



Owner's Manual

Important Operating, Safety and Maintenance Instructions

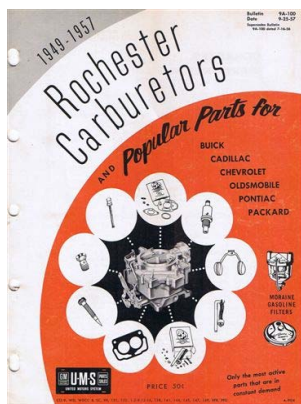
NINETY-EIGHT • DELTA 88 ROYALE
DELTA 88 CUSTOM • DELTA 88

1970 OLDSMOBILE



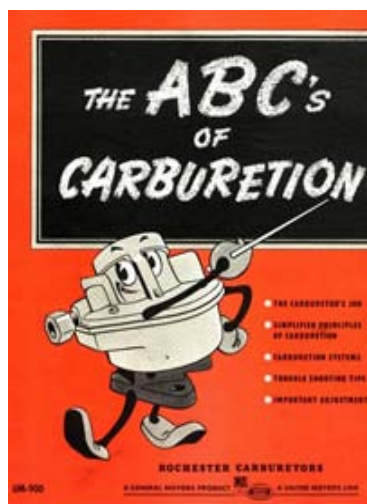
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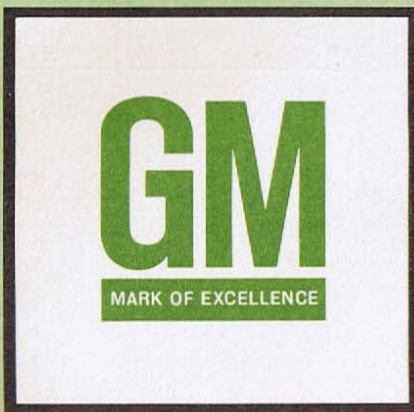
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Your new 1970 Oldsmobile meets or exceeds all applicable U. S. Federal Motor Vehicle Safety Standards. Effectiveness of these safety features can best be continued through regular vehicle inspection and maintenance.

OLDSMOBILE DIVISION
General Motors Corporation
Lansing, Michigan 48921

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IMPORTANT INFORMATION FOR THE OLDSMOBILE OWNER

This manual has been prepared to acquaint you with the operation and maintenance of your 1970 Oldsmobile. We urge you to read it carefully and follow the recommendations contained to help assure the most enjoyable and trouble-free operation of your vehicle. Listed below are subjects that deserve your special attention.

AIR POLLUTION CONTROL — A special colored supplement describes the operation and maintenance of the air pollution control systems on your car.

See Insert "B"

ALPHABETICAL INDEX — A complete index will be found in the back of the manual to assist you in locating specific information on your vehicle.

See Page 55

CHANGE OF ADDRESS OR VEHICLE OWNERSHIP — U.S. Federal Law requires the manufacturer to contact vehicle owners of record in the event a product safety defect is discovered. Your Oldsmobile Dealer should be notified if you change your address or purchased this car used.

See Your Dealer

DEALER ASSISTANCE — Your Oldsmobile Dealer knows your vehicle best and is interested in your complete satisfaction. Return to him for Guardian Maintenance Service and any other assistance you may require. To assist dealers in handling your needs, Oldsmobile maintains zone offices at the locations listed on the inside back cover. Should you have any questions which your dealer is unable to answer, the zone office nearest you, or the Owner Relations Department at the Oldsmobile Division address shown on the opposite page, will be pleased to assist you.

See Your Dealer

MAINTAINING SAFETY AND DEPENDABILITY — A special colored supplement contains recommendations to help you maintain the safety and dependability originally built into your Oldsmobile.

See Insert "A"

PROTECTING YOUR INVESTMENT — Only you can assure that the investment in your Oldsmobile is adequately protected. Regular and proper service as outlined in the manual will help you get the utmost in satisfaction and extended service from your car.

See Page 36

WARRANTY — When purchased new, your Oldsmobile is covered by the Oldsmobile New Vehicle Warranty and the Policy on Oldsmobile Owner Service. Complete details will be found in the Oldsmobile New Vehicle Warranty and Owner Protection Plan folder which was given to you by your Oldsmobile Dealer at the time of new car delivery.

See Your
Warranty Folder

Safety on the Road depends on...

1. You, the Driver

2. The Condition of Your Vehicle

3. Traffic and Highway Conditions

... BE SURE YOU UNDERSTAND ALL THREE!

REMEMBER: Proper operation, periodic maintenance and safety inspections help provide . . .

- **Economical Operation of Your Vehicle**
- **Safety for You and Your Passengers**
- **Dependable Transportation**

**Observe All Traffic Laws—
Make Safe Driving a Habit**

- **WHEN PARKED** — Don't invite theft by leaving your car unlocked or leaving valuable articles in view. Never leave children unattended in the automobile where they could accidentally release the brake or activate other controls.

- **IN TRAFFIC** — Study and understand surrounding traffic conditions before slowing, passing, turning or lane-changing, so you won't run into the unexpected. Maintain proper spacing, and check rearward conditions too.

When the light turns green, make sure cross-wise traffic has stopped before starting up.

Anticipate your next move and signal your intention at a reasonable time to the drivers around you.

- **DRIVING AT NIGHT** — Remember to remove sun glasses at dusk and at other times when the lighting is poor.

Be especially alert for pedestrians and unlighted vehicles at dusk and after dark.

Use "low beam" when approaching or following other cars, and look slightly to the right of oncoming lights.

Even properly aimed headlamps may cause annoying glare if the car is heavily loaded in the trunk. Distribute the load in your car as evenly as possible to avoid blinding other drivers.

Turn on your headlamps at early dusk, and during bad weather, to help other drivers see your car.

- **INCLEMENT WEATHER** — Proceed cautiously in inclement weather, until you are sure it is safe to drive faster. Be prepared for sudden crosswinds when crossing bridges or viaducts.

Remember that some wet pavement is as treacherous as ice, and bridges and viaducts can be slipperier.

- **BAD ROADS** — Remember, dust obscures vehicles and obstacles as completely as fog; drive cautiously in dust-clouded areas.

Avoid striking sharp rocks and pot-holes to avoid unnecessary (and often hidden) tire damage.

Remember to clean off headlamps, tail lamps and side markers after driving on wet, dusty, or muddy roads.

- **WINTER DRIVING** — Drive extra cautiously when winter comes, until you adjust to winter driving conditions.

Remember side streets may be slippery for days after main streets have been cleared, and drive accordingly.

In heavy snow or on icy roads, drive more cautiously, allow more room to stop, and use the brakes conservatively, and reduce the possibility of skids by using chains or special tires.

To get moving in snow, press very lightly on the accelerator pedal, increase pressure very slowly, and don't spin the wheels. If the wheels spin, they will turn the snow to slick ice or dig your wheels in deeper. Sand, rock salt, Liquid Tire Chain, or a piece of carpeting under the drive wheels can help if you do not get bogged down.

Remember that wet ice — at about 32°F — is extremely slippery; drive very cautiously.

- **EXTENDED TRIPS** — Before and regularly during the trip, check tire pressure, windshield washer and other fluid levels, and have necessary maintenance performed on a regular basis.

When driving along unfamiliar routes, it is safer to drive during daylight hours, and it is wise to obtain up-to-date maps and route information beforehand.

Remember that a high percentage of rural accidents involve head-on collisions and drive accordingly.

Budget your driving over the length of your trip. Share the driving or take rest breaks.

When driving alone for a long period, counteract monotony by changing radio stations, changing heater settings, opening windows, etc. If fatigue sets in, pull off the road for a short nap, or at least a rest.

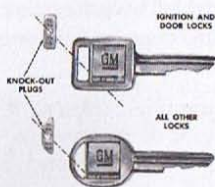
- **ALWAYS** be prepared for stopped or slow moving vehicles ahead.

Maintain an adequate distance between your car and the car ahead, to reduce the chances of rear-end collisions.

If you smell, or otherwise suspect that exhaust fumes are entering the passenger compartment, drive only with all windows and vents fully open, and then only until the cause can be determined and corrected.

OPERATING INSTRUCTIONS

A Word About Your Keys

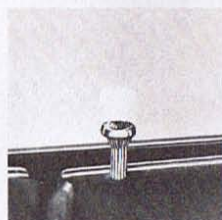


Two separate keys are provided for your car. Each key has a different cross section so that it can be inserted only in certain locks. The key with the square head and the letter "J" stamped on it operates the ignition switch and door locks. The key with the oval head and the letter "H" is used for the luggage compartment and glove box door locks, as well as the center console lock on cars so equipped. These compartments should be locked and the key removed from the car should it be necessary to leave the ignition key with an attendant.

The code number of each key is stamped on a "knock-out" plug in the key head. Your Oldsmobile dealer removed the key plugs and placed them with the spare set of keys in the special key envelope that

was given to you at time of delivery. Record the numbers on the key envelope and discard the key plugs. Keep the key envelope in a safe place such as your wallet, NOT IN THE CAR, so that you can have duplicate keys made in the event the original keys are lost.

Door Locks



Front and rear doors can be locked from the inside by depressing the passenger guard door lock button located on the upper door panel. All doors can be locked from the outside by simply depressing the interior door lock button and depressing the outside door handle plunger while closing the door. Once closed, release the plunger and the door is locked.

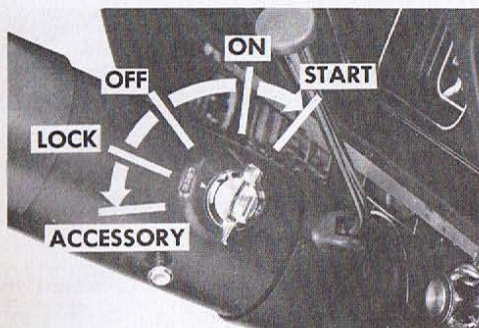
The front doors can also be locked by using the square headed key. All models

have, as a standard safety feature, overriding door locks. When the doors are locked, the door latch mechanism is inoperative, preventing inadvertent opening of the door by movement of the inside handle.

CAUTION: Always lock the doors when driving for greater security in the event of an accident and for security against unauthorized entries. Avoid pushing on the door glass when opening or closing the doors — instead, use the handles.

Anti-Theft Steering Column Lock

The Anti-Theft Lock, located on the right side of the steering column, has five positions. Starting from the full counterclockwise position (the position nearest you) they are, accessory, lock, off, on and start. To provide added theft protection for your car, the system is designed to prevent normal operation of the steering and shift controls when the ignition switch is in the "lock" position. The transmission selector lever must be in "park" on automatic transmission models, or reverse on manual transmission models, before the key can be turned to the "lock" position. The ignition



switch "accessory" position permits operation of electrical accessories when the engine is not running. It can be engaged only by pushing in on the ignition key and turning the key toward you (counterclockwise). The "off" position is provided so that the ignition can be turned off with- lock locking the steering column or trans- mission selector lever. The key can be withdrawn only when the switch is in the "lock" position.

NOTE: The Anti-Theft Steering Column Lock is not intended as a substitute for the parking brake. Always set your park- brake when leaving the vehicle unattend- ed to help assure that the vehicle will not move.

When leaving your car unattended:

- Set the parking brake
- Place automatic transmission selec- tor in Park (Reverse for manual transmission)
- Turn key to LOCK position
- Remove the key
- Lock all doors

CAUTION: In a parking situation, al- ways let go of the steering wheel **BE- FORE** turning the ignition key to LOCK position. When parking on a hill with wheels turned in to the curb, be sure the car has come to a complete stop before turning the key to LOCK position. Turning the wheels to left or right after the car stops "winds up" the steering system, which can result in a "spring back" of the steering wheel when the lock is released. As a further precaution, never reach through the steering wheel to operate controls, or for any other reason.

The ignition key warning buzzer warns you if you have left the key in the anti- theft lock when the driver's door is opened. Heed its warning—remove the key and lock the doors. The visible ve- hicle identification number of the instru-

ment panel aids in apprehension of thieves and recovery of stolen vehicles. Help it work; make sure it is not obscured by gloves, maps or other objects.

Starting the Engine

CAUTION: When starting the engine with the car parked, always have the brake applied—use the foot brake on automatic transmission cars and the parking brake on manual transmission cars.

NOTE: To prolong battery life, turn off switches for headlamps, radio, heater fan and other unnecessary electrical loads prior to starting the engine in colder weather. Leave accessories off until the engine is running smoothly.

Automatic Transmission Start Procedure — Place transmission selector lever in "P" or "N" ("P" preferred). A starter safety switch incorporated in automatic transmis- sion cars is designed to prevent starter operation while the transmission selector lever is in any drive position. If it is necessary to re-start the engine with the car moving, place the selector lever in "N".

Manual Transmission Start Procedure – Hold clutch pedal to the floor throughout the starting procedure. A starter safety switch incorporated in manual transmission cars is designed to prevent starter operation when the clutch is not fully depressed. Select the proper gear range before releasing the clutch pedal.

Cold Engine – Fully depress accelerator pedal and slowly release. **With foot off the accelerator pedal** crank the engine by turning the key to the Start position and release when engine starts. If the engine starts, but fails to run, repeat above procedure. When the engine is running smoothly, the idle speed may be reduced by slightly depressing the accelerator pedal and then slowly releasing.

Warm Engine – Depress accelerator pedal about halfway and hold while cranking the engine.

Extremely Cold Weather (Below 0°F) or After Car Has Been Standing Idle Several Days – Fully depress and release accelerator pedal two or three times before cranking the engine. **With foot off the accelerator pedal** crank the engine by turning the key to the Start position and release when engine starts.

If Engine Fails to Start using the appropriate procedure above, first, fully depress and release the accelerator pedal several times. Then remove foot from the accelerator and crank the engine.

If the engine still does not start, fully depress the accelerator pedal and hold to the floor while cranking the engine. If the engine has been flooded with gasoline it may start to run but not have enough power to keep running. In that case, continue cranking with the accelerator fully depressed until the engine clears itself of excess gasoline and runs smoothly.

Emergency Starting

If your Oldsmobile is equipped with a manual 3-speed transmission, it can be started in an emergency by pushing. When being pushed to start the engine turn ignition to "ON," depress the clutch, place the shift lever in high gear. Release the clutch when the car speed reaches 10 to 15 miles per hour. Bumpers and other parts contacted by the pushing vehicle should be protected from damage during pushing. Never tow the car to start.

Engines in vehicles with automatic transmissions cannot be started by pushing the car. To start the car when the Energizer

(battery) is discharged, use a single auxiliary battery or Energizer of the same voltage as the discharged battery with jumper cables. (Refer to page 44 for procedure.)

Exhaust Gas Warning (Carbon Monoxide)

Avoid inhaling exhaust gases because they contain carbon monoxide, which is a potentially lethal gas that by itself is colorless and odorless.

SITTING IN A PARKED CAR WITH ENGINE RUNNING FOR AN EXTENDED PERIOD IS NOT RECOMMENDED.

Do not run engine in confined areas such as garages any more than needed to move vehicle in or out of area. When vehicle is stopped in an unconfined area with the engine running for any more than a short period, the following precaution should be observed:

- Adjust heating or cooling system to force outside air into car with blower set at medium or high speed and controls set in any position except "OFF" or "MAX."

The trunk lid should be closed while driving to prevent drawing exhaust gases into

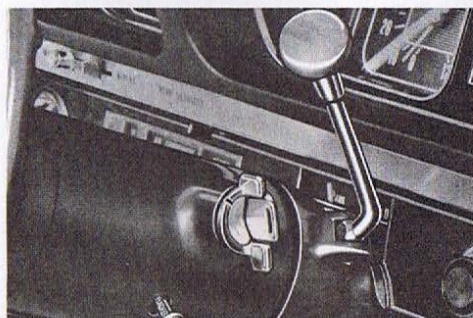
the car. However, if for some reason the trunk must remain open while moving, the following precautions should be observed:

- Close all windows.
- Adjust heating or cooling system to force outside air into car with blower set at high speed, and controls set in any position except "OFF" or "MAX."
- On cars equipped with outside air vents in or under instrument panel, open vents fully.

The best protection against carbon monoxide entry into the car body is a properly maintained engine exhaust system. Whenever a change is noticed in the sound of the exhaust system, when exhaust fumes can be detected inside the vehicle, or when the underside of the vehicle is damaged, have a competent mechanic inspect the complete exhaust system and adjacent body areas for broken, damaged or mispositioned parts, deterioration, open seams or loose connections which could permit exhaust fumes to seep into the trunk or passenger compartment. In addition, inspect the exhaust system each time the vehicle is raised for lubrication or oil change. Replace or adjust as required.

Turbo Hydra-Matic

On all models except the console equipped cars, the selector lever is located on the right side of the steering column and the shift indicator is located directly above the steering column on the instrument panel.



On console equipped cars, the selector lever and shift indicator are located on the console between the front seats. When shifting to "Park," "R," "S," and "L" position, the T-handle on the shift lever may be gripped to depress the ball on top of the shift lever.



"Park" provides a positive transmission lock when parking or while starting the engine. Pull the selector lever toward you (column shift) or press the button on selector lever (console shift) to select or release this position. Never move the selector lever to "Park" position unless the car is completely stopped.

"R" Reverse position is for backing the car. Bring the car to a complete stop before moving the selector lever into reverse.

"N" Neutral is the out-of-gear position. It is provided for starting a stalled engine while the vehicle is in motion and for running the engine while standing with the brakes applied. Do not coast in neutral.

"D" Drive Range is the driving range for normal city and highway driving. This position permits the transmission to operate through its complete range of gear ratios and to select the proper ratio for road and load conditions.

"S" Super Range position is used when super performance is needed for increased acceleration in traffic, hill climbing or "engine braking" downhill. The selector lever may be moved from "D" to "S" and vice versa, under most operating condi-

tions. "Super" should not be used at speeds above 75 mph.

CAUTION: Use caution when shifting into lower gear ratios on slippery surfaces, with vehicle moving — the abrupt braking action could cause the driving wheels to skid.

"L" Low position is available for heavy pulling through mud or sand and for "engine braking" when descending steep hills. The selector lever may be moved to "L" position at any speed but the transmission will only shift automatically into low range when car speed is under approximately 40 m.p.h. The transmission will not up-shift from low range as long as the selector lever is in "L" position.

GOOD DRIVING PRACTICE: Before descending a steep or long grade, down a mountain or hillside, reduce speed and shift into a lower gear. Use the brakes sparingly to prevent them from overheating and thus reducing brake effectiveness.

Forced Downshift — When quick power or acceleration is desired to pass moving vehicles or to climb steep grades at speeds

between approximately 35 and 65 mph, the transmission can be downshifted by depressing the accelerator pedal completely to the floor. It is also possible to obtain a forced downshift in "Drive" range at speeds under 35 mph by depressing the accelerator pedal part way down.

