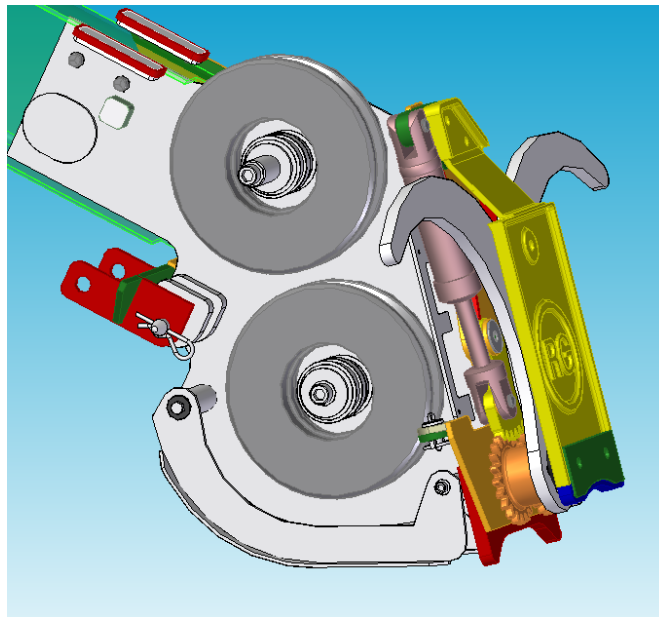


SERVICE BULLETIN

Rev. No	Date	Author	Description
Original Issue	31/7/19	A. Danks	Original Issue
1	08/8/19	A. Danks	Add Service Intervals



BACKGROUND

WorkCover Queensland have issued a Workplace Health and Safety Alert for Crane Rope Sheave failure on the 21st June, 2019.

In May 2019, a plastic (nylon) hoist rope sheave on a 130-tonne mobile crane catastrophically failed and broke into pieces during an attempt to lift an 8 tonne load on the main winch rope. As the sheave failed, the load dropped a short distance and applied shock loading to the hoist rope, damaging it. The main winch was rigged with three parts (falls) of rope.

Fortunately, no-one was injured and damage to the crane was minor. However, the incident had the potential for more serious consequences if the lifted load was heavier. With a heavy load failure of a rope sheave can cause complete failure of a wire rope.

The sheave that failed was a top sheave on the end of the hydraulic boom. On this crane the hoist rope passes through the top sheave and then down to a sheave on the bottom of the boom tip before passing down to the hook block.

Please note that the machine which failed was not a Redmond Gary Australia product, however the Redmond Gary Australia PoleERU is fitted with Sheave Wheels of a similar type.

MACHINE OR VEHICLE AFFECTED: PoleERU

SERIAL NOS: 2001 Onwards

RISK IDENTIFIED: Structural Cracks in Boom Sheave Wheels

DESCRIPTION: Structural cracks can occur in the Sheave Wheels

INSPECTION PROCEDURE:

Refer to procedure below:

Overview: This procedure outlines the actions required to remove and inspect the Sheave Wheels.

Ensure all of this work is carried out in a safe working environment. All work is to be carried out by a competent tradesperson.

Equipment Required:

Safety Glasses and relevant PPE
Allen Keys and Spanners

Procedure:

Follow the proceeding instructions for directions for inspection of the Sheave Wheels.

1. Rotate pole claw assembly and slide back and pin to second boom.
2. Remove the hook
3. Remove the wire rope so that it is clear of the two Sheave Wheels.
4. Remove the M20 Cap Screw and Nyloc nut from the centre of the lower Sheave Wheel taking care to support the Sheave Wheel when removing the capscrew.
5. Remove the lower Sheave Wheel
6. Repeat steps 4 and 5 for the upper Sheave Wheel.
7. Visually inspect the Nylatron Sheave Wheels for hair line cracks. If any cracks are found the Sheave Wheel **MUST** be replaced.
8. Check condition of bearings and replace if worn.
9. Reassemble the Sheave Wheels into the boom when tightening the M20 capscrews. They are to be torqued to 557 Nm or 410 Ft lbs.

