

ROSCOMMONO EQUIPMENT CENTER

Project Number 60

September 1998

M548/M1015 Full Tracked Vehicle

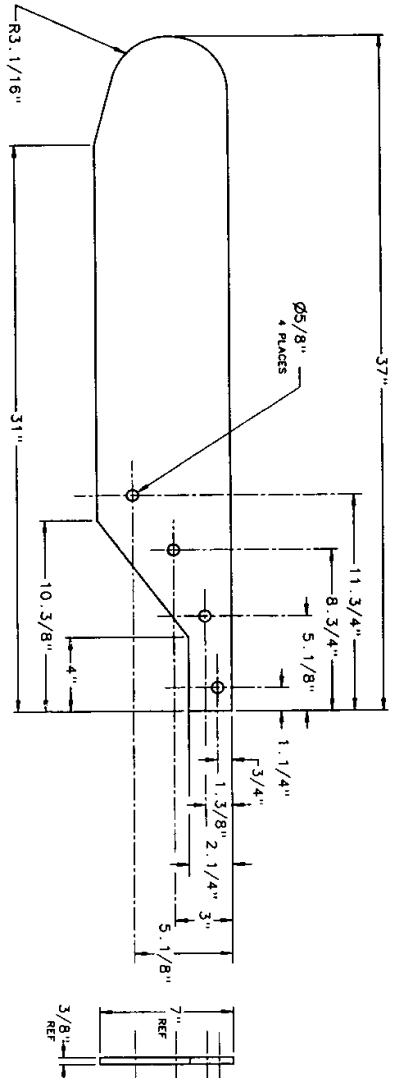
Design Packet 60B

M548 Bumper and Limb Risers

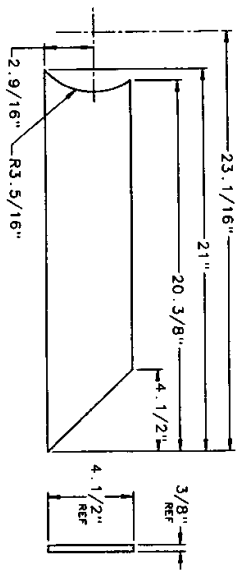
Northeast Forest Fire Supervisors
In Cooperation with
Michigan's Forest Fire Experiment Station

M548 Bumper and Limb Risers

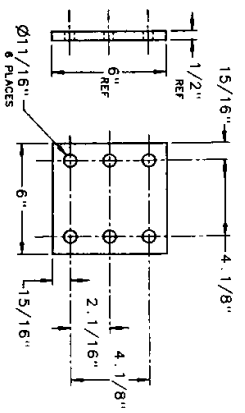
The bumper and limb riser assemblies are designed to protect the cab area and windshield from major damage. The bumper is made from six inch pipe and can be used for leverage on small trees when necessary. The limb risers help keep the windshield from taking a direct hit from branches. The design preserves the vision area for the occupants as much as possible. The limb risers also help protect the cab from falling object damage. This assembly, designed by REC, utilizes existing mounting points on the M548 body.



