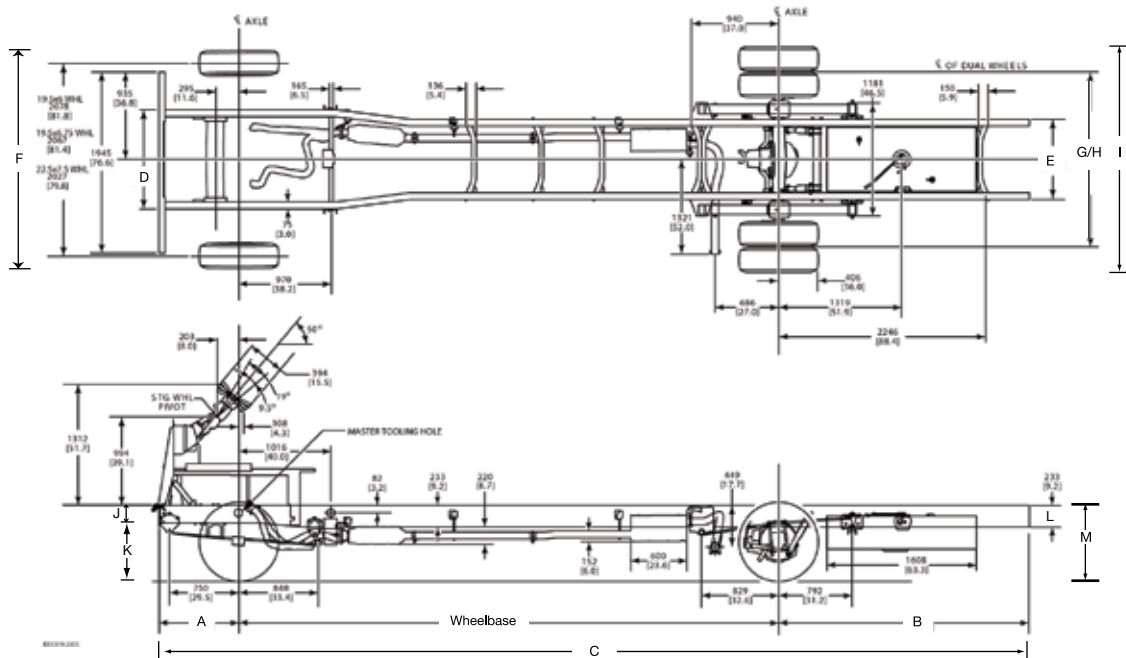


F53 Super Duty Motorhome Chassis Dimensions

2012



F53 Class A Motorhome Chassis⁽¹⁾

GVWR (lbs.)	16,000	16,000	16,000	18,000	18,000	18,000	18,000	20,500	20,500
Wheelbase (in.)	158.3	178.3	190.3	178.2	190.2	208.2	228.2	208.1	228.1
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)	90.5	90.5	90.5	91.6	91.6	91.6	91.6	91.6	91.6
G Tire Outside Width (Rear Inner)	72.4	72.4	72.4	73.1	73.1	73.1	73.1	73.1	73.1
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)	94.0	94.0	94.0	94.8	94.8	94.8	94.8	94.8	94.8
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

GVWR (lbs.)	22,000	22,000	22,000	24,000	24,000	26,000	26,000
Wheelbase (in.)	208.3	228.3	242.3	242.3	252.3	242.3	252.3
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.

June 2011

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RE&T: 2012 Source Book

F53 Chassis Cab/
F59 Commercial Chassis

2012

F53 Super Duty Motorhome Chassis *Dimensions*

F53 Class A Motorhome Chassis⁽¹⁾

GVWR (lbs.)	16,000	16,000	16,000	18,000	18,000	18,000	18,000	20,500	20,500
Wheelbase (in.)	159.1	179.1	191.1	179.1	191.1	209.1	229.1	209.1	229.1
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)	90.5	90.5	90.5	91.6	91.6	91.6	91.6	91.6	91.6
G Tire Outside Width (Rear Inner)	72.4	72.4	72.4	73.1	73.1	73.1	73.1	73.1	73.1
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)	94.0	94.0	94.0	94.8	94.8	94.8	94.8	94.8	94.8
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	31.9	31.9	31.9	32.2	32.2	32.2	32.2	32.6	32.6
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	34.6	34.6	34.6	34.9	34.9	34.9	34.9	35.4	35.4

