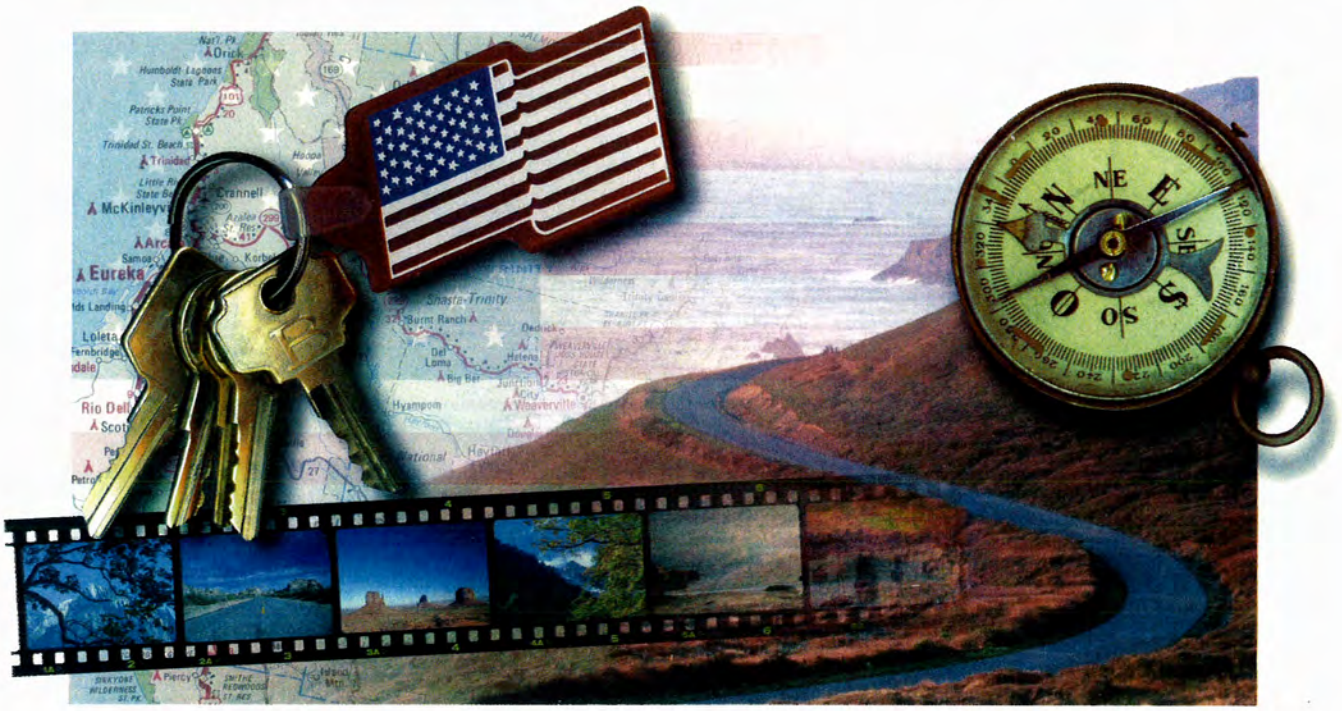
NEWMAR



OWNER'S GUIDE

1997 Mountain Aire

FIFTH WHEEL

NEWMAR CORPORATION
OWNER'S GUIDE

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Welcome to the exciting world of RV traveling and the growing family of recreational vehicle owners.

Congratulations on your purchase of a Newmar product. We sincerely thank you for choosing Newmar as your recreational vehicle. We trust this guide will help you to better understand and enjoy your new RV. We hope that you will enjoy many miles of traveling. Your new vehicle was built with care using today's technology and old world craftsmanship. We, at Newmar, strive to build vehicles that are safe, dependable, and comfortable to provide years of carefree, pleasant traveling.

This Owner's Guide, along with the Video Guide, should be kept in your vehicle for quick reference. Take time to get acquainted with your unit and how it operates. Carefully read both the instructions in this guide and the booklets supplied by the component manufacturers for important operation, safety, and maintenance information. Your dealer should be consulted should you have any questions. If your dealer is unable to answer the questions to your satisfaction he will refer you to our staff for help. Our customers are extremely important to us and we will make every effort necessary to ensure your satisfaction.

Again, thank you and welcome to our Newmar family.

Newmar Corporation

This guide, along with the Video Owner's Guide, has been provided by Newmar Corporation solely for the purpose of providing instructions about the operation and maintenance of this vehicle and its components. Nothing in this manual creates any warranty, either express or implied. The only warranty offered by Newmar Corporation is set forth in the written limited warranty that applies to this vehicle.

Instructions are included in this manual for operating some of the components that are standard on this vehicle. Instructions are also given for components that are options and may not appear on all vehicles. For more detailed information on components refer to the individual manufacturer's operating instructions contained in the Owner's Information Package.

The limited warranties issued by component manufacturers require periodic service and maintenance, and the owner's failure to provide this service and/or maintenance will result in the loss of warranty coverage. The owner should review the Newmar Corporation limited warranty and other manufacturers limited warranties of all components applicable to this vehicle. To activate the warranties on the components within your Newmar recreational vehicle, be sure to file the appropriate registration card with the component manufacturer as described with the individual instruction booklet.

Newmar Corporation has compiled the most current information available at the time of publication. If the components in your unit vary significantly from what is described within this manual, then consult the instructions provided by the component manufacturer found in the Owner's Package.

Throughout this guide, reference is made to the following terms: Warning, Caution, and Important. These terms indicate important information that must be understood and followed. The definitions of these terms are:

WARNING
Emphasizes an area in which personal injury or even death could result from failure to follow instructions properly. Mechanical damage may also occur.

CAUTION
Failure to observe a caution can cause damage to the equipment or unit. Personal injury is unlikely.

IMPORTANT
Provides additional information to make a step easier or clearer.

CHAPTER 1

GENERAL INFORMATION

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DELIVERY

Throughout the manufacturing process, your vehicle has been inspected by our qualified technicians. However, our final inspection at the factory is not to be the last one. The pre-delivery inspection and systems check your dealer performs are the final inspections done to the unit prior to you receiving your new coach. Your dealer is also available to assist you in understanding the limited warranties and completing any necessary forms to activate the warranties for the various appliances and accessories installed in your unit.

Dealer Responsibilities

1. A pre-delivery inspection and systems check. Thoroughly inspecting the vehicle and the operation of the factory installed components.
2. A customer walk through. This is done to familiarize the customer with the vehicle, its systems and components, and their operation.
3. Delivery of the Owner's Information Package. This package contains the warranty cards and registrations for the vehicle and factory installed components that carry a separate warranty. The detailed operating and maintenance instructions on these components are also included in this package.
4. Assisting the customer in completing the component registration forms, at the customer's request. To avoid loss of warranty coverage, the dealer should review the limited warranty provisions with the customer stressing the importance of filing warranty cards and registrations to the component's manufacturers within the prescribed time limit.
5. Providing the customer with information regarding warranty and non-warranty work on the vehicle and its separately warranted components whether the customer is in or out of the area.

Customer Responsibilities

The customer is responsible for regular and proper maintenance of the vehicle. Properly maintaining your vehicle will prevent conditions arising from neglect that are not covered by your Newmar limited warranty. The maintenance guidelines in this manual and any other applicable manual should be followed. It is your responsibility and obligation to return the vehicle to an authorized dealer for repairs and service.

To assist you in avoiding problems with your vehicle, we recommend you do the following:

a. Read the warranty. Go over it thoroughly with your dealer.
b. Inspect the vehicle. Do not accept delivery until you have gone through the unit with the dealer. Newmar has provided a check list to be used during retail delivery. Check each item on the list and make sure he does the same. Do not sign this checklist until you have done this.
c. Ask questions about anything that you do not understand concerning your recreational vehicle.
d. When taking delivery, set an appointment for adjustments. This appointment should be approximately two (2) weeks after you accept delivery.

RECREATIONAL VEHICLE LIMITED WARRANTY

Some of the items installed on your unit are warranted by the original manufacturer. Newmar does not warranty these items. These items include batteries, light bulbs, microwaves, televisions, washers, dryers, air conditioners, satellite dish systems, security systems, CB radios, VCRs, dishwashers, and tires. Below you will find a list of manufacturers who can help you with these components.

Major Equipment Manufacturers

A & E Awnings	800-544-4881
Carefree Awnings	800-621-2617
Dexter Axle	219-295-1900
Dometic, Duo Therm	800-544-4881
Fantastic Vents	800-521-0298
Flexsteel	319-556-7730
Goodyear Tires	800-227-1999
Hartco Flooring	615-569-8888
Kohler Generators	414-565-3381
Kwikee Products (Step)	800-736-9961
Larson Electronics (Monitor Panel)	714-738-3551
Magnavox Appliances	800-531-0039
MasterCraft Chairs & Sofas	800-522-5652
Moen Faucets	800-321-8809
Mor/Ryde Suspension	219-293-1581
MTI Industries	708-487-4940
Newmar Corporation	800-731-8300
Onan Generators	800-888-6626
Panasonic Radio & Microwaves	800-447-4700
Power Tech Generators	800-760-0027
Sealand Toilets	800-321-9886
Sears Washer & Dryer	800-359-2000
Sharp	800-237-4277
Suburban Furnace	800-659-2138
Thermoil Batteries	800-697-9505
Thetford Toilet	800-521-3032
Michigan Residents	313-769-6000
Todd Engineering	219-293-8633
Trekmate Security Systems	619-941-3444
U-Line Ice Maker	800-779-2547
Wedgewood Range (Atwood)	615-643-4556
Winegard Antenna Systems	800-288-8094

DAMAGE LIMITATION

Newmar Corporation will not be responsible for any incidental or consequential damages, including (but not limited to) loss of vehicle use, loss of time, inconvenience, expenses for travel, lodging, transportation charges, loss or damage to personal property or loss of income.

Please note, however, that some states do not allow the exclusion or the limitation of incidental or consequential damages, so the above limitation may not apply to you.

Oral and Implied Warranty Limitation

Implied warranties such as any warranty of merchantability or fitness for a particular purpose covers only the original purchaser. Coverage terminates 365 days from the date of purchase or on the date the original purchaser sells or transfers his interest in the recreational vehicle to a subsequent owner.

It is the intent of Newmar Corporation to comply with the Magnuson-Moss Warranty Act and the Federal Trade Commission's prescribed rulings. Newmar Corporation is not liable for, and will not recognize, any warranty other than the implied warranties under state law and the written warranty contained in this document. In other words, no other warranty, written or oral, is given by Newmar Corporation.

Please note, however, some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Transfer Limitation

This warranty is not assignable or transferable.

Legal Rights

This warranty gives you specific legal rights and you may also have other rights that may vary from state to state.

Reserved Right to Change

Newmar Corporation reserves the right to make changes or improvements in vehicles it produces in the future, without imposing on itself any duty to install the same improvements in vehicles it has previously manufactured.

Owner's Information Package

Included in this package are valuable documents about your vehicle and its components and systems. The Newmar Owner's Guide does not cover every possible detail of equipment, standard and/or option, installed on or in your vehicle. Consulting the booklets and instruction manuals in this package will help you safely operate, maintain, and troubleshoot these items.

Read all of the information and understand the safety and operating instructions included in the Owner's Information Package. To assure full warranty coverage, it is essential that all maintenance instructions are followed.

CUSTOMER RELATIONS

We, at Newmar Corporation, are concerned about our customer's satisfaction. Therefore, if you discover a defect or a problem, please follow these instructions.

Upon discovery of a defect, you should notify your local Newmar repair center and set up an appointment to have the defect corrected. If you are unsure of the location of your closest Newmar repair center, you may contact the Customer Service Department toll free at 1-800-731-8300. A customer service representative is available 24 hours a day, 365 days a year for operational and warranty assistance. Please have your Customer Care Card available for reference when calling for service. You may also write to:

Newmar Corporation
Warranty Department
P.O. Box 30
Nappanee, IN 46550

REPORTING SAFETY DEFECTS

If you believe your vehicle has a defect that could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Newmar Corporation. If the NHTSA receives similar complaints, then it may open an investigation. If it finds that a safety defect exists in a group of vehicles, it may order a recall or remedy campaign. NHTSA cannot become involved in individual problems between you, your dealer, or Newmar. To contact NHTSA you may either call the Auto Safety Hot Line toll free at 1-800-424-9393 (366-0123 in Washington, D.C.) or write to:

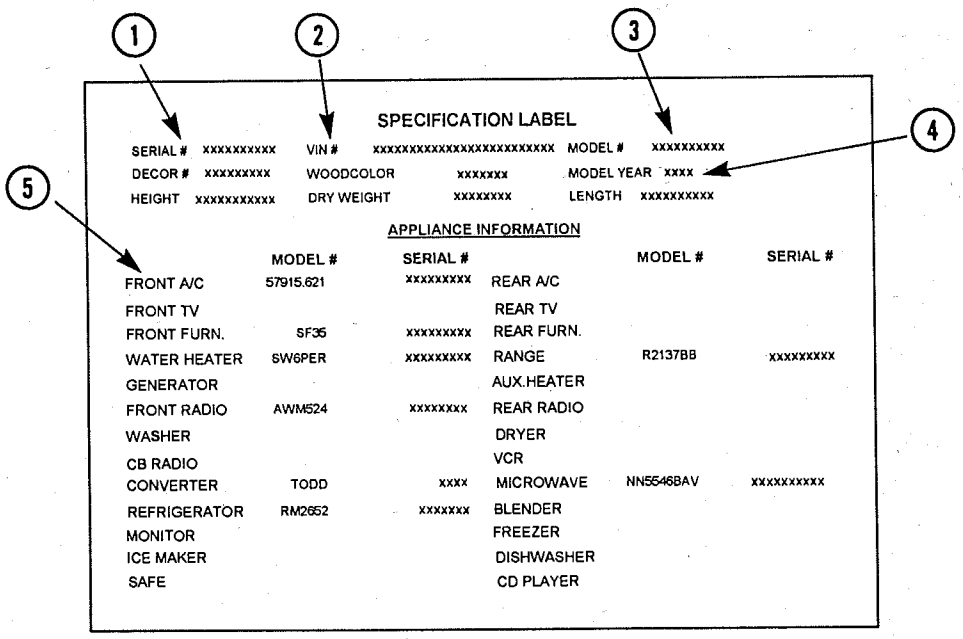
NHTSA
U.S. Department of Transportation
Washington, DC 20590

Notes

SPECIFICATION LABEL

There are two main numbers used to identify the vehicle. The Vehicle Identification Number (VIN) is the legal identification of the completed vehicle. The VIN is the number used by the state for vehicle registration. The Newmar Serial Number (1) is a five digit number that is needed whenever making an appointment for service or ordering parts through your Newmar Dealer or Service Center. This number can be found on the placard in the kitchen overhead and on the Customer Care card received from Newmar. Below is a sample of the placard located in the kitchen.

1. The Newmar Serial Number.
2. Last five digits Vehicle Identification Number (VIN)
3. Model Number of the Unit
4. Model Year of the Unit
5. Manufacturer, Model Number, and Serial Number of factory installed appliances



Notes

RECOMMENDED SERVICE CENTERS

ALABAMA

CAMPING CENTER RV SALES
P.O. Box 534
Prattville, AL 36067
(205)285-5269 Fax (205)285-5635

MILLICAN RV AMERICA INC .
36115 U.S. Highway 280
Sylacauga, AL 35150
(205)249-3773 Fax (205)249-3958

ALASKA

ALASKAN ADVENTURES RV CENTER
918 E. 73rd Street, P.O. Box 230427
Anchorage, AK 99523
(907)344-2072 Fax (907)344-1608

ARIZONA

AMERICAN PRIDE, INC.
2145 E. Main
Mesa, AZ 85204
(602)644-1500 Fax (602)834-6474

B & C MANUFACTURING RV REPAIR
3528 South Dodge
Tuscon, AZ 85713
(520)745-9586 Fax (909)783-3925

ROAD RUNNER
440 Riverview
Bullhead City, AZ 86430
(520)758-1111

ARKANSAS

NATIONAL TRAVELERS INC.
6027 Warden Road
Sherwood, AR 72120-6098
(501)835-1704 Fax (501)835-1320

OUTDOOR LIVING CENTER
Highway 7 South, P.O. Box 1081
Russellville, AR 72801
(501)968-7706 Fax (501)968-4360

CALIFORNIA

ACACIA RV
2281 LaCrosse #502
Colton, CA 92324
(909)824-9674 Fax (909)783-3925

ALPINE RECREATION SALES & SERVICE
19380 Monterey Road
Morgan Hill, CA 95037
(408)779-4511 Fax (408)776-0104

BARBER RV INC.
3650 E. Main Street, P.O. Box 3318
Ventura, CA 93006
(805)642-0276 Fax (805)642-9711

BRAWLEYS
5933 N. McHenry Avenue
Modesto, CA 95356
(209)521-0170 Fax (209)521-9436

CUSTOM EQUIPMENT
330 Keyes Street
San Jose, CA 95112
(408)294-2447

CUSTOM RV
1549 N. Broadway
Stockton, CA 95205
(209)462-6923

DAVE ALTMAN'S RV CENTERS, INC.
1201 Baldwin Park Boulevard
Baldwin Park, CA 91706
(818)960-1884 Fax (818)962-6906

DAVE ALTMAN'S RV CENTERS, INC.
906 RV Center Drive, Lot #5
Colton, CA 92324
(909)422-0311 Fax (909)422-0450

DAVE ALTMAN'S RV CENTERS, INC.
22020 Recreation Road
Carson, CA 90745
(310)518-6182 Fax (310)518-6195

EL MONTE RV CENTER
12061 E. Valley Boulevard
El Monte, CA 91732
(818)443-6158 Fax (818)448-5836

EL MONTE RV CENTER
565 E. Redlands Boulevard
San Bernadino, CA 92402
(909)885-2000 · Fax (909)888-0420

MATT FLEMMING'S RV SERVICE CO.
69-115 Ramon Road, Ste. 1369
Cathedral City, CA 92234
(619)328-3957 Fax (619)327-2885

COLORADO

ALPINE TRAVEL TRAILERS, INC.
2487 Highway 6 & 50
Grand Junction, CO 81505
(303)242-5898 Fax (303)242-5989

JDL TRAILER SALES
2734 Lake Avenue
Pueblo, CO 81004
(719)564-8056 Fax (719)564-8059

MOUNTAIN STATES RV, INC.
14300 E. Colfax Avenue
Aurora, CO 80011
(303)360-0252 Fax (303)363-9103

CONNECTICUT

DAVE'S RV CENTER
2 Industrial Plaza Road
Danbury, CT 06810
(203)730-1744 Fax (203)730-1741

FLORIDA

DICK GORE'S R.V. WORLD
14590 Duval Place West
Jacksonville, FL 32218
(904)741-5100 Fax(904)741-6682

INDEPENDENCE RV SALES & SVC. INC.
12705 W. Colonial Drive, Hwy. 50
Winter Garden, FL 34787
(407)877-7878 Fax (407)877-0911

LAND YACHTS INC.
1414 Commerce Lane, P.O. Box 1840
Jupiter, FL 33458
(407)745-0242 (407)745-1725

LEISURE TYME RV, INC.
1490 Highway 98 W.
Mary Esther, FL 32569
(904)581-0880 Fax (904)581-2300

LEISURE TYME RV INC.
6428 Pensacola Boulevard
Pensacola, FL 32505
(904)476-6848 Fax (904)474-6392

NORTH TRAIL RV CENTER
5270 Orange River Boulevard
Ft Myers, FL 33905
(813)693-8200 Fax (813)693-8179

SOUTH FLORIDA MOTOR HOMES INC.
1955 S. State Road 7
Ft Lauderdale, FL 33317
(305)792-3930 Fax (305)584-0137

TRAVEL EASY RV INC.
4299 Highway 441 S.
Okeechobee, FL 34974
(941)467-0400 Fax (941)467-9396

TRI AM RV CENTER INC.
5441 N.E. Jacksonville Road
Ocala, FL 34479
(904)732-6269 Fax (904)368-7992

GEORGIA

C.S.R.A. CAMPERLAND INC.
3844 Washington Road
Martinez, GA 30907
(706)863-6294 Fax (706)860-5728

IDAHO

AMERICAN WAY RV
4033 Chinden Boulevard
Boise, ID 83714
(208)345-5488 Fax (208)345-2521

RAY'S RV'S
3340 N. Atlas Road
Coeur D'Alene, ID 83814
(208)666-1478

ILLINOIS

ALL SEASONS CAMPING INC.
260 W. Grand Avenue
Elmhurst, IL 60126
(708)832-0800 Fax (708)832-0838

