

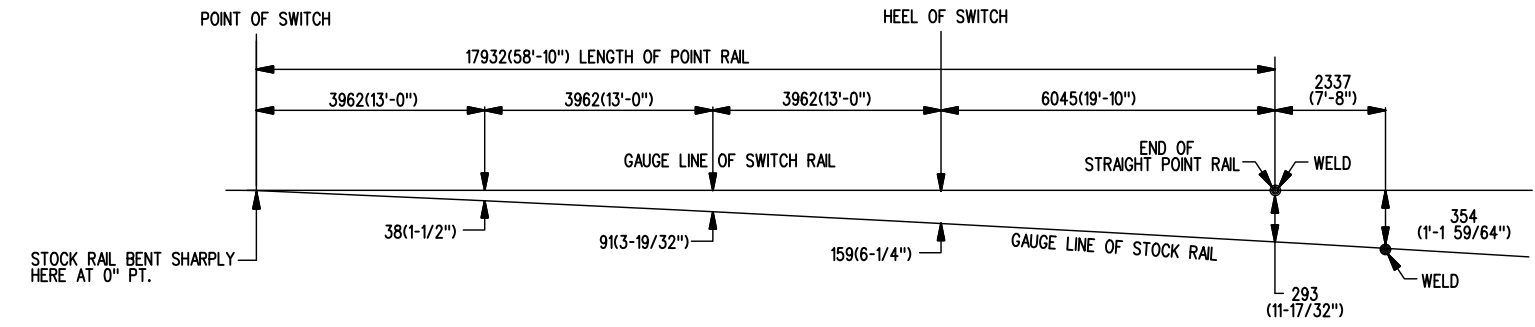
TIE ARRANGEMENT & SPACING

TURNOUT DATA

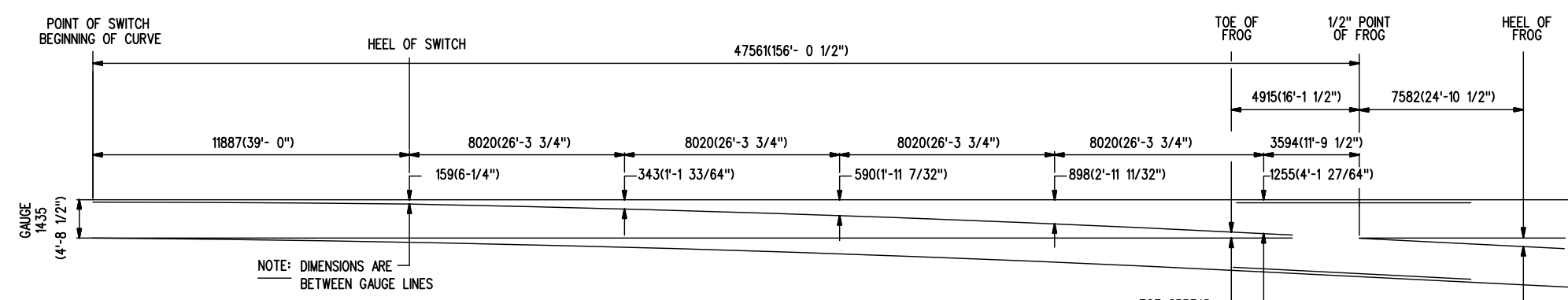
FROG NO. 20
 LENGTH OF SWITCH PT. 17932 (58'-10")
 HEEL SPREAD 159 (6 1/4")
 LEAD 47561 (156'-0 1/2")
 P.S. TO H.F. 55143 (180'-11")
 24714 (81'-1") STRAIGHT CLOSURE LENGTH
 24749 (81'-2 3/8") CURVED CLOSURE LENGTH

NOTES:

- TURNOUT TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LATEST ISSUE OF THE RM.
- WHEN REFERRING TO POWER OPERATED TURNOUTS, DRAWING NUMBER MUST BE STATED AS INDICATED:
 L-LEFT HAND TURNOUT P.O. MACHINE ON LEFT OR RIGHT
 R-RIGHT HAND TURNOUT P.O. MACHINE ON LEFT OR RIGHT
- FOR OTHER TURNOUT COMBINATIONS SEE INDEX GTS-0000 SHEETS 1 TO 3
- TURNOUT GEOMETRY, FOR TABLES OF DIMENSIONS AND OFFSETS SEE GTS-0005A NO. 20 ALL WELDED TURNOUTS.



