

# Pure Air™ Dryer Minor Repair Kit (RN60)

## Installation Instructions



### 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 air pressure may cause the vehicle to roll. Keep hands away from brake chamber push rods and brake 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.



### Servicing the Pure Air™ from the Inlet/Outlet End (Top)

The RN60 Kit contains four o-rings, desiccant and a filter. The Pure Air Dryer can be serviced while installed on the vehicle if there is adequate clearance from either end: 14" required for top end servicing - 12" required for bottom end servicing.

1. Drain all air from the vehicle reservoirs. Loosen the line on the dryer marked "inlet" to insure no pressure remains in the unit. Completely disconnect the inlet and outlet lines and move them to one side.
2. Remove the six 1/2" self tapping bolts from the cover. Tap the cover lightly with a plastic or brass hammer to loosen. Lift cover off.
3. Remove and discard all three o-rings. Clean all surfaces with a clean cloth.
4. Pull the center cylinder from the unit. The inner aluminum cylinder will also follow.

5. Pull the desiccant canister from the inner cylinder. Discard o-ring from canister.
6. Remove used desiccant by shaking it into a waste receptacle. The desiccant follower will come out with the desiccant. Retrieve the follower for reuse.
7. Unscrew the bolt retaining the filter element. Set aside screw and retainer.
8. Discard the filter element.
9. Reassembly of desiccant canister:
  - a. Clean the inner cylinder and the desiccant canister with a clean cloth.
  - b. Install new o-ring on canister.
  - c. Install new filter element. Tighten bolt to 60-90 in. lbs.
  - d. Slide in new desiccant cartridge. Shake canister vertically until desiccant is seated in canister (1/2" minimum from top).
  - e. Install desiccant follower with skirt side toward desiccant.
  - f. Place inner shell on desiccant canister making sure the o-ring is not pinched.
  - g. Insert entire assembly into dryer housing.
10. Clean cover and install new o-rings.
11. Install the top cover by starting all six bolts by hand. Draw cover down evenly and tighten bolts to 150-200 in. lbs.
12. Reconnect inlet/outlet.
13. Proceed to operational checks.

## Servicing the Pure Air™ from the Governor/Purge Valve End (Bottom)

1. Drain all air from the vehicle reservoirs. Loosen the line on the dryer marked "inlet" to ensure that no pressure remains in the unit.
2. Disconnect the heater wires and governor/purge valve air line from the lower cover and move to one side.
3. Remove the six 1/2" bolts from the lower cover and tap lightly with a plastic or brass hammer to loosen. Lower cover and pull the inner assembly from the dryer.
4. Remove and discard o-ring on lower cover.
5. Clean cover with clean cloth. Install new o-ring.
6. Unscrew the bolt retaining the filter element. Set aside screw and retainer.
7. Discard filter element.
8. Remove used desiccant by shaking it into a waste receptacle. The desiccant follower will come out with the desiccant. Retrieve the follower for reuse.
9. Clean the inner cylinder and the desiccant canister with a clean cloth.
10. Install new o-ring on canister.
11. Install new filter element. Tighten bolt to 60-90 in. lbs.
12. Slide in new desiccant cartridge. Shake canister vertically until desiccant is seated in canister (1/2" minimum from top).
13. Install desiccant follower with skirt side toward desiccant.
14. Place inner shell on desiccant canister making sure the o-ring is not pinched. Insure that desiccant spring is in place.
15. Insert entire assembly into dryer housing.
16. Reinstall the lower cover by starting all six bolts by hand. Tighten the bolts to 150-200 in. lbs.
17. Reconnect inlet/outlet and governor/purge valve line.
18. Reconnect heater wires.
19. Proceed to operational checks.

## Operational Checks

Once the unit is serviced and installed, start the engine and build up pressure to 100 psi and shut off engine. Close the reservoir drains.

Check for air leaks at the inlet and outlet of the dryer. Correct any leakage problem.

Restart engine and build up pressure to compressor cut-out. At cut-out pressure the dryer purge valve opens and immediately expels a large volume of air, followed by a slow flow of air lasting approximately 30 seconds. Check for leakage at the purge governor port.

To check if the heater is operating you must expose the unit to 32°F. At this temperature the thermostat is closed and the bottom housing should begin to feel warm. The temperature should continue to rise until the thermostat opens between 55-75°F.

Before placing the vehicle back in service, close the reservoir drains and perform the following tests:

1. Remove blocks from wheels and reconnect tractor to the trailer. Re-block the tractor and trailer wheels. Charge the tractor air system. Activate the trailer fill valve in the tractor cab. Observe the trailer brakes applying and automatically releasing as the trailer reservoir(s) are filling (except for dolly applications which may use a non-charging type relay emergency valve).
2. Adjust the trailer brakes.
3. Make several service brake applications and visually check for a brisk application and release of trailer brakes.
4. Make and hold a service brake application. Check for air pressure leakage at all fittings. A soap water solution liberally applied to the connections is an excellent method to check for air pressure leakage. Tighten fittings, if required.
5. Release the service brake application. Place the vehicle park valve (in the tractor cab) in the park position. Observe full trailer brake application. Place the park valve in the drive (not parked) position and observe full brake release.
6. Upon successful completion of the above tests, remove the wheel blocks.