



## INSTALLATION INSTRUCTIONS

<b>PART NUMBER</b>	<b>154-8521</b>
<b>PART DESCRIPTION</b>	<b>MACHINE LIFT UPGRADE – MOD A-D TO MOD E</b>
<b>REV DATE</b>	<b>4/4/2019</b>
<b>MACHINE MODELS</b>	<b>154-8510 MACHINE LIFT</b>



### **TOOLS NEEDED:**

Phillips Screwdriver	11/32" Wrench	3/8" Wrench
5/32" Allen Wrench	Tape Measure	Vise Clamps
1/8" Allen Wrench	9/16" Wrench	3/16" Allen Wrench
Non-Slip Gloves (recommended)	Dremel Tool or Saw	Grinder
.500" x 82 deg Countersink Bit	Tap Handle & 6-32 Tap	Drill w/ 1/4" & #36 Bits

### **PARTS NEEDED:**

(2) 154-0552 Machine Lifting Strap	(12") 154-0555 Protective Sleeve Tubing
(2) 158-6719 Winding Shaft	(1) 154-9212 1/2" x 3/4" x 1/2" Plain Bushing
(4) 154-6569 Strap Guide	(1) 154-6559 Handle Mount Plate
(1) 153-2037 1/8" x 1-3/4" Roll Pin	(2) 153-2016 3/8" Lock Washer
(2) 153-2027 3/8-16 Jam Nut	(2) 153-2006 3/8" Flat Washer
(2) 154-6568 Roller Fair Lead Mount	(8) 153-2001 #6 Flat Washer
(4) 153-2968 1/4-20 x 3/4" FSHCS	(2) 154-6567 Strap Tensioner
(2) 153-2943 Spring Hinge	(8) 153-2081 6-32 x 1/2" MS
(4) 153-2018 6-32 Lock Nut	(4) 153-2002 #8 Flatwasher
(1) 154-8521 INSTALLATION INSTRUCTIONS	(4) 153-2121 10-24 x 1/2" SHCS
(1) 154-8510 INSTALLATION INSTRUCTIONS	



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**TECHNICAL NOTE**

Please thoroughly read the instructions prior to performing the installation of this assembly.

To avoid any potential problems, if at any time during the process you have a question, stop and contact our Tech Support department at the numbers listed below.

**Please visit our growing library of videos to see if these instructions are available!**

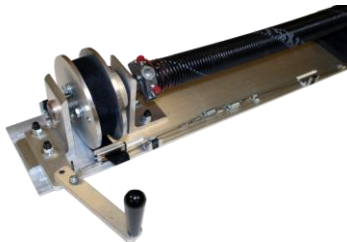


[www.youtube.com/user/KegelBowling81](http://www.youtube.com/user/KegelBowling81)

**\*\*\*\*CAUTION – CAUTION – CAUTION\*\*\*\***

**THE TORSION SPRINGS IN THE MACHINE LIFT ARE WOUND TIGHTLY AND EXTREME CAUTION IS NEEDED WHEN LOOSENING & TIGHTENING THE SPRINGS DURING THIS INSTALLATION.**

- 1) Using a Phillips screw driver, loosen & remove the eight 8-32 x ¾" MS securing the machine lift cover to the mounting plate.
- 2) Loosen & remove the bolts used to secure the machine lift to the wall. Remove from wall.
- 3) Clamp the machine lift to the work bench.
- 4) Move the machine handle to the "LOWER" position.



