

**Haldex**

**Product  
Training  
Workbook**

**L20023** Rev. 1/04



**Trailer**

Full Component Breakdown  
Easy to Follow System Schematic

# TRAILER SYSTEMS

## INTRODUCTION

Trailer Systems were relatively simple prior to the introduction of "121" regulations in the mid 70's.

Many "121" systems became complicated due to the necessary plumbing and devices that allow for the release of the spring brakes in a single loss of service pressure.

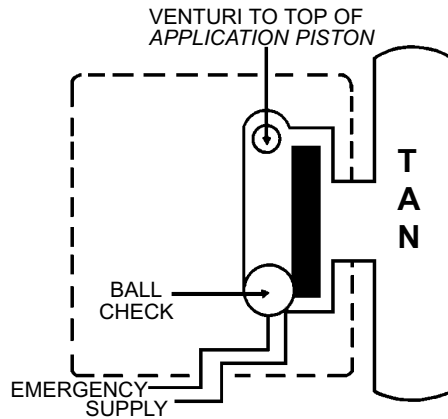
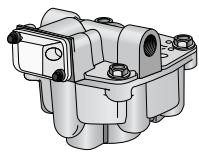
There are many systems and devices designed to meet that requirement.

To troubleshoot and understand valves and systems, learn:

- The Supply System (How to pump it up)
- The Emergency System (Spring brake application and release)
- The Service Brake System (Day-to-day braking)

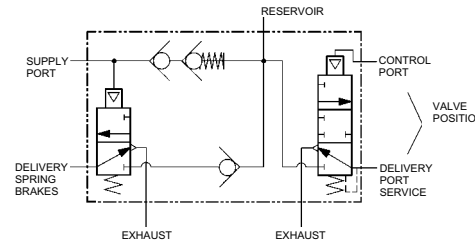
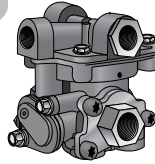
### RELAY EMERGENCY VALVE

1



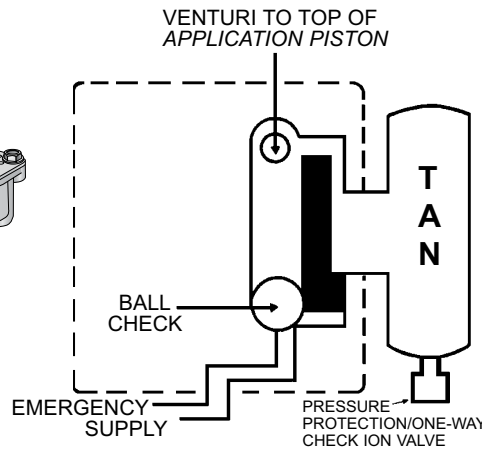
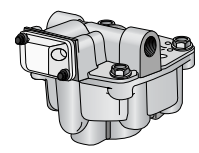
### MULTI-FUNCTION VALVE

3



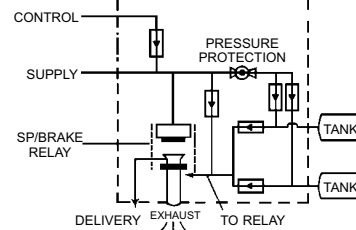
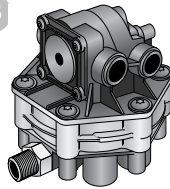
### RELAY EMERGENCY VALVE

