



P/N 021R2100
(P/N 021R2101)KIT

AIRLIFT DOORS, INC.

Owner's Manual

Air Operator **MAGNAGLIDE**

www.AirliftDoors.com

1-888-368-4403





WARNING

The material provided in this owner's manual is meant for reference purposes only. Only persons trained and qualified to work on Airlift Doors, Inc. products should perform maintenance and service on any products supplied by Airlift Doors, Inc.

This owner's manual only provides partial information regarding our products. Further information such as installation guides, wiring diagrams, and other technical information should be referenced to ensure safe and proper installation and maintenance of Airlift Doors, Inc. products.

Always consult a trained professional installer or service provider to properly service your equipment. Garage doors and garage door openers are extremely dangerous and improper handling of these products may result in serious injury or death if handled improperly.

Always ensure that all power is disconnected to components before you perform any service to any Airlift control box or motor.

Always shut off and drain any air supply associated with an Airlift operator before performing service on the component.

Never work on a door that is counterbalanced without referencing the installation guide or consulting the factory for proper methods to work on counterbalanced doors.

Never stand underneath a garage door to test any function of the door, opener, or safety devices.

Thank you for purchasing a Magnaglide from Airlift Doors, Inc. We take great pride in the quality and workmanship of our products and stand behind our products 100%. If you have any questions or concerns please contact us directly and we would be glad to assist you in any way possible.

This owner's manual is meant to be an informational tool for you to operate and maintain your Magnaglide. Further information is available on our website or by contacting us directly. Please reference the contact information below.

We greatly appreciate your business and promise to work hard to provide you with the highest level of service at all times.

Thank you again for choosing Airlift Doors.

Airlift Doors, Inc.
1-888-368-4403
www.airliftdoors.com

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I. NORMAL OPERATION

A. Basic Operation of the Magnaglide Air Opener

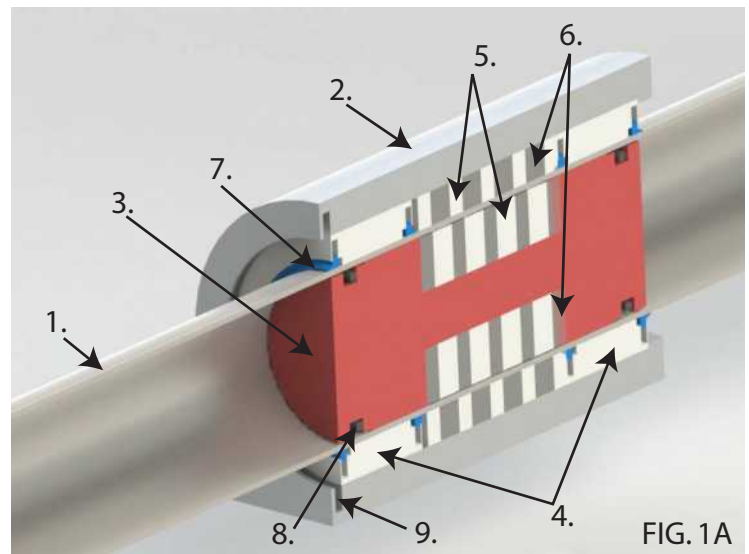
Description

The Magnaglide Air Opener is a pneumatically operated, magnetically coupled overhead door opener. Constructed of stainless steel, plastic, and other corrosion resistant materials, the Magnaglide is ideal for environments where exposure to moisture, chemicals, and other contaminants are present.

Construction

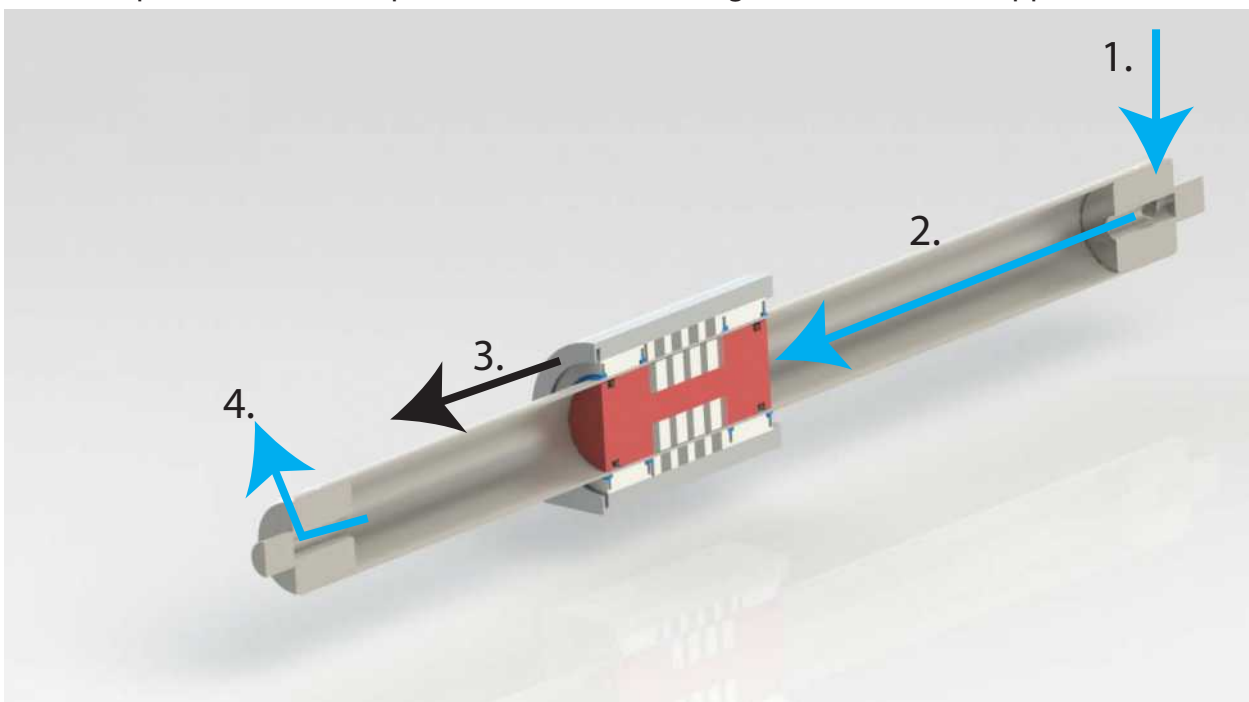
The Magnaglide Air Opener consists of a 2" sealed 304SS stainless steel cylinder housing a magnetic piston that is magnetically coupled to an exterior "carriage." (FIG. 1A)

1. Air Cylinder
2. Carriage Housing
3. Piston
4. Plastic Bushings
5. Rare Earth Magnets (light color)
6. Metal Spacers (dark color)
7. Wiper Seal (Blue)
8. Piston U-Cup Seal
9. Snap Ring Channel



Air Flow During Operation

1. Air enters through the 3/8" airline at either end of the cylinder.
2. Pressurized air pushes piston towards opposite end of cylinder.
3. Magnetically coupled carriage is pushed along with the piston due to the large magnetic force present.
4. Air on non-pressurized side of piston is exhausted through the airline at the opposite end.



