



Sprinter Model Year 2010 Emissions Features

Sprinter Engineering and Compliance Support Team

July, 8th 2009





Disclaimer

The specifications, descriptions, information, and recommendations contained in this bulletin are believed to be accurate as of July 8th, 2009.

Sprinter Engineering & Compliance Support Team reserves the right to modify or append this document without prior notification.

This bulletin is intended as a technical information aid for Body Builders who wish to retrofit or modify Dodge Sprinters & Freightliner Sprinters (VB).

Prior to making any modification to or installing any equipment in or on a Dodge Sprinter & Freightliner Sprinter (VB), please check with the Sprinter Engineering & Compliance Support Team for additional and updated information, and read the Sprinter Body Builder Information Book Model Series VB.

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Introduction

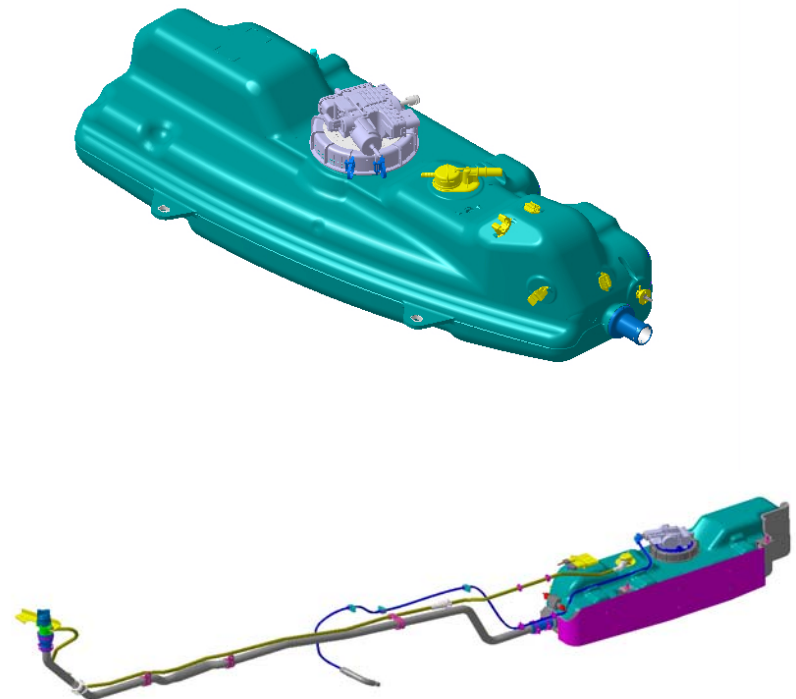
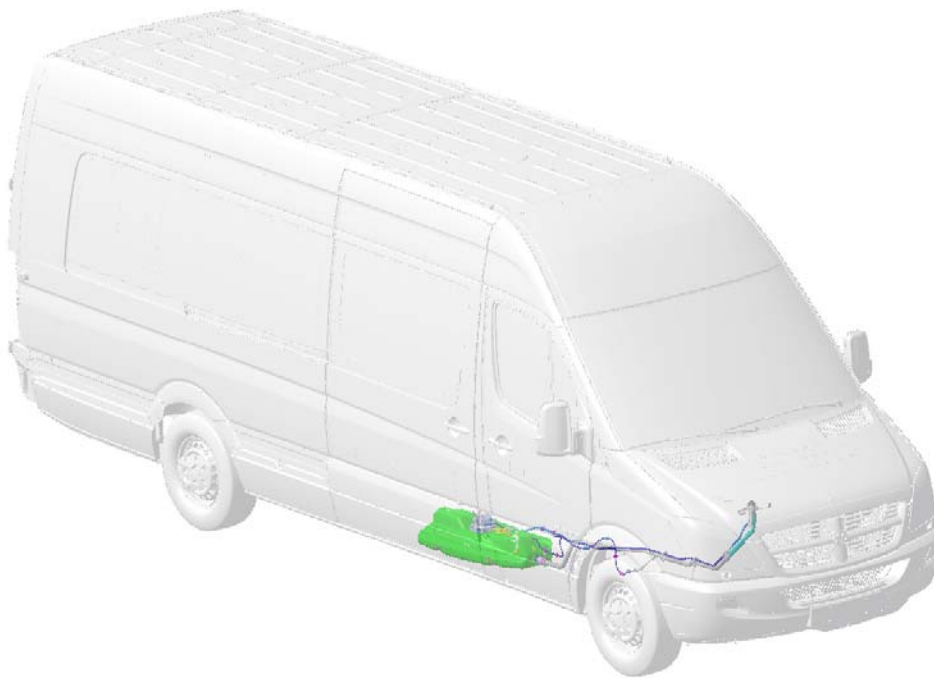
- In order to meet the strict 2010 EPA / CARB emission standards for Diesel powered engines, model year 2010 Dodge & Freightliner Sprinters will require the use of a **SCR** (**S**elective **C**atalytic **R**eduction) system. The SCR system is an exhaust after treatment that significantly reduces (over 80%) **NO_x** (**N**itrogen **O**xide).
- Aside of sophisticated electronic controllers and sensors the SCR system requires a catalytic converter and a non-fuel reducing agent called **DEF** (**D**iesel **E**xhaust **F**luid).
- DEF is a mixture of Urea (33%) and water (67%).
- DEF is stored in the vehicle in the DEF tank which features the SCR pump, temperature control, level sensors, etc.
- DEF has a limited shelf life that is influenced by ambient temperature and humidity, as such DEF degradation as well as DEF level in the SCR tank are important factors to meet the emission standards.

