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- B100 is neat biodiesel (B99 also considered B100)
- Must meet ASTM D6751
- Requires minimum fuel quality specifications

Property	ASTM Test	Value
Cetane number	D613 or IQT	>47
API Gravity	D287	>27 degrees API
Sulfur	D5453	<15 ppm
FAME Content	EN14103	>96.5 percent



# Proposed Requirements for Biodiesel as an ADF – B100

- B100 can be used for emissions neutral blends or for B5 blends
- Allowed as motor vehicle fuel if certified for CARB NOx equivalence
- Requires variance from CDFA
- Reporting requirements

# Biodiesel Certification Compliance Option

Certify either biodiesel formulation or NOx mitigating additives

- Formulation results in specific biodiesel blendstock properties that must be met
- Certified additives may be used with any biodiesel blendstock regardless of feedstock

# Biodiesel Certification Compliance Option

- Modeled after 13 CCR 2282(g)
- Test for statistical equivalence of candidate fuel and CARB reference diesel for NO<sub>x</sub>, PM, and SOF(?) emissions
- 2004-2006 Cummins ISM 360-380
- Test for selected toxics (PAH, Carbonyls, 1,3-butadiene)
- Heavy-duty FTP, minimum 20 hot starts per fuel

# Additional Considerations

- Fleet-specific provisions (e.g., for fleets comprised of new vehicles, animal/waste feedstocks, etc.)
- Incentivize NOx-reducing fuels
- Limited use exemption
- Open to suggestions

# Proposed Blending & Enforcement Provisions

- Who should provisions apply to, refiners, ADF producers, ADF importers, jobbers, marketers?
- Where should provisions apply?
- How should CARB address splash blending?

# Diesel Regulation Amendments

*(title 13, California Code of Regulations, sections 2281-2285)*



# Current Regulations

- § 2281. Sulfur content of diesel fuel
  - 15-ppmw standard enforced at refinery, import facility and throughout distribution system
- § 2282. Aromatic hydrocarbon content of diesel fuel
  - 10-vol% standard (20-vol% for small refiners), designated alternative aromatic hydrocarbon limit, certified diesel fuel formulation, or designated equivalent limits enforced at refinery or import facility
  - § 2282(g) certified diesel fuel formulations resulting in equivalent emissions reductions

# Current Regulations

- § 2283. Exemptions for diesel fuel used in test programs
- § 2284. Lubricity of diesel fuel
  - Enforced by CDFA's Division of Measurement Standards with ASTM D975, Standard Specification for Diesel Fuel Oils
- § 2285. Exemption from diesel fuel requirements for military-specification fuels used in qualifying military vehicles
  - Exemptions from sections 2281, 2282, and 2284
  - e.g., JP-8 used in exempt vehicles and tactical military vehicles



# Summary of Amendments

- Add provisions related to use of biodiesel blends
- Add prohibition on some downstream additives
  - Allow additives at production
- Add aromatic hydrocarbon caps for enforcement
- Update variance requirements
  - Delete outdated provisions
  - Add new section modeled after CaRFG
- Add, clarify and update other provisions
- Eliminate obsolete provisions











# Rulemaking Contacts

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