GENERAL INFORMATION A

INDEX

HOW TO USE THIS MANUAL

Organization

This manual is divided into three major parts: Part 1—Power Plant, Part 2—Chassis and Part 3—Body. These parts are comprised of chapters pertaining to the various topics. The Index at the front of this manual has a locator tab for each part.

The first page of each chapter in this manual contains a black tab in a position corresponding to the tab on the Chapter Index page for each part. To locate a desired chapter, simply fold back the manual slightly so that the outside edges of the pages are exposed. Find the black tab that aligns with the tab on the Chapter Index page and open to the desired chapter.

Each chapter begins with an alphabetical index of subjects. Locate the desired subject and turn to the appropriate page. If the subject is broad, the chapter is divided into sections and a subject index of each section is also included. An alphabetical index of all subjects is located at the back of this manual.

Each chapter ends with specifications, torque charts and special tools pertinent to that chapter.

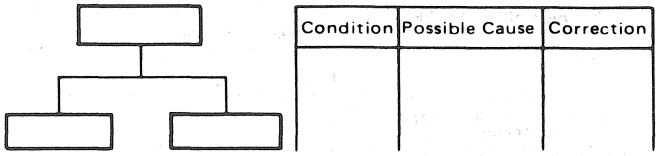
Warnings and Cautions

Detailed descriptions of standard workshop safety procedures are not included in this manual. This manual does contain WARNINGS for some service procedures that could cause personal injury, and CAUTIONS for some procedures that could damage the vehicle or its components. Please understand that these WARNINGS and CAUTIONS do not cover all conceivable ways which service might be done or all possible hazardous consequences of each conceivable way. Anyone using service procedures or tools (whether or not recommended by Jeep Corporation) must satisfy himself that neither personal nor vehicle safety will be jeopardized by the procedures or tools selected.

Diagnosis and Repair Simplification (DARS) Charts

In several places throughout this manual, Jeep Corporation's new Diagnosis and Repair Simplification (DARS) charts provide a graphic method of diagnosis and troubleshooting through the use of pictures and symbols.

The DARS charts are different from the ones you have used before. They are not "go-no go" decision trees or tables.



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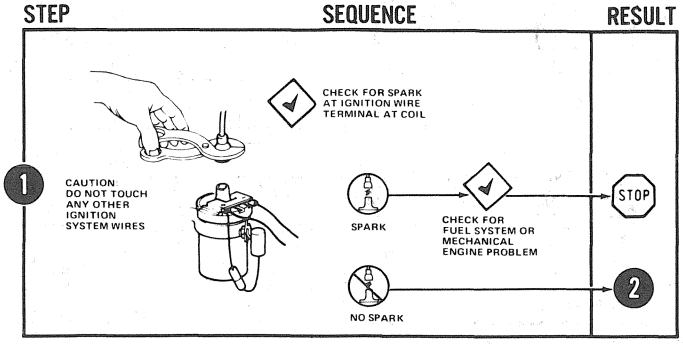
Instead, the new DARS charts use pictures plus a few words to help you solve a problem. . .



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and symbols and words help guide you through each step. . .

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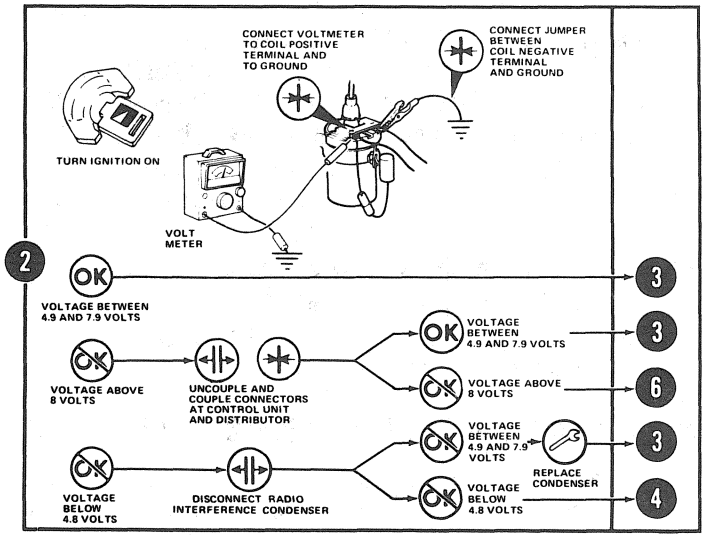
The charts are divided into three sections: **step, sequence** and **result**. Always start at the first step and go through the complete sequence from left to right.



80371D

A sequence could be checking pressure in all tires and inflating to specified pressures. If the problem is solved, the symbol OK will send you to STOP. If the problem is not solved, the symbol OK will send you through another sequence of checks which ends with a result and tells you the next step to go to.

Work through each step of the DARS charts until the system is repaired STOP.

Service Diagnosis Charts

You will also find Service Diagnosis Charts throughout this manual. These charts list causes of specific problems in descending order of probability. It is more likely that a problem would result from the first listed "possible cause" than the fourth, for instance.

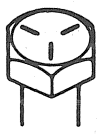
Visual inspection often leads directly to the correct solution. All service procedures should begin with a careful visual inspection of any suspected part or assembly.

Torque Information

Individual torque charts appear at the end of each chapter. Torque values are expressed two ways, Set-To and In-Use Recheck. The Set-To value is used when assembling components. The In-Use Recheck value is used to check pretightened items.

Refer to the Standard Torque Specifications and Capscrew Markings Chart in this chapter for torques not listed in individual torque charts. Note that torque specifications given in the chart are based on use of clean and dry threads. Reduce torque by 10 percent when threads are lubricated with engine oil and by 20 percent if new plated capscrews are used.

Standard Torque Specifications and Capscrew Markings Chart

CAPSCREW HEAD MARKINGS	CAPSCREW BODY SIZE Inches – Thread	SAE GRADE 1 or 2 (Used Infrequently)		SAE GRADE 5 (Used Frequently)		SAE GRADE 6 or 7 (Used at Times)		SAE GRADE 8 (Used Frequently)	
		Torque		Torque		Torque		Torque	
		Ft-Lb	Nm	Ft-Lb	Nm	Ft-Lb	Nm	Ft-Lb	Nm
Manufacturer's marks may vary. Three-line markings on heads shown below, for example, indicate SAE Grade 5.   SAE 1 or 2  SAE 5  SAE 6 or 7  SAE 8	1/4-20 -28	5 6	6.7791 8.1349	8 10	10.8465 13.5582	10	13.5582	12 14	16.2698 18.9815
	5/16-18 -24	11 13	14.9140 17.6256	17 19	23.0489 25.7605	19	25.7605	24 27	32.5396 36.6071
	3/8-16 -24	18 20	24.4047 27.1164	31 35	42.0304 47.4536	34	46.0978	44 49	59.6560 66.4351
	7/16-14 -20	28 30	37.9629 40.6745	49 55	66.4351 74.5700	55	74.5700	70 78	94.9073 105.7538
	1/2-13 -20	39 41	52.8769 55.5885	75 85	101.6863 115.2445	85	115.2445	105 120	142.3609 162.6960
	9/16-12 -18	51 55	69.1467 74.5700	110 120	149.1380 162.6960	120	162.6960	155 170	210.1490 230.4860
	5/8-11 -18	83 95	112.5329 128.8027	150 170	203.3700 230.4860	167	226.4186	210 240	284.7180 325.3920
	3/4-10 -16	105 115	142.3609 155.9170	270 295	366.0660 399.9610	280	379.6240	375 420	508.4250 569.4360
	7/8- 9 -14	160 175	216.9280 237.2650	395 435	535.5410 589.7730	440	596.5520	605 675	820.2590 915.1650
	1- 8 -14	235 250	318.6130 338.9500	590 660	799.9220 894.8280	660	894.8280	910 990	1233.7780 1342.2420

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Torx-Head Fasteners

Various sizes of internal and external hex-lobular (Torx) head fasteners are used as attaching hardware on numerous components and assemblies in 1981 Jeep vehicles. Due to the ever-changing usage and application of automotive fasteners, Torx-head fasteners may not be identified as such throughout this manual. However, these fasteners may be removed or installed using Tool Set J-25359-C.

