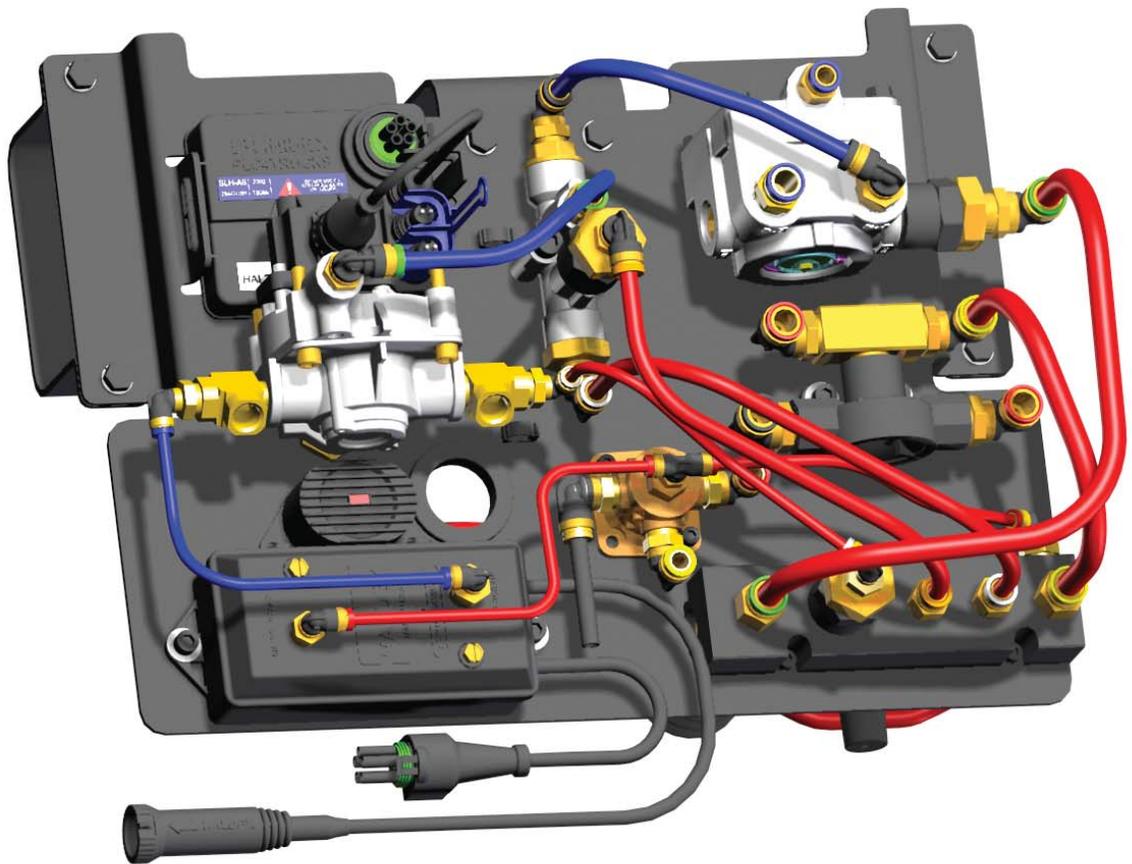


“Patent Pending”



**Installation Instructions
Dolly Module System (DMS-SA)
with Brake Monitoring System (BMS-1)
For Single Axle Dollies**



IMPORTANT NOTICE

This installation manual describes the correct installation procedure for the Haldex Dolly Module System with Brake Monitoring System (BMS-1).

The information contained in this installation manual was current at the time of printing and is subject to change without notice or liability.

Safety First !

You must follow your Company Safety Procedure when you install this equipment. Be sure you understand all procedures and instruction before you begin.

Installing the Haldex Dolly Module System is not complex, but care must be taken during the installation to ensure the Haldex Dolly Module System has been installed correctly.

IMPORTANT NOTICE

The data listed herein is correct to the best of Haldex's knowledge and belief, having been compiled from reliable and official sources of information. However, **HALDEX CAN NOT ASSUME ANY RESPONSIBILITY** for possible error or misapplication of the product. Final determination of the suitability of the products for the use contemplated by the Buyer is the sole responsibility of the Buyer. Haldex shall have no responsibility in connection with this suitability.

IMPORTANT NOTICE

The description and specifications contained in this Troubleshooting Guide are current at the time of printing. Haldex Brake Products Corp. reserves the right to discontinue or modify its models and/or procedure and to change specifications at any time without notice.

All Rights Reserved

Material may only be reproduced with the written permission of Haldex.

