
2006 F53 MOTORHOME CHASSIS

INDEX

Subject	Page Number
What's New	2
Models/Weight Ratings - GVWR/Payload/Spring & GAWR/Base Curb Weight:	3
Standard Powertrain/Chassis Equipment Specifications:	4
Technical Specifications:	
— Axles	5
— Brakes	5
— Cooling System	6
— Fuel System	6
— Steering	6
— Suspension (Frame)	6-7
— Tires and Wheels	7
— Transmission	7
Dimensions	8

2006 F53 MOTORHOME CHASSIS

WHATS NEW

MODEL:

- F53 Class A Motorhome Chassis 2005 program cancelled and redesignated to a 2006 program (Job#1 1/3/05). 2004 model will extend until the introduction of the 2006 model (Refer to 2004 Specifications for information) (TY3-ES-10009).

POWERTRAIN/CHASSIS:

- New 6.8L V-10 3-valve gas engine with electronic throttle control.
- New GF-4 engine oil replaces GF-3. Benefits include enhanced fuel economy, lower phosphorus reducing catalyst poisoning and decreased engine piston deposits and sludge (GEN-ES-10032).
- New TorqShift 5-speed Automatic Overdrive transmission with Tow/Haul mode (5R110W) is standard and the 4-speed Automatic Overdrive (4R100) is discontinued.
- Track Bar Heavy Duty Front Suspension is now standard with all wheelbases (except 15,700 lb. GVWR).
- All 19.5" wheels now include 10 lugs.

2006 F53 MOTORHOME CHASSIS

MODELS/WEIGHT RATINGS

F-53 Class A Motorhome Chassis - GVWR/Payload/GCWR & Trailer Weight/Spring & GAWR/Base Curb Weight

Drive/WB (in.)	Engine/ Trans.	Maximum GVWR (lbs.)	Maximum Payload (lbs.) ⁽¹⁾	Maximum GCWR/Trailer Weight (lbs.)	Spring/GAWR (lbs.) ⁽²⁾		Base Curb Weight ⁽³⁾		
					Front (lbs.)	Rear (lbs.)	Front (lbs.)	Rear (lbs.)	Total (lbs.)
4x2 - 178	6.8L/Auto	15,700	9,835	26,000/10,300	7000/6000	11,000	3197	2665	5862
	6.8L/Auto	18,000	11,985	26,000/8,000	7000	11,000	3280	2735	6015
4x2 - 190	6.8L/Auto	15,700	9,785	26,000/10,300	7000/6000	11,000	3235	2680	5915
	6.8L/Auto	18,000	11,930	26,000/8,000	7000	11,000	3318	2750	6068
4x2 - 208	6.8L/Auto	18,000	11,855	26,000/8,000	7000	11,000	3374	2768	6142
	6.8L/Auto	20,500	14,235	26,000/5,500	7000	13,500	3398	2865	6263
	6.8L/Auto	22,000	15,645	26,000/4,000	7500	14,500	3429	2926	6355
4x2 - 228	6.8L/Auto	18,000	11,755	26,000/8,000	7000	11,000	3421	2823	6244
	6.8L/Auto	20,500	14,135	26,000/5,500	7000	13,500	3445	2920	6365
	6.8L/Auto	22,000	15,540	26,000/4,000	7500	14,500	3469	2989	6458

- (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 GAWR's 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): LT245/70R19.5F Tires/19.5" x 6.75" Steel Wheels (Available with 22,000 lb. GVWR only) (-31/-122); Track Bar Heavy Duty Front Suspension (71/71) (Available with 15,700 lb. GVWR only).
- NOTE: Refer to page 4 for Standard Powertrain/Chassis Equipment Specifications.

