



## Mack Chassis - Air Brake Routing Schematics For Models (CHU, CXU, TD, GU) - 7.2010



> Internal Content

For more information refer to the Service Bulletin Trucks - Date 7.2010 Group 561 No.32 - Air Brake Routing Schematics CHU, CXU, TD, GU [here](#).



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## Air Brake Routing Schematics

CHU, CXU, TD, GU

### Air Brake Routing Schematics

The following information provides Air Brake Routing Schematics related to brakes and air systems.

There is no substitute for common sense and careful practices in the workplace. Improper practices or carelessness can cause burns, cuts, mutilation, asphyxiation, or other bodily injury or death.

Read and understand all of the safety precautions and guidelines before performing any repair.

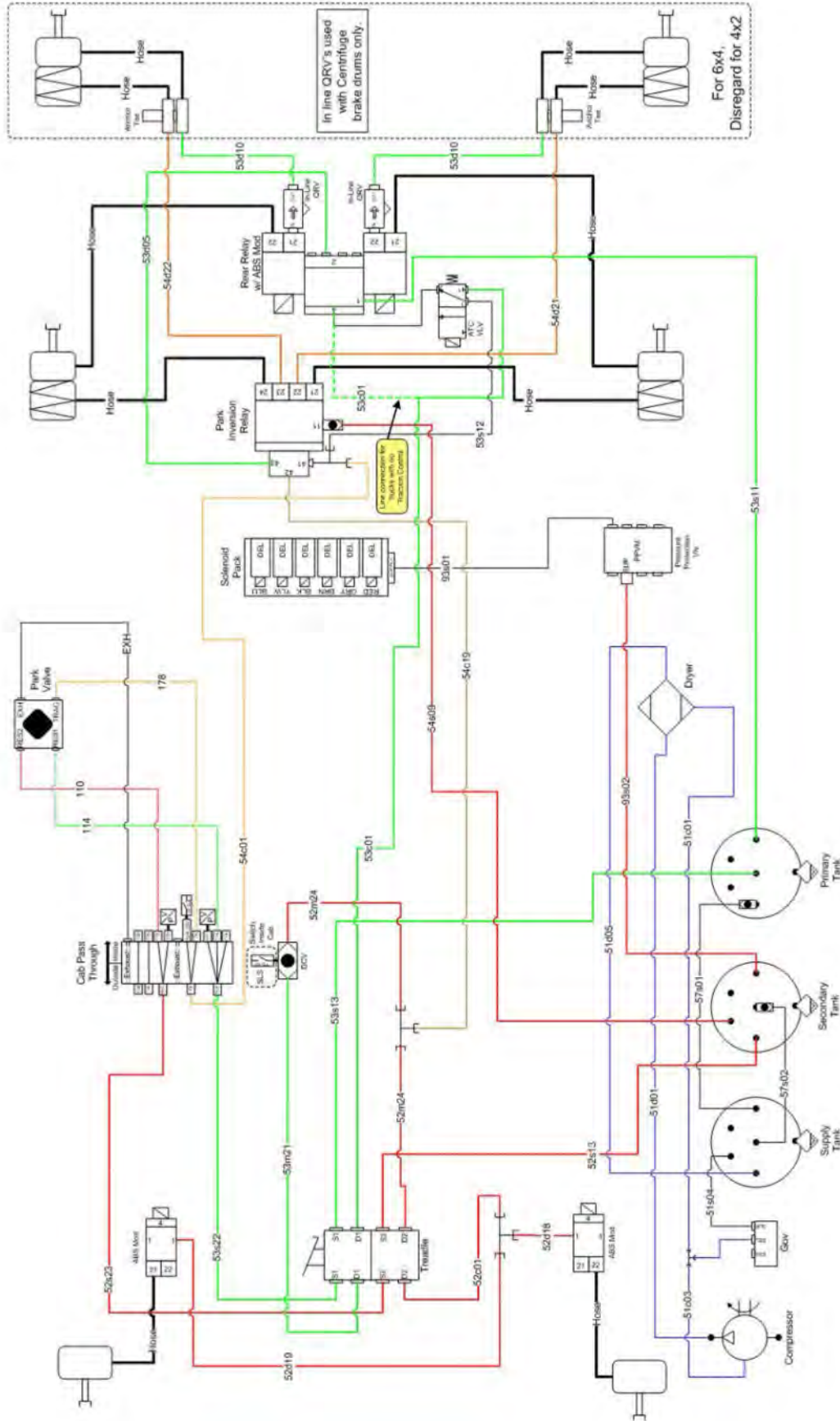
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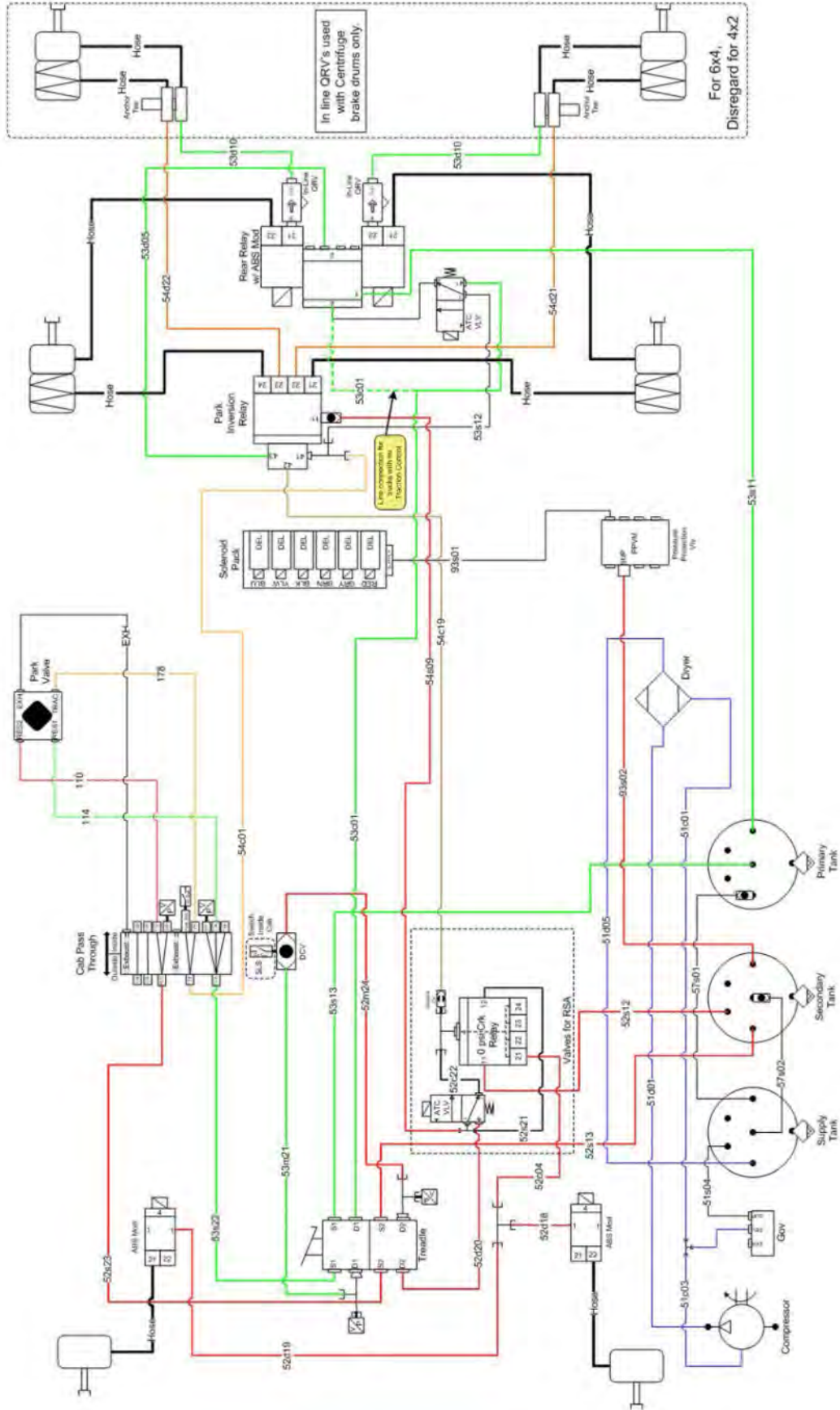




