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2003 Jeep Torques

These are all the torque settings that I have at the moment for the 2003 Jeep Wranglers.

<u>FRONT SUSPENSION</u>						
DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.			
Shock absorber upper nut	23	17	-			
Shock absorber lower nut	28	-	250			
Suspension arm lower axle bracket nut	163	120	-			
Suspension arm lower frame bracket nut	176	130	-			
Suspension arm upper axle bracket nut	75	55	16-Apr-2008 width="423" valign="top"> Suspension arm upper frame bracket bolt	75	55	-
Stabilizer bar retainer bolts	54	40	-			
Stabilizer bar link upper nut	61	45	-			
Stabilizer bar link lower bolt	95	70	-			
Track bar ball stud nut	81	60	-			
Track bar axle bracket bolt	47	40	-			
Hub/bearing bolts	102	75	-			
Hub/bearing axle nut	237	175	-			

<u>REAR SUSPENSION</u>			
DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Shock absorber upper bolts	35	26	-
Shock absorber lower nut	100	74	-
Suspension arm lower axle bracket nut	177	130	-
Suspension arm lower frame bracket nut	177	130	-
Suspension arm upper axle bracket nut	75	55	-
Suspension arm upper frame bracket bolt	75	55	-
Stabilizer bar retainer bolts	54	40	-
Stabilizer bar link nut/ bolt	54	40	-
Track bar frame bracket nut	100	74	-
Track bar axle bracket bolt	100	74	-

<u>DIFFERENTIAL AND DRIVELINE</u>			
DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Front Shaft Front Yoke Bolts	19	14	-
Front Shaft Rear Flange Bolts	27	20	-
Rear Shaft Rear Yoke Bolts	19	14	-
Rear Shaft Transfer Case Flange Bolts	115	85	-

<u>FRONT AXLE DANA 30 181 FBI</u>			
DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Fill Hole Plug	34	25	-
Differential Cover Bolts	41	30	-
Bearing Cap Bolts	61	45	-
Ring Gear Bolts	108	80	-

Pinion Bearing Nut Min – Max	217 - 678	160 - 500	-
Axle Nut	237	175	-
Hub Bearing Bolts	102	75	-

FRONT AXLE DANA 44 216 FBI

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Fill Plug	34	25	-
Drain Plug	34	25	-
Differential Cover Bolts	41	30	-
Bearing Cap Bolts	108	80	-
Pinion Nut	217-271	160-200	-
Ring Gear Bolts	136	100	-
Axle Nut	237	175	-
Wheel Bearing Bolts	170	125	-

REAR AXLE DANA 35 194 RBI

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Differential Cover Bolts	41	30	-
Bearing Cap Bolts	77	57	-
Ring Gear Bolts	136	100	-
Pinion Nut Min / Max	271-475	200-350	-
Pinion Mate Shaft Screw	16.25	12	-

REAR AXLE DANA 44 216 FBI

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Fill Hole Plug	34	25	-
Differential Cover Bolts	41	30	-
Bearing Cap Bolts	108	80	-
Ring Gear Bolts	136	100	-
Pinion Bearing Nut Min – Max	217 - 271	160 - 200	-

BRAKES

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Brake Pedal Support Bolt	28	21	-
Brake Booster Mounting Nuts	39	29	-
Master Cylinder Mounting Nuts	17	13	-
Master Cylinder Brake Lines	19	14	-
Combination Valve Mounting Nuts	20	15	-
Combination Valve Brake Lines	19	14	-
Caliper Mounting Bolts Front	15	11	-
Caliper Mounting Bolts Rear	25	-	220
Caliper Brake Hose Banjo Bolt Front	31	23	-
Caliper Brake Hose Banjo Bolt Rear	31	23	-
Wheel Cylinder Mounting Bolts	10	7	-
Wheel Cylinder Brake Line	16	12	-
Parking Brake Lever Bolts	12	9	-
Parking Brake Lever Bracket Bolts	12	9	-
Parking Brake Cable Retainer Nut	1.5	-	14

BRAKES ABS

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
G-Sensor Sensor Bolt	4-5	-	35-45
G-Sensor Bracket Bolt	8-13	-	75-115
Hydraulic Control Unit Bracket to HCU Bolts	6.5	-	57
Hydraulic Control Unit Body Bracket Bolts	16-24	-	142-212
Hydraulic Control Unit HCU to Body Bracket Bolts	9-13	-	80-115
Hydraulic Control Unit Brake Lines	15-18	-	130-160

