

Dear Friends:

You are just about to set forth on some new adventures in your ULTRA VAN. We feel sure that we will soon be receiving mail from you telling us of some exciting trips that you have enjoyed. We look forward to these letters with interest.

On the following pages, we have tried to supply you with all the information about the care and operation of your ULTRA VAN. We may have overlooked some points. However, we have made a sincere effort to cover the main items as clearly as possible.

Read every page of the manual. Make a list of anything you do not clearly understand. Bring up these points with our representatives. They are willing to assist you in every way. When all matters in the care and operation are clear, you will drive your ULTRA VAN with more enjoyable self-assurance.

Yours truly,

ULTRA, INC.

L. P. Knipe
Sales Manager

STUDY AND PREPARATION of this book was made by the following:

Mr. Ed Martin - Redondo Beach, California, #296

Mr. Len Ryerson - North Hollywood, California, #368

Mr. Larry Knipe, Mr. Bob Corkins, Mr. John Holmes, of Sales and Service Office
Manufacturing
Plant Engineers

COMPANY FACTS

PLANT ADDRESS

Ultra, Inc.
Post Office Box 106 - HABIT (Hutchinson Air Base Industrial Tract)
Hutchinson, Kansas 67501
Phone - Area 316 - MO 3-1187

Your Customer Service Representative is Bob S. Perkins

Plant General Manager is _____

SALES OFFICE

Ultra, Inc.
~~4241 Pennsylvania Avenue~~
~~Kansas City, Missouri 64111~~
Phone - Area 816 - JE 1-5730

101 West Fifth
Hutchinson

Sales Manager is J. P. Knipe

The above facts can be useful if ever there is a need to contact either office. If a need arises concerning parts, warranties or service information, you can obtain replies earlier by contacting the manufacturing plant directly.

Any information pertaining to sales should be directed to the Kansas City Office. Extra literature requests or letters concerning your travels should be directed to the Kansas City Office.

LITERATURE

You will be given a small supply of the following pieces of literature. We know that you will meet many new friends once you are on the road in your ULTRA VAN. They will come to see your Van wherever you stop. You can use this literature to help them know more about the ULTRA VAN.

1. Booklet - The 36 page booklet is very descriptive. There are two of these in the literature. These we use only where there is a real interest in future ownership.
2. Black and White Brochures - This gives all the factual information on the ULTRA VAN in less detail. It is complete and can be used to give those people showing some interest in ownership. They can write in here for the 36 page booklet. Write your name on these so they will know who showed them the ULTRA VAN.
3. Post Cards - These are the useful item with your guests. By merely filling in their name and address and mailing the card, we will send them all the details and literature on the ULTRA VAN. Be sure to put your name in the space provided.

At any time you wish more of any of the above listed material, please let the Sales Office know. We are ready to send you any additional pieces of literature that you can use.

WARRANTY INFORMATION

SHELL - The external shell, tanks and suspension are all manufactured by Ultra, Inc. These parts all carry a one year warranty against poor workmanship. Parts damaged through accident or negligence are not replaceable by warranty. The company will cooperate with you on pricing of replacement items not covered under the warranty. Requests for parts, pricing, etc. should be made to the manufacturing facility.

ENGINE - Any problems arising with the engine or transmission are covered with a 90 day warranty but must be handled by our manufacturing plant. Paid bills for any minor corrections should be sent to our plant for reimbursement. Be very sure the garage details, on a separate sheet, what they found causing the problem, especially if it entails a problem caused in manufacturing the engine. Minor engine repair up to \$20.00 may be made without factory approval. Amounts over this should be discussed with our plant for prior approval of the expenditure. When seeking approval, please be prepared with the garage diagnosis so our service people can assist you with their thinking to save you excessive labor time lost.

(Read Carefully, the Items NOT Included In the Warranty)

1. Engine tune-up
2. Cleaning or replacement of spark plugs
3. Adjusting or replacement of ignition points
4. Adjusting or cleaning of carburetor
5. Adjusting valves and/or engine timing
6. Front wheel alignment and wheel balancing
7. Clutch or transmission adjustment
8. Brake & 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. Any modification other than factory recommendations to any unit as to use for competition racing will void warranty
17. Cooling system cleaning or replacing of coolant
18. Positive crankcase ventilation valve cleaning
19. Service charges will be made for 6,000 mile, 12,000 mile, 18,000 mile and 24,000 mile check-ups.

PUMPS - There are five pumps in your ULTRA VAN. Location of these is shown on Page of the plumbing diagram. These are replaced by our plant and carry a one year warranty against manufacturing defects.