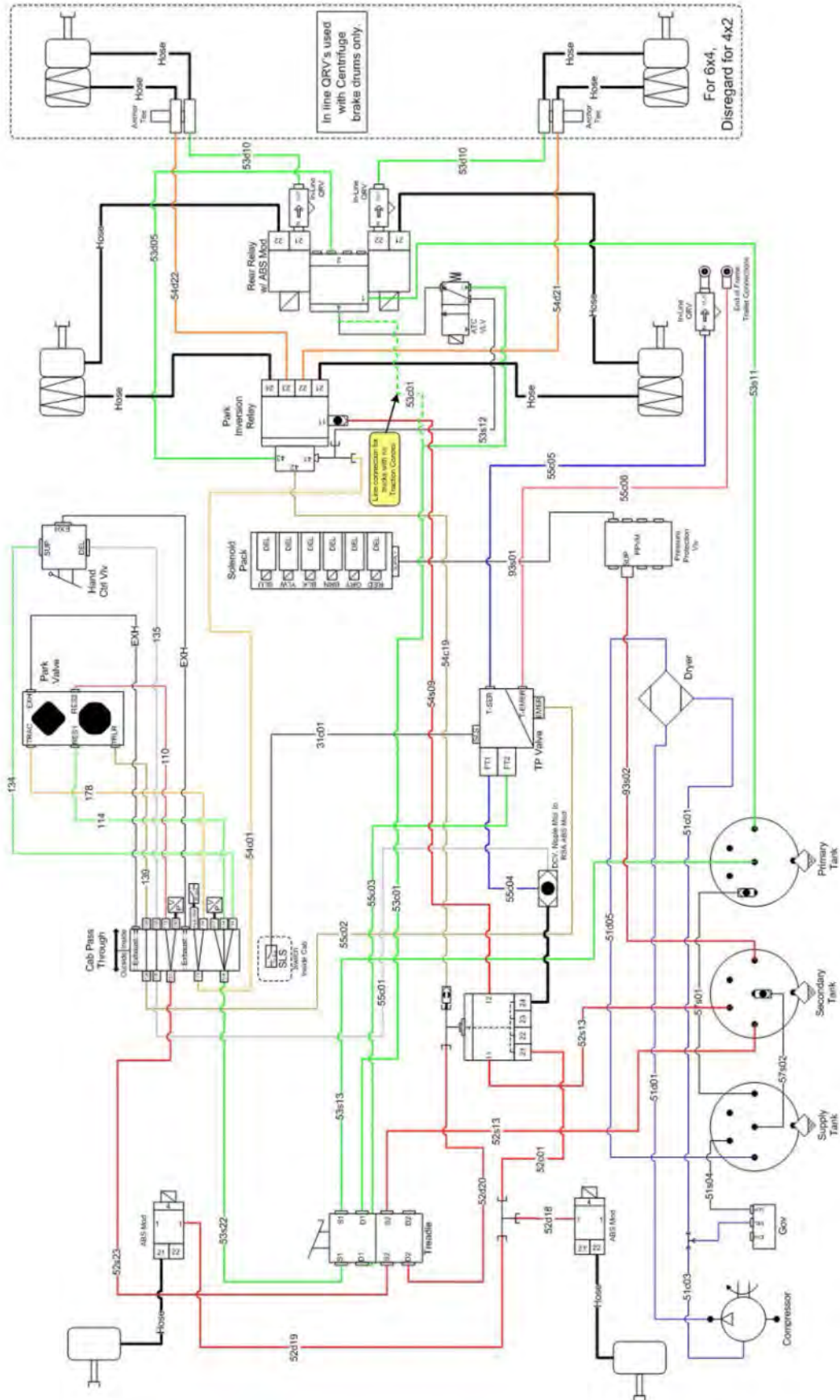
**Rigid with no Options**



# Rigid with RSA



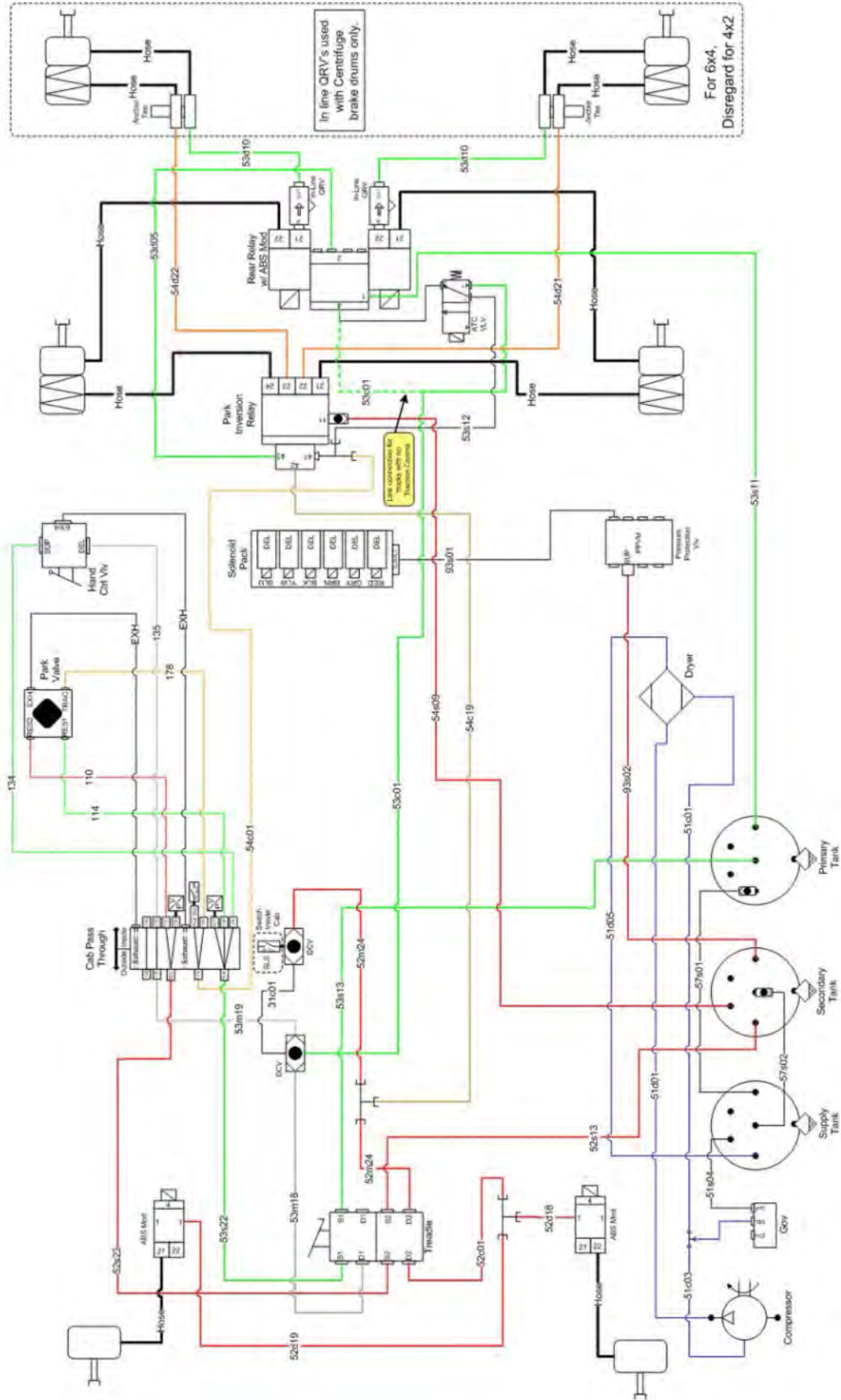
**Rigid with Full Trailer**