Inspection Regime:

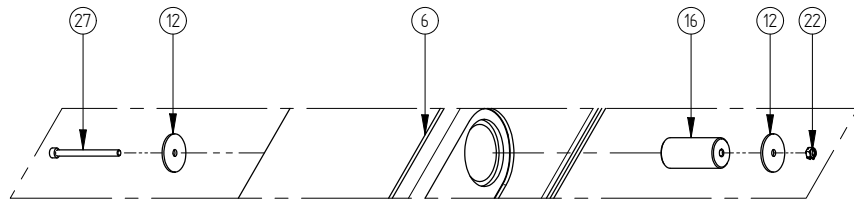
1. Remove wheels and inspect in accordance with procedure above at the next scheduled service.
2. Check periodically every 12 months or when the rope is replaced. These inspections can be carried out without removing the Sheave Wheels. The inspection should be of the external surface and rope groove.

CUSTOMER ACTION REQUIRED:

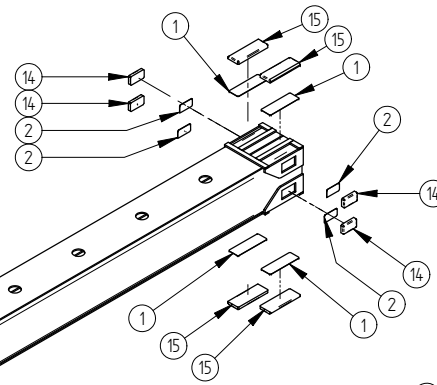
PoleERU owners must circulate this bulleting to all their maintenance personnel.

Please contact Dan Rae, our Service & Spare Parts Supervisor, on (07) 5594 9844 if further information is required.

