

2012

# **Ford E-Series Incomplete Vehicle and Body Builders Manual**

**LIQUID PROPANE AUTOGAS FUEL SYSTEM**

November, 2012

## **SUPPLEMENTAL MANUAL**

Part Number P-01A003-AA

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## **INTRODUCTION**

Thank you for purchasing a 2012 Ford E-Series propane autogas fuel system from ROUSH CleanTech. We pride ourselves on providing our customers with excellent quality and service of our propane autogas fuel systems. Bringing 35 years of automotive expertise to the alternative fuels marketplace, ROUSH CleanTech maintains a focus on providing reliable alternative fuel solutions for light- and medium-duty Ford vehicles.

The 2012 Ford E-Series Incomplete Vehicle and Body Builders Manual will provide you with the information needed to successfully install our propane autogas fuel system on an incomplete 2012 Ford E-Series vehicle. It is important that you read the 2012 Ford E-Series Incomplete Vehicle and Body Builders Manual before equipping a Ford E-Series vehicle with a ROUSH CleanTech propane autogas fuel system.

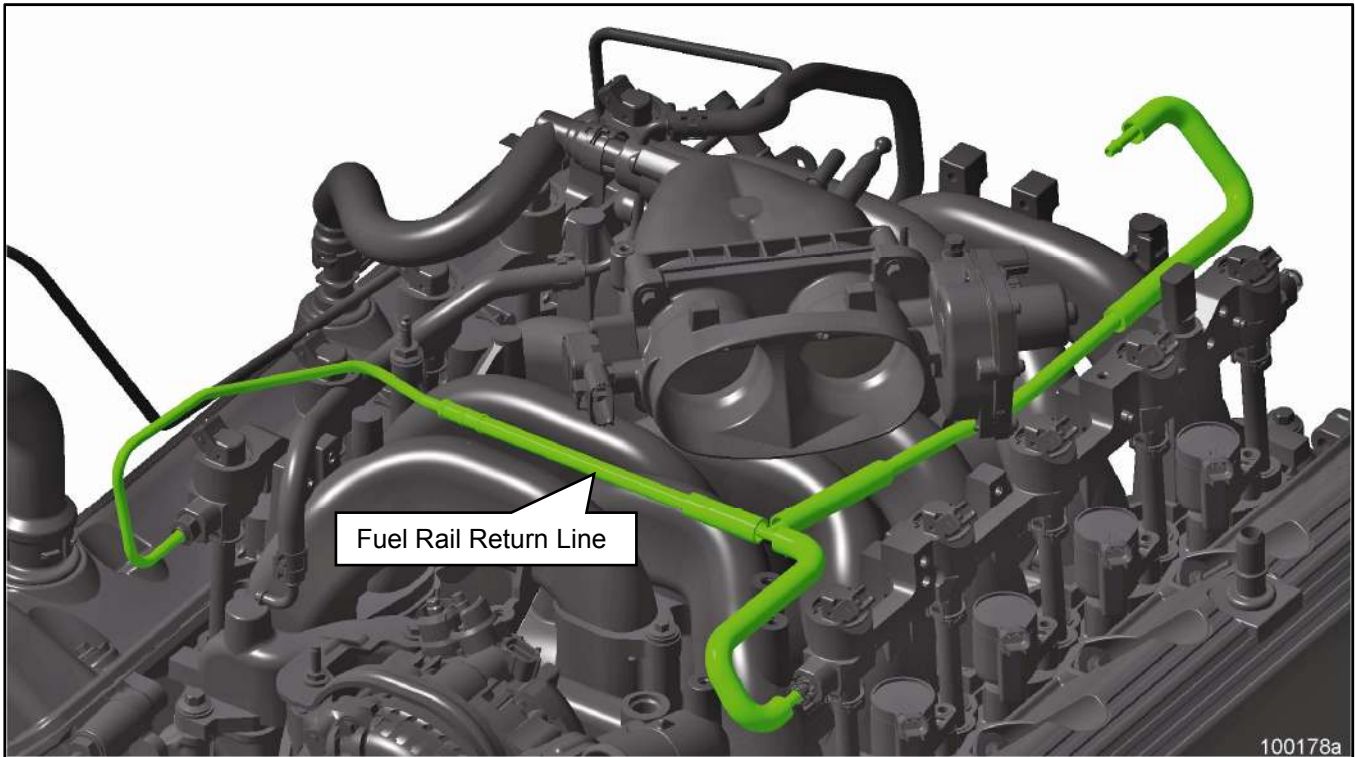
The following information in the 2012 Ford E-Series Incomplete Vehicle and Body Builders Manual will display the dimensions, locations, clearances and packaging environment of the ROUSH CleanTech propane autogas fuel system. This data is included in the manual to provide a better understanding of how to install the ROUSH CleanTech propane autogas fuel system.

Call ROUSH CleanTech Customer Service at 800.597.6874 with any questions regarding this supplemental manual.

**Auxiliary Front End Accessory Drive Compatibility**

The ROUSH CleanTech Liquid Propane Autogas system will generally work with any aftermarket systems designed for the base gasoline engine that do not require modifications to the fuel system or powertrain control module (PCM). Systems that package components or brackets in the engine valley may not be compatible as they could interfere with the fuel rail return line which is unique to the LPA system. If you intend to utilize any systems which might interfere, you should contact your ROUSH CleanTech sales representative prior to ordering the system. Roush does not recommend modifying the propane system to accommodate aftermarket systems, and modifications would void the warranty for those components and any other components/systems affected by the modification.

Roush has specifically designed the fuel rail return line for the 6.8L E-450 to package with the ProAir 23068-1 and 23168 auxiliary air conditioning compressor systems. If your application does require dual air conditioning compressors, we strongly recommend use of the ProAir system to ensure compatibility. If you require compatibility with another system, please contact your salesperson prior to ordering.



**E-450 6.8L Engine Shown (Other Engines Similar)**

**E-Series Wagon Model Lineup**

Model	WB (in.)	Engine/Transmission	Maximum GVWR (lbs)	Maximum Passenger Capacity	Base Curb Weight — Gasoline (lbs)	Curb Weight w/Liquid Propane Autogas (lbs)	
						Midship Tank	Extended Range Configuration*
E-150 Wagon	138	4.6L/Auto	8520	8	5679	Not Available	Not Available
	138	5.4L/Auto	8600	8*	5757	5816	5936
E-350 SD Wagon	138	5.4L/Auto	8800	12*	6028	6087	6037
	138	6.8L/Auto	8800	12	6240	Not Available	Not Available
E-350 SD Extended Wagon	138	5.4L/Auto	9300	11*	6227	6286	6236
	138	6.8L/Auto	9500	11	6437	Not Available	Not Available
	138	5.4L/Auto	9100	15*	6432	6491	6315
	138	6.8L/Auto	9300	15	6641	Not Available	Not Available

\* Extended range tank mounts inside of vehicle. It replaces the fourth row of seats on 11 and 12 passenger wagons reducing passenger capacity by 4, and replaces the fourth and fifth rows of seats on 15 passenger wagons reducing passenger capacity by 7.  
E-150 does not have a 4th row of seats. Therefore, E-150 will have a reduction in cargo space only.

