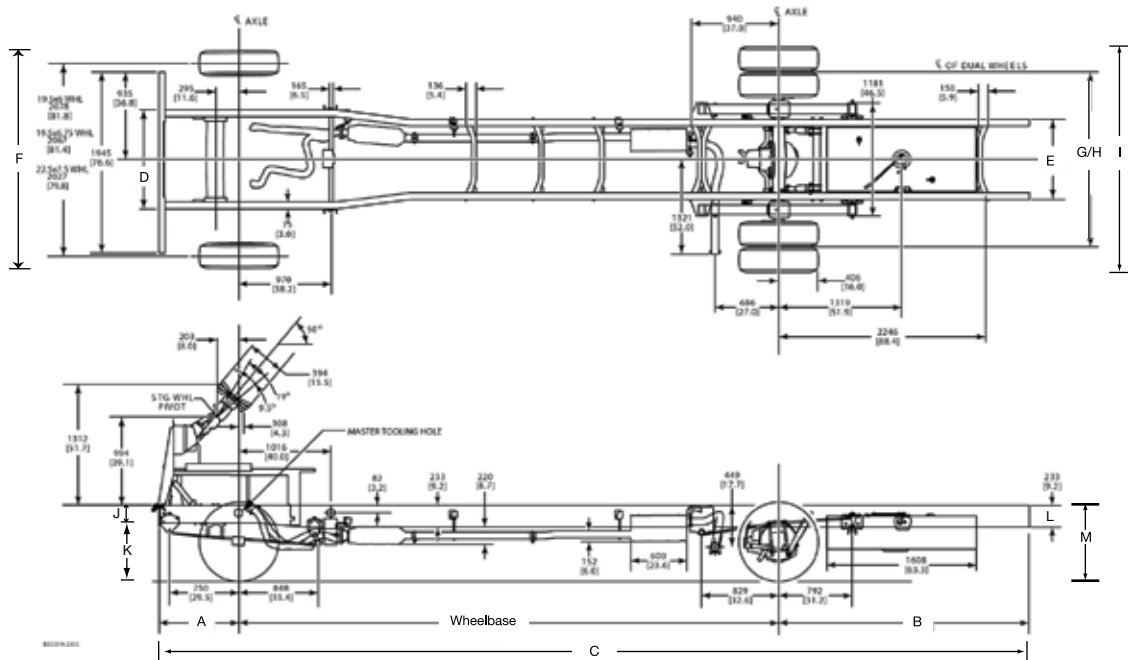


F53 Super Duty Motorhome Chassis

Dimensions

2016



F53 Class A Motorhome Chassis⁽¹⁾

Wheelbase (in.)	158.3	178.3	190.3	178.2	190.2	208.2	228.2	208.1	228.1
GVWR (lbs.)	16,000	16,000	16,000	18,000	18,000	18,000	18,000	20,500	20,500
Code Description (in.)									
A Front Overhang	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3
B Rear Overhang	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8
C Overall Length	300.1	320.1	332.1	320.1	332.1	350.1	360.1	350.1	360.1
D Front Frame Width	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
E Rear Frame Width	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
F Tire Outside Width (Front)	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6
G Tire Outside Width (Rear Inner)	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8
H Tire Center Width (Rear)	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0
I Tire Outside Width (Rear Outer)	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4
J Frame Front Section Height	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
K Frame Height @ Front Wheel	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3
L Frame Rear Section Height	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
M Frame Height @ Rear Axle	31.6	31.6	31.6	30.8	30.8	30.8	30.8	31.1	31.1

Wheelbase (in.)	208.3	228.3	242.3	242.3	252.3	242.3	252.3
GVWR (lbs.)	22,000	22,000	22,000	24,000	24,000	26,000	26,000
Code Description (in.)							
A Front Overhang	36.3	36.3	36.3	36.3	36.3	36.3	36.3
B Rear Overhang	105.8	105.8	105.8	105.8	105.8	105.8	105.8
C Overall Length	350.1	360.1	374.1	374.1	384.1	374.1	384.1
D Front Frame Width	41.9	41.9	41.9	41.9	41.9	41.9	41.9
E Rear Frame Width	34.0	34.0	34.0	34.0	34.0	34.0	34.0
F Tire Outside Width (Front)	90.7	90.7	90.7	92.6	92.6	92.6	92.6
G Tire Outside Width (Rear Inner)	70.3	70.3	70.3	70.2	70.2	70.2	70.2
H Tire Center Width (Rear)	73.3	73.3	73.3	71.9	71.9	71.9	71.9
I Tire Outside Width (Rear Outer)	95.0	95.0	95.0	95.2	95.2	95.2	95.2
J Frame Front Section Height	7.5	7.5	7.5	7.5	7.5	7.5	7.5
K Frame Height @ Front Wheel	30.5	30.5	30.5	31.2	31.2	31.2	31.2
L Frame Rear Section Height	9.2	9.2	9.2	9.2	9.2	9.2	9.2
M Frame Height @ Rear Axle	34.1	34.1	34.1	35.2	35.2	35.2	35.2

(1) Dimensions @ Strip Chassis.

