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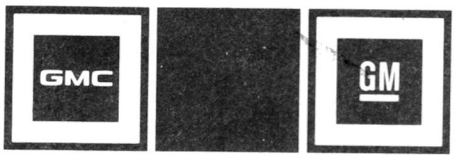
GMC

1978 TRANSMODE OPERATING MANUAL

IMPORTANT
OPERATING
SAFETY AND
MAINTENANCE
INSTRUCTIONS



PART NO. 2028573

A WORD TO GMC OWNERS...

This manual has been prepared to acquaint you with the operation and maintenance of only the chassis and body components of your TransMode Vehicle, and to provide important safety information. It is supplemented by two convenient folders. These folders give you maintenance and warranty information. We urge you to read these publications carefully. Follow the recommendations to help assure the most enjoyable and troublefree operation of your vehicle.

While reading this manual, you will notice that some specifications are given in both metric and customary units. Where precise accuracy is not needed, some conversions have been rounded to even numbers for your handy use.

An Operating Manual Appendix is provided with vehicles built after January 1, 1978, which have a gross vehicle weight rating (GVWR) in excess of 10,000 pounds. This Appendix covers items relating to compliance with Federal noise emission standards and includes the noise emission warranty. It also contains information on maintenance of the noise control system and lists acts which are considered to be tampering with the system. As noted in the Appendix, tampering with the noise control system is prohibited by Federal Law.

When it comes to service, remember that your GMC Motorhome dealer knows your chassis and body components best. Your dealer is interested in your complete satisfaction. Return to him for Guardian Maintenance Service and any other repairs you may require.

To assist dealers in handling your needs, GMC Truck and Coach maintains a number of Zone Offices throughout the country. If you have a problem that has not been handled to your satisfaction, follow the procedure presented in Section 6 of this manual under the heading, "Owner Assistance".

We would like to take this opportunity to thank you for choosing a GMC product—and assure you of our continuing interest in your motoring pleasure and satisfaction.

GMC Truck & Coach Division

FOR CONTINUING SATISFACTION KEEP YOUR VEHICLE ALL GM, GENERAL MOTORS PARTS ARE IDENTIFIED BY ONE OF THESE TRADEMARKS:

1978 GMC TRANSMODE VEHICLES

OPERATING MANUAL

This manual should be considered a permanent part of this vehicle. It should remain with the vehicle when sold, to provide the next owner with important safety, operating and maintenance information.

All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of printing. The right is reserved to make changes at any time without notice.

For vehicles sold in Canada, substitute the name General Motors of Canada Limited, wherever the name GMC Truck and Coach Division appears in this manual.

GMC Truck & Coach Division
General Motors Corporation
Pontiac, Michigan 48053

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IMPORTANT INFORMATION ON VEHICLE LOADING

OVERLOADING

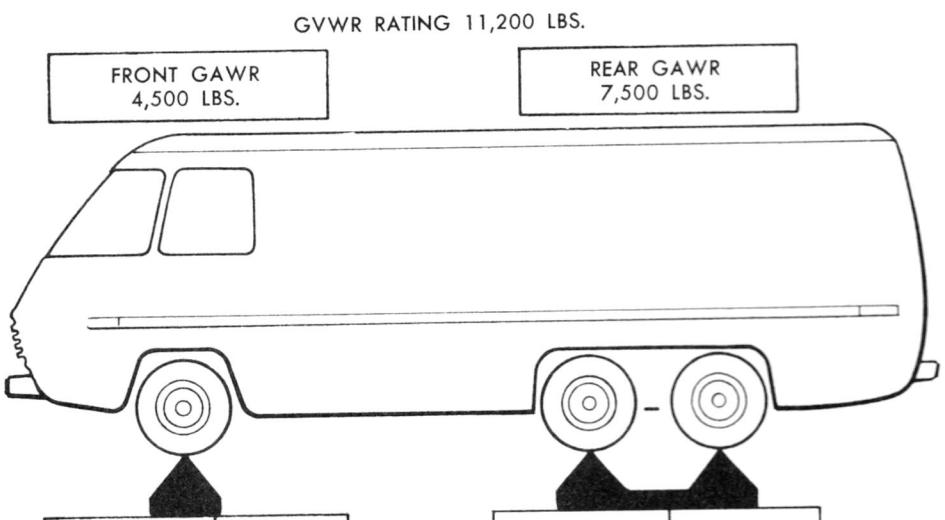
CAUTION

The components of your vehicle are designed to provide satisfactory service if the vehicle is not loaded in excess of either the Gross Vehicle Weight Rating (GVWR) or the maximum Front and Rear Gross Axle Weight Ratings (GAWR's). These ratings are listed on the Vehicle Identification Number (VIN) plate located behind the right front access door. Overloading can create serious potential safety hazards and shorten the service life of your vehicle.

Your dealer can advise you concerning proper loading conditions of your vehicle.

MAXIMUM FRONT AND REAR AXLE WEIGHTS (AS MANUFACTURED)

The weight of the cargo load must be properly distributed over both the front and rear axles. The VIN plate shows the maximum weight that the front axle can carry (front GAWR) and the maximum weight that the rear axle (rear GAWR) can carry. The GVWR represents the maximum permissible loaded weight of the vehicle and takes into consideration the engine, transmission, frame, suspension, brake, axle and tire capabilities. Actual front and rear end weights can only be determined by weighing the vehicle. This can be accomplished through highway weigh stations or other such commercial facilities. Consult your dealer for assistance. The cargo load should be distributed on both sides of the centerline of the vehicle as equally as possible.



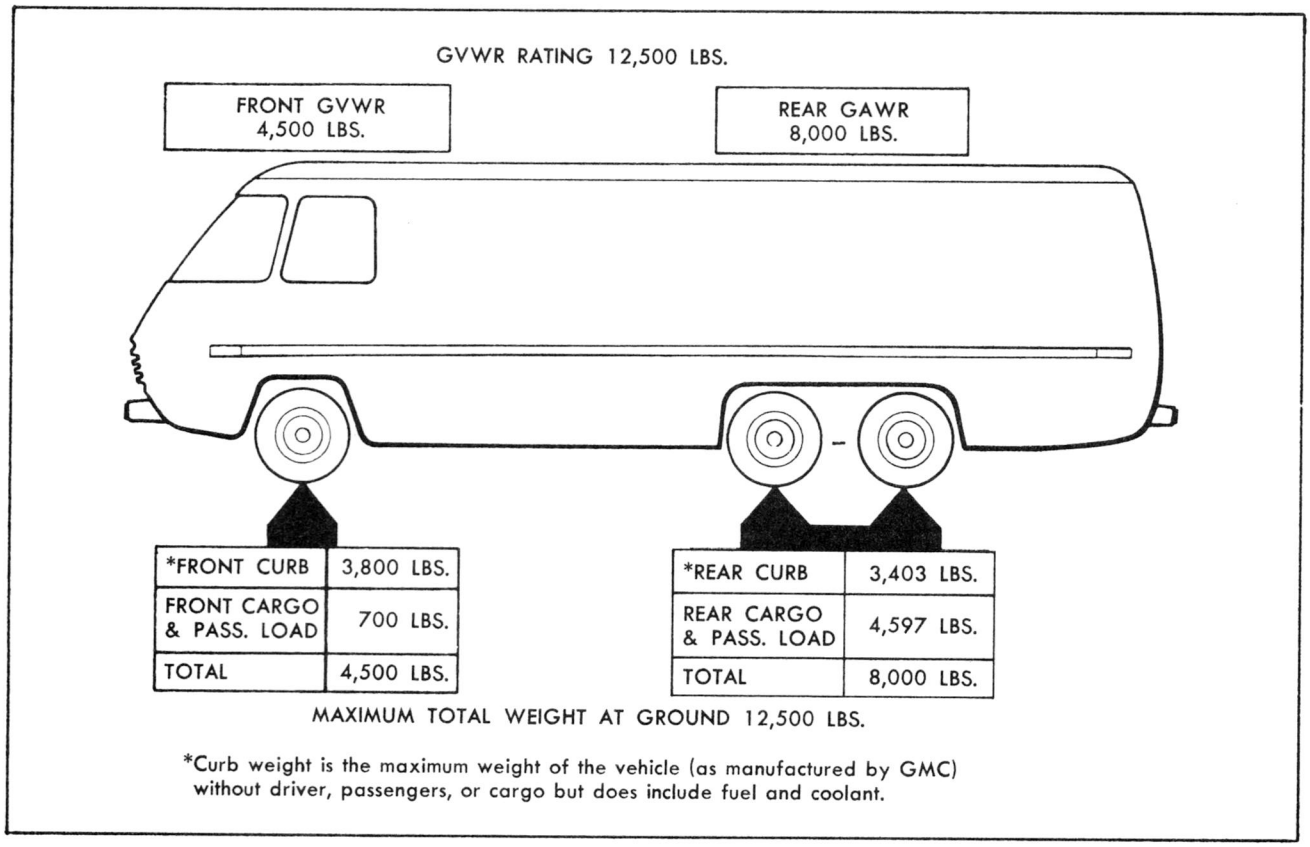
*FRONT CURB	3,800 LBS.
FRONT CARGO & PASS. LOAD	700 LBS.
TOTAL	4,500 LBS.

*REAR CURB	3,120 LBS.
REAR CARGO & PASS. LOAD	4,380 LBS.
TOTAL	7,500 LBS.

MAXIMUM TOTAL WEIGHT AT GROUND 11,200 LBS.

*Curb weight is the maximum weight of the vehicle (as manufactured by GMC) without driver, passengers, or cargo but does include fuel and coolant.

Vehicle Loading (23' Model)



Vehicle Loading (26' Model)

ALLOWABLE LATERAL WEIGHT VARIATION

The independent suspension on this vehicle could be adversely affected by an unbalanced load on either side of vehicle. The allowable front lateral weight variation is 250 pounds. The allowable rear lateral weight variation is 600 pounds.

Lateral weight variations in excess of the above, can result in abnormal vehicle handling.

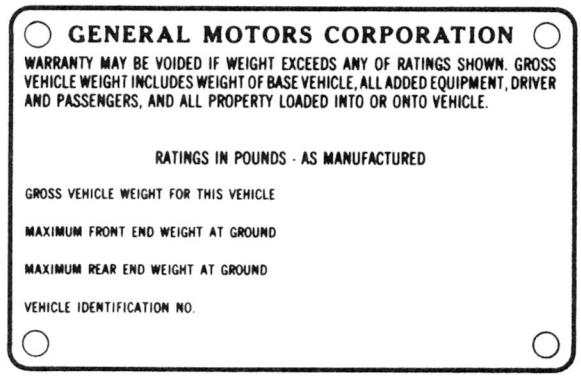
EFFECT ON WARRANTY

Your New Vehicle Warranty does not apply to any part of your vehicle "which has been subject to misuse." Any part which fails because of overloading has been subject to misuse.

VIN (Vehicle Identification Number) Plate

Your VIN plate shows the GVWR and the front and rear GAWR's for the vehicle to which they are attached.

Gross Vehicle Weight (GVW) is the weight of the originally equipped vehicle and all items added to the vehicle after it has left the factory. This would include the driver and all occupants, and everything that is loaded into (or onto) the vehicle. *The GVW must not exceed the GVWR.* Also, the front and rear weights of the loaded vehicle must not exceed the front and rear GAWR's.



Vehicle Identification Plate

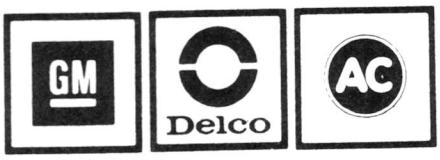
CAUTION

Luggage or other cargo should be secured in place. This will help keep such things from being thrown about and injuring people in the vehicle in an accident.

TIRES

It is important that the tires on your vehicle be of the proper size, and be properly inflated. It is important to avoid over-inflation as well as under-inflation. See the SERVICE AND MAINTENANCE section for proper tire inflation pressures.

For continuing satisfaction keep your vehicle all GM. General Motors Parts are identified by one of these trademarks:



SECTION 1
BEFORE DRIVING YOUR VEHICLE

DRIVER CHECKLIST

Before Entering Vehicle

1. See that windows, mirrors and lights are clean.
2. Check whether any tire is low or flat. (You may need to check with a gauge to tell if radial tires are properly inflated.)
3. Check that all exterior lights work.
4. Look for fluid leaks.
5. Check area behind vehicle if about to back up.

Before Driving Off

1. Lock all doors. Close all roof vents.
2. Adjust seat.
3. Adjust inside and outside mirrors.
4. Fasten seat belts.
5. Check that warning bulbs light when key is turned to "ON" or "START" position.
6. Check all gauges.
7. Release parking brake (and see that "PARK BRAKE" light turns off).
8. With engine running, check that warning lights are now out.
9. Be sure you know your vehicle and its equipment and how to operate it safely.

GUARD AGAINST THEFT

For tips on how to protect your vehicle and its contents, see the "Steering Column Controls" section of this manual.

APPLICABLE SAFETY STANDARDS

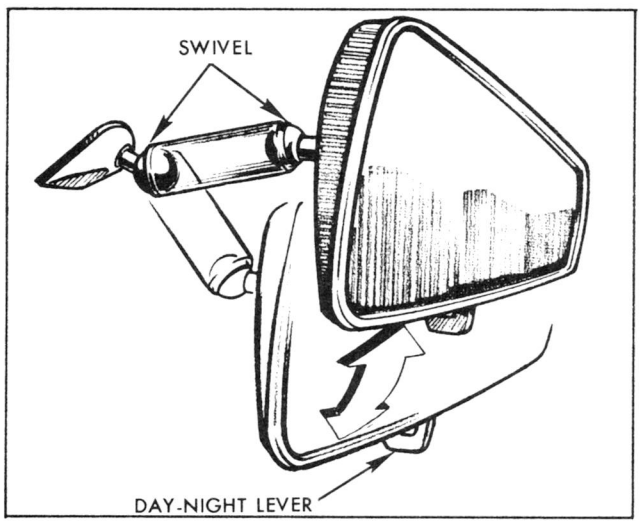
This vehicle was originally designed, manufactured and sold by General Motors Corporation as a bus, multipurpose passenger vehicle (MPV) or truck. General Motors Corporation has certified that as a bus, MPV or truck this vehicle conforms to all applicable Federal Motor Vehicle Safety Standards (FMVSS).

This vehicle was **not** originally designed, manufactured and sold by General Motors Corporation as **a school bus.** Therefore, this vehicle as originally designed, manufactured and sold by General Motors need not and does not conform to GMVSS requirements specifically intended only for school buses.

However, this does not prevent subsequent alteration of this vehicle from a bus, MPV or truck into a school bus. In such a situation the vehicle alterer should affix a vehicle alterer's label to this vehicle. This label should at least indicate the name of the vehicle alterer; the month and year of alteration; that, as altered, the vehicle conforms to all applicable Federal Motor Vehicle Safety Standards; and the new type classification of the vehicle; i.e., "school bus."

INSIDE REARVIEW MIRROR

The mirror can be adjusted up, down, or sideways to obtain the best view to the front and rear. Move the mirror lever to the night position to reduce glare from headlights of vehicles behind you.



Inside Rearview Mirror

OUTSIDE REARVIEW MIRRORS

Adjust the outside mirror so you can just see the side of your vehicle in the inboard portion of the mirror.

KEYS

Two different keys are provided for the locks on your VEHICLE. The key code is stamped on the "knock out" plug in each key head.

- *Key with square head (letter "J")* – for ignition lock only.
- *Key with oval head (letter "K")* – for all other locks.

For vehicle security:

- Record key code numbers; then knock plugs out of keys.
- Keep the key codes in a safe place such as your wallet, NOT IN THE VEHICLE.

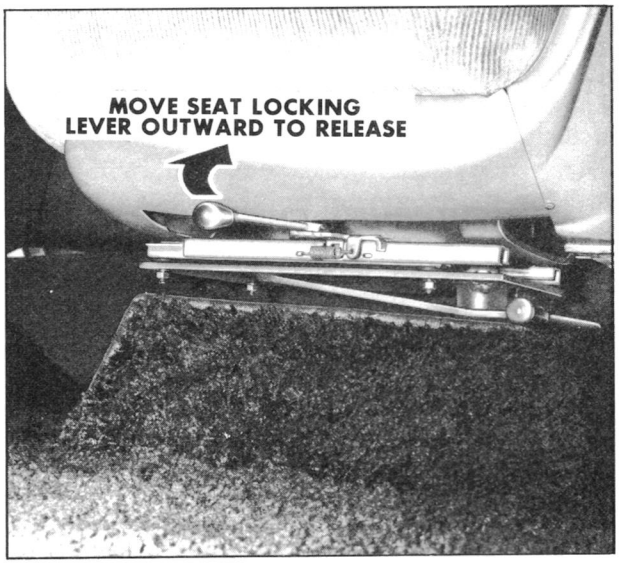
If the original keys are lost, duplicates can be made using the key codes. Contact any GM dealer or your locksmith.

If you park in an attended lot, separate and leave your square ignition key only. Lock your glove box (also all other compartments with key locks) and take the round key with you. This will help prevent any illegal entry into the glove box or any other compartments with locks.

SEATS

The driver and passenger seats in the driver compartment may be adjusted to suit an individual's preference. To move the seat forward or backward, simply release the seat locking lever located on the aisle side of the seat. Once released, exert slight body pressure in the direction desired. Release lever to lock the seat in desired position.

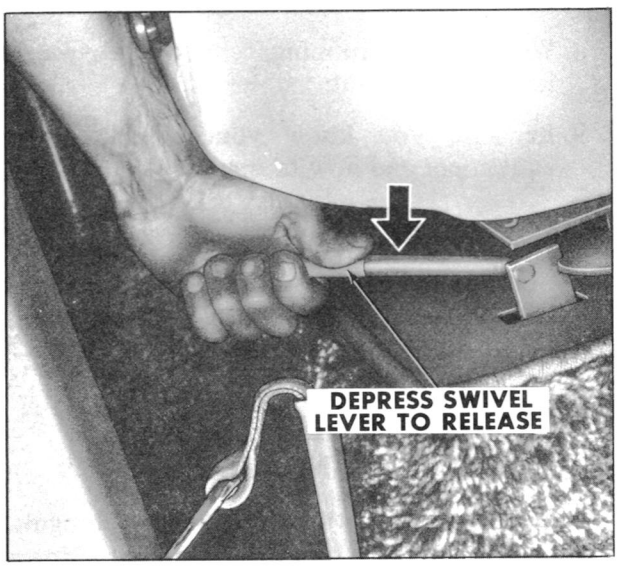
The seats can be swiveled to provide easy entrance and exit. To swivel seat, depress seat swivel lever (as shown), then rotate seat. The seats are designed to lock only in the forward facing position.



Seat Track Mechanism

CAUTION

After adjusting a manually operated seat, push forward and backward on seat and twist seat to be sure the seat adjusters and swivel lock have latched. Movement of the seat indicates that at least one latch or the lock did not engage. This could increase the chance of injury and/or the amount of injury in an accident. Take the vehicle to your dealer for service if you find that your seat adjusters do not latch.



Seat Swivel Mechanism

Do not adjust a manually operated driver's seat swivel or fore and aft lever while the vehicle is moving. The seat could move suddenly and could cause the driver to lose control of the vehicle.

ENTRANCE DOOR

DOOR LATCH

Door must be locked from outside the vehicle by inserting the key into the door key lock and turning. To unlock, turn in the clockwise direction. Reverse the direction to lock.

To lock door from inside vehicle, push the lock button DOWN. To unlock and open door from the inside, pull the lock button UP and pull on inside door handle.

CAUTION

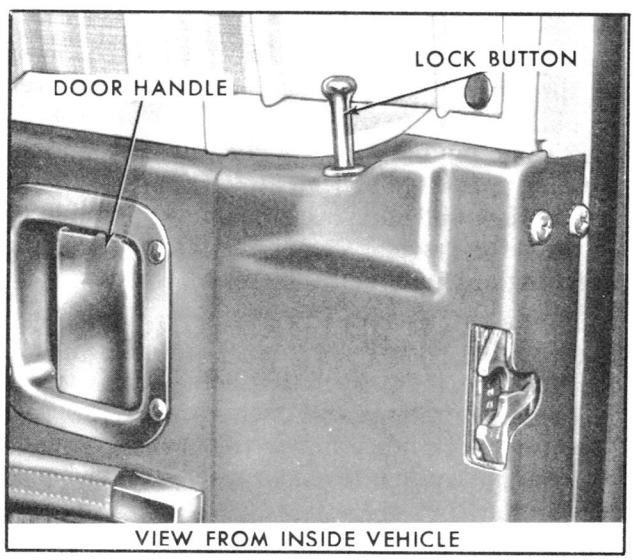
For safety's sake, always lock the doors when driving. This provides greater safety in accidents, and helps keep children from opening the door. It also helps keep out intruders when stopped for lights, etc.

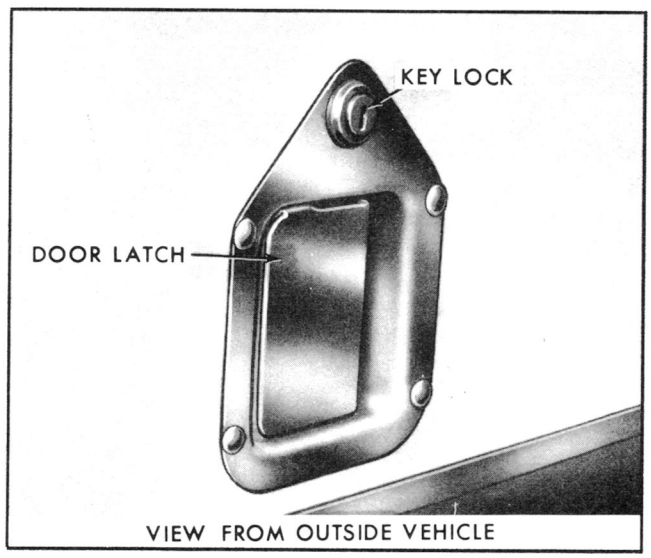
BELT RESTRAINTS

Your vehicle is equipped with lap belts in the driver and front passenger seating position(s). To help lessen the chance of injury and/or the amount of injury in accidents or sudden stops, General Motors urges that people riding in the vehicle be properly restrained at all times, using the seat belts provided. This includes pregnant women, and children of all ages. See following pages for use of restraints by children and pregnant women.

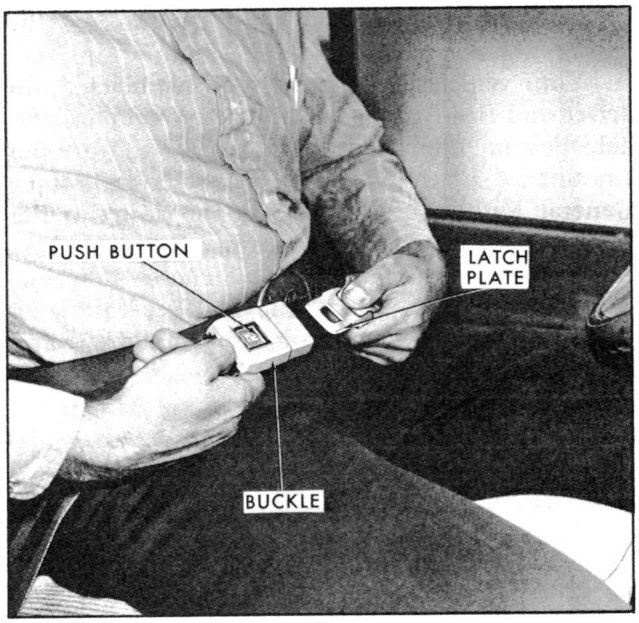
CAUTION

A snug fit with the lap belt positioned low on the hips is necessary to help lessen the chance of injury and/or the amount of injury in an accident. This spreads the force of the lap belt over the strong hip bone instead of across the soft abdomen. To help lessen the chance of injury and/or the amount of injury in an accident: Never use the same belt for more than one person at a time; do not wear twisted belts; and do not damage belts or belt hardware by pinching them in the seat or door.





Entrance Door Latch

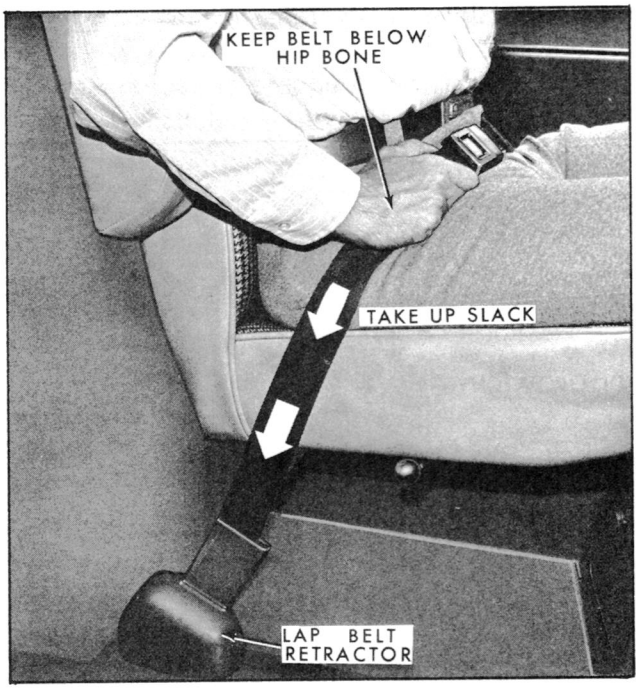


"Buckling Up" Lap Belt

For seats with built-in armrests, do not put the lap belt over the armrest.

The front seating positions—have belt retractors which are designed to automatically take up excess webbing.

- Adjust the seat as needed and sit up straight and well back in the seat.



Lap Belt (Front Seating Positions)

- In a single motion, pull the lap belt webbing across the lap far enough to push the latch plate into the buckle, until it clicks. If the webbing is not pulled out far enough to reach the buckle, let the lap belt rewind fully into the retractor. This unlocks the retractor so the belt can be pulled out to the proper length.

- Position the belt across the lap as LOW ON THE HIPS as possible. Then adjust to a SNUG FIT by pulling the belt firmly across the lap toward the lap belt retractor, so it can take up slack. This reduces the risk of sliding under the belt during an accident. The belt retractor is designed to take up extra webbing by itself.

- To unfasten the belt, push the button in the center of the buckle.

- When no longer in use, the lap belt can be stowed by letting it rewind into its retractor.

NOTICE: Do not let the belt twist while it is being rewound into the retractor. The bulk of the twisted belt may cause the retractor to jam so it will not rewind further. At the same time the retractor lock may keep the belt from being pulled out. If a belt should get jammed, you may be able to release it by working the belt in and out until the belt rewinds far enough to unlock. If the belt remains jammed, or other parts of the restraint system do not work properly, take the vehicle to your dealer for service.

RESTRAINT OF PREGNANT WOMEN

General Motors urges that pregnant women use the lap belt at all times. This will help lessen the chance of a pregnant woman and her unborn child being injured and/or will reduce the amount of their injury in an accident. The belt should be worn as low and snug over the hips as possible, as advised for regular seat belt use (See the preceding instructions).

LAP BELT INSPECTION

- Now and then check that belts, buckles, latch plates, retractors and anchors work properly. Also check for damage that could keep the restraint system from doing its job, see below.

- Keep sharp edges and damaging objects away from the belts and other parts of the restraint system.

- Replace belts if cut, weakened, or frayed. Also have belts replaced if they have been worn in a collision.
- If there is any question, have belts replaced.
- Keep belts clean and dry.
- Clean only with mild soap and lukewarm water.
- Do not bleach or dye belts since this may badly weaken them.

CHILD RESTRAINT

Children in vehicles should be restrained to help lessen the chance of injury and/or the amount of injury in accidents or sudden stops. In using any infant or child restraint system, be sure to read and follow all instructions on installation and use.

All unused lap belts near the child should be stowed properly to help keep them from striking the child in an accident. Lap belts without retractors should have the buckles latched and the belts adjusted to remove slack.

If a child is riding in a vehicle without an infant or child restraint system, take care as follows:

1. Infants who cannot sit up by themselves should be restrained by placing them in a covered, padded bassinet. Place it crossways in the vehicle (widthwise) on the seat. The bassinet should be securely restrained with the regular vehicle lap belts.

2. Children who can sit up by themselves should be placed on a seat and lap belted. Never let a child stand or kneel on any seat or elsewhere in the vehicle, once it is moving.

TRAILER TOWING

Towing a trailer could affect handling, durability and economy. Your safety and satisfaction depend upon proper use of correct equipment. Also, you should avoid overloads and other abusive use.

The maximum loaded trailer weight you can pull with your vehicle depends on what special equipment has been installed on it. We do not recommend towing any trailer over 1,000 pounds gross trailer weight.

To assist in attaining good handling of the Vehicle Trailer Combination, it is important that the trailer tongue load be maintained at approximately 10% of the 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.

CAUTION

Do not attempt to tow any trailer over 1,000 pounds gross trailer weight no matter what trailer towing equipment is installed. This could seriously affect your vehicle's performance, handling, and durability which could result in personal injury.

It should be remembered that when a trailer is connected, the trailer tongue weight is part of the load being carried by the vehicle and, therefore is included in the GVW of the vehicle.

CAUTION

Brakes

To help avoid personal injury due to poor braking action:

- **Before going down a steep or long grade, reduce speed and shift transmission into a lower gear to control your vehicle's speed. Try not to hold the brake pedal down too long or too often. This could cause the brakes to get hot and not work as well.**

Hitches

NOTICE: Periodically check that all trailer hitch bolts and nuts are tight.

- When a trailer hitch is removed, be sure to have any mounting holes in the body sealed. This will prevent entry of exhaust fumes, dirt or water. (See Engine Exhaust Gas Caution.)

BREAK-IN SCHEDULE

See the new vehicle break-in instructions in this manual. Also it is recommended that your new vehicle be driven for 500 miles (800 km) before trailer towing. At the end of this 500 mile

break-in period, speeds over 50 mph (80 km/h) and full throttle starts should be avoided during the first 500 miles (800 kilometres) of trailer towing. The same care should be observed when a new engine, transmission, or final drive is installed in your vehicle.

TRAILER TOWING TIPS

Engine Cooling

In case your engine overheats, see the "In Case of Emergency" section in this manual.

Long Uphill Grades

When going up long grades, the chance of engine overheating can be reduced by down-shifting the transmission to a lower gear and by reducing speed to 45 mph (70 km/h) or below.

Transmission

See the method for checking transmission fluid level in the "Service and Maintenance" section in this manual.

Parking

Vehicle's with trailers should not be parked on a grade. However, if you must, this is the way to do it:

1. Apply regular brakes.
2. Have someone place wheel chocks under trailer wheels.
3. When wheel chocks are in place, release regular brakes until chocks absorb load.
4. Apply parking brake.
5. Place transmission selector lever in "PARK".

If the vehicle is parked on a grade, don't shift the transmission lever to "PARK" until the trailer wheels are chocked and the parking brake is set. If you do, the weight of the vehicle and trailer may exert so much force on the parking pawl in the transmission that it may be hard to get the selector lever out of "PARK".

When starting after being parked on a grade:

1. Apply regular brakes and hold until steps 2 and 3 are completed.
2. Start engine in "PARK".
3. Shift into gear and release parking brake.
4. Release regular brakes and drive until the chocks are free.
5. Apply regular brakes and have helper remove chocks.

OPERATION IN FOREIGN COUNTRIES

Fuel Requirements

Your vehicle's engine can operate on regular grade leaded or unleaded gasoline with an octane rating of approximately 91, research method.

If you plan to drive your vehicle outside the U.S. and its jurisdictions or Canada, there is a possibility the gasolines available in some countries will not meet the needs of your engine. Use of low octane rated gasolines may cause engine knocking or serious engine damage, for which GMC Truck and Coach is not responsible.

To obtain gasoline information for the countries in which you plan to travel, write to GMC Truck & Coach Division, Service Department, Pontiac, Michigan 48053 (or in Canada, write to General Motors of Canada, Limited, Customer Services Department, Oshawa, Ontario L1J 5Z6.

When writing, please include:

1. The vehicle identification number.
2. The countries in which you plan to travel.

COMPONENT REPAIRS

Component repairs require the use of special tools and equipment. Technicians specially trained in the repair of TransModes and replacement parts may not be readily available outside of the United States causing delays and customer inconvenience. GMC is not responsible for any inconvenience which may result from these delays.

CB TRANSCEIVER

Operation of CB (Citizens Band) transceiver may be prohibited in some countries. In others, operation of this equipment requires a special permit besides the valid station license. (Permits should be obtained before you leave the United States.)

To operate a CB unit in Canada, get a permit from a regional office of the Canadian Department of Communications. For information regarding other countries, contact the local consulates of the countries in which you plan to travel.

SECTION 2

STARTING AND OPERATING VEHICLE

ENGINE EXHAUST GAS CAUTION (CARBON MONOXIDE)

Avoid breathing exhaust gases because they contain carbon monoxide, which by itself has no color or odor. Carbon monoxide is a dangerous gas. It can cause unconsciousness and can be lethal.

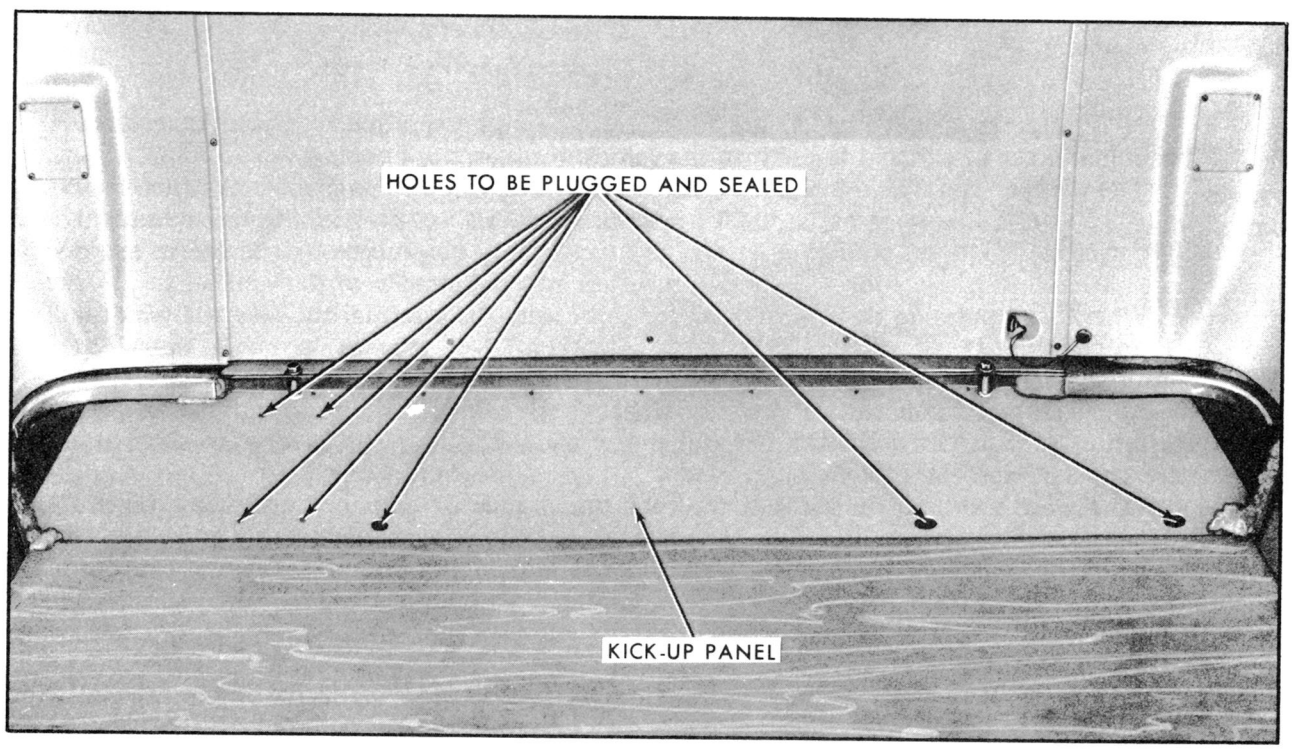
If at any time you suspect that exhaust fumes are entering the vehicle, have the cause determined and corrected as soon as possible. If you must drive under these conditions, drive with two rear windows CLOSED (if so equipped) and ALL other windows fully OPEN. Adjust heating or cooling system for maximum ventilation (see below).

