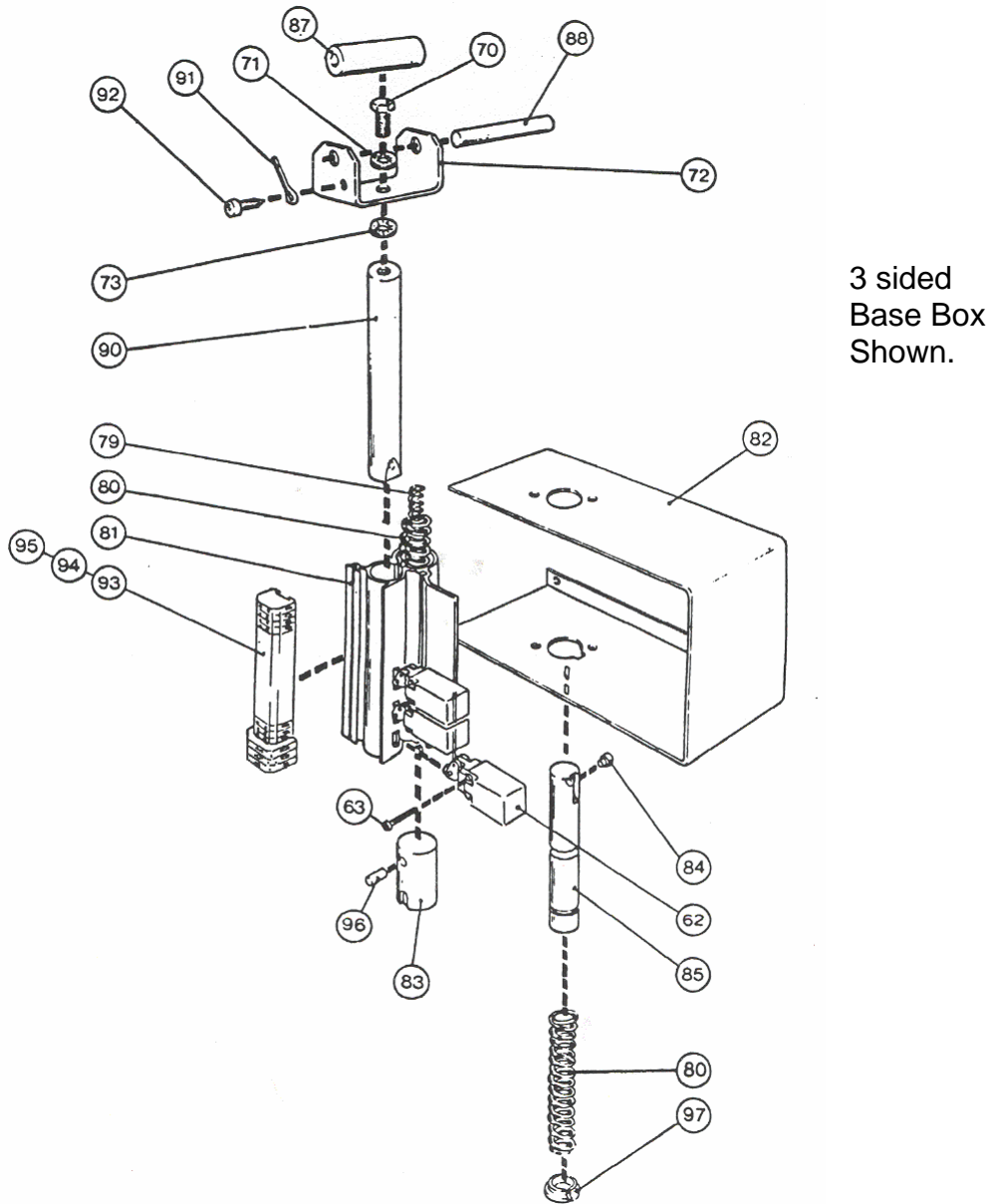


LIMIT PLUNGER REPLACEMENT

This procedure is to be used for replacement of limit switch rods or plungers on Megadoor System 800 or 1000 model doors.

NOTE: The attached parts explosion is a general view of all limit assemblies. Some parts may look slightly different, or the assembly may have a few extra parts (eg. Seals on plungers). This procedure will work on all units.



