

The user of this spreadsheet shall input data into the relevant yellow boxes on this worksheet and on all of the other relevant worksheets

Note: The disclaimer on the first worksheet applies to all tables in this workbook

Rig Manufacturer :	<b>TES CAR</b>	Rig Type & Serial No.	<b>CF2,5A</b>	<b>2585</b>
Operation mode:	<b>no slew</b>	Date:	<b>23/07/2018</b>	
Completed by:	<b>AM</b>	Checked by:	<b>LF</b>	

Main Components - Slewing:							
Item	Mass (kg)	Weight (kN)	X - Coordinate	Y - Coordinate	Moment Mx (kNm)	Moment My (kNm)	
UPPER WORKS (Slewing)	Supporto	396	4	0.00	0.64	-2	0
	Controslitta	800	8	0.00	1.08	-8	0
	Mast	700	7	0.00	1.20	-8	0
	Falchetto	150	1	0.00	1.32	-2	0
						0	0
LOWER WORKS (Slewing)	Base Machine	2,000	20	0.00	0.00	0	0
						0	0
						0	0
						0	0
						0	0
SUSPENDED EQUIPMENT CONNECTED TO CROWD SYSTEM (Slewing)	Kelly bar	1,000	10	0.00	1.85	-18	0
	Rotary Head	700	7	0.00	1.85	-13	0
						0	0
COUNTER-WEIGHT (Slewing)	Contrappeso	750	7	0.00	-1.00	7	0
						0	0
OTHER/OTHER SUSPENDED EQUIPMENT (Slewing)			0	0.00	3.41	0	0
						0	0
UPPER WORKS		2,046	20	0.00	1.05	-21	0
LOWER WORKS		2,000	20	0.00	0.00	0	0
SUSPENDED EQUIPMENT CONNECTED TO CROWD SYSTEM		1,700	17	0.00	1.85	-31	0
COUNTERWEIGHT		750	7	0.00	-1.00	7	0
OTHER		0	0	0.00	0.00	0	0
SLEWING TOTAL/RESULTANT (with $\theta=0$ )		6,496	64	0.00	0.70	-45	0

Foot Pads - Slewing :							
Description	Bearing Area	Max. Pad Loading	X - Coordinate	Y - Coordinate	Actual Shape	Actual Dimension	
Front Pad 1	m <sup>2</sup>	kN	m	m	None	None	
Front Pad 2					None	None	
Rear Pad 1					None	None	
Rear Pad 2					None	None	

Forces - Slewing					
	Force	X - Coordinate	Y - Coordinate		
	kN	m	m		
Crowd System - Maximum Extraction Force (kN)	28	0.00	1.85	Must be inline with suspended equip't.	
Crowd System - Maximum Penetration Force (kN)	-95	0.00	1.85	-ve Must be inline with suspended equip't.	
Maximum Auxillary Force (kN)	10	0.00	1.85		

Main Components - Non-Slewing:							
Item	Mass (kg)	Weight (kN)	X - Coordinate	Y - Coordinate	Moment Mx (kNm)	Moment My (kNm)	
Lower Works Non-Slewing (undercarriage/tracks etc)	Tracks & Undercarriage	2,500	25	0.00	0.00	0	0
				0.00	0.00	0	0
				0.00	0.00	0	0
NON-SLEWING TOTAL/RESULTANT (with $\theta=0$ )		2,500	25	0.00	0.00	0	0
TOTAL RIG MASS		8,996					

Foot Pads - Non-Slewing							
Description	Bearing Area	Max. Pad Loading	X - Coordinate	Y - Coordinate	Actual Shape	Actual Dimension	
Front Pad 1	m <sup>2</sup>	kN	m	m			
Front Pad 2							
Rear Pad 1							
Rear Pad 2							

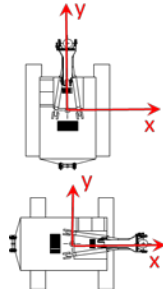
Tracks		Slewing	
Track bearing length (m)	1.92	Can the rig slew?	YES
Track pad width (m)	0.40		
Distance between centrelines of tracks (m)	1.55		

Note: The disclaimer on the first worksheet applies to all tables in this workbook



Notes  
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<b>TES CAR</b>	Weight / Force Applied (kN)	X - Coordinate	Y - Coordinate	Moment Mx	Moment My
<b>CF2,5A</b>					



SLEWING ACTIONS					
Upper Works (slewing)	20	0.00	1.05	-21	0
Suspended Eqpt. on Crowd	17	0.00	1.85	-31	0
Counterweight (slewing)	7	0.00	-1.00	7	0
Other (slewing)	0	0.00	0.00	0	0
Lower Works (Slewing)	20	0.00	0.00	0	0
Net Extraction Force	0	0.00	1.85	0	0
Net Penetration Force	0	0.00	1.85	0	0
Applied Auxiliary Force	0	0.00	1.85	0	0
Front Pad 1	0	0.00	0.00	0	0
Front Pad 2	0	0.00	0.00	0	0
Rear Pad 1	0	0.00	0.00	0	0
Rear Pad 2	0	0.00	0.00	0	0
Summary of Slewing Action	64	0.00	0.70	-45	0

Applied Force (kN)	Max. Allowable (kN)
0	28
0	-95
0	10

Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )
0	0.00
0	0.00
0	0.00
0	0.00
0	0.00

NON-SLEWING ACTIONS						Applied Force (kN)	Max. Allowable (kN)	Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )	
Lower Works Non-Slewing	25	0.00	0.00	0	0	0	0	0	0.00	
Front Pad 1	0	0.00	0.00	0	0	0	0	0	0.00	
Front Pad 2	0	0.00	0.00	0	0	0	0	0	0.00	
Rear Pad 1	0	0.00	0.00	0	0	0	0	0	0.00	
Rear Pad 2	0	0.00	0.00	0	0	0	0	0	0.00	
Summary of Non-slewing Actions	25	0.00	0.00	0	0	Max. Pad Pressure		0		
Total Rig Weight (kN)	88					Track Bearing Length (m)	1.92			
Resultant of all Actions (kN)	88	0.00	0.51	-45	0	Track pad width (m)	0.40			
						Track Centerline Dist. (m)	1.55			

