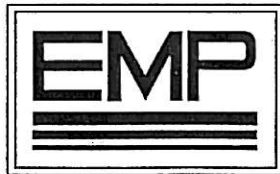


# **T-2 2HP Single Differential**

## **PARTS LISTING & OPERATING MANUAL**



**ELECTRONIC  
MACHINE  
PARTS, INC.**

# T-2 2HP Single Differential

## OPERATING & MAINTENANCE MANUAL WITH PARTS LIST

### 1. INTRODUCTION

The T-2 Single Differential is an important part of the total register system produced by EMP. Used primarily on machinery with existing PIV length control units, the T-2 Transmission will make the momentary phase corrections of the registration error. The T-2 Transmission has a main shaft ratio of 1:1. This ratio increases momentarily when an advance correction is made, and decreases momentarily when a retard correction is made. The actual rate of the correction is determined by the internal ratio selected (see table 2) the time setting located on the front panel of the EMP Controller. The standard ratio supplied in most applications is 4800 turns of the correction motor will rotate the output shaft 360°. Using an EMP Controller with a time setting of 2 at 1.8° correction of the output shaft will take place. These momentary corrections will adjust the T-2's main output shaft's speed briefly increasing or decreasing the machine's draw roller speed and the amount of printed web delivered to the knife.

### 2. LUBRICATION

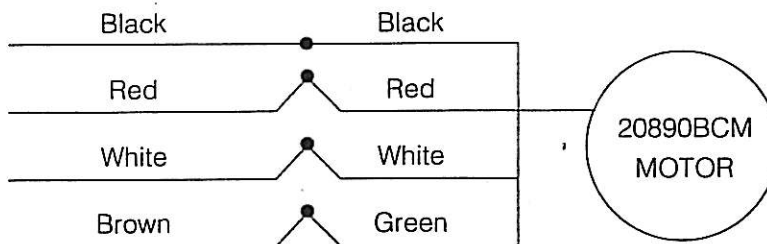
- a) The T-2 Transmission is shipped from the factory without oil.
- b) An access plug is located on top of the T-2 Transmission. PRIOR TO USE, FILL WITH 1/2 QUARTS OF MOBIL GEAR OIL NO. 629 OR ANY AGMA 4EP GRADE OIL EQUIVALENT.

### 3. INSTALLATION

Four 1/2" mounting slots are provided.

### 4. MOTOR WIRING

- a) Motor Part Number 20890BCM.
- b) Motor Brush Part Number A217.



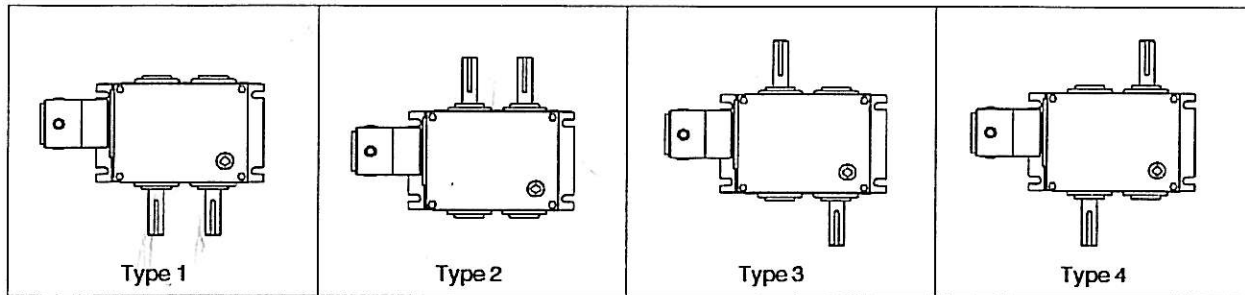
Interchange white and green for proper rotation of draw rollers.

# When Ordering Please Specify:

## 1 - Main Shafts Ratio is 1:1

- a) Input is to either shaft
- b) Rating 2HP @ 300 R.P.M. 420 lb in.
- c) Max speed: 600 R.P.M.
- d) Oil capacity: 1 1/2 Qt. MOBIL gear #629
- e) Weight: 36 lbs.

