

KEEP FOR FUTURE REFERENCE



INSTRUCTIONS

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STOCK NUMBER: 57330



DIGITAL VACUUM SWITCH CONVERSION KIT FOR MRTALPCH-DC LIFTERS



***READ ALL INSTRUCTIONS AND WARNINGS
BEFORE USING THIS PRODUCT***



DESIGNED FOR MATERIALS-HANDLING PROFESSIONALS

SPECIFICATIONS

Stock Number: 57330

Description: While the lifter is powered up, a vacuum switch senses the vacuum level in vacuum circuit of the vacuum system. If a vacuum circuit loses significant vacuum while the lifter is in attach mode, the system responds automatically.

WARNINGS



Powr-Grip is pleased to offer the most reliable materials handling products available. Despite the high degree of security associated with the Digital Vacuum Switch, certain precautions must be observed to protect the lifter operator and others.



Always install vacuum switches as directed in the INSTALLATION section.

Never use a vacuum switch that is damaged, malfunctioning, or missing parts.

CONVERSION KIT COMPONENTS

The Digital Vacuum Switch Conversion Kit for MRTALPCH-DC vacuum lifters (57330) includes the following:



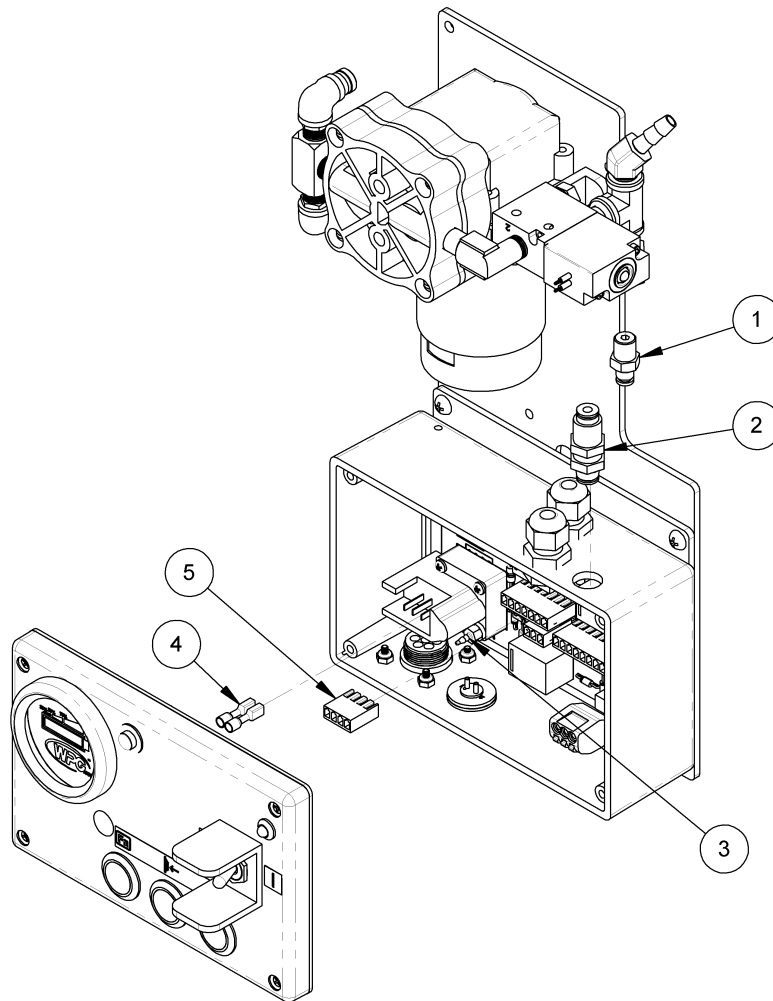
- 1 DIGITAL VACUUM SWITCH
- 2 STRAIGHT CORD GRIP
- 3 4-CONTACT CONNECTOR HOUSING