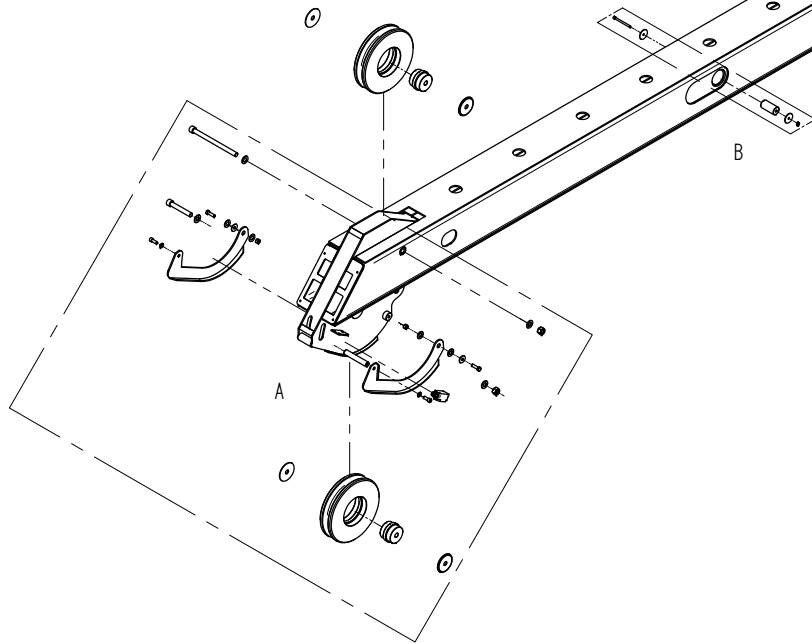
ANDREW DANKS
Managing Director



DETAIL B
1:7

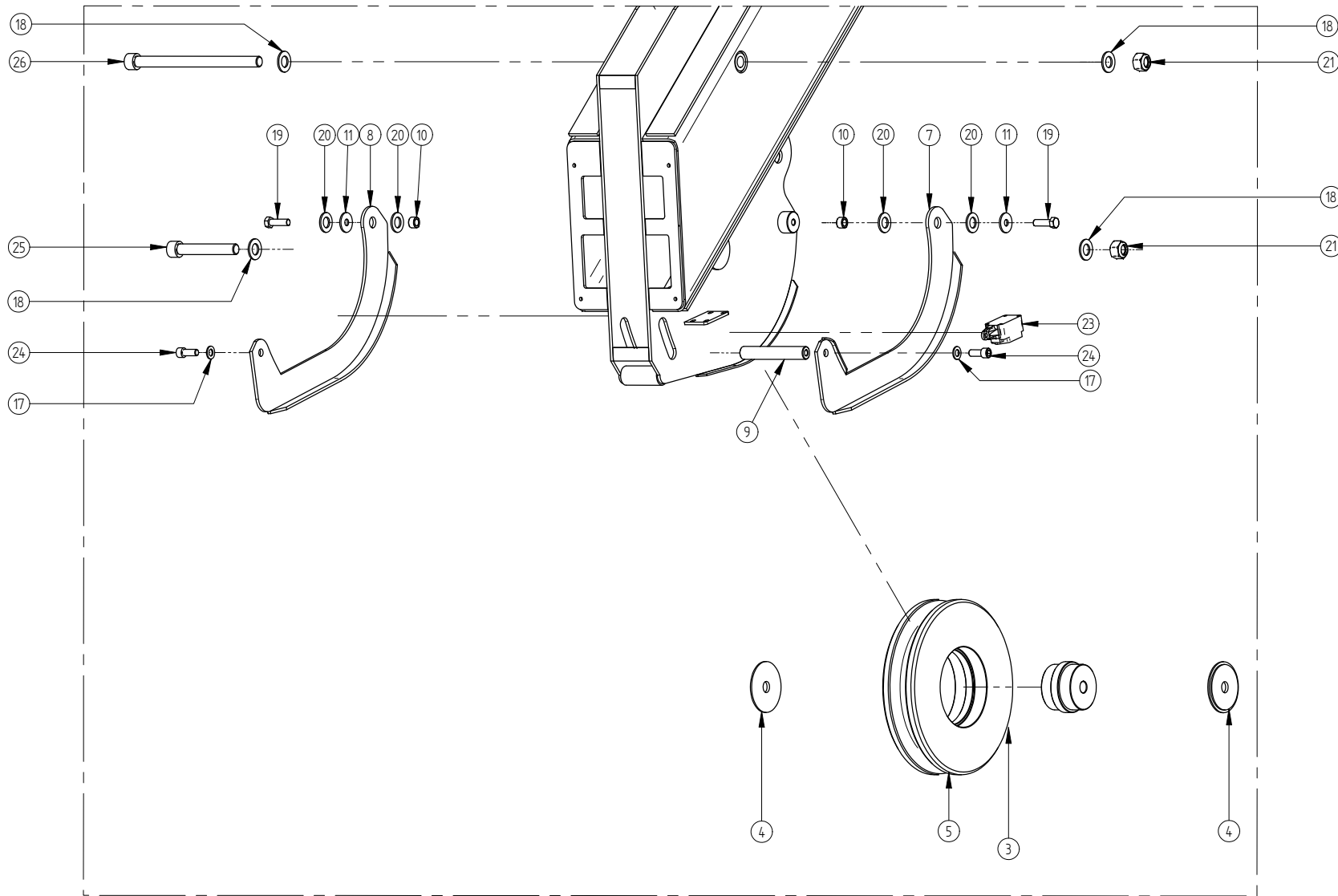


SCALE
1:50



Item	Dwg No.	Rev	Drawn	Description	Material	Qty
1	02L012	1		Wear Pad Packer Plate	Sheet 1 mm Zinccanneal	4
2	02L013	1		Wear Pad Packer Plate	Sheet 1 mm Zinccanneal	4
3	02L043	A1		Sheave Bearing Spacer	Round Bar 100 mm AS 1442/1045 Cold Drawn Black	2
4	02L044	A1		Sheave Bearing Spacer 2	Round Bar 100 mm AS 1442/1020 Cold Drawn Black	4
5	02L128			Extension Boom Wire Rope Sheave	Black Nylatron GSM	2
6	02L130	A1		2nd Boom Weldment		1
7	02L133LH			Rope Stop LH		1
8	02L133RH			Rope Stop RH		1
9	02L216			Rope Stop Boss	Round Bar 24 mm AS 1442/1045 Hot Rolled	1
10	02L218			Rope Stop Pivot Spacer	Round Bar 20 mm AS 1442/1045 Cold Drawn	2
11	02L219			Rope Stop Pivot Washer	Plate 3 mm AS 3678-350	2
12	02L232	1		Washer OD 50 x 9 ID	Sheet 3 mm Stainless Steel Grade 304	2
13	02L233			Extension Jib End Cover	Floor Plate 3 mm Aluminium 5251 0	1
14	03L011	A2		Wear Pad Side 3rd Jib	U.H.W.M.P.E.	4
15	03L015	1		Wear Pad Bottom / Top 3rd Jib	Nylatron GSM	4
16	91L4002	A		Cyl. Mount Bolt 2 for 2nd Jib	Round Bar 40mm AS1444/4140 Hard Chrome Plated	1
17	N/A		No	Flat Washer 12 mm	ASTM F436	2
18	N/A		No	Hardened Washer 20 mm	ASTM F436	4
19	N/A		No	Hex Head Bolt M12 x 40	ASTM F436	2
