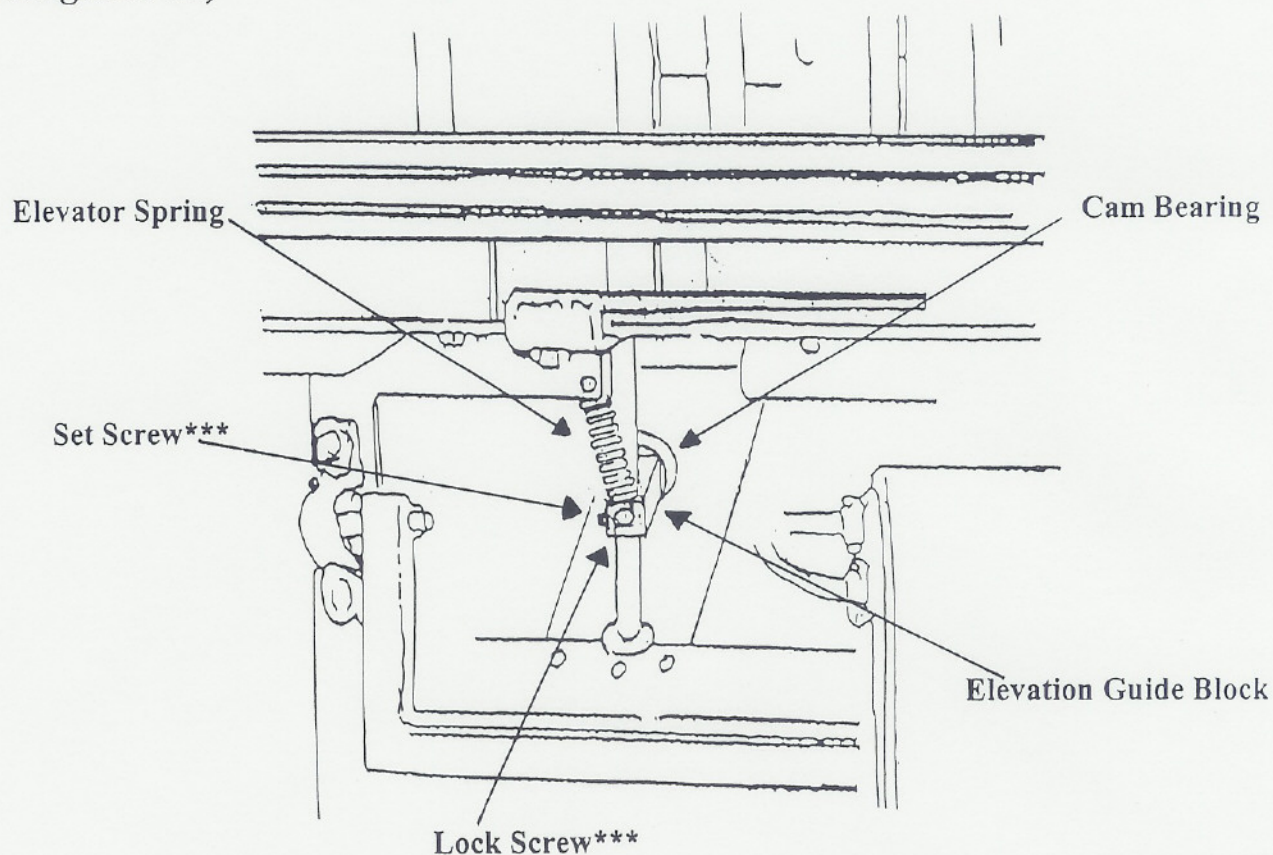


REPLACEMENT OF THE ELEVATOR SPRING

*****IMPORTANT:** Do not loosen or remove either the lock screw that the bottom of the spring hooks onto or the set screw. The screws are holding the bearing block in position so that the bearing is in alignment with the cam.