2016

F53 Super Duty Motorhome Chassis *Dimensions*

F53 Class A Motorhome Chassis⁽¹⁾

Wheelbase (in.)	228.0	228.0
GVWR (lbs.)	24,000	26,000
Code Description (in.)		
A Front Overhang	36.3	36.3
B Rear Overhang	105.8	105.8
C Overall Length	360.1	360.1
D Front Frame Width	41.9	41.9
E Rear Frame Width	34.0	34.0
F Tire Outside Width (Front)	92.6	92.6
G Tire Outside Width (Rear Inner)	70.2	70.2
H Tire Center Width (Rear)	71.9	71.9
I Tire Outside Width (Rear Outer)	95.2	95.2
J Frame Front Section Height	7.5	7.5
K Frame Height @ Front Wheel	31.2	31.2
L Frame Rear Section Height	9.2	9.2
M Frame Height @ Rear Axle	35.2	35.2

(1) Dimensions @ Strip Chassis.

F53 Super Duty Motorhome Chassis

Models/Weight Ratings

2016

F53 Class A Motorhome Chassis — GVWR/Payload/GCWR & Trailer Weight/ GAWR/Base Curb Weight

Drive/WB (in.)	Engine/ Trans.	Maximum GVWR (lbs.)	Maximum Payload (lbs.) ⁽¹⁾	Maximum GCWR/Trailer Weight (lbs.)	GAWR (lbs.) ⁽²⁾		Base Curb Weight (lbs.) ⁽³⁾		
					Front	Rear	Front	Rear	Total
4x2 — 158	6.8L/Auto	16,000	9690	23,000/7000	6500	11,000	3088	3219	6307
4x2 — 178	6.8L/Auto	16,000	9670	23,000/7000	6500	11,000	3109	3221	6330
	6.8L/Auto	18,000	11,630	23,000/5000	7000	12,000	3122	3240	6362
4x2 — 190	6.8L/Auto	16,000	9650	23,000/7000	6500	11,000	3111	3232	6343
	6.8L/Auto	18,000	11,590	23,000/5000	7000	12,000	3176	3227	6403
4x2 — 208	6.8L/Auto	18,000	11,530	23,000/5000	7000	12,000	3223	3241	6464
	6.8L/Auto	20,500	13,970	26,000/5500	7000 ⁽⁴⁾	13,500	3259	3271	6530
	6.8L/Auto	22,000	15,300	26,000/4000	8000	15,000	3289	3410	6699
4x2 — 228	6.8L/Auto	18,000	11,460	23,000/5000	7000	12,000	3275	3257	6532
	6.8L/Auto	20,500	13,900	26,000/5500	7000 ⁽⁴⁾	13,500	3311	3287	6598
	6.8L/Auto	22,000	15,210	26,000/4000	8000	15,000	3348	3437	6785
	6.8L/Auto	24,000	16,730	30,000/6000	9000	15,500	3500	3767	7267
	6.8L/Auto	26,000	18,720	30,000/4000	9000	17,500	3500	3779	7279
4x2 — 242	6.8L/Auto	22,000	15,140	26,000/4000	8000	15,000	3390	3462	6852
	6.8L/Auto	24,000	16,660	30,000/6000	9000	15,500	3542	3792	7334
	6.8L/Auto	26,000	18,650	30,000/4000	9000	17,500	3542	3804	7346
4x2 — 252	6.8L/Auto	24,000	16,610	30,000/6000	9000	15,500	3555	3826	7381
	6.8L/Auto	26,000	18,600	30,000/4000	9000	17,500	3572	3822	7394

(1) Load rating represents maximum allowable weight of people, cargo and body equipment and is reduced by optional equipment weight.

(2) Gross axle weight rating is determined by the rated capacity of the minimum component of the axle system (axle, springs, wheels, tires) of a specific vehicle. Front and rear GAWRs will, in all cases, sum to a number equal to or greater than the GVWR for the particular vehicle. Maximum loaded vehicle (including passengers, equipment and payload) cannot exceed the GVW rating or GAWR (front or rear).

(3) Base Curb Weights shown above consider the strip chassis weight with standard equipment, full fuel tank and all other fluids filled to capacity. Optional equipment weights are in pounds as follows: (Front/Total): 19.5" x 6.75" Tires and Wheels (available with 22,000-lb. GVWR only) (-39/-76); Track Bar Heavy-Duty Front Suspension (available with 16,000-lb. GVWR only) (32/32).

(4) Available FGAWR 7500 lbs.

NOTE: Refer to page 93 for Standard Powertrain/Chassis Equipment Specifications.

