

# BLUE BIRD wanderlodge®

UP DATE

## 1968 STANDARD EQUIPMENT SPECIFICATIONS

### WANDERLODGE CHASSIS

179" WHEELBASE

29' TURNING RADIUS

ENGINE	SYMBOL	HORSEPOWER	TORQUE	TRANSMISSION	GENERATOR
Chevrolet	366	235 @ 4000	345 @ 2600	Spicer 5-Speed	60 Amp. A.C.
Chevrolet	366A	235 @ 4000	345 @ 2600	Allison Auto 6-Speed	60 Amp. A.C.
Ford	391	235 @ 4000	372 @ 2000	Spicer 5-Speed	60 Amp. A.C.
Ford	391A	235 @ 4000	372 @ 2000	Allison Auto 6-Speed	60 Amp. A.C.
GMC	401	237 @ 4000	372 @ 1600	Clark 5-Speed	60 Amp. A.C.
GMC	401A	237 @ 4000	372 @ 1600	Allison Auto 6-Speed	60 Amp. A.C.

### STANDARD CHASSIS EQUIPMENT

AXLES:	11,000# front; 17,000# rear, single speed 5.8 to 1 ratio
BATTERY:	Auto-Lite 12 volt, 100 amp. @ 20 hour rate
BRAKES:	Vacuum over hydraulic with 1 3/4" bore x 1 7/16" stroke tandem master cylinder, 612 sq. in. total lining area
CONTROLS:	Choke, hand throttle, key type starter switch, headlight switch, dimmer switch, and high beam indicator
DRIVE LINE:	Spicer 1480 series with protective guard around each shaft
ELECTRICS:	12 volt
EXHAUST SYSTEM:	16 gauge heavy duty in-line muffler(s) with exhaust out of rear corner of body
FRAME:	One piece channel 9 5/8" high with 3" flanges made of 1/4" steel
FUEL TANK:	40 gallon capacity, 16 gauge terne plate tank, located behind left hand front wheel with electric fuel pump
G.V.W. RATING:	28,000 pound
HORN:	Electrical dual with non-glare horn button
INSTRUMENTS:	Speedometer; odometer; ammeter, fuel, oil pressure & water temperature gauges and emergency brake warning light
SHOCK ABSORBERS:	Direct acting, double action piston type; front and rear
SPRINGS:	2 1/2" x 52" semi-elliptic, two stage progressive, variable rate leaf spring, 6900# capacity each; front and rear
STEERING GEAR:	Ross model TE70 with 32:26:32 ratio
TIRES:	9:00 x 20 - 12 ply; single front, 9:00 x 20 - 10 ply, dual rear
VACUUM RESERVE:	3500 cubic inches capacity tank
WHEELS:	10 stud budd, 7.0" rim; single front, dual rear

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## 1968 STANDARD EQUIPMENT SPECIFICATIONS WANDERLODGE CHASSIS ENGINES

MAKE	FORD	FORD TRANSMATIC
	391	391A
TYPE	4 Cycle Gasoline	4 Cycle Gasoline
	Valve-in-head	Valve-in-head
NUMBER OF CYLINDERS	8 - 90° Vee	8 - 90° Vee
BORE x STROKE (Inches)	4.05 x 3.79	4.05 x 3.79
DISPLACEMENT (Cubic Inches)	391	391
COMPRESSION RATIO	7.4 to 1	7.4 to 1
SAE HORSEPOWER	64.0	64.0
MAX. (Gr.) B.H.P. @ RPM	235 @ 4000	235 @ 4000
MAX. (Net) B.H.P. @ RPM	199 @ 3800	199 @ 3800
MAX. (Gr.) TORQUE @ RPM	372 @ 2000	372 @ 2000
MAX. (Net) TORQUE @ RPM	342 @ 2000	342 @ 2000
MAX. GOV. RPM - Load/No Load	3600/3800	3600/3800
GOVERNOR - Type	Centrifugal-Vacuum	Centrifugal-Vacuum
PISTON MATERIAL	Aluminum Alloy	Aluminum Alloy
CARBURETOR - Type	4-Venturi, Downdraft	4-Venturi, Downdraft
CRANKCASE CAPACITY - Dry/Refill	9/8 Qts.	9/8 Qts.
COOLING SYSTEM - Cap. (Quarts)	30	25.5
	Fan	20" Dia. - 5 Blades
WATER PUMP CAP. @ ENGINE RPM	96 g.p.m. @ 3800	96 g.p.m. @ 3800
GENERATOR - Capacity	12 Volt - 60 Amp A.C.	12 Volt - 60 Amp A.C.
	Polarity	Negative Ground
OIL FILTER TYPE	Full Flow	Full Flow
	Replaceable Element	Replaceable Element
AIR CLEANER TYPE	Oil Bath - 1 Quart	Oil Bath - 1 Quart
EXHAUST SYSTEM	Single 2½" O.D. with one muffler per pipe	Single 2½" O.D. with one muffler per pipe
CLUTCH - Make	Long	NOT REQUIRED
	Type	WITH
	Size	TRANSMATIC
	Frictional Area	TRANSMISSION
TRANSMISSION - Type	Synchro-Mesh	Transmatic
	No Speeds	6 Forward - 1 Reverse
	Ratios - First	5.29
		Second
		3.81
		Third
		2.69
		Fourth
	1.45	1.94
	Fifth	1.39
	Sixth	Direct
	Reverse	6.04
	Lubricant Capacity	19 Quarts
	Bellhouse Size	Ford Standard
	Companion Flange	1480 Spicer
HAND BRAKE - Type	Bendix Internal Shoe	Bendix Internal Shoe
	Size	9" x 3"
	Lining Area	63.42 Sq. Inches

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Oct. 15, 1967

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## 1968 STANDARD EQUIPMENT SPECIFICATIONS WANDERLODGE CHASSIS ENGINES

MAKE	CHEVROLET 366	CHEVROLET 366A
TYPE	4 Cycle Gasoline Valve-in-head	4 Cycle Gasoline Valve-in-head
NUMBER OF CYLINDERS	8 - 90° Vee	8 - 90° Vee
BORE x STROKE (Inches)	3.9375 x 3.76	3.9375 x 3.76
DISPLACEMENT (Cu. In.)	366	366
COMPRESSION RATIO	8.0 to 1	8.0 to 1
SAE HORSEPOWER	49.56	49.56
MAX. (Gr.) BHP @ RPM	235 @ 4000	235 @ 4000
MAX. (Net) BHP @ RPM	200 @ 4000	200 @ 4000
MAX. (Gr.) TORQUE @ RPM	345 @ 2400	345 @ 2600
MAX. (Net) TORQUE @ RPM	315 @ 2200	315 @ 2400
MAX.GOV.RPM - Load/No Load	4000/4000	4000/4000
GOVERNOR - Type	Vacuum Spinner	Vacuum Spinner
PISTON MATERIAL	Cast Aluminum Alloy	Cast Aluminum Alloy
CARBURETOR - Type	Four Barrel Downdraft	Four Barrel Downdraft
CRANKCASE CAPACITY - Dry/Refill	7/5	7/5
COOLING SYSTEM - Cap. (Qts.)	27.5	27.5
Fan	20 Dia. - 6 Blades	20 Dia. - 6 Blades
WATER PUMP CAP. @ ENG. RPM	81 g.p.m. @ 4000	81 g.p.m. @ 4000
GENERATOR - Capacity	12 Volt - 60 Amp A.C.	12 Volt - 60 Amp A.C.
Polarity	Negative Ground	Negative Ground
OIL FILTER TYPE	Full Flow	Full Flow
	Replaceable Element	Replaceable Element
AIR CLEANER TYPE	Oil Bath - 1 Quart	Oil Bath - 1 Quart
EXHAUST SYSTEM	Dual 2½ OD with one muffler per pipe	Dual 2½ OD with one muffler per pipe
CLUTCH - Make	Borg & Beck	NOT REQUIRED
Type	Single Plate Dry Disc. (Hyd.)	WITH ALLISON
Size	12 7/8 OD - 7 1/4 ID	AUTOMATIC
Frictional Area	177.8 Sq. Inches	TRANSMISSION
TRANSMISSION - Type	Synchro-Mesh	Allison Automatic
No. Speeds	5 Forward - 1 Reverse	6 Forward - 1 Reverse
Ratios - First	7.07	5.29
Second	3.90	3.81
Third	2.22	2.69
Fourth	1.37 Spicer	1.94 Allison
Fifth	Direct 3152F	1.39 MT-40
Sixth		Direct
Reverse	6.96	6.04
Lubricant Cap.	10 Pints	19 Quarts
Bellhouse Size	Chevrolet Std.	Chevrolet S d.
Companion Flange	1480 Spicer	1480 Spicer
HAND BRAKE - Type	Band and Drum	Band and Drum
Size	9½ x 3	10½ x 3
Lining Area	85 Sq. Inches	99.1 Sq. Inches

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## 1968 STANDARD EQUIPMENT SPECIFICATIONS WANDERLODGE CHASSIS ENGINES

MAKE	GMC 401	GMC 401A
TYPE	4 Cycle Gasoline Valve-in-head	4 Cycle Gasoline Valve-in-head
NUMBER OF CYLINDERS	6 60° Vee	6 60° Vee
BORE x STROKE (Inches)	4.87 x 3.58	4.87 x 3.58
DISPLACEMENT (Cubic Inches)	401	401
COMPRESSION RATIO	7.5 to 1	7.5 to 1
SAE HORSEPOWER	56.92	56.92
MAX. (Gr.) BHP @ RPM	237 @ 4000	237 @ 4000
MAX. (Net) BHP @ RPM	210 @ 3700	210 @ 3700
MAX. (Gr.) TORQUE @ RPM	372 @ 1600	372 @ 1600
MAX. (Net) TORQUE @ RPM	348 @ 1600	348 @ 1600
MAX. GOV. RPM - Load/No Load	3700/3700	3700/3700
GOVERNOR - Type	Positive Hydraulic	Positive Hydraulic
PISTON MATERIAL	Cast Aluminum	Cast Aluminum
CARBURETOR - Type	Duplex Downdraft	Duplex Downdraft
CRANKCASE CAPACITY - Dry/Refill	11/9 Qts.	11/9 Qts.
COOLING SYSTEM - Cap. (Quarts)	38	38
Fan	22" Dia. - 5 Blades	22" Dia. - 5 Blades
WATER PUMP CAP. @ ENGINE RPM	130 g.p.m. @ 3400	130 g.p.m. @ 3400
GENERATOR - Capacity	12 Volt - 60 Amp A.C.	12 Volt - 60 Amp. A.C.
Poplarity	Negative Ground	Negative Ground
OIL FILTER TYPE	Full Flow	Full Flow
	Replaceable Element	Replaceable Element
AIR CLEANER TYPE	Oil Bath - 1 Quart	Oil Bath - 1 Quart
EXHAUST SYSTEM	Dual 2½" O.D. With one muffler per pipe	Dual 2½" O.D. with one muffler per pipe
CLUTCH - Make	Lipe Rollway 13 DPB	NOT REQUIRED
Type	Single Plate - Dry Disc (Hyd)	WITH
Size	12 7/8" O.D. - 7 1/4" I.D.	ALLISON
Frictional Area	177.8 Sq. Inches	TRANSMISSION
TRANSMISSION - Type	Synchro-Mesh	Allison Automatic
No. Speeds	5 Forward - 1 Reverse	6 Forward - 1 Reverse
Ratios - First	6.93	5.29
Second	4.08	3.81
Third	2.23 Clark	2.69 Allison
Fourth	1.46 285V	1.94 MT40
Fifth	Direct	1.39
Sixth		Direct
Reverse	5.89	6.04
Lubricant Capacity	12 Pints	19 Quarts
Bellhouse Size	SAE #2	GMC Std.
Companion Flange	1480 Spicer	1480 Spicer
HAND BRAKE - Type	Band and Drum	Band and Drum
Size	9 1/2" x 3"	10 1/2" x 3"
Lining Area	85 Sq. Inches	99.1 Sq. Inches
		FORM NO. 6813 Oct. 15, 1967

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## SPEED CHART - MILES PER HOUR

Engine  
Transmission  
Engine Governed Speed

Ford 391A  
Allison MT40  
3600 RPM

Transmission  
Ratio

5.8 Axle Ratio  
M.P.H.

1 - 5.29

13.4

2 - 3.81

18.6

3 - 2.69

26.4

4 - 1.94

36.6

5 - 1.39

51.1

6 - 1.00

71.0

Engine  
Transmission  
Engine Governed Speed

Ford 391  
Spicer 5652  
3600 RPM

Transmission  
Ratio

5.8 Axle Ratio  
M.P.H.

1 - 7.08

10.0

2 - 3.83

18.5

3 - 2.36

30.1

4 - 1.45

49.0

5 - 1.00

71.0

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## 1968 STANDARD EQUIPMENT SPECIFICATIONS

### WANDERLODGE AXLES AND BRAKES

#### FRONT

Axle Capacity	11,000
Timken Model	FE900-HD
Brake Type	Vacuum Boosted Hydraulic
Brake Size	15 x 3½ x 5/16
Lining Area	233 sq. in.
Drum Area	330 sq. in.
Wheels	10 Stud Budd
Track	80 3/4

#### REAR

Axle Capacity	17,000
Timken Model	H-140-HD
Brake Type	Vacuum Boosted Hydraulic
Brake Size	15 x 6 x ½
Lining Area	379 sq. in.
Drum Area	565 sq. in.
Wheels	10 Stud Budd
Track	70

#### TIRE SPECIFICATIONS

Front Tires - 9:00 x 20 - 12 ply nylon (capacity 5110 - inflation 95 lbs.)