COLLIER RV CENTER
3510 Merchandise Drive
Rockford, IL 61109
(815)874-7188 Fax (815)874-9426

LARRY'S TRAILER SALES INC.
Highway 148 N., P.O. Box 98
Zeigler, IL 62999
(618)596-6414 Fax (618)596-6344

R & S SALES & SERVICE, INC.
218 S. Lake of the Woods Road
Mahomet, IL 61853
(217)586-2055 Fax (217)586-2382

WHISPERING PINES CAMPGROUND INC.
6245 N. Seneca Road
Morris, IL 60450
(815)942-0922 Fax (815)942-0372

INDIANA

DON'S CAMPER SALES INC.
Box 373, U.S. 41 S.
Boswell, IN 47921
(317)869-5009 Fax (317)869-5009

HART CITY RV SERVICE INC.
2301 S. Nappanee Street
Elkhart, IN 46517
(219)295-5793 Fax (219)294-2026

INDY RV CENTER INC.
State Rd. 37, S. Smith Valley Rd., P.O. Box 447
Greenwood, IN 46142
(317)881-0300 Fax (317)881-0431

LEE'S RV CENTER INC.
7247 State Road 46 E.
Batesville, IN 47006
(812)934-3210 Fax (812)934-3345

THE RV CENTER INC.
3360 E. Lincolnway
Columbia City, IN 46725
(219)244-3898 Fax (219)244-3414

TOM STINNETT HOLIDAY RV CTR. INC.
560 Kopp Lane
Clarksville, IN 47129
(812)282-7718 Fax (812)288-9424

WETNIGHT RV SALES & SERVICE INC.
4401 U.S. 41 N., P.O. Box 5197
Terre Haute, IN 47805
(812)466-3961 Fax (812)466-6851

IOWA

HEROLD TRAILER SALES
1806 W. 2nd Avenue, Highway 92 W.
Indianola, IA 50125
(515)961-7405 Fax (515)961-3674

RV CENTRAL
3001 S. 2nd Avenue
Sheldon, IA 51201
(712)324-5395 Fax (712)324-5396

WALKER TRAILER SALES, INC.
Highway 18 W., Box 633
Nora Springs, IA 50458
(515)749-2321 Fax (515)749-2321

KANSAS

HARPER CAMPERLAND INC.
1200 E. 10th, P.O. Box 1993
Great Bend, KS 67530
(316)792-5170 Fax (316)792-8466

HARPER CAMPERLAND INC.
117 W. 14th
Harper, KS 67058
(316)896-2862 Fax (316)896-2858

JAYHAWK CAMPER SALES
24105 W. 43rd
Shawnee, KS 66226
(913)422-5677 Fax (913)422-7147

WILCOX HOMES & RV CENTER
835 N.E. Highway 24
Topeka, KS 66608
(913)357-5111 Fax (913)232-1574

KENTUCKY

HALL ENTERPRISES
975 Beasley Street, P.O. Box 55038
Lexinton, KY 40555
(606)233-1777 Fax (606)231-9369

YOUNGBLOOD RV CENTER INC.
Rt #8, Highway 45 N.
Mayfield, KY 42066
(502)247-8591 Fax (502)247-0604

LOUISIANA

JACKIE EDGAR RV CENTER INC.
3008 Cameron Street
Lafayette, LA 70506
(318)232-1941 Fax (318)233-1147

MILLER RV
12912 Florida Boulevard
Baton Rouge, LA 70815
(504)275-2940 Fax (504)275-6807

PREMIERE RV OUTLET INC.
1700 S. Siebarth Drive
Lake Charles, LA 70601
(318)436-8785 Fax (318)436-8706

MAINE

MOUNTAIN ROAD RV
R.F.D. #1, Box 2620
Sabattus, ME 04280
(207)375-4091 Fax (207)375-4014

MARYLAND

BECKLEYS CAMPING CENTER
11109 Angleberger Road
Thurmont, MD 21788
(301)898-3300 Fax (301)898-7093

MICHIGAN

CAMPER CENTER OF CLARE
5139 E. U.S. 10
Clare, MI 48617
(517)386-9338

GAYLORD RV SALES & SERVICE
271 W. Johnson Road
Gaylord, MI 49735
(517)732-6141 Fax (517)731-2735

GENERAL TRAILER SALES-WATERFORD
5300 Highland Road
Waterford, MI 48327
(810)674-0346 Fax (810)674-3809

GENERAL TRAILER SALES-WIXOM
48500 12 Mile Road
Wixom, MI 48393
(810)349-0900 Fax (810)348-4150

HILLTOP RV & MARINE
2905 N. Lincoln Road
Escanaba, MI 49829
(906)786-7986 Fax (906)786-3421

MIDWAY MOTORHOMES INC.
5590 S. Division Avenue
Grand Rapids, MI 49548
(616)534-9641 Fax (616)534-6869

MODERN TRAILER SALES, INC.
449 S. Division Avenue
Wyoming, MI 49548-2110
(616)241-2925 Fax (616)241-5451

MINNESOTA

HILLTOP TRAILER SALES
4560 Center Avenue N.E.
Minneapolis, MN 55418
(612)571-9103 Fax (612)571-2536

LANDEY'S RV INC.
6220 Highway 101 S.
Shakapee, MN 55379
(612)445-7081 Fax (612)445-4701

SHOREWOOD RV CENTER
7405 Highway 10 N.W.
Anoka, MN 55303
(612)421-2505 Fax (612)421-6076

MISSISSIPPI

RV REPAIR & SALES, INC.
4749 Highway 80 W.
Jackson, MS 39209
(601)922-9425 Fax (601)922-5153

MISSOURI

BILL THOMAS CAMPER SALES INC.
5217 N. Lindbergh
St Louis, MO 63044
(314)731-2217 Fax (314)731-0269

CAPETOWN RV SALES
I-55 & Airport Road, P.O. Box 1985
Cape Giradeau, MO 63702
(314)334-7152 Fax (314)334-9059

COACHLIGHT RV SALES INC.
Route 4, Box 515
Carthage, MO 64836
(417)358-7444 Fax (417)358-0856

MONTANA

BRETZ RV & MARINE
2045 Mullan Road
Missoula, MT 59802
(406)721-4010 Fax (406)549-8078

NEBRASKA

DENNING RV
3110 N. Broad
Fremont, NE 68025
(402)721-5030 Fax (402)721-5570

RICH & SON'S CAMPER SALES
5112 S. Antelope Drive
Grand Island, NE 68803
(308)384-2040 Fax (308)384-2043

NEVADA

MOUNTAIN FAMILY RV
16300 S. Virginia
Reno, NV 89511
(702)849-1005 Fax (702)849-2528

WHEELERS LAS VEGAS RV
13175 Las Vegas Boulevard S.
Las Vegas, NV 89124
(702)896-9000 Fax (702)896-9001

NEW HAMPSHIRE

C. H. DANA RV SALES & SERVICE
628 Woodsville Road
Monroe, NH 03771-3328
(603)638-2200 Fax (603)638-2066

CAMPERS INN OF KINGSTON
146 Route 125
Kingston, NH 03848
(603)642-5555 Fax (603)642-9931

MOUNTAIN VALLEY RECREATION
410 Main Street
Gorham, NH 03581
(603)466-3868 Fax (603)466-2416

NEW JERSEY

SCOTT MOTOR COACH SALES INC.
1133 Route 88
Lakewood, NJ 08701
(908)370-1022 Fax (908)370-1010

NEW MEXICO

ALOHA RV INC.
11200 Central S.E., P.O. Box 53250
Albuquerque, NM 87123
(505)298-8444 Fax (505)275-7687

AMERICAN RV & MARINE
11810 Central S.E.
Albuquerque, NM 87123
(505)293-1983 Fax (505)293-6991

AMERICAN RV & MARINE
200 N. Telshore Boulevard
Las Cruces, NM 88011
(505)522-5512 Fax (505)522-3781

NEW YORK

BALLARDS CAMPING CENTER, INC.
Rte. 20 at Pleasant Av. S - 5489 Southwestern Blvd.
Hamburg, NY 14075
(716)649-9654 Fax (716)648-0340

COON TRAVEL COACH, INC.
1312 State Route 414
Beaver Dams, NY 14812
(607)936-3472 Fax (607)937-9953

SEVEN O'S
7917 Devaul Road
Kirkville, NY 13082
(315)687-9342 Fax (315)687-7992

WRATTEN TRAILER SALES
9209 Route 11 S., P.O. Box 5
Adams, NY 13605
(315)232-4535 Fax (315)232-3445

NORTH CAROLINA

HOWARD RV CENTER
6811 Market Street
Wilmington, NC 28405
(910)791-5371 Fax (910)392-0672

INDEPENDENCE RV
6600 Reames Road
Charlotte, NC 28216
(704)596-5600 Fax (704)597-7400

OLD TOWN CAMPER SALES, INC.
5109 N. Causeway Drive
Winston Salem, NC 27106
(910)924-9864 Fax (910)922-1458

RANDYS RV'S INC.
5322 Fayetteville Road
Raleigh, NC 27603
(919)779-5445 Fax (919)772-8142

NORTH DAKOTA

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Bismarck, ND 58501
(701)255-7878 Fax (701)255-1678

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NATIONAL CAMPERLAND INC.
7417 W. Central Avenue
Toledo, OH 43617
(419)841-2444 Fax (419)841-2030

SIRPILLA RV CENTER INC.
1005 Interstate Parkway
Akron, OH 44312
(216)645-1991 Fax (216)645-3560

WINN'S RV CENTER INC.
6075 Dressler Road N.W.
North Canton, OH 44720
(216)494-3811 Fax (216)494-8255

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DAVE'S CLAREMORE RV INC.
1400 S. Lynn Riggs
Claremore, OK 74017
(918)341-0114 Fax (918)341-8936

EARL'S LAKE COUNTRY RV'S INC.
2601 S. 32nd Street
Muskogee, OK 74401
(918)682-4504 Fax (918)683-2691

FLOYD'S CAMPERS INC.
Route 1, P.O. Box 112 AA
Norman, OK 73072
(405)288-2355 Fax (405)288-2350

LEE'S RV CITY INC.
9300 S.E. 29th Street
Oklahoma City, OK 73130
(405)733-1753 Fax (405)733-4177

LEWIS TRAVEL TRAILER SALES
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Owasso, OK 74055
(918)272-1353 Fax (918)272-5451

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AL'S TRAILER SALES OF SALEM
4843 Portland Road N.E.
Salem, OR 97305
(503)393-3365 Fax (503)393-1525

BOB'S RV COUNTRY
13555 S.W. Canyon Road
Beaverton, OR 97005
(503)644-5760 Fax (503)626-6399

DON CRUICKSHANK ENTERPRISES
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Brookings, OR 97415
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Eugene, OR 97402
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Duncansville, PA 16635
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Boerne, TX 78006
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RON HOOVER CO. OF CORPUS CHRISTI INC.
5029 Columbia Street
Corpus Christi, TX 78416
(512)854-5383 Fax (512)851-9578

RON HOOVER CO. OF DONNA INC.
502 Frontage Road
Donna, TX 78537
(210)464-7826 Fax (210)464-7829

RON HOOVER CO. OF HOUSTON INC.
5715 N. Freeway
Houston, TX 77076-4504
(713)695-2244 Fax (713)695-2288

RON HOOVER CO. OF ROCKPORT INC.
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Rockport, TX 78382
(512)729-9695 Fax (512)729-9698

BILLY SIMS TRAILER TOWN
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Lubbock, TX 79423
(806)745-8791 Fax (806)745-8795

BILLY SIMS TRAILER TOWN
520 E. 2nd Street
Odessa, TX 79761
(915)580-3000

VOGT MOTOR HOMES
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Fisherville, VA 22939
(703)942-5556 Fax (703)943-0853

RAINBOW ACRES CAMPING RESORT INC.
Route 2, Box 16
King & Queen Courthouse, VA 23085
(804)785-9441 Fax (804)785-2608

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Poulsbo, WA 98370-0866
(206)697-2700 Fax (206)697-4085

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Pasco, WA 99301
(509)545-9500 Fax (509)547-0016

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Milton, WA 98354
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SETZER'S WORLD OF CAMPING
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Barboursville, WV 25504
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Calgary, AB T1Y 1A5
(403)291-1203 Fax (403)291-9561

MAJESTIC RV SERVICE Lot #2
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LETHBRIDGE, AB T1J 4K6
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7434–50 Avenue
Red Deer, AB T4P 1X7
(403)343-1464 Fax (403)340-8135

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HI-WAY RV LAND
6736 Glover Road
Langley, BC V2Y 1S6
(604)533-3421 Fax (604)533-0975

MIDTOWN RV LTD.
64 Industrial Avenue W.
Penticton, BC V2A 6M2
(604)492-5705 Fax (604)492-0430

TRAVELAND LEISURE VEHICLES LTD.
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Langley, BC V3A 5E8
(604)530-8141 Fax (604)530-9576

TRIANGLE HOMES LTD.
10299 McDonald Park Rd., P.O. Box 2518
Sidney, BC V8L 4B9
(604)656-1122 Fax (604)656-2161

WESTGATE RV CENTRE LTD.
1460 Byland Road
Kelowna, BC V1Z 1A7
(604)769-4525 Fax (604)769-5766

MANITOBA

WALT'S TRAILER SALES LTD.
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Headingly, MB R0H 0J0
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NEW BRUNSWICK

CAMPERS ALLEY LTD.
P.O. Box 929, Rue Bourque
Bouctouche, NB E0A 1G0
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NEWFOUNDLAND

GANDER RECREATION PRODUCTS LTD
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Gander, NF A1V 1A2
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NOVA SCOTIA

BLUENOSE HOMES CO. LTD.
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Bridgewater, NS B4V 2X6
(902)543-2519 Fax (902)543-2209

ONTARIO

FRONTIER RV
984 Finley Avenue
Orono, ON L1S 3V2
(905)983-8000 Fax (905)983-5746

WILLIAM PATTERSON RV SALES LTD.
R.R. # 1
Dutton, ON N0L 1J0
(519)762-2125 Fax (519)762-3386

QUEBEC

RAYMOND LE BLANC INC.
1275 Des Laurentides Boulevard
Vimont Laval, PQ H7M 2Y2
(514)663-7941 Fax (514)663-2213

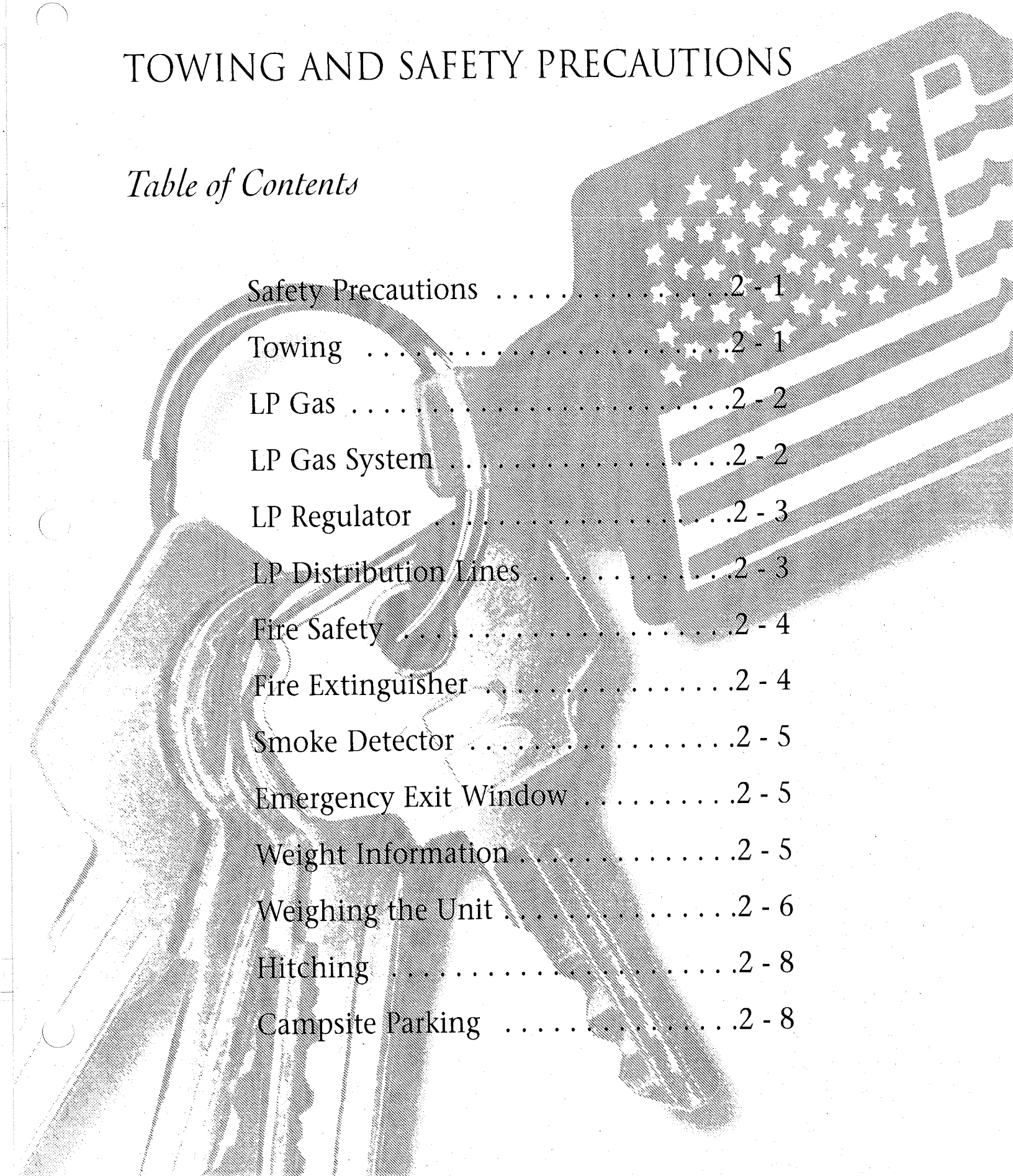
SASKATCHEWAN

DJ'S RV CENTRE LTD.
Thatcher Dr. E. & #1 Highway, P.O. Box 308
Moose Jaw, SK S6H 4N9
(306)694-6048 Fax (306)694-1221

Notes

CHAPTER 2

TOWING AND SAFETY PRECAUTIONS



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SAFETY PRECAUTIONS

> WARNING
>
> Prior to towing your vehicle, be sure you have read this entire owner's guide and that you understand your vehicle's equipment completely and how to use the equipment safely.

Read and understand all of the instructions and precautions in this owner's guide before towing your new fifth wheel. Listed below are some safety precautions that must be adhered to while your vehicle is in motion. These precautions, as well as others that involve possible damage to equipment, are also listed in the appropriate areas in this manual.

General Warning

> WARNING
>
> Portable fuel-burning equipment, including wood and charcoal grills and stoves, shall not be used inside the recreational vehicle. The use of this equipment inside the recreational vehicle may cause fires or asphyxiation.

- The fire extinguisher should be inspected monthly for proper charge and operating condition. The smoke alarm should also be tested on a regular basis. In addition to the recommended inspection, these should also be checked prior to a vacation or extended trip.
- Any part of this vehicle, including the sleeping facilities, must not be used while the vehicle is in motion. It is not safe to ride in a towed vehicle and in most states it is illegal.
- Become familiar with the operation of the escape window, but use this window strictly as an emergency exit.

Towing

- While driving on slippery surfaces, use care when accelerating or decelerating. Skidding and loss of vehicle control may be the result of abrupt changes in speed.
- Driving through water deep enough to wet the brakes may affect the stopping distance or cause the vehicle to pull to one side. If you have driven through deep water, check the brake operation in a safe area to be sure they have not been affected. Never operate a vehicle if a difference in braking efficiency is noticeable.
- Extreme terrain and adverse weather may affect the handling and/or performance of your vehicle.

> WARNING
>
> LP gas containers, gasoline or other flammable liquids shall not be placed or stored inside the vehicle because fire or explosion may result. LP gas containers are equipped with safety valves that relieve excessive pressure by discharging gas into the atmosphere.

- While the LP tanks must be removed before refilling, it is recommended that all pilot lights are extinguished and appliances turned off. Smoking is also prohibited at this time.
- Exhaust gases, which contain carbon monoxide (an odorless, colorless, and poisonous gas) are produced by burned gasoline, diesel or LP gas in items such as the range, tow vehicle engine, generator engine, refrigerator, furnace, and water heater. These fumes should not be inhaled.
- An open flame is never to be used to test for LP gas leaks. All protective covers and caps must be replaced after filling the LP system. Once the LP valve is closed, securely latch the LP door.
- LP gas and natural gas are not interchangeable. Never connect natural gas to the LP gas system.
- The use of equipment such as wood and charcoal grills and stoves inside this recreational vehicle may cause fires or asphyxiation.