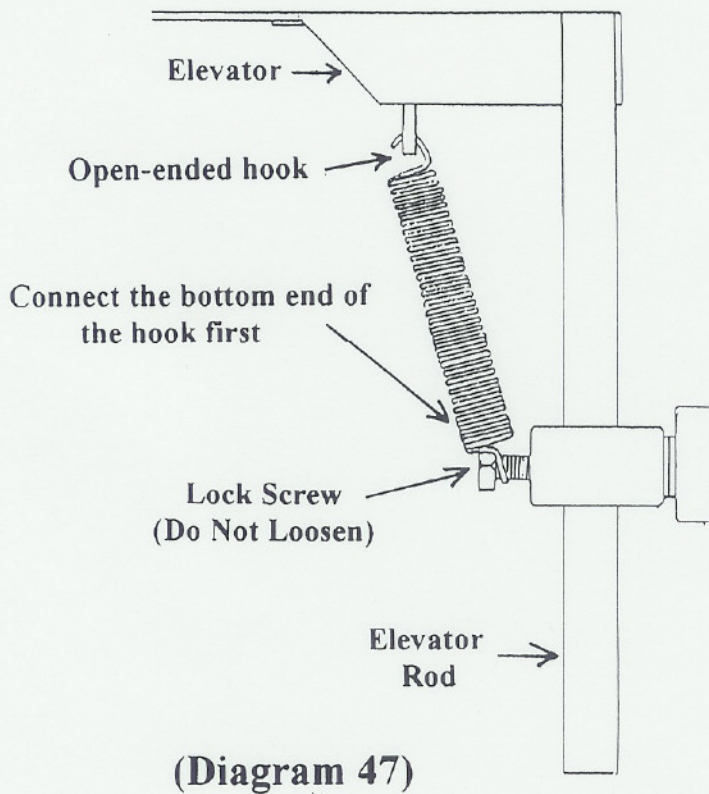
1. Turn the machine on.
2. Fire the throw arm and then turn the machine off as soon as the elevator goes up. (When the cam leaves the cam bearing.)
3. If disconnecting the spring: remove the top end first.
4. If connecting the spring: connect the bottom end first. Refer to Diagrams 47 or 48,

(Diagram 14)