Serial Number Location and Cylinder Measurements

Before you contact Airlift Doors for troubleshooting, parts replacement, or complete opener replacement, please obtain the serial number of the current cylinder as well as the length of the cylinder as shown below.

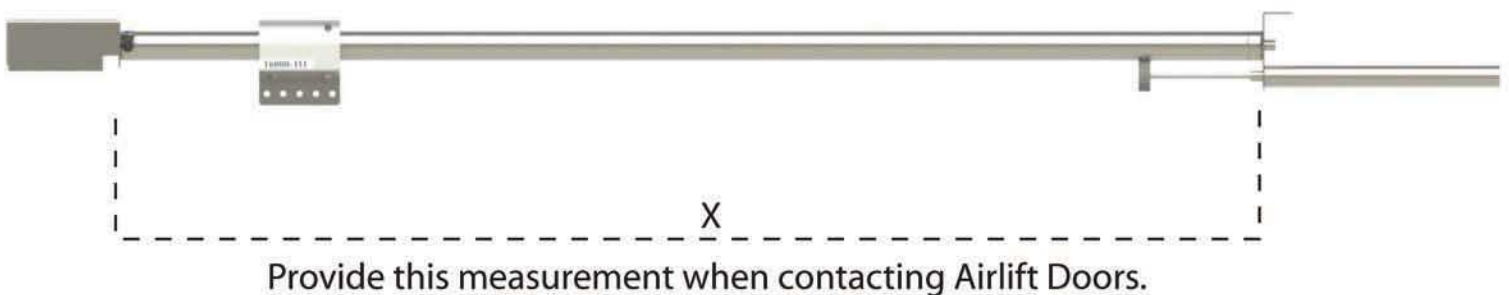
A. Serial Number Location

- The serial number of the Magnaglide Air Opener is encribed into the side of the carriage. Depending on how the cylinder was mounted, this could be on the left or right side of the carriage. See below.



B. Cylinder Measurements

- In order for Airlift personnel to determine the size of your Magnaglide Air Opener, you may be asked to provide us with the overall length of the cylinder, in between the mounting brackets. See below.



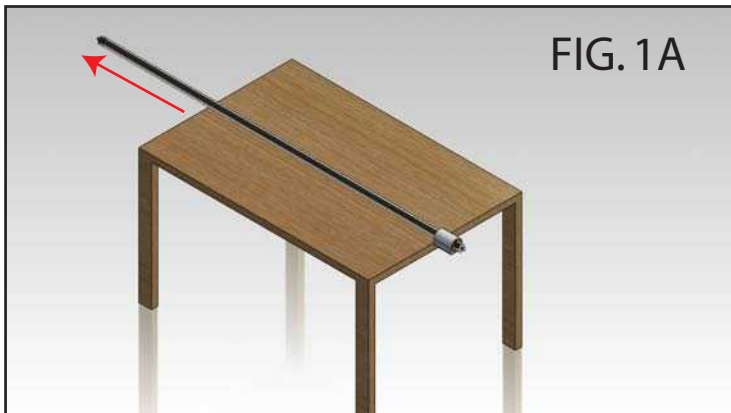
****Internal Airlift Use Only****

Magnaglide Stroke/Cylinder Size = $X - 2.5$ inches

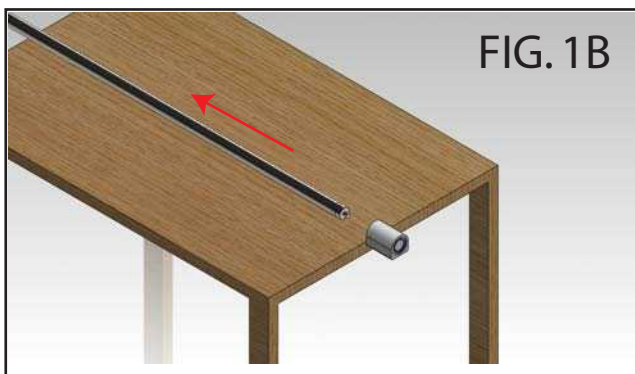
Magnaglide Air Opener Cleaning Instructions

Step 1 - Removal of Existing Carriage

- 1-1: Drain the air from the regulator by turning the regulator knob counterclockwise until it stops and the gauge reads zero PSI.
- 1-2: Remove the airlines from both ends of the opener by pushing in on the colored portion of the air fitting and pulling out on the airline. Remove air fittings from each end of the cylinder and set aside. ****CAUTION**** There may be built up air pressure in the airlines even after the regulator is shut off. Grip airlines tightly when removing to prevent injury.
- 1-3: Loosen the two large nuts on both ends of the cylinder using a 1-1/16" wrench. ****CAUTION**** Use two people to perform this step. One person should hold the cylinder while the other loosens the mounting nuts.
****NOTE:** It is not necessary to remove the mounting brackets from the wall or ceiling. Only remove the large nuts holding the cylinder to the mounting brackets.
- 1-4: Carefully remove the cylinder from the mounting brackets and lay the cylinder on a work bench.
- 1-5: Push the carriage by hand to either end of the cylinder.
****NOTE:** Some early versions of the Magnaglide may have two different size end caps. If this is the case, slide the carriage towards the end with the smaller diameter end cap.
- 1-6: Lay the cylinder on a table/workbench with the carriage hanging over the edge of bench. (FIG. 1A)



- 1-7: Grip the cylinder on the side of the workbench opposite of the carriage and pull the cylinder towards you in a snapping motion. This will cause the carriage to strike the edge of the workbench. You must apply enough force to the cylinder to disengage the carriage from the internal magnetic piston. (FIG. 1B)



****During this step, the carriage may fall to the floor. Place a cushioned surface beneath the magnaglide carriage to prevent damaging it when it slides off the cylinder.**

Step 2 - Clean the cylinder

2-1: Wipe the cylinder down and clean off any grease or chemical residue. If residue is difficult to remove, WD40 or a Scotch Brite pad may be used to clean the cylinder.

****CAUTION**** Be careful not to scratch or dent the surface of the cylinder.

2-2: Once the cylinder is clean, use a clean rag and apply a thin layer of lightweight oil to the entire surface of the cylinder. (Airlift Cylinder Lubricant or any non-detergent 10w oil may be used)

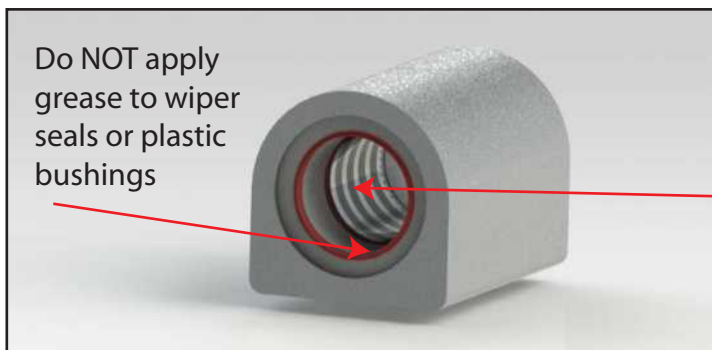
Step 2 - Clean the carriage

3-1: Using a clean rag, wipe the inside of the carriage to remove any existing grease, dirt, or other buildup.