LP GAS SYSTEM

General Information

A warning label has been located near the LP gas container. This label reads:

> WARNING
>
> DO NOT FILL CONTAINER(S) TO MORE THAN 80 PERCENT OF CAPACITY.

Over filling the LP gas container can reslt in uncontrolled gas flow, which can cause fire or explosion. A properly filled container will hold approximately 80 percent of its volume as liquid LP gas.

The LP gas system components in your unit have been approved for use in camping vehicles by a nationally recognized testing laboratory. LP gas is a clean-burning dependable fuel when properly handled. The LP gas tank(s) mounted on your unit contain liquid petroleum gas under high pressure. The liquid gas vaporizes as the fuel is used and passes through the tank valve to a regulator that automatically reduces the pressure. The low-pressure gas is then distributed to the appliances through the pipe manifold system. Appliance lighting problems are commonly caused by an improperly adjusted gas regulator. Never attempt to reset the

regulator yourself. Have an authorized service technician make any necessary adjustments. We recommend that you have the LP gas system checked by an authorized service technician at least once a year, and after every extended trip. Although the manufacturer and dealer test carefully for leakage, travel vibrations could loosen fittings. Leaks can be easily found by applying leak detector solutions at the connections. If leak detector solution is not available, a soapy water solution made with dish soap can be used. Tightening the fitting usually stops any leaks. If this does not work, shut off the main gas valve at the tank and immediately consult an authorized technician for repairs. If a leak is suspected, the identifying odor smells similar to rotten eggs (sulfur). Never test for a leak by lighting a match or have an open flame where you suspect leaking gas.

> WARNING
>
> Shut off the main gas valve at the tank when the camping vehicle is not in use. Also, shut off the valve when refueling to avoid potential danger from pilot lights igniting fuel fumes. Some appliances, such as the refrigerator, water heater, and furnace, have DSI (direct spark ignition) boards so it is important that you turn the appliances off when the LP gas is off. The ignition in the appliances will continue to spark even if there is no LP gas available.

LP Regulator

The regulator acts as the heart for the LP gas system. The LP gas in the tank is under high pressure. The regulator reduces the pressure of this gas so that it is safe to use with the various appliances in your unit. If corrosion is noticed, contact a qualified LP gas service technician. Do not adjust the regulator. It is factory preset. Adjustments are to be made by a qualified LP service technician using specialized equipment.

LP gas regulators must always be installed with the diaphragm vent facing downward. Regulators that are not in compartments have been equipped with a protective cover. Make sure that the regulator vent faces downward and that the cover is kept in place to minimize the vent blockage that could result in excessive gas pressure causing fire or explosion.

Distribution Lines

The primary manifold is a black steel pipe running the length of your unit. Most secondary lines leading to gas appliances are made of copper tubing with flare fittings. If any of the gas lines rupture, do not attempt to splice them. Always run a new line. We recommend gas distribution work be performed by an authorized service technician. The main valve at the LP tank must be closed when removing or servicing any gas appliance. This will prevent dangerous gas leakage that could result in an explosion and possibly serious injury. If a leak is suspected, have the systems inspected and repaired by a qualified service technician.

Precautions and Recommendations

- Inspect the LP fill valve for foreign materials before refueling.
- Shut the pilot lights off prior to refueling LP gas tanks.
- Never check for gas leaks with an open flame (match, etc.).
- Gas lines should be visually inspected periodically.
- Have the gas system inspected yearly and before and after extended trips.
- The gas system should be inspected and repaired by qualified technicians only.

> WARNING
>
> The LP system in your recreational vehicle is designed for liquefied petroleum gas only. Never attempt to connect natural gas or butane gas in this system.

FIRE SAFETY

The possibility of fire exists in all areas of life, and the recreational life-style is no exception. Recreational vehicles are complex machines. They are made up of many materials, some of which are flammable. Like most hazards, the possibility of fire can be minimized, if not totally eliminated. This is done by recognizing the danger and practicing common sense safety and maintenance habits. For safety reasons, your unit is furnished with both a fire extinguisher and a smoke alarm.

Fire Extinguishers

The fire extinguisher is rated for Class B (grease, gasoline, diesel fuel, flammable liquids) and Class C (electrical) fires. These are the most common types of fires in vehicles. Read the operator's manual and the instructions on the fire extinguisher. Be sure to know how and when to use the extinguisher and where it is located.

Fire extinguishers are mechanical, pressurized devices. Care must be exercised when they are handled. They must be maintained as the operator's manual instructs for proper and safe operation. The extinguisher should be inspected at least once a month. More frequent inspections may be required if the extinguisher is exposed to the weather or to possible tampering. Do not test the extinguisher by partially discharging. Doing this will cause a loss of pressure.

If a fire occurs in the vehicle, evacuate the vehicle as quickly and as safely as possible. Consider the cause and the severity of the fire and the risk involved before trying to extinguish it. If the fire is major or fuel fed, move away from and stand clear of the vehicle and wait for emergency assistance to arrive.

Smoke Detector

The battery powered smoke detector is mounted on the ceiling in the living area of the unit. Read the operating instructions for details on the testing and care for this important safety device. Test the smoke detector after the unit has been in storage, before each trip, and at least once a week during use. The detector should never be disabled because of nuisance or false alarm from cooking smoke or a dusty furnace. Ventilate the unit with fresh air and the alarm will shut off. Never disconnect or remove the battery from the smoke alarm. The battery should be replaced once a year or when the low battery signal sounds.

Emergency Exit Window

In the bedroom or slide out of the unit, there may be an emergency exit (egress) window. This window is designed to be used as an additional exit in emergency situations. It can be easily identified by the red handle and the red "EXIT" label. To open the egress window, lift the handle and push outward on the window. The window can be closed by pulling the window shut and lowering the handle in the down or locked position.

WEIGHT INFORMATION

Below is a sample of a weight information label which may appear in your unit.

TOWABLE WEIGHT INFORMATION

Newmar Serial Number	xxxxxxxx	VIN #	xxxxxxxxxxxxxxxxxxxxxxxx
Model	xxxxxxxxx		
GVWR	xxxxxxxx		
UVW	xxxxxx		
NCC	xxxxx		

GVWR (Gross Vehicle Weight Rating) means the maximum permissible weight of this trailer. The GVWR is equal to or greater than the sum of the Unloaded Vehicle Weight plus the Net Carrying Capacity.

UVW (Unloaded Vehicle Weight) means the weight of this trailer as built at the factory. If applicable, it includes full generator fuel, engine oil and coolants.The UVW does not include cargo, fresh water, LP gas, or dealer installed accessories.

NCC (Net Carrying Capacity) means the maximum weight of all personal belongings, food, fresh water, LP gas, tools, dealer installed accessories, etc., that can be carried by this trailer. (NCC is equal to or less than GVWR minus UVW)

This trailer is capable of carrying up to xxx gallons of fresh water (including water heater) for a total of xxxxxx pounds.

Reference: Weight of fresh water is 8.33 lbs/gal.

CONSULT OWNER'S MANUAL FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES.

Weighing the Unit

The following definitions are given to help in communications of issues of weight and your unit.

GAWR: Gross Axle Weight Rating means the maximum permissible weight for an axle. This takes into consideration the weakest link in the tire, wheel, brakes, hubs, axle, springs, and attaching parts. For example, if the axle is rated at 6,000 pounds and the tires are rated at 2,540 pounds each, the maximum GAWR would be 5,080 pounds.

GVWR: Gross Vehicle Weight Rating means the maximum permissible weight of this trailer. The GVWR is equal to or greater than the sum of the Unloaded Vehicle Weight plus the Net Carrying Capacity.

UVW: Unloaded Vehicle Weight means the weight of the trailer as built at the factory. If applicable, it includes full generator fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, LP gas, or dealer installed accessories.

NCC: Net Carrying Capacity means the maximum weight of all personal belongings, food, fresh water, waste water, LP gas, tools, dealer installed accessories, etc., that can be carried by the trailer. NCC is equal to or less than the GVWR minus the UVW.

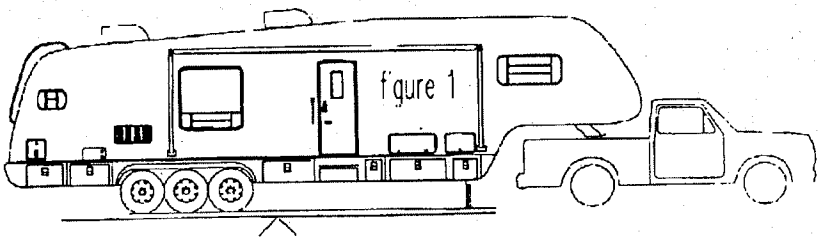
GVW: Gross Vehicle Weight is the weight of the unit with all items and supplies that are loaded into the unit at any point in time.

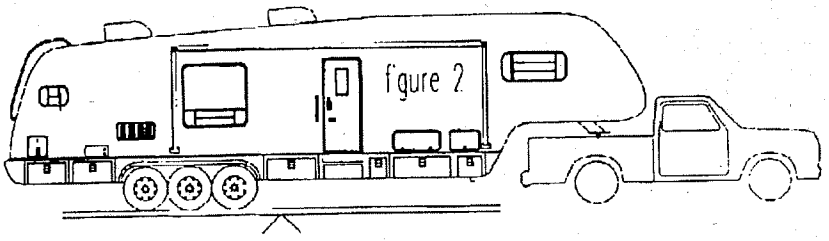
To assure the accuracy of your weights be sure the unit is always level during weighing.

The unit has been built to comply with the component suppliers recommended limits and give you a realistic NCC. When loading the unit, distribute the items so that not all of the weight is added to one area of the unit. If you have questions as to what the weight of the unit is after it has been loaded, take the unit to a drive on scale, or use individual wheel scales and verify that the weights are within the limits of those specified for the unit. When weighing the unit follow these instructions. Failure to follow these instructions may give an erroneous weight reading.

Notes

Fifth Wheels





1. Pull the unit onto the scales shown in Fig. 1. This is the total weight of the unit. To do this, put the front jacks down far enough to take all of the weight off of the tow vehicle and onto the scales. Make sure that only the trailer is on the scales. Record the weight. This is the GVW and should not exceed the GVWR supplied by Newmar for the unit.
2. Hook up to the unit and be sure, again, that there is no part of the tow vehicle on the scales as shown in Fig 2. Weigh the unit with only the trailer tires on the scales. Record the weight. This is the total weight on the axles. When this amount is subtracted from the GVW (first reading), the difference is the hitch weight. To achieve the approximate weight on each axle, divide the weight from Fig. 2 by the number of axles. This amount should not exceed the GAWR of the unit. For example 9,360 pounds with 2 axles is 4,680 pounds per axle or approximately 2,340 pounds per tire.

Notes

Hitching

> IMPORTANT:
>
> Your fifth wheel is equipped with electric trailer brakes. Make sure the proper brake controls are installed and in working order before traveling.

Hooking the fifth wheel will become quite simple after a little practice. Follow the steps listed below.

1. Adjust the fifth wheel jacks until the trailer is at the height level for hooking to the tow vehicle.
2. Place wheel chocks behind the wheels of the coach.
3. Release the fifth wheel lock handle.
4. Align the tow vehicle so the fifth wheel will accept the kingpin.
5. Back the tow vehicle slowly into the fifth wheel until the kingpin engages in the fifth wheel lock, automatically locking.
6. Verify that the lock is closed.
7. Connect the electrical pigtail between the fifth wheel and the tow vehicle.
8. Connect the break away switch line. Be sure the break away switch cable is not attached to any part of the tow vehicle hitch assembly. Make sure there is enough slack in the break-a-way cable to allow for turning.
9. Adjust the mirrors on the tow vehicle.
10. Check all of the lights on the fifth wheel and the tow vehicle (running lights, brake and tail lights, turn signal lights, and back up lights).
11. Pick up and store the wheel chocks.
12. Check the inside of the coach to verify that everything is stored properly, vents are closed, all of the doors and drawers are shut, and the TV antenna lowered. Close the entrance door and retract the steps.
13. Raise the fifth wheel jacks so the entire hitch load is on the tow vehicle. The jacks should be about 2" off of the ground. Do not raise the jacks completely until you have tested the brake control. This will also test the hook-up.
14. Pull the unit forward and apply the hand control for the trailer brakes to be sure they are operating properly.
15. Completely raise the fifth wheel jacks.

Campsite Parking

If the campground does not have drive through sites, it is recommended to stop near the site and inspect it for slopes or uneven areas. Back into the site carefully. Watch for low-hanging limbs, posts, large rocks or other obstacles. Back in so the site is on the driver's left. This will enable the driver to watch the rear of the unit. Maneuver the vehicle into position before backing into the site. Back up slowly, using the side mirrors as a guide or with the assistance of another person outside, guiding the parking procedure.

Place the tow vehicle in park and turn off the ignition. Block all of the trailer wheels with wheel chocks. Side to side leveling should be done by using shims under the tires on the low side of the unit after it has been backed into the site. This must be done before disconnecting the trailer from the tow vehicle. Lower the stabilizing jacks, if installed. Connect the 120 volt shore power to the unit. Open the LP gas valves at the LP tanks. Connect the fresh water supply and sanitize the water systems (see Chapter 11), if necessary. Connect the waste drain hose to the sewer hook-up. Start the refrigerator, water heater, and furnace, if needed. Light the oven pilot light, if applicable. Remember that the refrigerator will not operate efficiently if the unit is not level.

Notes

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CHAPTER 3

AIR CONDITIONING & HEATING

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AIR CONDITIONER(S)

The roof mounted central air conditioner installed on your unit will operate only when the unit is supplied with 120 volt AC power from the power cord or the optional generator. The air conditioner circuit breaker must be in the "ON" position it to work. The unit may be equipped with two air conditioners, depending upon which option package was installed.

Park the vehicle in the shade with the drapes or blinds closed for the best performance. Set the thermostat to the desired temperature while keeping the doors and windows closed. Keep in mind that air conditioners use a large portion of the available electric power.

RV parks may experience low voltage on days with high heat or humidity. This is commonly referred to as a "brown out". A brown out may trip the air conditioner circuit breaker. The circuit breaker protects your air conditioner motor from damage and is necessary during low voltage conditions. The tripping breaker is not a fault in your electrical system.

The cool air from the air conditioner is ducted throughout the coach through the cool air ceiling ducts. Warm air is returned to the air conditioner through return air ceiling ducts. Below is the thermostat that controls the air conditioner. It also controls the furnace. Simply select the desired temperature. The blower will cycle automatically, or you may choose low, medium or high fan settings.

Step One: Move power switch to ON

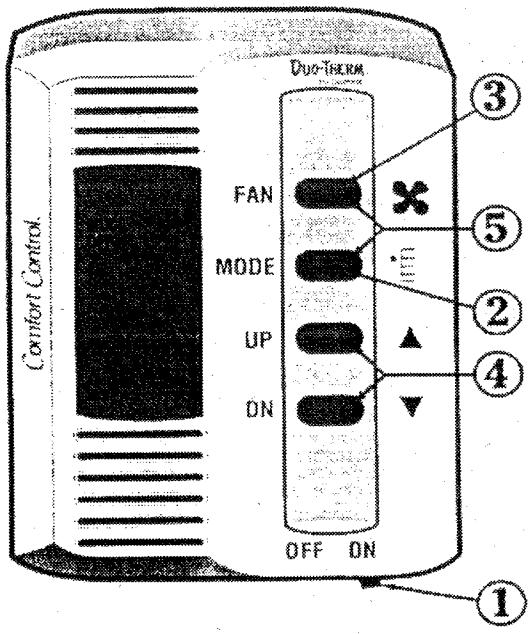
Step Two: Press MODE button to select function. (COOL*, FURNACE, FAN ONLY, etc.)

* There is an approximate 2-minute time delay after selecting cooling function for refrigerant compressor to start.

Step Three: Press FAN button to select fan speed or automatic operation.

Step Four: Press UP or DN button to set your desired temperature for the zone.

Step Five: If your vehicle contains more than one zone, depress FAN and MODE simultaneously to select zone 2, and repeat procedures from step 2 above. Repeat entire procedure for each additional zone.



Shutdown: If you turn the Comfort Control off, or if there is a power interruption for any reason, the system will resume operation on the last settings when power returns.

FURNACE

> **WARNING**
>
> Never attempt to modify this furnace. Fire, explosion, asphyxiation, or carbon monoxide poisoning may occur. If the furnace malfunctions, consult a trained service technician.

The furnace(s) installed in your unit is a forced-air furnace fueled by LP gas. If your unit is equipped with two furnaces, the living area furnace is controlled by the air conditioner wall thermostat that controls the heating, and cooling of the unit. The furnace installed in the bath/bedroom area is controlled by the thermostat in the bedroom.

The heat is supplied to the unit through ducts in the floor. The furnace will not operate properly if the air flow at the floor registers, or the air return to the furnace, is blocked by personal or storage items. Storage under the cabinets should be done carefully to prevent crushing or damaging the furnace ducting or blocking of the warm air return.

Smoke and fumes may be created as a result of the residual burn off of the manufacturing compounds that are sometimes present the first time the furnace is used. This is normal. To minimize the smoke and fumes, the initial lighting of the furnace should be done with the windows and doors open. Continue until the residue is completely burned off.

To operate, set the thermostat to the desired temperature setting and turn the thermostat to the on position. Allow 60 seconds for the furnace to begin operating. To shut down the furnace, turn the thermostat to the off position. After the furnace has been turned off, the fan will run for approximately 60 seconds to cool down.

For your safety, do not use gasoline or other flammable liquids in the vicinity of the furnace or any other appliance. Clean the complete furnace and air tube passageways periodically to remove dust, lint, etc. Check the gas system for leaks at least once a year. Check and clean the blower wheel annually.

On the exterior of the coach you will find a furnace cover. There are no owner serviceable parts on the furnace. This cover should be removed by authorized service technicians only.

> **WARNING**
>
> Use caution when washing the exterior of your vehicle. Water should not be sprayed directly into the furnace vent. If water is forced beyond the rain baffles into the furnace vent, rusting of the furnace could occur. This could also cause improper combustion.

The furnace should be thoroughly cleaned before the start of each heating season. Any debris in the system may restrict air flow for combustion, bind the combustion air impeller, or prevent the blower motor from running properly. Also, check the burner pilot orifices for debris. Lint accumulations may cause the blower to become unbalanced, vibrate, restrict the ability of the blower to move air. If lint is blown into the heat exchanger, it may cause odors or create a fire hazard. Contact an authorized service technician for annual cleaning. Consult the manufacturer's operating instructions in your Owner's Package for further information.

WARNING

Portable fuel burning appliances are not safe for heating inside the recreational vehicle. Asphyxiation or carbon monoxide poisoning can occur.

LP BOTTLES

This unit is equipped with two 30# LP bottles. These bottles are controlled with an automatic pressure regulator. The LP bottles contain liquid petroleum gas under high pressure. As the fuel is used, the liquid gas vaporizes and passes through the tank valve to a regulator that automatically reduces the pressure. The low-pressure gas is then distributed to the appliances throughout the pipe manifold system. Improperly adjusted regulators are the major cause of appliance lighting problems. Never attempt to reset the regulator. This is to be done by a qualified service technician. While in high altitudes or extreme cold weather a gas shortage may be experienced. Using one appliance at a time can help adjust to this problem.

It is recommended to have the LP system inspected by an authorized service technician at least once a year and after every extended trip. This system is tested by both the manufacturer and the dealer. Leaks can be caused by travel vibrations, therefore routine inspections are recommended.

The primary gas manifold is a black steel pipe running the length of the unit. All secondary lines leading to the gas appliances are made of copper tubing with flare fittings. If any of these lines rupture do not attempt to splice them. Always have a new line ran. Gas distribution work must be performed by an authorized service technician. When removing or servicing any gas appliance, close the main gas valve at the LP bottles. This will prevent dangerous gas leakage that could result in an explosion and possible serious injury. If a gas leak is suspected, have the system inspected and repaired by a qualified service technician as soon as possible.