STOCK RAIL BENDING AND CURVING DETAIL



OFFSET DIAGRAM

METRIC CONVERSION: 1 inch=25.4mm, 1 foot=304.8mm

No.	Date	Revision	By Approved
1	18/07/27	ADDED IMPERIAL TO METRIC CONVERSION NOTE	

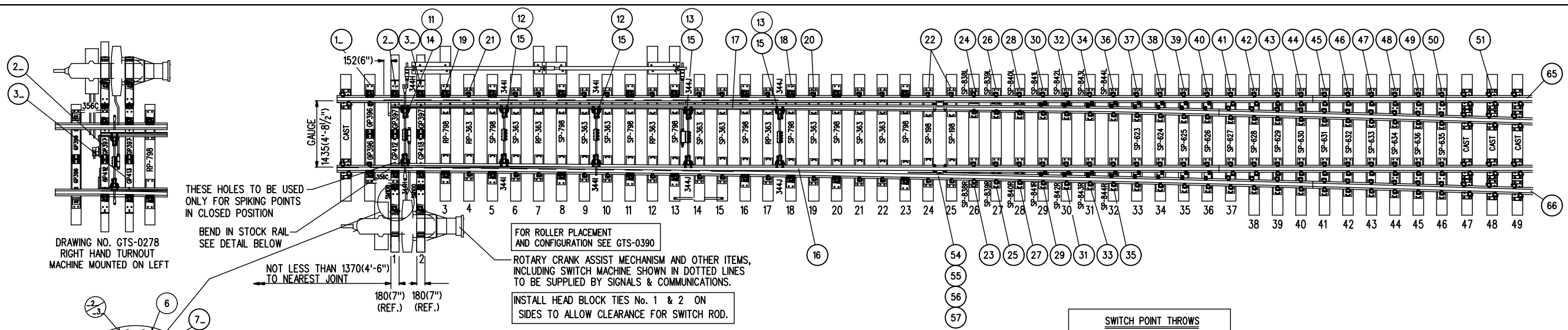
Standard / **NO. 20 TURNOUT-136 LB. RAIL
 58'10" POWER OPERATED-SAMSON PT. SWITCH
 UNIFORM RISER DESIGN-ALL WELDED
 R.B.M. FROG-WOOD TIES**