Service Manual Improvements

You are encouraged to report any errors, omissions, or recommendations for improving this publication. A form provided for this purpose is included at the end of this chapter.

1981 MODEL JEEP VEHICLES

CJ Models

Two CJ models are available for 1981: the 83.5-inch wheelbase CJ-5, model 85, and the 93.5-inch wheelbase CJ-7, model 87. See figures A-1 and A-2. Beyond the 10-inch difference in wheelbase, CJ-5 and CJ-7 differ primarily in available options. CJ-7 models are available with an automatic transmission, soft top with metal doors, moulded hardtop and moon roof. These options are not available on CJ-5 models.

The Renegade package continues to be offered on CJ models for 1981. The package features "Tracker PG" L78x15 tubeless tires mounted on 8-inch wide, styled-steel wheels along with unique exterior and interior trim.

The Laredo package is available on CJ models for 1981. It includes unique exterior paint and decals; chrome front bumper, rear bumperettes, mirror heads and arms, and body side steps; 15-inch x 8-inch chrome styled-steel wheels with 9Rx15 "Wrangler" radial tires, and a deluxe interior with tachometer and clock.

Refer to the Power Train Combinations Chart in this section for engine and transmission availability.

Cherokee Models

For 1981, three Cherokee models are offered: the base 2-door model 16, the Wide Track model 17, and the 4-door model 18. See figures A-3, A-4 and A-5.

The 2-door model 16 is a dual purpose vehicle in the sports/utility class featuring an all-steel top, front disc brakes and foldup rear seat as standard.

The Wide Track model 17 features steel wheel opening extensions to accommodate L78x15 tubeless tires mounted on 8-inch wide, styled-steel wheels.

The 4-door model 18 features the convenience of rear doors in a station wagon-type vehicle. The model 18 has the same grille and taillamps as other Cherokee models.

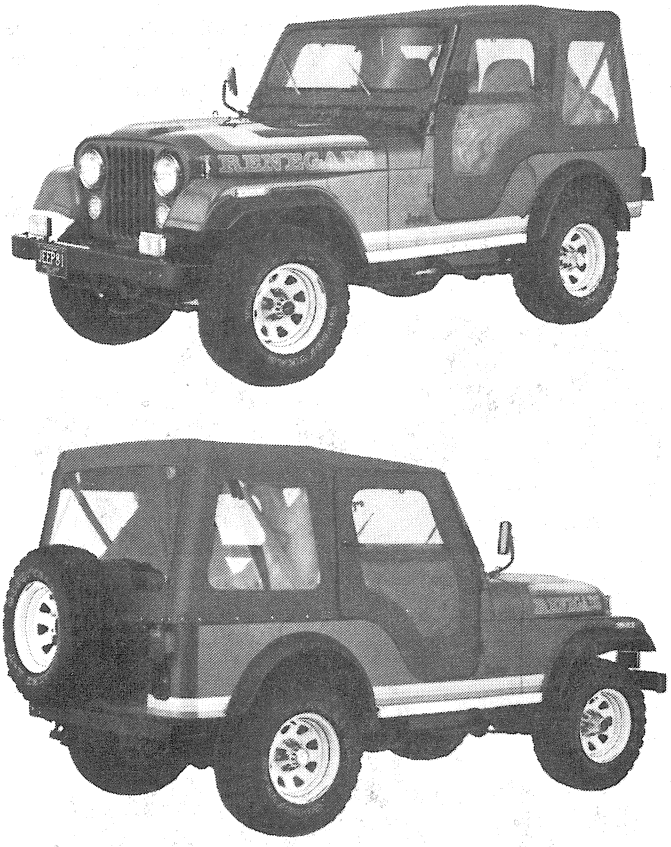

Fig. A-1 CJ-5 Model

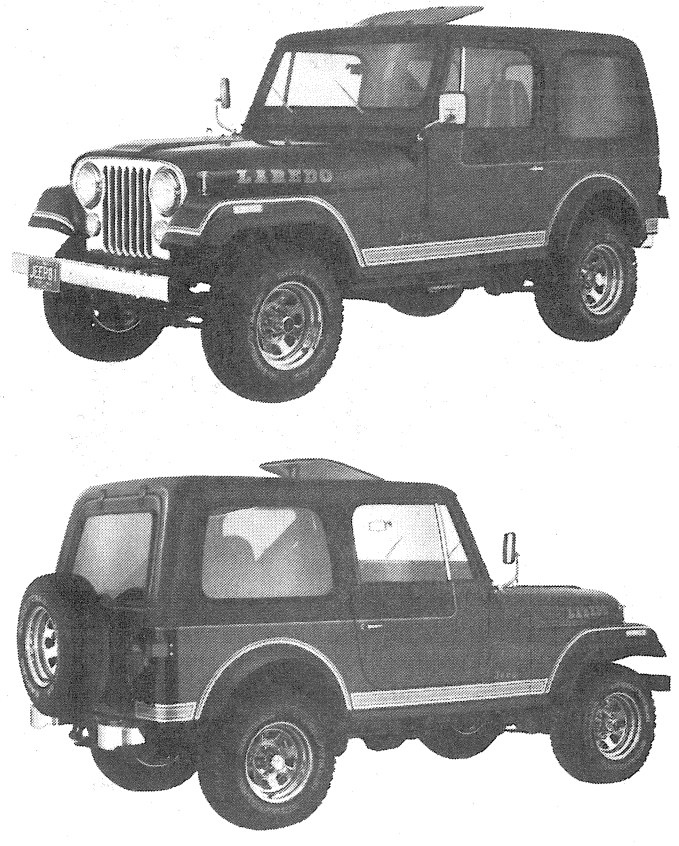

Fig. A-2 CJ-7 Model

Three trim packages are offered for 1981 Cherokee models. The "S" package is available on all Cherokee models. The Chief and Laredo packages are available on the model 17. All three packages feature deluxe interior trim and carpeting, chrome bumpers, and unique exterior trim.

Refer to the Power Train Combinations Chart in this section for engine and transmission availability.

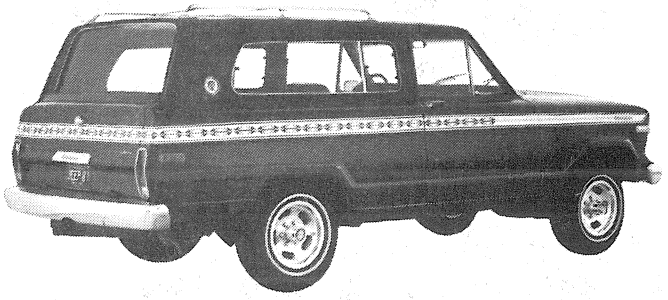

Fig. A-3 Cherokee Model 16

Fig. A-4 Cherokee Model 17

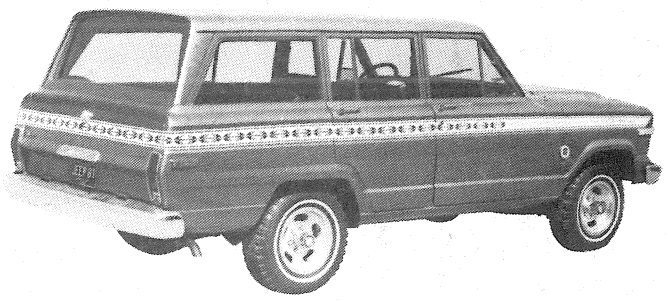

Fig. A-5 Cherokee Model 18

Wagoneer Model

For 1981, one Wagoneer model is offered: the model 15. The 4-door Wagoneer station wagon features deluxe interior trim and carpeting, chrome bumpers, power steering, and automatic transmission with Quadra-Trac full-time 4-wheel drive as standard. A luxury trim package, the Limited, is offered. It features a leather and corduroy interior, unique exterior woodgrain with vinyl surround mouldings, and forged aluminum wheels. See figure A-6.