Table of Contents

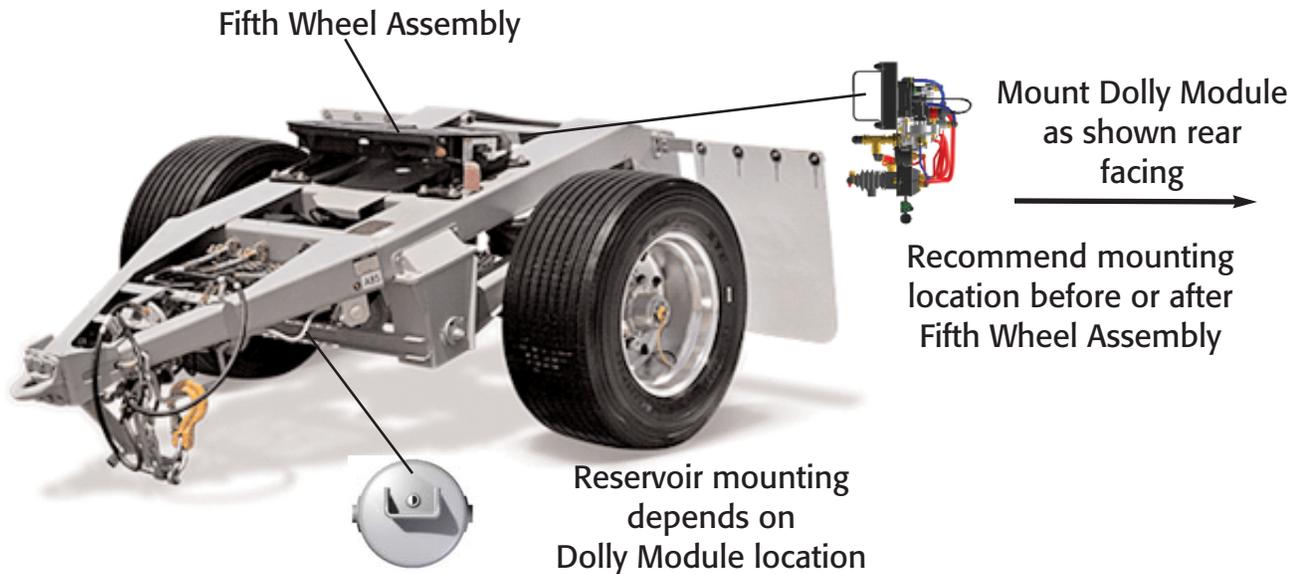


Section	Page
Information Notice	1
Table of Contents	2
Technical Information	3
Components Overview (Front View)	4
Components Overview (Rear View)	5
Plumbing Module (Front View)	6
Plumbing Module Haldex Push/Pull Valve (Rear View)	7
Plumbing Module Sealco Push/Pull Valve (Rear View)	8
Mounting Dolly Module System	9
Dolly Module System Brackets	10
Attaching Air Brake Monitoring System	11
Dolly End Of Line Testing & PM	12
Dolly End Of Line Testing & PM	13

Note: If you have any questions on this product or any of these Innovative Products offered by Haldex, please contact your local distributor for complete details. Technical Service or Troubleshooting help can be obtained by calling Haldex and asking for the Technical Support Line at (800) 643-2374 Press "2".



Dolly Module System Assembly



Technical Information: Dolly Module System with Brake Monitoring System (BMS-1)

C-Channel Dimensions: Approx: Height 5-1/4" x Width 3"
Approx: Height 7-3/4" x Width 3"

Service/Control Air Line (In) - 3/8" Tubing (Blue)
Service/Control Air Line (Out) - 1/2" Tubing (Blue)
Emergency/Supply Air Line (In) - 1/2" Tubing (Red)
Emergency/Supply Air Line (Out) - 1/2" Tubing (Red)

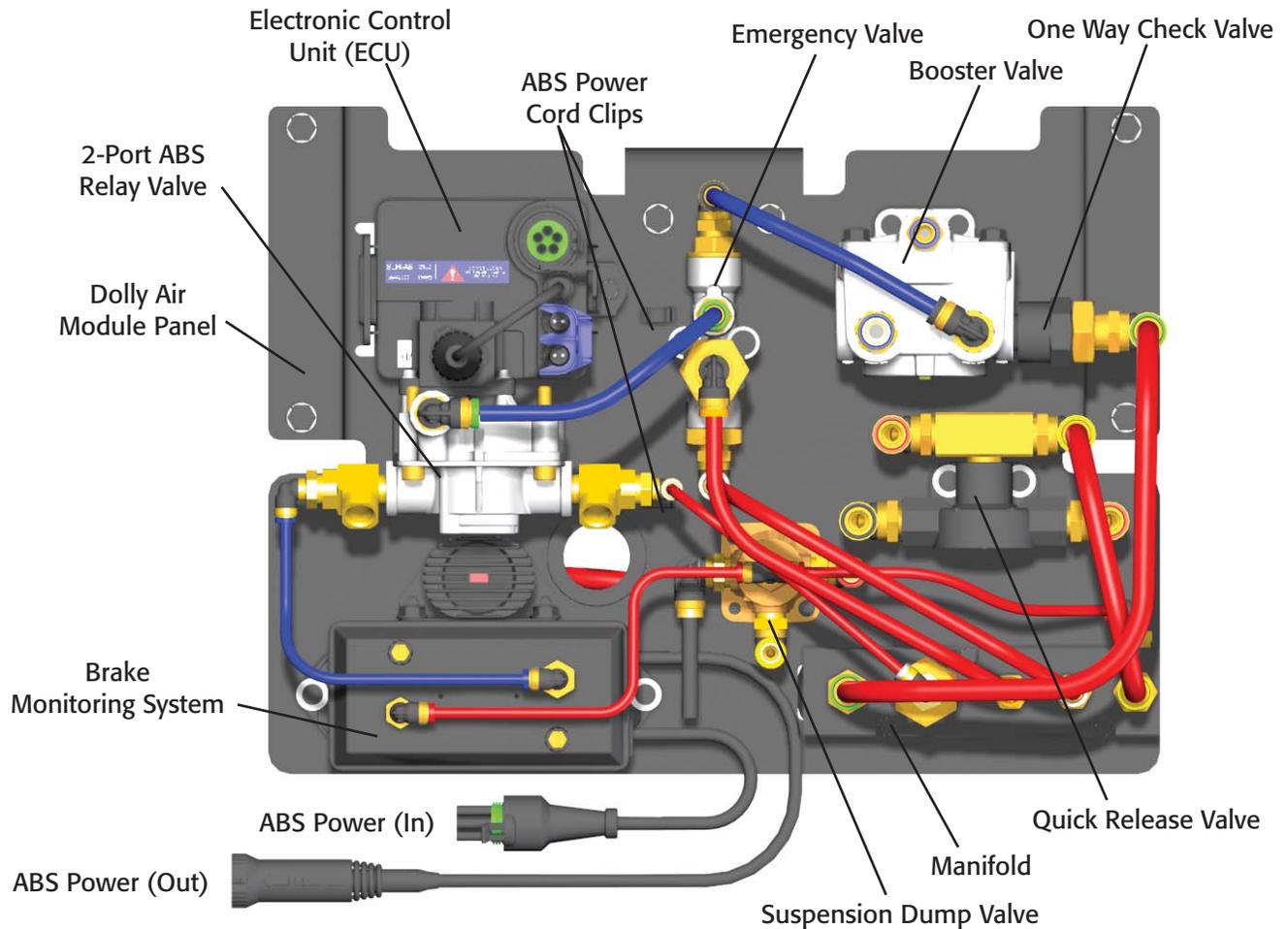
Push/Pull Valve: Supply Line - 3/8" Tubing (Red)
Reservoir Line - 3/8" Tubing (Blue)
Delivery Line - 3/8" Tubing (Black)

Air Tank: Supply Line - 5/8" Tubing (Black)

Air Bags: Supply Line - 3/8" Tubing (Red)

Leveling Valve: Supply Line - 3/8" Tubing (Green)
Delivery Line - 3/8" Tubing (Black)

Dolly Module System (Components - Front)



Technical Information: Dolly Module System with Brake Monitoring System (BMS-1)

Dolly ABS Module System: Height 15" x Length 20"
Weight: 37 lbs.

