



***COLUMBIA***

# **Parts Manual**

## **Multiple Vehicle Platform**

**MV1-S, MV1-L**

## ***Preface***

*Welcome, and congratulations on your choice of vehicle from Columbia ParCar Corp.!* Your vehicle has been designed and manufactured to conform to applicable sections of ANSI B56.8. Your safe use and operation of your vehicle is important to us. Any alteration of your Columbia vehicle that results in the vehicle being in noncompliance with applicable ANSI standards is strictly prohibited. Columbia ParCar Corp. is not responsible or liable for any damage that results from any such alteration, and all warranties for any such altered vehicles are null and void.

These vehicles are not designed for over-the-road use. They do not conform to Federal Motor Vehicle Safety Standards or EPA regulations, and are not equipped for operation on public streets, roads, or highways.

To the best knowledge of Columbia ParCar Corp., the material contained herein is accurate as of the date this publication was approved for printing. Columbia ParCar Corp. is not liable for errors in this manual or for incidental or consequential damages that result from the use of the material in this manual. Columbia ParCar Corp. reserves the right to change specifications, equipment or designs at any time without notice and without incurring obligation.

This manual contains proprietary information that is protected by copyright. All rights are reserved. No part of this manual may be photocopied, reproduced, or translated to another language without the written consent of Columbia ParCar Corp. Columbia ParCar Corp. products are manufactured under one or more of the following U.S. Patents - 2986162, 2987934, 3116089, 3144631, 3144860, 3229792, 3434887, 3559773, 3673359, 3680403, 3683716, 3709317, 4648473, Des. 225626.



1115 Commercial Avenue • Reedsburg, WI 53959  
Phone: (608) 524-8888 • Fax: (608) 524-8380  
(800) 222-4653 • Web: [www.parcars.com](http://www.parcars.com)

## INDEX MVP

### SECTION 1 Accelerator and Brakes

|                               |     |
|-------------------------------|-----|
| Brakes, MVP-S XXA HYD4 .....  | 1-1 |
| Brakes, MVP-L XXXA HYD4 ..... | 1-5 |
| Brakes, MVP-S XXAA HYD6 ..... | 1-9 |

### SECTION 2 Steering, Front Suspension and Wheels

|                                       |     |
|---------------------------------------|-----|
| Front Axle with Brakes .....          | 2-1 |
| Front Axle with Brakes Assembly ..... | 2-2 |
| Wheels .....                          | 2-4 |

### SECTION 3 Rear Axle, Brakes and Suspension

|                                       |      |
|---------------------------------------|------|
| Rear Axle and Brakes - MVP .....      | 3-1  |
| Rear Axle Assembly - MVP .....        | 3-6  |
| Single Rear Axle Assembly .....       | 3-7  |
| Tandem Rear Axle Assembly - MVP ..... | 3-9  |
| NKL Axle & Brake lines 16.77 .....    | 3-10 |
| NKL Single Axle Assembly 16.77 .....  | 3-13 |
| NKL Dual Axle Assembly 16.77 .....    | 3-14 |
| NKL Axle Assembly .....               | 3-15 |
| NKL Axle Hydraulic Brakes .....       | 3-18 |

### SECTION 4 Seats, Decks and Dash

|                                    |      |
|------------------------------------|------|
| Seats .....                        | 4-1  |
| Delta Q Charger w/Remote LED ..... | 4-2  |
| Cargo Bed .....                    | 4-3  |
| Cab .....                          | 4-4  |
| Cab w/Doors .....                  | 4-6  |
| Dash .....                         | 4-9  |
| Hitches .....                      | 4-11 |
| Bumpers .....                      | 4-12 |
| Seat Belts .....                   | 4-13 |
| Body .....                         | 4-14 |
| Lights & Horn .....                | 4-16 |
| Deluxe Lights & Horn .....         | 4-17 |
| High Output Procharger .....       | 4-18 |
| Labels .....                       | 4-19 |

### SECTION 5 Electrical Systems

|                                                                          |      |
|--------------------------------------------------------------------------|------|
| Main Harness and Schematic .....                                         | 5-1  |
| DC Converter Harness and Schematics- Single and Dual Battery Packs ..... | 5-4  |
| Accessory Harness and Schematic .....                                    | 5-6  |
| Motor Single Axle .....                                                  | 5-10 |
| Motor Dual Axle .....                                                    | 5-11 |
| Single Battery Tray .....                                                | 5-12 |
| Dual Battery Tray .....                                                  | 5-14 |
| Exchange Battery Tray .....                                              | 5-16 |
| Harness Dual Battery Selector .....                                      | 5-18 |
| DC Assembly Panel, One Axle & One Battery Pack .....                     | 5-20 |
| DC Assembly Panel, One Axle & Two Battery Packs .....                    | 5-21 |
| DC Assembly Panel, Two Axles & One Battery Pack .....                    | 5-22 |
| DC Assembly Panel, Two Axles & Two Battery Packs .....                   | 5-23 |
| DC Power, One Axle & One Battery Pack .....                              | 5-24 |
| DC Power, One Axle & Two Battery Packs .....                             | 5-25 |
| DC Power, Two Axles & One Battery Pack .....                             | 5-26 |
| DC Power, Two Axles & Two Battery Packs .....                            | 5-27 |
| DC Converter .....                                                       | 5-28 |

## SECTION 6 Options

|                                 |      |
|---------------------------------|------|
| Wiper .....                     | 6-1  |
| Strobe Light .....              | 6-2  |
| Cab Dome Light.....             | 6-3  |
| Cab Fan .....                   | 6-4  |
| Heater .....                    | 6-5  |
| Mirrors.....                    | 6-6  |
| Transport Express Trailer ..... | 6-7  |
| Rear Bumper Extended.....       | 6-10 |
| Back-up Lights & Harness .....  | 6-11 |

## SECTION 7 AC Drive Components

|                                             |      |
|---------------------------------------------|------|
| AC Drive, 1 Battery, 1 Axle .....           | 7-1  |
| Controller Assembly 450A AC .....           | 7-2  |
| 10.37 & 16.77 HKL Axle 8KW AC .....         | 7-3  |
| 10.37 & 16.77 HKL Axle Assembly 8KW AC..... | 7-4  |
| Harness AC Controller.....                  | 7-6  |
| Harness, Charger Interlock Ext .....        | 7-8  |
| Clearview Dash.....                         | 7-9  |
| Smartview Dash.....                         | 7-10 |

### Note:

Starting in February of 2015, Columbia started implementing the use of textured black paint instead of satin black on certain accessories. When ordering black coated parts it may be necessary to state if they have the satin finish or the textured finish.

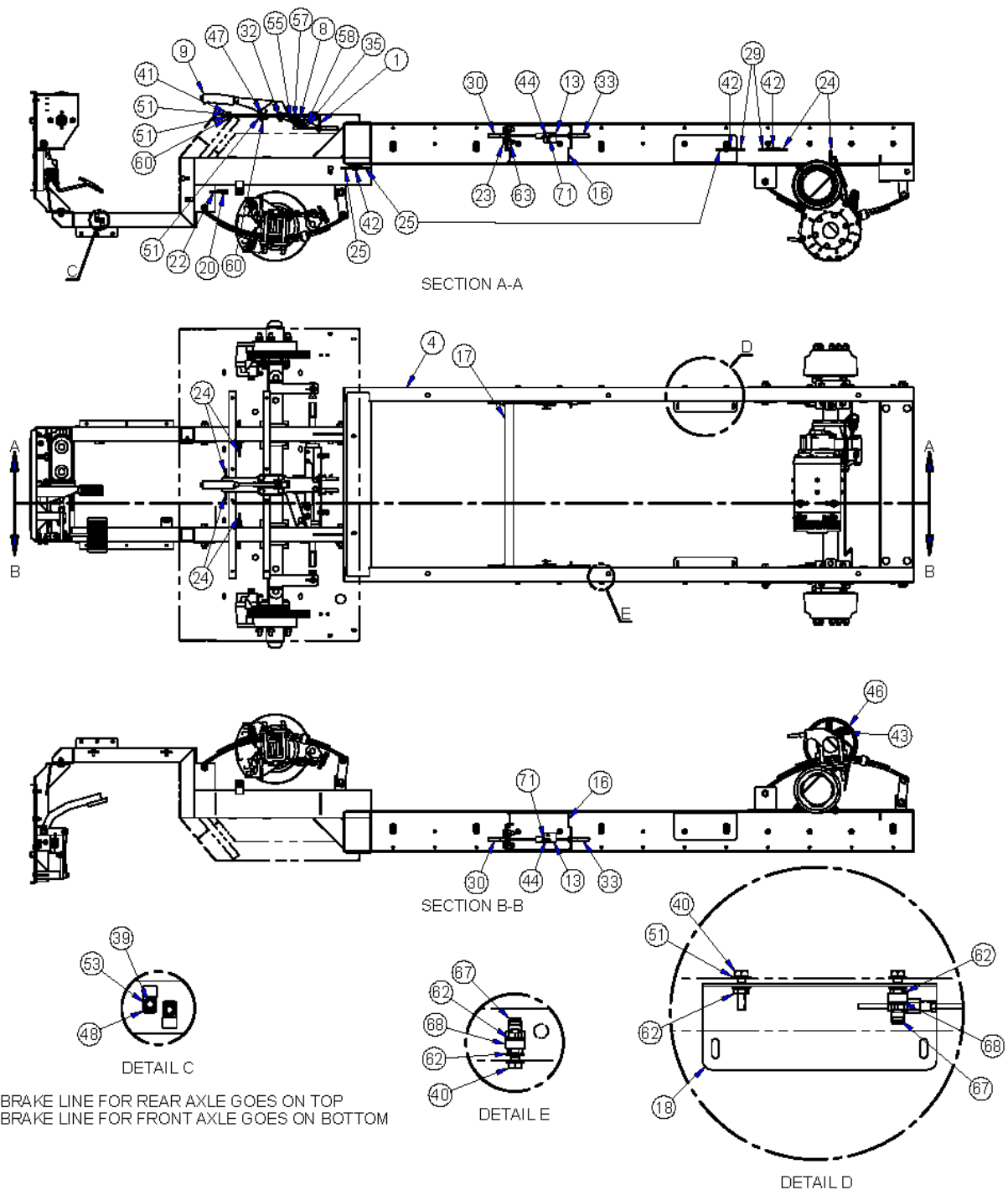
| CHANGE HISTORY - MVP |                                                       |    |
|----------------------|-------------------------------------------------------|----|
| DATE                 | DESCRIPTION                                           | BY |
| 5/7/12               | Issued                                                | TS |
| 12/12/13             | Changed main and dome light harness.                  | TS |
| 2/5/14               | Added lights, body, DC panel and power (ECR 110039)   | TS |
| 5/6/14               | Added that windows/windshields cannot ship UPS.       | TS |
| 6/26/14              | Added rear bumper extended                            | TS |
| 7/23/14              | Deleted 1008 seats                                    | TS |
| 12/9/14              | Added oil seal and dust cover kit to hydraulic brakes | TS |
| 1/19/15              | Added back-up light and revised Section 1 Brakes      | TS |
| 1/27/15              | Changed axles, added AC components                    | TS |
| 2/10/15              | Updated heater and mirrors                            | TS |
| 3/3/15               | Added note about the black finish changing            | TS |
| 3/30/15              | Corrected body                                        | TS |
| 4/23/15              | Changed jam nut on cylinder rod                       | TS |

# **Multiple Vehicle Platform Parts Manual**

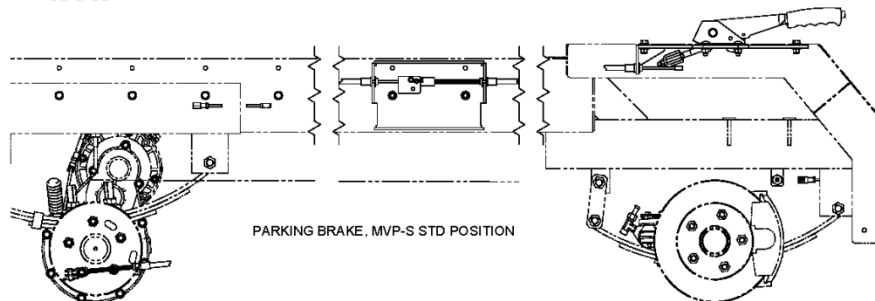
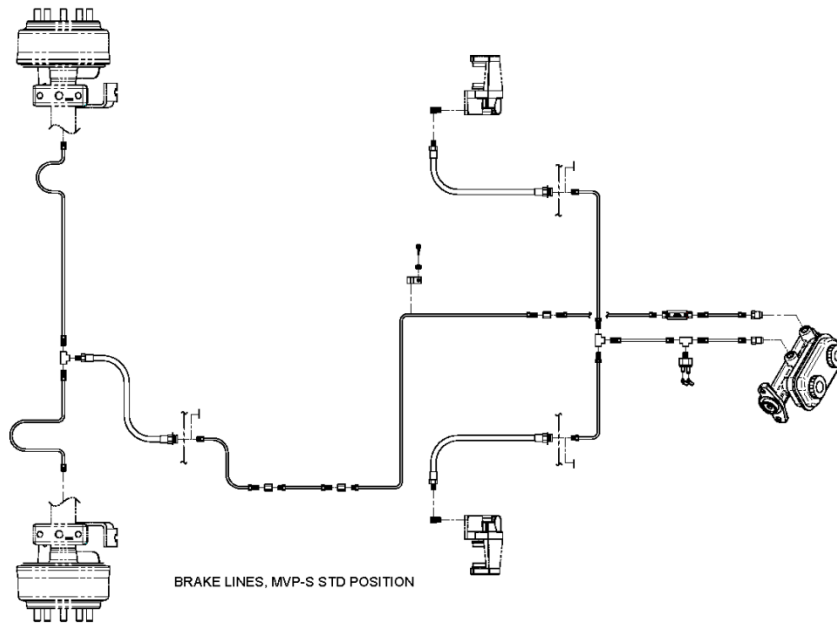
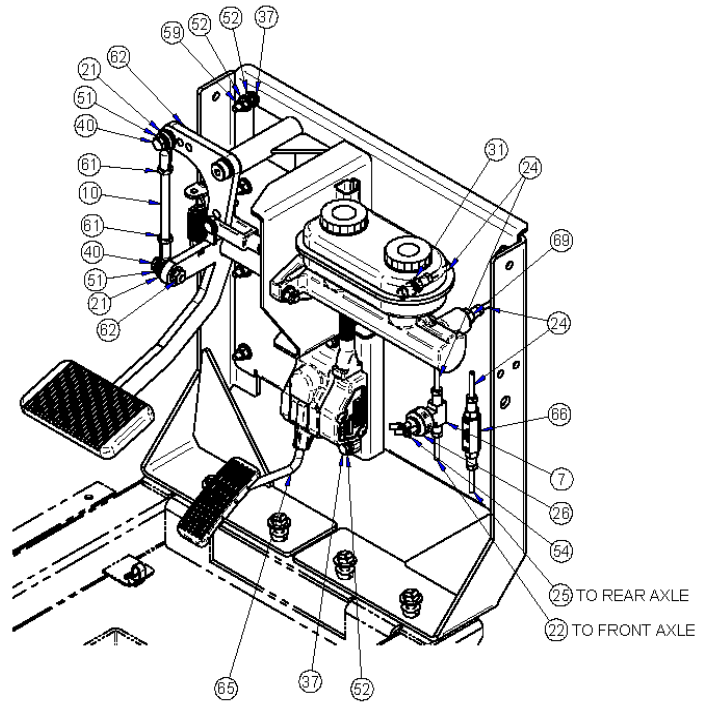
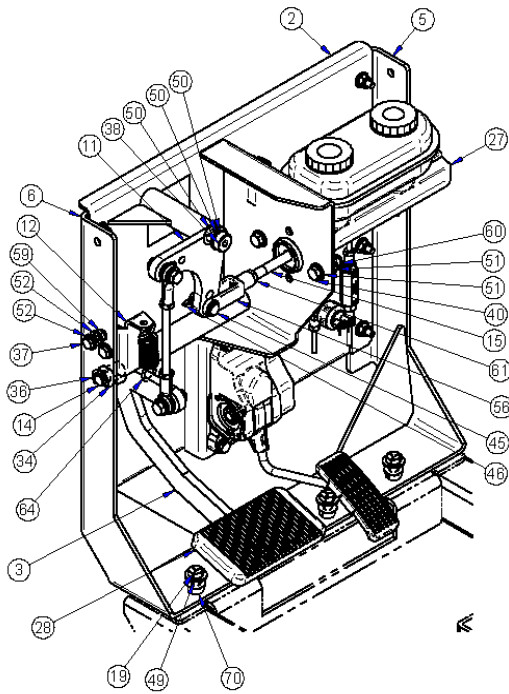
## **Section 1**

### **Accelerator and Brake Linkage**

## BRAKES, – MVP-S XXA HYD4



# BRAKES, – MVP-S XXA HYD4 Cont.



### BRAKES, – MVP-S XXA HYD4 Cont.

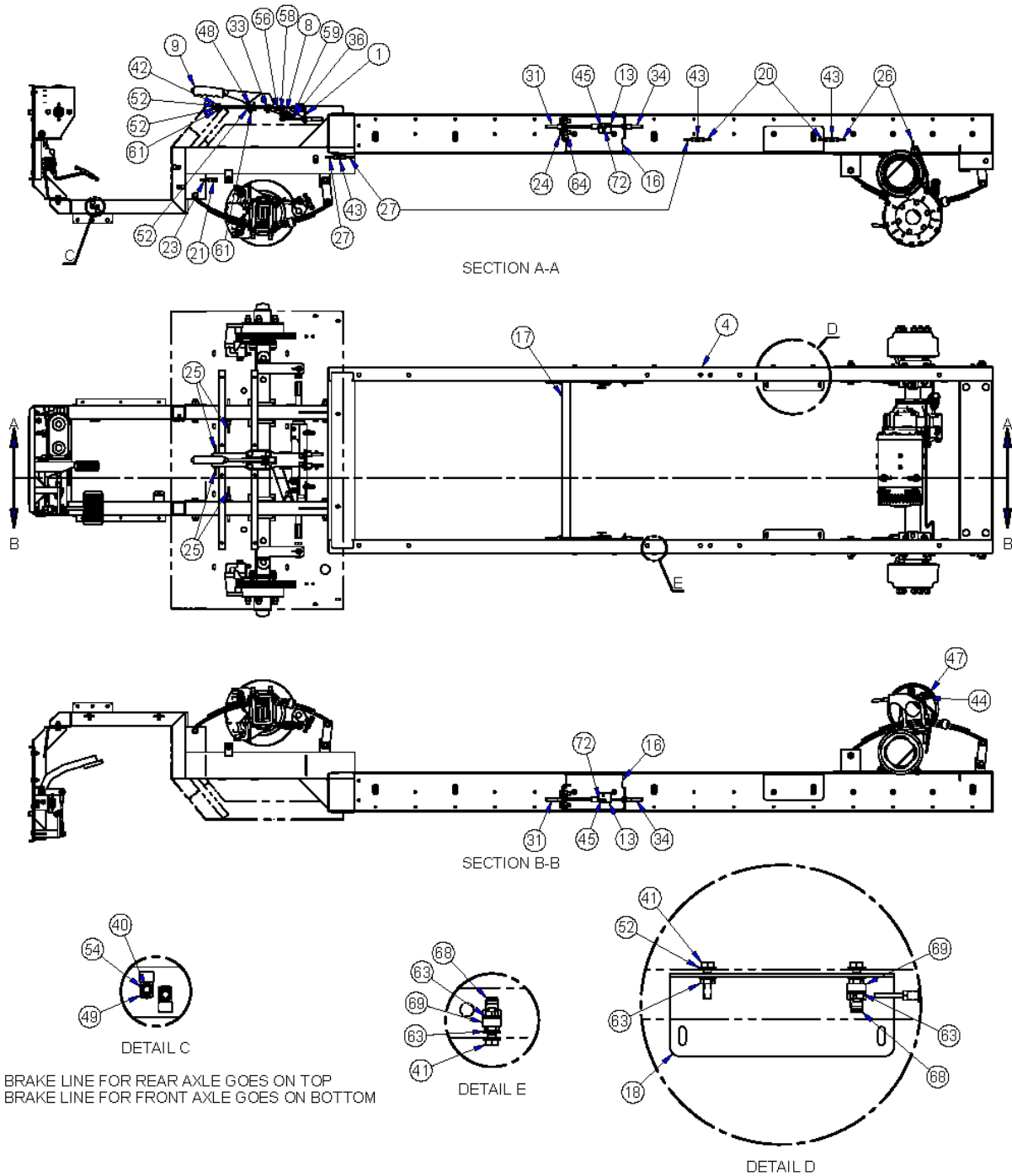
| ITEM | CPC P/N  | DESCRIPTION                            | QTY | SEATS P/N |
|------|----------|----------------------------------------|-----|-----------|
| 1    | 51520-10 | STIFFENER – SEAT BASE                  | 1   | 307526    |
| 2    | *        | CNTRL TOWER - MVP                      | 1   | 309055    |
| 3    | *        | BRAKE PEDAL                            | 1   | 309063    |
| 4    | *        | PAINTED, MVP CHASSIS - SHORT           | 1   | 309122B   |
| 5    | *        | CONTROL TOWER - RH                     | 1   | 309126    |
| 6    | *        | CONTROL TOWER - LH                     | 1   | 309127    |
| 7    | 69729-00 | CONNECTOR, 3-WAY SWITCH                | 1   | 508959    |
| 8    | 42402-89 | PLATED, BRAKE EQUALIZER                | 1   | 509154PL  |
| 9    | 41721-04 | PARKNG BRAKE, MODIFIED - SEAT MNTD     | 1   | 509905    |
| 10   | *        | ROD, BRAKE PULL - MVP                  | 1   | 512198    |
| 11   | *        | BELLCRANK                              | 1   | 512225    |
| 12   | *        | STOP TAB, BRAKE PEDAL                  | 1   | 512226    |
| 13   | *        | BRAKE EQUALIZER - SINGLE               | 2   | 512237    |
| 14   | *        | ROD, PEDAL PIVOT                       | 1   | 512240    |
| 15   | *        | ROD - HYDR CYL                         | 1   | 512241    |
| 16   | *        | MNT, BRKT - BRAKE CABLE                | 2   | 512249    |
| 17   | *        | STIFFENER, CHANNEL - MVP               | 1   | 512250    |
| 18   | *        | BRACKET, HANGER MNT                    | 2   | 512270    |
| 19   | 2879-W   | SCREW, 3/8-16 X 1 HHC, G5              | 4   | 707195    |
| 20   | 41842-94 | UNION TEE, HYD BRAKE                   | 1   | 709377    |
| 21   | 57019-00 | ROD END - 5/16 (KPF-5-G)               | 2   | 709450    |
| 22   | 41269-00 | BRAKE LINE, 3/16 X 51                  | 1   | 709474    |
| 23   | 3570     | SCREW, 1/2-13 X 1-1/4, HHCS, G5, ZC    | 4   | 709588    |
| 24   | 41223-00 | BRAKE LINE, 3/16 X 8                   | 5   | 709601    |
| 25   | 41220-00 | BRAKE LINE, 3/16 X 60                  | 2   | 709727    |
| 26   | 41212-00 | SWITCH, BRAKE LIGHT                    | 1   | 709749    |
| 27   | 41809-02 | MASTER CYLINDER 1-1/6 TANDEM           | 1   | 709806    |
| 28   | 42438-02 | PAD, BRAKE PEDAL                       | 1   | 709807    |
| 29   | 41431-02 | BRAKE LINE 3/16X6                      | 1   | 709812    |
| 30   | 42370-02 | BRAKE CABLE 42"                        | 2   | 709818    |
| 31   | 41827-93 | ADAPTER, HYD BRAKE 1/2-20 TO 3/16"     | 1   | 709828    |
| 32   | 625      | ROLL PIN, 1/4" OD X 5/8" (L) ,         | 1   | 719121    |
| 33   | 41860-06 | CABLE, BRAKE, 68.50"                   | 2   | 719209    |
| 34   | 10514    | BEARING, FLANGED, .50"IDX.62"ODX.75"L  | 2   | 719262    |
| 35   | 41512-08 | ROD, 1/4 - 28 X 3.00 LG                | 1   | 719364    |
| 36   | 11040    | E-RING, .562 REINFORCED PHOS           | 2   | 719515    |
| 37   | 2551-W   | SCREW, 1/4-20 X 1, HHCS, G5, YWZC 150  | 14  | 719564    |
| 38   | 2645     | SCREW, 1/2 X 1/2 LG SHLDR SOCKET       | 1   | 719580    |
| 39   | 2653-B   | SCREW, #10 X 3/4 HWH TEK #3            | 5   | 719583    |
| 40   | 2871-W   | SCREW, 5/16-18 X 1-1/4, HHCS, G5, YWZC | 14  | 719592    |
| 41   | 3991     | SCREW, 5/16-18X7/8, HHCS, G5, BLK MAX  | 3   | 719643    |
| 42   | 41206-00 | FLARE, UNION INVERTED 3/16             | 3   | 719657    |
| 43   | 497      | CLEVIS PIN, 5/16 X 7/8 YELLOW/ZINC     | 2   | 719713    |
| 44   | 499      | CLEVIS PIN 1/4 DIA X 1 1/2" LG         | 2   | 719715    |
| 45   | 516      | CLEVIS PIN, 3/8X1-1/8                  | 1   | 719727    |
| 46   | 520-W    | PIN, 1/8X1 COTTER                      | 3   | 719728    |
| 47   | 5400-BS  | BOLT, 5/16-18X1 CARR G5                | 4   | 719744    |
| 48   | 9982     | CLAMP, STEEL TUBE VINYL CUSH           | 5   | 719756    |
| 49   | 6000-B   | WASHER 5/16 USS/STD                    | 4   | 719771    |
| 50   | 6566     | WASHER .515X.812X.031                  | 3   | 719800    |
| 51   | 6702-B   | WASHER 5/16 SAE                        | 26  | 719810    |
| 52   | 6703-B   | WASHER 1/4 SAE                         | 24  | 719811    |
| 53   | 6716     | WASHER #10 SAE                         | 5   | 719812    |

**BRAKES, – MVP-S XXA HYD4 Cont**

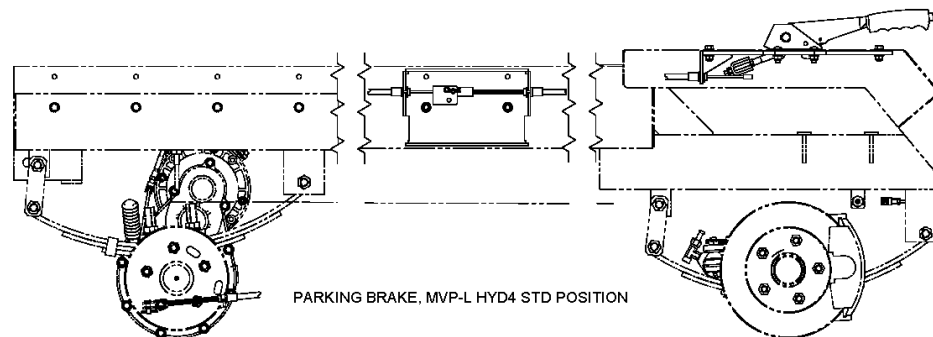
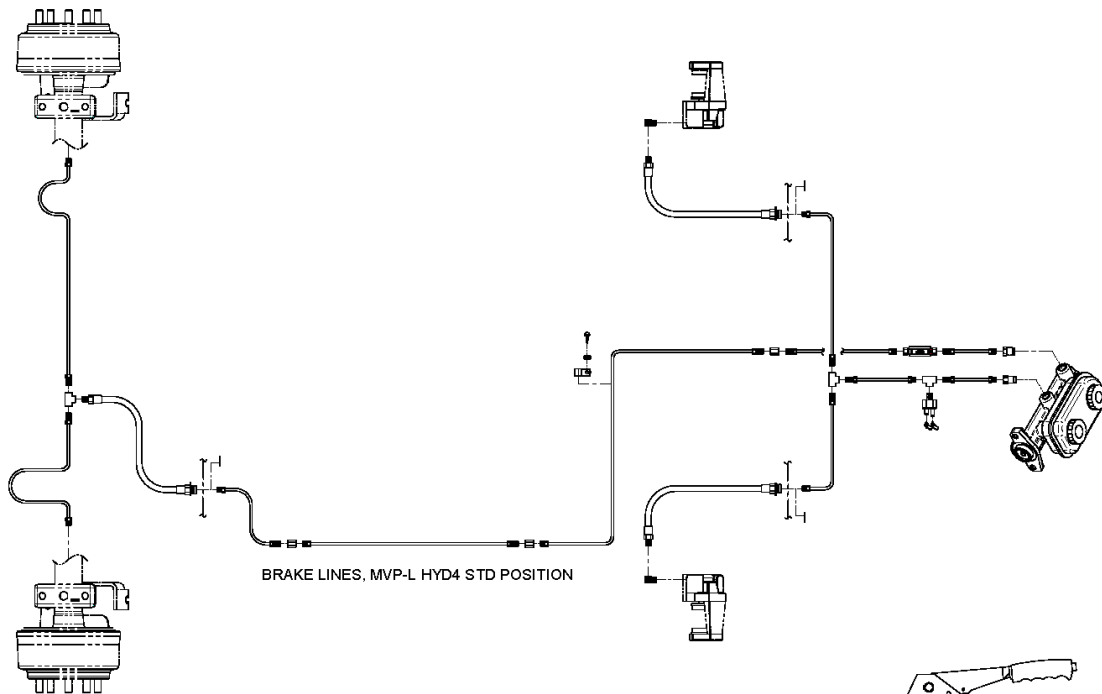
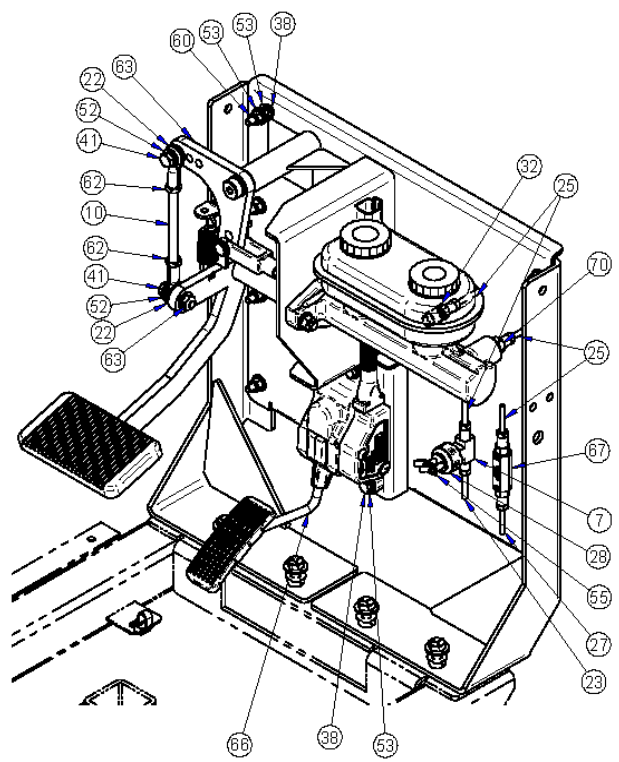
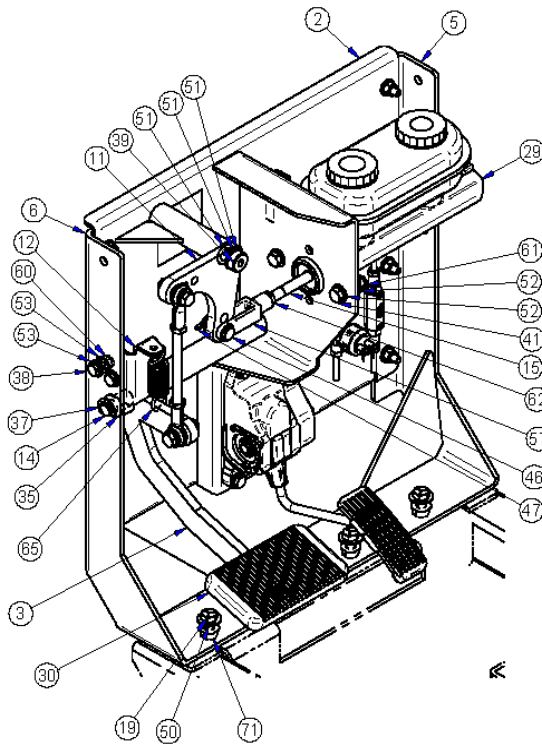
| ITEM | CPC P/N   | DESCRIPTION                                  | QTY | SEATS P/N |
|------|-----------|----------------------------------------------|-----|-----------|
| 54   | 32675-08  | TERMINAL #10 STUD-TO-1/4 MALE TAB            | 2   | 719825    |
| 55   | 73062-86A | YOKE, CLEVIS, 1/4-28 ADJ, RH, CLR            | 1   | 719854    |
| 56   | 73066-02  | CLEVIS #53 3/8-24 ADJ YOKE END YWZC          | 1   | 719855    |
| 57   | 7676      | NUT 1/4-28 GR 2 HEX FULL                     | 1   | 719874    |
| 58   | 7683      | NUT 1/4-28 GR A NE NYLON INSERT LCK          | 1   | 719877    |
| 59   | 7686      | NUT, 1/4-20, NYLOCK, GA,                     | 10  | 719879    |
| 60   | 7739      | NUT,5/16-18,L/N,NYLOK,NE,GA,                 | 9   | 719892    |
| 61   | 7744      | NUT, 5/16-24 GR 2 HEX JAM                    | 3   | 719895    |
| 62   | 7750      | NUT, 5/16-18 GF FLNG CNTR LOCK BLK           | 21  | 719897    |
| 63   | 7880      | NUT, 1/2-13 GR 2 HEX FULL                    | 4   | 719913    |
| 64   | 11801     | SPRING, EXT, .734" X 2.63" X.105", HD, ZC    | 1   | 759838    |
| 65   | 40600-10  | PEDAL ASSY, ACCEL                            | 1   | 759903    |
| 66   | 40955-12  | RESID PRESS VALVE -10 PSI W/ FTGS            | 1   | 759913    |
| 67   | *         | CABLE TIE, .30 X 8.58                        | 11  | 760121    |
| 68   | *         | HEAVY DUTY MOUNT                             | 9   | 760122    |
| 69   | 40954-12  | ADAPTER, HYD BRAKE 9/16-20 TO 3/16           | 1   | 760143    |
| 70   | 7755      | NUT 3/8-16 GR G FLNG CTR LOCK                | 4   | 760721    |
| 71   | 500       | PIN, HAIR CLIP #13                           | 2   | 781013    |
| -    | N/A       | GROUP BRAKES MVP-S XXA HYD4 (Includes above) | 1   | 191615A   |

\* SPECIAL ORDER

## BRAKES, – MVP-L XXXA HYD4



# **BRAKES, – MVP-L XXXA HYD4 Cont.**



**BRAKES, – MVP-L XXXA HYD4 Cont.**

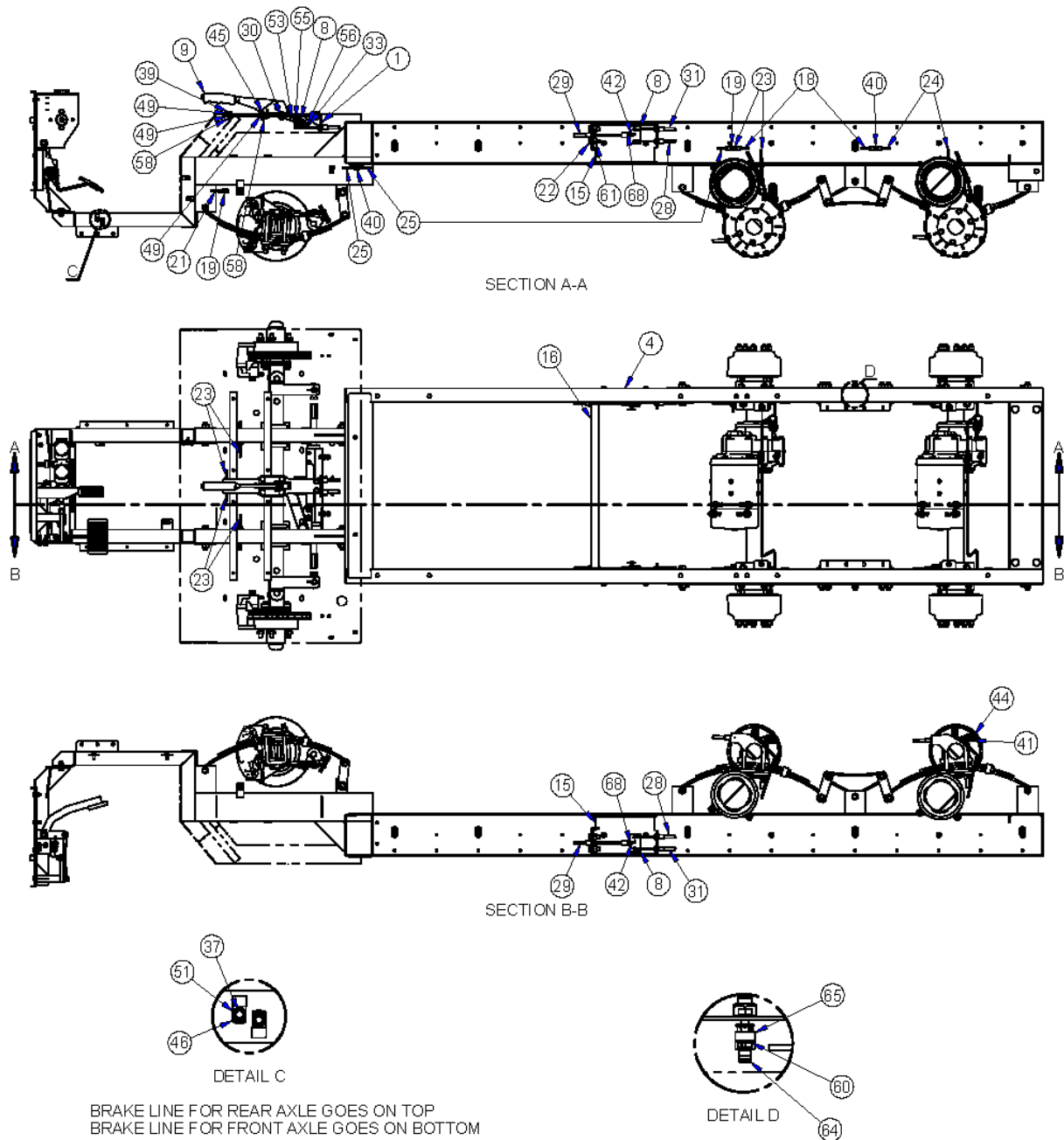
| ITEM | CPC P/N  | DESCRIPTION                            | QTY | SEATS P/N |
|------|----------|----------------------------------------|-----|-----------|
| 1    | 51520-10 | STIFFENER – SEAT BASE                  | 1   | 307526    |
| 2    | *        | CNTRL TOWER - MVP                      | 1   | 309055    |
| 3    | *        | BRAKE PEDAL                            | 1   | 309063    |
| 4    | *        | PAINTED, MVP CHASSIS - LONG            | 1   | 309098B   |
| 5    | *        | CONTROL TOWER - RH                     | 1   | 309126    |
| 6    | *        | CONTROL TOWER - LH                     | 1   | 309127    |
| 7    | 69729-00 | CONNECTOR, 3-WAY SWITCH                | 1   | 508959    |
| 8    | 42402-89 | PLATED, BRAKE EQUALIZER                | 1   | 509154PL  |
| 9    | 41721-04 | PARKNG BRAKE, MODIFIED - SEAT MNTD     | 1   | 509905    |
| 10   | *        | ROD, BRAKE PULL - MVP                  | 1   | 512198    |
| 11   | *        | BELLCRANK                              | 1   | 512225    |
| 12   | *        | STOP TAB, BRAKE PEDAL                  | 1   | 512226    |
| 13   | *        | BRAKE EQUALIZER - SINGLE               | 2   | 512237    |
| 14   | *        | ROD, PEDAL PIVOT                       | 1   | 512240    |
| 15   | *        | ROD - HYDR CYL                         | 1   | 512241    |
| 16   | *        | MNT, BRKT - BRAKE CABLE                | 2   | 512249    |
| 17   | *        | STIFFENER, CHANNEL - MVP               | 1   | 512250    |
| 18   | *        | BRACKET, HANGER MNT                    | 2   | 512270    |
| 19   | 2879-W   | SCREW, 3/8-16 X 1 HHC, G5              | 4   | 707195    |
| 20   | 41222-00 | BRAKE LINE 3/16X20                     | 1   | 709358    |
| 21   | 41842-94 | UNION TEE, HYD BRAKE                   | 1   | 709377    |
| 22   | 57019-00 | ROD END - 5/16 (KPF-5-G)               | 2   | 709450    |
| 23   | 41269-00 | BRAKE LINE, 3/16 X 51                  | 1   | 709474    |
| 24   | 3570     | SCREW, 1/2-13 X 1-1/4, HHCS, G5, ZC    | 4   | 709588    |
| 25   | 41223-00 | BRAKE LINE, 3/16 X 8                   | 4   | 709601    |
| 26   | 41219-00 | BRAKE LINE 3/16X12                     | 1   | 709607    |
| 27   | 41220-00 | BRAKE LINE, 3/16 X 60                  | 2   | 709727    |
| 28   | 41212-00 | SWITCH, BRAKE LIGHT                    | 1   | 709749    |
| 29   | 41809-02 | MASTER CYLINDER 1-1/6 TANDEM           | 1   | 709806    |
| 30   | 42438-02 | PAD, BRAKE PEDAL                       | 1   | 709807    |
| 31   | 41431-02 | BRAKE CABLE 51"                        | 2   | 709819    |
| 32   | 41827-93 | ADAPTER, HYD BRAKE 1/2-20 TO 3/16"     | 1   | 709828    |
| 33   | 625      | ROLL PIN, 1/4" OD X 5/8" (L) ,         | 1   | 719121    |
| 34   | 41860-06 | CABLE, BRAKE, 68.50"                   | 2   | 719209    |
| 35   | 10514    | BEARING, FLANGED, .50"IDX.62"ODX.75"L  | 2   | 719262    |
| 36   | 41512-08 | ROD, 1/4 - 28 X 3.00 LG                | 1   | 719364    |
| 37   | 11040    | E-RING, .562 REINFORCED PHOS           | 2   | 719515    |
| 38   | 2551-W   | SCREW, 1/4-20 X 1, HHCS, G5, YWZC 150  | 14  | 719564    |
| 39   | 2645     | SCREW, 1/2 X 1/2 LG SHLDR SOCKET       | 1   | 719580    |
| 40   | 2653-B   | SCREW, #10 X 3/4 HWH TEK #3            | 5   | 719583    |
| 41   | 2871-W   | SCREW, 5/16-18 X 1-1/4, HHCS, G5, YWZC | 14  | 719592    |
| 42   | 3991     | SCREW, 5/16-18X7/8, HHCS, G5, BLK MAX  | 3   | 719643    |
| 43   | 41206-00 | FLARE, UNION INVERTED 3/16             | 3   | 719657    |
| 44   | 497      | CLEVIS PIN, 5/16 X 7/8 YELLOW/ZINC     | 2   | 719713    |
| 45   | 499      | CLEVIS PIN 1/4 DIA X 1 1/2" LG         | 2   | 719715    |
| 46   | 516      | CLEVIS PIN, 3/8X1-1/8                  | 1   | 719727    |
| 47   | 520-W    | PIN, 1/8X1 COTTER                      | 3   | 719728    |
| 48   | 5400-BS  | BOLT, 5/16-18X1 CARR G5                | 4   | 719744    |
| 49   | 9982     | CLAMP, STEEL TUBE VINYL CUSH           | 5   | 719756    |
| 50   | 6000-B   | WASHER 5/16 USS/STD                    | 4   | 719771    |
| 51   | 6566     | WASHER .515X.812X.031                  | 3   | 719800    |
| 52   | 6702-B   | WASHER 5/16 SAE                        | 26  | 719810    |
| 53   | 6703-B   | WASHER 1/4 SAE                         | 24  | 719811    |
| 54   | 6716     | WASHER #10 SAE                         | 5   | 719812    |

**BRAKES, – MVP-L XXXA HYD4 Cont**

| ITEM | CPC P/N   | DESCRIPTION                                   | QTY | SEATS P/N |
|------|-----------|-----------------------------------------------|-----|-----------|
| 55   | 32675-08  | TERMINAL #10 STUD-TO-1/4 MALE TAB             | 2   | 719825    |
| 56   | 73062-86A | YOKE, CLEVIS, 1/4-28 ADJ, RH, CLR             | 1   | 719854    |
| 57   | 73066-02  | CLEVIS #53 3/8-24 ADJ YOKE END YWZC           | 1   | 719855    |
| 58   | 7676      | NUT 1/4-28 GR 2 HEX FULL                      | 1   | 719874    |
| 59   | 7683      | NUT 1/4-28 GR A NE NYLON INSERT LCK           | 1   | 719877    |
| 60   | 7686      | NUT, 1/4-20, NYLOCK, GA,                      | 10  | 719879    |
| 61   | 7739      | NUT,5/16-18,L/N,NYLOK,NE,GA,                  | 9   | 719892    |
| 62   | 7744      | NUT, 5/16-24 GR 2 HEX JAM                     | 3   | 719895    |
| 63   | 7750      | NUT, 5/16-18 GF FLNG CNTR LOCK BLK            | 21  | 719897    |
| 64   | 7880      | NUT, 1/2-13 GR 2 HEX FULL                     | 4   | 719913    |
| 65   | 11801     | SPRING, EXT, .734" X 2.63" X.105", HD, ZC     | 1   | 759838    |
| 66   | 40600-10  | PEDAL ASSY, ACCEL                             | 1   | 759903    |
| 67   | 40955-12  | RESID PRESS VALVE -10 PSI W/ FTGS             | 1   | 759913    |
| 68   | *         | CABLE TIE, .30 X 8.58                         | 11  | 760121    |
| 69   | *         | HEAVY DUTY MOUNT                              | 9   | 760122    |
| 70   | 40954-12  | ADAPTER, HYD BRAKE 9/16-20 TO 3/16            | 1   | 760143    |
| 71   | 7755      | NUT 3/8-16 GR G FLNG CTR LOCK                 | 4   | 760721    |
| 72   | 500       | PIN, HAIR CLIP #13                            | 2   | 781013    |
| -    | N/A       | GROUP BRAKES MPV-L XXXA HYD4 (Includes above) | 1   | 191613A   |

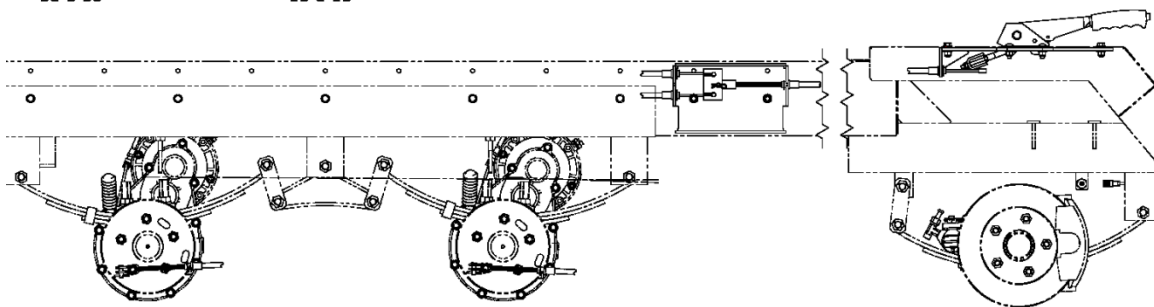
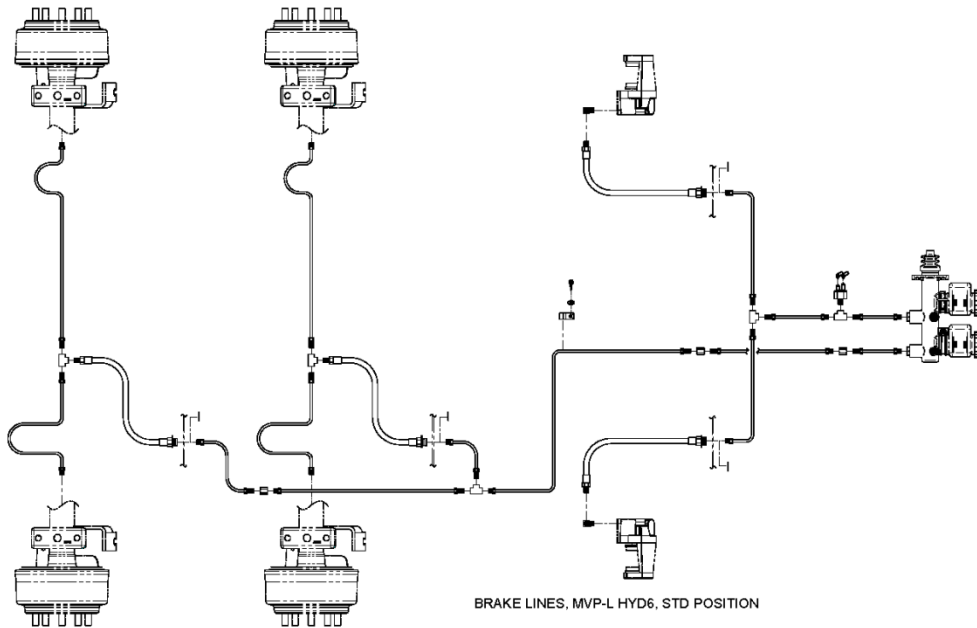
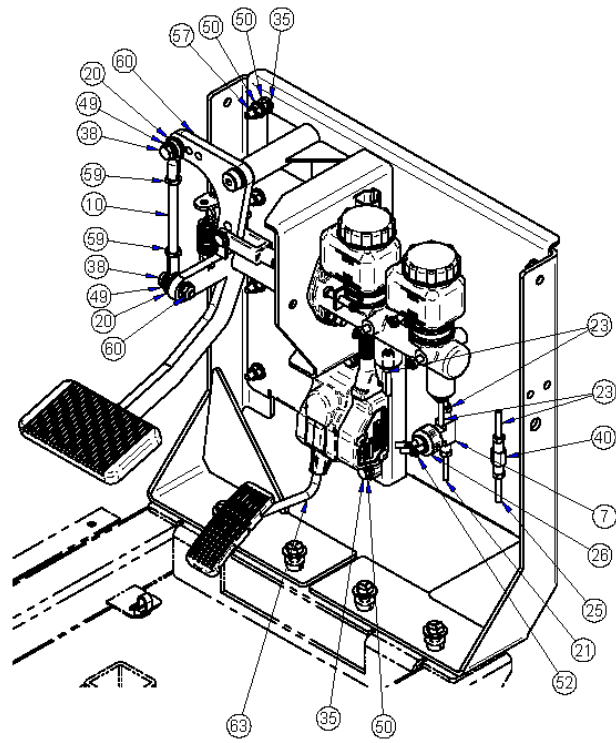
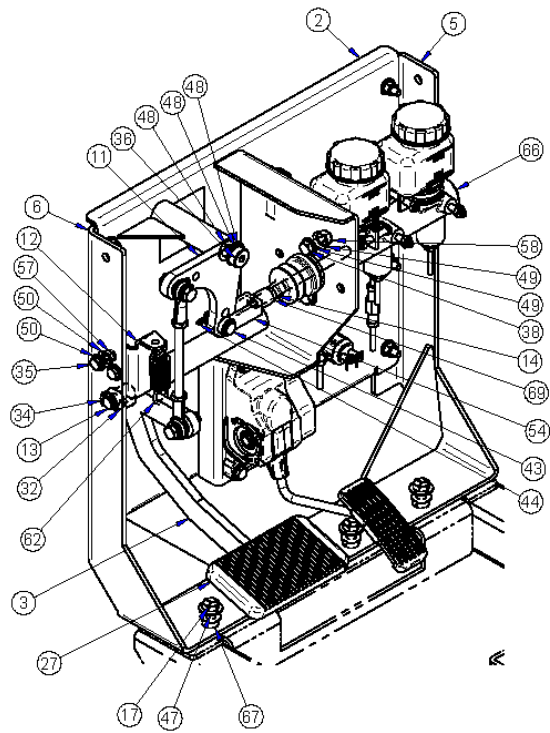
\* SPECIAL ORDER

## BRAKES, – MVP-L XXAA HYD6



TYPICAL CABLE MOUNT LOCATIONS SHOWN  
NOTE FRONT MOUNTS INSTALL ON BATTERY  
TRAY HARDWARE (NOT SHOWN)  
INSTALL ZIP TIES ON LEFT SIDE ONLY AFTER  
ALL WIRE HARNESSES HAVE BEEN INSTALLED

# **BRAKES, – MVP-L XXAA HYD6 Cont.**



PARKING BRAKE, MVP-L HYD6, STD POSITION

**BRAKES, – MVP-L XXAA HYD6 Cont.**

| ITEM | CPC P/N   | DESCRIPTION                            | QTY | SEATS P/N |
|------|-----------|----------------------------------------|-----|-----------|
| 1    | 51520-10  | STIFFENER – SEAT BASE                  | 1   | 307526    |
| 2    | *         | CNTRL TOWER - MVP                      | 1   | 309055    |
| 3    | *         | BRAKE PEDAL                            | 1   | 309063    |
| 4    | *         | PAINTED, MVP CHASSIS - LONG            | 1   | 309098B   |
| 5    | *         | CONTROL TOWER - RH                     | 1   | 309126    |
| 6    | *         | CONTROL TOWER - LH                     | 1   | 309127    |
| 7    | 69729-00  | CONNECTOR, 3-WAY SWITCH                | 1   | 508959    |
| 8    | 42402-89  | PLATED, BRAKE EQUALIZER                | 3   | 509154PL  |
| 9    | 41721-04  | PARKNG BRAKE, MODIFIED - SEAT MNTD     | 1   | 509905    |
| 10   | *         | ROD, BRAKE PULL - MVP                  | 1   | 512198    |
| 11   | *         | BELLCRANK                              | 1   | 512225    |
| 12   | *         | STOP TAB, BRAKE PEDAL                  | 1   | 512226    |
| 13   | *         | ROD, PEDAL PIVOT                       | 1   | 512240    |
| 14   | *         | ROD - HYDR CYL                         | 1   | 512241    |
| 15   | *         | MNT, BRKT - BRAKE CABLE                | 2   | 512249    |
| 16   | *         | STIFFENER, CHANNEL - MVP               | 1   | 512250    |
| 17   | 2879-W    | SCREW, 3/8-16 X 1 HHC, G5              | 4   | 707195    |
| 18   | 41222-00  | BRAKE LINE 3/16X20                     | 1   | 709358    |
| 19   | 41842-94  | UNION TEE, HYD BRAKE                   | 2   | 709377    |
| 20   | 57019-00  | ROD END - 5/16 (KPF-5-G)               | 2   | 709450    |
| 21   | 41269-00  | BRAKE LINE, 3/16 X 51                  | 1   | 709474    |
| 22   | 3570      | SCREW, 1/2-13 X 1-1/4, HHCS, G5, ZC    | 4   | 709588    |
| 23   | 41223-00  | BRAKE LINE, 3/16 X 8                   | 5   | 709601    |
| 24   | 41219-00  | BRAKE LINE 3/16X12                     | 1   | 709607    |
| 25   | 41220-00  | BRAKE LINE, 3/16 X 60                  | 2   | 709727    |
| 26   | 41212-00  | SWITCH, BRAKE LIGHT                    | 1   | 709749    |
| 27   | 42438-02  | PAD, BRAKE PEDAL                       | 1   | 709807    |
| 28   | 42370-02  | BRAKE CABLE 42"                        | 2   | 709818    |
| 29   | 41431-02  | BRAKE CABLE 51"                        | 2   | 709819    |
| 30   | 625       | ROLL PIN, 1/4" OD X 5/8" (L) ,         | 1   | 719121    |
| 31   | 41860-06  | CABLE, BRAKE, 68.50"                   | 2   | 719209    |
| 32   | 10514     | BEARING, FLANGED, .50"IDX.62"ODX.75"L  | 2   | 719262    |
| 33   | 41512-08  | ROD, 1/4 - 28 X 3.00 LG                | 1   | 719364    |
| 34   | 11040     | E-RING, .562 REINFORCED PHOS           | 2   | 719515    |
| 35   | 2551-W    | SCREW, 1/4-20 X 1, HHCS, G5, YWZC 150  | 14  | 719564    |
| 36   | 2645      | SCREW, 1/2 X 1/2 LG SHLDR SOCKET       | 1   | 719580    |
| 37   | 2653-B    | SCREW, #10 X 3/4 HWH TEK #3            | 5   | 719583    |
| 38   | 2871-W    | SCREW, 5/16-18 X 1-1/4, HHCS, G5, YWZC | 8   | 719592    |
| 39   | 3991      | SCREW, 5/16-18X7/8, HHCS, G5, BLK MAX  | 3   | 719643    |
| 40   | 41206-00  | FLARE, UNION INVERTED 3/16             | 3   | 719657    |
| 41   | 497       | CLEVIS PIN, 5/16 X 7/8 YELLOW/ZINC     | 4   | 719713    |
| 42   | 499       | CLEVIS PIN 1/4 DIA X 1 1/2" LG         | 2   | 719715    |
| 43   | 516       | CLEVIS PIN, 3/8X1-1/8                  | 1   | 719727    |
| 44   | 520-W     | PIN, 1/8X1 COTTER                      | 5   | 719728    |
| 45   | 5400-BS   | BOLT, 5/16-18X1 CARR G5                | 4   | 719744    |
| 46   | 9982      | CLAMP, STEEL TUBE VINYL CUSH           | 5   | 719756    |
| 47   | 6000-B    | WASHER 5/16 USS/STD                    | 4   | 719771    |
| 48   | 6566      | WASHER .515X.812X.031                  | 3   | 719800    |
| 49   | 6702-B    | WASHER 5/16 SAE                        | 20  | 719810    |
| 50   | 6703-B    | WASHER 1/4 SAE                         | 24  | 719811    |
| 51   | 6716      | WASHER #10 SAE                         | 5   | 719812    |
| 52   | 32675-08  | TERMINAL #10 STUD-TO-1/4 MALE TAB      | 2   | 719825    |
| 53   | 73062-86A | YOKE, CLEVIS, 1/4-28 ADJ, RH, CLR      | 1   | 719854    |
| 54   | 73066-02  | CLEVIS #53 3/8-24 ADJ YOKE END YWZC    | 1   | 719855    |

**BRAKES, – MVP-L XXAA HYD6 Cont**

| ITEM | CPC P/N  | DESCRIPTION                                   | QTY | SEATS P/N |
|------|----------|-----------------------------------------------|-----|-----------|
| 55   | 7676     | NUT 1/4-28 GR 2 HEX FULL                      | 1   | 719874    |
| 56   | 7683     | NUT 1/4-28 GR A NE NYLON INSERT LCK           | 1   | 719877    |
| 57   | 7686     | NUT, 1/4-20, NYLOCK, GA,                      | 10  | 719879    |
| 58   | 7739     | NUT,5/16-18,L/N,NYLOK,NE,GA,                  | 9   | 719892    |
| 59   | 7744     | NUT, 5/16-24 GR 2 HEX JAM                     | 2   | 719895    |
| 60   | 7750     | NUT, 5/16-18 GF FLNG CNTR LOCK BLK            | 15  | 719897    |
| 61   | 7880     | NUT, 1/2-13 GR 2 HEX FULL                     | 4   | 719913    |
| 62   | 11801    | SPRING, EXT, .734" X 2.63" X.105", HD, ZC     | 1   | 759838    |
| 63   | 40600-10 | PEDAL ASSY, ACCEL                             | 1   | 759903    |
| 64   | *        | CABLE TIE, .30 X 8.58                         | 11  | 760121    |
| 65   | *        | HEAVY DUTY MOUNT                              | 9   | 760122    |
| 66   | 41807-08 | MASTER CYLINDER ASSEMBLY                      | 1   | 760142    |
| 67   | 7755     | NUT 3/8-16 GR G FLNG CTR LOCK                 | 4   | 760721    |
| 68   | 500      | PIN, HAIR CLIP #13                            | 2   | 781013    |
| 69   | *        | NUT, 3/8-24 HEX JAM                           | 1   | 781490    |
| -    | N/A      | GROUP BRAKES MPV-L XXAA HYD6 (Includes above) | 1   | 191576A   |