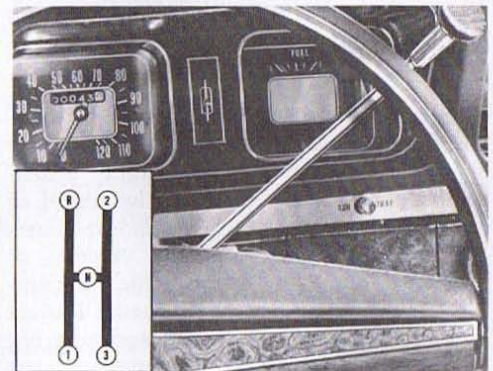
CAUTION: Care should be taken to avoid sudden accelerations when both drive wheels of any vehicle are on a slippery surface. This could cause both drive wheels to spin, especially when the car is equipped with Anti-Spin differential, and allow the vehicle to slide sideways on the curved surface of a road or in a turn.

Rocking the Car — If it becomes necessary to rock the car to free it from sand, mud or snow, move the selector lever from "D" to "R" in a repeat pattern while simultaneously applying moderate pressure to the accelerator. Do not race engine. Avoid spinning wheels when trying to free the car.

Three-Speed Manual Transmission

All forward gears on the Oldsmobile 3-speed manual transmission are fully syn-

chronized. This transmission is shifted through the standard "H" pattern as shown in the illustration. Before shifting into any gear, depress the clutch pedal and then shift into the desired gear. In first and reverse gears, release the clutch pedal slowly while simultaneously depressing the accelerator pedal. In second and third gears, release the clutch a little faster. This reduces the wear on the clutch and provides smoother operation.



OPERATING CAUTIONS —

1. Do not "speed shift," allow time between shifts for transmission synchronizers to coordinate.
2. Do not use second or third gear to accelerate from a stop.

3. Always place gear selector in neutral and set the foot brake when starting the engine.
4. Never leave vehicle unattended with the engine running.
5. Always set parking brake firmly before leaving the vehicle.
6. Do not coast in Neutral.
7. Never "ride" the clutch pedal as this will cause excessive slippage with resultant wear on the clutch parts.

GOOD DRIVING PRACTICE: Do use second gear at slow speeds (less than 30 miles per hour) when driving in "stop and go" traffic, for improved vehicle performance during acceleration and when descending steep hills.

New Car Operating Speeds

Driving speeds for your new Oldsmobile should be limited to a maximum of 50 miles per hour for the first 100 miles and 65 miles per hour for the next 400 miles with no heavy throttle accelerations. If most of your driving is of the around-town variety, which is considered "severe service" especially in cold weather, be sure to include some 25 to 50 mile highway trips

during the break-in period and vary the car's speed. The vehicle should be driven a minimum of 500 miles before hauling a trailer of less than 2,000 lbs. gross weight and at least 1,000 miles if the trailer exceeds 2,000 lbs. gross weight.

Fuel Requirements

Your Oldsmobile is designed to operate efficiently on "Regular" or "Premium" grade fuels commonly sold in the United States and Canada, depending on the engine installed in your car. The table indicates the fuel grade requirements for various Oldsmobile engines.

Engine	Fuel Grade
V-8 (350 cu. in.) 2 Bbl. (Low Compression) 4 Bbl. (High Compression)	Regular Premium
V-8 (455 cu. in.) 2 Bbl. (Low Compression) 4 Bbl. (High Compression)	Regular Premium

Use of a fuel which is too low in anti-knock quality will result in "spark knock." Since the anti-knock quality of all regular grade or of all premium grade gasolines is not the same and factors such as altitude, terrain and air temperature affect operating efficiency, knocking may result even

though you are using the grade of fuel recommended for your engine. If persistent knocking is encountered, it may be necessary to change to a higher grade of gasoline and, if knocking continues, consult your authorized Oldsmobile Dealer. In any case, continuous or excessive knocking may result in engine damages and constitutes misuse of the engine for which the Oldsmobile Division is not responsible under the terms of the Manufacturer's New Vehicle Warranty.

Fuel Filler Tube Location

The fuel filler tube is located in the center of the rear bumper directly behind the hinged license plate. The cap is removed by slowly turning it counterclockwise. The



license plate door may be held down by placing the filler cap between the hold-

open tab on the door and the hinge as shown. On Ninety-Eights the fuel filler door is located just below the trunk lid lock.

CAUTION: Gasoline is flammable and explosive under certain conditions. Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refueling. If gasoline fumes are noticed while driving, the cause should be determined and corrected without delay.

Operation in Foreign Countries

If you plan to operate your Oldsmobile outside the continental limits of the United States or Canada, there is a possibility that the best fuels available are so low in anti-knock quality that excessive knocking and serious engine damage may result from their use. To minimize this possibility, write to Oldsmobile Division, Service Department, Lansing, Michigan 48921, giving:

- The compression ratio and cubic inch displacement of your engine (obtain from your dealer).

- The vehicle identification number (on plate on instrument panel ahead of the steering wheel and visible through the windshield, or from registration slip or title).
- The country or countries in which you plan to travel.

You will be furnished details of adjustment or modifications which should be made to your engine at your Oldsmobile Dealership prior to your departure. Failure to make the necessary changes to your car and subsequent operation under conditions of continuous excessive knocking is considered misuse of the engine for which the Oldsmobile Division is not responsible under the terms of the Oldsmobile New Vehicle Warranty.

After arriving in a foreign country, determine and use the best fuels available.

Extended Vehicle Storage

If you plan to store your Oldsmobile over an extended period of time, certain steps should be taken to give it maximum protection. It is recommended that you write Oldsmobile Division, Service Department, Lansing, Michigan 48921, for detailed instructions on how to prepare your Oldsmobile for storage.

Trailer Hauling

Since passenger cars are designed and intended to be used primarily as passenger conveyances, towing a trailer may affect handling, durability and economy. Maximum satisfaction and safety will be derived through use of proper equipment and avoiding overloads and other abusive operation.

This car can pull a trailer of 5,000 pounds maximum loaded weight with a maximum tongue load of 500 pounds if equipped to the recommendations in Oldsmobile's 1970 Trailing Brochure.

Oldsmobile has a number of factory-installed options available to better equip cars for pulling trailers. For hauling trailers heavier than 2,000 pounds, it is recommended that an appropriate load equalizing hitch be purchased from a reliable manufacturer.

NOTE: Whenever a trailer hitch is removed, be certain to have any mounting holes in the underbody properly sealed to prevent possible entry of exhaust fumes, dirt or water.

Purchase of bumper and axle type hitches is not recommended. Rental installations

should be made only in accord with installation and usage instructions of a reputable trailer agency. To assist in attaining proper handling of the car-trailer combination, it is important that trailer tongue loads be maintained at approximately 10% of loaded trailer weight. Tongue loads can be adjusted by proper distribution of the load in the trailer, and can be checked by weighing separately the loaded trailer and then the tongue. Tire inflation recommendations outlined in this Owner's Manual should be followed. When towing trailers, the allowable passenger and cargo load (as shown in the instructions for tire inflation pressures, located in the tire section) must be reduced by an amount equal to the trailer tongue load on the trailer hitch. The fluid in your automatic transmission should be changed each 12,000 miles when the car is being used to pull a trailer.

Vehicles equipped with the trailer wiring option are furnished with a special turn signal flasher. This special flasher, stored in the glove compartment, should be installed in place of the regular turn signal flasher when hauling a trailer.

NOTE: Do not tap into the car's hydraulic brake system to couple with a trailer hydraulic brake system.

General information on trailer hauling, special equipment required, and optional equipment offered by Oldsmobile is available in booklet form and can be obtained by writing to Oldsmobile Division, Owner Relations Dept., Lansing, Michigan 48921.

Towing

With Ignition Key Available — Normally your Oldsmobile may be towed with all four wheels on the ground for distances up to 50 miles at speeds of less than 35 mph. However, the drive wheels (rear wheels) must be raised off the ground or the drive shaft disconnected when the transmission is not operating properly or when a speed of 35 mph or distance of 50 miles will be exceeded.

CAUTION: For towing, the parking brake should be released, the transmission should be in neutral and the engine ignition should be "off," but the Anti-Theft Steering Column Lock should not be in the "lock" position.

Without the Ignition Key — Since the Anti-Theft Steering Column Lock locks the steering and the shift controls as well as the ignition system, special provisions are necessary for towing a vehicle when the switch is in "lock" position. Normally

it will be necessary to place a dolly under the rear wheels and tow the vehicle with the front end raised.

Detailed towing information is available at your dealer and has been provided to tow truck operators responsible for movement of disabled or locked vehicles. Proper lifting and towing equipment is necessary to prevent damage to the vehicle during the towing operation.

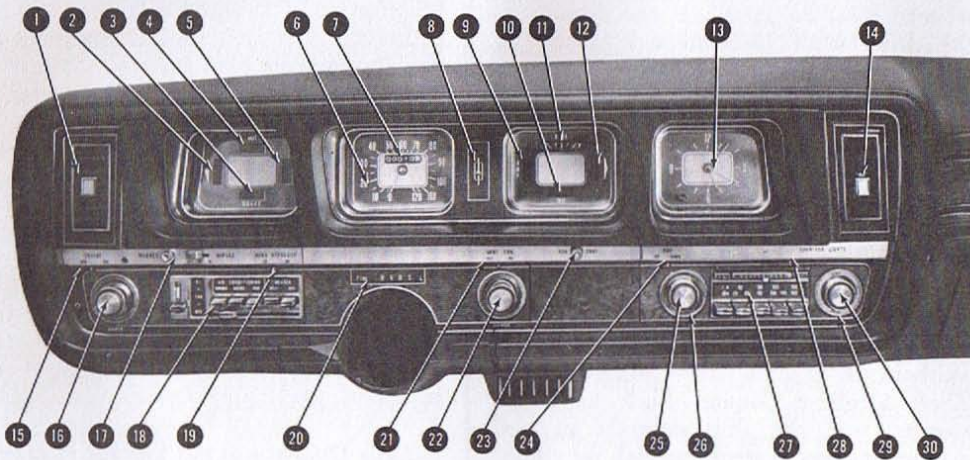
CAUTION: Attachment should NOT be made to bumpers or bumper brackets for towing. When vehicle is towed in a manner that requires hoisting one end off the ground, this is to be done only with a sling-type attachment hooked to main structural members of the car. Always use safety back-up chains crossed under the tow bar in a manner that will retain the vehicle if the primary attachment fails or breaks free, preferably attached to different structural members than those used for the primary attachment. When towing vehicles on the front wheels, the steering wheel should be secured to maintain a straight ahead position.

NOTE: Do not use the locking feature of the Anti-Theft Lock to secure the front wheels for towing purposes.

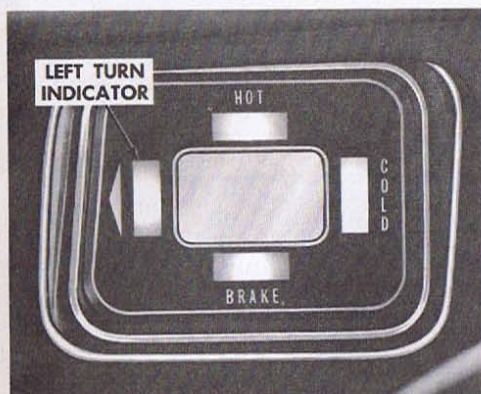
INSTRUMENTS

The instruments, gauges and warning lights which are conveniently grouped in the instrument clusters on the dash, are designed to give the operator important information on the car's performance.

GOOD DRIVING PRACTICE: A good driver familiarizes himself with the controls of any automobile **BEFORE** operating it.



1. Left Air Conditioning Outlet
2. Left Turn Indicator
3. Brake System Warning Indicator
4. Hot Warning Indicator
5. Cold Warning Indicator
6. Speedometer
7. Odometer
8. High Beam Indicator
9. Charging System Warning Indicator
10. Oil Pressure Warning Indicator
11. Fuel Gauge
12. Right Turn Indicator
13. Electric Clock
14. Center Air Conditioning Outlet
15. Cruise Control ON - OFF Switch
16. Headlight and Instrument Panel Light Switch
17. Windshield Washer - Wiper Switch
18. Heater/Air Conditioner Control Panel
19. Rear Defogger Switch
20. Automatic Transmission Shift Indicator
21. Ventilation Blower Switch
22. Cigar - Cigarette Lighter
23. Ash Tray Door Button
24. Convertible Top Switch
25. Radio ON - OFF and Volume Control
26. Radio Tone Control
27. Radio Dial and Push Buttons
28. Courtesy Light Switch
29. Rear Seat Speaker Fader Control
30. Manual Station Selector Switch



Brake System Warning Indicator

A brake system warning light is located in the lower section of the left instrument cluster. The warning light glows red to indicate to the operator that the parking brake has not been fully released. It also is designed to glow red while braking in the event of broken brake lines, major fluid loss, air in the brake lines or a pressure deviation between the front and the rear wheel brake lines. If this happens, it may mean that braking effectiveness is impaired. It will be possible to bring the vehicle to a stop, but depending on the severity of the malfunction, greater pedal

force and pedal travel may be required and stopping distance may be increased. The cause should be determined and any problem corrected as soon as possible. To make sure the brake warning light is not burned out, set the parking brake and start the engine. If the light does not come on, have your Oldsmobile Dealer correct the trouble as soon as possible.

NOTE: This warning light is not a substitute for visual checking of the fluid level in the master cylinder, which is a normal maintenance item at intervals specified on page 37.

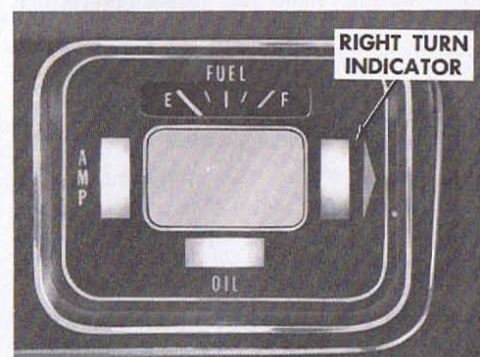
Engine Temperature Indicator Lights

A green signal light "COLD" will appear when a cold engine is started and the light will remain on until the engine reaches normal operating temperature. If the green light remains on after several miles of driving, have the cause determined and corrected. The red signal light "HOT" will go on momentarily when starting the car to let you know the warning light is operational. The only other time the red signal light should appear is when the engine reaches an abnormally high temperature. Then it will appear as a flashing light. If

this happens, the engine should be stopped immediately and the cause determined and corrected. When the engine is operating at normal temperature neither light should appear.

Turn Signal Indicators

A green light on the instrument panel flashes to indicate proper operation of the front and rear turn signal lamps.



Charging System Warning Indicator

A red light "AMP" will appear with the ignition key in the "ON" position and the engine not running. This light lets you

know the warning signal is operational. Should the light fail to come on, see your Oldsmobile Dealer. When the engine is started, the warning light should go out. In certain types of malfunction, the red light will come on with the ignition "OFF" or with the engine running. Should this happen, see your Oldsmobile Dealer. The warning light will not indicate all types of charging malfunctions. Therefore, if the starting motor turns the engine slower than normal, have the cause determined promptly.

Fuel Gauge

This gauge shows the approximate fuel level in the tank. ONLY with the ignition in the "ON" position will the pointer indicate the fuel level.

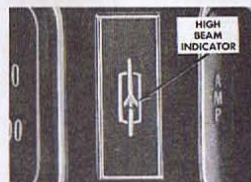


NOTE: Approximately 2 gallons of fuel remain in the tank when the fuel gauge shows empty.

Engine Oil Pressure Indicator

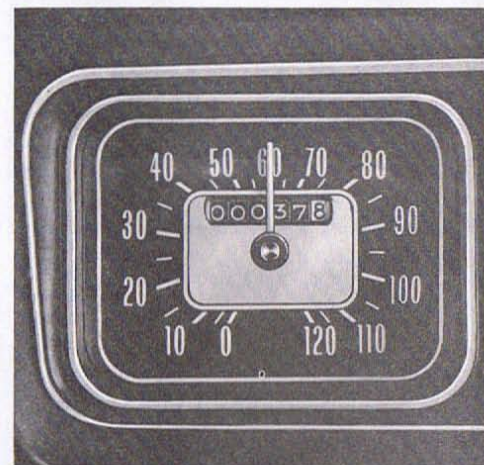
The red light "OIL" will appear when the ignition is turned "ON," informing you that the indicator light is operational. When the engine starts and oil pressure builds up, the light will go out. This signal light is an oil pressure indicator — not an oil level gauge. Should the light go on while the engine is running, stop the engine immediately and have the cause determined and corrected. Driving the car with low oil pressure can cause extensive engine damage.

Headlight Beam Indicator Light



The headlights of your Oldsmobile have high and low beams to provide you with proper night-time visibility during all driving conditions. The "low" beams are used during most city driving. The "high" beams are especially useful when driving on dark roads since they provide excellent long range illumination. The headlight

beam indicator, the emblem on the dash will glow red, whenever the high beams or "brights" are in use. The Headlight Beam Switch controls the headlight beams (see Page 18).



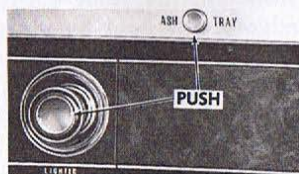
Speedometer and Odometer

The speedometer indicates the forward speed of the car in miles per hour. The odometer or mileage recorded registers the accumulated mileage the car has been driven.

CONTROLS

Ash Trays

To expose the ash tray, located on the instrument panel just to the right of the cigar lighter, depress the ash tray button and the ash tray door swings open to give access to the tray. To close the ash tray door, push down on the exposed edge until the door is flush with the panel surface. To remove the tray for cleaning, simply lift it out of its receptacle. Rear seat ash trays may be removed by lifting them out of their armrest receptacles.



Lighter

Push the lighter all the way in to operate. When it is heated sufficiently to use, it will "snap" back to normal position with an audible sound. Avoid holding the lighter in by hand while it is heating as this may damage the heating element.

Braking Systems

The service brake system is designed for braking performance under a wide range of driving conditions even when the vehicle is loaded to its full rated vehicle load.

CAUTION: "Riding the brake" by resting your foot on the brake pedal when not intending to brake can cause abnormally high brake temperatures, excessive lining wear and possible damage to the brakes.

The service brake system is designed so that in the event of a hydraulic fluid leak, in one-half of the system, the other half still provides braking action.

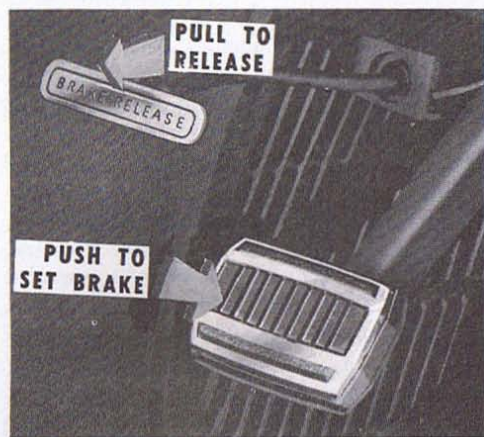
CAUTION: Driving through deep water may affect brake performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal.

Automatic Brake Adjusters

All Oldsmobiles are equipped with self-adjusting brakes designed to eliminate periodic brake adjustments. On drum-type brakes the self-adjusting mechanism is actuated, as needed, whenever the car is moved in reverse and the brakes are applied. Optional (standard on Ninety-Eight) front wheel disc brakes do not require adjustment. It is possible, however, for excessive brake pedal travel to develop if the required reverse movement with a brake application does not take place during a prolonged period of stop and go forward driving. Should this occur, the car should be driven backward and forward with the brakes applied firmly at the end of each rearward movement, until the brake pedal travel is back to normal. If this procedure fails to restore normal pedal travel, or if any abnormally rapid increase in pedal travel is experienced, immediate inspection should be made by your Authorized Oldsmobile Dealer.

