

January 1, 2021  
Lit. No. 74230, Rev. 01



# REFERENCE GUIDE

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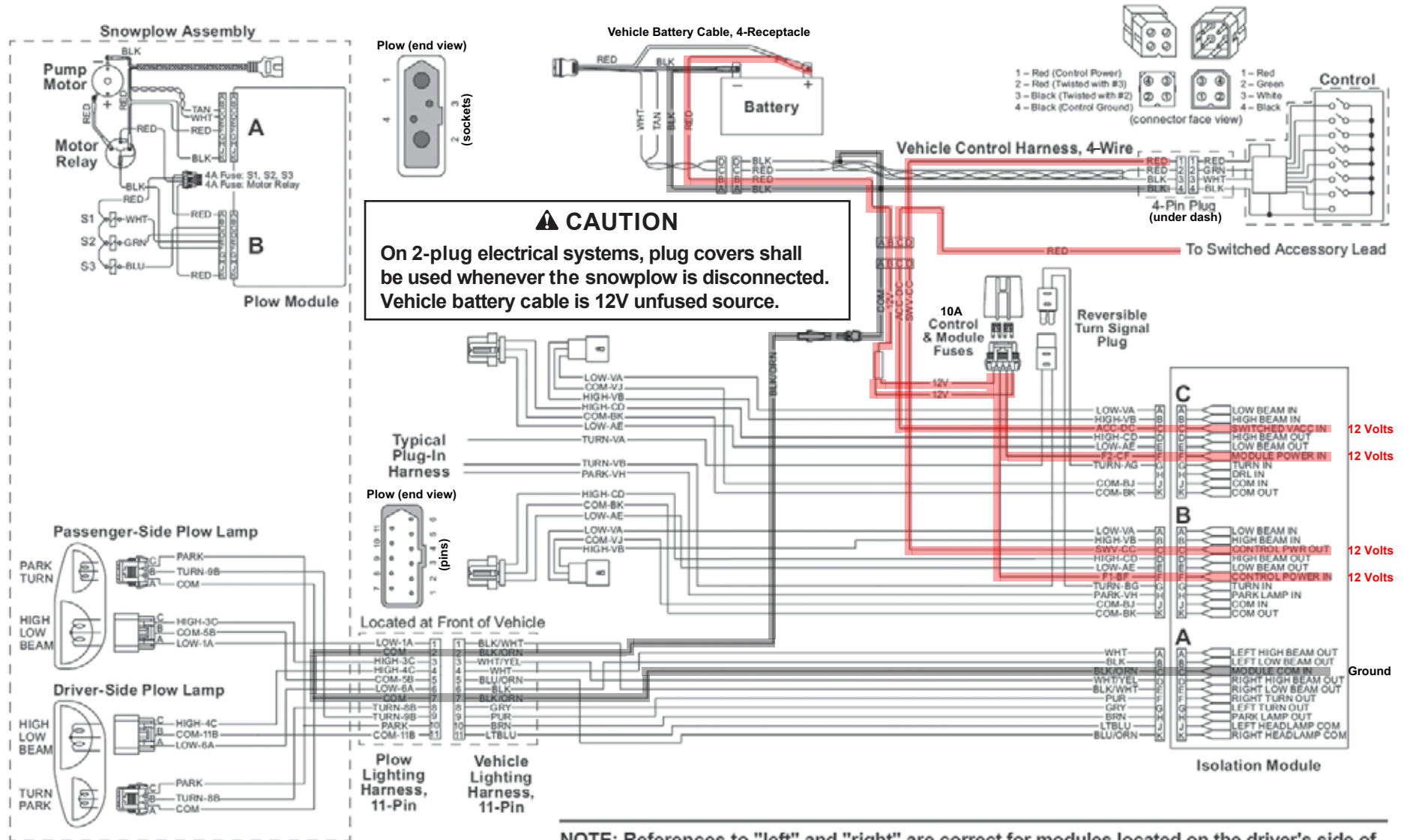
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# Electrical

3



# IMPORTANT WIRE LOCATIONS



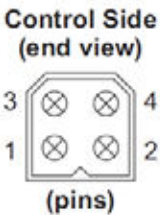
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Lit. No. 74230, Rev. 01

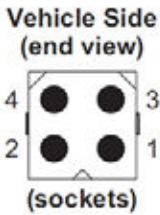
January 1, 2021

# 4-PORT & 3-PORT ISOLATION MODULE – ELECTRICAL CONNECTORS – 2-PLUG SYSTEMS

## Solenoid Control Connectors

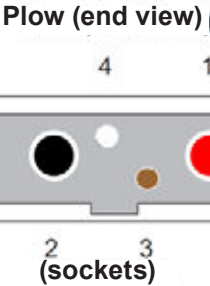


| Pin No. | Solenoid Control Wire Color Only |
|---------|----------------------------------|
| 1       | Red                              |
| 2       | Green                            |
| 3       | White                            |
| 4       | Black                            |



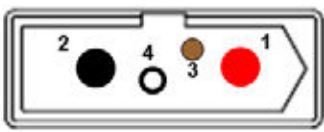
| Pin No. | Wire Color | Control Function |
|---------|------------|------------------|
| 1       | Red        | +12V             |
| 2       | Red        | Signal           |
| 3       | Black      | Signal           |
| 4       | Black      | Ground           |

## Multiplex Harnesses



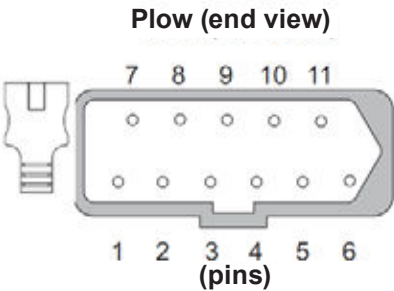
| 4-Pin   |            |                  |
|---------|------------|------------------|
| Pin No. | Wire Color | Control Function |
| 1       | Red        | +12V             |
| 2       | Black      | Ground           |
| 3       | Tan        | Signal           |
| 4       | White      | Signal           |

## Vehicle (end view)



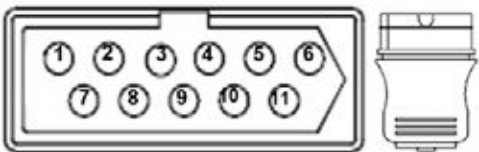
| Pin No. | Wire Color | Control Function |
|---------|------------|------------------|
| 1       | Red        | +12V             |
| 2       | Black      | Ground           |
| 3       | Tan        | Signal           |
| 4       | White      | Signal           |

## Plow Lighting Harness



| 11-Pin  |              |                   |
|---------|--------------|-------------------|
| Pin No. | Wire Color   | Control Function  |
| 1       | Black/White  | PS Low Beam       |
| 2       | Black/Orange | Ground            |
| 3       | White/Yellow | PS High Beam      |
| 4       | White        | DS High Beam      |
| 5       | Blue/Orange  | PS Common         |
| 6       | Black        | DS Low Beam       |
| 7       | Black/Orange | Ground            |
| 8       | Gray         | Left Directional  |
| 9       | Purple       | Right Directional |
| 10      | Brown        | Parking Lamps     |
| 11      | Light Blue   | DS Common         |

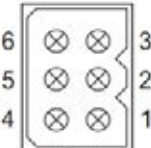
## 11-Pin Vehicle (end view)



# 4-PORT & 3-PORT ISOLATION MODULE – ELECTRICAL CONNECTORS – 3-PLUG SYSTEMS

## Solenoid Control Connectors

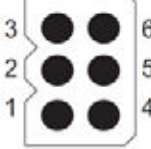
Control Side  
(end view)



(pins)

| Pin No. | Solenoid Control Wire Color Only |
|---------|----------------------------------|
| 1       | White                            |
| 2       | Green                            |
| 3       | Brown                            |
| 4       | Black                            |
| 5       | Blue                             |
| 6       | Red                              |

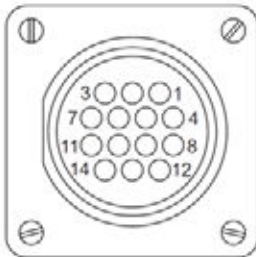
Vehicle Side  
(end view)



(sockets)

| Pin No. | Wire Color   | Control Function |
|---------|--------------|------------------|
| 1       | Red/Yellow   | +12V             |
| 2       | Light Green  | Valve S2         |
| 3       | Orange/Black | Ground           |
| 4       | Brown/Red    | Motor Relay      |
| 5       | Light Blue   | Valve S3         |
| 6       | White/Yellow | Valve S1         |

## MVP® Blade Control Connectors



(front view)

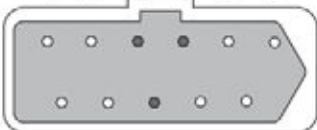
| Pin No. | Wire Color                 |
|---------|----------------------------|
| 1       | Light Blue w/Orange Stripe |
| 2       | Blue w/Orange Stripe       |
| 3       | Black w/White Stripe       |
| 4       | Light Green                |
| 5       | Light Blue                 |
| 6       | White w/Yellow Stripe      |
| 7       | Brown w/Red Stripe         |
| 8       | Red w/Yellow Stripe        |
| 9       | Orange w/Black Stripe      |
| 10      | Brown w/Green Stripe       |

## MVP Blade to Straight Blade Adapter Kit PN 66760K



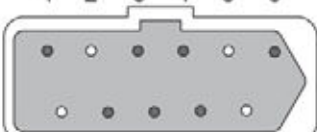
## Plow Control Harnesses

Plow (end view)



(sockets)

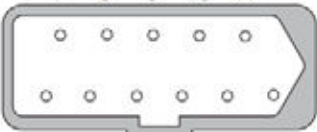
Plow (end view)



(sockets)

## Plow Lighting Harness

Plow (end view)



(pins)

| 3-Pin   |              |                  |
|---------|--------------|------------------|
| Pin No. | Wire Color   | Control Function |
| 1       | —            | —                |
| 2       | —            | —                |
| 3       | Light Blue   | Valve S3         |
| 4       | Light Green  | Valve S2         |
| 5       | —            | —                |
| 6       | —            | —                |
| 7       | —            | —                |
| 8       | —            | —                |
| 9       | White/Yellow | Valve S1         |
| 10      | —            | —                |
| 11      | —            | —                |

| 7-Pin   |                |                  |
|---------|----------------|------------------|
| Pin No. | Wire Color     | Control Function |
| 1       | Black/White    | Valve S4         |
| 2       | —              | —                |
| 3       | Light Blue     | Valve S2         |
| 4       | Light Green    | Valve S3         |
| 5       | —              | —                |
| 6       | Red            | +12V             |
| 7       | —              | —                |
| 8       | Blue/Orange    | Valve S5         |
| 9       | White/Yellow   | Valve S1         |
| 10      | Lt Blue/Orange | Valve S6         |
| 11      | —              | —                |

| 11-Pin  |              |                   |
|---------|--------------|-------------------|
| Pin No. | Wire Color   | Control Function  |
| 1       | Black/White  | PS Low Beam       |
| 2       | Black/Orange | Ground            |
| 3       | White/Yellow | PS High Beam      |
| 4       | White        | DS High Beam      |
| 5       | Blue/Orange  | PS Common         |
| 6       | Black        | DS Low Beam       |
| 7       | Black/Orange | Ground            |
| 8       | Gray         | Left Directional  |
| 9       | Purple       | Right Directional |
| 10      | Brown        | Parking Lamps     |
| 11      | Light Blue   | DS Common         |



29070-1 3-PORT ISOLATION MODULE, 76272 ADAPTER HARNESS & 29760-2 SOFT START KIT

3-Port Isolation Module



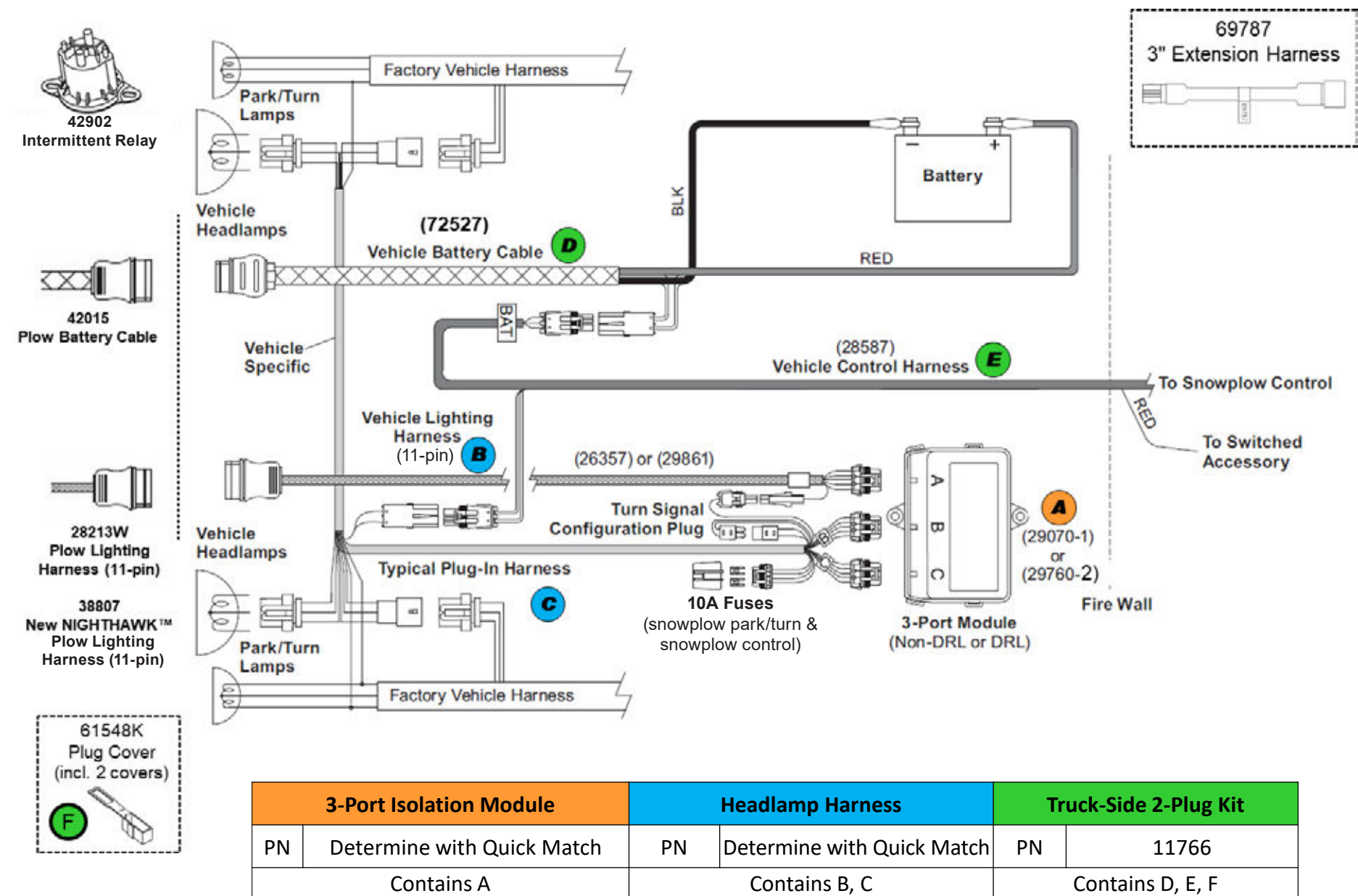
- Standard Isolation Module Kit – **29070-1**
- Used with all current truck lighting systems
- Isolates truck lights from plow lights & provides 12V power to control
- Has nothing to do with plow functions
- Use Quick Match to determine which module kit is applicable (29070-1 or 29760-2)
- Requires the use of 29047 adapter when using it in a 3-plug system.

|                |                                          |  |
|----------------|------------------------------------------|--|
| <u>29070-1</u> | 3-PORT<br>ISOLATION<br>MODULE            |  |
| +              |                                          |  |
| <u>76272</u>   | 10 PIN ADAPTER<br>HARNESS/<br>SOFT START |  |
| =              |                                          |  |
| <u>29760-2</u> | SOFT START<br>MODULE KIT                 |  |

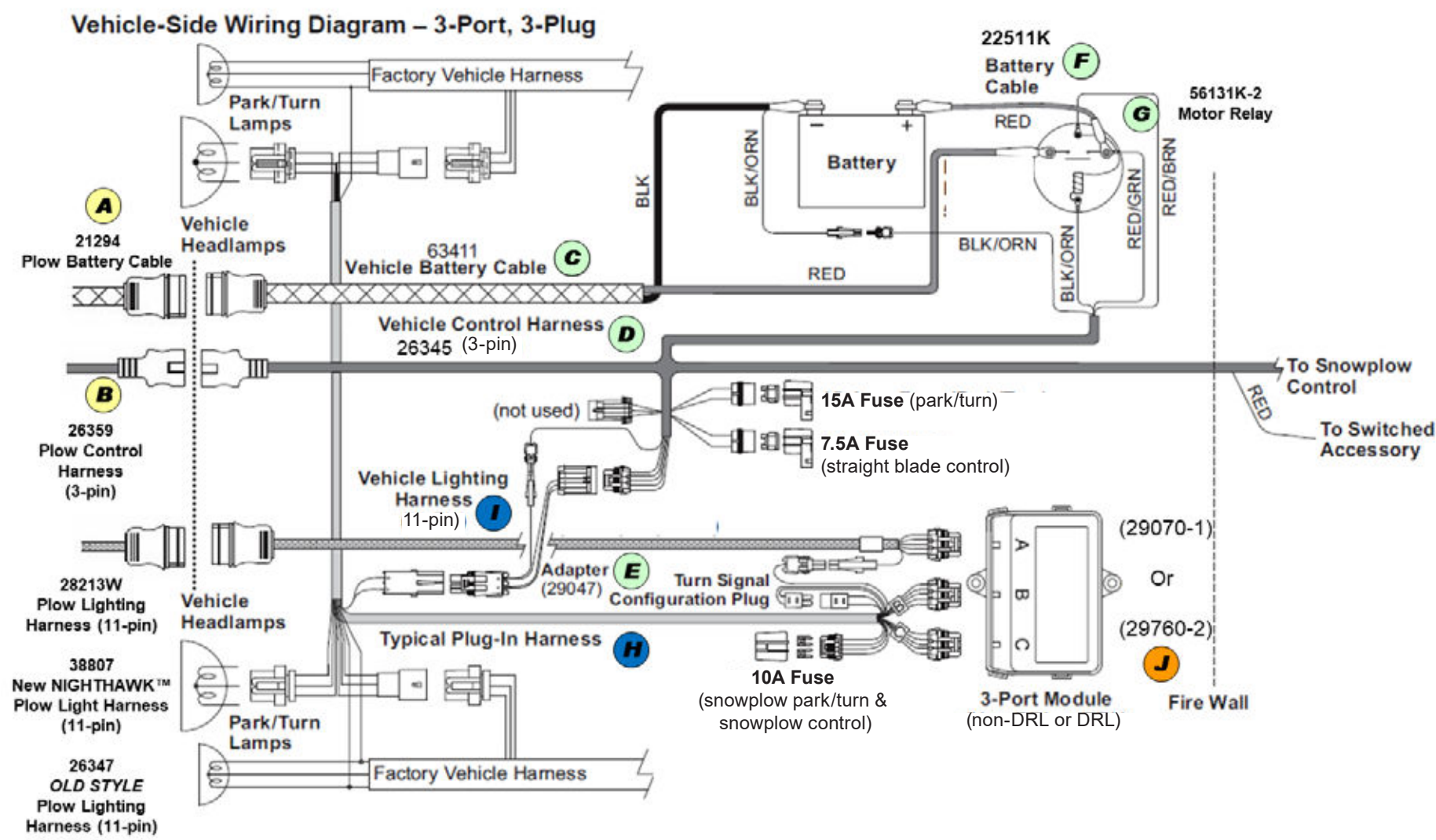
- Soft Start Isolation Module kit – **29760-2**  
**(replaces 29760-1 blue label module)**
- Slows down the transfer of lights from truck to plow when plugged in
- **Use Quick Match to determine if needed**

- 
- It is the responsibility of the installer to thoroughly review the condition of any electrical components being transferred.
  - It is the responsibility of the installer to exercise extreme caution when routing harnesses during an electrical transfer.
  - It is highly recommended by Western Products that ALL vehicle-side electrical components be REPLACED with new components when transferring electrical systems.

FLEET FLEX ELECTRICAL 3-PORT, 2-PLUG SYSTEM



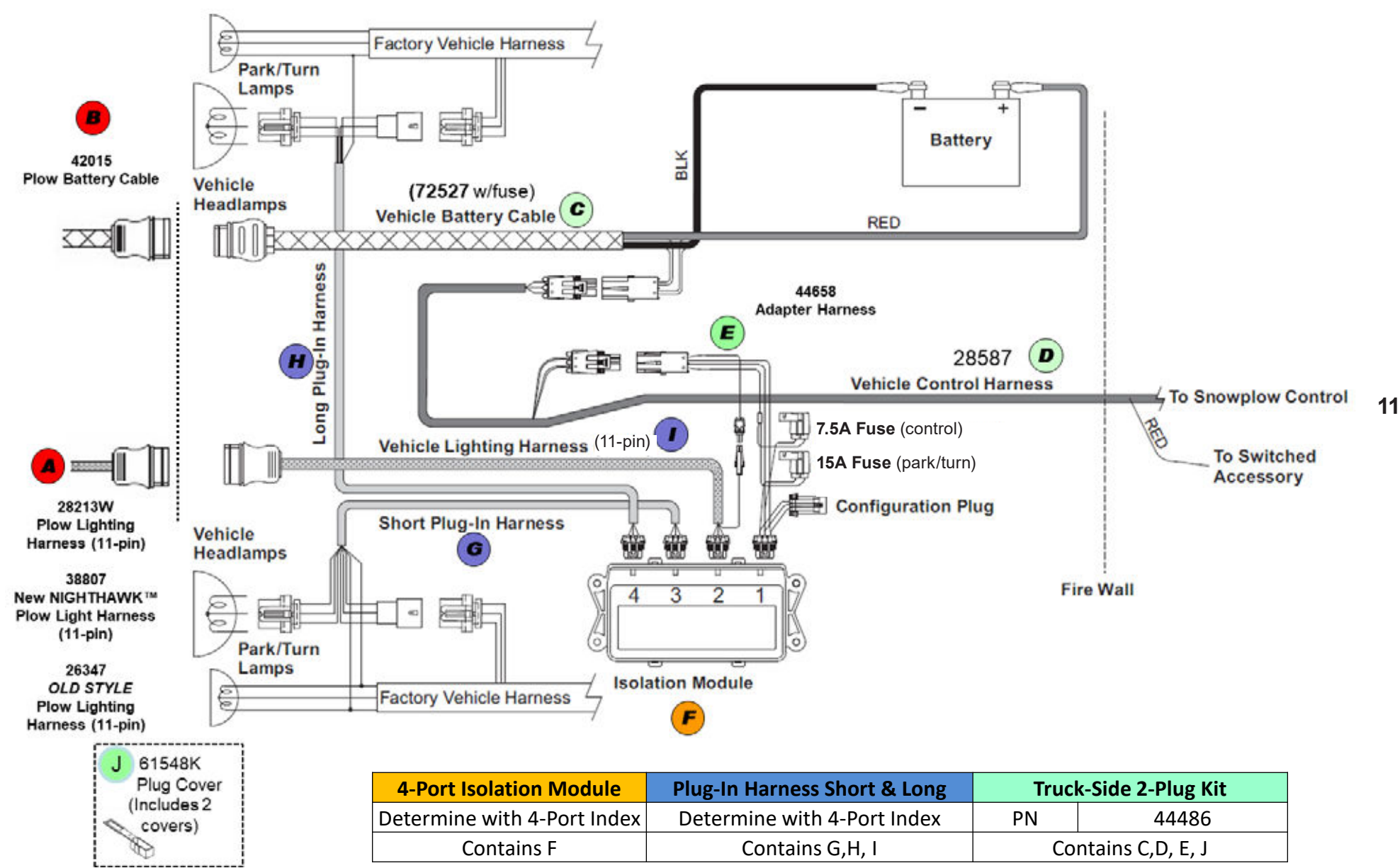
STRAIGHT BLADE 3-PORT, 3-PLUG ELECTRICAL SYSTEM



| Plow Side 3-Plug Kit |       | 3-Port Isolation Module |                            | Headlamp Harness |                            | Truck-Side 3-Plug Kit |       | Plow- & Truck-Side 3-Plug Kit |       |
|----------------------|-------|-------------------------|----------------------------|------------------|----------------------------|-----------------------|-------|-------------------------------|-------|
| PN                   | 49663 | PN                      | Determine with Quick Match | PN               | Determine with Quick Match | PN                    | 49664 | PN                            | 49665 |
| Contains A,B         |       | Contains J              |                            | Contains H,I     |                            | Contains C,D,E,F,G    |       | Contains A,B,C,D,E,F,G        |       |

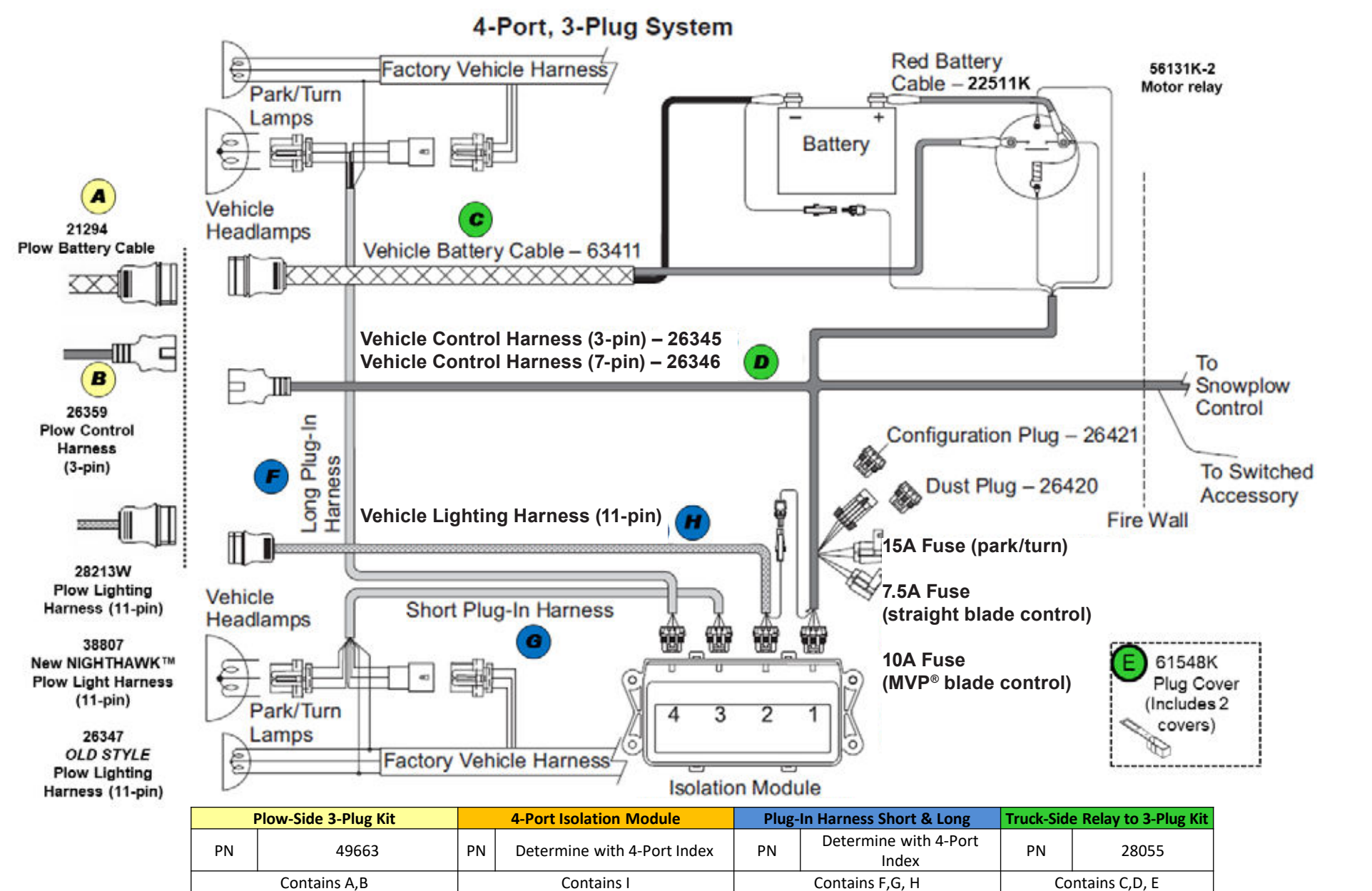


FLEET FLEX ELECTRICAL 4-PORT, 2-PLUG SYSTEM

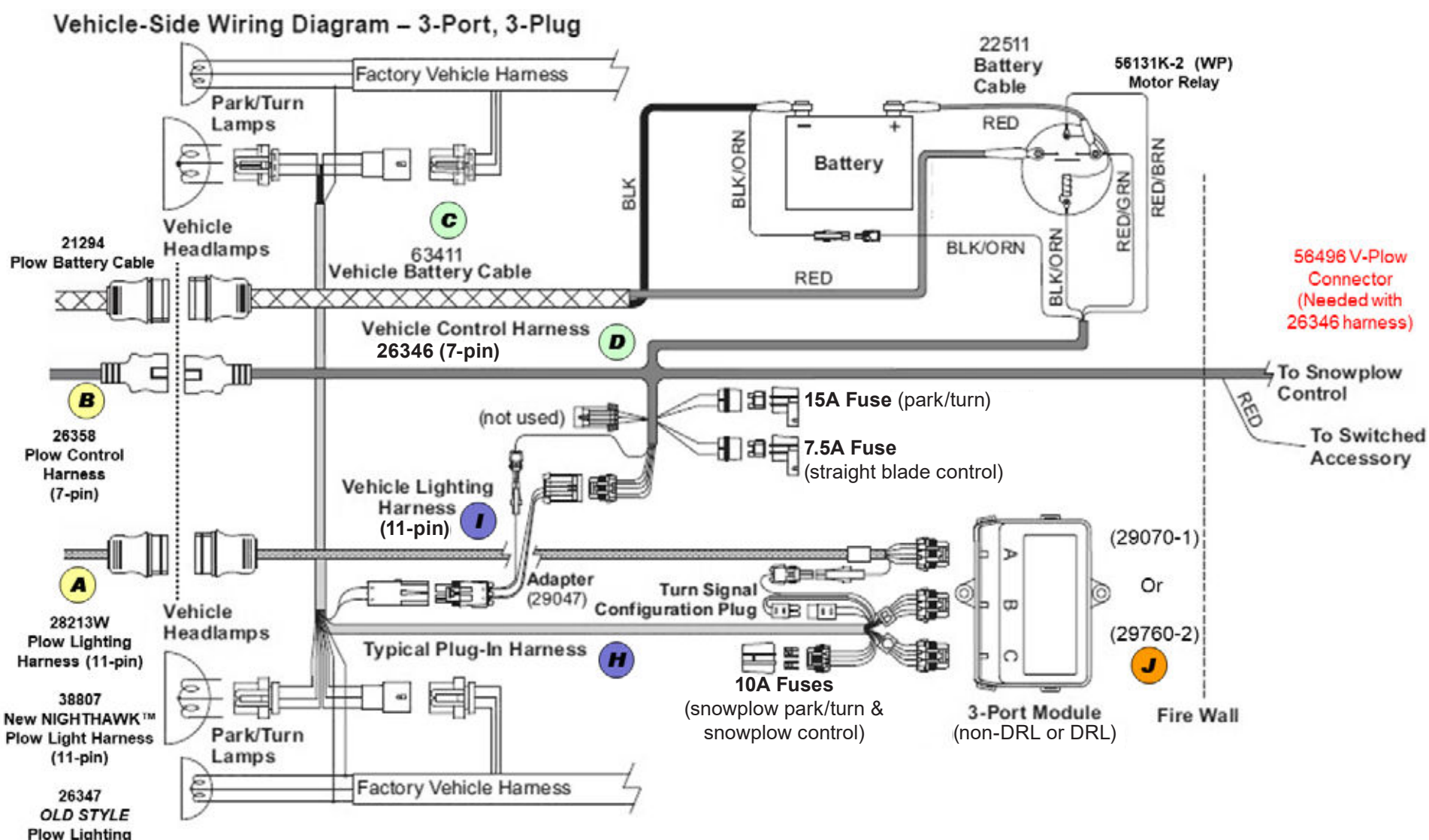




STRAIGHT BLADE ELECTRICAL 4-PORT, 3-PLUG SYSTEM

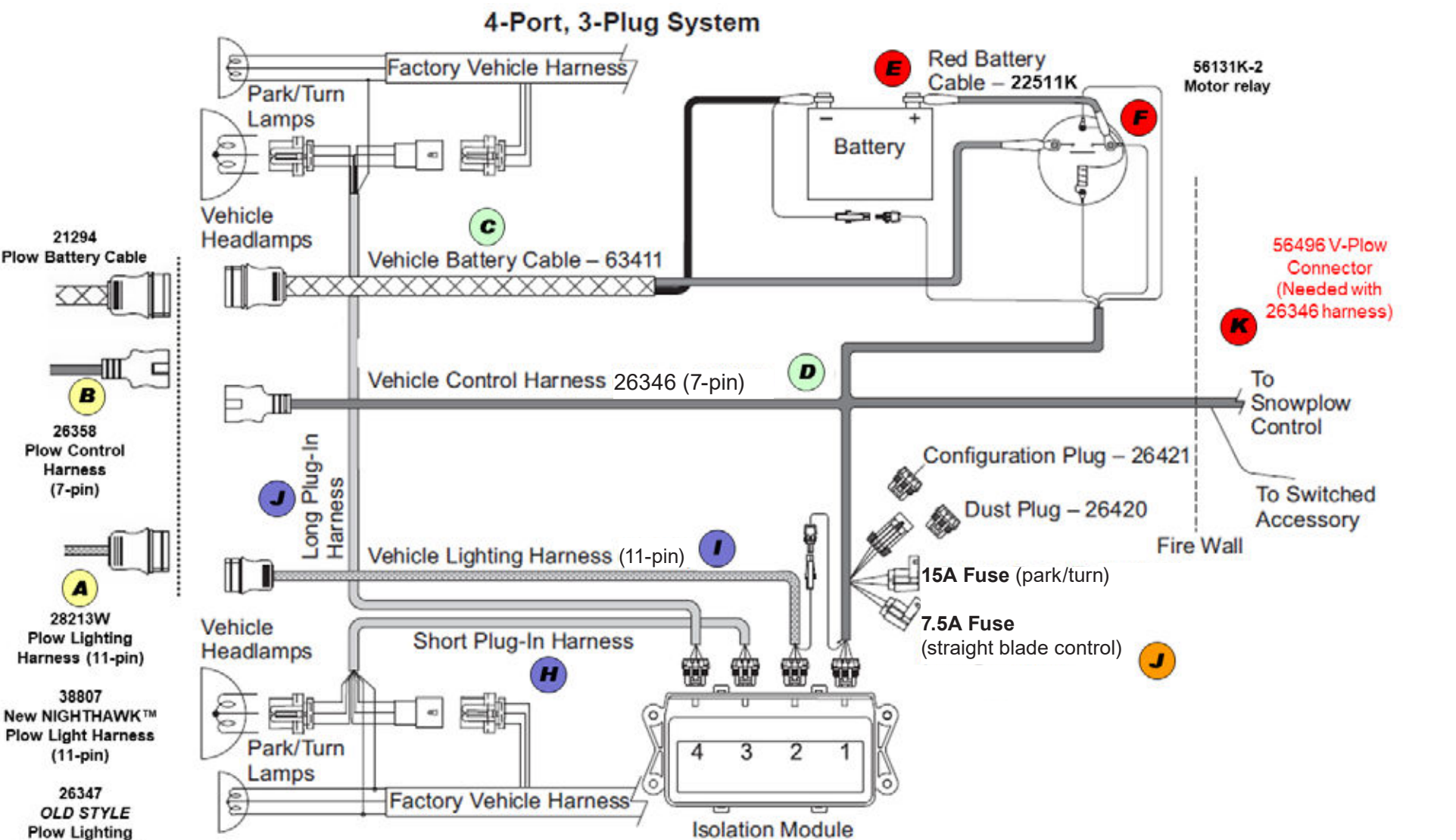


MVP® SNOWPLOW ELECTRICAL 3-PORT, 3-PLUG SYSTEM



| Plow-Side Relay to 3-Plug Kit |       | 3-Port Isolation Module |                           | Headlamp Harness |                           | Truck-Side Relay to 3-Plug Kit |       |
|-------------------------------|-------|-------------------------|---------------------------|------------------|---------------------------|--------------------------------|-------|
| PN                            | 28054 | PN                      | Determine with QuickMatch | PN               | Determine with QuickMatch | PN                             | 28056 |
| Contains A,B                  |       | Contains J              |                           | Contains H,I     |                           | Contains C,D                   |       |

MVP® SNOWFLOW ELECTRICAL 4-PORT, 3-PLUG SYSTEM

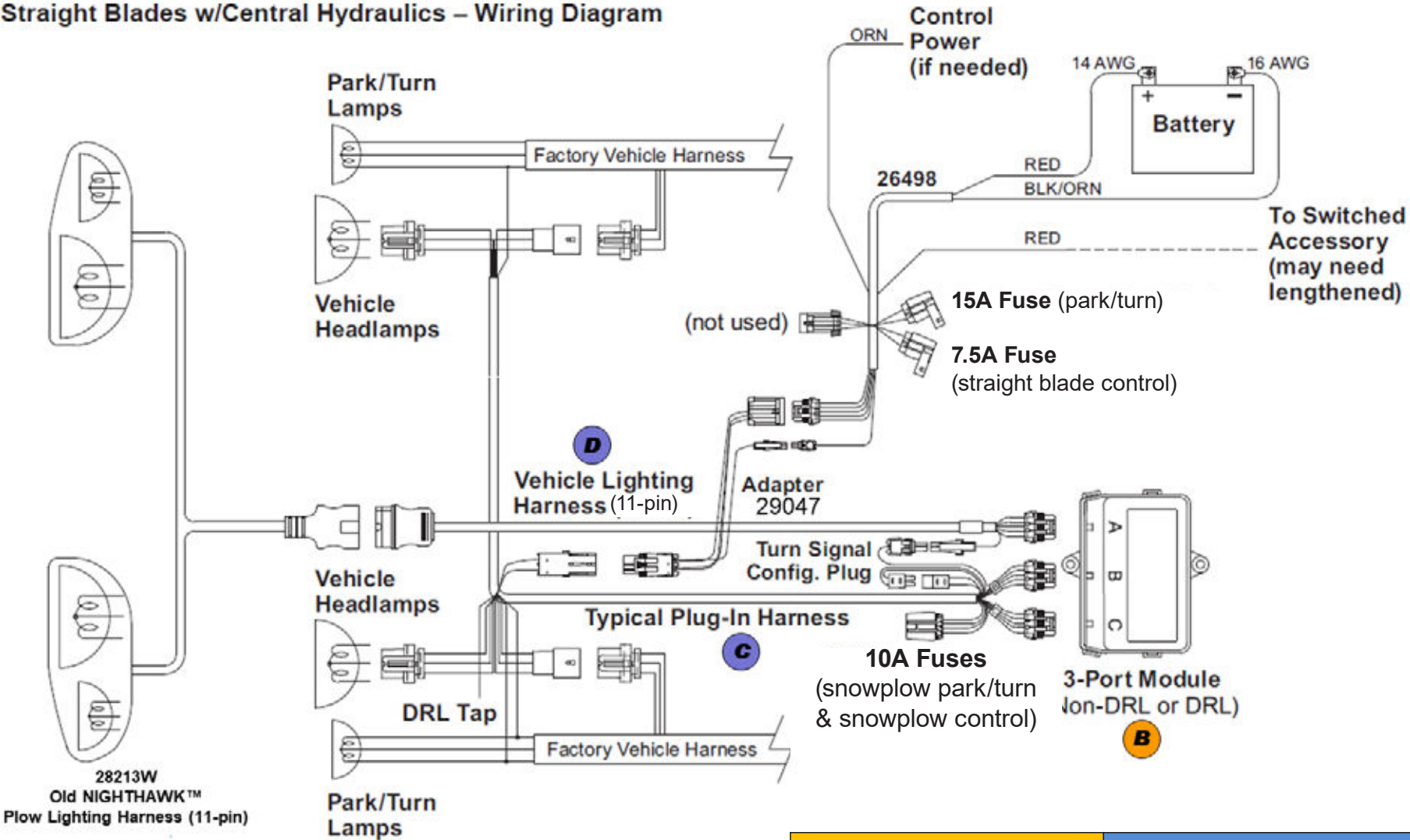


| Plow-Side Relay to 3-Plug Kit |       | 4-Port Isolation Module |                             | Plug-In Harness Short & Long |                             | Truck-Side Relay to 3-Plug Kit |       |
|-------------------------------|-------|-------------------------|-----------------------------|------------------------------|-----------------------------|--------------------------------|-------|
| PN                            | 28054 | PN                      | Determine with 4-Port Index | PN                           | Determine with 4-Port Index | PN                             | 28056 |
| Contains A,B                  |       | Contains G              |                             | Contains H, I, J             |                             | Contains C,D                   |       |



STRAIGHT BLADE w/CENTRAL HYDRAULICS ELECTRICAL 3-PORT SYSTEM

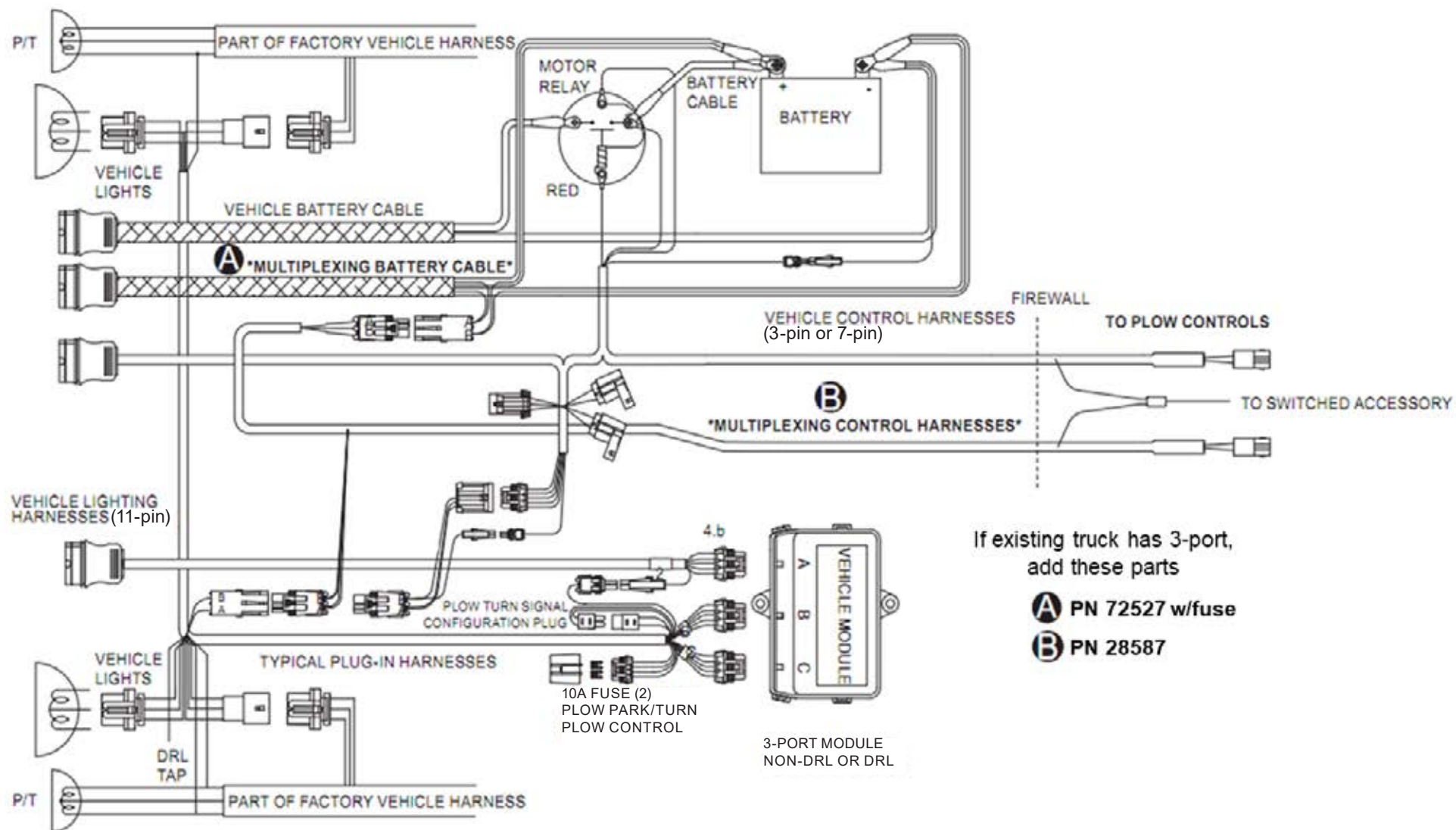
Straight Blades w/Central Hydraulics – Wiring Diagram



- 28213W  
Old NIGHTHAWK™  
Plow Lighting Harness (11-pin)
- 38807  
New NIGHTHAWK  
Plow Light Harness (11-pin)
- 26347  
OLD STYLE  
Plow Lighting Harness (11-pin)

| 3-Port Isolation Module |                            | Headlamp Harness |                            |
|-------------------------|----------------------------|------------------|----------------------------|
| PN                      | Determine with Quick Match | PN               | Determine with Quick Match |
| Contains B              |                            | Contains C,D     |                            |

## MULTIPLEX & NON-MULTIPLEX SNOWPLOWS – DUAL WIRING, 3-PORT MODULE

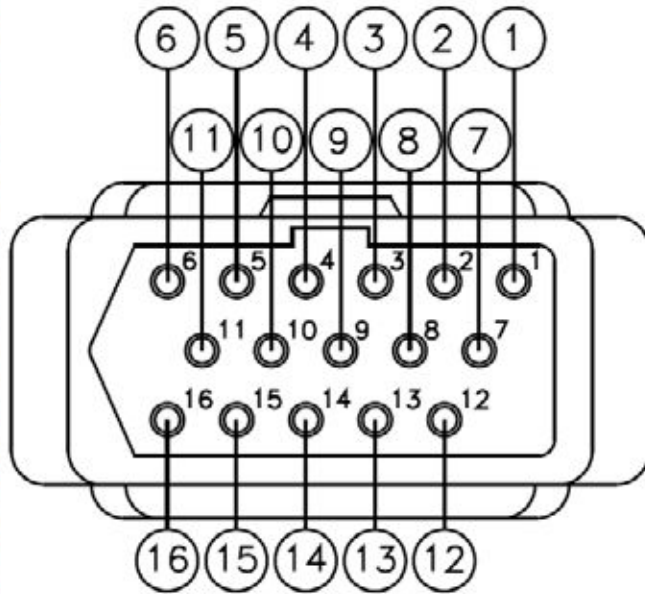


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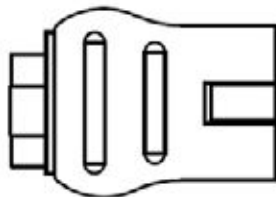
## LED SNOWPLOW LIGHTING

- \* **Do not probe wires.**
- \* **Left side input feeds both left and right side of plow lights.**



PLOW SIDE  
72548

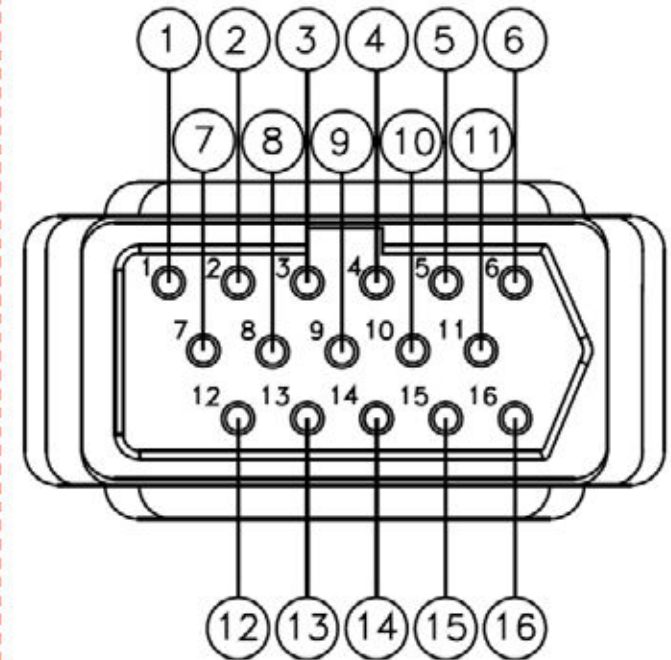
PIN SIDE



- 1 - YEL - EDGE VIEW FROM PLOW
- 2 - BLK/ORN - N/C
- 3 - BLK/WHT - RIGHT LOW
- 4 - WHT/YEL - RIGHT HIGH
- 5 - WHT - LT HIGH
- 6 - YEL - EDGE VIEW
- 7 - BLK/ORN - MODULE COMMON
- 8 - BLK - LEFT LOW
- 9 - GRY - LEFT TURN
- 10 - PUR - RIGHT TURN
- 11 - BRN - RIGHT PARK
- 12 - PNK - RIGHT DRL
- 13 - BLK/ORN - RIGHT COMMON
- 14 - BLK/ORN - LEFT COMMON
- 15 - \* LT BLU, BRN - LEFT PARK
- 16 - PNK - LEFT DRL

NOTE: PIN 15  
- LT BLU ON VEH SIDE  
- BRN ON PLOW SIDE

Ground Loop 7 & 14 at  
16-pin connector at the grille.



