

# Air System Piping Diagrams

M-561-001

(April 2009)

## Valid for

All MRU and LEU built after February 2nd, 2009.

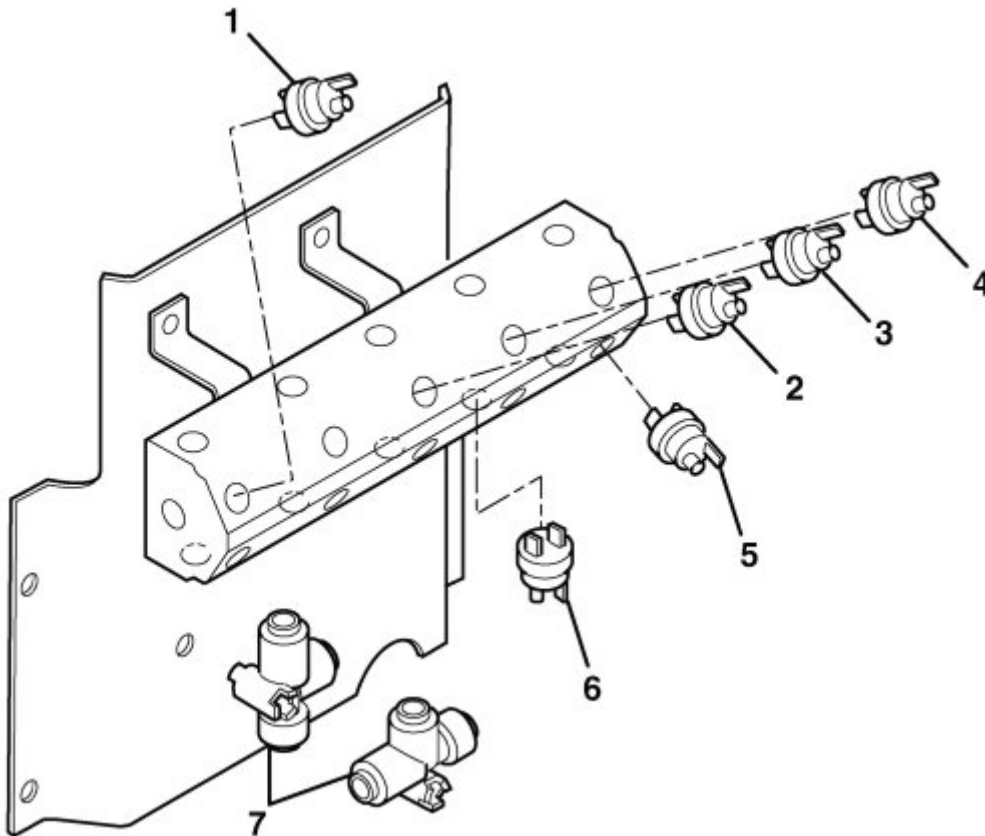
## Case description

Effective February 2, 2009, a change to the park brake valve used on LEU model chassis was made, whereby the parking brakes automatically apply when air system pressure drops to 345–414kPa (50–60 psi). The following service bulletin show the component locations and piping diagrams for the new parking brake.