Configuration:
2-Port ABS Relay Valve - 2S/1M Single Axle

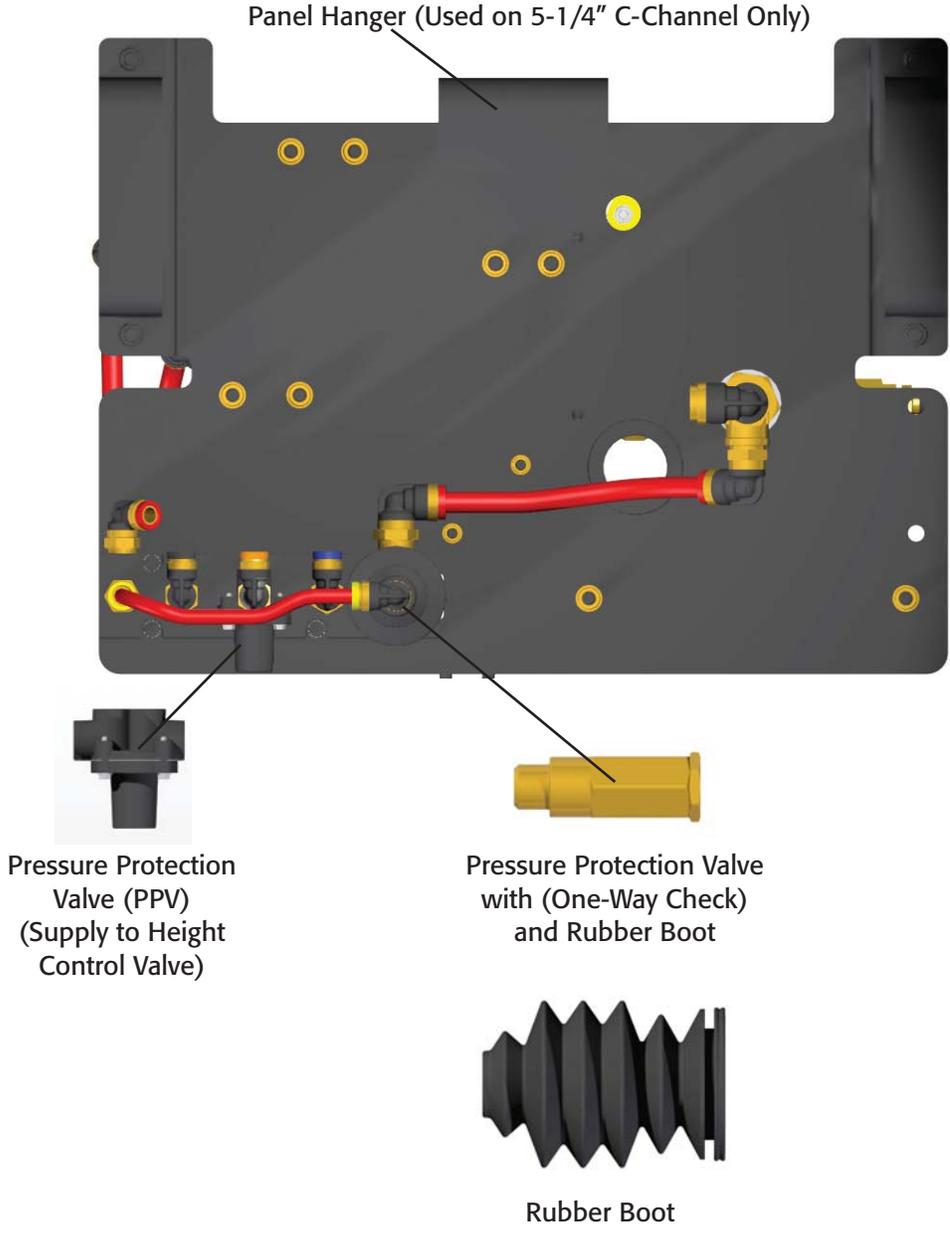
Mounting C-Channel Dimension: Height 5-1/4" x Width 3"
Option: C-Channel Dimension: Height 7-3/4" x Width 3"

Fittings: PTC (Push-To-Connect) Valves and Components
Panel Fasteners: Threaded Nuts 1/4-20 UNC, and 5/16-18 UNC
Mounting Fasteners: 3/8"-16 UNC X 1-1/4" Long Hex Bolt
Nylon Tubing (DOT): 1/4", 3/8", and 1/2" installed (5/8" tubing provided by Installer)
Included: Rubber Service Brake Hose Clamp Assembly

