



1977

TRANSMODE

OPERATING MANUAL

(WITH 403 CUBIC INCH ENGINE)

IMPORTANT OPERATING, SAFETY AND MAINTENANCE INSTRUCTIONS



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 which provide additional information on vehicle maintenance and warranties. We urge you to read these publications carefully and follow the recommendations to help assure the most enjoyable and troublefree operation of your vehicle.

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

GMC Truck and Coach maintains a number of Zone Offices throughout the country. Should you have a problem that cannot be handled through normal channels, 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:



GMC TRANSMODE VEHICLE

Operating Manual

This manual should be considered a permanent part of the vehicle, and must remain with the vehicle at time of resale.

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.

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

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

TABLE OF CONTENTS

| Section | Page |
|--|------|
| 1 Before Driving Your Vehicle | 5 |
| 2 Starting and Operating Vehicle | 11 |
| Steering Column Controls | 13 |
| Floor Controls | 18 |
| Instrument Panel and Controls | 20 |
| 3 In Case of Emergency | 36 |
| 4 Appearance Care | 43 |
| 5 Service and Maintenance | 48 |
| 6 Specifications, Owner Assistance, Index, Gas Station Information | 71 |

IMPORTANT INFORMATION ON VEHICLE LOADING

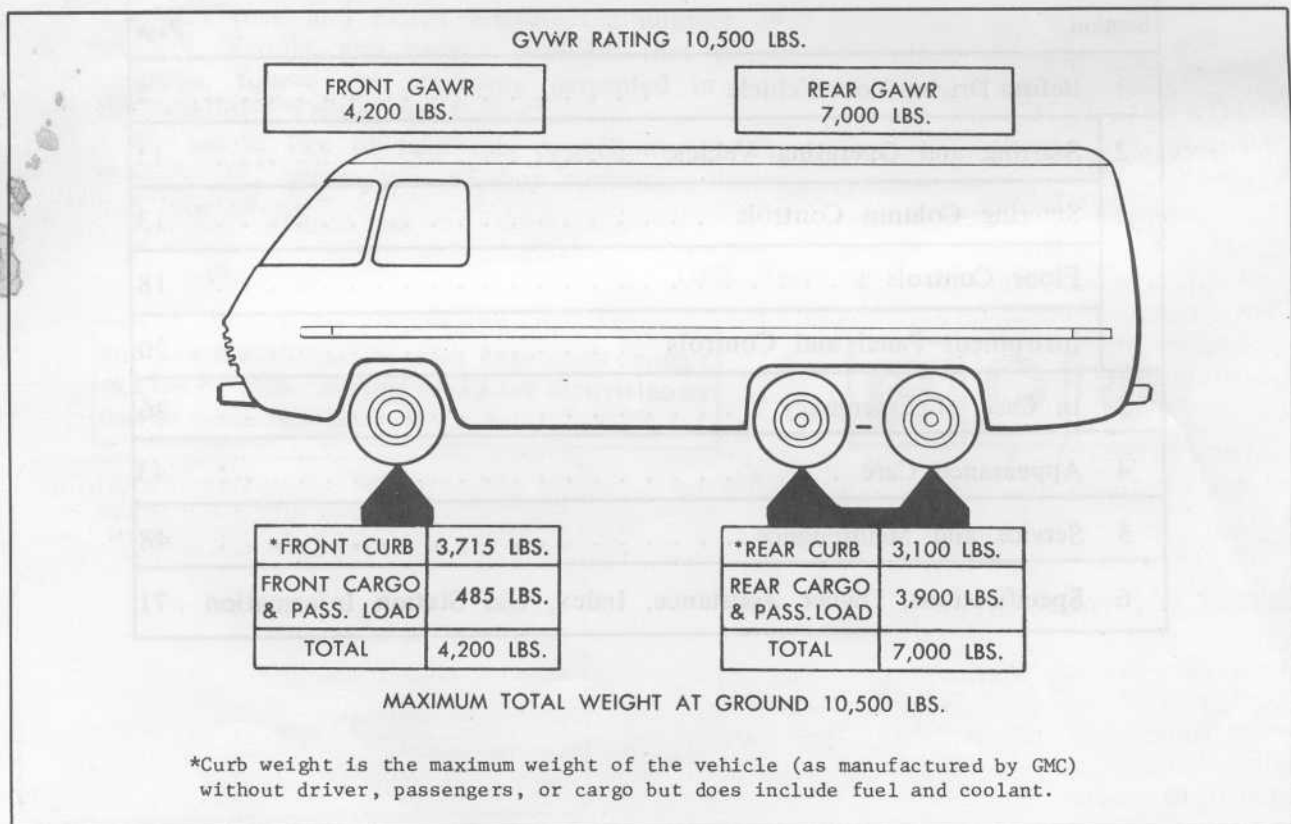
OVERLOADING

CAUTION

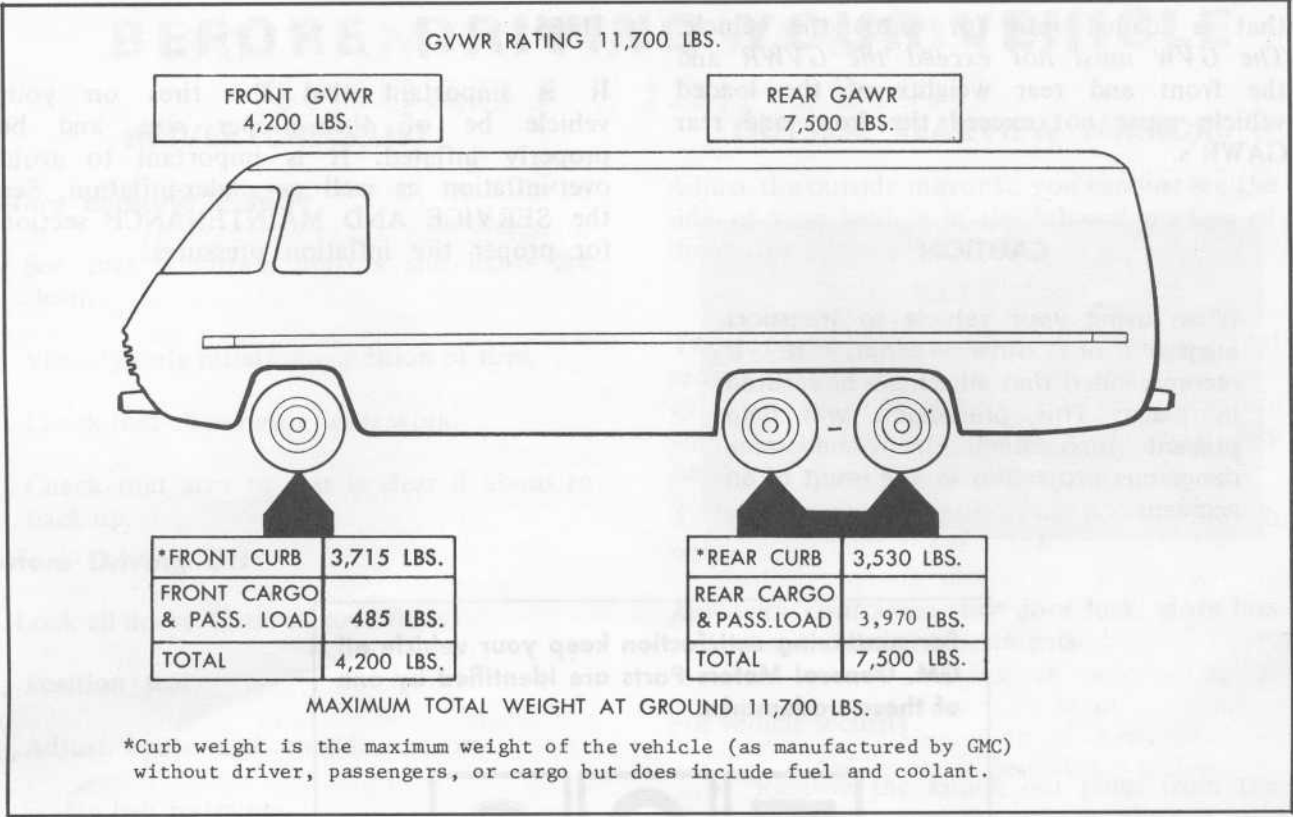
The components of your vehicle are designed to provide satisfactory service if the vehicle is not loaded in excess of either the Gross Vehicle Weight Rating (GVWR) or the maximum Front and Rear Gross Axle Weight Ratings (GAWR's) specified on the vehicle identification number (VIN) plate located behind 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. For assistance in this regard, consult your dealer. The cargo load should be distributed on both sides of the centerline of the vehicle as equally as possible.



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.

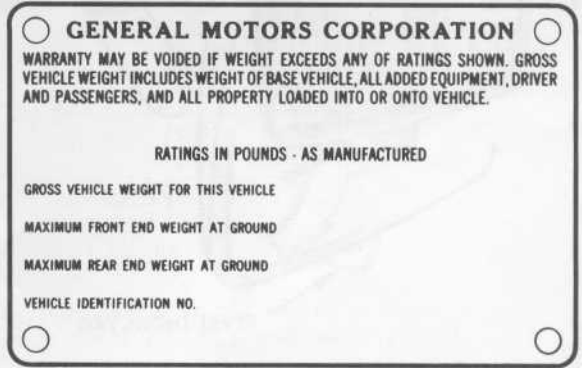
EFFECT ON WARRANTY

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

The vehicle identification number 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 vehicle itself, all items added to the vehicle after it has left the factory, the driver and all occupants, and everything



Vehicle Identification Plate

that is loaded into (or onto) the vehicle. The GVW must not exceed the GVWR and the front and rear weights of the loaded vehicle must not exceed the front and rear GAWR's.

CAUTION

When using your vehicle to transport luggage or other cargo, it is recommended that all articles be secured in place. This precaution will help prevent such items from becoming dangerous projectiles in the event of 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. Visually note inflation condition of tires.
3. Check that all exterior lights work.
4. Check that area to rear is clear if about to back up.

Before Driving Off

1. Lock all doors. Close all roof vents.
2. Position seat.
3. Adjust inside and outside mirrors.
4. Fasten belt restraints.
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. Be sure you understand your vehicle, its equipment, and how to operate it safely.

REMINDER: Always lock entrance door when driving for greater security in the event of an accident, to help keep children from opening door, and for greater security against entry by unwelcome persons while momentarily stopped.

INSIDE REARVIEW MIRROR

To raise or lower mirror to achieve desired field of view, grasp mirror and exert sufficient pressure by pushing or pulling up, down, or sideways. Switch mirror to night position to reduce glare from following headlights.

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 separate identifiable keys - with different cross section - are provided for the lock cylinders on your vehicle. The key codes are stamped on the "knock out" plug in the key head.

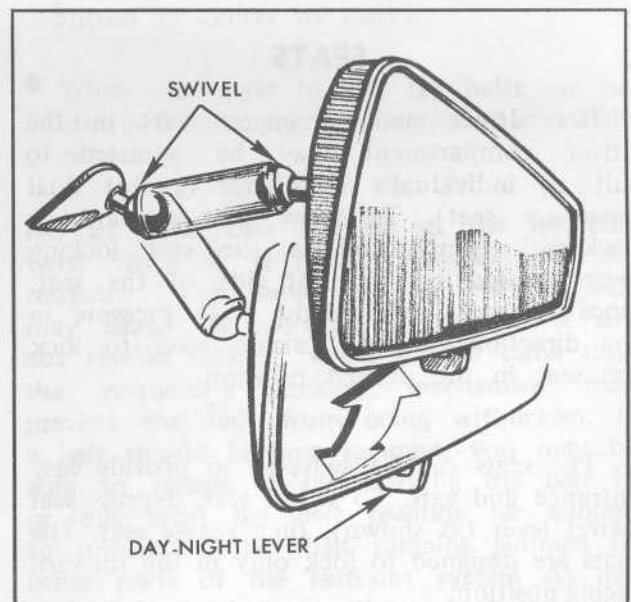
Key with Square Head—For ignition switch only.

Key with Oval Head—For door lock, glove box and other locking compartments.

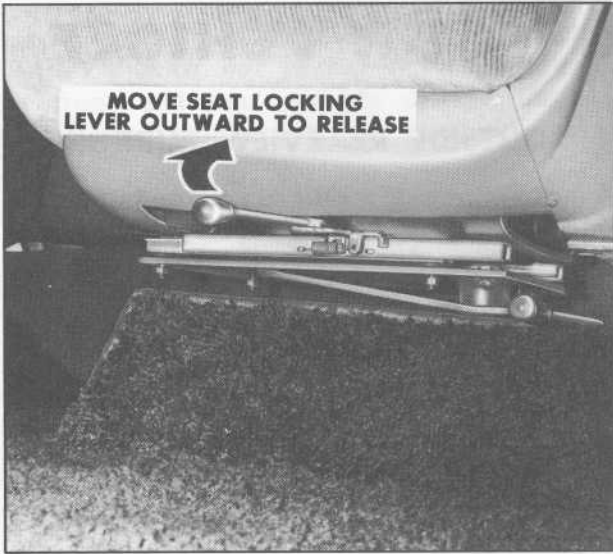
For vehicle security:

- Remove the knock out plugs from the keys and record the code numbers.
- Keep the key codes in a safe place such as your wallet, NOT IN THE VEHICLE.

In the event the original keys are lost, duplicates can be made by your dealer or a locksmith using the key code information.



Inside Rearview Mirror



Seat Track Mechanism

If it is necessary to park in an attended lot separate and leave your square ignition key only. Lock your glove box and take the round key with you. This will prevent any unauthorized entry into the glove box.

SEATS

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

CAUTION

After adjusting a manually operated seat, always use body weight to push forward and backward on seat and to twist seat — to assure that seat adjusters and swivel lock have securely engaged in the new position. Motion of the seat indicates that at least one adjuster or the lock did not engage, which could increase the chance of injury and/or the severity of injury in the event of an accident. If this condition persists, take the vehicle to your dealer for service.

Do not adjust a manually operated driver's seat swivel or fore and aft mechanism while the vehicle is moving — the seat could move unexpectedly, possibly causing loss of control of the vehicle.

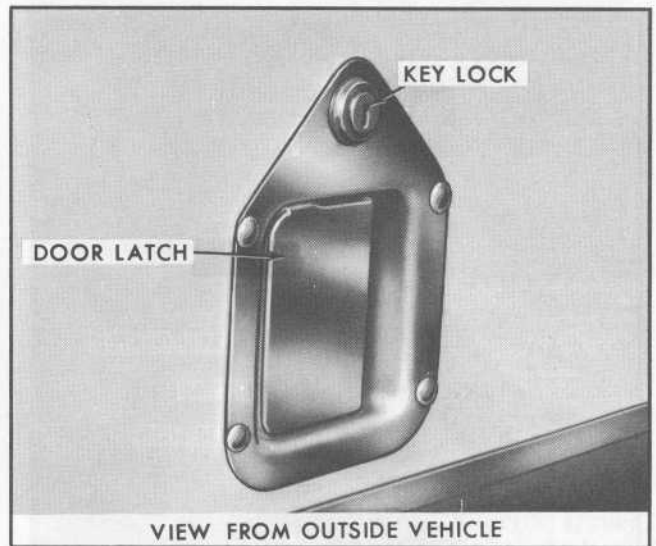
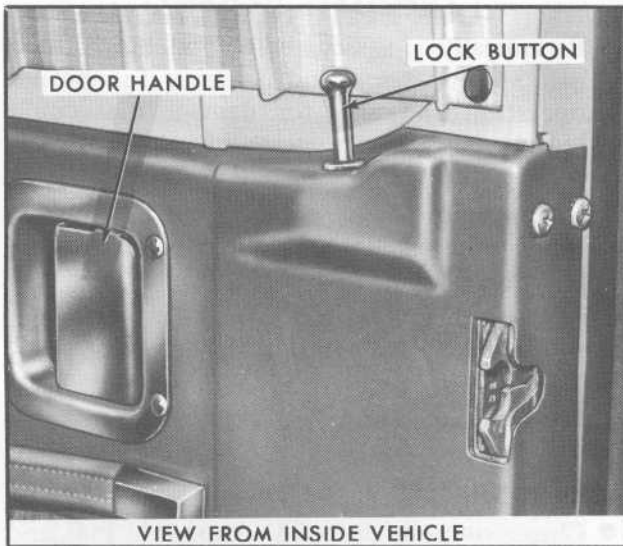
ENTRANCE DOOR

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.



Seat Swivel Mechanism



Entrance Door Latch

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.

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 severity of injury in accidents or sudden stops, General Motors recommends that people riding in the vehicle be properly restrained, with the belt restraints provided, including pregnant women and children of all ages. See following pages for information on restraint of pregnant women, and of children.

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

- Adjust seat to your satisfaction and sit erect and well back in the seat.
- In a single motion, pull webbing across lap far enough to permit inserting metal latch plate end of lap belt into the buckle, until a snap is heard. If webbing is not pulled out far enough to reach the buckle, let the belt rewind into the

retractor to release lock mechanism, so belt can be pulled out to the proper length.

- Position lap belt across lap as **LOW ON HIPS** as possible. To reduce the risk of sliding under the belt during an accident, adjust to a **SNUG FIT** by pulling belt firmly across lap in direction of retractor so it can take up slack.
- To unfasten seat belts, depress push button in center of buckle.
- When no longer in use, lap belts can be stowed by allowing them to rewind into their retractors.

NOTE: Take care not to let the lap 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, while at the same time the retractor's locking mechanism may prevent the belt from being withdrawn. If a belt should become jammed, you may be able to release it by working the belt in or out until the belt rewinds far enough to unlock. If lap belt remains jammed or other parts of the restraint system do not operate properly take the vehicle to your dealer for service.



Lap Belt (Front Seating Position)

CAUTION

A snug fit and a low lap belt position are essential to lessen the chance of injury and/or the severity of injury in the event of an accident, because this spreads the force exerted by the lap belt in a collision over the strong hip bone structure rather than across the soft abdominal area. To help lessen the chance of injury and/or the severity of injury in the event of an accident: Never use the same belt for more than one person at a time; avoid wearing belts in a twisted condition; do not allow belts or hardware to become damaged by being pinched between the seat structural (metallic) members or in the door.

RESTRAINT OF PREGNANT WOMEN

To help lessen the chance of injury and/or the severity of injury to a pregnant woman and her unborn child in the event of an accident, General Motors recommends that pregnant women use the lap belt, worn as low and snug over the hips as possible, as advised for regular seat belt use.

LAP BELT INSPECTION

- Periodically inspect belts, buckles, latch plates, retractors, and anchors for proper operation and also for damage that could lessen the effectiveness of the restraint system.
- Keep sharp edges and damaging objects away from belts and other parts of the restraint system.
- Replace belts if cut, weakened, frayed, or subjected to collision loads.
- Check that the anchor mounting bolts are tight.
- Have questionable parts replaced.
- Keep belts clean and dry.
- Clean only with mild soap solution and lukewarm water.
- Do not bleach or dye belts since this may severely weaken them.

CHILD RESTRAINT

Children in vehicles should be restrained to lessen the risk of injury in accidents, or sudden stops. In using any infant or child restraint system, read and comply with all installation and usage instructions.

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

If a child is traveling in a vehicle not equipped with an appropriate infant or child restraint system, the following precautions should be taken:

1. Infants unable to sit up by themselves should be restrained by placing them in a covered, padded bassinet which should be placed crossways in the vehicle (widthwise) on the seat. The bassinet should be securely restrained with the regular vehicle lap belts.
2. Children able to sit up by themselves should be placed on a seat and lap belted. Never allow a child to stand or kneel on any seat or elsewhere in the vehicle, once it is underway.

TRAILER HAULING

Towing a trailer will affect handling, durability and economy. Maximum safety and satisfaction depends upon proper use of correct equipment and avoiding overloads and other abusive operation.

The maximum loaded trailer weight which you can pull with your vehicle depends on what special equipment has been installed.

CAUTION

Do not attempt to tow any trailer over 1,000 pounds gross trailer weight regardless of the trailer towing equipment installed. This could overload your vehicle and seriously affect vehicle performance and vehicle handling which in turn could result in personal injury.

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.

The GVW of this vehicle is reduced by an amount equal to the trailer tongue load on the trailer hitch. The weight reduction necessary to compensate for the trailer tongue load is made by reducing the allowable passenger and cargo load.

CAUTIONS

To help avoid personal injury due to inadequate braking action:

- Before descending a steep or long grade, down a mountain or hillside, reduce speed and shift into a lower gear. Use the lower gear ranges to control vehicle speed. Avoid prolonged or frequent application of the brakes which could cause overheating and thus reduce brake effectiveness.

- Whenever a trailer hitch is removed, be certain to have any mounting holes in underbody properly sealed to prevent possible entry of exhaust fumes, dirt or water. (See "ENGINE EXHAUST GAS CAUTION" in the following section.)

TRAILER TOWING TIPS

Getting Underway

If the trailer is equipped with electric trailer brakes, before entering traffic, start the combination moving and manually apply the electric brakes to determine if the trailer brakes are operating and the trailer electrical system is connected.

Engine Cooling

In the event of an engine over heat condition, see the procedures in the "In Case of Emergency" section of this manual.

Long Uphill Grades

When ascending long uphill grades, the possibility of engine overheating can be reduced by down-shifting the transmission to a lower range gear and reducing speed to 45 mph, (75 km/h), or below.

Transmission

See the procedure for checking the transmission fluid level in the Service and Maintenance section of this manual.

Parking

Parking of vehicles with trailers on a grade is not recommended. However, should this be necessary, the following sequence should be used:

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" position.

Reverse above sequence when starting.

If the vehicle is parked on a grade and the transmission selector lever is placed in "PARK" before the trailer wheels are chocked and parking brake is set, the weight of the vehicle and trailer exert so much force on the parking pawl in the transmission that it may be difficult to pull the selector lever out of "PARK".

OPERATION IN FOREIGN COUNTRIES

Fuel Requirements

Your vehicle's engine is designed to operate on unleaded or leaded fuel of approximately 91 research octane number.

If you plan to operate your vehicle outside the continental limits of the United States or Canada, there is a possibility that the best fuels available are so low in anti-knock quality that excessive knocking and serious engine damage may result from their use. To obtain information on the quality of fuels available in the countries in which you plan to travel write to GMC Truck & Coach Division, General Motors Corporation, Pontiac, Michigan 48053 (or in

Canada write to General Motors of Canada Limited, Owner Relations Department, Oshawa, Ontario), giving:

- The vehicle identification number (from plate attached to right side of dash panel or from the registration slip or title).
- The country or countries in which you plan to travel.

It is recommended that you do not operate your vehicle in any country not having fuels meeting the requirements of your vehicle's engine as these MAY CAUSE ENGINE DAMAGE for which GMC Truck & Coach is not responsible under the terms of the New Vehicle Warranty or Emission Control Systems Warranty.

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 inhaling exhaust gases because they contain carbon monoxide, which by itself is colorless and odorless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal.

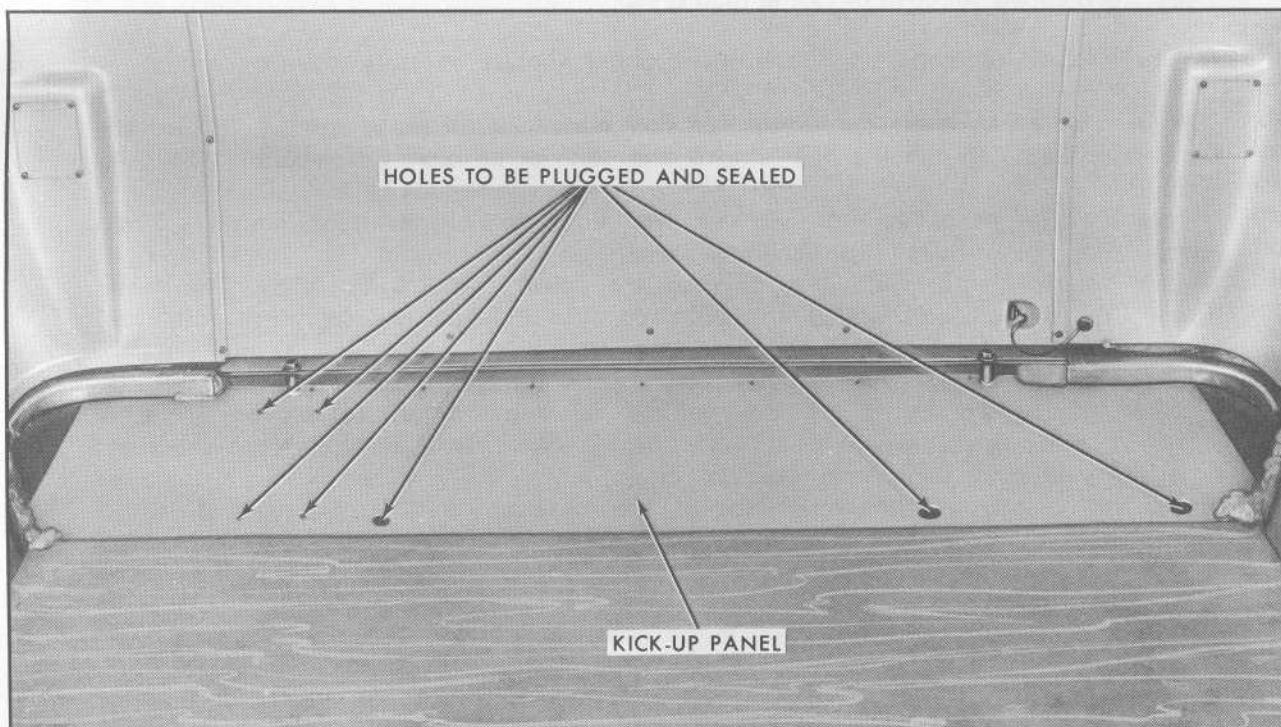
If, at any time, you suspect that exhaust fumes are entering the vehicle from any source have the cause determined and corrected as soon as possible. If you must drive before the cause is corrected, drive only with ALL windows FULLY open and heating or cooling system adjusted for maximum ventilation (see below).

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

- Each time the vehicle is raised for lubrication or oil change.
- Whenever a change is noticed in the sound, alignment, or appearance 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

SECTION 2
STARTING AND OPERATING VEHICLE

OCCUPYING A PARKED VEHICLE WITH ENGINE RUNNING FOR AN EXTENDED PERIOD OF 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 period of time, adjust heating or cooling system to force outside air into the vehicle as follows:

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

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

- Close all windows.
- Adjust heating or cooling system to force outside air into the vehicle as described above but with fan set at high speed.
- Air vents in or under the instrument panel should be fully open.

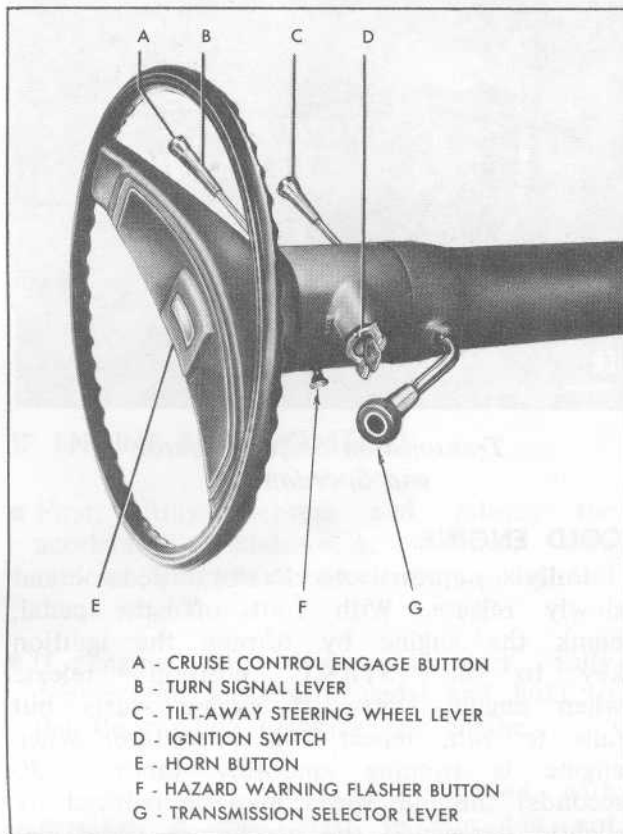
It is important that the inside engine cover be properly seated to prevent possible leakage of exhaust fumes into the vehicle through this opening.