Input Data Warning Messages	Notes
Auxiliary Line Force OK	
Extraction Force OK	
Penetration Force OK	
Slewing Footpad Forces OK	
Non-Slewing Footpad Forces OK	

**Notes on Using this Table**

- Auxiliary Line Pull -ve Z direction. Enter applied force (kN) in appropriate yellow box (G11). Note the maximum design force in the adjacent box (H11).
- Extraction Line Pull +ve Z direction. Enter applied force (kN) in appropriate yellow box (G9). Note the maximum design force in the adjacent box (FH9).
- Penetration Force -ve Z direction. Enter applied force (kN) in appropriate yellow box (G10) - must be negative as it imposes an upwards resultant force. Note the maximum design force in the adjacent box (H10).
- Slewing Foot Pad Forces +ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G12 to G15). Note the maximum the machine can develop is given in the adjacent boxes.
- Non-Slewing Foot Pad Forces -ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G20 to G23). Note the maximum the machine can develop is given in the adjacent boxes.

Fill in values in all yellow boxes appropriate for this mode -  
 Net extraction or penetration force is the applied value minus the weight of any rope / kelly / chain suspended equipment.  
 By trial and error, adjust Foot Pad Forces to eliminate "error" messages and equalise bearing pressures on both tracks and foot pads (highlighted in red boxes).  
 When applying Auxiliary or Extraction Line Pull, ensure that Penetration Force is zero.

**ONLY A COMPETENT PERSON MAY USE THIS TABLE !**

**Note: The disclaimer on the first worksheet applies to all tables in this workbook**

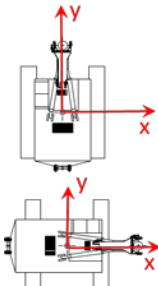
Mode : Standing							Transformation from triangular or trapezoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid		
Relative Angle - Upper Body and Tracks (degrees)	Max bearing pressure L.H. track (kN/m <sup>2</sup> )	Min bearing pressure L.H. track (kN/m <sup>2</sup> )	Max bearing pressure R.H. track (kN/m <sup>2</sup> )	Min bearing pressure R.H. track (kN/m <sup>2</sup> )	Max Track loading dimensions		Equivalent Bearing		
					ecc (m)	Bearing Len. (m)	L (m)	Q (kPa)	
0	162	0	162	0	0.506	1.363	0.908	121	
15	130	0	182	0	0.489	1.414	0.943	137	
30	95	0	187	0	0.438	1.566	1.044	140	
45	66	0	178	0	0.358	1.807	1.205	134	
60	45	5	161	19	0.253	1.920	1.414	122	
75	30	13	132	55	0.131	1.920	1.658	108	
90	20	20	95	95	0.000	1.920	1.920	95	
105	30	13	132	55	-0.131	1.920	1.658	108	
120	45	5	161	19	-0.253	1.920	1.414	122	
135	66	0	178	0	-0.358	1.807	1.205	134	
150	95	0	187	0	-0.438	1.566	1.044	140	
165	130	0	182	0	-0.489	1.414	0.943	137	
180	162	0	162	0	-0.506	1.363	0.908	121	
195	182	0	130	0	-0.489	1.414	0.943	137	
210	187	0	95	0	-0.438	1.566	1.044	140	
225	178	0	66	0	-0.358	1.807	1.205	134	
240	161	19	45	5	-0.253	1.920	1.414	122	
255	132	55	30	13	-0.131	1.920	1.658	108	
270	95	95	20	20	0.000	1.920	1.920	95	
285	132	55	30	13	0.131	1.920	1.658	108	
300	161	19	45	5	0.253	1.920	1.414	122	
315	178	0	66	0	0.358	1.807	1.205	134	
330	187	0	95	0	0.438	1.566	1.044	140	
345	182	0	130	0	0.489	1.414	0.943	137	
							Maximum Track Values	1.044	140
							Pad Area (m <sup>2</sup> )		
Max. Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing Leng							0.000	0.000	0
Max. Non-Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing							0.000	0.000	0
<b>Maximum Equivalent Design Values</b>							1.044	140	
Eccentricity index - X direction (sideways)							<b>0.65</b>		
Eccentricity index - Y direction (forwards/backwards)							<b>0.53</b>		
Track pressure distribution warning							<b>Track(s) lifting</b>		
Slewing foot pad message							<b>Slewing Foot Pad Pressure OK</b>		
Non-Slewing foot pad message							<b>Non-Slewing Foot Pad Pressure OK</b>		
<b>BRE LOAD CASE ( 1 or 2 )</b>							<b>1</b>		



TES CAR	Weight / Force Applied (kN)	X - Coordinate	Y - Coordinate	Moment Mx	Moment My
<b>CF2,5A</b>					
<b>SLEWING ACTIONS</b>					
Upper Works (slewing)	20	0.00	1.05	-21	0
Suspended Eqpt. on Crowd	17	0.00	1.85	-31	0
Counterweight (slewing)	7	0.00	-1.00	7	0
Other (slewing)	0	0.00	0.00	0	0
Lower Works (Slewing)	20	0.00	0.00	0	0
Net Extraction Force	0	0.00	1.85	0	0
Net Penetration Force	0	0.00	1.85	0	0
Applied Auxiliary Force	0	0.00	1.85	0	0
Front Pad 1	0	0.00	0.00	0	0
Front Pad 2	0	0.00	0.00	0	0
Rear Pad 1	0	0.00	0.00	0	0
Rear Pad 2	0	0.00	0.00	0	0
Summary of Slewing Action	64	0.00	0.70	-45	0

Applied Force (kN)	Max. Allowable (kN)
0	28
0	-95
0	10

Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )
0	0.00
0	0.00
0	0.00
0	0.00



NON-SLEWING ACTIONS						Applied Force (kN)	Max. Allowable (kN)	Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )
Lower Works Non-Slewing	25	0.00	0.00	0	0	0	0	0	0.00
Front Pad 1	0	0.00	0.00	0	0	0	0	0	0.00
Front Pad 2	0	0.00	0.00	0	0	0	0	0	0.00
Rear Pad 1	0	0.00	0.00	0	0	0	0	0	0.00
Rear Pad 2	0	0.00	0.00	0	0	0	0	0	0.00
Summary of Non-slewing Actions	25	0.00	0.00	0	0	Max. Pad Pressure 0			
Total Rig Weight (kN)	88					Track Bearing Length (m)		1.92	
Resultant of all Actions (kN)	88	0.00	0.51	-45	0	Track pad width (m)		0.40	
						Track Centerline Dist. (m)		1.55	

