

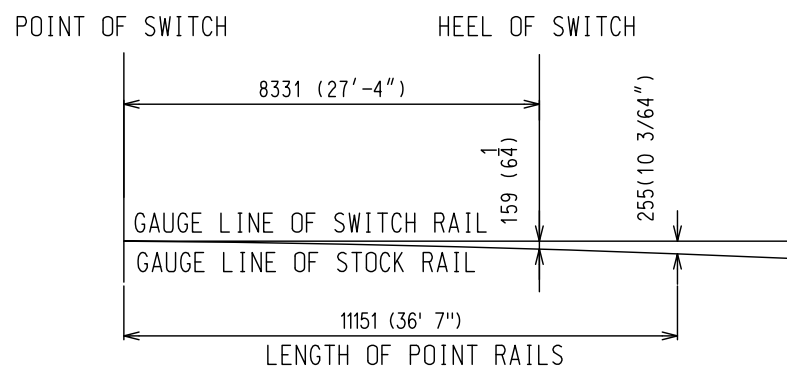
TIE ARRANGEMENT AND SPACING

TURNOUT DATA

FROG NO. 12  
 LENGTH OF SWITCH PT. 11100 (36'-5")  
 HEEL SPREAD 159 (6'-1<sup>1</sup>/<sub>4</sub>" )  
 LEAD 29896 (98'-1")  
 P.S. TO H.F. 35154 (115'-4")  
 14453 (47'-5") STRAIGHT CLOSURE LENGTH  
 MADE UP BY A 14453 (47'-5") RAIL OR:  
 A 11887 (39') RAIL AND 2566 (8'-5") RAIL  
 A 10973 (36') RAIL AND 3480 (11'-5") RAIL  
 14491 (47'-6<sup>1</sup>/<sub>2</sub>" ) CURVED CLOSURE LENGTH  
 MADE UP BY A 7798 (25'-7") RAIL, 3353 (11'-0") AND  
 3340 (10'-11<sup>1</sup>/<sub>2</sub>" ) RAIL

NOTES:

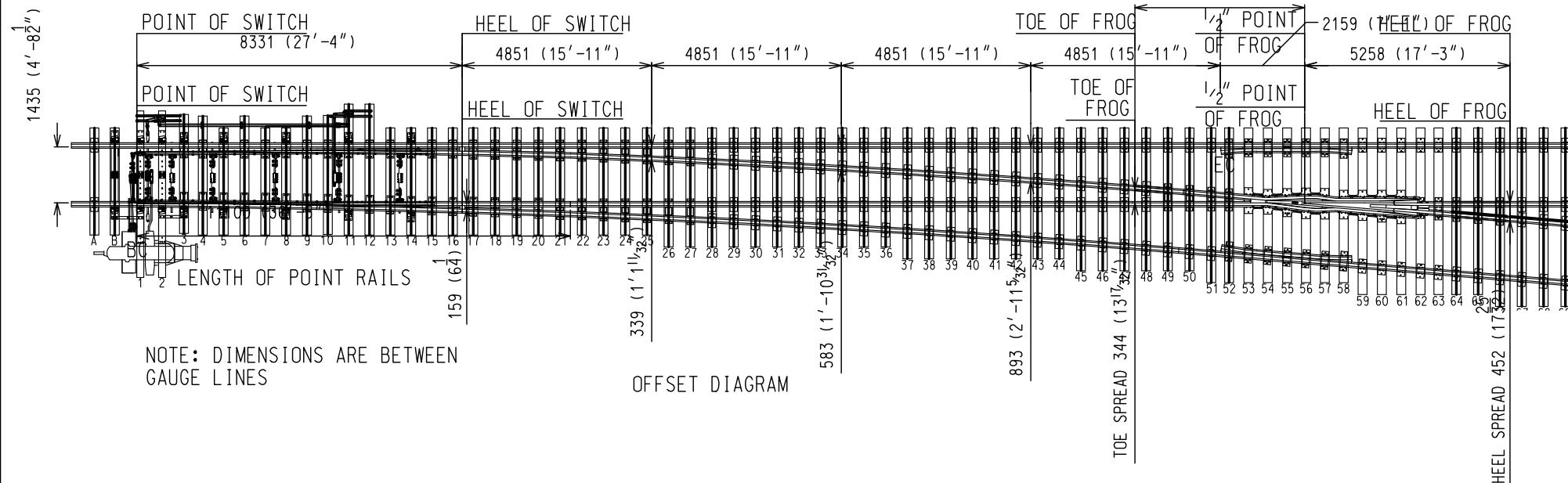
- 1.-TURNOUT TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LATEST ISSUE OF:  
GO TRANSIT TRACK STANDARDS-RC-0506-02TRK SECTION 16-TURNOUT INSPECTION
- 2.-WHEN REFERRING TO POWER OPERATED TURNOUTS, DRAWING NUMBER MUST BE STATED AS INDICATED:  
A-RIGHT HAND TURNOUT P.O. MACHINE ON RIGHT  
B-RIGHT HAND TURNOUT P.O. MACHINE ON LEFT  
C-LEFT HAND TURNOUT P.O. MACHINE ON RIGHT  
D-LEFT HAND TURNOUT P.O. MACHINE ON LEFT
- 3.-FOR THE VARIOUS STANDARD TURNOUT COMBINATIONS SEE INDEX GTS-0000 SHEET 3 OF 3
- 4.-TURNOUT GEOMETRY, FOR TABLES OF DIMENSIONS AND OFFSETS SEE GTS-0003A NO. 12 ALL WELDED TURNOUTS.