## 2 - Correction Shaft Position



## 3 - Correction Ratios

Available Ratio's	Correction Motor To Main Shaft Ratio	Degrees Per Correction at two*	At Ten**
Standard	4800:1	2°	6.5°
20:1	2400:1	1	3.25°
86:1	10320:1	.4	14

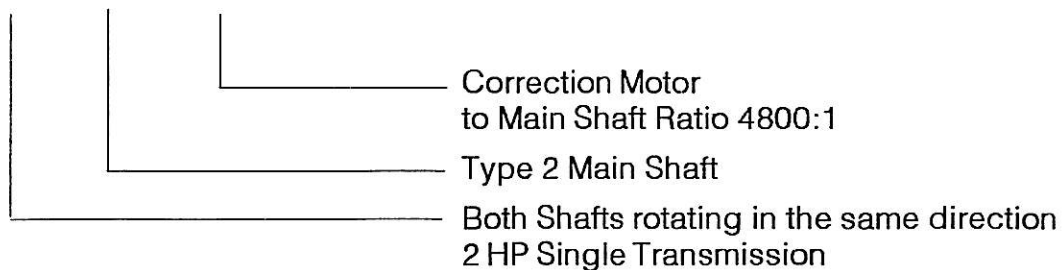
Degrees per correction are calculated using the Model 2 and Model 200 Controller.