Input Data Warning Messages	Notes
Auxiliary Line Force OK	
Extraction Force OK	
Penetration Force OK	
Slewing Footpad Forces OK	
Non-Slewing Footpad Forces OK	

**Notes on Using this Table**

Auxiliary Line Pull -ve Z direction. Enter applied force (kN) in appropriate yellow box (G11). Note the maximum design force in the adjacent box (H11).  
 Extraction Line Pull +ve Z direction. Enter applied force (kN) in appropriate yellow box (G9). Note the maximum design force in the adjacent box (FH9).  
 Penetration Force -ve Z direction. Enter applied force (kN) in appropriate yellow box (G10) - must be negative as it imposes an upwards resultant force. Note the maximum design force in the adjacent box (H10).  
 Slewing Foot Pad Forces +ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G12 to G15). Note the maximum the machine can develop is given in the adjacent boxes.  
 Non-Slewing Foot Pad Forces -ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G20 to G23). Note the maximum the machine can develop is given in the adjacent boxes.

Fill in values in all yellow boxes appropriate for this mode -

Net extraction or penetration force is the applied value minus the weight of any rope / kelly / chain suspended equipment.

By trial and error, adjust Foot Pad Forces to eliminate "error" messages and equalise bearing pressures on both tracks and foot pads (highlighted in red boxes).  
 When applying Auxiliary or Extraction Line Pull, ensure that Penetration Force is zero.

**ONLY A COMPETENT PERSON MAY USE THIS TABLE !**

**Note: The disclaimer on the first worksheet applies to all tables in this workbook**

Mode : Travelling								Transformation from triangular or trapezoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid	
Relative Angle - Upper Body and Tracks (degrees)	Max bearing pressure L.H. track (kN/m <sup>2</sup> )	Min bearing pressure L.H. track (kN/m <sup>2</sup> )	Max bearing pressure R.H. track (kN/m <sup>2</sup> )	Min bearing pressure R.H. track (kN/m <sup>2</sup> )	Max Track loading dimensions		Equivalent Bearing		
					ecc (m)	Bearing Len. (m)	L (m)	Q (kPa)	
0	162	0	162	0	0.506	1.363	0.908	121	
15	130	0	182	0	0.489	1.414	0.943	137	
30	95	0	187	0	0.438	1.566	1.044	140	
45	66	0	178	0	0.358	1.807	1.205	134	
60	45	5	161	19	0.253	1.920	1.414	122	
75	30	13	132	55	0.131	1.920	1.658	108	
90	20	20	95	95	0.000	1.920	1.920	95	
105	30	13	132	55	-0.131	1.920	1.658	108	
120	45	5	161	19	-0.253	1.920	1.414	122	
135	66	0	178	0	-0.358	1.807	1.205	134	
150	95	0	187	0	-0.438	1.566	1.044	140	
165	130	0	182	0	-0.489	1.414	0.943	137	
180	162	0	162	0	-0.506	1.363	0.908	121	
195	182	0	130	0	-0.489	1.414	0.943	137	
210	187	0	95	0	-0.438	1.566	1.044	140	
225	178	0	66	0	-0.358	1.807	1.205	134	
240	161	19	45	5	-0.253	1.920	1.414	122	
255	132	55	30	13	-0.131	1.920	1.658	108	
270	95	95	20	20	0.000	1.920	1.920	95	
285	132	55	30	13	0.131	1.920	1.658	108	
300	161	19	45	5	0.253	1.920	1.414	122	
315	178	0	66	0	0.358	1.807	1.205	134	
330	187	0	95	0	0.438	1.566	1.044	140	
345	182	0	130	0	0.489	1.414	0.943	137	
Maximum Track Values							1.044	140	
							Pad Area (m <sup>2</sup> )		
Max. Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing Leng							0.000	0.000	0
Max. Non-Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing							0.000	0.000	0
<b>Maximum Equivalent Design Values</b>							1.044	140	
Eccentricity index - X direction (sideways)							<b>0.65</b>		
Eccentricity index - Y direction (forwards/backwards)							<b>0.53</b>		
Track pressure distribution warning							<b>Track(s) lifting</b>		
Slewing foot pad message							<b>Slewing Foot Pad Pressure OK</b>		
Non-Slewing foot pad message							<b>Non-Slewing Foot Pad Pressure OK</b>		
<b>BRE LOAD CASE ( 1 or 2 )</b>							<b>1</b>		

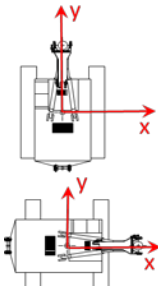


<b>TES CAR</b>	Weight / Force Applied (kN)	X - Coordinate	Y - Coordinate	Moment Mx	Moment My
<b>CF2,5A</b>					

<b>SLEWING ACTIONS</b>					
Upper Works (slewing)	20	0.00	1.05	-21	0
Suspended Eqpt. on Crowd	17	0.00	1.85	-31	0
Counterweight (slewing)	7	0.00	-1.00	7	0
Other (slewing)	0	0.00	0.00	0	0
Lower Works (Slewing)	20	0.00	0.00	0	0
Net Extraction Force	0	0.00	1.85	0	0
Net Penetration Force	0	0.00	1.85	0	0
Applied Auxiliary Force	10	0.00	1.85	-19	0
Front Pad 1	0	0.00	0.00	0	0
Front Pad 2	0	0.00	0.00	0	0
Rear Pad 1	0	0.00	0.00	0	0
Rear Pad 2	0	0.00	0.00	0	0
Summary of Slewing Action	74	0.00	0.86	-63	0

Applied Force (kN)	Max. Allowable (kN)
0	28
0	-95
10	10

Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )
0	0.00
0	0.00
0	0.00
0	0.00
0	0.00
Max. Pad Pressure	0