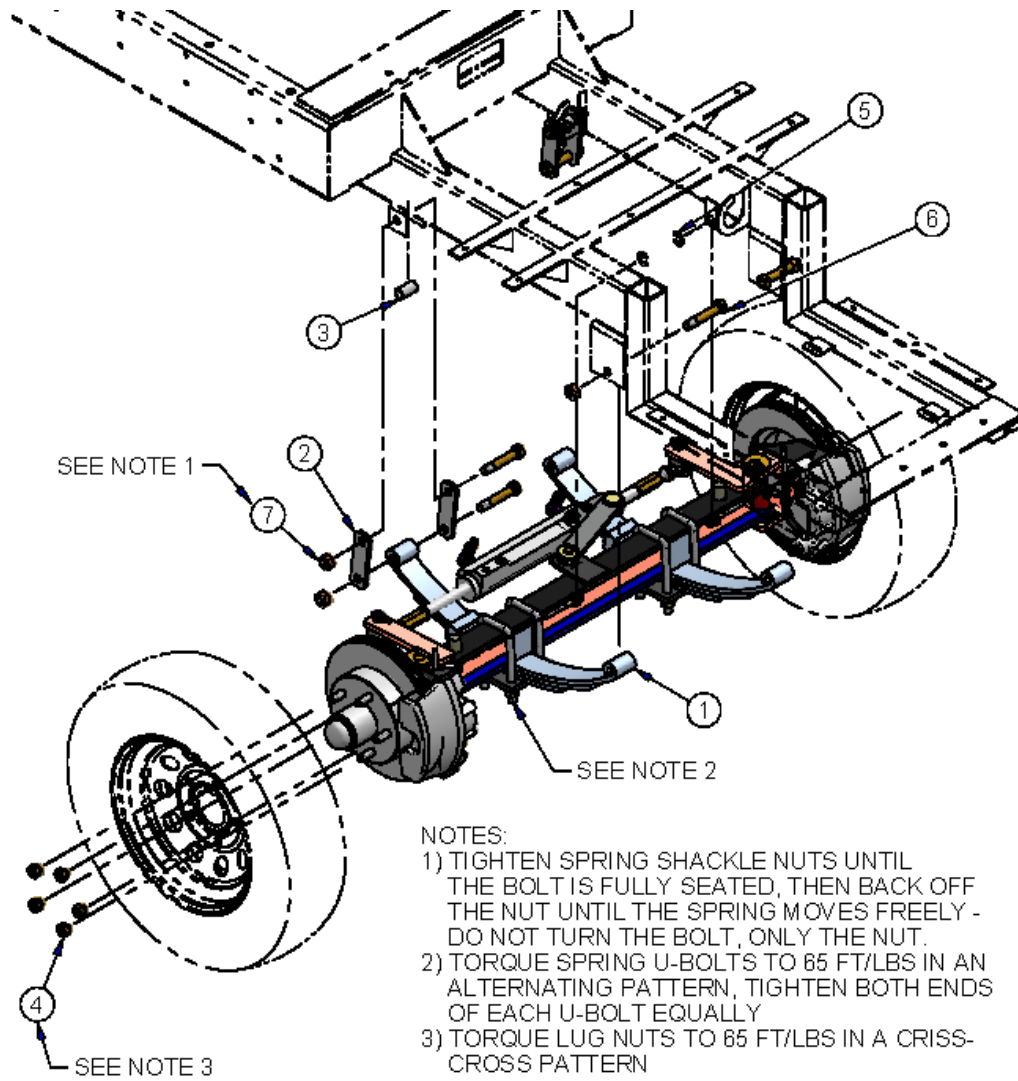
\* SPECIAL ORDER

# **Multiple Vehicle Platform Parts Manual**

## **Section 2**

### **Steering, Front Suspension and Wheels**

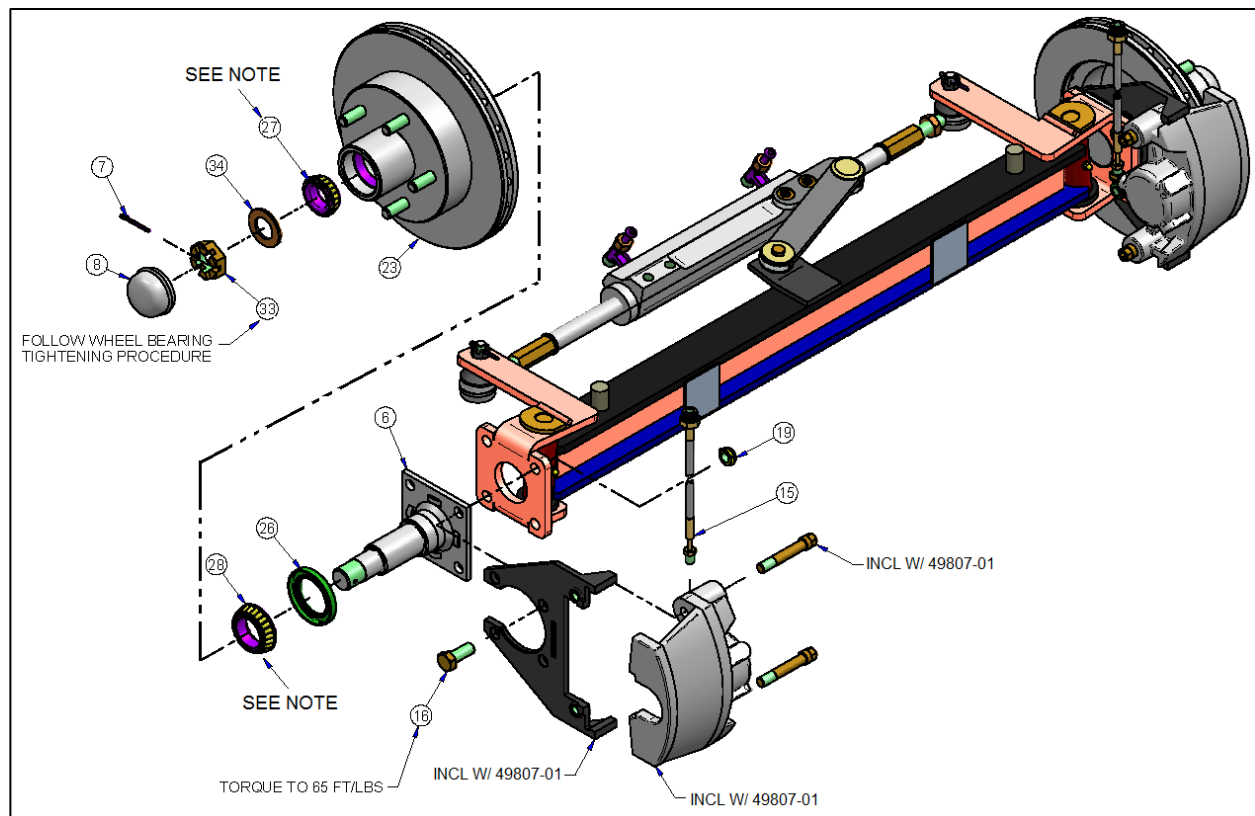
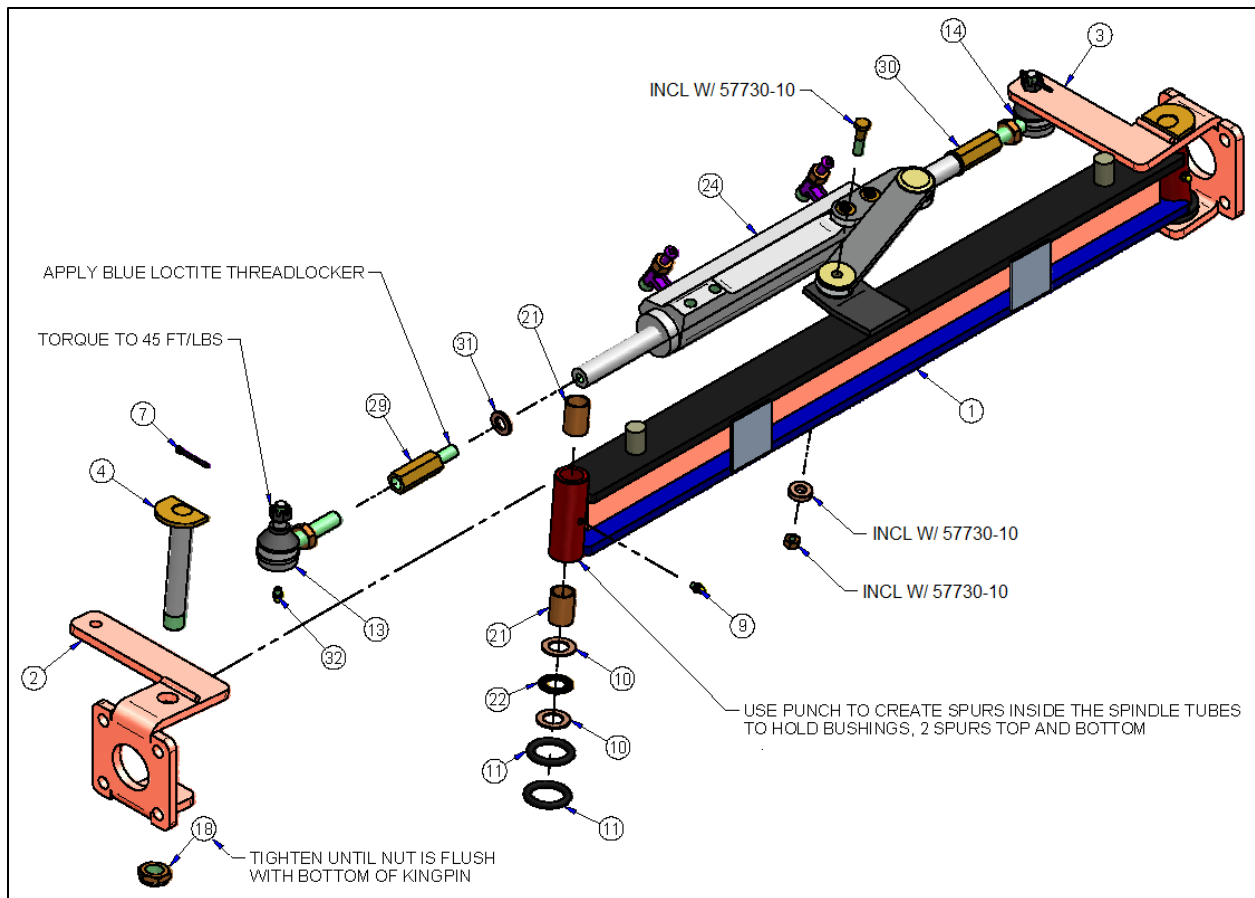
## FRONT AXLE WITH BRAKES – MVP



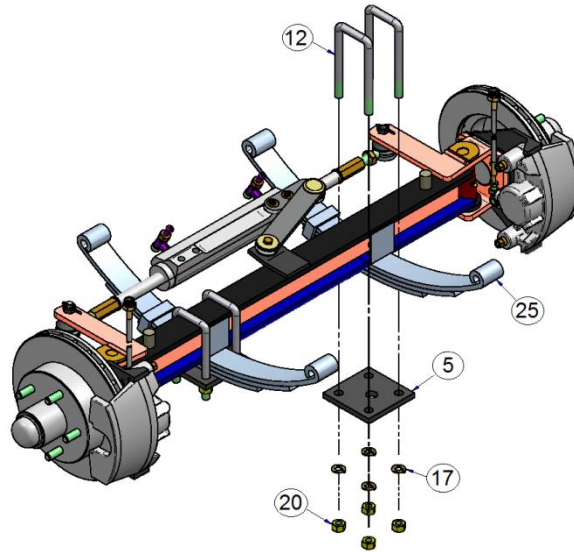
| ITEM | CPC P/N  | DESCRIPTION                        | QTY | SEATS P/N |
|------|----------|------------------------------------|-----|-----------|
| 1    | *        | ASSEMBLY, MVP FRONT AXLE, W/BRAKES | 1   | 467549    |
| 2    | 44805-11 | SHACKLE STRAP                      | 4   | 512245    |
| 3    | 82711-12 | SLEEVE - SPRING HANGER             | 2   | 512495    |
| 4    | 43152-66 | NUT, 1/2-20, TAPERED WHEEL         | 10  | 709002    |
| 5    | 11077    | E-RING, .625 PHOS                  | 2   | 719516    |
| 6    | 3800     | BOLT, 9/16-18 X 3" GR 5- SHACKLE   | 6   | 759898    |
| 7    | 7850     | HEX LOCKNUT, 9/16-18               | 6   | 759909    |

\* SPECIAL ORDER

## FRONT AXLE W/BRAKES ASSEMBLY – MVP



# FRONT AXLE W/BRAKES ASSEMBLY – MVP (Cont.)



| ITEM | CPC P/N  | DESCRIPTION                           | QTY | SEATS P/N |
|------|----------|---------------------------------------|-----|-----------|
| 1    | 44801-11 | FRONT AXLE ASSY                       | 1   | 309032    |
| 2    | 44802-11 | SPLINDLE - RH                         | 1   | 309110    |
| 3    | 44803-11 | SPLINDLE - LH                         | 1   | 309111    |
| 4    | *        | PNTD, KING PIN                        | 2   | 467952    |
| 5    | 54800-00 | FRONT AXLE SPRING PLATE               | 2   | 510276    |
| 6    | 44806-11 | SPDL, MACH'D - BRAKES (KODIAK)        | 2   | 512264    |
| 7    | 560      | PIN, 1/8" X 1-1/4", COTTER, ZNC       | 4   | 707337    |
| 8    | 43646-79 | HUB GREASE CAP                        | 2   | 709018    |
| 9    | 9800     | GREASE FITTING, 1/4" DRIVE, STRAIGHT  | 2   | 709110    |
| 10   | 6042     | WASHER, NEEDLE THRUST                 | 4   | 709217    |
| 11   | 11100    | O-RING, #332, 1-1/4 X 1/4             | 4   | 709218    |
| 12   | 5203     | 12 U-BOLT - FRONT SUSP, TABULATED     | 4   | 709372    |
| 13   | 56802-00 | TIE ROD ASSY, RH                      | 1   | 709415    |
| 14   | 56804-00 | TIE ROD ASSY, LH                      | 1   | 709416    |
| 15   | 41216-00 | BRAKE HOSE, HYD, FLEX, 22"            | 2   | 709430    |
| 16   | 3570     | SCREW, 1/2-13 X 1-1/4, HHCS, G5       | 8   | 709588    |
| 17   | 7068     | WASHER, 1/2, ALLOY-SPLIT, L/W         | 8   | 719840    |
| 18   | 7513     | NUT, 3/4-16 GR A NTE STYLE JAM NYLON  | 2   | 719861    |
| 19   | 7685     | NUT 1/2-13, GR A, NYLON LOCK          | 8   | 719878    |
| 20   | 7880     | NUT, 1/2-13 GR 2 HEX FULL YWZC        | 8   | 719913    |
| 21   | 9083     | BUSHING, .751 X .878 X 1.25 OILITE    | 4   | 719961    |
| 22   | 9085     | BEARING TORRINGTON NEEDLE THRUST      | 2   | 719962    |
| 23   | 44807-01 | BRAKE KIT, HYD DISC, PAIR             | 1   | 759899    |
| 24   | 57730-10 | HYDR CYL, MOUNT - FRONT               | 1   | 759900    |
| 25   | 54100-11 | SPRINGS, DOUBLE EYE                   | 2   | 759901    |
| 26   | 54101-11 | SEAL, SHAFT - RADIAL                  | 2   | 759905    |
| 27   | 54102-11 | BRGS, RLR, TPR – OUTER (              | 2   | 759906    |
| 28   | 54103-11 | BRGS, RLR, TPR - INNER                | 2   | 759907    |
| 29   | 57247-09 | COUPLER - STEERING, RH                | 1   | 759939    |
| 30   | 57248-09 | COUPLER - STEERING, LH                | 1   | 759940    |
| 31   | 6004     | FLAT WASHER - M12, DIN 125A, YZ       | 2   | 760670    |
| 32   | *        | GREASE FITTING, 1/4"-28, SELF-TAPPING | 2   | 760967    |
| 33   | 7860     | NUT, 1-14 UNS, GR 2 - SLOTTED         | 2   | 781349    |
| 34   | 6580     | WASHER, 1.75 OD X 1.02 ID X .108 THK  | 2   | 781350    |
| 35   | 4400595  | CUP 1.980 X 0.420 (See note)          | 2   | 719689    |

\* SPECIAL ORDER

NOTE: Item 35 is placed between Items 27 & 28, and Item 23.

### WHEELS – MVP

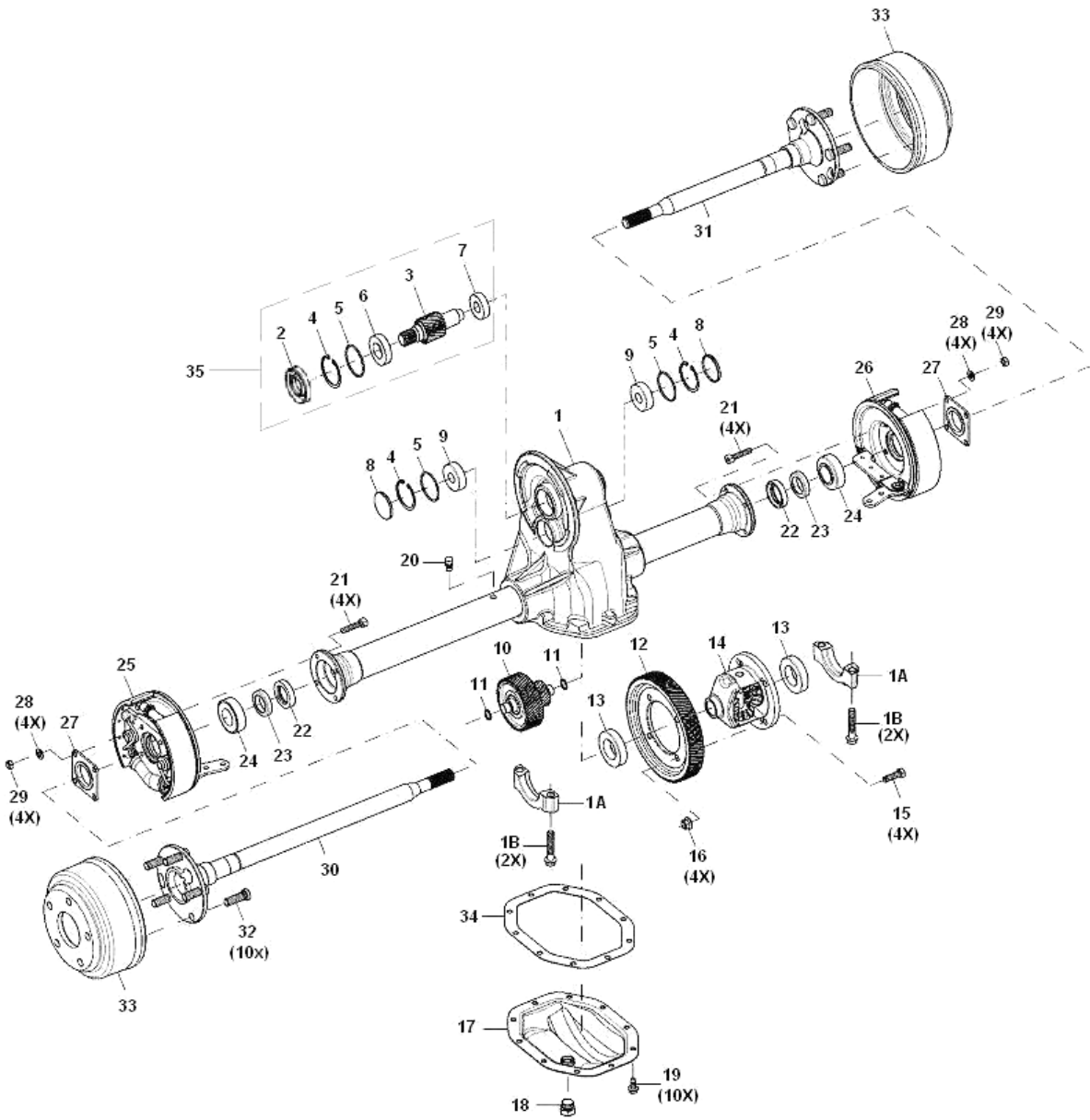
| ITEM | CPC P/N  | DESCRIPTION                            | QTY | SEATS P/N |
|------|----------|----------------------------------------|-----|-----------|
| 1    | 40973-07 | TIRE/WHEEL ASSY, 145R12 HIGH SPEED 5H  | 4/6 | 759849    |
| 2    | 40895-12 | TIRE/WHEEL ASSY, 145R12 FOAM FILLED 5H | 4/6 | 467617    |
| 3    | 43152-66 | NUT, 1/2-20, TAPERED WHEEL             | 5   | 709002    |

# **Multiple Vehicle Platform Parts Manual**

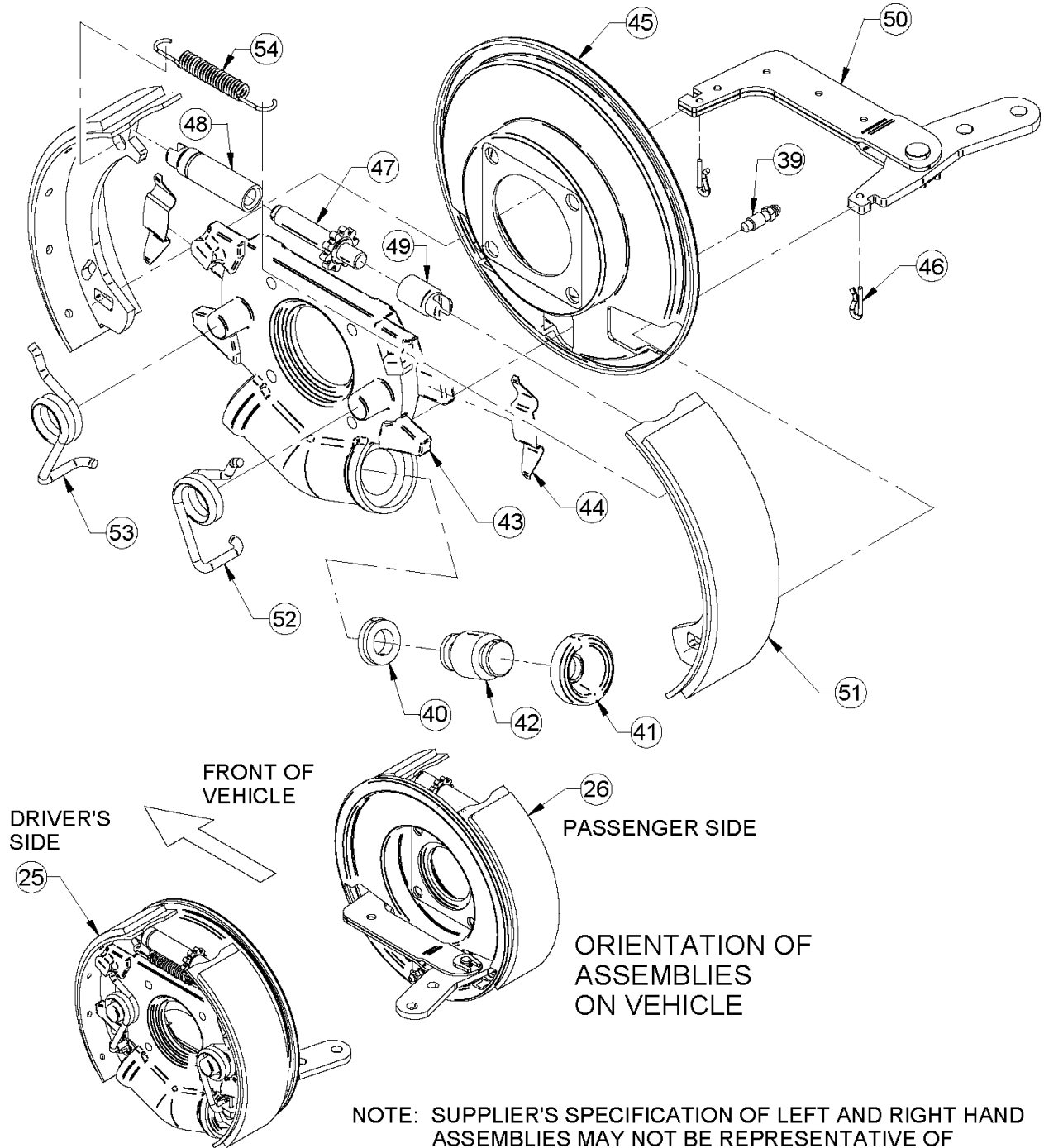
## **Section 3**

### **Rear Axle, Brakes and Suspension**

## REAR AXLE AND BRAKES – MVP



## REAR AXLE AND BRAKES – MVP (Cont.)



NOTE: SUPPLIER'S SPECIFICATION OF LEFT AND RIGHT HAND ASSEMBLIES MAY NOT BE REPRESENTATIVE OF POSITION ON VEHICLE. VISUAL CONFIRMATION IS RECOMMENDED BEFORE ORDERING.

### REAR AXLE AND BRAKES – MVP (Cont.)

| ITEM | CPC P/N   | DESCRIPTION                                                    | QTY | SEATS P/N |
|------|-----------|----------------------------------------------------------------|-----|-----------|
| 1    | N/A       | HOUSING, AXLE                                                  | 1   | N/A       |
| 2    | 83165-08  | SEAL, INPUT PINION                                             | 1   | 760371    |
| 3    | *         | GEAR, INPUT PINION (Available as Kit Item 35 & 37)             | 1   | *         |
| 4    | 90006-90  | RING, SNAP (Available as Kit Item 35 & 44)                     | 3   | 749701    |
| 5    | 11118     | O-RING (Available as Kit Item 35 & 44)                         | 3   | 729030    |
| 6    | 90003-90  | BEARING, BALL, INPUT SHAFT (Available as Kit Item 35, 38 & 44) | 1   | 719077    |
| 7    | 90004-90  | BEARING, BALL, INPUT GEAR (Available as Kit Item 35, 38 & 44)  | 1   | 749699    |
| 8    | 82808-90  | PLUG, END CAP                                                  | 2   | 749418    |
| 9    | 82810-90  | BEARING, BALL (Available as Kit Item 38)                       | 2   | 749419    |
| 10   | *         | SHAFT, INTERMEDIATE GEAR (Available as Kit Item 37)            | 1   | *         |
| 11   | 11119     | O-RING                                                         | 2   | 719132    |
| 12   | *         | GEAR, FINAL DRIVE (Available as Kit Item 38)                   | 1   | *         |
| 13   | 90005-90  | BEARING, BALL (Available as Kit Item 37)                       | 2   | 749700    |
| 14   | 83212-00  | DIFFERENTIAL ASSEMBLY                                          | 1   | 749575    |
| 15   | N/A       | SCREW, CAP                                                     | 4   | N/A       |
| 16   | N/A       | NUT, LOCK                                                      | 4   | N/A       |
| 17   | 90007-00  | PLATE, COVER (Available as Kit Item 39)                        | 1   | 749702    |
| 18   | 90008-00  | PLUG, DRAIN/FILL (Available as Kit Item 39)                    | 1   | 749704    |
| 19   | N/A       | SCREW, TAPPING                                                 | 10  | N/A       |
| 20   | 82701-90  | VENT                                                           | 1   | 759791    |
| 21   | N/A       | SCREW, SOCKET HEAD                                             | 8   | N/A       |
| 22   | 83160-93  | SEAL, OIL                                                      | 2   | 749547    |
| 23   | 83167-93  | RING, RETAINING                                                | 2   | 749549    |
| 24   | 83100-73  | ASSEMBLY, BEARING, TAPERED ROLLER                              | 2   | 749522    |
| 25   | 41814-93  | ASSEMBLY, BRAKE, LH (Hydraulic)                                | 1   | 729996    |
| 26   | 41813-93  | ASSEMBLY, BRAKE, RH (Hydraulic)                                | 1   | 729993    |
| 27   | 82811-93  | SEAL, OIL                                                      | 2   | 749421    |
| 28   | 83114-93  | WASHER, FLAT                                                   | 8   | 749530    |
| 29   | 83120-93  | NUT, LOCK                                                      | 8   | 749532    |
| 30   | N/A       | SHAFT, AXLE, LH LONG (Available as Kit Item 57)                | 1   | N/A       |
| 31   | 82757-00  | SHAFT, AXLE, RH SHORT(Available as Kit Item 58)                | 1   | 749403    |
| 32   | 41199     | BOLT, WHEEL 1.500" (Available as Kit Item 57)                  | 10  | 719655    |
| 32A  | 719463-05 | BOLT, WHEEL 1.680" (Available as Kit Item 57)                  | 10  | 719463    |
| 33   | 82830-93  | DRUM, BRAKE                                                    | 2   | 749427    |
| 34   | 82503-08  | GASKET                                                         | 1   | 759937    |
| 35*  | 83219-08  | PINION & SEAL KIT 16.99:1 (Includes Items 2-7)                 | 1   | 760374    |
| 36*  | 82776-08  | GEARSET KIT 16.99:1( Includes Items 4 – 13 & 35)               | 1   | 191703U   |
| 37*  | 82817-09  | RAW AXLE W/HYDR BRAKES,16.99                                   | 1   | 759922    |

# **REAR AXLE AND BRAKES – MVP (Cont.)**

| ITEM | CPC P/N  | DESCRIPTION                                                           | QTY | SEATS P/N |
|------|----------|-----------------------------------------------------------------------|-----|-----------|
| 38   | 82779-08 | PINION SEAL KIT (INCLUDES ITEMS 2 & 4 – 7) ONLY FOR USE WITH ITEM 35. | 1   | 191697U   |
| 39   | 41888-93 | BLEEDER VALVE                                                         | 2   | 719296    |
| 40   | 41890-93 | HYDRAULIC CUP                                                         | 4   | 739022    |
| 41   | 41886-93 | BOOT & RING                                                           | 4   | 739021    |
| 42   | 41892-93 | PISTON, WHEEL CYLINDER (Includes Items 40 & 41)                       | 4   | 739023    |
| 43   | 41884-93 | TORQUE SPIDER (INCLUDES ITEMS 39-42)                                  | 2   | 719076    |
| 44   | 41928-93 | SPRING, SHOE HOLD DOWN                                                | 4   | 719075    |
| 45   | 41926-93 | DUST SHIELD                                                           | 2   | 739030    |
| 46   | 41920-93 | PIN, RETAINER, PARKING BRAKE LEVER                                    | 4   | 739029    |
| 46   | 41918-93 | SPRING, ADJUSTING SCREW                                               | 2   | 739028    |
| 47   | 41880-93 | ADJUSTING SCREW                                                       | 2   | 719294    |
| 48   | 41878-93 | NUT, PIVOT, ADJUSTING SCREW                                           | 2   | 719295    |
| 49   | 41882-93 | SOCKET, ADJUSTING SCREW                                               | 2   | 739020    |
| 50   | 41894-93 | STRUT & LEVER ASSEMBLY, PARKING BRAKE                                 | 2   | 739024    |
| 51   | 41912-93 | SHOE & LINING ASSEMBLY SET                                            | 2   | 719046    |
| 52   | 41914-93 | SPRING, SHOE RETURN, LH (GREEN OR BLUE)                               | 2   | 739026    |
| 53   | 41916-93 | SPRING, SHOE RETURN, RH (RED OR YELLOW)                               | 2   | 739027    |
| 54   | 41918-93 | SPRING, ADJUSTING SCREW                                               | 2   | 739028    |
| 57   | 90013-08 | KIT, SHAFT & BOLT LH (Includes Items 30 & 32)                         | 1   | 759936    |
| 58   | 90012-00 | KIT, SHAFT & BOLT RH (Includes Items 31 & 32)                         | 1   | 719258    |

\*\* NOT SHOWN

\* SEE GEAR SETS PAGE 3-5

## REAR AXLE AND BRAKES – MVP (Cont.)

### GEAR SETS

NOTE A:  
CAN BE USED FOR SERVICING 2008 & EARLIER AXLES WHEN REPLACEMENT GEARS NEEDED -  
ORDER NEW PINION SHAFT DESIGN COMPLETE ASM.

NOTE B:  
NEW SEAL LIP PINION &  
GEAR SET KIT NOW INCLUDES:  
- SEALING O-RINGS  
- END CAP PLUGS  
- BEARINGS

NOTE C:  
CAN ALSO SERVICE EARLIER AXLES

NOTE D:  
PINION SEAL KIT 191697U  
(CPC 82779-08)

FOR USE ONLY WITH  
NEW PINION SHAFT DESIGN

SEE  
NOTE A

| KIT (INCLS GEARS, PINION&SEAL KIT& COMPONENT PARTS) |         |            |
|-----------------------------------------------------|---------|------------|
| CPC PN                                              | SI PN   | GEAR RATIO |
| 82773-08                                            | 191700U | 10.35:1    |
| 82774-08                                            | 191701U | 12.44:1    |
| 82775-08                                            | 191702U | 14.76:1    |
| 82776-08                                            | 191703U | 16.99:1    |

| INTERMEDIATE & RING GEAR SET |            | INTERMEDIATE GEARS |     | RING GEAR    |     |
|------------------------------|------------|--------------------|-----|--------------|-----|
| SI PN                        | GEAR RATIO | NO. OF TEETH       | QTY | NO. OF TEETH | QTY |
| 760376                       | 10.35:1    | 22 & 53            | 1   | 116          | 1   |
| 760402                       | 12.44:1    | 24 & 55            | 1   | 114          | 1   |
| 760401                       | 14.76:1    | 22 & 56            | 1   | 116          | 1   |
| 760400                       | 16.99:1    | 22 & 58            | 1   | 116          | 1   |

SEE  
NOTE C

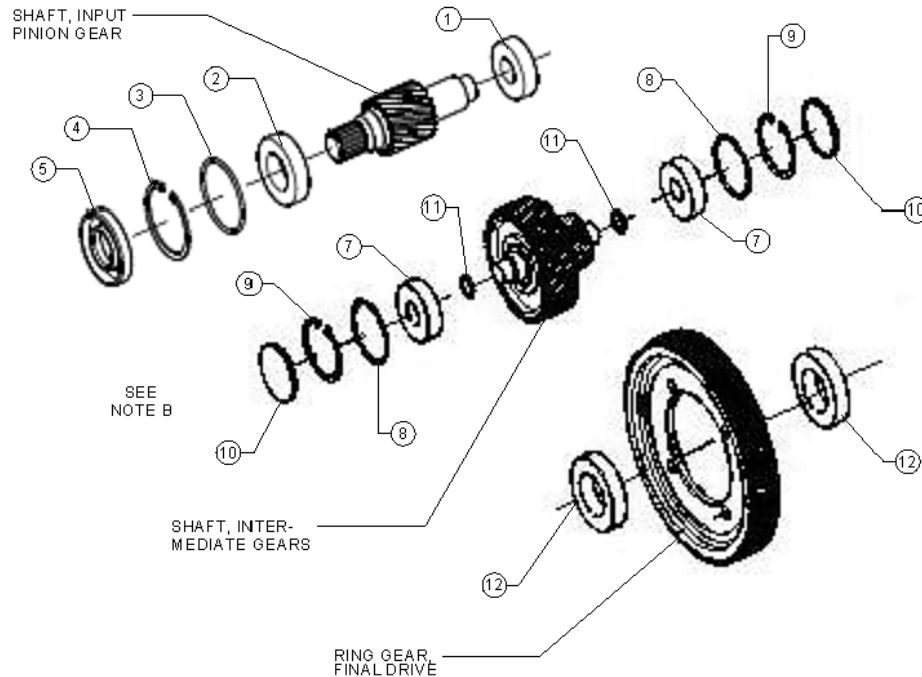
| PINION & SEAL KIT (INCLUDES ITEMS IN SEAL KIT 191697U) |        |                         |     | PINION GEAR |              |     |
|--------------------------------------------------------|--------|-------------------------|-----|-------------|--------------|-----|
| CPC PN                                                 | SI PN  | DESCRIPTION             | QTY | GEAR RATIO  | NO. OF TEETH | QTY |
| 83218-08                                               | 760372 | NEW LIP SEAL PINION KIT | 1   | 10.35:1     | 27           | 1   |
| 83297-08                                               | 760373 | NEW LIP SEAL PINION KIT | 1   | 12.44:1     | 21           | 1   |
| 83214-08                                               | 760386 | NEW LIP SEAL PINION KIT | 1   | 14.76:1     | 20           | 1   |
| 83219-08                                               | 760374 | NEW LIP SEAL PINION KIT | 1   | 16.99:1     | 18           | 1   |

SEE  
NOTE D

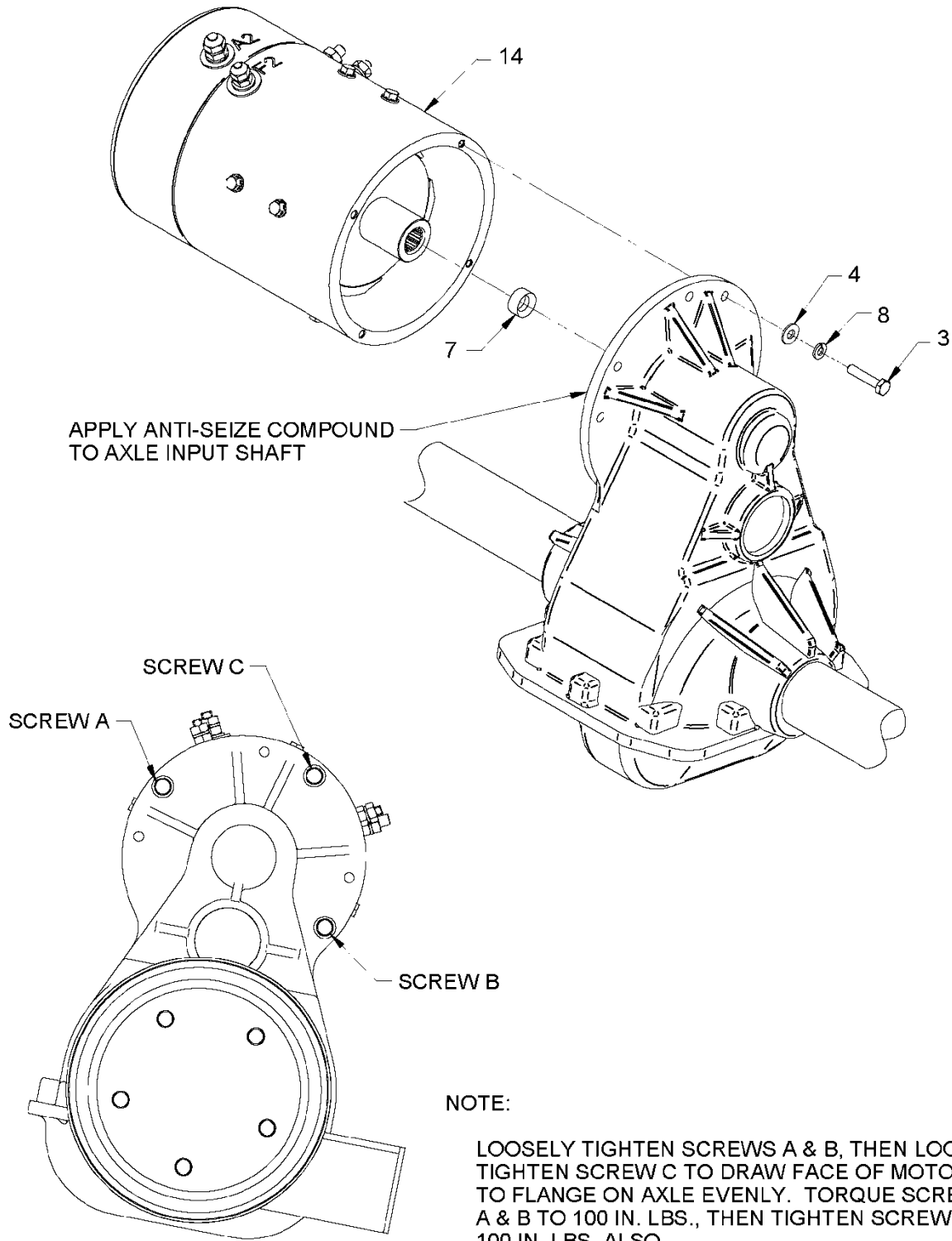
| PINION SEAL KIT 191697U / (CPC # 82779-08) |        |                        |     |
|--------------------------------------------|--------|------------------------|-----|
| CPC PN                                     | SI PN  | DESCRIPTION            | QTY |
| 1 90004-90                                 | 749699 | BEARING BALL INNER     | 1   |
| 2 90014-08                                 | 760375 | BEARING BALL OUTER     | 1   |
| 3 11118                                    | 729030 | O-RING                 | 1   |
| 4 90006-90                                 | 749701 | RING SNAP              | 1   |
| 5 83165-08                                 | 760371 | OIL SEAL - INPUT SHAFT | 1   |
| 6*                                         | N/A    | INSTRUCTION SHEET      | 1   |

\* ITEM NOT SHOWN

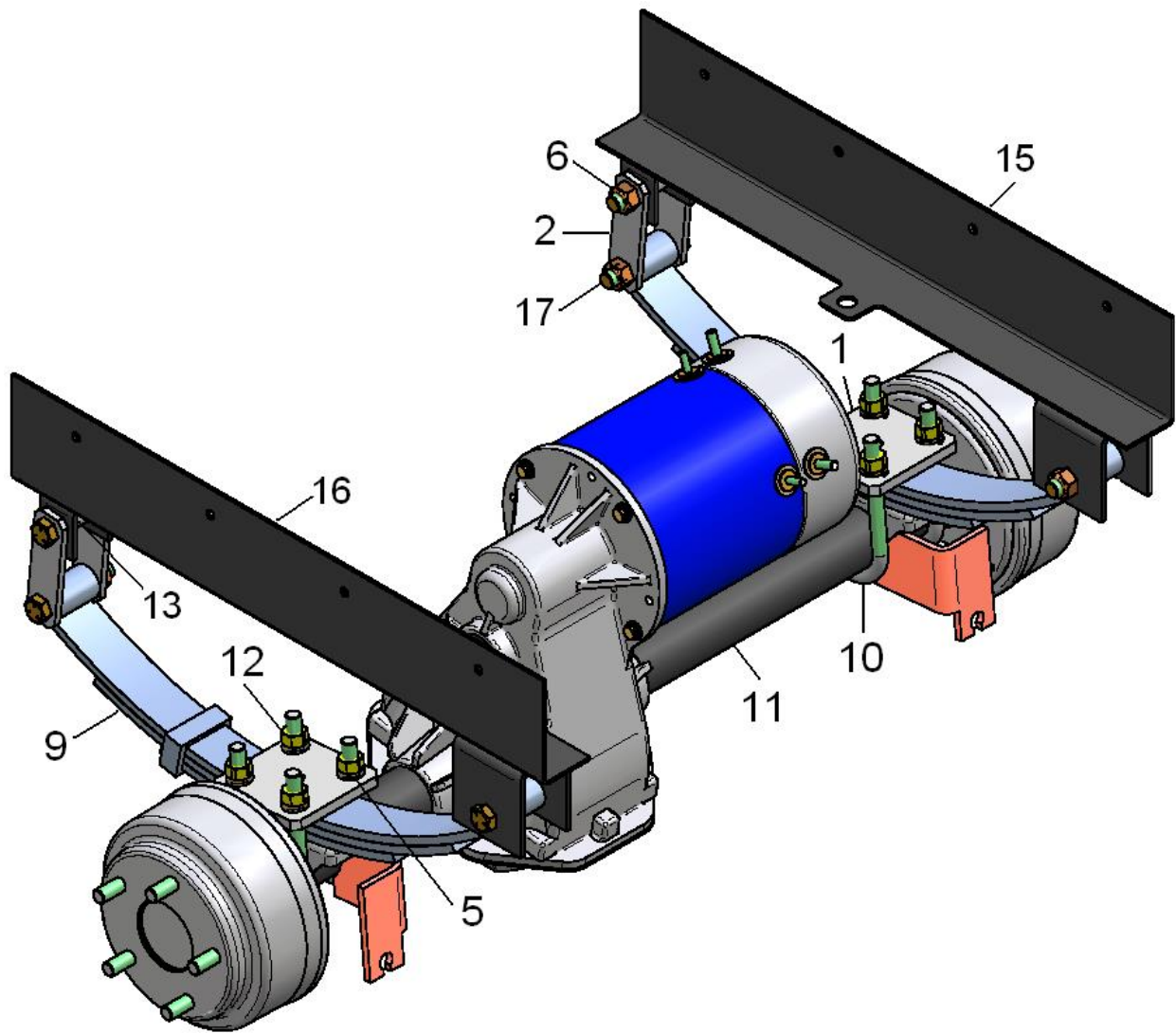
| COMPONENTS FOR GEAR SET KIT (SEE KIT CHART) |        |              |     |
|---------------------------------------------|--------|--------------|-----|
| CPC PN                                      | SI PN  | DESCRIPTION  | QTY |
| 7 82810-90                                  | 749419 | BEARING BALL | 2   |
| 8 11118                                     | 729030 | O-RING       | 2   |
| 9 90006-90                                  | 749701 | RING SNAP    | 2   |
| 10 82808-90                                 | 749418 | PLUG END CAP | 2   |
| 11 11119                                    | 719132 | O-RING       | 2   |
| 12 90005-90                                 | 749700 | BEARING BALL | 2   |



## REAR AXLE ASSEMBLY – MVP



# SINGLE REAR AXLE ASSEMBLY – MVP (Cont.)

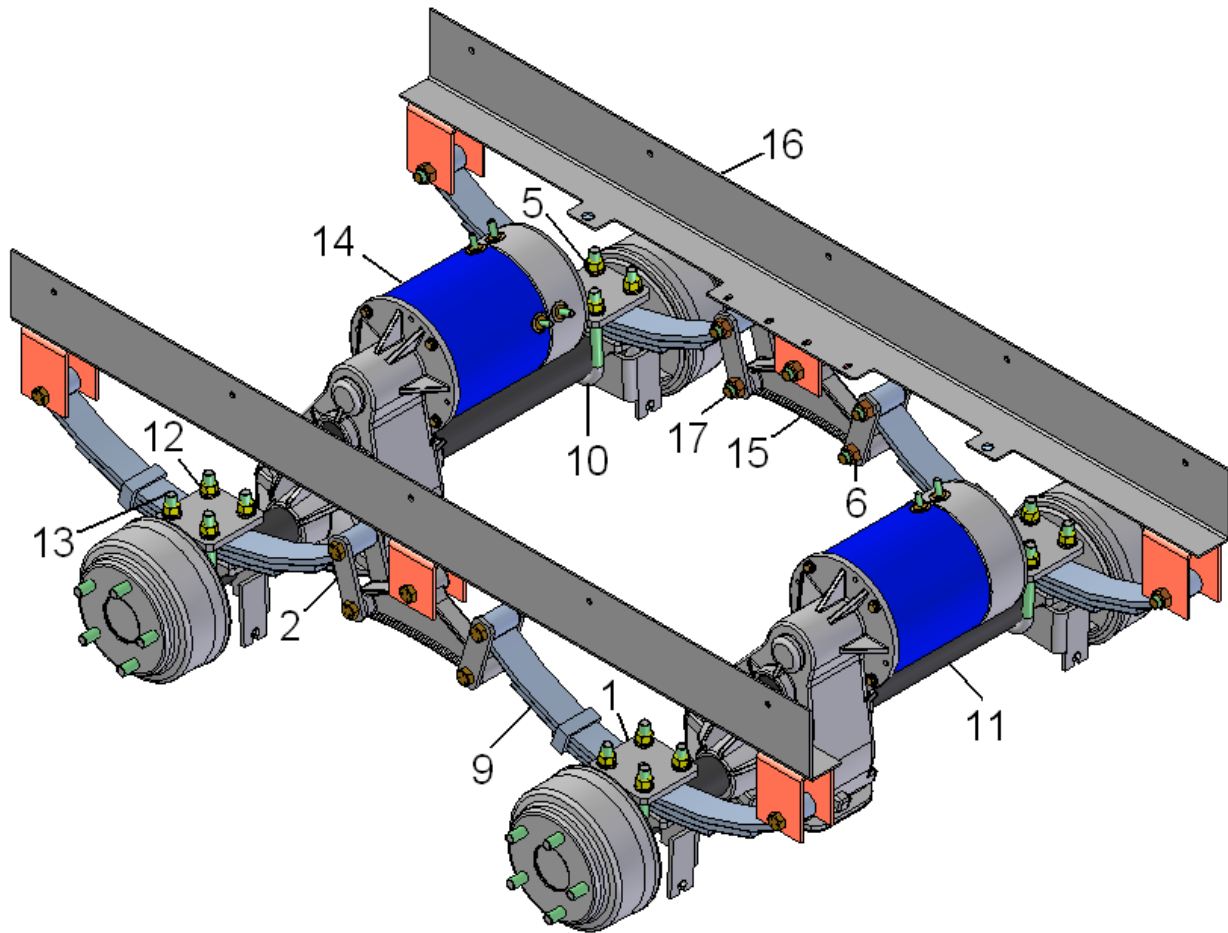


### SINGLE REAR AXLE ASSEMBLY – MVP (Cont.)

| ITEM | CPC P/N  | DESCRIPTION                                       | QTY | SEATS P/N |
|------|----------|---------------------------------------------------|-----|-----------|
| 1    | 82695-12 | SPRING PLATE                                      | 2   | 513980    |
| 2    | 44805-11 | SHACKLE STRAP                                     | 4   | 512245    |
| 3    | 708616   | SCREW, 1/4-20-1 1/4 HHC (See page 3-6)            | 3   | 708616    |
| 4    | 6703-B   | WASHER, 1/4 (See page 3-6)                        | 3   | 719811    |
| 5    | 7068     | WASHER, LOCK 1/2                                  | 8   | 719840    |
| 6    | 7850     | NUT, HEX LOCK 9/16-18                             | 6   | 759909    |
| 7    | 11423    | RESILIENT BUMPER ELEC MOTOR (See page 3-6)        | 1   | 709050    |
| 8    | 7036-B   | WASHER, LOCK 1/4 (See page 3-6)                   | 3   | 719834    |
| 9    | 54100-11 | SPRINGS, DOUBLE EYE                               | 2   | 759901    |
| 10   | 5205     | U-BOLT,                                           | 4   | 709425    |
| 11   | 83241-11 | AXLE, W/BRACKETS HD 16.99                         | 1   | 309096    |
| 12   | 7880     | NUT, 1/2-13 HEX                                   | 8   | 719913    |
| 13   | 82711-12 | SLEEVE, SPRING HANGER                             | 2   | 512495    |
| 14   | 69301-04 | MOTOR, ELEC., 48V HD DIRECT W/TACH (See page 3-6) | 1   | 719339    |
| 15   | 82718-12 | SUSPENSION HANGER LH                              | 1   | 309213    |
| 16   | 82740-12 | SUSPENSION HANGER RH                              | 1   | 309166    |
| 17   | 3800     | BOLT, 9/16-18X3 HHCS G5                           | 6   | 759898    |
| 18*  | 2871-W   | SCREW 5/16-18X1 1/4 HHCS G5                       | 8   | 719592    |
| 19*  | 6702-B   | WASHER 5/16                                       | 8   | 719810    |
| 20*  | 7750     | NUT, 5/16-18 FLNG CTR LOCK                        | 8   | 719897    |

\* NOT SHOWN - ATTACH ASSEMBLY TO FRAME RAIL

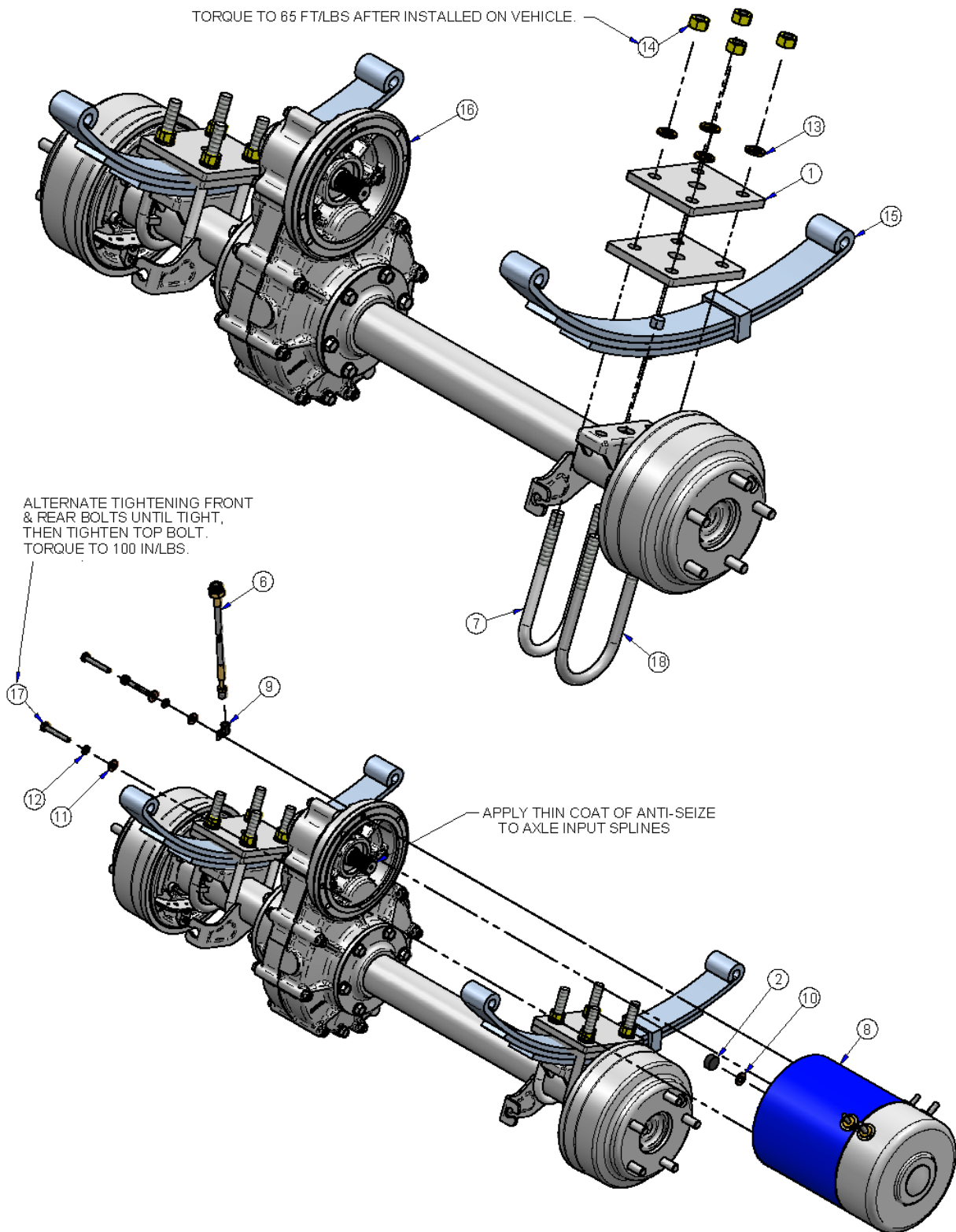
## TANDEM REAR AXLE ASSEMBLY



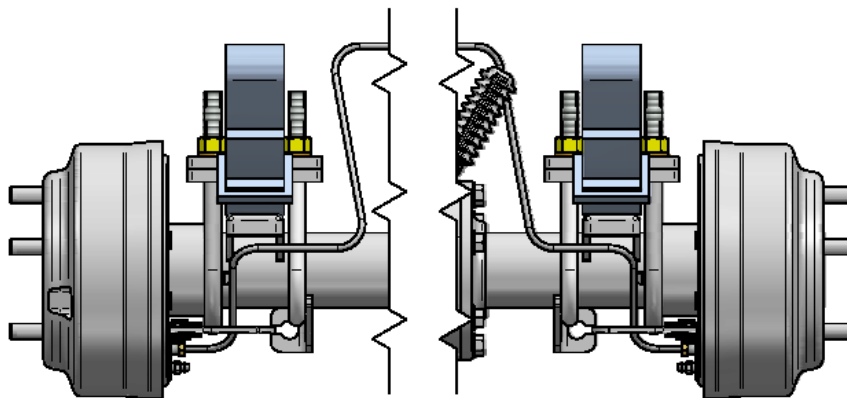
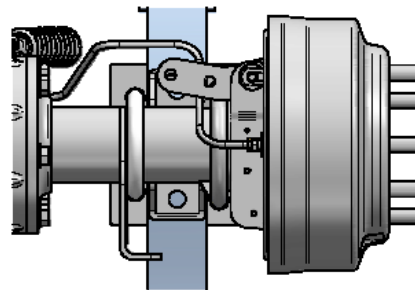
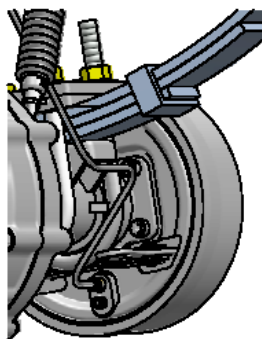
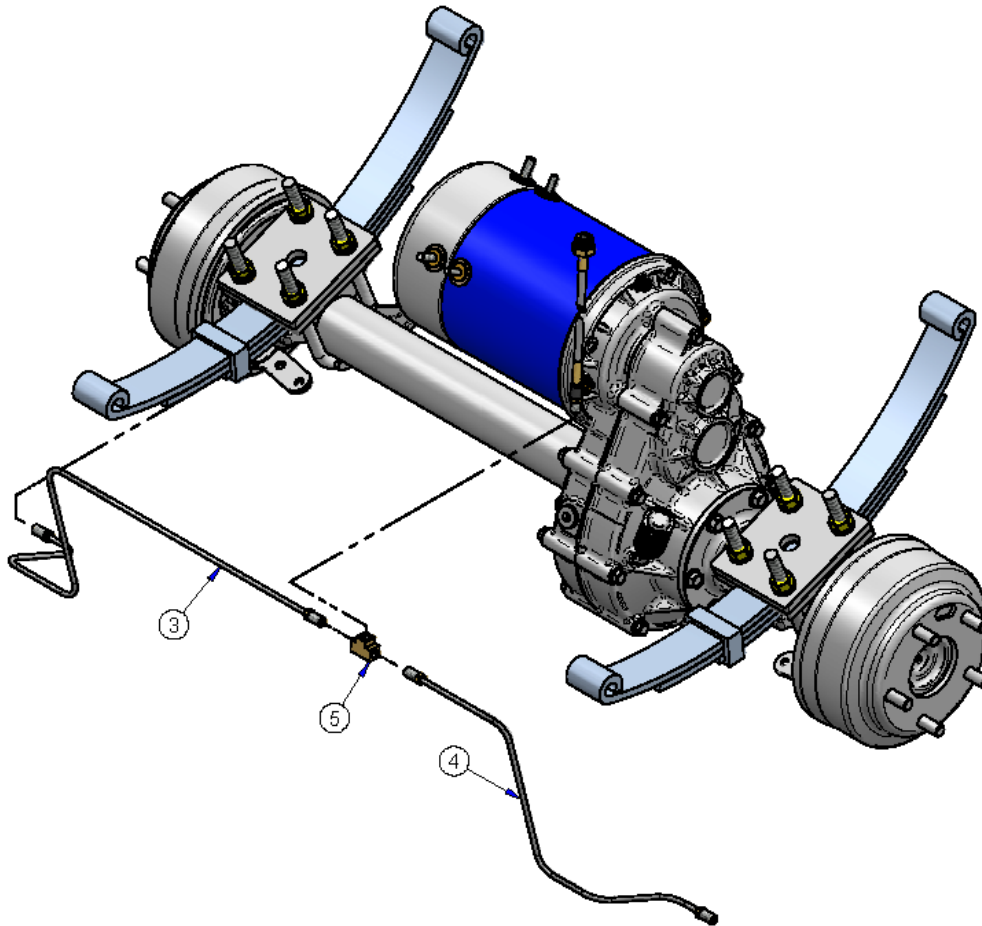
| ITEM | CPC P/N  | DESCRIPTION                                | QTY | SEATS P/N |
|------|----------|--------------------------------------------|-----|-----------|
| 1    | 82695-12 | SPRING PLATE                               | 4   | 513980    |
| 2    | 44805-11 | SHACKLE STRAP                              | 8   | 512245    |
| 3    | 708616   | SCREW, 1/4-20-1 1/4 HHC (See page 3-6)     | 6   | 708616    |
| 4    | 6703-B   | WASHER, 1/4 (See page 3-6)                 | 6   | 719811    |
| 5    | 7068     | WASHER, LOCK 1/2                           | 16  | 719840    |
| 6    | 7850     | NUT, HEX LOCK 9/16-18                      | 14  | 759909    |
| 7    | 11423    | RESILIENT BUMPER ELEC MOTOR (See page 3-6) | 2   | 709050    |
| 8    | 7036-B   | WASHER, LOCK 1/4 (See page 3-6)            | 6   | 719834    |
| 9    | 54100-11 | SPRINGS, DOUBLE EYE                        | 4   | 759901    |
| 10   | 5205     | U-BOLT,                                    | 8   | 709425    |
| 11   | 83241-11 | AXLE, W/BRACKETS HD 16.99                  | 2   | 309096    |
| 12   | 7880     | NUT, 1/2-13 HEX                            | 16  | 719913    |
| 13   | 3800     | BOLT, 9/16-18X3 HHCS G5                    | 6   | 759898    |
| 14   | 69300-03 | MOTOR, ELEC., 48V SEP EX (See page 3-6)    | 2   | 719135    |
| 15   | 82742-12 | EQUALIZER BAR                              | 2   | 759908    |
| 16   | 82744-12 | SUSPENSION HANGER                          | 2   | 309034    |
| 17   | 3800     | BOLT, 9/16-18X3 HHCS G5                    | 14  | 759898    |
| 18*  | 2871-W   | SCREW 5/16-18X1 1/4 HHCS G5                | 10  | 719592    |
| 19*  | 6702-B   | WASHER 5/16                                | 10  | 719810    |
| 20*  | 7750     | NUT, 5/16-18 FLNG CTR LOCK                 | 10  | 719897    |

\* NOT SHOWN - ATTACH ASSEMBLY TO FRAME RAIL

## NKL AXLE & BRAKE LINES 16.77 – MVP



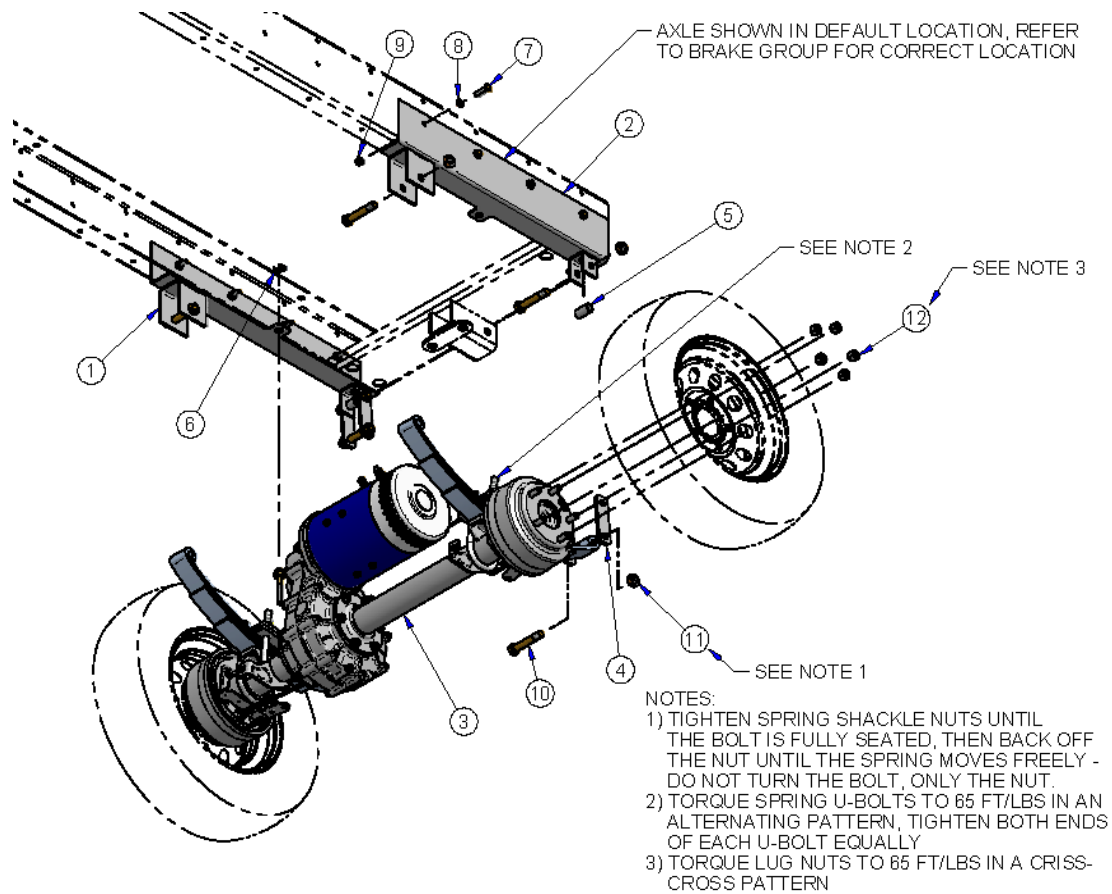
AXLE & BRAKE LINES 16.77 NKL – MVP (Cont.)