Drawn RL Checked JR Approved *[Signature]*
 VP Engineering & Asset Management



Date SEPT 15/2017 Plan Number GTS-0278 Rev 1

REFERENCE: TS-0278_R7 Sheet 1 OF 2



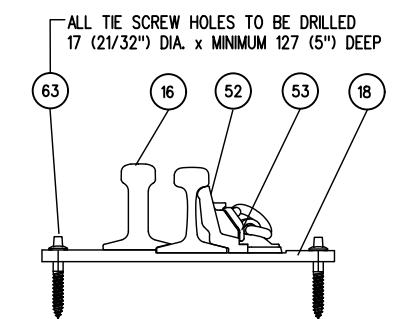
GENERAL ARRANGEMENT

DRAWING NO. GTS-0278R
RIGHT HAND TURNOUT
MACHINE MOUNTED ON RIGHT

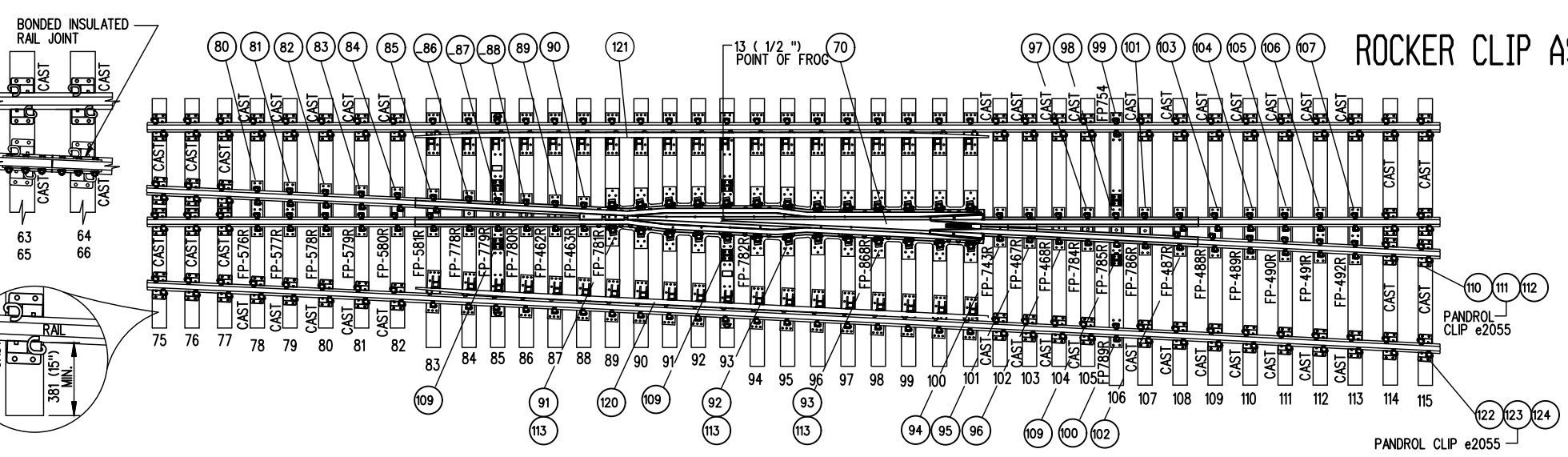
FOR REPLACEMENT OF CLIPS OR STOPS IN FIELD SEE GTS-0382

FOR CLIP ASSEMBLY SEE GTS-0352

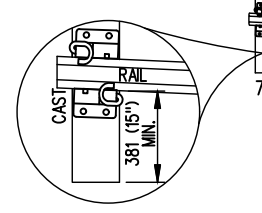
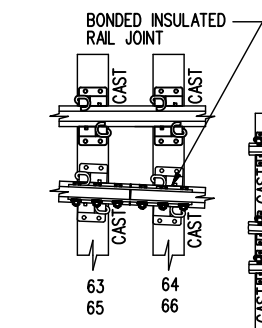
UNDERCUT STOCK RAIL



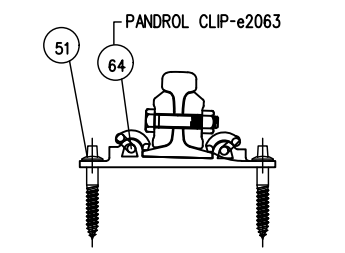
ADJUSTABLE RAIL BRACE ASSEMBLY



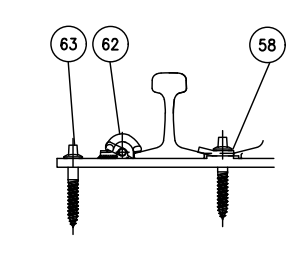
ROCKER CLIP ASSEMBLY



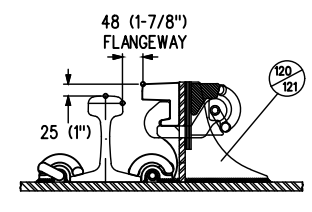
HEEL BLOCK ASSEMBLY



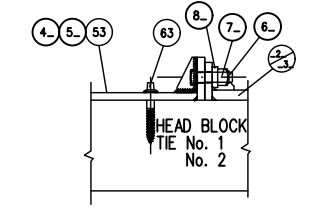
BONDED INSULATED RAIL JOINT



HOLD-DOWN CLIP ASSEMBLY



BOLTLESS GUARD RAIL ASSEMBLY



SWITCH MACHINE PLATE ASSEMBLY

METRIC CONVERSION: 1 inch=25.4mm, 1 foot=304.8mm

1	18/07/27	ADDED IMPERIAL TO METRIC CONVERSION NOTE	
No.	Date	Revision	By Approved