VEHICLE SIDE  
72546



- 1 – LEFT HIGH
- 2 – LEFT LOW
- 3 – MODULE COMMON
- 4 – NC (SPARE)
- 5 – LEFT COMMON
- 6 – PARK LIGHT
- 7 – LEFT TURN
- 8 – RIGHT TURN

### HEADLAMP CONTROL MODULE (HCM)

- 1 – LEFT DRL
- 2 – LEFT FP (PARK)
- 3 – LEFT LOW
- 4 – LEFT TURN
- 5 – LEFT HIGH
- 6 – COMMON
- 7 – EdgeView™
- 8 – RIGHT LOW
- 9 – RIGHT TURN
- 10 – RIGHT HIGH
- 11 – OEM PARK (RAM ONLY)
- 12 – EV SENSE
- 13 – NC
- 14 – COMMON
- 15 – NC
- 16 – NC
- 17 – NC
- 18 – NC
- 19 – RIGHT DRL
- 20 – RIGHT PARK

\*Left side input feeds both left  
and right side of plow lights

**X**

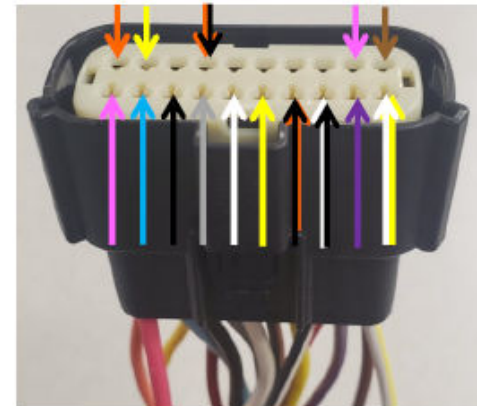
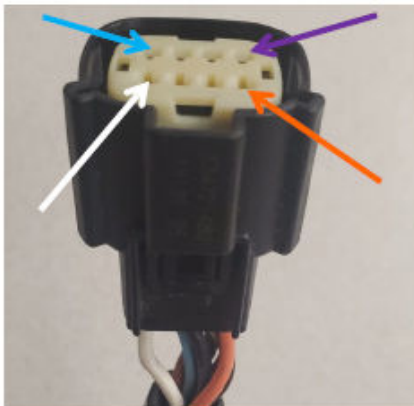
|              |            |                    |            |
|--------------|------------|--------------------|------------|
| 1<br>(WHT)   | 2<br>(BLK) | 3<br>(BLK/<br>ORN) | 4<br>(ORN) |
| 5<br>(LTBLU) | 6<br>(BRN) | 7<br>(GRY)         | 8<br>(PUR) |

BATT (+) IN



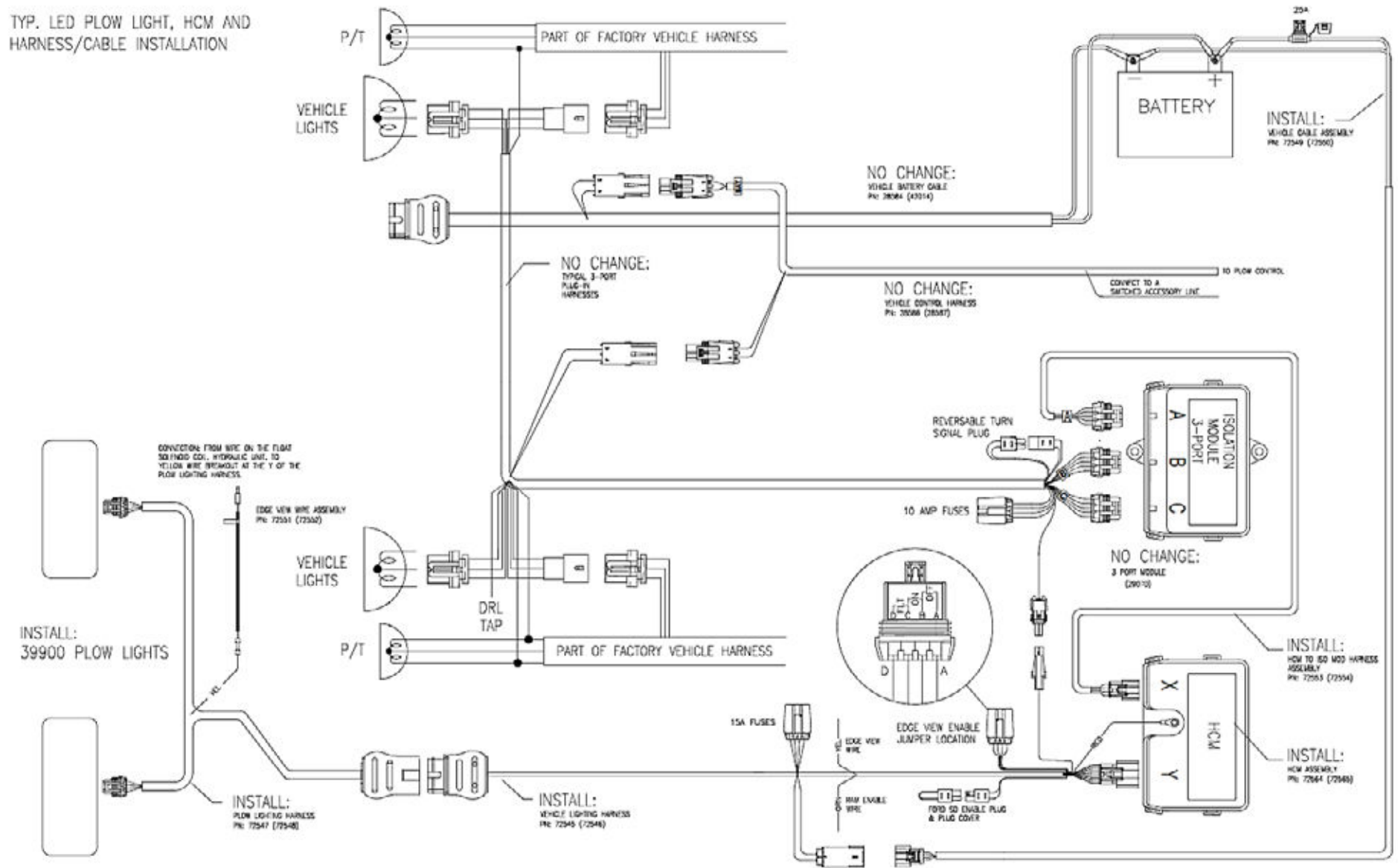
**Y**

|             |              |            |                     |            |                    |            |                    |             |                     |
|-------------|--------------|------------|---------------------|------------|--------------------|------------|--------------------|-------------|---------------------|
| 1<br>(PNK)  | 2<br>(LTBLU) | 3<br>(BLK) | 4<br>(GRY)          | 5<br>(WHT) | 6<br>(BLK/<br>ORN) | 7<br>(YEL) | 8<br>(BLK/<br>WHT) | 9<br>(PUR)  | 10<br>(WHT/<br>YEL) |
| 11<br>(ORN) | 12<br>(YEL)  | 13<br>(NC) | 14<br>(BLK/<br>ORN) | 15<br>(NC) | 16<br>(NC)         | 17<br>(NC) | 18<br>(NC)         | 19<br>(PNK) | 20<br>(BRN)         |

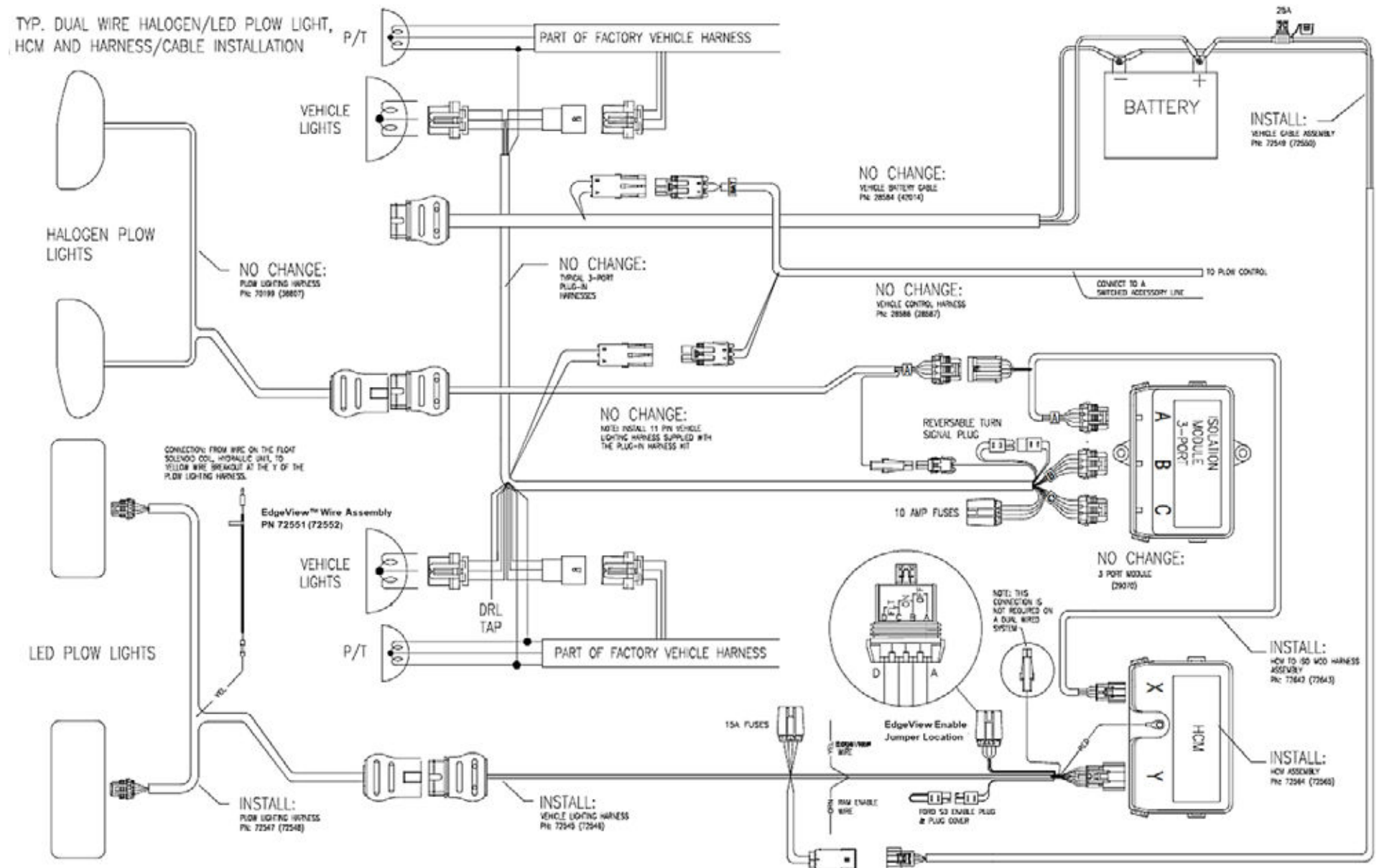


## LED (FLEET FLEX) WIRING DIAGRAM – 3-PORT, 2-PLUG ELECTRICAL SYSTEM

TYP. LED PLOW LIGHT, HCM AND HARNESS/CABLE INSTALLATION



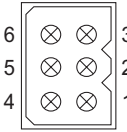
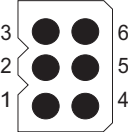
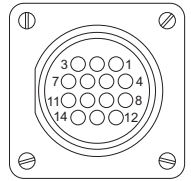
## DUAL HALOGEN/LED (FLEET FLEX) WIRING DIAGRAM – 3-PORT, 2-PLUG SYSTEM





## WESTERN® SNOWPLOW CONTROL REFERENCE

### Non FLEET FLEX System

| PN    | Model                          | Style     | Plug Description                                                                                                                              | Plug Profile                                                                                                                                                                                                                                          |
|-------|--------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 56369 | Straight Blade<br>(Minus HTS™) | Joystick  | 6-Pin                                                                                                                                         | <div>Control Side<br/>(end view)</div>  <div>Vehicle Side<br/>(end view)</div>  |
| 56462 | Straight Blade<br>(Minus HTS)  | Hand-Held | 6-Pin                                                                                                                                         |                                                                                                                                                                                                                                                       |
| 96369 | MVP®                           | Joystick  | Round Plug/10-Pin Replaces 6-Button Mode Control                                                                                              |  <div>(Front View)</div>                                                                                                                                           |
| 96462 | MVP                            | Hand-Held | Round Plug/10-Pin Replaces 6-Button Mode Control<br>(Connector PN 56496 needed with 26345 harness)<br>(Fuse Kit PN 69190), (Pin Kit PN 22123) |                                                                                                                                                                                                                                                       |

### FLEET FLEX System

| PN      | Model                                                     | Style     | Plug Description | Plug Profile                                                                                                                                                                                                                                       |
|---------|-----------------------------------------------------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 96800*  | Straight Blades                                           | Joystick  | 4-Pin            | <div><div>Control Side<br/>(end view)</div><div><div>3</div><div>4</div><div>1</div><div>2</div><div>(pins)</div></div><div>Vehicle Side<br/>(end view)</div><div><div>4</div><div>3</div><div>2</div><div>1</div><div>(sockets)</div></div></div> |
| 96400   | MVP PLUS™, MVP 3™, WIDE-OUT™ & FLEET FLEX Straight Blades |           |                  |                                                                                                                                                                                                                                                    |
| 35600   | FLEET FLEX Blades                                         |           |                  |                                                                                                                                                                                                                                                    |
| 85250   | IMPACT™                                                   |           |                  |                                                                                                                                                                                                                                                    |
| 96900** | Straight Blades                                           | Hand-Held |                  |                                                                                                                                                                                                                                                    |
| 96500   | MVP PLUS, MVP 3, WIDE-OUT & FLEET FLEX Straight Blades    |           |                  |                                                                                                                                                                                                                                                    |
| 35500   | FLEET FLEX Blades                                         |           |                  |                                                                                                                                                                                                                                                    |
| 85200   | IMPACT                                                    |           |                  |                                                                                                                                                                                                                                                    |

WESTERN, FISHER®, BLIZZARD® (only) Gray Master Control #78800 Lit. No. 41312, Rev. 01

\* Alternate Part Number 96400

\*\*Alternate Part Number 96500



## CONVERSION KITS

### Straight Blade Conversion Kits

| Part Number                            |       | Part Number                                           |          | Part Number                                                |          |
|----------------------------------------|-------|-------------------------------------------------------|----------|------------------------------------------------------------|----------|
| 49663                                  |       | 49664                                                 |          | 49665                                                      |          |
| Description                            |       | Description                                           |          | Description                                                |          |
| Plow-Side Straight Blade Multiplex Kit |       | Vehicle-Side Straight Blade 3-Plug Common Harness Kit |          | Complete Straight Blade Multiplex to 3-Plug Conversion Kit |          |
| Components Included                    | PN    | Components Included                                   | PN       | Components Included                                        | PN       |
| Plow Battery Cable                     | 21294 | 3-Pin Vehicle Control Harness                         | 26345    | Plow Battery Cable                                         | 21294    |
| 3-Pin Plow Control Harness             | 26359 | Short Battery Cable – 22"                             | 22511K   | 3-Pin Plow Control Harness                                 | 26359    |
|                                        |       | Vehicle Battery Cable                                 | 63411    | 3-Pin Vehicle Control Harness                              | 26345    |
|                                        |       | Motor Relay                                           | 56131K-2 | Short Battery Cable – 22"                                  | 22511K   |
|                                        |       | Adapter                                               | 29047    | Vehicle Battery Cable                                      | 63411    |
|                                        |       |                                                       |          | Motor Relay                                                | 56131K-2 |
|                                        |       |                                                       |          | Adapter                                                    | 29047    |

## WESTERN® HEADLAMPS

---

**2019** – present

*16-pin Connector*

NIGHTHAWK™ LED  
Headlamp  
Part# **72560 Kit**  
Part# **DS 39901**  
Part# **PS 39902**



**2017** – present

*11-pin Connector*

NIGHTHAWK Halogen Headlamps  
Gen 2 (two bulb) **LB 38811/HB 38809**  
Part# **38800 Kit**  
Part# **DS 38801**  
Part# **PS 38802**



**2005** – SOLD AS  
REPLACEMENT  
ONLY

*11-pin Connector*

NIGHTHAWK Halogen Headlamps  
Gen 1 (one bulb) Part# **28806**  
Part# **28800-1 Kit**  
Part# **DS 28801-1**  
Part# **PS 28802-1 (ns)**



**1996** – SOLD AS  
REPLACEMENT  
ONLY

*11-pin Connector*

Sealed Beam "Brick Style" Headlamp  
Part# **61543 kit**  
Part# **DS 61541 (ns)**  
Part# **PS 61542**



ns = not shown

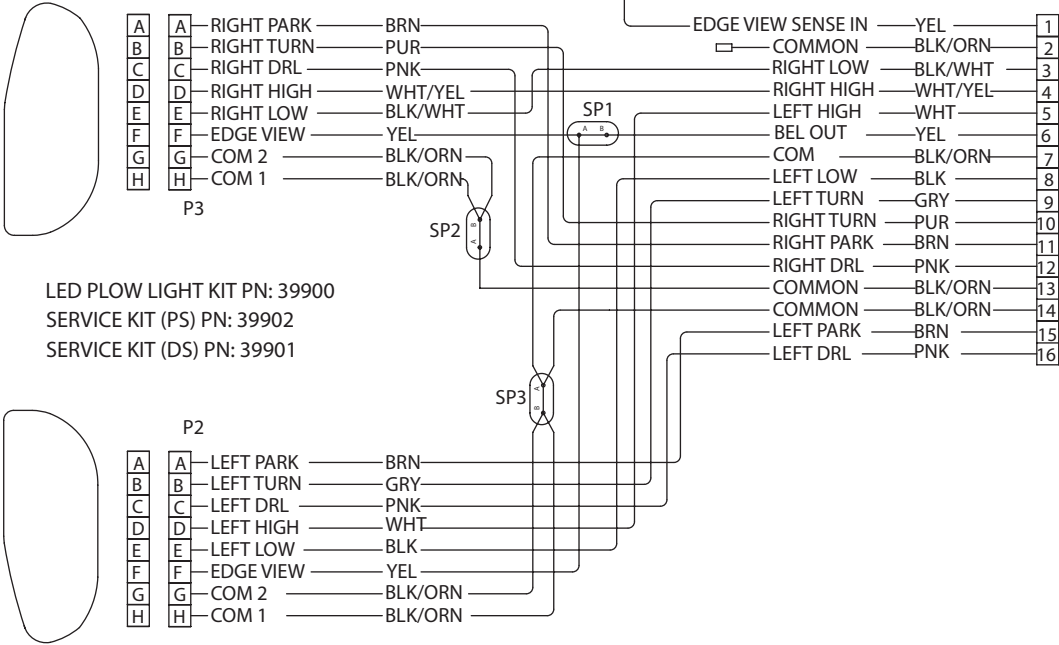
NIGHTHAWK™ Headlamps

CONNECTION: FROM WIRE ON THE FLOAT SOLENOID COIL,  
HYDRAULIC UNIT, TO YELLOW WIRE BREAKOUT AT THEY  
OF THE PLOW LIGHTING HARNESS.  
PN: 72551 (72552)

72548 (LED)

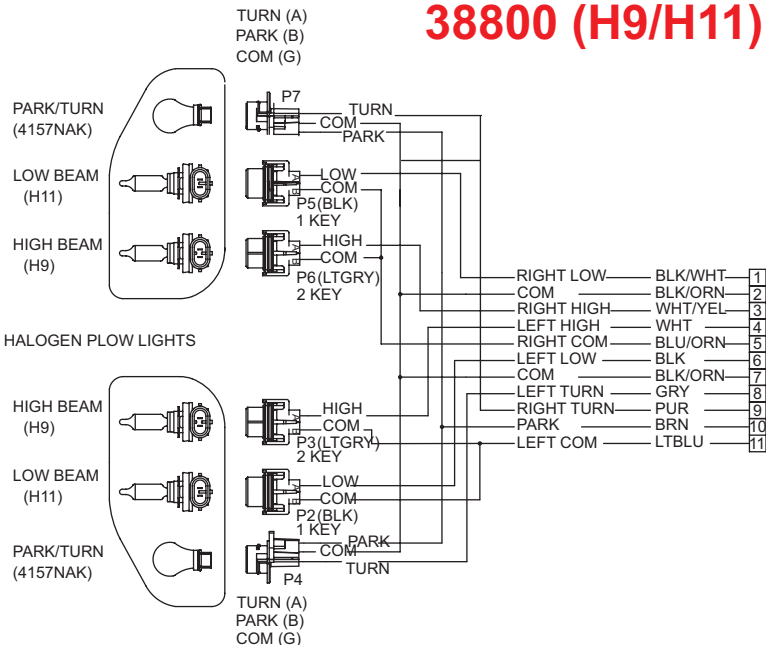
LED PLOW LIGHTS

NEW PLOW LIGHTING HARNESS: PN 72547 (72548)

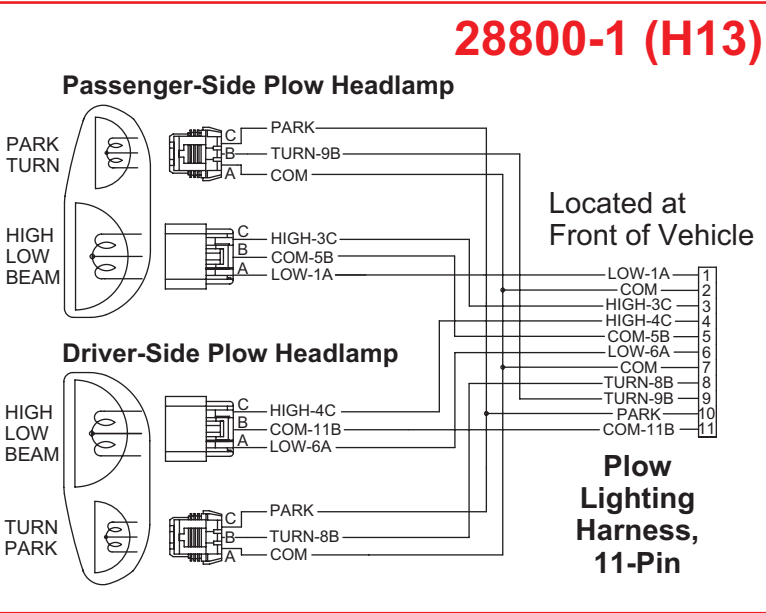


LED PLOW LIGHT KIT PN: 39900  
SERVICE KIT (PS) PN: 39902  
SERVICE KIT (DS) PN: 39901

38800 (H9/H11)



28800-1 (H13)



# HEADLAMP CONFIGURATIONS

## HB-3 / HB-4 Headlamps

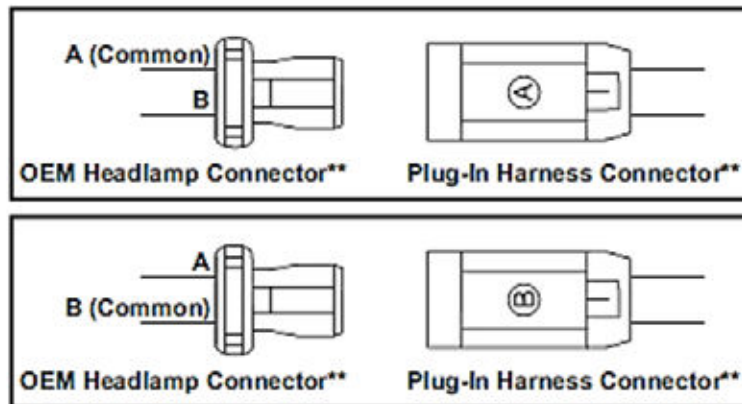
## HB-3 / H11 Headlamps

### **LSD: LOW-SIDE DRIVE**

12V present on one terminal. Ground NEGATIVE (–) is applied to the second terminal to trigger relay/solenoid coil.

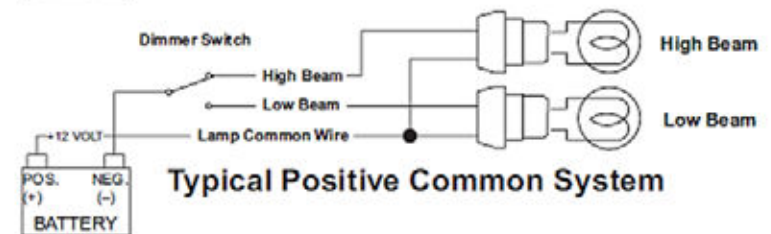
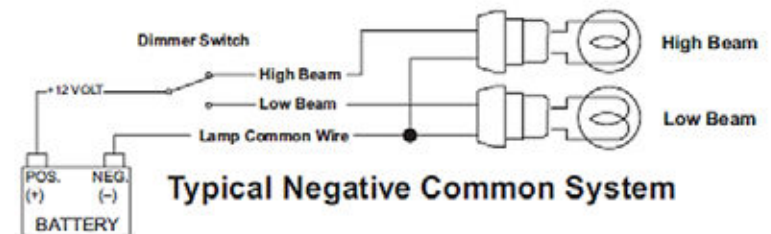
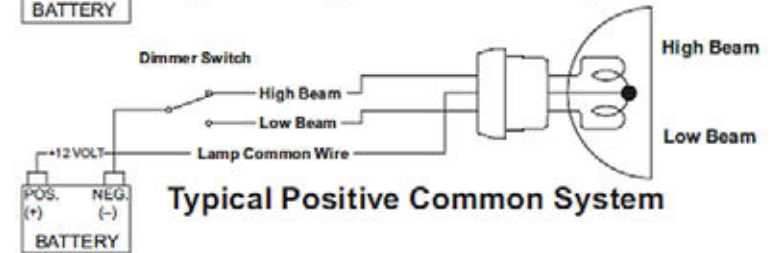
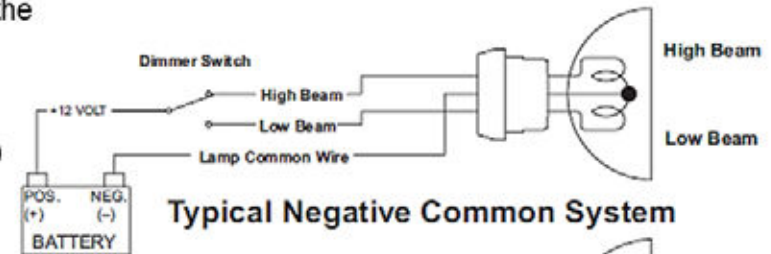
### **HSD: HIGH-SIDE DRIVE**

Ground NEGATIVE (–) present on one terminal. 12V POSITIVE (+) is applied to the second terminal to trigger relay/solenoid coil.



\*\* Connector appearance will vary.

**NOTE:** Use a multi-meter, determine the ground NEGATIVE (–) to properly install reversible 2-position connectors.





## HEADLAMP CONFIGURATIONS

### HB-1/HB-5 Headlamps

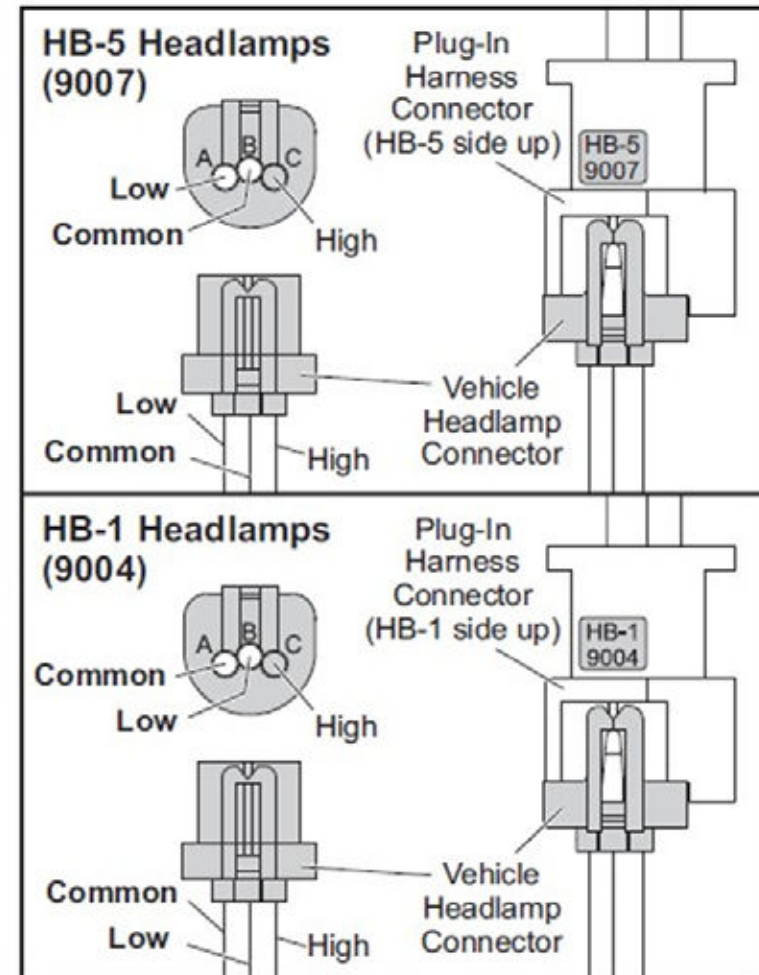
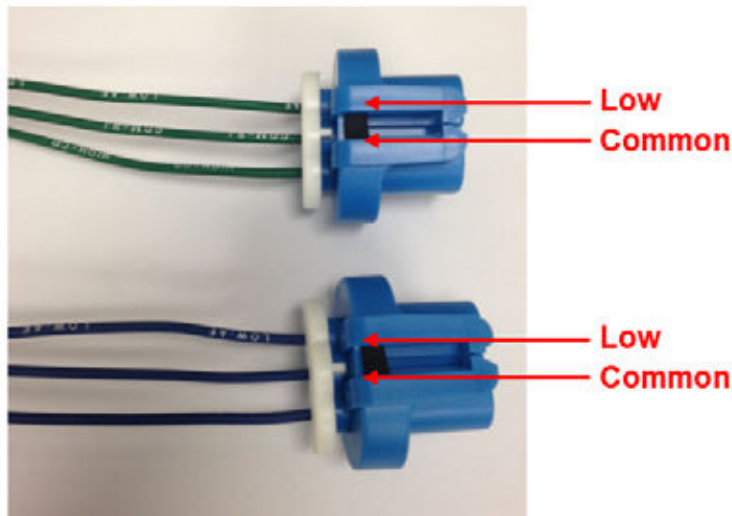
Pre-Configured for HB-5 Headlamps

Vehicles with HB-1 headlamps, the Low and Common pins need to be re-located.

**What is the symptom if the Low and Common pins are not relocated and/or plugged to the correct side of the plug-in harness?**

High beam indicator on all the time, dim snowplow low beam headlamps

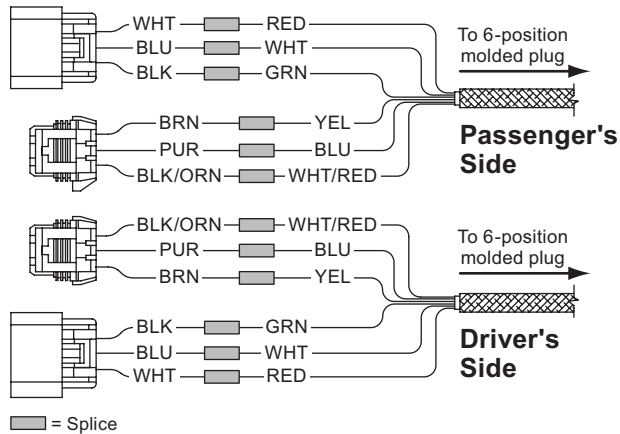
**Typical headlight connectors should be re-pin ONLY for HB-1 headlamps (blue plugs).**



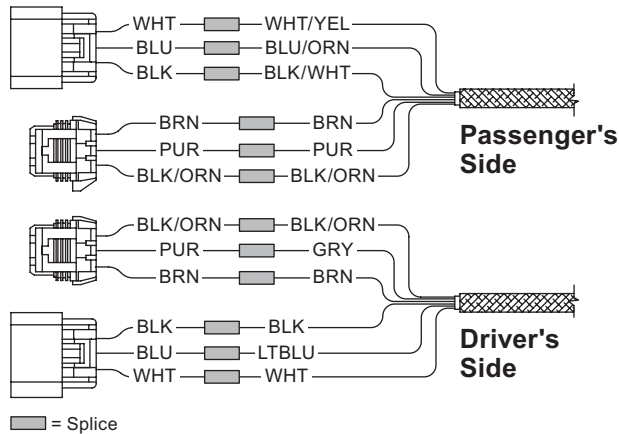
## 29033 ADAPTER KIT H13

Converts relay system to NIGHTHAWK™ / INTENSIFIRE™ / STORM SEEKER™ Headlamps

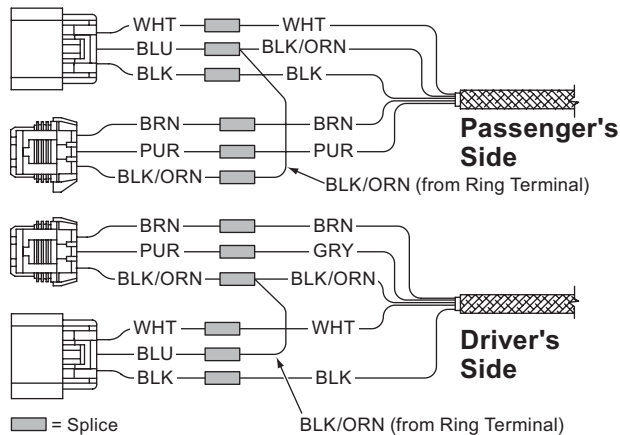
### 6-Pin Headlamps



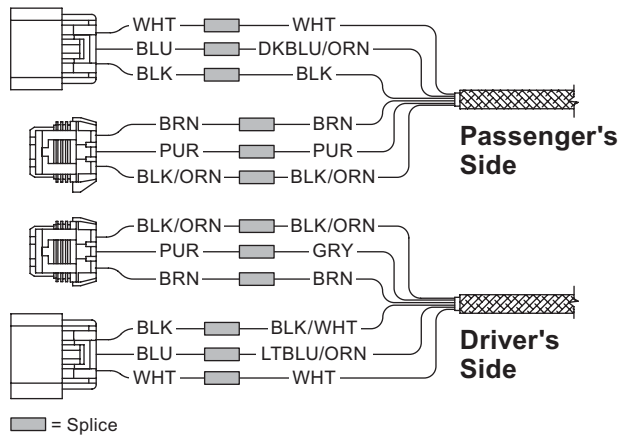
### 11-Pin Headlamps



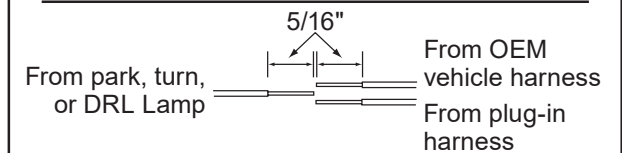
### 7- and 9-Pin Headlamps



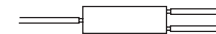
### 12-Pin Headlamps



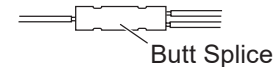
### Splicing Procedure



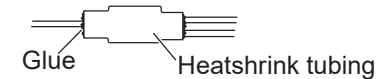
Insert wires into splice.



Crimp and solder each splice.

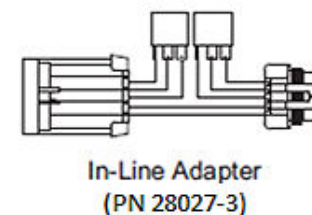
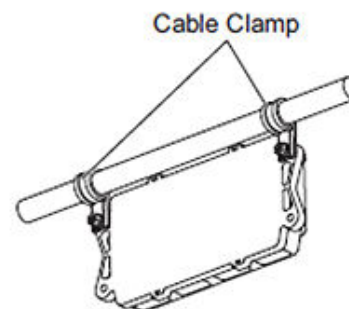
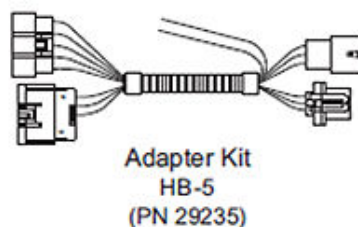
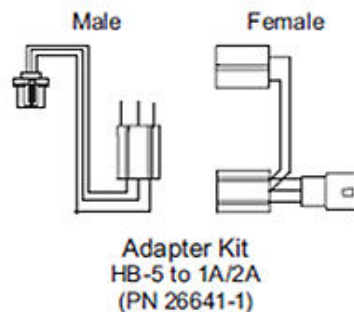
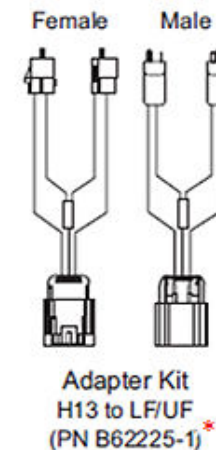
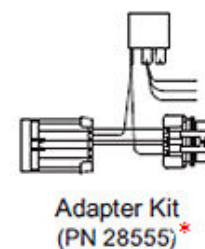
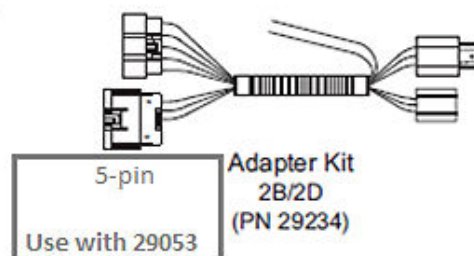
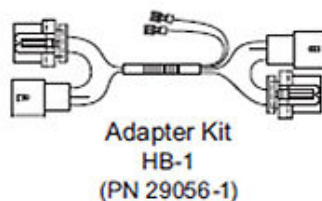
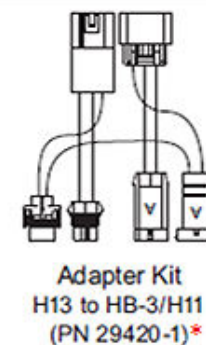
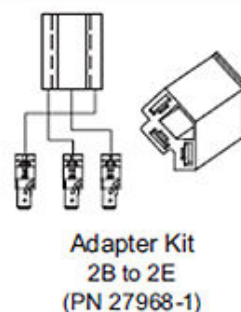
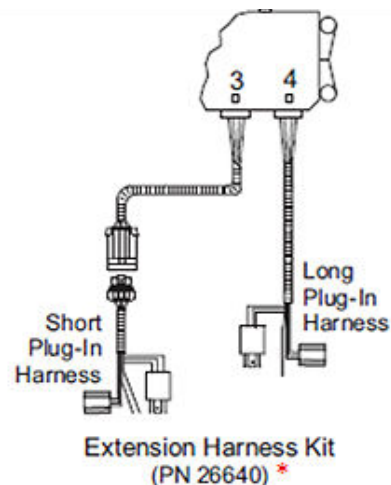
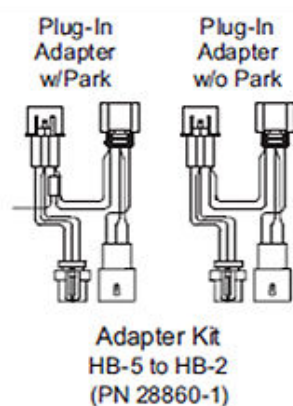


Cover the splice with heatshrink tubing. Using a hot air source, apply heat until tubing recovers and glue can be seen around the edges. Allow tubing to cool before handling.



Excerpts taken from Lit. No. 29034

## 4-PORT ISOLATION MODULE SYSTEM – ADAPTER KITS



28

## HEADLAMP MATRIX

| Headlamp Type | Vehicles                             | Years          | Isolation Module Kit # ** | Short Plug-In Harness | Long Plug-In Harness | 11-Pin Vehicle Harness Only | Isolation Module |
|---------------|--------------------------------------|----------------|---------------------------|-----------------------|----------------------|-----------------------------|------------------|
| H13           | Ford F-150                           | 2004 – 2010    | 28400*                    | 28244*                | 28242*               | 26357                       | 26400*           |
|               | Ford Super Duty                      | 2005 – 2007    |                           |                       |                      |                             |                  |
|               | Ford Super Duty                      | 2009 – Present |                           |                       |                      |                             |                  |
|               | Dodge 1500, 2500, 3500               | 2006 – 2012    |                           |                       |                      |                             |                  |
|               | Dodge Dakota                         | 2004 – 2011    |                           |                       |                      |                             |                  |
|               | Dodge Durango                        | 2004 – 2010    |                           |                       |                      |                             |                  |
|               | GMC Yukon/Yukon XL                   | 2007 – 2014    |                           |                       |                      |                             |                  |
| HB-3/H11      | Chevy/GMC 1500                       | 2007 – 2013    | 28400*, 28027-3, 29420-1* | 28244* & 29420-1*     | 28242* & 29420-1*    | 26357 & 28027-3             | 26400*           |
|               | Chevy/GMC 2500, 3500                 | 2007 – 2014    |                           |                       |                      |                             |                  |
| HB-3/HB-4     | Chevy/GMC Tahoe/Suburban             | 2007 – 2014    | 27780*, 29458*, 28027-3   | 26315* & 29458*       | 26352* & 29458*      | 26357 & 28027-3             | 27781*           |
|               | Chevy/GMC Trailblazer/Envoy/Bravada  | 2002 – 2009    | 28028*                    | 28032                 | 28030*               | 26357                       | 26400*           |
|               | Chevy/GMC Blazer/Jimmy/S-10/Sonoma   | 1998 – 2004    | 27480-1*                  | 26361-1*              | 26360-1*             | 26357                       | 26400*           |
|               | Chevy/GMC Colorado/Canyon (US)       | 2004 – 2012    |                           |                       |                      |                             |                  |
|               | Chevy/GMC Colorado/Canyon (Canadian) | 2004 – 2014    | 8437-1* & 28555*          | 26361-1* & 28555*     | 26360-1* & 28555*    | 26357                       | 27781*           |
|               | Chevy/GMC Blazer/Jimmy/S-10/Sonoma   | 1995 – 1997    | 8438                      | 26351*                | 26352*               | 26357                       | 26400*           |
|               | Chevy/GMC 1500/2500/3500 (classic)   | 1990 – 2002    |                           |                       |                      |                             |                  |
|               | Chevy/GMC 1500/2500/3500             | 1999 – 2002    | 8437-1*                   | 26361-1*              | 26360-1*             | 26357                       | 27781*           |
|               | Chevy/GMC 1500/2500/3500/Avalanche   | 2003 – 2006    | 27780*                    |                       |                      | 26357                       | 27781*           |
|               | Ford Explorer                        | 2002 – 2003    | 8438* & 28027-3           | 26351*                | 26352*               | 26357 & 28027-3             | 26400*           |
|               | Nissan Titan                         | 2004 – Present | 27480-1* & 28027-3        |                       |                      | 26357 & 28027-3             |                  |

\* Starred part numbers are obsolete.

\*\* Kit includes module, long & short harness, 11-pin vehicle light harness.

## HEADLAMP MATRIX

| Headlamp Type    | Vehicles                           | Years                    | Isolation Module Kit # ** | Short Plug-In Harness | Long Plug-In Harness | 11-Pin Vehicle Harness Only | Isolation Module |
|------------------|------------------------------------|--------------------------|---------------------------|-----------------------|----------------------|-----------------------------|------------------|
| 2B/2D or HB-2    | Jeep                               | 1984 – 2002              | 8439*                     | 26356*                | 26353*               | 26357                       | 26400*           |
|                  | Dodge                              | 1972 – 1993              |                           |                       |                      |                             |                  |
|                  | Ford                               | 1980 – 2002              |                           |                       |                      |                             |                  |
|                  | Chevy/GMC                          | 1973 – 2002              |                           |                       |                      |                             |                  |
|                  | Toyota                             | 1984 – Present           |                           |                       |                      |                             |                  |
|                  | International                      | 1989 – 2002              |                           |                       |                      |                             |                  |
| 2E               | Chevy/GMC Blazer/Jimmy/S-10/Sonoma | 1995 – 1997              | 8439* & 27968-1           | 26356* & 27968-1      | 26353* & 27968-1     |                             |                  |
|                  | Dodge Dakota                       | 1987 – 1996              |                           |                       |                      |                             |                  |
| 2B/2D or 1A/2A   | Chevy/GMC 4500/5500                | 2003 – 2009              | 27890*                    | 27885*                | 27886*               |                             |                  |
| 2B/2D            | Chevy/GMC Topkick/Kodiak 4500/5500 | 1990 – 2002              | 8443*                     | n/a                   | 26638*               |                             |                  |
| HB-5/HB-1 (Quad) | Dodge                              | 1999 – 2002              | 8442*                     | 26372*                | 26370*               |                             |                  |
| HB-1 or HB-5     | Dodge                              | 1991 – 2005              | 8436*                     | 26349*                | 26354*               |                             |                  |
|                  | Ford                               | 1980 – 2004              |                           |                       |                      |                             |                  |
|                  | Mazda                              | 1991 – 1994, 1999 – 2003 |                           |                       |                      |                             |                  |
|                  | Toyota 4Runner                     | 1992 – 1995              |                           |                       |                      |                             |                  |
|                  | Jeep Liberty                       | 2002 – 2007              |                           |                       |                      |                             |                  |
|                  | Mitsubishi FG                      | 2005 – 2010              | 8436* & 28860-1           | 26349* & 28860-1      | 26354* & 28860-1     |                             |                  |
|                  | International                      | 2003 – Present           | 8436* & 26640*            | 26349*                | 26354*               |                             |                  |
| 1A/2A            | Dodge                              | 1974 – 1983              | 8436* & 26641-1           | 26349* & 26641-1      | 26354* & 26641-1     |                             |                  |
|                  | Chevy/GMC                          | 1973 – 1987              |                           |                       |                      |                             |                  |
|                  | Isuzu/Mitsubishi                   | 1994 – 1997              |                           |                       |                      |                             |                  |
| LF/UF            | Jeep Wagoneer                      | 1985 – 1991              | 28400* & B62225-1*        | 28244* & B62225-1*    | 28242* & B62225-1*   |                             |                  |
|                  | Chevy/GMC                          | 1988 – 1991              |                           |                       |                      |                             |                  |

\* Starred part numbers are obsolete.

\*\* Kit includes module, long & short harness, 11-pin vehicle light harness.





Refer to Relay Electrical Index for  
Vehicle Specific Plug-In Harness Kits

MVP® control pin kit  
22123

#### REPAIR END KITS

| Part                                                 | Description |
|------------------------------------------------------|-------------|
| <b>Truck Side</b>                                    |             |
| 49308                                                | 9-Pin       |
| 49310                                                | 12-Pin      |
| <b>Snowplow Side</b>                                 |             |
| 49317                                                | 9-Pin       |
| 49319                                                | 12-Pin(a)   |
| <b>Kit Containing Both Snowplow &amp; Truck Ends</b> |             |
| 49366K                                               | 9-Pin       |
| 49367K                                               | 12-Pin(a)   |

#### Truck Side

#### Snowplow Side

#### Kit Containing Both Snowplow & Truck Ends

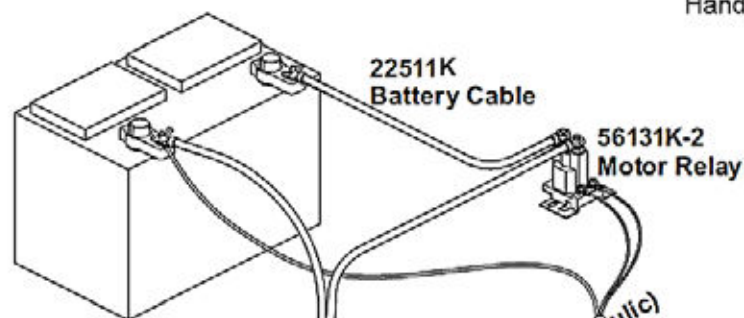
#### Plow Light Kits

|          |              |
|----------|--------------|
| 61540-1  | 9-Pin        |
| 61550-1  | 12-Pin       |
| 66640-2* | 12-Pin (MVP) |
| 62500-1  | 7-Pin (CH)   |

Joy Stick  
Handheld

#### CONTROLS & ADAPTERS

| Part   | Description                          |
|--------|--------------------------------------|
| 56369  | Solenoid Control                     |
| 56462  | CabCommand for Straight Blades       |
| 96462  | NEW 9-Button MVP® Control            |
| 96369  | NEW Joystick MVP Control             |
| 66760K | MVP to Straight Blade Adapter        |
| 62392  | SAE to Molex Adapter                 |
| 61845  | 4' Control Harness Extension (Molex) |
| 27070  | Molex Repair End Kit (Veh. Harness)  |
| 29033  | NIGHTHAWK™ Adapter Kit               |



61169 Vehicle Battery Cable Assy.  
66623 MVP Vehicle Battery Cable Assy.

62502 7-Pin Vehicle Harness  
61437 9-Pin (Long)  
62512 12-Pin Vehicle Harness  
61557 12-Pin (Long)  
62522 MVP Vehicle Harness  
66610 MVP Vehicle Harness

21294 Plow Cable Assy.  
66624 MVP Plow Cable Assy.

62503 7-Pin Plow Harness (Central Hydraulic)  
61438 9-Pin Plow Harness  
61558 12-Pin Plow Harness  
66611-1 MVP Plow Harness

80168  
6A Fuse Kit

61535K  
Relay

For vehicle specific headlamp plug-in harness,  
refer to the *Headlamp Electrical Schematic  
Guide* PN 22373.

(a) Can be used for MVP Blades if modified.

#### Plug Covers

Truck 61548K (single )  
Plow 61246 (double  
hangs on plow)

\*\*Starred part numbers are obsolete.

# RELAY ELECTRICAL INDEX

| Headlamp Type    | Vehicles               | Years       | WESTERN® Kit         | WP Headlamp Harness | WP Vehicle Harness | WP Headlamp Relay |
|------------------|------------------------|-------------|----------------------|---------------------|--------------------|-------------------|
| HB-3/HB-4        | Chevy/GMC No DRL       | 1988 – 1998 | 61515                | 61716               | 61437              | (2) 61535K        |
|                  | Chevy/GMC with DRL     | 1987 – 1995 | 61585                | 61586               | 61557              | (3) 61535K        |
|                  | Chevy/GMC              | 1999 – 2002 | 63392                | 26071               | 61437              | (4) 61535K        |
|                  | Chevy/GMC              | 2003 – 2006 | 64077                | 64075               | 61557              | (6) 61535K        |
|                  | Chevy/GMC (MVP®/EZ-V®) | 2003 – 2006 | 64085                | 64075               | 63390 & 63401      | (6) 61535K        |
| 2B/2D or HB-2    | Jeep                   | 1984 – 2002 | 61530/<br>ALT: 61545 | 61781-1             | 61437              | (2) 61535K        |
|                  | Dodge                  | 1972 – 1993 |                      |                     |                    |                   |
|                  | Ford                   | 1980 – 2007 |                      |                     |                    |                   |
|                  | Chevy/GMC No DRL       | 1981 – 1998 | 61545                | 61546               | 61437              | (2) 61535K        |
|                  | Chevy/GMC with DRL     | 1981 – 1998 |                      |                     |                    |                   |
|                  | Toyota No DRL          | 1984 – 2002 |                      |                     |                    |                   |
|                  | Toyota With DRL        | 1984 – 2002 | 61555                | 61556               | 61557              | (3) 61535K        |
|                  | Ford                   | 1999 – 2002 | 61595                | 61546 (2)           | 61557              | (4) 61535K        |
|                  | International          | 1989 – 2002 | 63422                | 61546               | 61437              | (2) 61535K        |
| 2E               | Dodge Dakota           | 1987 – 1996 | 62520                | 62521               | 62522              | (3) 61535K        |
| HB-5/HB-1 (Quad) | Dodge                  | 1999 – 2002 | 61575                | 61576               | 61437              | (2) 61535K        |
| HB-1             | Dodge                  | 1994 – 1998 | 63396                | 26027               | 61437              | (3) 61535K        |
|                  | Dodge                  | 1999 – 2001 | 62525                | 62526               | 61437              | (2) 61535K        |
|                  | Ford                   | 1980 – 1991 | 62917                | 26009               | 61437              | (4) 61535K        |
| HB-5             | Ford                   | 1992 – 1998 | 61570                | 61571               | 61437              | (2) 61535K        |
|                  | Ford                   | 1999 – 2003 | 61590                | 61591               | 61437              | (2) 61535K        |
| 1A/2A            | Dodge                  | 1974 – 1983 | 63420                | 61591               | 61437              | (2) 61535K        |
|                  | Chevy/GMC              | 1973 – 1987 | 61565                | 61566               | 61437              | (2) 61535K        |
|                  | Isuzu/Mitsubishi       | 1994 – 1997 | 63407                | 63409               | 61437              | (2) 61535K        |
| LF/UF            | Jeep Wagoneer          | 1985 – 1991 | 61580                | 61581               | 61437              | (2) 61535K        |
|                  | Chevy/GMC              | 1988 – 1991 |                      |                     |                    |                   |

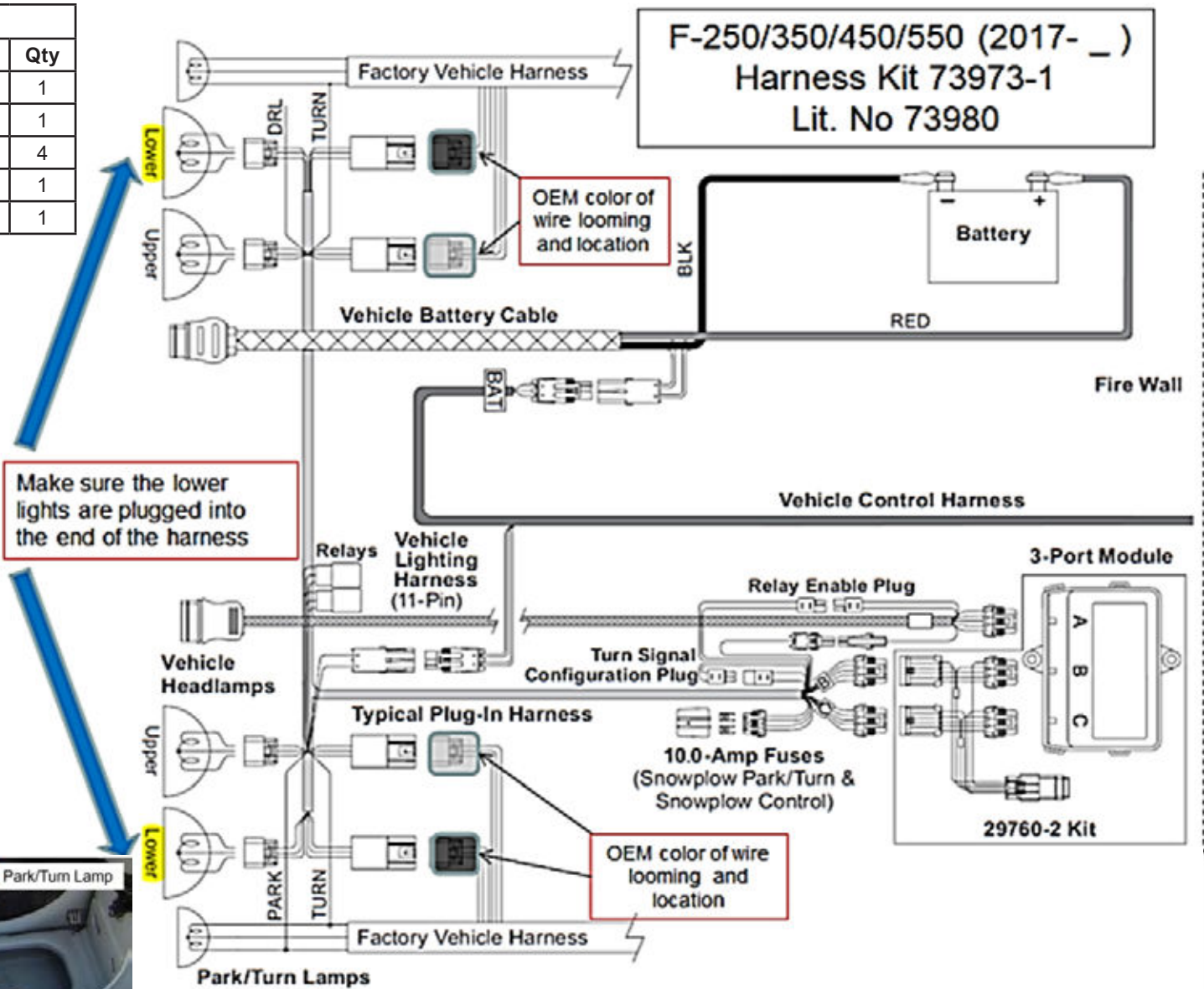
Part numbers in red are obsolete.