GVWR (lbs.)	22,000	22,000	22,000	24,000	24,000	26,000	26,000
Wheelbase (in.)	209.1	229.1	243.1	243.5	253.5	243.5	253.5
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	34.75	34.75	34.75	35.6	35.6	35.6	35.6
L Frame Rear Section Height	9.2	9.2	9.2	9.2	9.2	9.2	9.2
M Frame Height @ Rear Axle	39.1	39.1	39.1	38.75	38.75	38.75	38.75

(1) Dimensions @ Strip Chassis.

F53 Super Duty Motorhome Chassis

Models/Weight Ratings

2012

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

Drive/WB (in.)	Engine/ Trans.	Maximum GVWR (lbs.)	Maximum Payload (lbs.) ⁽¹⁾	Maximum GCWR/Trailer Weight (lbs.)	GAWR (lbs.) ⁽²⁾		Base Strip Chassis Weight (lbs.) ⁽³⁾		
					Front	Rear	Front	Rear	Total
4x2 — 158	6.8L/Auto	16,000	9819	23,000/7000	6500	11,000	2948	3233	6181
4x2 — 178	6.8L/Auto	16,000	9804	23,000/7000	6500	11,000	2995	3201	6196
	6.8L/Auto	18,000	11,780	23,000/5000	7000	12,000	3054	3166	6220
4x2 — 190	6.8L/Auto	16,000	9795	23,000/7000	6500	11,000	3023	3182	6205
	6.8L/Auto	18,000	11,724	23,000/5000	7000	12,000	3096	3180	6276
4x2 — 208	6.8L/Auto	18,000	11,657	23,000/5000	7000	12,000	3150	3193	6343
	6.8L/Auto	20,500	14,027	26,000/5500	7000	13,500	3193	3280	6473
	6.8L/Auto	22,000	15,353	26,000/4000	8000	15,000	3247	3400	6647
4x2 — 228	6.8L/Auto	18,000	11,583	23,000/5000	7000	12,000	3210	3207	6417
	6.8L/Auto	20,500	13,953	26,000/5500	7000	13,500	3253	3294	6547
	6.8L/Auto	22,000	15,268	26,000/4000	8000	15,000	3306	3426	6732
	6.8L/Auto	24,000	17,078	30,000/6000	9000	15,500	3370	3552	6922
	6.8L/Auto	26,000	19,073	30,000/4000	9000	17,500	3370	3557	6927
4x2 — 242	6.8L/Auto	22,000	15,208	26,000/4000	8000	15,000	3347	3445	6792
	6.8L/Auto	24,000	17,018	30,000/6000	9000	15,500	3411	3571	6982
	6.8L/Auto	26,000	19,013	30,000/4000	9000	17,500	3411	3576	6987
4x2 — 252	6.8L/Auto	24,000	16,976	30,000/6000	9000	15,500	3440	3584	7024
	6.8L/Auto	26,000	18,970	30,000/4000	9000	17,500	3440	3590	7030

(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) Optional equipment weights are in pounds as follows (Front/Total): 19.5" x 6.75" Tires & Wheels (optional with 22,000-lb. GVWR only) (-28/-84); Track Bar Heavy Duty Front Suspension (71/71) (optional with 16,000-lb. GVWR only).

NOTE: Refer to page 83 for Standard Powertrain/Chassis Equipment Specifications.

