

# TECHNICAL PROCEDURE

## HENDRICKSON TIRE INFLATION SYSTEMS

**SUBJECT:** Tire Hose and Tee Fitting Guard Installation Procedure

**LIT NO:** L828

**DATE:** October 2006     **REVISION:** C

This document focuses on a particular technical procedure regarding Hendrickson tire inflation systems. Before conducting any work on the system, read and understand Hendrickson publication L818, *TIREMAAX® Installation, Service and Troubleshooting Procedures* (available at [www.hendrickson-intl.com](http://www.hendrickson-intl.com)) for additional instructions and safety information.

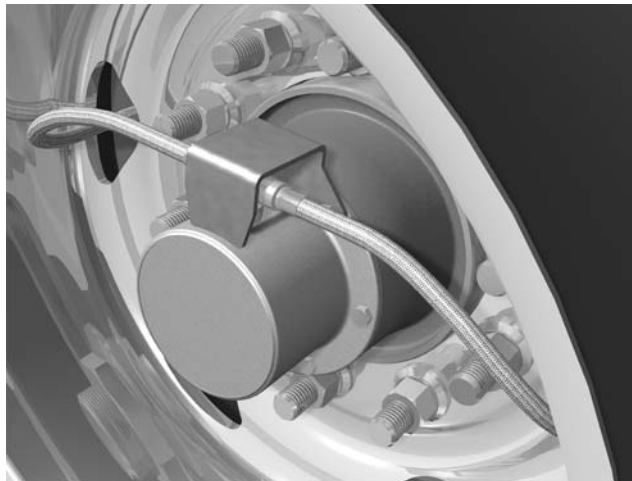


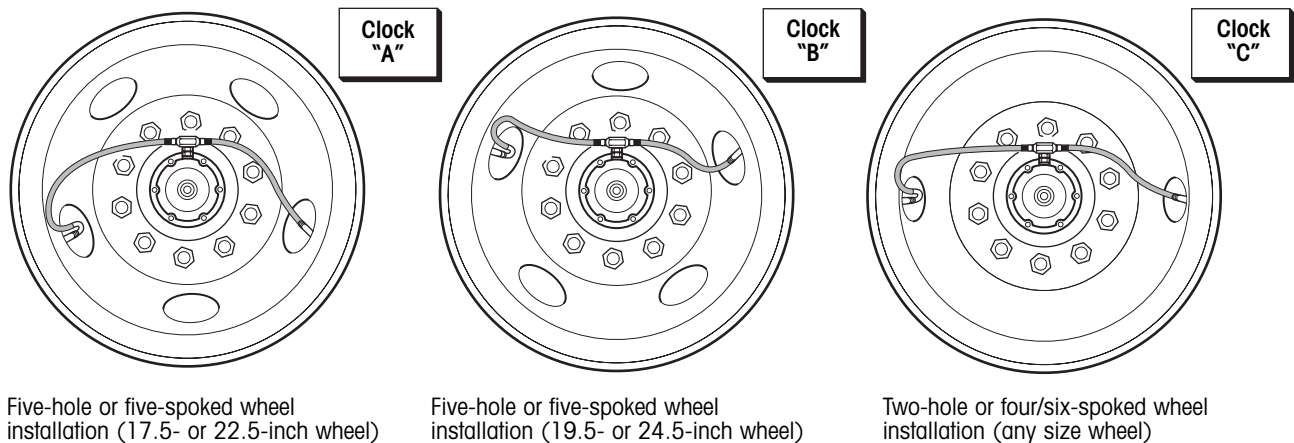
Figure 1. Finished tire hose and tee fitting guard installation

### TIRE HOSE INSTALLATION

**NOTE:** Tire hoses must be connected directly to the tire valve stems and the tee fitting. Do not use valve stem extenders.

1. Position the hubcap and wheel so the hoses will not stretch or rub on the wheel. Refer to figures 1 and 2 and the table on this page.

Wheel Size	Hole Configuration	Tire Position Clocking
17.5"	2	C
	5	A
19.5"	2	C
	5	B
22.5"	2	C
	5	A
24.5"	2	C
	5	B
Wide based 22.5"	N/A	N/A



Five-hole or five-spoked wheel installation (17.5- or 22.5-inch wheel)

Five-hole or five-spoked wheel installation (19.5- or 24.5-inch wheel)

Two-hole or four/six-spoked wheel installation (any size wheel)

Figure 2. Proper wheel and hubcap orientation for hose installation



**⚠ CAUTION:** For dual wheel configurations, the wheel must be properly “clocked” to the hubcap to prevent the hoses from rubbing on the wheel (figure 2). Failure to do so may result in hose failure.