Controller Anitlock Brakes Mounting Bolt	7-9	-	60-80
Wheel Speed Sensors Front Mounting Bolt	4-6	-	34-50
Wheel Speed Sensors Rear Mounting Bolt	12-14	-	106-124

CLUTCH

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Clutch Cover Bolts - 2.4L	31	23	-
Clutch Cover Bolts - 4.0L	50	37	-
Clutch Cylinder Bolts	23	-	200
Clutch Housing to Engine Bolts	75	55	-
Clutch Housing to Trans Bolts	46	34	-
Dust Shield Bolts	50	37	-
Flywheel Bolts - 2.4L	95	70	-
Flywheel Bolts - 4.0L	142	105	-
Crossmember Frame Bolts	41	30	-

COOLING

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Automatic Belt Tensioner to Mounting Bracket 2.4L	41	30	-
Automatic Belt Tensioner Pulley— Bolt (2.4L)	61	45	-
Block Heater—Bolt 2.4L	2	-	17
Condenser to Radiator Bolts Coolant Overflow Bottle to Plenum mounting bolts - 2.4L only	8.5	-	75
Coolant Pressure Bottle to Plenum mounting bolts Electric Fan to Fan Shroud bolts	5.5	-	50
Fan Blade Assy. to Viscous Drive Bolts 3.7L	23	-	210
Fan Shroud to Radiator Mounting Bolts	8	-	70
Radiator Upper Isolator to Crossmember - Bolts	9.5	-	85
Thermostat Housing—Bolts 2.4L	28	-	250
Water Pump—Bolts 2.4L	12	-	105

GENERATOR/ ALTERNATOR

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Generator Mounting Bolts (2.4L)	57	42	-
Generator Mounting Bolt (4.0L)	55	41	-
Generator Pivot Bolt/Nut (4.0L)	55	41	-
Generator B+ Cable Nut	13	-	115

STARTER

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Starter Solenoid B+ Terminal Nut	11.3	-	100
Starter Mounting Bolts (2.4L)	54	40	-
Starter Heat Shield Mounting Bolts	6	-	55
Starter Mounting Bolt (forward facing 4.0L)	41	30	-
Starter Mounting Bolt (rearward facing 4.0L)	48	35	-

IGNITION

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Camshaft Position Sensor Mounting Bolts – 4.0L	2	-	15
Camshaft Position Sensor – 2.4L	12	-	106
Ignition Coil Rail Mounting Bolts – 4.0L	29	-	250
Ignition Coil Mounting Bolts – 2.4L	11	-	105
Oil Pump Drive Hold-down Bolt – 4.0L	23	17	-
** Spark Plugs - 2.4L 4-Cylinder	15	11	-
Spark Plugs - 4.0L 6-cylinder	30	22	-

** Torque critical tapered design. Do not exceed 15 ft. lbs. Torque.

SPEED CONTROL

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Servo Mounting Bracket to- Servo Nuts	8.5	-	75
Speed Control Switch Mounting Screws	1.5	-	14
Vacuum Reservoir Mounting Bolt (screw)	1.2	-	1

ENGINE 2.4L

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Balance Shaft Carrier to Block—Bolts	54	40	-
Balance Shaft Gear Cover—Double Ended Fastener	12	-	105
Balance Shaft Sprocket— Bolt	28	-	250
Balance Shaft Chain Tensioner—Bolts	12	-	105
Balance Shaft Carrier Cover—Bolts	12	-	105
Camshaft Sprocket—Bolt	101	75	-
Connecting Rod Cap—Bolts	54 +1/4 turn	40 +1/4 turn	-
Crankshaft Main Bearing Cap/Bedplate — M8 Bolts	34	250	-
M11 Bolts	41 +1/4 Turn	30 +1/4 Turn	-
Crankshaft Damper	136	100	-
Cylinder Head Cover— Bolts	12	-	105
Flex Plate to Crankshaft	95	70	-
Flywheel Mounting Bolts	81	60	-
Engine Mount Bracket Right—Bolts	61	45	-
Exhaust Manifold to Cylinder Head—Bolts	23	-	200
Exhaust Manifold Heat Shield—Bolts	12	-	105
Intake Manifold – Lower —Bolts	28	-	250
Oil Filter	20	15	-
Oil Pan—Bolts	12	-	105
Oil Pan Drain—Plug	27	20	-
Oil Pump to Block—Bolts	28	-	250
Oil Pump Cover Plate—Bolts	12	-	105
Oil Pump Pick-up Tube—Bolt	28	20	-
Oil Pump Relief Valve—Cap	41	30	-
Spark Plugs	28		
Timing Belt Covers - Front Covers to Rear Cover—Bolts	12	-	105
- Rear Cover—Bolts	12	-	105
Timing Belt Tensioner Assembly—Bolts	61	45	-

