	CPS-M12X30ZP	BOLT M12 x 30 Cap/Hd.	2		
31	CPS-M12X20ZP	BOLT-M12 x 20	4		
32	CPS-M12X20ZP	BOLT- CAP-M12 x 25	4		
33	CPS-M8X12ZP	BOLT-M8 x 12 C/S Hd.	4		
34	CPS-M20NZP	NUT-M20	8		
35	CPS-M12NZP	NUT-M12	8		
36	CPS-M20WH	WASHER-HARDENED-M20	16		
37	CPS-M16WH	WASHER-HARDENED-M16	4		
38	CPS-M12WH	WASHER-HARDENED-M12	32		
39	CPS-M12WH	WASHER-HARDENED Spring- M12	2		

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Hitachi EX 1900-6



Section 4-5 Latch Mounting Assembly



Item	Part No.	Part Name	Qty		
1	PS-23203	LATCH MOUNTING TEE HEAD	1		
2	PS-23202	LATCH MOUNTING STUB BEAM ASSEMBLY	1		
3	PS-23201	LATCH MOUNTING WALL BEAM	1		
4	PS-23204	LATCH MOUNTING CROSS CLAMP ASSY	1		
5	PS-23217-1025	ANTI-VIBRATION STRUT-LONG-1025mm	1		
6	PS-23217-530	ANTI-VIBRATION STRUT-SHORT-530mm	1		
7	PS-23204	THREADED ROD-M12 x 300Lg	4	see drg. 23204	
8	CPS-M16X75ZP	BOLT-M16 x 75	4		
9	CPS-M16X60	BOLT-M16 x 60	4		
10	CPS-M12X100ZP	BOLT-M12 x 100	4		
11	CPS-M12X20ZP	BOLT-M12 x 20	8		
12	CPS-M12NZP	NUT-M12	12		
13	CPS-M16WH	WASHER-HARDENED-M16	4		
14	CPS-M12WH	WASHER-HARDENED-M12	16		

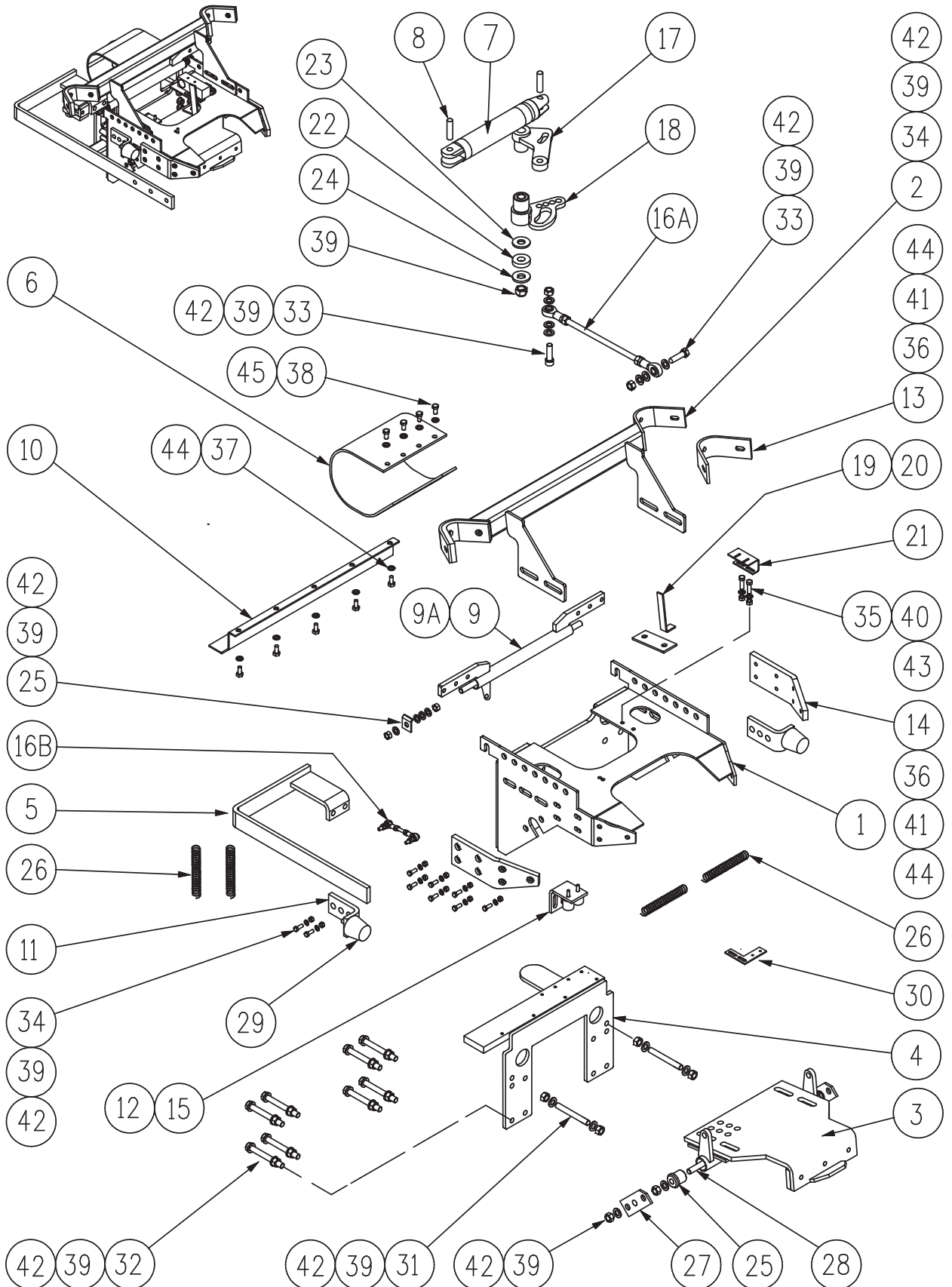
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Section 4-6 Latch Assembly PS-23383A

See Parts List Pg 26,27



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Section 4-6 Latch Assembly PS-23383A