3-2: Use a wire wheel on a drill to remove any corrosion from the magnets and spacers.

3-3: Once the inside of the carriage is clean, apply a layer of grease to the magnets and spacers.

****CAUTION**** Be sure not to apply grease to the wiper seals and plastic bushings. Grease should only be applied to the metal spacers and magnets. (FIG. 3A)



Step 4 -Re-install carriage

4-1: Slide the carriage onto the cylinder from the opposite end from which it was removed.

Push the carriage by hand to the other end of the cylinder until it stops.

(FIG's. 4A & 4B)



FIG. 4A

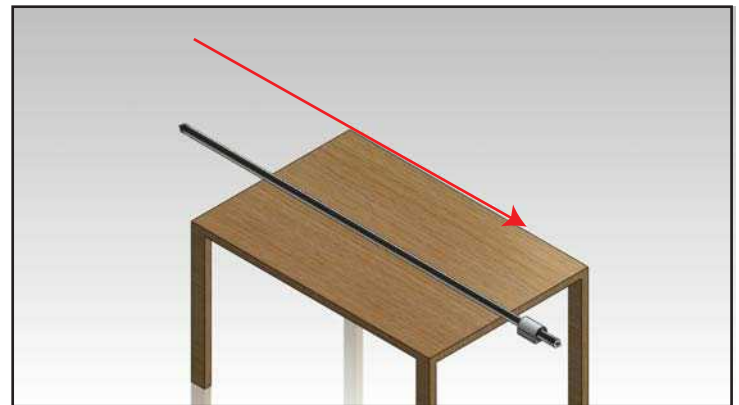


FIG. 4B

4-2: With the same motion you used to remove the old carriage, pull the cylinder towards you forcing the carriage further down the cylinder.

4-3: When the carriage re-engages to the internal magnetic piston, you will hear an audible SNAP. Keep pulling the cylinder until you hear the carriage snap TWICE onto the magnets.

4-4: Push the carriage to the end of the cylinder if it is not already there. Measure from the end face of the carriage to the weld line where the end cap of the cylinder is welded on.

- This measurement should be approximately 5/8" to ensure the carriage has been re-engaged correctly. (FIG. 4C)

- If the measurement is more than 5/8", redo step 4-2 through 4-4 until the carriage is re-engaged.

- If the measurement is less than 5/8" or the carriage travels right up to the weld line, you must push the carriage to the opposite end of the cylinder and repeat steps 4-2 through 4-4 in the opposite direction.

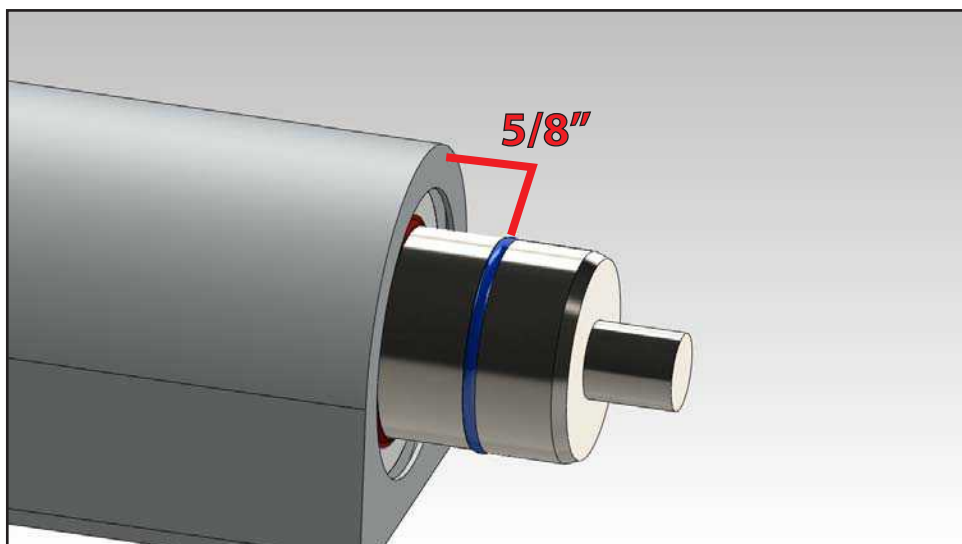


FIG. 4C

Step 5- Re-install cylinder

5-1: Remount the cylinder to the brackets using the large hex nuts and lock washers you removed in step 1.

5-2: Reattach air fittings and airlines to both ends of the cylinder.

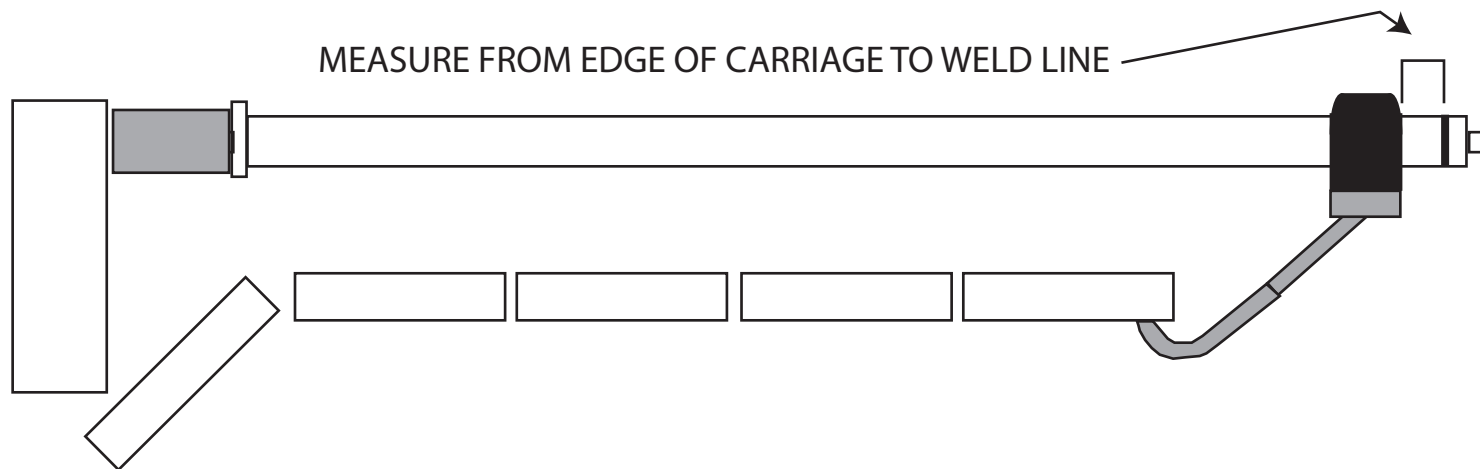
5-3: Adjust air pressure on the regulator to desired setting. (Normal psi range is 65-75 psi)

5-4: Run door in both directions to test proper operation.

TO DETERMINE IF THE MAGNAGLIDE CARRIAGE IS CORRECTLY COUPLED, FOLLOW THE STEPS AS LISTED BELOW.

