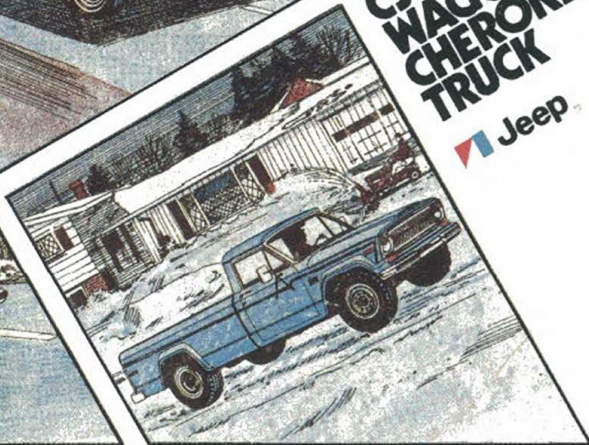


1977 OWNER'S MANUAL



**JEEP
CJ
WAGONEER
CHEROKEE
TRUCK**



Contents



Starting and Driving 6

Break-in Period, Carbon Monoxide Warning, Keys, Ignition Switch, Starting & Warm-up, Manual & Automatic Transmissions, Four-Wheel Drive Systems, Brakes, Fuel Economy.



Instrument Panel Controls and Indicators 24

Indicators, Gauges & Controls, Heating & Ventilating, Air Conditioning, Radios.



Steering Column Controls 38

Horn, 4-Way Hazard Warning Flasher, Power Steering, Adjust-O-Tilt Steering Wheel, Turn Signals, Cruise Command.



Safety, Security and Convenience Features 42

Door Locks, Rear View Mirror, Seats, Seat Belts, Tailgates & Liftgate, Luggage Rack.



Tires and Wheels 57

Tire Condition, Rotation, Repair, and Changing; Wide-Tread, Radial, Mud & Snow Tires; Pressures, Jack Location & Placement, Wheel Balancing, Front End Alignment, Front Wheel Turning Angles.



Special Driving and Emergency Situations 65

First Aid, Push & Jump Starting, Towing, Trailer Towing, Heavy-Duty & Four-Wheel Driving, Special Equipment.



Maintenance 81

Maintenance Schedule, Service Station Information, Fuel & Lubrication Recommendations, Fluid Level Checks & Capacities, Adjustments, Emission Controls, Care & Storage.



General Information 117

Owner's Kit, Vehicle Identification & Weight Capacities, Specifications, Literature Order Form.

Address Change Cards	131	Power	21	Drive Belts Adjustments	105	Engine Block Heater	79
Adjustments		Warning Light	21	Driving, Heavy-Duty	71	Engine Code Number	118
Clutch Pedal Free Play	108	Break-in Period	6	Driving Techniques in 4-Wheel Drive	72	Engine Cooling System	103
Drive Belts	105	Bulbs—Fuses	126	Across Slopes	74	Air Conditioning Check	104
Adjust-O-Tilt Steering Wheel	39			Down Hill	73	Coolant	103
Air Cleaner	91	Camper and Trailer Towing	70	Getting "Over the Hump"	73	Thermostat	104
Paper Cartridge	91	Carbon Monoxide Warning	6	Hill Climbing	73	Engine Filter Changes	98
Polyurethane Element	92	Card, Vehicle Identification	4	If You Stall	73	Engine Oil Changes	98
Air Conditioning Check	104	Care		Drum Brakes	21	Engine Oil Filter Cap	99
Air Conditioning Systems	33	Exterior	113	Dual Hydraulic Brakes	20	Engine Oil Viscosity	98
General	33	Interior	114			Engine Temperature Gauge	24
Operation	34	Cargo Area Light	52	Electrical System	106	Equipment, Special	74
Air Guard Emission (AGE) System	108	Catalytic Converter	107	Emergency Information	65	Exhaust Gas Recirculation (EGR) System	108
Alignment, Front End	63	Cautions and Warnings	5	First Aid	65	Exhaust Manifold Heat Control Valve	110
Ammeter	29	Chart, Special Equipment	80	Jump Starting	67	Exterior Care	113
Altitude Compensation	110	Charts		Mechanical Difficulties	65		
Antiknock Index	88	General Dimensions	125	Push Starting	66	Federal Safety Certification	118
Automatic Transmission Fluid		Bulbs—Fuses—Circuit Breakers	128	Tire Changing	82	Filter, Fuel	92
Change	99	Fluid Capacities	124	Towing	68	First Aid	65
Automatic Transmission	12	Lubricants	123	Emission Controls	106	Flipper Windows	51
Axle Differentials Fluid Change	102	Technical Specifications and		Air Guard Emission (AGE) System	108	Floor Coverings	114
Axle, Rear, Trac-Lok	78	Tuned-Up Data	122	Altitude Compensation	110	Fluid Capacities	124
		Tire Inflation Pressures	121	Catalytic Converter	104	Fluid Level Checks	93
Backup lights Indicator	30	Circuit Breakers	127	Emission Control System Warranty	111	Automatic Transmission	94
Battery Check	92	Clutch Pedal Free Play Adjustment	106	Exhaust Gas Recirculation (EGR)		Engine Coolant	94
Belts, Drive	105	Controls		System	108	Engine Oil	93
Belts, Seat	47	Light Switch	29	Exhaust Manifold Heat Control Valve	110	Front and Rear Axle Differentials	95
Disconnect and Stow	49	Tailgate Window Defogger	30	Fuel Evaporative Control (FEC)		Manual Steering Gear	97
Front Seat Lap-Shoulder	47	Windshield Wipers—Washers	30	System	109	Manual Transmission and Model 20	
Precautions	49	Coolant	103	Fuel Return Line	109	Transfer Case	101
Rear Seat Lap	49	Cooling System, Engine	103	Positive Crankcase Ventilation		Master Cylinder	97
When Children are Passengers	50	Cruise Command	39	(PVC) System	109	Power Steering Gear	96
Brakes		Dimensions, General	125	System Warranty	111	Windshield Washer	93
Disc	21	Disc Brakes	21	Thermostatically Controlled Air		Four-Way Hazard Warning Flasher	38
Drum	21	Door Locks	42	Cleaner (TAC) System	108	Four-Wheel Drive Systems	13
Dual Hydraulic	20			Transmission Control Spark (TAC) System	108	Model 20 Transfer Case	17
Parking	22			Vacuum Throttle Modulator System	109	Quadra-Trac	14

Fresh Air Ventilation	7	Identification Information, Vehicle	4	Manual Transmission	101	Quadra-Trac	
CJ Models with Top	7	Identification		Model 20 Transfer Case	101	Emergency Drive	14
Cherokee—Wagoneer—Truck	7	Engine Code Number	118	Model 20 Transfer Case Shift		Full-Time Four-Wheel Drive	14
Safety Precautions	7	Vehicle	117	Lever and Linkage	102	Low Range Reduction Unit	15
Front End Alignment	63	Ignition Switch	8	Propeller Shaft	102		
Front Vent Window	51	To Release Key From	9	Slave Yokes	102		
Front Wheel		Indicators		Luggage Rack	56		
Bearing Adjustment	83	Ammeter	25			Rack Luggage	56
Turning Angles	64	Backup Lights	30	Maintenance		Radios	36
Fuel		Engine Temperature Gauge	24	Non-Scheduled	81	AM	36
Filler Location	87	Fuel Gauge	24	Scheduled	81	AM/FM Stereo Multiplex	37
Requirement	87	Headlights High-Beam Light	30	Maintenance, Mechanical Schedule Chart	82	Rear View Mirrors	42
Fuel Evaporative Control (FEC) System	109	Odometer	24	Maintenance Services			
Fuel Filter	92	Oil Pressure Gauge	25	Owners Record	86	Safety Certification, Federal	118
Fuel Gauge	24	Speedometer	24	Manual Transmissions	11	Safety, Security and Convenience Features	42
Fuel Return Line	109	Tachometer	25	3-Speed	11	Sales Offices	Inside Back Cover
Fuses	128	Turn Signal Lights	30	4-Speed	12	Seal Bell Warning System	8
		Instrument Panel Controls and		Mechanical Maintenance Schedule	82	Seal Belts	47
		Indicators	24	Mileage Record, Gas	131	Seats	
Gas Mileage		Interior Care	114	Mirrors, Rear View	42	Front	43
How to Check	23			Model 20 Transfer Case	17	Rear	45
Record	131	Jack		Shifting Techniques	18	Selective Drive Hubs	75
Gasoline, Twelve Ways to Save	22	Location	60	Shift Lever Positions	18	Service Station Information	87
General Dimensions	125	Placement	60			Snow Plow	76
General Information	117					Spark Plugs	112
Glove Box	43	Keys	7			Special Driving and Emergency Situations	65
						Special Equipment	74
		Latch, Hood	90	Odometer	24	Engine Block Heater	79
Hazard Warning Flasher	38	Liftgate	53	Octane Rating	88	Selective Drive Hubs	75
Headlights High-Beam Light Indicator	30	Light, Cargo Area	52	Oil Pressure Gauge	25	Snow Plow	76
Headlining	114	Light Switch	25	Owner's Kit	117	Top (Fabric)	75
Heater, Engine Block	79	Literature Order Form	129			Trac-Loc Rear Axle	78
Heating and Ventilating	31	Locks, Door	42	Paint	113	Speedometer	24
Heavy-Duty Driving	71	Lubricants Chart	123	Parking Brake	22	Starting	
Hood Latch	90	Lubrication	98	Plow, Snow	76	Jump	87
Horn	38	Automatic Transmission	99	Plugs, Spark	112	Push	66
Hubs, Selective Drive	75	Body	103	Positive Crankcase Ventilation (PCV) System	109	Starting	10
				Power Brakes	21	Cold Engine	10
				Power Steering	39	Warm Engine	10

Starting and Driving	6	Tires and Wheels	57	Warm-Up	10
Steering Column Controls	38	Tire Inflation Pressures Chart	120	Warning Flasher, Hazard	38
Adjust-O-Tilt Steering Wheel	39	Top, Fabric	75	Warning Light	
Cruise Command	39	Towing		Brake System	21
Four-Way Hazard Warning Flasher	38	Emergency	68	Parking Brake	22
Horn	38	Recreational	69	Warnings and Cautions	5
Ignition Switch	38	Trailer and Campers	70	Warning System, Seat Belt	8
Power Steering	39	Trac-Loc Rear Axle	78	Warranty	4
Turn Signals	39	Trailer and Camper Towing	70	Warranty, Emission System	112
Steering Wheel, Adjust-O-Tilt	39	Transfer Case, Model 20	17	Washer, Windshield	90
Storing		Shifting Techniques	18	Weight Capacities	119
30-Day Storage	115	Shift Lever Positions	18	4-Wheel Drive	
Extended Storage	115	Transmission Control Spark (TCS) System	109	Driving Techniques	72
Readying for Use	116	Transmission, Fluid Change		When Not to Use	72
Switch, Ignition	8, 38	Automatic	99	When to Use	72
		Manual	101	Wheel Balancing	63
Tachometer	25	Model 20 Transfer Case	101	Wheel Bearing Adjustment	63
Tailgate	54	Quadra-Trac	100	Wheels and Tires	57
Tailgate Windows	53	Transmissions		When Not to Use 4-Wheel Drive	72
Tailgate Window Defogger Switch	30	Automatic	12	When to Use 4-Wheel Drive	72
Technical Specifications and		Manual	11	Windows	
Tune-Up Data Chart	122	Trim	114	Flipper	51
Temperature Gauge, Engine	24	Truck Sliding Rear Windows	51	Front Vent	51
Thermostat	104	Tune-Up Data Chart	122	Tailgate	53
Thermostatically Controlled Air		Turn Signal Lights Indicators	30	Truck Sliding Rear	51
Cleaner (TAC) System	108	Turn Signals	39	Windshield	
Tire Changing	62			Lower	50
Tires	57	Vacuum Throttle Modulator System	109	Raise	51
Aftermarket	57	Vehicle Identification	117	Windshield Washer	90
Condition	57	Vehicle Identification Information	4	Windshield Wiper	
Mud and Snow	57	Ventilating and Heating	31	Blade Care	88
Pressures	59	Ventilation, Fresh Air	7	Element Replacement	90
Radial/Ply and Wide-Tread	57	CJ Models with Top	7	Windshield Wipers—Washers Control	30
Repairs	58	Cherokee—Wagoneer—Truck	7		
Rotation	58	Safety Precautions	7		
Traction	58	Vent Windows, Front	51		
Wide-Tread	57				

Welcome ... to the Jeep Corporation family ...

Thank you for selecting one of our 1977 models. Whatever your choice—Jeep CJ, Jeep Cherokee, Jeep Wagoneer, or Jeep Truck—be assured that it represents precision workmanship, distinctive styling, and high quality—traditional with Jeep Corporation.

Features that make it a superior off-road vehicle—such as high ground clearance and reduced wheelbase and tread—result in handling and performance characteristics unlike those of standard passenger cars. So take time to read this manual. Get to know your vehicle and how to operate it. Read about the safety features and how to use them. And ... when you take the wheel for the first time, take it easy.

Models & Equipment

This manual covers all 1977 models, and is based on the latest information available at time of printing. The fact that various equipment is covered in this manual does not imply

that all models are so equipped since many are options or are only for certain models.

Vehicle Identification Information

Your vehicle identification information appears on the front of your 1977 Limited Warranty and Service Policy folder located in the glove box. **Make sure your dealer fills in the Vehicle Identification Number (VIN), delivery date and the Zone/Dealer Code number on the folder.**

When you visit your dealer for service present your folder to the service manager. Be sure to keep it in the glove box so it will be handy when you need it.

Warranty

Your vehicle warranty coverage is explained in the 1977 Limited Warranty and Service Policy folder included with this manual in the Owner's kit.

National Institute for Automotive Service Excellence (NIASE)

Even after the sale, we care about you and your Jeep vehicle. That's why all authorized Jeep dealers are staffed with factory-trained mechanics devoted solely to keeping your Jeep vehicle on the road.

Jeep dealer mechanics are highly skilled in their specific

service areas, and many are certified by the National Institute for Automotive Service Excellence (NIASE).

Cautions and Warnings

This manual contains **CAUTIONS** against operating procedures which **could result in damage to your Jeep vehicle or accessory equipment**. It also contains **WARNINGS** against procedures which **could result in accident or personal injury**.

Starting and Driving

Break-in Period

Jeep vehicles do not require a rigid break-in procedure. However, extra care for the *first 500 miles* will pay dividends. During the *first 100 miles*, drive at varying speeds *up to 50 mph*. Then drive at increasingly higher speeds—not exceeding 55 mph—until your mileage reaches 500 (Observe all local, state, and national speed limits.) During the entire 500 miles avoid driving at full throttle or at top speeds, and avoid steady speeds or excessive idling. Avoid shifting into gear after starting a cold engine without a warm-up of at least 15 seconds. Fast starts and quick stops should be avoided.

For the *first 1,200 miles*, do not expect top economy from your vehicle. Engines tend to use more fuel and oil until they are broken in. Driveability and performance generally improve as the engine breaks in. Check engine oil regularly and be alert for any indication of overheating in any component of the vehicle. Allow for proper break-in—at least 1,200 miles—before requesting engine adjustments ... if then needed.

Carbon Monoxide Warning

Avoid inhaling exhaust gases as they contain carbon monox-

ide which is colorless and odorless. Carbon monoxide is a dangerous gas which can be lethal.

Guard against carbon monoxide by proper maintenance. If exhaust sound changes, if fumes are detected in the vehicle, or if the underside of the vehicle is damaged ... immediately have a competent mechanic inspect the exhaust system and adjacent panels for damage, mislocated parts, or open or loose joints which could allow entry of fumes into the vehicle interior. Until repairs are made, the vehicle should be driven with **all** side windows **fully** open. The exhaust system should be inspected every time the vehicle is raised for servicing.

To allow proper operation of the vehicle's ventilation system, always keep front ventilation inlet grille clear of snow, leaves, and all other obstructions.

Sitting, in a parked vehicle with the engine running for an extended period is not recommended.

Do not run engine in a confined area such as a garage since exhaust fumes contain deadly carbon monoxide. When vehicle is stopped in an **unconfined** area with the engine running for any more than a short period, adjust heating and ventilation system to force fresh outside air into the vehicle as follows:



Fresh Air Ventilation

CJ Models with Top

Pull out AIR knob and turn FAN control to MAX setting.

Cherokee—Wagoneer—Truck

Use heater and ventilation controls to direct fresh air into the vehicle. Depress HEAT or DEFROST pushbutton, activate blower by rotating FAN switch toward the HI position and open one or both fresh air inlets (temperature control lever should be in OFF position).

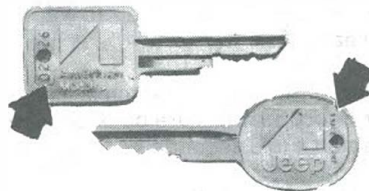
Safety Precautions

- If, while driving, a vent window is open or a side door window is open only slightly (rather than half to fully open), always provide for a flow of fresh air into the vehicle interior by opening the fresh air vents.
- On Cherokee and Wagoneer models, the tailgate window should always be closed while driving.
- On CJ models with a top, always keep liftgate and/or rear windows closed while driving. On models equipped with a fabric top, do not drive with tail flap up. Fasten the tail flap to the tailgate or rear panel unless the side panels are also up.

- On Trucks equipped with a cargo cap or cover, passengers should never occupy the cargo space in the pickup box while the engine is running.

Keys

When you receive the keys to your new Jeep vehicle, record the key code numbers which are stamped on the knock-out plugs. Remove the plugs and store them in a safe place.



**Key
Knock-Out
Plugs**

If you lose your keys, a Jeep dealer or any competent locksmith can replace them if the key code numbers are available.

- Key with square head (stamped "D" on knock-out) fits the ignition switch (all models), door locks (Cherokee, Wagoneer and Truck), and the tailgate rear window

lock—(CJ-7 Hardtop, Cherokee and Wagoneer).

- Key with oval head (stamped "E" on knock-out) fits the glove box lock on models so equipped and the door locks of CJ models with metal doors.

CAUTION: Always remove the ignition keys (and lock all doors and rear tailgate on models so equipped) when leaving your vehicle unattended.

For your convenience, two sets of keys are furnished.

Seat Belt Warning System

A FASTEN BELTS red indicator light and a buzzer are provided on Cherokee, Wagoneer, and Truck models to warn occupants to buckle their seat belts.

The light will come on whenever the ignition switch is turned to the on position, whether or not the belts are buckled. It will go off automatically after about 4 to 8 seconds.

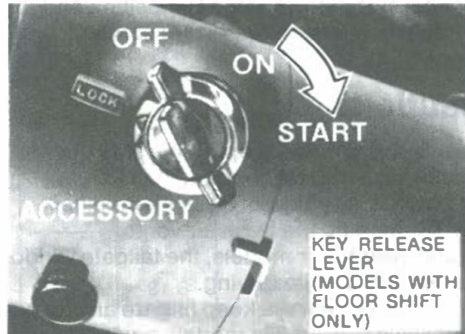
The buzzer will sound only if the driver fails to buckle up before turning the ignition switch to the on position. It will go off automatically after about 4 to 8 seconds.

The seat belt warning system is not interconnected to the ignition system and does not inhibit or prevent starting the engine.

WARNING: All lap belts should be adjusted low and snug on hips. Failure to do so may result in unnecessary injuries in the event of an accident. Shoulder straps must never be positioned under the arms.

Ignition Switch

The ignition switch, located on the right side of the steering column, has five positions:



- **Accessory**—Permits operation of electrical accessories when engine is not running. To engage, push key in and turn toward you (counterclockwise).

- **Lock**—Normal parking position. Locks ignition and provides added theft protection by preventing normal operation of steering wheel and shift controls (vehicles with automatic transmissions).

On models with automatic transmission, key cannot be turned to LOCK position and removed until gearshift lever is placed in Park position. On models with manual transmission, turn key to the LOCK position and depress the key release lever to remove the key.

WARNING: *In case of an emergency requiring ignition “off” while moving, DO NOT depress key release lever. This could result in locking the steering wheel with subsequent loss of steering control.*

- **Off**—Permits turning engine off without locking steering wheel and shift controls. If it becomes necessary to turn ignition off with vehicle in motion, turn key to *off position only*.
- **On**—Ignition and electrical system on (normal running position).
- **Start**—Permits engagement of starter.

WARNING: *Do not attempt to move shift lever in vehicles with shift lever lock before turning key to the off position to*

release lock. When parking, release steering wheel before turning the ignition key to the LOCK position. If the wheels are turned while parked, the resultant wind-up of the steering wheel can cause a sharp springing-back action of the wheel when the steering wheel lock is released. Do not operate controls by reaching through the steering wheel.



CAUTION: *To prevent battery discharge, do not leave ignition on with engine not running.*

To Release Key from Ignition Switch

Vehicles with Automatic Transmission

- Place gearshift lever in Park.
Turn ignition key to LOCK position.
- Remove key—the ignition, steering wheel, and gearshift lever are now locked for anti-theft protection.

Vehicles with Manual Transmission

- Push key release lever down and hold.
- Turn ignition key to LOCK position.
- Remove key—the ignition and steering wheel are now locked for anti-theft protection.

WARNING: *Placing the transmission gearshift lever in Park on vehicles with automatic transmission or in gear on vehicles with manual transmission is not a substitute for using the parking brake. Always set the parking brake—especially when parking on an incline—when leaving the vehicle unattended.*

Starting

You start a cold engine differently than a warm engine. Follow the instructions here and your engine will start easily.

Cold Engine

- 1 Turn ignition key to on position and shift gearshift lever to neutral (and, if equipped with manual transmission, depress clutch).
- 2 Press accelerator pedal to floor, then release it. This will preset the automatic choke. In extreme cold weather (near or below 0° F), or if the vehicle has been sitting idle for several days, repeat this procedure once or twice.
- 3 Turn key to start—release key when engine starts. If engine starts but fails to continue running, turn key to start again.

- 4 Allow engine to warm up for at least 15 seconds. Hold foot on brake. Engage transmission, release brake gradually, and drive away.

Warm Engine

- 1 Turn key to on position and shift gearshift lever to neutral (and, if equipped with manual transmission, depress clutch).
- 2 Press accelerator pedal 1/2 to 3/4 way down and hold. DO NOT pump the pedal.
- 3 Turn key to start position until engine starts, then release key. If engine fails to start, hold pedal to floor while starting—release key then release pedal gradually as engine gains speed.

Warm-Up

Once the engine has started, allow it to warm up for at least 15 seconds. Do not tap the accelerator to reduce engine speed prior to shifting unless the speed is excessively high. Hold foot on brake. Engage transmission, release brake gradually, and drive away. During cold weather or if pavement is slippery, let engine idle for a bit after starting to allow proper warm-up before engaging transmission. Idle speed may be reduced after about 30 seconds by tapping the accelerator pedal lightly.

Do not race a cold engine under any circumstances.

To aid warm-up, drive at moderate speeds for the first few minutes. Avoid excessively long idling periods. It's not the best way to warm up an engine and it wastes gasoline.

NOTE: *Starting your engine, moving your vehicle a short distance, and shutting off the engine can cause wet fuel fouling of spark plugs and consequent hard restarting and/or rough idling after restarting.*

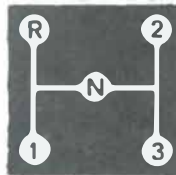
WARNING: *Due to exhaust emission requirements, engines idle at higher speeds. Therefore, be careful in close-quarter maneuvering, parking, stopping, or while driving on slippery roads, especially during the warm-up period.*

Manual Transmissions

3-Speed Manual Transmission

A conventional floor-mounted gearshift lever is used to pass through the gears in an H sequence. ALWAYS shift to neutral before starting the engine. With the engine running and the transmission in neutral, depress the clutch pedal to the floor

and place the lever in 1st gear. Release the clutch slowly, simultaneously pressing the accelerator gently as the vehicle rolls into motion. Proceed through 2nd and 3rd gears the same way.



**3-Speed
Manual Transmission
Shift Pattern**

Recommended shift speeds for normal driving are 15 mph for 1st to 2nd and 25 mph for 2nd to 3rd.

Use 2nd gear to achieve quicker response at slow speeds and in heavy stop-and-go traffic. Also use 2nd gear—1st if necessary—for climbing or descending steep inclines or making sharp turns.

To prevent undue engine “lugging” use 2nd gear to accelerate from speeds below 20 mph.

DO NOT engage the *reverse* gear when the vehicle is in motion.

To stop the vehicle, simply release the accelerator, depress the brake pedal and, as the vehicle slows down to a near stop, again depress the clutch pedal and move the gearshift lever to the *neutral* position.

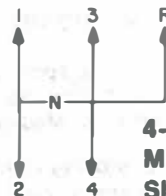
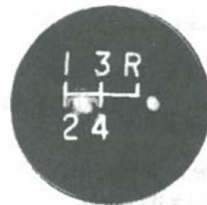
Avoid resting the foot on the clutch while driving and do not "slip" the clutch. Slipping the clutch causes excessive heat, which can result in clutch damage. This is especially important to remember when operating a vehicle equipped with a snow plow.

4-Speed Manual Transmission

Synchronous meshing is provided in second, third, and fourth gears. First and reverse provide greater gear reduction than is available with a 3-speed manual transmission.

Operate the same as for the 3-speed manual transmission, going one step beyond into a 4th forward position. Downshifting, going back from 4th to 3rd and then to 2nd, can be used to help reduce vehicle speed and achieve pulling power at low speeds. When downshifting be sure you shift progressively from 4th to 3rd to 2nd to 1st without skipping any gear.

Recommended shift speeds for normal driving are 10 mph from 1st to 2nd, 20 mph from 2nd to 3rd, and 40 mph from 3rd to 4th.



4-Speed Manual Transmission Shift Pattern

To engage reverse gear, push the spring-loaded shift lever to the far right and then forward. DO NOT attempt to engage reverse while the vehicle is moving.

To stop the vehicle, simply release the accelerator, depress the brake pedal and, as the vehicle slows down to a near stop, again depress the clutch pedal and move the gearshift to the Neutral position.

Avoid resting the foot on the clutch while driving and do not "slip" the clutch. Slipping the clutch causes excessive heat, which can result in clutch damage. This is especially important to remember when operating a vehicle equipped with a snow plow.

Automatic Transmission

The operating ranges for the automatic transmission are shown on the indicator on the steering column.

The pointer indicates the operating range selected when the gearshift lever is moved.

A safety start switch prevents starting the engine unless the gear selector is in P (Park) or N (Neutral).

The column-mounted gearshift lever must be lifted slightly for ease of operation, except that when shifting from N (Neutral) to 1 Drive—no lift is required.

To provide power and acceleration for passing, downshift transmission to a lower gear (with the gearshift lever in D position) by pressing the accelerator to the floor.

To start the vehicle in motion, move the gearshift lever to the operating range desired, and then depress the accelerator. You may find it helpful to apply the brakes to prevent the vehicle from lurching as the transmission engages.

The selector has six positions:

P Park—This position engages the transmission lock which must be used only when stopped, parked, or when starting the engine. After shifting into Park always check for positive lock engagement. On an incline, also apply parking brake fully.

WARNING: Do not use the automatic transmission Park position as a substitute for the parking brake. Always set the parking brake when leaving the car unattended.



R Reverse—For backing the vehicle. Before moving the selector lever to R, always stop the vehicle (except when freeing vehicle from snow, mud or sand—see page 72).

N Neutral—For starting the engine (with brakes applied). Do not coast in neutral at any time—leave the selector lever in one of the drive positions.

D Drive—For all normal open road driving. The shift into D from 1st or 2nd can be made at any time.

2 Drive 2—For moderate grades and to assist braking on clear, dry pavement or in mud or snow. Transmission will automatically shift only into low or 2nd gear—not into high gear.

