

COLLAR MAKER

CINCINNATI PRECISION MACHINERY 513-860-4133



COLLAR MAKER

CAPACITY: 24 GAUGE MAXIMUM

CAUTION: DO NOT RUN HEAVIER GAUGES

STOCK WIDTH: 3 INCH AS DELIVERED

6 INCH WITH ROLL INTERCHANGE

DIAMETER RANGE: 3 INCH MINIMUM 14 INCH MAXIMUM

OPERATION:

A. Machine as delivered adjusted to Open Diameter Curvature.

To adjust SEE DWG.#59551. Loosen the two wing nuts #61473 and raise the pivot roll assembly by turning adjusting screws #57565. The highest position will generate an approximate 3 inch diameter collar. Minor adjustment will generate the desired diameter.

NOTE: Due to the small diameter the part will curl onto the cover and distort the true radius slightly. The part can be easily cupped by hand to assume the proper configuration.

The Angular Plain of the pivot bars will be approximately:

3 Inch Diameter at 30 Degree/28 Degree

8 Inch Diameter at 15 Degree/13 Degree

Adjustments to control diameter are rapid and 2 - 3 pieces will give you the desired product. Due to variances in metals - - - formability due to its hardness (yield) and thickness range in tolerance it was not practical to establish exact settings for diameters required and the need to adjust to the material for the end product has been established.

B. CAUTION: Do not operate this machine with covers removed due to exposed gears and rotary punch.

Start machine and place material sheared to proper width (3 inch as machine is delivered) into gauge bar and feed material into the machine. The part will be fed thru the Rotary Notcher and directly into the Roll Bead Crimp function of the Collar Maker.

C. ENTRANCE GAUGE SETTINGS:

SEE GAUGE BAR SKETCH #1. The adjustable bar should be set at stock width plus 1/32 inches to allow the material to pass freely thru the machine. The back edge section can be adjusted to the dimension re-

COLLAR MAKER (CONT.)

C. ENTRANCE GAUGE SETTINGS: (CONT.)

quired by taking the blank and bending a 1 inch 90 degree flange and then fitting this flanged portion between the back gauge bar and front bar allowing approximately 1/32 inch side movement.

- D. THE SIDE GAUGE BAR is only used in conjunction with the Collar Maker and should be removed if wider sheets are to be run with Roto Notcher Only. This can be accomplished by removing the Upper Roller Assembly of the Collar Maker and lowering the Pivot Diameter Adjustment Assembly.

This can be accomplished as follows:

1. Remove box end cover.
 2. Remove 4 bolts that hold pillow block onto lower assembly.
 3. Lower Pivot Diameter Adjustment below tangency of bottom roll.
 4. Remove Side Gauge Bar.
 5. Replace Box End Cover.
 6. Start machine and feed flat sheet or sections with formed tee formed on end with 1 inch maximum tee height - - - NOTE tab end must be approximately 5/8 inches.
- E. To replace Top Section and convert the machine back into the Collar Maker proceed as follows:
1. Remove Box End Cover.
 2. Replace Top Roll Assembly.

CAUTION: Before replacing the Top Roll Assembly JOG the machine with the "Starting Switch" until a "PLUS + SIGN" etched onto the bottom shaft is at the TOP CENTER. When placing the Top Assembly onto the machine rotate the Assembly Shaft so that the "PLUS + SIGN" etched on the End of the Gear is also VERTICALLY UP at TOP CENTER. Assembly Top Assembly to lower portion with BOTH + SIGNS at TOP CENTER. The "PLUS SIGNS" at TOP CENTER insure the timing of the Crimp Rolls, for a true balanced Vee. The Top Assembly Gear has been positioned by drilling thru the set screw hole into a soft portion of the shaft and locked into position by a set screw. This positioning can be altered and recentered if a new gear or Crimp Roll is installed onto the unit.

When tightening socket head cap screws of the Upper Assembly, tighten tight to compress the disc springs and then loosen 3/8 to 1/2 turn (135 degree to 180 degree). This adjustment can be varied to suit individual crimp depth requirements, as well as feeding.

E: (CONT.)