- 4 BRASS HEX NIPPLE
- 5 BRASS STREET ELBOW
- 6 3-WIRE LEVER-LOCK NUT

INSTALLATION

DISCONNECTING THE MECHANICAL VACUUM SWITCH

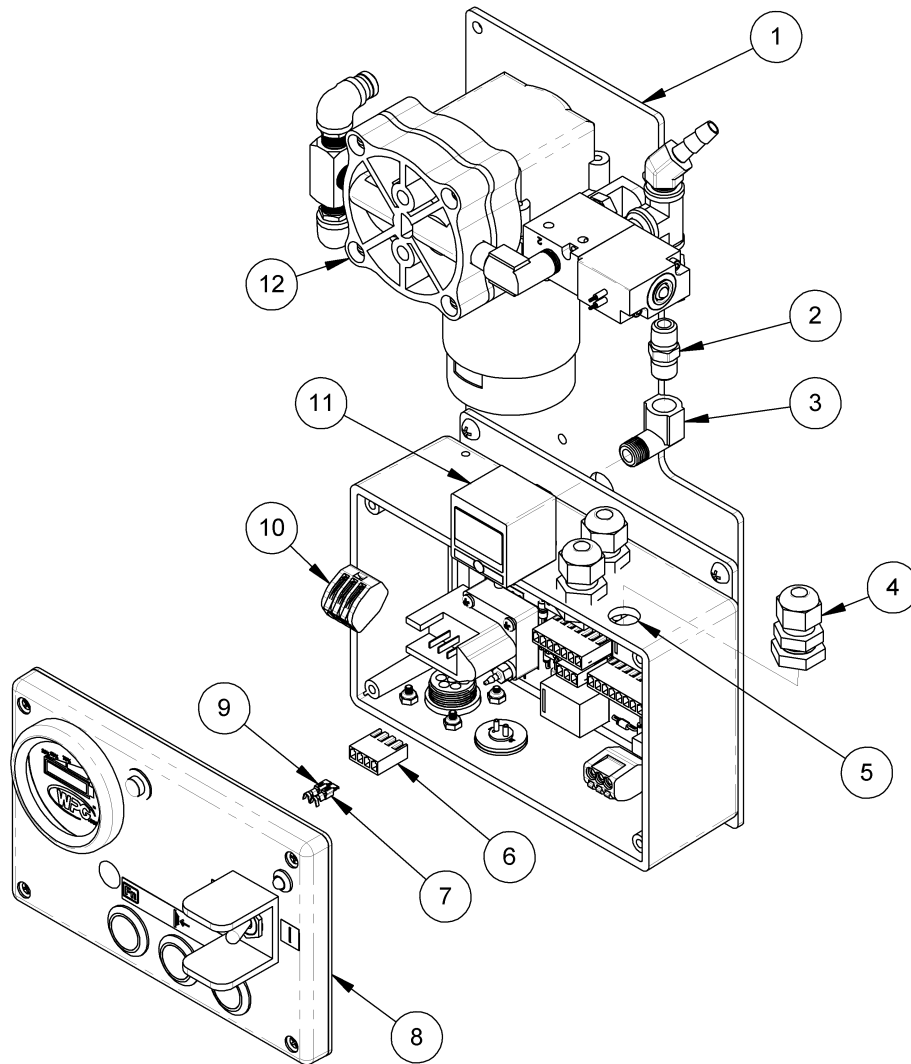
Note: Installation of the digital vacuum switch does not require removal of the mechanical vacuum switch from the enclosure. The following 6 steps are for disconnection only:



- | | | | |
|---|--------------------------|---|-------------------------|
| 1 | HOSE FITTING | 4 | BLACK AND BROWN WIRES |
| 2 | BULKHEAD FITTING | 5 | VACUUM SWITCH CONNECTOR |
| 3 | MECHANICAL VACUUM SWITCH | | |

- 1) Remove the 4 screws, and remove the enclosure cover.
- 2) Disconnect the vacuum hose from the mechanical vacuum switch (3).
- 3) Remove the bulkhead fitting (2) from the enclosure.
- 4) Unplug the vacuum switch connector (5).
- 5) Disconnect black and brown wires (4) from the mechanical vacuum switch.
- 6) Remove the hose fitting (1) from the pump assembly.

INSTALLING THE DIGITAL VACUUM SWITCH



- | | | | |
|---|---|----|-------------------------------|
| 1 | PUMP MOUNTING PLATE | 7 | BLACK WIRE |
| 2 | 1/8 NPT BRASS HEX NIPPLE | 8 | ENCLOSURE COVER |
| 3 | 1/8 NPT BRASS STREET ELBOW | 9 | BROWN WIRE |
| 4 | 1/2-20 UNF 0.11-0.26"
STRAIGHT CORD GRIP | 10 | 3-WIRE LEVER-LOCK NUT |
| 5 | ENCLOSURE HOLE | 11 | 1/8 NPT DIGITAL VACUUM SWITCH |
| 6 | 0.156 SERIES 4-CONTACT CONNECTOR
HOUSING | 12 | VACUUM PUMP |

- 1) Remove the pump (12) from the pump mounting plate (1).
- 2) Using a thread sealant, screw the 1/8 NPT brass hex nipple (2) into the pump assembly, where the hose fitting was previously installed.
- 3) Using thread sealant, screw the 1/8 NPT brass street elbow (3) onto the 1/8 NPT brass hex nipple (2).