See Drawing page 25

Item	Part No.	Part Name	Qty		
1	PS-23383	BUMPER BASE FABRICATION	1		
2	PS-22885	RAISED HANDRAIL REST	1		
3	PS-23847	CATCH HOOK FABRICATION	1		
4	PS-22851	LATCH ACTUATOR BASE	1		
5	PS-22896	MOUNTING LANYARD LEVER	1		
6	PS-22853	LATCH ACTUATOR SHROUD	1		
7	PS-62997	CYLINDER	1		see pg. 29
8	PS-62997P	CYLINDER PIN	2		see pg. 29
9	PS-22849	LANYARD LEVER SHAFT	1		
9A	PS-22849-02	PIVOT SHAFT	1		
10	PS-22851-06	COVER PLATE	1		
11	PS-22844-02	STILE BUFFER BRACKET	1		
12	PS-40006	BUFFER-RUBBER-M6 (Mackay)	2		
13	PS-22848-01	LATCH AND HANDRAIL GUIDE PAD(Rubber)	2		
14	PS-22848-02	BUMPER PAD	2		
15	PS-22844-01	LATCH STOP BRACKET	2		
16A	PS-22852-97	LINKAGE ASSEMBLY (12mm rod x 270)	1		
16B	PS-22849-99	LINKAGE ASSEMBLY (12mm rod x 90)	1		
17	PS-22852-99	LEVER BRACKET ASSEMBLY	2		
18	PS-22852-98	SECTOR BRACKET ASSEMBLY	1		
19	PS-22846-99	SWITCH STRIKER	1		
20	PS-22846-02	CATCH PLATE FLANGE	1		
21	PS-22894	GO SWITCH BRACKET	1		
22	PS-22852-10	REINFORCED RUBBER "SPRING"	1		
23	PS-22852-09	SPACER	1		
24	PS-22852-11	WASHER	2		
25	PS-S245	BUSH	4		
26	PS-39009	LATCH SPRING	4		
27	PS-22844-05	LATCH MOUNTING BAR	2		
28	PS-22847-02	LATCH PIVOT SHAFT	1		
29	PS-40003	STILE BUFFER-Insul-8 50-77925	2		
30	PS-22893-02	SWITCH MOUNTING	1		
31	CPS-M12X100	THREADED ROD M12 x 100	2		
32	CPS-M12X100ZP	BOLT-M12 x 100	8		
33	CPS-M12X50ZP	BOLT-M12 x 50	2		

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Section 4-6 Latch Assembly PS-23383A

See Drawing page 25

Item	Part No.	Part Name	Qty		
34	CPS-M12X35ZP	BOLT-M12 x 35	8		
35	CPS-M10X30ZP	BOLT-M10 x 30	6		
36	CPS-M8X20ZP	BOLT-M8 x 20-Pan Hd. Socket screw	20		
37	CPS-M8X15ZP	BOLT-M8 x 15 Socket Hd.	5		
38	CPS-M6X15NZP	BOLT-M6 x 15	8		
39	CPS-M12NZP	NUT-M12	20		
40	CPS-M10NZP	NUT-M10	4		
41	CPS-M8NN	NUT-NYLOC-M8	20		
42	CPS-M12WH	WASHER-HARDENED-M12	40		
43	CPS-M10WH	WASHER-HARDENED-M10	4		
44	CPS-M8WH	WASHER-HARDENED-M8	45		
45	CPS-M8WH	WASHER-HARDENED-M6	8		

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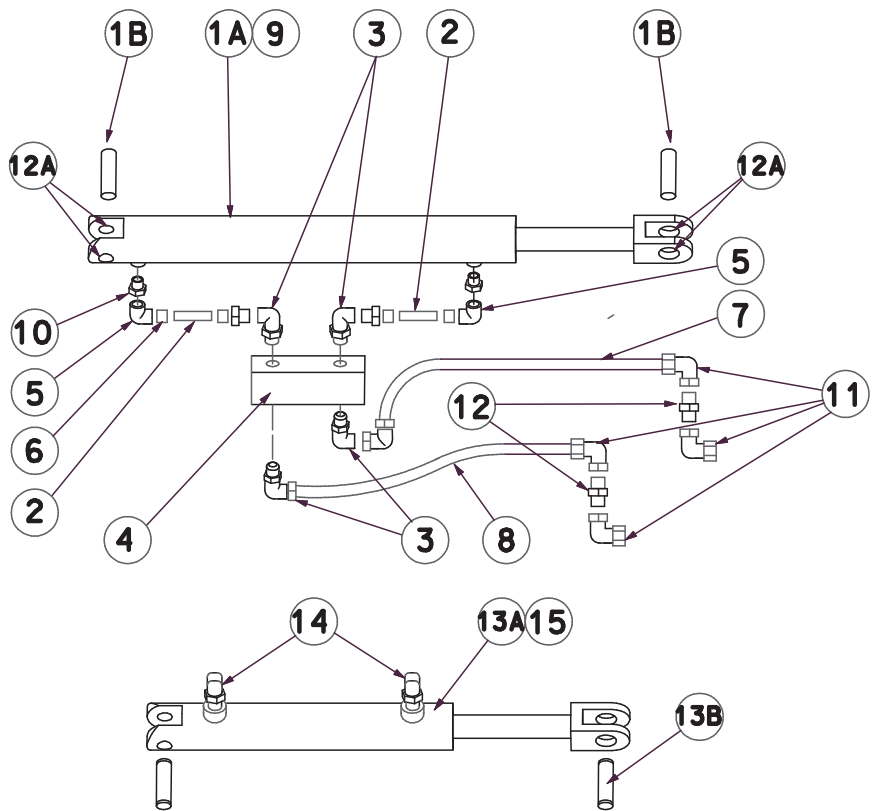
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Section 4-7 Hydraulic Cylinder Assemblies

Cylinder (Stair)

PS-63019-AH
Does not incl. Items 7,8 & 9
Cyl & Hyd Kit



Cylinder (Latch)

PS-62997-A

Item	Part No.	Part Name	Qty		
-	PS-63019-AH	CYLINDER ASSEMBLY(incl.hard plumbing)	1		
1A	PS-63019-A	HYDRAULIC CYLINDER 4"	1		
1B	PS-63009-P	PIN - CYLINDER	2		
1C	PS-63019-HPK	HARD PLUMBING KIT (Incl.Item 2,3,4,5,6)	1		
2	PS-61160-60MM	TUBING	2		
3	PS-61167	FITTING ELBOW	4		
4	PS-0844070-3022000A	VALVE ASSEMBLY	1		
5	PS-61154	FITTING	2		
6	PS-61147	FERRULES	4		
7	PS-60051-200MM	HYDRAULIC HOSE 200MM	1		
8	PS-60051-300MM	HYDRAULIC HOSE 300MM	1		
9	PS-63017-SK	SEAL KIT (not shown)	1		
10	PS-61163	FITTING - REDUCER	2		
11	PS-61159	SWIVEL FITTING 90 Deg.	5		
12	PS-61177	BULKHEAD FITTING	2		
12A	PS-63009C	HARDENED BUSH	4		
13A	PS-62997-A	HYDRAULIC CYLINDER-LATCH	1		
13B	PS-62997-P	PIN	2		
14	PS61152	FITTING 90DEG	2		
15	PS-62997 - SK	SEAL KIT (not shown)	1		