**AXLE & BRAKE LINES 16.77 NKL – MVP (Cont.)**

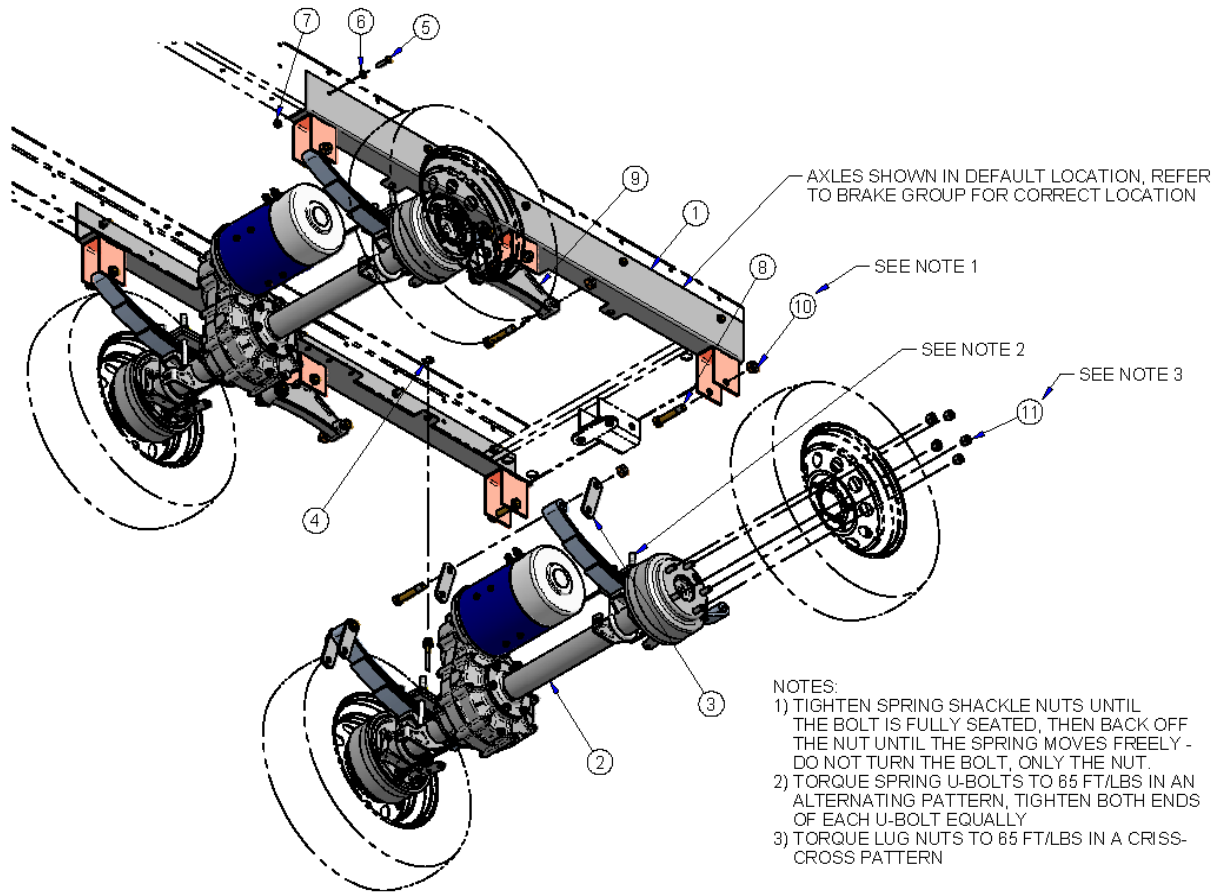
| ITEM | CPC P/N  | DESCRIPTION                                | QTY | SEATS P/N |
|------|----------|--------------------------------------------|-----|-----------|
| 1    | 54804-12 | REAR SPRING PLATE                          | 4   | 514353    |
| 2    | 11423    | RESILIENT BUMPER ELEC MOTOR (See page 3-6) | 1   | 709050    |
| 3    | 41440-02 | BRAKE LINE 3/16X30 (LH FORMED)             | 1   | 709232    |
| 4    | 41222-00 | BRAKE LINE 3/16X20 (RH FORMED)             | 1   | 709358    |
| 5    | 41842-94 | UNION TEE, HYD BRAKE                       | 1   | 709377    |
| 6    | 41216-00 | BRAKE HOSE, HYD, FLEX 22                   | 1   | 709430    |
| 7    | 5214     | U-BOLT, 1/2X13                             | 2   | 709574    |
| 8    | 69300-03 | MOTOR, ELEC., 48V SEP EX                   | 1   | 719135    |
| 9    | 9982     | CLAMP STEEL TUBING 1/4                     | 1   | 719756    |
| 10   | 6702-B   | WASHER, 5/16                               | 1   | 719810    |
| 11   | 6703-B   | WASHER, 1/4                                | 3   | 719811    |
| 12   | 7036-B   | WASHER, LOCK 1/4                           | 3   | 719834    |
| 13   | 7068     | WASHER, LOCK 1/2                           | 8   | 719840    |
| 14   | 7880     | NUT, 1/2-13 HEX                            | 8   | 719913    |
| 15   | 54100-11 | SPRINGS, DOUBLE EYE                        | 2   | 759901    |
| 16   | 82669-12 | AXLE, HD, HKL                              | 1   | 760733    |
| 17   | 3440     | SCREW, 1/4-20X1 3/4 HHCS, G8               | 3   | 760827    |
| 18   | 54811-12 | U-BOLT, 1/2-13                             | 2   | 782102    |

## NKL SINGLE AXLE ASSEMBLY 16.77 – MVP



| ITEM | CPC P/N  | DESCRIPTION                       | QTY | SEATS P/N |
|------|----------|-----------------------------------|-----|-----------|
| 1    | 82740-12 | SINGLE AXLE SUSPENSION HANGER RH  | 1   | 309166    |
| 2    | 82718-12 | SINGLE AXLE SUSPENSION HANGER LH  | 1   | 309213    |
| 3    | *        | ASSEMBLY, AXLE, MVP 16.77 NKL HD  | 1   | 467980    |
| 4    | 44805-11 | SHACKLE STRAP                     | 4   | 512245    |
| 5    | 82711-12 | SLEEVE, SPRING HANGER             | 2   | 512495    |
| 6    | 11077    | E-RING, .625 PHOS                 | 1   | 719516    |
| 7    | 2871-W   | SCREW 5/16-18X1 1/4 HHCS G5       | 8   | 719592    |
| 8    | 6702-B   | WASHER 5/16                       | 8   | 719810    |
| 9    | 7750     | NUT, 5/16-18 FLNG CTR LOCK        | 8   | 719897    |
| 10   | 3800     | BOLT, 9/16-18X3 HHCS G5           | 6   | 759898    |
| 11   | 7850     | NUT, HEX LOCK 9/16-18             | 6   | 759909    |
| 12   | N/A      | LUG NUT, (Included with NKL axle) | 10  | N/A       |

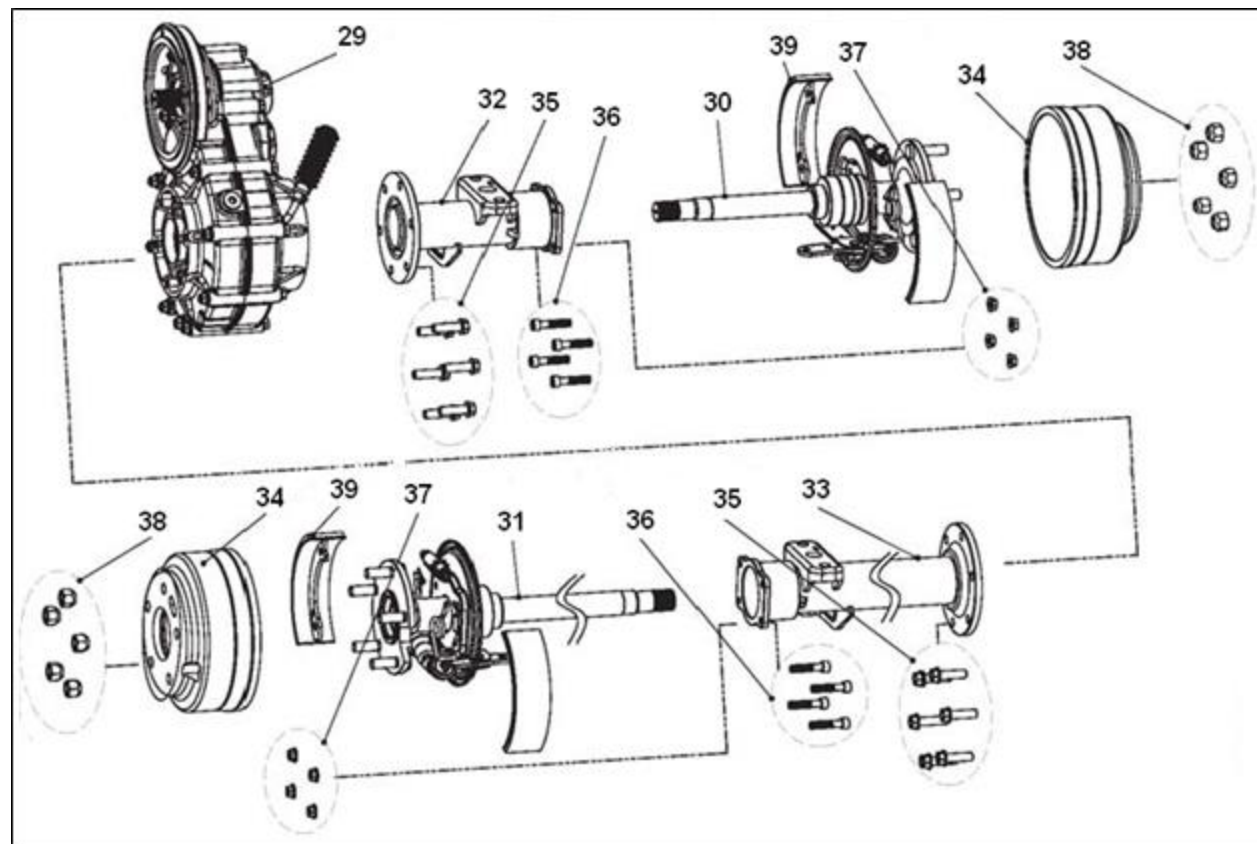
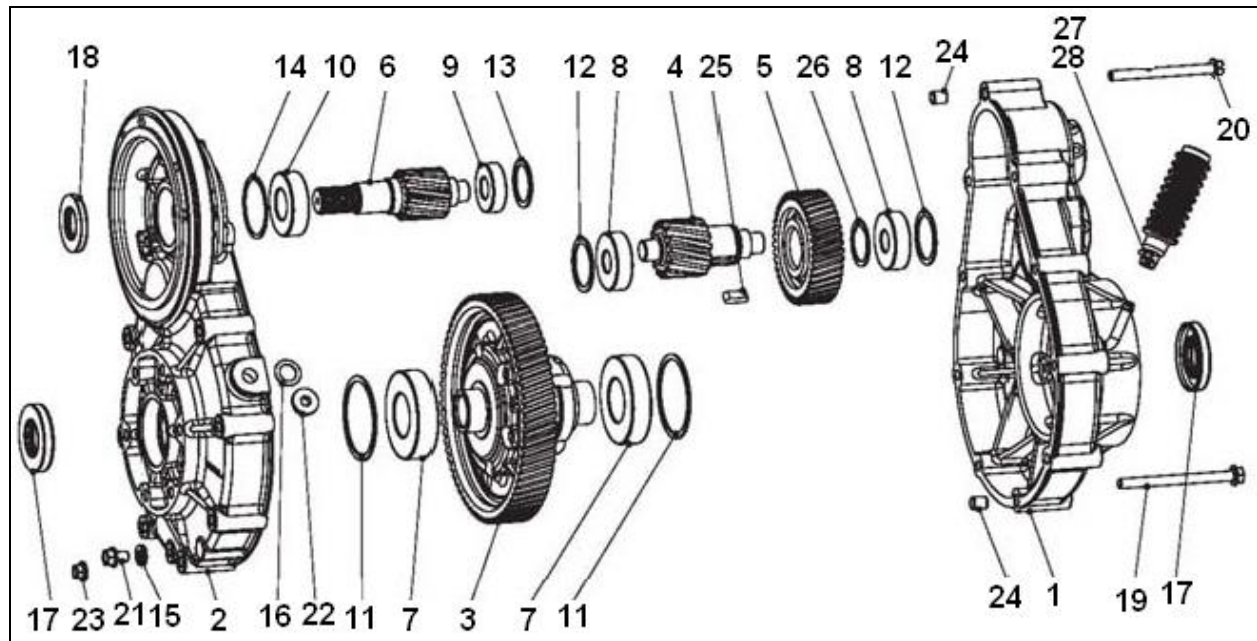
## NKL DUAL AXLE ASSEMBLY 16.77 – MVP



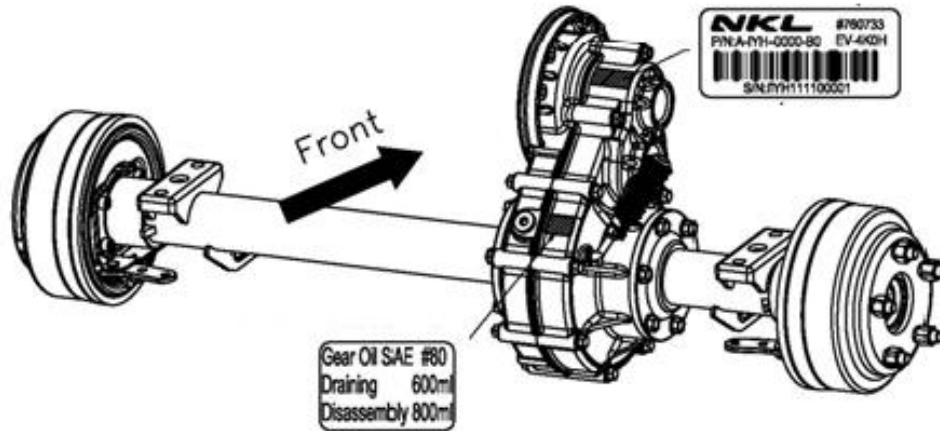
| ITEM | CPC P/N  | DESCRIPTION                       | QTY | SEATS P/N |
|------|----------|-----------------------------------|-----|-----------|
| 1    | 82744-12 | SUSPENSION HANGER                 | 2   | 309034    |
| 2    | *        | ASSEMBLY, AXLE, MVP 16.77 NKL     | 2   | 467979    |
| 3    | 44805-11 | SHACKLE STRAP                     | 8   | 512245    |
| 4    |          | E-RING .625 PHOS                  | 2   | 719516    |
| 5    | 2871-W   | SCREW 5/16-18X1 1/4 HHCS G5       | 10  | 719592    |
| 6    | 6702-B   | WASHER 5/16                       | 10  | 719810    |
| 7    | 7750     | NUT, 5/16-18 FLNG CTR LOCK        | 10  | 719897    |
| 8    | 3800     | BOLT, 9/16-18X3 HHCS G5           | 6   | 759898    |
| 9    | 82742-12 | EQUALIZER BAR                     | 2   | 759908    |
| 10   | 7850     | NUT, HEX LOCK 9/16-18             | 14  | 759909    |
| 11   | N/A      | LUG NUT, (Included with NKL axle) | 20  | N/A       |

\* SPECIAL ORDER

# NKL AXLE ASSEMBLY – MVP



## NKL AXLE ASSEMBLY – MVP (Cont.)

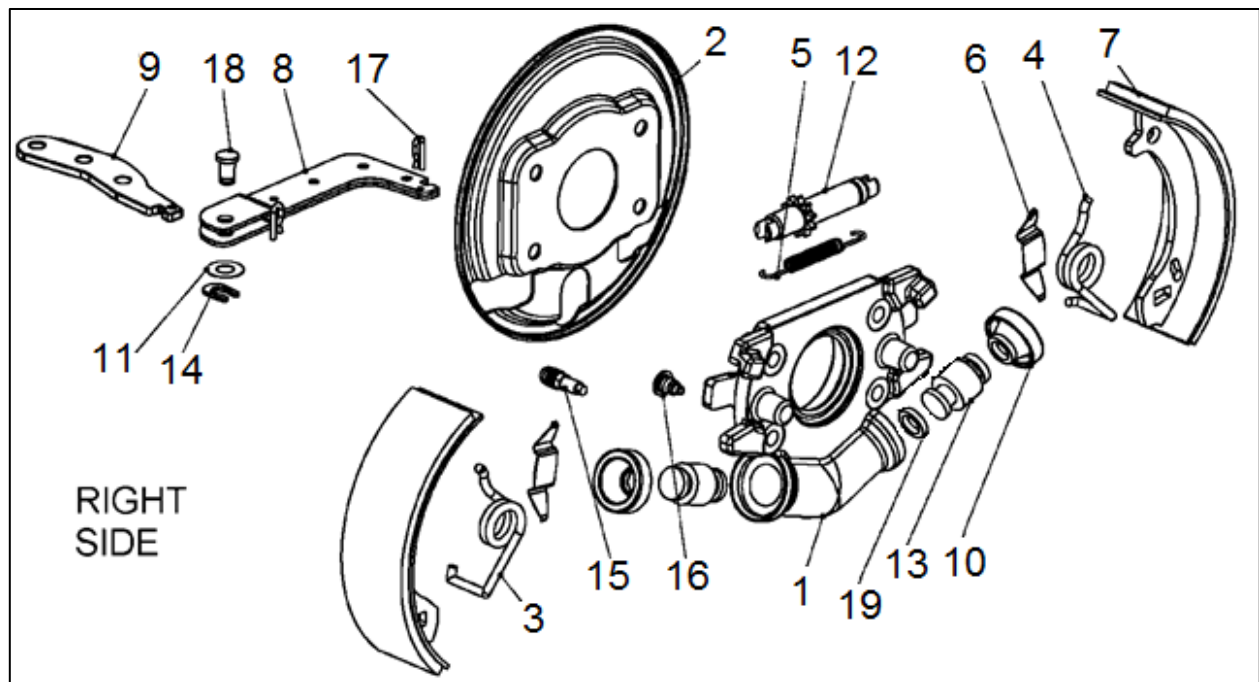
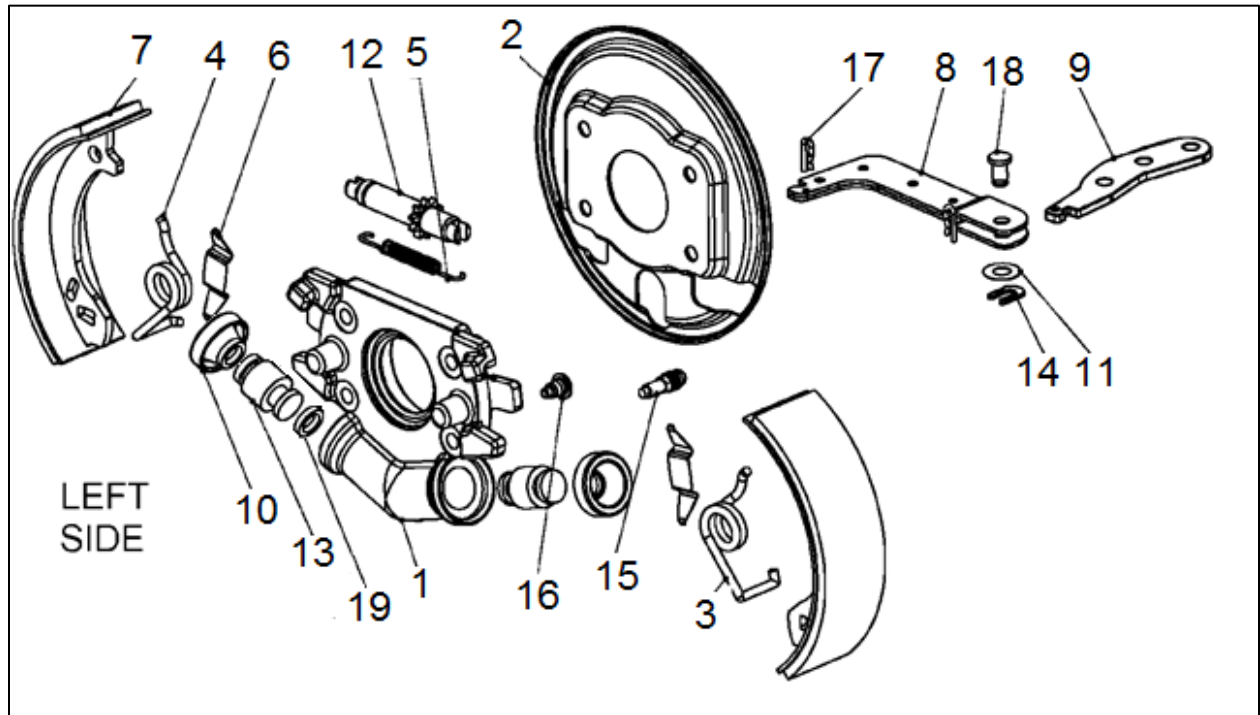


| ITEM | CPC P/N  | DESCRIPTION                      | QTY | SEATS P/N |
|------|----------|----------------------------------|-----|-----------|
| 1    | *        | COVER CASE ASSEMBLY              | 1   |           |
| 2    | *        | GEAR CASE                        | 1   |           |
| 3    | *        | CARRIER GEAR (See Item 40)       | 1   |           |
| 4    | *        | GEAR 15T (See Item 41)           | 1   |           |
| 5    | *        | GEAR 40T (See Item 41)           | 1   |           |
| 6    | *        | GEAR 18T (See Item 42)           | 1   |           |
| 7    | 82904-13 | BALL BEARING 6207 (See Item 40)  | 2   | 760926    |
| 8    | 82873-13 | BALL BEARING 6303 (See Item 41)  | 2   | 760918    |
| 9    | 82783-13 | BALL BEARING 6203 (See Item 42)  | 1   | 760921    |
| 10   | 82782-13 | BALL BEARING 6205 (See Item 42)  | 1   | 760922    |
| 11   | 82905-13 | SHIM 61X69X1.5t (See Item 40)    | 2   | 760925    |
| 12   | 82871-13 | SHIM 36X44X1.5t (See Item 41)    | 2   | 760919    |
| 13   | 82784-13 | SHIM 32X40X1.0t (See Item 42)    | 1   | 760920    |
| 14   | 82781-13 | SHIM 45X51X1.5t (See Item 42)    | 1   | 760923    |
| 15   | *        | WASHER                           | 1   |           |
| 16   | *        | WASHER                           | 1   |           |
| 17   | 82906-13 | SEAL 28X55X9h                    | 2   | 760924    |
| 18   | 82949-13 | SEAL 25X47X6h                    | 1   | 760993    |
| 19   | *        | BOLT M8XP1.25X100L               | 7   |           |
| 20   | *        | BOLT M8XP1.25X90L                | 3   |           |
| 21   | *        | BOLT M8XP1.25X12L                | 1   |           |
| 22   | *        | BOLT M14XP1.5X9.5L               | 1   |           |
| 23   | *        | NUT M8XP1.25                     | 10  |           |
| 24   | *        | LOCATION PIN                     | 2   |           |
| 25   | *        | MACHINE KEY (See Item 30)        | 1   |           |
| 26   | 82785-13 | CIRCLIP – SHAFT 32 (See Item 30) | 1   | 760917    |
| 27   | *        | BREATHER TUBE                    | 1   |           |
| 28   | *        | RING                             | 1   |           |

### NKL AXLE ASSEMBLY – MVP (Cont.)

| ITEM | CPC P/N  | DESCRIPTION                                                  | QTY | SEATS P/N |
|------|----------|--------------------------------------------------------------|-----|-----------|
| 29   | *        | GEAR BOX ASSY                                                | 1   |           |
| 30   | 82994-13 | SHAFT ASSY R                                                 | 1   | 760986    |
| 31   | 82995-13 | SHAFT ASSY L                                                 | 1   | 760987    |
| 32   | *        | TUBE ASSY R                                                  | 1   |           |
| 33   | *        | TUBE ASSY L                                                  | 1   |           |
| 34   | 82927-13 | DRUM                                                         | 2   | 760927    |
| 35   | *        | BOLT M10X1.25X35L                                            | 12  |           |
| 36   | *        | BOLT M8X1.25X40L                                             | 8   |           |
| 37   | *        | NUT SHRAPNEL M8XP1.25                                        | 8   |           |
| 38   | *        | NUT                                                          | 10  |           |
| 39   | 82909-13 | BRAKE SHOE                                                   | 4   | 760928    |
| 40   | 82984-13 | CARRIER GEAR ASSY 16.77:1 (Includes Items 3, 7 & 11)         |     | 760935    |
| 41   | 82985-13 | INTERM. GEAR ASSY 16.77:1 (Includes Items 4, 8, 12, 25 & 26) | 1   | 760936    |
| 42   | 86986-13 | INPUT GEAR ASSY 16.77:1 (Includes Items 6, 9, 10, 13 & 14)   | 1   | 760937    |
| 43   | 82669-12 | AXLE, HD, NKL, 16.77:1, COMPLETE                             | 1   | 760733    |

# NKL AXLE HYDRAULIC BRAKES – MVP



### NKL AXLE HYDRAULIC BRAKES – MVP Cont.

| ITEM | CPC P/N  | DESCRIPTION                                       | QTY | SEATS P/N |
|------|----------|---------------------------------------------------|-----|-----------|
| 1    | 82987-13 | MAIN BODY                                         | 1   | 760979    |
| 2    | 82988-13 | COVER                                             | 1   | 760980    |
| 3    | 82989-13 | SPRING (BLUE)                                     | 1   | 760981    |
| 4    | 82990-13 | SPRING (YELLOW)                                   | 1   | 760982    |
| 5    | *        | SPRING                                            | 1   |           |
| 6    | *        | SPRING PIECE                                      | 2   |           |
| 7    | 82909-13 | BRAKE SHOES                                       | 2   | 760928    |
| 8    | *        | L-TYPE LEVER                                      | 1   |           |
| 9    | *        | LEVER                                             | 1   |           |
| 10   | 40968-14 | DUSTPROOF COVER KIT                               | 1   | 192943U   |
| 11   | *        | WASHER                                            | 1   |           |
| 12   | *        | ADJUSTMENT ASSEMBLY L                             | 1   |           |
| 12A  | *        | ADJUSTMENT ASSEMBLY R                             | 1   |           |
| 13   | *        | PISTON ASSEMBLY                                   | 2   |           |
| 14   | *        | CIRCLIP                                           | 1   |           |
| 15   | *        | EXHAUST VALVE ASSEMBLY                            | 1   |           |
| 16   | *        | BUSH ASSEMBLY                                     | 1   |           |
| 17   | *        | COTTER PIN                                        | 2   |           |
| 18   | *        | PIN                                               | 1   |           |
| 19   | *        | OIL SEAL                                          | 2   |           |
| 20   | 82992-13 | LEFT BRAKE SET ASSEMBLY (Includes Items 12 – 19)  | 1   | 760984    |
| 21   | 82993-13 | RIGHT BRAKE SET ASSEMBLY (Includes Items 12 – 19) | 1   | 760985    |

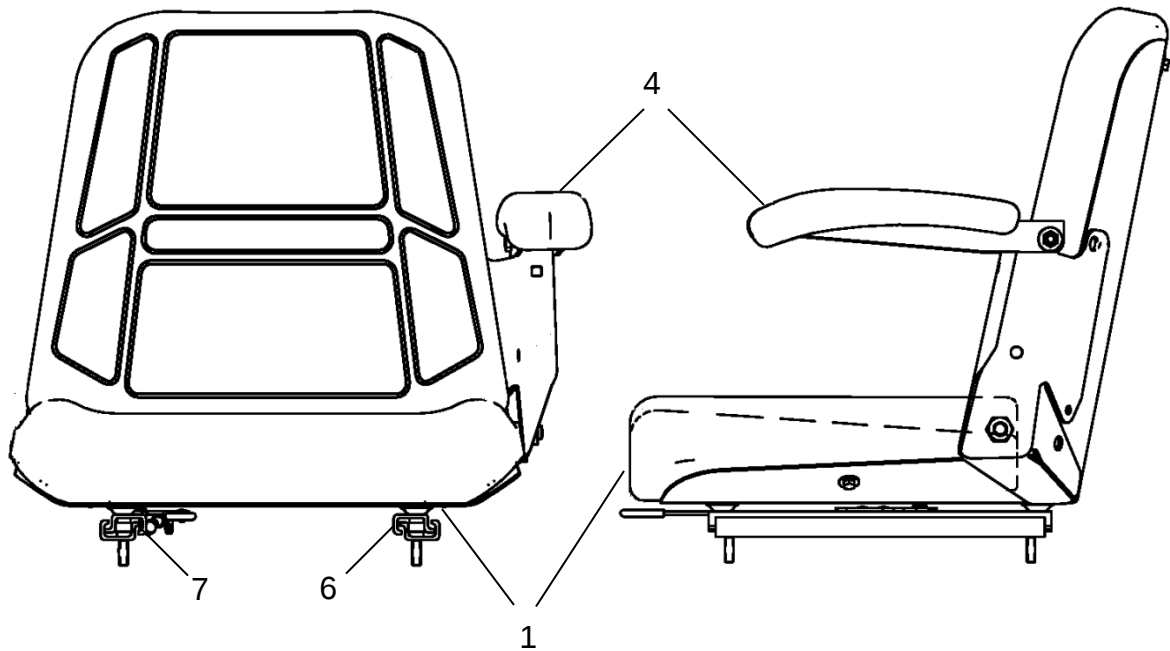
\* SPECIAL ORDER

# **Multiple Vehicle Platform Parts Manual**

## **Section 4**

### **Body, Seats, Dash**

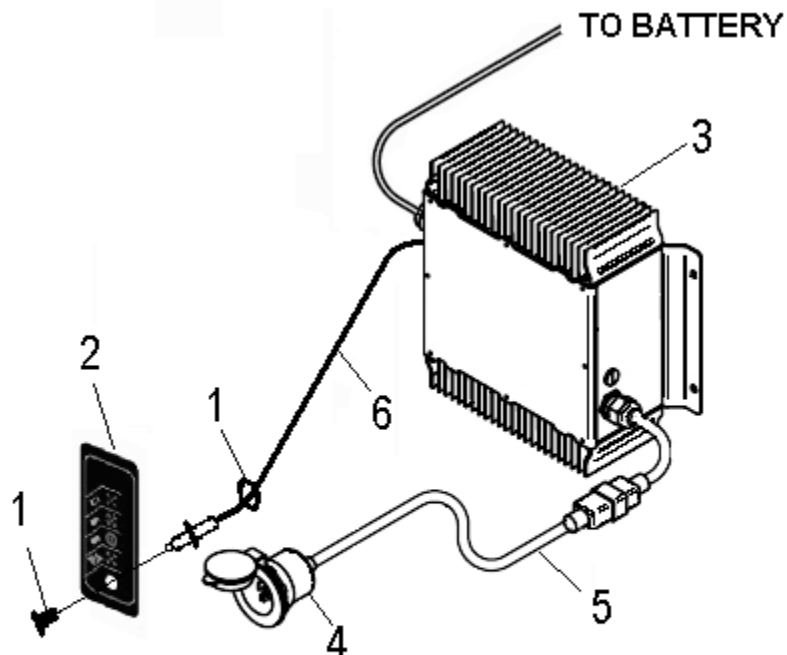
## SEATS – MVP



| ITEM | CPC P/N  | DESCRIPTION                                        | QTY | SEATS P/N |
|------|----------|----------------------------------------------------|-----|-----------|
| 1    | 51701-00 | LH SEAT ASSEMBLY W/ARM – SEAT SWITCH               | 1   | 149596%LA |
| 2*   | 51700-00 | RH SEAT ASSEMBLY W/ARM                             | 1   | 177295%RA |
| 3*   | 51722-09 | SEAT ASSEMBLY, NO ARMS W/ SEAT SWITCH              | 1   | 149596%   |
| 3A*  | 51723-09 | SEAT ASSEMBLY, NO ARMS                             | 1   | 177295%   |
| 4    | 52624-06 | ARM KIT, LH (Includes mounting bracket & hardware) | 1   | 307844BLU |
| 5*   | 52625-06 | ARM KIT, RH (Includes mounting bracket & hardware) | 1   | 307844BRU |
| 6    | 91401-90 | TRACK, NON-LOCKING                                 | 2   | 707005    |
| 7    | 91400-02 | TRACK, LOCKING                                     | 1   | 301150    |
| 8    | 69757-95 | SEAT SWITCH (Left Seat)                            | 1   | 708455    |
| 9*   | 7810     | NUT, 5/16-18 GR G FLANGE LOCK                      | 8   | 719906    |

\* NOT SHOWN

## DELTA Q CHARGER W/REMOTE LED SINGLE & DUAL BATTERY – MVP



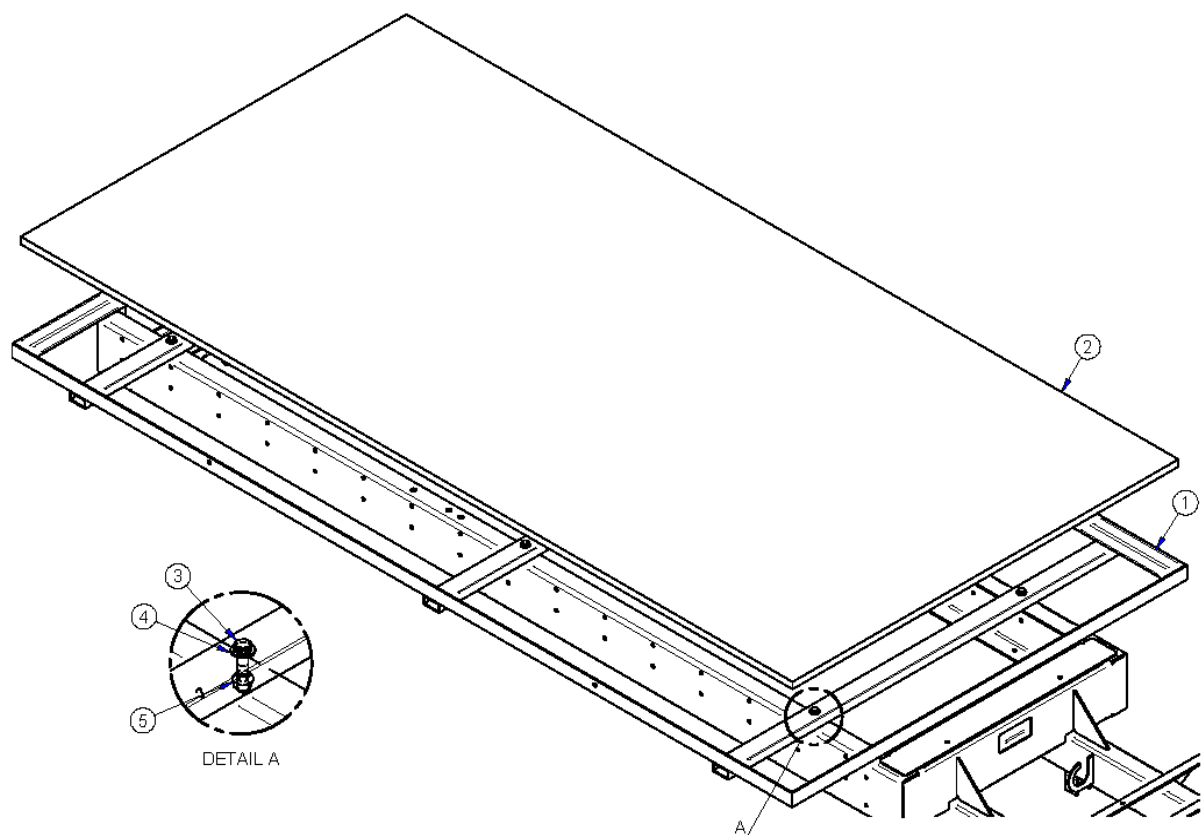
LED & LABEL POSITION WILL BE LOCATED  
ADJACENT TO THE CHARGER AC RECEPTICLE

| ITEM | CPC P/N  | DESCRIPTION                                    | QTY | SEATS P/N |
|------|----------|------------------------------------------------|-----|-----------|
| 1    | 9951     | CR-174 CLIP & RING                             | 1/2 | 781989    |
| 2    | 66584-12 | LED FRONT LABEL                                | 1/2 | 760754    |
| 3    | 66583-12 | CHARGER, DELTA Q 48V W/LED, STANDARD           | 1/2 | 760742    |
| 3A   | 66582-12 | CHARGER, DELTA Q 48V W/LED, AGM                | 1/2 | 467839    |
| 4    | 66034-02 | PLUG, POWER INLET 120V SEALED                  | 1/2 | 709558    |
| 5    | 66493-03 | CHARGER CORD 6'                                | 1/2 | 719264    |
| 6    | 66029-12 | LED 25' CABLE                                  | 1   | 760817    |
| 7    | 70036-05 | ASSY, CORD W/ RECEPTACLE (Includes Item 4 & 5) | 1/2 | 467405    |
| 8*   | 3787-B   | SCREW 1/4-20X3/4 HHCS G5                       | 4/8 | 719636    |
| 9*   | 6703-B   | WASHER 1/4                                     | 4/8 | 719811    |
| 10*  | 7724-B   | NUT, 1/4-20 L/N SER-FLG                        | 4/8 | 719887    |

\* NOT SHOWN

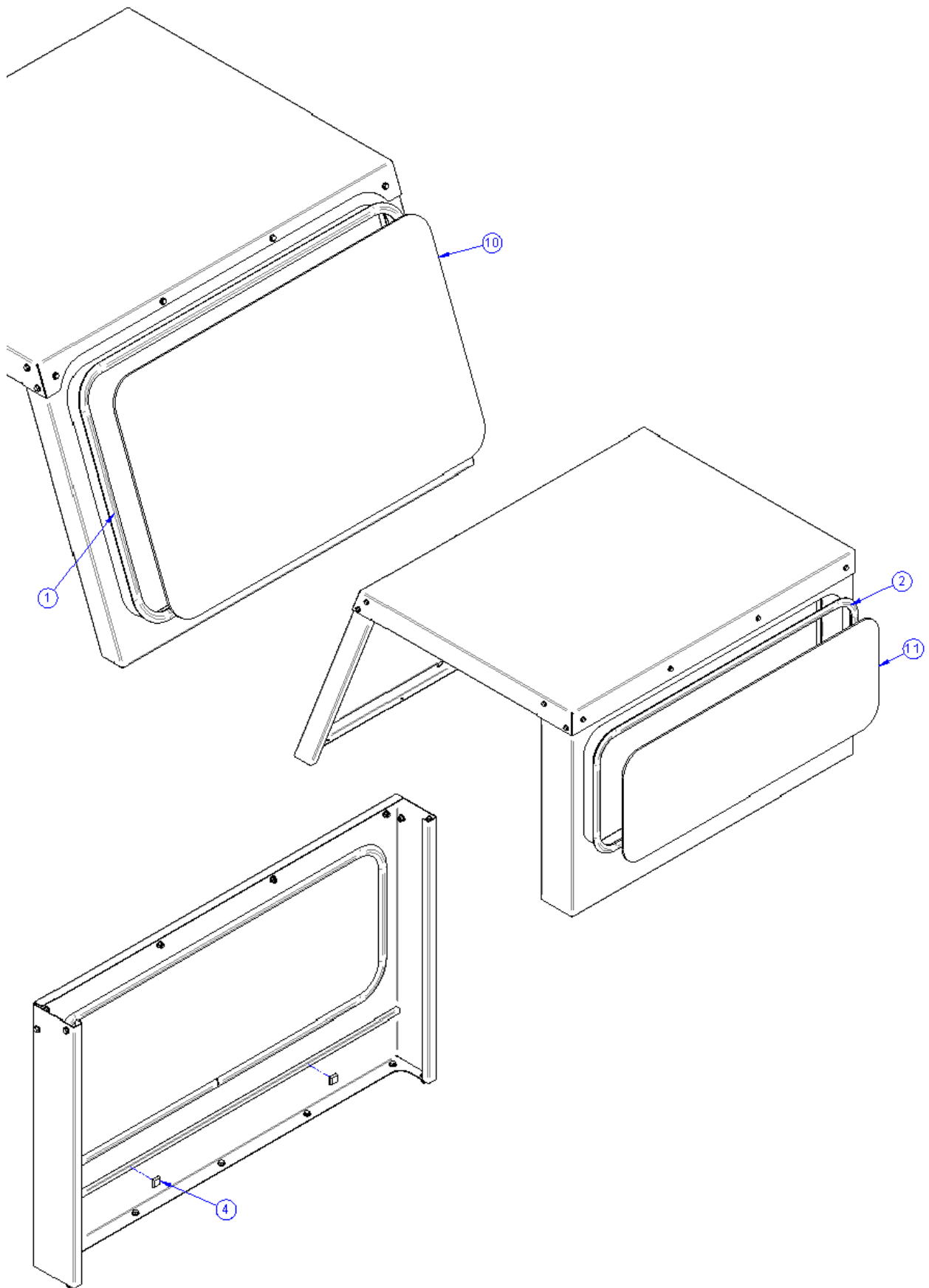
NOTE: SEE SERVICE BULLETIN SB11-004 IF REPLACING A NON-LED CHARGER.

CARGO BED – MVP

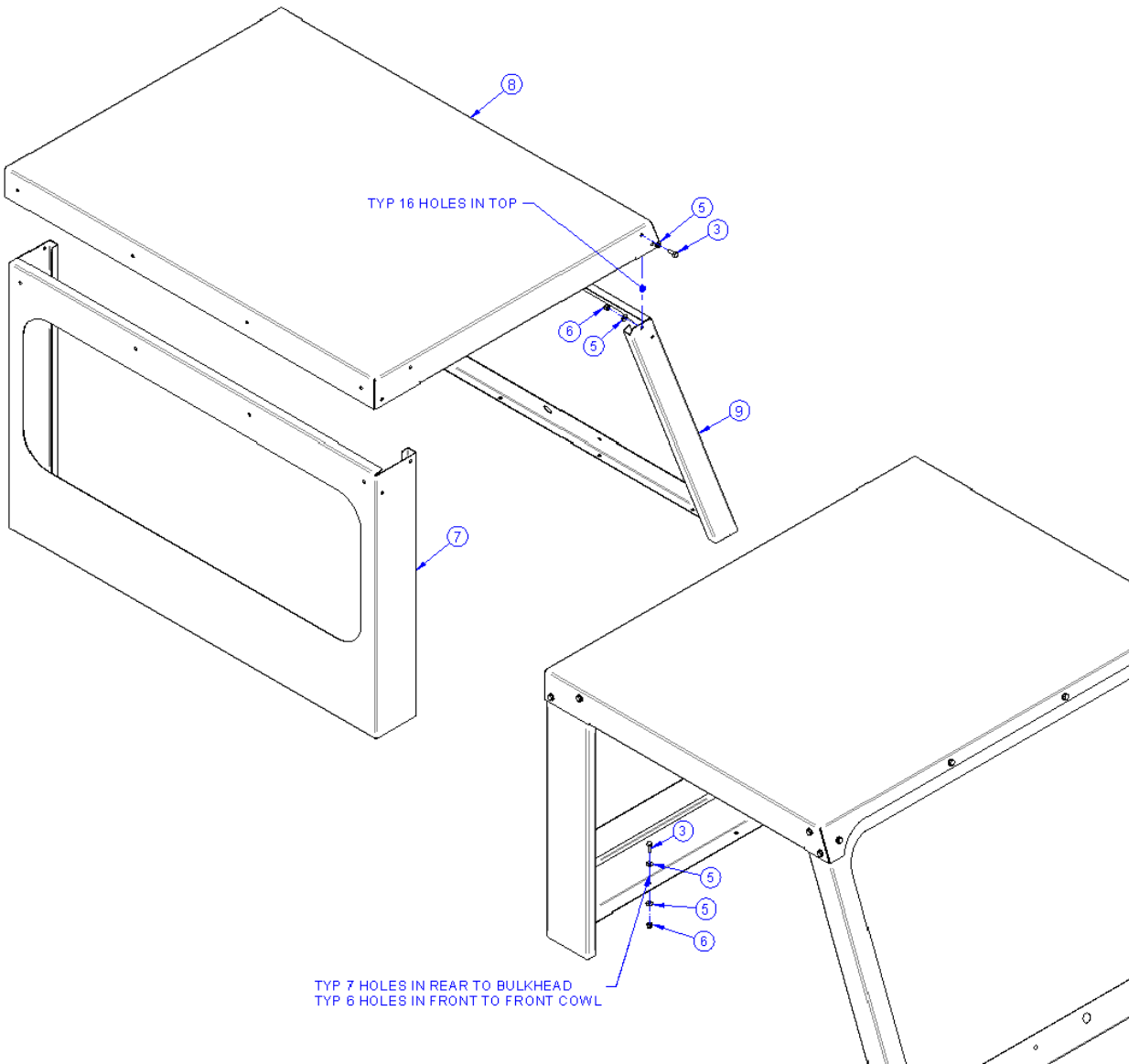


| ITEM | CPC P/N  | DESCRIPTION                  | QTY | SEATS P/N |
|------|----------|------------------------------|-----|-----------|
| 1    | 50049-12 | CARGO BED                    | 1   | 309404    |
| 2    | 50048-12 | MEZZTREAD 3/4X4X8            | 1   | 702625    |
| 3    | 4720-B   | SCREW, 3/8-16X1 3/4 HHCS, G5 | 6   | 719696    |
| 4    | 6000-B   | WASHER, 5/16                 | 6   | 719771    |
| 5    | 7755     | NUT 3/8-16 L/N, FLG          | 6   | 760721    |

# CAB – MVP



## CAB – MVP (Cont.)

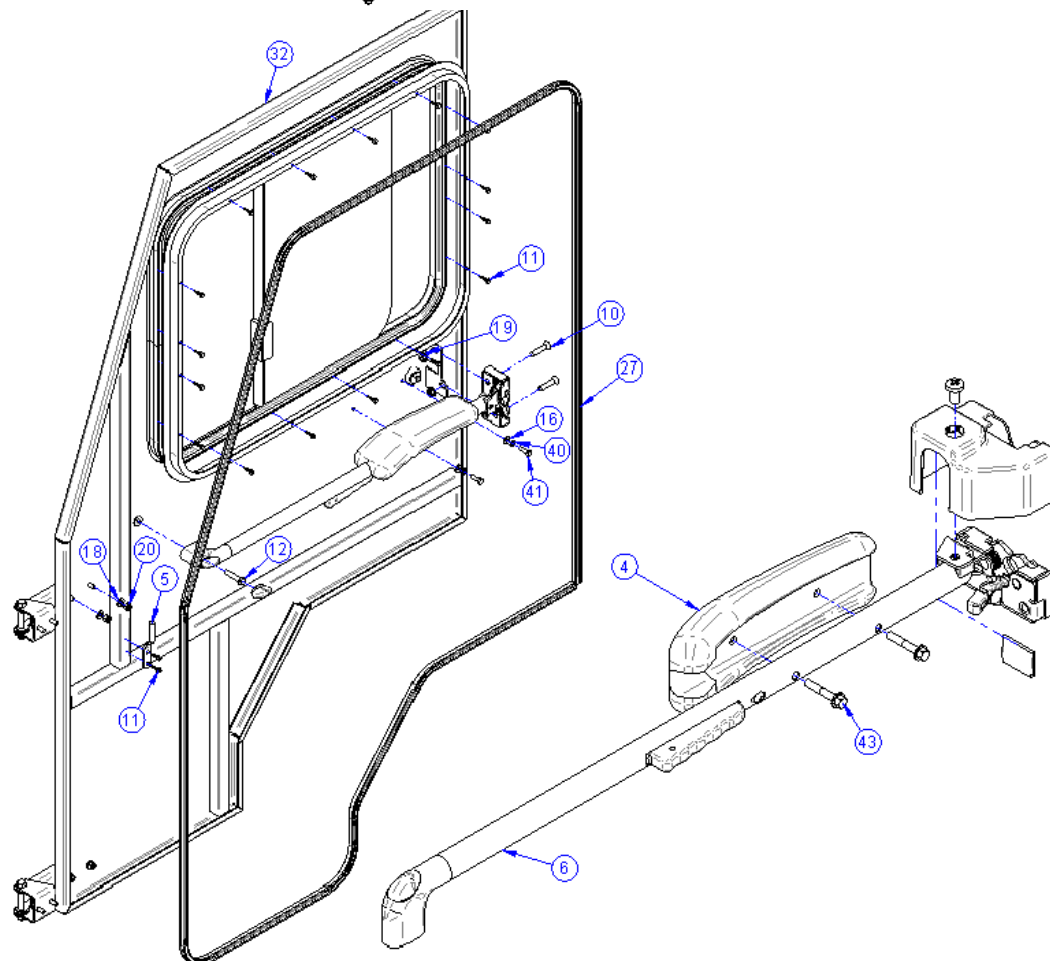
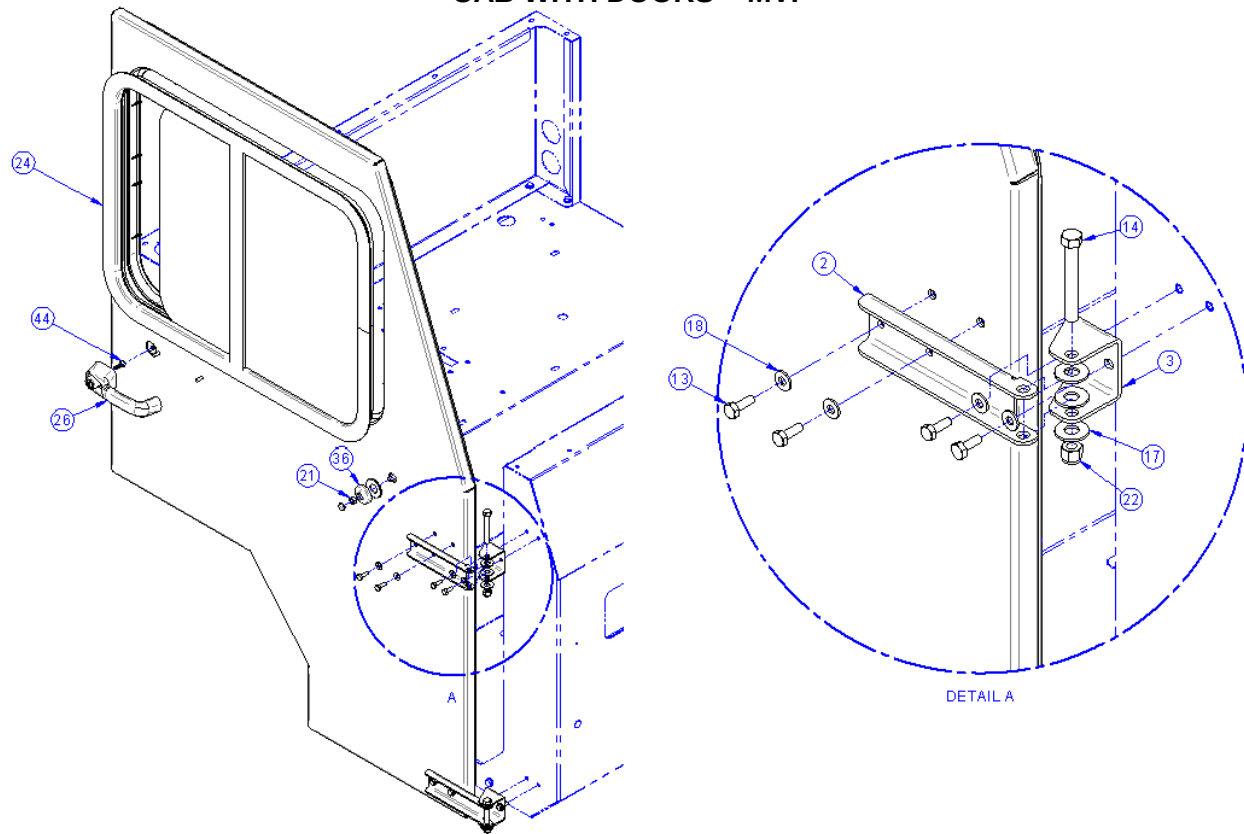


| ITEM | CPC P/N  | DESCRIPTION                        | QTY   | SEATS P/N |
|------|----------|------------------------------------|-------|-----------|
| 1    | 58901-11 | WEATHER STRIPPING                  | 10.5' | 719163    |
| 2    | 58901-11 | WEATHER STRIPPING                  | 9.1'  | 719163    |
| 3    | 3787-B   | SCREW, 1/4-20X3/4 HHCS, G5         | 29    | 719636    |
| 4    | 52330-86 | BUMPER BLACK                       | 2     | 719738    |
| 5    | 6703-B   | WASHER, 1/4                        | 58    | 719811    |
| 6    | 7686     | NUT, 1/4-20 NYLOCK, GA             | 29    | 719879    |
| 7    | 50056-12 | PANEL, BACK CAB (See Note 1)       | 1     | 467566    |
| 8    | 50057-12 | PANEL TOP CAB (See Note 1)         | 1     | 467567    |
| 9    | 50060-12 | PANEL, FRONT CAB (See Note 1)      | 1     | 467565    |
| 10   | 58022-12 | WINDSHIELD, GLASS CAB (See Note 2) | 1     | 760450    |
| 11   | 58035-12 | WINDOW, REAR CAB (See Note 2)      | 1     | 760538    |

