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Daimler Trucks North America

Mark A. Lampert
Senior Vice President
Sales

February 14, 2008

Brad Fauvre, President
South Bay Truck Center
21107 Chico Street
Carson, CA 90745

Dear Brad:

This letter will serve as confirmation that Sterling Truck Corporation is currently building a Sterling LT8513 tandem axle tractor (Serial Number AA7777) with a Cummins ISL-G engine and Allison 3000 Transmission for vehicle test and validation in port application. This vehicle is scheduled to go on-line in late February, and be completed in April 2008.

While additional real world vehicle testing is required and will be scheduled in Los Angeles after completion, we have extensively reviewed vehicle specifications with Cummins, Westport and Allison, and they are confident that this application will offer the port a cost effective natural gas solution to meet their reduced greenhouse gas and emission needs. This specification is already certified for EPA 2010 emissions. The planned application for this vehicle that they have recommended is 80,000 lb GVW @ 55 mph within 80-mile radius of the port operations in the Ports of Los Angeles and Long Beach.

Please contact me if you have any questions.

Best regards,

Mark Lampert
Senior Vice President, Sales



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# Goods Movement Emission Reduction Program

## *Cal Cartage Deployment of 400 Dedicated Natural Gas Port Drayage Trucks Meeting U.S. EPA 2010 On-Road Emissions*

**EXECUTIVE SUMMARY:**

Cal Cartage is the largest trucking company operating in the Ports of Los Angeles and Long Beach. The company has committed to deploy 400 dedicated natural gas trucks in its San Pedro Bay Ports drayage operation. These trucks will be powered by the Cummins ISL G natural gas engine, the cleanest heavy-duty engine available in the United States and the only heavy-duty engine certified by CARB to the stringent U.S. EPA 2010 on-road emission standards. Emissions from these trucks have no diesel particulate matter.

The deployment of these 400 ultra-clean natural gas trucks will provide more surplus emission reductions than any other engine technology available. The surplus emission reductions from these trucks are real and quantifiable. Further, these emission reductions are not used in Averaging, Banking & Trading (ABT) Programs to offset the emissions from other engines in the Cummins family.

Given the important surplus emission reductions these trucks will bring to the breathers in and around the San Pedro Bay Ports, this project offers the most cost-effective air quality improvement strategy for the State of California to reduce emissions from goods movement activities.

**PRIORITY POLLUTANT REDUCTION AND COST EFFECTIVENESS**

- Natural gas trucks powered by the Cummins (CWI) ISL G dedicated natural gas engine provide more cost effective emission reductions than a 2007 diesel truck based on the following calculation inputs:
    - Fleet operates 25,000 miles per year (or any annual mileage for that matter)
    - Pre-89 baseline emission factor of 21.39 g/m NOx for 2009
    - 2004 baseline emission factor of 11.63 g/m NOx for 2010 through 2012 (due to existing ARB Port Drayage Truck regulations which will limit the number of year surplus emission reductions can be claimed)
    - 2007 baseline diesel emission factor of 6.36 g/m NOx for 2013 and beyond (due to existing Port Tariffs)
    - 2007 diesel replacement trucks with an emission factor of 6.36 g/m NOx
    - 2007 LNG emission factor of 0.52 g/m NOx for the ISL G engine
    - 2007 diesel surplus emission life of four years (2007 LNG surplus emission life of eight years (due to 1B early guidelines)
    - 2007 grant funding at $50,000 per diesel unit
    - 2007 grant funding at $90,000 per LNG unit
- The project life NOx benefit of deploying one LNG truck instead of a 2007 diesel is 1.62 tons.
- Choosing diesel over the 5,311 LNG trucks included in the San Pedro Bay Ports Clean Air Action Plan (CAAP) will increase NOx within the South Coast Air Basin

an average of 1,073 tons of NOx per year over each of the next eight (8) years. This equates to an additional 2.94 tons of NOx per day and an aggregate NOx emission increase of 8,588 tons.

