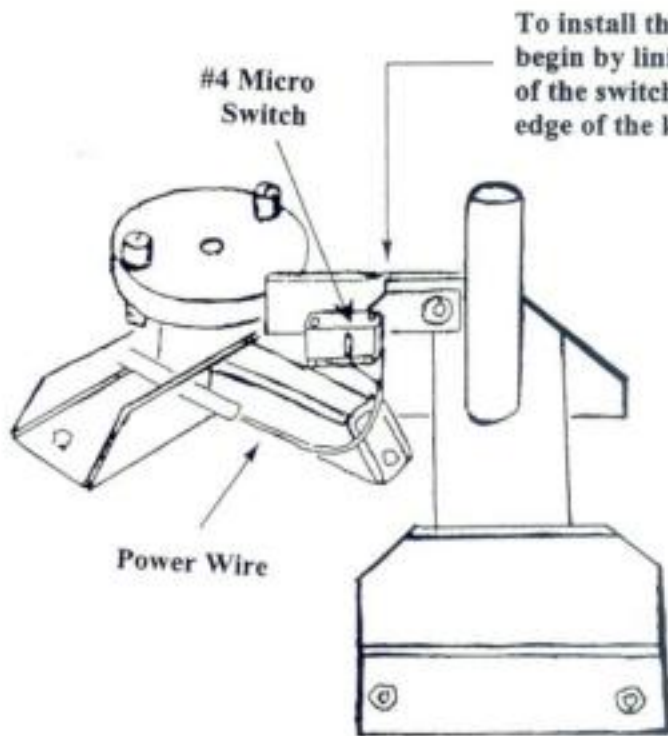
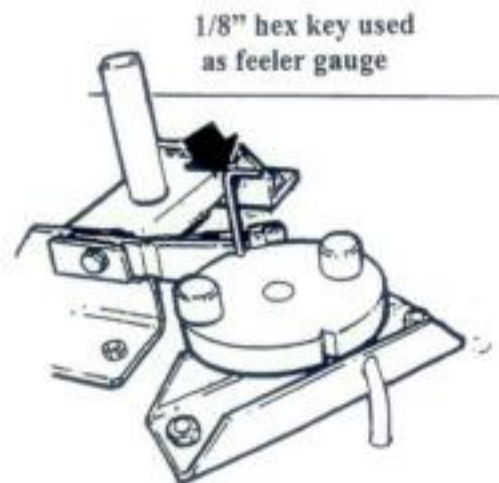


ADJUSTING THE #4 SWITCH (#4 Micro Switch Style)



(Diagram 73)



(Diagram 26)