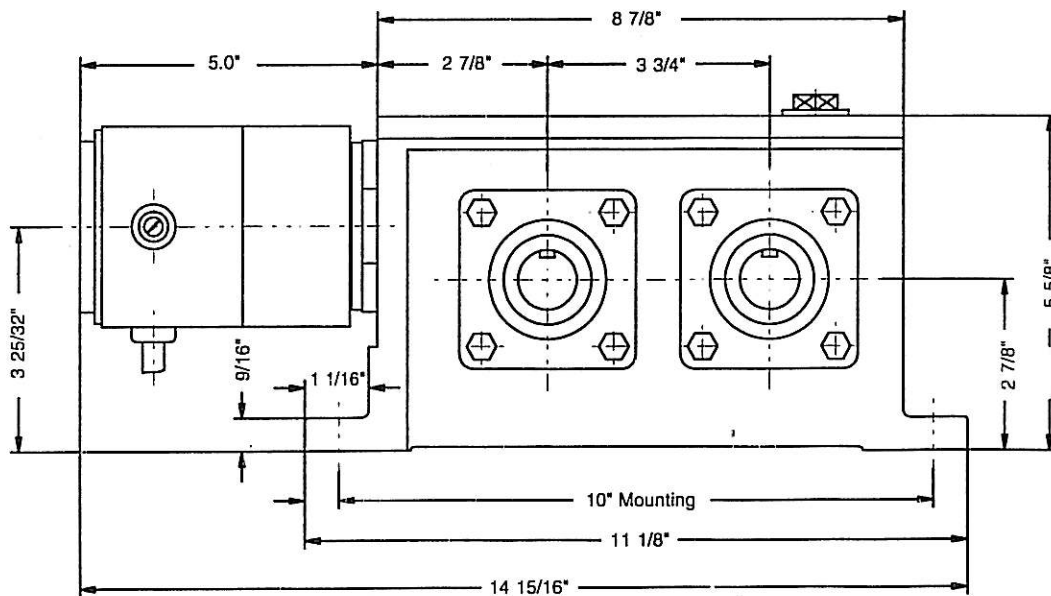
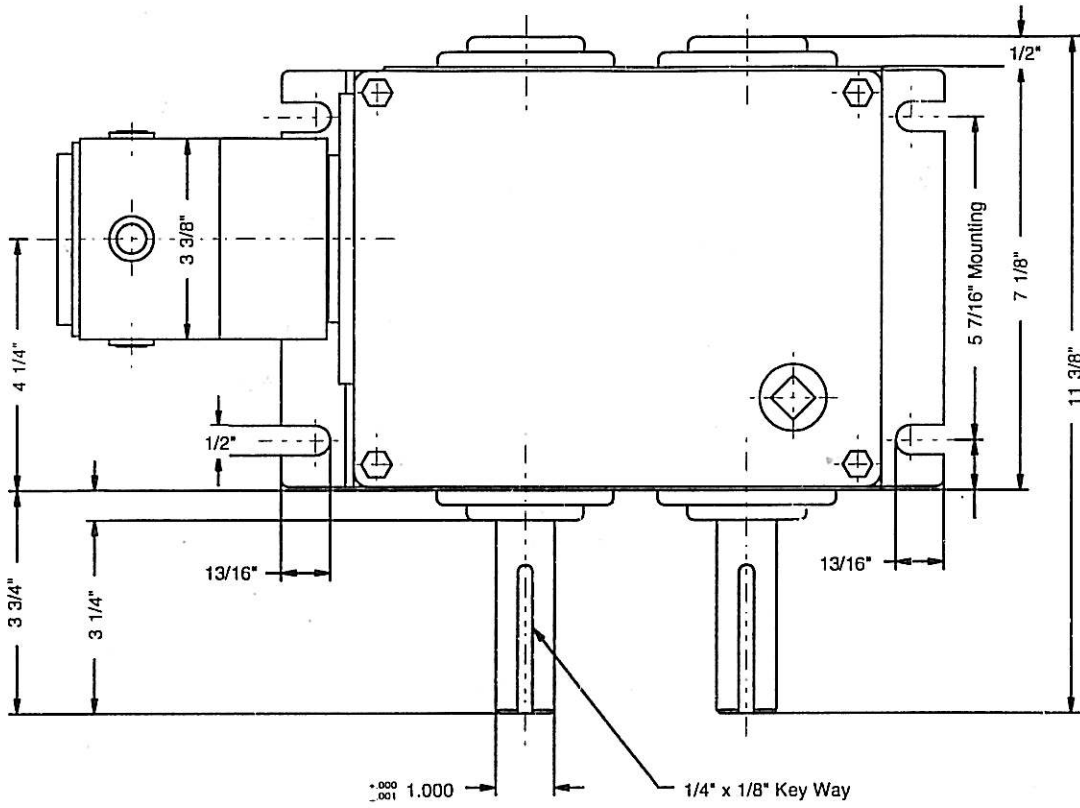
\*calculates the corrections when a timing pot is set at 2.