SIDE BAR
 PART NO.: 90-6051
 MAT'L.: BAR FLAT 3/8" X 7"
 G10200
 FFES SPEC NO.: AB-00628AA
 EST WT.: 22.9 LBS



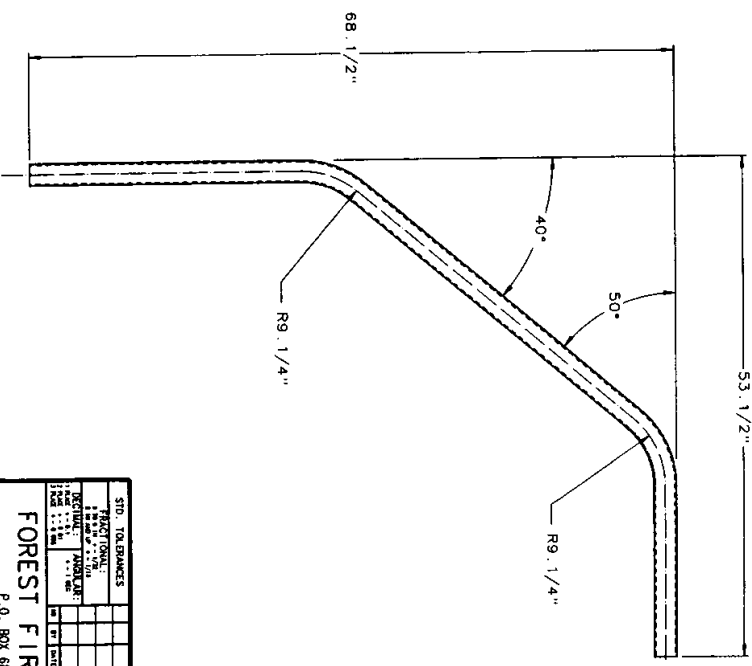
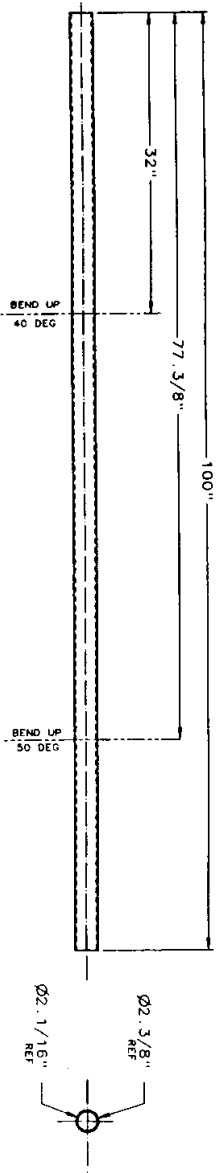
CENTER BAR
 PART NO.: 90-6049
 MAT'L.: BAR FLAT 3/8" X 4 1/2"
 G10200
 FFES SPEC NO.: AB-00618AA
 EST WT.: 8.51 LBS



FRONT MOUNTING PAD
 PART NO.: 90-6050
 MAT'L.: BAR FLAT 1/2" X 6"
 G10200
 FFES SPEC NO.: AB-00824AA
 EST WT.: 4.78 LBS

SIT. TOPOGRAPHY		DRAWN	
DATE	SCALE	DATE	SCALE
6/11/58	1/4"	6/11/58	1/4"
PROJECT NO. REC 60		PROJECT NO. REC 60	
90-60530		90-60530	

