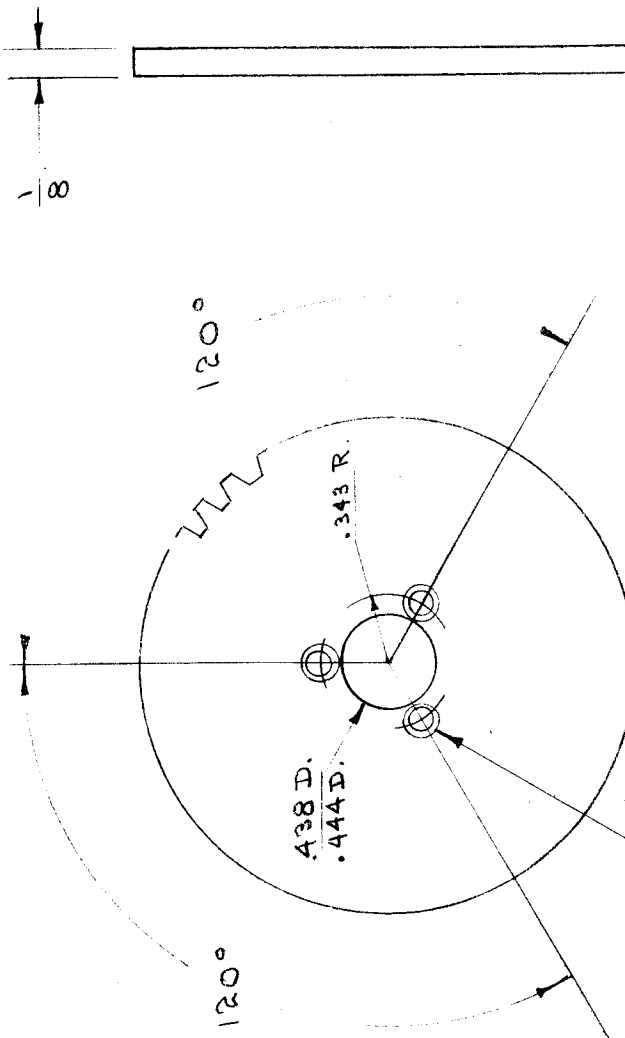


IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES



DRILL 1/8 (.125) D. THEN C' BORE 3/16 D (.187) X 1/16 (.062) DEEP. 3 HOLES REQ.

NO. OF TEETH 120
 PITCH 48
 PITCH DIAM. 2.5"
 PRESSURE ANGLE 14 1/2°
 (COMMERCIAL CLASS 3 TOL.)

GR-100 B.

USED ON		
MODEL	PROJECT NO.	ASSY. NO.
XTR	116	#
		DATE
		7-1-52

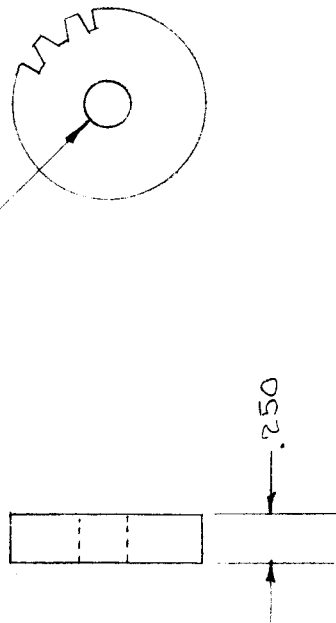
REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
	1/8 (.125)	THE TECHNICAL MATERIEL CORP. (MAMARONECK, NEW YORK)	
		PHENOLIC	
		LAMINATED GEAR STOCK	
		TYPE & TEMPER	
		HEAT TREAT. SPEC.	
		FINISH & SPEC. NO.	
		STOCK SIZE	
		WEIGHT PER PC.	
		C.D.D. 1-23-53	
		DRAWN	
		ELEC. DES. APP.	
		MECH. DES. APP.	
		CHECKED	
		FINAL APPROVAL	
		AMS 353	
		GR-100	
		B.	

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

— DRILL & REAM $\frac{.251}{.252}$

NOTE: REAM AFTER PLATING



NO. OF TEETH = 21
 PITCH = 32
 PITCH DIAM. = .656"
 PRESSURE ANGLE = 14 1/2°
 (COMMERCIAL CLASS 3 TOL.)

GR-101 B

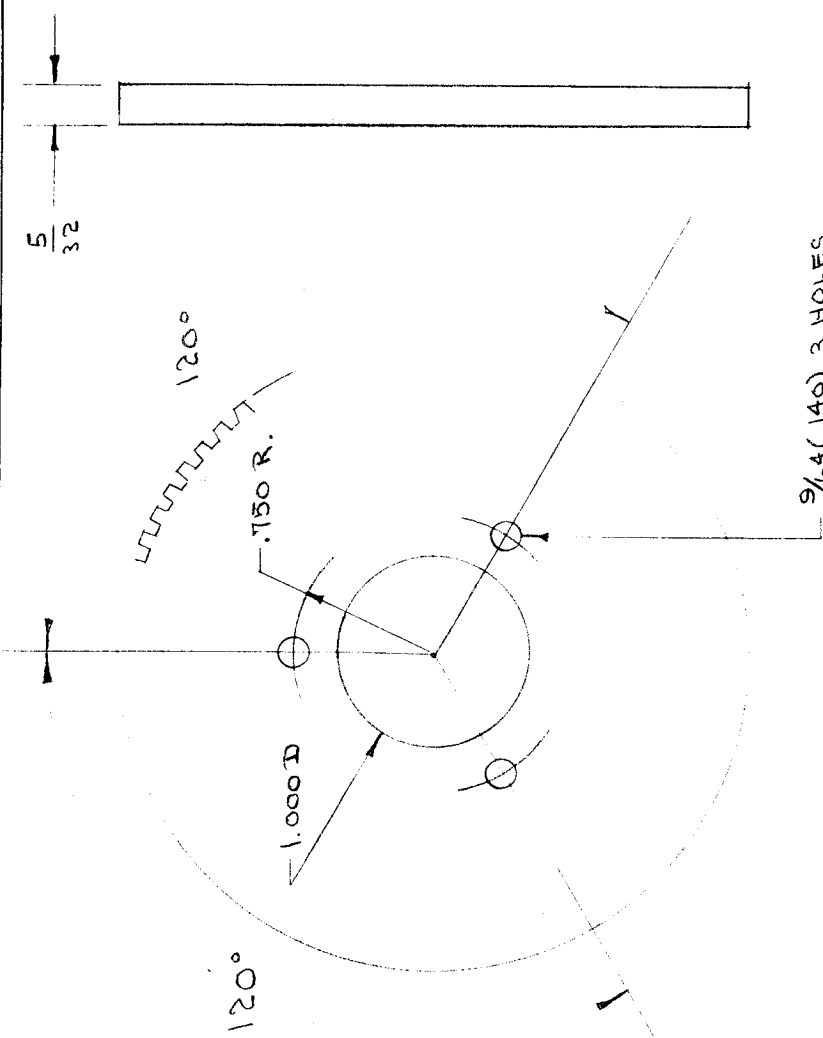
USED ON

MODEL	PROJECT NO.	ASSY. NO.	DATE
XTR	116	#	7-1-62

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
	#	THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
STOCK SIZE		DRIVE PINION	
MATERIAL	WEIGHT PER PC.		
BRASS	#		
HALF HARD			
TYPE & TEMPER			
#			
HEAT TREAT. SPEC.			
S-105	CADMIUM PLATE .0005		
FINISH & SPEC. NO.			
ISSUE ITEM	CHANGED FROM	DATE	CN. NO.
B 1 CLASS 3 TOL. ADDED		5/16/62	2
A	REDRAWN NO CHANGE	1/23/53	
SCALE			
DEC. DIM. ±			
FRAC. DIM. ±			
ANGULAR DIM. ±			
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.			
DRAWN	ELEC. DES. APP.	MECH. DES. APP.	
C.D.D. 1-23-54			
CHECKED			
JAD 1-28-53			
FINAL APPROVAL			
SUPERCEDES			
AMS 35A			
GR-101			
B			

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES



NO. OF TEETH 104
PITCH 32
PITCH DIAM. 3.25"
PRESSURE ANGLE 14 1/2°
(COMMERCIAL CLASS 3 TOL.)

GR-102 B

USED ON

MODEL	PROJECT NO.	ASSY. NO.	DATE
XTR	116	4	6-30-57

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
5/32(.156) THK.		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
PHENOLIC		FIBER BACK GEAR	
MATERIAL LAMINATED GEAR STOCK	WEIGHT PER PC.		
TYPE & TEMPER			
HEAT TREAT. SPEC.			
FINISH & SPEC. NO.			

DRAWN	ELEC. DES. APP.	MECH. DES. APP.
C.D.D. 1-23-53		
CHECKED		
JAD 1-28-53		
SUPERCEDES		
AMS-357		

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
B	1 CLASS 3 TOL. ADDED	5/16/57	2	PS	CDD	
A	REDRAWN NO CHANGE	1/23/53	1	CDD	JAD	
TOLERANCES						
SCALE 1/1						
DEC. DIM. ± .005						
OTHERS FRAC. DIM. ± 1/64						
ANGULAR DIM. ±						
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.						

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

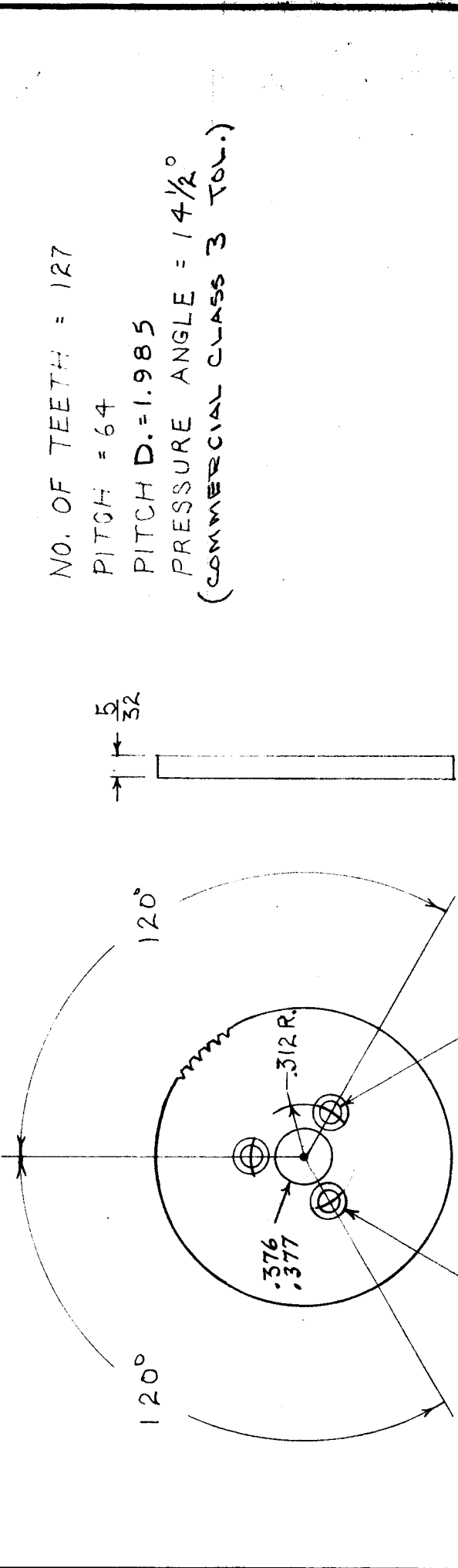
RELEASED

GR-103 **A**

USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
CK-1	#	-#	9-18-52
CK-2	168	A-268	12-5-52

T/MC NO	MATERIAL
GR-103-1	BRASS (HALF HARD)
GR-103-2	PHENOLIC-LAMINATED GEAR STOCK



COUNTER BORE — $\frac{9}{64}$ D. (.234) x $\frac{1}{16}$ DEEP
3 REQ'D

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR	
MATERIAL	WEIGHT PER PC.		
TYPE & TEMPER			
HEAT TREAT. SPEC.			
FINISH & SPEC. NO.			

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER	ENG. APP.
B 1	CLASS 3 TOL. ADDED	5/16/52	2	WDE	WDE
A 1	PHENOLIC GEAR ADDED	9/28/52	1	WDE	WDE

SCALE	FINAL
TOLERANCES	
DEC. DIM. ±	
FRAC. DIM. ±	
ANGULAR DIM. ±	
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.	

DRAWN	ELEC. DES. APP.	MECH. DES. APP.
WBC 9/18/52		WDE 9/23/52
CHECKED		
WBC 9/23/52		

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

RELEASED

GR-104

D

USED ON

DATE

9-22-52

ASSY. NO.

A-211

PROJECT NO.

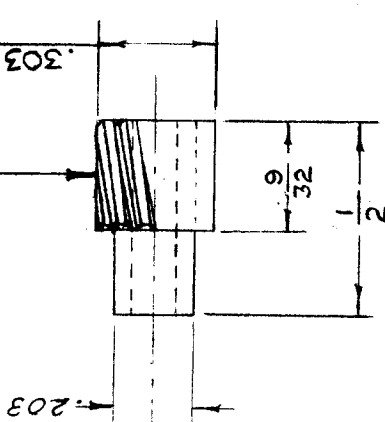
151

MODEL

TWR-115

ANGLE AS SHOWN

HOLE FOR PRESS FIT ON
.1250 DIA. MOTOR SHAFT.
.1248



HELICAL GEAR
NO. OF TEETH = 12
PITCH DIA. = .261
HELIX ANGLE = 17°
PRESSURE ANGLE = 20°
OUTSIDE DIA. = .303
REAL DIA. PITCH = .46
NORMAL DIA. PITCH } = 48
(PITCH OF CUTTER)
(COMMERCIAL CLASS 3 TOL.)

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
D 1	ADD. PRESS ANGLE = 20°	4.4.57	15031	MR	CP	gmb
C 1	DIMENSION .203 ADDED	6-3-57	3	RB	CS	MR
B 1	CLASS 3 TOL. ADDED	5-15-57	2	RB	CS	MR
A 1	NOR. PITCH ADDED	7-10-57	1	RB	CS	MR

TOLERANCES
SCALE 2" TO 1"

DEC. DIM. ± .0105
FRAC. DIM. ± .04
ANGULAR DIM. ±

DRILL, PUNCH, COMMERCIAL STOCK
SIZES AND MANUFACTURERS
TOLERANCES ARE NOT INCLUDED.

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
	H	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
STOCK SIZE	H	HELICAL PINION GEAR	
MATERIAL			
CARBON			
TYPE & TEMPER	H		
HEAT TREAT. SPEC.			
FINISH & SPEC. NO.			

DRAWN: *L. J. Gabel*
CHECKED: *HAQ. 11/6/57*
ELEC. DES. APP. *MR*
MECH. DES. APP. *HA*

FINAL APPROVAL
GR-104

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

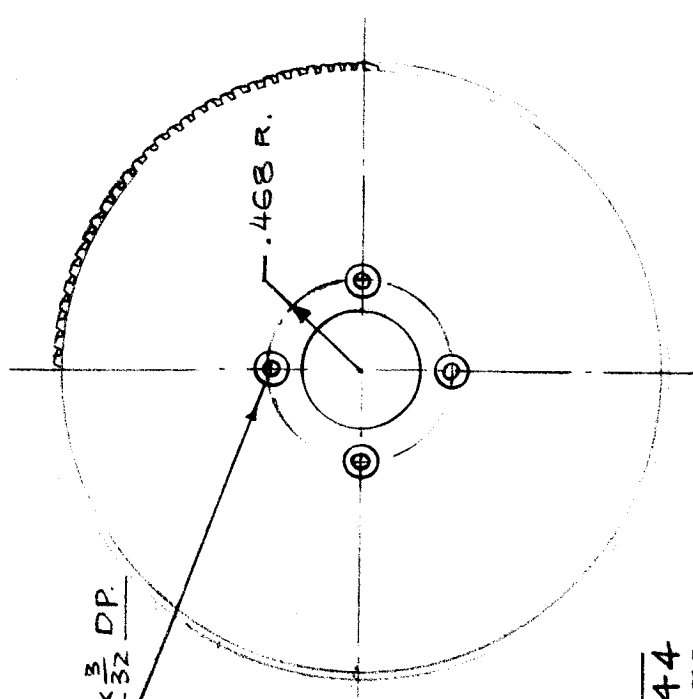
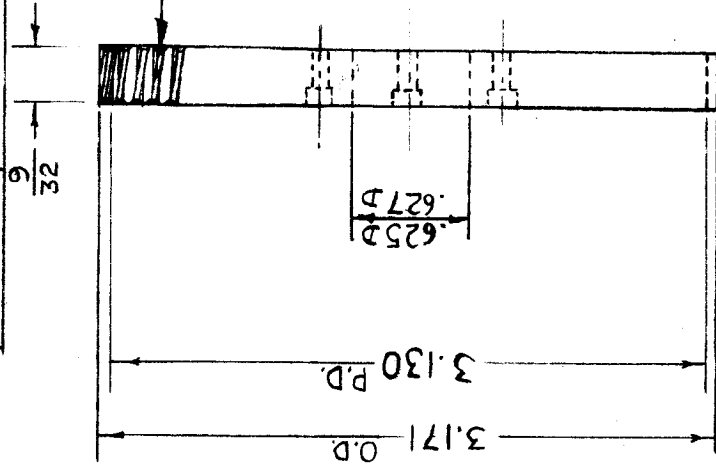
RELEASED

GR-105

C

USED ON

MODEL	PROJECT NO.	ASSY. NO.	DATE
TWR-115	151	A-230	9-22-52



1 D. (125) - BORE $\frac{3}{16}$ DIA X $\frac{3}{32}$ DP.
4 HOLES

HELICAL GEAR

NO OF TEETH = 144
 HELIX ANGLE = 17°
 PRESSURE ANGLE = 20°
 PITCH DIA. = 3.130
 OUTSIDE DIA. = 3.171
 REAL DIA. PITCH = 46
 NORMAL DIA. PITCH = 48
 (PITCH OF CUTTER) = 48
 (COMMERCIAL CLASS 3 TOV.)

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
C 1	ADD. PRESS. ANGLE 20°	4-4-57	18031	MR	JAY	PM
B 1	CLASS 3 TOV. ADDED	5/6/53	1	MB	JAY	PM
A 1	NOV. PITCH ADDED	7/19/48	1	MB	JAY	PM

TOLERANCES

ALL	DEC. DIM. $\pm .005$
OTHERS	FRACTIONAL DIM. $\pm \frac{1}{64}$
	ANGULAR DIM. \pm

SCALE FULL SIZE
 DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
	9/32 THK.	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
LAMINATED STOCK SIZE		HELICAL GEAR	
MATERIAL	WEIGHT PER PC.		
L FABRIC			
LINEN BASE			
TYPE & TEMPER			
HEAT TREAT. SPEC.			
FINISH & SPEC. NO.			

DRAWN	ELEC. DES. APP.	MECH. DES. APP.
11/14/52		
CHECKED	FINAL APPROVAL	
	GR-105	
	C	

RELEASED

GR-106

A

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

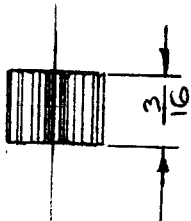
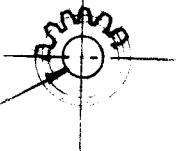
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

MODEL PROJECT NO. ASSY. NO. DATE

CK-2 168 A-262 11-18-52

HOLE FOR PRESS FIT ON
 $\frac{1.250}{.1248}$ DIA. MOTOR SHAFT.



PINION GEAR
 NO. OF TEETH = 13
 PITCH = 64
 PITCH DIA. = .203
 PRESSURE ANGLE = $14\frac{1}{2}^\circ$
 (COMMERCIAL CLASS 3 TOL.)

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
	ff	THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
STEEL	ff	PINION GEAR	
MATERIAL	WEIGHT PER PC.		
CARBON			
TYPE & TEMPER			
ff			
HEAT TREAT. SPEC.			
ff			
FINISH & SPEC. NO.			
			GR-106 A

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER	ENG. APP.
A 1	CLASS 3 TOL. ADDED	5/16/55	1	PB	DDC

SCALE 2"=1"

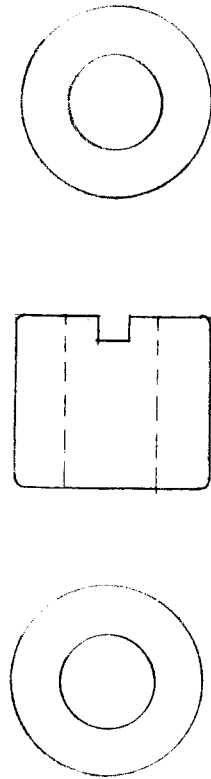
TOLERANCES

DEC. DIM. \pm	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.
FRAC. DIM. \pm	
ANGULAR DIM. \pm	

16 11-18-52
 DRAWN PAB
 CHECKED PAB
 ELEC. DES. APP. PAB
 MECH. DES. APP. PAB
 FINAL APPROVAL PAB
 4/7/65

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES



45° HELIX ANGLE
 1 1/2° NORMAL PRESSURE ANGLE
 2A DIAMETRAL PITCH
 33.94 NORMAL PITCH
 3/8" FACE
 1/4" HOLE
 10 TEETH
 .417" PITCH DIAM.
 3/32" X 1/16" KEYWAY ON END
 (COMMERCIAL CLASS 3 TOL.)

GR-107 B

USED ON

REQ PER UNIT	MODEL	PROJECT NO.	ASSY. NO.	DATE
	YOX-1	101	A-421	3-10-53

REF: BOSTON GEAR WORKS - CAT. NO. H2A10R.

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
#		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
STOCK SIZE		GEAR, HELICAL	
MATERIAL	—#—		
WEIGHT PER PC.		YOX	
HARDENED			
TYPE & TEMPER		CDD 5/19/54	
#		DRAWN	
		ATT	
		ELEC. DES. APP.	
		MECH. DES. APP.	
HEAT TREAT. SPEC.		CHECKED	
TEETH POLISHED		FINAL APPROVAL	
FINISH & SPEC. NO.		GR-107	B

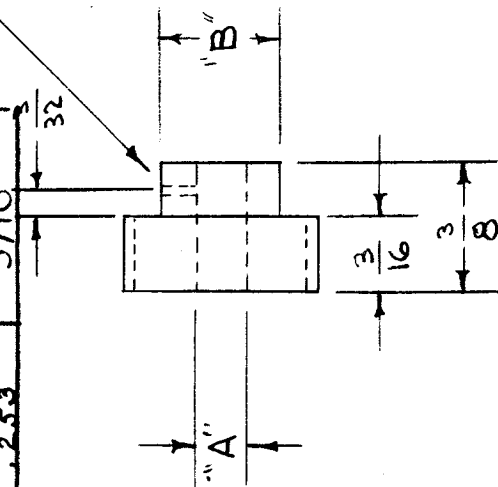
B	1	CLASS 3 TOL. ADDED	5/16/54	2	10	200	WDE
A	1	REDRAWN - DATA ADDED	5/19/54	1	CDD	100	WDE
ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.	
TOLERANCES							
SCALE #							
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.							
ALL OTHERS	DEC. DIM. ±	FRAC. DIM. ±	ANGULAR DIM. ±				

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

TMC P/NO	DIMENSIONS	
	A	B
GR109-1	.186 .187	5/16
GR109-2	.250 .253	3/8
GR109-3	.319 .323	5/16

.0625
HOLE REQ.