3. Replace Side Gauge Bar and adjust as required per previous instructions.
4. Replace Box End Cover.

F. ADJUSTMENTS AND TROUBLE SHOOTING:

1. Material not feeding into Bead and Crimp Roll Collar Maker.
 - a. Tighten front studs on Exit Feed Roll of Roller Notcher.. (2nd. Roll at Exit End of Roto Notcher).
 - b. Check Side Gauge Setting for proper width with 1/32 clearance. Check stock for being oversize. Adjust accordingly.
2. Metal Over Feeding into Collar Maker. (Buckle between Exit Feed Roll and Collar Maker).
 - a. Exit Feed Roll set too tight - - - loosen enough to insure positive feed into Collar Maker.
3. Metal buckling between Feed Rolls at Notch Area.
 - a. Entry Feed Roll too tight - - loosen as required.
4. Metal Skewing out of Collar Maker making ends out of match exceeding 1/16 inches.
 - a. Tighten hex head cap screw on Bead End pillow block of Collar Maker.
 - b. Check for over feeding on Exit Feed Roll.
 - c. Check Gauge Setting at Entry End to Collar Maker. Excess Setting beyond 1/32 inches may be cause.
5. Lead edge of bead torn as it exits from Collar Maker or material jams and folds under on small diameter.
 - a. Check and lower part #40792. (SEE DWG.#59551) slightly or remove and increase lead end radius on a grinder. Note part is thru hardened and grinding will not create a soft area.

The purpose of The Guide is to minimize the Flat or Reverse Curve caused on the lead end by the rapid forming of the bead in this one roll station.

COLLAR MAKER (CONT.)

F. (CONT.)

The proper locations of the slide would be NOSE DOWN and visually sighting thru the bottom roll slot and the slide. The top edge of the slide should be slightly above the bottom of the slot in the bottom roll. To test proper height run a blank thru the machine with the diameter forming pivot roll in its lowest position. The formed part should come out with a diameter of 14 to 16 inches without the use of the diameter forming attachment.

6. Tab Notch not to Base of Bead.

- a. Remove Box End Cover. Loosen the 2-3/8 Hex Head Cap Screw #62363 on Dwg. #59551 and move assembly left or right to add or delete material standard setting of plate, #20035 from the Roto Notcher Plate Assembly is 1/8 inch to 5/32 inch. Plate #20035 has slotted holes to allow this movement.

CAUTION: When tightening assembly be sure to hold the unit in an UP or HORIZONTAL plane.

ENCLOSURES:

Drawing #59551

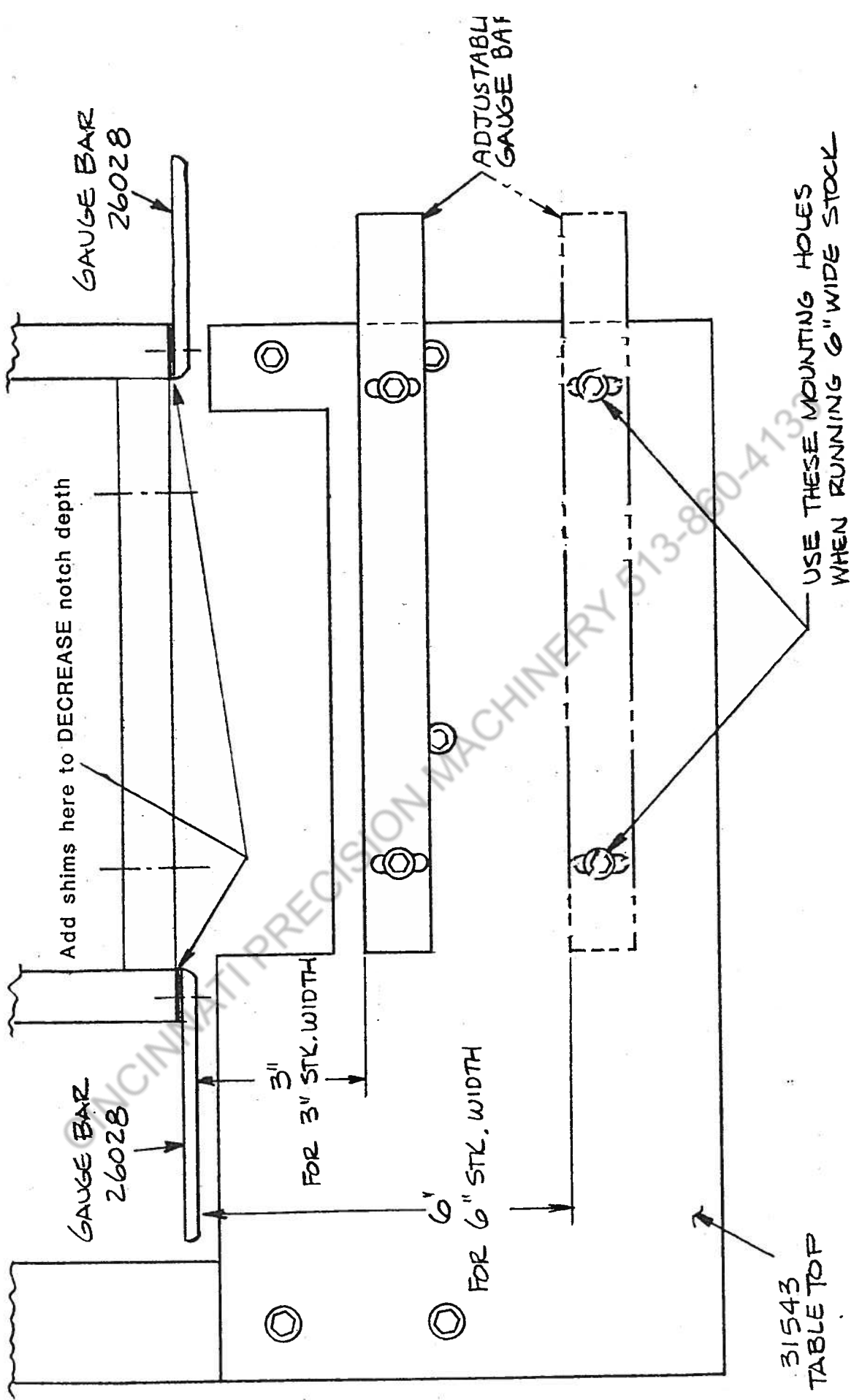
SKETCH #1

Collar Maker Bill of Material # 0960201

Roto Notcher Instructions Complete Form # _____

8/2/78

jjm



GAUGE BAR ADJUSTMENTS
 SKETCH #1

MATERIAL MOVES →

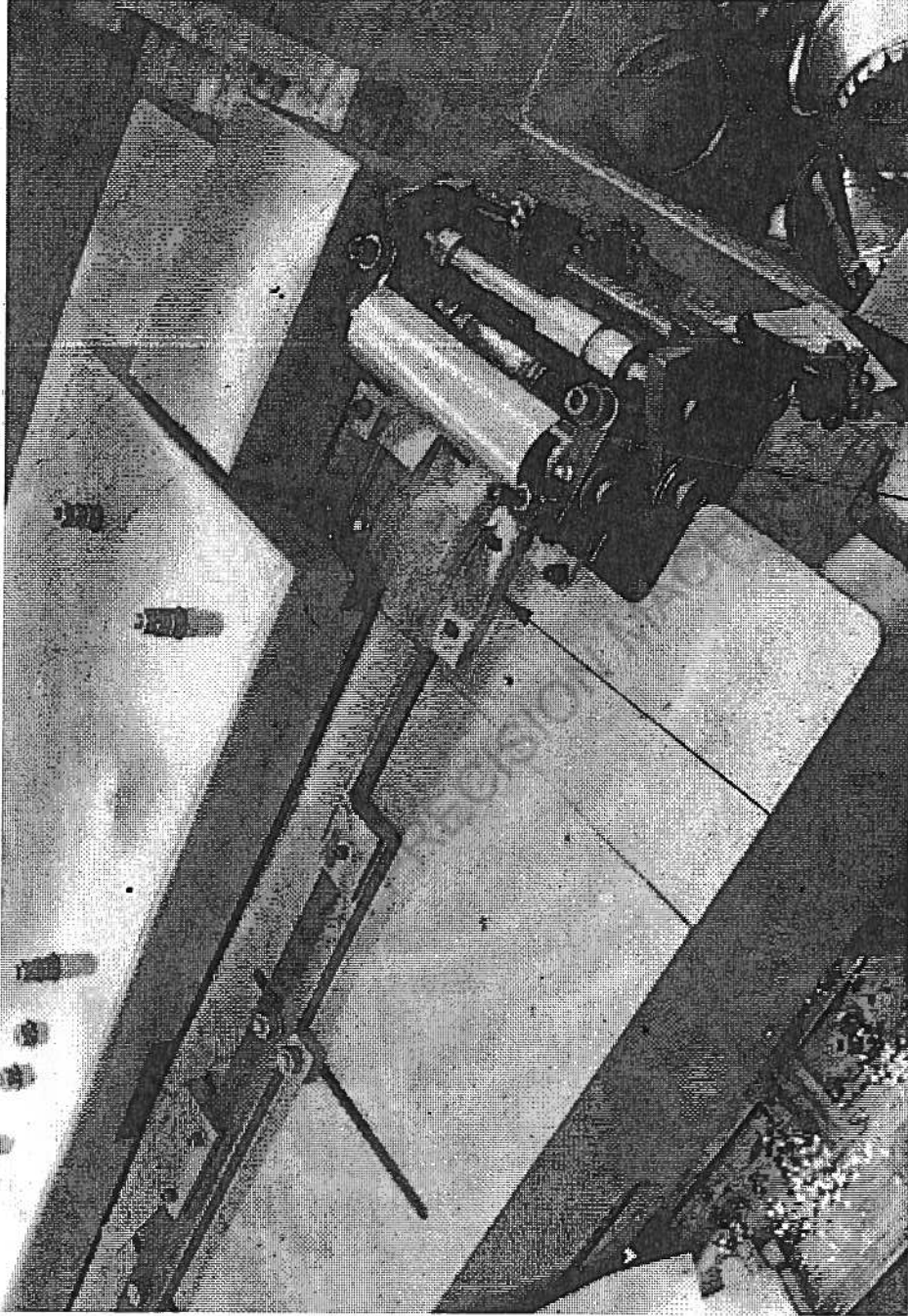
COLLAR MAKER PARTS LIST

COMPONENT	QTY	LOC	DESCRIPTION
0013498	1	3A19	LWR CRIMP ROLL SHF
0013499	1	3A19	UPPR CRIMP ROLL SH
0013777	1	3A46	SPACER
0013778	1	3A46	SPACER
0013779	1	3A46	TOP SPACER
0013780	1	3A46	SPACER
0013781	1	3A47	SPACER-UPPER-
0013782	1	3A47	SPACER-LOWER-
0016058	1	5A11	TOP CRIMP ROLL
0016094	1	5A17	UPPER BEAD ROLL
0016095	1	5A18	LOWER BEAD ROLL
0016096	1	5A18	CURLER ROLL
0016141	1	5A23	BTM CRIMP ROLL
0026032	2	OR07	SIDE PLATE
0026035	1	OR07	MTG PLATE
0026036	1	6A78	BRG BLOCK
0026038	2	6A79	PILLOW BLOCK
0036034	1	7A60	DEFLECTOR PLATE
0040792	1	8A03	SHOE -MACH-
0042760	1	8A18	SPUR GEAR
0042779	1	8A19	SPUR GEAR
0052610	2	8A45	MTR ADJ BOLT ASY
0057556	1	9A02	IDLR ARM ROTO-NTCH