Rear Tires - 9:00 x 20 - 10 ply nylon (capacity 3960 - inflation 70 lbs.)

# BLUE BIRD wanderlodge®

WANDERLODGE DIVISION

BLUE BIRD BODY COMPANY  
Fort Valley, Georgia

## I. CHASSIS SYSTEM

### A. TRAVELING:

Before starting on long trips, you should follow the maintenance procedures listed in your Maintenance Manual and Parts Catalogue concerning oil, water, lubrications, air pressure, etc. For extremely cold climates you should add ~~a quart of~~ antifreeze every time you dump the septic holding tank. Add this through the shower drain. Secure all the objects in the Wanderlodge which might fall during transit. Follow the "Check Out" list provided with these instructions.

### B. DRIVING:

Driving a Wanderlodge is a matter of becoming familiar with a different type vehicle and learning new driving habits. Wanderlodges are approximately 11 inches wider than the largest automobile. An easy way to judge position is to look out the rear view mirror and keep the left hand side of the Wanderlodge a foot or two from the white center line.

Most of you are familiar with nylon tire "thump" caused by the "balling" of nylon cord when it cools. In the Wanderlodge we have a king sized "Thump". This will "smooth out" in 5 or 6 miles of driving.

Driving the Wanderlodge is much the same as flying an aircraft. Plan ahead for turns and stops. Apply the brakes firmly but gradually. Do not apply them in a constant off and on cycle such as your automobile. This could endanger the passengers comfort in the vehicle, cause loose objects to be displaced, and excessive heat of the brake fluid and lining.

The normal temperature for a Wanderlodge is 190°-205° F. It is equipped with a 180° thermostat.

### C. EMERGENCY BRAKE:

The emergency brake (Hand Brake) is located on the left hand side of the driver's seat. The brake is "ON" when the lever is upright and the brake is "OFF" when the lever is in the forward position. A flashing red light to the right of the ignition switch will indicate the brake is on after the ignition is turned on. Adjustment can be made on the emergency brake by turning the end knob clockwise (Right Hand) to tighten the brake, and counterclockwise (Left Hand) to loosen the brake with the brake in "OFF" position.

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## D. PARKING:

To park your Wanderlodge safely, always be sure the emergency brake is in the "ON" position. Park the Wanderlodge level. Use the four-way level mounted on the dash. The small bubble should be inside the lined circle. For extended periods of remaining in one location, you should start the engine periodically to maintain the battery charge. Drain the water tank and cut off the 12-volt water pump if you will be connected to commercial water for an extended period.

## E. MICO BRAKE:

To actuate the optional Mico Brake Loc, put lever to "ON" position and depress foot brake. A buzzer will sound if the foot brake has not been set or the hydraulic pressure is not adequate.

## F. AUTOMATIC TRANSMISSION:

The automatic transmission contains six forward gear ratios, one reverse gear ratio, and a torque converter which functions automatically as required. The transmission also contains a hydraulic retarder which can be used to slow down the Wanderlodge and to control speed when descending hills. Any one of four forward driving ranges or reverse can be selected by moving the selector lever. The accelerator pedal has a "kick down" position, or "detent". When the accelerator pedal is above the kick down position, the transmission will automatically select the ratio which gives the best performance in the driving range selected. Below the kick down, the transmission will select a ratio and remain in it until the pedal is released.

Selector Lever Positions: "N" (Neutral) Position - the selector lever must be in the "N" position to start the engine. The "N" position should be used during engine warm-up or prolonged idling. "3-Hi" Position - this range provides 3rd, 4th, 5th and 6th gear ratios and should be used for all normal driving. For maximum acceleration, hold the accelerator in the full throttle position (before kick down) and the transmission will shift automatically at the maximum engine speed. "3-5" Position - this range provides 3rd, 4th and 5th gear ratios for use in moderate traffic conditions and for efficient retarder action when descending grades at speeds up to 40 mph. CAUTION: Do not downshift into "3-5" range at speeds above 40 mph or when using the hydraulic retarder. "3-4" Position - this range restricts the transmission to 3rd and 4th gears. It should be used for better control in heavy traffic and for descending long grades at speeds up to 30 mph. CAUTION: Do not downshift into "3-4" range at speeds above 30 mph or when using the hydraulic retarder. "1-2" position - this range restricts the transmission to 1st and 2nd gears. It should be used for very heavy pulling and for ascending and descending extreme grades at speeds up to 15 mph. CAUTION: Do not downshift into "1-2" range at speeds above 15 mph or when using the hydraulic retarder. Do not downshift into 1-2 while in motion on icy roads.



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Selector Lever Positions (Continued) "R" (Reverse) Position - this range provides the reverse ratio. CAUTION: Never move the lever to reverse position when Wanderlodge is moving forward.

Hydraulic Retarder: To slow down the Wanderlodge, push the pedal located at the left of the steering column to the floor. When descending long grades, the hydraulic retarder is most effective at engine speeds of 2800 to 3400 RPM maximum. Corresponding road speeds are approximately: "1-2" 15 mph; "3-4" 30 mph; "3-5" 40mph. CAUTION: When the hydraulic retarder red warning light goes on, release the retarder pedal until the red light goes out.

Towing Wanderlodge: Wanderlodge must be towed with rear wheels off the ground or with drive shaft disconnected at the axle pinion shaft. NOTE: DO NOT ATTEMPT TO PUSH OR TOW START.

## Servicing:

1. Check oil level every 1000 miles.
2. Change oil and replace filter every 10,000 miles (or 6 months) under normal stop and go operating conditions or every 25,000 miles of highway service.
  - a. Oil must be checked with selector lever in neutral position, transmission at operating temperatures, engine running at 1000 RPM and the parking brake set.
  - b. CAUTION: Be sure brake is set and/or Wanderlodge is blocked when making this check. Exercise extreme care to prevent dirt from entering filler tube when checking oil level or changing oil.

Use automatic transmission fluid type "A".

## G. INSTRUMENTS AND SWITCHES:

Your Wanderlodge may be equipped with many switches and devices which make it appear complicated to operate. THIS IS NOT THE CASE. The following is a list of operating switches for the Wanderlodge. Some of these are standard equipment and some are used only with the optional equipment. They are as simple as the switches on your automobile and will afford you comfort and pleasure while traveling. All the switches are plainly marked on the instrument panel located above the driver's window on left.

### Volt Meter:

To register voltage output of power plant or voltage output of commercial power supply.

### Battery Condition Meter:

To check condition of either 12 volt battery use Toggle Switch as marked.

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## 1. Heater Switches (Top Row)

- Rear Heaters (2)
- Front Heater
- Foot Warmer
- Defroster

THE REAR HEATER SWITCHES ARE MASTER CONTROLS. EACH HEATER HAS ITS OWN TWO SPEED SWITCH, OPERATING ONLY BY THE MASTER SWITCH. ON THE MASTER SWITCH ALSO CONTROLS A SQUIRREL CAGE BLOWER DESIGNED TO CIRCULATE THE WARM AIR OF THE KITCHEN UNDER THE COUNTER.

THE FRONT Heater switches are two-stage switches. The first click makes the fans in the heater run at low speed. Pulling the switch out to the second click makes the fan motors run at high speed.

All heater switches are designed to make the heater fan operate at low or high speed, depending upon your heat requirements.

## 2. Fan Switch

These switches control the 6" fans located on the dash. They, too, are two-speed.

## 3. Power Plant Indicator Light

The power plant indicator light is located near the hour meter. It is only on when the power plant is running.

## 4. Starter Switch

This is the remote starter for the electric power plant. For further instruction see Section IV, A. Electric Power Plant of these instructions.

## 5. Entry Lights

The entry light switch controls the two lights in the driver's area and one in the entrance door step.

## 6. Instrument Lights

To illuminate 12 volt instrument panel above driver's window.

## 7. Back Up Lights Switch

This is a switch to turn on back up lights. The red pilot light indicates they are on.

## 8. Rear Speaker Switch

The rear speaker switch is an on and off control for the rear speaker of the radio in the bedroom.

## 9. Flasher Switch

This is located bottom of dash board, next to steering column. The flasher switch will make all directional signals flash simultaneously. Its recommended use is when stopping in traveled areas.



#### 10. Transmission Indicator Light

This is the one inch Red pilot light located on the main instrument dash. Should this light flash red, stop immediately. This light comes on only when the transmission is overheating. Check the cause of overheating, the fluid level in the transmission and the water level in the main engine radiator. If these are both satisfactory, allow time for fluid to cool. It could have been caused by extended use of retarder.

#### 11. 12 Volt Battery Jumper Button

The 12 volt system has a built-in jumper from the positive pole of the chassis battery to the positive pole of the generator battery. This system goes through a solenoid which is activated by a push button located on the steering column support bracket. By pressing this button, you are putting the two batteries in parallel and thereby jumping the chassis battery to the generator or vice versa to "boost" the battery that is discharged. This is for starting purposes only.

#### H. ADJUSTING THE SEATS IN THE DRIVER'S AREA:

The seats in the driver's area are designed for six-way adjustment. To raise the seat, loosen the "L" shaped handle behind the center post and pull the seat up to the desired height. To lower the seat, depress the pedal in front of the post and the seat will automatically lower to one of four positions.

When you have reached the desired height, tighten the "L" handle behind the post. To adjust the seat forward or backward, pull out the knob below the seat cushion on the right hand side. Slide the seat forward or backward to the position you desire. When you have reached the desired position, move the seat enough for the locking mechanism to click. This will lock the seat in position. To tilt the back of the seat, pull out the knob on the right hand side just below the seat back. Tilt the back of the seat to a position you desire. Move the seat enough for the locking mechanism to click.

#### I. DUAL GAS TANK OPERATION:

If you selected the optional dual gas tanks, these can be controlled from the driver's area. There are three controls for dual gas tanks, these are located on the steering column support bracket.

1. Selector valve.
2. Fuel pump control toggle switch.
3. Gas gauge selector toggle switch.

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To use gasoline from the rear tank, pull up selector valve, push the fuel pump toggle switch and gas gauge toggle switch back.

To use gasoline from the front tank, push down selector valve, push the fuel pump toggle switch and gas gauge toggle switch forward. The optional power plant will always use gasoline from the front tank.

## II. HEAT SYSTEM

### A. CHASSIS HEAT SYSTEM:

The Blue Bird Wanderlodge is equipped with an 85,000 BTU heater at the front right hand corner and can have optional 72,000 BTU heater underneath the front dinette seat. These heaters use the chassis engine hot water as a heat source. All heaters are equipped with automatic air removers, but to insure maximum heat, we recommend bleeding the heaters periodically. This is recommended when air pockets have built up in the heater core. The bleeder for the heater system is located in the right front section under the hood.

The front heater is equipped with three large squirrel cage blowers which are controlled from the driver's instrument panel. One blower is used for defrosting, one blower is used for the driver, and one blower for the right side of the unit. All three of these blowers are two-speed.

The rear heater is controlled from the driver's instrument panel. This heater too has two two-speed blowers.

All Wanderlodge heaters are equipped with valves to stop the circulation of engine hot water through the heater cores.

For summertime driving, close the valves on the heater water hoses. These valves are accessible underneath the engine hood or adjacent to it and function like the water valves in your home. The valves should be opened in winter. The coolant level in the radiator should be checked after these valves have been opened. If the liquid in heater lines has evaporated during summer use, the radiator will lack sufficient coolant and overheat.

### B. GAS FURNACE

Your Wanderlodge is equipped with an LPG forced air heating system. This furnace located between the bedroom and kitchen, has a duct for each area, bedroom, bathroom and front living area. The warm air is moved with a 12 volt motor. You start the furnace as follows:

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1. Set thermostat (front wall) to "OFF" or lowest position.
2. Close hand valve (gas supply, on supply line at right side). If furnace has been operating wait five minutes.
3. Open control door and turn hand valve to on position.
4. Depress reset button and hold.
5. Pump igniter button to light pilot.
6. Continue to hold reset button until pilot stays lighted (30 seconds).
7. If igniter will not light pilot, remove  $1\frac{1}{2}$ " cap and light pilot with a match with the reset button depressed. Replace  $1\frac{1}{2}$ " cap.
8. Close control door and set thermostat at desired heat level.

NOTE: This furnace is completely safe. Its gas supply will shut off if the pilot light goes out. It cannot take air from the inside of the coach; it has separate intake and exhaust ducts to the outside.

## III. WATER SYSTEM

### A. ON-BOARD WATER SYSTEM:

Your Blue Bird Wanderlodge has a 58.5 gallon stainless steel water storage tank located under the curb-side rear bed. You may use water from this tank or from commercial sources. The on-board water system has a 12-volt water pump and will operate while the vehicle is in motion or stationary.