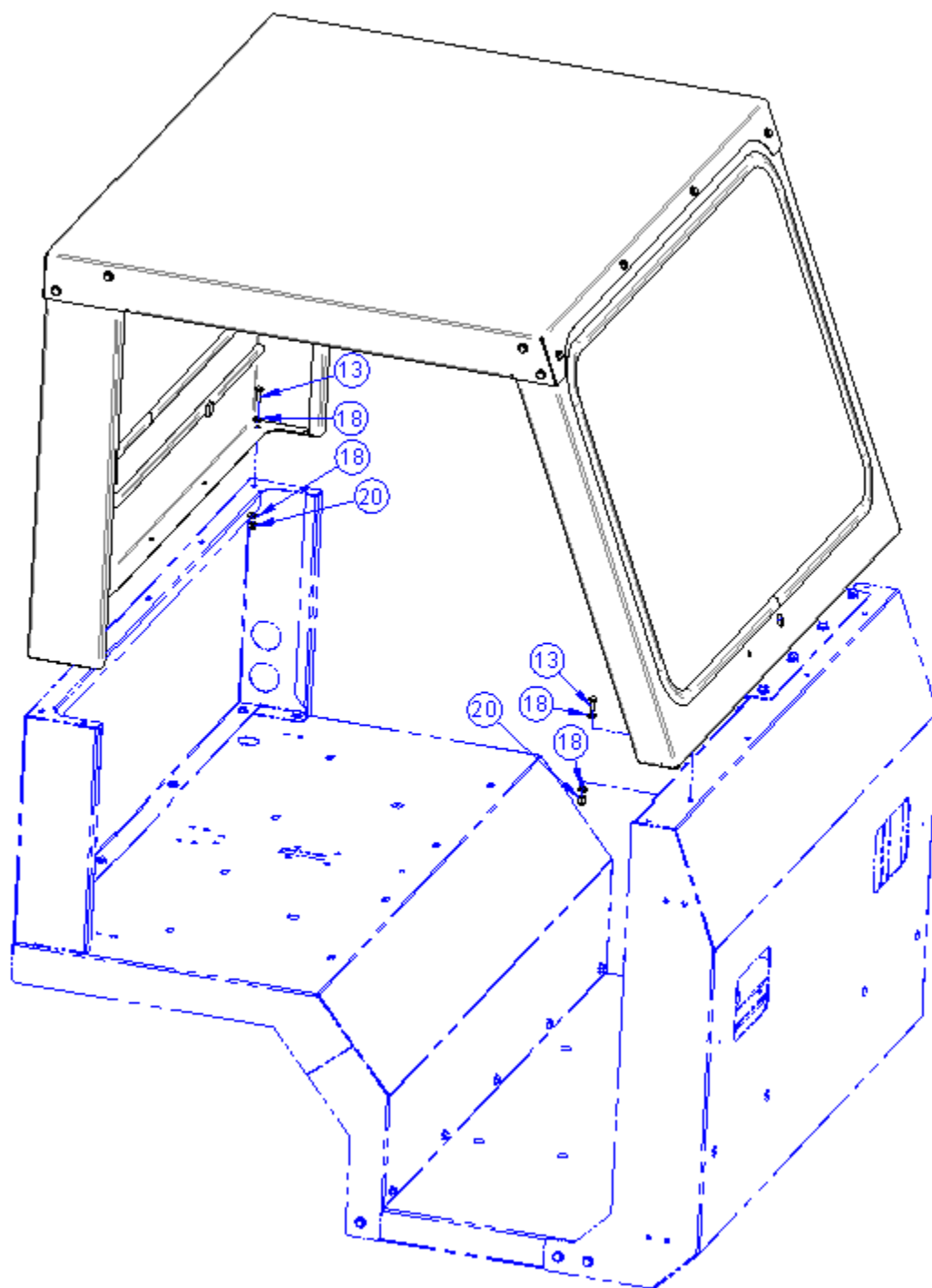
**NOTE:**

1. For correct color specify VIN.
2. Items cannot be shipped UPS. Ship via freight or local pickup.

# CAB WITH DOORS – MVP



## CAB WITH DOORS – MVP (Cont.)



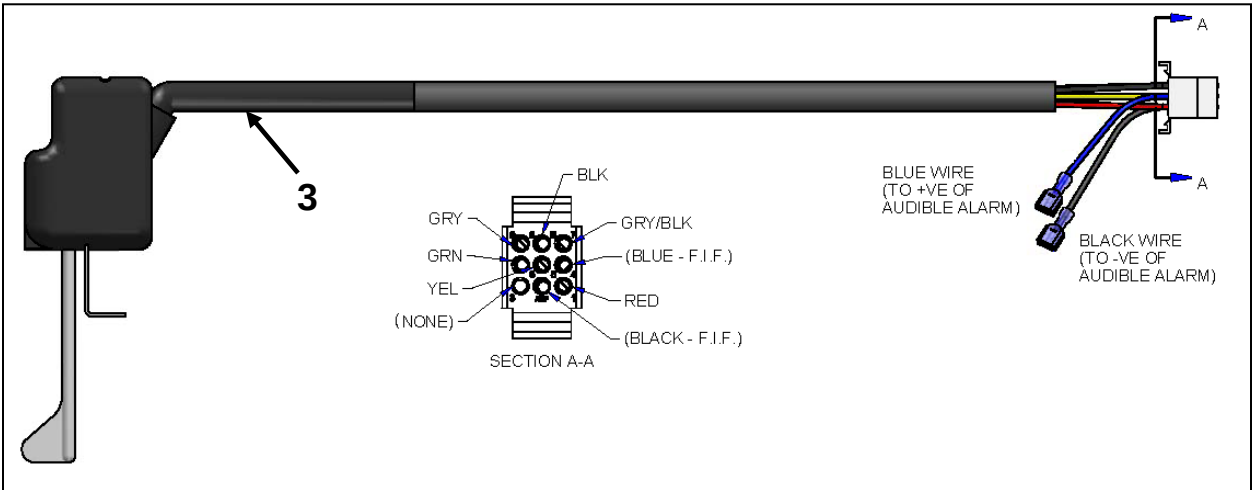
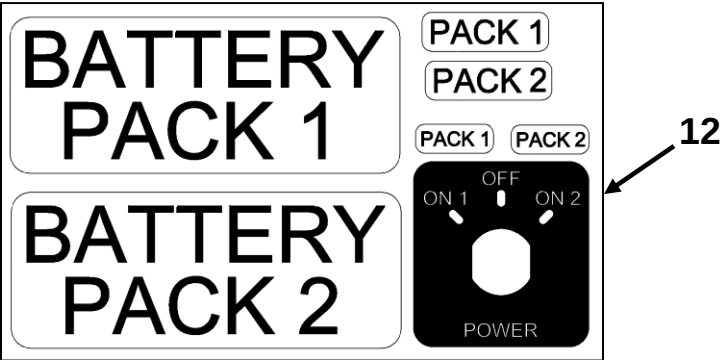
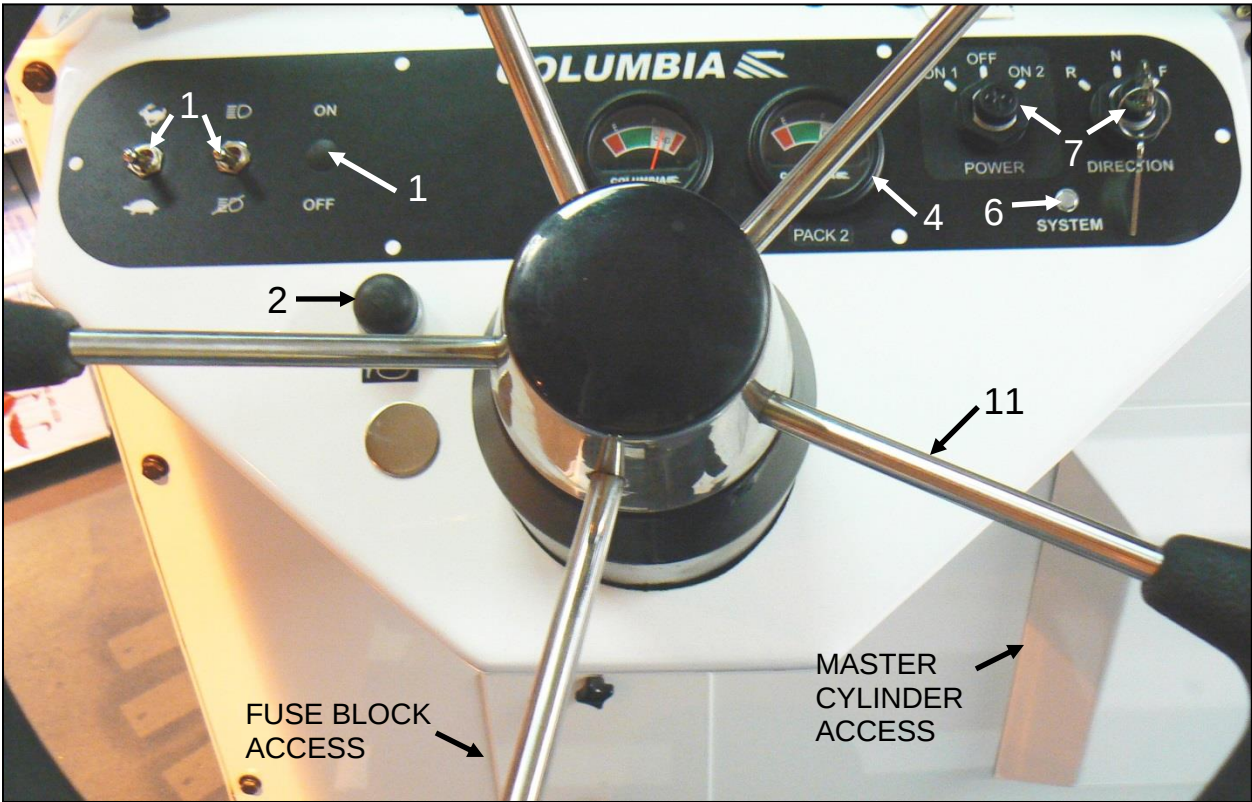
**CAB WITH DOORS – MVP (Cont.)**

| ITEM | CPC P/N  | DESCRIPTION                             | QTY | SEATS P/N |
|------|----------|-----------------------------------------|-----|-----------|
| 1*   | 51204-10 | STRAP, CAB DOOR                         | 2   | 309370    |
| 2    | 50079-12 | DOOR HINGE PLATE                        | 4   | 512162    |
| 3    | 50080-12 | HINGE MOUNTING BRACKET                  | 4   | 512372    |
| 4    | 51205-10 | ARM PAD                                 | 2   | 512812    |
| 5    | 50081-12 | BODY STRAP HOOK, PAINTED (See Note)     | 2   | 512813B   |
| 6    | 51206-10 | RH LATCH/ARM ASSY                       | 1   | 512814    |
| 7*   | 51207-10 | LH LATCH/ARM ASSY                       | 1   | 512815    |
| 10   | 2363-BS  | SCREW, 5/16-18X 1 1/2 PFH               | 4   | 719555    |
| 11   | 2653-B   | SCREW, 10-16X3/4 HWH TEK                | 40  | 719583    |
| 12   | 57111-11 | SCREW, 5/16-18X1 1/2 HHCS, G8           | 2   | 781924    |
| 13   | 3787-B   | SCREW, 1/4-20X3/4 HHCS, G5              | 45  | 719636    |
| 14   | 4719-W   | SCREW, 3/8-16X2 3/4 HHCS, G5            | 4   | 719695    |
| 16   | 6031     | WASHER, 3/16                            | 4   | 719777    |
| 17   | 6416     | WASHER, 3/8                             | 12  | 719796    |
| 18   | 6703-B   | WASHER, 1/4                             | 82  | 719811    |
| 19   | 7525     | NUT, 5/16-18 GR A SERR FLNG LOCK        | 4   | 719864    |
| 20   | 7686     | NUT, 1/4-20 NYLOCK, GA                  | 37  | 719879    |
| 21   | 7748-B   | NUT, 5/16-18 FFHEX G5                   | 2   | 719896    |
| 22   | 7778     | NUT, 3/8-16 GA NE NYLOCK                | 4   | 719902    |
| 23*  | 90104-01 | WINDOW, SLIDING LH                      | 1   | 749709    |
| 24   | 84022-05 | WINDOW, SLIDING RH                      | 1   | 759743    |
| 25*  | 825      | LATCH BOLT                              | 2   | 759816    |
| 26   | 50990-10 | LATCH HANDLE, OUTER                     | 2   | 759817    |
| 27   | 50082-12 | DOOR FRAME SEAL RH                      | 15' | 759818    |
| 28*  | 50082-12 | DOOR FRAME SEAL LH                      | 15' | 759818    |
| 31*  | 50083-12 | DOOR DRIVER SIDE, PAINTED (See Note)    | 1   | 467568    |
| 32   | 50084-12 | DOOR PASSENGER SIDE, PAINTED (See Note) | 1   | 467569    |
| 34*  | 50085-12 | SEAL DOOR OPENING RH                    | 11' | 760320    |
| 35*  | 50085-12 | SEAL DOOR OPENING LH                    | 11' | 760320    |
| 36   | 830      | NUT RETAINER KIT                        | 2   | 760321    |
| 37*  | 51208-10 | BRACKET, DOOR STRAP                     | 2   | 760404    |
| 40   | 46270-08 | WASHER 6MM L/N                          | 4   | 781405    |
| 41   | 5100     | SCREW, M6-1.0X20MM HHCS                 | 4   | 781440    |
| 42*  | 7530     | LATCH NUT, M12X1.0, L/N HEX NULOCK      | 2   | 781495    |
| 43   | 5101     | SCREW 1/4-20X1 1/2 HWH                  | 4   | 781504    |
| 44   | 1502     | SCREW, M5-.08X16MM PPH                  | 4   | 781618    |

\* NOT SHOWN

NOTE: For correct color specify VIN.

DASH – MVP



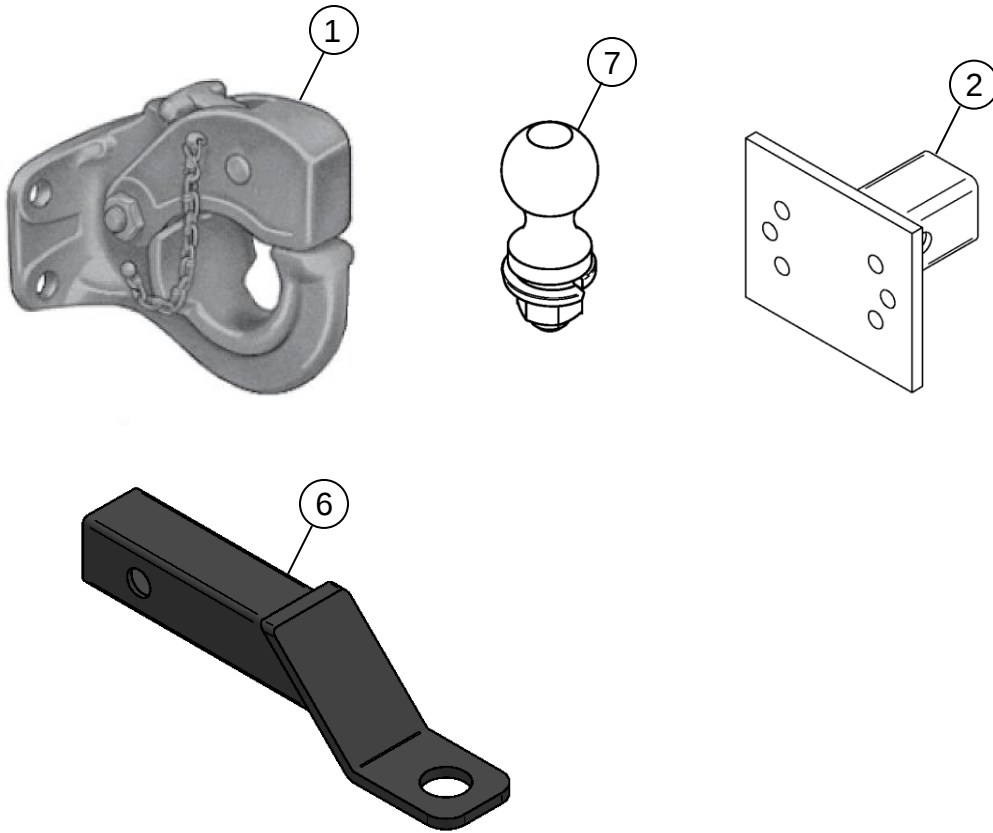
### DASH – MVP (Cont.)

| ITEM | CPC P/N  | DESCRIPTION                                                                                                        | QTY | SEATS P/N |
|------|----------|--------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1    | 72000-10 | SWITCH, TOGGLE OFF/ON                                                                                              | 2   | 760600    |
| 2    | 71807-80 | SWITCH, HORN                                                                                                       | 1   | 709385    |
| 3*   | 71428-04 | ASSY, TURN SWITCH                                                                                                  | 1   | 467279    |
| 4    | 75061-07 | BDI METER, 48V                                                                                                     | 1/2 | 759842    |
| 5*   | 71732-06 | 2 POSITION POWER SWITCH WITH HARDWARE FOR SINGLE BATTERY PACK (See table below for alternate keysets)              | 1   | 759706    |
| 6    | 67791-08 | LIGHT, LED, GREEN                                                                                                  | 1   | 759932    |
| 7    | 71730-01 | 3 POSITION KEYSWITCH WITH HARDWARE FOR DUAL BATTERY PACK POWER & DIRECTION (See table below for alternate keysets) | 1   | 709040    |
| 8*   | 71767-05 | ASSY, KEY, NON-REMOVABLE, W/COVER (Used only with Keyset A)                                                        | 1   | 719432    |
| 9*   | 53258-07 | DECAL, WARNING/OPER. INST                                                                                          | 1   | 712055    |
| 10*  | 653      | PLUG, 1/2 HOLE BLACK                                                                                               | 1   | 719798    |
| 11   | 56980-10 | STEERING WHEEL                                                                                                     | 1   | 760636    |
| 12   | 69519-12 | DECAL, DUAL BATTERY PACK LABEL SET                                                                                 | 1   | 712109    |
| 13*  | 71731-01 | KEYSET, UNIV. A 2 KEYS W/RING                                                                                      | 1   | 749184    |

\* NOT SHOWN

|        | 3 POSITION POWERSWITCH |        | 2 POSITION POWERSWITCH |        | STANDARD KEYS |        |
|--------|------------------------|--------|------------------------|--------|---------------|--------|
| KEYSET | CPC P/N                | SI P/N | CPC P/N                | SI P/N | CPC P/N       | SI P/N |
| A      | 71730-01               | 709040 | 71732-06               | 759706 | 71731-01      | 749184 |
| B      | 71730-03B              | 719297 | 71732-06B              | 759722 | 71731-03B     | 719301 |
| C      | 71730-03C              | 719298 | 71732-06C              | 759723 | 71731-03C     | 719302 |
| D      | 71730-03D              | 719299 | 71732-06D              | 759724 | 71731-03D     | 719303 |
| E      | 71730-03E              | 719300 | 71732-06E              | 759721 | 71731-03E     | 719304 |

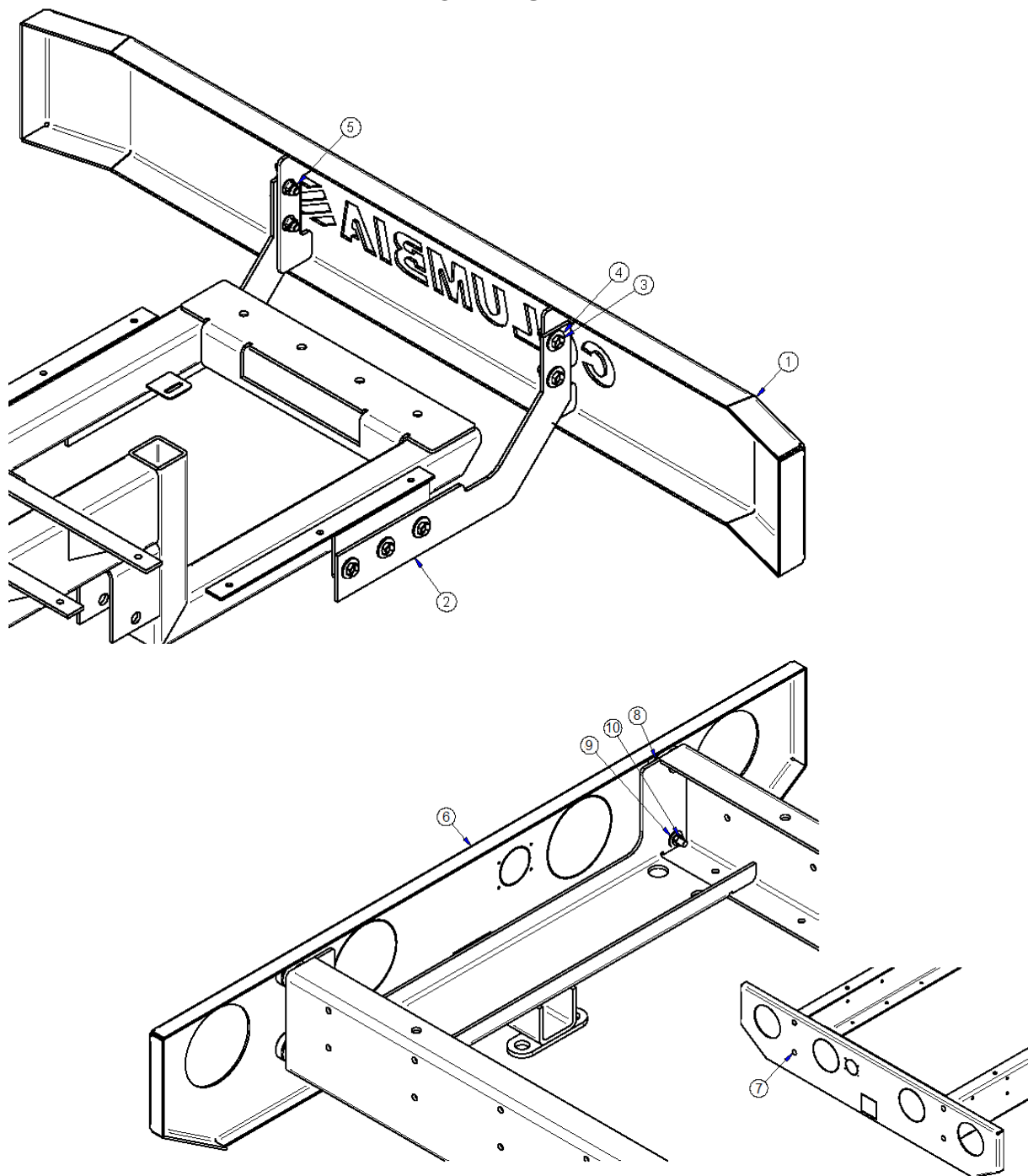
## HITCHES – MVP



| ITEM | CPC P/N  | DESCRIPTION                                  | QTY | SEATS P/N |
|------|----------|----------------------------------------------|-----|-----------|
| 1    | 57315-96 | PINDLE HOOK HITCH                            | 1   | 709833    |
| 2    | 82011-14 | HITCH PLATE                                  | 1   | 312577    |
| 3    | 82062-02 | HITCH PIN 5/8 OD (used with Items 2 & 6)     | 1   | 719210    |
| 4*   | 7812-W   | NUT, 1/2-20 NYLOK GR A (Used with Item 1)    | 4   | 719907    |
| 5*   | 4010     | SCREW, 1/2-20x1.5 HHCS G5 (Used with Item 1) | 4   | 729809    |
| 6    | 82003-12 | RECEIVER HITCH 2" DROP                       | 1   | 760530    |
| 7    | 82064-02 | HITCH BALL, 2"                               | 1   | 719207    |

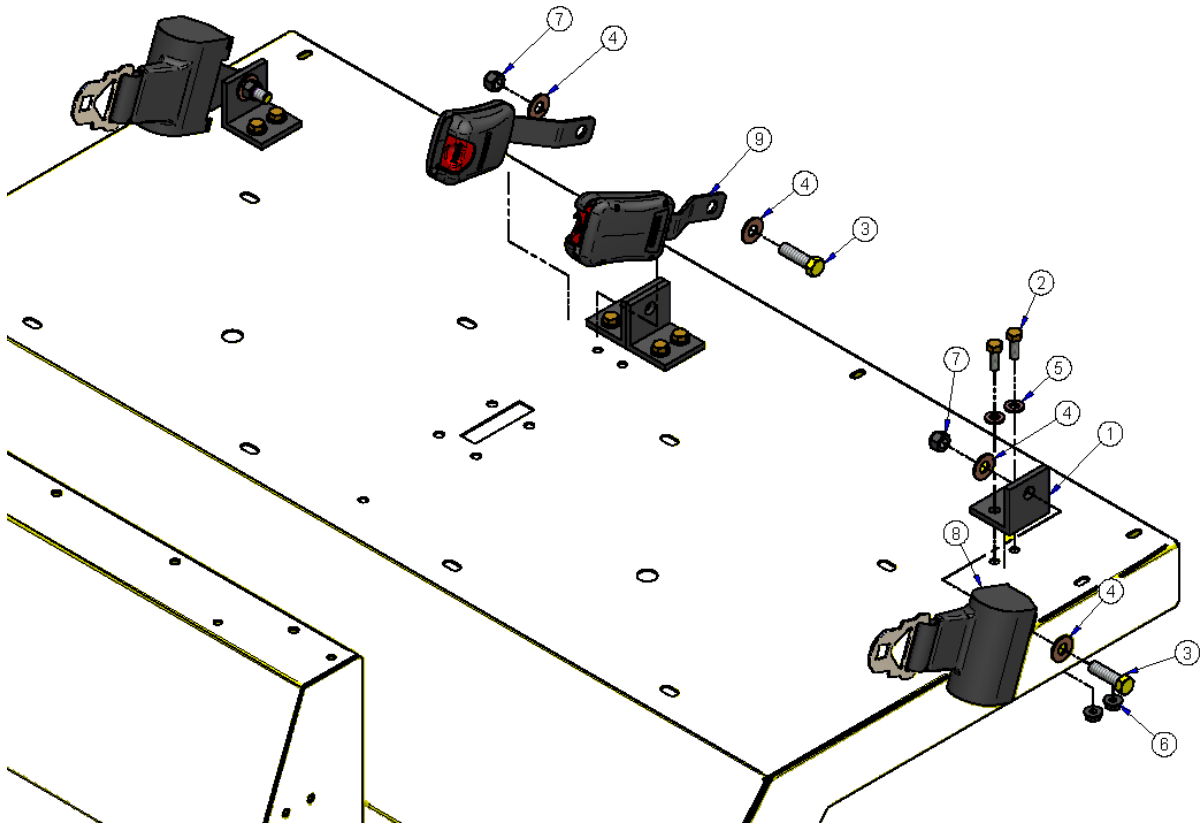
\* NOT SHOWN

## BUMPERS – MVP

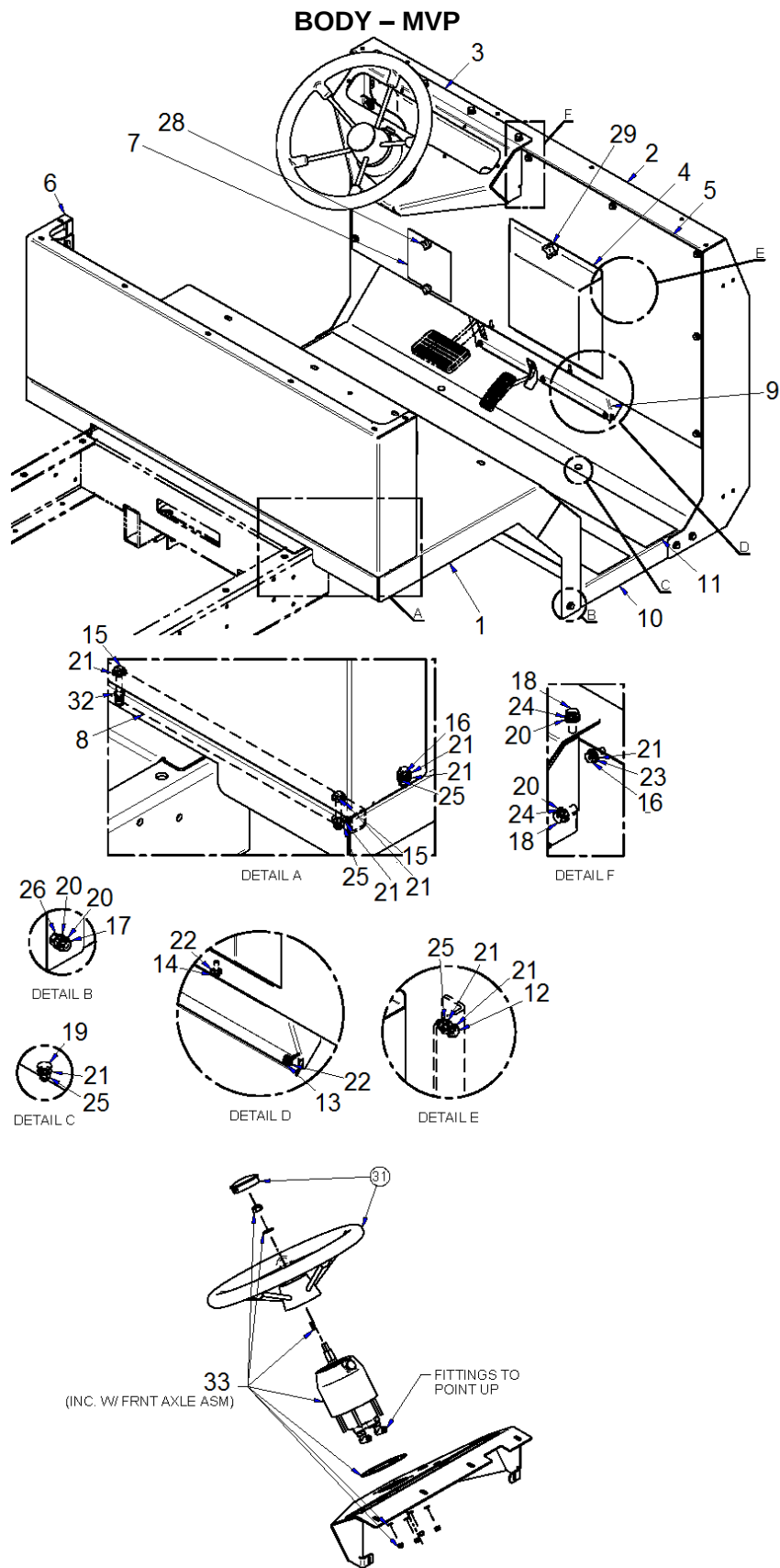


| ITEM | CPC P/N  | DESCRIPTION                                     | QTY | SEATS P/N |
|------|----------|-------------------------------------------------|-----|-----------|
| 1    | 50066-12 | FRONT BUMPER                                    | 1   | 309121    |
| 2    | 50071-12 | FRONT BUMPER MOUNTING PLATE                     | 2   | 512279    |
| 3    | 2879-W   | SCREW, 3/8-16X1 HHCS G5                         | 10  | 707195    |
| 4    | 6416     | WASHER 3/8                                      | 10  | 719796    |
| 5    | 7755     | NUT, 3/8-16 L/N FLG                             | 10  | 760721    |
| 6    | 50078-12 | REAR BUMPER                                     | 1   | 309103    |
| 7    | 3403-B   | BOLT, 5/16- 18X2 CARR G5                        | 4   | 719609    |
| 8    | 52329-85 | WASHER, .375X1.50X.5 FW, NYL (To attach Item 3) | 4   | 719737    |
| 9    | 6000-B   | WASHER, 5/16 (To attach Item 3)                 | 4   | 719771    |
| 10*  | 7739     | NUT, 5/16-18 L/N NYLOCK (To attach Item 3)      | 4   | 719892    |

## SEAT BELTS – MVP



| ITEM | CPC P/N  | DESCRIPTION                          | QTY | SEATS P/N |
|------|----------|--------------------------------------|-----|-----------|
| 1    | 75505-08 | SEATBELT BRACKET                     | 4   | 511730    |
| 2    | 3991     | SCREW, HHC, 7/16-18X7/8 G5           | 8   | 719643    |
| 3    | 4256     | SCREW, HX HD, 7/16-20X1.5 G5         | 3   | 719665    |
| 4    | 6416     | WASHER FLT STL 3/8 STD               | 6   | 719796    |
| 5    | 6702-B   | WASHER FLT STL 5/16                  | 8   | 719810    |
| 6    | 7750     | LOCKNUT 5/16-18 HEX FLG              | 8   | 719897    |
| 7    | 7825     | NUT 7/16-20 LOCK NYLON INSERT        | 3   | 719908    |
| 8    | 75504-09 | SEAT BELT, 48"                       | 2   | 741359    |
| 9    | 75503-09 | ATS BUCKLE, W/OFFSET STRAP SEAT BELT | 2   | 760553    |



### BODY – MVP (Cont.)

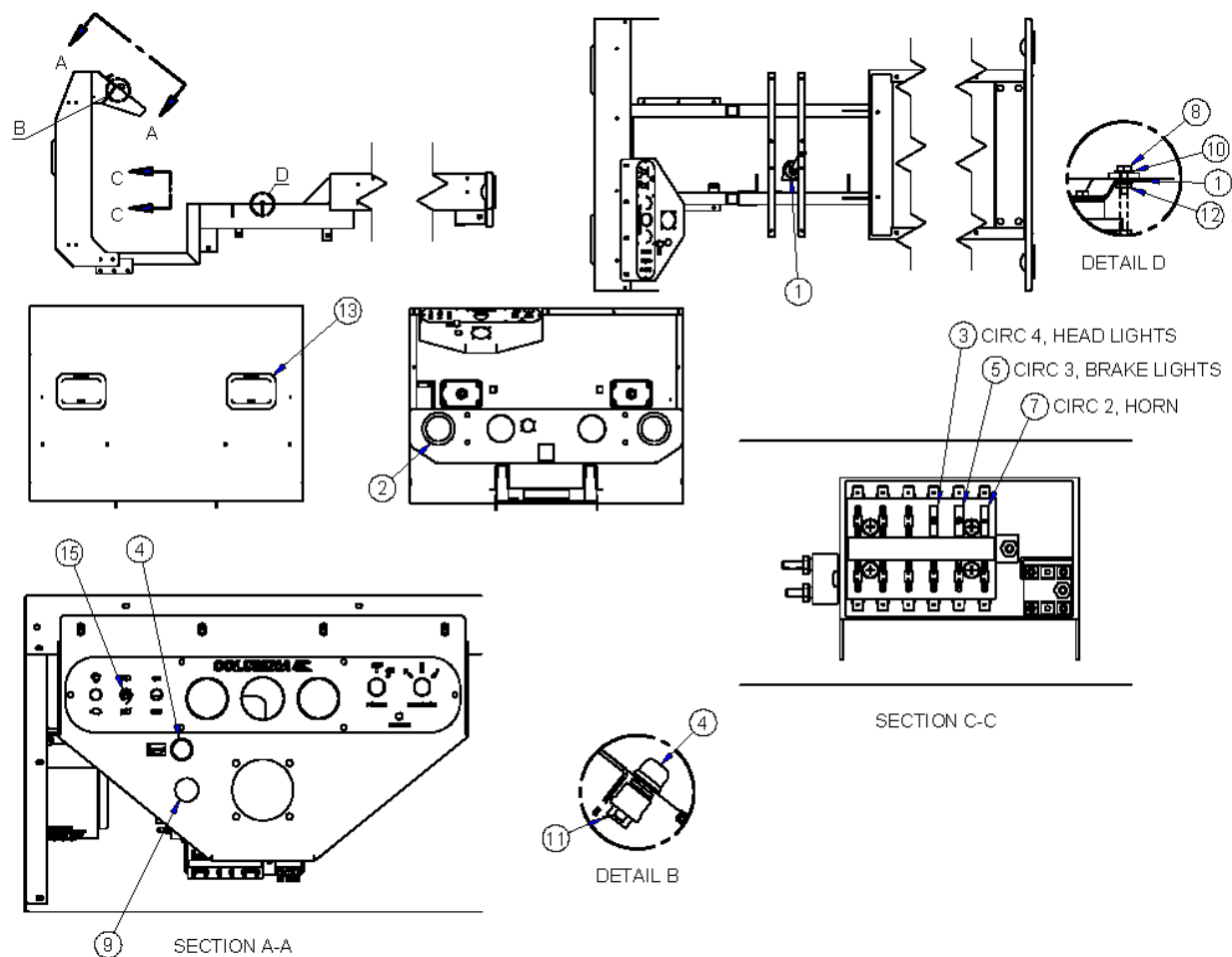
| ITEM | CPC P/N  | DESCRIPTION                             | QTY | SEATS P/N |
|------|----------|-----------------------------------------|-----|-----------|
| 1    | **       | SEAT PAN, MVP (See note)                | 1   | 467543    |
| 2    | **       | COWL, MVP (See note)                    | 1   | 467545    |
| 3    | **       | STEERING MNT, MVP (See note)            | 1   | 467546    |
| 4    | **       | ACCESS COVER, MVP (See note)            | 1   | 467544    |
| 5    | **       | INNER PANEL, MVP (See note)             | 1   | 467547    |
| 6    | **       | BULKHEAD, MVP (See note)                | 1   | 467594    |
| 7    | **       | FUSE COVER, MVP (See note)              | 1   | 467548    |
| 8    | **       | TUBE, STIFFENER - SEAT PAN              | 1   | 512286    |
| 9    | **       | PEDAL COVER, MVP (See note)             | 1   | 467541    |
| 10   | **       | FLOORBOARD, MVP (See note)              | 1   | 467542    |
| 11   | **       | MAT, ANTI-SLIP GRIP, 7.4 FT LG          | 1   | 709933    |
| 12   | 2551-W   | SCREW, 1/4-20 X 1, HHCS, G5, YWZC 150   | 2   | 719564    |
| 13   | 2653-B   | SCREW, #10 X 3/4 HWH TEK #3             | 3   | 719583    |
| 14   | 2685-W   | SCREW, 10=24X5/8 HWH TRD                | 2   | 719586    |
| 15   | 3454-BS  | SCREW, 1/4-20 X 1-3/4 HHCS, G5 HCBK 150 | 4   | 719623    |
| 16   | 3787-B   | SCREW, 1/4-20X3/4,HHCS,G5, BLK150       | 15  | 719636    |
| 17   | 3987-BS  | SCREW, 5/16-18 X 3/4 HHCS, GRADE 5      | 6   | 719642    |
| 18   | 3991     | SCREW, 5/16-18X7/8,HHCS,G5, BLK MAX     | 6   | 719643    |
| 19   | 5405-B   | CARRIAGE BOLT 1/4-20 X 3/4 GR 5 HC-BK   | 10  | 719747    |
| 20   | 6702-B   | WASHER, 5/16,SAE,F/W,BLK MAX            | 18  | 719810    |
| 21   | 6703-B   | WASHER, 1/4,SAE,F/W,BLK MAX             | 42  | 719811    |
| 22   | 6716     | WASHER, #10,SAE,F/W,BLK MAX             | 5   | 719812    |
| 23   | 7036-B   | WASHER LOCK 1/4 REGULAR BLK ZINC        | 8   | 719834    |
| 24   | 7041-B   | WASHER, 5/16, REG-SPRG LOCK, BLK MAX    | 6   | 719838    |
| 25   | 7686     | NUT, 1/4-20, NYLOCK, GA, YWZC           | 21  | 719879    |
| 26   | 7739     | NUT, 5/16-18, L/N,NYLOK,NE,GA, BLKMAX   | 6   | 719892    |
| 27*  | 49090-ZZ | TAPE, FOAM 1/8X1/2X24"                  | 1   | 739272    |
| 28   | **       | KNOB - #10-24 X 1/2 LG                  | 2   | 760022    |
| 29   | 66855-14 | KNOB - 5/16-18 X1 1/2 LG                | 1   | 760023    |
| 30*  | 82762-12 | KIT, 8-FT HOSE W/FITTINGS               | 1   | 760120    |
| 31   | 56980-10 | STEERING WHEEL, 15.50 "                 | 1   | 760636    |
| 32   | 19147-13 | RIVNUT, 1/4-20, ZC                      | 2   | 781598    |
| 33   | 57730-10 | KIT, FRONT MOUNT STEERING               | 1   | 759900    |

\* NOT SHOWN

\*\* SPECIAL ORDER

NOTE: Include VIN for the correct color.

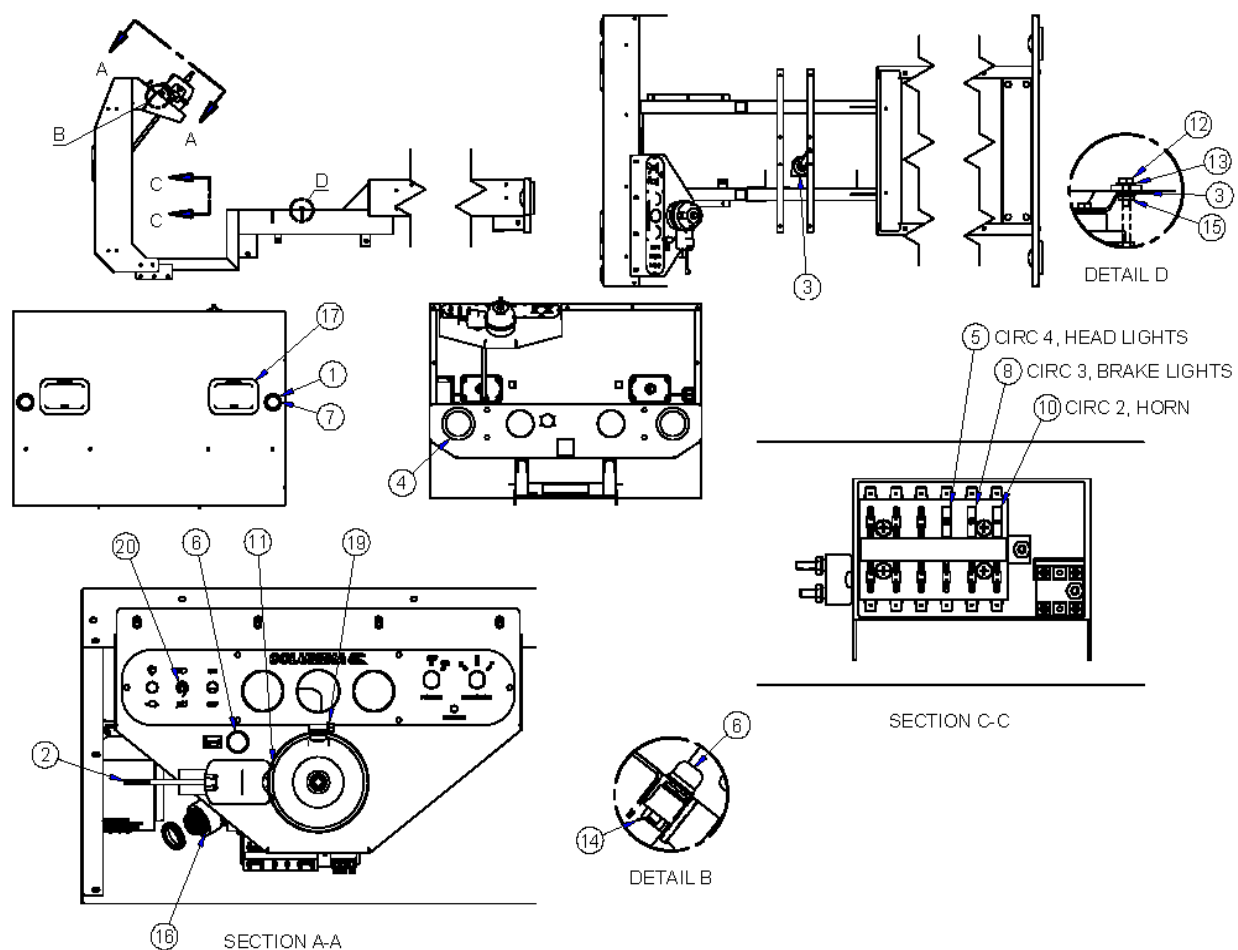
## DRIVING LIGHTS & HORN – MVP



| ITEM | CPC P/N   | DESCRIPTION                           | QTY | SEATS P/N |
|------|-----------|---------------------------------------|-----|-----------|
| 1    | 69001-76A | HORN, 12V (2 TERMINAL)                | 1   | 709089    |
| 2    | 68020-92  | 4" ROUND TAIL LAMP ASSY W/PLUG, SEAL  | 2   | 709109    |
| 3    | 74595-01  | FUSE, 15A ATO/ATC                     | 1   | 709255    |
| 4    | 71807-80  | HORN SWITCH                           | 1   | 709385    |
| 5    | 74596-02  | FUSE, 10A ATO/ATC                     | 1   | 709786    |
| 6*   | 68867-02  | WIRE HARNESS, TURN SIGNL BYPASS PLUG  | 1   | 709861    |
| 7    | 75593-04  | FUSE, 5A ATO/ATC                      | 1   | 719445    |
| 8    | 3787-B    | SCREW, 1/4-20 X 3/4 ,HHCS, G5, BLK150 | 1   | 719636    |
| 9    | 63912     | PLUG, 1" 12 PRONG HOLE ZNC/CLEAR      | 1   | 719794    |
| 10   | 6703-B    | WASHER, 1/4, SAE, F/W,BLK MAX         | 1   | 719811    |
| 11   | 32675-08  | TERMINAL, #10 STUD-TO-1/4 MALE TAB    | 2   | 719825    |
| 12   | 7724-B    | NUT 1/4-20 GR A SERRATED FLNG LOCK    | 1   | 719887    |
| 13   | 69515-12  | HEADLIGHT, 4X6, 12V, BEZEL MOUNT      | 2   | 759915    |
| 14*  | 69516-12  | WIRE HARNESS, 12V, ACCESSORY          | 1   | 760012    |
| 15   | 72000-10  | SWITCH, TOGGLE, LIGHTS ON-OFF         | 1   | 760600    |

\* NOT SHOWN

## DELUXE DRIVING LIGHTS & HORN – MVP



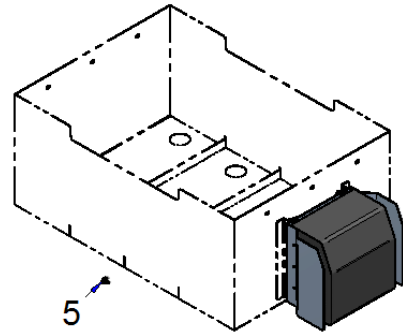
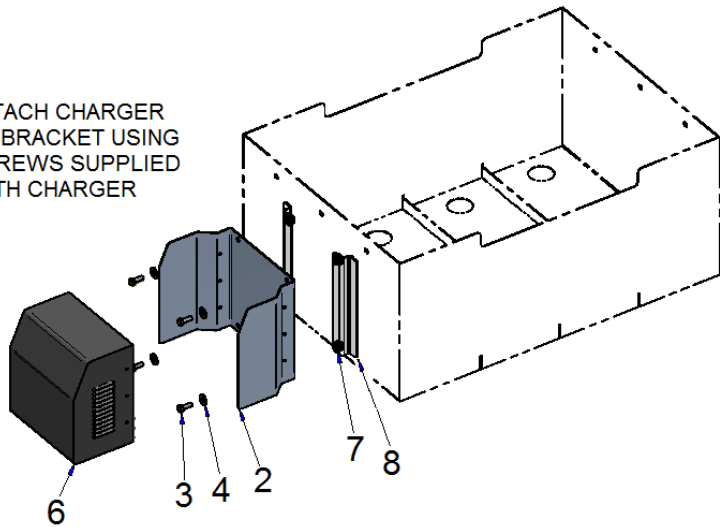
| ITEM | CPC P/N   | DESCRIPTION                            | QTY | SEATS P/N |
|------|-----------|----------------------------------------|-----|-----------|
| 1    | 69836-00  | ASSEMBLY, TURN LIGHT PIGTAIL W/GROMMET | 2   | 463979    |
| 2    | 71426-02  | ASSEMBLY, TURN SWITCH W/GROMMET        | 1   | 464193    |
| 3    | 69001-76A | HORN, 12V (2 TERMINAL)                 | 1   | 709089    |
| 4    | 68020-92  | 4" ROUND TAIL LAMP ASSY W/PLUG, SEAL   | 2   | 709109    |
| 5    | 74595-01  | FUSE, 15A ATO/ATC                      | 1   | 709255    |
| 6    | 71807-80  | HORN SWITCH                            | 1   | 709385    |
| 7    | 68501-00  | LIGHT, 2" AMBER                        | 2   | 709488    |
| 8    | 74596-02  | FUSE, 10A ATO/ATC                      | 1   | 709786    |
| 9*   | 71977-04  | FLASHER, LED LIGHTS                    | 1   | 719366    |
| 10   | 75593-04  | FUSE, 5A ATO/ATC                       | 1   | 719445    |
| 11   | 2612-B    | SCREW, 8-32X1/2 PHILLIPS PHM           | 2   | 719571    |
| 12   | 3787-B    | SCREW, 1/4-20 X 3/4 ,HHCS, G5, BLK150  | 1   | 719636    |
| 13   | 6703-B    | WASHER, 1/4, SAE, F/W,BLK MAX          | 1   | 719811    |
| 14   | 32675-08  | TERMINAL, #10 STUD-TO-1/4 MALE TAB     | 2   | 719825    |
| 15   | 7724-B    | NUT 1/4-20 GR A SERRATED FLNG LOCK     | 1   | 719887    |
| 16   | 71408-96  | AUDIBLE ALARM                          | 1   | 759790    |
| 17   | 69515-12  | HEADLIGHT, 4X6, 12V, BEZEL MOUNT       | 2   | 759915    |
| 18*  | 69516-12  | WIRE HARNESS, 12V, ACCESSORY           | 1   | 760012    |
| 19   | **        | HOSE CLAMP, 3" – 5" STAINLESS STEEL    | 1   | 760524    |
| 20   | 72000-10  | SWITCH, TOGGLE, LIGHTS ON-OFF          | 1   | 760600    |

\* NOT SHOWN

\*\* SPECIAL ORDER

## HIGH OUTPUT PROCHARGER 48V - MVP

ATTACH CHARGER  
TO BRACKET USING  
SCREWS SUPPLIED  
WITH CHARGER



PLUG CHARGER LED IN  
BULKHEAD HOLE BELOW  
DRIVER

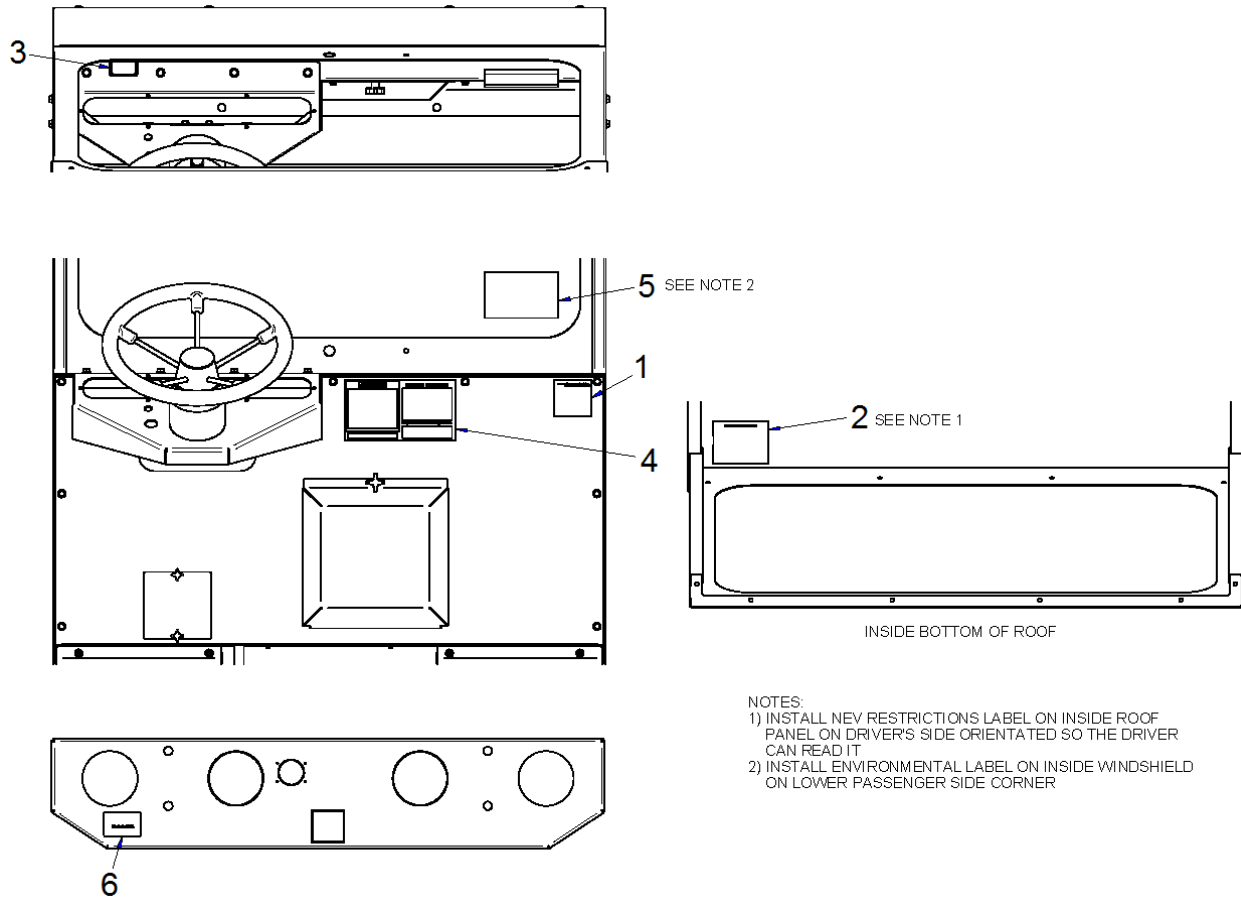
| CIRCUIT<br>NO | DESCRIPTION                                               | FIRST TERMINAL | SECOND TERMINAL                    | WIRE<br>LENGTH * | WIRE<br>COLOR | WIRE<br>GAGE |
|---------------|-----------------------------------------------------------|----------------|------------------------------------|------------------|---------------|--------------|
| 1             | INTERLOCK CONNECTOR / B POSITIVE                          | MOLEX SOCKET   | RING 16/14 INS TONGUE<br>5/16 STUD | 82.00 (1)        | RED           | 16           |
| 2             | INTERLOCK CONNECTOR / MAIN HARNESS<br>INTERLOCK CONNECTOR | MOLEX SOCKET   | 14-16 GA 1/4" F.I.F.               | 82.00 (1)        | RED           | 16           |

| ITEM | CPC P/N  | DESCRIPTION                            | QTY | SEATS P/N |
|------|----------|----------------------------------------|-----|-----------|
| 1    | 66619-14 | CHARGER INTERLOCK HARNESS              | 1   | 468836    |
| 2    | 66221-14 | BRACKET, PROCHARGER                    | 1   | 516307    |
| 3    | 3991     | SCREW, 5/16-18X7/8, HHCS, G5,BLK MAX   | 4   | 719643    |
| 4    | 6000-B   | WASHER, 5/16, USS/STD,F/W,BLK MAX      | 4   | 719771    |
| 5    | 8200     | FASTENER, PUSHPNL, .25 X .6875 X 0.625 | 1   | 719926    |
| 6    | *        | HIGH OUTPUT 48V CHARGER, PRO           | 1   | 761066    |
| 7    | 7537     | NUT, 5/16-18, CAGE, TRIBLK             | 4   | 782045    |
| 8    | *        | BRACKET, MOUNTING                      | 2   | 516308    |
| -    | N/A      | GROUP, PROCHARGER (Includes above)     | 1   | 192925A   |

\* SPECIAL ORDER

## LABELS – MVP



| ITEM | CPC P/N  | DESCRIPTION                              | QTY | SEATS P/N |
|------|----------|------------------------------------------|-----|-----------|
| 1    | *        | VIN LABEL                                | 1   | 511346    |
| 2    | 46930-02 | LABEL, NEV RESTRICTIONS                  | 1   | 511633    |
| 3    | *        | LABEL, SMALL VIN                         | 1   | 512059    |
| 4    | 43960-07 | LABEL, WARNING/OPERATING INSTRUCTIONS    | 1   | 712052    |
| 5    | *        | ENVIRONMENTAL PERFORMANCE LABEL          | 1   | 760692    |
| 6    | 53091-14 | MADE IN USA LABEL                        | 1   | 761132    |
| -    | N/A      | GROUP, VIN LABELS (Includes Items 1 – 6) | 1   | 192926A   |

\* SPECIAL ORDER

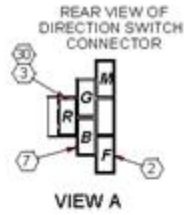
# **Multiple Vehicle Platform Parts Manual**