20	N/A		No	M20 Nylon Washer 3 mm	Blackwoods P/N: 0094 4316	4
21	N/A		No	Nut Nyloc M20	Class 12	2
22	N/A		No	Nut Nyloc M8	Class 8	1
23	N/A		No	Omron Roller Switch	ASTM F436	1
24	N/A		No	Socket Hd Capscrew M12 x 30	Grade 12.9	2
25	N/A		No	Socket Hd Capscrew M20 x 130	Grade 12.9	1
26	N/A		No	Socket Hd Capscrew M20 x 280	Grade 12.9	1
27	N/A		No	Socket Hd Capscrew M8 x 100	Grade 12.9	1

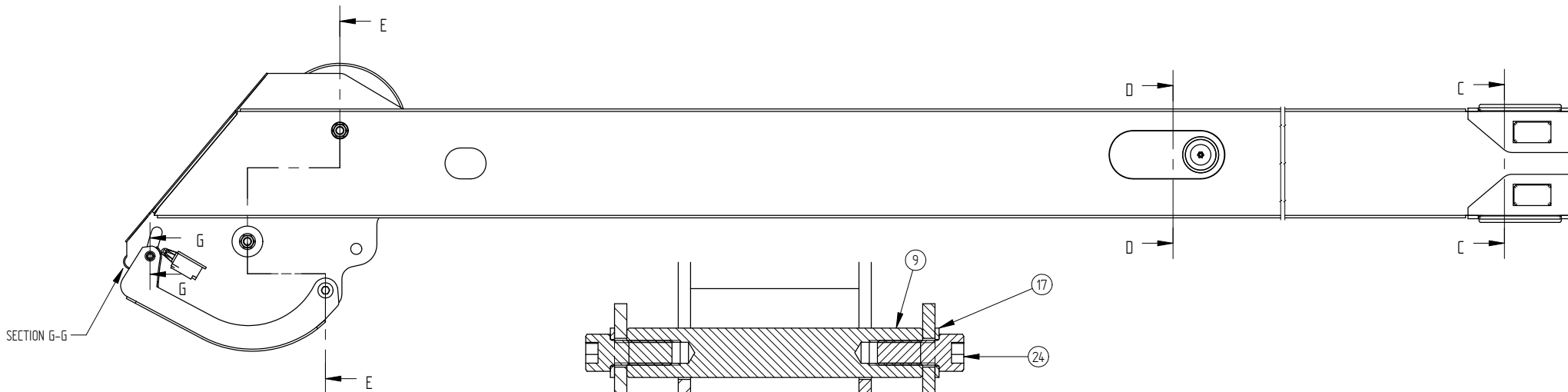
UNLESS OTHERWISE STATED ALL DIMS IN MM TO 3 DECIMALS			CNC NO		DATE CREATED	LAST MODIFIED	DRAWN BY	MODELED BY	 A.C.N. 070 053 984 PROJECT: 02 - Extension Jib SECTION: 02 - Extension Jib Second Jib No Pole Claws
FAB & WELDING 0 - 100mm +/- 1 100 - 300mm +/- 2 300 - 500mm +/- 3 ANGULAR: +/- 0.5 DEG UNLESS STATED			DRILL & MIC ALL +/- 0.1 UNLESS STATED		15/05/2014	15/05/2014	DCummins	DCummins	
DRAFTING STANDARDS AS1100 - Technical Dwg - General Principles AS1100:2011 - Tech Dwg - Mechanical Dwg AS1101:3 - Dwg Symbols - Welding & NDT			FINISH None		SCALE	QTY/MACHINE	CHECKED - ENGINEERING (SIG)		ISSUED - PRODUCTION (SIG)
REV NO. DATE REVISOR BY E.C.R. NO. DESCRIPTION			S/N		1 : 25		1		REFERENCED DWG No
14/01/09 H.Hahan Original Issue					00L04001		A4		SIZE
THIS DRAWING IS THE PROPERTY OF REDMOND GARY AUSTRALIA Pty Ltd. DO NOT USE OR COPY WITHOUT PERMISSION. COPYRIGHT RGA.					DRAWING NO.		REV		SHEET NO.
					02L132#1		1		4



