

CONNECTING THE HEATER

1. Determine the vehicle's electrical system voltage and make certain that the **Pure Air Plus** Air Dryer installed is of the same voltage.
2. Connect the white lead from the dryer to a good ground on the vehicle chassis.
3. The black lead should be attached to a wire which is hot when the ignition is "on." A ten (10) amp fuse is recommended in this wire for a 12 volt dryer and a five (5) amp fuse for a 24 volt dryer, in addition to the vehicle circuit breaker for that wire. Also the "hot" wire from the vehicle should be a minimum of 14 gauge.

OPERATIONAL CHECKS

Once the unit is installed, start the engine, build up pressure to 100 psi, and shut off the engine. Check for air leaks at the inlet and outlet of the dryer. Correct any leakage problem. Restart the engine and build up pressure to compressor cutout pressure. At cutout pressure the dryer purge valve opens and immediately expels a large volume of air, followed by a slow flow of air lasting approximately thirty seconds. Check for leakage at locations shown below to assure that the **Pure Air Plus** Air Dryer does not cycle excessively. Monitoring wet tank pressure with an accurate air pressure gauge will help determine if a significant air leak is present.

- A. Compressor Unloader Mechanism.
- B. Governor and associated fittings and air lines.
- C. Drain Cock and Safety Valve in first (supply or wet tank) reservoir.
- D. All air connections and air lines leading to and from the first (supply or wet tank) reservoir.

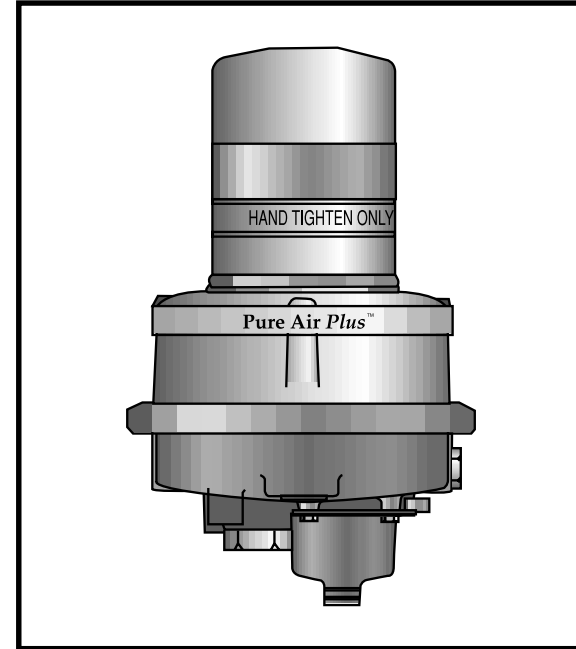
DESICCANT CANISTER REMOVAL

(**Note:** Do not remove the Desiccant Canister until the wheels have been blocked and the system has been drained of all pressure.) To check the condition of the coalescing filter, **carefully** loosen the desiccant canister and spin off by hand. To reinstall the canister, spin on **by hand** to contact, then turn by hand 1/2 turn past contact. (10 - 20 lb. ft., 14 - 27 Nm.)

APPLICATION GUIDELINES

The **Pure Air Plus** Air Dryer is designed to remove sufficient water, dirt, and oil during normal highway applications. Unusual or severe duty applications such as trash haulers or yard jockeys may have excessive compressor load cycles or insufficient unload cycles. Either case will reduce the performance of the dryer.

For optimum performance the **Pure Air Plus** Air Dryer must have a minimum of thirty seconds purge time between compressor load cycles, and the compressor load cycles should average no more than eighty seconds.



**INSTALLATION INSTRUCTIONS
PURE AIR PLUS AIR DRYER
12 VOLT (N4250/DA33100)
24 VOLT (N4250A/DA33110)**

Commercial Vehicle Systems

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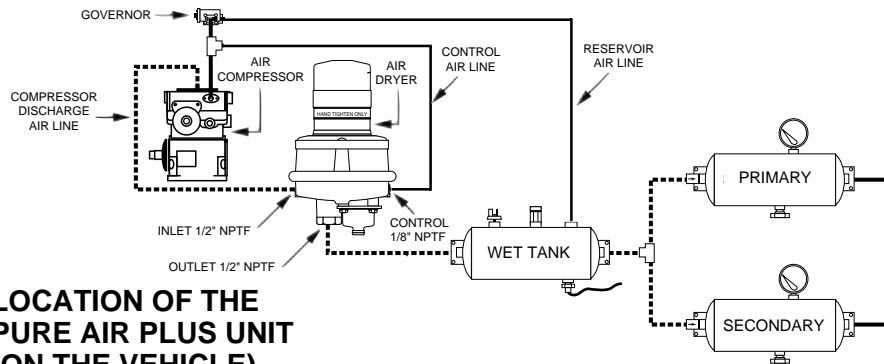
www.haldex.com ♦ www.hbsna.com



WARNING

When working on air system components the following precautions should be observed.