CAUTION: Brake pedal travel should not be obstructed by improper floor mats or other interfering material under the pedal.

Parking Brake



The parking brake operates independently of the regular foot brake hydraulic system. It is applied by fully depressing the foot pedal which is located to the lower left side of the front compartment under the instrument panel. The brake system warning light will also be "ON" whenever the parking brake is not fully released and the ignition switch is "ON." The parking brake is released by pulling the "BRAKE RELEASE" lever located directly over the parking brake foot pedal. Never drive the car with the parking brake engaged.

CAUTION: When leaving the car unattended, always place the selector lever in "PARK" position (if equipped with an automatic transmission) and fully apply parking brake. On manual transmission-equipped car, place the shift lever in reverse and fully apply the parking brake.

Convertible Top

CAUTION: Do not attempt to lower the top when the temperature is below 40° fahrenheit. Prior to lowering or raising the top, the car must be completely stopped and the sunshades turned down. Also, prior to lowering the top, make sure the top material is thoroughly dry and the top well is free of any stored items.

To lower the top, disengage the lock handles, located at the front of the side rails, by rotating inboard until the lock hook levers are free from the lock strikers located on the windshield header. (The lock handles must remain in the rotated position until the top is again locked to the windshield header.) Actuate the top con-

trol switch and lower the top assembly to the full down position.

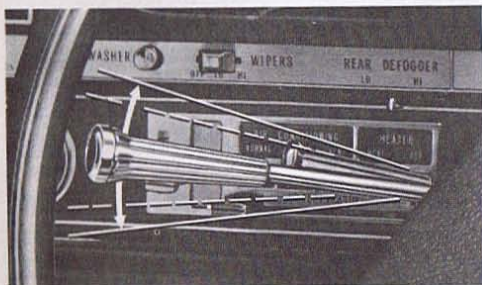
To raise the top, actuate the control switch until the top contacts and rests on the windshield header and the guide pins at the outboard corners of the top engage the striker assemblies on the windshield header.

To lock the top, rotate the left side locking handle outboard to engage the lock hook to the striker. Then, perform the same operation to the right side lock handle.

IMPORTANT: The top assembly must be securely locked to the windshield header prior to movement of car.

Installing the Boot — Attach the forward edge of the boot by grasping and sliding the welt of the boot into the retainer located on the top of the rear seat back panel. Position the boot over the lowered top and engage the snap fasteners on the boot to the snap studs located on the quarter trim. The rear and sides of the boot are then secured by starting at the center and pulling the rear edge of the boot rearward over the belt molding and inserting the plastic retainer under the molding.

Turn Signals and Lane Change Feature



The turn signal lever is located on the left side of the steering column immediately under the steering wheel. The lever is moved upward to signal a right turn and downward to signal a left turn. Lamps on the front and rear of the car transmit this signal to other motorists and pedestrians. The ignition switch must be in the "ON" position in order for the turn signals to be operational. This feature prevents battery drain if the lever is left in an "ON" position when your car is not in use.

In a normal turning situation such as turning a corner, the turn signal is cancelled automatically after the turn is completed. However, in some driving maneuvers such

as changing lanes on an expressway, the steering wheel is not turned back sufficiently after completing the turn to automatically cancel the turn signal. For convenience in such maneuvers the driver can flash the turn signals by moving the turn signal lever part way (to the first stop) and holding it there. The lever returns to the neutral or cancelled position when the driver releases his hold on the lever.

A green light on the instrument panel flashes to indicate proper operation of the front and rear turn signal lamps. If the indicator lamp remains on and does not flash, check for a defective signal lamp bulb. If the indicator fails to light when the lever is moved, check the fuse and indicator bulb.

Hazard Warning Flasher



In the event your car is disabled or you stop for any reason on the highway, the four-way hazard warning flasher system

on the your vehicle, front and rear signal lamps, should be used to warn other drivers that your vehicle is a traffic hazard. However, you should do everything possible to avoid stopping on the actual highway.

CAUTION: Use of the hazard flasher while the vehicle is moving is prohibited in some states.

The hazard warning system is activated by pushing in on the button located below the steering wheel on the right side of the steering column. When the system is operating, the turn signal indicators on the instrument panel will flash simultaneously. Use this system only when your vehicle is stopped on or near the roadway or otherwise constitutes a traffic hazard. The hazard flasher may be canceled by pulling the button outward.

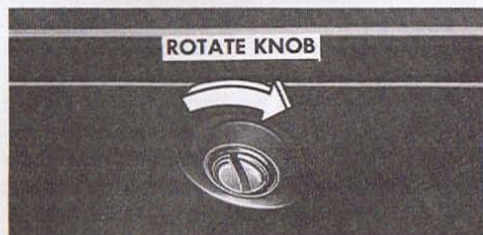
NOTE: The hazard warning flasher will operate with the ignition in the "LOCK" position and the key removed, allowing the car to be locked while help is sought.

CAUTION: If the brake pedal is depressed when the hazard warning flasher is in operation, the lights will not flash but will glow continuously instead.

Fuse Block Location

The fuse box is mounted under the instrument panel to the left of the steering column and just behind the parking brake. For fuse specifications, see "FUSE SPECIFICATIONS" in the technical section.

Glove Box Door Latch

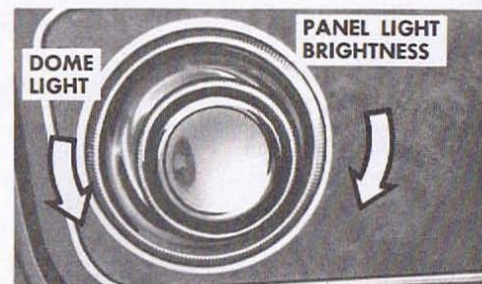
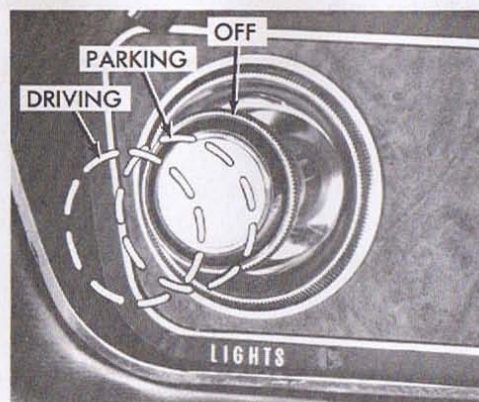


The glove box door is opened by turning the door knob clockwise. It latches automatically when closed firmly. The oval headed key will lock the door by turning the key counterclockwise.

GOOD DRIVING PRACTICE: A good driver turns on his headlamps at early dusk, and during bad weather to help other drivers see his car from a distance, even though he himself may still be able to see the roadway adequately.

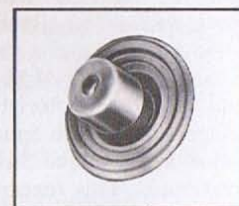
Headlight, Instrument Panel and Dome Light Switch

The headlight switch serves four functions. (1) Pulling the switch half-way out provides parking lights, instrument panel lights, tail lights and side marker lights. (2) Pulling the switch all the way out provides all driving lights which includes headlights, parking lights, side marker lights, tail lights and instrument panel lights. (3) To dim instrument panel lights, turn switch knob clockwise. (4) To operate the dome light, turn switch knob fully counterclockwise.



The headlamp circuit is protected by a circuit breaker in the light switch. An overload on the breaker will cause the lamps to "flicker" on and off. If this condition develops, have your headlamp wiring checked immediately.

Headlight Dimmer Switch



To obtain high or low beam headlights, push the foot dimmer switch located on the floor below the parking brake. The Oldsmobile emblem just to the right of the speedometer cluster will glow red when you are driving on high beam.

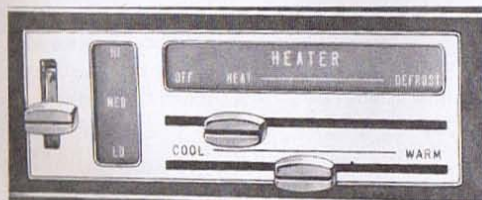
GOOD DRIVING PRACTICE: Always use the "low beam" when approaching or following other cars.

For better night driving vision and for compliance with regulations of certain states, it is recommended that the headlights be checked periodically for proper aim and adjusted if necessary. Whenever the headlamp is replaced the aim should be checked. Adjustment can be made without removing the headlamp rim.

Heating and Defrosting

(Without Air Conditioning)

The heating and defrosting controls are part of the master Heater-Ventilation control panel located near the steering column.



For Heating — Move the top lever from "OFF" to "HEAT". The lower lever regu-

lates the degree of heat. Moving the lever from left to right increases the temperature.

For Defrosting — Move both levers to the right to provide maximum defrost with high blower. The top lever may be positioned between "HEAT" and "DEFROST" to regulate the amount of air flow from the heater and defroster outlets.

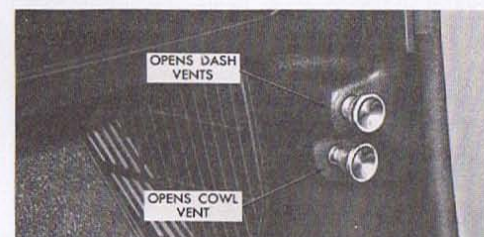
CAUTION: In inclement weather, clear snow or ice from cowl air inlets. This will improve heater and defroster efficiency and reduce formation of fog or frost on the inside of the windshield during initial operation under certain atmospheric conditions. Also, clear the windshield, rear window, outside mirrors and all side windows of ice or snow prior to operation of the vehicle. This will improve driver's vision during initial operation.

To Control the Blower — The "HI-MED-LO" fan switch will increase or decrease the air volume when the top lever is positioned between "HEAT" and "DEFROST".

NOTE: For maximum heat in the rear area, move the fan switch to "HI" or "MED" and adjust the temperature with the "TEMPERATURE" lever. Also, keep the windows closed and the space under the front seat clear of any obstruction.

Ventilation

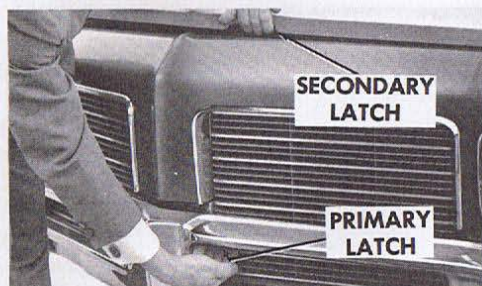
(Without Air Conditioning)



Outside air may be admitted to the passenger compartment through outlets in the instrument panel independently from the cowl side panel outlets. For upper level ventilation, pull the upper vent control knobs located at the lower ends of the instrument panel. The louvered outlets directly above the control knobs are adjustable to direct air to the right or left. The center instrument panel outlet is for appearance only and is not functional. The lower vent knobs control the amount of air flow through the two outlets in the

cowl side panels for lower level ventilation. Both upper and lower level ventilation may be obtained simultaneously or separately.

Dual-Action Safety Hood Latches



The hood is unlatched in two steps by means of disengaging the primary and secondary levers. The primary lever handle is accessible just below and to the right of the center grille when viewed from the front of the car. Pull on this handle. The hood will release, but will be prevented from opening further by a secondary latch, located between the front-end panel and hood panel just to the right of the emblem.

This lever must be moved up, allowing the hood to be raised. After closing always check to make sure the hood is properly secured.

Front Seat-Back Latch

Folding seat backs are equipped with self-latching mechanisms and release controls designed for the convenience of entering and exiting passengers. The seat back latch prevents the seat back from folding forward under loads equal to more than 20 times the weight of the seat back.

To release the latch on the Strato design seat push the button located in the upper center rear section of the backrest and tilt the backrest forward. The latch release lever for the standard bench seat is located on the lower rear outboard section of the backrest. Lift the lever to release and tilt the backrest forward.



NOTE: All Ninety-Eights with folding backrests are equipped with the push button type latch. The release button is located in the upper outside section of the backrest.

Manual Seat Adjustment

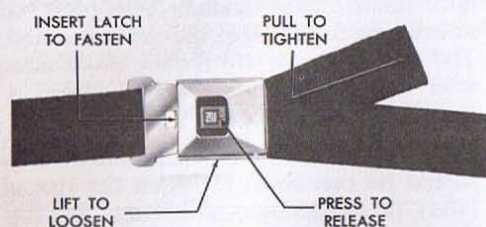


The front seat, either bench or bucket, may be adjusted to suit an individual's preference. Simply release the seat lock mechanism by forward movement of the lock lever, located at the side of the seat. Once released, exert slight body pressure in the direction desired. Release the lever to lock the seat in the desired position.

Occupant Restraint Belts

Lap and shoulder belts provide added security and comfort for you and your pas-

sengers. Proper use and care of these belts will assure continuance of this security.

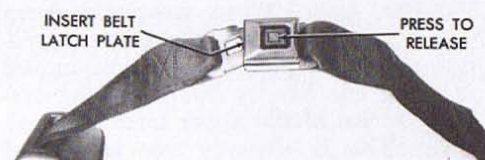


Standard Lap Belts — After the front seat has been adjusted to the satisfaction of the driver, grasp the buckle end and the flat metal "eye" end of your individual belt assembly and position the belt across the lap as **LOW ON THE HIPS AS POSSIBLE**. Insert the metal eye into the open end of the buckle until an audible snap is heard. Make sure the connection is secure and adjust the belt to a **SNUG FIT** by pulling on the end of the belt extending from the buckle. The snug and low positions are essential in order that the force exerted by the lap belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area. For retractor equipped belts, pull the retractor half of the belt to a solid stop

to make sure that the belt webbing is completely unwound from the retractor drum, then connect the belt and make the necessary adjustments at the buckle for proper fit. To lengthen a lap belt, place the buckle at right angles to the belt webbing. The belt will then slide easily through the buckle. To release the lap belt, simply depress the push button located in the center of the buckle.

CAUTION: Never use the same belt for more than one person at a time. Be sure to avoid: (a) wearing a lap belt loosely or with slack in the system; (b) wearing the belt with the webbing not fully extracted from a non-locking retractor; and (c) wearing the belt in a twisted condition or pinched between the seat structural (metallic) members.

Deluxe Lap Belts — Automatic-locking lap belt retractors are provided for the added convenience of the driver and outboard front seat passenger on all Oldsmobiles as an extra cost option, except the Ninety-Eight where they are standard equipment. The automatic-locking retractors adjust and lock the lap belts into position automatically to provide a snug and comfortable fit.



To fasten a lap belt equipped with an automatic-locking retractor, pull the webbing across the lap far enough to permit inserting the flat metal "eye" end into the buckle. If the webbing is not initially pulled out far enough to permit buckling, release the webbing, thus allowing it to rewind in the retractor and release the locking mechanism, so the webbing can be pulled out to the proper length. Once the buckle is fastened, pull the belt firmly across the lap in the direction of the retractor to obtain a snug fit. The retractor will automatically take up the excess webbing.

CAUTION: The buckle and flat metal "eye" of the lap belt used with automatic locking retractors are smaller than those used with other systems. Care should be taken to avoid inserting the small metal "eye" in the larger buckle of either the shoulder belt or the center lap belt because it will not latch properly.

Shoulder Belts — When properly worn with a lap belt, a shoulder belt can provide additional protection against impact with the car interior by restraining forward motion of the upper torso in a collision. This is primarily true in case of frontal impacts, which are the most frequent type of accident.

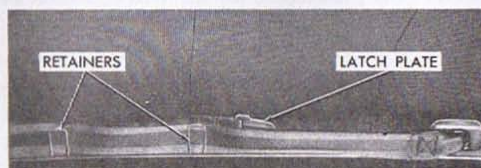
CAUTION: Wearing a shoulder belt without a lap belt can be extremely hazardous to the wearer in case of an accident. In addition, the use of a shoulder belt is not recommended for a person less than 4 feet 7 inches in height because the belt would cross over the body too near the neck and thereby substantially increase the danger of neck injury in a collision. Also, to avoid improper force distribution, the shoulder belt should not be worn under the arm.

Shoulder belts are fastened and released in the same manner as lap belts. A shoulder belt should not be uncomfortably tight. A fist's width between your chest and the belt should provide sufficient slack. This can be checked by inserting a clenched fist between the belt and your chest with thumb against chest and back of hand facing upward.

CAUTION: The driver's shoulder belt should be adjusted so the driver can reach essential operating controls without undue restraint.



When not in use, shoulder belts should be secured in the special storage convenience provision. This is to reduce the danger of the metal end striking an occupant in a sudden stop. When storage provisions are not provided, the loose end mounted on the upper structure should be fastened



to the floor-mounted end, and adjusted to remove excess slack.

Passengers in the rear seat of a convertible must remove their shoulder belts (optional at extra cost) **BEFORE** the top is lowered. The shoulder belt will require adjustment after the top has been either lowered or raised.

Child Restraint — Children in automobiles should be restrained to lessen the risk of injury in accidents, sudden stops or other driving conditions. General Motors has designed an "INFANT SAFETY CARRIER" specifically for infants and a "CHILD SAFETY SEAT" specifically for small children, which are available from your Oldsmobile Dealer. The Carrier and Child Seat are designed to utilize lap belts in your 1970 Oldsmobile.



CAUTION: Neither the Carrier nor Child Seat are recommended for use with folding or hinged seat backs not having self-locking devices. The Carrier is designed for use only with infants weighing up to 20 pounds. The Child Seat is designed for use only by children who are able to sit up by themselves weighing up to 30 pounds.

The General Motors Infant Safety Carrier and the Child Safety Seat should be used only in vehicles equipped with lap belts. They may be used on seats which do not fold or folding seats equipped with a latch to hold the seat back upright (standard on 1967 and later model GM passenger vehicles). Otherwise the Carrier or Child Seat should be used on the rear seat of the passenger vehicle. In using either Carrier or Child Seat, read and comply with all installation and usage instructions shown on the label attached to the device; do not use them in any manner not in accord with the label. Do not place more than one child at a time in the Carrier or Child Seat. All unused seat belts near the Carrier or Child Seat should be stowed properly to prevent them striking the child in the event of a sudden stop or collision.

Shoulder belts should be stowed in any special storage convenience provision provided. Lap belts and shoulder belts without storage provisions should have buckles latched and belts adjusted to remove slack.

Cars Not Equipped with Special Child Restraints — If a child is traveling in a vehicle not equipped with a General Motors Infant Safety Carrier or Child Safety Seat, the following precautions should be taken:

- (1) Children should be placed in the rear seat. Never allow a child to stand or kneel on any seat.
- (2) Infants unable to sit up by themselves should be restrained by placing them in a covered, padded bassinet which is placed crossways in the vehicle (width-wise) on the rear seat. The bassinet should be securely restrained with the regular vehicle seat belts. An alternate method is to position the bassinet so that it rests against the back of the front seat, again crossways in the vehicle.
- (3) When a child is old enough to sit up by himself in a car, he should sit on a firm cushion and use the conventional lap belt to restrain him at the hips.

