

## Dimensions

(small differences may occur depending on optional equipment or trim level)

wheelbase = 101.4"  
overall length = 165.3" - 168.8"  
overall width = 67.9" - 70.5"  
track = 58"  
height = 64"  
height with roof rack = 66.8"  
ground clearance (from differentials) = 7.3" - 8.3"  
approach angle = 37.6\* - 38\*  
departure angle = 31\* - 32.1\*  
breakover angle = 21\* - 21.9\*  
curb weight 2wd = 2,891 lbs - 2,993 lbs  
curb weight 4wd = 3,057 lbs - 3,386 lbs  
cargo capacity = 71.0 cu ft.

## Body

The body comes in both 2-door and 4-door styles with a rear hatch (liftgate).

In [94](#) side-impact beams were added in the doors and roof was strengthened. The 3rd brakelight was added to the top of the liftgate.

In [96](#) the body structure was strengthened some although it was not noticeable in appearance.

In [97](#) the body (and interior) was redesigned to freshen it up a bit. Most noticeably it gave the body smoother lines by changing the bumpers, flares, and moldings. The front fender was trimmed just below the headlights and replaced with plastic bumper endcaps that wrap around to the wheel well. The liftgate was also changed from fiberglass to sheet metal in this year. The windshield washer bottle was also moved to the inside of the drivers side front fender.

## Engines

2.5L I4 carbureted - 105 hp @ 5000 rpm, 132 ft lb torque @ 2800 rpm - used in [84-85](#) models

2.5L I4 TBI (fuel injected) - 117 hp @ 5000 rpm, 135 ftlb @ 3500 rpm - used in [86](#) and updated in [87-90](#) to 121hp

2.5L I4 MPI (multi-port injection) - 130 hp @ 5250 rpm, 139 ft lb @ 3250 rpm - used in [91-00](#)

GM 2.8L V6 - 115 hp @ 4800 rpm, 145 ft lb @ 2400 rpm - used in [84-86](#)

Renault 2.1L 4cyl. Turbo Diesel - 85 hp @ 3750 rpm, 132 ft lb @ 2750 rpm - used in [85-87](#)

Italian VM 2.5L Turbo Diesel - 140 hp, 236 ft lb torque - used in overseas XJs

4.0L I6 EFI "Power Tech" - 177 hp @ 4750 rpm, 220 ft lb @ 4000 rpm - used [87-90](#)

4.0L I6 MPI "Power Tech HO" (High Output) - 190 hp @ 4750 rpm, 220 ft lb @ 4,000

rpm - used in 91-95 and updated in 96-01 to 225 ft lb torque @ 3000 rpm (00-01 models use a distributorless ignition system)

## Transmissions

### Manual Transmissions

T4 & T5 - 4 & 5 speed manual - manufactured by Borg Warner - used 84-86 with 2.5L I4 and 2.8L V6 engines

BA10/5 - 5 speed manual - manufactured by Peugeot - used only up to 89

AX5 - 5 speed manual - manufactured by Aisin - used with 2.8L V6 and 87+ with 2.5L I4

AX15 - 5 speed manual - manufactured by Aisin - used with 4.0L I6 engines

NV3550 - 5 speed manual - manufactured by New Venture - used in 00-01 in SE models with 4.0L I6 engines

### Automatic Transmissions

Torqueflight 904 - 3 speed automatic - used 84-86 with 2.8L V6 and 2.5L I4 engines

30RH - 3 speed automatic - used with 2.5L I4 engine 94?-00

AW4 - 4 speed automatic, electronically controlled - manufactured by Aisin - used from 87-01 (87-91 models include a Power/Comfort button that adjusts the shift points)

## Transfer Cases

The transfer cases used are all chain driven with aluminum housings. NP stands for "New Process" which is the brand, if you will. The newer ones are NV instead which stands for "New Venture". It is the same transfer case just a different name.