F53 Chassis Cab/
F59 Commercial Chassis

2016

F53 Super Duty Motorhome Chassis

Standard Powertrain/Chassis Equipment Specifications

F53 Class A Motorhome Chassis⁽¹⁾

DRIVE:		4x2
POWERTRAIN:		
Engine	— Application	50 States
	— Type	6.8L V10 (Includes Cooler)
Transmission	— Type	TorqShift® HD 6-speed Automatic with Tow/Haul mode
	— Speeds	5-speed Overdrive
AXLES:		
Front Axle	— Type	Forged I-beam
	— Capacity (Rating @ Ground)	8000 lbs. with 16,000-lb. to 22,000-lb. GVWR; 9000 lbs. with 24,000-lb. and 26,000-lb. GVWR
	— King Pin Angle	5.5° (16,000-lb., 22,000-lb. GVWR); 6.5° (24,000-lb., 26,000-lb. GVWR)
	— Caster Angle	4.6° (16,000-lb., 22,000-lb. GVWR); 4.25° (24,000-lb., 26,000-lb. GVWR)
Rear Axle	— Type — Full-floating	Full-floating, Dana
	— Capacity (Rating @ Ground)	12,000 lbs. with 16,000-lb. to 18,000-lb. GVWR, 13,500 lbs. with 20,500-lb. GVWR, 15,000 lbs. with 22,000-lb. GVWR, 17,500 lbs. with 24,000-lb. to 26,000-lb. GVWR
	— Axle Ratio	4.30 (16,000-lb. and 18,000-lb. GVWR); 5.38 (20,500-lb. and 22,000-lb. GVWR); 6.17 (24,000-lb. and 26,000-lb. GVWR)
BRAKES:		
Front/Rear Disc	— Type	Dual Piston Pin Slider Calipers, Bolt-on Adapters, Wraparound Tie Bars (Exc. 66 Rear)
	— Rotor Diameter—Front/Rear	15.55" (16,000-lb. to 22,000-lb. GVWR) 15.0" (24,000-lb., 26,000-lb. GVWR)
Power Assist Unit	— Type	Hydro-Boost, 8.19 Boost Ratio (16,000-lb., 18,000-lb. GVWR); Hydro Max, 21.1 Boost Ratio (20,500-lb. to 26,000-lb. GVWR)
Anti-lock System		4-wheel, 3-sensor/3-channel (16,000-lb., 18,000-lb. GVWR); 4-sensor/4-channel (20,500-lb. to 26,000-lb. GVWR)
Parking Brake (Driveline Drum)		Foot-operated, Hand Release
ELECTRICAL:		
Alternator	— Rating	175 Amperes, 2360 Watt ⁽²⁾
Battery	— Type	Maintenance-free
	— Rating	78 Amp-hr., 750 CCA
	— Type	L.H. Forward-of-Rear-Axle Exhaust Exit
EXHAUST SYSTEM:		
FUEL TANK:	— Location/Capacity	Aft-of-Rear-Axle (Left-hand Side Fuel Fill)/80.0 Gal. (303.2 L)
STEERING:		
	— Type	Power, TRW, TAS 40 Gear (Includes Cooler) (16,000-lb. to 22,000-lb. GVWR) TAS 55 (24,000-lb. to 26,000-lb. GVWR)
	— Ratio	18.4:1 (16,000-lb. to 26,000-lb. GVWR)
	— Wheel	17.5" diameter
SUSPENSION:		
Frame	— Type	Ladder-type, Single-channel, 36,000 psi Steel (16,000-lb. to 22,000-lb. GVWR); 50,000 psi Steel (24,000-lb., 26,000-lb. GVWR)
	— Section Modulus	9.46 cu. in.
Jounce Bumpers		Front, Variable-rate
Springs, Front	— Type	Parabolic Leaf Spring, Single-stage, Constant Rate
	— Rating @ Ground (min.)	Refer to page 96 for usage and ratings
Springs, Rear	— Type	Parabolic Leaf Spring, Single-stage, Constant Rate
	— Rating @ Ground (min.)	Refer to page 96 for usage and ratings
Shock Absorbers	— Gas-pressurized, Front/Rear	Bilstein 1.63"
Stabilizer Bars		38.1 mm Front, 35.7 mm Rear 16,000-lb. to 22,000-lb. GVWR; 38.1 mm Rear 24,000-lb. to 26,000-lb. GVWR
Track Bar		Front (Standard on 18,000-lb. to 26,000-lb. GVWR; optional on 16,000-lb. GVWR)
TIRES:		
	— Type	Steel-belted Radial, Highway, BSW
	— Size	Six 245/70R19.5G on 16,000-lb., 18,000-lb. and 20,500-lb. GVWR; six 235/80R22.5G standard on 22,000-lb. GVWR (six 245/70R19.5G optional); six 255/80R22.5G on 24,000-lb. and 26,000-lb. GVWR
WHEELS:	— Type and Size	19.5" x 6.75" Steel with 16,000-lb. to 20,500-lb. GVWR, six, 8-hole Disc, 22.5" x 7.5" with 22,000-lb., 24,000-lb., 26,000-lb. GVWR — Polished Aluminum Front and Outer Rear with Steel Inner Rear ⁽³⁾

(1) Includes Electronic Speed Control/Tilt Steering Wheel, Tachometer, 17.5" Black Urethane Steering Wheel, Trailer Tow Prep Wiring and Air Conditioning Prep Package (non-precharged). Shipped with a dunnage box that contains the following: Glove Compartment Bag, Tire Warranty and Warranty Facts Booklet, Incomplete Vehicle and owner manual, Rating Plate, Instrument Cluster, Labels/Decals/Tags, Fuel Filler (Hose, Cap, Pipe Assembly, Support, Vent Hose), Wheel Nut Wrench (with spare tire option only), Horn Pad, Dual Electric Horns and Bracket Assembly, Headlight Switch and Knob Assembly, Daytime Running Light Harness.

(2) 175-amp output based on cold performance at 80° F. Actual output is temperature and application dependent.

(3) No spare tire/wheel included with 22.5" wheels.