<b>NON-SLEWING ACTIONS</b>					
Lower Works Non-Slewing	25	0.00	0.00	0	0
Front Pad 1	0	0.00	0.00	0	0
Front Pad 2	0	0.00	0.00	0	0
Rear Pad 1	0	0.00	0.00	0	0
Rear Pad 2	0	0.00	0.00	0	0
Summary of Non-slewing Actions	25	0.00	0.00	0	0
Total Rig Weight (kN)	88				
Resultant of all Actions (kN)	98	0.00	0.64	-63	0

Applied Force (kN)	Max. Allowable (kN)	Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )
0	0	0	0.00
0	0	0	0.00
0	0	0	0.00
0	0	0	0.00
Max. Pad Pressure	0		
Track Bearing Length (m)	1.92		
Track pad width (m)	0.40		
Track Centerline Dist. (m)	1.55		

<b>Input Data Warning Messages</b>	<b>Notes</b>
Auxiliary Line Force OK	
Extraction Force OK	
Penetration Force OK	
Slewing Footpad Forces OK	
Non-Slewing Footpad Forces OK	

**Notes on Using this Table**

Auxiliary Line Pull +ve Z direction. Enter applied force (kN) in appropriate yellow box (G11). Note the maximum design force in the adjacent box (H11).  
 Extraction Line Pull +ve Z direction. Enter applied force (kN) in appropriate yellow box (G9). Note the maximum design force in the adjacent box (FH9).  
 Penetration Force -ve Z direction. Enter applied force (kN) in appropriate yellow box (G10) - must be negative as it imposes an upwards resultant force. Note the maximum design force in the adjacent box (H10).  
 Slewing Foot Pad Forces +ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G12 to G15). Note the maximum the machine can develop is given in the adjacent boxes.  
 Non-Slewing Foot Pad Forces -ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G20 to G23). Note the maximum the machine can develop is given in the adjacent boxes.

Fill in values in all yellow boxes appropriate for this mode -  
 Net extraction or penetration force is the applied value minus the weight of any rope / kelly / chain suspended equipment.  
 By trial and error, adjust Foot Pad Forces to eliminate "error" messages and equalise bearing pressures on both tracks and foot pads (highlighted in red boxes).  
 When applying Auxiliary or Extraction Line Pull, ensure that Penetration Force is zero.

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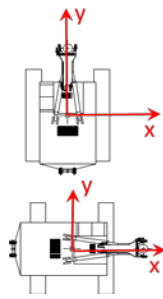
**Note: The disclaimer on the first worksheet applies to all tables in this workbook**

<b>Mode : Handling</b>							Transformation from triangular or trapezoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid		
Relative Angle - Upper Body and Tracks (degrees)	Max bearing pressure L.H. track (kN/m <sup>2</sup> )	Min pressure L.H. track (kN/m <sup>2</sup> )	Max bearing pressure R.H. track (kN/m <sup>2</sup> )	Min bearing pressure R.H. track (kN/m <sup>2</sup> )	Max Track loading dimensions ecc (m)	Bearing Len. (m)	Equivalent Bearing L (m)	Q (kPa)	
0	258	0	258	0	0.643	0.952	0.635	193	
15	190	0	293	0	0.621	1.018	0.679	220	
30	119	0	287	0	0.557	1.210	0.807	215	
45	67	0	257	0	0.454	1.517	1.011	193	
60	36	0	220	0	0.321	1.916	1.277	165	
75	19	6	175	55	0.166	1.920	1.587	139	
90	11	11	117	117	0.000	1.920	1.920	117	
105	19	6	175	55	-0.166	1.920	1.587	139	
120	36	0	220	0	-0.321	1.916	1.277	165	
135	67	0	257	0	-0.454	1.517	1.011	193	
150	119	0	287	0	-0.557	1.210	0.807	215	
165	190	0	293	0	-0.621	1.018	0.679	220	
180	258	0	258	0	-0.643	0.952	0.635	193	
195	293	0	190	0	-0.621	1.018	0.679	220	
210	287	0	119	0	-0.557	1.210	0.807	215	
225	257	0	67	0	-0.454	1.517	1.011	193	
240	220	0	36	0	-0.321	1.916	1.277	165	
255	175	55	19	6	-0.166	1.920	1.587	139	
270	117	117	11	11	0.000	1.920	1.920	117	
285	175	55	19	6	0.166	1.920	1.587	139	
300	220	0	36	0	0.321	1.916	1.277	165	
315	257	0	67	0	0.454	1.517	1.011	193	
330	287	0	119	0	0.557	1.210	0.807	215	
345	293	0	190	0	0.621	1.018	0.679	220	
Maximum Track Values							0.679	220	
Max. Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing Leng							0.000	0.000	0
Max. Non-Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing							0.000	0.000	0
<b>Maximum Equivalent Design Values</b>							0.679	220	
Eccentricity index - X direction (sideways)							<b>0.83</b>		
Eccentricity index - Y direction (forwards/backwards)							<b>0.67</b>		
Track pressure distribution warning							<b>Track(s) lifting</b>		
Slewing foot pad message							<b>Slewing Foot Pad Pressure OK</b>		
Non-Slewing foot pad message							<b>Non-Slewing Foot Pad Pressure OK</b>		
<b>BRE LOAD CASE ( 1 or 2 )</b>								<b>1</b>	



TES CAR	Weight / Force Applied (kN)	X - Coordinate	Y - Coordinate	Moment Mx	Moment My
<b>CF2,5A</b>					
<b>SEWING ACTIONS</b>					
Upper Works (slewing)	20	0.00	1.05	-21	0
Suspended Eqpt. on Crowd	17	0.00	1.85	-31	0
Counterweight (slewing)	7	0.00	-1.00	7	0
Other (slewing)	0	0.00	0.00	0	0
Lower Works (Slewing)	20	0.00	0.00	0	0
Net Extraction Force	0	0.00	1.85	0	0
Net Penetration Force	-42	0.00	1.85	77	0
Applied Auxiliary Force	0	0.00	1.85	0	0
Front Pad 1	0	0.00	0.00	0	0
Front Pad 2	0	0.00	0.00	0	0
Rear Pad 1	0	0.00	0.00	0	0
Rear Pad 2	0	0.00	0.00	0	0
Summary of Slewing Actions	22	0.00	-1.47	32	-0