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, alignment, or appearance of the exhaust system or if it is damaged. Do not run motor-generator in a confined area, such as a garage.

NOTE: Particular care should be taken to prevent the possibility of carbon monoxide exposure when the vehicle is modified for recreational or other usage. Additionally, some recreational vehicle appliances (such as lights, refrigerators, stoves, heaters) may generate carbon monoxide and should be used only if there is adequate ventilation.

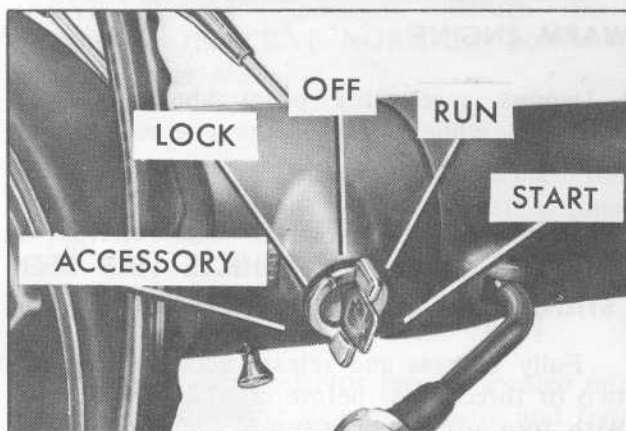
STEERING COLUMN CONTROLS



Steering Column Controls

ANTI-THEFT STEERING COLUMN LOCK

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



Anti-Theft Steering Column Lock

- **ACCESSORY**—Permits operation of electrical accessories when the engine is not running. To engage, push key in and turn toward you (counterclockwise.)
- **LOCK**—Normal parking position, locks ignition and provides added theft protection by preventing normal operation of steering wheel and shift controls.
Key cannot be returned to “LOCK” position and removed until transmission is placed in “PARK”.
- **OFF**—Permits turning engine off without locking steering wheel and shift controls.
- **RUN**—Normal operating position.
- **START**—Permits engagement of starter.

NOTE: The anti-theft steering column lock is not substitute for the parking brake. Always set the parking brake when leaving the driver’s seat unattended.

If difficulty is experienced in turning the ignition key and lock knob to unlock the ignition, attempt to turn the steering wheel as hard as possible in the direction the wheels are turned. At the same time turn the ignition-lock knob in a clockwise direction with as much effort as you can apply with your own hand. Do not attempt to use a tool of any kind to apply additional force on the lock knob, as this could break the knob.

THEFT PROTECTION

Your new vehicle has been equipped to help prevent theft of the vehicle itself, its equipment, and contents. However, these security features **DEPEND UPON** your cooperation to be effective.

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

- **LOCK THE STEERING COLUMN AND TAKE THE KEYS:**
 - Turning the key to the “LOCK” position and removing the key is designed to lock the ignition and BOTH steering and shift controls.
 - If it is necessary to leave a key with the vehicle, leave the square head ignition key only; take the round head key with you. This will help prevent unauthorized entry into your vehicle at a later date or into your glove box (if locked).
- **FULLY CLOSE ALL WINDOWS AND LOCK ALL DOORS**
- **KEEP VALUABLES OUT OF SIGHT.**
 - Never leave things of value in plain sight.
 - The glove box offers a place to hide small items (and if locked, provides still more security).

PARKING

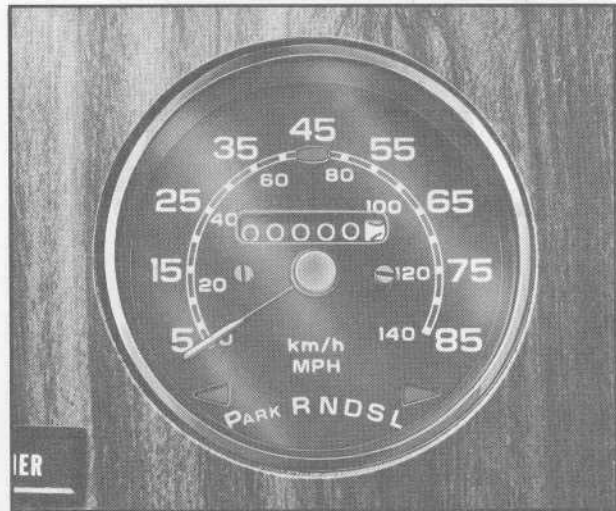
When leaving the driver's seat unattended:

- **SET PARKING BRAKE FIRST.** (See note on page 20).
- Place transmission selector lever in “PARK.”
- Turn key to LOCK position.
- Remove key from steering column lock (the buzzer will remind you).
- Lock entrance door if leaving vehicle.

NOTICE: Do not leave your vehicle unattended with the engine running. If the engine should overheat while your vehicle is unattended, the temperature warning light or gauge would go unheeded, which could result in extensive damage to your vehicle.

STARTING ENGINE

1. Apply the parking brake.
2. Place the transmission selector in “PARK” or “N” (“PARK” is preferred). A starter safety switch is designed to prevent starter operation while the transmission selector is in any drive position. (If it is necessary to re-start the engine with the vehicle moving, place the selector lever in “N”.)
3. Depress accelerator pedal and activate starter as outlined in the following, for different conditions.



*Transmission Shift Indicator
and Speedometer*

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 (approx. 30 seconds) the idle speed may be reduced by slightly depressing the accelerator pedal and then slowly releasing.

CAUTION

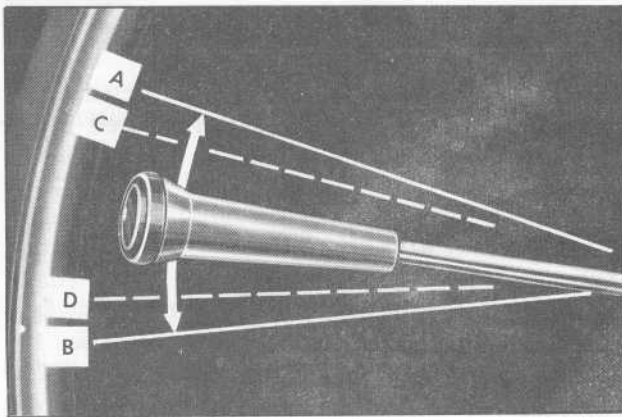
Extended running of the engine (5 minutes or more) without depressing the accelerator pedal, could cause damage to the engine or exhaust system due to overheating.

WARM ENGINE

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

EXTREMELY COLD WEATHER (BELOW 0° F.) (-18° C.) OR AFTER VEHICLE HAS BEEN STANDING IDLE FOR 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—release key when engine starts.



Turn Signal Lever

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.

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

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. **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.

CAUTION

Before descending a steep or long grade, down a mountain or hillside, reduce speed and shift into a lower gear. Use the lower gear ranges to control vehicle speed. Avoid prolonged or frequent application of the brakes which could cause overheating and thus reduce brake effectiveness.

Use caution when accelerating or shifting into lower range or lower gear on slippery surfaces with vehicle moving—abrupt acceleration or engine braking action could cause the front wheels to skid, possibly leading 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 AND LANE CHANGE FEATURE

Whenever a right or left turn is intended, when changing lanes, or when pulling away from the curb, use the turn signals.

- **FULL TURN**—For normal turns, move the turn signal lever to position “A” for right turn and “B” for left turn. Lever will remain in position without manual effort until the turn is completed, then cancel automatically.
- **LANE CHANGE**—Move lever to the detent position “C” for change to right lane or to “D” for change to left lane. Hold lever in position until lane maneuver is completed, then release. Lever will return to “OFF” position.

HAZARD WARNING FLASHER

For operation of hazard warning flasher, see “In Case of Emergency” 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.

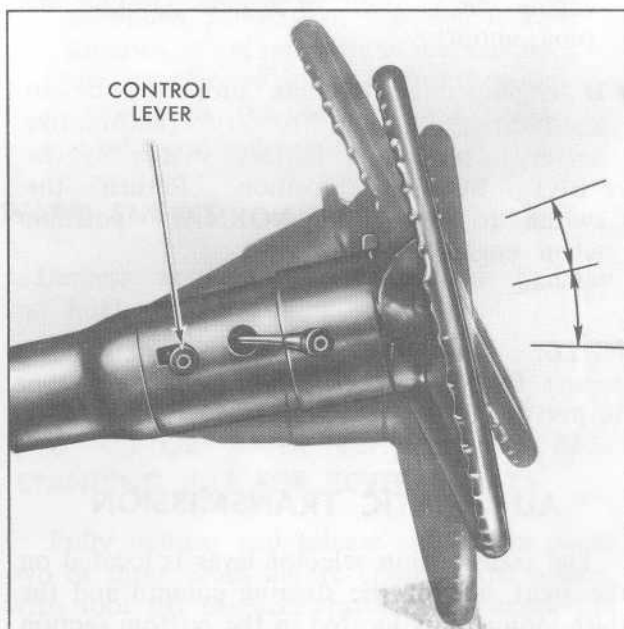
POWER STEERING

If the steering system power assist fails due to some malfunction, or because the engine has stalled, the vehicle can still be steered. However, much greater effort is required, particularly in sharp turns.

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.



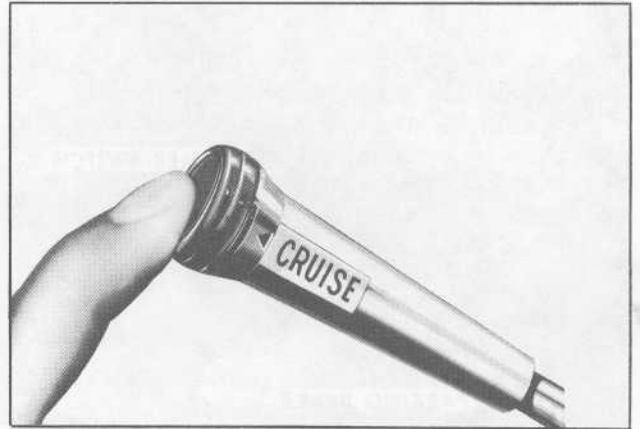
Tilt Steering Wheel

CRUISE CONTROL

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 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.

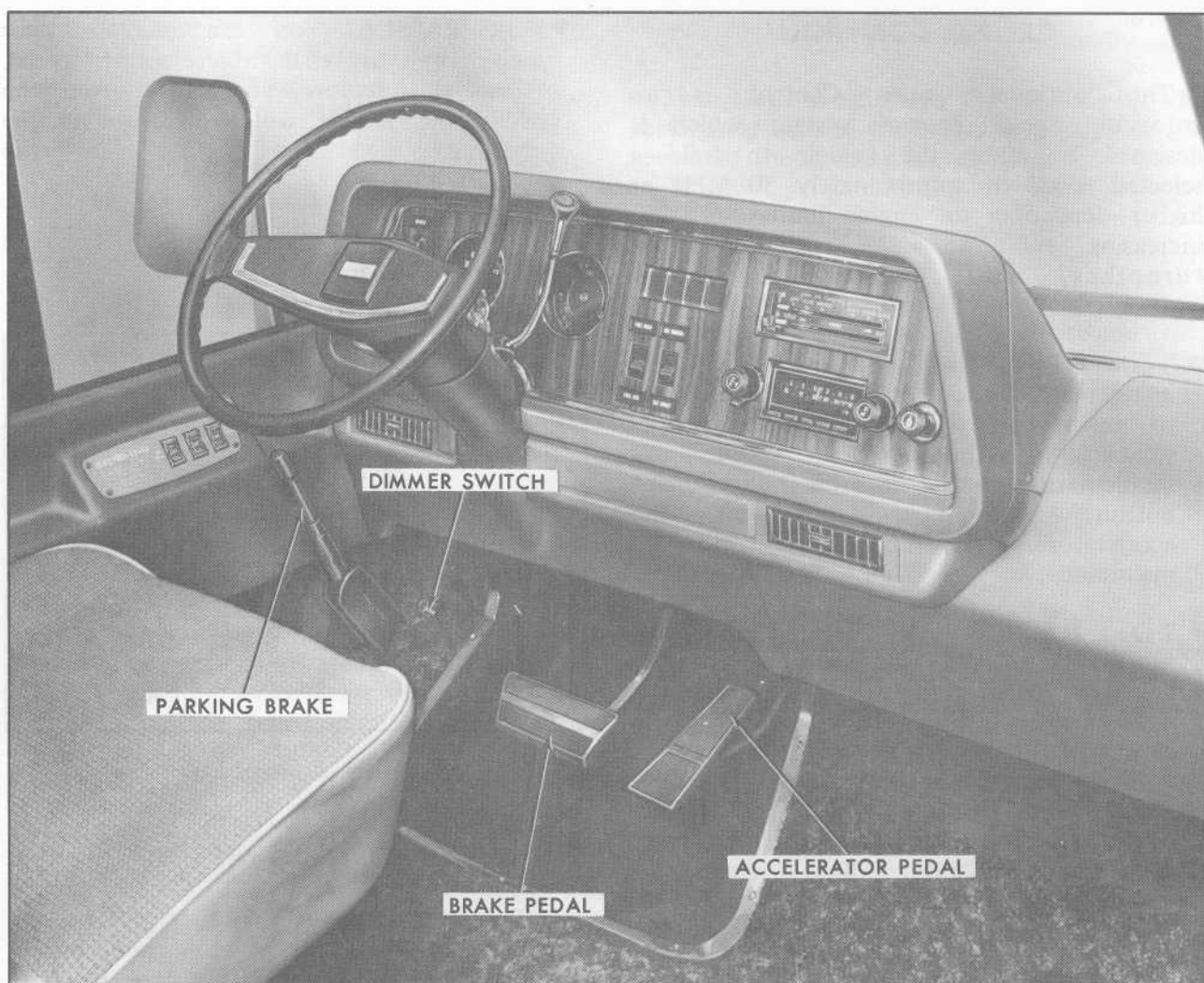
- **FOR PASSING**—You can increase your speed by depressing accelerator pedal. When you remove your foot from the pedal, the vehicle will slow down to the cruising speed set prior to the acceleration.
- **TO DISENGAGE**—Lightly apply the brake pedal to disengage system.



Cruise Control Lever

CAUTION

To help maintain vehicle control do not use the Cruise Control when conditions are not suitable for maintaining a constant speed, such as in heavy or varying traffic, or on winding or slippery roads. With the Cruise Control engaged, removing foot from the accelerator pedal does not permit engine speed to return to idle.



Vehicle Floor Controls

FLOOR CONTROLS

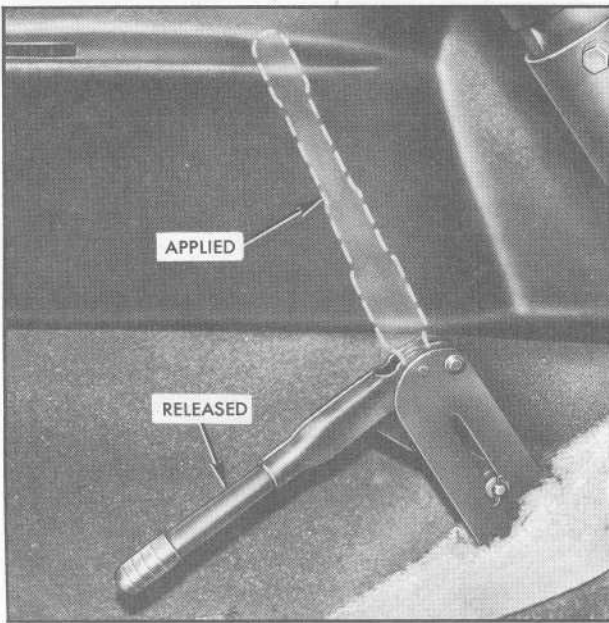
POWER BRAKE SYSTEM

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.

NOTE: Operation of the brake system warning light is covered (on page 22) (in the section on "Instrument Panel and Controls.")

CAUTION

Driving through water deep enough to wet the brakes may adversely affect brake performance so that the vehicle will not slow down at the usual rate, and may pull to the right or left. Applying the brakes lightly will indicate whether they have been so affected. To dry them quickly, lightly apply the brakes while maintaining a safe forward speed with an assured clear distance ahead and to the sides until brake performance returns to normal.



Parking Brake Control

- On your vehicle, if power assist to the brakes is interrupted due to a stalled engine or a system malfunction, two or more brake applications can normally be made 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 partially depleted each time the brake pedal is applied and released. Do not pump brakes when brake power assist has been interrupted, except when necessary in order to maintain steering control on slippery surfaces.
- When reserve power is exhausted, the vehicle can still be stopped by applying greater force to the pedal.

SELF-ADJUSTING BRAKES

Brakes on this vehicle (except for the Parking Brake) are self-adjusting, designed to eliminate periodic adjustments.

Drum brake adjustment is made automatically as the brakes are applied while vehicle is moving backwards.

Disc brake adjustment is made automatically with each brake application.

- If excess brake pedal travel develops, drive alternately backward and forward several times and apply brakes firmly in each direction.
- See your dealer if normal pedal travel is not restored, or if there is a rapid increase in pedal travel, which could be a sign of other brake trouble. See your dealer also if adjustment of the parking brake is required.

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

REMINDER: Front disc brakes have a built-in wear indicator that is designed to make a high frequency, squealing, or cricket-like warning sound when the linings are worn to where replacement is required. The sound will occur intermittently or continuously when wheels are rolling, but will disappear when the brake pedal is applied firmly. See also the various brake checks listed in the maintenance schedule folder.

PARKING BRAKE

- To set parking brake, fully pull up the handle located on the floor against the left wall, below the instrument panel.
- For increased holding power, first depress regular brake pedal with the right foot, and hold it while setting the parking brake with left hand.
- To release parking brake push the handle down.
- As a reminder, the "PARK BRAKE" reminder light is designed to come on whenever the parking brake control is not fully released, and the ignition is on.
- Never drive vehicle with parking brake set as this may overheat or otherwise damage rear brakes.

The amount of force required to apply parking brake can be adjusted by turning a tension adjustment knob located at the upper end of the lever. This also adjusts the degree of brake application. The greater the force required at the lever the greater the degree of brake application.

NOTE: The parking brake should be set first whenever the driver's seat is left unattended.

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 circuit 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 kilometers 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.

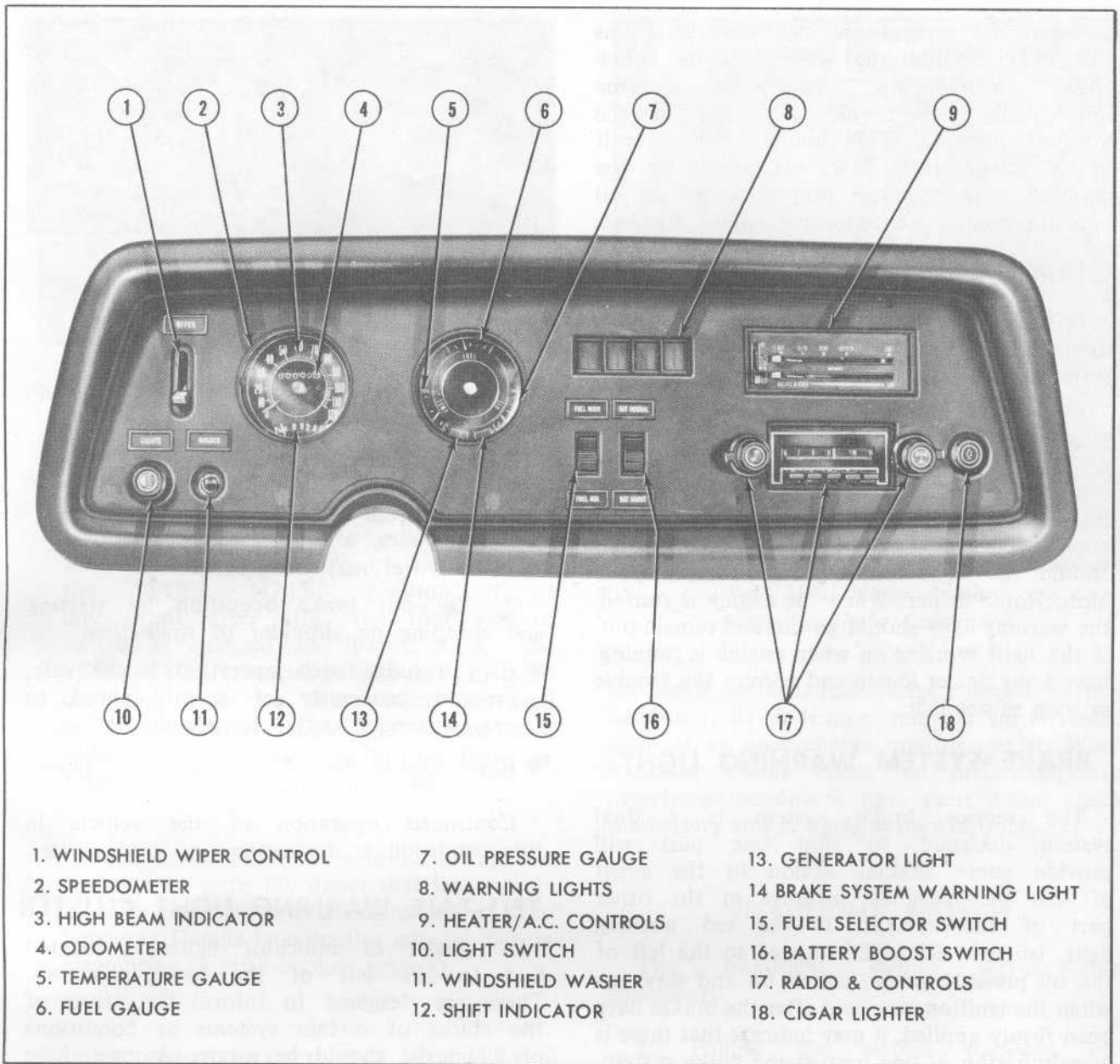
FUEL GAUGE

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.

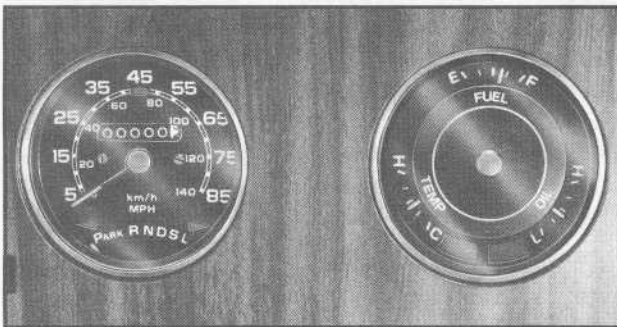
Since both fuel tanks are interconnected, the indicated level is designed to read the same (with the switch in either position) until approximately 60% of the total fuel capacity has been used. See "Fuel Selector Switch" later in this section.

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.



Instrument Panel



Speedometer and Gauge Clusters

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 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

NOTE: 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.

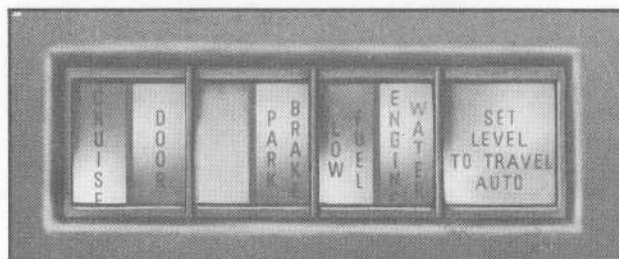
BRAKE SYSTEM WARNING LIGHT

The service brake system is a dual system designed so that one part will provide some braking action in the event of loss of hydraulic pressure in the other part of the system. If the red warning light, labeled "BRAKE" located to the left of the oil pressure gauge, comes on and stays on when the ignition is on and after the brakes have been firmly applied, it may indicate that there is a malfunction in one part of the brake system.

- The light is designed to come on during engine starting to verify that the bulb is operating properly.
- Have system repaired if light does not come on during check.
- This warning light is not a substitute for the visual check of brake fluid level required as part of normal maintenance.

IF LIGHT COMES ON:

- The service brake system is partially inoperative.



Warning Light Cluster

WHAT TO DO

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

- Stopping distances may be greater.
- Greater pedal effort may be required.
- Pedal travel may be greater.

2. Try out brake operation by starting and stopping on shoulder of road—then:

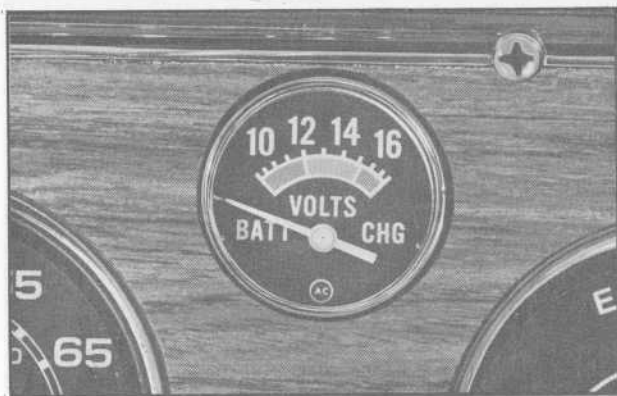
- If you judge such operation to be safe, proceed cautiously at a safe speed to nearest service outlet for repair, or
- Have vehicle towed to dealer for repair.

Continued operation of the vehicle in this condition is 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.



Voltmeter

- “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 optional 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



Windshield Wiper, Washer, and Headlight Controls

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.
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).

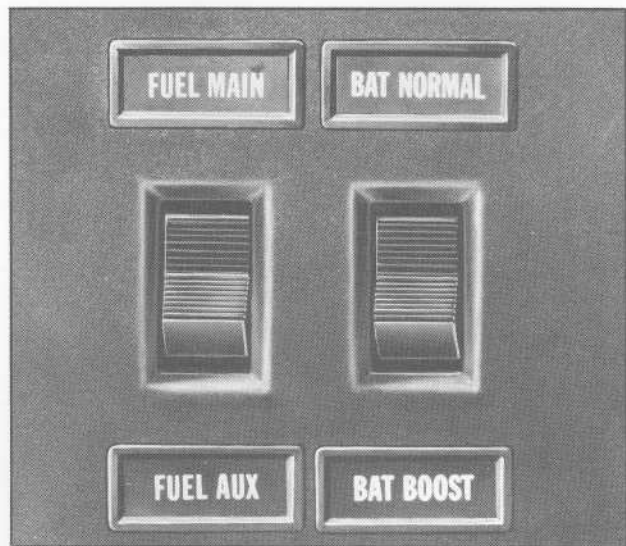
WINDSHIELD WASHERS

The windshield washers are controlled by the washer switch located under the windshield wiper 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 washer fluid level regularly—do it frequently when the weather is bad.
- Use a fluid such as GM OPTIKLEEN to help prevent freezing damage, and to provide better cleaning.
- Do not use radiator antifreeze in windshield washer; it could cause paint damage.
- In cold weather, warm the windshield with defrosters before using washer—to help prevent icing that may seriously obscure 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.



Fuel Tank and Battery Switches

BATTERY BOOST SWITCH

The GMC Dual Battery System provides power from two 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.

NOTE: If the battery boost switch is left in the “BAT BOOST” position for extended periods this can result in both batteries being discharged.