2



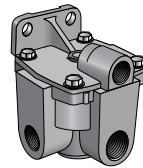
### FULL FUNCTION VALVE

13

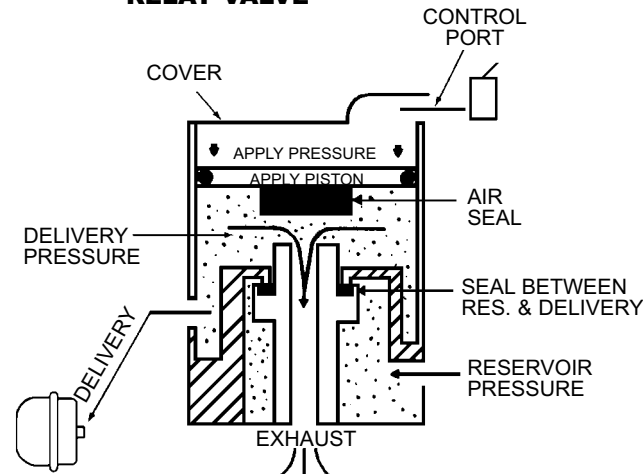
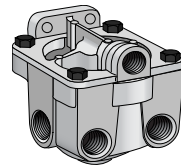


### RELAY VALVE

4 RG2 RELAY



12 SPEED UP RELAY



9



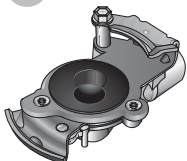
**AUTOMATIC BRAKE ADJUSTER**

10



**CHAMBER**

5



6



7

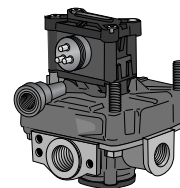
(use with no. 6)



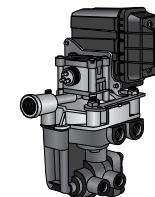
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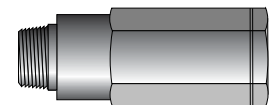
14 ABS RELAY



15 FULL FUNCTION



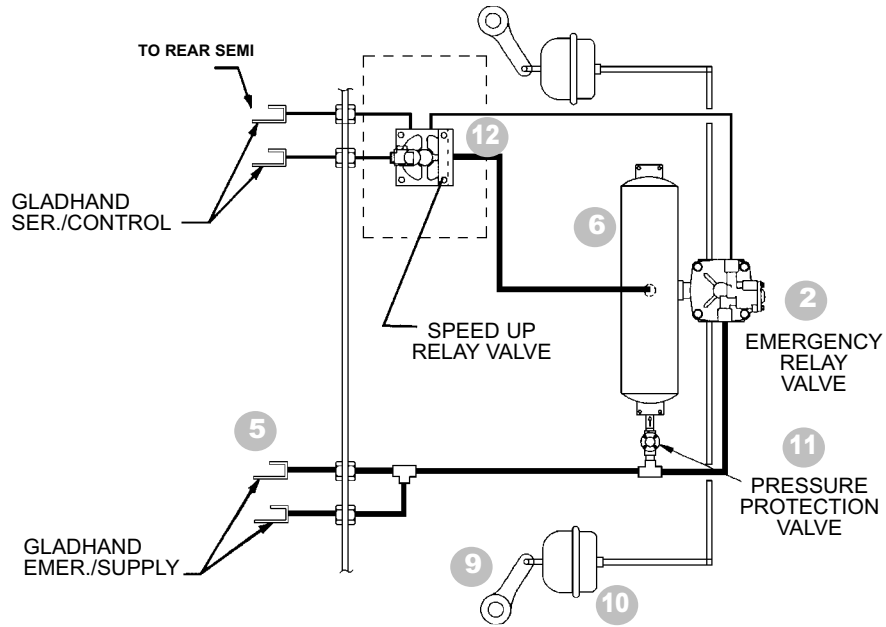
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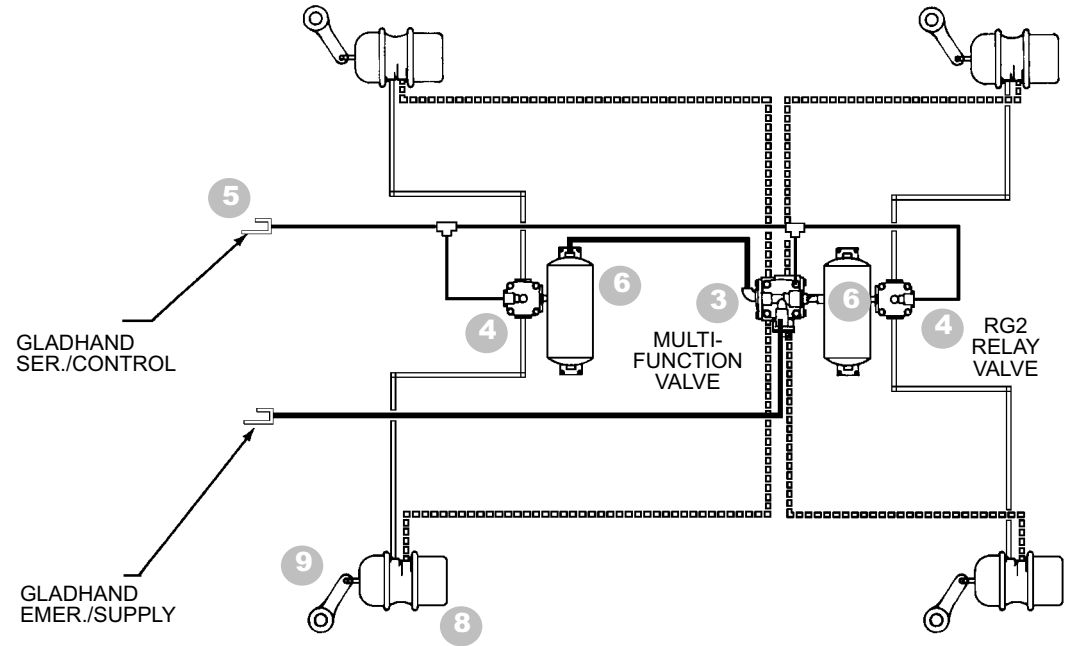
**PRESSURE PROTECTION WITH ONE-WAY CHECK VALVE**