1 Drive 1—For hard pulling at low speeds such as when traveling in deep mud, sand, snow, going up or down steep grades. Before attempting to go down steep grades, stop the vehicle and shift into 1st. This will assure that the downshift has been accomplished.

Four-Wheel Drive Systems

All Jeep vehicles are equipped with a transfer case which transmits engine torque to all four wheels by using “live” front

and rear axles. The front axle is driven by a drive shaft and differential in the same manner as the rear axle in a conventional two-wheel drive vehicle. Torque is delivered from the engine to the transmission and transfer case, which in turn, propels the front and rear propeller shafts. When in 4-wheel drive, the rear wheels are pushing while the front wheels are pulling—this provides four points of torque and traction for the “go anywhere” mobility that makes Jeep vehicles ideally suited for multi-purpose usage.

The Quadra-Trac® Transfer Case, standard on Wagoneers and optional on CJ-7, Cherokee, and Truck models with automatic transmission, provides the correct amount of torque to both front and rear axles at all times for “Full-Time 4-Wheel Drive.”

The Model 20 Dual-Range Transfer case is standard on CJ, Cherokee, and Truck models with manual transmissions.

Quadra-Trac®—Full-Time 4-Wheel Drive

Quadra-Trac is a registered trademark of Jeep Corporation signifying *Quad* (4-wheel) plus *Trac* (traction). This system is available only on models with automatic transmission and utilizes a unique controlled-slip third differential which auto-

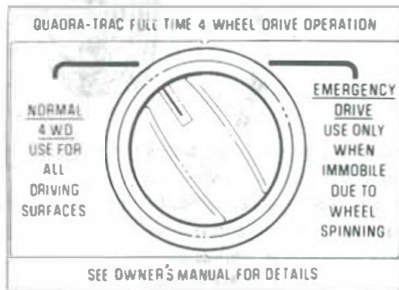
matically transmits continuous torque to both front and rear axles in direct proportion to their needs for maximum vehicle control, power, and traction. It is equally at home on the road or off the road. It is ideally suited for 4-wheel drive operations in normal dry road conditions or in situations with mixed dry and slippery surface conditions. In rugged off-road situations it constantly adjusts to the terrain, sending the right amount of torque to the axle where it's needed. With the exception of the Emergency Drive and the optional Low Range Reduction Unit, the Quadra-Trac System operates automatically.

WARNING: *All four tires used on vehicles equipped with Quadra-Trac MUST be of the same type and size and inflated within the specified pressure range at all times. Unlike tires could cause poor performance, poor steering, unusual noises, or premature wear of drive train components. Refer to Tires and Wheels section.*

Emergency Drive

In some emergency situations—as in the case of the vehicle becoming high-centered or stuck due to wheel spinning—it may be beneficial to nullify the differential action between the front and rear axles by actuating the emergency drive control.

To engage the emergency drive, turn the control knob located in the glove box in a clockwise direction. A reminder light indicating EMERG. DRIVE will come on in the instrument cluster and will continue to glow until the emergency drive is deactivated. When the emergency has passed, disengage the emergency drive by turning the control knob counter-clockwise. In some cases, it may be necessary to reverse vehicle direction for a slight distance to assist in deactivating the emergency drive.



Emergency Drive Control

CAUTION: *Internal parts of the Quadra-Trac transfer case may be damaged if the vehicle is driven inappropriately in emergency drive. Do not spin wheels excessively under any driving condition.*

Quadra-Trac Low Range Reduction Unit

The optional Quadra-Trac Low Range Reduction Unit (not available on Cherokee models with six-cylinder engine) provides additional gear reduction for maximum braking, control, and torque at low vehicle speeds. Use it for rugged on or off-road driving conditions, including trailer towing, for greater control of vehicle speed and direction.

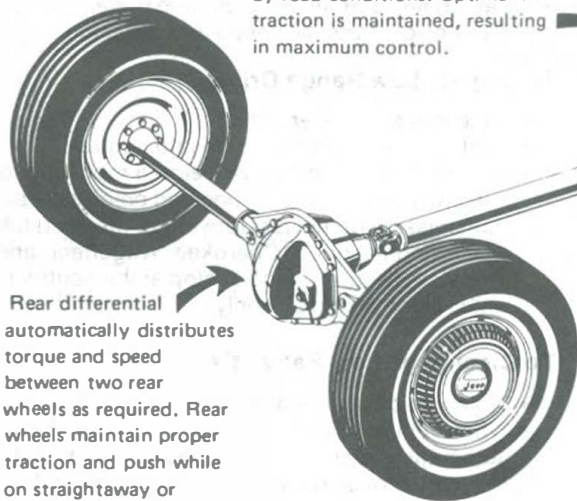


To Engage Low Range Drive:

- Take foot off accelerator.
- Shift automatic transmission into neutral.
- When vehicle speed drops below 5 mph, engage reduction unit by moving lever (located on driver's side of transmission tunnel just forward of the seat) fully forward (CJ-7 models) or up (Cherokee, Wagoneer, and Truck models). Be sure you don't stop at the neutral position which is for towing use only.

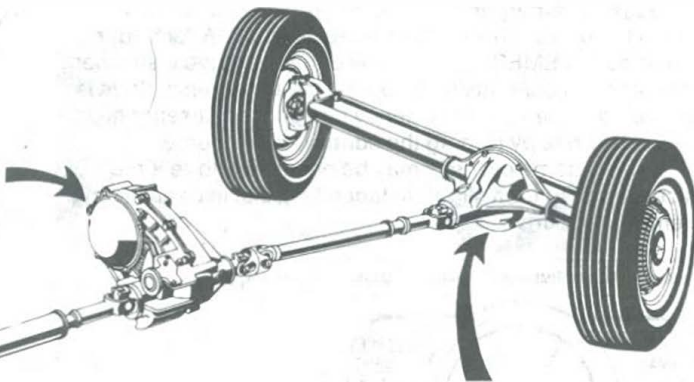
To Disengage Low Range Drive:

- Take foot off accelerator.
- When vehicle speed drops between 10 to 5 mph, shift automatic transmission into neutral and then pull (CJ-7 models) or push (Cherokee, Wagoneer, and Truck) on lever.



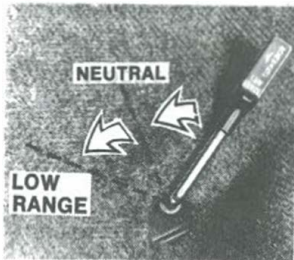
Rear differential automatically distributes torque and speed between two rear wheels as required. Rear wheels maintain proper traction and push while on straightaway or in turns.

Controlled-slip third differential transmits engine torque to both front and rear wheels in just the right proportion as required by road conditions. Optimum traction is maintained, resulting in maximum control.

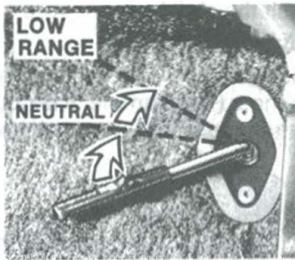


Front differential distributes torque and speed between two front wheels automatically as required. Front wheels maintain traction and pull vehicle through turns as well as on straightaway, minimizing the possibility of skids and loss of control.

Reduction Unit Low Range Lever:



CJ Models



**Cherokee, Wagoneer,
Truck**

Towing Position

A neutral position is provided so that it's unnecessary to disconnect the propeller shafts when your vehicle is to be towed behind a Recreational Vehicle (RV) or in the event of a breakdown. Refer to "Recreational Towing" in the *Special Driving and Emergency Situations* section.

If the reduction unit is infrequently used, it is recommended that it be engaged and operated for at least five minutes each month.

The optional Low Range Reduction Unit may be added to the

basic Quadra-Trac unit at any time. Contact your Jeep Dealer for further information.

Model 20 Transfer Case

The transfer case operates like a transmission. It has four gear positions for operating the vehicle in a variety of conditions: 2H (2-wheel drive high range), 4H (4-wheel drive high range), N (Neutral), and 4L (4-wheel drive low range).

- **2-Wheel Drive High Range (2H) Position**—delivers power to the rear wheels only. This position should be used for driving on hard-surfaced roads.
- **4-Wheel Drive High Range (4H) Position**—delivers power to the front and rear wheels for better traction on slippery pavement or for off-road use.
- **4-Wheel Drive Low Range (4L) Position**—provides even greater pulling power to front and rear wheels for tough going on slippery or off-road surfaces.
- **Neutral (N) Position**—the wheels do not drive, but power takeoff is available for stationary power.

The normal transmission shift pattern is used in either 2-wheel or 4-wheel drive operation.



Shift Lever Positions

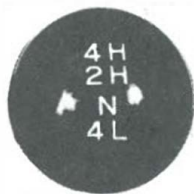
CJ Models

The gearshift pattern is a straight line.

Push the lever all the way forward for 4-wheel drive high range driving (4H). Pull the lever rearward one position for 2-wheel drive high range driving (2H).

Pull the lever rearward one more position for neutral (N). Pull the lever all the way rearward for 4-wheel drive low range driving (4L).

CAUTION: Shift lever must be in most rearward position to avoid possible (2L) 2-wheel drive low range operation. Vehicle must never be operated in 2-wheel drive low range.



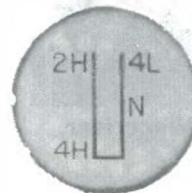
**Model 20
Transfer Case Gear-
Shift Lever —
CJ Models**

Cherokee—Truck

The gearshift pattern is U-shaped. Push the shift lever forward and to the left for 2-wheel drive high range (2H). Pull the lever fully rearward for 4-wheel drive high range (4H). Push

the lever to the right and forward to the center for neutral (N). Push the shift lever forward and to the right for 4-wheel drive low range driving (4L).

The gearshift lever can be moved only within the above sequence. For example, it is not possible to shift from 2H to 4L without passing through 4H and N positions.



**Model 20 Transfer
Case Gearshift Lever
Cherokee
and Truck Models**

Shifting Techniques

Shifting the transfer case requires more effort than shifting the transmission due to normal resistance in the transfer case. Always use firm pressure on the transfer case shift lever when changing gear positions.

If excessive effort is required to shift the transfer case, move the vehicle slowly (1 or 2 mph) in forward or reverse, or lightly depress and release the accelerator pedal to aid in shifting.

Shifting techniques will improve with driver experience.

- Refer to the *Special Driving and Emergency Situations* section for further information on when and when not to use 4-wheel drive and for special driving techniques.
- On vehicles equipped with manual-type selective drive hubs, place hubs in LOCKED position before shifting to 4-wheel drive. Refer to *Selective Drive Hubs* in the Maintenance section for operating instructions.

On vehicles equipped with automatic-type hubs, the vehicle must be stopped or slightly moving (1 or 2 mph) before shifting into 4-wheel drive. Otherwise damage to the transfer case may result.

2-Wheel Drive High Range into 4-Wheel Drive High Range Shifts, or 4-Wheel Drive High Range into 2-Wheel Drive High Range Shifts

All Models

Maintain vehicle speed and move shift lever into desired position. Letting up on the accelerator pedal or depressing the clutch pedal may provide easier shifting.

4-Wheel Drive Low Range Shifts

CJ Models

To shift into 4-wheel drive low range, reduce vehicle speed to 1 or 2 mph. Depress clutch pedal and pull lever forward into

4-wheel drive low (4L). Release clutch pedal and continue pulling lever while vehicle is moving, until assured of full engagement of 4-wheel drive low.

To shift out of 4L into 2-wheel drive high range (2H) or 4-wheel drive high range (4H), depress clutch pedal and move lever forward into 2H or 4H as desired. This may be done at any vehicle speed.

Cherokee—Truck

To shift into 4-wheel drive low range (4L), reduce vehicle speed to 1 or 2 mph. Move shift lever through the U-shaped pattern all the way into 4-wheel drive low range (4L) in one continuous motion.

NOTE: *If transfer case is in 4-wheel drive high range (4H), it may be easier to first shift into 2H, then shift into 4L in one continuous motion.*

To shift out of 4L into 4-wheel drive high range, reduce vehicle speed to 1 or 2 mph, depress clutch pedal and pull lever rearward into 4H position.

To shift into 2-wheel drive high range (2H), continue moving lever forward into 2H position.



Neutral Shifts

CJ Models

Stop vehicle, depress clutch pedal and move shift lever into neutral (N).

If 4-wheel drive high (4H) or low (4L) is desired after using neutral, it may be easier to shift into 2-wheel drive high range (2H) first and begin vehicle motion before shifting into 4-wheel drive high (4H) or low (4L). Remember to reduce speed to 1 or 2 mph when engaging 4-wheel drive low range (4L).

Cherokee—Truck

If transfer case is in 4-wheel drive low range (4L), reduce vehicle speed to 1 or 2 mph, depress clutch pedal and pull lever rearward into neutral (N).

If transfer case is in 4-wheel drive high range (4H), it may be easier to shift into 2H position, then shift from 2H through the U-shaped pattern all the way into neutral (N) in one continuous motion.

If 4-wheel drive high (4H) or low (4L) is desired after using neutral, it may be easier to shift into 2-wheel drive high range (2H) first and begin vehicle motion before shifting into 4-wheel drive high (4H) or low (4L). Remember to reduce speed to 1 or 2 mph when engaging 4-wheel drive low range (4L).

Brakes

Dual Hydraulic Brake System

Brake systems on Jeep vehicles are dual hydraulic. The separate front and rear systems operate from a dual-reservoir master brake cylinder and work in tandem. If one hydraulic system fails the other still functions.

WARNING: *After operating your Jeep in deep mud, sand, or water, have your brake assemblies inspected and cleaned as soon as possible. This will prevent abrasive materials that may have entered the brakes from damaging or causing excessive wear to the linings.*

Self-Adjusting Drum Brakes

Jeep brakes adjust themselves automatically, saving you the time and cost of periodic brake adjustments. The adjustment occurs (if necessary) when you apply the brakes while moving in reverse, which happens often enough during normal driving to keep the brakes in adjustment. If you find your brake pedal at an abnormally low position, put the vehicle in reverse and apply the brakes—*repeat the forward and reverse application three or four times*. If this procedure does not restore normal brake pedal position, have the brake fluid and linings checked by your dealer.

WARNING: *Don't "ride" the brakes by resting your foot on the pedal. After going through deep water (or an automatic wash) dry brakes by gentle intermittent pedal action while driving at very slow speeds.*

Disc Brakes

Ventilated-rotor front disc brakes (optional on CJ models) provide fade-resistance plus maximum stopping ability and control under a wide variety of speed, weather and road conditions. Disc brakes are self-adjusting and should be relined when necessary.

Power Brakes

With power disc brakes (optional on CJ models; standard on Cherokee, Wagoneer, and Truck), your braking effort receives a power assist from engine vacuum, significantly reducing the effort necessary in braking. Even after the engine stops, the built-in vacuum reserve system assists for one or two brake applications. **With no vacuum reserve, substantially greater pedal effort is needed for braking.**



Brake System Warning Light

The brake system warning light in the instrument cluster will glow red if there is a loss of hydraulic pressure in the brake system (also indicates parking brake engagement). As the key is turned to start the engine, the light should glow. If it doesn't glow, the bulb may be burned out and should be checked immediately. However, if the bulb glows while the vehicle is in motion and the parking brake is released, it is a warning that pressure is lost and calls for immediate repair. The warning light does not indicate fluid level in the master cylinder, which must be regularly inspected (see *Maintenance* section).

Parking Brake

The step-on parking brake pedal mechanically operates cables to the rear brakes when applied. To set parking brakes, push the service brake pedal down with the right foot at the same time you apply the parking brakes with your left foot. Before driving, release parking brakes by pulling out on the Brake Release lever. If possible, avoid using parking brakes in freezing weather or when brakes are known to be overheated.

Always apply parking brake fully when leaving the vehicle unattended, and especially when parking on inclines, or when inspecting or working under the hood or anywhere around the vehicle.

Parking Brake Warning Light

The parking brake warning light will glow when the parking brake is set and the ignition is in the on position. It will continue to glow until the parking brake is released. (Same light as for brake system warning.)

NOTE: *Place automatic transmission in Park or manual transmission in Reverse when leaving your vehicle and set the parking brake.*

Twelve Ways to Save Gasoline

1. First, determine to drive in a manner that saves fuel; attitude is an important element of economy driving.
2. Avoid "jack-rabbit" starts. Acceleration should be smooth with either manual or automatic transmission, getting into high gear early. Up to five times as much fuel can be used in a full throttle start.
3. Hold a steady accelerator pedal position when possible. Steady speeds are ideal for economy; unnecessary speed wastes gas. **Fuel economy in most vehicles, when driven at a steady speed, drops gradually as speed increases above 40 mph and drops fairly rapidly above 55 mph.**
4. Watch traffic conditions ahead to anticipate speed changes. Losing vehicle momentum means extra gasoline must be consumed to regain it. Good drivers avoid braking by adjusting speed to traffic flow.
5. Choose routes which avoid stop-and-go traffic, if possible. Starting from a stop uses much more fuel than cruising at a steady speed.
6. Accelerate gradually *before* going uphill to build up momentum and avoid the need to open the throttle unnecessarily.

7. Turn off the engine when stopped for more than a minute; idling requires a rich fuel mixture, and running the engine unnecessarily for even a minute burns more gasoline than needed for restarting.
8. Winter driving conditions cut economy—good reason for preparing your vehicle for cold weather use. Change to winter grade crankcase oil for better fuel economy through reduced engine friction.
9. Let a cold engine warm up while driving at a light throttle for the first mile or so, not with the vehicle sitting still. Warm-up will be faster and with less wear.
10. Check tire pressure regularly. Underinflation increases rolling resistance of the tires which has a marked effect on fuel usage. For best comfort, fuel economy and tire life, tires should be inflated as recommended in the *Tires and Wheels* section of this manual.
11. Maintain your vehicle as recommended in this manual. A tuned-to-specifications engine will give you better fuel economy and performance. Common wasters of gasoline are:
 - Idle speed faster than specification
 - Idle adjustment rich
 - Initial spark retarded from specification

Six-cylinder vehicles sold for principal use in high altitudes (above 4000 feet elevation) were built with a manual altitude

compensation device. For adjustment of this device and required timing adjustments, refer to page 110.

12. Drive courteously. The thoughtful driver invariably is a driver whose actions provide better fuel economy.



How to Check Gas Mileage Accurately

1. Select a service station with a level driveway, near a freeway-type road, and have the tank filled brim-full.
2. Record the odometer reading in tenths of a mile.
3. Cruise the vehicle on a freeway-type road at a steady speed of 50 mph for at least 60 miles, 30 miles out and 30 miles back to the same service station and gas pump.
4. Have the tank filled, again brim-full. Record the amount in tenths of a gallon.
5. Record the odometer reading, and calculate the exact miles driven in tenths of a mile.
6. Divide the miles driven by the number of gallons used, to obtain gas mileage.

A handy Gas Mileage Record form is provided on page 128.

Instrument Panel Controls and Indicators

Speedometer

The Speedometer is cable driven by gears in the transfer case. Gears are calibrated to axle ratio and tire size for reasonably accurate miles-per-hour readings.

Odometer

The Odometer is coordinated with the speedometer to register distance in statute miles. It records up to 99,999.9 miles, and then restarts at zero. A ratchet device prevents turning the odometer backward.

Fuel Gauge

The fuel gauge indicates how much fuel is in the fuel tank. The pointer will drop back to the E (empty) mark when the ignition switch is turned off. It may take a moment for the gauge to record when the ignition switch is again turned on. It is normal for the pointer to fluctuate at times as the vehicle is driven over rough terrain. Reduce water condensation by keeping the tank nearly full rather than nearly empty.

Engine Temperature Gauge

The temperature gauge registers the temperature of the solution in the cooling system. If the needle of the gauge swings far into the H (hot) zone, it means the engine is running dangerously hot. Stop and investigate.

WARNING: *If the engine is overheated, be extremely careful. Let the engine idle for a period above normal idle speed with the hood up—unless all coolant has been lost. Shut off the engine and let it cool for 15 minutes, then remove the cap as follows. Turn the cap slowly to the first notch to let any pressure escape before removing the cap. Use a heavy rag or towel wrapped over the cap to avoid injury. Never add coolant when the engine has overheated; allow the engine to cool first.*

Voltmeter

This instrument is used on CJ models and indicates whether the battery has sufficient electrical charge for vehicle starting and operation of accessories. It also indirectly shows the condition of the alternator and regulator as a function of voltage input to the battery.

Normal operating range is between 12.8 and 14.8 volts (slightly higher in cold weather starting). Prolonged gauge readings between 8 to 12 (undercharge) or between 14 to 15.5 (overcharge) indicate possible malfunction of alternator, regulator, or battery.



Ammeter

This instrument is used on Cherokee, Wagoneer, and Truck models to indicate battery charging or discharging. With ignition and all accessories off—the pointer should be centered at zero. Immediately after starting, the pointer may indicate a high rate of charge (+). However, as the battery becomes charged, it will drop back toward zero. When the battery is fully charged, the pointer is slightly on the charge side (+).

The electrical system should be checked whenever:

- The pointer indicates discharge (-) or no charge for an unusual length of time.
- The pointer indicates a high rate of charge (+) for an unusual length of time.

Tachometer

The electric tachometer sweep hand indicates engine revolutions per minute (RPM). To achieve maximum performance, do not operate engine in the area marked in red. Operation in the red zone could be detrimental to the engine. (Optional on CJ models.)

Oil Pressure Gauge

This gauge indicates oil pressure but *not oil level*. Pressure varies with engine speed, temperature, and oil viscosity. Cold engines give higher readings. Sustained high speeds cause lower readings. Sudden turns or stops can cause a momentary pressure drop. Normal readings are 20 to 60 psi in city driving, 45 to 60 psi at highway speeds. Hot engine idle pressure of 13 psi is satisfactory. Consistently lower readings indicate possible malfunction or low oil level. Stop for a service check immediately.

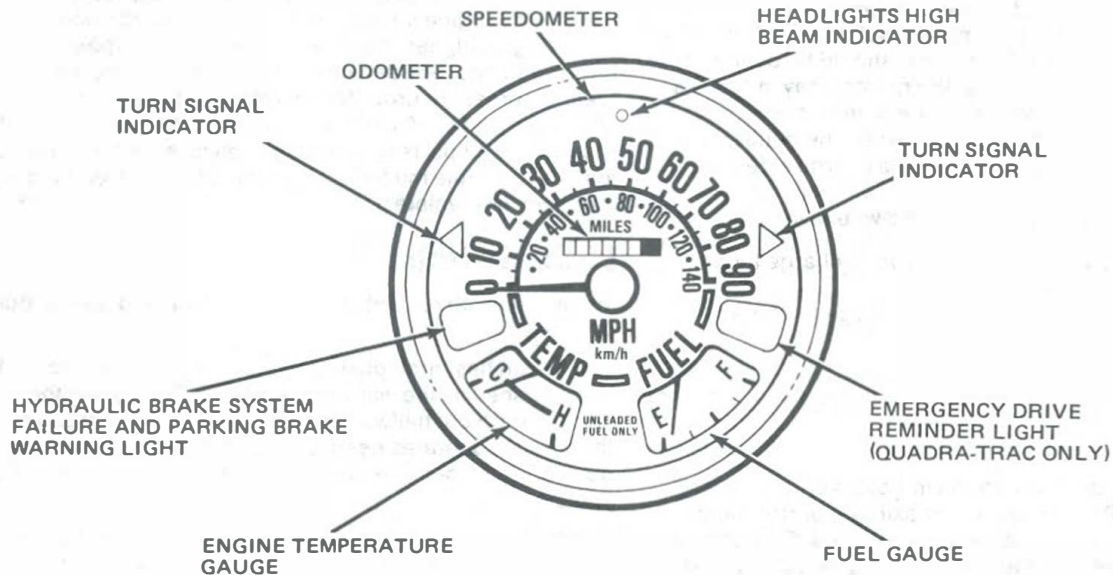
Light Switch

The light switch regulates the lighting by being pulled, pushed or rotated.

The switch has three push-pull positions. With the control knob pushed all the way in, all lights are off. Pulling the control knob out halfway operates the parking lights, and all the way out operates headlights and parking lights. Both positions also operate the taillights and the instrument cluster lights.

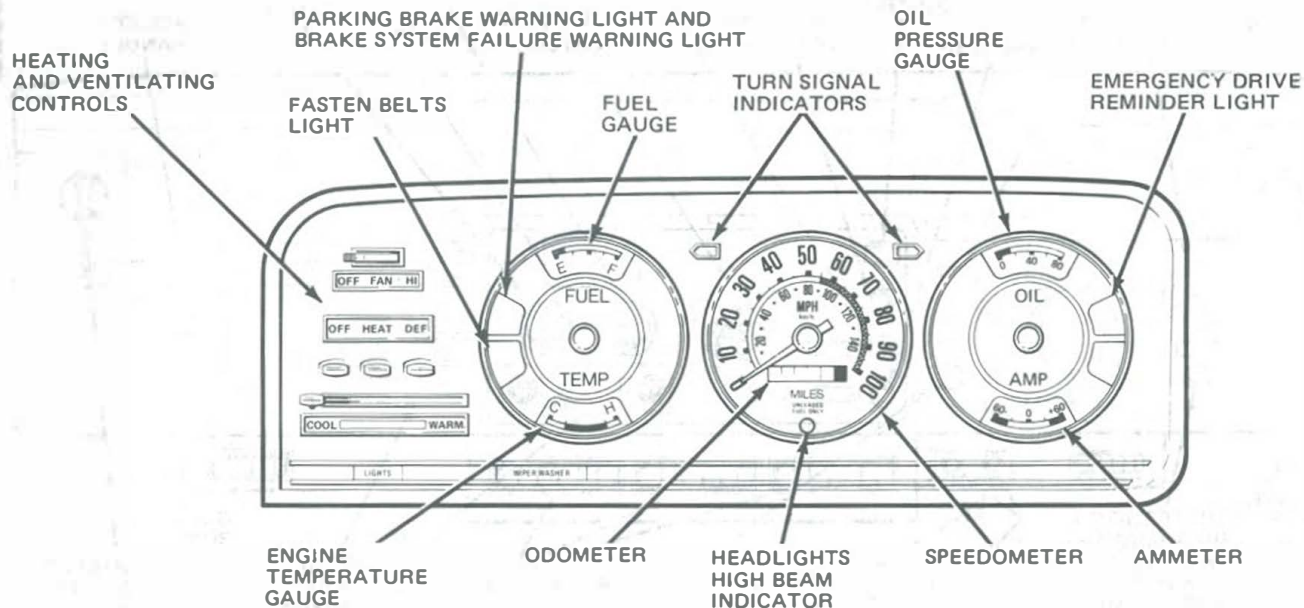
Rotate the knob clockwise to dim the instrument cluster lights and counterclockwise to turn the dome and courtesy lights (optional on CJ models) on.

CJ Models Instrument Cluster





Cherokee-Wagoneer-Truck Instrument Cluster



Cherokee-Wagoneer-Truck Instrument Panel

LIGHT SWITCH
(HEADLIGHTS, TAIL,
PARKING, DOME,
SIDE MARKER,
COURTESY, AND
INSTRUMENTS)

INSTRUMENT
CLUSTER

CIGARETTE
LIGHTER

ASH
TRAY

RADIO

CLOCK

GLOVE BOX

TAILGATE
WINDOW
SWITCH

PARKING
BRAKE
RELEASE
LEVER

AC AIR
OUTLET
LOUVER

FRESH
AIR
VENT

RADIO
SPEAKER
BALANCE
KNOB

AC CONTROL
PANEL AND AIR
OUTLET LOUVERS

AC AIR
OUTLET LOUVER

REAR WINDOW
DEFOGGER SWITCH

WINDSHIELD
WIPER-WASHER
SWITCH



Headlights High-Beam Indicator Light

A light in the instrument cluster indicates if the headlights are on high beam. Switch from low to high beam—or dim back to low beam by stepping on the dimmer switch at the left side of the floor.