WARNING

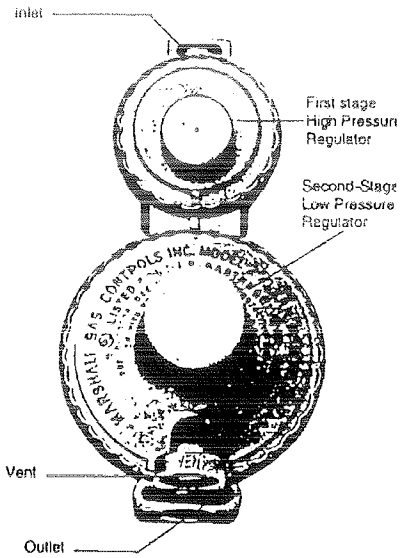
The main gas valve must be shut when the vehicle is not in use. Shut the valve off when refueling to avoid potential danger from pilots lights igniting fuel fumes. Gas valves on appliances with direct spark ignition (DSI) should also be in the off position. Do not store LP, gasoline, diesel, or other flammable liquids inside the vehicle. Fire or an explosion could be the result of ignoring this warning.

LP Bottle Filling

Do not fill the bottles to more than 80 percent of capacity. Fire or explosion may be the result of uncontrolled gas flow from an overfilled tank.

LP Regulator

The regulator is the heart of the LP system. The regulator reduces the pressure of the gas so it is safe to use with various appliances. Regulators are equipped with a vent. In the event excess pressure builds up in the body of the regulator, a relief mechanism vents it to the atmosphere. It will vent until the pressure returns to the normal range. The vent must be kept clean and clear of obstructions or corrosion. A clogged vent could cause the failure of components. Contact a qualified LP technician if corrosion or obstruction is noticed.



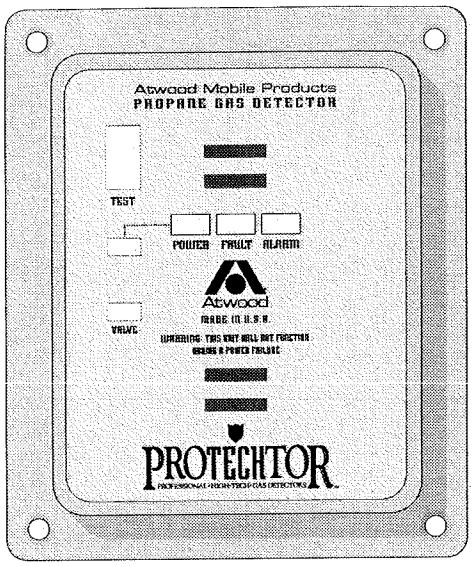
The presence of moisture in LP fuel causes the regulators to freeze. The moisture will pass through the cylinder valve and into the regulator where freezing occurs. To help prevent the regulator from freezing, always keep the tank control valve closed when not in use, even when the tank is empty, to prevent moisture from collecting on the inside.

If moisture becomes a problem, consult an authorized LP service center for assistance.

LP Gas Detector

> WARNING
>
> Never check gas lines for leaks with an open flame. Do not check for leaks using ammoniated or chlorinated household type detergents. These detergents can cause cracks to form on the metal tubing and brass fittings. Take the unit to a qualified LP gas service technician to find and repair the leak. Keep the tank valve closed and all of the appliances turned off when the unit is stored. If any of the LP gas valves do not close leak-tight by hand, consult a service technician.

Liquid Propane (LP) Gas is heavier than air and will settle to the lowest point of the room, which is generally on the floor of your coach. Because of this, the LP detector installed in your coach is located near the floor. The detector is also sensitive to other fumes, such as hair spray, which contain butane as the propellant. Butane, like propane, is heavier than air and will settle to the floor level where it may be detected. When this occurs, press the reset button to stop the alert sound for 60 seconds.



The detector is equipped with a "sensor activation strip." This strip must be removed for the detector to operate properly. This should have been done during the dealer's Pre-Delivery Inspection. Please check the detector to verify that the activation strip has been removed.

Please consult your LP detector User's Guide for more detailed information.

Notes

Notes

CHAPTER 4

APPLIANCES & ACCESSORIES

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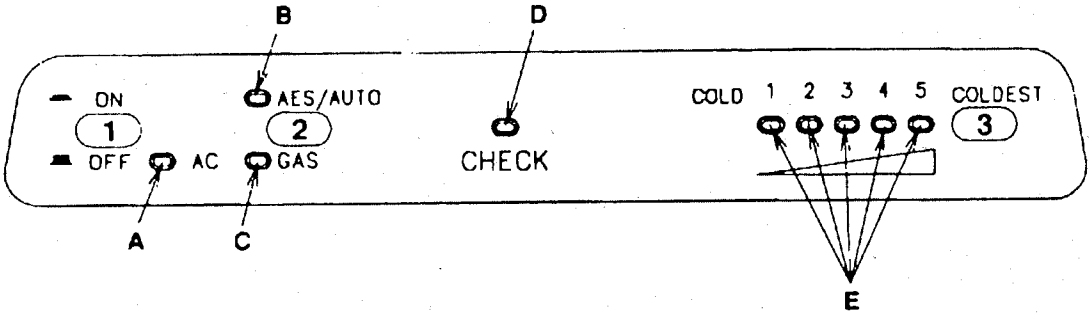
MAJOR APPLIANCES

Refrigerator

Before starting the refrigerator, verify that the main LP gas valve is in the on position. The refrigerator is equipped with a semi-automatic energy selector (AES) control system. It can be set to select either 120 volt or LP gas operation, automatically, if desired.

> **WARNING**
>
> Most LP gas appliances used in recreational vehicles are vented to the outside of the vehicle. When parked close to a gasoline pump it is possible that the gasoline fumes could enter this type of appliance and ignite the burner flame causing a fire or explosion. Use caution when refueling.

A 12 volt power supply must be available for the electronic control panel to function. The shore line must be plugged in, or the optional generator running, to operate in the 120 volt mode. The main LP gas valve must be open for operation in the LP mode. To start the refrigerator, press the main power ON/Off button to the ON position.



LEGEND 2-WAY AES Model

1. Main Power Button ON/OFF
2. AES/AUTO/GAS Mode Selector Buttor
3. Temperature Selector Button

A. AC Mode Indicator Lamp
B. AES/AUTO Mode Indicator Lamp
C. GAS Mode Indicator Lamp
D. CHECK Indicator Lamp
E. Temperature Indicator Lamps

To use the 2-way Auto Mode, push the AUTO/GAS mode selector into the ON position. If 120 volt is available, the AC mode indicator light will be illuminated designating AC operation. If 120 volt is not available, the gas mode indicator light will be illuminated. The control system will automatically switch to gas operation. To operate on gas only, push the AUTO/GAS mode selector until the gas indicator light has lit. After 45 seconds, the burner should be ignited and operating normally. The initial start up may take longer than 45 seconds in order to allow the air to be purged from the gas line. If the gas does not ignite within 45 seconds, the check indicator light will illuminate and the gas mode light will go off. If the check indicator light illuminates and the gas mode indicator light is off, then the controls have failed to ignite the burner in the gas mode. When the check indicator light is on, press the main power ON/OFF button to the off position to reset. Do not continue to reset the gas operation if the check indicator light continues to illuminate after several tries.

The thermostat on the refrigerator controls the gas and electric operation. This eliminates the necessity of resetting the temperature each time a different energy source is used. Press the temperature selector button until the light at the desired setting is illuminated. After the initial start up, the thermostat should be moved from the coldest setting to the desired setting, which is usually mid range.

An optional feature on the Dometic refrigerator is the addition of an automatic ice maker in the freezer compartment. For detailed operating instructions, please consult the manufacturer Owner's Manual in the Owner's Packet.

Microwave (Optional)

Your unit has been prepared for the installation of a microwave oven. There are several different microwave models that may have been installed depending upon which option package was chosen. All of the microwave ovens operate in the same manner. The microwave's control panel is the touch pad type. Simply enter the temperature, mode, and cooking time desired. If installed, the microwave is plugged into the electrical outlet through a surge protector. This will help protect the microwave in case of an electrical surge. For instructions on how to operate any of the special features on the microwave oven, please refer to the microwave Owner's Manual in your Owner's Package.

Range Hood

There are two different range hoods possible. The standard range hood is a separate appliance installed above the range, below the optional microwave. This range hood has both a fan and a light for your convenience. It is operated by turning the switch for the light either on or off, and the switch for the fan to low, high, or off. Consult the range hood Owner's Manual for further instruction on the hood operation. If the optionally installed microwave contains the range hood, the hood is controlled by the microwave control panel. Refer to the microwave Owner's Manual for further instruction on the hood operation.

Range

There is no pilot light for the top of the range. The top burners are controlled by a spark ignition. There are different models used in the Newmar product line with different types of controls. To light the burners on some models, turn the control knob to turn the gas on. Wait a couple of seconds, then push the red spark button until a flame appears. On other models, after the gas control has been turned on, turn the spark control knob until a flame appears. All burner controls operate counter clockwise and have to be pushed inward in order to turn. On units with an oven, the oven control must also be pressed inward before turning. To light the oven, push in the oven control knob and rotate counter clockwise to the PILOT ON position. Light the oven pilot light located at the back left hand side of the oven burner. The oven pilot may be slow in lighting due to initial air in the gas line. The oven pilot has been factory adjusted. No further adjustments are necessary. To extinguish the oven pilot, push in the oven control knob and turn clockwise to the Off position. For further instructions, please refer to the oven manufacturer Owner's Manual in your Owner's Package.

The following warning label has been located in the cooking area to remind the user to provide an adequate supply of fresh air for combustion:

> WARNING
>
> It is not safe to use cooking appliances for comfort heating. Cooking appliances need fresh air for safe operation. Before operation:
>
> 1. Open overhead vent or turn on an exhaust fan.
> 2. Open a window.

Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle. Proper ventilation when using the cooking appliances (s) will avoid dangers of asphyxiation. It is especially important that cooking appliances not be used for comfort heating as the danger of asphyxiation is greater when the appliance is used for long periods of time.

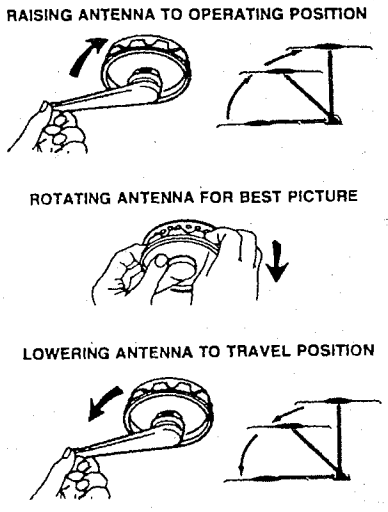
The following label has been placed in the vehicle near the range area:

If You Smell Gas:

1. Extinguish any open flames, pilot lights, and all smoking materials.
2. Do not touch electrical switches.
3. Shut off the gas supply at the tank valve(s) or gas supply connection.
4. Open doors and other ventilating openings.
5. Leave the area until the odor clears.
6. Have the gas system checked and leakage source corrected before using again.

TELEVISION OPERATION

Winegard Television Antenna



The TV antenna in your unit is designed for reception of all color and black-and-white channels. If the reception is poor, you should verify that the power switch is in the "ON" position and that all of the connectors are tight. If poor reception still occurs, consult your authorized dealer.

To raise the antenna into the operating position, turn the elevating crank (clockwise) in the "UP" direction, about 13 turns, or until some resistance to turning is noticed. On the power booster, turn the switch to "ON" in order to amplify the signal being received. Once in the "UP" position, rotate the antenna to receive the best picture. This is done by pulling down on the directional handle with both hands until it disengages from the ceiling plate and then rotating it until reception has improved. The antenna must be lowered before moving the vehicle. To lower, rotate the directional handle until the pointer is aligned with the pointer on the ceiling plate. Turn the elevating crank

(counter-clockwise) in the "DOWN" direction, about 13 turns, or until some resistance to turning is noticed. The antenna is now locked and in the travel position.

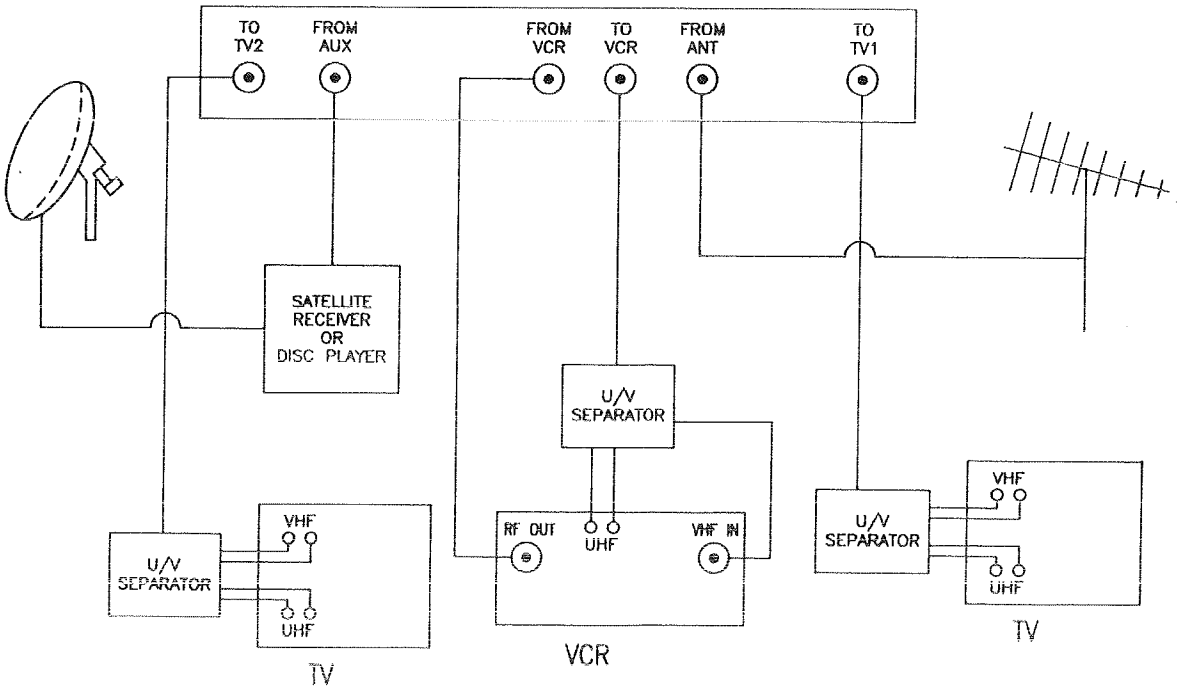
> **CAUTION**
>
> Under no circumstances should you lower the antenna in any position except the travel position.

Television

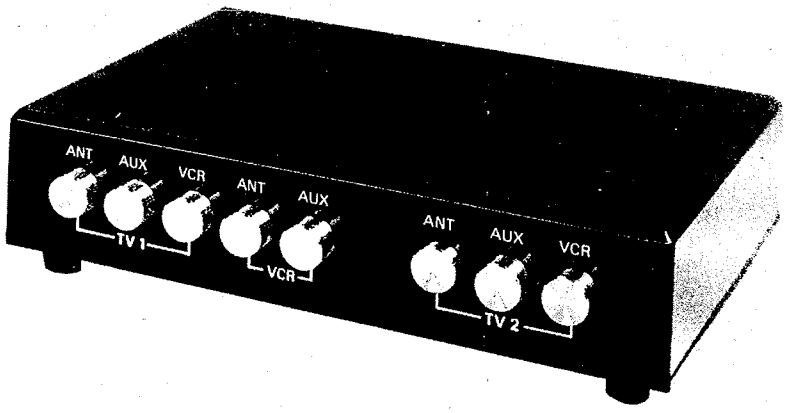
Your unit is prepared for the installation of a television. The unit is equipped with a cable television hook up. There are various option packages which may include a television in the bedroom, or in the living area entertainment center. The optional television, if installed, is powered by 120 volt electricity. Your unit must be plugged into shore power, or the optional generator running, in order for the television to work. The operation is similar to most televisions used in the home. The main unit has the basic ON/OFF, VOL(ume) UP and DOWN, CH(annel) UP and DOWN, and Menu buttons. The remote control has these in addition to many other function keys. Please consult your television Owner's Manual for further information. There are two jacks installed for televisions to receive the antenna signal.

Video Control Center (Optional)

If installed in your vehicle, the Audio Video Control Center will direct the signal being received by up to two televisions and one VCR. Simply push a button to select what is viewed and where. To control what is being viewed on the front television use the selections for "TV 1". To control what is being viewed on the bedroom (and outside television, if



installed) use the selections for "TV 2". Each television is capable of viewing different programming at the same time. For example, by selecting "ANT" for "TV 1" you are able to watch your favorite network broadcast on the front television, while a movie from the VCR is being watched in the bedroom or outside, after selecting the "VCR" button for "TV 2". This control center is capable of receiving three sources of input. They are "FROM ANTENNA", "FROM VCR", and "FROM AUX.". The "FROM AUX." selection is used for cable input. It will also accommodate video game systems.



VCR & Prep (Optional)

The VCR Prep option prepares the unit for the installation of a video cassette recorder (VCR). If the optional VCR is installed, it operates on 120 volt electricity. The controls are on the face of the VCR and on the remote control. The video switch previously described will assist you in directing the VCR signal to the television of your choice.

Cable and Telephone Jack

Optional on your unit are two cable television jacks. One is an interior jack installed where specified. The other is an exterior jack for use on the door side of the unit. An additional feature in this unit is the telephone hook up. This includes the connector for the incoming telephone line and one telephone outlet inside the unit.

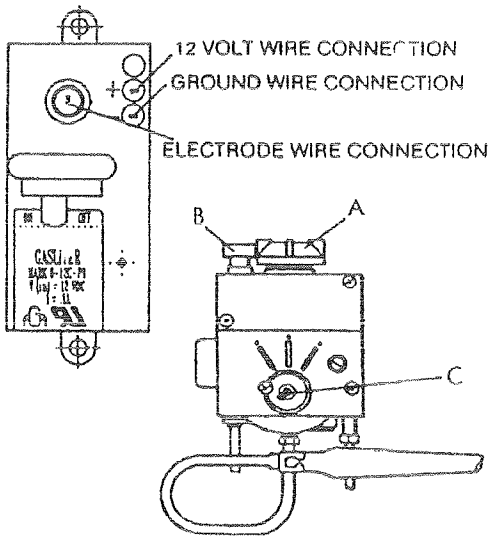
Stereo

The standard stereo installed in your unit is an AM/FM Cassette player. There are speakers located throughout the unit for listening pleasure. The operation of the stereo is similar to that of many car stereos. It operates on 12 volt electricity from the coach batteries. For further information on the operation of this stereo, consult the stereo Owner's Manual in the Owner's Package.

WATER HEATER

WARNING

Do not light the water heater until it is filled with water. There is a switch on the exterior of the water heater labeled "Electric". This switch must be in the "ON" position for the water heater to work in the electric mode.



Before lighting the water heater fill the fresh water system. Purge any air from the water heater by opening all hot water faucets until water flows steadily from each one. The water heater installed in this unit is a six gallon gas/electric model with a re-ignitor. This water heater operates on either LP gas or 120 volt electricity.

It is important to read all of the safety information provided in the water heater manufacturer Operation Manual in the Owner's Packet. At the water heater, place the re-ignitor control in the "OFF" position. Turn the gas cock (A) clockwise to the "OFF" position and the temperature indicator to the lowest setting.

Turn off all electrical power to the water heater. Wait five (5) minutes for gas to clear the area. If you smell gas, STOP. Follow the instructions in the safety information sections of the Operation Manual. If no gas odor is present, continue to the next step. Turn on the gas supply. Turn on the electrical power to the water heater. Turn the gas cock (A) counter clockwise to the "PILOT" position. Press the reset button (B) and switch the electric re-ignitor module to the "ON" position. The re-ignitor will start to spark between the electrode tip and the pilot hood. When the pilot lights, the spark will stop. Continue depressing the reset button (B) for approximately one minute or until the pilot light remains lit. On the initial start-up, it may take several minutes before the pilot light ignites in order to purge the air from the gas lines. Turn the gas cock (A) counter clockwise to the "ON" position. Set the temperature dial (C) to the desired setting. When the re-ignitor is in the on position, it will operate automatically if the pilot flame is accidentally extinguished. The re-ignitor is equipped with an alarm that will sound when the pilot light is extinguished or if the LP supply is turned off. The alarm will serve as a reminder to turn the re-ignitor off.

WARNING

Do not store any combustible materials or liquids near or adjacent to the water heater.

Storage

When storing your unit for the winter months, the water heater must be drained to prevent damage from freezing. The first step is to turn off all electrical power and LP gas going to the water heater. The water pump must also be turned off. Open both the hot and cold water faucets to drain the lines. Open the drain on the water heater. Drain the entire water system. When preparing the unit for use after it has been stored, make certain the water system, including the water heater has been filled before re-lighting the water heater. Failure to fill the water heater before lighting may damage the water heater and void the warranty.