FOLDING STAIRWAY

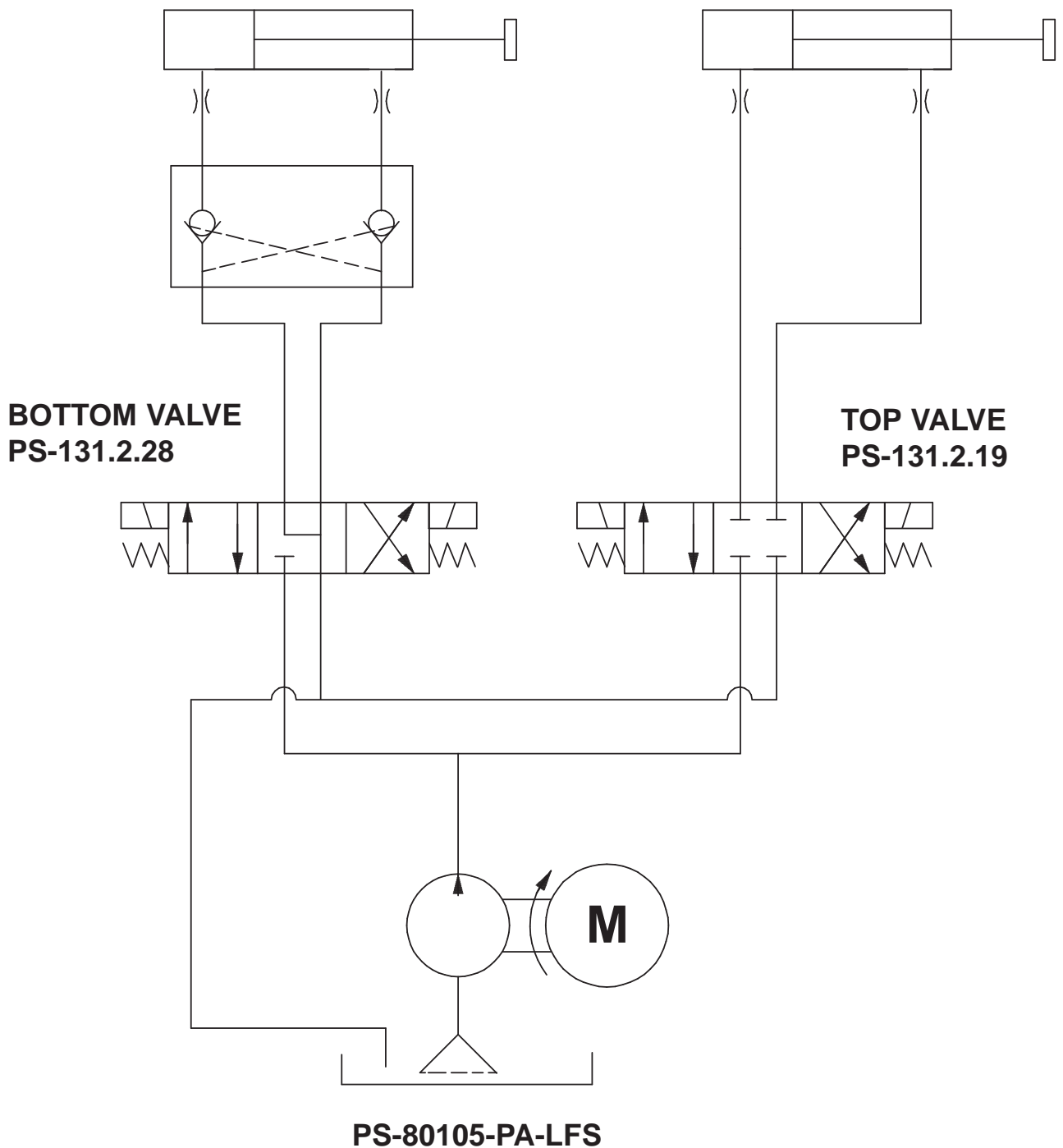
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Section 4-7 Hydraulic Valve Diagram