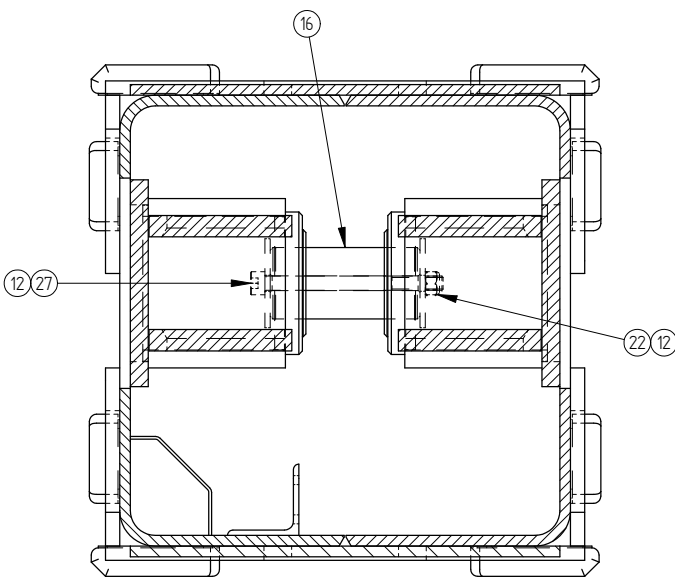
DETAIL A

UNLESS OTHERWISE STATED ALL DIMS IN MM TOLERANCES 0 - 100mm +/- 1 100 - 300mm +/- 2 300mm - 1000mm +/- 3 ANGULAR: +/- 0.5 DEG UNLESS STATED				 CNC NO DRILL & MIC ALL +/- 0.1 UNLESS STATED		DATE CREATED 15/05/2014	LAST MODIFIED 15/05/2014	DRAWN BY DCummins	MODELED BY DCummins	Redmond Gary (RG) Australia Pty.Ltd. <small>A.C.N. 070 053 584</small> PROJECT: PoleRU SECTION: 02 - Extension Jib Second Jib No Pole Claws		
DRAFTING STANDARDS AS1100 - Technical Dwg - General Principles AS1100:2011 - Tech Dwg - Mechanical Dwg AS1101:3 - Dwg Symbols - Welding & NDT				FINISH None		PROFILE NO	SCALE 1 : 8	QTY/MACHINE 1	CHECKED - ENGINEERING (SIG)		ISSUED - PRODUCTION (SIG)	
REV NO.	DATE	REVISED BY	E.C.R. NO.	DESCRIPTION	S / N	REFERENCED DWG No 00L04001			SIZE A4	DRAWING NO. 02L132#1	REV 2	SHEET NO. 4