When using the on-board water, you will hear a slight noise at the rear of the vehicle. This is the water pump and it will automatically stop and start as you open the faucet to use water. Always leave the water pump switch in the "ON" position unless you are connected to commercial water sources or will be away for an extended period. Your water storage tank has a drain plug underneath the unit. Periodically remove this drain plug and wash the storage tank. You have two hose connections on the rear of the coach. The street side one marked "Commercial Water", the curb side marked "Fill Water", is for filling your water tank. When filling the tank, remove the cap from the overflow outlet on rear of coach. The tank is completely full when the water comes out of this outlet. This outlet may also be used for filling with a bucket or hose, when a hose with fitting is not available.

### B. COMMERCIAL WATER SYSTEM:

By connecting a hose to the connection marked "Commercial Water", you will by-pass the on-board water system, using the pressure of the commercial water rather than your 12 volt pump. There is a check valve between this connection and the water tank.

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## C. DRAINING THE WATER SYSTEM:

To completely drain water system, open all four drain valves (one under left hand bed, one in front of tank, <sup>IN BOTTOM OF BATH ROOM CASKINER</sup> ~~one on each side of toilet base~~) and all faucets. Then with blow out plug installed on "Commercial Water" hose connection, put air pressure to system.

CAUTION: Be certain that all valves and faucets are open as you could damage water system with too much air pressure.

To drain only the on-board water tank, there is a two inch drain plug on the rear curb side of the tank extending through the floor.

## IV. ELECTRICAL SYSTEM

Your Blue Bird Wanderlodge has two electrical systems. One is a 12 volt system which utilizes the chassis battery for power and the other is a 110 volt system which may use generated power or commercial power.

### A. THE ELECTRIC POWER PLANT:

The electric power plant can be started from the inside or outside of the vehicle. To start the generator, first turn all appliance switches (110 volt air conditioners and electric hot water heaters) to the "OFF" position. One starter switch is located on the instrument panel above driver's window and one is located on the power plant. Push the starter switch to the "ON" position and hold until the power plant starts. This switch should be held in this position for at least 15 seconds even if you do not hear the starting noise. It may be released as soon as you hear the power plant running. To stop the power plant, hold the switch in the "OFF" position until the power plant is completely stopped. Before stopping power plant, shut off all major appliances and allow to run "free" for five minutes.

To use the generator's power, there is a selector cable located in the rear closet beside the main circuit breaker switch panel. Plug this power source selector cable into the outlet marked "Generator". Service the power plant according to the instructions furnished with your unit.

CAUTION: Do not plug in the power source selector cable to the generator outlet unless all the electrical equipment is in the "OFF" position.

### B. COMMERCIAL POWER:

For commercial power, your Wanderlodge is equipped with two 25' Shore Lines. For 220 volt power you have a larger #8 - 3 conductor. For 110 volt, you have a smaller #12 - 3 conductor.

To use commercial power, first turn all appliance switches to the "OFF" position. Connect the proper shore line to the Wanderlodge receptacle located in the rear adjacent to the street-side tail light.

# BLUE BIRD wanderlodge®



Plug the power source selector cable into the outlet marked "Commercial". If 110/220 volt power is available, you may connect directly to this source with the larger (8-3) shore line. If 110 volts is the only source available, use the smaller (12-3) shore line and connect to 110 volt power source.

IMPORTANT: Your Wanderlodge has been wired according to the National Electrical Code. All 110 volt wiring is a two-wire service with ground and all 220 volt is a three-wire service with ground. If you connect to a system which has only a two-wire circuit, ground the third wire on the adapter which you have to use.

IMPORTANT: A 110 volt commercial outlet will not operate all the electrical equipment in your Wanderlodge. You may operate only one air conditioner or the electric hot water heater. If you overload this circuit, you may blow a fuse in the commercial power circuit.

## C. THE 12 VOLT SYSTEM:

The 12 volt system is connected to the chassis battery. This 12 volt system is used to operate the water pump, exhaust fans, radio, stereo and all lights.

This system incorporates a completely automatic battery charger and power supply. This unit is powered by 110 volt (either commercial or generator). It will charge your chassis battery automatically as it needs it, supply power directly to various 12 volt appliances, or if not needed will shut itself off (it is completely automatic).

The 12 volt system has a built in jumper from the positive pole of the chassis battery to the positive pole of the generator battery. This system goes through a solenoid which is activated by a push button located on the steering column support bracket. By pressing this button you are putting the two batteries in parallel and thereby jumping the chassis battery to the generator or vice versa to "boost" the battery that is discharged. This is for starting purposes only.

CAUTION: When using battery power for lights, furnace and ~~refrigerator~~, battery condition should be checked twice daily.

RADIO OR STEREO

## V. SEPTIC SYSTEM

### A. DRAINING THE SEPTIC TANK:

To drain the septic tank, first remove the safety plug from the end of the septic valve by turning the lock ring counterclockwise. Insert the 3" septic tank hose coupling into this valve and tighten the lock ring, then place the discharge end into a septic container. Open the septic tank valve by turning the handle to the left (counterclockwise) and pull the valve stem out. This will discharge the septic tank.

# BLUE BIRD wanderlodge®

To clean the septic tank and to reduce odor, add a cup of detergent into the septic tank after emptying it. The agitating action of the vehicle while traveling will clean the tank.

DRAIN YOUR SEPTIC TANK OFTEN. DO NOT ALLOW THE SEPTIC TANK TO OVERFLOW.

## VI. APPLIANCES

### A. AIR CONDITIONERS:

#### 1. Electric

These are two roof mounted 110 volt powered air conditioners. There is a "Hi" and "Lo" fan for air circulation, and a "Hi Cool" and "Lo Cool" with desired thermostat setting for cooling.

Since all air conditioner units have their maximum amperage draw on the starting and cooling cycle, these two units should never be started simultaneously. The compressor will not start again immediately after it is shut off. Allow unit to remain off 5 minutes before attempting to restart compressor.

Your air conditioners will remove moisture from the air. That moisture that is not dissipated will discharge on top of the coach. This removal of moisture will, of course, lower the humidity and increase the effectiveness of the air conditioners.

#### 2. Chassis Air Conditioner

The chassis air conditioner system is quite like that which most people are familiar with in an automobile, except that this system has about twice the output. Each of the two air handling units above the windshield has its own three speed 12 volt blower. The controls are located below the dashboard.

This unit too will remove moisture from the air. This is drained through tubes down the corner windshield posts.

### B. HOT WATER HEATER:

The 110 volt electric hot water heater in the water system is controlled by a switch located ~~at the left of the kitchen over the LPG furnace.~~ <sup>ON THE END OF THE</sup> The hot water heater can be turned "ON" or "OFF" while driving. However, the power generator should not be started with the heater on. CAUTION: Do not turn the hot water heater on unless you have an ample supply of water in the tank.



# BLUE BIRD wanderlodge

## C. RANGE AND OVEN:

The range on the Blue Bird Wanderlodge will require matches to light the burners. The oven is controlled by a series of two pilots. To use the oven raise the top of the range and turn the oven valve "ON". Light the pilot light located to the rear of the main oven burner. Turn the knob to the temperature you desire, and the burner will come on after about 30 seconds.

## D. REFRIGERATOR: ~~CHANGE TO LANGUAGE USED IN CURRENT BOOK~~

The refrigerator is a 12 volt compressor type. It should be turned off when the Wanderlodge is not in use. Like a home refrigerator, this one has a thermostat on the "OFF-ON" switch.

## E. DINETTE:

To make a bed out of your dinette, ~~install the table support bracket between the seats of the dinette on the outer edge.~~ Fold up the leg on the table by pulling the spring collar down and fold the leg up. Remove the table from the wall brackets and lower the table to rest on the back edges of the dinette seats ~~and the table support bracket.~~ Remove the dinette seat backs by lifting upward. Place the dinette back cushions between the dinette seat cushions. This will form a bed.

## F. SOFA BED:

To make a bed out of the sofa, lower the legs on the front part of the sofa platform. This is the same type leg as the dinette. Slide out the seat panel of the sofa until the back is unfolded. To convert back to a sofa, pull on the strap provided while pushing the seat panel. This will start the hinge action and allow seat panel to slide easily into place.

## G. LPG OPERATION:

Your Wanderlodge is equipped with two bottle gas tanks and an automatic change-over valve. Open both valves one or two turns. Turn the arrow on the regulator valve so that it points toward either front or rear. The coach will use gas from the front or rear tank until it is exhausted. It will then automatically start using from the other tank. When this change-over occurs, a red indicator will show on the gas regulator. Fill the exhausted bottle gas tank and turn the arrow on the gas regulator to point in the other direction. This indicator is a warning that you have used all the gas from the ~~tank it is pointing with.~~ <sup>FRONT OR REAR TANK</sup> These tanks also have indicators showing the amount of LP gas in each. These tanks do not have to be removed to fill. The quick fill valve is located on the front of the tank.

# BLUE BIRD wanderlodge®

## BEFORE YOU TRAVEL

1. Close the side awning windows
2. Put the entrance step in the travel position
3. Secure loose items inside the unit
4. Disconnect all service lines and stow them away
5. Insure all drawers and doors are in the locked position
6. Check the tightness of the LPG bottles
7. Turn the LPG heaters "OFF"
8. Check the lighting system both inside and outside
9. Check tire inflation and oil
10. Release the emergency brake
11. Lock door with safety chain
12. HAPPY WANDERLODGING!!!

## WINTERIZING THE WANDERLODGE

1. Check anti-freeze in chassis engine cooling system
2. Put anti-freeze in holding tank and  
P-traps (shower, lavatory, kitchen sink)

NOTE: If you have a Monomatic toilet, care should be taken to protect the small holding tank in the base of the toilet. The manufacturer recommends using only permanent type Ethylene Glycol base anti-freeze. Alcohol anti-freeze would have a reaction with the plastic components in the unit.

3. Check your batteries for capacity and filling
4. Make certain your oil and lubricants are "winter weight"
5. Check heater and defroster systems (Sec. II, A)

## WHEN WANDERLODGE IS NOT IN USE

1. Check to see emergency brake is tight
2. Shut off 12 volt water pump
3. Shut off all other 12 volt accessories
4. Shut off LPG bottles
5. Drain water tank
6. Drain hot and cold water lines (cold weather) or plug in 110 volt power so thermostatically controlled heat tape will operate
7. Leave refrigerator door open
8. Shut all windows and vents
9. Remove keys and lock entrance door

# BLUE BIRD wanderlodge®



## C A P A C I T I E S

	<u>GMC</u>	<u>CHEVROLET</u>	<u>FORD</u>	<u>ONAN</u>
FUEL - Regular	40-55-110	40-55-110	40-55-110	From Front Tank of Chassis
COOLING SYSTEM & FRONT HEATER (Qts.)	40.9	30.4	32.9	Air Cooled
W/2ND HEATER (Qts.)	49.1	38.6	41.1	
ENGINE OIL (Dry) (Qts.)	9	7	8	4
WEIGHT 30°F-100°F	SAE 30	SAE 30	SAE 30 or 20W-40	SAE 30
0°F- 30°F	SAE 10W	SAE 10W	SAE 20 or 10W-30	SAE 10W
SPECIFICATION (API)	DG or MS/DG	DG or MS/DG	MS	MS or MS/DG
TRANSMISSION				
5-Speed	12 Pints	10 Pints	13 Pints	
Allison	19 Quarts	19 Quarts	19 Quarts	
TIRES				
Recommended	9:00 x 20 - 10 Ply	- Dual Rear	- 70#	
Pressure	9:00 x 20 - 12 Ply	- Single Front	- 95#	

# The OGDEN Water Purifier

**MODEL  
B**

## PERFORMANCE\*

The OGDEN HEALTH PROTECTING WATER PURIFIER is fully proven and guaranteed to remove . . .

- Chlorine
- Harmful bacteria
- Algae
- Rust and dirt
- Invisible suspended matter
- Organic tastes and odors
- Detergents
- Colors
- Radio-active solids
- Some iron and sulfur compounds

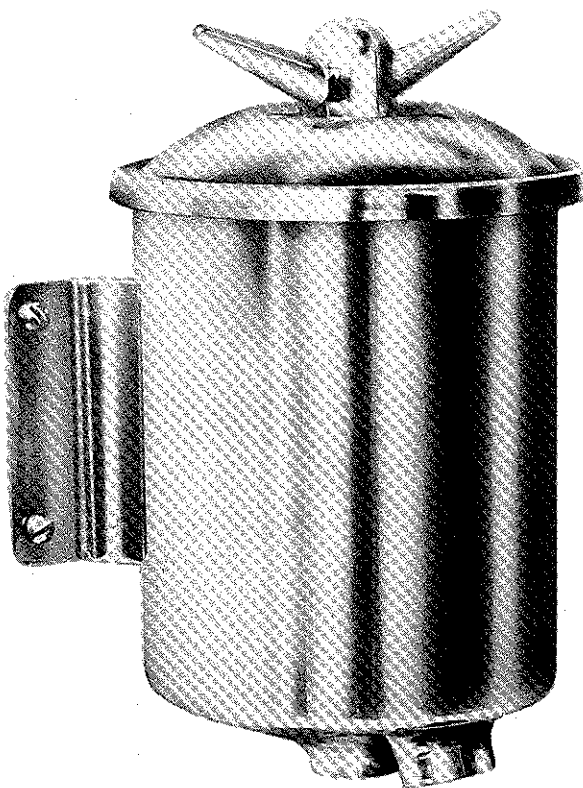
The OGDEN WATER PURIFIER is NOT a water softener and will NOT remove hardness causing minerals, but it WILL provide pure, delicious water for drinking, beverage preparation and cooking purposes, which meets the standards of the United States Public Health Service.

