

# Propane: Part of California's Diverse Fuels Portfolio

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Clean Technologies Forum

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# PROPANE AS AN ALTERNATIVE MOTOR FUEL

- 1913 – First propane vehicle in United States
- Today about 270,000 propane vehicles in USA
- About 14 million propane vehicles worldwide
- Referred to globally as “autogas”
- Move in USA to use “autogas” for propane used as a vehicle fuel





# PRODUCTS AND SOLUTIONS

**NEXBUS**<sup>TM</sup> PROPANE

**PROPANE**  
EXCEPTIONAL ENERGY<sup>®</sup>

**CLEAN**  
is green



# BLUE BIRD VISION TYPE-C SCHOOL BUS PROPANE-POWERED



CLEANFUEL USA/GM 6.0L CUTAWAY VAN  
C2500/3500 HD CHASSIS CAB  
AND TYPE A COLLINS SCHOOL BUS



# CLEANFUEL USA/GM 6.0L G4500 CUTAWAY VAN/WORKHORSE W42

**PROPANE**  
EXCEPTIONAL ENERGY®

- ▶ Walk in Van Applications



# CLEANFUEL USA GM 6.0L ENGINE OPTIONS



# FORD F-250/F-350

**Model Years:** 2009 – 2010

**Engine Size:** 5.4L V8 (3V)

**Applications:** All Bed Lengths  
All Cab Except Chassis Cab  
All Axle Configurations

**Tank Sizes:** In-Bed – 55 gallons  
Under-Bed - 23 gallons

**Ordering:** Ford Ship Through  
Conversion Kits

**Certification:** EPA  
CARB



# FORD E-150/ E-250/ E-350

**Model Years:** 2009 – 2011

**Engine Size:** 5.4L V8 (2V)

**Applications:** All Cargo configurations  
All Passenger configurations  
Single Rear-Wheel Cutaway

**Tank Sizes:** Under-Floor – 25 gallons

**Ordering:** Ford Ship Through  
Conversion Kits

**Certification:** EPA  
CARB



# FORD E-450 CUTAWAY

**Model Years:** 2009 – 2011

**Engine Size:** 6.8L V10 (2V)

**Applications:** Dual Rear-Wheel Cutaway  
5-Speed Auto Transmission

**Tank Sizes:** Under-Floor – 43 gallons

**Ordering:** Ford Ship Through  
Conversion Kits

**Certification:** EPA  
CARB



# FUTURE PRODUCT DEVELOPMENT

**Ford F-450 / F-550**

**6.8L V10 (3V)**



**Ford F-650 / F-750**

**6.8L V10 (3V)**



**Ford F-59 / F-53 Strip Chassis**

**6.8L V10 (3V)**

**Ford F-59 Strip Chassis**

**Ford F-250 / F-350**

**6.2L V8 (3V)**



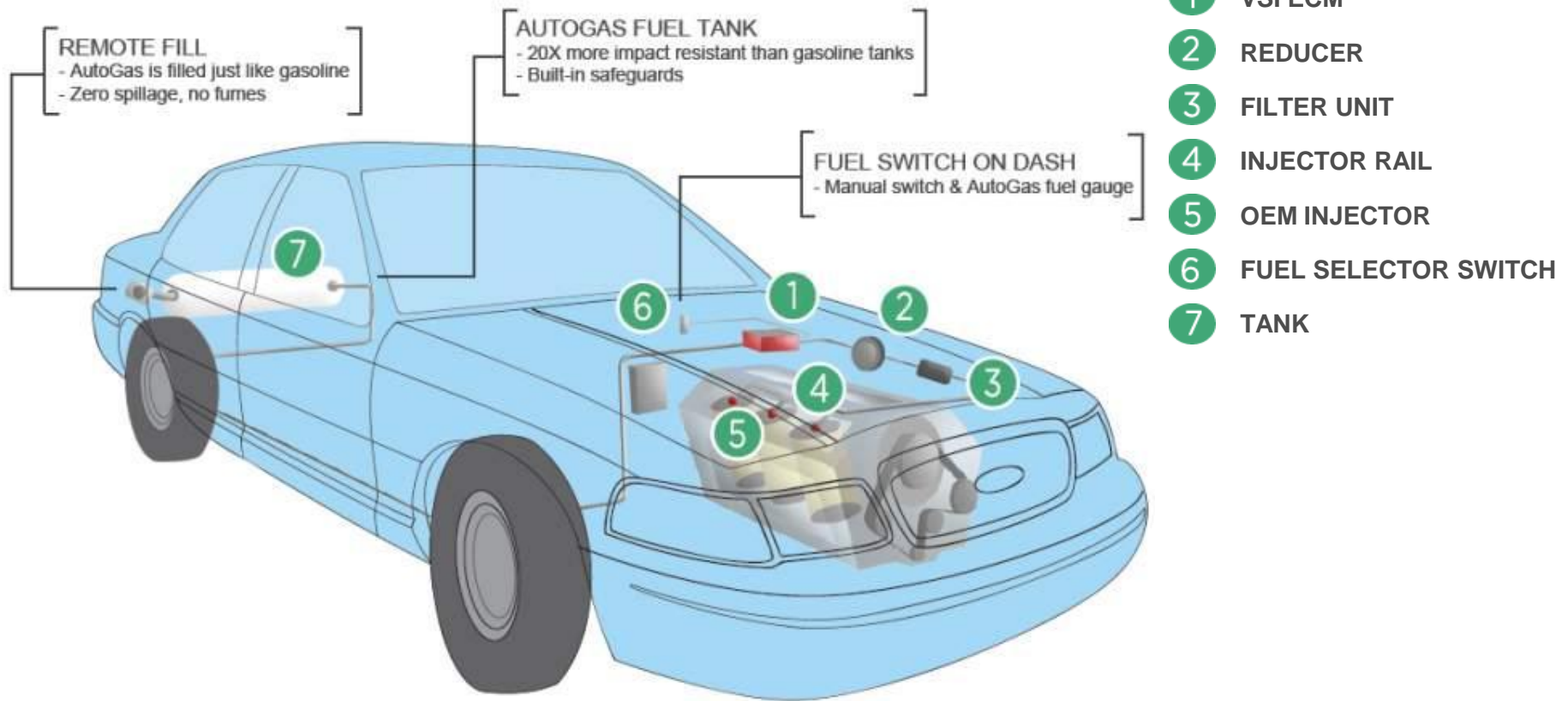
**Ford Transit Connect**

**Ford Transit Connect**

**Ford F-150**

# ALLIANCE AUTOGAS SYSTEMS

## The AAF – Prins VSI System (VSI = Vapor Sequential Injection)



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# FUELING

# WHERE'S THE GAS

- ▶ Private sites
- ▶ Public sites
- ▶ Cylinder exchange
- ▶ Card locks



# WHERE'S THE GAS

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# PROPANE VEHICLE INCENTIVES

- ▶ Federal tax credits for propane vehicles and infrastructure
  - ▶ 50 cents per gallon credit for engine fuel, including forklifts
  - ▶ 30% tax credit of cost for installing propane fueling system, up to \$30,000
- ▶ Western Propane Education & Research Council (WPERC)
  - ▶ \$1,000 per vehicle incentive payment
- ▶ AB 118 – California Energy Commission through dealers
  - ▶ \$2.5 million for light- and medium-duty vehicles NOW
    - ▶ \$6,000 per vehicle to buy down incremental cost
  - ▶ \$3 million for medium- and heavy-duty vehicles in 2012
  - ▶ \$2 million for school buses NOW, another \$2 million in 2012

**PROPANE**

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