Warning: The SCR system is vital to comply with 2010 EPA / CARB emission certification, as such do not modify or relocate individual components of the SCR system.

DEF tank location on Sprinter Cargo & Bus



- Tank location under the floor right hand side behind B-pillar
- Tank volume 6.6gal. = 25L
- Tank features drain plug

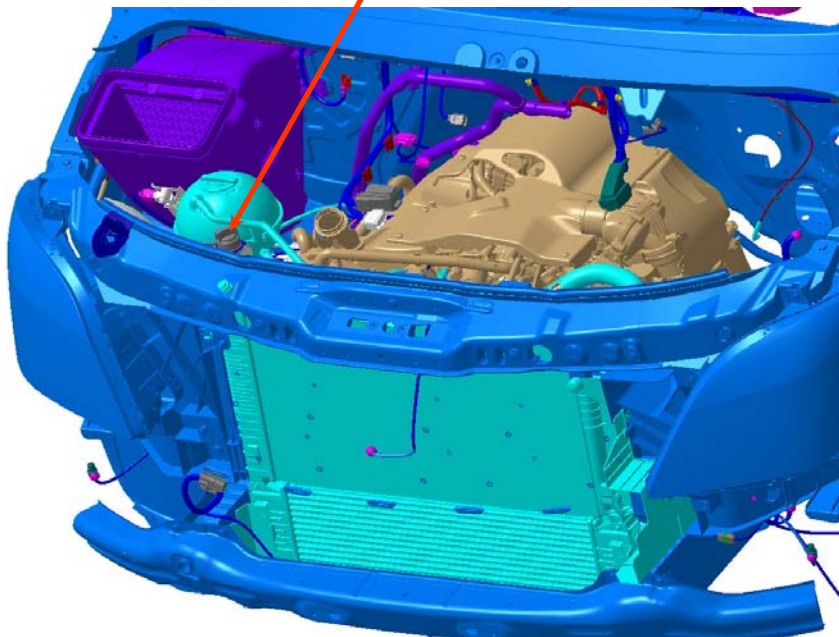


- DEF filler neck location on Sprinter Cargo & Bus

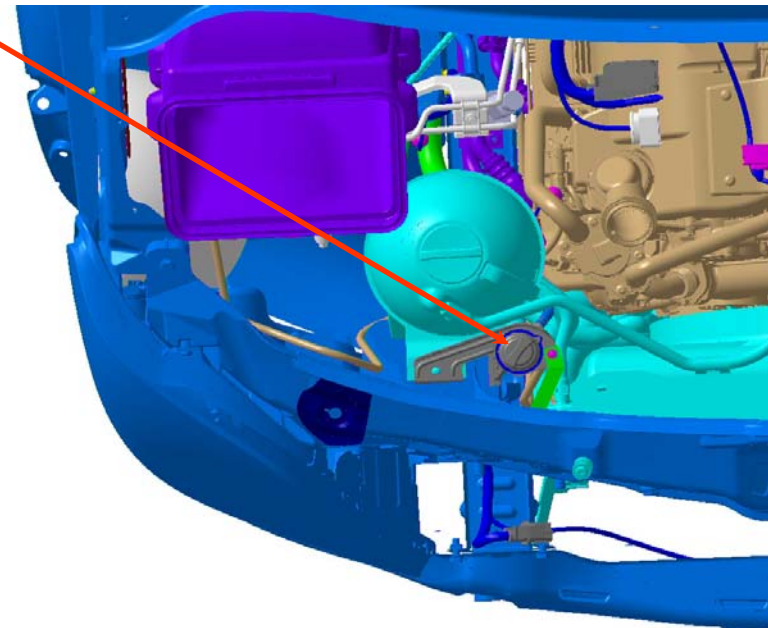


- Filler neck location front engine compartment RH side

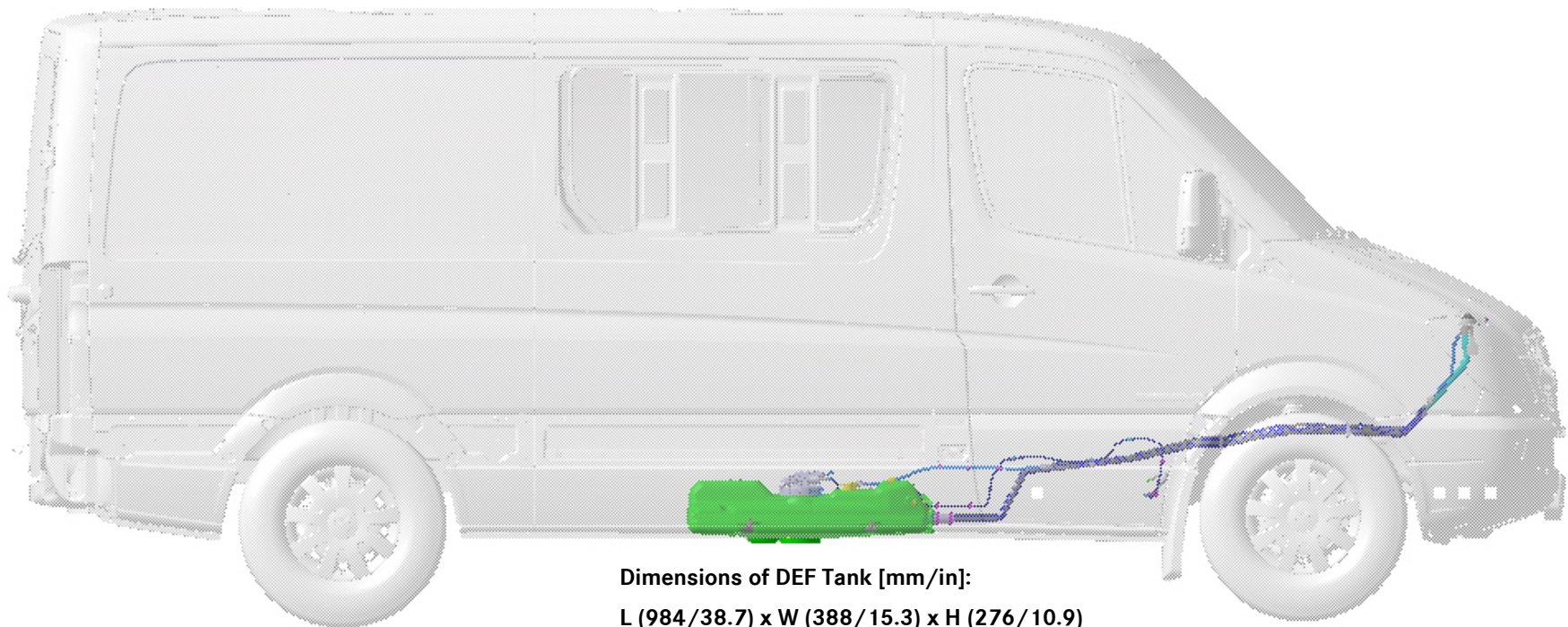
**Warning: Do not modify SCR system or
relocate components**