## **Section 5**

### **Electrical Systems**

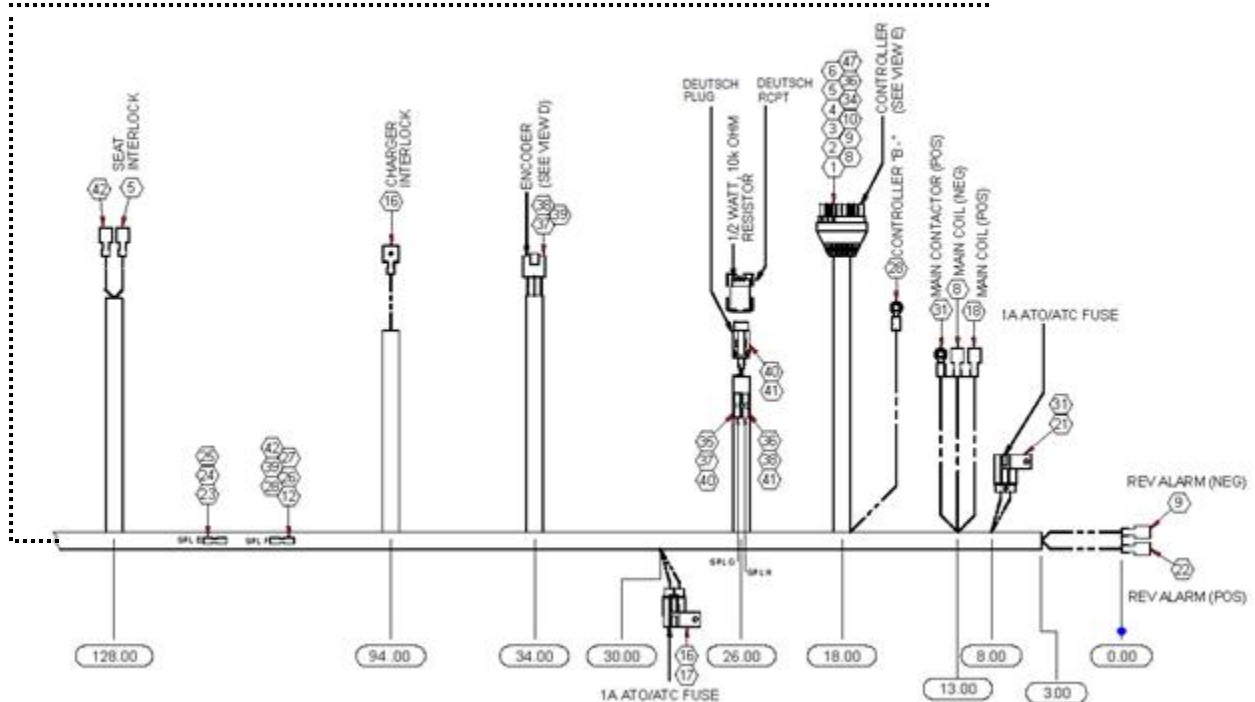
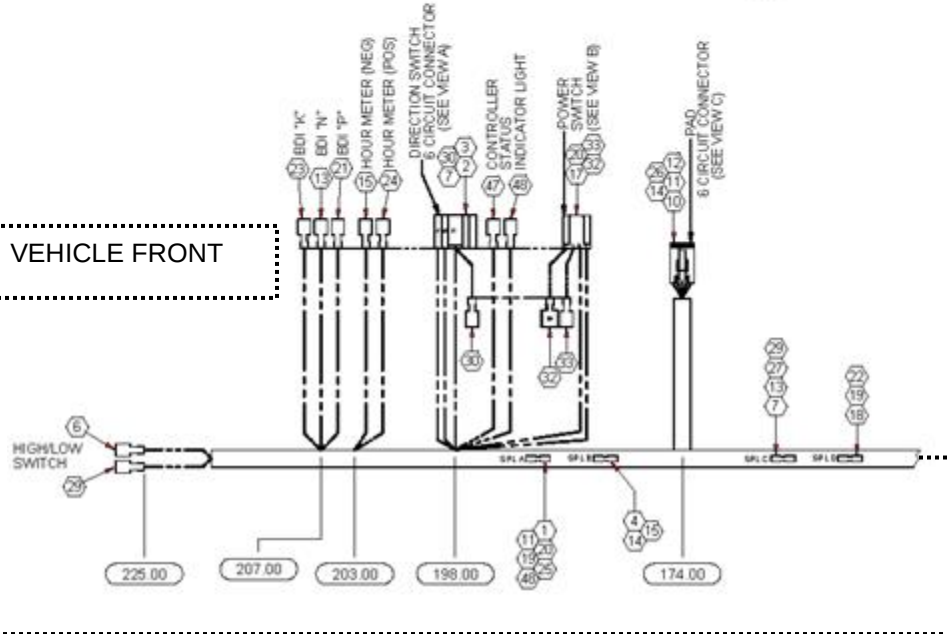
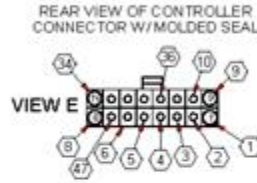
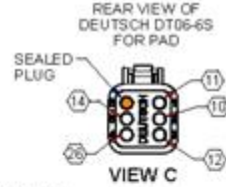
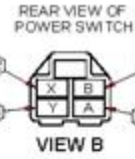
# MAIN HARNESS – MVP

| CIRCUIT NO. | WIRE COLOR | WIRE GAUGE | CIRCUIT NO. | WIRE COLOR | WIRE GAUGE |
|-------------|------------|------------|-------------|------------|------------|
| 1           | RED        | 18         | 23          | WHT        | 18         |
| 2           | GRN        | 18         | 24          | WHT        | 18         |
| 3           | GRY        | 18         | 25          | WHT        | 18         |
| 4           | BLK        | 18         | 26          | YEL        | 18         |
| 5           | BLK        | 18         | 27          | BLK        | 18         |
| 6           | BLK        | 18         | 28          | BLK        | 18         |
| 7           | BLK        | 18         | 29          | BLK        | 18         |
| 8           | BLK        | 18         | 30          | GRY        | 18         |
| 9           | BLK        | 18         | 31          | RED        | 18         |
| 10          | GRN        | 18         | 32          | RED        | 18         |
| 11          | RED        | 18         | 33          | RED        | 18         |
| 12          | BLK        | 18         | 34          | GRN        | 18         |
| 13          | BLK        | 18         | 35          | GRN        | 18         |
| 14          | BLU        | 18         | 36          | RED        | 18         |
| 15          | BLK        | 18         | 37          | GRN        | 18         |
| 16          | RED        | 18         | 38          | RED        | 18         |
| 17          | RED        | 18         | 39          | BLK        | 18         |
| 18          | RED        | 18         | 40          | GRN        | 18         |
| 19          | RED        | 18         | 41          | RED        | 18         |
| 20          | RED        | 18         | 42          | BLK        | 18         |
| 21          | RED        | 18         | 43          | BLK        | 18         |
| 22          | YEL        | 18         | 44          | RED        | 18         |

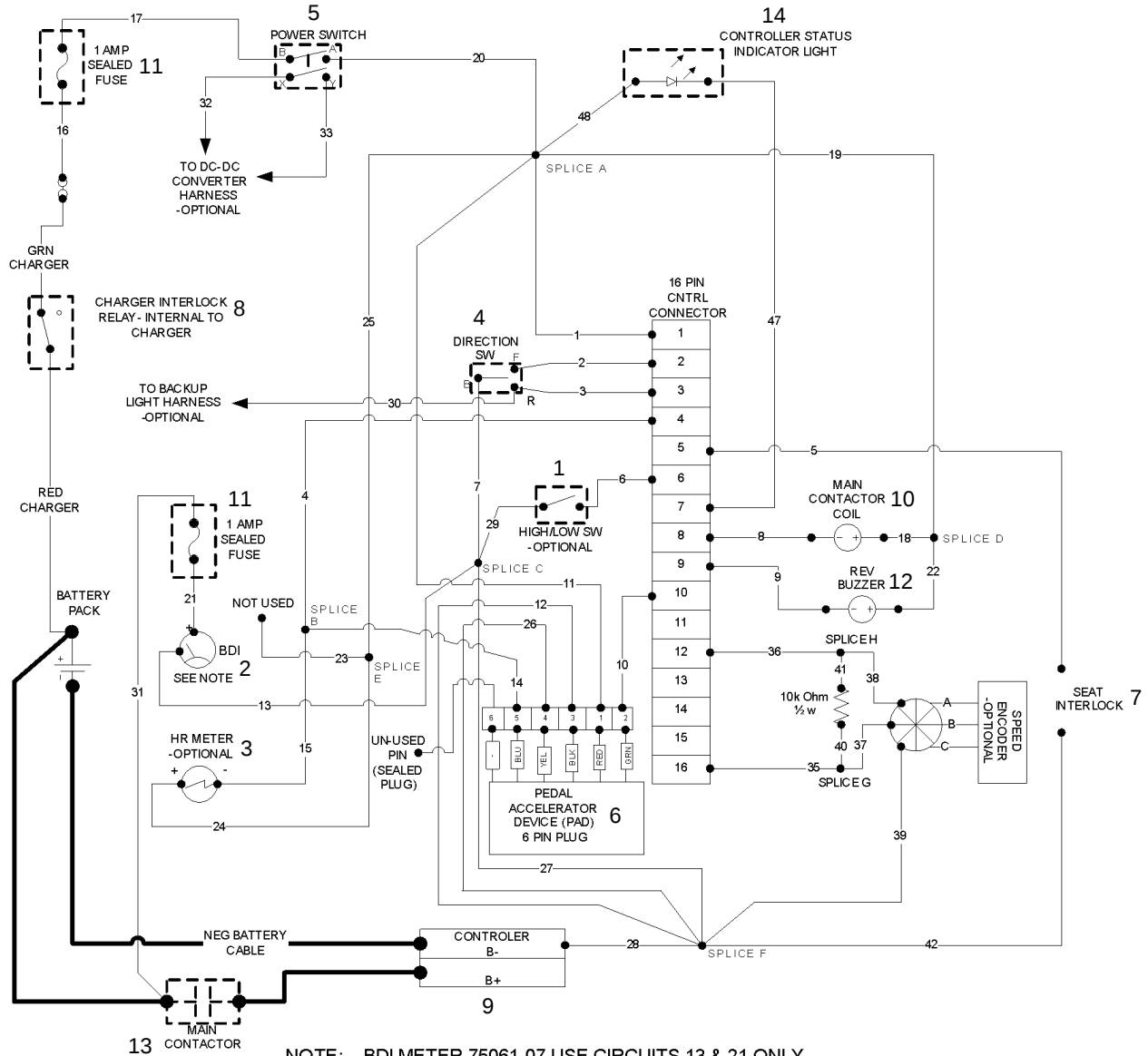


TO 12V ACC W/DC/DC CONN (CIRCUIT #16)

TO 12V ACC W/DC/DC CONN (CIRCUIT #15)



## MAIN HARNESS – MVP (Cont.) SCHEMATIC



| CIRCUIT NO. | WIRE COLOR | CIRCUIT NO. | WIRE COLOR | CIRCUIT NO. | WIRE COLOR | CIRCUIT NO. | WIRE COLOR | CIRCUIT NO. | WIRE COLOR |
|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| 1           | RED        | 11          | RED        | 21          | RED        | 31          | RED        | 41          | RED        |
| 2           | GRN        | 12          | BLK        | 22          | YEL        | 32          | RED        | 42          | BLK        |
| 3           | GRY        | 13          | BLK        | 23          | WHT        | 33          | RED        | 47          | BLK        |
| 4           | BLK        | 14          | BLU        | 24          | WHT        |             |            | 48          | RED        |
| 5           | BLK        | 15          | BLK        | 25          | WHT        | 35          | GRN        |             |            |
| 6           | BLK        | 16          | BLK        | 26          | YEL        | 36          | RED        |             |            |
| 7           | BLK        | 17          | RED        | 27          | BLK        | 37          | GRN        |             |            |
| 8           | BLK        | 18          | RED        | 28          | BLK        | 38          | RED        |             |            |
| 9           | BLK        | 19          | RED        | 29          | BLK        | 39          | BLK        |             |            |
| 10          | GRN        | 20          | RED        | 30          | GRY        | 40          | GRN        |             |            |

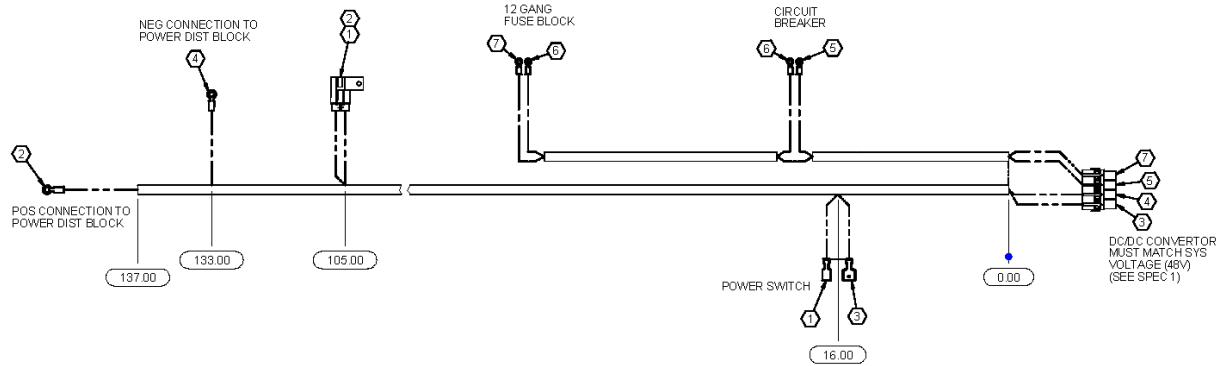
### MAIN HARNESS – MVP (Cont.)

| ITEM | CPC P/N   | DESCRIPTION                                                 | QTY | SEATS P/N |
|------|-----------|-------------------------------------------------------------|-----|-----------|
| 1    | 72000-10  | HIGH/LOW SPEED SWITCH                                       | 1   | 760600    |
| 2    | 75061-07  | BDI METER, 48V                                              | 1   | 759842    |
| 3    | 75033-91A | HOUR METER, 10-80 VDC                                       | 1   | 709452    |
| 4    | 71730-01  | DIRECTION SWITCH                                            | 1   | 709040    |
| 5    | 71732-06  | POWER SWITCH                                                | 1   | 759706    |
| 6    | 40610-10  | PEDAL, INTEGRATED ACCEL, SUSPENDED                          | 1   | 759903    |
| 7    | 69757-95  | SEAT SWITCH                                                 | 1   | 708455    |
| *    | 70038-04  | HARNESS EXTENSION (Used w/Item 7)                           | 1   | 467219    |
| 8    | 66583-12  | CHARGER, DELTA Q 48V W/LED                                  | 1   | 760742    |
| 8A   | 66582-12  | CHARGER, DELTA 2 48V W/LED, AGM                             | 1   | 467839    |
| 9    | 47895-05A | CONTROLLER, SEVCON, RGEN SEPEX 24/48<br>(Programmed 760576) | 1   | 467696    |
| 10   | 71467-02  | CONTACTOR, DOUBLE, 48V COILS                                | 1   | 709825    |
| 11   | 75594-04  | FUSE, 1 AMP ATO/ATC                                         | 1   | 719444    |
| 12   | 71408-96A | AUDIBLE ALARM, 12/48 VDC, SLOW PULSE                        | 1   | 759831    |
| 13   | 71455-01A | CONTACTOR & MOUNTING BRACKET                                | 1   | 709166    |
| 14   | 67791-08  | INDICATOR, LED                                              | 1   | 759932    |
| 15   | 69512-12  | MAIN HARNESS MVP                                            | 1   | 760014    |

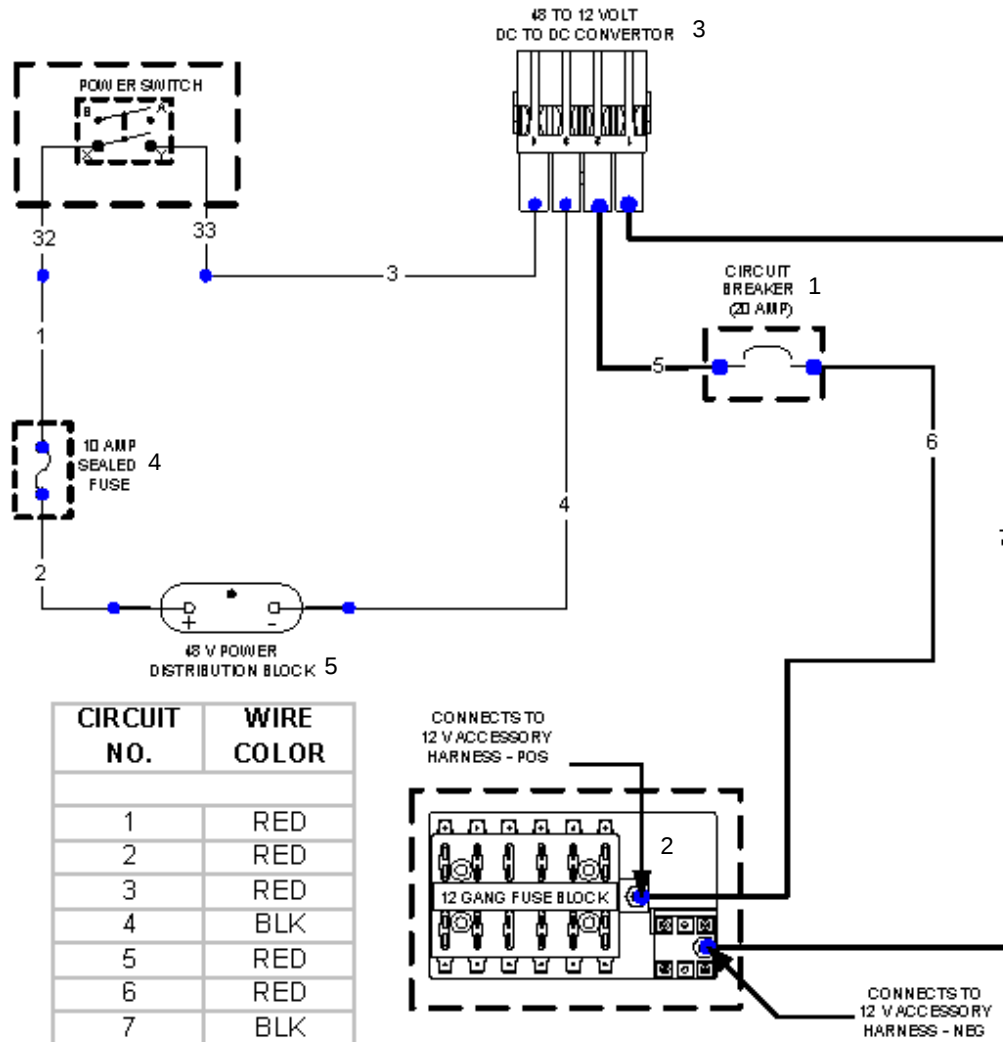
\* NOT SHOWN

## HARNESS DC CONVERTOR – MVP

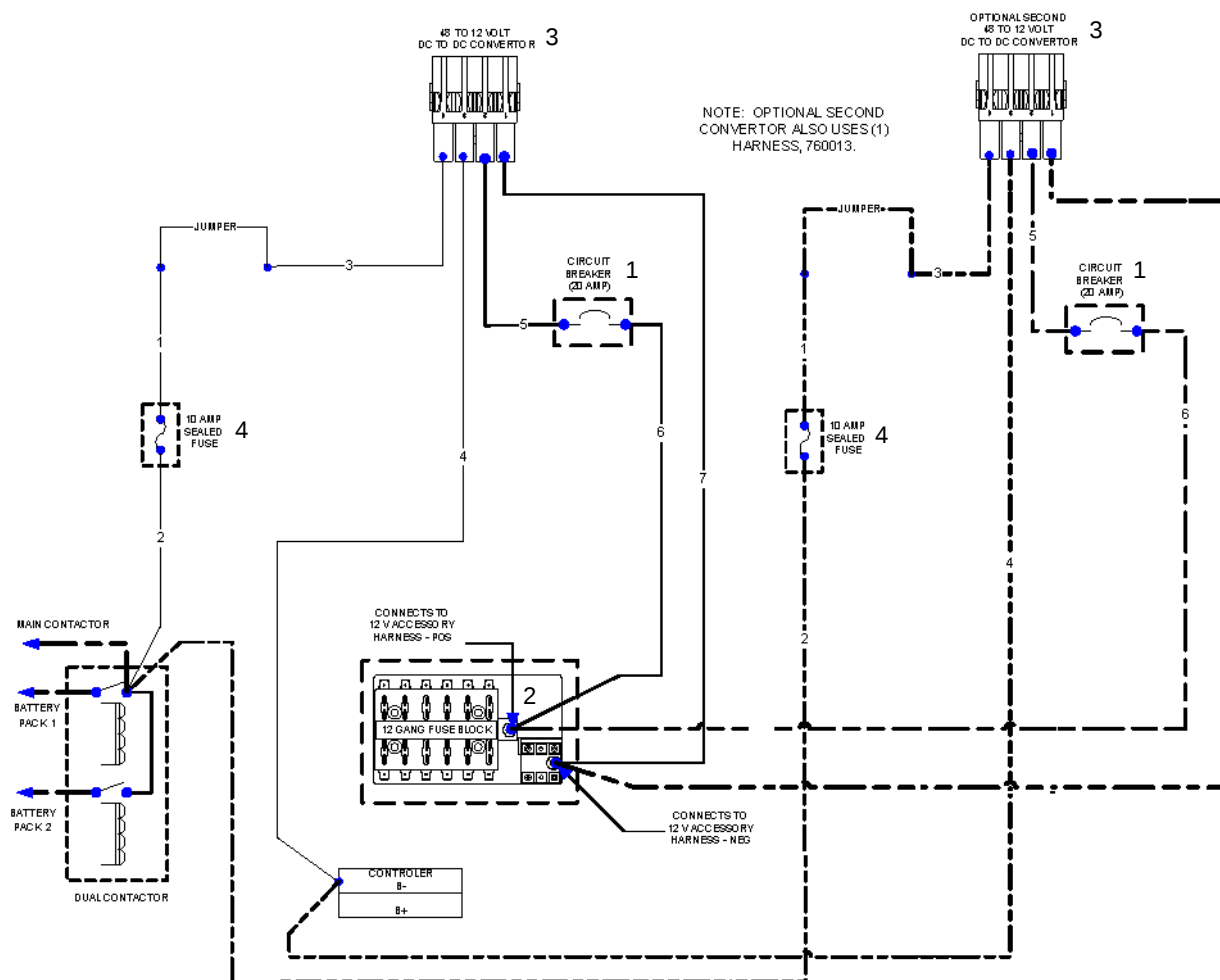
| CIRCUIT NO. | DESCRIPTION                                                         | WIRE COLOR | WIRE GAGE |
|-------------|---------------------------------------------------------------------|------------|-----------|
| 1           | POWER SWITCH "X" TO FUSE HOLDER (10A)                               | RED        | 16        |
| 2           | FUSE HOLDER (10A) TO POWER DISTRIBUTION BLOCK 48V POS               | RED        | 16        |
| 3           | POWER SWITCH "Y" TO DC/DC CONVERTOR POS INPUT (+IN)                 | RED        | 16        |
| 4           | DC/DC CONVERTOR NEG INPUT (-IN) TO POWER DISTRIBUTION BLOCK 48V NEG | BLK        | 16        |
| 5           | DC/DC CONVERTOR 12V OUT (+OUT) TO CIRCUIT BREAKER                   | RED        | 12        |
| 6           | CIRCUIT BREAKER TO 12 GANG FUSE BLOCK (POS)                         | RED        | 12        |
| 7           | 12 GANG FUSE BLOCK (NEG) TO DC/DC CONVERTOR 12V (-OUT)              | BLK        | 12        |



## SCHEMATIC W/SINGLE BATTERY PACK-MVP

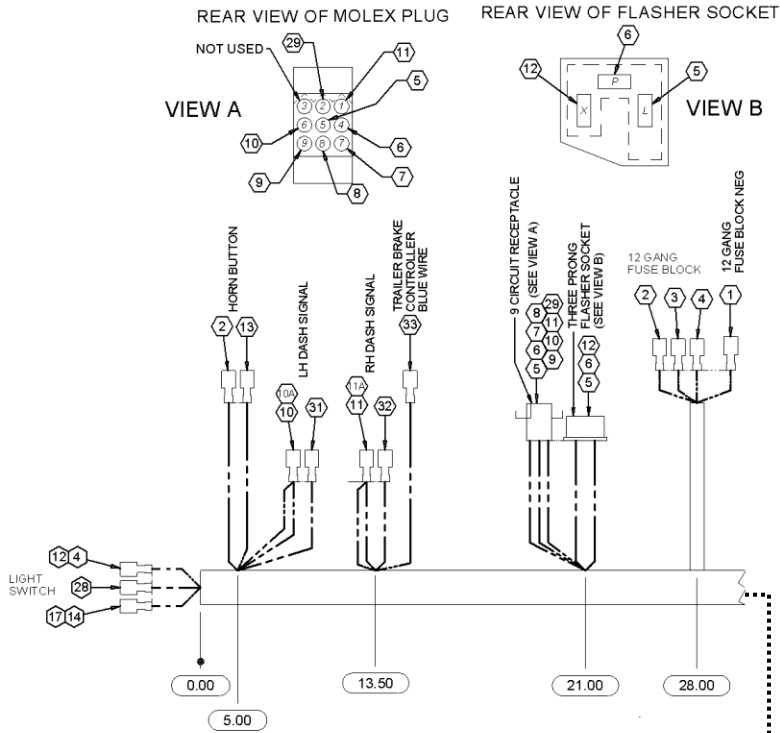


## SCHEMATIC W/DUAL BATTERY PACK - MVP

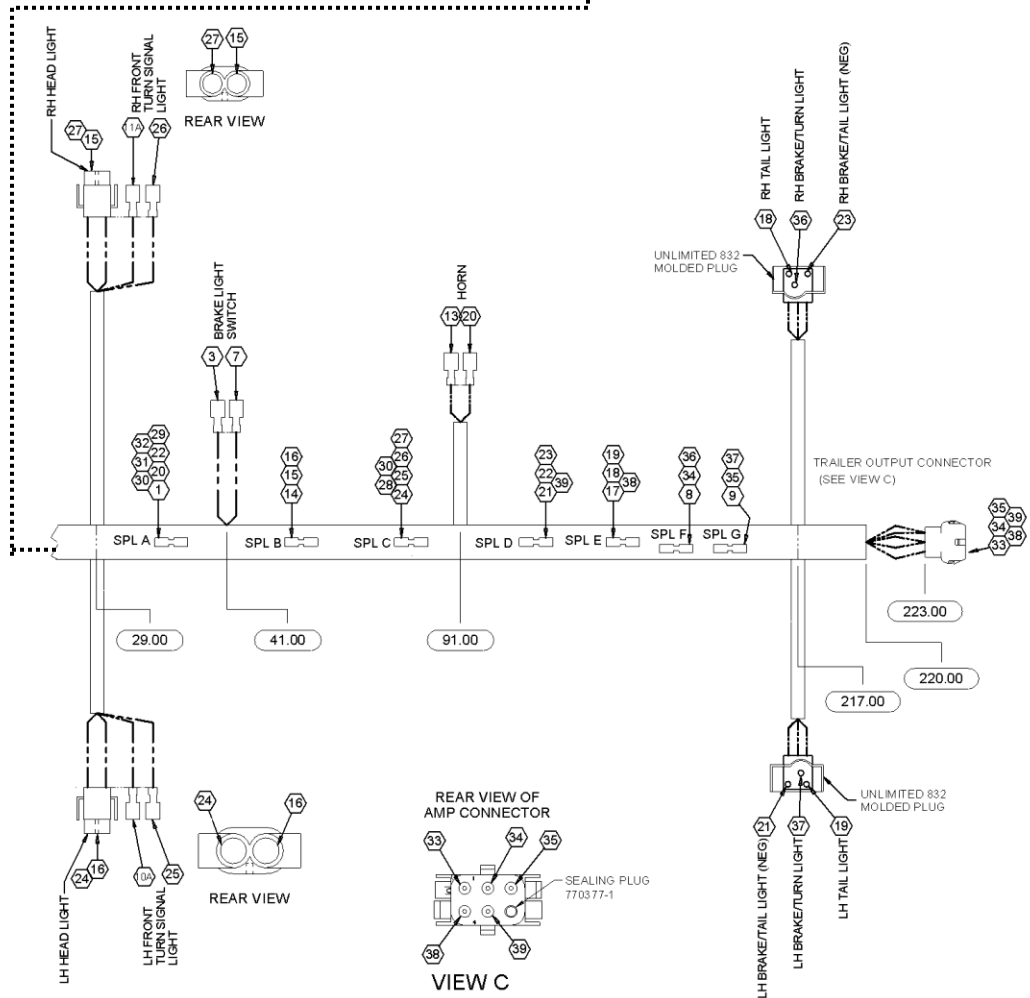


| ITEM | CPC P/N  | DESCRIPTION                            | QTY | SEATS P/N |
|------|----------|----------------------------------------|-----|-----------|
| 1    | 74591-96 | CIRCUIT BREAKER, 20 AMP                | 1/2 | 709398    |
| 2    | 69513-12 | FUSE BLOCK, 12-GANG W/GROUND TERMINAL  | 1   | 759912    |
| 3    | 69642-05 | CONVERTOR, DC-DC 36V/48V, 13.4V, FUSED | 1/2 | 760378    |
| 4    | 74596-02 | FUSE 10 AMP, ATO/ATC                   | 1/2 | 709786    |
| 5    | 71854-06 | BLOCK, POWER DISTRIBUTION              | 1   | 759792    |
| 6    | 71732-06 | POWER SWITCH                           | 1   | 759706    |
| 7    | 69514-12 | WIRE HARNESS, DC CONVERTOR             | 1   | 760013    |

## ACCESSORY HARNESS – MVP

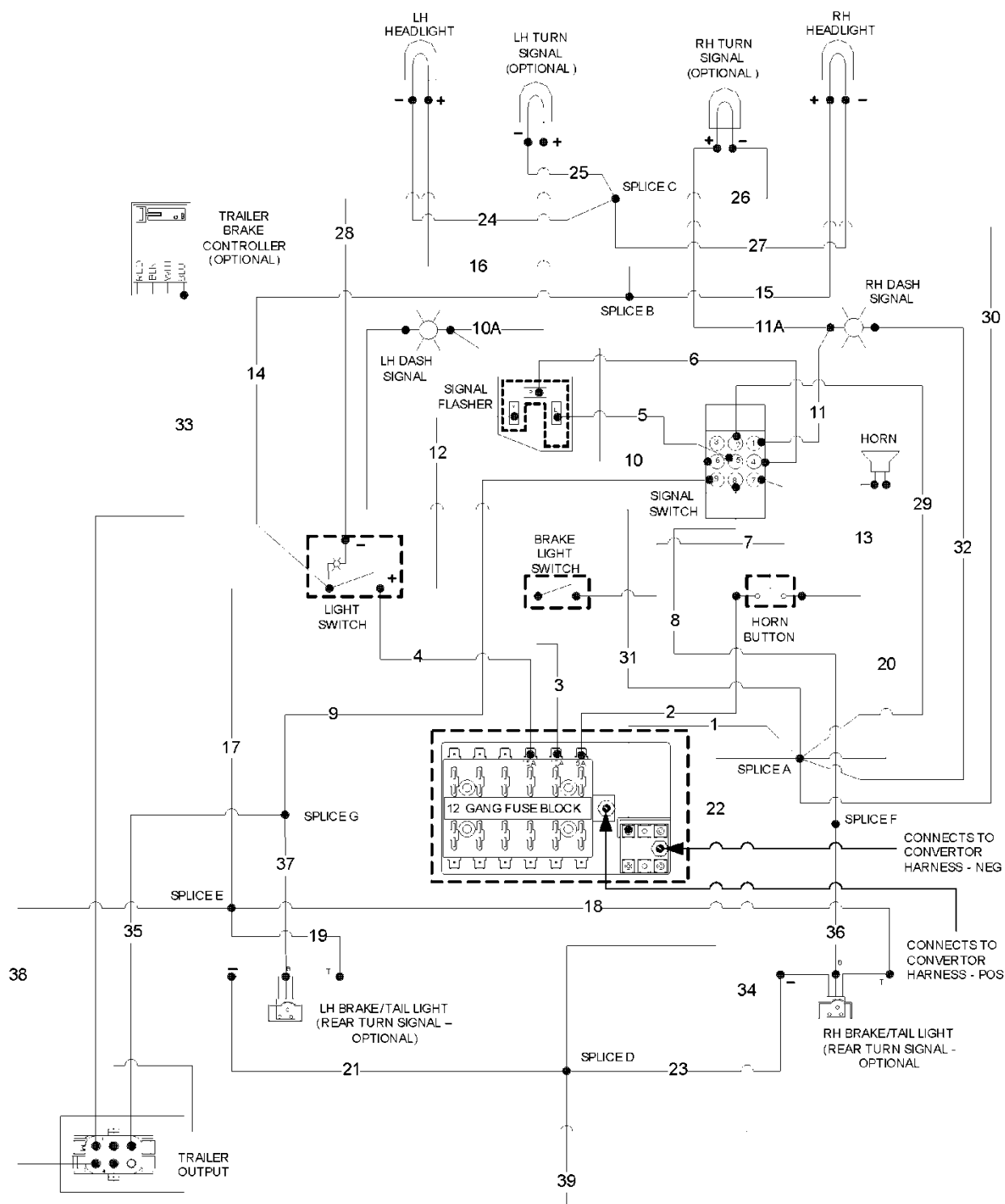


| CIRCUIT NO. | DESCRIPTION                                     | WIRE COLOR | WIRE GAGE |
|-------------|-------------------------------------------------|------------|-----------|
| 1           | 12 GANG FUSE BOX NEG TO SPUCE A                 | BLK        | 12        |
| 2           | 12 GANG FUSE BOX TO HORN BUTTON                 | WHT        | 16        |
| 3           | 12 GANG FUSE BOX TO BRAKE LIGHT SWITCH          | WHT        | 16        |
| 4           | 12 GANG FUSE BOX TO LIGHT SWITCH POS            | RED        | 16        |
| 5           | FLASHER SOCKET (L) TO SIGNAL SWITCH SOCKET (5)  | YEL        | 16        |
| 6           | FLASHER SOCKET (P) TO SIGNAL SWITCH SOCKET (4)  | BLU        | 16        |
| 7           | SIGNAL SWITCH SOCKET (7) TO BRAKE LIGHT SWITCH  | WHT        | 16        |
| 8           | SIGNAL SWITCH SOCKET (8) TO SPUCE F             | GRY        | 16        |
| 9           | SIGNAL SWITCH SOCKET (9) TO SPUCE G             | ORG        | 16        |
| 10          | SIGNAL SWITCH SOCKET (6) TO LH TURN SIGNAL POS  | GRN        | 16        |
| 11          | LH DASH SIGNAL POS TO TURN SIGNAL LIGHT POS     | GRN        | 16        |
| 12          | SIGNAL SWITCH SOCKET (11) TO RH TURN SIGNAL POS | RED        | 16        |
| 11A         | RH DASH SIGNAL POS TO RH TURN SIGNAL LIGHT POS  | RED        | 16        |
| 12A         | LIGHT SWITCH POS TO FLASHER SOCKET (X)          | RED        | 16        |
| 13          | HORN BUTTON TO HORN                             | WHT        | 16        |
| 14          | LIGHT SWITCH LOAD TO SPUCE B                    | BLU        | 16        |
| 15          | SPUCE B TO RH HEADLIGHT POS                     | BLU        | 16        |
| 16          | SPUCE B TO LH HEADLIGHT POS                     | BLU        | 16        |
| 17          | LIGHT SWITCH LOAD TO SPUCE E                    | BLU        | 16        |
| 18          | SPUCE E TO RH TAIL LIGHT                        | BLU        | 16        |
| 19          | SPUCE E TO LH TAIL LIGHT                        | BLU        | 16        |
| 20          | HORN TO SPUCE A                                 | BLK        | 16        |
| 21          | LH BRAKE/TAIL LIGHT NEG TO SPUCE D              | BLK        | 16        |
| 22          | SPUCE A TO SPUCE D                              | BLK        | 16        |
| 23          | RH BRAKE/TAIL LIGHT NEG TO SPUCE D              | BLK        | 16        |
| 24          | LH HEADLIGHT NEG TO SPUCE C                     | BLK        | 16        |
| 25          | TURN SIGNAL NEG TO SPUCE C                      | BLK        | 16        |
| 26          | RH TURN SIGNAL NEG TO SPUCE C                   | BLK        | 16        |
| 27          | SPUCE C TO RH HEADLIGHT NEG                     | BLK        | 16        |
| 28          | SPUCE C TO LIGHT SWITCH NEG                     | BLK        | 16        |
| 29          | SIGNAL SWITCH SOCKET (2) TO SPUCE A             | BLK        | 16        |
| 30          | SPUCE A TO SPUCE C                              | BLK        | 12        |
| 31          | LH DASH SIGNAL NEG TO SPUCE A                   | BLK        | 16        |
| 32          | RH DASH SIGNAL NEG TO SPUCE A                   | BLK        | 16        |
| 33          | TRAILER BRAKE OUTPUT TO LIGHT CONTROLLER        | BLK        | 16        |
| 34          | RH TRAILER TURN SIGNAL OUTPUT TO SPUCE F        | GRY        | 16        |
| 35          | LH TRAILER TURN SIGNAL OUTPUT TO SPUCE G        | ORG        | 16        |
| 36          | RH BRAKE/TURN SIGNAL TO SPUCE F                 | GRY        | 16        |
| 37          | LH BRAKE/TURN SIGNAL TO SPUCE G                 | ORG        | 16        |
| 38          | TRAILER TAIL LIGHT OUTPUT TO SPUCE E            | BLU        | 16        |
| 39          | TRAILER NEG OUTPUT TO SPUCE D                   | BLK        | 16        |



## ACCESSORY HARNESS – MVP (Cont.)

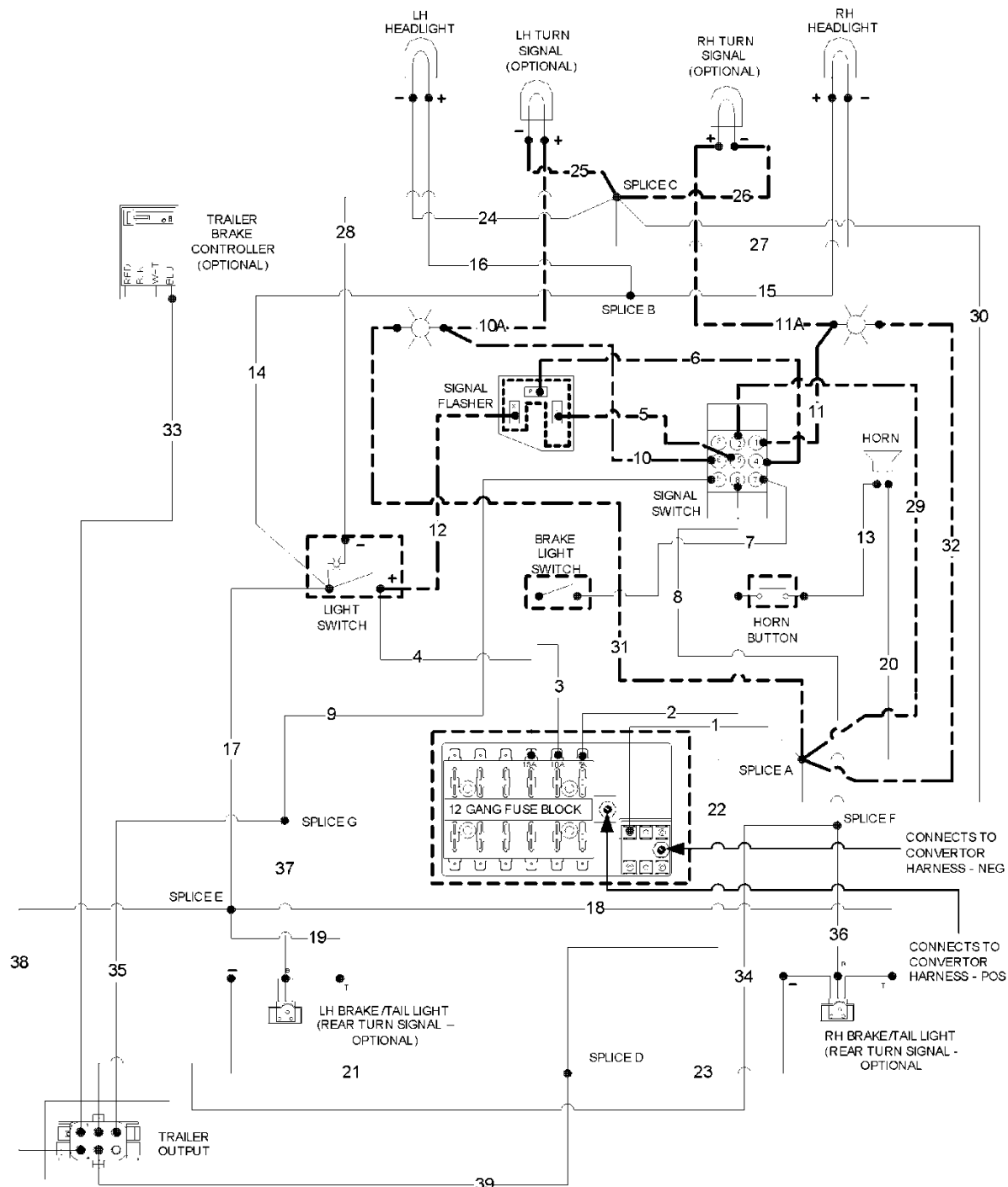
### 12 V ACCESSORY SCHEMATIC DIAGRAM (W/ TURN SIGNAL)



FUSE AMPERAGE FOR EACH CIRCUIT - HORN SWITCH - 5 AMPS  
 BRAKE LIGHT SWITCH - 10 AMPS  
 LIGHT SWITCH - 15 AMPS

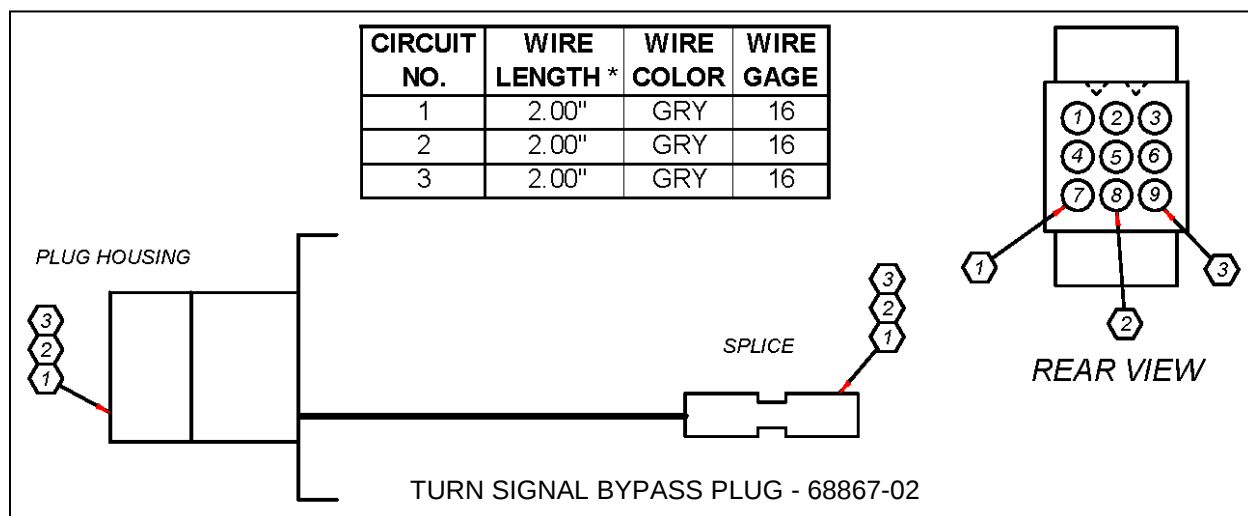
## ACCESSORY HARNESS – MVP (Cont.)

### 12 V ACCESSORY SCHEMATIC DIAGRAM (W/OUT TURN SIGNAL)



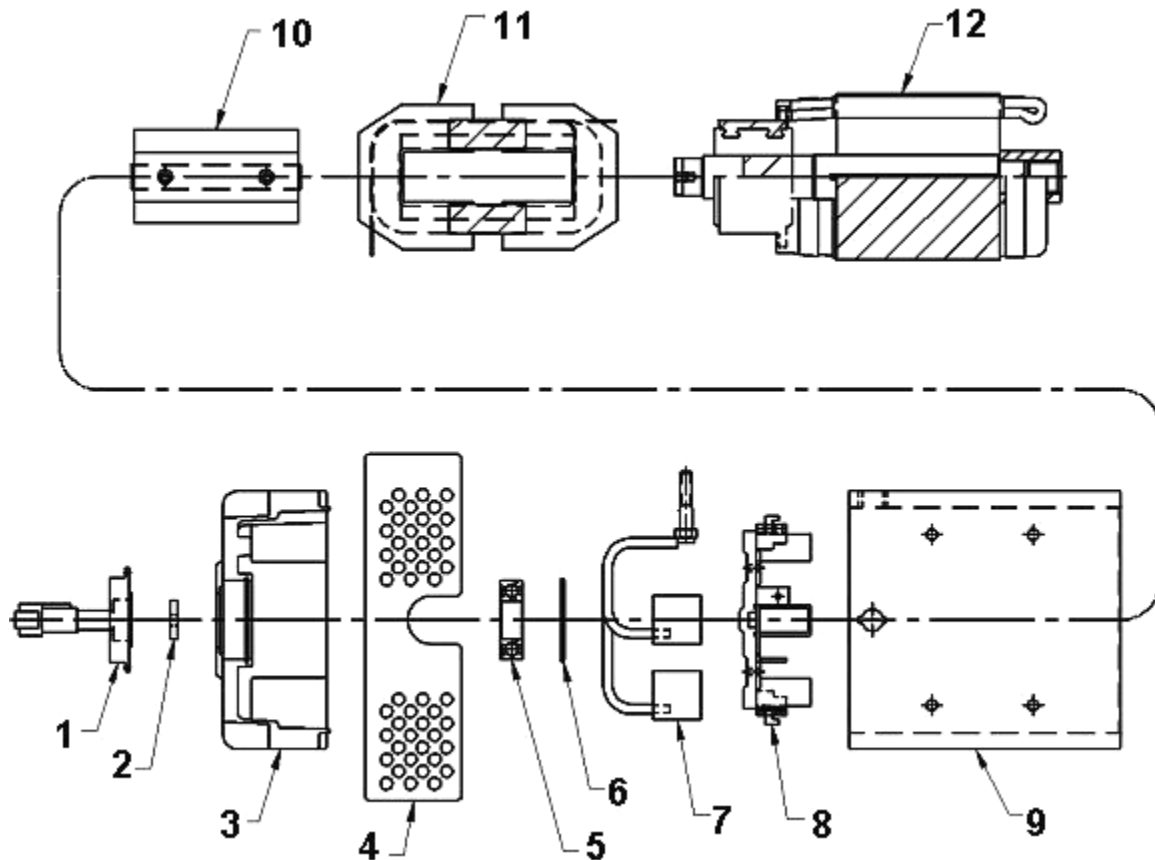
HORN SWITCH - 5 AMPS  
 FUSE AMPERAGE FOR EACH CIRCUIT - BRAKE LIGHT SWITCH - 10 AMPS  
 LIGHT SWITCH - 15 AMPS  
 - - - - - NOT USED

## ACCESSORY HARNESS – MVP (Cont.)



| ITEM | CPC P/N   | DESCRIPTION                       | QTY | SEATS P/N |
|------|-----------|-----------------------------------|-----|-----------|
| 1    | 69516-12  | WIRE HARNESS, MVP, 12V, ACCESSORY | 1   | 760012    |
| 2    | 69836-00  | TURN LIGHT PIGTAIL W/GROMMET      | 2   | 463979    |
| 3    | 74596-02  | FUSE, 10 AMP ATO/ATC              | 1   | 709786    |
| 4    | 74595-01  | FUSE, 15 AMP ATO/ATC              | 1   | 709255    |
| 5    | 75593-04  | FUSE, 5 AMP ATO/ATC               | 1   | 719445    |
| 6    | 69001-76A | HORN, 12V (2 TERMINAL)            | 1   | 709089    |
| 7    | 41212-00  | SWITCH, BRAKE LIGHT               | 1   | 709749    |
| 8    | 71807-80  | SWITCH, HORN                      | 1   | 709385    |
| 9    | 72000-10  | SWITCH, TOGGLE, LIGHT             | 1   | 760600    |
| 10   | 71428-04  | TURN SWITCH ASSY                  | 1   | 467279    |
| 11   | 71977-04  | TURN SIGNAL FLASHER UNIT          | 1   | 719366    |
| 12   | 69515-12  | HEAD LIGHT                        | 2   | 759915    |
| 13   | 68501-00  | TURN LIGHT, AMBER, ROUND          | 2   | 709488    |
| 14   | 68020-92  | BRAKE/TAIL LIGHT 4" ROUND         | 2   | 709109    |
| 14A  | 68028-04  | BRAKE/TAIL LIGHT 4" ROUND LED     | 2   | 719368    |
| 15   | 68867-02  | TURN SIGNAL BYPASS PLUG           | 1   | 709861    |

# MOTOR SINGLE AXLE- MVP



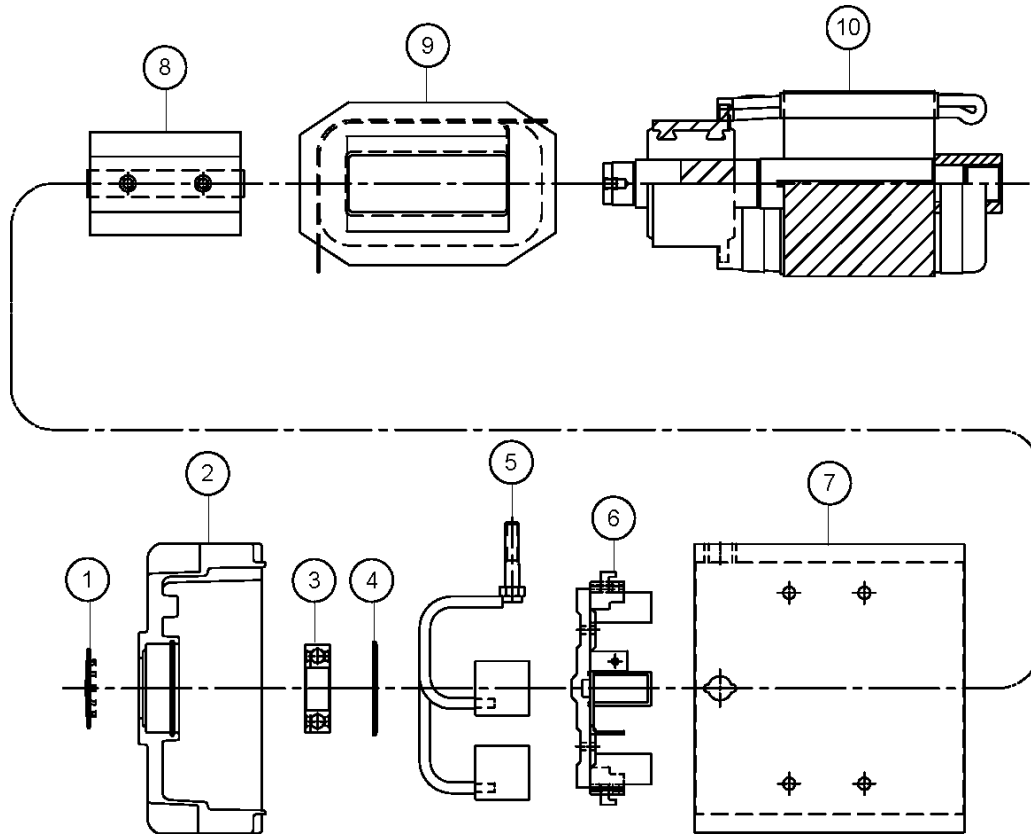
| ITEM | CPC P/N      | DESCRIPTION                                    | QTY. | SEATS P/N |
|------|--------------|------------------------------------------------|------|-----------|
| 1    | 74884-04     | SPEED SENSOR KIT (INCLUDES ITEM 2, SEE NOTE 2) | 1    | 719446    |
| 2    | (SEE NOTE 1) | MAGNET (SEE NOTE 2)                            | 1    | -         |
| 3    | (SEE NOTE 1) | COMMUTATOR END HEAD (SEE NOTE 2)               | 1    | -         |
| 4    | (SEE NOTE 1) | HEAD BAND (SEE NOTE 2)                         | 1    | -         |
| 5    | 83310-07     | BEARING                                        | 1    | 759896    |
| 6    | (SEE NOTE 1) | RETAINING RING                                 | 1    | -         |
| 7    | 30402-06     | BRUSH ASSY. (SEE NOTE 2)                       | 2    | 759780    |
| 8    | 30403-06     | BRUSH BOX ASSY. (SEE NOTE 2)                   | 1    | 759781    |
| 9    | SEE NOTE 1)  | MOTOR FRAME                                    | 1    | -         |
| 10   | SEE NOTE 1)  | POLE SHOE ASSY. (SEE NOTE 2)                   | 4    | -         |
| 11   | SEE NOTE 1)  | SHUNT COIL ASSY. (SEE NOTE 2)                  | 1    | -         |
| 12   | SEE NOTE 1)  | ARMATURE ASSY.                                 | 1    | -         |
| 13*  | 69301-04     | MOTOR, COMPLETE (INCLUDES ITEMS 1-12)          | -    | 719339    |

\* ITEM NOT SHOWN

## NOTES:

1. ONLY AVAILABLE AS SPECIAL ORDER
2. ITEM INCLUDES ALL NECESSARY FASTENERS

## MOTOR DUAL AXLE- MVP

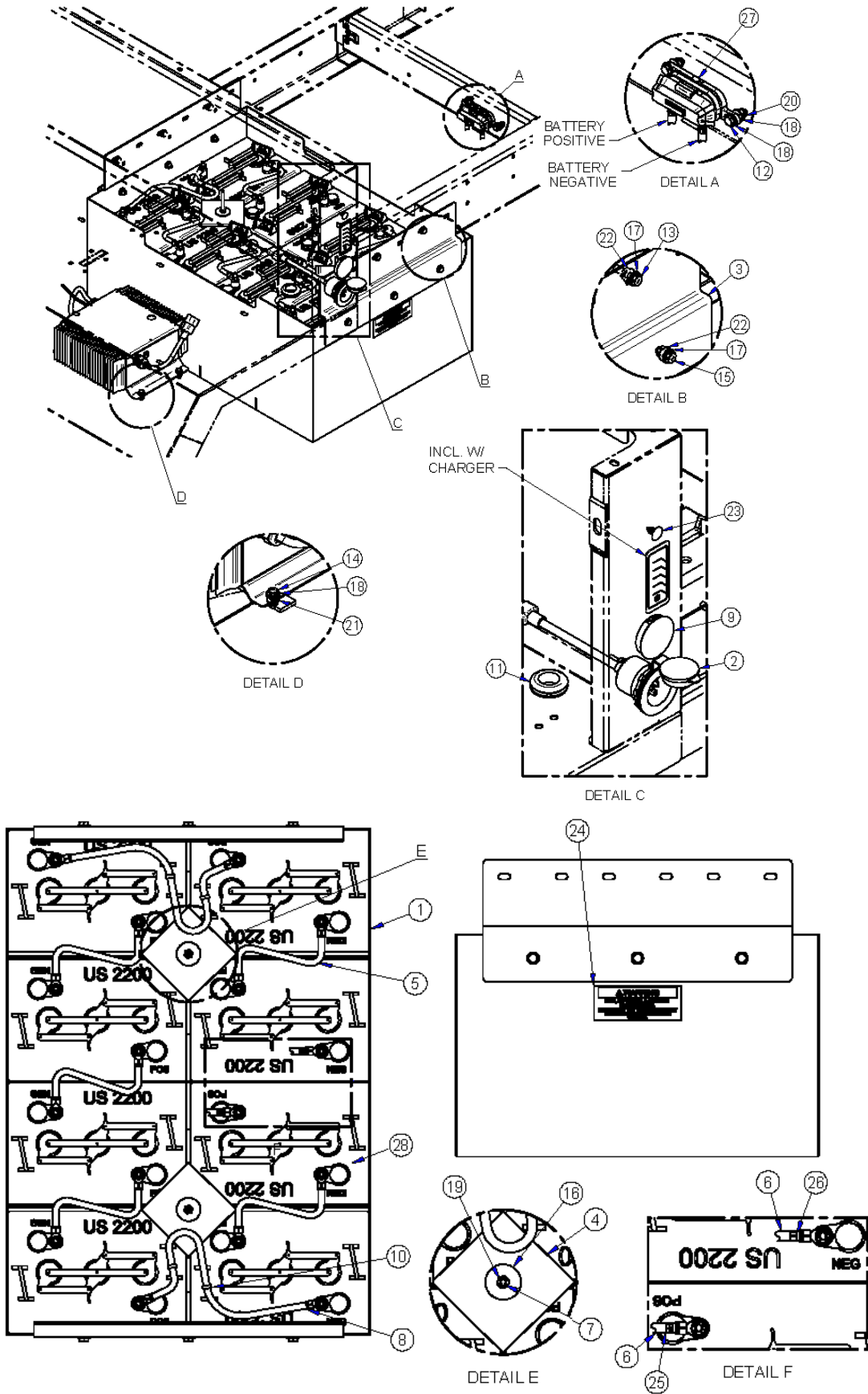


| ITEM | CPC P/N  | DESCRIPTION                              | QTY | SEATS P/N |
|------|----------|------------------------------------------|-----|-----------|
| 1    | *        | HOLE PLUG                                | 1   | N/A       |
| 2    | *        | COMMUTATOR END HEAD (Includes Fasteners) | 1   | N/A       |
| 3    | 83310-07 | BEARING                                  | 1   | 759896    |
| 4    | *        | RETAINING RING                           | 1   | N/A       |
| 5    | 30402-06 | BRUSH ASSY. (Includes Fasteners)         | 2   | 759780    |
| 6    | 30403-06 | BRUSH BOX ASSY. (Includes Fasteners)     | 1   | 759781    |
| 7    | *        | MOTOR FRAME                              | 1   | N/A       |
| 8    | *        | POLE SHOE ASSY. (Includes Fasteners)     | 4   | N/A       |
| 9    | *        | SHUNT COIL ASSY. (Includes Fasteners)    | 1   | N/A       |
| 10   | *        | ARMATURE ASSY.                           | 1   | N/A       |
| N/A  | 69300-03 | MOTOR, COMPLETE (Includes Items 1-10)    | 1   | 719135    |

\* SPECIAL ORDER

\* NOT SHOWN

SINGLE BATTERY TRAY – MVP



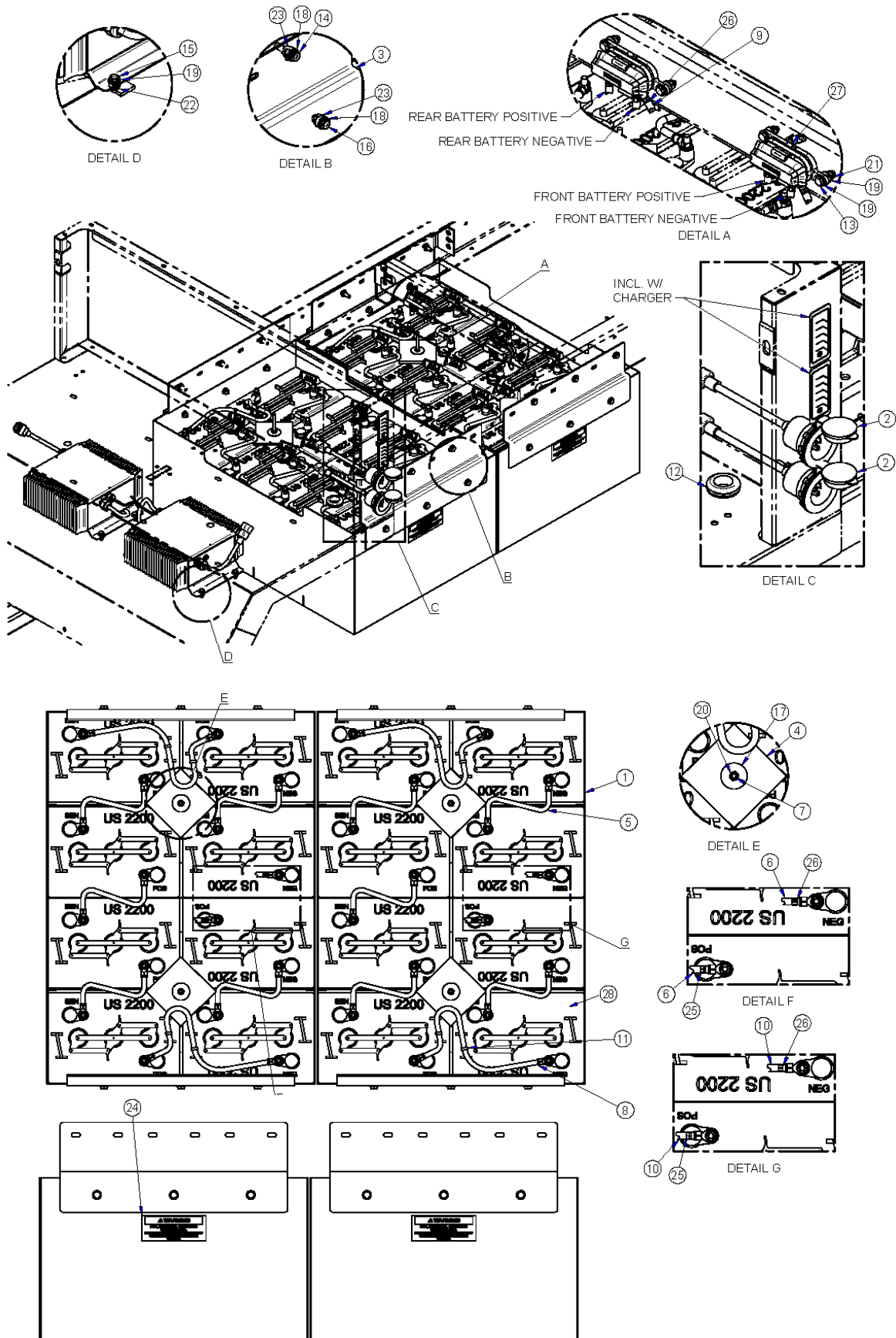
### SINGLE BATTERY TRAY – MVP (Cont.)