Protect against carbon monoxide entry into the vehicle body. The best way is to keep the engine exhaust system, body and body ventilation system properly maintained. It is recommended that the exhaust system and body be inspected by a competent mechanic:

- Each time the vehicle is raised for oil change.
- Whenever a change is noticed in the sound of the exhaust system.
- Whenever the exhaust system, underbody or rear of the vehicle is damaged.

See your Maintenance Schedule folder for inspection procedure.

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



Location of Holes in Kick-up Panel

OCCUPYING A PARKED VEHICLE WITH ENGINE RUNNING FOR A LONG TIME 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 time, adjust heating or cooling system to force outside air into vehicle as follows:

- Set fan to high speed and upper control lever to any position except "OFF".

The two rear windows (if so equipped) should be closed while driving to help prevent drawing exhaust gases into the vehicle. In addition, it is recommended that roof vent(s) be closed while driving. If a rear window or roof vent must remain open for some reason while moving, or if electrical wiring or other cable connections to a trailer must pass through the seal between them and the body, these precautions should be followed:

- Close all windows.
- Adjust heating or cooling system to force outside air into the vehicle by setting fan to high speed and upper control lever to any position except "OFF".
- Fully open air vents in or under the instrument panel.

It is important that the engine inside access cover be properly seated to prevent possible leakage of exhaust fumes into the vehicle through this opening.

The kick-up panel at the rear of the floor (see illustration) contains holes which may be utilized to facilitate access to the interior for installation of certain interior equipment (i.e., access for wiring, plumbing, etc.) The holes should be plugged and sealed to avoid possible exhaust gas (carbon monoxide) intrusion into the interior of the vehicle.

Whenever operating the optional motor-generator it is essential the left-rear window (if so equipped) of the vehicle be kept closed to prevent possible entry of motor-generator exhaust gases into vehicle. Inspect the motor-generator exhaust system at vehicle lubrication intervals or when a change is noticed in the sound of the exhaust system or if it is damaged. Do not run motor-generator in a confined area, such as a garage.

Special care should be taken to prevent the chance of carbon monoxide exposure when the vehicle is modified for recreational or other usage. Also, some recreational vehicle appliances (such as lights, refrigerators, stove, heaters) may give off carbon monoxide. These appliances should be used only if there is enough ventilation.

STEERING COLUMN CONTROLS

ANTI-THEFT STEERING COLUMN LOCK

The anti-theft lock on the right side of the steering column has five positions:

- ACCESSORY–You can use some electrical accessories when the engine is not running. To engage this position, push key in and turn the top of the key towards you.
- LOCK–Normal parking position. Locks ignition and prevents normal use of steering wheel and shift controls.
  Key cannot be returned to "LOCK" and removed until shift lever is placed in "PARK".
- OFF–You can turn the engine off without locking steering wheel and shift controls.
- RUN–Normal operating position.
- START–Starts engine.

NOTICE: The anti-theft steering column lock is not to be used in place of the parking brake. Always set the parking brake when leaving the vehicle.

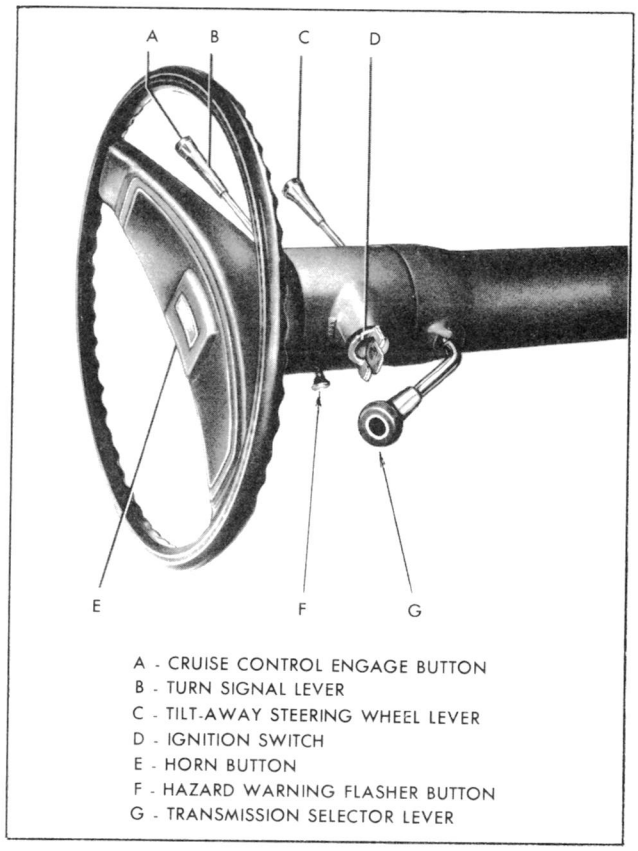
If you have trouble turning the key to unlock the ignition, try to turn the steering wheel as hard as you can in the direction the wheels are turned. At the same time, turn the key with as much effort as you can apply with your hand. Do not try to use a tool of any kind to apply more force on the lock knob, as this could break the knob.

GUARD AGAINST THEFT

Your new vehicle has features to help prevent theft of the vehicle itself, its equipment, and contents. But these anti-theft features DEPEND UPON YOU to work.

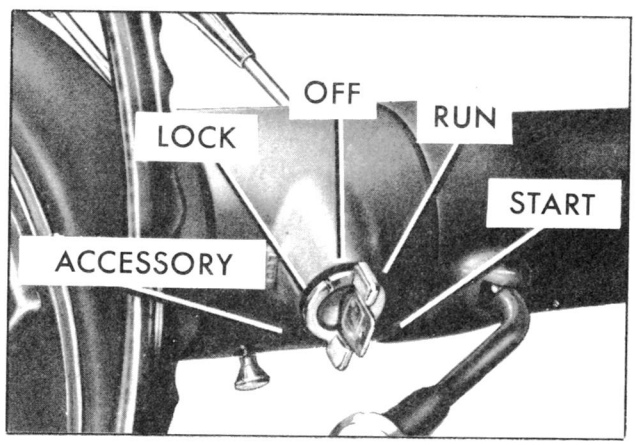
THE TIME TO BE MOST ON GUARD IS WHEN LEAVING THE VEHICLE. . . . .

- PARK IN A LIGHTED SPOT WHEN YOU CAN.

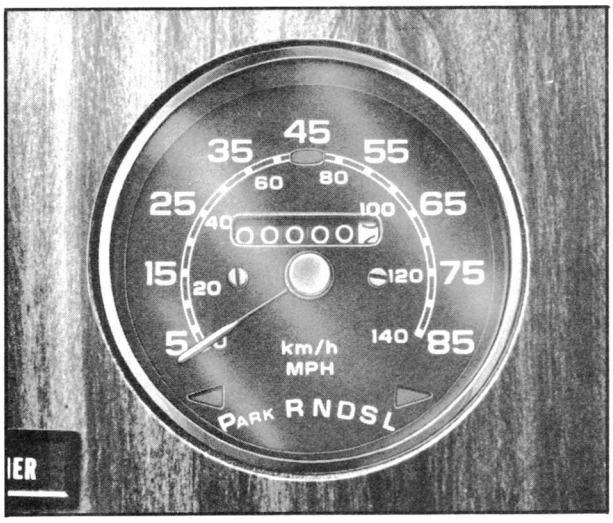


Steering Column Controls

- LOCK THE STEERING COLUMN AND TAKE THE KEYS:
  - o Turn the key to "LOCK" and remove the key. This locks the ignition and BOTH steering and shift controls.



Anti-Theft Steering Column Lock



Transmission Shift Indicator and Speedometer

- o If you must leave a key with the vehicle, leave the square head key only. Take the round head key with you. This will help prevent illegal entry into your vehicle at a later date or into your glove box (if locked).

- FULLY CLOSE ALL WINDOWS AND LOCK ALL DOORS.

- KEEP COSTLY ITEMS OUT OF SIGHT (AND LOCKED UP).

  - o Never leave things of value in plain sight on seat or floor.

  - o The glove box offers a place to hide small items (and if locked, protects even better.)

PARKING

When leaving your vehicle unattended:

- SET THE PARKING BRAKE *FIRST*. (See caution on page 19).

- Place the transmission lever in "PARK".

- Turn the key to "LOCK".

- Remove the key (the buzzer is designed to remind you.)

- Lock entrance door.

NOTICE: Do not leave your vehicle unattended with the engine running. If the engine should overheat you would not be there to react to the temperature warning light or gauge. This could result in costly damage to your vehicle and its contents.

STARTING THE ENGINE

1. Apply the parking brake.

2. **Place transmission shift lever in "P" or "N"** ("P" is preferred). A starter safety switch prevents starter operation while the transmission shift lever is in any drive position. (If you have to re-start the engine with the vehicle moving, place the shift lever in "N".)

3. Press down on accelerator pedal, and activate starter as outlined below, for different conditions.

- **Cold Engine -**

Fully depress accelerator pedal and slowly release. **With foot off the pedal,** crank the engine by turning the ignition key to the "Start" position; release when engine starts.

If engine starts, but fails to run, repeat this procedure. When engine is running smoothly (about 30 seconds), the idle speed may be reduced by slightly depressing the accelerator pedal and then slowly releasing.

NOTICE: Extended running of the engine (5 minutes or more) without pressing down on accelerator pedal could cause damage to the engine and exhaust system due to overheating.

- **Warm Engine -**

Press down on accelerator pedal about halfway and hold while cranking the engine.

- **Very Cold Weather (Below 0° F.) (-18° C.) Or After Vehicle 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:

- First, fully depress and release the accelerator pedal several times, then remove foot from accelerator pedal and crank engine.
- If 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 this case, continue cranking with the accelerator pedal fully depressed until the engine cleans itself of excess gasoline and runs smoothly.
- If engine doesn't crank properly due to a discharged main battery (automotive battery), place the battery switch in the "BAT BOOST" position. Return the switch to the "BAT NORMAL" position when engine starts.
- If engine fails to start after performing the above steps, refer to "Emergency Starting" in the IN CASE OF EMERGENCY section.

NOTICE: Do not continue cranking the engine for more than 30 seconds at a time to prevent starter overheating.

NEW VEHICLE "BREAK-IN" PERIOD

You can drive your new vehicle from its very first mile/kilometre without following a formal "break-in" schedule. However, there are things you can do during the first few hundred miles/kilometres of driving that will add to the future performance and ecomony of your vehicle.

It is recommended that your speed during the first 500 miles (800 kilometres) be limited to a maximum of 55 mph (90 km/h); but do not drive for long periods at any one constant speed, either fast or slow. During this period, avoid full throttle starts and, if possible, avoid hard stops especially during the first 200 miles (320 kilometres) of driving.

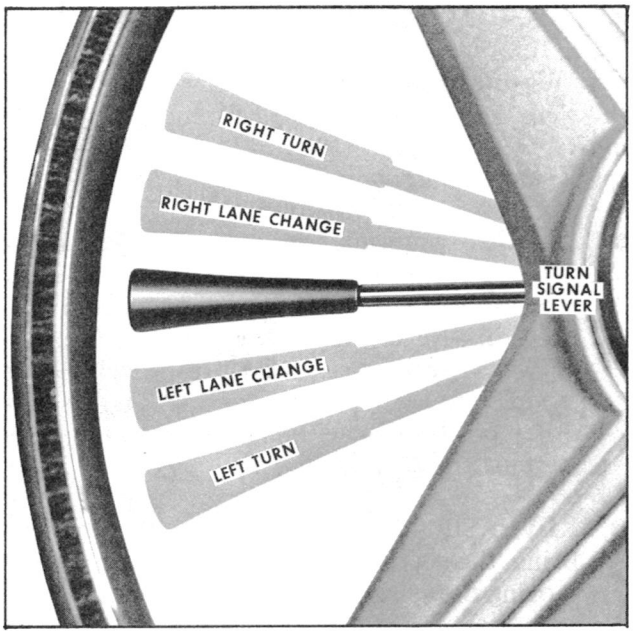
Always drive at moderate speed until the engine has completely warmed up.

If you plan to use your new vehicle for trailer towing, see additional information on page 9.

AUTOMATIC TRANSMISSION

The transmission selector lever is located on the right side of the steering column and the shift indicator is located in the bottom section of the speedometer cluster on the dash.

- "PARK"–Transmission lock when parking or while starting the engine. Pull the selector lever towards you to select or release this position. Never move the selector lever to "PARK" position unless the vehicle is completely stopped. "NEUTRAL" is the only other position in which your vehicle may be started.
- REVERSE "R"–For backing the vehicle. Bring the vehicle to a complete stop before moving the selector lever into Reverse.
- NEUTRAL "N"–The out-of-gear position. It is provided for starting a stalled engine while the vehicle is in motion or running the engine while standing with brake applied. This position is also used when the vehicle is being towed. DO NOT COAST IN NEUTRAL.
- DRIVE RANGE "D"–The driving range for city and highway driving. This position permits the transmission to operate through its complete range of gear ratios and to select automatically the proper ratio for road and load conditions.
- SUPER RANGE "S"–Used when super performance is needed for increased acceleration in traffic, hill climbing, or "Engine Braking" down-hill. The selector lever may be moved from "D" to "S" and vice versa, under most operating conditions. "SUPER" should not be used at speeds above 75 MPH.
- LOW "L"–Available for heavy pulling through mud or sand and for engine braking when descending steep hills. The selector lever may be moved to "L" at any speed but the transmission will only shift automatically into Low range when the vehicle speed is under approximately 40 MPH. The transmission will not upshift from Low range as long as the selector lever is in the "L" position.



Turn Signal Lever

CAUTION

Before going down a steep or long grade, reduce speed and shift the transmission into a lower gear or lower range to control vehicle speed. Try not to hold the brake pedal down too long or too often. This could cause the brakes to get hot and not work as well.

Use caution when speeding up, or when shifting into lower gear, on slippery surfaces with vehicle moving. Sudden acceleration or engine braking action (due to shifting into a lower gear) could cause the front wheels to skid. This could lead to loss of vehicle control.

- FORCED DOWNSHIFT–When additional 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.

TURN SIGNAL LEVER

The turn signal lever is on the left side of the steering column.

- TURN SIGNAL–Move the lever up to the second stop to signal a right turn. Move it down to the second stop to signal a left turn. When the turn is completed, the signal will cancel and the lever will return to horizontal.

- LANE CHANGE SIGNAL–In some turns, such as changing lanes, the steering wheel is not turned far enough to cancel the turn signal. You can flash the turn signal by moving the lever part way (to the first stop) and holding it there. The lever will return to horizontal when you release it.

A green light on the instrument panel flashes to tell you that the front and rear turn signal lights are working. If the light stays on, but does not flash, check for burned out bulbs. If the green light does not light when the lever is moved, check the fuse and indicator bulb.

HAZARD WARNING FLASHER

NOTICE: The hazard flasher is covered in the "In Case of Emergency" section later in this manual.

HORN CONTROL

The horn is actuated by depressing the rectangular shaped GMC button located in the center of the steering wheel.

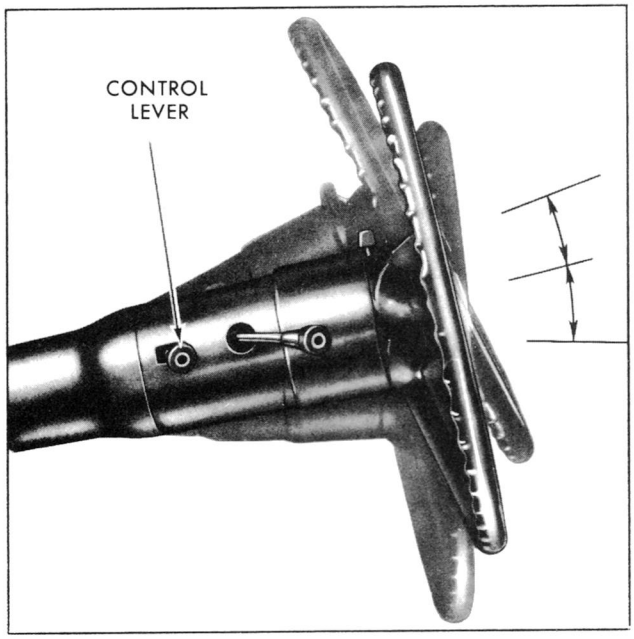
POWER STEERING

If the power steering system goes out because the engine has stalled or due to a failure, the vehicle can still be steered. However, much greater effort is needed, especially in sharp turns or at low speeds.

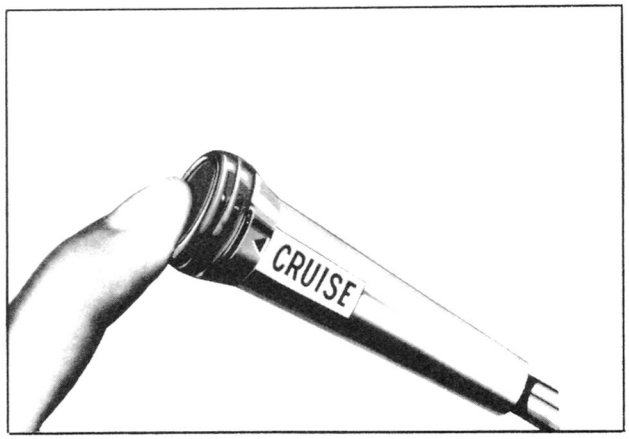
TILT STEERING WHEEL

The tilt steering wheel can be tilted up above normal position to provide additional room for entrance and exit as well as selected driving positions above or below normal height.

The tilt mechanism is operated by lifting up on the small control lever, on the left side of the steering column just below the directional signal lever, then moving the steering wheel to the selected position and releasing the lever.



Tilt Steering Wheel



Cruise Control Lever

CRUISE CONTROL

The optional Cruise Control is an automatic speed control system which is designed to allow the vehicle to hold a selected speed of approximately 30 MPH (50 km/h) or higher–depending on engine limitations–thus increasing comfort and economy on turnpikes, and other non-congested highways.

- TO OPERATE–The Cruise Control engagement button is located in the end of the turn signal lever. Accelerate the vehicle to the desired speed and momentarily push in the engagement button, take your foot off the accelerator and this speed will be maintained.

- TO RESET AT A FASTER SPEED–Accelerate the vehicle to the desired higher speed, push in the engagement button fully and release slowly.

- TO RESET AT A SLOWER SPEED–Depress the engagement button fully and HOLD. Allow vehicle to decelerate. When vehicle reaches desired speed, release the engagement button slowly.

- FOR PASSING–You can increase your speed by depressing accelerator pedal. When you remove your foot from the pedal, the vehicle will slow down to the cruising speed set prior to the acceleration.

- TO DISENGAGE–Lightly apply the brake pedal to disengage system.

CAUTION

To help keep the vehicle under control do not use the Cruise Control when it may not be safe to keep the vehicle at a constant speed. For example, a constant speed may not be safe in heavy or varying traffic, or winding or slippery roads. With the Cruise Control engaged, taking your foot off the accelerator pedal does not allow engine speed to return to idle.

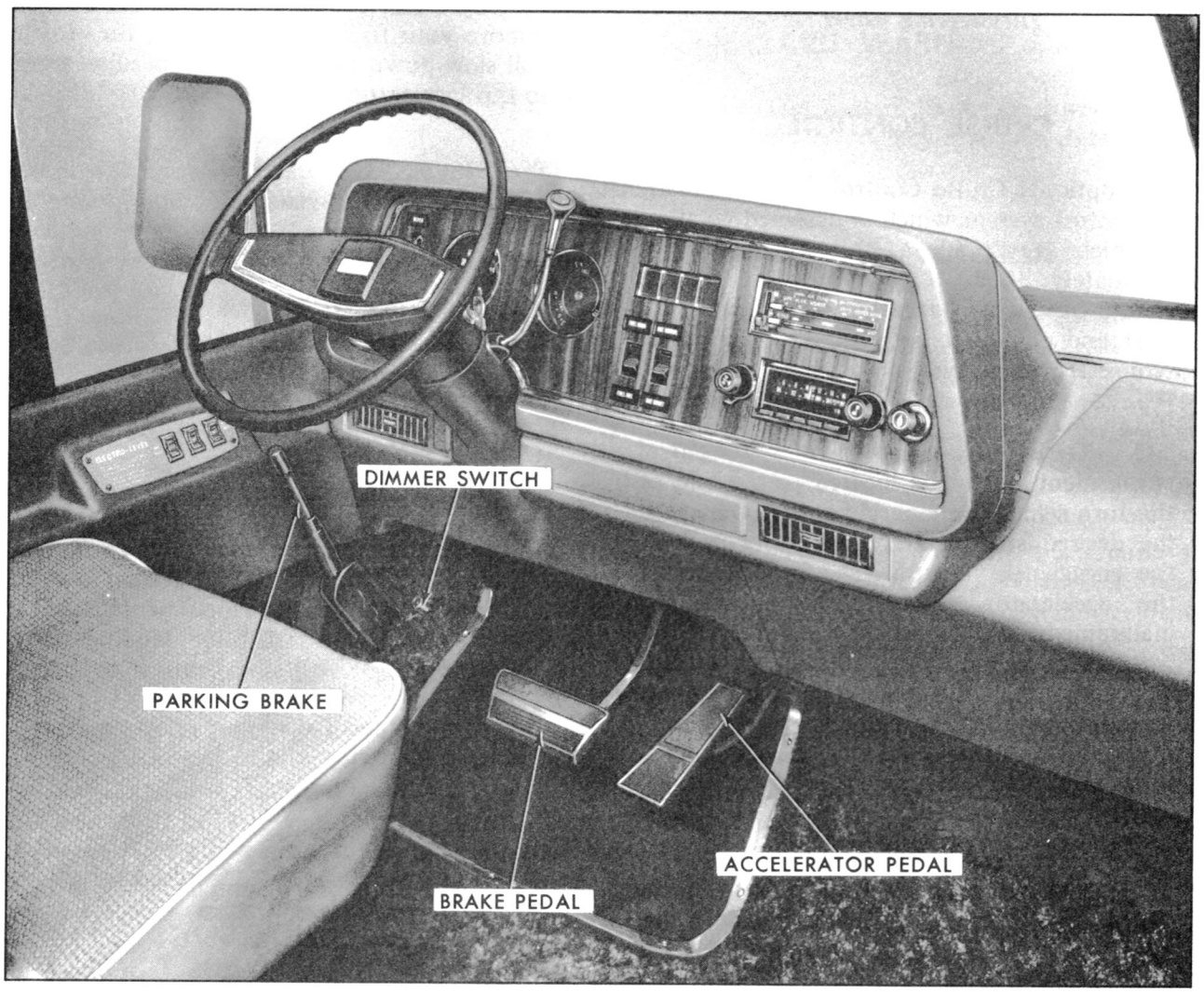
FLOOR CONTROLS

POWER BRAKE SYSTEM

This vehicle is equipped with a Dual Hydraulic Split System With Power Assist. It is also equipped with disc type brakes on the front wheels and drum type brakes on the tandem rear wheels.

CAUTION

Driving through water deep enough to wet the brakes may cause the brakes not to work as well. As a result the vehicle will not slow down at the usual rate, and it may pull to the right or left. After checking the rear for other vehicles, apply the brakes lightly to check whether this has happened. To dry them quickly, lightly apply the brakes. At the same time keep a safe forward speed, with plenty of clear space ahead, to the rear and to the sides. Do this until the brakes return to normal.



Vehicle Floor Controls

NOTICE: The brake system warning light is covered on page 22 under "Instrument Panel and Controls" in this section.

- If power assist is lost because of a stalled engine or other reasons, the brakes can normally still be applied with power assist at least two times using reserve power.

- If the brake pedal is held down, the system is designed to bring the vehicle to a full stop on reserve power. However, the reserve power is partly used up each time the brake pedal is applied and released. Do not pump the brakes when brake power assist has been lost. (except when needed to maintain steering control on slippery surfaces).

- Without power assist, the vehicle can still be stopped by pushing much harder on the brake pedal. However, the stopping distance may be longer.

SELF-ADJUSTING BRAKES

The brakes on this vehicle (except for the parking brake) are self-adjusting. They have been designed so that periodic brake adjustment is not required.

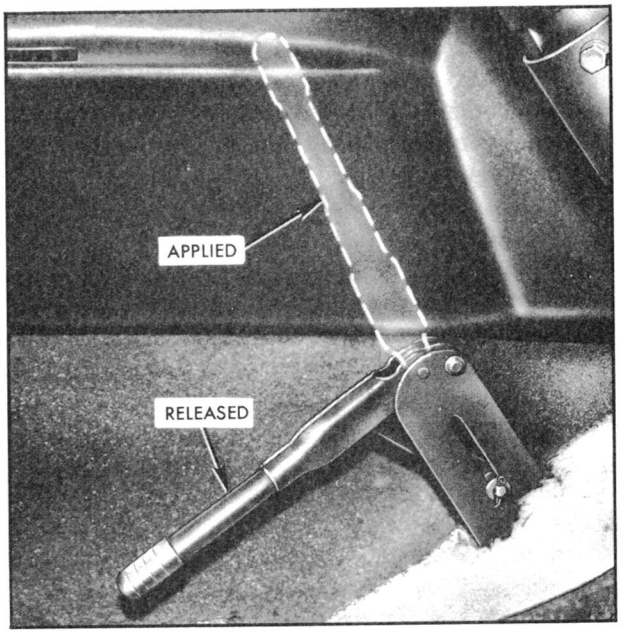
The drum brakes adjust themselves when the brakes are firmly applied while the vehicle is moving backwards.

The disc brakes adjust themselves each time the brakes are used.

- Thus, if the brake pedal goes down further than normal due to a lack of adjustment, drive backward and forward a few times. Apply the brakes firmly when going each way.

- See your dealer if pedal height does not return to normal, or if there is a rapid increase in pedal travel, which could be a sign of other brake trouble. Also see your dealer if the parking brake needs adjustment.

NOTICE: "Riding the brake" by resting your foot on the brake pedal when not intending to brake can cause overheated brakes. This can wear out the brake linings faster and damage the brakes themselves, as well as waste fuel.



Parking Brake Control

NOTICE: Front disc brakes have a built-in wear indicator that is designed to make a high-pitched squealing or cricket-like warning sound when the brake linings are worn to where new linings are needed. The sound will come and go, or be heard all the time when the wheels are rolling, but will stop when the brake pedal is pushed down firmly. There are also several brake checks listed in the Maintenance Schedule folder.

PARKING BRAKE

The amount of force needed to apply the parking brake can be adjusted by turning the knob on the upper end of the lever. This also adjusts how strongly the brake itself is applied. The greater the force needed at the lever, the greater the degree of brake application.

CAUTION

The parking brake should be set before leaving the driver's seat. This will help keep the vehicle from moving unexpectedly, which could result in personal injury.

- To set the parking brake, fully pull up the handle on the floor near the left wall.
- For better holding power, first press down the regular brake pedal. Then hold it while setting the parking brake.
- To release the parking brake, push the handle down.
- To help remind you, the "Park Brake" light is designed to come on if the parking brake control is not fully released and the ignition key is on.
- Never drive the vehicle with the parking brake set as this may overheat the rear brakes, reducing their effectiveness and causing excessive wear or damage.

If the vehicle is parked on a grade and the transmission is placed in "PARK" before the parking brake is set, the weight of the vehicle may exert so much force on the parking pawl in the transmission that the transmission selector lever cannot later be pulled out of "PARK." To prevent this, the parking brake should be applied BEFORE moving the transmission selector lever to "PARK." When preparing to move the vehicle, the shift indicator should be moved out of the "PARK" position BEFORE releasing the parking brake. It is good driving practice to always set the parking brake first (when parking), and release the transmission from "PARK" first (when preparing to move the vehicle) at all times, even on the level. If "torque lock", as this condition is called, does occur, it may be necessary to have another vehicle nudge this vehicle up hill, to take some of the pressure off the transmission while the driver pulls on the transmission selector lever.

HEADLIGHT DIMMER SWITCH

To obtain high or low beam headlights, push the foot dimmer switch located on the floor to the left of the brake pedal. Each time the switch is depressed, the light beam changes. A headlamp beam indicator, on the face of the speedometer, is designed to light up when the headlights are on high beam.

HEADLIGHT "FLICKER"

The headlight circuits are protected by a cricuit breaker in the light switch. An electrical overload on the breaker will cause the lights to "flicker" on and off, or in some cases to remain off. If this condition develops, have your headlight electrical circuit checked immediately.

INSTRUMENT PANEL AND CONTROLS

SPEEDOMETER AND ODOMETER

The speedometer indicates the forward speed of the vehicle in miles-per-hour and kilometres per hour. The odometer registers the accumulated mileage the vehicle has been driven. Also, located in the speedometer cluster are the turn signal indicators which show direction and proper operation of the turn signals, the high beam indicator light, and the shift indicator.

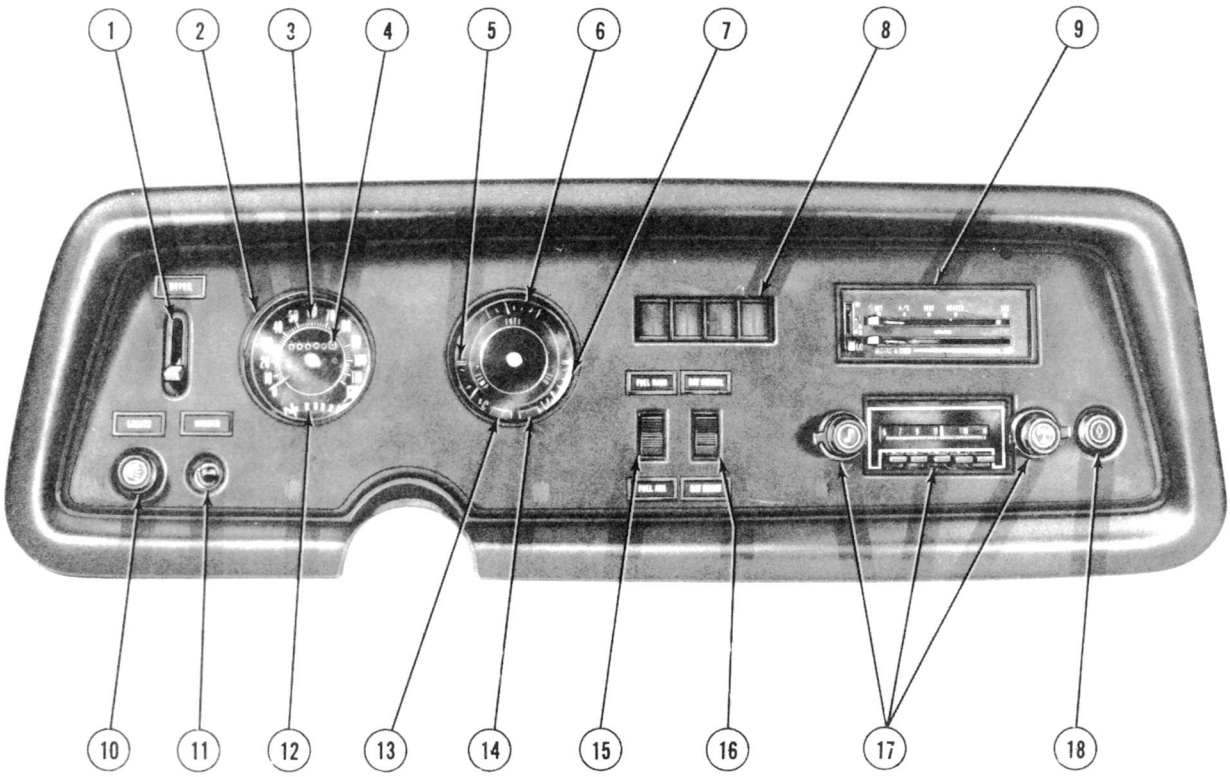
FUEL GAUGE

This gauge shows the approximate fuel level in the main tank when fuel selector switch is in the "FUEL MAIN" position, and the fuel level in the auxiliary tank when fuel selector switch is in the "FUEL AUX" position. The pointer will indicate the correct positions only when the ignition is in the "ON" position.

Since both fuel tanks are interconnected, the indicated level is designed to read the same (with the switch in either position) until approximately 60% of the total fuel capacity has been used. See "Fuel Selector Switch" later in this section.

TEMPERATURE GAUGE

This gauge registers the temperature of the engine coolant. The center area of the water temperature gauge marks the normal operating range. However, if the needle moves beyond the center area marks into the "H" side or hot area of the gauge, stop the engine as soon as possible, and remain stopped until the cause of the overheating is determined.

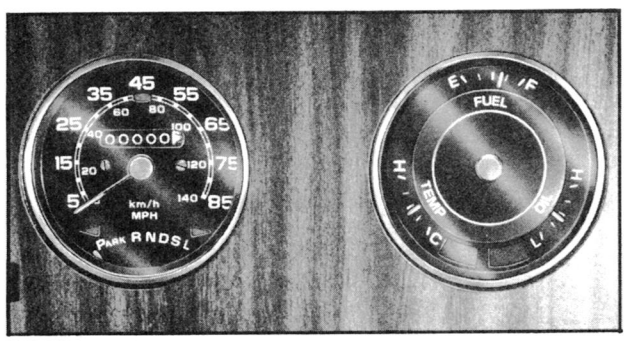


1. WINDSHIELD WIPER CONTROL
2. SPEEDOMETER
3. HIGH BEAM INDICATOR
4. ODOMETER
5. TEMPERATURE GAUGE
6. FUEL GAUGE
7. OIL PRESSURE GAUGE
8. WARNING LIGHTS
9. HEATER/A.C. CONTROLS
10. LIGHT SWITCH
11. WINDSHIELD WASHER
12. SHIFT INDICATOR
13. GENERATOR LIGHT
14 BRAKE SYSTEM WARNING LIGHT
15. FUEL SELECTOR SWITCH
16. BATTERY BOOST SWITCH
17. RADIO & CONTROLS
18. CIGAR LIGHTER

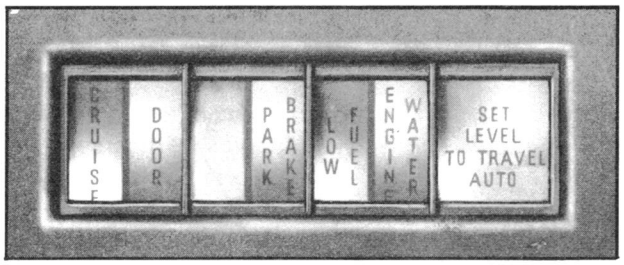
Instrument Panel

OIL PRESSURE GAUGE

This gauge registers engine oil pressure. The consistency of the oil in a cool engine will cause a high reading when the engine is first started. As the engine warms, the pressure will recede to normal. With the engine warmed up to normal operating temperature, minimum pressure at idle should be slightly above the "L" graduation (8 PSI). At normal operating speeds, minimum pressure should be between the second and middle graduations (35 PSI). Should the pressure



Speedometer and Gauge Clusters



Warning Light Cluster

drop below these minimums, stop the engine immediately and check the cause of the low oil pressure. This could be the result of a dangerously low oil level in the crankcase. Driving the vehicle with low oil pressure can cause extensive engine damage.

