

FreightCar America[®]

VersaFlood™

*Hybrid, Longitudinal Door, Aggregate Car
Door System Operating Instructions.*

CRMX 10000 – 10189

Lehigh Hanson, 2/2014

Safety Precautions - VersaFlood™

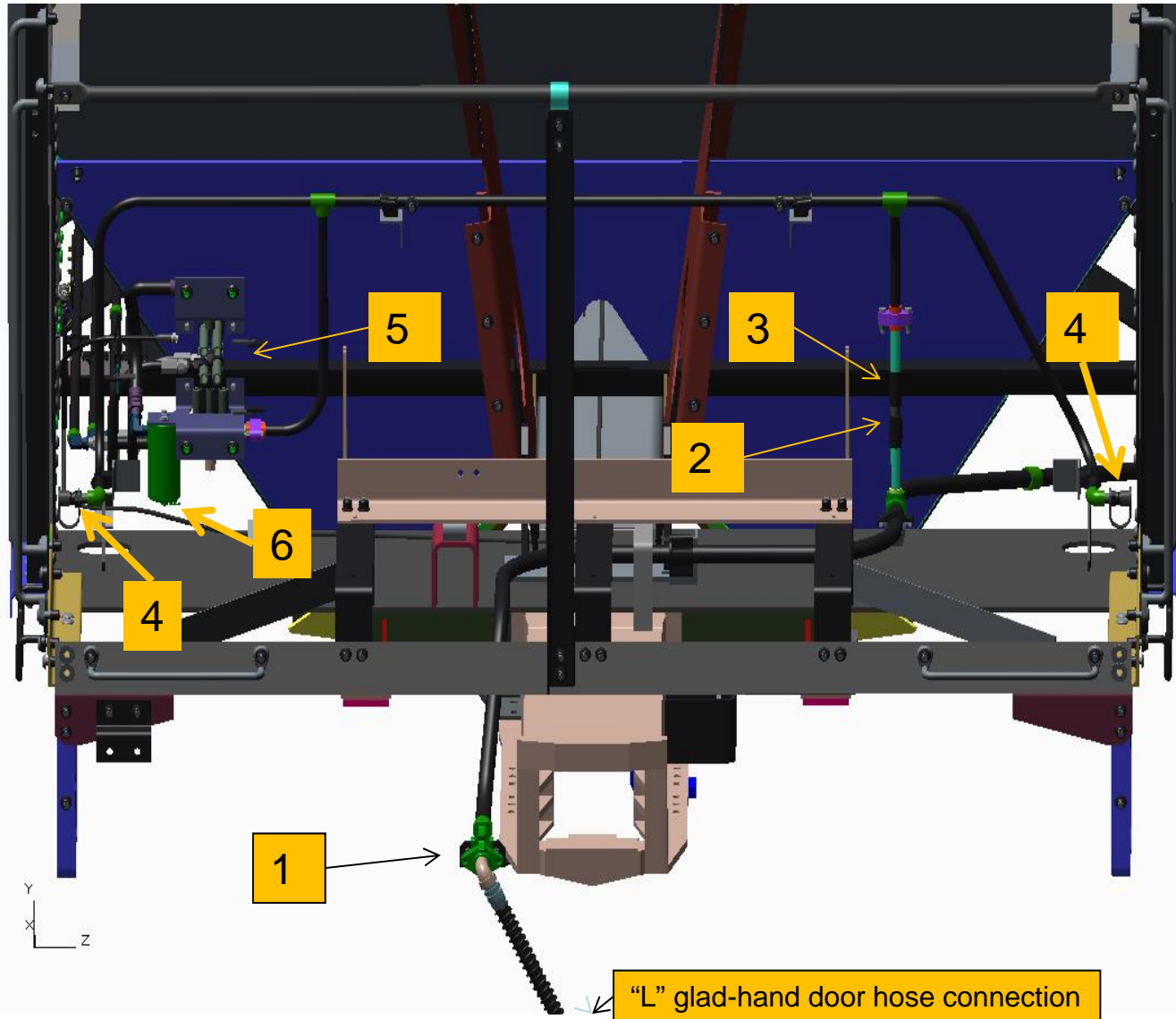
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1. All maintenance, repair, or adjustments must be made on shop or repair track where car will not be moved. Protective eye and ear wear should be used when doors are operated.
2. Carefully follow the instructions which are located on stencils at the sides of the car.
3. **ALWAYS - STAND CLEAR AND ASSURE OTHERS ARE CLEAR WHILE DOORS ARE BEING OPERATED**
4. Do not operate the doors unless the car has completely stopped moving.
5. When operating the doors, the operator must keep well away from the doors and mechanical door components. The operator must also have an assistant on each side of the car to ensure that everyone stands clear of the car doors while operating the door system.
6. If the car does not operate electrically or manually, **DO NOT** attempt to force the mechanism in any way.
7. Do not make any inspections, repairs, alterations, replacement, or adjustments to any part of the door system without first fully releasing all air pressure in the door system. To release all air pressure from the door system, disconnect the train line and wayside air supplies, and then slowly open the door valve manifold drain which is located at the A end of the car at the bottom of the door valve assembly. (Fig 4)
8. **CAUTION:** All residual air pressure should be released by opening the door valve manifold or filter housing drain valves. However, always use caution when first applying air to the cars and verify all door valves are in the closed position. The control valves can be actuated with as little as 10-15 psi of residual air pressure and the retained residual air may be enough to operate the doors. If the control valves are inadvertently actuated to the “open position” with the manual button or electrically, and there is a minimum amount of residual air pressure in the train line, the doors may open as soon as air is applied to the door system.
9. **CAUTION:** Do not load or ship a car unless the door lever mechanism is locked over center as indicated by the Primary lock Indicators and also the Secondary Lock Latches are in the locked positions. The Primary lock indicator which is located on each side of the operating shaft at the center of the car, will align with the indicator stripes on the door shaft when the mechanism is locked, figures 1 & 2. The secondary latches must be fully engaged over the lever rods, shown in figure 3.