CABINETS AND TRIM - The wall and cabinet trim is a melamine finished material. Cabinets and wall pieces are all cut and inserted into place by our plant. All carry a one year warranty. If a wall panel must be replaced, lay the broken piece out on plain paper and make a template so we may cut the replacement to size for you. The ceiling material is vinyl covered aluminum. Clean ceiling with warm, slightly sudsy water and wipe clean. The Formica can be kept nice with "Pride" or any similar product.

APPLIANCES - The warranties on these and service is available in almost any city of any size. All instruction books and warranty cards are in the drawer in the galley. Be very sure to fill in the warranty cards and send them in according to the instructions.

TIRES - Warranty credit can be handled by any dealer. Replacement is based on usage and miles driven.

INSULATION - The insulation material between the ribs of your ULTRA VAN is two inch fiberglass. There is onehalf inch polyfoam on every rib. There is no transfer of heat through any rivet or metal screw that can join the inside surface and the top. This eliminates condensation on the inner walls.

ALL materials are pre-tested and of high quality to assure you the very best in your ULTRA VAN.

DRIVING FACTS

There are some things you must know about driving your ULTRA VAN which we pass on to you before you set out upon the highways and side roads in a life of "ULTRA" travel.

1. To give you more living area, your Van is 94 inches (outside dimension) at the widest point. This is almost eight feet. With the mirrors on it, it is slightly over eight feet. State laws on width do not include the mirrors so you are under the maximum. Learn to give yourself room. While learning to drive the Van, glance into the lower mirror on the right side and note where your wheels are running on the pavement as compared to your position on your side of the road. Very quickly, you will learn where to keep the Van near the center line for safe driving clearance.

2. Practice reversing the Van and handling this by using the rear view mirrors. You will be surprised how well you can master this. At first, it may seem hard but the mirrors are well placed and very useful in developing this technique.

3. Practice placing the Van next to curbs on both sides. You can accomplish this easily by using the mirrors. Before long, you will handle this 22 foot VAN as you do your own car.

4. Remember the seat is directly over your front wheels. Do not start your turn until you are even with the corner. Then the turning of the wheel sharply will let you clear the corner in the back without running the rear wheels over a curb. If one wheel does get off in mud, remember your Van is equipped with positraction so you can come on out without major problems.

5. Your Van has more underneath clearance than a normal car. However, where the road signs suggest that the road ahead is not recommended for trailers, it is advisable you not try to drive your Van on these. If in doubt on under clearance, it is best to get out of the Van and check the condition. Remember, your water and gas tanks are on the bottom of the Van.

6. Your ULTRA VAN is lightweight and this gives many advantages such as easy steering and more miles per gallon. This eliminates a lot of shifting up and down according to the terrain. However, this does not mean it will not give you some cross winds or head wind problems. Do not try to drive against winds that are reported to blow at 35 or more miles per hour. If you must go in these winds, do so easily and do not force the gas feed, which may make your engine fire too rapidly and overheat.

7. In the beginning, as you pass trucks, the wind will have a tendency to give you the sensation of being jerked to the left. This is mainly true in areas of heavy wind. As you approach a truck, take a tight grip on the steering wheel with a slight pull to the right side just as you reach the rear of the approaching truck. After you learn your ULTRA VAN, this will cease being a concern but can be alarming in the beginning.

8. When seeking an overnight parking area, try to find a level area. There is an "eye" type level that is furnished with your refrigerator. This can be placed on the shelf across the front to give you a good idea of the way the Van is sitting. A level position or slightly up on the left will keep the refrigerator running good and it also makes more comfortable sleeping when the ULTRA VAN is near level.

9. Turning - The front wheels of your ULTRA VAN will turn at a 50 degree angle. You can turn the front of your Van quickly and in a tight corner. It will make a "U" turn in approximately 28 feet. This is also a big assistance in parallel parking.

Often, we have heard it said that owning and traveling in an ULTRA VAN is like a marriage. We strive to get the very best but still there must be some sacrifices on both parties. We have tried to give you the very best in equipment but it can be no better than the care and understanding the owner gives it. For some of the many benefits incorporated in the Van, there may be a few sacrifices in our travels to get the ultimate from its use.

NOW, let us start with the outside of your new ULTRA VAN and cover it step by step so you know all about it. Let us begin on the side with the entrance door.

Tires - All are 7:35 x 14 four ply tubeless tires. They are designed for a weight load of just under 5000 pounds. They are warranted by Dunlop and any correction can be handled by a Dunlop tire dealer. Have your title or purchase date available to prove the date of purchase. Some replacement costs are calculated on a basis of tire tread remaining.

