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Subject: Diesel Fuel, Cold Weather Conditioning for Driving at

Temperatures Below 0°C (32°F)

Model(s): All with Diesel engine

Group: 20

Number: 00-03

Date: Dec. 8, 2000

Condition

Poor diesel engine performance in ambient air temperatures below freezing 0°C (32°F) can be caused by a condition known as diesel fuel clouding (gelling/waxing), a result of improperly winterized/conditioned diesel fuel provided by fuel suppliers. Water contamination in diesel fuel can also cause similar conditions as the result of ice accumulation in the vehicle's fuel system.

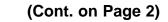
Service

To prevent the possibility of this condition occurring, recommend to diesel powered vehicle owners that a quality diesel fuel winterizer/conditioner be used during winter months. Volkswagen recommends using Standadyne™ One Shot Performance Formula All Season Diesel Fuel Conditioner in the correct amount per tank full of fuel as listed below.

 Add 8 oz. (235ml) per 15 gallons (60ltr) of diesel fuel of Stanadyne[™] One Shot Performance Formula All Season Diesel Fuel Conditioner directly to fuel the tank. Part No: ZVW 340 002.

Note:

For vehicles which will be operated at temperatures below –30 °C (–22 °F) add 12oz. (355ml) per 15 gallons (60 ltr) of diesel fuel.



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To determine if condition is due to diesel fuel clouding (fuel gelling/waxing) or water (ice/moisture) contamination in the fuel system (tank, lines, fuel filter) using the following steps:

Diesel fuel system, inspecting condition

- Check fuel system for small air leaks i.e air bubbles in:
- Fuel filter (insertion hole of regulator valve out of round)
- Fuel lines
- Fuel delivery unit in fuel tank
- Repair or replace as necessary.

Diesel fuel, inspecting condition

WARNING!

When working on ANY fuel system. ALWAYS read and follow Repair Manual CAUTIONS and WARNINGS!

- Remove fuel delivery unit in fuel tank (see appropriate Repair Manual Group 20 Fuel tank and components, removing and installing.
- Observe fuel condition.

If fuel is contaminated with water (ice/moisture):

- Drain fuel system (tank, lines)
- Replace fuel filter.
- Fill with new clean diesel fuel from a known winterized source.
- Add (8 oz. (235ml) per 15 gallons (60ltr) of diesel fuel) of Stanadyne™ One Shot Performance Formula All Season Diesel Fuel Conditioner directly to fuel tank. Part No: ZVW 340 002

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If fuel is clouding (gelling/waxing):

- Close fuel system (reinstall fuel delivery unit).
- Allow vehicle to set indoors long enough to bring fuel temperature up to approx.
 13°C (55°F) (may take several hours).
- Remove fuel delivery unit and observe fuel condition again.

Cloudiness (gelling/waxing) should no longer be seen.

Add the correct amount (8 oz. (235ml) per 15 gallons (60ltr) of diesel fuel) of Stanadyne[™]
One Shot Performance Formula All Season Diesel Fuel Conditioner directly to fuel tank.

Note:

For vehicles which will be operated at temperatures below –30 °C (–22 °F) add 12oz. (355ml) per 15 gallons (60 ltr) of diesel fuel.

- Thoroughly mix the additive with the fuel.
- Start and run engine approx. 10 minutes to ensure conditioned fuel has circulated throughout the system.

CAUTION!

DO NOT use diesel fuel additives containing alcohol! Alcohol WILL NOT address fuel clouding (gelling/waxing) conditions. Using alcohol will damage the diesel injection pump.

Note:

Improperly conditioned fuel or water accumulation in fuel is not covered by Warranty.

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