LIFT CYLINDER
PS-63019-AH

LOCK CYLINDER
PS-62997-A



FOLDING STAIRWAY

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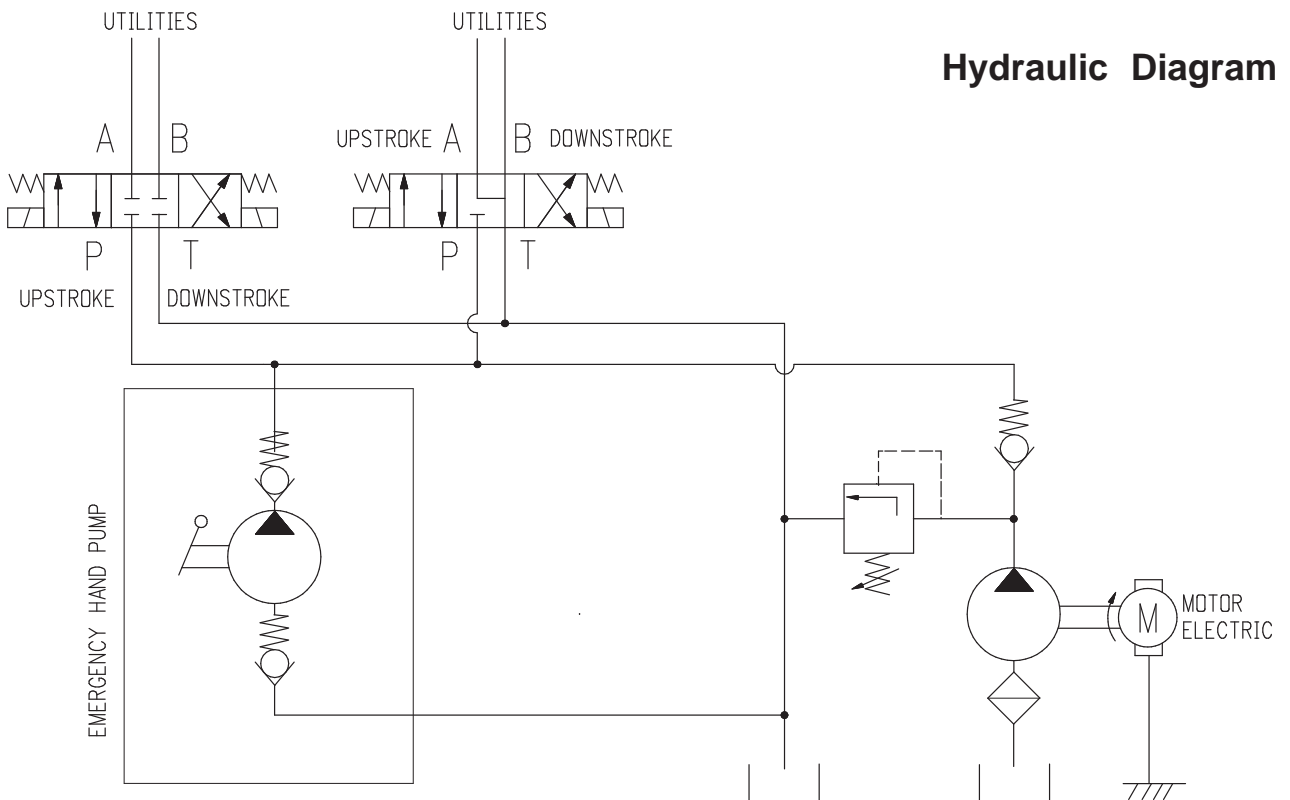
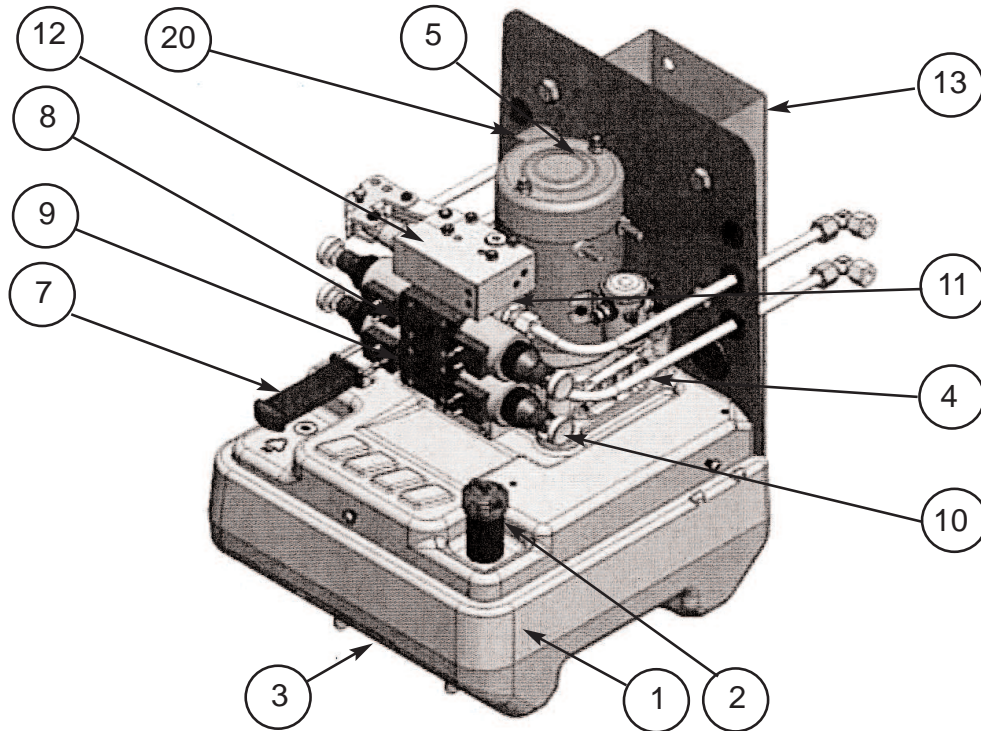


Section 4-8 Power Pack

See Parts list Page 32

PS-80105-PA (No cradle)

PS-80105-PA-LFS (Inc. cradle)



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

FOLDING STAIRWAY

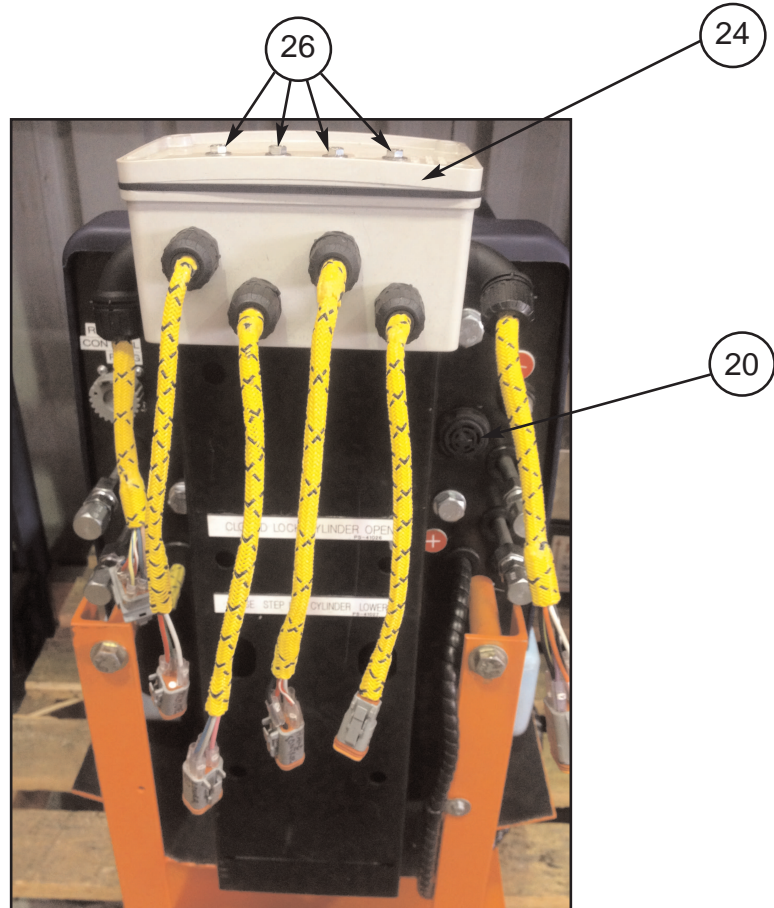
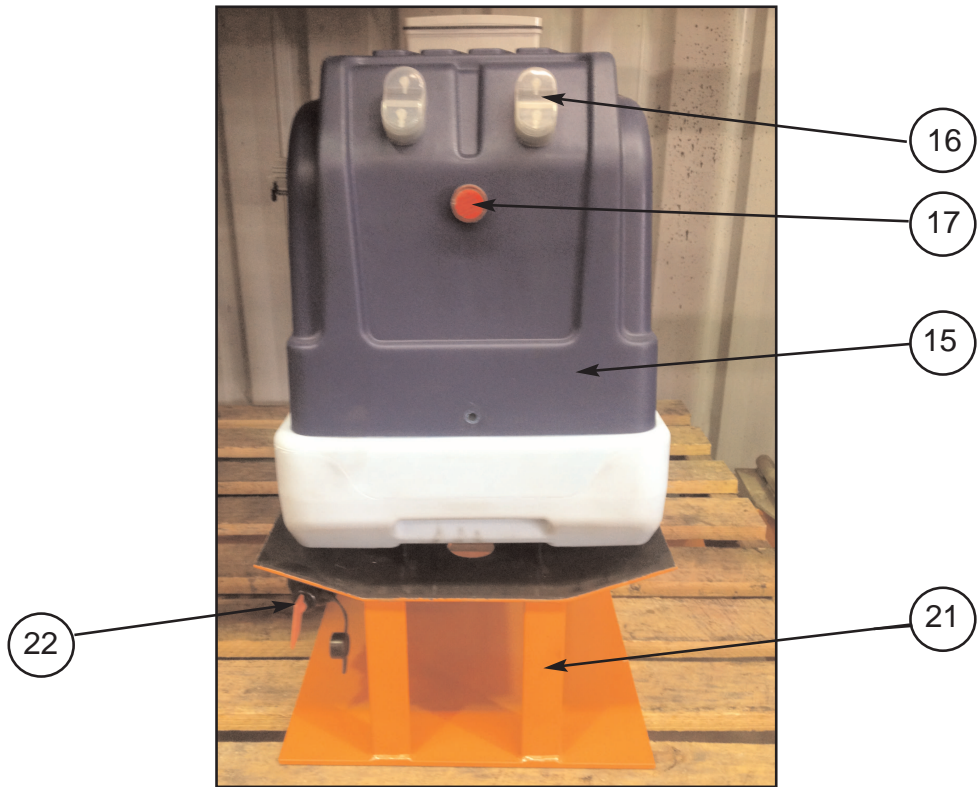
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Section 4-8 Power Pack