FOREST FIRE EXPERIMENT STATION
 P.O. BOX 68
 ROSCOPMAN, MICHIGAN 48653



LIMB RISER/FRONT

PART NO: 90-6054
 MAT'L: PIPE, 2" BLK STRUCTURAL
 FEES SPEC NO: AE-04032AY
 EST WT: 30.4 LBS

BENDER STROKE
 30 DEG = 3 3/16
 40 DEG = 4 3/16

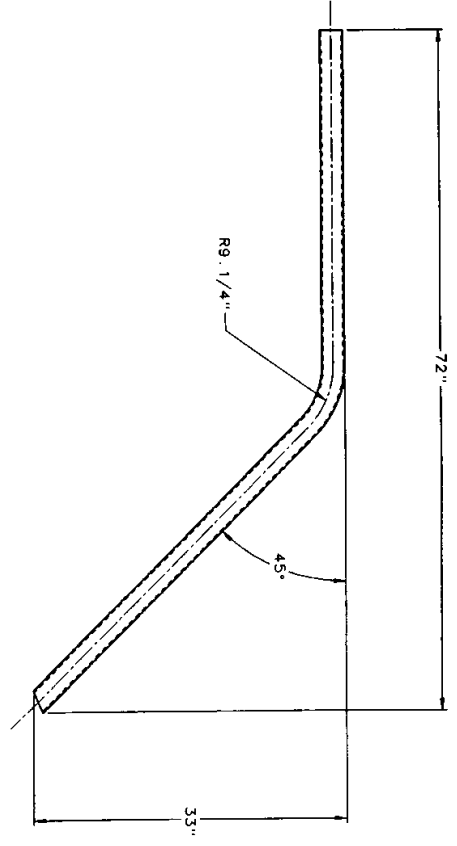
STD. TOLERANCES	FRAC TIONAL:	DECIMAL:	ANGLES:	DRAMA:
	1/16 = .0625	1/10 = .1	30 = .5	DGP
	1/32 = .03125	1/5 = .2	45 = .75	CHG
	3/16 = .1875	3/8 = .375	60 = 1.5	APP
	1/4 = .25	1/2 = .5	90 = 2.25	
	5/16 = .3125	3/4 = .75	120 = 3.0	
	3/8 = .375	7/8 = .875	150 = 3.75	
	1/2 = .5	1 = 1.0	180 = 4.5	
	5/8 = .625	1 1/4 = 1.25	225 = 5.25	
	3/4 = .75	1 1/2 = 1.5	270 = 6.0	
	7/8 = .875	1 3/4 = 1.75	315 = 6.75	
	1 = 1.0	2 = 2.0	360 = 7.5	

TITLE: LIMB RISER/FRONT
 DATE: 6/11/98
 PROJECT NO: REC-80
 90-6054C

FOREST FIRE EXPERIMENT STATION

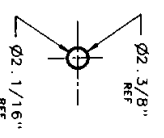
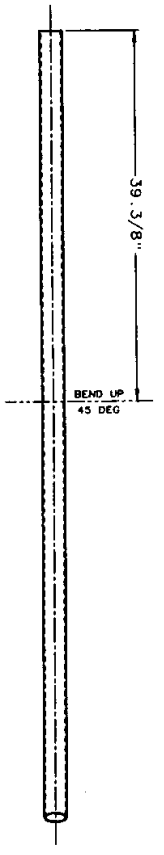
P.O. BOX 68
 ROSCOMMON, MICHIGAN 48853



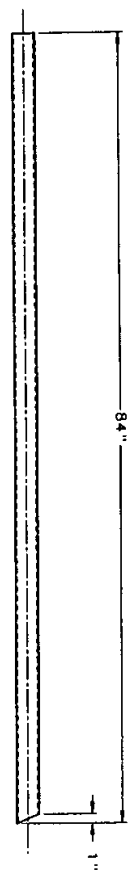


LIMB RISER/REAR

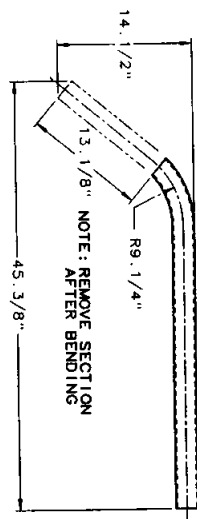
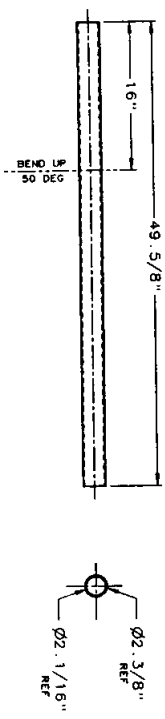
PART NO: 90-6055
 MAT L: PIPE 2"BLK STRUCTURAL
 EQS NO: AF-04032AY
 EST WT: 25.4 LBS



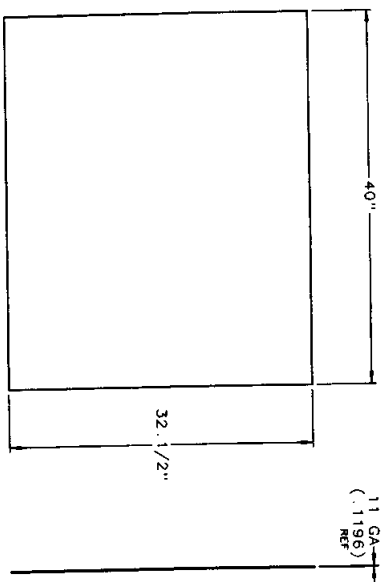
BENDER STROKE:
 45 DEG = 5 3/8"