Refer to the Power Train Combinations Chart in this section for engine transmission and transfer case availability.

Fig. A-6 Wagoneer Model 15

Truck Models

The truck models are available in two series: the J-10 Series model 24, 25 and 26, and the J-20 Series model 27 (figs. A-7, A-8 and A-9).

The J-10 models differ from the J-20 model in gross vehicle weight (GVW) ratings. For 1981, the J-10 Series GVW for models 24, 25 and 26 is 6200 while the J-20 model 27 GVW remains at 6800 with optional GVW of 7600 and 8400.

The Truck models are also identified by wheelbase. Models 24 and 25 have a 119-inch wheelbase; models 26 and 27 have a 131-inch wheelbase. The following chart outlines Truck differences by wheelbase and GVW ratings.

Truck Model Identification

Series	Model Number	Wheelbase (Inches)	Gross Vehicle Weight Rating		
			Standard	Option 1	Option 2
J-10	24	119	6200	–	–
J-10	25	119	6200	–	–
J-10	26	131	6200	–	–
J-20	27	131	6800	7600	8400

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Three trim packages are available on Truck models: Custom, Honcho and Laredo. The Custom package is available on all Trucks and features deluxe interior and exterior trim. The Honcho package is only available on model 25 and features denim interior, unique exterior trim, and 10-inch by 15-inch tires mounted on 8-inch wide, styled-steel wheels.

The Laredo package is available on 1981 J-10 model 25 Trucks. The package includes unique exterior paint and decals, 10-inch by 15-inch radial tires mounted on 8-inch wide chrome styled-steel wheels, chrome rear step bumper, and deluxe interior.

Refer to the Power Train Combinations Chart in this section for engine and transmission availability.

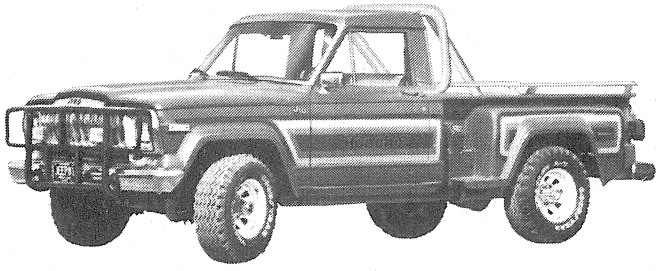


Fig. A-7 J-10 Truck Model 24

Fig. A-8 J-10 Truck Model 25

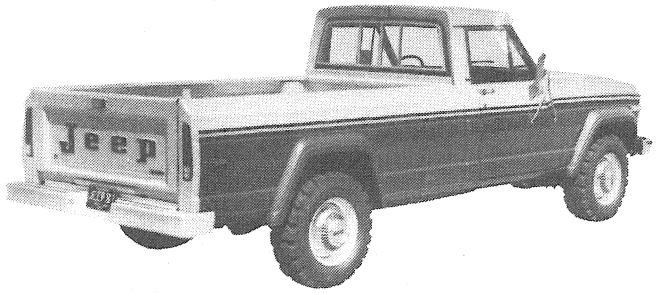
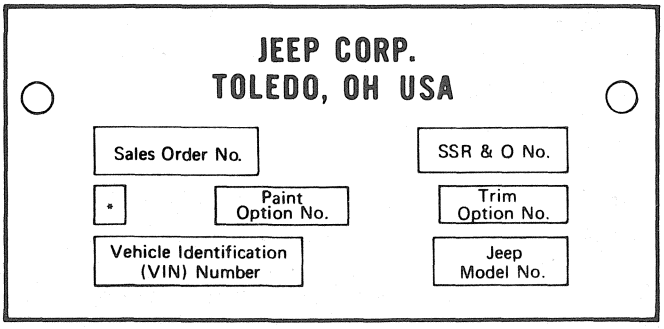


Fig. A-9 J-20 Truck Model 27

VEHICLE IDENTIFICATION

Vehicle Identification Plate

A metal vehicle identification plate is affixed to the left-hand side of the dash panel under the hood (fig. A-10). The plate shows the Sales Order Number; the Vehicle Identification Number (VIN); Special Sales Request & Order (SSR & O) Number; Paint Option Number; Trim Option Number; and the Jeep Model Number.



*Disregard – for factory use only

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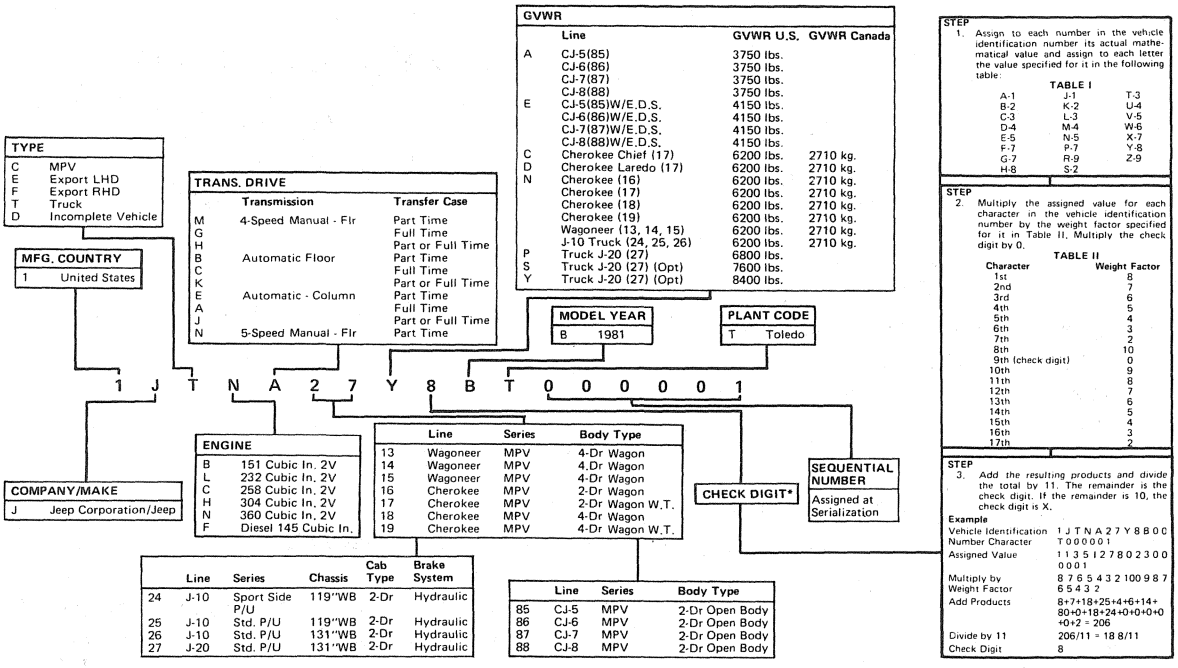
Fig. A-10 Vehicle Identification Plate

Vehicle Identification Number (VIN)

All Vehicle Identification Numbers contain 17 characters in a combination of letters and numbers that provide specific information about the vehicle. VIN's for all Jeep vehicles can be decoded using the following chart.

VIN Decoding Chart



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Special Sales Request and Order (SSR & O) Number

Certain Jeep vehicles are built to special order with other than standard parts or equipment. To assist the dealer in ordering correct replacement parts, an SSR & O number is assigned and a permanent record of the deviation is maintained by the factory. The SSR & O number is embossed on the Vehicle Identification Plate as shown in figure A-10.

Parts ordering procedure for SSR & O parts is detailed in the Jeep Parts Catalog.

Paint Option Number

The Paint Option Number is embossed on the Vehicle Identification Plate in the location shown in figure A-10.

Paint is not available from the factory. All colors shown below are available from Ditzler or DuPont paint jobbers by requesting the paint intermix formula. All colors are available from Sherwin-Williams in factory package cans. Option No. 999 indicates special paint. To obtain information on special paint, contact your Jeep Parts Distribution Center and provide the Vehicle Identification Number (VIN).