STOCK RAIL BENDING DETAIL

THEORETICAL TOE OF FROG

4343 (14'-3")



OFFSET DIAGRAM

NOTE: DIMENSIONS ARE BETWEEN GAUGE LINES

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. 12 TURNOUT**  
**36"5" POWER OPERATED-SAMSON PT. SWITCH**  
**UNIFORM RISER DESIGN-ALL WELDED RAIL**  
**RBM FROG-115LB. R.E. RAIL-WOOD TIES**

Drawn DW Checked BC Approved *BC*  
 VP Engineering & Asset Management

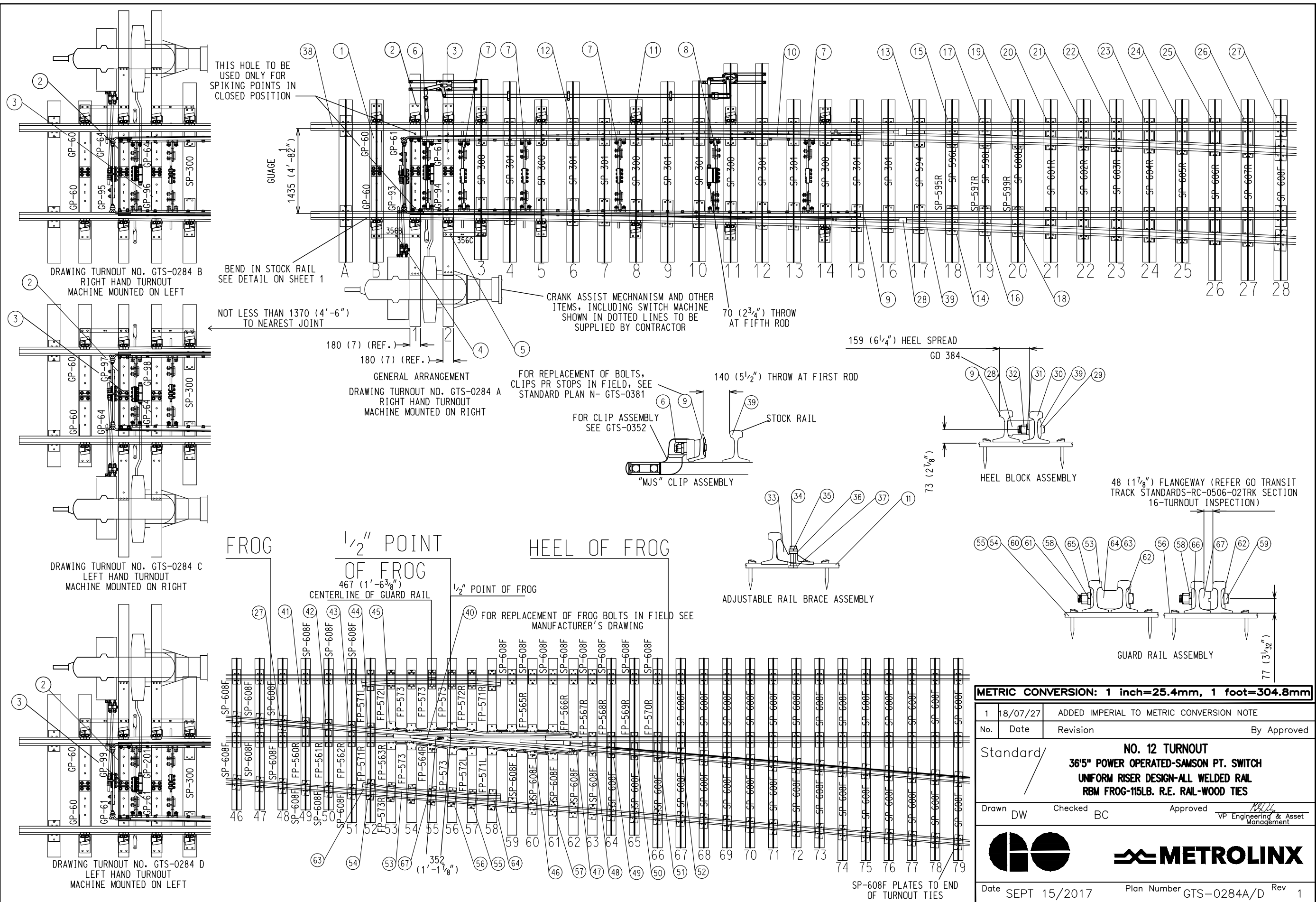


**METROLINX**

Date SEPT 15/2017 Plan Number GTS-0284A/D Rev 1

REFERENCE: CN\_TS-0284

Sheet 1 OF 2



**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. 12 TURNOUT**  
**36"5" POWER OPERATED-SAMSON PT. SWITCH**  
**UNIFORM RISER DESIGN-ALL WELDED RAIL**  
**RBM FROG-115LB. R.E. RAIL-WOOD TIES**