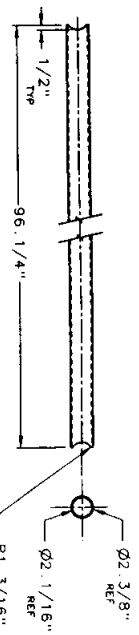
STD. TOLERANCES	MANUFACTURING	DATE	SCALE	DATE	PROJECT NO.
FINISH	ASSEMBLY	6/1/98	1/8	90-6055C	
COLLIMATED	TESTING				
STOCK	REWORK				
APPROVED:	APPROVED:				
FOREST FIRE EXPERIMENT STATION P.O. BOX 88 ROSCOPARK, MICHIGAN 48653					



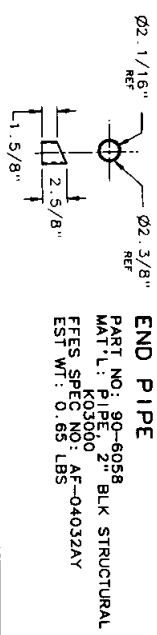
CENTER SUPPORT
 PART NO: 90-6056
 MAT'L: PIPE, 2" BLK STRUCTURAL
 K03000
 FEES SPEC NO: AF-04032AY
 EST WT: 11.1 LBS



TOP
 PART NO: 90-6068
 MAT'L: SHEET 11 GA HR P&O
 ASTM A569
 FEES SPEC NO: AA-G1148AP
 EST WT: 44.0 LBS



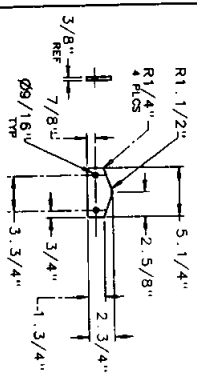
CROSS SUPPORT
 PART NO: 90-6057
 MAT'L: PIPE, 2" BLK STRUCTURAL
 K03000
 FEES SPEC NO: AF-04032AY
 EST WT: 29.2 LBS



