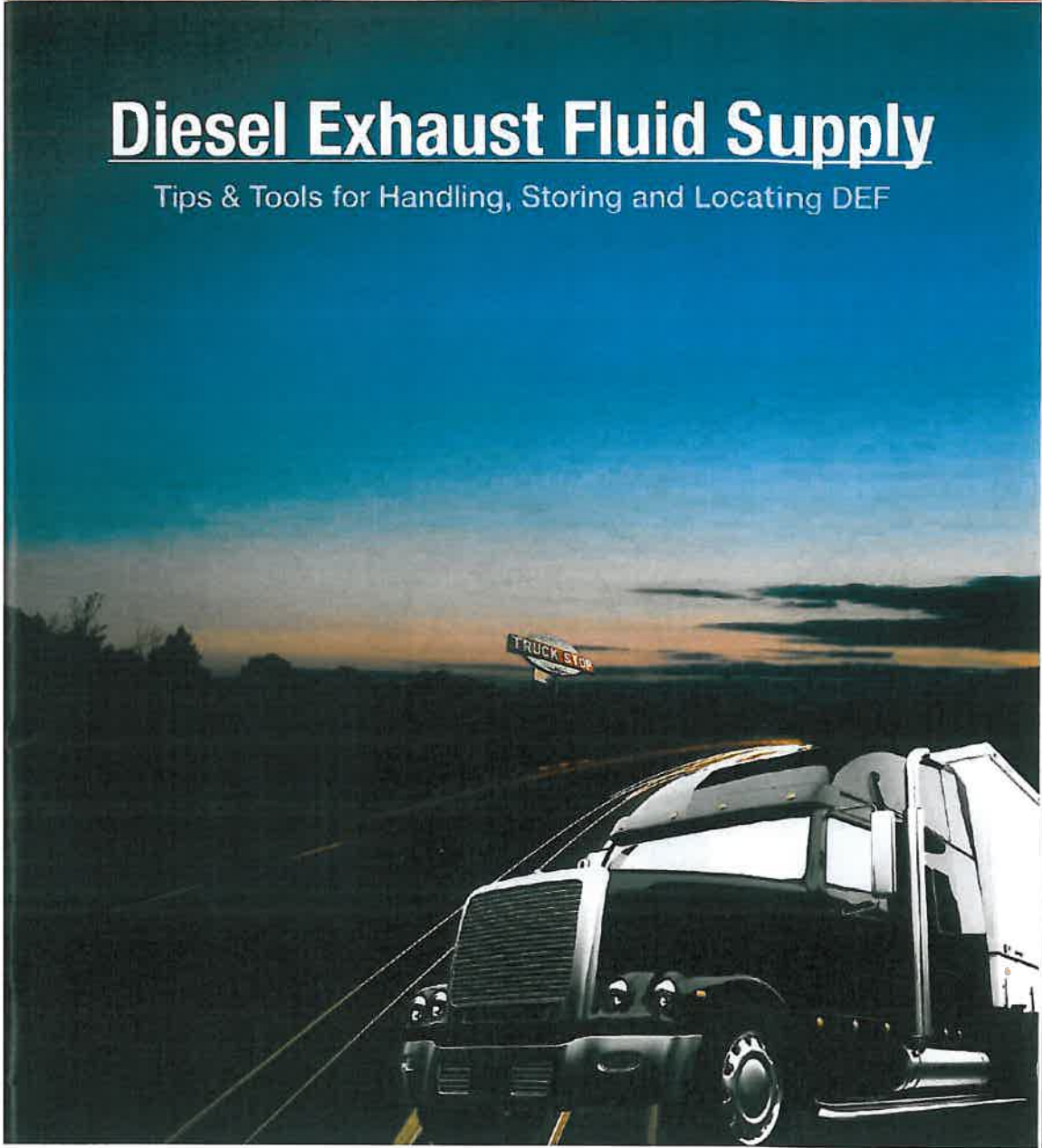


SPONSORED BY:  Blue DEF

JUNE 2010 EDITION

# Diesel Exhaust Fluid Supply

Tips & Tools for Handling, Storing and Locating DEF



# DEF for 2010

## Diesel Exhaust Fluid Supply Stream is Stocked & Ready

By Kim Doran



**SCR, 1. Selective Catalytic Reduction:** one of the most cost-effective and fuel-efficient vehicle emission control technologies capable of reducing emissions to near-zero levels.