NOTE: Refer to page 92 for Standard Weight Rating Specifications (GVWR/Payload/GCWR and Trailer Weight/GAWR/Base Curb Weight).

F53 Super Duty Motorhome Chassis

Technical Specifications

2016

Axles

FRONT AXLE SPECIFICATIONS

Type	Forged I-beam		
GVWR (lbs.)	16,000/18,000/22,000	24,000-26,000	
Max. Rating @ Ground (lbs.)	8000	9000	
Axle	— Type Monobeam		
	— Material Forged Steel		
	— Spring Centers (in.)	41.87	38.88
Ball Joint	Zirked		
Spindle	— Material Nodular Cast-iron Body with Forged Steel Stem		
Wheel Bearings	— Type Tapered Roller		

REAR AXLE SPECIFICATIONS

GVWR (lbs.)	16,000/18,000	20,500	22,000	24,000/26,000
Make (Standard)	Dana 80	Dana S110	Dana S130	Dana 17060S
Max. Rating @ Ground (lbs.)	12,000	13,500	15,000	17,500
Type	Full-floating			
Driveline Attachment	1480			SPL90
Housing	— Type Cast Center Banjo, Cast Carrier			
	— Cover Attachment Bolted Welded			
Section	— Tube Dia. (in.) 4.00 4.33 x 4.26 5.27 x 4.60			
Synthetic Lubricant Capacity (pt.)	8.875	13.6	32.0	
Spring Centers (in.)	42.48	42.48	42.48	42.48
Wheel Bearings	— Type Tapered Roller			
Gears	— Type Hypoid			
	— Material Alloy Steel			
Ring Gear	— Pitch Dia. (in.) 11.26		12.2	15.4
Pinion	— Mounting Overhung			Straddle Mount
Differential	— Type 2-pinion 4-pinion			
Axle Shaft	— Spline Minor Dia. (in.) 1.50 1.56 1.61 1.81			
	— Spline Major Dia. (in.) 1.57 1.75 1.85 2.0			
	— No. of Splines (Hub End) 37 34 36 39			

Brakes

HYDRAULIC BRAKE EQUIPMENT SPECIFICATIONS — FRONT/REAR DISC

Type	Axle Usage (lbs.)	Rotor Diameter (in.)		Brake Lining Segment	Area (sq. in.)/ Width (in.)/ Thickness (in.)	Caliper Piston No. Dia. (in.)	Gross Lining Area per Axle (sq. in.)	Total Swept Area per Axle (sq. in.)
		OD	ID					
Front Disc	8000	15.55	10.62	Outboard	13.9/1.81/0.47	Dual/2.36	55.6	361.9
				Inboard	13.9/1.81/0.47			
	9000	15.0	10.12	Outboard	20.4/2.32/0.74	Dual/2.87	81.6	366.6
				Inboard	20.4/2.32/0.74			
Rear Disc	12,000/13,500/ 15,000	15.55	10.62	Outboard	13.9/1.81/0.47	Dual/2.36	55.6	361.9
				Inboard	13.9/1.81/0.47			
	17,500	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			

BRAKE MASTER CYLINDER SPECIFICATIONS

Type	Usage (lbs.)	Bore Dia. (in.)
Dual System, Dash-mounted	16,000, 18,000 GVWR	1.375
	20,500, 22,000, 24,000, 26,000 GVWR	2.0

BRAKE BOOSTER SPECIFICATIONS

Make/Type	Usage (lbs.)	Booster Type	Boost Ratio
Dash-mounted	16,000, 18,000 GVWR	Hydro Boost	8.19
	20,500, 22,000, 24,000, 26,000 GVWR	Hydro Max	21.1

2016

F53 Super Duty Motorhome Chassis

Technical Specifications cont'd

Cooling Systems

COOLING SYSTEM SPECIFICATIONS

Engine	Cooling	Trans. Usage	Radiator						Cooling System Capacity (liters)	Fan Specifications			
			Frontal Area (sq. in.)	Core Size (in.)			Rows of Tubes	Fins Per Inch		In-Tank Trans Cooler	Type	No. of Blades	Blade Dia. (in.)
				Height	Width	Thick.							
6.8L (415) 3V SEFI V10	Standard	All	857	28.4	30.19	1.42	1	17.8	27.5 (26)	Standard	Plastic	8	20.0

AUXILIARY AUTOMATIC TRANSMISSION OIL COOLER APPLICATIONS

Engine	Transmission	Cooler — No. of Plates
6.8L (415) 3V SEFI V10	6-speed Automatic Overdrive	33

Fuel System

FUEL SYSTEM DATA

Electronic Fuel Injection	Sequential Multiport Fuel Injection
Fuel Pump	Single Electric-in-tank High Pressure
Fuel Filter	In-tank Large Capacity (One)
Air Cleaner	Dry Element, Replaceable

Steering

STEERING SPECIFICATIONS

Wheelbase (in.)	Power Steering ⁽¹⁾		Turning Diameter (ft.)		
	Gear Ratio		Curb-to-Curb		
			16,000-lb. to 22,000-lb. GVWR w/19.5" wheels	22,000-lb. GVWR w/22.5" wheels	24,000-lb. to 26,000-lb. GVWR w/22.5" wheels
158.0	18.4:1		45.4	—	—
178.0	18.4:1		49.7	—	—
190.0	18.4:1		52.2	—	—
208.0	18.4:1		56.1	63.7	—
228.0	18.4:1		60.3	68.6	60.6
242.0	18.4:1		63.3	72.0	66.8
252.0	18.4:1		—	—	69.5

(1) Power steering fluid cooler is standard.