STEP 1: OPEN THE DOOR TO THE FULL OPEN POSITION AS SHOWN BELOW.

STEP 2: MEASURE THE DISTANCE BETWEEN THE EDGE OF THE CARRIAGE AND THE WELD LINE ON THE CYLINDER AS SHOWN BELOW.



STEP 3: WHEN THE CARRIAGE IS COUPLED CORRECTLY, THE DISTANCE BETWEEN THE EDGE OF THE CARRIAGE AND THE WELD LINE WILL BE 5/8". IF THE DISTANCE IS LESS OR GREATER THAN 5/8", THE CARRIAGE NEEDS TO BE RECOUPLED. FOLLOW THE PROCEDURES ON THE NEXT PAGE TO RECOUPLE THE CARRIAGE.

TO RECOUPLE THE MAGNAGLIDE CARRIAGE, FOLLOW THE STEPS AS LISTED BELOW.

STEP 1: Drain the air from the regulator by turning the regulator knob counterclockwise until it stops and the gauge reads zero psi.

STEP 2: Remove the airline from both ends of the operator by pushing down on the colored portion of the air fittings and pulling on the airline. Next, remove both air fittings from the cylinder and set aside.

STEP 3: Disconnect the carriage bracket from the carriage by removing the four 1/2" bolts and lock washers from the bottom of the carriage.

STEP 4: Loosen and remove large nuts and lock washers from each end of the cylinder using a 1-1/16" wrench.

NOTE: IT IS NOT NECESSARY TO DETACH THE END BRACKETS FROM THE CEILING OR WALL. ONLY REMOVE THE LARGE NUTS TO REMOVE THE OPERATOR FROM THE BRACKETS.

STEP 5: Remove cylinder from brackets and place on floor.

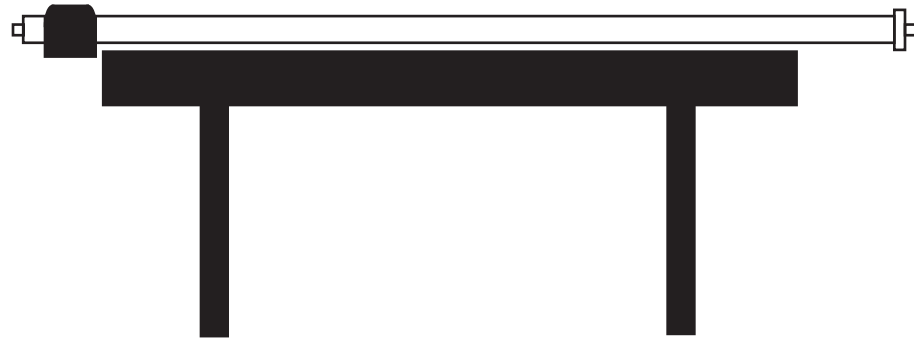
STEP 6: Determine which direction to recouple the carriage.

- Push the carriage to one end of the cylinder and measure from the edge of the carriage to the weld line where the end cap is welded on.

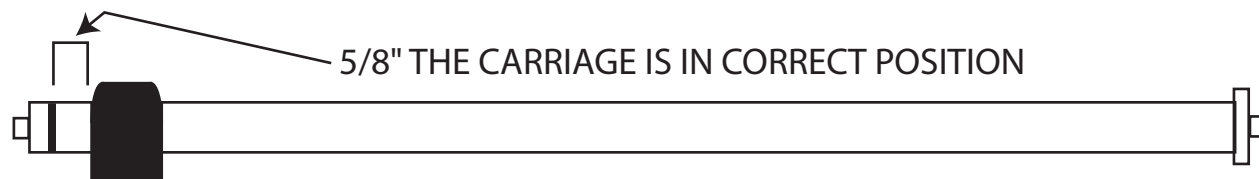
- If the measurement is greater than 5/8" (most likely it will be 2-3"), then proceed to step 7.

- If the measurement is less than 5/8" or the carriage travels up to or past the weld line, push the carriage to the opposite end of the cylinder and proceed to step 7.

STEP 7: Place cylinder on a flat table with the edge of the carriage over the edge of the table. See Below.



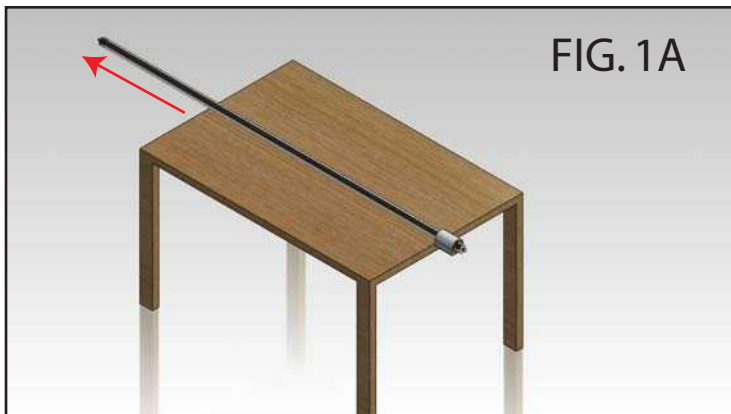
STEP 8: Grip the cylinder on the side of the table opposite the carriage. Pull the cylinder towards you in a snapping motion allowing the carriage to strike the edge of the table. Keep snapping the cylinder until you hear the carriage snap TWICE onto the magnets. When the carriage is correctly seated, there will be approximately 5/8" inbetween the edge of the carriage and the inside edge of the end cap. IMPORTANT: THE CARRIAGE MUST SNAP TWICE ONTO THE MAGNETS TO BE IN THE CORRECT POSITION. See below.



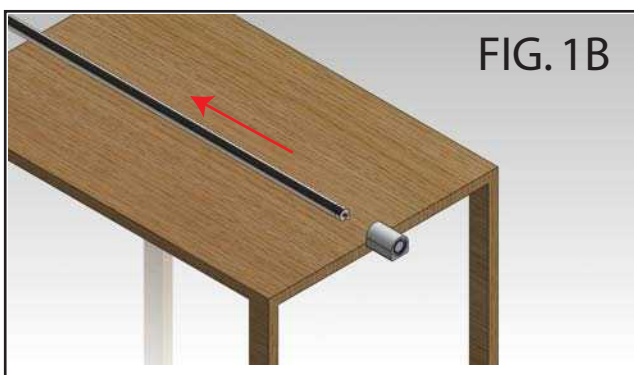
Magnaglide Air Opener Carriage Replacement Instructions

