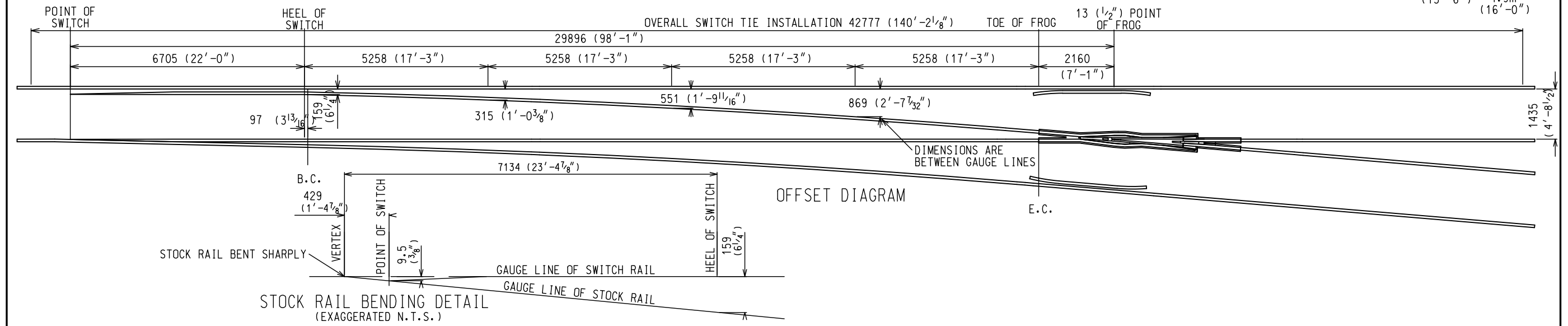


TIE ARRANGEMENT AND SPACING



OFFSET DIAGRAM

STOCK RAIL BENDING DETAIL (EXAGGERATED N.T.S.)

NOTES

- TURNOUT TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LATEST ISSUE OF:  
GO TRANSIT TRACK STANDARDS RC-0506-02TRK SECTION 16-TURNOUT INSPECTION
- WHEN REFERRING TO POWER OPERATED TURNOUTS, DRAWING NUMBER MUST BE STATED AS A, B, C OR D TO INDICATE:  
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
- FOR THE VARIOUS STANDARD TURNOUT COMBINATIONS SEE INDEX GTS-0000
- TURNOUT GEOMETRY, FOR TABLES OF DIMENSIONS AND OFFSETS SEE GTS-0003

TURNOUT DATA

FROG No 12  
 LENGTH OF SWITCH 6705 (22'-0")  
 HEEL SPREAD 159 (6 1/4")  
 LEAD 29896 (98'-1")  
 P.S. TO H.F. 33528 (110'-0")  
 21031 (69') STRAIGHT CLOSURE LENGTHS  
 MADE UP BY A 21031 (69') RAIL OR:  
 A 11887 (39') AND 9144 (30')  
 A 10973 (36') AND 10058 (33')  
 21069 (69'-1 1/2") CURVED CLOSURE LENGTHS  
 MADE UP BY A 21069 (69'-1 1/2") RAIL OR:  
 A 11887 (39') AND 9182 (30'-1 1/2")  
 A 10973 (36') AND 10096 (33'-1 1/2")

ALL METRIC MEASUREMENTS, MILLIMETERS UNLESS STATED OTHERWISE, ARE A ROUNDED SOFT CONVERSION OF BRITISH UNITS SHOWN IN BRACKETS

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		

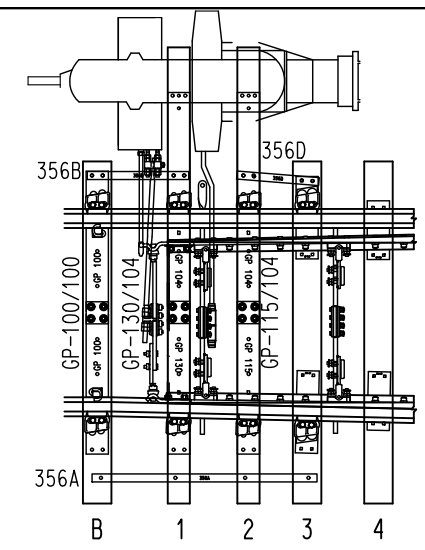
Standard / **NO. 12 TURNOUT-22'0" POINTS  
 POWER OPERATED-SAMSON POINTS  
 R.B.M. FROG-132 LB. R.E. RAIL**