Rear Mirror - is mounted with rivets to a curved cross rib above the windshield. If necessary to remove the bracket, drill out rivets, reset the bracket and drill holes. Use pop rivets or metal screws to replace bracket. This mirror is in two sections. The top shows a distance back. The lower tinted section reflects down to the road for width determination.

Windshields - These are regular Chevrolet Van windshields cut off square on one end to fit our dividers. They are regulation safety glass. The center windshield section and the two front sliding glass windows are made from the same type glass. The dividers can be removed by unscrewing the chrome solid head nuts showing on the outside. The glass fits into a double flanged rubber mounting. To seal this tight, a clear sealant is run into this rubber flange when the glass is inserted. It is also used in the dividers to seal out water. If a leak develops, any auto supply can furnish you with a satisfactory sealant for this area. Pull slightly back on the rubber flange and let sealant run down before releasing the flange back to position.

Entrance Door - This is a locking door. The key is the smallest one of the group of keys. This turns to the right to lock the door, to the left to unlock. The ULTRA VAN is like an airplane fuselage and to shut this door tight, you slam it shut.

Lower Louvered Door - just to the left of the entrance door. This is a dual purpose door. It opens with the key stamped "Refrig" on the top of the key. In here is the rear access to the pilot for the refrigerator and the two water connections. One water connection fills your fresh water tank and one is for a direct city water connection.

Gold Stripe - This is self-adhesive gold tape. We stock this and if you ever need a length, please write the factory, giving the approximate length you may need. By peeling off the back of the tape, the stripe will then stick in place.

Side Entrance Door - located about the middle of the ULTRA VAN about eye level. In here is your instantaneous hot water heater. This has seven jets that come on immediately when the hot water tap is opened. The pilot is lighted from inside and will be covered later. In freezing weather, it is necessary to drain this tank. From the hot water tank literature, acquaint yourself with the drain system.

Lower Rear Door - is a locked storage area. The key is marked "BAG". This is not water tight but good for fishing gear, buckets or those necessary items, but not attractive items for travel. Since it is not water tight, it is advised that tools or equipment be wrapped in plastic for protection.

Bumpers - These are a special foam material that has a lot of bounce for protection. They are attached to the body with an epoxy glue. The epoxy glue can be obtained from auto supply stores or trailer supply companies. If the bumper gets torn or damaged by cuts, this material comes in cans in trailer supply houses. It can be applied with a knife or putty knife for a new smooth bumper. It dries out pure white.

Upper Rear Window - This window cranks open from the inside. While driving, for better ventilation, it is well to have this open about two to three inches. Because it is braced by a center shaft, it is not good to have it clear open as it could vibrate as well as loosen on the roller opener.

Rear Entrance Door - This is a keyed door, stamped "AFT". It opens and raises up. It opens into the area between the rear twin mattresses behind the motor compartment. From the rear, lift up on the board under the carpet. In here is the spare tire and wheel, the jack, lug wrench and battery charger. There is some room for extra storage.

Using Jack - The jack supplied has sufficient strength to raise the Van while loaded. The jack should be positioned in the correct place in the wheel wells. You will note a piece of steel protruding at the bottom of the rear side on the front wheel wells and at the bottom of the front side of the rear wells. The raise part of the jack goes under the steel protruding lips for successful raising and lowering of the Van.

Battery Charger - This is equipped with a dial to indicate it is charging. There is a switch on the rear wall to start the charger. When plugged into 110 volt with the shoreline, flip the switch on and your batteries will charge while parked. This is not a trickle charge. DO NOT leave it on too long or you can burn up the batteries. It takes about four to five hours to completely charge one battery.

NOW, as we continue on around to the other side of the new ULTRA VAN, we see there are five openings on this side. Here is what they are:

Rear Lower Opening - This is the L. P. gas tank. The door has cut outs to allow air to enter. This tank can be filled by any L. P. gas supplier that has a tank with a filler hose. There are a few who do not have this equipment. They have been critical of the installation at times because they claim the tanks should remove to fill. Most up-to-date L. P. operators now have hose fill type. The head of the tank has a shut-off valve and a sending device. The sender is hooked up to the gasoline gauge on the dash. By the flip of a switch, you can tell how much L. P. remains in the tank. This switch will be covered when we go inside the ULTRA VAN.

First Small Door - Moving forward, the first small door is the 110 Volt Shoreline. This is a 50 foot heavy duty wire. The connection is covered to keep out water. By plugging in this shoreline, you have eight live 110 volt receptacles inside the Van. Where you are using the 110 volt, you can raise the aft door and flip on the battery charger. This will keep your battery charged while using lights.