The auxiliary battery will recharge itself 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-sensitive terminal which is designed to melt and break the circuit if the lighter becomes overheated.

AUTOMOTIVE HEATING AND AIR CONDITIONING SYSTEM

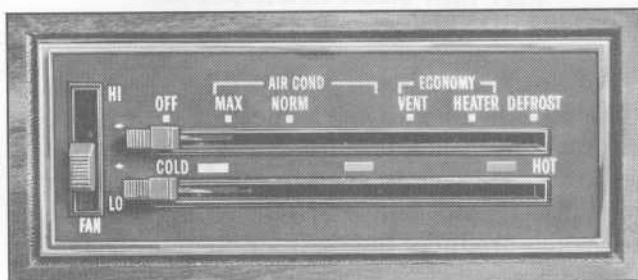
The Automotive Heating and Air Conditioning System offers year-round driving comfort. In addition to providing circulation of cool air during hot weather, the system can provide warm air in cold weather and dehumidify outside air in humid weather. Another feature of the system is continuous low-speed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

NOTE: 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.

- Clear windshield, rear window, outside mirrors, and all side windows of ice and snow before driving vehicle.
- Operate blower on "HI" for a few seconds before moving the vehicle, to help clear the air intake of snow to further reduce the possibility of fogging on inside of 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.

NOTE: 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.

RADIOS AND TAPE DECK

PUSH BUTTON "AM" RADIO

The "ON-OFF" switch is on the left-hand center knob with the volume control. The left-hand outside knob varies the tone response of the receiver. The right-hand center knob is used to select the station desired. The right-hand outside knob adjusts the volume of front and rear speakers.

In addition to the manual controls, this radio provides five push buttons with which to automatically select pre-set stations. To pre-set, pull the push button "out" as far as it will go, tune in the desired station manually, and then push the button "in."

Repeat this operation for each push button.



Push Button AM Radio

AM-FM RADIO

In addition to providing standard AM reception, this set permits you to receive clear static-free FM broadcasts. Move the slide bar, above the push buttons to the right or left to select AM or FM reception. All other controls remain the same as described for push button radios.

FM broadcasts may be received as far as 25 miles from the sending station, depending on the power of the station and the existing terrain. In fringe areas, it may be possible to retune the radio slightly to maintain peak reception. If not, retune to a closer or stronger FM station or switch to AM operation. Push buttons may be set for both AM or FM stations as follows:

- Place slide bar in AM position.
- Pull push button out as far as it will go, tune in desired AM station manually and then push button in to LOCK-IN position.
- Repeat for each remaining push button.
- Place slide bar in FM position and repeat procedures outlined for AM band setting.

IMPORTANT: Bands should not be changed if push button is unlocked or radio may be damaged.

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.

STEREO RADIO

Stereo receivers permit FM stereo reception with the AM-FM radio. Radio controls are used to turn the set on and off and for station selection. For 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. The indicator light will be on when the radio is tuned to an FM stereo station. Most broadcasts on such stations will be in stereo.



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

To Tune Your Stereo Radio

- Tune radio to an FM Stereo station (one which makes the indicator light come on with a steady glow).
- Tune the lever behind the station selector knob until volume from front and rear speakers sounds equal.
- Regulate volume and tone controls as required.



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

STEREO TAPE SYSTEM

The optional Stereo Tape Player provides prerecorded stereo programs for your enjoyment.

To play, insert cartridge through tape door with label side up and open end in first. Tape will play through all four programs in succession, then replay in same sequence. 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.

1. Rotate fader control until volume from front and rear speakers sounds equal.
2. Regulate volume and tone controls as desired .
3. To change program track, push in volume control knob and release; player will index to next track.
4. To remove tape cartridge from player, simply pull cartridge out of player.

Cleaning and Care

Every 100 hours of operation, or if tape slips and runs slowly, the capstan (revolving metal post), head and tape guide should be cleaned with a cotton-tipped swab moistened with alcohol (do not use carbon tetrachloride). To clean the capstan, trip the "ON-OFF" switch at the rear of the receptacle with your finger and hold the swab against the rotating capstan.

IMPORTANT: When tape player is not in use, remove the cartridge and store it in a cool, dry place out of direct sunlight. If the cartridge is not removed, the radio may be inoperative and possible roller damage to the tape unit could occur.

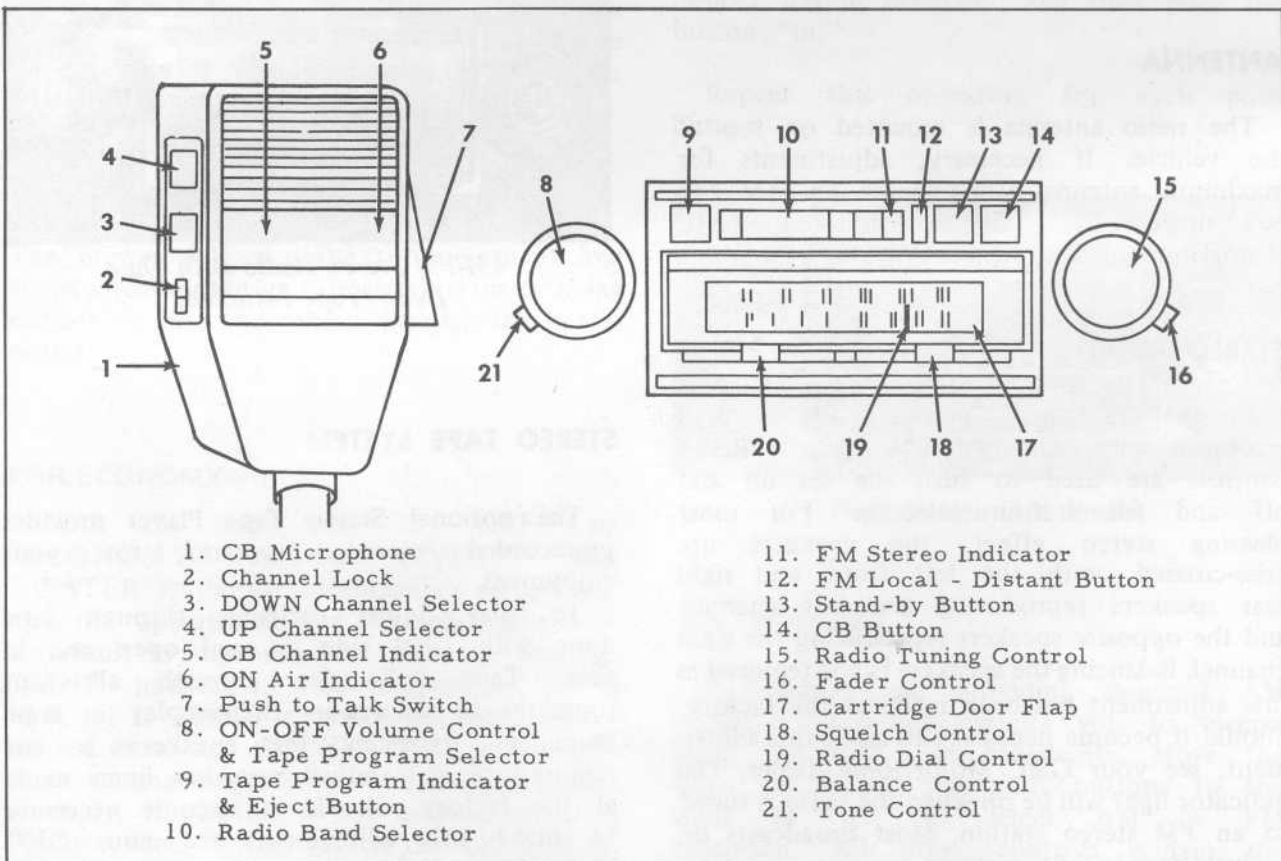
AM-FM STEREO RADIO WITH TAPE PLAYER AND CB TRANSCEIVER

The AM-FM stereo radio with tape player and CB (Citizens Band) transceiver allows the operator to play the radio or tape player and to transmit and receive communications on any one of 40 channels.

A four speaker system is used for radio, tape player, and CB transceiver. The controls for the unit are mounted on the radio face and CB microphone.

IMPORTANT: Before transmitting with your CB transceiver, be sure you have fulfilled the following:

1. Operation of this equipment requires a valid station license issued by the FCC (Federal Communications Commission). By filling out the temporary permit



AM-FM Stereo Radio with Tape Player and CB Transceiver

(Form 555-B) that came with your transceiver you can transmit with your equipment until you have received your license. License application is to be made on FCC Form 505, available from your nearest FCC field office. Copies of these forms are included with your new transceiver.

2. You are required to maintain a current copy of Part 95 Citizens Radio Service, the FCC rules and regulations, as a part of your station records. Copies are available from: Superintendent of Documents, GPO, Washington, D.C. 20402.
3. Your station license is to be posted in accordance with paragraph 95-101 of the FCC rules and an executed Transmitter Identification Card (FCC Form 452-G) is to be attached to each transmitter. A copy of this form is included with your new transceiver.
4. Never operate the transmitter unless the CB antenna is connected. To avoid damage to the CB transceiver, do not attempt to connect the entertainment radio antenna to it.

NOTE: For details on operation of a CB transceiver in foreign countries, refer to Operation in Foreign Countries in the BEFORE DRIVING YOUR VEHICLE section earlier in this manual.

Control Function

NOTE: The following is a brief explanation of each control on the AM-FM Stereo Radio with Tape Player and CB Transceiver. (Refer to illustration for control location).

1. **Microphone** - Hand-held instrument containing channel selector, channel indicator, and transmitter controls.
2. **Channel Lock** - Prevents changing channels, unless desired. With switch in the UP position, channel selector is locked. If switch is in the DOWN position channels may be selected as desired.
3. **DOWN Channel Selector** - Depressing this button will change the channel as shown on the CB channel indicator. Channel will continue to change as long as button is depressed.
4. **UP Channel Selector** - Depressing this button will change the channel as shown

on the CB channel indicator. Channel will continue to change as long as button is depressed.

5. **CB Channel Indicator** - Digital read-out of CB channel selected.
5. **ON Air Indicator** - The light, an output indicator device which lights up when the transmitter is activated.
7. **Push to Talk Switch** - The CB receiver and transmitter are controlled by this switch. Press the switch in to activate the transmitter. Release the switch to receive CB signals.
8. **ON-OFF Volume Control & Tape Program Selector** - To provide power to the unit, it is necessary to turn this knob clockwise until a "click" is heard. To increase volume, continue rotating knob to desired level. Tape program selector switch is combined with volume control. Push this knob for desired tape program.
9. **Tape Program Indicator & Eject Button** - Tape program indicator shows which program (channel) is being played. The indicator is also the EJECT button which allows easy removal of the tape cartridge.
10. **Radio Band Selector** - To select either AM or FM broadcast band, move this selector to the left (FM) or to the right (AM).
11. **FM Stereo Indicator** - This light will automatically light indicating you have turned to an FM stereo station.
12. **FM Local - Distant Button** - This control is used for limiting or improving FM radio reception when driving through a strong or weak reception area.
13. **ST BY Button** - By pressing the button you can receive "call-in" CB signals by an automatic break-in circuit even though the radio or tape player is in operation.
14. **CB Button** - By pressing this button the radio or tape player is cut off and the unit operates like a conventional CB transceiver.
15. **Radio Tuning Control** - This control allows manual selection of radio stations. Simply turn knob to right or left for station selection.
16. **Fader Control** - Rotate fader control until volume of front to rear speakers is as desired.

17. **Cartridge Door Flap** - Simply insert the tape cartridge by pushing this flap upwards.
18. **Squelch Control** - The squelch control silences the CB receiver's noise when signals are not being received.
19. **Radio Dial Control** - The pointer will move along the dial when changing stations.
20. **Balance Control** - A manual balancing, of the left channel (left front and right rear speakers) and the right channel (opposite speakers) can be adjusted as desired.
21. **Tone Control** - This control allows selection of "Bass" or "Treble" tone. Rotate control as desired.

CB Transceiver Operation

1. Set the SQUELCH control all the way to the left.
2. Turn the VOLUME control knob clockwise until a click is heard. Continue turning until a rushing noise is heard on speakers.
3. Adjust tone, balance and fader control for desired sound.
4. Using UP or DOWN channel selector, obtain desired channel and LOCK. Channel number is indicated on digital readout on microphone.
5. Adjust SQUELCH control to the right until CB receiver is silenced. Careful adjustment is necessary because setting too far to the right will not allow weaker signals to be received.
6. To transmit, depress the **push to talk** button on the microphone. The ON air light will light up. Hold the microphone 1-2 inches away from your mouth and speak in a normal voice. Release the button to receive CB signals.
7. By depressing the ST-BY button while you are listening to radio or tape, you can receive CB signals which will automatically break-in in accordance with the squelch level having been preset by the SQUELCH CONTROL. If you wish to answer that CB signal, depress the CB button and talk into the Microphone depressing P.T.T. switch. In the meantime, you may leave the ST-BY button as it is.

8. Serious attention is definitely needed for setting the SQUELCH CONTROL in case of ST-BY reception. If you set it too far to the right, only very strong signals can break-in. Consequently, you might miss the call-in signal. On the contrary, setting it too far to the left will cause frequent break-ins by very weak signals or even noise.
9. If you set the SQUELCH control all the way to the left (minimum squelch) while the ST-BY button is being depressed, radio or tape might be cut off, even though there will be no call-in signals. Do not be concerned as there is nothing wrong with this function. So long as you do not depress the ST-BY button, the SQUELCH control has nothing to do with the radio or tape sound.

On the air operating techniques and allowable communications are prescribed in the FCC rules. We strongly recommend that you do not unknowingly violate these rules.

AM-FM, FM Stereo Radio Operation

1. Release the CB button and ST-BY button to unlock.
2. Turn the unit on.
3. Adjust the VOLUME control, TONE control and BALANCE control as desired.
4. Select the desired broadcast band (AM or FM) by sliding the BAND SELECTOR.
5. Rotate the RADIO TUNING CONTROL knob to tune in the desired station.
6. When an FM stereo station is being received, the FM STEREO INDICATOR automatically illuminates.
7. In FM reception, if the FM signal is too strong (you are near a local broadcast antenna) and reception is very strong and distorted, press the LOCAL-DX switch in (LOCAL POSITION). When driving in a poor reception area or if you are tuned to a distant station, push this switch out (DISTANT POSITION). This will allow maximum signal reception in all areas.

NOTE: If this switch is left in local position, weak stations will not be received. If a distant or weak station is desired, always keep the switch out (DISTANT POSITION) when leaving strong signal areas. This function will only affect FM radio broadcasts. It has no effect on AM broadcast or CB station reception.

Stereo Tape Player Operation

1. Release the CB button and ST-BY button.
2. Turn the unit on.
3. Insert the tape cartridge pushing the flip-up door upward.
4. Adjust VOLUME, TONE and BALANCE.
5. TAPE PROGRAM SELECTOR combined with VOLUME control is used for the manual change of the desired program (channel). Push this knob for use. Otherwise, the programs are automatically changed in sequence.
6. Push EJECT BUTTON (combined with TAPE PROGRAM INDICATOR) for easy removal of tape cartridge. Pushing this button also has the effect of switching over to the radio reception.

NOTE: Once the tape cartridge is disengaged by "EJECT", take the cartridge completely out from the slot and then insert it into the slot to play it again. Otherwise, the cartridge lock mechanism does not work. The tape cartridge is to be removed from the unit whenever the unit is not in use.

MOBILE RADIO TRANSMITTERS

Mobile radio transmitting equipment is subject to Federal Communication Commission regulations and must be installed by a qualified radio technician. The specific installation instructions for radio transmitters will vary depending upon the radio equipment used. Mobile telephone equipment installed by your local telephone company, citizens band radios and electronic garage door openers will not adversely affect vehicle operation. In the event any other type of mobile radio transmitter is to be installed, consideration must be given to any possible adverse effect on vehicle operation.

STANDARD REAR SUSPENSION SYSTEM

The standard rear suspension system utilizes an automatic leveling feature that maintains a constant ride height at the rear tandem suspension. Note, information pertaining to "Emergency Operation" and "Maintenance" is the same as given under the following heading – "ELECTRO-LEVEL SYSTEM."

ELECTRO - LEVEL SYSTEM

The optional Elector-Level System provides the ability to level the vehicle at campsite or



Electro-Level System Control Panel

parking area where the surface is not level. This system can override the automatic leveling feature that maintains a constant ride height at the rear tandem suspension. The Electro-Level System can raise or lower the rear of the vehicle approximately 4 inches from normal ride height.

The Electro-Level control panel is located to the left of the driver, below the window.

NORMAL OPERATION

The controls consist of three rocker switches that 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 vehicle.

Driving

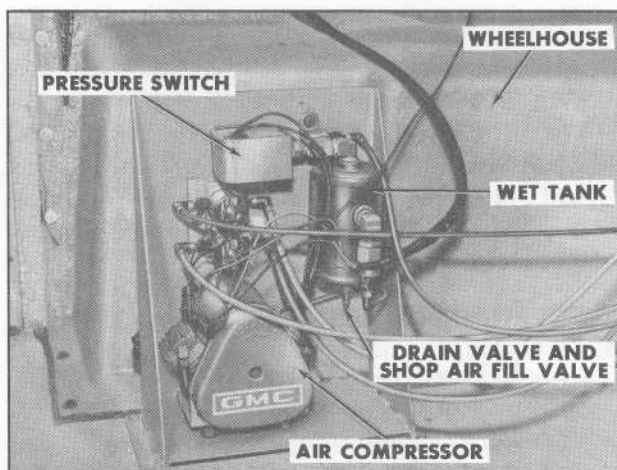
A reminder light in the dash panel is designed to light any time the engine is running and the transmission selector lever is moved to "D" (Drive Range). The normal position for the RAISE-LOWER switches should be placed in "OFF". The TRAVEL switch should be moved to "AUTO" for the first five minutes, if vehicle has been in a raised or lowered position. Then move the switch to "HOLD" after ride height is achieved.

It is not necessary to move the TRAVEL switch to "AUTO" if vehicle has not been leveled at a campsite or vehicle load has not changed significantly.

NOTE: The "HOLD" position is to be used for normal highway driving, when the vehicle is in operation. This allows the vehicle to maintain a designed ride height and eliminates unnecessary operation of the air compressor.

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.

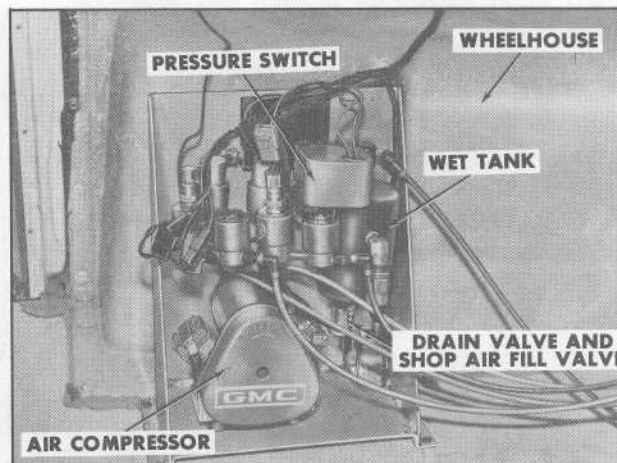


Standard Rear Suspension Control Components

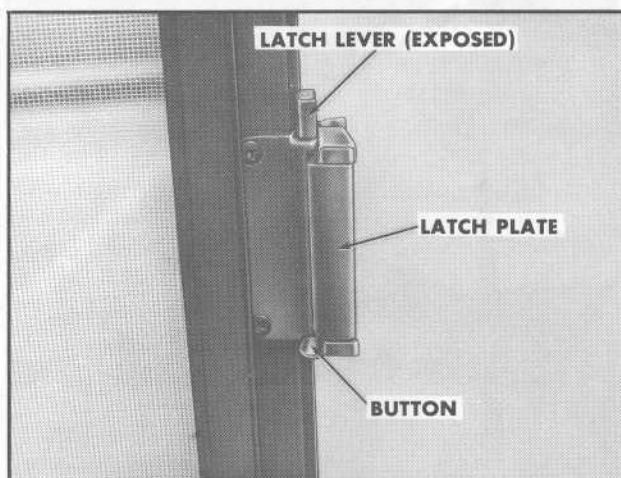
"RAISE"—With a rocker switch in this position the appropriate side of the vehicle will raise rear of vehicle to any desired position, up to a maximum of approximately 4 inches above normal ride height. When desired height is reached, return rocker switch to "OFF" position.

"LOWER"—With a rocker switch in this position the appropriate side of the 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.

NOTE: It is possible that the air compressor may operate for a short period when a rocker switch is in "LOWER" position.



Electro-Level Control Components



Window Latch (Unlocked)

IMPORTANT: When both sides of the vehicle have been leveled be sure the TRAVEL switch is moved to "HOLD" and turn ignition switch 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 assist 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 should not be exceeded since the air suspension in this position has maximum pressure supplied:

EMERGENCY OPERATION

In the event of total air loss for any reason, the vehicle may be driven at a speed of 5-15 MPH (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. Vehicle should be taken to nearest dealer.

Depending on the type of failure, it may be possible to add air to the rear suspension wet tank (shop air fill valve located on tank—see illustration) by filling reservoir at a local gas station. (DO NOT EXCEED 120 PSI.) Be sure the engine is running or the ignition switch is

turned to "ON" or "ACCESSORY" position, and the outer rocker switches in "RAISE" position until vehicle is leveled. Then move RAISE-LOWER switches to "OFF" and TRAVEL switch to "HOLD".

MAINTENANCE

No routine maintenance is required on the Electro-Level System other than draining moisture in the wet tank and cleaning the air compressor filter. Refer to SERVICE AND MAINTENANCE section later in this manual for "REAR SUSPENSION" maintenance details.

WINDOWS

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

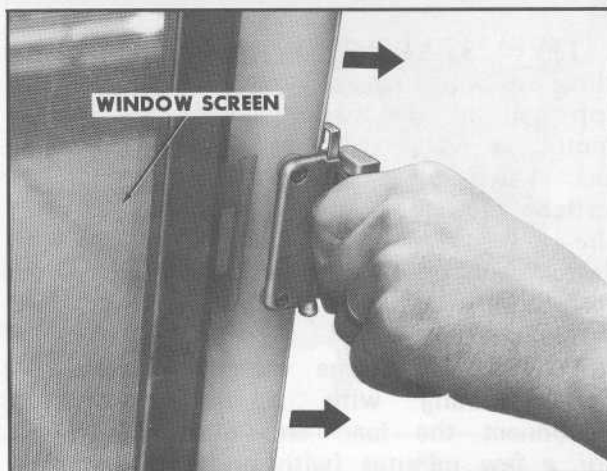
The optional sliding windows, if equipped with center mounted latches, are operated as follows:

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



Opening Horizontal Window

To Close Window

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

IMPORTANT: 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.

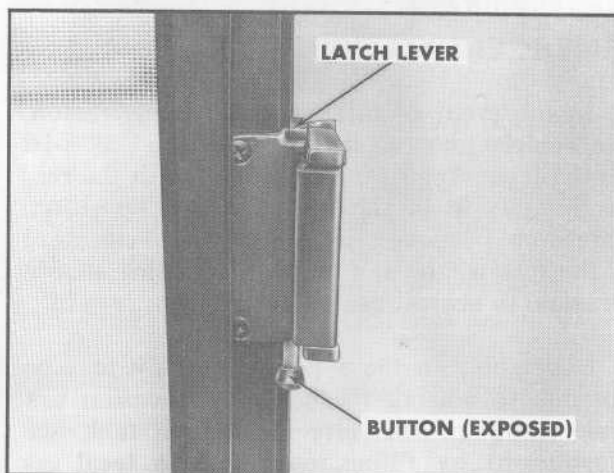
The START-STOP switch is a three-position rocker switch. By pressing the top half of the switch the starter on the motor generator will be activated, hold in the switch until the unit is started. The switch should then be released. To stop the unit depress the bottom half of the switch, and hold in until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

IMPORTANT: 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.



Opening Vertical Sliding Window

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



Window Latch (Locked)

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.

LOW TEMPERATURE OPERATION

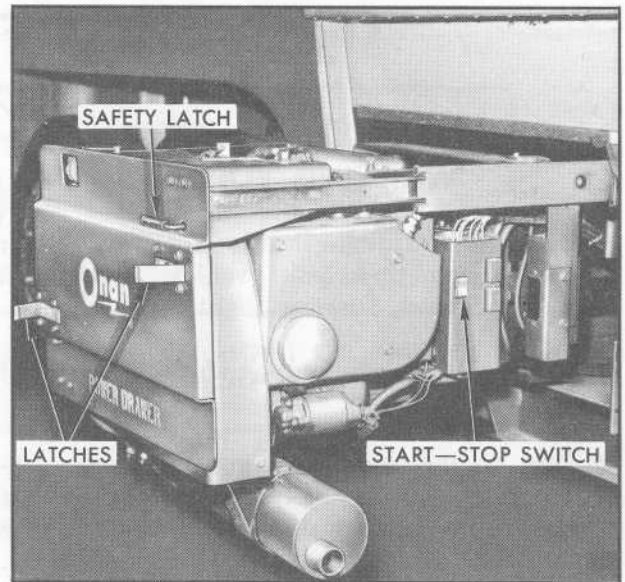
1. Use correct SAE No. Oil for temperature conditions. Change oil only when engine is warm.
2. Keep fuel system clean and battery in well charged condition.

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.

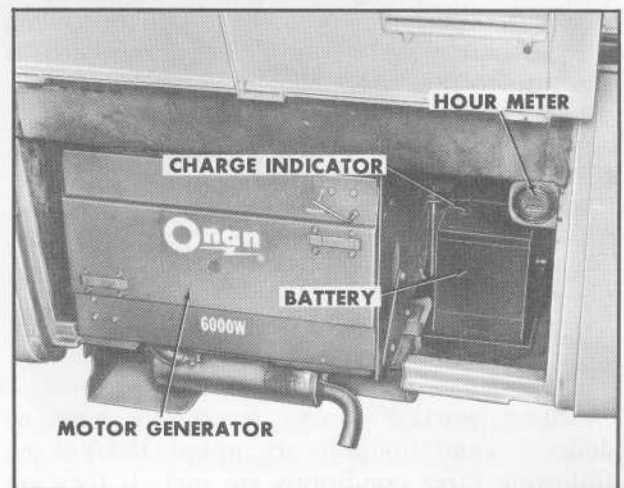


Onan Motor Generator

FUEL

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

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



Onan Motor Generator Compartment

SECTION 3

IN CASE OF EMERGENCY

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 on the button located on the column just below the steering wheel. Flasher can be actuated with engine ignition either off or on.
- Turn signals do not work with hazard flashers operating.
- If the brake pedal is depressed, the lights will not flash but remain continuously lit.
- To cancel the flasher, pull the button out.

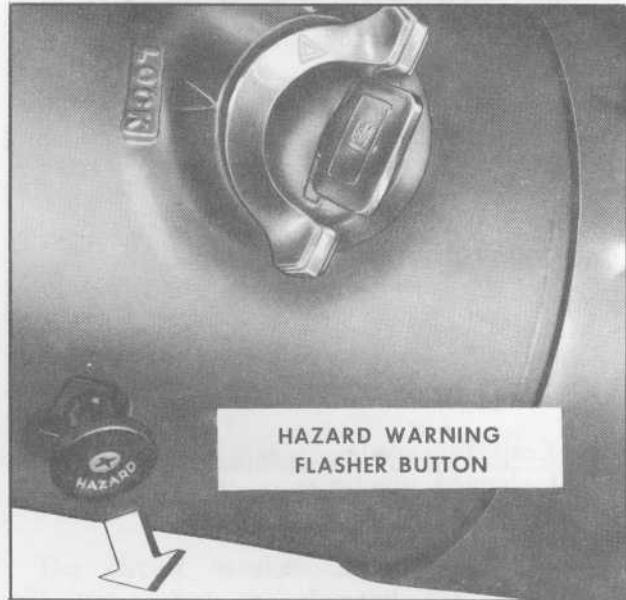
EMERGENCY STARTING

- Engine cannot be started by towing or pushing 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 (living area) battery. After use switch is designed to return to the "BAT NORMAL" position.
- A vehicle with both batteries discharged may be started by using energy from a battery in another vehicle—a procedure called "Jump Starting."