Trim Option Number

The Trim Option Number is embossed on the Vehicle Identification Plate as shown in figure A-10. Consult your Jeep Parts Catalog for trim ordering procedure. Special trim is indicated by trim option number 999. To obtain information on special trim, contact your Jeep Parts Distribution Center and provide the Vehicle Identification Number (VIN).

Paint Option Numbers

Paint Option Number	Color
9B	Olympic White
P1	Classic Black
1L	Steel Gray, Met.
1A	Montana Blue
1B	Moolight Blue
1C	Sherwood Green, Met.
1D	Autumn Gold
OK	Cameo Tan
1E	Copper Brown, Met.
1H	Chestnut Brown, Met.
OM	Dark Brown, Met.
1M	Oriental Red
1J	Vintage Red, Met.
1K	Deep Maroon, Met.

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Safety Certification Sticker

A safety sticker is placed on all vehicles to show that they meet federal motor vehicle safety certification standards (fig. A-11). It lists the VIN, month and year built, Gross Vehicle Weight Rating (GVWR), and Gross Axle Weight Rating (GAWR).

The sticker is located on the inside panel directly below the door opening on the drivers side on CJ-5 and CJ-7 models. On Cherokee, Wagoneer and Truck models, it is on the door lock pillar on the driver's side.

KEYS AND LOCKS

Two square-headed and two oval-headed keys are provided, as applicable, with each vehicle. The square-headed (code D) key operates the ignition switch, front door locks, and Cherokee/Wagoneer tailgates. The oval-

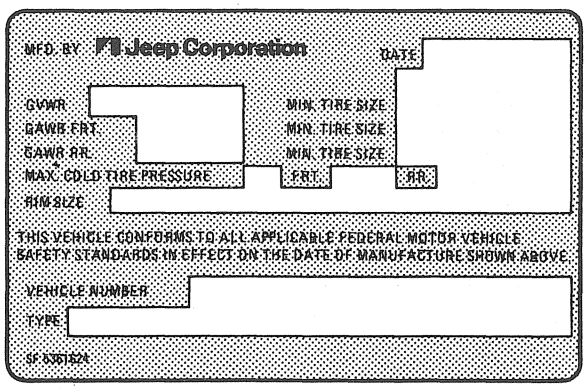

Fig. A-11 Safety Sticker

headed (code E) key operates the glove box lock. Each key has a code number stamped on the knock-out plug. In the event a key is lost, a new key can be made by converting the key code number to a key bitting number. Key bitting numbers can be obtained from a key cutting machine manufacturer's cross-reference list or by contacting your Zone office.

If a key is lost and the key code number is unknown, the correct number can be identified by the Zone office from the vehicle identification number.

If the ignition key is lost and the key code number is not available, a new key can be made by removing a door lock and taking it to a locksmith. The locksmith can determine the key bitting by inserting a blank key into the lock cylinder and cutting the blank to match the tumblers.

If the ignition switch lock is defective and the key is available, the cylinder and individual tumblers can be ordered and matched to the existing key. To determine the tumbler arrangement, place the key over the template (fig. A-12). Starting from the left, read across the horizontal lines and record first digit (number 1 position) of the key code. Continue this process for subsequent numbers 2 through 5.

NOTE: *The template shown in figure A-12 may be used to determine the key bitting code of a key for which the key code number is unknown.*

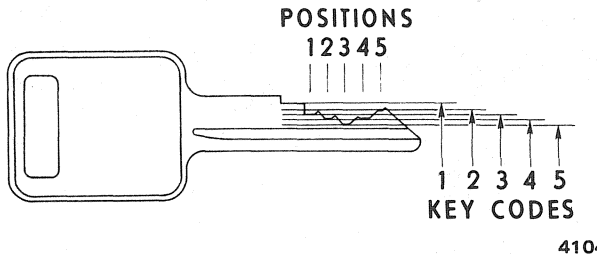

Fig. A-12 Key Coding Template

TOWING

General

A conventional towing sling is recommended for use on all Jeep vehicles because of its stability and reduced likelihood of damage. The following instructions apply only to this device. When using other than sling-type towing equipment, be sure to follow the manufacturer's instructions.

A safety chain system that is completely independent of the lifting and towing attachment must be used. Be careful when installing safety chains so that they do not damage the vehicle.

If additional ground clearance is required, a towing dolly may be used. The end of the vehicle to be placed on the dolly should be lifted with the same equipment as when towing.

CJ Models

Front Towing—Front End Raised

Part Time Transfer Case

Do not exceed a towing speed of 30 mph (48 km/h) and do not exceed a towing distance of 15 miles (24 km). Index and disconnect rear propeller shaft or place a dolly under rear wheels.

Rear Towing—Rear End Raised

Part Time Transfer Case

Do not exceed a towing speed of 30 mph (48 km/h) and do not exceed a towing distance of 15 miles (24 km). Index and disconnect front propeller shaft or place a dolly under front wheels.

If ignition key is available, turn ignition to Off position to unlock steering column. Clamp the steering wheel in the straight-ahead position. Do not use the steering column lock as a substitute for a clamping device.

If ignition key is not available, place front wheels on a dolly.

Cherokee-Wagoneer-Truck Models

Front Towing—Front End Raised

Part Time Transfer Case—Manual Transmission

Do not exceed a towing speed of 30 mph (48 km/h) and do not exceed a towing distance of 15 miles (24 km).

(1) Shift transmission into gear and the transfer case into N (Neutral).

Part Time Transfer Case—Automatic Transmission

Do not exceed a towing speed of 30 mph (48 km/h) and do not exceed a towing distance of 15 miles (24 km).

(1) Shift automatic transmission into Park.

(2) Shift transfer case into Neutral position.

Quadra-Trac—Automatic Transmission

Do not exceed a towing speed of 30 mph (48 km/h) and do not exceed a towing distance of 15 miles (24 km).

(1) Turn ignition switch to Off position to unlock steering wheel.
(2) Shift automatic transmission into Park.
(3) Shift transfer case into Neutral position.

Rear Towing—Rear End Raised

Part Time Transfer Case—Manual Transmission

Do not exceed a towing speed of 30 mph (48 km/h) and do not exceed a towing distance of 15 miles (24 km).

If ignition key is available, turn ignition to Off position to unlock steering column. Clamp the steering wheel in the straight-ahead position. Do not use steering column lock as a substitute for a clamping device. Shift transmission into gear and transfer case into Neutral. Turn selective drive hubs to 4 x 4/LOCK position.

If ignition key is not available, place front wheels on a dolly.

Part Time Transfer Case—Automatic Transmission

Do not exceed a towing speed of 30 mph (48 km/h) and do not exceed a towing distance of 15 miles (24 km).

If ignition key is available, turn ignition to Off position to unlock steering column. Clamp the steering wheel in the straight-ahead position. Do not use steering column lock as a substitute for a clamping device. Shift transmission into Park and transfer case into Neutral. Turn selective drive hubs to 4 x 4/LOCK position.

If ignition key is not available, place front wheels on a dolly.

Quadra-Trac—Automatic Transmission

Do not exceed a towing speed of 30 mph (48 km/h) and do not exceed a towing distance of 15 miles (24 km).

If ignition key is available, turn ignition to Off position to unlock steering column. Clamp steering wheel in the straight-ahead position. Do not use steering column lock as a substitute for a clamping device. Shift transmission into Park and transfer case into Neutral.

If ignition switch is not available, place front wheels on a dolly.

Safety Precautions

- Whenever possible, tow the vehicle from the rear to prevent damage to the transmission or rear axle.
- Secure loose or protruding parts of a damaged vehicle.
- The end of the vehicle being towed should be lifted a minimum of four inches off the ground. Check opposite end for adequate ground clearance.
- Always use a safety chain system that is independent of the lifting and towing attachment.
- Do not allow any of the towing equipment to bear on the fuel tank.
- Do not go under the vehicle while it is lifted by the towing equipment.
- Do not allow passengers to ride in a towed vehicle.
- Always observe all state and local laws regarding such items as warning signals, night illumination, speed, etc.
- Do not attempt a towing operation which could jeopardize the operator, any bystanders or other motorists.