Pressure Relief Valve

The temperature and pressure relief valve is designed to open if the temperature of the water within the heater reaches 210° F, or if the water pressure in the heater reaches 150 pounds. Recreational vehicle water systems are closed systems and during the water heating cycle the pressure build-up in the water system may reach 150 pounds. When this pressure is reached, the pressure relief valve will open and water will drip from the valve. This dripping will continue until the pressure is reduced to below 150 pounds, and the valve closes. This condition is normal and does not indicate a defective relief valve.

> WARNING
>
> Do not plug the relief valve under any circumstances.

Washer/Dryer (Optional)

The plumbing and/or the installation of a washer and dryer is part of the various option packages available on your unit. The washer and dryers used by Newmar function as those in a home, operating on 120 volt electricity. For more detailed information on the operating instructions, read the appliance Owner's Manual in the Owner's Package.

Ceiling Fan (Optional)

In the living room area, you may find the optionally installed ceiling fan. This operates on 120 volt electricity. The fans three speeds (low, medium and high) can move air in two directions, up and down. Moving the air up in the summer months, the fan will help circulate the cool air from the air conditioner. By moving the air down, the fan will help circulate the warm air from the furnace in the winter months.

Notes

CHAPTER 5

CABINETS & FURNITURE

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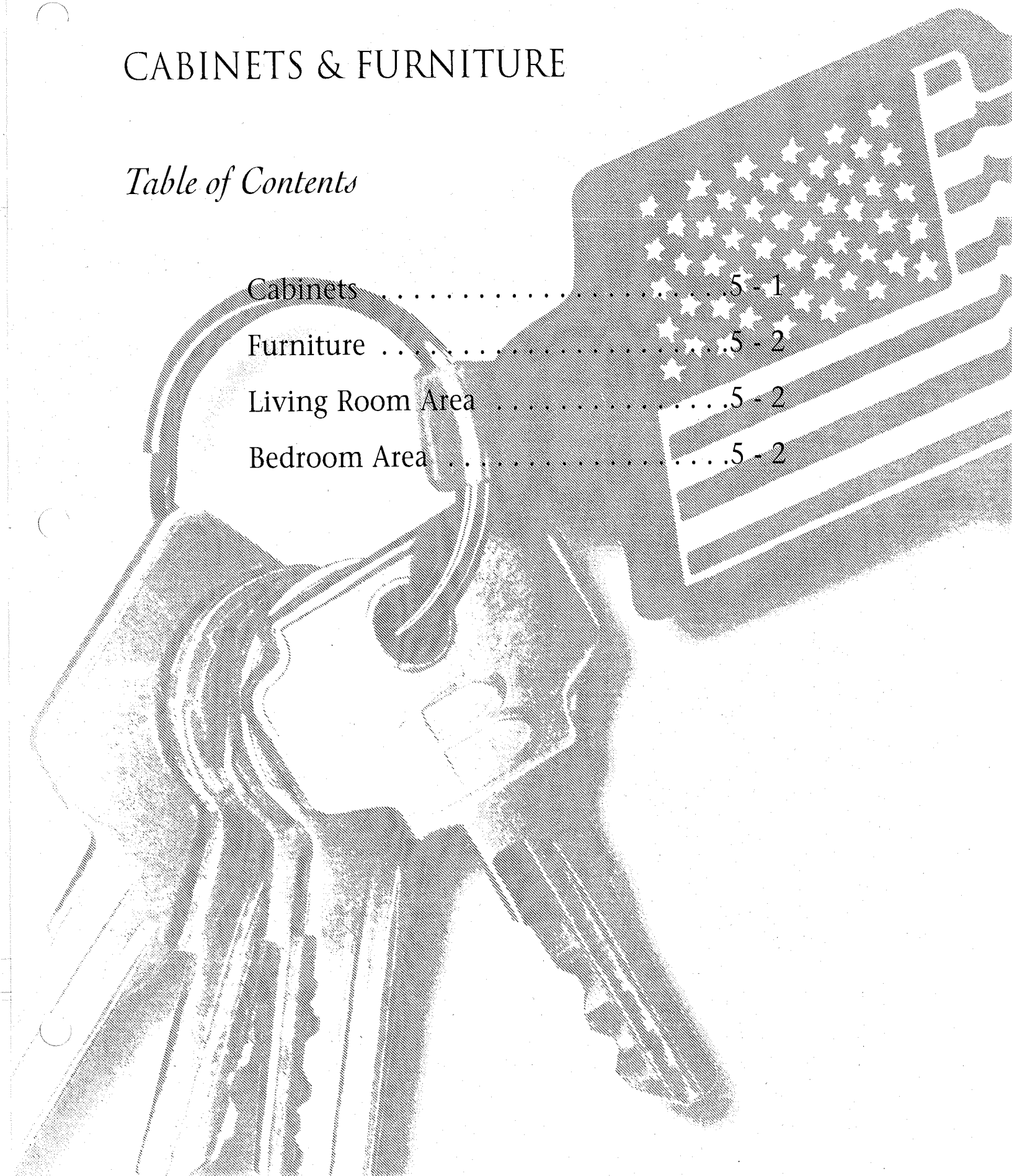
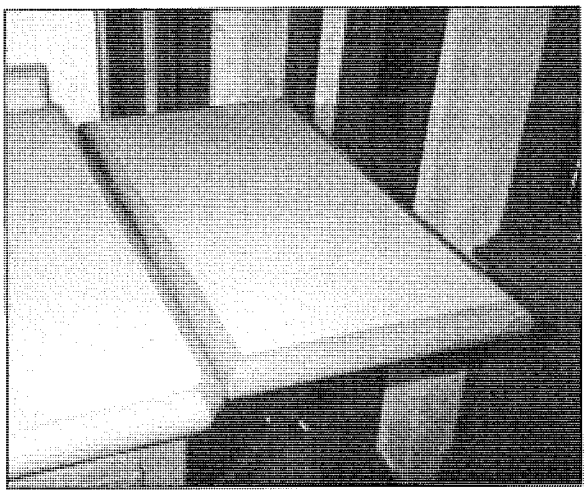


CABINETS

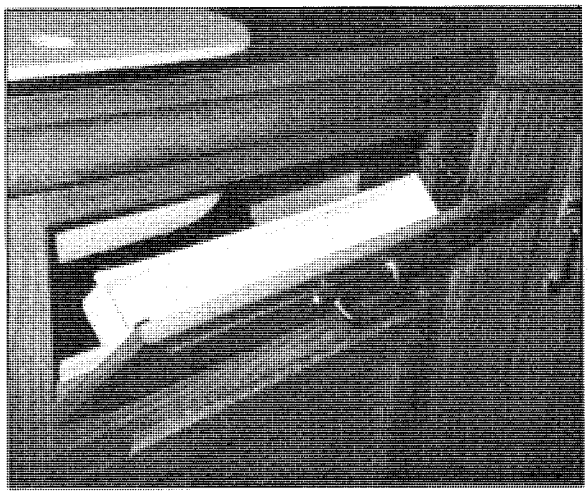
The cabinets in this unit are constructed on site, at the Newmar production facility. Oak frame doors with cathedral style raised panels are standard throughout the unit. An available decor option is bleached oak. All decors have brass door and drawer pulls. These give the interior an added touch of class. The glass door panels in the living room entertainment center allow for viewing the lighted mirrored interior of the cabinets.

The countertop extension in the kitchen provides additional counter space while cooking, and folds out of the way while entertaining. The silverware drawer contains a molded silverware divider tray for added storage.



Storage is an important factor to all RV owners. Keeping this in mind, the cabinetry is structured to provide as much storage as possible. Some models have pantry style cabinets in the kitchen for added storage. On other models, you may option a pull out pantry for storage ease. In the bedroom on all models, the bed platform lifts for convenient storage. This platform is held open by gas struts to allow hands-free access.

The countertop in the kitchen and bath is made of a decor matching laminate. The "drawer" directly in front of the kitchen and lavatory sink does not pull out, but rather flips down. This provides a storage tray for dish cloths, scouring pads, wash cloths, etc.



Drawer guides are standard on all of the drawers throughout the unit. These guides provide a smooth opening and closing of the drawers. To open a drawer, lift up slightly and pull open. This mechanism will prevent the drawers from unintended opening while traveling.

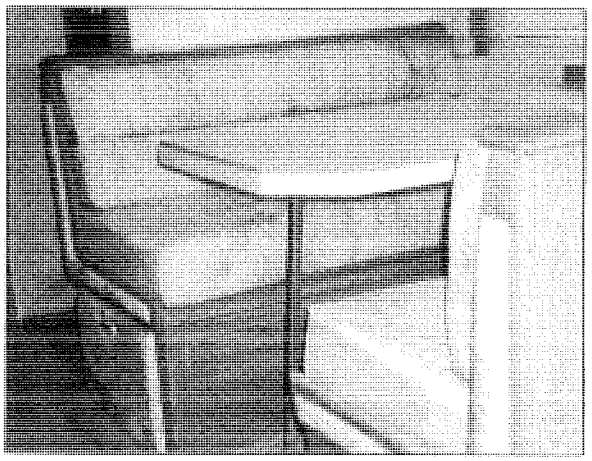
The cabinetry can be cleaned with commercial furniture cleaner or polish. As with any wood product, do not saturate these cabinets with water or any other liquid. Be certain to wipe up spills as they occur to avoid staining.

FURNITURE

Living Room Area

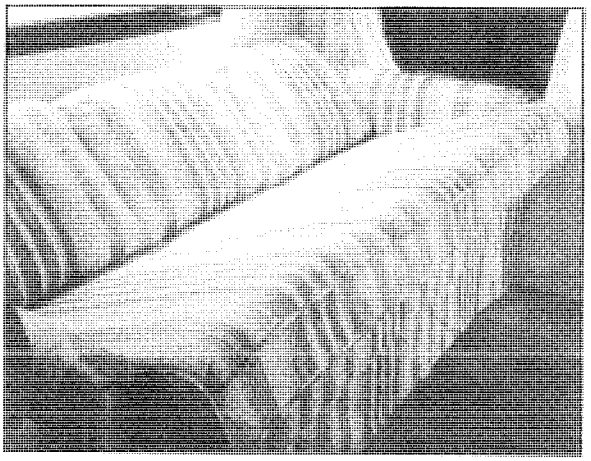
A standard feature in the kitchen area is the free-standing dinette. This includes a hardwood table and four chairs. The chair seats and backs are designed with a coordinating upholstery fabric to match your decor.

One popular option in this unit is the built in dinette booth. The built in dinette would be installed in place of the free standing table and chairs. The dinette provides added storage under the seat area of the booth, along with an extra sleeping area. The sleeping area is made by dropping the table top and re-arranging the cushions.



Another option on some models is the hidden leaf dinette table. This option is in place of the standard dinette table. The chairs with this option are the standard set of four.

In the living room, the standard sofa is a Flexsteel sleeper sofa. This sofa converts into a sleeping area by holding and pulling up on the bottom cushion while pushing down on the back cushion. The sofa is upholstered in decor matching fabric. If you have any questions regarding the warranty on this sofa, contact Flexsteel, the sofa manufacturer.



The standard living room chair, on most floor plans, is the Flexsteel swivel glider/recliner.

Bedroom Area

The standard mattress in the bedroom is queen size. There are some of floor plans that have two bedrooms. On these models, there will be both, queen and twin size mattresses. The twin size mattresses on these units measure 28" x 74".

One option in the bedroom is the luxurious pillow top mattress, in place of the standard mattress. The bedspread that is standard in the unit will conform to either mattress.

CHAPTER 6

STRUCTURE FEATURES

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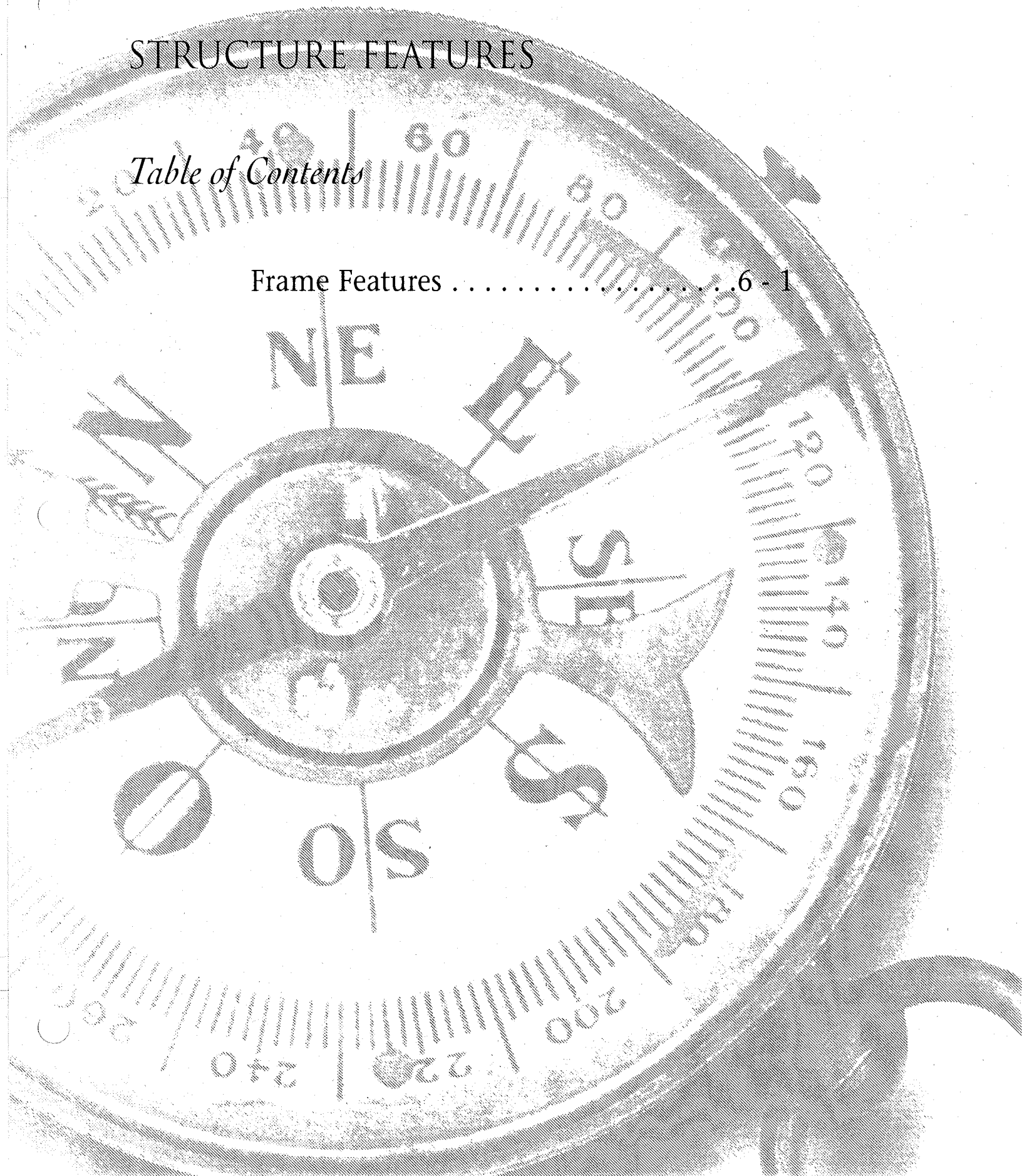

STRUCTURE FEATURES

These models are manufactured with 12" or 16" I-Beam steel frame construction with molded wrap for maximum storage capabilities. These frames are manufactured at the Newmar production facility. Doing this ensures the control of quality that Newmar insists upon.

Skid bars are installed on all models as a standard feature. These will help prevent accidental damage when encountering dips or steep inclines.

The tires installed on the unit are 16" radials. A spare tire and spare tire carrier can be added as an optional feature. The steel wheel installed on these units measures 16" x 6". The bolt pattern on the wheel is 8 on 6½". The number of axles, brake size, axle type, axle capacity varies per floor plan.

Shock absorbers are another standard feature. Installation of these will help cushion the trailer when pulled on rough, uneven roads. They also help stabilize the unit. All of the models have the easy lube equalizers. With multiple axle installations, as all of the models are, the movement of the equalizer assembly serves to transfer instantaneous loads from one axle to another in an effort to "equalize" the load between the axles. The equalizers installed are equipped with grease zerks for ease of maintenance.

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CHAPTER 7

ELECTRICAL FEATURES

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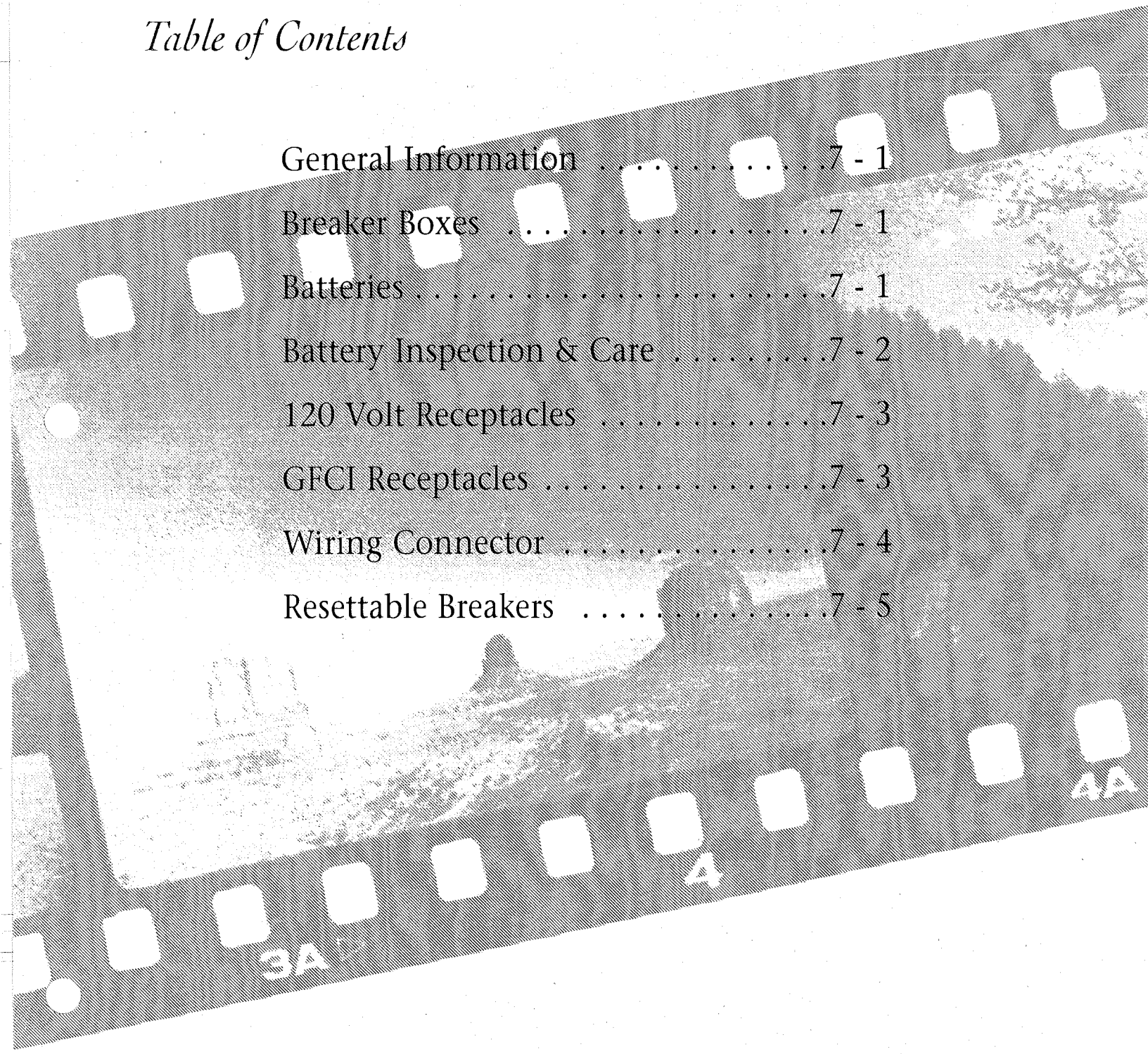


ELECTRICAL SYSTEMS

General Information

There are two electrical systems in your coach. They are the 12 volt DC system and the 120 volt AC system. Most standard appliances require 120 volt electricity while the majority of the lighting used in recreation vehicles is powered by 12 volt electricity. The power for the 12 volt system is supplied by the coach batteries. The power for the 120 volt system is supplied by the power cord when the unit is connected to an outside power source or by the generator, if so equipped. When connected to shore power, the standard 75 amp power converter will automatically charge the batteries as well as convert 120 volts into 12 volts.