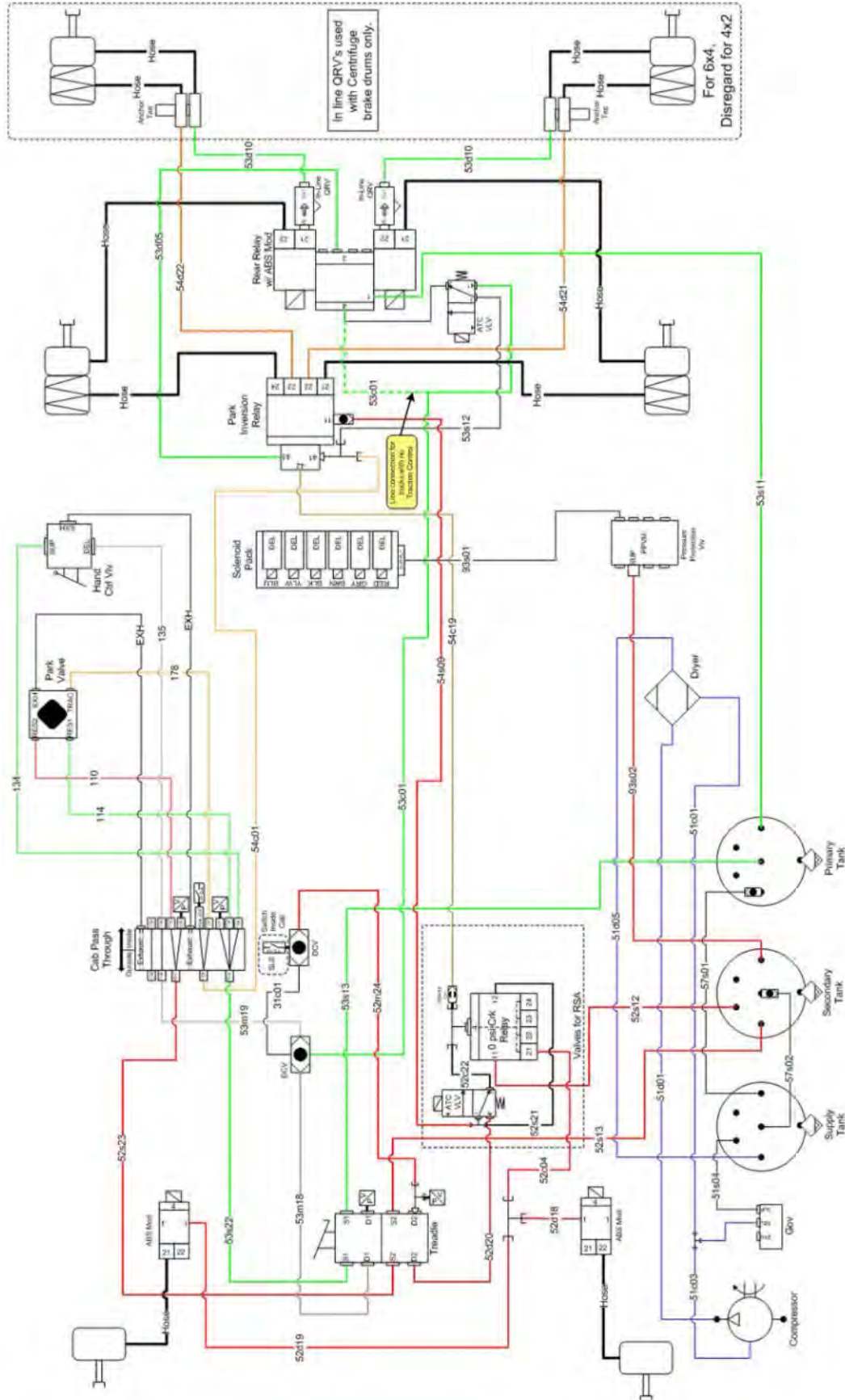




# Rigid with Service Brake Hand Control



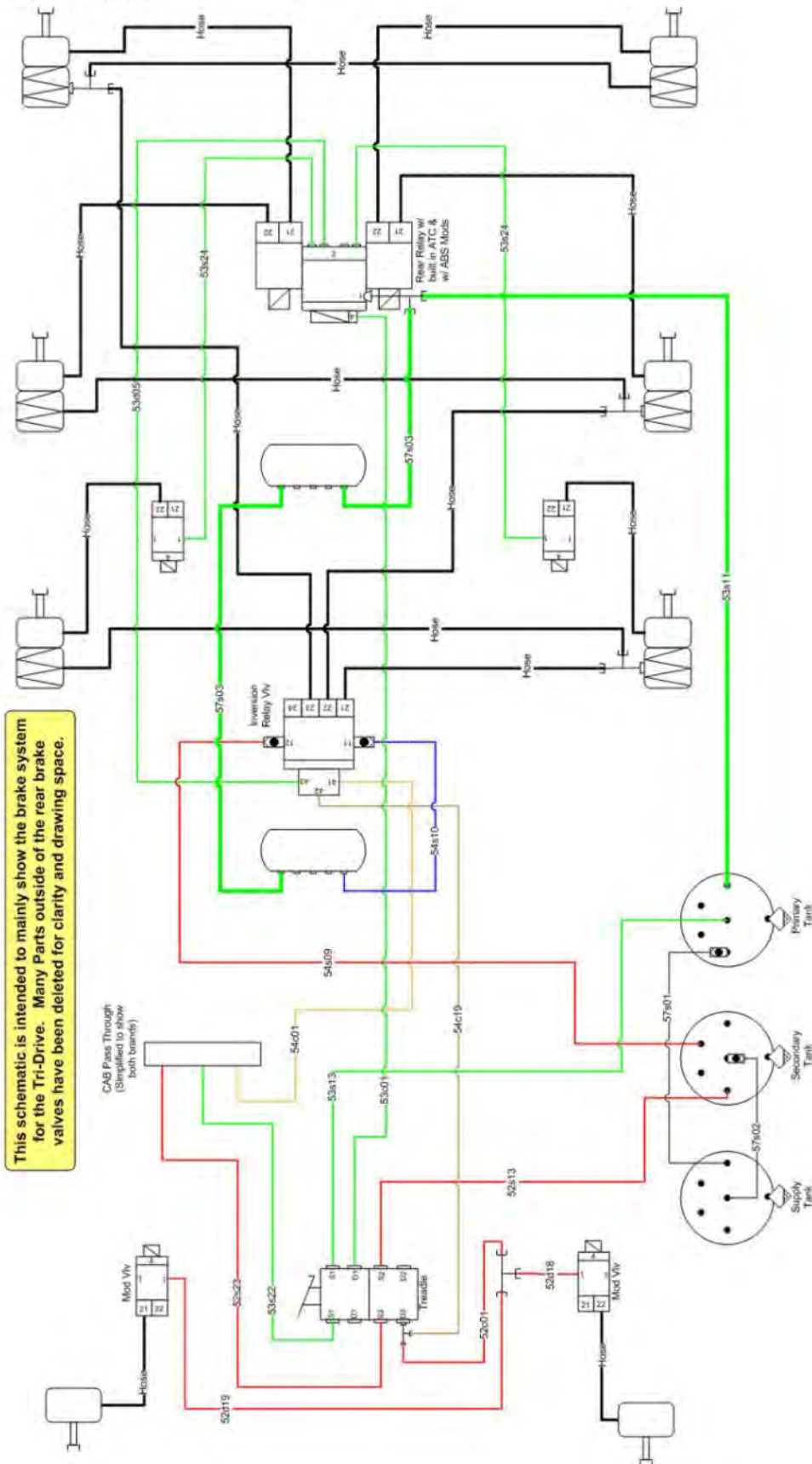
# Rigid with Service Brake Control, RSA







# Tri-Drive Brake System



This schematic is intended to mainly show the brake system for the Tri-Drive. Many parts outside of the rear brake valves have been deleted for clarity and drawing space.