END PIPE
 PART NO: 90-6058
 MAT'L: PIPE, 2" BLK STRUCTURAL
 K03000
 FEES SPEC NO: AF-04032AY
 EST WT: 0.85 LBS



REAR BRACE
 PART NO: 90-6066
 MAT'L: PIPE, 1" BLK SCH 40
 K02504
 FEES SPEC NO: AF-04016AD
 EST WT: 11.2 LBS



REAR MOUNTING PAD
 PART NO: 90-6064
 MAT'L: BAR, 3/8" X 3"
 G10250K1
 FEES SPEC NO: AB-00612AA
 EST WT: 1.17 LBS

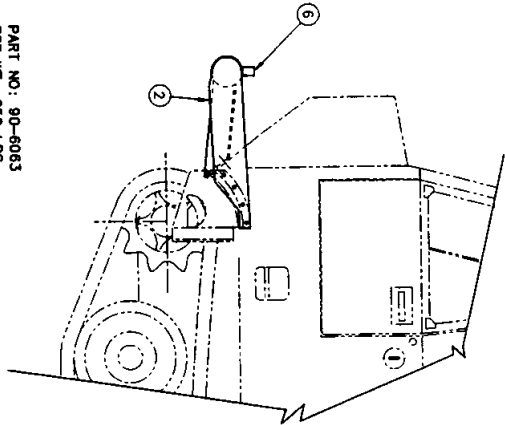
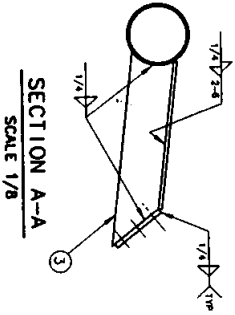
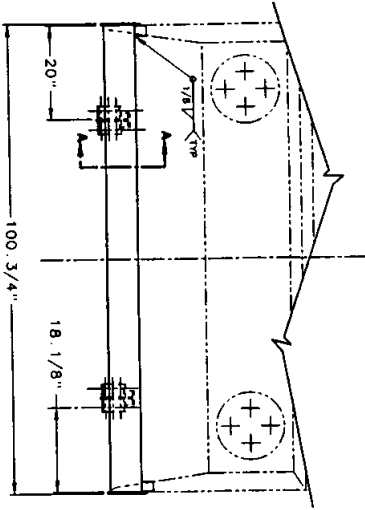
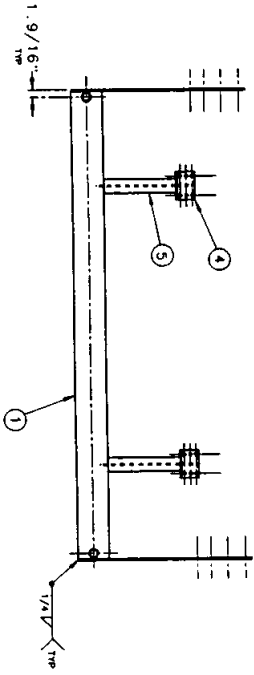
STANDARD	TO DIMENSIONS	REVISIONS	DATE	BY	CHKD
ASME	SECTION VIII	1	8/15/98	KDB	APPROVED
ASME	SECTION VIII	2			
ASME	SECTION VIII	3			
ASME	SECTION VIII	4			
ASME	SECTION VIII	5			
ASME	SECTION VIII	6			
ASME	SECTION VIII	7			
ASME	SECTION VIII	8			
ASME	SECTION VIII	9			
ASME	SECTION VIII	10			