- 4) Using thread sealant, screw the 1/8 NPT digital vacuum switch (11) onto the 1/8 NPT brass street elbow (3).
- 5) Reattach the pump (12) to the pump mounting plate (1).
- 6) Remove the hex nut from the straight cord grip (4).
- 7) Thread the wires from the 1/8 NPT digital vacuum switch (11) through the enclosure hole (5).
- 8) Reinstall the straight cord grip (4) into the enclosure hole (5), and secure it with the hex nut previously removed in step 6.
- 9) Tighten the straight cord grip (4) cap nut to secure the wire in place.
- 10) Insert the black wire (7) and brown wire (9) terminals into the 4-contact connector housing (6). See wiring diagram 713-W01 [A-W01] at the end of these *INSTRUCTIONS* for help.
- 11) Cut the ground wire from the battery gauge, leaving slack on both sides. Strip both cut ends to 0.375" [0.95 mm].
- 12) Use the 3-wire lever-lock nut (10) to connect the blue wire from the 1/8 NPT digital vacuum switch (11) and the wire just stripped in the previous step.
- 13) Reinstall the 4-contact connector housing (6) to the terminal strip of the circuit board.
- 14) Reinstall the enclosure cover (8).
- 15) Perform the VACUUM TEST as directed in the MAINTENANCE section of the lifter's *OPERATING INSTRUCTIONS*.

ADJUSTING THE DIGITAL VACUUM SWITCH

Settings for the digital vacuum switch must be adjusted as follows:

1) Press and hold the "SET" button on the digital vacuum switch for at least 5 seconds, to unlock its factory settings. Note that a different menu may appear on the switch's screen if the button is released too soon. Use the arrow keys to access the unlocked mode ("UnL") and press the "SET" button again.

2) Press and hold "SET" for 3 seconds to access the settings menu. Use the arrow keys to adjust the parameter, or press and release "SET" to scroll to the next parameter. Set parameters as shown:

- SETTING 1: $\bar{n}\bar{n}H$
- SETTING 2: $ln\bar{C}$
- SETTING 3: $2n\bar{C}$
- SETTING 4: 192
- SETTING 5: $\bar{n}An$

3) Press and release the "SET" button to access the different vacuum switch settings (n_1, n_2, n_3, n_4). Use the arrow keys to adjust each setting and then press the "SET" button to continue to the next setting. Set the following values¹:

- n_1 = -482. This setting turns off power to the vacuum pump(s) when the vacuum system reaches the maximum vacuum level. Setting n_1 must always be set above n_2.

Note: Lowering this value allows the pump(s) to shut off at higher elevations, but it also requires the pump(s) to run more frequently.

- n_2 = -458. After a vacuum switch has turned off the vacuum pump(s) (see n_1) and the vacuum system begins to lose vacuum, setting n_2 turns on power again to the vacuum pump(s). The vacuum pump(s) should turn on before the needle on either vacuum gauge moves from the green range to the red range.

- n_3 and n_4 do not apply to this lifter.

Note: Setting n_2 corresponds with the minimum vacuum level for lifting loads. ***This setting must not be lowered without first consulting Wood's Powr-Grip, because it may reduce the maximum lifting capacity.***

4) The digital vacuum switch must be locked after all adjustments have been made. Use the arrow keys to access the "locked" mode ("LoC") and press the "SET" button again.

¹ Other values must be input for MRTALPCH6-DC lifters to meet CE requirements. Consult the MRTALPCH-DC Vacuum Circuit Upgrade Kit *INSTALLATION INSTRUCTIONS* (35263) for information.

MAINTENANCE

When performing inspections and tests as directed in the lifter's *OPERATING INSTRUCTIONS*, be sure to include the digital vacuum switch whenever applicable.

