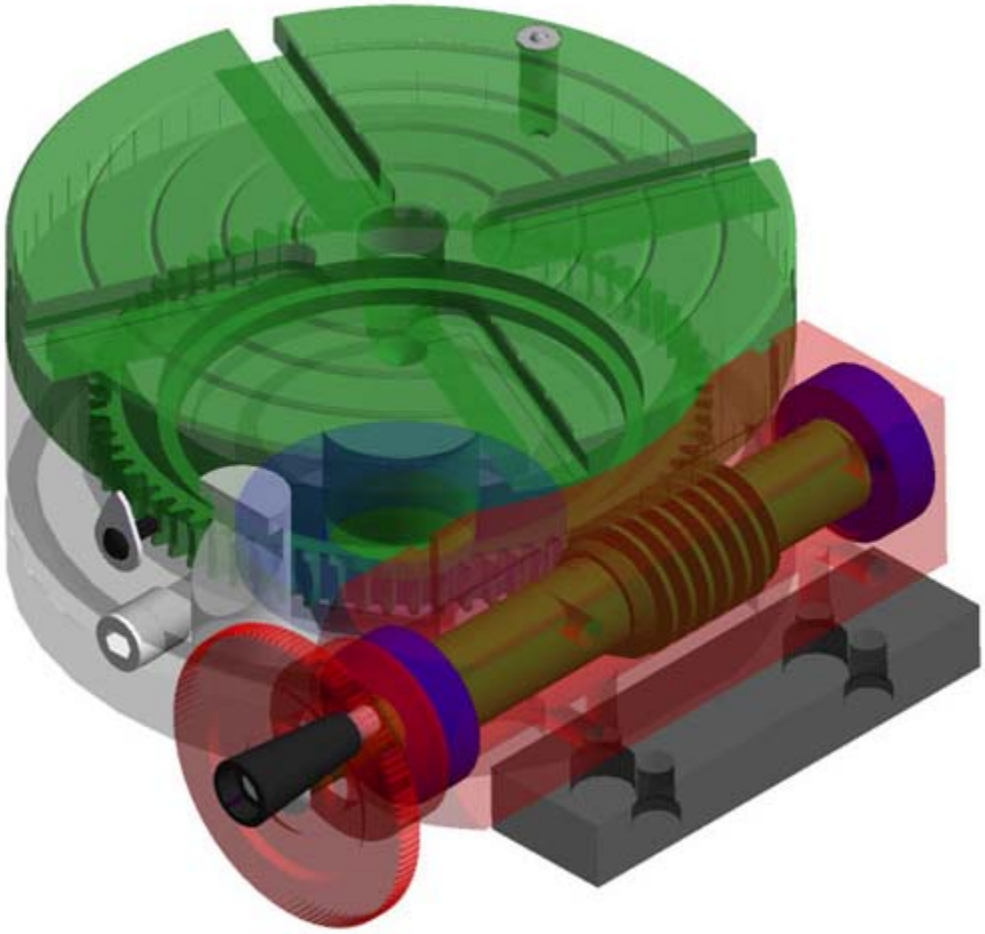
Maintenance for Model Master Rotary Table

- Keep your rotary table oiled on a weekly basis to prevent rust and binding between the two faces of the rotary table. A few drops in the oiler before using will eliminate table wear. The worm gear is greased at the factory. Do not take apart the components of your rotary table.