Leading DEF Producers, Distributors and Dispensing Equipment Manufacturers Debut Latest in Storage, Transport, Bulk and Packaged Supplies of DEF for 2010 Vehicle SCR Technologies at the Mid-America Truck Show in March.

Working across the industry and supply stream infrastructure, North American SCR Stakeholders came a long way since last year's OPIS Diesel Exhaust Fluid (DEF) supply update.

- Several new DEF suppliers joined the supply ranks (see exhibit participants & descriptions).
- DEF is now available across North America in more than 5,000 locations where drivers can top off DEF tanks with pre-packaged 2.5 gallons jugs or refill DEF tanks via truckstop fuel island DEF pumps (75 will be operating at Pilot Travel Centers by the end of 2010 with several coming online at Love's and TA/Petro travel centers) as well as home-based fleet filling units.
- Several new DEF locators are available online (see overview and site information).
- DEF quality is assured through certification and licensing programs supervised by the American Petroleum Institute (API @ [www.api-def.org](http://www.api-def.org)) and new storage, handling and dispensing guidelines established by the Petroleum Equipment Institute (PEI @ [www.pei.org](http://www.pei.org)).

### 2010 DEF Suppliers Exhibit at MATS – New Players, Mergers and Acquisitions

Leading diesel exhaust fluid (DEF) infrastructure suppliers, including DEF producers, distributors and dispensing equipment manufacturers, joined forces to showcase DEF supplies and support services. The showcase was part of an educational display at the Mid-America Truck Show (MATS) held in Louisville in March. The exhibit also marked the launch of new online DEF locators from both private and government entities,

providing DEF supply and availability information to drivers anytime and anywhere they are in North America.

Coordinated by FactsAboutSCR.com on behalf of the North American SCR Stakeholders Group, the exhibit was sponsored by 10 companies, including some new and more established players:

**Airgas, Inc.** – marketing diesel exhaust fluid through Airgas Specialty Products under the brand named AiRx™. Airgas Specialty Products is the nation's largest distributor of industrial nitrogen products and has been reducing nitrogen oxide since the 1980s. Airgas, Inc., with the 19th largest fleet in the U.S., is the largest U.S. distributor of industrial, medical, and specialty gases, and welding, safety, and related products. Airgas offers a reliable, time-tested brand with the expertise and fleet experience it takes to understand DEF demands.

**Aucterus LLC** – marketing diesel exhaust fluid under the brand named NOxBlue™. Aucterus is the newest division of Omni Agri Trade Group and manufactures, markets and sells API certified Diesel Exhaust Fluid (DEF) as NOxBlue throughout the U.S. It has operations at key locations across North America to service the emerging new diesel engine transportation market and continues to seek special partners to develop business further. As a full service company, Aucterus offers a complete line of DEF containers from 2.5 GI to 275/330 GI IBC's, extensive supporting dispensing hardware, storage and tanking systems for retail and non-retail applications with capabilities of delivering in bulk tankers.

**Balcrank** – offering a wide range of diesel exhaust fluid dispensing products, including pumps, hose reels, meters, electronic controls and complete ready-to-deploy systems.

**Brenntag North America** – a major supplier of diesel exhaust fluid. Brenntag is the world's leading chemical distributor with over 100 locations in the U.S. and

*continued on page 20*

*continued from page 18*

Canada. Brenntag was one of the first companies in the country, and among the first DEF distributors to add an EPA compliant truck to their fleet – a new Freightliner Cascadia™ SCR tractor equipped with a Detroit Diesel DD15 engine and BlueTec™ emissions technology.

Colder Products Company – the leading worldwide provider of quick disconnect couplings for industrial, life sciences and chemical handling markets. Colders DrumQuik PRO allows pumping systems to easily be connected to drums and IBCs containing DEF in both single use and reusable installations, providing a very low cost closed and reliable dispensing solution.

KOST USA – marketing diesel exhaust fluid under the brand name DEFendAL™. KOST USA is a glycol-based technology company and manufacturer of diesel exhaust fluid, as well as a full line of coolant and antifreeze products under the DefendAL™ name. Additionally, KOST USA manufactures specialty chemicals, heat transfer fluids, and lubricants.

