



**NOTES**

1- TURNOUT TO BE INSTALLED AND MAINTAINED IN ACCORDING WITH THE LATEST ISSUE OF:  
 RM.3500 TURNOUTS  
 RM.3502 POWER, SPRING AND INSTALLED SWITCH  
 RM.3506 SWITCH STAND, SWITCH LAMPS AND TARGETS, WHERE APPLICABLE

2- WHEN REFERRING TO POWER OPERATED TURNOUTS, DRAWING NUMBER MUST BE STATED AS A, B,C OR D:  
 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 SHEET GTS-0  
 4- TURNOUT GEOMETRY, FOR TABLES OF DIMENSIONS AND OFFSETS SEE GTS-2

**TURNOUT DATA:**

FROG NO -----10  
 LENGTH OF SWITCH-----16'-6"  
 HEEL SPREAD-----6 1/4"  
 LEAD-----81'-6 1/2"  
 PS TO H.F.-----88'-0 1/2"

58'-5" STRAIGHT CLOSURE LENGTH  
 MADE UP BY A 58'-5" RAIL OR:  
 A 39' AND 19'-5" RAIL  
 A 36' AND 22'-5" RAIL  
 A 33' AND 25'-5" RAIL  
 A 30' AND 28'-5" RAIL

58'-7" CURVE CLOSURE LENGTH  
 MADE UP BY A 58'-7" RAIL OR:  
 A 39' AND 19'-7" RAIL  
 A 36' AND 22'-7" RAIL  
 A 33' AND 25'-7" RAIL  
 A 30' AND 28'-7" RAIL

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. 10 TURNOUT-16" POINTS POWER OPERATED- SAMSON POINT R.B.M. FROG 100LB. A.R.A.A. RAIL
Drawn	Checked	Approved
MG	GGG	VP Engineering & Asset Management
Date	Plan Number	GTS-0119 Rev 1
REFERENCE: TS-119 A/D		Sheet 1 OF 1