Applied Force (kN)	Max. Allowable (kN)
0.00	28
-25.00	-95
0.00	10



Applied Pressure (kPa)	Foot Pad Area (m2)
0	0
0	0
0	0
0	0
0	0
Max. Pad Pressure 0	

NON-SEWING ACTIONS						Applied Force (kN)	Max. Allowable (kN)	Applied Pressure (kPa)	Foot Pad Area (m2)
Lower Works Non-Slewing	25	0.00	0.00	0	0	0	0	0	0.00
Front Pad 1	0	0.00	0.00	0	0	0	0	0	0.00
Front Pad 2	0	0.00	0.00	0	0	0	0	0	0.00
Rear Pad 1	0	0.00	0.00	0	0	0	0	0	0.00
Rear Pad 2	0	0.00	0.00	0	0	0	0	0	0.00
Summary of Non-slewing Actions	25	0.00	0.00	0	0	Max. Pad Pressure 0			
Total Rig Weight (kN)	88	Track Bearing Length (m)			1.92				
Resultant of all Actions (kN)	47	0.00	-0.70	32	0	Track pad width (m)			0.40
						Track Centerline Dist. (m)			1.55

Input Data Warning Messages	Notes
Auxiliary Line Force OK	
Extraction Force OK	
Penetration Force OK	
Slewing Footpad Forces OK	
Non-Slewing Footpad Forces OK	
	MAX 2,5 kN IN PENETRATING MODE

**Notes on Using this Table**  
 Auxiliary Line Pull -ve Z direction. Enter applied force (kN) in appropriate yellow box (G11). Note the maximum design force in the adjacent box (H11).  
 Extraction Line Pull +ve Z direction. Enter applied force (kN) in appropriate yellow box (G9). Note the maximum design force in the adjacent box (FH9).  
 Penetration Force -ve Z direction. Enter applied force (kN) in appropriate yellow box (G10) - must be negative as it imposes an upwards resultant force. Note the maximum design force in the adjacent box (H10).  
 Slewing Foot Pad Forces +ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G12 to G15). Note the maximum the machine can develop is given in the adjacent boxes.  
 Non-Slewing Foot Pad Forces -ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G20 to G23). Note the maximum the machine can develop is given in the adjacent boxes.

Fill in values in all yellow boxes appropriate for this mode -  
 Net extraction or penetration force is the applied value minus the weight of any rope / kelly / chain suspended equipment.  
 By trial and error, adjust Foot Pad Forces to eliminate "error" messages and equalise bearing pressures on both tracks and foot pads (highlighted in red boxes).  
 When applying Auxiliary or Extraction Line Pull, ensure that Penetration Force is zero.

**ONLY A COMPETENT PERSON MAY USE THIS TABLE!** Note: The disclaimer on the first worksheet applies to all tables in this workbook

Mode : Penetrating								Transformation from triangular or trapezoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid	
Relative Angle - Upper Body and Tracks (degrees)	Max bearing pressure L.H. track (kN/m²)	Min pressure L.H. track (kN/m²)	Max bearing pressure R.H. track (kN/m²)	Min bearing pressure R.H. track (kN/m²)	Max Track loading dimensions		Equivalent Bearing		
					ecc (m)	Bearing Len. (m)	L (m)	Q (kPa)	
0	148	0	148	0	0.697	0.789	0.526	111	
15	104	0	167	0	0.673	0.860	0.573	125	
30	60	0	158	0	0.604	1.069	0.713	118	
45	30	0	136	0	0.493	1.401	0.934	102	
60	14	0	113	0	0.349	1.834	1.223	85	
75	6	2	89	25	0.180	1.920	1.559	70	
90	3	3	58	58	0.000	1.920	1.920	58	
105	6	2	89	25	-0.180	1.920	1.559	70	
120	14	0	113	0	-0.349	1.834	1.223	85	
135	30	0	136	0	-0.493	1.401	0.934	102	
150	60	0	158	0	-0.604	1.069	0.713	118	
165	104	0	167	0	-0.673	0.860	0.573	125	
180	148	0	148	0	-0.697	0.789	0.526	111	
195	167	0	104	0	-0.673	0.860	0.573	125	
210	158	0	60	0	-0.604	1.069	0.713	118	
225	136	0	30	0	-0.493	1.401	0.934	102	
240	113	0	14	0	-0.349	1.834	1.223	85	
255	89	25	6	2	-0.180	1.920	1.559	70	
270	58	58	3	3	0.000	1.920	1.920	58	
285	89	25	6	2	0.180	1.920	1.559	70	
300	113	0	14	0	0.349	1.834	1.223	85	
315	136	0	30	0	0.493	1.401	0.934	102	
330	158	0	60	0	0.604	1.069	0.713	118	
345	167	0	104	0	0.673	0.860	0.573	125	
Maximum Track Values							0.573	125	
Max. Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing Leng							0.000	0.000	0
Max. Non-Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing							0.000	0.000	0
<b>Maximum Equivalent Design Values</b>							0.573	125	
Eccentricity index - X direction (sideways)					<b>0.90</b>				
Eccentricity index - Y direction (forwards/backwards)					<b>0.73</b>				
Track pressure distribution warning					<b>Track(s) lifting</b>				
Slewing foot pad message					<b>Slewing Foot Pad Pressure OK</b>				
Non-Slewing foot pad message					<b>Non-Slewing Foot Pad Pressure OK</b>				
<b>BRE LOAD CASE ( 1 or 2 )</b>							2		

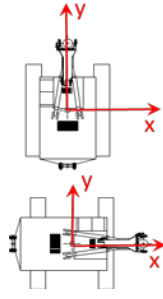


<b>TES CAR</b>	Weight / Force Applied (kN)	X - Coordinate	Y - Coordinate	Moment Mx	Moment My
<b>CF2,5A</b>					

SLEWING ACTIONS					
Upper Works (slewing)	20	0.00	1.05	-21	0
Suspended Eqpt. on Crowd	17	0.00	1.85	-31	0
Counterweight (slewing)	7	0.00	-1.00	7	0
Other (slewing)	0	0.00	0.00	0	0
Lower Works (Slewing)	20	0.00	0.00	0	0
Net Extraction Force	11	0.00	1.85	-21	0
Net Penetration Force	0	0.00	1.85	0	0
Applied Auxiliary Force	0	0.00	1.85	0	0
Front Pad 1	0	0.00	0.00	0	0
Front Pad 2	0	0.00	0.00	0	0
Rear Pad 1	0	0.00	0.00	0	0
Rear Pad 2	0	0.00	0.00	0	0
Summary of Slewing Action	75	0.00	0.87	-66	0