**E-Series Van Model Lineup**

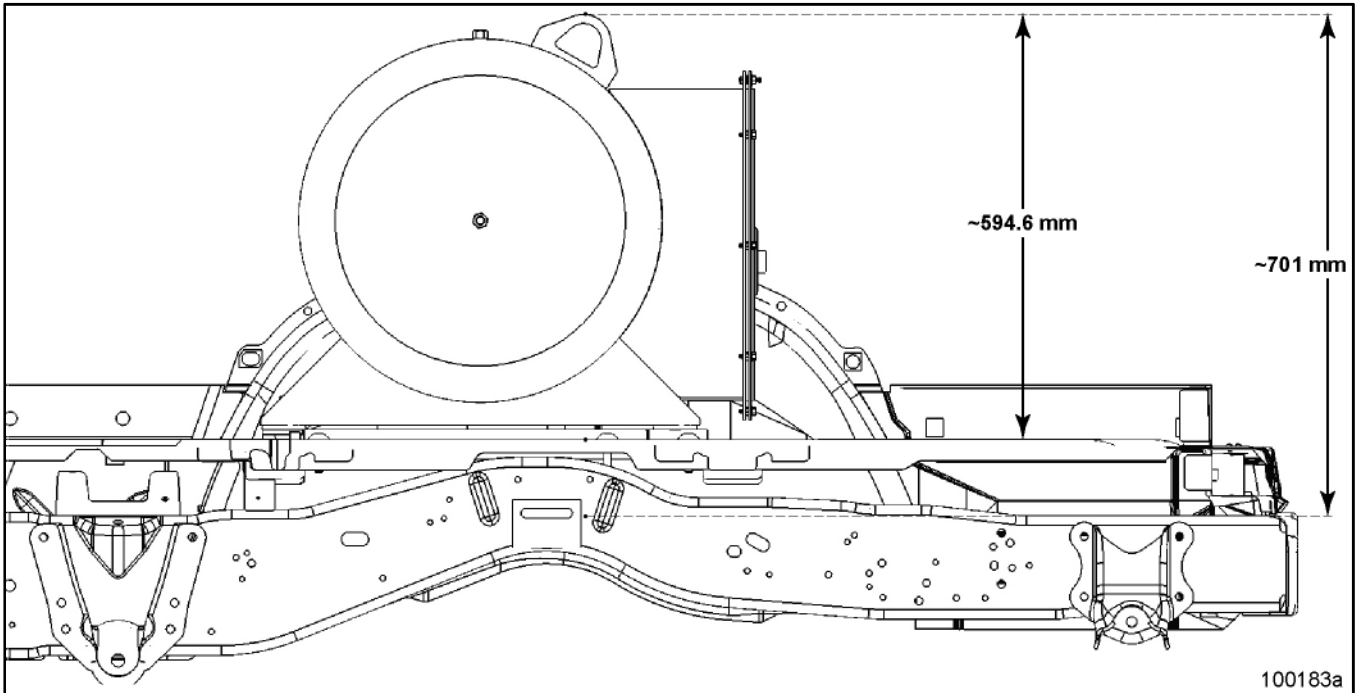
Model	WB (in.)	Engine/Transmission	Maximum GVWR (lbs)	Base Curb Weight — Gasoline (lbs)	Curb Weight w/Liquid Propane Autogas (lbs)	
					Midship Tank	Extended Range Configuration*
E-150 Van (Reg./Rec./Crew)	138	5.4L/4R75E	8600	5291	5350	5470
E-150 Extended Van	138	5.4L/4R75E	8600	5430	5489	5609
E-250 Van (Reg./Rec./Crew)	138	5.4L/4R75E	9000	5313	5372	5492
E-250 Extended Van	138	5.4L/4R75E	9000	5460	5519	5639
E-350 Van	138	5.4L/4R75E	9500	5388	5447	5567
		6.8L/5R110	9500	5602	Not Available	Not Available
E-350 Extended Van	138	5.4L/4R75E	9500	5521	5580	5700
		6.8L/5R110	9500	5729	Not Available	Not Available

\* Extended range tank mounts inside of the vehicle at the rear of the cargo area.

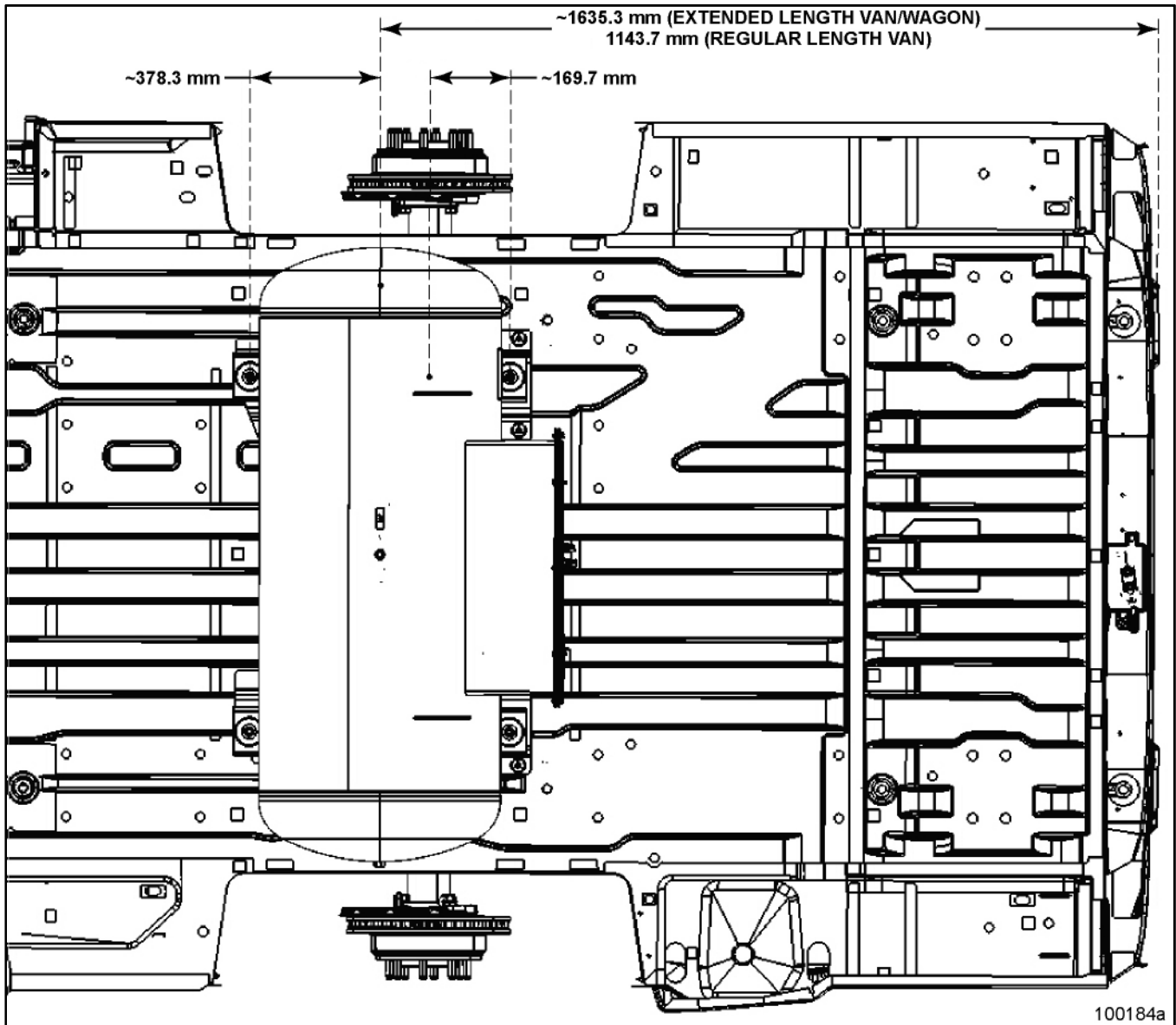
**E-Series Cutaway/Stripped Chassis Model Lineup**

Model	WB (in.)	Engine/Transmission	Maximum GVWR (lbs)	Base Curb Weight — Gasoline (lbs)	Curb Weight w/Liquid Propane Autogas (lbs)	
					Midship Tank	Aft-Axle Tank
E-350 SD Cutaway	138 SRW	5.4L/4R75E (1)	9600	4702	4761	Not Available
		5.4L/4R75E	9600	4691	Not Available	Not Available
		5.4L/5R110 (2)	9900	4782	Not Available	Not Available
		6.8L/5R110	9900	4898	Not Available	Not Available
		5.4L/5R110	10,050	4782	Not Available	Not Available
		6.8L/5R110	10,050	4898	Not Available	Not Available
E-450 SD Cutaway	158 DRW	5.4L/5R110	14,050	5324	Not Available	Not Available
		6.8L/5R110	14,500	5460	Not Available	5537
	176 DRW	5.4L/5R110	14,050	5363	Not Available	Not Available
		6.8L/5R110	14,500	5467	Not Available	5544
(1) With gasoline midship fuel tank (2) With gasoline aft-axle fuel tank.						