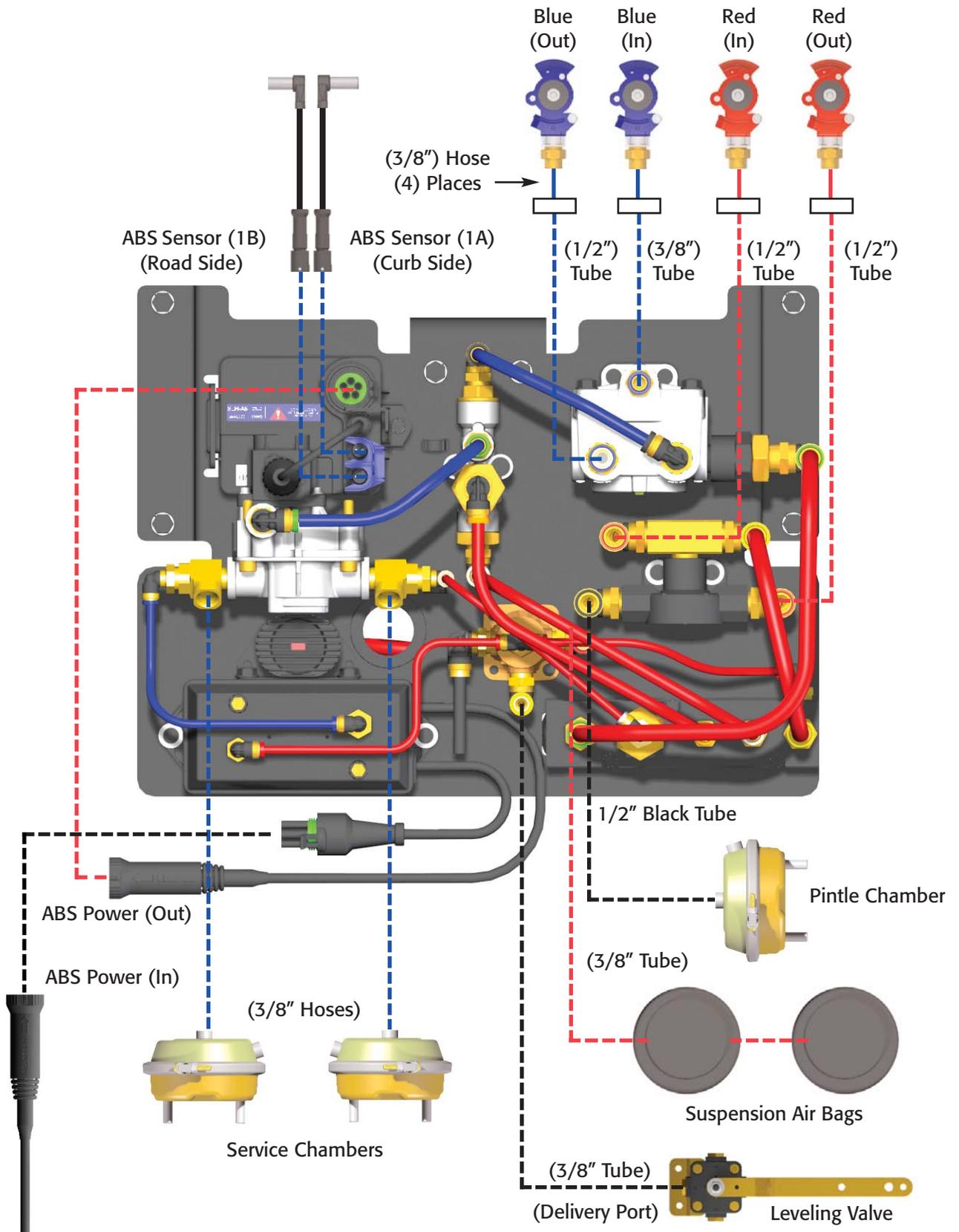
Note: See L31250 Manual for Brake Monitoring System (BMS-1) Information



Dolly Module System (Components - Rear)

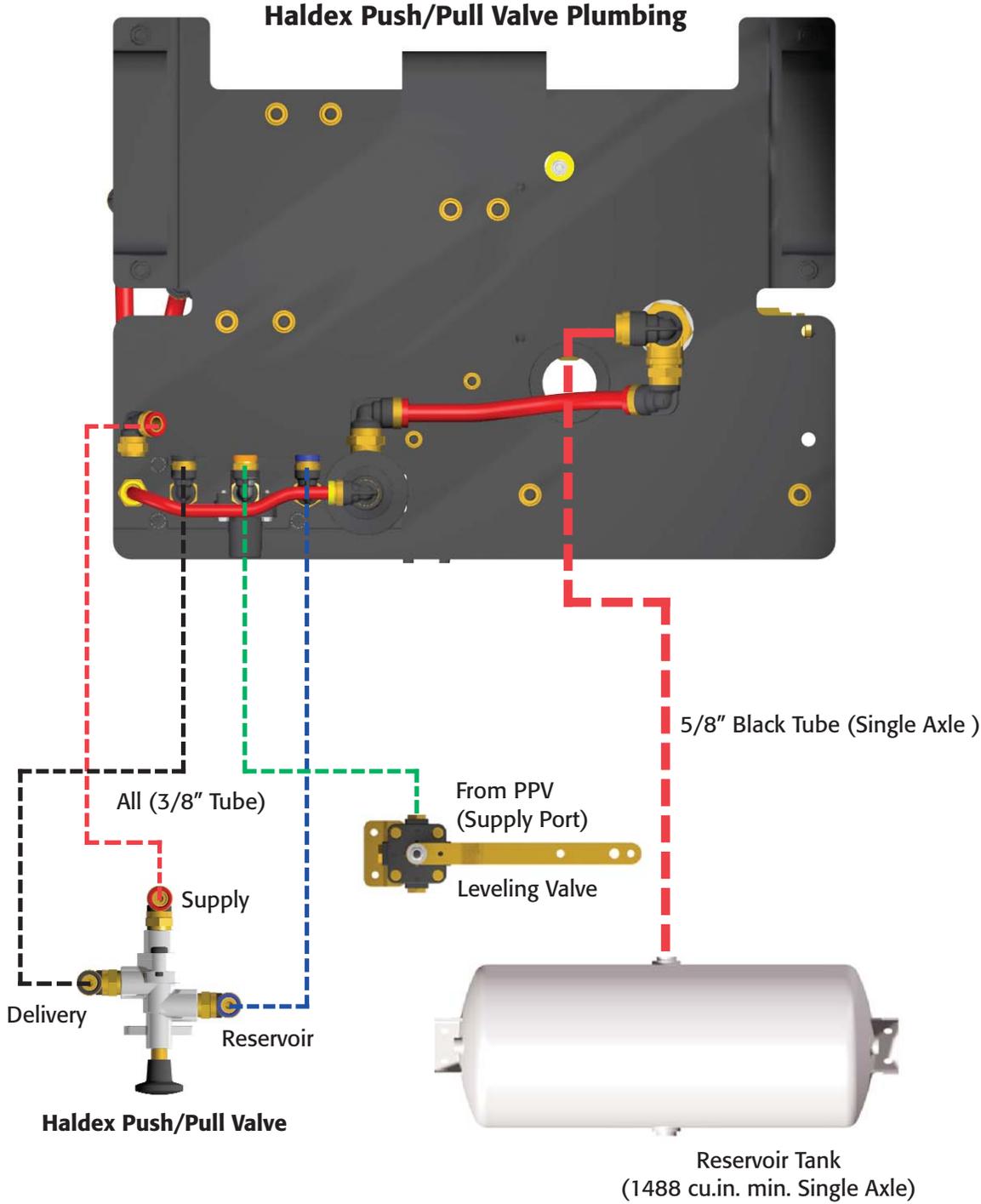


Dolly Module System (Front Side)