Applied Force (kN)	Max. Allowable (kN)
28.00	28
0.00	-95
0.00	10

Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )
0	0.00
0	0.00
0	0.00
0	0.00
0	0.00



NON-SLEWING ACTIONS						Applied Force (kN)	Max. Allowable (kN)	Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )
Lower Works Non-Slewing	25	0.00	0.00	0	0				
Front Pad 1	0	0.00	0.00	0	0	0	0	0	0.00
Front Pad 2	0	0.00	0.00	0	0	0	0	0	0.00
Rear Pad 1	0	0.00	0.00	0	0	0	0	0	0.00
Rear Pad 2	0	0.00	0.00	0	0	0	0	0	0.00
Summary of Non-slewing Actions	25	0.00	0.00	0	0	Max. Pad Pressure 0			
Total Rig Weight (kN)	88					Track Bearing Length (m)		1.92	
Resultant of all Actions (kN)	100	0.00	0.66	-66	0	Track pad width (m)		0.40	
						Track Centerline Dist. (m)		1.55	

Input Data Warning Messages	Notes
Auxiliary Line Force OK	
Extraction Force OK	EXTRACTING USING THE ROTARY IS NOT TAKE INTO ACCOUNT
Penetration Force OK	
Slewing Footpad Forces OK	
Non-Slewing Footpad Forces OK	

**Notes on Using this Table**

Auxiliary Line Pull -ve Z direction. Enter applied force (kN) in appropriate yellow box (G11). Note the maximum design force in the adjacent box (H11).  
 Extraction Line Pull +ve Z direction. Enter applied force (kN) in appropriate yellow box (G9). Note the maximum design force in the adjacent box (FH9).  
 Penetration Force -ve Z direction. Enter applied force (kN) in appropriate yellow box (G10) - must be negative as it imposes an upwards resultant force. Note the maximum design force in the adjacent box (H10).  
 Slewing Foot Pad Forces +ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G12 to G15). Note the maximum the machine can develop is given in the adjacent boxes.  
 Non-Slewing Foot Pad Forces -ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G20 to G23). Note the maximum the machine can develop is given in the adjacent boxes.

Fill in values in all yellow boxes appropriate for this mode -

Net extraction or penetration force is the applied value minus the weight of any rope / kelly / chain suspended equipment.

By trial and error, adjust Foot Pad Forces to eliminate "error" messages and equalise bearing pressures on both tracks and foot pads (highlighted in red boxes).

When applying Auxiliary or Extraction Line Pull, ensure that Penetration Force is zero.

**ONLY A COMPETENT PERSON MAY USE THIS TABLE !**

**Note: The disclaimer on the first worksheet applies to all tables in this workbook**

Mode : Extracting							Transformation from triangular or trapezoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid		
Relative Angle - Upper Body and Tracks (degrees)	Max bearing pressure L.H. track (kN/m <sup>2</sup> )	Min bearing pressure L.H. track (kN/m <sup>2</sup> )	Max bearing pressure R.H. track (kN/m <sup>2</sup> )	Min bearing pressure R.H. track (kN/m <sup>2</sup> )	Max Track loading dimensions		Equivalent Bearing		
					ecc (m)	Bearing Len. (m)	L (m)	Q (kPa)	
0	275	0	275	0	0.659	0.904	0.603	207	
15	200	0	313	0	0.636	0.971	0.648	235	
30	122	0	304	0	0.570	1.169	0.779	228	
45	67	0	269	0	0.466	1.483	0.988	202	
60	35	0	228	0	0.329	1.892	1.261	171	
75	18	5	181	55	0.170	1.920	1.579	144	
90	10	10	120	120	0.000	1.920	1.920	120	
105	18	5	181	55	-0.170	1.920	1.579	144	
120	35	0	228	0	-0.329	1.892	1.261	171	
135	67	0	269	0	-0.466	1.483	0.988	202	
150	122	0	304	0	-0.570	1.169	0.779	228	
165	200	0	313	0	-0.636	0.971	0.648	235	
180	275	0	275	0	-0.659	0.904	0.603	207	
195	313	0	200	0	-0.636	0.971	0.648	235	
210	304	0	122	0	-0.570	1.169	0.779	228	
225	269	0	67	0	-0.466	1.483	0.988	202	
240	228	0	35	0	-0.329	1.892	1.261	171	
255	181	55	18	5	-0.170	1.920	1.579	144	
270	120	120	10	10	0.000	1.920	1.920	120	
285	181	55	18	5	0.170	1.920	1.579	144	
300	228	0	35	0	0.329	1.892	1.261	171	
315	269	0	67	0	0.466	1.483	0.988	202	
330	304	0	122	0	0.570	1.169	0.779	228	
345	313	0	200	0	0.636	0.971	0.648	235	
							Maximum Track Values	0.648	235
							Pad Area (m <sup>2</sup> )		
Max. Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing Leng							0.000	0.000	0
Max. Non-Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing							0.000	0.000	0
<b>Maximum Equivalent Design Values</b>							0.648	235	
Eccentricity index - X direction (sideways)							<b>0.85</b>		
Eccentricity index - Y direction (forwards/backwards)							<b>0.69</b>		
Track pressure distribution warning							<b>Track(s) lifting</b>		
Slewing foot pad message							<b>Slewing Foot Pad Pressure OK</b>		
Non-Slewing foot pad message							<b>Non-Slewing Foot Pad Pressure OK</b>		
<b>BRE LOAD CASE ( 1 or 2 )</b>								<b>2</b>	



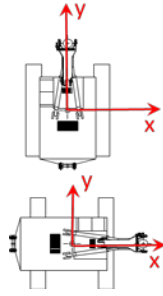


<b>TES CAR</b>	Weight / Force Applied (kN)	X - Coordinate	Y - Coordinate	Moment Mx	Moment My
<b>CF2,5A</b>					