E-150/E-250/E-350 Extended Range — Dimensional Data — Tank Mounting, Side

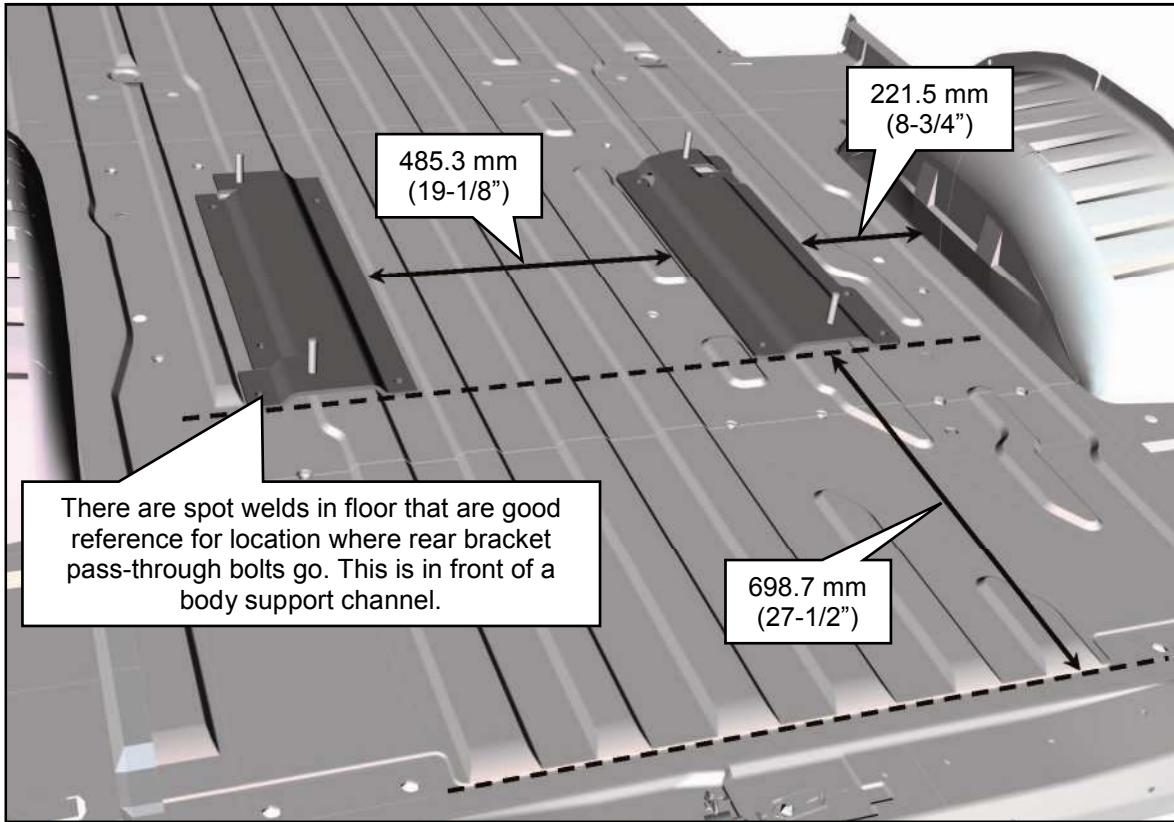


E-150/E-250/E-350 Extended Range — Dimensional Data — Tank Mounting, Top

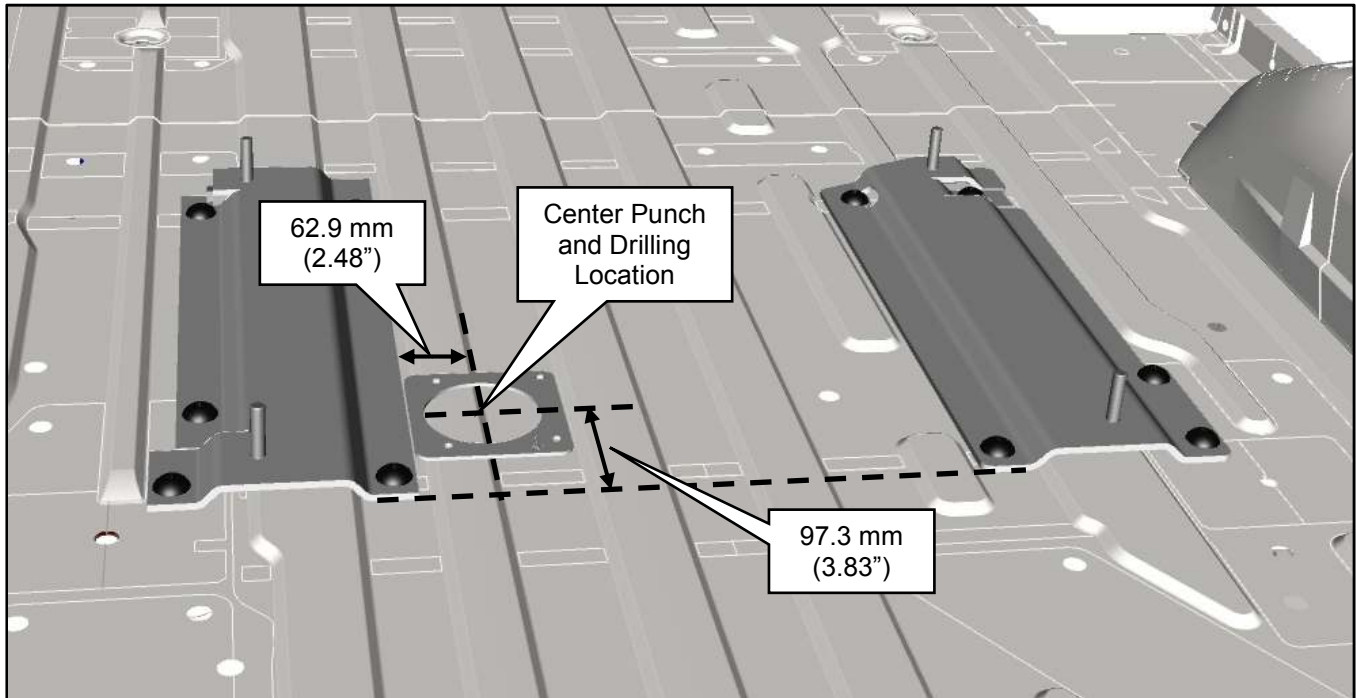




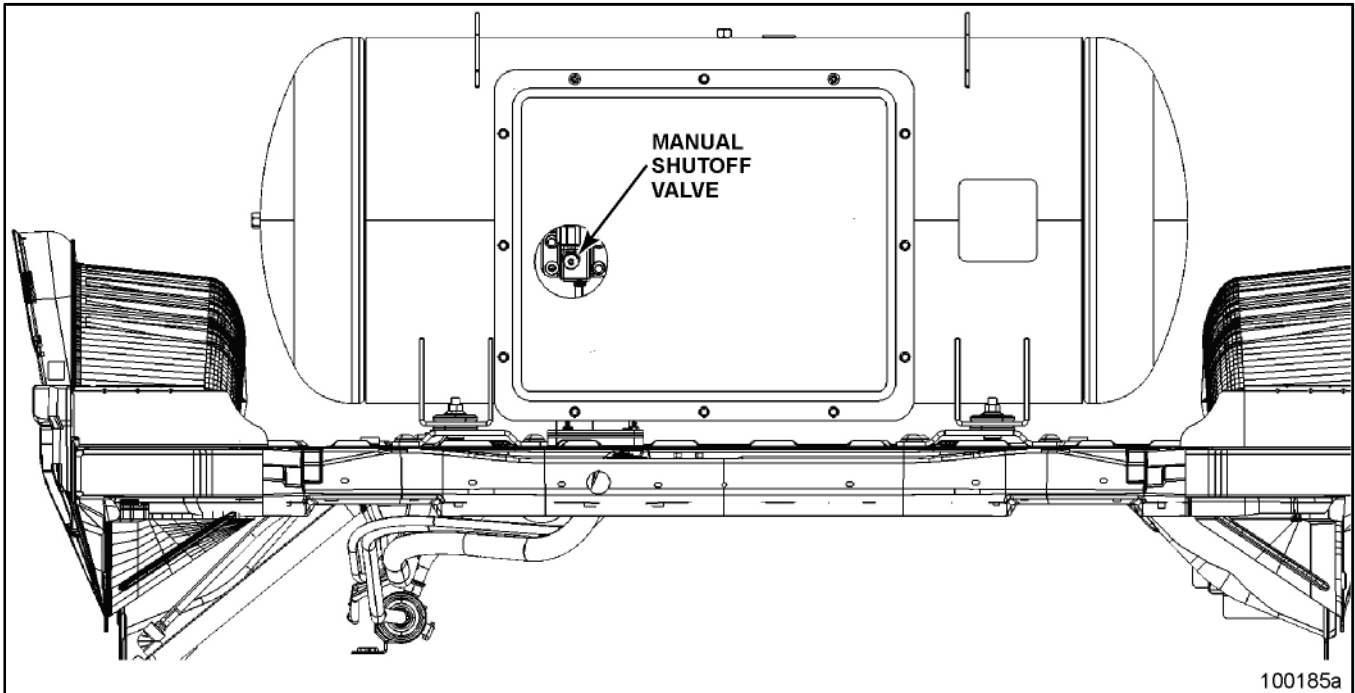
E-150/E-250/E-350 Extended Range — Dimensional Data — Tank Mounting, Brackets



E-150/E-250/E-350 Extended Range — Dimensional Data — Hose and Wiring Pass-Through