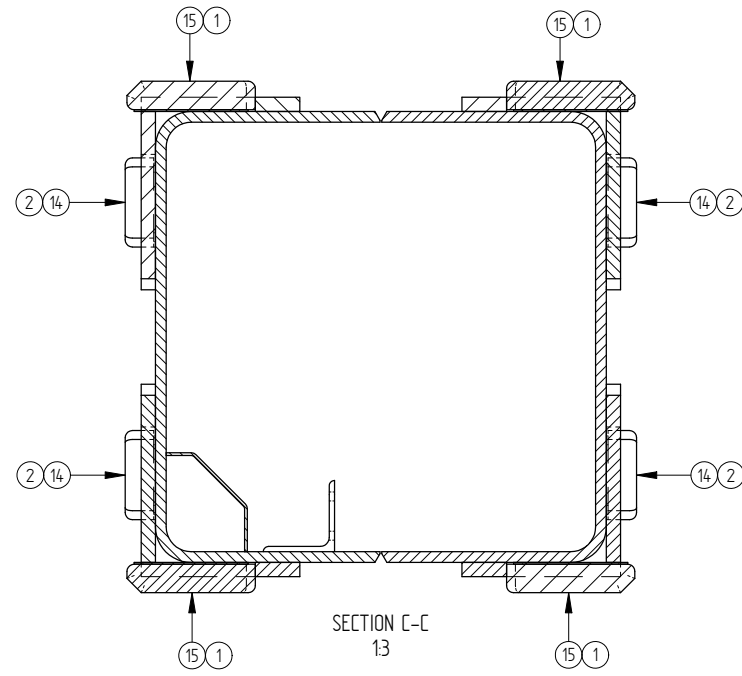
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SECTION G-G
12



