

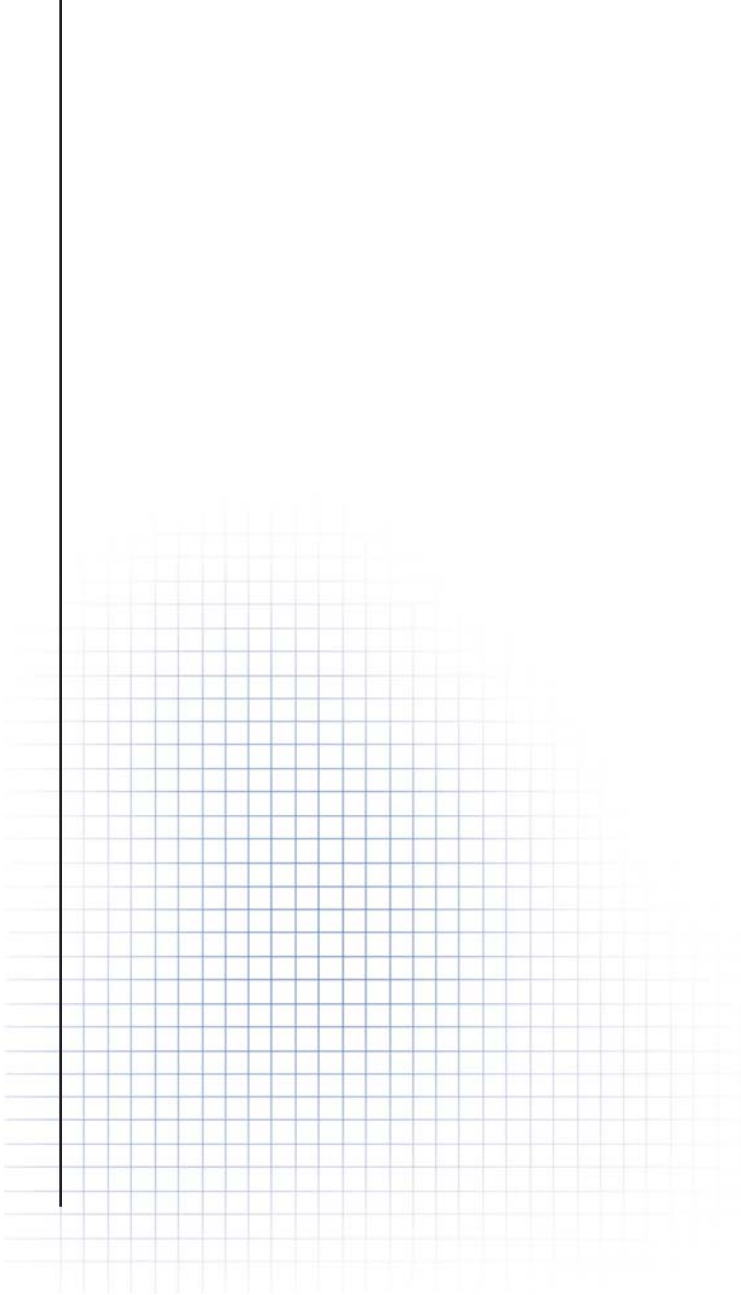


Transit System
Components

L20700W 10/11



Bus Door Catalog



**Greater Strength
and Durability -
The Haldex Touchbar
Device - Designed for
All Types of Pneumatic
And Electric Bus Door
Systems.**