Mausser Corp – offering plastic drums and composite IBC's. Mauser Corp operates 12 plants in North America and is the largest provider of fiber drums, recollection, recycling, remanufacturing and reconditioning services and is a unit of Mauser Group, a global leader in industrial packaging.

SPATCO DEF Dispensing Systems – Providing DEF Dispensing Systems for commercial and private fleets, municipalities, school and city bus garages, trucking companies, and retail truck stops. SPATCO™ DEF installed North America's first fuel island bulk DEF systems at Pilot Travel Centers and offers the industry's first secondary containment feature to their tote storage enclosure system. SPATCO™ DEF is headquartered in Charlotte, N.C. and has distributors through out the U.S. and Canada.



*continued on page 38*

## Brief Chronology Of SCR Decisions & Development In North America

### 1990s

Daimler begins to investigate mobile applications and ways to adapt stationary SCR reduction technologies used to reduce emissions in power plants and utilities.

### 1994

U.S. Environmental Protection Agency announces emissions reduction standards.

### 2004

Europe and U.S. commit to reducing emissions.

- NOx chosen as first emissions goal in Europe.
- Particulate Matter chosen as first emissions goal in U.S. preceding the introduction of ULSD.

### 2005-2006

VDA and ACEA in Europe announce plans, incentives and commitment to SCR.

### 2007

U.S. introduces Diesel Particulate Filters.

Daimler and Volvo announce plans to offer SCR to meet U.S. EPA 2010 standards.

Cummins announces it will enhance its MidRange on-highway product performance and reliability by adding Selective Catalytic Reduction (SCR) to its existing product to meet the near-zero 2010 emissions standards.

### 2008

NA SCR Stakeholders develop SCR task force to deal with infrastructure needs and issues specific to trucking.

Cummins announces that it will add Selective Catalytic Reduction (SCR) aftertreatment to its Heavy-Duty products for 2010 to deliver the best fuel efficiency for its customers. October 2008: Cummins debuts 2010 ISL9 engine equipped with SCR technology at the American Public Transportation Association (APTA) Expo.

Pilot Travel Centers and TravelCenters of America announce 100% support of DEF supplies.

### 2009

Mack Trucks debuts SCR truck at World of Concrete. Detroit Diesel debuts BlueTec SCR technology at TMC.

NA SCR Stakeholders join forces to showcase diesel exhaust fluid dispensing equipment and supplies.

American Petroleum Institute (API) develop DEF quality certification program.

### 2010

Pilot Travel Centers open first fuel island DEF pump locations.

Petroleum Equipment Institute (PEI) publishes standards for DEF dispensing, storage and handling.

DEF for 2010 - producers, distributors and dispensing equipment manufacturers exhibit at MATS.

continued from page 20

Terra Environmental Technologies (TET) – offering diesel exhaust fluid under the brand named TerraCair®. TET was recently acquired by C.F. Industries and is a leading North America DEF producer. TET developed a complete supply chain solution that includes manufacturing and distributing the product, recommending DEF-compatible dispensing equipment, offering financing options and providing field services and employee training.

Yara – offering a complete diesel exhaust fluid solution under the global brand name Air1®. Yara is a leading DEF producer and is selling Air1® product to the major truckstop chains, North American commercial fleets, government entities, marine and industrial clients. As a market pioneer (one of the developers of the ISO 22241 product specs) Air1® understands customer needs at each stage of the market development and is a preferred partner of major oil producers and OEMs in the USA and around the world. Air1® has reliable nationwide reach and a multi-sourcing model based on domestic production and back up of imports from the world's largest production capacity. The Air1® brand ensures a guaranteed supply of API certified DEF from production to tank. Utilizing the DeliveryOne network of distribution, Air1® will offer an efficient and economical supply of DEF to the transportation industry.

#### 2010 DEF Exhibit – Spotlight on EPA 2010-Compliant Vehicles

The MATS DEF for 2010 educational exhibit featured two new 2010 Freightliner Cascadia trucks equipped with Detroit Diesel engines and BlueTec™ SCR technology, and a new tanker developed specifically for the transport of DEF tanker by Oilman Truck Tanks.