Drawn AZ Checked BC Approved VP Engineering & Asset Management

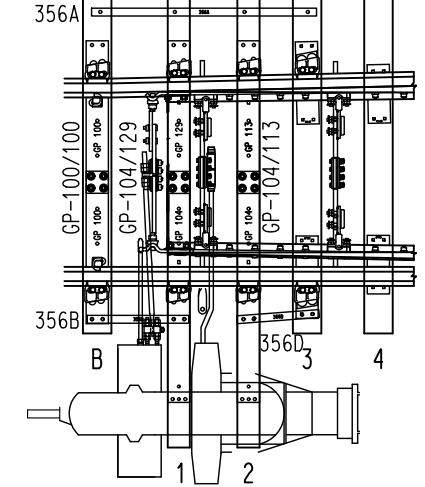


Date SEPT 15/2017 Plan Number GTS-0224A/D Rev 1

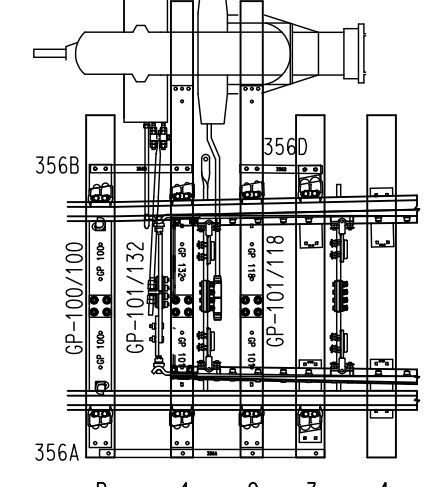
REFERENCE: CN\_TS-224A/D Sheet 1 OF 2



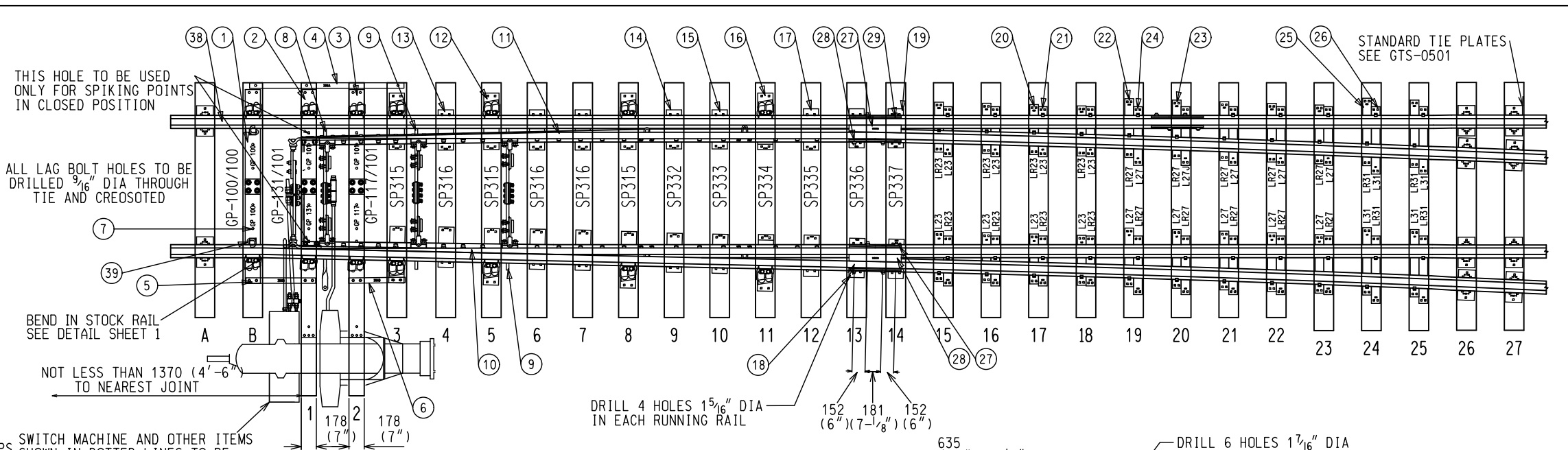
DRAWING No. GTS-0224 B  
RIGHT HAND TURNOUT  
MACHINE MOUNTED ON LEFT  
REFERENCE DRAWING: GTS-0356 FOR STRAPS