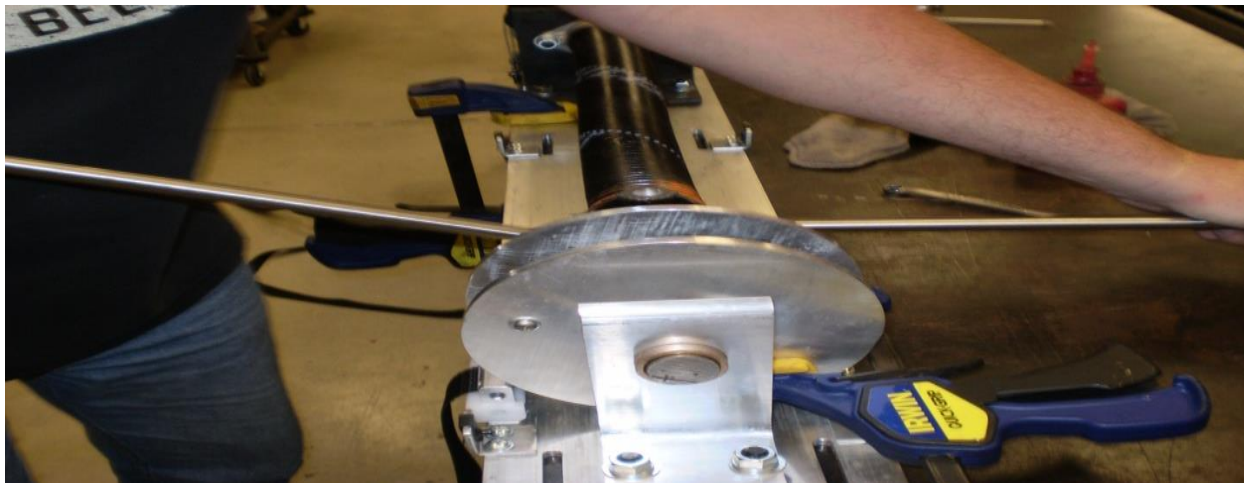
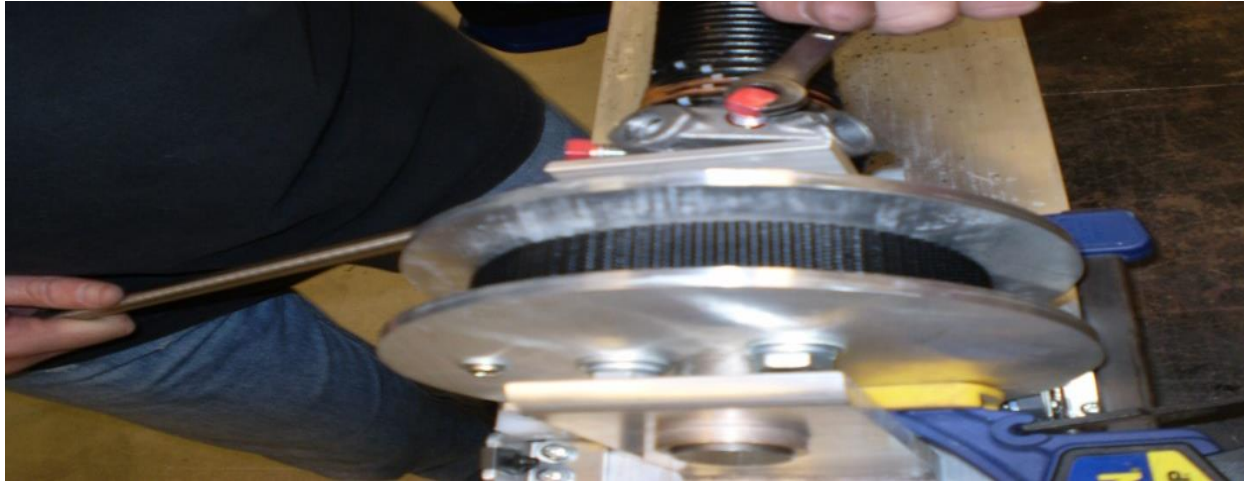
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- 5) Insert the 158-6719 Winding Shaft into the hole on top of the cast portion of the torsion spring. Push the shaft away from you and towards the wall (above the lift) to access the two 3/8" square head bolts. While applying continuous pressure, loosen both square head bolts. Once the bolts are loose, walk the winding shaft towards you to begin releasing the pressure on the spring. Once the first shaft has been walked down under the lift, install the second shaft at the top of the spring into another hole in the cast portion. Continue walking the shaft toward you until all pressure has been released from the spring.