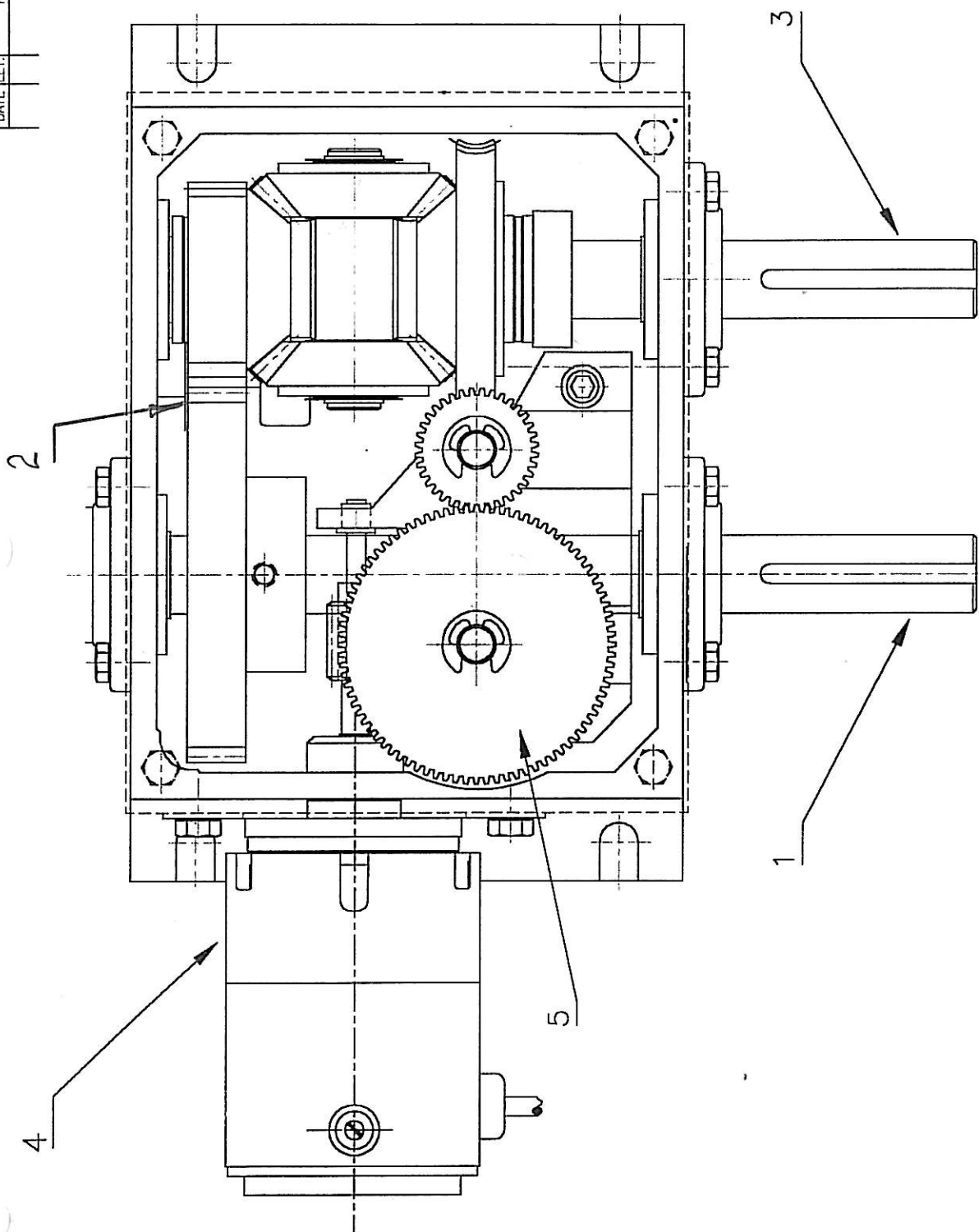
\*\*calculates the correction at a timing pot setting of 10.

## 4 - Example Of A T-2 Part Number

T-2 TYPE 3 20:1







5	Reduction Assembly	C1600
4	Motor/C195	20890BCM
3	Differential Shaft Assy	C1469-1
2	Idler Gear Ass.	B2746
1	Jack Shaft Assy	C1639
#	Part	Dwg:

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES

DECIMALS: .05  
ANGULAR: ± 0.5°  
XXX ± .010  
DO NOT SCALE DRAWING

DATE: 01/14/00

MODEL: Type 1

SIZE: FSCM NO. B-2745-1

DWG NO. B-2745-1

REV. 3

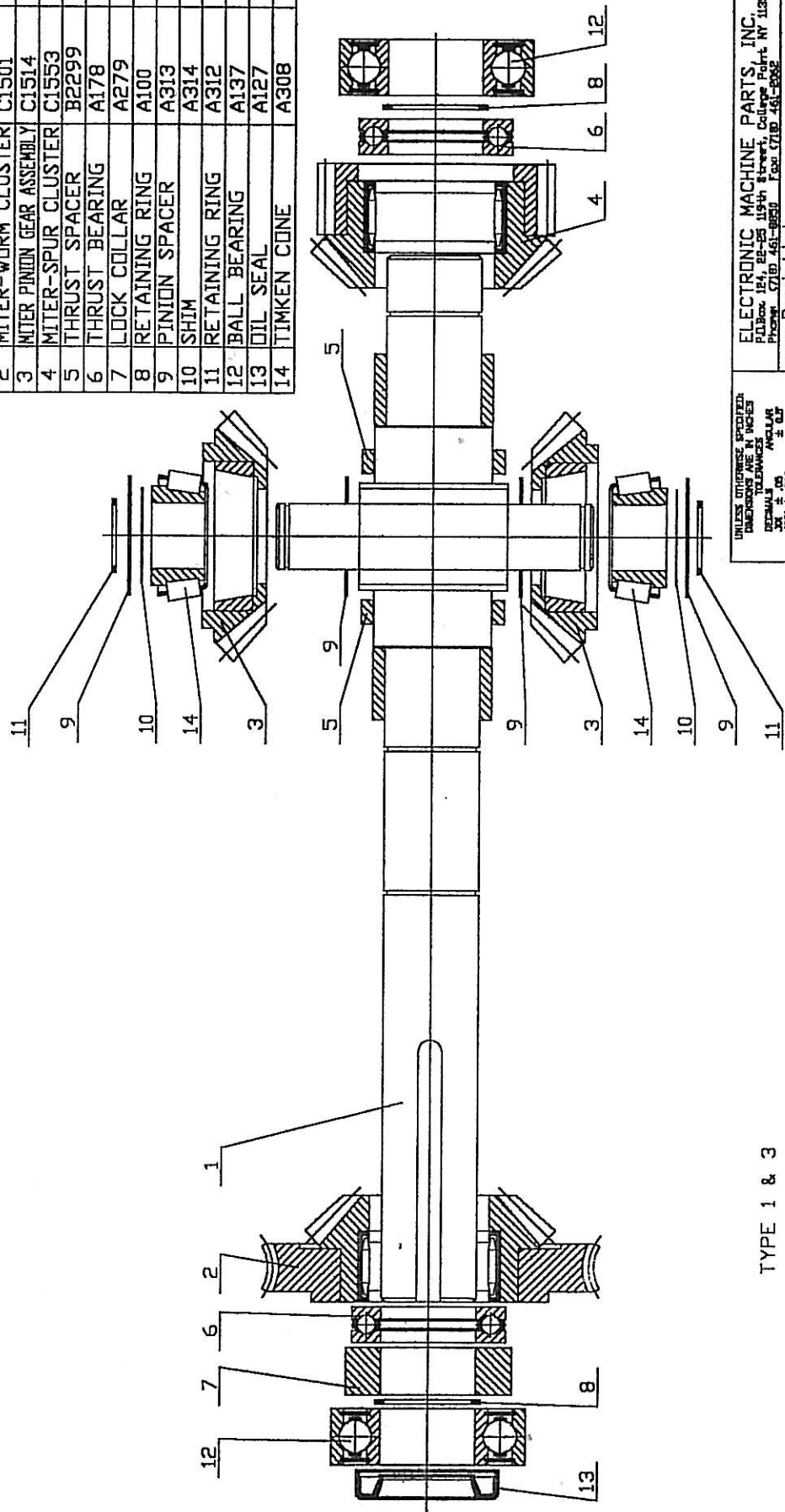
ELECTRONIC MACHINE PARTS, INC.  
P.O. Box 124, 22-25 119th Street, College Point, NY 11356  
Phone: (718) 461-8850 Fax: (718) 461-2062

TITLE: T-2M Type 1 Same Direction

SCALE: FULL

SHEET 07

NO	PART NAME	DWG. NO.	QTY
1	DIFFERENTIAL SHAFT ASSEMBLY	C1574	1
2	MITER-WORM CLUSTER	C1501	1
3	MITER PINION GEAR ASSEMBLY	C1514	2
4	MITER-SPUR CLUSTER	C1553	1
5	THRUST SPACER	B2299	2
6	THRUST BEARING	A178	2
7	LOCK COLLAR	A279	1
8	RETAINING RING	A100	2
9	PINION SPACER	A313	4
10	SHIM	A314	2
11	RETAINING RING	A312	2
12	BALL BEARING	A137	2
13	OIL SEAL	A127	1
14	TIMKEN CONE	A308	2