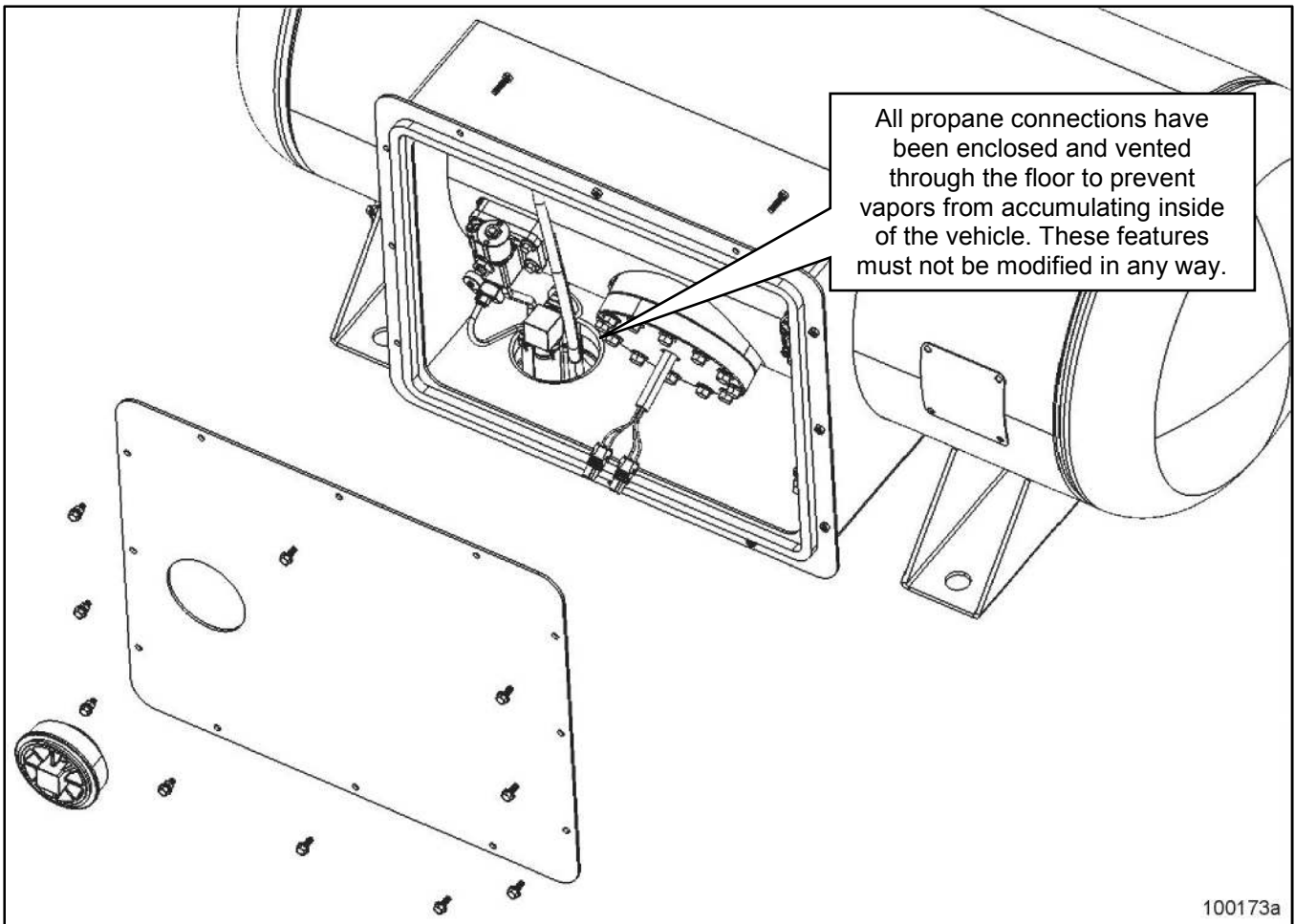


E-150/E-250/E-350 Extended Range — Supply Valve, Manual Shut-Off Valve



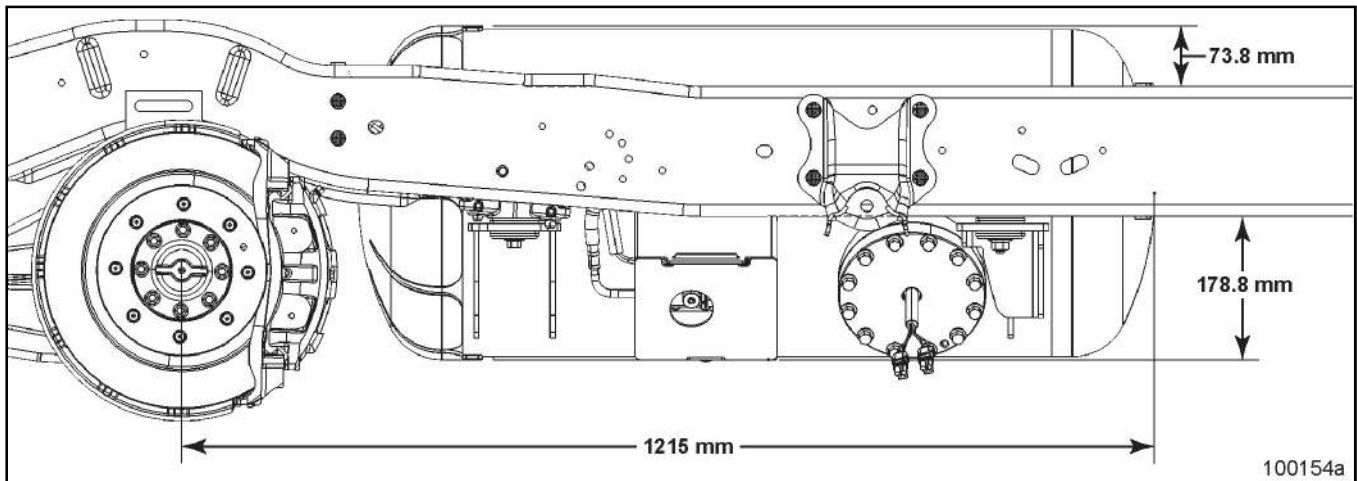
Manual Shut-Off Valve Access Plug Removed

E-150/E-250/E-350 Extended Range — Exploded View, Access Cover and Plug



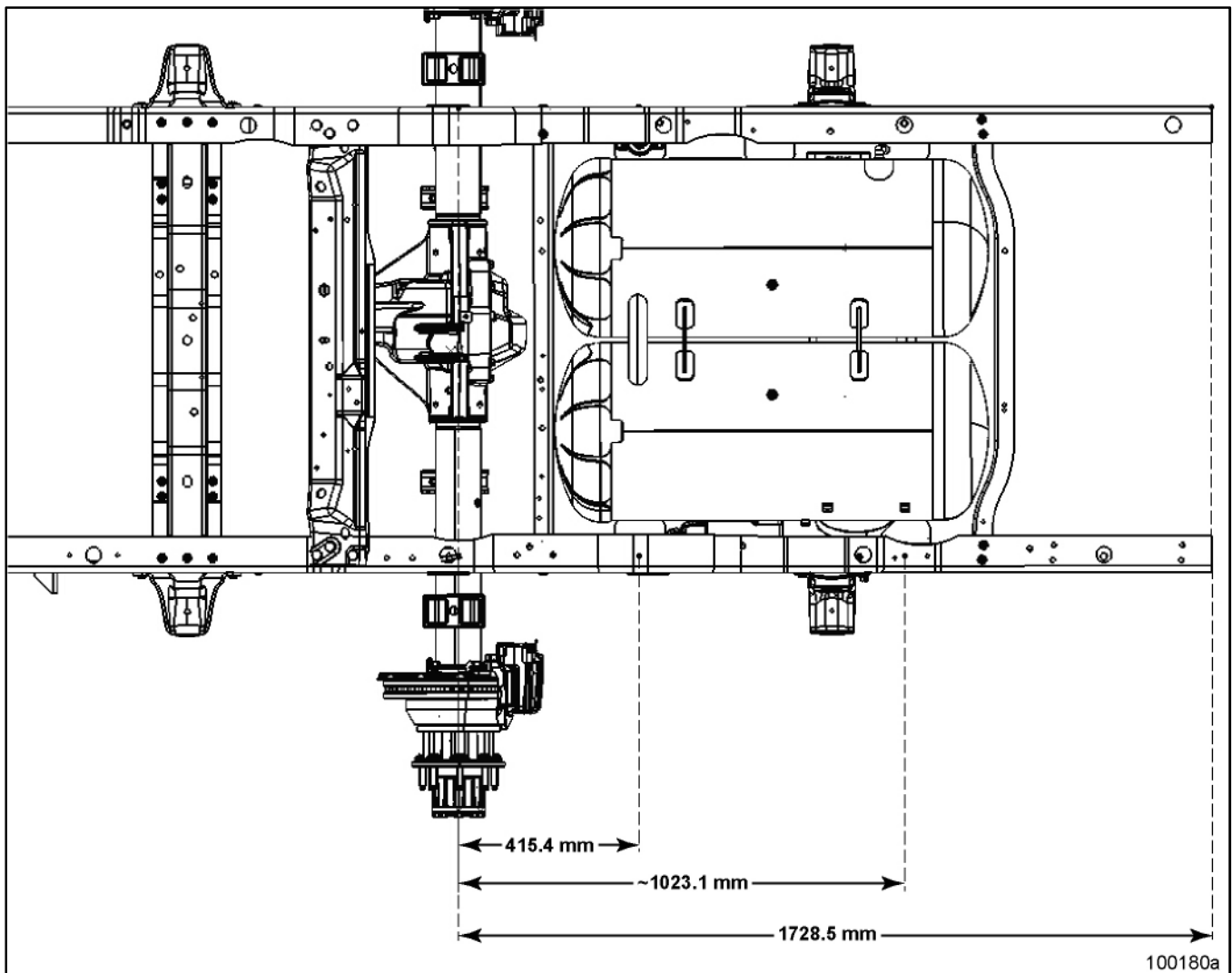
E-450 Cutaway Chassis — Dimensional Data — Aft-Axle Tank Mounting, Side