2006 F53 MOTORHOME CHASSIS

STANDARD POWERTRAIN/CHASSIS EQUIPMENT SPECIFICATIONS

F-53 Class A Motorhome Chassis⁽¹⁾

DRIVE:		4x2
POWERTRAIN:		
Engine	— Application	50 States
	— Type	6.8L (415 CID) 3V SEFI V-10 (Includes Cooler)
Transmission	— Type	TorqShift Automatic With Tow/Haul Feature (Includes Auxiliary Cooler)
	— Speeds	5-Speed Overdrive
AXLES:		
Front Axle	— Type	Westport
	— Capacity (Rating @ Ground)	7500 lbs.
	— King Pin Angle	5.5°
	— Caster Angle	4.6°
Rear Axle	— Type—Full-Floating	Full-Floating, Dana
	— Capacity (Rating @ Ground)	11,000 lbs. (13,500 lbs. With 20,500 lb. GVWR, 14,500 lbs. With 22,000 lb. GVWR)
	— Axle Ratio	5.38
BRAKES:		
Front/Rear Disc	— Type	Dual-Piston Pin-Slider Calipers, Bolt-on Adapters, Wrap-around Tie Bars
	— Rotor Diameter—Front/Rear	15.55"
Power Assist Unit	— Type	Hydro Boost, 8.19 Boost Ratio (Hydro Max, 21.1 Boost Ratio With 20,500 lb., 22,000 lb. GVWR)
Anti-Lock System		4-Wheel, 3-Sensor/3-Channel (4-Sensor/4-Channel With 20,500 lb., 22,000 lb. GVWR)
Parking Brake (Driveline Drum)		Foot-Operated, Hand Release
ELECTRICAL:		
Alternator	— Rating	110 Amperes, 1650 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)/75.0 Gal. (284 L)
STEERING:	— Type	Power, TRW, TAS 40 Gear (Includes Cooler)
	— Ratio	18.0:1
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	Tapered Multi-Leaf, Single-Stage, Constant Rate
	— Rating @ Ground (min.)	Refer to page 3 for usage and ratings
Springs, Rear	— Type	Tapered Multi-Leaf, Single-Stage, Constant Rate
	— Rating @ Ground (min.)	Refer to page 3 for usage and ratings
Shock Absorbers	— Gas-pressurized, Front/Rear	Bilstein 1.63"
Stabilizer Bars		Front and Rear
Track Bar		Front (With 18,000 lb., 20,500 lb., 22,000 lb. GVWR)
TIRES:	— Type	Steel-Belted Radial, Highway, BSW
	— Size	Six, 225/70Rx19.5F (245/70Rx19.5F With 18,000 lb., 20,500 lb. GVWR, 235/80Rx22.5G XRV with 22,000 lb. GVWR)
WHEELS:	— Type and Size	Seven, 10-Hole Disc, 19.5" x 6" Steel (19.5" x 6.75" Steel With 18,000 lb., 20,500 lb. GVWR, Six, 8-Hole Disc, 22.5" x 7.5" With 22,000 lb. GVWR—Polished Aluminum Front and Outer Rear With Steel Inner Rear) ⁽²⁾

(1) Includes Electronic Speed Control/Tilt Steering Wheel, Tachometer, 15.5" 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 Owners Manual, Rating plate, Instrument cluster, Labels/decals/tags, Fuel filler (hose, cap, pipe assembly, support, vent hose), Wheel nut wrench, Horn pad, Dual electric horns and bracket assembly, Headlight switch and knob assembly, Daytime Running Lights.

(2) 19.5" x 6.75" steel spare wheel mounted to frame with 19.5" wheels only. No spare wheel included with 22.5" wheels.

NOTE: Refer to page 3 for Standard & Optional Weight Rating Specifications (GVWR/Payload/GCWR & Trailer Weight Spring & GAWR/Base Curb Weight/Option Weights).

2006 F53 MOTORHOME CHASSIS

TECHNICAL SPECIFICATIONS

Axles

FRONT AXLE SPECIFICATIONS

Make	Westport	
Max. Rating @ Ground (lbs.)	7500	
Axle	— Type	Monobeam
	— Material	Forged Steel
	— Spring Centers (in.)	41.87
Ball Joint	Zirked	
Spindle	— Material	Nodular Cast Iron Body w/Forged Steel Stem
Wheel Bearings	— Type	Tapered Roller

REAR AXLE SPECIFICATIONS

GVWR (lbs.)	15,700/18,000	20,500	22,000
Make (Standard)	Dana 80	Dana 135	Dana 145
Max. Rating @ Ground (lbs.)	11,000	13,500	14,500
Type	Full-Floating		
Driveline Attachment	Circular Flange	1480 End Yoke	
Housing	— Type	Cast Center	Stamped
	— Cover Attachment	Bolted	Welded
Section	— Tube Dia. (in.)	4.00	4.92 x 4.25
Synthetic Lubricant Capacity (pt.)	8.25	24.5	
Spring Centers (in.)	41.5		
Wheel Bearings	— Type	Tapered Roller	
Gears	— Type	Hypoid	
	— Material	Alloy Steel	
Ring Gear	— Pitch Dia. (in.)	11.25	14.38
Pinion	— Mounting	Overhung	
Differential	— Type	2-Pinion	
Axle Shaft	— Spline Minor Dia. (in.)	1.50	1.72
	— Spline Major Dia. (in.)	1.57	1.85
	— No. of Splines (Hub End)	37	36

Brakes

HYDRAULIC BRAKE EQUIPMENT SPECIFICATIONS — FRONT/REAR DISC

Type	Axle Usage (lbs.)	Rotor Dia. (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	7500	15.55	10.62	Outboard	13.9/1.81/0.47	Dual/2.36	55.6	361.9
				Inboard				
Rear Disc	11,000/13,500/14,500	15.55	10.62	Outboard	13.9/1.81/0.47	Dual/2.36	55.6	361.9
				Inboard				

BRAKE MASTER CYLINDER SPECIFICATIONS

Type	Usage	Bore Dia. (in.)
Dual System, Dash-Mounted	15,700, 18,000 GVWR	1.5
	20,500, 22,000 GVWR	2.0