Brenntag North America, one of the exhibit sponsors, and Meijer, a Grand Rapids, Michigan based retailer that operates 190 supercenters throughout Michigan, Ohio, Indiana, Illinois, and Kentucky, were among the first to receive new 2010 production trucks from Freightliner. Brenntag's Green Truck Blue Ski condo cab which was showcased at MATS is equipped with the Detroit Diesel DD15 engine while the Meijer day cab is equipped with the DD13 engine. Both employ the BlueTec emissions system.

The TerraCair Oilmen tanker was specifically developed to deliver DEF using components compatible with the fluid's unique properties and technology. These tankers ensure DEF purity is maintained throughout the delivery process. Oilmen's delivery system is composed of stainless steel components that meet ISO 22241 specifications. The tanker can pump DEF up to 80 GPM.

#### NEW: DEF Availability Online Locators

A new DEF locator, [www.discoverDEF.com](http://www.discoverDEF.com), debuted at MATS. It is free to users and helps drivers quickly find a supply of API-certified DEF at a location to suit them, either at a truck stop, OEM dealership, retail outlet or through a fleet terminal supplier. The website is easy to find and intuitive to use, and was designed with truckers in mind, ensuring their ability to find DEF whenever their truck needs a DEF refill – anytime and anywhere in North America.

A second DEF locator which features more than 5,000 sites where DEF is available through dealerships and at retail was developed in cooperation with the U.S. Department of Energy Clean Cities Program and National Renewable Energy Laboratory. This public locator is also accessible at no charge and may be bookmarked for easy reference and access by drivers, truck operators and fleets. The locator is available at: <http://www.afdc.energy.gov/afdc/locator/def/> and may be easily accessed through links at organizations such as the American Petroleum Institute, which certifies the quality of DEF. The DOE web locator offers information on DEF in 25-mile radius increments, including addresses and phone numbers where DEF should be available for low emitting 2010-compliant vehicles. The data for these sites was provided by the vehicle manufacturers and truckstops and includes truck dealerships and the service centers supporting leading truck and engine manufacturers. The locator tool and its application is similar others developed and provided by NREL for locating alternative fuels and fluids, such as ethanol and biodiesel.

A third DEF locator, [www.findDEF.com](http://www.findDEF.com), was developed by Benecor, Inc., an industry leader in dispensing DEF, and one of the first to offer specialized DEF storage and pumping equipment. This site features more than 1,500 locations where API-certified DEF can be found.

#### About Selective Catalytic Reduction (SCR)

SCR is the first emissions technology that is as good for business as it is for the environment, and is the only emissions control solution proven to meet the 2010 emissions control standards set by the Environmental Protection Agency (EPA) – the most stringent in the world – without the use of credits. Extensive testing by truck and engine manufacturers show SCR provides up to five percent in a fuel economy advantage and SCR results in increased uptime due to needing fewer forced, parked or active regenerations of the engine.

The North American SCR Stakeholders Group is a nationwide, cross-functional industry effort among



more than 300 companies and government agencies focused on increasing fuel efficiency and reducing harmful emissions through the support and rollout of SCR technology. Participants include government agencies, automotive and heavy-duty engine and truck manufacturers and trade associations, fuel retailers and truck stop trade associations, chemical and oil companies, diesel exhaust fluid producers, distributors and dispensing equipment manufacturers.

The 2010 MATS exhibit of SCR-related and DEF packaging and dispensing products was coordinated by FactsAboutSCR.com, an online SCR information resource developed on behalf of the North American SCR Stakeholders Group by Quixote Group, a strategic market research and marketing communications firm located in Greensboro, North Carolina.



**Kim Doran,**  
Editor, FactsAboutSCR.com

Kim Doran is CEO of Quixote Group, an independent market research, industry analysis and strategic communications firm based in Greensboro, North Carolina working with the North American SCR Stakeholders Group, an ad-hoc group of automotive, light, medium and heavy duty OEMs, DEF producers and distributors, industry associations and government agencies. She is editor of [www.FactsAboutSCR.com](http://www.FactsAboutSCR.com), an informational website advancing education on the benefits of SCR in vehicles. Contact via email at: [kdoran@quixotegroup.com](mailto:kdoran@quixotegroup.com).