48 PITCH
22 TEETH
1/24" PD
14 1/2° PRESSURE ANGLE
(COMMERCIAL CLASS 3 TOL.)

GR-109 D

USED ON

REQ. PER UNIT	MODEL	PROJECT NO.	ASSY. NO.	DATE
1	A-1000	101	A-422	9-24-51

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
	#	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
	STOCK SIZE	GEAR, PINION	
	STAINLESS STEEL	(MAIN GEAR ASSY.)	
	MATERIAL	C.D.D. 3-11-54	WOL
	WEIGHT PER PC.	ATT	
	TYPE & TEMPER	ATT	
	HEAT TREAT. SPEC.	ATT	
	FINISH & SPEC. NO.	ATT	

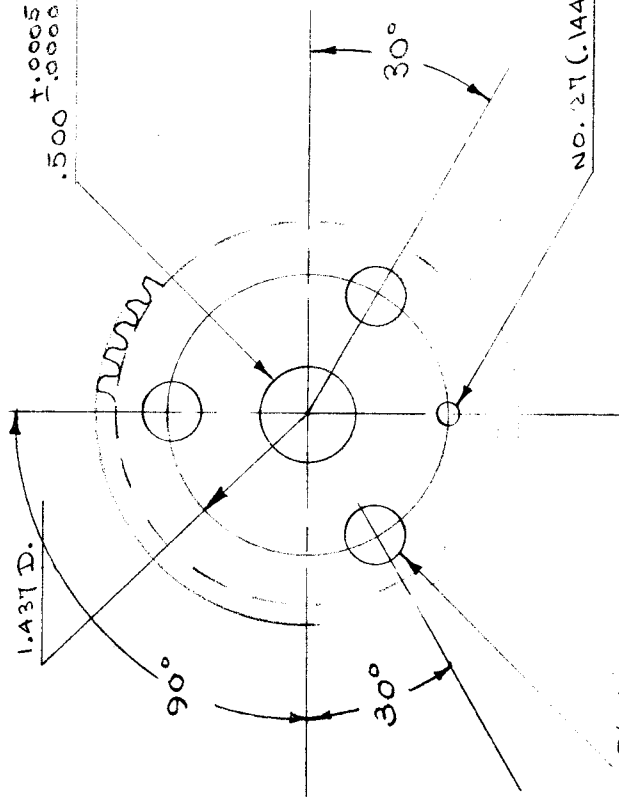
ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
D	GR109-3 ADDED TO TMC P/L	10-28-74	21482	GR	GR	KA
C	DIMS "A" WAS .186/187, "B" WAS 5/16 - CHART ADD	3-7-74	2147	GR	GR	CL
B	PRO. VOK. RTF REF	6/8/56	2	HAB	HAB	WOL
A	CLASS 3 TOL. ADDED	5/8/50	1	GR	GR	WOL
	REDRAWN - NO CHANGE	7/1/54		C.D.D.	HAB	WOL

TOLERANCES
DEC. DIM. ± .005
FRAC. DIM. ± 1/64
ANGULAR DIM. ±

DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES



REMOVE ALL BURRS

NOTE:
48 PITCH
14 1/2° PRESSURE ANGLE
2 1/2" P.D. - 100 TEETH SPUR GEAR
(COMMERCIAL CLASS 3 TOL.)

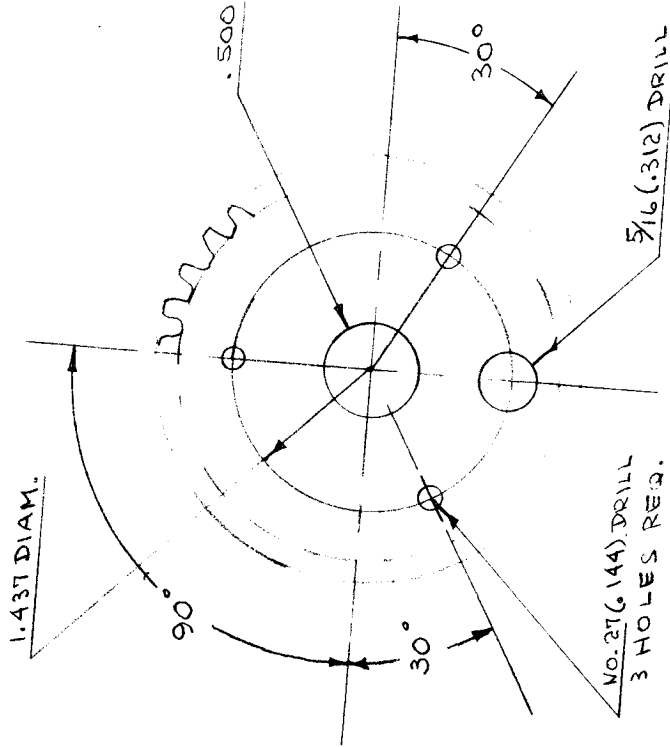
SLIDING FIT ON HUB (see Drawg PM-182)

GR-110		A	
QTY PER UNIT	1	USED ON	
		PROJECT NO.	101
MODEL	A-1000	ASSY. NO.	A-336
DATE			1-14-53

A 1	CLASS 3 TOL. ADDED	5/16/53	1	10	000	WJ
ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
TOLERANCES						
DEC. DIM.	± .005					
FRAC. DIM.	± 1/64					
ANGULAR DIM.	± 1°					
ALL OTHERS		DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.				

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
.064		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
STOCK SIZE			
MATERIAL	BRASS	FREE GEAR	
WEIGHT PER PC.			
TYPE & TEMPER	HALF HARD		
HEAT TREAT. SPEC.			
FINISH & SPEC. NO.			
DRAWN		C.D.D. 1-14-53	WJ
CHECKED		AJT	WJ
ELEC. DES. APP.		AJT	WJ
MECH. DES. APP.		AJT	WJ
FINAL APPROVAL			
SUPERCEDES		GR-110	A
AMS-220C			

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES



LIGHT PRESS FIT ON HUB THEN BRAZED. (See DWG PM-182)

NOTE
 AB PITCH
 1 1/2° PRESSURE ANGLE
 2 1/2 P.D. 100 TEETH SPUR GEAR.
 (COMMERCIAL CLASS 3 TOL.)

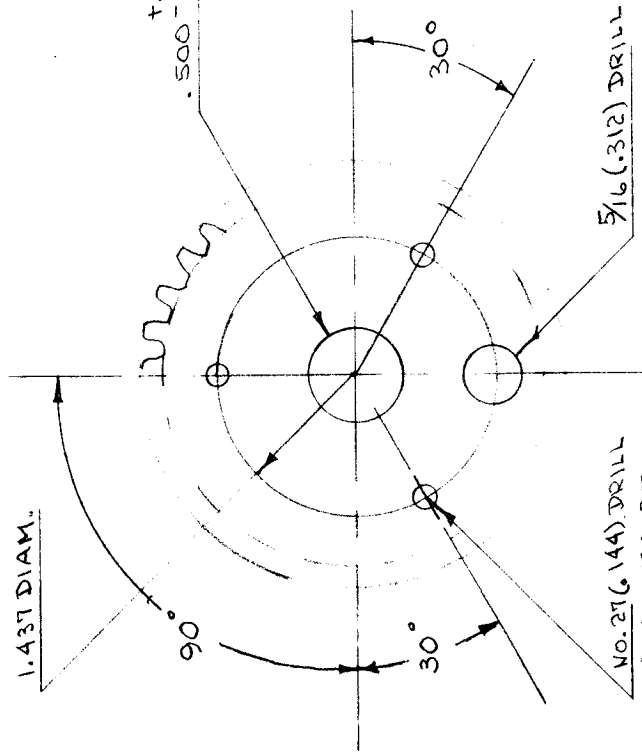
QTY PER UNIT	MODEL	PROJECT NO.	USED ON
1	A-1000	101	
ASSY. NO. A-336			DATE 8/13/5

GR-111

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
	• 06A	THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
STOCK SIZE		FIXED GEAR	
MATERIAL	BRASS		
TYPE & TEMPER	HALF HARD		
HEAT TREAT. SPEC.			
FINISH & SPEC. NO.			
DRAWN	C.D.D.	ELEC. DES. APP. AJT	MECH. DES. APP. WJC
CHECKED	JAG	FINAL APPROVAL	WJC
AM3221-C			GR-111

ISSUE	NO. 1	CLASS 3 TOL. ADD.	5/6/5	DATE	1/25/5	CHECKER	ENG. APP.
TOLERANCES							
ALL	DEC. DIM. ± .005						
OTHERS	FRAC. DIM. ± .004						
	ANGULAR DIM. ± 10						
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.							

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.		GR-111		A	
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES		USED ON			
QTY PER UNIT	MODEL	PROJECT NO.	ASSY. NO.	DATE	
1	A-1000	101	A-336	X/13/53	



NOTE
 AB PITCH
 1 1/2° PRESSURE ANGLE
 2 1/2 P.D. 100 TEETH SPUR GEAR
 (COMMERCIAL CLASS 3 TOL.)

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
.06A		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
STOCK SIZE			
BRASS	H	FIXED GEAR	
MATERIAL	WEIGHT PER PC.		
HALF HARD			
TYPE & TEMPER			
H			
HEAT TREAT. SPEC.			
H			
FINISH & SPEC. NO.			

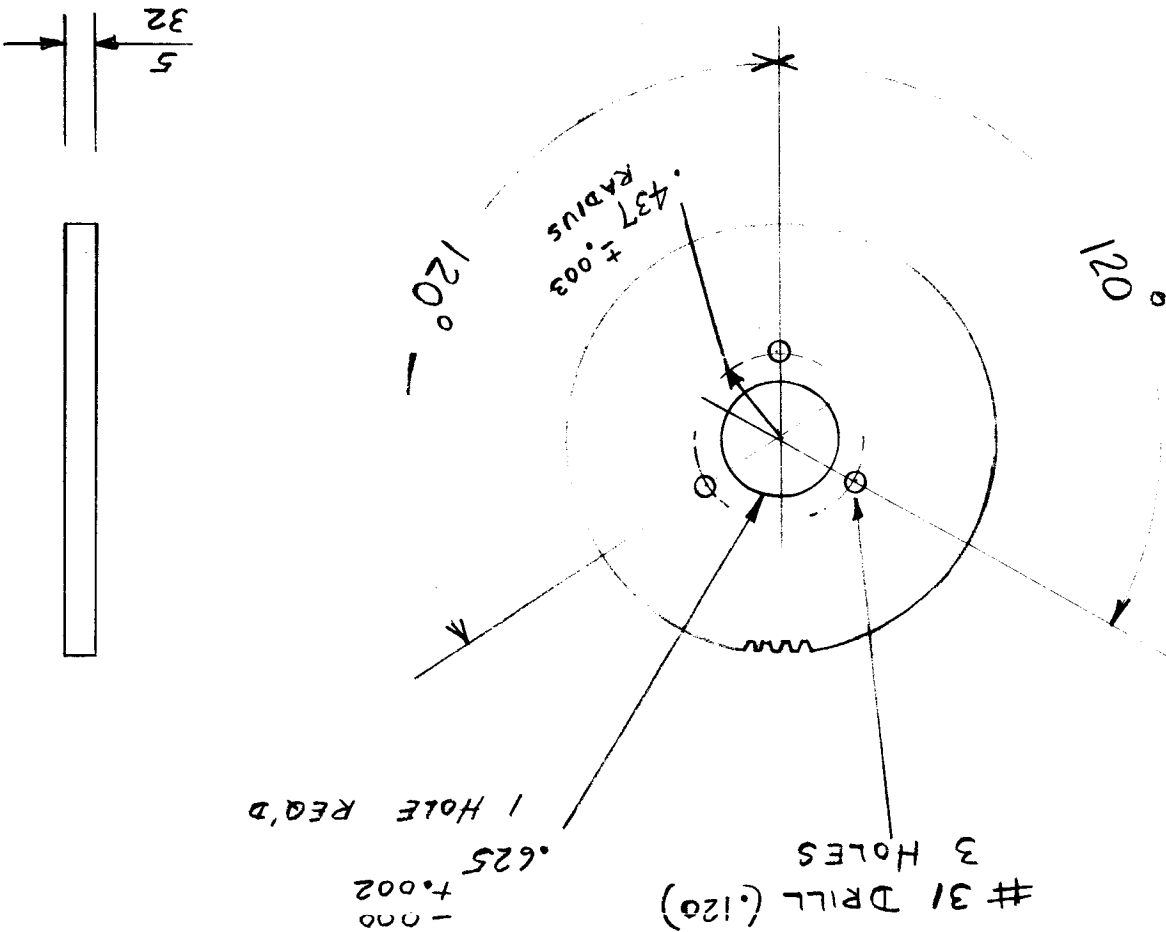
ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER	ENG. APP.
A 1	CLASS 3 TOL. ADD.	5/16/50	1	RS	WDC
TOLERANCES					
SCALE					
DEC. DIM. ± .001					
FRAC. DIM. ± .004					
ANGULAR DIM. ± 10					
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.					

APPD. <i>PTB</i>	MODEL CKI	SHEET	NO. GR-114
CHKD.	DRIVEN SPUR GEAR	OF	
DRN. <i>PTB</i>			
DATE 6-2-52			

THE TECHNICAL MATERIEL CORPORATION
MAMARONECK, NEW YORK

MATERIAL: HALF HARD BRASS SHEET $\frac{5}{32}$ (.156) THICK
(COMMERCIAL CLASS 3 TOL.)

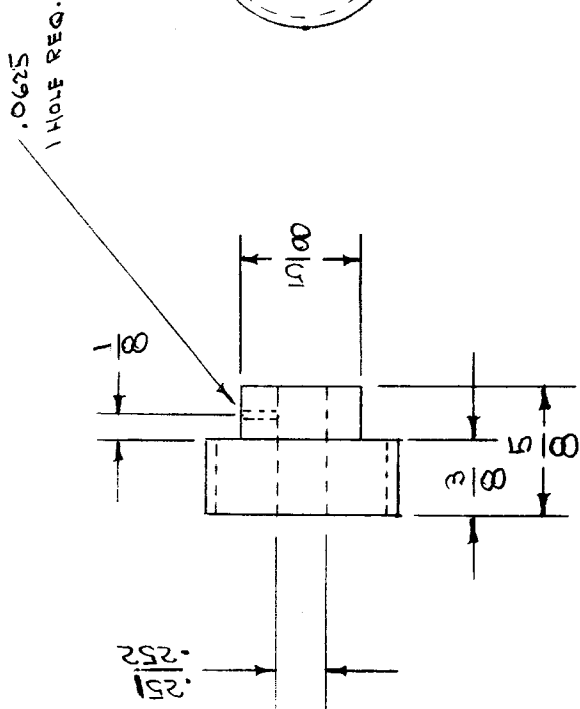
NO TEETH = 70
PITCH = 32
PITCH DIA. = 2.18"
PRESSURE ANGLE = 20°



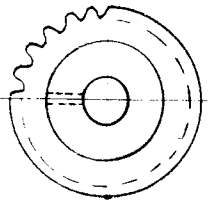
ISSUE ITEM	A	1	CLASS 3 TOL. ADDED
CHANGED FROM	DATE	DRN. NO.	DRN. NAME

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES



48 PITCH
55 TEETH
1.1458 P.D.
14 1/2° PRESSURE ANGLE
(COMMERCIAL CLASS 3 TOL.)



GR-115 B

USED ON

REG. PER UNIT

MODEL

PROJECT NO.

ASSY. NO.

DATE

B	1	PMO, VOX, RTF REF DELETED	6/8/56	2	WJC
A	1	CLASS 3 TOL. ADDED	5/8/57	1	WJC
ISSUE ITEM		CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER/ENG. APP.
TOLERANCES					
SCALE					
DEC. DIM. ± .005					
FRAC. DIM. ± 1/64					
ANGULAR DIM. ±					
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.					

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
STAINLESS STEEL		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
MATERIAL	WEIGHT PER PC.	GEAR, STEP UP	
TYPE & TEMPER			
HEAT TREAT. SPEC.			
FINISH & SPEC. NO.			
DRAWN		ELEC. DES. APP.	MECH. DES. APP.
CHECKED		FINAL APPROVAL	
C.D.D. 3-11-54		GR-115 B	

REQ. PER UNIT
2

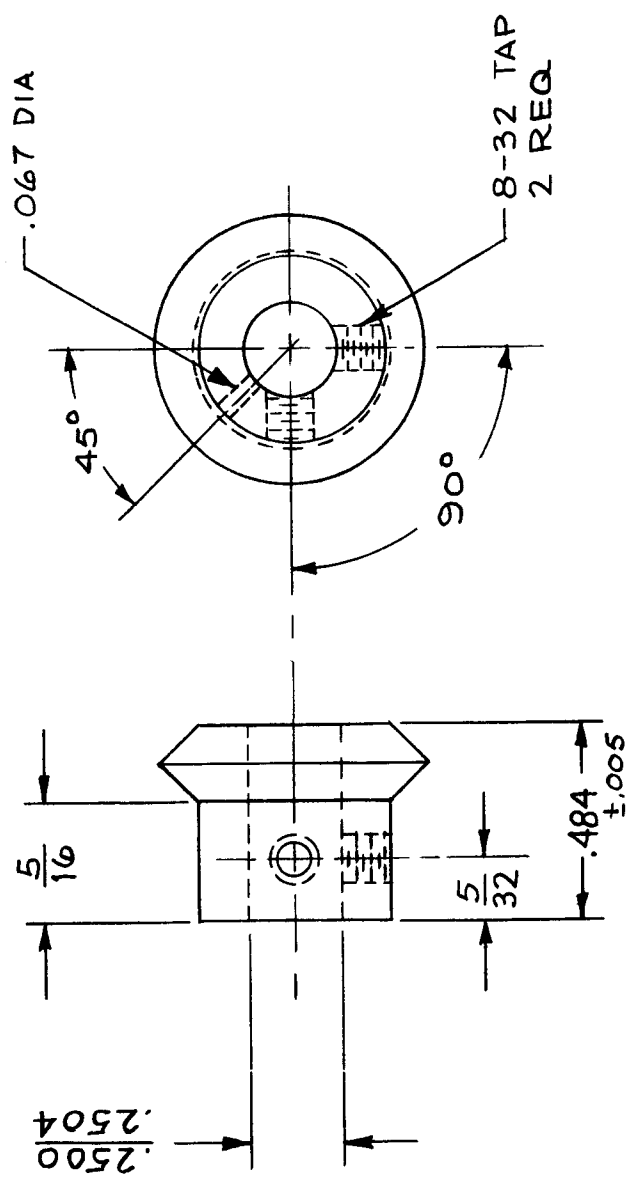
USED ON
MODEL
PMO

ASSY. NO.
285

DATE
7-23-54

GR-116 E

PRESSURE ANGLE - 20°
 PITCH DIA. _____ .600
 PITCH _____ 20
 TEETH _____ 12
 FACE _____ .12
 HOLE _____ $\frac{.2500}{.2504}$
 HUB PROJ _____ $\frac{5}{16}$
 (COMMERCIAL CLASS 3 TOL.)

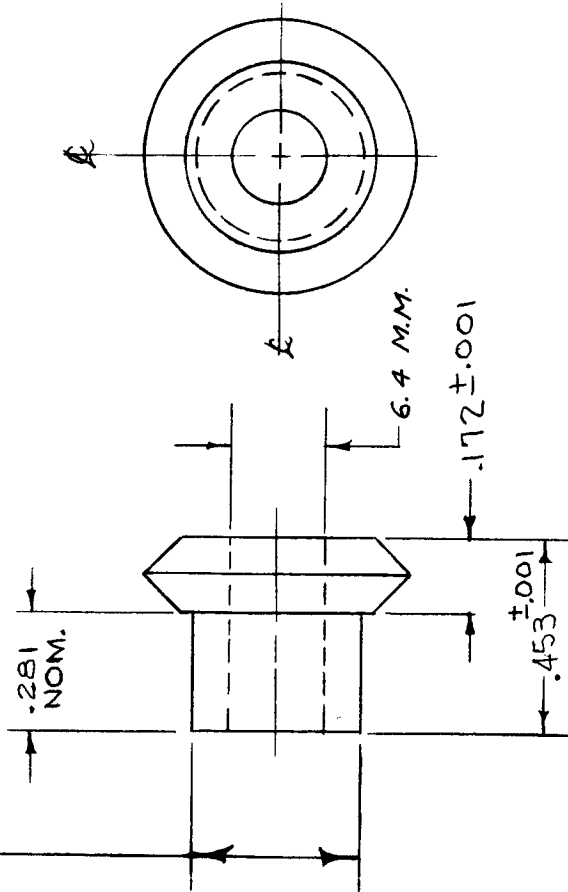


REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR, MITER	
		STOCK SIZE BRASS	
		MATERIAL	
		FREE MACRINING	
		TYPE & TEMPER	
		CHROMIUM PLATED .0003	
		FINISH & SPEC. NO.	
		CD.D 7-23-54	
		DRAWN	
		CHECKED	
		FINAL APPROVAL	
		A.J.J.	
		ELEC. DES. APP.	
		MECH. DES. APP.	
		GR-116	
		E	

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

TURN FOR TIGHT FIT OF COLLAR (SEE PM-335)



PRESSURE ANGLE - 20°
 PITCH DIA. - .600
 PITCH - 20
 TEETH - 12
 FACE - .12
 HOLE - 6.4 M.M. (.2519)D.
 HUB PROJ. - .281
 (COMMERCIAL CLASS 3 TOL.)

REF: A-939 MITER GEAR ASSEMBLY

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
	#	THE TECHNICAL MATERIEL CORP.	
		MAMARONECK, NEW YORK	
		GEAR, MITER	
DELFIN	#		
MATERIAL	WEIGHT PER PC.		
	#		
TYPE & TEMPER			
HEAT TREAT. SPEC.			
FINISH & SPEC. NO.			

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
C 1	DWG UPDATED AND CLARIFIED PER EMN NO. 10198	10/14/63	10198	AW	AW	AW
B 2	5/32 WAS 5/16	4/1/64	2	AW	AW	AW
A 1	25/64 " 3/164	5/16/64	1	AW	AW	AW
	CLASS 3 TOL. ADDED					
TOLERANCES						
SCALE,						
DEC. DIM. ±						
FRAC. DIM. ± 1/64						
ANGULAR DIM. ±						
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.						

USED ON			
REQ. PER UNIT	MODEL	PROJECT NO.	DATE
2	VOX-1		2-25-55
2	VOX-2		2-25-55
2	PMO-2		2-1-56
2	RTF		2-1-56
2	RTF-2		11-10-58

GR-117 C

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

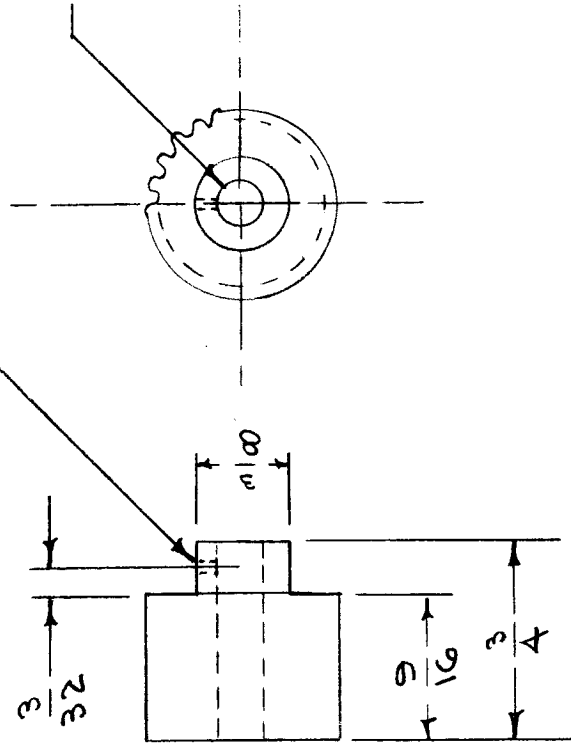
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

GR-118 A

USED ON

REQ. PER UNIT	MODEL	PROJECT NO.	ASSY. NO.	DATE
1	NO X - 2			A-14-SK
1	PMD - 2			A-14-SS
1	RTF			6/8/56
1	TRTF-2	F/P		11-10-58

No. 52 (.063) DIA.



6.4 (.2519) M.M.

22 TEETH
 AB PITCH
 1A 1/2 PRESSURE ANGLE
 1 1/24" P.D.
 (COMMERCIAL CLASS 3 TOL.)

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER	ENG. APP.
A	CLASS 3 TOL. ADDED	5/16/58	1	AS	WDC

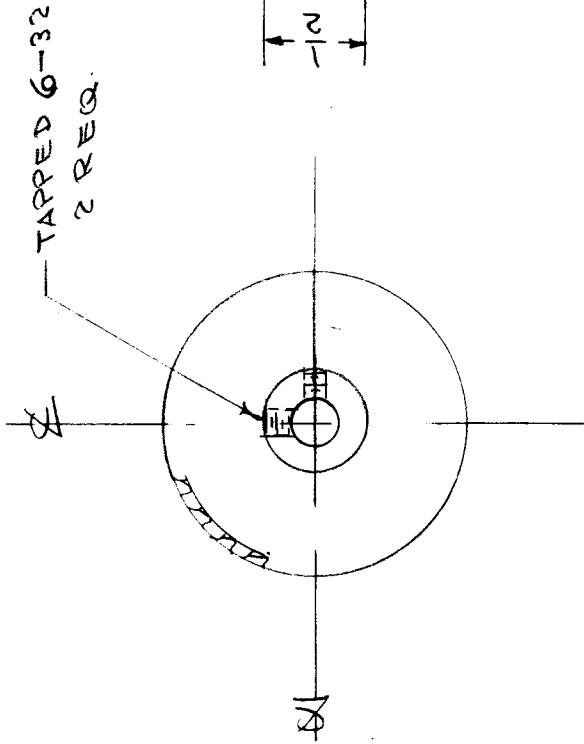
TOLERANCES
 DEC. DIM. ±
 FRAC. DIM. ± 1/64
 ANGULAR DIM. ±

SCALE
 DRILL, PUNCH, COMMERCIAL STOCK
 SIZES AND MANUFACTURERS
 TOLERANCES ARE NOT INCLUDED.