CJ Models

Front (Refer to Figure A-13)

(1) Attach J-hooks over axle outboard of springs.
(2) Place towbar under spring shackles.
(3) Attach safety chains around spring shackles.

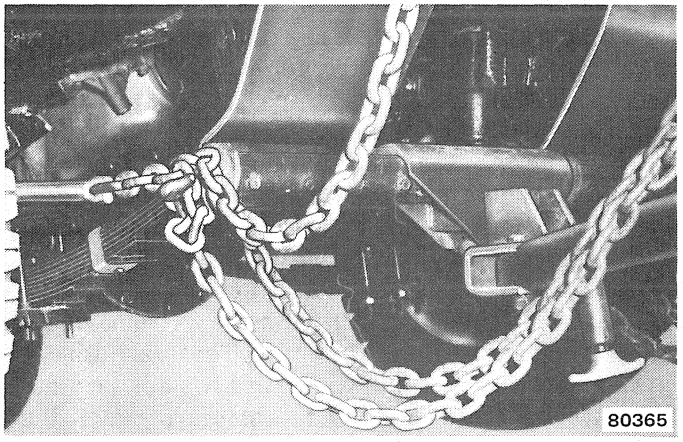

Fig. A-13 Front Towing—CJ Models

Rear (Refer to Figure A-14)

(1) Attach J-hooks around axle outboard of springs.
(2) Place towbar under bumper plate.
(3) Attach safety chains around spring shackles.

CAUTION: *To prevent damage to drive line members shift the transmission and transfer case into the correct position as outlined in the general towing instructions.*

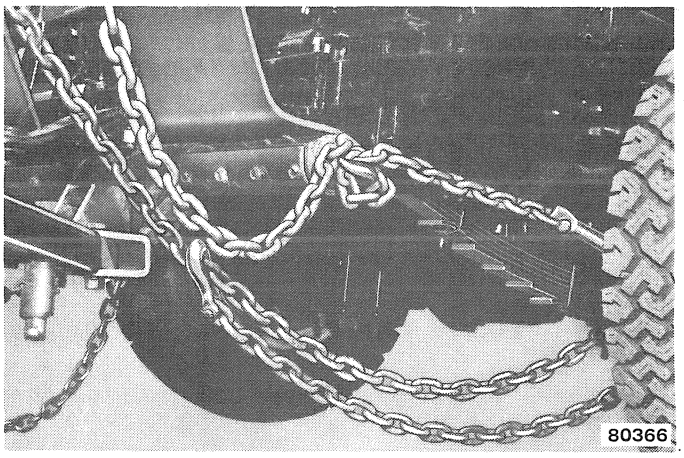

Fig. A-14 Rear Towing—CJ Models

Cherokee and Wagoneer Models

Front (Refer to Figure A-15)

(1) Attach J-hooks around axle outboard of shock absorbers.
(2) Place towbar under spring shackles.
(3) Attach safety chains around spring shackles.

CAUTION: *To prevent damage to drive line members, shift the transmission and transfer case into the correct position as outlined in the general towing instructions.*

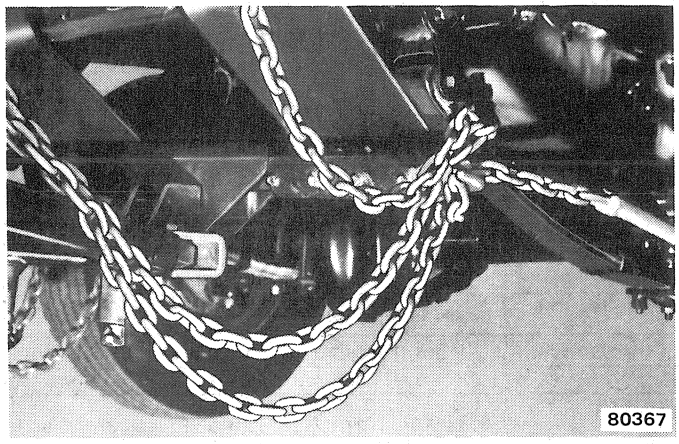

Fig. A-15 Front Towing—Cherokee and Wagoneer Models

Rear (Refer to Figure A-16)

(1) Attach J-hooks around axle outboard of shock absorber brackets.
(2) Place towbar under bumper.
(3) Attach safety chains around frame rails.

CAUTION: *To prevent damage to drive line members, shift the transmission and transfer case into the correct position as outlined in the general towing instructions.*

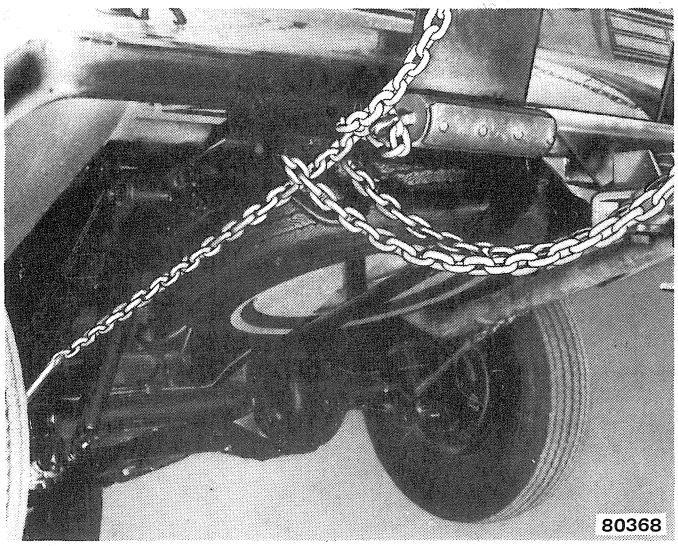

Fig. A-16 Rear Towing—Cherokee and Wagoneer Models

Truck Models

Front (Refer to Figure A-17)

(1) Attach J-hooks around axle outboard of shock absorbers.
(2) Place towbar under spring shackles.
(3) Attach safety chains around spring shackles.

CAUTION: *To prevent damage to drive line members, shift the transmission and transfer case into the correct position as outlined in the general towing instructions.*

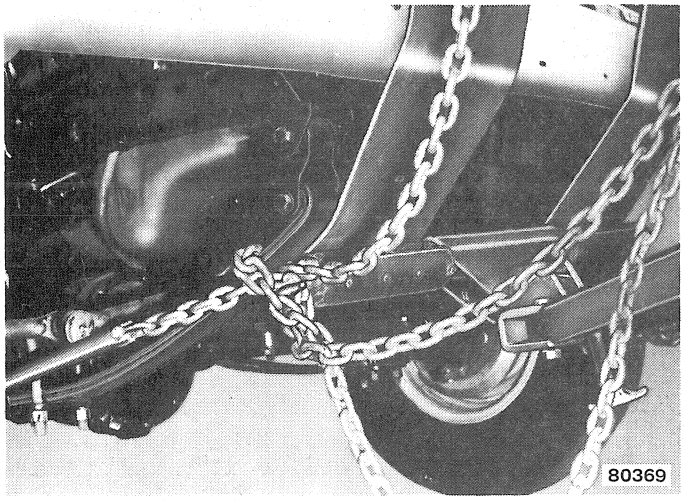

Fig. A-17 Front Towing—Truck Models

Rear (Refer to Figure A-18)

(1) Attach J-hooks around axle outboard of shock absorbers.
(2) Place towbar under frame cross rail.
(3) Attach safety chains around spring shackles.

