

TIARA
OWNERS MANUAL

We welcome you to the family of Tiara Motor Home owners. You have purchased a quality motor home, one of which you can be justly proud. No other motor home is built exactly like Tiara and in very few others will the same quality of workmanship and materials be found.

It will be the intent of this manual to acquaint you with the basic operational features of Tiara and will not enter into technical aspects of the various components of the unit. The main purpose of the manual will be to outline for reference those items which were discussed during your indoctrination, items of information which may have been forgotten, or which may have been overlooked at that time.

On those components in the Tiara which are manufactured by Belco, Inc., there is a one year warranty. You should refer to your Oldsmobile Owners Manual for warranty information on all Oldsmobile parts in your Tiara. Olds parts in units 2002 through 2027 are warranted direct to the owner by Oldsmobile. A Protect-O-Plate is supplied to the owner by Oldsmobile as proof of this warranty. On units 2028 and later, the Oldsmobile parts are warranted by Olds through Belco to the owner. All warranty claims on Oldsmobile parts on these units must be processed through Belco, Inc.

All appliance items such as air conditioning, auxiliary power

unit (110 V generator), refrigerator, range, hot water heater, furnace, stool, etc. are warranted to the owner for one year by the manufacturer of the unit. All warranty cards on these items are filled out and mailed to the manufacturer for the Tiara owner by Belco, Inc.

All exterior skin and supporting structure of your Tiara are made of aluminum except the roll bar, located immediately forward of the entrance door; it is fabricated from welded steel. Some of the small access doors on the outside are fiberglass. The interior paneling and cabinetry facing is made of melamine plastic, a formica-like material.

WARRANTY:

The general policy for warranties is outlined in the foreward section of the manual. As a general rule, before you have any repair work done which will amount to more than twenty-five dollars, you should first check with the service department of Belco, Inc. for approval. If the work done falls under the Belco warranty, you should forward a copy of the paid bill to the company for reimbursement. For clarification please read the following carefully, as these items are not covered by warranty:

1. Engine tune-up
2. Cleaning or replacement of spark plugs
3. Adjusting or replacement of ignition points
4. Adjusting or cleaning of carburetors
5. Adjusting valves and/or engine timing
6. Front wheel alignment and wheel balancing
7. Clutch or transmission adjustments
8. Brake and clutch lining replacement
9. Wiper blades replacement
10. Lubrication and oil and filter change
11. Tires or tubes (Warranted by Tire Manufacturer)

12. Brake cleaning, bleeding system, or shoe adjustment
13. Adjustment for body rattles and squeaks due to normal road hazards
14. Engine or chassis damage, due to weather and/or normal road hazards
15. Paint, chrome and trim damage due to after-delivery use
16. Cooling system cleaning or replacing of coolant
17. Positive crankcase ventilation valve cleaning

ENGINE:

The engine, transmission, final drive, and front suspension of your Tiara is the same as that in an Olds Toronado automobile except that special heavy duty torsion bars have been substituted for the standard. The transmission is equipped with a heavy duty factory installed cooler. You should refer to your Olds Owners Manual for proper maintenance and other information. You should always use the oil change interval for severe service- 3,000 miles or 2 months, and change the oil filter each time.

The engine is equipped with an overflow coolant recovery system as standard equipment by Belco, Inc. The expansion tank in the system can be reached through the access door located front and center under the wind-shield. Anytime additional coolant is added to the system, it must be put into this expansion tank. The radiator cap should not be removed.

The oil dip stick and fill spout are reached by raising the engine hatch cover in the drivers compartment. Minor engine repair and tune-up is accomplished through this opening. For major engine repair, the entire engine assembly and front suspension may be removed. Your Tiara was engineered so that this is not as difficult as it sounds. The front cover panel containing the grill is first removed. All wiring, which is equipped with quick disconnects, steering column, and hoses

must be disconnected. Approximately three bolts on each side of the Olds chassis where it is attached to the motor home frame must be taken out. The engine and chassis assembly is now ready to be pulled from under the coach body.

Engines in units 2002 through 2027 burn premium fuel. Later units use regular fuel. The engine of your Tiara has been tuned by factory trained mechanics at an authorized Oldsmobile dealership prior to delivery to you.