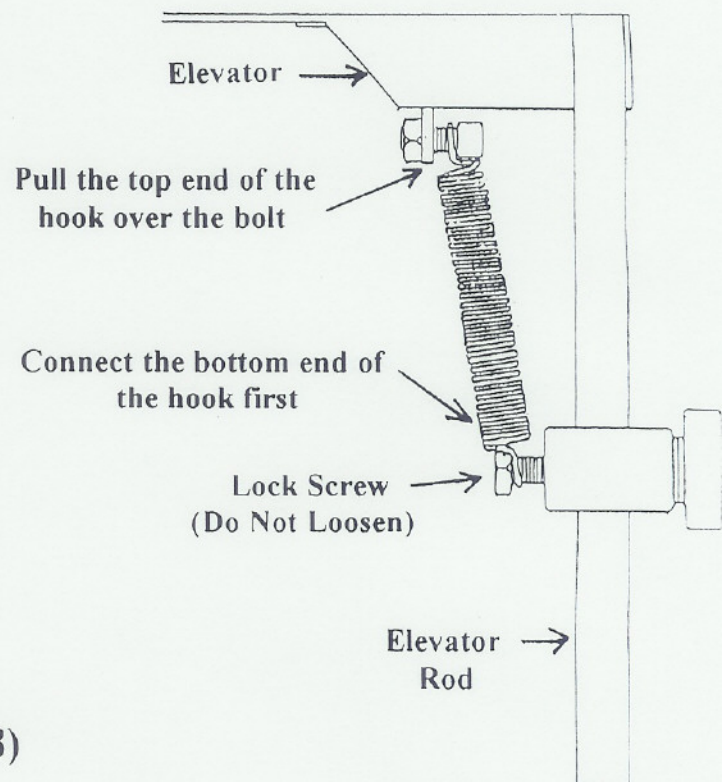


ELEVATOR SPRING CONNECTION

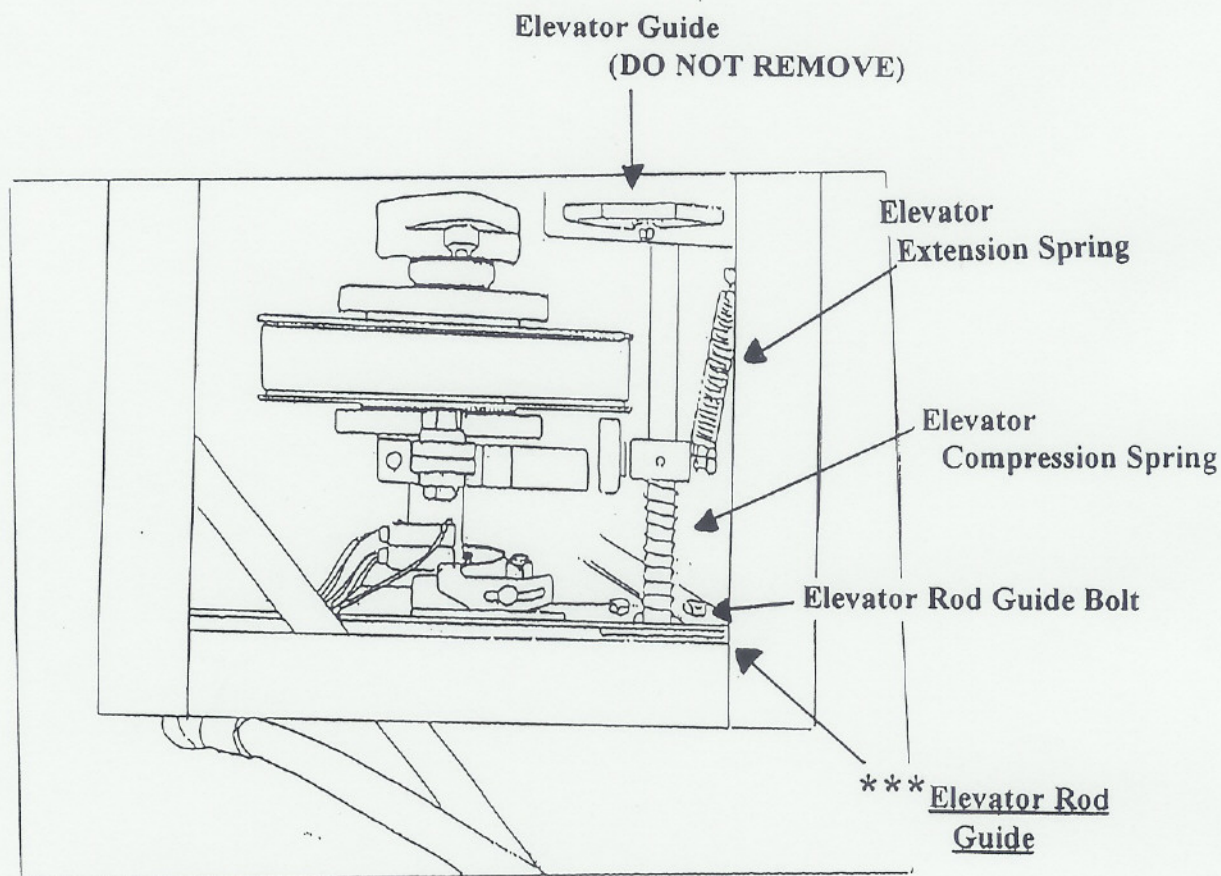
Up to Serial # 2804



From Serial # 2809



INSTALLATION OF THE ELEVATOR COMPRESSION SPRING



(Diagram 54)

1. Turn the machine on. As soon as the elevator goes up, turn the machine off.
2. Remove the two elevator rod guide bolts (7/16" wrench)
3. Remove the *** ELEVATOR ROD GUIDE (This must be replaced the same way as it was found).
4. Put the compression spring on over the elevator rod.
5. Replace the Elevator Rod Guide
6. Fasten the two bolts only slightly snug; over tightening will deform the material and possibly cause the guide to tighten against the rod.

THE TARGET ELEVATOR MAINTENANCE

The elevator guides keep the elevator centered in the slots of the throw plate. The guides are set into position so that they are 1/32" away from the ends of the elevator wings. It is important that the elevator has free play between the guides so that the spring can pull the elevator up. See Diagram 105.