\*Copies of tests available on request.

## MODEL B SPECIFICATIONS

- **INSTALLATION** — Wall mounted
- **SIZE** — 5 inches in diameter  
8 inches high overall
- **MATERIAL** — Highly polished type 18-8 stainless steel
- **NORMAL FLOW RATE** —  
1 gallon per minute
- **CARTRIDGE CAPACITY\*** —  
400 to 1000 gallons of water
- **SHIPPING WEIGHT** —  
One unit — 4 pounds  
Full case — 96 pounds  
(24 units)

\*Capacity will vary depending on the amount of suspended matter in the raw water.



## DESCRIPTION

The OGDEN WATER PURIFIER is a small, compact stainless steel unit designed to provide pure, safe, delicious crystal clear DRINKING WATER from practically any water supply.

The scientifically developed and patented disposable cartridge is easily changed without the use of tools.

All water is purified at the point of use — eliminating contamination from handling and storage.

The OGDEN WATER PURIFIER is used by more than 80% of the world's major airlines. Many thousands are now in use throughout the world in...

Homes	Hospitals	Offices
Hotels	Restaurants	Trailers
Schools	Apartments	Yachts
Laboratories	Factories	Airlines

Reg. U.S. Patent No. 2627351

## Western OGDEN Purifier Corporation

WESTERN DISTRIBUTOR

7906 Santa Monica Blvd. Los Angeles 46, Calif.

Oldfield 4-2231  
Oldfield 4-3497

**INSTALLATION  
DIAGRAM**

FORM B-1

# INSTALLATION OF THE MODEL B OGDEN WATER PURIFIER

The MODEL B is designed for wall mounting either above or below a sink, as shown in the diagrams below.

This unit is also adaptable to many commercial uses and can be easily installed on water coolers, beverage dispensers, ice making machines and carbonation equipment.

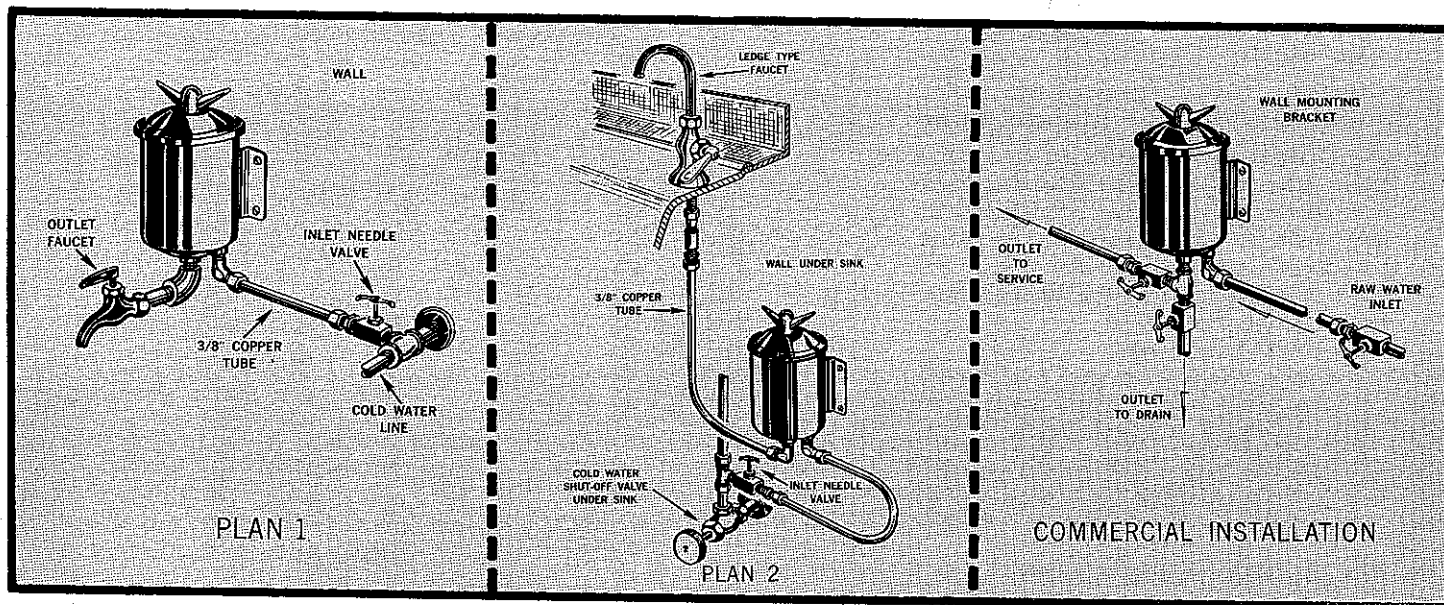
## INLET CONNECTION...

Bottom of unit, marked "IN" — 1/4 inch female pipe thread.

## OUTLET CONNECTION...

Bottom center of unit, marked "OUT" — 1/4 inch female pipe thread.

## SAMPLE INSTALLATIONS



Other models and types of installations are also available

## ORDER DATA

The MODEL B is supplied complete with wall mounting bracket and one SM 2 cartridge. Installation accessories are extra to provide flexibility of installation.

### INSTALLATION ACCESSORIES

#### PLAN 1 (Chrome plated fittings)

- 4—Wood screws for mounting
- 4—Toggle bolts for mounting
- 1—1/2" lever-handled water faucet
- 1—1/2" x 1/4" reducing elbow
- 1—1/4" pipe x 3/8" tube elbow
- 1—1/4" pipe x 3/8" tube union
- 1—1/4" pipe inlet needle valve
- 2—1/4" x close pipe nipples
- 1—1/2" x 1/2" x 1/4" pipe tee
- 3 feet—3/8" copper tubing

#### PLAN 2

- 4—Wood screws for mounting
- 4—Toggle bolts for mounting
- 1—Ledge-type water faucet
- 1—1/4" pipe coupling
- 2—1/4" pipe x 3/8" tube unions
- 2—1/4" pipe x 3/8" tube elbows
- 1—1/4" pipe inlet needle valve
- 1—7/16" tube x 1/4" pipe tee
- 3 feet—3/8" copper tubing
- 2 feet—3/8" copper tubing

### RUBBER REPLACEMENT PARTS

The "B" Series units are supplied with 4 neoprene rubber seals and gaskets which should be replaced each year. Complete replacement kits are available for each model of OGDEN WATER PURIFIER. When ordering, please specify purifier model.

### CARTRIDGES

The MODEL "B" SERIES WATER PURIFIER uses the following disposable cartridges which are easily installed without the use of tools:

TYPE	RECOMMENDED USE
SM 2	Above 40 pounds pressure, or where water supply may be contaminated.
LP 2-7	Less than 40 pounds pressure with a pre-treated water supply only.


NOTE: All bacteriological reports are based on results using the SM type cartridge.

*The* **OGDEN** *Water Purifier*

A QUALITY ENGINEERED PRODUCT  
OF OGDEN FILTER CO., INC.

Los Angeles, California, U.S.A.



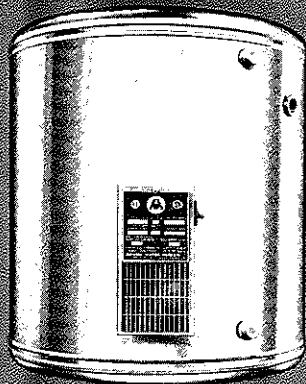


# ATWOOD BOWEN

## Automatic Electric Water Heaters

*... set the standard for  
mobile-home water heating*

*... compact, space-saving  
design for maximum  
efficiency*



Every ATWOOD BOWEN  
is individually tested under  
extreme pressure, your  
assurance of long life and  
complete satisfaction.

### REPRESENTATIVES & WAREHOUSES

Martin Manufacturing Co.  
Box 1292  
708 N. Throckmorton  
Fort Worth, Texas  
Florence Distributing Co.  
2900 West Mishawaka Road  
Elkhart, Indiana  
Mobile Home Products  
13535 49th Street North  
St. Petersburg, Florida  
Leslie Road, Box 535  
Americus, Georgia  
Hutchinson Merchandise  
Warehouse  
701 East Second Street  
Hutchinson, Kansas

Sporaco, Inc.  
100 Sand Hill Road  
Selingsgrove, Penna.  
407 W. Main St.  
South Hill, Virginia  
Ward & Son, Inc.  
5601 Valley Blvd.  
Los Angeles 32, Calif.  
Valley Distributing Co.  
Highway 30 East  
P. O. Box 4345  
Boise, Idaho

This great new line of electric water heaters offers the ultimate in fast water heating, quick recovery, long life and low-cost operation. Special alloy-clad inner tank, rust and corrosion proof . . . carries a 2-year full replacement warranty under a 10-year warranty plan. New 1,500-watt immersion coil responds instantly to heating requirements . . . keeps water at constant temperature. • Hot water is drawn off extreme top . . . assures an ample supply of hot water over a long period of time and utilizes full capacity of the tank. Exclusive Atwood Bowen baffle separates and channels incoming water for most efficient operation. Accurate, trouble-free thermostat is graduated from 110° to 160°. Non-settling fiber glass insulation retains heat for unmatched economy. Space-saving size fits easily under counters, out of the way.

### SPECIFICATIONS

(subject to change without notice)

MODEL	RA-6	RA-10	RA-20	RA-30
Gallons Capacity	6	10	20	30
Voltage (A. C. Only)	110-220*	110-220*	110-220*	110-220*
Watts	1500	1500	1500	1500
Diameter	15"	18"	20½"	20½"
Height	16"	17¼"	22½"	32½"
Net Weight	19½ lbs.	26½ lbs.	36 lbs.	49 lbs.
Shipping Weight	21½ lbs.	30 lbs.	39½ lbs.	55 lbs.

\* Available on request, with 2500-watt element as standard.



## ATWOOD BOWEN CO.

49230 W. 14 Mile Rd. • Wixom, Michigan • 48096

Subsidiary of

ATWOOD VACUUM MACHINE CO.

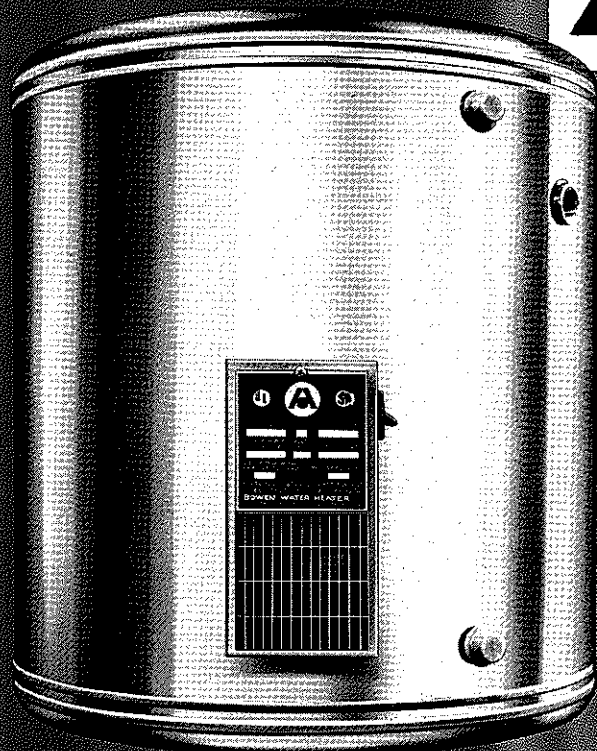
1400 EDDY AVE., ROCKFORD, ILLINOIS 61101

BD 866-E

Printed in U.S.A.



**ATWOOD  
BOWEN**



NEW 20 GALLON MODEL  
MODEL RA-20

## Automatic Electric WATER HEATERS

*New* improved line to meet all water heating needs.

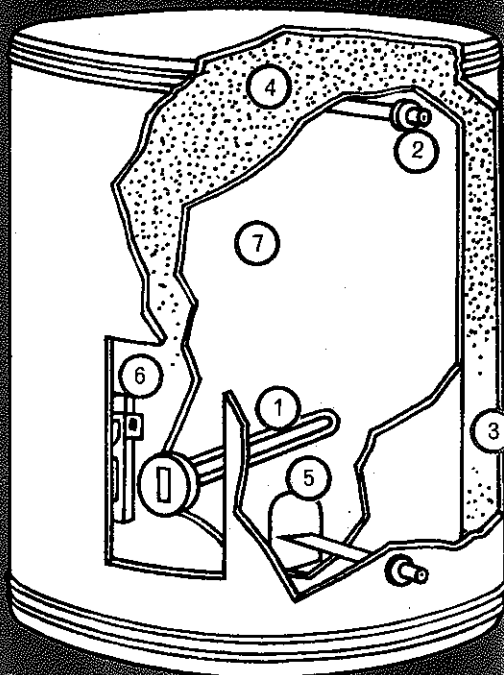
*New* 10-year warranty plan (with full replacement 2-yr. warranty on inner tank).