TORSION BARS:

The heavy duty torsion bars in your Tiara should be adjusted to $7\frac{1}{2}$ inches road height. This dimension is measured from the bottom edge of the Olds frame, which is located directly to the rear and inboard from the front wheel, to the ground. This setting has been properly made and a complete alignment on the front wheels has been done prior to delivery of your coach to you. You should periodically have the front end checked for alignment, between five and ten thousand miles, or sooner if unusual tire wear is evident.

CHASSIS LUBRICATION:

Follow Oldsmobile recommendations for lubrication of standard Olds components in the chassis suspension and steering. In addition to the standard grease fittings there are three modified components to grease. These are located on diagram - Appendix A, attached.

POWER BRAKES:

Your Tiara is equipped with power disc brakes in front and standard power expansion type in the rear, with a total of eighty-four sq. inches plus of braking surface. The vacuum assist and master cylinder are located under the coffee bar directly over the automotive heater. Master cylinder brake fluid can be checked and filled through an access hole located in the coffee bar. The access hole cover plate can be moved by taking out the four retaining screws.

SHOCK ABSORBERS:

Your Tiara is equipped with Monroe Heavy Duty Shock Absorbers. Their numbers are 4612 for the front and 4622 for the rear. When replacements are installed they should be of equivalent duty.

TIRES:

Dual single tires, size 10-16.5, have been installed on all Tiaras starting with 2017 and later. These tires have added stability, safety and additional tire mileage over those previously installed. These tires require a special wheel which Belco, Inc. has specially made. The center portion, or spider, is standard Olds and it is welded into an 8.25 rim at a pre-determined setting. Air pressures for the 10-16.5 tires should be maintained at these weight to air pressure figures:

35 PSI - 2000

40 PSI - 2150

45 PSI - 2300

WEIGHT:

When delivered to you, your Tiara, depending on the amount of optional equipment installed, will weigh between 6,600 and 6,850 pounds. As the weight allowed on the front suspension is critical, too much weight on the front axle may void the Oldsmobile warranty. As a result you should always know what the weight of your unit is and how much is on the front wheels, as 4,000 pounds is the maximum allowable there. Maximum total weight on units 2002 through 2027 should not be over 8,500 pounds. On units 2028 and beyond, 9,000 pounds is allowable.

For a very small charge you can have your unit weighed at any large salvage yard, grain elevator, or any other business that has truck scales.

REAR AXLE AND SPRINGS:

The rear axle is standard Oldsmobile on units 2002 through 2027. On 2028 and later, the axle is specially made for Tiara and has approximately 1,000 pounds more carrying capacity. The rear springs are leaf type and are manufactured specifically for Tiara. Neither the axle nor springs require maintenance, except that the rear wheel bearings should be packed every 10,000 miles.

JACKING:

Your Tiara is furnished with a hydraulic bumper jack. When using, it should be attached to the bumper as close as possible to the bolts which attach the bumper to the bumper brackets.

CARE AND MAINTENANCE:

Exterior:

Your Tiara is painted with a high quality acrylic enamel paint which will withstand severe weather conditions. You should, however, keep it as clean as possible and polish it at regular intervals of about six months. The unit has been undercoated at the factory. Those owners who drive their units over roads that have been treated with heavy concentrations of salt for snow and ice removal, should hose off the underneath areas of the van if possible.

Interior:

Use a damp cloth or polish to clean the melamine plastic and vinyl clad interior ceiling and trim parts. Formula cleaner made by the Formica Company does an excellent job of cleaning and polishing the formica surfaces.

The drapes and cushion covers are removable for dry cleaning. The carpet is 100% nylon and should be cared for much the same as the carpet in your home.

SKIN AND STRUCTURAL DAMAGE:

Minor damage to the exterior aluminum skin is quite easily repaired, and probably at less expense than fender or body damage to an automobile. One would think first of an auto body shop for this kind of repair work, but we would recommend an aircraft repair shop or high quality sheet metal shop. Minor skin damage can be repaired by replacing the damaged panel or by overlaying a sheet of aluminum over the damaged area and riveting into place.