Backup Lights

The backup lights will come on automatically when the transmission is shifted into reverse with the ignition in the on position.

Turn Signal Indicator Lights

The turn signal indicators will flash in unison with outside lights whenever the turn signal lever or the 4-Way Hazard Warning Flasher is activated. Refer to *Steering Column Controls* section.

Windshield Wipers—Washers

The two-speed wipers are operated by turning the control knob clockwise. The first stop position operates the wipers at low speed; the second position at high speed. To operate the windshield washers, push in on the control knob.

Tailgate Window Defogger

The defogger is optional on Cherokee and Wagoneer models.

The electrically-heated grid on the inside glass surface of the tailgate window is controlled by pushing the Rear Defog switch up for On or down for Off. A green pilot light glows when the system is on. As a safety precaution, an automatic timer turns the system off after approximately 10 minutes (or if the ignition is turned off).

CAUTION: *To prevent damage to the electrical grid bonded to the interior surface of the tailgate window, sharp instruments or window cleaners containing abrasives should never be used to clean the rear window.*

NOTE: *Read additional instructions on Tailgate Window in the Safety, Security, and Convenience Features section.*

Tailgate Power Window Switch

The tailgate power window (optional on Cherokee and Wagoneer models) can be raised or lowered by the toggle switch marked TAILGATE, located at the lower left side of the instrument panel. For safety, the switch will not operate un-

less the ignition key is in the on or accessory position. Hold the switch up to raise the window and down to lower it. The switch is spring-loaded and will return to the mid-position when released. The window may also be operated by turning the square-headed key in the lock of the exterior side of the tailgate. To assure proper operation, make sure the tailgate is fully closed.

WARNING: *Do not drive with the tailgate window open even slightly. Poisonous exhaust fumes could be drawn into the vehicle passenger compartment.*

Electric Clock

To set the hands of the clock, pull the adjustment knob out. Hands of a fast-running clock should be turned backward, slow-running clocks forward. Clock speed will then be corrected automatically after one or two adjustments. Optional on all models.

Cigarette Lighter

The lighter heats when pushed in, and pops out automatically when ready for use. To preserve heating element, *do not* hold the lighter in heating position. The lighter operates when ignition key is turned to the on position.

Ashtray

Front ashtray(s), located in or under the instrument panel and the rear seat ashtray on Wagoneer models with the full bench front seat, may easily be removed for cleaning. To remove, push tray tab down and pull out. To install, simply push the tray into position.

On Cherokee "S" and Wagoneer models with bucket seats, the rear seat ashtrays are located in the door trim panels. To remove, pull upward. To install, simply push the tray into position.



Glove Box

To open the glove box door, press the pushbutton. On models equipped with a lock, use the oval-headed key to lock and unlock.

Heating and Ventilating

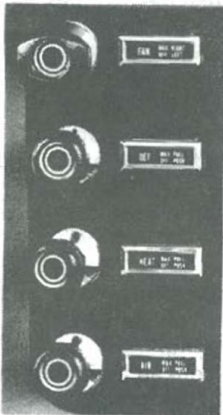
The fresh air heater and defroster system is designed to provide fresh air ventilation for summer driving or fresh heated air within the vehicle for winter driving.

In winter, keep accumulated snow away from air inlet grille in front of windshield for proper operation of the heater.

CJ Models

The heating and ventilating controls are located just to the left of the instrument cluster.

Pull out on the AIR Control Knob to allow maximum airflow through the heater coils. To increase the airflow, turn the FAN Control Knob. The temperature is regulated by the amount the HEAT Control Knob is pulled out. Pull out on the DEF Control Knob to direct warm air to the windshield for defrosting.



**Heating and
Ventilating
Controls**

CJ Models

For warm weather driving, pull the AIR Knob out for fresh air ventilation. For maximum fresh air to the passenger compartment turn the FAN Control Knob.

Cherokee—Wagoneer—Truck

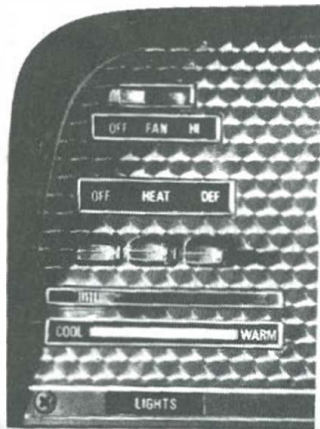
Heating and ventilating controls are grouped together at the left side of the instrument cluster. The controls consist of three airflow pushbuttons, a sliding Temperature Control Lever, and a FAN Switch. With the OFF pushbutton pressed, the heater system will not operate.

Do not operate the fan with the OFF pushbutton pressed—the fan motor could overheat.

The HEAT pushbutton directs outside air over the heater coils and to the heater outlets under the dash near the floor. The DEF pushbutton directs the heated air to the outlets at the top of the instrument panel to defrost the windshield.

The temperature of the heated air can be regulated by sliding the lever located below the pushbuttons. The temperature is raised as the lever is moved to the right into the red area.

Move the FAN Switch to one of its three "on" positions for circulation of fresh or heated air.



Heating and Ventilating Controls

Cherokee, Wagoneer, and Truck Models

Additional fresh air can be brought into the vehicle by opening the fresh air vents. The Fresh Air Vent Control Knobs are located on both sides of the steering column (on the right side of the steering column only on models equipped with air conditioning).

For warm weather ventilation, follow these steps.

1. Open one or both fresh air vents.

2. Press HEAT pushbutton and slide Temperature Control Lever to the COOL position.
3. Activate the blower by sliding the FAN switch toward the HI position.
4. Lower side windows as needed.



Air Conditioning Systems

General

When driving at normal highway speeds, your Jeep air conditioning unit will provide maximum efficiency. However, when operating your vehicle under stop-and-go city driving conditions, a slight reduction in cooling efficiency will generally be experienced.

NOTE: *When driving at relatively high speeds for an extended period of time, move the temperature control away from the maximum COOL setting to avoid frosting over the cooling coil which would result in a temporary loss of cooling. However, should frosting occur, simply turn the TEMP control to OFF and allow the blower to operate for a few minutes to allow the cooling coil to defrost. Then turn the TEMP control to a setting which is not as cold as the setting at which frosting occurred.*

To maintain maximum cooling efficiency, periodically remove bugs and foreign matter from the condenser and radiator fins. DO NOT install a bug screen in front of the condenser and radiator.

Water forming under your vehicle, at a point below the cooling unit, is condensation and is a normal occurrence.

The engine temperature gauge pointer will indicate a slightly higher than normal temperature when the air conditioning unit is operating. However, should excessive overheating occur, check the condition of all water hoses, check the radiator for rust or scaling conditions, and make sure that the condenser is free of bugs or other foreign matter.

CJ-5, CJ-7 Models Air Conditioner Operation

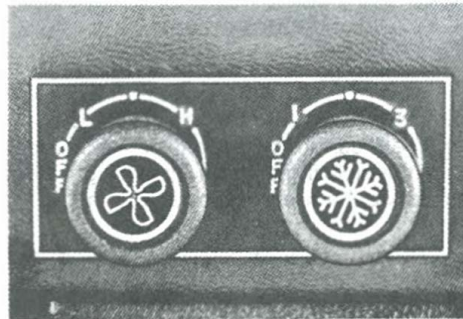
Before Starting Engine:

1. Close air vent, if open.
2. Open windows to allow warm air to escape from vehicle.

After Starting Engine:

1. Put the FAN Control Knob in the HI position.

2. Put the TEMP Control Knob in the "3" position.
3. When most of the hot air has escaped from the vehicle, close windows.
4. Adjust the five air outlet louvers to obtain desired airflow distribution.
5. When the interior of the vehicle has cooled down to the desired temperature, the TEMP knob may be adjusted to decrease cooling. Turning the knob counterclockwise will decrease cooling.



**CJ-5, CJ-7
Models—
Air Conditioner
Controls**

Cherokee, Wagoneer, and Truck Air Conditioner Operation

For maximum efficiency follow these instructions:

Before Starting Engine:

1. Close air vent, if open.
2. Open side vent windows to allow warm air to escape from vehicle.

After Starting Engine:

1. Put the FAN Control Knob in either the HI or the PC (pre-cool position) to pre-cool the evaporator. The FAN Control should not be kept in the PC position for more than 15 to 30 seconds before switching to the HI position. The purpose of the pre-cool feature is to permit quick cooling in the hottest weather conditions by preventing entry of warm air into the vehicle until the evaporator has cooled.
2. Put the TEMP Control Knob in the MAX position.

3. When most of the hot air has escaped from the vehicle, close vent windows.

4. Adjust the four air outlet louvers to obtain desired airflow distribution. Airflow can be adjusted for quick delivery to a specific spot or for gentle diffusion of air throughout the vehicle.

5. When the interior of the vehicle has cooled down to the desired temperature, the TEMP knob may be rotated to decrease cooling. Turning the knob counterclockwise will decrease cooling.

NOTE: It may be necessary for you to experiment with the TEMP knob to determine the settings best suited to various driving conditions.



**Air
Conditioner
Controls**

Radios

A variety of audio equipment is available from Jeep dealers...if your vehicle is not so equipped.

Jeep all-transistorized radios operate with the ignition key in the on or accessory position.

To operate your radio, rotate the off-on volume control knob clockwise. Continue rotating the knob clockwise to increase volume.

Station selection is controlled by the manual tuner or five pushbuttons.

To set pushbuttons:

- Pull out button to be set.
- Tune in the desired station with the manual tuning knob.
- Push the button all the way in and release it.

Repeat for remaining buttons.

Tone is adjusted by turning the inner control knob clockwise to increase the treble range and counterclockwise to increase the bass range.

The antenna for all models is designed for maximum performance over the entire band and is nonadjustable.

AM Pushbutton Radio



In addition to receiving AM and FM, your AM/FM stereo radio also receives FM/stereo broadcasts.

The yellow jewel light on the radio dial will glow when your radio is receiving an FM/stereo broadcast. The light indicates that the radio has switched from FM into FM/stereo operation. The light will remain off during nonstereo reception.

AM/FM Stereo Multiplex Radio



Band Selector—Slide the band selector to the right for AM operation and to the left for FM or FM/Stereo operation.

Left-Right Speaker Balance—Adjust the left-right speaker balance control to confine the sound output to either right or left speaker, or to blend the sound as desired between the speakers.

Front to Rear Speaker Balance Control

The speaker balance control on Cherokee "S" and Wagoneer models is located at the bottom of the instrument panel and adjusts the volume between front and rear speakers. Rotating the knob to the extreme right or left confines the sound output to either the front or the rear speakers, or blends the sound between the speakers as desired.

FM Radio Tips

FM and FM/stereo broadcasts have some characteristics which do not appear in AM broadcasting. These conditions are not due to any fault in your radio:

- The effective range of FM and FM/ Stereo broadcasts is approximately 20 miles. When driving away from a station it may become necessary to fine-tune the radio and turn up the volume as the station becomes weaker. When the hissing or popping noise (which indicates a weak broadcast signal) becomes too strong, tune to another station.
- Tall buildings, hills, or depressed roadways may cause garbled or weak reception or even temporary loss of the program.
- When you pass near the broadcasting tower of an FM station, that station may cut out another station to which you are listening even though you do not change your dial setting. This may even switch back and forth several times until you get a little farther from the tower. This condition is temporary and will clear up as you move away from the offending tower.
- In some cases, these conditions can be helped by fine-tuning. If not, tune to another station.



Steering Column Controls

Horn

On standard steering wheels and all sport steering wheels, the horn may be operated by pressing the center hub section of the wheel. On all other steering wheels, the horn will operate when any portion of the padded crossbar is pressed.

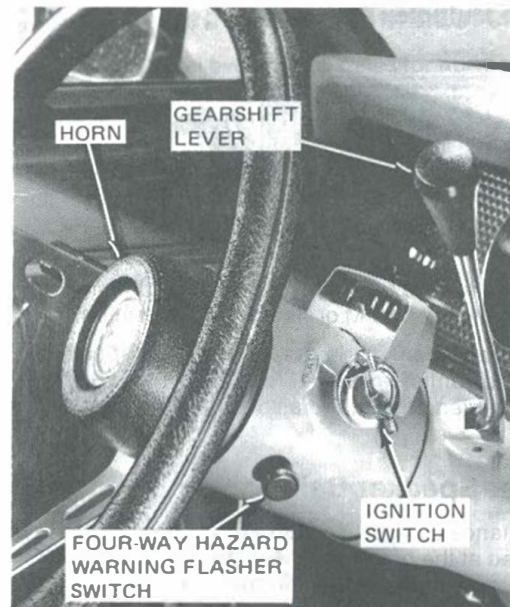
Ignition Switch

The ignition switch is located on the right side of the steering column. Refer to *Starting and Driving* section for operating instructions.

Four-Way Hazard Warning Flasher

Push flasher button on right side of steering column and all four exterior turn signal lights, plus instrument panel indicators will flash together. Pull button to cancel. Use for emergency stops only.

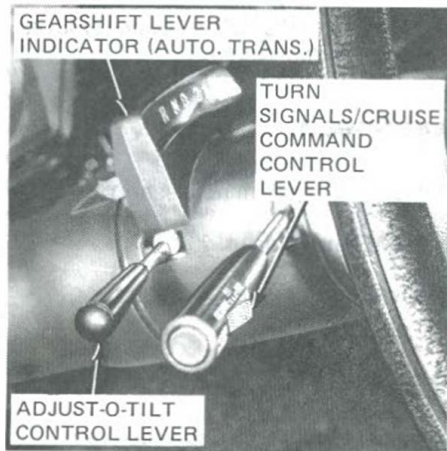
Flashers operate regardless of ignition key. If brakes are applied, lights will not flash, but will glow continuously.



**Steering
Column
Controls—
Right
Side**

Power Steering

With this option, an engine-driven hydraulic pump provides a power assist to greatly reduce steering effort. If the engine stalls or the power assist fails due to some malfunction, the car can still be steered although greater effort—particularly in sharp turns—will be required.



**Steering
Column
Controls—
Left Side**

Adjust-O-Tilt Steering Wheel

This adjustable steering wheel can be set in any of five positions even while driving. Simply pull the lever toward the steering wheel, located below the turn signal lever on the left side of the steering column, and the steering wheel will move upward. Move the steering wheel to the desired position—up or down—and release the lever to lock the wheel in position.

Turn Signals

The lever on the steering column (left side) operates the two-way turn signals. To signal a left turn, push the lever down to “click” stop. For right turns, push the lever up. Lever automatically returns to “off” when turn is completed. On gradual turns, return lever manually. *Do not force.* If the instrument panel indicator lights do not flash, an exterior light may be burned out and should be replaced. *As a lane changer,* hold the lever at an intermediate position prior to “click” to signal right or left maneuver. Lever returns to “off” when released.

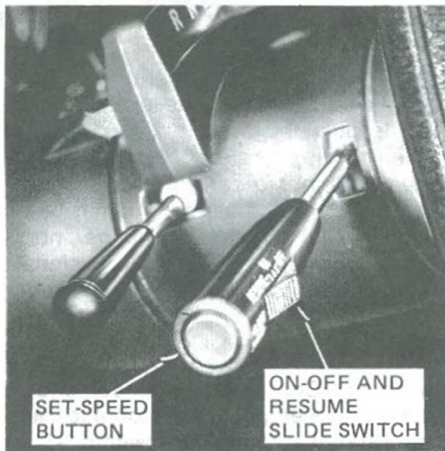
Cruise Command

Cruise Command, available on Cherokee, Wagoneer, and Truck models equipped with V-8 engine and automatic transmission, controls cruising speed automatically (within 3-5



mph of preset speed). The system, which can be set at speeds above 30 mph, disengages when the brake pedal is touched. The two controls on the turn signal lever should be operated as follows:

1. Obtain desired speed with accelerator (over 30 mph).
2. Slide switch from OFF to ON to energize system.
3. Press set-speed button on end of lever to engage system.



**Cruise
Command
Controls**

4. Remove foot from accelerator—speed will be automatically controlled.

WARNING: *Do not use Cruise Command in heavy or varying traffic, or on slippery or winding roads.*

To Disengage System

Simply apply brakes or move slide switch from ON to OFF.

NOTE: *Moving the slide switch to the OFF position removes the preset speed selection from the system.*

To Resume Preset Speed

1. Bring vehicle speed up to 30 mph (if necessary).
2. Slide switch to RESUME and release.
3. Vehicle will automatically resume preset speed.

To Increase Speed Setting

1. Accelerate to desired speed by applying accelerator.

2. Press set-speed button on end of lever and release (also release accelerator pedal).

To Decrease Speed Setting

1. Touch brake pedal lightly (disengages system).
2. When vehicle has slowed to desired speed, press set-speed button on lever and release.

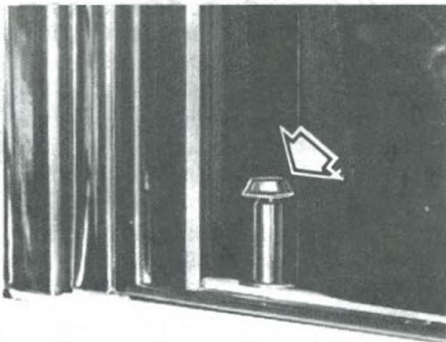
To Turn System Off

Move slide switch to OFF position.

NOTE: *It is not necessary to turn the Cruise Command system off in normal operation since it is connected to the ignition switch. However, the OFF switch position on the turn signal lever is provided in case of an electrical malfunction and to eliminate electrical load when ignition switch is left in the accessory position.*



Safety, Security, and Convenience Features



Door
Locking
Button

Door Locks

CJ Models

Metal Cab: To unlock the doors from the outside, use the oval-headed key provided. Lock the doors when inside the

cab by depressing the lock lever. When leaving the vehicle unattended, lock the doors with the key, not with the lock lever. If you depress the lock lever and then slam the door, the door will not lock.

Molded Top: Use the oval-headed key to lock or unlock the doors from the outside.

Cherokee-Wagoneer-Truck

- To unlock the front doors from the outside, use the square-headed key.
- To lock the doors from the inside, first make sure the doors are securely closed, then press down the locking button.
- To unlock doors from the inside, lift up on the locking button. The door release handles are inoperative when the locking button is depressed.

Rear View Mirrors

Adjust the inside mirror for maximum visibility. Some models have a day-and-night lever on the bottom of the mirror.

Adjust optional outside mirror (Cherokee-Wagoneer) for maximum visibility (a part of your vehicle should be visible in the mirror to give you a reference point).



**Day/Night
Inside
Rear View
Mirror**



**Remote
Control
Outside
Rear View
Mirror**

Glove Box

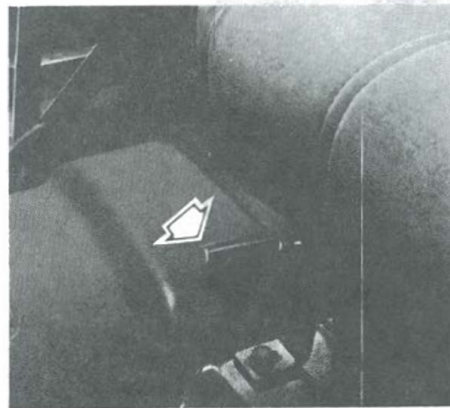
To open glove box, press the latch pushbutton. Use oval-headed key if locked.

NOTE: Be sure to lock the glove box and remove the key from the vehicle whenever it's necessary to leave the ignition key with an attendant.

Front Seats

Adjustment

The driver's seat on all models is adjustable forward and rearward.



**Adjustment
Lever—
Typical**



**Safety, Security,
and Convenience
Features**

WARNING: Move the lever to the left to adjust seat (before driving). Release lever to lock. Apply a forward and rearward rocking motion to the seat to be sure the latch is fully engaged.

WARNING: Do not adjust the driver's seat while the vehicle is moving. The seat could move unexpectedly, causing loss of control.



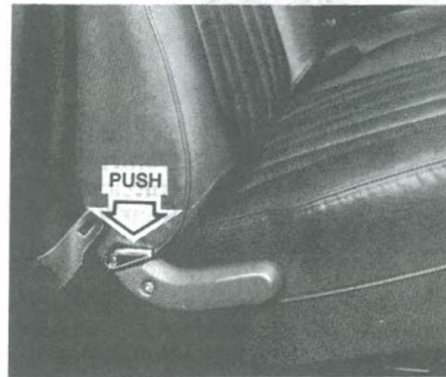
**Tilting Seat
Release
Lever**

Tilting Passenger Seat—CJ Models

The passenger seat on CJ models will tilt forward to permit access to the rear cargo area or rear seat (if equipped). Lift up on the seat release lever and swing the seat forward.

Seatback Release—Cherokee Models

On all Cherokee 2-door models, the seatback on the passenger-side bucket seat swings forward for access to the rear seat or cargo area. The seatback locks automatically in the



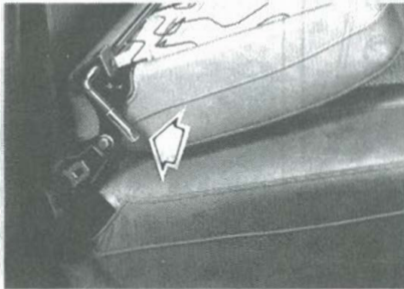
**Seatback
Release**

fully upright position to prevent it from tilting forward in the event of sudden stops. To release the seatback lock, move the lever in the direction shown.

This feature is standard also for the driver's seat on Cherokee "S" models equipped with bucket seats. It's optional for the driver's seat for Standard Cherokee models.

Seatback Release—Truck Models

On all truck models, the bench seatback swings forward for access to the seatback storage area. The seatback locks automatically in the fully upright position to prevent it from tilting forward in the event of sudden stops. To release the seatback lock, pull up on the seatback release.



**Hinged Seatback
Release Lever**

Rear Seats

CJ Models

The optional rear bench-type seat for CJ models is stationary.

Cherokee—Wagoneer

The rear seat is the double-hinged type and can be folded forward to occupy minimum space or can be completely removed from the vehicle



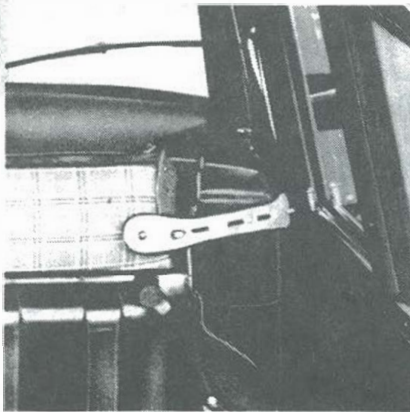
**Cherokee &
Wagoneer
Cargo Area—
Rear Seat
Folded**



To fold the seat forward:

Lift the latch at the passenger side of the seat to release the seatback locking mechanism.

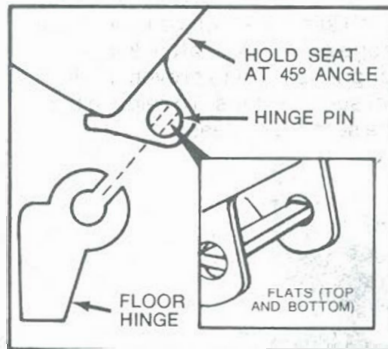
- Fold the seatback forward.
- Roll the seat assembly forward, then secure it with the holding strap (on the door pillar). Hook the strap over the stud on the seat frame.



**Rear Seat
Holding Strap**

To remove the rear seat:

- Lift seatback release latch and fold seatback forward.
- Swing seat upward about 45° from floor. In this position the hinge pin flats will align with the slots in the floor hinges.



**Seatback
Release**

- Holding the seat at 45° angle, lift the seat to remove it from the floor hinges.

Seat Belts

Seat belts are provided for protection of the driver and occupants of the vehicle. Constant and proper use of seat belts is a wise precaution. Make it a habit to wear belts properly and see that passengers follow your example.

CJ models are equipped with lap belts only for the front and rear seat occupants. On Cherokee, Wagoneer, and Truck models, the front seat outboard positions have a lap and a shoulder belt that are permanently connected at the latch plate. The **lap belt** has a retractor reel that **locks when you stop pulling the belt out**. The **shoulder belt** has an inertial-locking retractor that **locks only when the vehicle stops abruptly** to allow upper body freedom of movement in normal situations. A plastic comfort clip on the shoulder belt allows the belt to be adjusted to reduce the pressure of the belt across the shoulder and chest. The center position, on vehicles with bench seats, is equipped with a manually adjustable lap belt.

A seat belt reminder system is provided on Cherokee, Wagoneer, and Truck models, and consists of a FASTEN BELTS indicator light and a buzzer. The light will come on whenever the ignition is turned to the on or start position,

whether or not the driver has buckled up. It will go off automatically after about 4 to 8 seconds. The buzzer will sound only if the driver has failed to fasten his seat belt and the ignition is turned to on or start position; it will go off automatically after about 4 to 8 seconds of buzzing. The warning light and buzzer work independently of each other and only for the driver's seat.

The rear seat outboard positions are equipped with automatic-locking lap belt retractors. Rear seat center positions have manually adjustable lap belts.



To “Buckle-Up”

Front Seat Lap-Shoulder Belt

- Adjust front seat to satisfaction of driver (if vehicle has bench-type seat) and sit erect and well back in seat.
- Pull the lap-shoulder belt from the retractors in one continuous motion so the shoulder portion of the belt crosses your shoulder and chest and insert metal latch plate into buckle until you hear a “click” and feel it latch. If pulling motion was stopped short so that the latch won't reach the buckle, let lap belt rewind into the retractor to release locking mechanism. Then, pull belt out to the proper

length. Be sure latch plate for outboard seat belts is not inserted into buckle for middle seat (if your vehicle has a bench-type seat).

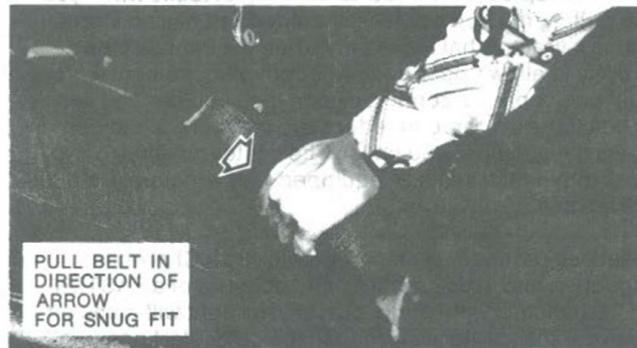


WARNING: The shoulder belt must be positioned across the shoulder—never under the arm.

- Position the lap belt across hips as *low as possible*. Adjust belt to a *snug* fit by pulling belt firmly across lap in direction of lap belt retractor. The retractor will automatically take up excess slack.

- Adjust shoulder belt comfort clip by sliding it up or down so that belt is snug yet comfortable.
- Pull belt in direction of arrow for snug fit.

WARNING: Be sure the shoulder belt comfort clip is adjusted to reduce the pressure on the shoulder to a comfortable level while allowing no slack when seated in a normal upright position. Excessive slack can reduce the effectiveness of seat belts as a safety device and result in increased personal injury in the event of a collision.



Rear Seat Lap Belts (Cherokee—Wagoneer)

- For *outboard seats* equipped with automatically locking retractors, pull belt from retractor in a single continuous motion and insert metal latch plate into buckle until a “click” is heard. If latch won’t reach, let belt rewind to release locking mechanism so belt can be pulled out to the proper length. Adjust belt low and snug across hips by pulling belt in direction of retractor.