- 6) Remove existing strap guide & roller fair lead mounts from mounting plate on both sides.

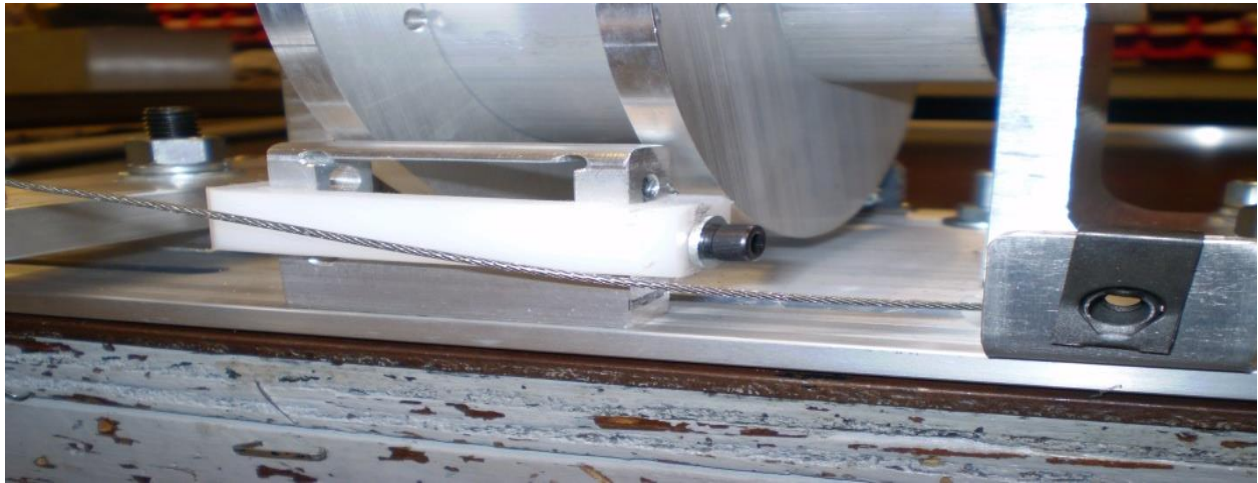


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- 7) Using the Phillips screwdriver & 11/32" wrench, loosen & remove the 8-32 x 2-1/4" screw that secures the strap loop to the strap pulley assembly. Remove broken strap from the pulley. Remove the snap clips from old straps as they will need to be installed on the new straps.
- 8) At this point, you will need to flip the entire machine lift over to access the wall mounting plate.
- 9) Using the template supplied, drill holes A & B all the way through the plate using a #36 (.1065") drill bit on both ends of the mounting plate. Tap the four holes using a 6-32 tap.
- 10) If you do NOT have a model w/ roller fair lead mounts, drill template holes C & D all the way through the plate using a 1/4" (.250") drill bit on both ends of the mounting plate. Countersink these four holes on the backside of the plate just deep enough to sub-flush the 1/4-20 x 3/4" FSHCS supplied w/ the upgrade.
- 11) Install the new strap guide / roller fair lead mount assembly w/ new strap to the topside of the mounting plate using the 1/4-20 x 3/4" FSHCS. Slide the 8-32 x 2-1/4" screw (removed in step #6) from the outside of the pulley, through the loop in the strap, and secure with the 8-32 flat washer & 8-32 lock nut on the side of the pulley nearest the spring.