**The Haldex
Touchbar Device**

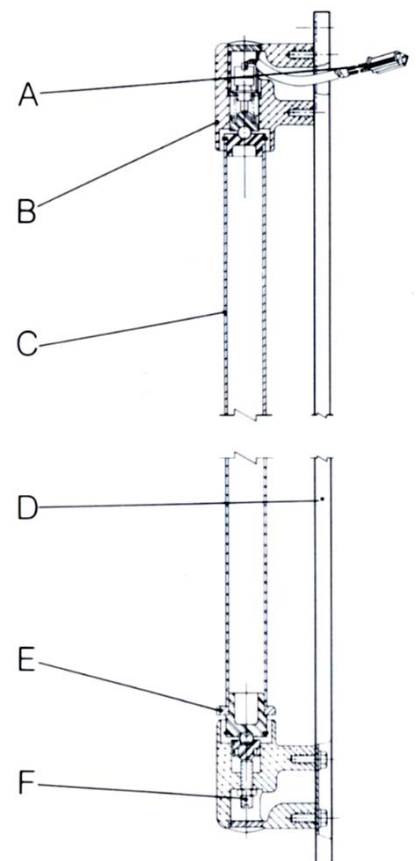


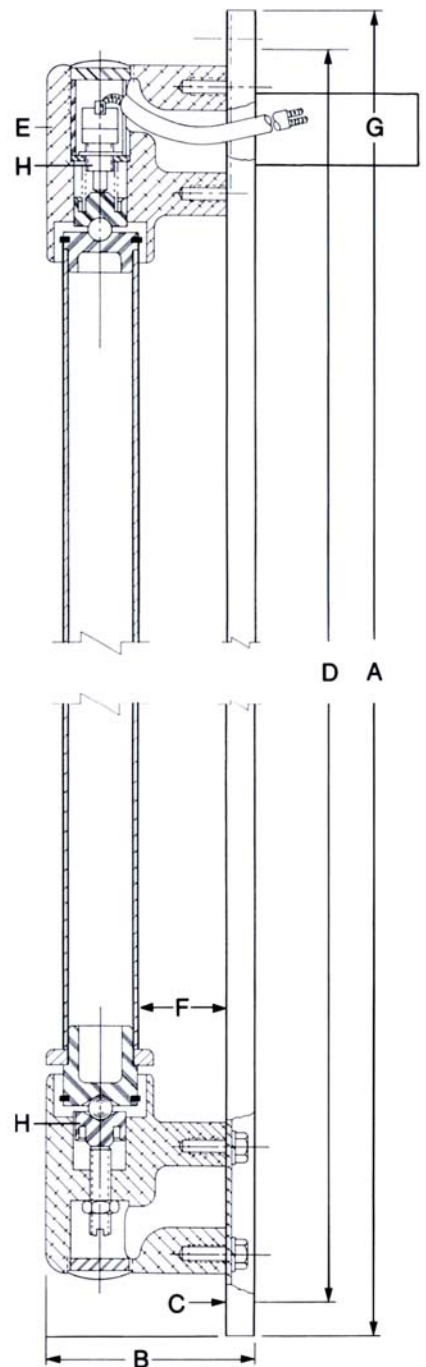
The Haldex Touchbar Device easily replaces step treadle assemblies and can be used with pneumatic and electrical systems.

For the best value in passenger activated door opening devices consider the Haldex Touchbar Device.

- A. Installation and/or retrofit is simplified with 16 gauge 48-inch neoprene insulated cable
- B. Epoxy coated end castings guard against wear and damage from passenger contact for greater durability, service and value.
- C. Structural grade tubing has been specially anodized for greater durability, improved appearance and reduced maintenance costs.
- D. Rigid universal mounting channel facilitates installation of a system on stanchion tubes or any flat surface. The Touchbar's rigid universal mounting channels also eliminate the possibility of erratic door operation common to other systems.
- E. Protective collar, hermetically sealed, keeps Touchbar mechanism free from moisture and other contaminants for improved durability and lower maintenance.
- F. Easy to service support bracket with threaded key allows external switch sensitivity adjustment for easier maintenance and reduced downtime.

Backed by Haldex's superior limited warranty, every Haldex Touchbar Device is guaranteed against mechanical failure or fatigue for 1 year or 100,000 miles.