The cushion should be as firm as practical and enable the child to look horizontally out of the car windows.

- (4) The use of the cushion should be discontinued as soon as the child is old enough to see out of the car windows without it.
- (5) Do not use shoulder belts on children shorter than approximately 4 feet 7 inches in height.
- (6) General Motors recommends that children be restrained when riding. However, if conditions require that a child must stand, he should stand on the floor directly behind the front seat. This will minimize the possibility of his being thrown from the rear compartment during a sudden stop. This method should be used only if more complete restraint cannot be used.

Belt Inspection and Care — Keep the belts clean and dry. Clean with a mild soap solution and lukewarm water. Keep sharp edges and damaging objects away from belts. Periodically inspect belts, buckles, retractors, and anchors for damage that could lessen the effectiveness of the restraint system, and have questionable parts replaced. Seat belts should be replaced if cut, weakened, frayed, or subjected to

collision loads. During seat belt inspection, check that anchor mounting bolts are tight to the floor. Do not bleach or dye belts since this may cause severe loss of strength.

Pre-Collision Positioning – If, in addition to wearing seat belts, a person can “pre-position” his body to get ready for a frontal impact, the severity of his impact with the vehicle interior can be reduced by a considerable amount. If a severe accident threatens, the “pre-positioning” technique calls for reducing the space between one’s body and the vehicle interior as much as possible. Practice beforehand in assuming the proper position may make its employment automatic in an accident situation.

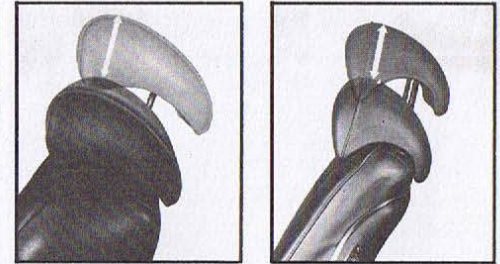
A driver wearing both lap and shoulder belts should lean forward into the restraint system, grip the upper rim of the steering wheel with both hands, and rest the arms on the steering wheel rim with elbows out. Control of the vehicle can be maintained until the last possible moment; then bend the head forward. If the shoulder belt is not worn, the driver should at the last moment rest his forehead on the backs of his hands.

A front seat passenger wearing both shoulder and lap belt should lean into the shoulder belt, place hands and forearms on top of the instrument panel with elbows out to the side and the head bent far forward. Front seat passengers wearing lap belts only should lean as far forward as possible, place their forearms on top of the instrument panel, and cradle their head on their arms. Lap-belted rear seat occupants should lean far forward, and rest head on arms on the top of the front seat-back-rest. Children or short adults in front or back seats who cannot contact instrument panel or seat back with their head when swinging forward should lean far forward with head down, and wrap their arms beneath and around their upper legs.

While these positions cannot protect the occupants against all types of injury in all types of accidents, they can be expected to reduce injury severity in the majority of cases.

Head Restraints

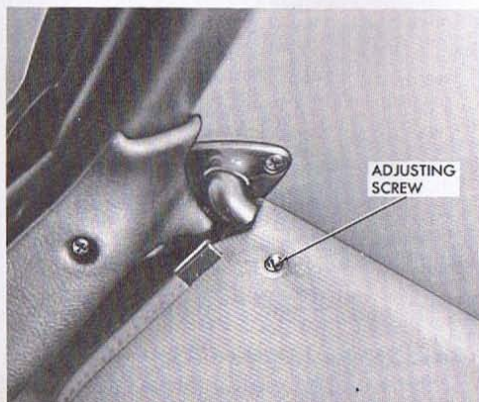
The head restraint may be raised by simply pulling up until the spring latch engages the detent notch in the UP position. DO NOT use the head restraint above the UP detent position. To lower the head



restraint, depress the latch at the base of the supporting rod at the same time the restraint is pushed downward. Select the UP or DOWN position for the head restraint according to your seated height. The position that places the top of the head restraint at the same height as, or above the center of your head will normally prove best suited to your needs. Do not operate the vehicle with the head restraint removed. The head restraint is also designed to protect rear seat passengers by shielding the head restraint latch and bracket on the front seat-back rest, which may be in the head impact area of some adult rear seat occupants. Check the head restraints periodically; if any components are missing or if the restraints do not appear to be functioning properly, they should be inspected by your Oldsmobile Dealer and any necessary corrections made.

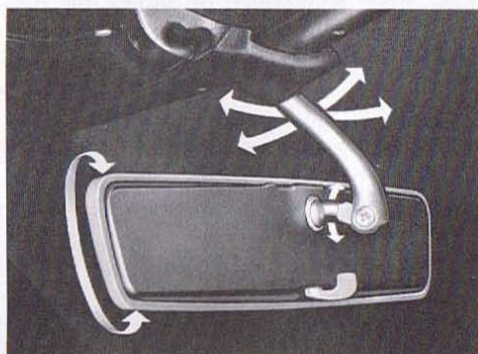
CAUTION: The filler panel between the rear seat and the rear window should not be used for storage — even of light weight, small articles. They might become dangerous projectiles during a collision or sudden stop; larger items may also reduce vision to the rear.

Sun Visor Adjustment



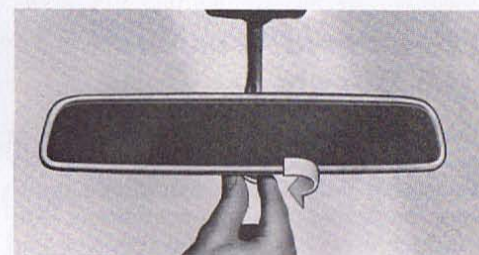
The force required to rotate the visor up and down may be adjusted by tightening or loosening the screw indicated in the illustration.

Rearview Mirrors



Rearview mirrors are not intended for use while backing up, or for surveillance of conditions close to the rear of the car. It is suggested that the driver turn his head and look to the rear during backing operations. The inside day-night rearview mirror incorporates a triple-jointed mounting so the driver can position the mirror vertically and horizontally to suit his driving needs. It is only necessary to exert enough pressure to overcome the friction load at the three joints in order to adjust the mirror to any position within the physical limits of its travel.

GOOD DRIVING PRACTICE: A good driver always scans the area to the rear **BEFORE** entering the vehicle and backing up, and makes a habit of using his rearview mirrors while driving, so as to be aware of the rearward aspect of his total driving environment.



Day-Night Feature — This mirror may be moved from clear daylight visibility to non-glare visibility at night by turning the small tab at the bottom of the mirror.

“For maximum performance and economy, replace with General Motors parts which are identified by one of these trademarks:



Trunk Compartment

The trunk compartment may be opened with the oval-end key and by lifting up on the counter balanced trunk lid. To close, the lid must be shut firmly to engage the lock. The spare wheel and wheel changing tools are located in the trunk.

Windshield Washers and Wipers

The windshield wiping system operates at two speeds and is designed to wipe clear designated areas of the windshield under most inclement weather conditions. The windshield wipers work electrically and are not affected by engine operation. When the sliding switch button is moved



to the right at the halfway position, the wiper operates at the intermediate speed. Full speed is obtained by sliding the control button fully to the right. By depressing the washer button as shown, the windshield washers and wipers automatically start operating. When the washing is completed, the wipers are turned off by sliding the wiper control button. Wiper blades are properly positioned when the blade tips do not touch the lower or side mouldings of the windshield while the wipers are in operation. The wiper motor is protected from overloading by a circuit breaker. Should an excessive buildup of snow or ice cause the wiper to cease operating, the wiper switch should be turned "OFF" and the accumulation removed. When the wiper motor cools, the circuit breaker will automatically reconnect and the wipers will become operational again when the switch is turned on.

NOTE: If the wipers fail to operate in severely cold weather, check the wiper linkage, arms and blades to make certain they are not frozen. It may be necessary to raise the hood to gain access to the wipers to break away any heavy ice formation that may be preventing the wipers

from operating properly. This may be accomplished in the same manner that you would free exposed wipers by using your regular windshield ice scraper to chip the ice and jar the wiper assembly loose.

Windshield Washer Solvent

GM Windshield Washer Solvent is recommended for use in the washer reservoir located under the hood.

CAUTION: Have the fluid level in the washer reservoir checked regularly, with special attention to keeping the reservoir filled during periods of heavy use. GM Windshield Washer Solvent should be used as directed to prevent freezing damage and for better cleaning of the windshield under all conditions. Do not use radiator anti-freeze as this will cause paint damage.

Guardian Maintenance Tip – Use plenty of water when cleaning the windshield. Wiping with a dry cloth or operating wipers on a dry windshield can scratch the glass. And when scraping off frost or ice, be sure to use a plastic scraper – not metal.

ACCESSORIES

Comfortron Air Conditioner



The Oldsmobile Comfortron Air Conditioning system (optional equipment) automatically controls the air-conditioner-heater system to provide the interior temperature selected by the driver on the control panel temperature dial. The "Comfortron" unit is AUTOMATIC and requires little change of setting due to outside weather conditions.

Dash Outlets — In warm weather, air which has been cooled and dehumidified, is discharged from three adjustable outlets, one at each end and one in the top center of the dash panel. Each outlet can be adjusted to divert air throughout the car.

Air flow can be reduced from the left and center outlets by positioning the deflector in the extreme down position. Reduction of the air flow at the right outlet is obtained by positioning the deflector to the extreme right.

Controls — The "Comfortron" control panel is located on the instrument panel, just to the left of the steering column.

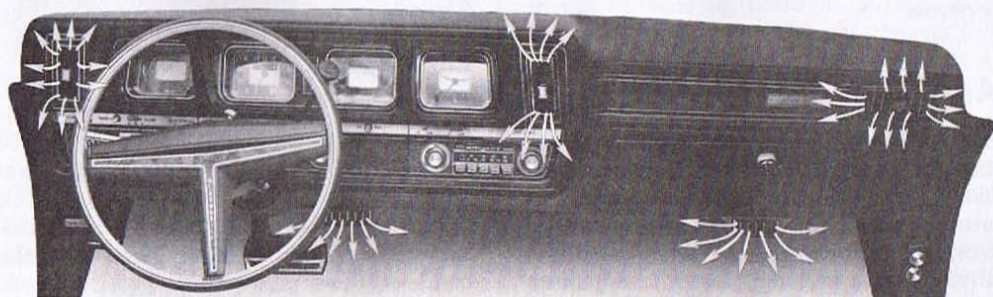
Normal Operation — Use the following procedure:

1. Rotate the "TEMP" (temperature) dial, located on the left side of the control panel, to the desired interior temperature.

2. The horizontal sliding lever should be moved to the "LO" position. This turns the system on and provides automatic temperature control.

NOTE: After the initial settings are made, it is not necessary to turn the system "OFF" each time the ignition switch is turned off. The air-conditioner-heater system will operate automatically whenever the car is started. It will start almost immediately in warm weather, but the heater operation in cold weather will be delayed until heat is available from the engine coolant.

Unusual Operation — Three additional settings of the sliding control lever are provided for use in those few instances when extreme weather conditions call for extra volume of heated or cooled air or for air



to be directed to the windshield. Moving the control lever to the "HI" position allows the system to operate similar to the "LO" setting but at higher blower speeds, resulting in quicker cool-down in summer and warm-up in winter. To achieve quicker cool-down when the car has been parked in the hot sun, the windows may be opened approximately two inches for a few minutes to help exhaust the hot air.

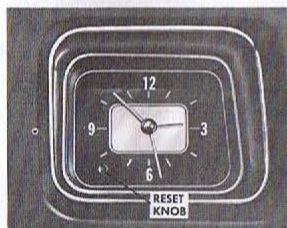
The "DEF" (defogger) position should be used when the windshield is fogged over. This will direct a stream of forced air to the windshield, automatically controlled for temperature and blower speed. The "DE-ICE" position provides maximum heated air at high blower speed to be delivered to the windshield for melting ice and snow. It also permits air to be directed against the windshield for defogging before the engine reaches operating temperature.

Anti-Spin Differential

The Anti-Spin differential (optional at extra cost) provides additional traction on snow, ice, mud, sand and gravel, particularly when one drive wheel is on a surface providing poor traction. During normal driving and cornering, the Anti-Spin unit

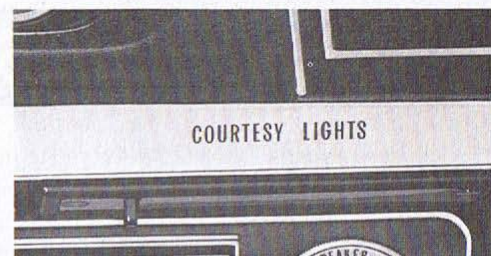
functions as a standard differential. When one wheel encounters a slippery surface, however, the Anti-Spin differential directs the driving force to the wheel having the better traction.

CAUTION: On cars equipped with an Anti-Spin differential, never run the engine for any reason with one drive wheel off the ground, since the car may drive through the wheel remaining on the ground.



Electric Clock

The electric clock (standard equipment on some models) is automatically regulated to compensate for lost or gained time whenever the clock is reset. If the clock is running fast, set the hands back (counterclockwise); if running slow, set the hands forward (clockwise).



Courtesy Lights

The courtesy lights (optional equipment on some models) are operated by the courtesy light switch at the right center of the instrument panel. These lights will also come on automatically when either front door is opened.

Cornering Lights

Cornering lights are available as optional equipment on some series. They operate in conjunction with the directional signals. When the directional signal is operating in either direction, with the headlights or parking lights on, the corresponding cornering light comes on to provide additional lighting in the direction the car is turning. The lights turn off when the directional signal switch cancels.

MAINTAINING SAFETY AND DEPENDABILITY

Listed below are a number of vehicle features that should be periodically checked to help maintain continued safe and dependable vehicle operation. Some will require physical checks, either while parked or driving, while others can be accomplished by simple visual inspections. In certain other instances, you should ask your dealer or service station to check the items when your vehicle is in for regular maintenance. Because weather and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage have a considerable effect on the need for replacing or adjusting these items, a single uniform service interval recommendation for all drivers is not always practical for every item.

Tires

Tires will wear under normal use and require replacement periodically throughout the life of the vehicle. Original equipment tires incorporate built-in tread wear indicators to assist in determining when your tires have been worn to the extent that replacement is needed (described on page 46). Whenever your car is on the hoist for service, have your serviceman take a good look at your tires, checking them for excessive wear, cuts, nails, etc. Check too that all wheel nuts are tight, and that each wheel is running true (no wobble, as would occur with bent wheels).

Improper inflation, rapid acceleration, quick stops, fast cornering, high speeds and heavy loading adversely affect tire life and can cause uneven wear. Tires should be rotated every 6,000 miles for more uniform wear and maximum life. Check inflation pressure at least monthly.

Wheel Alignment and Balancing

Wheel alignment and balancing contribute greatly to longer tire life and better vehicle handling. The need for wheel alignment service will generally be indicated by abnormal tire wear, and in some cases, by a noticeable pull to the right or left when driving on a straight level road. The need for wheel balancing may be indicated by a chattering or shimmying condition at the steering wheel or by a front end bounce or noise. Take your car to your dealer or a qualified wheel alignment shop whenever the need for wheel alignment or balance is indicated or suspected.

Brakes

Brake lining wear will vary depending upon driving conditions and driving habits of each individual driver. Brake linings, as well as the other internal brake components at each wheel (such as

drums, wheel cylinders, etc.) should be checked by a competent mechanic at least every 12,000 miles or more often if driving conditions and habits result in frequent brake application. Parking brake adjustment should be checked whenever brake linings are checked, and front wheel bearings should be lubricated whenever brake drums are removed. Owners should periodically check parking brake function by parking on a steep hill, restraining the vehicle with the parking brake only. Following this, check the "Park" mechanism of automatic transmissions by releasing all brakes with the transmission selector lever in "P" position. If either mechanism does not hold, have needed adjustments or repairs made by a competent mechanic.

The brake fluid in the master cylinder should be checked at every oil change. Any significant loss generally means that a malfunction is developing in the system, since fluid is not consumed or otherwise lost during normal brake system operation. If loss is noted, the cause should be determined and corrective action taken immediately. Any noticeable increase in brake pedal travel should also be brought to the attention of your serviceman, since this could also indicate brake fluid loss, improper brake adjustment or other brake malfunctions. Check your (dual purpose) brake warning light when you start your car, as set forth on page 13. See page 15 for detailed information on the function of automatic brake adjusters and how to use them.

Brake Lines and Brake Hoses

Brake lines and brake hoses should also be periodically checked for proper attachment, leaks, cracks, chafing, deterioration, etc. Ask your serviceman to check brake lines and hoses when your car is on the hoist for oil change or lubrication service. Any

questionable parts noted should be replaced immediately by a qualified mechanic.

Exhaust System

Each time the vehicle is raised for lubrication or oil change service, the complete exhaust system and adjacent body areas should be inspected for broken, damaged, or mispositioned parts, deterioration, open seams or loose connections, which could permit exhaust fumes to seep into the passenger compartment. Exhaust system leaks may sometimes be indicated by excessive under-car noise or the smell of exhaust fumes inside the car. Leaks may also be indicated by "smoke" coming from under the car after starting, particularly on a cold day. Any signs of leaks or other exhaust system deterioration should be discussed with your serviceman and necessary corrections made immediately. Exhaust system pipes and resonators rearward of the mufflers should be replaced whenever a new muffler is installed.

Lights

As with any household light bulbs, the light bulbs in your car will eventually burn out and require replacement. License plate lights, side marker lights, headlamps, parking lamps, tail lamps, brake lights, turn signals and hazard warning flashers should be checked periodically. Have your serviceman check them during a regular maintenance visit or have a member of your family observe light operation while you activate the brake pedal and switches involved. Have any malfunctions corrected for your benefit and for the benefit of other drivers too.

Headlamp aim should also be checked periodically. Frequent

ON THE FOLLOWING THREE PAGES ARE...

SOME IMPORTANT FACTS YOU SHOULD KNOW ABOUT AIR POLLUTION CONTROL SYSTEMS

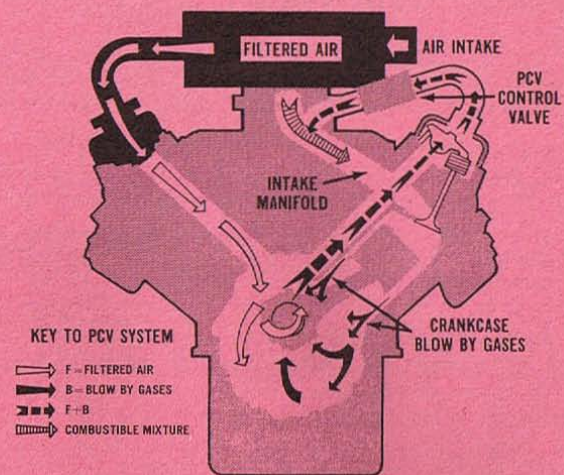
BACKGROUND INFORMATION: During the combustion process in an automotive engine, certain hydrocarbons in the fuel fail to burn completely and are discharged into the engine crankcase or exhaust system. Some carbon monoxide is also formed during the combustion process. This is also discharged into the exhaust system. On a per-car basis, concentrations of these combustion products are insignificant. Multiplied by millions of vehicles, however, crankcase and exhaust emissions combine with pollution products from other sources to contribute to the total air pollution problem. General Motors has, since the late 1940's, been a leader in research and development work related to vehicle emissions, and control systems have been developed which are highly effective in reducing undesirable crankcase and exhaust emissions. This work continues at an accelerated pace.