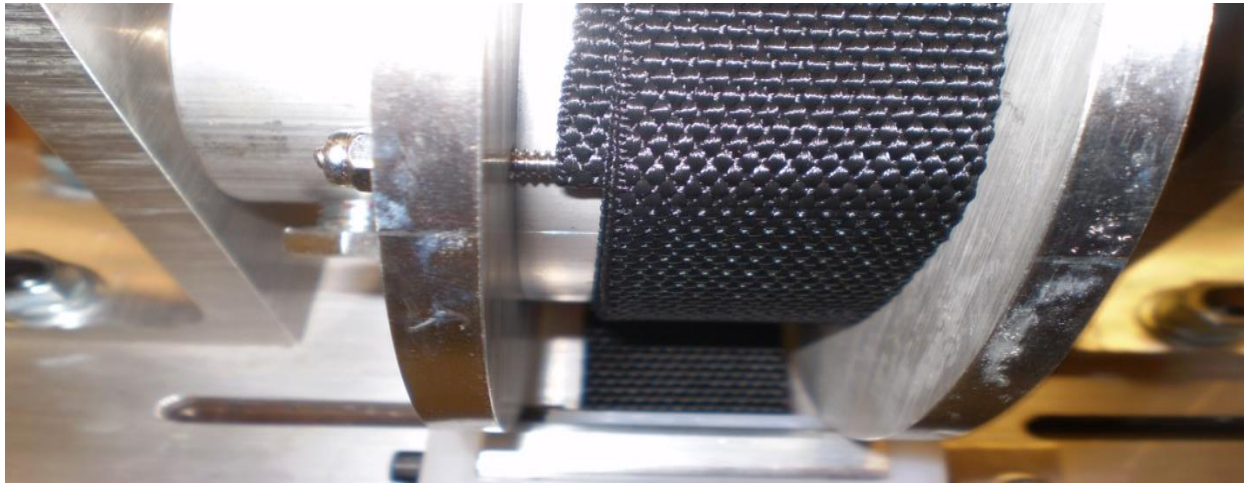
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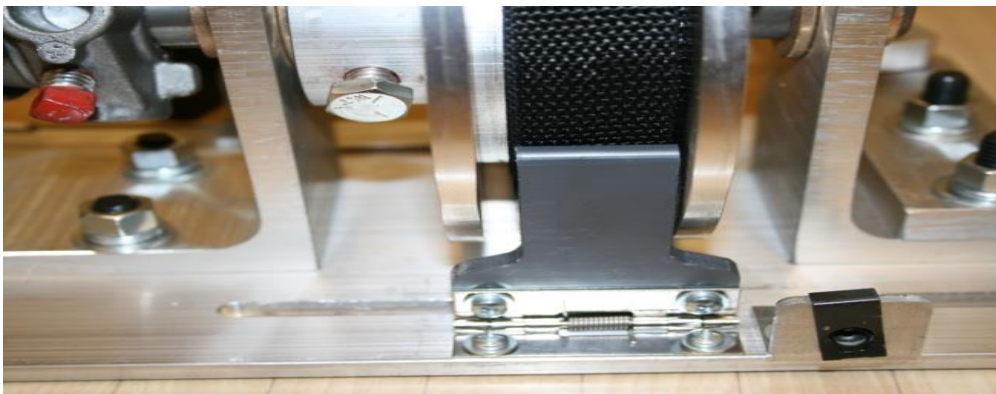
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- 12) Mount the two spring hinge assys to the topside of the mounting plate using the 6-32 x 1/2" MS supplied. Put a drop of blue loc-tite onto each screw before securing the spring hinge. Tighten screws completely. Using a grinder, grind the mounting screw threads flush w/ the back of the plate.



- 13) Next, the new handle assembly included in the upgrade needs to be installed as follows:
- A) Remove the screw that attaches the cable to the handle
  - B) Remove the Handle shoulder bolt using a 3/16" Allen Wrench (keep the spacer)
  - C) Remove the (2) 3/8" nuts, lock washers and washers
  - D) Remove the Handle Mount Plate
  - E) Install the handle onto the new Handle Mount Plate along with the spacer (this will be an assembly with a 1/8" x 1-3/4 roll pin pressed into it)



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F) Install on both studs the following in this order: 3/8" washer, lock washer, nut, lock washer, washer Handle mount plate, washer, jam nut

G) Re-route the cable behind the Strap Guide and re-attach to the handle mount plate with the screw removed in step A



14) Move the machine handle to the "RAISE" position to dis-engage the ratcheting mechanism.