Part numbers in blue are 12-pin harness with DRL (61557).

## HEADLAMP HARNESS GUIDE

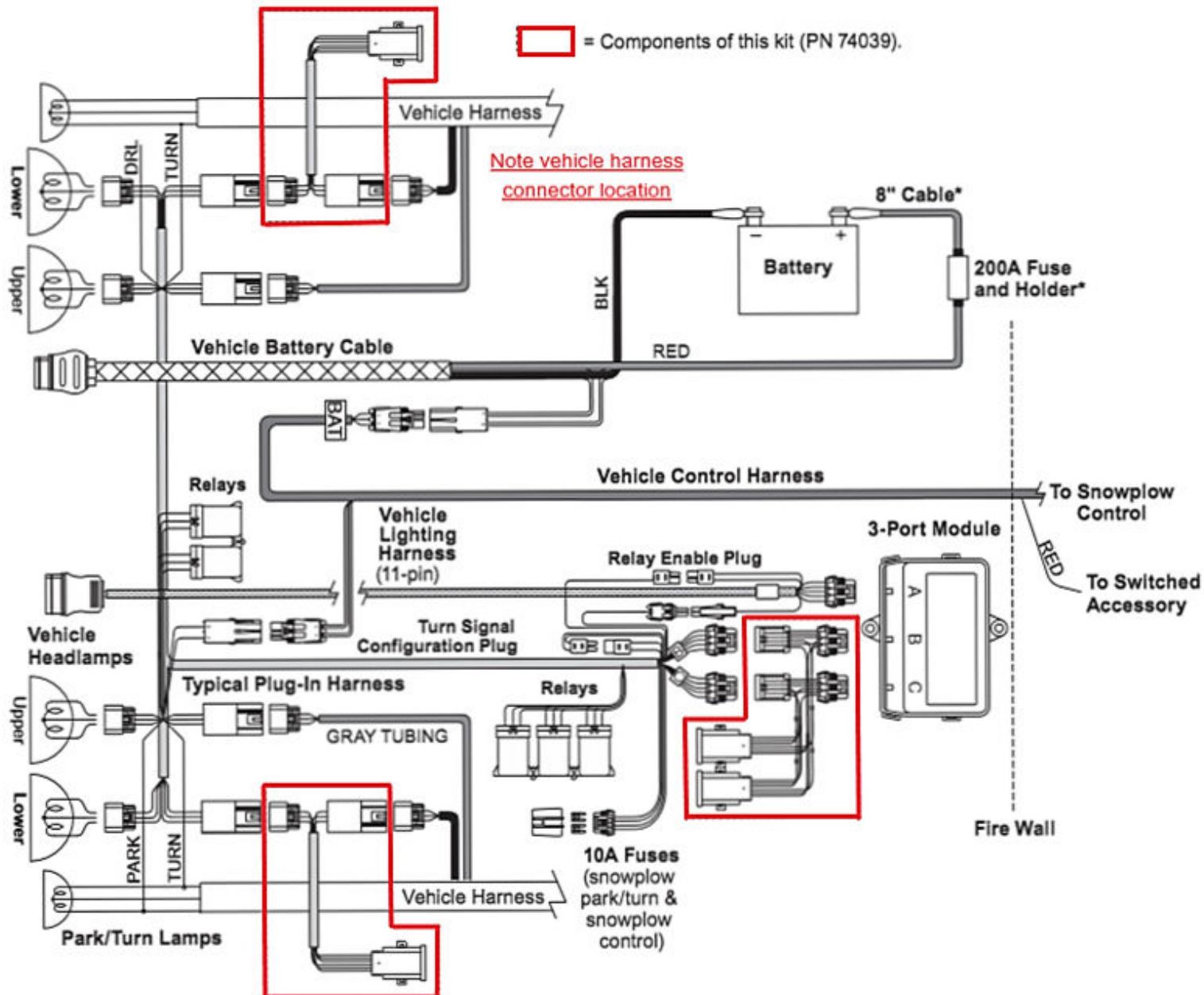
| HEADLAMP TYPE                                                                                | HEADLAMP HARNESS KIT (Plug-In & 11-Pin) | PLUG-IN HARNESS ONLY | 11-PIN VEHICLE LIGHT HARNESS ONLY | NOTES                  |
|----------------------------------------------------------------------------------------------|-----------------------------------------|----------------------|-----------------------------------|------------------------|
| Chevy/GM/Ford/Jeep/Nissan (HB-3/HB-4)                                                        | 29048                                   | 28253                | 26357                             |                        |
| Chevy/GM/Ram/Ford/Jeep/Sterling (H13)                                                        | 29049                                   | 28986                | 26357                             |                        |
| Ram/Ford/Jeep/Mazda/Mitsubishi/Nissan (HB-5/HB-1 Dual or Quad)                               | 29050                                   | 28930                | 26357                             |                        |
| Chevy/GM/Ford/Isuzu/Jeep/Toyota (2B or 2D or HB-2 Dual)                                      | 29051                                   | 28464                | 29861-4                           |                        |
| Chevy/GM (HB-3/HB-4 4-Pin Connector)                                                         | 29052                                   | 28294                | 26357                             |                        |
| Chevy/GM/Ford/Hino/International/Mitsubishi/Fuso (2B/2D or 1A/2A, GM 4500/5500 Dual or Quad) | 29053                                   | 29058                | 26357                             |                        |
| Chevy/GM (2B/2D 7-Pin Connector)                                                             | 29054                                   | 29270                | 26357                             |                        |
| Chevy/GM/Toyota Quad (HB-3/H11)                                                              | 29400-7                                 | 29499-1              | 29861-4                           |                        |
| Ram (HIR2/HB-3) Projector Style                                                              | 69804-1                                 | 69803                | 29861-4                           |                        |
| Chevy/GM (HB-3/H11/HIR2)                                                                     | 69818-2                                 | 69817-1              | 69793-1                           |                        |
| Ford 2015 – F150 (HB3/H11 & LED)                                                             | 69889-1                                 | 69888                | 69793-1                           |                        |
| Ram 2500/3500 2015 – ___ (7-Wire)                                                            | 69892-1                                 | 69986                | 69886-1                           |                        |
| Chevy/GM K1500 Silv/Sierra 8-Pin (HID/LED)                                                   | 72101-1                                 | 83608                | 69793-1                           |                        |
| Ram 1500 16-Pin                                                                              | 72192                                   | 89803                | 69793-1                           |                        |
| Ram 12-Pin Halogen                                                                           | 72359                                   | 89703                | 69793-1                           |                        |
| Ford Super Duty Quad 2017 – ___ (H13)                                                        | 73973-1                                 | 73972-2              | 73970                             |                        |
| Ford Super Duty 2017 – ___ (LED)                                                             | 73977-2                                 | 73976-1              | 69793-1                           |                        |
| Frieghtliner 5-Pin                                                                           | 74212                                   | 29058                | 29861-4                           |                        |
| Chevy/GM/International (GM HD)                                                               | 81330                                   | 81328                | 29860                             |                        |
| Nissan (HB-3/HB-11)                                                                          | 83900                                   | 29499-1              | 29861-3                           |                        |
| Jeep (Halogen and LED)                                                                       | 89807                                   | 89806                | 69793-1                           |                        |
| Chevy/GM 2500/3500 (HB-3/H11/HID)                                                            | 52101                                   | 69935                | 29860                             | (May also need 29234.) |
| Ford Projector Style (HID)                                                                   | 69805-1                                 | 69798                | 69793-1                           |                        |
| Chevy/GM 1500 19 – ___ and 2500 20 – ___                                                     | 72199                                   | 72198                | 69793-1                           |                        |
| Nissan Titan (LED)                                                                           | 72200                                   | 72206                | 29861-4                           |                        |
| 16-Pin                                                                                       | 74973                                   | 74972                | 26357                             |                        |
| New Ford Ranger                                                                              | 77533                                   | 77532                | 69793-1                           |                        |
| Toyota Tundra (LED)                                                                          | 79147-1                                 | 79146-1              | 29861-4                           |                        |
| LED Gray                                                                                     | 96618-1                                 | 96617                | 69793-1                           |                        |

| 73973-1 Plug-In Harness Kit |                                   |     |
|-----------------------------|-----------------------------------|-----|
| Part                        | Description                       | Qty |
| 73970                       | Vehicle Lighting Harness – 11-Pin | 1   |
| 73972                       | Plug-In Harness, Quad H13         | 1   |
|                             | Reclosable Fasteners              | 4   |
|                             | Splices                           | 1   |
|                             | Heatshrink Tubing                 | 1   |



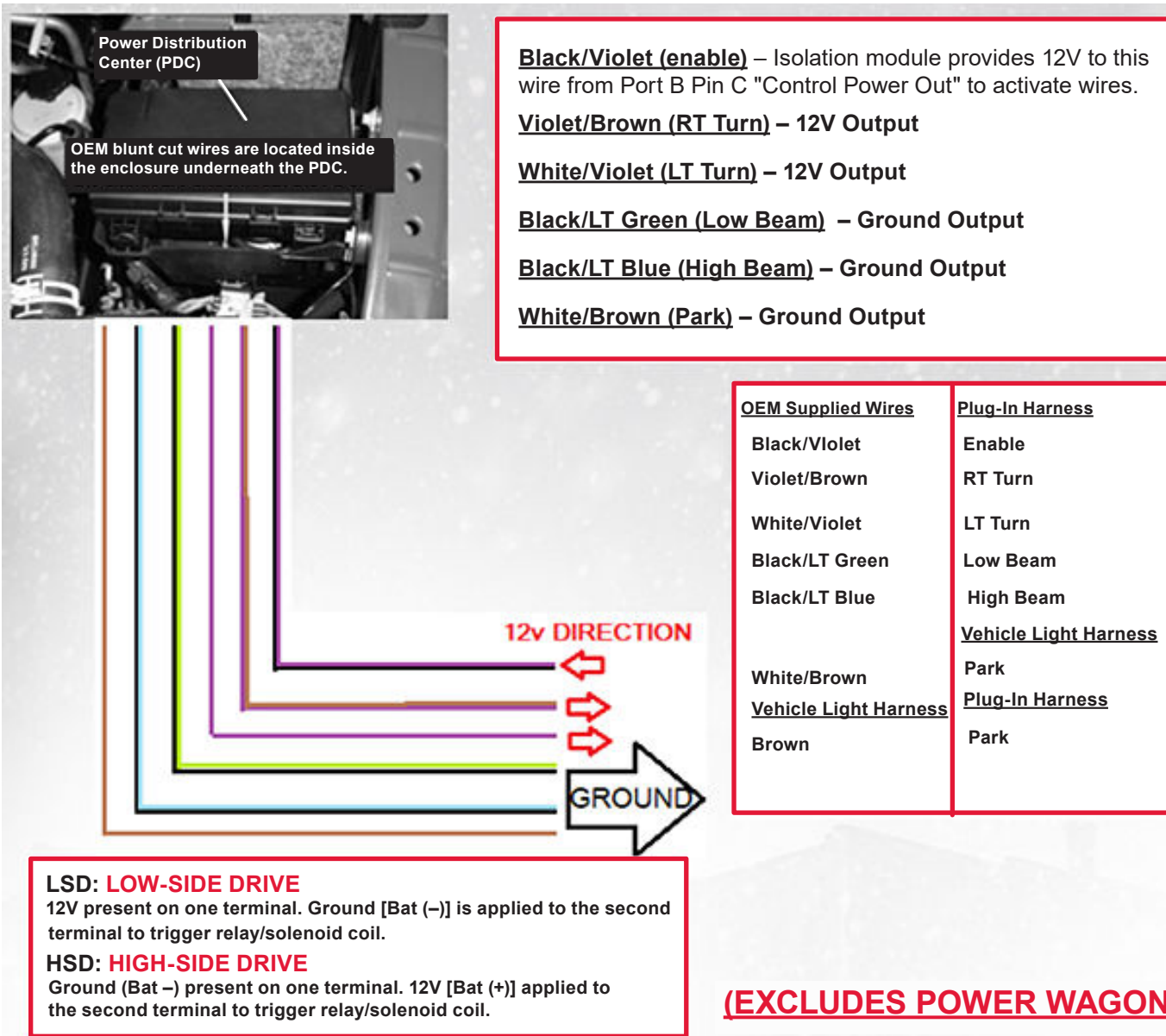


## 74039 SOFT START KIT – H13 QUAD HALOGEN LIGHTS

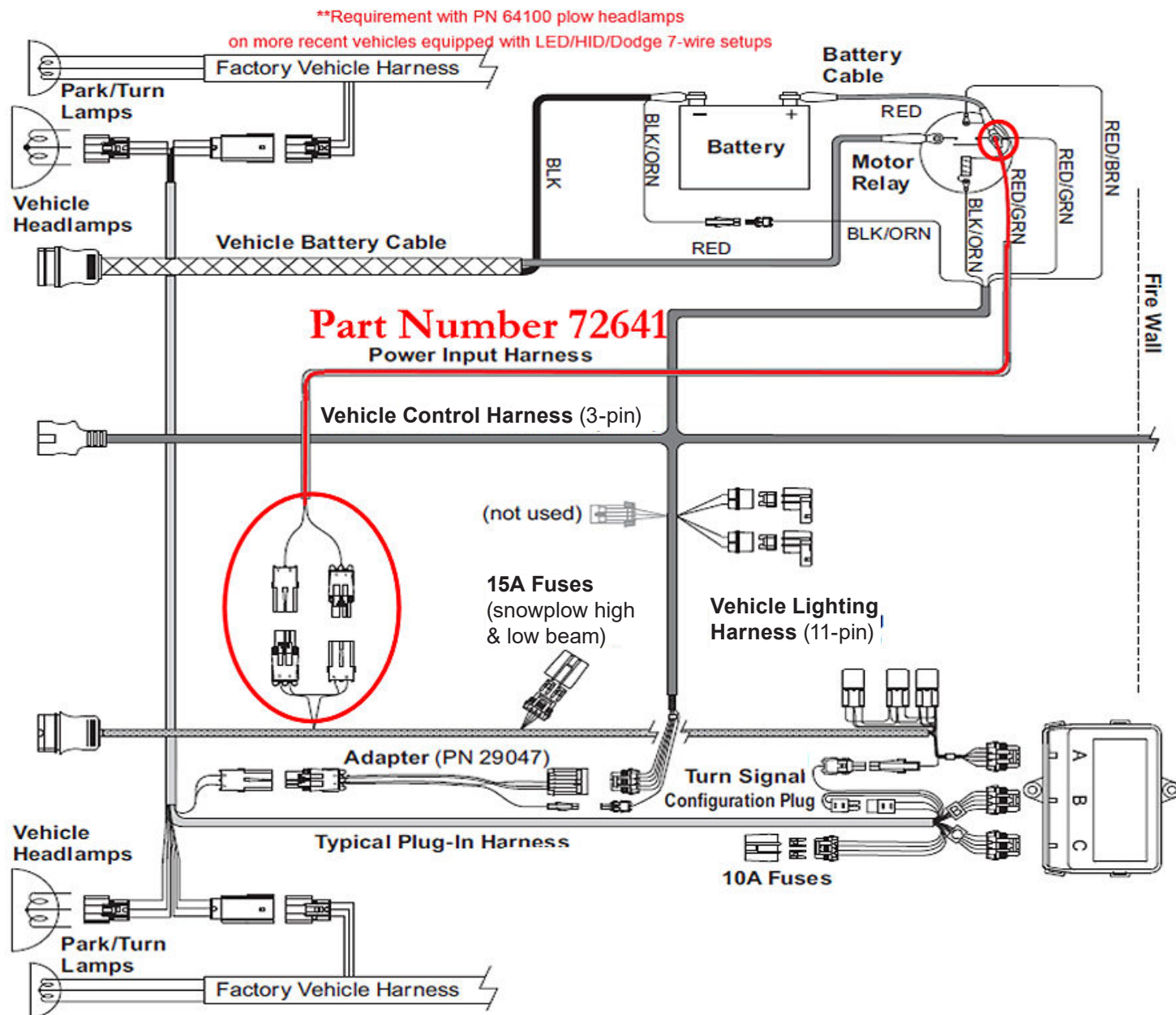




## 69892-1 HARNESS KIT – 2015 DODGE RAM 2500–5500

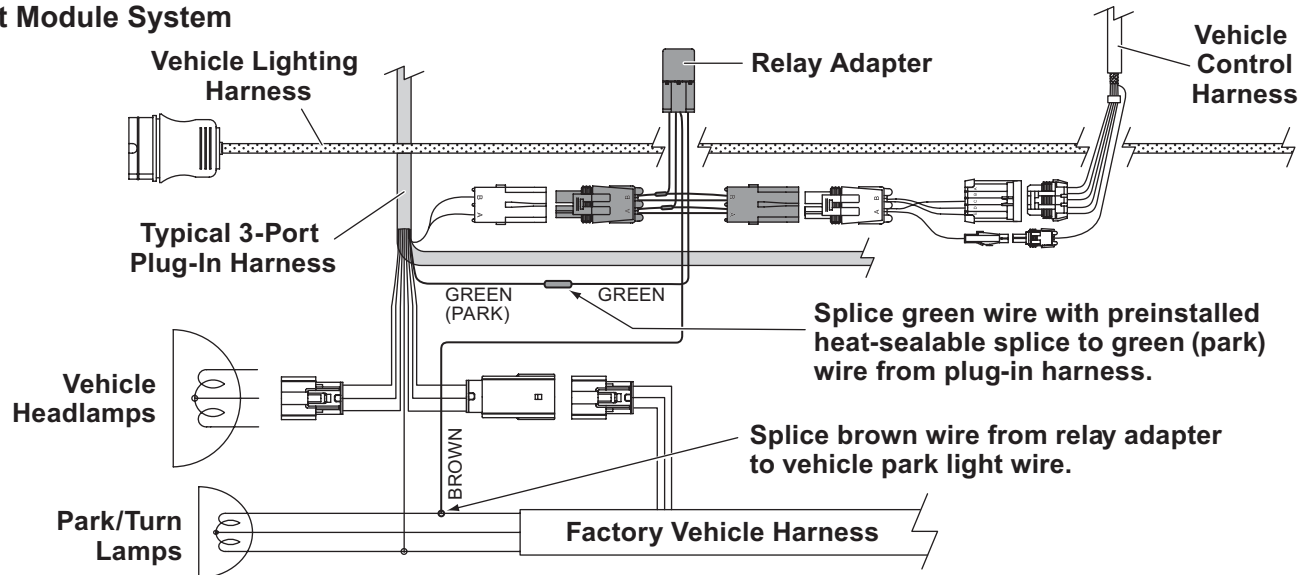


## 69892-1 HARNESS KIT – 2015 DODGE RAM 2500–5500



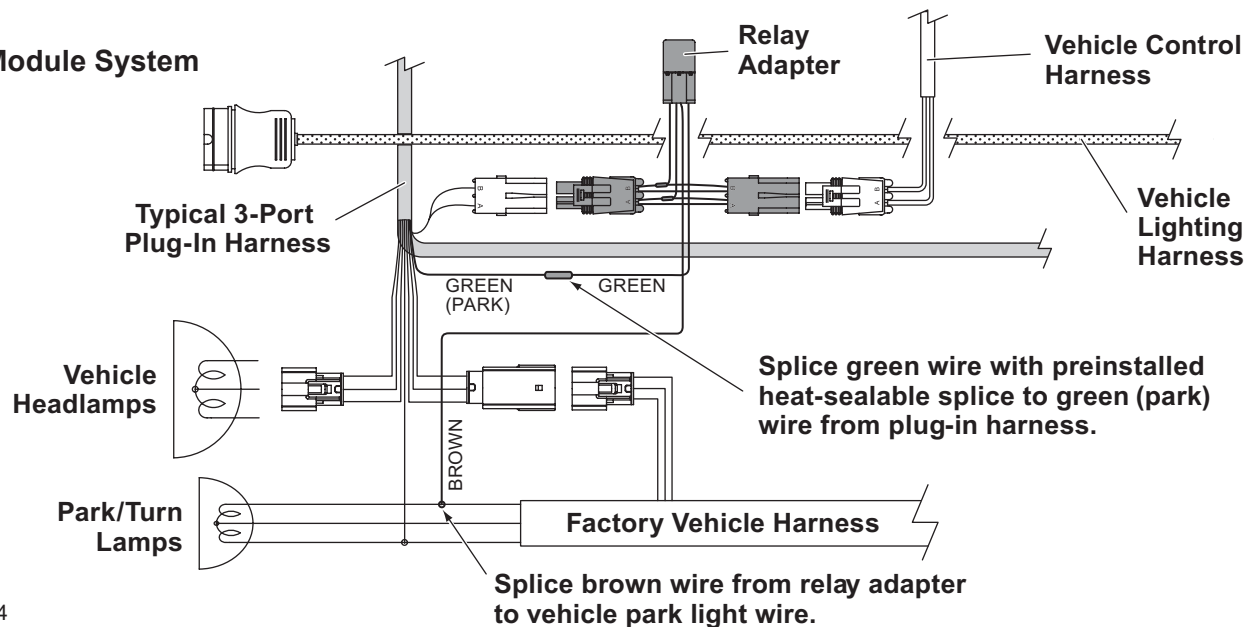
## 69826 RELAY ADAPTER KIT

### Typical 2-Plug, 3-Port Module System



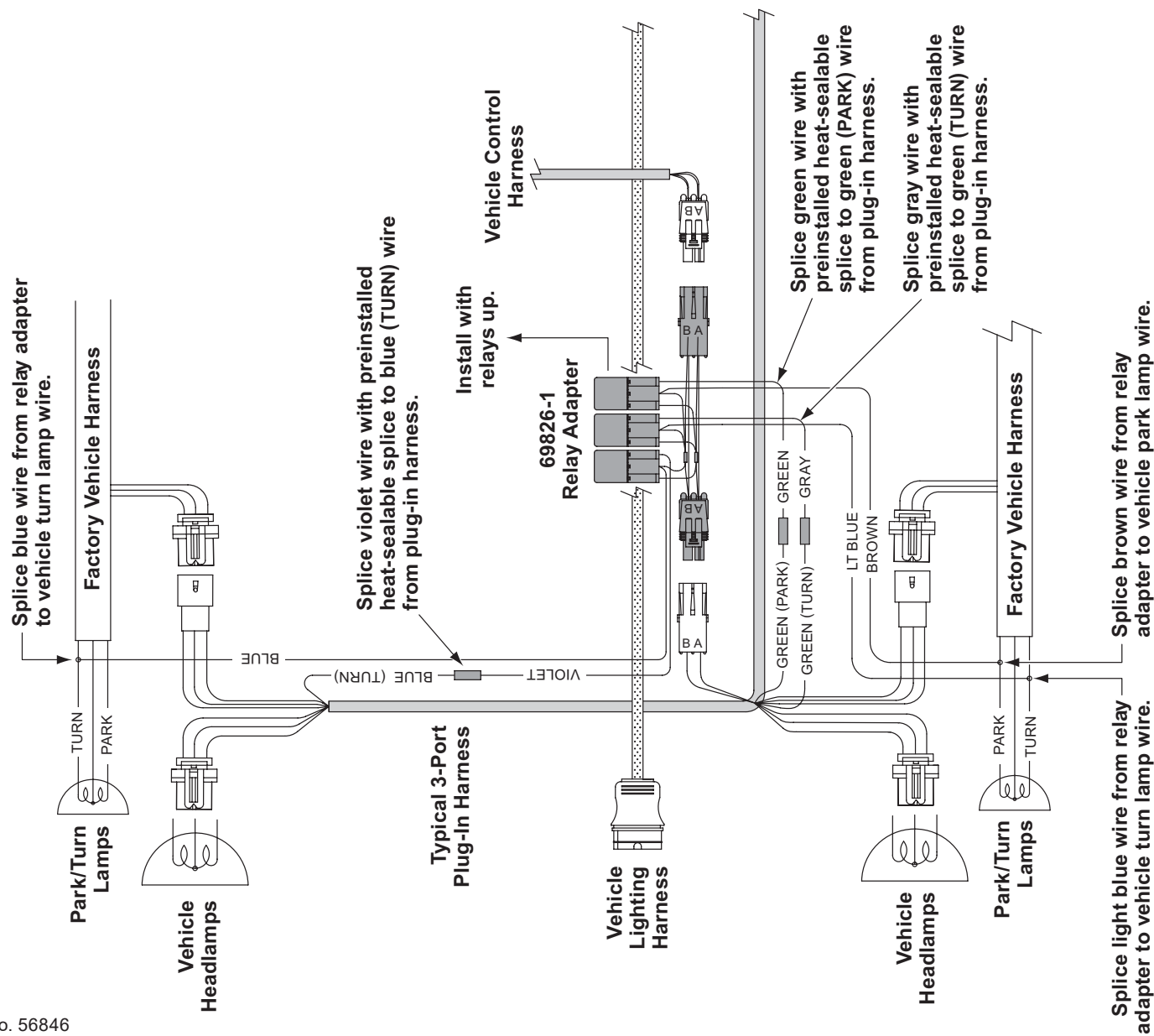
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### Typical 3-Plug, 3-Port Module System



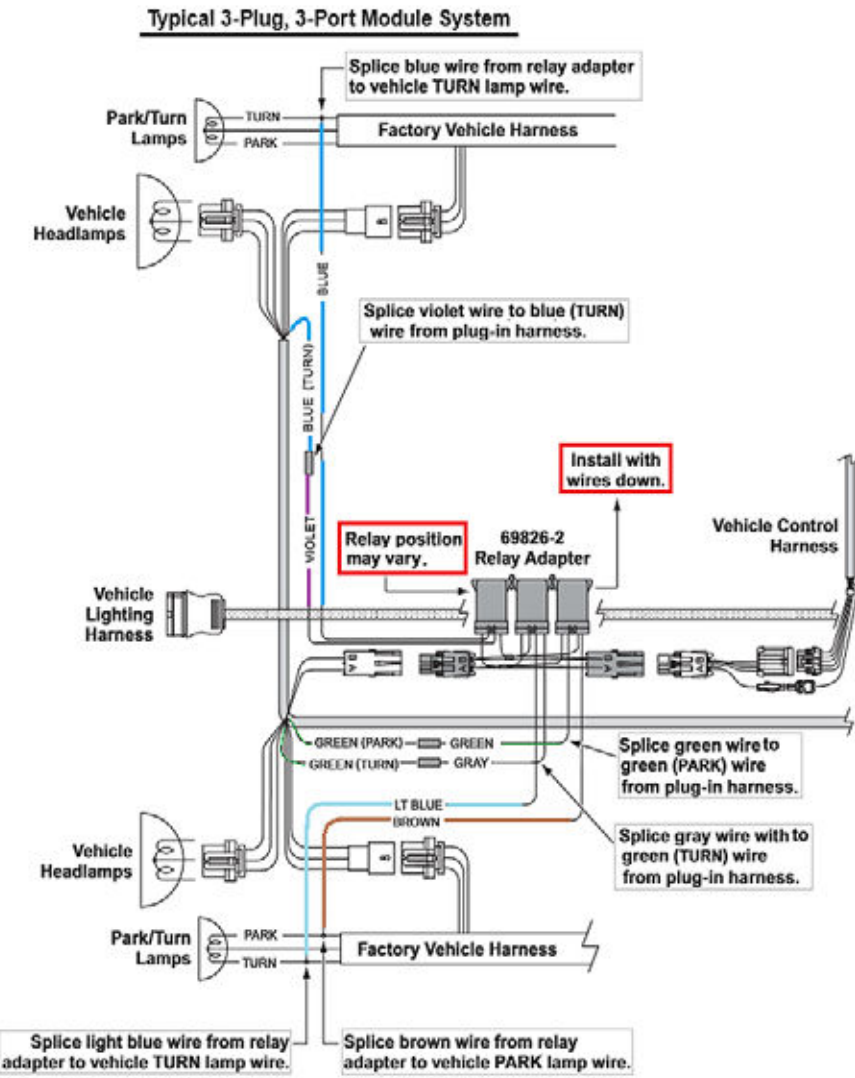
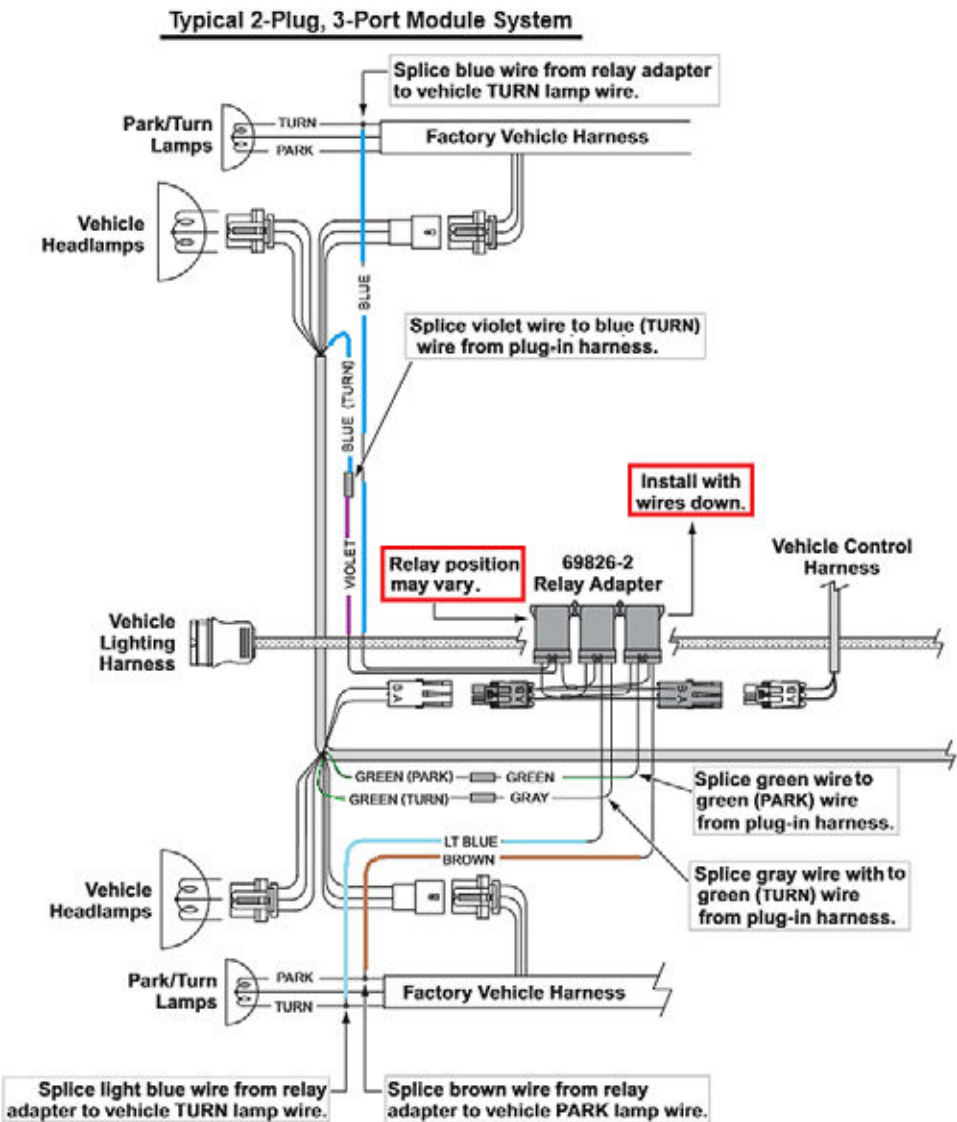
Excerpts taken from Lit. No. 69824

## 69826-1 RELAY ADAPTER KIT



Excerpts taken from Lit. No. 56846

69826-2 RELAY ADAPTER KIT

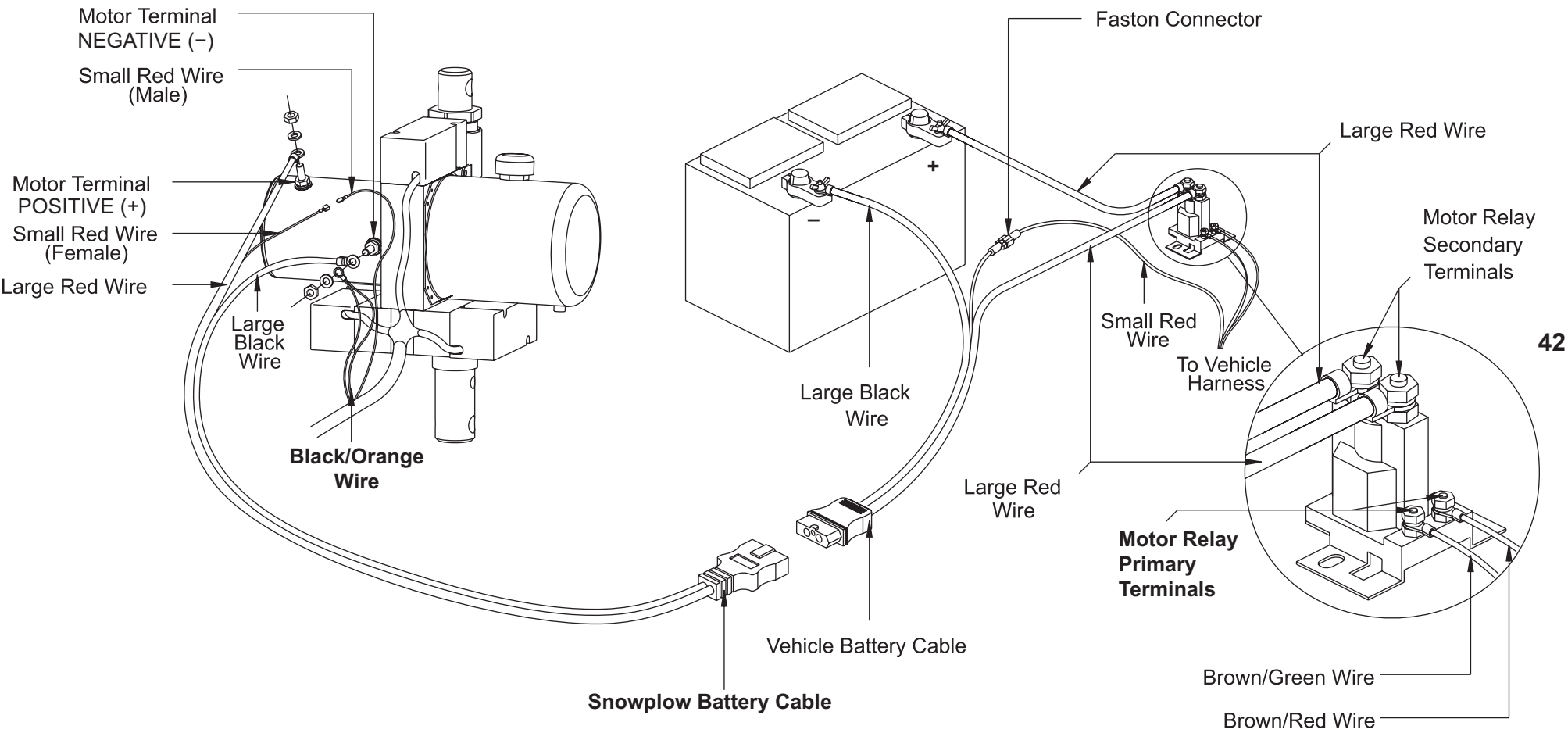




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# UniMount® FloStat® SYSTEM – MVP® SNOWPLOWS – MOTOR AND MOTOR RELAY TEST DIAGRAM



Excerpts taken from Lit. No. 21936

## UniMount® FloStat® SYSTEM – MVP® SNOWPLOWS – CONTROL TEST

### ⚠ CAUTION

Printed circuit board (PCB) is subject to damage from static electricity. Follow instructions below to safely handle PCB.

#### To safely handle PCB:

1. Place control on its side and remove top half of handle, leaving the PCB in lower half.
2. Remove PCB from housing by only touching the edges of the PCB.
3. Touch a clean finger to metal part of fuse "F2".
4. PCB is now safe to handle as long as contact with it is maintained.

#### Test Procedure

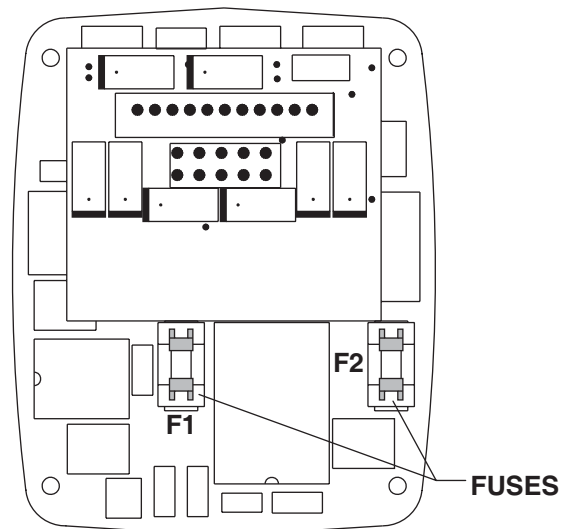
1. Disconnect the control in the cab and remove to bench.
2. Remove control handle half to access internal components.
3. Refer to diagram for fuse location.

**NOTE:** Fuse F1 is for motor relay, S1, S2, and S3 solenoid coils. Fuse F2 is for S4, S5, and S6 solenoid coils.

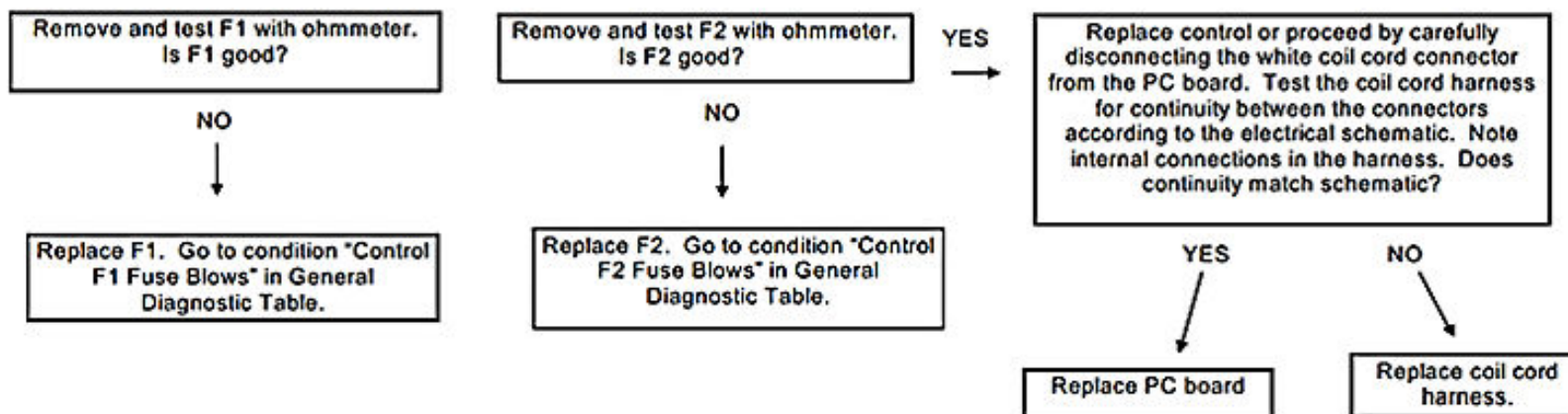
Fuse Kit: 69190

Repair Pin Kit: 22123

V-Plow Connector: 56496



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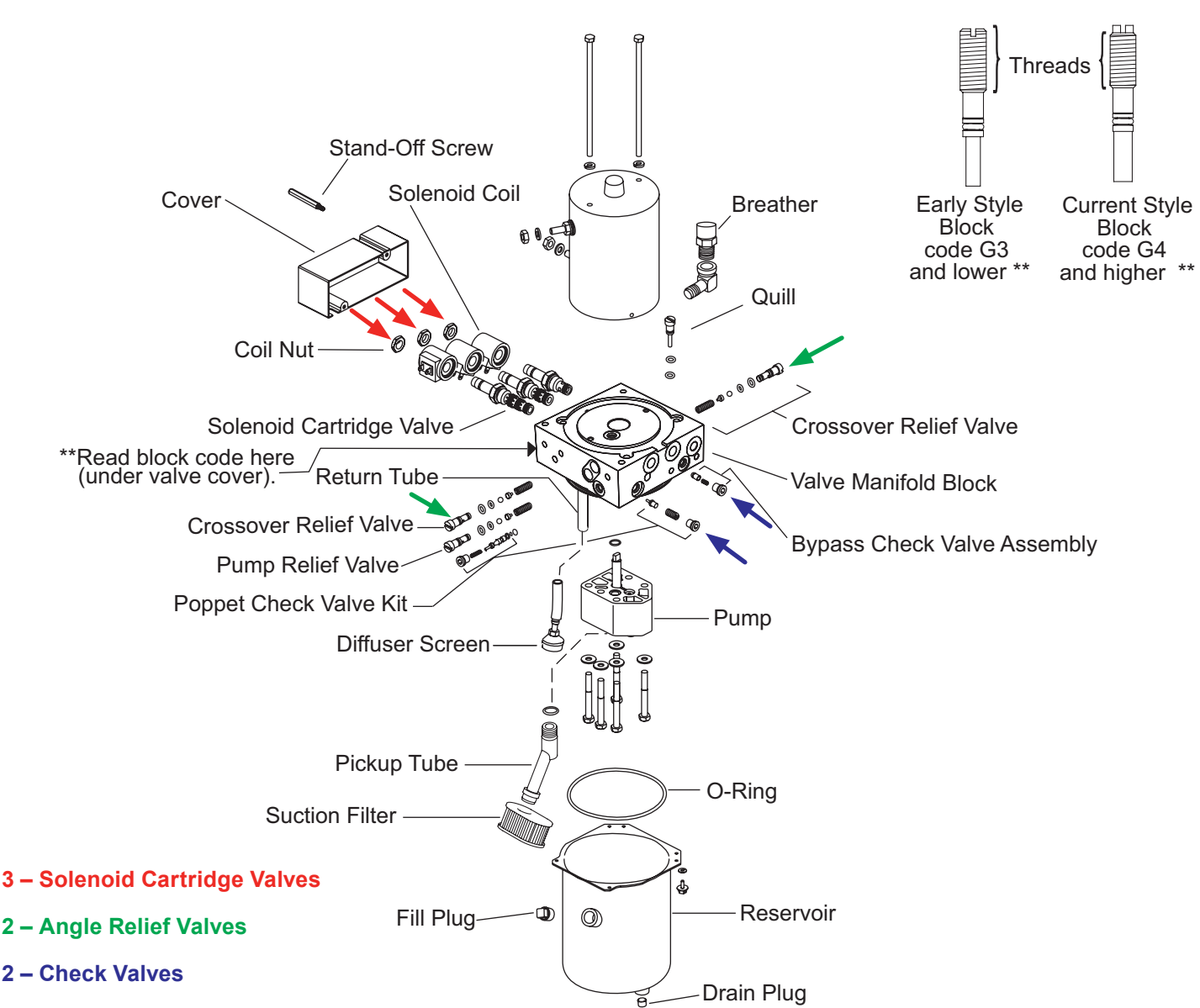


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# Hydraulic

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# FloStat® HYDRAULIC UNIT BREAKDOWN



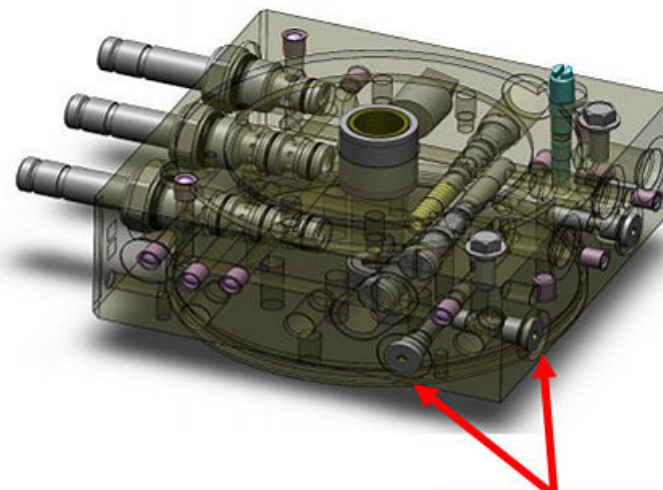
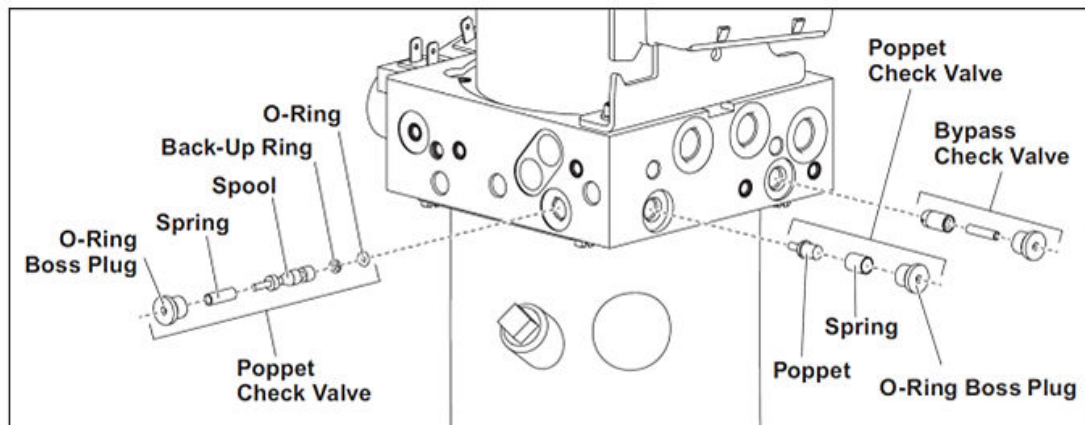
- 3 – Solenoid Cartridge Valves
- 2 – Angle Relief Valves
- 2 – Check Valves

Excerpts taken from Lit. No. 27097



# FloStat® PILOT-OPERATED (POPPET-STYLE) VALVE

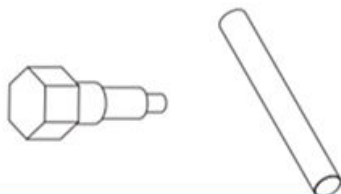
## PILOT-OPERATED (POPPET-STYLE) CHECK VALVES



**What is the symptom(s) if the poppet check valve is not functioning properly?**

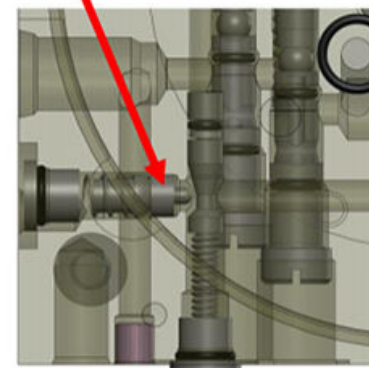
**If not fully seated, symptom will be slow/no angle LEFT, no angle RIGHT.**

### Poppet Seat Service Tool (PN 28530)



Install 1<sup>st</sup>;  
Remove 2<sup>nd</sup>

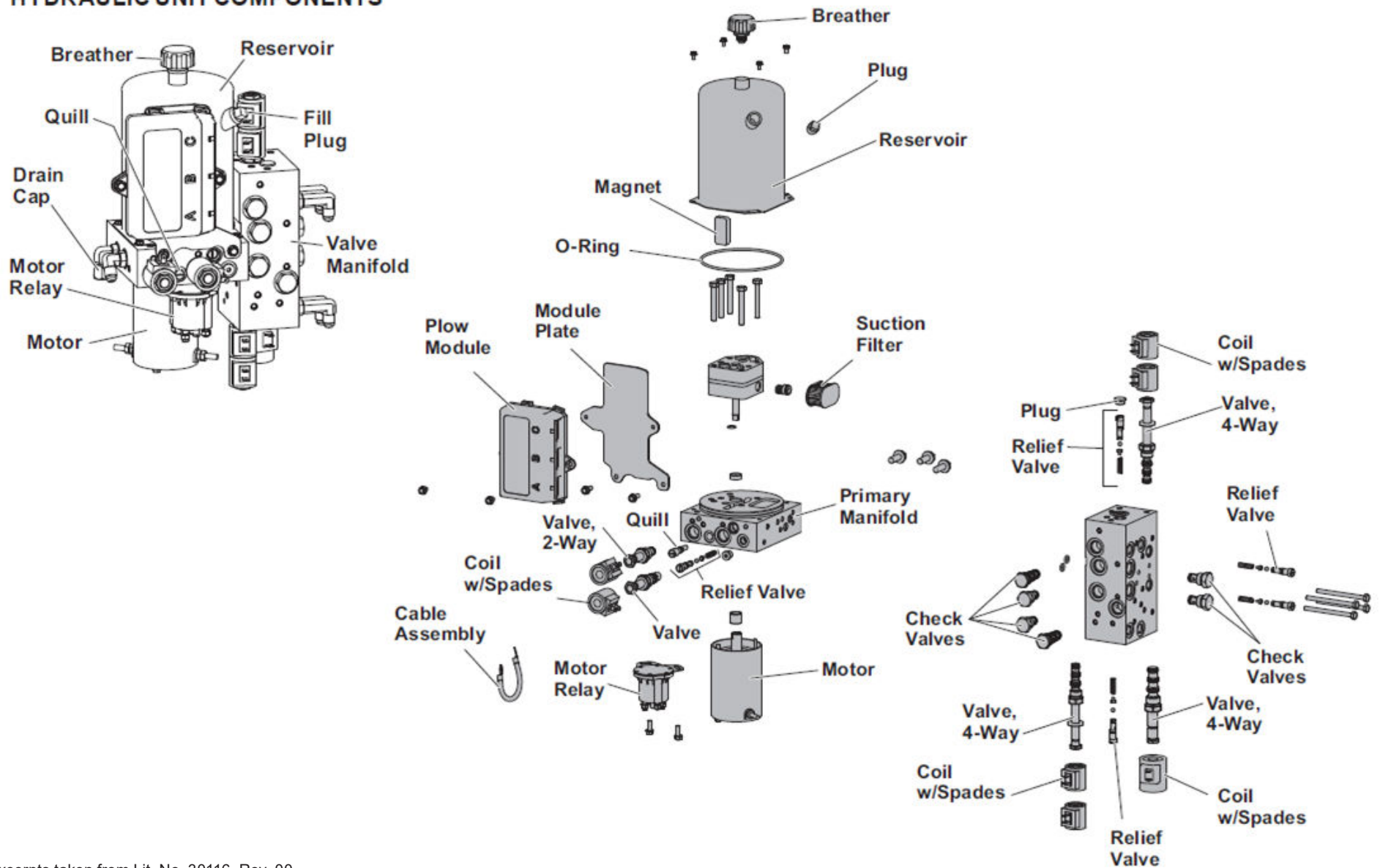
Install 2<sup>nd</sup>;  
Remove 1<sup>st</sup>