2. On wide-based tire configurations only, two styles of fittings exist — a cap-and-ball tee fitting or a 90-degree elbow fitting. If you have the cap-and-ball tee fitting, install the tee fitting cap before screwing the tee fitting onto the rotary joint bulkhead adapter. **Apply a small amount of thread sealant** on one end of the tee fitting and screw the cap on the same end of the tee fitting (figure 3). Tighten the cap to 12 - 18 ft. lbs. (16 - 24 N•m) of torque. If you have the 90 degree elbow tee fitting, proceed to step 3.

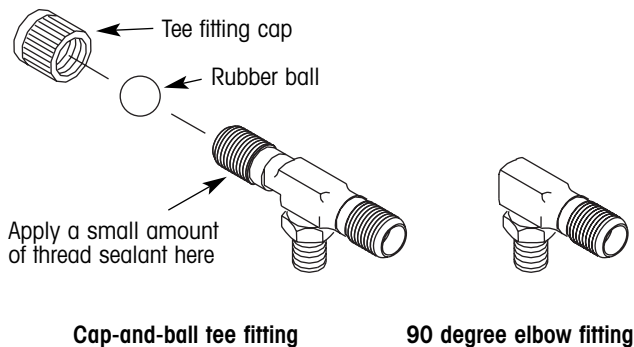


Figure 3. Wide-based tire configuration fittings

3. For all tire configurations, screw the tee fitting onto the rotary joint bulkhead adapter (figure 4) and tighten the swivel threads to  $130 \pm 10$  in. lbs. ( $14.7 \pm 1$  N•m) of torque. Use two wrenches to achieve the final torque value. Use one wrench to hold the jam nut on the rotary joint bulkhead adapter stationary and use the second wrench to tighten the tee fitting swivel threads to the final torque value.

If a torque wrench is not available, one way to approximate  $130 \pm 10$  in. lbs. ( $14.7 \pm 1$  N•m) of torque is to tighten the tee fitting swivel threads hand tight and then use the two-wrench method as described previously to tighten the swivel threads one additional turn. Hendrickson

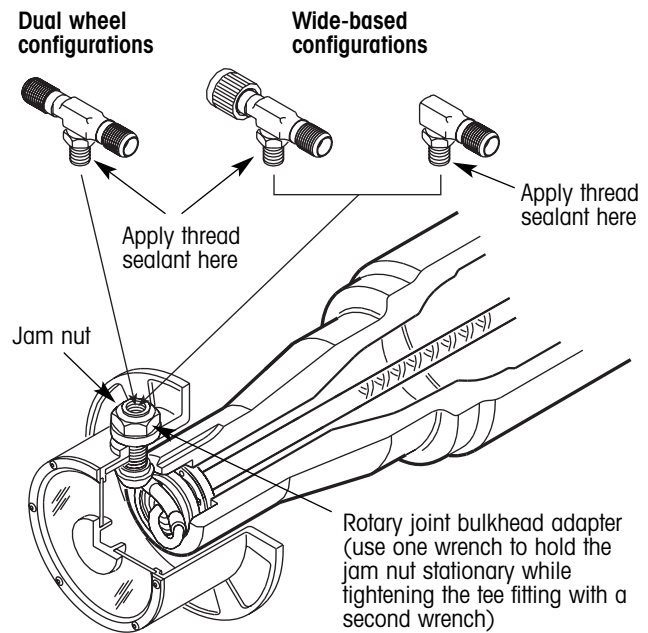


Figure 4. Tee installation

recommends tightening to the stated torque value, but if you use the approximate method, make sure the tee fitting cannot be rotated freely within the bulkhead fitting after the additional one full turn.

4. Attach the tire hose(s) to the tire valve stem(s) and tighten finger tight (figure 6).

**NOTE:** Tire hoses must be connected directly to the tire valve stems and the tee fitting. Do not use valve stem extenders.

5. Using a  $\frac{7}{16}$ -inch wrench, tighten the tire hose/valve stem connection an additional one-half turn (figure 6). **Do not overtighten this connection.** The hose and tee connections are tight enough when moving the hose back and forth does not cause the connection to move.

**⚠ CAUTION:** **DO NOT overtighten the tire hose(s) on the tire valve stem(s). Doing so may damage the tire hose internal gasket, causing a leak or decreased system performance. Only tighten the connection an additional one-half turn with the wrench.**