All new 1970 Oldsmobile passenger cars comply with all Federal and State laws and regulations for the Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines.

YOUR ROLE IN CONTROLLING AIR POLLUTION: It is very important that the engine in your Oldsmobile vehicle be serviced regularly in order to maintain its efficiency and minimize emissions in normal driving.

The following pages describe the emission control systems on Oldsmobile vehicles and provide information on their proper maintenance. By following these recommended maintenance services you will help assure cleaner air and will provide a better running, longer lasting engine for greater all-around satisfaction, economy and performance.

What you should know about Air Pollution Control Systems on your Oldsmobile and the service they require



Positive Crankcase Ventilation (PCV)

All General Motors vehicles are equipped with Positive Crankcase Ventilation — a system which permits no crankcase emission to be discharged into the ambient air. To function properly, the system depends on the PCV Valve (smog valve) which recirculates and burns blow-by gases inside the engine. This valve must be clean in order to maintain efficient engine operation. See service recommendations presented on last page of this section.

signaling by oncoming motorists when you are using your low beams is a good indication that headlamps are aimed too high. Likewise, poor visibility when driving on a dark road may indicate improper aim. Have your dealer or a qualified service station check headlamp aim at least once a year and be sure to have replacement units aimed properly at time of installation or following a front-end collision.

Steering

On cars equipped with power steering, the power assist is provided by a hydraulic pump driven by the engine. When the engine is not running, or if the power steering pump drive belt should break, there is no power assist; therefore, much greater steering effort will be required. A loud squealing noise when making a full right or left turn is usually an indication of improper belt tension. The pump belt, as well as the other engine drive belts, should be checked periodically and adjusted or replaced as necessary.

Power steering lines and hoses should be checked for leaks, deterioration and chafing at every oil change. The power steering pump fluid level should also be checked at the same interval. In addition, your serviceman should be asked to visually check the condition of all steering linkage whenever your vehicle is raised for lubrication or oil change service. This should include an inspection of the pitman shaft, tie rod, idler arm, and steering arm attachments. Needed adjustments or replacements should be made promptly.

Other Features

Many features provided for safety of vehicle operation could

become ineffective because of wear, misalignment or misadjustment occurring during normal use or as a result of misuse or abuse. Periodically, the driver should check performance of these features, as listed below, to determine that they are performing properly, or if repairs or adjustments are needed.

Anti-Theft Lock — Check that it will lock in only the PARK position (REVERSE on manual transmission cars) by attempting to turn key to LOCK in some other transmission selector position, with car stationary.

Seat Belts — Lap belts and shoulder belts, as well as buckles, retractors and anchors, should be checked for loose connections and damage. Any questionable parts should be replaced.

Windshield Wipers and Washers — Continued good windshield wiper and washer performance is important to good driver vision. Drivers should check performance of both systems, particularly in regard to the condition and alignment of wiper blades, and the amount and direction of fluid sprayed by the washers. Blades should be replaced and wipers and/or washers should be serviced whenever vision is impaired.

Defrosters — Defroster performance could be adversely affected by malfunctions in the heater/defroster wiring or air distribution systems, which develop during vehicle use. Drivers should check defroster performance by turning controls to "de-ice" and noting whether a good supply of air is directed against the windshield. Cause of weak or mis-directed air flows should be determined and corrected by your Oldsmobile dealer.

Starter Safety Switch — Check automatic transmission cars by placing the transmission in each of the driving gears and attempting to start the engine. The starter should operate only in Park ("P") or Neutral ("N").

CAUTION: Be sure to have a clear distance ahead and behind the car, set the parking brake and firmly apply the foot brake. Do not depress accelerator pedal. Be prepared to turn off ignition switch immediately if engine should start.

To check a manual transmission car, depress the clutch halfway, place the transmission in neutral, and attempt to start. The starter should operate only when the clutch is fully depressed.

Transmission Shift Indicator — Check the automatic transmission selector lever indicator each time you drive the car, to be sure it accurately indicates the shift position you select.

Horn — Blow the horn occasionally to assure that it works.

Seat Back Latches — Check that seat back latches are holding firmly, by giving an emphatic yank at the seatback top, when latches are latched.

Rearview Mirrors and Sun Visors — Check that friction joints are properly adjusted so mirrors and/or sun visors stay in the desired position. It may be necessary to have the friction joints adjusted for best performance.

Door Latches — If for some reason doors do not close, latch or

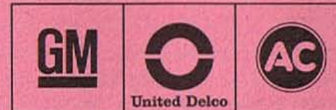
lock properly, your dealer should be consulted without delay for evaluation and correction of the problem.

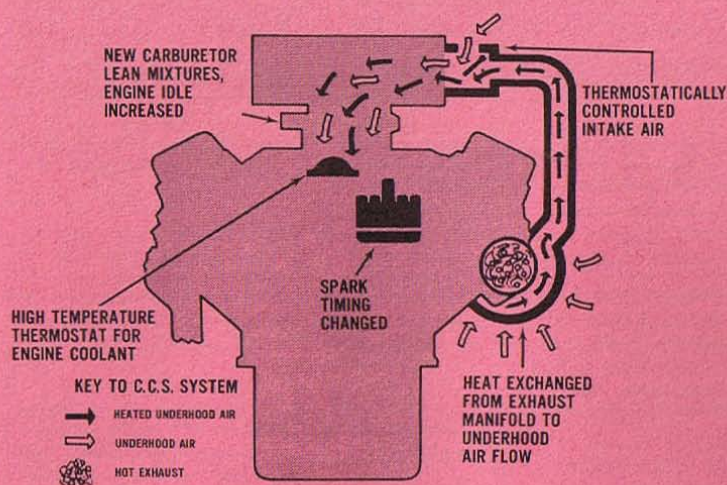
Hood Latches — Check to make sure the hood closes easily but firmly, by lifting on the hood after closing. Check also for broken or damaged or missing parts which might prevent secure latching of the hood, especially after any front-end collision.

Fluid Leaks — Inspect your vehicle periodically for fuel, water or oil leaks; and have repaired as needed. A good way to check is to observe the ground beneath the vehicle after it has been parked for a while.

For your convenience, all of the checks discussed in this section that would normally be made by the car owner are listed in the "Owner Safety Checks" chart on page 49. The other services discussed that would normally be performed by your dealer or service station are included in the "Maintenance Schedule" on page 50. Perform the checks and services as indicated to help maintain the safety and dependability originally built into your Oldsmobile. Whenever malfunctions are discovered, they should be corrected as soon as possible by a competent mechanic.

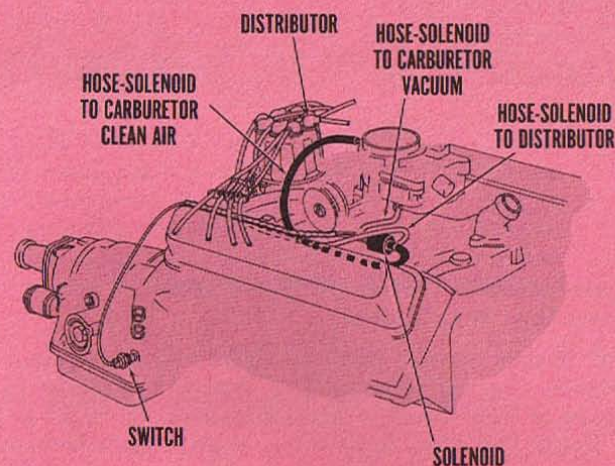
For maximum performance and economy, keep your GM car all GM. Specify General Motors Parts identified by one of these trademarks:





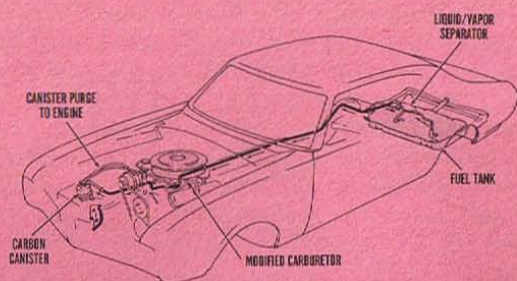
Controlled Combustion System (CCS)

The Controlled Combustion System is designed to reduce exhaust air pollution by altering the combustion process. CCS includes a special air cleaner which incorporates thermostatic control of heated air to the carburetor, a special calibrated carburetor and distributor and related components. Complete effectiveness of the system, as well as full power and performance, depend upon proper engine maintenance. See service recommendations.



Transmission Controlled Spark (TCS)

Transmission Controlled Spark is another separate system designed to further reduce exhaust emissions by permitting vacuum spark advance during high gear operation only. TCS includes a solenoid which controls vacuum advance to the distributor in response to a signal from a switch operated by the transmission. The system is designed to provide the advantages of advanced spark timing when it is most needed. TCS requires no regular service.



Evaporation Control System

(Required Only in California)

General Motors vehicles sold in California are equipped with an Evaporation Control System. This system is designed to minimize the escape of fuel vapors to the atmosphere. Included in the system are a special fuel tank, liquid-vapor separator, carbon canister, canister purge hoses, and carburetor modifications. Fuel vapors which would otherwise escape to the atmosphere are directed into the carbon canister. The carbon adsorbs the vapors and stores them. The vapor is removed from the canister during periods of engine operation as manifold vacuum draws the vapors into the engine and burns them. The Evaporation Control System requires only periodic canister filter servicing. See service recommendations.

NOTE: The General Motors Evaporation Control System is designed to control evaporation losses from your car under all normal conditions using 9 lb. Reid Vapor Pressure fuel specified by California test requirements. However, if you should use fuel of abnormally high volatility for existing temperature conditions, you may detect a gasoline odor during or after driving in heavy traffic. If you find this objectionable, you may obtain relief by using a lower volatility fuel.

B-4

For Cleaner Air — Better Engine Performance — Follow These Periodic Service Recommendations

Interval	System	Service
At first oil change—4 mos. or 6,000 miles (whichever occurs first)	Positive Crankcase Ventilation (PCV)	Check for proper operation
	Controlled Combustion System (CCS)	Set idle speed and ignition timing to specifications on decal under hood.
At every other oil change—8 mos. or 12,000 miles (whichever comes first)	Positive Crankcase Ventilation (PCV)	Clean and recoil crankcase ventilation filter.*
Every 12 mos. or 12,000 miles (whichever occurs first)	Positive Crankcase Ventilation (PCV)	Replace PCV valve. Inspect all hoses, fittings and inlet air filter. Replace or clean as necessary.*
	Controlled Combustion System (CCS)	Set idle speed and ignition timing to specifications on decal under hood.**
	Evaporation Control System	Replace filter in base of canister and inspect canister.* NOTE: Never replace fuel tank cap with other than the specified cap.

*Service filters more frequently under dusty conditions.

**These adjustments are also included as part of the quality tune-up recommended at the same intervals.

Cruise Control

Oldsmobile Cruise Control system (optional at extra cost) allows you to maintain the cruising speed you select on turnpikes or open highways without holding your foot on the accelerator pedal. The "ON-OFF" switch is located on the instrument panel directly above the headlight switch. The



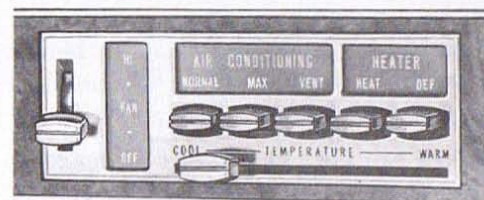
engagement button is located in the end of the turn signal lever. To operate, turn the "ON-OFF" switch to the "ON" position, accelerate the vehicle to the desired speed and momentarily push in the engage button. Take your foot off the accelerator and this speed will be maintained up or down hill. Your cruising speed may be increased at any time by depressing the accelerator pedal and pushing the engage button completely in when the desired speed is reached. If you wish to decrease

your speed, press the button completely in and hold until your cruising speed is reduced to the level desired, then release the button. For passing or emergency situations, you can increase your speed by depressing the accelerator pedal. When you remove your foot from the pedal, the car will slow down to your cruising speed prior to the acceleration. The Cruise Control system can be disengaged at any time by lightly depressing the brake pedal, by normal braking or by turning the switch off. The system does not operate under 30 mph or when the ignition is off. When Cruise Control is not in operation, the instrument panel switch should be turned to "OFF" position.

CAUTION: With the Cruise Control engaged, releasing the accelerator pedal does not permit engine speed to return to idle. Do not use the Cruise Control when conditions do not warrant maintaining a constant speed, such as in heavy traffic, or on winding or slippery roads.

Heater-Air Conditioner

Oldsmobile's heater — air conditioning system (optional equipment) offers year-round driving comfort. In addition to pro-



viding circulation of cool air during hot weather, the system can provide warm air in cold weather and dehumidify outside air in humid weather.

Dash Outlets — The air is discharged from five adjustable outlets, one in the center, one at each end of the dash panel, and two below the panel. These outlets can be adjusted vertically or horizontally to direct air throughout the car. The air flow from the left and center outlets may be shut off by positioning the deflector in the extreme up position. Reduction of air flow from the outlet on the right is obtained by positioning the deflector to the extreme right.

Controls — Easy to operate push buttons and a sliding lever provide fingertip comfort control. The air conditioner controls are combined with heating and ventilating controls in the same illuminated panel located to the left of the steering column.

Turning System On – The system is automatically turned on by moving the blower control switch from the “OFF” position to a choice of any one of four speeds, “LO, M1, M2, or HI”. These blower speeds are used for cooling, heating, defrosting or ventilating as follows:

For Cooling – Push the “NORMAL” button to provide 100% outside air to enter the cooling system. Adjust the “TEMPERATURE” lever to satisfy your comfort. The “NORMAL” setting is usable during hot-dry weather, moderate summer weather and cool, rainy weather. During rainy weather, window fogging is discouraged by the use of one of the two high blower settings, the “NORMAL” button depressed and the “TEMPERATURE” lever adjusted to maintain comfort with the higher air flow. For maximum cooling during hot-humid weather, push the “MAX” button. This allows a mixture of 80% recirculated air and 20% outside air to enter the cooling system.

For Heating – Push the “HEAT” button. This allows 100% outside air to enter the heating system. To warm the air to the temperature you want, move the “TEMPERATURE” lever to any position between “COOL” and “WARM.” This permits the proper mixture of heated air and outside

air to enter the passenger compartment through the heating outlets.

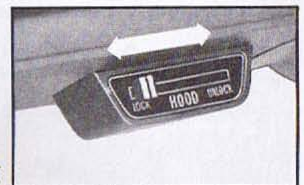
For Defrosting – Set the “TEMPERATURE” lever to obtain the air temperature you want. Next, push the “DEF” button. This directs approximately 90% of the heated air to the windshield and 10% to the passenger compartment through the heating outlets.

For Ventilating – Push the “VENT” button. This allows 100% outside air to enter the passenger compartment through the air conditioner outlets. Heat may be added to the vent air by using the temperature lever.

For Humidity Control – The compressor is engaged by depressing the “NORMAL” or “MAX” button. Once engaged, the compressor will run until the ignition switch is turned off. This will remove humid air from the system and minimize rapid fogging of the windows which can occur if humid air is blown onto cool glass. In mild weather, when use of the heater or defogger is desired and the air conditioner was previously used, operate the air conditioner in the “NORM” or “MAX” position before switching to “HEAT” or “DEF” from the “OFF” position.

To Turn System Off – Move the blower switch to the “OFF” position.

NOTE: When “HEAT”, “VENT”, “DEF”, buttons are pushed or system turned “OFF” after being operated in “NORMAL” or “MAX”, the compressor clutch will not be disconnected until the ignition switch is turned off.



Hood Lock

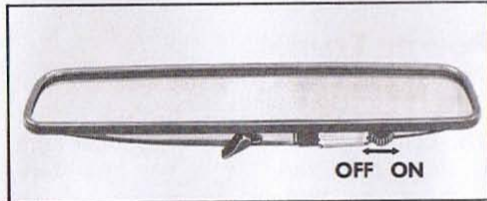
The Hood Lock is an additional theft protection option that prevents unwanted admittance to the engine compartment when the lock lever is in the “LOCK” position. The control is located to the left of the steering column on the lower edge of the dash panel. To unlock the hood, move the lock lever to the “UNLOCK” position. The hood may be raised in the conventional manner using the dual hood latches at the front of the vehicle.

Night-Watch Light Control

The Oldsmobile “Night-Watch” light control (optional equipment) provides for an

additional period of light for the driver and passengers after they leave the vehicle. By depressing the "Night-Watch" control switch button after the Steering Column Lock and headlight switch have been turned to the "OFF" position and the key removed, the car's driving lights will be placed in an OFF-delayed position remaining on for a period of 45 to 60 seconds before shutting off.

Rear View Mirror Map Light



This convenience feature (optional at extra cost) enables the driver to obtain light where he needs it simply by sliding the light switch, located on the lower edge of the mirror, to the right and adjusting the mirror. The ignition lock must be in the "ON" or "ACCESSORY" position for the light to operate.

Remote Controlled Outside Mirror



The remote control lever for this optional mirror is located at the upper front edge of the left front door. To adjust the position of the mirror, simply move the lever in the direction desired.

Vanity Mirror Light

On Luxury Sedans, the rear seat vanity mirror light (optional equipment) will operate only with the ignition in the "ON" or "ACCESSORY" position.

Power Brakes

Cars equipped with optional power brakes (standard on 98's) use engine vacuum to reduce the braking effort. The system has a vacuum reserve which will supply two or more power assisted brake applications after the engine has stopped. After the vacuum reserve has been exhausted, the vehicle can still be stopped by applying greater force to the brake pedal.

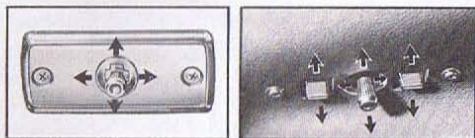
Power Door Locks



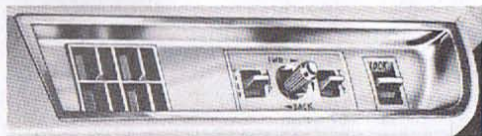
The power-operated door-lock system (optional equipment) makes it possible to lock and unlock all doors simultaneously. The switch buttons that operate the Power Door Locks, are located on the upper portion of both front door panels or on the door arm rests. These buttons give instant, convenient, fingertip control of all door locks. Coupes and convertibles equipped with power door locks also feature a device to automatically unlock the front seat backs when a door is opened.

Power Operated Seats

Four-Way Electric — An electric combination four-way tilt type control is available on bucket seat equipped Oldsmobiles, on the driver's side only, as optional equipment. Moving the control switch forward and backward will provide corresponding movement of the entire front seat assembly. Moving the switch up or down will raise or lower the back portion of the seat assembly.



Six-Way Electric — The electrically-operated six-way front seat assembly option is available for full width seats. The switch may be located on the underside of the seat side panel or in the door arm rest. The seat can be moved forward, rearward, upward, downward or tilted by means of



the seat control switch as follows:

1. The front control provides up and down movement at the front of the seat.
2. Forward and backward and up and down movement of the complete front seat assembly is accomplished by the center control.
3. The rear control provides up and down movement at the back of the seat.