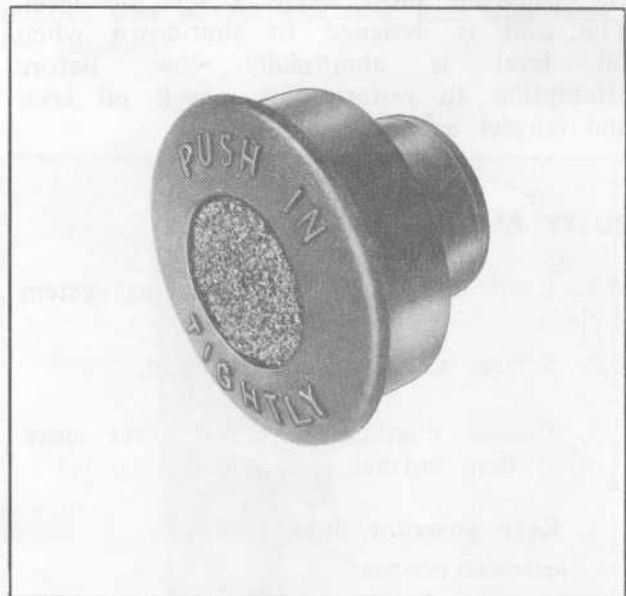
JUMP STARTING

Jump starting done improperly may be dangerous and should be attempted **ONLY** if the following three conditions are met. If they are not, we strongly recommend that you leave the starting to a competent mechanic.

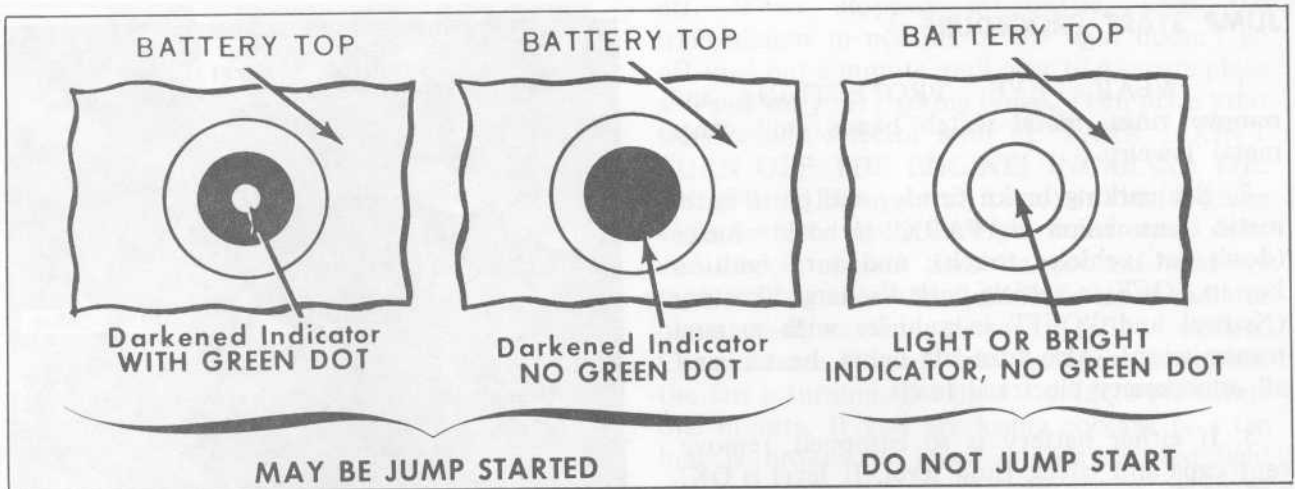
- **THE BATTERY IN THE OTHER VEHICLE:** must be 12-VOLT and **NEGATIVELY GROUNDED**, like the batteries in **THIS** vehicle. (Check the other vehicle's owner's manual to see if it is.)
- **THE BATTERY IN THIS VEHICLE:** must be equipped with **FLAME ARRESTOR TYPE FILLER/VENT CAPS** on **ALL** filler



Hazard Warning Flasher



Flame Arrestor Cap



Charge Or Test Indicator Conditions (Maintenance-Free Battery)

openings (as was the original-equipment Delco battery), or it must be a sealed-type battery which does not have filler openings or caps. (Each Delco battery flame arrester cap has a grey disc rather than a small hole—see illustration. If the battery does not have flame arrester caps, or it is not a sealed-type battery, see “Alternate Procedure” before proceeding.)

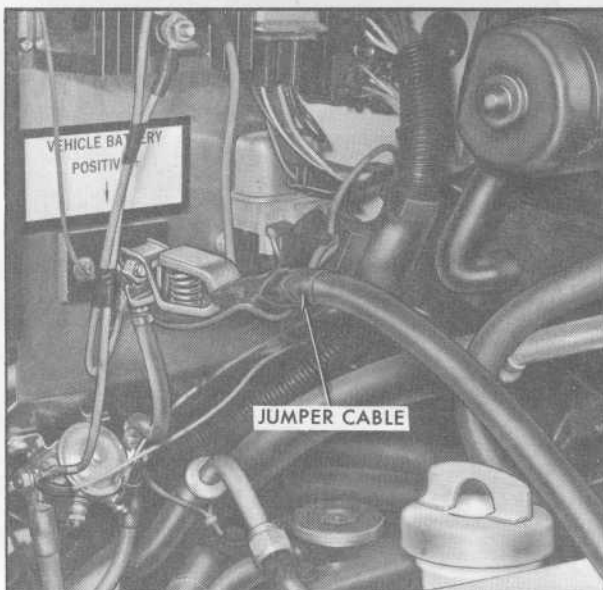
IF THE BATTERY IS A DELCO SEALED-TYPE BATTERY: without filler openings or caps, its charge or test indicator **MUST BE DARK**, with or without green dot showing, see illustration. **DO NOT** attempt jump starting if the charge indicator has a light or bright center. (If the vehicle will not

start, and the charge or test indicator is light, replace the battery.)

CAUTION

Departures from these conditions or the procedure below could result in: (1) serious personal injury (particularly to eyes) or property damage from such causes as battery explosion, battery acid, or electrical burns; and/or (2) damage to electronic components in either vehicle.

Never expose battery to open flame or electrical spark—batteries generate a gas which is flammable and explosive. Do not allow battery fluid to contact eyes, skin, fabrics, or painted surfaces—fluid is a corrosive acid. **FLUSH ANY CONTACTED AREA WITH WATER IMMEDIATELY AND THOROUGHLY.** Be careful that metal tools, or jumper cables do not contact the positive battery terminal (or metal in contact with it) and any other metal on the vehicle, because short circuit could occur. Batteries should always be kept out of the reach of children.



Connecting Jumper Cable to “VEHICLE BATTERY POSITIVE” Stud

JUMP START PROCEDURE

1. **WEAR EYE PROTECTION** and remove rings, metal watch bands, and other metal jewelry.

2. Set parking brake firmly, and place automatic transmission in "PARK" in both vehicles (don't let vehicles touch); and turn ignition key to LOCK in vehicle with discharged battery (Neutral and "OFF" in vehicles with manual transmission). Also turn off lights, heater, and all unnecessary electrical loads.

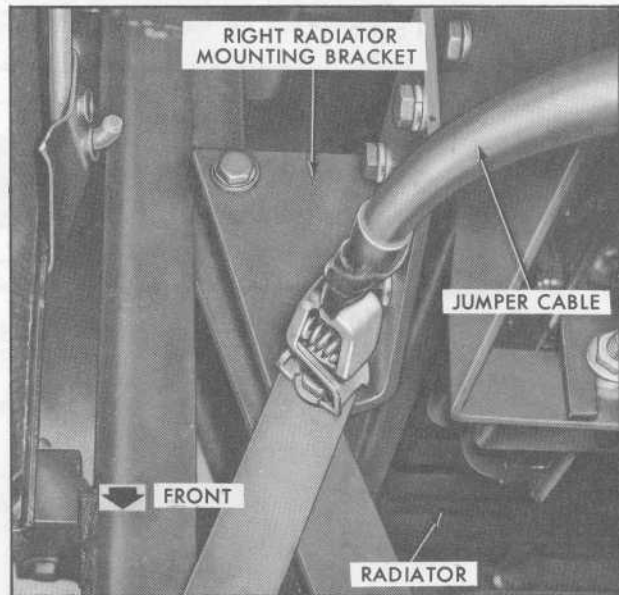
3. If either battery is so equipped, remove vent caps and check fluid level. If level is OK, **REPLACE CAPS BEFORE PROCEEDING**; if level is low, add drinking water, and **REPLACE CAPS BEFORE PROCEEDING**. If no water is available, leave caps off and cover filler openings with a cloth **BEFORE PROCEEDING**. **DISPOSE OF CLOTH AND REPLACE CAPS AFTER JUMP STARTING**.

4. Attach one end of a jumper cable to the positive terminal (identified by a red color, "+", or "P" on the battery case, post, or clamp), of the battery in the other vehicle and the other end of the same cable to positive terminal junction block stud, marked "VEHICLE BATTERY POSITIVE." This is located behind the right access door above the main (automotive) battery.

5. Attach the remaining jumper cable **FIRST** to the negative terminal (black color, "-", or "N") of the **OTHER** vehicle's battery, (regardless of which vehicle has the discharged battery) and **THEN** to the right radiator mounting bracket in **THIS** vehicle—thus taking advantage of your battery's flame arrestor feature, should a spark occur.

6. Start the engine in the vehicle that is providing the jump start (if it was not running). Let run a few minutes, then start the engine in the vehicle that has the discharged battery.

7. Reverse the above sequence **EXACTLY** when removing the jumper cables, taking care to remove the cable from the right radiator mounting bracket in **THIS** vehicle as the **FIRST** step.



*Connecting Jumper Cable to
Right Radiator Mounting Bracket*

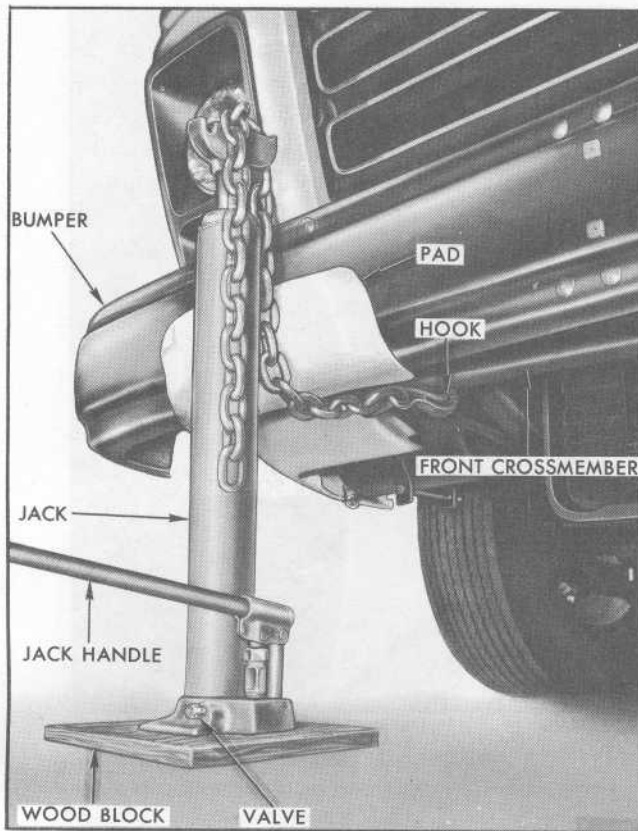
ALTERNATE PROCEDURE

If the battery in this vehicle has been replaced and does not have flame arrestor caps, or is not a sealed-type maintenance-free battery, one of the following alternatives should be followed.

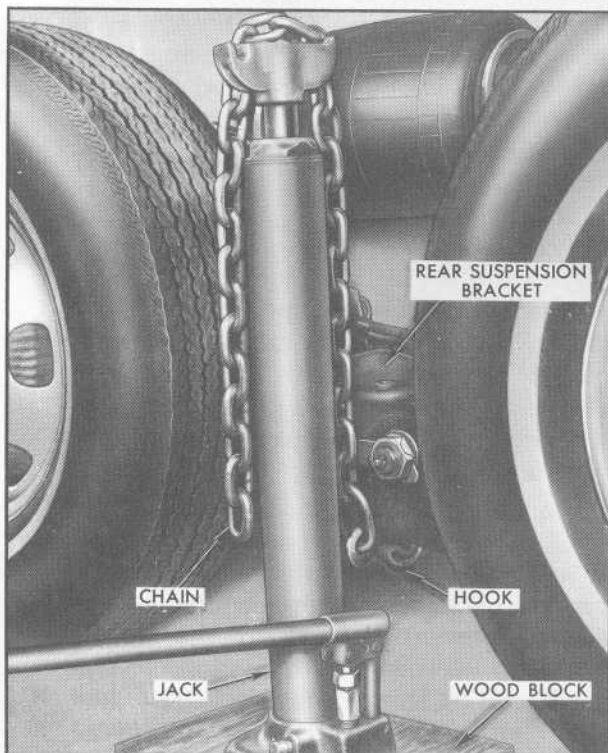
- A. If the battery in the other vehicle is equipped with flame arrestors, follow the procedure above but make the final connection at the **OTHER** vehicle's battery. Then when removing cables, remove connection first from the other vehicle's battery.
- B. If neither battery has flame arrestor caps, remove the filler/vent caps from the battery in this vehicle and place a disposable cloth over the filler openings. Follow the procedure above but make the final connection on this vehicle's right radiator mounting bracket.

ENGINE COOLANT

You might encounter a temporary cooling system overload during severe conditions, such as on hot days when pulling a long grade, when slowing down after high speed driving, after long idle periods in traffic jams or in these conditions when towing a trailer. If the hot light comes on and you have your air conditioning on, turn it



Jacking at Front of Vehicle



Jacking at Rear of Vehicle

off. When stopped in traffic, keep the transmission in neutral. If the light doesn't go off in about a minute, pull over to a secure place and put on your parking brake. Then place your transmission selector lever in "PARK". **DON'T TURN OFF THE ENGINE! INCREASE THE ENGINE IDLE** speed so it sounds like it's going twice as fast. Open the right front access door and check coolant level in coolant recovery tank. If low, check for fluid leaks at the radiator hoses, radiator or radiator overflow outlets. Check to see that all drive belts are intact and the fan is turning. The light should go off within one minute. If you are losing coolant 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 light is out, following temporary cooling system overload, proceed on the highway at a reduced speed. About ten minutes later, resume normal driving.

CAUTION

- To help avoid the danger of being burned, do not remove radiator cap while engine and radiator are still hot, because the cooling system will blow out scalding fluid and steam under pressure.
- Do not remove radiator cap to check engine coolant level; check coolant visually at the "see-through" coolant tank.
- Proper coolant level at normal engine operating temperature is between the "FULL" and "ADD" marks on the tank.
- Coolant should be added only to the coolant recovery tank (see SERVICE & MAINTENANCE section for details).

JACK USAGE INSTRUCTIONS

CAUTION

1. Follow jacking instructions in order to reduce the possibility of serious personal injury.
2. The jack is designed for use 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

NOTE: The jack is located under the rear facing dinette seat or davo seat, located behind the front passenger seat.

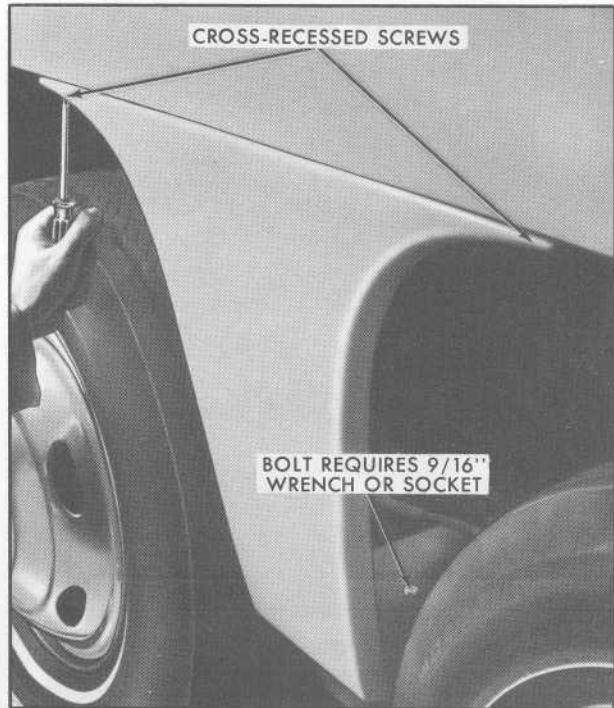
- Park on level surface and set parking brake firmly.
- Set automatic transmission in "PARK".
- Activate Hazard Warning Flasher.
- Remove wheel opening cover if equipped.
- Block both front and rear of the wheel diagonally opposite the jack position.
- Loosen but do not remove wheel nuts.

NOTICE: A tire that is run while significantly underinflated will overheat, possibly resulting in a fire that may seriously damage the vehicle and its contents.

JACKING AT FRONT—Place hydraulic jack on wood block near front bumper bracket. Place hook at flange front cross-member. Pass chain under bumper and adjust chain length to snug fit on fork on top of jack.

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.

- Close valve at base of jack and insert jack handle.
- Always operate jack with slow, smooth motion.
- Raise vehicle so tire just clears surface, replace wheel and slightly tighten wheel nuts.
- Open valve at base of jack to lower, then fully tighten wheel nuts. **Proper torque is 250 foot pounds.**



Removing Fender Skirt

CAUTION

Use lug wrench provided to tighten wheel nuts securely. (Follow the nut tightening sequence shown in the SERVICE AND MAINTENANCE section). At the earliest opportunity have wheel nut torque checked. This is necessary to help prevent loosening or stripping of the wheel nuts.

Always securely restow the spare tire assembly (if so equipped) on the spare tire carrier, and return all jacking equipment to its proper stowage location. These precautions will help prevent such items from becoming dangerous projectiles in the event of an accident.

TOWING

Proper lifting and towing equipment is necessary to prevent damage to the vehicle during any towing operation. State (Provincial in Canada) and local laws applicable to vehicles to tow must be followed. Detailed towing instructions are available at your Motorhome dealer.

Your vehicle may be towed on all six wheels, at speeds less than 35 MPH (56 km/h), for distances up to 50 miles, provided the final drive, axle, transmission, and steering system are otherwise normally operable. Use only towing equipment specifically designed for this purpose following the instructions of the towing equipment manufacturer. A separate safety chain system must be used. For such towing the steering must be unlocked, transmission in neutral and the parking brake released. Attachments must be to engine front crossmember. Do not attach to bumpers of associated brackets. Remember that power brakes and power steering assists will not be available when engine is inoperative.

TOWING AT FRONT

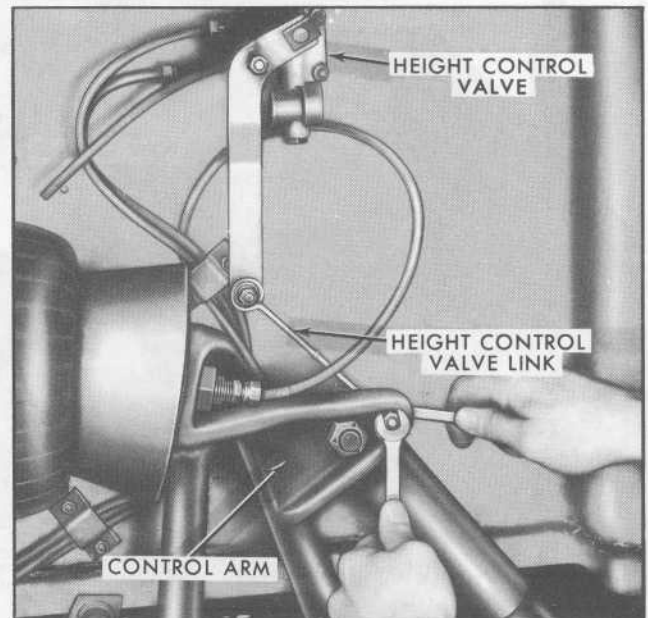
On vehicles equipped with the Electro-Level System, be sure the TRAVEL switch (located to the left of driver) is moved to "HOLD" position, thereby making the automatic height valves inoperative on the rear suspension. On vehicles not equipped with the optional Electro-Level System it will be necessary to disconnect the height control valve link at the rear suspension control arm (adjacent to the shock absorber stud) on each side of the vehicle. Raising front of vehicle so front wheels are four inches off the ground will provide about five-inch ground clearance at the rear when towing.

TOWING AT REAR

It is not recommended that vehicle be towed with the rear raised as this could result in suspension or crossmember damage.

FREING VEHICLE FROM SAND, ETC.

If it becomes necessary to rock the vehicle to free it from sand, mud, or snow, move the transmission selector lever from "D" to "R" in a repeat pattern while simultaneously applying moderate pressure to the accelerator. Do not race engine. For best possible traction, avoid spinning wheels when trying to free the vehicle. The use of AC Liquid Tire Chain is recommended for temporary assistance when traction is lost on ice or snow.



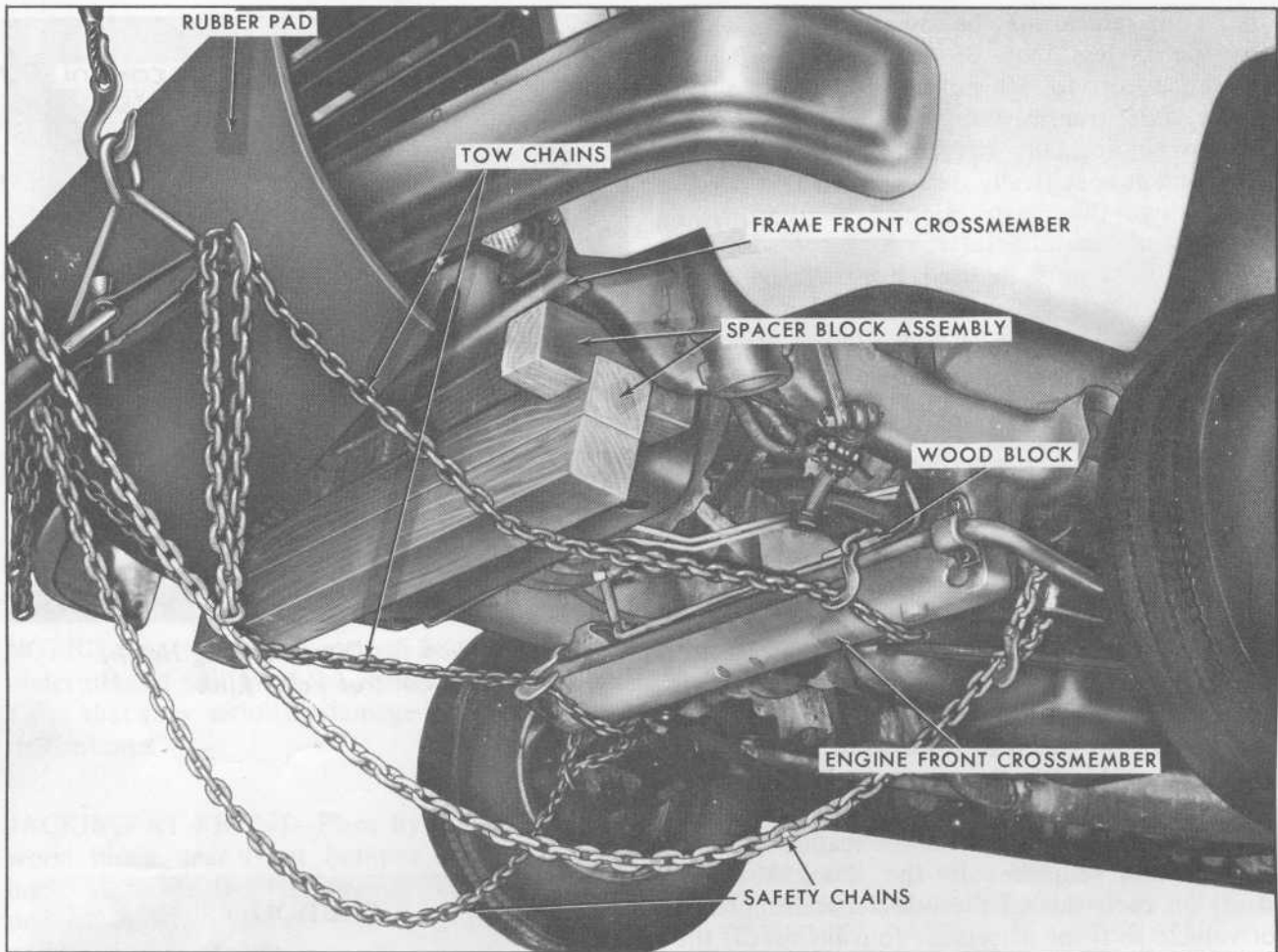
Location for Disconnecting Height Control Valve Link

CAUTION

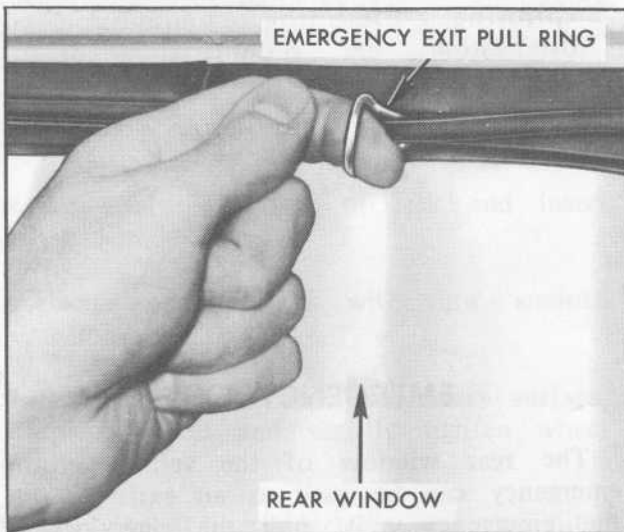
Do not spin wheels in excess of 35 MPH (56 km/h) as indicated on the speedometer or for more than 3 minutes at a time. Personal injury and severe damage may result from excessive wheel spinning including transmission overheating, tire disintegration or differential failure.

EMERGENCY EXIT

The rear window of the vehicle in an emergency can be used as an exit. 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



Towing Vehicle



Emergency Exit Pull Ring

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.

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



SECTION 4

APPEARANCE CARE

CARE AND CLEANING OF INTERIOR

IMPORTANT: Be sure vehicle is well ventilated while using any cleaning agents. Follow manufacturer's recommendations in using such products. Also to avoid possible permanent discoloration on white or light colored seat trim **DO NOT** allow materials with unstable dyes (certain types of casual clothing, such as colored denims, corduroys, leathers and suedes; also decorative paper, etc.) to come in contact with seat trim materials.

With the advent of modern trim materials composed of synthetic plastics and/or man made fibers, it is **EXTREMELY IMPORTANT** that proper cleaning techniques and cleaners be used when cleaning interior trim. 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 or impossible to remove in a second cleaning.

Certain portions of the following cleaning instructions are in bold type; they are particularly important and **must** be performed.

Dust and loose dirt that accumulates on interior fabric trim should be removed frequently with a vacuum cleaner, whisk broom 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 the following G.M. cleaners.