| ITEM | CPC P/N   | DESCRIPTION                                  | QTY | SEATS P/N |
|------|-----------|----------------------------------------------|-----|-----------|
| 1    | 66218-12  | TRAY BATTERY                                 | 1   | 309095    |
| 2    | 70036-05  | ASSEMBLY, CHARGER CORD W/ RECEIPT            | 1   | 467405    |
| 3    | 66219-12  | TRAY HANGER BRACKET                          | 2   | 512272    |
| 4    | 66362-96  | PLATE, HOLD DOWN                             | 2   | 513002    |
| 5    | 70099-88  | CABLE, 4GA X 8.75                            | 5   | 709004    |
| 6    | 70105-88  | CABLE, 4GA X 37                              | 2   | 709019    |
| 7    | 66561-90A | HOLD DOWN ROD                                | 2   | 709059    |
| 8    | 70351-88  | CABLE, 4GA X 16.75                           | 2   | 709600    |
| 9    | **        | DOME PLUG 2"                                 | 1   | 719214    |
| 10   | 10043     | NYLON TIE                                    | 8   | 719504    |
| 11   | 11430     | GROMMET                                      | 1   | 719524    |
| 12   | 2551-W    | SCREW, 1/4-20X1 HHCS, G5                     | 2   | 719564    |
| 13   | 2871-W    | SCREW 5/16-18X 1 1/4 HHCS G5                 | 6   | 719592    |
| 14   | 3787-B    | SCREW 1/4-20X3/4 HHC G5                      | 4   | 719636    |
| 15   | 3987-BS   | SCREW 5/16-18X 3/4 HHCS G5                   | 6   | 719642    |
| 16   | 6256      | WASHER, SS .28X1.375X.06                     | 2   | 719786    |
| 17   | 6702-B    | WASHER, 5/16                                 | 12  | 719810    |
| 18   | 6703-B    | WASHER, 1/4 DUAL ONLY                        | 8   | 719811    |
| 19   | 7680      | NUT, 1/4-20 SS NYLON                         | 2   | 719876    |
| 20   | 7686      | NUT, 1/4-20 NYLOCK, GA                       | 2   | 719879    |
| 21   | 7724-B    | NUT, 1/4-20 SER-FLG DUAL ONLY                | 4   | 719887    |
| 22   | 7750      | NUT, 5/16-18 GR F FLNG CTR LOCK              | 12  | 719897    |
| 23   | 8200      | FASTENER, PUSHPNL                            | 1   | 719926    |
| 24   | 53283-00  | DECAL, BATTERY BOX WARNING                   | 2   | 739546    |
| 25   | 71581-84  | WIRE MARKER, POSITIVE                        | 2   | 749180    |
| 26   | 71582-84  | WIRE MARKER, NEGATIVE                        | 2   | 749181    |
| 27   | 71854-06  | BLOCK, POWER DISTRIBUTION                    | 1   | 759792    |
| 28   | 66014-03  | BATTERY, 6V, DEEP CYCLE, (US 2200)           | 8   | 719229    |
| 28A* | 66005-03  | BATTERY, 6V DEEP CYCLE HD, (US-145)          | 8   | 719231    |
| 28B* | 66200-10  | BATTERY, 6V, AGM SEALED                      | 8   | 760586    |
| 29*  | 66210-07  | BATTERY WATERING SYSTEM CAPS                 | 1   | 759857    |
| 30*  | 66211-07  | BATTERY WATERING SYSTEM HAND PUMP            | 1   | 759858    |
| -    | N/A       | GROUP SINGLE BATTERY (Includes Items 1 – 27) | 1   | 191579A   |

\* NOT SHOWN

\*\* SPECIAL ORDER

## DUAL BATTERY TRAY – MVP



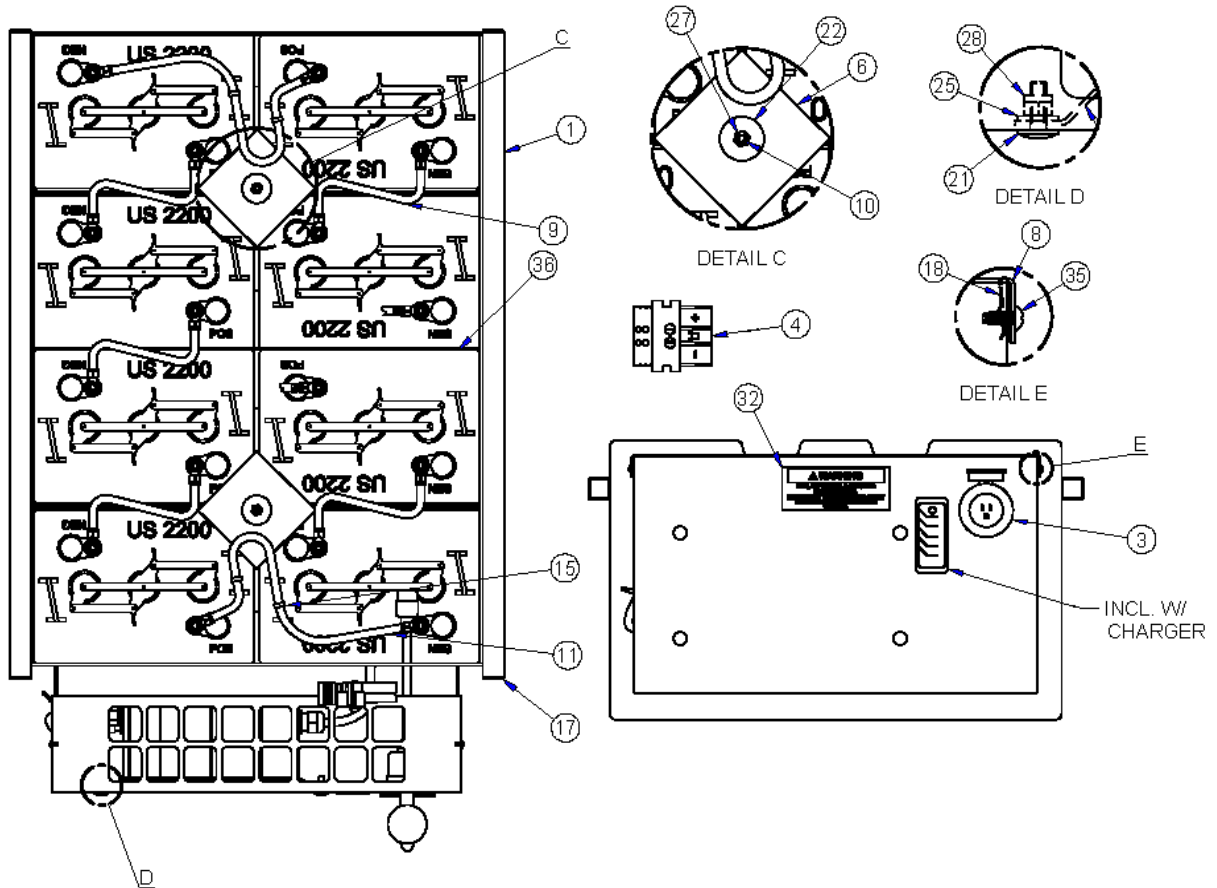
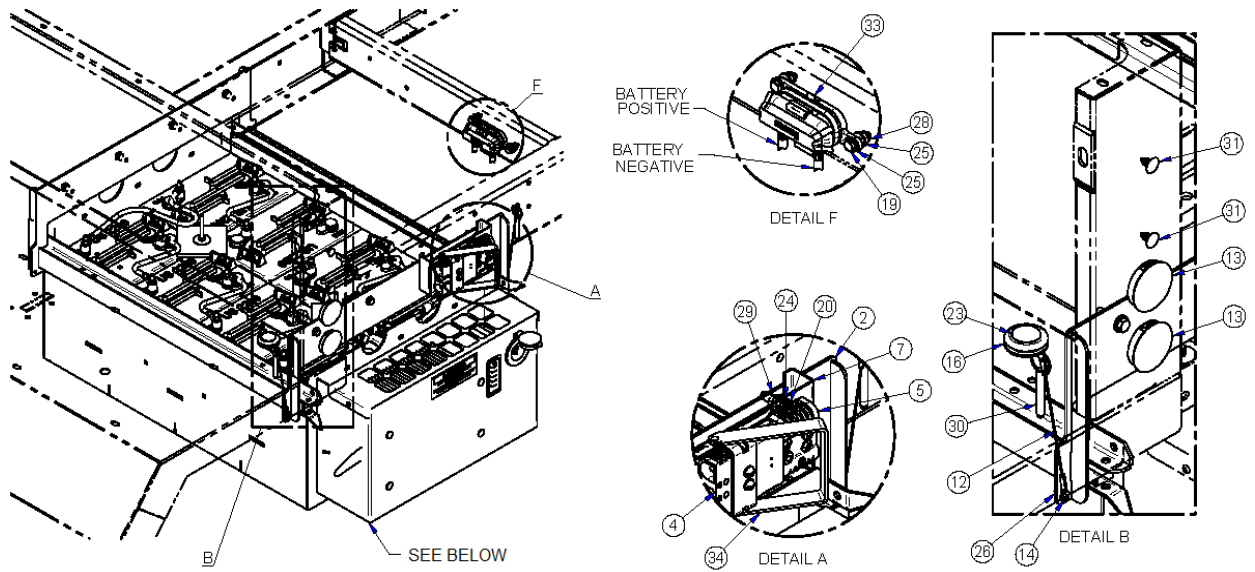
### DUAL BATTERY TRAY – MVP (Cont.)

| ITEM | CPC P/N   | DESCRIPTION                                     | QTY | SEATS P/N |
|------|-----------|-------------------------------------------------|-----|-----------|
| 1    | 66218-12  | TRAY BATTERY                                    | 2   | 309095    |
| 2    | 70036-05  | ASSEMBLY, CHARGER CORD W/ RECEIPT               | 2   | 467405    |
| 3    | 66219-12  | TRAY HANGER BRACKET                             | 4   | 512272    |
| 4    | 66362-96  | PLATE, HOLD DOWN                                | 4   | 513002    |
| 5    | 70099-88  | CABLE, 4GA X 8.75                               | 10  | 709004    |
| 6    | 70105-88  | CABLE, 4GA X 37                                 | 2   | 709019    |
| 7    | 66561-90A | HOLD DOWN ROD                                   | 4   | 709059    |
| 8    | 70351-88  | CABLE, 4GA X 16.75                              | 4   | 709600    |
| 9    | 70351-88  | CABLE, 4GA X 16.75                              | 1   | 709600    |
| 10   | 70112-95  | CABLE, 4GA X 25.5                               | 2   | 709732    |
| 11   | 10043     | NYLON TIE                                       | 16  | 719504    |
| 12   | 11430     | GROMMET                                         | 1   | 719524    |
| 13   | 2551-W    | SCREW, 1/4-20 X1 HHCS, G5                       | 4   | 719564    |
| 14   | 2871-W    | SCREW 5/16-18 X 1 1/4 HHCS G5                   | 8   | 719592    |
| 15   | 3787-B    | SCREW 1/4-20 X 3/4 HHC G5                       | 8   | 719636    |
| 16   | 3987-BS   | SCREW 5/16-18 X 3/4 HHCS G5                     | 12  | 719642    |
| 17   | 6256      | WASHER, SS .28 X 1.375X.06                      | 4   | 719786    |
| 18   | 6702-B    | WASHER, 5/16                                    | 20  | 719810    |
| 19   | 6703-B    | WASHER, 1/4 DUAL ONLY                           | 16  | 719811    |
| 20   | 7680      | NUT, 1/4-20 SS NYLON                            | 4   | 719876    |
| 21   | 7686      | NUT, 1/4-20 NYLOCK, GA                          | 4   | 719879    |
| 22   | 7724-B    | NUT, 1/4-20 SER-FLG DUAL ONLY                   | 8   | 719887    |
| 23   | 7750      | NUT, 5/16-18 GR F FLNG CTR LOCK                 | 20  | 719897    |
| 24   | 53283-00  | DECAL, BATTERY BOX WARNING                      | 4   | 739546    |
| 25   | 71581-84  | WIRE MARKER, POSITIVE                           | 4   | 749180    |
| 26   | 71582-84  | WIRE MARKER, NEGATIVE                           | 6   | 749181    |
| 27   | 71854-06  | BLOCK, POWER DISTRIBUTION                       | 2   | 759792    |
| 28   | 66014-03  | BATTERY, 6V, DEEP CYCLE, (US 2200)              | 16  | 719229    |
| 28A* | 66005-03  | BATTERY, 6V DEEP CYCLE HD, (US-145)             | 16  | 719231    |
| 28B* | 66200-10  | BATTERY, 6V, AGM SEALED                         | 16  | 760586    |
| 29*  | 66210-07  | BATTERY WATERING SYSTEM CAPS                    | 2   | 759857    |
| 30*  | 66211-07  | BATTERY WATERING SYSTEM HAND PUMP               | 2   | 759858    |
| -    | N/A       | GROUP DUAL BATTERY TRAY (Includes Items 1 – 27) | 1   | 191581A   |

\* NOT SHOWN

\*\* SPECIAL ORDER

## BATTERY EXCHANGE TRAY – MVP



## BATTERY EXCHANGE TRAY – MVP (Cont.)

| ITEM | CPC P/N   | DESCRIPTION                                 | QTY | SEATS P/N |
|------|-----------|---------------------------------------------|-----|-----------|
| 1    | **        | BATTERY TRAY, EXCHANGE                      | 1   | 311791    |
| 2    | **        | BATTERY FRAME                               | 1   | 311792    |
| 3    | 70036-05  | CHARGER CORD W/ RECEIPT                     | 1   | 467405    |
| 4    | **        | CONNECTOR ASSEMBLY                          | 1   | 467990    |
| 5    | **        | CONNECTOR, ASSEMBLY DIST BLOCK              | 1   | 467991    |
| 6    | 66362-96  | PLATE, BATTERY HOLD DOWN                    | 2   | 513002    |
| 7    | **        | BRACKET, CONNECTOR                          | 1   | 515395    |
| 8    | **        | COVER, CHARGER                              | 1   | 515396    |
| 6    | 70099-88  | CABLE, 4GA X 8.75", 5/16"                   | 5   | 709004    |
| 10   | 66561-90A | ROD, BATTERY HOLD DOWN                      | 2   | 709059    |
| 11   | 70351-88  | CABLE, 4GA X 16.75", 5/16"                  | 2   | 709600    |
| 12   | 40826-02  | LANYARD, 7 3/4" LG                          | 2   | 709929    |
| 13   | **        | DOME PLUG, BLACK, 2.00"                     | 2   | 719214    |
| 14   | 3615      | SCREW, 10-24 X 1/2 PHILLIPS, BLK            | 2   | 719467    |
| 15   | 10043     | NYLON TIE, BLACK                            | 8   | 719504    |
| 16   | 11430     | GROMMET, 1.00" ID X 1.75" OD X .56", RUBBER | 1   | 719524    |
| 17   | 11432     | CAPLUG, FP-161, 1" SQ X .120 WALL           | 4   | 719525    |
| 18   | 11736     | NUT, TINNEMAN, #10 U-TYPE                   | 2   | 719538    |
| 19   | 2551-W    | SCREW, 1/4-20 X 1, HHCS, G5                 | 2   | 719564    |
| 20   | 2871-W    | SCREW, 5/16-18 X 1-1/4, HHCS, G5            | 8   | 719592    |
| 21   | 5405-B    | CARRIAGE BOLT 1/4-20 X 3/4 GR 5 HC-BK       | 4   | 719747    |
| 22   | 6256      | WASHER FLT STAINLESS .28X1.375X.06          | 2   | 719786    |
| 23   | 63912     | PLUG, 1" 12 PRONG HOLE ZNC/CLEAR            | 1   | 719794    |
| 24   | 6702-B    | WASHER, 5/16, SAE, F/W, BLK MAX             | 8   | 719810    |
| 25   | 6703-B    | WASHER, 1/4, SAE, F/W, BLK MAX              | 8   | 719811    |
| 26   | 7624      | NUT 10-24 GR A NM MACH NYLON LOCK           | 2   | 719870    |
| 27   | 7680      | NUT 1/4-20 NE 316 STAINLESS NYLON           | 2   | 719876    |
| 28   | 7686      | NUT, 1/4-20, NYLOCK, GA                     | 6   | 719879    |
| 29   | 7750      | LOCKNUT, 5/16-18 HX FLNG 2-WAY CNTR         | 8   | 719897    |
| 30   | 799       | PIN, 5/16 X 2, COTTERLESS HITCH,ZC          | 2   | 719918    |
| 31   | 8200      | FASTENER, PUSHPNL, .25 X .6875 X .625       | 2   | 719926    |
| 32   | 53283-00  | DECAL BATTERY BOX WARNING                   | 2   | 739546    |
| 33   | 71854-06  | BLOCK, POWER DISTRIBUTION                   | 1   | 759792    |
| 34   | **        | TRUCK BRACKET, MANUAL RELEASE               | 1   | 760646    |
| 35   | 1503      | SCREW, 10-16 X 1/2",PPH, TYPE B, BLK 96     | 2   | 760890    |
| 36   | 66014-03  | BATTERY, 6V, DEEP CYCLE, (US 2200)          | 8   | 719229    |
| 36A* | 66005-03  | BATTERY, 6V DEEP CYCLE HD, (US-145)         | 8   | 719231    |
| 36B* | 66200-10  | BATTERY, 6V, AGM SEALED                     | 8   | 760586    |

\* NOT SHOWN

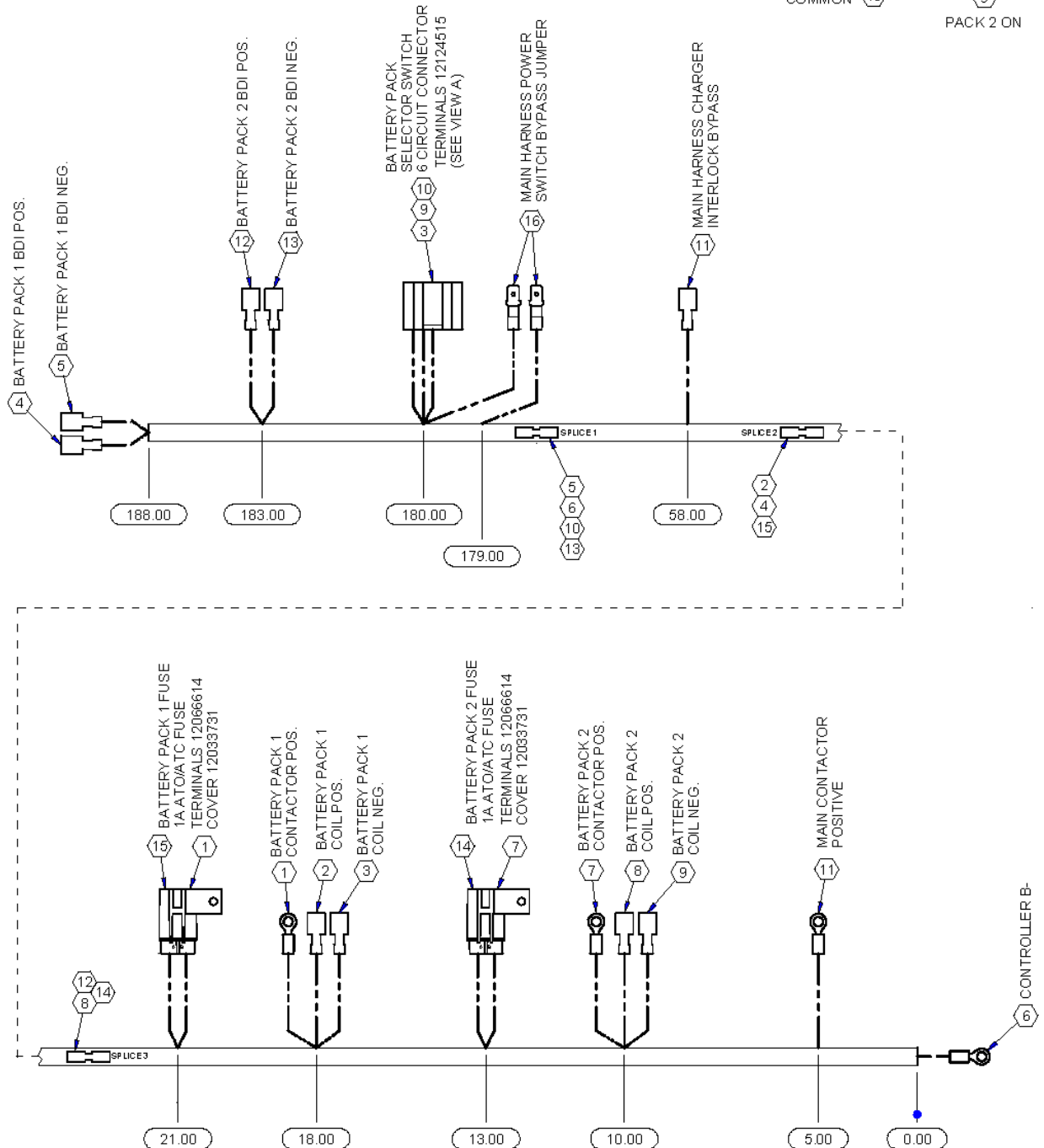
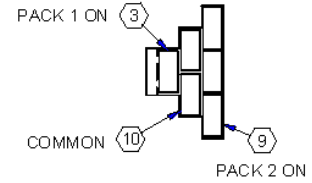
\*\* SPECIAL ORDER

# HARNESS DUAL BATTERY SELECTOR – MVP P/N 71417-12

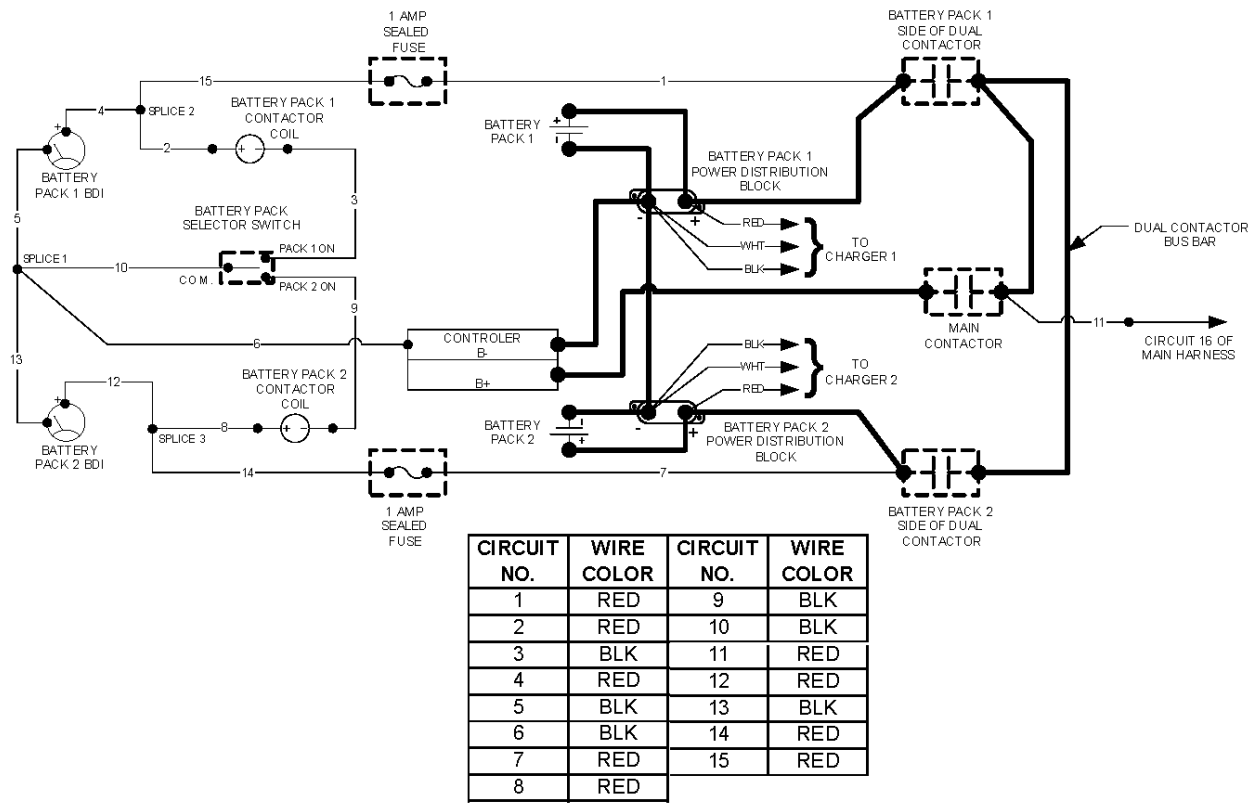
| CIRCUIT NO. | DESCRIPTION                                        | WIRE LENGTH ' | WIRE COLOR | WIRE GAGE |
|-------------|----------------------------------------------------|---------------|------------|-----------|
| 1           | PACK 1 CONTACTOR POS. TO PACK 1 (1A) FUSE          | 11.00         | RED        | 16        |
| 2           | SPLICE 2 TO PACK 1 COIL POS.                       | 15.00         | RED        | 16        |
| 3           | PACK 1 COIL NEG. TO SELECTOR SWITCH "R"            | 170.00        | BLK        | 16        |
| 4           | SPLICE 2 TO PACK 1 BDI POS.                        | 163.00        | RED        | 16        |
| 5           | PACK 1 BD INEG. TO SPLICE 1                        | 16.00         | BLK        | 16        |
| 6           | SPLICE 1 TO CONTROLLER B-                          | 180.00        | BLK        | 12        |
| 7           | PACK 2 CONTACTOR POS TO PACK 2 (1A) FUSE           | 11.00         | RED        | 16        |
| 8           | SPLICE 3 TO PACK 2 COIL POS.                       | 19.00         | RED        | 16        |
| 9           | PACK 2 COIL NEG. TO SELECTOR SWITCH "F"            | 178.00        | BLK        | 16        |
| 10          | SELECTOR SWITCH "B" TO SPLICE 1                    | 8.00          | BLK        | 16        |
| 11          | MAIN HARNESS CIRCUIT 16 TO CONTACTOR SWITCHED SIDE | 61.00         | RED        | 16        |
| 12          | SPLICE 3 TO PACK 2 BDI POS.                        | 162.00        | RED        | 16        |
| 13          | PACK 2 BD INEG. TO SPLICE 1                        | 11.00         | BLK        | 16        |
| 14          | SPLICE 3 TO PACK 2 (1A) FUSE                       | 16.00         | RED        | 16        |
| 15          | SPLICE 2 TO PACK 1 (1A) FUSE                       | 12.00         | RED        | 16        |
| 16          | POWER SWITCH BYPASS                                | 9.00          | RED        | 16        |

VIEW A

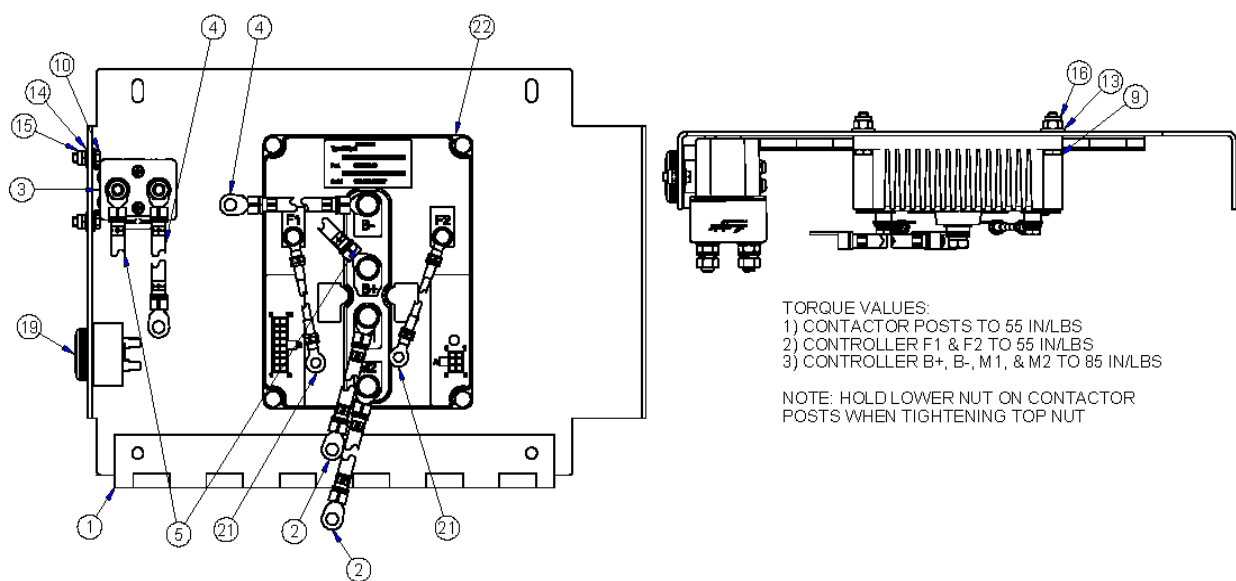
REAR VIEW OF BATTERY  
PACK SELECTOR  
SWITCH CONNECTOR



## HARNESS DUAL BATTERY SELECTOR – MVP (Cont.)



## DC ASSEMBLY PANEL, ONE AXLE & ONE BATTERY PACK – MVP

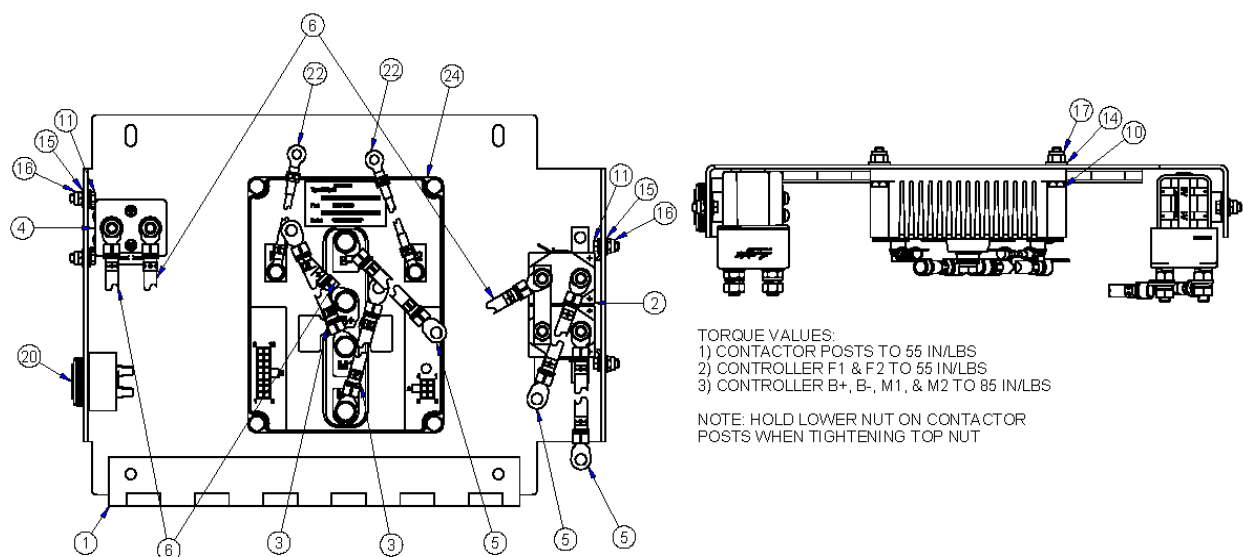


| ITEM | CPC P/N   | DESCRIPTION                                                | QTY | SEATS P/N |
|------|-----------|------------------------------------------------------------|-----|-----------|
| 1    | **        | CONTROL PANEL                                              | 1   | 309106    |
| 2    | 70105-88  | CABLE 4 GA X 37                                            | 2   | 709019    |
| 3    | 71455-01A | CONTACTOR & BRACKET 24 V COIL                              | 1   | 709166    |
| 4    | 70105-89  | CABLE 4 GA X 61.5                                          | 2   | 709411    |
| 5    | 70351-88  | CABLE 4 GA X 16.75                                         | 1   | 709600    |
| 6*   | 32973-04  | WIRE MARKER, F1 (.0278)                                    | 2   | 719330    |
| 7*   | 32972-04  | WIRE MARKER, F2 (.0278)                                    | 2   | 719331    |
| 8*   | 10043     | CABLE TIE, BLACK, .18 X 11 -3/4, STD, 50LB                 | 2   | 719504    |
| 9    | 2551-W    | SCREW, 1/4-20 X 1, HHCS, G5, YWZC 150                      | 4   | 719564    |
| 10   | 2685-W    | SCREW, 10-24 X 5/8 HWH TRD ROL                             | 2   | 719586    |
| 11*  | 32970-67  | WIRE MARKER, A1 (.0278)                                    | 2   | 719600    |
| 12*  | 32971-67  | WIRE MARKER, A2 (.0278)                                    | 2   | 719601    |
| 13   | 6703-B    | WASHER, 1/4, SAE, FW, BLK MAX                              | 4   | 719811    |
| 14   | 6716      | WASHER, #10, SAE, FW, BLK MAX                              | 2   | 719812    |
| 15   | 7624      | NUT 10-24 GR A NM MACH NYLON LOCK                          | 2   | 719870    |
| 16   | 7636      | NUT, 1/4-20, NYLOCK, GA, YWZC                              | 4   | 719879    |
| 17*  | 71581-84  | WIRE MARKER, POSITIVE (.0278)                              | 4   | 749180    |
| 18*  | 71582-84  | WIRE MARKER, NEGATIVE (.0278)                              | 2   | 749181    |
| 19   | 71408-96A | AUDIBLE ALARM 12/48 VDC                                    | 1   | 759831    |
| 20*  | 69512-12  | WIRE HARNESS, MAIN                                         | 1   | 760014    |
| 21   | 71418-12  | CABLE ASSY 10GA X 28, 1/4                                  | 2   | 760222    |
| 22   | 47895-05A | CONTROLLER, SEVCON, RGEN-SEPEX, 24/48C (Programmed 760576) | 1   | 467696    |
| -    | N/A       | ASSEMBLY, DC 1 BAT 1 AXLE (Includes above)                 | 1   | 467564    |

\* NOT SHOWN

\*\* SPECIAL ORDER

## DC ASSEMBLY PANEL ONE AXLE & TWO BATTERY PACKS– MVP

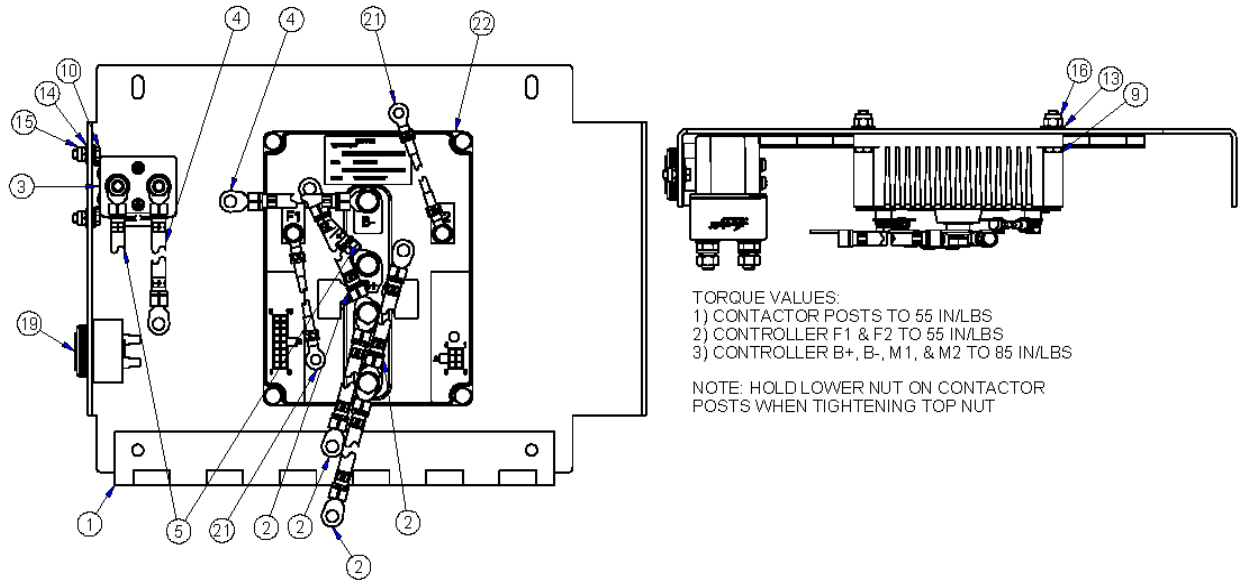


| ITEM | CPC P/N   | DESCRIPTION                                                | QTY | SEATS P/N |
|------|-----------|------------------------------------------------------------|-----|-----------|
| 1    | **        | CONTROL PANEL                                              | 1   | 309106    |
| 2    | 71416-12  | MOD CONTACTOR, DOUBLE – 48 COILS                           | 1   | 467562    |
| 3    | 70105-88  | CABLE 4 GA X 37                                            | 2   | 709019    |
| 4    | 71455-01A | CONTACTOR & BRACKET                                        | 1   | 709166    |
| 5    | 70105-89  | CABLE 4 GA X 61.5                                          | 3   | 709411    |
| 6    | 70351-88  | CABLE 4 GA X 16.75                                         | 2   | 709600    |
| 7*   | 32973-04  | WIRE MARKER, F1 (.0278)                                    | 2   | 719330    |
| 8*   | 32972-04  | WIRE MARKER, F2 (.0278)                                    | 2   | 719331    |
| 9*   | 10043     | CABLE TIE, BLACK, .18 X 11 -3/4, STD, 50LB                 | 2   | 719504    |
| 10   | 2551-W    | SCREW, 1/4-20 X 1, HHCS, G5, YWZC 150                      | 4   | 719564    |
| 11   | 2685-W    | SCREW, 10-24 X 5/8 HWH TRD ROL                             | 4   | 719586    |
| 12*  | 32970-67  | WIRE MARKER, A1 (.0278)                                    | 2   | 719600    |
| 13*  | 32971-67  | WIRE MARKER, A2 (.0278)                                    | 2   | 719601    |
| 14   | 6703-B    | WASHER, 1/4, SAE, FW, BLK MAX                              | 4   | 719811    |
| 15   | 6716      | WASHER, #10, SAE, FW, BLK MAX                              | 4   | 719812    |
| 16   | 7624      | NUT 10-24 GR A NM MACH NYLON LOCK                          | 4   | 719870    |
| 17   | 7636      | NUT, 1/4-20, NYLOCK, GA, YWZC                              | 4   | 719879    |
| 18*  | 71581-84  | WIRE MARKER, POSITIVE (.0278)                              | 8   | 749180    |
| 19*  | 71582-84  | WIRE MARKER, NEGATIVE (.0278)                              | 2   | 749181    |
| 20   | 71408-96A | AUDIBLE ALARM 12/48 VDC                                    | 1   | 759831    |
| 21*  | 69512-12  | WIRE HARNESS, MAIN                                         | 1   | 760014    |
| 22   | 71418-12  | CABLE ASSY 10GA X 28, 1/4                                  | 2   | 760222    |
| 23*  | 71417-12  | WIRE HARNESS, DUAL BATTERY SELECTOR                        | 1   | 760317    |
| 24   | 47895-05A | CONTROLLER, SEVCON, RGEN-SEPEX, 24/48C (Programmed 760576) | 1   | 467696    |
| -    | N/A       | ASSEMBLY, DC 2 BAT 1 AXLE (Includes above)                 | 1   | 467634    |

\* NOT SHOWN

\*\* SPECIAL ORDER

## DC ASSEMBLY PANEL TWO AXLES & ONE BATTERY PACK- MVP

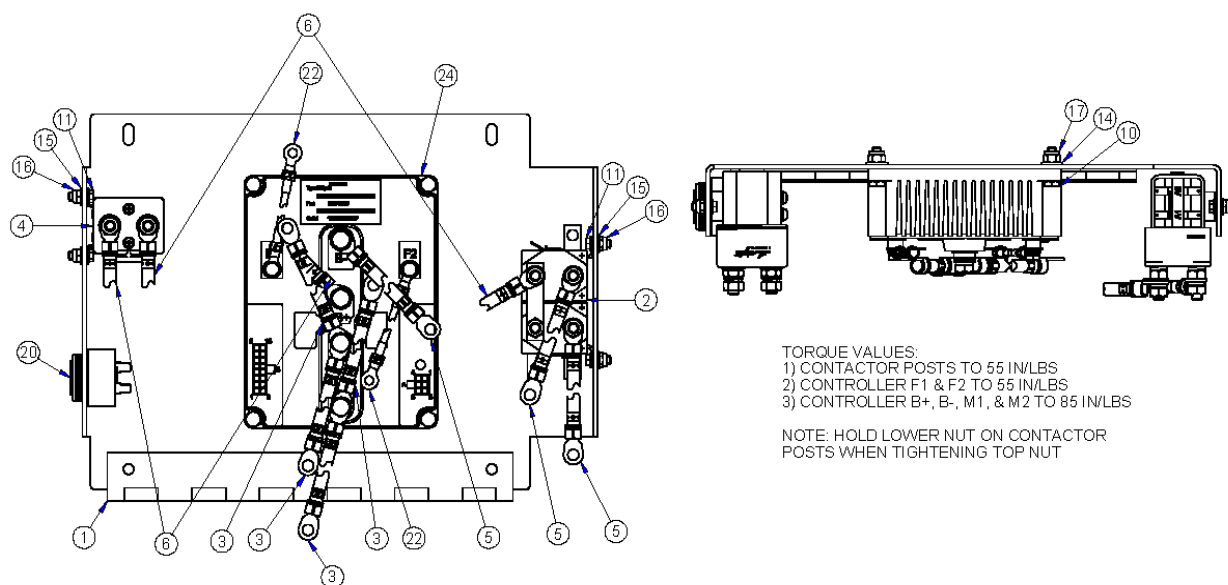


| ITEM | CPC P/N   | DESCRIPTION                                                   | QTY | SEATS P/N |
|------|-----------|---------------------------------------------------------------|-----|-----------|
| 1    | **        | CONTROL PANEL                                                 | 1   | 309106    |
| 2    | 70105-88  | CABLE 4 GA X 37                                               | 4   | 709019    |
| 3    | 71455-01A | CONTACTOR & BRACKET                                           | 1   | 709166    |
| 4    | 70105-89  | CABLE 4 GA X 61.5                                             | 2   | 709411    |
| 5    | 70351-88  | CABLE 4 GA X 16.75                                            | 1   | 709600    |
| 6*   | 32973-04  | WIRE MARKER, F1 (.0278)                                       | 2   | 719330    |
| 7*   | 32972-04  | WIRE MARKER, F2 (.0278)                                       | 2   | 719331    |
| 8    | 10043     | CABLE TIE, BLACK, .18 X 11 -3/4, STD, 50LB                    | 2   | 719504    |
| 9    | 2551-W    | SCREW, 1/4-20 X 1, HHCS, G5, YWZC 150                         | 4   | 719564    |
| 10   | 2685-W    | SCREW, 10-24 X 5/8 HWH TRD ROL                                | 2   | 719586    |
| 11*  | 32970-67  | WIRE MARKER, A1 (.0278)                                       | 4   | 719600    |
| 12*  | 32971-67  | WIRE MARKER, A2 (.0278)                                       | 4   | 719601    |
| 13   | 6703-B    | WASHER, 1/4, SAE, FW, BLK MAX                                 | 4   | 719811    |
| 14   | 6716      | WASHER, #10, SAE, FW, BLK MAX                                 | 2   | 719812    |
| 15   | 7624      | NUT 10-24 GR A NM MACH NYLON LOCK                             | 2   | 719870    |
| 16   | 7636      | NUT, 1/4-20, NYLOCK, GA, YWZC                                 | 4   | 719879    |
| 17*  | 71581-84  | WIRE MARKER, POSITIVE (.0278)                                 | 4   | 749180    |
| 18*  | 71582-84  | WIRE MARKER, NEGATIVE (.0278)                                 | 2   | 749181    |
| 19   | 71408-96A | AUDIBLE ALARM 12/48 VDC                                       | 1   | 759831    |
| 20*  | 69512-12  | WIRE HARNESS, MAIN                                            | 1   | 760014    |
| 21   | 71418-12  | CABLE ASSY 10GA X 28, 1/4                                     | 2   | 760222    |
| 22*  | 47895-05A | CONTROLLER, SEVCON, RGEN-SEPEX, 24/48C<br>(Programmed 760576) | 1   | 467696    |
| -    | N/A       | ASSEMBLY, DC 1 BAT 2 AXLE                                     | 1   | 467596    |

\* NOT SHOWN

\*\* SPECIAL ORDER

## DC ASSEMBLY PANEL TWO AXLES & TWO BATTERY PACK- MVP

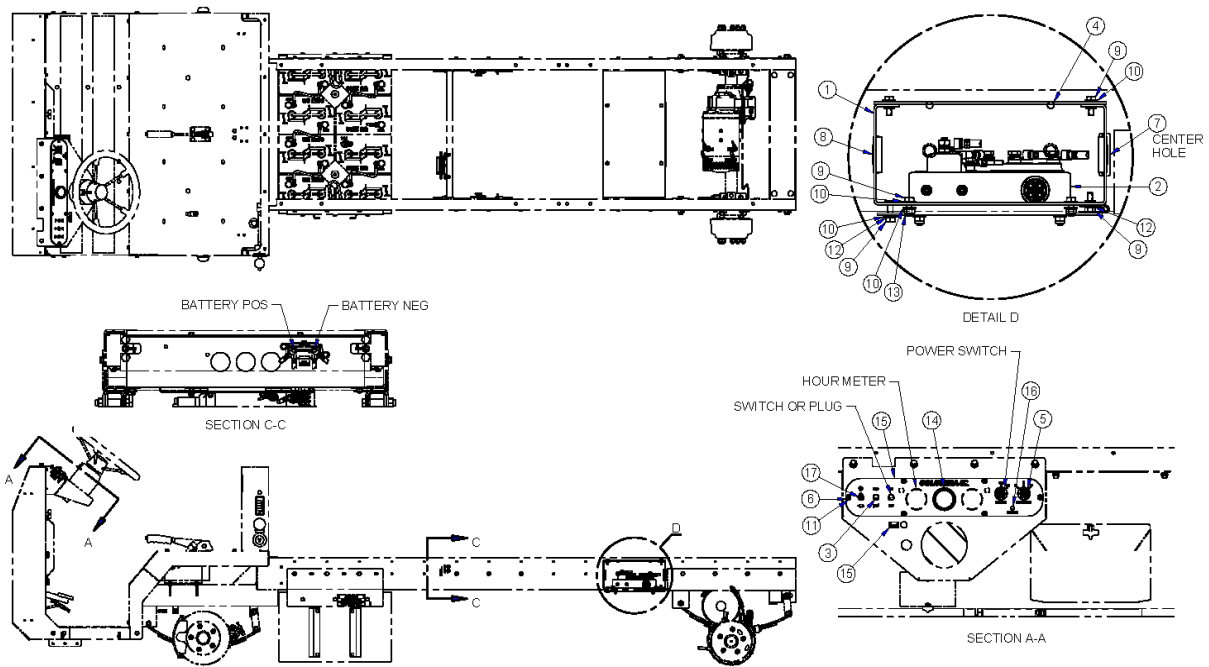


| ITEM | CPC P/N   | DESCRIPTION                                                | QTY | SEATS P/N |
|------|-----------|------------------------------------------------------------|-----|-----------|
| 1    | **        | CONTROL PANEL                                              | 1   | 309106    |
| 2    | 71416-12  | MOD CONTACTOR, DOUBLE – 48 COILS                           | 1   | 467562    |
| 3    | 70105-88  | CABLE 4 GA X 37                                            | 4   | 709019    |
| 4    | 71455-01A | CONTACTOR & BRACKET                                        | 1   | 709166    |
| 5    | 70105-89  | CABLE 4 GA X 61.5                                          | 3   | 709411    |
| 6    | 70351-88  | CABLE 4 GA X 16.75                                         | 2   | 709600    |
| 7*   | 32973-04  | WIRE MARKER, F1 (.0278)                                    | 2   | 719330    |
| 8*   | 32972-04  | WIRE MARKER, F2 (.0278)                                    | 2   | 719331    |
| 9*   | 10043     | CABLE TIE, BLACK, .18 X 11 -3/4, STD, 50LB                 | 2   | 719504    |
| 10   | 2551-W    | SCREW, 1/4-20 X 1, HHCS, G5, YWZC 150                      | 4   | 719564    |
| 11   | 2685-W    | SCREW, 10-24 X 5/8 HWH TRD ROL                             | 4   | 719586    |
| 12*  | 32970-67  | WIRE MARKER, A1 (.0278)                                    | 4   | 719600    |
| 13*  | 32971-67  | WIRE MARKER, A2 (.0278)                                    | 4   | 719601    |
| 14   | 6703-B    | WASHER, 1/4, SAE, F/W, BLK MAX                             | 4   | 719811    |
| 15   | 6716      | WASHER, #10, SAE, F/W, BLK MAX                             | 4   | 719812    |
| 16   | 7624      | NUT 10-24 GR A NM MACH NYLON LOCK                          | 4   | 719870    |
| 17   | 7636      | NUT, 1/4-20, NYLOCK, GA, YWZC                              | 4   | 719879    |
| 18*  | 71581-84  | WIRE MARKER, POSITIVE (.0278)                              | 8   | 749180    |
| 19*  | 71582-84  | WIRE MARKER, NEGATIVE (.0278)                              | 2   | 749181    |
| 20   | 71408-96A | AUDIBLE ALARM 12/48 VDC                                    | 1   | 759831    |
| 21*  | 69512-12  | WIRE HARNESS, MAIN                                         | 1   | 760014    |
| 22   | 71418-12  | CABLE ASSY 10GA X 28, 1/4                                  | 2   | 760222    |
| 23*  | 71417-12  | WIRE HARNESS, DUAL BATTERY SELECTOR                        | 1   | 760317    |
| 24   | 47895-05A | CONTROLLER, SEVCON, RGEN-SEPEX, 24/48C (Programmed 760576) | 1   | 467696    |
| -    | N/A       | ASSEMBLY, DC 2 BAT 2 AXLE (Includes above)                 | 1   | 467560    |

\* NOT SHOWN

\*\* SPECIAL ORDER

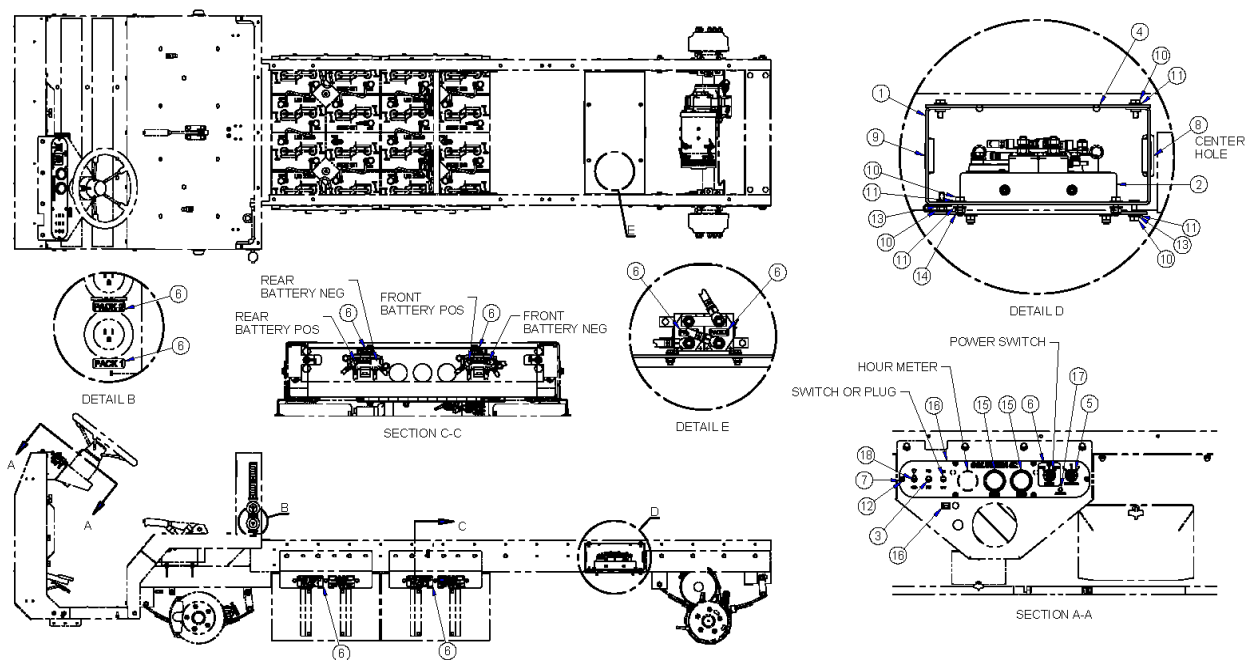
## DC POWER, ONE AXLE & ONE BATTERY PACK – MVP



| ITEM | CPC P/N  | DESCRIPTION                              | QTY | SEATS P/N |
|------|----------|------------------------------------------|-----|-----------|
| 1    | *        | CONTROLS HANGER                          | 1   | 309107    |
| 2    | *        | ASSEMBLY, SEVCON DC PANEL                | 1   | 467564    |
| 3    | 51486-14 | PLATE, INNER DASH INSERT                 | 1   | 512263    |
| 4    | *        | COVER, CONTROL PANEL                     | 1   | 512548    |
| 5    | 71730-01 | KEYSWITCH, UNIVERSAL "A" W/HARDWARE      | 1   | 709040    |
| 6    | 3615     | SCREW, 10-24X1/2PHILLIPS,BLK ZNC         | 6   | 719467    |
| 7    | 11418-A  | GROMMET, 2775 EPDM 3/16 GROOVE           | 1   | 719523    |
| 8    | 11448    | PLUG, 1.75" BLACK PLASTIC                | 5   | 719530    |
| 9    | 3787-B   | SCREW, 1/4-20 X 3/4, HHCS, G5, BLK 150   | 12  | 719636    |
| 10   | 6703-B   | WASHER, 1/4, SAE, F/W, BLK MAX           | 14  | 719811    |
| 11   | 6716     | WASHER,#10,SAE,F/W,BLK MAX               | 6   | 719812    |
| 12   | 7036-B   | WASHER LOCK 1/4 REGULAR BLK ZINC         | 4   | 719834    |
| 13   | 7686     | NUT, 1/4-20, NYLOCK, GA                  | 4   | 719879    |
| 14   | 75061-07 | BDI, 48V - VOLTMETER STYLE               | 2   | 759842    |
| 15   | *        | DASH OVERLAY                             | 1   | 759910    |
| 16   | 67791-08 | INDICATOR, LED, SERIES 22                | 1   | 759932    |
| 17   | 72000-10 | SWITCH, TOGGLE, LIGHTS ON-OFF            | 1   | 760600    |
| -    | N/A      | GROUP, DC, 1 BAT 1 AXLE (Includes above) | 1   | 191617A   |

\* SPECIAL ORDER

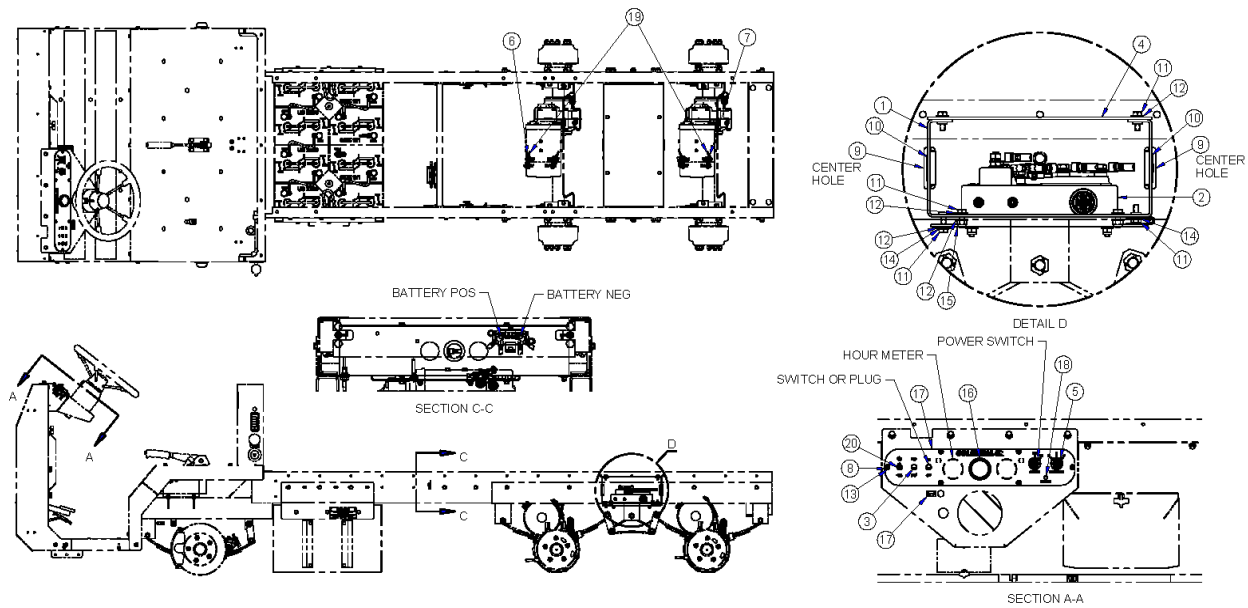
## DC POWER, ONE AXLE & TWO BATTERY PACKS – MVP



| ITEM | CPC P/N  | DESCRIPTION                              | QTY | SEATS P/N |
|------|----------|------------------------------------------|-----|-----------|
| 1    | *        | CONTROLS HANGER                          | 1   | 309107    |
| 2    | *        | ASSEMBLY, SEVCON DC PANEL                | 1   | 467634    |
| 3    | 51486-14 | PLATE, INNER DASH INSERT                 | 1   | 512263    |
| 4    | *        | COVER, CONTROL PANEL                     | 1   | 512548    |
| 5    | 71730-01 | KEYSWITCH, UNIVERSAL "A" W/HARDWARE      | 1   | 709040    |
| 6    | 69519-12 | DECAL, BATTERY PACK LABEL SET            | 1   | 712109    |
| 7    | 3615     | SCREW, 10-24X1/2PHILLIPS,BLK ZNC         | 6   | 719467    |
| 8    | 11418-A  | GROMMET, 2775 EPDM 3/16 GROOVE           | 1   | 719523    |
| 9    | 11448    | PLUG, 1.75" BLACK PLASTIC                | 5   | 719530    |
| 10   | 3787-B   | SCREW, 1/4-20 X 3/4, HHCS, G5, BLK 150   | 12  | 719636    |
| 11   | 6703-B   | WASHER, 1/4, SAE, F/W, BLK MAX           | 14  | 719811    |
| 12   | 6716     | WASHER,#10,SAE,F/W,BLK MAX               | 6   | 719812    |
| 13   | 7036-B   | WASHER LOCK 1/4 REGULAR BLK ZINC         | 4   | 719834    |
| 14   | 7686     | NUT, 1/4-20, NYLOCK, GA                  | 4   | 719879    |
| 15   | 75061-07 | BDI, 48V - VOLTMETER STYLE               | 2   | 759842    |
| 16   | *        | DASH OVERLAY                             | 1   | 759910    |
| 17   | 67791-08 | INDICATOR, LED, SERIES 22                | 1   | 759932    |
| 18   | 72000-10 | SWITCH, TOGGLE, LIGHTS ON-OFF            | 1   | 760600    |
| -    | N/A      | GROUP, DC, 2 BAT 1 AXLE (Includes above) | 1   | 191695A   |