CHARGING SYSTEM WARNING LIGHT

NOTICE: If vehicle is equipped with a voltmeter it will not be equipped with a charging system warning light.

Located to the right of the temperature gauge is the charging system warning light. A red light "GEN" 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 Motorhome dealer. When the engine is started, the warning light should go out and remain out. If the light remains on when engine is running, have your dealer locate and correct the trouble as soon as possible.

BRAKE SYSTEM WARNING LIGHT

The regular brake is a dual system designed so that one part will provide some braking action if there is a loss of hydraulic pressure in the other part of the system. The system has a "Brake" light located to the left of the oil pressure gauge.

- The light is designed to come on briefly during engine starting so you can check that the bulb is okay.
- Have the system repaired if the light does not come on during engine starting.
- This warning light does not do away with the need for brake inspection and maintenance. The brake fluid level must be checked regularly. See the Maintenance Schedule folder for other brake checks.
- If the light comes on and stays on when the ignition key is on, after the brake pedal has been firmly pushed down, it may mean that there is something wrong with one part of the brake system.

WHAT TO DO

1. Pull off the road and stop carefully—and remember that:

- Stopping distances may be longer.
- You may have to push harder on the pedal.
- The pedal may go down further than normal.

2. Try out the brakes by starting and stopping on the road shoulder—then:

- If you judge it to be safe, drive cautiously at a safe speed to nearest service outlet for repair.
- Or have vehicle towed to dealer for repair.

Continued driving without getting it repaired could be dangerous.

TELL-TALE WARNING LIGHT CLUSTER

A cluster of indicator lights is located just to the left of the heater controls. These are designed to inform the driver of the status of certain systems or conditions of which he should be aware. Among these are:

- "CRUISE" (Optional Equipment)—This indicator is designed to glow GREEN whenever the Cruise Control System is engaged and working.
- "DOOR"—The door light is designed to warn the driver that the entrance door is not properly closed.
- "PARK BRAKE"—As a reminder, the "PARK BRAKE" brake reminder light is designed to glow whenever the parking brake control is not fully released and the ignition is on.

- "LOW FUEL" (Optional Light)–The low fuel warning light in your vehicle is designed to come on when the main tank has less than five gallons of fuel left and the fuel selector switch is in the "FUEL MAIN" position. If, at any point after this, the fuel selector switch is changed to "FUEL AUX" the "LOW FUEL" warning light will then go out and come on again when the fuel in the auxiliary tank goes below five gallons. At this point both fuel tanks of your vehicle are nearly depleted.

- "ENGINE WATER"–This indicator light is designed to warn the driver that the coolant level in the radiator is abnormally low. (See Servicing Details later in this manual, before attempting to refill cooling system).

- "SET LEVEL TO TRAVEL AUTO"–This light is designed to inform the driver that the Electro-Level System TRAVEL switch should be set to the "AUTO" position before driving the vehicle. (See "Electro-Level System" later in this section for additional details).

VOLTMETER

The optional voltmeter is calibrated in volts and is divided into three segments. During operation, the indicator hand should remain in the center segment to indicate a normal battery condition. If indicator remains in left-hand segment, an undercharge condition exists. When indicator shows either an undercharge or overcharge condition, have your dealer check the battery and charging system at once.

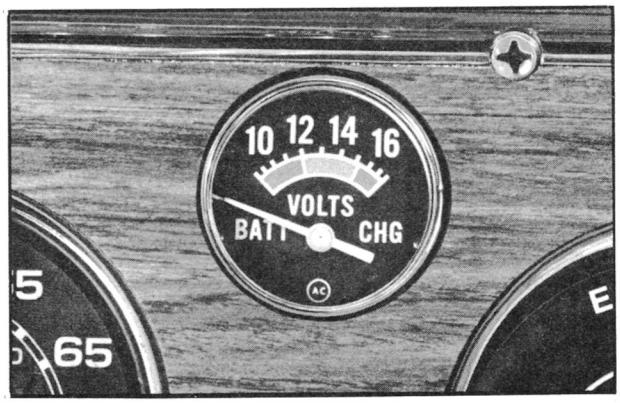
HEADLIGHT SWITCH

The headlight switch serves four functions:

1. Pulling the switch half-way out provides parking lights, instrument panel lights, tail lights, side marker lights, and clearance and identification lights.

2. Pulling the switch all the way out provides all driving lights,–this includes headlights, plus those mentioned above.

3. To dim instrument panel lights, turn switch knob clockwise.



Voltmeter

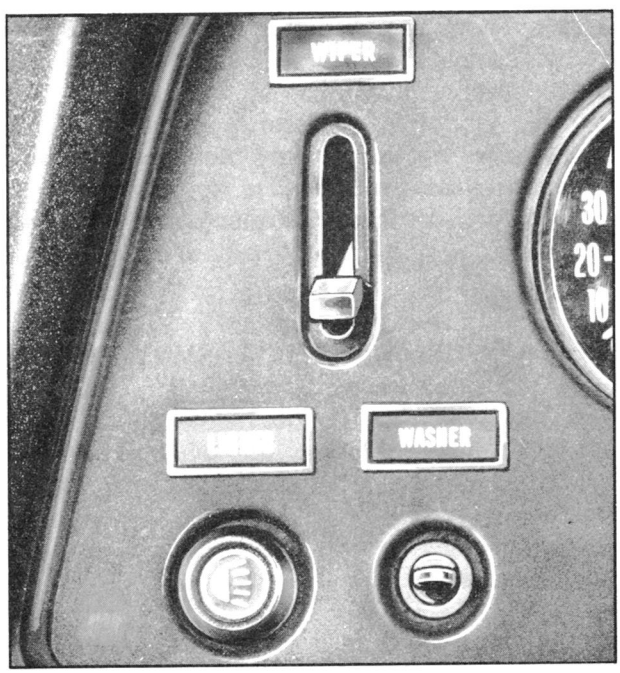
4. To operate the dome lights, turn switch knob fully counterclockwise.

WINDSHIELD WIPER LEVER

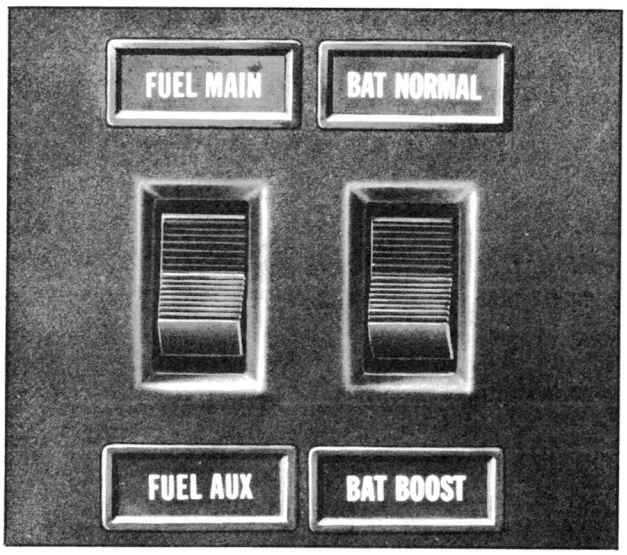
The windshield wipers are variable speed, and hydraulically powered. The lever control, on the left side of the instrument panel, varies the speed of the wiper blades from stop ("DOWN" position) to fast (extreme "UP" position).

WINDSHIELD WASHERS

The windshield washers are controlled by the washer switch located under the windshield wiper



Windshield Wiper, Washer and Headlight Controls



Fuel Tank and Battery Switches

lever. To operate the washers, turn the wipers to an ON position, then push down on the switch until the desired amount of washer fluid has been directed to the windshield.

- Check the washer fluid level regularly—do it often when the weather is bad.
- Use a fluid such as GM Optikleen to help prevent freezing damage, and for better cleaning.
- Do not use radiator antifreeze in the windshield washer; it could cause paint damage.
- **In cold weather, warm the windshield with the defrosters before using the washer—to help prevent icing that may block the driver's vision.**

FUEL SELECTOR SWITCH

The fuel selector switch, located below the warning light cluster, has two positions—"FUEL MAIN" and "FUEL AUX." This switch allows the driver to change the fuel pick-up and fuel gauge sending unit from the main tank, as it goes empty, to the auxiliary tank which will normally contain 7 to 9 gallons of fuel. It is recommended that any time the fuel system is filled, this switch be put in the "FUEL MAIN" position and left there until auxiliary fuel is needed.

BATTERY BOOST SWITCH

The GMC Dual Battery System provides power from the automotive and auxiliary batteries to the vehicle's 12-volt electrical system, either in combination or singularly. The components used to provide charging and/or switching are conventional, except for a diode assembly with which both batteries will receive charging current whenever the vehicle is running. The diode assembly has separate outputs to the two batteries and provides isolation between the batteries and their associated circuits whenever the engine is not running.

The main battery (or automotive battery) supplies power to the chassis circuit; i.e., engine, external lights, etc. The auxiliary battery powers the vehicle's internal area; i.e., internal lights, etc.

The battery switch should be left in the "BAT NORMAL" position, except when additional power is needed for either battery circuit. If this is desired, change switch to "BAT BOOST" position. After use, it is recommended that switch be returned to the "BAT NORMAL" position.

NOTICE: If the battery boost switch is left in the "BAT BOOST" position for extended periods this can result in batteries being discharged.

The auxiliary battery will recharge while the vehicle's engine is running.

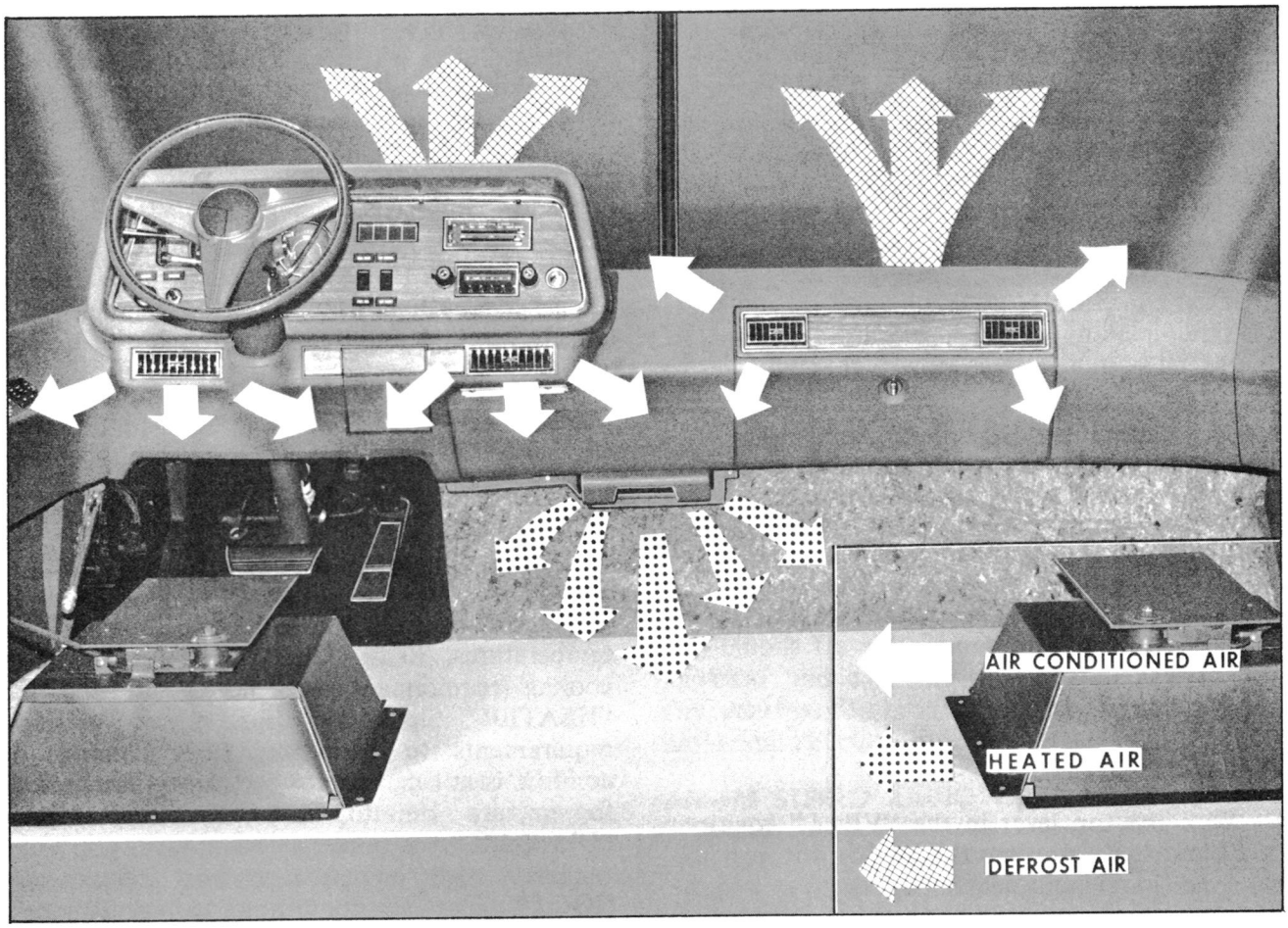
CIGAR-CIGARETTE LIGHTER

Push the lighter in all the way to operate. When it is heated sufficiently to use, it is designed to "snap" back to normal position with noticeable sound. Avoid holding the lighter in by hand while it is heating.

For added safety, the cigar-cigarette lighter has a heat-sensative terminal which is designed to melt and break the circuit if the lighter becomes overheated.

AUTOMOTIVE HEATING AND AIR CONDITIONING SYSTEM

The Automotive Heating and Air Conditioning System offers year-round driving comfort. In addition to providing circulation of cool air during hot weather, the system can provide warm air in cold weather and dehumidify outside air in humid weather (see air flow illustration). Another feature of the system is



Air Flow Schematic (Typical)

continuous low-speed operation of the heater and air conditioner blower, resulting in an uninterrupted supply of outside air flow into the vehicle whenever the ignition switch is on. The following portion of this manual provides operating instructions for obtaining heating and cooling comfort.

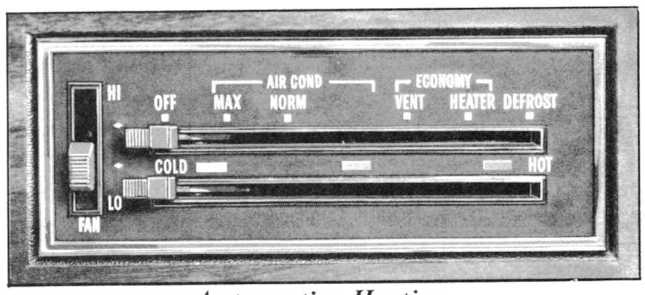
NOTICE: See Engine Exhaust Gas Caution at the beginning of this Section.

AIR OUTLETS

Air is directed through a combination of the heater floor vent, the adjustable outlets in the instrument panel, and the defroster vents at the base of the windshield. Each instrument panel outlet can be adjusted to divert air throughout the driver and front passenger area. Note the driver's left-hand outlet can be closed.

CONTROLS

The heater and air conditioner controls are located on the instrument panel to the right of the steering column. They consist of a fan switch and two sliding levers. The upper sliding lever selects the source of air and the lower one determines the temperature of air.



Automotive Heating and Air Conditioner Controls

FOR COOLING—

Move the top lever to either of the two "AIR COND" positions, "MAX" or "NORM". Adjust the bottom (temperature) lever to the desired air temperature and adjust the fan switch to meet the air flow requirements. For maximum cooling or quick cool down in hot, humid climates, or during extended idle conditions—move the top lever to "MAX" and the lower lever to "COLD." This provides 80% recirculated air and 20% outside air at high blower speed independent of fan speed switch setting. Moving the top lever to "NORM" provides 100% outside air. Blower speed is determined by the fan switch setting. The temperature of the dehumidified air can be controlled in all positions by moving the lower lever.

NOTICE: A protective device installed on all vehicles will turn the compressor off should the system leak refrigerant, thus avoiding possible costly repair and inconvenience to the owner.

FOR VENTILATING—

With the top lever in the "VENT" position, 100% outside air enters the vehicle through the air conditioning and heater outlets. Heat may be added to the vent air by adjusting the bottom lever. Any one of the four blower speeds may be selected.

FOR HEATING—

Move the top lever to "HEATER" to bring heated air into the vehicle of which 90% is through the heater outlet and 10% through the defroster outlets. The bottom lever should be positioned for the desired air temperature and the fan switch moved for the proper air flow.

FOR DEFROSTING—

Moving the top lever to "DEFROST" brings 100% outside air into the vehicle of which 90% is through the defroster outlets and 10% through the heater outlet. Adjusting the bottom lever gives the desired temperature and moving the fan switch produces the right air volume. The air conditioner compressor engages automatically at outside temperatures above freezing.

- **For better driver vision, clear the windshield, rear window, outside mirrors, and all side windows of ice and snow before driving.**
- Run the blower on "HIGH" for a few seconds before driving off. This helps to clear the air intake of snow and further lessens the chance of fogging on the inside of the windshield.

TO TURN SYSTEM OFF—

Move the top lever to the "OFF" position. The blower will continue to operate at low speed whenever the ignition switch is on, bringing outside air into the vehicle through the heater outlet.

FOR ECONOMY—

With the top lever in "OFF", or "ECONOMY" modes ("VENT" and "HEATER"), the air conditioning compressor does not operate and the reduced engine load can result in improved fuel economy. Use the "VENT" position in mild temperatures, 30 to 70° F. (-1 to 21° C.), when cooling requirements are not great, and the "HEATER" position for most heating requirements to maximize fuel economy. If comfort is not maintained, or if windows tend to fog, return the top lever to "NORM", or "DEFROST" position.

NOTICE: The air conditioner compressor will operate in "MAX", "NORM", and "DEFROST" when the outside temperature is above freezing. Keep the vehicle windows closed for best operation of the air conditioner and heater systems.

RADIO AND TAPE PLAYER

Your vehicle may be equipped with either a Delco AM-FM Stereo Radio (not shown), or a Delco AM-FM Stereo Radio with Tape Deck (see illustration).

AM-FM STEREO RADIO

The optional AM-FM Stereo Radio permits you to receive FM broadcasts as well as the standard AM. Choose the desired band by sliding the selector bar to the right for AM, or to the left for FM.

This radio will automatically switch to stereo operation whenever an FM stereo broadcast is being received, and an indicator will light. "Stereo" operation means that the radio is separating stereo broadcast back into the original

two channels, called "left" and "right". Stereo sound is noticeably more realistic to the ear.

For the most pleasing stereo effect, the speakers are criss-crossed, with the left front and right rear speakers reproducing the left channel, and the opposite speakers reproducing the right channel. Balancing the speakers is not required as this adjustment has been made at the factory. Should it become necessary to make this adjustment, see your GMC Motorhome dealer.

FM Reception

Although FM is normally static free, reception can be limited by terrain, atmospheric conditions, station strength, and distance from the transmitter. Momentary static, flutter, or station swapping can be caused by buildings or other obstructions. If good reception cannot be maintained, tuning to a stronger station will bring improvement.

CONTROLS

Left Knob—This knob turns the set "On" or "Off", and controls the "Volume". (To operate the radio, ignition must be in "Run" or "Accessory" position.) Behind the "Volume" knob is the "Tone" control. When turned clockwise, it increases treble; when turned counterclockwise, it increases bass.

Right Knob—This knob is a "Manual Tuning" control for selecting Radio Stations. A "Fader" control is located behind it. This control adjusts the sound between the forward and rear speakers.

Push buttons-The radio features five push buttons with which you can select your favorite stations. After push button operation, it may be necessary to manually "fine-tune" the radio for best reception.

To "set-up" push buttons:

1. Manually tune to the desired station.
2. Choose the button you wish to use. Pull it straight out, then push it back in firmly until it stops.
3. Follow this procedure for each of the five buttons.

AM-FM Stereo Radio with Tape Deck (Tape Removed)

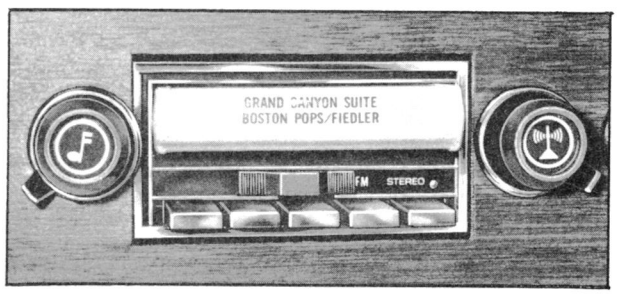
On your AM-FM Stereo radio, you may select an AM station and an FM station for each button, providing a total of 10 selections. This is done by sliding the selector bar to the right and setting each button for AM stations. Then slide the bar to the left and repeat the procedure for FM stations.

NOTICE: Do not move the selector bar while any push button is pulled out, or damage to the radio could occur.

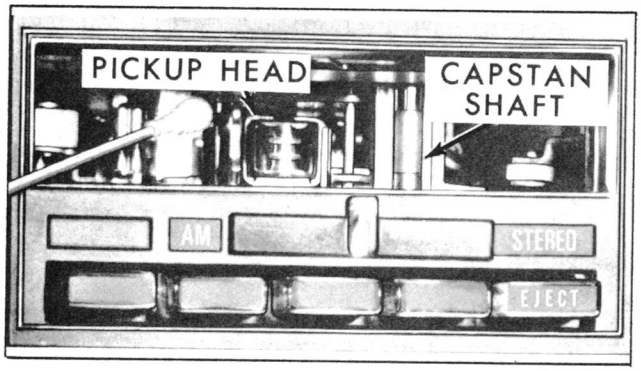
AM-FM STEREO RADIO WITH 8-TRACK TAPE

This system provides the convenience of an AM-FM Stereo Radio combined with a Stereo Tape Player in the same unit. To operate the tape feature:

- Turn the radio on.
- Insert the cartridge through the radio dial door, label side up, and open end first. This automatically switches the unit from radio to tape operation.
- After the cartridge is firmly seated, adjust the volume and fader controls to your preference.



AM-FM Stereo Radio with Tape Deck (Tape Installed)



Cleaning Tape Player

- Each of the four programs will play in succession automatically, or you can change programs manually by pushing in the left knob. Each time the knob is pushed and released, the unit will step to the next program.

To remove the tape cartridge, depress the push button labeled "Eject." The unit will return to radio operation.

NOTICE: The tape cartridge should be taken out when not in use to prevent possible damage to the tape player and to the cartridge.

Cartridge and Tape Player Care

Store cartridges away from extreme heat or direct sunlight, and protect the open end from dirt or damage. Eight-track cartridges do eventually wear out and replacement may be necessary if they become noisy.

The tape player pick-up head and capstan (revolving metal post) should be cleaned every 100 hours of operation with a swab moistened in rubbing alcohol. Acess is through the tape door.

ANTENNA

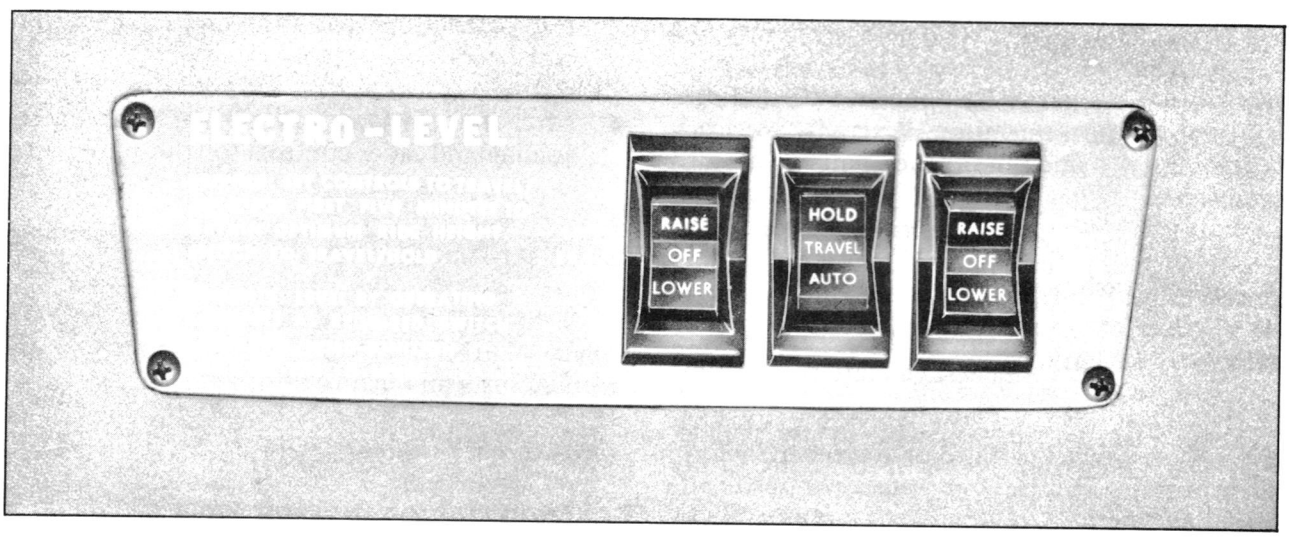
The radio antenna is mounted on top of the vehicle. If necessary, adjustments for maximum antenna effectiveness on AM can be made by your authorized GMC Motorhome dealer.

MOBILE RADIO TRANSMITTERS

Mobile two-way units are subject to Federal Communications Commission (FCC) rules and must be installed by trained radio people. Mobile telephones installed by your local phone company, Citizens Band (CB) radios and garage door openers will not affect vehicle operation. If any other mobile radio transmitters are installed, there can be possible adverse effects on vehicle operation.

ELECTRO - LEVEL SYSTEM

Early model 1978 vehicles are equipped with Type I rear air suspension. Late model vehicles are equipped with Type II rear air suspension. Both Electro-Level suspension systems operate in the same manner, using an automatic leveling feature to maintain a constant ride height at the rear tandem suspension when the vehicle is travelling down the highway.



Electro-Level System Control Panel

In addition, the Electro-Level system provides the ability to level the vehicle when stopped at a campsite or parking area where the ground surface is not level. With Electro-Level, the rear of the vehicle can be raised or lowered approximately 4 inches from normal ride height. This is accomplished by pushing a rocker switch (or switches) on the Electro-Level control panel, which is located to the left of the driver, below the window.

CONTROL PANEL

The driver controls consist of three rocker switches on the Electro-Level control panel. These switches function to automatically or manually level the vehicle. The center rocker switch (TRAVEL) is used for a travel or hold mode, and the two outer rocker switches (RAISE-LOWER) are used to raise or lower the rear of the vehicle.

NORMAL OPERATION

Highway Travel

When driving down the highway, the normal position for both the RAISE-LOWER switches is "OFF." The center TRAVEL switch should be in the "HOLD" position. This allows the vehicle to maintain a designed ride height, and eliminates unnecessary operation of the air compressor(s).

NOTICE: If the vehicle has been in a raised or lowered position while parked on an uneven surface, the TRAVEL switch should be moved to "AUTO" for the first five minutes before the vehicle is put into motion. This will allow the vehicle to level itself for highway driving. Then move the switch to "HOLD" after normal ride height is achieved. A reminder light in the dash panel (which says "SET LEVEL TO TRAVEL AUTO") is designed to light any time the engine is running and the transmission shift lever is moved to "D."

Campsite or Parking Area

The two "RAISE-LOWER" switches may be used as necessary to raise or lower the vehicle. When using Electro-Level at a campsite the vehicle engine need not be running to operate the system; however, the ignition switch must be in the "ON" or "ACCESSORY" position.

"RAISE"—With a rocker switch in this position the appropriate side of the rear of the vehicle will raise to any desired position, up to a maximum of approximately 4 inches above normal ride height. When desired height is reached, return rocker switch to "OFF" position.

"LOWER"—With a rocker switch in this position the appropriate side of the rear of the vehicle will lower a maximum of approximately 4 inches below the normal ride height. In order to maintain a desired height, return rocker switch to "OFF" position.

NOTICE: When the rear of the vehicle is at desired level, be sure the TRAVEL switch is moved to "HOLD" and ignition switch is turned to 'OFF."

A glass of water or a bubble-type level, when placed in a normally level location inside the vehicle, can be used to help in determining the desired level condition.

Off-Road Operation

In order to gain maximum ground clearance, both RAISE-LOWER switches should be placed in the RAISE position. It is recommended that a speed of 15 mph (20 km/h) should not be exceeded since the air suspension in this position has maximum pressure supplied.

CONTROL COMPONENTS

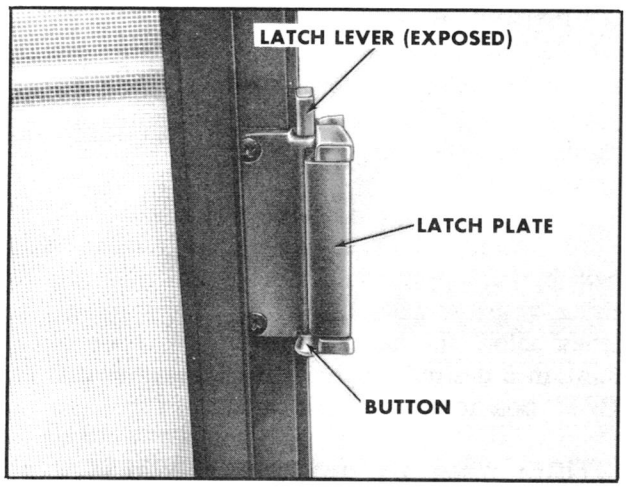
Control components for Type I and Type II vehicles are discussed later in this manual. Refer to "Rear Suspension" in the SERVICE AND MAINTENANCE section for component information.

MAINTENANCE

Refer to "Rear Suspension" in the SERVICE AND MAINTENANCE section later in this manual for maintenance information.

EMERGENCY OPERATION

In the event of rear suspension air loss, refer to "Rear Suspension Failure" in the IN CASE OF EMERGENCY section of this manual.



Window Latch (Unlocked)

WINDOWS

The side windows in the driver's compartment are operated by squeezing the latch and sliding the window to the rear.

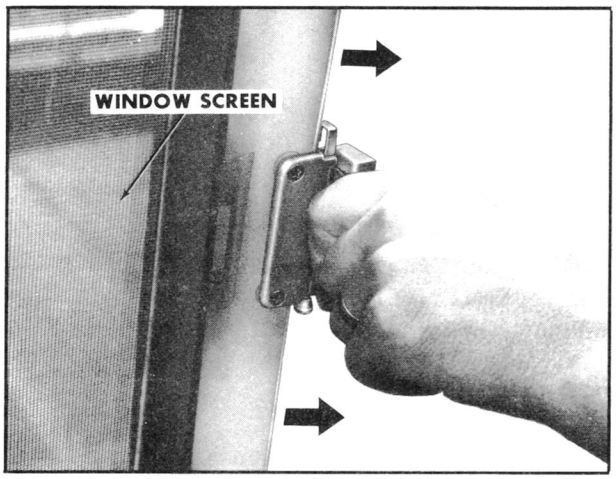
The optional sliding windows, if equipped with center mounted latches, are operated as follows:

SLIDING WINDOWS

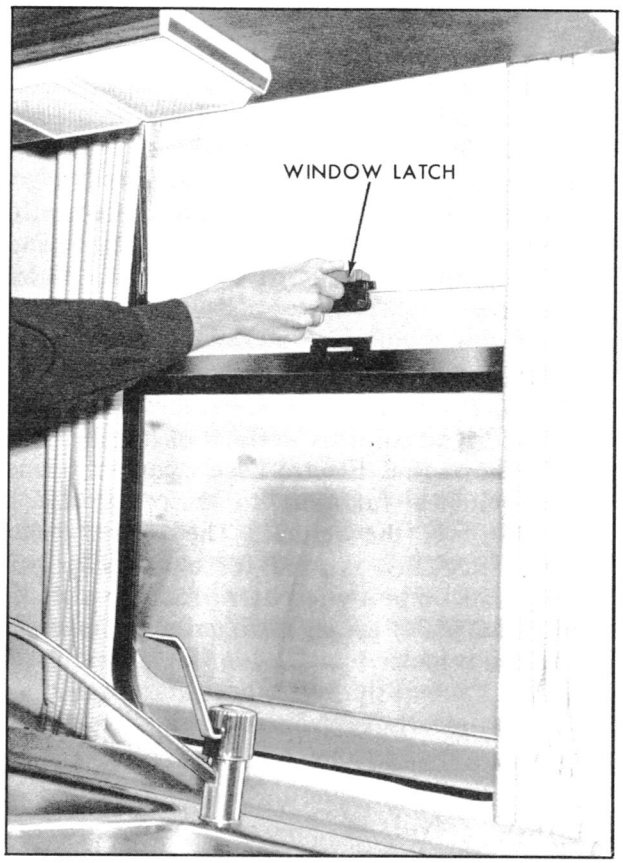
The horizontal and optional vertical sliding windows in your vehicle are equipped with a locking type latch.

To Open Window

Unlock window latch by pushing upward on



Opening Horizontal Window

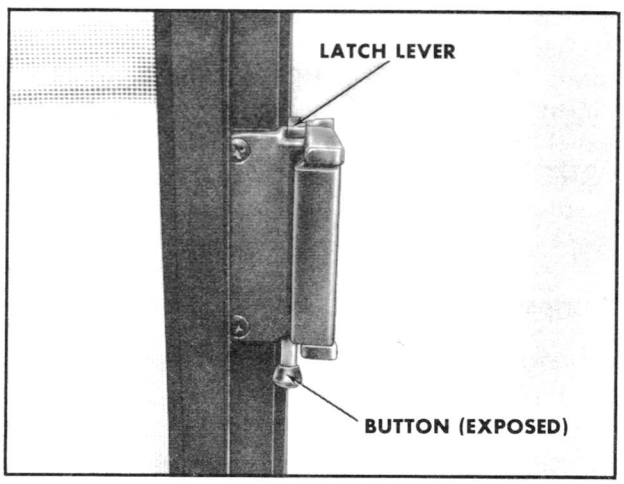


Opening Vertical Sliding Window

button, until latch lever is exposed (see illustration). Firmly grasp latch plate, and slide window to desired position (see illustration).

To Close Window

Grasp latch, and slide window to the fully closed position. Push downward on latch lever,



Window Latch (Locked)

until button is exposed (see illustration) to lock sliding window in position. To be sure window latch assembly is locked, depress latch plate and carefully attempt to open window. If window opens repeat "To Close Window" procedure. If window latch assembly still does not lock return vehicle to your dealer for service.

ONAN MOTOR GENERATOR

NOTICE: Before operating motor generator see the carbon monoxide caution at the beginning of this section.

The motor generator is located in an exterior compartment in the left rear corner of the vehicle.

The unit is mounted on slides and can be pulled out like a drawer for ease in servicing the unit. To slide out the unit depress the buttons on the two latches. Then pull up on safety latch in upper right-hand corner and pull unit out.

