# MAINTENANCE INFORMATION

**MI22-12B**

| | |
|---|---|
| DATE: November 2022 | SECTION: 12 BRAKE & PNEUMATIC |
| SUBJECT: | **AIR TANKS DRAINING SEQUENCE** |

Revision: B General update 12-07-2022

## APPLICATION

| Model | VIN  |
|---|---|
| ALL PREVOST VEHICLES | |

## DESCRIPTION

It is very important to drain the air tanks in the proper order to confirm the various check valves and safety valves are functioning properly.

| **IMPORTANT NOTICE** |
|---|
| *This procedure provides guidelines on how to drain air tanks. However, please note that this procedure is not a substitute for similar documents issued by your federal, state, or provincial transportation authority.* |

## SAFETY PRECAUTIONS

- Eye protection should always be worn when working in a shop.
- Rules for Personal Protection Equipment should always be respected. Wear your PPE including but not limited to the following:

## PROCEDURE

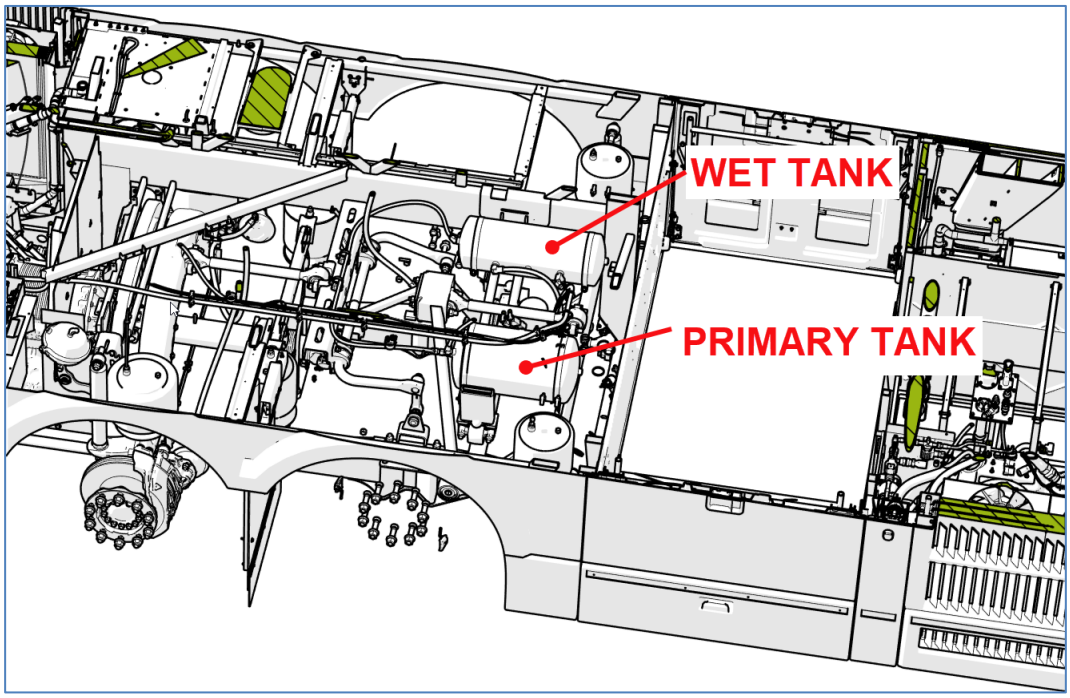



FIGURE 1: AIR TANKS LOCATION (LATEST ARRANGEMENT) – REAR END

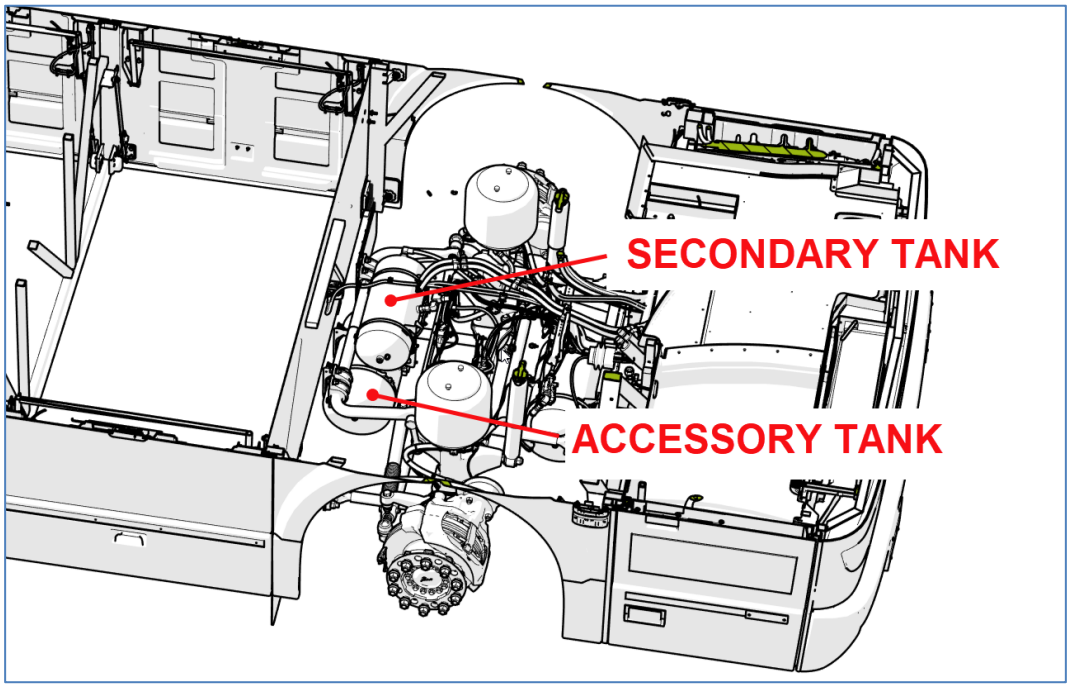



FIGURE 2: AIR TANKS LOCATION (LATEST ARRANGEMENT) – FRONT END

Please, refer to your Parts Manual or Maintenance Manual for specific year model tank location

Perform the following air tanks draining sequence.

| **NOTE** |
| --- |
| *All air tanks are provided with a bottom drain valve.* |

1. Raise the vehicle from under the axles or use the chassis hoisting points as the drive axle wheels must remain free to turn. Refer to MI18-18 GENERAL HOISTING AND TOWING PROCEDURES.

| **NOTE** |
| --- |
| *The vehicle shall not be lifted with the tag axle loaded unless the tag axle is supported with jack stands.*<br>*Raise/unload the tag axle prior lifting t**he vehicle** when not using jack stands.*<br>*When raised/unloaded, the tag axle brakes are disabled. To test the tag axle brakes function, the tag axles must be properly supported then lowered/loaded.* |

2. Start the engine and allow enough time to fill all the air tanks to full pressure (between 120 psi and 140 psi max).