ENGINE 4.0L

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
A/C Compressor—Bolts	28	-	250
Block Heater—Nut	2	-	16
Camshaft Sprocket—Bolt	68	50	-
Camshaft Thrust Plate to Cylinder Block—Screws	24	18	-
Clutch Cover to Flywheel— Bolts	54	40	-
Coil Bracket to Block—Bolts	22	-	192
Connecting Rod—Nuts	45	33	-
Cylinder Block—Drain Plugs	34	25	-
Cylinder Head—Bolts	135	100	-
Cylinder Head Cover—Bolts	10	-	85
Distributor Clamp—Bolts	23	-	204
Engine Mounts—Front Support Bracket Bolts	61	45	-
Support Cushion Bolts/Nuts	41	30	-
Support Cushion Bracket Bolts	54	40	-
Support Cushion Bracket Stud Nuts	41	30	-
Support Cushion Thru-Bolt	65	48	-
Engine Mounts—Rear Crossmember to Sill Bolts—(Automatic)	41	30	-
Insulator Stud Assembly—Nut	41	30	-

Support Cushion/ Crossmember— Nuts	22	-	192
Support Cushion/Bracket— Nuts (Manual)	75	55	-
Transmission Support Bracket—Bolt (Manual)	46	34	-
Transmission Support Bracket/ Cushion—Bolt (4WD Auto)	75	55	-
Transmission Support Adaptor Bracket—Bolts (2WD Auto)	75	55	-
Exhaust Manifold/Pipe—Nuts	27	20	-
Intake/Exhaust Manifold Fasteners #1-5	33	24	-
Fasteners #6 and 7	14	-	126
Fasteners #8-11	33	24	-
Flywheel to Converter Housing—Bolts	38	28	-
Flywheel to Crankshaft—Bolts	143	105	-
Front Cover to Block—Bolts1/4-20	7	-	60
5/16-18	22	-	192
Fuel Rail—Bolts/Stud	12	-	108
Generator—Bolts	57	42	-
Generator Bracket to Engine—Bolts	47	35	-
Idler Pulley to Cylinder Head—Bolt	47	35	-
Main Bearing Cap—Bolts	108	80	-
Oil Filter	18	-	156
Oil Filter Connector to Adaptor	47	35	-
Block	68	50	-
Adaptor Bolts	102	50	-
Oil Galley—Plug	41	30	-
Oil Pan—Bolts1/4-20	9.5	-	84
5/16-18	15	-	132
Oil Pan—Drain Plug	34	25	-
Oil Pump Mounting Bolts	23	-	204
Cover Bolts	8	-	70
Rocker Arm Assembly to Cylinder Head—Capscrews	30	21	-
Spark Plugs	37	27	-
Starter Motor—Mounting Bolts	45	33	-
Thermostat Housing—Bolts	18	-	156
Throttle Body—Bolts	10	-	90
Vibration Damper—Bolt	108	80	-
Water Pump to Block—Bolts	23	17	-

EXHAUST

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Crossmember to Sill—Bolts	42	31	-
Crossmember to Transmission Mount—Nuts	22	16	-
Exhaust Pipe to Manifold— Nuts	31	23	-
Exhaust Manifold to Engine— Nuts#6&7	31	23	-
Nuts/Bolts#1,2,3,4,5,8,9,10&11	33	24	-
Exhaust Pipe to Catalytic Converter Flange—Nuts	28.5	21	-
Tailpipe to Rear Tailpipe Hanger—Clamp	27	20	-
Oxygen Sensors	27	20	-
Heat Shields	45	33	-

FRAME AND BUMPERS

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Front bumper screw	104	77	-
Front tow hook screw	108	80	-
Fuel tank skid plate nuts	16	12	138
Fuel tank strap nuts	5	-	40
Main floor to hold down bolt	68	50	-
Radiator to frame hold down bolt	60	45	-
Rear bumper bolt	67	50	-
Rear floor to frame bolt	47	35	-
Transfer case skid plate bolts	74	55	-
Transmission mount nuts	28	21	-

Transmission skid plate to frame bolts	68	50	-
Transmission skid plate to transfer case skid plate bolts	28	21	-