0057557	1	9A02	IDLR ARM ROTO-NTCH
0060014	4	ASF4	3/8-16X1 1/2 HHCS
0060389	2	1B03	5/16-18X3-1/2SHCS
0060392	4	ASF6	3/8X2-1/2 SHCS NYL
0060394	6	ASF6	3/8-16X3/4SHCS NYL
0060613	1	AS10	1/4-20X5/8SSS
0060650	2	AS10	5/16-18X5/16 SSS
0060821	4	AS12	10-12 SMS TP-A
0061473	2	AS32	3/8-16 WING NUT
0062000	2	AS32	1/4X062 WSHR
0062027	2	AS33	3/8X082 WSHR
0062340	32	1C15	3/8 BLVL WSHR
0062362	2	QL09	5/16 LCK WSHR
0062363	4	QL09	3/8 LCK WSHR
0062401	1	1C17	9 WDRF KEY
0062402	1	1C17	15 WDRF KEY
0062451	2	1C19	3/16 SQX 8 LG
0062518	3	AS35	5160-98 RET RNG
0062526	3	AS35	RET RG 5160-75
0062611	4	AS14	1/4X1/2 DWL
0066010	2	9A27	B108 TORR BRG
0066030	2	9A27	B168 O.H. TORR BRG
0066060	2	9A27	B1212 TORR BRG
0066100	3	9A28	B1612 TORR BRG
0066160	2	9A30	TT1102-1 THRST BRG
0066333	2	9A39	TRB 1220 THRS RC
0066354	1	9A40	TRB 1625 THRUST
0066420	6	9A46	TT1205 THRUST BRG
0066421	1	9A46	TT1502 THRUST BRG
0066425	5	9A46	TT1709-1THRUST BRG
0072059	1	4B32	40B26 7/8BORE SPKT