Small Second Door - This is the hose for emptying the final holding tank. There is a 50 foot hose. When you are ready to empty your tank, remove the "screw on" end plug on the hose. Insert hose into a stool of any service station restroom. Reach up in the top of this compartment and flip on the switch. The tank empties in 7 to 12 minutes. You can tell from the tone of the running pump when it is empty. Turn off switch, remove hose, flush stool in service station and rinse end of hose clean. Screw cap back on hose and rewind into compartment. Once a year, it is well to remove the drain cork and flush out with water. Drop some amonia through the stool and flush into the tank for ood cleaning.

Circle Opening - down on the bottom of the Van at about the center held in place with six metal screws, is an entrance gap for tightening the L. P. gas connection to the inside heater. Occasionally this should be checked for any leaks. Normall, twice or three times a year should be ample for checking based on the amount of use you give your Van and the type of roads traveled.

Gas Leak Test - L. P. gas of any type has an additive that makes it a very obnoxious odor. You can, as a rule, detect a leak quickly. It is still well to occasionally check all the connections to be sure they are tight. The drawing on the plumbing detail will locate these connections for you, Page . Merely paint on soapy water and watch for bubbles to determine leaks. Tighten only slightly as too heavy a turn can strip threads. There is also some fine joint sealants available from trailer supply firms.

Locked Gas Filler - Up toward the front is the locked door where gas is fed to the tank. The correct key is identified "GAS". Because of the three baffles in the tank, it fills slowly, especially the first few times. Have the service attendant use the slow speed in the gas feeder pipe. Use Ethyl gas. If in Mexico, be careful to get good high octane gas.

Towing - If it is necessary to tow your Van, be sure they hook to each side to the "A" frame of the suspension under the wheel well. If it must be lifted, make a board or blankets placed between the chain and the body to keep it from being damaged.

You have now explored the exterior of your ULTRA VAN and know where part of the equipment is located. Let us return to the main entrance for further acquaintance.

Tanks - There are four tanks under the floor of the Van. They are as wide, or long, as the Van is wide. The first tank or front one is the gas tank. The next one back, is the fresh water. The next is the final holding tank and the last one is a center holding tank. Water from the shower drain and wash basin flow into the center hold tank and this is re-used to flush and fill the stool. Kitchen sink water and the stool drains into the final hold tank. The tanks have gap covers between them to give a smooth bottom to your Van and allow even "under" air flow to the engine compartment. All tanks have a drain connection at one end and accessible from a kneeling position at the side of your Van.

Fresh water tanks can freeze in cold weather. It should be drained. The two holding tanks can be kept from freezing by adding some alcohol base anti-freeze. This can be put in through the two basins inside.

The gap covers are held on each side by metal screws and can easily be removed to get to the concealed pumps. The tanks are screwed and riveted into place against the reinforced base of the side wall. If they have to be removed, they can be replaced with metal screws or pop rivets.

Each tank has three baffles. These are to keep the weight from shifting. The gas tank baffles are a bit different than in the other tanks. The first baffle in the gas tank is solid up to the top and overflows over the first baffle into the balance of the tank. This first section becomes a reserve tank of approximately five gallons of gas. Should you run out of gasoline, you can resort to this reserve by pulling out the lever located under the front shelf on the inside and just to the right of the steering column. All the other baffles in the tank are similar in construction with holes at the top and on the corners to allow the liquid to transfer from one compartment to another within the tank but restricted enough so there is not a weight shift or excessive noise.

As we face the door, let's look on the inside.....

Flooring - Above the aluminum tanks is a thick plywood flooring. On top of this is the polyfoam and then the nylon carpeting. You have a well insulated floor as well as sturdy flooring. The carpet has snaps holding it in place around the very front of the contour of the Van. It is stapled in place around the other edges. If you ever remove the carpet, do it gently from one staple to the next. Reapply it the same way. Do not drive nails through this area as there is the danger of hitting your tanks.

Shall we work up into the Van and go to the front. We will start here and work our way back through the Van, seeing and learning about everything. Let's begin with the driver's seat.

Seats - First, the seat is set loose on top of the wheel well. This is purposely planned to give you versatile use of the seats. Once you are seated, the seats will remain firmly placed. There is a seat belt, one side firmly fastened to a reinforced section of the wheel well and the other side (to your left) is bolted through the paneling into a construction rib. These belts meet safety standards.

The driver's seat can be turned completely around and makes comfortable seating for the dining table. Or, by turning it long ways of the Van, you have a nice divan at night with a reading light overhead. In fact, both seats operate the same way and this gives you a living room atmosphere with reading lights over each divan.