**Adjustable Shoulder
Belt Comfort Clip**

- For *center seat*, insert metal latch plate until “click” is heard. Adjust belt low and snug across hips by pulling on free end of webbing at the latch side of the belt.

To Disconnect and Stow Belts

- To unfasten belts, press pushbutton in center of buckle.
- When not in use, front seat lap-shoulder belts can be stowed by allowing them to rewind into their retractors. The shoulder belt comfort clip can be adjusted so that shoulder belt slack will be fully taken up by the retractor.

Precautions

Never use the same lap-shoulder belt on more than one person at a time and do not wear shoulder belt under the arm. Such uses increase the chance and severity of injury in the event of an accident.

- Belts, buckles, latch plates, retractors, reminder systems, comfort clips, and anchors should be inspected periodically. Webbing should be replaced if fraying or cuts have developed. Depending upon amount of use and exposure to sunlight, dirt, and abrasion, belt webbing strength may deteriorate over a period of years. In such cases, belt assemblies should be replaced.
- If your vehicle has a three-passenger front or rear bench-type seat, be sure each seat belt latch plate is inserted into the correct buckle. It's possible—especially for children—to get the middle and outboard seat buckles mixed up. For front seats, belt routings can be checked visually; for rear seats, manually trace webbings to their anchors by slipping your hand between the seat cushion and the seatback.
- Belt assemblies should be replaced in the event that they have experienced major collision loads.
- Connecting bolts should be tightened to the correct torque. Your dealer can check this.



- When cleaning belts, use a mild soap or detergent with warm water. Rinse them thoroughly and dry them in the shade. Never dye or bleach belts (this may weaken fabric).

When Children Are Passengers

For children five years of age or under, use of a child restraint is recommended. These include child seats, child harnesses, or infant carriers complying with Federal Motor Vehicle Safety Standard (FMVSS) 213.

The American Safety Belt Council (which also concerns itself with child seats), gives the following tips on buying and using child restraints:

- Look for a label saying that the infant carrier or child seat meets FMVSS 213 standards.
- Look for a statement in the seat's accompanying literature saying that the manufacturer has run his own "dynamic" test on the seat. (There are about half a dozen such products on the market.)
- If possible, put the carrier in the center of the back seat rather than up front with you. The back seat is more safe for a child.
- Read all instructions carefully and follow to the letter. Many infant carriers and child seats have a webbed strap coming from the top of the back of the carrier. This strap

should be fastened down when you are traveling by attaching it to a back seat safety belt.

- Many children aged four and five are too big for child seats and too small for regular seat belts (especially in the front seat, where the shoulder harness is likely to come right across their faces or necks). Put such children in the back seat, where seat belts don't have shoulder harnesses, and strap them in. While seat belts are not as protective for them (because their body weight and flexibility differ from adults), seat belt use is recommended.

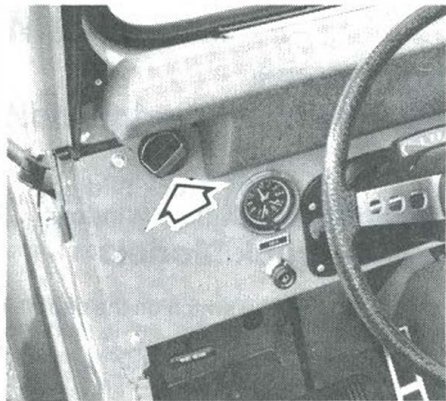
Children should never be left alone in a vehicle. If the occasion so requires, be sure to set the parking brake and remove the ignition key which also locks the steering wheel (and transmission on vehicles with automatic transmission).

Windshield Positioning—CJ Models

You can drive with the windshield up or down.

To lower the windshield:

- Lower soft top or remove hard top, if equipped.
- Turn holddown knobs counterclockwise to remove them. Stow them in the glove box or, after lowering the windshield, replace them in the instrument panel by turning them clockwise.



**Windshield
Holddown
Knob—
CJ Models**

- Lower windshield gently until it contacts the vinyl-coated bumpers on the hood.
- Secure the windshield to the hood by passing the strap at the top of the windshield through the loop on the hood, and drawing the strap up firmly. (Straps not provided with hardtop models.)

To raise the windshield:

- Remove holddown strap from loop on hood and secure it

to top of windshield.

- Raise windshield slowly, being careful not to pinch windshield wiper motor wires at driver's side of windshield.
- Install holddown knobs by turning them clockwise into instrument panel.
- Raise soft top or install hard top, if desired.

WARNING: *Never drive without the windshield being securely fastened.*

Flipper Windows—Cherokee Models

To open the flipper window, pull the toggle-type latch forward. The more you pull it forward, the further it will open the window. Push rearward to close and secure the window.

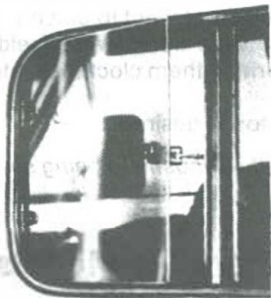


Front Vent Windows

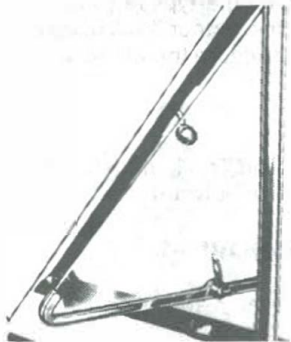
Standard on Cherokee, Wagoneer, and Truck models. To open, lift upward on the latch and push outward.

Truck Sliding Rear Window

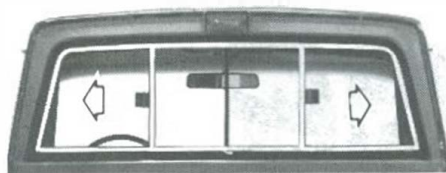
Open the window by unfastening the latch and sliding the glass panels as desired. (Optional.)



**Cherokee
Flipper
Window**



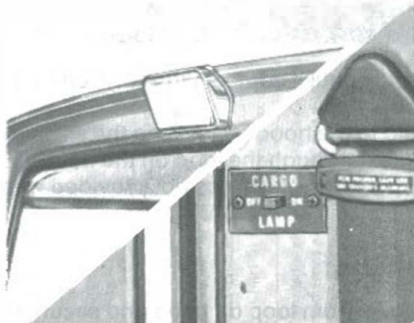
**Front
Vent
Window—
Typical**



**Truck Sliding
Rear Window**

Cargo Area Light—Truck Models

Illuminate the cargo box by flipping the switch on the cab wall (driver's side at rear quarter). (Optional.)



**Cargo Area
Light and
Interior Switch**

Tailgate Window—Cherokee-Wagoneer

The tailgate window can be raised or lowered manually or electrically.

Manually—Turn the crank handle clockwise to lower the window and counterclockwise to raise it.

Electrically (Optional)—The electrically operated tailgate window can be raised or lowered by turning the square-headed key in the lock on the tailgate (turn key clockwise to lower—counterclockwise to raise), or with the remote control



Electrically Operated Tailgate Window Controls

switch located on the instrument panel. The ignition switch must first be in the on or accessory position before the switch will operate. A safety switch will also prevent operation unless the tailgate is fully closed.

WARNING: *Keep the tailgate window closed while driving to prevent exhaust fumes from being drawn into the passenger compartment.*

Liftgate—CJ Models

Metal Cab—Unlatch and swing out spare tire carrier (if equipped). Insert key in lock cylinder in handle to unlock the liftgate. Then turn handle counterclockwise to unlatch the catches, and swing the liftgate upward. A metal brace will hold it in the full horizontal position.

Molded Top—Unlatch and swing out spare tire carrier (if equipped). Unlock the liftgate handle with the oval-headed key and turn the handle clockwise. Lift the gate slightly and two spring-loaded support cylinders will raise it the rest of the way and hold it open horizontally.

WARNING: *Always keep the liftgate (or tail flap for models with fabric top) closed while driving to prevent exhaust fumes from being drawn into the vehicle.*



Tailgate

CJ-5 Models

The tailgate can be fully lowered for ease of loading or can be removed to accommodate oversized loads.

To Lower Tailgate:

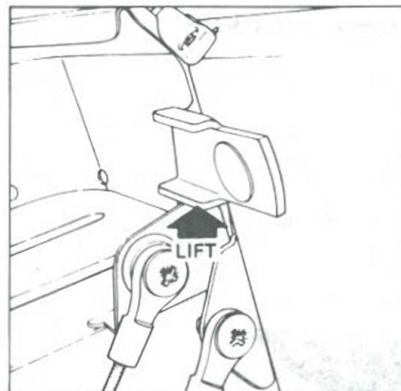
- Unlatch and swing out spare tire carrier (if equipped).
- Unsnap fabric-top tail flap or raise hardtop liftgate, if equipped.
- Press in against top of tailgate and remove chain hooks from lock brackets.
- Secure chain hooks to lowered tailgate—if you wish to use it as a loading platform.

To Remove Tailgate:

- Swing tailgate downward, about 45° from vertical.
- When flats on hinge pins are aligned with flats on hinge jaws, lift tailgate from hinges.

CJ-7 Models

To lower the tailgate on CJ-7 models, first unsnap the tail flap (if equipped with fabric top) or raise the liftgate (if equipped with hardtop). Then, press in against the top of the tailgate and swing both latches upward. Steel cables at each side of the tailgate will hold it in a horizontal position.



**CJ-7
Tailgate
Latch**

Cherokee—Wagoneer

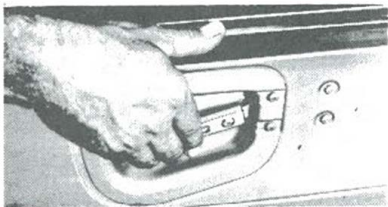
The tailgate can be fully opened for ease in loading.

First, unlock the lock in the crank handle and roll the window all the way down, or lower the window electrically using the key in the tailgate lock (if equipped). *The window must be lowered completely to prevent damage to the glass.*

Release the tailgate latch by pulling upward on the tailgate latch located on the inside top center portion of the tailgate. With the latch released the tailgate is free to open downward, so that the interior side of the gate becomes an extension of the floor.

Truck Models

The tailgate on the pickup box may be opened to the normal horizontal position, or may be easily lowered to the full vertical position (pivoted 180° from normal upright position)—whichever suits the cargo loading situation.

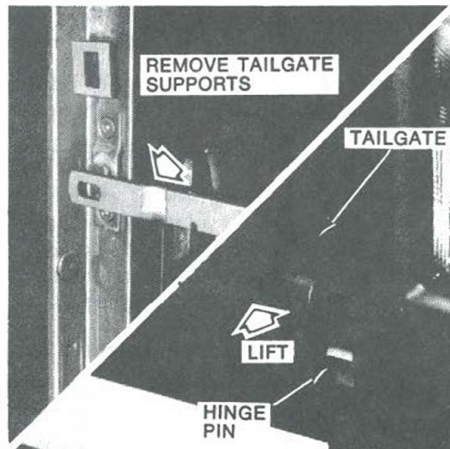


Tailgate Inside Latch

To open to the **horizontal** position, release the tailgate latch by pulling outward on the tailgate latch located on the outside top center portion of the tailgate. With the latch released the tailgate is free to open downward, so that the interior side of the gate becomes an extension of the floor.

To open to the **vertical** position, raise the tailgate slightly (about 40°) from horizontal position. Pull one side support outward until hole aligns with pin and remove side support. Repeat on other side, and lower the tailgate to vertical position.

CAUTION: *Do not drive with tailgate in vertical position.*



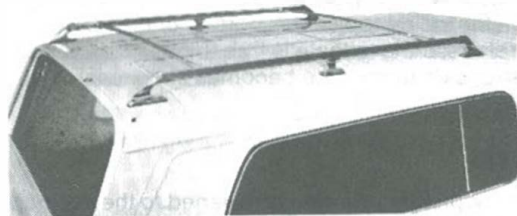
**Truck
Tailgate
Removal**



To **remove** the tailgate remove side supports, raise tailgate about 40° from horizontal, and lift to disengage tailgate from right side hinge pin. Then move the tailgate to the right to disengage from left side hinge pin.

Luggage Rack

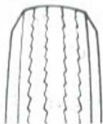
A roof-top luggage rack is available for Cherokee and Wagoneer models. (Adjustable cross bows and wrench stowed in glove box.)



Tires and Wheels

Tire Condition

Inspect tires often—every 2,000 miles or so—for visible signs of underinflation and uneven wear, which may indicate need for front-end alignment, tire rotation, or wheel balancing. Tire pressure should be checked and adjusted, if necessary at least once a month.



Tread Still Good



Tread Worn Out

Wide-Tread and Radial-Ply Tires

These types of tires must be installed on the vehicle in complete sets, and be used only when there is adequate clearance. (Wagoneer and Cherokee vehicles with radial tires require front sway bar.)

WARNING: *Radial or wide-tread tires must not be mixed with conventional bias-ply tires, or the fiberglass belted "78" series tires as this could result in dangerous steering prob-*

lems. Application of special tires may result in different compound stresses and thus in reduced gross load ratings.

Mud and Snow Tires

All Jeep vehicles and **especially those with Quadra-Trac** drive, must be equipped with the same size tires of equal circumference on all four wheels. Therefore, should mud and snow tires be required—they must be installed on all four wheels.

Sustained speeds over 75 mph for one hour or more are not recommended for mud and snow tires.

Aftermarket Wheels and Tires

Certain combinations of aftermarket replacement wheels and tires can increase the tread measurement and change steering and suspension geometry. This can result in a dangerous deterioration of vehicle steering capability and possibly induce overloading and unnecessary wear and tear of steering and suspension components. Therefore, use only those wheel and tire combinations approved by Jeep Corporation as standard or optional equipment.

WARNING: *All Jeep vehicles must be equipped with the same size tires of equal circumference on all four wheels.*



Tire Traction

On wet or slushy roads, a water wedge can build up between the tire and road. This hydroplaning action could cause loss of traction, thus adversely affecting control and braking.

WARNING: *Slow down in rainstorms, or when roads are wet or slushy, and by all means—take advantage of 4-wheel drive traction.*

To improve temporary traction on snow or ice, spray both rear tires with Liquid Tire Chain (aerosol can). A mild “rocking” action will help free the car from snow (and mud or sand) by moving the automatic transmission lever from D (drive) or R (reverse) in a repeating pattern while applying accelerator *moderately* (shift from 1st gear to reverse for manual transmission).

WARNING: *Do not race engine, avoid spinning tires and limit rocking time to prevent transmission damage.*

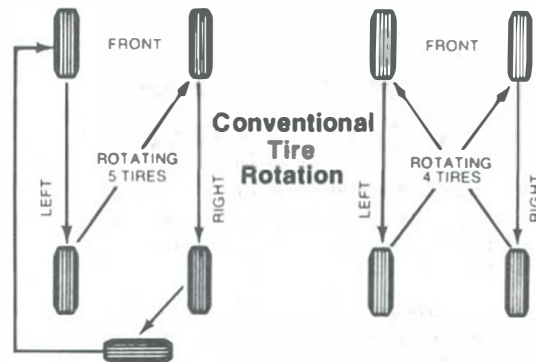
Tire Repair

If it becomes necessary to repair a tire due to puncture, the tire should be removed from the rim and a combination vulcanized plug and patch should be applied from the inside. Externally applied plugs, blowout patches, and aerosol-type

sealants would be considered only as emergency repair. *Tires with emergency repairs should not be driven over 50 mph, nor for more than 100 miles before permanent repairs are made.*

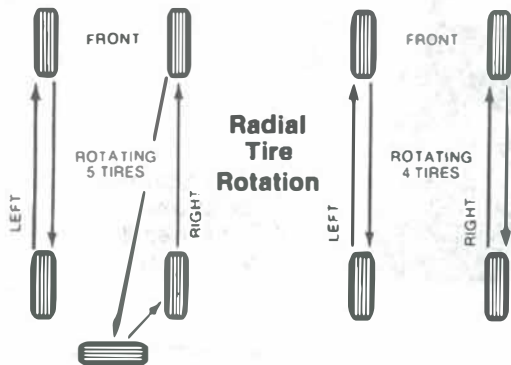
Tire Rotation

Rotating tires every 5,000 to 10,000 miles is usually recommended by tire manufacturers to assure longer overall tire life by equalizing wear. The “key” is a careful inspection of all four road tires for signs of *unusual* or *uneven* wear. Whenever tires are rotated the inflation pressure should be readjusted,



and if the tires were balanced on the vehicle, they should be rebalanced.

The cost of rotating and balancing tires is the owner's responsibility, but is an expense that will be offset by extended tire life.



Tire Pressures

Correct tire pressures depend on tire size, tire ply, gross vehicle weight (GVW) rating, vehicle load and the type of driving.

For satisfactory 4-wheel drive operation, a Jeep 4-wheel drive vehicle **MUST** be equipped with the same size tires of equal circumference on all four wheels. The tires must then be inflated to the pressures recommended by Jeep Corporation—at all times.

Tire inflation should be checked and adjusted to recommended pressures periodically (at least monthly), especially when extreme changes (20°F) in average seasonal temperatures occur. Tire inflation pressures should be checked and adjusted when the tires are cold—driven less than 2 miles at moderate speeds of less than 40 mph after the vehicle has been at rest for at least 6 hours.

Do not reduce inflation pressure if the tires are hot—driven over 10 miles in excess of 60 mph—as tire pressure may increase as much as 6 psi over cold pressures. If tire pressure must be adjusted while hot, temporarily set pressure at 6 psi (10 psi for sustained high speeds) greater than those specified (but not over the maximum inflation pressure shown on the tire) until such time as cold inflation pressure can be checked and adjusted.

The correct tire inflation pressures for your vehicle, under any given set of driving conditions, may be determined by referring to the Tire Inflation Pressures (PSI) table. "Cold" inflation



pressures are those measured with the tires at approximately the prevailing atmospheric temperature and do not include any inflation build-up caused by heat from vehicle operation. Pressures specified are precisely measured for the tire sizes recommended for each Jeep vehicle model at the GVW rating.

Jack Location

WARNING: For safety's sake keep the jack, lug wrench, and spare tire secured to prevent them from becoming dangerous projectiles during a quick stop or collision.

CJ Models

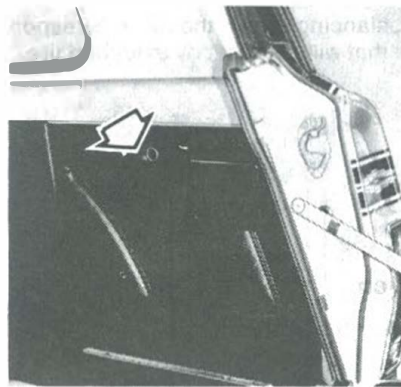
The jack and lug wrench are in a bag strapped to a plate on the vehicle floorboard at the left side of the driver's seat.

Cherokee—Wagoneer

The storage compartment is conveniently located in the right rear quarter panel.

To remove the cover of this compartment, insert one finger into the hole located in the upper center portion of the cover,

and pull the cover out. Jack and tire lug wrench are located here.



Jack Storage Location—Cherokee & Wagoneer

Truck Models

Tools are stored in the floor area directly behind the seats.

Jack Use

CJ Models

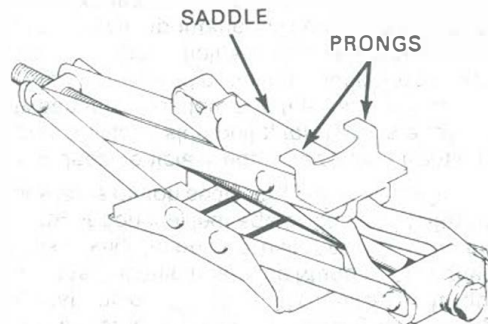
These models are equipped with the scissor-type jack illustrated below.



**Jack Storage
Location—
Truck Models**

From the side of the vehicle, place the jack transverse (non-parallel) to the vehicle, under the spring just behind the spring pivot near the wheel to be changed. Position the jack in such a way that the saddle of the jack is underneath the spring leaves and the prongs extend over the top of the spring leaves.

CAUTION: *Scissor jack must be raised at least 3 inches before contacting the vehicle or damage to the jack may result.*



Scissor Jack



Cherokee—Wagoneer

These models are equipped with a bumper-type jack.

Place the jack under the bumper making sure that the jack tongue engages the notch in the bumper at the side nearest the wheels to be changed.

Truck Models

These models are equipped with a screw-type jack.

Front

Place the jack under the axle tube, just outboard from the shock absorber mounting bracket near the wheel to be changed.

CAUTION: *The jack must not touch the shock absorber mounting bracket.*

Rear

Place the jack under the axle tube, between the spring attaching U-bolts, near the wheel to be changed.

WARNING: *Check the stability of the vehicle after it is raised and do not work under vehicle without a safety stand supporting it. The jack is for changing wheels only.*

Tire Changing

If you plan to change a tire yourself, follow this routine to assure that you've done it right and safely.

- Park on a level, firm surface.
- Stop the engine and set the parking brake.
- Place the automatic transmission in Park or the manual transmission in reverse.

- *Never start the engine with the vehicle on a jack. Trac-Lok rear axles, especially, can roll your car off the jack even with one rear wheel off the ground.*
- Block the tire diagonally opposite to the flat tire to prevent forward and backward movement.
- Remove the spare tire and jack, but note their position for easy replacement.

NOTE: *On Cherokee, Wagoneer and Truck models, remove and replace the spare tire as follows:*

Remove the spare tire from the rear undercarriage by loosening the lug nut with the lug wrench until the spare tire holding arm may be swung to the left. Make sure that the nut is loosened sufficiently to allow easy movement of the holding-arm. To install the spare tire, place it on the holding-arm with the valve stem side of the tire facing down, and move the holding-arm up and to the right, over the nut. Center the tire on the holding-arm with the valve stem side of the tire facing down, and tighten the nut until the tire is held firmly in position.

- Allow ample working space on the side of the vehicle, particularly if the flat tire is on the left side and you are on the highway shoulder.
- Pry off the wheel cover before raising the vehicle. Use the flat end of the lug wrench and start prying at the edge opposite the tire valve.

- Position jack as recommended in Jack Placement instructions (page 60).
- Before raising the vehicle, loosen the wheel nuts, turning counterclockwise about one-half turn. However, don't remove the nuts until the wheel is raised.
- After changing the tire, and before lowering the vehicle, snug up the wheel nuts in an alternating sequence, and with uniform snugness.
- Lower the vehicle until the tire just touches the ground, then tighten the wheel nuts *firmly* (75 foot-pounds torque), and with the same alternating sequence.
- Lower the vehicle fully, then snap the wheel cover firmly into place by starting directly over the valve stem.

WARNING: *Stow the jack, lug wrench, and spare tire properly to prevent them from becoming dangerous projectiles in the event of a quick stop or collision.*

Wheel Balancing

Wheel balancing with the wheel on the vehicle is recommended with the exception of rear wheels on vehicles equipped with the optional Trac-Lok differential.

Front Wheel Bearing Adjustment

Adjustment of wheel bearings is critical because it establishes the running clearance of the wheel bearings. Adjustment that is too tight preloads the bearings and causes them to run hot. Loose bearings permit the drum hub to shift its position on the bearings as the thrust loads vary with acceleration, braking, and cornering. Loose bearings can also cause erratic steering.

Rear wheel bearings on the J-20 Truck (Model 60 Full-Floating Rear Axle) are adjustable. Rear wheel bearings on all other models (Model 44 Rear Axles) do not require adjustment.



Front End Alignment

Whenever uneven tire wear is evident, or when front end shimmy, front end alignment should be checked.

Your Jeep dealer will be happy to assist you in determining the problem and correcting it, so you will only pay for work that is actually needed.

Alignment Specifications

Model	Castor (+1°)	Camber (+1/2°)	Toe-In
CJ-5/CJ-7	+3°	+1-½°	3/64 to 3/32 inch
Cherokee, Wagoneer, - & Truck	+4°	+1-½°	3/64 to 3/32 inch

Front Wheel Turning Angles

CJ Models

Turning angle is set at 29° maximum for all tires.

Cherokee—Wagoneer—Truck

Turning angle is set at 36° +1° —0°.



Special Driving and Emergency Situations

Emergency Information

Mechanical Difficulties

If mechanical difficulties force you to stop operation of your vehicle, follow these guidelines.

- Avoid stopping on the roadway if possible.
- If you pull off the roadway, avoid parking over dry grass, brush, or other combustible materials, since a hot exhaust system could ignite such materials.
- Use the Four-way Hazard Warning Flasher to warn other drivers anytime your vehicle becomes a traffic hazard, day or night.
- Raise the hood of your vehicle and/or tie a white handkerchief to the radio antenna as a signal for help.
- Only if you know of, or can see, a service or aid station near your location, proceed there for assistance. If you do not know of any service or aid station near you, stay with your vehicle until help arrives.

WARNING: *If walking on or near a roadway, be extremely careful of motor traffic.*

Tire Changing

Please refer to *Tires and Wheels* section for tire changing instructions.

First Aid

The American Academy of Family Physicians suggests that every driver should be aware of a few first aid measures which might save the life of an auto accident victim. Here are some guidelines to follow in case of an accident.

- **Stay calm**
- **Do not attempt to move victim unless there is danger of fire.**

Send for experienced police or ambulance help. Keep the victim warm with clothing or blankets. Do not attempt to remove the victim from the car and do not transport the injured until expert help arrives.

- **Make sure the victim is breathing without difficulty.**
Check the victim immediately to be sure his mouth is clear of foreign material and that the tongue is not blocking air from entering the lungs. Using a clean cloth or handkerchief to wipe out the mouth, grasp the tongue and pull it forward, maintaining this position until the victim can breathe easily on his own. If spontaneous breathing does not occur, artificial respiration, using mouth-to-mouth technique, should be used.



1. Lift up neck and tilt head back



2. Pull chin upward



3. Pinch nostrils and blow into mouth



4. Check breathing

Applying Artificial Respiration

- **Control bleeding by pressing down firmly and directly on the bleeding wound.**

Use a clean cloth or handkerchief and apply pressure directly on the bleeding area and maintain this pressure. The cloth may be held in place by ties or strips of cloth. The use of tourniquets should be left to those trained in their proper use.



Controlling Bleeding

- **Stay calm and be reassuring to the victim.**
Once breathing is satisfactory and bleeding is controlled there is little more to do until a rescue vehicle arrives.

Emergency Starting Procedures

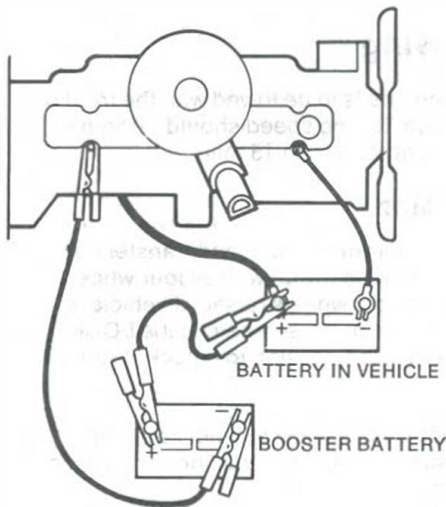
Push Starting

WARNING: *If your vehicle has a manual transmission and a catalytic converter, don't push or tow it to get it started. In the event the engine turns over but doesn't start during pushing or towing, raw fuel could enter the converter. Once the engine is started, the raw fuel could cause the converter to overheat and rupture.*

To start vehicle equipped with **manual transmission** by a push from another vehicle, follow this procedure: first, check to see that bumpers are aligned. Be sure all electrical systems are off. Turn ignition key to on position. Put the shift lever in 3rd gear (4th gear for 4-speed), and push clutch pedal in. When vehicle is rolling at about 15 mph, signal the pushing driver to fall back, depress the accelerator pedal, and slowly release the clutch pedal. Your engine should then start.