Step 1 - Removal of Existing Carriage

- 1-1: Drain the air from the regulator by turning the regulator knob counterclockwise until it stops and the gauge reads zero PSI.
- 1-2: Remove the airlines from both ends of the opener by pushing in on the colored portion of the air fitting and pulling out on the airline. Remove air fittings from each end of the cylinder and set aside. ****CAUTION**** There may be built up air pressure in the airlines even after the regulator is shut off. Grip airlines tightly when removing to prevent injury.
- 1-3: Loosen the two large nuts on both ends of the cylinder using a 1-1/16" wrench. ****CAUTION**** Use two people to perform this step. One person should hold the cylinder while the other loosens the mounting nuts.
****NOTE:** It is not necessary to remove the mounting brackets from the wall or ceiling. Only remove the large nuts holding the cylinder to the mounting brackets.
- 1-4: Carefully remove the cylinder from the mounting brackets and lay the cylinder on a work bench.
- 1-5: Push the carriage by hand to either end of the cylinder.
****NOTE:** Some early versions of the Magnaglide may have two different size end caps. If this is the case, slide the carriage towards the end with the smaller diameter end cap.
- 1-6: Lay the cylinder on a table/workbench with the carriage hanging over the edge of bench. (FIG. 1A)



- 1-7: Grip the cylinder on the side of the workbench opposite of the carriage and pull the cylinder towards you in a snapping motion. This will cause the carriage to strike the edge of the workbench. You must apply enough force to the cylinder to disengage the carriage from the internal magnetic piston. (FIG. 1B)



****During this step, the carriage may fall to the floor. Place a cushioned surface beneath the magnaglide carriage to prevent damaging it when it slides off the cylinder.**

Step 2 - Clean the cylinder

2-1: Wipe the cylinder down and clean off any grease or chemical residue. If residue is difficult to remove, WD40 or a Scotch Brite pad may be used to clean the cylinder.

****CAUTION**** Be careful not to scratch or dent the surface of the cylinder.

2-2: Once the cylinder is clean, use a clean rag and apply a thin layer of lightweight oil to the entire surface of the cylinder. (Airlift Cylinder Lubricant or any non-detergent 10w oil may be used)

Step 3 - Install new carriage

****NOTE**** Both the cylinder and carriage can be oriented either direction. There is no front or rear direction either of them must be mounted.

3-1: Slide the new carriage onto the cylinder from the opposite end from which the old carriage was removed. Push the carriage by hand to the other end of the cylinder until it stops.

(FIG's. 3A & 3B)



FIG. 3A

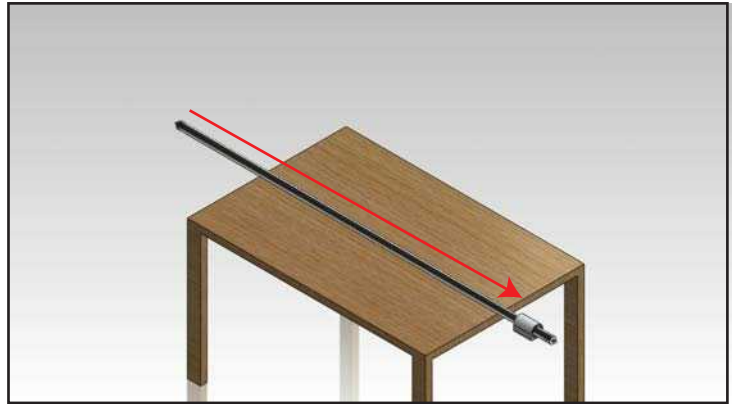


FIG. 3B

3-2: With the same motion you used to remove the old carriage, pull the cylinder towards you forcing the carriage further down the cylinder.

3-3: When the carriage re-engages to the internal magnetic piston, you will hear an audible SNAP. Keep pulling the cylinder until you hear the carriage snap TWICE onto the magnets.

3-4: Push the carriage to the end of the cylinder if it is not already there. Measure from the end face of the carriage to the weld line where the end cap of the cylinder is welded on.

- This measurement should be approximately 5/8" to ensure the carriage has been re-engaged correctly. (FIG. 3C)

- If the measurement is more than 5/8", redo step 3-2 through 3-4 until the carriage is re-engaged.

- If the measurement is less than 5/8" or the carriage travels right up to the weld line, you must push the carriage to the opposite end of the cylinder and repeat steps 3-2 through 3-4 in the opposite direction.