F53 Chassis Cab/
F59 Commercial Chassis

2012

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 (415 CID) 3V SEFI V10 (Includes Cooler)
Transmission	— Type TorqShift® Automatic with Tow/Haul Feature (Includes Auxiliary Cooler) — Speeds 5-speed Overdrive
AXLES:	
Front Axle	— Type Forged I-beam — Capacity (Rating @ Ground) 8000 lbs. with 16,000–22,000-lb. GVWR; 9000-lbs. with 24,000 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 16,000–18,000-lb. GVWR, 13,500 lbs. with 20,500-lb. GVWR, 15,000 lbs. with 22,000-lb. GVWR, 17,500 lbs. with 24,000–26,000-lb. GVWR — Axle Ratio 4.88 (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
EXHAUST SYSTEM:	— Type L.H. Forward-of-Rear-Axle Exhaust Exit
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., – 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 82 for usage and ratings
Springs, Rear	— Type Parabolic Leaf Spring, Single-stage, Constant Rate — Rating @ Ground (min.) Refer to page 82 for usage and ratings
Shock Absorbers	— Gas-pressurized, Front/Rear Bilstein 1.80"
Stabilizer Bars	38.1mm Front, 35.7mm Rear 16,000–22,000-lb. GVWR; 38.1mm Rear 24,000–26,000-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, 225/70R19.5G on 16,000-lb. and 18,000-lb. GVWR; six 245/70R19.5F on 20,500-lb. GVWR; six 235/80R22.5G standard on 22,000-lb. GVWR (six 245/70R19.5F optional); six 255/80R22.5G on 24,000-lb. and 26,000-lb. GVWR
WHEELS:	— Type and Size Six, 10-hole Disc, 19.5" x 6" Steel (19.5" x 6.75" Steel with 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 Box Bag, Tire Warranty and Warranty Facts Booklet, Incomplete Vehicle and Owner Guide, 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 82 for Standard Weight Rating Specifications (GVWR/Payload/GCWR & Trailer Weight/Spring & GAWR/Base Curb Weight).

F53 Super Duty Motorhome Chassis

Technical Specifications

2012

Axles

FRONT AXLE SPECIFICATIONS

Make	Forged I-beam		
GVWR	16,000-22,000		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
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		
Differential	— Type	2-pinion	4-pinion	Straddle Mount
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			
	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

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F53 Super Duty Motorhome Chassis

Technical Specifications cont'd

Cooling Systems

COOLING SYSTEM SPECIFICATIONS

Engine	Cooling	Trans. Usage	Radiator						Cooling System Capacity qts. (liters)	In-Tank Trans Cooler	Fan Specifications		
			Frontal Area (sq. in.)	Core Size (in.)			Rows of Tubes	Fins Per Inch			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	5-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		
		16,000–22,000-lb. GVWR w/19.5" wheels	22,000-lb. GVWR w/22.5" wheels	24,000–26,000-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	24K–26K
				Yield Strength (psi)	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	1.80	Gas-pressurized	2	1.80	Gas-pressurized

F53 Super Duty Motorhome Chassis

Technical Specifications cont'd

2012

Suspensions cont'd

SPRING SPECIFICATIONS — FRONT LEAF

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	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 (lbs. per in./spring)
11,000	3	3.88 (w/Spacer)	64.0	4.00	950
12,000	3	3.88 (w/Spacer)	64.0	4.00	1120
13,500	3	2.44 (w/o Spacer)	64.0	4.00	1350
15,000	3	2.48 (w/o Spacer)	64.0	4.00	1350
15,500	4	3.31 (w/o Spacer)	64.0	4.00	1700
17,500	4	3.31 (w/o Spacer)	64.0	4.00	1850

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
225/70Rx19.5	Highway-BSW	Continental	6.0	8.22	14/G	85–100 ⁽²⁾	3640/3490	14.96	647
245/70Rx19.5	Highway-BSW	Goodyear	6.75	9.94	12/F	82–92 ⁽³⁾	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 GWR = 85 psi, 18,000 GVWR = 95 psi (front) and 100 psi (rear).

