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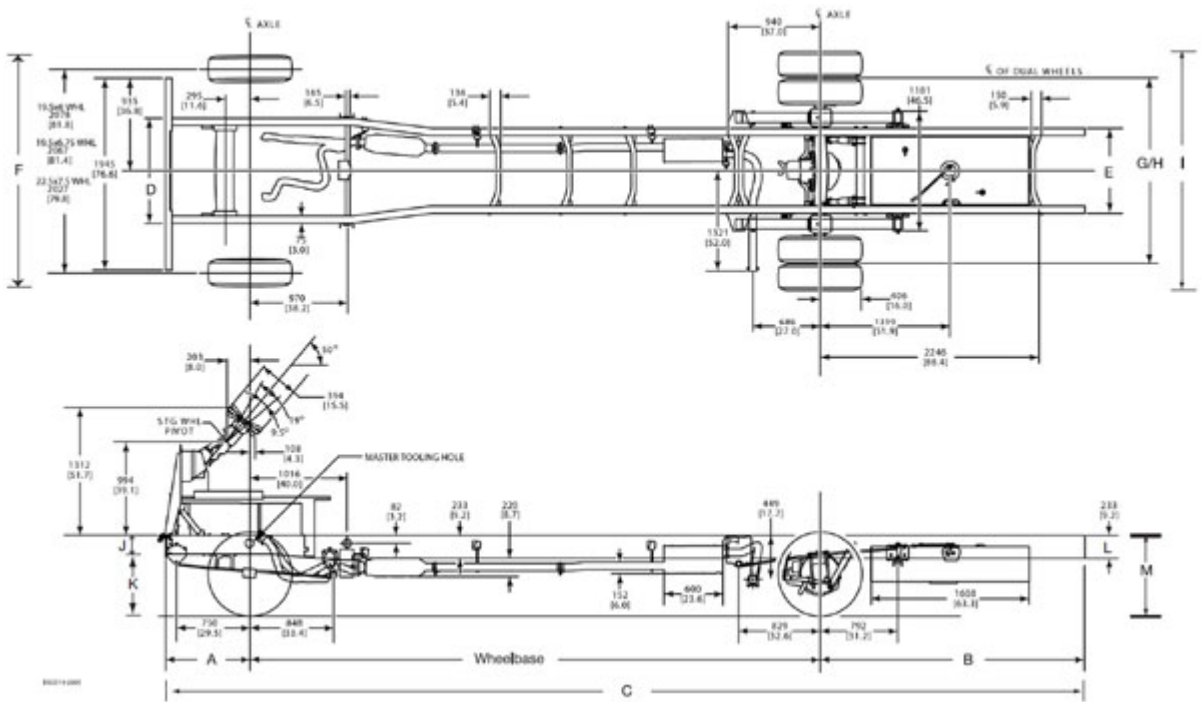
2019 F53 Motorhome Chassis
Specifications

F53 Motorhome Specifications



Dimensions

F53 Motorhome Specifications



GVWR (lbs.)		16,000	16,000	16,000	18,000	18,000	18,000	18,000	20,500	20,500
Wheelbase (in.)		158	178	190	178	190	208	228	208	228
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

[illegible]

	Section Height									
M	Frame Height @ Rear Axle ⁽¹⁾	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.7	30.7

GVWR (lbs.)		22,000	22,000	22,000	24,000	24,000	24,000	26,000	26,000	26,000
Wheelbase (in.)		208	228	242	228	242	252	228	242	252
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	350.1	360.1	374.1	360.1	374.1	384.1	360.1	374.1	384.1
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)	90.7	90.7	90.7	92.6	92.6	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	70.2	70.2
H	Tire	73.3	73.3	73.3	71.9	71.9	71.9	71.9	71.9	71.9

	Center Width (Rear)									
I	Tire Outside Width (Rear Outer)	95.4	95.4	95.4	95.2	95.2	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	7.5	7.5
K	Frame Height @ Front Wheel ⁽¹⁾	28.3	28.3	30.5	31.2	31.2	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	9.2	9.2
M	Frame Height @ Rear Axle ⁽¹⁾	30.7	30.7	32.9	33.9	33.9	33.9	33.9	33.9	33.9

(1) Dimensions are for reference only. Actual heights may vary due to product tolerances.

Weight Ratings

F53 Motorhome Specifications

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) 20.5K GVWR Upgrade package (20R) includes optional 7,500 lb FGAWR (68R).

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

Standard Powertrain/Chassis Equipment Specifications

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Drive:		4x2
POWERTRAIN:		
Engine	Application	50 States
	Type	6.8L SEFI 3V V10 (gas engine, includes cooler)
Transmission	Type	TorqShift HD 6-speed with tow/haul mode
	Speeds	6-speed overdrive
AXLES:		
Front Axle	Type	Forged I-beam
	Capacity (Rating @ Ground)	6,500 and 7,000 lbs. (16,000/18,000/20,500 lb. GVWR), 7,500 lbs. (20,500 lbs. GVWR option), 8,000 lbs. (22,000 lb. GVWR), 9,000 lbs. (24,000/26,000 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)	11,000 lbs. (16,000 lb. GVWR), 12,000 lbs. (16,000 - 18,000 lb. GVWR), 13,500 lbs. (20,500 lb. GVWR), 15,000 lbs. (22,000 lb. GVWR), 17,500 lbs. (24,000 - 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 ⁽¹⁾
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. (302.8 L)
STEERING:	Type	Power, TRW, TAS 40 Gear (Includes Cooler) (16,000-lb.–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 Weight Ratings for usage and ratings
Springs, Rear	Type	Parabolic Leaf Spring, Single-stage, Constant Rate
	Rating @ Ground (min.)	Refer to Weight Ratings for usage and ratings
Shock Absorbers	Gas-pressurized, Front/Rear	Sachs twin-tube

Stabilizer Bars		38.1 mm Front, 35.7 mm Rear 16,000-lb. to 22,000-lb. GVWR; 38.1 mm 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, 245/70R19.5G on 16,000-lb., 18,000-lb. GVWR 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.–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 ⁽²⁾

(1) 175-amp output based on cold performance at 80° F. Actual output is temperature and application dependent.