Excerpts Taken From LIT NO. 27097

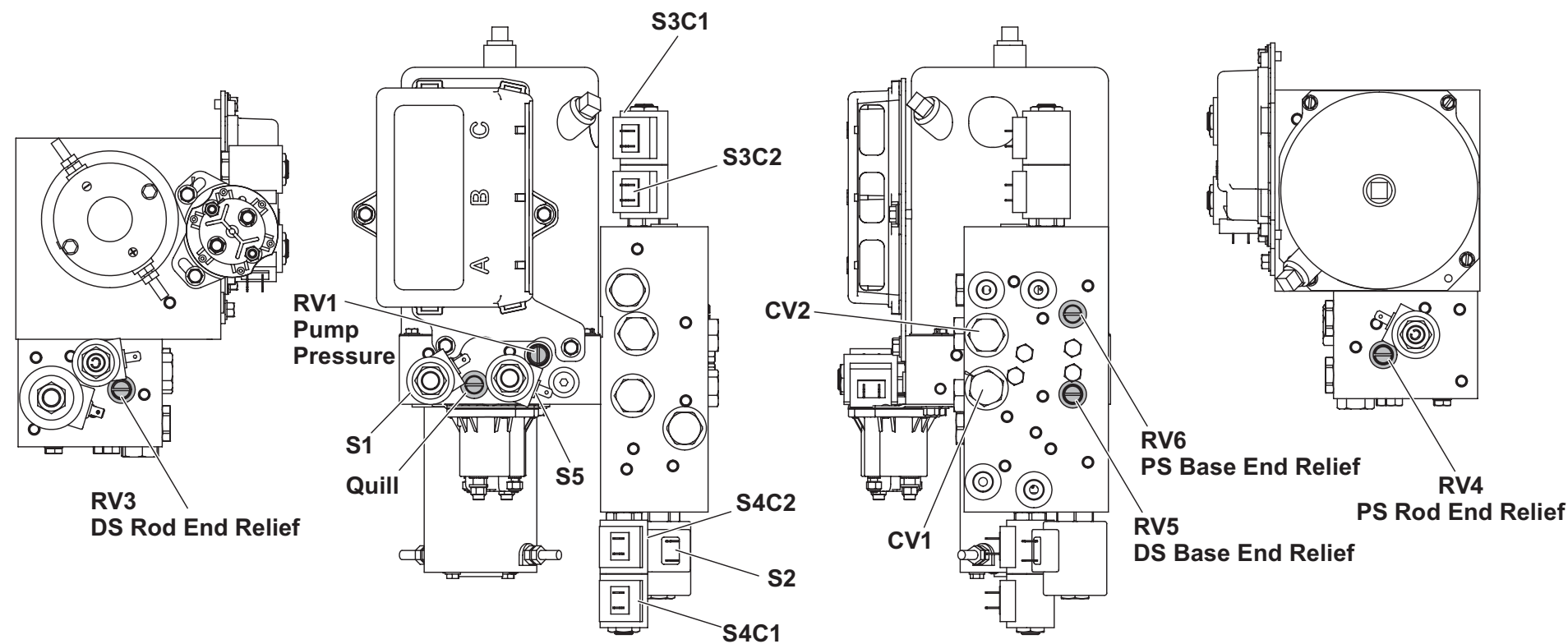
# UltraMount® 2 ENFORCER™ V-PLOW – HYDRAULIC SYSTEM

## HYDRAULIC UNIT COMPONENTS



UltraMount® 2 ENFORCER™ V-PLOW – HYDRAULIC SYSTEM

VALVE LOCATION



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| Solenoid Cartridge Valves |            |            |
|---------------------------|------------|------------|
| Coil                      | Valve Type | Wire Color |
| S1                        | SV08-2004  | Blue       |
| S2                        | SV10-43    | Dark Green |
| S3C1                      | SV08-47C   | Brown      |
| S3C2                      | SV08-47C   | White      |
| S4C1                      | SV08-47C   | Purple     |
| S4C2                      | SV08-47C   | Orange     |
| S5                        | SVCV08-20  | Yellow     |

Excerpts taken from Lit. No. 30116, Rev. 00

# UltraMount® / UltraMount® 2 – MVP PLUS™ & MVP 3™ SNOWPLOWS

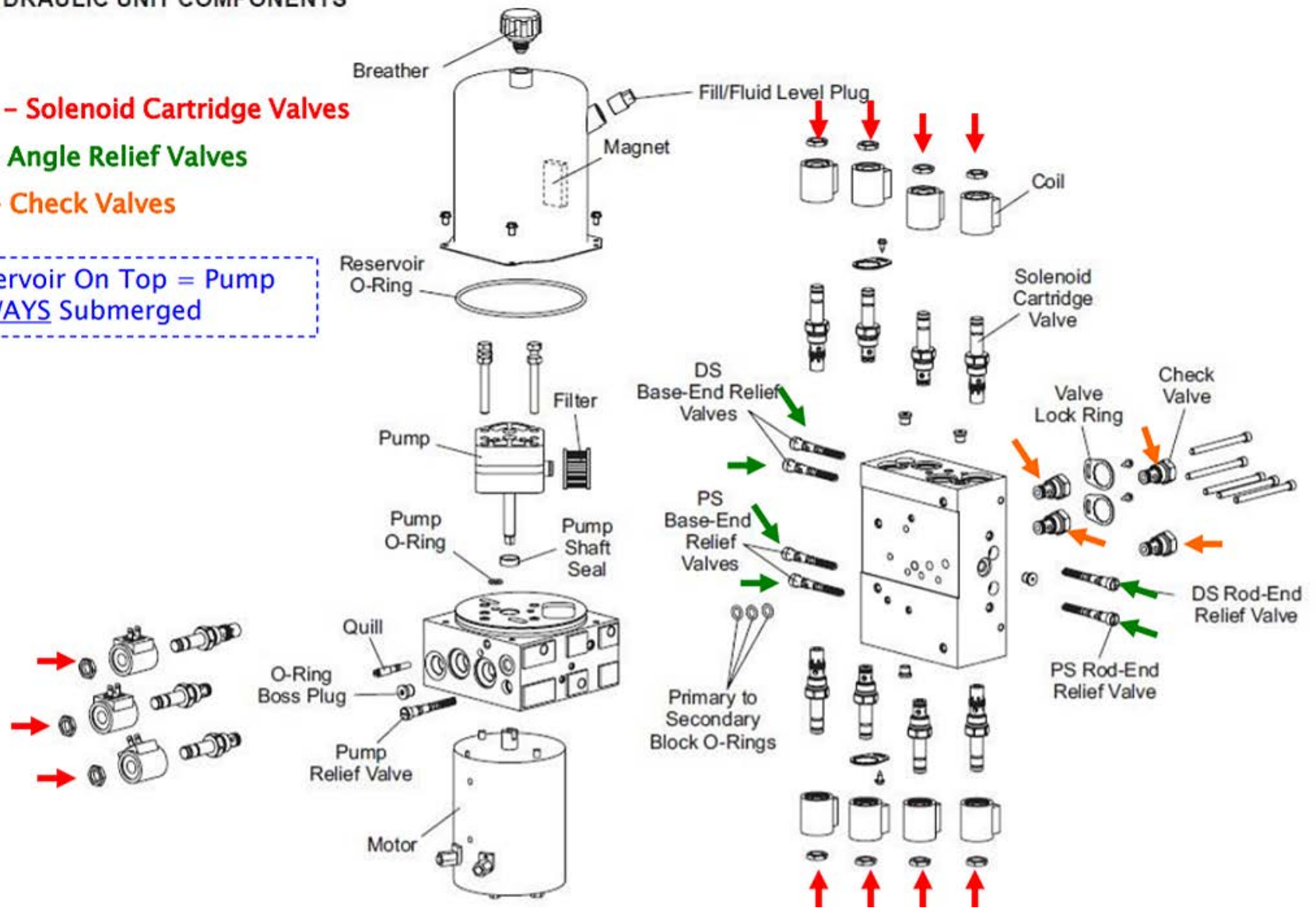
## HYDRAULIC UNIT COMPONENTS

11 – Solenoid Cartridge Valves

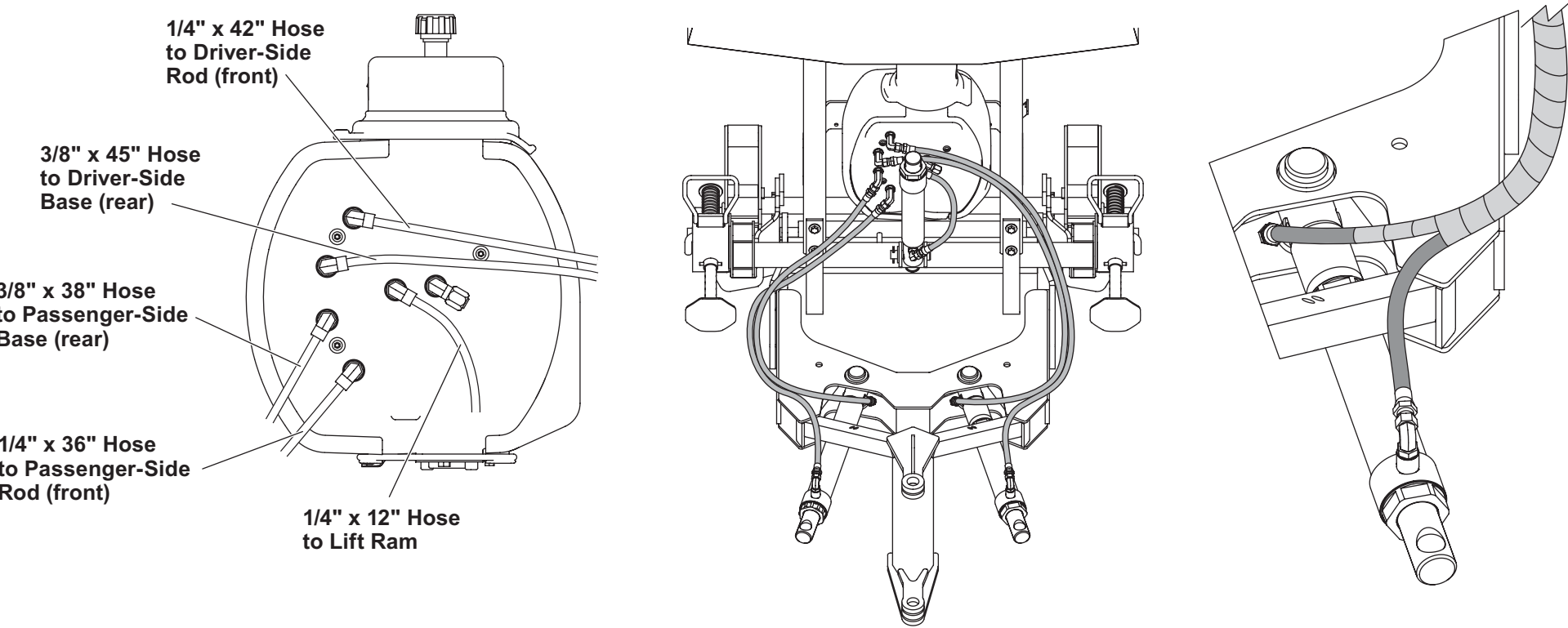
6 – Angle Relief Valves

4 – Check Valves

Reservoir On Top = Pump  
ALWAYS Submerged



# MVP PLUS™ & MVP 3™ SNOWPLOW – HOSE ROUTING



Excerpts taken from Lit. No. 27366



## UltraMount® / UltraMount® 2 – WIDE-OUT™ & WIDE-OUT™ XL SNOWPLOWS

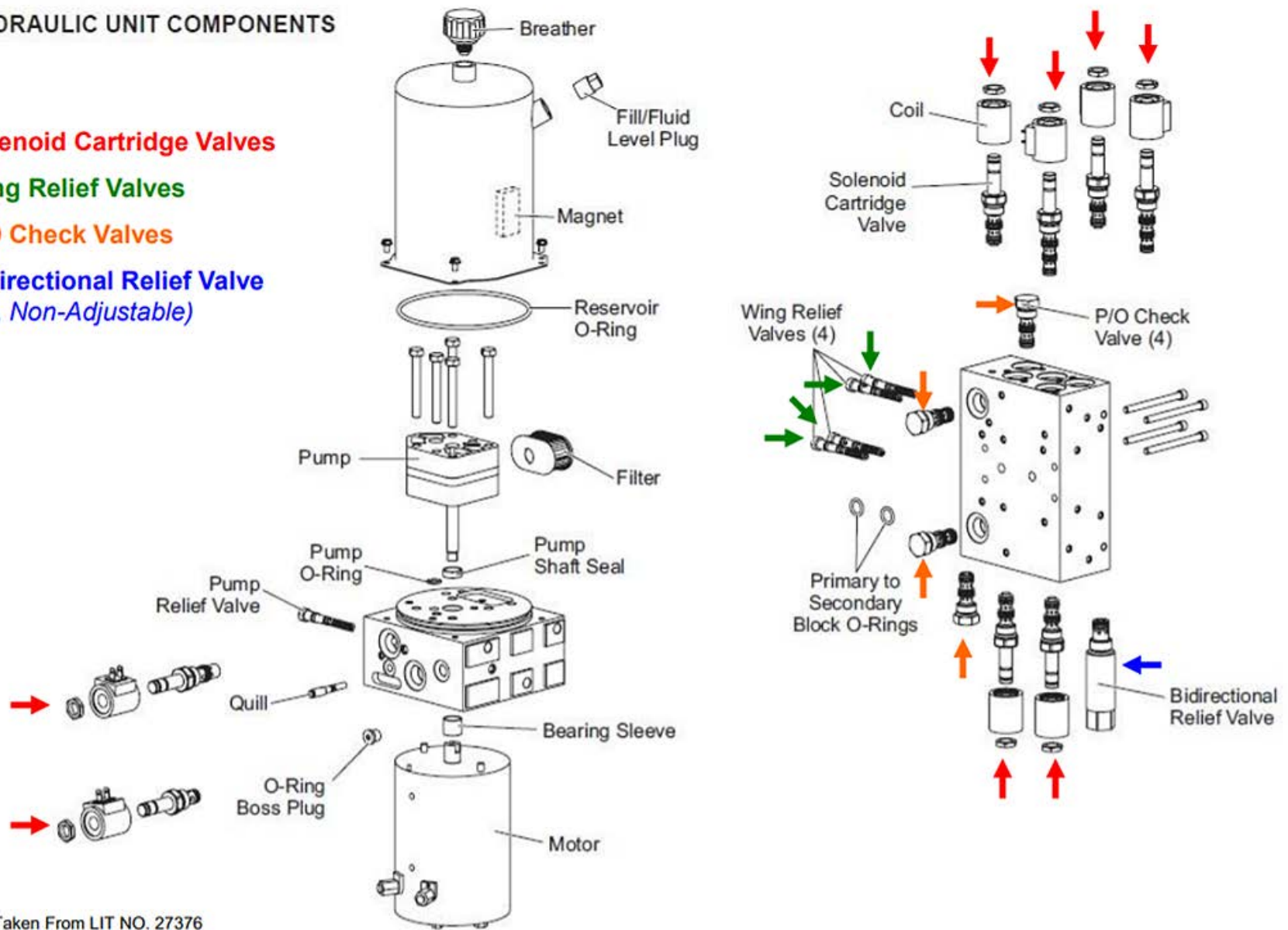
### HYDRAULIC UNIT COMPONENTS

8 - Solenoid Cartridge Valves

4 - Wing Relief Valves

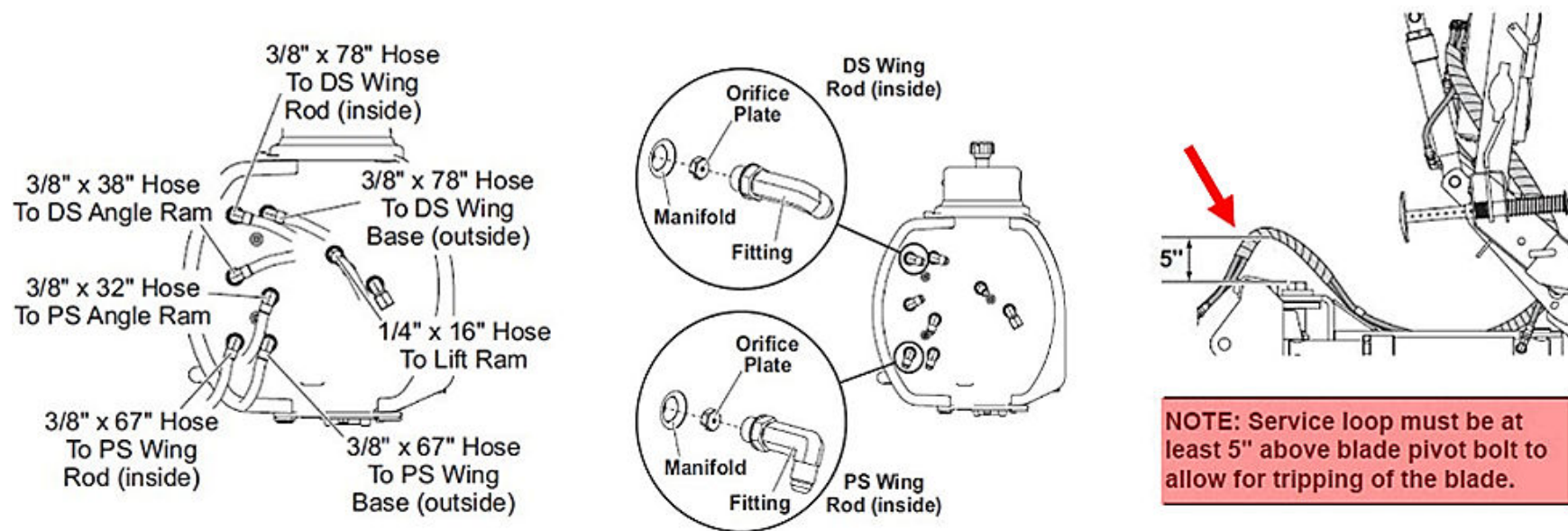
4 - P/O Check Valves

1 - Bidirectional Relief Valve  
(Angle, Non-Adjustable)



Excerpts Taken From LIT NO. 27376

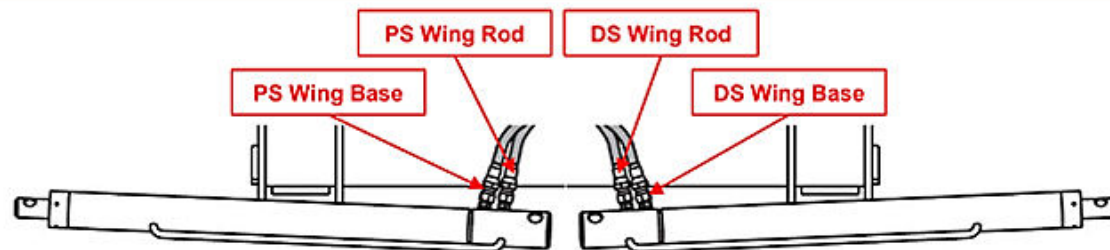
## WIDE-OUT™ SNOWPLOW – HOSE ROUTING



★ **WESTERN® Snowplow Pre-Delivery Inspection** ★

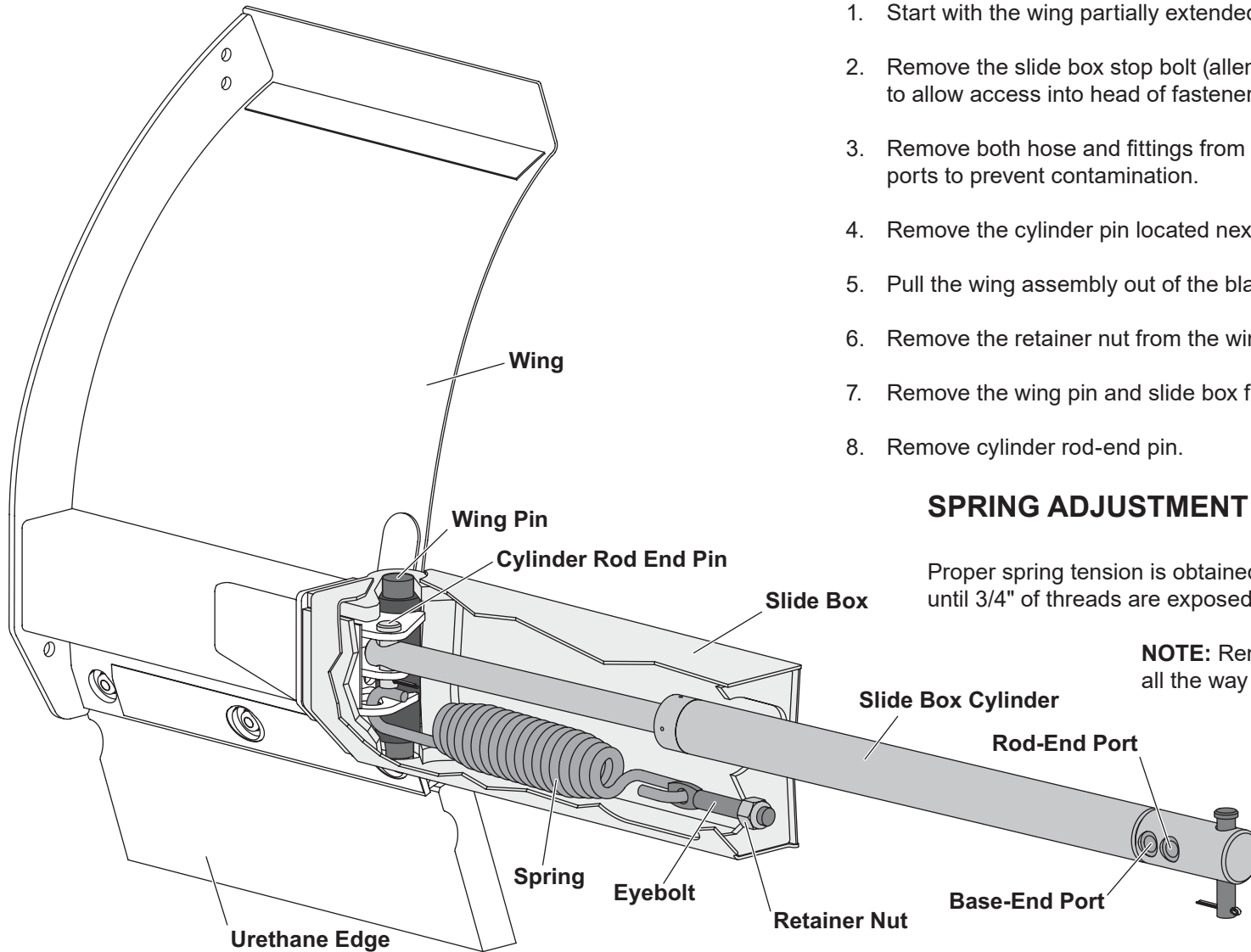
**Orifice Plates allow free flow in one direction and restrict flow in the opposite direction**

**(Eliminates Wing Chatter During Retract Function)**



Excerpts Taken From LIT NO. 27376

## SLIDE BOX & WING REMOVAL



### SLIDE BOX AND WING REMOVAL

1. Start with the wing partially extended (mid-stroke).
2. Remove the slide box stop bolt (allen wrench size may require modification to allow access into head of fastener).
3. Remove both hose and fittings from the slide box cylinder and cap off ports to prevent contamination.
4. Remove the cylinder pin located next to the fittings.
5. Pull the wing assembly out of the blade frame and place on work bench.
6. Remove the retainer nut from the wing spring eyebolt and remove.
7. Remove the wing pin and slide box from the wing assembly.
8. Remove cylinder rod-end pin.

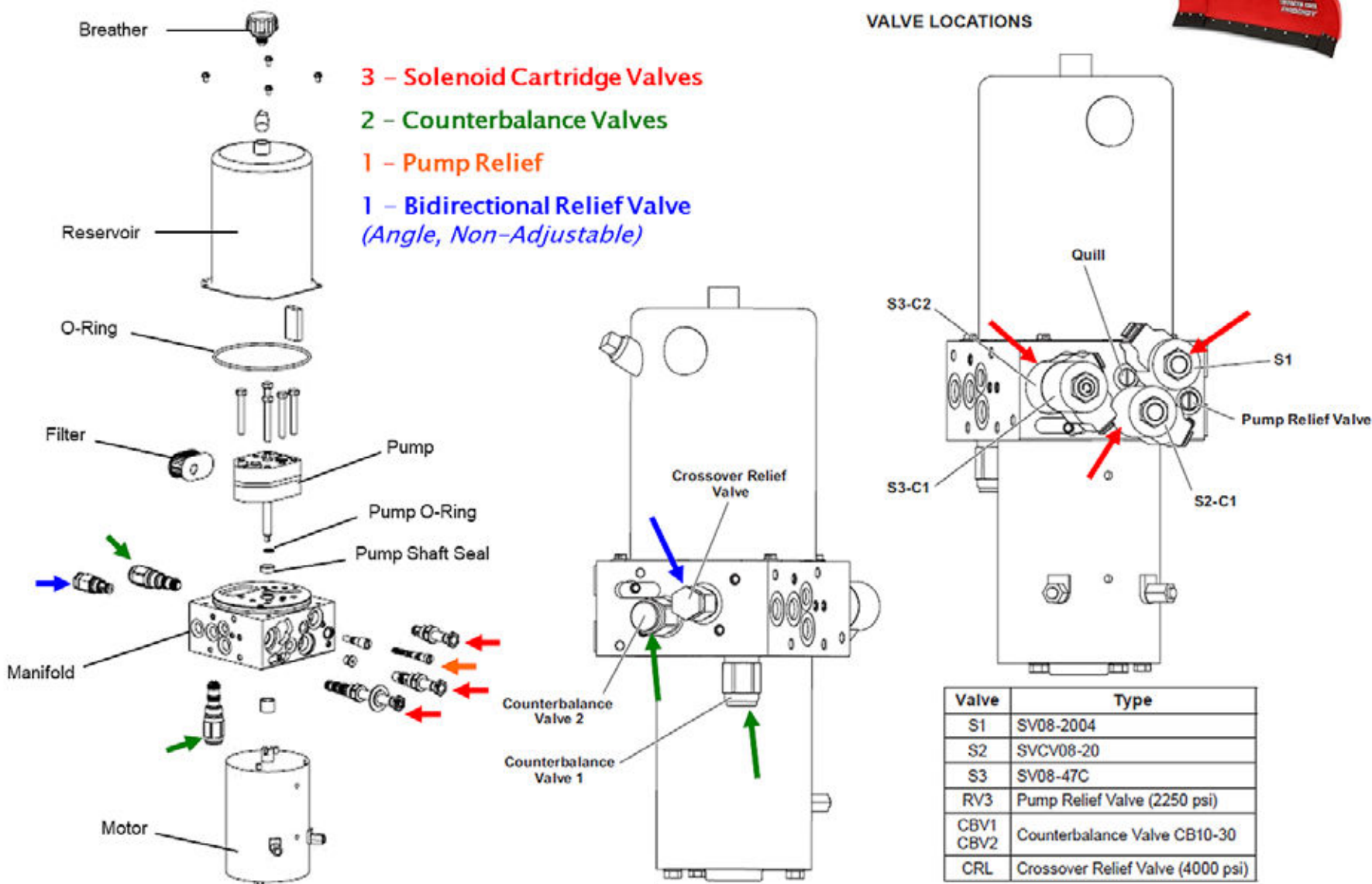
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### SPRING ADJUSTMENT

Proper spring tension is obtained by tightening the eyebolt retainer nut until 3/4" of threads are exposed beyond the top of the locknut.

**NOTE:** Remove wing stop bolt and extend wing all the way to remove blade/wing cutting edge(s).

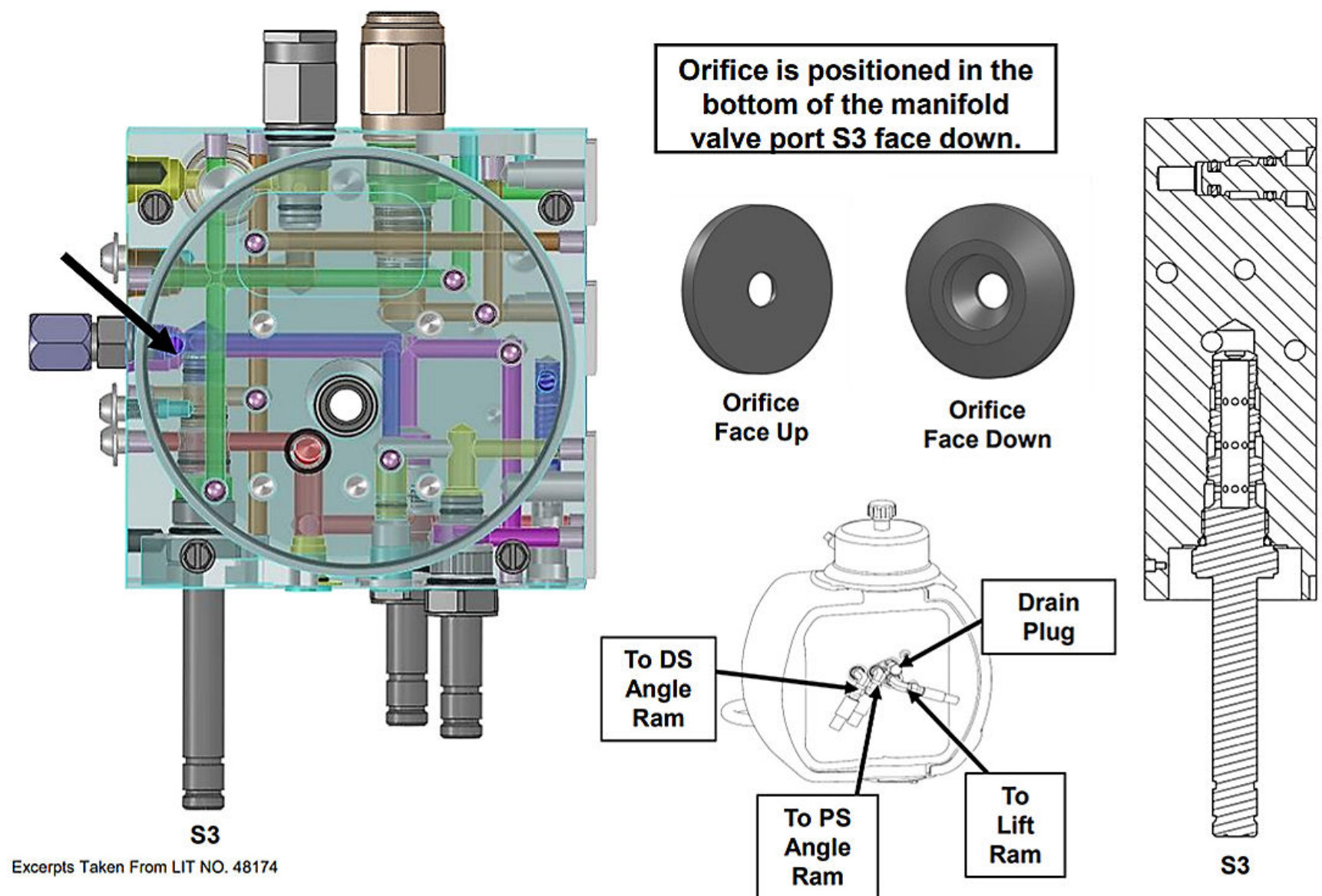
UltraMount® 2 – PRODIGY™ SNOWPLOWS



Excerpts taken from Lit. No. 48174.

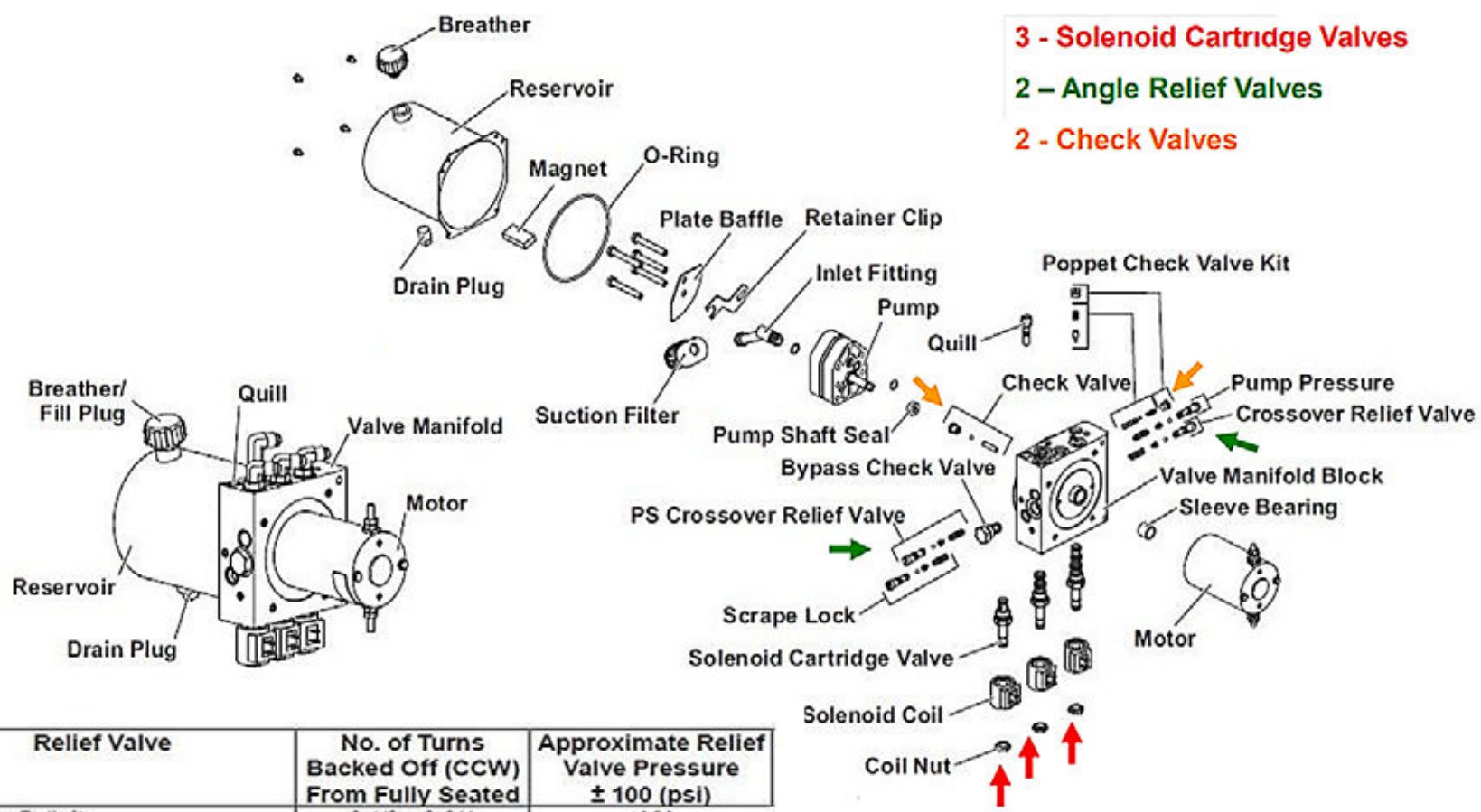


UltraMount® 2 PRODIGY™ ORIFICE PLATE & HOSE ROUTING





UltraMount® 2 STRAIGHT BLADE – HTS™, DEFENDER™, Suburbanite™, IMPACT™ SNOWPLOWS



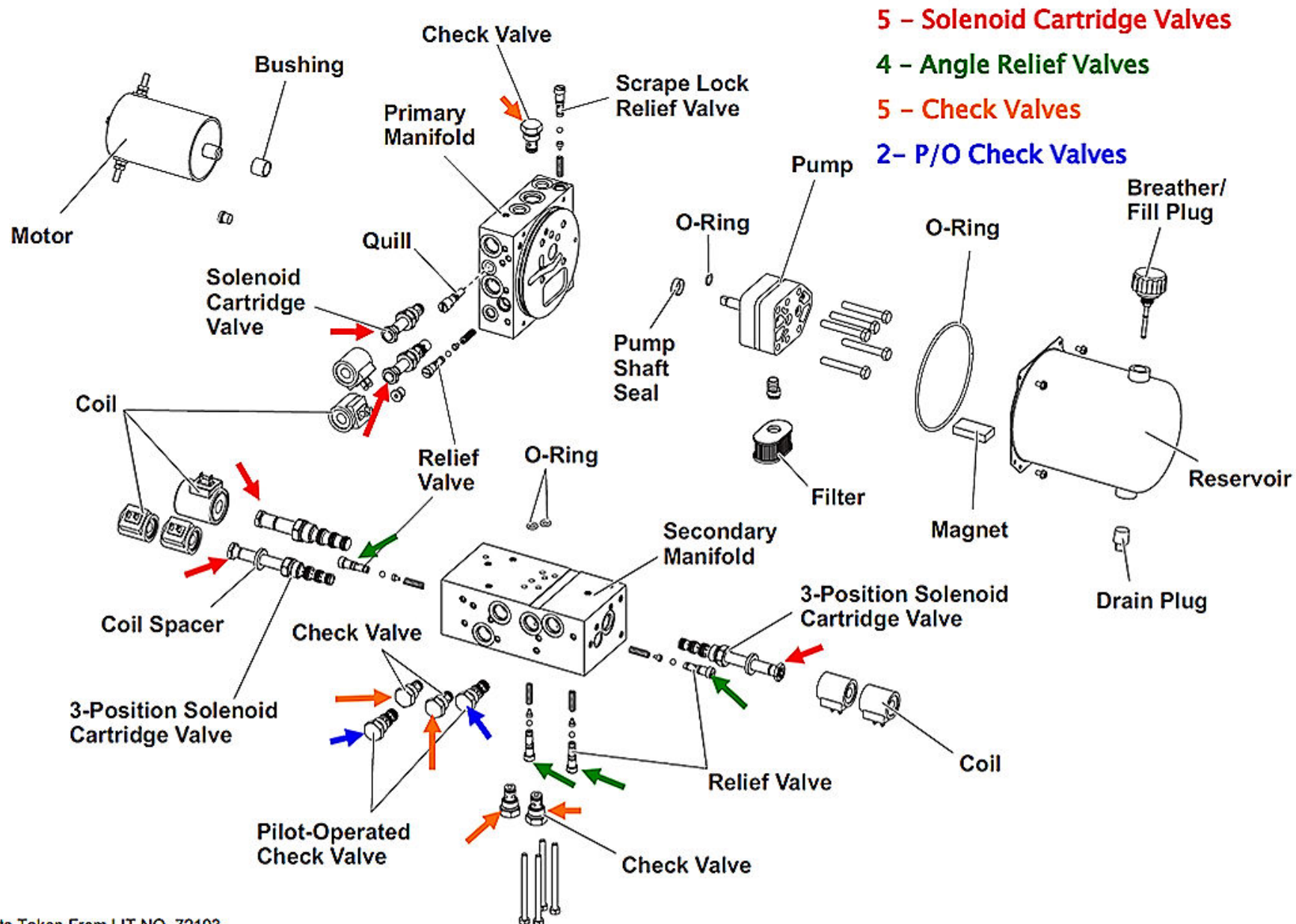
| Relief Valve                            | No. of Turns Backed Off (CCW) From Fully Seated | Approximate Relief Valve Pressure ± 100 (psi) |
|-----------------------------------------|-------------------------------------------------|-----------------------------------------------|
| C – Pump Relief*                        | 2-1/2 – 2-3/4                                   | 1650                                          |
| A & B – Angle Cylinder Crossover Relief | 1 – 1-1/4                                       | 4000                                          |
| D – Scrape Lock                         | 1/2 – 3/4                                       | 350                                           |

\* See Pump Pressure Test to measure actual pump relief pressure.

**NOTE: Relief Valve Service:** Apply one drop of low-strength threadlocker to all relief valve stems. The spring for relief valve D is different from the other springs and should not be interchanged. Spring is made of a lighter wire and is gold in color.

Excerpts Taken From LIT NO. 41467

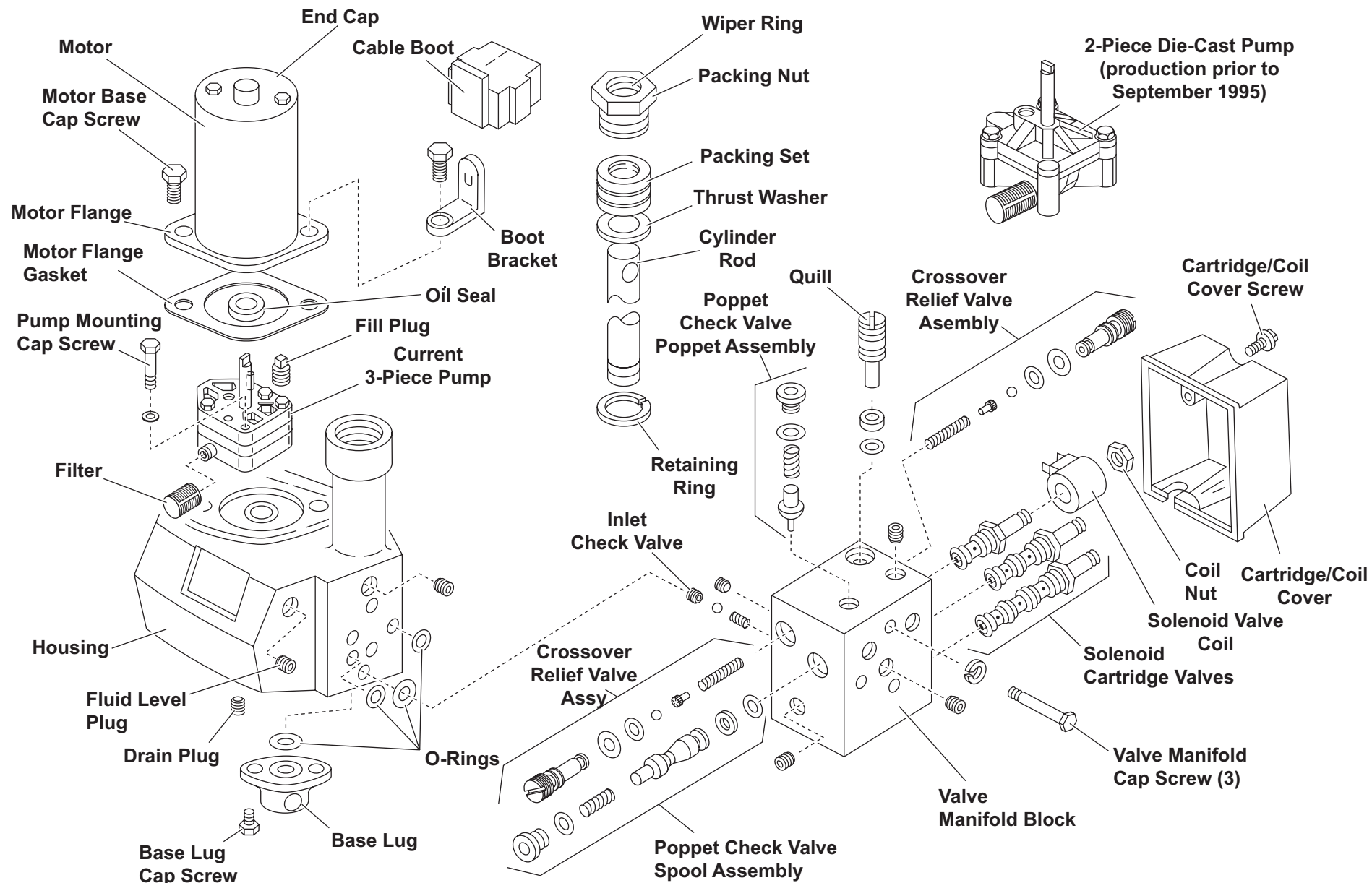
# IMPACT™ V-PLOW



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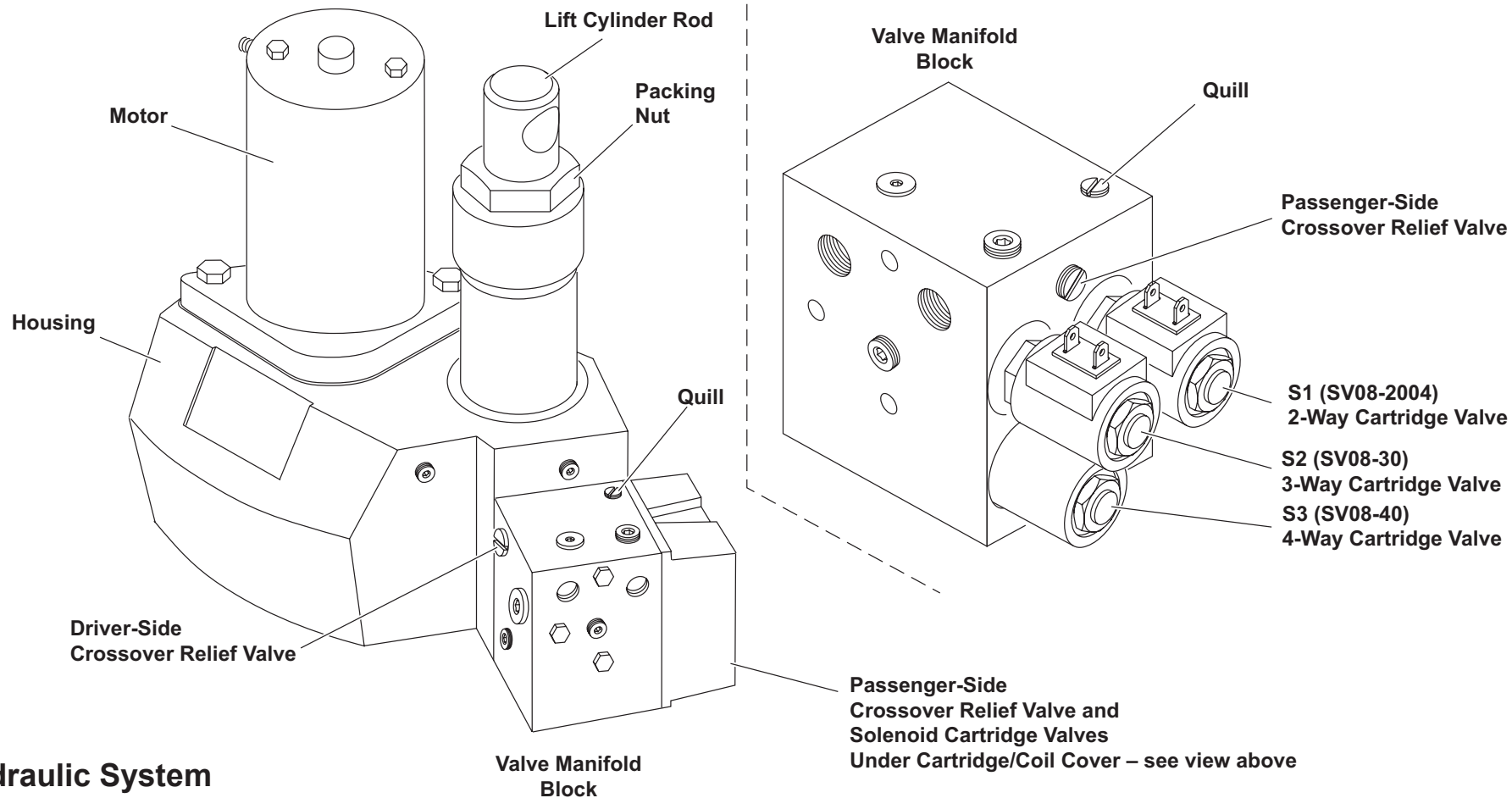
Excerpts Taken From LIT NO. 72103

# ISARMATIC® HYDRAULIC UNIT PARTS DIAGRAM



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Excerpts taken from Lit. No. 21936



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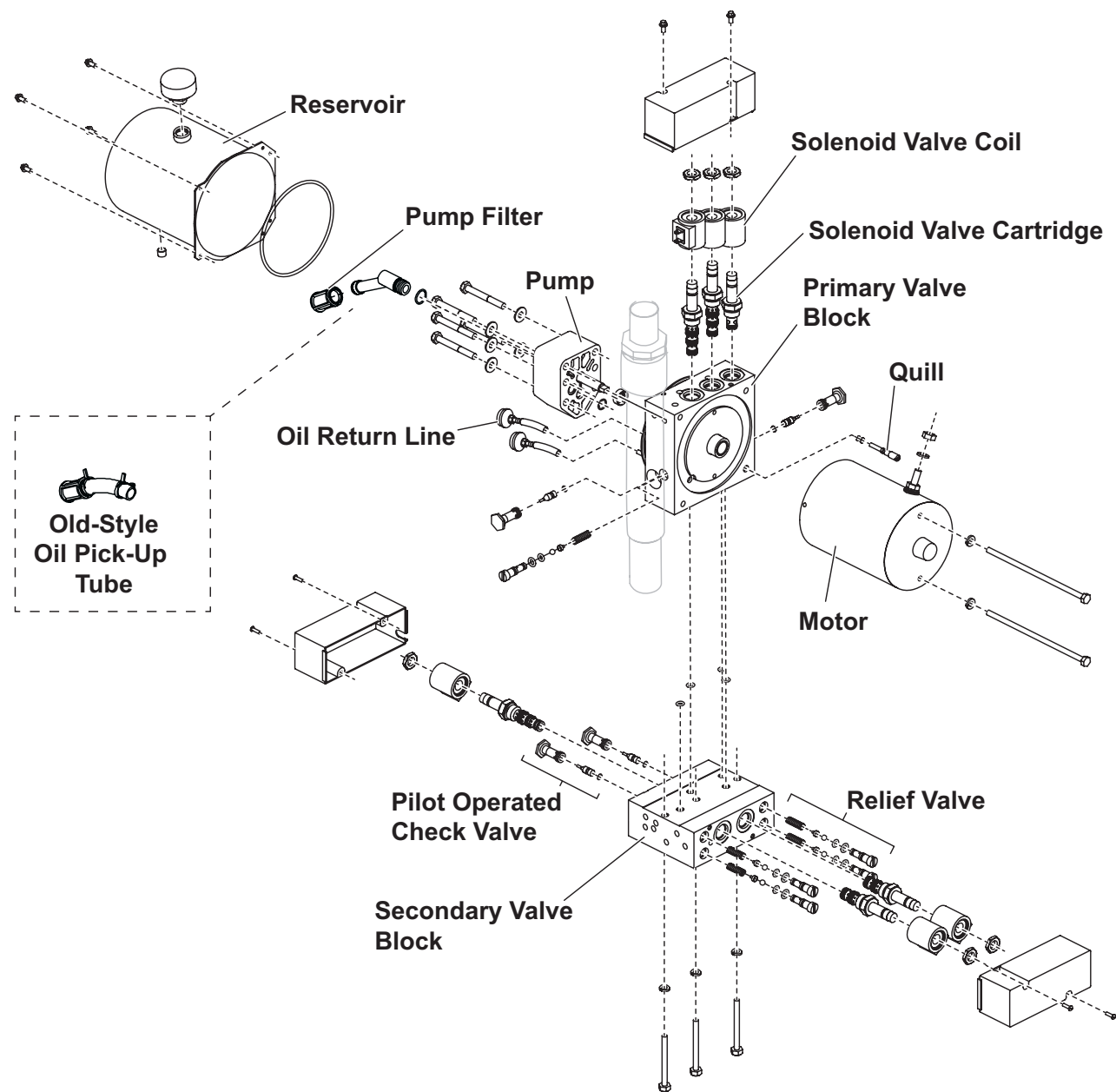
## Hydraulic System

| Snowplow Type            | Crossover Relief Valve Pressure ( $\pm$ 100 psi) | No. of Turns Crossover Relief Valve is Backed Off (CCW) from Fully Seated* | Pump Relief Valve Pressure ( $\pm$ 100 psi) | Max. Motor Amperage Draw at Relief Pressure** |
|--------------------------|--------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------|
| Standard, PRO-PLOW®, L3X | 3500                                             | 1-1/2 – 2                                                                  | 1750                                        | 200                                           |
| HEAVYWEIGHT              | 3500                                             | 1-1/2 – 2                                                                  | 1900                                        | 210                                           |
| Sport Utility            | 2500                                             | 2-1/4 – 2-3/4                                                              | 1550                                        | 180                                           |

\* Settings are approximate.

\*\* Actual readings may vary due to vehicle battery voltage and oil temperature.