## Air Line Numbers and Description

| Engine with Mounting and Equipment         |   | Color        | Line size (inches)        |
|--|---|--------------|---------------------------|
| <b>Exhaust brake</b>                       |   |              |                           |
| 21s01                                      | Air Supply to Engine Exhaust Brake                | Black        | 1/4                       |
| <b>Fan Clutch</b>                          |   |              |                           |
| 22c01                                      | Fan Clutch Control, Solenoid to Clutch            | Green        | 1/4                       |
| 22s02                                      | Fan Clutch Solenoid Supply                        | Green        | 1/4                       |
| <b>Air Cleaner</b>                         |   |              |                           |
| 23c01                                      | Air Cleaner Intake Control                        | Purple       | 1/4                       |
| <b>Emissions control</b>                   |   |              |                           |
| 25s01                                      | Diesel Particulate Filter Atomizer Block Supply   | Red          | 1/2                       |
| 25s02                                      | DRV Valve Supply                                  | Black        | 1/4                       |
| 25s03                                      | AHI Regulator Valve Supply                        | Tan          | 1/4                       |
| 25s04                                      | AHI Regulator Valve Delivery to Injector Air Pipe | White        | 1/4                       |
| <b>Electrical Lighting the Instruments</b> |   | <b>Color</b> | <b>Line size (inches)</b> |
| <b>Switches</b>                            |   |              |                           |
| 31c01                                      | Stop Light Switch Control                         | Black        | 1/4                       |
| 31m02                                      | Primary/Secondary Jumper                          | Grey         | 3/8                       |
| 31m03                                      | Hand Control Jumper                               | Grey         | 3/8                       |
| <b>Gauges</b>                              |   |              |                           |
| 32m01                                      | Rear Bellows Gauge Pressure                       | Purple       | 1/4                       |
| 32m02                                      | Front Bellows Gauge Pressure                      | Brown        | 1/4                       |
| 32m03                                      | Primary Tank Pressure                             | Green        | 1/4                       |
| 32m04                                      | Secondary Tank Pressure                           | Red          | 1/4                       |
| 32m05                                      | Primary Brake Pressure                            | Green        | 1/4                       |
| 32m06                                      | Secondary Brake Pressure                          | Red          | 1/4                       |
| 32m07                                      | Rear Rear Bellows Pressure                        | Orange       | 1/4                       |
| 32m08                                      | ESP Rear Suspension Pressure                      | Purple       | 1/4                       |

| Power Transmission          |                                  | Color  | Line size (inches) |
|-----------------------------|----------------------------------|--------|--------------------|
| <b>Switches</b>             |                                  |        |                    |
| 41s01                       | Clutch Release Air Assist Supply | Black  | 3/8                |
| 41c02                       | Neutral Switch                   | Red    | 1/4                |
| <b>Gearbox</b>              |                                  |        |                    |
| 42s01                       | Gearbox Air Shift                | Black  | 3/8                |
| 42s07                       | Transmission Supply              | Black  | 3/8                |
| <b>Rear Axle(s)</b>         |                                  |        |                    |
| 43c01                       | Inter Axle Lock (Diff Axle)      | Grey   | 1/4                |
| 43c02                       | Inner Wheel Lock (Diff Wheel)    | Brown  | 1/4                |
| <b>Power Take-Off (PTO)</b> |                                  |        |                    |
| 44d01                       | PTO Solenoid Delivery            |        | 1/4                |
| 44s02                       | PTO Solenoid Supply              | Orange | 1/4                |