## DOLLIE SYSTEM

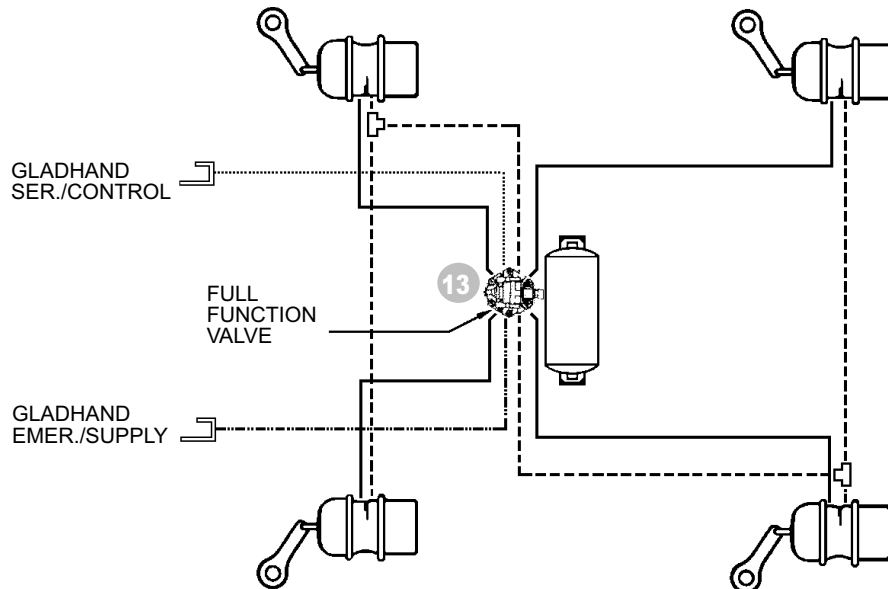
121 DOLLIE APPLICATION WITH NON-CHARGING TYPE RELAY  
EMERGENCY VALVE, OPTIONAL SPEED UP VALVE AND CHAMBERS