See Parts list Page 32

PS-80105-PA (No cradle)
PS-80105-PA-LFS (Inc. cradle)



FOLDING STAIRWAY

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Section 4-8 Power Pack Assembly PS-80105-PA

Assembly complete PS-80105-PA-LFS

See Photos Pages 30 & 31

Item	Part No.	Part Name	Qty	
1	PS-514-9-154	PLASTIC TANK	1	
2	PS-509-5-140	TANK FILLER CAP/ BREATHER	1	
3	PS-115-6-126	TANK PLUG	1	
4	PS-147-900-724	PUMP & HOUSING ASSEMBLY	1	
5	PS-149-165-89	24V MOTOR	1	
6	PS-114-4-951	DRIVE COUPLING	1	Not shown
7	PS-106-936-308	EMERGENCY HAND PUMP	1	
8	PS-131-2-19	CLOSED CENTRE (A1) VALVE-TOP	1	
9	PS-131-2-28	A-B TO T (A2) VALVE-BOTTOM	1	
10	PS-122-11-1258	MANUAL OVERRIDE BUTTON	4	
11	PS-149-115-123	BASE PANEL (Manifold)	1	
12	PS-149-115-70	INTERMEDIATE PANEL (Manifold)	1	
13	PS-538-6-200	REAR BRACKET	1	
14	PS-118-64	PUMP FILTER	1	Not shown
15	PS-147-790-406	DOUBLE VALVE COVER	1	
16	PS-122-11-1276	COVER SWITCH	2	
17	PS-149-990-991	COVER LIGHT	1	
18	PS-541-3-126	PUMP PICK UP TUBE	1	Not shown
19	PS-541-6-89	RELIEF TUBE	1	Not shown
20	PS-122-11-357	BUZZER	1	
21	PS-21613	MOUNTING CRADLE	1	
22	PS-149-120-820	MASTER SWITCH	1	
23	PS-506-4-254	O RING SEAL 5.34 X 101	1	(on pump)Not shown
24	PS-265/4	ELECTRICAL BOX	1	
25	PS-1712080	BLACK JUNCTION BOX	1	Inside - Not shown
26	PS-84214	RECTIFIERS	4	
27	PS-77013	MOTOR ENCLOSURE HARNESS	1	Inside Power Pack
28	PS-77015	ELECTRICAL BOX HARNESS	1Set	(6 Small Harnesses)
29	PS-63202A	FLOW CONTROL VALVES	2	Not shown
30	PS-60051-3.5	HYD HOSES 3.5M X 9/16	2	Not shown
31	PS-60051-2.8	PS-60051- 2.8M X 9/16	2	Not shown
32	PS-60051-1.8	PS-60051-1.8M X 9/16	2	Not shown

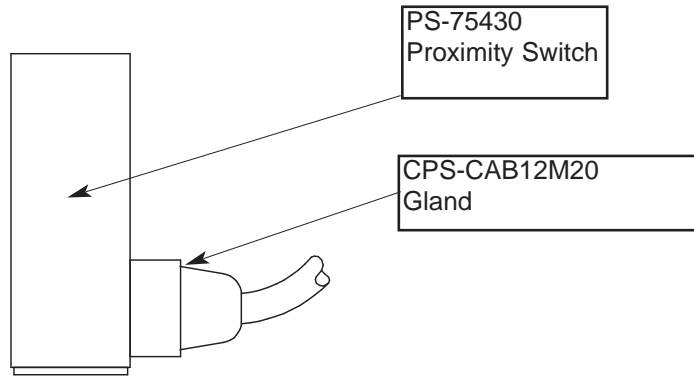
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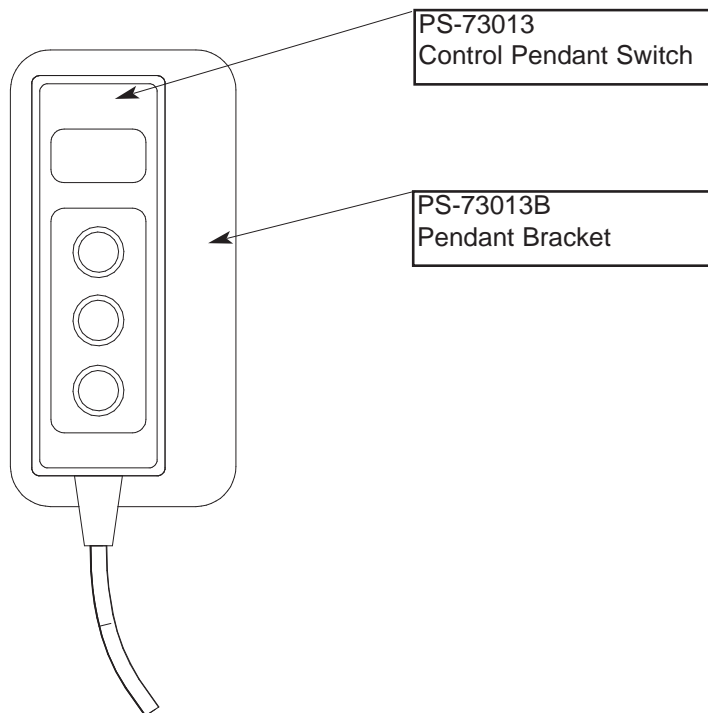
Section 4-9 Electrical Controls