| Brake  |  | Color         | Line size (inches) |
|--|--|---------------|--------------------|
| <b>Compressor, Regulator, Anti-Freeze Unit</b> |  |               |                    |
| 51d01  | Delivery from the compressor                                     |               |                    |
| 51m02  | Air Dryer to Purge Tank  | Blue          | 3/8                |
| 51c03  | Compressor Unload from Governor                                  | Blue          | 1/4                |
| 51s04  | Governor Supply from We Tank                                     | Yellow        | 3/8                |
| 51d05  | Air Dryer Delivery to Wet Tank                                   | Blue          | 5/8                |
| 51c01  | Air Dryer Purge Control from Governor                            | Blue          | 1/4                |
| <b>Front Circuit</b>                           |  |               |                    |
| 52c01  | Foot Brake Valve to QRV/Tee (BSYS-CON)                           | Red           | 1/2                |
| 52c03  | Redundant Rear Control   | Brown         | 3/8                |
| 52c04  | ESP Relay to ABS Modulator                                       | Black         | 1/2                |
| 52d04  | QRV/Relay to ABS Modulator                                       | Red           | 1/2                |
| 52d05  | ABS Modulator to Brake Chamber                                   | Rubber Hose   | 1/2                |
| 52s12  | Front Circuit/ESP Relay Supply                                   | Red           | 5/8                |
| 52s13  | Front Circuit Foot Brake Valve Supply                            | Red           | 5/8                |
| 52m17  | Front Brake Valve to Front Circuit Pressor Sensor                | Red           | 3/8                |
| 52d18  | Tee to ABS mod LHS   | Red           | 1/2                |
| 52d19  | Tee to ABS mod RHS   | Red           | 1/2                |
| 52d20  | Foot Valve to ESP ATC Valve/ESP Relay Control Port               | Red           | 1/2                |
| 52s21  | ESP ATC Valve Supply   | Black         | 3/8, 1/2           |
| 52c22  | ESP ATC Valve Control to Relay Control                           | Black         | 3/8                |
| 52s23  | Foot Brake Valve to Pass Through Supply to Park Valve            | Red           | 3/8                |
| 52m24  | Foot Brake Valve to SLS DCV, Rigid Only                          | Grey          | 3/8                |
| 52c25  | Hill Start Assist Inversion Valve Secondary Control from Treadle | Red           | 1/4                |
| <b>Rear Circuit</b>                            |  |               |                    |
| 53c01  | Rear Service Relay Control from Treadle Valve                    | Green         | 3/8, 1/2           |
| 53c02  | SBHC Control from Cab to Treadle DCV                             | Grey          | 1/4, 3/8           |
| 53c03  | 6S6m QRV Control from Rear Relay                                 | Green         | 5/8                |
| 53d05  | Anti-compounding from Rear Relay                                 | Green         | 3/8                |
| 53d06  | Relay to ABS Modulators (ABS Solenoid Valve)                     | Green         | 5/8                |
| 53d09  | ABS Solenoid Valve to Brake Chambers (ABS)                       | Green, Rubber | 5/8, Hose          |
| 53d10  | Service Relay Valve to Brake Chambers (Without ABS)              | Green, Rubber | 5/9, Hose          |
| 53s11  | Service Relay Supply from Air Tank (2 for GU and Titan)          | Green         | 3/4, 5/8           |
| 53s12  | Traction Control Supply from Park Valve Control                  | Green         | 1/4, 3/8           |
| 53s13  | Treadle Valve Supply for Rear Circuit from Air Tank              | Green         | 5/8                |
| 53m18  | SBHC Jumper  | Grey          | 3/8                |



|                           |   |        |               |
|---------------------------|---|--------|---------------|
| 53m19                     | SBHC Jumper 2   | Grey   | 3/8           |
| 53m20                     | Treadle Valve to Rear Circuit Pressure Sensor                   |        | 1/4           |
| 53m21                     | Treadle Valve to SLS DCV, Rigid Only                            |        | 1/4, 3/8      |
| 53m22                     | Treadle Valve to Pass Through Supply to Park Valve              |        | 3/8           |
| 53s23                     | Service Brake Hand Control Supply                               | Green  | 3/8           |
| 53s24                     | 6S6M Rear Axle ABS Modulator Supply                             | Green  | 5/8           |
| 53s25                     | Hill Start Assist Supply  | Blue   | 1/4           |
| 53s26                     | Hill Start Assist Control                                       | Green  | 1/4           |
| <b>Parking Brake</b>      |   |        |               |
| 54c01                     | Spring Brake Control  | Orange | 3/8           |
| 54d03                     | QRV/Relay Valve to Rear Spring Brake Chambers                   | Rubber | Hose          |
| 54d07                     | Joint Fitting at Rear Axle to LH Spring Brake Chamber           | Rubber | Hose          |
| 54d08                     | Joint Fitting at Rear Axle to RH Spring Brake Chamber           | Rubber | Hose          |
| 54s09                     | Inversion Relay Secondary Supply                                | Red    | 1/2           |
| 54s10                     | Inversion Relay Primary Supply                                  | Blue   | 1/2           |
| 54m16                     | Park Control Exhaust from Dash Valve                            | Yellow | 3/8           |
| 54c19                     | Redundant Control Line from Treadle Valve                       | Brown  | 3/8           |
| 54m20                     | Park Chamber Jumper Lines, Chambers Left to Right               | Black  | 1/2           |
| 54d21                     | Park Valve to Joint Fitting, LHS                                | Black  | 1/2           |
| 54d22                     | Park Valve to Joint Fitting, RHS                                | Black  | 1/2           |
| <b>Trailer Brake</b>      |   |        |               |
| 55c01                     | Hand Control from Cab   | Grey   | 3/8           |
| 55c02                     | Spring Brake Control from Cab                                   | Brown  | 3/8           |
| 55c03                     | Primary Control from Treadle Valve                              | Green  | 1/4, 1/2      |
| 55c04                     | Secondary Control from Treadle Valve                            | Red    | 3/8           |
| 55c05                     | EOFA Trailer Secondary Service Control from Relay               | Blue   | 3/8, 1/2, 5/8 |
| 55c06                     | EOFA Trailer Park Control from Cab                              | Red    | 3/8           |
| 55m15                     | Hand Control Exhaust  | Yellow | 1/4           |
| 55c20                     | Trailer Park Control Tee to DFHC Inversion Control              | Brown  | 3/8           |
| 55s22                     | Hand Control Tee to DFHC Inversion Supply                       | Grey   | 3/8           |
| 55c23                     | Control from ESP Trailer Modulator to Trailer Secondary Control | Red    | 3/8           |
| 55c24                     | Trailer Relay Control   | Blue   | 3/8           |
| 55s25                     | Trailer Relay Supply  | Black  | 1/2           |
| 55d26                     | Trailer Relay Delivery to TPV                                   | Blue   | 1/2           |
| <b>Hydraulic Retarder</b> |   |        |               |
| 56s001                    | Manifold for Aux Equipment to Retarder                          | Black  | 3/8           |