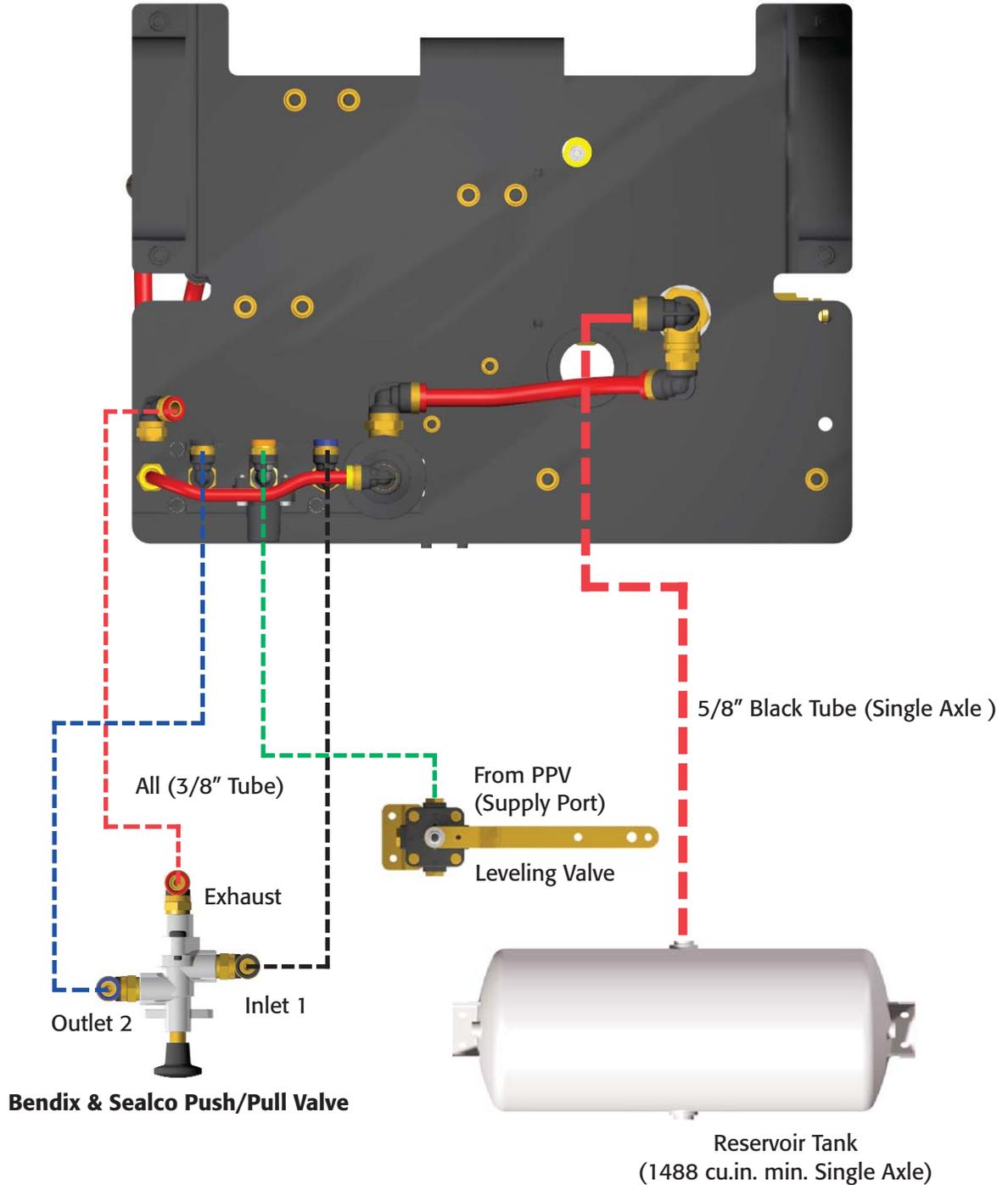
Dolly Module System (Rear Side)



Dolly Module System (Rear Side)