- If all of the approximate 7,500 LNG trucks the Port of Long Beach is now calling for in its recently adopted Clean Truck Program use the ISL G natural gas engine, the surplus emissions NOx reductions from these trucks within the South Coast Air Basin will be 1,515 tons per year more than the surplus NOx emissions realized by 7,500 diesel trucks with 2007 emissions. This equates to an additional 4.2 tons of NOx per day that will be gained over and above an all diesel path.
- The CAAP, as supported by SCAQMD, ARB and US EPA, recommends replacing the current port truck drayage fleet with and equal number of LNG and diesel units (5,311 trucks for each fuel). Furthermore, ARB's recommendations for Early Grant Projects include funding for replacements with 130 diesel trucks directly to local fleets. Cal Cartage's proposed LNG project would provide a 50/50 split between diesel and LNG in the district which is well aligned to local plans. Furthermore, AQMD, POLA, POLB and the community have expressed support for funding alternative fuel projects so the funding is utilized for the cleanest possible option.
- Likewise, not included in the cost-effectiveness calculations, the LNG units are certified to the direct standard of 0.2 g/bhp-hr and do not rely on Averaging, Banking and Trading (ABT) Programs to meet Federal Standards, as do all of the diesel engines now available for use in port drayage truck applications. While ARB will only provide funding to diesel trucks with certified emission levels of 1.2 g/bhp-hr NOx, these trucks are being used in ABT Programs, thereby allowing for higher emission diesel engines to be sold elsewhere. **Historically, ARB has not provided funding for engines which are being used in ABT Programs.**
- The trucks that Cal Cartage wants to purchase will be powered by the Cummins ISL G natural gas engine. This engine is certified by CARB to US EPA's 2010 emission standards (0.2 g/bhp-hr NOx and 0.01 g/bhp-hr PM). It is the only heavy-duty engine that is certified to these low levels. Given that NOx is an extremely important precursor to ground-level ozone and PM 2.5, the importance of actual tailpipe emission levels to the communities adjacent to the San Pedro Bay Ports cannot be understated. The CWI ISL G engine has 8 to 9 times lower tailpipe NOx emissions compared to the most state-of-the-art diesel trucks available today and likely through the end of 2009.
- The ISL G engine is more than 80% cleaner on the NOx and has no diesel PM emissions at all.
- The ISL G engine is certified by ARB to US EPA's 2010 emission standard of 0.2 g/bhp-hr NOx and is not involved in any ABT Programs.
- These 400 dedicated natural gas trucks:
    - Will be the cleanest commercially available heavy-duty trucks that are available today;
    - Will be cleaner than even the most stringent requirements of the ARB port drayage truck rule and the new Port of LA and Long Beach clean truck requirements which only call for trucks with 2007 emission levels;

- These trucks will exceed the goals of the San Pedro Bay Ports Clean Air Action Plan (CAAP). Even if the CAAP is modified at some point in the future to require even cleaner drayage trucks to be deployed than is now called for in the plan, the investment in these ISL G powered trucks will provide compliance to these potential future requirements.
- This project will have the advantage of deploying 400 trucks in a single trucking company operation, thus meeting the stated goals of the 1B Program to make the project management more efficient and cost-effective.

## USE OF ALTERNATIVE LOW CARBON FUELS / PETROLUEM REDUCTION

- These 400 natural gas trucks will use 100% alternative low carbon fuels and thus contribute to the goal of the Governor's Low Carbon Fuel Standard.
- Heavy-duty natural gas truck deployment projects, as exemplified by Cal Cartage's proposal, offer an outstanding opportunity to reach the state's goals under AB1007 and the December 2007 Alternative Fuels Plan.
- Taking into account the differing energy contents of the two fuels (diesel and natural gas), engine efficiency of the two kinds of engines, and the fact that the LNG source for these trucks will be a pipeline LNG plant in either Topock, Arizona or Boron, California, these natural gas trucks will reduce greenhouse gas emissions by approximately 20% over the diesels selected to receive funding by ARB, and thus immediately aid in achieving the state's goals under AB32.
- Cal Cartage's commitment to deploy 400 dedicated natural gas trucks in its San Pedro Bay port drayage operations is a tremendous opportunity for the State of California to simultaneously achieve multiple Greenhouse Gas, petroleum displacement, and alternative low carbon fuel goals, in addition to the immediate reductions in priority pollutants the project will achieve.

## TRUCK MANUFACTURER AND FLEET COMMITMENT AND QUALIFICATIONS

- Cal Cartage is the largest trucking company operating in the Ports of Los Angeles and Long Beach, with approximately 1,200 trucks and drivers in their operation. The company is committed to deploying at least 400 dedicated natural gas trucks in its San Pedro Bay Ports drayage operation, representing 1/3 of the company's entire operation. These trucks will be deployed in the very near-term.
- Cal Cartage is already a leader in the San Pedro Bay Port community. This project will further demonstrate such leadership and will likely encourage other operations to follow suit with similar alternative fuel projects. It is this kind of leadership and "snowball effect" that is needed in order to make significant inroads in cleaning up the emissions from the port drayage sector in Southern California and in other California ports.
- Los Angeles Freightliner has been working with Cal Cartage for over a year now to determine how best to integrate natural gas trucks into San Pedro Bay Port operations.