*Note: Not applicable to Mack Trucks Australia*

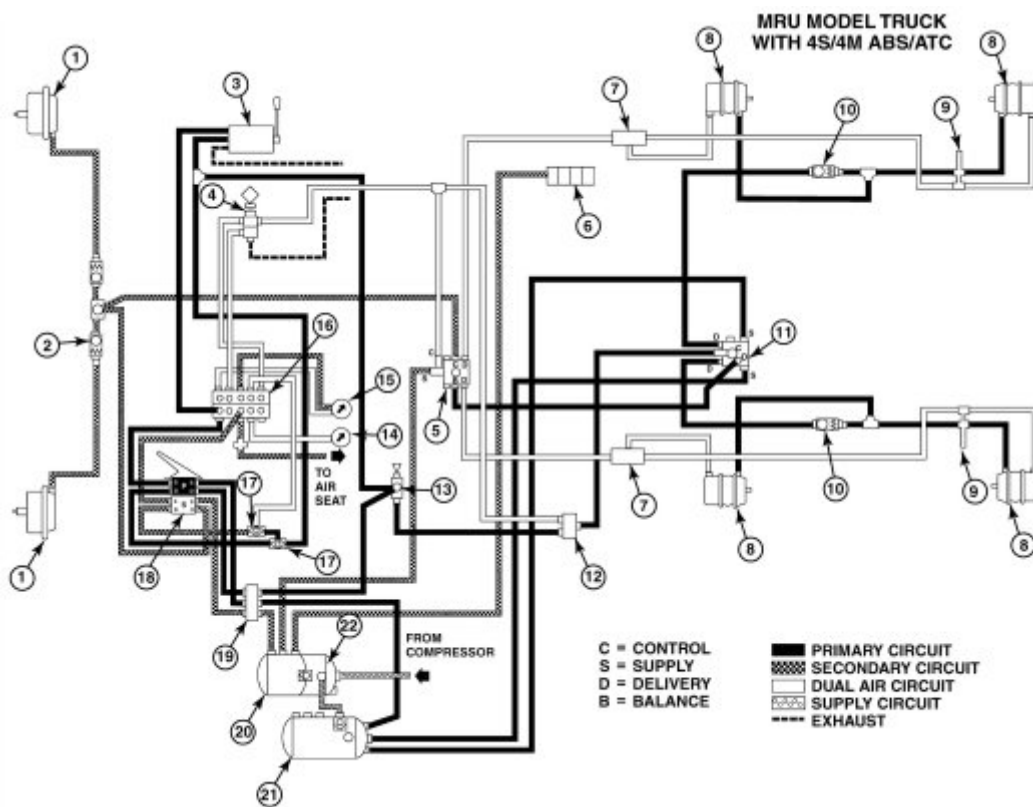
## MRU model

The following component and piping diagrams cover the air systems for MRU model chassis.



MRU Bulkhead Manifold Switches and Double Check Valves

- |   |  |
|---|--|
| 1. Primary Low Air Pressure Warning Switch  | 5. Park Brake Switch with Neutral Control Option |
| 2. Secondary Low Air Pressure Warning Switch  | 6. Retarder Switch                               |
| 3. Auxiliary Stop Light Switch (illuminates the stop lamps when parking brake is applied) | 7. Double Check Valves                           |
| 4. Park Brake Switch (sends a signal to the VECU)   |  |