15) Rotate the strap guide pulley so the replacement strap starts rolling up onto the pulley. Apply a small amount of tension on the strap while rolling to remove any excess slack / stretch in the strap. Continue turning the pulley until the line on the strap (92" from end) is



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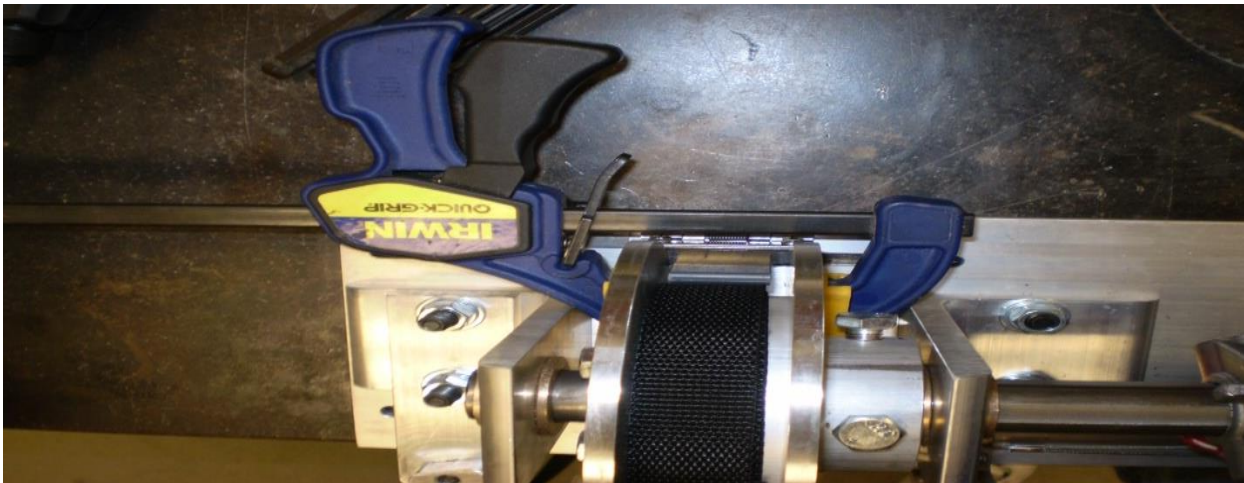




as close to the front of the UHMW portion of the strap guide as possible. At this time, move the handle back into the “LOWER” position to engage the ratcheting mechanism.



- 16) Install the vise clamp on the top portion of the pulley assy so it is positioned right against the bench. Tighten clamp to secure in place. This clamp prevents the pulley assy from turning when the spring is re-tightened.



- 17) Using the spring winding shafts, rotate the spring EIGHT full 360 degree rotations (SIXTEEN half 180 degree rotations) to obtain the correct spring tension. While continuing to hold a constant and firm pressure against the spring, *COMPLETELY* tighten the two 3/8” square head bolts onto the shaft flat spots to secure the spring in place.