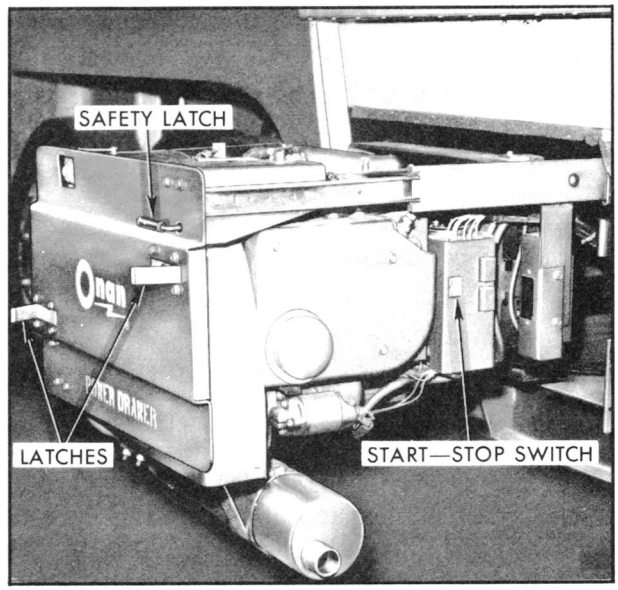
OPERATING INSTRUCTIONS

The unit can be started from a START-STOP switch that is located on the right side of the generator. Be sure the crankcase has been filled with oil to the "F" full mark on the dipstick. Check oil only when the motor generator is not operating.

The START-STOP switch is a three-position rocker switch. By pressing the top half of the switch the starter on the motor generator will be activated; hold in the switch until the unit is started. The switch should then be released. To stop the unit depress the bottom half of the switch, and hold in until the unit comes to a full stop.

NOTICE: If the motor generator has been running with a load connected, disconnect the load and allow it to run for a few minutes (with no-load connected) before pushing STOP button.

The circuit breaker on top of the unit will trip when the demand for electricity in amperes exceeds the motor generator's capabilities. If the circuit breaker does trip, remove part of the electrical load and reset the breaker.



Onan Motor Generator

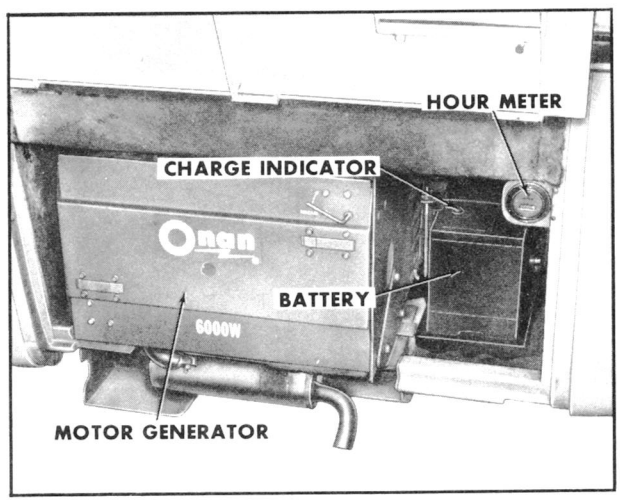
HOUR METER

Located to the right of the motor generator, the HOUR-METER indicates total amount of hours motor generator has operated. This gauge will aid in determining when the motor generator should receive periodic inspections, maintenance and service parts replacements.

HIGH TEMPERATURE OPERATION

Make sure that nothing obstructs air flow to and from the unit.

Keep cooling fins clean. Motor generator housing should be unaltered and undamaged.



Onan Motor Generator Compartment

LOW TEMPERATURE OPERATION

1. Use correct SAE No. Oil for temperature conditions. Change oil only when engine is warm.

2. Keep fuel system clean and battery in well charged condition.

LOW OIL LEVEL

If motor generator suddenly stops during a tight turn or sudden stop of the vehicle, the cause is most likely a low oil level. The unit is designed to shut down when oil level is abnormally low. Before attempting to restart unit, check oil level and correct as necessary.

DUSTY AND DIRTY OPERATION

1. Keep unit clean. Keep cooling system clean.

2. Service air cleaner as required.

3. Change crankcase oil and filter more often than normal.

4. Keep governor linkage clean.

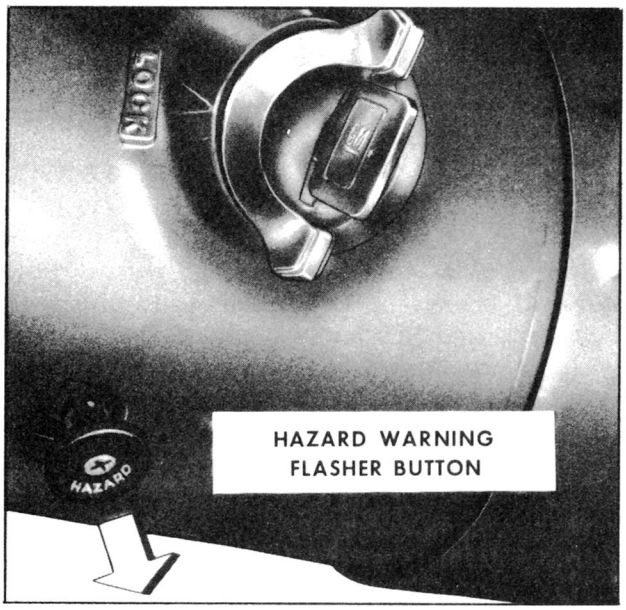
FUEL

The motor generator's fuel is supplied from the vehicle's main fuel tank.

NOTICE: The motor generator may be operated while the vehicle is underway. However, the vehicle's gasoline supply will be depleted at a faster rate.

GMC TRANSMODE NOTES

SECTION 3
IN CASE OF EMERGENCY



Hazard Warning Flasher

FOUR-WAY HAZARD WARNING FLASHER

- Use the warning flasher to warn other drivers any time your vehicle becomes a traffic hazard, day or night.
- Avoid stopping on the roadway if possible.
- Turn on the hazard warning flasher by pushing in the button (inside the collar) located on the column just below the steering wheel. The flasher will work with the ignition key either off or on.
- The turn signals do not work when the hazard flashers are on.
- If the brake pedal is depressed, the lights will not flash; they will stay on until the brake is released.
- To turn off the flasher, pull the button collar out.

EMERGENCY STARTING

NOTICE: Do not push or tow this vehicle to start it. Under some conditions this may damage certain parts of the vehicle.

- If only main (automotive) battery is discharged, hold battery switch on instrument panel momentarily in "BAT BOOST." This supplies current from the auxiliary battery (or batteries). After use, switch is designed to return to the "BAT NORMAL" position.

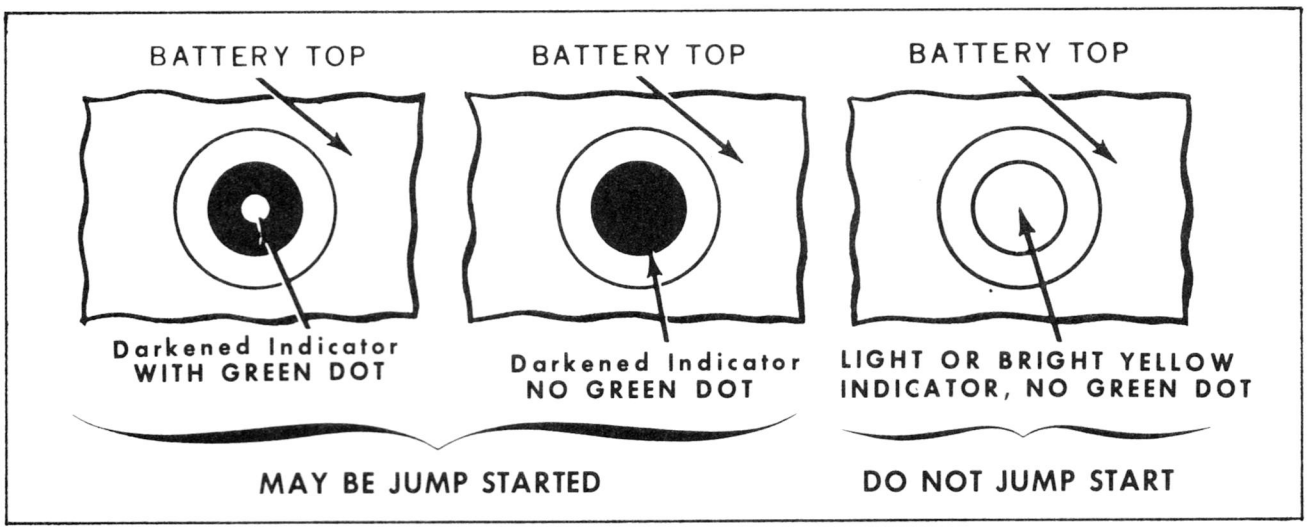
If your vehicle has discharged batteries, it can be started by using energy from another battery–a procedure called "jump starting."

JUMP STARTING

CAUTION

The instructions below must be followed EXACTLY or personal injury (particularly to eyes) or property damage may result from battery explosion, battery acid, or electrical (short circuit) burns.

- **THE MAJOR SAFETY PRE–CAUTION IS TO MAKE THE FINAL CONNECTION TO GROUND AT THE RADIATOR RIGHT MOUNTING BRACKET (PASSEN–GER SIDE OF VEHICLE). THIS HELPS REDUCE THE CHANCE OF AN EXPLOSION DUE TO SPARKS.**
- **To lessen the chance of an explosion, never expose the battery to open flames or electric sparks. Also do not smoke near the battery. Batteries give off a gas which is flammable and explosive.**
- **To lessen the risk of injury in case an explosion does occur, WEAR EYE PROTECTION or shield your eyes when working near either battery. Do not lean over a battery.**



Test Indicator Conditions (Freedom Battery)

- **Do not allow battery fluid to contact eyes, skin, fabrics or painted surfaces because battery fluid is a corrosive acid. FLUSH ANY CONTACTED AREA WITH WATER IMMEDIATELY AND THOROUGHLY. ALSO GET MEDICAL HELP IF EYES ARE AFFECTED.**

- **To lessen the risk of a short circuit, remove rings, metal watch bands and other metal jewelry. Also do not allow metal tools to contact:**

  - **The positive terminal junction block stud in this vehicle, marked "VEHICLE BATTERY POSITIVE", or**

  - **The positive battery terminal on either vehicle, or**

  - **Metal in contact with either positive terminal.**

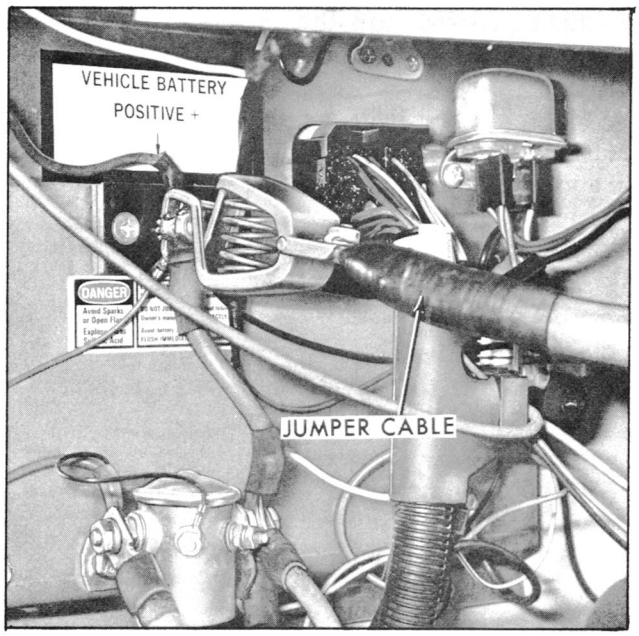
Also, make certain when attaching the jumper cable clamps to the junction block stud, and to the positive terminal of the other battery, that neither clamp contacts any other metal.

1. This vehicle has a 12-volt automotive battery and a negative ground electrical system. Make sure that the other vehicle also has a 12-volt battery and negative ground. Its owner's manual may provide that information. **If unsure of voltage (or if the voltage and ground are different from your vehicle), do not attempt to jump start as personal injury or severe damage to electrical and electronic parts may result.**

2. Position the vehicle with the good (charged) battery so that the jump starting cables will reach. **Do not allow the vehicles to touch, and check to see that the bumpers do not touch.**

3. Turn off all electrical motors and accessories in both vehicles. Turn off all lights except those needed to protect the vehicle or illuminate the work area. Turn off the ignition, apply the parking brake firmly, and put the automatic transmission in "PARK" (manual transmission "NEUTRAL") in both vehicles.

4. If the discharged battery has filler caps, check the fluid level. **(Do not use an open flame to check and do not smoke.)** Add clear drinking water to the proper level if low, and replace caps before jump starting. If the battery is a Delco sealed-type, do not attempt to jump start the vehicle, or charge or test the battery if the center of the test indicator in the battery is bright or light yellow (See illustration). Instead, install a new battery.



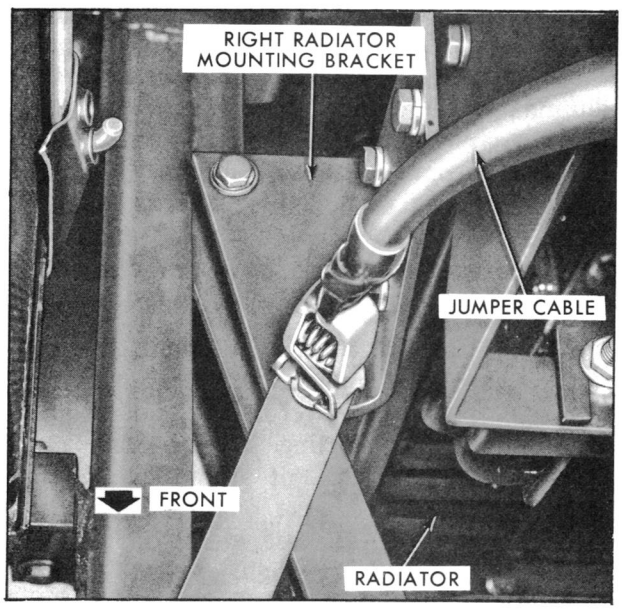
Connecting Jumper Cable to "VEHICLE BATTERY POSITIVE" Stud

5. Jumper Cable Connector Instructions (See Illustrations)

- Connect the first jumper cable from the positive "+" (red) terminal on the battery in the **other** vehicle to the positive terminal junction block stud in this vehicle, marked "VEHICLE BATTERY POSITIVE." This is located behind the right access door above the main (automotive) battery. **Never** connect "+" (red) to "–" (black), or "–" to "+".

- Next, connect one end of the second cable to the grounded negative "–" (black) terminal of the OTHER vehicle's battery, regardless of which vehicle has the discharged battery.

- Lastly, connect the other end of the second jumper cable to the radiator right mounting bracket (passenger side) in THIS vehicle (See illustration). Do not connect the cable to pulleys, fans, or other parts that move. Beware of touching hot manifolds which can cause severe burns.



Connecting Jumper Cable to Radiator Right Mounting Bracket (Passenger Side)

6. Start the engine in the vehicle with the good (charged) battery and run the engine at a moderate speed.

NOTICE: If the discharged battery is completely dead, it may be necessary to run the engine of the vehicle with the charged battery for a few minutes at a moderate speed to slightly charge the discharged battery. This will help when cranking the engine in the vehicle with the discharged battery, especially when outside temperatures are very low.

7. Start the engine of the vehicle that has the discharged battery.

8. Remove the battery cables by reversing the above sequence EXACTLY. Start by removing the cable from the radiator right mounting bracket in THIS vehicle as the FIRST step.

ENGINE COOLANT

Your cooling system may overheat during severe operating conditions. This may occur when:

- Climbing a long hill on a hot day
- Stopping after high speed driving
- Idling for long periods in traffic or
- Towing a trailer

If the hot light comes on:

- Turn your air conditioner off if it is on.
- Put the transmission in neutral if stopped in traffic.

If the light doesn't go off within a minute or two:

- Pull over to a safe place and move your shift control lever to "Park." Then put on your parking brake.
- DON'T TURN OFF THE ENGINE. INCREASE THE ENGINE IDLE SPEED until it sounds like its going about twice as fast. Bring idle back to normal after two or three minutes.
- Lift the right front access door. Check the level of the coolant by looking at the "see through" coolant recovery tank. (It is not necessary to remove the radiator cap to check coolant level, and it can be dangerous if engine is still hot. See caution below.) The proper coolant level when engine is operating is between the "Full" and "Add" marks on the tank.

CAUTION

To help avoid the danger of being burned, do not remove the radiator cap while the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure if the cap is taken off too soon.

If coolant level is low:

–Check for fluid leaks at hose connections or from radiator or water pump. Check to see that drive belts are intact, and that the fan is turning.

–Add coolant at the first opportunity. Coolant should be added only to the recovery tank. (See "SERVICE AND MAINTENANCE" section for details.)

- If you are losing coolant because of leaks, or a fan belt is broken or loose, and/or the red light persists, stop the engine until the cause of overheating is corrected.

After the red light is out, resume driving at a reduced speed. If the light does not come back on in about ten minutes, return to normal driving.

JACKING

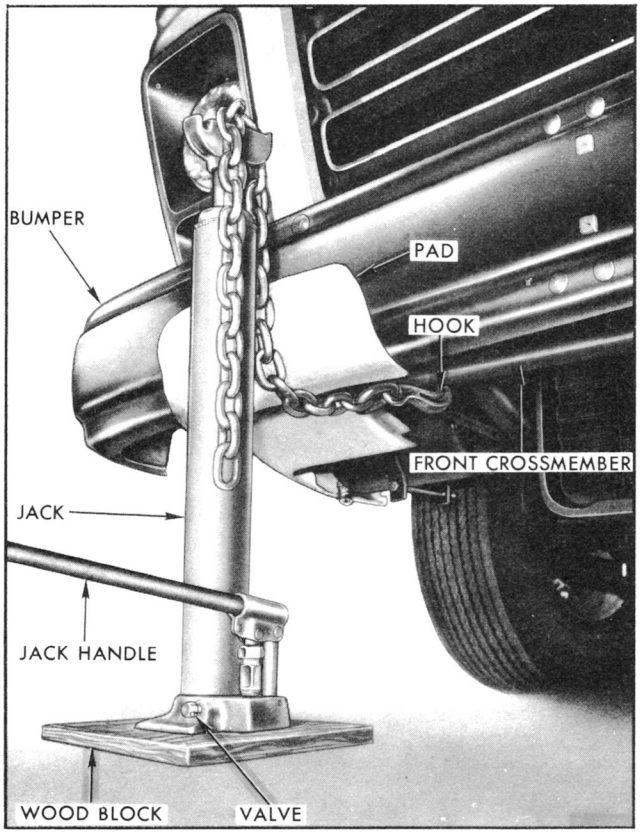
CAUTION

In order to reduce the chance of personal injury:

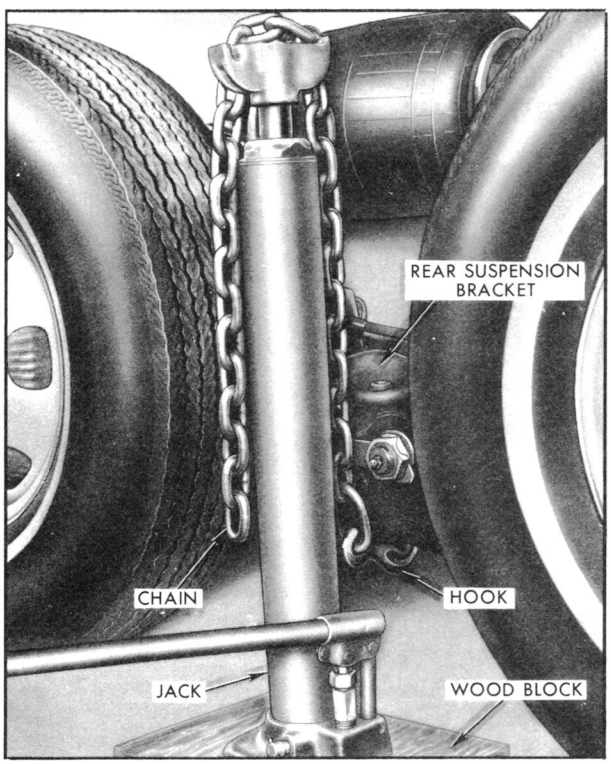
1. **Follow jacking and stowage instructions.**
2. **Use jack only when changing wheels.**
3. **Never get beneath the vehicle when using jack.**
4. **Do not start or run engine while vehicle is on jack.**

INSTRUCTIONS

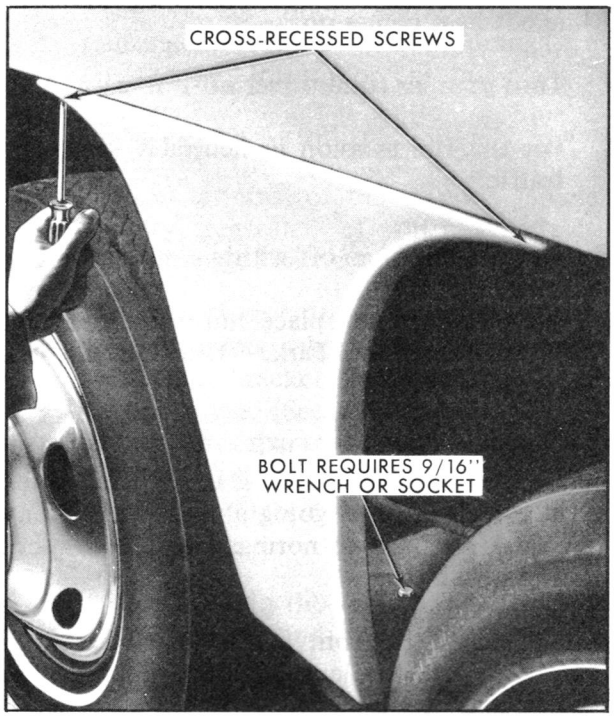
1. Park on level surface and set parking brake firmly.
2. Set automatic transmission in "PARK".
3. Activate Hazard Warning Flasher.
4. Remove wheel opening cover, if equipped.
5. Block both front and rear of the wheel diagonally opposite the jack position.
6. Loosen, but do not remove, wheel nuts by rotating wrench counterclockwise.
7. IF JACKING AT FRONT––
   - Place hydraulic jack on wood block (provided with jack) near front bumper bracket.



Jacking at Front of Vehicle



Jacking at Rear of Vehicle



Removing Fender Skirt

- Place hook at flange of front crossmember.
- Pass chain under bumper and adjust chain length to snug fit by adjusting at fork on top of jack.

8. IF JACKING AT REAR--

- Remove fender skirt, if vehicle is so equipped, using a No. 2 cross-recessed screwdriver and 9/16" wrench or socket (as shown).
- Place hydraulic jack on wood block close to rear suspension bracket (see illustration). The hook is placed in the drainage slot under bracket. Adjust chain length so link will fit in fork at top of jack.

9. Close valve at base of jack and insert jack handle.

10. Operate jack with slow, smooth motion. Raise vehicle so tire just clears surface.

11. Replace wheel and, using lug wrench provided, slightly tighten wheel nuts. Wheel must be seated on hub.

12. Open valve at base of jack to lower, and lower vehicle. Fully tighten wheel nuts by applying clockwise pressure near end of wrench. Be sure to follow the nut tightening sequence shown in illustration. Wheel nut torque should be set at 250 foot-pounds.

WHEEL NUT TORQUE CAUTION

CAUTION

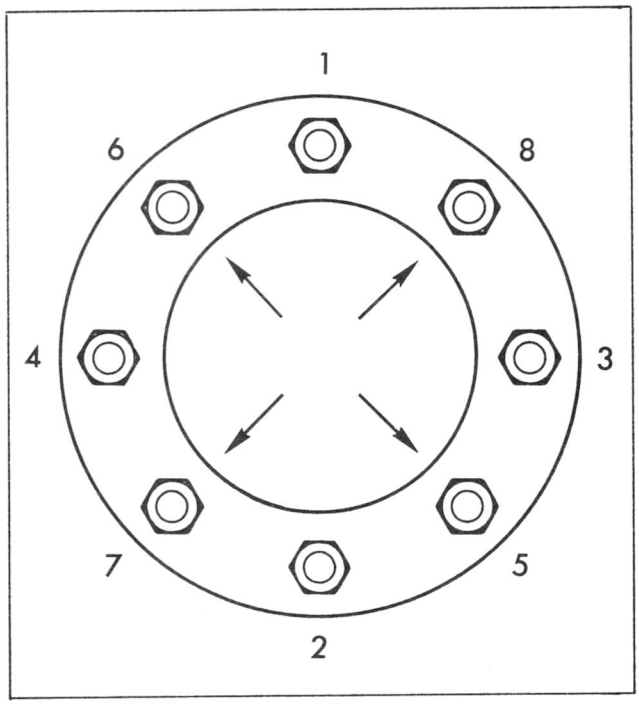
As soon as possible after installing a wheel, AND at 500 miles (800 kilometres) after such installation, have a mechanic tighten wheel nuts with a torque wrench to 250 foot-pounds. IN ADDITION, when the vehicle, or wheel, or fasteners are new, have the torque set at the first 500 miles (800 kilometres). This precaution is necessary because the clamping system used on the vehicle wheels in some cases needs to seat before the fasteners will hold a uniform clamp load and remain fully tightened. Also, nut tightening on all wheels should be set with a torque wrench at the intervals shown on the chart in the Maintenance Schedule folder.

Wheel nuts should be tightened alternately and evenly to the correct torque in the sequence shown. Improperly tightened wheel nuts could eventually allow the wheel to come off while the vehicle is in motion, possibly causing loss of control. (Also see the caution in the SERVICE AND MAINTENANCE section of this manual regarding the danger of mixing metric and customary fasteners.)

STOWAGE OF TIRE AND JACK

CAUTION

Always securely restow the spare tire assembly (if so equipped), all jacking equipment, and any covers or doors, using the means provided. This will help keep such things from being thrown about and injuring people in the vehicle in an accident.



Wheel Nut Tightening Sequence

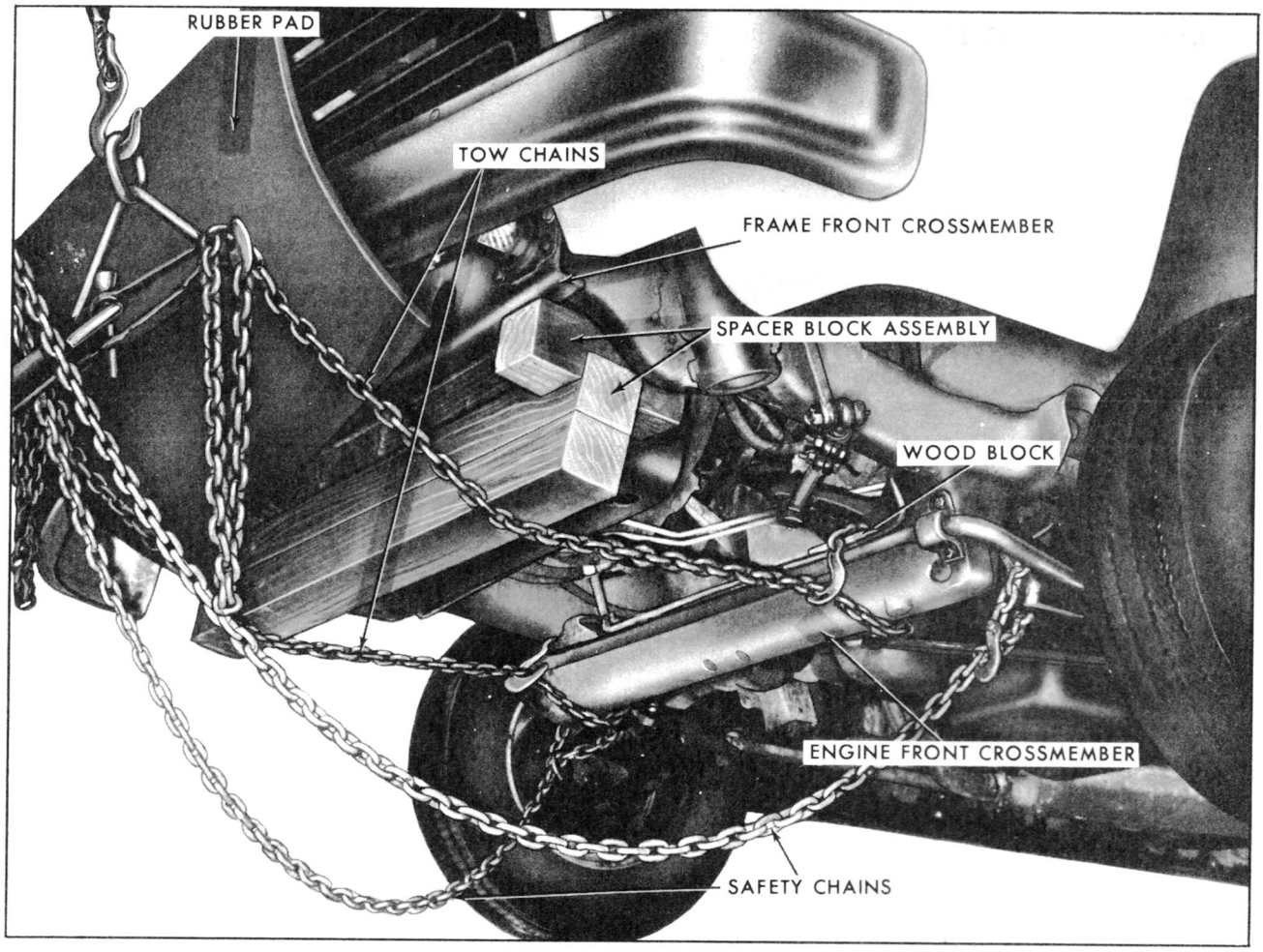
NOTICE: A tire that is run while seriously low on air will overheat, and may result in a fire that may severely damage the vehicle and its contents.

TOWING

Proper equipment must be used to prevent damage to vehicles during any towing. State (Provincial in Canada) and local laws which apply to vehicles in tow must be followed. Get detailed towing instructions from your Motorhome dealer.

Your vehicle should always be towed from the front. It should be towed on all six wheels if possible. When towing on all six wheels, the vehicle should be towed at speeds less than 35 mph (60 km/h) for distances up to 50 miles (80 kilometres), provided the final drive, axle, transmission and steering system are normally operable. However, if the front of the vehicle must be raised before it can be towed, it is important that you follow this precautionary procedure:

NOTICE: If the front of the vehicle is raised for towing, vehicle speed should be limited to 5-15 mph (10-20 km/h), depending on road surface. This should be done to avoid damage to the vehicle.



Towing Vehicle on Four or Six Wheels

If the front of the vehicle must be raised for towing, raising the front wheels four inches off the ground will leave about five inches ground clearance at rear (assuming the vehicle started at design ride height and with proper loading).

For any towing, the steering must be unlocked, transmission in NEUTRAL, and the parking brake released. Also, be sure the ignition key is in the "OFF" position (not "ACCESSORY" or "LOCK").

Connect towing equipment to engine front crossmember as shown in illustration. Do NOT attach to bumpers or brackets. Remember also that power brakes and power steering will not work when engine is off.

If the vehicle is to be towed by a wrecker, use only equipment designed for this purpose, following the instructions of the wrecker manufacturer. A safety chain system must be used.

IT IS NOT RECOMMENDED THAT VEHICLE BE TOWED WITH THE REAR LIFTED, AS THIS COULD RESULT IN FRONT SUSPENSION OR CROSSMEMBER DAMAGE.

FREEING VEHICLE FROM SAND, ETC.

If your vehicle gets stuck in sand, mud, or snow, move the transmission shift lever from "D" to "R" in a repeat pattern while applying moderate pressure to the accelerator. **Do not race engine.** For best traction, avoid spinning wheels.

CAUTION

Do not spin wheels faster than 35 MPH (60 km/h) or for more than 3 minutes at a time. Personal injury and damage may result from excessive wheel spinning, including transmission overheating, tire disintegration and/or differential failure.

REAR SUSPENSION FAILURE

EMERGENCY OPERATION

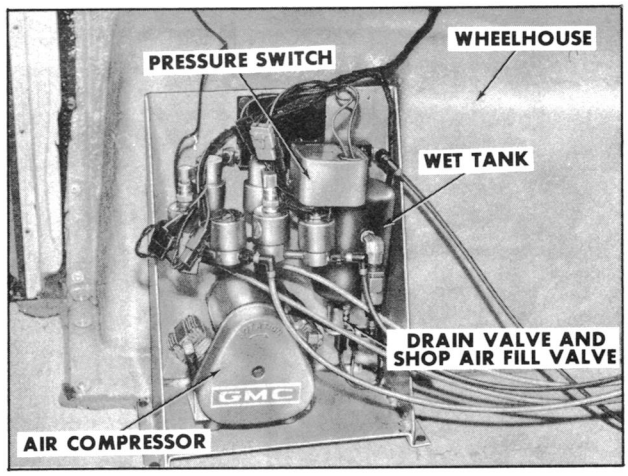
In the event of total air loss for any reason, the vehicle may be driven at a speed of 5-15 MPH (10-20 km/h) depending on road surface, with the rear of the vehicle in the fully "DOWN" position. Care should be exercised since ground clearance at the rear will be at a minimum. If total air loss has occurred, vehicle should be taken to the nearest Motorhome dealer. (For further information on the rear suspension system, refer to the SERVICE AND MAINTENANCE section of this manual.)

Depending upon the type of rear suspension failure, it may be possible to add air to the rear suspension air bellows. This should be done **inside** the vehicle in vehicles with both Type I and Type II suspension systems. (To determine which type of rear suspension system you have, refer to "Rear Suspension" in the SERVICE AND MAINTENANCE section of this manual.)

In vehicles with mechanical height control valves (Type I suspension), air should be added to the rear suspension wet tank at the shop air fill valve (see illustration). Wet tank is located with the control components near the left rear wheel housing of the vehicle.

In vehicles with electronic height control sensors and two air compressors (Type II suspension), air should be added to the air valve fitting (see illustration) on the output side of **each** compressor. Compressors are located with the control components near the left rear wheel housing of the vehicle.

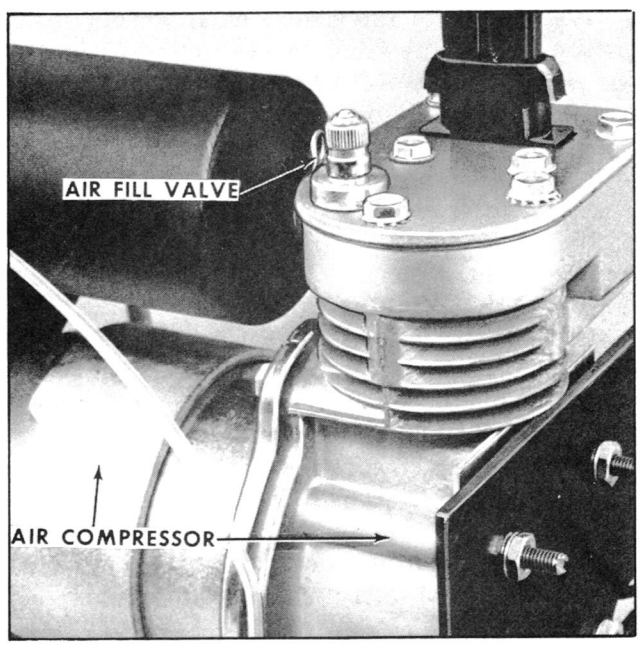
This procedure (adding air) can be done at a local gas station. When adding air in this manner, be sure the engine is running or the ignition switch is turned to "ON" or "ACCESSORY" position. Also, make certain that the outer rocker switches on the Electro-Level panel are in "RAISE" position. Leaving key and switches in these positions is necessary to electrically actuate the Electro-Level system before air can be added. While adding air, have someone stand outside the vehicle (but not near the bellows) to signal when the vehicle appears to be level. If this is not done, too much air could be added to the bellows and the rear of the vehicle will then be in a raised position unsuitable for driving.