REPLACEMENT PARTS LIST

Stock No.	Description	Qty.
64238AA	Vacuum Switch – Digital	1

***SERVICE ONLY WITH IDENTICAL REPLACEMENT PARTS,
AVAILABLE AT WPG.COM OR THROUGH AN AUTHORIZED WPG DEALER***

LIMITED WARRANTY

Wood's Powr-Grip® (WPG) products are carefully constructed, thoroughly inspected at various stages of production, and individually tested. They are warranted to be free from defects in workmanship and materials for a period of one year from the date of purchase.

If a problem develops during the warranty period, follow the instructions hereafter to obtain warranty service. If inspection shows the problem is due to defective workmanship or materials, WPG will repair the product without charge.

WARRANTY DOES NOT APPLY WHEN:

- modifications have been made to the product after leaving the factory;
- rubber portions have been cut or scratched during use;
- repairs are required due to abnormal wear and tear; and/or
- the product has been damaged, misused, or neglected.

If a problem is not covered under warranty, WPG will notify the customer of costs prior to repair. If the customer agrees to pay all repair costs and to receive the repaired product on a C.O.D. basis, WPG then will proceed with repairs.

TO OBTAIN REPAIRS OR WARRANTY SERVICE

For purchases in *North America*:

Contact the Technical Service Department at Wood's Powr-Grip. When factory service is required, ship the complete product – prepaid – along with your name, address and phone number to the street address hereafter.

For purchases in *all other localities*:

Contact your dealer or the Technical Service Department at Wood's Powr-Grip for assistance.

Wood's Powr-Grip Co., Inc.
908 West Main St
Laurel, MT USA 59044

406-628-8231 (phone)
800-548-7341 (phone)
406-628-8354 (fax)

WIRING DIAGRAMS

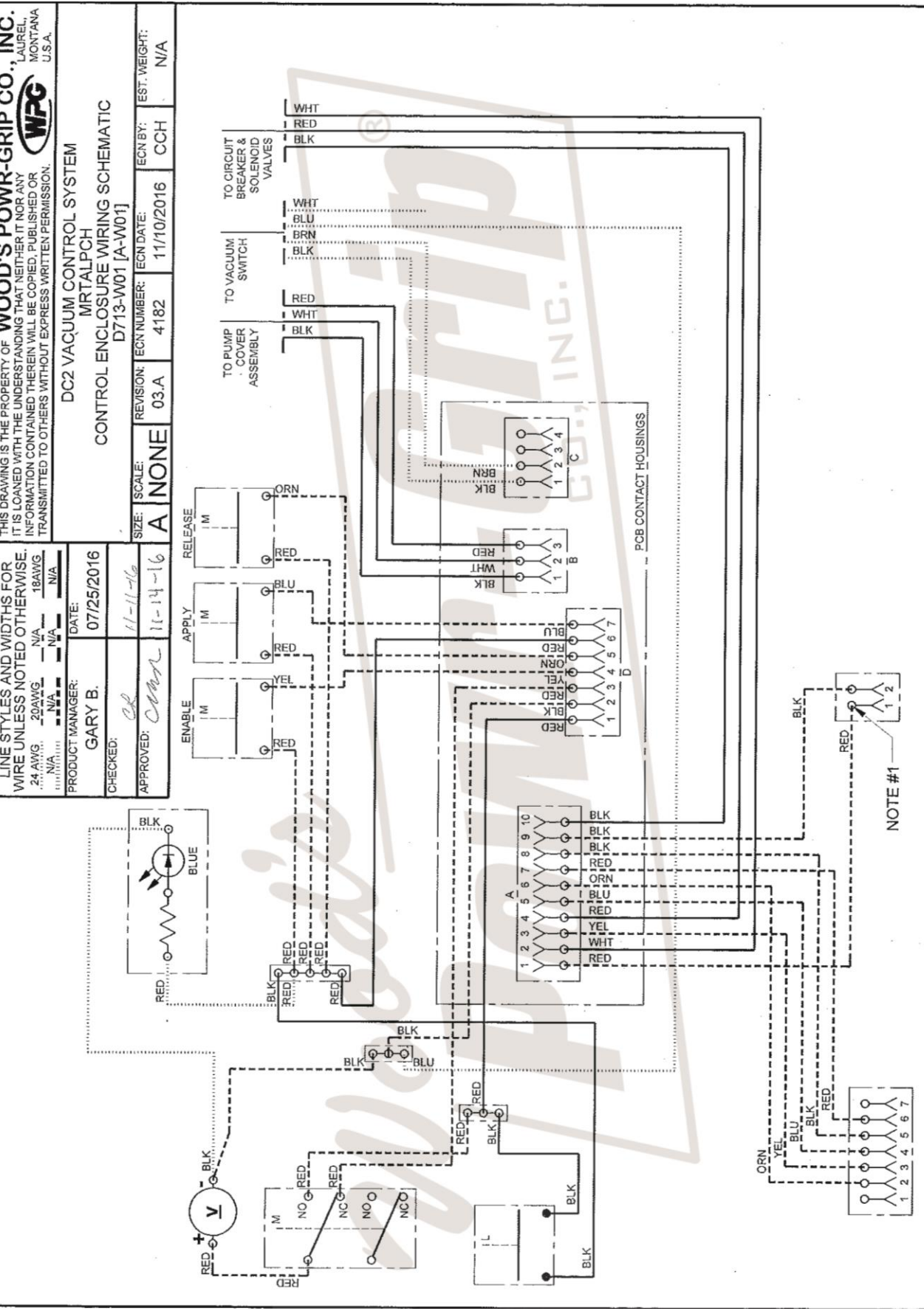
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WIRE LEGEND: CONTROLLED BY WIRING SYMBOLS DRAWING EXCEPT AS NOTED AND BELOW.
LINE STYLES AND WIDTHS FOR WIRE UNLESS NOTED OTHERWISE.
24 AWG. — N/A — 18AWG.
18AWG. — N/A — 14AWG.
14AWG. — N/A — 12AWG.
12AWG. — N/A — 10AWG.
10AWG. — N/A — 8AWG.
8AWG. — N/A — 6AWG.
6AWG. — N/A — 4AWG.
4AWG. — N/A — 2AWG.
2AWG. — N/A — 1AWG.