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“A” end view, Hybrid Longitudinal Door System, Components and Locations.



1- Door line end cock shut off valve with end hose and “L” S4 glad-hand door connection.

2- Ball valve used to shut off the air supply to an individual car, and still charge the rest of the cars in the train or group of cars with the door line air supply.

3- The in line check valve will not allow the way side or auxiliary supply air, to charge the door train line system.

4- Auxiliary way side air connections are located at the AR and AL side end post area, and are equipped with a male quick coupler fitting. Parker Series BH6 - 61 with a rubber dust cap.

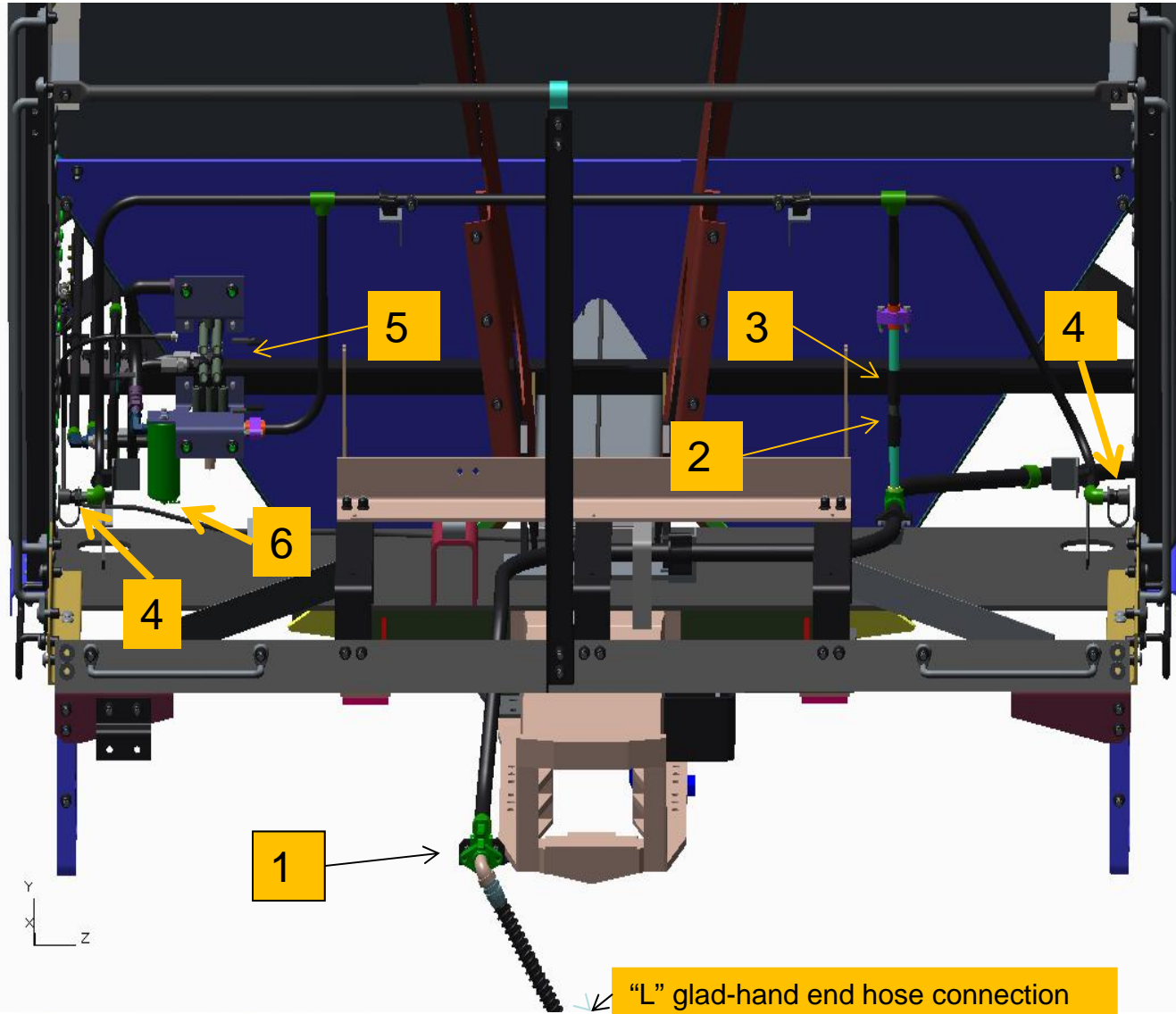
5- Door valve assembly with a drain valve located at the bottom of the assembly. The door valve operates the A & B doors electrically or manually by shifting the spool valves by hand.