*New* 1,500-watt immersion coil assures fast recovery.

*Brand New* 20-gallon model especially for mobile homes.

"If it's an ATWOOD BOWEN...you know it's the best"

### SUPERIOR FEATURES FOR TOP PERFORMANCE AND ECONOMY



- ① New 1,500-watt immersion coil heats water fast. Assures quick recovery.
- ② Hot water outlet at the extreme top. Utilizes full capacity of the tank.
- ③ Heavy-gauge outer jacket. Thermostat access panel easily removed.
- ④ Blanket of fiber glass insulation covers inner tank. Prevents heat loss.
- ⑤ Exclusive baffle channels incoming water for most efficient operation.
- ⑥ Accurate thermostat graduated from 110° to 160°. Easily adjusted.
- ⑦ One-piece water reservoir has corrosion resistant clad lining. Each tank inspected and pressure-tested at 300 lbs. psi.



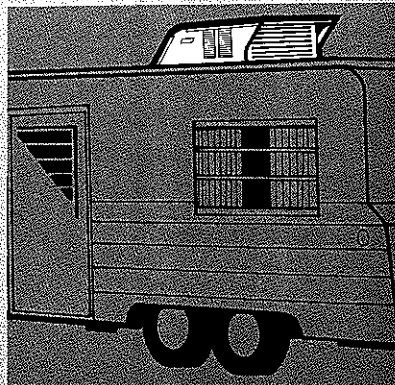
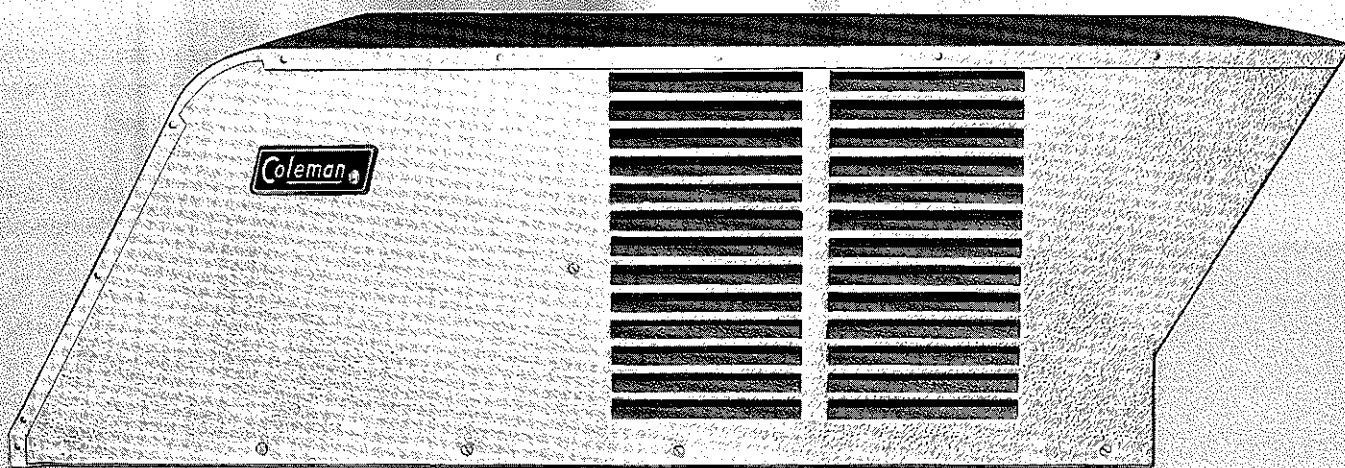
10,000 BTU / ROOF TOP



# POLAR•PAL

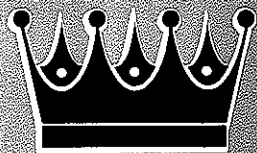
## AIR CONDITIONER

### FOR TRAVEL TRAILERS



*The new Polar•Pal Roof Top Air Conditioner with its low profile—2 inches lower than other makes—creates less air drag and its modern, streamlined styling is more attractive.*

*Built to the same exacting standards that have made Coleman air conditioners the acknowledged leader in other industries—it features the best possible components, assembled by skilled technicians under the supervision of Coleman's capable engineering and quality control personnel.*



*First Class Coleman Comfort*  
FOR RECREATIONAL VEHICLES

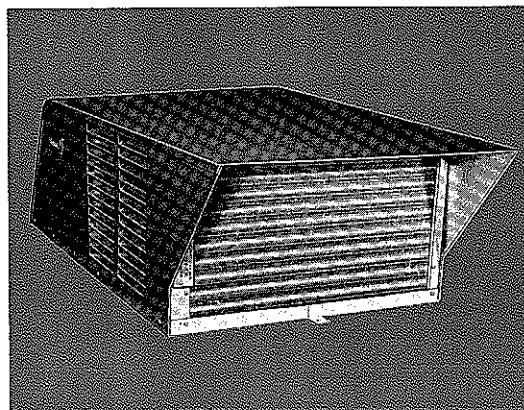
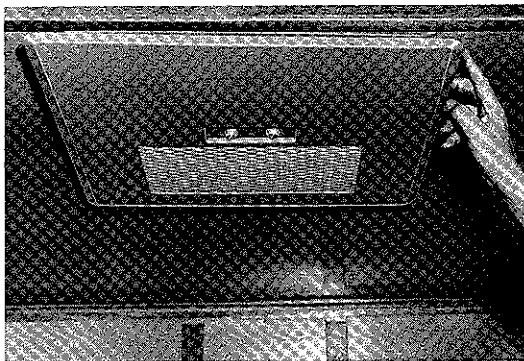


THE COLEMAN COMPANY, INC. / SUPPLIER PRODUCTS DIVISION  
WICHITA, KANSAS 67201

HEATING / AIR CONDITIONING

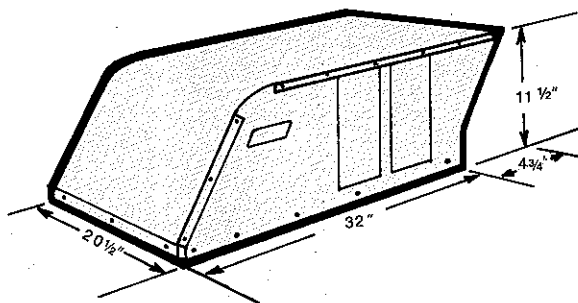


## ROOF TOP AIR CONDITIONERS FOR RECREATIONAL VEHICLES



### EXCLUSIVE \$1000 BOND PROTECTS WARRANTY!

Only with Coleman you get a \$1000 Bond that backs up warranty on Coleman products. An exclusive extra from Coleman! All Coleman manufactured components carry full 5-year free service warranty; components manufactured by vendors have 1-year free service warranty.



### COMPACT/MORE OUTPUT

Smaller and lighter than other makes... Polar•Pal provides 10,000 BTU/HR! More output for its size than any other unit.

### MORE HEAD ROOM

Ceiling assembly projects only 1 1/2 inches into the room... compared to nearly 4 inches for units of other makers.

### EXCLUSIVE CONTROL-AIRE

Only Coleman gives you directional control of air discharge. Dampers permit adjustment of air flow to the front, rear, and sides of the vehicle. Provides cool air wherever it's needed.

### LIGHTWEIGHT

Complete unit weighs only 125 pounds... compared to the 140 pounds or more of other make units. Less roof load and little need for special bracing.

### 5-WAY CONTROL

Most units offer only ON or OFF controls. Polar•Pal gives you: OFF—LO FAN—HI FAN—LO COOL—HI COOL. When operating on either cooling setting temperature is automatically controlled by thermostats.

### 100% FILTERED AIR

The air is continuously filtered by a permanent air filter for the cleanest air possible. The special filter is washable and easily accessible from inside for cleaning.

### EASY TO SERVICE

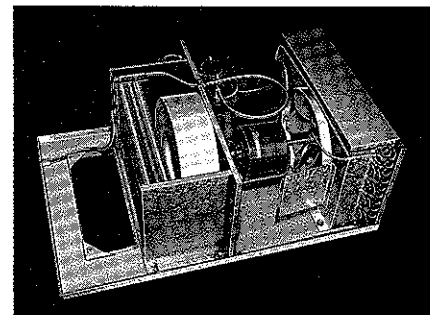
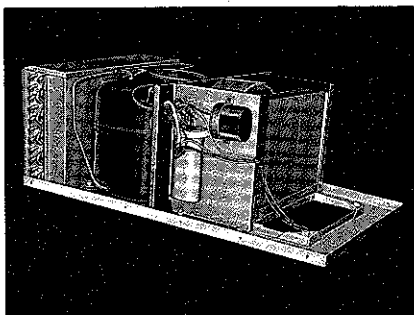
Outer casing cabinet removes easily. All components are readily accessible for servicing.

### EASY TO INSTALL

Fits standard 14" x 14" opening. Requires no structural roof changes and no additional holes... unit completely fastened from inside. Adaptor available for curved ceiling.

### LOW CURRENT DRAW

Economical to operate—draws only 11 amps. Comparable units of other makes draw 12 amps or more.



### SPECIFICATIONS

MODEL	BTU/HR	VOLTS	AMPS	PHASE	CYCLE	WEIGHT
6248-701	10,000	115	11.0	1	60	125 lbs.
6248-707*	10,000	115	11.0	1	60	127 lbs.

\* Model 6248-707 has compressor start kit installed at factory.  
Accessory Start Kit available for 6248-701.

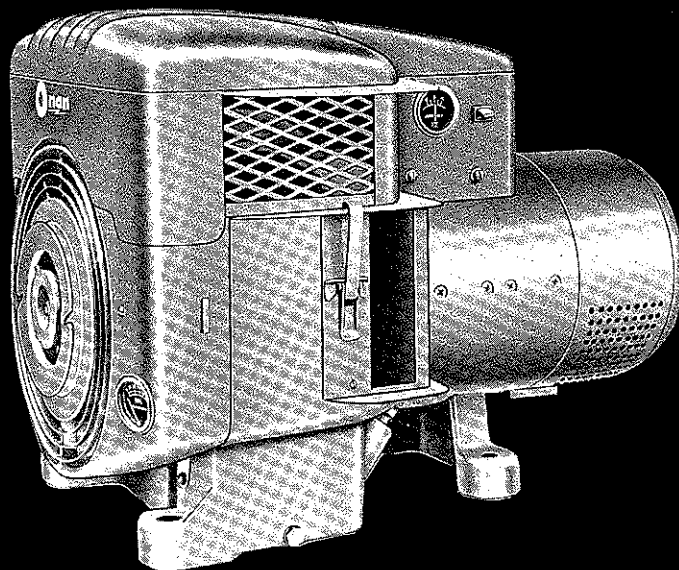
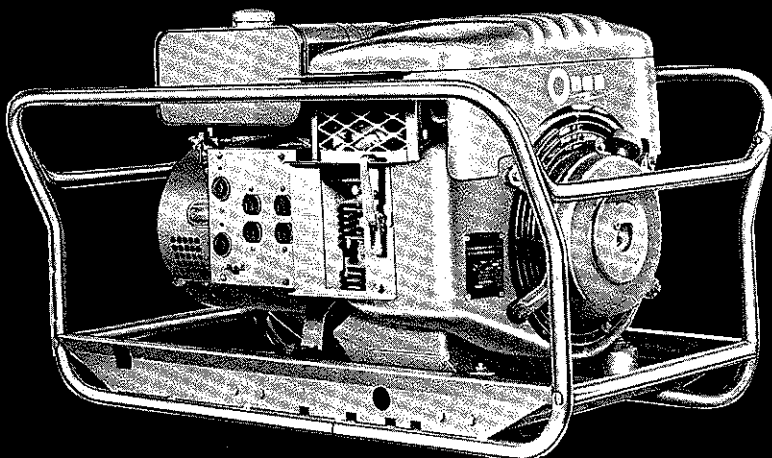