Jump Starting

A Jeep vehicle equipped with an **automatic transmission** cannot be started by pushing or towing. In the event of battery failure, use jumper cables for starting a vehicle with a weak or rundown battery.



Jumper Cable Arrangement

The booster battery must be of 12-volt dc capacity and **negatively grounded** like the one in your vehicle. You can check the owner's manual for the other vehicle to make sure. Energy sources exceeding 16 volts dc must not be used or damage to the battery, starter, or alternator could result.

Jump starting can be dangerous, and to avoid personal injury or damage to electrical components in your car, the following procedure should be followed carefully.

Procedure

1. Place automatic transmission in Neutral or Park and set parking brake.
2. Turn off lights, heater, and all other electrical loads.
3. Remove rings, metal watch bands, and other metal jewelry and wear eye protection.
4. Make sure fender or body of other vehicle is not in contact with your vehicle.

WARNING: Never expose battery to open flames or sparks (including cigarettes, cigars, and pipes). The battery generates hydrogen gas which is flammable, explosive, and present within the battery at all times. Do not allow battery acid to contact eyes, skin, fabrics, or painted surfaces—serious personal injury or property damage could result. Flush any contacted area with water immediately and thoroughly. Be



careful when using metal tools and equipment near the battery—contact between the positive terminal (or metal in contact with it) and any other metal on the vehicle could cause an injurious or damaging short circuit. Always keep batteries and battery acid out of the reach of children.

5. Remove vent caps from discharged battery:
 - (a) Check fluid level. If low, fluid must be brought to proper level before jump starting is attempted.
 - (b) Check fluid condition. If slushy or frozen, do not attempt jump starting—battery could rupture or explode. Battery must be brought up to 40° F (4.4°C) before it can be safely jump started or charged.
6. Cover discharged battery vent wells with a dampened cloth.
7. Connect a jumper cable between the positive posts of the two batteries. The positive post may be identified by a "+" sign on the post and the letters "POS" embossed on the battery cover in 1/4-inch letters adjacent to the battery post.
8. Connect one end of the other jumper cable to the negative terminal of the battery in the other vehicle. The negative terminal has "NEG" embossed adjacent to the terminal. Do not connect the other end of the jumper cable to the negative terminal of the discharged battery. Connect to a bolt or nut on the engine. Do not connect the

jumper to the carburetor, air cleaner or fuel line. Keep the cables clear of belts and pulleys.

9. Start the engine in the vehicle providing the jump start. Let it run a few minutes, then start your engine.
10. Remove end of jumper cable from your engine first and then other end of the same cable. Remove the other cable.

Emergency Towing

If your vehicle is disabled and is to be towed with the *front or rear wheels off the ground*, towing speed should be limited to 30 mph for a distance no greater than 15 miles.

Manual Transmission

Ignition Key Available: Shift transmission and transfer case into neutral. Vehicle can now be towed with all four wheels on the ground or with front or rear wheels raised. If vehicle is equipped with selective drive hubs, set them in the LOCK position. Turn ignition key to off position to unlock steering wheel.

Ignition Key Not Available and Vehicle is Unlocked: Shift transmission and transfer case into neutral and tow vehicle with front wheels raised.

Ignition Key Not Available and Vehicle is Locked: Place dolly under rear wheels and tow vehicle with front end raised. Or, disconnect rear propeller shaft at rear axle yoke (be sure to index mark prop shaft and yoke for proper alignment at assembly), secure shaft to underside of vehicle, and tow with front end raised.

Automatic Transmission with Quadra-Trac Less Low Range Reduction Unit

Ignition Key Available: Turn ignition key to off position to unlock steering column and gearshift selector linkage. Place transmission gearshift lever in N (Neutral). If vehicle is to be towed with all four wheels on the ground, disconnect *both* propeller shafts from axle yokes (be sure to index mark prop shafts and yokes for proper alignment at assembly), secure shafts to underside of vehicle, and proceed with towing. If vehicle is to be towed with front end raised, disconnect rear propeller shaft only (index mark for proper assembly later) and secure shaft to underside of vehicle.

Ignition Key Not Available: Place dolly under rear wheels and tow vehicle with front end raised. Or, disconnect rear propeller shaft at rear axle yoke (index mark for correct assembly later), secure shaft to underside of vehicle, and tow with front wheels raised.

Automatic Transmission with Quadra-Trac and Low Range Reduction Unit

Ignition Key Available: Vehicle can be towed with all four wheels on the ground without disconnecting propeller shafts. Turn ignition key to off position to unlock steering wheel. Place transmission gearshift lever in P (Park) and shift low range reduction unit gearshift lever to N (Neutral) position. If Emergency Drive control (in glove box) was in EMERGENCY DRIVE when the engine was shut down, restart engine and turn the control knob to the NORMAL position. If the engine will not restart, tow the vehicle using a dolly under rear wheels and with the front wheels raised. **Never tow the vehicle with the Emergency Drive control activated or reduction unit in low range.**

Ignition Key Not Available: Place dolly under rear wheels and tow vehicle with front wheels raised. Or, disconnect rear propeller shaft at rear axle (index mark for proper assembly), secure shaft to underside of vehicle, and tow with front wheels raised.

Recreational Towing

Your Jeep vehicle can be towed behind a recreational vehicle such as a motor home, but be sure you comply with the following instructions to avoid damage to drivetrain components. And ... be sure to check federal, state, and local



requirements regarding vehicle lighting and trailering hitches or tow bars.

Manual Transmission

- Turn ignition key to off position to unlock steering wheel.
- Shift transmission and transfer case into Neutral position.
- Turn selective drive hubs to LOCK position (if equipped).

Automatic Transmission Without Quadra-Trac Low Range reduction Unit

- Turn ignition key to off position to unlock steering wheel.
- Shift transmission into Neutral position.
- Disconnect front and rear propeller shafts at axle (index mark prop shafts and yokes for proper alignment at assembly) and secure shafts to underside of vehicle or remove shafts completely.

Automatic Transmission With Quadra-Trac Low Range Reduction Unit

- Turn ignition key to off position to unlock steering wheel.
- Shift automatic transmission into Park.
- Shift Low Range Reduction Unit into Neutral position.

CAUTION: *If the Emergency Drive control knob (in the vehicle glove box) was in the Emergency Drive position when the engine was shut down, restart the engine and turn the knob to the Normal position. Never tow with the control knob*

In the Emergency Drive position or the Low Range Reduction Unit in low range.

Trailer Towing and Campers

In order to maintain the coverage of the Jeep Corporation 1977 New Vehicle Warranty, including its conditions and limitations, on vehicles used in trailer towing or camper applications (including the mounting of slide-in campers on Jeep Pickup Trucks), the requirements and recommendations in this manual and other factory literature must be followed.

In addition to requirements for proper vehicle maintenance, inspection, and servicing as prescribed in this manual, GVW and GAW ratings are of special significance. When your vehicle is to be used for trailer towing or, in the case of a Jeep Truck, for mounting a camper, it is very important that neither GVW or GAW ratings be exceeded by the addition of:

- The tongue weight of a trailer.
- The weight transferred to your truck by the mounting of a fifth-wheel trailer.
- The weight of a slide-in camper or any other type of truck camper.
- The weight of any other type of vehicle put in or on your Jeep vehicle.

Remember that everything put in or on the trailer or the mounted camper adds to the load on your Jeep vehicle. Refer

to the Jeep Vehicle Weight Capacities chart in the *General Information* section.

WARNING: *Jeep Corporation will not be responsible for brake performance if the Jeep vehicle and trailer hydraulic brake systems are in any way connected. A separate brake system for all trailers weighing over 1,000 pounds gross is recommended (as many states require).*

For truck slide-in camper loading information on your particular 1977 Jeep Truck, refer to the Consumer Information booklet in the glove box of your vehicle. For more information about trailer towing or camper recommendations and requirements, consult your Jeep Dealer.

Heavy-Duty Driving

Heavy-duty usage refers primarily to off-road, farming, police, government and commercial load-carrying applications, as well as the towing of trailers weighing over 2,000 pounds loaded.

WARNING: *In all types of load-carrying applications and trailer towing, avoid overloading and severe-condition operation which might cause brake, engine, axle, steering, suspension, frame, tire, or other failure.*

Special driving conditions—cold weather, short trips, high-speed trips, driving in heavy dust—also call for more frequent

air cleaner service, oil and filter changes, plus other heavy-duty (HD) services as outlined in the Mechanical Maintenance Schedule Chart.

WARNING: *After operating the vehicle in deep mud, sand, or water, or similar contaminating conditions; brake drums, brake linings, and front axle U-joints and yokes should be cleaned thoroughly to avoid excessive wear and/or unnecessary part failure caused by contamination with foreign material.*

Following off-road or heavy-duty usage perform a vehicle underbody inspection. Check frame members, steering, suspension and exhaust system for damage. Check threaded fasteners for looseness, particularly on running gear, steering and suspension. Retighten if required, to torque values specified in the Technical Service Manual. Also check for accumulations of vegetation or brush that could constitute a fire hazard, or conceal leakage or damage to fuel lines, brake hoses, axle pinion seals, or propeller shafts.

If your Jeep vehicle is equipped with a transmission skid plate and/or fuel tank skid plate, foreign material accumulated between the skid plate and the transmission or fuel tank should be removed or flushed out periodically; or daily after operation in grain fields—since a build-up of such materials could result in spontaneous combustion, fire damage, and possible injury to occupants.



Model 20 4-Wheel Drive Transfer Case

When To Use 4-Wheel Drive

Four-wheel drive should be used to provide additional traction and lower gearing for use on difficult terrain, and to provide low-speed pulling power for industrial and agricultural use. The 4-wheel drive transfer case should be engaged only when greater traction and power are required than that provided by the standard transmission low gear. Use it off the road. Use it to pull agricultural implements. Use it on the road in snow, mud, sand, on ice, etc. Use it on the road to get heavy loads rolling, or whenever normal 2-wheel drive traction will not do the job. However, do not use it more than is necessary (in terms of distance) on dry, hard-surfaced roads.

When Not To Use 4-Wheel Drive

The 4-wheel drive transfer case should not be used for normal driving on hard-surfaced roads. Prolonged use of 4-wheel drive on hard-surfaced roads may occasionally cause temporary difficulty in shifting out of 4-wheel drive. This is due to a build-up of torsional stress in the drive train and is caused by the normal variations in tire diameters under different load conditions.

To relieve this build-up, simply drive the vehicle in reverse for several feet or drive off the hard surface momentarily to allow tire slippage.

Driving Techniques In 4-Wheel Drive (Quadra-Trac and Model 20 Transfer Case)

Snow, Mud, and Sand

When going through snow, mud, and sand without a load, shift the transfer case into 4-wheel drive high range, and the manual transmission into first gear or automatic transmission into drive D.

Four-wheel drive low range is not necessary in such conditions unless a load is being pulled by the vehicle or unless it is desired to proceed more slowly due to changing road conditions. Don't shift into any lower gear than is necessary to maintain headway. Try to maintain a constant engine speed. Over-revving the engine will cause the wheels to start spinning and traction will be lost. Tire pressures may be reduced to about 10 psi if additional flotation is required.

To rock a vehicle equipped with automatic transmission free from snow, mud, or sand, repeatedly move the selector lever

between D and R maintaining a very slight amount of pressure on the accelerator pedal. Do not race the engine. Avoid spinning the wheels. As a general practice, never shift gears so as to change the direction of movement while the vehicle is in motion.

WARNING: *After operating the vehicle in deep mud, sand, or water, or similar contaminating conditions; brake drums, brake linings, and front axle U-joints and yokes should be cleaned thoroughly to avoid excessive wear and/or unnecessary part failure caused by contamination with foreign materials.*

Hill Climbing

When climbing a steep hill, shift the transfer case into 4-wheel drive low range, and the manual transmission into 2nd gear or the automatic transmission into low 1.

Drop down to first gear (manual transmission) only when it is apparent that the steepness of the ascent requires the lowest gear to maintain headway.

If You Stall

If the vehicle stalls or loses headway climbing a steep hill, **make a fast shift to reverse gear, and quickly release clutch**

pedal. Engine compression should then hold the vehicle on the hill. Shifting into reverse allows you to start the engine without depressing the clutch (the vehicle will move backward as the starter is engaged). When the engine starts, back the vehicle down the hill, controlling your backward speed with the accelerator.

WARNING: *Do not attempt to back down a hill with the clutch released and only the brakes holding the vehicle. Always back straight down a hill (if possible), never diagonally across the hill.*

Getting “Over the Hump”

“Walk” the vehicle up the last few feet if the wheels start to slip with only a few feet of ascent remaining; headway may be maintained by swinging the front wheels sharply left and right. This action will provide fresh “bite” into the surface and will usually result in enough traction to complete the climb.

Down Hill

A 4-wheel drive vehicle can proceed in safety down a grade which could not be negotiated safely by a conventional 2-wheel drive vehicle. Shift the transfer case into 4-wheel drive low range, and 1st gear (manual transmission) or “1” (automatic transmission). Let the vehicle go slowly down the hill with all four wheels turning against engine compression. This will permit you to control vehicle speed and direction.



WARNING: *Vehicles equipped with selective drive hubs must have the hubs set in the LOCK position.*

Across Slopes

Avoid this situation! A Jeep vehicle will seldom encounter a hill which it cannot negotiate directly. However, natural obstacles may make it necessary to travel diagonally up or down the hill. The danger lies in losing traction and slipping sideways *with the possibility of tipping.*

When necessary, choose as mild an angle as possible, keep moving, and make your turns quickly.

WARNING: *Don't travel diagonally across a hill unless absolutely necessary.*

Jeep Special Equipment

Jeep Approved Special Equipment is designed to adapt the versatile Jeep vehicles to specialized tasks and specific functions, as well as to provide items that complement the vehicle and increase owner satisfaction and comfort.



**CJ-7 with
Molded Top**

Some of the Jeep Approved Special Equipment items available are:

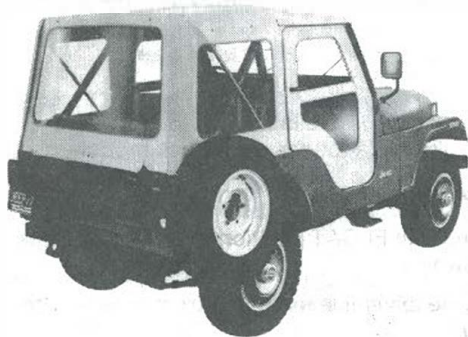
- Selective Drive Hubs
- Fabric Tops
- Swing-Out Tire Carriers
- Roll Bars
- Rear Step Bumpers (Trucks)
- Snow Plows
- Winches

For other items available, see the list of dealer-installed Jeep Accessories and Special Equipment at the end of this section.

Fabric Top

Fold Down Instructions

1. Remove doors and rods. Unsnap side curtains and lay curtains on top.
2. Unsnap rear curtain and lay curtain on top. Unbuckle rear support straps.
3. Unsnap windshield corner snaps. Release front retainer strip and lay fabric on top. Release rear bow support.
4. Lay top down. Bring support straps over folded top, under, and fasten to footman loops.



**CJ-5 with
Fabric Top**

WARNING: *Tailgate and rear curtain must be securely fastened closed while driving with side curtains and doors in place to avoid drawing dangerous exhaust gases into vehicle.*

Selective Drive Hubs

All Jeep vehicles have 4-wheel drive capability, a feature which requires the use of a front propeller shaft, front axle differential, and front axle shafts. Because these parts are directly connected to the front wheels, they rotate when the vehicle is in motion, even though the vehicle is in 2-wheel-drive. Selective drive hubs are used with the Model 20 transfer case to eliminate the rotation of front drive train components when the vehicle is in 2-wheel drive. This reduces wear on front end parts and tires and makes steering easier.

For free-wheeling 2-wheel drive, manually turn both hub control dials to the FREE position. Use the FREE position for all driving that does not require 4-wheel drive power and traction. With both hubs in FREE position, there is no front end drag.

CAUTION: *Do not move vehicle in low range of transfer case with locking hubs set in the FREE position.*



For normal 4-wheel drive, set both hub control dials at LOCK. With both hubs in LOCK position, the vehicle operates in 4-wheel drive, the same as before hubs were installed.

CAUTION: *Do not move the vehicle unless the dial is completely at either the LOCK or FREE position.*



**Selective
Drive Hub**

Vehicles equipped with selective drive hubs should not be driven exclusively with the hubs in the FREE position, as it is imperative to operate the front axle to promote lubrication of its component parts. It's recommended that your Jeep vehicle be driven with the hubs in the LOCK position for at least five miles once a month.

Selective drive hubs are a dealer-installed option for all models except Cherokee, Wagoneer, Truck and CJ-7 models equipped with factory Quadra-Trac Full Time 4-Wheel Drive.

CAUTION: *Selective drive hubs must not be installed on Jeep Vehicles equipped with Quadra-Trac Full Time 4-Wheel Drive.*

Snow Plow

The Snow Boss snow plow is available—factory or dealer installed—on Cherokee, Wagoneer, and Truck models.

Connecting Plow to Vehicle

1. Place LIFT control in FLOAT position and push lift arm completely down.
2. Connect A-frame to vehicle mounting frame using hinge pins and retainer clips.

3. Hook chain on lift arm with sufficient slack to permit the plow to follow ground contour.
4. Wipe "quick-connect" couplers free of dirt. Pull sleeve back on each coupler half and insert its mating male half on each angling cylinder. Release the sleeve to lock the halves together.

Operating Instructions

SAFETY PRECAUTIONS should always be used when Electronic Power Pack is in **operation** and when plow is in a **raised position**. Always **lower** plow to ground when vehicle is **parked**.

Overhaul and Service Information is covered in the 1977 Jeep Special Equipment Technical Service Manual.

Raise. To raise plow, hold yellow LIFT toggle in UP position until the plow has reached the desired height. When released, the toggle will self-return to HOLD position.

Lower. To lower or put plow down in the FLOAT position, push yellow LIFT toggle DOWN where it will stay until manually returned to HOLD or RAISE position.

Angle. To angle plow **left** or **right**, move black ANGLE toggle until plow has reached desired angle. Toggle will self-return to HOLD position.

NOTE: While plowing, leave toggle in **FLOAT** position to enable the plow to follow ground contour.

NOTE: Retorque all mounting bolt connections after first plow use.

General Maintenance

Cleanliness should be stressed at the time of **installation, servicing, and repairing**. Maximum performance and efficiency require that the vehicle's Electronic System be properly maintained.

NOTE: Plow pivot pins should be greased before and after winter season to insure plow tripping.

Check Periodically

- Battery Terminals—must be **clean** and the battery in **first class** condition.
- Electrical Connections—must be **tight**.
- Alternator and Regulator—must be functioning to **factory** specifications.

Post Season Maintenance

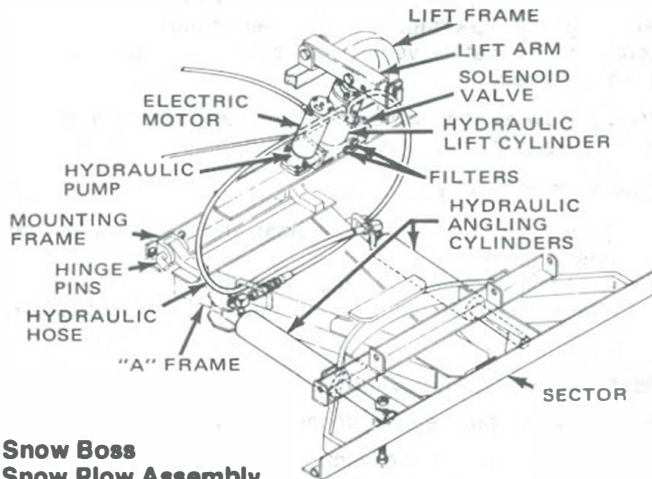
After snow plowing season, do the following:

- Drain and replace the electronic power pack fluid. Use Meyer Hydraulic Fluid M-L 2015134.



NOTE: *Electronic power pack fluid contains an anti-freeze additive which is effective for one season of use. Usage of other oils or fluid will void the Snow Boss warranty.*

- Clean the two screen-type filters located in base of unit. Use clear solvent and blow out with air.



**Snow Boss
Snow Plow Assembly**

- Fully extend the lift arm, coat the rod with grease and leave in this position. Fully extended position fills the cylinder with fluid which prevents internal rust and corrosion.
- Coat the exposed portions of the power angling cylinder rods with grease to prevent rust and corrosion.

Trac-Lok Rear Axle

The optional Trac-Lok rear axle (not available with Quadra-Trac) provides a constant driving force to both rear wheels and reduces wheel spin caused by the loss of traction at one driving wheel. If traction becomes unequal between the two rear wheels, the Trac-Lok differential automatically proportions the usable torque by providing more torque to the wheel that has traction.

Trac-Lok is especially helpful during slippery driving conditions. With both rear wheels on a slippery surface, a light application of the accelerator will supply maximum traction. When starting with only one rear wheel on an excessively slippery surface, slight application of the parking brake may be necessary to gain maximum traction.

Engine Block Heater

If your area is exposed to below zero temperatures much of the time, a Jeep Engine Block Heater with a 70-ampere-hour, heavy-duty battery and a 62-ampere alternator will not only make starting easier but will also prolong starter life.

The engine-block heater cord (extends to the grille) should

be connected to a standard 110-115 volt ac electrical outlet with an appropriate extension cord. Preheated engine coolant permits quicker starts with reduced engine wear, plus faster vehicle heater output in extreme cold weather. The engine heater can be used as desired for indefinite periods.

CAUTION: *Be sure to disconnect cord before driving!*



Dealer-Installed Jeep Accessories and Special Equipment

(For further information consult your Jeep dealer)

Equipment Available (X) For 1977 Jeep Vehicles. On items
Marked*—Mandatory Vehicle Equipment is Required.

	CJ Models	Cherokee	Wagoneer	Truck
Air Conditioning	*	•	•	•
Air Deflector—Rear Window		X	X	
Cap—Pick-Up Bed				X
Carpeting—Cargo Area		X	X	
Carpeting—Molded	X			
Fender Extension Kit	X			
Floor Mats		X	X	X
Full Cab—Metal	X			
Full Top—Fabric	X			
Half Cab—Metal	X			
Helper Air Springs—Front	X	X	X	X
Helper Air Springs—Rear	X	X	X	NA*
Helper Springs—Coil	X			X
Locking Gas Cap		X	X	X
Luggage Carrier		X	X	
Luggage Roof Rack		X	X	
Mirror—Inside, Day/Night	X	X	X	X
Mirror—Outside Right		X	X	X
Push Bumper	X	X	X	X
Radio & Antenna	X	X	X	X
Radio—Citizens Band	X	X	X	X
Rear Step Bumper				X
Roll Bar	X			
Seat—Rear	X			
Selective Drive Hubs (Not available with Quadra-Trac)	X	X		X
Ski Rack		X	X	
Sliding Rear Window				X
Snow Plow	•	•	•	•
Spare Tire Carrier—Inside		X	X	
Spare Tire Cover	X	X	X	X
Spare Wheel Lock	X	X	X	X
Swing-Out Tire Carrier	X			
Tonneau Cover				X
Trailer Hitch—Class I		X	X	X
Trailer Hitch—Class II		X	X	
Trailer Hitch—Class III		X	X	
Winch—Front Mounted	•	•	•	•
Window Vent Shades		X	X	X
Wrecker (8000 GVW req'd.)				•

Maintenance

Non-Scheduled Maintenance

Your vehicle will need a number of non-scheduled services and maintenance replacements. Need for these is determined by road, load, weather, terrain and other variable operating conditions.

Non-Scheduled maintenance *services* include such items as cleaning of the fuel system, removal of engine carbon deposits, and retightening of loose parts and connections.

Non-scheduled maintenance *replacements* include manual clutch components, brake linings, shock absorbers, light bulbs, wiper blades, belts, hoses, soft trim, bright metal trim, painted parts, other appearance items plus other rubber and rubber-like parts. Need for these non-scheduled maintenance services and replacements is usually indicated by the

performance, handling, or appearance of your vehicle or particular component. While you may choose to do some of these on your own, your Jeep dealer offers reliable diagnosis and repairs at reasonable prices. He is ready at all times to serve you on these, as he is for your *scheduled* maintenance.

Scheduled Maintenance

Your vehicle will need periodic maintenance to keep it running at peak efficiency and make it last longer. All the services it will need—and when it will need them—are listed in the following charts. These services are vitally important for its upkeep, so it's up to you as the owner to see that they're performed at or near the scheduled intervals. Payment for these services is also the owner's responsibility.

For expert service, rely on your authorized Jeep dealer. His factory-trained mechanics, equipment, parts, and accessories make up a team devoted to keeping you on the road.



SERVICES SCHEDULED by ACCUMULATED MILEAGE



0 0 0 0 0 0 0

IN THOUSANDS

5

10,

 20, 25,
35, 40,
50, 55,
65, 70,
80, 85,
95, 100

15

45
75

30

60
90

Engine Oil, Oil Filter and Fluids (Chart 1)

R

R

R

R

Complete Body Lubrication and Brake Inspection (Chart 2)

HD

HD

R

R

Front Suspension and Steering — Verify condition and action, and correct as needed (Page 64)

HD

HD

R

R

Manual Transmission Clutch — inspect/Correct adjustment

R

R

Automatic Transmission — adjust linkage

R

R

Complete Chassis Lubrication (Chart 3)

{ CJ

R

R

R

R

{ Cherokee, Wagoneer, Truck

HD

HD

R

R

Shock Absorber Mountings and Bushings — inspect

HD

HD

R

R

Spring Bushings — inspect

HD

HD

R

R

Exhaust System — inspect

R

HD

HD

HD

U.S. Emission Control Services Cherokee, Wagoneer, Truck (Chart 4)

{ Complete precision tune-up

E

E

U.S. Emission Control Services CJ Models (Chart 5)

{ Scheduled routine Service

E

{ Complete precision tune-up

E

{ Idle Speed (curb and fast) — check and inspect. Drive belts — inspect condition and tension and correct as required.

E

E

*Immediately after operating in sand, mud, water, etc., brake drums, brake linings, and front axle U-joints and yokes should be cleaned thoroughly to avoid excessive wear and for unnecessary part failure caused by contamination with foreign materials.

†It's the owner's responsibility to have maintenance services performed at the scheduled intervals, and to pay for the necessary parts and labor.

HD—If you operate your Jeep vehicle under heavy-duty conditions such as off-road or dusty driving conditions for over 30% of use; extended idling during normal uses; towing heavy trailers (over 2,000 lbs); or short run uses (most trips under 6-8 miles); more frequent servicing intervals are required. HD service intervals are in addition to other indicated.

R—Required for function and durability.

E—Required to help assure compliance with U.S. Emission Control Standards.

1977 Jeep Mechanical Maintenance Schedule (Owner Responsibility†) – Continued

SERVICES SCHEDULED BY MILEAGE OR TIME INTERVALS

Engine Oil and Oil Filter Change required (R) every 5,000 miles or 5 months, whichever comes first. If most vehicle uses involve trips under 6 miles, change oil once in between the oil filter changes. Change Heavy-Duty (HD) every 3,000 miles or 3 months, whichever ever comes first. Check engine oil level every 500-600 miles.	Tires Tires and tire services are excluded from both the New Vehicle Warranty and the Maintenance Schedule. Tire adjustments are handled directly by the tire manufacturer. Normal maintenance recommendations appear as guides under "Tires."
Engine Coolant Change required at 25,000 miles or 25 months, whichever comes first, and then at the start of every winter season.	Wheel Nuts Tighten to specified torque (R) after first 200 miles.

