

## LiquidSpring CLASS® Application Guide Bus Application

Key:  
 CAB: Reg – Regular Cab, Ext – Extended (Super) Cab, CC – Crew Cab  
 Fuel Tank Location: M – Midship, R – Rear (aft of axle)  
 OnSpot Chain System Availability: Sway bars may need to be removed (if installed). Please contact OnSpot for exact part numbers and directions.

### Ford

#### E-350/450 Cutaway (not van/wagon)

Model	Model Years	Rear Axle GAWR	Cab/WB/CA	Fuel Tank Location	LiquidSpring Kit	OnSpot Avail?	Comments
E350	2006 – Current	8500	Cutaway/158.0"/100.0"	M,R	DS85FS2B	No	
			Cutaway/176.0"/118.0"				
E450	2006 – Current	9600	Cutaway/158.0"/100.0"	M,R	DS96FS2B	No	
			Cutaway/176.0"/118.0"				

#### F-550 Cab Chassis

Model	Model Years	Rear Axle GAWR	Cab/WB/CA	Fuel Tank Location	LiquidSpring Kit	OnSpot Avail?	Comments
F550 4x2, 4x4 17,500 GVW 19,500 GVW	2017 – newer	Up to 14,706	Reg/169.3"/84"	M*,R	DS147FS3B	Yes	CLASS system will NOT work with midship fuel tank on 84" and 108" CA.
			Reg/193.3"/108"				
			Reg/205.3"/120"				
			Ext/191.9"/84"				
	2011 – 2016	Up to 14,706	M*,R	CC/203.8"/84"	DS147FS2B	Yes	
				Reg/164.8"/84"			
				Reg/188.8"/108"			
				Reg/200.8"/120"			
			Ext/185.8"/84"				
			CC/200.2"/84"				

\*DEF tank may have to be relocated when LiquidSpring system is installed on diesel with mid-ship tank.

#### F-650 Cab Chassis

Model	Model Years	Rear Axle GAWR	Rear Axle Model	Cab/WB/CA	Brakes	OEM Susp.	OnSpot Avail?	LiquidSpring Kit	Comments	
F650 Straight Frame	2016 – Current	17,500	Dana S17-140	Reg/182"/108" And Greater	Hyd. only	Up to 17,500 Rear Steel Leaf	Yes (Hyd. Brakes only)	DS175F650SR-SHB (Late Availability)	Suspension is rated up to 17500 lbs GAWR.	
				Ext/203"/108" And Greater						
				CC/218"/108" And Greater						
		19,000	Dana S19-140	Reg/182"/108" And Greater	Hyd. only	Up to 19,000 Rear Steel Leaf	Yes (Hyd. Brakes only)	DS190F650SR-SHB (Late Availability)		Suspension is rated up to 19000 lbs GAWR.
				Ext/203"/108" And Greater						
				CC/218"/108" And Greater						

Please provide LiquidSpring with either vehicle specification sheet or build sheet during time of order to assure proper suspension configuration is selected.

F53 Strip Rail Chassis

Model	Model Years	Rear Axle GAWR	Rear Axle Model	WB	Brakes	OEM Susp.	OnSpot Avail?	LiquidSpring Kit	Comments
F53 16K GVW	2011 - newer	11,000	Dana 80	158.3", 176.3", 190.3"	Hyd.	Steel Leaf	No	DS120F53B (Available mid-late 2017)	
F53 18K GVW		12,000	Dana 80	178.2", 190.2", 208.2", 228.2"			No	DS120F53B (Available mid-late 2017)	
F53 20.5K GVW		13,500	Dana S13-110	208.1", 228.1"			No	DS135F53B (Available mid-late 2017)	
F53 22K GVW		15,000	Dana S16-130	208.3", 228.3", 242.3"			No	DS150F53B	
F53 24K GVW		15,500	Dana 17060S	242.3", 252.3"			No	DS175F53B (Available mid-late 2017)	
F53 26K GVW		17,500	Dana 17060S	242.3", 252.3"			No	DS175F53B (Available mid-late 2017)	

## Freightliner

Model	Model Years <sup>2</sup>	Rear Axle GAWR <sup>3</sup>	Frame	Brakes	Exhaust Routing <sup>1</sup>	Fuel Tank Location	OEM Susp.	LiquidSpring Kit	OnSpot Avail?	Comments
M2 106 2WD  Also fits: MB-65 S2 S2C	2005 – Current	<b>Up to 15000</b>  Meritor: MS-17-14X  Detroit: DA-RS-17.5-4 DA-RS-17.5-2 DS-RS-15.0-2 <sup>3</sup>	546-020 546-021 546-094 546-093 546-099 546-100	Hyd. Only	Any	Any	Steel Leaf: 622-1MA 622-1MB 622-1MC 622-1MD 622-1ME 622-1MT	DS150FR-SB	Yes (Hyd. Brakes only)	Volumes and power module located behind rear axle (requires minimum of 62" rear overhang).
					Any	Side-under cab		DS150FR-SSB	Yes (Hyd. Brakes only)	Volumes located along side frame rails, between cab and rear axle.
				Hyd./ Air	Any	Forward (in front of rear axle)	Air Susp: 622-1CW 622-1CX 622-1CY	DS150FR-AB	Yes (Hyd. Brakes only)	Volumes and power module located behind rear axle (requires minimum of 62" rear overhang).
					Driver side	Aft of Axle		DS150FR-ARB	Yes	Volumes located along side frame rails, between cab and rear axle. Power Module inside frame, Passenger Side
					Passenger side	Aft of Axle		DS150FR-AREPB	Yes	Volumes located along side frame rails, between cab and rear axle. Power Module inside frame, Driver Side

### Notes:

<sup>1</sup>Exhaust routing refers to location of exhaust routed from engine, not tail pipe exit.