NP207 - "Command-Trac" part-time only - 2.61:1 ratio low range - used 84-87

NP231 - "Command-Trac" part-time only - 2.72:1 ratio low range - shift pattern 2H - 4H - N - 4L - used 87-01

NP228/NP229 - "Selec-Trac" - 4Hi(full-time) - N - 4Lo (part-time) - used 84-87

NP242 - "Selec-Trac" part-time OR full-time - 2.72:1 ratio low range - shift pattern 2wd - 4part-time - 4full-time - N - 4LO - used 87-01

## Driveshafts

Front Driveshaft - On 84-87 XJs (NP207 t-case) the front shaft is a "GKN" style shaft. On 87-01 XJs (NP231/242 t-case) the front is a "double cardan" two-piece driveshaft with a CV joint at the transfer case end.

Rear Driveshaft - The rear is a one-piece shaft with standard u-joints at both ends. The slip yoke is located on the output shaft of the transfer case. On 84-95 models, the yoke slides in and out of the transfer case and is lubricated by the ATF fluid internally. On 96-01 due to a design change, the slip yoke is external (does not slide in and out of the transfer case). This slip yoke is covered with a rubber boot.

## Axles

### Front Axles

Dana 30 high pinion - reverse cut - 27 spline, 1.16" diameter shafts, 7.13" ring gear - used 84-99 (some axles through 91 are vacuum disconnect, 92+ are non-disconnect, 89-95 with ABS have 5-297x u-joints, all 95+ have 5-297x u-joints, all others have 5-

260x u-joints)

Dana 30 low pinion - standard cut - 27 spline, 1.16" diameter shafts, 7.13" ring gear, 5-297x u-joints - used [00-01](#)

#### Rear Axles

(Note on Dana 35 axles sometimes referred to as Dana 35C - The "C" does not stand for c-clip. It stands for "custom" meaning it came from Dana unfinished.)

(Note on 8.25 axles - none of these axles were used on XJs with ABS brakes. If you have ABS, you have the Dana 35. Without ABS you could have either axle. 8.25 axles are c-clip)

Dana 35 non c-clip - 27 spline, 1.18" diameter shafts, 7.58" ring gear, 2.62" axle tube - used [84-89](#)

Dana 35 c-clip - 27 spline, 1.18" diameter shafts, 7.58" ring gear, 2.62" axle tube - used [90-01](#)

Chrysler 8.25 - 27 spline, 1.17" diameter shafts, 8.25" ring gear, 3" axle tube - used [91-96](#)

Chrysler 8.25 - 29 spline, 1.21" diameter shafts, 8.25" ring gear, 3" axle tube - used [97-01](#)

Dana 44 non c-clip - 30 spline, 1.31" diameter shafts, 8.5" ring gear, 2.75" axle tube - used [87-89](#) on some(not all) XJs equipped with towing package.

#### **Gearing**

3.07 - used with 4.0L engine / manual transmission

3.31 - only available on older (pre87?) 2 door XJs with "Fuel Economy" package

3.55 - used with 4.0L engine / automatic transmission

3.73 - found in some XJs with the towing package

4.10 - used with 2.5L engine usually, and older XJs with the "Off-Highway Vehicle" package.

4.56 - rare but can be found on some older (~ 89 ~) models with 2.5L engine and auto transmission

#### **Cooling Systems**

Open style - any normal cooling system used today. Opposite of closed style described below.

Closed style - has no radiator cap and utilizes a pressure bottle. This style cooling system was used in [87-90](#) XJs.

#### **Airbags**

Drivers side airbag (mechanical) was added in [95](#).

Passenger side airbag was added in [97](#). Airbags changed from mechanical to electronic in this year also.

#### **Production Numbers**

# of XJs built in given year:

84 - 93,326  
85 - 120,328  
86 - 107,225  
87 - 139,295  
88 - 187,136  
89 - 207,216  
90 - 151,230  
91 - 151,578  
92 - 137,826  
93 - 144,961  
94 - 123,391  
95 - 120,234  
96 - 286,463  
97 - 258,958  
98 - 182,845  
99 - 186,116  
00 - 165,590 (Freedom Edition - 2,821)  
01 - 120,454