Proximity Switch and Control Pendant



Control Pendant Switch

Mounted on Handrail



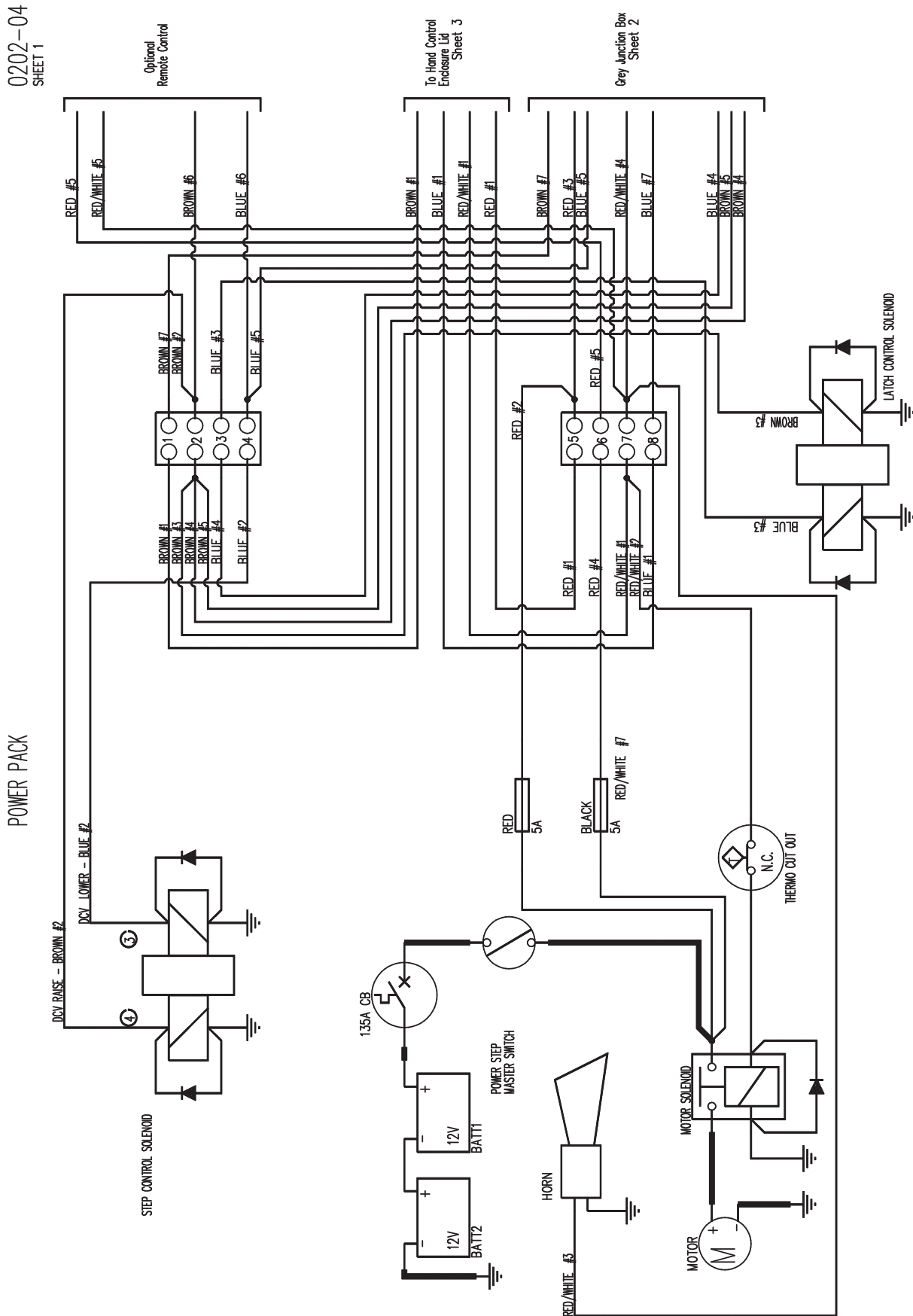
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Section 4-9 Electrical Controls Wiring Page 1