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
		ALUMINUM	
		MATERIAL	
		WEIGHT PER PC.	
	2024-T4		
		TYPE & TEMPER	
		HEAT TREAT. SPEC.	
		FINISH & SPEC. NO.	
		YELLOW IRIDITE	
		DRAWN	
		ELEC. DES. APP.	
		MECH. DES. APP.	
		CHECKED	
		FINAL APPROVAL	
		GR-118 A	

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES



NOTE: SUPPLIED BY MFR.
6-32 X 1/8 LONG
HEXAGONAL SOCKET SET SCREWS
2 REQ.

TEETH ----- 2 A
PITCH DIA. ----- 1.500
DIAMETRAL PITCH ----- 16
NORMAL PITCH ----- 22.63
NORMAL PA ----- 1 1/2°
FACE ----- 1/2"
LEFT HAND GEAR ----- 45°
HELIX ANGLE ----- 45°
COMMERCIAL TOL. CLASS 3

NOTE:
MESHES WITH GR-128

REF: NEW JERSEY GEAR WORKS

REQ. PER UNIT	MODEL	PROJECT NO.	ASSY. NO.	DATE
1	RTF			7-28-55

GR-124 A

USED ON

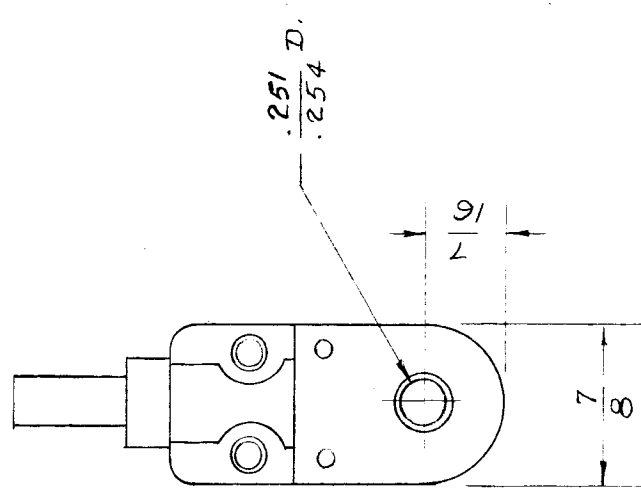
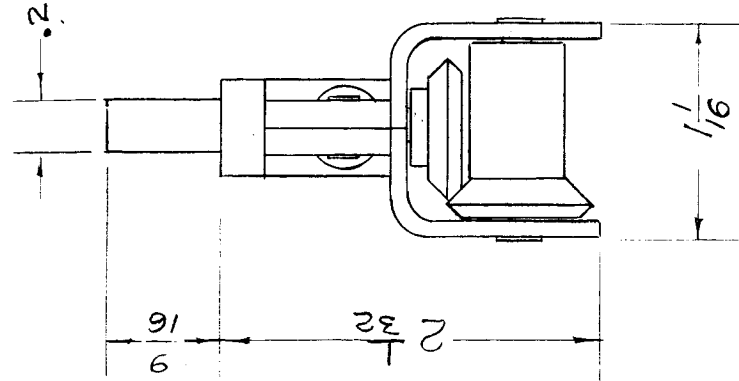
REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP.	
		MAMARONECK. NEW YORK	
STEEL		GEAR, HELICAL	
MATERIAL	WEIGHT PER PC.		
HARDENED		POW/AMP	
TYPE & TEMPER		CDD.	
HEAT TREAT. SPEC.		DRAWN	ELEC. DES. APP.
		Checked	MECH. DES. APP.
FINISH & SPEC. NO.		Checked	FINAL APPROVAL
		GR-124	A

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER	ENG. APP.
A 2	WAS 2 REQ	7/25/56	1	JAK	OOD
TOLERANCES					
SCALE					
DEC. DIM. ±					
FRAC. DIM. ±					
ANGULAR DIM. ±					
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.					

REQ. PER UNIT	MODEL	USED ON	DATE
1	RTF	ASSY. NO.	10/26/55
1	RTF-2	MULT	11-20-58

GR-125 B

+0.0006
-0.0014



REF: NATIONAL CO. TRAD # C25769-3

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
		RIGHT ANGLE DRIVE	
		MULTIPLIER	GPT-750
		DRAWN	A. J. J.
		CHECKED	FINAL APPROVAL
		ELEC. DES. APP.	MECH. DES. APP.
		FINISH & SPEC. NO.	GR-125 B

ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
B	2 1/32 WAS 2	8/4/58	1		JAR	AKM
A	1 9/16 WAS 1	1-20-56	1		JAR	AKM

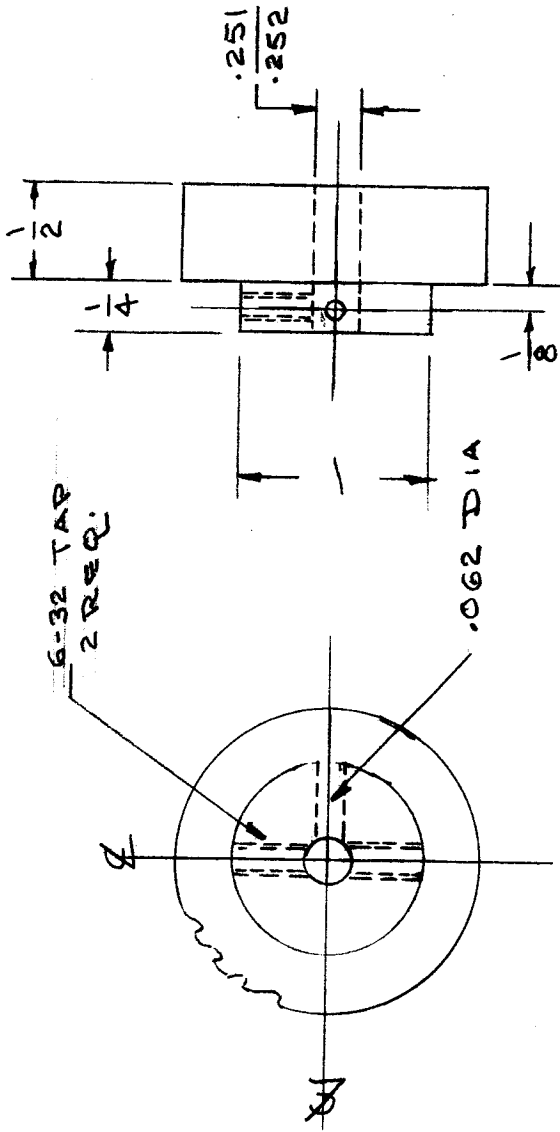
TOLERANCES

DEC. DIM. ±
 FRAC. DIM. ±
 ANGULAR DIM. ±

SCALE:
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

REF. UNIT	USED ON	M DEL	DATE
1	RTF	A-1569	4/29/58
1	RTF-2	P/A	11/10/58

GR-128 A



TEETH 24
 PITCH DIA 1.500
 DIAMETRAL PITCH 16
 NORMAL PITCH 22.63
 NORMAL PA 14 1/2
 FACE 1
 LEFT HAND GEAR 450
 HELIX ANGLE 450
 COMMERCIAL TOL. CLASS 3

MESHES WITH GR-124
 OR
 GR-138

SUPPLIED BY MFG.
 G-32 X 3/8 LONG, HEX SOCKET SET SCREWS
 2 REQ.

REF: NEW JERSEY GEAR WORKS

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
		GEAR, HELICAL	
		P/A	GRT-750
FM-10001		NYLON	
		MATERIAL	
		TYPE & TEMPER	HEAT TREAT. SPEC.
		DRAWN	CHECKED
			FINAL APPROVAL
		ELEC. DES. APP.	MECH. DES. APP.
		FINISH & SPEC. NO.	

SCALE:

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

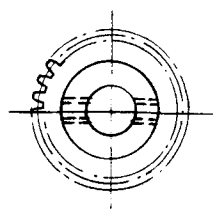
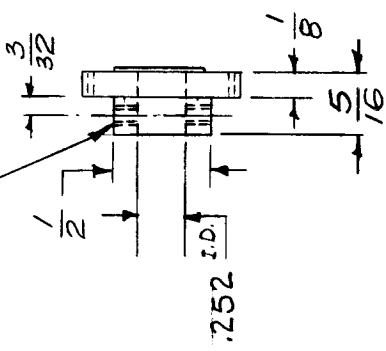
DEC. DIM. ±
 FRAC. DIM. ±
 ANGULAR DIM. ±

REQ. PER UNIT	USED ON		DATE
	MODEL	ASSY. NO.	
1	SBE-1		7-22-57
1	SBE-2		5-5-58
1	SBE-3	AP-100	11-30-59

GR-129 A

Pitch Diameter - .750"
 Diametral Pitch - 48
 Number of teeth - 36
 Pressure Angle - 14 1/2°

Dr. & tap 6-32 - 2 Req.
 Class 2



REF: NEW JERSEY GEAR WORKS

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
		STOCK SIZE Linen Base Phosphoric Gear - Brass Hub.	
		MATERIAL	
		672267	RWP
		TYPE & TEMPER	CHECKED
		HEAT TREAT. SPEC.	90B
		FINISH & SPEC. NO.	90B
		ELEC. DES. APP.	MECH. DES. APP.
			GR-129 A

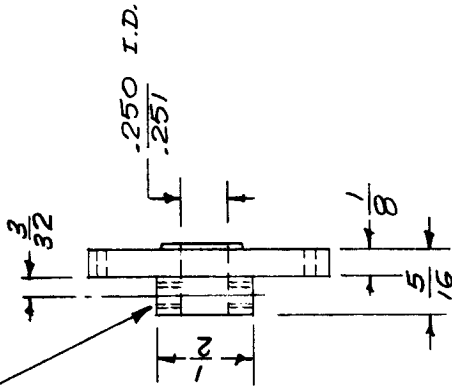
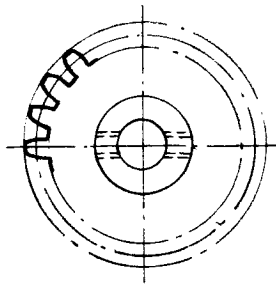
2-28-64 4285 RU JCS JWB
 DATE CH. NO. DRAFTS CHECKER ENG. APP.
 SCALE: FULL 1-1003
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

DEC. DIM. ± .0015
 FRAC. DIM. ± 1/64
 ANGULAR DIM. ±

REQ. PER UNIT	MODEL	USED ON
		ASS'Y. NO.
		DATE
		7-22-57

GR-130

Dr. & tap 6-32 Class 2
2 Req.



Pitch Dia. - 1.1458"
 Diametral Pitch - 48
 Number of Teeth - 55
 Pressure Angle - 14 1/2°

Ref. New Jersey Gear Works

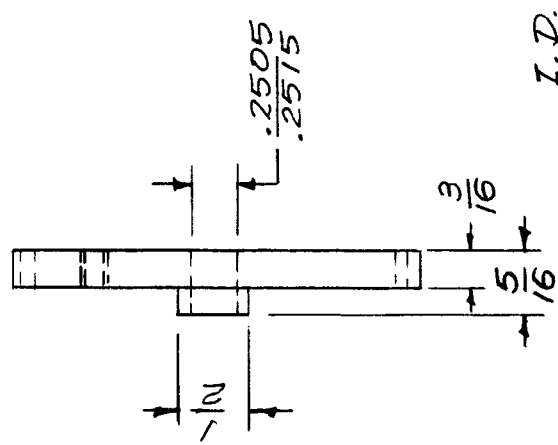
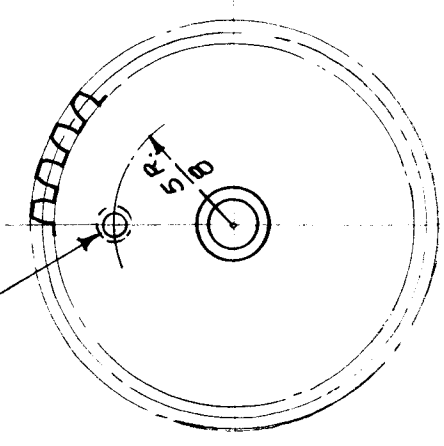
REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP.	
		MAMARONECK.	NEW YORK
		Linien Base Phenolic	
		Gear - Brass Hub	
		MATERIAL	
		167-22-57	
ISSUE ITEM	CHANGED FROM	DATE	CH. NO.
TOLERANCES			
SCALE: FULL			
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.			
REMOVE ALL BURRS AND SHARP EDGES			
DEC. DIM. ±			
FRAC. DIM. ±	1/64		
ANGULAR DIM. ±			
		CHECKED	FINAL APPROVAL
		RWP	JW
			GR-130
		ELEC. DES. APP.	MECH. DES. APP.

REQ. PER UNIT	MODEL	USED ON
	ASBY. NO.	DATE
1	SBE-1	7-23-57
1	SBE-2	5-5-58
1	SBE-3	AP-100 11-30-59

GR-131

Pitch Dia. — 2.000"
 Pitch — 48
 No. of Teeth — 96
 Pressure Angle — 14 1/2°

Dr. & Tap G-32 Class 2



I.D. and P.D. must be concentric within .0015 F.I.R.

REF: NEW JERSEY GEAR WORKS

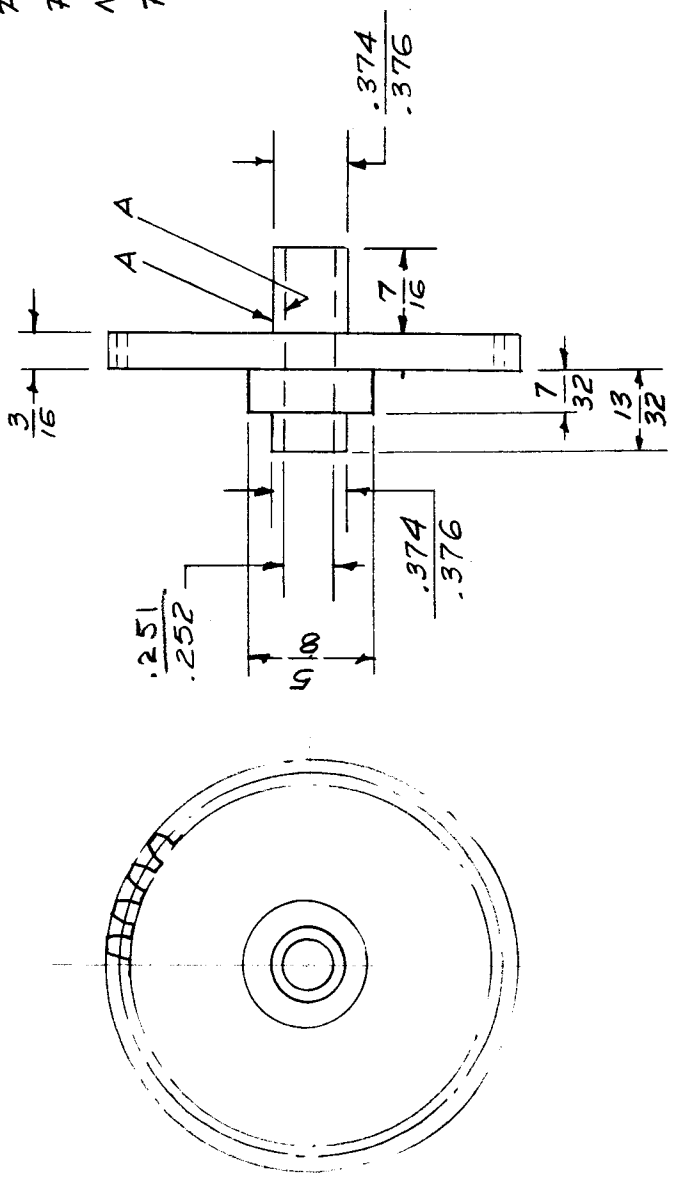
REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR, SPUR, 2" P.P.	
ISSUE ITEM	CHANGED FROM	TOLERANCES	
		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	
DEC. DIM. ±			
FRAC. DIM. ±			
ANGULAR DIM. ±			
TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED
Yellow Anodize		24S-T3	67-23-57
FINISH & SPEC. NO.		FINAL APPROVAL	
		GR-131	

USED ON		MODEL	ASSY. NO.	DATE
REQ. PER UNIT	1	SBE-1		7-23-57
	1	SBE-2		5-5-58
	1	SBE-3	AP-100	11-30-59

GR-132

Note - "A" Surfaces must be concentric to within .0015 F.I.R. with the Pitch Dia.

Pitch Dia. — 2"
 Pitch — 48
 No. of Teeth — 96
 Pressure Angle — 14 1/2°



REF: NEW JERSEY GEAR WORKS

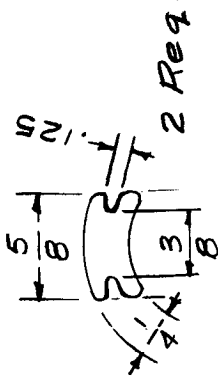
REQ. ITEM	C 1	13/32 WAS 3/8 7/32 x 5/8 D. Bushing Add.	12/2/57	3	16	ALU	CHK	PART NO.		DESCRIPTION	SYMBOL
	B 1	.252 WAS .2505	10/11/57	2	JAG	J.D		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK			
	A 1	MATERIAL WAS ALUMINUM	9/17/57	1	B	DB		GEAR, SPUR, 2" P.D., SPECIAL HUB			
ISSUE ITEM		CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	MATERIAL			
							1-1002	HALF HARD			
								TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	FINAL APPROVAL
										DB	GR-132
								FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.

TOLERANCES
 DEC. DIM. ±
 FRAC. DIM. ± 1/64
 ANGULAR DIM. ±

STANDARD DRAWING

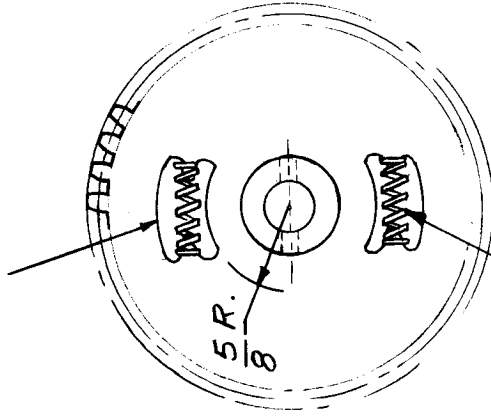
GR-133 C

USED ON		DATE
REQ. PER UNIT	ASBY. NO.	
1	SBE-1	7-23-57
1	SBE-2	5-5-58
1	SBE-3	AP-100
		11-30-59

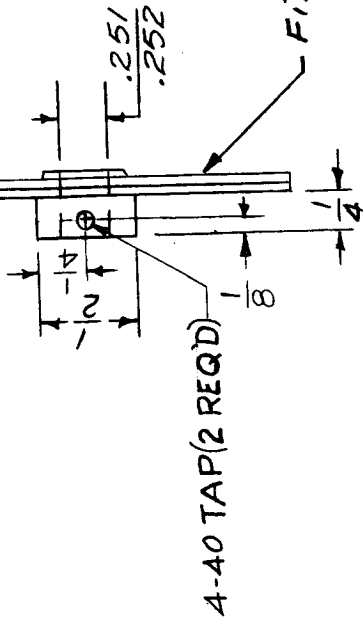


Approx. .003 Spacing between Gears.

Pitch Dia. — 2"
 Pitch — 48
 No. of Teeth — 96
 Pressure Angle — 14 1/2°
 Comm. Class 3 Tol.
 Type — Anti-backlash



Free Gear



4-40 TAP (2 REQ'D)

Fixed Gear

Spring suitable to prevent backlash. - 2 Req.
 Spring must not bind.
 Use TMC SP-122

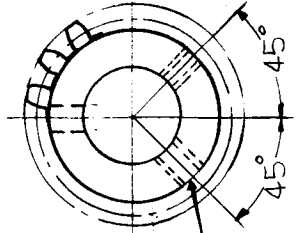
Note - Lubricate lightly between gears.

ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL	
C		12-29-64	13185	9 F.	@				THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	C	
B		4/13/64	11163	AM.	Jude JC		.032 thk (each gear) STOCK SIZE		GEAR, SPLIT, 2" P.D.		
A		12/19/57	1	16	Jude JNO		ALUMINUM MATERIAL				
TOLERANCES		SCALE: S401-194	1-1000				245 T3				
DEC. DIM. ±		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.									
FRAC. DIM. ±		REMOVE ALL BURRS AND SHARP EDGES									
ANGULAR DIM. ±											
TYPE & TEMPER		HEAT TREAT. SPEC.		DRAWN		CHECKED		FINAL APPROVAL			
S404 YELLOW IRIDITE				Jude		Jude		Jude		GR-133 C	
FINISH & SPEC. NO.											

GR-134 A

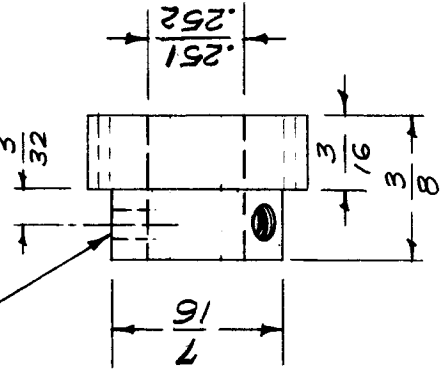
USED ON		MODEL	DATE
REQ. PER UNIT	ASSY. NO.	SBE-1	7-23-57
1		SBE-2	5-5-58
1		SBE-3	11-30-59
1	AP-100	CHG-1,2	5-10-60
1	AX-275	GPT-40K	5-2-62

0.065 D



DRILL & TAP FOR 4-40
2 REQ.

Pitch Dia. — 11/24"
Pitch — 48
No. of Teeth — 22
Pressure Angle — 14 1/2°
Comm. Class 3 Tol.