Major damage to exterior skin and supporting structure should be handled cautiously, as all supporting members and skin components tend to combine forces to make up the overall strength and load carrying abilities of the unit. If major damage is sustained and you are not able to bring your unit back to the factory for repair, as will generally be the case, you should as in the case of minor damage, take your unit to an aircraft type repair shop. We would recommend that the repair shop call the factory service department for information and advice if there is any doubt as to proper and accurate repair procedure.

GASOLINE TANK:

The gas tank, made of aluminum, is located directly aft of the rear axle and has a capacity of 42 gallons. This capacity will give you an extended range between refills. Many stations give a discount for purchases of 30 gallons or more. The fill spout is located at the rear of the coach to the driver's side of the spare tire. The fuel gauge on the dash shows the approximate fuel level in the tank only when the ignition switch is on.

FRESH WATER TANK AND PLUMBING SYSTEM:

The fresh water tank is made of aluminum and is located approximately amidship. It has a capacity of 50 gallons, and is equipped with internal baffles to reduce liquid movement when the coach is in motion. The fill cap and city water hookup are located just forward of the shoreline receptacle toward the rear on the driver's side. A small door equipped with a lock covers the two water intakes. The tank cannot be filled through the city water hookup as this system bypasses the tank and water pump and pressurizes only the plumbing leading to the faucets, shower, stool, and hot water tank. When using

the city water hookup you should always use a pressure regulator set at not more than 25 pounds at the hose connection. This regulator is extremely important as some city water pressures are exceedingly high and might damage the coach plumbing. A water level gauge is located on the forward wall of the refrigerator compartment. The fresh water tank is equipped with an overflow vent. When the tank is full, water will spill out this vent and will be visible on the ground at the left side when standing at the fill area.

The fresh water system is equipped with a demand type 12V pump. The pump is turned on with a switch located next to the sink on some units and on the forward wall of the refrigerator on others. The pump runs only when water is needed, such as when a faucet is turned on, stool flushed, etc.

The pump is calibrated to turn on at 15PSI pressure and off at 25PSI. A check valve is located a few inches into the plumbing system from the pump to maintain pressure in the lines and prevent the water from draining back into the tank.

It is recommended that the pump be turned off when the coach is moving. This is a safety precaution in the event that vibration might cause a leak in the lines. If the pump were turned on, it would pump water out the leak until such time that it were shut off. In case you forget to shut the switch off there is a red light on the left side of the dash on units up to and including 2027, which burns whenever the pump runs. This is to alert you to trouble if the pump should come on when you are traveling. Owners of units 2028 and later should make sure that the pump is off when traveling.

The hot water heater which is LP Gas operated, is located under the sink in the galley. It is 6.2 Gal. capacity with a recovery rate of seven gallons per hour. Lighting and operating instructions are included in the information packet.

HOLDING TANK, OVERBOARD PUMP, AND 3" DRAIN:

The holding tank is made of aluminum. It has 50 Gallon capacity and is equipped with internal baffles to minimize liquid movement when the coach is in motion. It is located directly beneath the bathroom. Tiara is one of the few motor homes which includes as standard equipment an overboard pump to empty the holding tank in addition to the standard 3" dump hose.

There are two flushmounted doors in the rocker panel on the driver's side underneath the outboard bathroom wall. The door to the rear, when opened, exposes the Lim-In-Ator pump and knife valve handle. The forward door, when opened, exposes the 25 foot length of 3/4" hose which is capped on one end and hooked directly to the Lim-In-Ator pump on the other. The toggle switch which activates the pump is also visible when the forward door is opened. On later units the toggle switch is located in the pump compartment. To empty the holding tank with the pump, one only has to pull out the 3/4" hose, un-cap the end, and put it in the disposal station. and then turn the pump on with the toggle switch. It will take approximately eight minutes to empty a full 50 gallon holding tank. The Lim-In-Ator pump is equipped with a macerator blade which liquifies all solids and will grind up such items as wood chips, cigarette filters, etc. which might get into the holding tank. After the tank is empty, fresh water should be run

into it to clean out the pump and hose prior to shutting the pump off and recapping the hose and replacing it.