FOREST FIRE EXPERIMENT STATION
 P.O. BOX 68
 ROSCOMBEN, MICHIGAN 48653

LIMB RISER DETAILS

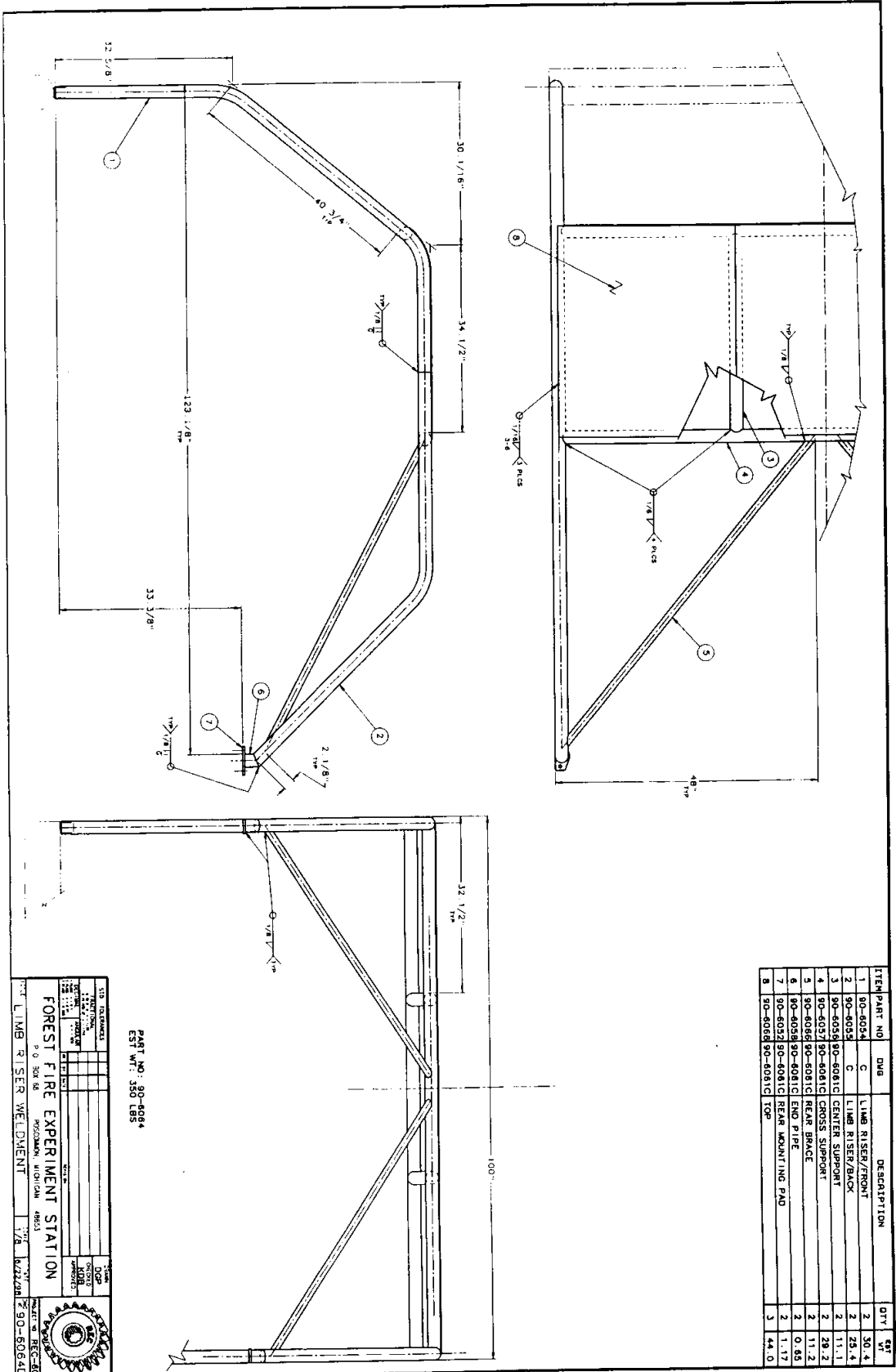
SCALE: 1/8" = 1'-0"
 DATE: 8/15/98
 PROJECT NO: REC-60
 DRAWING NO: 90-6061C

ITEM	PART NO	DWG	DESCRIPTION	QTY	EST WT
1	90-6060	90-6061C	BUMPER	1	158
2	90-6051	90-6053C	SIDEBAR SUPPORT	2	22.9
3	90-6049	90-6053C	CENTER SUPPORT	2	8.51
4	90-6050	90-6053C	MOUNT PLATE	2	4.78
5	90-6062	90-6067C	TEE SUPPORT	2	5.05
6	90-6059	90-6087C	MOUNT TUBE	2	0.76



PART NO: 90-6063
EST WT: 250 LBS

STD. DIMENSIONS	DESIGN	DATE	SCALE	DATE
PROJECT NO.	90-6063C		1/18	6/16/98
FOREST FIRE EXPERIMENT STATION				
P. O. BOX 68 ROSCOMMON, MICHIGAN 48653				
TITLE: BUMPER WELDMENT				
PROJECT NO. REC-60				



ITEM/PART NO	DMB	DESCRIPTION	QTY	WT
1	90-6054	C	2	30.4
2	90-6055	G	2	25.4
3	90-6056	90-6061C	2	11.1
4	90-6057	90-6061C	2	29.2
5	90-6068	90-6061C	2	11.2
6	90-6058	90-6061C	2	0.85
7	90-6052	90-6061C	2	1.17
8	90-6068	90-6061C	3	14.0