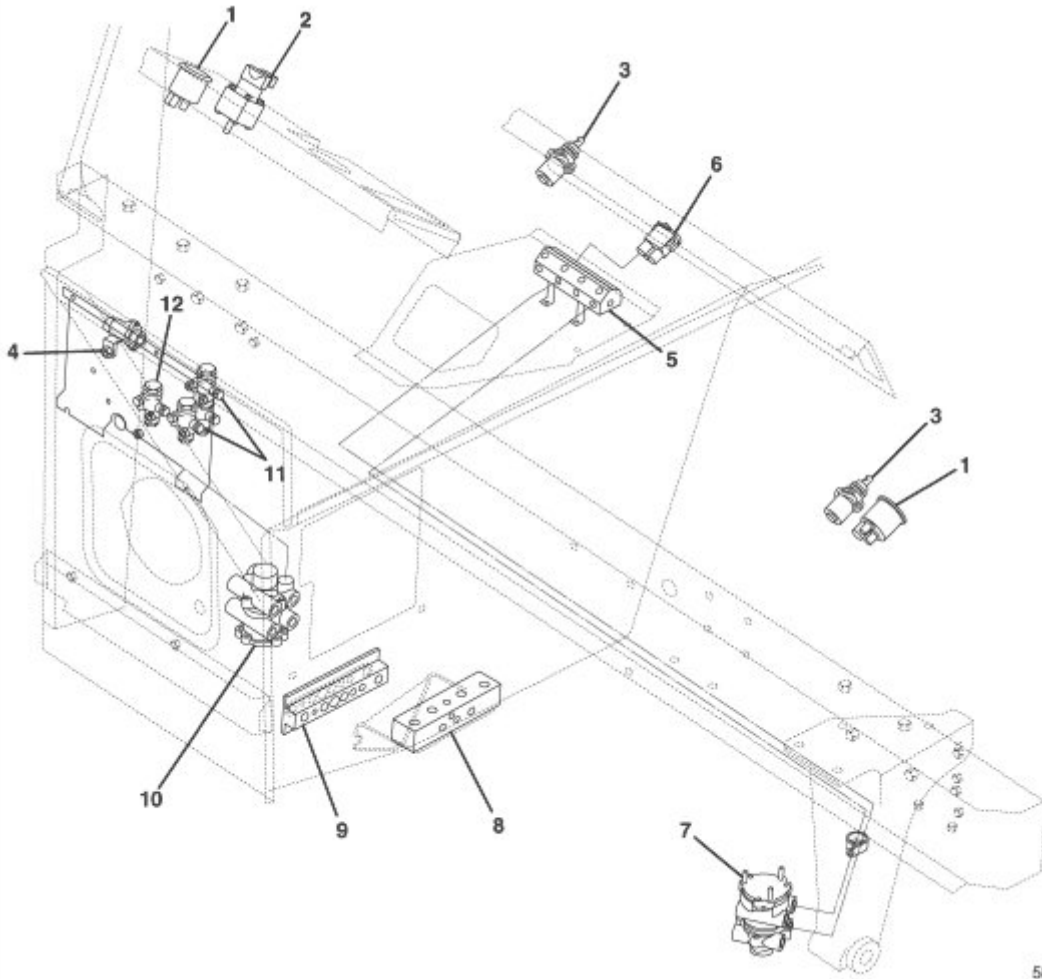
MRU Series Truck with 4S/4M ABS/ATC

- |   |   |
|---|---|
| 1. Front Axle Brake Chamber                     | 12. Automatic Traction Control (ATC) Valve      |
| 2. ABS Modulator Valve/Quick Release Valve Pack | 13. Quick Release Valve with Double Check Valve |
| 3. Hand Control Valve                           | 14. Air Pressure Gauge (Application)            |
| 4. Park Brake Valve                             | 15. Air Pressure Gauge (Primary/Secondary)      |
| 5. Spring Brake Relay Valve                     | 16. Bulkhead Manifold (inside cab)              |
| 6. Air Solenoid Valve Pack                      | 17. Double Check Valves (Mounted on Bulkhead)   |
| 7. Frame Tee                                    | 18. Treadle Valve                               |
| 8. Spring Brake Chamber                         | 19. Junction Block (Mounted on Frame Rail)      |
| 9. Anchor Fitting                               | 20. Secondary Reservoir                         |
| 10. ABS Modulator Valve                         | 21. Supply Reservoir                            |
| 11. Service Brake Relay Valve                   | 22. Primary Reservoir                           |

## LEU Model

The following component and piping diagrams cover the air system for LEU model chassis.

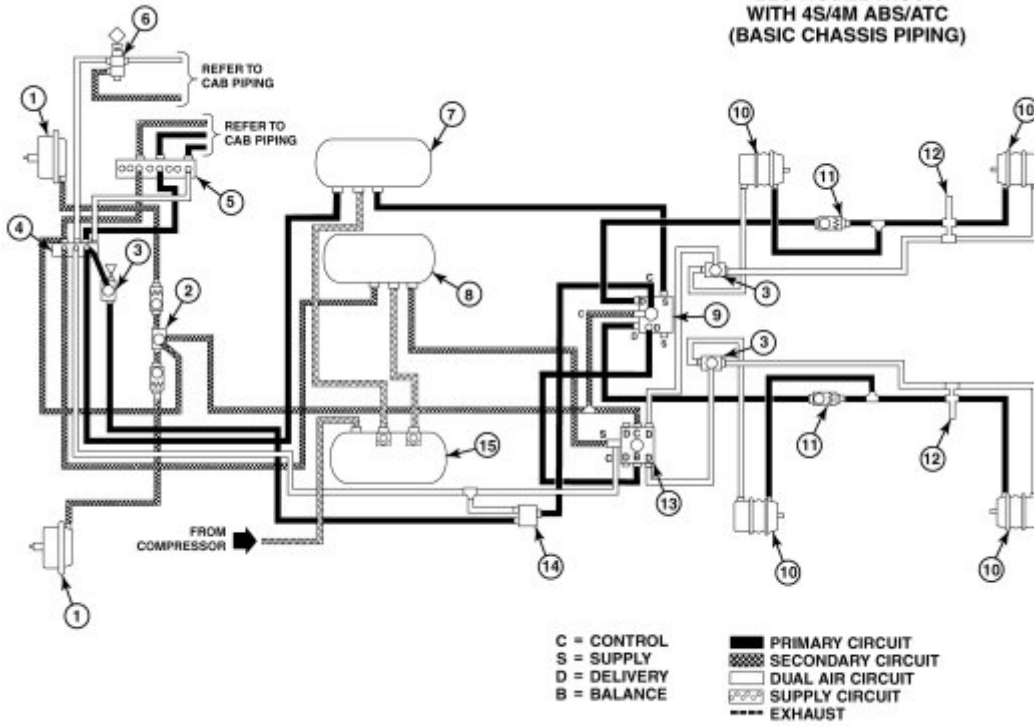
*Note: This is a change from previous LE and LEU model chassis manufactured prior to the February 2, 2009, implementation date, where the parking brakes automatically applied when air system pressure dropped to 138–207 kPa (20–30 psi).*



LEU Cab Air Manifold and Component Locations

- |                                  |                             |
|----------------------------------|-----------------------------|
| 1. Air Pressure Gauge            | 7. L.H. Treadle Valve       |
| 2. Work Brake Valve              | 8. Chassis Junction Block   |
| 3. Park Brake Valve              | 9. Cab Manifold             |
| 4. Double Check Valve            | 10. R.H Treadle Valve       |
| 5. Dash Manifold                 | 11. Pressure Reducing Valve |
| 6. Power Divider Lock Out Switch | 12. Inversion Valve         |