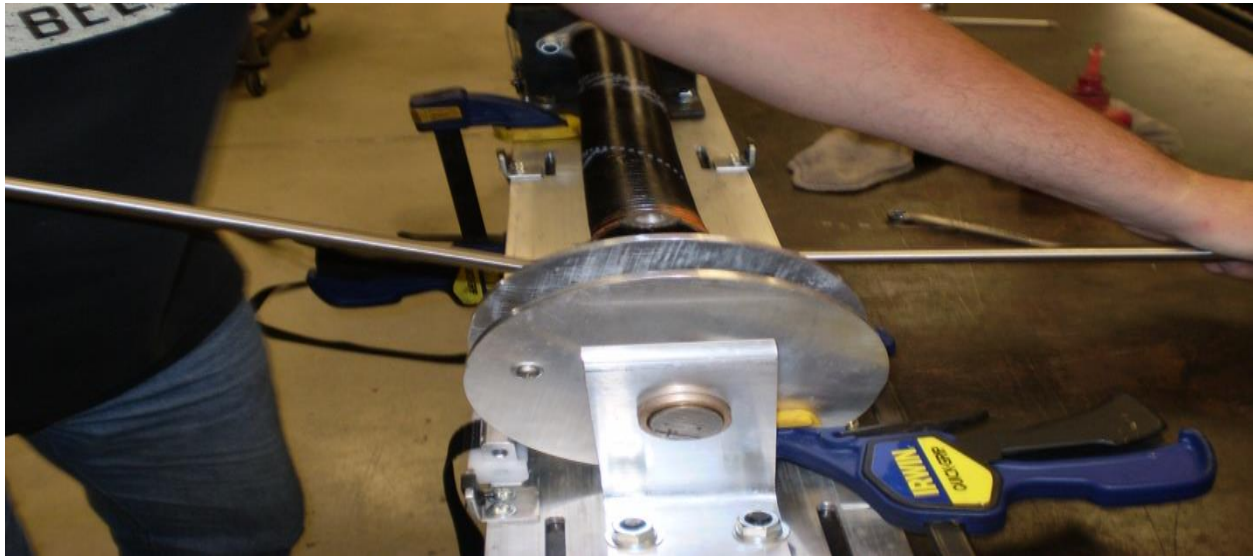


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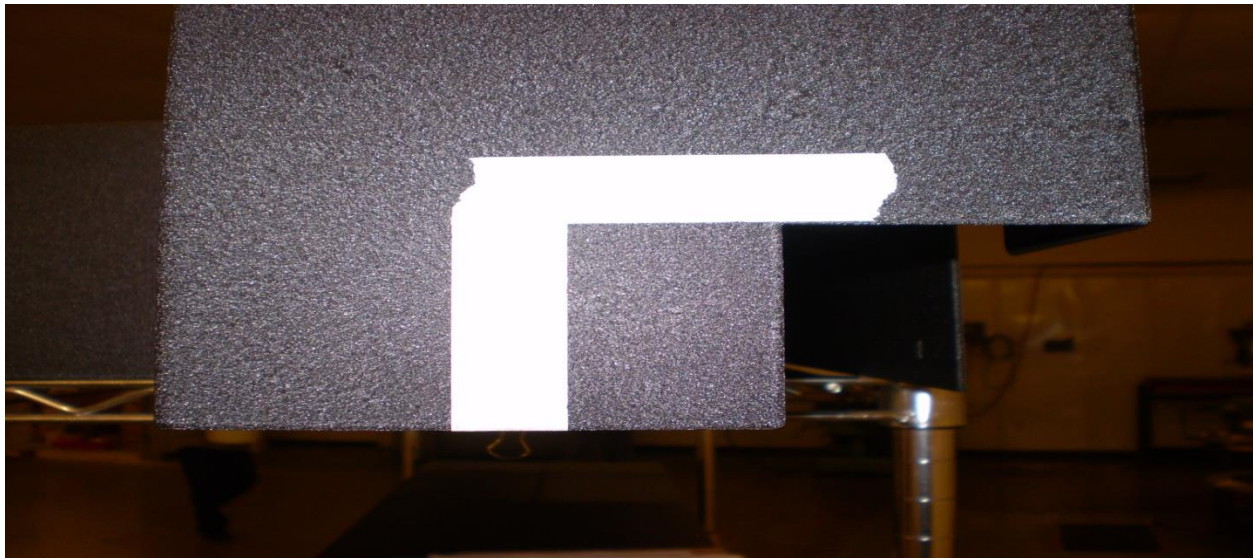
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- 18) Re-install the snap clips onto the new straps. Pull both straps out to check the strap tension. Both should be very close to the same.
- 19) Re-mount the machine lift on the wall.
- 20) Extend the existing cut-out in the end of the cover an extra 1-3/8" to accommodate the new handle assembly. The cut-out will be 4" long from bottom of the cover when lengthened. Remove any burrs caused by the cutting process. Re-install cover on lift.