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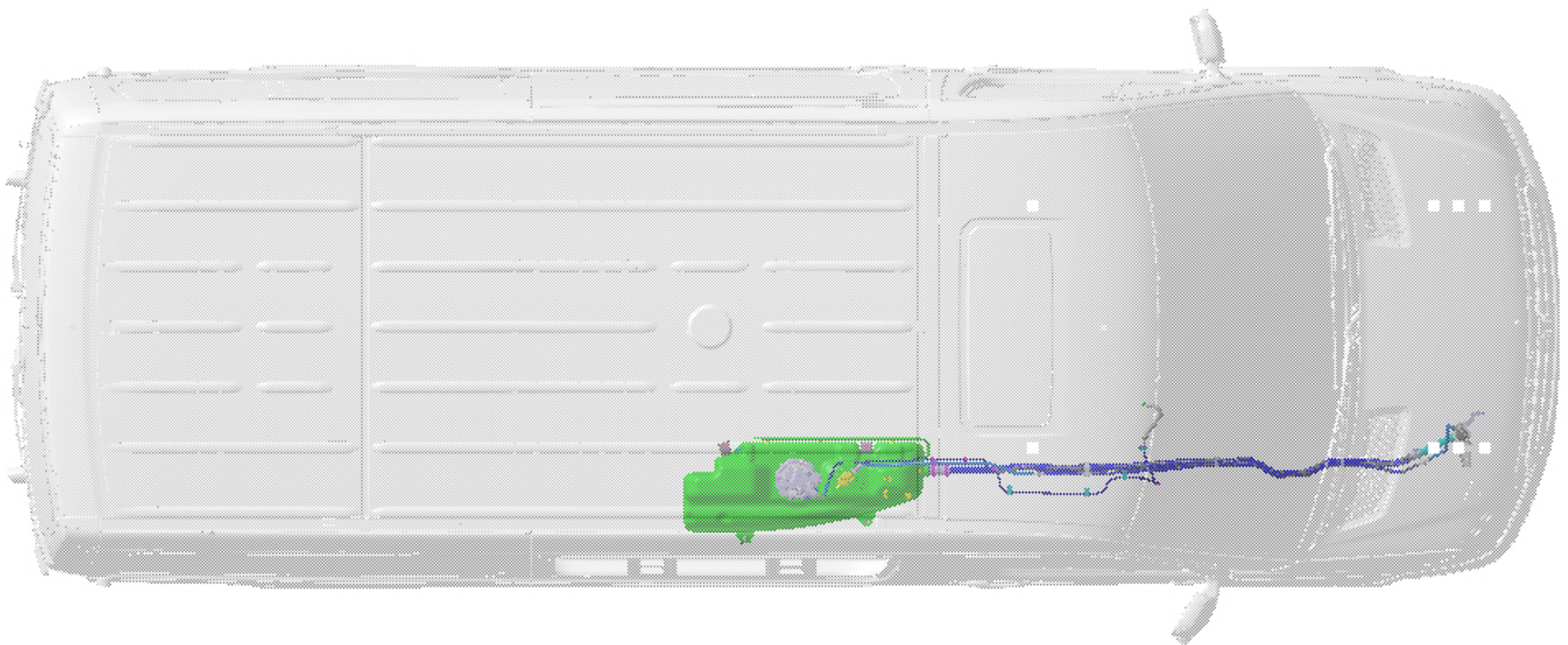


- DEF tank dimensions on Sprinter Cargo & Bus



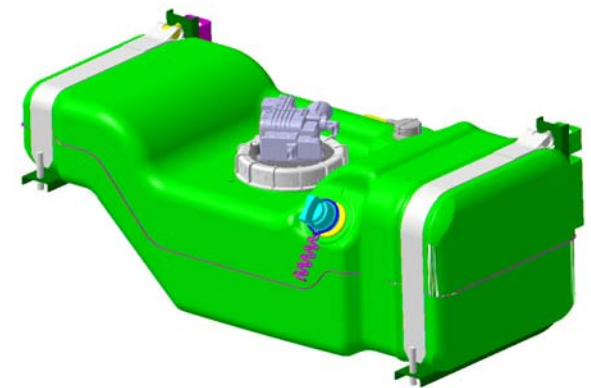
Dimensions of DEF Tank [mm/in]:
L (984/38.7) x W (388/15.3) x H (276/10.9)