CAUTION: *To prevent damage to drive line members, shift the transmission and transfer case into the correct position as outlined in the general towing instructions.*

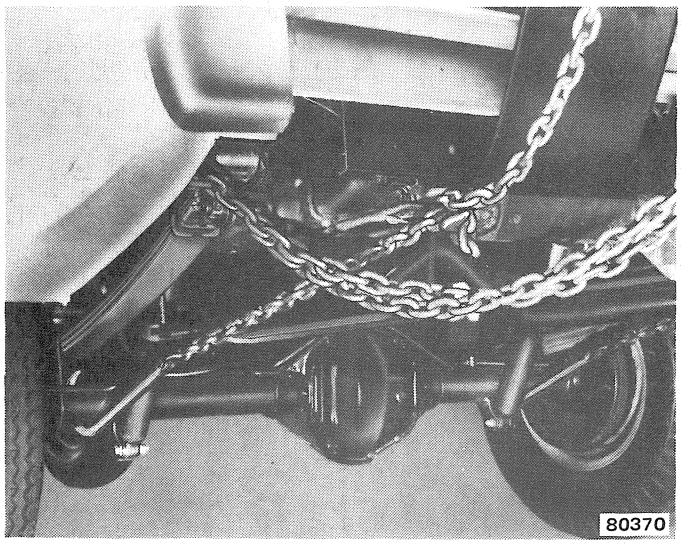

Fig. A-18 Rear Towing—Truck Models

CONVERSION OF ENGLISH AND METRIC MEASURES

Cubic Centimeters to Inches: To change cubic centimeters to cubic inches, multiply cubic centimeters by 0.061 (cc x 0.061 equals cubic inch).

Cubic Inches to Centimeters: To change cubic inches to cubic centimeters, multiply cubic inches by 16.39 (cubic inch x 16.39 equals cc).

Liters to Cubic Inches: To change liters to cubic inches, multiply liters by 61.02 (liter x 61.02 equals cubic inches).

Cubic Inches to Liters: To change cubic inches to liters, multiply cubic inches by 0.01639 (cubic inches x 0.01639 equals liters).

Cubic Centimeters to Liters: To change centimeters to liters, divide by 1000 (simply move the decimal point three figures to the left).

Liters to Cubic Centimeters: To change liters to cubic centimeters, move the decimal point three figures to the right.

Miles to Kilometers: To change miles to kilometers, multiply miles by 1.609 (miles x 1.609 equals kilometers).

Kilometers to Miles: To change kilometers to miles, multiply kilometers by 0.6214 (kilometers x 0.6214 equals miles).

Pounds to Kilograms: 1 pound equals 0.4536 kg.

Kilograms to Pounds: 1 kg equals 2.2046 pounds.

General Dimensions (Inches)

	CJ Models		Cherokee Models			Wagoneer Models	Truck Models		
							J-10 Series		J-20 Series
	CJ-5	CJ-7	Model 16 2-Dr.	Model 17 2-Dr.	Model 18 4-Dr.	Model 15	Model 25	Model 26	Model 27
Wheelbase	83.5(212.0)	93.5(237.5)	108.7(276.1)	108.7(276.1)	108.7(276.1)	108.7(276.1)	118.7(301.5)	130.7(332.0)	130.7(332.0)
Overall Length	138.4(402.3)	147.9(375.7)	183.5(466.1)	183.5(466.1)	183.5(466.1)	183.5(466.1)	192.5(489.0)	204.5(519.4)	204.5(519.4)
Overhang									
Front	23.5(59.7)	23.5(59.7)	29.9(75.9)	29.9(75.9)	29.9(75.9)	29.9(75.9)	29.9(75.9)	29.9(75.9)	29.9(75.9)
Rear	31.4(79.8)	30.9(78.5)	44.9(114.0)	44.9(114.0)	44.9(114.0)	44.9(114.0)	43.9(111.5)	43.9(111.5)	43.9(111.5)
Overall Width	68.6(174.2)	68.6(174.2)	75.6(192.0)	78.9(200.4)	75.6(192.0)	75.6(192.0)	78.9(200.4)	78.9(200.4)	78.9(200.4)
Overall Height	–	–	66.9(169.9)	67.6(171.7)	66.9(169.9)	66.7(169.4)	69.3(176.0)	69.1(175.5)	70.7(179.6)
Open Body	67.6(171.7)	67.6(171.7)	–	–	–	–	–	–	–
Soft Top	71.4(181.4)	71.3(181.1)	–	–	–	–	–	–	–
Hard Top	71.3(181.1)	70.5(179.1)	–	–	–	–	–	–	–
Step Height									
Front	27.0(68.6)	26.1(66.3)	19.9(50.5)	20.7(52.6)	19.9(50.5)	19.9(50.5)	20.7(52.6)	20.7(52.6)	22.1(56.1)
Rear	–	–	–	–	20.8(52.8)	20.8(52.8)	–	–	–
Front Tread	51.5(130.8)	51.5(130.8)	59.4(150.9)	65.4(166.1)	59.4(150.9)	59.4(150.9)	63.3(160.8)	63.3(160.8)	64.6(164.1)
Rear Tread	50.0(127.0)	50.0(127.0)	57.8(146.8)	62.3(158.2)	57.8(146.8)	57.8(146.8)	63.8(162.1)	63.8(162.1)	65.9(167.4)
Minimum Ground Clearance	6.9(17.5)	6.9(17.5)	7.7(19.6)	8.6(21.8)	7.7(19.6)	7.7(19.6)	7.7(19.6)	7.7(19.6)	8.1(20.6)
Min.Turning Diameter-feet(m)	33.5(10.2)	35.9(10.9)	37.7(11.5)	39.4(12.0)	37.7(11.5)	37.7(11.5)	40.6(12.4)	44.5(13.6)	44.5(13.6)
Effective Leg Room									
Front (Accelerator)	37.9(96.3)	39.1(99.3)	41.6(105.7)	4.16(105.7)	41.6(105.7)	41.6(105.7)	41.6(105.7)	41.6(105.7)	41.6(105.7)
Rear (Minimum)	30.5(77.5)	35.0(88.9)	37.0(94.0)	37.0(94.0)	37.0(94.0)	37.0(94.0)	–	–	–
Hip Room									
Front	55.4(140.7)	53.8(136.7)	60.5(153.7)	60.5(153.7)	60.5(153.7)	60.5(153.7)	60.5(153.7)	60.5(153.7)	60.5(153.7)
Rear	36.0(91.4)	36.0(91.4)	60.9(154.7)	60.9(154.7)	60.9(154.7)	60.9(154.7)	–	–	–
Shoulder Room									
Front	55.4(140.7)	53.8(136.7)	58.3(148.1)	58.3(148.1)	58.3(148.1)	58.3(148.1)	58.3(148.1)	58.3(148.1)	58.3(148.1)
Rear	55.4(140.7)	56.3(143.0)	58.3(148.1)	58.3(148.1)	58.3(148.1)	58.3(148.1)	–	–	–
Effective Head Room									
Front	–	–	38.0(96.5)	38.0(96.5)	38.0(96.5)	38.0(96.5)	40.2(102.1)	40.2(102.1)	40.2(102.1)
Soft Top	39.8(101.1)	40.6(103.1)	–	–	–	–	–	–	–
Hard Top	40.8(103.6)	39.9(101.3)	–	–	–	–	–	–	–
Rear Hard Top	40.9(103.9)	39.6(100.6)	37.2(94.5)	37.2(94.5)	37.2(94.5)	37.2(94.5)	–	–	–
Cargo Floor Height	25.2(64.0)	25.1(63.8)	24.9(63.2)	25.6(65.0)	24.9(63.2)	24.7(62.7)	26.8(68.0)	26.4(67.0)	28.2(71.6)
Cargo Capacity-cubic feet ( )	10.2(288.8)*	13.6(385.1)*	95.1(2692.9)*	95.1(2692.9)*	95.1(2692.9)*	95.1(2692.9)*	67.0(1897.2)	76.6(2169.1)	76.6(2169.1)
Cargo Space									
Overall Length	–	–	–	–	–	–	86.5(219.7)	98.5(250.2)	98.5(250.2)
Length at Floor	40.2(102.1)	46.8(118.9)	81.6(207.3)	81.6(207.3)	81.6(207.3)	81.6(207.3)	83.6(212.3)	95.6(242.8)	95.6(242.8)
Width at Wheelhouse	36.0(91.4)	36.0(91.4)	44.3(112.5)	44.3(112.5)	44.3(112.5)	44.3(112.5)	50.0(127.0)	50.0(127.0)	50.0(127.0)
Width at Floor	36.0(91.4)	36.0(91.4)	60.9(154.7)	60.9(154.7)	60.9(154.7)	60.9(154.7)	68.0(172.7)	68.0(172.7)	68.0(172.7)
Width of Tailgate Opening	35.8(90.9)	34.5(87.6)	54.9(139.4)	54.9(139.4)	54.9(139.4)	54.9(139.4)	57.2(145.3)	57.2(145.3)	57.2(145.3)
Height of Sides and Tailgate	–	–	–	–	–	–	20.5(52.1)	20.5(52.1)	20.5(52.1)

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*With rear seat removed.