To connect the unit to 120 volt shore power, first make sure all of the breakers are in the off position. This is done to avoid a power surge. Unwind the power cord from the electrical compartment. The standard electrical service in this unit is 30 amps. A 50 amp service can be optioned in place of the standard. Check to make sure the pins in the outlet are oriented correctly, that they match the power cable, and that they are in good condition. If there is a circuit breaker switch at the plug, it should be turned OFF before making the connection. Insert the plug completely into the outlet and turn the circuit breaker on. Close, and lock the electrical compartment door to keep the contents clean, dry, and secure. Close the cover on the power box, if equipped, to avoid an unintended disconnection, and to keep contents clean. Switch the main breaker to the 'ON' position. The 120 volt system will energize all 120 volt circuits and outlets when the main breaker is turned on.

Breaker Boxes

Circuit breakers and fuses are installed to protect the electrical system from overloading. Do not attempt to change the circuitry or add appliances yourself. Please consult an authorized Newmar Service Center.

Batteries

The battery on your unit is installed by Newmar Corporation. This battery is warranted by the battery manufacturer. It is used to operate the 12 volt items in the unit. The battery also operates the water heater's electronic ignition, landing jacks, etc. In-line breakers protecting these circuits are found near the battery. If the tow vehicle is equipped with a charge line, the tow vehicle's electrical system will charge the coach battery while in transit. The power converter automatically charges the coach batteries when the unit is connected to a 120 volt outside power source.

Notes

Battery Inspection & Care

WARNING

Remove rings, metal watch bands and other metal jewelry before working around batteries. Use caution when using metal tools. If a tool contacts a battery terminal or metal connected to it, a short circuit could occur which could cause personal injury, explosion or fire.

CAUTION

Disconnect the 120 volt electrical power cord and the negative terminal from the coach batteries before working on the electrical system.

Remember, when a battery is not used for an extended period of time, it may lose its charge. Periodic charging of the battery during storage of the unit will increase the life of the battery. Check the external condition of the battery periodically. Look for cracks in the cover and case. Check the vent plugs and replace them if they are cracked or broken. Keep the battery clean. Accumulations of acid film and dirt may permit current flow between the terminals, which could drain the battery.

To clean, wash the battery with a diluted solution of baking soda and water to neutralize any acid present. Rinse thoroughly with clean water. Foaming around the terminals or on top of the battery is a sign that acid is being neutralized. Avoid getting the baking soda solution in the battery. Secure all vent caps. Dry the battery cables and terminals. Do not use grease on the bare metal inside the cable terminals to prevent corrosion. Grease can act as an insulator. Electricity will not flow through it. A plastic ignition spray will protect the terminals after they have been cleaned.

WARNING

Do not allow the battery fluid to contact your skin, eyes, fabric, or painted surfaces. The fluid could cause serious personal injury or property damage. Wear eye protection when working with any battery.

When storing the unit for a short period of time, the battery should be disconnected from the coach to prevent draining. As an option, your unit may be equipped with a battery disconnect switch. Simply push the switch to the store position when storing your unit. To use the unit again, simply push the switch to the use position. If the unit is not equipped with a disconnect switch, disconnect the cables directly from the battery. When not using your unit for an extended period of time, the battery should be removed and stored in a warm place. Mark the cables, positive and negative, for easy identification. Batteries are not to be stored on concrete floors. The battery may require periodic charging during storage. If the unit is to be stored for a long period of time, it is recommended that all the batteries inside the unit be removed from clocks, radios, smoke alarms, etc. This will prevent unnecessary drain and corrosion of the batteries. The coach battery is a deep cycle RV/marine

battery. This type of battery consumes water and must be filled periodically. Consult the owner's manual supplied by the battery manufacturer. This can be found in the Owner's Information Package received with this unit.

120 Volt Receptacles

For your convenience, there are 120 volt receptacles located throughout the interior of the unit. There are also exterior outlets located on the curbside of the coach. These receptacles require the three-pin plugs that provide proper grounding to protect you from electrical shock. Do not use an adapter, cheater, or extension cord that breaks the continuity of the ground circuit to the ground pin. Never remove the ground pin from a plug in order to connect it to a two pronged ungrounded outlet. Never operate the camping vehicle with an electrical short. An electrical short may cause the exterior of the unit to shock you when touched. If you feel even the slightest shock, disconnect the unit from the 120 volt power source and locate the fault. It is usually a break in the grounding circuit. The grounding circuit must be continuous from the frame to the distribution panel, to the power cord, to the earth ground.

Ground Fault Circuit Interrupt Receptacle

The 120 volt electrical outlets in the kitchen and bath area are ground fault circuit interrupt (GFCI) receptacles. The GFCI outlets provide an overload and short circuit protection. The electrical outlets located in the slide out are wired through the kitchen GFCI. The exterior electrical outlets are wired through the bathroom GFCI. If an item plugged into a slide out or outside receptacle is not working, check for a tripped GFCI in the kitchen or bathroom. In addition, these outlets protect the user from ground faults between a hot wire and ground. The GFCI will not reduce the shock hazard if the short is between a neutral and hot wire, or two hot load wires.

The GFCI should be tested at least once a month. The 120 volt electrical system must be on in order to test the GFCI. The reset button needs to be pushed in all of the way before starting the test. Push the test button. This will cause the reset button to pop out which means that the protected circuits have been disconnected. Push the reset button back in until a click is heard. This will reactivate the protected circuit. If the GFCI is working properly the reset button will remain in the 'IN' position.

Electrical Diagrams

Typical electrical diagrams can be found in chapter 15.

Notes

Wiring Connector

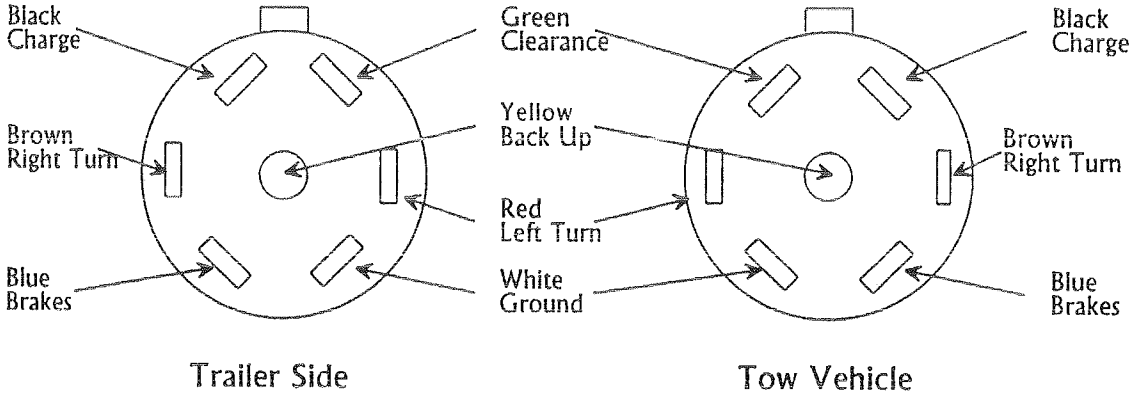
The wiring connector installed on all Newmar fifth wheels is the standard seven pin connector. The 12 volt battery in the tow vehicle supplies power to the trailer's electric brakes, tail lights, brake lights, turn lights, etc. through this connector. The color scheme for the wiring pigtail is as follows:

Left Turn Signal .....Red
Right Turn Signal .....Brown

Clearance .....Green
Ground .....White
Back Up Lights .....Yellow

Charge .....Black
Brakes .....Blue

Below is the diagram of both the trailer and tow vehicle side of the pigtail. As stated above, this is a standard seven pin pigtail.



Notes

RESETTABLE BREAKERS

The resettable breakers are located within 18 inches of the source of power. This is the converter and the battery. (Figure 1)

When either of the breakers are shut down they must be manually reset.

To find the breakers, follow the line from the battery or converter approximately 18 inches.

This may lead to a junction box or to a cabinet inside the unit or similar location.

Manually reset the breaker as shown at right in Figure 2.

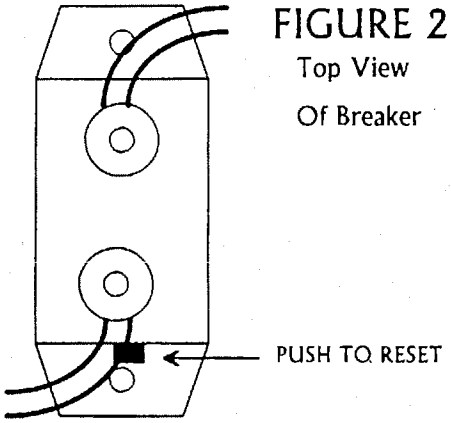
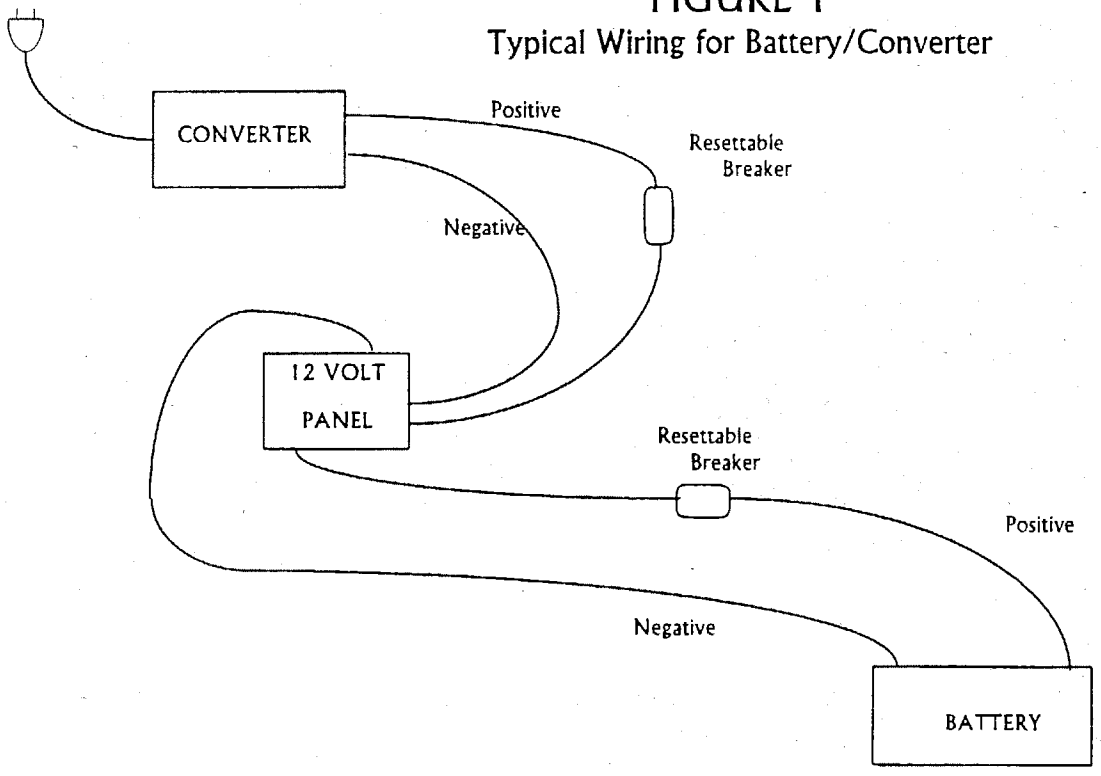


FIGURE 2
Top View
Of Breaker

FIGURE 1
Typical Wiring for Battery/Converter



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CHAPTER 8

SLIDE OUT FEATURES

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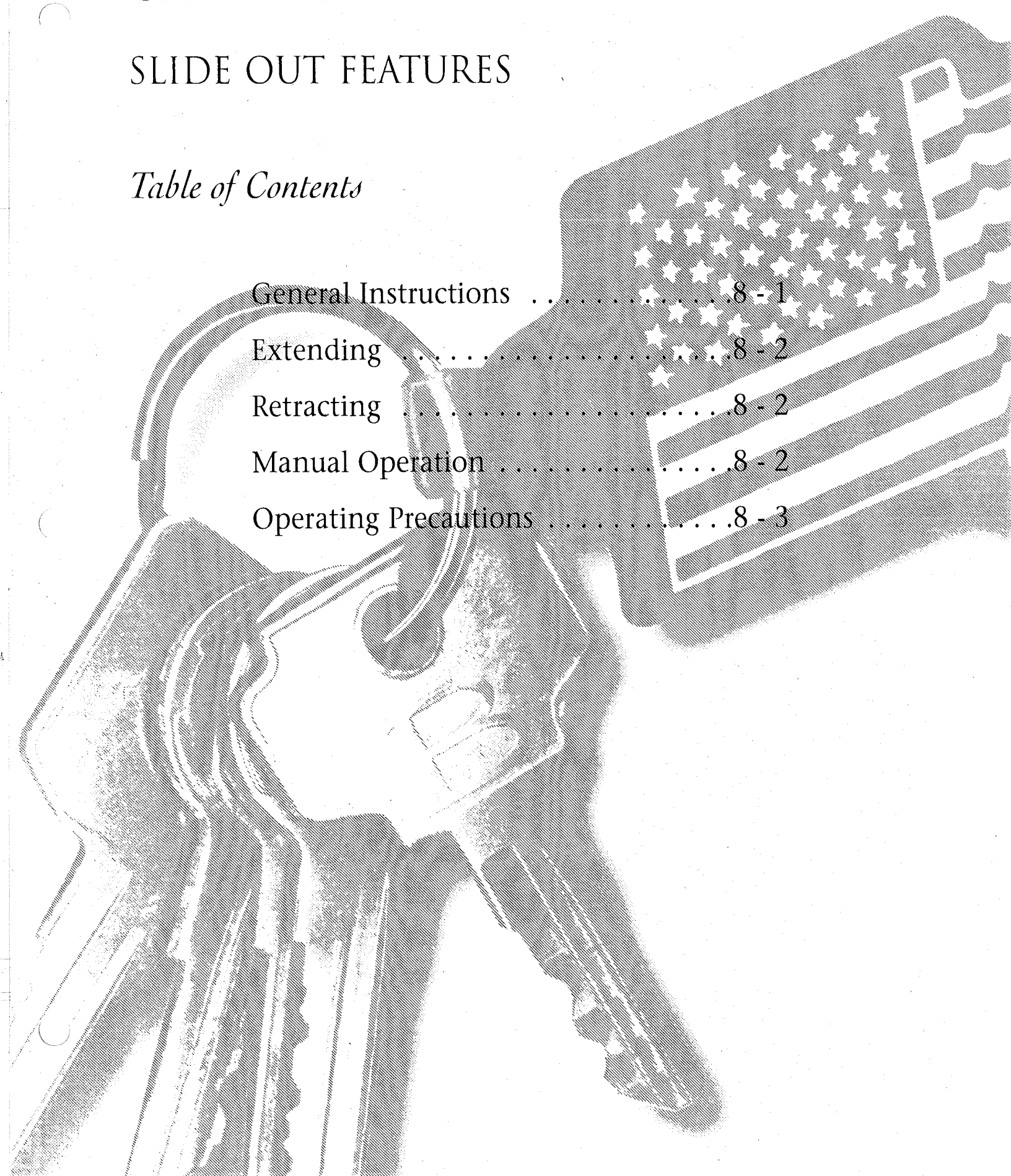


WARNING

READ THE FOLLOWING SLIDE OUT ROOM INSTRUCTIONS BEFORE ACTIVATING THE SWITCH.

IMPORTANT

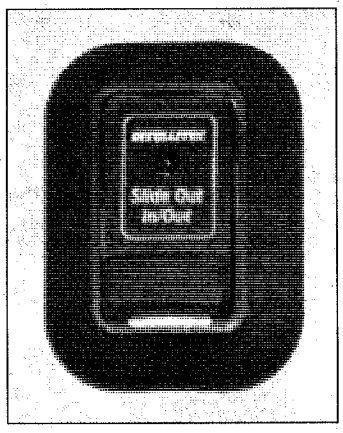
The slide out room should be inspected for alignment every six (6) months. If alignment is necessary, have the room adjusted.

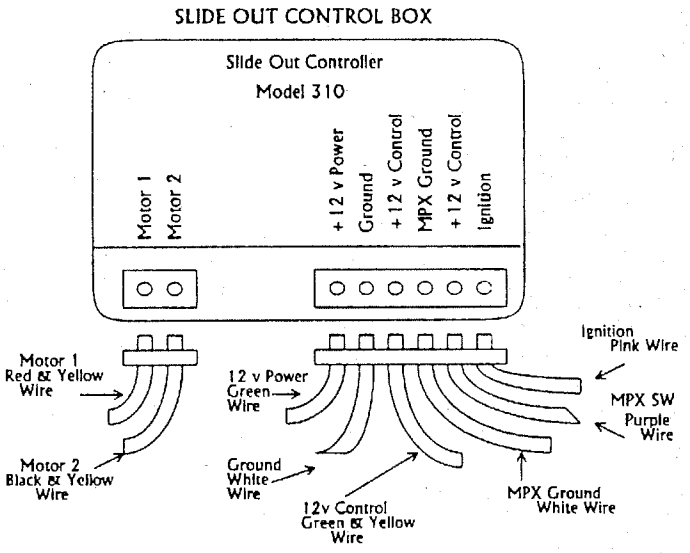
GENERAL INSTRUCTIONS

1. The slide out room can be stopped at any time by activating the slide out switch. The room will reverse directions each time the switch is activated.
2. If the slide out room stops before reaching the full 'OUT' or 'IN' position, the slide out controller may need adjustment.
3. To adjust the slide out controller, turn the adjustment screw clockwise to increase the power and counter-clockwise to decrease the power.

CAUTION

Move the adjustment screw in small increments. Try moving the slide out room again. Use caution. There is a potential for component or structural damage if the screw is adjusted too high.



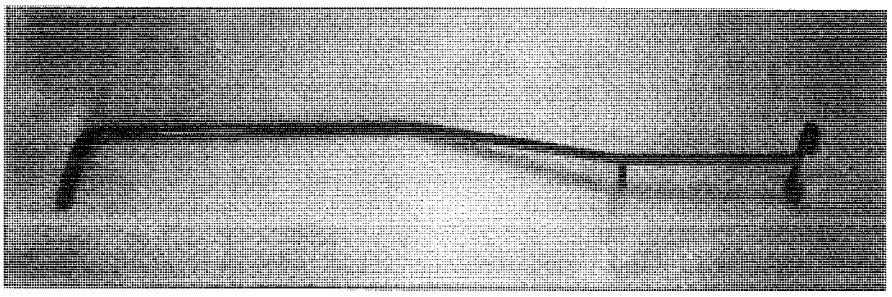


IMPORTANT

This screw does not adjust the slide out room speed. It sets the amount of power required to move the room against the mechanical stops.

Extending the Slide Out Room

1. The windows on the end of the slide out room must be closed before moving the room in either direction.
2. Before extending or retracting the room, look for and remove any obstructions.
3. Disengage the lock arms by pulling down on the center of the arm using the lock arm release tool, as required.
4. Activate the slide out switch. Once fully extended, the room will automatically stop. The indicator light will be lit while the room is traveling.



Retracting the Slide Out Room

1. Activate the slide out switch. When fully retracted, the room will automatically stop. The indicator light will be lit while the room is traveling.
2. Before moving the coach, engage the lock arms by pushing the arm up into the locked position using the lock arm tool, as required.

Manual Extension and Retraction

1. Access must be gained to the 'TRANTORQUE' bushing coupling at the end of the slide out gear motor.
2. Using the factory supplied ½" drive - 1¼" open end crows foot wrench and a user supplied ½" drive ratchet wrench, loosen the 1¼" nut. This will require approximately 1½ turns. The nut is a standard right hand thread. After the initial release the nut will turn for a partial turn, then will release again as you turn the wrench. This second release is required to loosen the 'TRANTORQUE' bushing from the shaft.

In Chapter 15 you will find a diagram of the slide out mechanism.

The Slide Out Room May Be Moved By Two Methods.

1. With the proper amount of help, two people minimum, the slide out room can be pushed the full length of it's travel in either direction.
2. The 1¼" crows foot wrench and the ½" drive ratchet wrench can be used on the short 1¼" square section of the cross shaft. Moving the slide out with this method may take more than one person.

IMPORTANT

The 'TRANTORQUE' bushing must be re-tightened to re-couple the slide out gear motor and the lock arm must be engaged before moving the coach. This will hold the slide out room in place.

CAUTION

The correct torque on the 1¼" 'TRANTORQUE' is 110 foot pounds maximum.