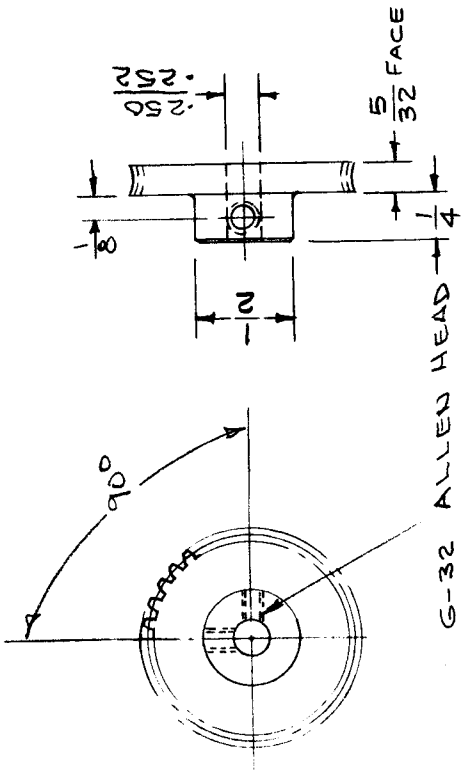
REF: NEW JERSEY GEAR WORKS

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
		GEAR, SPUR, 11/24" P.D.	
		STOCK SIZE Stainless Steel	
		MATERIAL	
		TYPE & TEMPER	
		HEAT TREAT. SPEC.	
		FINISH & SPEC. NO.	
		ELEC. DES. APP.	
		MECH. DES. APP.	
		DRAWN	
		CHECKED	
		FINAL APPROVAL	
			GR-134 A

ISSUE ITEM
A 1 Draft For 4-40 Added
CHANGED FROM
DATE 5-2-62
CH. NO. 6616
DRAFTS [JF]
CHECKER [MF]
ENG. APP. [DB]
SCALE: 2 X
2-706
TOLERANCES
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.
REMOVE ALL BURRS AND SHARP EDGES

DEC. DIM. ±
FRAC. DIM. ± 1/64
ANGULAR DIM. ±

RE. PER UNIT	MODEL	ASS.
1	ATS-50TU	12-18-57
1	ATS-70TU	12-18-57



Pitch Diam. — 1.042"
 Pitch — 48
 No. of Teeth — 50
 Pressure Angle — 14 1/2°
 Threads — Right Hand Single Type

MATES WITH WORM - GR-137

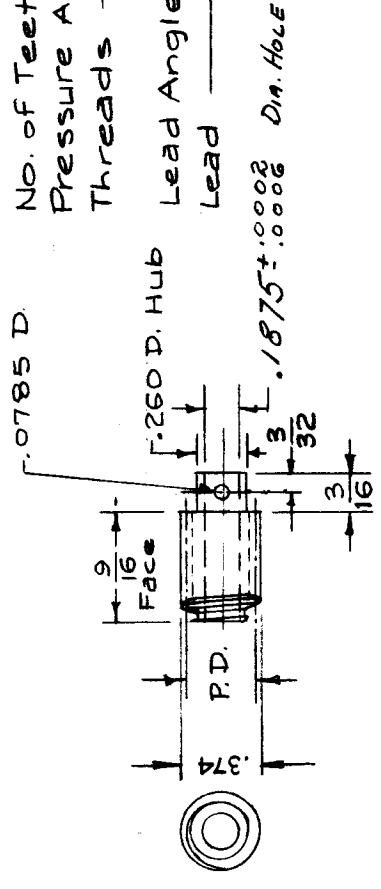
REF - BOSTON GEAR # G1021

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
	A	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR, WORM, 1.042 PD, R.H.	
		BRONZE	
		MATERIAL	
		TYPE & TEMPER	
		HEAT TREAT. SPEC.	
		FINISH & SPEC. NO.	
ISSUE ITEM	DATE	CH. NO.	DRAFTS
A 1	2/24/58	1	ADD 16 gear
			CHECKER
			ENG. APP.
TOLERANCES			
SCALE: FULL			
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES			
DEC. DIM. ±			
FRAC. DIM. ± 1/64			
ANGULAR DIM. ±			
	DRAWN	CHECKED	FINAL APPROVAL
	GR	ANISE	GR-136 A
	16 12/18/57		

REQ. PER UNIT		USED ON	
1	MODEL	ASSY. NO.	DATE
1	ATS-50TU		12-18-57
1	ATS-70TU		12-18-57
1	ATS-50(70)TU-2		6-8-59

GR-137 C

O/A OUTSIDE DIA. .374
 Pitch Diam. (P.D.) .333"
 Pitch 48
 No. of Teeth 8
 Pressure Angle 14 1/2°
 Threads Right Hand Single Type
 Lead Angle 3° 35'
 Lead .0654

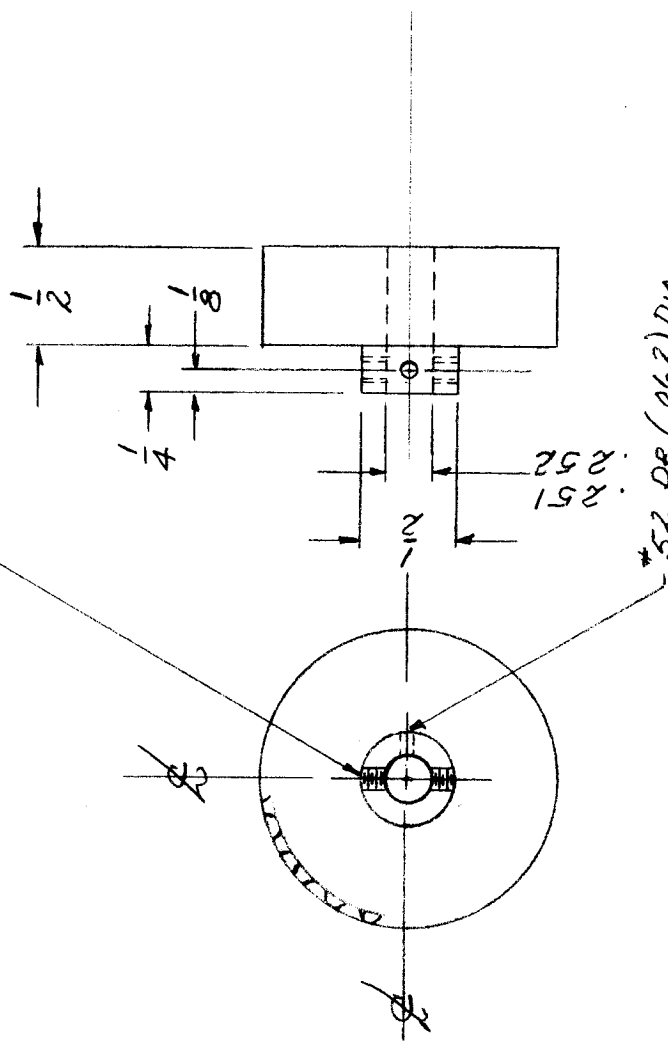


MATES WITH WORM GEAR - GR-136 & GR-146

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
C 1		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
B 1		WORM, .333 P.D., R.H.	
A 1		STEEL	
ISSUE ITEM	CHANGED FROM	TOLERANCES	
		SCALE: 5-401-15 (LSH)	
		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	
		DEC. DIM. ±	
		FRAC. DIM. ± 1/64	
		ANGULAR DIM. ±	
		TYPE & TEMPER	
		HEAT TREAT. SPEC.	
		NICKEL PLATE S-135	
		FINISH & SPEC. NO.	
		MATERIAL	
		STOCK SIZE	
		16 1/23/58	
		DRAWN	
		CHECKED	
		FINAL APPROVAL	
		16 1/23/58	
		ANSI	
		A. J. J.	
		GR-137 C	

REQ. PER UNIT	1	MODEL	RTF-2	ABBY. N.	P/A	DATE	11-5-58
USED ON		GR-138					

TAPPED 6-32 - 2 REQ.



(2) 6-32 X 1/8 LONG HEXAGONAL SOCKET SET SCREWS: SUPPLIED BY MFR.

GEAR DATA

TEETH 24
 PITCH DIA. 1.500
 DIAMETRAL PITCH 16
 NORMAL PITCH 22.63
 NORMAL PA 1 1/2
 FACE 1/2"
 LEFT HAND GEAR - 45°
 HELIX ANGLE - 45°
 COMMERCIAL TOL. CLASS 3

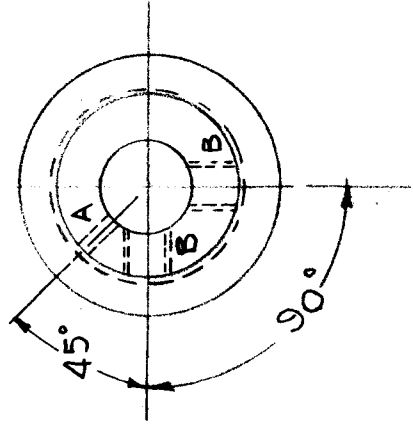
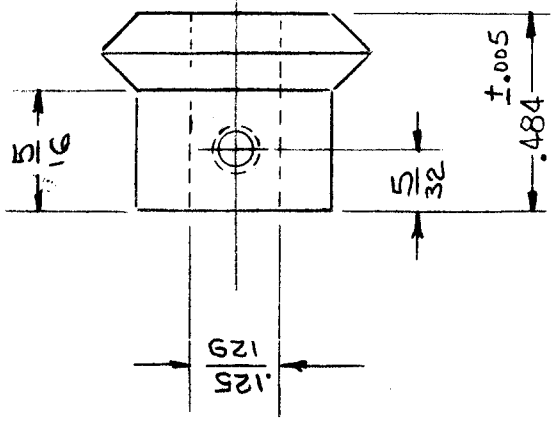
NOTE - MESHES WITH GR-128

REF.: NEW JERSEY GEAR WORKS

ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REG. ITEM	PART NO.	DESCRIPTION	SYMBOL	
TOLERANCES							THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK GEAR, HELICAL				
DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±							STOCK SIZE STEEL MATERIAL HARDENED TYPE & TEMPER HEATTREAT. SPEC. FINISH & SPEC. NO.				
SCALE: FULL SIZE MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTI N. REMOVE ALL BURRS AND SHARP EDGES							11-5-58 DRAWN CHECKED ELEC. DES. APP MECH. DES. APP				
							POW/AMP FINAL APPROVAL GR-138				

UNIT	UNIT	UNIT	UNIT
1	2	3	4
GR-139	GR-139	GR-139	GR-139

A ~ #52 (.0635) DR - 1 Req.
 B ~ 4-40 TAP - 2 Req.



Pressure Angle — 20°
 Pitch DIA. — .600
 Pitch — 20
 Teeth — 12
 Face — .12
 Hole — .125
 Hub Proj. — 5/16
 Commercial — CL-3 TOL.

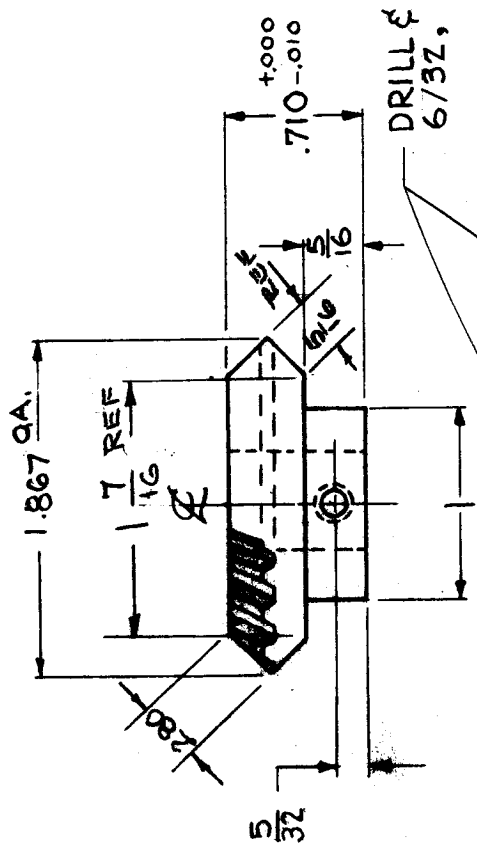
ISSUE ITEM	CHANGED FROM	DATE	CH. N.	DRAFTS	CHECKER	ENG. APP.
E 1	(2) "B" HOLES WERE	1-19-63	8036		Hole	
D 2	B-32 TAP	11-15-62	1644		ep	
C 1	ON SPECS. HOLE WAS 1/8 DIA. AND TOLERANCE ADDED DIM. WAS .005 ±	9/21/59	1317		mc	
B 1	"A" WAS (.067) D. HOLE	6/8/59			J.C.B.	
A 1	0 "A" Hole added	3/29/59			Hole	
	3-40-1-18 (L-98Y) DELETED					

REQ. ITEM	PART NO.	DESCRIPTION	SYMB L
		THE TECHNICAL MATERIAL CORP.	
		MAMARONECK, NEW YORK	
		GEAR, MITER	
		BRASS	
		STOCK SIZE	
		MATERIAL	
		FREE MACHINING	
		TYPE & TEMPER	
		HEAT TREAT. SPEC.	
		Chrome Plate.0003	
		FINISH & SPEC. NO.	
		GR-139	

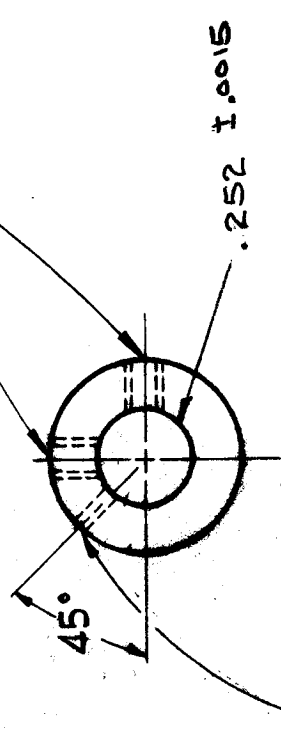
SCALE:
 MAXIMUM ALL WABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTI N. REMOVE ALL BURRS AND SHARP EDGES

TOLERANCES
 DEC. DIM. ±
 FRAC. DIM. ±
 ANGULAR DIM. ±

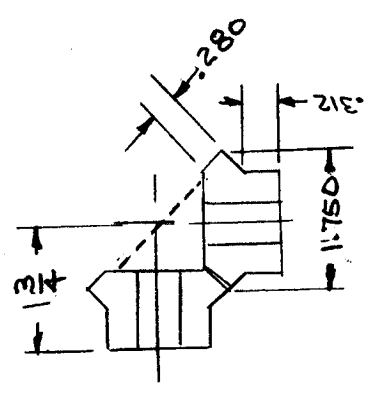
REV. NO.	ISS. BY	DATE
1	GR-140	12-12-58
2	GR-140	12-12-58



DRILL & TAP, CL-2
6/32, 2REQ'D.



PITCH DIA. ~ 1.750
 NO. OF TEETH ~ 21
 PRESSURE ANGLE ~ 20°
 PITCH ~ 12
 FACE - .280
 HOLE DIA - .252 ±.0015
 HUB PROJ. - .312

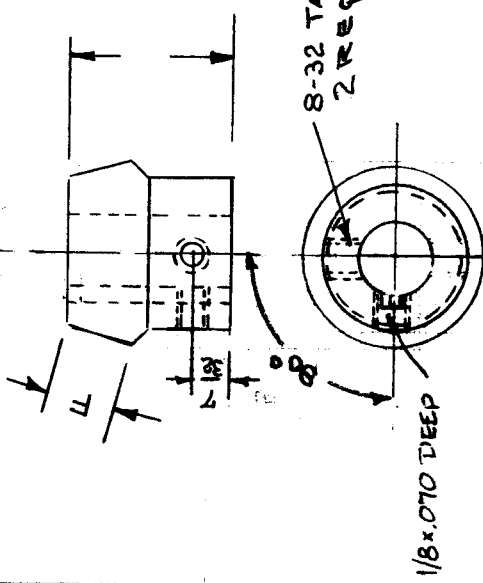
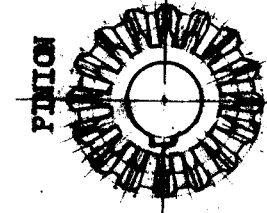


REV.	ISS. BY	DATE	REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
D	GR-140	12/17/59	1317	anc	THE TECHNICAL MATERIEL CORP.	
C	GR-140	12/14/59		fld	MAMARONECK, NEW YORK	
B	GR-140	12/14/59		J.C.B.	GEAR, BEVEL	
A	GR-140	12/14/59		997	BRASS	
ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	REPTS. CORRECTED	MATERIAL	
					CHROME PLATE COOR	
					J.C. BIELE	
					DRAWN	
					FINAL	
					GR-140	

DEC. DIM. ±
 FRAC. DIM. ± 1/64
 APPROVALS

GR-141

#52 (.0635) D.P. 1/8" KEYWAY .070 DEEP

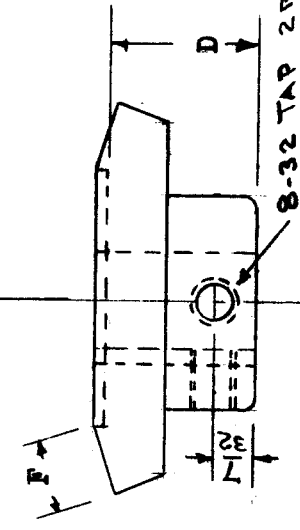
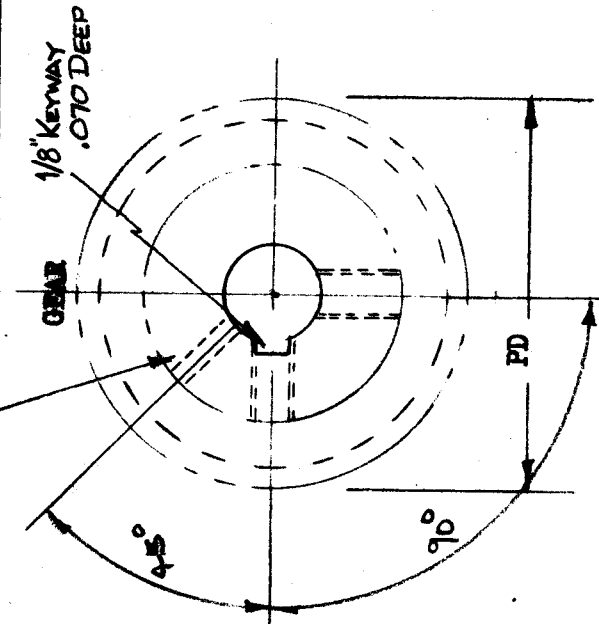


Pitch Diam. 1.000
 Face Diam. .635
 Hole 3/8
 D- Diamen. 27/32
 Hub Diam. 13/16
 Approx. Hub Proj. 7/16

GR-141-1

D	1	KEYWAY added on both Pinion and Gear.	8/15/60		
C	1	Made Pinion GR-141-1 Made Gear GR-141-2	10/25/59	1388	
B	1	SIM. CHG. #52 (.0635) DE. WAS (.067) D. HOLE	7/1/59	1317	
A	1	8-32 TAPPED HOLES ADDED. MAT. WAS STEEL	5/8/59		

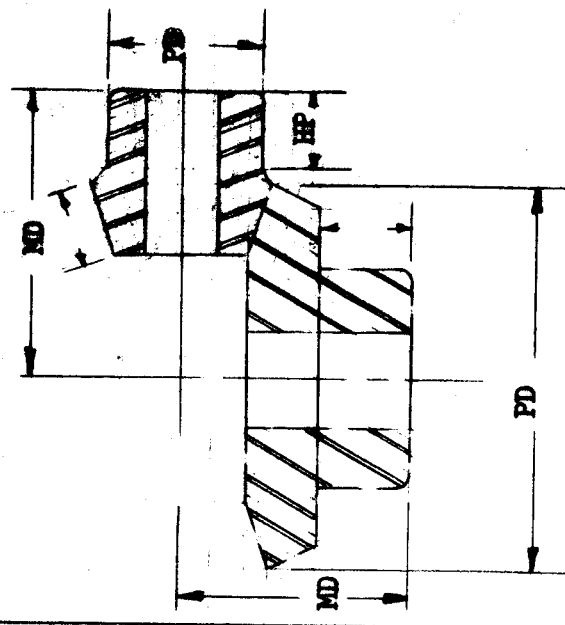
CHANGED FROM
 TOLERANCES
 SCALE:
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES



Pitch Diam. 2.000
 Face Diam. .49/64
 Hub Diam. 1 1/8
 Hole A. H. P. 1/2

GR-141-2

BRASS
 MATERIAL
 TYPE & TEMPER MATERIAL SPEC. BRASS
 FINISH PLATED
 .0003
 FINISH & SPEC. NO.



MD- Diam. Gear
 1-3/16
 Pitch Dia
 1-1/2

Ref. Boston Gear #L1191
 (Gear & Pinion Ass'y)

THE TECHNICAL MATERIAL CORP.
 MANASSAUCK, NEW YORK

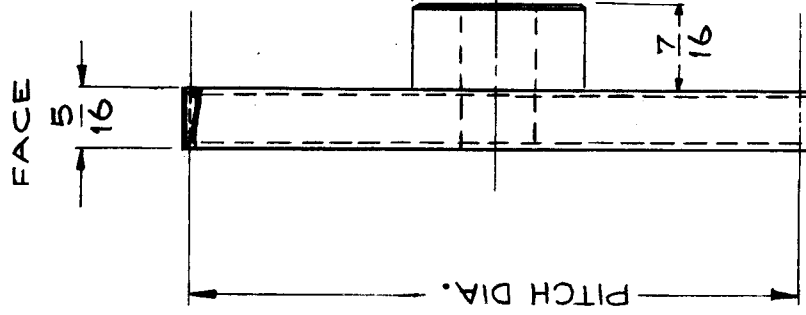
GEAR, BEVEL

GR-141
 GR-141
 D

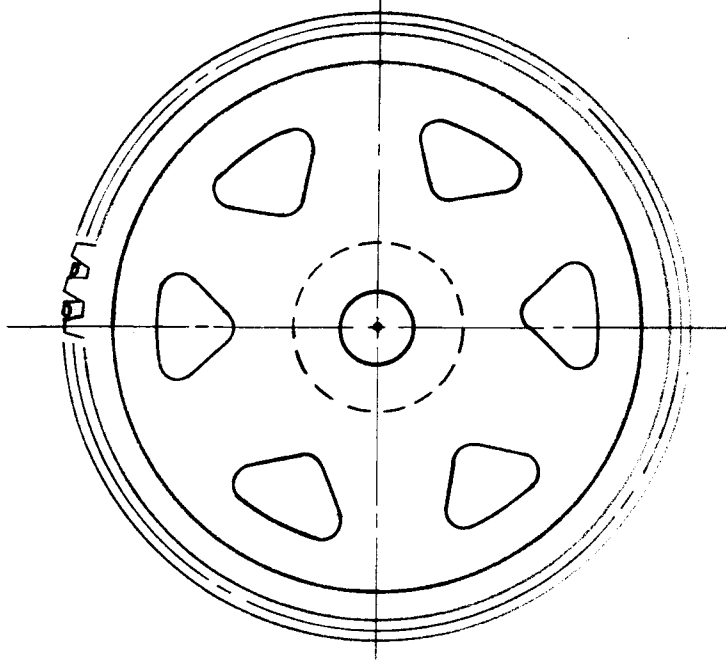
GR-142

REQ. PART UNIT	MODEL	USED ON ASSY. NO.	DATE
1			

PITCH DIA. 3.125
 PITCH 16
 NO OF TEETH 50
 PRESSURE \angle 20°
 THREADS RIGHT HAND



MATES WITH GR-143-2



REF ~ TMC DWG NO. GR-144

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		BRONZE	
		MATERIAL	
		TYPE & TEMPER	
		HEAT TREAT. SPEC.	
		DRAWN	
		CHECKED	
		J.C. BIELE	
		FINAL APPROVAL	
		GR-142	
		ELEC. DES. APP	
		MECH. DES. APP	

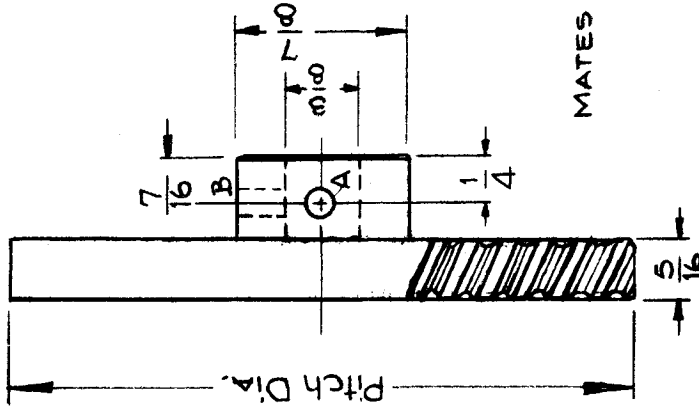
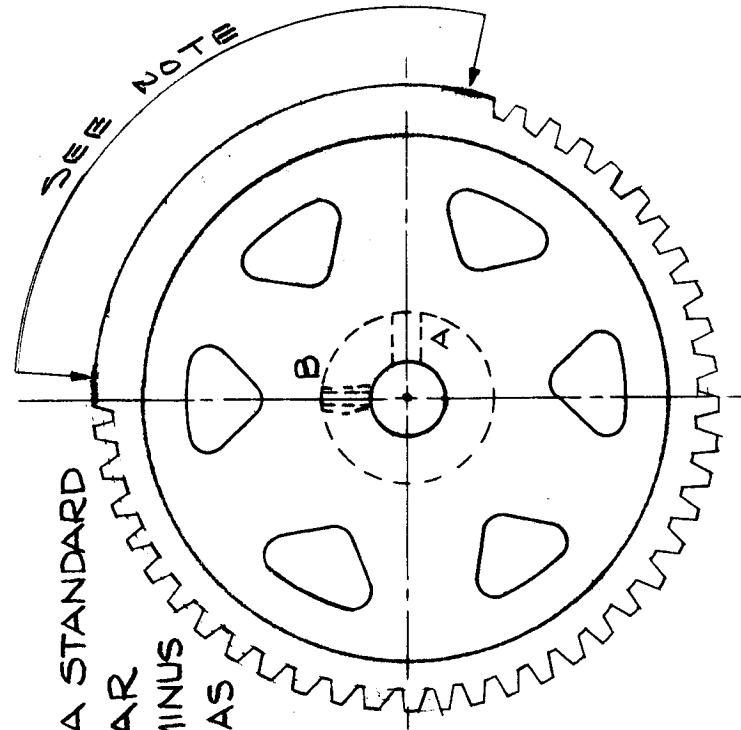
SCALE: S-40 1-15 (Q 1345)
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.
 REMOVE ALL BURRS AND SHARP EDGES

DEC. DIM. \pm
 FRAC. DIM. \pm
 ANGULAR DIM. \pm

REQ. PER. UNIT	USED ON	DATE
1	GR-144	
	MODEL	ASSY. NO.
	GR-T-101K	AS-102

PITCH DIA. ~ 3.125
 PITCH ~ 16
 NO. OF TEETH ~ 36
 PRESSURE ϕ ~ 20°
 THREADS RIGHT HAND

A ~ .1285 DIA. HOLE (± 30) DR. 1 Req.
 B ~ TAP ϕ -32 1 Req.