Metric System-SI

The International System of Units (Systeme International d'Unites) officially abbreviated "SI" in all languages – the modern metric system

QUANTITY	EXAMPLES OF APPLICATIONS	METRIC UNIT	SYMBOL
Length	Dimensions Tire rolling circumference Turning circle/ radius Braking distance	meter	m
	Greater than 999 meter	kilometer	km
	Dimensions	millimeter	mm
	Depth of surface finish	micrometer	um
Area	Glass & Fabrics Brake & Clutch linings Radiator area etc.	square centimeter	cm^2
	Small areas	square millimeter	mm^2
Volume	Car Luggage Capacity	cubic meter	m^3
	Engine Capacity	liter	l
	Vehicle fluid capacity	cubic centimeter	cm^3
Volume Flow	Gas & Liquid	liter per second	l/s
Time Interval	Measurement of elapsed time	second minute hour day	s min h d
Velocity	General use Road speed	meter per second kilometer per hour	m/s km/h
Acceleration & Deceleration	General use	meter per second squared	m/s^2
Frequency	Electronics	hertz kilohertz megahertz	Hz kHz mHz
Rotational Speed	General use	revolution per minute revolution per second	rpm rps
Mass	Vehicle mass Legal load rating General use Small masses	megagram kilogram gram milligram	t kg g mg
Density	General use	kilogram per cubic meter gram per cubic centimeter kilogram per liter	kg/m^3 g/cm^3 kg/l
Force	Pedal effort Clutch spring force Handbrake lever effort etc.	newton	N
Moment of Force (Torque)	Torque	newton meter	N-m
Power, Heat Flow Rate	General use Bulbs Alternator output Engine performance Starter performance	watt kilowatt	W kW

QUANTITY	EXAMPLES OF APPLICATIONS	METRIC UNIT	SYMBOL
Celsius Temperature	General use	degree Celsius	^oC
Thermodynamic Temperature	General use	kelvin	k
Electric Current	General use	ampere milliampere microampere	A mA μA
Potential Difference (Electromotive Force)	General use	kilovolt volt millivolt microvolt	kV V mV μV
Electric Resistance	General use	megohm kilohm ohm	MΩ kΩ Ω
Electric Capacitance	General use	farad microfarad picofarad	F μF pF
Fuel Consumption	Vehicle performance	liter per 100 kilometer	l/100 km
Oil Consumption	Vehicle performance	liter per 1000 kilometer	l/1000 km
Stiffness	Linear stiffness	kilonewton meter	kN/m
Tire Revolutions	Tire Data	revolution per kilometer	rev/km
Pressure	Tire Coolant Lubricating oil Fuel pump delivery Engine compression Manifold Brake line (hydraulic) Car heating & ventilation Barometric pressure	kilopascal	kPa
Luminous Intensity	Bulbs	candela	cd
Accumulator Storage Rating	Battery	ampere hour	A-h

U.S.A./METRIC COMPARISON

QUANTITY	USA	METRIC – SYMBOL	
Length	Inch-Foot-Mile	Meter	m
Weight (mass)	Ounce-Pound	Kilogram	Kg
Area	Square inch/Foot	Square Meter	m^2
Volume-Dry	Cubic inch/Foot	Cubic Meter	m^3
-Liquid	Ounce-Pint-Quart-Gallon	Liter	l
Velocity	Feet Per Second	Meter per Second	m/s
Road Speed	Miles Per Hour	Kilometer per Hour	km/h
Force	Pound-Force	Newton	N
Torque	Foot-Pounds	Newton meter	N-m
Power	Horsepower	Kilowatt	kW
Pressure	Pounds Per Square Inch	Kilopascal	kPa
Temperature	Degrees Fahrenheit	Degrees Kelvin and Celsius	K ^oC

Power Train Combinations—1981 CJ Models

Series	GVRW	Engine	Transmission			Transfer Case		Clutch (in.)	Axle Ratio		Trac-Lok	Axle Model		Brakes (in.)		Standard Wheels
			SR-4	T-176	A	300	QT		S	O		Front	Rear	Front	Rear	
CJ-7 Model 87 93.5 Inch Wheelbase	Open Body 3750 W/EDS. 4/50 (1)	4-151-2V	S		NA	S	NA	9.250	3.73		O	Dana 30 Open End	AMC/ Jeep	11.7 Inch Dics. Std.	11 x 2 Drum	15 x 6 5 Bolt 5.50 B.C.
		6-258-2V	S	S	NA	S	NA	10.50	2.73	3.31						
		8-304-2V		S	NA	S	NA	10.50	2.73	3.31						
CJ-5 Model 85 83.5 Inch Wheelbase	Open Body 3750 W/EDS. 4/50 (1)	4-141-2V	S		904	S	NA	9.250	3.73		O	Dana 30 Open End	AMC/ Jeep	11.7 Inch Dics. Std.	11 x 2 Drum	15 x 6 5 Bolt 5.50 B.C.
		6-258-2V	S	S	999	S	NA	10.50	2.73	3.31						
		8-304-2V		S	999	S	NA	10.50	2.73	3.31						

Notes:

(1) With Extra Duty Suspension

Abbreviations:

B.C. - Bolt Circle
GVWR - Gross Vehicle Weight Rating
O - Optional Equipment
QT - Quadra-Trac
S - Standard Equipment

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Power Train Combinations—1981 Cherokee-Wagoneer-Truck Models

Series	GVWR	Engine	Transmission			Transfer Case		Clutch (in.)	Axle Ratio (2)			Trac-Lok (3)	Axle Model		Brakes		Standard Wheels
			176 4M	T-18 4M	727 Auto.	208	QT		2.73	3.31	3.73		Front	Rear	Front	Rear	
Cherokee Models 16, 17 & 18 168.7 Inch Wheelbase	6200	6-258-2V (1)	S(1)			S(1)		11.0		S		O	Dana Open End	AMC/ Jeep	12 Inch Disc	11 x 2 Drum	15 x 6 6 Bolt 5.5 B.C. Models 16-18
					O(1)		O(1)										
		8-360-2V	S(1)			S(1)		11.0(1)		S*		O					15 x 8 6 Bolt 5.5 B.C. Model 17
					O		O		S(5)(6)	S(4)** O(5)(6)							
Wagoneer Model 15 109 Inch Wheelbase	6200	6-258-2V (1)	O(1)			O(1)		11.0	S	O		O	Dana Open End	AMC/ Jeep	12 Inch Disc	11.2 Drum	15 x 6 6 Bolt 5.5 B.C.
					S(1)		S(1)										
		8-360-2V	O(1)			O(1)		11.0									
					S		S										
J-10 Truck Mod.24&25 119 Inch Wheelbase Model 26 131 Inch Wheelbase	6200	6-258-2V (1)	S(1)			S(1)		11.0	S(5)(6)	S(4) O(5)(6)		O	Dana Open End	AMC/ Jeep	12 Inch Disc	11 x 2 Drum	15 x 6 6 Bolt 5.5 B.C.
					O(1)		O(1)										
		8-360-2V	S(1)			S(1)		11.0	S(5)(6)	S(4) O(5)(6)		O					
					O		O										
J-20 Truck Model 27 130.7 Inch Wheelbase	6800 (Std.) 7600 (Opt.) 8400 (Opt.)	8-360-2V		S(1)		S(1)		11.0			S	O	Dana Open End	Dana 60	12.5 Inch Disc.	12 x 2.50 Drum	16.5 x 6 8 Bolt 6.5 B.C.
					O		O										