\* SPECIAL ORDER

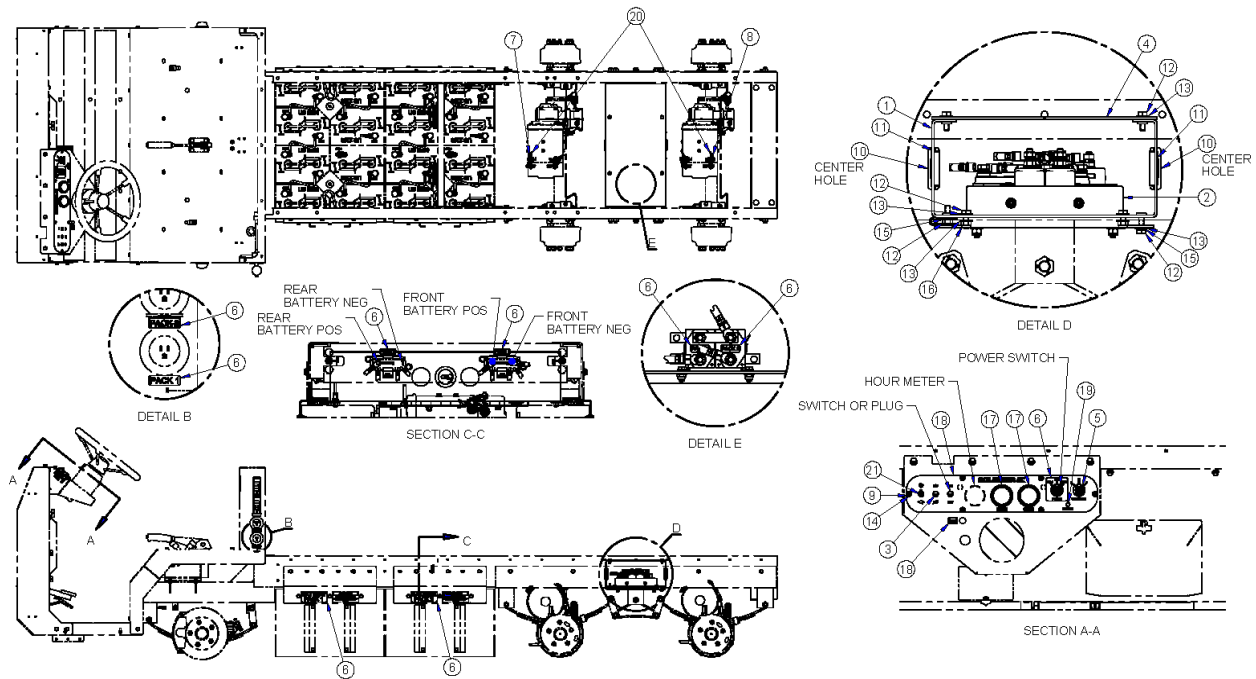
## DC POWER, TWO AXLES & ONE BATTERY PACK – MVP



| ITEM | CPC P/N  | DESCRIPTION                               | QTY | SEATS P/N |
|------|----------|-------------------------------------------|-----|-----------|
| 1    | *        | CONTROLS HANGER                           | 1   | 309107    |
| 2    | *        | ASSEMBLY, SEVCON DC PANEL                 | 1   | 467596    |
| 3    | 51486-14 | PLATE, INNER DASH INSERT                  | 1   | 512263    |
| 4    | *        | COVER, CONTROL PANEL                      | 1   | 512548    |
| 5    | 71730-01 | KEYSWITCH, UNIVERSAL "A" W/HARDWARE       | 1   | 709040    |
| 6    | 32973-04 | WIRE MARKER F1                            | 1   | 719330    |
| 7    | 32972-04 | WIRE MARKER F2                            | 1   | 719331    |
| 8    | 3615     | SCREW, 10-24X1/2PHILLIPS,BLK ZNC          | 6   | 719467    |
| 9    | 11418-A  | GROMMET, 2775 EPDM 3/16 GROOVE            | 2   | 719523    |
| 10   | 11448    | PLUG, 1.75" BLACK PLASTIC                 | 4   | 719530    |
| 11   | 3787-B   | SCREW, 1/4-20 X 3/4, HHCS, G5, BLK 150    | 12  | 719636    |
| 12   | 6703-B   | WASHER, 1/4, SAE, F/W, BLK MAX            | 14  | 719811    |
| 13   | 6716     | WASHER,#10,SAE,F/W,BLK MAX                | 6   | 719812    |
| 14   | 7036-B   | WASHER LOCK 1/4 REGULAR BLK ZINC          | 4   | 719834    |
| 15   | 7686     | NUT, 1/4-20, NYLOCK, GA                   | 4   | 719879    |
| 16   | 75061-07 | BDI, 48V - VOLTMETER STYLE                | 1   | 759842    |
| 17   | *        | DASH OVERLAY                              | 1   | 759910    |
| 18   | 67791-08 | INDICATOR, LED, SERIES 22                 | 1   | 759932    |
| 19   | 71420-12 | CABLE ASSEMBLY, 10 GA X 51"               | 1   | 760221    |
| 20   | 72000-10 | SWITCH, TOGGLE, LIGHTS ON-OFF             | 1   | 760600    |
| -    | N/A      | GROUP, DC, 1 BAT, 2 AXLE (Includes above) | 1   | 191696A   |

\* SPECIAL ORDER

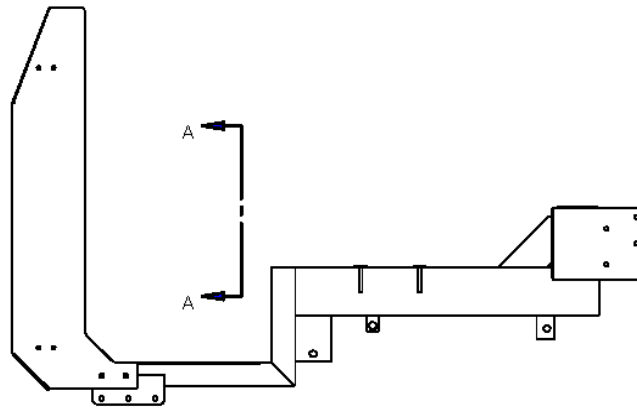
## DC POWER, TWO AXLES & TWO BATTERY PACKS – MVP



| ITEM | CPC P/N  | DESCRIPTION                               | QTY | SEATS P/N |
|------|----------|-------------------------------------------|-----|-----------|
| 1    | *        | CONTROLS HANGER                           | 1   | 309107    |
| 2    | *        | ASM, MVP SEVCON DC, 2 BAT 2 AXL           | 1   | 467560    |
| 3    | 51486-14 | PLATE, INNER DASH INSERT                  | 1   | 512263    |
| 4    | *        | COVER, CONTROL PANEL - MVP                | 1   | 512548    |
| 5    | 71730-01 | KEYSWITCH, UNIVERSAL "A" W/HRDWR          | 1   | 709040    |
| 6    | 69519-12 | DECAL, BATTERY PACK LABEL SET             | 1   | 712109    |
| 7    | 32973-04 | WIRE MARKER, F1 (.0278)                   | 1   | 719330    |
| 8    | 32972-04 | WIRE MARKER, F2 (.0278)                   | 1   | 719331    |
| 9    | 3615     | SCREW, 10-24X1/2PHILLIPS,BLK ZNC          | 6   | 719467    |
| 10   | 11418-A  | GROMMET, 2775 EPDM 3/16 GROOVE            | 2   | 719523    |
| 11   | 11448    | PLUG, 1.75" BLACK PLASTIC                 | 4   | 719530    |
| 12   | 3787-B   | SCREW,1/4-20X3/4,HHCS,G5, BLK150          | 12  | 719636    |
| 13   | 6703-B   | WASHER,1/4,SAE,F/W,BLK MAX                | 14  | 719811    |
| 14   | 6716     | WASHER,#10,SAE,F/W,BLK MAX                | 6   | 719812    |
| 15   | 7036-B   | WASHER LOCK 1/4 REGULAR BLK ZINC          | 4   | 719834    |
| 16   | 7686     | NUT, 1/4-20, NYLOCK, GA, YWZC             | 4   | 719879    |
| 17   | 75061-07 | BDI, 48V - VOLTMETER STYLE                | 2   | 759842    |
| 18   | *        | DASH OVERLAY - MVP                        | 1   | 759910    |
| 19   | 67791-08 | INDICATOR, LED, SERIES 22                 | 1   | 759932    |
| 20   | 71420-12 | CABLE ASSY, 10GA X 51.00", 1/4" TERM      | 1   | 760221    |
| 21   | 72000-10 | SWITCH, TOGGLE, LIGHTS ON-OFF             | 1   | 760600    |
| -    | N/A      | GROUP, DC, 2 BAT, 2 AXLE (Includes above) | 1   | 191577A   |

\* SPECIAL ORDER

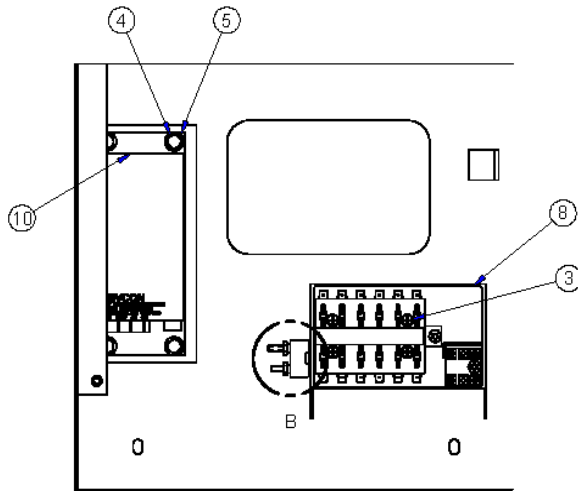
## DC CONVERTER GROUP – MVP



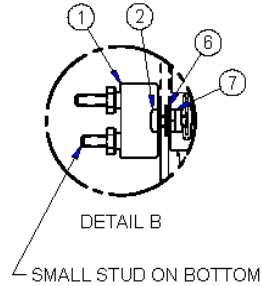
### NOTES:

IF VEHICLE HAS SINGLE BATTERY PACK, THEN  
 1) CONNECT BATTERY POS & NEG TERMINALS TO DISTRIBUTION BLOCK  
 2) CONNECT KEYSWITCH TERMINALS TO POWER SWITCH

IF VEHICLE HAS DUAL BATTERY PACK, THEN  
 1) CONNECT BATTERY POS TERMINAL TO DOUBLE CONTACTOR (SWITCHED SIDE) AND NEG TERMINAL TO CONTROLLER B-  
 2) CONNECT KEYSWITCH TERMINALS TO EACH OTHER (NOT TO POWER SWITCH)



SECTION A-A



| ITEM | CPC P/N  | DESCRIPTION                          | QTY | SEATS P/N |
|------|----------|--------------------------------------|-----|-----------|
| 1    | 74591-96 | CIRCUIT BREAKER 20 AMP               | 1   | 709398    |
| 2    | 2592     | SCREW, 10-24 X 1/2 PHILLIPS PHM      | 2   | 719566    |
| 3    | 2595     | SCREW, 10-24 X 1 PPH                 | 4   | 719567    |
| 4    | 3787-B   | SCREW, 1/4-20X3/4, HHCS, G5, BLK150  | 4   | 719636    |
| 5    | 6703-B   | WASHER, 1/4, SAE, F/W, BLK MAX       | 4   | 719811    |
| 6    | 6716     | WASHER, #10, SAE, F/W, BLK MAX       | 2   | 719812    |
| 7    | 7624     | NUT 10-24 GR A NM MACH NYLON LOCK    | 2   | 719870    |
| 8    | 69513-12 | FUSE BLOCK 12 GANG W/ GND TERM       | 1   | 759912    |
| 9    | 69514-12 | WIRE HARNESS, DC CONVERTER, MVP      | 1   | 760013    |
| 10   | 69642-05 | DC/DC CONVERTER - 12V OUT/INP 36/48V | 1   | 760378    |

\* NOT SHOWN

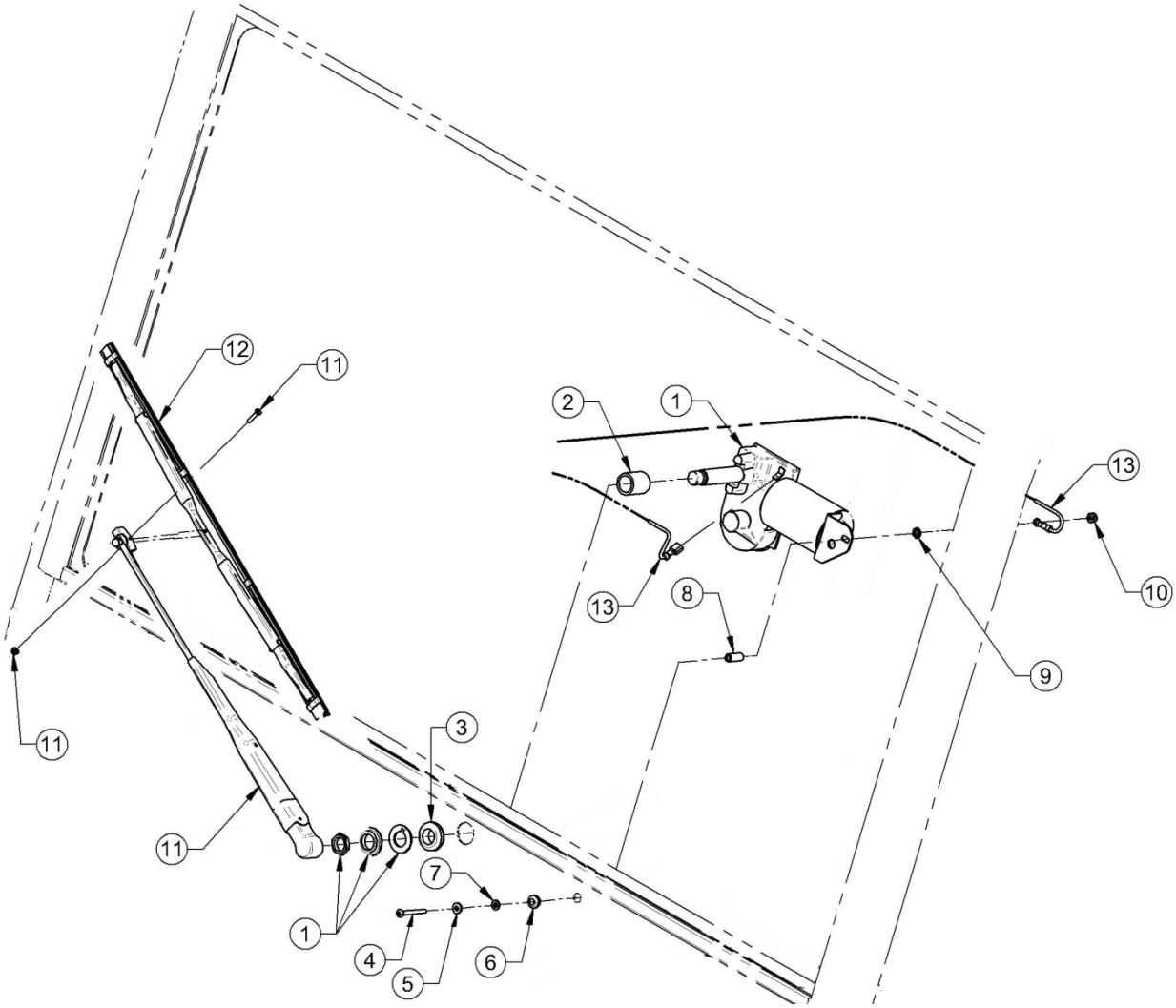
\*\* SPECIAL ORDER

# **Multiple Vehicle Platform Parts Manual**

## **Section 6**

### **Accessories**

## WIPER – MVP

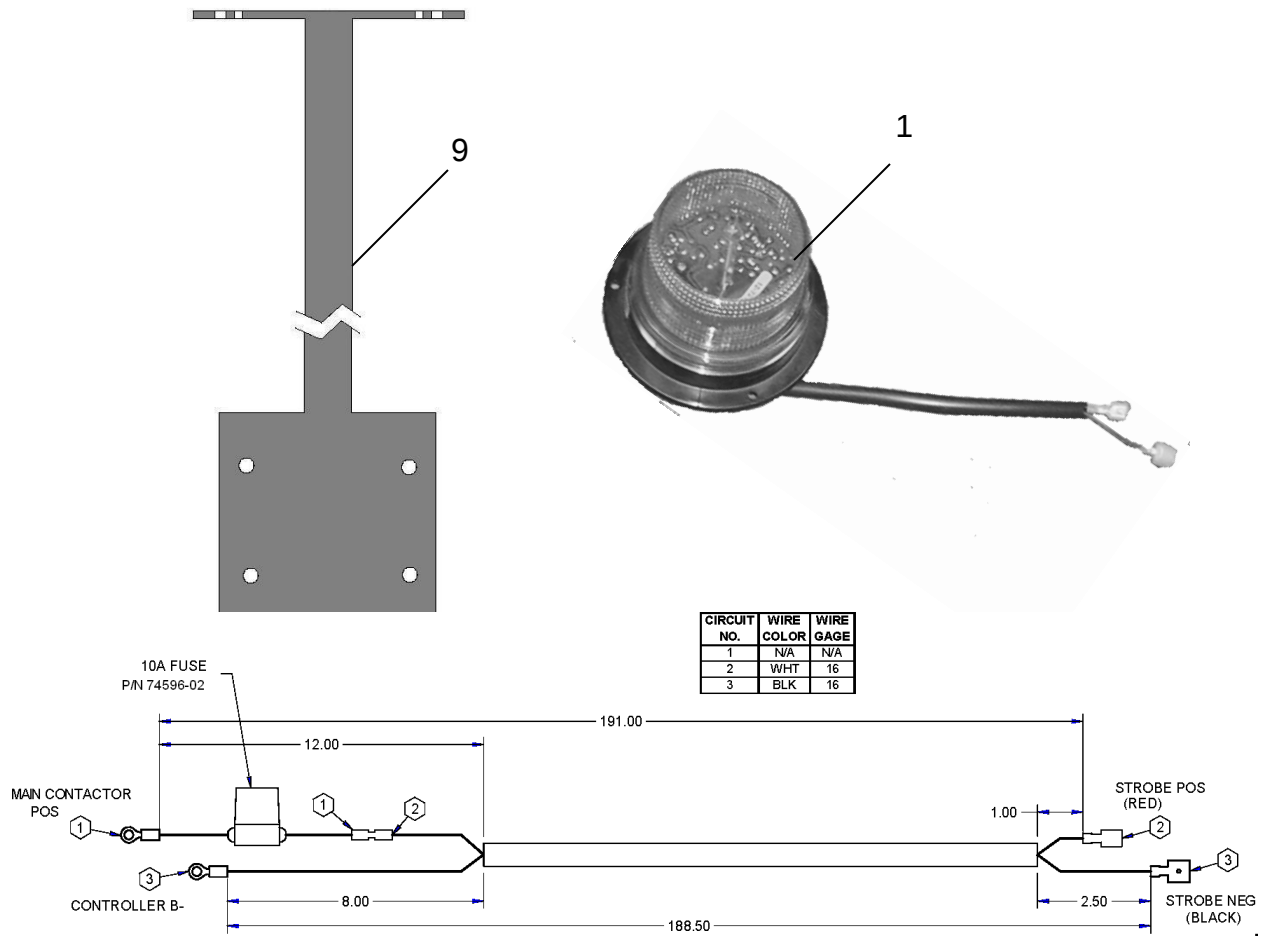


| ITEM | CPC P/N  | DESCRIPTION                                  | QTY | SEATS P/N |
|------|----------|----------------------------------------------|-----|-----------|
| 1*   | 84111-92 | MOTOR, WINDSHIELD WIPER (INCLUDES SHAFT NUT, | 1   | 709592    |
| 2    | 5712     | SPACER, WIPER MOTOR                          | 1   | 508993    |
| 3    | 11446    | GROMMET, 5/8 X 1-1/8 X 3/8 1/8 GROOVE        | 1   | 719529    |
| 4    | 2613-B   | SCREW, 8-32 X 1 1/2, PHILLIPS PHM            | 1   | 719572    |
| 5    | 6912-B   | WASHER, #8 TYPE A PLAIN                      | 1   | 719817    |
| 6    | 11409    | GROMMET, .25 ID, DELTA FLEX 2902             | 1   | 719520    |
| 7    | 10510    | NYLON BEARING                                | 8   | 709362    |
| 8    | 759824   | NYLON SPACER, .313 OD X .194 ID X .75 LG     | 1   | 759824    |
| 9    | 7220     | WASHER, #10, EXTERNAL TOOTH LOCK             | 1   | 719851    |
| 10   | 7609-W   | NUT, #8-32, NM NYLOC, MACH, GR A             | 1   | 719868    |
| 11   | 84164-03 | WIPER ARM, 14-19" ADJUSTABLE, BLACK          | 1   | 719321    |
| 12   | 84165-03 | WIPER BLADE, 18" BLACK FLEXIBLE              | 1   | 719322    |
| 13   | 69517-12 | HARNESS, WIPER MOTOR                         | 1   | 467780    |
| 14** | 74596-02 | FUSE, 10A                                    | 1   | 709786    |
| 15   | 84115-09 | WIPER KIT (Includes above)                   | 1   | 191686U   |

\* MOTOR POSITION MAY NOT BE AS SHOWN

\*\* NOT SHOWN

## STROBE LIGHTS – MVP

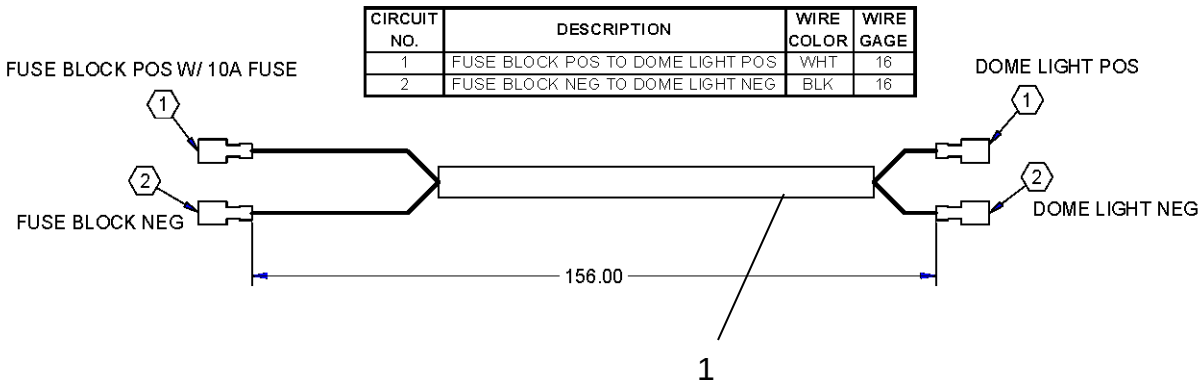


| ITEM | CPC P/N  | DESCRIPTION                                             | QTY | SEATS P/N |
|------|----------|---------------------------------------------------------|-----|-----------|
| 1    | 68029-06 | STROBE LIGHT ASSY                                       | 1   | 467408    |
| 2    | **       | HARNESS, CAB (Used with cab & pole mount)               | 1   | 467585    |
| 3    | 10008*   | CABLE TIE 5 3/4" (Used with cab & pole mount)           | 2/9 | 719501    |
| 4    | 10020*   | CABLE TIE MOUNTING BRACKET (Used with cab & pole mount) | 2/9 | 719503    |
| 5    | 11418-A  | GROMMET, 2775 EPDM 3/16 GROOVE (Used with cab mount)    | 1   | 719523    |
| 6    | 2339*    | SCREW, #10-24X3/4, HH (Used with cab mount)             | 3   | 719551    |
| 7    | 6716     | WASHER, #10 (Used with cab mount)                       | 3   | 719812    |
| 8    | 7624     | NUT, 10-24 NYLOCK (Used with cab & pole mount)          | 3   | 719870    |
| 9    | 68504-02 | LIGHT MAST(Mounts to body with Items 10 – 12)           | 1   | 306164    |
| 10   | 3787-B*  | SCREW 1/4-20X3/4 HHC                                    | 4   | 719636    |
| 11   | 6703-B*  | WASHER 1/4                                              | 8   | 719811    |
| 12   | 7692*    | NUT, 1/4-20 NYLOCK                                      | 4   | 719882    |
| 13   | 11416*   | GROMMET 3/8X7/8                                         | 1   | 719522    |

\* NOT SHOWN

\*\* SPECIAL ORDER

## CAB DOME LIGHT – MVP

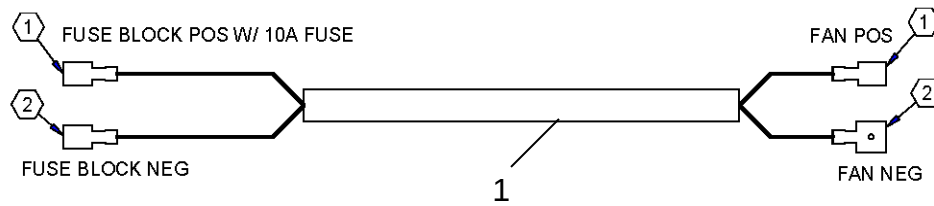
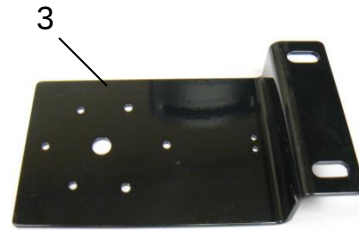


| ITEM | CPC P/N  | DESCRIPTION                       | QTY | SEATS P/N |
|------|----------|-----------------------------------|-----|-----------|
| 1    | **       | HARNESS, DOME LIGHT               | 1   | 468817    |
| 2    | 51150-11 | MOUNTING PLATE                    | 1   | 510315    |
| 3    | 84147-92 | DOME LIGHT ASSY                   | 1   | 709920    |
| 4    | 10008*   | CABLE TIE 5 3/4"                  | 4   | 719501    |
| 5    | 10020*   | CABLE TIE MOUNTING BRACKET        | 4   | 719503    |
| 6    | 10043*   | CABLE TIE 18X11 3/4", 50 LB       | 2   | 719504    |
| 7    | 11409*   | GROMMET .25, RUBBER               | 1   | 719520    |
| 8    | 2616*    | SCREW, #8-32X1 PFH                | 4   | 719574    |
| 9    | 2685-W*  | SCREW, 10-24X5/8 HWH              | 2   | 719586    |
| 10   | 7609-W*  | NUT, 8-32 NYLOCK LOCK             | 4   | 719868    |
| 11   | 9906*    | TERMINAL, 16/14 INS, 1/4 MALE TAB | 2   | 719973    |
| 12   | 6716*    | WASHER #10                        | 2   | 719812    |
| 13   | 7624*    | NUT, 10-24 NYLOCK                 | 2   | 719870    |

\* NOT SHOWN

\*\* SPECIAL ORDER

## CAB FAN – MVP



| ITEM | CPC P/N  | DESCRIPTION               | QTY | SEATS P/N |
|------|----------|---------------------------|-----|-----------|
| 1    | 75626-10 | HARNESS, CAB FAN          | 1   | 468036    |
| 2    | 75625-10 | FAN                       | 1   | 467433    |
| 3    | 75322-00 | BRACKET                   | 1   | 516067    |
| 4*   | 74596-02 | FUSE, 10A                 | 1   | 709786    |
| 5*   | 10043    | CABLE TIE                 | 3   | 719504    |
| 6*   | 2646     | SCREW, 6-32X5/8 PHM       | 4   | 719581    |
| 7*   | 2653-B   | SCREW, 10-16X3/4 HWH, TEK | 3   | 719583    |
| 8*   | 6912-B   | WASHER #8                 | 3   | 719817    |
| 9*   | 7592     | NUT, 6-32 NYLOCK          | 4   | 719866    |

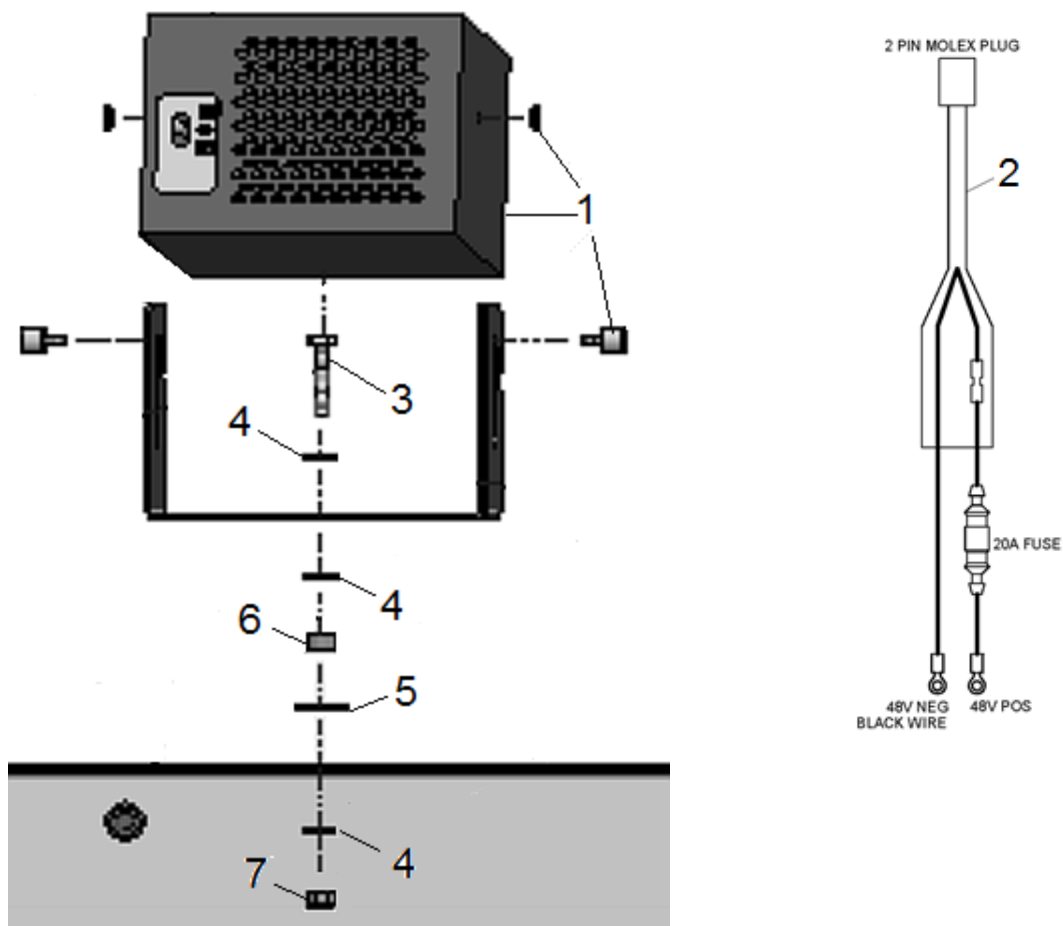
\* NOT SHOWN

## HEATER – MVP

| ITEM | CPC P/N  | DESCRIPTION                 | QTY | SEATS P/N |
|------|----------|-----------------------------|-----|-----------|
| 1    | 65199-11 | HEATER 48V                  | 1   | 467801    |
| 2    | 69936-15 | HEATER HARNESS ASSEMBLY 48V | 1   | 467803    |
| 3    | 3993     | SCREW, 1/4-20X1 1/4 HHC     | 1   | 719644    |
| 4    | 6703-B   | WASHER, 1/4 STL             | 3   | 719811    |
| 5    | 6830     | WASHER, 5/16X1X.036, NYLON  | 1   | 719816    |
| 6    | 84105-92 | SPACER .382X.50X.312 BRASS  | 1   | 719940    |
| 7    | 7686     | NUT, 1/4-20 NYLOCK          | 1   | 719879    |

**NOTE:**

1. If the toggle switch is in the Fan/Heat position and no heat is occurring, a circuit reset may be needed. On a heater side panel is a 3/8" hole. Inside is a circuit reset tab. Using a non-conductive device push the tab to reset the circuit.
2. This heater/harness is not interchangeable with heater/harness installed on vehicles prior to 8/10/2010. Connect black wire to 48V negative and red wire to 48V positive.
3. If previous heater had a three (3) wire harness, a new two (2) wire harness (Item 2) is required.

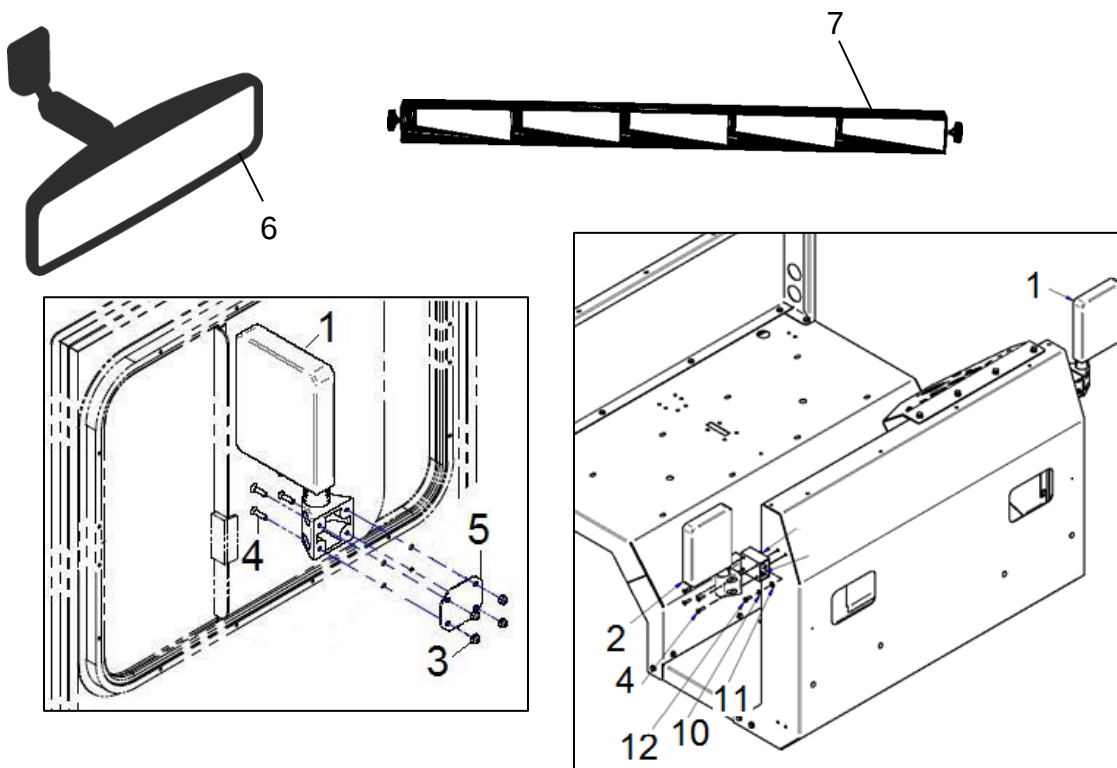


## MIRRORS – MVP

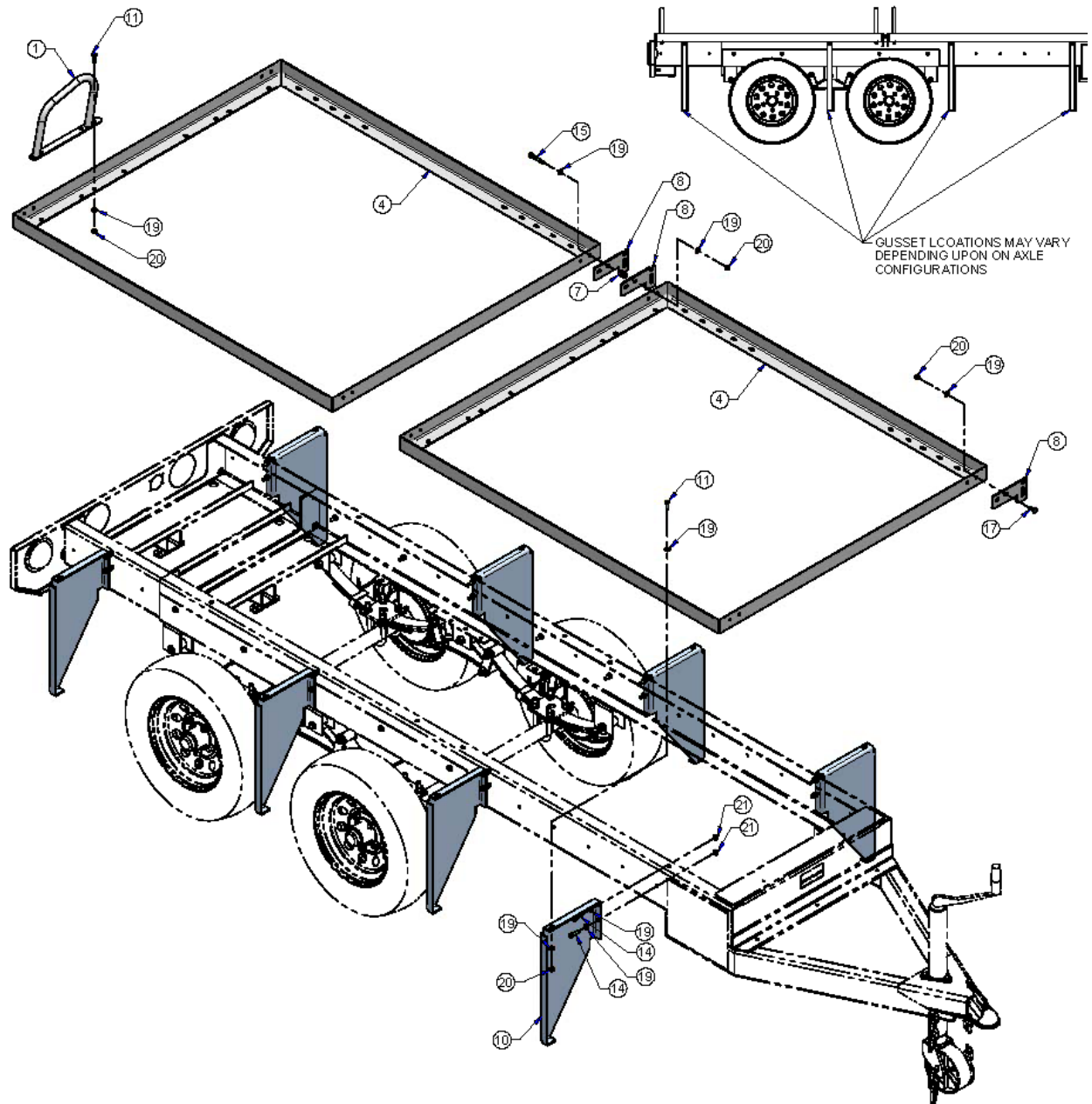
| ITEM | CPC P/N  | DESCRIPTION                                                  | QTY | SEATS P/N |
|------|----------|--------------------------------------------------------------|-----|-----------|
| 1    | 72667-08 | SIDE MIRROR, LH                                              | 1   | 760201    |
| 2*   | 72668-08 | SIDE MIRROR, RH                                              | 1   | 760202    |
| 3    | 7680     | NUT, 1/4-20 NYLOCK                                           | 8   | 719876    |
| 4    | 1400     | SCREW, 1/4-20X1                                              | 8   | 781601    |
| 5    | 51000-10 | BACKING PLATE)                                               | 2   | 513203    |
| 6    | 84120-92 | REAR VIEW MIRROR W/HARDWEAR                                  | 1   | 709837    |
| 7    | 84270-98 | 5 PANEL REAR VIEW MIRROR                                     | 1   | 709408    |
| 8*   | 2665     | SCREW, 10-24X5/8 PPH (Use with 7)                            | 4   | 719584    |
| 9*   | 6261     | WASHER, FLT RUBBER 1/4X5/8X.093 (Use with 7)                 | 4   | 719788    |
| 10   | 7036-B   | WASHER, LOCK 1/4                                             | 4   | 719834    |
| 11   | 6703-B   | WASHER, 1/4                                                  | 4   | 719811    |
| 12   | 3787-B   | SCREW, 1/4-20X3/4, HHC, G5                                   | 4   | 719636    |
| 13   | **       | BRACKET                                                      | 2   | 515728    |
| 14*  | 6716     | WASHER #10 SAE (Use with 7)                                  | 4   | 719812    |
| 15*  | 7624     | NUT, 10-24 GR A, NYLOK (Use with 7)                          | 4   | 719870    |
| -    | 91872-09 | KIT. SIDE VIEW MIRRORS, MVP CAB<br>(Includes Items 1-4 only) | 1   | 191688U   |

\* NOT SHOWN

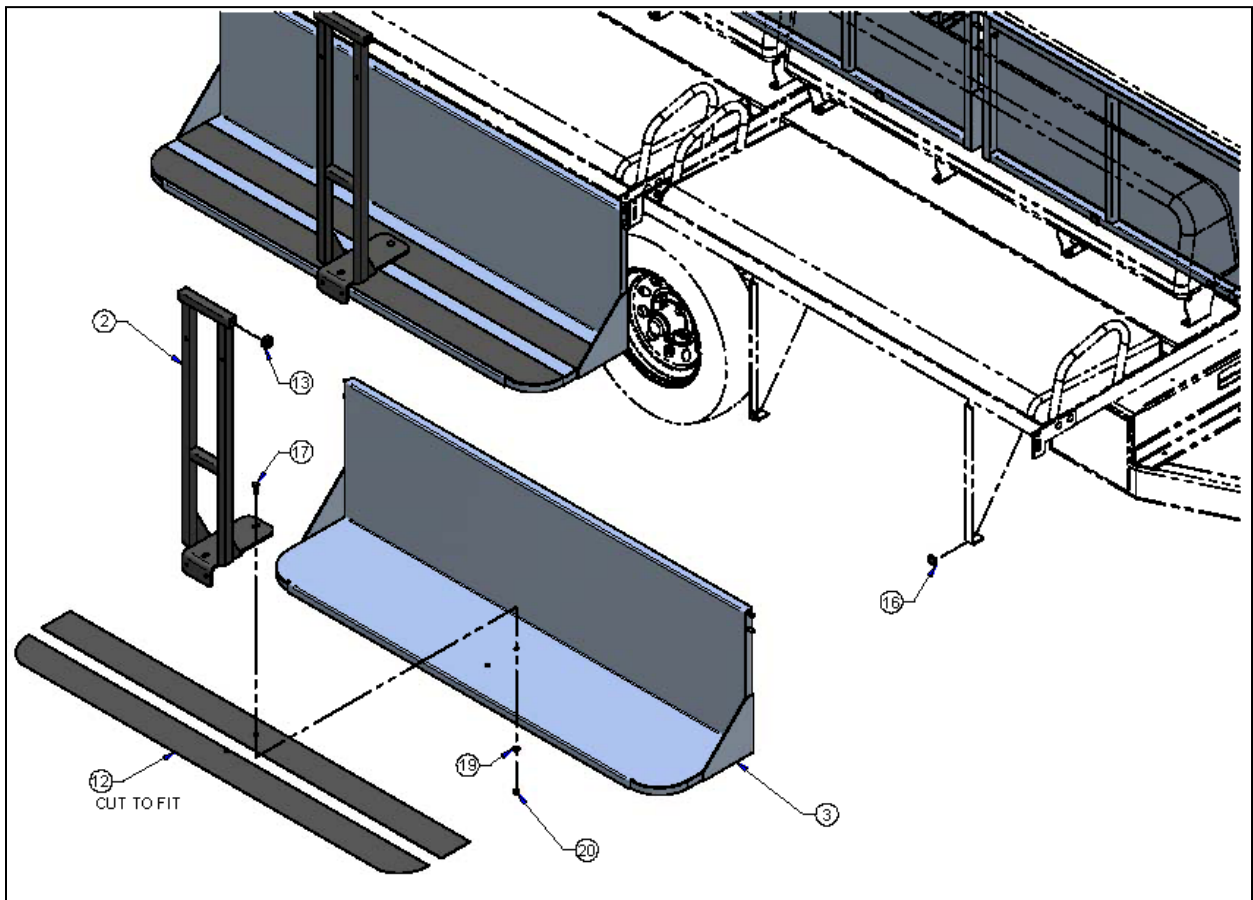
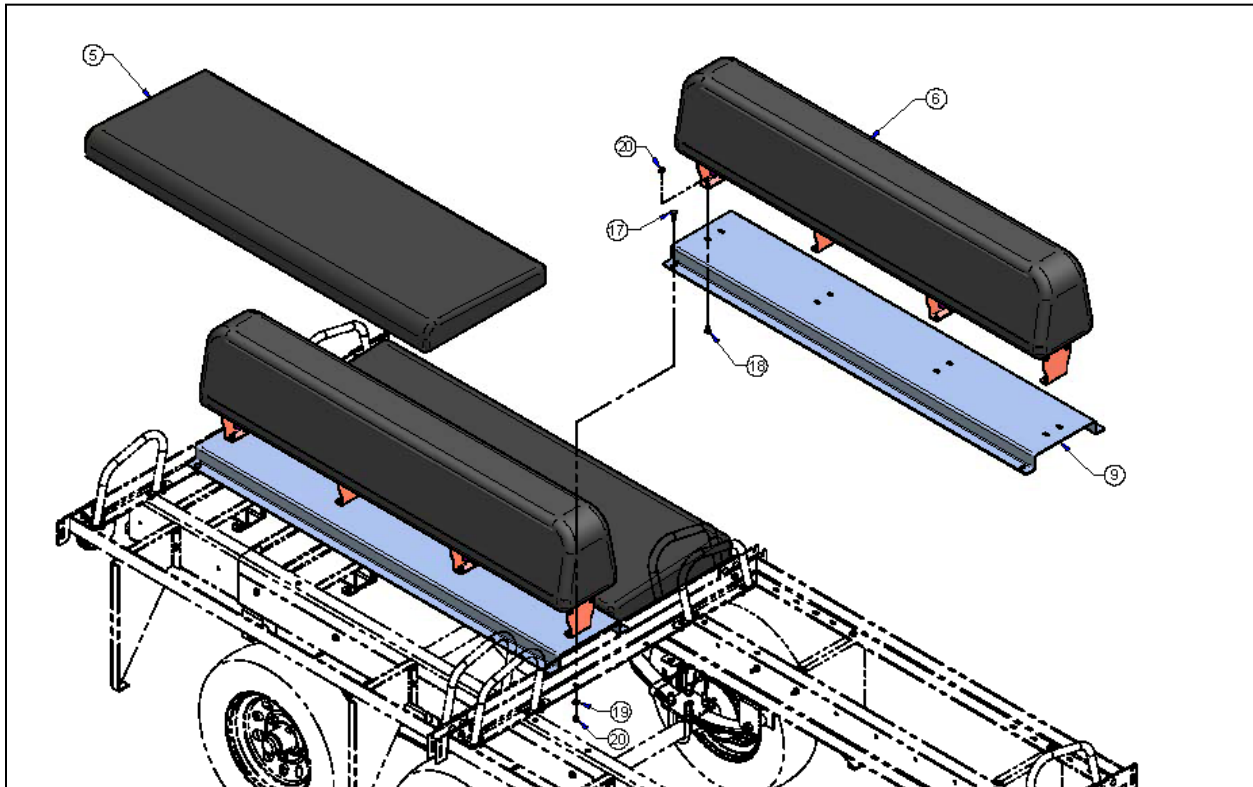
\*\* SPECIAL ORDER



# TRANSPORT EXPRESS TRAILER – MVP



## TRANSPORT EXPRESS TRAILER – MVP (Cont.)

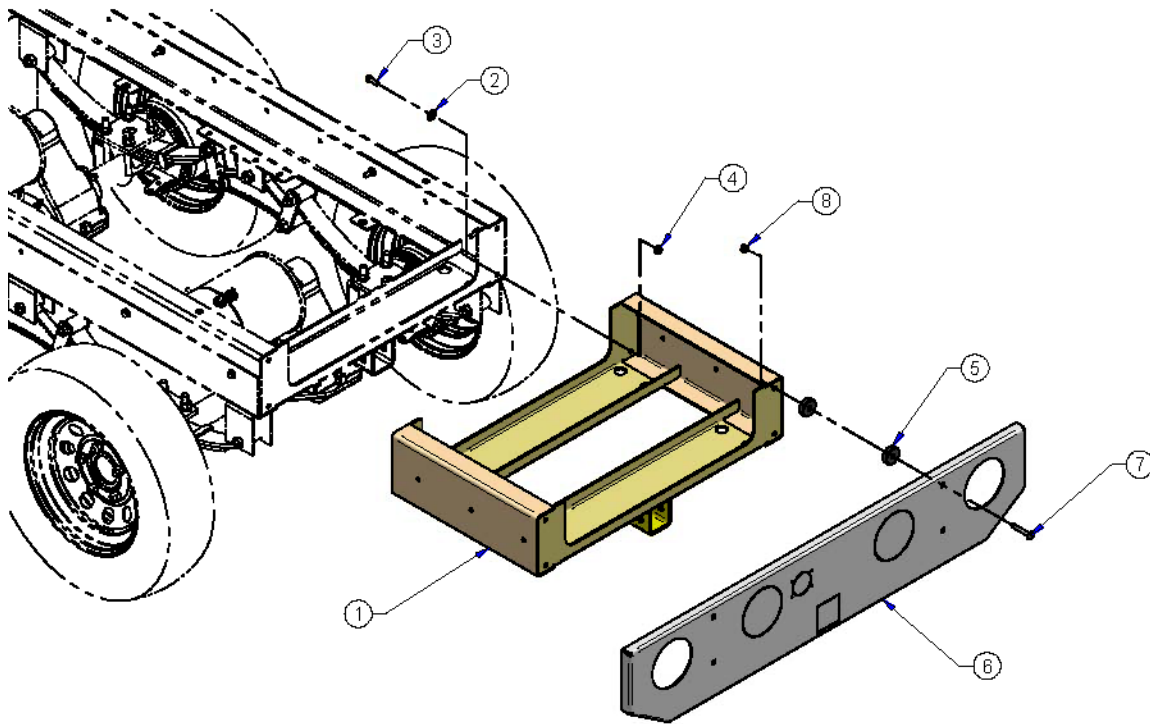


**TRANSPORT EXPRESS TRAILER – MVP (Cont.)**

| ITEM | CPC P/N  | DESCRIPTION                            | QTY | SEATS P/N |
|------|----------|----------------------------------------|-----|-----------|
| 1    | 50027-92 | HANDRAIL                               | 8   | 303393    |
| 2    | 84926-07 | HANDRAIL - REAR                        | 4   | 308292EP  |
| 3    | *        | FOOTREST                               | 4   | 309529    |
| 4    | *        | FRAME, SEAT                            | 2   | 309628    |
| 5    | *        | CUSHION, BOTTOM (See Note)             | 4   | 309647%   |
| 6    | *        | ASSY, CUSHION BACK (See Note)          | 2   | 309667%   |
| 7    | 52329-85 | WASHER, .375X1.50X.5, NYLON            | 8   | 719737    |
| 8    | 47781-08 | PLATE, MTG - RAIL                      | 8   | 512696    |
| 9    | *        | FRAME, SUPPORT - BOTTOM CUSHION        | 2   | 512864    |
| 10   | *        | GUSSET, RUNNING BOARD                  | 8   | 512952    |
| 11   | 4017     | SCREW, 5/16-18 X 1 HH CAP, GRD-8       | 32  | 708085    |
| 12   | *        | MAT, NON-SKID                          | 8   | 709933    |
| 13   | 11433    | CAPLUG, FP-165                         | 8   | 719526    |
| 14   | 2871-W   | SCREW, 5/16-18 X 1-1/4 GRD 5 HHC       | 14  | 719592    |
| 15   | 3419     | SCREW, 5/16-18 X 2-1/4 HHCS, GRADE 5   | 4   | 719616    |
| 16   | 52330-86 | BUMPER BLACK 3M#SJ5023                 | 8   | 719738    |
| 17   | 5400-BS  | BOLT, 5/16-18 X 1, CARRIAGE, GRADE 5   | 24  | 719744    |
| 18   | 5452-BS  | BOLT, 5/16-18 X 5/8, CARRIAGE, GRADE 5 | 16  | 719751    |
| 19   | 6702-B   | WASHER FLT STL 5/16 BLK MAXCOAT        | 86  | 719810    |
| 20   | 7739     | NUT, 5/16-18, NE, NYLON INSERT, GA     | 76  | 719892    |
| 21   | 7750     | LOCKNUT, 5/16-18 HX FLNG 2-WAY CNTR    | 14  | 719897    |

\* SPECIAL ORDER

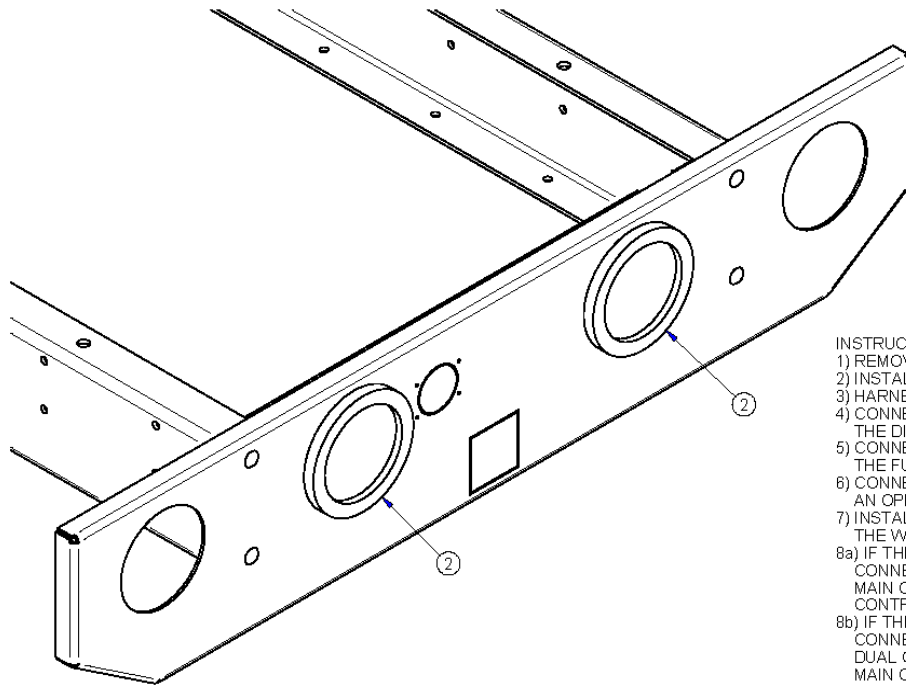
## REAR BUMPER EXTENDED – MVP



| ITEM | CPC P/N  | DESCRIPTION                              | QTY | SEATS P/N |
|------|----------|------------------------------------------|-----|-----------|
| 1    | *        | FRAME - 16.50" EXTENDED                  | 1   | 309520    |
| 2    | 6000-B   | WASHER, 5/16 STD                         | 8   | 719771    |
| 3    | 3991     | SCREW, HEX HEAD CAP 5/16-18 X 7/8 G5     | 4   | 719643    |
| 4    | 7750     | LOCKNUT, 5/16-18 HX FLNG 2-WAY CNTR      | 4   | 719897    |
| 5    | 52329-85 | WASHER FLAT BLK DELRIN .375X1.5X.5       | 8   | 719737    |
| 6    | 50078-12 | PLATE, BUMPER - REAR                     | 1   | 309103    |
| 7    | 3403-B   | BOLT, 5/16-18 X 2, CARRIAGE, GRADE 5     | 4   | 719609    |
| 8    | 7739     | NUT, 5/16-18, NE, NYLON INSERT, GA, YWZC | 4   | 719892    |

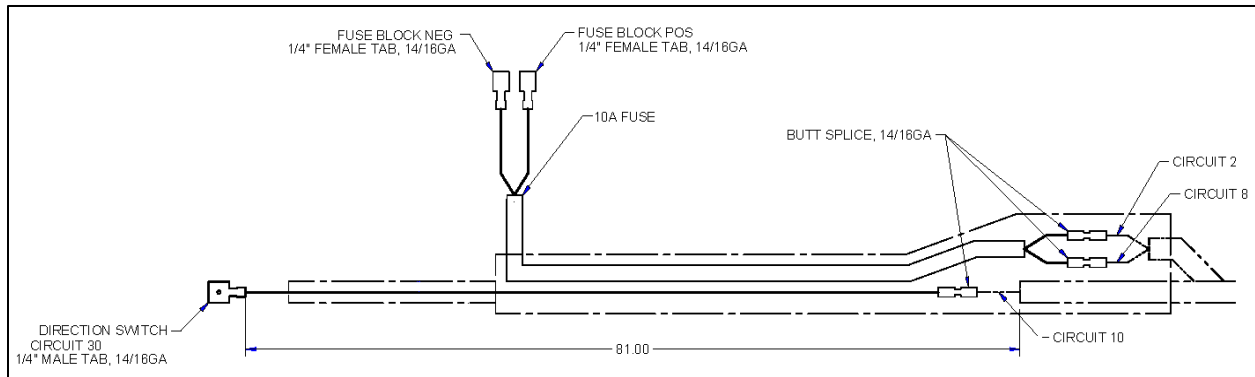
\* SPECIAL ORDER

## BACK-UP LIGHTS AND HARNESS- MVP



### INSTRUCTIONS

- 1) REMOVE KNOCK-OUTS IN REAR BUMPER
- 2) INSTALL BACK-UP LIGHTS IN REAR BUMPER
- 3) HARNESS RUNS TO FRONT OF VEHICLE
- 4) CONNECT THE GRAY MALE TAB TERMINAL TO THE DIRECTION SWMCH CIRCUIT 30
- 5) CONNECT THE BLACK FEMALE TERMINAL TO THE FUSE BLOCK NEGATIVE TERMINAL
- 6) CONNECT THE WHITE FEMALE TERMINAL TO AN OPEN LOCATION ON THE FUSE BLOCK
- 7) INSTALL THE 10A FUSE INCLUDED WITH THE WIRE HARNESS IN THE FUSE BLOCK
- 8a) IF THE VEHICLE HAS A SINGLE BATTERY TRAY CONNECT THE YELLOW RING TERM TO THE MAIN CONTACTOR POST GOING TO THE CONTROLLER
- 8b) IF THE VEHICLE HAS DUAL BATTERY TRAYS CONNECT THE YELLOW RING TERM TO THE DUAL CONTACTOR POST GOING TO THE MAIN CONTACTOR



| ITEM | CPC P/N  | DESCRIPTION                                 | QTY | SEATS P/N |
|------|----------|---------------------------------------------|-----|-----------|
| 1    | 69933-14 | BACK-UP LIGHT HARNESS                       | 1   | 468053    |
| 2    | 68506-04 | 4' ROUND BACK-UP LAMP ASSEMBLY W/PLUG, SEAL | 2   | 719305    |
| -    | N/A      | BACK-UP LIGHT GROUP (Includes above)        | 1   | 192932A   |