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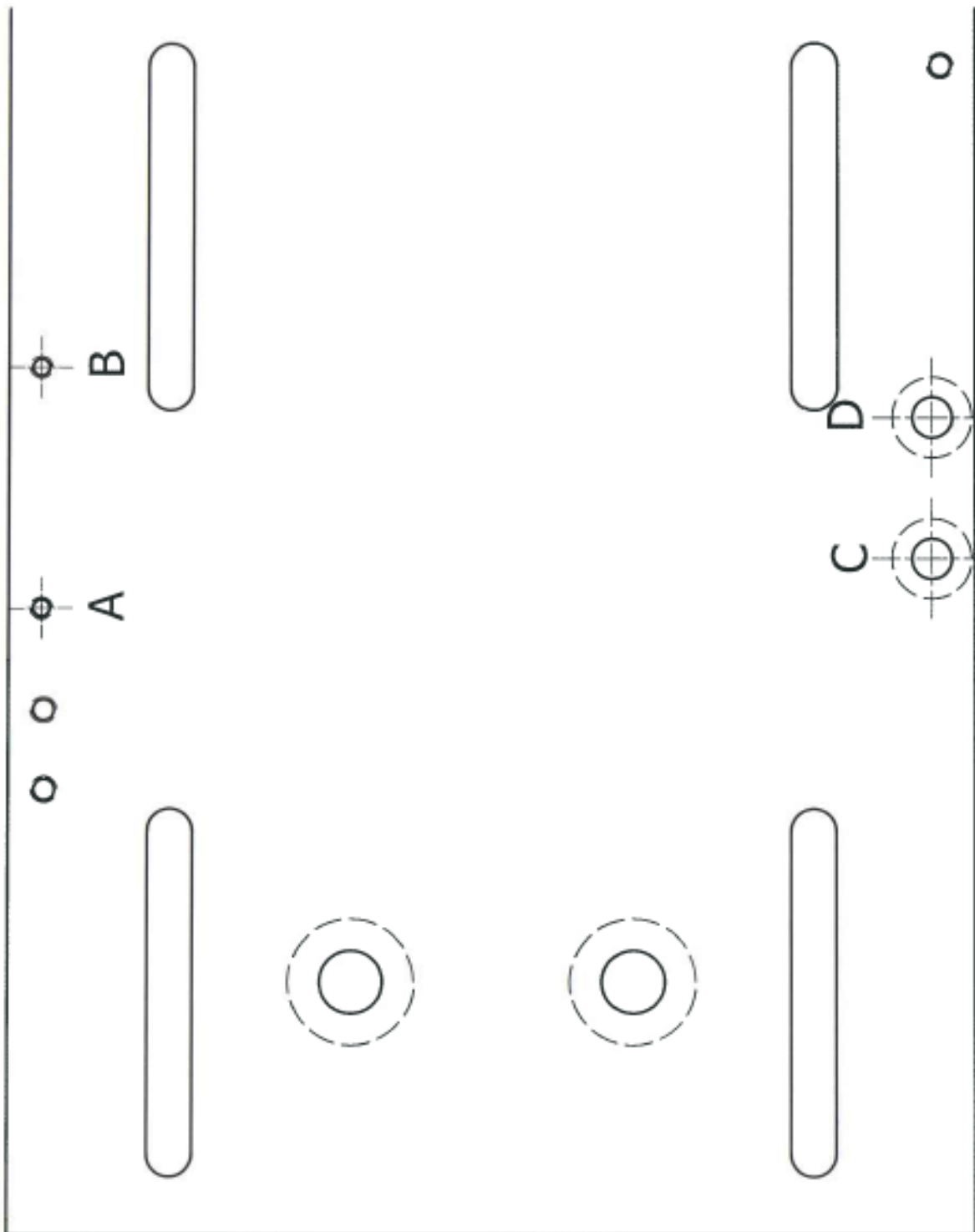