Power Window Controls



With this optional power-operated window system, the driver can raise or lower all vertical moving windows with electric window regulators from a master switch control. Individual switches are provided under each window for passenger use. All of these switches have an ignition interlock so that the windows cannot be operated unless the ignition switch is in the "ON" or "ACCESSORY" position. (Reminder: Remove the ignition key when the vehicle is not attended by a responsible person.)

Power Steering

Oldsmobile's optional power steering (standard variable ratio on Ninety-Eights) provides ease in handling, parking, and getting into or out of tight places. Power assist is provided by a hydraulic pump driven by the engine. When the engine is not running or if the power steering pump drive belt breaks, the car can still be steered, but much greater steering effort will be required.

Power Trunk Lid Release



The control button, for this optional item, is located behind the glove box door. Pushing the button electrically releases the trunk lid latch and allows the trunk lid to swing open. The control can be operated at all times with or without the engine running. The control works independently of the conventional key-opening operation and will not interfere with its function. Locking the glove box door prohibits access to the trunk lid control should trunk contents need this protection.

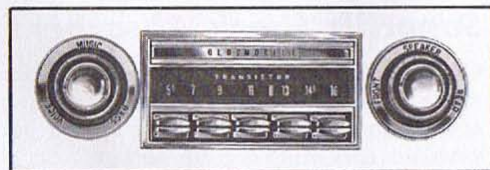
Radios and Equipment

Oldsmobile offers as optional equipment two transistorized radios, Deluxe and AM-FM Stereo, which play instantly when turned on. Both sets have the following controls:

Control Knobs — The left knob operates the "ON-OFF" switch and the volume control, while the ring behind the left knob operates the tone control. Manual tuning is accomplished by turning the right knob. If your radio is equipped with a rear seat speaker, the ring behind the right knob controls the fading or modulation of the volume of the front and rear seat speakers. (See Rear Seat Speaker.)

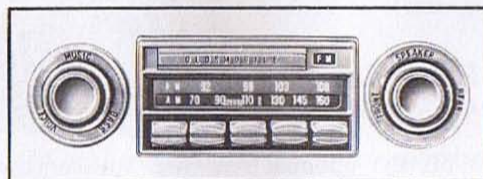
Adjusting Push Buttons — The push buttons on all radios are adjusted as follows:

1. Turn on receiver. (If car is equipped with AM-FM radio, see note.)
2. Select a push button for the desired station. Move this button slightly to the left and pull out as far as it will go.



3. Tune in the desired station manually.
4. Push the selected button to its maximum "in" position in order to lock it.
5. Proceed in the same manner for the remaining stations.
6. A station setting may be changed at any time by repeating the foregoing procedure.

NOTE: Any single push button on the AM-FM radio may be adjusted for either AM or FM reception. When a push button is adjusted for FM, it cannot be used for AM tuning also and vice versa.



AM-FM Stereo Radio — The AM-FM stereo radio provides a selection of AM-FM monaural or FM stereo reception. The AM-FM frequency band reception may be selected by sliding the frequency bar, located above the dial, to the right or left. The type of reception selected is indicated by the letters AM and FM. (Follow the procedure for push-button tuning adjustment.)

FM reception, to a great degree, is free from atmosphere static and man-made interference such as neon lights, power lines, ignition systems, etc. Normal FM reception should be almost noise-free unless the radio is tuned to a very weak station in the fringe area. It may be necessary, while driving, to manually retune FM stations slightly to maintain peak reception. Unlike AM reception, FM station coverage will only average 20 to 30 miles. When the distance from the car to the station exceeds this range, reception will start to flutter or static may become objectionable. This is a normal condition and may be corrected by tuning in a different station which is within the FM range. If no FM stations are within range, AM tuning should be used.

The stereophonic feature is pre-set at the factory for balance and correct separation of sound. An indicator light on the center of the dial (marked STEREO) comes on only when an FM stereo station is selected. It is also important that your front and rear speakers be properly balanced for the best stereo effect. The balance is adjusted by using the rear seat speaker ring.

Stereo Tape Player

The optional stereo tape player provides pre-recorded stereo music for your enjoyment. It utilizes a 4-channel, 8-track tape pack and the front and rear radio speakers. All tape player controls are contained within the unit. A pilot light on the player indicates when the player is in operation. (The radio does not have to be ON.) To play the tape unit the ignition switch must be in the "ON" or "ACC" position.



Insert the tape pack in the slot (label side up) and engage fully. The two player controls should then be adjusted as follows:

1. Program Selector—push the program bar to select the desired program number. Individual songs or arrangements cannot be selected, as there may be more than one on each numbered program.
2. Volume and Tone Knobs—adjust as desired.

3. Balance Knob—for best stereo effect, the balance between the front and rear speakers may be controlled by turning the knob to the left or right as required.

To avoid damage to your tape packs, never leave one engaged in the player when not in use. Store tapes in a cool, dry and clean place out of the direct sunlight and with the open end of the pack up.



Rear Seat Speaker

With the optional rear seat speaker the ring behind the right hand knob on the radio control panel enables you to fade or modulate the volume of both the front and rear seat speakers. As the control is turned to the right, the volume from the front speaker is increased and the volume from the rear speaker is decreased. Turning the control to the left causes the reverse. With the word "SPEAKER" in the top position, the volume is approximately equal at the front and rear speakers.



Rear Window Defogger

Electric Defogging Rear Window—This new all-weather electric rear window defogger (optional equipment) heats the glass and removes interior fog automatically, quietly, and without drafts. An instrument-panel lamp lights when the power is on. Current flows through a grid of silver and ceramic frit bonded to the glass.

NOTE: On vehicles equipped with air conditioning, the blower will not operate at full speed in the "HI" position when the rear defogger is in operation.

Superlift Shock Absorbers

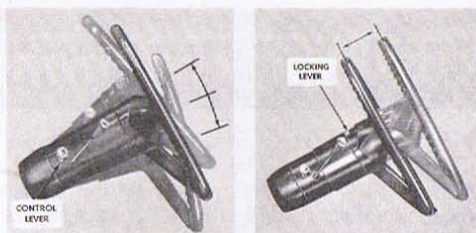
Optional Superlift Air Adjustable Shock Absorbers allow you to ride with the trunk or load space of your car fully loaded but with no annoying sag or bumps. Air is

added to the rear shocks as needed through the air valve located inside the trunk compartment on the right trunk latch brace. A minimum pressure of 10-15 psi. should be maintained at all times. After the car is loaded, pressure may be increased until the rear of the vehicle reaches the desired riding height or to a maximum of 90 psi.

Tilt and Telescope Steering Wheel

The Tilt and Telescope Steering Wheel (optional equipment) can be tilted up above normal position to provide additional room for entrance and exit as well as selected driving positions at or below normal height. In addition it can be adjusted in and out within a 2 $\frac{3}{4}$ " range to obtain the most comfortable distance between you and the wheel. This permits individual selection of the most natural position for all driving conditions. On long trips the steering wheel position can be changed to minimize tension and fatigue. The adjustments are simple and independent of each other.

The TILT mechanism is operated by lifting up on the small control lever on the left side of the steering column just below



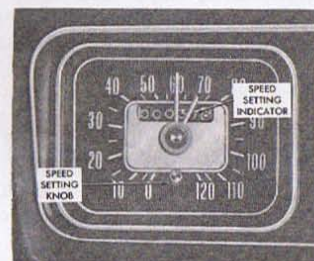
the direction signal lever, moving the steering wheel to the selected position, and releasing the lever. The TELESCOPE feature of the wheel is used by rotating the locking lever located on the top side of the steering column above the steering wheel cover counterclockwise to unlock the mechanism, sliding the wheel into the desired position and turning the locking lever clockwise to make the adjustment secure.

Both the tilt and telescope mechanisms can be changed while driving but should not be attempted in heavy traffic. These features also permit maximum ease in entering and leaving the car. The wheel is spring-loaded, so that lifting the tilt lever automatically raises the wheel to its uppermost position. Additional clearance can be obtained by unlocking the lever and sliding the steering wheel all the way into the column and relocking the lever.

Rim-Blow Horn Control



On this optional steering wheel, the horn control is activated by lightly depressing the soft section located on the inside circumference of the steering wheel rim.



Safety Sentinel

The safety sentinel (optional equipment) indicator is set at a desired speed by turning the safety sentinel knob located near the center of the speedometer cluster. When the car speed is increased so that it reaches or goes beyond the speed setting, a buzzer warns the driver that he is exceeding his desired speed.

GUARDIAN MAINTENANCE FOR OWNER PROTECTION

Importance of Protecting Your Investment

Your purchase of a 1970 Oldsmobile was an important decision — one that represented a sizable investment. Unquestionably, this was a wise decision since you have selected a fine automobile that, with reasonable care and use, will give you many years of safe, dependable service and enjoyment.

Now you are faced with another decision — to what extent are you willing to protect your investment? This should not be a difficult decision, but again it is an important one. Only you can make certain that your car receives the care it requires to retain the safety and dependability originally built into it. Compared to the car of years past, your new Oldsmobile needs only a few regular maintenance services. But because there are only a few, do not minimize their importance. The demands placed on the present day automobile in all of the varying conditions of traffic, temperature, high speed operation, etc. make it more important than ever that the car receives proper maintenance.

For example, regular attention to engine oil is essential. The oil level must be periodically checked and oil added whenever needed. Also, the oil should be changed at the intervals specified in this manual with the proper quality and viscosity of oil. If your engine should run excessively low on oil or if the oil has lost its lubricating qualities because of old age, serious engine damage could occur — damage that would not be covered under the New Vehicle Warranty.

It is also important that the safety related components of your car be checked regularly. For example, the exhaust system should be looked at whenever your car is on the hoist for an oil change and correction made to any defects noted. If leaks in the system are ignored, exhaust fumes could possibly seep into the passenger compartment resulting in serious consequences to the occupants.

All of the recommended maintenance items for your Oldsmobile are discussed in this section of this manual and summarized in the "Maintenance Schedule" presented on page 50. In addition, be sure to read the colored supplement entitled "Maintaining Safety and Dependability" for tips on keeping your car in optimum condition.

Guardian Maintenance Service

The quality of maintenance your new car receives is as important as the regularity with which it is serviced. The "Guardian Maintenance Service" program has been developed by Oldsmobile Division in cooperation with Oldsmobile Dealers to provide nationwide quality in customer service. The program includes the training of dealer technicians at General Motors Training Center throughout the country and is supported with a continuous follow-up of publications, films, and other service information. The use of genuine General Motors parts and accessories, which have the same high quality standards as original equipment parts, and the use of Oldsmobile approved tools developed and tested for use by Oldsmobile Dealers also contribute to the high quality of Guardian Maintenance Service.

No one else has more knowledge or is better prepared to service your Oldsmobile than your Oldsmobile Dealer. Return to him for Guardian Maintenance Service at the intervals designated in this manual.

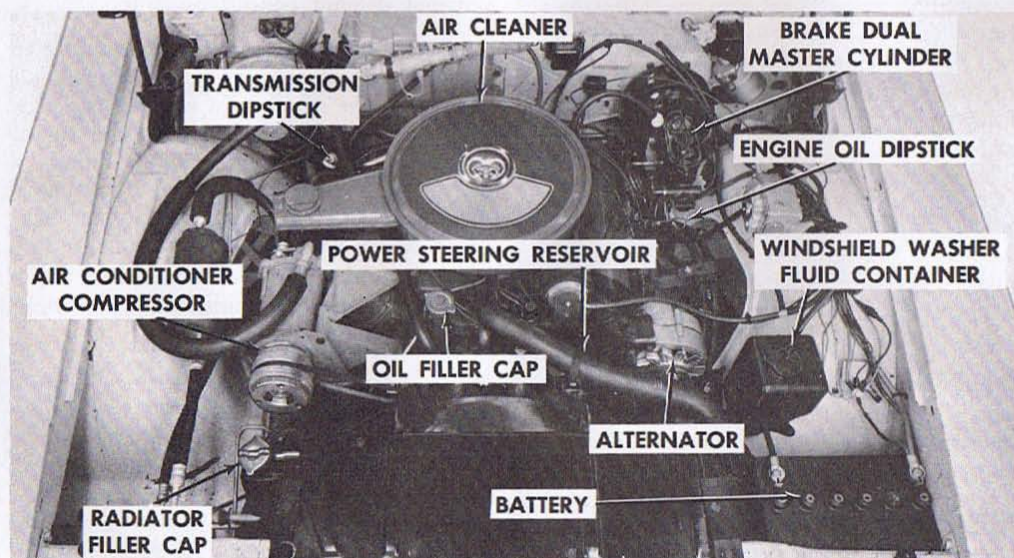
RECOMMENDED LUBRICATION SERVICE

Ball Joints

The ball joints should be lubricated every 12 months using a water resistant E.P. chassis lubricant which meets the GM specifications 6031M. Inspect seals for damage at each lubrication.

Brake Master Cylinder

Check fluid level at each engine oil change period. Wipe off the brake master cylinder filler cap and unsnap the retainer. The fluid level must be maintained at $\frac{1}{4}$ inch below the top of EACH reservoir with



Delco Supreme No. 11 Hydraulic Brake Fluid or Equivalent. When replacing the cap be sure to fasten the retainer securely.

Differential

Standard — Check lubricant level at each engine oil change period and keep filled to level of filler plug hole with Lubricant Part Number GM-1051022, GM-1050081 or SAE 90 multipurpose type gear lubricant meeting Military Specification MIL-L2105B, available at your Oldsmobile Dealer. Periodic or seasonal changes are not recommended.

Anti-Spin — (requires special lubricant properties.) Check lubricant level at each engine oil change and add, as required, only with special lubricant Part Number GM-1051022 available at your Oldsmobile Dealer to assure proper function of the unit. Periodic or seasonal changes are not recommended except under heavy duty operating conditions such as trailer hauling. For heavy duty operations, it is recommended that the lubricant be replaced every 12,000 miles.

Engine Oil

Use only engine oil which meets oil quality standard GM 6041-M. High quality oils which are intended for service MS and

pass car makers' tests are of this quality. The oil change interval (see section on "Engine Oil Change Interval") and the new vehicle warranty are based on the use of oils that meet these requirements.

NOTE: Non-detergent and other low quality oils are specifically not recommended. The use of proper engine oils and oil change intervals are your best assurance of continued reliability and performance from your Oldsmobile engine.

Checking Oil Level—The engine oil should be maintained at the proper level. The best time to check it is before operating the engine or as the last step in a fuel stop. This will allow the normal oil accumulation in the engine to drain back in the crankcase. To check the level, remove the oil level gauge rod (dip stick), wipe it clean and reinsert it for an accurate reading. The oil gauge rod is marked "FULL" and "ADD." The oil level should be maintained within the margin, neither going above the "FULL" line nor below the "ADD" line. Reseat the gauge rod firmly after taking the reading.

NOTE: The oil gauge rod is also marked, "Use GM 6041-M Quality MS Oil," as a reminder to use only high quality oils as prescribed under "Engine Oil Recommendations."

Supplemental Engine Oil Additives—The regular use of supplemental additives is specifically not recommended and will increase operating costs. However, in cases of specific problems which may arise under certain conditions, additive supplements are available that can effectively and economically solve these problems without causing other difficulties. For example, if higher detergency is required to reduce varnish and sludge deposits resulting from some unusual operational difficulty, a thoroughly tested and approved concentrate—GM Hi-Detergent Concentrate—is available at your Oldsmobile Dealer. It is suggested that, in the event of an operational problem, you consult your dealer for advice.

Ventilation Filter—Remove the crankcase ventilation filter in the air cleaner at each change of the oil filter (more often under dusty conditions), wash in kerosene, dip in engine oil, allow excess oil to drain and then reinstall.

Engine Oil Change Interval—Change oil each 4 months. If more than 6,000 miles are driven in a 4-month period, change oil each 6,000 miles.

In certain types of service including:

—operation under dusty conditions,

—trailer hauling,
—extensive idling, or
—short trip operation at freezing temperatures (engine not thoroughly warmed up)

the oil change interval should not exceed 2 months, or 3,000 miles, whichever occurs first. Operation in dust storms may require an immediate change of oil. See your Oldsmobile Dealer for advice on the frequency of oil and filter changes under unusual driving conditions.

The preceding recommendations apply to the first change as well as subsequent oil changes. The oil change interval for your Oldsmobile engine is based on the use of oils that meet the requirements indicated in the section on "Engine Oil Recommendations." Oil change intervals longer than those listed will result in serious reductions in engine life and may affect Oldsmobile's obligation under the provisions of the new vehicle warranty.

A high quality MS oil meeting General Motors Standard GM 6041-M was installed in your engine at the factory. It is not necessary to change this factory-installed oil prior to the recommended normal change period. However, the oil level should be checked more frequently

during the break-in period since somewhat higher oil consumption is normal until the piston rings become seated.

Recommended Viscosity — The proper viscosity helps assure good cold and hot starting by reducing friction and thus increasing cranking speed. The following chart will serve as a guide for selecting the proper oil viscosity.

Engine Oil Filter Replacement — The engine oil filter should be replaced at the first oil change and every second oil change thereafter. This recommendation is based on the use of engine oils that meet the requirements indicated in the section on "Engine Oil Recommendations," and the use of a quality oil filter. AC oil filters provide maximum engine protection.

Front Wheel Bearings

Clean, inspect and repack with a good high melting point wheel bearing grease only when brake maintenance necessitates removal of front drums or discs; otherwise, no periodic maintenance is required.

Steering Linkage

The steering linkage (tie rods, relay rod and idler arm support) should be lubricated, using a water resistant E.P. chassis lubricant that meets G.M. specifications 6031-M, every 12 months and inspected for lash and wear.

Power Steering System

Check the fluid level in the pump reservoir at each engine oil change period with

fluid at operating temperature. Add fluid as necessary. Fill reservoir only to the mark. Use Power Steering Fluid, Part Number GM-1050017. If not available, use General Motors DEXRON® Automatic Transmission Fluid, Part Number GM-1050568. Replace fluid only if necessary to disassemble.

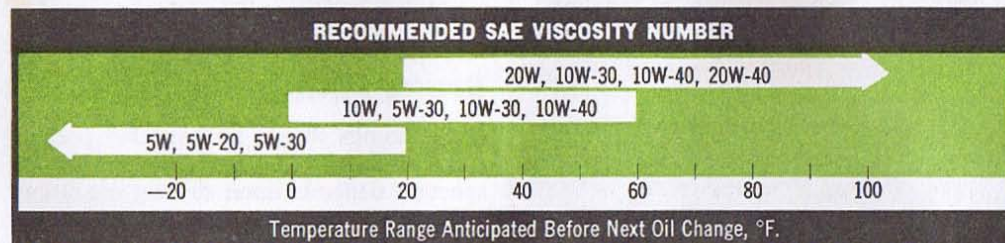
Linkage and Body

Every 12 months, the transmission and Cruise Control linkage, hood hinges, stops and latches should be lubricated. The following points, requiring body lubrication, should also be checked and lubricated every 12 months: hinges on all doors, fuel filler door, trunk lid, door lock striker, rotary lock, door jamb switches, all seat adjusters and convertible top linkage.