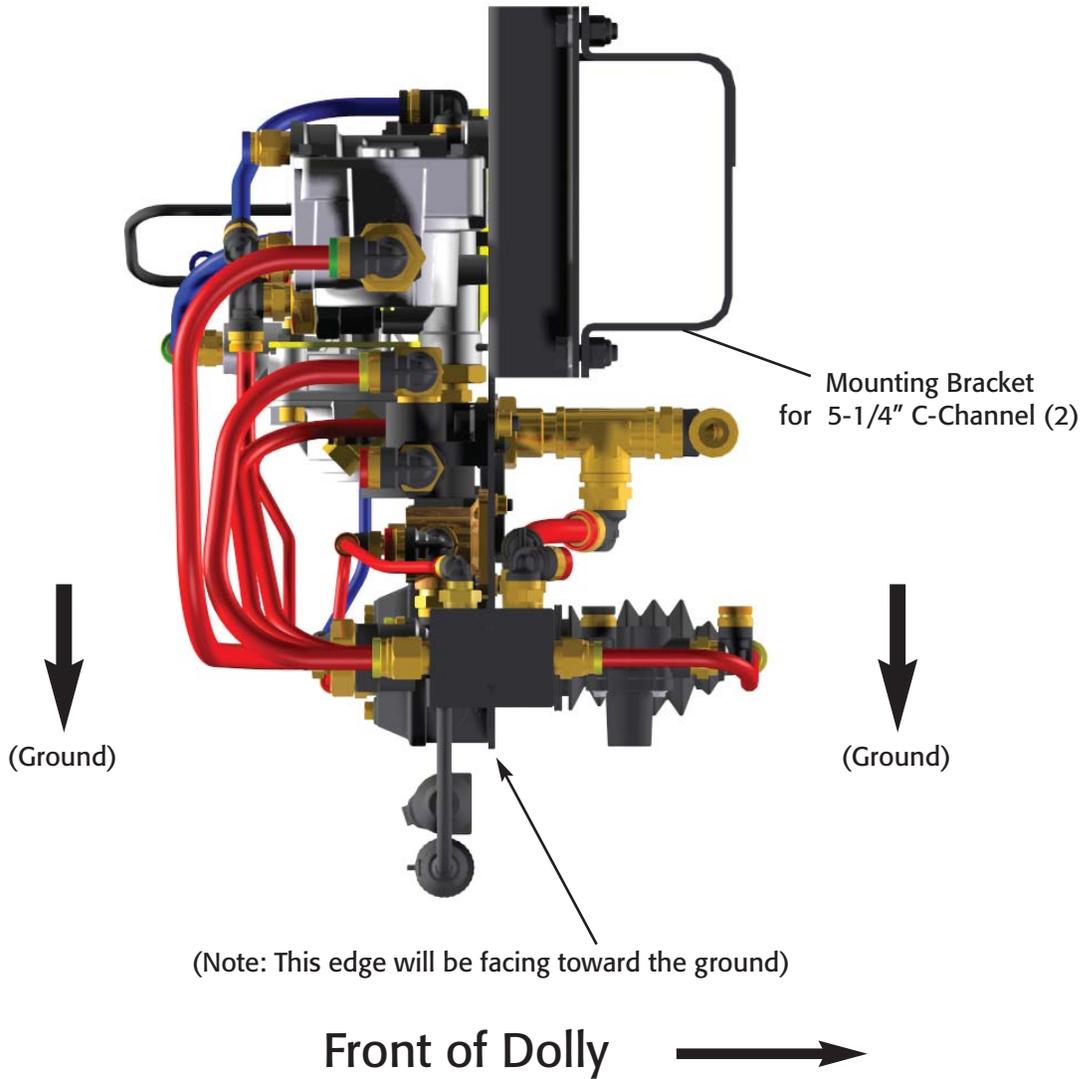


Bendix & Sealco Push/Pull Valve Plumbing





Dolly Module System C-Channel Mounting

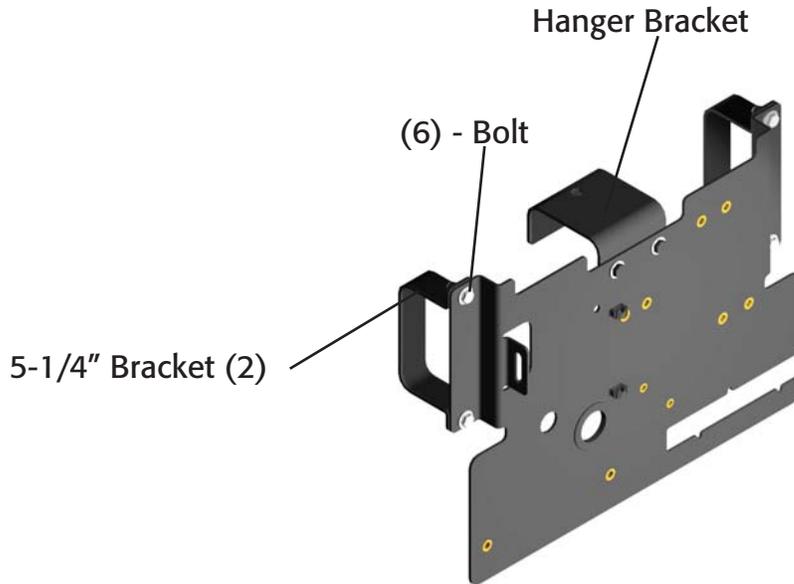


Dolly Module System

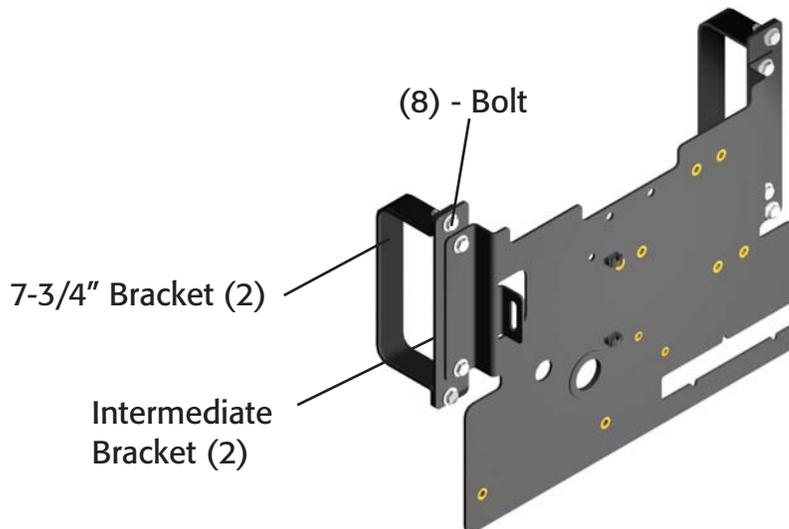
5-1/4" - 7-3/4" Mounting Brackets



- 5-1/4" Channel Bracket
- 3/8-16 UNC X 1-1/4" Long Hex Bolt (Grade 5) - 28 - 32 ft. lbs.
- 3/8" Flat Washer (6)
- 3/8" Lock Washer (6)
- 3/8" Nut (6)



- 7-3/4" Channel Bracket
- 3/8-16 UNC X 1.25" Long Hex Bolt (Grade 5) - 28 - 32 ft. lbs.
- 3/8" Flat Washer (8)
- 3/8" Lock Washer (8)
- 3/8" Nut (8)