Total = 2,884,172

### **Trim Levels**

84 - Base, Wagoneer, Pioneer, Chief  
85 - Base, Wagoneer, Pioneer, Chief, Laredo  
86 - Base, Wagoneer, Pioneer, Chief, Laredo  
87 - Base, Wagoneer, Pioneer, Chief, Laredo, Limited  
88 - Base, Wagoneer, Pioneer, Chief, Laredo, Limited, Sport  
89 - Base, Wagoneer, Pioneer, Chief, Laredo, Limited, Sport  
90 - Base, Wagoneer, Pioneer, Chief, Laredo, Limited, Sport  
91 - Base, Briarwood, Chief, Laredo, Limited, Sport  
92 - Base, Briarwood, Chief, Laredo, Limited, Sport  
93 - Base, Sport, Country  
94 - SE, Sport, Country  
95 - SE, Sport, Country  
96 - SE, Sport, Country, Classic  
97 - SE, Sport, Country  
98 - SE, Sport, Classic, Limited  
99 - SE, Sport, Classic, Limited  
00 - SE, Sport, Classic, Limited, Freedom  
01 - Sport, Limited, 60th Anniversary Edition

### **Other resources:**

Factory Service Manuals <http://www.techauthority.daimlerchrysler.com/> or by calling:  
1-800-890-4038 (US)  
1-800-387-1143 (Canada)

DaimlerChrysler E-Fiche Service Parts Catalog 1981 - 1996  
DaimlerChrysler E-Fiche Service Parts Catalog 1997 - 1999  
DaimlerChrysler E-Fiche Service Parts Catalog 2000

## \*Sensors

CCV- Crank Case Ventilation.

CPS- Crank Position Sensor.

MAP- Manifold Absolute Pressure it is a sensor.

NSS- Neutral Safety Switch.

O2- Oxygen sensor.

TPS- Throttle Position Sensor.

TCU- Transmission Control Unit.

## \*General

Walmart Light Bar- Homemade roof light rack made with the factory roof bar. See FAQ/Tech sticky on XJ page.

BS- Back Spacing, refers to wheel hub in relation to out edge of rim.

BFH - big "F-ing" hammer

Cap and Rotor- Refers to Distributor cap and rotor inside cap.

Cat- Refers to a Catalytic Converter that is located before the muffler on a exhaust system.

Cat-Back Exhaust - aftermarket exhaust replacing everything after the catalytic converter.

Caster – Refers to forward or rearward tilt of the steering knuckle from vertical

COG - center of gravity

Camber - Refers to inward or outward tilt of the wheel relative to the center of the vehicle

Closed Cooling System- This is the cooling system found in older models that has to be "burped" when fluid is added, or "hot spots" will occur in the cooling system as air is trapped in the passages.

Cold air Intake- Term used for a replacement intake system for the TB. Usually consisting of a smoother tube for better air flow in combination with a higher flowing air filter.

DW- Refers to term Death Wobble. Usually violent shaking of front end while driving 30+mph.

EFI- Refers to Electronic Fuel Injection.

FSM - Factory Service Manual

Flex (aka "articulation") - suspension travel usually when one wheel is drooping down and the other wheel on the axle is "stuffed" or pushed up into the wheel-well.

Hack -N-Tap- Rubicon Express "cut and tap" budget SYE kit.

Header- Refers to Exhaust Header. Used to channel exhaust to exhaust pipe.

LHD - left hand drive (steering wheel is on the left)

MPI- Multiport Fuel Injection.

OBDI- First generation On Board Diagnostics engine control computer.

OBDII- Second generation On Board Diagnostics, more complicated, found in 96+ vehicles. Port under steering wheel under dash for Scanner plug in.

OEM- Refers to Original Equipment Manufacturer.

OME- Refers to Old Man Emu, off-road accessory manufacturer.

Open Cooling System- This is the cooling system that is used on new models. It is preferred due to the fact that the cooling system doesn't need to be "burped" after coolant is added.

Open Element Filter- Term used for a cone or cylinder shaped air filter that is not shielded under the hood. These are used in place of the factory air box.

RHD - right hand drive (steering wheel is on the right)

TB- Throttle Body

BB- Refers to Budget Boost, Also called a bb. Usually only increases of 1-2" of lift.