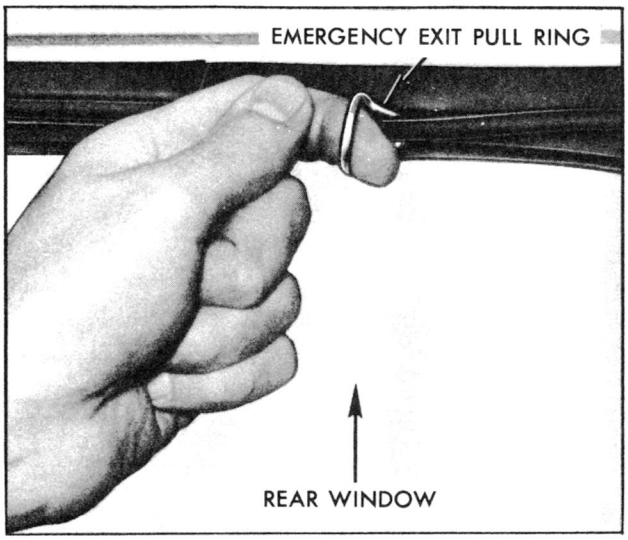
Location For
Adding Air--Type I Rear Suspension

CAUTION

Normal air bellows pressure is between 80-90 PSI. When adding air to the rear suspension in an emergency situation, DO NOT EXCEED 120 PSI AT ANY TIME, or bellows or pistons could explode, possibly causing personal injury and/or property damage.



Location For
Adding Air--Type II Rear Suspension



Emergency Exit Pull Ring

When vehicle is leveled, move the RAISE-LOWER switches to the "OFF" position and the center TRAVEL switch to "HOLD." This will electrically "lock" the Electro-Level system, trapping air in the bellows to maintain a normal ride height.

Adding air is an emergency procedure. Vehicles with rear suspension "leak down" or air loss failure should be taken to the nearest Motorhome dealer for inspection and repair.

EMERGENCY EXIT

The rear window of the vehicle can be used as an exit in an emergency. To use the emergency exit, pull the ring located at the top center of the rear window until window seal is removed, and then push the glass out of the frame. Do not pull ring except in case of emergency. The window is not hinged, and it is designed to be pushed out. Take care that window will not fall on anyone outside the vehicle. Be careful of possible broken glass on ground when exiting from the vehicle.

SECTION 4

APPEARANCE CARE

CARE AND CLEANING OF INTERIOR

CAUTION

Because fumes are more dangerous in a small space, be sure the vehicle is well ventilated while using any cleaning agent. Follow the manufacturer's advice in using such products.

NOTICE: To avoid possible permanent discoloration on white or light colored seat trim, DO NOT let materials with unstable dyes come in contact with seat trim materials until totally dry. (This would include certain types of casual clothing, such as colored denims, corduroys, leathers and suedes; also decorative paper, etc.)

With the advent of modern trim metarials, it is VERY IMPORTANT that proper cleaning techniques and cleaners be used. Failure to do this on the first cleaning may result in water spots, spot rings, setting of stains or soilage, all of which make it more difficult to remove in a second cleaning.

The portions of the following cleaning instructions that are in **bold type** are especially important and **must** be performed.

Dust and loose dirt that accumulates on interior fabric trim should be removed often with a vacuum cleaner or soft brush. Vinyl or leather trim should be wiped regularly with a clean damp cloth. Normal trim soilage, spots or stains can be cleaned with these GM cleaners.

Description	Part No.
GM Spot Lifter 8 oz. Solvent Type	1051398
GM Multi-Purpose Powdered Cleaner 6 lbs. Foam Type	1050429

The above products are excellent cleaners when used properly. They are available through the GM Parts System.

1. Remove stains as quickly as possible before they become "set".
2. Use a clean cloth or sponge and change to a clean area frequently. (A **SOFT** brush may be used if stains persist.)
3. Use solvent type cleaners in a well ventilated area, also, do not saturate the stained area.
4. If a ring should form after spot cleaning, the entire area of the trim assembly should be cleaned **IMMEDIATELY.**
5. Follow instructions on the label of the cleaner.

CAUTION

Many cleaners may be poisonous or flammable, and their improper use may cause personal injury or may cause damage to the inside of your vehicle. Therefore, when cleaning the interior, do not use volatile cleaning solvents such as: acetone, lacquer thinners, enamel reducers, nail polish removers; or such cleaning materials as laundry soaps, bleaches or reducing agents (except as noted in the fabric cleaning advice on stain removal that follows). Never use carbon tetrachloride, gasoline or naphtha for any cleaning purpose.

CLEANING GENERAL SOILAGE OR WATER SPOTS FROM FABRIC TYPE TRIM WITH FOAM TYPE CLEANER

GM Multi-purpose Powdered Cleaner is excellent for this type of cleaning and for cleaning panel sections where a minor cleaning ring may be left from spot cleaning.

Vacuum area thoroughly to remove excess loose dirt. **ALWAYS** clean a full trim assembly or complete trim section. Mask adjacent trim along stitch or welt lines. Mix Multi-Purpose Powdered Cleaner in strict accordance with directions on label of container-mix proportionally for smaller quantities. **USE SUDS ONLY ON A CLEAN SPONGE OR SOFT BRISTLE BRUSH. DO NOT WET FABRIC TOO MUCH OR RUB HARSHLY WITH BRUSH. IMMEDIATELY AFTER CLEANING, WIPE OFF ANY EXCESS CLEANER RESIDUE WITH SLIGHTLY DAMP ABSORBENT TOWEL OR CLOTH. IMPORTANT – IMMEDIATELY AFTER WIPING, FORCE-DRY FABRIC WITH AIR HOSE, HEAT DRYER OR HEAT LAMP.** (Use caution with heat dryer or heat lamp to prevent damage to fabric.) When trim materials with a sheen or luster finish are dry, wipe fabric lightly with a soft, dry, clean cloth to restore its sheen or luster.

SPOT CLEANING FABRIC TYPE TRIM MATERIALS WITH SOLVENT TYPE CLEANER

Before trying to remove spots or stains from fabric, determine as accurately as you can what kind and how old the spot or stain is. Some spots or stains can be removed with water or mild soap solution (see "Removal of Specific Stains"). Spots or stains should be removed as soon as possible.

Some types of stains or soilage such as lipstick, inks, and grease, are very difficult sometimes impossible to completely remove. When cleaning this type of stain or soilage, be sure not to enlarge the soiled area.

GM Fabric Cleaner (Solvent Type) is excellent for spot cleaning grease, oil or fats from fabric trim. Excess stain should be gently scraped off trim material with a clean, **DULL** knife or scraper. **USE VERY LITTLE CLEANER,** light pressure, and clean cloths (preferable cheese cloth). Cleaning action should be from outside of stain **FEATHERING** towards center of stain. Keep changing to a clean section of cloth. When stain is cleaned from fabric, immediately dry area with an air hose, heat dryer or heat lamp to help prevent a cleaning ring (use caution with heat dryer or heat lamp to prevent damage to fabric). If a ring still persists, mark off surrounding trim sections and clean entire affected trim panel section with GM Multi-Purpose Powdered Cleaner as previously described under "Cleaning General Soilage or Water Spots with Foam Type Cleaner".

REMOVAL OF SPECIFIC STAINS

GREASE OR OIL STAINS–Includes grease, oil, butter, margarine, shoe polish, coffee with cream, chewing gum, cosmetic creams, vegetable oils, wax crayon, tar and asphalts. Carefully scrape off excess stain; then use Fabric Cleaner (Solvent Type) as previously described. Shoe polish, wax crayons, tar and asphalts will stain if allowed to remain on trim; they should be removed as soon as possible - use caution as cleaner will dissolve them and may cause them to "bleed."

NON-GREASY STAINS–Includes catsup, coffee (black), egg, fruit, fruit juice, milk, soft drinks, wine, vomit and blood. Carefully scrape off excess stain; then sponge stain with cool water. If stain remains, use Multi-Purpose Powdered Cleaner (Foam Type) as previously described. If odor persists after cleaning vomitus or urine, treat area with a water-baking soda solution - 1 teaspoon baking soda to 1 cup of tepid water - finally, if necessary, clean lightly with Fabric Cleaner (Solvent Type).

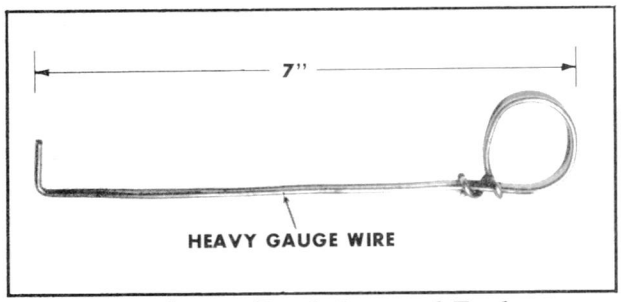
COMBINATION STAINS–Includes candy, ice cream, mayonnaise, chili sauce and unknown stains. Carefully scrape off excess stain; then clean first with COOL water and allow to dry. If stain remains, clean with Fabric Cleaner (Solvent Type).

CLEANING VINYL OR LEATHER TRIM

Ordinary soilage can be removed from vinyl or leather with warm water and a mild soap such as saddle soap or oil soap, or approved equivalent. Apply a small amount of soap solution and allow to soak for a few minutes to loosen dirt; then, rub briskly with a clean, damp cloth to remove dirt and traces of soap. (this operation may be repeated several times if necessary). Soilage such as tars, asphalts, shoe polish, etc. will stain if allowed to remain on trim. They should be wiped off as quickly as possible and the area cleaned with a clean cloth dampened with GM Vinyl Cleaner (Solvent Type).

SEAT BELT CARE

- Clean only with mild soap solution and luke warm water.



Screen Track Removal Tool

- Do not bleach or dye belts since this may severely weaken them.

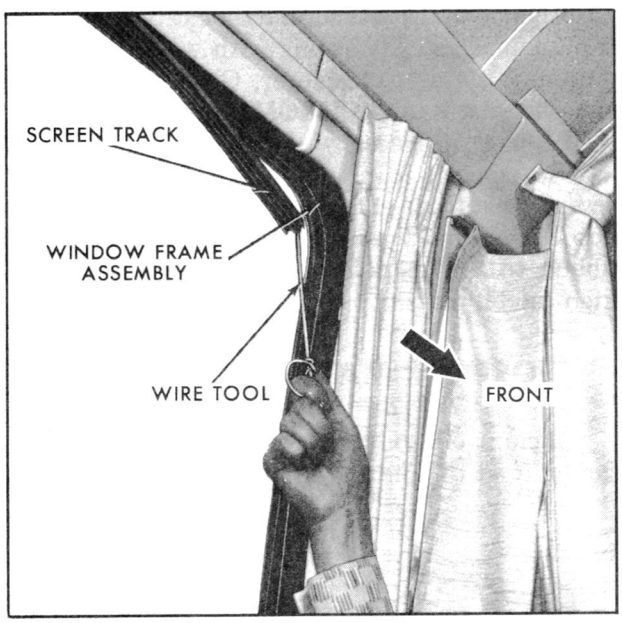
GLASS SURFACES

The glass surfaces should be cleaned on a regular basis. Use of GM Glass Cleaner or a commercial household glass cleaning agent will remove normal tabacco smoke and dust films sometimes caused by ingredients used in vinyls, plastics or other interior trim materials.

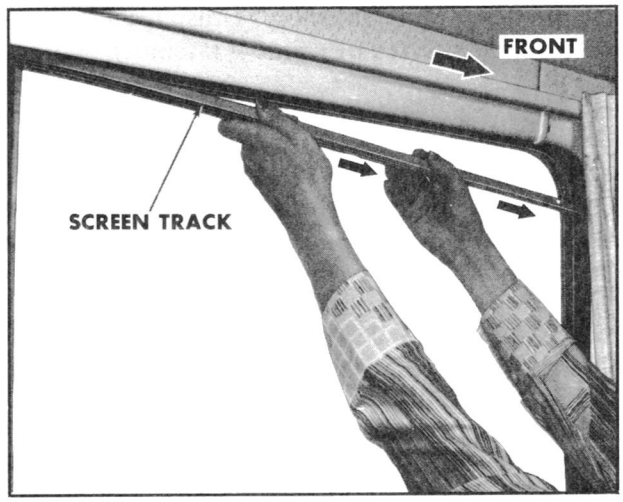
NOTICE: Never use abrasive cleaners on any vehicle glass, as they may cause scratches.

WINDOW SCREEN REMOVAL

To aid in cleaning interior glass on your vehicle, the horizontal sliding window screens may be removed as follows:



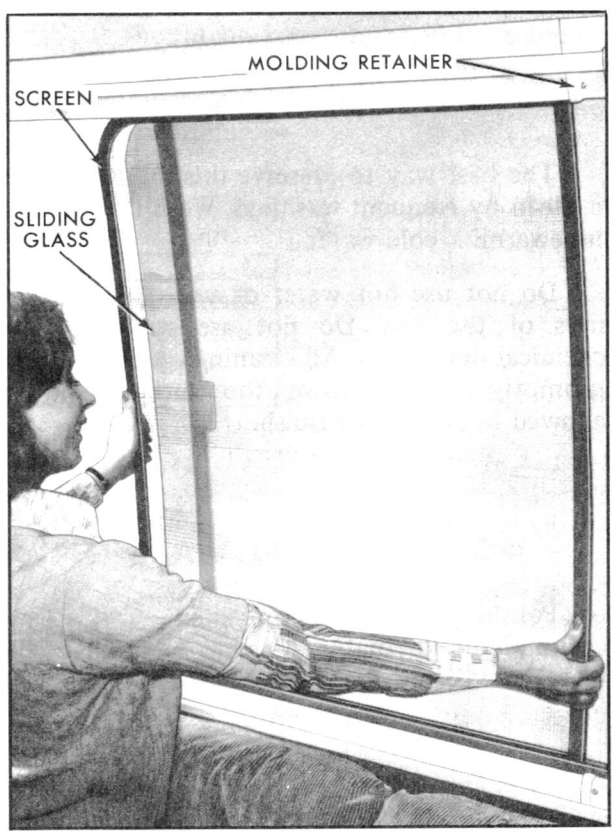
Separating Track From Window Frame Assembly



Removing Screen Track

NOTICE: To help avoid damaging screen track, DO NOT remove screen before removing screen track.

1. Remove upper screen track using a reasonably stiff wire shaped to form the screen track removal tool (as shown). Insert tool at outer end of screen track and separate track from



Removing Window Screen

window frame assembly. Grasp track and pull completely free of window assembly.

2. Unlock window, slide glass and screen forward almost to moulding retainers.

3. Lift screen up into window frame assembly. Pull bottom of screen away from window and remove screen.

WINDOW SCREEN INSTALLATION

1. To install screen, lift screen up into window frame assembly. Slide screen fully rearward.

2. Note that screen track when installed contacts the inner edge of sliding window track. The screen track has three grooves, and the widest groove should face the outside of the vehicle. Position screen track in window frame assembly and slide it rearward, until contact is made with adjacent upper screen track. Seat track into position by pressing track firmly up into window frame assembly.

3. Slide screen back and forth several times to assure proper sealing of track. If screen will not slide, track is binding. Using a small wood block and mallet, carefully tap the track firmly into position.

CAUTION

DO NOT use a screwdriver to install screen track. The screwdriver may fracture the window glass.

EXTERIOR APPEARANCE CARE

The acrylic finish on your vehicle provides maximum beauty, depth or color, gloss retention and durability.

WASHING

The best way to preserve this finish is to keep it clean by frequent washings. Wash the vehicle in lukewarm or cold water.

Do not use hot water or wash in the direct rays of the sun. Do not use strong soap or chemical detergents. All cleaning agents should be promptly flushed from the surface and not allowed to dry on the finish.

POLISHING AND WAXING

Polishing is recommended to remove accumulated residue and eliminate any "weathered" appearance.

Your GMC Motorhome dealer offers several polishes and cleaners which have proven value in maintaining original finish appearance and durability.

PROTECTION OF EXTERIOR BRIGHT METAL PARTS

Bright metal parts should be cleaned regularly to maintain luster. Washing with water is all that is usually required. However, GM Chrome Polish may be used on CHROME or STAINLESS STEEL trim, if necessary.

Use special care with ALUMINUM trim. Never use auto or chrome polish, steam or caustic soap to clean aluminum. A coating of wax, rubbed to a high polish, is recommended for all bright metal parts.

FOREIGN MATERIAL DEPOSITS

Calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings,

chemicals from industrial chimneys and other foreign matter may damage vehicle finishes if allowed to remain on painted surfaces.

Prompt washing may not thoroughly remove all of these deposits. Additional cleaners may be required. When using chemical cleaners developed for this purpose, be certain they are safe for use on acrylic painted surfaces.

FINISH DAMAGE

Any stone chips, fractures or deep scratches in the finish should be repaired promptly. Exposed metal will corrode quickly and may develop into major repair expense.

Minor chips and scratches can be repaired using touch-up materials available from your GMC Motorhome dealer. Larger damages to the finish can be corrected in your dealer's body and paint shop facility.

CLEANING WHITE SIDEWALL TRIES

Use GM White Sidewall Tire Cleaner or a tire cleaner which will not harm aluminum trim. A stiff brush may be used with the cleaner.

UNDERBODY MAINTENANCE

Corrosive materials used for ice and snow removal and dust control accumulate on the underbody. If allowed to remain, these materials can result in accelerated rusting and deterioration of underbody components such as fuel lines, frame and floor pan, exhaust system, etc. At least once each year, preferably after a winter's exposure these corrosive materials should be removed by flushing the underbody with plain water. Particular attention should be given to cleaning out those area where mud and other foreign materials collect.

If desired, your GMC Motorhome dealer can perform this service for you. In addition, he can provide recommendations on undercoating materials which will help protect your vehicle from corrosion.

UNDERCOATING

Due to the fiberglass and aluminum body construction of the vehicle added protection by additional undercoating is not necessary. However, if you do wish to apply undercoating material, it should be kept off of all moving or rotating parts. It should also be kept off air conditioner fittings, body drain holes, exhaust systems, and plumbing.

NOTICE: See list of GM APPEARANCE CARE AND MAINTENANCE MATERIALS on the following page.

GM VEHICLE CHEMICALS

Part Number	Size	Description	Usage
1050001	16 Oz.	Washer Solvent and Gas Line De-Icer	Windshield washing system and gas line
1050017	32 Oz.	Power Steering Fluid	Power Steering
1050019	16 Oz.	Spray-A-Squeak	Weather Strips-stops squeaks on metal to metal and metal to rubber contact
1050172	16 Oz.	Tar and Road Oil Remover	Removes old waxes, polishes, tar, and road oil
1050173	16 Oz.	Chrome Cleaner and Polish	Removes rust and corrosion on chrome and stainless steel
1050174	16 Oz.	White Sidewall Tire Cleaner	Cleans white and black tires
1050214	32 Oz.	Vinyl/Leather Cleaner	Spot and stain removal on vinyl or leather
1050223	16 Oz.	Finish Guard Cleaner	One step cleaner and wax
1050244	16 Oz.	Fabric Cleaner	Spot and stain removal on cloth and fabric
1050422	12 Oz.	Heat Valve Lubricant	Free up sticky heat risers-general purpose penetrant
1050427	23 Oz.	Glass Cleaner	Glass cleaning and spot cleaning on vinyls
1050429	6 Lb.	Multi-Purpose Powdered Cleaner	Cleans vinyl and cloth on door trim, seats, and carpet also tires and mats
1050520	16 Oz.	Lubriplate (White Grease)	Grease for various compartment and door hinges and latches
1051398	8 Oz.	Spot Lifter	Spot and stain removal on cloth and fabric
1051515	32 Oz.	GM Optikleen	Windshield washer solvent and anti-freeze
1051516	32 Oz.	Washer Solvent and Gas Line De-Icer	Same as 1050001
1051772	20 Oz.	Presoftened Cleaner/Wax	One step cleaner/wax
1051855	32 Oz.	Dexron® II	Automatic Transmission
1051858	16 Oz.	G.M. Super E.O.S.	Consult your Dealer for specific usage
1052103	1 Gal.	Permanent Type Coolant and Anti-Freeze	Year round coolant and anti-freeze
1052271	23 Oz.	GM Gear Lubricant	Final Drive Lubricant
1052272	15 Gal.	GM Gear Lubricant	Same as 1052271

GMC TRANSMODE NOTES

SECTION 5

SERVICE AND MAINTENANCE

CAUTION

As with any machine, care should be taken when making any check, doing any maintenance, or making any repair to avoid being injured. Improper or incomplete service could also lead to the vehicle itself not working properly which may result in personal injury or damage to the vehicle or its equipment. If you have any question about carrying out some service, have the service done by a skilled mechanic.

CAUTION

This vehicle has some parts dimensioned in the metric system as well as in the customary system. Some fasteners are metric and are very close in dimension to well-known customary fasteners in the inch system. Mismatched or incorrect fasteners can result in damage to the vehicle or possibly personal injury. Note that, during any vehicle maintenance, any fasteners used to replace older ones must have the same measurements and strength as those removed, whether metric or customary. (The numbers on the heads of metric bolts and on the surfaces of metric nuts show their strength. Customary bolts use radial lines to show this, while most customary nuts do not have strength markings.) Fasteners taken from the vehicle should be saved for re-use in the same spot when possible. Where a fastener cannot be used again, care should be taken to choose a replacement that matches the old one. For information and help, see your GMC Motorhome dealer.

MAINTENANCE SCHEDULE

For owner convenience, a separate folder has been provided with your vehicle which contains a complete maintenance schedule. It also briefly describes the safety, emission control, lubrication, and general service that your vehicle requires. The maintenance folder is supplemented by this section of the Operating Manual, as well as a Warranty Information folder also furnished with your vehicle. Read all three publications for a full understanding of your vehicle's maintenance needs.

GMC TRUCK AND COACH DIVISION SUPPORTS NIASE MECHANIC CERTIFICATION

What is "NIASE"?

The National Institute for Automotive Service Excellence* is a nonprofit corporation. It was started to promote the highest standards of automotive service. It's run by a 36-member Board of Directors who are from the automotive service business, education, government and consumer groups. GMC Truck and Coach Division supports NIASE.

What Does "Certified" Mean?

"Certified" means that the mechanic has demonstrated his training and skill in one or more service repair areas such as engine, brakes, and electrical systems. In total, there are 16 NIASE skills: These cover eight mechanical passenger car, six mechanical truck and two body areas.

How Are Mechanics Certified?

Mechanics volunteer to take tough written exams to test their knowledge. These tests were developed and are offered by the Educational Testing Service of Princeton, New Jersey. (These are the same people who administer college exams and other large scale testing programs.) In addition, at least two years of on-the-job experience as a mechanic are needed to become certified.

How Do I Know A Mechanic Is Certified?

NIASE awards certificates and pocket cards. These show the areas in which the mechanic has been certified. The mechanic is also entitled to wear the authorized shoulder patch.

What Does It Do For Me?

Certification helps assure you that the job will be done right—by a highly trained person. It helps protect your investment.

*U.S. only

NIASE Certification

ACCESSIBILITY

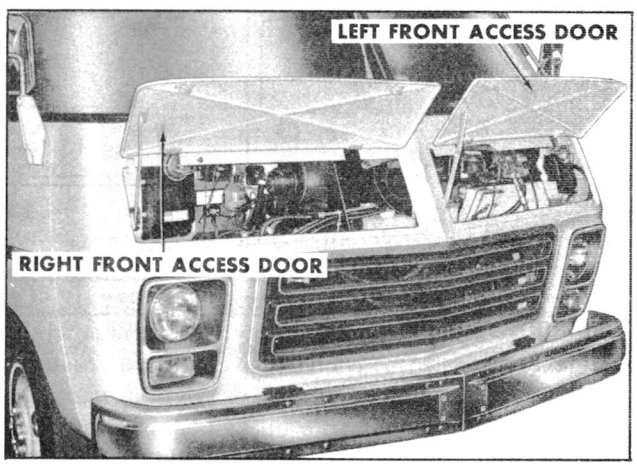
EXTERIOR COMPARTMENTS

Your vehicle has an entrance door on the right side and three compartment doors. Their locations are shown on the preceeding illustration.

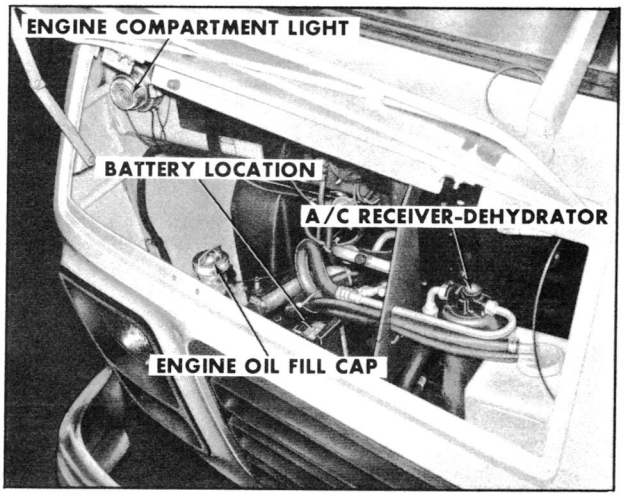
Be sure the doors are secured tightly to prevent their opening after vehicle is in motion.

There are two front access doors on your vehicle. Turn the latch knob to the left to release each door. Items that can be checked or filled through the right access door are the batteries, engine oil fill, radiator, radiator cap, engine coolant reservoir and the air conditioner receiver-dehydrator sight glass. Items that can be checked or filled through the left access door are the windshield washer reservoir, brake master cylinder and engine oil dipstick.

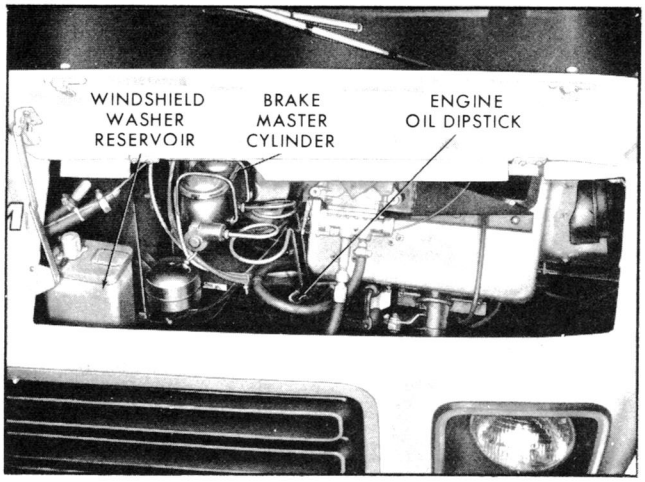
Be sure to secure the access doors after closing them by turning the latch knob to the right to prevent the doors from opening after the vehicle is in motion.



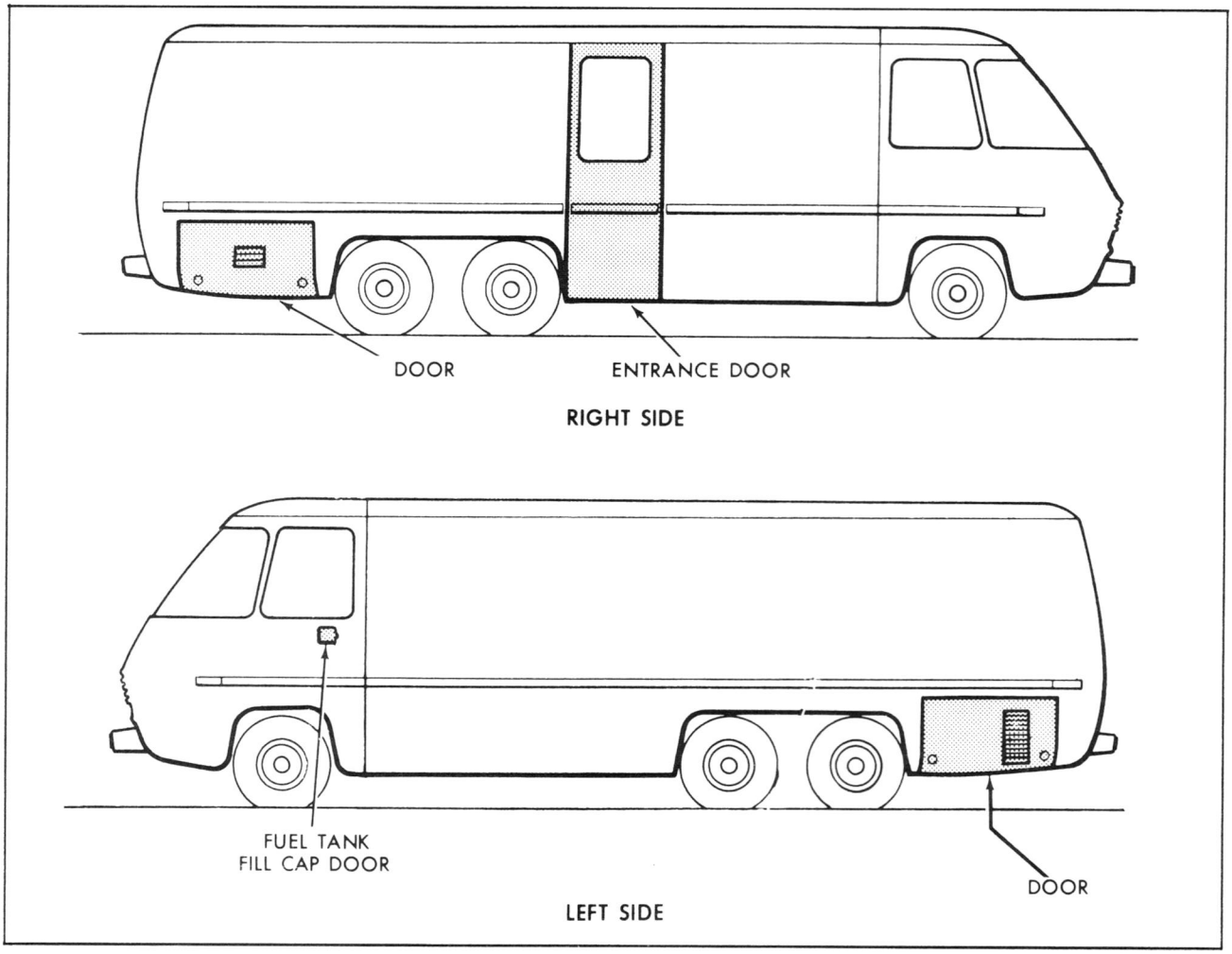
Front Access Doors



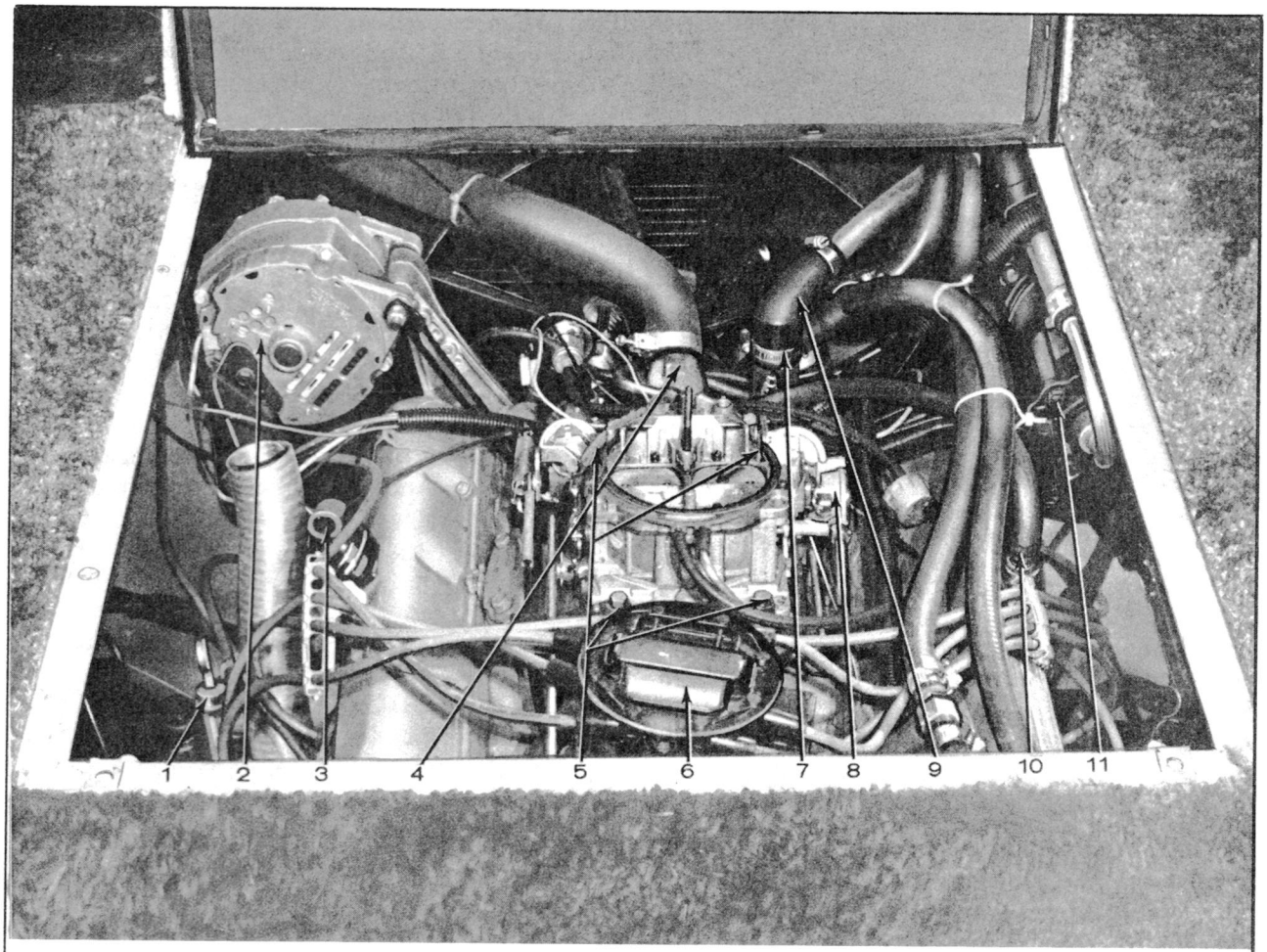
Right Front Access Compartment



Left Front Access Compartment



Exterior Compartment Location (Typical)



1. Automatic Transmission Fluid Dipstick and Fill Tube
2. Generator
3. PCV Filter
4. Thermostat Housing
5. Carburetor Attaching Bolts (4)
6. Distributor
7. Thermal Vacuum Switch
8. Carburetor Choke Coil Cover
9. Engine Oil Fill Hose and Tube Assembly
10. PCV Valve
11. Air Conditioning Compressor

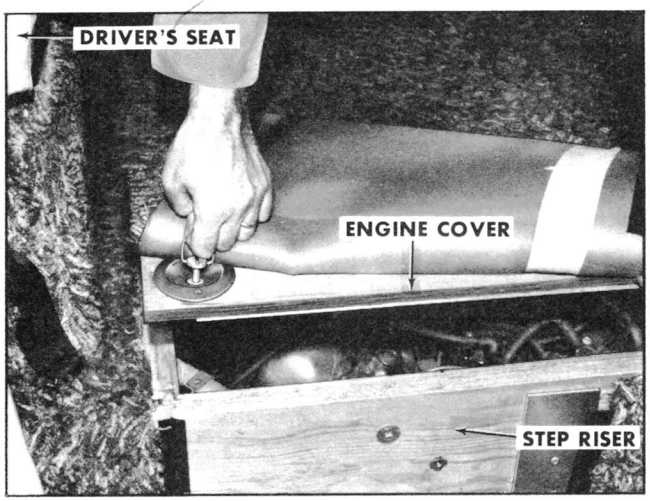
Engine Compartment (Typical)

CAUTION

Before pouring fluid into any opening anywhere on the vehicle, or allowing anyone else to do so, make certain that the correct filler opening and type of fluid has been selected. A wrong choice could result in serious personal injury or property damage.