Drawn DW Checked BC Approved *[Signature]*  
 VP Engineering & Asset Management



Date SEPT 15/2017 Plan Number GTS-0284A/D Rev 1

**BILL OF MATERIALS FOR GTS-0284**

ITEM	DESCRIPTION	STANDARD DRAWING	MARK NO.	QUANTITY			
				A	B	C	D
	<b>SWITCH PACK</b>						
1	1st. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP60/GP60	1	1	1	1
2	2nd. GAUGE PLATE ASSEMBLY	GTS-0521	GP93/GP61	1	-	-	-
	2nd. GAUGE PLATE ASSEMBLY	GTS-0521	GP95/GP64	-	1	-	-
	2nd. GAUGE PLATE ASSEMBLY	GTS-0521	GP64/GP97	-	-	1	-
	2nd. GAUGE PLATE ASSEMBLY	GTS-0521	GP61/GP99	-	-	-	1
3	3rd. GAUGE PLATE ASSEMBLY	GTS-0521	GP94/GP61	1	-	-	-
	3rd. GAUGE PLATE ASSEMBLY	GTS-0521	GP96/GP64	-	1	-	-
	3rd. GAUGE PLATE ASSEMBLY	GTS-0521	GP64/GP98	-	-	1	-
	3rd. GAUGE PLATE ASSEMBLY	GTS-0521	GP61/GP201	-	-	-	1
4	MILD STEEL STRAP	GTS-0356B	356B	1	1	1	1
5	MILD STEEL STRAP	GTS-0356C	356C	1	1	1	1
6	SWITCH ROD	GTS-0344G	344G	1	1	1	1
7	SWITCH ROD	GTS-0344C	344C	4	4	4	4
8	SWITCH ROD	GTS-0344D	344D	1	1	1	1
9	RIGHT SAMSON POINT RAIL	GTS-0381D	381D	1	1	-	-
	RIGHT SAMSON CURVED POINT RAIL	GTS-0381A	381A	-	-	1	1
10	LEFT SAMSON POINT RAIL	GTS-0381C	381C	-	-	1	1
	LEFT SAMSON CURVED POINT RAIL	GTS-0381B	381B	1	1	-	-
11	SWITCH PLATE	GTS-0508	SP300	10	10	10	10
12	SWITCH PLATE	GTS-0509	SP301	18	18	18	18
13	SWITCH PLATE (RIGHT HAND)	GTS-0509	SP594	2	2	2	2
14	SWITCH PLATE (RIGHT SIDE FOR RIGHT HAND TURNOUT)	GTS-0613	SP595R	1	1	-	-
	SWITCH PLATE (LEFT SIDE FOR LEFT HAND TURNOUT)	GTS-0612	SP596R	-	-	1	1
15	SWITCH PLATE (RIGHT SIDE FOR RIGHT HAND TURNOUT)	GTS-0612	SP596L	1	1	-	-
	SWITCH PLATE (LEFT SIDE FOR LEFT HAND TURNOUT)	GTS-0613	SP595L	-	-	1	1
16	SWITCH PLATE (RIGHT SIDE FOR RIGHT HAND TURNOUT)	GTS-0613	SP597R	1	1	-	-
	SWITCH PLATE (LEFT SIDE FOR LEFT HAND TURNOUT)	GTS-0612	SP598R	-	-	1	1
17	SWITCH PLATE (RIGHT SIDE FOR RIGHT HAND TURNOUT)	GTS-0612	SP598L	1	1	-	-
	SWITCH PLATE (LEFT SIDE FOR LEFT HAND TURNOUT)	GTS-0613	SP597L	-	-	1	1
18	SWITCH PLATE (RIGHT SIDE FOR RIGHT HAND TURNOUT)	GTS-0613	SP599R	1	1	-	-