Above/Below Frame



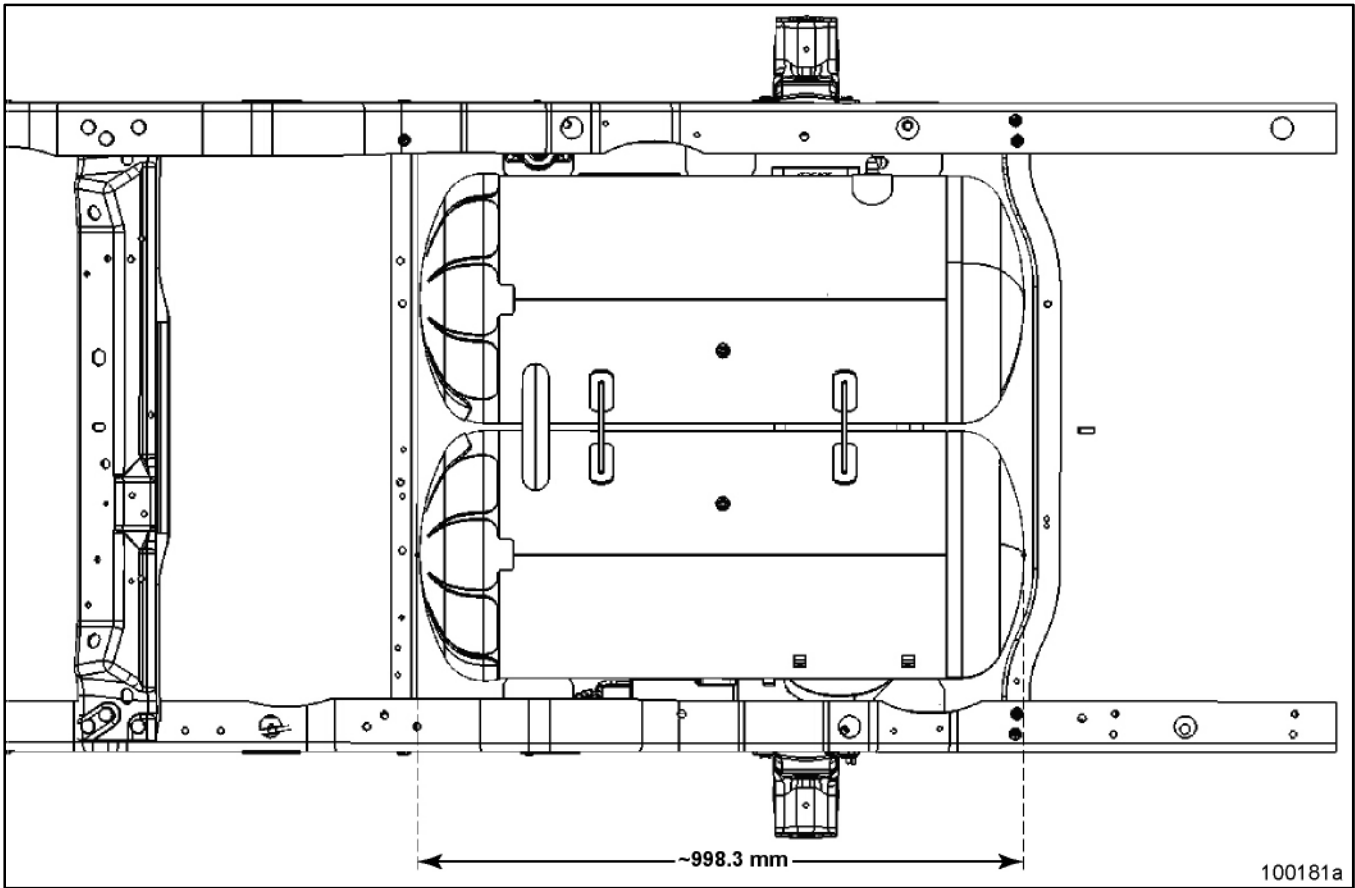
E-450 Cutaway Chassis — Dimensional Data — Aft-Axle Tank Mounting, Top

Tank Brackets-to-Axle



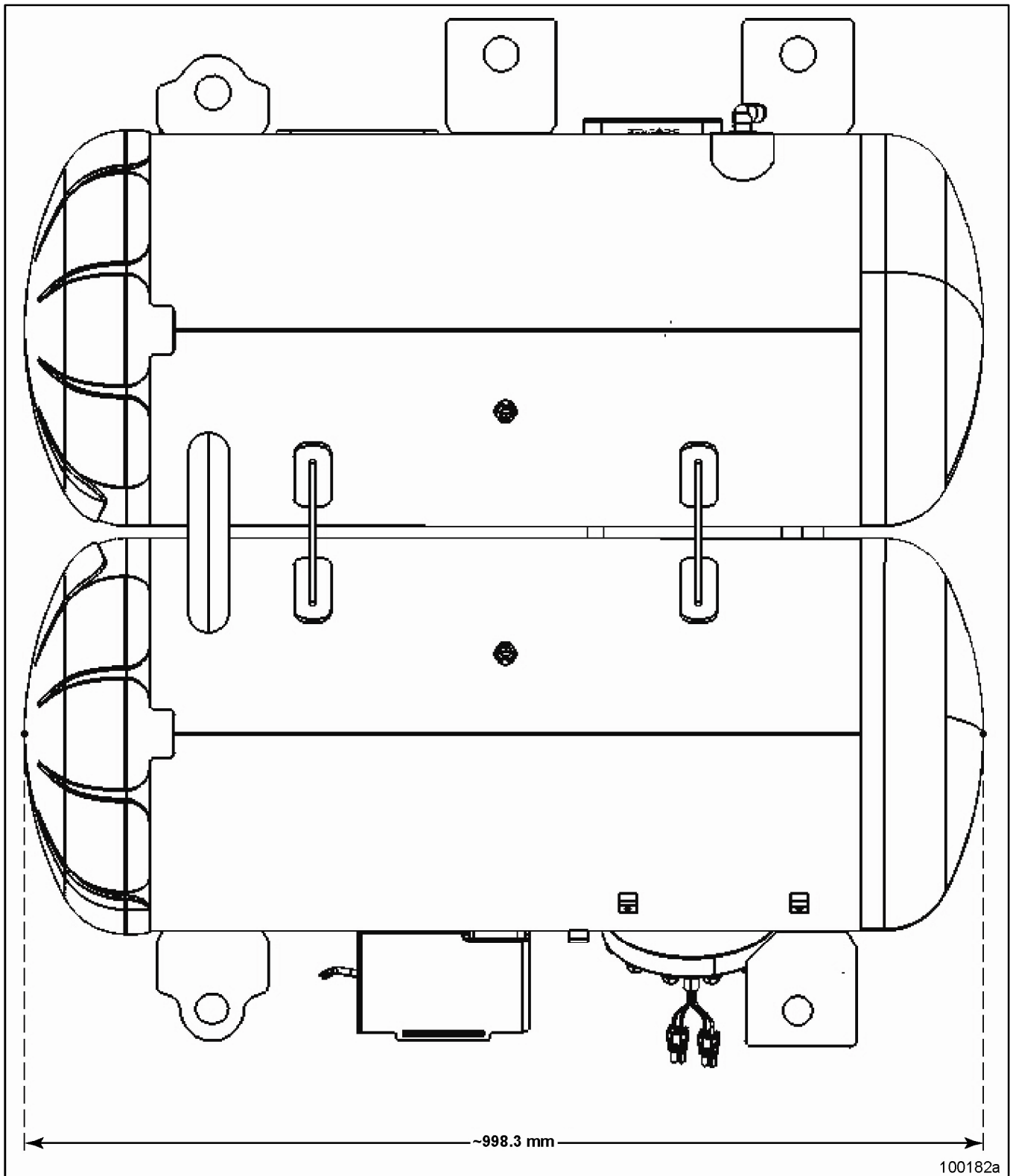
E-450 Cutaway Chassis — Dimensional Data — Aft-Axle Tank Mounting, Top