CAUTION

Many cleaners may be toxic or flammable, and their improper use may cause personal injury or may cause damage to the interior. 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 adjacent fabric cleaning instructions on stain removal). 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

G.M. Multi-Purpose Powdered Cleaner is excellent for this type cleaning and for cleaning a panel section 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 EXCESSIVELY OR RUB HARSHLY WITH BRUSH. IMMEDIATELY AFTER CLEANING, WIPE OFF ANY 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 sheen or luster.

SPOT CLEANING FABRIC TYPE TRIM MATERIALS WITH SOLVENT TYPE CLEANER

Before attempting to remove spots or stains from fabric, determine as accurately as possible the nature and age of the spot or stain. Some spots or stains can be removed satisfactorily with water or mild soap solution (refer to accompanying "Removal of Specific Stains"). For best results, spots or stains should be removed as soon as possible. Some types of stains or soilage such as lipstick, some inks, certain types of grease, etc., are extremely difficult and, in some cases, impossible to completely remove. When cleaning this type of stain or soilage, care must be taken not to

enlarge the soiled area. It is sometimes more desirable to have a small stain than an enlarged stain as a result of careless cleaning.

G.M. Fabric Cleaner (Solvent Type) is excellent for spot cleaning stains containing grease, oil or fats from fabric type 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 (preferably cheese cloth). Cleaning action should be from outside of stain **FEATHERING** towards center of stain and constantly 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 material). If a ring forms, immediately repeat the cleaning operation over a slightly larger area with special emphasis on **FEATHERING** towards center of area. If ring still persists, mark off adjacent trim sections and clean entire affected trim panel section with G.M. Multi-Purpose Powdered Cleaner as previously described under "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 soap residues - this operation may be repeated several times if necessary. Some 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 G.M. Vinyl Cleaner (Solvent Type).

BELT RESTRAINT CARE

- Clean only with mild soap solution and luke warm water.
- Do not bleach or dye belts since this may severely weaken belts.

GLASS SURFACES

The glass surfaces should be cleaned on a periodic basis for continued good visibility. Use of GM Glass Cleaner or a commercial household glass cleaning agent containing ammonia will remove normal tobacco 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 it may cause scratches.

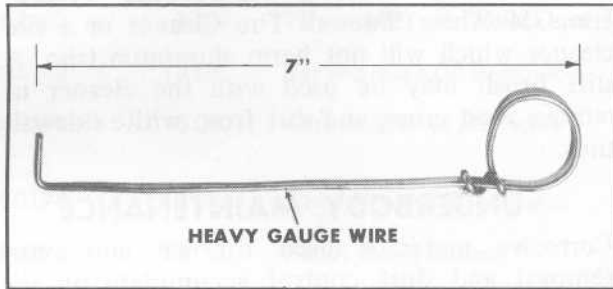
WINDOW SCREEN REMOVAL

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

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

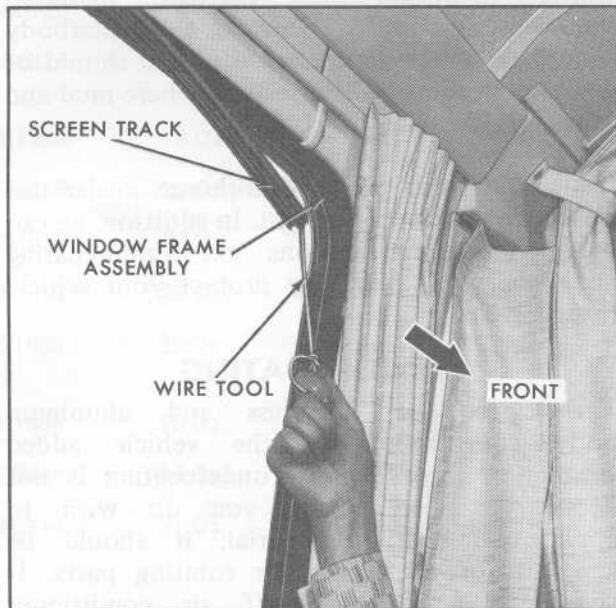
1. Remove upper screen track using a reasonably stiff wire shaped to form the screen track removal tool (as shown). Insert tool at outer end of screen track and separate track from window frame assembly. Grasp track and pull completely free of window assembly.

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

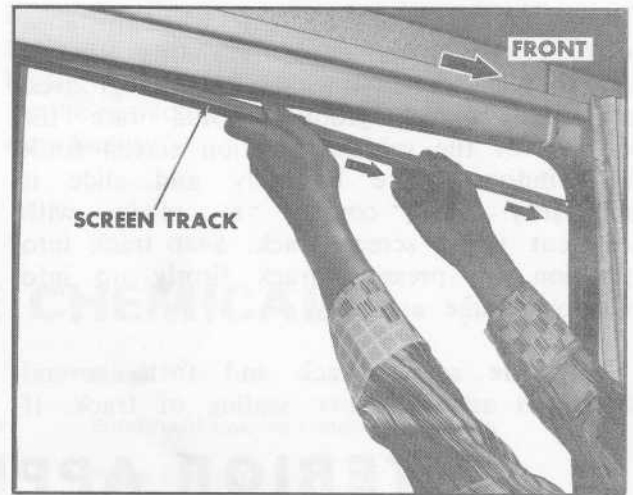


Screen Track Removal Tool

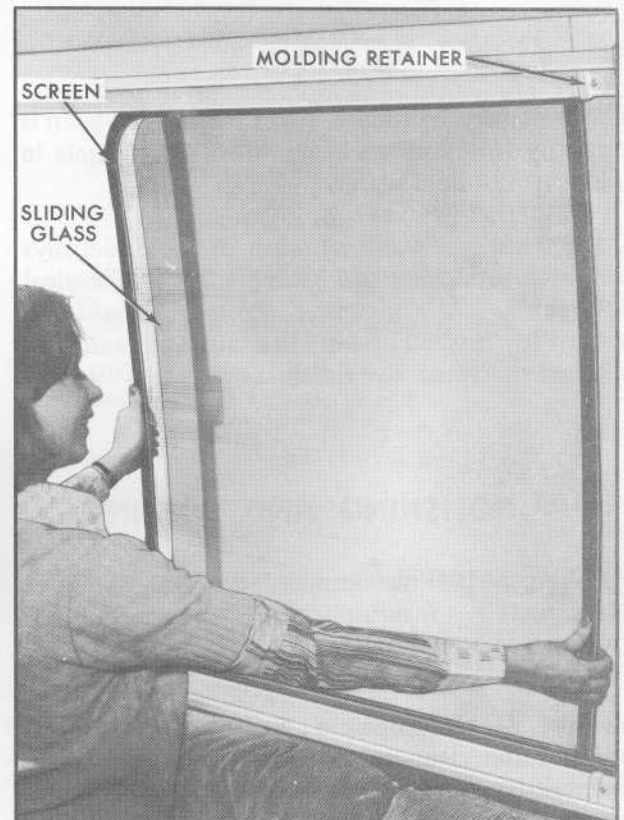
3. Lift screen up into window frame assembly. Pull bottom of screen away from window and remove screen.



Separating Track From Window Frame Assembly



Removing Screen Track



Removing Window 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 of 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.

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

CLEANING WHITE SIDEWALL TIRES

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 to remove road grime and dirt from white sidewall tires.

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 areas 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.

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.

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 |
| 1052103 | 1 Gal. | Permanent Type Coolant and Anti-Freeze | Year round coolant and anti-freeze |
| 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 |
| 1050223 | 16 Oz. | Finish Guard Cleaner | One step cleaner and wax |
| 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 |
| 1050520 | 16 Oz. | Lubriplate (White Grease) | Grease for various compartment and door hinges and latches |
| 1050729 | 8 Oz. | Vinyl Top Cleaner | Cleaning of vinyl tops |
| 1050429 | 6 Lb. | Multi-Purpose Powdered Cleaner | Cleans vinyl and cloth on door trim, seats, and carpet also tires and mats |
| 1051398 | 8 Oz. | Spot Lifter | Spot and stain removal on cloth and fabric |
| 1051515 | 32 Oz. | 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 Transmissions and Five Speed Manual Transmissions |
| 1051858 | 16 Oz. | G.M. Super E.O.S. | Consult your Dealer for specific usage |
| 1050244 | 16 Oz. | Fabric Cleaner | Spot and stain removal on cloth and fabric |
| 1050214 | 32 Oz. | Vinyl/Leather Cleaner | Spot and stain removal on vinyl or leather |

SECTION 5

SERVICE AND MAINTENANCE

CAUTION

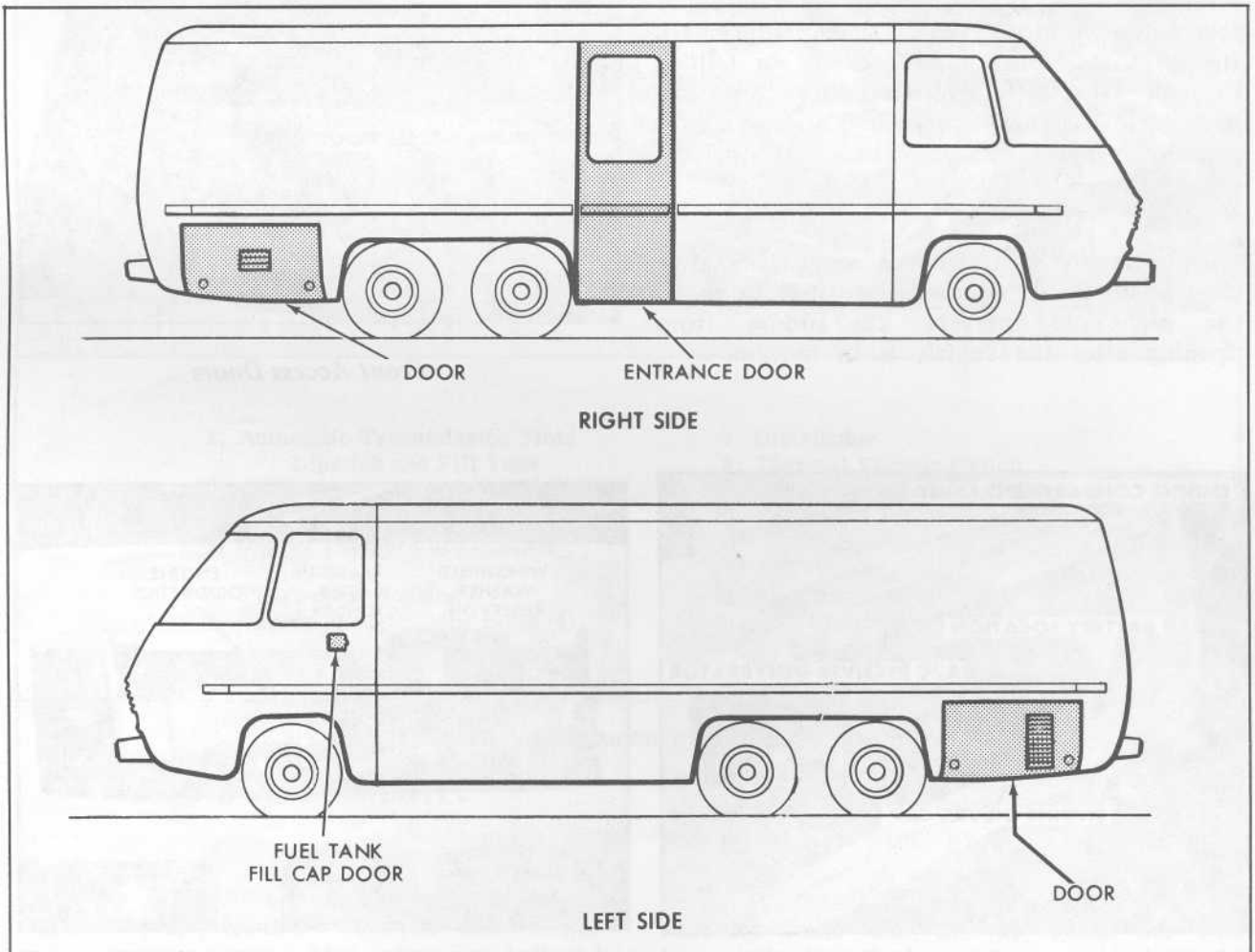
As with any machinery, extreme care should be taken when performing any inspection, maintenance or repair so as to prevent accidental injury. Improper or incomplete servicing could also result in vehicle operational problems which may lead to serious personal injury, or damage to the vehicle or its equipment. Should you have any question about performing any service, have the service performed by a competent serviceman.

This vehicle contains 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 familiar customary fasteners in the inch system. It is important to note that, during any vehicle maintenance procedures, replacement fasteners must have the same measurements and strength as those removed, whether metric or customary. (Numbers on the heads of metric bolts and on surfaces of metric nuts indicate their strength. Customary bolts use radial lines for this purpose, while most customary nuts do not have strength markings.) Mismatched or incorrect fasteners can result in vehicle damage or malfunction, or possibly personal injury. Therefore, fasteners removed from the vehicle should be saved for re-use in the same locations whenever possible. Where the fasteners are not satisfactory for re-use, care should be taken to select a replacement that matches the original. For information and assistance, see your GMC Motorhome dealer.

MAINTENANCE SCHEDULE

For owner convenience, a separate maintenance folder has been provided with your vehicle which contains a complete schedule and brief explanation of the safety, emission control, lubrication and general maintenance it requires. The maintenance folder information 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 vehicle maintenance requirements.



Exterior Compartment Location (Typical)

ACCESSIBILITY

EXTERIOR COMPARTMENTS

Your vehicle has an entrance door on the right side and six compartment doors. Their locations are shown on the following illustrations.

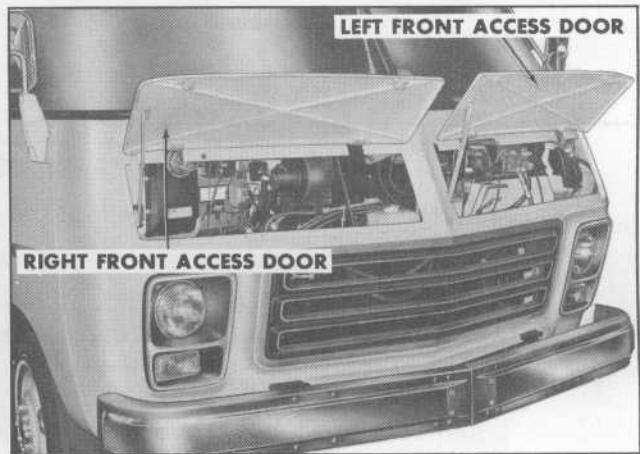
Be sure the doors are secured tightly to prevent their opening after vehicle is in motion.

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 (optional). Items that can be checked or filled through the left access door are the windshield washer reservoir, brake master cylinder, engine oil dipstick and the air compressor.

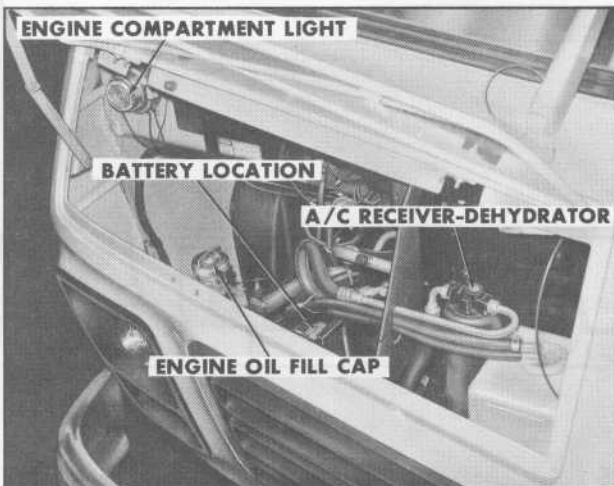
Be sure to secure the access doors after closing them by turning the latch knob to the right to prevent the doors from opening after the vehicle is in motion.

CAUTION

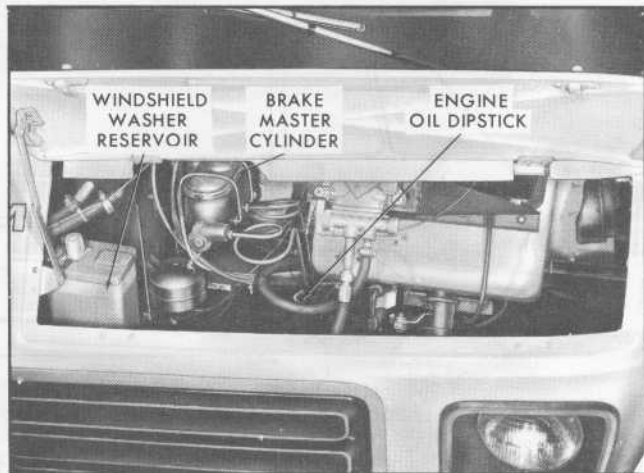
Before pouring fluid into any opening anywhere on the vehicle, or allowing anyone else to do so, make certain that the correct filler opening, and type of fluid has been selected. A wrong choice could result in serious personal injury or property damage.



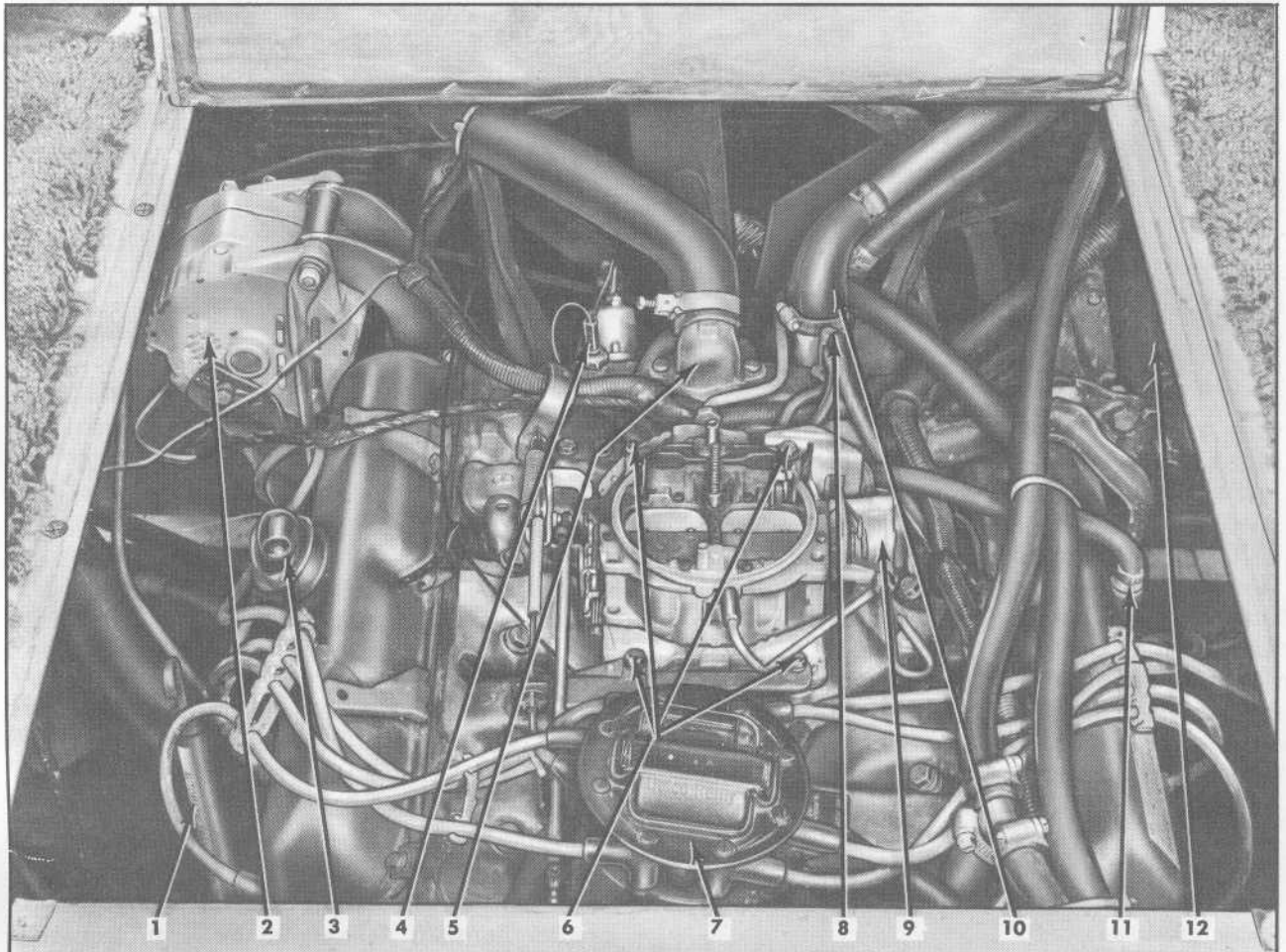
Front Access Doors



Right Front Access Compartment



Left Front Access Compartment



1. Automatic Transmission Fluid Dipstick and Fill Tube
2. Generator
3. PCV Filter
4. Engine Temperature Sending Unit
5. Thermostat Housing
6. Carburetor Attaching Bolts (4)

7. Distributor
8. Thermal Vacuum Switch
9. Carburetor Choke Coil Cover
10. Engine Oil Fill Hose and Tube Assembly
11. PCV Valve
12. Air Conditioning Compressor (Optional)

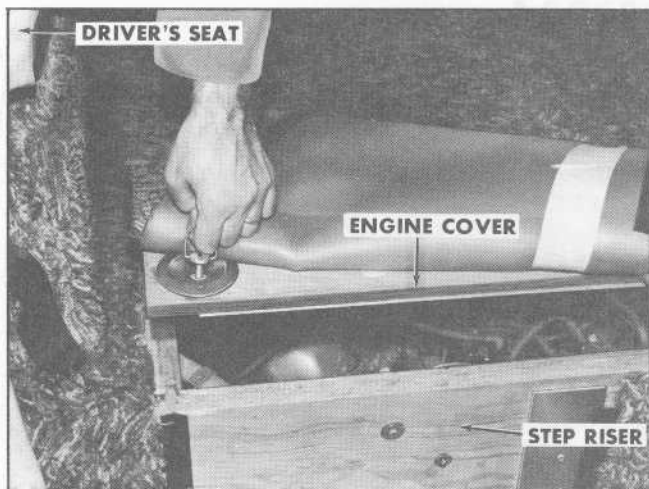
Engine Compartment (Typical)

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.

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.



Removing Engine Access Cover

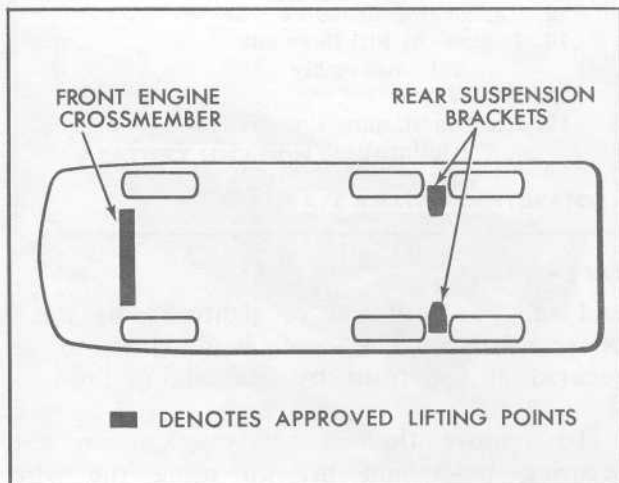
ENGINE COMPARTMENT LIGHT

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.

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

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.

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 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 is 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 engine oil.
- Refer to Maintenance Schedule folder for oil change and filter replacement intervals.
- Operation in a dust storm may require an immediate oil change.
- AC oil filters provide excellent engine protection.
- See your GMC Motorhome dealer for advice on the frequency of oil and filter changes under unusual driving conditions.

The recommendations in the Maintenance Schedule folder apply to the first change as well as subsequent oil changes. The oil change interval for your vehicle's engine is based on the use of SE oils and quality oil filters. Oil change intervals longer than those listed will seriously reduce engine life and may effect GMC Truck & Coach's obligation under the provisions of the New Vehicle Warranty.

A high quality SE oil was installed in your engine at the factory. It is not necessary to change this factory-installed oil prior to the recommended normal change period. However, check the oil level more frequently during the break-in period since higher oil consumption is normal until the piston rings become seated.

NOTE: Non-detergent and other low quality oils are specifically not recommended. Only the use of SE engine oils and proper oil and filter change intervals assure you of continued proper lubrication of your vehicle's engine.

RECOMMENDED SAE VISCOSITY

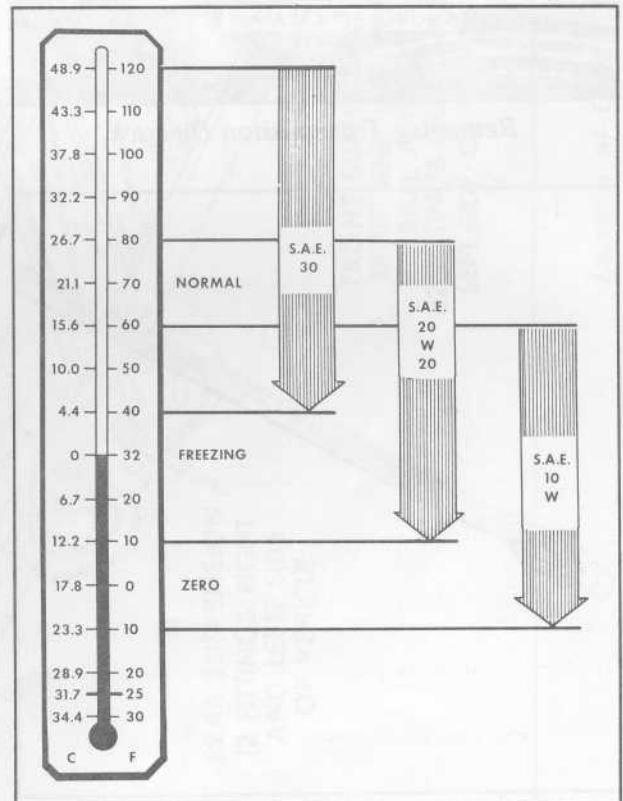
- Single grade oils are preferred, however, multigrades such as SAE 10W-30 or 10W-40 are also acceptable.
- SAE 5W-20 oils are not recommend for sustained high speed driving.
- SAE 5W-30 oils (if available) may be used if extreme low temperatures are anticipated.

SUPPLEMENTAL ENGINE OIL ADDITIVES

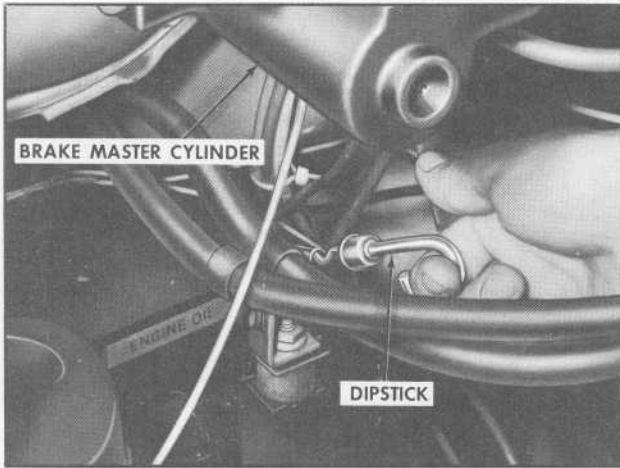
The regular use of supplemental additives is specifically not recommended and will increase operating costs. However, supplemental additives are available that can effectively and economically solve certain specific problems without causing other difficulties. For example, if higher detergency is required to reduce varnish and sludge deposits resulting from some unusual operational difficulty, a thoroughly tested and approved additive—"GM Super Engine Oil Supplement"—is available at your GMC Motorhome dealer. In the event of an operational problem, consult your dealer for advice before using supplemental additives.