	SWITCH PLATE (LEFT SIDE FOR LEFT HAND TURNOUT)	GTS-0612	SP600R	-	-	1	1
19	SWITCH PLATE (RIGHT SIDE FOR RIGHT HAND TURNOUT)	GTS-0612	SP600L	1	1	-	-
	SWITCH PLATE (LEFT SIDE FOR LEFT HAND TURNOUT)	GTS-0613	SP599L	-	-	1	1
20	SWITCH PLATE (RIGHT HAND)	GTS-0616	SP601R	2	2	-	-
	SWITCH PLATE (LEFT HAND)	GTS-0616	SP601L	-	-	2	2
21	SWITCH PLATE (RIGHT HAND)	GTS-0616	SP602R	2	2	-	-
	SWITCH PLATE (LEFT HAND)	GTS-0616	SP602L	-	-	2	2
22	SWITCH PLATE (RIGHT HAND)	GTS-0616	SP603R	2	2	-	-
	SWITCH PLATE (LEFT HAND)	GTS-0616	SP603L	-	-	2	2
23	SWITCH PLATE (RIGHT HAND)	GTS-0616	SP604R	2	2	-	-
	SWITCH PLATE (LEFT HAND)	GTS-0616	SP604L	-	-	2	2
24	SWITCH PLATE (RIGHT HAND)	GTS-0616	SP605R	2	2	-	-
	SWITCH PLATE (LEFT HAND)	GTS-0616	SP605L	-	-	2	2
25	SWITCH PLATE (RIGHT HAND)	GTS-0616	SP606R	2	2	-	-
	SWITCH PLATE (LEFT HAND)	GTS-0616	SP606L	-	-	2	2
26	SWITCH PLATE (RIGHT HAND)	GTS-0616	SP607R	2	2	-	-
	SWITCH PLATE (LEFT HAND)	GTS-0616	SP607L	-	-	2	2
27	SWITCH PLATE	GTS-0617	SP608F	86	86	86	86
28	HEEL BLOCK - SYMMETRICAL	GTS-0384	CN384	2	2	2	2
29	1 - 1/8" DIA. - 7 UNC SQ. HD. BOLT X 4-1/2" LG. C/W SQ. NUT	GTS-1309/31	-	4	4	4	4
30	HEADWASHER FPR 1-3/16" DIA. BOLT (NOT BEVELLED)	GTS-0837Q	837Q	4	4	4	4
31	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	4	4	4	4
32	LOCKNUT FOR 1 - 1/8" DIA. - 7 UNC BOLT	GTS-1302	-	4	4	4	4
33	ADJUSTABLE RAIL BRACE	GTS-0354	115M-12	16	16	16	16
34	7/8" DIA. 9 UNC SQ. HD. BOLT X 3-3/4" LG.	GTS-1308/5	-	32	32	32	32
35	SPRING WASHER for 7/8" DIA. BOLT	GTS-1301	-	32	32	32	32
36	DOUBLE WASHER	GTS-0354	M-10	16	16	16	16
37	DOUBLE NUT	GTS-0354	M-9	16	16	16	16
38	UNDERCUT STOCK RAIL - LEFT HAND - 115 LB. R.E. 39' - 0" LG.	GTS-1105L	1105L	1	1	-	-
	UNDERCUT STOCK RAIL - RIGHT HAND - 115 LB. R.E. 39' - 0" LG.	GTS-1105P	1105P	-	-	1	1
39	BENT UNDERCUT STOCK RAIL - R/H - 115 LB. R.E. 39' - 0" LG.	GTS-1109FF	1109FF	1	1	-	-
	BENT UNDERCUT STOCK RAIL - L/H - 115 LB. R.E. 39' - 0" LG.	GTS-1109GG	1109GG	-	-	1	1
	<b>FROG</b>						
40	#12-115 LB. RAIL BOUND MANGANESE STEEL FROG	87-1081 ABC	-	1	1	1	1