Chart 1 Fluids

INSPECT AND CORRECT LEVELS Normal Service – Every 5,000 Miles* Heavy-Duty Service – Every 3,000 Miles*

Transmission	Radiator Coolant	} at each fuel tank fill
Transfer Case – Model 20 only**	Windshield Washer Solvent	
Differentials – Front and Rear	Battery	
Steering Gear Housing	Clean Windshield Wiper Blade	
Power Steering Reservoir	Elements and Windshield	
Brake Master Cylinder	Check and Set Idle Speed	
Engine Oil Level	(curb and fast idle)	

DRAIN AND REFILL (At Mileage Indicated)

Transmission – Automatic	Transfer Case –
Normal Service . . . 25,000	Model 20 only*. . . 30,000
Heavy-Duty Service 10,000	Differentials –
Manual 30,000	Front and Rear. . . 30,000

Chart 2 Complete Body Lubrication And Brake Inspection

Normal Service – Every 15,000 Miles Heavy-Duty Service – Every 5,000 Miles

Inspection, and correction as needed, of brake linings and other parts.	Front seat tracks.
Hood latch and hinges.	Ashtay slides.
Door latches, lock cylinders and door hinges.***	Glove box door latch and hinge.
Tailgate and liftgate hinges and latches.***	Courtesy light switch buttons.***
	Apply silicone lubricant to all door, window, tailgate and liftgate rubber weather seals.

Chart 3 Complete Chassis Lubrication

	CJ Models	Cherokee, Wagoneer, & Truck
Normal Service	Every 5,000 miles	Every 15,000 miles
Heavy-Duty Service	Every 3,000 miles	Every 5,000 miles

Inspection and or lubrication of . . .
 Steering linkage ball joints (with replacement of suspension and steering system seals and components as necessary).
 Steering shaft U-joint – Cherokee, Wagoneer, Truck models.
 Clutch linkage – CJ Models.

Lubricate every 25,000 miles:
 Front wheel bearings - All Models.
 Transfer case shift linkage - CJ Models.
 Transfer case shift control lever assembly - Cherokee, Wagoneer, and Truck.

Normal Service Every 10,000 miles
 Heavy-Duty Service Every 5,000 miles
 Front and rear propeller shafts – all models

NOTE: Rear wheel bearings do not require periodic or scheduled lubrication; only at time of overhaul or other service.

*Except as otherwise indicated.

**Quadra-Trac transfer case does not require scheduled lubricant level check or drain and refill.

***Where applicable.

†It's the owner's responsibility to have maintenance services performed at the scheduled intervals, and to pay for the necessary parts and labor.



1977 Jeep Mechanical Maintenance Schedule (Owner Responsibility†) – Continued

Chart 4 U.S. Emission Control Services – Cherokee, Wagoneer, Truck Models

A precision electronic diagnosis should be purchased whenever questionable engine performance occurs between the scheduled complete precision tune-ups.

COMPLETE PRECISION TUNE-UP At 15-30-45-60-75-90,000 miles

Air Guard System Hoses—inspect and correct as required.

Carburetor Air Cleaner Element—replace paper cartridge, clean polyurethane element, unless plugged or damaged, then replace.

Choke Linkage—inspect for free movement (correct as required).

Coil and Spark Plug Wires—inspect and replace as required.

Distributor Vacuum and Centrifugal Advance Mechanisms—check and correct as required.

Distributor Cap and Rotor—inspect and replace as required.

Drive Belts—inspect condition and tension and correct as required.

Engine Oil Filler Cap (filter type)—clean.

Exhaust Gas Recirculation Discharge Port (Six-cylinder)—inspect and clean as required.

Exhaust Gas Recirculation Valve—inspect and clean.*

Fuel Filter—replace.

Fuel System: Cap, Tank, Lines, Check Valve, and Connections—inspect for integrity and correct as required.

Fuel Vapor Inlet Filter at Charcoal Canister—replace.

Heat Valve (exhaust manifold)—inspect and lubricate.

Idle Speed and Mixture—check and reset as required.

Ignition Timing—check and set as required.

PCV Hoses—inspect and replace as required.

PCV Filter (six-cylinder)—clean.

PCV Valve—replace.

Spark Plugs—replace.

TAC System—inspect and correct as required.

Vacuum Fittings, Hoses and Connections—inspect and correct as required.

*Not applicable to California engines.

†It's the owner's responsibility to have maintenance services performed at the scheduled intervals, and to pay for the necessary parts and labor.

1977 Jeep Mechanical Maintenance Schedule (Owner Responsibility†) — Continued

Chart 5 U.S. Emission Control Services — CJ Models

A precision electronic diagnosis should be purchased whenever questionable engine performance occurs between the scheduled complete precision tune-ups.

SCHEDULED ROUTINE SERVICES At 15-45-75-105,000 miles

Drive Belts — inspect condition and tension and correct as required
Fuel Filter — replace.

COMPLETE PRECISION TUNE-UP At 30-60-90,000 miles.

Air Guard System Hoses — inspect and correct as required.

Carburetor Air Cleaner Element — replace

Choke Linkage — inspect for free movement (correct as required).

Coil and Spark Plug Wires — inspect and replace as required.

Distributor Vacuum and Centrifugal Advance Mechanisms — check and correct as required.

Distributor Cap and Rotor — inspect and replace as required.

Drive Belts — inspect condition and tension and correct as required.

EGR System — inspect hoses and connections.

Engine Oil Filler Cap (filter type) — clean.

Fuel Filter — replace

Fuel System, Cap, Tank, Lines, Check Valve, and Connections — inspect for integrity and correct as required.

Fuel Vapor Inlet Filter at Charcoal Canister — replace.

Heat Valve (exhaust manifold) — inspect and lubricate.

Idle Speed (curb and fast) and Mixture — check and reset as required.

Ignition Timing — check and set as required.

PCV Filter (Six-cylinder) — clean.

PCV Hoses — inspect and replace as required.

PCV Valve — replace.

Spark Plugs — replace.

TAC System — inspect and correct as required.

Transmission Controlled Spark Systems — inspect and correct as required.

Vacuum Fittings, Hoses and Connections — inspect and correct as required.



†It's the owner's responsibility to have maintenance services performed at the scheduled intervals, and to pay for the necessary parts and labor.

Owner's Record of Regular Maintenance Services

Normal Service At (Miles)	Odometer Reading	Date Service Performed	Repair Order Number	Name of Servicing Dealer or Firm	Location of Servicing Dealer or Firm	Service Manager's Signature
5,000						
10,000						
15,000						
20,000						
25,000						
30,000						
35,000						
40,000						
45,000						
50,000						
55,000						
60,000						
65,000						
70,000						
75,000						
80,000						
85,000						
90,000						
95,000						

Service Station Information

Fuel Filler Location

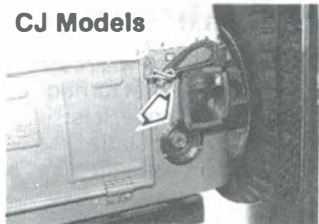
CJ Models: Below right rear tail/stop taillights.

Cherokee: Just forward of left rear side marker light.

Wagoneer: Just forward of left rear stop/ taillights.

Truck: Behind cab at right side of pickup box.

CJ Models



Fuel Requirement

CJ Models

All engines require the use of unleaded fuel to reduce exhaust emissions. Use of leaded fuel can result in substantially higher emissions. Fuel should have an antiknock index (AKI) of at least 87 AKI (A lower octane AKI is acceptable at elevations above 1500 feet). On those vehicles equipped with a catalytic converter, use of leaded fuel can render the catalyst ineffective.

Cherokee—Wagoneer—Truck

All engines for these models (except on California vehicles) will operate efficiently on regular grade leaded fuel or unleaded fuel of 87 AKI or higher. California senior V-8's have catalytic converters and require unleaded fuel. The use of unleaded fuel helps in the reduction of hydrocarbon emissions and provides some increase in spark plug and exhaust system life.

All Models

In the event of spark knock (ping) reduce initial timing setting within specified range (See Technical Specifications and Tune-Up Data chart) or select an alternate source of fuel.



Fuels from different marketers of equivalent research octane rating can vary in their knocking characteristics in a given vehicle. A trace knock at low engine speeds is not harmful. However, continued knock at high speeds can damage the engine. Persistent knock is damaging and constitutes actual misuse under your new vehicle warranty. Operation under this condition should be brought to your dealer's attention immediately.

Octane Rating

Over the years you have been accustomed to terms, such as "premium" and "regular," to describe the antiknock properties of gasoline. These simple descriptions were useful in a time of abundant, relatively inexpensive fuel supply. Higher "octanes" in these fuels were more economically obtained by the addition of lead antiknock additives. With the advent of Federal emission requirements, lead antiknock additives cannot be used in the gasoline for 1977 Jeep CJ models. As a result "octane" quality is more difficult and/or expensive to achieve in unleaded fuel. Therefore, it is more important than ever before to know what "octane" is.

Antiknock Index

There are two laboratory engine tests used to rate gasoline for antiknock performance: Research Octane Number and Motor Octane Number. Both relate to gasoline performance

in your vehicle. Federal regulations require posting of an Antiknock Index (AKI) on gasoline dispensing pumps. The antiknock index is the average of the Research and Motor Octane Numbers. This represents a better technical description of the antiknock properties of gasoline as it performs in your vehicle than the previous common usage of research octane.

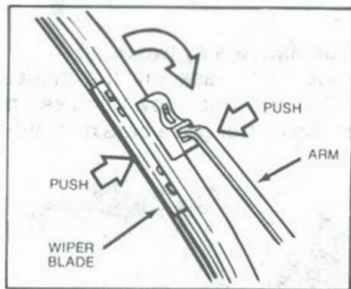
Windshield Wiper Blade Care

Dry windshield glass accumulates road film which will result in hazing and/or smearing when the wipers are first turned on. This film is not readily washed with water, hence, it is important that both the glass as well as the wiper blade rubber element is washed with mild detergent solution regularly.

The use of "All Season Washer Solvent" mixed with water is recommended all year round for, in addition to the ice inhibitor it contains, washer detergent effective in removing road film. *Whenever hazing and/or smearing occurs, use washers to wash windshield glass thoroughly with washer solvent. In a prolonged dry spell, more than one washer application may be necessary to completely remove road film and restore good wipe quality.*

In freezing weather, warm the windshield with the defogger before using washers.

Windshield Wiper Blade Replacement

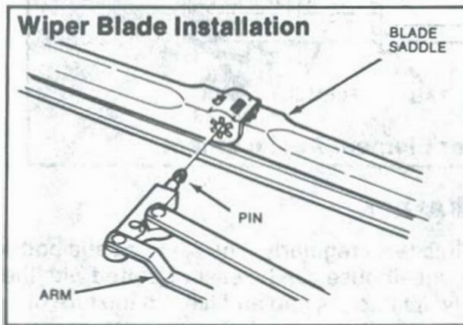
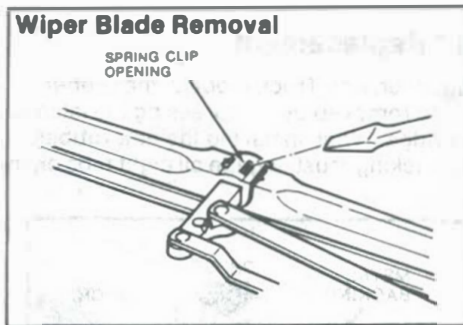


Wiper Blade Replacement C-J Models

CJ Models

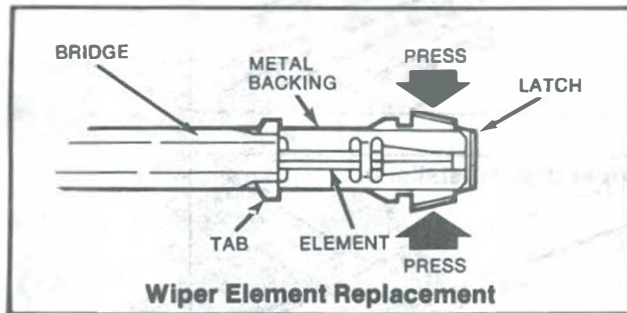
Raise the wiper arm away from the windshield and push the wiper blade firmly against the tip of the arm. Hold arm stationary and rotate the blade around the tip of the arm as illustrated. Rubber element is not replaceable—install new wiper blade assembly.

To remove blade, insert screwdriver point into spring clip opening of blade saddle, depress spring clip, and pull blade from arm. To install, push blade saddle on pin so that spring clip engages pin. Be sure saddle is securely attached to arm.



Wiper Element Replacement

On Cherokee, Wagoneer, and Truck models, the rubber blade element can be removed by compressing the latch and sliding it from the bridge. When installing the new rubber element, the metal backing must engage all eight tabs on the bridge.



Windshield Washer

Check reservoir fluid level regularly. The white plastic bottle on the side of the wheelhouse can be easily spotted with the hood open. Simply unsnap the cap and fill with mixture of water and windshield washer solvent. See page 93.

Hood Latch CJ Models

The hood is secured to the front fenders by two hood latches—one on each front side. To release, pull the latches straight up and turn slightly. The hood may now be raised by inserting the fingers between the center grille bars and pulling the catch to the left.



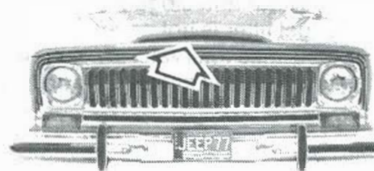
CJ Models

To secure the hood in the raised position, remove the support bar from its retaining clip and insert the free end into the support bar bracket.

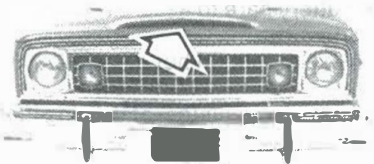
Cherokee—Wagoneer—Truck

The hood lock release latch is located under the front center of the hood, above the grille. To release the latch, reach in under the hood, lift up on the hood latch with the fingers and lift the hood.

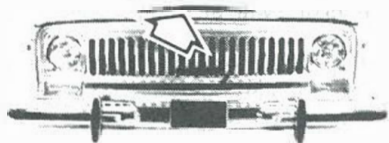
WARNING: After closing the hood, lift up on it to be sure it's secured.



Cherokee



Wagoneer



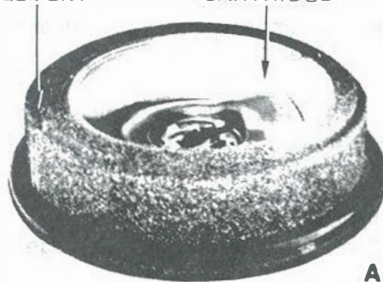
Truck

Air Cleaner

The air cleaner element assembly consists of a paper cartridge and a polyurethane element. (The polyurethane air filter is optional on CJ models with six-cylinder engines.)

POLYURETHANE
ELEMENT

PAPER
CARTRIDGE



Air Cleaner Assembly



Paper Cartridge

Replace the paper cartridge at 30,000-mile intervals for CJ models and at 15,000-mile intervals for Cherokee, Wagoneer, and Truck models. Replace it more frequently if the vehicle is operated under dusty conditions.

Polyurethane Element

Inspect frequently and clean when dirty. Cleaning may be needed as often as every 5,000 miles if the vehicle is operated under dusty conditions.

To clean the polyurethane element, first remove it carefully from the paper cartridge, then wash it in solvent. Wrap in a clean dry cloth and squeeze to remove all possible solvent. Do not wring the element or it may tear.

After cleaning, oil liberally with SAE 10W-30 engine oil and squeeze to distribute the oil evenly through the element and to remove excess oil. The element should be damp with oil, not dripping. Install the polyurethane element on the paper cartridge, taking care to have edges of the polyurethane element over the plastic end plates of the paper cartridge.

Replace the polyurethane element if it becomes torn or otherwise damaged.

Replacement part numbers of the polyurethane element and paper cartridge are imprinted on a decal affixed to the air cleaner.

Fuel Filter

The in-line fuel filter at the carburetor prevents foreign particles from getting into the carburetor and clogging the jets. Ordinarily, replacement of the fuel filter is not necessary before the recommended 15,000-mile interval. However, abnormal operating conditions and/or dirty gasoline could cause the element to clog sooner.

Battery Check

Your Jeep vehicle is equipped with a 12-volt battery. You should follow these tips on battery care to assure reliable operation and long battery life.

- Check the fluid level once a month (in hot dry weather, check more frequently).
- Maintain the fluid level (above the plates) at the ring in the bottom of the filler well.
- Distilled water should be used if possible. However, drinking water, free of high mineral content, can be used.
- In freezing weather, water additions should be made just before driving to assure mixing with acid to prevent freezing.
- The battery condition should be checked frequently in cold weather. To prevent hard starting due to a low battery (below 1.250 specific gravity), a battery charge will be necessary.

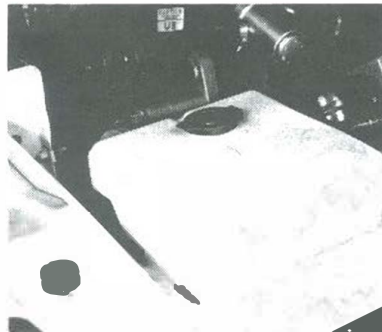
- Battery terminals can be cleaned with a baking soda and water solution to prevent corrosion. Apply solution freely to top of battery (be sure caps are firmly in place), and flush off with clean water. Protect the terminals with Jeep Silicone Lubricant Spray or petroleum jelly. Apply protective coating after cables have been installed and tightened.
- Check to be sure battery cables are tight at both ends. Holddown bolt should be snugly tight (don't overtighten, refer to torque chart).

WARNING: *Battery fluid is a sulfuric acid solution and must be kept away from skin, eyes, clothing and the painted surfaces of the vehicle. If acid contacts any of these, flush immediately with large amounts of water. Get medical attention. Don't smoke while checking or servicing the battery and keep open flames or sparks away from open battery filler caps since explosive gas is always present.*

Fluid Level Checks

Windshield Washer Fluid

The windshield washer fluid container is located under the hood. This container must be refilled periodically with water



**Windshield
Washer
Fluid
Reservoir—
Typical**

and a washer solvent if the temperature is expected to be below the freezing point.

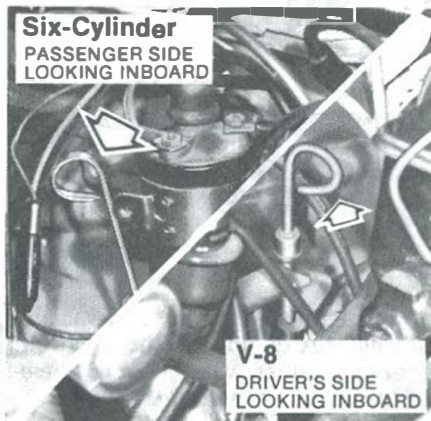
All-Season Washer Solvent has an ice inhibitor and washing detergent. DO NOT use antifreeze or other solutions that can damage the paint. In freezing weather, warm the windshield with the defroster before using the washer.



Engine Oil

Allow a few minutes after stopping the engine for the oil to settle before checking the dipstick. If the oil level has

dropped to the ADD mark, only one quart is required to raise level to the FULL mark. Do not overfill. Some oil is inevitably used in normal vehicle operation, and a consumption rate of one quart per 1,000 miles is not excessive.



**Engine Oil
Dipstick
Location**

Engine Coolant

To avoid personal injury or damage to the engine, check the cooling system as follows:

- Check the radiator coolant level when the engine is cold (before running). When cold, maintain coolant level 1-1/2 inches to 2 inches below the rear of the filler-neck surface (1/2 to 1 inch when hot). We recommend a 50/50 anti-freeze/water mixture for refilling.
- If you must remove the radiator cap when the engine is hot, let the engine cool down by letting it idle for a few moments before removing the cap.

WARNING: Turn the cap slowly to the first notch to let any pressure escape before removing the cap. Use a heavy rag or towel wrapped over the cap to avoid injury.

- If the engine is overheated, *be extremely careful*. Let the engine idle for a period above normal idle speed with the hood up unless all coolant has been lost. Shut off the engine and let it cool for 15 minutes, then remove the cap as outlined above.

Automatic Transmission Fluid

Check the fluid level every 5,000 miles for normal driving and every 3,000 miles for heavy-duty driving. Use the following sequence to check level accurately:

1. Operate engine at hot idle speed.
2. Place vehicle on level surface.

3. Apply parking brake.
4. Move lever through all ranges.
5. Place transmission in Park.
6. Check fluid level (dipstick is located in the filler pipe at the right rear of the engine—push down on cap and turn counterclockwise).
7. If fluid is low, add as required and check for leaks. Use DEXRON® or DEXRON® II automatic transmission fluid only.

The fluid level should be between the dipstick ADD and FULL marks at normal operating temperature (170°F). This temperature is obtained after at least 15 miles of expressway driving or equivalent city driving. At normal operating temperature, the oil will heat the gauge end of the dipstick so that it cannot be grasped without discomfort.

If the transmission is not at operating temperature, the fluid level should be approximately 1/4 inch below the ADD mark with the oil at approximately 75°F (room temperature). If the fluid level is correctly established at room temperature (75°F), it should be at the full mark on the dipstick when the transmission reaches normal operating temperature (170°F).

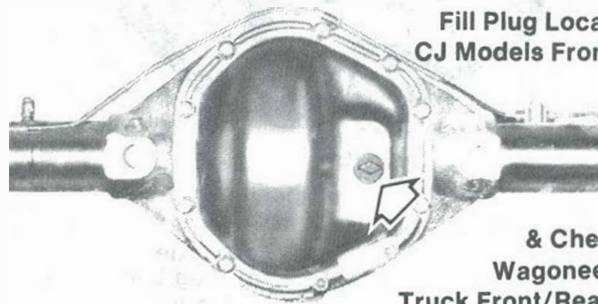
CAUTION: Do not overfill transmission, as this will cause foaming and loss of fluid through the vent pipe.

Refer to page 123 for automatic transmission fluid change interval and procedure.

Manual Transmission and Model 20 Transfer Case Fluid Level

Check the lube level every 5,000 miles for normal driving and every 3,000 miles for heavy-duty driving. The fill hole is located on the right side of the 3-speed transmission, on the back of the transfer case, and on the left side of the 4-speed transmission. To check lube level, remove fill plug. Lube should be level with each fill hole. If not, bring up to level with make-up lubricant and replace fill plug.

Front and Rear Axle Differentials Fluid Level



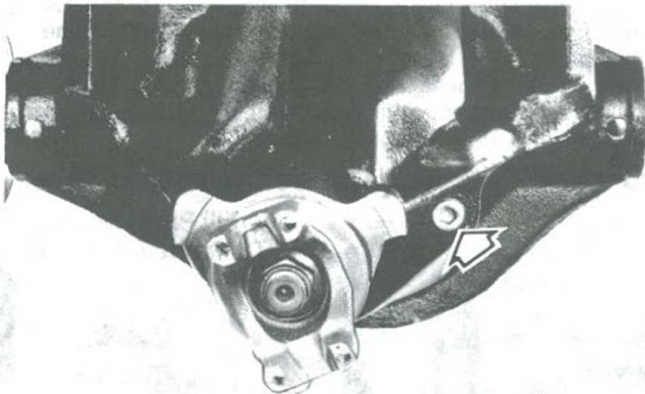
Fill Plug Location—
CJ Models Front Axle



& Cherokee,
Wagoneer, and
Truck Front/Rear Axle

Check lube level every 5,000 miles for normal driving and every 3,000 miles for heavy-duty driving.

The lubricant level of all differentials should be at the level of the fill hole. If not, bring to level by adding lubricant.



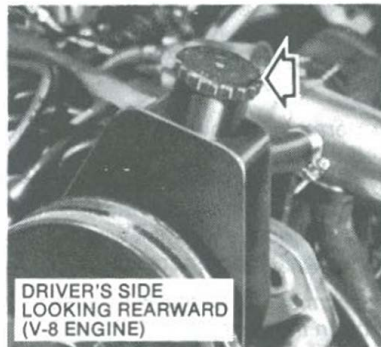
**Rear Axle
Fill Plug Location—
CJ Models**

Power Steering Pump Fluid Level

Check fluid level every 5,000 miles for normal driving and every 3,000 miles for heavy-duty driving.

To check, remove the power steering pump filler cap and observe the fluid level. (Wipe away dirt on cap and neck before removing cap.) Fluid level should be at correct dipstick level. If not, fill to proper level with make-up fluid. Use DEXRON® Automatic Transmission Fluid.

If abnormally low, the power steering system should be checked for possible leaks.

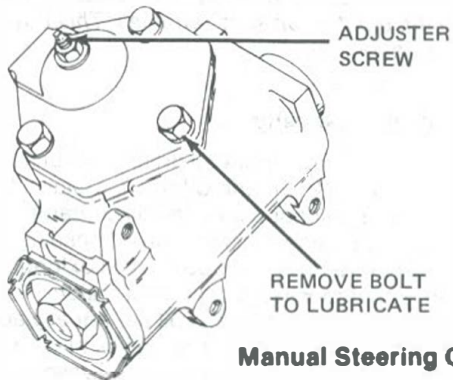


**DRIVER'S SIDE
LOOKING REARWARD
(V-8 ENGINE)**

**Power
Steering
Pump
Filler Cap**

Manual Steering Gear Fluid Level

Check the fluid every 5,000 miles (3,000 miles for heavy-duty driving) by removing the side cover bolt opposite the adjuster screw. Lubricant should be at level of bolt hole. Use AM All-Purpose Lubricant or Multi-Purpose Chassis Lubricant (Lithium Base). If level is abnormally low check for leaks.



Manual Steering Gear

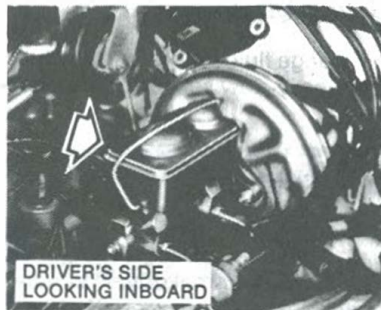
Brake Master Cylinder Fluid Level

Check fluid level every 5,000 miles for normal driving and every 3,000 miles for heavy-duty driving.

To check, clean the top of the master cylinder cover and surrounding housing area. The fluid level should be 1/4 inch below the rim of each half of the reservoir. If not, add brake fluid as required and install cover. Use only Jeep Part No. SF89972757 Heavy-Duty Automatic Brake Fluid or equivalent; SAE Standard J1703, and Federal Standard No. 116, DOT 3 Fluid.

WARNING: *Never use reclaimed fluid, mineral oil, or brake fluid inferior to SAE Standard J1703.*

Be sure to handle the brake fluid in clean dispensers and containers that will not introduce even the slightest amount of other liquids or foreign particles.



Master Cylinder Cover



Lubrication

Keep your vehicle operating at peak efficiency by lubricating it properly. This means . . .

- Lubricate at regular intervals.
- Use the proper lubricant.

The regularly scheduled **lubrication intervals** are listed in the Mechanical Maintenance Schedule and throughout the text that follows. See also *Chart 1—Fluids*, and *Chart 3—Complete Chassis Lubrication*. Items requiring periodic attention are listed in these charts.

The **kinds of lubricants** you should use are listed in the *Recommended Lubricants* chart. For engine oil recommendations see the *Engine Oil Viscosity* chart.

Remember to lubricate or change fluids more frequently when using your vehicle for heavy-duty service or under severe operating conditions.

Engine Oil and Filter Changes

Your engine oil and oil filter should be changed every 5,000 miles (8,047 km) or 5 months, whichever occurs first, when the vehicle is being operated under normal driving conditions. More frequent changes are required under the special

driving conditions listed in the Mechanical Maintenance Schedule chart. It is a good practice to change oil and filter soon after engine has reached operating temperature to assure complete removal of used oil and contaminants.