- Los Angeles Freightliner is the largest OEM truck dealer in Southern California and one of the largest trucks dealers in the entire western United States. The company offers a variety of truck options, including the full line up of Freightliner products, Sterling Trucks, Autocar Trucks, Western Star Trucks, and Mitsubishi Fuso Trucks. While a majority of these trucks are diesel powered, the company offers several alternative fuel and natural gas truck options.
- Given that rough estimates show approximately 65% of the trucks being operated in the San Pedro Bay Ports are manufactured by Freightliner Trucks, Cal Cartage has selected Freightliner (which is owned by Daimler Trucks LLC) as its alternative fuel truck manufacturer of choice. While Los Angeles Freightliner offers other natural gas port drayage truck options, Cal Cartage – like any modern trucking company – highly values the standardization of its fleet as issues such as maintenance, stocking parts, etc. become significantly more streamlined, efficient, and thus, cost-effective.
- Another reason that Cal Cartage has selected Freightliner as its heavy-duty truck OEM of choice is because the drivers that work for Cal Cartage have indicated a strong preference for Freightliner trucks versus all other OEM products based simply on the greater availability of parts and trained mechanics for Freightliner products.
- Daimler Trucks LLC (through its Sterling Truck division) has committed to build these dedicated alternative fuel trucks on the factory line as a fully warranted OEM product. While the company originally had pushed off the development of alternative fuel products such as these until after 2010, the prospects of a large order resulting from the Prop 1B program was sufficient for Freightliner to advance this alternative fuel truck development program. This is a tremendous advancement for air quality and the alternative fuel industry.
- To prepare for the production of a large natural gas truck order that can meet the very near-term deliverables of the ARB Early 1B Program, Freightliner has already begun production of a few initial vehicles in order that they can "work the bugs out," complete real world testing, and review and finalize the truck specification so that mass quantities can be built upon receipt of the purchase order after the Early 1B funding is (expected to be) awarded.
- Daimler is the premier supplier of class-8 trucks in North America. Their market share is two (2) times that of the nearest competitor. The company's commitment and leadership in producing alternative fuel trucks will undoubtedly encourage other truck manufacturers to follow suit.
- Sterling Trucks has certified this tractor for use in port drayage applications to haul loads on freeways up to the legal road weight limit of up to 80,000 lbs. This certification was provided after an extensive and sophisticated review of the vehicle specifications with Cummins, Westport and Allison Transmission.
- Sterling Trucks can supply these natural gas powered trucks just as fast as they can produce diesel powered trucks. As these trucks will be built on the factory line, from the time of order by the customer, there is no difference in the delivery timeline for these natural gas trucks and other standard diesel trucks used in port drayage applications.
- South Bay Sterling, as part of the Los Angeles Freightliner group, has an unsurpassed record of successfully identifying and mentoring truck replacements

through grant funding. As one of the first dealerships to sign an agreement with the Gateway Cities Council of Governments for the Fleet Modernization Program, Los Angeles Freightliner has since facilitated the replacement of 389 diesel trucks. In addition to identifying applicants and educating them about the grant program, Los Angeles Freightliner prepared the grant applications and vetted the supporting documentation on behalf of the fleet operators. Simply put, there is no other entity that has the demonstrated skills and local relationships as exemplified by Los Angeles Freightliner's success.

- Los Angeles Freightliner has the most comprehensive and advanced infrastructure network in place to support this and other similar clean truck deployments. Los Angeles Freightliner:
    - Has the most extensive alternative fuel medium- and heavy-duty vehicle sales and service support experience in California; experienced gained by the company's active participation in this market for many years selling and supporting natural gas refuse trucks, school buses (through the BusWest division they represent Thomas Bus throughout the state), municipal vehicles, and other alterative fuel vehicle efforts.
    - Has experienced alternative fuel mechanics and alternative fuel compliant maintenance facilities located at the South Bay location in Carson; which is the closest OEM service facility to the San Pedro Bay Ports.
    - Has a total of eight (8) service facilities throughout the Los Angeles Basin, more than any other truck manufacturer.
    - Already utilizes its sister company, Crossroads Equipment Lease and Finance, to provide attractive financing to the independent owner operators now working in the San Pedro Bay Harbor. (see below for more information on Crossroads Equipment Lease and Finance)
- Los Angeles Freightliner will provide an optional maintenance and service offering to lessees through its FleetLogic division. The FleetLogic division is set up to provide contract maintenance to lessees, including all government required inspections (BITs, DOT, etc.), preventative maintenance, and on-site and mobile emergency and breakdown services. FleetLogic also provides business management services on behalf of independent owner operators. These services include: tracking maintenance expenses, filing fuel taxes, excise tax reporting, filing annual tax returns, and providing recommendations on best-practices. Fleet Logic currently provides service to hundreds of business owners in the LA Basin, including many that now operate in the San Pedro Bay Ports.