To use the 3" dump, remove the plug from the elbow located between the access doors, attach the 3" dump hose which is furnished with the coach and is normally stored in the right rear baggage compartment, insert the free end into the dump station and then turn the knife valve clockwise. After the tank is empty, run fresh water through the tank to clean out the hose, remove the hose, replace the plug, and close the knife valve by turning it clockwise.

Note: Do not run the Lim-In-Ator pump with a kink in the hose or with the hose capped as damage might result.

ELECTRICAL SYSTEM:

Your Tiara has two separate wiring systems, 12V and 110V. All lights and appliances except the electric side of the refrigerator and of course the 110V side of the Coleman furnace are powered by 12V. The source of power for both the 12V system in the coach and for all automotive requirements is two 90 ampere batteries which are located in a vented compartment on the upper deck directly behind the driver. On units 2028 and later, batteries are located in the small compartment on the driver's side of the generator compartment. These batteries are kept charged by the heavy duty alternator mounted on the engine. They are connected into the system individually by a switch, one for each battery. These switches are located just below and to the right hand corner of the engine hatch cover. The purpose of these switches is to allow both batteries to be disconnected during periods of

coach inactivity, and to allow one battery to be turned off during the night so that one battery will always remain fresh for starting the coach engine in the morning.

The 110V system operates entirely independently of the 12V. Your coach is equipped with a 25 foot shoreline cord for use in connecting the 110V system to shore based 110V current. The shoreline plugs into a socket on the outside of the coach toward the rear on the drivers side, approximately four feet above the ground. There are seven 110V outlet locations inside the coach and one outside. The one outside is located behind the refrigerator access door panel.

In addition to the shoreline to energize the 110V system, it can also be done with a 110V generator. Located on the wall beneath the bed on the driver's side of the coach is a selector switch. This switch should be pushed upward if you are using shoreline 110V current and pushed down for generator current. The switch is marked for proper identification of position.

The 110V system of your Tiara has another very outstanding feature. It is wired to a battery charger which automatically charges the 12V batteries. It also converts the 110V current to 12V for use by the 12V system and thus preserves the life of the batteries. The battery charger is located in the compartment on the upper deck directly behind the passenger's seat. It operates as noted previously on either shoreline or generator current. All fuses for the automotive portion of the 12V system, including the coach tail, clearance and brake lights are located under the dash to the left of the steering

column; the fuses for the interior coach portion of the 12V system, including the Lim-In-Ator pump, freshwater pump, range-hood fan, lights, etc. are located under the galley on the rear wall.

There is a 30 Amp. overload reset button located directly above the battery switches for the 12V system. There is a breaker box for the 110V system located in the rear of the coach next to the shoreline - generator selector switch.

AUTOMOTIVE HEATER AND DEFROSTER:

The heater is located in the driving compartment on the forward wall centered between the driver and passenger seats. Heater operating instructions in your Oldsmobile manual are not applicable. Four knobs located below the coffeybar to the driver's right are identified as follows: heat, fresh air, heater, defrost. The heat knob must be pulled out, the farther out it is pulled, the more heat is made available. The fresh air knob also must be pulled to allow outside air to circulate through the heater. The heater switch controls the fan. Turn it clockwise one notch for low speed fan operation, two for high. For defrosting turn the defrost switch clockwise one notch for low speed and two for high. For maximum defrost operation, the fresh air control should be left in the closed position.

LP SYSTEM:

Units up to 2027 are equipped with two 20 pound tanks with automatic changeover. For the auto changeover to work the valves on both tanks must be open. When the tank which is

being used from is empty, the regulator automatically changes withdrawal to the full tank without interruption of service. Turn the tank valve off on the empty tank, remove the "POL" hose fitting from the tank and removed the wing nut and hold down bracket from the rack. The empty tank can now be removed for filling. On units after 2027, a 68 pound, lay down tank is installed. It may be filled while in place without removal. A remote gauge is supplied so that the LP supply can be readily checked at any time.

AIR CONDITIONERS:

The automotive air conditioner is located in the foreward overhead. It is a 10,000 BTU, Mark IV unit and is warranted to the Tiara owner for one year by the manufacturer. The compressor is standard Oldsmobile and is powered by the engine. Operating instructions for the Mark IV are included in the information given the owner at time of delivery.