NOTE: *Long and short oil filter elements are currently being used. When the short element is used, a slight overfill condition is indicated on the dipstick on some engines. This does not affect engine operation.*

Engine Oil Quality and Viscosity

For maximum engine protection under all driving conditions, use only engine oil meeting API Engine Oil Service Classification "SE." The term "SE" must appear on the oil container singly or in conjunction with other designations. These new SE engine oils provide more protection against oil oxidation, high temperature engine deposits, rust, and corrosion. Multi-viscosity or single-viscosity types of oil are equally acceptable if refined and sold by reputable oil companies. However, multi-viscosity oil is your best choice since it covers a broader range of operating temperatures and driving conditions. Oil viscosity should be determined by the lowest air temperature anticipated before your next oil change, as follows:

Engine Oil Viscosity

Lowest Temperature Anticipated	Recommended Single Viscosity	Recommended Multi-Viscosity
Above +40°F	SAE 30 or 40	SAE 10W-30, 20W-40, or 10W-40
Above 0°F	SAE 20W-20	SAE 10W-30 or 10W-40
Below 0°F	SAE 10W*	SAE 5W-20 or 5W-30

*Sustained high speeds (above 55 mph) should be avoided when using SAE 10W engine oil since oil consumption may be greater under this condition.

Engine Oil Filler Cap

Your filter-type V-8 oil filler cap should be cleaned with kerosene and then soaked in engine oil every 30,000 miles for CJ models and every 15,000 miles for Cherokee, Wagoneer, and Truck—more often under heavy-duty driving conditions.

Automatic Transmission Fluid Change

Change fluid every 25,000 miles for normal driving and every 10,000 miles for heavy-duty driving.

To change automatic transmission fluid, proceed as follows:

- Drain fluid, immediately after vehicle operation, before it cools.
- Remove the transmission bottom pan screws, pan and gasket.
- Remove oil filter and discard.
- Remove and discard O-ring seal from the pick-up pipe.
- Install new O-ring seal on the pick-up pipe, and install the filter and pipe assembly.
- Thoroughly clean the bottom pan and position a new gasket on the pan. Use petrolatum or equivalent.
- Install bottom pan; secure with attaching screws and tighten to 10 to 13 foot-pounds torque.
- Pour approximately 5 quarts of DEXRON® or DEXRON® II automatic transmission fluid in the filler pipe. (Be sure that container spout, funnel or other items in contact with the fluid are clean.)
- Start engine—allow it to idle for a few minutes.
- Apply brake pedal and parking brake. Shift transmission into all positions then place selector lever in P (Park).
- With transmission warm, check fluid level; add fluid to bring level to the FULL mark.



Quadra-Trac® Transfer Case Lubrication

“Stick-Slip” Condition

A condition called “Stick-Slip” can occur after extensive straight-ahead driving on dry pavement, resulting from the lubricant being spun off of the transfer case clutch brake cones. If it occurs, a constant, pulsating, low-frequency, grunt-like or rasping noise will be evident at slow or “crawl” speeds—such as when slowly turning a corner, or when maneuvering to park.

NOTE: “Stick-Slip” can occur after extended high-speed highway driving or driving after the vehicle has been sitting idle for a week or more. This is considered normal, and should be of no concern, as the noise will disappear with continued driving.

If Stick-Slip occurs, drain the Quadra-Trac unit and refill with fresh Quadra-Trac lubricant, available at your Jeep dealer.

After draining and refilling, it may be necessary to drive the vehicle in circles (in an open area) both clockwise and counterclockwise for about 15 minutes to allow the fresh

lubricant to enter the differential unit and to force the clutches to operate.

CAUTION: *When driving in tight circles, don't turn the wheels to the stop position—keep the wheel about half a turn off the stop position.*

Fluid Change

CAUTION: *Fill plugs, drain plugs, and reduction unit housing bolts should not be overtightened. Tighten plugs and 3/8-16 bolts to 15 to 25 foot-pounds and 5/16-18 bolts to 10 to 20 foot-pounds torque. Overtightening may result in thread stripping or breakage of the aluminum unit.*

Without Reduction Unit

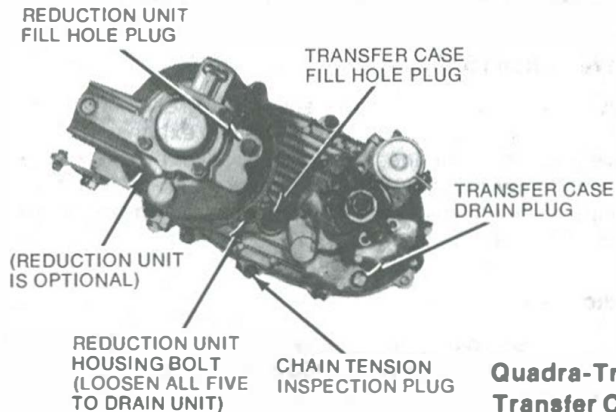
Use special Quadra-Trac lubricant available at your Jeep dealer. Requirement is 2 quarts (3.3 Imperial pints or 1.9 liters).

Remove fill plug and drain plug, and allow the transfer case to drain completely. Install drain plug. Fill to fill hole level with Quadra-Trac lubricant as specified above. Install fill plug.

With Reduction Unit

Use special Quadra-Trac lubricant available at your Jeep dealer. Requirement is 2-1/2 quarts (4.2 Imperial pints or 2-3/8 liters).

Remove the fill plugs from the transfer case and reduction unit. Remove the transfer case drain plug. After it has drained *completely*, install the drain plug.



Loosen the five bolts on the reduction unit housing (no drain plug), so that the unit can be pulled back far enough to permit the unit to drain. After it has drained completely, move the housing back into position and tighten the bolts.

First, fill the reduction unit to fill hole level with Quadra-Trac lubricant as specified above. Install the fill plug. Next, fill the transfer case to fill-hole level with the specified lubricant. Install the fill plug.

Manual Transmission and Model 20 Transfer Case Fluid Change

Manual transmission (3-speed or 4-speed) and Model 20 Transfer Case lubricating fluid must be changed at the same time. Change every 30,000 miles.

Use SAE 80W Gear Lubricant of API. GL-4 quality—see Fluid Capacities chart, page 124, for quantity.

To change fluid:

- Remove fill plugs and drain plugs.
- Allow unit to drain completely.
- Replace drain plugs.
- Fill to level of fill holes.
- Replace fill plugs.



Axle Differentials (Front and Rear) Fluid Change

Change every 30,000 miles using AMC Rear Axle Lubricant or Limited-Slip Gear Lubricant of SAE 80W-90 (API, GL5) quality. For Trac-Lok differentials use only Jeep Differential Oil, Part Number 8991018. Quantity required is listed in the Fluid Capacities chart (page 124) by axle model. The axle model number is cast on the axle housing.

To change fluid:

- Remove the axle differential housing cover.
- Allow lubricant to drain out completely.
- On all differentials (except Trac-Lok) flush the differential with a flushing oil or light engine oil to clean out the housing (do not use water, steam, kerosene or gasoline for flushing). Trac-Lok differentials may be cleaned only by disassembling the unit and wiping with clean rags. Do not flush the unit.
- Check condition of the differential housing cover gasket. Replace if necessary.
- Install gasket and differential housing cover.
- Tighten the cover bolts to 15 to 25 foot-pounds torque.
- Remove filler plug and add new lubricant to fill-hole level.
- Replace fill plug.

Model 20 Transfer Case Shift Lever and Linkage Lubrication

Lubricate every 25,000 miles—all models—using AMC All-Purpose or Multi-Purpose Chassis Lubricant (Lithium Base).

Propeller Shaft Lubrication

Lubricate every 10,000 miles for normal driving and every 5,000 miles for heavy-duty driving—all models using AMC All-Purpose or Multi-Purpose Chassis Lubricant (Lithium Base).

Sleeve Yokes (Splines)

Apply grease gun pressure to sleeve yoke grease fitting until lubricant appears at pressure relief hole in expansion plug at sleeve yoke end of spline. At this point, cover pressure relief hole with finger and continue to apply pressure until grease appears at sleeve yoke seal. This will ensure complete lubrication of spline.

Single Cardan Joint

The single cardan joint must be lubricated every 10,000 miles for normal driving and every 5,000 miles for heavy-duty driving.

Double Cardan Joint

The double cardan joint constant velocity center bearing, at the transfer case end of the front propeller shaft, must be lubricated every 10,000 miles for normal driving and every 5,000 miles for heavy-duty driving.

- Mark the front propeller shaft and pinion yoke to ensure proper alignment upon assembly.
- Disconnect the front universal joint from the front axle. Move the front end of the shaft to the right as far as possible.
- Rotate the shaft until the lubrication hole plug in the center bearing can be easily seen. (A needle-type grease gun adapter is required to lube this joint.)
- Lube the joint using an extended point lubrication adapter such as Alemite Adapter No. 6783.
- Align the marks on the propeller shaft and pinion yoke.
- Connect the front universal joint to the front axle.

CAUTION: *If you have had your vehicle undercoated, inspect for undercoating material on the propeller shafts. Such material could cause the shafts to become unbalanced and cause drive train vibrations. Remove any undercoating using the special solvent available from the undercoater.*

Body Lubrication

Lubricate all models every 15,000 miles for normal driving and every 5,000 miles for heavy-duty driving.

All body pivot points, including such items as seat tracks, doors, liftgate, tailgate and hood hinges plus locks, should be lubricated with Lubriplate periodically to help assure quiet, easy operation. As part of the body lubrication, Jeep Silicone Lubricant Spray should be applied to all door, window, liftgate and tailgate rubber weather seals to minimize deterioration and reduce damage from scuffing encountered in daily use.

Engine Cooling System

Coolant

Year-around coolant is installed at the factory to last through *2 years of normal operation*, if the coolant is maintained at the original concentration. It is advisable to maintain a regular check of the coolant level and concentration to assure proper operation of the cooling system. Refer to Fluid Level Checks, page 93.

In normal operation, the cooling system should be flushed and the coolant replaced at 25,000 miles or 25 months and



then at the start of every winter season. This will provide the fullest protection against rust.

High-quality ethylene glycol antifreeze coolant should be used in the system the year-around.

WARNING: *Do not use any type salt base antifreeze.*

Fill with antifreeze coolant and water in 50/50 proportions to provide -34°F freezing protection. (Consult your Jeep dealer for recommendations if greater protection is required.)

The 50/50 mixture should be maintained throughout the year to provide good corrosion inhibition as well as anti-boil protection so essential during summer.

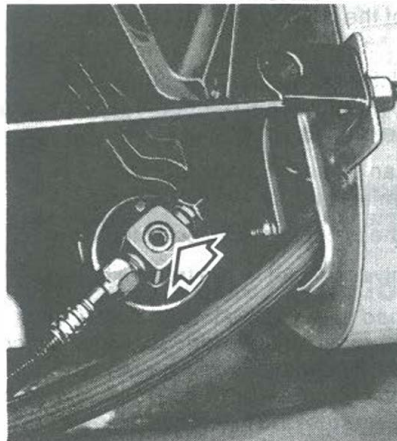
Thermostat

The operating temperature of the engine cooling system is governed by a pre-set thermostat which normally does not require replacement. However, if you suspect that the thermostat is malfunctioning (poor heater performance or engine over-heating are clues), consult your Jeep dealer for diagnosis and possible replacement.

Air Conditioning Check

You can occasionally check the operation of your air conditioning system by observing the sight glass, located in the engine compartment near the radiator, with the following steps:

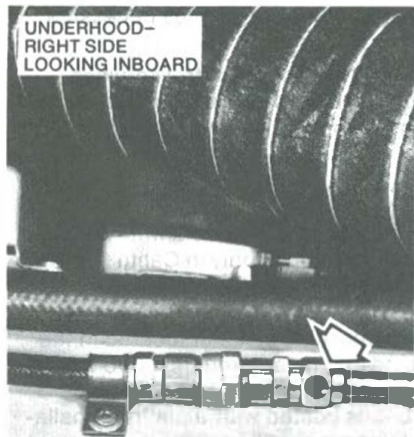
1. Clean the sight glass and observe for bubbles with engine running at fast idle (about 1,500 rpm) and with air



**Sight Glass
Location—
CJ Models**

conditioning controls set for maximum cooling.

2. If bubbles appear constantly, this indicates an under-charge of refrigerant (Freon-12), in which case see your Jeep dealer for service.
3. If no bubbles are observed, the system is either fully charged or completely depleted of refrigerant, in which case, you have no cool air output.



**Sight Glass
Location—
Cherokee-Wagoneer**

4. Determine which of the above two conditions is present, as follows:

- Have a helper cycle the system on and off by alternately turning the FAN (TEMP knob on CJ vehicles) blower knob from OFF to HI.
- Observe the sight glass. If a short spurt of bubbles appears when the knob is turned from the OFF position to HI then disappears, the system is charged.
- If no bubbles are observed during the on-and-off cycle, then there is no refrigerant, and it will be necessary to see your Jeep dealer for service.

Adjustments

Drive Belts

Tension and condition of belts should be checked every 15,000 miles for CJ, Cherokee, Wagoneer, and Truck models.

If a belt appears to be badly worn, cracked or frayed, it should be replaced.



Clutch Pedal Free Play

Clutch pedal "free play" must be checked every 15,000 miles and readjusted when free play has disappeared to prevent premature release of the throwout bearing and resultant clutch failure.

Electrical System

Your vehicle is equipped with a 12-volt, negative-ground electrical system which is charged by an alternator and controlled by a voltage regulator. All models have electronic ignition which uses an electronic control unit, trigger wheel and sensor circuit, requiring minimum servicing.

Emission Controls

Federal and State regulations have been established for the control of emissions from new motor vehicles. All Jeep vehicles produced for the domestic market are equipped with various systems to conform with these regulations when the vehicle is delivered to help control contaminants.

Due to the vital importance of following Jeep Corporation engineering recommendations on specific checks and adjustments for proper engine performance, adjustment specifications are shown on a label located in a convenient place under the hood on CJ models. On Cherokee, Wagoneer, and Truck models, the label is on the engine air cleaner.

Refer to the Mechanical Maintenance Schedule for the recommended maintenance intervals and services necessary for emission control.

Be sure to keep a record of all emission control services performed. A handy record form is on page 86 of this manual. It's a good idea to also retain applicable invoices and repair orders.

Catalytic Converter

Catalytic converters are used on all CJ models with V-8 engines, on all Jeep models built for sale only in California, and on all six-cylinder CJ's with altitude compensation.

A catalytic converter is a muffler-like canister located in the exhaust system between the engine and muffler. Two types are used, but both function the same way. The pellet type is filled with small alumina beads coated with a platinum palladium mixture. The monolithic type is filled with a honeycomb material also coated with a platinum palladium mixture.

The coating acts as a catalyst and causes the undesirable carbon monoxide and hydrocarbons to be converted into harmless carbon dioxide and water vapor. The converter is designed to last the life of the vehicle under normal usage and service. It does, however, require the use of unleaded fuel. Use of leaded fuel, which is prohibited by Federal law, will render the catalyst ineffective and result in substantially higher emissions.

If the catalyst has been contaminated by the use of leaded fuels, it may be necessary to have the coated beads replaced (pellet type), or to replace the entire catalytic converter (monolithic type). The combination of catalytic converter and unleaded fuel helps you enjoy low emission levels and reduced maintenance.

Catalytic Converters: Some Cautions

- Keep your engine properly tuned (see pages 84-85) and the exhaust system in good shape.
- An out-of-tune engine or certain carburetion or ignition malfunctions could cause the converter to get too hot, possibly damaging it or your vehicle. *Don't continue to drive your vehicle if the engine regularly misfires, stalls or quits.* Get the problem diagnosed and fixed promptly.

- The following warning signs will let you know if your converter is getting too hot. First, you will notice a pungent odor—"like something is burning." Second, and more critical, you may notice some light smoke. Either warning means your engine may be out of tune or malfunctioning and require immediate service correction.
- Be careful *where* you drive or park. As with any exhaust system, catalytic converter temperatures can get quite high and under certain conditions might ignite combustible materials such as dry grass, leaves or brush.
- If your vehicle has a manual transmission, don't push or tow it for extended periods to get it started. Unburned fuel mixture could enter the converter, and once the engine has started could ignite and cause the converter to overheat and rupture.
- If you have your vehicle undercoated, make sure no undercoating material is sprayed on the exhaust system ... it could cause smoke and odor.

If your vehicle is to be shipped overseas to areas where unleaded fuel is not available, and then is to be returned to



the U.S.A., write to the following address for information concerning compliance with Environmental Protection Agency import requirements and prevention of damage to the catalytic converter.

**American Motors Corporation
International Operations
27777 Franklin Road
Southfield, Michigan 48034**

Air Guard Emission (AGE) System

This exhaust emission control system uses an engine-driven air pump to promote oxidation of hydrocarbons and carbon monoxide in the exhaust manifold by "injecting" filtered air into the exhaust ports. No maintenance is required. This system is standard on all CJ models and senior V-8 models, but is not used with the 258 2V engine in J-10 Truck and Cherokee vehicles.

Exhaust Gas Recirculation (EGR) System

This system is standard on all models. The combination EGR valve and exhaust back-pressure sensor (used on most models) is bolted directly to the intake manifold. Approximately 10-12% of the exhaust gases are vented through the vacuum operated and, on most models, exhaust back-pressure mod-

ulated EGR metering (flow control) valve, back into the cylinders for additional burning. This results in a significant reduction of oxides of nitrogen.

EGR maintenance is not necessary on CJ models. On Cherokee, Wagoneer, and Truck, inspect and clean the valve every 15,000 miles. No cleaning is required on California Cherokee, Wagoneer and Truck models.

To clean, remove the EGR valve and sand-blast or wire-brush the movable center pin of the valve. Also, on six-cylinder engines, clean the intake manifold EGR discharge port by wire-brushing or rodding. Inspect the vacuum hoses for proper fit, and replace if deteriorated.

Thermostatically Controlled Air Cleaner (TAC) System

A thermal-sensor in the air cleaner regulates and, in effect, selects the temperature of the air coming into the air cleaner for improved vaporization of the air-fuel mixture. This system provides optimum carburetor performance at all times, including improved cold weather driveability. Other benefits are improved fuel economy and reduction of hydrocarbon and carbon monoxide emissions. No maintenance is required.

Transmission Controlled Spark (TCS) System

This system is standard on all California CJ models with V-8 engines and all California CJ models with six-cylinder engines and automatic transmissions. It is also standard on six and eight cylinder CJ's with automatic transmissions designed for use at altitudes above 4,000 feet. The TCS system is required to meet regulations for oxides of nitrogen and reduces them and hydrocarbon emissions by controlling vacuum spark advance. A solenoid switch on the manual transmission regulates the vacuum signal to the distributor. The TCS system needs no periodic maintenance.

Vacuum Throttle Modulator System

This system is used on Cherokee, Wagoneer, and Truck models with V-8 engines and manual transmission and, in California, on all Cherokee, Wagoneer, and Truck models to help control hydrocarbon emissions during deceleration when manifold vacuum is higher than at idle. A special valve senses this higher vacuum and activates a vacuum diaphragm modulator unit, which is mounted on the carburetor, causing it to open the throttle slightly beyond the normal idle setting. This throttle opening causes a slight pulsation of the accelerator pedal which is normal. No maintenance is required.

Positive Crankcase Ventilation (PCV) System

The PCV system is used on all Jeep engines to eliminate the emission of crankcase fumes into the atmosphere by recirculating these fumes back into the engine for burning. Maintenance consists of cleaning the urethane filter inside the small plastic container located within the air cleaner housing. Use kerosene as a cleaning agent. This service is required only on six-cylinder engines and should be performed every 30,000 miles for CJ models and every 15,000 miles for Cherokee, Wagoneer, and Truck models.

Fuel Evaporative Control (FEC) System

This system is used on all CJ models and on Cherokee, Wagoneer, and Truck models retailed in the State of California. A charcoal canister storage system absorbs fuel tank vapors and vents them into the engine induction system. An air cleaner purge for the canister, which works off of carburetor airflow, results in minimum purging at low speeds with a gradual increase at higher speeds.



Fuel Return Line

A return line is standard on all models to route fuel vapors back to the fuel tank to prevent excessive vaporization in the

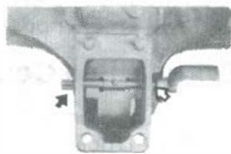
feed line to the carburetor. This eliminates "vapor lock" and provides improved hot engine restarts.

Exhaust Manifold Heat Control Valve

The exhaust manifold heat-control valve functions to speed up the warming action of your engine and assists fuel vaporization, thus aiding performance when the engine is cold.



V-8



Six-cylinder

Lubricate the valve shaft with AMC/Jeep Heat Valve Lubricant, Part No. 8891632, every 30,000 miles for CJ models and every 15,000 miles for Cherokee, Wagoneer, and Truck models to assure freedom of operation. Apply lubricant when valve is cold.

On V-8 engines, the valve is at the end of the right-side exhaust manifold. On six-cylinder engines, the valve is in the lower portion of the exhaust manifold on the left-side of the engine.

Altitude Compensation

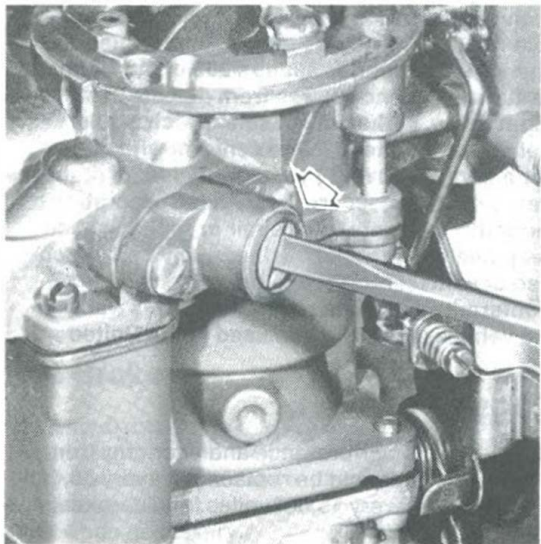
Vehicles sold for principal use in areas where the elevation is 4000 feet or more incorporate an altitude compensation device on the carburetor. This device is provided in accordance with EPA regulations.

On V-8 engines with the two barrel carburetor, the device is automatic and no adjustment is required. However, on six-cylinder engines with the single barrel carburetor (Carter YF models), the device must be manually set in accordance with "Altitude Compensator Setting" table shown below for the altitude in which you drive.

CAUTION: *Whenever the altitude compensation device setting is changed, the ignition timing also must be reset as indicated in the "Ignition Timing" table below. Failure to reset the ignition timing can result in damage to your vehicle engine.*

We recommend you have both the altitude compensation device and ignition timing reset by your authorized AMC/JEEP dealer. However, if you are mechanically inclined and

Altitude Compensation Device



have the necessary equipment, you may reset the compensation device and the ignition timing yourself, at your option. (Refer to the 1977 JEEP Technical Service Manual for the correct ignition timing procedure.)

Setting Altitude Compensation Device and Ignition Timing

The Altitude Compensation Device is located on the top portion of the Carter YF Single Barrel Carburetor. It may be manually set as follows:

1. Remove the carburetor air cleaner.
2. Turn the screw fully in or out (clockwise or counterclockwise) as prescribed in the "Altitude Compensator Setting" table below.

Altitude Compensator Setting

Altitude	Screw Setting
4000 feet or more	fully counterclockwise
Sea level to 4000 feet	fully clockwise



NOTE: Screw travel is approximately 2-1/4 turns.

3. Adjust ignition timing to the appropriate setting listed in "Ignition Timing" table below.
4. Install carburetor air cleaner.

Ignition Timing

Engine	Transmission	49 States	
		Sea Level to 4000 feet	4000 feet or More
232	manual	5°	10°
258	manual	3°	10°
	automatic	8°	10°

NOTE: Vehicles sold for principal use at low altitudes (below 4000 feet) and designed to meet emission standards at such low altitudes incorporate no compensation device and cannot be converted to high altitude emissions performance.

Emission Control System Warranty

Jeep Corporation warrants to the owner that this vehicle (and, in the case of a vehicle rated at more than 6,000 lbs. G.V.W., that the engine installed in such vehicle) is (1) designed, built, and equipped to conform, at the time of sale, with applicable regulations of the Federal Environmental Protection Agency issued under Section 202 of the National Emission Standards Act, and (2) free from defects in materials and workmanship, at the time of sale, which would cause such vehicle or engine to fail to conform with such regulations for a period of five (5) years from date of first use or 50,000 miles, whichever occurs first. Jeep Corporation's obligation under this warranty is to repair or replace, at an authorized Jeep dealer's place of business, any part which proves to be so defective, required to bring the vehicle or engine into conformity with such regulations. This warranty applies only to vehicles first sold and used in the United States.

Spark Plugs

To get the full measure of performance and economy from your engine, spark plugs should be replaced at every 30,000 miles for CJ models and every 15,000 miles for Cherokee, Wagoneer, and Truck models.

Exterior Care

Perhaps nowhere is neglect more quickly apparent than in the appearance of a vehicle. Chemicals that help make roads passable in snow and ice, that are sprayed on trees and road surfaces during other seasons, are highly corrosive to the metal in your vehicle.

Outside parking, which exposes your vehicle to airborne contaminants, extreme hot or cold weather and other extreme conditions naturally has an adverse affect on your vehicle's paint, metal trim and rubber parts. Repairs as a result of these conditions are your responsibility as are damages caused by misuse, negligence or accident.

Jeep Corporation utilizes many anti-corrosion treatments in the construction and finish of vehicles including rust-prevention coating of the body, plus the application of high-quality enamels to provide a surface highly resistant to the corrosion. Undercoating, when applied, adds further protection, but precautions are still needed.

Weekly washings of the exterior are recommended. Even steam-cleaning, particularly of wheelhousings, bumpers, mufflers, tailpipes and brackets, is suggested to clear away

damaging incrustations on the underbody structure. If undercoated, any breaks should be promptly repaired.

Paint

Frequent washing with clear water and polishing with a soft cloth or chamois will preserve the original luster of the finish. Always use cold water in washing the vehicle. Never wash it in the direct rays of the hot sun and always wait until the sheet metal surfaces are cooled before washing. Exercise care in removing stains and road film to prevent scratching the finish. AMC/Jeep Polish may be used to effectively remove road film and normal stains. Avoid using abrasive compounds and power buffing that may diminish the gloss or thin out the enamel. Gloss may also be restored to the vehicle finish by using AMC/Jeep Auto Polish.

Paint scratches should be retouched as soon as discovered. Your Jeep dealer can supply touch-up paint in handy spray cans or brush applicators to match the color of your Jeep vehicle. This paint, when properly applied, will cover up minor nicks and scratches.

Woodgrain panels and exterior tape stripes are made of vinyl, and are applied over the finish with a special applique process. Use special care in cleaning or polishing such areas.



Bright Metal Trim

The sheen of chrome and bright metal trim can be retained if washed frequently. AMC/Jeep Chrome Cleaner will help remove discoloration and blemishes.

The use of AMC/Jeep Auto Polish will provide protective coating against severe exposure.

Do not use abrasive or strong cleaning materials such as steel wool or scouring powder.

Interior Care

Trim

Fabrics and vinyls used for interior trim are selected by Jeep Corporation stylists for their durability, fade-resistance, and color-fastness. Frequent dusting with a whisk broom or vacuum and wiping with a damp cloth followed by towel-drying, will help keep your upholstery and interior trim clean and attractive.

Imbedded dust, grease, oil, lipstick, and other stains may be removed from fabrics with AMC/Jeep Fabric Cleaner. AMC/Jeep Vinyl Roof Cleaner and Protector is specifically recommended for vinyl trim.

Floor Coverings

Carpeting will resist wear for a much longer time if it is vacuumed frequently to prevent dust and dirt from being ground into the fibers.