(3) 20,500 GVWR = 82 psi, 20,500 GVWR with 7500 FGAWR and 22,000 GVWR = 92 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 6.0" RW	5.35	10	225 (8.85)	3750
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

2012

F53 Super Duty Motorhome Chassis

Technical Specifications cont'd

Transmission

AUTOMATIC TRANSMISSION SPECIFICATIONS

Make/Type	Ford TorqShift® 5-Speed Automatic Overdrive
Ratios (to 1):	
1st	3.11
2nd	2.22
3rd	1.55
4th	1.00
5th	0.71
Reverse	2.88
Converter Torque Ratio @ WOT Stall	1.86
Fluid Capacity (qts.)	19.0
Gear Set	Spur
Oil Cooler	Oil to Air and In-tank
Oil Filter	Internal
Converter Size & Type	12" PCM Controlled Clutch Apply

F59 Super Duty Commercial Chassis Cab

Dimensions

2012

F59 Commercial Chassis Cab⁽¹⁾

Wheelbase (in.)	158.3	178.2	208.3
GVWR (lbs.)	16,000	19,500	22,000
Code Description (in.)			
A Front Overhang	36.3	36.3	36.3
B Rear Overhang	105.8	105.8	105.8
C Overall Length	300.1	320.1	350.1
D Front Frame Width	41.9	41.9	41.9
E Rear Frame Width	34.0	34.0	34.0
F Tire Outside Width (Front)	90.5	91.6	90.7
G Tire Outside Width (Rear Inner)	72.4	73.1	70.3
H Tire Center Width (Rear)	74.0	74.0	73.3
I Tire Outside Width (Rear Outer)	94.0	94.8	95.0
J Frame Front Section Height	7.5	7.5	7.5
K Frame Height @ Front Wheel	28.3	28.3	30.5
L Frame Rear Section Height	9.2	9.2	9.2
M Frame Height @ Rear Axle	31.6	30.8	34.1

(1) Dimensions @ GVWR.

F59 Commercial Chassis Cab⁽¹⁾

Wheelbase (in.)	159.1	179.1	209.1
GVWR (lbs.)	16,000	19,500	22,000
Code Description (in.)			
A Front Overhang	36.3	36.3	36.3
B Rear Overhang	105.8	105.8	105.8
C Overall Length	300.1	320.1	350.1
D Front Frame Width	41.9	41.9	41.9
E Rear Frame Width	34.0	34.0	34.0
F Tire Outside Width (Front)	90.5	91.6	90.7
G Tire Outside Width (Rear Inner)	72.4	73.1	70.3
H Tire Center Width (Rear)	74.0	74.0	73.3
I Tire Outside Width (Rear Outer)	94.0	94.8	95.0
J Frame Rail Height	7.5	7.5	7.5
K Frame Height @ Front Wheel	31.9	32.2	34.75
L Frame Rear Section Height	9.2	9.2	9.2
M Frame Height @ Rear Axle	34.6	34.9	39.1

(1) Dimensions @ Strip Chassis.

2012

F59 Super Duty Commercial Chassis Cab *Model/Weight Ratings*

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

Drive/WB (in.)	Engine/ Transmission	Maximum GVWR (lbs.)	Maximum Payload (lbs.) ⁽¹⁾	Maximum GCWR/ Trailer Weight (lbs.)	GAWR (lbs) ⁽²⁾		Base Strip Chassis Weight (lbs.)		
					Front	Rear	Front	Rear	Total
4x2 – 158	6.8L/Auto	16,000	10,141	23,000/7000	6500	11,000	3012	2847	5859
	6.8L/Auto	19,500	13,534	26,000/6500	7000	13,500	3155	2811	5966
4x2 – 178	6.8L/Auto	16,000	10,126	23,000/7000	6500	11,000	3032	2842	5874
	6.8L/Auto	19,500	13,519	26,000/6500	7000	13,500	3176	2805	5981
4x2 – 208	6.8L/Auto	19,500	13,496	26,000/4000	7000	13,500	3208	2796	6004
	6.8L/Auto	22,000	15,685	26,000/4000	8000	13,500	3282	3033	6315

(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).