DRAWING No. GTS-0224 C  
LEFT HAND TURNOUT  
MACHINE MOUNTED ON RIGHT  
REFERENCE DRAWING: GTS-0356 FOR STRAPS



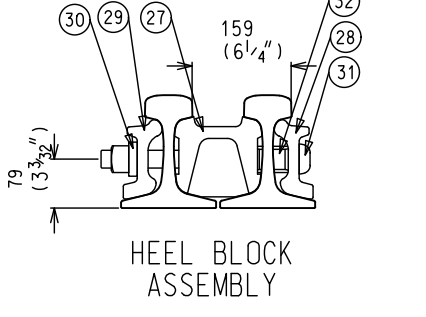
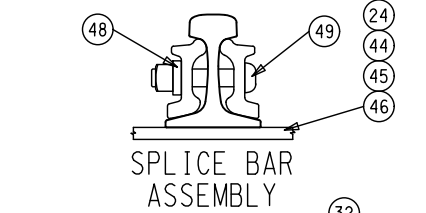
DRAWING No. GTS-0224 D  
LEFT HAND TURNOUT  
MACHINE MOUNTED ON LEFT  
REFERENCE DRAWING: GTS-0356 FOR STRAPS



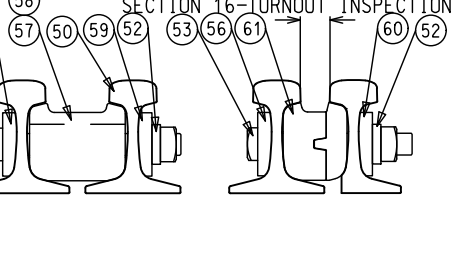
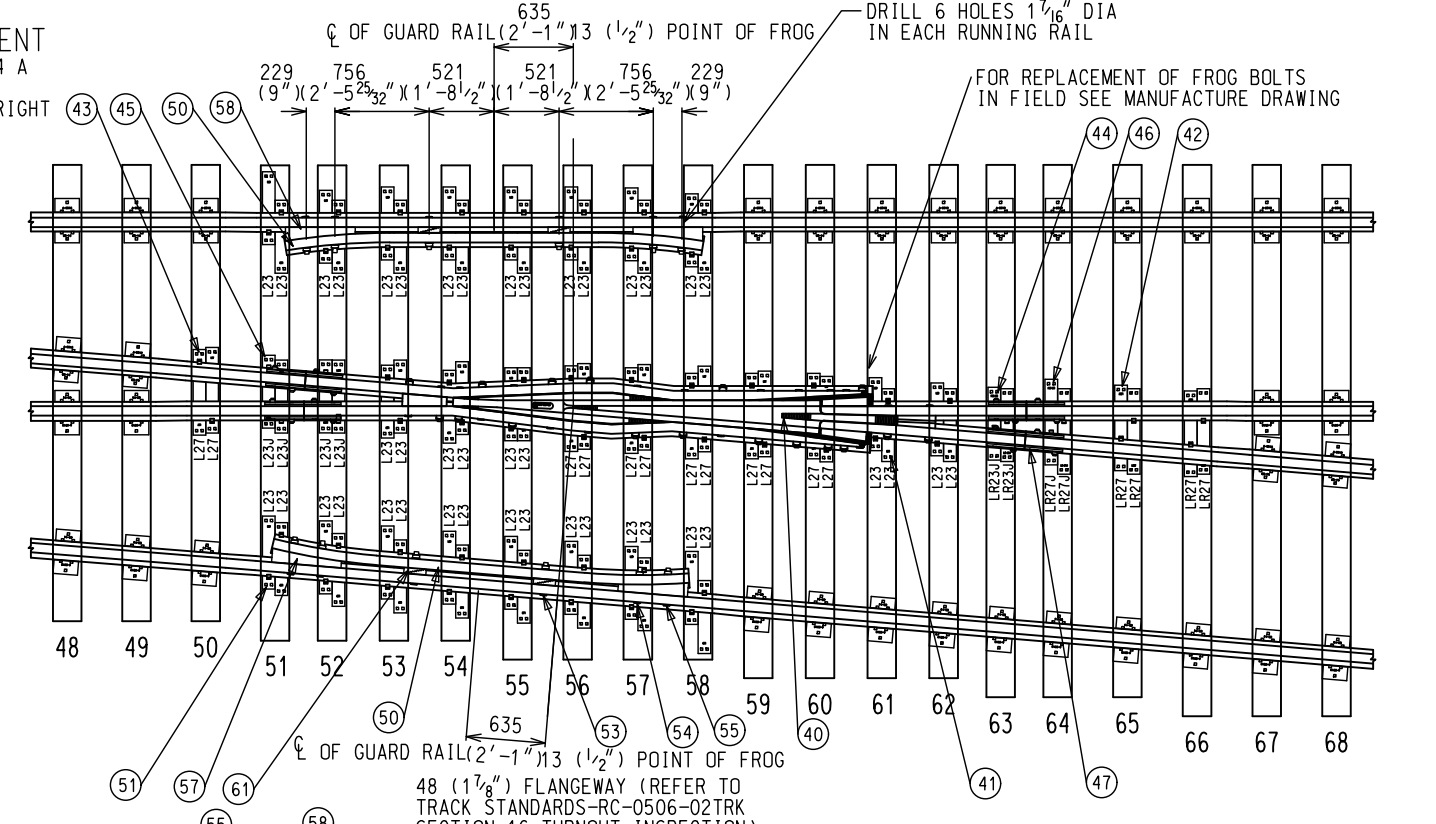
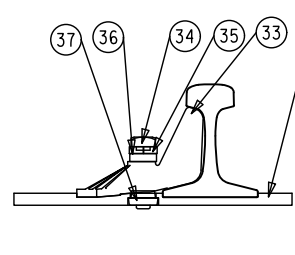
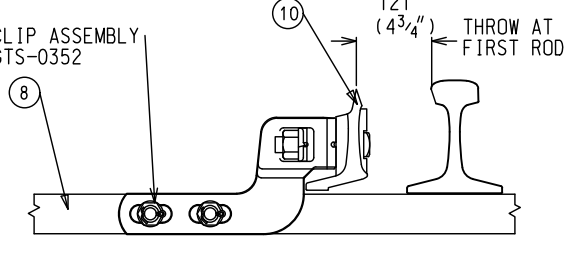
SWITCH MACHINE AND OTHER ITEMS SHOWN IN DOTTED LINES TO BE SUPPLIED BY CONTRACTOR

POINT OF SWITCH

GENERAL ARRANGEMENT  
DRAWING No. GTS-0224 A  
RIGHT HAND TURNOUT  
MACHINE MOUNTED ON RIGHT



FOR REPLACEMENT OF BOLTS, CLIPS, OR STOPS IN FIELD SEE STANDARD PLAN No. GTS-0333 KNIFE EDGE GTS-0336 SAMSON (SHOWN)



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. 12 TURNOUT-22'0" POINTS POWER OPERATED-SAMSON POINTS R.B.M. FROG-132 LB. R.E. RAIL**

Drawn AZ Checked BC Approved VP Engineering & Asset Management



Date SEPT 15/2017 Plan Number GTS-0224A/D Rev 1

REFERENCE: CN\_TS-224A/D Sheet 2 OF 2

ALL METRIC MEASUREMENTS, MILLIMETERS UNLESS STATED OTHERWISE, ARE A ROUNDED SOFT CONVERSION OF BRITISH UNITS SHOWN IN BRACKETS