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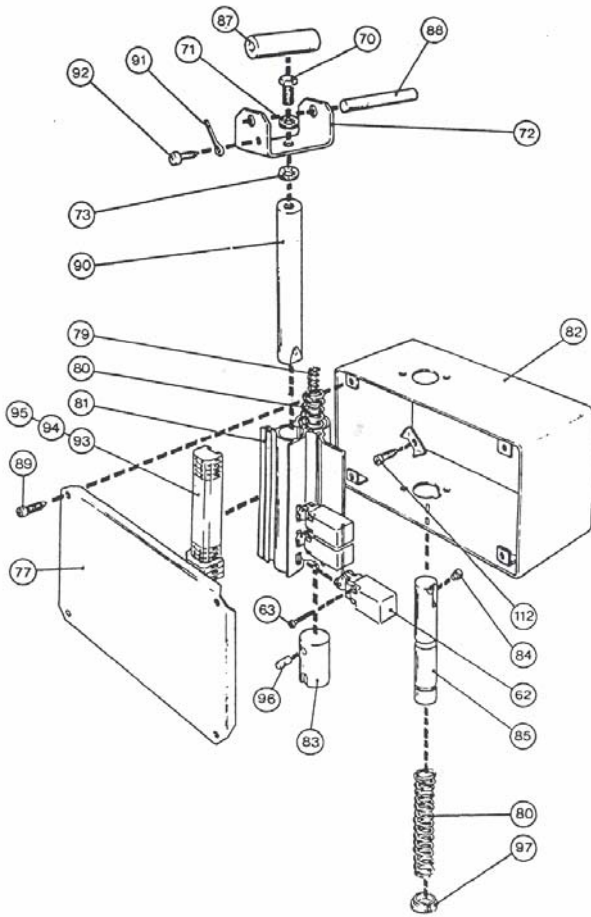
Megadoor Limit Plunger Replacement Procedure

Limit Box Variations

- 4 sided base box with cover (shown in parts explosion)
- 4 sided base box with cover and seals
- 3 sided base box
- 3 sided base box with angled cover
- Enclosed plastic box with clear cover totally sealed unit

Notes on other limit box variations.

System 800		System 1000	
LB1	LB2	LB1	LB2
3 limit switches	2 limit switches	3 limit switches	3 limit switches
Short Rod #85	No Rod	Long Rod #85	Long Rod #85
Terminal Blocks	No terminal blocks	Terminal Blocks	1 Motor NO Terminal Blocks 2 Motor has Terminal Blocks



4 sided
Limit box
At left
Shown with
Cover.

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Megadoor Limit Plunger Replacement Procedure

Disassembly

- [] 1) Lower the door to the fully closed position.
- [] 2) Lock out control panel.
- [] 3) Remove two screws (Torx 30 or Allen head M5) from the top of the Machine Box Cover and open enclosure.
- [] 4) (*Some models*) Remove limit box cover (77) by removing 4 (QTY) torx size 25 screws (89).
- [] 5) Remove the roller and bracket (87)(88)(91)(92) from the belt.
 - [] a) Using a torx size 10 bit, remove screw (92) that is holding the split pin (91).
 - [] b) Remove the split pin (91) from the spindle (88).
 - [] c) *Note: The top plunger is spring loaded, and will move downward when removed from the belt.*
 - [] d) Pull the spindle (88) toward you and remove completely from the roller (87) and bracket (72).
- [] 6) Remove the bracket from the top plunger. (70)(71)(72)(73)
 - [] a) Using a 13-mm wrench, remove the bolt (70).
 - [] b) Note the location of lock washers (71)(73) for later installation.
- [] 7) Remove the 4 (QTY) screws (112) holding the black limit box housing to the back plate.
- [] 8) Pull the complete assembly out of the header box.
 - [] a) The bottom plunger pusher rod (85) is long, so the unit must be pulled out and up.
 - [] b) Be careful not to disturb the electrical wires. Remove if necessary.
- [] 9) Remove the bottom plunger pusher rod (85) retainer (97) and slide off the outer compression spring (80).
- [] 10) Removal of Limit Switch Bracket (81) from Limit Switch Housing (82)

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Megadoor Limit Plunger Replacement Procedure

- [] a) Models *without* seals:
 - [] i) Remove the 4 (qty) torx size 25 screws (89) from the top and bottom of the limit housing.
- [] b) Models *with* seals:
 - [] i) On the top of the limit assembly, remove the 2 (qty) torx size 25 screws (89).
 - [] ii) Note the position of the next three components for re-assembly. Remove Clamping Ring (74) Wiper (75) and Guide Ring (76) from top.
 - [] iii) On the bottom of the limit assembly, remove the 2 (qty) torx size 25 screws (89).
 - [] iv) Note the position of the next three components for re-assembly. Remove Clamping Ring (74) Wiper (75) and Guide Ring (76) from top
- [] 11) Note the key notch on the top and bottom holes where the limit rods penetrate the limit switch housing (82).
- [] 12) Rotate the flat part of the limit switch bracket (81) 90 degrees toward you. The bottom limit plunger (85) will slide out when the pin (84) in the plunger aligns with the key slot.
- [] 13) Remove the bottom plunger.
- [] 14) *Note: There are compression springs (79)(80) inside the limit switch bracket (81) that will expand upward when the bracket is removed from the limit switch housing (82).*
- [] 15) Carefully slide the bracket (81) out of the limit switch housing (82).
- [] 16) Remove the 2 (qty) compression springs (80)(81).
- [] 17) Remove the top plunger (90) pin (84) and activator (83).