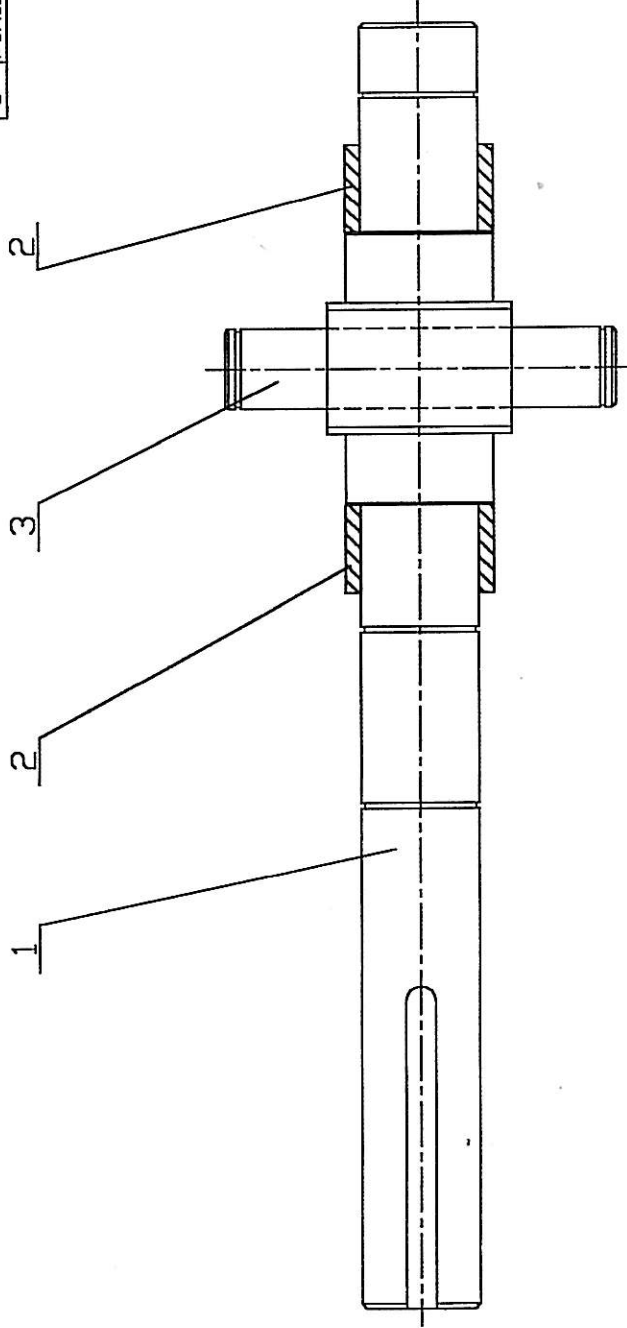
UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
DECIMAL TOLERANCES  
AS SHOWN  
FRACTIONS  
300 ± .010  
DO NOT SCALE DRAWING

DATE 10.23.96  
DRAWN A. Vinnitsky  
CHECKED R. Love  
DESIGN R. Love  
SCALE 1/1  
MODEL T-2M Transmission  
SIZE B  
DWG. NO. C-1469-1  
REV 2

ELECTRONIC MACHINE PARTS, INC.  
P.O. Box 124, 22-25 119th Street, College Point, NY 11356  
Phone (718) 461-8250 Fax (718) 461-8252