ENGINE ACCESSIBILITY

Access to the engine is provided by an engine cover located between the driver and passenger seats. The cover is designed to be secured at the two rear corners by securing bolts. The securing bolts have rings and may be loosened or tightened by hand or screwdriver. The cover is designed to be secured at the front by a retaining lip.



Removing Engine Access Cover

To remove the engine cover loosen the securing bolts and lift up using the wire loops. To install the engine cover place the cover in its frame and slide forward as far as possible. Tighten the securing bolts.

ENGINE COMPARTMENT LIGHT

The optional engine compartment light (located behind right front access door) is turned ON when access door is opened. The light, attached to a 25-foot cord, may be removed from engine compartment for use as necessary.

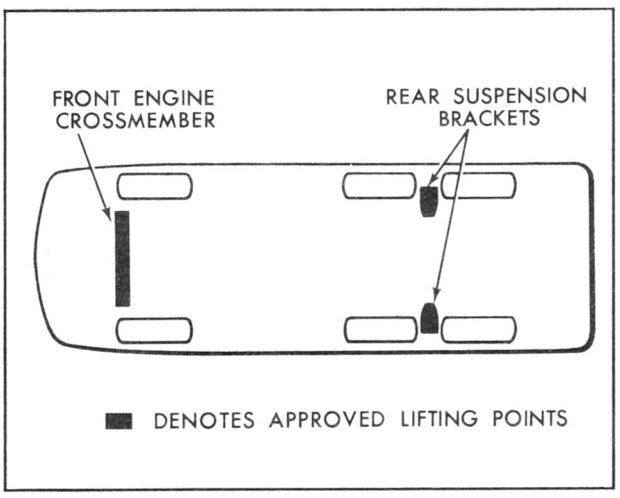
CAUTION

It is essential that when installing the engine cover it be fully seated to its seal and secured by the lip at its forward edge and the securing bolts at its rearward edge. Do NOT allow cables, carpeting, floor mats or any other material to interrupt the seat between the cover and the engine compartment. If the engine cover is not correctly installed and seated, engine exhaust could leak into the passenger compartment creating a safety hazard (see the carbon monoxide caution at the beginning of the section on STARTING AND OPERATING VEHICLE). If the engine must run with the cover off for maintenance purposes, care should be taken to assure that the vehicle's interior is well ventilated.

HOISTING INSTRUCTIONS

A twin post hoist of sufficient capacity and with proper adapters and/or fittings must be used.

Front hoisting position is the front engine crossmember.



Vehicle Hoisting Points

Rear hoisting must be done at the rear suspension brackets. If an "I" beam type adapter is used it should be approximately 82 inches in length to gain adequate support at suspension brackets.

If the vehicle is to be placed on safety stands for maintenance or repairs, the hoisting points should be used.

CAUTION

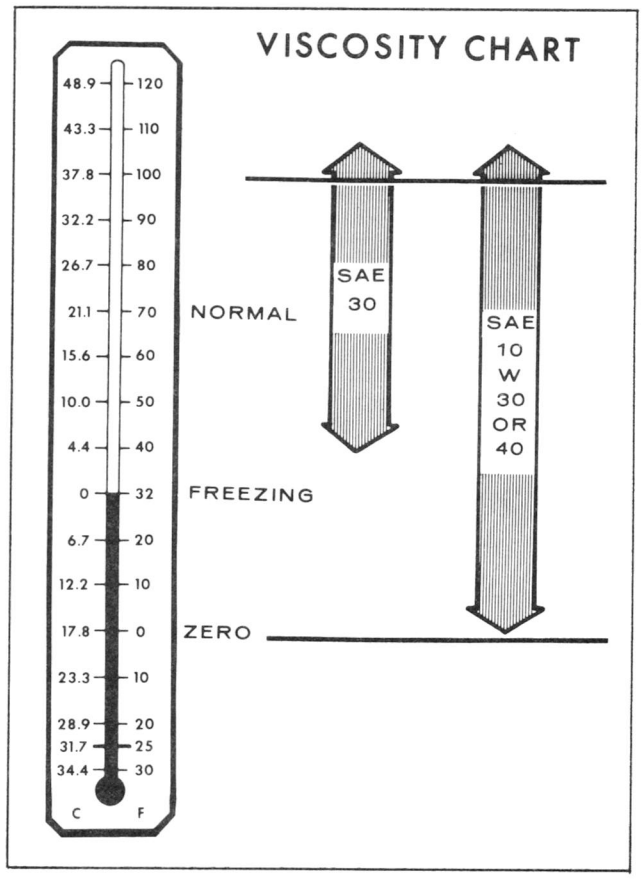
To help avoid serious personal injury and/or damage to your vehicle, the vehicle should be raised only on twin post hoists of 15,000 pounds or more total rated capacity, at the suspension points noted (see diagram). Before raising, check overhead clearance to see that it is sufficient for the vehicle. DO NOT use the vehicle jack for hoisting or maintenance. It is designed for use only when changing tires.

LUBRICATION DETAILS

ENGINE

ENGINES OIL AND FILTER RECOMMENDATIONS

- Use only SE quality engine oils (see markings on containers).
- Refer to Maintenance Schedule folder for oil change and filter replacement intervals.
- After driving in a dust storm, change the oil and filter as soon as you can.
- See your GMC Motorhome dealer for advice on the frequency of oil and filter changes under unusual driving conditions.
- The oil and filter change intervals for your engine are based on the use of SE quality oils and high quality filters like AC oil filters. Use of non-SE oils or oil change intervals longer than listed in the Maintenance Schedule folder could reduce engine life and might affect your warranty.
- Your engine was filled with an SE quality engine oil when it was built. You do not have to change this oil before the suggested change period. Check the oil level often when your engine is new until you learn how often oil must be added. Keep in mind your engine may use more oil when it is new.



Engine Oil Viscosity Chart

OIL VISCOSITY

Use the chart below to select the proper oil thickness (called viscosity or SAE Viscosity Grade) for the temperature range you expect before your next oil change. This will help cold and hot starting. It will also give good engine life, and fuel and oil mileage.

RECOMMENDED SAE VISCOSITY

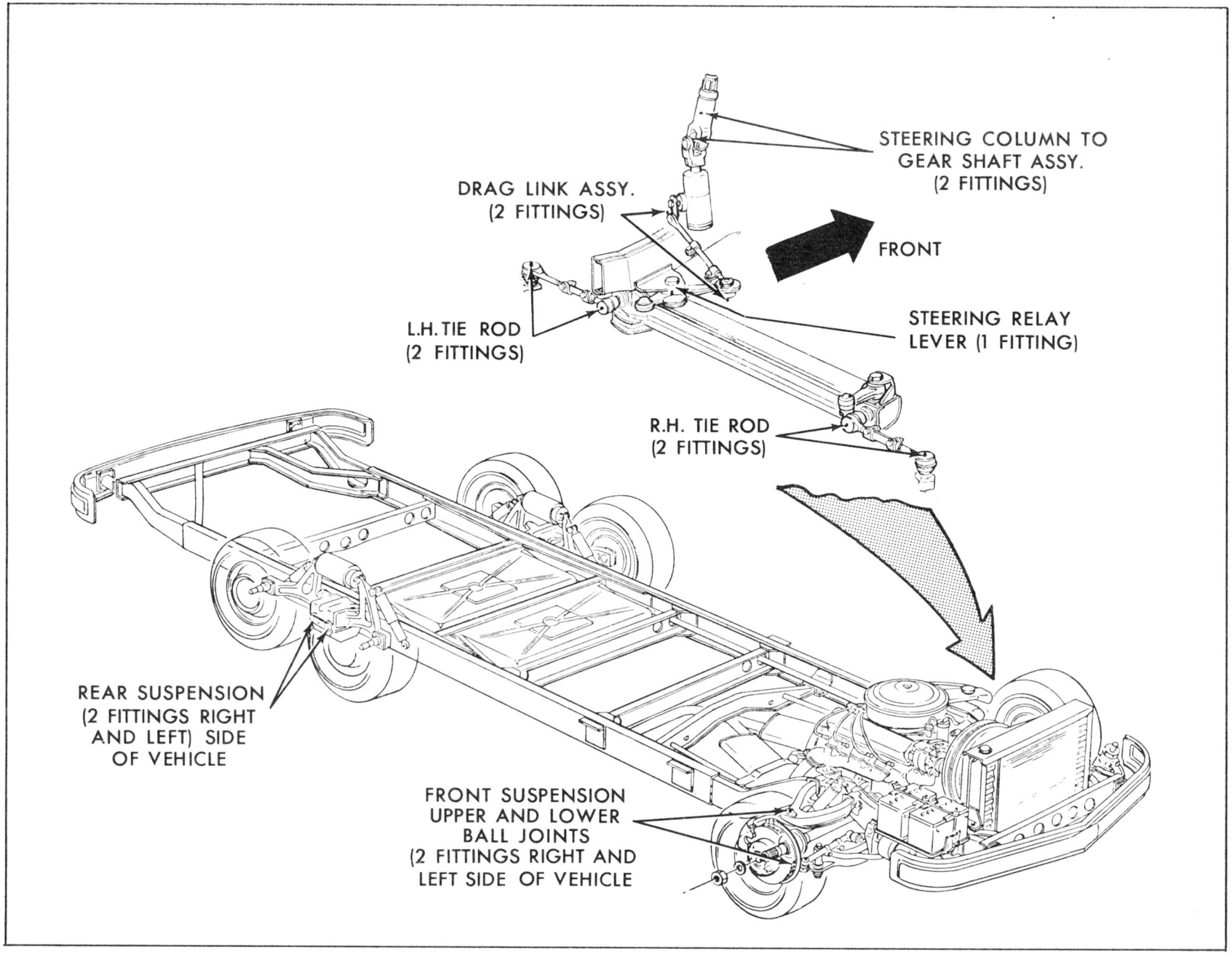
- Single grade oils are preferred, however, multigrades such as SAE 10W-30 or 10W-40 are also acceptable.
- SAE 5W-20 oils are not recommended for sustained high speed driving.
- SAE 5W-30 oils (if available) may be used if extreme low temperatures are anticipated.

ENGINE OIL ADDITIVES

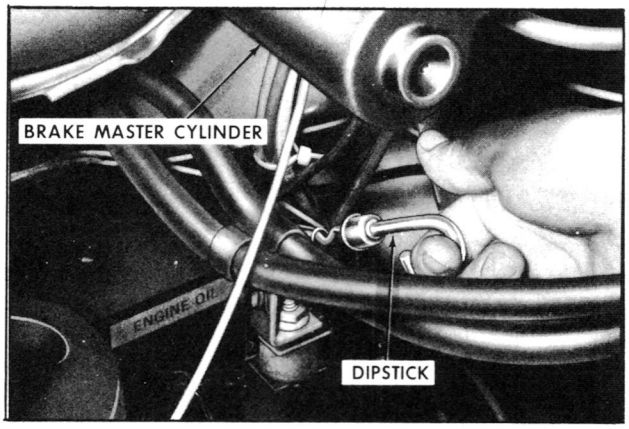
There are many extra engine oil helpers or additives for sale. Your engine should not need these extra engine oil helpers if SE quality engine oil is used and changed as suggested. If you think your engine has an oil related problem, talk to your GMC Motorhome dealer. If needed, your dealer can provide you with a tested and approved oil helper called GM Super Engine Oil Supplement.

CHECKING OIL LEVEL

- **Warm**—The best time to check the engine oil level is when the oil is warm such as during a fuel stop. First, allow about 5 minutes for the oil to drain back to the oil pan. Then pull the dipstick out (located inside the left front access door), wipe it clean, and push it back



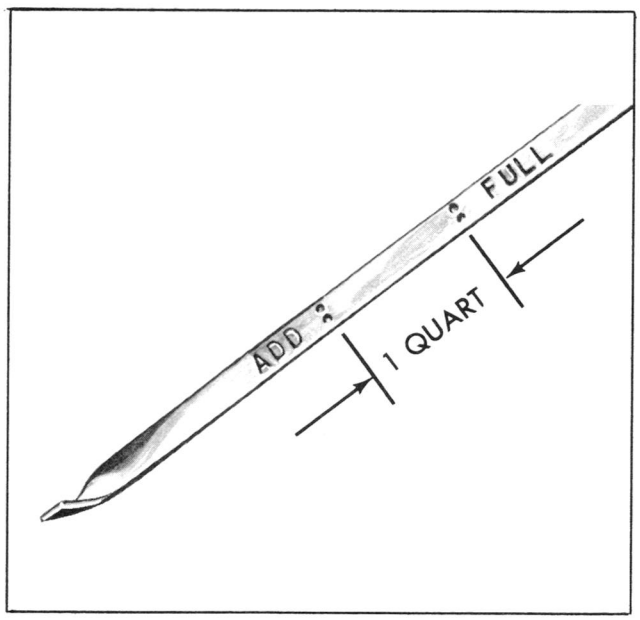
Location of Chassis Lubrication Fittings



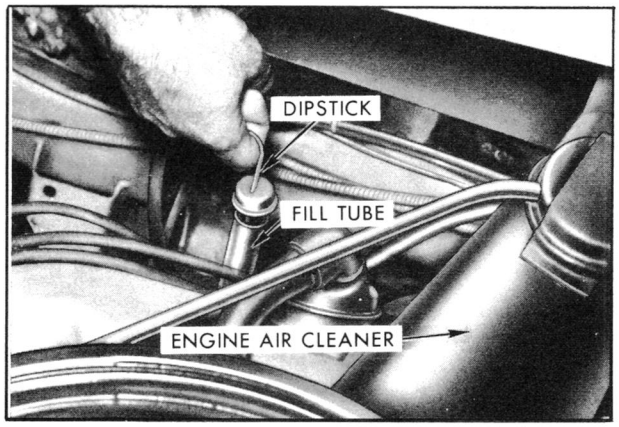
Removing Engine Oil Dipstick

down all the way. Now pull the dipstick out and look at the oil level on the dipstick. The oil level dipstick 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. **In all cases the oil level should be kept above the "ADD" line.** Push the dipstick back down all the way after taking the reading. Add oil if needed. One (1) quart will raise the oil level from "ADD" to "FULL".

- **Cold**—If oil level is checked when oil is cold, do not run the engine first. The cold oil will not drain back fast enough to the pan to give a true oil level.



Engine Oil Dipstick



Removing Transmission Dipstick

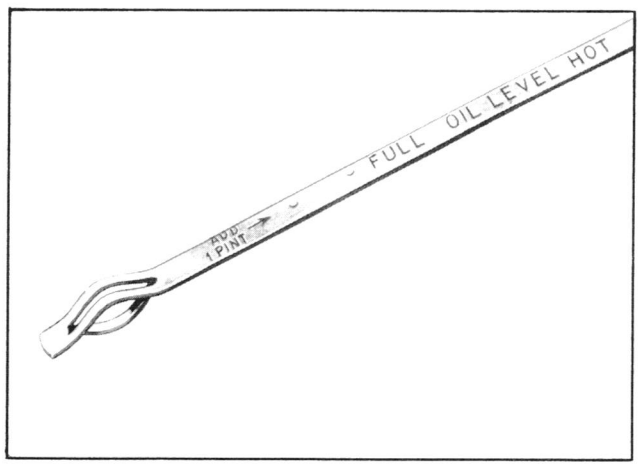
AUTOMATIC TRANSMISSION FLUID RECOMMENDATIONS

The transmission dipstick and fill tube is located under the engine access cover on the left side of the engine.

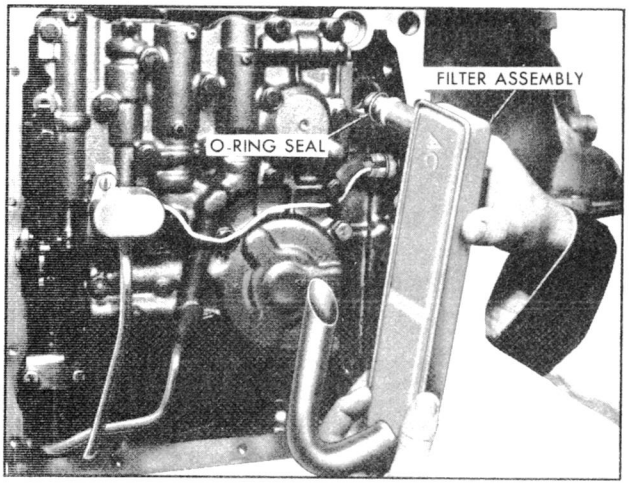
Use only automatic transmission fluids labeled with the mark DEXRON ® II.

You can buy these fluids from your GMC Motorhome dealer or other service outlets.

Automatic transmissions are often overfilled because the fluid level is checked when the fluid is cold. When cold, the dipstick shows that fluid should be added. However, the low reading is normal; the level will rise as the fluid gets warm. The fluid level will increase more than 3/4 inch as fluid warms up from 60° F to 180° F. (16° C to 82° C)



Transmission Dipstick



Replacing Transmission Oil Filter

Overfilling can cuase foaming and loss of fluid. Transmission damage can result. Low fluid level can cause slipping or loss of drive.

Check the fluid level at each engine oil change period:

NOTICE: If vehicle has just been driven for a long time at high speed or in city traffic in hot weather, or if the vehicle has been pulling a trailer, the correct fluid level cannot be read. Wait until the fluid has cooled down (about 30 minutes).

1 Drive vehicle several miles (kilometres), making frequent starts and stops to bring transmission up to normal operating temperature (approx. 190-200° F. (88-93° C.).

2. Park vehicle on a level surface.

3. Apply parking brake.

4. Place selector lever in "PARK" and leave engine running.

5. Open all windows, then remove engine cover.

6. Remove dipstick and wipe clean.

7. Reinsert dipstick until cap seats.

8. Remove dipstick 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."

NOTICE: DO NOT OVERFILL. It takes only one pint to raise level from "ADD" to "FULL" with a hot transmission.

AUTOMATIC TRANSMISSION DRAIN INTERVALS

Refer to Maintenance Schedule folder for transmission drain intervals.

TRANSMISSION OIL AND FILTER REPLACEMENT

NOTICE: Have a drain pan ready as lubricant will begin to drain as bolts are loosened.

1. Remove (13) bottom pan attaching screws.

2. Remove bottom pan and discard gasket.

3. Remove and discard oil filter assembly.

4. Install new O-ring seal on new filter and intake pipe and filter assembly and install.

5. Using a new pan gasket, install pan. Torque attaching screws to 12 foot-pounds.

6. Add four (4) quarts of DEXRON® II automatic transmission fluid and check fluid as noted above.

FINAL DRIVE

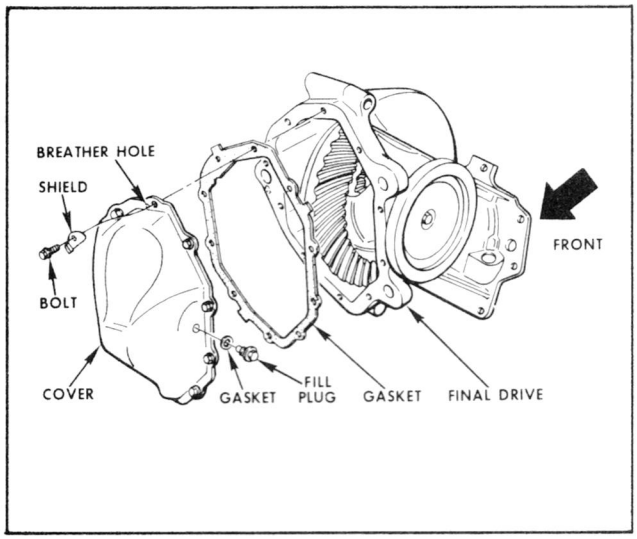
FINAL DRIVE LUBRICANT

Check lubricant level of final drive at intervals specified in the Maintenance Schedule folder. Add lubricant, if necessary, to fill to level of filler plug hole. Use SAE 80W GL-5 or SAE 80W-90 GL-5 Gear Lubricant. For those vehicles driven in Canada, use SAE 80W GL-5 Gear Lubricant.

Lubricant Replacement Procedure

1. Remove (10) cover attaching bolts. Have a drain pan ready as lubricant will begin to drain as bolts are loosened.

2. Remove cover and allow lubricant to drain. Discard old gasket.



Final Drive Cover Removal

3. Using a new cover gasket, install cover. Torque attaching bolts to 24-foot pounds. Shield to be bent over breather hole.

4. Add four pints of recommended lubricant through fill plug hole or fill until libricant level is at the plug hole. Install fill plug.

STEERING SYSTEM

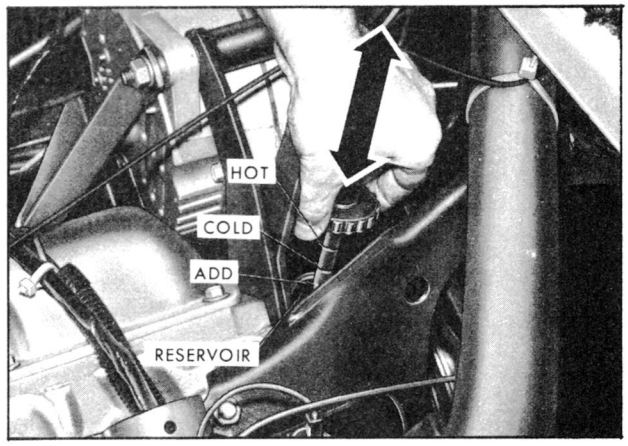
POWER STEERING SYSTEM

Check the fluid level in the power steering pump reservoir at each oil change period. This requires the removal of the engine access cover. The reservoir is located near the Delcotron generator. Add GM Power Steering Fluid (GM 1050017 or equivalent) as necessary:

- If fluid is warmed up (about 150° F. or 66° C.--hot to the touch), it should be between "HOT" and "COLD" marks on the filler cap indicator.

- If cool (about 70° F. or 21° C.), fluid should be between "ADD" and "COLD" marks.

Fluid does not need periodic changing.



Checking Power Steering Fluid Level

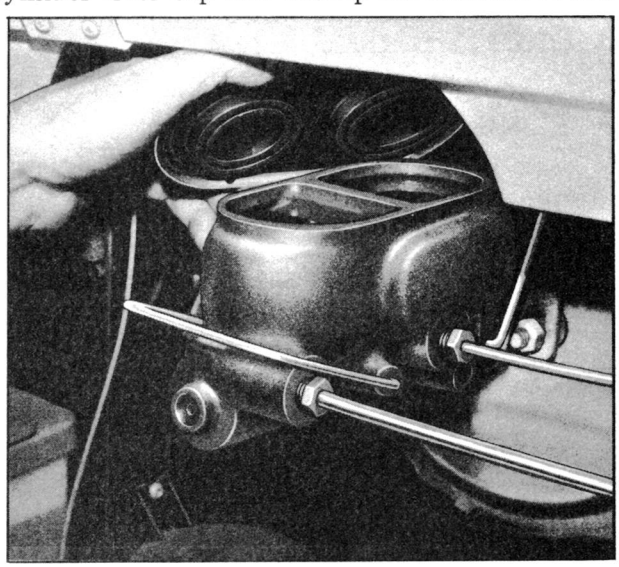
STEERING LINKAGE

The steering linkage (tie rods) and suspension should be lubricated, using a Lithium Soap Multi-purpose grease that meets GM Specification 6031-M, at every oil change. Seals should be checked for damage (see Maintenance Schedule folder).

BRAKE SYSTEM

BRAKE MASTER CYLINDER

The master cylinder is located behind the left-front access door on the front of the vehicle. The fluid level in the master cylinder should be checked at each oil change. Wipe off the brake cylinder filler cap and unsnap the retainer. A low



Checking Brake Master Cylinder

fluid level in the front brake master cylinder reservoir could be an indicator that the disc brake pads need replacing. The fluid level must be maintained at 1/4-inch below the top of each reservoir with Delco Supreme No. 11 or DOT-3 Brake Fluid or equivalent. When replacing the cap be sure to fasten the retainer securely, taking care not to let dirt enter the reservoirs.

BLEEDING BRAKES

The need for bleeding brakes is generally indicated by springy, spongy pedal action. Pressure bleeding equipment must be used and a definite bleeding sequence and procedure must be followed. Consult your GMC Motorhome dealer.

SERVICING DETAILS

ENGINE COOLING SYSTEM

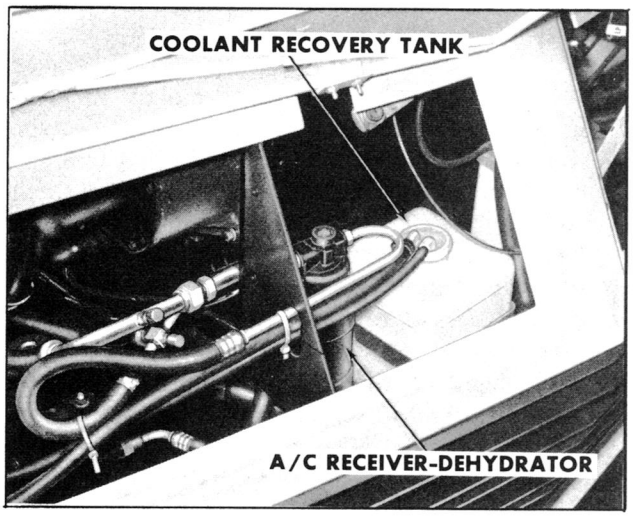
The coolant recovery system is standard on all vehicles. The coolant in the radiator expands with heat and the overflow is collected in the recovery tank. When the system cools down, the coolant is drawn back into the radiator. The cooling system has been filled at the factory with a quality coolant that prevents corrosion and can be used all year. It meets the standards of General Motors Specification 1899-M. This coolant solution provides freezing protection to -20° F. (-29° C.) -35° F. (-37° C. in Canada): and it has been made to be used without replacement for the period specified in Maintenance Schedule folder, providing the proper concentration of coolant is maintained. After the interval specified in the Maintenance Schedule folder, the coolant should be drained and replaced to prevent corrosion.

COOLING SYSTEM CARE

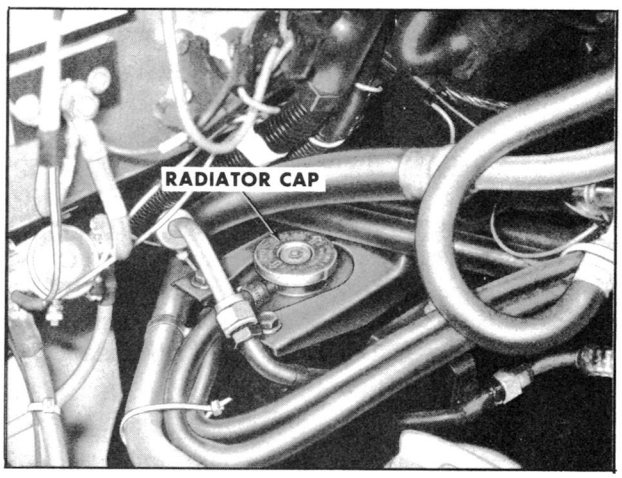
Checking Coolant Level

Open right front access cover. Do not remove radiator cap to check coolant level. Instead, check by looking at the "see thru" coolant recovery tank. Level should be at the "COLD" mark on the recovery tank when the system is cold; and at the "HOT" mark during engine operation. Add a 50/50 mixture of a good quality ethylene glycol anti-freeze and water to the recovery tank when more coolant is needed. If frequent additions are needed, see your dealer for a cooling system check.

NOTICE: If the proper quality antifreeze is used, there is no need to add extra inhibitors or additives that claim to improve the system. They may be harmful to the proper operation of the system, and are an unnecessary expense.



Coolant Recovery Tank



Location of Radiator Cap

Annual Service

The cooling system should be serviced each year as follows:

1. Wash radiator cap and filler neck with clean water. (See CAUTION on radiator cap removal below.)

2. Check coolant level and have tested for freeze protection.

3. Have system and radiator cap tested for proper pressure holding capacity (9 psi). If replacement cap is needed, use a cap designed by AC for coolant recovery systems and specified for your vehicle.

4. Tighten hose clamps and inspect all hoses. Replace hoses if swollen, "checked" or otherwise deteriorated.

5. Clean frontal area of radiator core and air conditioning condenser.

Draining and Refilling

At intervals specified in the Maintenance Schedule folder, the cooling system should be drained, flushed and refilled as follows:

1. Remove radiator cap when engine is cool:

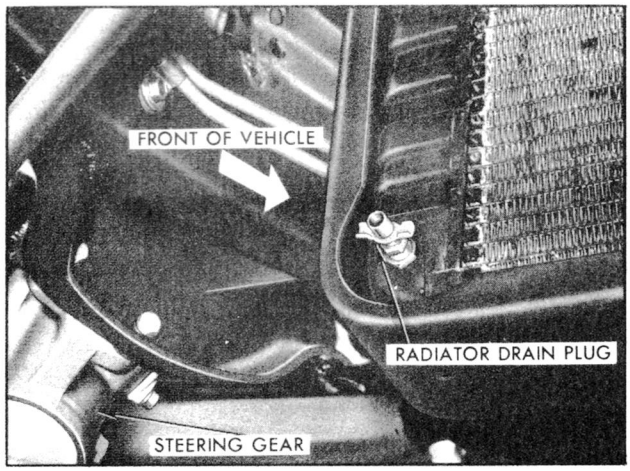
   - Rotate cap slowly counterclockwise until it reaches a "stop" detent (Do not press down while rotating).

   - Wait until pressure (indicated by a hissing sound) is relieved: then press down on cap and continue to rotate counterclockwise.

CAUTION

To help avoid the danger of being burned, do not remove radiator cap while the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure if the cap is taken off too soon.

2. Run engine, with radiator cap removed, until upper radiator hose is hot (this shows that the thermostat is open).



Radiator Drain Plug

3. Stop engine and open radiator drain valve to drain coolant. (Drainage may be speeded by removing drain plugs in the block.)

4. Close valve (install block drain plugs, if removed). Add water until system is filled.

5. Repeat steps 2, 3, and 4 several times until the drained liquid is nearly colorless.

6. Drain system and then close radiator drain valve tightly. (Install block drain plugs, if removed.)

7. Remove recovery tank cap, leaving hoses in place. Remove coolant recovery tank and empty fluid. Scrub and clean bottom and sides of tank with soap and water. Flush well with clean water and drain. Reinstall tank.

8. Add enough ethylene glycol coolant meeting GM Specification 1988-M, to provide the required cooling function as well as freezing and corrosion protection. Use a 50 percent solution, -34° F. (-36° C.). Fill radiator to the base of the radiator filler neck and raise level of coolant in the recovery tank to the "HOT" mark. Reinstall recovery tank cap.

9. Run engine, with radiator cap removed, until radiator upper hose becomes hot.

10. With engine idling, add coolant to radiator until level reaches bottom of filler neck. Install cap, making sure arrows line up with overflow tube.

It is owner's responsibility to:

- Maintain cooling system freeze protection at -20° F. (-29° C.) to ensure protection against corrosion and loss of coolant from boiling. This should be done even if freezing temperatures are not expected.

- Add ethylene glycol base coolant that meets GM Specification 1899-M when coolant has to be added because of coolant loss, or to provide added protection against freezing at temperatures lower than -20° F (-29° C.); -35° F. (-37° C.)

NOTICE: Alcohol or methanol base coolants or plain water alone should not be used in your vehicle at any time.

"ENGINE WATER" LIGHT IS ON

If the cooling system "ENGINE WATER" light is illuminated this is an indication that the coolant level in the radiator is abnormally low and requires immediate service. Be sure to heed the CAUTION on previous page.

1. Allow engine to cool. While engine is cooling, visually inspect radiator, engine, all cooling system hoses for source of low coolant level, and correct problem if possible.

2. If leakage problem cannot be readily corrected, do not run engine until vehicle is repaired and refilled by a qualified mechanic.

3. Refill cooling system by performing Steps 8-11 of "Draining and Refilling."

THERMOSTAT

The engine coolant temperature is controlled by a thermostat. It prevents circulation of coolant through the radiator until a preset temperature is reached. This thermostat is installed in the engine coolant outlet. The same thermostat is used in both winter and summer. When a replacement is necessary, Delco parts are recommended.

ENGINE FUEL SYSTEM

FUEL REQUIREMENTS

Regular grade leaded gasoline, the emissions certification fuel, may be used under normal operating conditions and to eliminate knock*. The engines do not require Premium grade fuel and its use would be an unnecessary expense.

Your vehicle's engine was also designed to operate on unleaded gasoline. If an unleaded gasoline is used it must meet Federal government minimum octane number specifications. Federal regulations require that pumps delivering such gasoline be labeled with the UNLEADED.

*Knock is a metallic rapping noise that sometimes happens during the combustion process. If knocking persists, consult your dealer. Continuous or excessive knocking may result in engine damage. Failure to take steps to stop such knocking is misuse of the engine for which GMC Truck & Coach Division is not responsible under the terms of the new Vehicle Warranty.

FUEL SYSTEM

The vehicle has two gasoline tanks of approximately 25 gallons each and a switching device (see "FUEL SELECTOR" switch) which allows the driver to switch from the main tank (when empty) to the auxiliary tank which will normally contain 7 to 9 gallons of fuel.

The gasoline fuel filler compartment is located on the left side of the vehicle, directly under the driver's window.

CAUTION

It is important that all pilot lights be turned off and open flames kept away when filling the fuel system to help reduce the possibility of personal injury and/or vehicle damage from fire.

GAS CAP—The cap is equipped with a double set of locking tangs.

To Remove:

- Rotate cap one-half turn counterclockwise to clear the first set of tangs from the slots inside the filler neck. This will allow any residual pressure to escape.

- Pull the cap outward and rotate one-quarter turn counterclockwise to clear second set of tangs. Then remove the cap.

- To install, reverse this procedure.

NOTICE: If the gas cap requires a replacement, only a cap with the same features should be used. Failure to use the correct cap can result in a serious malfunction of the system. Correct replacement caps may be obtained from your GMC Motorhome dealer.

NOTICE: If automatic gasoline pump nozzle shuts off before both fuel tanks are full, it is recommended that a delay of approximately 1 minute be held prior to continuation of filling tanks. Automatic nozzle should then be adjusted for a slower fuel feed, to fill remainder of tanks.