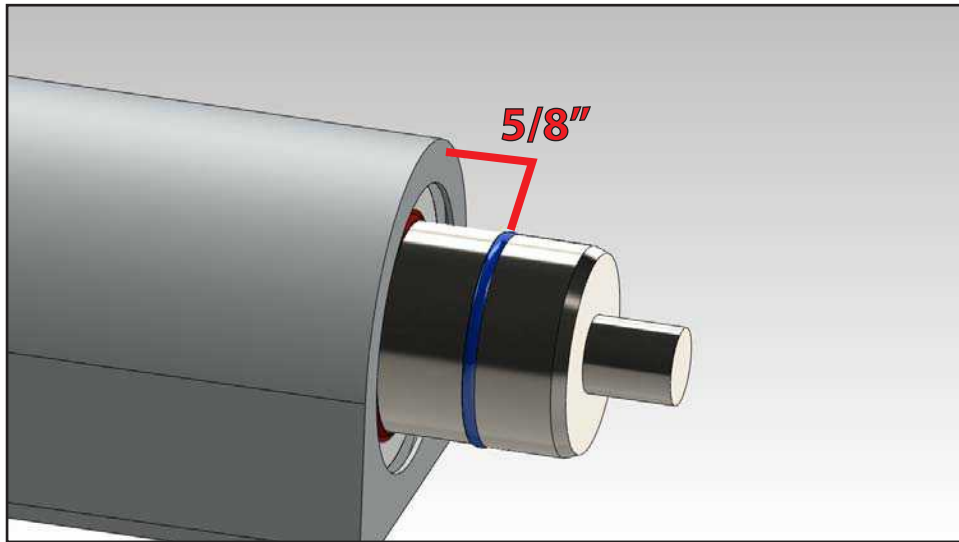


FIG. 3C

Step 4 - Re-install cylinder

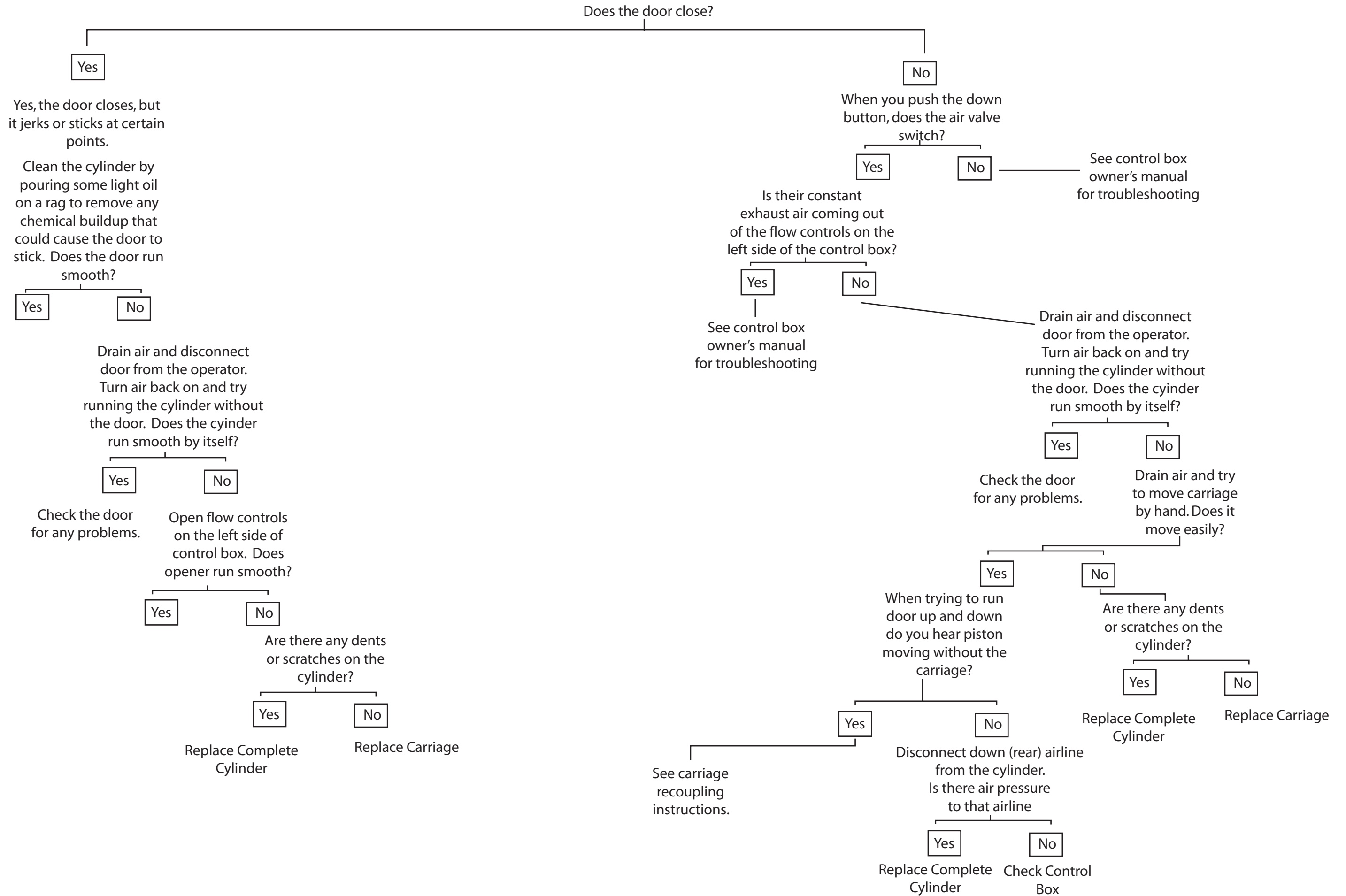
4-1: Remount the cylinder to the brackets using the large hex nuts and lock washers you removed in step 1.

4-2: Reattach air fittings and airlines to both ends of the cylinder.

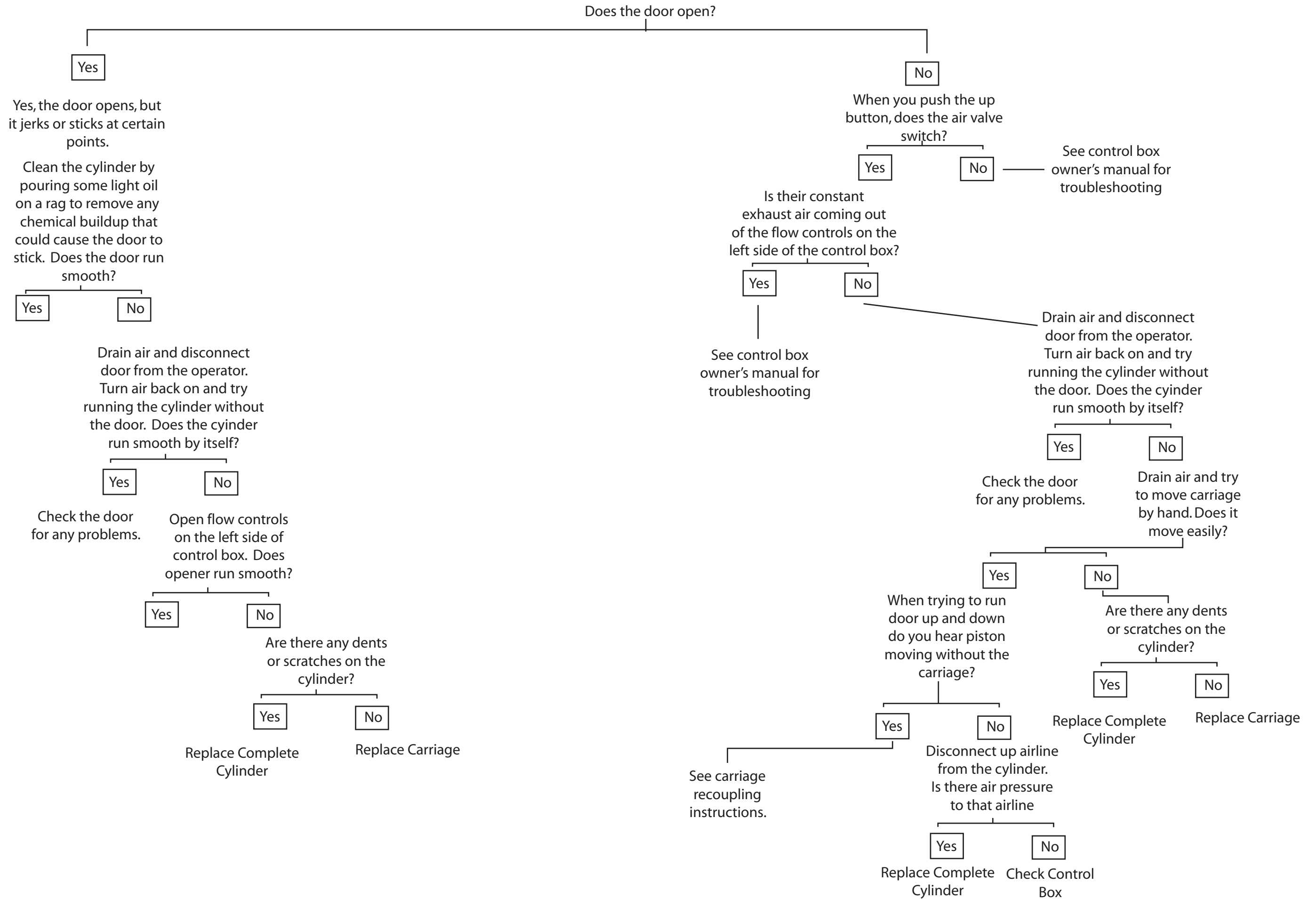
4-3: Adjust air pressure on the regulator to desired setting. (Normal psi range is 65-75 psi)