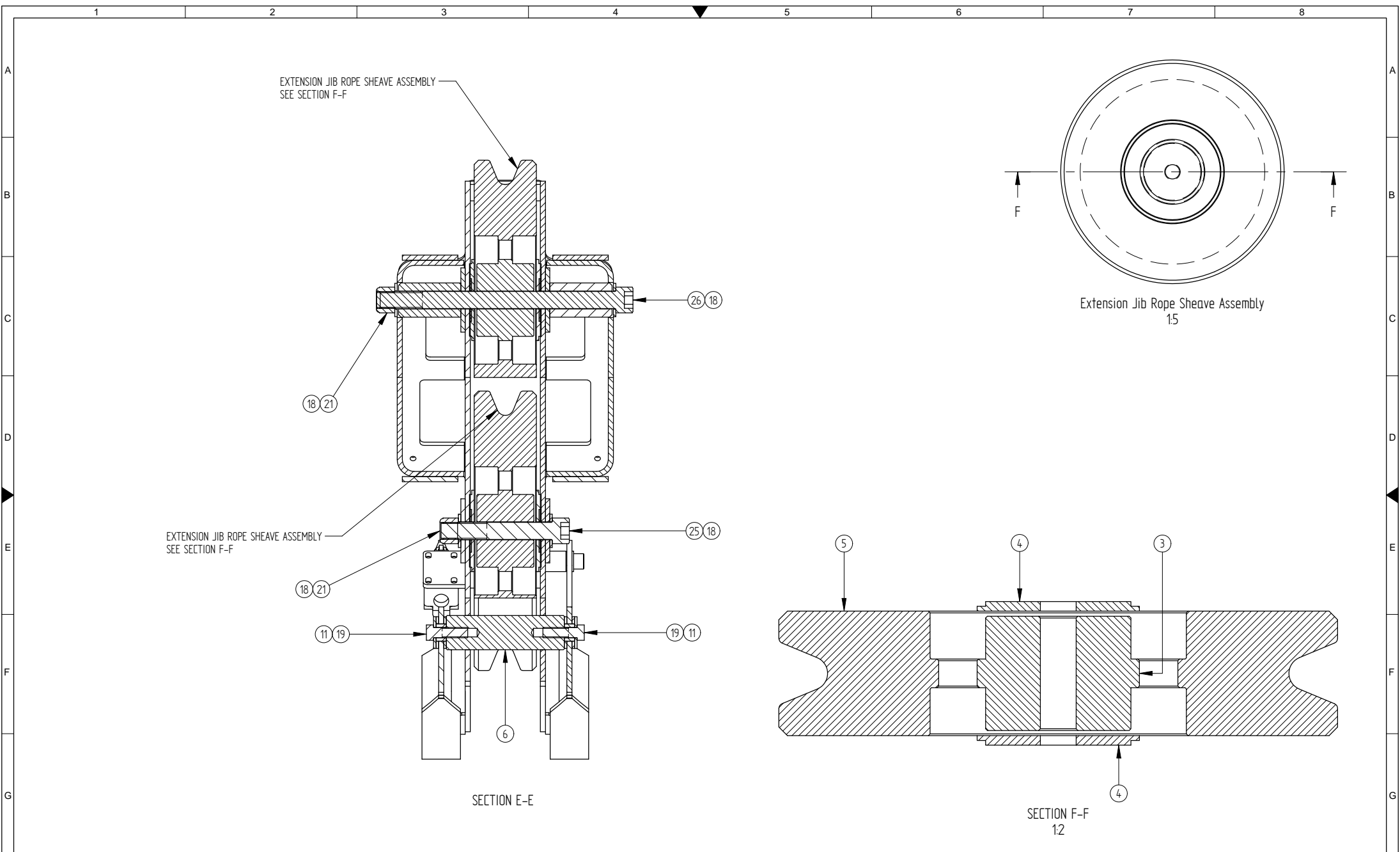
SECTION D-D
13



SECTION C-C
13

				UNLESS OTHERWISE STATED ALL DIMS IN MM TOLERANCES FAB & WELDING 0 - 100mm +/- 1 100 - 300mm +/- 2 ABOVE 300mm +/- 3 ANGULAR: +/- 0.5 DEG UNLESS STATED		CNC NO 15/05/2014		DATE CREATED 15/05/2014		DRAWN BY DCummins		MODELED BY DCummins		Redmond Gary (RG) Australia Pty.Ltd. A.C.N. 070 053 984	
				DRAFTING STANDARDS AS1100 - Technical Dwg - General Principles AS1100:2011 - Tech Dwg - Mechanical Dwg AS1101:3 - Dwg Symbols - Welding & NDT		PROFILE NO 1		SCALE 1 : 10		QTY/MACHINE 1		CHECKED - ENGINEERING (SIG)		PROJECT: PoleRU SECTION: 02 - Extension Jib Second Jib No Pole Claws	
				FINISH None		ISSUED - PRODUCTION (SIG)		REFERENCED DWG No 00L04001		SIZE A4		DRAWING NO. 02L132#1		REV SHEET NO. 3 of 4	
REV NO.	DATE	REVISED BY	E.C.R. NO.	DESCRIPTION		S/N									
	14/01/09	H.Hahan		Original Issue											

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UNLESS OTHERWISE STATED ALL DIMS IN MM				CNC		DATE CREATED	LAST MODIFIED	DRAWN BY	MODELED BY	Redmond Gary (RG) Australia Pty.Ltd. <small>A.C.N. 070 053 584</small> PROJECT: PoleRU SECTION: 02 - Extension Jib Second Jib No Pole Claws
TOLERANCES				DRILL & MIC		15/05/2014	15/05/2014	DCummins	DCummins	
FAB & WELDING				ALL ±0.1		PROFILE		CHECKED - ENGINEERING (SIG)		ISSUED - PRODUCTION (SIG) REFERENCED DWG No 00L04001
DRAFTING STANDARDS				UNLESS STATED		SCALE		QTY/MACHINE		
AS1100 - Technical Dwg - General Principles				NONE		1 : 4		1		SIZE A4
AS1100:2011 - Tech Dwg - Mechanical Dwg				FINISH		None		None		DRAWING NO. 02L132#1
AS1101:3 - Dwg Symbols - Welding & NDT				MATERIAL		None		None		REV 4 of 4
REV NO.	DATE	REVISED BY	E.C.R. NO.	DESCRIPTION	S/N	THIS DRAWING IS THE PROPERTY OF REDMOND GARY AUSTRALIA Pty Ltd. DO NOT USE OR COPY WITHOUT PERMISSION. COPYRIGHT RGA.				
	14/01/09	H.Hahan		Original Issue						