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

NOTE: 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's 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, Headlamp Switch and Knob Assembly, Daytime Running Light Harness.

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

Front Axle Specifications

[F53 Motorhome Specifications](#) > Axles

Type		Forged I-beam	
GVWR (lbs.)		16,000/18,000/20,500/22,000	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

F53 Motorhome Specifications > Axles

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.)		11,000/12,000		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 (pts.)		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	

Hydraulic Brake Equipment Specifications — Front/Rear Disc

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Specifications

F53 Motorhome Specifications > Brakes

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	6500	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			
	7000	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			
	7500	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			
	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

[F53 Motorhome Specifications](#) > Brakes

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

[F53 Motorhome Specifications](#) > Brakes

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

Cooling System Specifications

[F53 Motorhome Specifications](#) > Cooling Sytems

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

Auxiliary Automatic Transmission Oil Cooler Applications

2019 F53 Motorhome Chassis Specifications

[F53 Motorhome Specifications](#) > Cooling Systems

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

Engine

[F53 Motorhome Specifications](#)

Driveline Layout	Front engine, rear wheel (RWD)
Engine Type	6.8L SEFI 3V V10
Displacement (liters/cu. in.)	6.8/415
Horsepower @ rpm	320 @ 3900
Torque (lb.-ft.) @ rpm	460 @ 3000
Compression Ratio	9.2:1
Valvetrain	SOHC
Valve Operation	Roller rocker shaft
Bore & Stroke (in.)	3.55 x 4.17
Main bearings	6
Induction	Naturally aspirated
Fuel System	Sequential Electronic Fuel Injection
Fuel Requirement (octane)	87 (min.)

Fuel System Data

F53 Motorhome Specifications

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 Specifications

F53 Motorhome 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	18.4:1	45.4	—	—
178	18.4:1	49.7	—	—
190	18.4:1	52.2	—	—
208	18.4:1	56.1	63.7	—
228	18.4:1	60.3	68.6	60.6
242	18.4:1	63.3	72.0	66.8
252	18.4:1	—	—	69.5

(1) Power steering fluid cooler is standard.

Frame Specifications

[F53 Motorhome Specifications](#) > Suspensions

Wheelbase (in.)	No. of Crossmembers	Maximum Side Rail Section ⁽¹⁾ (Height x Width x Thickness) (in.)	Section Modulus (cu. in.)	16K–22K Yield Strength (psi)	24K–26K Yield Strength (psi)
158	7	9.16 x 3.00 x .025	9.46	36,000	—
178	7	9.16 x 3.00 x .025	9.46	36,000	—
190	7	9.16 x 3.00 x .025	9.46	36,000	—
208	8	9.16 x 3.00 x .025	9.46	36,000	—
228	9	9.16 x 3.00 x .025	9.46	36,000	50,000
242	9	9.16 x 3.00 x .025	9.46	36,000	50,000
252	9	9.16 x 3.00 x .025	9.46	—	50,000

(1) Measured to inside of metal.

Shock Absorber Specifications

[F53 Motorhome Specifications](#) > Suspensions

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

Spring Specifications — Front Leaf

[F53 Motorhome Specifications](#) > Suspensions

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Overall Length (in.)	Width (in.)	Deflection Rate ⁽¹⁾ (lbs. per in./spring)
6500	2	3.38	63.00	4.00	510
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

[F53 Motorhome Specifications](#) > Suspensions

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
17,500	4	3.31 (w/o Spacer)	64.00	4.00	1850

(1) Single-stage, constant rate springs.

Tire Specifications

[F53 Motorhome Specifications](#) > Tires and Wheels

Size	Tread Type & Sidewall	Tire Man.	Rim Width (in.)	Section Width ⁽¹⁾ (in.)	Ply/Load Rating	Inflation Press. (psi)	Load Limits @ Max. Inflation Press. (lbs.)	Static Loaded Radius (in.)	SAE Rev. 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) 16,000–20,500 GVWR = 82 psi, 20,500 GVWR with 7500 FGAWR and 22,000 GVWR = 95 psi.

Wheel Specifications

[F53 Motorhome Specifications](#) > Tires and Wheels

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
Bright 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

Automatic Transmission Specifications

F53 Motorhome Specifications

Make/Type	6-Speed TorqShift Double Overdrive Automatic with Tow/Haul Mode
Ratios (to 1):	
1st	3.97
2nd	2.31
3rd	1.51
4th	1.14
5th	0.85
6th	0.67
Reverse	3.12
Converter Torque Ratio @ WOT Stall	1.86
Fluid Capacity (qts.)	19.0
Gearset	Spur
Oil Cooler	Oil to Air and In-tank
Oil Filter	Internal
Converter Size & Type	12" PCM Controlled Clutch Apply

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