1. Stop engine when working under a vehicle. Always block the vehicle wheels to prevent a fore or aft roll. Bleeding off system pressure may cause the vehicle to roll. Keep hands away from brake chamber push rods and slack adjusters; they may apply as system pressure drops.
2. Never connect or disconnect a hose or line containing air pressure. It may whip as air escapes. Never remove a component or a pipe plug unless you are certain all system air pressure has been exhausted.
3. Never exceed recommended working air pressure and always wear safety glasses when working with air pressure. Never look directly into component ports or direct a pressurized air flow at anyone.
4. Never attempt to disassemble a component until you have read and understood all recommended procedures. Some components contain powerful springs and injury can result if not properly disassembled. Use only proper tools and observe all precautions pertaining to the use of those tools.



LOCATION OF THE PURE AIR PLUS UNIT (ON THE VEHICLE)

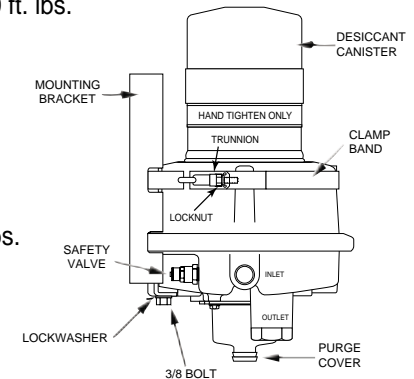
1. The **Pure Air Plus** Air Dryer must be mounted vertically with the purge exhaust toward the road surface. The preferred mounting location is outside the engine compartment in an area of air flow while the vehicle is in motion.
2. Do not mount the **Pure Air Plus** Air Dryer near any heat producing source such as vehicle exhaust.
3. The discharge line length for a normal installation shall be between eight (8) and sixteen (16) feet. **Note:** The length of the discharge line has a direct bearing on the performance of the Air Dryer. The longer the discharge line, the cooler the air will be as it enters the Air Dryer which improves drying performance. Excessive line length may result in airline freeze-up in cold weather, which could restrict or possibly prevent air from flowing to the dryer. **The maximum inlet air temperature for the Pure Air Plus Air Dryer is 160°F. Any temperatures above 160°F entering the dryer will cause diminished performance and may cause internal damage to the dryer.**

LOCATION OF THE PURE AIR PLUS UNIT ON THE VEHICLE - (CONT'D)

4. The **Pure Air Plus** Air Dryer requires minimal clearance for service. Allow a minimum of one inch above for desiccant cartridge service and two inches below should the heater or purge valve need to be serviced.
5. It is best to install the **Pure Air Plus** Air Dryer below the level of the compressor so that the discharge line from the compressor can slope down to the Air Dryer inlet, avoiding sags or traps in the line. If possible, the Air Dryer should be located above the level of the wet tank.