0202-04
SHEET 1



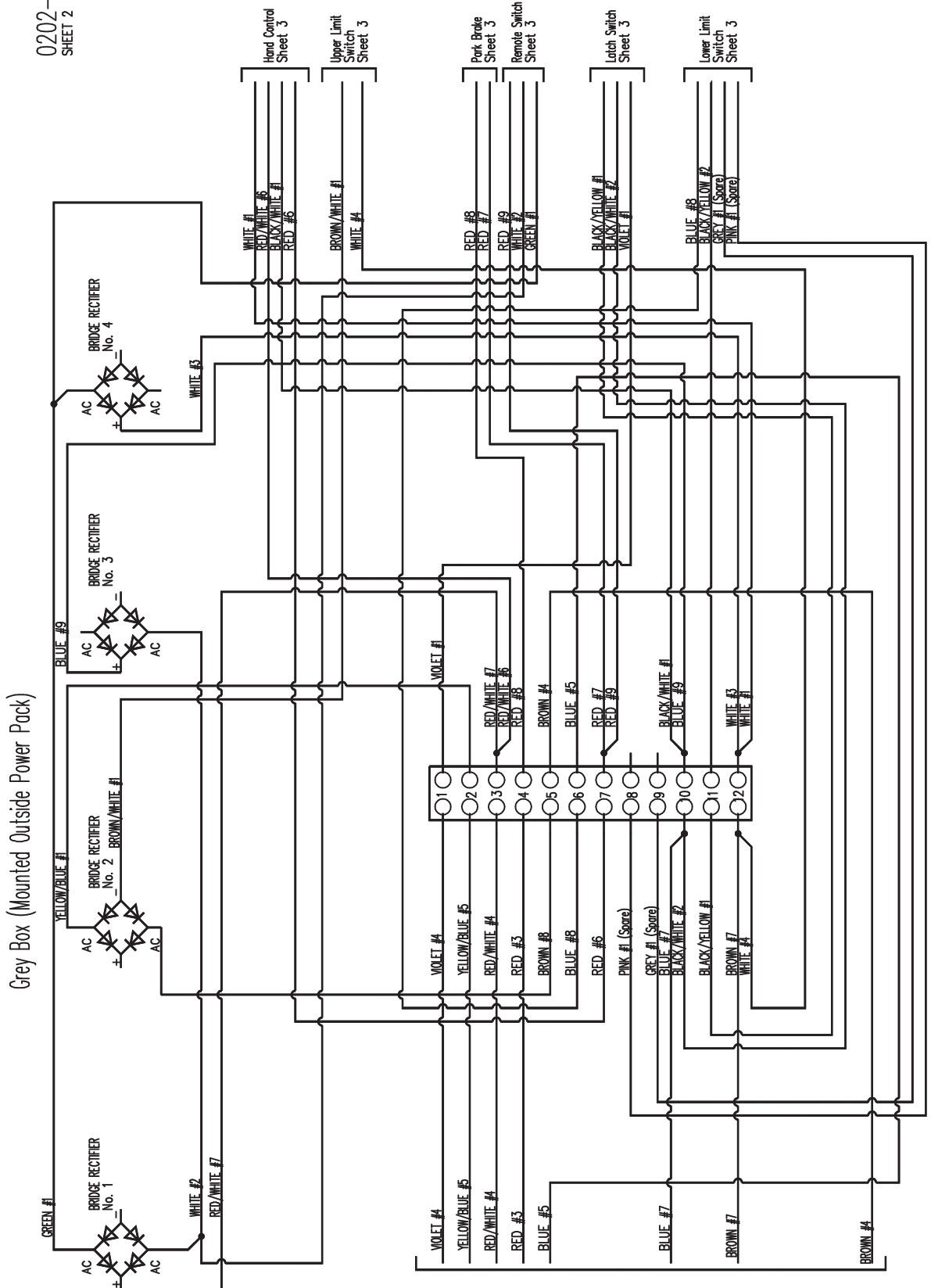
FOLDING STAIRWAY

Hitachi EX 1900-6



Section 4-9 Electrical Controls Wiring Page 2

0202-04
SHEET 2



Grey Box (Mounted Outside Power Pack)

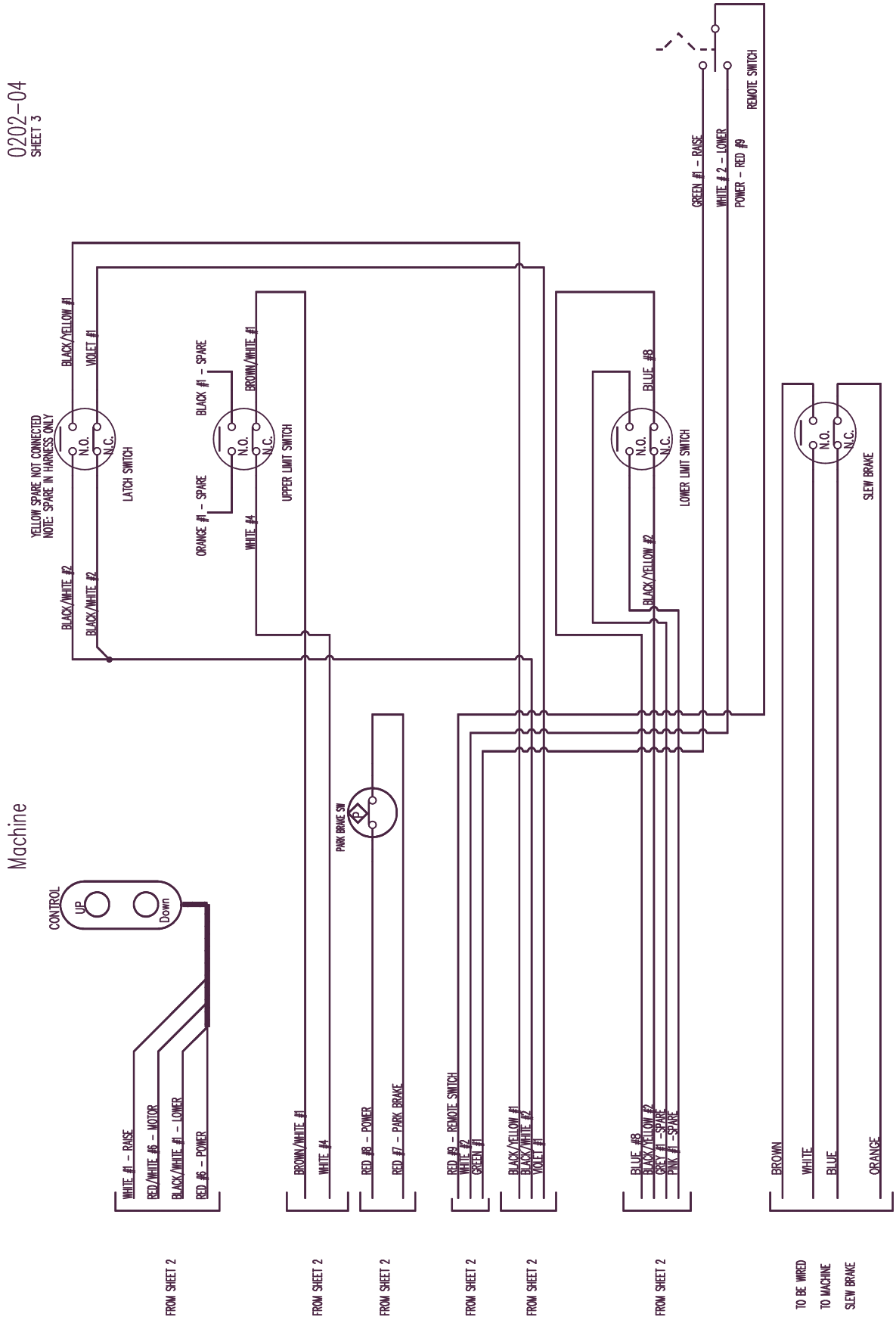
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Hitachi EX 1900-6



Section 4-9 Electrical Controls Wiring Sheet 3

0202-04
SHEET 3



FOLDING STAIRWAY

Hitachi EX 1900-6



Section 4-9 Electrical Controls Wiring Sheet 4

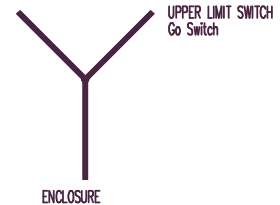
1. PS-77026 Lock Harness and Stair Up Harness To Go Switch

0202-04
SHEET 4

- No. 2 BLACK/WHITE (LATCH SWITCH) (N.O. Looped to N.C. Contact)
- No. 1 VIOLET (LATCH SWITCH) (N.C. Contact)
- No. 1 BLACK/YELLOW (LATCH SWITCH) (N.O. Contact)
- No. 1 YELLOW - SPARE (LATCH SWITCH) (Not Connected)
- No. 1 BROWN/WHITE (UPPER LIMIT SWITCH) (N.C. Contact)
- No. 4 WHITE (UPPER LIMIT SWITCH) (N.C. Contact)
- No. 1 BLACK - SPARE (UPPER LIMIT SWITCH) (N.O. Contact)
- No. 1 ORANGE - SPARE (UPPER LIMIT SWITCH) (N.O. Contact)

10 m

LATCH SWITCH
Go Switch



2. PS-77027 Lower Limit Switch Harness (Go Switch No. 3)

- No. 2 BLACK/YELLOW (N.C. Contact)
- No. 3 BLUE (N.C. Contact)
- No. 1 GREY - SPARE (N.O. Contact)
- No. 1 PINK - SPARE (N.O. Contact)

7 m

3. PS-77028 Hand Control Platform Harness (Mounted on Handrail)

- No. 1 WHITE
- No. 1 BLACK/WHITE
- No. 6 RED
- No. 6 RED/WHITE

10 m

4. PS-77029 Remote Control Switch Harness (If Required)

- No. 2 WHITE
- No. 9 RED
- No. 1 GREEN

10 m

5. PS-77006 Park Brake SLRW

- 2 X RED WIRES AT 10 METRES
- No. 7 RED - CONNECTION 7
- No. 8 RED - CONNECTION 4

10 m

6. PS-77009-AR Slew Brake Limit Switch

- BLUE N.C.
- BROWN N.O.
- WHITE N.C.
- WHITE N.O.