6- Filter assembly equipped with an automatic drain valve used to remove moisture from the bottom of the canister, fig 4 page 11 .

“L” glad-hand door hose connection

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"A" end view, Hybrid Longitudinal Door System Supply Air Operation.



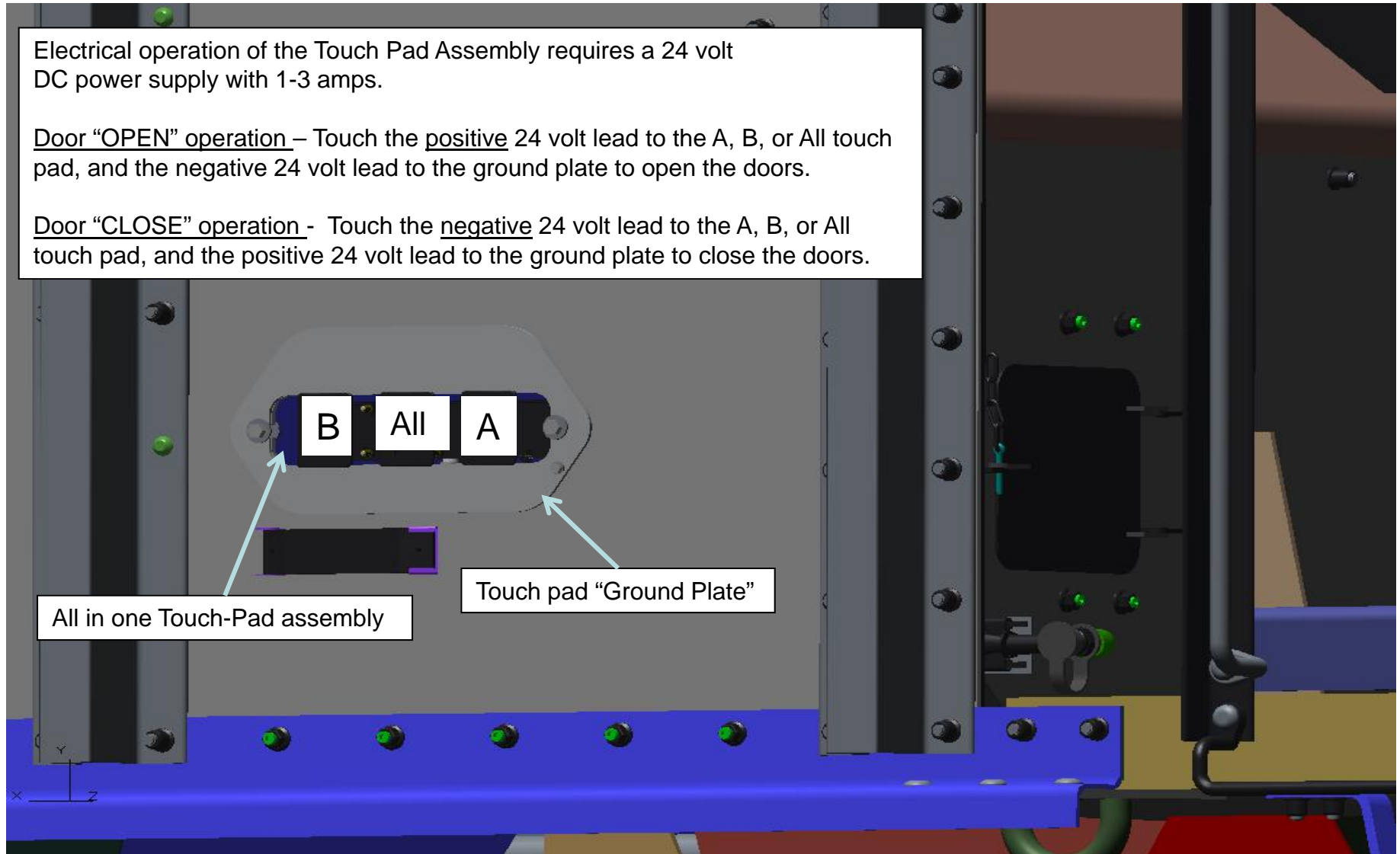
- 1- Door line end cock valve must be "open" to charge the system using the door line end hose at the A & B end of the car.
 - 2- The ball valve "must be open" when charging the door system with the end hose supply.
 - 3- When using the auxiliary way side air supply, the in line check valve will not allow the way side supply air to charge the door train line.
 - 4- Auxiliary way side air connections are located at the AR and AL side end posts. Male quick coupler fitting Parker BH6 -61 with rubber dust cap. A female quick coupler connection is needed to connect to the male fitting in order to charge the door system using the way side fittings.
 - 5- Door valve assembly with drain valve located at the bottom of the assembly must be closed to charge the system. The drain valve is used to drain all air from the system.
- CAUTION:** Until the door valve drain is opened, there may be enough air in the way side pipes to operate the door system ,and or at least shift the door valves.
- 6- Filter assembly with drain valve is used to remove moisture from the canister and can also be used to drain air from the door system.

*Door Operating Features - Touch Pad locations, BL & AR side end panels.
Electrical Operation can be done from both sides of the car.*

Electrical operation of the Touch Pad Assembly requires a 24 volt DC power supply with 1-3 amps.

Door "OPEN" operation – Touch the positive 24 volt lead to the A, B, or All touch pad, and the negative 24 volt lead to the ground plate to open the doors.

Door "CLOSE" operation - Touch the negative 24 volt lead to the A, B, or All touch pad, and the positive 24 volt lead to the ground plate to close the doors.