Standard/ **NO. 20 TURNOUT-136 LB. RAIL**
58"10" POWER OPERATED-SAMSON PT. SWITCH
UNIFORM RISER DESIGN-ALL WELDED
R.B.M. FROG-WOOD TIES

Drawn RL Checked JR Approved *VP Engineering & Asset Management*



Date SEPT 15/2017 Plan Number GTS-0278 Rev 1

REFERENCE: TS-0278_R7 Sheet 2 OF 2

BILL OF MATERIALS FOR GTS-0278

ITEM	DESCRIPTION	MARK NUMBER	STANDARD DRAWING	QUANTITY	
				L	R
SWITCH PACK					
1	1st. GAUGE PLATE ASSEMBLY	GP396/GP396	GTS-0523	1	1
2	2nd. GAUGE PLATE ASSEMBLY	GP412/GP397	GTS-0523	-	1
	2nd. GAUGE PLATE ASSEMBLY	GP397/GP410	GTS-0523	1	-
3	3rd. GAUGE PLATE ASSEMBLY	GP413/GP397	GTS-0523	-	1
	3rd. GAUGE PLATE ASSEMBLY	GP397/GP411	GTS-0523	1	-
4	SWITCH MACHINE PLATE	SM100	GTS-0520	2	2
5	SWITCH MACHINE PLATE CLAMP (includes serrated washer)	-	GTS-0520	2	2
6	1" DIA. - 8 UNC SQ.HD. BOLT X 3-1/2" LG. C/W SQ. NUT	-	GTS-1309/13	4	4
7	LOCKNUT FOR 1" DIA. - 8 UNC BOLT	-	GTS-1302	4	4
8	SPRING WASHER for 1" DIA. BOLT	-	GTS-1301	4	4
9	MILD STEEL STRAP	356C	GTS-0356C	1	1
10	MILD STEEL STRAP	356G	GTS-0356G	1	1
11	SWITCH ROD	344H	GTS-0344H	1	1
12	SWITCH ROD	344I	GTS-0344I	2	2
13	SWITCH ROD	344J	GTS-0344J	2	2
14	ROCKER CLIP ASSEMBLY	352L	GTS-0352L	2	2
15	ROCKER CLIP ASSEMBLY	352M	GTS-0352M	8	8
16	RIGHT SAMSON POINT RAIL - THICK WEB		GTS-0382	-	1
	RIGHT SAMSON CURVED POINT RAIL - THICK WEB		GTS-0382	1	-
17	LEFT SAMSON POINT RAIL - THICK WEB		GTS-0382	1	-
	LEFT SAMSON CURVED POINT RAIL- THICK WEB		GTS-0382	-	1
18	SWITCH PLATE - LV/CLAMPTITE BRACE	SP798	GTS-0508	18	18
19	ROLLER PLATE - LV/CLAMPTITE BRACE	RP798	GTS-0508	2	2
20	SWITCH PLATE	SP363	GTS-0530	18	18
21	ROLLER PLATE	RP363	GTS-0530	8	8
22	SWITCH PLATE	SP198	GTS-0530	4	4
23	SWITCH PLATE (RIGHT HAND)	SP838R	GTS-0587/1	1	1
24	SWITCH PLATE (LEFT HAND)	SP838L	GTS-0587/2	1	1