UniMount® FloStat® SYSTEM – MVP® SNOWPLOWS



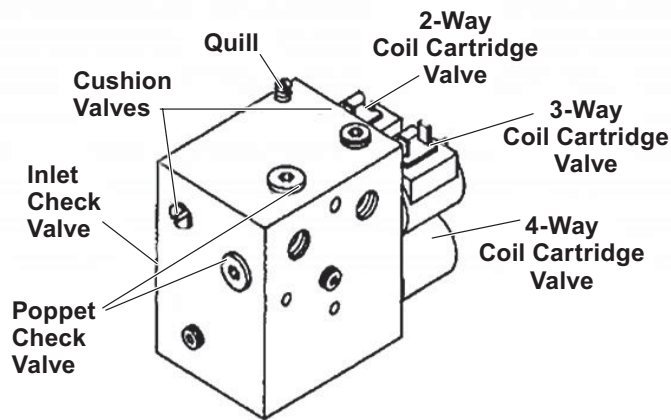
Excerpts taken from Lit. No. 21857



# SOLENOID ISARMATIC® MARK IIIa ASSEMBLY DIAGRAM

## CUSHION VALVES

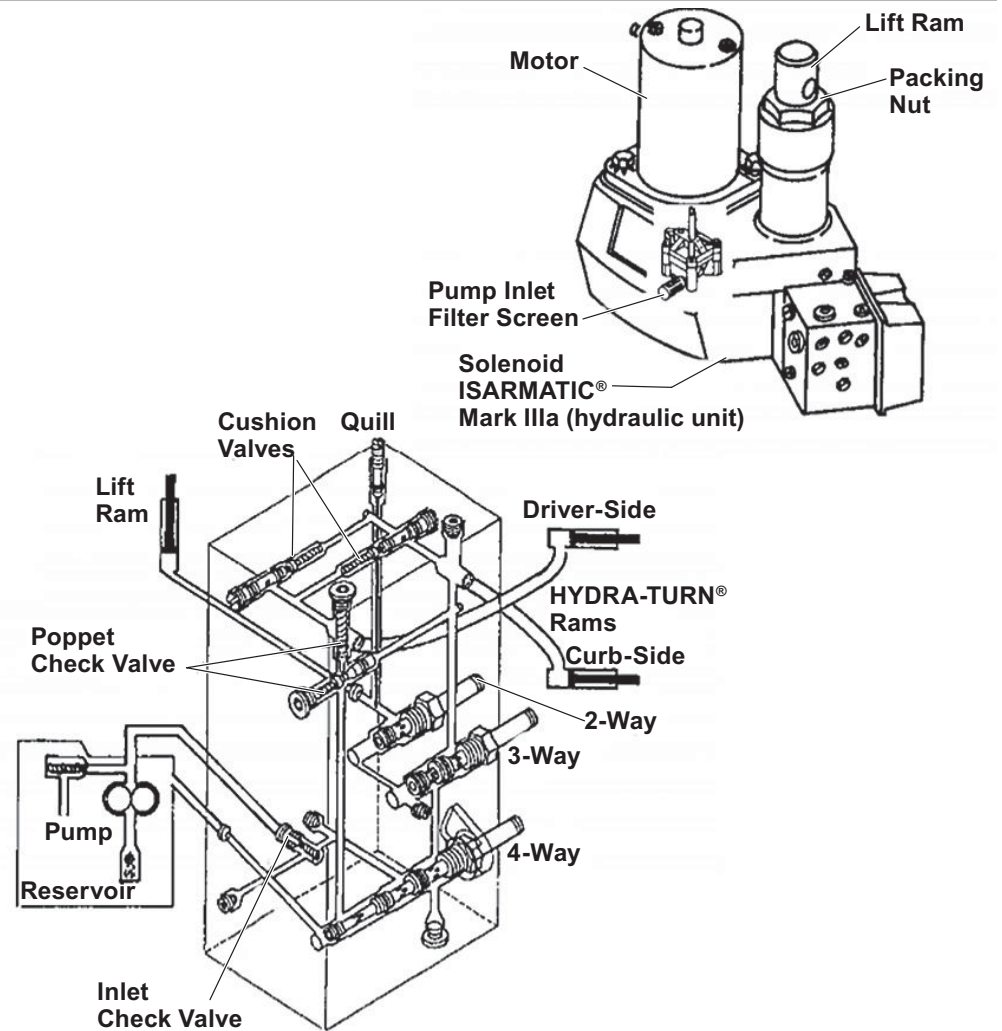
While plowing, oil is trapped in the extended HYDRA-TURN® ram. When the blade meets an object, pressure rises in the extended HYDRA-TURN ram. As pressure in the ram exceeds the spring force holding the checkball against the seat, the checkball unseats. This allows oil to flow to the collapsed ram, and angles the blade in the opposite direction, preventing damage to the hydraulic system, blade, or vehicle. Oil is trapped in the curb-side ram by the 3-way cartridge valve and in the driver-side ram by the poppet check valve.



VALVE MANIFOLD COMPONENTS

## POPPET CHECK VALVE

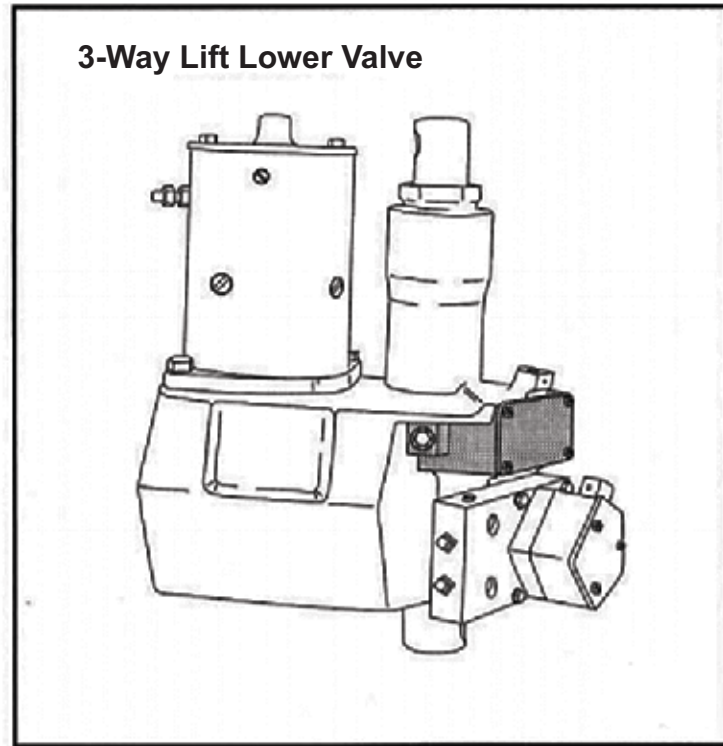
This check valve prevents oil from flowing out of the driver-side HYDRA-TURN ram while the blade is being raised. Without this check valve, whenever the blade is raised to stack snow, oil could flow from the driver-side ram, through the 4-way cartridge valve, and back to the reservoir.



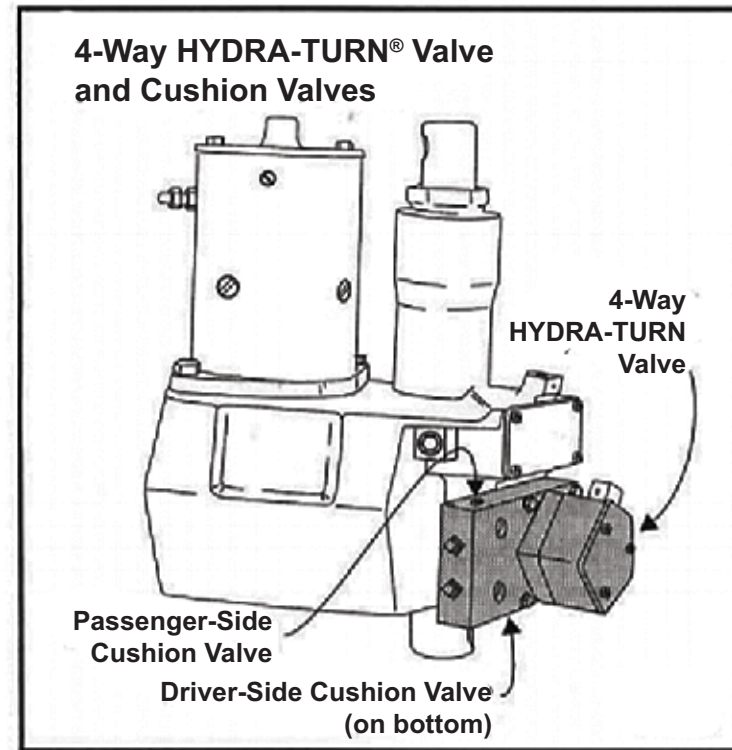
HYDRAULIC SYSTEM

## INLET CHECK VALVE

The pump supply passage in the valve manifold has an inlet check valve (one-way check valve) which allows oil to flow from the pump into the valve manifold. This check valve prevents oil from flowing back to reservoir whenever the pump is not in operation.



The **3-way lift/lower valve** is located in the hydraulic housing, to the right of the nameplate. It controls the raise/lower movement of the snowplow blade and is mechanically operated by the cab control cable assembly.



The **4-way HYDRA-TURN valve** is attached to the hydraulic housing, directly below the 3-way valve. It controls plow angling and is mechanically operated by a cable linked to the cab control.

The **cushion valves** (cross-over relief valves) are located in the HYDRA-TURN valve manifold. They act as an impact absorbing device, protecting both the vehicle and plow when an immovable object is struck by the blade.

# HOSE REFERENCE GUIDE

| Hose Part # | Model                                            | Lift or Angle Hose | Base or Rod, DS or PS                   | Hose Length | Hose Size | Thread Type |
|-------------|--------------------------------------------------|--------------------|-----------------------------------------|-------------|-----------|-------------|
|             |                                                  |                    |                                         |             |           |             |
| 4424K       | MVP® UniMount®                                   | Angle              | Base                                    | 36"         | 1/4"      | NPTF        |
| 40569       | PRODIGY™                                         | Lift               | Base                                    | 16"         |           | SAE         |
| 41094       | MIDWEIGHT™, PRO-PLOW® Series 2                   |                    | Base                                    | 18"         |           |             |
|             | PRO-PLUS®, PRO-PLUS HD, MVP 3™                   |                    | Base                                    |             |           |             |
| 44347       | Suburbanite™ (New)                               |                    | Base                                    | 12"         |           |             |
| 44350       | MVP PLUS™ , MVP 3™                               | Angle              | Base, DS                                | 45"         | 3/8"      | SAE         |
| 44351       |                                                  |                    | Base, PS                                | 38"         |           |             |
|             |                                                  |                    | WIDE-OUT™, WIDE-OUT Gen-2, WIDE-OUT™ XL | Base, DS    |           |             |
| 48519       | IMPACT™ V-Plow & Straight Blade, HTS™, DEFENDER™ |                    | Base                                    | 32"         | 1/4"      |             |
| 49467       | WIDE-OUT™, WIDE-OUT Gen-2, WIDE-OUT XL           | Wing               | Base & Rod, PS                          | 67"         | 3/8"      |             |
| 49468       |                                                  | Angle              | Base & Rod, DS                          | 78"         |           |             |
| 49469       |                                                  |                    | Base, PS                                | 32"         |           |             |
| 49496       |                                                  |                    | Base, DS                                | 42"         |           |             |
| 49532       | MIDWEIGHT™ , PRO-PLOW Series 2                   | Angle              | Base                                    | 36"         |           |             |
|             | PRO-PLUS, PRO-PLUS HD                            |                    | Base                                    |             |           |             |
|             | PRODIGY                                          |                    | Base, PS                                |             |           |             |
| 55020K      | UniMount® Straight Blades                        |                    | Lift                                    | Base        | 38"       | 1/4"        |
|             | MVP UniMount                                     | Rod                |                                         | 38"         |           |             |
| 56224K      | MVP UniMount                                     | Base               |                                         | 18"         | SAE       |             |
| 56599       | MVP PLUS, MVP 3                                  | Rod, PS            |                                         | 36"         |           |             |
|             | Suburbanite                                      | Base               |                                         |             |           |             |
| 56616-1     | Standard , PRO-PLOW, PRO-PLUS                    | Base               | 42"                                     |             |           |             |
|             | MVP UltraMount®                                  | Base & Rod         |                                         |             |           |             |
|             | MVP PLUS, MVP 3                                  | Rod, DS            |                                         |             |           |             |
| 56617       | All UltraMount Straight Blade                    | Base               | 16"                                     |             |           |             |
|             | MVP UltraMount, WIDE-OUT                         | Base               |                                         |             |           |             |
| 56765       | Suburbanite (Scrape Lock Cylinder)               | Base               | 8"                                      |             |           |             |
| 56830       | HTS, MVP PLUS                                    | Base & Rod         | 22"                                     |             |           |             |
|             | Suburbanite, DEFENDER                            | Rod                |                                         |             |           |             |
| 64625       | MIDWEIGHT, PRO-PLOW Series 2, IMPACT V-Plow      | Angle              | Base                                    | 36"         |           |             |
|             |                                                  |                    | Rod                                     |             |           |             |
| 84446       | DEFENDER, IMPACT V-Plow & Straight Blade         | Lift               | Base                                    | 14"         |           |             |
| 84453       | IMPACT V-Plow & Straight Blade                   |                    | Rod                                     | 20"         |           |             |
|             |                                                  |                    |                                         |             |           |             |

## Cylinder Reference Guide

| Cylinder Part # | Updated Part # | Model                                                                                                   | Lift or Angle Ram | Single or Double-Acting | Ram Size            | Retract Length Hole to Hole | Extend Length Hole to Hole | Gland Nut Assembly #   | Split Bearing Kit #  | Spacer # | Fitting Type | Pinholes Size |    |
|-----------------|----------------|---------------------------------------------------------------------------------------------------------|-------------------|-------------------------|---------------------|-----------------------------|----------------------------|------------------------|----------------------|----------|--------------|---------------|----|
|                 |                |                                                                                                         |                   |                         |                     |                             |                            |                        |                      |          |              |               |    |
| 25210           |                | (Central hyd.) HEAVYWEIGHT                                                                              | Lift              | Single                  | 2' x 6"             | 14.06"                      | 20.16"                     | Packing Nut # 25948    | Wiper Ring # 25215   | N/A      | NPTF         | 3/4"          |    |
| 25878K          |                | HEAVYWEIGHT                                                                                             | Angle             |                         | 2" x 16"            | 23.12"                      | 39.22"                     |                        |                      |          |              |               | 1" |
| 72620           |                | PRO-PLUS® HD                                                                                            |                   |                         | 2 X 12-1/2"         | 18.82"                      | 31.23"                     | 57125                  | Wear Ring # 29570    | N/A      | SAE          | 1-1/4"        |    |
| 27204K          | 77489          | Suburbanite™ (scape lock ram)                                                                           | Lift              | Double                  | 1-1/2" x 6"         | 12.99"                      | 19.18"                     | 27788-1 (ram seal kit) |                      |          |              | 1/2"          |    |
| 48600           | 77487          | Suburbanite™                                                                                            | Slide Box         |                         | 1-1/2"x13-15/16" DA | 26.56"                      | 40.50"                     | 43794 (ram seal kit)   |                      |          |              | 5/8"          |    |
| 43803           | 77475          | WIDE-OUT™, WIDE-OUT Gen 2 (810)                                                                         |                   |                         | 1-1/2"x16-15/16" DA | 26.56"                      | 43.50"                     |                        |                      |          |              |               |    |
| 94491           |                | WIDE-OUT XL™ (8611)                                                                                     | Angle             | Single                  | 1-3/4" x 11"        | 18.29"                      | 29.28"                     | 48985                  | 44342 (ram seal kit) |          |              | 1"            |    |
| 44341           |                | MVP 3™, MVP PLUS™                                                                                       |                   |                         | 1-1/2" x 10"        | 17.06"                      | 27.27"                     |                        | 64650                | 56537    |              |               |    |
| 49460           |                | PRODIGY™, WIDE-OUT™, WIDE-OUT Gen 2, WIDE-OUT XL(8611)                                                  |                   |                         | 1-1/2" x 8"         | 15.18"                      | 23.33"                     |                        |                      |          |              |               |    |
| 56538K          |                | LSX<br>MIDWEIGHT™<br>PRO-PLOW® (all), PRO-PLUS®<br>MVP® (UltraMount®), MVP Plus™<br>PRODIGY™, WIDE-OUT™ | Lift              | Double                  | 1-3/4" x 8"         | 15.20"                      | 23.20"                     | 43135                  | 43134                | N/A      |              | 1"            |    |
| 43149           |                | MVP 3™, WIDE-OUT Gen 2, WIDE-OUT XL, PRO-PLUS® HD                                                       | 1-1/2" x 10"      |                         | 17.06"              | 27.27"                      | 48985                      | 64650                  | 56537                |          |              |               |    |
| 56614           |                | Standard, PRO-PLOW® (UltraMount®)                                                                       | 2" x 10"          |                         | 17.29"              | 27.29"                      |                            | 49498 (seal kit)       |                      |          |              |               |    |
| 56709W T        |                | MVP® (UniMount®)                                                                                        | Angle             | Single                  | 2" x 11"            | 18.29"                      | 29.29"                     | 62290 (2)              |                      | 56537    |              | 1"            |    |
| 56750           |                | MVP® (UltraMount®)                                                                                      |                   |                         | 1" x 7"             | 13.50"                      | 20.50"                     | 66699K                 | 56771 (2)            | 56803    |              | 1/2"          |    |
| 56772K          | 77478          | Suburbanite™, DEFENDER™<br>IMPACT™ Straight Blade                                                       |                   |                         | 1-1/2" x 6"         | 17.06"                      | 23.06"                     | 25944K                 | 62290 (2)            | N/A      | NPTF         | 3/4"          |    |
| 62540           |                | Sport/Utility                                                                                           | 1-1/2" x 10"      | 17.08"                  | 27.08"              | 48985                       | 64650                      |                        | 56537                | SAE      | 1"           |               |    |
| 62550K          |                | Standard, PRO-PLOW® (UniMount®)                                                                         | Lift              | Double                  | 1-1/2" x 12"        | 19.56"                      | 31.39"                     | 25944K                 | 62290 (2)            | N/A      | NPTF         | 3/4"          |    |
| 64148           |                | PRO-PLUS®                                                                                               |                   |                         | 1-1/2" x 10"        | 17.06"                      | 27.27"                     |                        | 91167                |          |              |               |    |
| 64706           |                | MIDWEIGHT™, PRO-PLOW® Series 2                                                                          |                   |                         | 1-1/2" x 6"         | 13.25"                      | 19.25"                     | 48985                  | 64650                | 56537    | SAE          | 1"            |    |
| 66342           |                | Old style standard (Conventional )                                                                      | 1-1/2" x 8"       | 15.18"                  | 23.33"              | 48985                       | 64650                      | 56537                  |                      |          |              |               |    |
| 66650           |                | All UniMount® Central Hydraulic                                                                         | Angle             | Double                  | 2" x 6-3/4"         | 12.96"                      | 19.71"                     | 49499                  | 48520 (seal kit)     |          | 1"           |               |    |
| 66722           |                | MVP® (UniMount®)                                                                                        |                   |                         | 1-1/2" x 8-3/4"     | 13.75"                      | 22.5                       | 52558                  | 52557 (seal kit)     |          |              |               |    |
| 69495           |                | HTS™                                                                                                    | Lift              | Double                  | 1-1/2" x 6"         | 12.99"                      | 19.18"                     | 52277                  | 27788-1 (seal kit)   |          | 1/2"         |               |    |
| 69513           |                |                                                                                                         | Angle             |                         |                     |                             |                            |                        |                      |          |              |               |    |
| 84435           | 77481          | IMPACT™ UTV V-Plow                                                                                      | Angle             |                         |                     |                             |                            |                        |                      |          |              |               |    |
| 84496           | 77484          | IMPACT™ V-Plow & Straight Blade<br>DEFENDER™                                                            | Lift              |                         |                     |                             |                            |                        |                      |          |              |               |    |

T If it has (old cylinder #66375) will need 56539k 90° fitting from SAE to NPTF

## CARTRIDGE VALVE REFERENCE

### WESTERN® Cartridge Valve Identification

| Service Part # | Hydraforce | Deltrol            | UltraMount®         |        |                          |                 |            | IMPACT™        |                | UniMount® |                 |
|----------------|------------|--------------------|---------------------|--------|--------------------------|-----------------|------------|----------------|----------------|-----------|-----------------|
|                |            |                    | MVP PLUS™ & MVP 3™  | MVP®   | WIDE-OUT™ & WIDE-OUT™ XL | Straight Blades | Prodigy™   | V-Plow         | Straight Blade | MVP       | Straight Blades |
| 44332          | SVCV08-20  | —                  | S2, S4, S7, S8, S11 |        | S1                       |                 | S2         |                |                |           |                 |
| 44336          | SF06-2015  | —                  | S6, S10             |        |                          |                 |            |                |                |           |                 |
| 49227K-2       | SV08-2004  | DSV-080-2NCP-N-C66 | S1, S3, S5, S9      | S1     | S2                       | S1              | S1         |                | S1             | S1        | S1              |
| 66608-1        | SV08-31    | DSV2-080-3-N-C7    |                     |        |                          | S2              |            |                | S2             |           |                 |
| 49229K-1       | SV08-40    | DSV2-080-4CO-N-C25 |                     | S2, S5 |                          | S3              |            |                | S3             | S2, S5    | S3              |
| 49452          | SV08-45    | —                  |                     |        | S5                       |                 |            |                |                |           |                 |
| 49456          | SV08-41    | —                  |                     |        | S6                       |                 |            |                |                |           |                 |
| 49228K-1       | SV08-30    | —                  |                     | S4, S6 | S7, S8, S9, S10          |                 |            |                |                | S4, S6    | S2              |
| 66783W         | SV08-43    | —                  |                     | S3     |                          |                 |            |                |                | S3        |                 |
| 48291          | SV08-47C   | —                  |                     |        |                          |                 | S3C1, S3C2 |                |                |           |                 |
| 48288          | SV08-22    | —                  |                     |        |                          |                 |            | S1 F           |                |           |                 |
| 84900          | SV10-43    | —                  |                     |        |                          |                 |            | S2             |                |           |                 |
| 84936          | SV08-2211  | —                  |                     |        |                          |                 |            | S1 F           |                |           |                 |
| 52285          | SV08-47C   | —                  |                     |        |                          |                 |            | S3C1, S3C2, S4 |                |           |                 |

† SV08-22 (before approx. 6/30/16); SV08-2211 (after approx. 6/30/16).

#### O-Ring Service Kits

|         |                                                 |         |                                                              |
|---------|-------------------------------------------------|---------|--------------------------------------------------------------|
| 56657-4 | Back-Up/O-Ring Kit                              | 49259-2 | Seal Kit – Valves SV08-30, -31, -33, -40, -43, and SVCV08-20 |
| 49258-2 | Seal Kit – Valves SV08-2004, CV08-20, SF08-2015 |         |                                                              |

**\*NOTICE\***  
Hex thickness difference  
between Hydraforce vs. Deltrol

Hydraforce

Deltrol





WESTERN® CONVENTIONAL SNOWPLOW PUMP REFERENCE



Pump - 25557  
Overall Height - 3.56"  
Status: Available



Filter - 25639  
Status: Available



Pump - 56055  
Overall Height - 4.15"  
Status: Replaced by 49211 (Two Piece)



Filter - 25639  
Status: Available



Pump - 49211 (Two Piece)  
Overall Height - 4.15"  
Status: Replaced by 49211 (Three Piece)



Filter - 56185  
Status: Available



Pump - 49211 (Three Piece)  
Overall Height - 4.15"  
Status: Available



Filter - 56185  
Status: Available

10887  
Fitting, Hydraulic Pump Inlet  
WIDE-OUT™, PRODIGY™,  
MVP 3™, MVP PLUS™





If you have original motor #25556 and need to replace it you need to replace pump as well. New part # 49211, 21500-1 & 50869

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# Spreaders

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## PRO-FLO™ 525 & PRO-FLO 900 Spreaders

| Version | Model(s)               | Remarks                                                                                                                                       |
|---------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-1.8 | PRO-FLO™ 525 & 900     | No version is displayed upon power up. Beeps when key on and spreader disconnected. Discontinued. Upgrade to 1.9                              |
| 1.8     | Control Service Parts: | NOTE: Before use, Auto Reverse (AR) must be set to 7. No longer beeps when key on and spreader is disconnected.                               |
| 1.9     | 52450/52452            | Designated with orange dot/1.9 sticker. Recommended version to use with current product. Auto Reverse (AR) preset. Motor range shifted lower. |

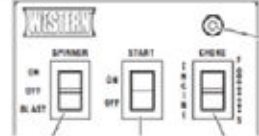
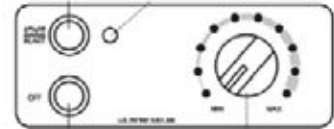
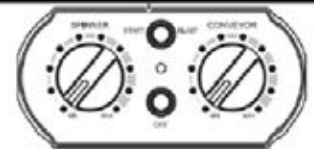
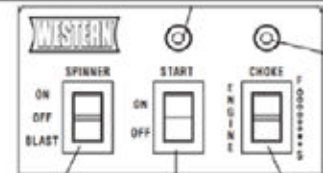
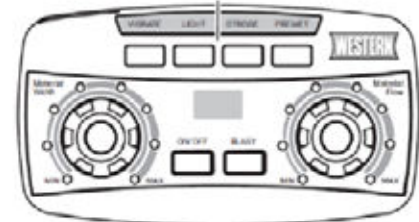
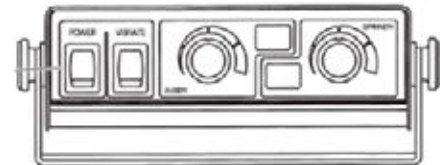
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## Striker™ & Tornado™ Spreaders

| Version | Model(s)                     | Remarks                                                                             |
|---------|------------------------------|-------------------------------------------------------------------------------------|
| Pre-1.8 | Electric Striker™ & Tornado™ | No version is displayed upon power up. Beeps when key on and spreader disconnected. |
| 1.8     | Control Service Parts:       | No longer beeps when key on and spreader disconnected.                              |
| 1.9     | 99534/99774                  | Compatible with product. Motor range shifted lower.                                 |



# WESTERN® Hopper Spreader Control Reference

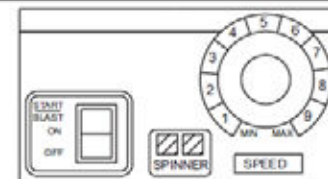
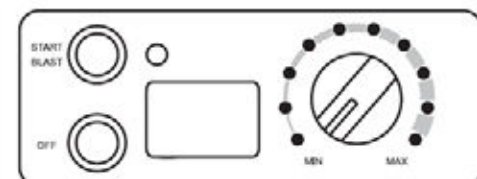
| Part #                                                | Model                                                | Style                          | Description                                       | Illustration                                                                          |
|-------------------------------------------------------|------------------------------------------------------|--------------------------------|---------------------------------------------------|---------------------------------------------------------------------------------------|
| 67530-1                                               | ICE BREAKER™                                         | Premium Cab Control            | 3 Rocker Switches                                 |    |
| 29247 *                                               | Tornado™<br>(0607 - 090224)                          | Cab Command                    | Single Dial, 2 Button                             |    |
| 78102                                                 | Tornado<br>(090527 - 160129)                         | Cab Command                    | Variable Speed, Dual Dial,<br>2 Button            |    |
| 98985                                                 | Striker™ (Gas)                                       | 2 Light<br>Premium Cab Control | 3 Rocker Switches                                 |    |
| 99534<br>(Cab Control Kit)<br>99774<br>(Control Only) | Tornado™<br>(160201- Higher) &<br>Striker (Electric) | 2-Knob Cab Control             | Variable Speed, Dual Dial,<br>4 Accessory Buttons |   |
| 51037                                                 | Tornado™ LT &<br>Tornado™ UTV                        | Cab Command                    | Variable Speed,<br>Dual Dial                      |  |

\* 29247 replaced by 78102





## Low Profile Tailgate Spreaders Control Reference

| Part #                                         | Model                        | Style                    | Description                                | Illustration                                                                          |
|------------------------------------------------|------------------------------|--------------------------|--------------------------------------------|---------------------------------------------------------------------------------------|
| 67437                                          | Model 110                    | On/Off Control           | On/Off w/Blast 4 Individual 1/4" Terminals | OBSOLETE                                                                              |
|                                                | Model 500 (030101 - Higher)  |                          |                                            |                                                                                       |
|                                                | Model 1000 (10001 - 10002)   |                          |                                            |                                                                                       |
|                                                | Model 2000 (20237 - 20363)   |                          |                                            |                                                                                       |
| 67436 & 66600<br>are obsolete alt.<br>to 28866 | Model 110 (7192 - Higher)    | Cab Command              | Variable Speed,<br>Single Dial, 2 Button   |    |
|                                                | Model 500 (030101 - Higher)  |                          |                                            |                                                                                       |
|                                                | Model 1000 (10001 - 10002)   |                          |                                            |                                                                                       |
|                                                | Model 2000 (20237 - 20363)   |                          |                                            |                                                                                       |
| 67070                                          | Model 1000 (10003 - Higher)  | On/Off Control           | On/Off w/Blast<br>2 Plug                   |   |
|                                                | Model 2000 (20364 - Higher)  |                          |                                            |                                                                                       |
|                                                | Model 2500 (080612 - Higher) |                          |                                            |                                                                                       |
| 28866                                          | Model 1000 (10003 - Higher)  | Cab Command              | Variable Speed,<br>Single Dial, 2 Button   |  |
|                                                | Model 2000 (20364 - Higher)  |                          |                                            |                                                                                       |
|                                                | Model 2500 (080612 - Higher) |                          |                                            |                                                                                       |
| 75910<br>Uses CR2032 battery or<br>equivalent  | Model 300 W                  | Wireless Key Fob Control | On / Off<br>50% or 100%                    |  |





## PRO-FLO™ Tailgate Spreader Control Reference

| Part #                                | Model                          | Style              | Description                                             | Illustration |
|---------------------------------------|--------------------------------|--------------------|---------------------------------------------------------|--------------|
| 66600<br>is obsolete Alt.<br>to 28866 | PRO-FLO & PRO-FLO™ 2           | PWM Control        | Variable Speed,<br>Single Dial,<br>Single Rocker Switch |              |
| 67070                                 | PRO-FLO & PRO-FLO2             | On/Off Control     | On/Off<br>w/Blast 2 Plug                                |              |
| 28866                                 | PRO-FLO & PRO-FLO2             | Cab Command        | Variable Speed,<br>Single Dial,<br>2 Button             |              |
| 52450                                 | PRO-FLO™ 525 &<br>PRO-FLO™ 900 | 2-Knob Cab Control | Variable Speed,<br>Dual Dial,<br>4 Accessory Buttons    |              |

## SPREADER DIAGNOSTIC CODES



**NOTE:**  
When spreader is un-plugged, CE will be displayed on the control.

| CODE          | CONTROL MODE                                                            |
|---------------|-------------------------------------------------------------------------|
| <b>Ar</b>     | Auto-reverse mode (auger units only).                                   |
| <b>Cb</b>     | Calibration mode.                                                       |
| <b>Cc</b>     | Clear calibration. Clears all stored calibration data.                  |
| <b>dU</b>     | Dump mode.                                                              |
| <b>LS</b>     | Entering brightness adjustment mode.                                    |
| <b>SL</b>     | Exiting brightness adjustment mode.                                     |
| CODE          | FAULT CONDITION                                                         |
| <b>bb</b>     | Bad button. Button is stuck.                                            |
| <b>bH</b>     | Bad hopper. Control and module are incompatible.                        |
| <b>CE</b>     | Communication error. No communication with spreader module.             |
| <b>CP</b>     | Chute present fault. Chute is open.                                     |
| <b>Ct</b>     | Control temperature is too hot.                                         |
| <b>EF</b>     | Excessive faults. 60-second time-out.                                   |
| <b>EH</b>     | Empty Hopper (informational code). Calibration data input required.     |
| <b>HO/HO.</b> | Hopper/feed motor overload.                                             |
| <b>HP</b>     | Hopper power fault. Hopper drive motor not connected.                   |
| <b>Lb</b>     | Low battery. Module is sensing <10V (warning code) or <6V (fault code). |
| <b>nC</b>     | No connection. Spreader not connected to vehicle harness.               |
| <b>nr</b>     | No reverse detected (auger units only).                                 |
| <b>OH/OH.</b> | Overheating spreader module.                                            |
| <b>rS</b>     | Module reset.                                                           |
| <b>SO/SO.</b> | Spinner overload. Spinner motor overload.                               |
| <b>SP</b>     | Spinner power fault. Spinner drive motor not connected.                 |

Lit. No. 92952, Rev. 01

March 15, 2016

Excerpts taken from Lit. No. 95952, Rev. 01

Lit. No. 74230, Rev. 01

January 1, 2021

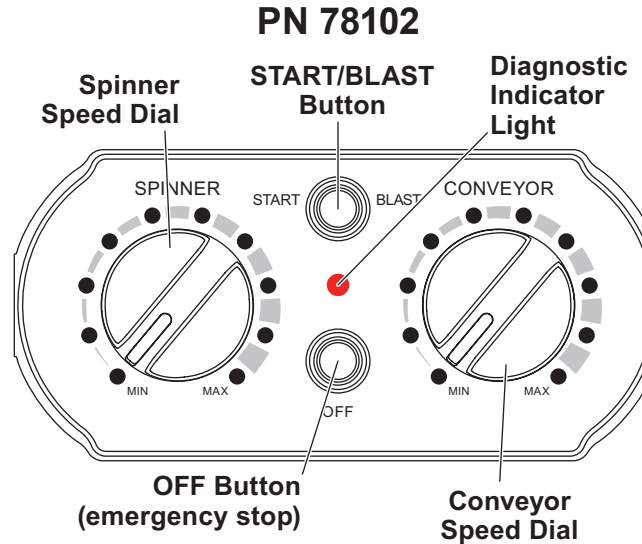


## Tornado™ POLY HOPPER CONTROL (Pre FLEET FLEX System)

### Diagnostic Indicator Light and Audio Beep

The diagnostic indicator light located beneath the START/BLAST button remains dark unless a problem with the motor or wiring is detected. The light will flash in coordination with an audio beep a number of flashes/beeps in a row, pause, then repeat. Count the flashes/beeps and refer to diagnostic chart below to determine the nature of the malfunction.

**NOTE:** Always close the lids on hopper to prevent moisture buildup. Do not let spreader sit idle with material in hopper for an extended period of time. This can cause material to compact, reduce or stop the flow of material and cause permanent hopper body deformation.



| Tornado Spreader Amperage Draw Reference |         |                    |
|------------------------------------------|---------|--------------------|
| Motor Type                               | Empty   | Loaded w/ Material |
| Conveyor                                 | 15A–20A | 25A–55A            |
| Spinner                                  | 4A–10A  | 10A–15A            |
| Conveyor & Spinner                       | 20A–25A | 35A–70A            |

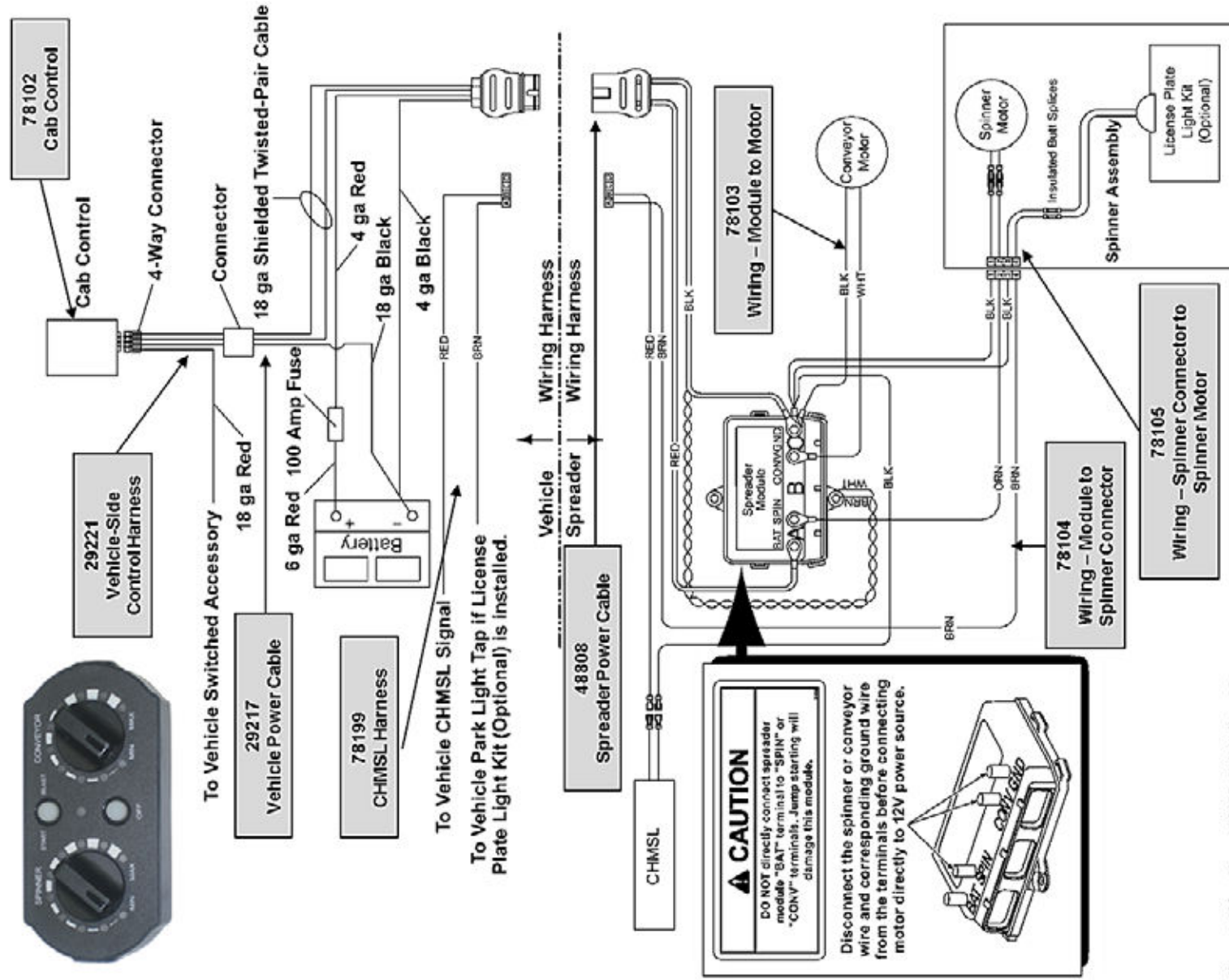
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| # of Flashes/Beeps | Problem               | Possible Cause                                                                                                                                                                |
|--------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0                  | No Error              | –                                                                                                                                                                             |
| 1                  | No Communication      | Loss of communication between spreader module and cab control. Vehicle cable assembly is disconnected or faulty.                                                              |
| 2                  | Empty Hopper          | Spreader is empty or material has bridge in the hopper.                                                                                                                       |
| 3                  | Conveyor Over Current | Over 70A for up to 3 seconds. Conveyor chain is stalled.                                                                                                                      |
| 4                  | No Power              | Battery fuse is blown or vehicle cable assembly is disconnected or faulty.                                                                                                    |
| 5,8                | Over Temp             | Motor is OFF due to spreader module overheating from high-current draw over a long period of time.                                                                            |
| 6                  | Battery Saver         | Reduced spreader performance due to vehicle voltage drop. Spreader will function at reduced output until vehicle voltage increases.                                           |
| 7                  | Spinner Over Current  | Over 32A for up to 3 seconds. Spinner is stalled.                                                                                                                             |
| 9                  | Sander Reset          | Module came out of reset. Momentary loss of power. Restart unit, check power wiring.                                                                                          |
| 10                 | Cool Down             | If the unit gets more than 5 faults with each fault starting within 60 seconds from the last, it will not start for 60 seconds from the last fault to allow the unit to cool. |
| 11                 | Low Battery           | Low battery voltage or poor electrical connection of vehicle cable assembly.                                                                                                  |



# Tornado™ POLY HOPPER WIRING DIAGRAM (Pre FLEET FLEX System)

## HARNESS WIRING DIAGRAM



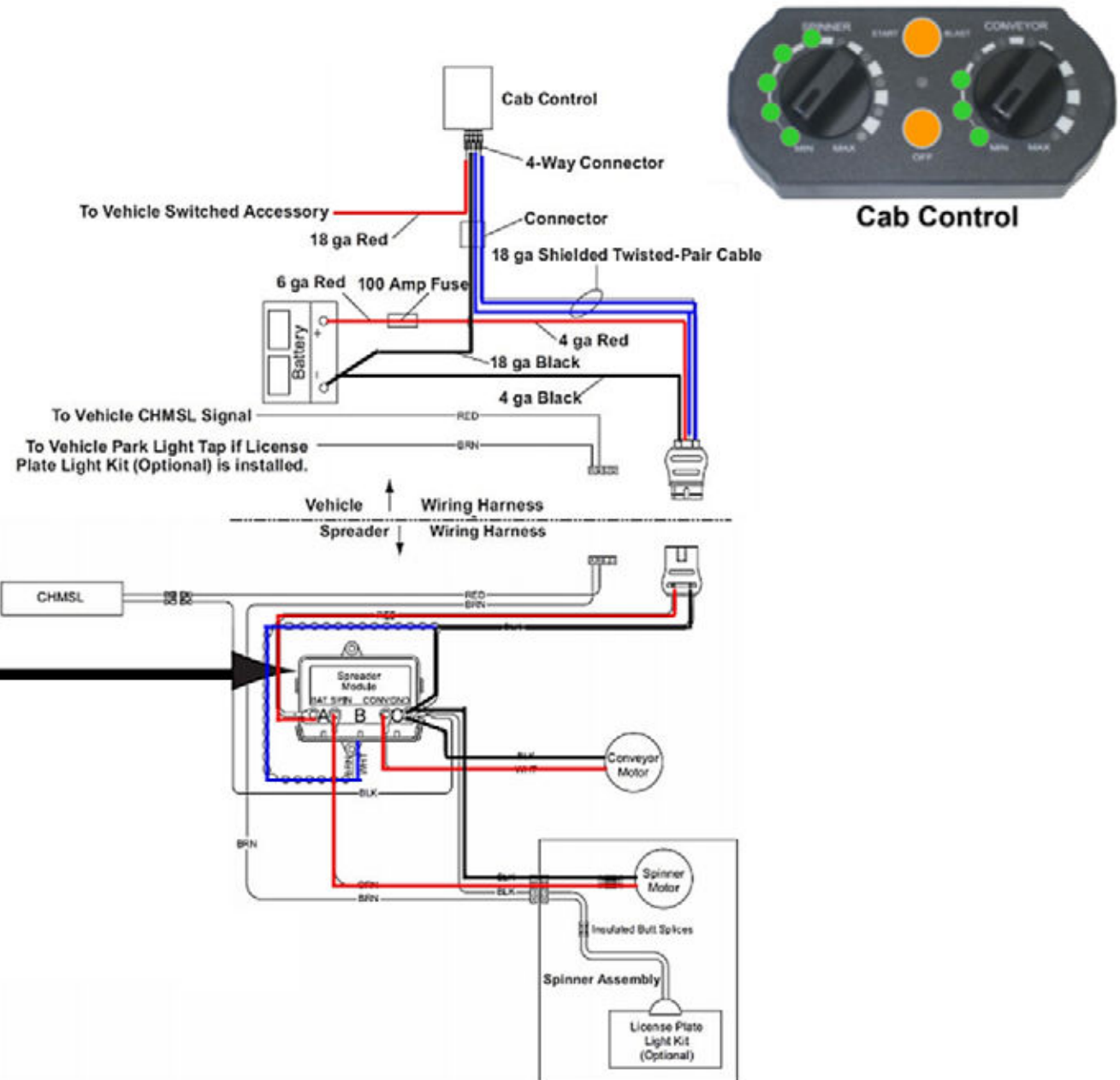


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# Striker™ HOPPER (OLD) ELECTRICAL DIAGRAM

- 1 Vehicle battery provides power to cab control and spreader module.
- 2 Vehicle battery provides ground to cab control and spreader module.
- 3 Switched accessory is activated, cab control is ON.
- 4 Conveyor and spinner speed is selected, signal sent through communication wires to spreader module.
- 5 Spreader module decodes signal from the cab control, sends power and ground to conveyor and spinner motor.



ICE BREAKER™ HOPPER SPREADER – DRIVE COMPONENTS

Throttle Kit for Honda 69781

MODEL # V340K2DE33

11 HP Honda Engine 94535

Replaced Tecumseh Motor

10.5 HP Briggs & Stratton Engine 96165

Throttle Kit for Briggs & Stratton 69782

Chain Kit – PN 95736

Chain

Master Link

Sprocket

Belt Kit – PN 95737

V-Belt

Drive Belt

Idler

Pulley

Conveyer and/or Spinner Hydraulic Drive Kit – PN 95470

| Control Valve Type | Control Valve PN | Required Flow |
|--------------------|------------------|---------------|
| Single Flow        | 68469            | 10 gpm        |
| Dual Flow Hopper   | 95245            | 10/10 gpm     |

Hydraulic Drive

Center Drive Chute Update Rework Kit PNs

|    |       |
|----|-------|
| MS | 95494 |
| SS | 95495 |

When replacing Honda or Tecumseh engine with Briggs & Stratton engine, you will also need throttle bracket (PN 65372-1), hood baffle weldment (PN 94582-1) and new battery kit (PN 65605-3).

Electric Clutch

Conveyer Chain

Idler Shaft

Gear Case

NOTE: A new belt idler kit is available (PN 95568).

# CONVEYOR CHAIN REFERENCE

## ICE BREAKER™

| Serial Number | Part Number | Length | RC or HC | Overall Width (pin to pin) | Sprocket to Sprocket (centerline) | # of Links |
|---------------|-------------|--------|----------|----------------------------|-----------------------------------|------------|
| 0126–Higher   | 94898       | 7'     |          | 15.679"                    | 14.025"                           | 108        |
|               | 68474       | 8'     |          | 15.679"                    | 14.025"                           | 123        |
|               | 95361       | 9'     |          | 15.679"                    | 14.025"                           | 138        |
|               | 68435       | 10'    |          | 15.679"                    | 14.025"                           | 150        |

## Old-Style Hopper (T = Obsolete Part)

|           |         |     |    |         |         |     |
|-----------|---------|-----|----|---------|---------|-----|
| 4583–6998 | 94462   | 7'  | RC | 11.651" | 10.025" | 108 |
|           | 68349 T | 8'  | RC | 11.879" | 10.025" | 123 |
|           | 68474   | 8'  | HC | 15.679" | 14.025" | 123 |
|           | 68435   | 10' | HC | 15.679" | 14.025" | 150 |
| 3883–4582 | 68349   | 8'  | RC | 11.879" | 10.025" | 123 |
|           | 68474   | 8'  | HC | 15.679" | 14.025" | 123 |
|           | 68435   | 10' | HC | 15.679" | 14.025" | 150 |
| 1200–3882 | 65183 T | 8'  | RC | 11.863" | 10.209" | 123 |
|           | 65648 T | 8'  | HC | 16.002" | 14.376" | 123 |
|           | 65650 T | 10' | HC | 16.002" | 14.376" | 123 |

## Striker™

|         |       |        |  |         |        |     |
|---------|-------|--------|--|---------|--------|-----|
| 150515– | 94898 | 7'–8'  |  | 14.025" | 15.65" | 123 |
|         | 68474 | 9'–10' |  | 14.025" | 15.65" | 108 |

## Tornado™

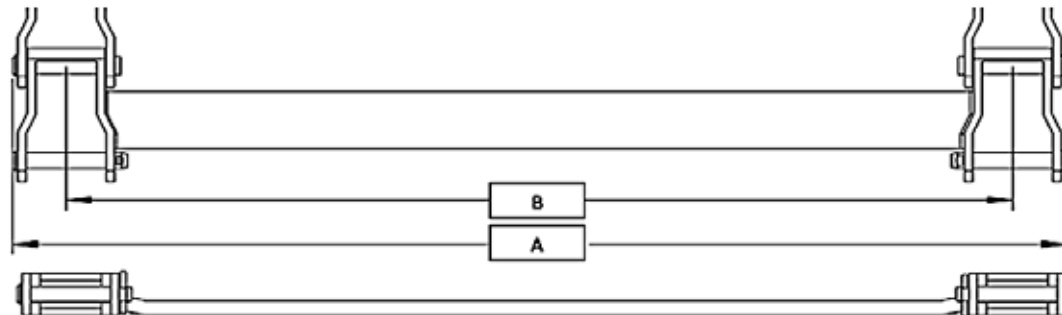
|         |       |    |  |         |        |     |
|---------|-------|----|--|---------|--------|-----|
| 090528– | 78078 | 7' |  | 14.025" | 15.65" | 99  |
|         | 94898 | 8' |  | 14.025" | 15.65" | 108 |

## 0.35 yd³ Striker

|       |       |    |  |         |         |    |
|-------|-------|----|--|---------|---------|----|
| 74758 | 94898 | 3' |  | 11.651" | 10.025" | 48 |
|-------|-------|----|--|---------|---------|----|

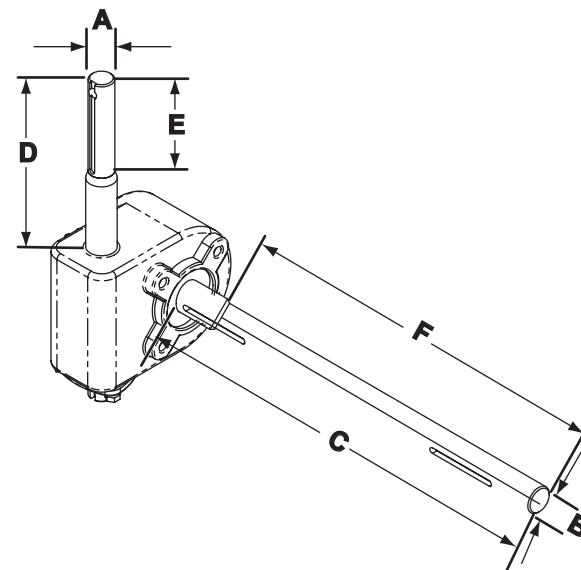
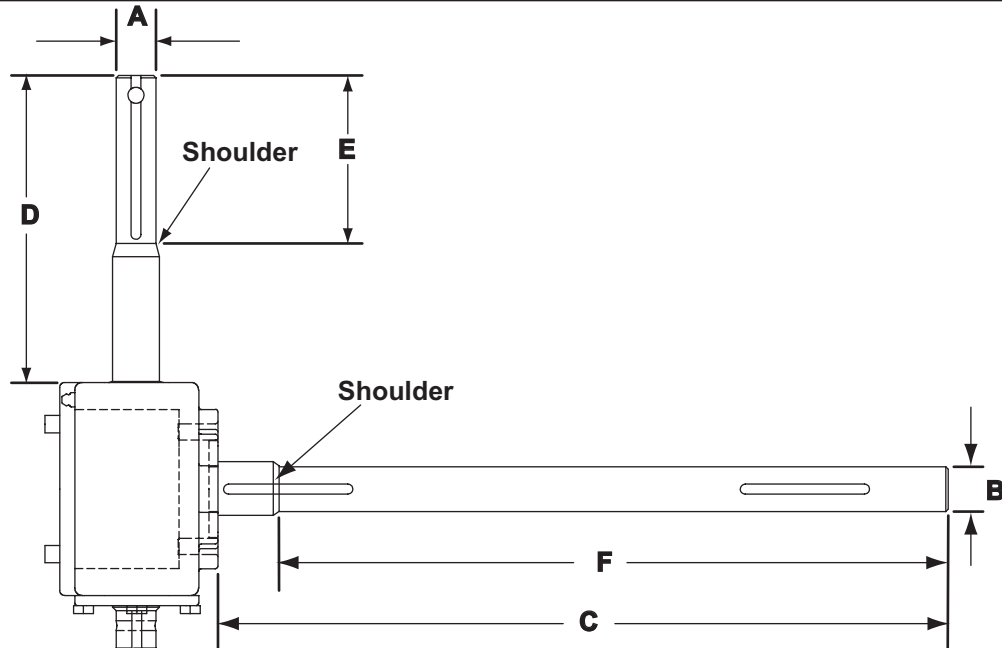
## 0.7 yd³ Striker

|       |       |      |  |        |         |    |
|-------|-------|------|--|--------|---------|----|
| 74758 | 94898 | 4.5' |  | 15.65" | 14.025" | 78 |
|-------|-------|------|--|--------|---------|----|





## SPREADER GEAR CASE REFERENCE TABLE



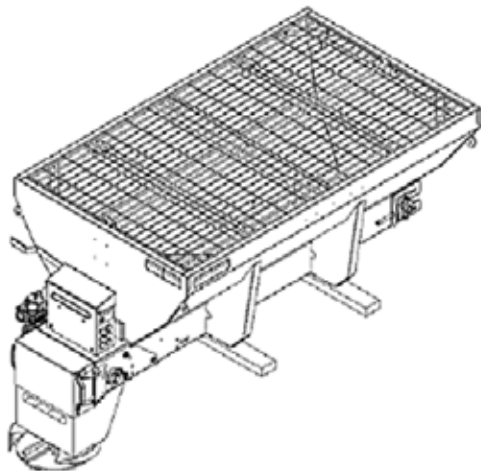
| Model                                                                                                                                                        | Serial Number   | Part Number       | A              | B               | C                   | D                  | E                              | F                               | Comments                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|----------------|-----------------|---------------------|--------------------|--------------------------------|---------------------------------|----------------------------|
|                                                                                                                                                              |                 |                   | Input Shaft OD | Output Shaft OD | Output Shaft Length | Input Shaft Length | Input Shaft Length to Shoulder | Output Shaft Length to Shoulder |                            |
| Tornado™                                                                                                                                                     | 090527 – 120430 | 95567             | 1              | 1-1/4           | 18-21/32            |                    | 4                              |                                 |                            |
| Old Tornado                                                                                                                                                  | 0607 – 090224   | 95756 T           | 5/8            | 3/4             |                     |                    | 5                              | 2-5/8                           |                            |
| PRO-FLO™ 2                                                                                                                                                   | 202650 – Higher | 68803 T           | 5/8            | 3/4             |                     | 2-3/16             |                                | 2-5/8                           |                            |
|                                                                                                                                                              | 202389 – 202649 | 65762 T           | 5/8            | 3/4             |                     | 2-3/16             |                                | 2-5/8                           |                            |
| 65762 can be replaced with 68803 by adding two 95692 mounting brackets and drilling attaching holes in spreader frame stub shaft directly below input shaft. |                 |                   |                |                 |                     |                    |                                |                                 |                            |
| ICE BREAKER™                                                                                                                                                 | 0126 – 0401     | 94349 T           | 1              | 1-1/8           | 18-3/8              |                    | 4-7/32                         |                                 | Direct Drive               |
|                                                                                                                                                              | 0402 – Higher   | 95567             | 1              | 1-1/8           | 18-3/8              |                    | 4-7/32                         |                                 | Center Drive               |
| Hopper Spreader                                                                                                                                              | 4583 6998       | 78367 T (68374 T) | 1              | 1-1/8           | 14-3/8              | 7-7/8              |                                |                                 | Regular Capacity           |
|                                                                                                                                                              |                 | 78367 T (68412 T) | 1              | 1-1/8           | 14-3/8              | 7-7/8              |                                |                                 | Regular Capacity Hydraulic |
|                                                                                                                                                              |                 | 78368 T (68384 T) | 1              | 1-1/8           | 18-3/8              | 7-7/8              |                                |                                 | High Capacity/Gas          |
|                                                                                                                                                              |                 | 78368 T (68463 T) | 1              | 1-1/8           | 18-3/8              | 7-7/8              |                                |                                 | High Capacity Hydraulic    |
|                                                                                                                                                              | 1200 – 3882     | 65178 T           | 1              | 1-1/8           | 2                   | 7-7/8              |                                |                                 | Regular Capacity           |

T Obsolete Part

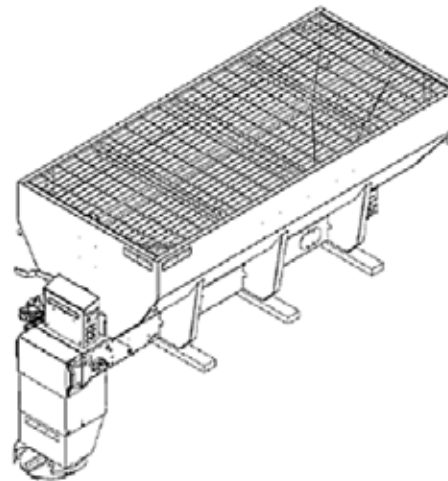


## Striker™ CHUTE REFERENCE

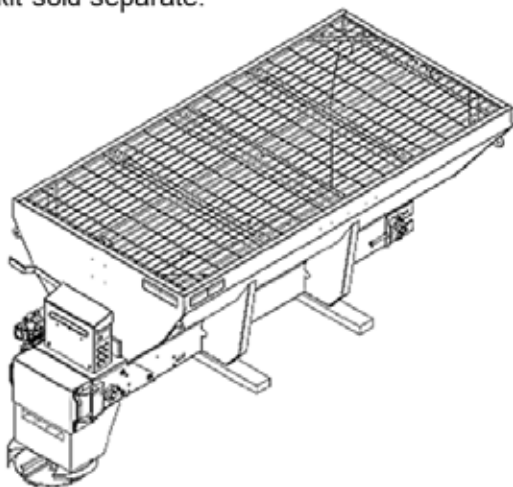
**7' Steel Hoppers** – Standard with short chute configuration. PN 99139 electric chute extension kit sold separate.



