



STATE OF TENNESSEE
 DEPARTMENT OF ENVIRONMENT AND CONSERVATION
 DIVISION OF UNDERGROUND STORAGE TANKS
 William R. Snodgrass Tennessee Tower
 312 Rosa L. Parks Avenue, 12th Floor
 Nashville, Tennessee 37243

Equipment Compatibility Checklist for Underground Storage Tank Systems with E-Blend Fuels (greater than 10% ethanol by volume)

Instructions

Pages 1 and 2 of this **Checklist** must be completed by the tank owner **and** someone familiar with equipment such as an experienced installer or Professional Engineer with knowledge, experience and training in materials science (API RP 1626) to determine compatibility of materials/ equipment/ components with E-Blend fuels. The installer or Professional Engineer must complete and sign the checklist. The following items must be compatible with E-Blend fuel (see asterisks for thread sealant and adhesive). Enter **Model/Brand, Manufacturer** and check either **Yes** or **No** in one or both columns under **UL Listed** or **Manufacturer Approved**. If a component was not used in the installation, write "not used" in the **Model/Brand, Manufacturer** column.

Page 3 of this **Checklist** must be signed by the owner and one copy submitted to the Division and one copy maintained with facility records and available for inspection.

| | | |
|---|--------|---------------|
| Facility Name | | Facility No.: |
| Address | | No. of Tanks: |
| City | County | Zip Code: |
| Owner Name | | Phone: |
| Company Name | | Phone: |
| E-Blend stored <input type="checkbox"/> E-85 <input type="checkbox"/> Other _____ % ethanol | | |

Section 1: Tanks and Product Piping

| Component | Model/Brand | Manufacturer | UL Listed | Manufacturer Approved |
|----------------------------|-------------|--------------|--|--|
| (a) Tank* | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Tank construction material | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Auto Shutoff | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Sub Pump, O-rings, Gaskets | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Tank top Sump | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| ATG Probe, float/sensor | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Drop Tube | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ball Float | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Sump Sensor | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Spill bucket | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| (b) Pipe | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Piping Material | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Thread Sealant** | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Adhesive** | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Flex Connectors | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Line Leak Detectors | | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |

***Internally lined tanks are not suitable for conversion to storage of E-Blend fuels.**

** If compatibility is undetermined, analysis may be used to determine compatibility.

Dispensers and Dispenser Sumps

On June 24, 2010 Underwriters Laboratories (UL) granted safety listings to the **Gilbarco Veeder-Root Encore E85** dispenser and the **Dresser Wayne Ovation Eco** Fuel dispenser as certified for E-85 fuel. Effective June 24, 2010 for any tank converted or installed after June 24, 2010 to dispense E85, an E85 UL listed dispenser must be used for dispensing E-85 fuel. This UL listing only applies to units manufactured after June 24, 2010. If UL grants subsequent safety listings to other model dispensers certified for E85, use of those models will be acceptable as long as the models used were manufactured after the UL safety listing was granted. Components not approved for use by the manufacturer with E-blend fuels may not be used. Shear valves or emergency valves on existing and new UST systems must be compatible with E-Blend fuel.

If an owner discontinues storing E-Blend fuel and reverts back to gasoline before buying E-Blend compatible dispensers, daily visual dispenser inspections must continue for six months and the record of daily inspections maintained. Any leak must be reported to the Division within 72 hours.

Section 2: Dispensers and Dispenser Sump

| Component | Model/Brand | Manufacturer | UL Listed |
|--------------------------|-------------|--|--|
| (c) Dispenser | | | Yes <input type="checkbox"/> |
| | | | Yes <input type="checkbox"/> |
| | | | Yes <input type="checkbox"/> |
| | | | Yes <input type="checkbox"/> |
| Hoses | | | Yes <input type="checkbox"/> |
| Fuel Filter | | | Yes <input type="checkbox"/> |
| (d)Dispenser/Sump | | | |
| Pipe | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Pipe Sealant* | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Flex Connector | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Sump material | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Emergency Valve | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Sensor | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Check valve | | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> |

*If compatibility is undetermined, analysis may be used to determine compatibility.

Installer Certification

I have inspected the visible UST system components, and reviewed available installation records of the UST site referenced on pages 1 and 2 of this checklist. I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Signed _____ Date _____

Installer

Professional Engineer

Owner's Signature: _____ Date: _____

Before E-Blend is Transferred to the Tank

All items below must be completed before E-Blend fuel can be transferred to the tank.

- Check for water in the tank. **No level of water is acceptable for E-Blend fuels** due to the possibility of phase separation.
- All visible fittings and connections at the top of the tank are tight (no vapors escape and no water enters).
- Sump and spill containment covers must be tight to prevent water from entering.
- Any and all water infiltration problems must be eliminated. For example, spill buckets for these tanks should not have drain back mechanisms.
- If this tank was previously used, it was cleaned of all water and sediment and clean tank certificate obtained or comparable documentation (API Publication 2015 and NFPA 326) Mark **NA** if tank is new
_____ **NA**
- Identify the fill port and paint access covers according to API RP 1637. Make sure transport driver cannot inadvertently deliver E-Blend fuel to the wrong fill pipe. Label dispenser.

First Delivery

- Tank filled to 80 percent capacity (recommended by the Renewable Fuels Association) and kept as full as possible for 7 to 10 days.
- Conduct a precision test of the tank system (0.1 gph leak rate) within seven days after tank is filled to make sure system is tight and leak detection equipment is operating properly. Report any "Fail" results.
- Test for water (use alcohol compatible paste if you stick your tanks) at the beginning of each shift for the first 48 hours after delivery. If there is water in the tank, remove it, find out how it got there and fix it so it doesn't occur again.
- Owner or operator knows how to visually inspect E-Blend dispenser for leaks and problems and how to complete inspection record.

Ongoing Maintenance Responsibilities

- Check for water daily with your stick or ATG system. No level of water in the tank is acceptable.
- If product seems to pump slowly, check and replace filters.
- Calibrate dispenser meter at the time of conversion and two weeks after conversion to verify meter accuracy. Particulate materials may cause excessive meter wear, which would require more frequent meter calibration (API RP 1626).
- Conduct daily, visual inspections of the dispenser and dispenser sump (secondary containment) beneath the dispenser (if one is installed) and all the other items on the inspection form. This form must be kept on site and available for submittal to the Division within 72 hours.

Owner's Signature: _____ **Date** _____

(by signing the owner acknowledges the preparatory items have been conducted, and awareness of ongoing responsibilities)