25	SWITCH PLATE (RIGHT HAND)	SP839R	GTS-0587/1	1	1
26	SWITCH PLATE (LEFT HAND)	SP839L	GTS-0587/2	1	1
27	SWITCH PLATE (RIGHT HAND)	SP840R	GTS-0587/1	1	1
28	SWITCH PLATE (LEFT HAND)	SP840L	GTS-0587/2	1	1
29	SWITCH PLATE (RIGHT HAND)	SP841R	GTS-0587/3	1	1
30	SWITCH PLATE (LEFT HAND)	SP841L	GTS-0587/4	1	1
31	SWITCH PLATE (RIGHT HAND)	SP842R	GTS-0587/3	1	1
32	SWITCH PLATE (LEFT HAND)	SP842L	GTS-0587/4	1	1
33	SWITCH PLATE (RIGHT HAND)	SP843R	GTS-0587/3	1	1
34	SWITCH PLATE (LEFT HAND)	SP843L	GTS-0587/4	1	1
35	SWITCH PLATE (RIGHT HAND)	SP844R	GTS-0587/3	1	1
36	SWITCH PLATE (LEFT HAND)	SP844L	GTS-0587/4	1	1
37	SWITCH PLATE (UNIVERSAL)	SP623	GTS-0560/1	2	2
38	SWITCH PLATE (UNIVERSAL)	SP624	GTS-0560/1	2	2
39	SWITCH PLATE (UNIVERSAL)	SP625	GTS-0560/1	2	2
	SWITCH PACK continued	0	0		0
40	SWITCH PLATE (UNIVERSAL)	SP626	GTS-0560/1	2	2
41	SWITCH PLATE (UNIVERSAL)	SP627	GTS-0560/2	2	2
42	SWITCH PLATE (UNIVERSAL)	SP628	GTS-0560/2	2	2
43	SWITCH PLATE (UNIVERSAL)	SP629	GTS-0560/2	2	2
44	SWITCH PLATE (UNIVERSAL)	SP630	GTS-0560/2	2	2
45	SWITCH PLATE (UNIVERSAL)	SP631	GTS-0560/2	2	2
46	SWITCH PLATE (UNIVERSAL)	SP632	GTS-0560/2	2	2
47	SWITCH PLATE (UNIVERSAL)	SP633	GTS-0560/2	2	2
48	SWITCH PLATE (UNIVERSAL)	SP634	GTS-0560/2	2	2
49	SWITCH PLATE (UNIVERSAL)	SP636	GTS-0560/2	2	2
50	SWITCH PLATE (UNIVERSAL)	SP635	GTS-0560/2	2	2
51	CAST TIE PLATE	CAST	GTS-0501	126	126
52	BOLTLESS ADJUSTABLE LV/CLAMPTITE BRACE	-	GTS-0354	24	24
53	SERRATED WASHER FOR BOLTLESS ADJUSTABLE LV/CLAMPTITE BRACE		GTS-0354	26	26
54	HEEL BLOCK - SYMMETRICAL FOR THICK WEB POINT	CN383-TW	GTS-0383	2	2
55	BOLT, 1 1/8" DIA X 5-1/2" LONG, 7 UNC C/W NUT	TS1308/10	GTS-1308	4	4
56	SPRING WASHER for 1-1/8" DIA BOLT	-	GTS-1301	4	4
57	LOCKNUT FOR 1-1/8" DIA. - 7 UNC BOLT	-	GTS-1302	4	4
58	HOLD DOWN CLIP	FS156	GTS-1334	32	32