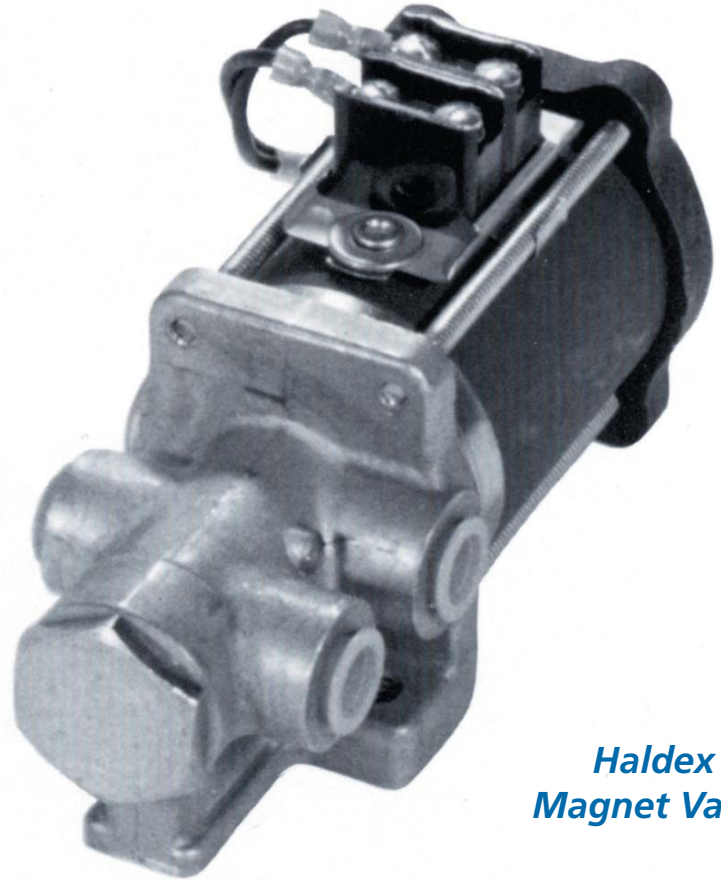




Specifications - Standard Unit - Part # 300502C

A. Overall length	49"
B. Overall height	3 1/8"
C. Diameter of mounting holes	3/8"
D. Center to center distance of mounting holes	48"
E. Contact switch 102322 - S	3 amp for 12 and 24 volt applications
F. Clearance for grasp	1"
G. 48" Electrical lead	Yes
H. Hermetically sealed environment controlled	Yes

The Haldex Magnet Valve Provides Proven Quality and Durability



**Haldex
Magnet Valve**

Pressure Type Magnet Valve

The Haldex Magnet Valve is a pressure type valve which is commonly found in brake and accelerator interlocks. The function of the magnet valve is to automatically control the air supply to the interlocks when the rear doors are open.

Durability

Built to withstand severe environmental conditions, the Haldex Magnet Valve is a proven performer with a long in-service life. Each Haldex valve is 100% performance tested before it ever reaches the field.

Multiple Configurations

The Haldex Magnet Valve is available for both 12 volt and 24 volt systems. The terminal block can be located in different positions to allow for clearance as necessary.

Operation

When the solenoid coil is deenergized, the inlet valve is held against its seat by air pressure assisted by a spring. The exhaust valve is held off its seat which allows air pressure from the brake interlock check valve and accelerator interlock cylinder to exhaust to atmosphere.

When the solenoid coil is energized, the plunger and push rod move down to close the exhaust valve and open the inlet valve. This allows air pressure to pass through the cylinder port to the brake interlock check valve and accelerator interlock.



Pressure Type Magnet Valves

Part Number	Voltage	Coil	Terminal Block Location	GMC Part #	Repair Kit
N2991	12	N12797	Mounting Side	2336345	RN24B
N2991D	12	N12797	Opposite Mounting Side	248376	RN24B
N2991J	24	N12797B	Mounting Side	-	RN24B
N2991K	24	N12797B	Opposite Mounting Side	-	RN24B
N2991K-WP*	24	N12797B	Opposite Mounting Side	-	RN24B

*Weather Pack

Additional Service Components Available

N12797	12 Volt Coil
N12797B	24 Volt Coil

Disassembly

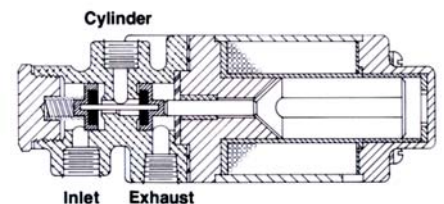
1. Remove ground wire (where applicable).
2. Remove coil wires from the terminal block.
3. Remove four screws, terminal block, end cover and plunger.
4. Remove shell, coil, rubber washer, spacer and gasket.
5. Remove end plug, washer, spring, inlet valve, exhaust valve and valve rod.
6. Wash all metal parts in suitable cleaning fluid.

Inspection

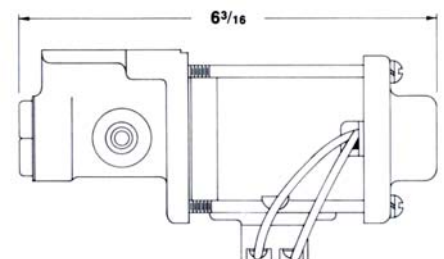
1. Coil liner must be smooth.
2. Valve seats in body must be free from nicks.
3. Push rod must be free fit in spacer.

Assembly

1. Install inlet valve in body. Apply spring and end plug with washer, tighten securely.
2. Install valve rod in inlet valve stem. Seat exhaust valve on valve rod. Make certain that exhaust valve is seated squarely in body.
3. Complete by reversing disassembly instructions 4 thru 1.



N2991 PRESSURE TYPE MAGNET VALVE



Standard Five-Position Valve Allows for Convenient Control of Both Front and Rear Doors



*Door
Control Valve*

The Haldex Door Control Valve is typically a combination air and electric unit used for air control of the front door and electric control of the rear door. The air section has two poppet type valves. The electric section has a dual circuit micro switch. Both sections are operated by a common cam plate actuated by movement of the control valve handle to any one of five positions, each of which has positive spring loaded registration.