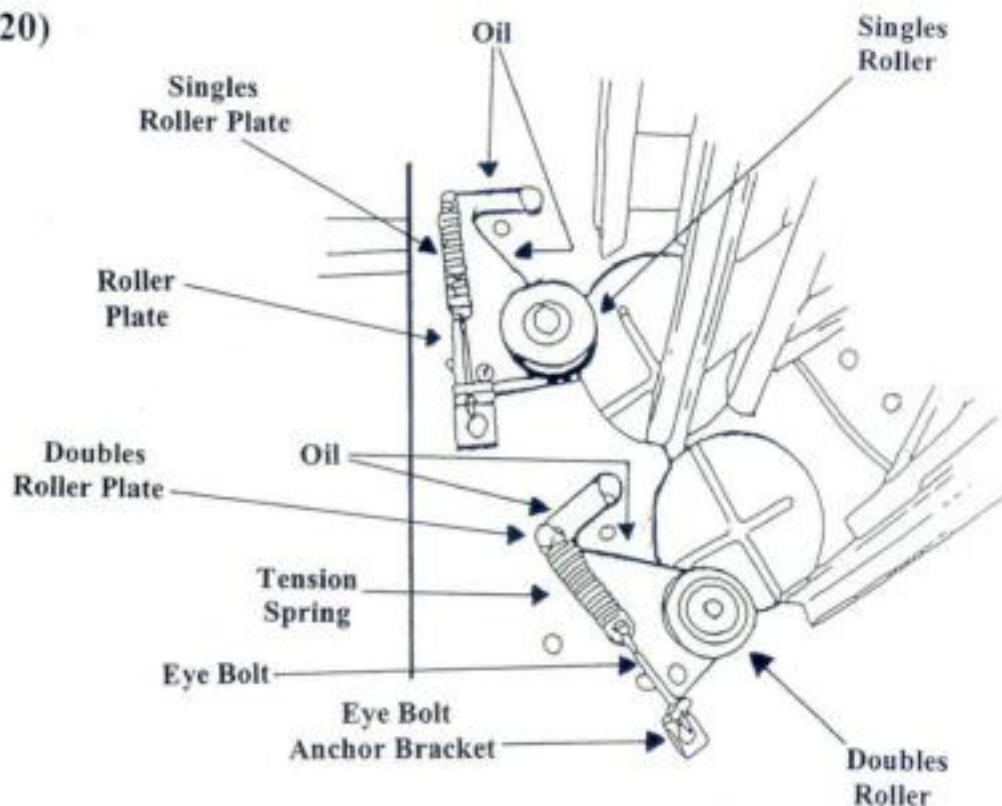
Turn the power off to the machine. Disconnect the power wires to the roller switch. Use an ohm meter (or continuity tester) to check when the switch is activated. Rotate the pinion wheel by turning the clutch by hand. The gap between the end of the plastic and the notch in the pinion wheel *must be* 1/8" when the switch is activated (when the switch closes). See Diagram 15. Use a 1/8" hex key as a feeler gauge to set the gap. See Diagram 26.

Slide the switch bracket *toward* the pinion wheel to close the gap; slide *away* from the pinion to open the gap. If there is not enough slot to adjust for the 1/8" gap, the bracket can be bent: bend *IN* toward the flat spring to close the gap. See Diagram 72. Bend *AWAY* from the flat spring to open the gap.

NOTE: You can hear this switch "click" when it closes while setting the 1/8" gap.

ROLLER PLATE MAINTENANCE

(Diagram 20)



NOTE: There needs to be enough spring tension to keep the stack of targets from slipping down past the rollers. The tension is pre-set at approximately fourteen (14) pounds.

PROBLEM:

1. Dropping Doubles while in Singles mode.
2. Breaking Targets

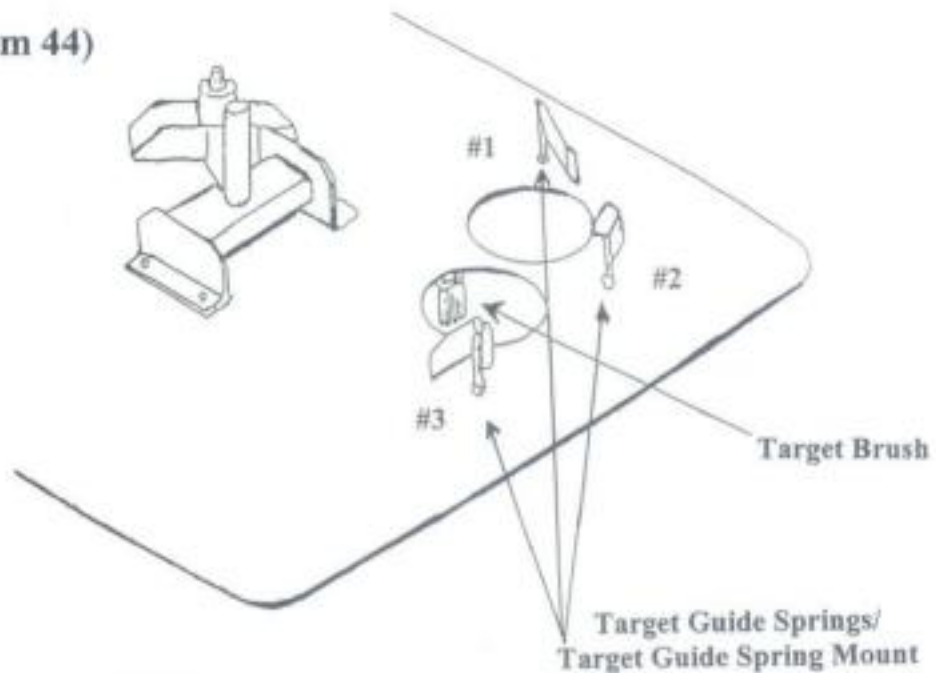
SOLUTION:

Place a *few* drops of light oil under the edges of the roller plate. Be sure to inspect the roller plates every three weeks by pulling back and forth on the roller to see that they slide smoothly. Any excessive oil will drop down onto the throw arm and brake causing the machine to cycle.

DO NOT USE sprays such as RemOil, WD-40 or other such oils as they may dissolve the clay target dust. Use 3 & 1 oil or a synthetic lubricant with teflon --- such as Super Lube.

TARGET BRUSH MAINTENANCE

(Diagram 44)



PROBLEM:

1. Breaking targets
2. Targets being thrown further to the right

SOLUTION:

It may be time to change the target brush. (When the target brush becomes worn out, the target can be bumped ahead *and/or* slide down the throw plate. This can cause either the target to break or be thrown further to the right.)

PURPOSE:

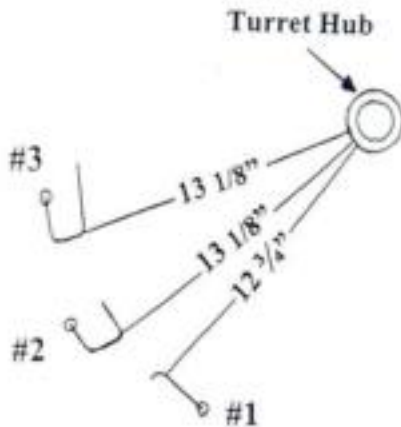
The purpose of the target brush is to hold the singles target against the throw arm when the throw arm advances to the cocked position.

MAINTENANCE:

When the brush begins to "flair out", loosen the screw and turn the brush 180 degrees. The brush(s) needs to be aligned within it's slot. Replace the brush when needed.

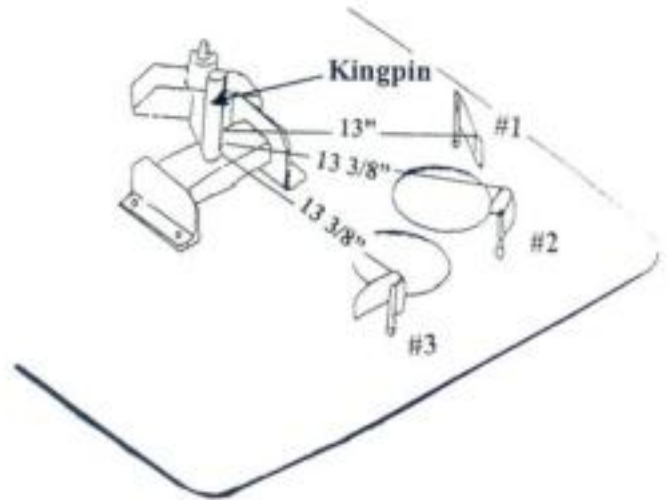
TARGET GUIDE SPRING POSITION

with TURRET ON



(Diagram 56)

with TURRET OFF



(Diagram 84)

Measuring to the Guide Spring(s) with the turret off: from the face of the kingpin measure 13" to Spring #1. Measure 13 3/8" to Springs #2 and #3. See Diagram 84.

Measuring the Guide Spring(s) with the turret on: remove the targets from the appropriate column. A tape measure easily fits underneath the turret. Measure 12 3/4" from the face of the turret hub to Spring #1. Measure 13 1/8" to Springs #2 and #3. See Diagram 56

Also note that the Guide Spring mounting bolt is tilted back slightly, so that the top of the Guide Spring is further away from the targets than the bottom.

If the Guide Spring(s) needs to be replaced, use a 7/64" hex drive wrench to remove the two socket cap screws. Then pull the spring out of the mounting bolt slot.