**Columbia ParCar Corp.**

1115 Commercial Avenue • Reedsburg, WI 53959

Phone: (608) 524-8888 • Fax: (608) 524-8380

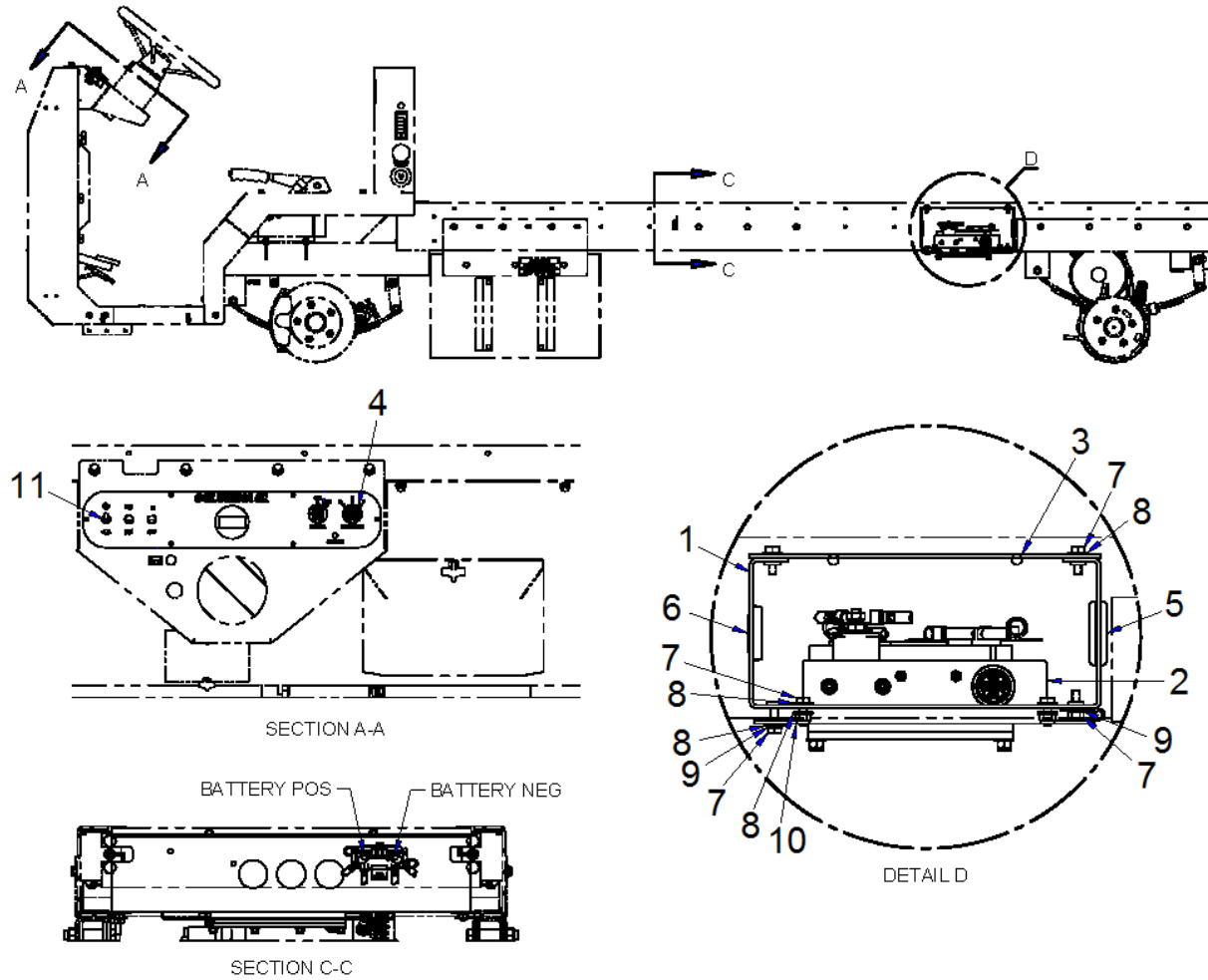
(800) 222-4653 • Web: [www.parcars.com](http://www.parcars.com)

# **Multiple Vehicle Platform Parts Manual**

## **Section 7**

### **AC Drive Components**

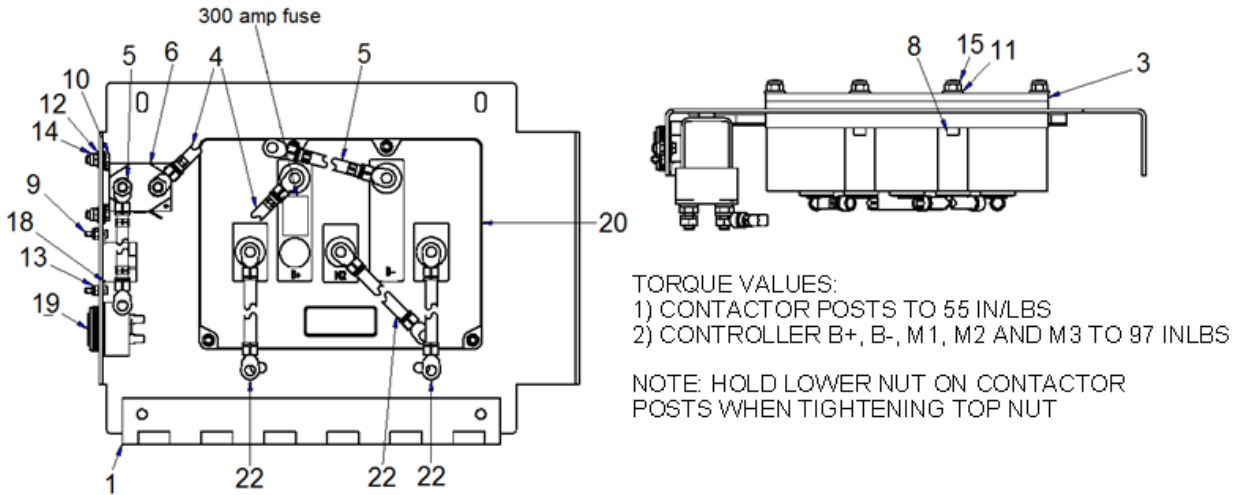
# AC DRIVE, 1 BATTERY, 1 AXLE- MVP



| ITEM | CPC P/N  | DESCRIPTION                                           | QTY | SEATS P/N |
|------|----------|-------------------------------------------------------|-----|-----------|
| 1    | *        | CONTROLS HANGER                                       | 1   | 309107    |
| 2    | *        | ASSEMBLY, CONTROL, SEVCON 450A AC,                    | 1   | 468043    |
| 3    | *        | COVER, CONTROL PANEL                                  | 1   | 512548    |
| 4    | 71763-07 | KEYSWITCH, UNIVERSAL "A" W/HARDWARE (Replacement Kit) | 1   | 709040    |
| 5    | 11418-A  | GROMMET, 2775 EPDM 3/16 GROOVE                        | 3   | 719523    |
| 6    | 11448    | PLUG, 1.75" BLACK PLASTIC                             | 3   | 719530    |
| 7    | 3787-B   | SCREW, 1/4-20X3/4, HHCS, G5,                          | 12  | 719636    |
| 8    | 6703-B   | WASHER, 1/4,SAE,F/W,BLK MAX                           | 14  | 719811    |
| 9    | 7036-B   | WASHER LOCK 1/4 REGULAR BLK ZINC                      | 4   | 719834    |
| 10   | 7686     | NUT, 1/4-20, NYLOCK, GA, YWZC                         | 4   | 719879    |
| 11   | 72000-10 | SWITCH, TOGGLE, LIGHTS ON-OFF                         | 1   | 760600    |
| -    | N/A      | GROUP 450A AC 1 BAT, 1 AXLE (Includes above)          | 1   | 192917A   |

\* SPECIAL ORDER

## CONTROLLER ASSEMBLY 450A AC - MVP

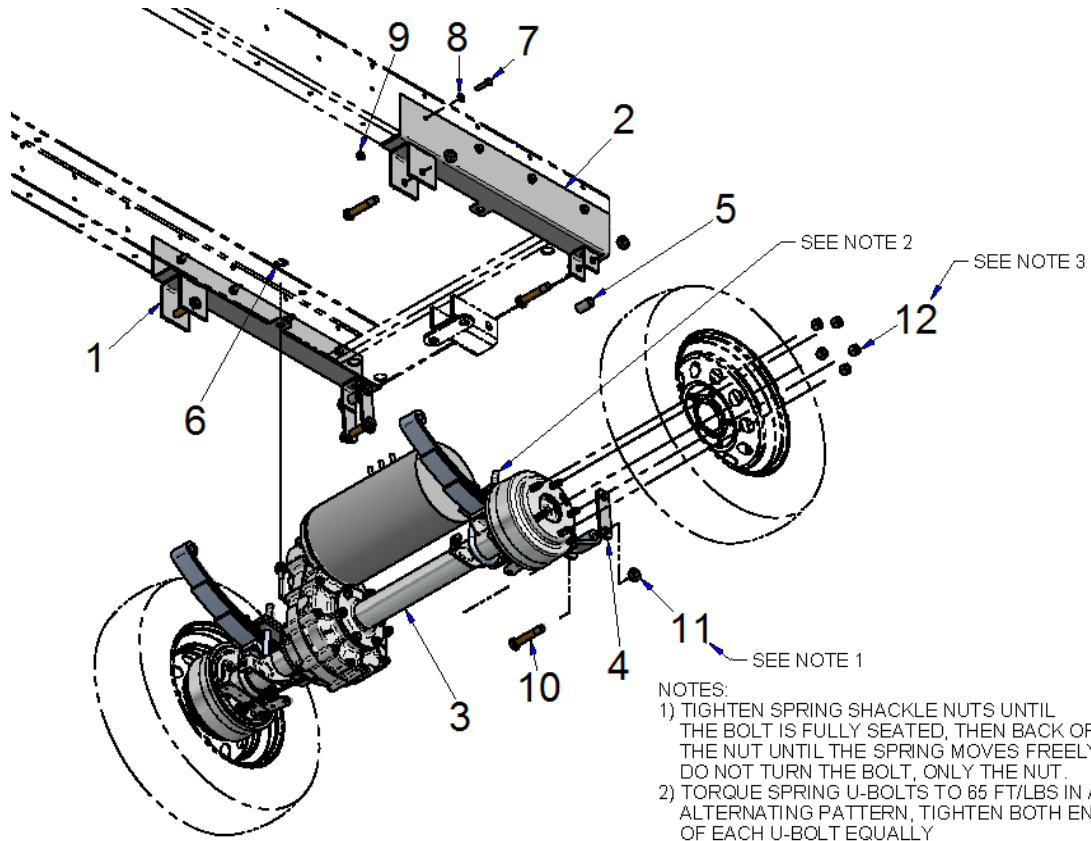


| ITEM | CPC P/N   | DESCRIPTION                                 | QTY | SEATS P/N |
|------|-----------|---------------------------------------------|-----|-----------|
| 1    | *         | CONTROLS PANEL                              | 1   | 309106    |
| 2**  | 69932-14  | HARNESS, CHARGER INTERLOCK EXT              | 1   | 468050    |
| 3    | 69538-14  | PLATE, HEAT SINK                            | 2   | 515379    |
| 4    | 70099-88  | CABLE, 4GA X 8.75", 5/16" TERM              | 1   | 709004    |
| 5    | 70105-89  | CABLE, 4GA X 61.50", 5/16" TERM             | 2   | 709411    |
| 6    | 71466-02  | CONTACTOR, SINGLE - 48V COIL, SW80          | 1   | 709590    |
| 7**  | 10043     | CABLE TIE, BLACK, .18 X 11 - 3/4, STD, 50LB | 2   | 719504    |
| 8    | 2010-B    | SCREW, 1/4-20X1-1/2,SHCS,BLK MAX            | 4   | 719545    |
| 9    | 2646      | SCREW,#6-32X5/8,PPH,M/S, YWZC               | 2   | 719581    |
| 10   | 2685-W    | SCREW, 10-24 X 5/8 HWH TRD ROL              | 2   | 719586    |
| 11   | 6703-B    | WASHER, 1/4,SAE,F/W,BLK MAX                 | 4   | 719811    |
| 12   | 6716      | WASHER, #10,SAE,F/W,BLK MAX                 | 2   | 719812    |
| 13   | 7592      | NUT 6-32 GR A NM MACH NYLON YWZC            | 2   | 719866    |
| 14   | 7624      | NUT 10-24 GR A NM MACH NYLON LOCK           | 2   | 719870    |
| 15   | 7686      | NUT, 1/4-20, NYLOCK, GA, YWZC               | 4   | 719879    |
| 16** | 71581-84  | WIRE MARKER, POSITIVE (.0278)               | 4   | 749180    |
| 17** | 71582-84  | WIRE MARKER, NEGATIVE (.0278)               | 2   | 749181    |
| 18   | 66555-00  | RELAY, 48VDC, SPSTNO, 20                    | 1   | 759829    |
| 19   | 71408-96A | AUDIBLE ALARM - 12/48 VDC                   | 1   | 759831    |
| 20   | 69533-13  | GEN4 CONTROLLER – SEVCON 450A               | 1   | 760956    |
| 21   | 69915-14  | HARNESS - SEVCON AC, BC                     | 1   | 761057    |
| 22   | 69916-14  | CABLE, MOTOR, SEVCON AC, 25.5"              | 3   | 761063    |
| -    | N/A       | CONTROLLER ASSEMBLY (Includes above)        | 1   | 468043    |

\* SPECIAL ORDER

\*\* NOT SHOWN

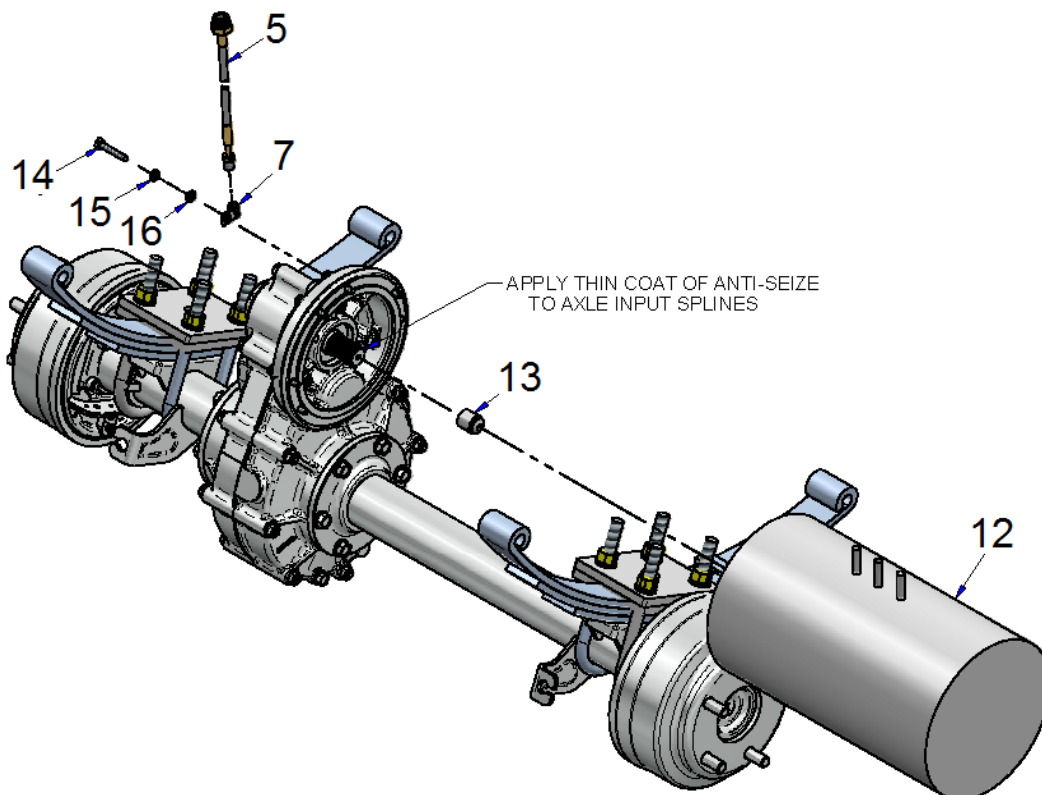
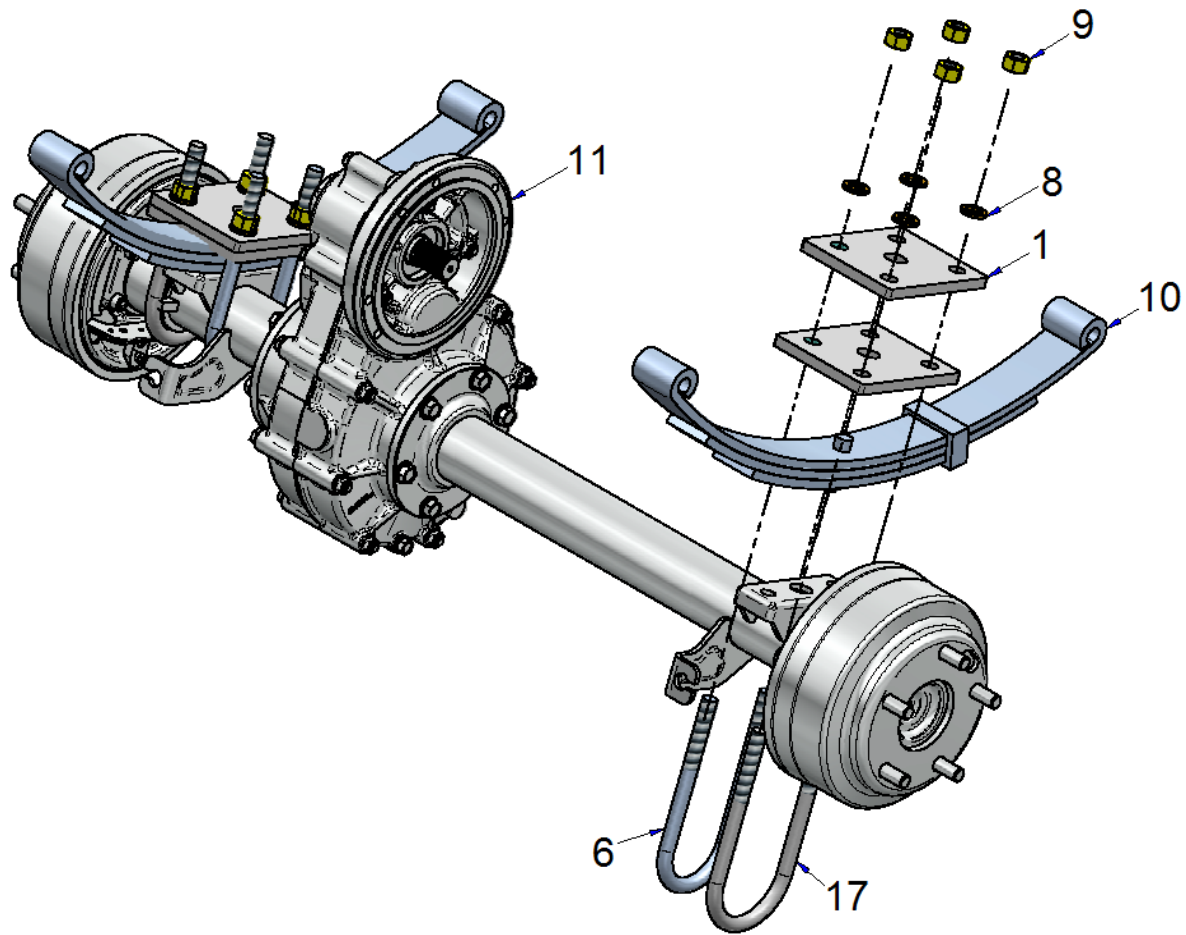
# 10.37 & 16.77 NKL AXLE 8KW AC – MVP



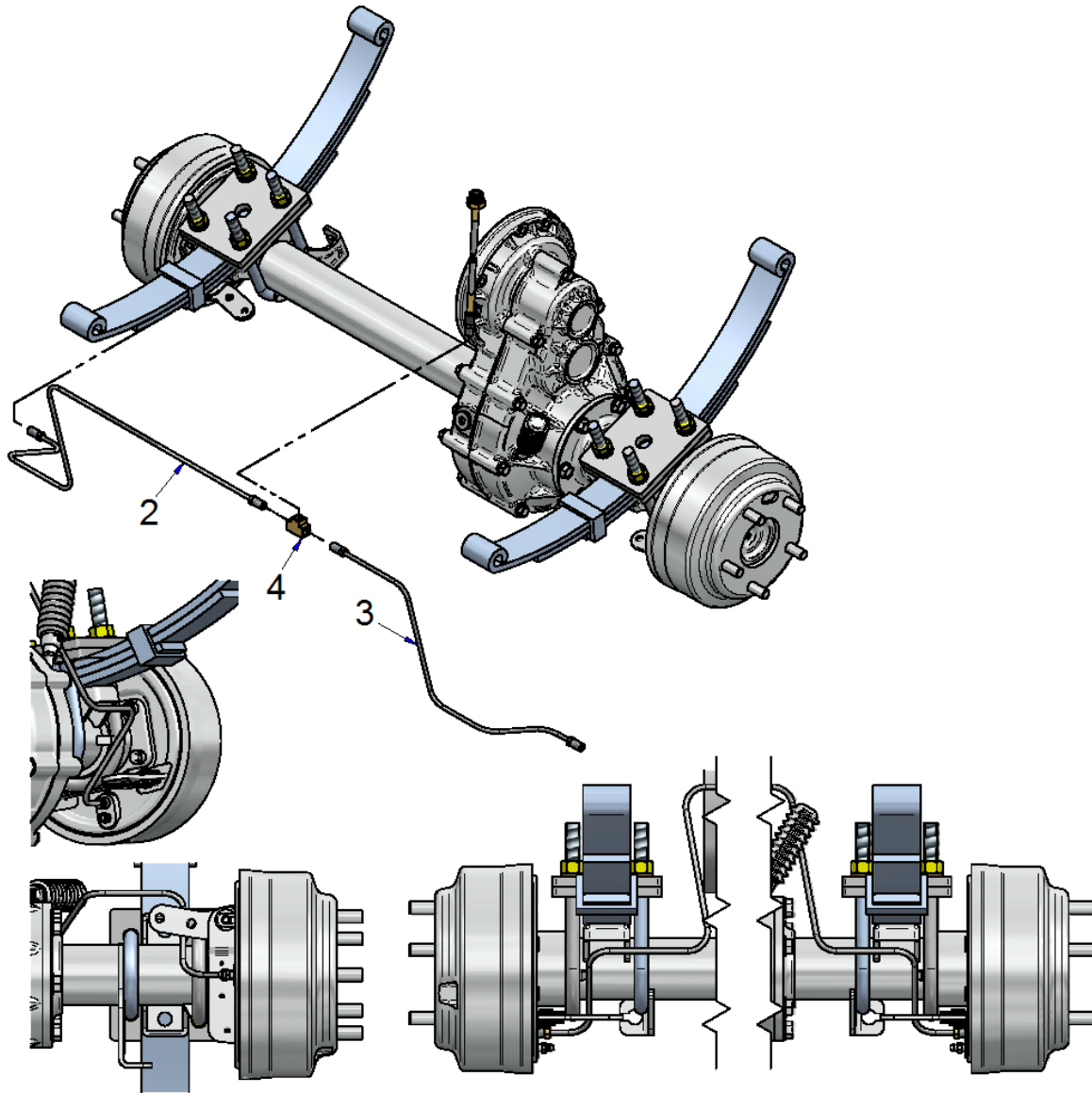
| ITEM | CPC P/N  | DESCRIPTION                                  | QTY | SEATS P/N |
|------|----------|----------------------------------------------|-----|-----------|
| 1    | 82740-12 | SGL AXLE SUSPENSION HANGER - RH              | 1   | 309166    |
| 2    | 82718-12 | SGL AXLE SUSPENSION HANGER - LH              | 1   | 309213    |
| 3    | *        | ASSEMBLY, AXLE, MVP 10.37 NKL 8KW AC         | 1   | 468045    |
| 3A   | *        | ASSEMBLY, AXLE, MVP 10.37 NKL 8KW AC         | 1   | 468049    |
| 4    | 44805-11 | SHACKLE STRAP                                | 4   | 512245    |
| 5    | 82711-12 | SLEEVE - SPRING HANGER                       | 2   | 512495    |
| 6    | 11077    | E-RING, .625 PHOS                            | 1   | 719516    |
| 7    | 2871-W   | SCREW, 5/16-18 X 1-1/4, HHCS, G5, YWZC       | 8   | 719592    |
| 8    | 6702-B   | WASHER, 5/16,SAE,F/W,BLK MAX                 | 8   | 719810    |
| 9    | 7750     | NUT, 5/16-18 GF FLNG CNTR LOCK BLK           | 8   | 719897    |
| 10   | 3800     | BOLT, 9/16-18 X 3" GR 5- SHACKLE             | 6   | 759898    |
| 11   | 7850     | HEX LOCKNUT, 9/16-18                         | 6   | 759909    |
| 12   | N/A      | LUG NUT, INCLUDED W/ NKL AXLE                | 10  | N/A       |
| -    | N/A      | GROUP 10.37 NKL AXLE (Includes above w/o 3A) | 1   | 192919A   |
| -    | N/A      | GROUP 16.77 NKL AXLE (Includes above w/3A)   | 1   | 192927A   |

\* SPECIAL ORDER

# 10.37 & 16.77 NKL AXLE ASSEMBLY 8KW AC – MVP

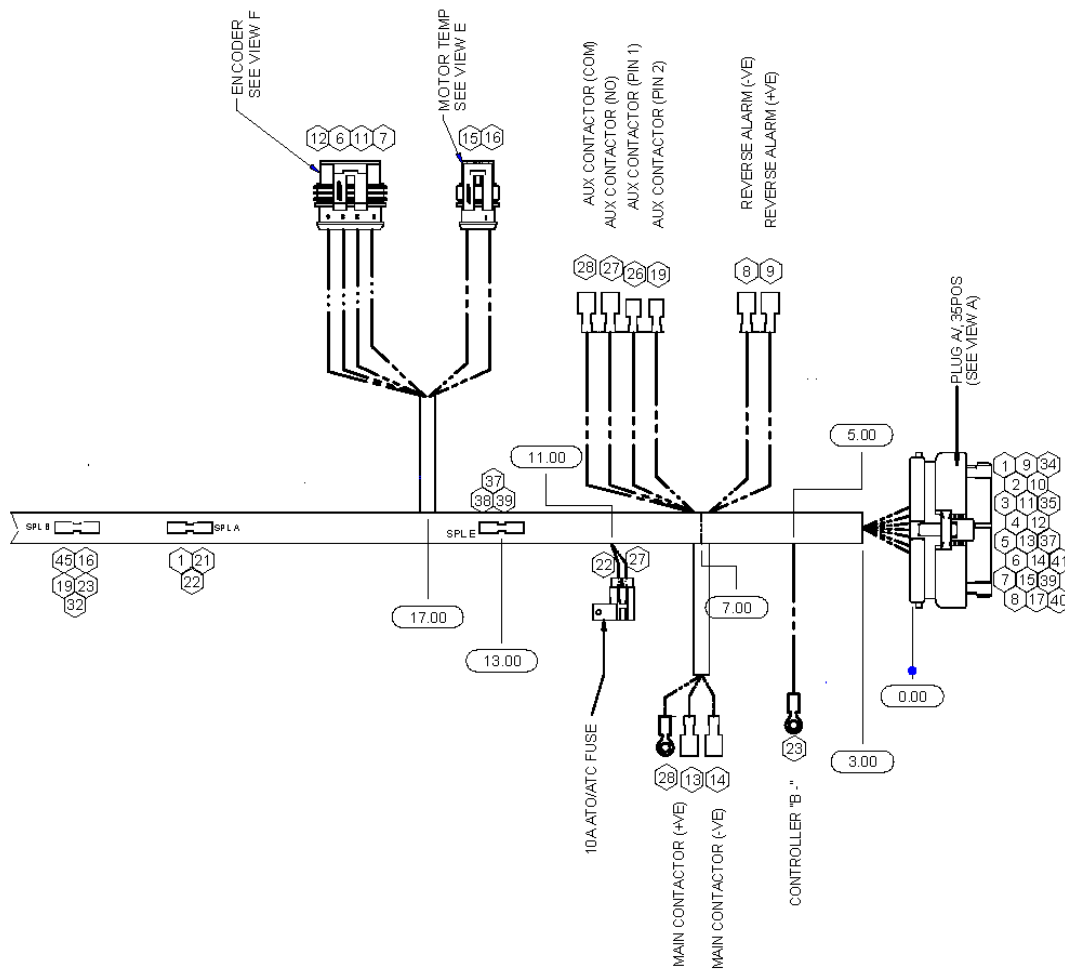
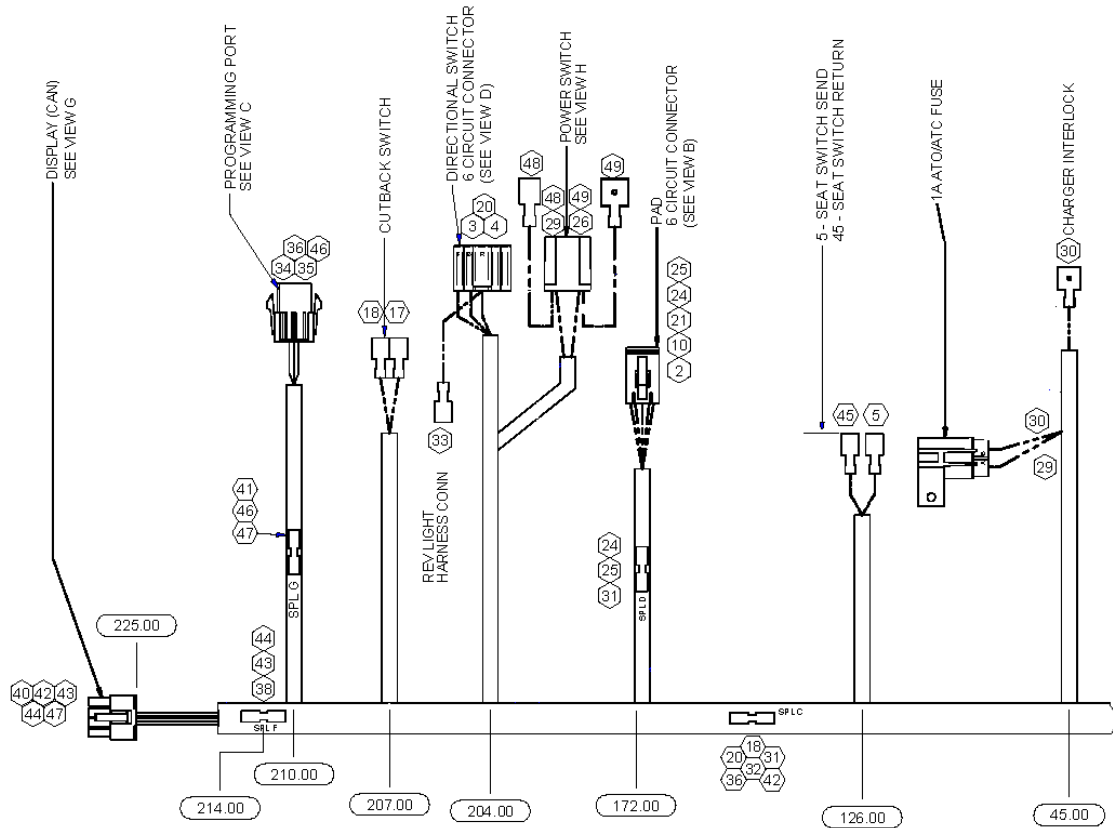


# 10.37 & 16.77 NKL AXLE ASSEMBLY 8KW AC – MVP Cont.

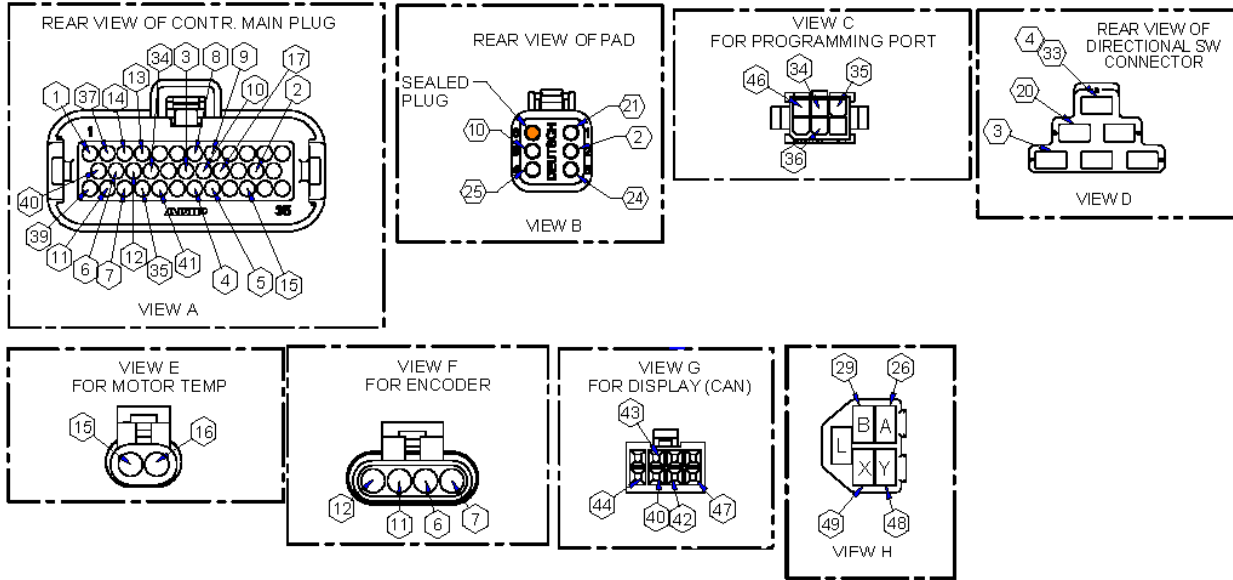


| ITEM | CPC P/N  | DESCRIPTION                                         | QTY | SEATS P/N |
|------|----------|-----------------------------------------------------|-----|-----------|
| 1    | 54804-12 | REAR SPRING PLATE, BC NKL                           | 4   | 514353    |
| 2    | 41440-02 | BRAKE LINE, 3/16 X 30 (LH FORMED)                   | 1   | 709232    |
| 3    | 41222-00 | BRAKE LINE, 3/16 X 20 (RH FORMED)                   | 1   | 709358    |
| 4    | 41842-94 | UNION TEE, HYD BRAKE                                | 1   | 709377    |
| 5    | 41216-00 | BRAKE HOSE, HYD, FLEX, 22"                          | 1   | 709430    |
| 6    | 5214     | U-BOLT, 1/2-13, 2.31 X 6.50, UNPLTD                 | 2   | 709574    |
| 7    | 9982     | CLAMP, STEEL TUBE, 1/4" VINYL CUSH                  | 1   | 719756    |
| 8    | 7068     | WASHER, 1/2,ALLOY-SPLIT,LW,YWZC                     | 8   | 719840    |
| 9    | 7880     | NUT, 1/2-13 GR 2 HEX FULL YWZC                      | 8   | 719913    |
| 10   | 54100-11 | SPRINGS, DOUBLE EYE                                 | 2   | 759901    |
| 11   | 82670-12 | AXLE, HD NKL, 10.37:1                               | 1   | 760734    |
| 11A  |          | AXLE, HD NKL 16.77:1                                | 1   | 760733    |
| 12   | 69531-13 | MOTOR, AC, 8KW, SCHABMUELLER                        | 1   | 760957    |
| 13   | 69532-13 | BUMPER, MOTOR, SCHABMUELLER AC                      | 1   | 760991    |
| 14   | 46270-08 | WASHER, 6MM, LW, ZC                                 | 6   | 781405    |
| 15   | 46265-08 | WASHER,6MM,FW,ZC                                    | 6   | 781406    |
| 16   | 72464-12 | SCREW, M6-1.0 X 35MM HHCS                           | 6   | 781478    |
| 17   | 54900-12 | U-BOLT, 1/2-13, 2.81 X 6.75                         | 2   | 782102    |
| -    | N/A      | AXLE ASSY 10.37 NKL 8KW AC (Includes above w/o 11A) | 1   | 468045    |
| -    | N/A      | AXLE ASSY 16.77 NKL 8KW AC (Includes above w/11A)   | 1   | 468049    |

# **HARNESS, AC CONTROLLER – MVP** **P/N 69915-14**

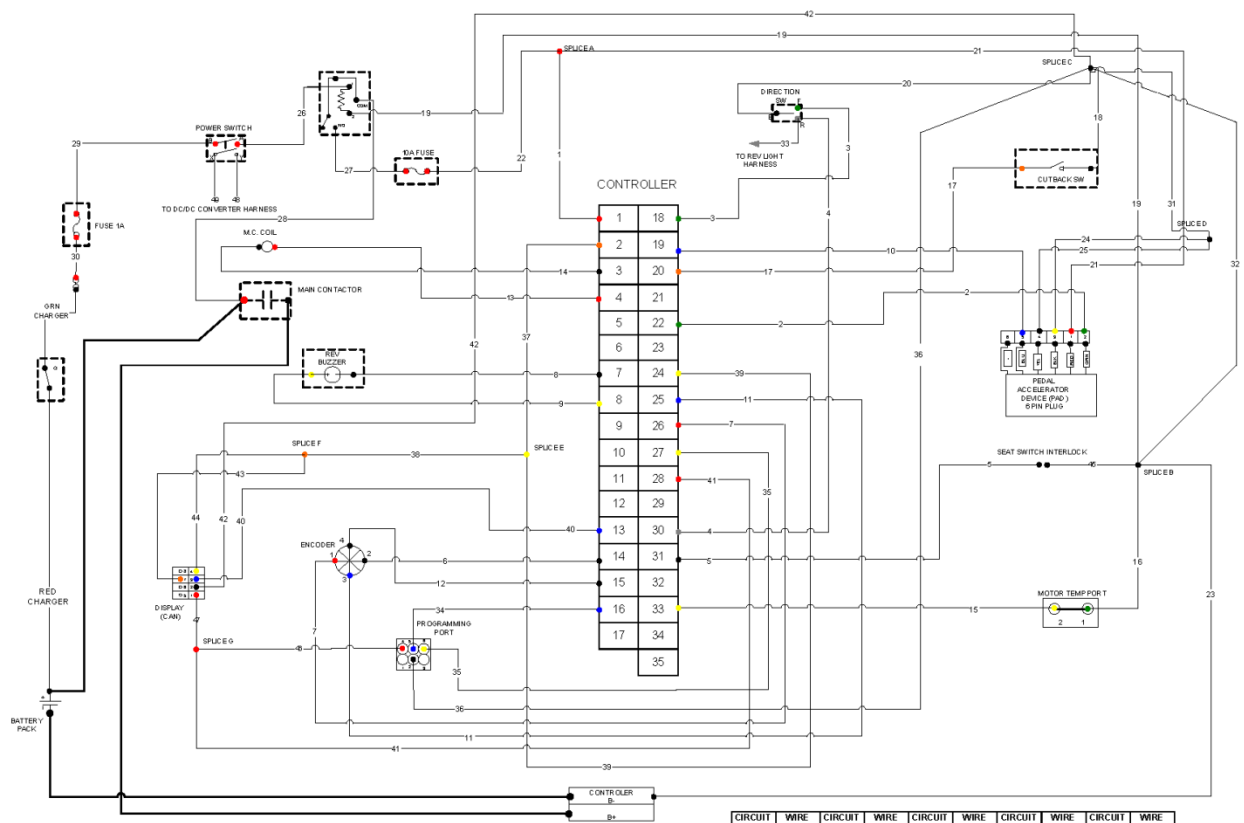


## HARNESS, AC CONTROLLER – MVP (Cont.)



| ITEM | DESCRIPTION                                              | CIRCUIT NO. | WIRE LENGTH * | WIRE COLOR | WIRE GAGE |
|------|----------------------------------------------------------|-------------|---------------|------------|-----------|
| 1    | CONTROL PIN 1 (POWER INPUT) TO SPICE A                   | 1           | 25            | RED        | 18        |
| 2    | CONTROL PIN 22 (PEDAL SIGNAL) TO PAD PLUG PIN 2          | 2           | 180           | GRN        | 18        |
| 3    | CONTROL PIN 18 (FWD) TO DIRECTIONAL SWTCH "F"            | 3           | 214           | GRN        | 18        |
| 4    | CONTROL PIN 30 (REV) TO DIR SW "R"                       | 4           | 214           | GRAY       | 18        |
| 5    | CONTROL PIN 31 (SEAT SW SEND) TO VEHICLE                 | 5           | 134           | BLK        | 18        |
| 6    | CONTROL PIN 14 (ENC PHASE A) TO ENCODER PLUG (PIN 2)     | 6           | 26            | WHT        | 18        |
| 7    | CONTROL PIN 26 (ENC +VE SUPPLY) TO ENCODER PLUG (PIN 1)  | 7           | 26            | RED        | 18        |
| 8    | CONTROL PIN 7 TO REV ALARM (-)                           | 8           | 18            | BLK        | 18        |
| 9    | CONTROL PIN 8 TO REV ALARM (+)                           | 9           | 18            | YLW        | 18        |
| 10   | CONTROL PIN 19 (PEDAL SW +VE) TO PAD PLUG PIN 5          | 10          | 180           | BLU        | 18        |
| 11   | CONTROL PIN 25 (ENC PHASE B) TO ENCODER PLUG (PIN 3)     | 11          | 26            | BLU        | 18        |
| 12   | CONTROL PIN 15 (ENC -VE SUPPLY) TO ENCODER PLUG (PIN 4)  | 12          | 26            | BLK        | 18        |
| 13   | CONTROL PIN 4 TO MAIN CONT COIL (POS)                    | 13          | 13            | RED        | 18        |
| 14   | CONTROL PIN 3 TO MAIN CONT COIL (NEG)                    | 14          | 13            | BLK        | 18        |
| 15   | CONTROL PIN 33 (MOTOR TEMP +) TO MOTOR TEMP PLUG (PIN 2) | 15          | 26            | YLW        | 18        |
| 16   | MOTOR TEMP PLUG (PIN 1 (-)) TO SPICE B                   | 16          | 19            | GRN        | 18        |
| 17   | CONTROL PIN 20 (CUTBACK) TO CUTBACK SWTCH                | 17          | 215           | ORG        | 18        |
| 18   | CUTBACK SWTCH TO SPICE C                                 | 18          | 47            | BLK        | 18        |
| 19   | SPICE B TO AUX CONTACTOR COIL (PIN 2)                    | 19          | 31            | BLK        | 18        |
| 20   | DIRECTIONAL SWTCH "B" TO SPICE C                         | 20          | 46            | BLK        | 18        |
| 21   | SPICE A TO PAD PLUG PIN 1                                | 21          | 155           | RED        | 18        |
| 22   | SPICE A TO FUSE 10A                                      | 22          | 16            | RED        | 18        |
| 23   | SPICE B TO CONTROL "B"                                   | 23          | 31            | BLK        | 16        |
| 24   | SPICED TO PAD PLUG PIN 3                                 | 24          | 4             | YLW        | 18        |
| 25   | SPICED TO PAD PLUG PIN 4                                 | 25          | 4             | BLK        | 18        |
| 26   | AUX CONTACTOR COIL (PIN 1) TO POWER SWITCH "A"           | 26          | 221           | RED        | 18        |
| 27   | FUSE 10A TO AUX CONTACTOR (NO)                           | 27          | 17            | RED        | 18        |
| 28   | AUX CONTACTOR (COM) TO MAIN CONTACTOR (POS)              | 28          | 17            | RED        | 18        |
| 29   | POWER SWITCH "B" TO FUSE 1A                              | 29          | 193           | RED        | 18        |
| 30   | FUSE 1A TO CHARGER INTERLOCK (CONTROL +)                 | 30          | 6             | RED        | 18        |
| 31   | SPICE D TO SPICE C                                       | 31          | 8             | BLK        | 18        |
| 32   | SPICE C TO SPICE B                                       | 32          | 141           | BLK        | 18        |
| 33   | DIR SW "R" TO REV LIGHT HARNESS CONN                     | 33          | 6             | GRAY       | 18        |
| 34   | CONTROL PIN 16 (CAN HIGH) TO PROGRAMMING PORT PIN 5      | 34          | 220           | BLU        | 18        |
| 35   | CONTROL PIN 27 (CAN LOW) TO PROGRAMMING PORT PIN 6       | 35          | 220           | YLW        | 18        |
| 36   | SPICE C TO PROGRAMMING PORT PIN 2                        | 36          | 52            | BLK        | 18        |
| 37   | CONTROL PIN 2 (CAN TERM) TO SPICE E                      | 37          | 13            | ORG        | 18        |
| 38   | SPICE E TO SPICE F                                       | 38          | 201           | YLW        | 18        |
| 39   | CONTROL PIN 24 TO SPICE E                                | 39          | 13            | YLW        | 18        |
| 40   | CONTROL PIN 13 (CAN HIGH) TO DISPLAY PIN 3               | 40          | 225           | BLU        | 18        |
| 41   | CONTROL PIN 28 (CAN + SPL Y) TO SPICE G                  | 41          | 214           | RED        | 18        |
| 42   | DISPLAY PIN 2 TO SPICE C                                 | 42          | 57            | BLK        | 18        |
| 43   | DISPLAY PIN 7 TO SPICE F                                 | 43          | 11            | ORG        | 18        |
| 44   | DISPLAY PIN 4 (CAN LOW) TO SPICE F                       | 44          | 11            | YLW        | 18        |
| 45   | SEAT SW RETURN TO SPICE B                                | 45          | 107           | BLK        | 18        |
| 46   | SPICE G TO PROGRAMMING PORT PIN 4                        | 46          | 6             | RED        | 18        |
| 47   | SPICE G TO DISPLAY PIN 1                                 | 47          | 18            | RED        | 18        |
| 48   | POWER SWITCH "Y" TO DC CONVERTER                         | 48          | 5             | RED        | 16        |
| 49   | POWER SWITCH "X" TO DC CONVERTER                         | 49          | 5             | RED        | 16        |

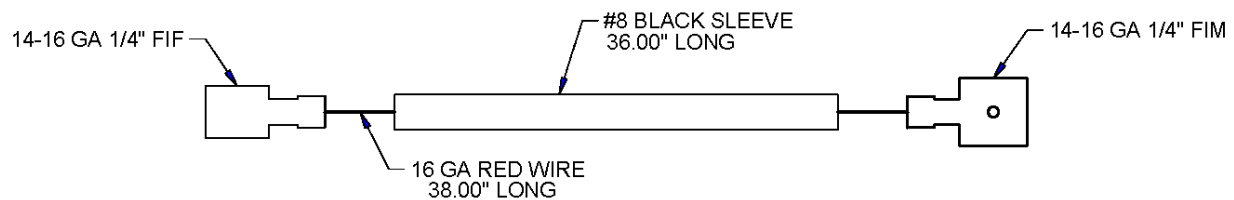
## HARNESS, AC CONTROLLER – MVP (Cont.)



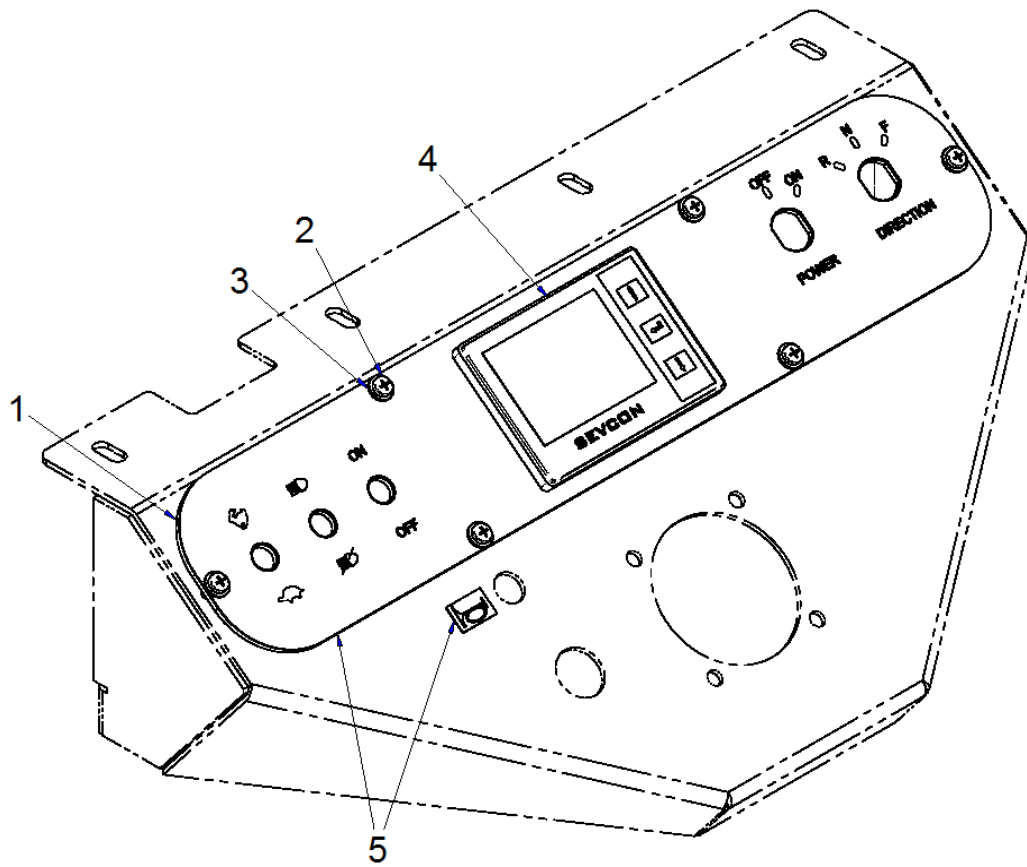
| Pin | Description               |
|-----|---------------------------|
| 1   | REV SWITCH SIGNAL         |
| 2   | CAN BUS TERMINATION       |
| 3   | MAIN CONTACTOR (+) SUPPLY |
| 4   | MAIN CONTACTOR (-) SUPPLY |
| 5   | NOT USED                  |
| 6   | NOT USED                  |
| 7   | REVERSE ALARM (-) SUPPLY  |
| 8   | REVERSE ALARM (+) SUPPLY  |
| 9   | NOT USED                  |
| 10  | NOT USED                  |
| 11  | NOT USED                  |
| 12  | NOT USED                  |
| 13  | CAN HIGH (DEP-AY)         |
| 14  | ENCODER PHASE A           |
| 15  | ENCODER (-) SUPPLY        |
| 16  | CAN HIGH (PROGRAMMING)    |
| 17  | NOT USED                  |
| 18  | FORWARD                   |
| 19  | REV (-) SUPPLY            |
| 20  | CUTBACK SWITCH            |
| 21  | NOT USED                  |
| 22  | PEDAL SIGNAL              |
| 23  | NOT USED                  |
| 24  | CAN LOW (DEP-AY)          |
| 25  | ENCODER PHASE B           |
| 26  | ENCODER (+) SUPPLY        |
| 27  | CAN LOW (PROGRAMMING)     |
| 28  | DISPLAY (+) SUPPLY        |
| 29  | NOT USED                  |
| 30  | REVERSE                   |
| 31  | SAFETY OUT                |
| 32  | NOT USED                  |
| 33  | MOTOR TEMP (+) SUPPLY     |
| 34  | NOT USED                  |
| 35  | NOT USED                  |

| CIRCUIT NO. | WIRE COLOR | CIRCUIT NO. | WIRE COLOR | CIRCUIT NO. | WIRE COLOR | CIRCUIT NO. | WIRE COLOR | CIRCUIT NO. | WIRE COLOR |
|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| 1           | RED        | 11          | BLU        | 21          | RED        | 31          | BLK        | 41          | RED        |
| 2           | ORN        | 12          | BLK        | 22          | RED        | 32          | BLK        | 42          | BLK        |
| 3           | ORN        | 13          | RED        | 23          | BLK        | 33          | GRAY       | 43          | ORN        |
| 4           | GRAY       | 14          | BLK        | 24          | YLW        | 34          | BLU        | 44          | YLW        |
| 5           | BLK        | 15          | YLW        | 25          | BLK        | 35          | YLW        | 45          | BLK        |
| 6           | WHT        | 16          | ORN        | 26          | RED        | 36          | BLK        | 46          | RED        |
| 7           | RED        | 17          | ORN        | 27          | RED        | 37          | ORN        | 47          | RED        |
| 8           | YLW        | 18          | BLK        | 28          | RED        | 38          | YLW        | 48          | RED        |
| 9           | BLK        | 19          | BLK        | 29          | RED        | 39          | YLW        | 49          | RED        |
| 10          | BLU        | 20          | BLK        | 30          | RED        | 40          | BLU        |             |            |

## HARNESS, CHARGER INTERLOCK EXT P/N 69932-14

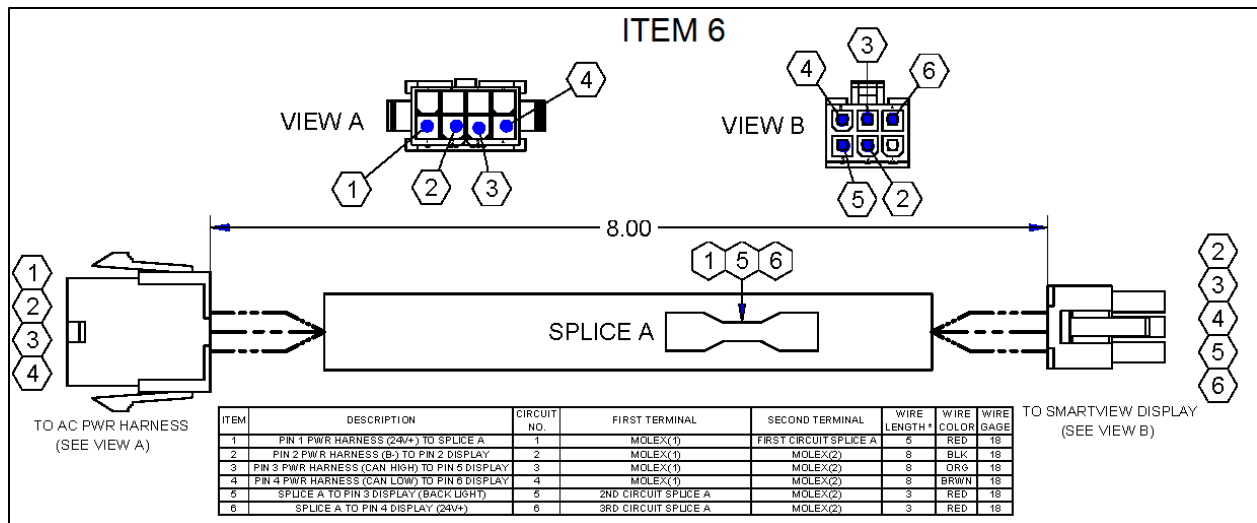
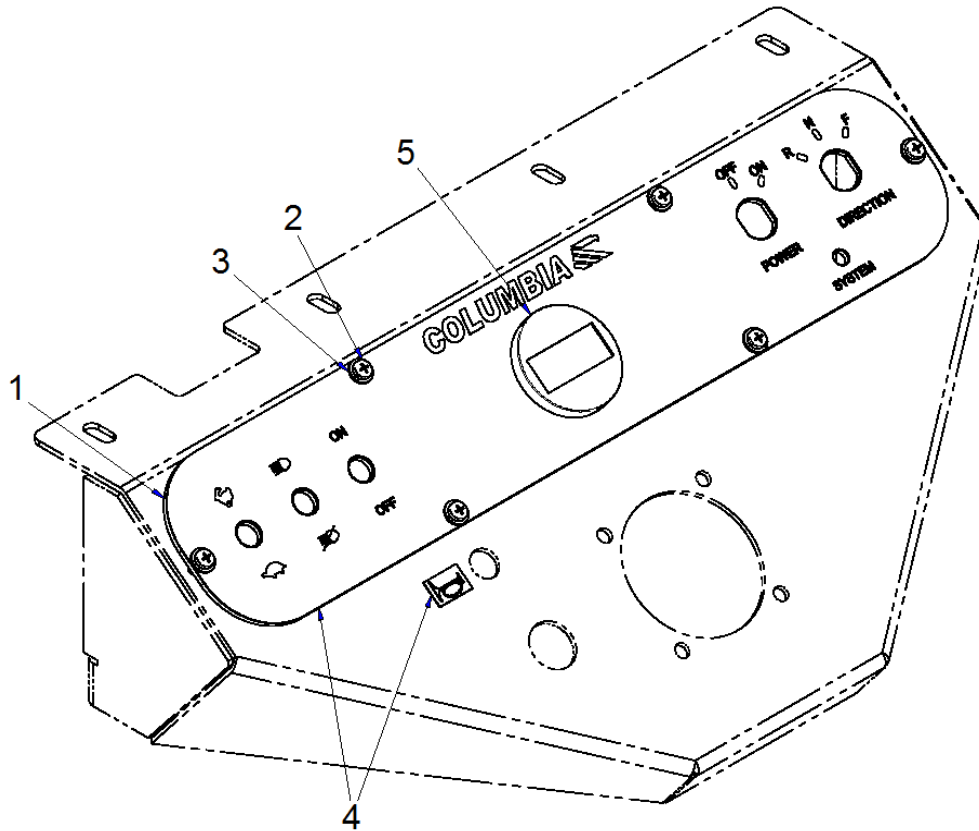


## CLEARVIEW DASH- MVP



| ITEM | CPC P/N  | DESCRIPTION                      | QTY | SEATS P/N |
|------|----------|----------------------------------|-----|-----------|
| 1    | 51487-14 | PANEL, DASH, CLEARVIEW, MVP      | 1   | 516300    |
| 2    | 3615     | SCREW, 10-24X1/2PHILLIPS,BLK ZNC | 6   | 719467    |
| 3    | 6716     | WASHER,#10,SAE,F/W,BLK MAX       | 6   | 719812    |
| 4    | 69534-13 | DISPLAY, CLEARVIEW, SEVCON       | 1   | 760958    |
| 5    | 51488-14 | DASH OVERLAY - MVP AC DRIVE      | 1   | 761171    |
| -    | N/A      | CLEARVIEW DASH (Includes above)  | 1   | 192920A   |

# SMARTVIEW DASH – MVP



| ITEM | CPC P/N  | DESCRIPTION                      | QTY | SEATS P/N |
|------|----------|----------------------------------|-----|-----------|
| 1    | 51486-14 | PLATE, INNER DASH INSERT         | 1   | 512263    |
| 2    | 3615     | SCREW, 10-24X1/2PHILLIPS,BLK ZNC | 6   | 719467    |
| 3    | 6716     | WASHER,#10,SAE,FW,BLK MAX        | 6   | 719812    |
| 4    | *        | DASH OVERLAY DECAL               | 1   | 759910    |
| 5    | *        | DISPLAY,SMARTVIEW                | 1   | 761154    |
| 6    | *        | HARNESS, DISPLAY ADAPTER, AC DR  | 1   | 761157    |
| -    | N/A      | SMARTVIEW GROUP (Includes above) | 1   | 192928A   |