Pneumatic Operation

With the valve handle in center position #1 or in position #4, the raised portion of the cam plate depresses the right hand valve plunger and unseats the right hand inlet valve disc which allows air pressure to flow thru the right rear cylinder port to the closing side of the front door engine. When the handle is moved to position #2, #3 or #5, the cam plate depresses the left hand plunger and opens the

left hand inlet valve disc allowing air pressure to flow thru the front cylinder port to the opening side of the engine. At the same time, the raised portion of the cam plate moves away from the right hand inlet valve plunger, permitting the right hand inlet valve disc to seat on the body, shutting off the flow of air to the closing side of the door engine. Air remaining in the closing side of the engine flows back to the control valve and thru the hollow section of the valve plunger to exhaust to the atmosphere.

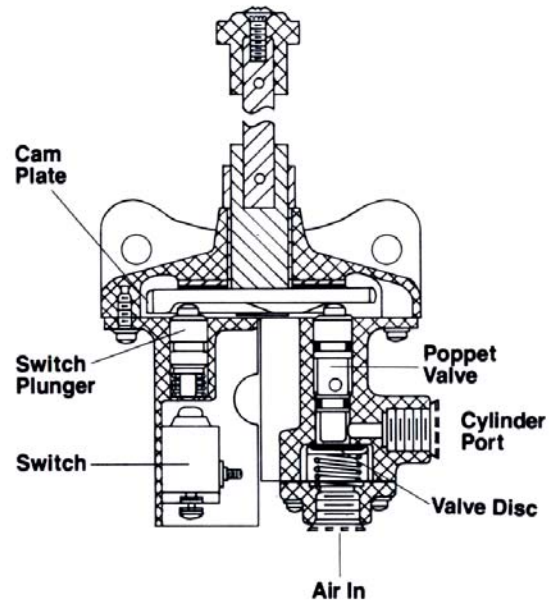
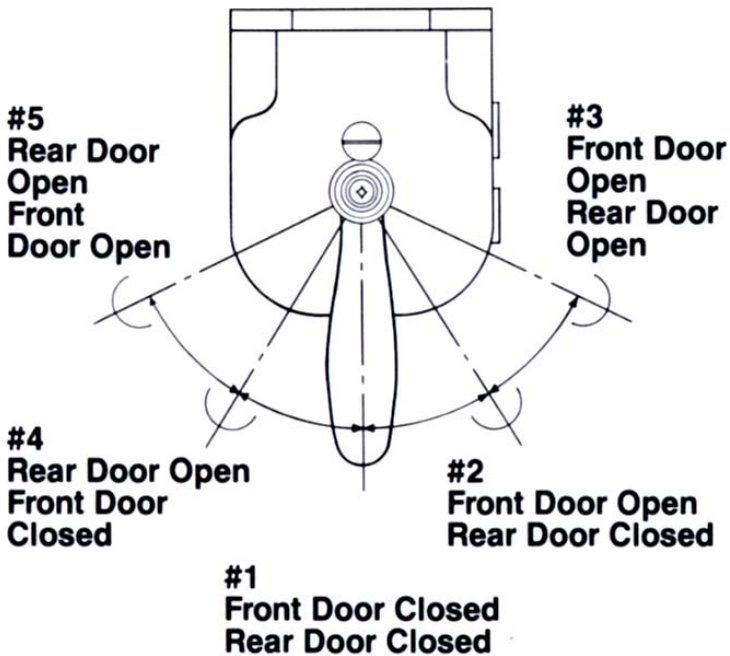
Electric Operation

With the valve handle in center position #1, the door opening circuit is completed to the rear door. Movement of the handle to position #3, #4, or #5 rotates the raised portion of the cam plate to depress the switch plunger. This actuates the micro switch which breaks the normally closed circuit and completes the rear door opening circuit.



Technical Information

Part Number	Handle Positions	Valve Type	Left	Right	Handle	Repair Kit Major	Repair Kit Minor	Customer Part Number	Remarks
N3667AT	1-5	E	P	Y	RN30	RN29	-	-	Handle raised 7 1/8"
N3667AY	1-5	E	P	Y	-	-	AMG # 5964277	-	Handle raised 2 1/2 " with unpainted handle



Haldex (www.haldex.com), headquartered in Stockholm, Sweden, is a provider of proprietary and innovative solutions to the global vehicle industry, with focus on products in vehicles that enhance safety, environment and vehicle dynamics.

Haldex is listed on the Stockholm Stock Exchange. Haldex has a yearly turnover of close to 5.6 billion SEK and employs 4,300 people.

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