

# Detroit Diesel

## Series 149 Engines

Category: Coolants  
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### Introduction:

The Detroit Diesel® Series 149 Engine is a large, high horsepower engine used in mine haul, power generation and marine applications. It is subjected to extremely unfriendly environments and difficult service demands. Penray and Detroit Diesel have co-operated in the development of a cooling system program that addresses the needs of the Series 149 engine family at minimum cost while providing optimum cooling system protection.

### Primary Recommendation:

#### 1. Initial Fill:

The two following alternatives will comply with the Detroit Diesel recommendation for Series 149 engines.

- a. **Best:** 30%-60% Power Cool® 3149 Silicate-Free Antifreeze in purified water (i.e. distilled, deionized, reverse osmosis). No additional SCA is required unless the concentrations of Power Cool is below 50%, then the coolant must be supplemented with PowerCool 3149 SCA at the concentration of 1 gallon to 100 gallons.
- b. **Acceptable:** Pure water with an initial chemical charge of 5.0 vol% PowerCool 3149 SCA.

#### 2. Coolant Maintenance:

Periodic maintenance is required to insure the protection of Series 149 family of engines. Follow the recommendations below:

- a. **Every P.M.:** Using a Power Trac® test strip, verify that the nitrite concentration of the coolant is between 800 ppm and 2400 ppm. If antifreeze is used, these test strips will also indicate the freeze protection level.
  - If the nitrite level is between 800 and 2400 ppm, DO NOTHING. Return engine to service.
  - If the nitrite concentration is above 2400 ppm, call Penray Technical Service before proceeding further. The toll-free number is at the bottom of this page.
  - If molybdate is indicated, drain and refill the system.

- b. **Coolant Change Interval:** It is permissible to operate this type of fluid, maintained as directed herein, until the engine is overhauled.

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