Tank-to-Frame



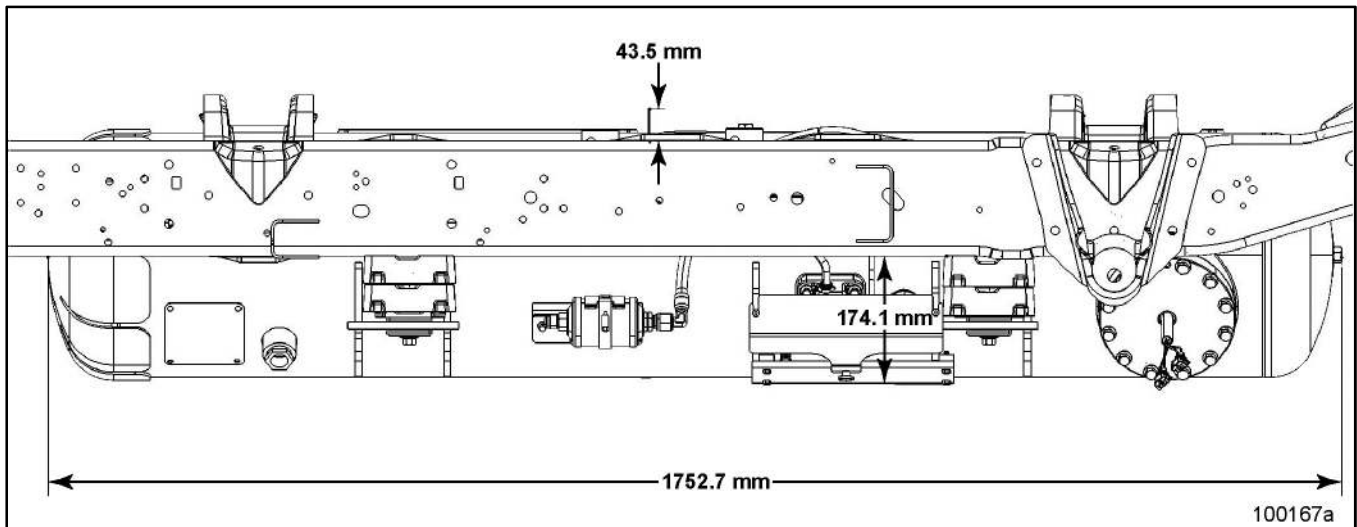
E-450 Cutaway Chassis — Dimensional Data — Aft-Axle Tank Mounting, Top

Tank Overall Dimensions



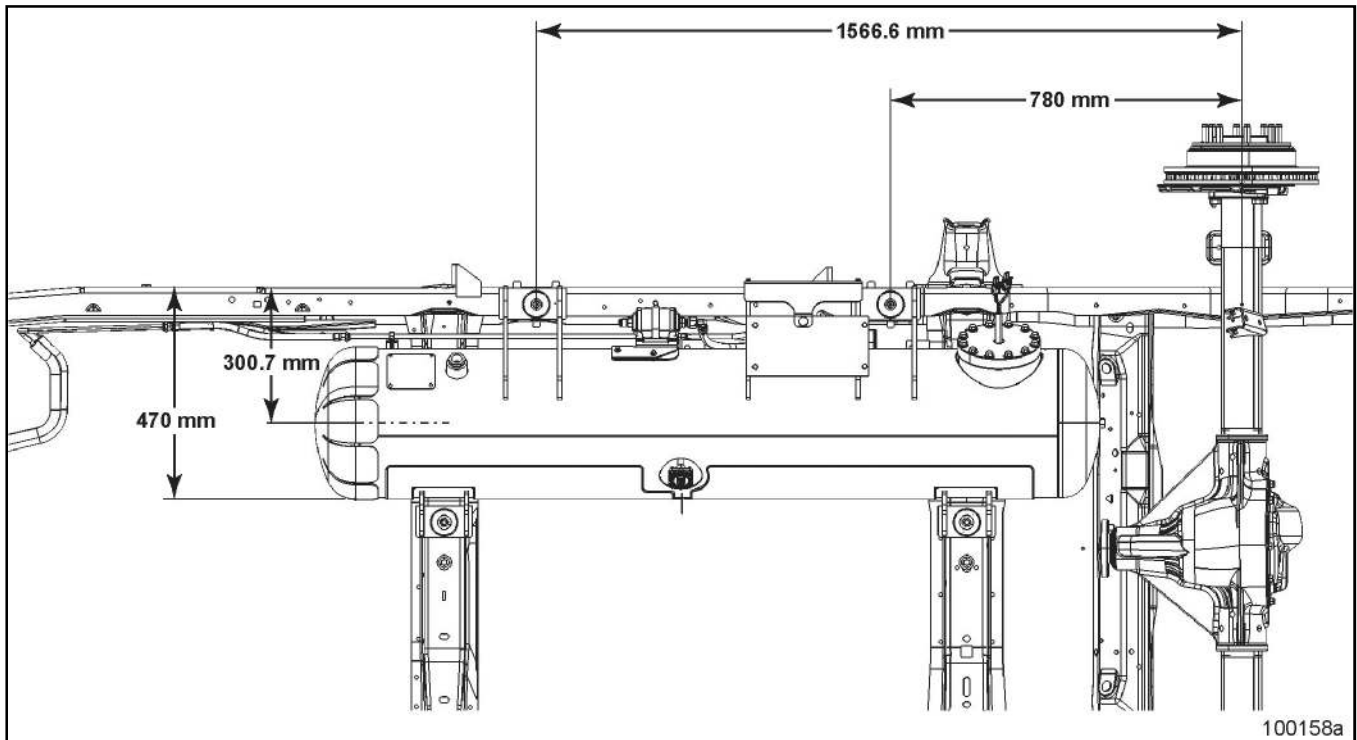
E-150/E-250/E-350 — Dimensional Data — Midship Tank Mounting, Side