| <b>Air Tanks</b>           |                              |       |          |
|----------------------------|------------------------------|-------|----------|
| 57s01                      | Primary Tank Supply          | Black | 1/2      |
| 57s02                      | Secondary Tank Supply        | Black | 1/2      |
| 57s03                      | Rear Primary Tank Supply     | Green | 5/8, 3/4 |
| 57s04                      | Auxiliary Axle Tank Supply   | Black | 1/2      |
| 57s05                      | Auxiliary Axle Tank Jumper   | Green | 5/8      |
| 57s06                      | Tag Axle Supply              | Black | 1/2, 5/8 |
| 57m07                      | Wet Tank Jumper              | Black | 1/2      |
| 57s08                      | Transmission Air Tank Supply | Red   | 1/2      |
| 57s09                      | Extra Air Tank Supply        | Black | 1/2      |
| <b>Auxiliary Equipment</b> |                              |       |          |
| 59s02                      | Auxiliary Manifold to Cab    |       |          |

| Frame, Springs, Damping and Wheel       |  | Color        | Line size (inches)        |
|---|--|--------------|---------------------------|
| <b>Air Suspension Rear Axle(s)</b>      |  |              |                           |
| 72s01                                   | Leveling Valve Supply from PPVM                      | Black        | 3/8                       |
| 72d02                                   | Air Bellow Pressure from Tee to Cab                  | Purple       | 3/8                       |
| 72c03                                   | Rear Suspension Dump from Solenoid Pack              | Black        | 1/4                       |
| 72d04                                   | Front-Rear Bellows Pressure 6x2 to Cab               | Purple       | 3/8                       |
| 72d05                                   | Rear-Rear Bellows Pressure 6x2 to Cab                | Orange       | 3/8                       |
| 72d11                                   | Front Bellows to Rear Bellows                        | Blue         | 3/8                       |
| <b>Air Suspension Front Axle(s)</b>     |  |              |                           |
| 73s01                                   | Leveling Valve Supply from PPVM                      | Black        | 1/4                       |
| 73d02                                   | Air Bellow Pressure (left) from Leveling Valve       | Yellow       | 1/4                       |
| 73d08                                   | Air Bellow Pressure (left) from Tee to Cab           | Yellow       | 1/4                       |
| <b>Cab</b>                              |  | <b>Color</b> | <b>Line size (inches)</b> |
| <b>Cab Suspension</b>                   |  |              |                           |
| 81s02                                   | PPV Manifold to Cab Leveling Valve, Rear             | Green        | 1/4                       |
| 81d05                                   | Cab Leveling Valve (rear) to Rear Bellows LHS        | Black        | 1/4                       |
| 81d06                                   | Cab Leveling Valve (rear) to Rear Bellows RHS        | Black        | 1/4                       |
| <b>Seat Suspension</b>                  |  |              |                           |
| 82s01                                   | Seat Suspension Supply from PPVM                     | Black        | 1/4                       |
| <b>Air Horn</b>                         |  |              |                           |
| 83s01                                   | Solenoid Valve Pack to Air Horn                      | Red          | 1/4                       |
| 83d03                                   | Auxiliary Manifold to Air Horn Lanyard Valve         | Black        | 1/4                       |
| <b>Miscellaneous, Special Funcitons</b> |  | <b>Color</b> | <b>Line size (inches)</b> |
| <b>Fifth Wheel</b>                      |  |              |                           |
| 91c01                                   | 5th Wheel Slide from Solenoid Pack                   | Yellow       | 1/4                       |
| 91c02                                   | Touch Release Park Signal from Rear Park Control Tee | Orange       | 1/4                       |
| 91d03                                   | Touch Release Piston Control from 2nd Solenoid       | Grey         | 3/8                       |
| 91c04                                   | Inversion Supply from 1st Solenoid                   | Blue         | 1/4                       |
| 91m05                                   | 2nd Solenoid Jumper from Inversion Valve             | Blue         | 3/8                       |
| <b>Miscellaneous</b>                    |  |              |                           |
| 93s01                                   | Solenoid Valve Pack Supply from PPVM                 | Orange       | 3/8                       |
| 93s02                                   | PPV Manifold Supply from Secondary Air Tank          | Red          | 1/2                       |