Operating Precautions

Before extending the slide out, make sure that the unit is level.

WARNING

Before extending the slide out make certain that there is a minimum of five feet of clear space on the slide out side of the unit. Prior to extending the room, be sure to unlock the slide out locking arms.

Make sure there are no obstructions either inside or outside of the unit that may interfere with the slide out extension. Tree branches, bushes, or telephone poles can cause extensive damage to the exterior of the unit.

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EXTERIOR FEATURES

Exterior Sides

The sides of this unit are constructed of gel-coated fiberglass. To add to this feature, the front and rear end caps are also gel-coated fiberglass. Clean the fiberglass material with a mild cleanser and warm water. Use only soft cloths. Using stiff bristle brushes may cause scratches in the fiberglass surface.

Jacks

Standard on these units are the 12 volt electrical fifth wheel jacks. Before using the jacks, read and closely follow the operation instructions provided by the jack manufacturer. To lift the unit for uncoupling, drop the pad tube by removing the lock pin. Re-pin the hole that places the foot pad closest to the ground to compensate for variations in the terrain between the jacks. Push the toggle switch to the "DOWN" position and hold until the jack raises the unit to the desired height.

> CAUTION
>
> Before raising the jacks, make sure the hitch is securely latched by applying the trailer brakes and slowly pulling the tow vehicle forward. The unit should prevent the tow vehicle from moving.

To raise the jacks after coupling, push the toggle switch to the "UP" position and hold until the jacks are fully retracted. Release the toggle switch as the lock pin in the inner ram tube nears the end of the outside tube to avoid unnecessary wear on the motor clutch. Remove the lock pins and raise the pad tubes, re-pinning them in the highest possible position.

> CAUTION
>
> When the jacks reach their maximum extended or retracted length or maximum load, you will hear a clicking noise. This is the slip clutch built into the motor to prevent jack overextension or retraction. Release the toggle switch as soon as you hear the clicking. Continued operation with the clutch slipping can damage the jacks.

These jacks can be operated manually, if necessary. Insert the hand crank into the alignment tube until the end engages with the crank shaft. Turn the crank handle counter clockwise to raise the trailer. Remove and store the crank handle. To raise the jacks after coupling, rotate the crank handle clockwise. Retract as far as possible with the crank handle, then remove the lock pin and raise the pad tube and re-pin it in the highest possible position. Please refer to the jack manufacturer Operation Instructions for further assistance.

The snaps for the fifth wheel jacks are a standard feature on this model.

Stabilizer Jacks

This unit may be equipped with stabilizer jacks. The operation of the stabilizer jack is fairly simple. First park the vehicle on level ground. Block the wheels using tire chocks to prevent the unit from moving. Level the front and the back of the unit using the tongue jack or landing gear. Crank the stabilizers down on the low side first, this will bring the trailer to a fine level position. Re-tighten the stabilizers on the low side of the unit, if necessary. Do not use stabilizer jacks to lift the unit.

> CAUTION
>
> Before moving the trailer, crank up the stabilizer jacks to the fully closed position. Tighten ¼ turn to secure the jacks in the travel position. This will help prevent the stabilizers from working open due to road vibration. Do not use stabilizer jacks to lift the unit.

Electric Stabilizer Jacks (Optional)

In place of the manual stabilizer jacks, an electric stabilizer jack assembly can be optioned. For further instructions on the operation of these, refer to the manufacturer Operator's Manual in the Owner's Packet.

Roof

Standard on this unit is the painted aluminum roof. As an option, a roof rack and ladder can be installed. The ladder will assist you in gaining access for routine roof inspections. A rubber roof is one of the possible options in place of the standard aluminum. Another option is for the roof to be gel-coated fiberglass.

Steps

The entrance door steps on your unit are the fold down steps. To extend the step, first release the locking latch. Once the latch is released, pull the step pivot section out and down by the step cross member bar. NOTE: Be careful not to get any fingers or clothing near the pivot action of the step. Next, release the second step by pulling the step up and straight outward until it locks into position. Then pivot the third and final step out and down. For retracting the step, reverse the procedure. Keep all step pivot points lubricated with a quality grease based spray lubricant for smooth operation. An optional feature are the 12 volt automatic steps.

Electric Steps (Optional)

Installation of the electric steps is an optional feature. These are installed in place of the standard manual steps. Operation for the electrical entrance door step is as follows;

1. With the entrance door open, turn the step power switch on.
2. Close the door. The step should retract and lock in the up position.
3. Open the door. The step should extend and lock in the down position with the under step light on.
4. Turn the step power switch off. The step should remain in the extended position when the door is closed. Turning off the power with the step retracted will hold the step in a retracted position as well.

> CAUTION
>
> If the vehicle is towed with the step in the extended position, there is the possibility of causing major damage to both the step and the vehicle.

Stone Guard

A black vinyl stone guard is available as an option. This stone guard will protect the front fiberglass section of the fifth wheel from rocks and road dirt. This will recess under the cab over section of the unit when not in use. To use, turn the grommets so the stone guard is unlocked from the coach. Gently pull down on the stone guard and the spring action of the roller will retract it.

Pin Stabilizer (Optional)

An optional feature is the built-in fifth wheel pin stabilizer. This helps to stabilize the unit when parked at a campsite.

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CHAPTER 10

INTERIOR FEATURES

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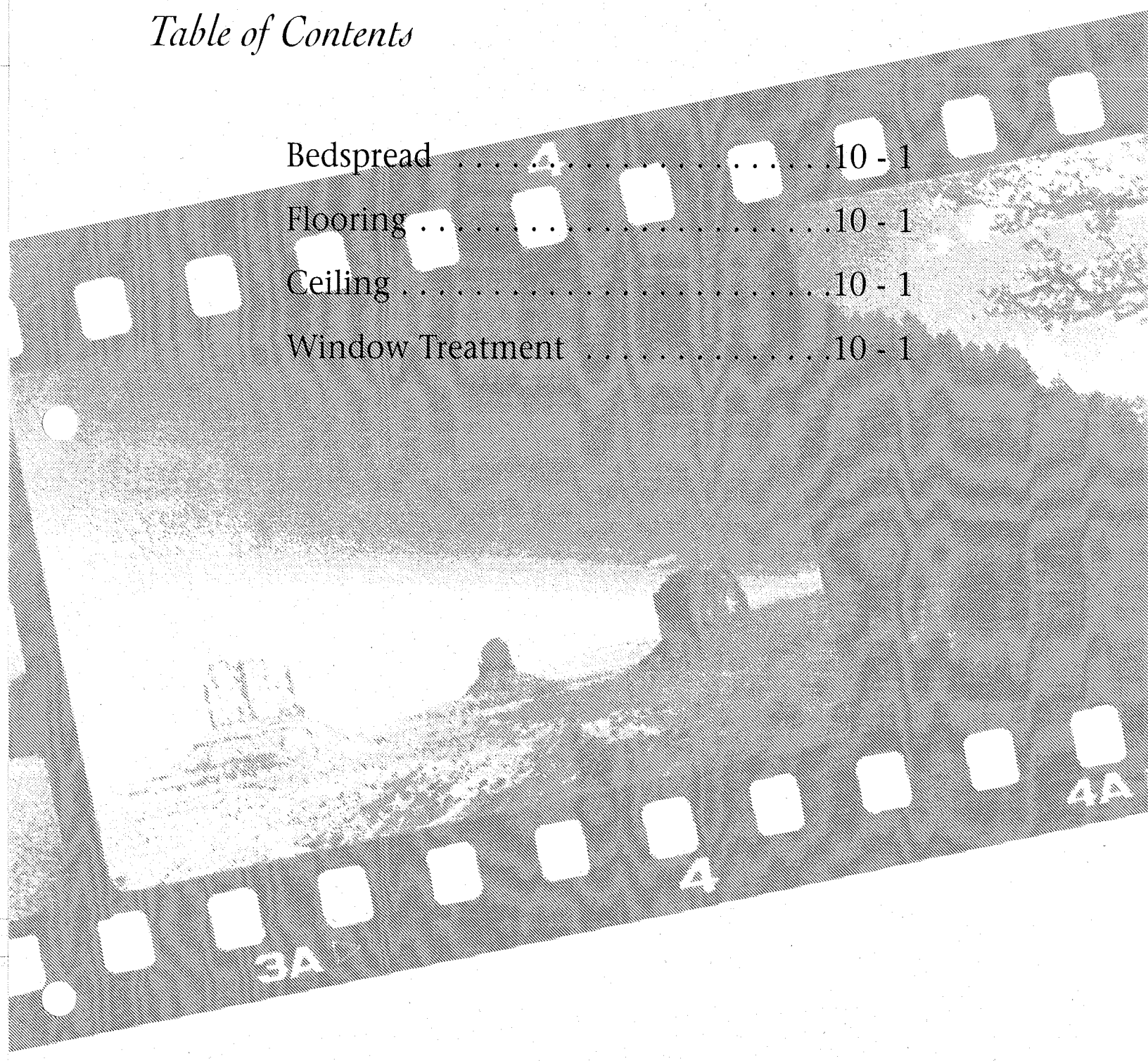

INTERIOR FEATURES

Bedspread

All units have a decor matching bedspread enclosed as part of the standard package. The recommended cleaning instructions for this spread are Dry Clean Only. The materials the make up the spread may have been treated and dry cleaning will preserve this treatment.

Flooring

The floor covering in the living room and bedroom of the unit is carpet. In the Owner's Packet you will find literature supplied by the carpet manufacturer. This information will be helpful in maintaining and extending the life of the carpet. Please refer to this information for the carpet care and cleaning instructions. The floor covering in the bath, kitchen and foyer area is a vinyl linoleum. The cleaning procedures for this flooring are the same as with any linoleum. Use a mild soap with warm water and a soft cloth or mop. Optional in the kitchen and foyer area is the popular hardwood plank flooring. This flooring is cleaned the same as linoleum. Do not saturate the wood with water, this could damage the wood.

Ceiling

The ceiling in this unit is covered with a woven soft touch ceiling covering. The recommended cleaning instructions are to have the ceiling professionally dry cleaned.

Window Treatment

The window treatment throughout this unit, except in the kitchen, is pleated day/night soft shades with lined drapes. These shades have two sections. The first section visible when closing the shade is the "DAY" section. This material is translucent. Sun light passes easily through the material into the unit. The second visible section is the "NIGHT" section. This material is a heavier, more opaque material. Very little to no light passes through it. It is generally used in the evening or when more privacy is desired. The kitchen window is equipped with a mini-blind.

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FRESH WATER SYSTEM

Kitchen Sink

The kitchen sink installed is a double bowl stainless steel sink. The unit has two sink covers to provide additional counter space when the sink is not in use. Stainless sinks do not rust or chip. Cleaning care consists of washing with mild detergents and a soft cloth. Avoid using "S.O.S." type cleaning pads because they may scratch the stainless steel surface. The faucet in the kitchen is an 8" chrome single handle faucet.

Bath Sink, Shower & Accessories

The sink in the bathroom is vacuum formed durable white plastic. Use care when cleaning to avoid scratching the surface The bathroom accessories include two towel bars, a tissue holder, and a robe hook. The faucet in the bathroom is decor matching with a white dual handle faucet. The shower installed is a fiberglass combination tub and shower surround with enclosure. The white tub faucet with shower head, hose, and bracket, are decor coordinates with the sink faucet.

Monitor Panel

The monitor panel allows you to check the approximate levels in the fresh, gray, and black water holding tanks, and the battery condition. The monitor panel is generally located in the bathroom. Simply press the button of the item to check its status. The empty indicator light will always light when the button is pressed. If the tank is full, all of the lights will be on. Lights are sequential, and indicate the level in approximately ¼ tank increments. For example: If the tank selected is approximately ½-full, then the indicator lights E, ¼, and ½ will be lit. On the right hand side of the monitor panel is the water pump switch. This switch controls the power going to the water pump, turning it either on or off.

Monitor Panel Calibration

The monitor panel comes to you factory calibrated for accuracy and should not need to be adjusted. In the event that the system does not read accurately, then re-calibration may be necessary. The procedure for re-calibration is simple: First, fill the tank to be re-calibrated. Second, using the adjustment tool enclosed in the Owner's Package (or any small flat-bladed screw driver) simultaneously push the button for that tank and rotate the adjustment screw located above the button and behind the face plate counter-clockwise until some of the lights turn off in sequence. Then slowly rotate the adjustment screw clockwise until the full light is completely on. Repeat this procedure as necessary for the remaining tanks. The system is now calibrated properly.

Water Pump

The water pump is self priming and totally automatic, operating on demand whenever water is required. The water pump is used to pressurize the fresh water system when the unit is not connected to city water. To start the pump follow these instructions:

1. Fill or partially fill the fresh water supply tank.
2. Open the kitchen and bathroom faucets.
3. Turn the water pump switch on and allow the water to fill the water line and the hot water heater.
4. Close each faucet after it delivers a steady stream of water (close the cold water first). Leave the hot water faucets on until they also deliver a steady stream of water. This will ensure that the water heater is filled with water.
5. The water pump should stop running once all faucets are closed.
6. The pump is now ready for automatic operation. The pump will run when a faucet is opened and stop when a faucet is closed.
7. Never allow the pump to run for long periods of time without water in the supply tank. Pump damage or blown fuses may result.

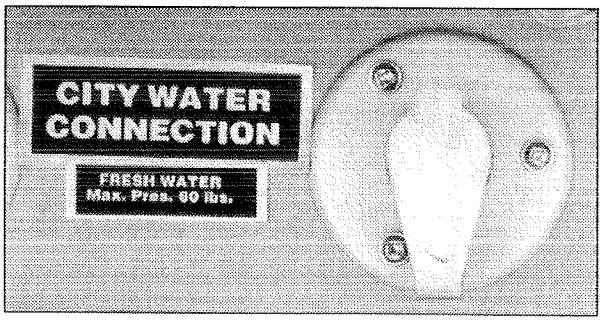
If water doesn't flow when a faucet is turned on while using the demand system, use the following trouble shooting chart.

SITUATION	SOLUTION
Pump running - no water	1. Fill tank
	2. Clear the water line to the pump
Pump doesn't run	1. Check the pump switch
	2. Check the 12 volt fuses
	3. Check the electrical connections
	4. Check the battery

All of the water should be drained from the fresh water system when the unit is not in use for more than one week. For more detailed information regarding the water pump, refer to the water pump manufacturer's brochure in your Owner's Packet.

City Water Hook-Up

When connecting your unit to city water, be certain to use a water hose manufactured and labeled for potable water. This will ensure that the hose will not alter the taste of the water. To hook the city water supply to the unit, connect one end of the hose to the city water supply. This will usually be a faucet or valve similar to your garden hose valve at home.



Turn the city water supply on for a few seconds in order to clear the line. Once the hose has been flushed, turn the supply off. Connect the other end of the hose to the city water connections. Turn on the water supply and open all of the faucets to clear the air from the lines in the unit. Once air pockets have been purged from the water lines and water flows freely, close all of the faucets. The city water supply is under pressure, therefore the water pump is not necessary when connected to city water. Once the city water fill valve is opened, water is supplied to the fresh water system including the hot water heater, faucets, and stool. To disconnect from the city water supply, close the valve and remove the hose from the city water supply. Disconnect the hose from the city water connection and store the hose in the water compartment.

Fresh Water Tank Fill

The fresh water tank is filled from the city water hook-up. The water supply valve located in the service compartment near the water hook-up determines whether the city water is going through the water system or into the fresh water tank. An additional way to fill the fresh water tank is with the winterizing intake hose placed in a bucket of water (See Chapter 14). With the water supply valve open, turn on the water pump to fill the tank. Since there is not an automatic shut-off for the fresh water tank fill, check the level from the monitor panel while filling the unit. The excess water will be vented from an overflow vent pipe onto the ground when the tank capacity has been reached. This pipe is installed in the fresh water tank to prevent tank rupture from overfilling. All of the water should be drained from the fresh water system when the unit is not in use for more than one week. Whenever possible, drain the fresh water tank before traveling. Water in the tank will reduce the carrying capacity of the unit.

SANITIZING

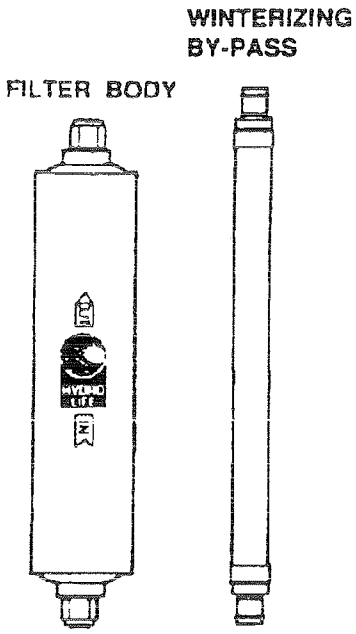
To assure complete disinfecting of your fresh water system, it is recommended that the following procedure be followed on a new system, on one that has not been used for a length of time, or one that may have become contaminated. This procedure is also recommended before long periods of storage, such as over the winter months:

1. Drain the fresh water tank by opening the drain valves. There is one valve per water tank. All of the faucets should be in the closed or off position.
2. Prepare a chlorine solution using one gallon of water and ¼ cup of chlorine bleach (5% sodium hypo-chlorite solution). Prepare enough of the chlorine solution to administer one gallon of solution for every 15 gallons of tank capacity. For sanitizing this unit, prepare 4½ gallons of the chlorine solution. This mixture puts a 50 PPM (parts per million) residual chlorine concentration in the water system that will act as a quick kill dosage for harmful bacteria, viruses and slime forming organisms. Concentrations higher than 50 PPM may damage the water lines and/or tank.
3. Once the fresh water tank is empty, close the drain valves on the water tank.
4. Pump the chlorine solution into the tank. This is done by placing the winterizing hose into the chlorine solution. Close the valve from the fresh water tank to the pump and open the valve from the solution to the pump. Turn the tank fill valve from city water to tank fill. Turn on the water pump until all of the solution is pumped into the fresh water tank.

5. Turn off the water pump. Close the valve to the solution. Turn the city water valve to open. Open the valve from the tank to the water pump. Turn the water pump on in order to fill the tank with fresh water until it is completely full. Remove the water filter (from the drink dispenser faucet, if installed) and install the by-pass pipe to allow the sanitizing solution access to the faucet. Open each faucet in turn including the kitchen faucet, bath faucet, inside and outside shower, turning on both the hot and cold, and flushing the stool until all of the air has been purged from the pipes and the water runs freely. The entire system will then be filled with the sanitizing solution.
6. Allow the 50 PPM disinfecting solution to stand in the system at least four hours.
7. Drain the system and flush with fresh water. The water system needs to be flushed with clean water repeatedly, if necessary, until there is no chlorine taste or smell left in the system. To remove any excessive chlorine taste or odor that might remain, prepare a solution of one quart vinegar to five gallons of water. Allow this solution to agitate in the tank for several days by vehicle motion. Drain the solution and refill the tank with clean water.

Drink Dispenser with Water Filter (Optional)

Before disinfecting the fresh water system, remove the water filter and install the by-pass pipe to allow water access to the drink dispenser faucet if installed. The water filter is located under the kitchen sink. The filter will remove chlorine, dirt, and other matter. It will also eliminate most phenol (or similar) odors and tastes while delivering sparkling, taste free water for drinking and cooking. The filter is connected only to the cold water line that is attached to the drink faucet. The filter is not guaranteed to remove the tastes and odors of iron and sulfur. To remove these tastes you will need to chlorinate the water. Replacement filters are available that will filter iron and sulfur. Ask your dealer or RV supply center about acquiring an iron and sulfur filter. If you are traveling in an area where the water has a high iron and sulfur content, then add 1 tablespoon of chlorine bleach to every 10 gallons of water in your tank. This will precipitate the iron or sulfur so that the filter can remove it. If you are at a site where the unit is hooked up to city water, you will not be able to chlorinate the system because the water flows straight to your faucets and not through the fresh water tank. Filters should be changed every 6 - 12 months depending on the quality and quantity of water that is used in your unit.



Water Heater By-Pass System

The water heater by-pass valve is located at or near the water heater. By closing the water heater supply valve and opening the by-pass valve you can divert water away from the water

heater. This is done when winterizing your unit. Using the by-pass will keep antifreeze out of the water heater when winterizing the system.