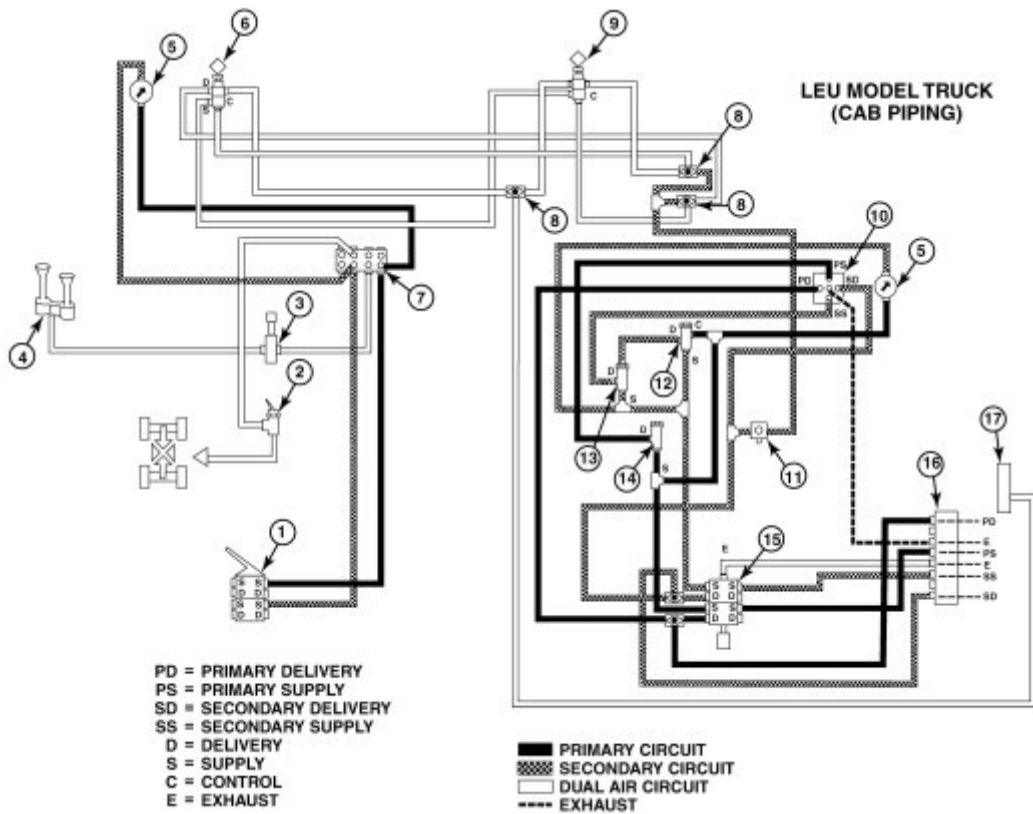
**LEU MODEL TRUCK  
WITH 4S/4M ABS/ATC  
(BASIC CHASSIS PIPING)**



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**LEU Series Truck with 4S/4M ABS/ATC (Basic Chassis Piping)**

- |   |  |
|---|--|
| 1. Front Axle Brake Chamber               | 9. Service Brake Relay Valve               |
| 2. ABS Modulator/Quick Release Valve Pack | 10. Spring Brake Chamber                   |
| 3. Quick Release Valve                    | 11. ABS Modulator Valve                    |
| 4. Chassis Junction Block                 | 12. Anchor Fitting                         |
| 5. Cab Manifold                           | 13. Spring Brake Relay Valve               |
| 6. Parking Brake Valve                    | 14. Automatic Traction Control (ATC) Valve |
| 7. Primary Reservoir                      | 15. Supply Reservoir                       |
| 8. Secondary Reservoir                    |  |



LEU Model Truck (Cab Piping)

- |  |   |
|--|---|
| 1. L.H. Treadle Valve                                  | 10. Work Brake Hand Valve                 |
| 2. Power Divider Lock-Out Switch                       | 11. Solenoid Valve (Work Brake Fail Safe) |
| 3. Air Horn Control Valve                              | 12. Inversion Valve                       |
| 4. Air Horn  | 13. Pressure Reducing Valve               |
| 5. Air Pressure Gauge (Primary and Secondary Circuits) | 14. Pressure Reducing Valve               |
| 6. Park Brake Control Valve                            | 15. R. H. Treadle Valve                   |
| 7. Dash Manifold                                       | 16. Cab Manifold                          |
| 8. Dual Check Valve                                    | 17. Chassis Junction Block                |
| 9. Park Brake Control Valve                            |   |

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