10 m

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Section 4-9 Electrical Controls Wiring Sheet 5 & 6

Grey Junction Box (Mounted Outside Power Pack)

0202-04
SHEET 5

VIOLET No. 4 (INTERNAL CONNECTION J-BOX)

YELLOW/BLUE No. 5 (INTERNAL CONNECTION J-BOX)

RED/WHITE No. 4 (INTERNAL CONNECTION J-BOX)

RED No. 3 (INTERNAL CONNECTION J-BOX)

BROWN No. 8 - RECTIFIER No. 2

BLUE No. 8 - LOWER LIMIT SWITCH

RED No. 6 - HAND CONTROL (ON HANDRAIL)

SPARE - PINK No. 1

SPARE - GREY No. 1

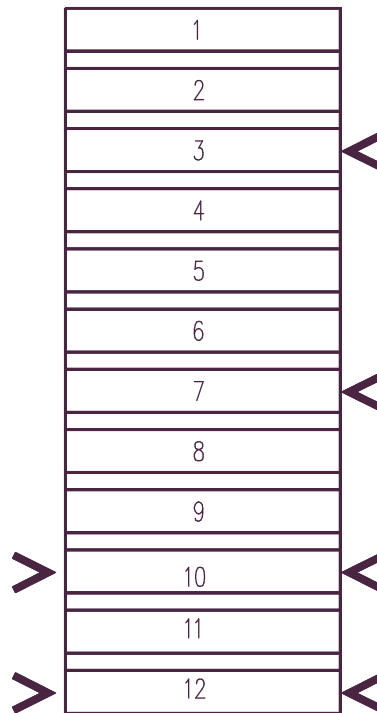
BLUE No. 7 (INTERNAL CONNECTION J-BOX)

BLACK/WHITE No. 1 (HAND CONTROL (ON HANDRAIL))

BLACK/YELLOW No. 1 - LATCH SWITCH

WHITE No. 4 - UPPER LIMIT SWITCH

BROWN No. 7 (INTERNAL CONNECTION J-BOX)



VIOLET No. 1 - LATCH SWITCH

YELLOW/BLUE No. 1 - RECTIFIER No. 2

RED/WHITE No. 7 - RECTIFIER 1

RED/WHITE No. 6 - HAND CONTROL (ON HANDRAIL)

RED No. 8 - PARK BRAKE

BROWN No. 4 (INTERNAL CONNECTION J-BOX)

BLUE No. 5 (INTERNAL CONNECTION J-BOX)

RED No. 7 - PARK BRAKE

RED No. 9 - REMOTE TOGGLE SWITCH

BLUE - No. 9 - RECTIFIER No. 3

BLACK/WHITE No. 2 - LATCH SWITCH

BLACK/YELLOW No. 2 - LOWER LIMIT SWITCH

WHITE No. 3 - RECTIFIER No. 4

WHITE No. 1 - HAND CONTROL SWITCH (ON HANDRAIL)

Black Junction Box (Inside Power Pack)

0202-03
SHEET 6

GREY J/BOX - BROWN No. 7

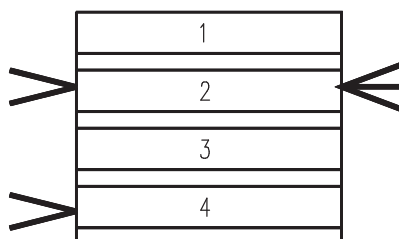
DCV RAISE - BROWN No. 2

REMOTE CONTROL - BROWN No. 6

DCV UNLATCH - BLUE No. 3

GREY J/BOX - BLUE No. 5

REMOTE CONTROL - BLUE No. 6



BROWN No. 1 - (HAND CONTROL ENCLOSURE LID)

BROWN No. 3 - DCV LATCH

BROWN No. 5 - GREY J/BOX

BROWN No. 4 - GREY J/BOX

BLUE No. 4 - GREY J/BOX

BLUE No. 2 - DCV LOWER

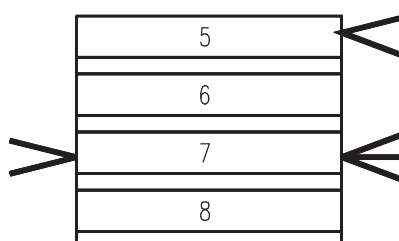
HAND CONTROL ENCLOSURE LID - RED No. 1

BLACK 5A FUSE - RED No. 4

HAND CONTROL ENCLOSURE LID - RED/WHITE No. 1

HEAT SENSOR - RED/WHITE No. 2

HAND CONTROL ENCLOSURE LID - BLUE No. 1



RED No. 2 - RED 5A FUSE

RED No. 3 - GREY J/BOX

RED No. 5 - REMOTE CONTROL

RED/WHITE No. 3 - ALARM

RED/WHITE No. 4 - GREY J/BOX

RED/WHITE No. 5 - REMOTE CONTROL

BLUE No. 7 - GREY J/BOX

FOLDING STAIRWAY

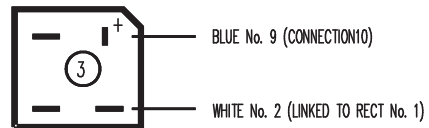
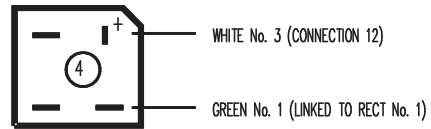
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Section 4-9 Electrical Controls Wiring Sheet 7

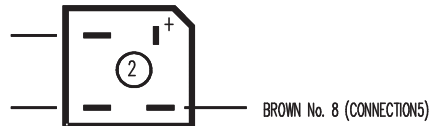
WHITE JUNCTION BOX BRIDGE RECTIFIERS (MOUNTED ON LID)

0202-04
SHEET 7



YELLOW/BLUE No. 2 (CONNECTION 2)

BROWN/WHITE No. 1 (LATCH SWITCH)



GREEN No. 1 (REMOTE SWITCH, LINKED TO RECT No. 4)