- DEF tank location on Sprinter Cargo & Bus



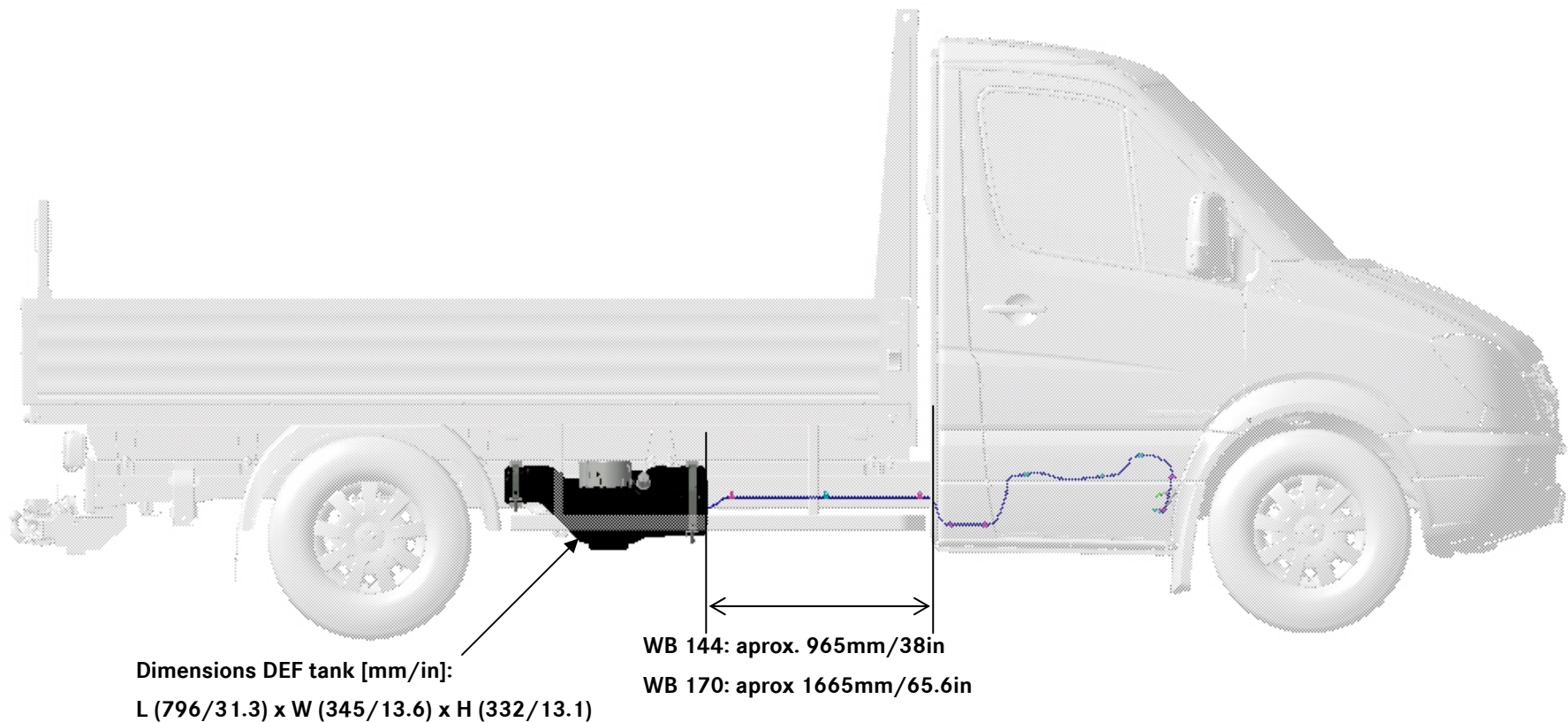
- DEF tank location on Sprinter Chassis Cab