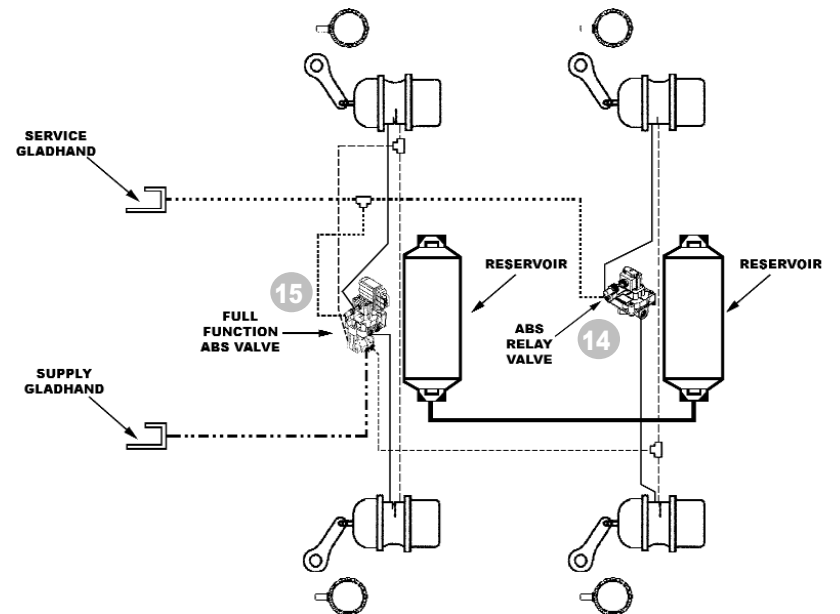
## TYPICAL TRAILER SYSTEM



## TRAILER-FULL FUNCTION VALVE SYSTEM

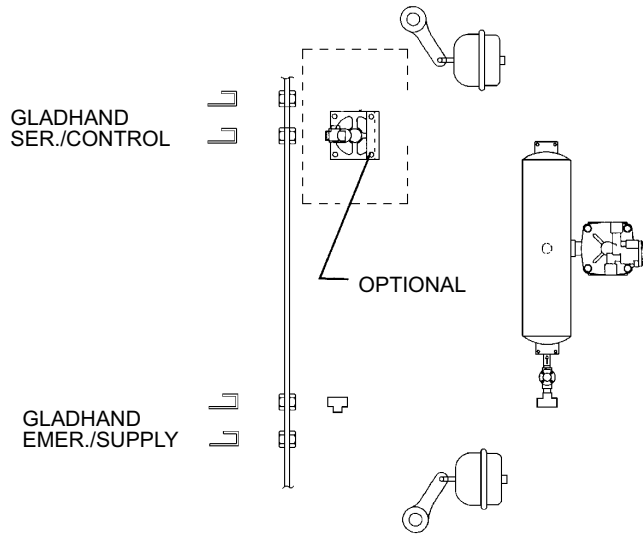


## 4S/2M FULL FUNCTION ABS SYSTEM



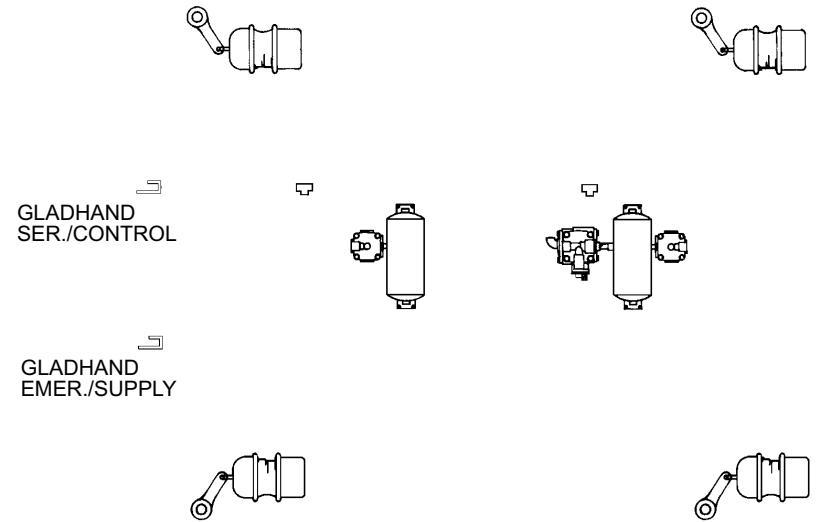
## DOLLIE SYSTEM

121 DOLLIE APPLICATION WITH NON-CHARGING TYPE RELAY  
EMERGENCY VALVE, OPTIONAL SPEED UP VALVE AND CHAMBERS



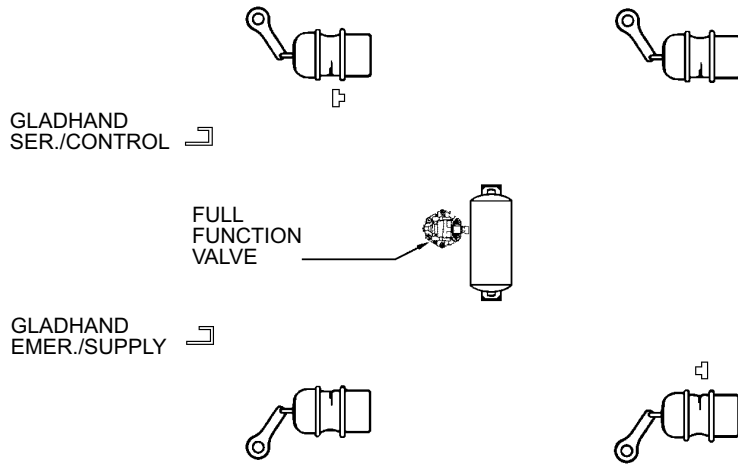
## TYPICAL TRAILER SYSTEM

EARLY 121 RT-RG SYSTEM



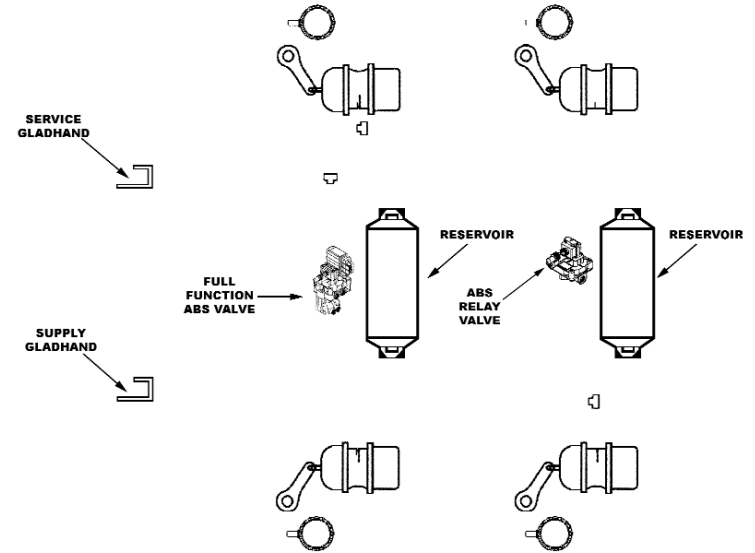
## TRAILER-FULL FUNCTION VALVE SYSTEM

COMPLIANT WITH FMVSS-121 – MANDATORY OCT. 8, 1992



JUMBO TANK FFV

## 4S/2M FULL FUNCTION ABS SYSTEM



AXLE BY AXLE FFABS - MOD II SYSTEM

### Commercial Vehicle Systems

**Haldex**

Haldex Brake Products Corporation  
10930 N. Pomona Avenue, Kansas City, MO 64153  
Phone: (816) 891-2470 Fax: (816) 891-9447

Haldex Limited  
525 Southgate Drive, Unit 1 Guelph, Ontario CANADA N1G 3W6  
Phone: (519) 826-7723 Fax: (519) 826-9497

www.haldex.com

L20023 US 3/07 10M ART (Last Rev. 1/04)

4/09 Address Block Updated Web Only