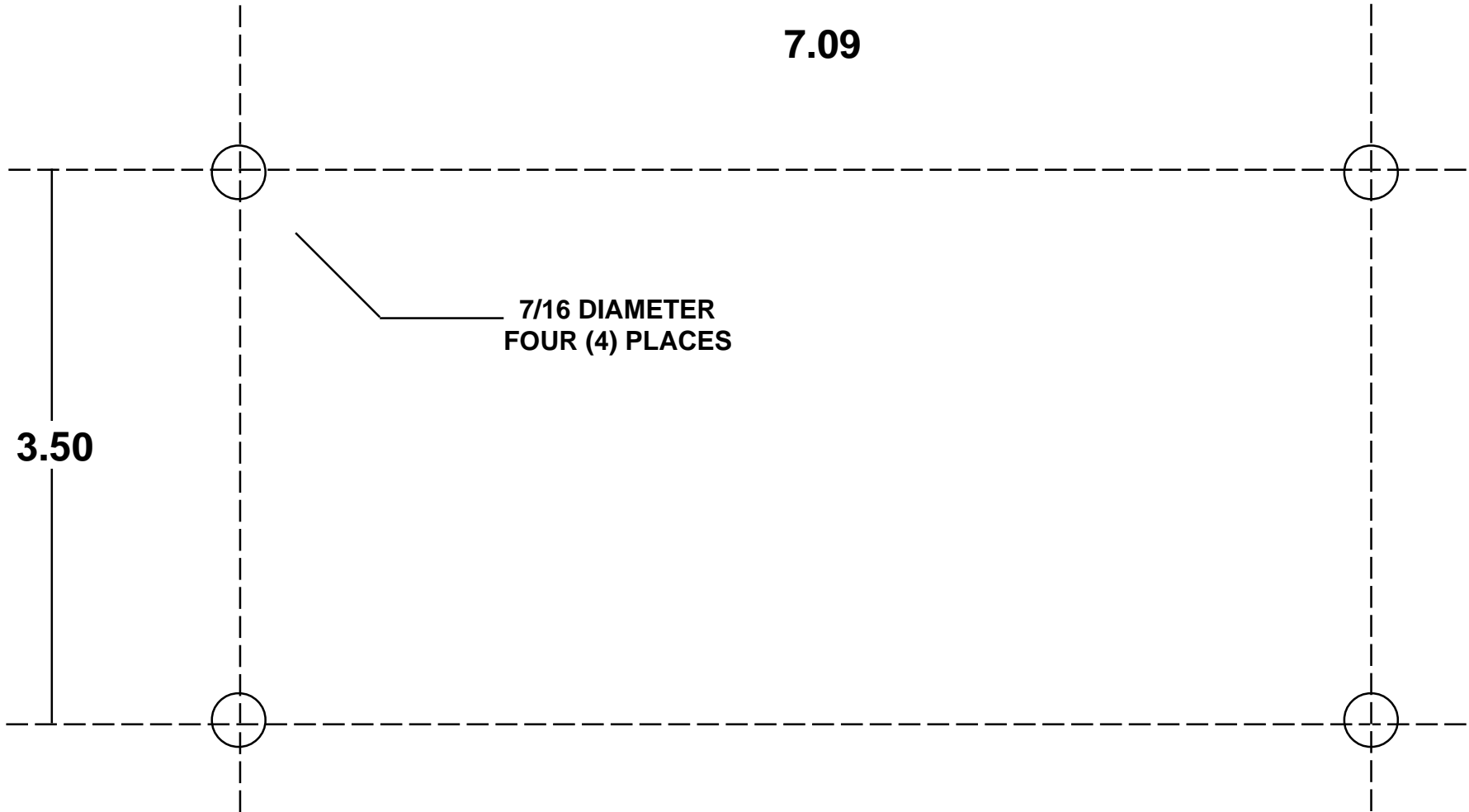
MOUNTING THE PURE AIR PLUS AIR DRYER

1. Using the template included with this installation booklet, determine mounting bolt location.
2. Determine whether the inlet needs to face left or right.
3. Fasten the **Pure Air Plus** Air Dryer mounting bracket to the vehicle using 3/8 diameter bolts, grade 5 or better, and tighten to 30 ft. lbs.
4. Assemble the **Pure Air Plus** Air Dryer to the mounting bracket using the 3/8 diameter bolt and 3/8 diameter lock washer provided and torque to 20-25 ft. lbs. Feed clamp band through opening in mounting bracket and wrap around dryer base to make connection. Insert "T" bolt through the trunnion and tighten lock nut (provided) to 50 in. lbs.



CONNECTING THE AIR LINES

1. Using appropriate fittings install line from discharge of compressor to inlet of **Pure Air Plus** Air Dryer. Avoid any loops, sags, or sharp bends which may form water traps. Discharge line must be minimum 1/2" I.D. (#10), and at least the first four feet of line from the compressor must be metal tubing or stainless steel-braided Teflon line.
2. Install an air line of approximately the same I.D. as the compressor discharge line from the **Pure Air Plus** Air Dryer outlet to the first (supply) reservoir. This line should also slope downward, if possible.
3. Connect a line from an unused unloader port on the governor to the 1/8 NPT control port on the **Pure Air Plus** Air Dryer. This line should slope downward avoiding potential water traps. Recommend 1/4" or 3/8" nylon tubing, or reinforced hose with no larger than 5/16" I.D.
4. If desired, a one-inch I.D. line may be connected to the purge cover to direct discharge away from the vehicle.



**MOUNTING TEMPLATE
PURE AIR PLUS
AIR DRYER**