BRAKES BOOSTER SPECIFICATIONS

Make/Type	Usage	Booster Type	Boost Ratio
Dash Mounted	15,700, 18,000 GVWR	Hydro Boost	8.19
	20,500, 22,000 GVWR	Hydro Max	21.1

2006 F53 MOTORHOME CHASSIS

TECHNICAL SPECIFICATIONS

Cooling Systems

COOLING SYSTEM SPECIFICATIONS

Radiator													
Engine	Cooling	Trans.	Usage (sq. in.)	Core Size (in.)			Rows of Tubes	Fins Per Inch	Cooling System Capacity (litres)	In-Tank Trans. Cooler	Fan Specifications		
				Frontal Area	Height	Width					Type	No. of Blades	Blade Dia. (in.)
6.8L (415) 3V SEFI V-10	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 V-10	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-Line Large Capacity (One)
Air Cleaner	Dry Element, Replaceable

Steering

STEERING SPECIFICATIONS

Wheelbase (in.)	Tire Size	Power Steering ⁽¹⁾		Turning Diameter (ft.)	
		Gear Ratio	Overall Ratio	Curb-to-Curb	Wall-to-Wall
178 DRW		18:1	—	52.8	—
190 DRW		18:1	—	56.3	—
208 DRW		18:1	—	61.6	—
228 DRW		18:1	—	67.5	—

(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 Yield Strength (psi)	
			(cu. in.)	(psi)
178.0	7	9.16 x 2.94 x .250	9.46	36,000
190.0	7	9.16 x 2.94 x .250	9.46	36,000
208.0	8	9.16 x 2.94 x .250	9.46	36,000
228.0	9	9.16 x 2.94 x .250	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	1.63	Gas-Pressurized	2	1.63	Gas-Pressurized

SPRING SPECIFICATIONS — FRONT LEAF

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Length (in.)	Width (in.)	Deflection Rate (lbs. per in./ spring) ⁽¹⁾
7000	3	3.36	63.00	4.00	550
7500	3	3.36	63.00	4.00	650

(1) Single-stage, constant rate springs.

2006 F53 MOTORHOME CHASSIS

TECHNICAL SPECIFICATIONS

Suspensions (Cont'd)

SPRING SPECIFICATIONS — REAR LEAF

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness @ Pad (in.)	Overall Length (in.)	Width (in.)	Deflection Rate (lbs. per in./spring) ⁽¹⁾	Rating Each @ Pad (lbs. per spring)
Main Leaf Only						
11,000	3	3.80 (Includes Spacer)	64.0	4.00	1050	4910
13,500	3	2.44 (No Spacer)	64.0	4.00	1350	6124
14,500	3	2.48 (No Spacer)	64.0	4.00	1400	6901

(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 @ Inflation Press. (lbs. SRW/DRW)	Static Loaded Radius (in.)	SAE Revolutions Per Mile Average
225/70Rx19.5	Highway-BSW	General	6.0	8.22	12/F	80	3195/3000	14.9	649
245/70Rx19.5	Highway-BSW	Goodyear	6.75	10.50	12/F	80	3640/3415	15.3	626
245/70Rx19.5	Highway-BSW	Goodyear	6.75	10.50	12/F	90	3890/3655	15.3	626
235/80Rx22.5	Highway-BSW	Michelin	7.5	9.2	14/G	90	4140/3765	17.4	556

(1) Tire and rim maximum width.

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

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	Remote, Cartridge Type And Internal
Converter Size & Type	12" PCM Controlled Clutch Apply

2006 F53 MOTORHOME CHASSIS

DIMENSIONS

F53 Class A Motorhome Chassis

Wheelbase (in.)	178.0		190.0		208.0		228.0			
GVWR (lbs.)	15,700	18,000	15,700	18,000	18,000	20,500	22,000	18,000	20,500	22,000
Code	Description	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
A	Front Overhang	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3
B	Axle to Frame	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8
C	Overall Length	320.1	320.1	332.1	332.1	350.1	350.1	350.1	360.1	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)	90.2	91.6	90.2	91.6	91.6	91.6	90.7	91.6	90.7
G	Tire Outside Width (Rear Inner)	73.1	72.8	73.1	72.8	72.8	72.8	70.3	72.8	70.3
H	Tire Center Width (Rear)	74.0	74.0	74.0	74.0	74.0	74.0	73.3	74.0	73.3
I	Tire Outside Width (Rear Outer)	90.9	94.8	90.9	94.8	94.8	94.8	95.0	94.8	95.0
J	Frame Rail Height	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
K	Frame Height @ Front Wheel ⁽¹⁾	27.9	28.3	27.9	28.3	28.3	28.3	30.5	28.3	30.5
L	Frame Height @ Rear Axle ⁽¹⁾	30.3	30.7	30.3	30.7	30.7	30.7	32.9	30.7	32.9
M	Load Height @ Top End Of Frame ⁽¹⁾	31.6	31.1	31.6	31.1	31.1	31.1	34.1	31.1	34.1

(1) The height data shown represents dimensions from ground to top of frame rail of a standard vehicle with no options. Actual height may vary due to production tolerances.