TYPE 1 & 3  
SAME DIRECTION

NO	PART NAME	DWG. NO	QTY
1	DIFFERENTIAL SHAFT	C1574	1
2	INNER RACE	A310	2
3	PINION SHAFT	B2301	1



TYPE 1 & 3

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
DECIMAL FRACTIONS  
XX ± .05  
XXX ± .010  
DO NOT SCALE DRAWING

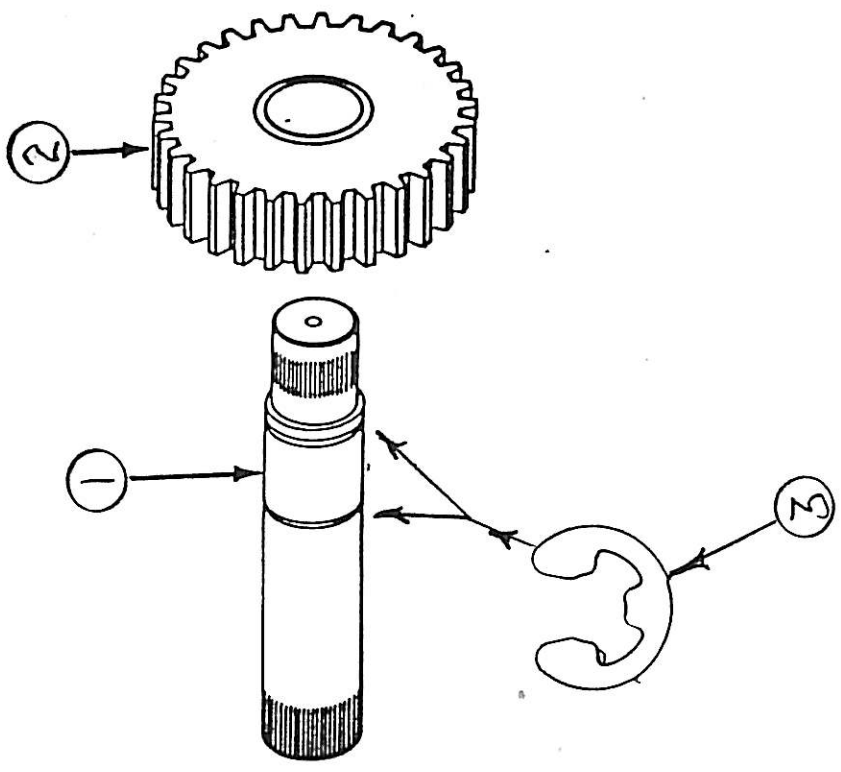
ELECTRONIC MACHINE PARTS, INC.  
P.O. Box 124, Rt. 25 19th Street, College Point, NY 11366  
Phone: (718) 461-9850 Fax: (718) 461-8782  
TITLE: DIFFERENTIAL SHAFT

DATE	DATE	SCALE	SHEET	OF
10.23.96		1:1	1	1
DRAWN A. Vinnitsky	MODEL J-2M TRANSMISSION	SIZE B	DWG. NO. C1574	REV
CHECKED R. LOVE				
DESIGN R. LOVE				