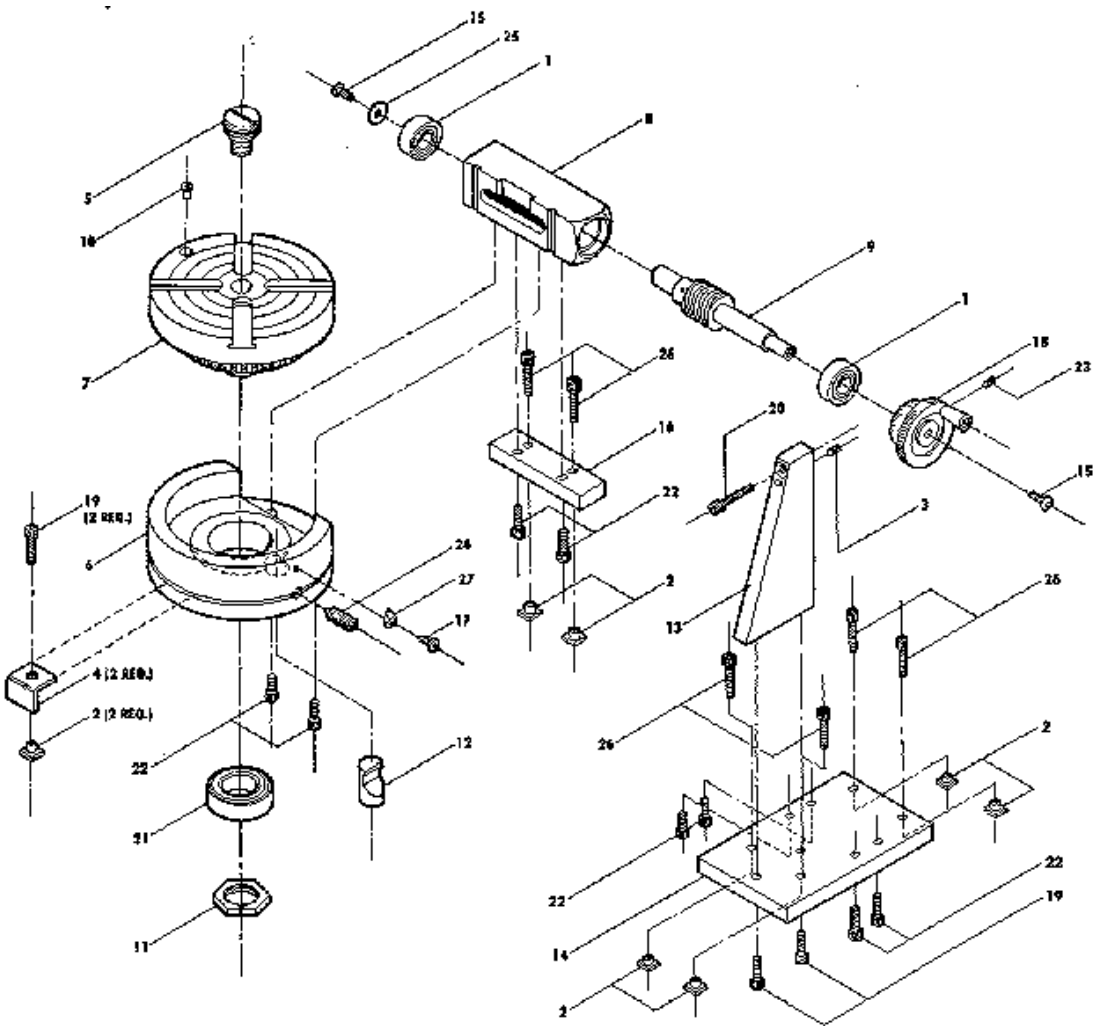
- Worm backlash can be minimized by moving the worm housing to compensate for wear. However, please call Model Master before performing this function. It should not have to be done more than one time per year when cutting soft materials. To adjust, loosen one of the two socket head screws that come up from the bottom and hold the worm housing to the body of the rotary table. Lightly tap the housing with a plastic mallet to move the housing (and worm shaft) tighter into the table gear. When backlash has been reduced to less than 1/10°, retighten the screw.



A rendering of the rotary table in Solid Edge by John Costello shows some of the in internal components in relation to each other.

Exploded View and Parts Listing

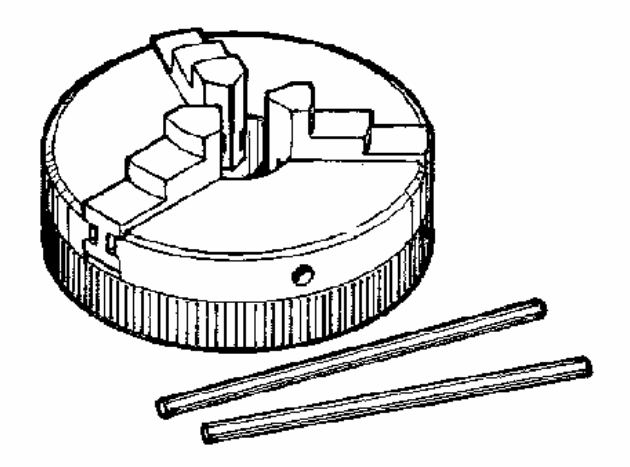
Some parts not relevant to the Model Master rotary table may be found in this drawing and list.



Replacement Parts List

REF. NO.	PART NO.	DESCRIPTION
1	10930	3/8" Bearing
2	30560	T-Nuts, 10-32
3	31080	Set Screw, 10-32 x 3/8"
4	35580	Hold Down Clamp
5	37090	Chuck Adaptor
6	37100	rotary table Base

7	37110	Table
8	37120	Worm Housing
9	37130	Worm Gear
10	37150	Oiler (requires weekly lubrication when used)
11	37160	Preload Nut
12	37170	Lock Pin
13	37180	Upright
14	37190	Right Angle Base
15	37200	Button Hd Skt Hd Cap Screw 10-32 x 3/8"
16	37210	Hold Down Tab
17	37220	Button Hd Skt Hd Cap Scrw,6-32 x 1/4"
18	40050	Handwheel Assembly
19	40330	Skt Hd Cap Screw, 10-32 x 5/8"
20	40340	Skt Hd Cap Screw, 10-32 x 1"
21	40420	Headstock Bearing
22	40510	Skt Hd Cap Screw, 10-32 x 3/8"
23	40520	Cup Point Set Screw, 10-32 x 3/16"
24	40540	Cone Point Set Screw, 5/16-18 x 3/4"
25	40660	Washer, 3/16" I.D.
26	40670	Skt Hd Cap Screw, 10-32 x 1/2"
27	50120	Pointer



3-Jaw Self Centering Chuck

P/N 1040 3-Jaw Chuck, 3.125" Diameter
P/N 1041 3-Jaw Chuck, 2.5" Diameter

CAUTION! DO NOT OVERTIGHTEN CHUCK. Use only moderate pressure with the Tommy Bars supplied.