Front Bed - These seats convert into a bed. Under one of the rear mattresses, there is a piece of plywood. Place this between the two wheels with both seats to a position that the backs are parallel with the side walls. Remove the cushions, putting one at each end of the bed first. The other two cushions go into place by forming an inverted "V". Then push down the center which wedges the cushions in closer together for a comfortable bed.

Emergency Brake - This is mounted on the left of the driver's seat, pulling up to set the brake and turning the handle slightly. Turn handle parallel and a slight pull releases and lets brake arm down. This is connected to a cable that runs to the rear of the Van and can be worked on easily as it is exposed on the underside. It is always well to carry two short lengths of 2 x 4 blocks to place under two wheels on steep inclines or for a long duration of time. This does not denote any weakness of the brakes but only an added safety precaution. When applying emergency brake, press down on foot brake for a more secure setting.

Draperies (Front) - Release the tiebacks on each side by unsnapping and the drapes pull from each side to cover the entire windshield area for privacy.

Front Side Windows - Right behind the tieback location on the front drapes, you will find a wood knob attached to a Dowel. This pushes in to keep the side window from being opened from the front outside. To slide window, merely pull gently out on the knob to a point where the window will slide open. Some people remove these dowels and store them in the cabinet over the driving compartment and remove them at night to lock the windows or when leaving the Van. These two sliding windows are not screened as it may be necessary to lean out to check clearances or give turn signals.

Driving Instruments - Directly in front of the driver is the dash and it has all the usual gauges and switches the same as generally found in Chevrolet cars. All are marked. The protruding arm is the gear shift. There are positions "R" - reverse; "N", Neutral; "D", Drive and "L", Low. Your gas gauge serves three gauges. When the key is on, turn your head slightly left and you see a switch with three positions, marked "Gas", "Water" and "L. P.". By turning this three way switch to the desired position, the gas gauge then registers the amount of fuel or water remaining in the tanks on the dash gas gauge.

Small Red Light - This is an indicator light to let the driver know if the water pumps and pressure comes on. This generally means a faucet is leaking or running and needs to be shut off tight.

Small Switch - is for turning top bulb of pole lamp off or on.

Removable Panel - Below the shelf is a removable small panel covered in material that matches the wall panels. Bow slightly to remove. It fits into the "Z" strip on one side and bow slightly to fit back into the opposite side. On the reverse side of this cover is a chart showing what each fuse position is and the size to be used. Many carry extra fuses of each size with them. As you remove the cover plate, you will see the fuses all easily within your finger reach.

Fan - Defrost Fan, two speed is over the driver. Keep turned to windshield to cast air clear across when defrosting. Gives air to the driver in hot weather.

Sun Shades - Adjustable by thumb screws.

Overhead Cabinet - Over the driver is what is called the front overhead canopy. This is so shaped to fit the front contour of the ULTRA VAN. It is made from Fiberglass and should it ever get damaged, it can be repaired with any fiberglass kit obtained from an auto supply, then tinted in. This is colored when manufactured but can be painted at any time you may desire, using a lacquer paint. This canopy has two entrance doors, one on each side for storage, maps, tools, etc. In here, you will also find the modesty drape that snaps over the window in the door.

Front Wall Panels - All wall panels can be removed. There are "Z" shaped strips mounted to internal ribs and each panel slides into these, into position. The wall panels are all Formica and high quality. They are easily cleaned with warm water and soap. They will shine with the use of "Pride". Use care in removing any panel that not too much strain is applied from bending or bowing to break a panel. If a panel is broken, you should lay the broken pieces together on a large sheet of paper to outline a template and mail it to our factory. We will cut a duplicate panel and return it to you. This assures you that the new piece will be identical to the broken piece.

Ceiling Panels - These are vinyl covered aluminum. They are also held in place by "Z" shaped strips mounted to ceiling ribs. They are also attached between the Z strips with an adhesive to each cross top rib. Luke warm water and mild detergent or soap will clean these panels.

Insulation - See Page 78 of the booklet "From Covered Wagon to Ultra Van". Between the outer skin and the inner walls of Formica, there is two inch thick fiberglass roll matted insulation. On each bulkhead (or rib) is one half inch of polyfoam rubber. There is little or no chance of wall or ceiling moisture drip. There is no heat loss or gain through the roof or sides as there are no screws or bolts joining or extending through from the inside of the Van to the outside so there is no place to transfer heat.