# ELECTRIC GENERATING PLANTS

## GASOLINE-DRIVEN

### PERFORMANCE CERTIFIED

**SERIES CCK**  
**5000 WATTS**  
**AIR-COOLED**



### MODEL SELECTION and RATING TABLE

ELECTRICAL DETAILS				MODEL NUMBER	RATINGS			
VOLTS	CYCLE	PHASE	WIRE		CONTINUOUS SERVICE	STANDBY SERVICE	STARTING METHOD	
120	60	1	2	5CCK-1M	5,000 watts	5,000 watts	Manual	<b>NOTES</b> *This model is reconnectable to deliver full output at 120-volt or 240-volt, 2-wire.  <b>50-CYCLE MODELS</b> are available and rated at 4,250 watts for continuous and standby service.
120	60	1	2	5CCK-1P	5,000 watts	5,000 watts	Manual	
120	60	1	2	5CCK-1R	5,000 watts	5,000 watts	Remote	
240	60	1	2	5CCK-2M	5,000 watts	5,000 watts	Manual	
240	60	1	2	5CCK-2P	5,000 watts	5,000 watts	Manual	
240	60	1	2	5CCK-2R	5,000 watts	5,000 watts	Remote	
120/240	60	1	3	5CCK-3M	5,000 watts	5,000 watts	Manual	
120/240	60	1	3	5CCK-3P	5,000 watts	5,000 watts	Manual	
120/240	60	1	3	5CCK-3R	5,000 watts	5,000 watts	Remote	
120/240	60	1	4	5CCK-3CR*	5,000 watts	5,000 watts	Remote	
240	60	3	3	5CCK-5M	5,000 watts	5,000 watts	Manual	
240	60	3	3	5CCK-5P	5,000 watts	5,000 watts	Manual	
240	60	3	3	5CCK-5R	5,000 watts	5,000 watts	Remote	
120/208	60	3	4	5CCK-4M	5,000 watts	5,000 watts	Manual	
120/208	60	3	4	5CCK-4P	5,000 watts	5,000 watts	Manual	
120/208	60	3	4	5CCK-4R	5,000 watts	5,000 watts	Remote	

### STANDARD EQUIPMENT

**REMOTE START MODELS:** Mounted Control Box with Battery Charge Rate Ammeter, Battery Terminals, Remote Control Terminals, Reverse Current Relay, Start-Stop Switch, 2-Step Current Regulator • Muffler • Flexible Exhaust Connection • Separate 5-gallon Fuel Tank • Fuel Line • Battery Cables • Vibration Isolators • Emergency Starter Rope

**PORTABLE MODELS:** Carrying Frame • Readi-Pull Recoil Starter • 6-Receptacle Outlet Box with Pilot Light • Mounted 4-gallon Fuel Tank • Muffler • Vibration Isolators

**MANUAL STATIONARY MODELS:** Separate 5-gallon Fuel Tank • Fuel Line • Muffler • Flexible Exhaust Connection • Readi-Pull Recoil Starter • Vibration Isolators • Outlet Box (no receptacles)

Litho in U.S.A.

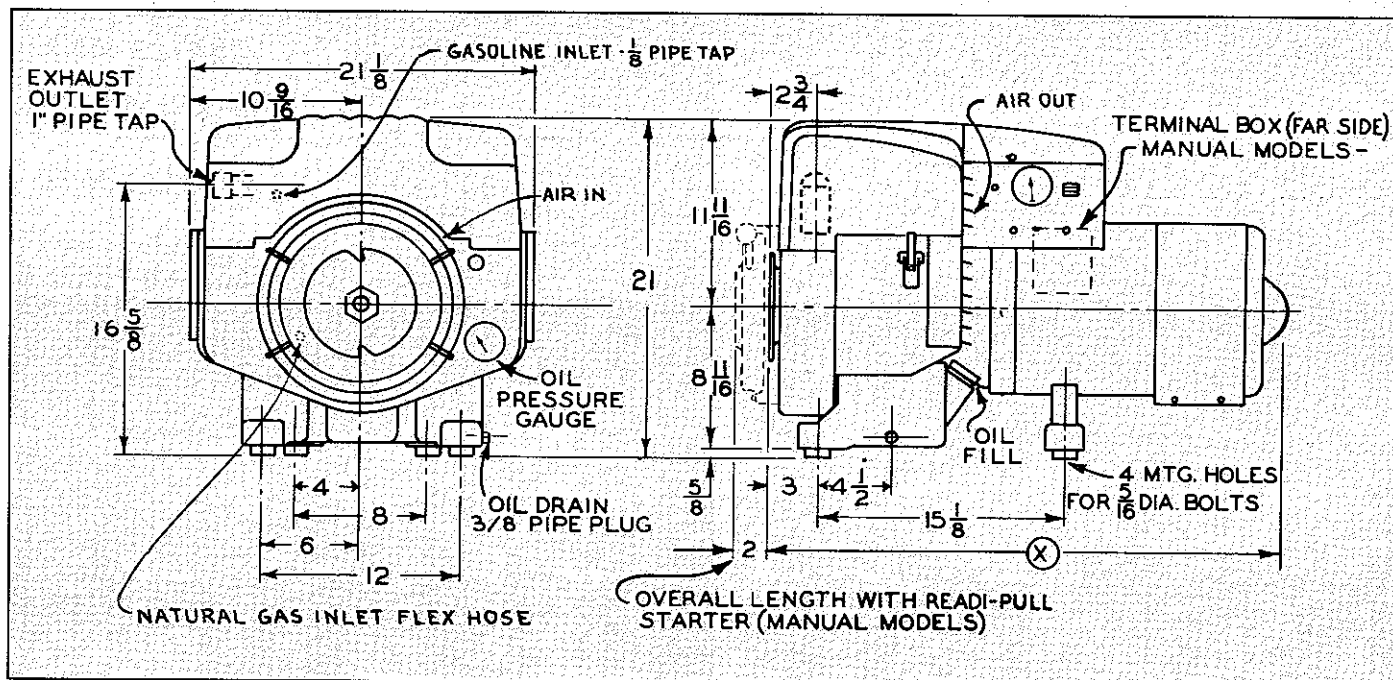
A-405-D

**ONAN**

ENGINE/GENERATOR DIVISION  
**Studebaker**  
 CORPORATION

2515 UNIVERSITY AVENUE S.E. • MINNEAPOLIS, MINN. 55414

IN CANADA: ONAN GENERATORS CANADA LTD., P.O. BOX 652, GUELPH, ONTARIO



Variable Dimensions: Length "X"—2-wire, 29<sup>7</sup>/<sub>8</sub>-in.; 3 and 4-wire, 31<sup>1</sup>/<sub>2</sub>-in. Approx. Net Weights: Manual Start—370-lb.; Remote Start—375-lb. PORTABLE MODELS: Overall Dimensions—Length 38-in., Width 27<sup>1</sup>/<sub>8</sub>-in., Height 23-7/16-in. Approx. Net Weight: 410-lb.

## ONAN ENGINE

**Type:** Four-cycle: L-head; Two cylinders horizontally opposed; 3<sup>1</sup>/<sub>4</sub>-in. bore; 3-in. stroke; 50.0 cubic inch piston displacement; 5.5:1 compression ratio; 10.2 horsepower at 1800 rpm; BMEP at continuous load is 51 psi. Piston speed is 900 fpm. ONAN CCK Engine.

**Cooling System:** Pressure air-cooled. Direct drive axial flow blower. Cooling air volume 500 cfm.

**Fuel System:** Downdraft carburetor with diaphragm fuel pump (fuel lift 4-feet), screen fuel filter, oil bath air cleaner. Portable and manual stationary models have hand choke; remote start models have electric choke. Approximate fuel consumption at continuous rated load: Gasoline—0.88 gph; Gaseous fuel (1000 Btu cu ft) 115 cu ft-hr.

**Governor:** Enclosed, flyball governor, cam gear-driven with vacuum booster to supplement mechanical governor control of speed. Speed regulation 5 percent.

**Ignition Systems:** Portable and Manual Stationary models have flywheel magneto ignition. Remote models have 12-volt battery ignition. All Models are shielded to minimize radio interference.

**Lubrication System:** Gear driven gear pump. Full pressure lubrication to main and connecting rod bearings and governor. Adjustable pressure relief valve. Oil pressure gauge; dipstick. Sump capacity: 4-quarts.

**Starting System:** Portable and manual stationary models—hand started with an automatic recoil Read-Pull starter, stop button on blower housing. Remote models—12-volt cranking from exciter of the AC generator. Optional (LTE 3-wire) automatic load transfer control for standby service.

**Bearing:** Two main bearings are steel backed bronze (sleeve); replaceable precision inserts.

**Connecting Rods:** Cast aluminum alloy.

**Crankshaft:** High strength, cast alloy iron. Balanced.

**Cylinders-Crankcase:** Integral. Cast alloy iron. Cast iron oil base.

**Cylinder Heads:** Cast aluminum alloy.

**Pistons:** Machined aluminum alloy, controlled expansion; 3-ring (2 compression, 1 oil control).

**Valves:** Intake valves are SAE 4140 carbon steel. Rotating exhaust valves are austenitic (2112) steel with hard chrome-cobalt alloy facing. Hard Chrome-Cobalt Alloy Exhaust Seat Insert, replaceable.

## ONAN AC GENERATOR

**Ratings:** 5000 watts continuous and 5000 watts, AC, standby service at unity power factor, 60-cycle. Remote Start Models: AC generators incorporate 12-volt, DC windings and 12-volt, DC battery charging circuit—6-amp battery charge rate, maximum.

**Type:** Revolving armature, 4-pole, self excited, inherently regulated. Drip-Proof design. Permanently aligned to engine.

**Frequency Regulation:** 3 Cycles (5 percent) no load to rated continuous service load, 60-Cycle operation.

**Voltage Regulation:** Plus or Minus 5 percent, no load to rated continuous service load, 60-Cycle operation.

**Insulation System:** Class B per NEMA MG1-1.65 definition. Insulating Varnish conforms to MIL-V-1137.

**Temperature Rise:** Temperature rise at rated load is within NEMA MG1-22.40 definition.

**Radio Frequency Interference Suppression:** Exceeds requirements for most civilian and commercial applications.

**Armature:** Laminated Electrical steel stack, keyed and press fitted to shaft. Heavy Nyform insulated copper wire windings. Balanced.

**Stator:** Laminated Electrical steel pole shoes mounted in rolled steel frame. Machine form wound and taped field coils.

**Collector Rings:** Low zinc-brass. Machine finished.

**Bearing:** Sealed ball bearing, lubricated for life.

## OPTIONAL ACCESSORIES

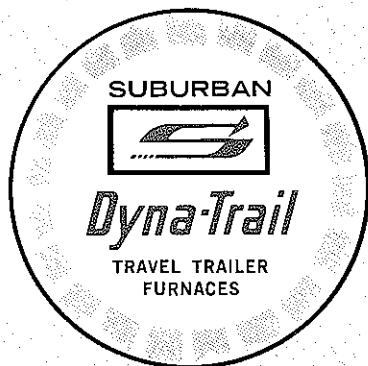
Automatic (load demand) Start-Stop Controls • Automatic (LTE) Load Transfer Controls • Switchboards • Two, 6-volt, 105 amp-hr Starting Batteries • Gas or Combination Gas-Gasoline Carburetion • Vacu-

Flo Cooling • Thermostatically-controlled Air Shutter • High Air Temperature Cut-out • Weather Protective Housing (Instruments and Receptacles) • Two-wheel Dolly Kit for Portable Models

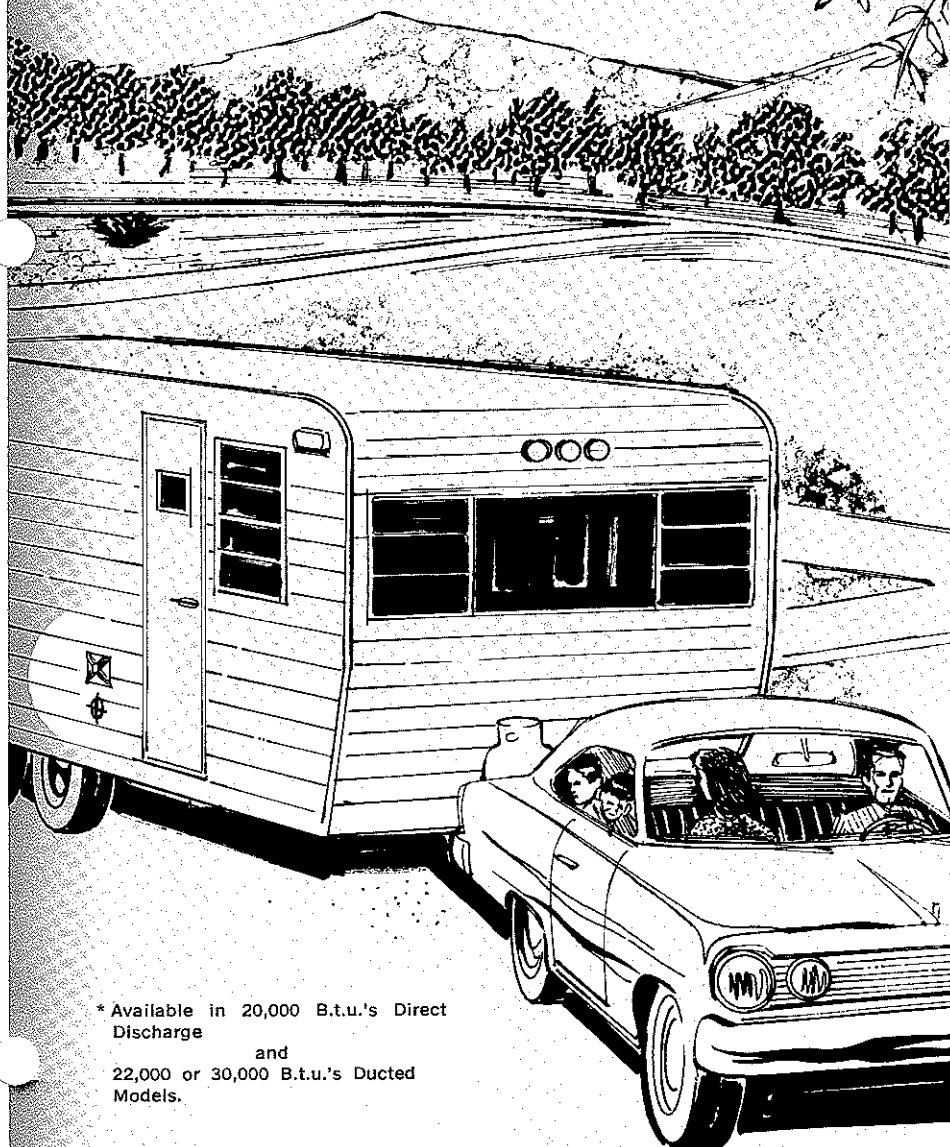
Specifications May Change Without Notice

# REVOLUTIONARY \* **NEW**

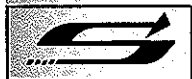
**"THE HEATER WITH THE PILOT  
THAT WON'T GO OUT!"**



Now, from Suburban, two new travel trailer heaters featuring easy installation, superb efficiency, quality materials and workmanship for long-lasting service, fool-proof safety advantages, low operating costs . . . DUCTED or DUCTLESS. A.G.A. approved, of course. Trailer with furnace application can be tested in Suburban's "Cold Room" under temperatures as low as -15 degrees.