The spring can be changed without removing the mounting bolt. You will have to remove the roller plate extension spring to gain access to the socket cap screws.

COLD WEATHER ADJUSTMENT TEMPERATURE/RELEASE TIME STOPPING THE THROW ARM ON THE BRAKE

In very cold weather, the pump motor should be turned on one-half to one hour *before* operating time to warm up the hydraulic oil. If the On/Off/Release switch is turned on too soon, the machine will keep cycling.

Extreme temperature changes may affect the stopping position of the throw arm. Very cold temperature may cause the machine to keep cycling by itself. Very warm weather may stop the throw arm too soon and cause slow pulls. Refer to the figure of the throw arm brake assembly for proper stopping position of the throw arm. See Diagram 80.

ADJUSTING RELEASE TIME & CORRECTION OF CYCLING PROBLEM

There are two switches on the left side of the trap machine which are mounted on a bracket. Loosen the thumb screws *or* with a hex key, loosen the set screw. Move the switch bracket by increments of 1/16" to the left (toward the front of the trap house) to *stop cycling* – or lengthen the throw time --- causing the arm to stop further back on the brake.

To *shorten* the throw time, move the switch bracket to the right --- toward the back of the trap house --- causing the throw arm to stop further forward on the brake. See Diagram 74

For proper stopping position of the throw arm on the brake, please refer to Diagram 80

CAUTION

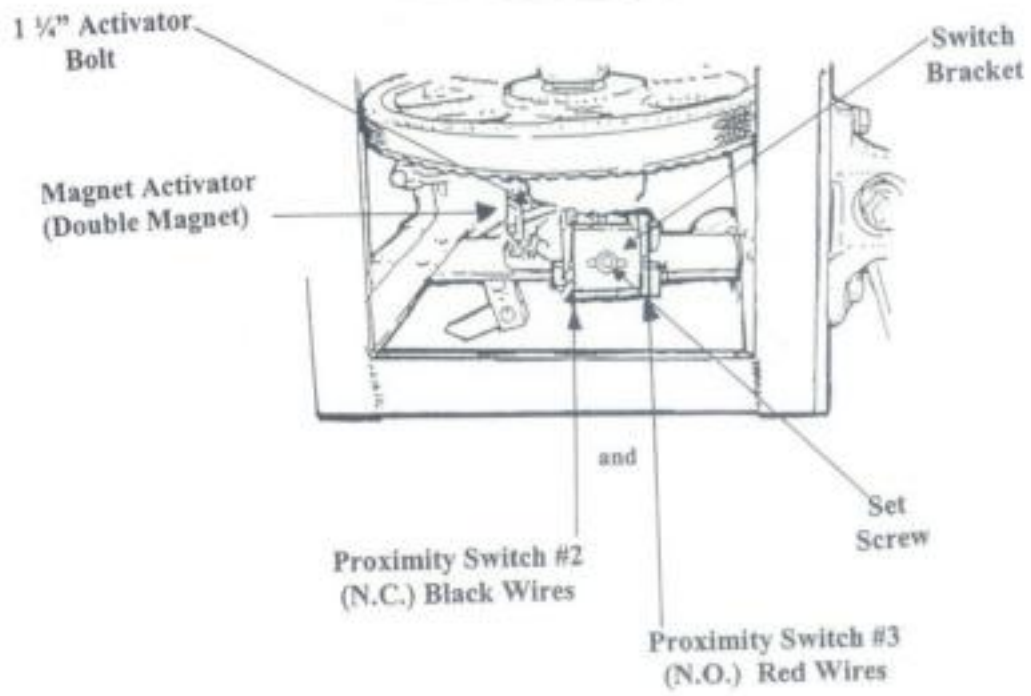
When the machine is turned ON the throw arm will travel forward to the cocked position through the danger zone.

When the throw arm is FIRED, the arm will travel through the indicated danger area.

The throw arm can be fired by pushing the pullcord button. It can also be fired by hand, by pushing the arm forward off the brake when the machine is either ON or OFF.