Bookcase and Table - The table stays in place when in the down position as it is engineered the exact length to wedge into the fiber of the carpet. Merely raise the table top and on the right underneath side is a thumb screw. By turning this slightly, two corner legs drop down into support position. When folding up, put the left leg up first, then over lay with the right leg and turn thumb screw to hold legs in place. Lower table and push it firmly back against bookcase with toe. The slide strip is there so the table position can be moved. In the down position of the table, it slides easily forward to the driver's seat or back. A drop of oil on this slide or a small amount of occasional wax will keep this slide operating smoothly. There is storage and shelf area behind the table. The lower right hand corner has the fire extinguisher. Any good grade of wax will keep this table slide bar working easily. If it is ever necessary to remove this section, slide the table top clear off and the bookcase is mounted to the inner wall ribs with metal screws. Notice in the lower right hand corner, there is a metal contoured cover. This must be shaped this way as it covers the gasoline tank filler spout. This can be removed to get to the spout if service is necessary. This may be easier than removing the entire bookcase to work on the spout filler.

Picture Window - All the remaining side windows in the Van, including the picture window are approved Plexiglas. As a safety feature, they are a "pop out" style. The windows slide and have small lift-up style locks to hold them in place when the Van is locked. All remaining windows are screened. Do not let a filling station operator clean Plexiglas. They scratch it. Use a very soft damp cloth on these windows. The drapes at the picture window work by pulling the cords just as the style you probably have at home. The drapes should be dry cleaned.

Overhead Storage - You will notice the appealing hardware and overhead cabinets over the galley as well as around the rear section of the Van. All cabinet doors are reinforced with plywood and use a standard hardware snap latch. All overhead cabinets are lined with polyfoam to keep the noise down or items stored from vibrating on the cabinet shelf.

Galley - Refrigerator - As you face the kitchen compartment, on the lower left side is the refrigerator. This is a Dometic. Service and warranty cards are in one of the small drawers in the galley. Be very sure you file the warranty by completing the information on the warranty card and mailing. The pilot can be lighted from the front by removing the lower plate. It snaps loose at the top, push down hard and remove. The pilot may also be lighted from the outside. Set the thermostat on position 4. There is a button to push in and hold for 30 to 45 seconds - then give a clockwise turn of the knurled knob. There is a wheel and flint in the back and the spark from this will ignite the pilot light. Holding this for 15 to 20 seconds until the thermocouple is warmed up and the pilot light will stay on. You may then set the thermostat to high or low, according to the temperature you

wish. Remember, if you turn it too high, it is possible that everything will freeze in the storage compartment. The lighter uses a regular flint as in a cigarette lighter. In case you need to replace this, your booklet gives you the direction for removing the lighter.

In case you should have a little difficulty in getting as large a spark as necessary, cleaning the wheel with a wire brush will usually correct it. If your starter should fail you, open the outside vent door and remove the metal screws, taking off the back plate. You can now light the pilot with a match.

Read your direction book carefully and note the use of the "eye level". It is generally found in motor homes that the refrigerator will operate at levels that are also level enough for comfortable sleeping.

Large Storage Drawer - Over the refrigerator. Lift slightly to open.

Center Drawers - There are three small center drawers. These are notched to keep them closed when in motion. Lift up slightly and pull out.

Gas Range - This is a Magic Chef. Complete instructions are in one of the small drawers. Be sure to complete and mail the warranty card. This range has the pan carriages all locked in place for no rattle. The entire top will raise from the front for easy cleaning.

Sometime you may wish to make a thorough study of the directions that come with your range. In this you will find a book of suggested recipes. In case you have not had experience in cooking at various altitudes, you will have to make some allowances if you are traveling in the mountains. Some firms give special high altitude recipes.

As everyone knows, water boils at 212 degrees. This, however, is at sea level. As altitude increases, there is less atmospheric pressure, and water boils at a lower temperature. A little practice and understanding of this will enable you to soon catch on if you are traveling in the high country.

Your Magic Chef is a high class unit in every way. With it, you will find a book of instructions and illustrations of parts. However, here are a few simple points that will take care of your normal needs.

It is a small thing, but note the spring clasp that holds the grates down to prevent rattling. The top of the range is hinged at the back and may be lifted up from the front. Just inside of the front top of the gas line that runs to the burners, you will see a small setscrew. To completely shut the gas off, this is turned to the right.

To light a burner, press the black control knob in and turn to the left, light, then regulating the flame to desired height.

Just to the left under the range top is a shut-off valve that regulates the gas to the oven. Turn this on and you can then light the oven pilot light. This is a double thermocouple light. The small pilot light will warm up the second thermocouple. When this is warmed up the oven burner will come on. The red handle on the front of the range may be set to desired temperature and the thermostat will automatically control your oven heat. Note you have "B" position which is "broil". A drip and broiler pan are included.