**BILL OF MATERIALS FOR GTS-0119**

ITEM	DESCRIPTION	STANDARD DRAWING	MARK NO.	QUANTITY		
				A	B	C
<b>SWITCH PACK</b>						
1	1st. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP60/GP60	1	1	1
2	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP67/GP61	1	-	-
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP65/GP64	-	1	-
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP64/GP62	-	-	1
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP61/GP69	-	-	-
3	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP68/GP61	1	-	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP66/GP64	-	1	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP64/GP63	-	-	1
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0521	GP61/GP70	-	-	-
4	MILD STEEL STRAP	GTS-0356C	356C	1	1	1
5	MILD STEEL STRAP	GTS-0356D	356D	1	1	1
6	MILD STEEL STRAP	GTS-0356A	356A	1	1	1
7	DOUBLE SPRING WASHER - TYPE FE6	GTS-1310	-	30	30	30
8	SWITCH ROD	GTS-0344A	344A	1	1	1
9	SWITCH ROD	GTS-0344F	344F	1	1	1
10	RIGHT SAMSON POINT RAIL	GTS-0310A	310A	-	-	1
	RIGHT POINT RAIL	GTS-0307A	307A	1	1	-
11	LEFT SAMSON POINT RAIL	GTS-0310B	310B	-	-	1
	LEFT POINT RAIL	GTS-0307B	307B	1	1	1
12	SWITCH PLATE	GTS-0508	SP300	6	6	6
13	SWITCH PLATE	GTS-0509	SP301	10	10	10
14	SWITCH PLATE	GTS-0504	SP123	2	2	2
15	SWITCH PLATE	GTS-0507	SP151	2	2	2
16	SWITCH PLATE	GTS-0507	SP157	2	2	2
17	SWITCH PLATE	GTS-0506	SP158	2	2	2
18	HOOK TWIN TIE PLATE	GTS-0503	LR27	8	8	8
19	HOOK TWIN TIE PLATE	GTS-0503	L27	8	8	8
20	HOOK TWIN TIE PLATE	GTS-0503	LR31	4	4	4
21	HOOK TWIN TIE PLATE	GTS-0503	L31	3	3	3
22	HOOK TWIN TIE PLATE	GTS-0503	L31J	1	1	1
23	HEEL BLOCK (RIGHT HAND)	GTS-0358	16-6&22CP1-S	1	1	1
24	HEEL BLOCK (LEFT HAND)	GTS-0358	16-6&22CP2-S	1	1	1
25	BENT SPLICE BAR (4 HOLE) - 100 LB A.R.A.-A.	GTS-1204B	1204B	2	2	2
26	STRAIGHT SPLICE BAR (4 HOLE) - 100 LB A.R.A.-A.	GTS-1201	-	1	1	1
27	SPRING WASHER for 1" DIA. BOLT	GTS-1301	-	8	8	8
28	1" DIA. 8 NC OVAL NECK TRACK BOLT X 12" LG. C/W SQ. NUT	GTS-1319/9	-	8	8	8
29	PIPE THIMBLE - 1" DIA. X 2-1/32" LONG	GTS-0345B	B	2	2	2
30	ADJUSTABLE RAIL BRACE	GTS-0354	100M-7	12	12	12
31	7/8" DIA. - 9 UNC SQ. HD. BOLT X 3-3/4" LG.	GTS-1308/5	-	24	24	24
32	SPRING WASHER for 7/8" DIA. BOLT	GTS-1301	-	24	24	24
33	DOUBLE WASHER	GTS-0354	M-10	12	12	12
34	DOUBLE NUT	GTS-0354	M-9	12	12	12
35	UNDERCUT STOCK RAIL - 100 LB. A.R.A.-A. 39" - 0" LG.	GTS-1105A	1105A	1	1	1
36	PANDROL CLIP - PR 631A	GTS-1322	-	2	2	2
<b>FROG</b>						
37	#10 - 100 LB. RAIL BOUND MANGANESE STEEL FROG	R11C- 170.1	-	1	1	1
<b>FROG PACK</b>						
38	HOOK TWIN TIE PLATE	GTS-0503	LR23	2	2	2
39	HOOK TWIN TIE PLATE	GTS-0503	L23	12	12	12
40	HOOK TWIN TIE PLATE	GTS-0503	LR27J	2	2	2
41	HOOK TWIN TIE PLATE	GTS-0503	L27	6	6	6
42	HOOK TWIN TIE PLATE	GTS-0503	LR31	2	2	2
43	HOOK TWIN TIE PLATE	GTS-0503	LR23J	2	2	2
44	HOOK TWIN TIE PLATE	GTS-0503	L23J	2	2	2
45	HOOK TWIN TIE PLATE	GTS-0503	LR27J	2	2	2
46	HOOK TWIN TIE PLATE	GTS-0503	L27J	2	2	2
47	STRAIGHT SPLICE BAR (4 HOLE) - 100 LB A.R.A.-A.	GTS-1201	-	4	4	4
48	SPRING WASHER for 1" DIA. BOLT	GTS-1301	-	16	16	16
49	1" DIA. 8 NC OVAL NECK TRACK BOLT X 5-5/8" LG. C/W SQ. NUT	GTS-1319/1	-	16	16	16
<b>GUARD RAIL PACK</b>						
50	FROG GUARD RAIL 11' - 0" LONG	GTS-1106	-	2	2	2
51	HOOK TWIN TIE PLATE	GTS-0503	L23	28	28	28
52	SPRING WASHER for 1 - 1/4" DIA BOLT	GTS-1301	-	10	10	10
53	1-1/4" DIA. 7 UNC SQ. HD. BOLT X 9" LG. C/W SQ. NUT	GTS-1309/67	-	2	2	2
54	1-1/4" DIA. 7 UNC SQ. HD. BOLT X 9-1/2" LG. C/W SQ. NUT	GTS-1309/68	-	4	4	4
55	1-1/4" DIA. 7 UNC SQ. HD. BOLT X 10-1/2" LG. C/W SQ. NUT	GTS-1309/71	-	4	4	4
56	HEAD WASHER	GTS-0836L	836L	10	10	10
57	END CASTING RIGHT HAND 100 LB. A.R.A.-A.	GTS-0846	CG2-S	2	2	2
58	END CASTING LEFT HAND 100 LB. A.R.A.-A.	GTS-0846	CG3-S	2	2	2
59	TAIL WASHER (BEVELLED)	GTS-0836H	836H	8	8	8
60	TAIL WASHER (NOT BEVELLED)	GTS-0836M	836M	2	2	2
61	ADJUSTABLE BLOCK 100 LB. A.R.A.-A.	GTS-0846	CG1-S	4	4	4
<b>TURNOUT PACKAGES</b>						
<b>TURNOUT NUMBER</b>	<b>DESCRIPTION</b>			<b>QUANTITY PER TURNOUT</b>		
GTS- 119A	FROG RBM 10-100			1		
	SW-PK INS SAMSON PO NO. 10A-100 LBS.			1		
	GR-PK 100 11'-0"			1		
	FR-PK RBM 10-100			1		
GTS- 119B	FROG RBM 10-100			1		
	SW-PK INS SAMSON PO NO. 10B-100 LBS.			1		
	GR-PK 100 11'-0"			1		
	FR-PK RBM 10-100			1		
GTS- 119C	FROG RBM 10-100			1		
	SW-PK INS SAMSON PO NO. 10C-100 LBS.			1		
	GR-PK 100 11'-0"			1		
	FR-PK RBM 10-100			1		
GTS- 119D	FROG RBM 10-100			1		
	SW-PK INS SAMSON PO NO. 10D-100 LBS.			1		
	GR-PK 100 11'-0"			1		
	FR-PK RBM 10-100			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				
NOTE: 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")		
LENGTH				LENGTH		
METRES	FEET/INCHES	NO. OF PIECES	METRES	FEET/INCH	NO. OF PIECES	
2.8	9' - 0"	19	2.8	9' - 0"	24	
3.1	10' - 0"	10	3.1	10' - 0"	22	
3.4	11' - 0"	7	3.4	11' - 0"	15	
3.7	12' - 0"	8	3.7	12' - 0"	11	
4	13' - 0"	6	4	13' - 0"	9	
4.3	14' - 0"	6	4.3	14' - 0"	10	
4.6	15' - 0"	6	4.6	15' - 0"	9	
4.9	16' - 0"	6	4.9	16' - 0"	8	
			5.5	18' - 0"	2	
TOTAL NUMBER OF TIES - 68				TOTAL NUMBER OF TIES - 110		