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Megadoor Limit Plunger Replacement Procedure

Assembly

- [] 1) Slide the new top plunger (90) on to the activator (83) pin (84).
 - [] a) They should be spaced approximately 1/8" apart.
- [] 2) Slide the three assembled pieces into the limit switch bracket (81)
 - [] a) The assembly should move freely inside the bracket.
 - [] b) If the unit sticks, adjust the dimension between the rods until there is sufficient clearance between the two rods.
 - [] c) These parts require no lubrication.
- [] 3) Insert the 2 (qty) compression springs (80)(81) into the top of the limit switch bracket (81).
- [] 4) Holding the compression springs in (80)(81), slide the limit switch bracket assembly (81) inside the limit switch housing (82).
- [] 5) Rotate the limit switch bracket assembly (81) so it aligns with the key slot in the bottom hole of the limit switch housing.
- [] 6) Slide in the new bottom plunger (85).
- [] 7) Rotate the limit switch bracket (81) back to its normal position.
- [] 8) Assembly of Limit Switch Bracket (81) and Limit Switch Housing (82)
 - [] a) Models *without* seals:
 - i) Install the 4 (qty) torx size 25 screws (89) on the top and bottom of the limit housing.
 - [] b) Models *with* seals:
 - i) Slide on to the bottom plunger the Guide Ring (76) Wiper (75) and then the Clamping Ring (74).
 - ii) Align components and install the 2 (qty) torx size 25 screws (89).

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Megadoor Limit Plunger Replacement Procedure

- iii) Slide on to the top plunger the Guide Ring (76) Wiper (75) and then the Clamping Ring (74).
- [] 9) Align components and install the 2 (qty) torx size 25 screws (89).
- [] 10) Install the bottom plunger compression spring (80) and retainer (97).
- [] 11) Push bottom plunger (85) and check for smooth operation.
- [] 12) Grab the top plunger (90) while pushing the bottom plunger (85) and check it for smooth operation.
 - [] a) If there is a drag, revert back to step 8) – loosen and again tighten the 4 (qty) torx size 25 screws (89), making sure everything is aligned properly for smooth operation.
- [] 13) Insert the complete limit assembly back into the machine box.
 - [] a) Insert the bottom plunger through the hole in the bottom of the machine box.
 - [] b) Slide the unit down, and then back against the back of the machine box.
 - [] c) Make sure no electrical wires are pinched.
- [] 14) Fasten the limit switch housing (82) to the back plate using the 4 (qty) torx size 30 or Allen head M5 bolts (112) .
- [] 15) Install the top bracket (72).
 - [] a) Rotate the top bracket (72) with the side with the two holes are facing you.
 - i) The small hole is for the setscrew (92).
 - [] b) Slide lock washer (73) into position between the top plunger (90) and bracket (72).
 - [] c) Place lock washer (71) on top of bracket.
 - [] d) Insert the retaining bolt (70).
 - [] e) Square the bracket (72) so the belt will run smoothly through the assembly.
 - [] f) Tighten the retaining bolt (70) with a 13-mm wrench.
- [] 16) Attach bracket assembly to belt.

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Megadoor Limit Plunger Replacement Procedure

- [] a) Raise the bracket assembly (72)(90) in to position with the belt.
 - [] b) Place the roller (87) on top of the belt and align with the holes in the bracket (72).
 - [] c) Insert the spindle (88) through the bracket (72) and roller (88).
 - [] d) Insert the split pin (91) through the spindle (88).
 - [] e) Align the split pin (91) with the small hole in the bracket (72) and install the small screw (92) using a torx size 10 bit.
- [] 17) Locate all lifts, ladders, tools etc. in a safe place away from any potential moving door parts.
- [] 18) Turn on the control system.
- [] 19) Run the door, and watch the operation of the limit assembly.
- [] a) As the door is running, the roller (87) runs smoothly.
 - [] b) The belt is not rubbing on the bracket (72).
 - [] c) When the door is in the full open position, the bottom limit plunger (85) raises and trips the lower limit (62) shutting off the motor.
- [] 20) When the door immediately starts closed, the bottom limit plunger (85) extends and releases the lower limit (62).
- [] a) When the door reaches the fully closed position, the belt loosens, and the top plunger (90) and bracket (72) compress into the limit box and trip the top limit switch shutting off the motor.
 - [] b) When the door immediately starts open, the belt tightens and the plunger (90) and bracket (72) raise and the top limit switch is no longer tripped.
- [] 21) Install the cover (77) using the 4 (qty) torx 25 screws (89).
- [] 22) Close the Machine Box Cover and insert the two screws (Torx 30 or Allen head M5).

Plunger replacement procedure.doc

Megadoor S800 S1000 Limit Plunger Replacement Procedure. pdf