<b>SLEWING ACTIONS</b>					
Upper Works (slewing)	20	0.00	1.05	-21	0
Suspended Eqpt. on Crowd	17	0.00	1.85	-31	0
Counterweight (slewing)	7	0.00	-1.00	7	0
Other (slewing)	0	0.00	0.00	0	0
Lower Works (Slewing)	20	0.00	0.00	0	0
Applied Extraction Force	0	0.00	1.85	0	0
Applied Penetration Force	0	0.00	1.85	0	0
Applied Auxiliary Force	0	0.00	1.85	0	0
Front Pad 1	0	0.00	0.00	0	0
Front Pad 2	0	0.00	0.00	0	0
Rear Pad 1	0	0.00	0.00	0	0
Rear Pad 2	0	0.00	0.00	0	0
Summary of Slewing Action	64	0.00	0.70	-45	0

Applied Force (kN)	Max. Allowable (kN)
0	28

Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )
0	0.00
0	0.00
0	0.00
0	0.00
0	0.00
0	0.00
0	0.00
0	0.00
0	0.00



<b>NON-SLEWING ACTIONS</b>						Applied Force (kN)	Max. Allowable (kN)	Applied Pressure (kPa)	Foot Pad Area (m <sup>2</sup> )	
Lower Works Non-Slewing	25	0.00	0.00	0	0	0	0	0	0.00	
Front Pad 1	0	0.00	0.00	0	0	0	0	0	0.00	
Front Pad 2	0	0.00	0.00	0	0	0	0	0	0.00	
Rear Pad 1	0	0.00	0.00	0	0	0	0	0	0.00	
Rear Pad 2	0	0.00	0.00	0	0	0	0	0	0.00	
Summary of Non-slewing Actions	25	0.00	0.00	0	0	Max. Pad Pressure		0		
Total Rig Weight (kN)	88					Track Bearing Length (m)	1.92			
Resultant of all Actions (kN)	88	0.00	0.51	-45	0	Track pad width (m)	0.40			
						Track Centreline Dist. (m)	1.55			

<b>Input Data Warning Messages</b>	<b>Notes</b>
Auxiliary Line Force OK	
Extraction Force OK	
Penetration Force OK	
Slewing Footpad Forces OK	
Non-Slewing Footpad Forces OK	

**Notes on Using this Table**

Auxiliary Line Pull +ve Z direction. Enter applied force (kN) in appropriate yellow box (G11). Note the maximum design force in the adjacent box (H11).  
 Extraction Line Pull +ve Z direction. Enter applied force (kN) in appropriate yellow box (G9). Note the maximum design force in the adjacent box (FH9).  
 Penetration Force -ve Z direction. Enter applied force (kN) in appropriate yellow box (G10) - must be negative as it imposes an upwards resultant force. Note the maximum design force in the adjacent box (H10).  
 Slewing Foot Pad Forces +ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G12 to G15). Note the maximum the machine can develop is given in the adjacent boxes.  
 Non-Slewing Foot Pad Forces -ve Z direction. Enter applied total force (kN) in appropriate yellow boxes (G20 to G23). Note the maximum the machine can develop is given in the adjacent boxes.

Fill in values in all yellow boxes appropriate for this mode -  
 Net extraction or penetration force is the applied value minus the weight of any rope / kelly / chain suspended equipment.  
 By trial and error, adjust Foot Pad Forces to eliminate "error" messages and equalise bearing pressures on both tracks and foot pads (highlighted in red boxes).  
 When applying Auxiliary or Extraction Line Pull, ensure that Penetration Force is zero.

**ONLY A COMPETENT PERSON MAY USE THIS TABLE !**

**Note: The disclaimer on the first worksheet applies to all tables in this workbook**

<b>Mode : Other</b>							Transformation from triangular or trapezoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid		
Relative Angle - Upper Body and Tracks (degrees)	Max bearing pressure L.H. track (kN/m <sup>2</sup> )	Min bearing pressure L.H. track (kN/m <sup>2</sup> )	Max bearing pressure R.H. track (kN/m <sup>2</sup> )	Min bearing pressure R.H. track (kN/m <sup>2</sup> )	Max Track loading dimensions ecc (m)	Bearing Len. (m)	Equivalent Bearing L (m)	Q (kPa)	
0	162	0	162	0	0.506	1.363	0.908	121	
15	130	0	182	0	0.489	1.414	0.943	137	
30	95	0	187	0	0.438	1.566	1.044	140	
45	66	0	178	0	0.358	1.807	1.205	134	
60	45	5	161	19	0.253	1.920	1.414	122	
75	30	13	132	55	0.131	1.920	1.658	108	
90	20	20	95	95	0.000	1.920	1.920	95	
105	30	13	132	55	-0.131	1.920	1.658	108	
120	45	5	161	19	-0.253	1.920	1.414	122	
135	66	0	178	0	-0.358	1.807	1.205	134	
150	95	0	187	0	-0.438	1.566	1.044	140	
165	130	0	182	0	-0.489	1.414	0.943	137	
180	162	0	162	0	-0.506	1.363	0.908	121	
195	182	0	130	0	-0.489	1.414	0.943	137	
210	187	0	95	0	-0.438	1.566	1.044	140	
225	178	0	66	0	-0.358	1.807	1.205	134	
240	161	19	45	5	-0.253	1.920	1.414	122	
255	132	55	30	13	-0.131	1.920	1.658	108	
270	95	95	20	20	0.000	1.920	1.920	95	
285	132	55	30	13	0.131	1.920	1.658	108	
300	161	19	45	5	0.253	1.920	1.414	122	
315	178	0	66	0	0.358	1.807	1.205	134	
330	187	0	95	0	0.438	1.566	1.044	140	
345	182	0	130	0	0.489	1.414	0.943	137	
Maximum Track Values							1.044	140	
Max. Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing Leng							0.000	0.000	0
Max. Non-Slewing Foot Pads Bearing Pressure (kPa) & Equivalent Bearing							0.000	0.000	0
<b>Maximum Equivalent Design Values</b>							1.044	140	
Eccentricity index - X direction (sideways)							<b>0.65</b>		
Eccentricity index - Y direction (forwards/backwards)							<b>0.53</b>		
Track pressure distribution warning							<b>Track(s) lifting</b>		
Slewing foot pad message							<b>Slewing Foot Pad Pressure OK</b>		
Non-Slewing foot pad message							<b>Non-Slewing Foot Pad Pressure OK</b>		
<b>BRE LOAD CASE ( 1 or 2 )</b>							<b>0</b>		