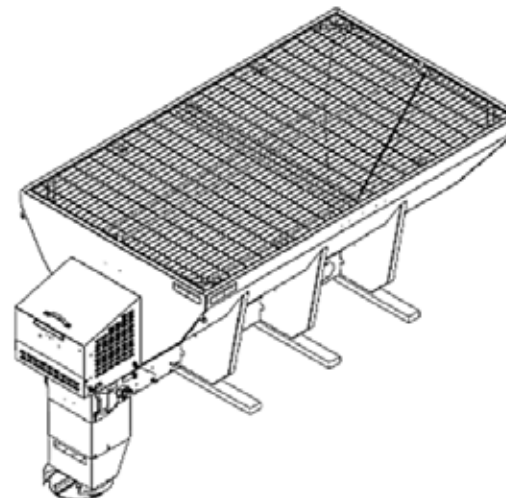
**9' Steel Hoppers** – Standard with long chute configuration. Additional short spinner shaft is also provided with each hopper.



**8' Steel Hoppers** – Standard with short chute configuration. PN 99139 (electric), 99619 (gas) or 99698 (hydraulic) chute extension kit sold separate.

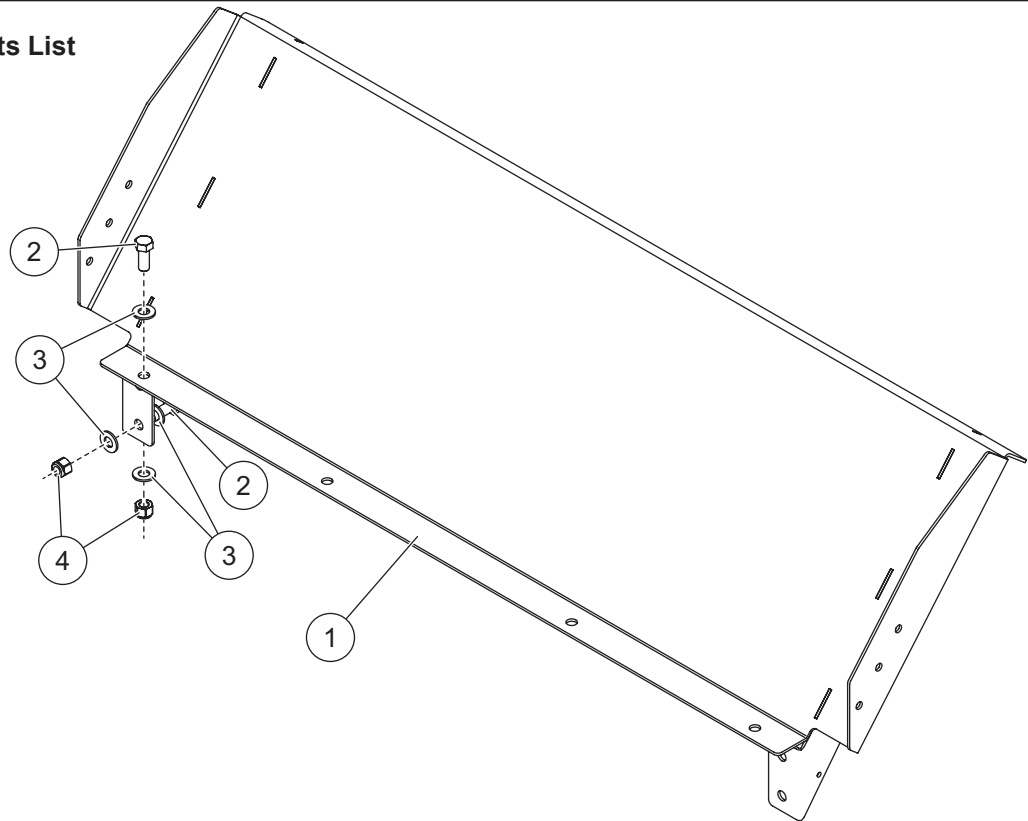


**10' Steel Hoppers** – Standard with long chute configuration. Additional short spinner shaft is also provided with each hopper.



# STAINLESS STEEL HOPPERS – SPILL GUARD KITS

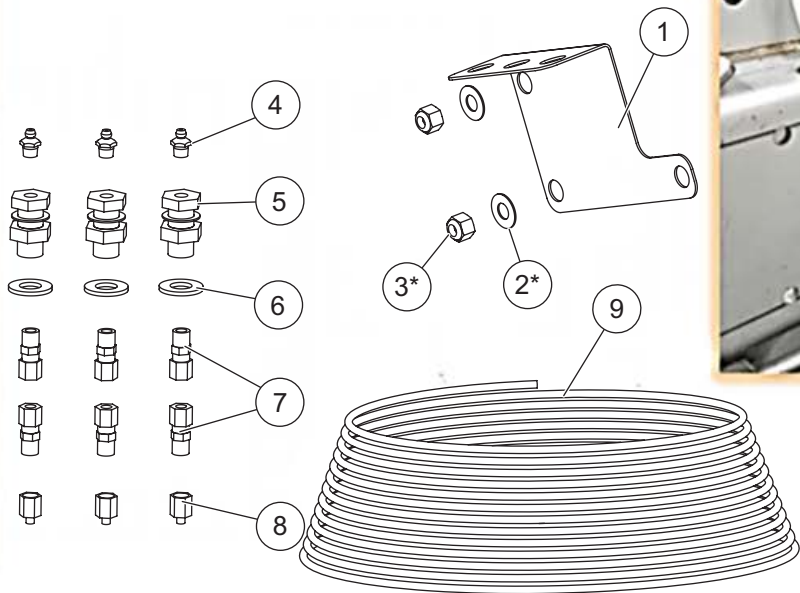
## Parts List



82

| 81119 Spill Guard Kit – 70"         |       |     |                                 |                      |       |     |                     |
|-------------------------------------|-------|-----|---------------------------------|----------------------|-------|-----|---------------------|
| Item                                | Part  | Qty | Description                     | Item                 | Part  | Qty | Description         |
| 1                                   | 79112 | 2   | Spill Guard, 70"                | ns                   | 79114 | 1   | Bolt Bag            |
| 79114 Bolt Bag                      |       |     |                                 |                      |       |     |                     |
| 2                                   |       | 20  | 1/2-13 x 1-1/4 Hex Cap Screw SS | 4                    |       | 20  | 1/2-13 Locknut SS   |
| 3                                   |       | 40  | 1/2 Flat Washer SS              | ns                   | 68595 | 1   | Label – Information |
| 81120 Spill Guard Kit – 50" (Shown) |       |     |                                 |                      |       |     |                     |
| Item                                | Part  | Qty | Description                     | Item                 | Part  | Qty | Description         |
| 1                                   | 79113 | 2   | Spill Guard, 50"                | ns                   | 79115 | 1   | Bolt Bag            |
| 79115 Bolt Bag                      |       |     |                                 |                      |       |     |                     |
| 2                                   |       | 16  | 1/2-13 x 1-1/4 Hex Cap Screw SS | 4                    |       | 16  | 1/2-13 Locknut SS   |
| 3                                   |       | 32  | 1/2 Flat Washer SS              | ns                   | 68595 | 1   | Label – Information |
| ns = not shown                      |       |     |                                 | SS = Stainless Steel |       |     |                     |

POLY & STAINLESS STEEL HOPPER SPREADERS – CENTRAL GREASE POINT KIT



| 11763 Central Grease Point Kit |        |     |                              |                      |       |     |                             |
|--------------------------------|--------|-----|------------------------------|----------------------|-------|-----|-----------------------------|
| Item                           | Part   | Qty | Description                  | Item                 | Part  | Qty | Description                 |
| 1                              | 11845  | 1   | Bracket                      | 6                    |       | 3   | 1/2 Flat Washer SS          |
| 2*                             |        | 2   | 3/8 Flat Washer Wide SS      | 7                    | D6984 | 6   | 1/4 Compression Fitting     |
| 3*                             |        | 2   | 3/8-16 Hex Locknut GB        | 8                    | D6985 | 3   | 1/4-28 x 1/8 Female Adapter |
| 4                              | B61400 | 3   | 1/8 NPT Straight Grease Zerk | 9                    | D6987 | 1   | 1/4 Nylon Tubing – 300"     |
| 5                              | D6982  | 3   | 1/8 Bulkhead Coupling Brass  |                      |       |     |                             |
| G = Grade                      |        |     |                              | SS = Stainless Steel |       |     |                             |

\* Used for poly hopper installations only.

Lit. No. 11846, Rev. 01



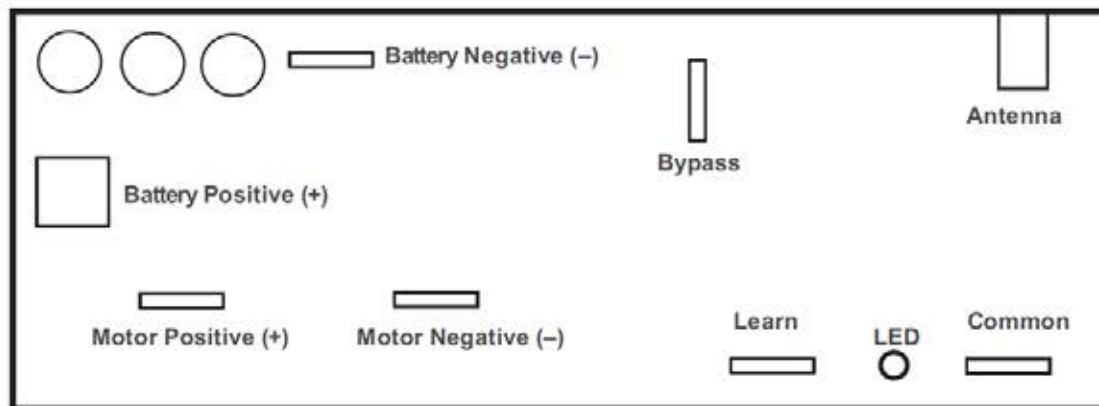
## LOW-PRO 300W TAILGATE SPREADERS

### LOW-PRO 300W Spreader

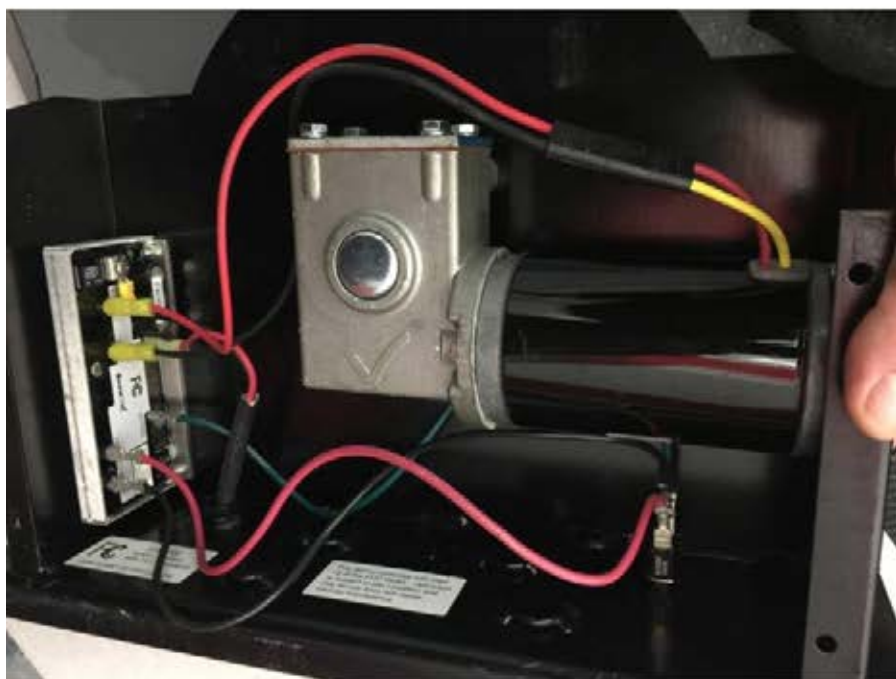
- 3.00 ft<sup>3</sup>
- Wireless

#### Available Mounts Include:

- 2" receiver hitch
- 3-point hitch mount
- Drop utility
- Trailer and utility mount



Wireless Receiver Module Connections



#### Amperage Draw

- 3.5A: No Load
- 10A: Underload



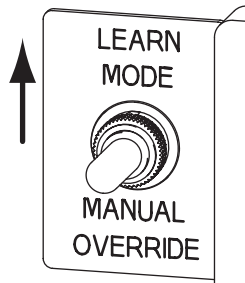
# WIRELESS CONTROL PROGRAMMING AND PAIRING

## PROGRAMMING AND PAIRING THE WIRELESS KEY FOB CONTROL

### Resetting the Wireless Control Module

Push and hold the toggle switch UP into the "LEARN MODE" position for 15 seconds and then release. This erases all previously paired wireless key fob controls from memory.

A wireless key fob control must be paired before the spreader will operate.



### Programming the Wireless Key Fob Control

1. Gently press the end of a pointed object (e.g., ballpoint pen) into the small hole on the underside of the wireless key fob control. A blue light on the underside of the key fob will flash for 10–15 seconds, indicating that the wireless key fob control will accept programming.



2. While the blue light is flashing, press the wireless key fob control buttons in the following sequence:

**50%, OFF, 100%, 50%, OFF, 100%.**

The sequence must be completed before the blue light stops flashing.

### Pairing the Wireless Key Fob Control to the Wireless Control Module

1. Check that the wireless control module is receiving a signal by confirming that a red light is visible through the bottommost hole in the toggle-switch side of the transmission mount.

#### **⚠ WARNING**

**The spinner will start immediately upon successful pairing. Keep hands and tools clear of spinner assembly.**

2. Press and hold the "50%" button on the wireless key fob control. While holding the button, push the toggle switch UP into the "LEARN MODE" position twice and release the toggle switch. Continue holding the button for 30 seconds and the spreader will start at 50% speed.



If the spreader does not start, release the "50%" button, wait 20 seconds, and then repeat Step 2.

3. Press the "100%" button to make sure the spreader runs at 100% speed.



If any of the buttons are not working, return to "Resetting the Wireless Control Module," and repeat the entire programming and pairing process.



## Striker™ SPREADER SPILL GUARD REFERENCE

| Dual Electric    |                      |                     |                     |                   |                   |                     |                   |
|------------------|----------------------|---------------------|---------------------|-------------------|-------------------|---------------------|-------------------|
| Capacity         | 0.35 yd <sup>3</sup> | 0.7 yd <sup>3</sup> | 1.5 yd <sup>3</sup> | 2 yd <sup>3</sup> | 3 yd <sup>3</sup> | 4.5 yd <sup>3</sup> | 6 yd <sup>3</sup> |
| Spill Guard Size | N/A                  | N/A                 | 50"                 | 50"               | 50"               | 70"                 | 70"               |
| Part #           | 85696                | 85697               | 81120               | 81120             | 81120             | 81119               | 81119             |

| Dual Gas         |                      |                     |                     |                   |                   |                     |                   |
|------------------|----------------------|---------------------|---------------------|-------------------|-------------------|---------------------|-------------------|
| Capacity         | 0.35 yd <sup>3</sup> | 0.7 yd <sup>3</sup> | 1.5 yd <sup>3</sup> | 2 yd <sup>3</sup> | 3 yd <sup>3</sup> | 4.5 yd <sup>3</sup> | 6 yd <sup>3</sup> |
| Spill Guard Size | N/A                  | N/A                 | 50"                 | 50"               | 50"               | 70"                 | 70"               |
| Part #           | N/A                  | N/A                 | 81120               | 81120             | 81120             | 81119               | 81119             |

| Dual Hydraulic   |                      |                     |                     |                   |                   |                     |                   |
|------------------|----------------------|---------------------|---------------------|-------------------|-------------------|---------------------|-------------------|
| Capacity         | 0.35 yd <sup>3</sup> | 0.7 yd <sup>3</sup> | 1.5 yd <sup>3</sup> | 2 yd <sup>3</sup> | 3 yd <sup>3</sup> | 4.5 yd <sup>3</sup> | 6 yd <sup>3</sup> |
| Spill Guard Size | N/A                  | N/A                 | 50"                 | 50"               | 50"               | 70"                 | 70"               |
| Part #           | N/A                  | N/A                 | 81120               | 81120             | 81120             | 81119               | 81119             |

## SPREADER GEAR BOX REFERENCE

| T Obsolete Part *** To Be Obsolete |                                             |             |                |                 |                     |                    |                                |                                 |        |                 |          |
|------------------------------------|---------------------------------------------|-------------|----------------|-----------------|---------------------|--------------------|--------------------------------|---------------------------------|--------|-----------------|----------|
| Type                               | Serial Number                               | Part Number | Input Shaft OD | Output Shaft OD | Output Shaft Length | Input Shaft Length | Input Shaft Length to Shoulder | Output Shaft Length to Shoulder | Ratio  | Auger / Spinner | Comments |
| Striker™                           |                                             |             |                |                 |                     |                    |                                |                                 |        |                 |          |
| Dual Electric                      | 170711 – Higher                             | 99087       |                |                 |                     |                    |                                |                                 | 2 : 1  | Auger           |          |
|                                    | 160902 – 170628                             |             |                |                 |                     |                    |                                |                                 |        |                 |          |
|                                    | 150515 – 160902                             |             |                |                 |                     |                    |                                |                                 |        |                 |          |
| Gas Engine                         | 170711 – Higher                             | 99117       |                |                 |                     |                    |                                |                                 | 20 : 1 | Auger           |          |
|                                    | 150515 – 170628                             |             |                |                 |                     |                    |                                |                                 |        |                 |          |
| Dual Hydraulic                     | 170711 – Higher<br>150515 – 170628          | 99117       |                |                 |                     |                    |                                |                                 | 20 : 1 | Auger           |          |
| Tornado™                           |                                             |             |                |                 |                     |                    |                                |                                 |        |                 |          |
| 1.5, 1.8, 2.5 yd Hoppers           | 160905 – Higher                             | 99087       | 1.0"           | 1.125"          | 18.65"              |                    | 4.0"                           |                                 | 2 : 1  | Auger           |          |
|                                    | 160201 – 160902                             |             |                |                 |                     |                    |                                |                                 |        |                 |          |
|                                    | 120522 – 160129                             | 95567       |                |                 |                     |                    |                                |                                 | 20 : 1 |                 |          |
|                                    | 090528 – 120430                             |             |                |                 |                     |                    |                                |                                 |        |                 |          |
| 1.25 yd Hoppers                    | 0712 – 090224<br>0609 – 0711<br>0606 – 0608 | 95756 ***   | 5/8"           | 3/4"            |                     |                    | 5.0"                           | 2-5/8"                          | 20 : 1 | Auger           |          |
| LT ( 78901 )                       | 0000 – Higher                               | 51090       |                |                 |                     |                    |                                |                                 | 30 : 1 | Auger           |          |
|                                    |                                             | 51028       |                |                 |                     |                    |                                |                                 | 8 : 1  | Spinner         |          |
| UTV ( 78600 )                      | 160901 – Higher                             | 51090       |                |                 |                     |                    |                                |                                 | 30 : 1 | Auger           |          |
|                                    |                                             | 51028       |                |                 |                     |                    |                                |                                 | 8 : 1  | Spinner         |          |
| ICE BREAKER™                       |                                             |             |                |                 |                     |                    |                                |                                 |        |                 |          |
| ICE BREAKER                        | 0402 – Higher                               | 955667      | 1.0"           | 1.125"          | 18.65"              |                    | 4.0"                           |                                 | 20 : 1 | Auger           |          |
|                                    | 0126 – 0401                                 | 94349 ***   |                |                 |                     |                    |                                |                                 |        |                 |          |

## SPREADER GEAR BOX REFERENCE *(continued)*

| Type                           | Serial Number   | Part Number                  | Input Shaft OD | Output Shaft OD | Output Shaft Length        | Input Shaft Length | Input Shaft Length to Shoulder | Output Shaft Length to Shoulder | Ratio           | Auger / Spinner              | Comments                            |
|--------------------------------|-----------------|------------------------------|----------------|-----------------|----------------------------|--------------------|--------------------------------|---------------------------------|-----------------|------------------------------|-------------------------------------|
| Hopper Spreader                |                 |                              |                |                 |                            |                    |                                |                                 |                 |                              |                                     |
| Hopper                         | 4583 – 6998     | (T 68374 )<br>(T 68412 )     | 1.0"           | 1-1/8"          | 14-3/8"                    | 7-7/8"             |                                |                                 |                 |                              | Regular Capacity                    |
|                                |                 |                              |                |                 | Regular Capacity Hydraulic |                    |                                |                                 |                 |                              |                                     |
|                                |                 | (T 68384 )<br>(T 68463 )     |                |                 | 18-3/8"                    |                    |                                |                                 |                 |                              | High Capacity                       |
|                                |                 | High Capacity Hydraulic      |                |                 |                            |                    |                                |                                 |                 |                              |                                     |
|                                | 1200 – 3882     | 65178                        | 2.0"           |                 | Regular Capacity           |                    |                                |                                 |                 |                              |                                     |
| Tailgate Spreaders             |                 |                              |                |                 |                            |                    |                                |                                 |                 |                              |                                     |
| PRO-FLO™<br>91810-1<br>91850-1 | 170504 – Higher | 75670 (525)A                 |                |                 |                            |                    |                                |                                 | 30 : 1          | Auger (525)                  |                                     |
| 918102<br>91850                | 160801 – 170502 | 75640 (525)S<br>75692 (900)A |                |                 |                            |                    |                                |                                 | 8 : 1<br>20 : 1 | Spinner (525)<br>Auger (900) |                                     |
|                                |                 | 75686 (900)S                 |                |                 |                            |                    |                                |                                 | 8 : 1           | Spinner (900)                |                                     |
| 80152 (525)<br>80190 (900)     | 150601 – 160729 | SAME                         |                |                 |                            |                    |                                |                                 | SAME            | SAME                         |                                     |
| LOW-PRO 300W                   | 150401 – Higher | 75625                        |                | 5/8"            | 5.87"                      |                    |                                |                                 | 14.5 : 1        | Both                         |                                     |
| Hopper                         |                 |                              |                |                 |                            |                    |                                |                                 |                 |                              |                                     |
| PRO-FLO™ 2<br>(67120 )         | 202650 – Higher | 68803 ***                    |                |                 |                            |                    |                                |                                 |                 | Conveyor                     |                                     |
|                                | 202389 – 202649 | 65762 ***                    |                |                 |                            |                    |                                |                                 |                 |                              |                                     |
| PRO-FLO<br>(67280)             | 115297 – Higher | N/A                          |                |                 |                            |                    |                                |                                 |                 |                              | No gear box; Belt driven from motor |

## BEARING REFERENCE CHART

| Bearing Part # | Bore Dimension | Hole Type | # of Holes | Bolt Size                             | Distance Between Holes | Grease Fitting | Used In:                                                                          | Notes               |
|----------------|----------------|-----------|------------|---------------------------------------|------------------------|----------------|-----------------------------------------------------------------------------------|---------------------|
| 9157           | 1"             | Flange    | 2          |                                       |                        |                | ICE BREAKER™                                                                      |                     |
| 9162           | 1 1/8"         | Flange    | 2          |                                       |                        |                |                                                                                   |                     |
| 9176           | 1"             | Flange    | 2          |                                       |                        |                |                                                                                   |                     |
| 9193           | 3/4"           | Pillow    | 2          |                                       |                        |                | ICE BREAKER                                                                       | With Locking Collar |
| 20322          | 1"             | Pillow    | 2          |                                       |                        | bottom         | Tornado™                                                                          | Obsolete            |
| 65171          | 1 1/8"         | Flange    | 2          | 3/8"                                  | 3.563"                 |                |                                                                                   |                     |
| 65197          | 3/4"           | Pillow    | 2          | 7/16"                                 | 3.750"                 | bottom         | ICE BREAKER                                                                       | With Locking Collar |
| 65409          | 3/4"           | Flange    | 2          | 5/16"                                 | 2.750"                 |                | PRO-FLO™                                                                          |                     |
| 65758          | 3/4"           | Hanger    | 3          |                                       |                        |                | PRO-FLO 2                                                                         |                     |
| 65759          | 3/4"           | Take Up   |            |                                       |                        |                | PRO-FLO 2                                                                         |                     |
| 68619          | 3/4"           | Flange    | 2          | 3/8"                                  | 3.543"                 |                | PRO-FLO 2, 1.25 Tornado                                                           |                     |
| 68662          | 5/8"           | Flange    | 4          | 3/8"                                  | 2.125"                 |                | LOW-PRO 500,<br>LOW-PRO 1000/2000,<br>PRO-FLO™ 525, PRO-FLO™ 900,<br>1.25 Tornado |                     |
| 65182          | 1"             | Flange    | 2          | 5/16"                                 | 2.984"                 |                | ICE BREAKER                                                                       | 94897 KIT           |
| 94536          | 1 1/8"         | Flange    | 2          | 3/8"                                  | 4.594"                 |                | Striker™ & Tornado                                                                | 94953 KIT           |
| 65636          | 1"             | Pillow    | 2          | 7/16"                                 | 4.125"                 | on bottom      | Tornado                                                                           | 95488 KIT           |
| 96167          | 3/4"           | Flange    | 2          | 3/8"                                  | 3.531"                 | on side        | Tornado, Striker, & WESTERN® 2500                                                 |                     |
| 96501          | .75 ID         | Flange    | 2          | 3/8-16<br>X 1-1/4<br>Carriage<br>Bolt | 3.53                   | on side        | Tornado, Striker, & Western 2500                                                  | Kit with bolts      |
| D6512          | 5/8"           | Flange    | 4          |                                       |                        |                | TGS05                                                                             | Obsolete            |
| D6845          | 1 1/4"         | Flange    | 2          |                                       |                        |                |                                                                                   | n/s                 |

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# General Info

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## WESTERN® SNOWPLOW PRE-DELIVERY INSPECTION

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### Please review the following prior to snowplow delivery:

- \_\_\_\_\_ Verify that the snowplow properly attaches and detaches from the vehicle.
- \_\_\_\_\_ Verify that the A-frame/T-frame of MVP PLUS™ and MVP 3™ snowplows is properly configured to the vehicle as described in the Installation Instructions and Owner's Manual.
- \_\_\_\_\_ Verify that all wiring harnesses and battery cables are properly secured away from hot or moving parts, as described in the Installation Instructions.
- \_\_\_\_\_ Verify that dielectric grease has been applied to all electrical connections, as described in the Installation Instructions.
- \_\_\_\_\_ Verify that all vehicle and snowplow lights are adjusted and working correctly as described in the Owner's Manual.
- \_\_\_\_\_ Verify that all hydraulic hoses are properly routed, free of twists and kinks, and away from any pinch points. Verify that the hose wrap on MVP PLUS, MVP 3, WIDE-OUT™, and WIDE-OUT™ XL snowplows is located correctly to prevent hoses from getting caught between the stacking stops and the frame, and to prevent chafing on the back of the blade.
- \_\_\_\_\_ Verify that all hydraulic hoses are tight and that there are no leaks.
- \_\_\_\_\_ Verify that the hydraulic fluid has been properly topped off as described in the Owner's Manual.
- \_\_\_\_\_ Verify that the stand shoe is properly adjusted.
- \_\_\_\_\_ Verify that the stacking stops are adjusted correctly on MVP PLUS and MVP 3 snowplows as described in the Installation Instructions.
- \_\_\_\_\_ Verify that all pivot points are properly lubricated as described in the Owner's Manual.
- \_\_\_\_\_ Verify that the lift chains are properly adjusted for optimum transport height and to allow for float. Verify that the blade does not block the snowplow lights.
- \_\_\_\_\_ Adjust the blade drop speed as needed. See the Owner's Manual and Installation Instructions for more information.
- \_\_\_\_\_ Verify that all snowplow functions are working correctly.
- \_\_\_\_\_ Verify that the customer has received the Owner's Manual and Owner's Registration Card.

## PRE-CALL CHECKLIST

| PRE-CALL CHECKLIST                            |  |                                           |    |                |                       |
|-----------------------------------------------|--|-------------------------------------------|----|----------------|-----------------------|
| HAVE THIS INFORMATION WHEN YOU CALL           |  |                                           |    |                |                       |
| NEW OR EXISTING INSTALL:                      |  | DATE OF INSTALL:                          |    |                |                       |
| TRUCK INFO:                                   |  |                                           |    |                |                       |
| YEAR:                                         |  |                                           |    |                |                       |
| MAKE:                                         |  |                                           |    |                |                       |
| MODEL:                                        |  |                                           |    |                |                       |
| HEADLAMP STYLE:                               |  |                                           |    |                |                       |
| ISOLATION MODULE PART NUMBER:                 |  |                                           |    |                |                       |
| SOFT START ADAPTER REQUIRED?:                 |  |                                           |    |                |                       |
| HEADLAMP HARNESS PART NUMBER(S):              |  |                                           |    |                |                       |
| HAND-HELD CONTROL TYPE:                       |  |                                           |    |                |                       |
| SNOWPLOW INFO:                                |  |                                           |    |                |                       |
| MODEL (INCLUDING WIDTH):                      |  |                                           |    |                |                       |
| SERIAL NUMBER SNOWPLOW & HYDRAULIC UNIT:      |  |                                           |    |                |                       |
| ELECTRICAL INFO:                              |  | 2-PLUG FLEET FLEX                         | OR | 3-PLUG         | OR 2-PLUG RELAY (OLD) |
| COMPLAINT OR ISSUE (VERIFIED BY TECHNICIAN):  |  |                                           |    |                |                       |
| SNOWPLOW FUNCTION OR LIGHTING ISSUE:          |  |                                           |    |                |                       |
| TRUCK-SIDE OR PLOW-SIDE:                      |  |                                           |    |                |                       |
| IF LIGHTING ISSUE:                            |  | WHAT'S MISSING (POWER OR GROUND) & WHERE: |    |                |                       |
| SOLENOID COIL ACTIVATION TEST (SCAT) RESULTS: |  | ELECTRICAL                                |    | OR             | HYDRAULIC             |
|                                               |  | WHAT'S MISSING (POWER OR GROUND) & WHERE: |    | PUMP PRESSURE: |                       |
|                                               |  | MOTOR AMPERAGE DRAW:                      |    |                |                       |
| SPREADER INFO:                                |  |                                           |    |                |                       |
| MODEL (INCLUDING LENGTH):                     |  |                                           |    |                |                       |
| SERIAL NUMBER (REQUIRED):                     |  |                                           |    |                |                       |
| TRUCK-SIDE OR SPREADER-SIDE:                  |  |                                           |    |                |                       |
| CONTROL ERROR CODE:                           |  |                                           |    |                |                       |
| COMPLAINT OR ISSUE (VERIFIED BY TECHNICIAN):  |  |                                           |    |                |                       |

WESTERN® SNOWPLOW CHECKLIST



A DIVISION OF DOUGLAS DYNAMICS, L.L.C.

Western Products  
PO Box 245038  
Milwaukee, WI 53224-9538  
www.westernplows.com

**Snowplow Checklist**

Customer Name: \_\_\_\_\_ Date: \_\_\_\_\_

Serial No.: \_\_\_\_\_

Please review the following with the customer and check accordingly. The distributor keeps the original and should give a signed copy to the customer.

- \_\_\_\_\_ Discussed the Owner's Manual and reviewed safety information.
- \_\_\_\_\_ Demonstrated correct operation of the snowplow.
- \_\_\_\_\_ Demonstrated correct mounting and dismounting of the snowplow.
- \_\_\_\_\_ Discussed proper ballast and location (if applicable). See Quick Match.
- \_\_\_\_\_ Discussed the recommended plowing and transport speeds.
- \_\_\_\_\_ Told the owner to check and tighten all mount assembly fasteners after 5–10 hours of usage.
- \_\_\_\_\_ Gave the dielectric grease tube to the owner and instructed the owner on proper greasing.
- \_\_\_\_\_ Instructed the owner to change the hydraulic fluid annually.
- \_\_\_\_\_ Reviewed maintenance and storage instructions.
- \_\_\_\_\_ Filled out and returned the Owner's Registration Card, or completed registration online at [www.westernplows.com](http://www.westernplows.com).
- \_\_\_\_\_ Gave the Owner's Manual packet to the owner.
- \_\_\_\_\_ Discussed any questions the owner may have.

I have covered the above checklist with the customer. \_\_\_\_\_  
*Distributor Signature*

\_\_\_\_\_  
*Distributor Name*

I understand the above statements on this checklist. \_\_\_\_\_  
*Customer Signature*

Excerpts taken from Lit. No. 63002, Rev. 03

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# Bulletins

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# Technical Service Bulletin

WTB-1909  
Nov. 14, 2019

Western Products • 7777 N 73rd Street • Milwaukee, WI 53223 • (414) 354-2310 • FAX (800) 236-6692

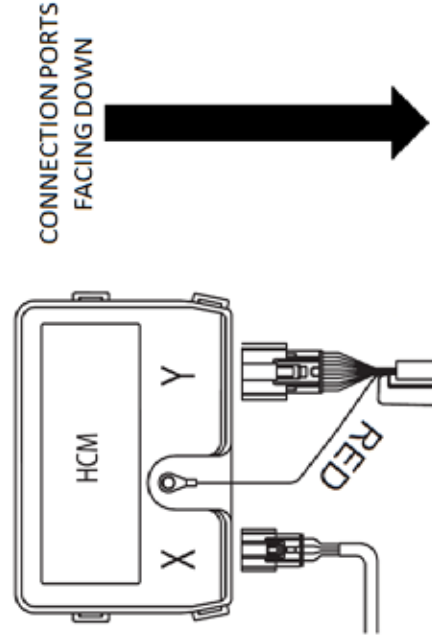
## IMPORTANT – PLEASE READ IMMEDIATELY

**PRODUCT:** NIGHTHAWK™ Headlamp Control Module (HCM)

**SUBJECT:** Installation Instruction Update

During our ongoing audit process, Western Products has identified variations in installation that could affect the durability of our NIGHTHAWK HCM. We have modified the Installation Instructions to reflect a bestpractice that will ensure product integrity.

Mount the HCM so that the connection ports are facing down towards the ground. If possible, mount the HCM in an area that is protected from road splash.



Please contact Technical Service toll-free at (866) 334-3800 should you have any technical questions on this matter.

Please contact the Western Products Technical Service Department if you have any questions concerning this matter.

| Route To     | Sales Manager | Service Manager | Parts Manager | Chief Mechanic | Mechanic No. 1 | Mechanic No. 2 |
|--------------|---------------|-----------------|---------------|----------------|----------------|----------------|
| Initial Here |               |                 |               |                |                |                |

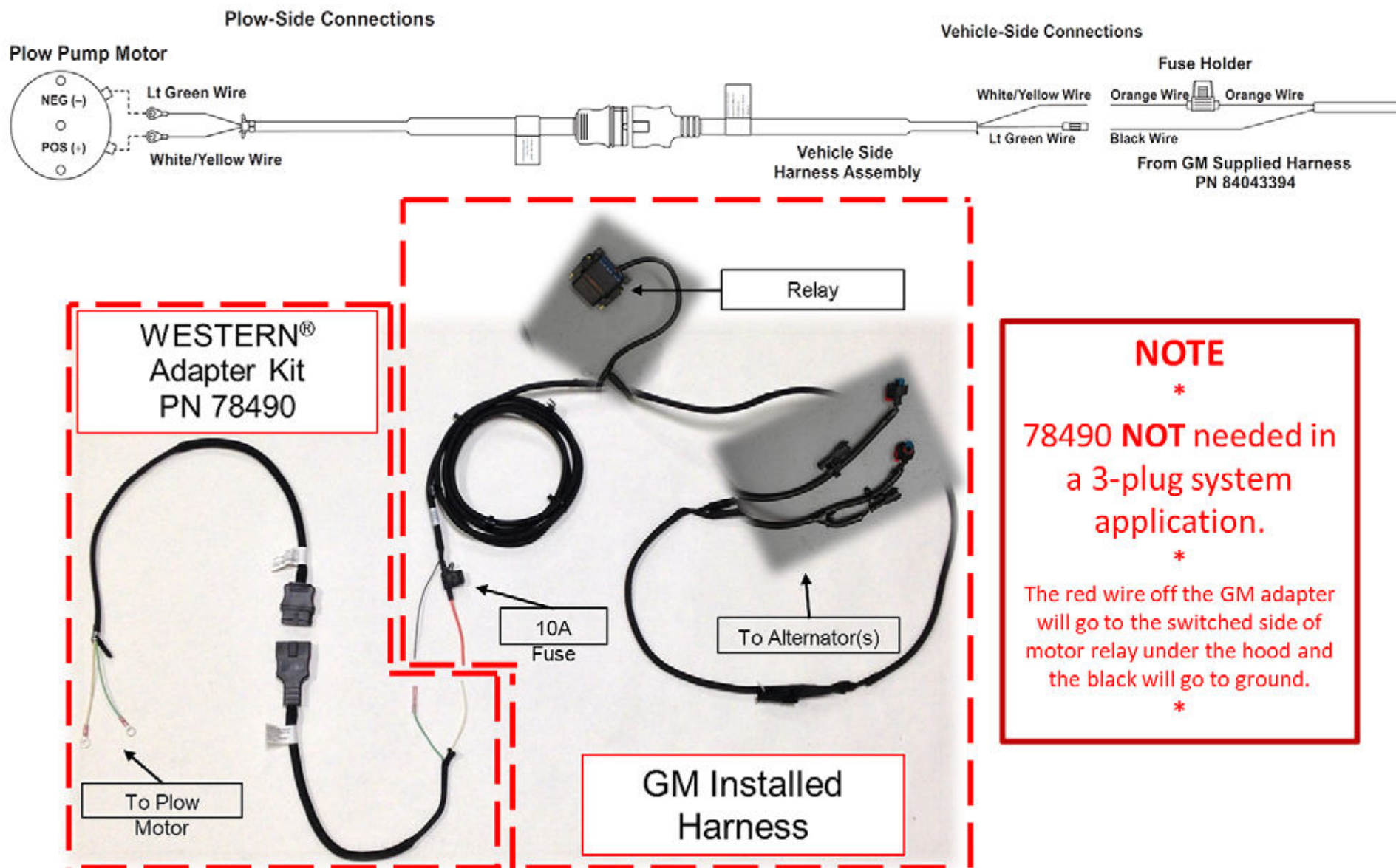
Printed in U.S.A.

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Page 1 of 1



## GM FIELD ADAPTER KIT





# Service Bulletin

SP 840  
February 25, 2016

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Western Products • 7777 N 73rd Street • Milwaukee, WI 53223 • (414) 354-2310 • FAX (414) 354-6664

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## IMPORTANT – PLEASE READ IMMEDIATELY

**SUBJECT:** Chevy/GMC Overvolt Fix

**ISSUE:** Supplemental harness kit to adapt FLEET FLEX snowplows to fit new GM Snow Plow Jumper Harness

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Chevy/GMC recently released a harness to combat the overvolt issue involving trucks with snow plow prep packages entering an over-voltage situation during plow operation. The overvolt situation occurs when the alternator has been operating at the high electrical draw of plow operation, the plow shuts off and the momentary spike in voltage will trip errors in the truck, temporarily shutting off various subsystems. Trucks affected are 2014 Sierra/Silverado K1500, and all 2015 and 2016 Sierra/Silverados with the snowplow prep package.

As a result, Western® is pleased to announce the approval of a harness kit to allow connection to the Snow Plow Jumper Harness released by Chevy/GMC under the recent Upfitter Integration Bulletin 124b (attached).

Because the relay for Western's plows resides on the plow, this fix necessitates an additional connection for Western's FLEET FLEX snowplows. In these situations please use PN 78490 GM Field Adapter Kit to adapt the system to the Chevy/GMC Snow Plow Jumper Harness.

If you have any questions, please contact Western Customer or Technical Support toll-free at (866)-334-3800.



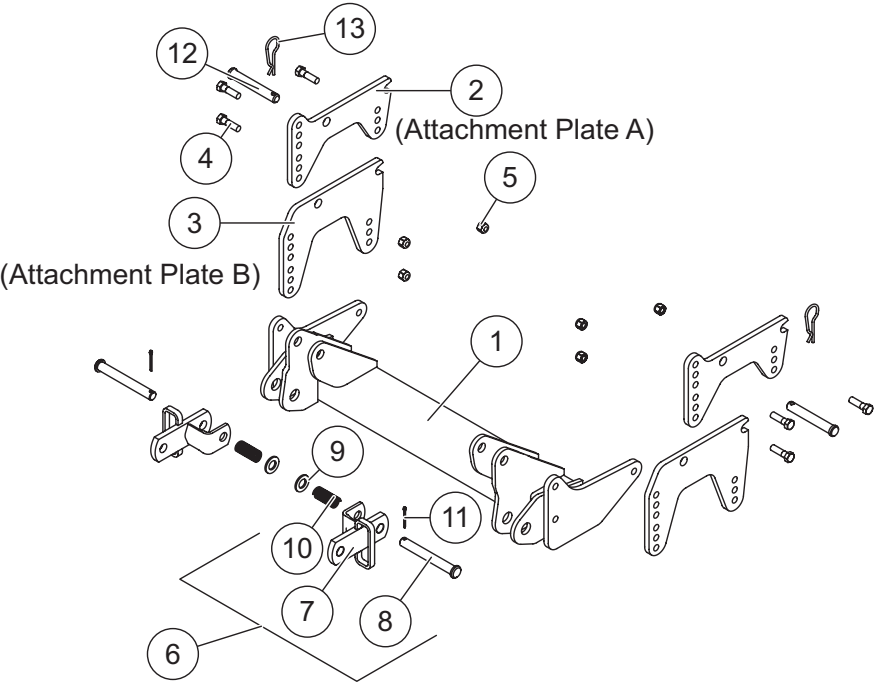
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# Blades & Attachments

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27170 UltraMount® – UniMount® ADAPTER

PARTS LIST – CONVERSION KIT



| 27170 CONVERSION KIT UltraMount – UniMount |       |     |                                 |      |        |     |                             |
|--------------------------------------------|-------|-----|---------------------------------|------|--------|-----|-----------------------------|
| Item                                       | Part  | Qty | Description                     | Item | Part   | Qty | Description                 |
| 1                                          | 40271 | 1   | MOUNT ADAPTER                   | 5    | 91335  | 6   | 1/2-13 HEX LOCKNUT GB       |
| 2                                          | 40278 | 2   | ATTACHMENT PLATE A              | 6    | 63940  | 2   | LINK ARM SERVICE KIT        |
| 3                                          | 40279 | 2   | ATTACHMENT PLATE B              | 12   | 95739  | 2   | 3/4 X 5 CLEVIS PIN          |
| 4                                          | 90101 | 6   | 1/2-13 X 1-3/4 HEX CAP SCREW G5 | 13   | 91965  | 2   | 5/32 HAIRPIN COTTER         |
| 63940 LINK ARM SERVICE KIT                 |       |     |                                 |      |        |     |                             |
| 7                                          | 63497 | 1   | LINK ARM                        | 10   | 63356  | 1   | 3/4 X 3 SPRING              |
| 8                                          | 63354 | 1   | 3/4 X 6 CLEVIS PIN HEAT-TREATED | 11   | 91911K | 1   | 5/32 X 1-1/2 COTTER PIN KIT |
| 9                                          | 91147 | 1   | 3/4 FLAT WASHER                 |      |        |     |                             |
| G = GRADE                                  |       |     |                                 |      |        |     |                             |



# RECEIVERS GUIDE

| PLOW              | MOUNT | DS KIT | PS KIT | DS    | PS    | PIN                   | HAIRPIN | OTHER              |
|-------------------|-------|--------|--------|-------|-------|-----------------------|---------|--------------------|
| HTS™              | UT    | 69611  | 69610  |       |       | 69663                 |         | 63212 SPACER       |
| MIDWEIGHT™        | UT    | 67858  | 67859  |       |       | 67665                 | 91965K  |                    |
| PRO-PLOW®         | UT    | 67858  | 67859  |       |       | 67665                 | 91965K  |                    |
| PRO-PLOW SERIES 2 | UT    | 67858  | 67859  |       |       | 67665                 | 91965K  |                    |
| PRO-PLUS®         | UT    | 67858  | 67859  |       |       | 67665                 | 91965K  |                    |
| MVP®              | UT    | 67858  | 67859  |       |       | 67665                 | 91965K  |                    |
| MVP PLUS™         | UT    | 67858  | 67859  |       |       | 67665                 | 91965K  |                    |
| WIDE-OUT™         | UT    | 67858  | 67859  |       |       | 67665                 | 91965K  |                    |
| STANDARD          | UT    | 67858  | 67859  |       |       | 67665                 | 91965K  |                    |
| DEFENDER™         |       | 83791  | 83792  |       |       | 84610<br>RECEIVER PIN |         | 83886<br>HITCH PIN |
| Suburbanite™      |       | 27754  | 27755  | 27146 | 27611 |                       |         |                    |
| IMPACT™           |       | 83637  | 83638  |       |       | 84610                 |         |                    |
| MIDWEIGHT™        | UT2   | 76722  | 76718  |       |       | 42498                 | 91965K  |                    |
| PRO-PLOW S2       |       |        |        |       |       |                       |         |                    |
| PRO-PLUS          | UT2   | 76722  | 76718  |       |       | 42498                 | 91965K  |                    |
| PRO-PLUS® HD      | UT2   | 96294  | 96295  |       |       | 95739                 | 42142   | 84611 PIN KIT      |
| MVP PLUS™         | UT2   | 76722  | 76718  |       |       | 42498                 | 91965K  |                    |
| MVP 3™            | UT2   | 76722  | 76718  |       |       | 42498                 | 91965K  |                    |
| MVP 3 10'6"       | UT2   | 96294  | 96295  |       |       |                       |         | 84611 PIN KIT      |
| PRODIGY™          | UT2   | 76722  | 76718  |       |       | 42498                 | 91965K  |                    |
| WIDE-OUT          | UT2   | 76722  | 76718  |       |       | 42498                 | 91965K  |                    |
| WIDE-OUT S2       | UT2   | 76722  | 76718  |       |       | 42498                 | 91965K  |                    |
| WIDE-OUT™ XL      |       |        |        |       |       |                       |         |                    |

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## SHOES GUIDE

| SNOWFLOW                               | KIT<br>(qty) | SHOE ASSY<br>(qty 1) | HD<br>(accessory) | SHOE<br>(not sellable #) | DIMENSIONS                                                      | STYLE                                                                                 |
|----------------------------------------|--------------|----------------------|-------------------|--------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------|
| DEFENDER™                              | 83845        |                      |                   |                          |                                                                 |                                                                                       |
| Suburbanite™                           | 27710        |                      |                   |                          |                                                                 |                                                                                       |
| HTS™                                   | 69570        | 49067 (2)            |                   | 60028                    | 9" H 5.8" OCTAGONAL BASE                                        |    |
| MIDWEIGHT™                             | 64392        |                      |                   |                          |                                                                 |                                                                                       |
| WIDE-OUT™ /<br>WIDE-OUT™ XL/ MVP PLUS™ | 44277-1      | 53595 (2)            |                   | 53596                    | 8.5" H<br>1" SHAFT<br>4" BASE<br>5.75" TOP BASE .5" PIN HOLE    |    |
| PRODIGY™                               | 49853 (1)    | 53595                |                   | 53596                    |                                                                 |                                                                                       |
| MVP 3™ /<br>MVP 3 10'6"                | 43088 (1)    |                      |                   | 50695                    | 4.6" H<br>1" SHAFT<br>8" X 4" BASE<br>.5 PIN HOLE               |    |
| MVP 3/<br>MVP 3 10'6"                  |              |                      | 86871 KIT         | 86675 (HD)               | 6.5" H                                                          |    |
| PRO-PLUS®                              |              | 49071 (STD)          |                   | 42301                    | 10" H<br>1" SHAFT<br>4" BASE<br>6.25" TOP BASE<br>.5" PIN HOLE  |   |
| PRO-PLUS® HD                           | 84506-1 (1)  | 42301                | 86871 KIT         | 60217                    | 10" H<br>1" SHAFT<br>4" BASE<br>6.25" TOP BASE<br>.5" PIN HOLE  |  |
| PRO-PLOW®                              |              | 49071 (STD)          |                   | 42301                    |                                                                 |                                                                                       |
| MVP®                                   |              | 62637 (STD)          |                   | 21749                    | 5.6" H<br>1" SHAFT<br>4" BASE<br>5.75" TOP BASE<br>.5" PIN HOLE |  |
| STANDARD                               |              | 49067 (2)            | 49071 (2)         | 60028 STD<br>42301 HD    |                                                                 |                                                                                       |