F59 Super Duty Commercial Chassis Cab

Standard Powertrain/Chassis Equipment Specifications

2012

F59 Commercial Stripped Chassis

DRIVE:		4x2
POWERTRAIN:		
Engine	— Application	50 States
	— Type	6.8L V10
Transmission	— Type	TorqShift® Automatic with Tow/Haul Feature
	— Speeds	5-speed Overdrive
AXLES:		
Front Axle	— Type	Forged Steel I-beam
	— Capacity (Rating @ Ground)	8000 lbs.
	— King Pin Angle	5.5°
	— Caster Angle	4.6°
Rear Axle	— Type—Full-floating	Full-floating
	— Capacity (Rating @ Ground)	12,000 lbs. with 16,000-lb. GVWR, 13,500 lbs. with 19,500-lb. GVWR and 15,000 lbs. with 22,000-lb. GVWR
	— Axle Ratio	4.88 (16,000–19,500-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 with 16,000-lb. and 19,500-lb. GVWR); Hydro Max with 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 with 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
EXHAUST SYSTEM:	— Type	L.H. Forward-of-Rear-Axle Exhaust Exit
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 89 for Usage and Ratings
Springs, Rear	— Type	Parabolic Leaf Spring, Single-stage, Constant Rate
	— Rating @ Ground (min.)	Refer to page 89 for Usage and Ratings
Shock Absorbers	— Type/Size (Dia.)	Gas-pressurized (Front/Rear)/1.80" Bilstein
Stabilizer Bars		38.1mm Front/35.7mm Rear
TIRES:	— Type	Steel-belted Radial, Highway, BSW
	— Size	Six, 225/70R19.5G on 16,000-lb./19,500-lb. GVWR; six 245/70R19.5F (22,000-lb. GVWR)
WHEELS:	— Type and Size	Six, 10-hole Disc, 19.5" x 6.0" (16,000-lb. and 19,500-lb.); Six, 10-hole Disc, 19.5" x 6.75" (22,000-lb. GVWR)

2012

F59 Super Duty Commercial Chassis Cab

Technical Specifications

Axles

FRONT AXLE SPECIFICATIONS

Make		Westport
GVWR		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		
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 lbs.	1.375
	22,000 lbs.	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

2012

Cooling Systems

COOLING SYSTEM SPECIFICATIONS

Radiator													
Engine	Cooling	Trans. Usage	Frontal Area (sq. in.)	Core Size (in.)			Rows of Tubes	Fins per Inch	Cooling System Capacity qts. (liters)	In-Tank Trans Cooler	Fan Specifications		
				Height	Width	Thick.					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	5-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
178.0	18.4:1	49.7
208.0	18.4:1	56.1

(1) Power Steering Fluid Cooler is standard.

Suspensions

FRAME SPECIFICATIONS

Wheelbase (in.)	No. of Crossmembers	Maximum Side Rail Section	Section Modulus (cu. in.)	Yield Strength (psi)
		(Height x Width x Thickness) (in.) ⁽¹⁾		
158.0	7	9.16x3.00x0.25	9.46	36,000
178.0	7	9.16x3.00x0.25	9.46	36,000
208.0	8	9.16x3.00x0.25	9.46	36,000

(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	1.80	Gas-pressurized	2	1.80	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.)	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	64.0	4.00	1425
15,000	3	3.07	64.0	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
225/70R19.5	Highway-BSW	Continental	6.0	8.22	14/G	85–100 ⁽²⁾	3640/3490	14.96	647
245/70R19.5	Highway-BSW	Goodyear	6.75	9.94	12/F	82–92 ⁽³⁾	3890/3655	15.30	633

(1) Tire and rim maximum width.

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

(3) 19,500 GVWR = 82 psi, 22,000 GVWR = 92 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 6.0" 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

2012

Transmission

AUTOMATIC TRANSMISSION SPECIFICATIONS

Make/Type	Ford TorqShift 5-Speed Automatic Overdrive
Ratios (to 1):	
1st	3.11
2nd	2.22
3rd	1.55
4th	1.00
5th	0.71
Reverse	2.88
Converter Torque Ratio @ WOT Stall	1.86
Fluid Capacity (qts.)	19.0
Gear Set	Spur
Oil Cooler	Oil to Air and In-tank
Oil Filter	Internal
Converter Size & Type	12" PCM Controlled Clutch Apply