CARBURETOR

To obtain maximum engine performance and fuel economy, the following items should be checked or replaced as recommended in the Maintenance Schedule folder:

- Carburetor idle speed
- Carburetor mounting torque
- Carburetor choke mechanism and choke hoses
- Fuel Filter

NOTICE: Refer to Tune-up label on engine for correct specifications.

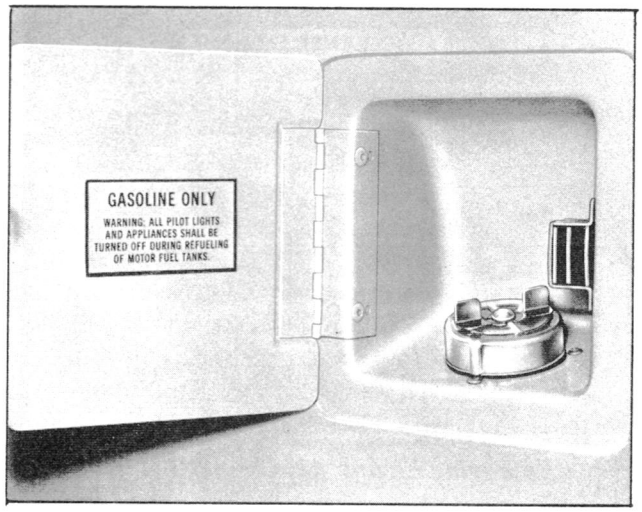
FILTER REPLACEMENT

To replace carburetor filter, disconnect fuel line, remove filter nut, gasket, filter, and spring. Install spring and element (open end of filter facing toward filter nut). Install gasket; tighten fuel inlet nut. Do not exceed 18 foot-pounds torque. Reconnect fuel line and tighten fuel line nut. Do not exceed 18 foot-pounds torque on fuel line nut. Then, with engine running, check for fuel leaks.

NOTICE: Tightening fuel inlet nut beyond specified torque can damage nylon gasket.

ENGINE AIR CLEANER

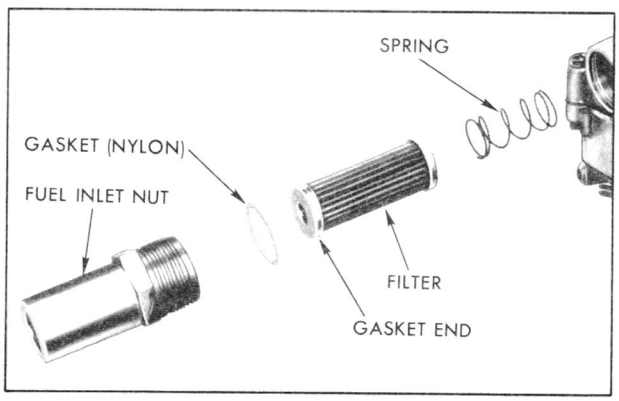
The air cleaner is a disposable type element. Replace the element as specified in the Maintenance Schedule folder. Do not wash, oil, or clean with air hose. The air cleaner will require more frequent service under dusty conditions.



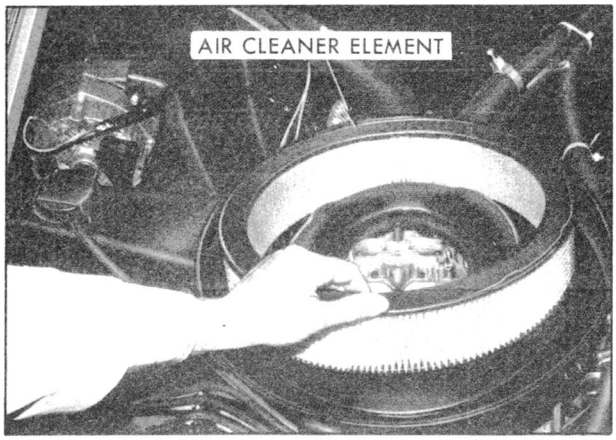
Gasoline Fuel Filler Compartment

Your GMC Motorhome dealer can advise you on the proper interval. When replacement is necessary, an AC ACron air filter element is recommended.

NOTICE: If the air cleaner is removed during repair or maintenance, be sure to put it back on correctly. Without the air cleaner on, the engine may backfire and cause a fire in the engine compartment.



Fuel Filter Components



Removing Engine Air Cleaner Element

CHASSIS ELECTRICAL SYSTEM

FREEDOM BATTERY

Your new vehicle is equipped with a Delco FREEDOM battery. It needs no periodic maintenance. Its top is permanently sealed and has no filler caps. Water will never have to be added.

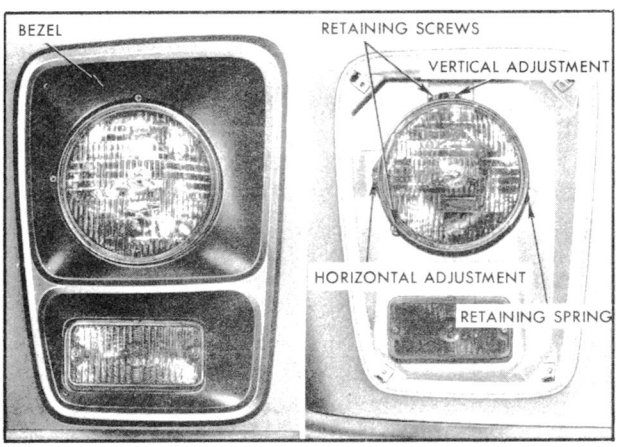
The test indicator (if so equipped) on the top of the battery provides information for testing purposes only.

For full power needs, a Delco battery is recommended at replacement time.

DISTRIBUTOR

Distributor maintenance, which is the owner's responsibility, includes regular examination of the distributor cap for cracks, checking condition of ignition wires, and adjustment to proper ignition timing at specified intervals. Refer to the Maintenance Schedule folder for additional information.

NOTICE: Refer to Tune-up label on engine for correct specifications.



Headlight Replacement

SPARK PLUGS

The frequency of spark plug service intervals is explained in the Maintenance Schedule folder. Servicing is the owner's responsibility. Before removing plugs, clean plug wells thoroughly, clean the threads and seats in the cylinder heads to assure proper seating and heat transfer.

HEADLIGHTS

Make a headlight beam adjustment check a regular part of your "Safety Maintenance" program. Sealed-Beam units are No. 6014 which are equipped with ground guide points for the use of a mechanical aiming device. Your authorized dealer is best qualified to adjust your headlights.

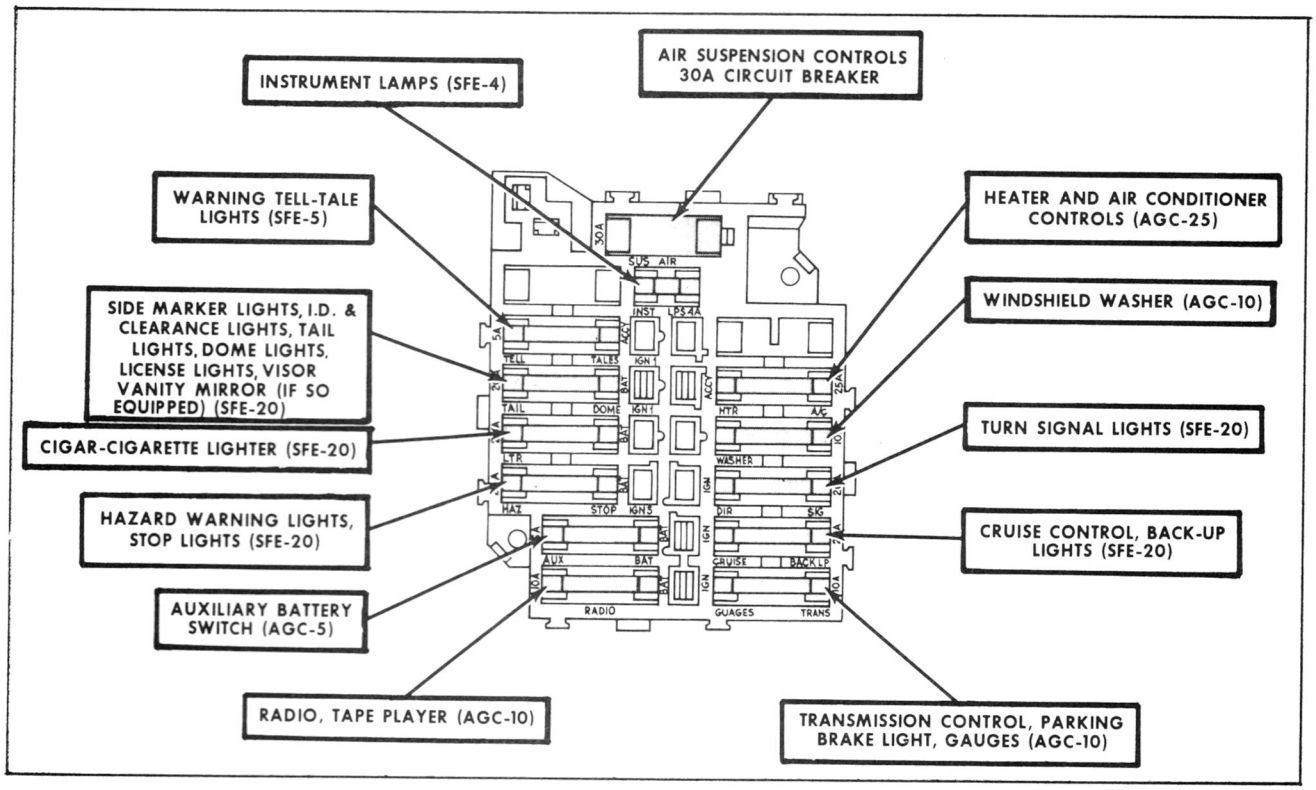
Headlight Beam Adjustment

NOTICE: Cutouts in headlight bezel permit access to adjustment screws.

Headlights should be adjusted properly. The top adjusting screw provides vertical adjustment and the side adjusting screw provides horizontal adjustment. Headlights should not have to be adjusted after replacing Sealed-Beam unit, providing headlights were in proper adjustment before replacement and adjusting screws were not disturbed during replacement.

Headlight Replacement

To replace a Sealed-Beam unit, remove bezel. Then disengage the tension spring using a stiff hooked tool. Rotate the Sealed-Beam assembly slightly to disengage mounting ring slots from groove of each adjusting screw, then pull forward. Disconnect wiring at the base of unit and separate the Sealed-Beam assembly by removing the two retaining screws. Install Sealed-Beam unit in reverse order of removal.



Chassis Fuse Block

EXTERIOR LIGHTS

All exterior lights can be easily replaced by removing lens, pushing bulb in slightly and turning counterclockwise, except side marker lights which are simply pressed in. Then, with new bulb, reverse procedure.

CHASSIS FUSES, FUSIBLE LINKS, CIRCUIT BREAKERS

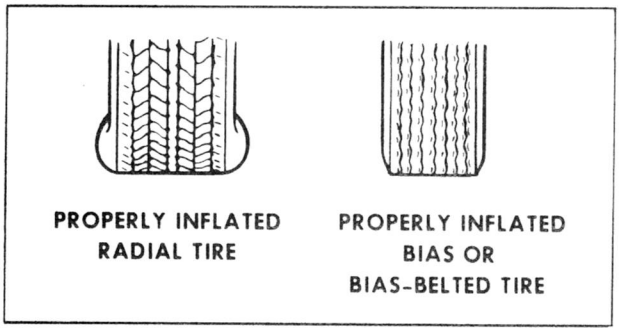
The wiring circuits in your vehicle are designed to be protected from short circuits by a combination of fuses, circuit breakers, and fusible thermal links in the wiring itself. This helps to reduce the hazard of electrically-caused fires in the vehicle.

The fuse and circuit breaker block is located behind the glove compartment. To gain access to the chassis fuse block, open the glove box door, then release the secondary cable latch (by removing retaining screw) in the back of the glove compartment. Glove box will now come forward, exposing fuse block. All chassis circuits are protected by fuses or circuit breakers located here except:

- HEATER BLOWER—Which has a fusible link built into harness located behind the right access door near the heater blower relay.
- HEADLAMP CIRCUITS—Are protected by a circuit breaker in the main light switch. An electrical overload in the light circuit will cause the lights to go on and off or in some cases to remain off. If this condition develops, have the wiring circuits checked immediately. Circuit breakers of remote reset type can be reset only after turning the affected circuit control switch "OFF" for approximately 40 seconds, or by removing the breaker from clips for this period of time.

CAUTION

Do not touch body of any installed breaker of this type with bare hands; if circuit should happen to be shorted or overloaded—the breaker body could be hot and cause a burn.



Tire Inflation

A replaceable fuse link is located at the battery pickup junction block behind the right access door. If an overload should occur, this link is designed to fail (open circuit), preventing damage to the main wiring harness. Another link of the same wire gauge and length must be installed in its place in the event of failures.

NOTICE: When replacing fuse or circuit breaker, make sure replacement is of same number as marked on block.

TURN SIGNAL FLASHER

The turn signals operate with the same flasher, which is clipped to the left side of the steering column.

HAZARD WARNING FLASHER

The hazard warning flasher is clipped behind the instrument panel just to the right of the steering column.

WHEELS AND TIRES

TIRES

The tires installed on your vehicle are engineered to provide a proper balance of these performance characteristics under normal driving conditions:

- Endurance
- Handling
- Noise
- Ride
- Road Hazard Resistance
- Rolling Resistance
- Traction
- Tread Mileage

This section contains some tips on how you can obtain the most benefit from your tires.

VEHICLE LOADING

See Page 1 in this Manual for Important Information on Vehicle Loading.

INFLATION PRESSURE

The cold inflation pressures listed on the Tire Placard (located on the glove compartment door) provide for the best balance of tire life, riding comfort, and vehicle handling under normal driving conditions.

Incorrect tire inflation pressures can have adverse effects on tire life and vehicle performance. Too low an air pressure causes increased tire flexing and heat build-up. This weakens the tire and increases the chance of damage or failure. It can result in tire overloading, abnormal tire wear, adverse vehicle handling, and reduced fuel mileage. Too high an air pressure can result in abnormal wear, harsh ride, and also increase the chance of damage from road hazards.

Tire inflation pressures should be checked (this includes the spare tire, if so equipped) at least monthly. Always check tire inflation pressures when tires are "cold."

1. The "cold" tire inflation pressure applies to the tire pressure when the vehicle has not been driven more than one mile (1.6 kilometre) after sitting for three hours or more.

NOTICE: The cold inflation pressures for your tires are:

Steel-Belted Radial Tires . . . . . 65 psi
Bias-Belted Tires . . . . . 60 psi

2. It is normal for tire pressure to increase 4-8 psi or more when the tires become hot from driving. **Do Not** "bleed" or reduce tire inflation pressures after driving your vehicle. Bleeding serves to reduce "cold" inflation pressure and increase tire flexing which can result in tire damage and failure.

3. For sustained driving at speeds over 65 mph (100 km/h), where permitted by law, cold inflation pressures should be increased 10 psi above the recommended cold inflation pressures.

4. Always use a tire pressure gauge (a pocket type gauge is advised) when checking inflation pressures. Radial tires may look under-inflated when at recommended cold inflation pressure.

5. Be sure to reinstall the tire inflation valve caps, if so equipped, to prevent dirt and moisture from getting into the valve core, which could cause air leakage.

6. If an air loss occurs while driving, do not drive on the deflated tire more than needed to stop safely. Driving even a short distance on a deflated tire can damage a tire and wheel beyond repair.

INSPECTION AND ROTATION

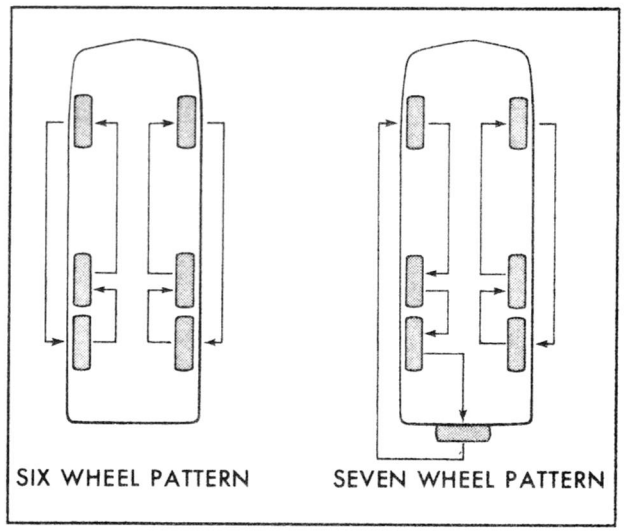
Front and rear tires perform different jobs and can wear differently depending on the types of roads driven, your driving habits, etc. To obtain the longest tire life you should inspect and rotate your tires regularly (See Tire Rotation Diagram.). Many GMC Motorhome dealers and tire dealers will perform a free tire inspection to look for uneven or abnormal tire wear.

To equalize wear it is recommended that the tires be rotated every 6,000 miles (or sooner if irregular wear develops) as shown.

NOTICE: The disc brake pads should be inspected for wear when the tires are rotated.

For the longest tire life, any time irregular wear is seen, have the tires checked and rotated by your Motorhome dealer and have the cause of the uneven wear corrected. After rotation be sure to check wheel nut tightness (see "NOTICE" below) and to adjust tire pressures, front and rear. (See "Tire Pressure Placard" located on the glove compartment door.)

NOTICE: Wheel nuts should be tightened at certain intervals; see Wheel Nut Torque maintenance requirements under "Tightening Wheel Nuts" later in this section.



Tire Rotation Diagram

ALIGNMENT AND BALANCE

Proper front end alignment improves tire tread mileage. Your vehicle's front end suspension parts should be inspected periodically and aligned when needed. (See the Maintenance Schedule folder for more information.) Improper alignment will not cause the vehicle to vibrate. However, improper toe alignment will cause front tires to roll at an angle which will result in faster tire wear. Incorrect caster or camber alignment will cause your front tires to wear unevenly and can cause the vehicle to "pull" to the left or right.

Proper tire balancing provides the best riding comfort and helps to reduce tire tread wear. Out-of-balance tires can cause annoying vehicle vibration and uneven tire wear such as cupping and flat spots.

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 vehicle 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 is known as hydroplaning and may cause partial or complete loss of traction, vehicle control, and stopping

ability. To reduce the chance of traction loss, follow these tips:

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 showing.

4. Keep tires properly inflated.

TIRE CHAINS

The radial tires which are standard on your vehicle are quite effective in winter snow conditions. If you feel the need for improved traction, conventional or studded* snow tires are recommended for use instead of tire chains.

However, if tire chains are used for improved traction in mud, sand or other conditions, use caution to avoid contact between the wheel housing and the chain. This condition could arise, especially in the case of sharp turns, since the side-to-side clearance between the chain and the wheelhousing is at a minimum.

To reduce the chance of chain damage to your vehicle:

- Use chains that will give you the largest amount of clearance (especially between the sides of the wheel and the wheel housing). Otherwise, the chains may contact and possibly damage the wheel housing or the vehicle frame.

- If possible, use chains that have fasteners or buckles on the side of the chain that do not stick out further than the side chain links themselves.

- Install the chains as tightly as possible, then tighten again after driving 1/4 to 1/2 mile (0.4 to 0.8 kilometre).

- Avoid severe turns which could cause contact between the chain and the vehicle wheel housing or frame.

- Drive in a restrained manner, avoiding large bumps, potholes, sharp turns and other maneuvers which could cause the Motorhome to bounce up and down.

- DO NOT EXCEED 20 mph (30 km/h), or the chain manufacturer's speed limit, if lower.

- Follow the chain manufacturer's instructions.

* Studded snow tires may be used only in states where lawful. When travelling, it is the owner's responsibility to comply with state laws regarding the use of studded snow tires.

TIRE REPLACEMENT CONSIDERATIONS

CAUTION

Do not mix different construction types of tires on your vheicle such as radial, bias, and bias-belted tires except in emergencies, because vehicle handling could be affected and may result in loss of control.

You should replace your tires when:

1. Your tires are worn to a point where 2/32 inch or less tread remains, or the cord or fabric is exposed. To help you detect this, your tires have built-in tread wear indicators that appear between the tread grooves when the tread depth is 2/32 inch or less. When the indicators appear in two or more adjacent grooves at three spots around the tire, the tire should be replaced.

2. Your tire tread or sidewall is cracked, cut, or snagged deep enough to expose the cord or fabric.

3. Your tire has a bump, or bulge, or split.

4. Your tire sustains a puncture, cut, or other injury that can't be correctly repaired because of the size or location of the injury.

When replacing tires, you should use size 8.75 - 165LT or 8.75R - 16.5LT, load range "D". Also, the construction type must be bias-ply, bias-ply steel belted, or steel belted radial.

Use of any other size or type tire may affect load carrying capacity, ride, handling, speedometer/odometer calibration, vehicle ground clearance, and tire clearance to the body and chassis. If replacing only a single tire, it should be paired on the same axle with the least worn tire of the other five.

WHEEL REPLACEMENT CONSIDERATIONS

Wheels must be replaced if they become damaged (for example: bent, heavily rusted, leak air) or if lug nuts often become loose. Do not straighten bent wheels or use inner tubes in leaking wheels used with tubeless tires. Such wheels may have structural damage and could fail without warning.

When replacing wheels for any reason, the new wheels should be equal in load capacity, inflation pressure capacity, diameter, width, offset, and mounting configurations to those originally installed on your vehicle.

A wheel of the wrong size or type may adversly affect load carrying capacity, wheel and bearing life, brake cooling, speedometer/odometer calibration, stopping ability, headlight aim, bumper height, vehicle ground clearance, and tire clearance to the body and chassis. Replacement with "used" wheels is not advised: they may have been subjected to harsh treatment or very high mileage and could fail without warning.

Motorhome wheels will accomodate both radial and bias belted tires. However, if wheel replacement is required, be sure the word "RADIAL" is stamped on the rim.

NOTICE: The use of wheels and/or tires with higher load carrying limits than originally equipped on your vehicle does not in itself increase the GAWR's or the GVWR of the vehicle.

Proper replacement wheels can be obtained from your GMC Motorhome dealer.

WARRANTY

Tires are warranted by the tire manufacturers. Warranty information is included in the New Vehicle Warranty folder furnished with your vehicle.

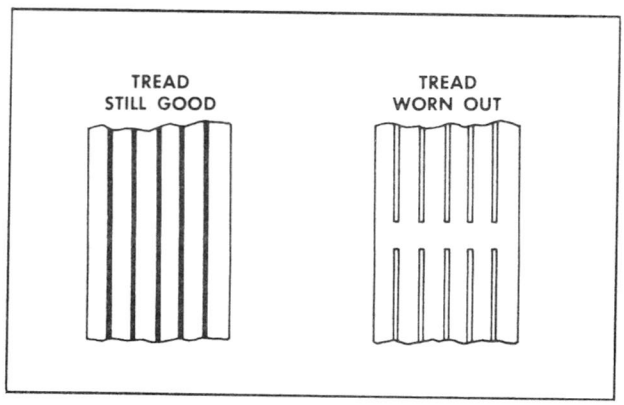
TIGHTENING WHEEL NUTS

IT IS THE OWNER'S RESPONSIBILITY TO FOLLOW THESE PRECAUTIONARY PROCEDURES.

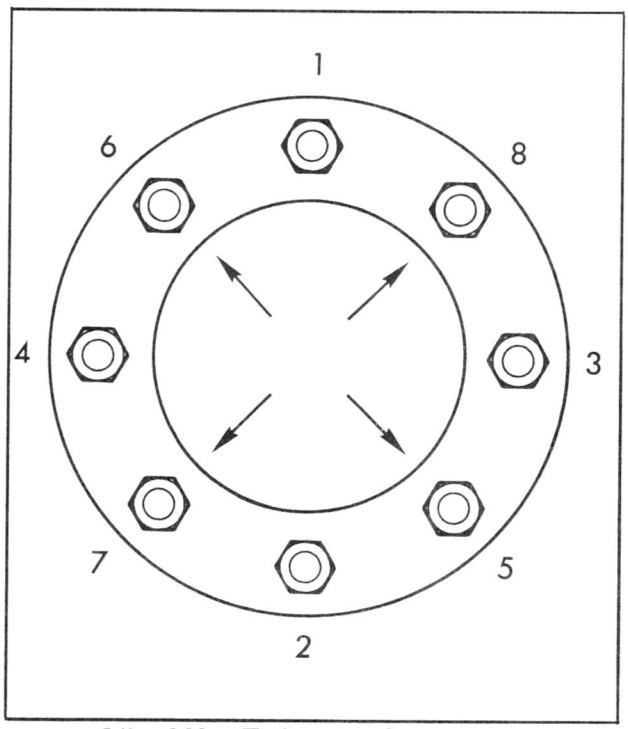
CAUTION

As soon as possible after installing a wheel, AND at 500 miles (800 kilometres) after such installation, have a mechanic tighten wheel nuts with a torque wrench to 250 foot-pounds. This precaution is necessary because the clamping system used on Motorhome wheels in some cases needs to seat before the fasteners will hold a uniform clamp load and remain fully tightened. Also, nut tighteners on all wheels should be set with a torque wrench at the intervals shown in the maintenance Schedule folder.

Wheel nuts should be tightened alternately and evenly to the correct torque in the sequence shown. Improperly tightened wheel nuts could eventually allow the wheel to come off while the Motorhome is in motion, possibly causing loss of control. (Also see the caution at the beginning of mixing metric and customary fasteners.)



Tire Tread Wear Indicator



Wheel Nut Tightening Sequence

Tighten wheel stud nuts as follows:

1. Install all nuts loosely, then finger-tighten only the nuts marked by arrows (see illustration).

2. Tighten all nuts to specified torque in sequence illustrated. Never use oil or grease on studs or nuts.

See IN CASE OF EMERGENCY section for procedure used to change tire.

CAUTION

To help avoid personal injury and/or property damage, if any wheel experiences a single stud failure caused by a loose-running wheel, all wheel studs should be replaced.

A loose-running wheel may cause only one stud to break, but several more studs may become fatigued to the point of failure, but not actually breaking. Replacing only the broken stud and remounting wheel will then set the stage for a second and possible more serious failure. If holes in the wheel have become elongated or enlarged, replace wheel.

WHEEL BEARINGS

FRONT WHEEL BEARINGS

At intervals listed in the Maintenance Schedule folder, front wheel bearings should be cleaned and inspected for wear or damage by your Motorhome dealer. The bearings should be replaced if necessary. If bearings are suitable for continued use, they should be repacked with bearing grease–GM Part Number 1051344 or equivalent, a premium high melting point lubricant.

REAR WHEEL BEARING

A periodic rear wheel bearing repack is required as indicated in Maintenance Schedule folder. These bearings should be cleaned and repacked with Lithium Soap Multi-Purpose Grease Meeting GM Specification 6031-M or equivalent.

The adjustment of the bearing must be done with the wheel off the floor, and rotating the wheel while tightening nut. At this time make the torque readings as follows:

1. Tighten adjusting nut with a torque wrench to 25-30 foot-pounds with wheel rotating to ensure that all parts are properly seated and threads are free.

2. Back off nut one-half turn. Re-tighten nut finger-tight.

3. If unable to install cotter pin at finger-tight position, back off one slot, then secure with cotter pin.

4. Rear hub must be rotated at least three revolutions of spindle nut during tightening and retightening operations.

5. End play should be .001" to .005". Also at this interval the rear suspension control arms should be lubricated. This is accomplished at the fittings between the rear wheels.

FRONT SUSPENSION

The front suspension consists of control arms, stabilizer bar, shock absorbers and a right and left side torsion bar. The front suspension components are designed to provide satisfactory service, ride, and handling if not overloaded, and if adjusted to specified vehicle front end ride height.

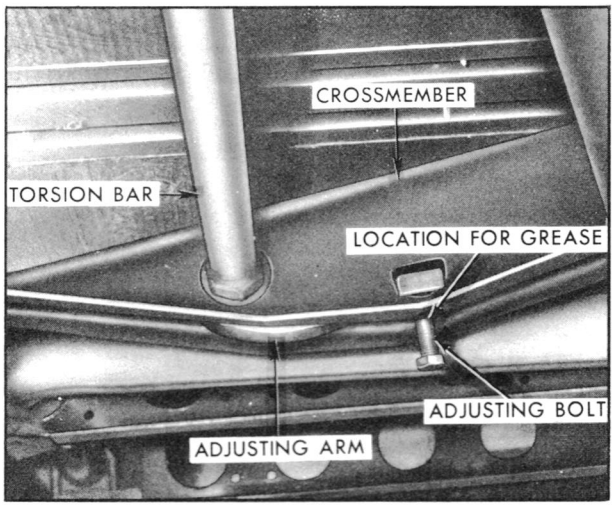
Ride Height

The front of the torsion bar is attached to the lower control arm. The rear of the torsion bar is mounted into an adjustable arm. The front ride height is controlled by this adjustment.

The simplest way to adjust is to move arm slightly to achieve ride height and drive unit a few blocks so as to overcome delaying action.

NOTICE: Ride height is measured from top of elongated slot in frame rail to ground level. Tire inflation should be checked prior to making any ride height adjustment.

Ride height should be adjusted by raising vehicle to relieve strain on adjusting bolt. Lubricate adjusting bolt with chassis grease.



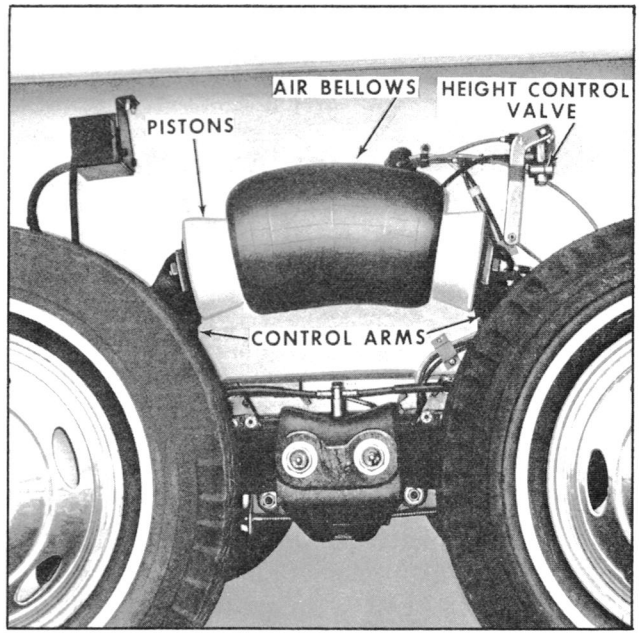
Location–Front Ride Height Adjustment

Adjustment is made by repositioning adjusting bolt to wind-up and unwind torsion bar. Whenever ride height is changed, be sure to check front end alignment and readjust if necessary.

NOTICE: Overloading and incorrect ride height can create serious problems and shorten the service life of the vehicle. Adjust front suspension ride height to specifications shown.

MAINTENANCE

No maintenance other than lubrication is normally required. Refer to lubrication information given earlier in this section for intervals and lubrication points.

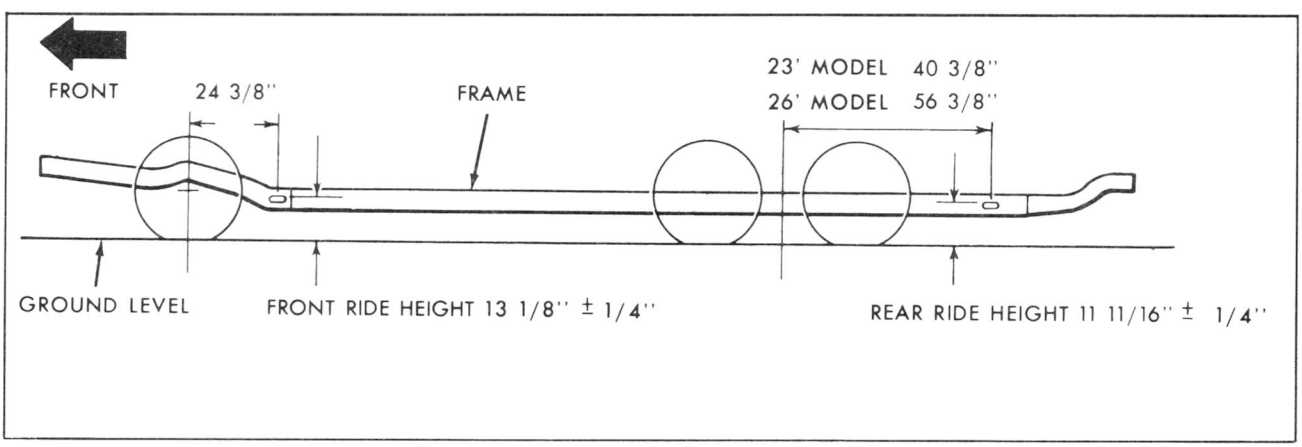


Type I Rear Suspension Components (Exterior of Vehicle)

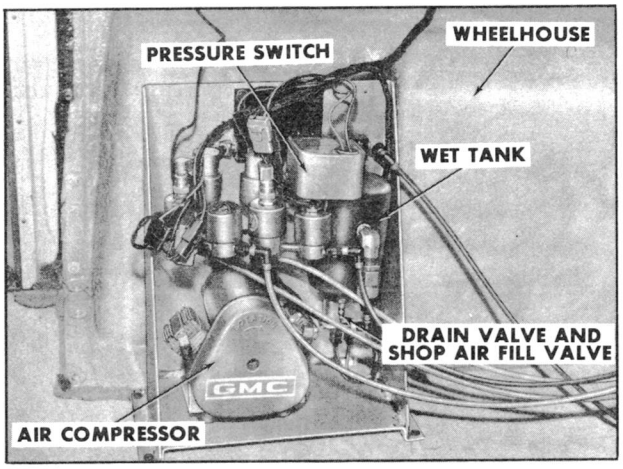
REAR SUSPENSION

TYPE I

Type I rear suspension consists of the following components: control arms, mounting brackets, air bellows, shock absorbers and mechanical height control valves located outside the vehicle at the tandem rear wheels (see illustration); an air compressor, solenoid valves, wet tank and pressure switch located near the left rear wheel housing inside the vehicle (see illustration).



Checking Vehicle Ride Height



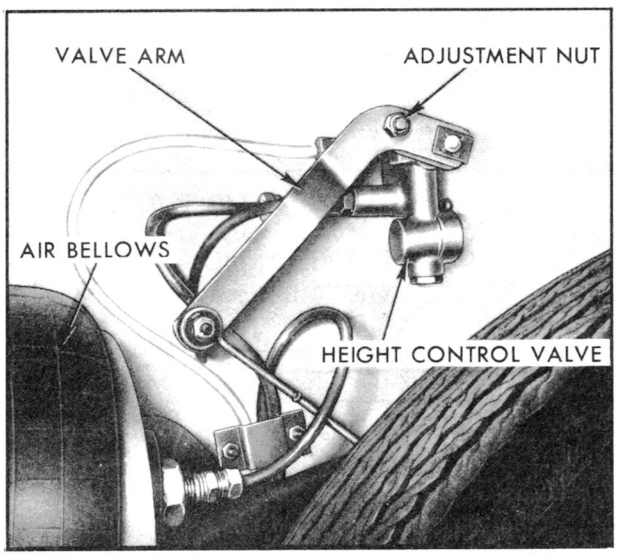
Interior Control Components (Type I Rear Suspension)

The rear suspension operates automatically as load varies, and is designed to maintain a consistent frame height.