Suspensions

FRAME SPECIFICATIONS

Wheelbase (in.)	No. of Crossmembers	Maximum Side Rail Section (Height x Width x Thickness) (in.) ⁽¹⁾	Section Modulus (cu. in.)	16K–22K Yield Strength (psi)	24K–26K Yield Strength (psi)
158.0	7	9.16 x 3.00 x .025	9.46	36,000	—
178.0	7	9.16 x 3.00 x .025	9.46	36,000	—
190.0	7	9.16 x 3.00 x .025	9.46	36,000	—
208.0	8	9.16 x 3.00 x .025	9.46	36,000	—
228.0	9	9.16 x 3.00 x .025	9.46	36,000	50,000
242.0	9	9.16 x 3.00 x .025	9.46	36,000	50,000
252.0	9	9.16 x 3.00 x .025	9.46	—	50,000

(1) Measured to inside of metal.

SHOCK ABSORBER SPECIFICATIONS

Type	Usage	Front			Rear		
		No. Used	Piston Dia. (in.)	Type	No. Used	Piston Dia. (in.)	Type
Bilstein	Std.	2	1.63	Gas-pressurized	2	1.63	Gas-pressurized

F53 Chassis Cab/
F59 Commercial Chassis

F53 Super Duty Motorhome Chassis

Technical Specifications cont'd

2016

Suspensions cont'd

SPRING SPECIFICATIONS — FRONT LEAF

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Overall Length (in.)	Width (in.)	Deflection Rate ⁽¹⁾ (lbs. per in./spring)
7000	2	3.38	63.00	4.00	550
7500	2	3.38	63.00	4.00	650
8000	2	3.47	63.00	4.00	693
9000	3	3.31	63.00	3.00	750

(1) Single-stage, constant rate springs.

SPRING SPECIFICATIONS — REAR LEAF

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Overall Length (in.)	Width (in.)	Deflection Rate ⁽¹⁾ (lbs. per in./spring)
11,000	3	3.88 (w/Spacer)	64.00	4.00	950
12,000	3	3.88 (w/Spacer)	64.00	4.00	1120
13,500	3	2.44 (w/o Spacer)	64.00	4.00	1350
15,000	3	2.48 (w/o Spacer)	64.00	4.00	1350
15,500	4	3.31 (w/o Spacer)	64.00	4.00	1700
17,500	4	3.31 (w/o Spacer)	64.00	4.00	1850

(1) Single-stage, constant rate springs.

Tires and Wheels

TIRE SPECIFICATIONS

Size	Tread Type & Sidewall	Tire Manufacturer	Rim Width (in.)	Section Width (in.) ⁽¹⁾	Ply/Load Rating	Inflation Press. (psi)	Load Limits @ Max. Inflation Press. (lbs.)	Static Loaded Radius (in.)	SAE Revolutions per Mile @ 45 mph
245/70Rx19.5	Highway-BSW	Goodyear	6.75	9.94	12/G	95 ⁽²⁾	3890/3655	15.30	633
235/80Rx22.5	Highway-BSW	Michelin	7.5	9.2	14/G	90	4140/3765	17.40	556
255/80Rx22.5	Highway-BSW	Michelin	7.5	9.9	14/G	100	4975/4525	17.90	541

(1) Tire and rim maximum width.

(2) 16,000-lb.–20,500-lb. GVWR = 82 psi, 20,500-lb. GVWR with 7500-lb. FGAWR and 22,000-lb. GVWR = 95 psi.

WHEEL SPECIFICATIONS

Wheel Type	Wheel Size	Nominal Offset (in.)	No. of Studs	Bolt Circle mm (in.)	Max. Wheel Capacity Load (lbs. @ ground)
Steel	19.5" x 6.75" RW	5.50	10	225 (8.85)	4000
Polished Aluminum (Front/Outer Rear)	22.5" x 7.5" RW	6.28	8	275 (10.83)	7300
Steel (Inner Rear)	22.5" x 7.5" RW	6.20	8	275 (10.83)	5000

2016

F53 Super Duty Motorhome Chassis

Technical Specifications cont'd

Transmission

AUTOMATIC TRANSMISSION SPECIFICATIONS

Make/Type	TorqShift HD 6-Speed 6R140 Automatic with Tow/Haul Mode
Ratios (to 1):	
1st	3.974
2nd	2.318
3rd	1.516
4th	1.149
5th	0.858
6th	0.674
Reverse	3.128
Fluid Capacity (qts.)	17.4
Oil Cooler	Oil to Air and In-tank
Oil Filter	Internal

F59 Super Duty Commercial Chassis Cab

Dimensions

2016

F59 Commercial Chassis Cab⁽¹⁾

Wheelbase (in.)	158.3	178.2	208.3
GVWR (lbs.)	16,000	16,000	19,500
Code Description (in.)			
A	Front Overhang	36.3	36.3
B	Rear Overhang	105.8	105.8
C	Overall Length	300.1	320.1
D	Front Frame Width	41.9	41.9
E	Rear Frame Width	34.0	34.0
F	Tire Outside Width (Front)	90.5	90.5
G	Tire Outside Width (Rear Inner)	72.4	72.4
H	Tire Center Width (Rear)	74.0	73.3
I	Tire Outside Width (Rear Outer)	94.0	94.0
J	Frame Front Section Height	7.5	7.5
K	Frame Height @ Front Wheel	28.3	30.5
L	Frame Rear Section Height	9.2	9.2
M	Frame Height @ Rear Axle	31.6	34.1

(1) Dimensions @ GVWR.