62	PANDROL CLIP - e2055	e2055	GTS-1322	426	426
63	SCREW SPIKE - POINTED	COMMON STD	GTS-1315	900	900
64	PANDROL CLIP - e2063 (for INSULATED RAIL JOINTS)	e2063	GTS-1322	8	8
65	UNDERCUT STOCK RAIL - LEFT HAND - 136 LB. R.E. 78'- 0" LG.	1105S	GTS-1105S	-	1
	UNDERCUT STOCK RAIL - RIGHT HAND - 136 LB. R.E. 78'- 0" LG.	1105U	GTS-1105U	1	-
66	BENT UNDERCUT STOCK RAIL - R/H - 136 LB. R.E. 78'- 0" LG.	1109MM	GTS-1109MM	-	1
	BENT UNDERCUT STOCK RAIL - L/H - 136 LB. R.E. 78'- 0" LG.	1109NN	GTS-1109NN	1	-
	FROG				
70	#20-136 LB. RAIL BOUND MANGANESE STEEL FROG 41' MAINTENANCE LENGTH FROG - CUT TO SHORTEST LENGTH	-		1	1
	FROG PACK				
80	FROG PLATE (RIGHT HAND)	FP576R	GTS-0547	-	1
	FROG PLATE (LEFT HAND)	FP576L	GTS-0547	1	-
81	FROG PLATE (RIGHT HAND)	FP577R	GTS-0547	-	1
	FROG PLATE (LEFT HAND)	FP577L	GTS-0547	1	-
82	FROG PLATE (RIGHT HAND)	FP578R	GTS-0546	-	1
	FROG PLATE (LEFT HAND)	FP578L	GTS-0546	1	-
83	FROG PLATE (RIGHT HAND)	FP579R	GTS-0546	-	1
	FROG PLATE (LEFT HAND)	FP579L	GTS-0546	1	-
84	FROG PLATE (RIGHT HAND)	FP580R	GTS-0556	-	1
	FROG PACK continued				
	FROG PLATE (LEFT HAND)	FP580L	GTS-0556	1	-
85	FROG PLATE (RIGHT HAND)	FP581R	GTS-0556	-	1
	FROG PLATE (LEFT HAND)	FP581L	GTS-0556	1	-
86	FROG PLATE (RIGHT HAND)	FP778R	GTS-0615/1	-	1
	FROG PLATE (LEFT HAND)	FP778L	GTS-0615/2	1	-
87	FROG PLATE (RIGHT HAND)	FP779R	GTS-0670/1	-	1
	FROG PLATE (LEFT HAND)	FP779L	GTS-0670/2	1	-
88	FROG PLATE (RIGHT HAND)	FP780R	GTS-0615/1	-	1
	FROG PLATE (LEFT HAND)	FP780L	GTS-0615/2	1	-
89	FROG PLATE (RIGHT HAND)	FP462R	GTS-0554	-	1
	FROG PLATE (LEFT HAND)	FP462L	GTS-0554	1	-
90	FROG PLATE (RIGHT HAND)	FP463R	GTS-0554	-	1
	FROG PLATE (LEFT HAND)	FP463L	GTS-0554	1	-
91	FROG PLATE (RIGHT HAND)	FP781R	GTS-0625	-	1
	FROG PLATE (LEFT HAND)	FP781L	GTS-0625	1	-