- DEF tank location RH side ahead of rear RH wheel
- DEF filler neck integrated to DEF tank
- DEF tank volume: 7.4gal. = 28L
- DEF tank does not feature a drain plug



- DEF tank dimensions on Sprinter Chassis Cab

**Warning: Do not modify SCR system or
relocate components**



- DEF tank dimensions on Sprinter Chassis Cab





- Weight issues
 - Sprinter curb weight will increase by approximate:
 - Chassis – Cab: **155lbs**
 - Cargo: **144lbs**
 - Due to chassis certification Sprinters **under 10,000lbs GVWR** cannot exceed the **UVW (Unloaded Vehicle Weight) 7,400lbs**
 - Due to chassis certification Sprinters **over 10,000lbs GVWR** cannot exceed the UVW of **10,470lbs**

- DEF consumption



- During tests the average consumption of DEF for Sprinters:
0.6 gallon or 2.2l per 1,000 miles
- Chassis – Cab: 12,500 miles DEF radius or 29 fuel fill ups to 1 DEF fill up
- Cargo: 11,500 miles DEF radius or 23 fuel fill ups to 1 DEF fill up
- DEF concentration limit is at 25% Urea
- DEF service intervals every 10,000 miles or once a year.
- DEF availability through authorized Sprinter dealers:

MOPAR Part #

68035700AA	55 gallon
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68035704AA	1 gallon
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68056278AA	2.5 gallon
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**Notice: Due to ongoing tests the aforementioned
information is subject to change without notice.**

• DEF level warning strategy



- The first warning displayed on the instrument cluster is triggered at a remaining DEF level of 1.5 gallons = 5.5l or approx. 2,500mls
- The second warning, in combination with displaying the # of remaining engine starts (countdown from 20), is triggered at a remaining DEF level of 0.8gallon = 3.0l or approx. 1,360mls. In addition a signal will sound.
- If an operator “ignores” both warnings and still drives the vehicle until the last remaining “engine start” is reached or “used up”, the engine will not start and the operator then will be advised to fill up at least 2 gallons of DEF to ensure to get beyond both warning levels.



High Line
Cluster

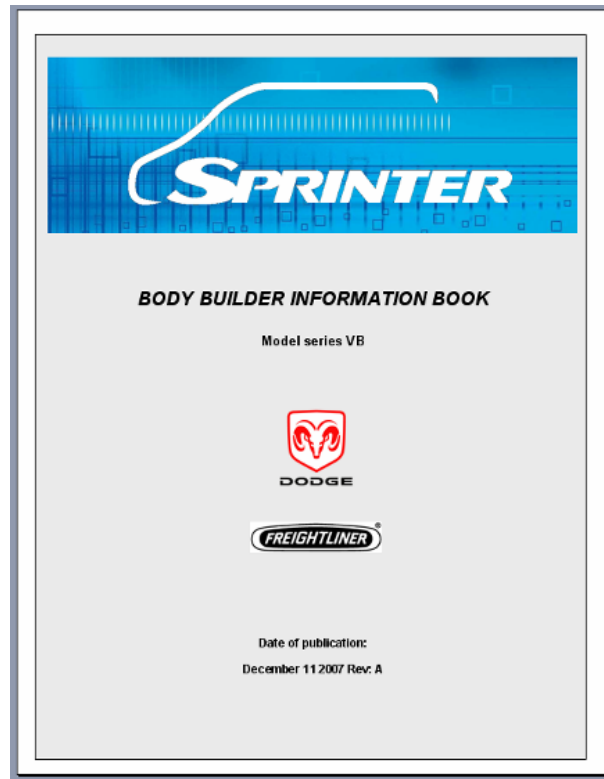


Low Line
Cluster

- Sprinter 2010 engine & torque
 - New engine performance: 185 hp @ 3,800 rpm
Increase of 30hp
 - New torque: 325lbf-ft @ 1,400-2,400 rpm
Increase of 45lbf-ft



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Sprinter Body Builder Information Book and Drawings:

www.dodge.com/bodybuilder

www.sprinter-engineeringcompliance.com