<sup>2</sup>On 2005-2011 vehicles, kit **11355** (steering sensor mounting) **MUST** be ordered.

<sup>3</sup>With Detroit Axle DA—RS-15.0-2 rear axle, kit **11337** (for steel leaf spring conversion) or kit **11338** (for air ride conversion) **MUST** be ordered.

### All Freightliner kits require the following codes:

Vehicle Interface Lighting (one of the locations):	<b>353-022</b> Vehicle interface wiring with body builder connector mounted back of cab. <b>353-023</b> Vehicle interface wiring with body builder connector mounted end of frame. <b>353-026</b> Vehicle interface wiring and PDM with body builder connector, back of cab. <b>353-027</b> Vehicle interface wiring and PDM with body builder connector, end of frame.
Transmission Interface Connector (one of the locations):	<b>34C-001</b> Transmission Interface Harness at the Front Wall <b>34C-002</b> Transmission Interface Harness at Back of Cab

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## General Motors (Chevrolet/GMC)

Express/Savana G-Series Cutaway (not van/wagon)

Model	Model Years	Rear Axle GAWR	Cab/WB/CA	Fuel Tank Location	LiquidSpring Kit	OnSpot Avail?	Comments
G3500: G33503 G33803 G33903	2013 - Current	8600	Cutaway/139"/80"	M	DS96GM2-AMB	No	
			Cutaway/159"/100.0"				
			Cutaway/177"/118.0"				
			Cutaway/139"/80"	R	DS96GM2-ARB	No	
			Cutaway/159"/100.0"				
Cutaway/177"/118.0"							
G4500: G33803 G33903	2013 - Current	9600	Cutaway/159"/100.0"	M	DS96GM2-AMB	No	
			Cutaway/177"/118.0"				
			Cutaway/159"/100.0"	R	DS96GM2-ARB	No	
			Cutaway/177"/118.0"				

## International

DuraStar 4300 (Up to 13,500 lbs GAWR) (See note below about gearbox)

Model	Model Years	Rear Axle GAWR	Engine	Brakes	OEM Susp.	LiquidSpring Kit	OnSpot Avail?	Comments
4300 Low Profile Frame	2008 - Current	13500 Dana S130 (S14-130, S16-130)	MaxxForce	Hyd. Only	Steel Leaf 14SAC 14SAE 14SAH	DS135ND-S130B	Yes	Recommended code 12VYL
			Cummins			DS135ND-S130CB	Yes	
			MaxxForce	Hyd./ Air	IROS Air 14TBL 14TBM 14TBN	DS135ND-A130B	Yes (Hyd. Brakes only)	Recommended code 12VYL
			Cummins			DS135ND-A130CB	Yes (Hyd. Brakes only)	
		13500 Dana 17060S, Dana S140 (17-140) Meritor MS-17-14X	MaxxForce	Hyd. Only	Steel Leaf 14SAC 14SAE 14SAH	DS135ND-SB	Yes	Recommended code 12VYL
			Cummins			DS135ND-SCB	Yes	
			MaxxForce	Hyd./ Air	IROS Air 14TBL 14TBM 14TBN	DS135ND-AB	Yes (Hyd. Brakes only)	Recommended code 12VYL
			Cummins			DS135ND-ACB	Yes (Hyd. Brakes only)	

Note: The LiquidSpring system requires the installation of a steering position sensor on the OEM steering gearbox.

Require mounting brackets are available in the kits above for the following steering gearboxes:

TRW: TAS-40, THP-45;

Sheppard: M100, HD94.

Do not use LiquidSpring systems with TRW TAS-66 or TRW THP-60 gearboxes.

Please provide LiquidSpring with either vehicle specification sheet or build sheet during time of order to assure proper suspension configuration is selected.

DuraStar 4300 (Up to 15,500 lbs GAWR) (see note below about gearbox)

Model	Model Years	Rear Axle <sup>1</sup> GAWR	Engine	Brakes	OEM Susp.	LiquidSpring Kit	OnSpot Avail?	Comments
4300 Low Profile Frame	2008 - Current	15500 Dana 17060S, Dana S140 (17-140) Meritor MS-17-14X	MaxxForce	Hyd. Only	Steel Leaf 14SAE 14SAH	DS155NDLP-SB	Yes	Recommended code 12VYL
			Cummins			DS155NDLP-SCB	Yes	
			MaxxForce	Hyd./ Air	IROS Air 14TBM 14TBN	DS155NDLP-AB	Yes (Hyd. Brakes only)	Recommended code 12VYL
			Cummins			DS155NDLP-ACB	Yes (Hyd. Brakes only)	

<sup>1</sup>Dana S130 (S16-130) not recommended.

Note: The LiquidSpring system requires the installation of a steering position sensor on the OEM steering gearbox.

Require mounting brackets are available in the kits above for the following steering gearboxes:

TRW: TAS-40, THP-45;

Sheppard: M100, HD94.

Do not use LiquidSpring systems with TRW TAS-66 or TRW THP-60 gearboxes.

Please provide LiquidSpring with either vehicle specification sheet or build sheet during time of order to assure proper suspension configuration is selected.

## Ram

### 5500 Cab Chassis

Model	Model Years	Rear Axle GAWR	Cab/WB/CA	Fuel Tank Location	LiquidSpring Kit	OnSpot Avail?	Comments
5500 4x2, 4x4	2014 - Current	13500	Reg/168.5"/84"	M, R	DS135RS2B	Yes	Must include the <b>XXS</b> VSIM option. Volumes outboard of frame rails.
			Reg/192.5"/108"				
			Reg/204.5"/120"				
			CC/197.4"/84"				