Rubber or vinyl mats may be washed with soap and water.

Headlining

Headlining with *vinyl-coated* surfaces can be cleaned easily using light pressure with clean cloth or sponge and mild soap.

WARNING: *For safety sake, never use volatile cleaning solvents, such as gasoline, naphtha, turpentine, paint thinner or carbon tetrachloride in the interior of your vehicle. Nor should laundry soaps, bleaches, tints or caustic cleaners be used. They may injure or fade trim material. If you choose to use them, they should be tested on an obscure area before use.*

Storing Your Vehicle

If you won't be using your vehicle for 30 days or so, there are suggested steps to take to protect its operation. For extended storage, the routine is more extensive.

30-Day Storage

1. Wash the exterior finish.
2. Check anti-freeze protection.
3. Recharge battery if specific gravity is below 1.250 to protect against freezing or deterioration. Disconnect cables at battery.
4. Inflate tires to about 40 psi.
5. Store the vehicle inside. If it must be left where severe-weather exposure is certain, cover it. Be sure the cover will not loosen in heavy wind, thus rubbing the finish.
6. Run engine at fast idle for 15 minutes to assure oiling of parts.
7. Place the automatic transmission in park, manual transmission in reverse and the transfer case in neutral. Parking brake should be off.
8. Check storage area and glove box for items that might be damaged by extreme temperatures.
9. Close windows (if so equipped).
10. Open-body vehicles require special protection from the elements—especially the controls, instruments and seats. Storage within a closed area is recommended.

Extended Storage

If your vehicle will not be operated for more than 30 days, the following should be done *in addition* to the short-term storage procedure:

1. Wash the exterior finish.
2. Run engine until it is thoroughly warmed up, and then drain oil. Install a new oil filter and fresh oil.
3. Take off the air cleaner and pour up to one pint of SAE-10W (or lighter) engine oil into the carburetor air intake with the engine running. Pour slowly, then faster until the last quick pour stalls the engine. Install air cleaner.
4. Drain radiator, block and heater.
5. If freezing temperatures are likely, remove the battery and store it in a dry, cool (but above freezing) area. Do *not* store the battery where there is a likelihood of open fire or sparks, or accessible to children. Batteries produce hydrogen gas that is toxic and highly combustible.
6. Drain the fuel tank, making sure all gas is removed from carburetor and fuel lines. This reduces fire hazard and prevents gumming of fuel.
7. Take off the wiper blades.
8. Place blocks under the front and rear to raise tires off the ground.



Readying for Use

1. Check oil, fluid, and coolant levels in engine and transmission, transfer case, Quadra-Trac transfer case and reduction unit, differentials, front axle steering knuckle housing, brake master cylinder, power steering pump and radiator.
2. Check under vehicle and hood for leaks (and for birds or animals that may be using your vehicle as a temporary home).
3. Clean and attach battery cables. Be sure battery is fully charged.
4. Lubricate steering linkage ball joints.
5. Clean and gap spark plugs.
6. Clean the carburetor air cleaner.
7. Fill the fuel tank.
8. Inflate tires to correct pressure ... you are now ready for the road.

General Information

Owner's Kit

Your Jeep Owner's Kit contains this manual and the 1977 Owner's Manual Supplement. The Supplement gives detailed Warranty information and tells you what to do if a servicing problem occurs. The Supplement entitles you to Warranty service until you receive your Vehicle Identification Card (in about 6 weeks). Then, to obtain Warranty service, you need only to present the Vehicle Identification Card to the servicing Jeep Dealer. *Keep this manual, the Supplement, and the Vehicle Identification Card in your vehicle at all times.*

Change of Address or Ownership

The National Traffic and Motor Vehicle Safety Act of 1966 and the Clean Air Act of 1970 require that the manufacturer be in a position to contact car owners in the event a product correction becomes necessary.

Please fill in one of the postage-paid cards included in this manual when you change your address or purchase a used Jeep vehicle. Be sure to use the complete Vehicle Identification Number (VIN). Its location is shown below.

If the card has been used or misplaced, furnish the VIN and your name and address to:

**Jeep Corporation
Owner Relations
14250 Plymouth Road
Detroit, Michigan 48232**

Vehicle Identification

The diagram shows a rectangular plate with two circular punch holes at the top corners. The text "JEEP CORPORATION" and "TOLEDO, OHIO USA" is at the top. Below this are six rectangular boxes arranged in two columns. The left column contains "Sales Order No.", "Paint Option No.", and "Vehicle Identification (VIN) Number". The right column contains "SSR & O No.", "Trim Option No.", and "Jeep Model No".

Vehicle Identification Plate

Affixed to the left side of the firewall under the hood, a metal Vehicle Identification Plate shows the Model Number, Sales Order Number, Vehicle Identification Number (VIN), and the following:



Trim Option Number

This number identifies the seat type, the seat trim color and the upholstery material to ensure exact matching of replacement seat trim.

Paint Option Number

This number identifies the paint used on your vehicle to ensure exact color-matching for retouching or repainting.

SSR & O Number

Certain Jeep vehicles are built to special order with other than standard parts or equipment. By using the SSR & O number, your Jeep dealer is ensured of obtaining the correct replacement parts and equipment.

Engine Code Number

The six-cylinder engine code number is on the right side in the center of the block. On V-8's, it is on a tag attached to the front of the right-hand valve cover.



Engine Code Number: Six-Cylinder, V-8

Federal Safety Certification

A nonremovable plastic label lists the Vehicle Identification Number (VIN), month and year built, GVWR (gross vehicle weight rating), and GAWR (gross axle weight rating).

MFD. BY Jeep Corporation	
DATE	GVWR
GAWR FRT	REAR
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.	
VEHICLE NUMBER	
TYPE	

**Safety
Certification
Label**

This label certifies compliance with all Federal Motor Vehicle Safety Standards. On CJ models, the label is located on the instrument panel. On Cherokee, Wagoneer, and Truck models, it is located on the door lock pillar on the driver's side.

Jeep Vehicle Weight Capacities

As with *any* vehicle, it is very important that you *do not overload* your Jeep vehicle in excess of its GVW or GAW rating. These ratings are shown on your vehicle's Federal Safety Certification label. Gross Vehicle Weight Rating (GVWR) and Gross Axle Weight Rating (GAWR) indicate the weight capacities for which a vehicle is designed. These gross ratings include the weight of the vehicle itself plus the weight of people, cargo and everything that is put in or on the vehicle. Since GAWR is the total allowable load on an individual axle, be sure that neither the front nor the rear rating is exceeded and that the total of the axle loads do not exceed the GVWR.

Jeep Vehicle Weight Capacities (Pounds)

Model	Gross Vehicle Weight Rating	Gross Axle Front	Weight Rating Rear
CJ-5	3750 (1)	2200	2700
CJ-7	3750 (1)	2200	2700
Cherokee	6025	3215 (2)	3215
Wagoneer	6025	3215 (2)	3215
J-10 Truck	6025	3200 (2)	3200
J-20 Truck	6800	3500 (3)	4090
	7600	3500 (3)	4700
	8400	3500 (3)	5500

- (1) GVWR for hardtop with heavy-duty suspension: 4150.
- (2) Front GAWR for snow plow application: 3520.
- (3) Front GAWR for snow plow application: 3750.



Tire Inflation Pressures (PSI)

Model	GVW Rating	Tire Size	Load Range	Normal Load (1)				Maximum Load (2)			
				Sustained Driving Over 65 mph (3)		Under 65 mph		Sustained Driving Over 65 mph (3)		Under 65 mph	
				Front	Rear	Front	Rear	Front	Rear	Front	Rear
CJ-5 & CJ-7	3750 & 4150	E78 x 15	B	24	24	20	20	32	32	32	32
		F78 x 15	B	24	24	20	20	32*	32*	32	32
		H78 x 15	B & D	24	24	20	20	28	28	24	24
		HR78 x 15	B	24	24	20	20	28	28	24	24
		6.00 x 16	C	40	40	30	30	50	50	40	40
		9.00 x 15	B	30	30	20	20	35	35	35	35
Wagoneer & Cherokee	6025	H78 x 15	B & D	26	26	22	22	32*	32*	32	32
		H78 x 15	D	26	26	22	22	36	36	32	32
		HR x 15	B	26	26	22	22	32*	32*	32	32
		10.00 x 15	B	30	30	20	20	40	40	30	30

NOTE: Inflate tires while cold, before running. Do not reduce pressures if tires are warm.

*Speed limited to 75 mph.

(1) Normal Load—Frequently selected accessories, plus driver and two passengers. For CJ models, driver and one passenger.

(2) Maximum Load—Gross Vehicle Weight Rating (GVWR).

(3) Sustained driving over 75 mph for Cherokee and Wagoneer.

Tire Inflation Pressures (PSI) –Continued

Model	GVW Rating	Tire Size	Load Range	Normal Load (1)				Maximum Load (2)			
				Sustained Driving Over 65 mph		Under 65 mph		Sustained Driving Over 65 mph		Under 65 mph	
				Front	Rear	Front	Rear	Front	Rear	Front	Rear
Truck J-10	6025	H78 x 15	B & D	28	28	24	24	32*	32*	32	32
		H78 x 15	D	28	28	24	24	36	36	32	32
		HR78 x 15	B	26	26	22	22	32*	32*	32	32
		6.00 x 16	C	26	26	22	22	32*	32*	32	32
		10.00 x 15	B	30	30	20	20	40	40	30	30
Truck J-20	6800	8.00 x 16.5	D	45	45	35	35	55	70	50	60
		7.50 x 16	C	40	40	30	30	45	55	35	45
	7600	9.50 x 16.5	D	45	45	35	35	55	70	45	60
		7.50 x 16	E	40	40	30	30	55	85	45	75
	8400	9.50 x 16.5	D	45	45	35	35	55	70	45	60
		7.50 x 16	E	40	40	30	30	55	85	45	75

NOTE: Inflate tires while cold, before running. Do not reduce pressures if tires are warm.

*Speed limited to 75 mph.

(1) Normal Load—Frequently selected accessories, plus driver and two passengers. For CJ models, driver and one passenger.

(2) Maximum Load—Gross Vehicle Weight Rating (GVWR).



Technical Specifications and Tune-up Data

ENGINE	232 Six 1-B Carb.	232 Six 1-B High Altitude	258 Six 1-B Carb.	258 Six 1-B High Altitude	258 Six 2-B Carb.	304 V-8 2-B Carb.	360 V-8 2-B Carb.	360 V-8 4-B Carb.	401 V-8 4-B Carb.
Bore & Stroke (inches)	3.75x3.50	3.75x3.50	3.75x3.50	3.75x3.90	3.75x3.90	3.75x3.44	4.08x3.44	4.08x3.44	4.12x3.68
Displacement (cu. inches)	232	232	258	258	258	304	360	360	401
Compression Ratio	8.0:1	8.0:1	8.0:1	8.0:1	8.0:1	8.4:1	8.25:1	8.25:1	8.30:1
Gasoline Grade	SEE FUEL REQUIREMENT ON PAGE 124								
Horsepower, Taxable (License)	33.75	33.75	33.75	33.75	33.75	45.00	53.27	53.27	55.51
Radiator Cap Pressure (PSI)	15	15	15	15	15	15	15	15	15
Thermostat Rating (°F)	195	195	195	195	195	195	195	195	195
Carburetor Dashpot Setting (inch)	—	—	—	—	—	.075	.075	.075	.075
Carburetor Choke Setting	1 Rich	2 Rich	1 Rich(7)	2 Rich	2 Rich	2 Rich(8)	2 Rich	2 Rich	2 Rich
Electrical System	12 VOLT (Negative Ground)								
Spark Plugs	CHAMPION N-12Y (or equivalent/Gap .033-.037 inch)								
(A) Ignition Timing ± 2°	5° BTDC	10° (4) BTDC	8° (1) BTDC(3)	10° (4) BTDC	6° BTDC	5° (5) BTDC	5° (6) BTDC	5° (6) 8TDC	8° BTDC
(B) Engine Idle Speed ± 100 rpm Manual Transmission Automatic Transmission	850N —	600N —	850N 550D (2)	600N 550D	650N 550D	750N 700D	750N 700D	750N 700D	— 700D

- (A) Set timing with engine warmed and idling at 500 rpm with distributor vacuum line and idle solenoid disconnected (plug vacuum line). Align line on vibration damper with correct timing mark on front cover, unplug and connect vacuum line, and set engine to correct idle speed.
- (B) Set idle speed with parking brake on, air conditioning off, and with automatic transmission in drive (manual transmission in neutral).

- (1) 6° BTDC for California vehicles with manual transmission only.
- (2) 700D for California vehicles.
- (3) 3° BTDC for models with manual transmission.
- (4) Below 4,000 feet altitude, reset to "49" State specifications.
- (5) 10° BTDC for models with automatic transmission, except California.
- (6) 8° BTDC for models with automatic transmissions.
- (7) Index for California models with automatic transmissions.
- (8) 1 Rich for models with automatic transmissions or California models with manual transmissions.

Recommended Lubricants

Component	Lubricant
Manual Transmission Model 20 Transfer Case	SAE 80W Gear Lubricant API-GL-4
Automatic Transmission	AMC Automatic Transmission Fluid or equivalent brand labeled Dexron® or Dexron II®
Power Steering Gear Pump*	AMC/Jeep Power Steering Fluid
Quadra-Trac Transfer Case	Quadra-Trac Lubricant
Manual Steering Gear*	AMC All-Purpose Lubricant or Multi-Purpose Chassis Lubricant (Lithium Base)
Brake Master Cylinder (Drum or Disc Brakes)	AMC/Jeep Brake Fluid, or equivalent conforming to SAE Standard J1703 and FMVSS No. 118, DOT 3 Brake Fluid
Axle Differentials—Front & Rear Trac-Lok Axle Differential	AMC Rear Axle Lubricant or Limited-Slip Gear Lubricant of SAE 80W-90 (API-GL5) quality.
Propeller Shaft Double Cardan Joint; Propeller Shaft Single Cardan Joint; Propeller Shaft Sleeve Yokes; Model 20 Transfer Case Shift Lever; Model 20 Transfer Case Shift Linkage; Steering Linkage Ball Joints; Steering Shaft Universal Joint	AMC All-Purpose Lubricant or Multi-Purpose Chassis Lubricant (Lithium Base)
Front Wheel Bearings	Wheel Bearing Lubricant
Exhaust Manifold Heat Valve	AMC Heat Valve Lubricant or equivalent
Ash Tray Slides Door, Hood, Liftgate, and Tailgate Lock Mechanisms Glove Box Latch and Hinges Parking Brake	AMC Lubriplate or equivalent
Accelerator Linkage Door, Hood, Tailgate, and Liftgate Pivot Points	AMC Motor Oil or equivalent brand
Weatherstripping	AMC Silicone Lubricant Spray or equivalent
Key Lock Cylinders	Apply AMC Silicone Lubricant Spray or light oil to key and insert in lock cylinder. Repeat several times
Air Cleaner Polyurethane Element	SAE 10W-30 engine oil

*No drain or refill required except when overhauled or serviced.

See *Fluid Capacities* chart on page 124 for refill quantities. Fluids specified are to be used for maintaining recommended levels as well as service refills. Refer to Mechanical Maintenance Schedule for intervals.



Fluid Capacities

Capacities, Approximate Refill	U.S. Measure	Imperial Measure	Metric Measure
Engine Oil (Includes 1 quart for filter change) 232 CID & 258 CID engines 304 CID, 360 CID & 401 CID engines	6.0 quarts 5.0 quarts	5.0 quarts 4.2 quarts	5.7 liters 4.7 liters
Cooling System (Includes 1 quart for heater) 232 CID & 258 CID engines 304 CID engine 360 CID, & 401 engines	10.5 quarts 13.0 quarts 14.0 quarts	8.7 quarts 10.8 quarts 11.6 quarts	9.9 liters 12.3 liters 13.2 liters
Transfer Case Model 20 (a) Quadra-Trac (a) Quadra-Trac with Reduction Unit	3.2 pints 2.0 quarts 2.5 quarts	2.6 pints 3.3 pints 4.2 pints	1.5 liters 1.9 liters 2.4 liters
Transmission Manual 3-Speed—CJ Models Manual 3-Speed—Cherokee, Wagoneer, & Truck Manual 4-Speed—All Models Automatic—Change Only Automatic—At Overhaul	3.0 pints 2.7 pints 6.5 pints 5.0 quarts 11.0 quarts	2.5 pints 2.3 pints 5.5 pints 4.2 quarts 9.2 quarts	1.4 liters 1.3 liters 3.1 liters 4.7 liters 10.4 liters
Axles AMC Model Rear Axle—CJ Models Model 30—Front Axle—CJ Models (b) Model 44—Front or Rear Axle—All but CJ Models (b) Model 60-3 (FF) Rear Axle—Trucks over 6500 GVW	4.0 pints 2.5 pints 3.0 pints 6.0 pints	3.3 pints 2.1 pints 2.5 pints 5.0 pints	1.9 liters 1.2 liters 1.4 liters 2.8 liters
Gas Tank (Approximate Gallons) CJ Models Cherokee & Wagoneer Truck Truck Auxiliary Tank (Optional)	15.0 gallons 22.0 gallons 19.0 gallons 15.0 gallons	12.5 gallons 18.5 gallons 16.0 gallons 12.7 gallons	56.7 liters 83.6 liters 72.2 liters 57.0 liters

(a) Drain and replace with Quadra-Trac lubricant

(b) Capacities of conventional and Trac-Lok rear axles are identical.

General Dimensions (Inches)

	CJ Models		Cherokee Models			Wagoneer Models	Truck Models		
	CJ-5	CJ-7	Model 16 2-Dr.	Model 17 2-Dr.	Model 18 4-Dr.		J-10 Series		J-20 Series
						Model 15	Model 25	Model 45	Model 46
Wheelbase	83.5	93.5	108.7	108.7	108.7	108.7	118.7	130.7	130.7
Overall Length	138.4	147.9	183.5	183.5	183.5	183.5	192.5	204.5	204.5
Overhang—Front	23.5	23.5	29.9	29.9	29.9	29.9	29.9	29.9	29.9
—Rear	31.4	30.9	44.9	44.9	44.9	44.9	43.9	43.9	43.9
Overall Width	68.6*	68.6*	75.6	78.9	75.6	75.6	78.9	78.9	78.9
Overall Height	—	—	66.7	67.6	66.7	66.7	69.3	69.1	70.7
Open Body	67.6	67.6	—	—	—	—	—	—	—
Soft Top	71.4	71.3	—	—	—	—	—	—	—
Hard Top	71.3	70.5	—	—	—	—	—	—	—
Step Height—Front	27.0	26.1	19.9	20.7	19.9	19.9	20.7	20.7	22.1
—Rear	—	—	—	—	20.8	20.8	—	—	—
Front Tread	51.5	51.5	59.4	65.4	59.4	59.4	63.3	63.3	64.6
Rear Tread	50.0	50.0	57.8	62.3	57.8	57.8	63.8	63.8	65.9
Minimum Ground Clearance	6.9	6.9	7.7	8.6	7.7	7.7	7.7	7.7	8.1
Minimum Turning Diameter	33.5	35.9	37.7	39.4	37.7	37.7	40.6	44.5	44.5
Effective Leg Room—Front (Accelerator)	37.9	39.1	39.4	39.4	39.4	38.8	38.8	38.8	38.8
—Rear (Minimum)	—	—	37.0	37.0	37.0	37.0	—	—	—



General Dimensions (Inches) — Continued

	CJ Models		Cherokee Models			Wagoneer Models	Truck Models		
	CJ-5	CJ-7	Model 16 2-Dr.	Model 17 2-Dr.	Model 18 4-Dr.		J-10 Series		J-20 Series
						Model 15	Model 25	Model 45	Model 46
Hip Room — Front	55.4 —	53.8 —	60.5 60.9	60.5 60.9	60.5 60.9	60.5 60.9	60.5 —	60.5 —	60.5 —
Shoulder Room — Front — Rear	55.4 —	58.3 —	58.3 58.3	58.3 58.3	58.3 58.3	58.3 58.3	58.3 —	58.3 —	58.3 —
Effective Head Room — Front Soft Top Hard Top — Rear	— 39.8 40.8 —	— 40.6 39.9 —	38.0 — — 37.2	38.0 — — 37.2	38.0 — — 37.2	38.0 — — 37.2	40.2 — — —	40.2 — — —	40.2 — — —
Cargo Floor Height	25.2	25.1	24.9	25.6	24.9	24.9	—	—	—
Cargo Capacity (Cubic Feet)	10.2**	13.6**	95.1**	95.1**	95.1**	95.1**	67.0	76.6	76.6
Cargo Space									
Overall Length	—	—	—	—	—	—	86.5	98.5	98.5
Length at Floor	40.2	46.8	81.6	81.6	81.6	81.6	83.6	95.6	95.6
Width at Wheelhouse	36.0	36.0	44.3	44.3	44.3	44.3	50.0	50.0	50.0
Width at Floor	36.0	36.0	60.9	66.8	60.9	60.9	68.0	68.0	68.0
Width of Tailgate Opening	35.8	34.5	54.9	54.9	54.9	54.9	57.2	57.2	57.2
Height of Sides and Tailgate	—	—	—	—	—	—	20.5	20.5	20.5

*With side mounted spare tire.

**With rear seat removed.

Bulbs

	CJ Models	Cherokee, Wagoneer, Truck
Vehicle Exterior		
Headlamp	6014	6014
Marker and Reflector	194	194
Parking and Directional	1157	1157
Backup Lamp	1156	1156
License Lamp	—	97*
Stop, Tail, and Directional	1157	1157
Cargo Box Lamp (Trucks Only)	—	1156
Indicator Lamps		
Brake Failure/Parking Brake Warning	53	158
Quadra-Trac "Emerg. Drive"	53	158
Fasten Belts	—	158
High Beam	53	158
Turn Signal & Hazard Warning	53	158
Vehicle Interior		
Ash Tray	—	1445
Clock and Steering Column Light	1892	1892
Courtesy	89	89
Dome	—	212
Gauges—Oil Pressure, Ammeter (Voltmeter on CJ)	1895	158
Glove Box	—	1891
Headlamps/Wiper Controls	**	**
Heater Controls	**	1815
Instrument Cluster	53	158
Radio	1893	1892
Tachometer	1895	—

*Truck Only.

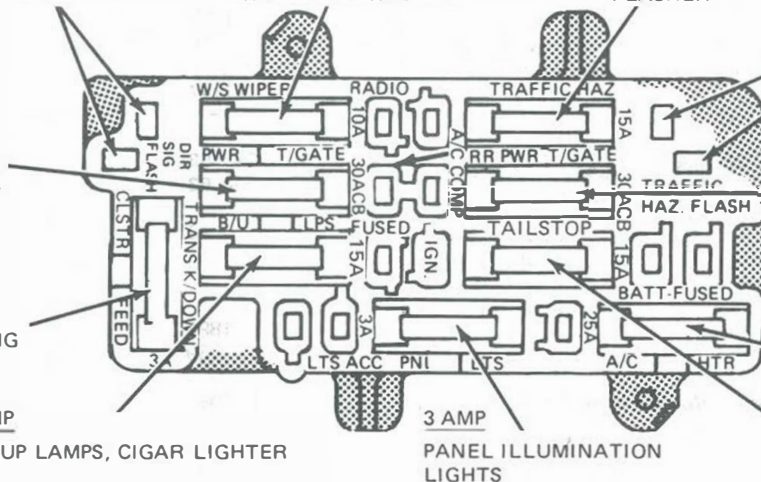
**Replaced as a unit.



NOTES:

- (1) FUSE PANEL LOCATED BENEATH INSTRUMENT PANEL ON DRIVER'S SIDE.
- (2) LIGHTING SYSTEM PROTECTED BY 25 AMP CIRCUIT BREAKER IN HEADLAMP SWITCH.
- (3) CRUISE COMMAND PROTECTED BY 1.5 AMP IN-LINE FUSE.

TAILLAMPS, STOP LAMPS, TURN SIGNAL LAMPS



Although this Owner's Manual thoroughly covers the operation and maintenance recommendations for your vehicle, more detailed technical information is available in the Technical Service Manual. To obtain a manual, please check correct block on this page and enclose remittance with order.

TECHNICAL SERVICE MANUAL, OWNER'S MANUAL AND LITERATURE ORDER FORM

Please send the items requested below. Enclosed is a check or money order payable to Jeep Corporation to cover cost of each Manual.

- ☐ 1977 Jeep Technical Service Manual — \$11.00
- ☐ 1977 Owner's Manual — \$1.00
- ☐ Jeep Special Equipment Technical Service Manual — \$4.50
- ☐ Consumer Information Booklet — No charge

NOTE: For Canadian request please make check or money order payable to Jeep of Canada Ltd. Allow up to 30 days for delivery.

Mail coupon to:

Jeep Corporation
Literature Distribution
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Livonia, Michigan 48150

or

Jeep Division of American Motors (Canada) Ltd.
350 Kennedy Road South
Brampton, Ontario
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Province _____

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NOTES

Gas Mileage Record

[illegible]

NOTES



PARTS

OFFICIALLY LICENSED PRODUCT

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Sales Offices Supporting Authorized Dealers

To find the sales office responsible for the area in which you purchased your vehicle, compare the first two digits of the "Dealer Code Number" on your Vehicle Identification Card with the number next to the zone listings below.

Atlanta (10) 1640 Stone Ridge Drive P.O. Box 718 Stone Mountain, GA 30083 area 404-939-7710	Denver (24) 5005 Lima Street Denver, CO 80239 area 303-373-5800	Minneapolis (36) 4600 Olson Memorial Hwy. Mail: P.O. Box 1273 Minneapolis, MN 55440 area 612-340-8830	St. Louis (46) 1101 Research Blvd. St. Louis, MO 63132 area 314-994-1100	Montreal American Motors (Canada) Limited 4875 Bourg Street Montreal 376, P.Q. area 514-735-4111
Boston (12) 420 Providence Hwy. Westwood, MA 02090 area 617-329-5100	Detroit (26) 600 American Center Southfield, MI 48076 area 313-827-7870	New York (38) 444 Saw Mill River Road P.O. Box 500 Elmsford, NY 10523 area 914-345-5745, -6	San Francisco (48) 15 Guittard Road Burlingame, CA 94010 area 415-697-1720	Toronto American Motors (Canada) Limited 4560 Dixie Road Mississauga, Ontario area 416-625-8930
Chicago (16) 11222 W. Melrose St. Franklin Park, IL 60131 area 312-625-0300	Kansas City (28) 8915 Quivira Rd. Overland Park, KS 66201 Mail: P.O. Box 283 Shawnee Mission, KS 66201 area 913-888-1050	Philadelphia (40) 800 Chester Pike Sharon Hill, PA 19079 area 215-586-3500	Washington (50) Westgate Research Park 1751 Old Meadow Rd. P.O. Drawer AA McLean, VA 22101 area 703-893-4600	Vancouver American Motors (Canada) Limited 7972 Enterprise Street Burnaby 2, B.C. area 604-291-7771
Cincinnati (18) 1125 Glendale-Milford Rd. Cincinnati, OH 45215 area 513-771-1900	Los Angeles (30) 2320 Alaska St. El Segundo, CA 90245 Mail: P.O. Box 92787 Airport Sta. Los Angeles, CA 90009 area 213-772-1521 or 644-1164	Pittsburgh (42) 253 Curry Hollow Road Pittsburgh, PA 15236 area 412-892-2500	Miami (52) 1550 NE Miami Gardens Drive Sky Lake State Bank Building North Miami Beach, Fla. 33162 area 305-949-1492	Winnipeg American Motors (Canada) Limited 580 Berry Street Winnipeg, Manitoba area 204-774-3438
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The Toughest Four-Letter Word on Wheels