CHECKING OIL LEVEL

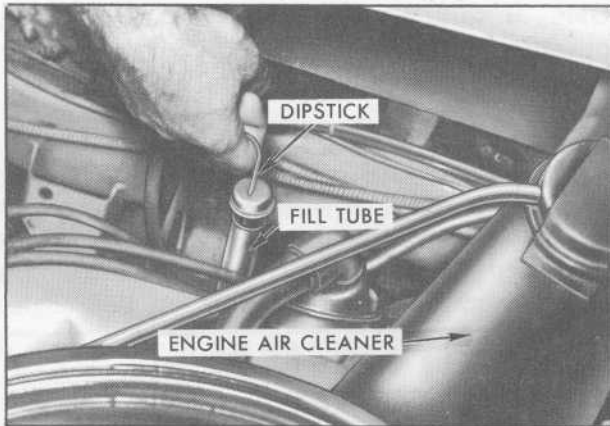
The engine oil should be maintained at the proper level. The best time to check it is before operating the engine or as the last step in a fuel stop. This will allow the normal oil accumulation in the engine



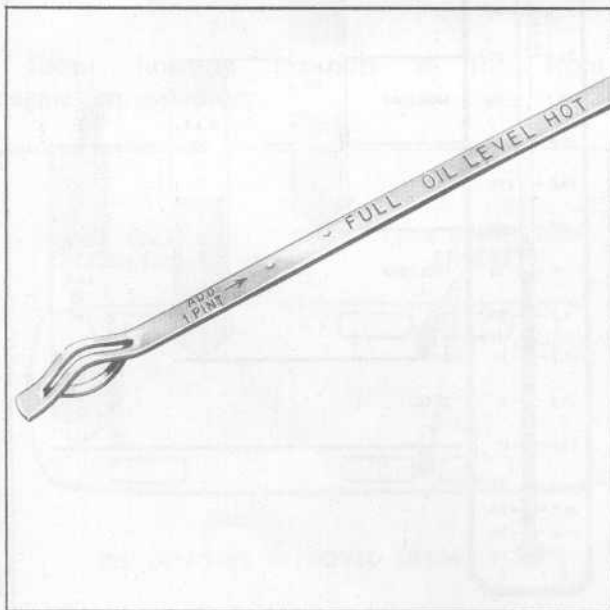
Engine Oil Viscosity Chart



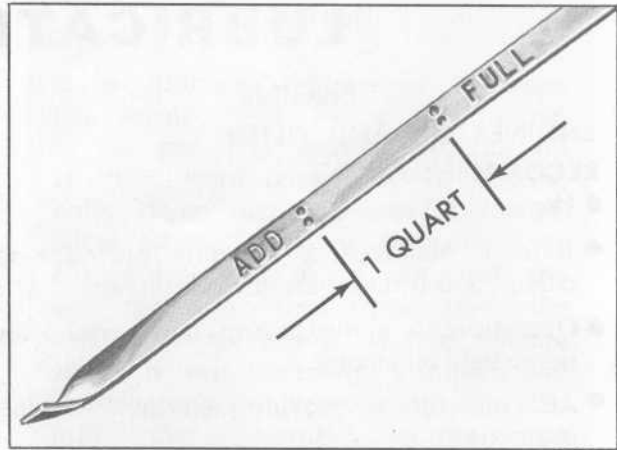
Removing Engine Oil Dipstick



Removing Transmission Dipstick



Transmission Dipstick



Engine Oil Dipstick

to drain back into the crankcase. To check the level, remove the oil level dipstick located inside the left front access door, wipe it clean and reinsert it fully for accurate reading. 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. Reseat the dipstick firmly after taking the reading. One (1) quart will raise the oil level from "ADD" to "FULL."

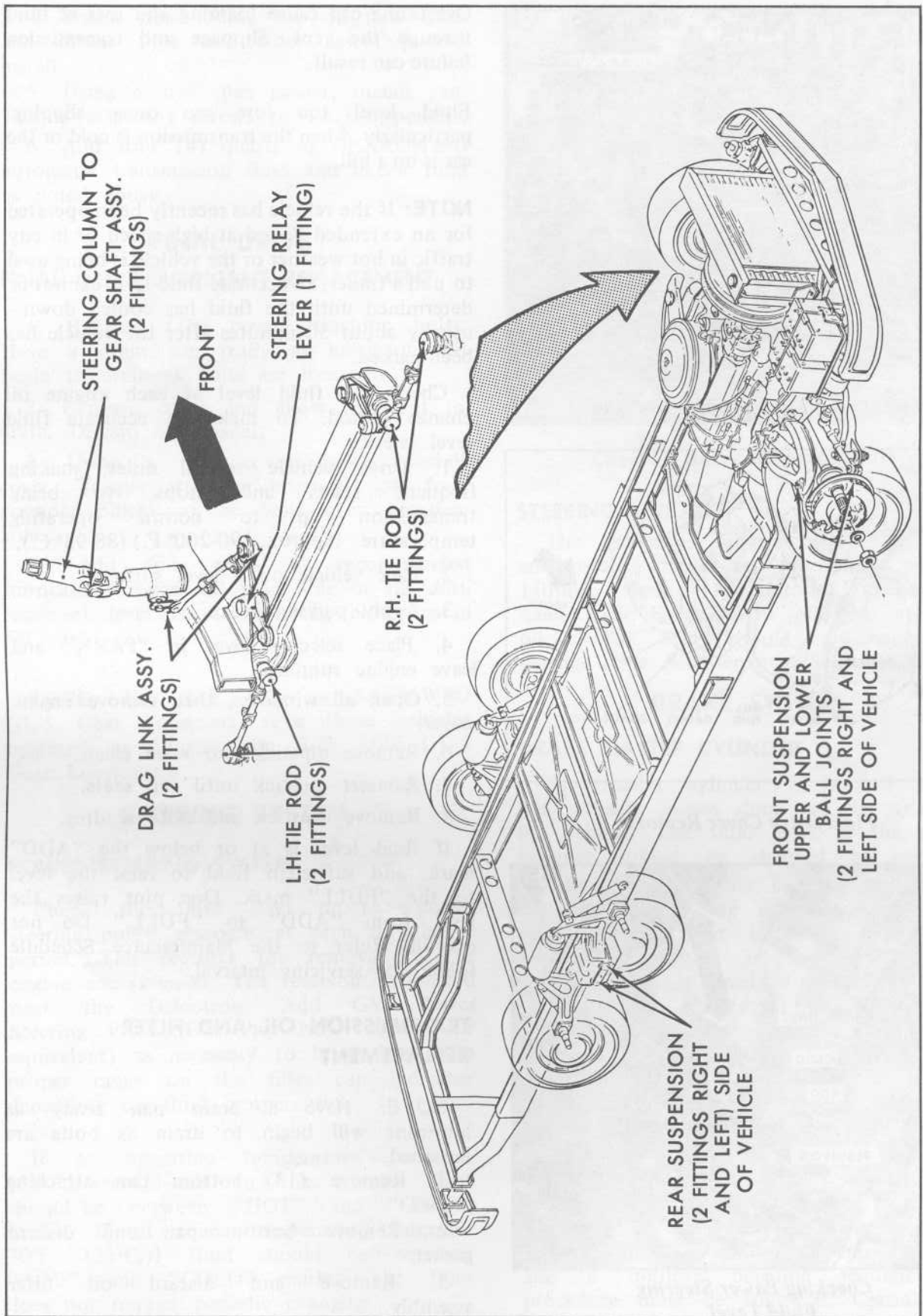
NOTE: The oil dipstick is also marked "USE SE ENGINE OIL," as a reminder to use only SE oils.

AUTOMATIC TRANSMISSION FLUID RECOMMENDATIONS

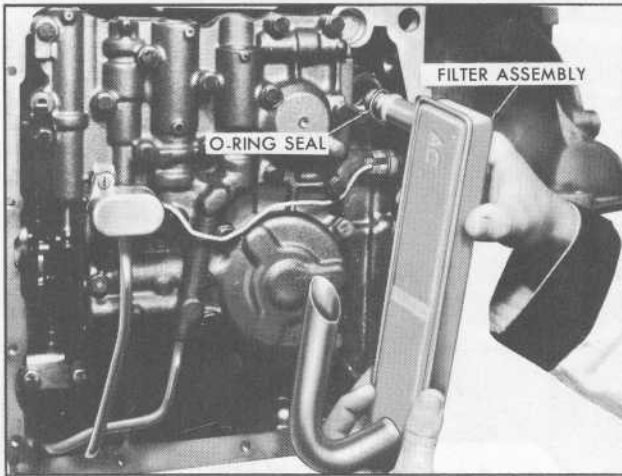
The transmission dipstick and fill tube is located under the engine access cover on the left side of the engine.

Use only automatic transmission fluids identified with the mark DEXRON® II. These fluids have been specially formulated and tested for use in your automatic transmission, and are available from your GMC Motorhome dealer or local service station.

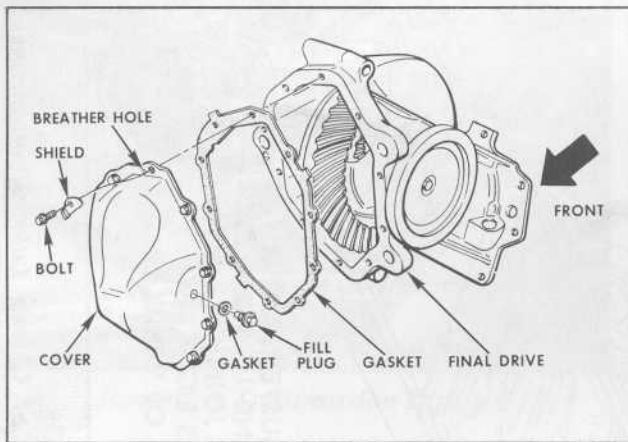
Automatic transmissions are frequently overfilled because the fluid level is checked when the fluid is cold and the dipstick indicates fluid should be added. However, the low reading is normal since the level will rise as the fluid temperature increases. A level change of over 3/4 inch will occur as fluid temperature rises from 60°F to 180°F. (16°C to 82°C)



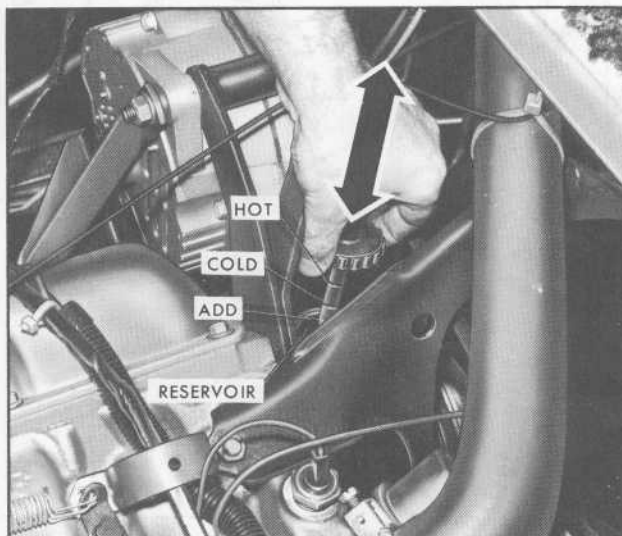
Location of Chassis Lubrication Fittings



Replacing Transmission Oil Filter



Final Drive Cover Removal



Checking Power Steering Fluid Level

Overfilling can cause foaming and loss of fluid through the vent. Slippage and transmission failure can result.

Fluid level too low can cause slipping, particularly, when the transmission is cold or the car is on a hill.

NOTE: If the vehicle has recently been operated for an extended period at high speed or in city traffic in hot weather or the vehicle is being used to pull a trailer, an accurate fluid level cannot be determined until the fluid has cooled down - usually about 30 minutes after the vehicle has been parked.

Check the fluid level at each engine oil change period. To make an accurate fluid level check:

1. Drive vehicle several miles, 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." Do not overfill. Refer to the Maintenance Schedule folder for servicing interval.

TRANSMISSION OIL AND FILTER REPLACEMENT

NOTE: 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 REPLACEMENT

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.

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 lubricant level is at the plug hole. Install fill plug.

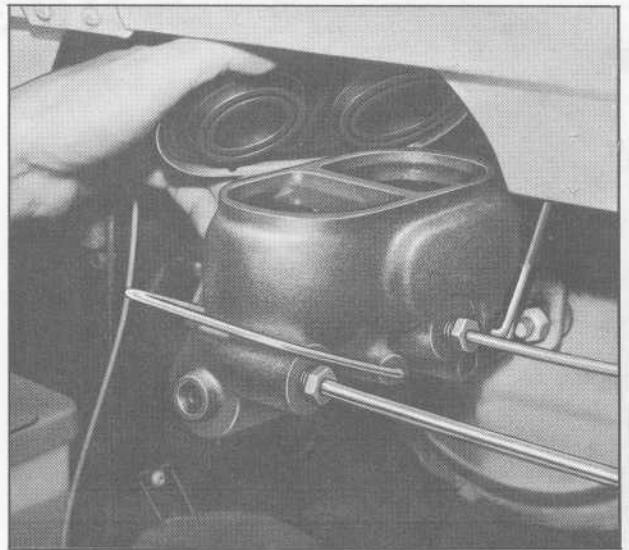
NOTE: Use SAE 80W or SAE80W-90 GL-5 Gear Lubricant. (For those vehicles operated in Canada, use SAE 80W GL-5 Gear Lubricant.)

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. Add GM Power Steering Fluid (GM Part No. 1050017 or equivalent) as necessary to bring level into proper range on the filler cap indicator depending on fluid temperature.

If at operating temperature [approx. 150°F. (66°C.)—hot to the touch] fluid should be between "HOT" and "COLD" marks. If at room temperature [approx. 70°F. (21°C.)] fluid should be between "ADD" and "COLD" marks. The fluid does not require periodic changing.



Checking Brake Master Cylinder

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

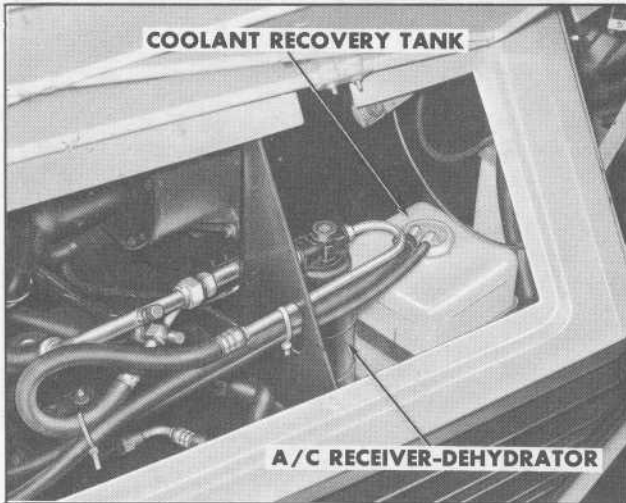
The master cylinder is located behind the left-side access door on the front of the vehicle. The fluid level in the master cylinder should be checked at each oil change. Wipe off the brake cylinder filler cap and unsnap the retainer. A low fluid level in the front brake master cylinder reservoir could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

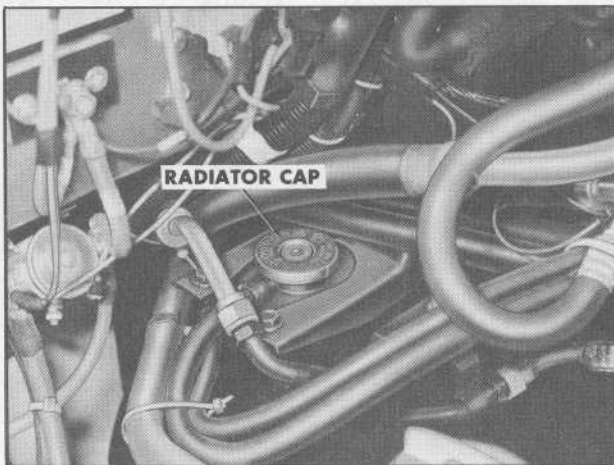
COOLING SYSTEM CARE



Coolant Recovery Tank

ENGINE COOLING SYSTEM

The recovery type cooling system is standard on all vehicles covered by this manual. The coolant expands with rising temperature and the overflow is collected in the recovery tank. When the system temperature drops, the coolant is drawn back into the radiator. The cooling system has been filled at the factory with a high-quality, inhibited, year-around coolant that 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 formulated to be used without replacement for period specified in Maintenance Schedule folder, providing the proper concentration of coolant is maintained.



Location of Radiator Cap

Checking Coolant Level

Open right front access cover. Do not remove radiator cap to check coolant level, but check visually in the "see thru" coolant recovery tank as frequently as necessary. Level should be at the "COLD" mark on the recovery tank when the system is cold; and at the "HOT" mark at normal operating temperature. Add a 50/50 mixture of high-quality ethylene glycol anti-freeze and water to the recovery tank for coolant additions. If frequent additions are required, see your dealer for a cooling system check.

NOTE: If the recommended quality antifreeze is used, supplemental inhibitors or additives claiming to provide increased cooling capability are not necessary. They may be detrimental to the efficient operation of the system, and represent an unnecessary operating expense.

Annual Service

The cooling system should be checked each year as follows:

1. Wash radiator cap and filler neck with clean water.
2. Check coolant for proper level and freeze protection.
3. Test system and radiator cap for proper pressure holding capacity (9 psi). If required, use cap designed by AC for coolant recovery systems and specified for your vehicle.
4. Tighten hose clamps and inspect all hoses. Replace hoses every 24 months, earlier if swollen, checked or otherwise deteriorated.
5. Clean frontal area of radiator core and air conditioning condenser.

Draining and Refilling

The cooling system should be drained, flushed and refilled using the following recommended procedure at intervals specified in the Maintenance Schedule folder.

1. Remove radiator cap when engine is cool:

- Rotate cap slowly counterclockwise to detent (Do not press down while rotating).
- Wait until residual 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 engine and radiator are still hot because cooling system will blow out scalding fluid and steam under pressure.

2. Run engine, with radiator cap removed, until upper radiator hose is hot (indicates thermostat is open).

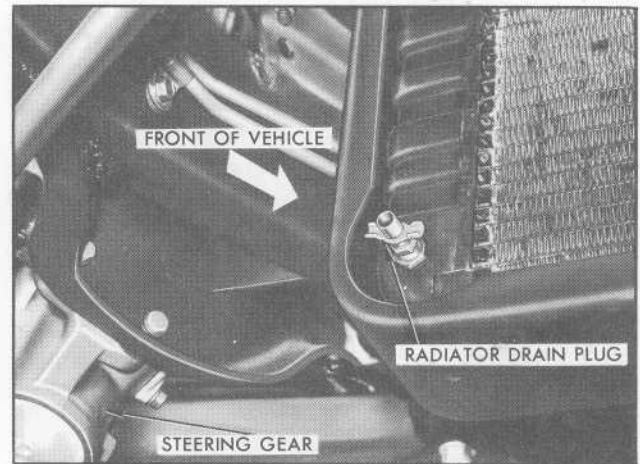
3. Stop engine and open radiator drain valve to drain coolant. (Operation may be speeded by removing drain plugs in the block.)

4. Close valve (install block drain plugs, if removed) and add sufficient water to fill system.

5. Repeat steps 1, 2, 3, and 4 a sufficient number of times until the drained liquid is nearly colorless.

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

7. Remove recovery cap leaving hoses in place. Remove coolant recovery tank,



Radiator Drain Plug

empty fluid, scrub and clean bottom and sides of tank with detergent and water, flush well with clean water, drain and reinstall.

8. Add sufficient ethylene glycol coolant, meeting GM specification 1899-M, to provide the required freezing and corrosion protection—at least a 50 percent solution (-34°F.) (-37°C.). Fill radiator to the base of the radiator filler neck and bring level of coolant in the recovery tank to the “FULL 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 certain arrows line up with overflow tube.

11. Add sufficient coolant to coolant reservoir to raise level to the “HOT” mark. Install reservoir cap.

Owner Responsibility

It is the owner's responsibility to:

- Maintain cooling system freeze protection at -20°F. (-29°C.) or below to ensure protection against corrosion and loss of coolant from boiling, even though freezing temperatures are not expected.

- Add ethylene glycol base coolant that meets GM Specification 1899-M when coolant additions are required because of coolant loss or to provide additional protection against freezing at temperatures lower than -20°F (-29°C) [-35°F (-37°C in Canada)].

NOTE: Alcohol or methanol base coolants or plain water are not recommended for 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 cooling system is protected and controlled by a thermostat installed in the engine coolant outlet to maintain a satisfactory operating temperature of the engine. This thermostat is designed for continuous use through both winter and summer and need not be changed seasonally. When replacement is necessary, Delco parts are recommended.

ENGINE FUEL SYSTEM

FUEL REQUIREMENTS

Your vehicle’s engine is designed to operate on unleaded gasoline which minimizes spark plug fouling and emission control system deterioration. Regular grade leaded gasoline may be used under normal operating conditions and also to eliminate knock. Knock is metallic

rapping noise generated during the combustion process. If knocking persists, consult your authorized dealer. Continuous or excessive knocking may result in engine damage and constitutes misuse of the engine for which GMC Truck and Coach Division is not responsible under the terms of the New Vehicle Warranty. The engine does not require Premium grade fuel. Therefore, its use would be an unnecessary additional expense.

If an unleaded gasoline is used it must meet the minimum octane specifications established by the Federal government. In compliance with Federal regulations, pumps dispensing such gasoline are labeled with the word UNLEADED.

FUEL SYSTEM

The vehicle has two gasoline tanks of approximately 25 gallons each and fuel switching device (see “FUEL SELECTOR” switch) which allows the driver to switch from the main tank (when empty) to the auxiliary tank.

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 fire hazard.

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

To Remove:

- Rotate cap one-half turn counterclockwise to clear the first set of tanks 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 tanks. Then remove the cap.
- To install, reverse this procedure.

NOTE: 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.

IMPORTANT: 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, carburetor idle speeds should be checked as recommended in the Maintenance Schedule folder. If the engine stalls, idles too fast or slow, or idles roughly, the following adjustments should be performed. However, if the above symptoms persist it is recommended the vehicle be taken to a GMC Motorhome dealer.

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

Fuel Filter

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 nut to 18 foot-pounds torque.

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

ENGINE AIR CLEANER

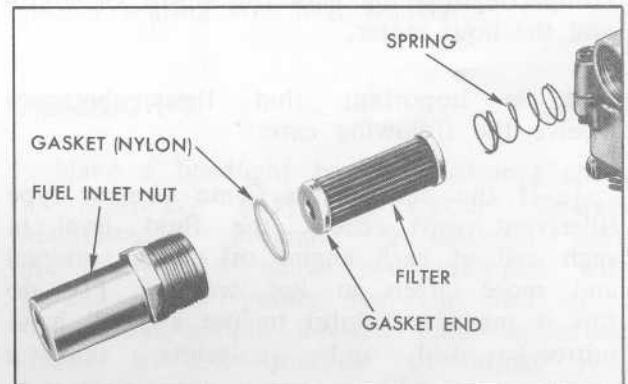
The air cleaner is a disposable type element. Replace the element as specified in the Maintenance Schedule folder. Do not wash, oil, or clean with air hose. The air cleaner will require more frequent service under dusty conditions. Your GMC Motorhome dealer can advise you on the proper interval. When replacement is necessary, an AC ACron air filter element is recommended.

NOTICE

DO NOT remove the engine air cleaner, unless temporary removal is necessary during repair or maintenance of the vehicle. When the air cleaner is removed backfiring can cause fire in the engine compartment.



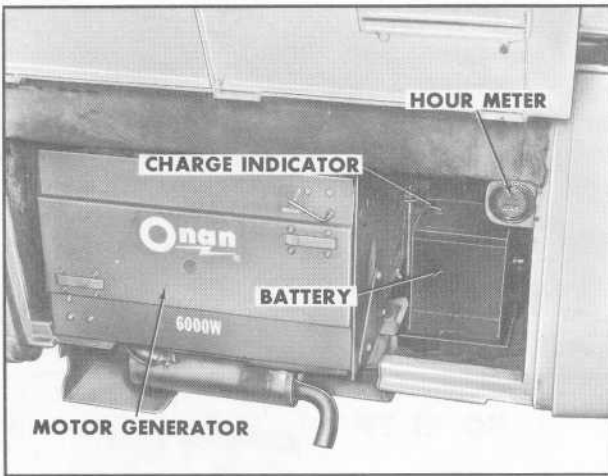
Gasoline Fuel Filler Compartment



Fuel Filter Components



Removing Engine Air Cleaner Element



Motor Generator Compartment

CHASSIS ELECTRICAL SYSTEM

BATTERIES

There are two Delco Batteries used for the chassis and interior of the vehicle. These are located behind the right front access door. The optional Motor Generator cranking battery is located in the storage or motor generator compartment along with the Motor Generator and the hour meter.

It is important that these batteries receive the following care:

1. If the battery has flame arrestor type filler/vent caps, check the fluid level in each cell at each engine oil change interval and more often in hot weather. (To do this it may be helpful to use a small hand mirror.) Add only colorless, odorless

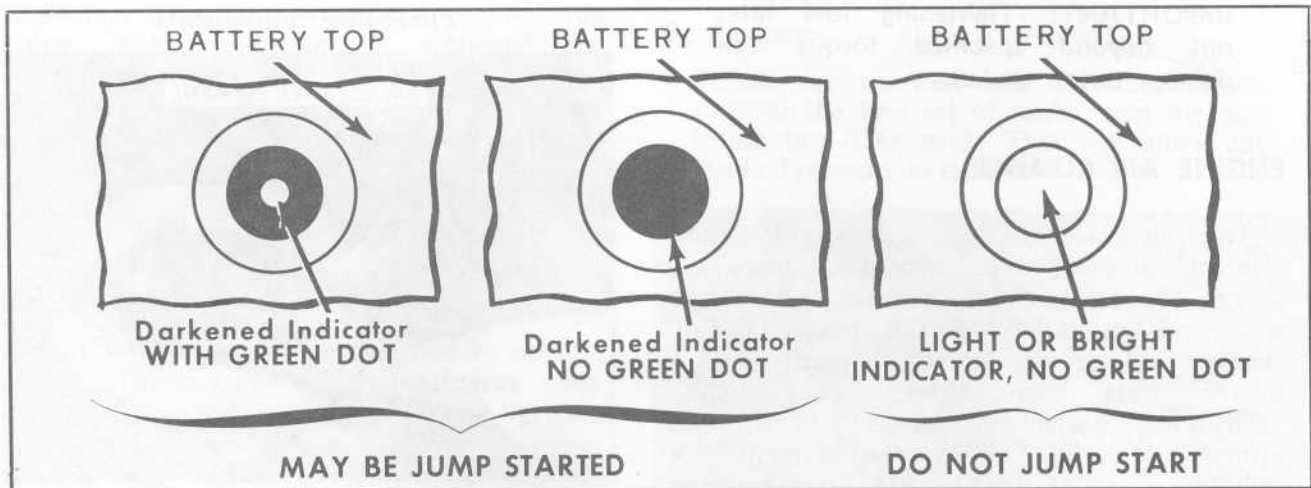
drinking water or distilled water to bring the level to the split-ring in the filler opening. **DO NOT OVERFILL.**

2. The batteries may be maintenance-free type batteries, identified by the absence of vent plugs. Water never needs to be added to the maintenance-free batteries. A charge indicator in the cover of the battery indicates the state of charge. Check the charge indicator at each engine oil change interval. (A small hand mirror may be helpful in reading the indicator.)

- If the charge indicator is dark and has a green dot in the center, the battery is sufficiently charged.
- If the charge indicator is dark and a green dot is not visible, have your GMC Motorhome dealer charge the battery.
- If the charge indicator has a light or bright center, the battery must be replaced. If the battery fails prematurely and exhibits a light indicator condition, have your dealer check the charging system of the vehicle.