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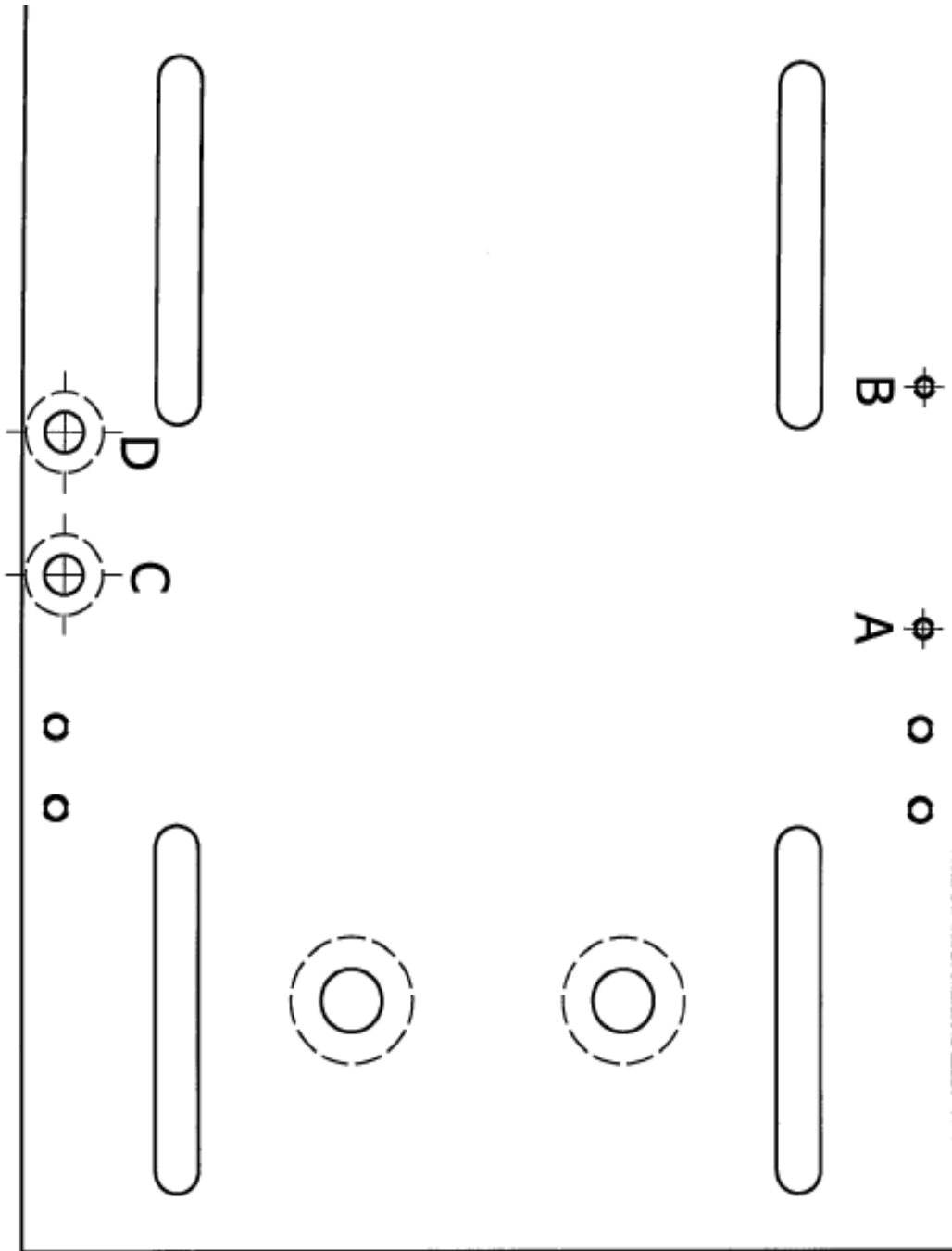


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