## ECONOMICS

- These natural gas trucks offer not only the lowest emissions of priority pollutants and greenhouse gases, and provide a 100% alternative low carbon fuel strategy in a fuel hungry heavy-duty application, but these trucks also provides the lowest cost option to the end user.
- Natural gas trucks are eligible for the $32,000 federal tax credit from the IRS. The use of Prop 1B funds to fund natural gas (or other alternative fuel trucks) will thus further leverage California's bond money by bringing to the table federal funding incentives that are otherwise not available for the purchase of standard diesel trucks.

- Cal Cartage has selected Crossroads Equipment Lease and Finance to provide the financing for these trucks. While Crossroads Equipment Lease and Finance is the in-house finance company within Los Angeles Freightliner, Cal Cartage does have the option of using another financing company should they elect to do so. A company such as Crossroads Equipment Lease and Finance has the ability to use competition within the financial markets to provide this financing. Through this competitive mechanism, Cal Cartage will be guaranteed the most competitive financing rates available.
- Given their very long standing and proven relationship, Crossroads Equipment Lease and Finance will use Daimler Truck Financial to back the loans needed to finance the balance of the truck cost after the incentives and tax credits are applied to the truck cost. Aside from perhaps GE Capital, Daimler Truck Finance can offer the best truck financing rates in the United States. Daimler Truck Finance has the largest truck loan portfolio in the country. Daimler Truck Finance is also 100 percent dedicated to serving the trucking industry; as this is its core business.
- Crossroads Equipment Lease and Finance is specifically focused on independent owner operators. Perhaps more than any other entity, Crossroads Equipment Lease and Finance understands the independent owner operator and the credit qualifications and risks that are required for this market segment. As evidenced by the company's extremely low delinquency rates, Crossroads Equipment Lease and Finance has developed a very successful proprietary credit approval process for this market niche. In addition, Crossroads Equipment Lease and Finance provides an innovative GPS based billing and tracking management system for the trucks it leases. This further assists in achieving very low delinquency rates. If a driver happens to fall behind on his payments, the company's innovative system allows for the truck to be quickly located and repossessed. Combined with the pool of 1,200 drivers in Cal Cartage's operation, Los Angeles Freightliner and Crossroads Equipment Lease and Finance will be able to almost immediately place another driver in any repossessed truck, thus ensuring the seamless and continued operation of the truck, and thus the seamless and continued emission benefits to the region.
- Crossroads Equipment Lease and Finance will receive its financing from Daimler Truck Finance, thus providing an essentially unlimited capacity to fund new clean trucks.
- The balance of the trucks' cost (after 1B, tax credits and other funding is applied) will be very low, thus making the lease payments and the residual buy-out cost to the owner/operator very low. With the incentives from ARB and AQMD, and federal tax credits for alternative fuels, the residual owner/operator payments on these natural gas trucks will lower than a new diesel truck with the same $50,000 Prop 1B incentive. On a 5-year lease, the monthly payments on the cleaner natural gas truck will be approximately $650 while the monthly payments on a 2007 diesel with the same 5-year lease will be approximately $1,100. Thus, not only will these natural gas trucks be the lowest emission (of NOx, diesel PM and GHG) and petroleum free option, but they will also be the lowest cost option for the driver.
- In addition to the lowest cost of the truck to the driver, natural gas trucks also offer superior life-cycle costs, primarily due to the lower cost of natural gas fuel when compared to diesel, and the very significant $0.50 per gallon (of LNG or

gasoline gallon equivalent of CNG) federal tax credit that is available through September 30, 2009. According to the California Energy Commission, as of February 20, 2008, the average retail cost of diesel in Southern California was $3.66 per diesel gallon (http://www.energy.ca.gov/gasoline/). On the other hand, the cost of an untaxed LNG gallon in the Southern California market in February 2008 is approximately $1.00 to $1.25. When fully taxed, the cost of an LNG is $1.36 to $1.63 per gallon. As an LNG gallon has less BTU than a diesel gallon (82,000 BTU per LNG gallon compared to 128,000 BTU for a diesel gallon), approximately 1.7 gallons of LNG is required to provide the same work as a gallon of diesel. Therefore, on a diesel gallon equivalent (DGE) basis, the cost of LNG (including taxes) is approximately $2.31 to $2.77.