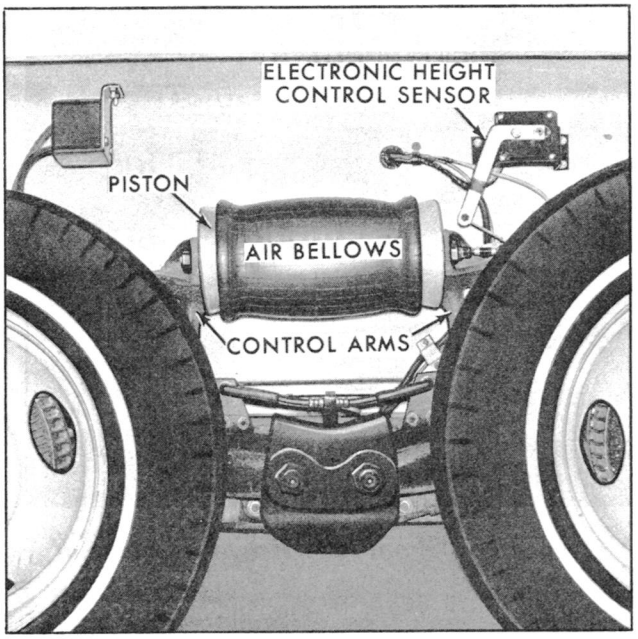
Ride Height

NOTICE: Ride height is measured from top of elongated slot in frame rail to ground level. Tire inflation should be checked prior to making any ride height adjustments.

The rear suspension can be manually adjusted for variations in load distribution. Adjustment is made at the adjustment nut on the control valve arm (see illustration).



Location–Rear Ride Height Adjustment (Type I Rear Suspension)



Type II Rear Suspension Components (Exterior of Vehicle)

Maintenance

1. The wet tank (see illustration) should be drained at 3 month or 3,000 mile intervals, or more often if above normal air compressor operation is encountered.

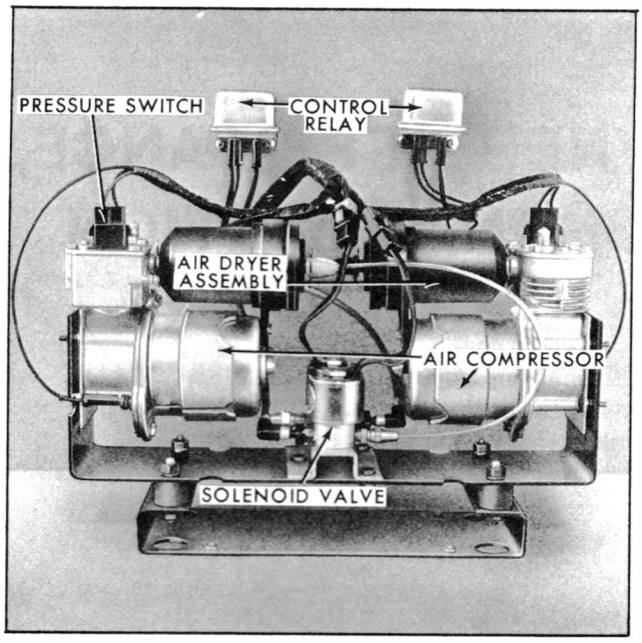
2. The air compressor must periodically have the air filter washed with soap and water solution or replaced. Filter should be serviced at intervals specified in Maintenance Schedule folder.

NOTICE: Occasionally check air bellows to see if they are caked with mud deposits. If deposits are present, remove them from air bellows.

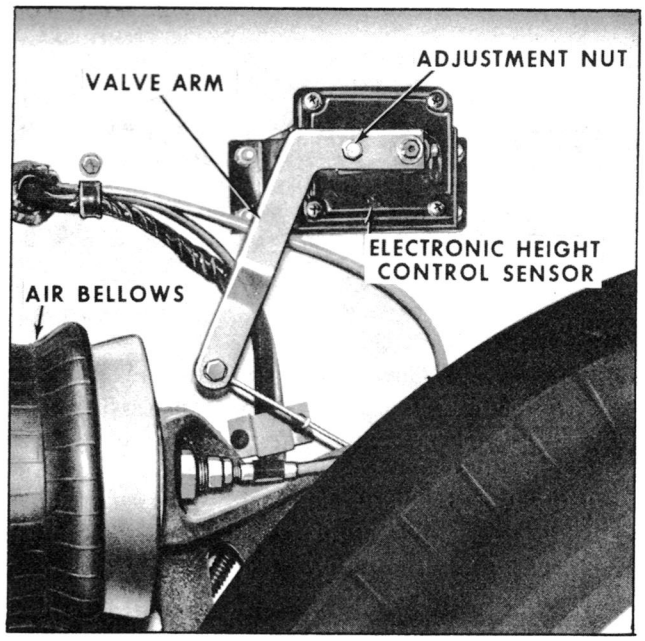
TYPE II

Type II rear suspension consists of the following components: control arms, mounting brackets, air bellows, shock absorbers, and electronic height control sensors located outside the vehicle at the tandem rear wheels (see illustration); two air compressors, two solenoid valves and two control replays located near the left rear wheel housing inside the vehicle (see illustration).

The rear suspension operates automatically as load varies, and is designed to maintain a constant frame height.



Interior Control Components (Type II Rear Suspension)



Location—Rear Ride Height Adjustment (Type II Rear Suspension)

Ride Height

Ride height is measured from the top of the elongated slot in the frame rail to ground level. Tire inflation should be checked prior to making any ride height adjustment.

The rear suspension can be manually adjusted for variations in load distributions. Adjustment is made at the adjustment nut on the electronic height sensor arm.

Maintenance

No routine maintenance is required on the Type II rear suspension system other than occasional check of the air bellows to see if they are caked with mud deposits. If deposits are present, remove them from bellows.

SECTION 6

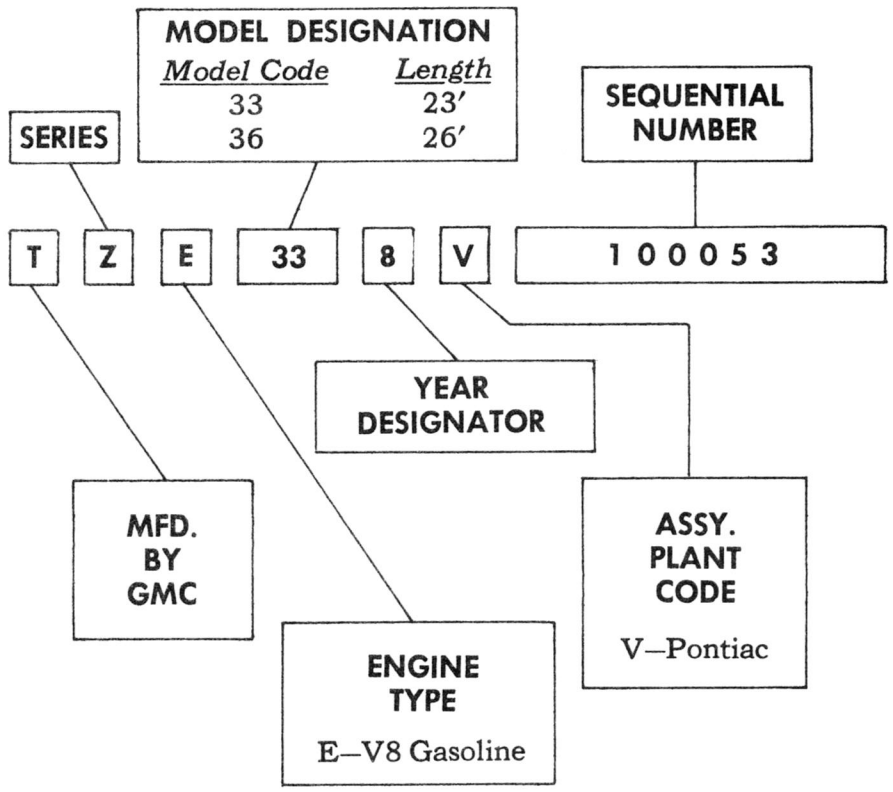
SPECIFICATIONS, OWNER ASSISTANCE, INDEX, GAS STATION INFORMATION

These specifications are given for information only. Before using this information, see the cautions and other instructions throughout the manual. For further information, refer to the maintenance manual covering this vehicle. Your GMC Motorhome dealer may also be able to offer assistance.

VEHICLE IDENTIFICATION NUMBER

This is the legal identification of the vehicle. It appears on a plate, which is located behind the right front access door (passenger side) The VIN also appears on the Vehicle Certificates of Title and Registration.

(TYPICAL IDENTIFICATION NUMBER TZE338V100053)



TZE338V101163

VEHICLE DIMENSIONS

Track	Front—75.28 in.
	Rear—82.12 in.
Wheelbase	23' Model — 140 In.
	26' Model — 160 in.
Length (Including optional spare tire)	23' Model — 23 ft.-9in.
	26' Model — 26 ft.-9in.
Width	96 in.
Height	8 ft.-1 in.
With Roof Air Conditioner	9 ft.-2 in.
Interior Ceiling Height	76 in.

CAPACITIES

Fuel System	Two, 25 Gal. Tanks
Cooling System	21 Qts.
Engine Oil	5 Qts. (Including Filter 6 Qts.)
Turbo Hydramatic	Drain & Refill 4 Qts.
	After Complete Overhaul 12 Qts.
Final Drive (Differential)	4 Pts.
Power Steering Pump	1/2 Qt.
Power Steering System	1 1/2 Qts.

ENGINE*

Displacement	403 cu. in.
Carburetor	4 Barrel
Compression Ratio	7.9 : 1
Bore	4.351 in.
Stroke	3.385 in.
Firing Order	1-8-4-3-6-5-7-2

*See Tune-up label on engine for additional specifications.

BATTERIES

Main (Automotive) Battery
Freedom Type .....Freedom Catalog No. R89-5
No. R89-5 Rated 4000 Watts @ 0° F. (-18 ° C.)

Auxiliary Battery
Freedom Type .....Freedom Catalog No. R89-5
No. R89-5 Rated 4000 Watts @ 0° F. (-18° C.)

Motor Generator (Optional) Battery
Freedom Type ..... Freedom Catalog No. R 85-5
No. R85-5 Rated 3200 Watts at 0° F. (-18° C.)

MISCELLANEOUS

Radiator cap (pressure opening)	9 PSI
	AC Type RC32
Thermostat	195°F.

TIRE INFORMATION

SEE "Wheels and Tires" in the SERVICE AND MAINTENANCE section of this manual and the tire placard on the glove box door.

FILTER RECOMMENDATIONS

Engine Air Cleaner	AC Type A212CW
Engine Oil	AC Type PF30
Transmission Oil	AC Type PF160
Engine Fuel	AC Type GF441
PCV Valve	AC Type CV679C
PCV Filter	GM Part 403192
Carbon Canister	GM Part 7026014
Onan Motor Generator	
Oil Filter	GM Part 710319
Fuel Filter	GM Part 707267
Air Cleaner Element	GM Part 710391

FRONT END ALIGNMENT

NOTICE: Front and rear ride height must be checked and adjusted, if necessary, before proper front end alignment can be attained. Refer to "Front Suspension" and "Rear Suspension" earlier in this manual for details on ride height.

Caster (Degrees)*	$+2°$ $\pm\frac{1}{2}°$
Camber (Degrees)**	R.H. $+\frac{1}{2}°$ $\pm\frac{1}{4}°$
	L.H. $+\frac{3}{4}°$ $\pm\frac{1}{4}°$
Toe (Inches)	$-\frac{1}{8}$ $\pm 1/16$

*L.H. and R.H. must be within $\frac{1}{2}°$.

**L.H. camber must be more positive (+) than R.H. camber.

VEHICLE FUSES AND CIRCUIT BREAKERS

The following fuses are located in the fuse block behind the glove box in the dash. Do not use fuses or higher amperage rating than those specified below—or property damage may result.

USAGE	NAME ON FUSE BLOCK	FUSE TYPE
Instrument Lamps	INST LPS	SFE-4
Warning Tell-Tale Lights	TELL TALES	SFE-5
Side Marker Lights I.D. & Clearance Lights Tail Lights Dome Lights License Lights	TAIL DOME	SFE-20
Cigar – Cigarette Lighter	LTR	SFE-20A
Hazard Warning Lights, Stop Lights	HAZ STOP	SFE-20A
Auxiliary Battery Switch	AUX BAT	AGC-5A
Radio, Tape Player	RADIO	AGC-10A
Heater and Air Conditioner	HTR A/C	AGC-25A
Windshield Washers	WASHER	AGC-10A
Turn Signal Lights	DIR SIG	SFE-20A
Cruise Control, Back-Up Lights	CRUISE BACK-UP	SFE-20A
Transmission Control, Parking Brake Light, Gauges	GUAGES TRANS	AGC-10A

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

Headlight Circuit Breaker . . . . . .Built Into Light Switch

Main Harness Fusible Link . . . . . Between Junction Block and Horn Relay

Heater Blower Fusible Link . . . . . Built Into Line At Right Access Door Near Heater Blower Relay

Hazard Signal Flasher GM No. 673499 . . . . . In Clip Behind Instrument Panel at Fuel Selector Switch

Turn Signal Flasher GM No. 491392 . . . . . On Steering Column

Vehicle Trouble Light AGC-10 . . . . . In Line, Behind Access Door, Near Light

Air Suspension Compressor 30A Circuit Breaker . . . .In Fuse Block

ONAN MOTOR GENERATOR (6000 WATT – 50 AMP)

Bore	3 9/16 in.
Stroke	3 in.
Oil Capacity	4 Qts.
(With Filter Change)	4 1/2 Qts.
Spark Plug Type	ACR46S
Spark Plug Gap	.020 in.
Breaker Point Gap	.020 in.
Ignition Timing (Running or Static)	20° BTDC
Tappet Adjustment (Engine Cold)	
Intake	.003 in.
Exhaust	.012 in.

LIGHT BULB SPECIFICATIONS (INSTRUMENT PANEL)

Usage	Quantity	Bulb No.
Brake System Tell Tale	1	161
Generator Tell Tale	1	161
Park Brake Tell Tale	1	74
Cruise Control Tell Tale	1	74
Door Ajar Tell Tale	1	74
Low Fuel Tell Tale	1	74
Engine Water Tell Tale	1	74
Electro-Level Tell Tale	2	74
High Beam Indicator	1	161
Turn Signal Indicator	2	168
Instrument Cluster Lights	2	194
Speedo Cluster Lights	2	194
Dome Lights	2	211
Radio Dial (AM/FM/Stereo/Tape)	1	566
Radio Dial (AM/FM/Stereo)	1	1893
Heater Control	1	1895
Voltmeter	1	53

LIGHT BULB SPECIFICATIONS (EXTERIOR)

Usage	Quantity	Bulb No.
Clearance and I.D.	10	67
License	1	67
Side Markers–Front	2	194
Side Markers–Rear	2	194
Back-up Lights	2	1156
Parking and Turn Signals	2	1157
Stop and Tail	2	1157
Headlights	2	6014

OWNER ASSISTANCE

Your satisfaction and goodwill are important to your dealer and the GMC Truck & Coach Division. Normally, any problems that concern sales transaction or the operation of your vehicle will be handled by your dealer's Sales or Service Departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your problem has not been handled to your satisfaction, we suggest you follow these steps:

STEP ONE–Discuss your problem with a member of dealership management. Often, complaints can be quickly resolved at that level. If the problem already has been reviewed with the Sales or Service Manager, contact the Dealer himself or the General Manager.

STEP TWO–Contact the GMC Truck & Coach Division Zone Office closest to you listed on page 80 (or in Canada contact the General Motors Zone Office). If your problem can't be quickly resolved by the service outlet without further help, contact the Zone's Customer Services Department, and provide them with:

- Your name, address, telephone number
- Vehicle Identification Number *
- Dealer's name and location
- Vehicle's delivery date and mileage
- Nature of problem

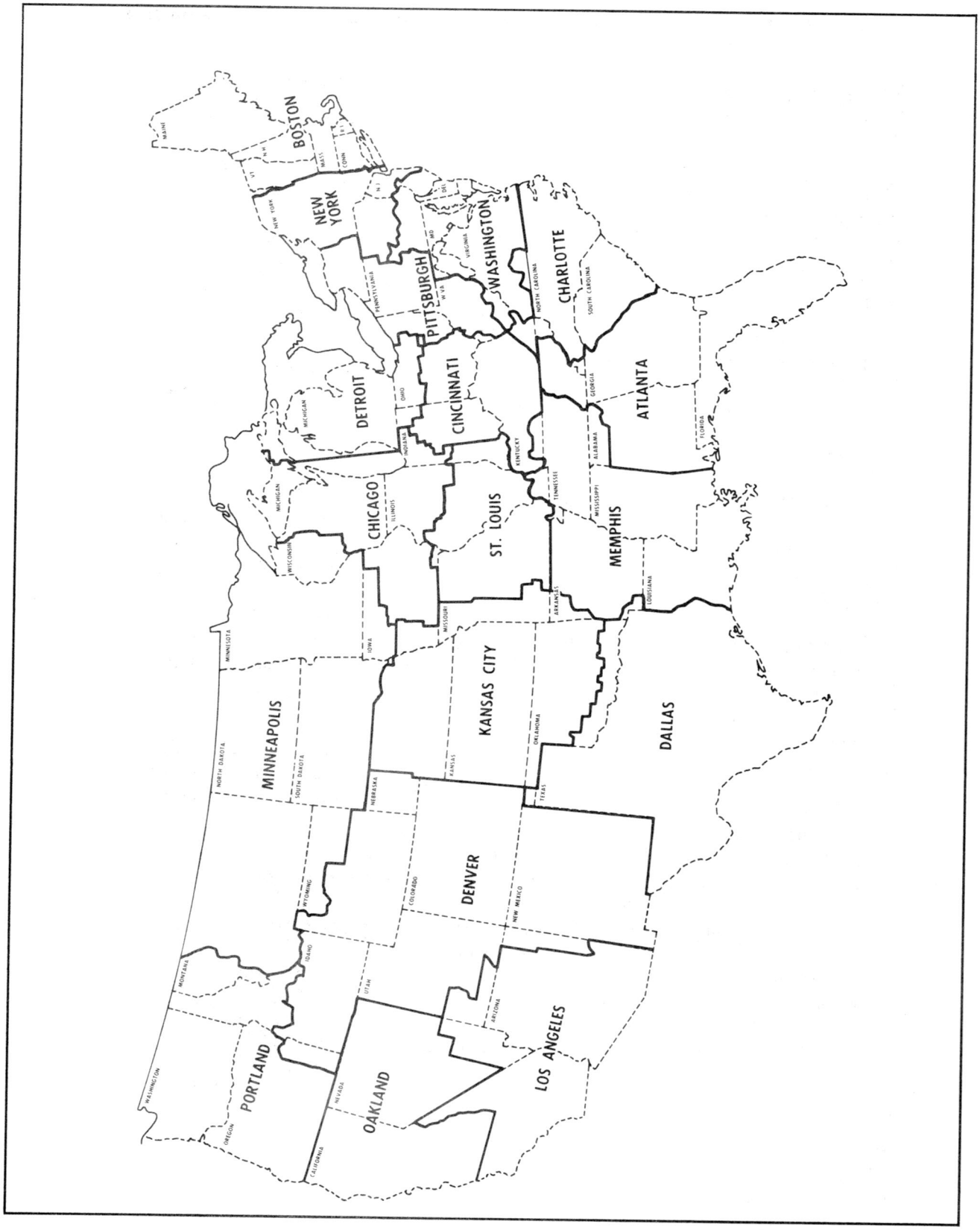
STEP THREE–Contact the Customer Services Representative, GMC Truck & Coach Division, 660 South Blvd. East, Pontiac, Michigan 48053 (phone 313-857-4547). (In Canada, contact the Customer Services Representative, Oshawa, Ontario, phone 416-644-6624.) The representative will review all the facts involved. Then, if it is felt that some further action can be taken, the zone will be so instructed. In any case, your contact will be acknowledged providing GMC Truck & Coach Division's position in the matter.

When contacting the Zone or Home Office, please bear in mind that your problem likely will be resolved in the dealership, utilizing the dealer's facilities, equipment and personnel. So it is suggested that you follow the above steps in sequence when you have a problem.

Your purchase of a GMC Truck & Coach product is greatly appreciated by both your dealer and GMC Truck & Coach Division. We want to help you in any way we can to make sure you are completely satisfied with your vehicle.

*Available from vehicle registration, title or vehicle identification plate.

U.S. ZONE TERRITORIES



U.S. ZONE OFFICES

When calling for assistance, please ask for Customer Services Representative

ATLANTA
5730 Glenridge Drive
Atlanta, Georgia 30302
Mailing Address
P.O. Box 50267
455-5570
Area Code 404

BOSTON
45 Williams Street
Wellesley, Mass. 02181
235-1114
Area Code 617

CHARLOTTE
6000 Monroe Rd.
Suite 222-A
Charlotte, N.C. 28230
Mailing Address
P.O. Box 180
Charlotte, N.C. 28230
371-5192
Area Code 704

CHICAGO
Commerce Plaza
2021 Spring Rd.
Oakbrook, Ill. 60521
Mailing Address
P.O. 4392
Chicago, Ill. 60680
654-6468
Area Code 312

CINCINNATI
4010 Executive Park Dr.
Suite 320
Cincinnati, Ohio 45241
841-5856
Area Code 513

DALLAS
6007 Peeler Street
P.O. Box 35187
Airlawn Station
Dallas, Texas 75235
688-5605
Area Code 214

DENVER
4715 Colorado Blvd.
Denver, Colo. 80216
320-5080
Area Code 303

DETROIT
600 S. Saginaw
Plant #4
Pontiac, Mich. 48053
857-3553
Area Code 313

KANSAS CITY
1509 N.E. Parvin Rd.
Kansas City, Mo. 64116
281-6061
Area Code 913

LOS ANGELES
8155 Van Nuys Blvd.
Suite 1030 Panorama Towers
Panorama City, Calif. 91402
873-5478
Area Code 213

MEMPHIS
3495 Lamar Ave.
Box 18467
Holiday City Sta.
Memphis, Tenn. 38118
346-5254
Area Code 901

MINNEAPOLIS
3001 Broadway N.E.
Minneapolis, Minn. 55413
378-3470
Area Code 612

NEW YORK
275 Old New
Brunswick Rd.
Piscataway, N.J. 08854
246-5203
Area Code 201

OAKLAND
10626 E. 14th Street
Oakland, Calif. 94623
Mailing Address
P.O. Box 24033
Oakland, Calif. 94623
577-0519
Area Code 415

PITTSBURGH
Two Parkway Center
875 Greentree Rd.
Pittsburgh, Pa. 15220
928-5081
Area Code 412

PORTLAND
5355 S.W. Western Avenue
Beaverton, Ore. 97005
646-7945
Area Code 503

ST. LOUIS
Suite 320
Crestwood Executive Center
St. Louis, Mo. 63126
849-5725
Area Code 314

WASHINGTON
Suite 410—Profess. Bldg.
1109 Spring St.
Silver Spring, Md. 20910
537-5353
Area Code 202

Note: The State of Alaska is serviced by the Portland Zone.

GENERAL MOTORS OVERSEAS DISTRIBUTION CORP. OFFICES

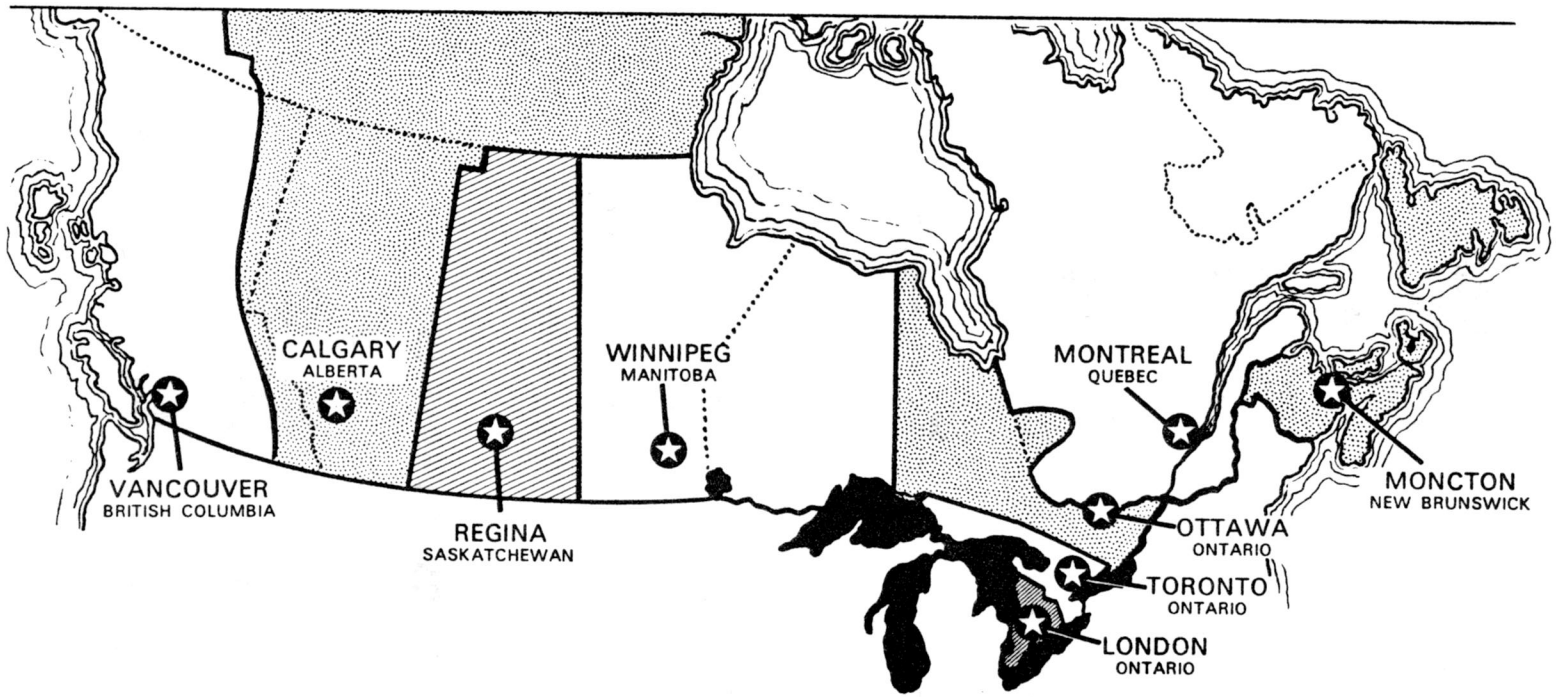
HAWAII, GUAM, AMERICAN SAMOA
General Motors Overseas
Distribution Corporation
1600 Kapiolani Boulevard
Suite 714
Honolulu, Hawaii
Mail—P.O. Box 341
Honolulu, Hawaii 96809
(808) 946-3988

MEXICO
General Motors de Mexico
S.A. de C.V.
Av. Ejercito Nacional No. 843
Mexico 5, D.F.
Mail—Apartado 107 Bis
Mexico 1, D.F.
5 45-70-20

PUERTO RICO, U.S. VIRGIN ISLANDS
General Motors Overseas
Distribution Corporation
Suite No. 10
Centro Comercial San Francisco
Avenida De Diego
Rio Piedras, Puerto Rico
Mail—G.P.O. Box 4382
San Juan, Puerto Rico 00936
(809) 763-1315

PANAMA CANAL ZONE
General Motors Overseas
Distribution Corporation
Edificio De Diego
Esq. Calle 40 Y
Avenida Balboa
Panama, R.P.
Mail—Apartado 7872
Panama 9, Republic of Panama
25-1983

GM OF CANADA LIMITED—ZONE OFFICES



ZONES	ADDRESS	AREA CODE	PHONE NO.
VANCOUVER	900 Terminal Avenue Vancouver, B.C. V6A 2N6	604	684-9444
CALGARY	Box 2510 Calgary, Alberta T2P 2M7	403	243-4621
REGINA	581 Park Street Regina, Sask. S4N 5A9	306	543-2224
WINNIPEG	1345 Redwood Avenue Winnipeg, Man. R2X OY9	204	633-1080
LONDON	951 Pond Mills Road P.O. Box 5412 London, Ontario N6A 4P6	519	452-5151

ZONES	ADDRESS	AREA CODE	PHONE NO.
TORONTO	1200 Eglinton Ave. East Toronto Ont. M3C 1J1	416	446-5053
OTTAWA	875 Belfast Road Ottawa, Ont. K1G OZ4	613	237-5051
MONTREAL	5000 Trans-Canada Hwy. Pointe Claire, Quebec H9R 4R2	514	697-9160
STE. FOY	979 Avenue de Bourgogne P.O. Box 10800 Ste. Foy, (Quebec), Que. G1V 4K7	418	653-2054
MONCTON	653 St. George Street Moncton, N.B. E1C 8M2	506	854-1500

AFTER-HOUR INFORMATION SERVICE

If you have attempted to contact a GMC Motorhome dealer after normal business hours, without success, you may call the toll-free number below. The operator will give you the location and phone number of the nearest dealer that provides After-Hour Assistance.

It should be understood, however, that any charges for after-hours service assistance must be borne by the owner. In those instances where the repair qualifies under our published warranty, the dealership charge for additional services, such as for after normal business hour repairs, will be at the owner's expense.

800-521-2806

In Michigan call: 800-482-9228

EMERGENCY SERVICE

Engine
Transmission
Final Drive (Differential)
Front Suspension

In the event you require Emergency Serivce to your vehicle's engine, transmission, final drive (differential), or front suspension and a GMC Motorhome dealer is not located in the immediate geographic area – the nearest Oldsmobile dealer may be able to offer you emergency service assistance. Any work performed will be at the discretion of the particular Oldsmobile dealer contacted. You will be required to pay the servicing Oldsmobile dealer and if the vehicle is under Warranty, the repair order can be submitted to the selling GMC Motorhome dealer for review and consideration for reimbursement.

MAINTENANCE MANUAL AND PARTS BOOK

Maintenance Manual and/or Parts Book can be purchased through any GMC Motorhome dealer.

IMPORTANT FACTS YOU SHOULD KNOW ABOUT GASOLINE MILEAGE AND HOW TO IMPROVE IT

How you drive, where you drive, and when you drive all affect how many miles/kilometres you can get from a gallon/litre of gasoline. The careful attention you give your vehicle as far as maintenance and repairs are concerned will also contribute importantly to fuel economy.

FUEL SELECTION

Use regular grade leaded or unleaded gasoline. Additional details on Fuel Requirements are given in SERVICE AND MAINTENANCE section.

"JACKRABBIT" STARTS

Gasoline can be saved (and engine and tire life prolonged) by avoiding fast starts away from lights and stop signs.

STOP-AND-START DRIVING

Frequent stops and starts during a trip really cut down on your miles per gallon. Plan even your short trips to take advantage of through streets to avoid traffic lights. Pace your driving like the expert drivers to avoid unplanned stops.

EXCESSIVE IDLING

An idling engine uses gasoline, too. If you're faced with more than a few minutes wait and you're not in traffic, it may be better to "turn off" and start again later.

SUDDEN STOPS

Sudden stops can also waste gasoline; instead of moving the vehicle, the energy is wasted as heat in braking. Energy in the form of gasoline is also needed to accelerate back to driving speed.

LUBRICANTS

A properly lubricated vehicle means less friction between moving parts. Consult this manual and the Maintenance Schedule folder for the proper lubricants to use and the lubrication intervals.

AIR CLEANER

Your vehicle recieves its power from a mixture of gasoline and air. The air is taken into the system through the air cleaner. So it's important to replace the air cleaner at required intervals. A dirty air cleaner element reduces engine performance and can waste gasoline.

TUNED ENGINE

Proper tuning (a check on timing, spark plugs, emission control devices, etc.) can improve your vehicle's gas mileage. You just can't expect an "out-of-time" engine to give you good gas mileage and cleaner air.

EXCESS WEIGHT

Fuel economy is related to the work the engine must do to run your vehicle. The heavier the load, the more gasoline it takes. Keep weight to a minimum by removing any personal effects or luggage from the vehicle when they are not needed.

TIRE INFLATION

Under inflation not only causes needless wear of the tires, but can also waste gasoline. It's a good idea to check tire pressures often and, for best fuel economy, keep your tires inflated to the pressure shown on the Tire Placard (located on the inside of the glove compartment door).

WHEEL ALIGNMENT

Improper toe alignment will cause the front tires to roll at an angle which will result in faster tire wear. It takes power to overcome improper alignment which, in turn, wastes gasoline.

INDEX

GAS STATION INFORMATION

Refer to SERVICE AND MAINTENANCE section for details on removal and installation of engine cover, placing vehicle on suitable hoist, etc.

CAUTION

To help prevent the possibility of fire or explosion, turn off LP gas supply at the LP gas tank and be sure all pilots are out, before filling gasoline tanks.

Always check that fluid inputs are made into the correct filler opening to help avoid serious personal injury and property damage.

Gas Cap Location

GAS CAP–Located on the left side of the vehicle, directly under the driver's window. See gas cap removal procedure in SERVICE AND MAINTENANCE section.

GASOLINE RECOMMENDATION–Use a regular grade leaded or unleaded gasoline. Additional details on Fuel Requirements are given in the SERVICE AND MAINTENANCE section.

FRONT ACCESS DOORS–Release by turning latch knob to the left to loosen.

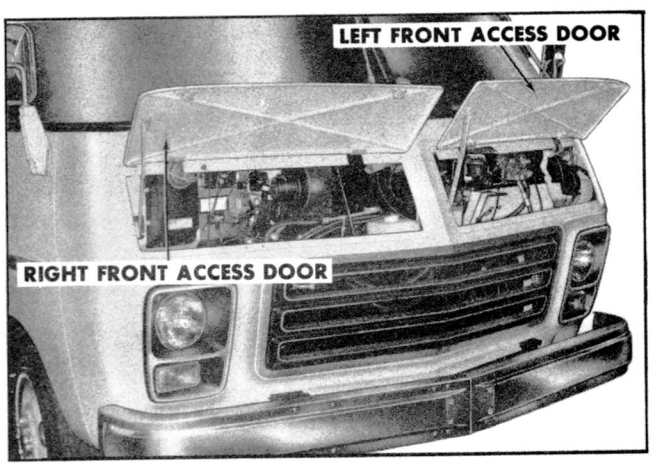
ENGINE OIL DIPSTICK–Located inside the left front access door. Check oil level as the last operation in a fuel stop. Maintain between "ADD" and "FULL" marks on dipstick.

ENGINE OIL RECOMMENDATION–Use only SE quality oils. The chart in the SERVICE AND MAINTENANCE section will serve as a guide for selecting proper oil viscosity.

TIRE INFLATION PRESSURES–Check at least monthly. Keep inflated to pressures shown on tire placard affixed on the inside of the glove compartment door.

WINDSHIELD WASHER–Check reservoir fluid level regularly. Use a washer fluid, such as GM Optikleen or equivalent.

BATTERIES–If your vehicle is equipped with a Freedom battery, the test indicator provides information for testing purposes only. Check fluid level monthly, if equipped with flame arrestor cap type battery. When fluid level is low, add colorless, odorless drinking water to bring level to split ring in filler openings.



Front Access Doors