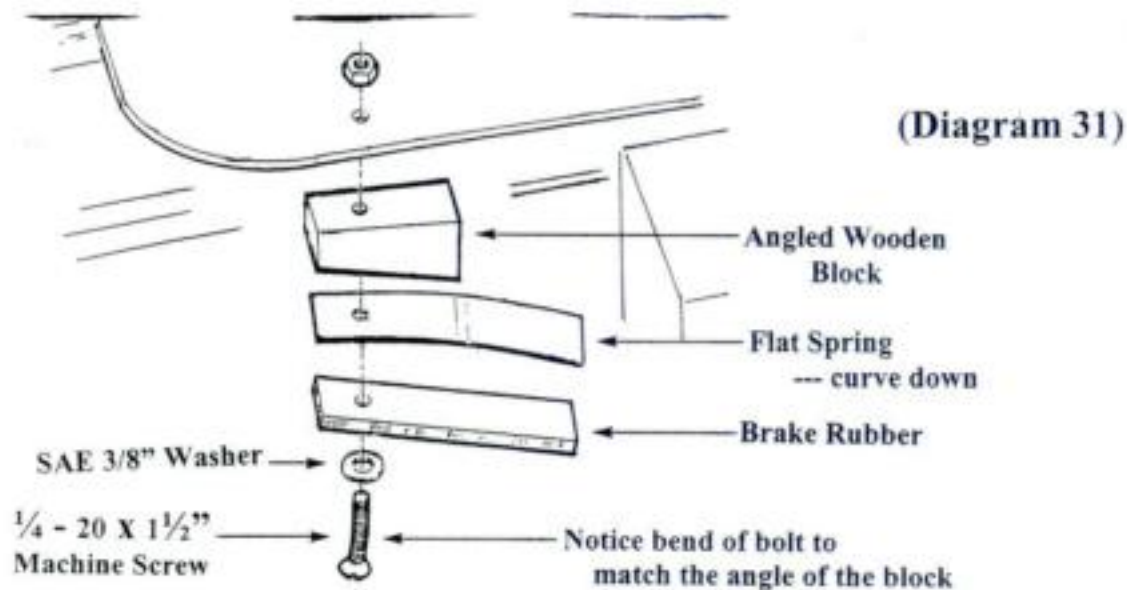
DANGER

The Throw Arm Travels This Path

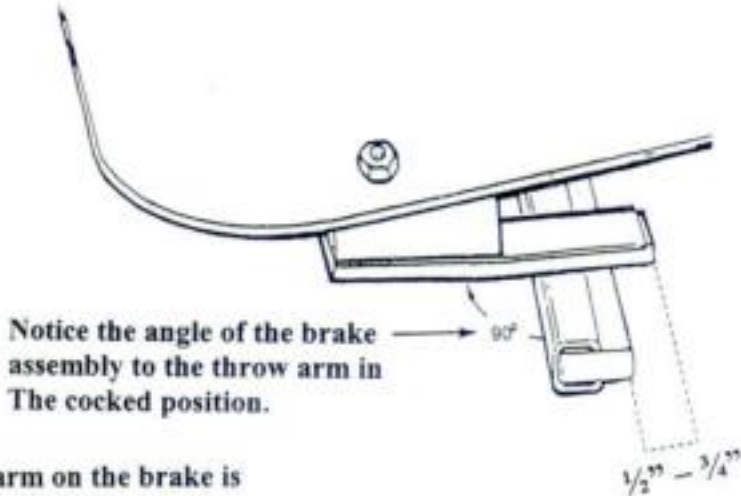


(Diagram 74)

ASSEMBLY OF THROW ARM BRAKE



(Diagram 80)



**** The stopping position of the throw arm on the brake is approximately 1/2" to 3/4" behind the end of the brake, which is determined by the position of the #2 and #3 switch bracket.