3. Shut down the engine, release the parking brake, turn the ignition switch to the ON position.

| **NOTE** |
| --- |
| *You should have an assistant in the driver seat the entire time this procedure is being done.* |

4. Drain the **Wet** tank and then close the drain valve. Confirm the Accessory pressure gauge value is above 65 psi.

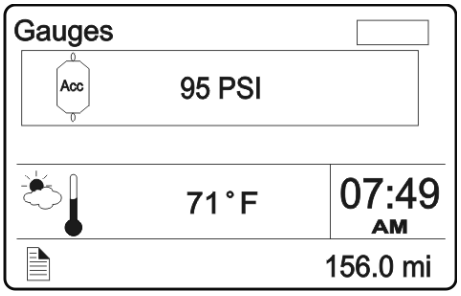



FIGURE 3: ACCESSORY PRESSURE GAUGE IN DRIVER INFORMATION DISPLAY

| **NOTE** |
| --- |
| *Check for any excess water or oil accumulation when draining the Wet tank. If excessive water or oil is found, it needs to be remedied.* |

5. Confirm Primary and Secondary pressure gauges indicate full pressure, that is above 120 psi.

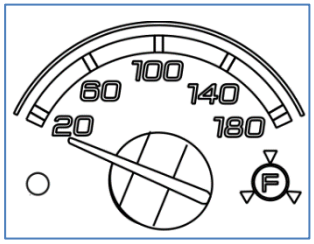



FIGURE 4: SECONDARY SYSTEM AIR PRESSURE GAUGE – FRONT BRAKES

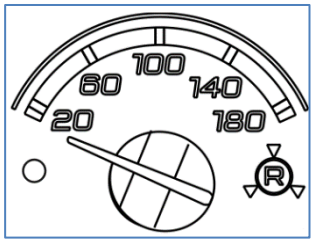



FIGURE 5: PRIMARY SYSTEM AIR PRESSURE GAUGE – REAR BRAKES

6. Drain the Accessory tank and then close the drain valve. The Accessory pressure gauge should indicate 0 psi.

| **NOTE** |
| --- |
| *Check for any excess water or oil accumulation when draining the Accessory tank. If excessive water or oil is found, it needs to be remedied.* |

   a) Confirm Primary and Secondary pressure gauges still indicate full pressure, that is above 120 psi.

   b) In the front service compartment, drain the accessory air filter and note any excess of water or oil.

   c) Drain the Kneeling Recovery tank (if equipped) and note any excess of water or oil.

7. Drain the **Secondary** tank and then close the drain valve.

| **NOTE** |
| --- |
| *Check for any excess water or oil accumulation when draining the Secondary tank. If excessive water or oil is found, it needs to be remedied.* |

a) Ask the assistant in the driver seat to confirm when the secondary tank *low air pressure warning* indicator comes on.

b) Ask the assistant in the driver seat to confirm that the emergency brake does not apply (the control valve knob does not pop out) once the secondary tank is drained. This confirms proper functioning of the *DC-4 SHUTTLE-TYPE DOUBLE CHECK VALVE*.