The roof top air conditioner is a 12,000 BTU (10,000 BTU on units prior to 2015) Coleman, and is warranted to the owner by the Coleman Co. for one year. It requires 110V current and can be operated from either shoreline or 110V generator. Operation instructions are also included in the information given the owner at time of delivery.

110V GENERATOR:

Both 3,500 watt Kohler and 4,000 watt Onan generators have been installed in Tiara. Operating and maintenance instructions are found in the equipment information packet. The unit is equipped with a remote start switch and its own battery.

Both the Onan and the Kohler are quality units and it is essential that the manufacturers recommendations for maintenance be followed closely for satisfactory operation and long life of the unit.

WINDSHIELD WIPERS:

The windshield wipers are pantograph type. Most coaches are equipped with a separate switch for each wiper. The motors are two speed, 12V, heavy duty motors with an automatic built-in parking circuit. All coaches are equipped with windshield washers.

ROOF VENT:

This vent, located in the bathroom ceiling, can be operated three ways, aft, forward, or vertical open. The electric fan is 12V, and is turned on by a toggle switch.

APPLIANCES:

STOVE AND RANGE HOOD:

All units are equipped with either a Magic Chef or Holiday three-burner range with oven, unless four burner ranges were special ordered. All ovens are equipped with safety pilot lights. The range hood has light and fan switches located on the front. The exhaust louver is equipped with a lock feature to stop wind noise when traveling. The lock must be unlatched when the exhaust fan is in use. The lock is located in the forward edge of the louver on the outside of the coach.

REFRIGERATOR:

The refrigerator is a combination gas-electric unit. The electrical side requires 110V current. The unit can be lighted from the inside, but the change over from gas to electric operation or vice versa must be done manually from the outside. The gas valve and electric switch are so positioned that only one can be "on" at a time. These are located behind the access panel on the outside of the coach. Heat generated by the refrigerator when in operation exhausts to the outside through the top louvers.

FURNACE:

The furnace is a 23,000 BTU Coleman forced air furnace. It burns LP gas and the electrical components will operate on either 12V or 110V current. A selector switch allows a choice of current if both are available. Lighting is accomplished from the inside of the coach.

STOOL:

The stool is a flush, marine type toilet. When flushed it drops straight into the holding tank.

As previously mentioned all appliance operating and maintenance instructions are included in the information packet given to the owner at the time of delivery. All appliances are warranted to the owner by the manufacturer.

GENERAL INFORMATION:

It is a good thing to remember that when you need to fill your water tank, your holding tank is probably nearly full, as both

tanks are of equal capacity. It follows that when one is empty the other is full. You can also reduce or minimize unnecessary weight by following this procedure.

If you did not order your Tiara with roof-top air conditioning or 110V generator, you may want to add these later. The necessary wiring for both these options was put into your unit at the factory. Wiring for the generator is stubbed off at the generator compartment at the center rear. That for roof air conditioning is located in the ceiling. When the 14 inch square opening is cut in the roof, $6\frac{1}{2}$ inches to the rear of the roll bar, this wire should be visible. On units 2027 and later you should contact the factory for the location of the air conditioner wiring.

The fresh water and holding tanks of your Tiara and all exterior pipes are insulated with polyurethane foam. If heat is kept in the coach, there should be no freezing problems unless the weather is severely cold. To completely winterize your Tiara the following steps should be taken. Either drain or put anti-freeze in the holding tank. Even after it is drained, you should put a small amount of anti-freeze in the tank to protect the Lim-In-Ator pump. Run the pump a few revolutions to let it drain some anti-freeze into the pump body. Drain the fresh water tank or put some non-toxic anti-freeze in it. The drain plug is located on the passenger side of the unit at the center, bottom of the tank. Open all faucets, loosen the pipe just beyond the fresh water check valve and blow out the plumbing with compressed air. Put a small amount of anti-freeze in both the kitchen and bathroom sink traps and the shower drain trap. Drain the hot water tank.

Your Tiara was built to give you many miles and years of dependable, enjoyable service. If something should arise which is not fully covered in this manual, you should call the service department of Belco, Inc. for further information. Phone numbers are 316-663-1187 and 316-662-0289.

We wish you the best of luck and lots of fun and motor home travel in your Tiara.

Belco, Inc.