Transmissions

Automatic — General Motors DEXRON® Automatic Transmission Fluid, Part Number GM-1050568, which has been especially formulated and tested for use in your automatic transmission, is recommended. Other Automatic Transmission Fluids identified with the mark DEXRON® are also recommended.

Check the fluid level at each engine oil change period. For an accurate fluid level



NOTE: SAE 5W and 5W-20 oils are not recommended for sustained high-speed driving. SAE 30 oils may be used at temperatures above 60°F.

check, drive the car several miles, making frequent starts and stops, to bring the transmission up to normal operating temperature (approximately 180-190°F). Park the car on a level surface, place selector lever in "Park" and leave the engine running. Remove dipstick, wipe clean, reinsert until the cap seats, remove and note reading. If fluid level is at or below the "ADD" mark, add sufficient fluid to raise the level to the "FULL" mark. One pint raises the level from "ADD" to "FULL". Do not overfill.

Under normal driving conditions, the transmission fluid should be changed every 24,000 miles. If your car is driven extensively in heavy city traffic during hot weather, or is used to pull a trailer, change fluid every 12,000 miles. Likewise, operators of cars in commercial use (such as taxicab, limousine or patrol car service) where the engine idles for long periods, should change fluid every 12,000 miles.

Manual — Check lubricant level at each engine oil change and add, as required, SAE 80 (preferred) part number GM-1051066 or SAE 90 multi-purpose gear lubricant meeting requirement of MIL-L-2105B. Periodic or seasonal changes are not recommended.

GENERAL MAINTENANCE SERVICES

Air Cleaner

The air cleaner is a disposable type element. Replace the element every 24 months or 24,000 miles, whichever occurs first. Do not wash, oil, or clean with air hose. The air cleaner will require more frequent service under dusty conditions. Your Oldsmobile Dealer can advise you on the proper interval. For maximum protection specify an AC ACron air filter element.

CAUTION: In addition to its function of filtering air drawn into the engine through the carburetor, the air cleaner also acts as a flame arrester in the event engine backfires. The air cleaner should be installed at all times unless its temporary removal is necessary for repair or maintenance of the vehicle, because backfiring may cause fire in the engine compartment.

Air Conditioning

IMPORTANT — Have a thorough service inspection performed before operating the unit at the beginning of the cooling season, or as otherwise indicated as follows:

- Check refrigerant and replenish as necessary. Over the period of a year, the system can lose up to a pound of refrigerant through normal operation.
- Check and adjust compressor belt tension.
- Remove road accumulation from condenser (bugs, etc.) every engine oil change or more often, if necessary.

Brake Lining Inspection

Brake linings should be inspected periodically for wear. The frequency of this inspection depends upon driving conditions such as traffic or terrain, and also the driving techniques of individual owners. Your Oldsmobile Dealer is best qualified to advise you as to how often this inspection should be performed.

tion should be performed. The effectiveness of the parking brake is related to the rear brake lining wear and should be adjusted at the time of lining inspection. If replacement parts are required, specify General Motors and United Delco parts.

Carburetor

To meet Federal Exhaust Emission Requirements and to obtain maximum engine performance and fuel economy, carburetor idle speeds should be checked as recommended in the Maintenance Schedule. If engine stalls, idles too fast or idles roughly, it should be adjusted. The carburetor fuel inlet filter should be replaced every 12 months, or more often, if necessary.

NOTE: Some engines will increase in idle speed during the break-in period. If this occurs, an idle speed adjustment should be made. Refer to label in engine compartment for correct specifications.

Clutch Pedal Adjustment

On cars equipped with a manual transmission the clutch pedal should be adjusted from time to time so that it has

free travel before the clutch actually begins to disengage. A light pressure should be enough to push the pedal in about $\frac{3}{4}$ inch to 1 inch before resistance of the clutch springs is felt. If there is little or no "pedal lash," the clutch may be slipping which will cause premature wear. If there is too much "pedal lash," the clutch may not disengage completely, causing gear shifting trouble. When "pedal lash" is less than $\frac{1}{2}$ inch or more than 1 inch, an adjustment should be made by your Oldsmobile Dealer.

Engine

Cooling

System



Recommendations

The inhibited year-around engine coolant, used to fill the cooling system at the factory, is a high quality solution that meets General Motors Specification 1899-M. This factory-fill coolant solution is formulated to withstand two full calendar years of normal operation without draining or

adding inhibitors, provided the same concentration of coolant is added if the system needs additional fluid between drain periods. The original factory-fill coolant provides freezing protection to -20°F (-32°F in Canada), and improved summer cooling. Each year, the cooling system should be serviced as follows:

1. Wash the radiator cap thoroughly with clean water.
2. Check coolant level.
3. Check freeze protection.
4. Pressure test system. The system must hold 15 to 18 psi.
5. Inspect all hoses and clamps.

CAUTION: Radiator cap must be tight when reinstalled. Make certain red stripe on cap lines up with red stripe on radiator upper support.

Every two years the cooling system should be serviced as follows:

1. Drain coolant, when hot, through the radiator drain valve.
2. Close valve and add sufficient plain water to fill system.
3. Run engine until normal operating temperature is reached.

4. Drain and refill the system, as described in steps 1, 2, and 3, a sufficient number of times until the drained liquid is colorless.
5. Allow system to drain completely and then close radiator drain valve tightly.
6. Add the necessary amount of high quality inhibited glycol base coolant meeting GM Specification 1899-M to provide the required freezing and corrosion protection (at least to -20°F , or -32°F in Canada).
7. Run engine until normal operating temperature is reached.
8. Check and adjust level of coolant after system has cooled sufficiently to remove radiator cap.

The following chart will serve as a guide in protecting the cooling system against freezing:

NOTE: Alcohol or methanol base coolants or plain water are not recommended for your Oldsmobile at any time.

It is the owner's responsibility to keep the freeze protection at a level commensurate with the temperatures which may occur in the area in which the vehicle will be operated. Regardless of whether freezing temperatures are or are not expected, cooling system protection should be maintained at least to -20°F to provide adequate corrosion and overheating protection. When coolant additions are required because of coolant loss or to provide additional protection against freezing at temperatures lower than -20°F (-32°F in Canada), a sufficient amount of an ethylene glycol base coolant meeting GM Specification 1899-M should be used.

Quarts of Ethylene-Glycol "Year Around" Coolant		8 Qts. U.S. 6.75 Qts. Imp.	9 Qts. U.S. 7.5 Qts. Imp.	10 Qts. U.S. 8.25 Qts. Imp.
Temperature Protection Point	Delta 88 (350 cu. in.) Without Air Conditioning	-31°F	-47°F	————
	Delta 88 (350 cu. in.) With Air Conditioning	-26°F	-43°F	————
	All Others Without Air Conditioning and Delta 88 With "Heavy-Duty" Cooling	-23°F	-39°F	————
	All Others With Air Conditioning	-21°F	-35°F	-50°F
	All Others With "Heavy-Duty" Cooling	————	-32°F	-46°F

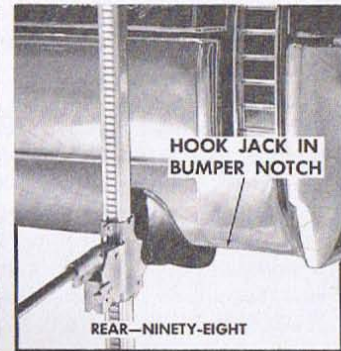
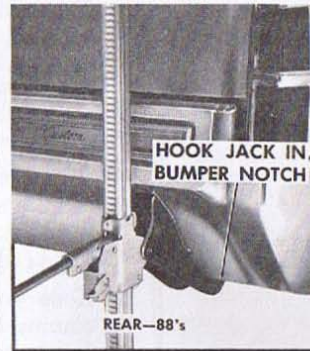
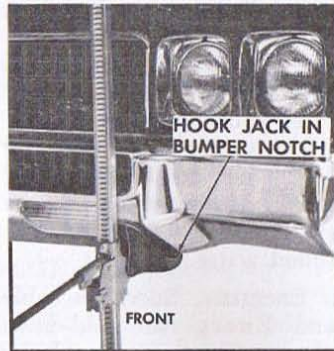
Thermostat — The cooling system is protected and controlled by a thermostat installed in the engine coolant outlet to maintain a satisfactory operating temperature of the engine. This thermostat is designed for continuous use through both Winter and Summer and need not be changed seasonally. When replacement is necessary, specify a GM replacement part.

CAUTION: When an engine is at normal operating temperature or above, the internal pressure built up in the cooling system will blow out scalding fluid and vapors if the radiator cap is suddenly removed. To prevent loss of coolant and to avoid the danger of being burned, the coolant level should be checked or coolant added only when the engine is cool. To remove the cap when engine is cool, slowly rotate cap counterclockwise to detent (DO NOT PRESS DOWN WHILE ROTATING), wait until any residual pressure is relieved — as indicated by a hissing sound, then press down on the cap while continuing to rotate counterclockwise. Radiator pressure cap should be checked by a qualified technician every 12 months for proper operation and replaced as required with applicable A.C. type cap.

Jack Operation for Changing a Wheel

Instructions for operating bumper jack are as follows:

1. Fully apply the parking brake and block wheel diagonally opposite from the jack position. With the Turbo Hydra-Matic, place the selector lever in the "Park" position, and with the manual transmission, place the shift lever in the reverse gear position.
2. From the luggage compartment remove spare wheel and tire, jack, jack base and jack handle, wheel nut wrench. Place the jack lever in the "UP" position.
3. Attach the jack lift pad to the column assembly.
4. When jacking rear of car position the jack lift pad so that the notch in the lift pad straddles the bumper bolts. The bumpers are notched for clearance in this area. When jacking front of car position the jack lift pad hook in bumper notch.
5. Remove wheel discs or hub caps using the sharp end of the jack handle.



NOTE: On Ninety-Eights, it is necessary to remove the rear wheel opening panel. To remove this panel, lift the panel lock (located at the center of the lower edge of the panel) over the inside flange and push the handle downward and toward the front of the car. Tip the panel outward at the top while raising up and away from the mounting hooks.



6. Loosen, but do not remove, wheel nuts by turning counterclockwise.
7. Insert jack handle in jack, grasp firmly, and jack the car off the ground.
8. Check stability of car on jack and then remove wheel nuts and wheel.
9. Install spare wheel and install wheel nuts finger tight.
10. Place jack control lever in "down" position and lower wheel until it just touches the ground. Fully tighten wheel nuts. Lower car and remove jack. Carefully install wheel cover.
11. Replace jack and wheel in luggage compartment and tighten them securely to avoid rattles.

Illustrated instructions on jack operation and stowage are also provided on the underside of the trunk lid.

CAUTION: Stand clear of and never get beneath the car when it is supported only by jack; the jack is designed only for use when changing wheels. Always use safety stands to support the car if it is necessary to get underneath. Do not run the engine for any reason with one rear wheel off the ground as the car may drive through the rear wheel remaining on the ground.

Distributor and Spark Plugs

To meet Federal Exhaust Emission Requirements and to obtain maximum engine performance and fuel economy, engine tune-up operations should be performed at the service intervals recommended in the Maintenance Schedule. This includes adjusting or replacing the distributor points, setting the timing, cleaning and gapping or replacing the spark plugs.

Energizer (Battery)

It is important that the Energizer receive the following care:

1. Check the fluid level in each cell at each oil change interval or once each month, whichever occurs first, and more often in hot weather. If low, add distilled water to bring the level to the bottom of the split ring in the cell filler well. Do not overfill Energizer and never add any substance to the fluid except colorless, odorless drinking or distilled water.
2. Keep your Energizer, Energizer cable clamps, and Energizer hold-down bracket clean. Cleaning should be done every 12 months. Use a brush and a solution of ammonia and water or baking soda and water. Flush off with clear water. After cleaning, apply petroleum jelly or petrolatum to Energizer cable clamps and terminals to retard corrosion.
3. If Energizer performance becomes questionable, have your dealer give the Energizer a "421 Test."

For maximum wattage requirements specify a Delco Energizer at replacement time.

BATTERY-GAS WARNING: Since normal battery or Energizer chemical action generates hydrogen gas which is explosive when mixed with air, never expose the battery to an open flame or electric spark.

Also, avoid getting battery fluid, which is a sulfuric acid solution, on skin, on clothing or other fabrics, or on painted surfaces. Eye protection should be worn while working on the battery for any reason.

Hydrogen gas may be released by a battery and is generally present when the battery has been, or is charging. If the booster battery is part of another vehicle's electrical system, the booster battery should be treated carefully when using jumper cables — follow exactly the procedure outlined, being careful not to cause sparks which could ignite any hydrogen which might be present when attaching jumper cable clips to the two batteries.

CAUTION: Do not attempt to jump start a frozen battery. If a frozen battery is suspected, open and examine all fill vents on the battery. If ice can be seen, or the electrolyte fluid cannot be seen, do not attempt to start with jumper cables.

WHEN ATTACHING JUMPER CABLES:

First, attach one end of one jumper cable to the positive terminal of the **booster battery** (identified by a "+" or "P" on the

battery case, post, or clamp) and the other end of the same cable to the positive terminal of the discharged battery.

Second, attach one end of the remaining cable to the negative terminal ("−" or "N") of the booster battery, and finally to the negative terminal of the discharged battery — taking care that none of the jumper clips contact each other.

Reverse this sequence exactly when removing the jumper cables.

CAUTION: Any procedure other than the preceding could result in personal injury caused by electrolyte squirting out of the battery vents, damage or injury due to battery explosion, and/or damage to the charging system of the booster vehicle's or immobilized vehicle's charging system.

Lights and Circuits

The headlamp circuit is protected by a circuit breaker in the light switch. An overload on the breaker will cause the lamps to "flicker" on and off. If this condition develops, have your headlamp wiring checked immediately.

CAUTION: It is the owner's responsibility to check all lamps, signaling systems and warning lights frequently to be sure they are working properly. Headlamp aim should also be checked periodically. It is important that any malfunctions be corrected promptly for your safety, and for the safety of others.

Tires

The factory installed tires on your car are selected to provide the best all around tire performance for all normal operation. When inflated as recommended in the tire inflation pressure table, they have the load carrying capacity to operate satisfactorily at all loads up to and including the full rated load specified in that table at all normal highway speeds. For the added convenience of owners, many Oldsmobile Dealers are equipped to handle tire warranty adjustments on certain makes of tires provided on 1970 Oldsmobile cars.

Tire Traction — A decrease in driving, cornering and braking traction occurs when water, snow, ice, gravel, or other material is on the road surface. Driving practices and car speed should be adjusted to the road conditions. When driving on wet or slushy roads, it is possible for a wedge of

water to build up between the tire and road surface. This phenomenon, known as hydroplaning, may cause partial or complete loss of traction, which adversely affects vehicle control and stopping ability. To reduce the possibility of traction loss, the following precautions should be observed:

1. Slow down during rainstorms or when roads are slushy.
2. Slow down if road has standing water or puddles.
3. Replace tires when tread wear indicators are visible.
4. Keep tires properly inflated.

For temporary assistance when traction is lost on ice or snow, the use of Liquid Tire Chain is recommended.

Inflation Pressure — To ensure the proper tire inflation pressures for your particular requirements, follow the recommendations in the tire inflation pressure table. Keep tires properly inflated, and check inflation pressure at least monthly. This should provide you with the best tire life and riding comfort, over the full range of normal driving conditions.

1. Tire inflation pressures may increase as much as 6 pounds per square inch (psi.) when hot.

RECOMMENDED TIRE INFLATION PRESSURES (Pounds Per Square Inch Cool)			
Models	Tire Load Range	Standard Inflation For All Loads Including Full Rated	
88 and 98	B	1 to 6 Passengers + 200 Lbs. Luggage 1100 Lbs. Load	
		Front 23 Lbs.	Rear 24 Lbs.

- For continuous high speed operation (over 75 mph) increase tire inflation pressure 4 pounds per square inch over the recommended pressures up to a maximum of 32 pounds per square inch cold for load range B tires. Sustained speed above 75 mph are not recommended when the 4 pounds per square inch adjustment would require pressures greater than the maximums stated in the chart.
- Cold tire inflation pressure:** After vehicle has been inoperative for 3 hours or more, and driven less than 1 mile. **Hot tire inflation pressure:** After vehicle has been driven 10 miles or more at 60 - 70 miles per hour.
- Vehicles with luggage racks do not

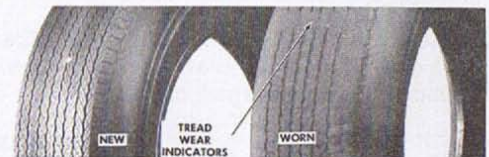
have a vehicle load limit greater than specified.

- When towing trailers, the allowable passenger cargo load must be reduced by an amount equal to the trailer tongue load on the trailer hitch.

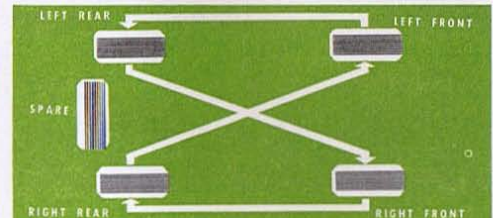
TIRE USAGE			
Models	Equipment	Standard*	Optional*
88	All	H78 x 15 (Black)	H78 x 15 2 Stripe Whitewall 8.55 x 15 3 Stripe Whitewall (export)
98	All	J78 x 15 (Black)	J78 x 15 2 Stripe Whitewall 8.85 x 15 3 Stripe Whitewall (export)

*All Standard and Optional tires are load range B.

Tread Wear Indicators—The original equipment tires on your Oldsmobile incorporate built-in tread wear indicators to assist you in determining when your tires have been worn to the point of needing replacement. These indicators are molded into the bottom of the tread grooves and will appear as ½ inch wide bands when tire tread depth becomes 1/16 of an inch. When the indicators appear in two or more adjacent grooves, tire replacement due to tread wear is recommended.



Optional Tires—Only those tires of the size shown on the adjacent table are recommended for use on Oldsmobiles. Use of any other size of tire may seriously affect ride, handling, ground clearance, tire clearances, and speedometer calibration. To achieve best all around vehicle handling performance, fiberglass belted tires, radial ply tires, and bias ply tires should not be mixed on the same car.



Tire Rotation Information—To equalize wear it is recommended that the four road tires be rotated every 6,000 miles in accordance with diagram. It is not necessary to rotate the spare. Upon rotation, tire pressures must be adjusted (front and rear) in accordance with the recommendations in the tire inflation pressure table.

RECOMMENDED APPEARANCE CARE

Acrylic Lacquer

Your Oldsmobile is finished with General Motors "Magic-Mirror" acrylic lacquer. This is a finish of maximum beauty in depth of color, gloss retention and durability.

Aluminum Parts

All bright interior mouldings should be cleaned frequently with lukewarm water and GM All Purpose Cleaner Concentrate. In severe cases, a chemical cleaner, which is specified for use on acrylic finishes, may be used. Strong alkali soaps or abrasive cleaners (such as some insect removers or tire cleaners) should never be used. Do not permit the use of cleaning solutions containing caustic cleansing agents for the cleaning of your car.