## BACK DRAG EDGES

| Kit Part #      | Cutting Edge Part # | Hard-ware Kit Part # | Bolt Spec                          | Applicable Plow Model                                                                                   | Thick-ness | Height | Length  | # of Holes | Hole Size      | Hole Type     | Top to Hole | Edge to Center of 1st. Hole | Edge to Center of 2nd. Hole | Edge to Center of 3rd. Hole |
|-----------------|---------------------|----------------------|------------------------------------|---------------------------------------------------------------------------------------------------------|------------|--------|---------|------------|----------------|---------------|-------------|-----------------------------|-----------------------------|-----------------------------|
| Straight Blades |                     |                      |                                    |                                                                                                         |            |        |         |            |                |               |             |                             |                             |                             |
| N/A             | 64758               | N/A                  | Reuses cutting edge bolts          | 7'6" Steel (HTS™, MIDWEIGHT™, PRO-PLOW® Series 2, PRO-PLUS®) & (Poly MIDWEIGHT, Poly PRO-PLOW Series 2) | .25"       | 5.5"   | 90"     | 12         | .875" to .890" | Slotted       | 1.25"       | 2.5"                        | 5.5"                        | 12.5"                       |
| N/A             | 66892               | N/A                  | Reuses cutting edge bolts          | 8' Steel (PRO-PLOW Series 2, PRO-PLUS & Poly PRO-PLOW Series 2)                                         | .25"       | 5.5"   | 96"     | 10         |                | Slotted       | 1.25"       | 2.5"                        | 5.5"                        | 15.5"                       |
| N/A             | 66999               | N/A                  | Reuses cutting edge bolts          | 8'6" Steel (PRO-PLOW Series 2, PRO-PLUS)                                                                | .25"       | 5.5"   | 102"    | 10         |                | Slotted       | 1.25"       | 2.5"                        | 5.5"                        | 18.5"                       |
| N/A             | 66991               | N/A                  | Reuses cutting edge bolts          | 9' Steel (PRO-PLOW Series 2, PRO-PLUS)                                                                  | .25"       | 5.5"   | 108"    | 10         |                | Slotted       | 1.25"       | 2.5"                        | 5.5"                        | 21.5"                       |
| Winged Plows    |                     |                      |                                    |                                                                                                         |            |        |         |            |                |               |             |                             |                             |                             |
| 52278           | 64758               | 29351                | (10) 5/8-11 x 2-1/2 CB G5          | 7'6" WIDE-OUT™, WIDE-OUT™ Gen 2                                                                         | .25"       | 5.5"   | 90"     | 12         | .875" to .890" | Slotted       | 1.25"       | 2.5"                        | 5.5"                        | 12.5"                       |
| 81985           | 41879               | 29351                | (10) 5/8-11 x 2-1/2 CB G5          | 8' WIDE-OUT™ XL                                                                                         | .25"       | 5.5"   | 96"     | 10         |                | Slotted       | 1.25"       | 2.5"                        | 5.5"                        | 15.5"                       |
| N/A             | 42437               | N/A                  | Reuses cutting edge bolts          | PRODIGY™                                                                                                | .25"       | 6"     | 80.5"   | 8          |                | Slotted       | 1.25"       | 1"                          | 9.15"                       | 21.59"                      |
| V-Plows         |                     |                      |                                    |                                                                                                         |            |        |         |            |                |               |             |                             |                             |                             |
| 44281-3         | N/A                 | 43591                | (14) 5/8-11x2-1/2 Carriage Bolt G5 | 7'6" MVP Plus™, MVP 3™, ENFORCER™:                                                                      | .25"       | 4.5"   | 37.56"  | 6          | .75"           | Round/Slotted | .938"       | 0.625"                      | 3.625"                      | 22.156"                     |
| 44282-3         | N/A                 | 43591                | (14) 5/8-11x2-1/2 Carriage Bolt G5 | 8'6" MVP PLUS, MVP 3:                                                                                   | .25"       | 5.125" | 43.563" | 6          | .75"           | Round         | .938"       | .625"                       | 3.625                       | 10.69"                      |
| 44283-3         | N/A                 | 43591                | (14) 5/8-11x2-1/2 Carriage Bolt G5 | 9'6" MVP PLUS, MVP 3 and 10'6" MVP 3:                                                                   | .25"       | 5.125" | 49.56"  | 7          | .75"           | Round         | .938"       | .625"                       | 3.625"                      | 10.69"                      |

# HINGED BLADE CUTTING EDGE REFERENCE SHEET

| WESTERN    |                  |                     |                                 |                                 |                                |                                                                        |       |        |        |      |      |            |                |           |                      |                            |                            |                            | HINGED BLADE CUTTING EDGE REFERENCE SHEET |  |  |  |  |  |  |  |  |  |
|------------|------------------|---------------------|---------------------------------|---------------------------------|--------------------------------|------------------------------------------------------------------------|-------|--------|--------|------|------|------------|----------------|-----------|----------------------|----------------------------|----------------------------|----------------------------|-------------------------------------------|--|--|--|--|--|--|--|--|--|
| Kit Part # | Wing C.E. Part # | Hardware Kit Part # | Bolt Spec                       | Mark Bag w/<br>(? = Not Spec'd) | Center C.E. Part # w/ Hardware | Applicable Plow/Model                                                  | Thick | Height | Length | Std. | Opt. | # of Holes | Hole Size      | Hole Type | Distance Top to Hole | Edge to Center of 1st Hole | Edge to Center of 2nd Hole | Edge to Center of 3rd Hole |                                           |  |  |  |  |  |  |  |  |  |
| 49799      | 42383            | 41774 T             | (8) – 5/8-11 x 2-1/2 CB G5      | ?                               | 49677 T                        | PRODIGY™                                                               | 1/2"  | 6"     | 83.5"  | X    |      | 8          | 0.68 x 1.3.75" | Slotted   | 1.25"                | 2.5"                       | 10.65"                     | 23.09"                     |                                           |  |  |  |  |  |  |  |  |  |
| 64775      |                  | 29351NN             | (10) – 5/8-11 x 2-1/2 CB G5     | 29351NN                         | 48762 T                        | WIDE-OUT™ (S/N 180209 – lower)<br>WIDE-OUT Gen-2 (S/N 180210 – higher) | 1/2"  | 6"     | 90.0"  | X    |      | 10         | 0.68 x 1.375"  | Slotted   | 1.25"                | 2.5"                       | 5.5"                       | 12.5"                      |                                           |  |  |  |  |  |  |  |  |  |
| 81996      |                  |                     |                                 |                                 |                                | WIDE-OUT Gen-2 (S/N 180210 – higher)                                   | 5/8"  | 6"     | 90.0"  |      | X    | 10         | 0.68 x 1.375"  | Slotted   | 1.25"                | 2.5"                       | 5.5"                       | 12.5"                      |                                           |  |  |  |  |  |  |  |  |  |
| 63980      |                  | 29351               | (10) – 5/8-11 x 2-1/2 CB G5     | 29351NN                         | 48761 T                        | WIDE-OUT™ XL                                                           | 1/2"  | 6"     | 96.0"  | X    |      | 10         | 0.68 x 1.375"  | Slotted   | 1.25"                | 2.5"                       | 5.5"                       | 15.5"                      |                                           |  |  |  |  |  |  |  |  |  |
| 81995      |                  |                     |                                 |                                 |                                | WIDE-OUT XL                                                            | 5/8"  | 6"     | 96.0"  |      | X    | 10         | 0.68 x 1.375"  | Slotted   | 1.25"                | 2.5"                       | 5.5"                       | 15.5"                      |                                           |  |  |  |  |  |  |  |  |  |
|            | **50626          | 50642               | 1/2-13 x Carriage Bolt G5       |                                 |                                | WIDE-OUT (S/N 180200-lower) Urethane C.E.                              |       |        |        | X    |      |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | 50645            |                     | (Retainer Bar – 50644)          |                                 |                                | DS or PS                                                               |       |        |        |      |      |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | 57865            | 11009               | 1/2-13 x 1-1/2 Carriage Bolt G8 |                                 |                                | WIDE-OUT Steel Wing C.E. (Accessory)                                   |       |        |        |      | X    |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | 57865            | 11010               |                                 |                                 |                                | WIDE-OUT Gen-2 (S/N 180210 – higher)                                   |       |        |        | X    |      |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | 81148            |                     |                                 |                                 |                                | Steel Edge DS                                                          |       |        |        |      |      |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | 81149            |                     |                                 |                                 |                                | Steel Edge PS                                                          |       |        |        |      |      |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | **81994          | 94802               | (Retainer Bar – 50644)          |                                 |                                | Urethane Edge Kit                                                      |       |        |        |      | X    |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | 81141            | 11010               |                                 |                                 |                                | WIDE-OUT XL                                                            |       |        |        | X    |      |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | 95060            |                     | (Retainer Bar – 50644)          |                                 |                                | Steel Wing Edge DS                                                     |       |        |        |      |      |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | 95061            |                     |                                 |                                 |                                | Steel Wing Edge PS                                                     |       |        |        |      |      |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |
|            | 81993            | 94802               |                                 |                                 |                                | Urethane Edge Kit                                                      |       |        |        |      | X    |            |                |           |                      |                            |                            |                            |                                           |  |  |  |  |  |  |  |  |  |

† Not a sellable part.

‡ No center flap kit.

\*\* Does not include retainer bar.

# HINGED BLADE CUTTING EDGE REFERENCE SHEET (continued)

| WESTERN    |                  |                     | HINGED BLADE CUTTING EDGE REFERENCE SHEET |                                 |                                |                                               |       |        |        |      |      |            |               |           |                      |                            |                            |                            |
|------------|------------------|---------------------|-------------------------------------------|---------------------------------|--------------------------------|-----------------------------------------------|-------|--------|--------|------|------|------------|---------------|-----------|----------------------|----------------------------|----------------------------|----------------------------|
| Kit Part # | Wing C.E. Part # | Hardware Kit Part # | Bolt Spec                                 | Mark Bag w/<br>(? = Not Spec'd) | Center C.E. Part # w/ Hardware | Applicable Plow/Model                         | Thick | Height | Length | Std. | Opt. | # of Holes | Hole Size     | Hole Type | Distance Top to Hole | Edge to Center of 1st Hole | Edge to Center of 2nd Hole | Edge to Center of 3rd Hole |
| 44284-2    | 44996-1          | 29688               | (14) – 5/8-11 x 2 CB G5                   | ?                               | 29675-1                        | 7'6" MVP Plus & MVP 3                         | 1/2"  | 6"     | 34.75" |      | X    | 5          | 0.690 x 1.50  | Slotted   | 1.56                 | 3.94                       | 6.94                       | 18.72                      |
| 44564-2    | 44897            | 29688               |                                           |                                 | 29675-1                        | 8'6" MVP Plus UltraMount® & MVP 3             | 3/8"  | 6"     | 40.75" | X    |      | 5          | 0.690 x 1.38  | Slotted   | 1.56                 | 3.81                       | 6.81                       | 20.47                      |
| 44285-2    | 44997            | 29688               |                                           |                                 | 29675-1                        | 8'6" MVP Plus UltraMount & MVP 3              | 1/2"  | 6"     | 40.75" |      | X    | 5          | 0.690 x 1.38  | Slotted   | 1.56                 | 3.81                       | 6.81                       | 20.47                      |
| 44567-2    | 44898            | 29688               |                                           |                                 | 29675-1                        | 9'6" MVP Plus UltraMount & MVP 3              | 1/2"  | 6"     | 47.75" | X    |      | 5          | 0.690 x 1.38  | Slotted   | 1.56                 | 3.81                       | 6.81                       | 23.47                      |
| 21608 ‡    | 21587 †          | 21610 †             | (5) – 1/2-13 x 2 CB G8                    | ?                               | Not in kit                     | 8'6" MVP® (DS or PS) UniMount® & UltraMount   | 3/8"  | 6"     | 49.88" | X    |      | 5          | 0.590 x 0.590 | =         | 1.39                 | 2                          | 16.13                      | 30.25                      |
| 28407 ‡    | 28406 †          | 21610 †             |                                           |                                 | Not in kit                     | 8'6" MVP (DS or PS) UniMount & UltraMount     | 1/2"  | 6"     | 49.88" |      | X    | 5          | 0.590 x 0.590 | =         | 1.39                 | 2                          | 16.13                      | 30.25                      |
| 28409      | 28406 †          | 21610 †             |                                           |                                 | 62636                          | 8'6" MVP UniMount & UltraMount                | 1/2"  | 6"     | 49.88" |      | X    | 5          | 0.590 x 0.590 | =         | 1.39                 | 2                          | 16.13                      | 30.25                      |
| 62649      | 63280 †          | 21610 †             |                                           |                                 | Not in kit                     | 8'6" MVP (DS) w/Carbide UniMount & UltraMount | 3/8"  | 6"     | 50.25" |      | X    | 5          | 0.590 x 0.590 | =         | 1.38                 | 2                          | 16.13                      | 30.25                      |
| 63284      | 63281 †          | 21610 †             |                                           |                                 | Not in kit                     | 8'6" MVP (PS) w/Carbide UniMount & UltraMount | 3/8"  | 6"     | 50.25" |      | X    | 5          | 0.590 x 0.590 | =         | 1.38                 | 2                          | 16.13                      | 30.25                      |
| 63540      | 62649 & 63284    | 21610 †             |                                           |                                 | 62636                          | 8'6" MVP Kit w/Carbide UniMount & UltraMount  | 3/8"  | 6"     | 50.26" |      | X    | 5          | 0.590 x 0.590 | =         | 1.38                 | 2                          | 16.13                      | 30.25                      |
| 63678 ‡    | 26592 †          | 21610 †             |                                           |                                 | Not in kit                     | 9'6" MVP (DS or PS) UniMount & UltraMount     | 1/2"  | 6"     | 55.88" | X    |      | 6          | 0.588 x 0.588 | =         | 1.37                 | 2                          | 8                          | 22.13                      |
| 66420      | 63678            | 21610 †             |                                           |                                 | 62636                          | 9'6" MVP UniMount & UltraMount                | 1/2"  | 6"     | 55.88" | X    |      | 6          | 0.588 x 0.588 | =         | 1.37                 | 2                          | 8                          | 22.13                      |
| 84827      | 84828            | 83623               | (10) – 1/2-13 x 1-1/2 CB G8               | ?                               | –                              | IMPACT™ UTV V-Plow (Wing C.E. Kit)            | 1/4"  | 5"     | 28.45" | X    |      | 5          | 0.563 x 1.00  | Slotted   | 1.00                 | 2.45                       | 11.45                      | 20.45                      |
|            | 83622            | –                   | (4) – 1/2-13 x 1-1/2 CB G8                | ?                               | 84323 & 84325                  | IMPACT UTV V-Plow (Center C.E. Kit)           | 1/4"  | 5"     | 7.564" | X    |      | 2          | 0.560 x 1.185 | Slotted   | 1.00                 | N/A                        | N/A                        | N/A                        |

† Not a sellable part.

‡ No center flap kit.

\*\* Does not include retainer bar.



# STRAIGHT BLADE STEEL CUTTING EDGE KIT DETAIL

| WESTERN STRAIGHT BLADE CUTTING EDGE DETAIL |                     |                     |                             |                                 |                             |       |        |        |      |      |            |               |           |                      |                            |                            |                            |
|--------------------------------------------|---------------------|---------------------|-----------------------------|---------------------------------|-----------------------------|-------|--------|--------|------|------|------------|---------------|-----------|----------------------|----------------------------|----------------------------|----------------------------|
| Kit Part #                                 | Cutting Edge Part # | Hardware Kit Part # | Bolt Spec                   | Mark Bag w/<br>(? = Not Spec'd) | Applicable Plow/Model       | Thick | Height | Length | Std. | Opt. | # of Holes | Hole Size     | Hole Type | Distance Top to Hole | Edge to Center of 1st Hole | Edge to Center of 2nd Hole | Edge to Center of 3rd Hole |
| 84973                                      | 84974               | 84977               | (8) – 1/2-13 x 1-1/2 CB G8  | 84977NN                         | IMPACT™ Straight Blade      | 1/4"  | 5"     | 6'     | X    |      | 8          | 1.00 x 0.563  | Slotted   | 1.125                | 1.25                       | 3.668                      | 12                         |
| 49264                                      | 61119 T             | 41794               | (7) – 7/16-14 x 3-1/2 CB G5 | ?                               | Sport Utility               | 1/4"  | 5"     | 6'6"   | X    |      | 7          | 0.50 X 0.50   | □         | 0.75                 | 4.5                        | 16                         | 27.5                       |
| 49066                                      | 60119 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                           | Standard                    | 3/8"  | 6"     | 6'6"   | X    |      | 8          | 0.563 x 0.563 | □         | 1.5                  | 2.63                       | 10.88                      | 22.13                      |
| 93668                                      | 93666 T             | 76512               | (8) – 1/2-13 x 1-3/4 CB G8  | 76512NN                         | DEFENDER™                   | 1/4"  | 5"     | 6'8"   | X    |      | 6          | 1.125 x 0.531 | Slotted   | 1.5                  | 2                          | 17.2                       | 32.4                       |
| 85287                                      | 77545 T             | 76512               | (8) – 1/2-13 x 1-3/4 CB G8  | 76512NN                         | DEFENDER                    | 3/8"  | 5"     | 6'8"   |      | X    | 6          | 1.125 x 0.531 | Slotted   | Slotted              | 2                          | 17.2                       | 32.4                       |
| 27713                                      | 27123 T             | 27574NN             | (7) – 3/8-16 x 1-1/2 CB G8  | ?                               | Suburbanite™                | 1/4"  | 5"     | 6'8"   | X    |      | 7          | 0.406 x 0.406 | □         | 1.5                  | 2.25                       | 15.25                      | 2.813                      |
| 49070                                      | 60128 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                           | Standard                    | 3/8"  | 6"     | 7'     | X    |      | 8          | 0.563 x 0.563 | □         | 1.5                  | 2.63                       | 13.88                      | 25.13                      |
| 93669                                      | 93667 T             | 76512               | (8) – 1/2-13 x 1-3/4 CB G8  | 76512NN                         | DEFENDER                    | 1/4"  | 5"     | 7'2"   | X    |      | 6          | 1.125 x 0.531 | Slotted   | 1.5                  | 3                          | 19                         | 35                         |
| 85288                                      | 77546 T             | 76512               | (8) – 1/2-13 x 1-3/4 CB G8  | 76512NN                         | DEFENDER                    | 3/8"  | 5"     | 7'2"   |      | X    | 6          | 1.125 x 0.531 | Slotted   | 1.5                  | 3                          | 19                         | 35                         |
| 63541                                      | 63471 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                           | LSX                         | 3/8"  | 6"     | 7'2"   | X    |      | 8          | 0.563 x 0.563 | □         | 1.5                  | 3.63                       | 14.88                      | 26.13                      |
| 27714                                      | 27159 T             | 27574NN             | (7) – 3/8-16 x 1-1/2 CB G8  | ?                               | Suburbanite                 | 1/4"  | 5"     | 7'4"   | X    |      | 7          | 0.406 x 0.406 | □         | 1.5                  | 2.25                       | 16.75                      | 32.13                      |
| 58814                                      | 23939 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                           | Conventional (center punch) | 3/8"  | 6"     | 7'6"   | X    |      | 8          | 0.563 x 0.563 | □         | 3                    | 2.63                       | 16.88                      | 28.13                      |
| 69499                                      | 69505               | 69425               | (10) – 5/8-11 x 2 CB G5     | 69425                           | HTS™                        | 5/16" | 6"     | 7'6"   | X    |      | 10         | 0.688 X 1.375 | Slotted   | 1.125                | 2.5                        | 5.5                        | 12.5                       |
| 28594                                      | 48760 T             | 69425               | (10) – 5/8-11 x 2 CB G5     | 69425                           | HTS™ & MIDWEIGHT™           | 3/8"  | 6"     | 7'6"   |      | X    | 10         | 0.688 X 1.375 | Slotted   | 1.13                 | 2.5                        | 5.5                        | 12.5                       |
| 49088                                      | 60387 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                           | PRO-PLOW® Series 2          | 3/8"  | 6"     | 7'6"   | X    |      | 8          | 0.563 x 0.563 | ◇         | 1.25                 | 2.63                       | 16.88                      | 28.13                      |
| 49346                                      | 62489 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                           | PRO-PLOW Series 2           | 1/2"  | 6"     | 7'6"   |      | X    | 8          | 0.563 x 0.563 | ◇         | 1.25                 | 2.63                       | 16.68                      | 28.13                      |

T Not a sellable part.

*Continued on following page.*



# STRAIGHT BLADE CUTTING EDGE DETAIL (continued)

| Kit Part # | Cutting Edge Part # | Hardware Kit Part # | Bolt Spec                   | Mark Bag w/ (? = Not Spec'd) | Applicable Plow/Model                                                                                                                                     | Thick | Height | Length | Std. | Opt. | # of Holes | Hole Size     | Hole Type | Distance Top to Hole | Edge to Center of 1st Hole | Edge to Center of 2nd Hole | Edge to Center of 3rd Hole |
|------------|---------------------|---------------------|-----------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|--------|------|------|------------|---------------|-----------|----------------------|----------------------------|----------------------------|----------------------------|
| 49312      | 62119 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                        | Standard Poly & Poly PRO-PLOW® Series 2                                                                                                                   | 3/8"  | 6"     | 7'6"   | X    |      | 8          | 0.563 x 0.563 | ◇         | 2.06                 | 2.63                       | 16.88                      | 28.13                      |
| 49350      | 62497 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                        | Standard Poly & Poly PRO-PLOW Series 2                                                                                                                    | 1/2"  | 6"     | 7'6"   |      | X    | 8          | 0.563 x 0.563 | ◇         | 2.06                 | 2.63                       | 16.88                      | 28.13                      |
| 64775      | 48762 T             | 29351               | (10) – 5/8-11 x 2-1/2 CB G5 | 29351NN                      | PRO PLUS® & WIDE-OUT®                                                                                                                                     | 1/2"  | 6"     | 7'6"   | X    |      | 10         | 0.688 X 1.375 | Slotted   | 1.25                 | 2.5                        | 5.5                        | 12.5                       |
| 49080      | 60396 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                        | Conventional                                                                                                                                              | 3/8"  | 6"     | 8'     | X    |      | 8          | 0.563 x 0.563 | □         | 1.13                 | 2.5                        | 15.5                       | 28.5                       |
| 49089      | 62494 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                        | PRO-PLOW Series 2                                                                                                                                         | 3/8"  | 6"     | 8'     | X    |      | 8          | 0.563 x 0.563 | ◇         | 1.25                 | 2.5                        | 15.5                       | 28.5                       |
| 49347      | 62494 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                        | PRO-PLOW Series 2                                                                                                                                         | 1/2"  | 6"     | 8'     |      | X    | 8          | 0.563 x 0.563 | ◇         | 1.25                 | 2.5                        | 15.5                       | 28.5                       |
| 49328      | 62413 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                        | Poly PRO-PLOW Series 2                                                                                                                                    | 3/8"  | 6"     | 8'     | X    |      | 8          | 0.563 x 0.563 | ◇         | 2.06                 | 2.5                        | 15.5                       | 28.5                       |
| 49351      | 62498 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62504                        | Poly PRO-PLOW Series 2                                                                                                                                    | 1/2"  | 6"     | 8'     |      | X    | 8          | 0.563 x 0.563 | ◇         | 2.06                 | 2.5                        | 15.5                       | 28.5                       |
| 63980      | 48761 T             | 29351               | (10) – 5/8-11 x 2-1/2 CB G5 | 29351NN                      | PRO PLUS                                                                                                                                                  | 1/2"  | 6"     | 8'     | X    |      | 10         | 0.688 X 1.375 | Slotted   | 1.25                 | 2.5                        | 5.5                        | 15.5                       |
| 49086      | 60313 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62506                        | PRO-PLOW Series 2                                                                                                                                         | 3/8"  | 6"     | 8'6"   | X    |      | 8          | 0.563 x 0.563 | ◇         | 1.25                 | 2.5                        | 18.5                       | 31.5                       |
| 49348      | 62495 T             | 62504               | (8) – 1/2-13 x 1-3/4 CB G8  | 62506                        | PRO-PLOW Series 2                                                                                                                                         | 1/2"  | 6"     | 8'6"   |      | X    | 8          | 0.563 x 0.563 | ◇         | 1.25                 | 2.5                        | 18.5                       | 31.5                       |
| 63985      | 48763 T             | 29351               | (10) – 5/8-11 x 2-1/2 CB G5 | 29351NN                      | PRO PLUS                                                                                                                                                  | 1/2"  | 6"     | 8'6"   | X    |      | 10         | 0.688 X 1.375 | Slotted   | 1.25                 | 2.5                        | 5.5                        | 18.5                       |
| 49251      | 60656 T             | 62506               | (10) – 1/2-13 x 1-3/4 CB G8 | 62506                        | PRO-PLOW                                                                                                                                                  | 3/8"  | 6"     | 9'     | X    |      | 10         | 0.563 x 0.563 | ◇         | 1.25                 | 2.5                        | 5.5                        | 24.5                       |
| 49349      | 62496 T             | 62506               | (10) – 1/2-13 x 1-3/4 CB G8 | 62506                        | PRO-PLOW                                                                                                                                                  | 1/2"  | 6"     | 9'     |      | X    | 10         | 0.563 x 0.563 | ◇         | 1.25                 | 2.5                        | 5.5                        | 24.5                       |
| 58817      | 23854 T             | 43240               | (12) – 5/8-11 x 2-1/2 CB G5 | ?                            | UniMount® HEAVYWEIGHT                                                                                                                                     | 1/2"  | 6"     | 9'     | X    |      | 11         | 0.688 x 0.688 | □         | 1.63                 | 3                          | 6                          | 18                         |
| 63990      | 48764 T             | 29351               | (10) – 5/8-11 x 2-1/2 CB G5 | 29351NN                      | PRO PLUS & PRO PLUS® HD                                                                                                                                   | 1/2"  | 6"     | 9'     | X    |      | 10         | 0.688 X 1.375 | Slotted   | 1.24                 | 2.5                        | 5.5                        | 21.5                       |
| 58818      | 58500 T             | 43240               | (12) – 5/8-11 x 2-1/2 CB G5 | ?                            | UniMount HEAVYWEIGHT                                                                                                                                      | 1/2"  | 6"     | 10'    | X    |      | 12         | 0.688 x 0.688 | □         | 1.63                 | 3                          | 6                          | 18                         |
| *80295     |                     | 80298               |                             | 80298                        | * PRO PLUS HD Curb Guard Kit<br>* Curb Guard Kit needed along with the 63990 to make up a 10'6" on each curb guard and 9' on the main cutting edge = 10'. |       |        |        |      |      |            |               |           |                      |                            |                            |                            |

T Not a sellable part.

# CUTTING EDGE KIT DETAIL

| Kit Part #                                                | C.E. Part # | Hardware Kit Part # | Bolt Spec                   | Mark Bag w/(? = Not Spec'd) | Clamp Bar | Applicable Plow/Model      | Thick  | Height | Length | # of Holes | Hole Size    | Hole Type | Distance Top to Hole      | Edge to Center of 1st Hole | Edge to Center of 2nd Hole | Edge to Center of 3rd Hole |
|-----------------------------------------------------------|-------------|---------------------|-----------------------------|-----------------------------|-----------|----------------------------|--------|--------|--------|------------|--------------|-----------|---------------------------|----------------------------|----------------------------|----------------------------|
| STRAIGHT BLADE RUBBER CUTTING EDGE KIT DETAIL             |             |                     |                             |                             |           |                            |        |        |        |            |              |           |                           |                            |                            |                            |
| 60825                                                     | 60826       | 41795 T             | (8) – 1/2-13 x 2-3/4 CB G5  | ?                           | 60827     | 6'6" – 7'6" Std. &         | 1"     | 6"     | 90"    | 12         | 0.69 x 2.00  | Slotted   | 3.00                      | 2.63                       | 5.63                       | 8.63                       |
| 62556                                                     | 62344       | 41789 T             | (10) – 1/2-13 x 2-3/4 CB G5 | ?                           | 62346     | 8' – 9' PRO-PLOW® Series 2 | 1"     | 6"     | 108"   | 12         | 0.69 x 2.00  | Slotted   | 3.00                      | 2.50                       | 5.50                       | 8.50                       |
| 60831                                                     | 60032       | 41784 T             | (12) – 5/8-11 x 3-1/2 CB G5 | ?                           | 60833     | 9' – 10' HEAVYWEIGHT       | 1-1/2" | 6"     | 120"   | 13         | 0.69 x 2.00  | Slotted   | 3.00                      | 3.00                       | 6.00                       | 18.00                      |
| STRAIGHT BLADE POLY CUTTING EDGE KIT DETAIL               |             |                     |                             |                             |           |                            |        |        |        |            |              |           |                           |                            |                            |                            |
| 76476                                                     | 76471 T     | 86470               | (6) – 1/2-13 x 2-1/4 CB G8  | 86470NN                     | None      | DEFENDER™                  | 1"     | 5"     | 6'8"   | 6          | 0.588        | Circle    | 1.40                      | 2.00                       | 17.20                      | 32.40                      |
| 76477                                                     | 76472 T     | 86470               | (6) – 1/2-13 x 2-1/4 CB G8  | 86470NN                     | None      | DEFENDER                   | 1"     | 5"     | 7'2"   | 6          | 0.588        | Circle    | 1.40                      | 3.00                       | 19.00                      | 35.00                      |
| STRAIGHT BLADE CARBIDE CUTTING EDGE KIT DETAIL            |             |                     |                             |                             |           |                            |        |        |        |            |              |           |                           |                            |                            |                            |
| 74961                                                     |             | 70728               | 5/8-11 x 2-1/2 CB G5        | 70728                       | NA        | PRO PLUS® HD 3-Piece Kit   |        |        |        |            |              |           |                           |                            |                            |                            |
| 76825                                                     | 76825       |                     |                             |                             |           | PRO PLUS HD Center         | 3/4"   | 6"     | 53.90" | 4          | 0.68 x 1.37" | Slotted   | 1.25                      | 7.45                       | 20.45                      | 46.45                      |
| 76826                                                     | 76826       |                     |                             |                             |           | PRO PLUS HD Outer          | 3.4"   | 6"     | 27.00" | 4          | 0.68 x 1.37" | Slotted   | 2.50                      | 5.50                       | 21.50                      | 24.50                      |
| WHEELED/BACKHOE/SKID STEER RUBBER CUTTING EDGE KIT DETAIL |             |                     |                             |                             |           |                            |        |        |        |            |              |           |                           |                            |                            |                            |
| WHEELED LOADERS                                           |             |                     |                             |                             |           |                            |        |        |        |            |              |           |                           |                            |                            |                            |
| 72057                                                     |             | 72064               |                             | 72064                       | 72067     | PILE DRIVER™ 12'           |        |        |        |            |              |           | 3.00"    15.00"    27.00" |                            |                            |                            |
| 72058                                                     |             | 72064               |                             | 72064                       | 72068     | PILE DRIVER 14'            |        |        |        |            |              |           |                           |                            |                            |                            |
| 72059                                                     |             | 72064               |                             | 72064                       | 72071     | PILE DRIVER 16'            |        |        |        |            |              |           |                           |                            |                            |                            |
| BACKHOE LOADERS                                           |             |                     |                             |                             |           |                            |        |        |        |            |              |           |                           |                            |                            |                            |
| 72056                                                     |             | 72064               |                             | 72064                       | 72066     | PILE DRIVER 10'            |        |        |        |            |              |           | 3.50"    15.50"    27.50" |                            |                            |                            |
| 72057                                                     |             | 72064               |                             | 72064                       | 72067     | PILE DRIVER 12'            |        |        |        |            |              |           |                           |                            |                            |                            |
| SKID STEER LOADERS                                        |             |                     |                             |                             |           |                            |        |        |        |            |              |           |                           |                            |                            |                            |
| 72061                                                     |             | 72074               |                             | 72074                       | 72072     | PILE DRIVER 8'             |        |        |        |            |              |           | 3.50"    15.50"    27.50" |                            |                            |                            |
| 72062                                                     |             | 72074               |                             | 72074                       | 72073     | PILE DRIVER 10'            |        |        |        |            |              |           |                           |                            |                            |                            |

T Not a sellable part.

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# Service Tools

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SERVICE TOOLS AND TEST EQUIPMENT

|                                                                                                                                            |                                                                                                                                                        |                                                                                                                                               |                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Poppet Seat Service Tool</b><br/>PN 28530</p>       | <p><b>Pump Shaft Seal Repair Kit</b><br/>PN 28856</p>                | <p><b>Pressure Test Kit</b><br/>PN 56679</p>               | <p><b>Motor Bearing Sleeve Repair Kit</b><br/>PN 64589</p>  |
| <p><b>Spring Replacement Tool</b><br/>PN 20043-1</p>      | <p><b>PRODIGY™ Wing Spring Removal Tool</b><br/>PN 69780</p>         | <p><b>Isolation Module 10-Pin Tester</b><br/>PN 28957</p>  | <p><b>Harness Kit Diagnostic</b><br/>PN 29290-2</p>         |
| <p><b>Adapter Breakdown:</b></p> <p>4-pin adapter<br/>PN 76441</p> <p>6-pin adapter<br/>PN 76446</p> <p>DC outlet adapter<br/>PN 76448</p> | <p><b>Vehicle Isolation Module/Control Tester (PN 41000-1)</b></p>  | <p><b>Master Control 78800</b></p>                       |                                                                                                                                                |



## VEHICLE ISOLATION MODULE/CONTROL TESTER

**PN 41000-1, Lit. No. 76491**

**What can be tested?**

- 3-Port Isolation Modules 29070-1, 29760-1, 29760-2
- 4-Pin & 6-Pin Hand-Held Controls
- 4-Pin & 6-Pin Joystick Controls



Solenoid Coil Activation Test (SCAT)

What is the Purpose of a SCAT Test?

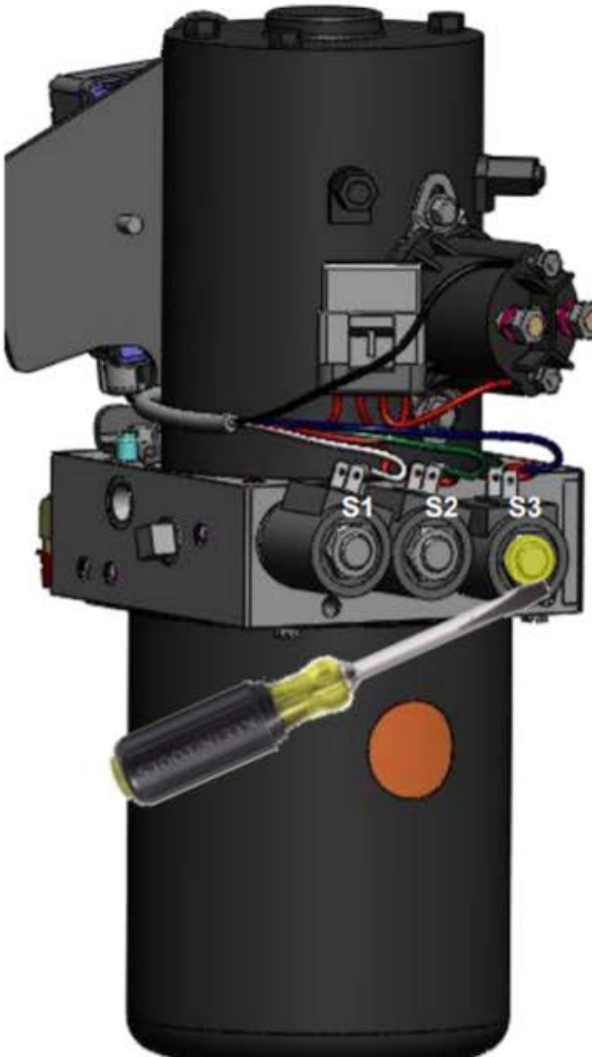
- *Eliminate an Electrical Problem*

Tools Needed:

- Screwdriver
- Continuity Tester (Multi-Meter)
- Blade Movement Chart

Mechanics Guide

| BLADE MOVEMENT |    | RAISE | LOWER | ANGLE RIGHT<br> | ANGLE LEFT<br> |
|----------------|----|-------|-------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| MOTOR          | M  | ON    |       | ON                                                                                                 | ON                                                                                                 |
| SV08-2004      | S1 |       | ON    |                                                                                                    |                                                                                                    |
| SV08-31        | S2 |       |       | ON                                                                                                 | ON                                                                                                 |
| SV08-40        | S3 | ON    |       |                                                                                                    | ON                                                                                                 |

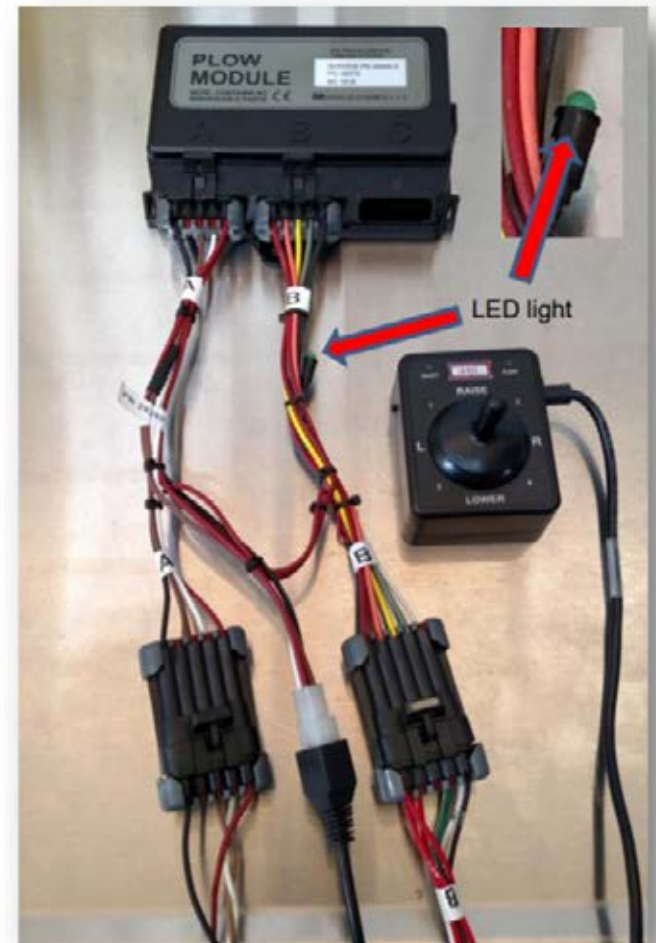


### Diagnostic Harness Kit

#### PN 29290-2

*\*This diagnostic harness kit can be used with or without the snowplow connected to a vehicle\**

1. Unplug the snowplow connectors from Ports A and B of the Plow Module.
2. Connect the diagnostic harness connectors A and B to the matching ports on the Plow Module (A to A and B to B).
3. Connect the snowplow control into the 4-position control connector either in the cab of the vehicle or on the diagnostic harness.



\*Plow module not included\*

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# Miscellaneous

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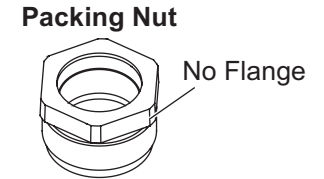
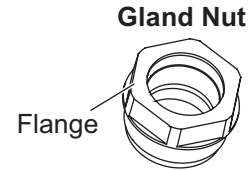
# TORQUE CHART FOR HYDRAULIC UNITS (straight blades and V-plows with 6-valve hydraulic unit only)

## HYDRAULIC UNIT COMPONENTS

| Straight Blades and V-Plows                               |                                                                                              |                |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------|
| Location                                                  | Fastener Size                                                                                | Torque (in-lb) |
| Pump Cap Screws                                           | 5/16"-18 x 2-1/2" <b>with</b> Flat Washer<br>or 5/16"-18 x 2-1/4" <b>without</b> Flat Washer | 150–160        |
| Motor Terminals (+ and –)                                 | 5/16"-18 or 5/16"-24 Nut                                                                     | 50–60          |
| Motor to Manifold Cap Screws                              | 1/4"-20 x 6-1/4" Long                                                                        | 55–65          |
| Reservoir Screws                                          | #10-24 x 5/16" Long                                                                          | 30–35          |
| Valve Cartridges                                          | 7/8" Head Hex                                                                                | 120–144        |
| Coil Nuts                                                 | 3/4" Head Hex Jam Nut                                                                        | 40–60          |
| Cartridge/Coil Cover Screws                               | #8-32 x 1/2" Long                                                                            | 15–20          |
| SAE O-Ring Plugs                                          | 1/8" or 5/32" Internal Hex                                                                   | 55–65          |
| Lift Frame Cross Member to Manifold Cap Screw (no washer) | 3/8"-16 x 1" Long                                                                            | 180–240        |
| Manifold Mount Bolts                                      | 1/4"-20 x 2-3/4" Long                                                                        | 105–115        |

| V-Plows Only                   |                       |                |
|--------------------------------|-----------------------|----------------|
| Location                       | Fastener Size         | Torque (in-lb) |
| Check Valves                   | 11/16" Hex Head       | 120–144        |
| Secondary to Primary Manifolds | 1/4"-20 x 2-1/2" Long | 105–115        |

## RAM NUTS



### Gland Nut Rams (Hex Flange Head on Nut)

#### Piston Locknut to Rod (Double-Acting Rams Only)

- **2" Rams:** 100–120 ft-lb
- **1-1/2" Rams:** 35–40 ft-lb

#### Gland Nut

- **1" Single-Acting & 1-1/2" Double-Acting Rams:** 120–150 ft-lb
- **All Other Rams:** 150–180 ft-lb
- **Alternate Method:** Thread nut into coupling. Insert a feeler gauge (0.015" for 1" single-acting and 1-1/2" double acting rams, 0.012" for all other rams) between the front surface of the cylinder tube face and the hex of the gland nut. Tighten the gland nut until it is snug against the feeler gauge. Remove the feeler gauge, and tighten the gland nut an additional **1/4 turn**. This adjustment procedure will provide the torque listed above. Undertightening may result in nut loosening during snowplow operation.

### Packing Nut Rams (Hex Head on Nut)

#### Lift Ram Packing Nut (Single-Acting Rams Only)

- Tighten packing nut not more than 1/4 turn after you feel packing nut contact packing. Overtightening affects ram operation and packing life.

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*Continued on following page.*



**TORQUE CHART FOR HYDRAULIC UNITS (straight blades and V-plows with 6-valve hydraulic unit only)**

**HYDRAULIC HOSES AND FITTINGS**

**NOTE: Overtightening JIC hose fitting ends will result in a fractured fitting.**

**DO NOT** use any type of sealant or tape on the fittings or hoses. This could damage product. Always use two wrenches to ensure proper tightening of fittings and hoses.

**SAE O-Ring Style**

**Fittings**

- 1. Turn jam nut on fitting as far back as possible.
- 2. Lubricate O-ring with clean hydraulic fluid.
- 3. Screw fitting into port by hand until the washer contacts port face and shoulder of the jam nut threads.
- 4. Unscrew fitting to proper position no more than one full turn.
- 5. Using two wrenches, hold fitting body in position and tighten jam nut until the washer again contacts port face, then tighten an additional 1/8 to 1/4 turn to lock fitting in place. Final torque on the jam nut should be approximately 20 ft-lb.

**Hydraulic Hoses**

- 1. Screw flare nut onto fitting flare and hand tighten.
- 2. Align hose so there are no twists or sharp bends.
- 3. Using two wrenches, hold the hose in position and tighten flare nut 1/8 to 1/4 turn beyond hand tight. Final torque on the flare nut should be approximately 20 ft-lb.

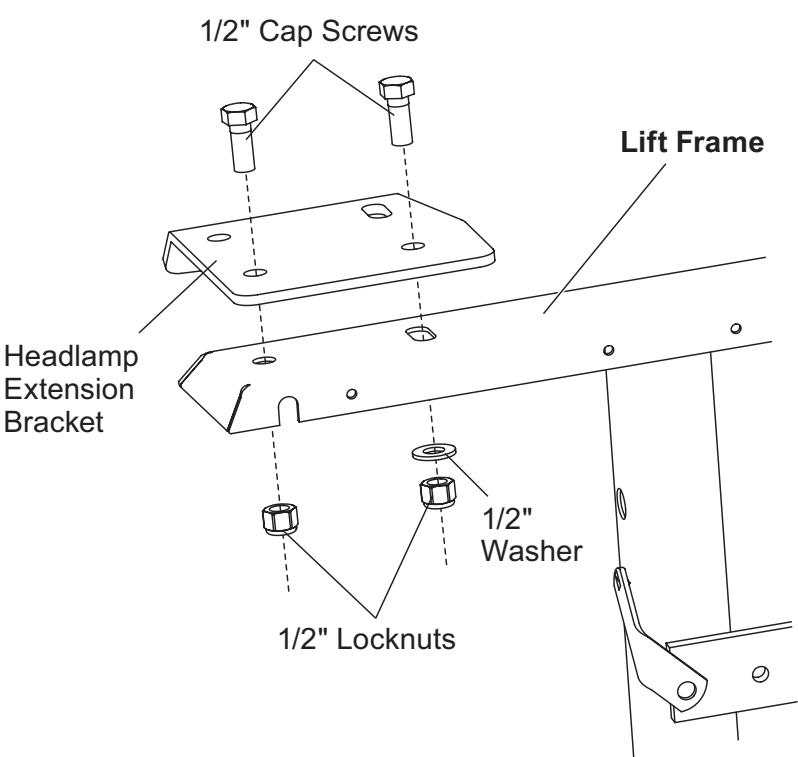
**NPTF Pipe Thread Style**

- 1. Screw fitting into female pipe port to the finger tight position.
- 2. Wrench tighten fitting to the appropriate turns from finger tight (TFFT) shown in chart stopping at the position where the joining tube can be attached. Avoid overtightening and then backing out the fitting to make the connection as this will likely result in a leaking or weeping connection.

| Pipe Thread Size (NPTF) | TFFT    |
|-------------------------|---------|
| 1/8-27                  | 2.0–2.5 |
| 1/4-18                  | 1.5–2.0 |
| 3/8-18                  | 2.0–2.5 |
| 1/2-14                  | 2.0–2.5 |
| 3/4-14 & Larger         | 1.5–2.0 |

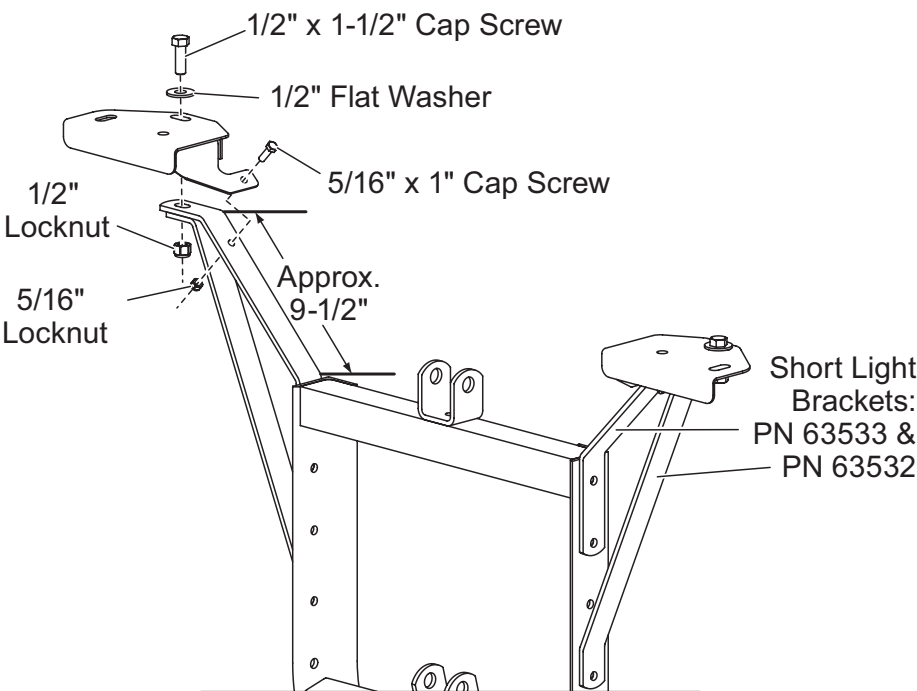
# WESTERN® SNOWPLOW HEADLAMP BRACKETS

## Headlamp Extension Bracket Kit – PN 68210



## Headlamp Extension Bracket Kit – PN 28340

There are short and long versions of the existing headlamp mounting brackets on the UniMount® upper lift frame. Before installing the Headlamp Extension Bracket Kit and your new headlamps, replacing the long brackets with the shorter versions is recommended.