	<b>FROG PACK</b>						
41	FROG PLATE (RIGHT HAND)	GTS-0619	FP560R	1	1	-	-
	FROG PLATE (LEFT HAND)	GTS-0619	FP560L	-	-	1	1
42	FROG PLATE (RIGHT HAND)	GTS-0619	FP561R	1	1	-	-
	FROG PLATE (LEFT HAND)	GTS-0619	FP561L	-	-	1	1
43	FROG PLATE (RIGHT HAND)	GTS-0619	FP562R	1	1	-	-
	FROG PLATE (LEFT HAND)	GTS-0619	FP562L	-	-	1	1
44	FROG PLATE (RIGHT HAND)	GTS-0619	FP563R	1	1	-	-
	FROG PLATE (LEFT HAND)	GTS-0619	FP563L	-	-	1	1
45	FROG BASE PLATE (RIGHT HAND)	GTS-0620	FP564R	1	1	-	-
	FROG BASE PLATE (LEFT HAND)	GTS-0620	FP564L	-	-	1	1
46	FROG BASE PLATE (RIGHT HAND)	GTS-0621	FP565R	1	1	-	-
	FROG BASE PLATE (LEFT HAND)	GTS-0621	FP565L	-	-	1	1
47	FROG PLATE (RIGHT HAND)	GTS-0619	FP566R	1	1	-	-
	FROG PLATE (LEFT HAND)	GTS-0619	FP566L	-	-	1	1
48	FROG PLATE (RIGHT HAND)	GTS-0619	FP567R	1	1	-	-
	FROG PLATE (LEFT HAND)	GTS-0619	FP567L	-	-	1	1
49	FROG PLATE (RIGHT HAND)	GTS-0619	FP568R	1	1	-	-
	FROG PLATE (LEFT HAND)	GTS-0619	FP568L	-	-	1	1
50	FROG PLATE (RIGHT HAND)	GTS-0619	FP569R	1	1	-	-
	FROG PLATE (LEFT HAND)	GTS-0619	FP569L	-	-	1	1
51	FROG PLATE (RIGHT HAND)	GTS-0619	FP570R	1	1	-	-
	FROG PLATE (LEFT HAND)	GTS-0619	FP570L	-	-	1	1
52	SWITCH PLATE	GTS-0617	SP608F	26	26	26	26
	<b>GUARD RAIL PACK</b>						
53	FROG GUARD RAIL 11' - 0" LONG	GTS-1106	-	2	2	2	2
54	FROG PLATE (RIGHT HAND)	GTS-0618	FP571R	2	2	2	2
	FROG PLATE (LEFT HAND)	GTS-0618	FP571L	2	2	2	2
55	FROG PLATE (RIGHT HAND)	GTS-0618	FP572R	2	2	2	2
	FROG PLATE (LEFT HAND)	GTS-0618	FP572L	2	2	2	2
56	FROG PLATE	GTS-0622	FP573	6	6	6	6
57	SWITCH PLATE	GTS-0617	SP608F	48	48	48	48
58	SPRING WASHER for 1 - 3/8" DIA BOLT	GTS-1301	-	10	10	10	10
59	1 - 3/8" DIA. 6 UNC SQ. HD. BOLT X 9-1/2" LG. C/W SQ. NUT	GTS-1309/100	-	2	2	2	2
60	1 - 3/8" DIA. 6 UNC SQ. HD. BOLT X 10" LG. C/W SQ. NUT	GTS-1309/101	-	4	4	4	4
61	1 - 3/8" DIA. 6 UNC SQ. HD. BOLT X 10-1/2" LG. C/W SQ. NUT	GTS-1309/102	-	4	4	4	4
62	HEAD WASHER	GTS-0837G	837G	10	10	10	10
63	END CASTING LEFT HAND 115 LB. R.E.	GTS-0847	FG2-S	2	2	2	2
64	END CASTING RIGHT HAND 115 LB. R.E.	GTS-0847	FG3-S	2	2	2	2