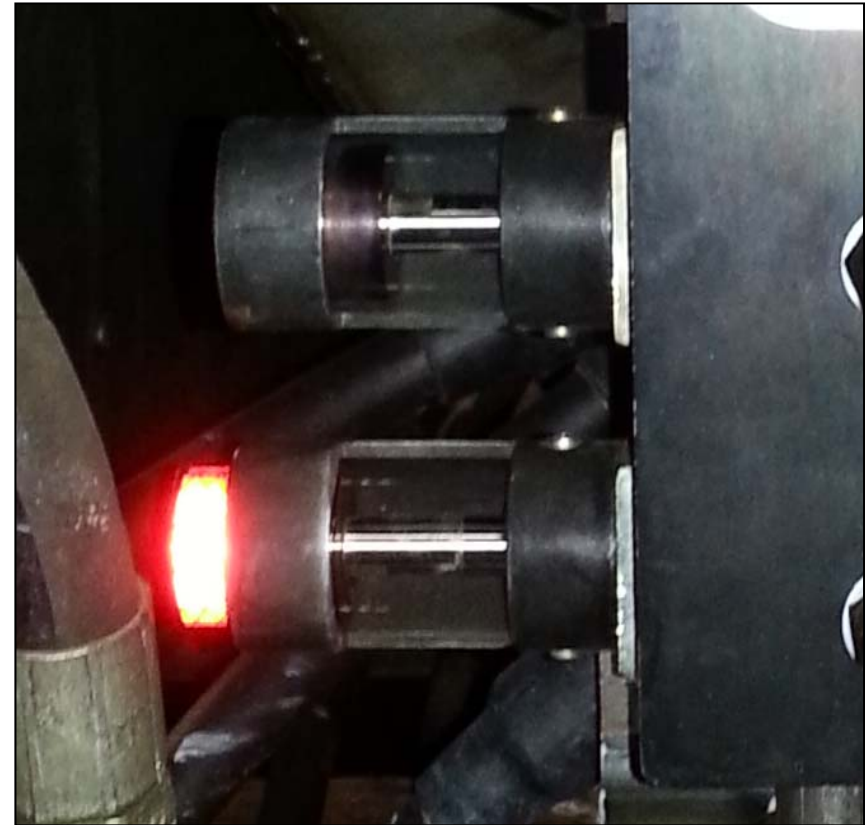


Door Operating Instructions – Door valve manual operation.



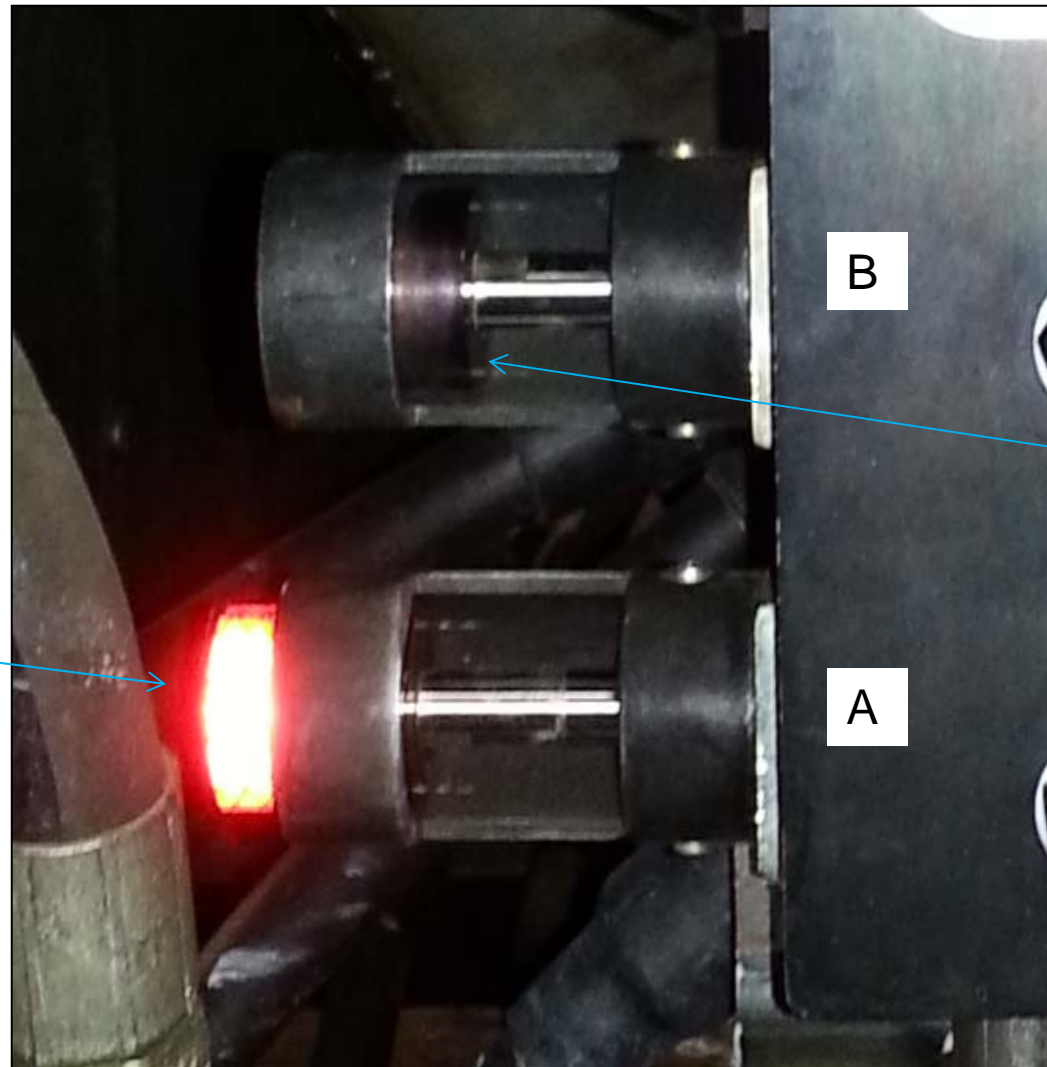
The door valve is located at the AR corner of the car and is mounted on the inside surface of the bolster web. To operate the door valve by hand or manually, the access door must be opened to expose the door valve assembly.