COLLAR MAKER PARTS LIST

COMPONENT	QTY	LOC	DESCRIPTION
0013498	1	3A19	LWR CRIMP ROLL SHF
0013499	1	3A19	UPPR CRIMP ROLL SH
0013777	1	3A46	SPACER
0013778	1	3A46	SPACER
0013779	1	3A46	TOP SPACER
0013780	1	3A46	SPACER
0013781	1	3A47	SPACER-UPPER-
0013782	1	3A47	SPACER-LOWER-
0016058	1	5A11	TOP CRIMP ROLL
0016094	1	5A17	UPPER BEAD ROLL
0016095	1	5A18	LOWER BEAD ROLL
0016096	1	5A18	CURLER ROLL
0016141	1	5A23	BTM CRIMP ROLL
0026032	2	OR07	SIDE PLATE
0026035	1	OR07	MTG PLATE
0026036	1	6A78	BRG BLOCK
0026038	2	6A79	PILLOW BLOCK
0036034	1	7A60	DEFLECTOR PLATE
0040792	1	8A03	SHOE -MACH-
0042760	1	8A18	SPUR GEAR
0042779	1	8A19	SPUR GEAR
0052610	2	8A45	MTR ADJ BOLT ASY
0057556	1	9A02	IDLR ARM ROTO-NTCH
0057557	1	9A02	IDLR ARM ROTO-NTCH
0060014	4	ASF4	3/8-16X1 1/2 HHCS
0060389	2	1B03	5/16-18X3-1/2SHCS
0060392	4	ASF6	3/8X2-1/2 SHCS NYL
0060394	6	ASF6	3/8-16X3/4SHCS NYL
0060613	1	AS10	1/4-20X5/8SSS
0060650	2	AS10	5/16-18X5/16 SSS
0060821	4	AS12	10-12 SMS TP-A
0061473	2	AS32	3/8-16 WING NUT
0062000	2	AS32	1/4X062 WSHR
0062027	2	AS33	3/8X082 WSHR
0062340	32	1C15	3/8 BLVL WSHR
0062362	2	QL09	5/16 LCK WSHR
0062363	4	QL09	3/8 LCK WSHR
0062401	1	1C17	9 WDRF KEY
0062402	1	1C17	15 WDRF KEY
0062451	2	1C19	3/16 SQX 8 LG
0062518	3	AS35	5160-98 RET RNG
0062526	3	AS35	RET RG 5160-75
0062611	4	AS14	1/4X1/2 DWL
0066010	2	9A27	B108 TORR BRG
0066030	2	9A27	B168 O.H. TORR BRG
0066060	2	9A27	B1212 TORR BRG
0066100	3	9A28	B1612 TORR BRG
0066160	2	9A30	TT1102-1 THRST BRG
0066333	2	9A39	TRB 1220 THRS RC
0066354	1	9A40	TRB 1625 THRUST
0066420	6	9A46	TT1205 THRUST BRG
0066421	1	9A46	TT1502 THRUST BRG
0066425	5	9A46	TT1709-1THRUST BRG
0072059	1	4B32	40B26 7/8BORE SPKT

59551



AA25737

AA25716

1

FRAC. TOE 11/64		DEC. TOE +.003/- .000	ANG. TOE	REV. NO.	REVISIONS
MATERIAL X		HEAT TREAT	SCALE	2	
DRAWN BY DAG		CHECKED BY	DATE 5-22-96	3	
PART NAME SPIN CURLER ASSY.		PART NUMBER 59551		4	
MACHINE		SHT. 2 OF 2		5	
711 DGDEN AVE.		THE LOCKFORMER CO.		6	
		LISLE, ILLINOIS 60532			