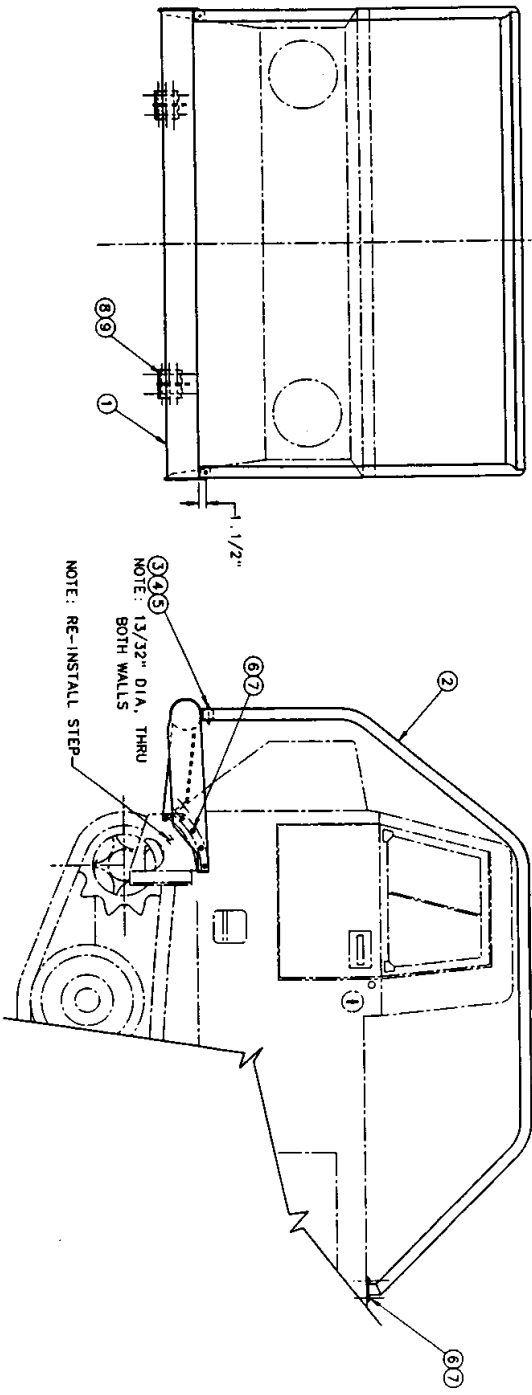
PART NO. 90-6084
 EST. WT.: 350 LBS.

FOREST FIRE EXPERIMENT STATION
 P. O. BOX 86
 MORGANTOWN, W. VIRGINIA 26503

FOREST FIRE EXPERIMENT STATION
 P. O. BOX 86
 MORGANTOWN, W. VIRGINIA 26503

90-6064D
 90-6064D

ITEM	PART NO	DMG	DESCRIPTION	QTY	EST
1	90-6063	C	BUMPER WELDMENT	1	250
2	90-6064	D	LIMB RISER WELDMENT	1	350
3	TS-06WG24		CAPSCREW 1/2" x 3/4" x 1/4" x 3/16"	2	
4	TS-06HP		NUT, HEX 3/4"-16 x 1/2"	2	
5	WS06-BC		WASHER, LOCK 3/4"-16 x 1/2"	2	
6	TS-08WG16		CAPSCREW 1/2" x 3/4" x 1/4" x 3/16"	12	
7	WS08-BC		WASHER, LOCK 1/2" x 3/4" x 1/2"	12	
8	TS-10WG16		CAPSCREW 5/8" x 1 1/4" x 1/4" x 3/16"	12	
9	WS10-BC		WASHER, LOCK 5/8" x 1 1/4" x 1/2"	12	