**BILL OF MATERIALS FOR GTS-0224**

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-0522	GP100/GP100	1	1	1	1
2	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP131/GP101	1	-	-	-
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP130/GP104	-	1	-	-
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP104/GP129	-	-	1	-
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP132	-	-	-	1
3	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP117/GP101	1	-	-	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP115/GP104	-	1	-	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP104/GP113	-	-	1	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP118	-	-	-	1
4	MILD STEEL STRAP	GTS-0356A	356A	1	1	1	1
5	MILD STEEL STRAP	GTS-0356B	356B	1	1	1	1
6	MILD STEEL STRAP	GTS-0356D	356D	1	1	1	1
7	DOUBLE SPRING WASHER - TYPE FE6	GTS-1310	-	30	30	30	30
8	SWITCH ROD	GTS-0344B	344B	1	1	1	1
9	SWITCH ROD	GTS-0344D	344D	2	2	2	2
10	RIGHT SAMSON POINT RAIL	GTS-0336A	336A	-	-	1	1
	RIGHT POINT RAIL	GTS-0333A	333A	1	1	-	-
11	LEFT SAMSON POINT RAIL	GTS-0336B	336B	1	1	-	-
	LEFT POINT RAIL	GTS-0333B	333B	-	-	1	1
12	SWITCH PLATE	GTS-0508	SP315	6	6	6	6
13	SWITCH PLATE	GTS-0509	SP316	6	6	6	6
14	SWITCH PLATE	GTS-0509	SP332	2	2	2	2
15	SWITCH PLATE	GTS-0509	SP333	2	2	2	2
16	SWITCH PLATE	GTS-0510	SP334	2	2	2	2
17	SWITCH PLATE	GTS-0511	SP335	2	2	2	2
18	SWITCH PLATE	GTS-0511	SP336	2	2	2	2
19	SWITCH PLATE	GTS-0511	SP337	2	2	2	2
20	HOOK TWIN TIE PLATE	GTS-0503	LR23	8	8	8	8
21	HOOK TWIN TIE PLATE	GTS-0503	L23	8	8	8	8
22	HOOK TWIN TIE PLATE	GTS-0503	LR27	10	10	10	10
23	HOOK TWIN TIE PLATE	GTS-0503	L27	1	1	1	1
24	HOOK TWIN TIE PLATE	GTS-0503	L27J	9	9	9	9
25	HOOK TWIN TIE PLATE	GTS-0503	LR31	4	4	4	4
26	HOOK TWIN TIE PLATE	GTS-0503	L31	4	4	4	4
27	HEEL BLOCK	GTS-0360	16-6&22GP1-S	2	2	2	2
28	BENT SPLICE BAR(4 HOLE) - 132/136 LB. R.E.	GTS-1204D	1204D	2	2	2	2
29	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB. R.E.	GTS-1203	-	1	1	1	1
30	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	8	8	8	8
31	1 - 1/8"DIA. - 7 NC OVAL NECK TRACK BOLT X 12 - 1/2" LG. C/W SQ. NUT	GTS-1320/4	-	8	8	8	8
32	PIPE THIMBLE - 1 - 1/4" DIA. X 2 - 3/8" LONG	GTS-0345J	J	2	2	2	2
33	ADJUSTABLE RAIL BRACE	GTS-0354	132M-14	14	14	14	14
34	7/8" DIA. 9 UNC SQ. HD. BOLT X 3-3/4" LG.	GTS-1308/5	-	28	28	28	28
35	SPRING WASHER for 7/8" DIA. BOLT	GTS-1301	-	28	28	28	28
36	DOUBLE WASHER	GTS-0354	M-10	14	14	14	14
37	DOUBLE NUT	GTS-0354	M-9	14	14	14	14
38	UNDERCUT STOCK RAIL - 132 LB. R.E. 39' - 0" LG.	GTS-1105C	1105C	1	1	1	1
39	PANDROL CLIP - PR 631A	GTS-1322	-	2	2	2	2
<b>FROG</b>							