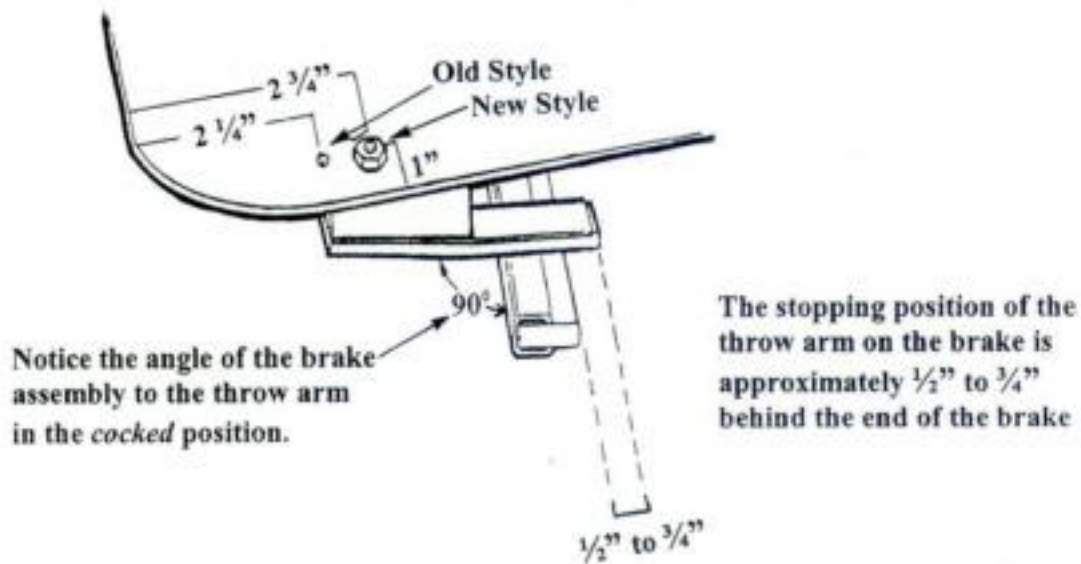
Keep surfaces dry where the throw arm contacts the brake rubber.
Replace the brake rubber when it begins to wear out.

THROW ARM BRAKE INSTALLATION

NOTE: Proper installation of your throw arm brake depends upon the style of the throw arm being installed. The "new style" throw arm rubber is $\frac{1}{2}$ " further ahead than the "old style". You may need to drill a new hole. Please refer to the diagram below.

1. Stand back from the machine. Release the target and turn off the machine.
2. Remove the brake assembly.
3. Measure the placement of the hole, if necessary. Drill a new hole using a $\frac{1}{4}$ " drill bit.
4. Install the brake assembly.