Chrome Plated and Stainless Steel Parts

Wash all bright metal parts frequently to alleviate the destructive forces of salt,

calcium chloride, exhaust gases, industrial fallout and other corrosive elements. Then follow with a protective coating, such as a light application of a mixture of motor oil and kerosene (50% oil - 50% kerosene) on surfaces that are stain and rust free. If necessary, Liquid Glaze Cleaner and Wax may be used to remove rust from chrome plated parts before applying a protective coating. Proper protection is an owner responsibility and parts damaged by chemical action or abrasion are not considered to be defective under the terms of the Oldsmobile New Vehicle Warranty.

Convertible Top

The folding top material will retain its luster and bright appearance with frequent washing using neutral soap suds, lukewarm water and a soft bristle brush. In the event heavy soilage or persistent stains are encountered, cleaning with a mild foaming cleanser, lukewarm water, and a soft bristle brush will normally be sufficient. Regardless which method is used, a generous amount of clean rinse water

must be applied to insure complete removal of soap suds from the top material and all adjacent body panels.

CAUTION: The folding top should never be subjected to volatile cleaners or household bleaches. Also, after cleaning is completed, the top material must be allowed to thoroughly dry before it is lowered.

The rear window and back curtain may be cleaned in the same manner as all body glass. Volatile cleaning agents should be avoided as these liquids could have a deteriorating effect if spilled on the back curtain material or any painted finish.

Glass and Mirrors

Never wipe glass with dry paper or cloth or operate the wipers when the glass is dry. Dirt and insects can be removed with clear water or a mild liquid household cleaner. The use of harsh abrasives should

be avoided. Periodic inspection and replacement of wiper blades will reduce the possibility of the windshield becoming scratched and will assure clear vision under adverse driving conditions.

Inside Car Care

Dirt and dust that accumulate on the upholstery, vinyl covered trim parts, and carpeting of your car should be removed regularly where necessary. For best results, stains on upholstery should be removed immediately.

CAUTION: When cleaning interior fabrics or carpeting, do not use volatile cleaning solvents such as acetone, lacquer thinners, carbon tetrachloride, enamel reducers, nail polish remover, or laundry soaps, bleaches and reducing agents. **NEVER USE GASOLINE OR NAPHTHA FOR ANY CLEANING PURPOSE.**

GM All Purpose Cleaner Concentrate with lukewarm water may be used to clean fabrics, coated fabrics and genuine leather. Only the suds should be applied, using a damp cloth, sponge, or soft brush and

rubbed gently. The suds should then be removed with a clean, damp cloth or sponge. Finally, the surface should be wiped with a soft cloth. In some cases it may be necessary to use either GM Upholstery Cleaner or GM Upholstery Spotter or equivalent as the label directs.

Touch-Up Paint

Nicks and chips in paint surfaces should be touched up before weathering action begins. The best time to detect them is right after the car has been washed. Touch-Up Paint to match your car's color is available at most Oldsmobile Dealers.

Undercoating

When applying this added protection, the undercoating material should not be applied to any moving or rotating parts. It should also be kept off air conditioner fittings and lines, body drainholes, and exhaust systems. On cars equipped with the Super Lift Shock Absorbers, particular care should be taken so as not to undercoat any fittings, lines or system components.

Vinyl-Covered Roof Top

Ordinarily plain water is sufficient to clean the optional vinyl top when the car is washed frequently. However, to remove accumulated dirt and grime, use a soft, natural bristle brush with GM All Purpose Cleaner Concentrate and lukewarm water. Scrub in all directions, covering a 2-foot area at a time. Carefully overlap each section to avoid streaking and then rinse with plenty of water to remove all suds and dirt.

Washing

The best way to preserve the finish is to keep it clean. Normally, only frequent washings are required to maintain its original beauty. Wash the car with either cold or warm (never hot) water, not in the direct rays of the sun and not while the sheet metal surfaces are hot. Never wipe dirt from dry painted surfaces because this may scratch the finish. The use of strong soaps and chemical detergents should be avoided and in any event, cleaning agents should be promptly flushed from the surface and not allowed to dry or they may streak the finish.

NOTE: Some chemical cleaners used for removing road oil and tars from painted surfaces are detrimental to acrylic finishes. When purchasing a cleaner, make sure that the instructions on the container specifically state that the contents can be used on an acrylic finish.

Waxing and Polishing

Even though the acrylic paint on your car is durable, under certain conditions it may be advisable to wax or polish your car to provide added protection. Calcium chloride and other salts, road oil and tar, tree sap, chemicals from factory chimneys and other foreign matter may damage any known automobile finish if allowed to remain in contact with the paint film. Prompt washing may not thoroughly remove these deposits. This is particularly true in geographical areas where these exposure conditions are severe. Properly applied polishes and waxes of known quality will provide the best protection. Most Oldsmobile Dealers offer polishes or waxes which can be of real value in maintaining a good paint finish.

OWNER SAFETY CHECKS

Take a few minutes, periodically, to check the items listed below for proper operation. See "Maintaining Safety and Dependability" section for instructions on the recommended method of checking. Any deficiencies noted should be corrected without delay.

- | | |
|---|---|
| ☐ Anti-Theft Lock | ☐ Hood Latches |
| ☐ Defrosters | ☐ Fuel, Water and Oil Lines, etc. |
| ☐ Starter Safety Switch | ☐ Parking Brake |
| ☐ Transmission Shift Indicator | ☐ Lights and Hazard Warning Flashers |
| ☐ Horn | ☐ Seat Belts |
| ☐ Seat Back Latches | ☐ Tire Inflation |
| ☐ Rearview Mirrors and Visors | ☐ Windshield Wipers |
| ☐ Door Latches | ☐ Windshield Washers |

1970 OLDSMOBILE MAINTENANCE SCHEDULE

MAINTENANCE SERVICE	MAINTENANCE INTERVAL (Time in Months)														
	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
* ENGINE OIL—Change	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FLUID LEVELS, All—Check and Add if Necessary (Except Manual Steering Gear)															
TIRE AND WHEEL CONDITION—Inspect															
BRAKE FLUID LEVEL—Check; BRAKE LINES AND HOSES—Inspect															
STEERING LINKAGE—Inspect; EXHAUST SYSTEM—Inspect															
POWER STEERING BELT, FLUID LEVEL, PIPES AND HOSES—Check															
MANUAL TRANSMISSION CLUTCH—Check and Adjust	X														
* ENGINE OIL FILTER—Replace; VENTILATION FILTER—Clean and Re-oil	X		X		X		X		X		X		X		X
* EMISSION CONTROL ADJUSTMENTS															
SPARK PLUGS—Clean and Gap or Replace (Not required at first 4-month interval)															
DISTRIBUTOR POINTS—Adjust or Replace and Set Timing	X		X			X			X			X			X
CARBURETOR—Adjust Idle Speeds															
P.C.V. SYSTEM—Service (Check operation of P.C.V. valve at first oil change)															
CANNISTER FILTER (California cars)—Replace and Inspect cannister			X			X			X			X			X
LINKAGE (Transmission, Cruise Control, Manual Shift and Clutch)—Lubricate			X			X			X			X			X
BATTERY—Clean terminals and cables; HEADLIGHTS—Check Aim			X			X			X			X			X
HOOD STOPS, HINGES, LATCHES AND ALL BODY HINGES—Lubricate			X			X			X			X			X
CARBURETOR—Replace Fuel Inlet Filter			X			X			X			X			X
STEERING LINKAGE AND BALL JOINTS—Lubricate and check seals for damage			X			X			X			X			X
COOLING SYSTEM—Pressure Test, Wash Radiator Cap and Add Coolant if Necessary			X			X			X			X			X
BRAKES—Inspect															
BRAKE SYSTEM WARNING LIGHT—Check Operation						X						X			
ENGINE COOLANT—Service System and Install New Coolant						X						X			
SPEEDOMETER CABLE—Lubricate						X						X			
* AIR CLEANER ELEMENT—Replace						X						X			
* AUTOMATIC TRANSMISSION—Change Fluid, Replace Strainer						X						X			
AIR CONDITIONER—Check Operation and Service as Needed															
FRONT WHEEL BEARINGS—Repack															
TIRE PRESSURES, All Including Spare—Check When Cold															
TIRES (Except spare)—Rotate															
WHEELS—Align and Balance															

* EXCEPTIONS TO THE ABOVE SCHEDULE FOR HIGH MILEAGE AND ADVERSE DRIVING CONDITIONS

- ENGINE OIL—Exceptionally high mileage driver should change oil at six thousand mile interval when this occurs in less than 4 months.
Under adverse or heavy-duty operations such as dusty conditions, trailer hauling, extensive idling, numerous short trips or prolonged operation at sub-zero temperatures, change engine oil every 2 months or at three thousand mile intervals, whichever occurs first.
- ENGINE OIL FILTER—Replace at first oil change and every second oil change thereafter.
- EMISSION CONTROL ADJUSTMENTS—Perform at first oil change and at 12 months or 12,000 mile intervals thereafter.
- AIR CLEANER ELEMENT—Replace every 24,000 miles or more often as required when operating under dusty conditions.
- AUTOMATIC TRANSMISSION—HEAVY DUTY OPERATION—Change fluid and replace strainer every 12,000 miles.

TECHNICAL DATA

DIMENSIONS (IN INCHES)

SERIES	TREAD		WHEEL BASE	OVERALL LENGTH	OVERALL WIDTH
	Front	Rear			
Delta 88s.....	62.5	63.0	124.0	218.6	79.9
Ninety-Eights.....	62.5	63.0	127.0	224.4	80.0

CAPACITIES

COOLING SYSTEM	UNITS	U. S. MEASURE	IMPERIAL MEASURE
Delta 88			
Without Heater.....	Qts.	15.5	13.0
With Heater.....	Qts.	16.5	13.75
With Air Conditioner, Add.....	Qts.	.5	.4
Delta 88 Custom & Royal & Ninety-Eight			
Without Heater.....	Qts.	16.5	13.75
With Heater.....	Qts.	17.5	14.5
With Air Conditioner, Add.....	Qts.	.5	.4
DIFFERENTIAL			
Delta 88s with 350 Engine.....	Pts.	3.7	3.0
88s & Ninety-Eights with 455 Engine.....	Pts.	5.3	4.4

CAPACITIES (continued)

ENGINE CRANKCASE	UNITS	U. S. MEASURE	IMPERIAL MEASURE
Drain and Refill.....	Qts.	4.0	3.25
Refill and Filter Change.....	Qts.	5.0	4.25
FUEL TANK.....	Gals.	25.0	20.75
POWER STEERING			
Pump Only.....	Qts.	.6	.45
Complete System.....	Qts.	1.2	.9
AUTOMATIC TRANSMISSION			
Turbo Hydra-Matic			
Drain and Refill.....	Qts.	3.0	2.5
After Complete Overhaul.....	Qts.	10.0	8.3
MANUAL TRANSMISSION			
3-Speed.....	Pts.	3.55	3.0
Radiator Cap Pressure Specification.....		15-18 psi	
Thermostat Temperature Specification.....		195° F.	
TIRE PRESSURES AND SIZES—See Charts in the Tire Section of This Book.			

ENGINE SPECIFICATIONS

ENGINE	350 L.C. 2 Bbl.	455 L.C. 2 Bbl.	455 H.C. 4 Bbl.	455 H.C. Performance
Bore and Stroke	4.057 x 3.385	4.126 x 4.250	4.126 x 4.250	4.126 x 4.250
Compression Ratio	9.0 to 1	9.0 to 1	10.25 to 1	10.25 to 1
Cubic Inch Displacement	350	455	455	455
Horsepower (Taxable)	52.7	54.4	54.4	54.4
Horsepower (Brake)	250 @ 4400 RPM	310 @ 4200 RPM	365 @ 4600 RPM	390 @ 5000 RPM
Firing Order	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
Code Number Prefix	TC, TD, TL	UC, UD, UJ	UN, UO	UL
AC Spark Plug Type	SEE TUNE-UP LABEL UNDER CAR HOOD			
Spark Plug Gap				
Dist. Point Dwell				
Ignition Timing				
Energizer (Battery)	Delco R59	Delco R71	Delco R71S	Delco R71S
(Amp. Hrs./No. Plates)	61/66	70/77	73/90	73/90
Fuel Recommended	Regular	Regular	Premium	Premium

RECOMMENDATIONS FOR FILTERS

ITEM	USAGE	RECOMMENDATION
Engine Oil Filter	All Engines	AC Type PF 30
Engine Air Cleaner Element	2 Bbl. Engines 4 Bbl. Engines	AC Type A 331C AC Type A 212CW
Carburetor Fuel Filter	All Engines	AC Type GF 441
Positive Crankcase Ventilator Valve	All Engines	AC Type CV 679C

IDENTIFICATION NUMBERS

Vehicle Identification Number – This is the legal number of the vehicle which is embossed on a plate attached to the top of the instrument panel on the driver's side and is easily seen through the windshield from outside the car. It is also imprinted on the Protect-O-Plate and appears on the Vehicle Certificates of Title and Registration.

Body Identification Number – The body style number, body serial number, trim number and paint code are shown on a plate affixed to the left side of the cowl and can be seen when the hood is raised.

LAMP SPECIFICATIONS

INTERNAL LAMPS

USAGE	QUANTITY	LAMP NO.
Speedometer and Odometer.....	2 }	194
Gas Gauge.....	3 }	
Turn Signal Indicator.....	2 }	
Generator Warning.....	1 }	
Brake Warning Light.....	1 }	
Engine Temperature Indicator—(Cold).....	1	161
High Beam Indicator.....	1 }	168
Engine Temperature Indicator—(Hot).....	1 }	
Oil Pressure Warning.....	1 }	
Console Compartment.....	1 }	1895
Heater, Ventilation and Air Conditioner Control.....	1 }	
Shift Indicator HMT—Floor.....	1 }	1445
Ash Tray.....	1 }	
Cruise Control.....	1 }	
Radio Dial.....	1	1893
Electric Clock.....	2 }	1816
Shift Indicator HMT—Panel.....	1 }	
Underhood.....	1 }	631
Trunk.....	1 }	
Map Lamp.....	1 }	563
Mirror Map Light.....	1 }	
Courtesy.....	2 }	90
Side Roof or Rear Quarter.....	2 }	
Arm Rest.....	2 }	

USAGE	QUANTITY	LAMP NO.
Console Light.....	1	97
Dome.....	1	211
Door Lights.....	4* }	212
Glove Box.....	1 }	
Rear Seat Vanity Light.....	1 }	

EXTERNAL LAMPS

License.....	1	97
Parking and Turn Signal.....	2	1157NA
Tail and Stop.....	4	1157
Back Up.....	2	1156
Cornering Lamp.....	2	1293
Side Marker—Front.....	2	194
Side Marker—Rear.....	2**	194
Headlamp—Upper Beam.....	2	L-4001
Headlamp—Upper and Lower Beam.....	2	L-4002

*98 Luxury Sedans Use 8

**98 Models Only

When replacement is necessary, specify AC-Guide Lamps.

FUSE SPECIFICATIONS

The following fuses are located in the fuse block on the front passenger compartment wall adjacent to the steering column. Do not use fuses of higher amperage rating than those specified below.

Usage	Name of Fuse Circuit on Fuse Block	Fuse Type and Amperes
Radio.....	Radio	AGC-10
Tape Player.....		
Turn Signal.....	Dir. Sig.-Back Up	SFE-20
Back-Up Lamps.....		
Electric Antenna.....		
Cruise Control.....		
Cornering Lamps.....	Tail	SFE-20
Tail Lamps.....		
Side Marker Lamps.....		
License Lamp.....		
Underhood Lamp.....		
Stop Lamps.....	Stop-Haz.	SFE-20
Hazard Warning Lamps.....		
Instrument Panel Lamps.....	Inst.-Lps.	SFE-4
Windshield Wipers.....	Wiper	AGC-25
Heater.....	Heater-A/C	AGC-25
Air Conditioner and Comfortron.....		
Transmission-Control.....	Gauges-Trans.	AGC-10
Parking Brake Lamp.....		
Electric Windows.....	Power Relay /Acsys.	SFE-20
Vanity Mirror Lamp.....		
Mirror Map Lamp.....		

Usage	Name of Fuse Circuit on Fuse Block	Fuse Type and Amperes
Clock.....	Clk., Ltr.-Ctsy.	AGC-25
Cigar Lighter.....		
Dome Lamp.....		
Courtesy Lamps.....		
Trunk Lamp.....		
Glove Box Lamp.....		

The following circuits employ circuit breakers or have fuses located as indicated:

Headlamps.....	Circuit Braker	Built-In Light Switch
Windshield Wiper Motor.....	Circuit Braker	In Motor
Electric Seat, Window and/or Convertible Top Motors.....	Circuit Braker	Left Side of Engine Compartment
Directional Signal Flasher Delta 88s, Ninety-Eight.....	G. M. Part Number 383636 or 383637	In Clip Behind Instrument Panel
Hazard Warning Flasher.....	3904868	In Fuse Panel
Air Conditioner (High) and Comfortron.....	AGA-30	In Harness
Electric Rear Window Defogger.	Aga-30 SFE-3	In Harness

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ZONE OFFICES

To assist Oldsmobile Dealers, who are conveniently located throughout the United States, Oldsmobile Division maintains, in strategic locations, the following Zone Offices:

Atlanta, Georgia 30303
Peachtree Center Bldg.
230 Peachtree St., N.W.

Boston, Mass. 02116
30 St. James Ave.

Buffalo, New York 14203
Tishman Building
10 Lafayette Sq.

Charlotte, N. C. 28203
1051 E. Morehead St.
Suite 100
P.O. Box 3486

Chicago (Park Ridge), Ill. 60068
Executive Plaza
205 West Touhy Ave.

Cincinnati, Ohio 45202
Kroger Building
1014 Vine Street

Cleveland, Ohio 44116
Park-West Bldg.
20545 Center Ridge Rd.

Dallas, Texas 75201
Southland Center

Denver, Colorado 80202
1212 Security Life Bldg.
1616 Glenarm Place

Detroit (Southfield), Mich. 48075
Northland Towers, Suite 700
15565 Northland Drive

Houston, Texas 77025
Fannin Bank Bldg.
1020 Holcombe Blvd.

Indianapolis, Indiana 46204
Fidelity Building
Monument Circle

Jacksonville, Florida 32207
Gulf Life Tower, Suite 1742
Gulf Life Drive

Kansas City, Mo. 64199
Commerce Towers Bldg.
P.O. Box 13247

Los Angeles (Woodland Hills),
California 91364
6355 Topanga Canyon Blvd.

Memphis, Tennessee 38111
Century Building
3294 Poplar Ave.

Milwaukee, Wisconsin 53226
Mayfair Plaza
2421 North Mayfair Rd.

Minneapolis, Minn. 55435
Pentagon Office Park
4640 W. 77th Street

Newark (East Orange),
N. J. 07018
Liberty Mutual Ins. Bldg.
240 S. Harrison

New York, New York 10022
General Motors Bldg.
767 Fifth Ave.

Oakland (Walnut Creek),
California 94596
Lincoln-Broadway Two Bldg.
1501 North Broadway

Oklahoma City, Okla. 73105
First Fidelity Ins. Bldg.
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