**BILL OF MATERIALS FOR GTS-0284**

ITEM	DESCRIPTION	STANDARD DRAWING	MARK NO.	QUANTITY			
				A	B	C	D
65	TAIL WASHER (BEVELLED)	GTS-0837B	837B	8	8	8	8
66	TAIL WASHER (NOT BEVELLED)	GTS-0837H	837H	2	2	2	2
67	ADJUSTABLE BLOCK 115 LB. R.E.	GTS-0847	FG1-S	4	4	4	4
* CRANK ASSIST MECHANISM SHOWN IS REQUIRED ON THIS T/O AND MUST BE ORDERED THROUGH THE SIGNAL & COMMUNICATION FUNCTION **							
<b>TURNOUT PACKAGES</b>							
<b>TURNOUT NUMBER</b>	<b>DESCRIPTION</b>	<b>QUANTITY PER TURNOUT</b>					
GTS- 284A	FROG RBM 12 - 115	1					
	SW-PK INS SAMSON PO NO. 12A - 115 LBS.	1					
	GR-PK 115 11-0	1					
	FR-PK RBM 12 - 115	1					
GTS- 284B	FROG RBM 12 - 115	1					
	SW-PK INS SAMSON PO NO. 12B - 115 LBS.	1					
	GR-PK 115 11-0	1					
	FR-PK RBM 12 - 115	1					
GTS- 284C	FROG RBM 12 - 115	1					
	SW-PK INS SAMSON PO NO. 12C - 115 LBS.	1					
	GR-PK 115 11-0	1					
	FR-PK RBM 12 - 115	1					
GTS- 284D	FROG RBM 12 - 115	1					
	SW-PK INS SAMSON PO NO. 12D - 115 LBS.	1					
	GR-PK 115 11-0	1					
	FR-PK RBM 12 - 115	1					
<b>ABBREAVATIONS</b>							
SW - PK - SWITCH PAK		SAM - SAMSON		SGM - SELF GUARD MANGANESE			
FR - PK - FROG PAK		HO - HAND OPERATED		RBM - RAIL BOUND MANGANESE			
GR - PK - GUARD RAIL PAK		SO - SPRING OPERATED					
INS - INSULATED		PO - POWER OPERATED					
<b>NOTE:</b>							
1 - For a new installation, necessary rail, bonded insulated joints, splice bars, bolts, washers, rail anchors, connecting rod, switch stand, targe and reflectorized target kit may be required in addition to the materials listed above							
<b>BILL OF SWITCH TIES FOR HAND AND SPRING OPERATION</b>							
TIES 180 X 230 mm (7" X 9")							
<b>LENGTH</b>				<b>LENGTH</b>			
<b>METRES</b>	<b>FEET/INCHES</b>	<b>NO. OF PIECES</b>	<b>METRES</b>	<b>FEET/IN</b>	<b>NO. OF PIECES</b>		
2.8	9' - 0"	18	2.8	9' - 0"	18		
3.1	10' - 0"	16	3.1	10' - 0"	16		
3.4	11' - 0"	10	3.4	11' - 0"	10		
3.7	12' - 0"	6	3.7	12' - 0"	6		
4.0	13' - 0"	8	4.0	13' - 0"	8		
4.3	14' - 0"	7	4.3	14' - 0"	9		
4.6	15' - 0"	8	4.6	15' - 0"	8		
4.9	16' - 0"	6	4.9	16' - 0"	6		
5.5	18' - 0"	2					
TOTAL NUMBER OF TIES - 81				TOTAL NUMBER OF TIES - 81			