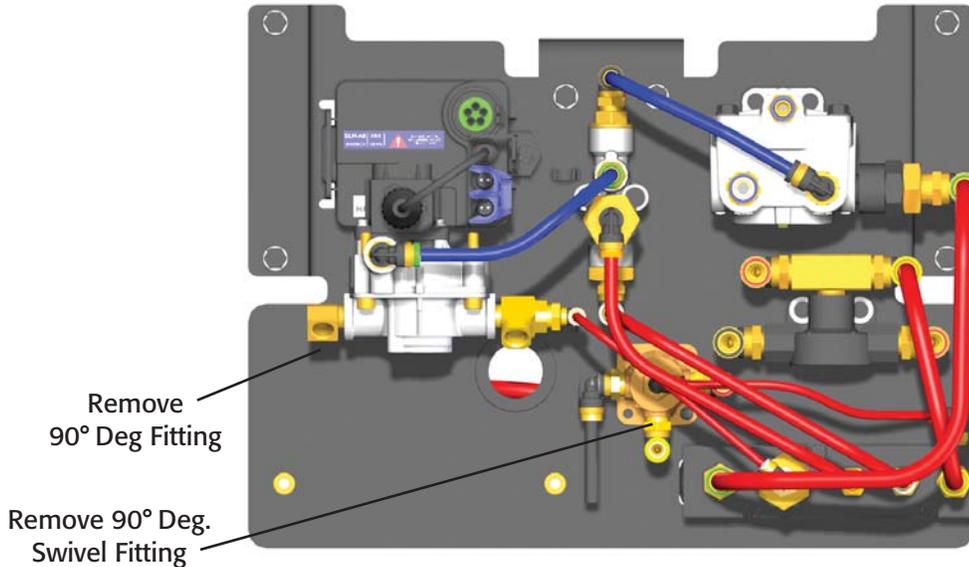




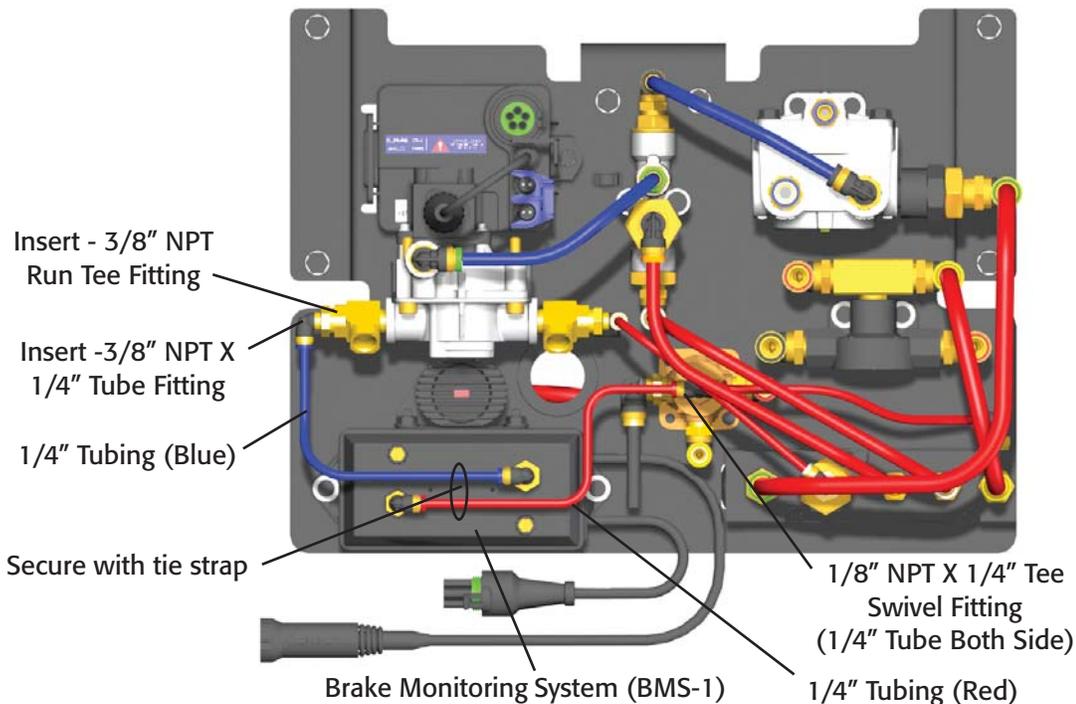
Dolly Module System Without Brake Monitoring System (BMS-1)

To modify an existing Dolly Module System to accept an Brake Monitoring System (BMS-1) the following fittings are required 3/8" NPT Run Tee, 3/8" NPT X 1/4" Tubing 90 Deg Swivel, 1/8" NPT X 1/4" Tubing Swivel Tee, (2) - 1/4" Tubing (Red and Blue). Cut to length, then secure tubing as required with additional tie straps.

Without Brake Monitoring System (BMS-1)



With Brake Monitoring System (BMS-1)



Dolly Module System

Air System and Power Test



Air System Test

Step 1: Verify Dolly Air System is functioning correctly

- Charge Emergency **(IN)** gladhand **(90 - 120 PSI)**.
 - Service Chambers should release.
 - Air Reservoir tank should fill.
 - Air bags should inflate after approx. 20 seconds.
 - Check and correct any Emergency air leaks.
- Charge Service **(IN)** gladhand **(90 - 120 PSI)**.
 - Service Chambers should apply.
 - Check and correct any Service air leaks.
 - Release Service **(IN)** gladhand pressure and brakes should release.
- Release Emergency **(IN)** gladhand pressure
 - Service Chambers should park.

Step 2: Verify Dolly ABS Power

- Apply 12 volts to the Blue ABS Pin #7 on the 7-Way and verify the external mounted Dolly ABS Warning Lamp goes **(ON - OFF)**. The ABS System is **(OK)**.
- If the Dolly ABS Lamp stays **(ON)** solid, an ABS fault is present. Reference the ABS Installation/Service Guide L30041.
- Turn **(OFF)** Blue ABS Power.