BILL OF MATERIALS FOR GTS-0278

ITEM	DESCRIPTION	MARK NUMBER	STANDARD DRAWING	QUANTITY	
				L	R
92	FROG PLATE (RIGHT HAND)	FP782R	GTS-0626	-	1
	FROG PLATE (LEFT HAND)	FP782L	GTS-0626	1	-
93	FROG PLATE (RIGHT HAND)	FP868R	GTS-0XXX	-	1
	FROG PLATE (LEFT HAND)	FP868L	GTS-0XXX	1	-
94	FROG PLATE (RIGHT HAND)	FP743R	GTS-0554	-	1
	FROG PLATE (LEFT HAND)	FP743L	GTS-0554	1	-
95	FROG PLATE (RIGHT HAND)	FP467R	GTS-0554	-	1
	FROG PLATE (LEFT HAND)	FP467L	GTS-0554	1	-
96	FROG PLATE (RIGHT HAND)	FP468R	GTS-0554	-	1
	FROG PLATE (LEFT HAND)	FP468L	GTS-0554	1	-
97	FROG PLATE (RIGHT HAND)	FP784R	GTS-0615/1	-	1
	FROG PLATE (LEFT HAND)	FP784L	GTS-0615/2	1	-
98	FROG PLATE (RIGHT HAND)	FP785R	GTS-0670/1	-	1
	FROG PLATE (LEFT HAND)	FP785L	GTS-0670/2	1	-
99	FROG PLATE (UNIVERSAL)	FP754	GTS-0662/1	1	1
100	FROG PLATE (RIGHT HAND)	FP789R	GTS-0662/1	-	1
	FROG PLATE (LEFT HAND)	FP789L	GTS-0662/2	1	-
101	FROG PLATE (RIGHT HAND)	FP786R	GTS-0XXX	-	1
	FROG PLATE (LEFT HAND)	FP786L	GTS-0XXX	1	-
102	FROG PLATE (RIGHT HAND)	FP487R	GTS-0556	-	1
	FROG PLATE (LEFT HAND)	FP487L	GTS-0556	1	-
103	FROG PLATE (RIGHT HAND)	FP488R	GTS-0556	-	1
	FROG PLATE (LEFT HAND)	FP488L	GTS-0556	1	-
104	FROG PLATE (RIGHT HAND)	FP489R	GTS-0546	-	1
	FROG PLATE (LEFT HAND)	FP489L	GTS-0546	1	-
105	FROG PLATE (RIGHT HAND)	FP490R	GTS-0546	-	1
	FROG PLATE (LEFT HAND)	FP490L	GTS-0546	1	-
106	FROG PLATE (RIGHT HAND)	FP491R	GTS-0547	-	1
	FROG PACK continued				
	FROG PLATE (LEFT HAND)	FP491L	GTS-0547	1	-
107	FROG PLATE (RIGHT HAND)	FP492R	GTS-0547	-	1
	FROG PLATE (LEFT HAND)	FP492L	GTS-0547	1	-
109	INSULATION KIT FOR 3/4" THICK PLATE c/w HARDWARE	-	GTS-0526	6	6
110	CAST TIE PLATE	CAST	GTS-0501	34	34
111	PANDROL CLIP - e2055	e2055	GTS-1322	168	168
112	SCREW SPIKE - POINTED	COMMON STD	GTS-1315	322	322
113	PANDROL FROG CLAMP INCLUDES SERRATED WASHER		GTS-0365	24	24
	GUARD RAIL PACK				
120	#20L GUARD RAIL ASSY.-RIGHT SIDE FOR RIGHT HAND TURNOUT		GTS-1123	-	1
	#20L GUARD RAIL ASSY.-LEFT SIDE FOR LEFT HAND TURNOUT		GTS-1123	1	-
121	#20L GUARD RAIL ASSY.- STRAIGHT SIDE		GTS-1123	1	1
122	CAST TIE PLATE	CAST	GTS-0501	66	66
123	PANDROL CLIP - e2055	e2055	GTS-1322	208	208
124	SCREW SPIKE - POINTED	COMMON STD	GTS-1315	470	470
	** CRANK ASSIST MECHANISM SHOWN IS REQUIRED ON THIS T/O AND MUST BE ORDERED THROUGH THE SIGNAL & COMMUNICATION FUNCTION **				
	SWITCH PACKS				
	#20 - 136, Power Operated - Right Hand Turnout				
	#20 - 136, Power Operated - Left Hand Turnout				
	FROG PACKS				
	#20 - 136, RBM - Right Hand Turnout				
	#20 - 136, RBM - Left Hand Turnout				
	GUARD RAIL PACKS				
	#20 - 136, RBM - Right Hand Turnout				
	#20 - 136, RBM - Left Hand Turnout				
	SWITCH TIES				
	9 ft (2.8 m)			32	32
	10 ft (3.1 m)			19	19
	11 ft (3.4 m)			19	19
	12 ft (3.7 m)			12	12
	13 ft (4.0 m)			11	11
	14 ft (4.3 m)			14	14
	15 ft (4.6 m)			16	16
	16 ft (4.9 m)			9	9