6. Attach tire hose and check valve assemblies to the tee fitting and tighten finger tight (figure 5).



# TIRE HOSE AND TEE FITTING GUARD INSTALLATION PROCEDURE

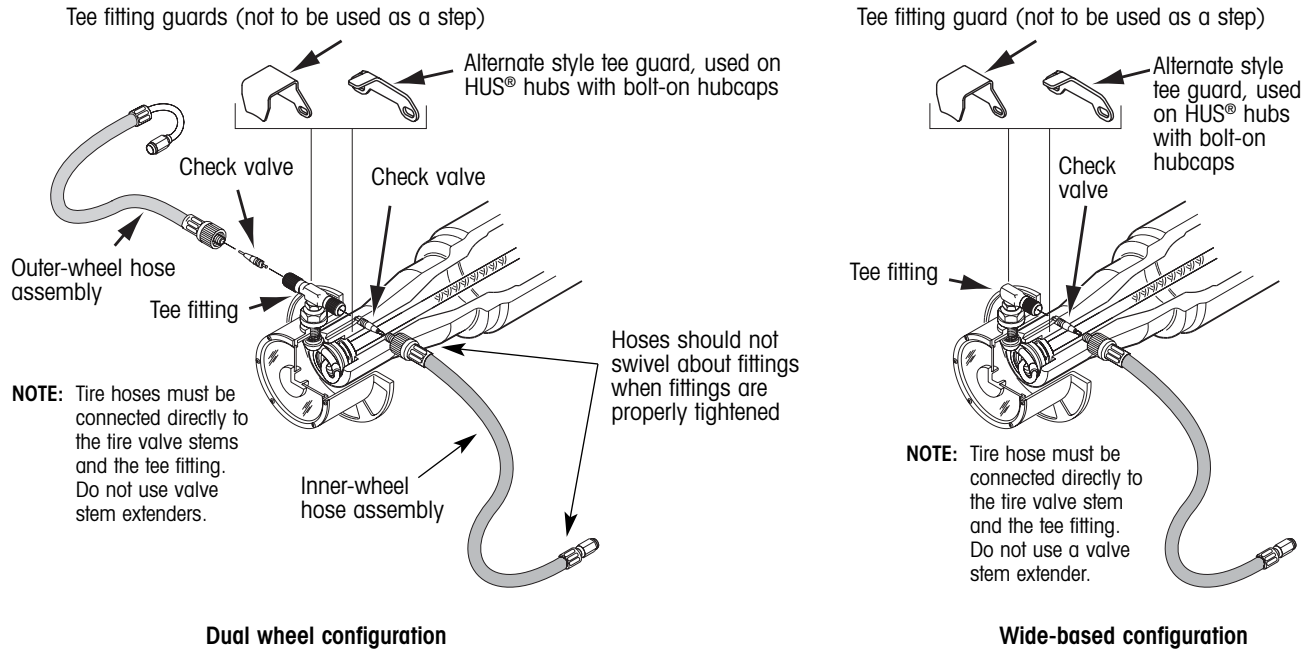


Figure 5. Tire hose, check valve and tee fitting guard installation

Recheck the tire hose connections at the valve stems. Verify that the tire hose/valve stem connection did not loosen during the tire hose/tee fitting connection process.

**After assembly is complete, check the tire hose/valve stem connection (and all other air system connections) for leaks using the system integrity check found in Hendrickson publication**

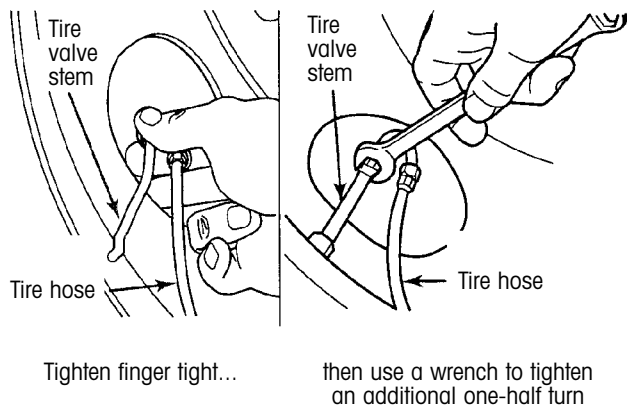


Figure 6. Attaching the tire hose to the tire valve stem

**L818, TIREMAAX® Installation, Service and Troubleshooting Procedures (available at [www.hendrickson-intl.com](http://www.hendrickson-intl.com)).**

**NOTE:** Simply spraying the connections to look for leaks will not work. Use a commercially available leak detector solution and the system integrity check (found in L818, *TIREMAAX Installation, Service and Troubleshooting Procedures*) to verify airtight connections. If an airtight seal cannot be achieved by the cap-and-ball style tee fitting on wide-based tire configurations, call the Hendrickson technical service department at 800-455-0043 in the United States or 800-668-5360 in Canada.

7. Attach the tee fitting guard (figure 5). Remove the two hub cap bolts closest to the rotary joint bulkhead adapter, place the tee fitting guard over the rotary joint bulkhead adapter and reinstall the hub cap bolts through the holes in the tee fitting guard. Tighten the hub cap bolts to 12 - 18 ft. lbs. (16 - 24 N•m) of torque.

**NOTE:** The tee fitting guard is not used on HUS® hubs with screw-on hubcaps.

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