Step 3: Verify Dolly Stoplight Power

- Apply 12 volts to the Stoplight Pin # 4 on the 7-Way and verify external mounted Dolly ABS Warning Lamp goes **(ON - OFF)**. The ABS system is **(OK)**.
- If the Dolly ABS Lamp stays **(ON)** solid, an ABS fault is present. Reference the ABS Installation/Service Guide L30041.
- Turn **(OFF)** Red Stoplight Power



Dolly Module System End of Line and PM Test

Functional Test for Brake Monitoring System (BMS-1)

Note: All Power and Air Pressure must be removed prior to start of this test.

Step 1: Apply 12 volts to the Blue ABS Pin # 7 on the 7-Way.

- The Brake Monitoring System (BMS-1) alarm will sound after 15 seconds.

Step 2: Charge the Red (IN) Emergency Gladhand to (90 - 120 PSI).

- The Brake Monitoring System (BMS-1) alarm will shut-off.

Step 3: Apply 12 volts to the Red Stoplight Pin # 4 on the 7-Way.

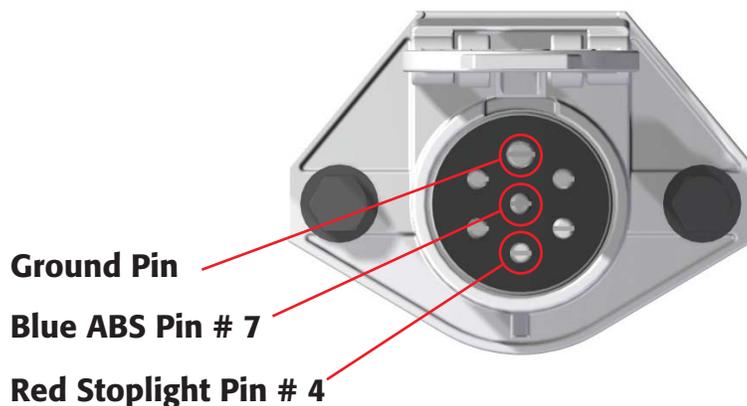
- Wait 60 seconds and the Brake Monitoring System (BMS-1) alarm will sound.

Step 4: Charge the Blue (IN) Service Gladhand to (90 - 120 PSI).

- The Brake Monitoring System (BMS-1) alarm will shut-off.

Note: If the alarm continues to sound, see L31250 Installation/Troubleshooting Guide for the Brake Monitoring System (BMS-1).

7-Way Connector



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.

Disclaimer: The products described within this literature, including without limitation, product features, specifications, designs, availability and pricing are subject to change by Haldex and its subsidiaries at any time without notice.

This document and other information from Haldex, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system, in the current literature or catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through their own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements are met.

©2010, Haldex AB - This material may contain Haldex trademarks and third party trademarks, trade names, corporate logos, graphics and emblems which are the property of their respective companies. The contents of this document may not be copied, distributed, adapted or displayed for commercial purposes or otherwise without prior written consent from Haldex.

Austria
Haldex Wien Ges.m.b.H.
Vienna
Tel.: +43 1 8 69 27 97
Fax: +43 1 8 69 27 97 27
E-Mail: info.AT@haldex.com

Belgium
Haldex N.V.
Balegem
Tel.: +32 9 363 90 00
Fax: +32 9 363 90 09
E-Mail: info.BE@haldex.com

Brazil
Haldex do Brasil Ind. e Com. Ltda.
São Paulo
Tel.: +55 11 213 55 000
Fax: +55 11 503 49 515
E-Mail: info.BR@haldex.com

Canada
Haldex Ltd.
Cambridge, Ontario
Tel.: +1 519 621 6722
Fax: +1 519 621 3924
E-Mail: info.CA@haldex.com

China
Haldex International Trading Co. Ltd.
Shanghai
Tel.: +86 21 5240 0338
Fax: +86 21 5240 0177
E-Mail: info.CN@haldex.com

France
Haldex Europe SAS
Weyersheim (Strasbourg)
Tel.: +33 3 88 68 22 00
Fax: +33 3 88 68 22 09
E-Mail: info.EUR@haldex.com

Germany
Haldex Brake Products GmbH
Heidelberg
Tel.: +49 6 221 7030
Fax: +49 6 221 703400
E-Mail: info.DE@haldex.com

Hungary
Haldex Hungary Kft.
Szentlőrincváta
Tel.: +36 29 631 300
Fax: +36 29 631 301
E-Mail: info.HU@haldex.com

India
Haldex India Limited
Nasik
Tel.: +91 253 2380094
Fax: +91 253 2380729

Italy
Haldex Italia Srl.
Biassono (Milan)
Tel.: +39 039 47 17 02
Fax: +39 039 27 54 309
E-Mail: info.IT@haldex.com

Korea
Haldex Korea Ltd.
Seoul
Tel.: +82 2 2636 7545
Fax: +82 2 2636 7548
E-Mail: info.HKR@haldex.com

Mexico
Haldex de Mexico S.A. De C.V.
Monterrey
Tel.: +52 81 8156 9500
Fax: +52 81 8313 7090

Poland
Haldex Sp. z.o.o.
Praszka
Tel.: +48 34 350 11 00
Fax: +48 34 350 11 11
E-Mail: info.PL@haldex.com

Russia
OOO "Haldex RUS"
Moscow
Tel.: +7 495 747 59 56
Fax: +7 495 786 39 70
E-Mail: info.RU@haldex.com

Spain
Haldex España S.A.
Granollers
Tel.: +34 93 84 07 239
Fax: +34 93 84 91 218
E-Mail: info.ES@haldex.com

Sweden
Haldex Brake Products AB
Landskrona
Tel.: +46 418 47 60 00
Fax: +46 418 47 60 01
E-Mail: info.SE@haldex.com

United Kingdom
Haldex Ltd.
Newton Aycliffe
Tel.: +44 1325 310 110
Fax: +44 1325 311 834
E-Mail: info.GBAy@haldex.com

Haldex Brake Products Ltd.
Redditch
Tel.: +44 1527 499 499
Fax: +44 1527 499 500
E-Mail: info.GBRe@haldex.com

USA
Haldex Brake Products Corp.
Kansas City
Tel.: +1 816 891 2470
Fax: +1 816 891 9447
E-Mail: info.US@haldex.com