MATES WITH GR-143-2

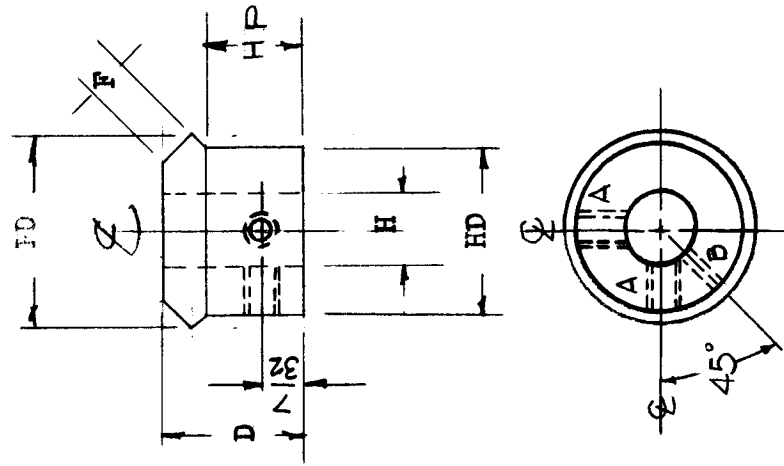
NOTE:
 THIS IS A STANDARD
 TMC GEAR
 (GR-142) MINUS
 14 TEETH AS
 SHOWN.

REF ~ TMC DWG NO. GR-142 (MOD)

REG. ITEM	DESCRIPTION	SYMBOL
C	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
B	GEAR, WORM WHEEL	
A	J.C. BIELE	
ISSUE ITEM	CHANGED FROM	DATE
	CH. NO.	DRAFTS
	CHECKER	ENG. APP.
	SCALE: 5/16-15 (Q1345 MOD)	
	MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	
DEC. DIM. \pm		
FRAC. DIM. \pm		
ANGULAR DIM. \pm		
	TOLERANCES	
	STOCK SIZE	
	BRONZE	
	MATERIAL	
	TYPE & TEMPER	HEAT TREAT. SPEC.
	Chrom Plate.0003	
	FINISH & SPEC. NO.	
	DRAWN	CHECKED
	J.C. BIELE	J.C.B.
		FINAL APPROVAL
		GR-144 C

REQ. PER UNIT	MODEL	USED ON	GR-115	B
1	GPT-10K	ASS'Y. NO.		
		DATE		

A - TAP 8-32 2 Req.
 B - #52(.0635) DR. 1 Req.



- P.D. PITCH DIAMETER 1,000
- F - FACE .19
- D - DIMENSION 1/7/64
- HD HUB DIA. 7/8
- HP - HUB PROJECT 1/2
- H - HOLE 3/8
- MD - DIMENSION 1-1/16

REF: BOSTON GEAR #L-124Y

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
STEEL		THE TECHNICAL MATERIEL CORP.	
STOCK SIZE		MAMARONECK, NEW YORK	
Brass		MITER GEAR	
MATERIAL			
TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED
chrome Plate.0003		10/21/50	10/21/50
FINISH & SPEC. NO.	ELEC. DES. APP. MECH. DES. APP.		
			GR-115 B

ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
B 1	DIM CHG B WAS (.067) D. HOLE	9/21/50	1317	AWL		
A 1	2A HOLES 0.08" HOLE ADDED	6/8/50		J.C.B.		

TOLERANCES

SCALE:

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

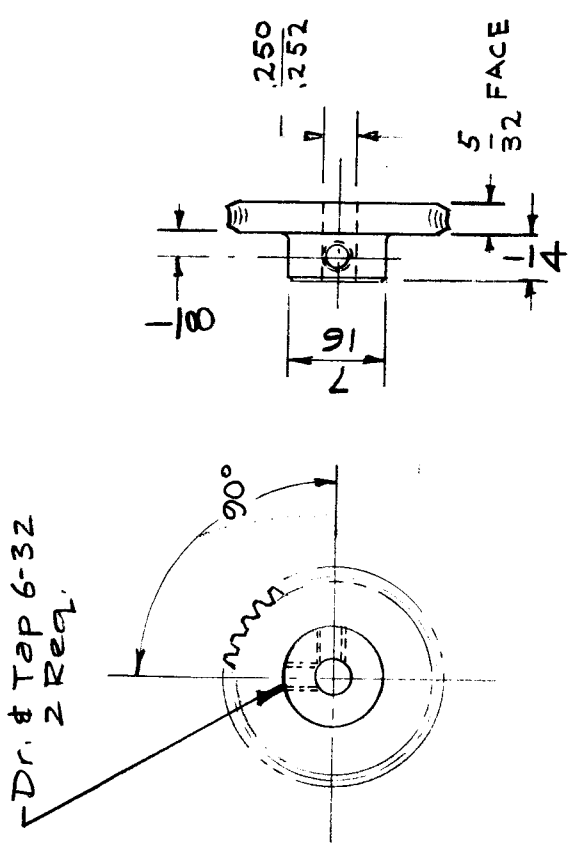
DEC. DIM. ±
 FRAC. DIM. ±
 ANGULAR DIM. ±

REQ. PER. UNIT	MODEL	USED ON
1	ATS-50(10) TU2	ASSY. N.
		DATE
		6-10-59

GR-146 D

SPECS.

HELIX ANGLE — 3° 35'
 RAD. OF CURVATURE OF THROAT — 0.187
 OUTSIDE DIA. OF GEAR — 0.677
 PITCH DIAM — .625
 PITCH — 48
 NO. OF TEETH — 30
 PRESSURE ANGLE — 14 1/2°
 THREADS — RIGHT HAND SINGLE TYPE



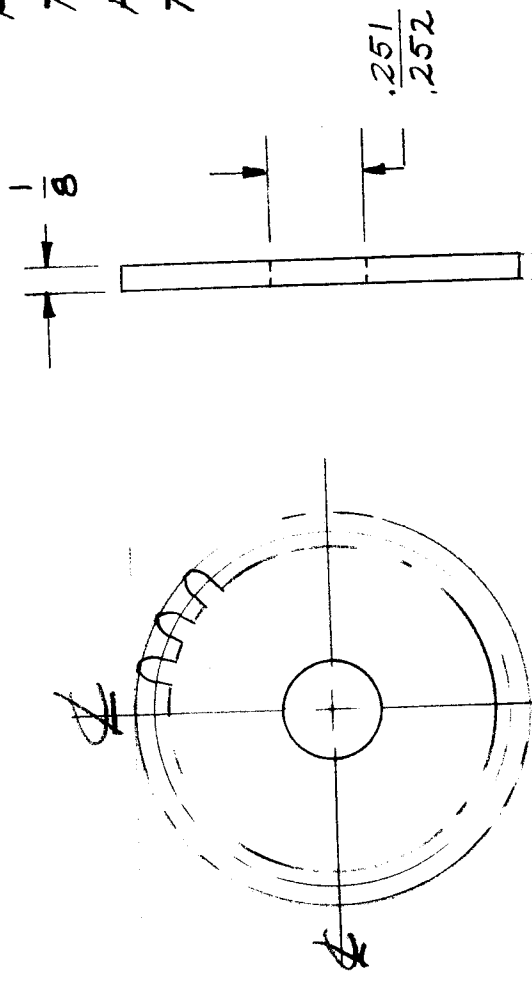
MATES WITH WORM - GR-137

ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REG. ITEM	PART NO.	DESCRIPTION	SYMBOL
D 1	NICKEL PLATE S-135 DELETED	4-3-64	11162	AMH	JDA	LB			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
C 1	SPEC. CHART REVISED	10-24-61	5757	SL	JDA	LS			GEAR, WORM WHEEL, .625 PD, RH	
B 1	7/16 WAS 11/32, 1/4 WAS 3/16 V WAS 3/32, Teeth Paper Added	10/18/59	1395.16	JDA	JDA	JDA			ATS-50(70) TU 2	
A 1	FINISH ADDED	9/21/59	1307	JDA	JDA	JDA				
ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REG. ITEM	PART NO.	DESCRIPTION	SYMBOL
<p>TOLERANCES</p> <p>DEC. DIM. ±</p> <p>FRAC. DIM. ± 1/64</p> <p>ANGULAR DIM. ±</p>										
<p>SCALE: S-401-15 (G1019 MOD)</p> <p>MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES</p>										
<p>FINISH & SPEC. NO.</p>										
<p>ELEC. DES. APP. MECH. DES. APP.</p>										

GR-153

REQ. PER UNIT	3
MODEL	CHG-1
USED ON ASSY. N.	
DATE	5-3-60

PITCH 48
 PRESSURE ANGLE 14 1/2°
 TEETH 48
 PITCH DIA. 1"
 TOLERANCE - COMMERCIAL CLASS 3



OBSOLETE
 NO LONGER USED
 9/12/60

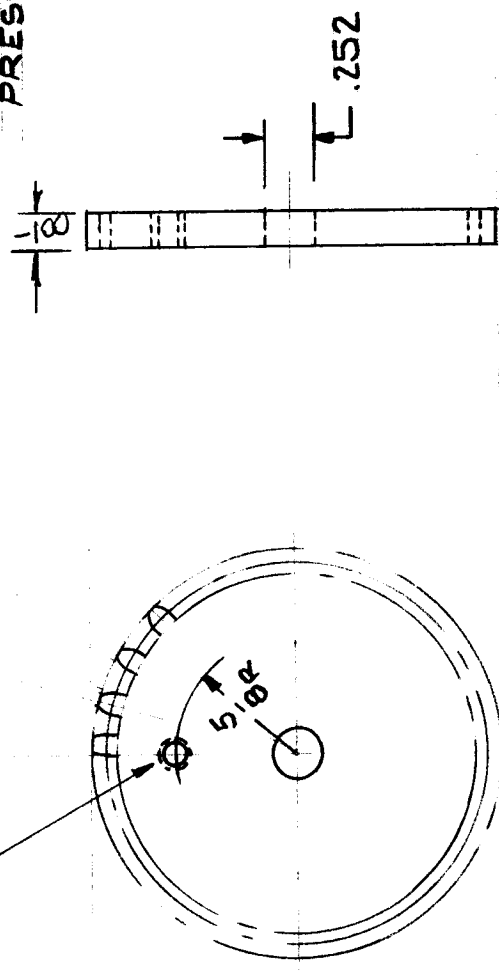
SYMBOL		DESCRIPTION	
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR, IDLER	
REQ. ITEM	PART NO.	DRAWN	CHECKED
		Jude	Jude
		245-T3	GR-153
MATERIAL		HEAT TREAT. SPEC.	
ALUMINUM		YELLOW ANODIZE	
FINISH & SPEC. NO.		ELEC. DES. APP. MECH. DES. APP.	
GR-153		GR-153	

SCALE:
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.
 REMOVE ALL BURRS AND SHARP EDGES

REQ. PER UNIT	MODEL	USED ON	SYMBOL
	CHG-1	ASSTY. NO.	GR-154
		DATE	B
		4-26-60	

PITCH DIA. _____ 2.000
 PITCH _____ 48
 NO. OF TEETH _____ 96
 PRESSURE ANGLE _____ 14 1/2°

DR & TAP 6-32 CLASS 2



I.D. AND P.D. MUST BE
 CONCENTRIC WITHIN .0015 F.I.R.
 OBSOLETE
 NO LONGER USED

REF - N.J. GEAR WORKS

REG. ITEM	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
			GEAR, SPUR, 2"	
			ALUMINUM	
			MATERIAL	
			24S-T3	
			TYPE & TEMPER	
			HEATTREAT.SPEC.	
			YEL. ANODIZE	
			FINISH & SPEC. NO.	
			DRAWN	
			CHECKED	
			FINAL APPR VAL	
			GR-154	B

DEC. DIM. ±.0015
 FRAC. DIM. ± 1/64
 ANGULAR DIM. ±

SCALE: FULL

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

ISSUE ITEM

CHANGED FROM

DATE

CH. NO.

DRAFTS

CHECKER

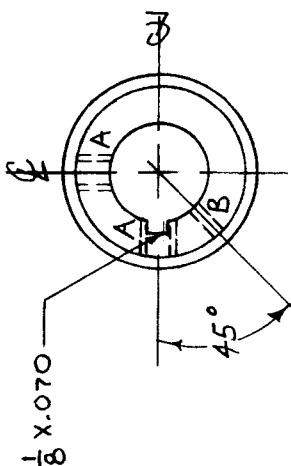
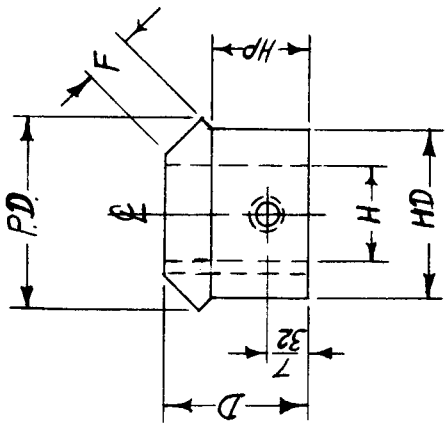
ENG. APP.

2-28-61 4285 RU JCB

11-8-60 3420 NF JCB

REQ. PER UNIT	1	USED ON	GR-155	A
MODEL	CPT-10K	ASSY. NO.		
		DATE	8-1-60	

A ~ 8-32 TAP 2 REQ.
 B ~ .0635 DIA. 1 REQ.



- PD ~ PITCH DIAMETER 1.000
- F ~ FACE .19
- D ~ DIMENSION $\frac{47}{64}$
- HD ~ HUB DIAMETER $\frac{7}{8}$
- HP ~ HUB PROJECT $\frac{1}{2}$ ±.001
- H ~ HOLE $\frac{1}{2}$
- MD ~ DIMENSION $\frac{1}{16}$

REF: BOSTON GEAR #L-124Y (MODIFIED).

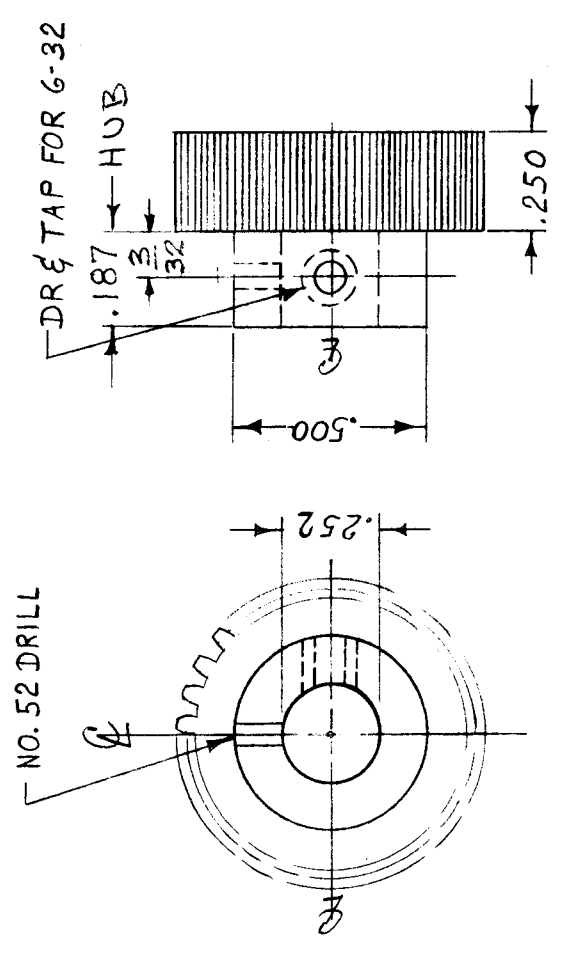
REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP.	
		MAMARONECK, NEW YORK	
		MITER GEAR	
		STEEL	
		MATERIAL	
		TYPE & TEMPER	
		HEAT TREAT. SPEC.	
		FINISH & SPEC. NO.	
		WICKEL PL .0003	
		DRAWN	
		CHECKED	
		FINAL APPROVAL	
			GR-155
			A

SCALE: FULL
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

DEC. DIM. ±
 FRAC. DIM. ± 1/64
 ANGULAR DIM. ±

REQ. PER UNIT	MODEL	USED ON	DATE
	CHG-1	GR-157	A
		ASSY. NO.	
			9-2-60

PITCH 48
 PRESSURE \angle $14\frac{1}{2}^\circ$
 NO. OF TEETH 36
 FACE .250
 BORE .252
 PITCH DIA. .750
 HUB PROJ. .187



REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP.	
		MAMARONECK, NEW YORK	
		GEAR, PINION	
		STOCK SIZE	
		BRASS	
		MATERIAL	
		1/2 H	
		TYPE & TEMPER	
		HEATTREAT. SPEC.	
		DRAWN	
		CHECKED	
		FINAL APPROVAL	
		ELEC. DES. APP. MECH. DES. APP.	
		FINISH & SPEC. NO.	
		GR-157	A

DATE 2-28-61
 CH. NO. 4285
 DRAFTS RU
 CHECKER JCB
 ENG. APP. [Signature]
 SCALE: 1:2
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

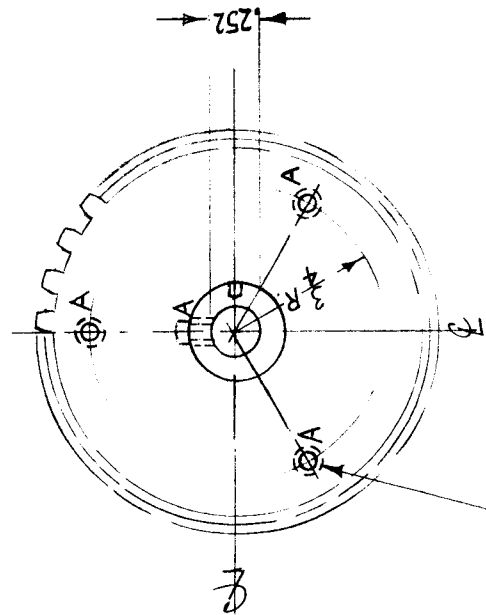
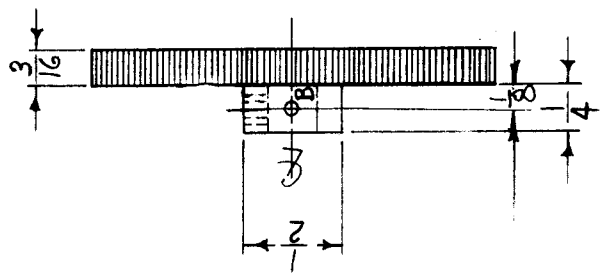
DEC. DIM. $\pm .0015$
 FRAC. DIM. $\pm 1/64$
 ANGULAR DIM. \pm

A-6-32 DR & TAP 4 REQ
 B-#52 DRILL - SUB 1 REQ.
 (PAR WAY)

REQ. PER UNIT	MODEL	USED ON	DATE
1	CHG-1	ASST. NO.	9-6-60
1	CHG-2		
1	CHG-2A	A3591	

GR-159 C

PITCH DIA. 2.000
 PITCH 48
 NO. OF TEETH 96
 HUB DIA. .500
 HUB PROJ. .250
 BORE .252 ± .002
 FACE .187
 STYLE PLAIN
 PRESSURE 14 1/2°



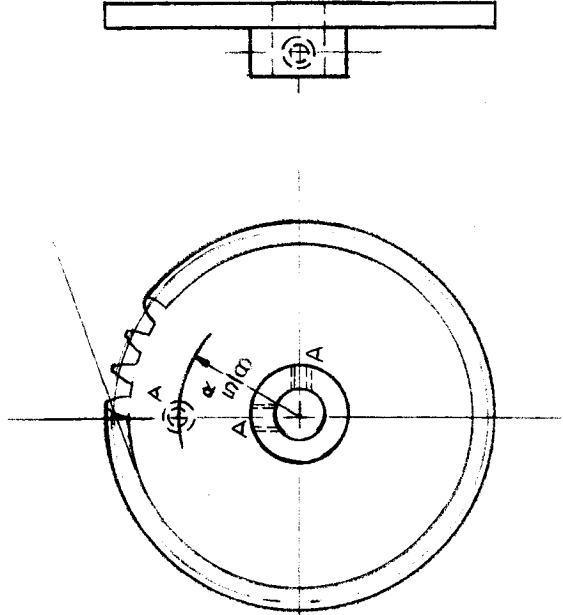
3 ("A" HOLES) SPACED 120°
 APART ON 3/4" RADIUS.

REQ. ITEM	1	SLHC0632553	SET SCREW	SYMBOL	C
DESCRIPTION	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK GEAR DETENT				
PART NO.					
STOCK SIZE	BRASS				
MATERIAL					
1/2 H					
TYPE & TEMPER	DRAWN				
HEAT TREAT. SPEC.	CHECKED				
FINISH & SPEC. NO.	ELEC. DES. APP. MECH. DES. APP.				

ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
C 1	-SUB (PART WAY), TOL TO BORE ADDED	12/29/65	15459	F.V.V.	J.P.	J.P.
B	CLERICAL CHANGES	8.24.64		A.B.	J.P.	J.P.
A 1	Dim. 252 was .250	2-28-61	4285	EU	J.P.	J.P.
TOLERANCES						
SCALE: FULL						
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES						
DEC. DIM. ±	.0015					
FRAC. DIM. ±	1/64					
ANGULAR DIM. ±						

REQ. PER UNIT	USED ON	MODEL	ASSY. NO.	DATE
2	GEAR ASSY	CHG	11-4-60	GR-162 A

P.D. = 2.000
 PITCH = 48
 NO. OF TEETH = 96
 HUB { DIA = .500
 PROJ = .250
 BORE = .252 DIA.
 STYLE = PLAIN
 PRESSURE ANGLE = 14 1/2°
 FACE = .125
 A DRILL & TAP 6-32 - 3 REQ



REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP.	
		MAMARONECK, NEW YORK	
		GEAR, POT. MTG.	
		MF TUNING	
		ALUMINUM	
		STOCK SIZE	
		MATERIAL	
		YELLOW IRIDITE	
		FINISH & SPEC. NO.	
		HEAT TREAT. SPEC.	
		TYPE & TEMPER	
		DRAWN	
		CHECKED	
		FINAL APPROVAL	
		ELEC. DES. APP.	
		MECH. DES. APP.	
		GR-162	A

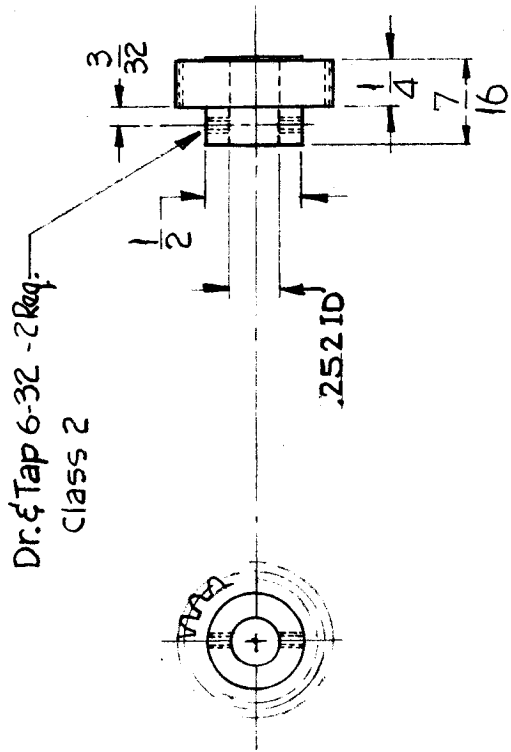
A 1 Bore Dim. was .250 Dia
 DATE 2-28-64 CH. NO. 4285 RU
 CHECKER [Signature]
 DRAFTS [Signature]
 ENG. APP. [Signature]

SCALE: DO NOT SCALE
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.
 REMOVE ALL BURRS AND SHARP EDGES

TOLERANCES
 DEC. DIM. ± .0015
 FRAC. DIM. ± 1/64
 ANGULAR DIM. ±

REQ. PER UNIT	1
MODEL	CHG-1
ASSEMBLY NO.	GEAR ASSY
DATE	12-9-60
GR-163	A

PITCH DIAMETER - .750"
 DIAMETRAL PITCH - 48
 NUMBER OF TEETH - 36
 PRESSURE ANGLE - 14 1/2°



Ref. New Jersey Gear Works

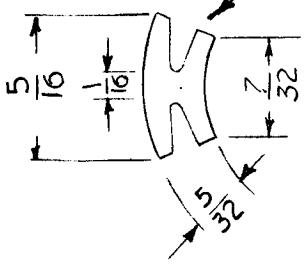
REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP.	
		MAMARONECK, NEW YORK	
		GEAR, SPUR, .750" P.D.	
		STOCK SIZE	
		LINEN BASE PHENOLIC	
		Gear - BRASS HUB	
		MATERIAL	
		TYPE & TEMPER	
		HEAT TREAT. SPEC.	
		FINISH & SPEC. NO.	
		DRAWN	
		CHECKED	
		FINAL APPR VAL	
		D.D. [Signature]	SFM
		[Signature]	GR-163
		ELEC. DES. APP	
		MECH. DES. APP	
		SCALE: Full	
		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	
ISSUE ITEM	CHANGED FROM	DATE	CH. NO.
A 1	Dim. .252 was .250 ID	2-28-61	4285
			R4
			DRAPTS
			CHECKER
			ENG. APP.
			SCALE: Full
			MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES
			DEC. DIM. ± .0015
			FRAC. DIM. ± 1/64
			ANGULAR DIM. ±

REQ. PER. UNIT	USED ON
1	MODEL
	CHG-1
	ASSY. NO.
	GEAR ASSY
	DATE
	2-12-61
	GR-164

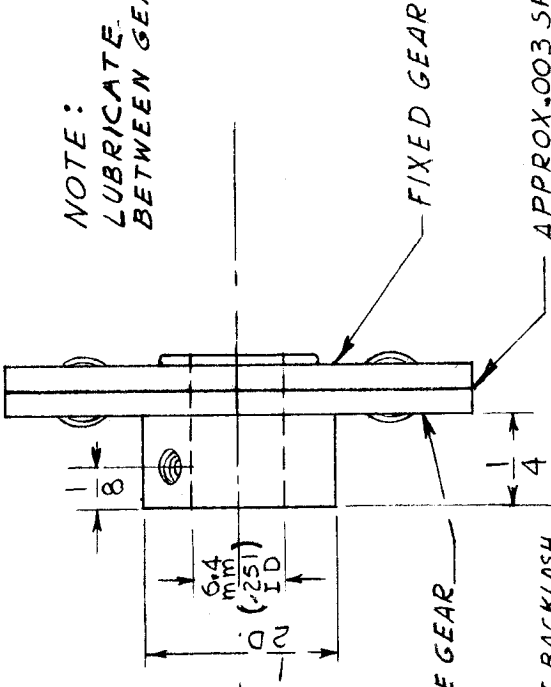
PITCH DIA. 1.1458"
 PITCH 48
 NO. OF TEETH 55
 PRESSURE ANGLE 14 1/2°
 COMM. CLASS 3 TOL.
 TYPE ANTI-BACKLASH

DR. & TAP 6-32 CLASS 2
 2 REQ.
 NOTE RELATION OF TAPPED HOLES TO CUTOUT.

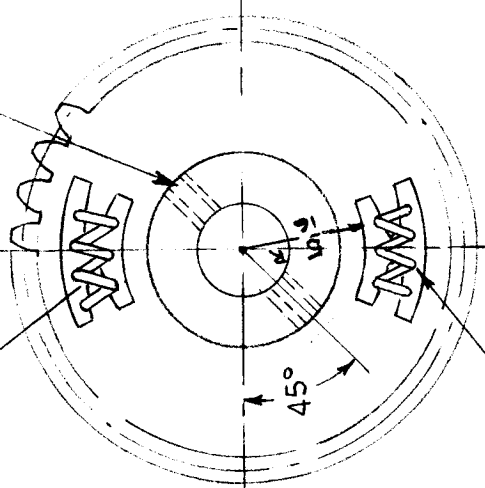
CUTOUT DETAIL (2 REQ.)
 DIM. FOR REF. ONLY



NOTE:
 LUBRICATE LIGHTLY BETWEEN GEARS.



APPROX. .003 SPACING BETWEEN GEARS.



SPRING SUITABLE TO PREVENT BACKLASH (2 REQ.) SPRING MUST NOT BIND.

REF: N.J. GEAR WORKS

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
.0625 THK (each gear)		THE TECHNICAL MATERIEL CORP.	
STOCK SIZE		MAMARONECK, NEW YORK	
ALUMINUM		GEAR, SPLIT, 1.1458 P.D.	
MATERIAL			
2024-T3			
TYPE & TEMPER	HEATTREAT. SPEC.	CHECKED	FINAL APPROVAL
YELLOW ANODIZE		DRAWN	
FINISH & SPEC. NO.		ELEC. DES. APP. MECH. DES. APP.	
ISSUE ITEM	CHANGED FROM	TOLERANCES	
DEC. DIM. ±		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.	
FRAC. DIM. ±		REMOVE ALL BURRS AND SHARP EDGES	
ANGULAR DIM. ±			

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT
2

MODEL
GPR-92

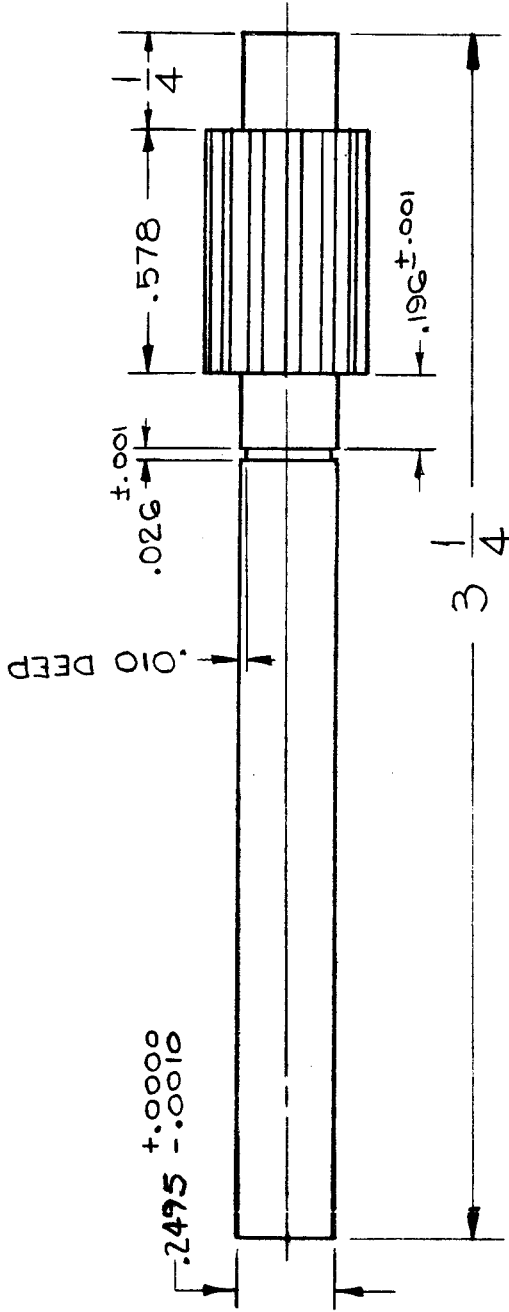
USED ON

ASSY. NO.

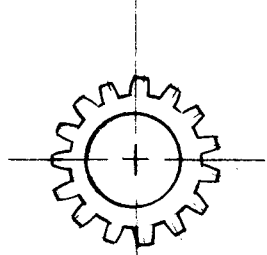
DATE

5-9-62

GR-170 C



BRASS
15 TEETH
48 PITCH PINION WIRE
PITCH DIA. - .312
PRESSURE ANGLE - 20°



REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		GELLMAN	
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR SHAFT, SPUR	
		RUEZZO	JMA
		DRAWN	FINAL APPROVAL
		CHECKED	GR-170 C
		ELEC. DES. APP. MECH. DES. APP.	
		FINISH & SPEC. NO.	
		SCALE: 5-401-15 (YW4815)	
		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	
		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ON FRAC. ± 1/ DEC. ± .000 ANGLES ± 1/20	
C	GROOVE ADDED	9-16-63 9945	JMA
B	DELETED 7/8 DIM	2-17-63 9294	JMA
A	ADDED .518 DIM PRESSURE ANGLE MATERIAL & SCALE ADDED	11-29-62 7764	JMA
SYM	DESCRIPTION	DATE	CH. NO. DRAFTS CHECKER ENG. APP.

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REQ. PER UNIT
2

MODEL GPR-92

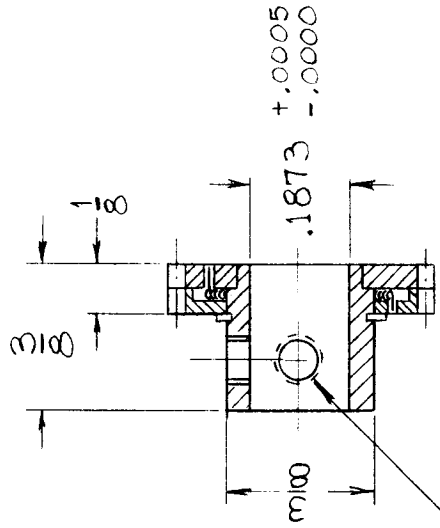
USED ON ASSY. NO. DATE
6-15-62

GR-171

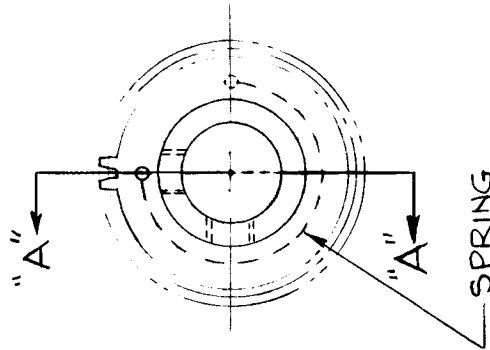
A

~ SPECIFICATIONS ~

NO. OF TEETH = 40
DIAMETRAL PITCH = 64
PITCH DIA. = .6250
PRESSURE ANGLE = 20°
FACE = $\frac{1}{8}$



6-32 ALLEN
HEAD SET SCREW
SUPPLIED
2 REQ'D



NOTES:

- 1. HUB, STAINLESS STEEL, PASSIVATE S104.
- 2. GEAR, 24ST ALUM ALLOY, ANODIZE.

SECTION "A-A"

REQ. ITEM	PART NO.	STRUMER DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR, ANTI-BACKLASH	
	SEE NOTE 1 & 2		
		MATERIAL	
		V.R.R.	JMA BP
		DRAWN	JMA
		CHECKED	D.M.
		HEAT TREAT. SPEC.	
	SEE NOTE 1 & 2		
		FINISH & SPEC. NO.	GR-171
		TYPE & TEMPER	
		MECH. DES. APP.	
		ENG. APP.	
		DATE	9-23-63
		CH. NO.	9984
		DRAFTS	G.D.L.
		CHECKER	JWS
		SCALE:	5401-193 (ADD 6-40)
		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ON FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°	
		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	

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REQ. PER UNIT
2

MODEL
GPR-92

USED ON
ASSY. NO.

DATE
6-14-62

GR-172

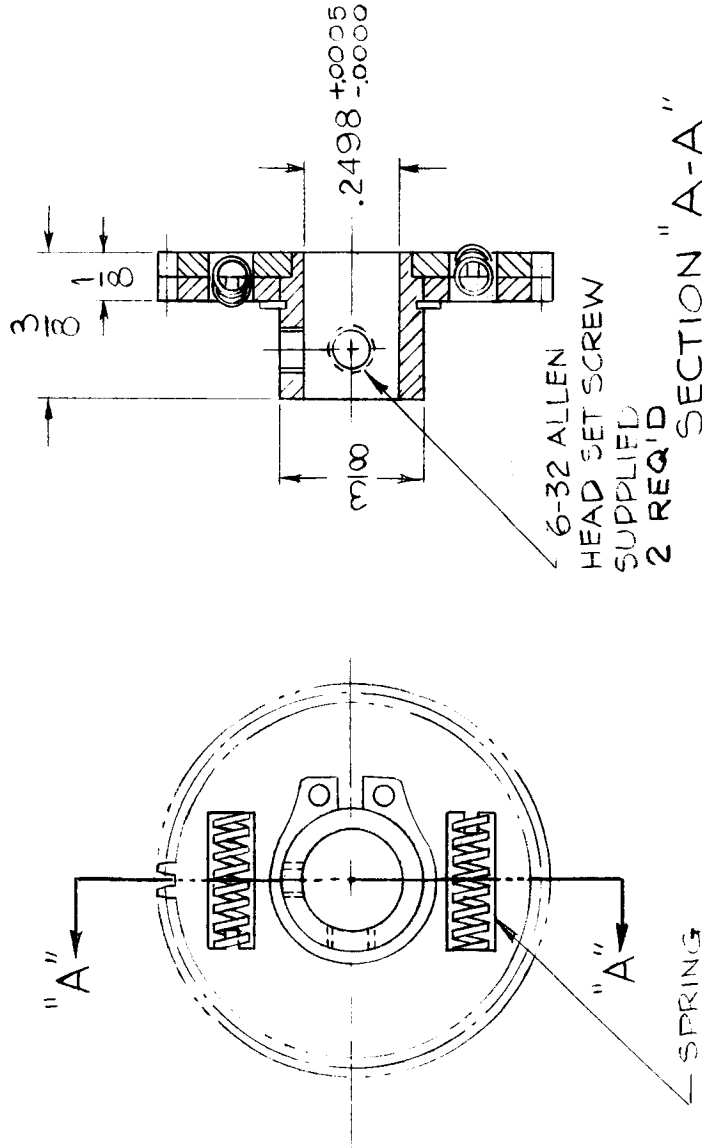
A

~ SPECIFICATIONS ~

NO. OF TEETH = 48
DIAMETRAL PITCH = 48
PITCH DIA. = 1.000
PRESSURE ANGLE = 20°
FACE = $\frac{1}{8}$

NOTES:

- HUB, STAINLESS STEEL
PASSIVATE S104.
- GEAR, 24ST ALUM ALLOY
ANODIZE.



SECTION "A-A"

REQ. ITEM	PART NO.	STRUMER DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
	SEE NOTE 1 & 2	GEAR, ANTI-BACKLASH	
		V.R.R. <i>JMA</i>	<i>BP</i>
		DRAWN <i>JMA</i>	FINAL APPROVAL
		CHECKED <i>D.M.</i>	
		MECH. DES. APP. <i>JMA</i>	GR-172
		MECH. DES. APP.	A
		FINISH & SPEC. NO.	
		SCALE: S401-193 (ACC8-48)	
		DATE 9-23-63	
		CH. NO. 9984	
		DRAFTS G.D.L.	
		CHECKER <i>JMA</i>	
		ENG. APP. <i>JMA</i>	
		DESCRIPTION #6-32 WAS 4-40	
		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ON FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°	
		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	

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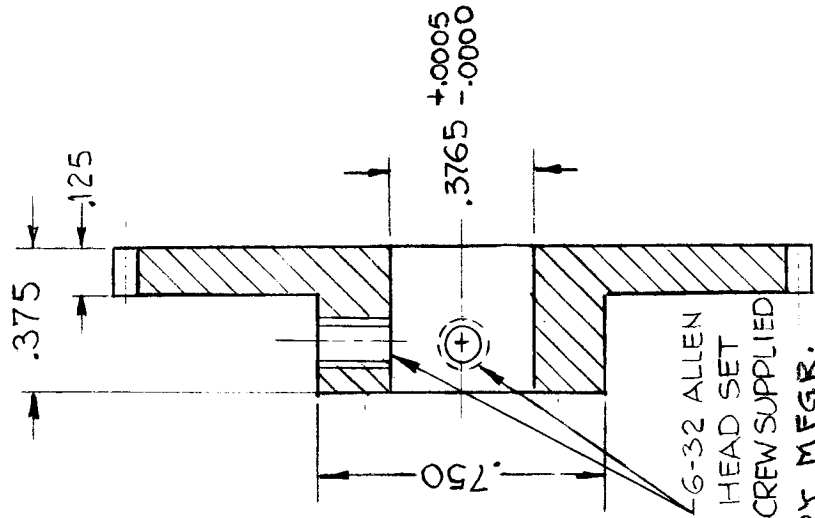
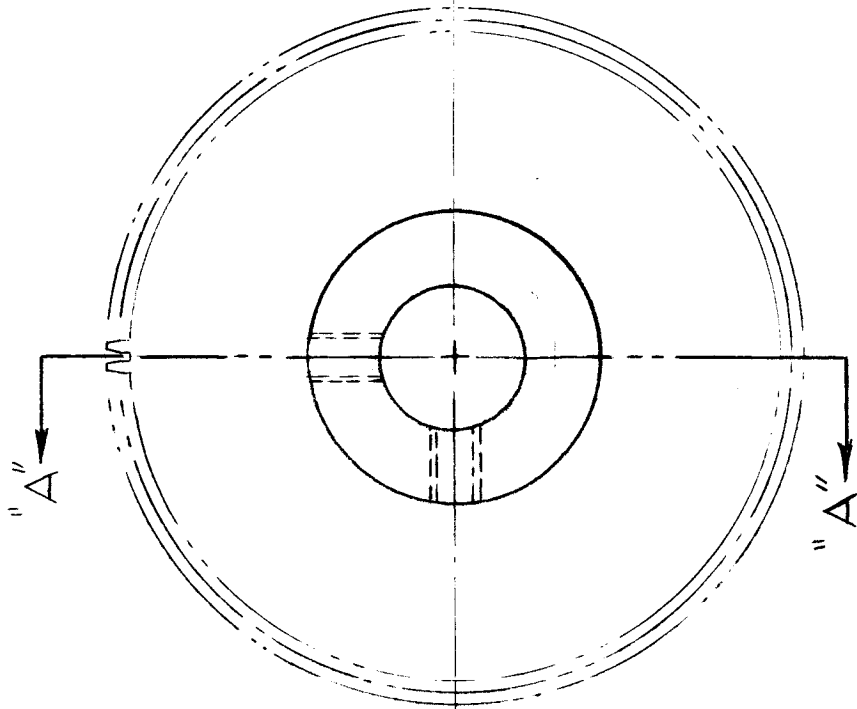
REQ. PER UNIT
2

MODEL
GPR-92

USED ON
ASSY. NO.

DATE
6-14-62

GR-175



~ SPECIFICATIONS ~
 NO. OF TEETH = 84
 DIAMETRAL PITCH = 48
 PITCH DIA. = 1.7500
 PRESSURE ANGLE = 20°
 FACE = 1/8

SECTION "A-A"

REQ. ITEM	PART NO.	STRUMER DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR, SPUR	
		ALUMINUM	
		MATERIAL	
245T		V.R.R.	JMA BP
		DRAWN	MP
		CHECKED	
		TYPE & TEMPER	FINAL APPROVAL
		HEATTREAT. SPEC.	
		CLEAR ANODIZE	GR-175
		FINISH & SPEC. NO.	
		ELEC. DES. APP.	
		MECH. DES. APP.	

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES ON
 FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°

SCALE: S401-194

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

DATE CH. NO. DRAFTS CHECKER ENG. APP.

SCALE: S401-194

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT

1

USED ON

ASSY. NO.

DATE

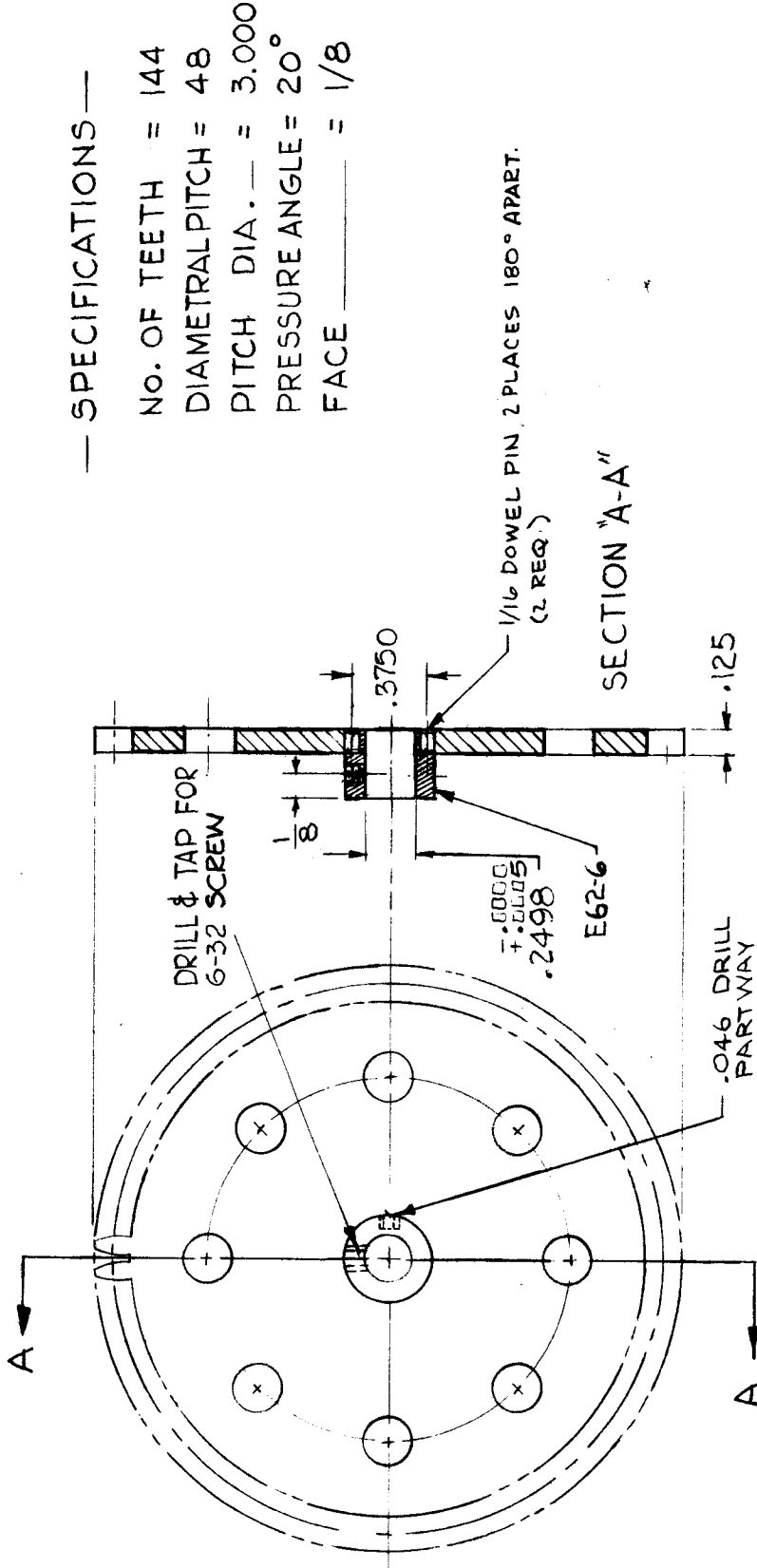
7-26-62

MODEL

HFR - 1

GR-176

B



— SPECIFICATIONS —

- NO. OF TEETH = 144
- DIAMETRAL PITCH = 48
- PITCH DIA. = 3.000
- PRESSURE ANGLE = 20°
- FACE = 1/8

1/16 DOWEL PIN, 2 PLACES 180° APART.
(2 REQ.)