F59 Commercial Chassis Cab⁽¹⁾

Wheelbase (in.)	158.3/ 168.0⁽²⁾	178.3/190.3	208.3
GVWR (lbs.)	19,500	19,500	22,000
Code Description (in.)			
A	Front Overhang	36.3	36.3
B	Rear Overhang	105.8	105.8
C	Overall Length	300.1/ 310.1	320.1/332.1
D	Front Frame Width	41.9	41.9
E	Rear Frame Width	34.0	34.0
F	Tire Outside Width (Front)	90.5	91.6
G	Tire Outside Width (Rear Inner)	72.4	72.8
H	Tire Center Width (Rear)	74.0	73.3
I	Tire Outside Width (Rear Outer)	94.0	95.4
J	Frame Front Section Height	7.5	7.5
K	Frame Height @ Front Wheel	31.9	34.75
L	Frame Rear Section Height	9.2	9.2
M	Frame Height @ Rear Axle	34.6	39.1

(1) Dimensions @ Stripped Chassis.

(2) Parcel Delivery Van Package only.

F53 Chassis Cab/
F59 Commercial Chassis

2016

F59 Super Duty Commercial Chassis Cab Model/Weight Ratings

F59 Commercial Stripped Chassis – GVWR/Payload/GCWR & Trailer Weight/ GAWR/Base Curb Weight

Drive/WB (in.)	Engine/ Transmission	Maximum GVWR (lbs.)	Maximum Payload (lbs.) ⁽¹⁾	Maximum GCWR/ Trailer Weight (lbs.)	GAWR (lbs.) ⁽²⁾		Base Curb Weight (lbs.) ⁽³⁾		
					Front	Rear	Front	Rear	Total
4x2 – 158	6.8L/Auto	16,000	10,080	23,000/7000	6500	11,000	3054	2857	5911
	6.8L/Auto	19,500	13,480	26,000/6500	7000	13,500	3197	2821	6018
4x2 – 168⁽⁴⁾	6.8L/Auto	19,500	13,470	27,200/7700	7000	13,500	3198	2828	6026
4x2 – 178	6.8L/Auto	16,000	10,050	23,000/7000	6500	11,000	3191	2754	5945
	6.8L/Auto	19,500	13,460	26,000/6500	7000	13,500	3198	2835	6033
4x2 – 190	6.8L/Auto	19,500	13,400	26,000/6500	7000	13,500	3209	2887	6096
4x2 – 208	6.8L/Auto	19,500	13,310	26,000/6500	7000	13,500	3227	2962	6189
	6.8L/Auto	22,000	15,610	26,000/4000	8000	15,000	3276	3112	6388

- (1) Load rating represents maximum allowable weight of people, cargo and body equipment and is reduced by optional equipment weight.
 (2) Gross axle weight rating is determined by the rated capacity of the minimum component of the axle system (axle, springs, wheels, tires) of a specific vehicle. Front and rear GAWRs will, in all cases, sum to a number equal to or greater than the GVWR for the particular vehicle. Maximum loaded vehicle (including passengers, equipment and payload) cannot exceed the GVW rating or GAWR (front or rear).
 (3) Base curb weights shown above consider the strip chassis weight with standard equipment, full fuel tank and all other fluids filled to capacity. Available equipment weights are in pounds as follows: (Front/Total): Pull Out Ramp Prep Package (available with 208" wheelbase only) (50/85).
(4) Parcel Delivery Van Package only.