40	#12 - 132 LB. RAIL BOUND MANGANESE STEEL FROG	GTS-0832	-	1	1	1	1
		D-11637 NOR					
<b>FROG PACK</b>							
41	HOOK TWIN TIE PLATE	GTS-0503	L23	10	10	10	10
42	HOOK TWIN TIE PLATE	GTS-0503	LR27	4	4	4	4
43	HOOK TWIN TIE PLATE	GTS-0503	L27	12	12	12	12
44	HOOK TWIN TIE PLATE	GTS-0503	LR23J	2	2	2	2
45	HOOK TWIN TIE PLATE	GTS-0503	L23J	4	4	4	4
46	HOOK TWIN TIE PLATE	GTS-0503	LR27J	2	2	2	2
47	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB R.E.	GTS-1203	-	4	4	4	4
48	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	16	16	16	16
49	1-1/8" DIA. 7 NC OVAL NECK TRACK BOLT X 5-7/8" LG. C/W SQ. NUT	GTS-1320/1	-	16	16	16	16
<b>GUARD RAIL PACK</b>							
50	FROG GUARD RAIL 11' - 0" LONG	GTS-1106	-	2	2	2	2
51	HOOK TWIN TIE PLATE	GTS-0503	L23	32	32	32	32
52	SPRING WASHER for 1 - 3/8" DIA BOLT	GTS-1301	-	12	12	12	12
53	1 - 3/8" DIA. 6 UNC SQ. HD. BOLT X 9-1/2" LG. C/W SQ. NUT	GTS-1309/100	-	4	4	4	4
54	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
55	1 - 3/8" DIA. 6 UNC SQ. HD. BOLT X 11" LG. C/W SQ. NUT	GTS-1309/104	-	4	4	4	4
56	HEAD WASHER	GTS-0836J	837J	12	12	12	12
57	END CASTING LEFT HAND 132 LB. R.E.	GTS-0848	GG2-S	2	2	2	2
58	END CASTING RIGHT HAND 132 LB. R.E.	GTS-0848	GG3-S	2	2	2	2
59	TAIL WASHER (BEVELLED)	GTS-0837B	837B	8	8	8	8
60	TAIL WASHER (NOT BEVELLED)	GTS-0837K	837K	4	4	4	4
61	ADJUSTABLE BLOCK 132 LB. R.E.	GTS-0848	GG1-S	8	8	8	8
***TO UPGRADE EXISTING TURNOUT, REPLACE 132 LB. PLATES WITH EQUIVALENT 136 LB. PLATES***							
***MINOR TIE SPACING ADJUSTMENTS MAY BE NECESSARY***							
<b>TURNOUT PACKAGES</b>							
<b>TURNOUT NUMBER</b>	<b>DESCRIPTION</b>	<b>QUANTITY PER TURNOUT</b>					
GTS- 224A	FROG RBM NO. 12-132	1					
	SW-PK INS SAMSON PO NO. 12A-132 LBS.	1					
	GR-PK 132 11'-0"	1					
	FR-PK RBM 12-132	1					
GTS- 224B	FROG RBM NO. 12-132	1					
	SW-PK INS SAMSON PO NO. 12B-132 LBS.	1					
	GR-PK 132 11'-0"	1					
	FR-PK RBM 12-132	1					
GTS- 224C	FROG RBM NO. 12-132	1					
	SW-PK INS SAMSON PO NO. 12C-132 LBS.	1					
	GR-PK 132 11'-0"	1					
	FR-PK RBM 12-132	1					
GTS- 224D	FROG RBM NO. 12-132	1					
	SW-PK INS SAMSON PO NO. 12D-132 LBS.	1					
	GR-PK 132 11'-0"	1					
	FR-PK RBM 12-132	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>				<b>BILL OF SWITCH FOR POWER OPERATION</b>			
TIES 180 X 230 mm (7" X 9")				TIES 180 X 230 mm (7" X 9")			
<b>LENGTH</b>				<b>NO. OF PIECES</b>			
METRES	FEET/INCHES						
2.8	9' - 0"			22			
3.1	10' - 0"			11			
3.4	11' - 0"			10			
3.7	12' - 0"			9			
4.0	13' - 0"			8			
4.3	14' - 0"			7			
4.6	15' - 0"			7			
4.9	16' - 0"			6			
<b>TOTAL NUMBER OF TIES - 80</b>							