Lower Storage - There is a lower storage below the three small drawers and under the oven.

Water Switch - In front of the sink is a small switch with two settings - "automatic" and "manual". Automatic means that when you turn on and use water, the switch setting will activate the pump and pressure to keep an even flow from the outlet. Manual setting means the pump will run while you are drawing water.

Hot Water - When the faucet is turned on hot, this activates the hot water heater and you will have hot water almost immediately.

Circuit Breakers - The circuit breakers for the electrical system and the water check valve and one of the pumps is located under the lavatory in the bathroom. The cover panel snaps out.

110 Volt Plugs - Throughout the ULTRA VAN, there are four double plugs. One of these is above the work surface top over the refrigerator. Another is under the front shelf, one on the forward wall of the book shelf cabinet and one in the closet on the rear wall. These are not activated until you are attached with the shoreline to the 110 volt current.

Heater - L. P. Gas - On the wall opposite the galley is your heater. This will operate when you are moving but very probably not required since there is engine heat available. The heater is vented to the outside for safety. There is an instruction book and warranty card which must be completed and mailed in. Read the instructions carefully for lighting.

The L. P. gas, of course, should be turned on by turning the valve full according to the directions at the tank. ALWAYS WAIT ABOUT FIVE MINUTES FOR GAS TO ESCAPE FROM ANY LP UNIT BEFORE ATTEMPTING TO RELIGHT.

The knob that regulates the temperature can be pulled off the shaft coming through the grill. Pull the loop at the top out and make a quarter turn to match the slot at the top of the grill. The grill will then come off and you can get to the pilot light.

There is a safety valve that keeps the gas from getting into the chamber except when the thermostat calls for heat and the pilot light is off. To light, there is a small peep-hole which may be raised. Press in on the small button below and hold for approximately 30 seconds. The first time it may take longer to get all of the air out of the line. You can then place a match to the pilot light. Continue to hold it for another 15 or 20 seconds until the thermocouple warms up. If the pilot light should go out, repeat the performance and hold the button in a bit longer. When you have replaced the grill, replace the knob and set at the desired temperature. There is a thermostat which will turn the heat off and on according to the setting you have made.

This is a safety approved sealed combustion chamber. You will note, fresh air is taken in the lower portion from the outside, and the flame is likewise vented from the top through this same area.

NOTE: Remove the screws on the small plate on the outside to get to the L. P. gas line connecting the heater to check for gas leaks periodically.

To check L. P. gas couplers, use a small brush and soapy, sudsy water. If bubbles show, make only a very small turn on the couplers until bubbles do not show. Some sealants are on the market for this purpose. Do Not turn couplers too tight to break the flare on the tubing.

Compartment Walls - are Formica. They fasten into the bulkheads or ribs above the ceiling.

Center Divider Door - This is a most unusual feature. It makes a door for both the bathroom and also separates the ULTRA VAN into two compartments. It will swing on open into the living area if crowded conditions exist in the bedroom area.

Closet - Look at the back wall of this closet. Here is a small red button. This is the 110 Volt circuit breaker. If, when using the 110 volt shoreline, the current gets overloaded, this will shut off the power. A safety precaution. Reduce the power being used, push in on the red button and it will again activate the 110 volt current in the wall plugs. The closet door can be cleaned with warm water and soap, then wiped with clean clear water. Wax the track occasionally.

Battery Switches - In the lower part of the vertical back piece over the step, there are two switches on a horizontal setting. They are both in an "ON" position. To turn "OFF", merely push down. When parked where 110 volt is not available, it is best to turn one battery off and reserve this power for starting. After using lights from one battery, reverse these switch settings and start from a full charged "hot" battery. Once engine is running, turn on the battery which you used for lights the night before and it will re-charge as you travel.

Bathroom - The bathroom door has been covered. When we look inside, here is what we find. In the roof is an exhaust vent with a motor driven fan. On the upper left is a towel bar that keeps the towel high and out of the way of the directional shower head. The medicine cabinet purposely swings to the right to keep it from opening in sudden stops. There is a hand turning lock for additional safety. This mirror can break. On the rear wall is a hinged opening that snaps shut. This is an entrance door to the hot water heater pilot light. The black knob is the hot water thermostat control. Turn left to reduce heat or right to make water hotter. The basin is equipped with hot and cold faucets. The shower hose and head are beneath the basin. It turns on by pushing on the small extruded knob on the shower head. On the right wall of the bathroom are three switches. These are marked "flush", "grind", and "shower". The "flush" switch brings the water into the stool. The "grind" switch is connected to a pump at the base of the stool which is equipped with blades and emulsifies all solids. To flush the toilet, step on the black lever on the front of the stool and turn on the grind switch. All waste material passes into the final holding tank.