F59 Super Duty Commercial Chassis Cab

Standard Powertrain/Chassis Equipment Specifications

2016

F53 Chassis Cab/
F59 Commercial Chassis

F59 Commercial Stripped Chassis

DRIVE:		4x2
POWERTRAIN:		
Engine	— Application	50 States
	— Type	6.8L V10
Transmission	— Type	TorqShift 6-speed Automatic with Tow/Haul Feature
	— Speeds	6-speed Overdrive
AXLES:		
Front Axle	— Type	Forged Steel I-beam
	— Capacity (Rating @ Ground)	8000 lbs.
	— Kingpin Angle	5.5°
	— Caster Angle	4.6°
Rear Axle	— Type — Full-floating	Full-floating
	— Capacity (Rating @ Ground)	12,000 lbs. (16,000-lb. GVWR), 13,500 lbs. (19,500-lb. GVWR) and 15,000 lbs. (22,000-lb. GVWR)
	— Axle Ratio	4.30 (16,000-lb. GVWR), 4.88 (19,500-lb. GVWR), 5.38 (22,000-lb. GVWR)
BRAKES:		
Front/Rear Disc	— Type	Dual Piston Pin Slider Calipers, Bolt-on Adaptors, Wraparound Tie Bars
	— Rotor Diameter—Front/Rear	15.55"
Power Assist Unit	— Type	Hydro-Boost (16,000-lb. and 19,500-lb. GVWR); Hydro Max (22,000-lb. GVWR)
Anti-lock System		4-wheel, 3-sensors/3-channel (16,000-lb. and 19,500-lb. GVWR); 4-wheel, 4-sensors/4-channel (22,000-lb. GVWR)
Parking Brake (Driveline Drum)		Trans-mounted, Foot-operated, Hand Release
ELECTRICAL:		
Alternator	— Rating	175 Amperes, 2360 Watt
Battery	— Type	Maintenance-free
	— Rating	78 Amp-hr., 750 CCA
	— Type	L.H. Forward-of-Rear-Axle Exhaust Exit
EXHAUST SYSTEM:		
FUEL TANK:	— Location/Capacity	Aft-of-Rear-Axle (Left-hand Side Fuel Fill)/40-gallon
STEERING:		
	— Type	Power, TRW, TAS 40 Gear (Includes Cooler)
	— Ratio	18.4:1
	— Wheel	17.5" diameter
SUSPENSION:		
Frame	— Type	Ladder-type, Single-channel, 36,000 psi Steel
	— Section Modulus	9.46 cu. in.
Jounce Bumpers		Front, Variable Rate
Springs, Front	— Type	Parabolic Leaf Spring, Single-stage, Constant Rate
	— Rating @ Ground (min.)	Refer to page 103 for usage and ratings
Springs, Rear	— Type	Parabolic Leaf Spring, Single-stage, Constant Rate
	— Rating @ Ground (min.)	Refer to page 103 for usage and ratings
Shock Absorbers	— Type/Size (Dia.)	Gas-pressurized (Front/Rear)/2.20" Sachs Twin-Tube
Stabilizer Bars		38.1 mm Front/35.7 mm Rear
TIRES:		
	— Type	Steel-belted Radial, Highway, BSW
	— Size	Six, 225/70R19.5G (16,000-lb. and 19,500-lb. GVWR); six 245/70R19.5G (22,000-lb. GVWR)
WHEELS:		
	— Type and Size	Six, 10-hole Disc, 19.5" x 6.0" (16,000-lb. and 19,500-lb. GVWR); Six, 10-hole Disc, 19.5" x 6.75" (22,000-lb. GVWR)

NOTE: Refer to page 99 for Standard Weight Rating Specifications (GVWR/Payload/GCWR and Trailer Weight/GAWR/Base Curb Weight).

F59 Super Duty Commercial Chassis Cab Technical Specifications

Axles

FRONT AXLE SPECIFICATIONS

Make		Westport
GVWR (lbs.)		16,000/19,500/22,000
Max. Rating @ Ground (lbs.)		8000
Axle	— Type	Monobeam
	— Material	Forged Steel
	— Spring Centers (in.)	41.87
Ball Joint		Zirked
Spindle	— Material	Nodular Cast-iron Body with Forged Steel Stem
Wheel Bearings	— Type	Tapered Roller

REAR AXLE SPECIFICATIONS

GVWR (lbs.)		16,000	19,500	22,000
Make (Standard)		Dana 80	Dana S110	Dana S130
Max. Rating @ Ground (lbs.)		12,000	13,500	15,000
Type		Full-floating		
Driveline Attachment		1480		
Housing	— Type	Cast Center	Stamped Banjo, Cast Carrier	
	— Cover Attachment	Bolted	Welded	
Section	— Tube Dia. (in.)	4.00	4.33 x 4.26	
Synthetic Lubricant Capacity (pt.)		8.875	13.6	13.6
Spring Centers (in.)		42.48		
Wheel Bearings	— Type	Tapered Roller		
Gears	— Type	Hypoid		
	— Material	Alloy Steel		
Ring Gear	— Pitch Dia. (in.)	11.26	12.2	12.2
Pinion	— Mounting	Overhung		
Differential	— Type	2-pinion		4-pinion
Axle Shaft	— Spline Minor Dia. (in.)	1.50	1.56	1.61
	— Spline Major Dia. (in.)	1.57	1.75	1.85
	— No. of Splines (Hub End)	37	34	36

Brakes

HYDRAULIC BRAKE EQUIPMENT SPECIFICATIONS — FRONT/REAR DISC

Type	Axle Usage (lbs.)	Rotor Diameter (in.)		Brake Lining Segment	Area (sq. in.)/ Width (in.)/ Thickness (in.)	Caliper Piston No. Dia. (in.)	Gross Lining Area per Axle (sq. in.)	Total Swept Area per Axle (sq. in.)
		OD	ID					
Front Disc	8000	15.55	10.62	Outboard	13.9/1.81/0.47	Dual/2.36	55.6	361.9
				Inboard	13.9/1.81/0.47			
Rear Disc	12,000/13,500/ 15,000	15.55	10.62	Outboard	13.9/1.81/0.47	Dual/2.36	55.6	361.9
				Inboard	13.9/1.81/0.47			

BRAKE MASTER CYLINDER SPECIFICATIONS

Make/Type	Usage (lbs.)	Bore Diameter (in.)
Dual System	16,000, 19,500	1.375
	22,000	2.0

BRAKE BOOSTER SPECIFICATIONS

Make/Type	Usage (lbs.)	Booster Type	Boost Ratio
Dash-mounted	16,000/19,500	Hydro Boost	8.19
	22,000	Hydro Max	21.1