N0TE: To prevent permanent damage to the chuck, finished, turned or drawn stock only should be held with this chuck. For rough castings, etc., use the 4-jaw chuck.

Always wear your safety glasses when operating metalworking equipment.

Instructions for Use

Three-jaw chucks are designed so that all three jaws move together and automatically center round or hexagonal parts or stock to within a few thousandths of an inch. These chucks provide the quickest and easiest way of holding work in the lathe.

The Model Master rotary table is designed so that it can be used to clamp externally on bar stock or internally on tube stock. The P/N 1041 chuck is designed to grip from 3/32" (2mm) to 1-3/16" (30mm) diameter stock with the jaws in the normal position. The P/N 1040 chuck handles stock up to 1-1/2" (38mm) in diameter. For larger diameter work, the jaws must be reversed (See Figure 2). The reversible jaws can grip to 2-1/4" (56.0 mm) for the P/N 1041 chuck and up to 2.75" (70 mm) for the P/N 1040 chuck. The chucks have a .687" (17mm) diameter through hole with a 3/4"-16 thread.

The diagram below should be used when removing and replacing the jaws in the rotary table chuck.

FIGURE 1—Three-Jaw Chuck, standard jaw locations.

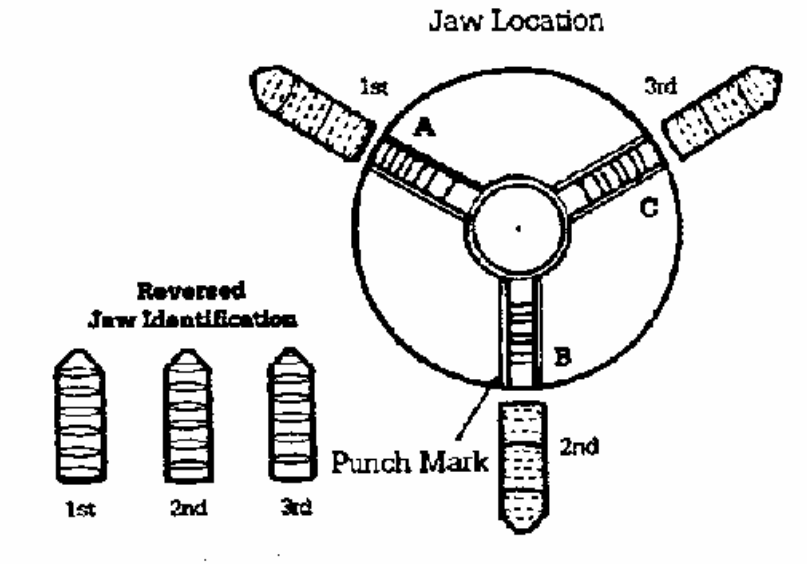


FIGURE 2—Reversing the Chuck Jaws.

NOTE: Always start with position "A". To reverse the chuck jaws, rotate the knurled scroll until the jaws can be removed. They can be easily identified by the location of the teeth to the end of the jaw (See Figures 1 and 2). To maintain chuck accuracy, the 2nd jaw must always be inserted in the same slot even when the jaws are reversed. This slot is identified by a punch mark next to the slot. Always insert the jaws in the order and location shown on the drawings. Turn the scroll counter-clockwise when viewed from the face of the chuck until the outside start of the scroll thread is just ready to pass the slot for the 1st jaw. Slide the 1st jaw as far as possible into the slot. Turn the scroll until the 1st jaw is engaged.

Due to the close tolerances between the slot and jaw, the most difficult part of replacing the jaws is engaging the scroll thread and 1st jaw tooth without binding. Therefore, never use force when replacing the jaws, and if binding occurs, back up the scroll slightly and wiggle the jaw until it is free to move in the slot. Advance the scroll and repeat for the 2nd and 3rd jaws. The scroll thread must engage the first tooth in the 1st, 2nd and 3rd jaws in order.

A set of replacement jaws, P/N 1141 is available. Should it become necessary, please return your chuck to the factory so that we may replace the jaws and check the alignment before returning it to you. In the case of a damaged chuck body, replacement of the entire chuck is usually more economical than attempting repairs.

Removing the chuck from the spindle

Use one tommy bar in the hole in the spindle and another tommy bar in the hole in the chuck body to achieve enough leverage to unscrew the chuck (counterclockwise) from the spindle thread. If the chuck becomes stuck on the spindle thread, put a tommy bar in the hole in the chuck body. Place a block of wood against the tommy bar where it enters the chuck. With a small mallet, give the block of wood a sharp tap, turning the chuck in a counterclockwise direction. It should not be necessary to hold the spindle, as its inertia should be sufficient. (Don't hit the tommy bar anywhere other that right where it enters the chuck or you can bend it.) This small but sharp force at the outer edge of the chuck should break the thread loose and the chuck can then be unscrewed using the tommy bars.