FUEL SYSTEM

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Accelerator Pedal Bracket Mounting Nuts	8.5	-	75
Fuel Hose Clamps	3	-	25
Fuel Rail Mounting Bolts-2.4L	28	-	250
Fuel Rail Mounting Bolts or Nuts-4.0L	11	-	100
Fuel Pump Module Locknut	74	55	-
Fuel Tank Skid plate Bolts	16	-	141

FUEL INJECTION

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Accelerator Pedal Bracket Mounting Nuts	8.5	-	75
Engine Coolant Temperature Sensor-2.4L/4.0L	11	-	96
IAC Motor-To-Throttle Body Bolts-2.4L/4.0L	7	-	60
Intake Manifold Air Temp. Sensor-4.0L	28	20	-
MAP Sensor Mounting Screws-2.4L/4.0L	3	-	25
Oxygen Sensor-2.4L/4.0L	30	22	-
PCM Mounting Screws	4	-	35
Throttle Body Mounting Bolts-2.4L/4.0L	11	-	100
Throttle Position Sensor Mounting Screws-2.4L/4.0L	7	-	60
Vehicle Speed Sensor Mounting Bolt	2.2	-	20

STEERING COLUMN

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Tilt Steering Column Steering Wheel Nut	54	40	-
Tilt Steering Column Mounting Nuts	17	-	150
Tilt Steering Column Coupler Bolt	49	36	-
Non-Tilt Steering Column Steering Wheel Nut	54	40	-
Non-Tilt Steering Column Mounting Nuts	17	-	150
Non-Tilt Steering Column Coupler Bolt	49	36	-

STEERING GEAR

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Power Steering Gear Adjustment Screw Locknut	65	48	-
Power Steering Gear Gear to Frame Bolts	95	70	-
Power Steering Gear Pitman Shaft Nut	251	185	-
Power Steering Gear Pressure Line	28	21	-
Power Steering Gear Return Line	28	21	-

STEERING LINKAGE

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Pitman Arm Shaft	251	185	-
Drag Link Ball Studs	74	55	-
Drag Link Clamp	49	36	-
Tie Rod Ends Ball Studs	74	55	-
Tie Rod Ends Clamp	27	20	-
Tie Rod Ball Stud	88	65	-
Steering Damper Frame	74	55	-
Steering Damper Drag Link	74	55	-

STEERING PUMP

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
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Power Steering Pump Bracket To Pump	28	21	-
Power Steering Pump Bracket To 4.0L Engine	57	42	-
Power Steering Pump Bracket To 2.4L Engine	28	21	-
Power Steering Pump Flow Control Valve	75	55	-
Power Steering Pump Pressure Line	28	21	-

TRANSMISSION NV1500

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Back up Lamp Switch	41	30	-
Countershaft Bearing Shim Cap	41	30	-
Bearing Retainer- Front	41	30	-
Bearing Retainer- Rear	34	25	-
Drain/Fill Plug	34	25	-
Shift Shaft Lock Bolt	27	20	-
Idler Shaft Bolts- M8	27	20	-
Idler Shaft Bolts- M10	52	40	-
Shift Tower Bolts	11	8	100
Clutch Housing Bolts	46	34	-
Transmission Bolts	75	55	-
Skid Plate Bolts	41	31	-
Transmission mount bolts	54	40	-

TRANSMISSION NV3550

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Clutch Housing Bolts	54-61	40-45	-
Crossmember To Frame Bolts	61-75	44-55	-
Crossmember To Insulator Nuts	54-61	40-45	-
Drain/Fill Plug	9-27	14-20	-
Front To Rear Housing Bolts	30-35	22-26	-
Front Bearing Retainer Bolts	9-14	7-8	80-124
Idler Shaft Bolts	19-25	14-18	-
Rear Bearing Retainer Bolts	30-35	22-26	-
Shift Tower Bolts	7-10	5-7	62-88
Slave Cylinder Nuts	23	17	-
Transfer Case Nuts	47	35	-
U-Joint Clamp Bolts	19	14	-