CAUTION

To avoid explosion hazard, **NEVER** attempt to charge or jump start a maintenance free battery which exhibits a light indicator condition. Departures from this procedure could result in serious personal injury or property damage. For additional details refer to "JUMP STARTING" earlier in this manual.



Charge Or Test Indicator Conditions (Maintenance-Free Battery)

3. Keep your batteries, battery cable terminals, and battery hold-down brackets clean. They should be cleaned every 12,000 miles or once a year. Use a brush and a solution of ammonia and water or baking soda and water. Flush off with clear water. After cleaning apply petroleum jelly to petrolatum to battery cable terminals to help retard corrosion.

4. If battery performance becomes questionable see your dealer.

For full voltage requirements a Delco Battery is recommended at replacement time.

CAUTION

Never expose battery to open flame or electric spark—chemical action in the battery generates hydrogen gas which is flammable and explosive. Do not allow battery fluid to contact eyes, skin, fabrics, or painted surfaces—fluid is a corrosive sulfuric acid solution which could cause serious personal injury or property damage. **FLUSH ANY CONTACTED AREA WITH WATER IMMEDIATELY AND THOROUGHLY. WEAR EYE PROTECTION WHEN WORKING ON OR NEAR BATTERY.** Remove rings, metal watchbands and other metal jewelry before working on or around a battery. Be careful in using metal tools and equipment. If such metals should contact the positive battery terminal (or metal in contact with it) and any other metal on the vehicle, a short circuit may occur which could cause personal injury. Batteries and battery acid should always be kept out of the reach of children.

For "Battery Jump Starting Procedure" see IN CASE OF EMERGENCY section.

DISTRIBUTOR

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

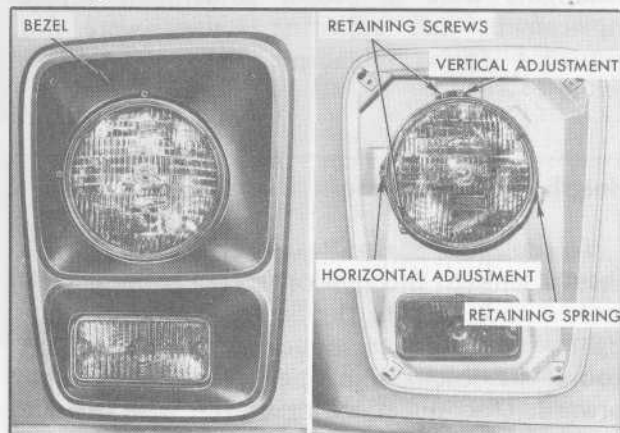
NOTE: Refer to Tune-up label on engine for correct specifications.

SPARK PLUGS

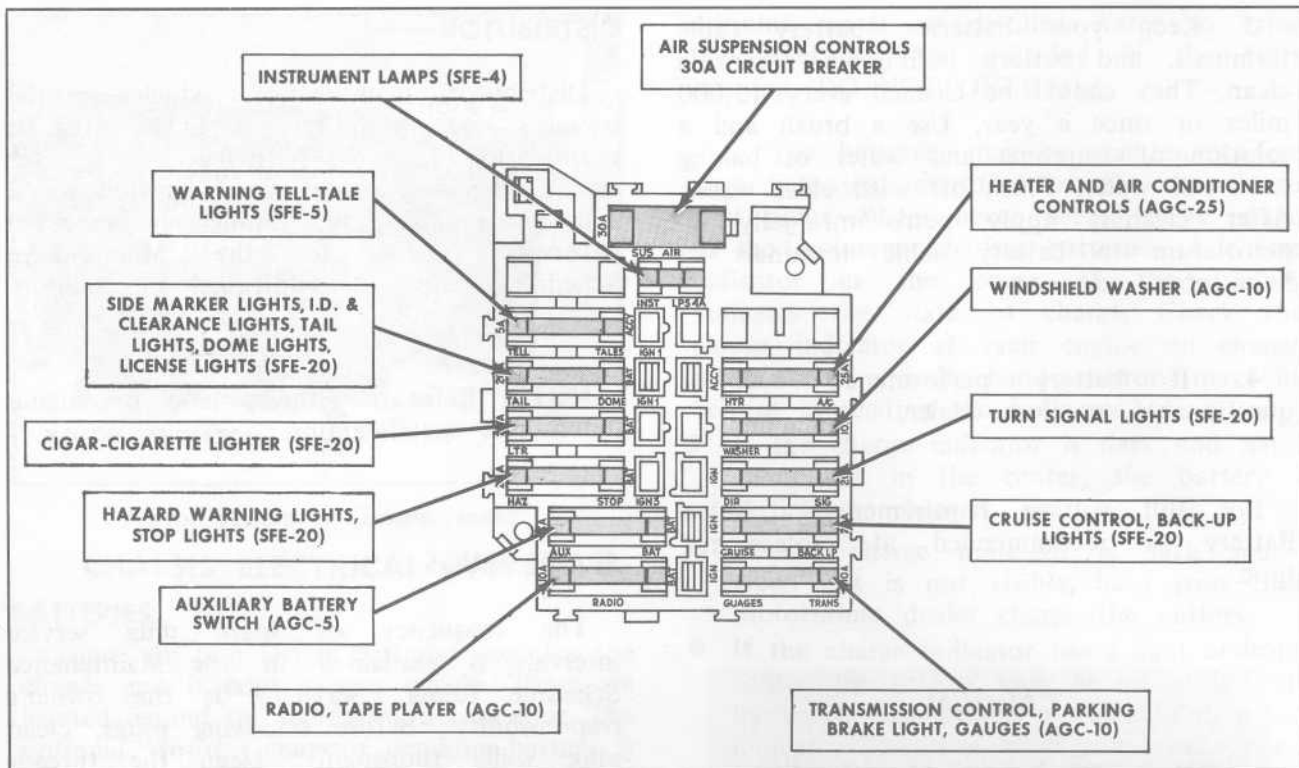
The frequency of spark plug service intervals is explained in the Maintenance Schedule folder. Servicing is the owner's responsibility. Before removing plugs, clean plug wells thoroughly, clean the threads and seats in the cylinder heads to assure proper seating and heat transfer.

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 Replacement



Chassis Fuse Block

Headlight Beam Adjustment

NOTE: 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.

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.

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.

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

TURN SIGNAL HAZARD WARNING FLASHER

The turn signals and the hazard warning system both operate with the same flasher. This flasher is clipped behind the dashboard just to the right of the steering column.

WHEELS AND TIRES

TIRES

This section contains some tips on how you can obtain maximum benefit from these tires and your investment in them.

Vehicle Loading

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

Inflation Pressure

The cold inflation pressures for your factory installed tires are listed on the “Tire Pressure Placard” located on the glove compartment door. Improper tire inflation pressures for the load you are carrying can adversely affect tire life and vehicle performance.

Too low an air pressure can result in tire overloading, abnormal tire wear, adverse vehicle handling, and reduced fuel economy. The tire flexes more and can build up excessive heat, weakening the tire and increasing susceptibility to damage or failure. Too high an air pressure can result in abnormal wear, harsh vehicle ride, and increased susceptibility to damage from road hazards.

Tire inflation pressures should be checked when the tires are “cold” at least monthly.

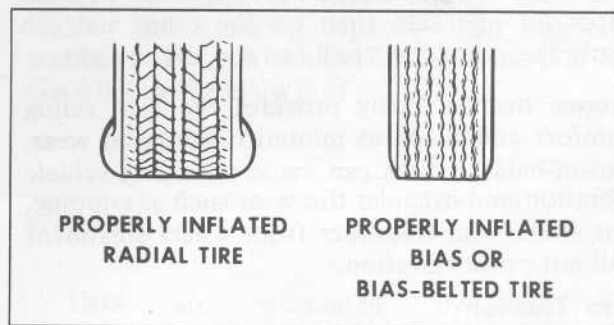
1. The “cold” tire inflation pressure rating applies to the tire pressure when the vehicle has not been driven for three hours or more, or driven less than one mile.

NOTE:The cold inflation pressures for your tires are:

- Bias-ply or Bias-belted 60 psi
- Radial tires 65 psi

2. It is normal for tire pressures 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 over 65 mph (105 km/h), cold inflation pressures should be increased 10 psi above the recommended cold inflation pressures.



Tire Inflation

4. Always use a tire pressure gauge (a pocket type gauge is recommended) when checking inflation pressures. Radial tires may have the appearance of being under-inflated when at recommended cold inflation.

5. Be sure to re-install the tire inflation valve caps, if so equipped, to prevent dirt and moisture from entering the valve core which could cause air leakage.

6. If an air loss occurs while driving, do not attempt to drive on the deflated tire more than necessary 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 type of roads driven, individual driving habits, etc. To obtain maximum tire life you should inspect and rotate your tires regularly. Many GMC Motorhome dealers and tire dealers will perform a free tire inspection and assist you in identifying uneven or abnormal tire wear.

Tire Rotation

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

NOTE: It is recommended that disc brake pads be inspected for wear whenever tires are rotated.

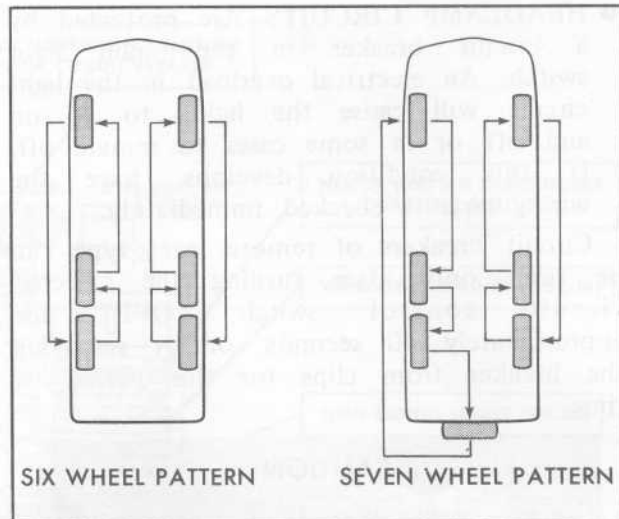
Alignment and Balance

Proper front-end alignment and regular inspection of your front end suspension components will help to extend your tire life. See the Maintenance schedule folder for more information. Improper toe alignment will cause your front tires to roll at an angle resulting in excessive wear. Improper caster or camber alignment will cause your front tires to wear more on one side than on the other and can cause the vehicle to "pull" to the left or right.

Proper tire balancing provides the best riding comfort and helps to minimize tire tread wear. Out-of-balance tires can cause annoying vehicle vibration and irregular tire wear such as cupping, flat spots, etc. Improper front wheel alignment will not cause vibration.

Tire Traction

A decrease in driving, cornering, and



Tire Rotation Diagram

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 phenomenon, known as hydroplaning, may cause partial or complete loss of traction, which adversely affects vehicle control and stopping ability. To reduce the possibility of traction loss, the following precautions should be observed:

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

Snow Tires

If the vehicle is expected to encounter muddy or snowy driving conditions it is recommended that front driving wheels be equipped with mud and snow type tires.

If you equip your vehicle with mud and snow tires, they should be of the same size, load range, and construction type (bias-ply, bias-belted, or radial) as your other tires. It is recommended that vehicle speeds be limited to a maximum of 65 mph (105k m/h) if mud and snow tires are installed.

Tire Replacement Considerations

CAUTION

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

You should replace your tires when. . .

1. Your tires are worn to a point where 1/16 inch or less tread remains or the cord or fabric is exposed. To help you detect this condition, your tires incorporate built-in tread wear indicators which appear in the tread grooves when tread depth is 1/16 inch or less. When the indicators appear in two or more adjacent grooves at three locations around the tire, the tire should be replaced.

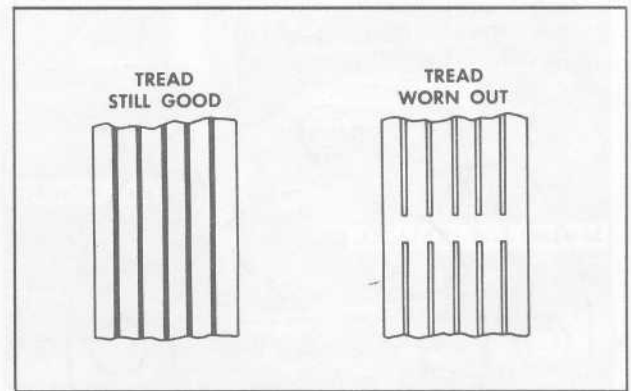
2. Your tire tread or sidewall is cracked, cut, or snagged deep enough to expose the cord or fabric.

3. Your tire has a visible bump, or bulge, or separation.

4. Your tire sustains a puncture, cut, or other injury that cannot be satisfactorily 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 seriously 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.



Tire Tread Wear Indicator

Wheel Replacement Considerations

Wheels must be replaced if bent, heavily rusted, leak air, or if lug nuts continually loosen. Do not straighten bent wheels or use inner tubes in leaking wheels used with tubeless tires.

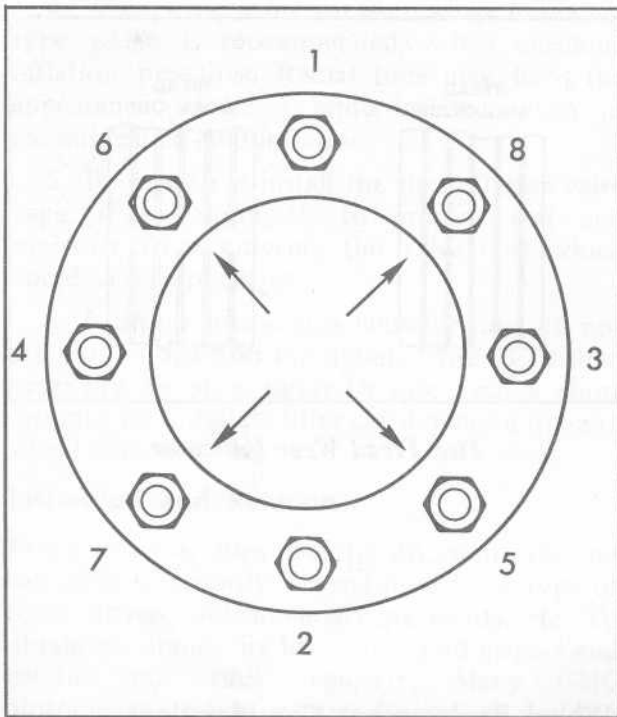
When replacing wheels for any reason, the replacement wheels should be equivalent in load capacity, inflation pressure capacity, diameter, width, offset, and mounting configurations to those originally installed in your vehicle. Be sure the work "RADIAL" is stamped on the rim.

Proper replacement wheels can be obtained from GMC Motorhome dealers.

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

Warranty

Tires are warranted by the tire manufacturers as covered in the New Vehicle Warranty folder.



Wheel Stud Tightening Sequence

Tightening Wheel Stud Nuts

When the vehicle is new or after wheels have been replaced, it is the owner's responsibility to check wheel stud nuts at 500 miles and after every wheel removal thereafter. Nuts should be tightened to 250 foot-pounds torque in sequence shown.

CAUTION

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.

Tighten wheel stud nuts as follows:

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

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.

REAR WHEEL BEARING ADJUSTMENT

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. 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 torsion bar. The front suspension components are designed to provide satisfactory service, ride, and handling if not overloaded and adjusted to specified vehicle front end ride height.

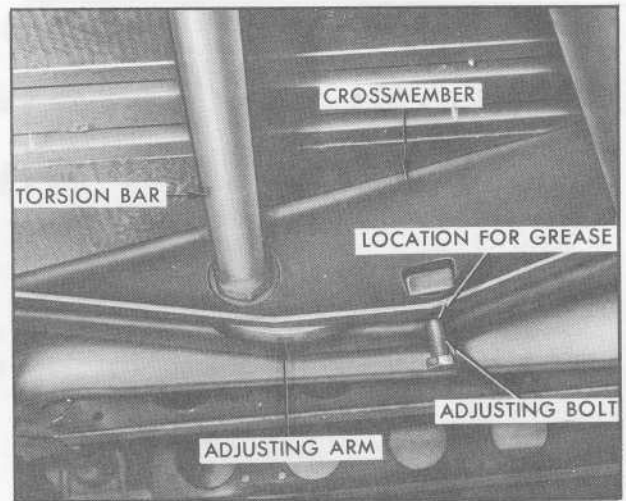
No maintenance other than lubrication is normally required. Refer to lubrication information given earlier in this section for intervals and lubrication points.

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.

NOTE: 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. Adjustment is made by repositioning adjusting bolt to wind-up and unwind



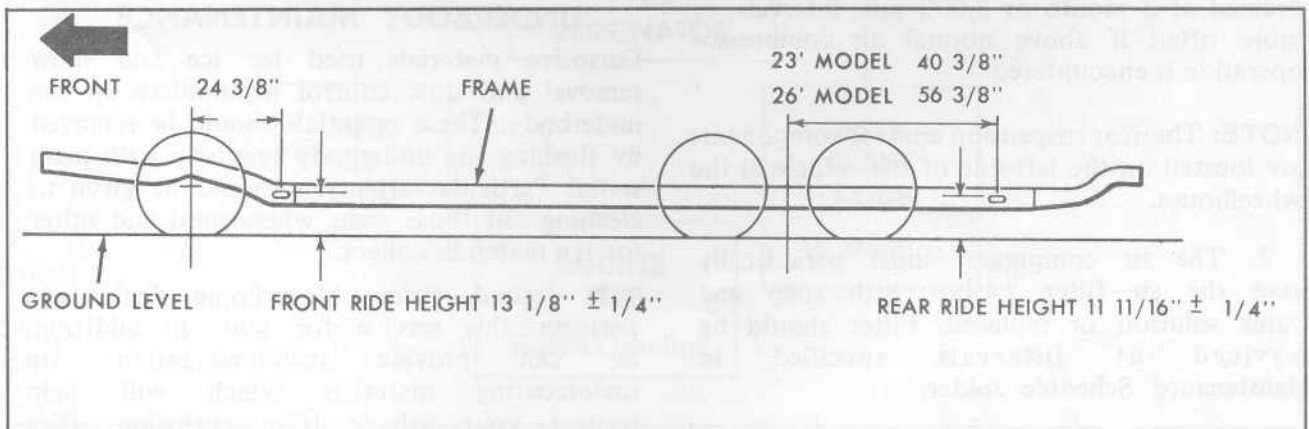
Location—Front Ride Height Adjustment

torsion bar. Whenever ride height is changed, be sure to check front end alignment and readjust if necessary.

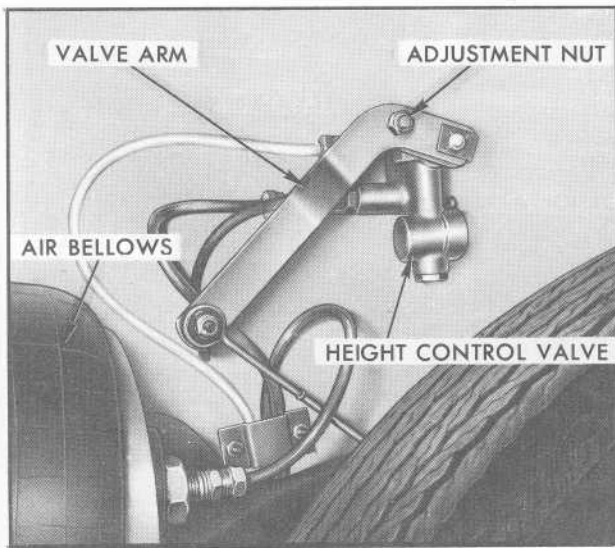
NOTE: Overloading and incorrect ride height can create serious problems and shorten the service life of the vehicle. Adjust front suspension ride height to specifications shown.

REAR SUSPENSION

The rear suspension consists of control arms, mounting brackets, air bellows, shock absorbers, air compressor, solenoid valves, wet tank, and height control valves. The system operates automatically as load varies, and is designed to maintain a constant frame height.



Checking Vehicle Ride Height



Location—Rear Ride Height Adjustment

NOTE: 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 height control valve arm.

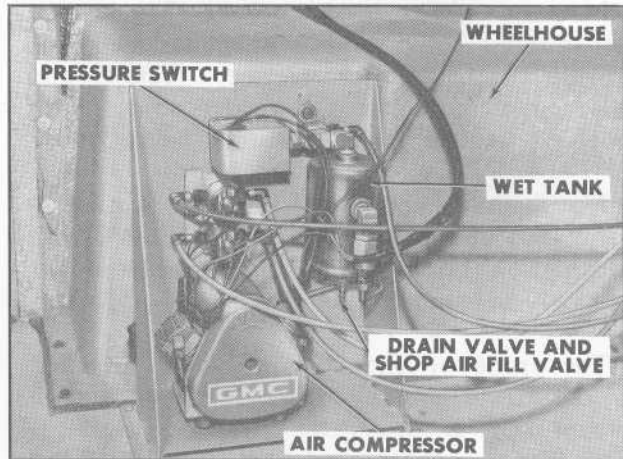
MAINTENANCE

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.

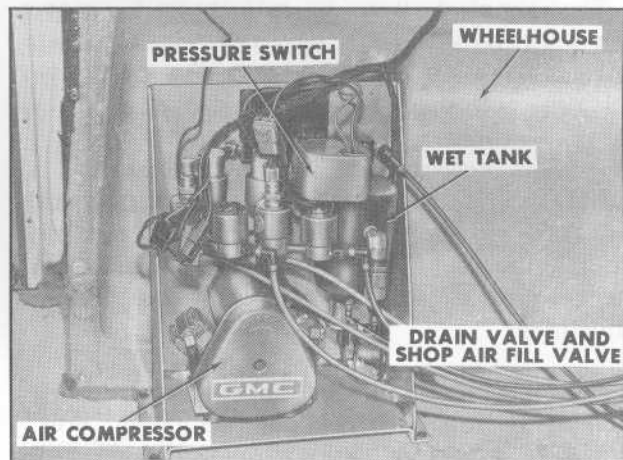
NOTE: The rear suspension control components are located on the left-side of the vehicle at the wheelhouse.

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.

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



Standard Rear Suspension Control Component



Electro-Level Suspension Controls

UNDERBODY MAINTENANCE

Corrosive materials used for ice and snow removal and dust control accumulate on the underbody. These materials should be removed by flushing the underbody regularly with plain water. Particular attention should be given to cleaning out those areas where mud and other foreign materials collect.

If desired, your 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. (See "Undercoating" in APPEARANCE CARE section.)

SECTION 6

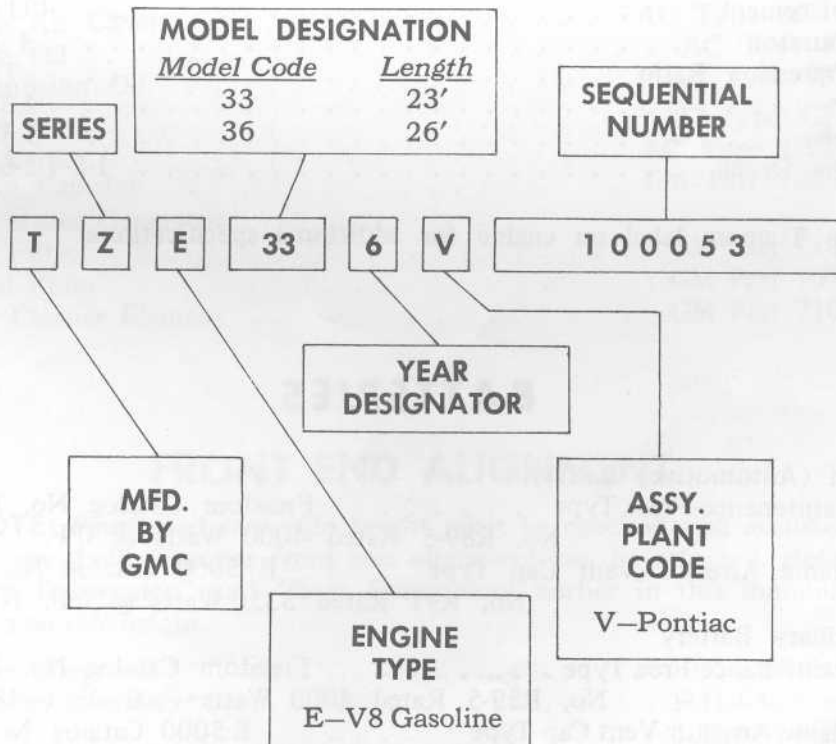
SPECIFICATIONS, OWNER ASSISTANCE, INDEX, GAS STATION INFORMATION

These specifications are provided for information only. Before using this information, see the cautionary and procedural material 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

In order that your vehicle may be specifically identified as to manufacturer, engine type, year designator, etc., refer to chart below.