DC2 VACUUM CONTROL SYSTEM
MRTALPCH
CONTROL ENCLOSURE WIRING SCHEMATIC
D713-W01 [A-W01]

PRODUCT MANAGER:
GARY B.
DATE: 07/25/2016
CHECKED: *cl*
APPROVED: *cmj*
SCALE: NONE
REVISION: 03-A
ECN NUMBER: 4182
ECN DATE: 11/10/2016
ECN BY: CCH
EST. WEIGHT: N/A

NOTES:
(1) TERMINAL #1 IS THE TERMINAL WITH A DOT BY IT.



NOTE #1

WIRE LEGEND: CONTROLLED BY WIRING SYMBOLS DRAWING EXCEPT AS NOTED AND BELOW.
LINE STYLES AND WIDTHS FOR WIRE UNLESS NOTED OTHERWISE:
24AWG --- 22AWG --- 20AWG --- 18AWG --- 16AWG
PRODUCT MANAGER: JOSH E.
DATE: 09/13/2012

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1100LB LOW-PROFILE MANUAL-ROTATOR/QUADRA-TILT-ER CHANNEL PAD FRAME
CHANNEL WIRING SCHEMATIC
D775B-W01 [B-W01]

TYPE:	STANDARD	FILE [SHEET]:	775
WIRE LEGEND:	CONTROLLED BY WIRING SYMBOLS DRAWING EXCEPT AS NOTED AND BELOW.	DATE:	09/13/2012
LINE STYLES AND WIDTHS FOR WIRE UNLESS NOTED OTHERWISE:	24AWG --- 22AWG --- 20AWG --- 18AWG --- 16AWG	CHECKED:	<i>af</i>
PRODUCT MANAGER:	JOSH E.	APPROVED:	<i>Dean</i>
THIS DRAWING IS THE PROPERTY OF WOOD'S POWR-GRIP CO., INC. LAUREL, MONTANA U.S.A. IT IS LOANED WITH THE UNDERSTANDING THAT NEITHER IT NOR ANY INFORMATION CONTAINED THEREIN WILL BE COPIED, PUBLISHED OR TRANSMITTED TO OTHERS WITHOUT EXPRESS WRITTEN PERMISSION.		SIZE:	A NONE
1100LB LOW-PROFILE MANUAL-ROTATOR/QUADRA-TILT-ER CHANNEL PAD FRAME CHANNEL WIRING SCHEMATIC D775B-W01 [B-W01]		REVISION:	02.A
		ECN NUMBER:	4113
		ECN DATE:	08/25/2016
		ECN BY:	JAC
		EST. WEIGHT:	N/A