SECTION "A-A"

(CAT. No 521-144-E62 MODIFIED PER TMC)

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR SPUR, W/HUB	
		STAINLESS STEEL	
		MATERIAL	
		303	
		TYPE & TEMPER	GDL
		HEATTREAT. SPEC.	DRWN
		PASSIVATE S-104	CHKD
		FINISH & SPEC. NO.	APP. GR-176
			FINAL APPROVAL
			GR-176 B

SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
B	ADD .046 DRILL & 1/8 DIM S DELE "2 REQ." CHG'D REF E62 TO E62-6	14-66	16843		RME	
A	(2) DOWEL PINS ADDED	1-8-63	7936		WJ	

SCALE: S 401-196
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ON FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

USED ON

ASS'Y. NO.

DATE

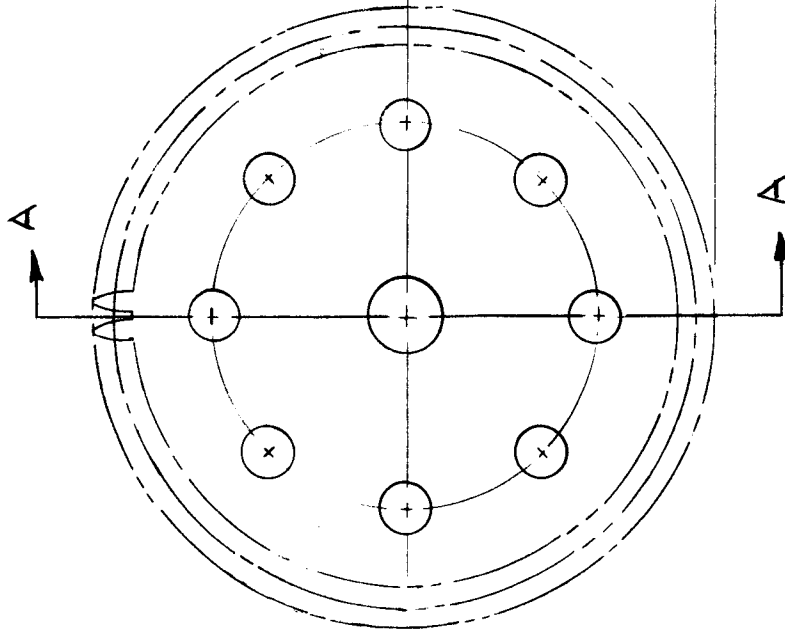
GR-177

REQ. PER UNIT

MODEL

HFR-1

7-26-62



— SPECIFICATIONS —
 No. OF TEETH = 144
 DIAMETRAL PITCH = 48
 PITCH DIA. — = 3.000
 PRESSURE ANGLE = 20°
 FACE — = 1/8

SECTION 'A-A'

STERLING INSTRUMENT (CAT. No S2I-144)

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		KRUY	
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STAINLESS STEEL	
		GEAR, SPUR HUBLESS	
		MATERIAL	
		303	
		G.D.L	
		TYPE & TEMPER	
		PASSIVATE S104	
		HEATTREAT. SPEC.	
		DRAWN	
		CHECKED	
		FINAL APPROVAL	
		ELEC. DES. APP.	
		MECH. DES. APP.	
		GR-177	

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES ON
 FRAC. ± 1/64 DEC. ± 0.5 ANGLES ± 1/20

SCALE:
 MAXIMUM ALLOWABLE TOLERANCES HAVE
 BEEN DETERMINED AND ANY DEVIATIONS
 WILL BE CAUSE FOR REJECTION.
 REMOVE ALL BURRS AND SHARP EDGES

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE FOR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT
1

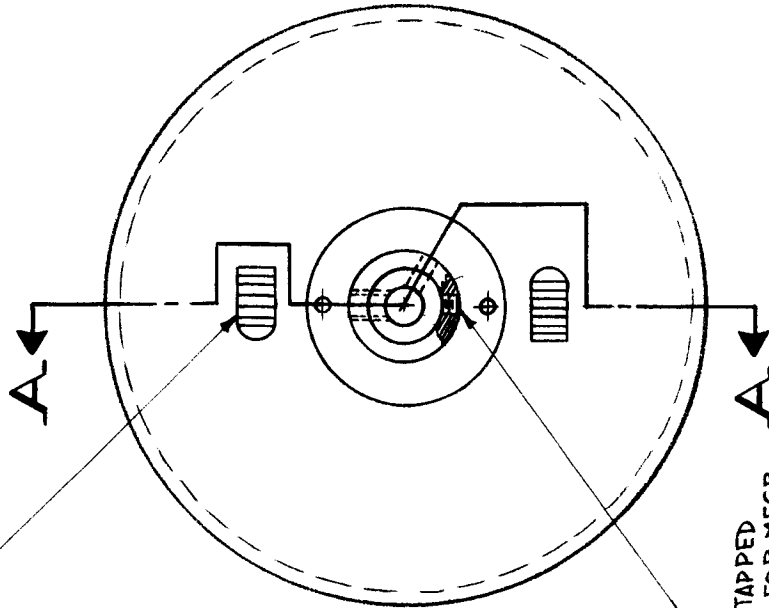
MODEL
HFR-1

USED ON
ASSY. NO.

DATE
1-7-63

GR-179
A

STAINLESS STEEL SPRINGS
MFG PART NO. A-002361-1 (2 REQ)



4.40 TAPPED HOLE FOR MFG. USE ONLY (1 REQ)

FREE GEAR (1 REQ)

NOTE:

GEARS TO BE ASSEMBLED SO THAT THE FREE GEAR HAS NO AXIAL PLAY, BUT CAN STILL ROTATE FREELY.

~ SPECIFICATIONS ~
 NO. OF TEETH - 240
 DIAMETRAL PITCH - 80
 PITCH DIA. - 3.000
 PRESSURE ANGLE - 20°
 FACE - .104

SECTION "A-A"

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		KRUY	
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR, ANTI-BACKLASH	
		STAINLESS STEEL	
		MATERIAL	
	* 303	DRAWN HJE	BP
		CHECKED TAK	FINAL APPROVAL
		TYPE & TEMPER	
	S-104 PASSIVATE	ELEC. DES. APP. MECH. DES. APP.	GR-179 A
		FINISH & SPEC. NO.	
		SCALE	
		DATE 1-7-63	
		CH. NO. 7934	
		DRAFTS Lef	
		CHECKER HJE	
		ENG. APP.	
		CODE	
		S 401-196 (006330)	
		UNLESS OTHERWISE SPECIFIED	
		DIMENSIONS ARE IN INCHES AND INCLUDE	
		CHEMICALLY APPLIED OR PLATED FINISHES	
		FRACTIONS	
		± 1/64	
		ANGLES,	
		± 0° 30'	
		TOLERANCES	
		± .05	
		.XX ± .01	
		.XXX ± .005	

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REQ. PER UNIT
1

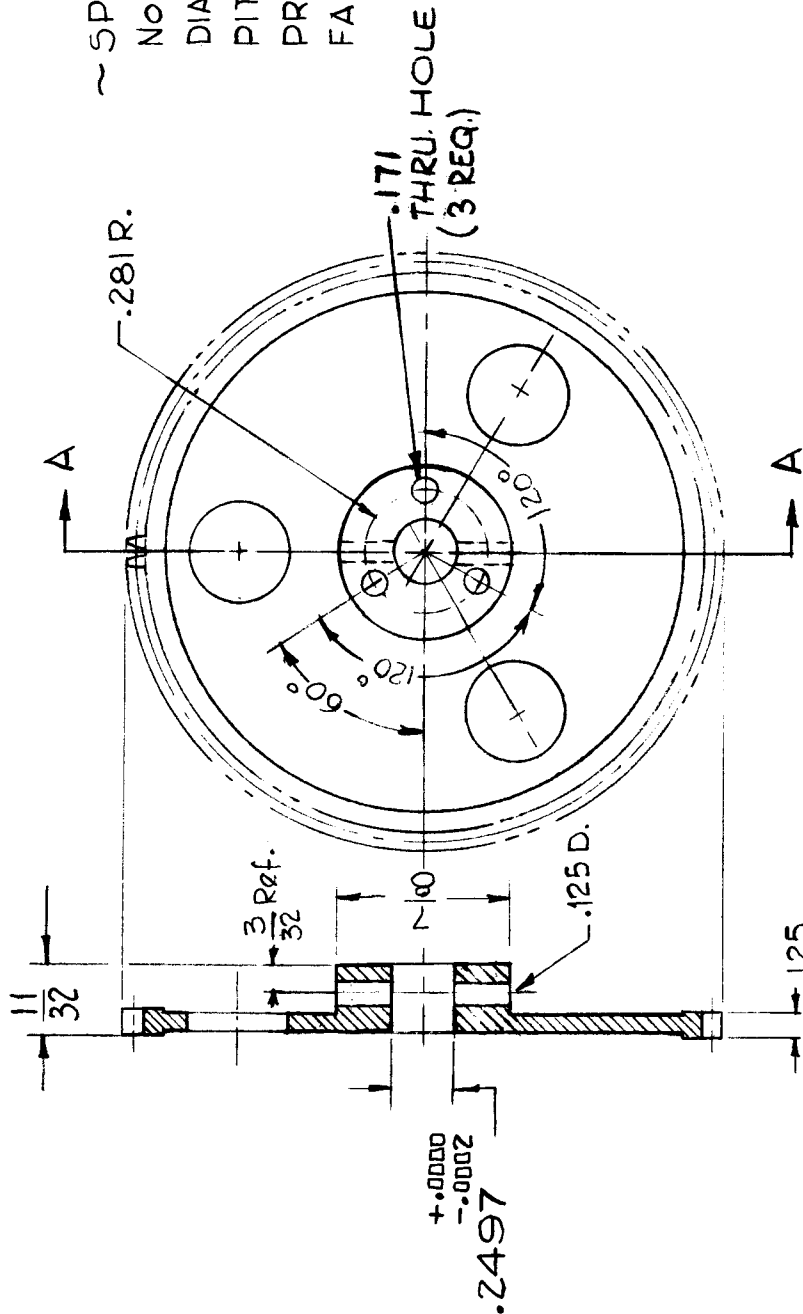
MODEL
HFR-1

USED ON
ASSY. NO.

DATE

GR-181

7-26-62



~ SPECIFICATIONS ~
 No. OF TEETH = 144
 DIAMETRAL PITCH = 48
 PITCH DIA. = 3.000
 PRESSURE ANGLE = 20°
 FACE = 1/8

SECTION "A-A"

BOSTON - CAT. (Y48144 MOD. PER TMC)

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		KRUY	
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		GEAR, SPUR	
		BRASS	
		MATERIAL	
		G.D.L.	GP
		DRAWN	FINAL APPROVAL
		CHECKED	
		ZAK	GR-181
		ELEC. DES. APP. MECH. DES. APP.	
		HEAT TREAT. SPEC.	
		TYPE & TEMPER	
		FINISH & SPEC. NO.	
		DATE	CHECKER
		CH. NO.	ENG. APP.
		SCALE:	
		UNLESS OTHERWISE SPECIFIED:	
		DIMENSIONS ARE IN INCHES	
		TOLERANCES ON	
		FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°	
		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.	
		REMOVE ALL BURRS AND SHARP EDGES	

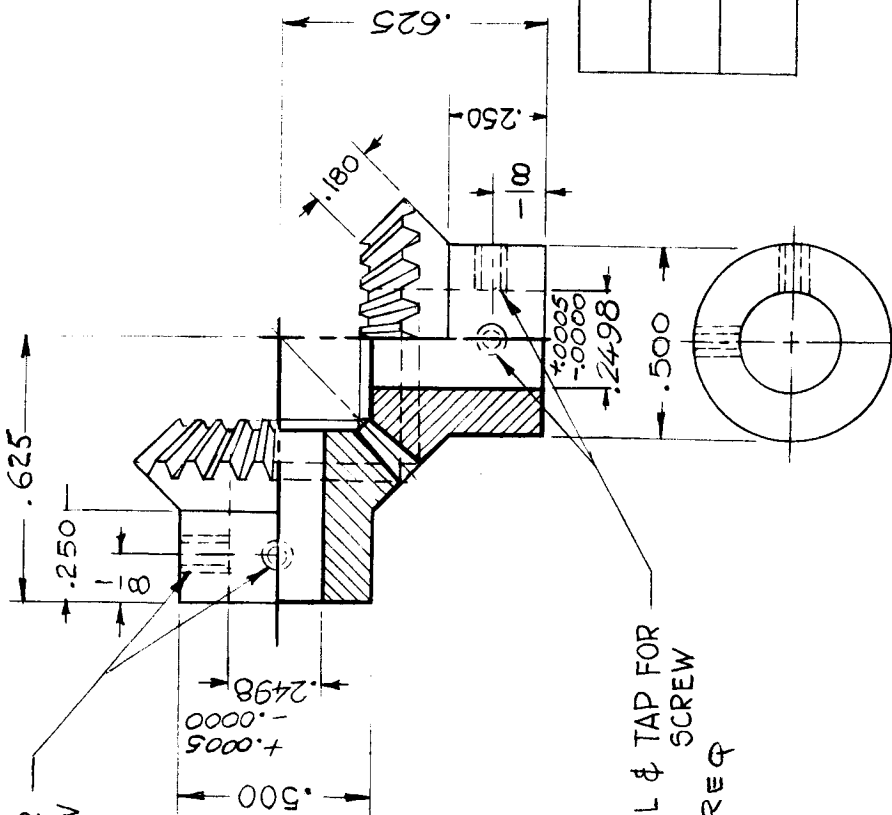
THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT	MODEL	USED ON
1	HFR -1	ASSY. NO.
	HFIR	DATE
		7-26-62

GR-183

B.

DRILL & TAP FOR
6/32 SCREW
2 REQ.



DRILL & TAP FOR
6-32 SCREW
2 REQ.

~ SPECIFICATIONS ~
NO. OF TEETH = 30
DIAMETRAL PITCH = 48
PITCH DIA. = .625
FACE = .180

GEAR REQ.	MATERIAL	FINISH
1	ALUMINIUM 24 ST	CHROMIC ACID ANODIZED
1	STAINLESS STEEL # 303	PASSIVATE (S104)

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
SEE NOTE		KRUY	
SEE NOTE		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
SEE NOTE		GEAR SET, BEVEL	
SEE NOTE		MATERIAL	
SEE NOTE		G.D.L.	
TYPE & TEMPER	HEATTREAT. SPEC.	CHECKED	FINAL APPROVAL
SEE NOTE		FREE	7A.K.
FINISH & SPEC. NO.		ELEC. DES. APP. MECH. DES. APP.	GR-183 B

DATE: 6/30/69
CH. NO. 12465
DRAFTS CHECKER ENG. APP. GE
SCALE: S401-232
S401-196

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.
REMOVE ALL BURRS AND SHARP EDGES

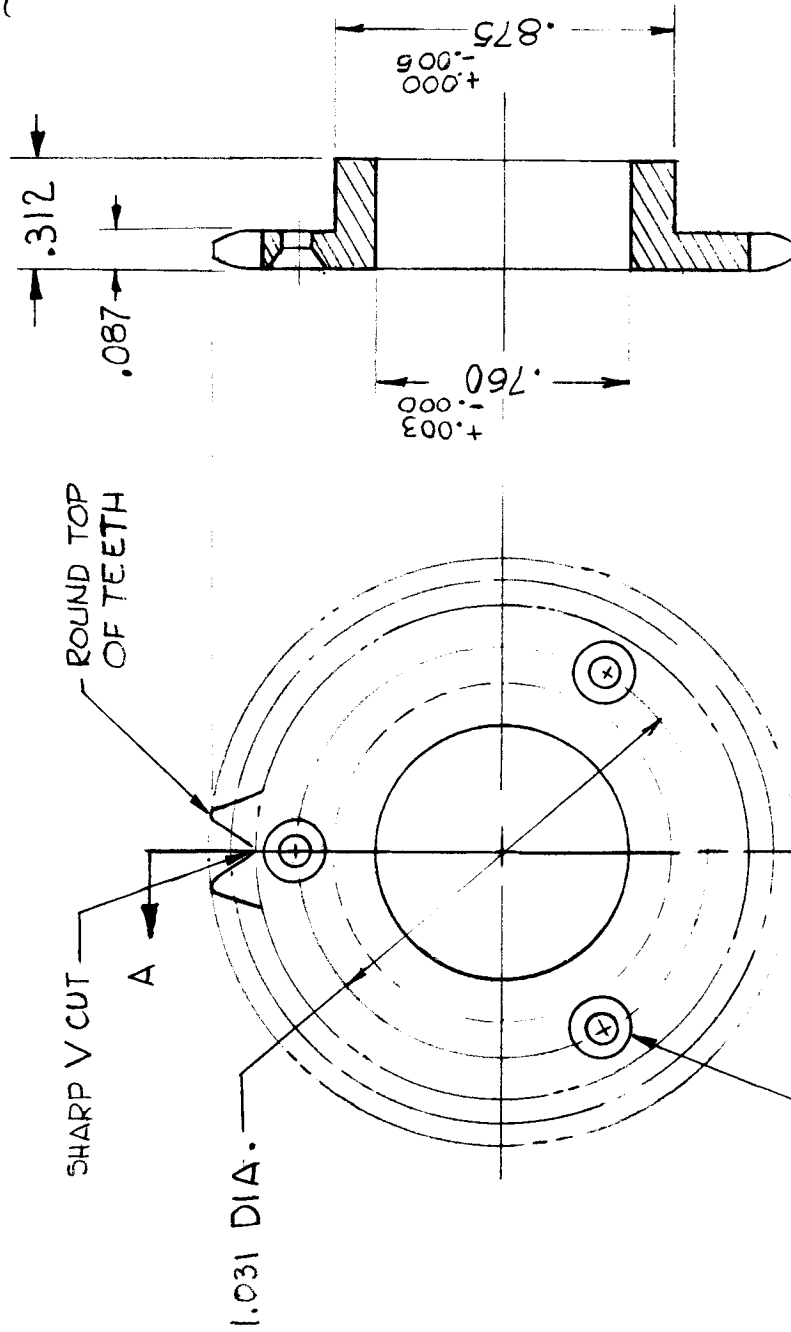
THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT
 MODEL
 HFR-1

USED ON
 ASSY. NO.
 DATE
 7-26-62

GR-184

~ SPECIFICATIONS ~
 NO. OF TEETH = 24
 PITCH DIA. = 1.41



SECTION A-A

(BOSTON GEAR CA 24 MODIFIED AS PERTMC)

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		KRUY	
THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK			
STEEL, STAINLESS			
SPROCKET, WHEEL			
MATERIAL			
# 303		G.O.L	BF
TYPE & TEMPER		CHECKED	FINAL APPROVAL
S104 PASSIVATE		DRAWN	
FINISH & SPEC. NO.			
ELEC. DES. APP.		MECH. DES. APP.	
UNLESS OTHERWISE SPECIFIED:			
DIMENSIONS ARE IN INCHES			
TOLERANCES ON			
FRAC. ± 1/64 DEC. ± .5 ANGLES ± 1/2°			
SYM	DESCRIPTION	DATE	CH. NO. DRAFTS CHECKER ENG. APP.
SCALE: MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES			

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT

1

USED ON

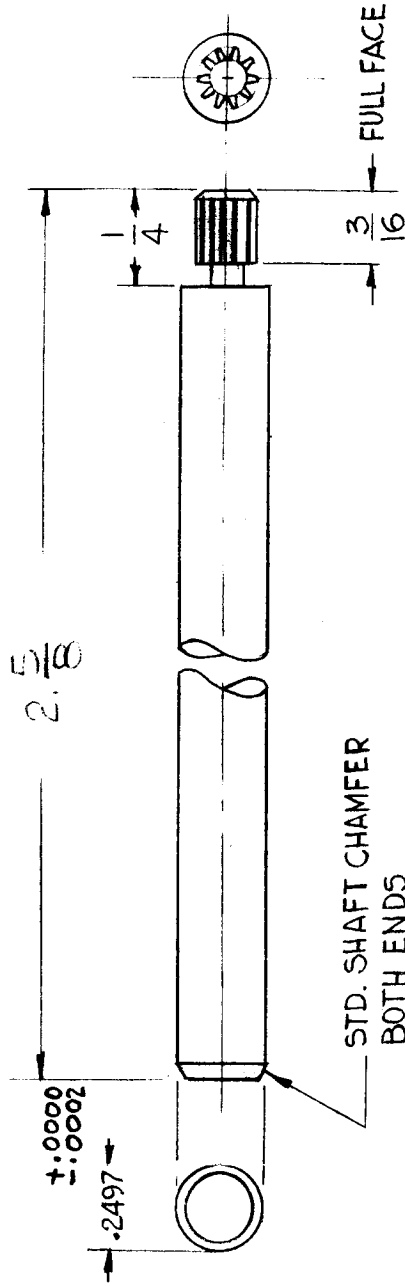
MODEL

HFR -1

DATE

7-26-62

GR-185



~SPECIFICATIONS~

No. OF TEETH = 10
 DIAMETRAL PITCH = 80
 PITCH DIA. = .1250
 PRESSURE ANGLE = 20°
 FACE = 3/16

(PRECISION INSTRUMENTS COMPONENTS FG-8 MOD. AS PERTM)

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		KRUY	
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STOCK SIZE	
		MATERIAL	
		GEAR, SHAFT, PINION	
		G.D.L	
		DRAWN	
		CHECKED	
		TYPE & TEMPER	
		HEATTREAT. SPEC.	
		FINISH & SPEC. NO.	
		ELEC. DES. APP.	
		MECH. DES. APP.	
		FINAL APPROVAL	
		GR-185	

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES ON
 FRAC. $\pm 1/64$ DEC. $\pm .005$ ANGLES $\pm 1/2^\circ$

SCALE:
 MAXIMUM ALLOWABLE TOLERANCES HAVE
 BEEN DETERMINED AND ANY DEVIATIONS
 WILL BE CAUSE FOR REJECTION.
 REMOVE ALL BURRS AND SHARP EDGES

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT

MODEL
HFR-1

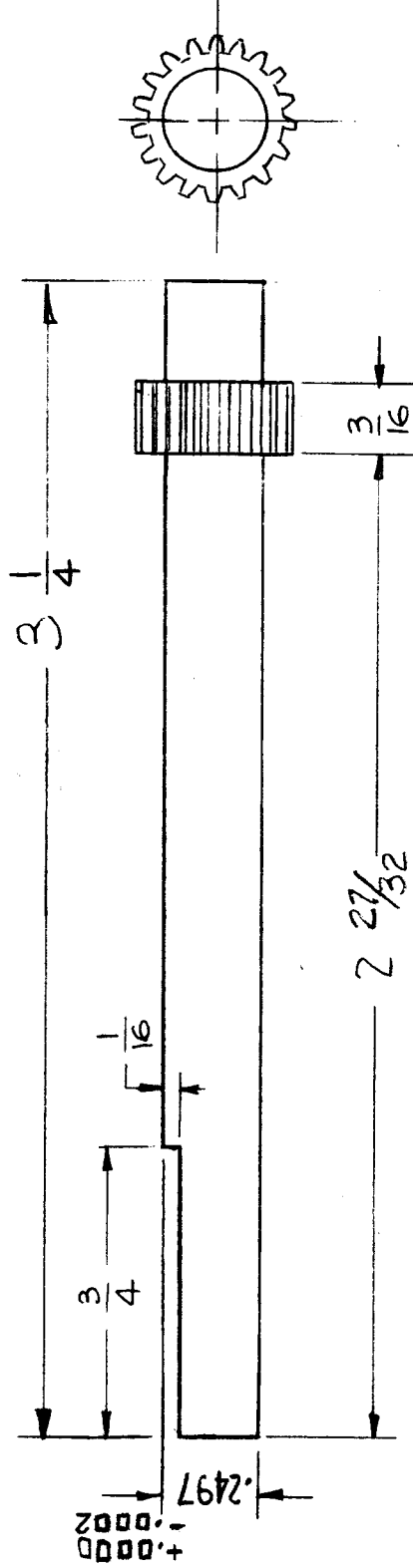
USED ON
ASSY. NO.