Notes:

(1) NA California
(2) Trac-Lok available with all ratios.
(3) NA with QT
(4) Manual Transmission/Part-Time Transfer Case
(5) Automatic Transmission/Part-Time Transfer Case
(6) Automatic Transmission/Quadra-Trac

Abbreviations:

B.C. - Bolt Circle
GVWR - Gross Vehicle Weight Rating
NA - Not Available
O - Optional Equipment
S - Standard Equipment

*Model 17
**Models 16 and 18

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Decimal Equivalents

Milli-meter	Decimal	Fraction	Drill Size	Milli-meter	Decimal	Fraction	Drill Size	Milli-meter	Decimal	Fraction	Drill Size	Milli-meter	Decimal	Fraction	Drill Size	Milli-meter	Decimal	Fraction
.1	.0039			1.75	.0689				.1570		22	6.8	.2677			10.72	.4219	27/64
.15	.0059				.0700		50	4.0	.1575			6.9	.2716			11.0	.4330	
.2	.0079			1.8	.0709				.1590		21		.2720		I	11.11	.4375	7/16
.25	.0098			1.85	.0728				.1610		20	7.0	.2756			11.5	.4528	
.3	.0118				.0730		49	4.1	.1614				.2770		J	11.51	.4531	29/64
	.0135		80	1.9	.0748			4.2	.1654			7.1	.2795			11.91	.4687	15/32
.35	.0138				.0760		48		.1660		19		.2811		K	12.0	.4724	
	.0145		79	1.95	.0767			4.25	.1673			7.14	.2812	9/32		12.30	.4843	31/64
.39	.0156	1/64		1.98	.0781	5/64		4.3	.1693			7.2	.2835			12.5	.4921	
.4	.0157				.0785		47		.1695		18	7.25	.2854			12.7	.5000	1/2
	.0160		78	2.0	.0787			4.37	.1719	11/64		7.3	.2874			13.0	.5118	
.45	.0177			2.05	.0807				.1730		17		.2900		L	13.10	.5156	33/64
	.0180		77		.0810		46	4.4	.1732			7.4	.2913			13.49	.5312	17/32
.5	.0197				.0820		45		.1770		16		.2950		M	13.5	.5315	
	.0200		76	2.1	.0827			4.5	.1771			7.5	.2953			13.89	.5469	35/64
	.0210		75	2.15	.0846				.1800		15	7.54	.2968	19/64		14.0	.5512	
.55	.0217				.0860		44	4.6	.1811			7.6	.2992			14.29	.5625	9/16
	.0225		74	2.2	.0866				.1820		14		.3020		N	14.5	.5709	
.6	.0236			2.25	.0885			4.7	.1850		13	7.7	.3031			14.68	.5781	37/64
	.0240		73		.0890		43	4.75	.1870			7.75	.3051			15.0	.5906	
	.0250		72	2.3	.0905			4.76	.1875	3/16		7.8	.3071			15.08	.5937	19/32
.65	.0256			2.35	.0925			4.8	.1890		12	7.9	.3110			15.48	.6094	39/64
	.0260		71		.0935		42		.1910		11	7.94	.3125	5/16		15.5	.6102	
	.0280		70	2.38	.0937	3/32		4.9	.1929			8.0	.3150			15.88	.6250	5/8
.7	.0276			2.4	.0945				.1935		10		.3160		O	16.0	.6299	
	.0292		69		.0960		41		.1960		9	8.1	.3189			16.27	.6406	41/64
.75	.0295			2.45	.0964			5.0	.1968			8.2	.3228			16.5	.6496	
	.0310		68		.0980		40		.1990		8		.3230		P	16.67	.6562	21/32
.79	.0312	1/32		2.5	.0984			5.1	.2008			8.25	.3248			17.0	.6693	
.8	.0315				.0995		39		.2010		7	8.3	.3268			17.06	.6719	43/64
	.0320		67		.1015		38	5.16	.2031	13/64		8.33	.3281	21/64		17.46	.6875	11/16
	.0330		66	2.6	.1024				.2040		6	8.4	.3307			17.5	.6890	
.85	.0335				.1040		37	5.2	.2047				.3320		Q	17.86	.7031	45/64
	.0350		65	2.7	.1063				.2055		5	8.5	.3346			18.0	.7087	
.9	.0354				.1065		36	5.25	.2067			8.6	.3386			18.26	.7187	23/32
	.0360		64	2.75	.1082			5.3	.2086				.3390		R	18.5	.7283	
	.0370		63	2.78	.1094	7/64			.2090		4	8.7	.3425			18.65	.7344	47/64
.95	.0374				.1100		35	5.4	.2126			8.73	.3437	11/32		19.0	.7480	
	.0380		62	2.8	.1102				.2130		3	8.75	.3445			19.05	.7500	3/4
	.0390		61		.1110		34	5.5	.2165			8.8	.3465			19.45	.7656	49/64
1.0	.0394				.1130		33	5.56	.2187	7/32			.3480		S	19.5	.7677	
	.0400		60	2.9	.1141			5.6	.2205			8.9	.3504			19.84	.7812	25/32
	.0410		59		.1160		32		.2210		2	9.0	.3543			20.0	.7874	
1.05	.0413			3.0	.1181			5.7	.2244				.3580		T	20.24	.7969	51/64
	.0420		58		.1200		31	5.75	.2263			9.1	.3583			20.5	.8071	
	.0430		57	3.1	.1220				.2280		1	9.13	.3594	23/64		20.64	.8125	13/16
1.1	.0433			3.18	.1250	1/8		5.8	.2283			9.2	.3622			21.0	.8268	
1.15	.0452			3.2	.1260			5.9	.2323			9.25	.3641			21.03	.8281	53/64
	.0465		56	3.25	.1279				.2340		A	9.3	.3661			21.43	.8437	27/32
1.19	.0469	3/64			.1285		30	5.95	.2344	15/64			.3680		U	21.5	.8465	
1.2	.0472			3.3	.1299			6.0	.2362			9.4	.3701			21.83	.8594	55/64
1.25	.0492			3.4	.1338				.2380		B	9.5	.3740			22.0	.8661	
1.3	.0512				.1360		29	6.1	.2401			9.53	.3750	3/8		22.23	.8750	7/8
	.0520		55	3.5	.1378				.2420		C		.3770		V	22.5	.8858	
1.35	.0531				.1405		28	6.2	.2441			9.6	.3780			22.62	.8906	57/64
	.0550		54	3.57	.1406	9/64		6.25	.2460		D	9.7	.3819			23.0	.9055	
1.4	.0551			3.6	.1417			6.3	.2480			9.75	.3838			23.02	.9062	29/32
1.45	.0570				.1440		27	6.35	.2500	1/4	E	9.8	.3858			23.42	.9219	59/64
1.5	.0591			3.7	.1457			6.4	.2520				.3860		W	23.5	.9252	
	.0595		53		.1470		26	6.5	.2559			9.9	.3898			23.81	.9375	15/16
1.55	.0610			3.75	.1476				.2570		F	9.92	.3906	25/64		24.0	.9449	
1.59	.0625	1/16			.1495		25	6.6	.2598			10.0	.3937			24.21	.9531	61/64
1.6	.0629			3.8	.1496				.2610		G		.3970		X	24.5	.9646	
	.0635		52		.1520		24	6.7	.2638				.4040		Y	24.61	.9687	31/32
1.65	.0649			3.9	.1535			6.75	.2657	17/64		10.32	.4062	13/32		25.0	.9843	
1.7	.0669				.1540		23	6.75	.2657				.4130		Z	25.03	.9844	63/64
	.0670		51	3.97	.1562	5/32			.2660		H	10.5	.4134			25.4	1.0000	1