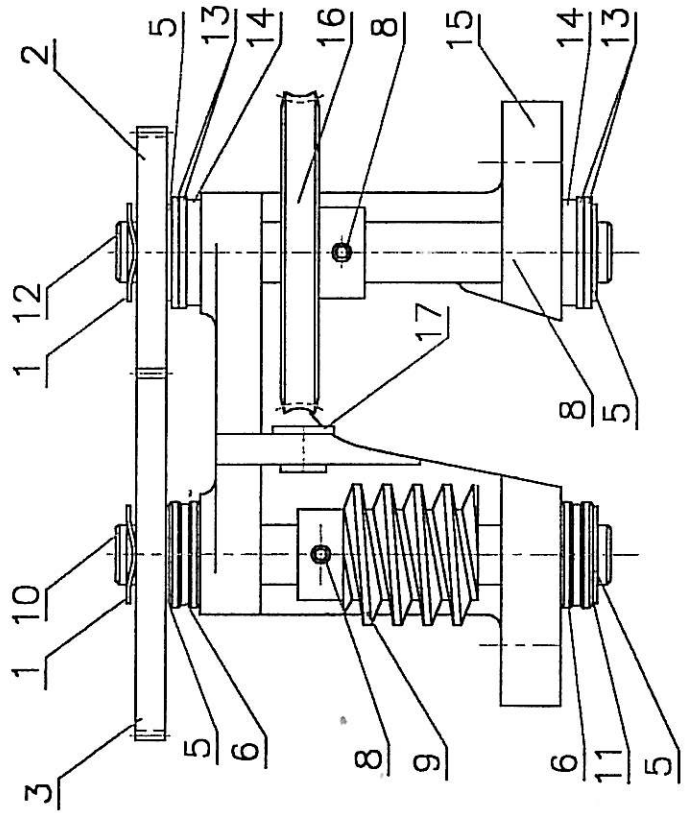
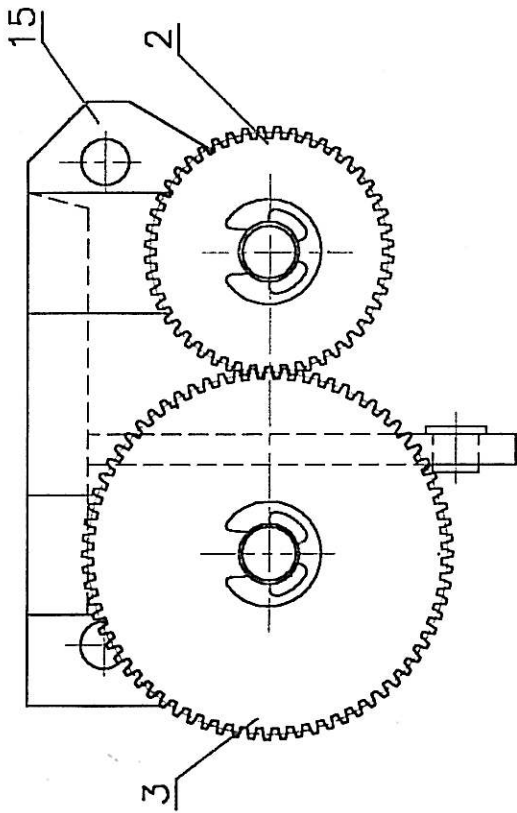


#	PART	DWG
1	IDLER SHAFT	B2531
2	IDLER GEAR WITH A196 BUSHING	B2532
3	RETAINING RING	A108 (2) Pc



T-2  
TRANSMISSION  
IDLER GEAR ASS'Y  
B2746

DATE LET.	REVISION	E.C.N. BY APP.



NO	PART#	DESCRIPTION	QTY
17	A186	BRONZE BUSHING	1
16	B266	WORM GEAR, REDUCTION	1
15	C210	BRACKET, REDUCTION	1
14	A187	BRONZE BUSHING	2
13	A184	THRUST WASHER	4
12	B288	WORM SHAFT	1
11	A228	SHIM	-
10	B287	WORM SHAFT	1
9	B268	WORM GEAR	1
8	A254-50	ROLL PIN 5/32D x 3/4L	2
7	A191	BRONZE BUSHING	2
6	A179	THRUST BEARING 1/2"	2
5	A109	RETAINER RING	4
4	A265-10	DOWEL PIN 1/8Dx1/2L	2
3	B294	SPUR GEAR - 72 TOOTH	1
2	B293	SPUR GEAR - 48 TOOTH	1
1	A110	RETAINER RING	2
NO	PART#	DESCRIPTION	QTY

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES  
 DECIMALS ANGULAR  
 .XX ± .05  
 .XXX ± .010  
 DO NOT SCALE DRAWING

DATE: 23.04.88  
 DRAWN: J. WROBLEWSKI  
 CHECKED: [Signature]  
 DESIGN: [Signature]

MODEL: [Blank]  
 SIZE: [Blank] FSCM NO. [Blank] DWG NO. C1600 OF [Blank] SHEET  
 TITLE: PSD3/T2 B1443 REDUCTION ASSEMBLY PARTS LISTING  
 ELECTRONIC MACHINE PARTS, INC.  
 P.O. Box. 124, 22-25 118th Street, College Point, NY 11358  
 Phone: (718) 481-8850 Fax: (718) 481-2082