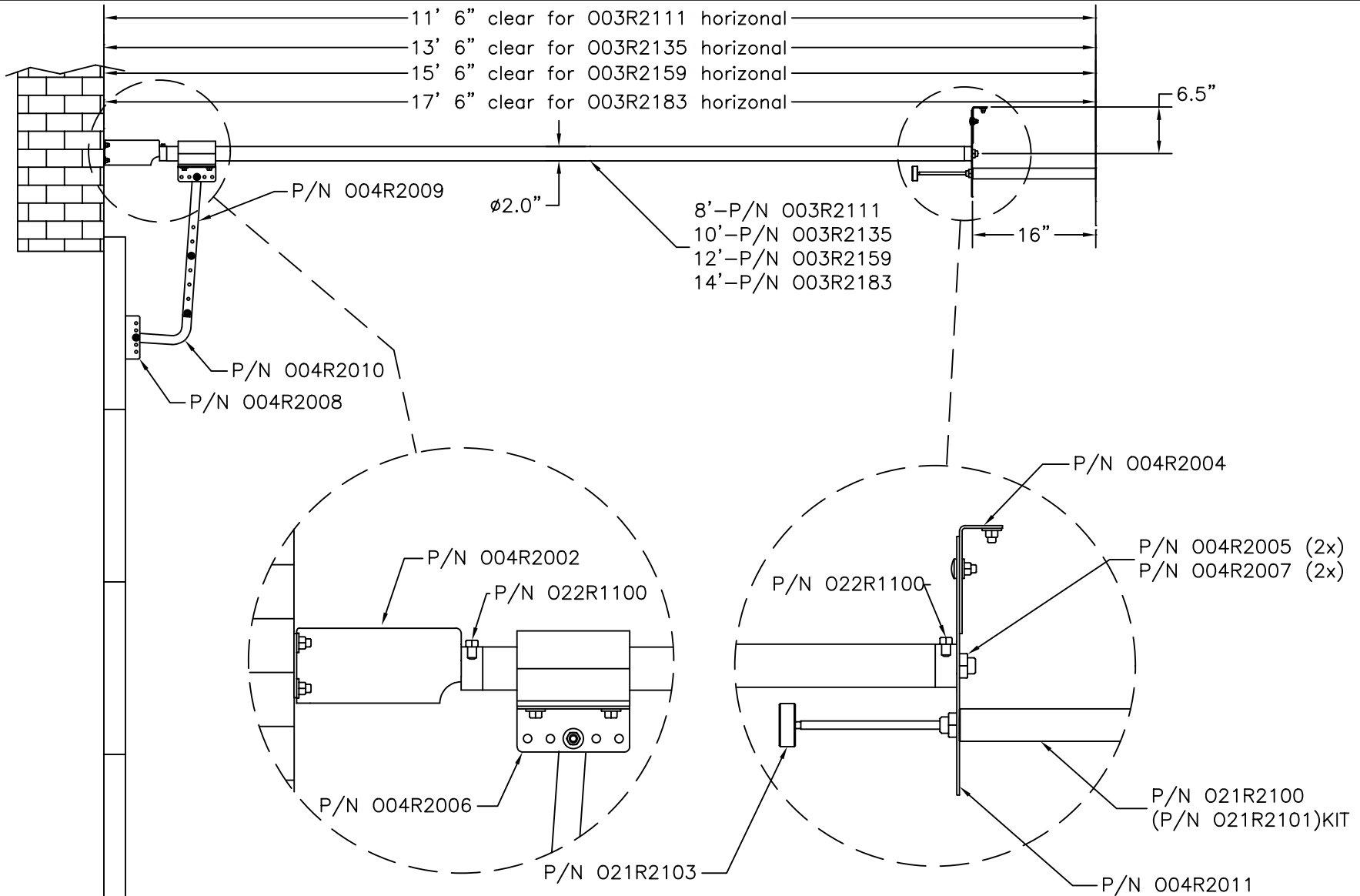
4-4: Run door in both directions to test proper operation.

Magnaglide Troubleshooting Flow Chart For Door In UP Position



Magnaglide Troubleshooting Flow Chart For Door In DOWN Position





Rev notes:
 B. changed P/N 35007 for both ends and changed bracket 1004 to single pc.
 3/7/03

B.S. changed P/N 35007 to 35024 &
 added extra dimensions for different sizes.
 10/17/05