The photo to the left shows the A spool valve in the open position with the RED indicator showing at the end of the spool. The B spool valve is shown in the closed position.



Door Operating Instructions – Door valve manual operation.

The manual operation of the spool valves can be used to operate A and B doors separately, or all doors when both A & B spool valves are shifted at the same time to open or close the doors.



To manually "CLOSE" the spool valve, push the end of the spool inward by hand, until the red indicator is fully retracted and is not visible.

To manually "OPEN" the spool valve, pull the inner area of the indicator outward by hand, until the spool stops and the red indicator is showing.

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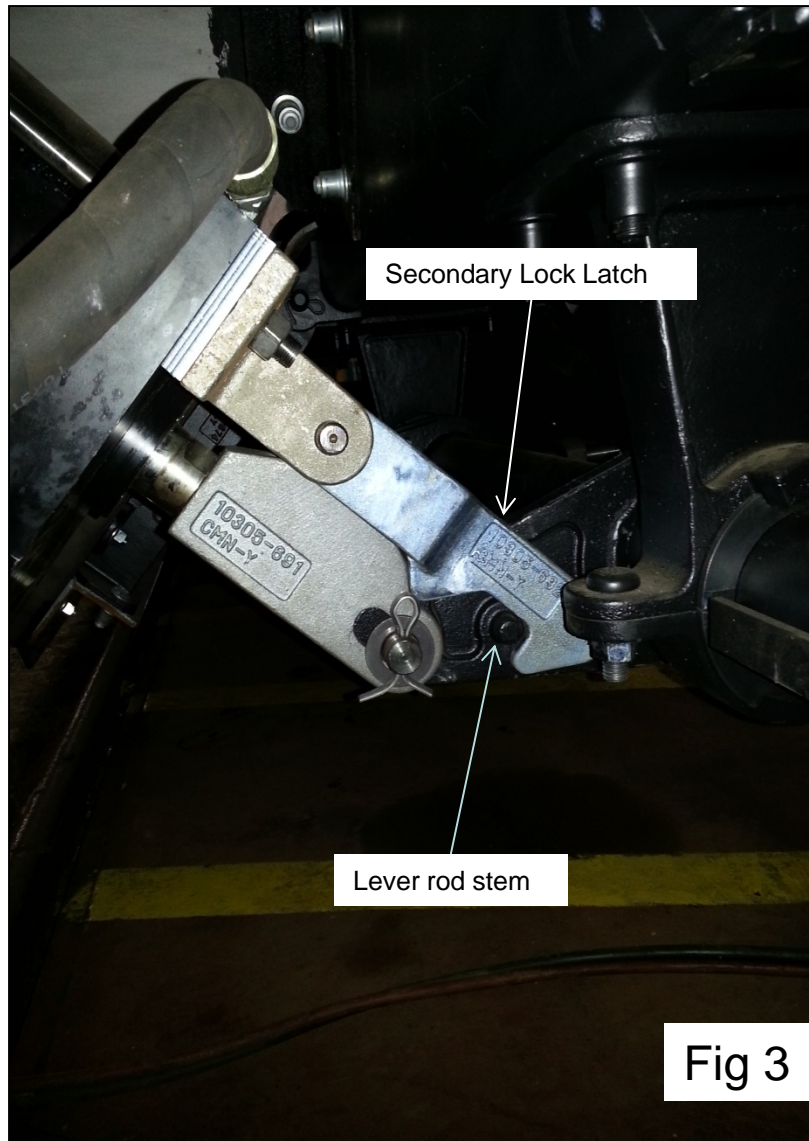
Door Operating Instructions – Primary Door Lock Indicator shows the door system in the “LOCKED” position. The primary lock indicator is located in the middle of the car between the A & B door cylinders, and can be seen from both sides of the car, shown in Figures 1 & 2. **CAUTION; Do not load or ship the car if the Primary Lock Indicators and the Secondary lock latches are not in the locked positions.**