PROBLEMS AND SOLUTIONS

Rust or target dust accumulation on the elevator:

This could cause the elevator to get stuck part of the way up. The symptom of this could be broken targets or targets being thrown to the extreme right. Scrape or sand the elevator surface in the area of the guides.

The elevator is sticking against the guides. The guides might be too tight.

To check the free travel of the elevator, begin with the machine/throw arm released and turned off. Turn the machine on for ½ a second and then shut off. The cam should be off of the elevator bearing and the elevator should be all of the way up. Disconnect the elevator extension spring. With your hand on the elevator rod you should be able to move it up and down and notice a small amount of free play back and forth.

If there is some drag against the guides, then a guide can be moved out by lightly tapping against the end of the left hand elevator wing using a light hammer. This will cause the right hand wing to move the right hand elevator guide away. If you move the guide too far you will have to reposition it. To do this, use a 7/16" wrench to loosen the guide bolt and move it back into place.

TRAP TOP VIEW

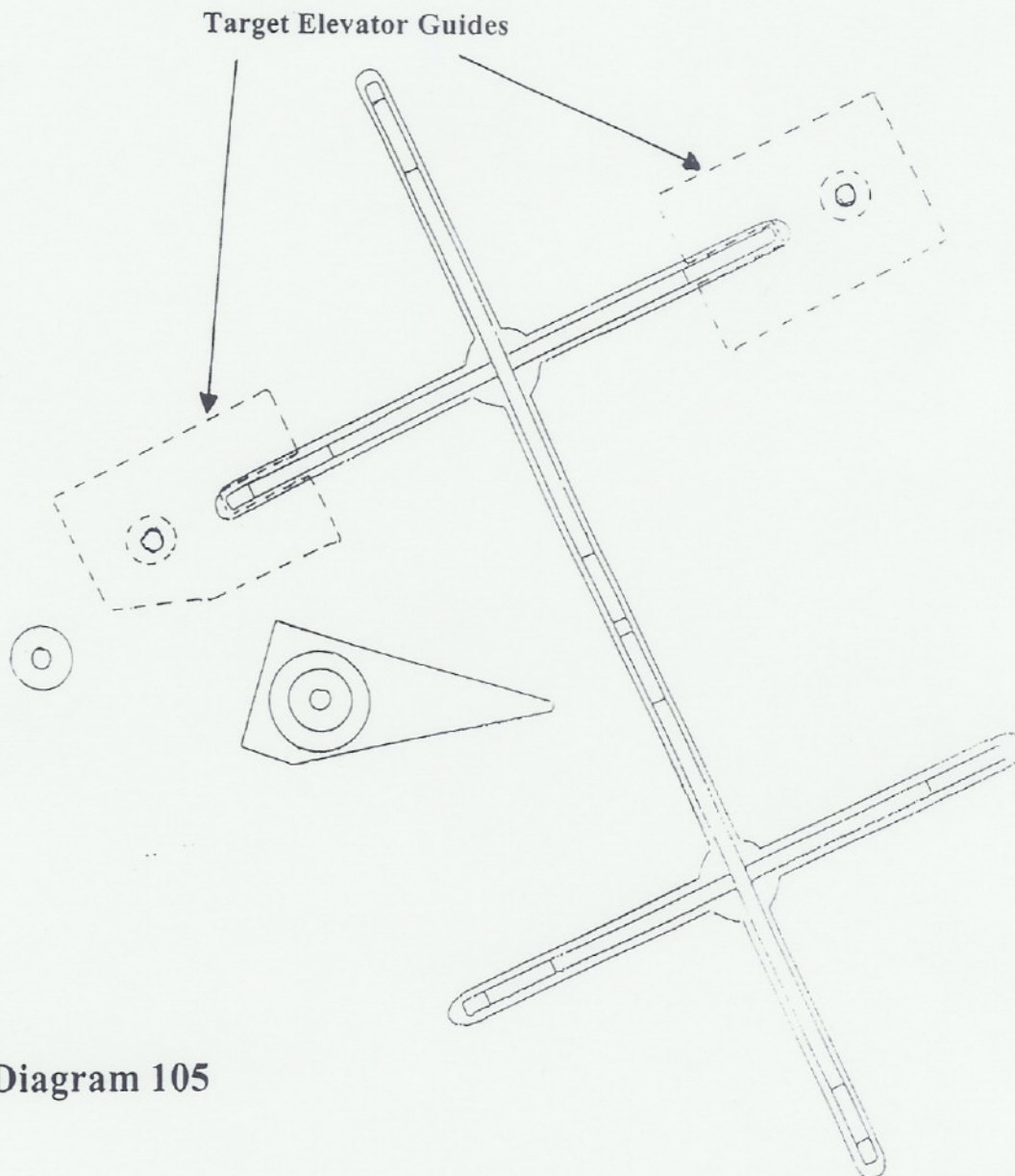


Diagram 105

Back Edge of Throw Plate

LUBRICATION MAINTENANCE

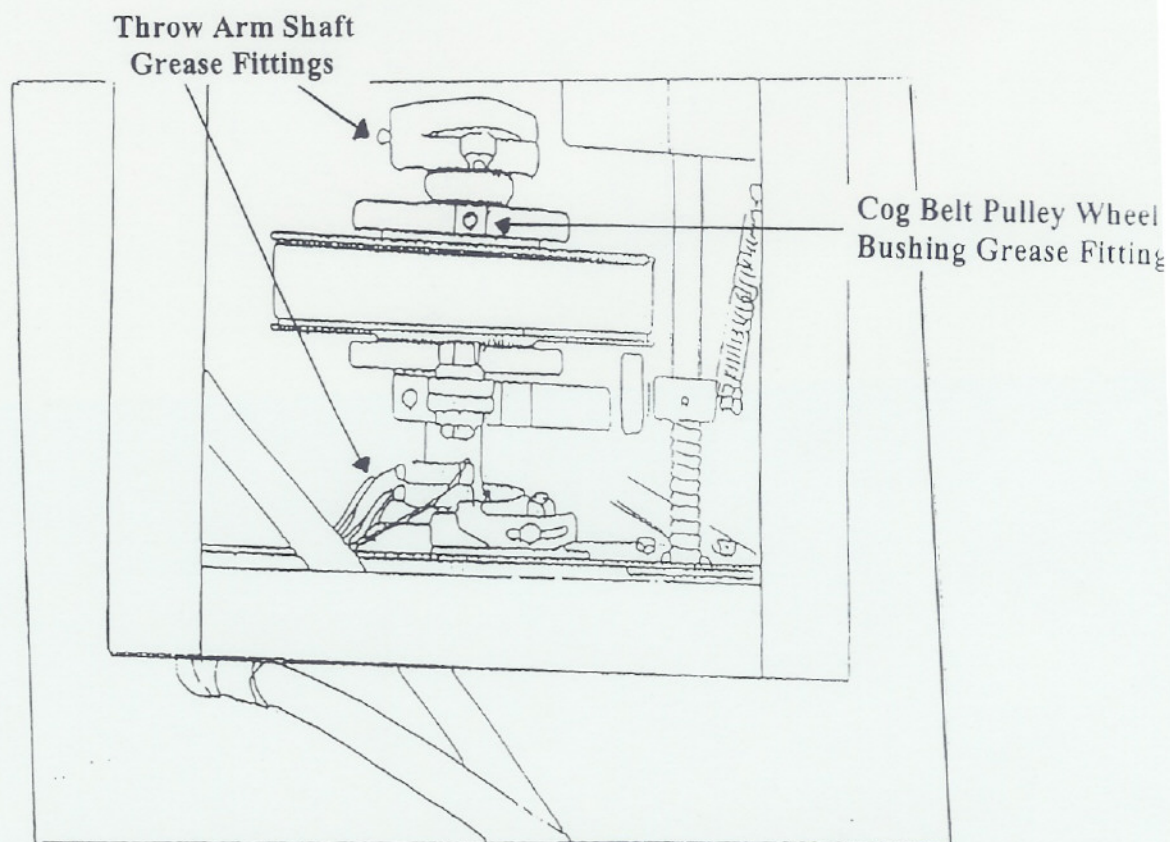


Diagram 103

Apply grease to these fittings once a year using Mobil EP1 grease. EP1 is a light weight grease. A heavier grease will gum-up and not perform the job.