\*Manufactures

Rusty's- Refers to [www.rustysoffroad.com](http://www.rustysoffroad.com)

RE- Refers to [www.rubiconexpress.com](http://www.rubiconexpress.com)

C4X4 - Custom 4x4 Fabrication [url]<http://custom4x4fabrication.com/>[url]

AEV - American Expedition Vehicles

M.O.R.E. -Refers to [www.mountainoffroad.com](http://www.mountainoffroad.com)

\*DRIVETRAIN

AW4 - 4 Speed automatic.

AX15 - 5 speed manual.

Chrysler 8.25- The Chrysler rear end with a 8.25 ring diameter.

Command-Trac- NP231 (New Process 231) this TC has the following 2WD 4HI N 4LO. Front shaft not engaged until shifted into 4WD.

CV Joint- Constant Velocity Joint.

D30- refers to a Dana 30.

D35- refers to a earlier factory assembled Dana 35.

D35C- refers to a Dana 35 Custom rear axle, that was pre-assembled before shipped to factory.

D44- refers to a Dana 44 axle.

Diff- this is in reference to the differential on the axle. Also called a Pumpkin.

Double Cardan Joint- This is basically a back to back U joint setup that allows for more angles in the drive shaft.

Locker- A traction adder like a LSD, just always on when driving straight. Most will disengage when wheels are turned.

LSD- Limited Slip Differential is a traction adder that engages power to both rear wheels in cases where both are slipping. Is not always on.

Select-Trac- NP242 (New Process 242) this TC has the following 2WD Fulltime 4WD 4HI N 4LO. Front shaft can be engaged all the time in Fulltime 4WD, or disengaged in 2WD.

SYE- Slip Yoke Eliminator.

TC- Transfer Case. This unit engages or disengages the front drive shaft via a shift fork and chain drive.

TC Drop kit- Spacer used to lower TC to reduce Vibration when lift is installed to improve drive shaft angles in relation to the axles.

Trac lock- The factory option Limited Slip Differential.

Ujoint- refers to Universal Joint at the joined ends of the axles (front) and drive shafts (front and rear).

Ujoint front- These are the U joints that are at the end of each of the front axles shafts on the front axle. They are located at the knuckles.

Ujoint rear- This is the Ujoint on the drive shaft.

Wheel Hubs- These are basically the front sealed wheel bearings. They have to be completely replaced because they can't be rebuilt.

#### \*SUSPENSION

AAL - Refers to Add A Leaf, placed in the factory leaf pack to achieve lift.

DPA – Refers to dropped pitman arm

Drag Link - the bar connected to the pitman arm and the passenger side steering knuckle (drivers side knuckle on RHD jeeps)

LCA- lower control arms. These are the arms that attach to the front axle bottom.

Leaf Springs- These are the set of leaf packs on the rear suspension that the axle bolts to.

Pitman Arm- Refers to arm that attaches the Steering box to drag link.

Steering Stabilizer- This unit is the small shock on the front suspension that helps buffer the vibration and travel of the front suspension.

Sway Bars- Tubular bars on the front and rear that tie into the axles, that help stabilize vehicle on turns.

Sway Bar Disconnects- these are after-market units that replace the factory sway bar mounts. These are used to release the sway bar much quicker and easier to allow for more articulation offroad.

TRE - tie rod end .

Trac Bar- this is a bar that attaches to the front axle and the body and keeps the front axle from moving side to side and keeps it centered.

UCA- upper control arms. These are the arms that attach to the front axle top.

### **transmission gear ratios**

manual transmissions:

AX4 - no information (I assume the same as AX5 minus 5th gear)

T4 - 4.02 2.37 1.50 1.00 rev?

T5 - 4.02 2.37 1.50 1.00 0.76 rev?

BA10/5 - 3.99 2.33 1.44 1.00 0.79 rev?

AX5 - 3.93 2.33 1.45 1.00 0.85 4.72(rev)

AX15 - 3.83 2.33 1.44 1.00 0.79 4.22(rev)

NV3550 - 4.01 2.32 1.40 1.00 0.78 3.55(rev)

automatic transmissions

TF904 - 2.45 1.45 1.00 rev?

30RH - 2.74 1.54 1.00 rev?

AW4 - 2.804 1.531 1.000 0.753(OD) 2.393(rev)