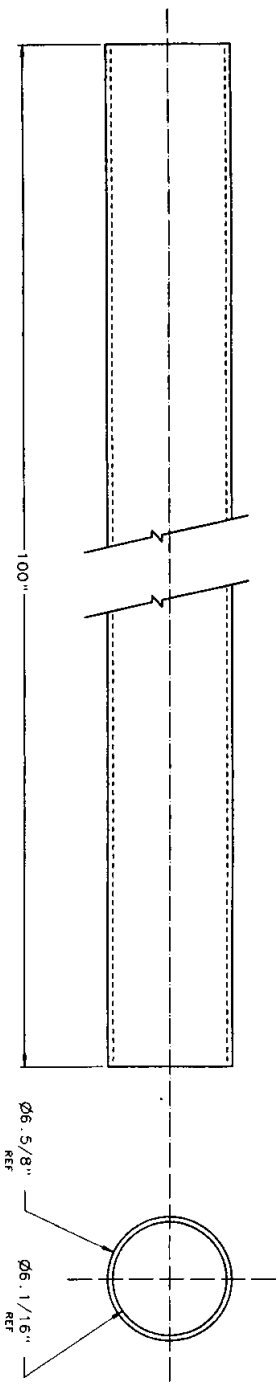


FOREST FIRE EXPERIMENT STATION
P. O. BOX 68
ROSCOMAN, MICHIGAN 48653

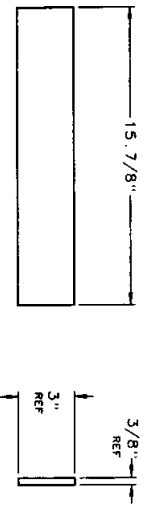
DATE: 6/22/98

PROJECT NO: REC-60
ITEM: BRUSH GUARD ASSEMBLY

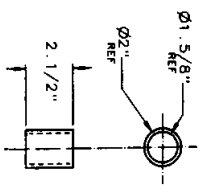
STD. TOE ENANCES	DRWING:
FRONT VIEW	DCP
REAR VIEW	OK'D:
RIGHT SIDE VIEW	ASSEMBLED:
LEFT SIDE VIEW	
ISOMETRIC VIEW	



BUMPER
 PART NO: 90-6060
 MAT'L: 2125 8" BLK, SCH 40
 K02504
 FFES SPEC NO: AF-04096AD
 EST WT: 158 LBS



TEE BRACE
 PART NO: 90-6062
 MAT'L: BAR, FLAT 3/8" X 3" HR
 G10200
 FFES SPEC NO: AB-00612AA
 EST WT: 5.05 LBS



MOUNT TUBE
 PART NO: 90-6059
 MAT'L: TUBE, RD 2" OD X 3/16" WA DOM
 G10260
 FFES SPEC NO: AD-20006AM
 EST WT: 0.78 LBS

STD. TOLERANCES		DIM.	
FRACTIONS	DECIMALS	DIAM.	RADIUS
±.005	±.005	±.005	±.005
±.010	±.010	±.010	±.010
±.015	±.015	±.015	±.015
±.020	±.020	±.020	±.020
±.030	±.030	±.030	±.030
±.040	±.040	±.040	±.040
±.050	±.050	±.050	±.050
±.060	±.060	±.060	±.060
±.070	±.070	±.070	±.070
±.080	±.080	±.080	±.080
±.090	±.090	±.090	±.090
±.100	±.100	±.100	±.100
±.120	±.120	±.120	±.120
±.150	±.150	±.150	±.150
±.200	±.200	±.200	±.200
±.250	±.250	±.250	±.250
±.300	±.300	±.300	±.300
±.400	±.400	±.400	±.400
±.500	±.500	±.500	±.500
±.600	±.600	±.600	±.600
±.700	±.700	±.700	±.700
±.800	±.800	±.800	±.800
±.900	±.900	±.900	±.900
±1.000	±1.000	±1.000	±1.000
±1.200	±1.200	±1.200	±1.200
±1.500	±1.500	±1.500	±1.500
±2.000	±2.000	±2.000	±2.000
±2.500	±2.500	±2.500	±2.500
±3.000	±3.000	±3.000	±3.000
±4.000	±4.000	±4.000	±4.000
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±40.000	±40.000	±40.000	±40.000
±50.000	±50.000	±50.000	±50.000
±60.000	±60.000	±60.000	±60.000
±80.000	±80.000	±80.000	±80.000
±100.000	±100.000	±100.000	±100.000

FOREST FIRE EXPERIMENT STATION
 P. O. BOX 68 ROSCOMMON, MICHIGAN 48853

BUMPER DETAILS SCALE: 1/4" = 1" DATE: 6/19/98

PROJECT NO. REC-60
 90-6067C