If the DC-4 was stuck at the primary system port, the emergency brake control knob would pop out and the emergency brake would then apply.

DC-4 SHUTTLE-TYPE DOUBLE CHECK VALVE

The double check valve is located on the pneumatic accessories panel in the front service compartment. In the event of a pressure drop in either the primary or secondary system, this unit will protect the emergency /parking brake control valve and the intact portion of the air system from pressure loss.

c) Ask the assistant to apply the service brake. Only the rear brake (primary system) will function. Confirm the primary system *stop light switch* functions. The brake lights should illuminate.

8. Start the engine. Confirm the air compressor builds pressure on all tanks until the compressor disengages at full pressure. Visual and audible warnings should turn off.

9. Shut down the engine, release the parking brake, turn the ignition switch to the ON position.

10. Drain the Primary tank and then close the drain valve. Confirm Secondary pressure gauge indicates full pressure.

| **NOTE** |
| --- |
| *Check for any excess water or oil accumulation when draining the Primary tank. If excessive water or oil is found, it needs to be remedied.* |

a) Ask the assistant in the driver seat to confirm that the emergency brake does not apply (the control valve knob does not pop out) once the primary tank is drained. This confirms proper functioning of the DC-4 SHUTTLE-TYPE DOUBLE CHECK VALVE.

   If the DC-4 was stuck at the secondary system port, the emergency brake control knob would pop out and the emergency brake would then apply.

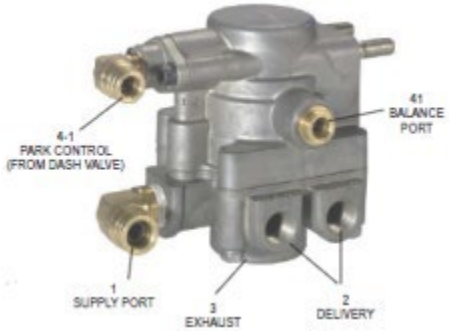
11. Drive axle brake test (with secondary system pressurized only): With the park brake released, confirm the spring brake engages (modulated) when service brake pedal is depressed. Ask the assistant to press the service brake. The drive axles brakes should apply. Verify that the drive axle wheels cannot be turned by hand. Note: during this portion of the procedure the tag axle brakes will not function.

    This confirms proper functioning of the *SR-7 SPRING BRAKE VALVE*.

    a) While the assistant is pressing the service brake pedal, confirm the secondary system *stop light switch* functions. The brake lights should illuminate.

SR-7 SPRING BRAKE VALVE

The spring brake valve is located above the drive axle. The SR-7 Modulating Valve is used in conjunction with a dual air brake system and spring brake chamber and performs the following functions:




• Provides a rapid application of the spring brake chamber when parking.

• Modulates the spring brake chamber application using the dual brake valve should a primary failure occur in the service brake system.

• Prevents compounding of service and spring forces.

Maintenance and repair information on the spring brake valve is supplied in the applicable booklet, found on your Technical Publications USB flash drive, under reference number Bendix Service Data SD-03-9043.

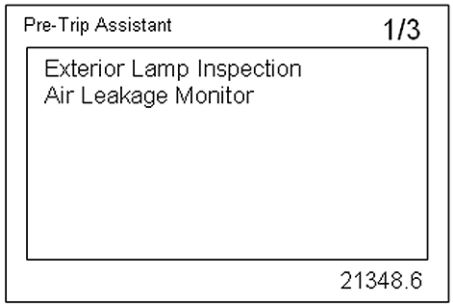
12. Start the engine. Confirm the air compressor builds pressure on all tanks until the compressor disengages at full pressure. Visual and audible warnings should turn off.

    The Accessory pressure gauge should remain at 0 psi until Primary pressure gauge reaches 70 psi.

13. Shut down the engine, release the parking brake, turn the ignition switch to the ON position.

14. **Air leak test**. Depress the service brake pedal and hold for 60 seconds. The air pressure drop should not exceed 3 psi per minute (3 psi / 60 sec).

To use this test, select *Air Leakage Monitor* in *Pre-Trip Assistance* menu on your Driver Information Display and follow the instructions displayed.




15. Test the emergency spring brake application. Release the parking brake. Pump the service brake pedal to drop the Primary & Secondary tank air pressure. The *Low Air Pressure* alarm should sound at 75 psi (prescribed pressure may be lower on older vehicles). The parking brake valve should pop out at 60 psi (prescribed pressure may be lower on older vehicles). This confirms the activation of the emergency spring brakes.

| **CAUTION** |
| --- |
| Allow air pressure to reach 95 psi before releasing the parking brake. |

## PARTS / WASTE DISPOSAL

| Discard according to applicable environmental regulations (Municipal/State [Prov.]/ Federal) |
| --- |

*Access all our Service Bulletins on http://techpub.prevostcar.com/en/*
*Or scan the QR-Code with your smart phone*
.
**Are you a Vehicle owner?**
*E-mail us at **technicalpublications_prev@volvo.com** and type "ADD" in the subject to receive warranty bulletins applicable to your vehicle(s) by e-mail.*