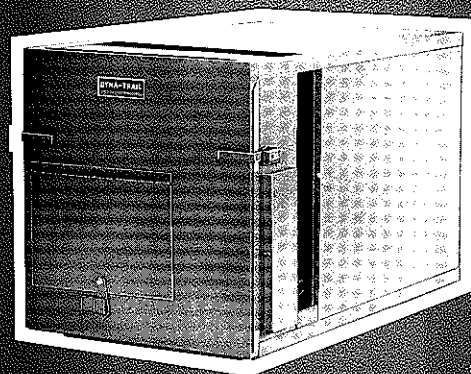


\* Available in 20,000 B.t.u.'s Direct Discharge and 22,000 or 30,000 B.t.u.'s Ducted Models.

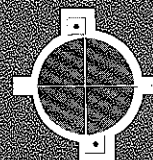
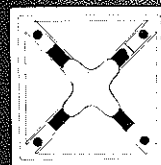


**Suburban Manufacturing Company, DAYTON, TENNESSEE**

## DUCTED MODEL NT22 AND NT30

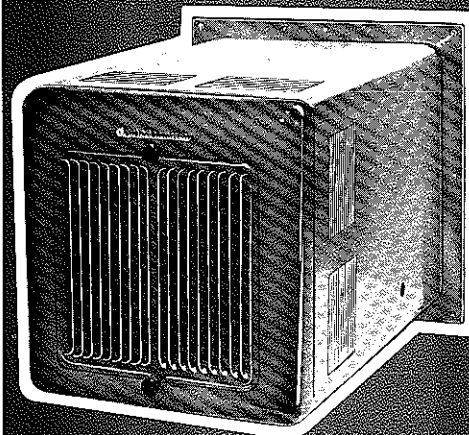


Just set the thermostat to the desired temperature. The Suburban DYNATRIL NT22 and NT30 force hot air through ductwork to outlets in any predetermined area of the trailer for uniform floor-to-ceiling, wall-to-wall comfort.



Positive through-the-wall venting system eliminates unsightly roof vents and bulky attachments to the outside wall. Trim, aluminum vents provide for intake of outside air and exhaust — making impossible the contamination or depletion of room air.

## DUCTLESS MODEL NT20-A

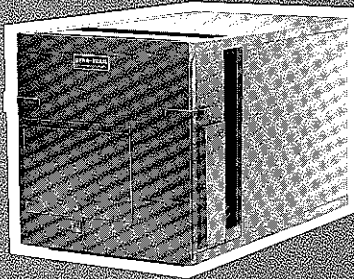


Suburban warmth discharged directly into the room by the NT20-A — thermostatically controlled and economical to operate.

A.G.A. APPROVED







## Suburban Model NT22 and NT30 DUCTED FURNACES



Ducted Models NT22 and NT30 provide the ultimate in heating comfort, use less fuel to maintain uniform temperatures. . . can be ducted on both sides or bottom for carrying hot air into remote trailer areas.

### FEATURES

- **Exclusive** forced draft . . . ducted, noiseless.
- **Exclusive** forced draft sealed combustion system virtually eliminates pilot outage.
- Dual electric system; operates on either 12-volt battery or standard 115-volt current. Automatic rectifier system. (No need to manually switch for 12-volt or 115-volt operation.)
- All the controls of a central forced warm air system.
- Low, low amperage draw.
- Wall thermostat.
- Simple to light, economical operation.
- Easy installation.
- Cleveite spark igniter—solid state.
- Only 24" in length.
- Only  $\pm 1$  degree thermostat differential.

### SPECIFICATIONS

#### CAPACITY

**NT-22** Input—22,000 B.t.u.'s per hour.  
Output—17,600 B.t.u.'s per hour.

**NT-30** Input—30,000 B.t.u.'s per hour.  
Output—24,000 B.t.u.'s per hour.

#### SEALED COMBUSTION SYSTEM

Exclusive, patented forced draft.

#### VENTING

Exclusive side-wall . . . trim aluminum vents.

#### AIR CIRCULATION

170 c.f.m. at 12 in. H<sub>2</sub>O static pressure.

#### CLEARANCES REQUIRED TO COMBUSTIBLE MATERIAL

Zero inches on all sides, including warm air ducts.

#### ELECTRICAL SYSTEM

Dual voltage: 115-volt a.c. or 12-volt d.c. battery.

#### AMPERAGE DRAW

Maximum 4.1 amps. under full operating conditions.

#### FAN CONTROL

Automatic, two-step blower.

#### THERMOSTAT

Wall mounted.

#### HIGH LIMIT CONTROL

Automatic.

#### GAS CONTROLS

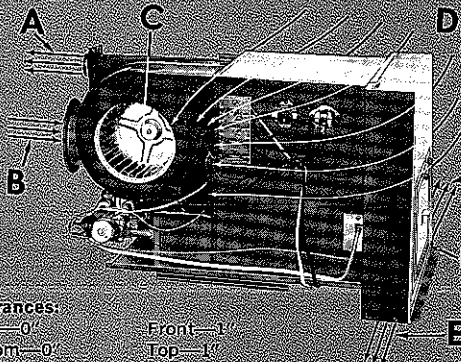
100 percent shutoff.

#### EXCLUSIVE POWER VENT SYSTEM

#### DIMENSIONS

Height—15" Width—14 1/4"  
Length—24" Weight—Approx. 75 lbs.

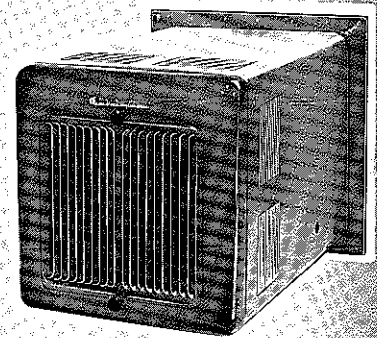
(Approximate overall dimensions subject to change.)



**Clearances:**  
Back—0"  
Bottom—0"  
Left side—1"

Front—1"  
Top—1"  
Right side—2"

- A Exhaust Flue Gas
- B Combustion Air Intake
- C Blower (Low Amperage Draw)
- D Return Air Intake
- E Ducted Hot Air
- F Pilot Access Door



Ductless Model NT20-A directs hot air directly into the trailer . . . features same economical operation and venting system as Model NT22. Cold air can be connected to cold air return duct.

### FEATURES

- **Exclusive** forced draft, sealed combustion system. Virtually eliminates pilot outage.
- All the controls of a central forced warm-air system.
- No ducting required . . . discharges hot air directly into living area.
- Dual electric system; operates on either 12-volt d.c. or standard 115-volt a.c. current. Automatic rectifier system.
- Low, low amperage draw.
- Wall thermostat.
- Simple to light.
- Easy Installation.
- Cleveite spark igniter.

### SPECIFICATIONS

#### CAPACITY

Input—20,000 B.t.u.'s per hour  
Output—15,000 B.t.u.'s per hour

#### SEALED COMBUSTION SYSTEM

Exclusive, patented forced draft.

#### AIR CIRCULATION

170 c.f.m. at 12 in. H<sub>2</sub>O static pressure.

#### ELECTRICAL SYSTEM

Dual 12-volt d.c. or 115-volt a.c.

#### AMPERAGE DRAW

Maximum 4.1 under full operating conditions.

#### COMBUSTIBLE MATERIAL CLEARANCES

Zero inches all sides.

#### FAN CONTROL

Automatic, two-step blower.

#### THERMOSTAT

Wall mounted.

#### HIGH-LIMIT CONTROL

Automatic.

#### GAS CONTROLS

100 percent shutoff.

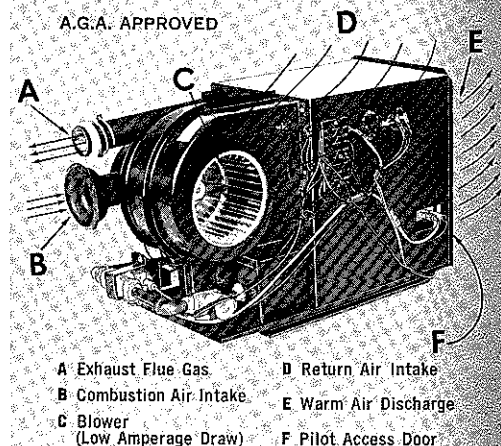
#### VENTING SYSTEM

Exclusive power vents system.

#### DIMENSIONS

Height—14 1/4"  
Width—14 1/2"  
Length—22" (Less out side mounting flange)  
Weight—Approx. 75 lbs. (Approximate overall dimensions subject to change.)

A.G.A. APPROVED



- A Exhaust Flue Gas
- B Combustion Air Intake
- C Blower (Low Amperage Draw)
- D Return Air Intake
- E Warm Air Discharge
- F Pilot Access Door

1-YEAR IN-WARRANTY SERVICE POLICY COVERS LABOR AND MATERIAL.

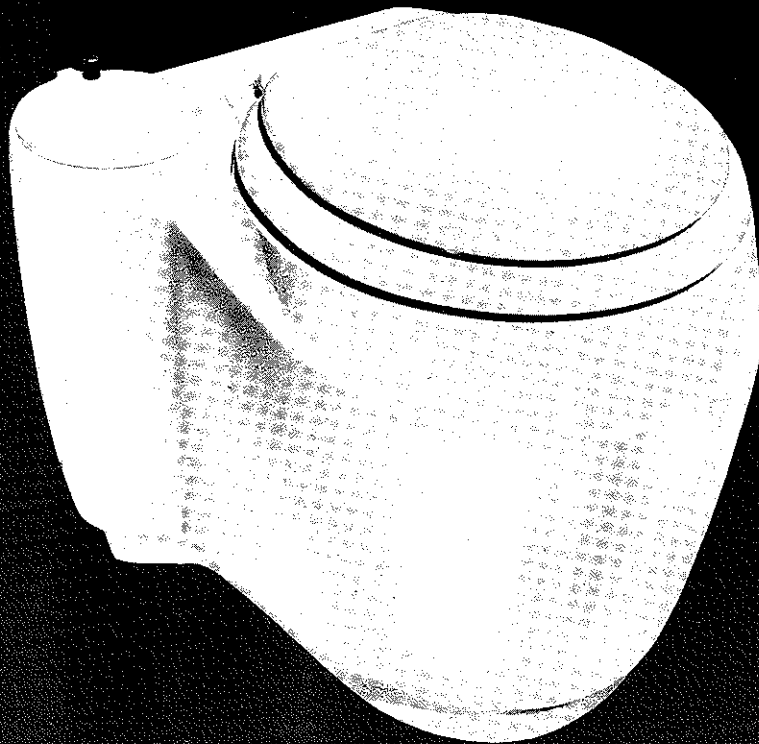


**Suburban Manufacturing Company,** P.O. BOX 399, DAYTON, TENNESSEE 37321

**All \$7 million jet airliners  
rely on MONOGRAM sanitation systems**



**So do most leading recreational vehicle manufacturers**

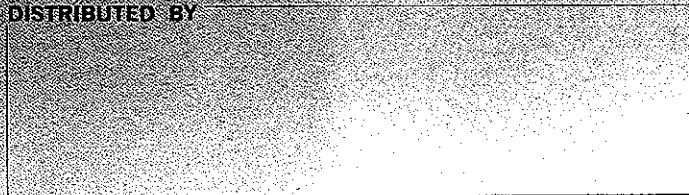


■ All flushing toilets for every Boeing 707 and Douglas DC-8 flying today are produced by Monogram Industries. Now, the same engineering principles have been incorporated into the MONOMATIC at a price you can afford.