Your ULTRA VAN has two holding tanks to conserve water. The sink in the galley drains directly to the final holding tank since it may have particles or grease in the water. The basin and shower water drain into the center holding tank. This water is pumped back into the stool and used for flushing. Be sure you run some water through the bathroom into this center holding tank before trying to pump water into the toilet.

DO NOT RUN THE PUMPS IN A DRY CONDITION

The two rear holding tanks and the pumps can be kept from freezing by pouring an alcohol base anti-freeze down the shower, basin, galley and stool. Do not use permanent type anti-freeze. If holding tank is emptied and the new water added, it is well to remember to add more anti-freeze.

Rear Overhead Storage - There is a big storage area all around the upper rear section of the Van. Once you raise any of the reinforced hinged doors, you will note the open area for storage of many items. The cabinet buttons are all lined with polyfoam to decrease noise. Light wires are under the polyfoam.

Vertical Wall at Entrance Step - You will note a louvered door on this vertical panel with a thumb type switch to open and close the louvers. This is to heat your Van while underway. Motor heat will keep you very warm while driving or while engine is idling.

On your right of the heat door, just mentioned, are two switches. Each switch is for a battery. When they are horizontal, they are on. Turn down to turn off. It is well to turn both batteries off if Van is parked and not used for a long period of time. When parked at night, it is suggested you turn one battery off and draw current from a single battery. When ready to start in the morning, reverse the switches and start from the "hot" battery. Once the engine is running, set both batteries to "on" so they will charge during the day.

When you are parked where 110 volt is available, just plug in the shoreline located on the outside of the Van. Raise the rear door and the inside cover door to the spare tire. There you will see the battery charger and a small flip switch mounted on the rear wall. If the switch is not on, turn it on and notice the charge indicator on the charger. When this is on and only one battery turned on, you can use the lights and yet keep the battery charged. DO NOT OVERCHARGE.

Engine Compartment - At the top of this step, you will see a latch. This is to hold the engine compartment doors tight. It merely turns left to open. At the rear of the left door is a thumb type latch hidden beneath the carpet. Open these two latches and the doors fold open for access to the engine.

Many owners prefer to carry some extra oil and a can of transmission fluid so they can make their own periodic checks and additions when necessary rather than have a filling station man with oily soles coming through their Vans.

Your engine has a break-in oil to start; change after 1,000 miles. After that, it is recommended that you change oil every 2,000 miles. There is a drain plug which can be reached from underneath. The filling opening is just in back of the breather. It takes four quarts of oil. Normally use SAE 30. In hot weather, it is better to use SAE 40. In extremely cold weather, you might wish to use SAE 10-30. The stick for checking the oil is in the front next to the larger stick where you check the differential and the transmission level. For engine service, it is recommended that you go to your Chevrolet Dealer as their mechanics will be familiar with the Corvair engine. In case you have to add or are changing the transmission fluid, use Automatic Transmission Fluid Type A bearing mark AQ-AFT., followed by a number and the suffix letter "A". In case it is necessary to remove the engine, it is taken out from the bottom.

Remember, in case of needing work on the engine, go to a Chevrolet Truck Dealer. However, if you should need any body work done, it is best to go to an Airplane Service Center. They will be accustomed to working with fiberglass and aluminum.

Rear Compartment - Directly behind the engine compartment is the spare tire, lug wrench, jack and battery charger. The entrance to this area is through the rear outside door already covered.

Mattress Area - The twin mattresses or double, whichever you have chosen, are merely laid in place and are lightweight foam material. They are easily moved about for cleaning. Under one of the mattresses, you will find a piece of plywood. This is the piece that is used to cover the open space between the wheel wells in front. By putting this in place, turning the seats parallel with the sides of the Van and removing the seat cushions, you make the front bed. Place the cushions at the head and foot first, then set the other two in the center opening, pushing down on the middle which forces the cushions in tight for a comfortable bed.

Under the mattress on the right, you will find a wood door. This is the access door to the two batteries. Check your batteries with regularity for the correct water level.

We have gone completely around the outside of the Van and had a trip through the inside.

Be sure to ask the plant representative about anything you do not understand.

On the last three pages, you will find three diagrams. This is to assist you in service if required. One is the electric wiring - one is the L. P. gas lines and the other is the water lines and pump locations.

We feel sure, with a clear understanding of how your Van operates, you will have many miles of pleasure and fun.