(TYPICAL IDENTIFICATION NUMBER TZE336V100053)



Vehicle Identification Number

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. |
| 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 Qt. |

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 | |
| Maintenance-Free Type | Freedom Catalog No. R89-5 |
| | No. R89-5 Rated 4000 Watts @ 0°F. (-18°C.) |
| Flame Arrestor Vent Cap Type | E 5000 Catalog No. R91 |
| | No. R91 Rated 3350 Watts @ 0°F. (-18°C.) |
| Auxiliary Battery | |
| Maintenance-Free Type | Freedom Catalog No. R89-5 |
| | No. R89-5 Rated 4000 Watts @ 0° F. (-18° C.) |
| Flame Arrestor Vent Cap Type | E 5000 Catalog No. R91 |
| | No. R91 Rated 3350 Watts @ 0° F. (-18°C.) |
| Motor Generator (Optional) Battery | |
| Maintenance-Free 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 |
| 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

NOTE: 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° ±1/2° |
| Camber (Degrees)** | R.H. +1/2° ±1/4° |
| | L.H. +3/4° ±1/4° |
| Toe (Inches) | -1/8 ±1/16 |

*L.H. and R.H. must be within 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 Between Junction Block and Horn Relay |
| Main Harness Fusible Link | Built Into Line At Right Access Door Near Heater Blower Relay |
| Heater Blower Fusible Link | In Clip Behind Instrument Panel at Fuel Selector Switch |
| Hazzard Signal Flasher GM No. 673499 | On Steering Column |
| Turn Signal Flasher GM No. 491392 | In Line, Behind Access Door, Near Light |
| Vehicle Trouble Light AGC-10 | |
| 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 Qt. |
| | (With Filter Change) 4 1/2 Qt. |
| Spark Plug Type | ACR46S |
| Spark Plug Gap | .020 in. |
| Breaker Point Gap | .020 in. |
| Ignition Timing (Running or Static) | 25° BTDC |
| Tappet Adjustment (Engine Cold) | |
| Intake | .003 in. |
| Exhaust | .012 in. |

LIGHT BULB SPECIFICATIONS (INSTRUMENT PANEL)

| <u>Usage</u> | <u>Quantity</u> | <u>Bulb No.</u> |
|-------------------------------------|-----------------|-----------------|
| 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 (Exc. AM/FM/Stereo/Tape) | 1 | 1893 |
| Radio Dial (with CB Transceiver) | 1 | 47 |
| Heater Control | 1 | 1895 |
| Voltmeter | 1 | 53 |

LIGHT BULB SPECIFICATIONS (EXTERIOR)

| <u>Usage</u> | <u>Quantity</u> | <u>Bulb No.</u> |
|--------------------------|-----------------|-----------------|
| 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

The satisfaction and goodwill of the owners of GMC Truck & Coach products are of primary concern to your dealer and the GMC Truck & Coach Division. Normally, any problems that arise in connection with the sales transaction or the operation of your vehicle will be handled by your dealer's Sales or Service Departments. It is recognized, however, that despite the best intentions of everyone concerned, misunderstandings will sometimes occur. If you have a problem that has not been handled to your satisfaction through normal channels, we suggest that you take the following steps:

STEP ONE—Discuss your problem with a member of dealership management. Frequently, complaints are the result of a breakdown in communications and can quickly be resolved by a member of the dealership management. If the problem already has been reviewed with the Sales Manager 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 79 (or in Canada contact the general Motors Zone Office). When it appears that your problem cannot be readily resolved by the service outlet without additional assistance, the matter should be called to the attention of the Zone's Customer Services Department and the following information provided:

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

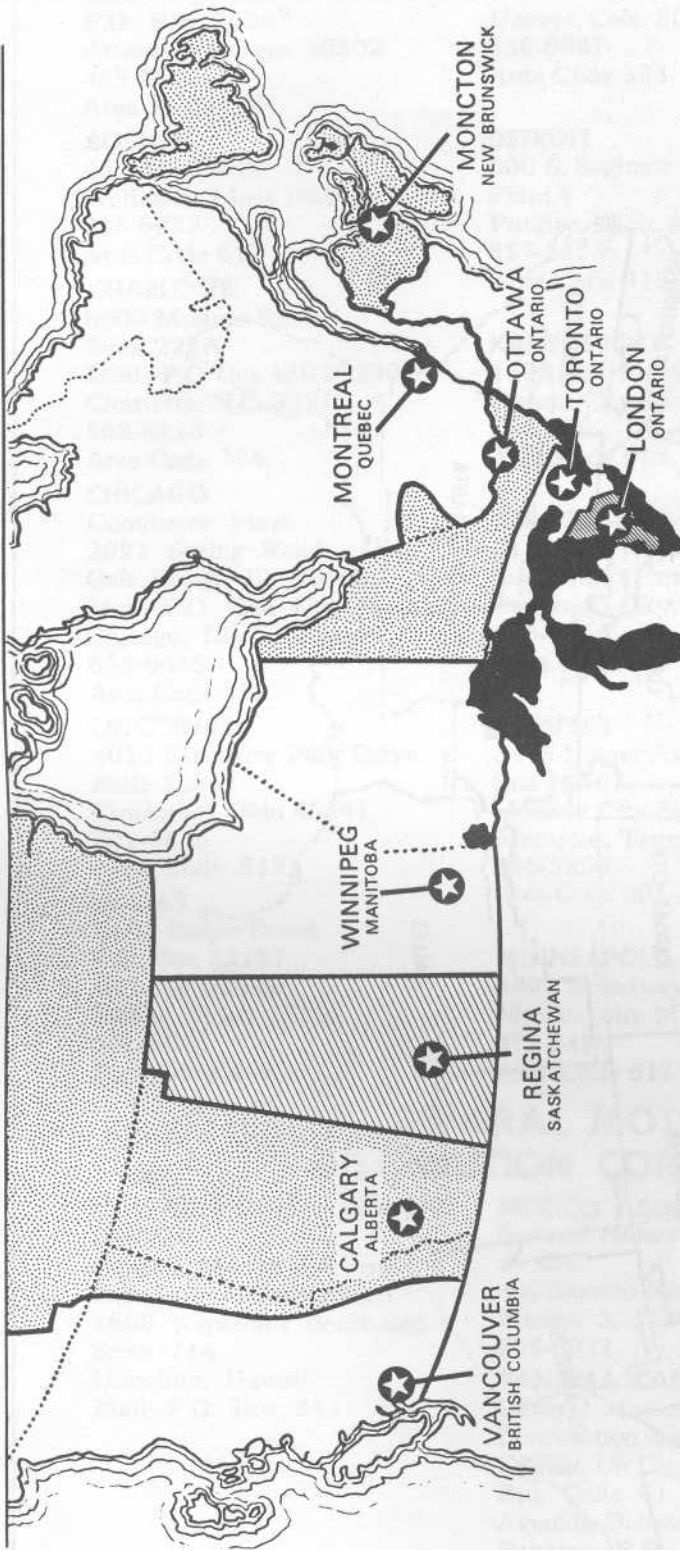
STEP THREE—Contact the Customer Services Manager, GMC Truck & Coach Division, 660 South Blvd. East, Pontiac, Michigan 48053 (phone 313-857-4575). (In Canada, contact the Customer Services Manager, Oshawa, Ontario, phone 416-644-6624.) If after an additional review of all facts involved he feels that some further action can be taken, he will so instruct the Zone. In any case, your letter 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 ultimately your problem likely will be resolved in the dealership utilizing the dealer's facilities, equipment and personnel. It is suggested, therefore, that you follow the above steps in sequence when pursuing a problem.

Your purchase of a GMC Truck & Coach product is greatly appreciated by both your dealer and GMC Truck & Coach Division. It is our sincere desire to assist you in any way possible to assure your complete satisfaction with your vehicle.

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

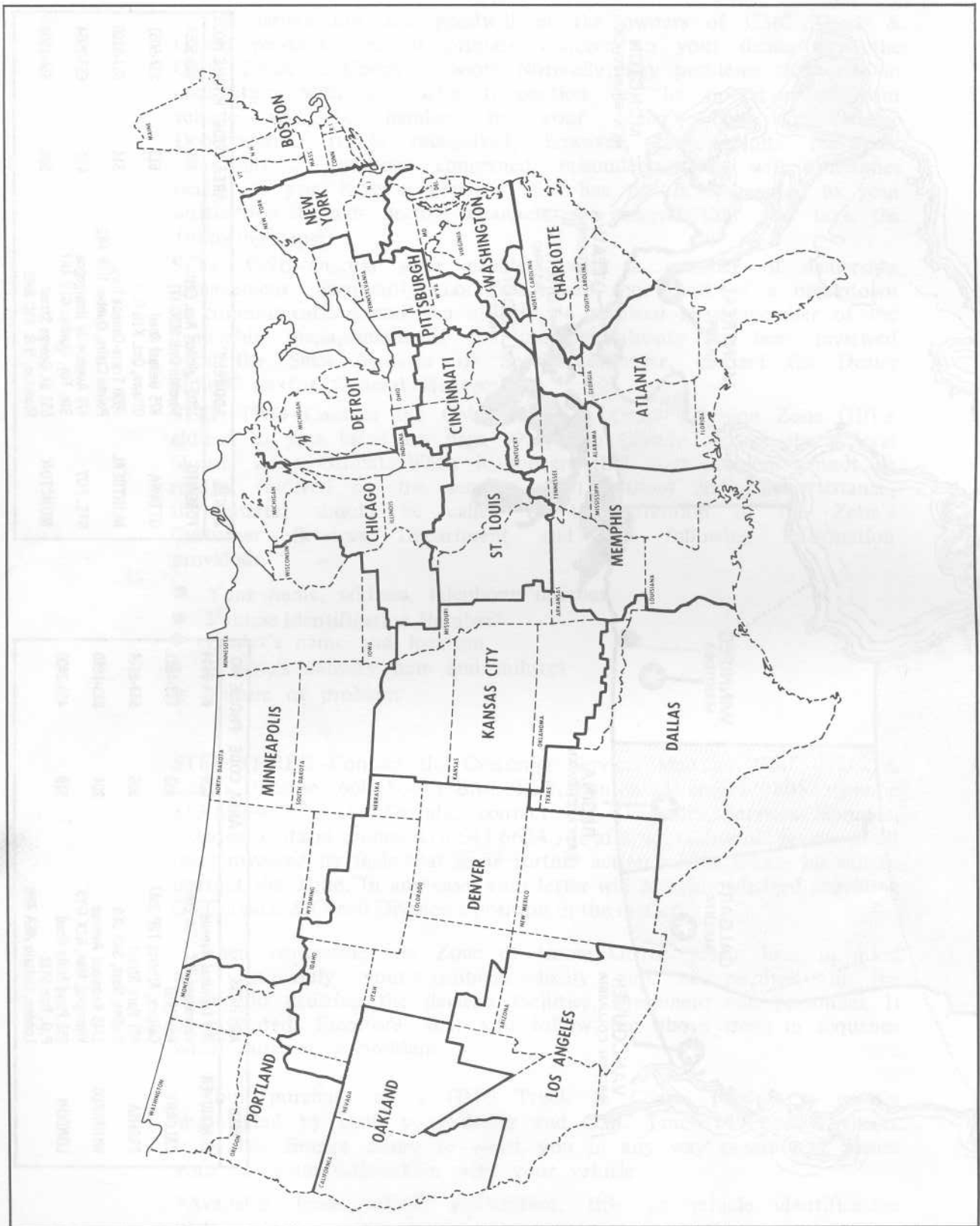
GM OF CANADA LIMITED—ZONE OFFICES



| 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 0Z4 | 613 | 237-5051 |
| MONTREAL | 5000 Trans-Canada Hwy. Pointe Claire, Quebec H9R 4R2 | 514 | 697-9160 |
| STE. FOY | 979 Avenue de Bourgogne Ste. Foy, Quebec G1V 4K7 | 418 | 653-2054 |
| MONCTON | 653 St. George Street Moncton, N.B. E1C 8M2 | 506 | 854-1500 |

| 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. S4P 3E9 | 306 | 543-2224 |
| WINNIPEG | 1345 Redwood Avenue Winnipeg, Man. R2X 0Y9 | 204 | 633-1080 |
| LONDON | 951 Pond Mills Road P.O. Box 5412 London, Ontario N6A 4P6 | 519 | 455-2400 |

U.S. ZONE TERRITORIES



U.S. ZONE OFFICES

When calling for assistance, please ask for Customer Services Manager

ATLANTA

5730 Glenridge Drive
P.O. Box 50267
Atlanta, Georgia 30302
455-5564
Area Code 404

BOSTON

45 Williams St.
Wellesley, Mass. 02181
235-6957
Area Code 617

CHARLOTTE

6000 Monroe Rd.
Suite 222A
Mail—P.O. Box 180 28230
Charlotte, N.C. 28212
568-8223
Area Code 704

CHICAGO

Commerce Plaza
2021 Spring Road
Oak Brook, Ill. 60521
Mail—P.O. Box 4392
Chicago, Ill. 60680
654-6465
Area Code 312

CINCINNATI

4010 Executive Park Drive
Suite 320
Cincinnati, Ohio 45241
841-5856
Area Code 513

DALLAS

6007 Peeler Street
P.O. Box 35187
Airlawn Station
Dallas, Texas 75235
688-5611
Area Code 214

DENVER

4715 Colorado Blvd.
Denver, Colo. 80216
320-5087
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
281-6062
Area Code 913

LOS ANGELES

8155 Van Nuys Blvd.
Suite 1030 Panorama Towers
Panorama City, Calif. 91402
873-7554
Area Code 213

MEMPHIS

3495 Lamar Ave.
Box 18467
Holiday City Sta.
Memphis, Tenn. 38118
346-5250
Area Code 901

MINNEAPOLIS

3001 Broadway N.E.
Minneapolis, Minn. 55413
378-3471
Area Code 612

NEW YORK

275 Old New Brunswick Rd.
Piscataway, N.J. 08854
246-5200
Area Code 201

OAKLAND

10626 E. 14th Street
P.O. Box 24033
Oakland, Calif. 94603
577-0511
Area Code 415

PITTSBURGH

Two Parkway Center
875 Greentree Rd.
Pittsburgh, Pa. 15220
928-5080
Area Code 412

PORTLAND

5355 S.W. Western Avenue
Beaverton, Ore. 97005
646-8333
Area Code 503

ST. LOUIS

Suite 320
Crestwood Executive Center
St. Louis, Mo. 63126
849-0990
Area Code 314

WASHINGTON

Suite 410—Profess. Bldg.
1109 Spring St.
Silver Spring, Md. 20910
537-5276
Area Code 202

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

GENERAL MOTORS OVERSEAS DISTRIBUTION CORPORATION OFFICES

HAWAII, GUAM, AMERICAN SAMOA

General Motors Overseas
Distribution Corporation
1600 Kapiolani Boulevard
Suite 714
Honolulu, Hawaii
Mail—P.O. Box 341

MEXICO ADDRESS

General Motors de Mexico S.A.
de C.V.
Av. Ejercito Nacional No. 843
Mexico 5, D.F.
545-3921

PANAMA CANAL ZONE

General Motors Overseas
Distribution Corporation
Edificio De Diego
Esq. Calle 41 Y
Avenida Balboa
Panama, R.P.
Mail—Apartado 7872
Panama 9, Republic of Panama

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

24-HOUR PHONE ASSISTANCE

- Need answers to service or maintenance questions?
- Want to discuss vehicle specifications?
- Want to know where the GMC Motorhome dealer is located?

NORMAL BUSINESS HOURS

GMC offers you direct-to-factory communication. You can dial toll free Monday through Friday between 8:15 A.M. and 5:00 P.M. (EST) and talk with qualified personnel by calling the number below.

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 who will answer has a list of private numbers through which many dealers can be reached after hours and will give you the number and location of the nearest one.

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 Service 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 have an effect on how many miles you can get from a gallon 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 an unleaded gasoline or regular grade leaded gasoline. Additional details on Fuel Requirements are given in **SERVICE AND MAINTENANCE** section.

"JACKRABBIT" STARTS

Gasoline can be conserved (and engine and tire life prolonged) by avoiding unnecessarily rapid acceleration 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 professional drivers to avoid unnecessary 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 themselves don't waste gasoline, but 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 for the proper lubricants to use and the lubrication intervals.

AIR CLEANER

Your vehicle receives 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 reduces engine efficiency.

PROPERLY TUNED ENGINE

Overall 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-tune" engine to give you good gas mileage and cleaner air.

EXCESS WEIGHT

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

TIRE INFLATION

Underinflation not only causes needless wear of the tires, but can also waste gasoline. It's a good idea to check tire pressures regularly.

WHEEL ALIGNMENT

"Toe in" or "toe out" has the effect of dragging your front tires sideways and causes premature tire wear. It takes power to carry this extra load and that takes gas from your tanks.

INDEX

| SUBJECT | PAGE NO. | SUBJECT | PAGE NO. |
|---|------------|---------------------------------------|------------|
| A | | | |
| Absorbers, Shock | 69 | Capacities | 72 |
| Accessory Position, Ignition Switch | 13 | Carbon Monoxide Caution | 11, 12 |
| After-Hour Information Service | 80 | Carburetor, Engine | 61 |
| Air Circulation | 25, 26 | Changing Wheels & Tires | 39, 65-68 |
| Air Cleaner | 61, 73 | Charging System Indicator Light | 22 |
| Air Compressor | 69 | Chassis Lubrication | 55, 57 |
| Air Conditioning | | Check List | 5 |
| Automotive | 25 | Child Restraints | 8 |
| Air Suspension | 69 | Chrome Protection | 47 |
| Alignment, Wheel | 73 | Cigar Lighter | 25 |
| Antenna | 27, 29 | Circuit Breaker, Headlights | 20, 65 |
| Anti-theft Steering Column Lock | 13 | Circuit Breaker | 20, 64, 74 |
| Appearance Care | 43 | Cleaning | |
| Automatic Transmission | | Exterior Finish and Trim | 46, 47 |
| Fluid Check | 54 | Fabric and Interior Trim | 43, 47 |
| Maintenance | 54, 56 | Spot Removal | 43, 47 |
| Operation | 15 | Cold Weather Starting | 14 |
| Starter Safety Switch | 14 | Compartment | |
| Auxiliary Battery | 24, 62, 72 | Engine | 51 |
| Auxiliary Fuel Tank | 24 | Front Access | 50 |
| Axle, Final Drive | 57 | Glove | 5 |
| B | | | |
| Batteries | | Complaint Procedure | 76 |
| Emergency Starting | 33 | Conditioner, Automotive, Air | 25 |
| Fluid Level | 62 | Cooling System | |
| Gas Caution | 63 | Care | 58 |
| Location | 62 | Coolant Recommendation | 58 |
| Battery Boost Switch | 24 | Overheating Caution | 39 |
| Bearings, Rear Wheel | 68 | Cruise Control | 17 |
| Before Driving | 5 | Customer Service | 76 |
| Belts, Lap | 7, 44 | D | |
| Blower, Ventilating | 25, 26 | Defrosters | 26 |
| Body Identification Number | 68 | Differential, Final Drive | 57 |
| Brakes | | Dimensions, Vehicle | 72 |
| Linings | 19 | Dimmer Switch, Headlamp | 20 |
| Master Cylinder Level | 57 | Directional Signal | 16 |
| Parking Brake | 19 | Distributor | 63 |
| Power | 18 | Dome Lights | 23 |
| Self-Adjusting | 19 | Driver Check List | 5 |
| Trailer | 9 | Driver's Seat | 6 |
| Warning Light | 22 | Dusty Condition, Operation Under ... | 35, 61 |
| Bright Metal Cleaning | 46 | E | |
| Bulbs and Fuses | 74, 75 | Electrical Systems | |
| C | | | |
| Cap, Filler | | Batteries | 24, 62, 72 |
| Engine Oil | 53 | Battery Boost Switch | 24 |
| Gasoline | 61 | Bulbs, Light | 75 |
| Power Steering Reservoir | 56 | Charging System Indicator Light | 22 |
| Radiator | 58 | Diode Assembly | 24 |
| | | Electro-Level System | 31 |
| | | Emergency Exit | 41, 42 |

| SUBJECT | PAGE NO. | SUBJECT | PAGE NO. |
|---|----------|--|---------------------|
| Emergency, In Case Of | 36 | Front Suspension | 69 |
| Brake System Warning Light | 22 | Fuel | |
| Charging System Warning Light | 22 | Filler Cap Location | 61 |
| Emergency Starting | 36 | Gauge | 20 |
| Hazard Warning Flasher | 36 | Recommendation | 60 |
| Jacking Instructions | 39 | Tank Selector Switch | 24 |
| Jump Starting | 36 | Fumes, Engine Exhaust | 11, 12 |
| Overheated Engine | 38, 60 | Fuses | |
| Electro-Level System | 33 | Vehicle Chart | 74 |
| Pushing to Start | 36 | Vehicle Location | 64 |
| Towing | 40 | | |
| Engine Access | 51 | G | |
| Engine Coolant Reservoir | 58 | Gas Station Information | (Inside Back Cover) |
| Engine Compartment | 51 | Gasoline (See Fuel) | 60 |
| Engine Oil | | Generator Indicator Light | 22 |
| Capacity | 72 | General Data & Specifications | 71 |
| Dip Stick | 54 | Glass and Mirrors | 5, 33, 44, 47 |
| Filter | 53, 73 | Glove Box | 5 |
| Pressure Gauge | 21 | Gross Vehicle Weight (GVW) | 2 |
| Recommendation | 53 | | |
| Entrance Door | 6 | H | |
| Ethylene Glycol Coolant | 58 | Hazard Warning Flasher | 36, 74 |
| Exhaust Gas Caution | 11, 12 | Headlight | |
| Parked with Engine Running | 12 | Adjustment | 64 |
| Exit, Emergency | 41, 42 | Flicker | 20 |
| Exterior Finish Care | 46 | High Beam Dimmer Switch | 20 |
| | | High Beam Indicator | 20 |
| F | | Replacement | 64 |
| Fabric Care | 43, 47 | Switch | 23 |
| Filters | 53, 73 | Heater, Operation | 26 |
| Final Drive Differential | 57 | Hitches, Trailer | 9 |
| Finish Care, Exterior | 46, 47 | Hoisting Vehicle | 49 |
| Flammable Cleaning Solvents | 43 | Horn | 16 |
| Flashers | | | |
| Hazard Warning | 36, 74 | I | |
| Turn Signal | 16, 74 | Identification Lights | 23, 74, 75 |
| Flooded Engine | 15 | Identification Number, Vehicle | 71 |
| Floor Controls | 18 | Identification Plate, Vehicle | 3 |
| Fluid Capacities | 72 | Ignition, Keys and Lock | 5, 6 |
| Fluid Levels | | In Case of Emergency | 36 |
| Batteries | 62 | Indicator Lights | 23, 74, 75 |
| Brake Master Cylinder | 57 | Infant Restraining Methods | 8 |
| Engine Oil | 53 | Inflation Pressure, Tire | 65 |
| Final Drive | 57 | Instrument Panel | 20 |
| Power Steering | 57 | Interior Appearance Care | 43 |
| Radiator | 58 | | |
| Transmission | 54 | J | |
| Foreign Countries, Operation in | 10 | Jack Usage Instructions | 39 |
| Four-Way Hazard Warning Flasher | 36, 74 | Jump Starting | 36 |
| Front Access Doors | 50 | | |

INDEX

| SUBJECT | PAGE NO. | SUBJECT | PAGE NO. |
|---------------------------------------|----------|--------------------------------------|------------|
| K | | | |
| Keys | 5 | Overheated Engine | |
| Knocking Engine | 60 | Temperature Gauge | 20 |
| L | | | |
| Lane Change and Turn Signal | 16 | What To Do | 20, 38, 60 |
| Lap Belts | 7, 8 | Owner Assistance | 76 |
| Latch, Door | 6 | P | |
| Leveling, Vehicle | 32 | Paint, Care and Touch Up | 47 |
| Lighter, Cigar | 25 | Parking | 14 |
| Lights | | Brake | 19 |
| Brake Warning | 22 | Lights | 22 |
| Bright Beam Indicator | 20 | Plugs, Spark | 63 |
| Bulb Chart | 75 | Polishing and Waxing | 46 |
| Charging System | 22 | Power | |
| Dome | 23 | Brakes | 18 |
| Hazard Flasher | 36 | Steering | 16 |
| Headlight Switch | 23 | Pressure, Tire Inflation | 65 |
| Marker & Clearance | 23 | R | |
| Parking Brake | 23 | Radiator and Coolant | 58 |
| Tail Lights | 23 | Radio | |
| Tell Tale Warning | 22 | AM | 26 |
| Turn Signal Indicator | 16 | AM/FM | 26 |
| Linings, Brake | 19 | Antenna | 27 |
| Loading, Vehicle | 2 | C B Transceiver | 28 |
| Locks | 5 | Mobile Transmitter | 31 |
| Low Temperature Operation | 14 | Stereo | 27 |
| Lubrication Details | 53 | Tape System | 27 |
| M | | | |
| Maintenance | | Raising Vehicle With Jack | 39 |
| Appearance Care | 43 | Rear Suspension | 69 |
| Manual | 80 | Rear Wheel Bearings | 68 |
| Master Cylinder, Brake | 57 | Restraints, Child | 8 |
| Marker Lights | 23, 75 | Rotation, Tire | 66 |
| Metal Cleaners | 46, 47 | S | |
| Methods of Restraining Children | 8 | Safety | |
| Mirrors, Rear View | 5 | Belt Restraints | 7, 8 |
| Mobile Radio Transmitter | 31 | Schedule, Maintenance | 49 |
| O | | | |
| Odometer | 20 | Screen, Window | 45 |
| Oil | | Seat | |
| Additives | 53 | Adjustments | 6 |
| Checking Engine Oil Level | 53 | Belts | 7 |
| Pressure Gauge | 21 | Self Adjusting Brakes | 19 |
| Recommendations | 53 | Service and Maintenance | 48 |
| Transmission | 54 | Service Assistance, After-Hour | 80 |
| Viscosity | 53 | Shock Absorbers | 69 |
| Operation in Foreign Countries | 10 | Signals, Turn | 16 |
| | | Solvents, Recommended Cleaning | 43 |
| | | Spark Knock | 60 |
| | | Spark Plugs | 63 |
| | | Speakers, Radio | 26-31 |

| SUBJECT | PAGE NO. | SUBJECT | PAGE NO. |
|------------------------------|----------|-------------------------------------|----------|
| Specifications | | Transmission | |
| Air Cleaner | 73 | Braking Effect On Hills | 16 |
| Body | 71 | Checking Fluid Level | 54 |
| Capacities | 72 | Maintenance | 54 |
| Dimensions | 72 | Shift Controls | 15 |
| Filters | 73 | Transmitter, Mobile Radio | 31 |
| Fuses | 74 | Tread Wear Indicators | 67 |
| Light Bulbs | 75 | Trim Care Interior | 43 |
| Miscellaneous | 73 | Turn Signals | 16 |
| PCV Valve | 73 | U | |
| Vehicle Identification | 71 | Underbody Maintenance | 70 |
| Speedometer and Odometer | 20 | Undercoating | 46, 70 |
| Spot Cleaner | 43 | Upholstery | 43 |
| Stains, Removal Of | 44 | V | |
| Starter, Safety Switch | 14 | Vehicle Identification | 3, 71 |
| Starting Engine | 14 | Volatile Cleaning Solvents, Caution | 43 |
| Cold Weather | 14 | W | |
| Emergency | 14 | Warning Flasher, Hazard | 36 |
| Steering | | Warning Lights | |
| Column Controls | 13 | Brake | 22 |
| Linkage | 57 | Charging System | 22 |
| Maintenance | 57 | Cluster | 21 |
| Power | 16, 57 | Low Fuel | 23 |
| Tilt | 16 | Washers, Windshield | 24 |
| Wheel | 16 | Washing | 46 |
| Stereo, Radio and Tape | 26 | Waxing | 46 |
| Suspension | | Weight Distribution | 2 |
| Front | 69 | Wheel Alignment | 73 |
| Rear | 69 | Wheel Bearings | |
| Swivel Seats | 6 | Rear | 68 |
| T | | Wheel Changing | 39, 67 |
| Tape System, Stereo | 26 | Wheel, Tilt Steering | 16 |
| Tell Tale Lights | 22 | Windows | 33 |
| Temperature | | Latch | 33 |
| Control, Cooling and Heating | 25, 26 | Screen | 45 |
| Gauge | 20 | Windshield | |
| Thermostat, Engine Cooling | 60, 73 | Defrosting | 26 |
| Tilt Steering Wheel | 16 | Washers | 24 |
| Tire | | Wipers | 24 |
| Care | 65-68 | Wrecker, Towing | 40 |
| Changing | 39, 67 | Z | |
| Inflation Pressure | 65 | Zone Offices | |
| Inspection | 66 | Canada | 77 |
| Load Limit | 65 | Mexico | 79 |
| Replacement | 67 | United States | 79 |
| Rotation | 66 | Zone Territories | |
| Snow | 66 | Canada | 77 |
| Traction | 66 | United States | 78 |
| Tread Wear | 66, 67 | | |
| Towing | 40 | | |
| Trailer Hauling | 9 | | |

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 an unleaded gasoline or regular grade leaded 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.

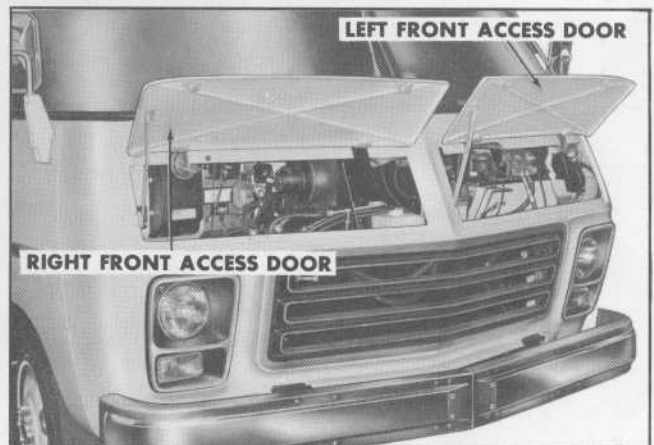
ENGINE OIL DIPSTICK—Located inside the left front access door. Check oil level as the last operation in a fuel stop. Maintain between "ADD" and "FULL" marks on dipstick.

ENGINE OIL RECOMMENDATION—Use only high quality SE 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—Check fluid level monthly. When fluid level is low, add colorless, odorless drinking water to bring level to split ring in filler openings. If your vehicle is equipped with a Maintenance-Free battery the charge or test indicator provides information for testing purposes only.



Front Access Doors