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DRAWING DATE

7/3/02

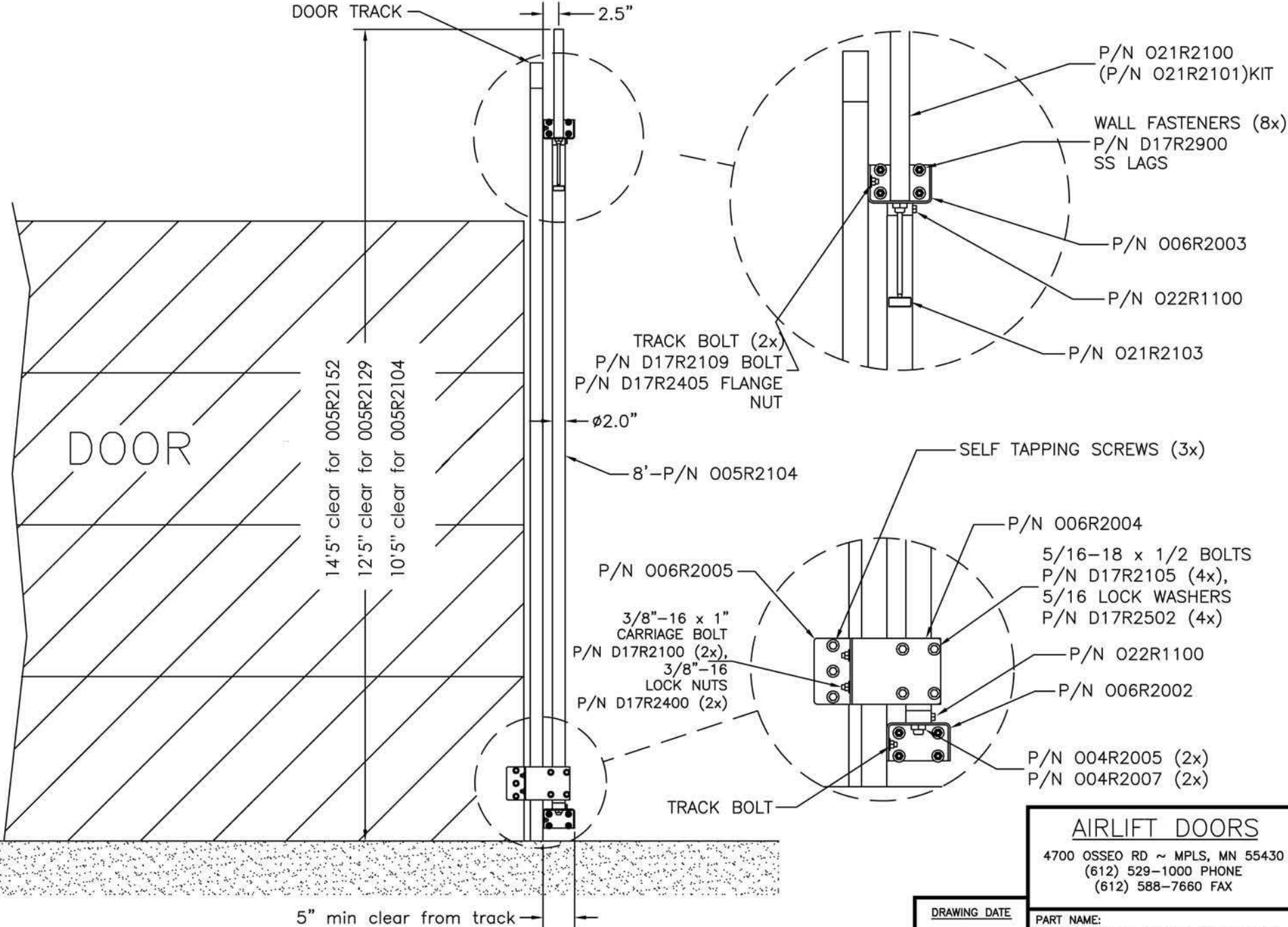
AIRLIFT DOORS

4700 OSSEO RD ~ MPLS, MN 55430
 (612) 529-1000 PHONE
 (612) 588-7660 FAX

PART NAME:
 MAGNAGLIDE DOOR OPERATOR
 -HORIZONTAL

ASSEMBLY NUMBER:
 MGH1

REV:
 C



AIRLIFT DOORS
 4700 OSSEO RD ~ MPLS, MN 55430
 (612) 529-1000 PHONE
 (612) 588-7660 FAX

DRAWING DATE
 7/3/02

PART NAME:
 MAGNAGLIDE DOOR OPERATOR
 -VERTICAL

ASSEMBLY NUMBER:
 MG1V1

REV:
 A

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AIRLIFT DOORS, INC.

QUARTERLY MAINTENANCE PROGRAM MAGNAGLIDE AIR OPERATOR

Airlift Doors, Inc. recommends performing quarterly maintenance on your Magnaglide Air Operator.

Maintenance steps explained:

A. Cleaning

Be sure to disconnect power to the control box and remove all air from the system before cleaning the cylinder. Failure to do so may result in serious injury. To prevent chemical buildup on the operator, the cylinder should be cleaned quarterly or more frequently if necessary. Clean the cylinder with water, mild soap, and a soft cloth. Rinse with water and dry with a non-abrasive towel or cloth

B. External lubrication of cylinder

Be sure to disconnect power to the control box and remove all air from the system before lubricating the cylinder. Failure to do so may result in serious injury. Spray a lubricant such as JB-80 or similar to the entire length of the cylinder. Airlift Cylinder Lubricant may also be used. Apply the cylinder lubricant directly to the cylinder with a clean rag.

C. Internal lubrication of the cylinder

If your control box has an automatic oiler to the right of the regulator set the automatic oiler for one drop of oil per each up and down cycle. Consult the control box owners manual for adjustment instructions. Depending on the amount of use, the oiler should be filled quarterly at a minimum. If your control box is not equipped with an automatic oiler, you can add oil manually. Close the door so that the carriage is in the closed position. Shut off the power to your control box to ensure that the door will not operate while performing maintenance. Disconnect the airline from the fitting closest to the carriage. Pour 10 weight/ non-detergent oil directly into the airline until there is approximately 4-5 inches of oil visible in the airline. Re-insert the airline back into the fitting. Turn the power back on and cycle the door to the open position. This will push the oil into the cylinder to lubricate the internal piston seals. With the door open, shut off the power and repeat to the other side of the cylinder. This step should be performed quarterly.

D. Carriage lubrication

Remove the bolt/plug from the side of the carriage. Using an oil can, add approximately ¼ oz. to ½ oz of 10 weight non-detergent oil into the fill hole. Replace the bolt/plug and tighten. See instructions in this manual for further information.

E. Air compressor maintenance

Every time you perform maintenance you should drain your compressor to reduce the amount of water contained in the system. See your air compressor manual for further information and proper drainage instructions.

Quarterly Maintenance Program For "Magnaglide" Air Openers

Year: _____

Note: Mark date in each box when maintenance is performed to keep accurate records

<u>Steps</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
A. Cleaning				
B. External Lubrication				
C. Internal Lubrication				
D. Carriage Lubrication				
E. Air Compressor				

1st Quarter Notes:

2nd Quarter Notes:

3rd Quarter Notes:

4th Quarter Notes:

UNLIMITED Warranty for the Magnaglide Air Opener

Airlift Doors, Inc. warrants to the original purchaser or original user that all Magnaglide model air openers sold by Airlift Doors, Inc. and all parts thereof are free from defects in material or workmanship under normal use and service. Airlift Doors Inc. sole obligation under this warranty shall be limited to furnishing replacement parts F.O.B Maple Lake, Minnesota for the periods specified below from the date of initial shipment by Airlift Doors, Inc.

Complete Opener (3) Year

These Warranties are void if the original product warranted has been damaged by accident, abuse, misuse or neglect, improper installation or service, unauthorized modifications, misapplication, or other use not arising out of defects in material and workmanship.

Warranty redemption requires verification of original purchase date and completion in full of return goods form. Returns are only accepted when return authorization number has been provided by Airlift Doors, Inc. before product is returned.

The warranties set out in this certificate are the exclusive remedy of the original owner or user in lieu of all other warranties written, oral or implied (including any warranty or merchantability or fitness for the purpose) and all other obligations or liabilities on the part of Airlift Doors, Inc. Airlift Doors, Inc. neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the sale, installation, or use of the Magnaglide Air Opener or any parts thereof.

Airlift Doors, Inc. will not be responsible for labor or shipping and handling charges for the analysis of a defective condition or for the replacement and installation of defective parts.

The warranties herein shall be null and void if the Magnaglide Air Opener is not installed by a competent contractor and/or if the Magnaglide Air Opener is not installed according to Airlift Doors, Inc. provided instructions.

In no event will Airlift Doors, Inc. be responsible for, or liable to anyone for, special, indirect, collateral, punitive, incidental, or consequential damages, even if Airlift Doors, Inc. has been advised of the possibility of such damages. Such excluded damages include, but are not limited to, personal injury, damage to property, loss of goodwill, loss of profits, loss of use, cost of cover with any substitute product, interruption of business, or other similar indirect financial loss.



AIRLIFT DOORS, INC.

RETURN GOODS AUTHORIZATION

Airlift Doors, Inc. will not accept any return goods without prior authorization. Only the original purchaser is authorized to obtain return approval. If the goods were not purchased directly from Airlift Doors, Inc. please contact the Company the goods were purchased from to process the return with Airlift Doors, Inc.

Return Goods Procedure Directions:

Please complete this form and fax it to 612-588-7660 or e-mail to info@airliftdoors.com. Upon review and approval of this form you will be contacted by your preferred contact method.

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Contact: _____

Preferred method of Contact: _____

Original Invoice #: _____

Item(s) being returned: _____

Part # (if known): _____

Reason for Return: _____

Return Terms and Conditions:

All pre-approved returns must have the RGA number printed on the outside of the package

All Returns must be made within 30 days of authorization.

A copy of the RGA Slip and packing slip must be included with the return when replacement items have been shipped. Airlift Doors, Inc. will provide this slip with the replacement shipment.

All items to be returned to:

Airlift Doors, Inc

RGA # _____

400 State Hwy. 55

Maple Lake, MN 55358