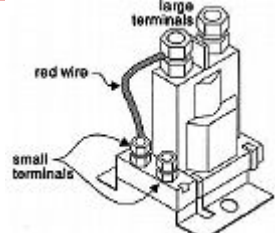
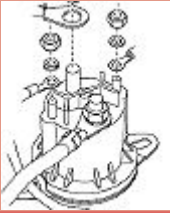
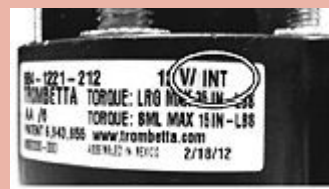


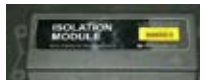
## **PLOW HARNESS REPAIR ENDS**

| <b>PLOW HARNESS REPAIR ENDS</b> |                                        |             |               |
|---------------------------------|----------------------------------------|-------------|---------------|
| <b>Part Number</b>              | <b>Plow Side/Vehicle Side</b>          | <b>Pins</b> | <b>Length</b> |
| <b>27063W</b>                   | Vehicle Side                           | 3-Pin       | 25"           |
| <b>27067W</b>                   | Vehicle Side                           | 7-Pin       |               |
| <b>66431</b>                    | Vehicle Side                           | 11-Pin      | 18"           |
| <b>49038</b>                    | Vehicle Side                           | 9-Pin       | 10.25"        |
| <b>49310</b>                    | Vehicle Side                           | 12-Pin      | 11.88"        |
| <b>49317</b>                    | Plow Side                              | 9-Pin       | 20"           |
| <b>49319</b>                    | Plow Side                              | 12-Pin      | 20"           |
| <b>49366K</b>                   | Kit                                    | 9-Pin       |               |
| <b>49367K</b>                   | Kit                                    | 12-Pin      |               |
| <b>49307</b>                    | Not available separate from kit 49366K | 9-Pin       | 22"           |
| <b>49309</b>                    | Not available separate from kit 49367K | 12-Pin      | 22"           |

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## MOTOR RELAYS

| Part Number | Type                         | Description                                                                                                                                                                                                                                                                                                                                          | Applications                                                              |                                                                                       |
|-------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 56131       | Continuous<br>Non FLEET FLEX |                                                                                                                                                                                                                                                                                                                                                      | All non FLEET FLEX snowplows<br>minus the V-plows                         |    |
| 56131K-1    | Continuous<br>Non FLEET FLEX |                                                                                                                                                                                                                                                                                                                                                      | Including the UltraMount®<br>MVP® snowplows                               |    |
| 56131K-2    | Continuous<br>Non FLEET FLEX | <u>DO NOT</u> use continuous-duty<br>relay on FLEET FLEX system<br>snowplows                                                                                                                                                                                                                                                                         | All non FLEET FLEX snowplows<br>including the UltraMount<br>MVP snowplows |    |
| 42902       | Intermittent<br>FLEET FLEX   | <ul style="list-style-type: none"> <li>Used on FLEET FLEX system<br/>equipped snowplows</li> <li>Operates at a lower voltage</li> </ul> <u>DO NOT</u> use intermittent-duty relay<br>on non FLEET FLEX snowplows<br>because it: <ul style="list-style-type: none"> <li>Increases internal heat</li> <li>Decreases the life of the control</li> </ul> | All FLEET FLEX snowplows minus<br>the UTVs and ENFORCER™<br>snowplows     |  |
| 52290       | Intermittent<br>FLEET FLEX   |                                                                                                                                                                                                                                                                                                                                                      | UTV – Straight and V-plow<br>ENFORCER V-plow                              |                                                                                       |

| VEHICLE ISO MODULES |        |                                          |                             |                                                                                                |                                                                                       |
|---------------------|--------|------------------------------------------|-----------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| MODULE PN           | PORTS  | COMPONENTS                               | PREVIOUS VERSION            | UPGRADE NOTES                                                                                  | PIC                                                                                   |
| 29760-1 *           | 3-Port | 29760-1                                  | 29760                       | Soft start was built into the module on 29760-1.                                               |    |
| 29760-2             | 3-Port | 29070-1 ISO Module and 76272 10-pin w/SS | 29760-1; 29760              | Soft start was removed from the 29760-1 module itself and we made it adapter harness PN 76272. |    |
| 29070-1             | 3-Port |                                          |                             | Basic standard module.                                                                         |    |
| 26400 *             | 4-Port | x1 Module                                |                             |                                                                                                |    |
| 27781 *             | 4-Port | x1 Module                                |                             |                                                                                                |    |
| PLOW MODULES        |        |                                          |                             |                                                                                                |                                                                                       |
| 49567               | 2-Port | x1 Plow Module                           | - - -                       |                                                                                                |    |
| 44354-3             | 3-Port | x1 Module                                | 44354<br>44354-1<br>44354-2 |                                                                                                |   |
| 52292-2             | 3-Port | 52292-2                                  |                             |                                                                                                |  |
| SPREADER MODULES    |        |                                          |                             |                                                                                                |                                                                                       |
| 52370               | 2-Port | x1 Module                                |                             | 5-Post                                                                                         |  |
| 78178-1             | 3-Port | x1 Module                                | 78178                       |                                                                                                |  |
| 52385               | 2-Port | x1 Module                                | - - -                       | 4-Post                                                                                         |  |

\* Obsolete



## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

### History of Whole Good Parts with Dash Numbers

| SNOWPLOW MOUNTS  |         |              |                                                                                                                                                                                                                                                         |
|------------------|---------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PN<br>= Obsolete | Model   |              | COMMENTS                                                                                                                                                                                                                                                |
| 1213             | 1213    | Suburbanite™ | Fits '02-'03 Explorer 4-door 4X4 V6 only.                                                                                                                                                                                                               |
| 1213-1           | 1213-1  | Suburbanite  | Revised due to location of oil filter on '02-'03 V6 Explorer 4X4. Fits V6 & V8 vehicles 2002–2005.                                                                                                                                                      |
| 1533             | 1533    | Suburbanite  | Fits '02-'04 GM Trailblazer/Envoy/Bravado.                                                                                                                                                                                                              |
| 1533-1           | 1533-1  | Suburbanite  | Mount modified to accommodate '05 vehicle frame changes.                                                                                                                                                                                                |
| 3713             | 3713    | Suburbanite  | New mount released for '97 & later Jeep Liberty.                                                                                                                                                                                                        |
| 3713-1           | 3713-1  | Suburbanite  | Revised due to changes in 2002 models not encountered in mount development.                                                                                                                                                                             |
| 3713-2           | 3713-2  | Suburbanite  | Revised to accommodate 2008 model year changes. Fits vehicles 2002–2013.                                                                                                                                                                                |
| 31303            | 31303   | Suburbanite  | Fits 2004–2009 Nissan Titan.                                                                                                                                                                                                                            |
| 31303-1          | 31303-1 | Suburbanite  | Modified to fit 2009+ Nissan Titan. Fits vehicles 2004–2015.                                                                                                                                                                                            |
| 31543            | 31543   | Suburbanite  | Fits 2004–2007 GM Colorado/Canyon. Due to increased vehicle height, the non -1 mount may not fit 2004–2007 GM Colorado/Canyon vehicles.                                                                                                                 |
| 31543-1          | 31543-1 | Suburbanite  | Fits 2004–2010 GM Colorado/Canyon. Bolt-on extension brackets are included for trucks with connecting pin heights greater than 11.5".                                                                                                                   |
| 31543-2          | 31543-2 | Suburbanite  | Fits 2004–2012 GM Colorado/Canyon. Accommodating changes in Colorado/Canyon Z71 "Off Road" package.                                                                                                                                                     |
| 31553            | 31553   | Suburbanite  | Fits 2007–2015 production date July 1st and earlier. GM K1500/Tahoe/Yukon/ 1500 Suburban/Yukon XL.                                                                                                                                                      |
| 31553-1          | 31553-1 | Suburbanite  | Fits 2007–2016 -1 mount was due to a nut insert on the frame to accommodate a new "offset crash" structure on production date of July 1, 2015.                                                                                                          |
| 32323            | 32323   | Suburbanite  | Fits 2005–2015 Toyota Tacoma.                                                                                                                                                                                                                           |
| 32323-1          | 32323-1 | Suburbanite  | Fits 2005–2015 Toyota Tacoma. -1 mount kit will place the plow approximately two inches forward from previous mount version. This kit will be necessary on 2016 model trucks to maintain adequate clearance since the bumper has been extended forward. |
| 42113            | 42113   | Suburbanite  | Fits vehicles MY 2003–2009.                                                                                                                                                                                                                             |
| 42113-1          | 42113-1 | Suburbanite  | Modified to fit 2010 M Wranglers & Rubicon models. 42113-1 fits MY 2003–2010.                                                                                                                                                                           |

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## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

### History of Whole Good Parts with Dash Numbers

| SNOWPLOW MOUNTS  |       |           |                                                                                                                                                                                                                                                   |
|------------------|-------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PN<br>- Obsolete | Model |           | COMMENTS                                                                                                                                                                                                                                          |
| 62660            | 3215  | UniMount® | Fits all Ford 250–550 SD trucks '99 & later. HOWEVER, if the truck has fog lights, it will need a power steering cooler extension kit, PN 63934. Ref SP-742. Will not fit '03 & later w/6.0L V8 Diesel w/fog lights.                              |
| 62660-1          | 3215  | UniMount  | Fits all Ford 250–550 SD trucks '99 & later, except 6.0L V8 Diesel w/fog lights '03 & later due to cooler change.                                                                                                                                 |
| 63250            | 3715  | UniMount  | Fits 1997 & later Jeep Wrangler. Will have to modify mount to fit a 2003 truck due to a frame hole change. Ref SP-572 for modification procedures.                                                                                                |
| 63250-1          | 3715  | UniMount  | Changes for a frame hole change on the 2003 truck. Will backfit. Fits vehicles 1997–2005.                                                                                                                                                         |
| 63350            | 3225  | UniMount  | Fits all Ford 450–550 SD trucks '99 & later (HW /9'6" MVP® applications). HOWEVER, if the truck has fog lights, it will need a power steering cooler extension kit, PN 63934. Ref SP-742. Will not fit '03 & later w/6.0L V8 Diesel w/fog lights. |
| 63350-1          | 3225  | UniMount  | Fits all Ford 350–550 SD trucks '99 & later. (HW/9'6" MVP applications). Fits vehicles 1999–2004 early.                                                                                                                                           |
| 63360            | 3525  | UniMount  | Fits 1999–2002 GMC/Chevy 1500HD 2500/2500HD/3500. Due to a bumper bracket change, the non -1 mount may not fit a 2003 truck.                                                                                                                      |
| 63360-1          | 3525  | UniMount  | Fits 1999–2003 GMC/Chevy 2500/2500HD/3500 due to a bumper bracket change in the 2003 model. Will backfit to 1999.                                                                                                                                 |

## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

| SNOWPLOW MOUNTS (continued) |       |             |                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|-------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 63710                       | 1349  | UltraMount® | Fits Fords 1980–1991. Superseded by 63710-1.                                                                                                                                                                                                                                                                                                                                        |
| 63710-1                     | 1349  | UltraMount  | Fits Fords '80 – '91. Dash 1 mounts increase ground clearance and improve hook up on lower F150 and Bronco vehicles.                                                                                                                                                                                                                                                                |
| 63883                       | 969   | UltraMount  | For 2003 Dodge 2500/3500 with a V8 engine only. Does not fit V10 & diesels due to transmission cooler interference.                                                                                                                                                                                                                                                                 |
| 63883-1                     | 969   | UltraMount  | For all 2003 Dodge 2500/3500 (gas and diesel). Will still work on the 2006 Ram 2500 & 3500 trucks EXCEPT Laramie packages.                                                                                                                                                                                                                                                          |
| 63883-2                     | 969   | UltraMount  | Backfits to 2003, including trucks with Laramie trim packages.                                                                                                                                                                                                                                                                                                                      |
| 67830                       | 1299  | UltraMount  | Fits Ford 1992 to 1996. With the 67830-1, was improved to accommodate spring width variances. Does not affect application, however, could interfere with wider springs on diesel applications. When tightening the thrust arms, it may draw the mounts outward. They must have a center to center dimension on the mount of 30-7/16". This is true for all UltraMount applications. |
| 67830-1                     | 1299  | UltraMount  | Improved to accommodate spring width variances. Does not affect application. Superseded by 1379.                                                                                                                                                                                                                                                                                    |
| 67830-2                     | 1299  | UltraMount  | Superseded by 1369 mount. Fits vehicles 1992–1997.                                                                                                                                                                                                                                                                                                                                  |
| 1379                        | 1379  | UltraMount  | New mount number replaced 67830-1 due to truck height and suspension issues will fit Ford F250–F350 Super Duty 4X4 '92–'97.                                                                                                                                                                                                                                                         |
| 1369                        | 1369  | UltraMount  | New mount number replaces 67830-2 due to truck height and suspension issues. Will fit Ford F150, Bronco 4X4 '92–'97.                                                                                                                                                                                                                                                                |
| 67960                       | 3519  | UltraMount  | Fits 1999 and later 1500 Chevy/GMC. Contains crossbar, does not affect application. Customer can choose to keep or remove crossbar. Crossbar was removed because it wasn't needed and was seen as a weight reduction. Need to notch air dam.                                                                                                                                        |
| 67960-1                     | 3519  | UltraMount  | Crossbar removed, does not affect application. Need to notch air dam. Fits vehicles 1999–2007.                                                                                                                                                                                                                                                                                      |
| 67981                       | 3529  | UltraMount  | Fits 1999 and later GMC/Chevy 1500HD, 2500, 2500HD/3500. Contains crossbar, does not affect application. Customer can choose to keep or remove crossbar. Crossbar was removed because it wasn't needed and was seen as a weight reduction. Tabs can be trimmed to fit an '03 Chevy 2500/3500.                                                                                       |
| 67981-1                     | 3529  | UltraMount  | Tabs were also trimmed due to bumper bracket change. Crossbar removed. Fits '99–'03 Chevy 1500HD/2500/2500HD/3500.                                                                                                                                                                                                                                                                  |
| 67981-2                     | 33939 | UltraMount  | Mount redesigned to move attaching point forward and eliminate the need to notch lower air dam on bumper and bumper interference. ('99–'03 Chevy 1500HD/2500/2500HD/2500.)                                                                                                                                                                                                          |
| 33939                       | 33940 | UltraMount  | Fits Dodge 2008–2010 Ram 45/5500. Fits vehicles 2008–2010. Superseded to 33940 mount.                                                                                                                                                                                                                                                                                               |

## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

| SNOWPLOW MOUNTS (continued) |         |             |                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------|---------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 33940                       | 33940   | UltraMount® | The 33939 mount could not carry over to the 2011 model year 45/5500 vehicles, as there was interference with the radiator. Thus, the previous mount released and used for BLIZZARD® on these vehicles (33940) would fit the 2011 MYs. The 33940 fits model years 2008–2011. Refer to Sales Bulletin WP475.                           |
| 33940-1                     | 33940   | UltraMount  | Accommodate enlarged radiator on 2013 and later Ram 4500/5500.                                                                                                                                                                                                                                                                       |
| 31269                       | 31269   | UltraMount  | Fits Ford 2008–2010 Super Duty.                                                                                                                                                                                                                                                                                                      |
| 31269-1                     | 31269-1 | UltraMount  | Kit was rev'd to a dash one in order to accommodate 2011 MY Ford Super Duty & diesel applications. Thus, 31269 will fit model years 2008–2010 and only gas engine 2011 models. The 31269-1 will fit model years 2008–2011, all models. Refer to Sales Bulletin WP453.                                                                |
| 31599                       | 31599   | UltraMount  | Fits 2008–2015 production date July 1st and earlier. GM K1500/Tahoe/Yukon/1500 Suburban/Yukon XL.                                                                                                                                                                                                                                    |
| 31599-1                     | 31599-1 | UltraMount  | Fits 2008–2016+ -1 mount was due to a nut insert on the frame to accommodate a new "offset crash" structure on production date July 1, 2015 & later.                                                                                                                                                                                 |
| 33212-1                     | 33212-1 | UltraMount  | Fits 2008–__ Isuzu NPR/GM W-series 2008–10 Isuzu NPR, NPR HD, NPR XD kit was changes to -1 to add a "Max GVW when plow installed" label and revise the instructions and parts list to note the label and its placement. This -1 kit allows us to add the NQR and NRR models in addition to what was listed for the non-dash version. |
| 33212-2                     | 33212-2 | UltraMount  | Driver-side thrust arm was revised to accommodate a larger steering linkage encountered on some 2017 models.                                                                                                                                                                                                                         |
| 33886                       | 33886   | UltraMount  | 2013 and later Diesel Ram 2500–3500 models.                                                                                                                                                                                                                                                                                          |
| 33886-1                     | 33886   | UltraMount  | Accommodate larger front body mount for 2014 and later Diesel Ram 2500–3500 models. Fits vehicles 2013–2018 gas/diesel.                                                                                                                                                                                                              |
| 35066                       | 35066   | UltraMount  | Fit Nissan Titan models 2004–2010.                                                                                                                                                                                                                                                                                                   |
| 35066-1                     | 35066-1 | UltraMount  | Because of frame changes to the 2010–2011 model year Titans, the kit was up-rev'd to a -1 kit. The previous mount interfered slightly with the underride structures added by Nissan on the new model year Titans. Refer to Sales Bulletin WP484.                                                                                     |
| 35133                       | 35133   | UTV         | Fits Kubota RTV/X-Series 2009–__.                                                                                                                                                                                                                                                                                                    |
| 35133-1                     | 35133-1 | UTV         | Fits some RTV (non X-series) models that the 35133 did not.                                                                                                                                                                                                                                                                          |

## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

| All MVP PLUS™ Blades | All MVP PLUS Blades |               | Blade assemblies all changed to -1 part numbers: 44475-1, 44575-1, 44485-1, 44585-1, 44495-1, and 44595-1. The -1 part numbers accommodate 4-piece cutting edges. See Sales Bulletin WP-341 for details.                                                |
|----------------------|---------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PN                   |                     |               | COMMENTS                                                                                                                                                                                                                                                |
|                      |                     | UniMount®     | AQ&L to fit HEAVYWEIGHT plows.                                                                                                                                                                                                                          |
|                      |                     | UniMount      | Changes made to accommodate isolation module system.                                                                                                                                                                                                    |
|                      | All MVP PLUS Models | UltraMount®   | Changes made to the T-frame. Reference Sales Bulletin WP-363. Changes made also apply to Central Hydraulics Big Box for MVP PLUS models, part # 43225-1.                                                                                                |
|                      |                     | UniMount      | Change to dual bulb (H9/H11) NIGHTHAWK™ headlamps plus associated Owner's Manual changes in hydraulics box.                                                                                                                                             |
|                      |                     | UltraMount® 2 | Change to dual bulb (H9/H11) NIGHTHAWK headlamps in big boxes instead of H13 NIGHTHAWK headlamps.                                                                                                                                                       |
|                      |                     | UltraMount 2  | ONLY a few big boxes were made with a -2 and later all became -3 to make it even across the board.                                                                                                                                                      |
| All Big Boxes -3     |                     | UltraMount 2  | Change to headlamp kits no longer in big boxes, but ordered separately.                                                                                                                                                                                 |
| PN                   |                     |               | COMMENTS                                                                                                                                                                                                                                                |
|                      |                     |               | Modified hydraulics to include manifold assembly that was previously being used for the HTS™ snowplow, moving the adjustment for the scrape lock from the lift ram to the manifold. Lift ram also changed as a result. Reference Sales Bulletin WP-412. |
| 27516-2              |                     |               | Revised for literature changes.                                                                                                                                                                                                                         |
|                      |                     |               | ISARMATIC® hydraulic assembly and wiring release.                                                                                                                                                                                                       |
|                      |                     |               | Removed 29047 adapter, as it only required for Suburbanite™ and HEAVYWEIGHT plows.                                                                                                                                                                      |
|                      |                     |               | Changed to a -2 for literature changes. Replace 86270 with 64315. Incorrect OM packet.                                                                                                                                                                  |



## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

| SNOWPLOW ELECTRICAL KITS |  |  |                                                                                                                                                                                                                          |
|--------------------------|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PN                       |  |  | COMMENTS                                                                                                                                                                                                                 |
| 61540                    |  |  | Does not contain the extra metal tab which was developed for use with UltraMount® applications so these kits should ONLY be used with UniMount® applications.                                                            |
| 61540-1                  |  |  | Contains a metal tab to increase the strength of the headlight bezel. (Can be used on both UniMount and UltraMount applications.)                                                                                        |
| 61550                    |  |  | Does not contain the extra metal tab which was developed for use with UltraMount applications so these kits should ONLY be used with UniMount applications.                                                              |
| 61550-1                  |  |  | Contains a metal tab to increase the strength of the headlight bezel. (Can be used on both UniMount and UltraMount applications.)                                                                                        |
| 62550                    |  |  | Does not contain the extra metal tab which was developed for use with UltraMount applications so these kits should ONLY be used with UniMount applications.                                                              |
| 62550-1                  |  |  | Contains a metal tab to increase the strength of the headlight bezel. (Can be used on both UniMount and UltraMount applications.)                                                                                        |
| 66640                    |  |  | Does not contain the extra metal tab which was developed for use with UltraMount applications so these kits should ONLY be used with UniMount applications.                                                              |
| 66640-1                  |  |  | Contains a metal tab to increase the strength of the headlight bezel, but should ONLY be used with the UniMount MVP® due to hydraulic unit position change on the UltraMount. The wires for the coils will be too short. |
| 66640-2                  |  |  | Designed for UltraMount MVP due to the hydraulic unit position change. Will backfit to UniMount MVP                                                                                                                      |
| 69889                    |  |  | (2015-__) F-150 (HB3/H11 & LED)                                                                                                                                                                                          |
| 69889-1                  |  |  | Changed 69889 to a -1. Went from unsealed relay connectors to sealed relay connectors. (2015-__) F-150 (HB3/H11 & LED)                                                                                                   |
| 72101                    |  |  | K1500 Silverado/Sierra 8-pin HID/LED.                                                                                                                                                                                    |
| 72101-1                  |  |  | Changed 72101 to a -1. Went from unsealed relay connectors to sealed relay connectors. K1500 Silverado/Sierra 8-pin HID/LED.                                                                                             |

## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

| SNOWPLOW ELECTRICAL KITS |  |  |                                                                                                                                                                                                                                                              |
|--------------------------|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PN                       |  |  | COMMENTS                                                                                                                                                                                                                                                     |
| 73973                    |  |  | 2017–2019 Ford SD Quad H13.                                                                                                                                                                                                                                  |
| 73973-1                  |  |  | Changed 73973 to a -1. Went from unsealed relay connectors to sealed relay connectors. Also, the 69826-2 relay kit was built into the plug-in harness 73971-2. Added diode for the control back light. Fits vehicles 2017–2019 Ford SD Quad H13.             |
| 73977                    |  |  | 2017–2019 Ford SD Quad H13.                                                                                                                                                                                                                                  |
| 73977-1                  |  |  | Changed 73977 to a -1. Went from unsealed relay connectors to sealed relay connectors on the 11-pin vehicle lighting harness. Fits vehicles 2017–2019 Ford SD LED.                                                                                           |
| 73977-2                  |  |  | Changed 73977-1 to a -2 to include the built-in 73999 DRL 10-pin adapter on the plug-in harness 73975-1. Fits vehicles 2017-2019 Ford SD LED.                                                                                                                |
| 76048                    |  |  | 6-pin adapter kit. Colorado/Canyon.                                                                                                                                                                                                                          |
| 76048-1                  |  |  | Changed 76048 to a -1. Added new lit PN 95090 Installation Instructions for adapter 76947. Added 76947 adapter this eliminates the plow park light flickering issue when installing our system on vehicles supplying PWM voltage to the vehicle park lights. |
| 8437                     |  |  | Fits '99–'02 GMC/Chevy GMT-800 models.                                                                                                                                                                                                                       |
| 8437-1                   |  |  | Revised due to different daytime running lamps on Canyon/Colorado. Will backfit all other GM/Chevy applications.                                                                                                                                             |
| 69892                    |  |  | Dodge RAM HD 2500/3500 (2015–__) 7-wire harness kit.                                                                                                                                                                                                         |
| 69892-1                  |  |  | Went from unsealed relay connectors to sealed relay connectors on the 11-pin vehicle lighting harness. Dodge RAM HD 2500/3500 (2015–__) 7-wire harness kit.                                                                                                  |
| 96618                    |  |  | (2018–Current) Ford F-150 gray LED 16-pin.                                                                                                                                                                                                                   |
| 96618-1                  |  |  | Changed 96618 to a -1. Changed from unsealed relay connectors to sealed relay connectors.                                                                                                                                                                    |

## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

| SNOWPLOW ELECTRICAL KITS (continued) |                          |  |                                                                                                                                                                                                                                                |
|--------------------------------------|--------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PN                                   |                          |  | COMMENTS                                                                                                                                                                                                                                       |
| 21500-1                              |                          |  | Added motor relay -mounting holes for MVP Plus™ snowplows.                                                                                                                                                                                     |
| 56131K-1                             |                          |  | Old-style relay does not fit on MVP Plus snowplows.                                                                                                                                                                                            |
| 27480-1                              |                          |  | Now includes Colorado & Canyon trucks. HB3/HB4 with white label 4-port module.                                                                                                                                                                 |
| 23420                                |                          |  | GM vehicles only. 4-port application adapter.                                                                                                                                                                                                  |
| 29420-1                              |                          |  | GM & Tundra vehicles. 4-port application adapter.                                                                                                                                                                                              |
| 28027                                |                          |  | Literature in the adapter kit references only the 4-port module.                                                                                                                                                                               |
| 28027-1                              |                          |  | New literature shows 4- and 3-port modules.                                                                                                                                                                                                    |
| 28027-2                              |                          |  | Changed adapter grounding. Relay ground is now direct to the NEGATIVE (–) battery terminal.                                                                                                                                                    |
| 28027-3                              |                          |  | Changed from unsealed relay connectors to sealed relay connectors.                                                                                                                                                                             |
| 29070-1                              | 3-port Module            |  | Modified previous 29070 module to a dash one to cover DRL applications, in addition to non-DRL applications.                                                                                                                                   |
| 29760-2                              | Soft Start 3-Port Module |  | Modified previous 29760-1 to a -2. 29760-2 is backwards compatible. Running change is being made to improve product quality and reliability. The new -2 kit will include both a module and an additional "mini-module" harness assembly 76272. |
| 69826                                | Relay Adapter            |  | Single relay for park lights.                                                                                                                                                                                                                  |
| 69826-1                              | Relay Adapter            |  | The -1 went from a single relay to 3 relays. (1) park, (2) turns.                                                                                                                                                                              |
| 69826-2                              | Relay Adapter            |  | Changed from unsealed relay connectors to sealed relay connectors.                                                                                                                                                                             |

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## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

| SNOWPLOW ELECTRICAL KITS (continued) |                          |  |                                                                                                                               |
|--------------------------------------|--------------------------|--|-------------------------------------------------------------------------------------------------------------------------------|
| PN                                   |                          |  | COMMENTS                                                                                                                      |
| 29861                                | Vehicle Lighting Harness |  | Single harness with built-in relays PN 29860.                                                                                 |
| 29861-1                              | Vehicle Lighting Harness |  | Went to a -1 to make it a single 11-pin harness (22413) and a separate adapter (28027-2).                                     |
| 23661-2                              | Vehicle Lighting Harness |  | Went back to a single harness with built-in relays PN 23660.                                                                  |
| 29861-3                              | Vehicle Lighting Harness |  | Changed lit specs for packaging reasons                                                                                       |
| 29861-4                              | Vehicle Lighting Harness |  | Changed from unsealed relay connectors to sealed relay connectors.                                                            |
| 69804                                | Lighting Harness         |  | RMA trucks with HIR2/HB3 headlamp type.                                                                                       |
| 69804-1                              | Lighting Harness         |  | Changed from unsealed relay connectors to sealed relay connectors.                                                            |
| 28800-1                              |                          |  | Modified H13 headlamp kit to include a 3rd screw in the cover assembly.                                                       |
| 29400                                | 3-port Harness           |  | GM vehicles only. 4-port application adapter.                                                                                 |
| 29400-1                              | 3-port Harness           |  | GM & Toyota vehicles.                                                                                                         |
| 29400-2                              | 3-port Harness           |  | Modified 29400-1 harness to incorporate adapter capability of 28027-2 for most applications. Reference Sales Bulletin WB-381. |
| 29400-3                              | 3-port Harness           |  | Rev change back to the original -1 version, still including the functionality of the 28027-2 adapter.                         |
| 29400-4                              | 3-port Harness           |  | Modified the relay, while moving back to the -2 configuration (cover, etc.). Functionality did not change.                    |
| 29400-5                              | 3-port Harness           |  | Implemented e-literature for the product. Functionality did not change.                                                       |
| 29400-6                              | 3-port Harness           |  | Plug-in harness change for Nissan Titan (63436-1 lengthened).                                                                 |
| 29400-7                              | 3-port Harness           |  | Changed from unsealed relay connectors to sealed relay connectors.                                                            |
| 69818                                | 3-port Harness           |  | GM vehicles only with HIR2 or HB3/H11.                                                                                        |
| 69818-1                              | 3-port Harness           |  | Heavier gauge wire added to plug-in harness (69817-1). DRL configuration wires built in.                                      |
| 69818-2                              | 3-port Harness           |  | Changed from unsealed relay connectors to sealed relay connectors.                                                            |

## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

| SERVICE TOOLS                      |                      |  |                                                                                                                                                                                                                                                                                |
|------------------------------------|----------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PN                                 |                      |  | COMMENTS                                                                                                                                                                                                                                                                       |
| 29260-2                            | Plow Module          |  | Added ability to perform SCAT on UTV V-plow.                                                                                                                                                                                                                                   |
| 41000-1                            | Iso Module & Control |  | Added 76489 harness kit to test on 4-pin & 6-pin controls. (Also includes power cord for 12V DC outlet.)                                                                                                                                                                       |
| PRO-FLO™ MOUNTS                    |                      |  |                                                                                                                                                                                                                                                                                |
| 67040                              |                      |  | For long bed only (1994–1998). Dodge 1500/2500/3500. Will not fit short bed due to exhaust interference.                                                                                                                                                                       |
| 67040-1                            |                      |  | For 1500 Dodge long and short bed (1999–2001), for 2500 long and short bed (1999–2002), for 2500HD long and short bed (2002), for 3500 long bed (1994–present). Fits short bed, '99 & later, due to exhaust change.                                                            |
| 67040-2                            |                      |  | Frame change on Dodge rear spring shackle in 2000. Retrofits back to 1994 on the long bed, '99 on the short bed 1500/2500HD. For 2000, the 2500 has rear spring shackle interference resulting in -2.                                                                          |
| 63827                              |                      |  | For 1500 Dodge with non-welded trailer hitch.                                                                                                                                                                                                                                  |
| 63827-1                            |                      |  | 1500 Dodge 2002 & later. Added crossbar and revised mount for welded trailer hitch on '03 models. Fits 2002 & later.                                                                                                                                                           |
| 27936-1                            |                      |  | For Dodge Ram 2500HD, 3500 applications, modified mount to cover MY 2010 vehicles. Change made pre-season 2010.                                                                                                                                                                |
| 27936-2                            |                      |  | 2014 Ram 25/3500 trucks have a bolt moved on their trailer hitch. Our 27936-1 tailgate spreader uses this bolt as a mount point. The -2 adds a new hole in the rear brackets to pick up this revised bolt position. This kit will fit all trucks covered by 27936 and 27936-1. |
| 65710-1                            |                      |  |                                                                                                                                                                                                                                                                                |
| PRO-FLO A, Q & L KITS              |                      |  |                                                                                                                                                                                                                                                                                |
| All PRO-FLO & PRO-FLO™ 900 with -1 | PRO-FLO              |  | Includes baffle extension plate & hardware.                                                                                                                                                                                                                                    |



## HISTORY OF WHOLE GOOD PARTS WITH DASH NUMBERS

| HOPPER SPREADER A, Q & L KITS |                       |                        |                                                                                                                                  |
|-------------------------------|-----------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| All Tornado™ with -1          | Tornado               |                        | Upgrade to FLEET FLEX system (2-knob, 6-button control). Electrical components in general got updated.                           |
| All Striker™ with -1          | Striker               |                        | Removed the wooden support beams for shipping and replace them with stainless steel body cross braces.                           |
| HOPPER SPREADER P & A         |                       |                        |                                                                                                                                  |
| 65605-1                       |                       | Steel Hopper Spreaders | Added new starter relay kit.                                                                                                     |
| 65605-2                       |                       |                        | Added new 6-pin Tecumseh alternator harness.                                                                                     |
| 65605-3                       |                       |                        | Update for Briggs & Stratton engine charging wire.                                                                               |
| 65605-4                       |                       |                        | Battery tray is made of stainless steel instead of power coated mild steel.                                                      |
| 99504                         | Vibrator Kit          |                        | KARRIER COMPANY, #2-200 Karrier Company #2-200 vibrator with 99069 bolt bag.                                                     |
| 99504-1                       | Vibrator Kit          |                        | QC 200 vibrator with 95096 bolt bag, 99504-1 is now obsolete and is superseded by 76668 kit.                                     |
| 99505                         | Primary Work Light    |                        | Primary work light for the steel hoppers.                                                                                        |
| 99505-1                       | Kit–FLEET FLEX System |                        | Added mounting plate to work both on the poly and steel hoppers.                                                                 |
| 99732                         | Secondary Work Light  |                        | Secondary work light for the steel hoppers.                                                                                      |
| 99732-1                       | Kit–FLEET FLEX System |                        | Added mounting plate to work both on the poly and steel hoppers.                                                                 |
| 78117-2                       |                       | Tornado                | Top screen is made of stainless steel instead of powder coated mild steel. (Units built in RKD will continue to use mild steel.) |

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## VEHICLE MODELS (FOR REFERENCE ONLY)

| This guide is FOR REFERENCE ONLY. Consult Quick Match for final determination of exact and current mounts and harnesses. |             |         |                  |                     |                     |               |       |
|--------------------------------------------------------------------------------------------------------------------------|-------------|---------|------------------|---------------------|---------------------|---------------|-------|
| DODGE/RAM                                                                                                                |             |         |                  |                     |                     |               |       |
| Vehicle Models                                                                                                           | Model Years | Mount   | Isolation Module | Plug-In Harness Kit | Harness Adapter     | Headlamp Type | Notes |
| Ram 1500 4X4                                                                                                             | 1994–01     | 67980   | 29070-1          | 29050               | –                   | HB1           |       |
| RAM 2500 & 3500 4X4                                                                                                      | 1994–02     | 67980   | 29070-1          | 29050               | 29056-1             | HB5/HB1       |       |
| Durango 4X4                                                                                                              | 2000–03     | 3919    | 29070-1          | 29050               | –                   | HB5           |       |
| Dakota 4X4                                                                                                               | 2000–04     | 3919    | 29070-1          | 29050               | –                   | HB5           |       |
| Ram 1500 4X4                                                                                                             | 2002–05     | 63760   | 29070-1          | 29050               | –                   | HB5           |       |
| Ram 2500, 3500 4X4                                                                                                       | 2003–09     | 63883-2 | 29070-1          | 29050               | –                   | HB5           |       |
| Dakota 4X4                                                                                                               | 2005–11     | 33929   | 29070-1          | 29049               | –                   | H13           |       |
| Ram 1500 Regular Cab 4X4                                                                                                 | 2006–08     | 30999   | 29070-1          | 29049               | –                   | H13           |       |
| Ram 4500, 5500 4X4, 4X2                                                                                                  | 2008–12     | 33940   | 29070-1          | 29049               | –                   | H13           |       |
| Ram 1500                                                                                                                 | 2009–12     | 33949   | 29070-1          | 29049               |                     | H13           |       |
| Ram 1500                                                                                                                 | 2009–18     | 33949   | 29070-1          | 29049               | 28027-2<br>&69826-2 | HB3/H11       |       |
| Ram 1500                                                                                                                 | 2013–18     | 33949   | 29070-1          | 69804-1             |                     | HIR2/HB3      |       |
| Ram 1500 Rebel                                                                                                           | 2016–18     | 33949   | 29070-1          | 29049               | 28027-2<br>&69826-2 | HB3/H11       |       |
| Ram 1500 Rebel                                                                                                           | 2016–18     | 33949   | 29070-1          | 69804-1             |                     | HIR2/HB3      |       |
| Ram 1500 Classic                                                                                                         | 2019        | 33949   | 29070-1          | 69804-1             |                     | HIR2/HB3      |       |
| Ram 1500 Classic                                                                                                         | 2019        | 33949   | 29070-1          | 29049               | 28027-2<br>&69826-2 | HB3/H11       |       |
| Ram 1500 Rebel Classic                                                                                                   | 2019        | 33949   | 29070-1          | 69804-1             |                     | HIR2/HB3      |       |
| Ram 1500 Rebel Classic                                                                                                   | 2019        | 33949   | 29070-1          | 29049               | 28027-2<br>&69826-2 | HB3/H11       |       |

**This guide is FOR REFERENCE ONLY. Consult Quick Match for final determination of exact and current mounts and harnesses.**

**DODGE/RAM (continued)**

| Vehicle Models           | Model Years | Mount  | Isolation Module | Plug-In Harness Kit | Harness Adapter     | Headlamp Type | Notes     |
|--------------------------|-------------|--------|------------------|---------------------|---------------------|---------------|-----------|
| Ram 1500                 | 2019–__     | 33950  | 29070-1          | 72359               |                     | HB3/H11       |           |
| Ram 1500                 | 2019–__     | 33950  | 29070-1          | 72192               |                     | LED           |           |
| Ram 2500/3500            | 2010–15     | 33886  | 29070-1          | 29049               |                     | H13           |           |
| Ram 2500/3500            | 2013–18     | 33886  | 29070-1          | 29049               | 28027-2<br>&69826-2 | HB3/H11       |           |
| Ram 2500/3500            | 2013–18     | 33886  | 29070-1          | 69804-1             |                     | HIR2/HB3      |           |
| Ram 2500/3500            | 2015–18     | 33886  | 29070-1          | 69892-1             | HIR2/HB3 & HB3/H11  |               |           |
| Ram 2500/3500            | 2019–__     | 33888  | 29070-1          | 69892-1             |                     | All           |           |
| Ram 4500/5500            | 2013–18     | 339401 | 29070-1          | 29049               | 28027-2<br>&69826-2 | HB3/H11       |           |
| Ram 4500/5500            | 2015–18     | 339401 | 29070-1          | 69804-1             |                     | HIR2/HB3      |           |
| Ram 4500/5500            | 2015–18     | 339401 | 29070-1          | 69892-1             | HIR2/HB3 & HB3/H12  |               |           |
| Ram 4500/5500            | 2019–__     | 33889  | 29070-1          | 69892-1             |                     | All           |           |
| Aspen, Durango 4X4       | 2004–10     | 33929  | 29070-1          | 29049               | –                   | H13           | DEFENDER™ |
| Dakota 4X4               | 2005–11     | 33929  | 29070-1          | 29049               | –                   | H13           | DEFENDER  |
| Ram 1500 Regular Cab 4X4 | 2006–08     | 33913  | 29070-1          | 29049               | –                   | H13           | DEFENDER  |
| Ram 1500                 | 2009–12     | 33923  | 29070-1          | 29049               |                     | H13           | DEFENDER  |
| Ram 1500                 | 2009–18     | 33923  | 29070-1          | 29049               | 28027-2<br>&69826-2 | HB3/H11       | DEFENDER  |
| Ram 1500                 | 2013–18     | 33923  | 29070-1          | 69804-1             |                     | HIR2/HB3      | DEFENDER  |
| Ram 1500 Classic         | 2019–__     | 33923  | 29070-1          | 72192               |                     | LED           | DEFENDER  |
| Ram 1500 Rebel Classic   | 2019–__     | 33923  | 29070-1          | 29049               | 28027-2<br>&69826-2 | HB3/H11       | DEFENDER  |

# TOYOTA

| Vehicle Models | Model Years | Mount   | Isolation Module | Plug-In Harness Kit | Harness Adapter | Headlamp Type  | Notes     |
|----------------|-------------|---------|------------------|---------------------|-----------------|----------------|-----------|
| Tacoma 4X4     | 1998–04     | 2313    | 29070-1          | 29051               | –               | HB2            |           |
| Tundra 4X4     | 2007–14     | 31139   | 29070-1          | 29400-7             | –               | HB3/H11        |           |
| Tundra 4X4     | 2014–16     | 31139   | 29070-1          | 29051               |                 | HB2            |           |
| Tundra 4X4     | 2014–17     | 31139   | 29070-1          | 29051               |                 | HB2 2/ LED DRL |           |
| Tundra 4X4     | 2018–__     | 31139   | 29070-1          | 29051               | 73999           | HB2            |           |
| Tundra 4X4     | 2018–__     | 31139   | 29070-1          | 79147-1             |                 | LED            |           |
| Tundra 4X4     | 2000–06     | 2303    | 29070-1          | 29051               | –               | HB2            | DEFENDER™ |
| Tacoma 4X4     | 1995 1/2–04 | 2313    | 29070-1          | 29051               | –               | 2B/HB2         | DEFENDER  |
| Tacoma 4X4     | 2005–15     | 32323-1 | 29070-1          | 29051               | –               | HB2            | DEFENDER  |
| Tacoma 4X4     | 2016–__     | 32323-1 | 29070-1          | 29400-7             | 72100           | HB3/H9         | DEFENDER  |
| Tundra 4X4     | 2007–13     | 32333   | 29070-1          | 29400-7             | –               | HB3/HB11       | DEFENDER  |
| Tundra 4X4     | 2014–17     | 32333   | 29070-1          | 29051               |                 | HB2            | DEFENDER  |
| Tundra 4X4     | 2018–__     | 32333   | 29070-1          | 29051               | 73999           | HB2 w/ LED DRL | DEFENDER  |
| Tundra 4X4     | 2018–__     | 32333   | 29070-1          | 79147-1             |                 | LED            | DEFENDER  |

# INTERNATIONAL

| Vehicle Models  | Model Years | Mount | Isolation Module | Plug-In Harness Kit | Harness Adapter | Headlamp Type | Notes |
|-----------------|-------------|-------|------------------|---------------------|-----------------|---------------|-------|
| 4000 Series     | 2001–07     | 32275 | 29070-1          | 29053               | 29235           | HB5           |       |
|                 |             |       |                  | 29053               | 29234           | 2B            |       |
| 4000 Series 2WD | 2008–__     | 31103 | 29070-1          | 29053               | 29235           | HB5           |       |
|                 |             |       |                  | 29053               | 29234           | 2B            |       |
| TerraStar 4X2   | 2011–__     | 35109 | 29070-1          | 29053               | 48236           | 2B/HB5        |       |
| TerraStar 4X4   | 2013–__     | 35110 | 29070-1          | 29053               | 48236           | 2B/HB5        |       |

## JEEP

| Vehicle Models     | Model Years | Mount   | Isolation Module | Plug-In Harness Kit | Harness Adapter | Headlamp Type | Notes     |
|--------------------|-------------|---------|------------------|---------------------|-----------------|---------------|-----------|
| Wrangler 4X4       | 1997–06     | 3723    | 29070-1          | 29051               | –               | 2D            |           |
| Wrangler 4X4       | 2007–16     | 33220   | 29070-1          | 29049               | –               | H13           |           |
| Wrangler 4X4 JK    | 2017–18     | 33220   | 29070-1          | 29049               |                 | H13           |           |
| Wrangler 4X4 JK    | 2017–18     | 33220   | 29070-1          | 29049               |                 | LED           |           |
| Liberty 4X4        | 2002–12     | 3713-2  | 29070-1          | 29050               | –               | HB5           | DEFENDER™ |
| Wrangler 4X4       | 1997–06     | 3723    | 29070-1          | 29051               | –               | 2B            | DEFENDER  |
| Wrangler 4X4       | 2007–16     | 42113-1 | 29070-1          | 29049               |                 | H13           | DEFENDER  |
| Wrangler 4X4 JK    | 2017–18     | 42113-1 | 29070-1          | 29049               |                 | H13           | DEFENDER  |
| Wrangler 4X4 JK    | 2017–18     | 42113-1 | 29070-1          | 29049               |                 | LED           | DEFENDER  |
| Wrangler 4X4 JL    | 2018–__     | 32113   | 29070-1          | 89807               | 86273 & 69826-2 | Halogen       | DEFENDER  |
| Wrangler 4X4 JL    | 2018–__     | 32113   | 29070-1          | 89807               | 69826-2         | LED           | DEFENDER  |
| Grand Cherokee 4X4 | 2005–10     | 42021   | 29070-1          | 29048               | 28027-2         | HB3/HB4       | DEFENDER  |

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**FORD (continued)**

| Vehicle Models                    | Model Years | Mount | Isolation Module | Plug-In Harness Kit | Harness Adapter | Headlamp Type | Notes |
|-----------------------------------|-------------|-------|------------------|---------------------|-----------------|---------------|-------|
| F150/Bronco 4X4                   |             |       | 29070-1          | 29050               | —               | HB5           |       |
| F250, F350, F-DS 4X4              |             |       | 29070-1          | 29050               | —               | HB5           |       |
| F250/F350 4X4                     |             |       | 29070-1          | 29051               | —               | 2B            |       |
|                                   |             |       |                  | 29050               | —               | HB1           |       |
| F150 4X4                          |             |       | 29070-1          | 29050               | —               | HB5           |       |
| F250 LD 4X4                       |             |       | 29070-1          | 29050               | —               | HB5           |       |
| F250-550 SD 4X4                   |             |       | 29070-1          | 29051               | —               | 2B            |       |
| F450, F550 4X2                    |             |       | 29070-1          | 29050               | —               | HB5           |       |
| F650                              |             |       | 29070-1          | 29053               | 29234           | 2B1           |       |
| F650                              |             |       | 29070-1          | 29053               | 29234           | 2B            |       |
|                                   |             |       |                  | 29053               | 29235           | HB5           |       |
| F250-550 SD 4X4 (includes Diesel) |             |       | 29070-1          | 29051               | —               | 2B            |       |
| F450, F550 4X2                    |             |       | 29070-1          |                     |                 |               |       |
| Excursion                         |             |       | 29070-1          | 29050               | —               | HB5           |       |
| F150 4X4                          |             |       | 29070-1          | 29049               | —               | H13           |       |
| F150 4X4                          |             |       | 29070-1          | 69889-1             | 69826-1         | HB3H11        |       |
| F150 4X4                          |             |       | 29070-1          | 96618               | 73999           | LED           |       |
| F250-550 SD 4X4                   |             |       | 29070-1          | 29049               | —               | H13           |       |
| F350, F450, F550 4X2              |             |       | 29070-1          | 29051               | —               | 2B            |       |
| F250-550 SD 4X4                   |             |       | 29760-2          | 29051               | —               | 2B            |       |
|                                   |             |       | 29760-2          | 29049               | —               | H13           |       |
| F250-550 SD 4X4                   |             |       | 23070-1          | 29051               | —               | 2B            |       |
|                                   |             |       |                  | 29049               | —               | H13           |       |
|                                   |             |       |                  | 29049               | —               | H13           |       |

**FORD (continued)**

| Vehicle Models                 | Model Years | Mount | Isolation Module | Plug-In Harness Kit | Harness Adapter    | Headlamp Type | Notes     |
|--------------------------------|-------------|-------|------------------|---------------------|--------------------|---------------|-----------|
| F250-550 SD 4X4                |             |       | 23760-2          | 73973-1             |                    | Quad H13      |           |
|                                |             |       | 26760-2          | 73977               | 73999              | LED           |           |
| F250-550 SD 4X4                |             |       | 26070-1          | 74973               | OR                 | H13 Quad      |           |
|                                |             |       | 23070-1          | 73973-1             | 74093              |               |           |
|                                |             |       | TBD              | TBD                 | TBD                | LED           |           |
| F650                           |             |       | 23070-1          | 29053               | 29234              | 2B            |           |
|                                |             |       | 23070-1          | 29053               | 29235              | HB5           |           |
| F150                           |             |       | 23070-1          | 29049               |                    | H13           |           |
| F150                           |             |       | 23070-1          | 29049               |                    | H13           |           |
| F150                           |             |       | 23070-1          | 69889               | 69826-1            | HB3/HB11      |           |
|                                |             |       | 23070-1          | 69889               | 69859 &<br>69826-1 | LED           |           |
| Ranger, Mazda 4X4              |             |       | 23070-1          | 29050               | —                  | HB5           | DEFENDER™ |
| Explorer                       |             |       | 23070-1          |                     |                    |               | DEFENDER  |
| Explorer Sport 4X4             |             |       | 23070-1          |                     | —                  |               | DEFENDER  |
| Explorer Sport Trac 4X4        |             |       | 23070-1          |                     | —                  |               | DEFENDER  |
| Explorer 4X4                   |             |       | 23070-1          | 29048               | 28027-2            | HB3/HB4       | DEFENDER  |
|                                |             |       | 23070-1          | 29050               | —                  | HB5           | DEFENDER  |
| F150 (Heritage)/Expedition 4X4 |             |       | 23070-1          | 29050               | —                  | HB5           | DEFENDER  |
| F150 4X4                       |             |       | 23070-1          | 29049               | —                  | H13           | DEFENDER  |
| Sport Trac 4X4                 |             |       | 23070-1          | 29049               | —                  | H13           | DEFENDER  |
| F150                           |             |       | 23070-1          | 29049               |                    | H13           | DEFENDER  |
| F150                           |             |       | 23070-1          | 69889-1             | 69826-1            | HB3/HB11      | DEFENDER  |
|                                |             |       | 23070-1          | 69889-1             | 69859 &<br>69826-1 | LED           | DEFENDER  |
| Ranger                         |             |       | 23070-1          | 29049               |                    | H13           | DEFENDER  |
| Ranger                         |             |       | 23760-2          | 77533               | 69826-1            | Halogen       | DEFENDER  |
|                                |             |       | 29070-1          | 77533               | 69826-1            | LED           | DEFENDER  |

| GM                        |             |           |                  |                     |                 |                  |           |
|---------------------------|-------------|-----------|------------------|---------------------|-----------------|------------------|-----------|
| Vehicle Models            | Model Years | Mount     | Isolation Module | Plug-In Harness Kit | Harness Adapter | Headlamp Type    | Notes     |
| K2500/3500/Sub.-2500 4X4  | 1988–00     | 1589      | 23070-1          | 23048               | –               | HB3/HB4          |           |
|                           |             |           | 23070-1          | 29051               | –               | 2B               |           |
| K1500, 2500, 3500 4X4     | 1973–87     | 1519      | 23070-1          | 29051               | –               | 2B               |           |
|                           |             | 63300 Kit |                  |                     |                 | LF/UF            |           |
| Blazer, Suburban 4X4      | 1973–91     |           | 23070-1          | 23050               | 26641-1         | 1A/2A            |           |
| K1500/Sub/Blazer 4X4      | 1988–00     | 1589      | 23070-1          | 29048               | –               | HB3/HB4          |           |
|                           |             | 67665 Kit | 23070-1          | 29051               | –               | 2B               |           |
|                           |             |           |                  |                     |                 | LF/UF            |           |
| C3500 2WD                 | 1991–01     | 7144      | 23070-1          | 29048               | –               | HB3/HB4          |           |
|                           |             |           | 23070-1          | 29051               | –               | 2B               |           |
| K1500 4X4                 | 1999–02     | 3519      | 23070-1          | 29048               | –               | HB3/HB4          |           |
| Tahoe, Yukon, Suburban    | 1999–06     |           | 23070-1          | 29051               | –               | 2B               |           |
| K1500/K1500 "Classic" 4X4 | 2003–07     | 3519      | 23070-1          | 29048               | –               | HB3/HB4          |           |
| K1500HD                   | 2001–07     | 3529      | 23070-1          | 29048               |                 | HB3/HB4          |           |
| Suburban/Yukon XL         | 2003–06     | 3529      | 23070-1          | 29048               |                 | HB3/HB5          |           |
| 2500HD/3500               | 2003–06     | 67381-2   | 23070-1          | 29048               | –               | HB3/HB4          |           |
| 2500HD/3500               | 2007–10     | 67381-2   | 23070-1          | 29400-7             |                 | HB3/HB11         |           |
| Suburban/Yukon XL         | 2007–10     | 67381-2   | 23070-1          | 29400-7             |                 | HB3/HB11         |           |
| C4500/5500 4X2            | 2003–09     | 3539      | 23070-1          | 29053               | –               | 2B/1A/2A         |           |
| Canyon/Colorado 4X4 Z71   | 2004–09     | 31543-1   | 23070-1          | 29048               | –               | HB3/HB4          | DEFENDER™ |
| Canyon/Colorado 4X4 Z65   | 2004–12     | 31543-1   | 23070-1          | 29048               | –               | HB3/HB4          | DEFENDER  |
| C4500/5500 4X4            | 2005–09     | 33559     | 23070-1          | 29053               | –               | 2B/1A/2A         |           |
| K1500                     | 2007–__     | 31599     | 23070-1          | 29400-7             | –               | HB3/HB11         |           |
| K1500                     | 2014–15     | 31599     | 23760-2          | 69818-1             | –               | HB3/HB11 or HIR2 |           |
| K1500 Classic             | 2016–19     | 31599-1   | 23070-1          | 72101-1             |                 | HID or LED       |           |
| K1500 Plow Prep           | 2019–__     | 31699     | 23070-1          | 77199               |                 | Halogen & LED    |           |

**GM (continued)**

| Vehicle Models             | Model Years | Mount   | Isolation Module | Plug-In Harness Kit | Harness Adapter | Headlamp Type    | Notes        |
|----------------------------|-------------|---------|------------------|---------------------|-----------------|------------------|--------------|
| 2500HD/3500                | 2011–19     | 69981   | 23070-1          | 29400-7             | –               | HB3/HB11         |              |
| 2500HD/3500                | 2015–19     | 69981   | 23760-2          | 69818-1             | –               | HB3/HB11         |              |
| 2500HD/3500                | 2015–19     | 69981   | 23070-1          | 69818-1             |                 | HID              |              |
| 2500HD/3500                | 2020–__     | 31700   | 23070-1          | 72199               |                 | Halogen & LED    |              |
| S10/Blazer 4X4             | 1995–04     | 1503    | 23070-1          | 29048               | –               | HB3/HB4          | Suburbanite™ |
| GMC Sonoma                 |             |         | 23070-1          | 29051               | 27968-1         | 2E               | Suburbanite  |
| K1500/K1500 "Classic" 4X4  | 1999–07     | 1533    | 23070-1          | 29048               | –               | HB3/HB4          | DEFENDER     |
| Tahoe/Yukon 4X4            | 2000–06     | 1533    | 23070-1          | 29048               | –               | HB3/HB4          | DEFENDER     |
| Envoy/Trailblazer 4X4      | 2002–09     | 1533-1  | 23070-1          | 29052               | –               | HB3/HB4          | DEFENDER     |
| Canyon/Colorado 4X4        | 2004–12     | 31543-2 | 23070-1          | 29048               | –               | HB3/HB4          | DEFENDER     |
| Canyon/Colorado 4X4        | 2015–__     | 31563   | 23760-2          | 69818-1             | 76048           | HB3/HB11         | DEFENDER     |
| K1500 4X4                  | 2007–13     | 31553-1 | 23070-1          | 29400-5             | –               | HB3/HB11         | DEFENDER     |
| K1500 4X4                  | 2014–15     | 31553-1 | 23760-2          | 69818-1             | –               | HB3/HB11 or HIR2 | DEFENDER     |
| K1500 4X4                  | 2016–19     | 31553-1 | 23070-1          | 72101-1             |                 | HID or LED       | DEFENDER     |
| Tahoe, Yukon, XL, Suburban | 2007–14     | 31553-1 | 23070-1          | 29400-7             | –               | HB3/HB11         | DEFENDER     |
| Tahoe, Yukon, XL, Suburban | 2007–15     | 31553-1 | 23070-1          | 29049               |                 | H13              | DEFENDER     |
| Tahoe, Yukon, XL, Suburban | 2015–19     | 31553-1 | 23070-1          | 69818-1 & 69928     | –               | HB3/HB11 or H13  | DEFENDER     |

**ISUZU**

| Vehicle Models | Model Years | Mount | Isolation Module | Plug-In Harness Kit | Harness Adapter | Headlamp Type | Notes |
|----------------|-------------|-------|------------------|---------------------|-----------------|---------------|-------|
| Isuzu NPR      | 2008–__     | 33212 | 29070-1          | 29051               | –               | 2B/2D/HB-2    |       |

**STERLING**

| Vehicle Models        | Model Years | Mount | Isolation Module | Plug-In Harness Kit | Harness Adapter | Headlamp Type | Notes |
|-----------------------|-------------|-------|------------------|---------------------|-----------------|---------------|-------|
| Bullet 45/55 4X4, 4X2 | 2008–12     | 33940 | 29070-1          | 29049               | –               | H13           |       |

**This guide is intended FOR REFERENCE ONLY. Please consult Quick Match for final determination of exact and current mount, harness , and any needed adapters.**



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