Above/Below Frame

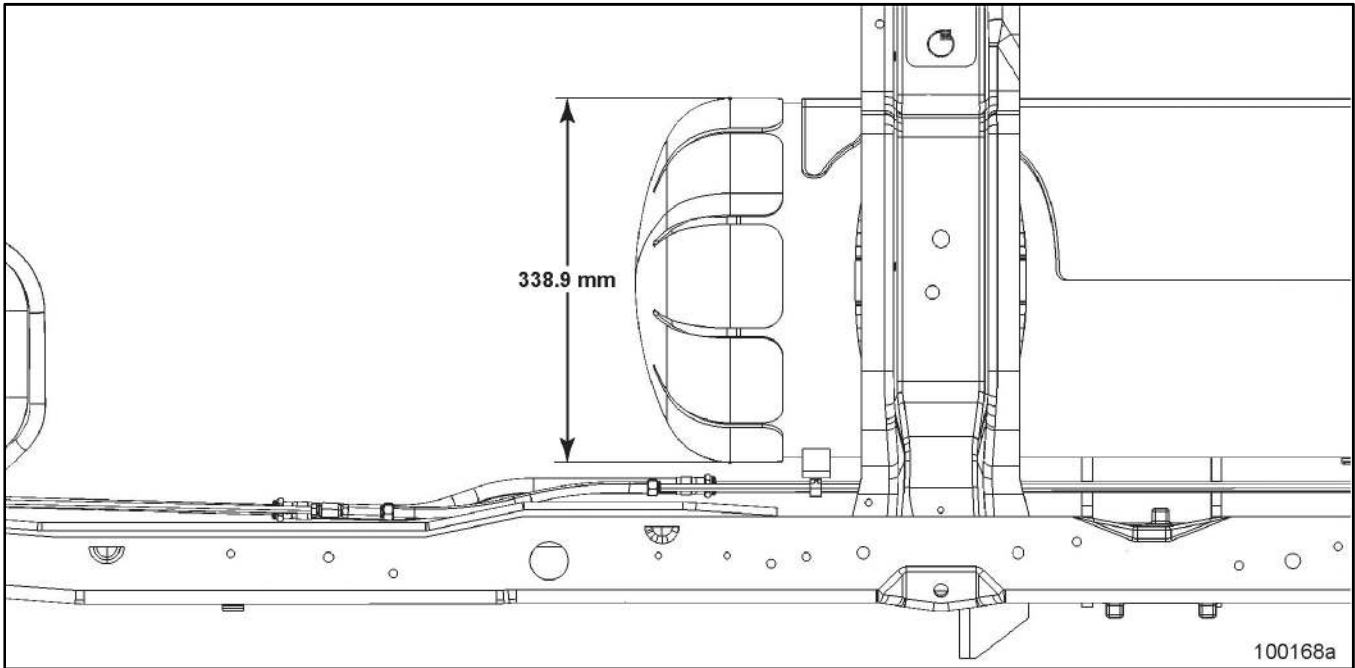


E-150/E-250/E-350 — Dimensional Data — Midship Tank Mounting, Bottom

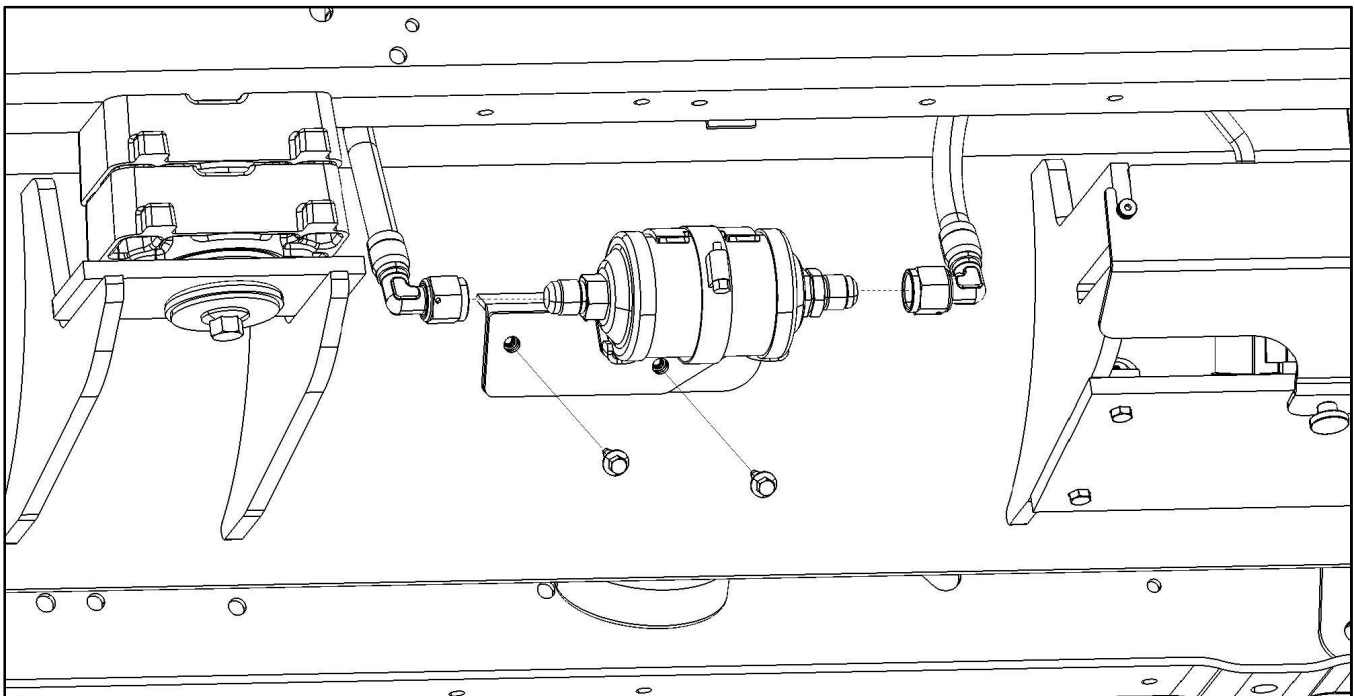
Tank Brackets-to-Axle, Tank-to-Frame



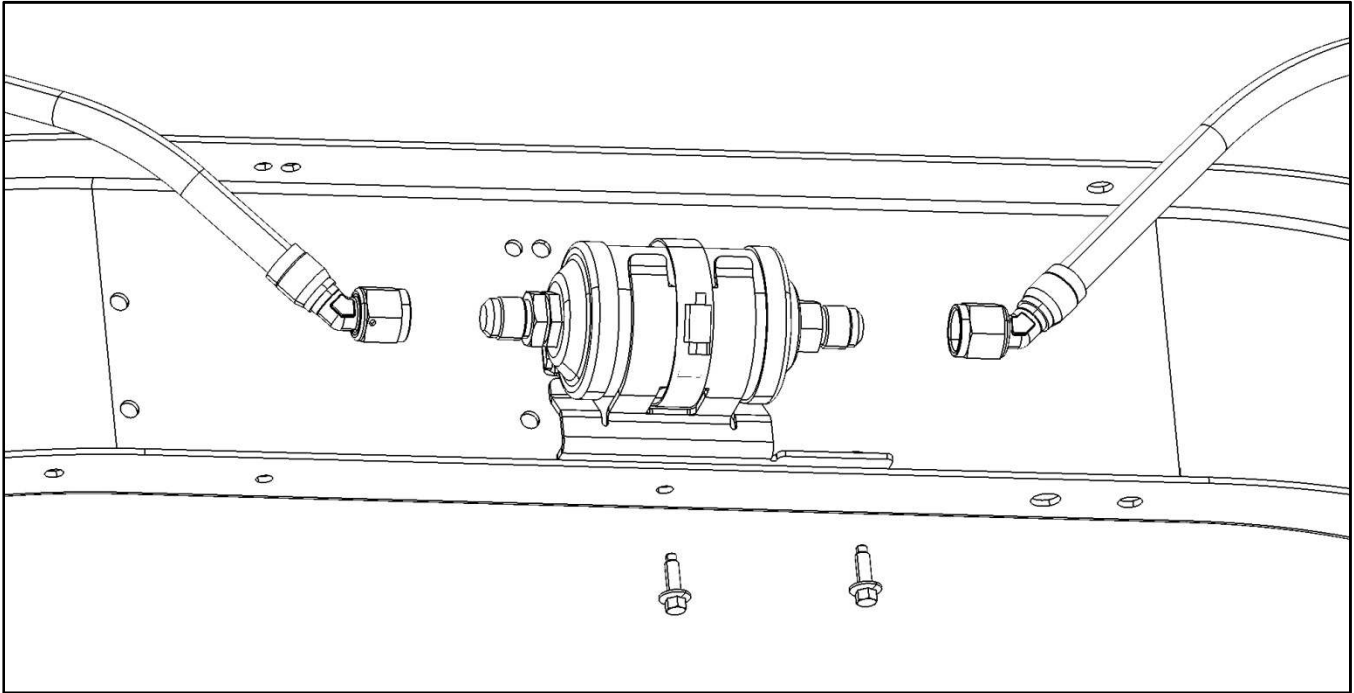
E-150/E-250/E-350 — Dimensional Data — Midship Tank Mounting, Top