■ MONOMATIC is completely self-contained. Same four gallons of water with one packet of Monochem T-5 will accommodate 80 to 100 usages without a holding tank. With a new or existing conventional holding tank the capacity can be extended weeks, months or even a full season. Ten minute installation on any recreational vehicle. Twelve volt DC system. Merely press button and automatic timer controls 8 second flush through self-cleaning filter. Built in drain valve at base of unit (above floor) makes emptying and recharging a simple procedure. ■ Over

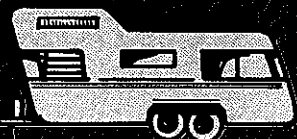
60% of the nation's leading trailer, camper and motor home manufacturers include MONOMATIC as standard equipment. Due to simplicity of installation most other manufacturers will consider it optional and gladly make an exchange for you.

**DISTRIBUTED BY**



**Manufacturers and originators of all flushing toilets for Boeing 707 and Douglas DC-8's**

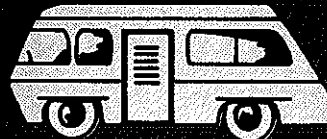




TRAILER



CAMPER



MOTOR HOME



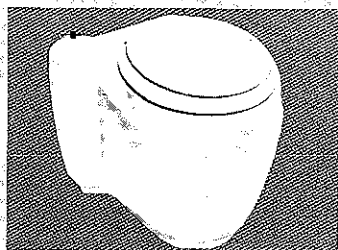
FOLD-OUT TENT CAMPER

# THE NEW STANDARD OF MOBILE SANITATION

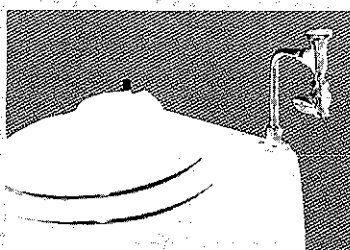
To answer a critical need for a thoroughly reliable, trouble-free toilet for travel trailers, pleasure craft, and other areas where self containment is essential, Monogram Industries has applied the same principles used in the flushing toilets they manufacture for use in the Boeing 707's, Douglas DC8's, and other jet airliners flying the world over. ■ The result is a unit that is completely different in operation and appearance from any toilet ever before made available outside the aircraft field. Completely self-contained, the electrically operated Monomatic is quiet and efficient.

Recirculating, it uses none of the precious water supply. It is completely hygienic and odorless. ■ It offers fast, economical installation for the manufacturer, increased sales appeal for the dealer, and years of trouble-free service for the owner. The trim, modern appearance of the Monomatic will enhance the interior decor wherever it is installed. The cabinet and bowl are made of rugged ABS plastic with a tough, gleaming-white finish that is easy to keep clean. All internal parts are either stainless steel or corrosion-proof plastic for years of satisfactory service.

## TWO MODELS AVAILABLE



Model A: Manually filled with any measured container.



Model W: Connects directly to water supply for easy rinsing and filling. Complete with factory installed anti-siphon vacuum breaker, water inlet fitting and charging tube.

Both Models A & W are equipped with factory installed built in drain valve.

## MONOCHEM T-5 CHEMICAL TREATMENT

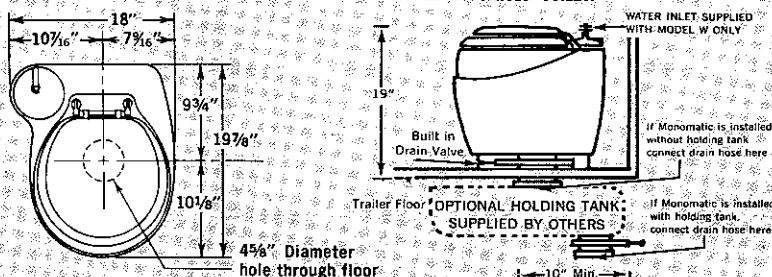


In the Monomatic system, special attention has been directed toward elimination of the odor-causing bacteria. The Monomatic has a capacity of 8½ gallons and takes an initial charge of four gallons of water mixed with one package of Monochem T-5. It will accommodate 80 to 100 usages over a continuous 5 day period or several week ends. The formulation of Monochem T-5 is the result of more than seven years of research, testing and proven dependability in Monogram sanitation systems throughout the world. Monochem T-5 has a cost of less than one penny a flush.

## SPECIFICATIONS

Toilet Housing	ABS Plastic
Toilet Bowl	ABS Plastic
Usable Capacity	8.5 gallons
Disposal Outlet	3 inches
Motor	12 Volt DC
Current	9 Amps Max. (8 Sec. Period)
Weight	20 lbs.
Shipping Weight	Approx. 24 lbs.

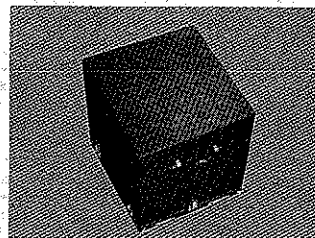
THE MONOMATIC HAS STANDARD MOUNTING BRACKETS AND MAY READILY REPLACE ANY MARINE STOOL OR CONVENTIONAL HOUSEHOLD TOILET.



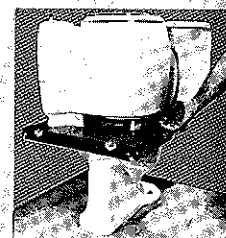
MODEL A AND MODEL W MAY BE INSTALLED WITH OR WITHOUT HOLDING TANK. When used with holding tank the capacity of self containment is extended beyond 80 usages.

## PORTABLE MONOMATIC

All the outstanding features of the Monomatic have been incorporated into a smartly styled case with the appearance of fine luggage. Outside dimensions of case, including clips: 22 inches long 20½ inches wide, 21¼ inches top to bottom.



The Portable Monomatic is securely mounted to its own vinyl covered platform with four built-in grip handles and six heavy duty chrome finished locking clips, which secure the lift off top — easy portability in either open or closed position.



After approximately 80 uses, the Portable Monomatic may be placed on a conventional toilet. The built-in drain valve is released and the contents flushed away.

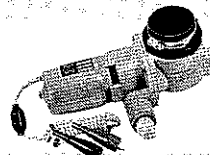
Maximum weight of Portable Monomatic, when filled to capacity, is approximately 85 lbs.

## ELECTRICAL POWER SOURCE



Conventional 12 volt automotive battery. If 110 volt AC standard household current is used as a power source, it must be converted to 12 volt DC. The Monovolt Converter Model 10A has been especially designed to provide the proper voltage and amperage output necessary for optimum performance of the Monomatic. The Monovolt may also be used as an efficient 6 volt, or 12 volt battery charger.

## MONOPUMP



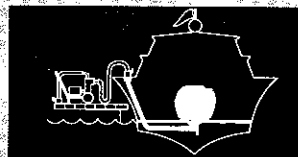
Discharges Monomatic or conventional holding tank thru ¾" garden hose into household toilet.



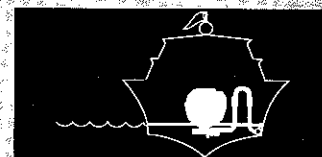
Optional carrying case for MonoPump very strong, very light, heavy duty chrome hardware.

## MARINE MONOMATIC

The self-contained marine Monomatic is the only practical solution to the problem of preventing water pollution by pleasure craft. Two marine models are available.



Model 3 — DOCKSIDE DISCHARGE OF TREATED WASTE. Waste is removed by dockside discharge facilities. This system is approved by most states.



Model 4 — OVERBOARD DISCHARGE OF TREATED WASTE. Where permitted by law, treated waste is discharged into water ways.



MONOGRAM INDUSTRIES, INC.

10131 NATIONAL BOULEVARD, LOS ANGELES, CALIF. 90034



Model No. 285 With Top Burner Pilot,

Model No. 165 } HT. 1 $\frac{3}{4}$ " Less than  
Model No. 265 } Model No. 185



**MAGIC CHEF** MODELS NO. 165 & 185 GAS RANGES  
for Campers and Travel Trailers...



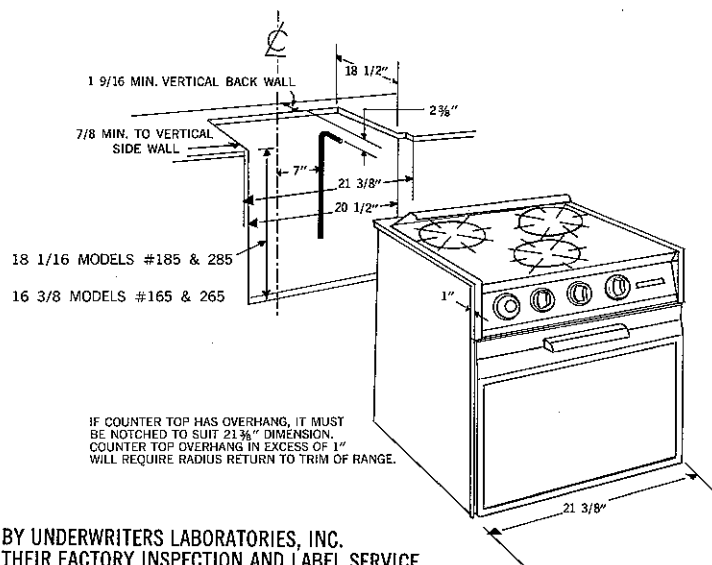
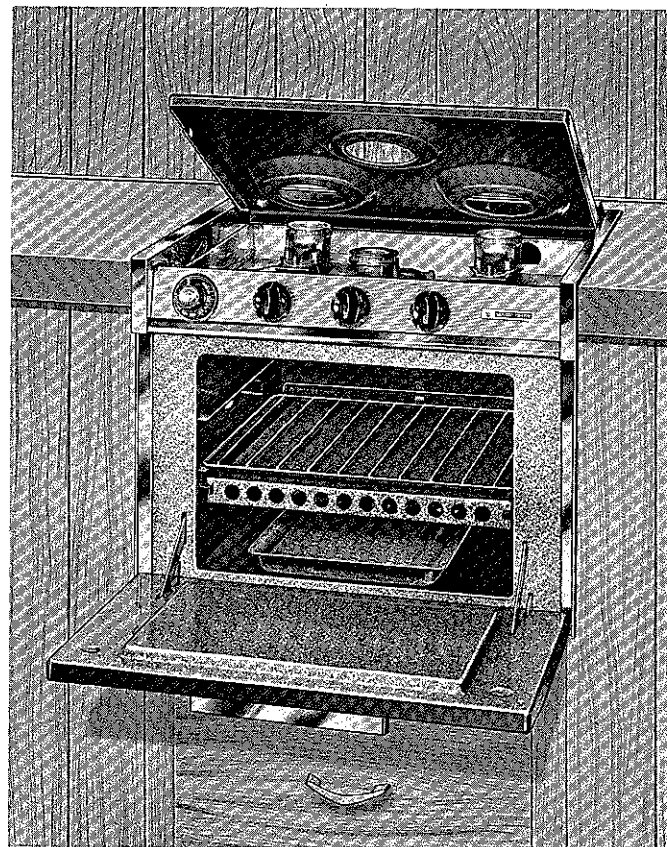
# MAGIC CHEF

Models No. 165 & 185 Gas Ranges

Designed expressly for the Camper and Travel Trailer. The Model 165 will maintain 36" countertop height for Campers. All the convenience of a full size range with 3 large surface units and oven/broiler compartment. Surface units, oven and control panel in one compact, built-in unit. Meets all code requirements. Colors: white, champagne, yellow, pink, copper-tone, turquoise.

## OTHER OUTSTANDING FEATURES:

- \* Automatic oven ignition on all models.
- \* Top burner pilot (Models 265 & 285 only).
- \* New "Hi-speed, low turn down" top burner control enabling infinite temperature control settings.
- \* Exterior and interior finish porcelain enamel.
- \* High polished chrome heavy gage trim rim completely conceals cabinet cutout.
- \* "Curbed" cook top.
- \* Two piece enamelled "Smokeless" broiler pan.
- \* Hinged top permits easy, fast cleaning.
- \* Inclined control panel.
- \* New custom styled knobs.



## COUNTER PREPARATION

Easy and inexpensive to install, simply slip into cabinet opening, secure with six recessed screws and connect the gas line. Weight of unit provides tight, flush mounting. No platform, base or rails required as unit is fully supported from countertop.

LISTED BY UNDERWRITERS LABORATORIES, INC.  
UNDER THEIR FACTORY INSPECTION AND LABEL SERVICE.

MODELS 165 & 265			SPECIFICATIONS	MODELS 185 & 285		
DEEP	HIGH	WIDE		DEEP	HIGH	WIDE
16 1/4	6 1/2	15 1/2	OVEN COMPARTMENT	16 1/4	7 1/4	15 1/2
16 1/4	3	15 1/2	BROILER COMPARTMENT	16 1/4	3 3/8	15 1/2
19 3/4	16 5/8	21 3/8	OVERALL	19 3/4	18 3/8	21 3/8
		69#	APPROX. SHIPPING WEIGHT			72#



# MAGIC CHEF, INC.

Specifications, equipment and models subject to change without notice

PAN PACIFIC DIVISION 245 North Vineland, City of Industry, Calif. 91746

Litho in U.S.A.