F59 Super Duty Commercial Chassis Cab

Technical Specifications cont'd

2016

Cooling Systems

COOLING SYSTEM SPECIFICATIONS

Engine	Cooling	Trans. Usage	Radiator						Cooling System Capacity (liters)	Fan Specifications			
			Frontal Area (sq. in.)	Height	Width	Thick.	Rows of Tubes	Fins per Inch		In-Tank Trans Cooler	Type	No. of Blades	Blade Dia. (in.)
6.8L 3V SEFI V10	Standard	All	857	28.4	30.19	1.42	1	17.8	27.5 (26)	Standard	Plastic	8	20.0

AUXILIARY AUTOMATIC TRANSMISSION OIL COOLER APPLICATIONS

Engine	Transmission	Cooler—No. of Plates
6.8L 3V V10	6-speed Automatic Overdrive	33

Fuel System

FUEL SYSTEM DATA

Electronic Fuel Injection	Sequential Multiport Fuel Injection
Fuel Pump	Single Electric-in-tank High Pressure
Fuel Filter	In-tank Large Capacity (One)
Air Cleaner	Dry Element, Replaceable

Steering

STEERING SPECIFICATIONS

Wheelbase (in.)	Power Steering ⁽¹⁾	Turning Diameter (ft.)
	Gear Ratio	Curb-to-Curb
158.0	18.4:1	45.4
168.0⁽²⁾	18.4:1	48.3
178.0	18.4:1	49.7
190.0	18.4:1	52.2
208.0	18.4:1	56.1

(1) Power steering fluid cooler is standard.

(2) **Parcel Delivery Van Package only.**

Suspensions

FRAME SPECIFICATIONS

Wheelbase (in.)	No. of Crossmembers	Maximum Side Rail Section (Height x Width x Thickness) (in.) ⁽¹⁾	Section Modulus (cu. in.)	Yield Strength (psi)
158.0	8	9.16 x 3.00 x 0.25	9.46	36,000
168.0⁽²⁾	8	9.16 x 3.00 x 0.25	9.46	36,000
178.0	8	9.16 x 3.00 x 0.25	9.46	36,000
190.0	8	9.16 x 3.00 x 0.25	9.46	36,000
208.0	9	9.16 x 3.00 x 0.25	9.46	36,000

(1) Measured to inside of metal.

(2) **Parcel Delivery Van Package only.**

SHOCK ABSORBER SPECIFICATIONS

Type	Usage	Front			Rear		
		No. Used	Piston Dia. (in.)	Type	No. Used	Piston Dia. (in.)	Type
Sachs Twin-Tube	Std.	2	2.20	Gas-pressurized	2	2.20	Gas-pressurized

F59 Super Duty Commercial Chassis Cab Technical Specifications cont'd

Suspensions cont'd

SPRING SPECIFICATIONS — FRONT LEAF

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Overall Length (in.)	Width (in.)	Deflection Rate ⁽¹⁾ (lbs. per in./spring)
6500	2	2.73	63.00	4.00	510
8000	2	2.73	63.00	4.00	585

(1) Single-stage, constant rate springs.

SPRING SPECIFICATIONS — REAR LEAF

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Overall Length (in.)	Width (in.)	Deflection Rate ⁽¹⁾ (lbs. per in./spring)
12,000	2	3.82	64.00	4.00	1425
15,000	3	3.07	64.00	4.00	1850

(1) Single-stage, constant rate springs.

Tires and Wheels

TIRE SPECIFICATIONS

Size	Tread Type & Sidewall	Tire Manufacturer	Rim Width (in.)	Section Width (in.) ⁽¹⁾	Ply/Load Rating	Inflation Press. (psi)	Load Limits @ Max. Inflation Press. (lbs.)	Static Loaded Radius (in.)	SAE Revolutions per Mile @ 45 mph
225/70R _x 19.5	Highway-BSW	Continental	6.0	8.22	14/G	85-100 ⁽²⁾	3640/3490	14.96	647
245/70R _x 19.5	Highway-BSW	Goodyear	6.75	9.94	12/G	95 ⁽²⁾	3890/3655	15.30	633

(1) Tire and rim maximum width.

(2) 16,000 GVWR = 85 psi, 19,500 GVWR = 95 psi (front) and 100 psi (rear).

WHEEL SPECIFICATIONS

Wheel Type	Wheel Size	Nominal Offset (in.)	No. of Studs	Bolt Circle mm (in.)	Max. Wheel Capacity Load (lbs. @ ground)
Steel	19.5" x 6.0" RW	5.35	10	225 (8.85)	3750
Steel	19.5" x 6.75" RW	5.50	10	225 (8.85)	4000

F59 Super Duty Commercial Chassis Cab

Technical Specifications cont'd

2016

Transmission

AUTOMATIC TRANSMISSION SPECIFICATIONS

Make/Type	TorqShift <i>HD 6-speed</i> Automatic Overdrive
Ratios (to 1):	
1st	3.974
2nd	2.318
3rd	1.516
4th	1.149
5th	0.858
6th	0.674
Reverse	3.128
Fluid Capacity (qts.)	17.4
Oil Cooler	Oil to Air and In-tank
Oil Filter	Internal