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Door Operating Instructions – Door Cylinder & Secondary Latch



The secondary latch which is fastened to the rod end of both the A & B door cylinders is shown in Fig 3 with the door system in the closed and locked position.

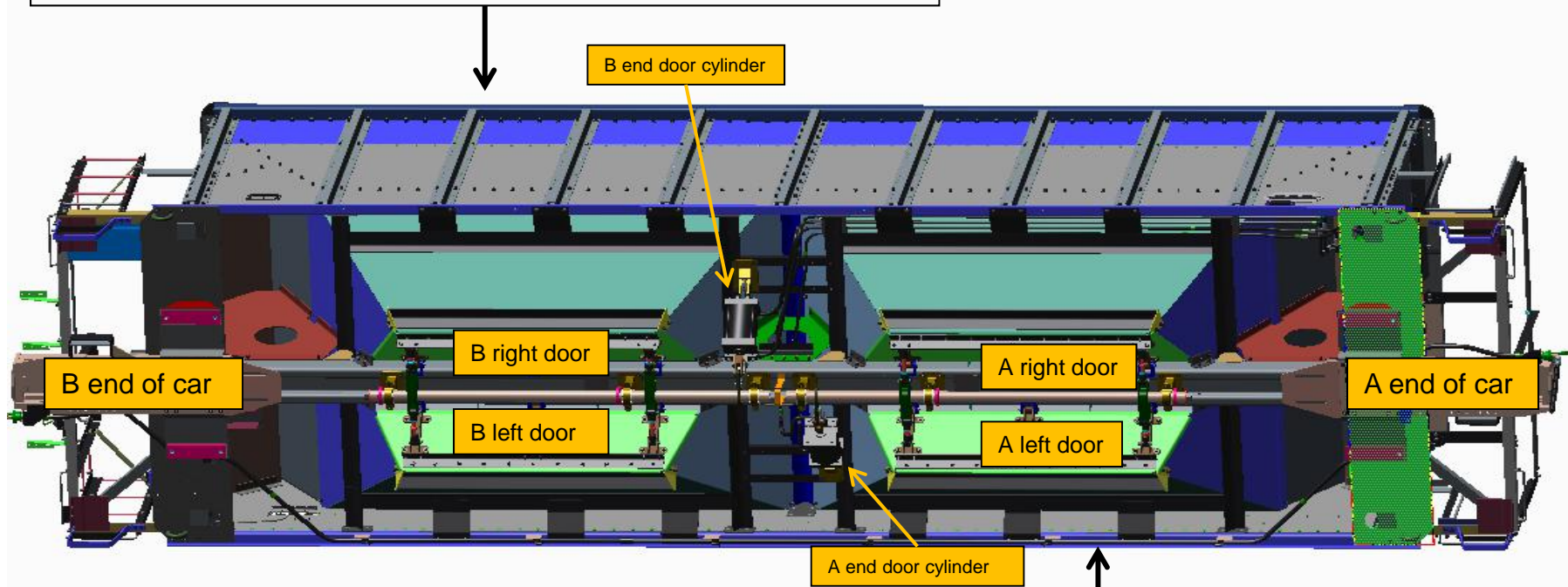
The secondary latch hook is shown fully engaged over the lever rod stem in Fig 3.

CAUTION: Do not load or ship the car if the Primary Lock Indicators and the Secondary Lock Latches are not in the locked positions.

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Door Operating Instructions – Door location & door cylinder operation.

The door operation for the left and right doors at the “B” end of the car are operated by the “B end” door cylinder. The left and right “B” doors are connected to the operating shaft and will open and close the doors at the same time.



The door operation for the left and right doors at the “A” end of the car are operated by the “A end” door cylinder. The left and right “A” doors are connected to the operating shaft and will open and close the doors at the same time.