DATE

7-26-62

GR-186 B

~ SPECIFICATIONS ~
 NO. OF TEETH = 18
 DIAMETRAL PITCH = 48
 PITCH DIA = .375
 PRESSURE ANGLE = 20°
 FACE = 3/16



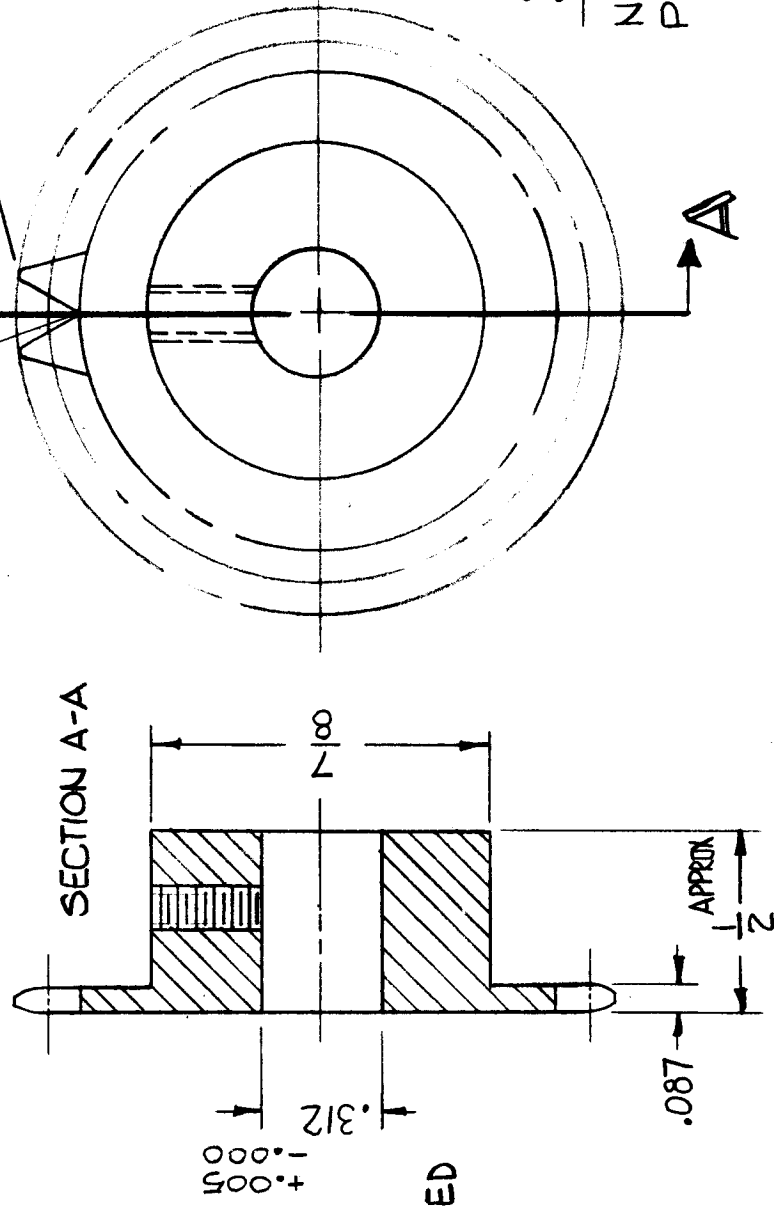
REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		KROY	
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STEEL (STAINLESS)	
		GEAR, SHAFT PINION	
		Ruzzo	BP
		DRAWN	CHECKED
		TYPE & TEMPER	HEAT TREAT. SPEC.
		FINISH & SPEC. NO.	GR-186 B
		ELEC. DES. APP.	MECH. DES. APP.
		SCALE: 5-401-232	
		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES	
		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ON FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°	
		DATE	CH. NO.
		8-27-64	12238
		12-7-62	7791
		DRAFTS	CHECKER
		ENG. APP.	
		MAT'L WAS STEEL (DRAWN) MFG NAME DELE, S4-01-232 AM.	
		3 1/4 DIM. WAS 3 1/32	

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REQ. PART UNIT
 MODEL ASSY. NO. DATE
 HFR-1 7-26-62

USED ON
 GR-187

SHARP-V-CUT
 ROUND TOP OF TEETH



NOTE
 SET SCREW SUPPLIED

SPECIFICATIONS
 NO OF TEETH = 24
 PITCH DIA. = 1.41

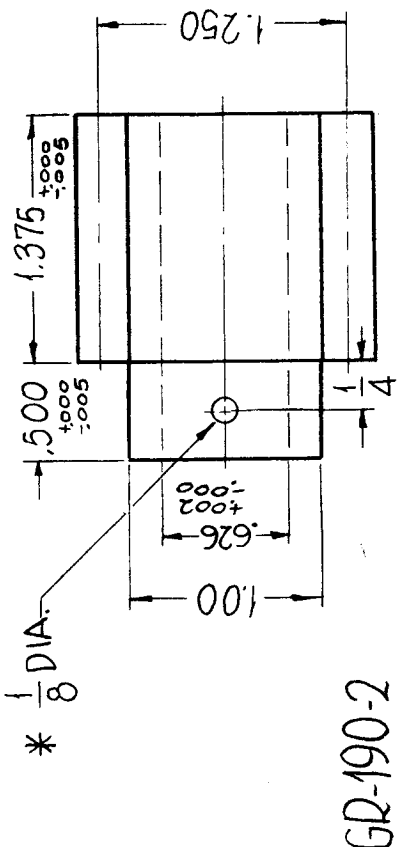
(BOSTON GEAR CA24 MODIFIED AS PER TMC)

REQ. ITEM	PART NO.	KEY	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
			STEEL STAINLESS	
			MATERIAL	
	# 303	RUZZO	SPROCKET, WHEEL	
			TYPE & TEMPER HEAT TREAT. SPEC.	
	S104 PASSIVATE		CHECKED	
			DRAWN	
			FINAL APPROVAL	
			FINISH & SPEC. NO.	
			ELEC. DES. APP.	
			MECH. DES. APP.	
			T.A.K.	GR-187

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES ON
 FRAC. ± 1/64 DEC. ± .008 ANGLES ± 1/2°

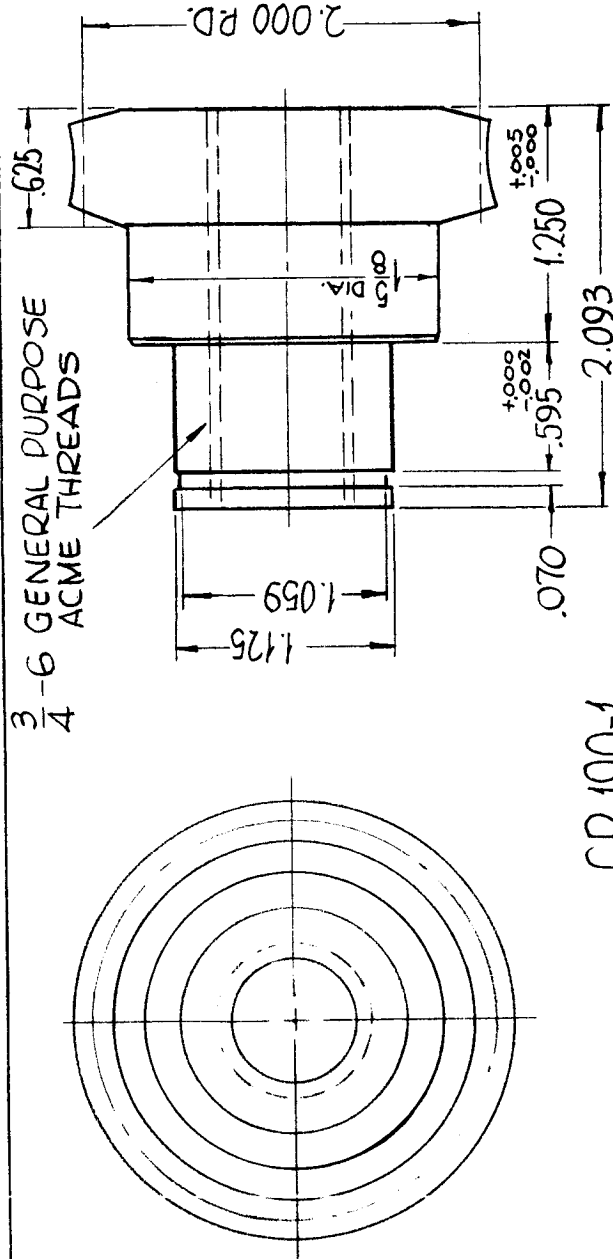
SCALE: Do Not Scale
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.
 REMOVE ALL BURRS AND SHARP EDGES

REQ. PER UNIT	USED ON	
	MODEL	ASSY. NO.
	GPT-200K	A-2706
		DATE
		3-24-64
		GR-190
		0



GR-190-2

PITCH DIA - 1.250
 PITCH - 10
 THREADS - 4, RIGHT HAND
 PRESSURE \angle - 14 1/2°
 FACE - 1.375
 MAT'L - STAINLESS STEEL 303
 FINISH - S-104 PASSIVATE



GR-190-1

PITCH DIA - 2.000
 PITCH - 10
 TEETH NO. - 20
 THREADS - 4, RIGHT HAND
 PRESSURE \angle - 14 1/2°
 FACE - .625
 MAT'L - G-BRONZE

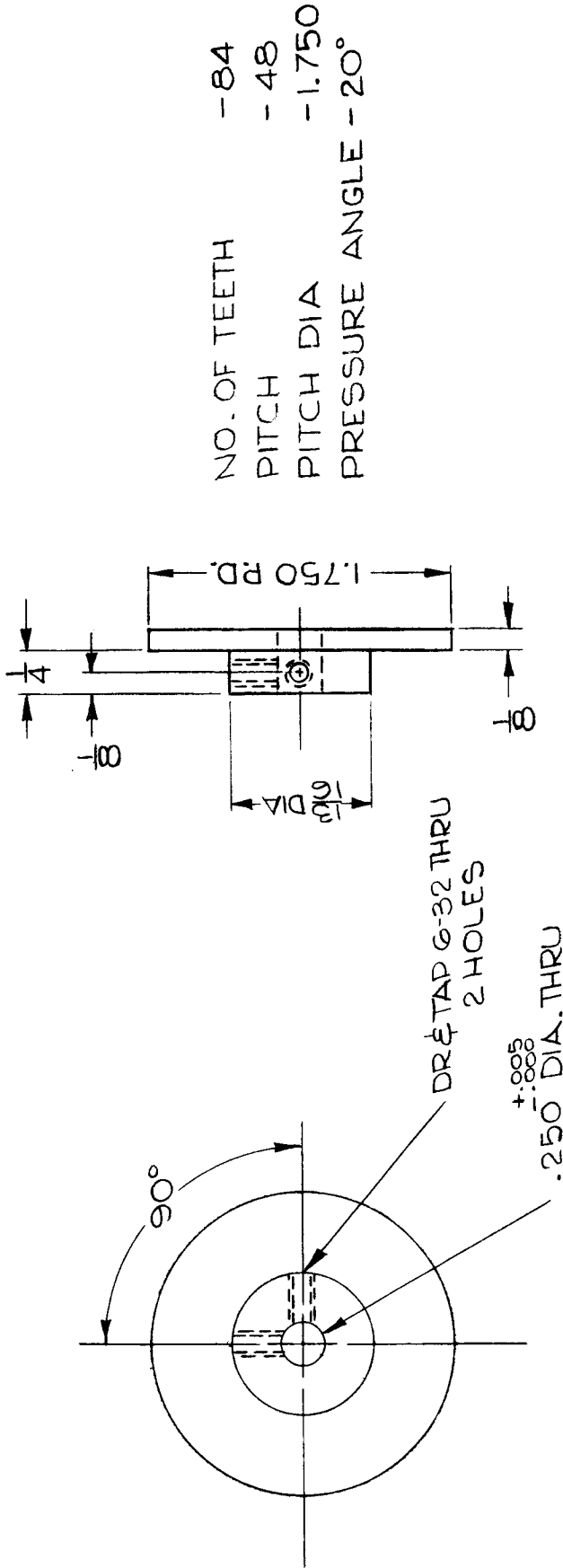
* DRILL & PIN UPON ASSY

REQ. ITEM	PART NO.	F. BUDETTI	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
0	SRG		GEAR WORM WHEEL TUBE HOIST	
X1				GR-190
SYM	DESCRIPTION	CH. NO.	DATE	SCALE
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		5-27-64	1" = 1"
	DECIMALS		2-14-64	
	.X \pm .05			
	.XX \pm .01			
	.XXX \pm .005			
	FRACTIONS			
	± 1/64			
	ANGLES			
	± 0° 30'			
	TOLERANCES			
	FINISH & SPEC. NO.			
	ELEC. DES. APP. MECH. DES. APP.			
	TYPE & TEMPER			
	HEAT TREAT. SPEC.			
	MATERIAL			
	DRAWN			
	CHECKED			
	FINAL APPROVAL			

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE FOR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

REQ. PER UNIT: 1
 USED ON: TTR-10
 MODEL: AX-418
 ASSY. NO.: 6-13-63
 DATE: 6-13-63

GR-191



MODIFY PER TMC REQUIREMENT.

REQ. ITEM	PART NO.	DESCRIPTION	JORDAN	SYMBOL
		STOCK SIZE		
		BRASS		
		MATERIAL		
1/2 HARD				
TYPE & TEMPER		HEAT TREAT. SPEC.	DRAWN	CHECKED
			RON KOHN	W. JORDAN
			ELEC. DES. APP.	MECH. DES. APP.
				GR-191
DESCRIPTION		DATE	CH. NO.	DRAFTS
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES			1:1	
TOLERANCES		CODE	SA01-15 (Y488A)	
.X ± .05		A	(MOD)	
.XX ± .01				
.XXX ± .005				
FRACTIONS		SCALE	1:1	
± 1/64				
ANGLES				
± 0° 30'				

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REQ. PER UNIT

1

USED ON

ASSY. NO.

AX-418

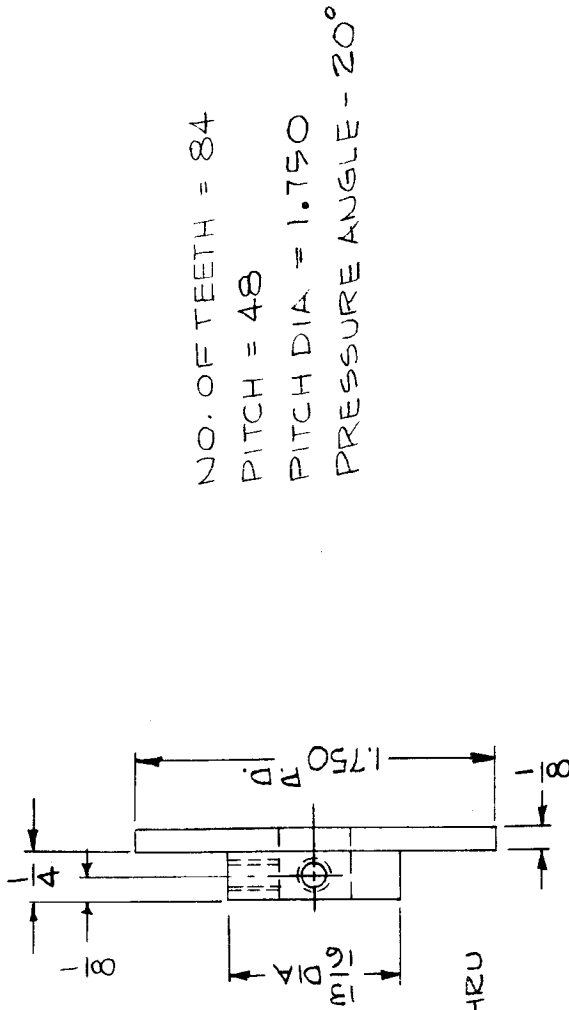
DATE

6-13-63

MODEL

TTR-10

GR-192



NO. OF TEETH = 84
 PITCH = 48
 PITCH DIA = 1.750
 PRESSURE ANGLE = 20°

DR 1/4 TAP 6-32 THRU
 2 HOLES

±.001
 .378 DIA. THRU

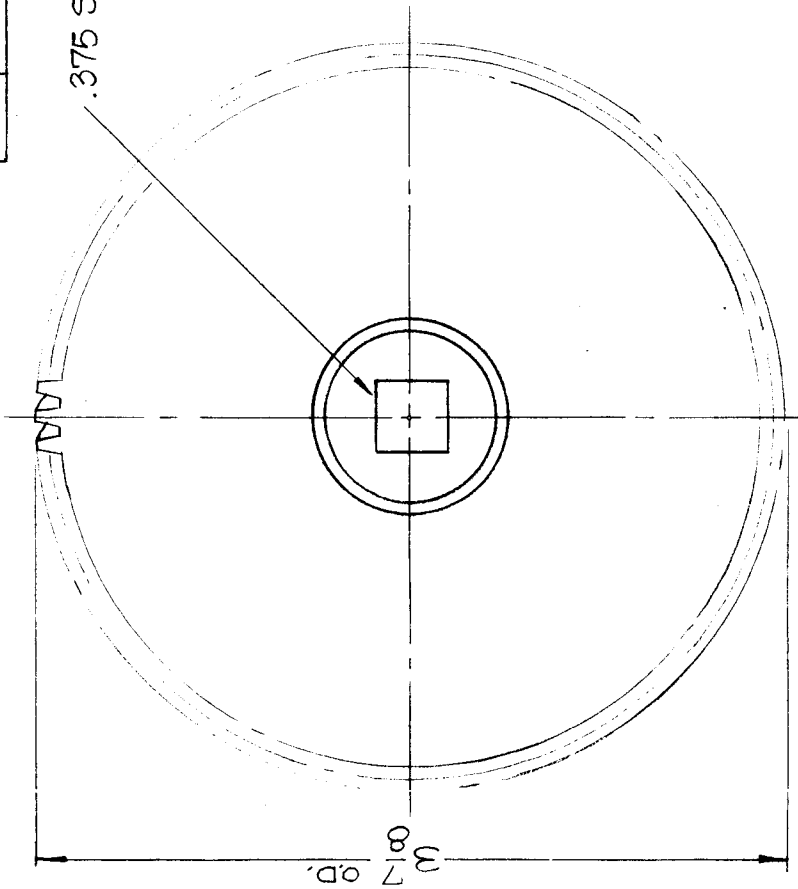
MODIFY PER TMC REQUIREMENT

REQ. ITEM	PART NO.	JORDAN DESCRIPTION	SYMBOL			
		JORDAN DESCRIPTION E3037-14				
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK				
		GEAR, SPUR				
		MATERIAL				
		BRASS				
		1/2 HARD				
		DRAWN				
		W. JOHNSON				
		CHECKED				
		W. JOHNSON				
		FINAL APPROVAL				
		GR-192				
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES					
	FRACTIONS ± 1/64 ANGLES ± 0° 30'					
	DECIMALS .X ± .05 .XX ± .01 .XXX ± .005					
	TOLERANCES					
	SCALE	1:1				
	CODE	A				
		S401-15 (Y4884) MOD				

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REQ. PER UNIT	MODEL	ASSY. NO.	DATE
1	GPT-200K (AX-395)	A-3236	8-6-63
1	GPT-200K (AX-395)	A-3239	8-6-63
1	GPT-200K (AX-395)	A-3242	8-6-63

GR-194 0



SPECIFICATIONS:
 P.D. - 3.750
 PITCH - 16
 TEETH - 60
 PRESS. \angle 20°

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		F. BUDETTI	
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STAINLESS STEEL	
		303	
		HEAT TREAT. SPEC.	
		S104-PASSIVATE	
		FINISH & SPEC. NO.	
		TYPE & TEMPER	
		303	
		DRAWN	
		SRG	
		CHECKED	
		QOM	
		APL 3-30-64	
		FINAL APPROVAL	
		GR-194 0	
		ELEC. DES. APP.	
		MECH. DES. APP.	
		303	
		DATE	
		3-1-64	
		SCALE	
		1" = 1"	
		DESCRIPTION	
		ORIGINAL RELEASE FOR PRODUCTION	
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	
		FRACTIONS	
		± 1/64	
		ANGLES	
		± 0° 30'	
		TOLERANCES	
		.X ± .05	
		.XX ± .01	
		.XXX ± .005	
		CODE	
		A	

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REQ. PER UNIT
2

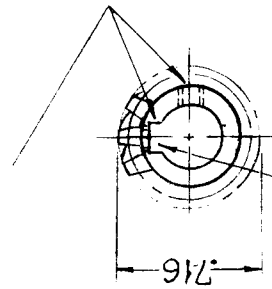
MODEL
GPT-200K (AX 395)

USED ON ASSY. NO.
A-3242

DATE
8-6-63

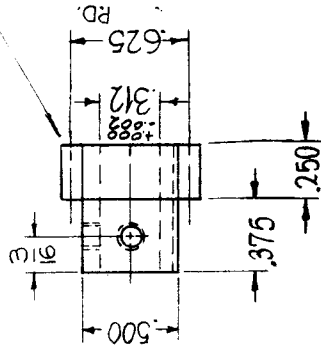
GR-195 0

(2) 8-32 TAP
90° APART.



1/8 WIDE X .070 DEEP
KEYWAY THRU.

10 TEETH



SYMBOL
THE TECHNICAL MATERIEL CORP.
MAMARONECK. NEW YORK
GEAR, HELICAL

REQ. ITEM
PART NO.
STAINLESS STEEL

DATE
3-3-64

DESCRIPTION
ORIGINAL RELEASE FOR PRODUCTION

SCALE
1" = 1"

CHECKER
ENG. APP.

TYPE & TEMPER
HEAT TREAT. SPEC.
S-104-PASSIVATE

DRAWN
SRG

CHECKED
SRG

FINAL APPROVAL
GR-195

SYMBOL
0

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES
FRACTIONS ± 1/64 ANGLES ± 0° 30'

CODE
C

DRAFTS

FINISH & SPEC. NO.
S401-15 (H1610R MOD.)

FINISH & SPEC. NO.

FINISH & SPEC. NO.

FINISH & SPEC. NO.

FINISH & SPEC. NO.

FINISH & SPEC. NO.

FINISH & SPEC. NO.

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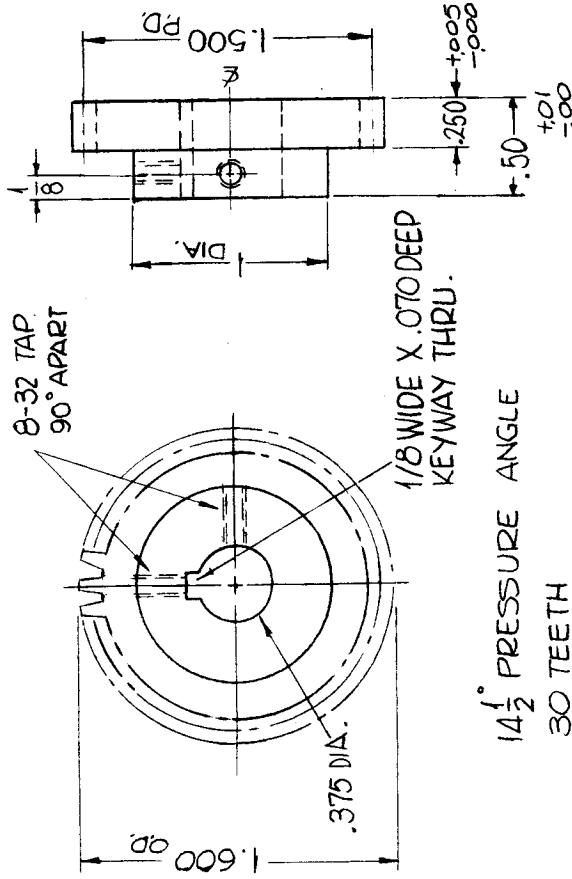
REQ. PER UNIT
3

MODEL
GPT200K (AX-395)

USED ON ASSY. NO.
A-3242

DATE
8-5-63

GR-196 0



14 1/2° PRESSURE ANGLE
30 TEETH

REQ. ITEM	PART NO.	F. BUDETTI	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
			GEAR, SPUR	
			STAINLESS STEEL	
			MATERIAL	
			303	
			TYPE & TEMPER	
			HEAT TREAT. SPEC.	
			S104-PASSIVATE	
			FINISH & SPEC. NO.	
			SCALE 1" = 1"	
			DATE 3-3-64	
			CH. NO.	
			DRAFTS	
			CHECKER	
			ENG. APP.	
			CODE A	
			S401-15 (NA 308 (MOD))	
			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	
			FRACTIONS ± 1/64 ANGLES, ± 0° 30'	
			TOLERANCES X ± .05 .XX ± .01 .XXX ± .005	
			SEEG	
			DRAWN	
			CHECKED	
			FINAL APPROVAL	
			GR-196	