When the $0.50 per LNG gallon tax credit is applied, the cost of LNG on a DGE basis (including taxes) is reduced to approximately $1.39 to $1.85, thus providing an additional cost savings to the LNG truck driver over the driver of a diesel fuel truck of $1.66 to $2.12 per DGE. In a vehicle that travels approximately 25,000 miles per year (and assuming a 6.5 mile per gallon fuel economy), the annual fuel cost savings to the LNG truck driver, including the Federal Tax Credit, is $6,692 to $8,462.

As of this writing, however, the Federal Tax Credit will expire in September, 2009 (note that there is a high degree of likelihood that the credit will be extended). The trucks which would be funded by Prop 1B early action funds would be on the road by July 1, 2008. Assuming that these trucks would enjoy only one year of the Federal Tax Credit, there is still an enormous cost savings to the drivers of these LNG trucks over the diesel versions that ARB proposes to fund. The cost savings over the assumed 8 year operating life of the LNG trucks would be between $30,654 and $44,808. This amounts to a monthly savings of $320 to $467, which could more than offset the increased cost of a LNG truck lease.

| California Environmental Protection Agency AIR RESOURCES BOARD | CUMMINS INC. | EXECUTIVE ORDER A-021-0456 New On-Road Heavy-Duty Engines |
|---|---|---|

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

**IT IS ORDERED AND RESOLVED:** The engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

| MODEL YEAR | ENGINE FAMILY | ENGINE SIZES (L) | FUEL TYPE [1] | STANDARDS & TEST PROCEDURE | INTENDED SERVICE CLASS [2] | ECS & SPECIAL FEATURES [3] |
|---|---|---|---|---|---|---|
| 2008 | 8CEXH0540LBC | 8.8 | CNG/LNG | Diesel | MHDD | TBI, TC, CAC, ECM, EGR, TWC, HO2S |

| ENGINE (L) | ENGINE MODELS / CODES (rated power, in hp) |
|---|---|
| 8.8 | ISL G 320 / 0887;FR94242 (320), ISL G 300 / 0887;FR92104 (300) |
| * | * |
| * | * |
| * | * |

* =not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz; 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86.abc; L=liter; hp=horsepower; kw=kilowatt;

[1] CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel;

[2] L/M/H HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDO=heavy duty Otto;

[3] ECS=emission control system; TWC/OC=three-way/oxidizing catalyst; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; PTOX=periodic trap oxidizer; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); TBI=throttle body fuel injection; SFI/MFI=sequential/multi port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel injection; TC/SC=turbo/super charger; CAC=charge air cooler; EGR=exhaust gas recirculation; PAIR/AIR=pulsed/secondary air injection; SPL=smoke puff limiter; ECM/PCM=engine/powertrain control module; EM=engine modification; 2 (prefix)=parallel; (2) (suffix)=in series (2006DEC22)

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.1 (urban bus) or 13 CCR 1956.8 (other than urban bus); 2) the EURO and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, in g/bhp-hr, for this engine family. "Diesel" CO, EURO and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [ ] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.1 or 13 CCR 1956.8 are in parentheses.) [4]

| | NMHC | | NOx | | NMHC+NOx | | CO | | PM | | HCHO | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FTP | EURO | FTP | EURO | FTP | EURO | FTP | EURO | FTP | EURO | FTP | EURO |
| STD | 0.14 | 0.14 | 0.20 | 0.20 | * | * | 15.5 | 15.5 | 0.01 | 0.01 | * | * |
| FEL | * | * | | | * | * | * | * | * | * | * | * |
| CERT | 0.13 | 0.04 | 0.10 | 0.01 | * | * | 1.2 | 0.4 | 0.009 | 0.000 | * | * |
| NTE | 0.21 | | 0.30 | | * | | 19.4 | | 0.02 | | * | |

[4] g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle; NTE=Not-to-Exceed; STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC/HC=non-methane/hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde;

**BE IT FURTHER RESOLVED:** Certification to the FEL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

**BE IT FURTHER RESOLVED:** For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels) and 13 CCR 2035 et seq. (emission control warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 23rd day of August 2007.

J. Lourenco

**Annette Hebert, Chief**
**Mobile Source Operations Division**