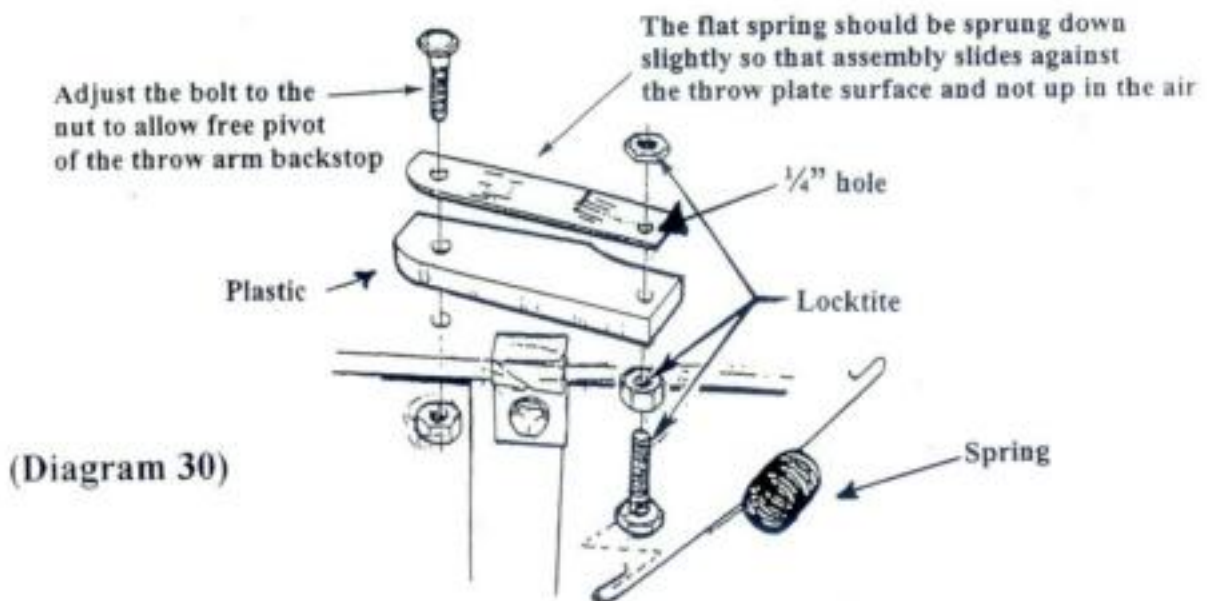
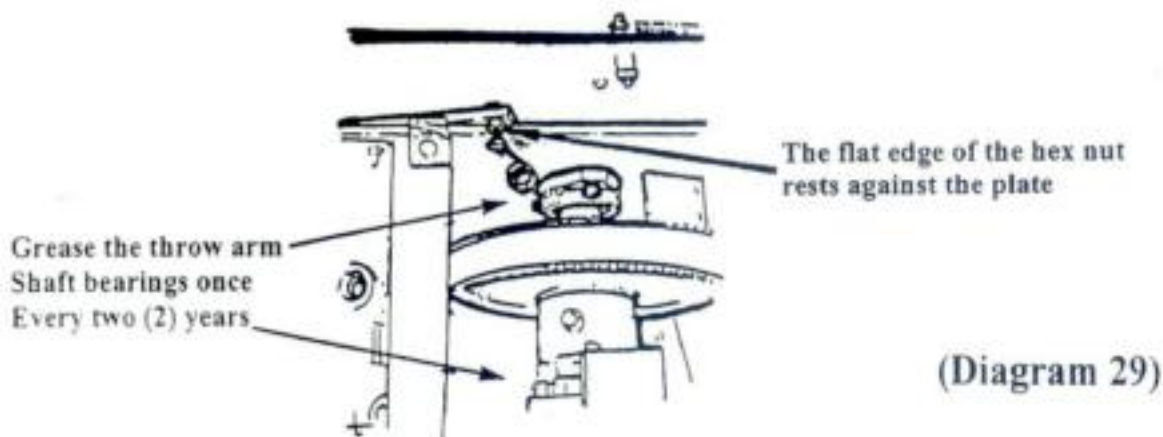
(Diagram 75)



MAINTENANCE

Keep surfaces dry where the throw arm contacts the brake rubber.
Replace the brake rubber when it begins to wear out.

THROW ARM BACKSTOP



If you are only replacing the "plastic", align the flat spring so that it is 1/16" inside the edge of the plastic. Use a vise grip to clamp the two together onto the throw plate and drill with a 1/4" drill bit.

When assembling the throw arm backstop, LOCKTITE glue must be used as pictured above. See Diagram 30

The purpose of the throw arm backstop is to minimize the cycle-time for the loading of targets for SINGLES.

INSTALLATION OF THROW ARM

1. Release the throw arm. *Never* attempt to work on your machine while it is in the cocked position.
2. Turn off the machine and “drop” the machine to the lowest elevation for easier working conditions.
3. Disconnect the main spring *before* working with the throw arm. Refer to the section for guidelines to disconnect the main spring.

With the main spring disconnected, check to see that the height of the bottom of the throw arm rubber is $\frac{1}{2}$ ” above the throw plate. (This measurement allows for $\frac{1}{32}$ ” clearance between the lip of the target and the throw arm rubber.) Set a target on the throw plate against the throw arm and check the clearance between the two. The best place to check this is the area where the target leaves the throw plate. The nut on the throw arm can be torqued a maximum of 15 ft/lbs.

Check to see that the throw arm has clearance where it passes by the “doubles” finger. If necessary, the “doubles” finger can be bent down using a pair of water pump pliers. A screwdriver can be used between the “doubles” finger and the throw plate to pry it up.