Door System Pressure Relief Procedure

IMPORTANT!

Read Safety Precautions in this document and adhere to all onsite Safety Regulations!

Caution!

Before troubleshooting or working on the door system – It is Required that the Door System Air Pressure be Completely Relieved!

Door System Air Pressure Relief Procedure

1. **Remove** – Air Supply from Wayside Air Connections or Train line Glad-hand Hoses.
2. **Open** – Drain Valve Located at the Bottom of the Door Control Valve to remove all air from the door system shown in Fig 4.

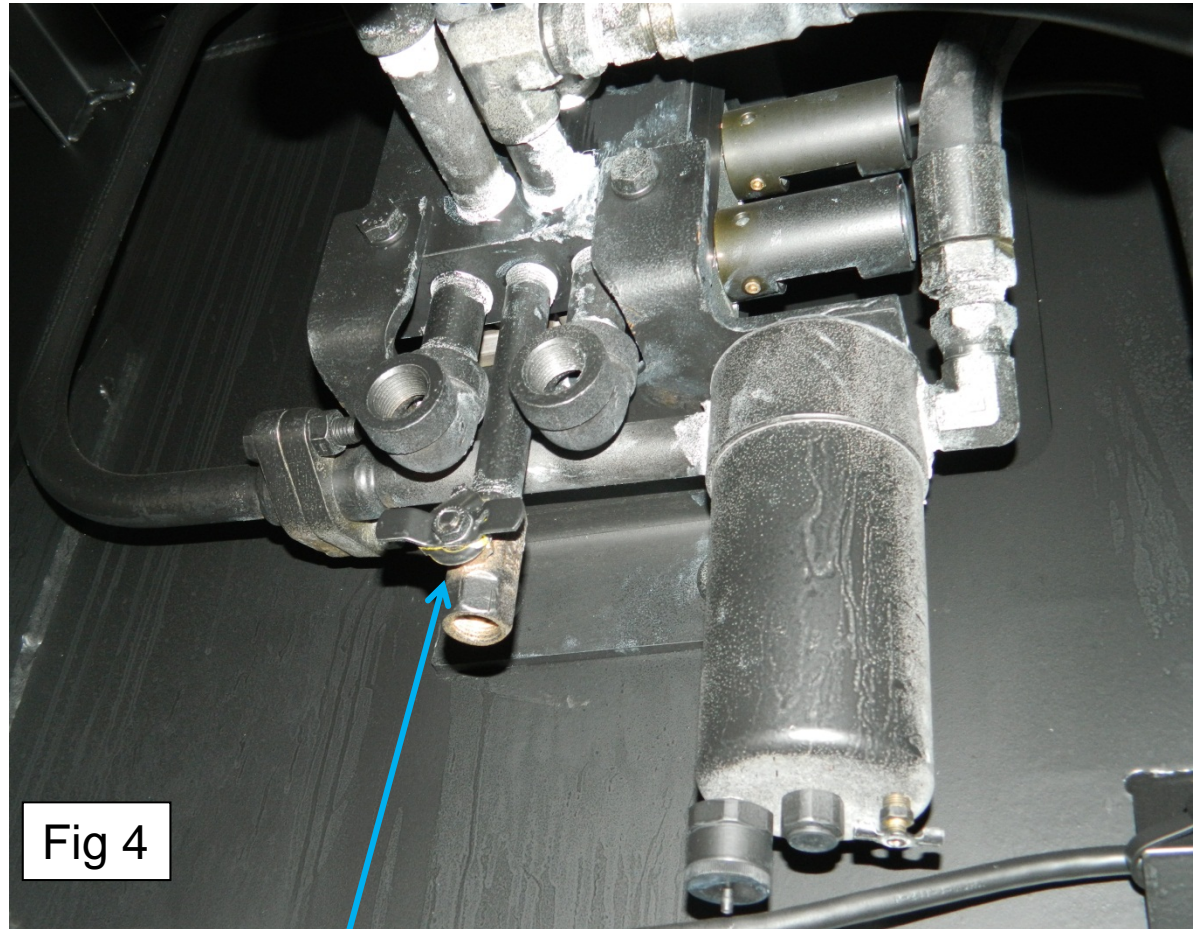


Fig 4

Door valve assembly showing the drain valve in the closed position.

Any Questions or Problems Call Customer Service at

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800-458-2235