E-Series — Midship Tank — Fuel Filter Installation

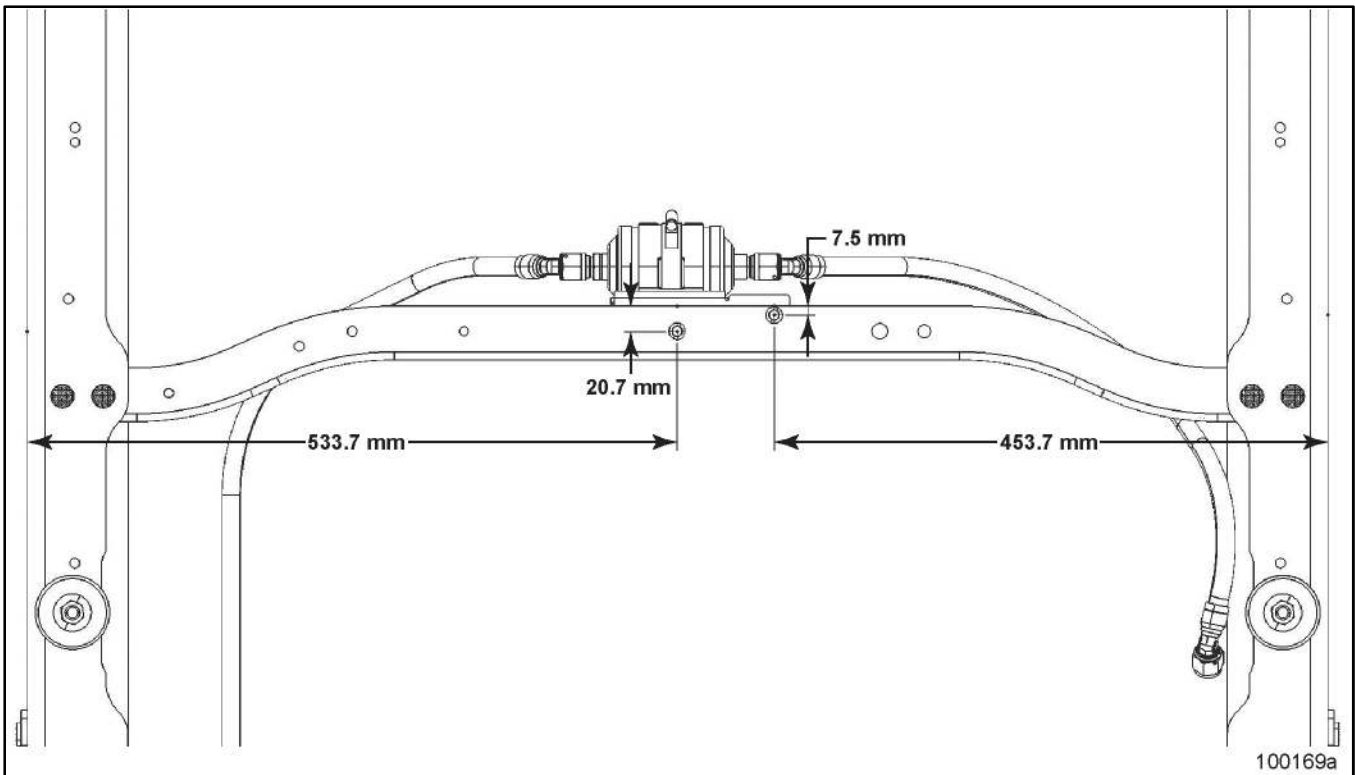


E-450 — Aft-Axle Tank — Fuel Filter Installation



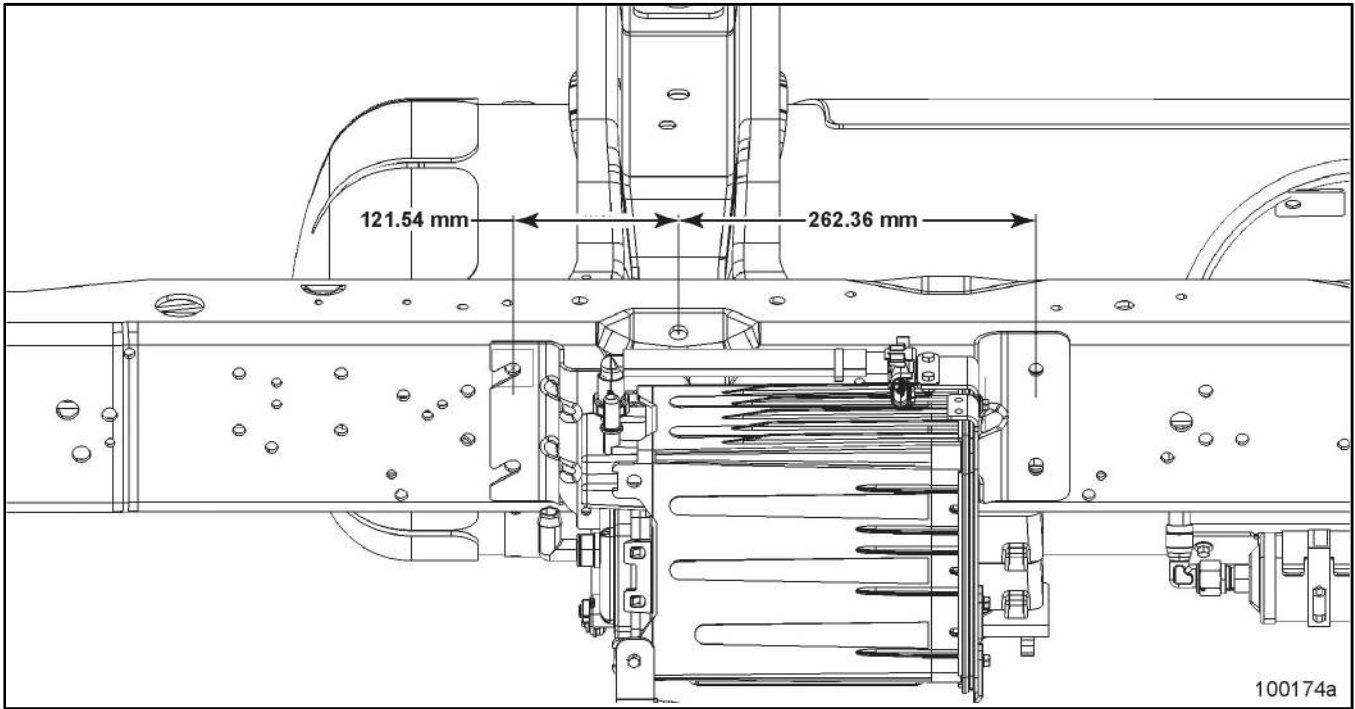
E-450 — Dimensional Data — Fuel Filter Bracket Location

Crossmember-to-Frame

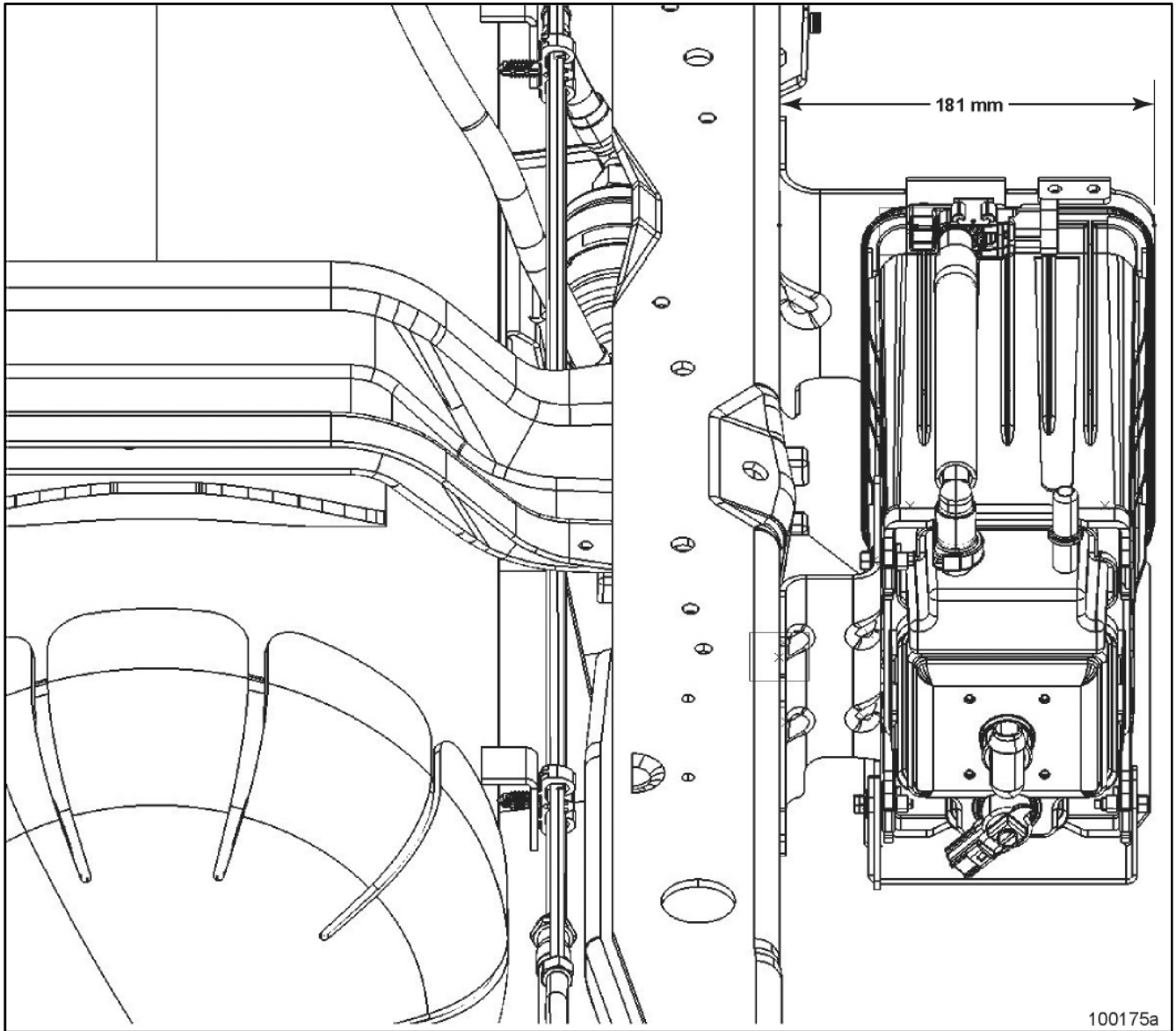




E-150/E-250/E-350 — Dimensional Data — Vapor Canister, Left



E-150/E-250/E-350 — Dimensional Data — Vapor Canister, Front



**E-150/E-250/E-350 Vapor Canister Connections**

Second unit bodies must provide clearance for vapor canister hoses and wiring to pass over the frame rail. Minimum clearance required is 1 inch (25 mm) between frame and second unit body.