TRANSMISSION 42RLE

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Bolt, Converter-to-Driveplate	88	65	-
Bolt, Fluid Filter-to-Valve Body	5	-	45
Bolt, L/R Clutch Retainer-to-Case	5	-	45
Bolt, Adapter/Extension Housing	54	40	-
Bolt, Manual Valve Lever-to-Manual Valve	5	-	45
Bolt, Oil Pan-to-Case	20	14.5	-
Bolt, Oil Pump-to-Case	30	-	265
Bolt, Park Sprag Retainer	4.5	-	40
Bolt, Reaction Shaft Support Halves	28	-	250
Bolt, Solenoid/Pressure Switch Assy-to- Valve Body	5.5	-	50
Bolt, Valve Body-to-Case	12	-	105
Bolt, Valve Body-to-Transfer Plate	5	-	45
Fitting, Cooler Line	47.5	35	-
Nut, Output Shaft	271	200	-
Plug, Pressure Tap	5	-	45
Bolt, Input Speed-to-Case Sensor	9	-	80
Bolt, Output Speed-to-Case Sensor	9	-	80

TRANSFER CASE NV231

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Plug, Detent	16-24	12-18	-
Plug, Drain/Fill	20-34	15-25	-
Bolt, Front Brg. Retainer	21	16	-
Bolt, Case Half	27-34	20-25	-
Nut, Front Yoke	122-176	90-130	-
Nut, Range Lever	27-34	20-25	-
Bolt, Rear Retainer	35-46	26-34	-
Nuts, Mounting	35-47	26-35	-
Switch, Indicator	20-34	15-25	-

TRANSMISSION NV241OR

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Plug, Detent	16-25	12-18	-
Plug, Drain/Fill	20-34	15-25	-
Bolt, Rear Extension	16-24	12-18	-
Bolt, Front Input Retainer	21	16	-
Bolt, Case Half	20-27	15-20	-
Nut, Front Yoke	122-176	90-130	-
Nut, Rear Companion Flange	258-312	190-230	-
Bolt, Shift Lever	20-34	15-25	-
Nuts, Mounting	30-41	20-30	-
Bolts, U-Joint	19	17	-
Support, Sector	27-42	20-30	-
Sensor, Transfer Case Position	20-34	16-25	-
Bolt, Speed Sensor	11-16	8-12	-

TIRE

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Lug Nut 1/2 X 20 with 60° Cone	115-156	85-115	-

BODY

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Body side guard/side bolts	5	-	45
Body side guard/support tab bolts	11	8	-
Hood assist spring bolt	3	-	25
Hood catch nuts	18	13	-
Hood catch bracket nuts	11	8	-
Hood hinge screws	24	18	-
Hood safety latch bolt	9	-	80
Bucket seat front anchor bolt	47	35	-
Bucket seat rear inboard anchor bolt	74	55	-
Bucket seat rear outboard anchor bolt	33	25	-
Lifgate glass ball stud nut	13	10	-
Lifgate glass hinge nut	6	-	53
Lifgate hinge to hardtop bolt	11	8	95
Front tuning loop bolt	47	35	-
Front retractor bolt	47	35	-
Rear retractor bolt	47	35	-
Rear tuning loop bolt	47	35	-
Rear belt anchor bolt	47	35	-
Rearview mirror set screw	1	-	9
Rear buckle anchor bolt	43	32	-
Side support bar to sport bar bolts	20	15	-
Side support sport bar to windshield frame bolts	32	24	-
Sport bar bracket bolt	68	50	-
Sport bar speaker pod bolts	68	50	-
Sport bar to wheelhouse bolts	40	30	-
Sport bar to cargo floor bolts	40	30	-

2003 Jeep Torque Specifications

Tailgate hinge screws	23	17	-
Tailgate striker	71	52	-

EMISSIONS

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
EVAP Canister Mounting Nuts	9	-	80
Leak Detection Pump Filter Mounting Bolt	7	-	65
LDP Pump Mounting Bolts	1	-	11
EVAP Canister/LDP Mounting Bracket-to-Body Nuts	-	-	250
EVAP Canister/LDP Mounting Bracket-to-Body Bolts	-	-	212

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Common Sense and Safety should always be observed when working on your vehicle or doing modifications. Jackstands, wheel blocks, disconnecting the battery are a few of the basic safety precautions that should be used and may not be mentioned in the write ups on this site. You are responsible for your own installation, these write ups are a helpful guideline and should not be taken as an official installation instruction. My write up may be different from the kits currently out there, so always double check the manufacturers installation instructions when installing anything. I try to keep the site up to date with changes that have occurred as I discover them, but may not have the latest unless someone lets me know. If you feel that an install is above your capabilities after reading my write ups, I recommend getting together with a club and getting some help. Only a few times have I needed to employ some actual help from a shop to get something done. Usually welding or A/C work.

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