**Schedule of Piling Rig Component Weights, Dimensions, Forces and Pressures**

Note: The disclaimer on the first worksheet applies to all tables in this workbook

Rig Manufacturer :	<b>TES CAR</b>	Rig Type & Serial No.	<b>CF2,5A 2585</b>
Operation mode:	<b>no slew</b>	Date:	<b>23/07/2018</b>
Completed by:	<b>AM</b>	Checked by:	<b>LF</b>

**Main Components - Slewing:**

Item	Mass (kg)	Weight (kN)	X - Coordinate	Y - Coordinate	Moment Mx (kNm)	Moment My (kNm)
<b>Slewing Components Totals/Resultant (with θ=0)</b>						
UPPER WORKS	2,046	20	0.00	1.05	-21	0
LOWER WORKS	2,000	20	0.00	0.00	0	0
SUSPENDED EQUIPMENT CONNECTED TO CROWD SYSTEM	1,700	17	0.00	1.85	-31	0
COUNTERWEIGHT	750	7	0.00	-1.00	7	0
OTHER	0	0	0.00	0.00	0	0
<b>TOTAL/RESULTANT (with θ=0)</b>	<b>6,496</b>	<b>64</b>	<b>0.00</b>	<b>0.70</b>	<b>-45</b>	<b>0</b>

**Foot Pads - Slewing :**

Description (Forces must be -ve)	Bearing Area	Max. Pad Loading	X - Coordinate	Y - Coordinate	Actual Shape	Actual Dimension
	m <sup>2</sup>	kN	m	m		
Front Pad 1	0.00	0	0.00	0.00	None	None
Front Pad 2	0.00	0.00	0.00	0.00	None	None
Rear Pad 1	0.00	0.00	0.00	0.00	None	None
Rear Pad 2	0.00	0.00	0.00	0.00	None	None

**Forces - Slewing**

	Force	X - Coordinate	Y - Coordinate	
	kN	m	m	
Maximum Extraction Force (kN)	28	0.00	1.85	Must be inline with suspended equip't.
Maximum Penetration Force (kN)	-95	0.00	1.85	-ve Must be inline with suspended equip't.
Maximum Auxillary Force (kN)	10	0.00	1.85	

**Main Components - Non-Slewing:**

Item	Mass (kg)	Weight (kN)	X - Coordinate	Y - Coordinate	Moment Mx (kNm)	Moment My (kNm)
<b>Lower Works Non-Slewing (undercarriage/tracks etc)</b>	Tracks & Undercarriage	2500	0.00	0.00		
			0.00	0.00		
			0.00	0.00		
<b>TOTAL/RESULTANT (with θ=0)</b>	<b>2,500</b>	<b>25</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0</b>
<b>TOTAL RIG MASS</b>	<b>8,996</b>					

**Front Foot Pads - Non-Slewing**

Description	Bearing Area	Max. Pad Loading	X - Coordinate	Y - Coordinate	Actual Shape	Actual Dimension
	m <sup>2</sup>	kN	m	m		
Front Pad 1						
Front Pad 2						
Rear Pad 1						
Rear Pad 2						

Tracks		Slewing	
Track bearing length (m)	1.92	Can the Rig Slew?	YES
Track pad width (m)	0.40		
Distance between centrelines of tracks (m)	1.55		

MODE	Pressure Summary for Platform Design (unfactored)			BRE LOAD CASE (1 or 2)	Eccentricity Index		Winch Forces
	Equiv. Track Length (m)	Equiv. Track Width (m)	Equiv. Uniform Bearing Pressure, q <sub>eq</sub> (kPa)		Eccentricity index - X direction (sideways)	Eccentricity index - Y direction (forwards/backwards)	
Standing	1.04	0.40	140	1	0.65	0.53	0
Travelling	1.04	0.40	140	1	0.65	0.53	0
Handling	0.68	0.40	220	1	0.83	0.67	10
Penetrating	0.57	0.40	125	2	0.90	0.73	-25
Extracting	0.65	0.40	235	2	0.85	0.69	28
Other	Not Used	-	-	0	-	-	0

MODE	ERROR FOR TRACK	Auxiliary Line	ERROR MESSAGES FOR LINE FORCES	
	<b>Zero Pressure</b>		<b>Extraction Force</b>	<b>Penetration Force</b>
Standing	Track(s) lifting	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Travelling	Track(s) lifting	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Handling	Track(s) lifting	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Penetrating	Track(s) lifting	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Extracting	Track(s) lifting	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Other	Track(s) lifting	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK

MODE	ERROR MESSAGES FOR FOOT PAD FORCES		ERROR MESSAGES FOR FOOT PAD PRESSURES	
	<b>INPUT DATA</b>		<b>OUTPUT DATA</b>	
Standing	Slewing Footpad Forces OK	Non-Slewing Footpad Forces OK	Slewing Foot Pad Pressure OK	Non-Slewing Foot Pad Pressure OK
Travelling	Slewing Footpad Forces OK	Non-Slewing Footpad Forces OK	Slewing Foot Pad Pressure OK	Non-Slewing Foot Pad Pressure OK
Handling	Slewing Footpad Forces OK	Non-Slewing Footpad Forces OK	Slewing Foot Pad Pressure OK	Non-Slewing Foot Pad Pressure OK
Penetrating	Slewing Footpad Forces OK	Non-Slewing Footpad Forces OK	Slewing Foot Pad Pressure OK	Non-Slewing Foot Pad Pressure OK
Extracting	Slewing Footpad Forces OK	Non-Slewing Footpad Forces OK	Slewing Foot Pad Pressure OK	Non-Slewing Foot Pad Pressure OK
Other	Slewing Footpad Forces OK	Non-Slewing Footpad Forces OK	Slewing Foot Pad Pressure OK	Non-Slewing Foot Pad Pressure OK

Note: The disclaimer on the first worksheet applies to all tables in this workbook



**Notes**

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