Fresh Water Lines

Vibration and flexing during traveling can cause pipes and fittings to work loose. Check all of the plumbing connections for leaks on a yearly basis. If the water pump runs when all faucets are turned off, check for a leak. Be sure the drain valves are closed. Connections at the kitchen and bathroom faucets normally seal with hand tightening and a half turn with a wrench. If a fitting leak persists, disconnect it completely and check for mineral deposits or foreign material on the sealing surfaces. Clean the surfaces thoroughly and reinstall the fitting. Take the coach to an authorized service center for repairs if the system continues to leak. Follow the winterizing instructions given in Chapter 14 to reduce the risk of leaks caused by cracks from freezing pipes. Freezing damage can be extensive and expensive.

WASTE WATER SYSTEM

General Information

The waste drainage system was designed to provide adequate and safe storage and/or disposal of waste materials. All of the material used in the making of this system are tested by a nationally recognized testing laboratory. The drainage system uses ABS plastic piping and fittings connected to the sinks, toilet, and holding tanks. This provides for their drainage to an outside termination. The unit should be reasonably level for best operation of the system. There are two separate waste systems. The gray water system is for waste water from the sinks and shower. The black water system is generally for sewage waste from the stool. Each tank has its own control valve and both tanks drain through the sewer drain hose.

Toilet

The stool operates with water from either the fresh water tank with the water pump on or the city water supply. Before using the stool, add water to the bottom of the tank. Refer to the 'BLACK WATER TANK' instructions in this chapter. The stool flushes wastes directly into the black water holding tank. The stool uses high velocity water injection to produce a swirl effect in the bowl. The greatest problem that causes stool solids to build up in the holding tank is lack of liquids. When using your stool, it is wise to fill the stool ¾ full of water. This will help to wash the solids away from directly below the stool and to ensure complete dumping of the holding tank. Depending upon the model installed, water can be added to the stool bowl by lifting up on the lever. To flush the stool, push down on the lever until water swirls.

The stool requires little maintenance. Use an approved non-abrasive cleaner to clean the bowl. Spraying the bowl sealing blade with a silicone spray will retain the original smooth operating condition.

Check the complete instruction and trouble shooting guide in the stool manufacturer's Owner's Manual provided in the Owner's Packet.

P-Traps

Each of the sink drains, the shower drain, and the washing machine drain (if equipped) has a water trap (P-Trap) to prevent holding tank odors from entering the coach. These traps must have water in them in order to work. While traveling, the water may splash out of the sink and shower drains. While stored, the water may evaporate allowing an odor to enter the coach. If this occurs, run water from the faucet into the drain, allowing water to fill the trap.

Black Water Holding Tank

The black water, or sewage, holding tank is located directly beneath the toilet. Before using the stool, you will need to treat the tank with water that is mixed with an odor controlling chemical. These chemicals are readily available at any RV supply store. Be careful not to spill the chemical on your hands, clothing or the carpet because it may cause a permanent stain. Pull the toilet levers forward to allow the chemical to mix with the toilet water. Continue pulling the toilet levers until at least one inch of solution is directly under the toilet. Release the levers and the waste tank is ready for use.

> **CAUTION**
>
> Use only approved RV odor controlling chemicals in the holding tanks. Products containing ammonia and petroleum will damage the ABS plastic holding tanks and seals.

Gray Water Holding Tank

The gray water holding tank is located in the underbelly of the unit. It is primarily used for the drainage from the kitchen and bath sinks and the shower.

Waste Water Disposal

Both of the holding tanks terminate in a valve arrangement that permits draining each tank separately or together. It is recommended to drain the black water tank before the gray water tank. This will allow the water from the gray tank to wash the black water residue from the drain lines and hose. The valves that open to release the water are called gate valves. The blade that closed the opening in the sewer drain pipes is connected to the T-handle to release the contents of the tank(s) when pulled. The sewer line must be securely capped during self-containment use to prevent leakage of waste material onto the ground or pavement. Do not pull the holding tank gate valve open when the protective cap is installed on the pipe. Always drain the tank into an acceptable sewer inlet or dump station.

WARNING

Holding tanks are an enclosed sewer system and must be drained into an approved dump station. Both black and gray water holding tanks must be drained and rinsed thoroughly on a regular basis in order to prevent the accumulation of harmful or toxic materials.

Whenever possible, drain the holding tanks prior to traveling. The carrying capacity of your unit will be reduced if water is left in the black or gray tanks.

The holding tanks should only be drained when they are at least ¾ full. Doing this will provide sufficient water to allow the complete flushing of waste materials in the drain lines and hose. If the tanks are not ¾ full, add enough water to allow for sufficient flushing.

To empty the waste water tanks, connect the adapter to the drain hose. Use the adapter supplied with your unit. If the adapter is lost or broken, one can be purchased from most RV supply stores. Once you have placed the adapter on the drain hose, it can remain there for the life of the hose. Unscrew the cap off the drain. Connect the hose with the adapter in place to the drain fitting. Open the gate valve all the way by pulling on the T-handle. The tank will start to drain as soon as the T-handle is pulled. After you have drained the black water tank, immediately drain the gray water tank. Doing this helps to flush the black water from the sewage hose.

When both of the tanks are empty, flush them with a fresh water rinse before you close the valves. The gray tanks are easily flushed by pouring a couple of gallons of water into a sink drain. Prime the system with an odor control chemical following the directions above for preparing the system for use. The drain outlet is engineered for quick release of the drain hose adapter. Always close the gate valves and secure the end cap to prevent leakage while in transit. After draining, add enough water to the black water tank to cover the bottom.

When using dump stations for draining the holding tanks, keep other travelers in mind. Practice good housekeeping. Leave the dump stations in good order. Above all, do not pollute.

Camping with Sewer Hook-Up

When camping at parks with sewer hook-up, it is important to keep the black water holding tank gate valve closed at all times, except when dumping. The gray tank can be kept open while hooked to a sewer connection but again, the black water tank must be kept closed. This is done so that an ample supply of liquid remains in the tank to provide a smooth flow through the gate and drain valve when dumping. Sufficient liquid in the tank causes a swirling action that should take any accumulated solid wastes with it. Accumulation of solid wastes in the black water tank can be avoided by keeping the gate valve closed when connected to the sewer hook-up. If the valve is left open, solid wastes may accumulate in the tank. This may eventually result in costly repairs. The gray tank valve needs to be in the open position when operating the optional washing machine.

No Fuss Flush (Optional)

This unit may be equipped with an flushing system for the holding tanks. When draining your sewer tank, attach a water hose to the Sewer Spray hookup. After the tank is drained, leave the gate valve open and open the water valve to allow water to spray inside the sewage tank. This will clean the inside of the tank of any debris that may be left inside the tank. After this is done, disconnect the water hose and close the gate valve. When unsure if any solids are still left inside the tank, fill the sewage tank with approximately ten gallons of water through the stool. Then, as you travel, the agitation of the water should help liquefy any solids left in the tank. You can dump the sewage tank again at your next destination.

> CAUTION
>
> Do not use the same hose for the No Fuss Flush that is used for filling the fresh water tank

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CHAPTER 12

CONSTRUCTION FEATURES

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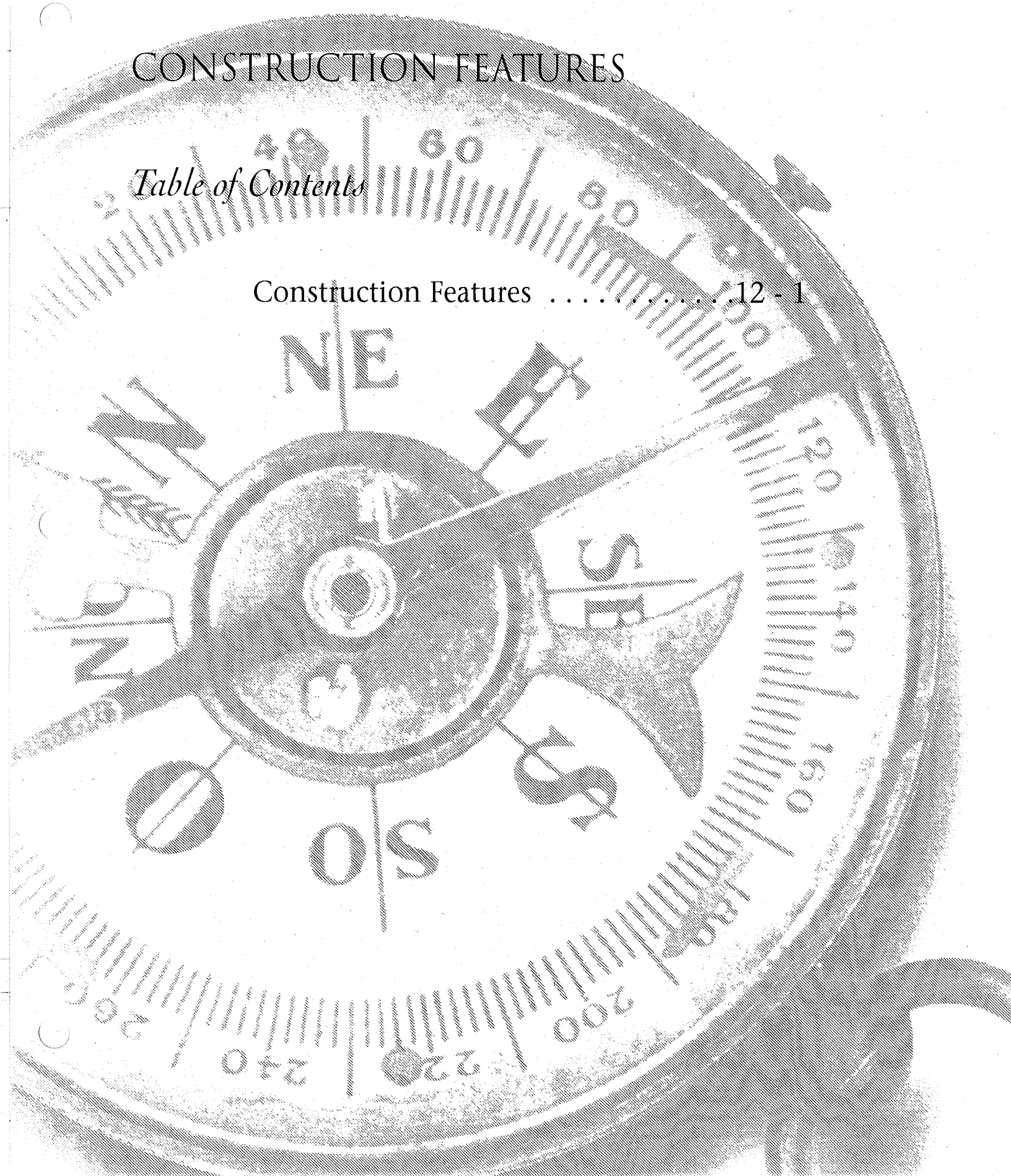
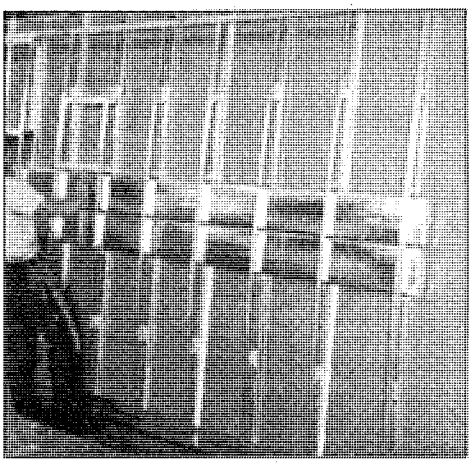


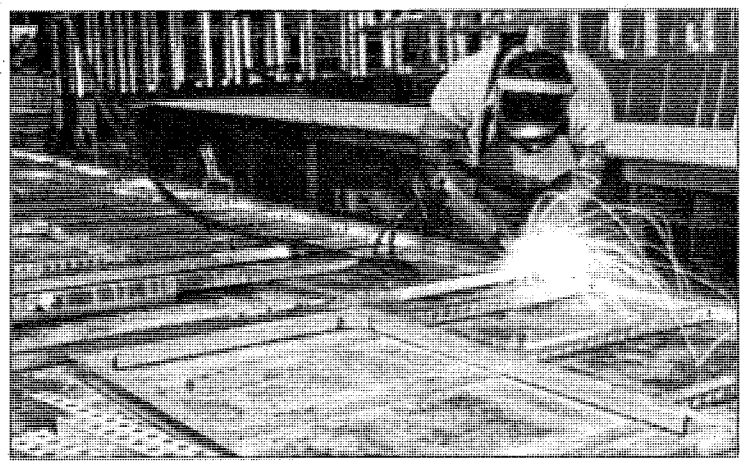
CONSTRUCTION FEATURES

The floor decking is constructed of durable 19/32" structure wood. The fiberglass insulation in the floor is rated at R19. The underbelly on these models is enclosed with aluminum laminated 5/8" foam board. The rear bumper pulls out with a slide out tray for the spare tire.

On this model, each sidewall is constructed for strength and is heavily insulated for comfort. Welded, for added strength, the widebody extruded aluminum sidewalls and roof are built with 16" on center framing, providing the strongest and most durable construction. The inside consists of 5/8" beaded foam that is laminated to kraft paper and covered by the interior paneling. A blanket of rolled insulation is added to the sidewalls, roof, and slide out to provide a greater efficiency and consistency of climate control. The sidewall insulation is rated R7, while the roof is rated R19. This will assist the furnace in the winter by keeping the warm air in and the cold air out. In the summer months, it will assist the air conditioning by keeping the cool air in and the hot air out.

Below are examples of the framing and insulation that your unit is constructed with.





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CHAPTER 13

WINDOWS, AWNINGS, VENTS & DOORS

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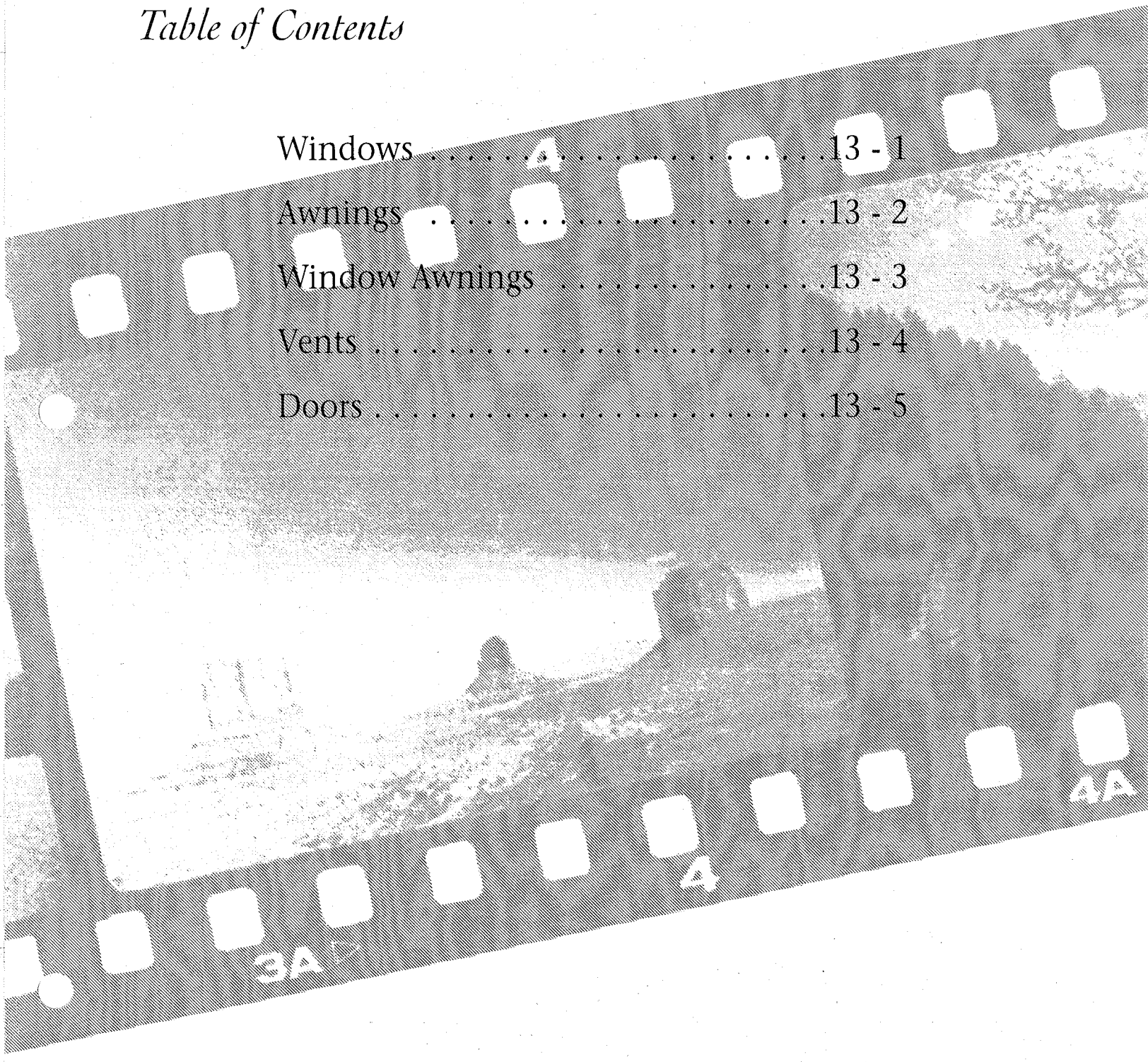
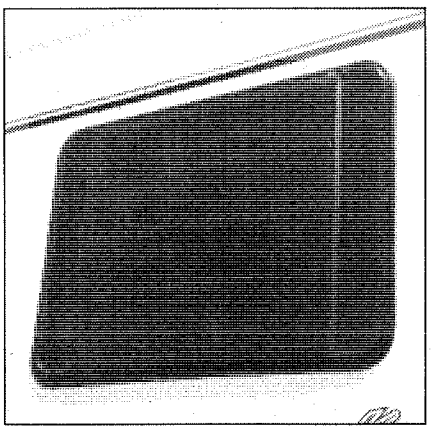
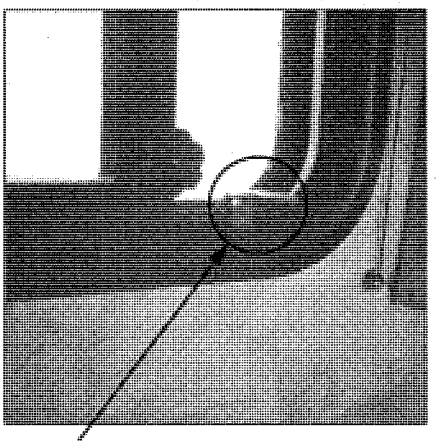


WINDOWS



The windows installed in this unit are the radius torque style. These windows are also referred to as jalousie windows. They open with the simple turn of a crank. There are two window options in this model. One is to have safety glass storm windows installed. The other would be the installation of dark tinted, safety glass storm windows.



Red Handle

In the bedroom of the unit, one window will be marked "EXIT". This window is an emergency escape, or egress, window. To open in case of an emergency, lift the red handles at the bottom of the window and push out.

Notes

AWNINGS

Side Awning

The side awning is an available option on this unit. When installed, the side tension rafter can also be optioned. To operate, follow these instructions:

EXTENDING

1. Loosen the black adjustment lock knob behind each main arm. Flip the travel lock latches up.
2. Using the provided pull rod, reach up and pull the locking lever forward or down to release the awning.
3. Hook the rod into the loop of the pull strap and pull the awning all the way out.
4. Slide one rafter arm up until it snaps into place. Push down on the main arm to remove slack from the fabric, and tighten the black adjustment knob. Repeat on other side.
5. Slide the pull strap to the right end of the roller and wrap it around the main arm.
6. Pull up on the lift handle and raise the arm assembly to the desired height. Swing handle in, and allow the lock button to snap into one of the holes. Repeat on the other side.
7. Press the release lever at the bottom end of one main arm, pull the arm assembly outward to a vertical position, and readjust height. Repeat on other side. Drive provided stakes through holes of each patio foot into the ground.
8. During rain, lower one end to allow water to flow off.

> **CAUTION**
>
> Whenever heavy or prolonged rain or wind is anticipated, or you will leave the awning unattended, it is best to close the awning. Damage as a result of weather is not covered by warranty.

RETRACTING

1. Pull the stakes from the ground, swing the arm toward the vehicle, and snap the patio foot into the bracket. Repeat on the other side.
2. Raise the lift handle to release the lock button. Lower the main arm to the stop plug. Swing the handle in to engage the lock button in a hole. Repeat on other side.
3. Loosen black adjustment knob, lift slider catch, and slide the rafter arm down to the bottom of the main arm. Leave the black adjustment knob loose. Repeat on other side.
4. Grasp the pull strap and pull toward you. Flip the locking lever to the ROLL UP position. Hold the awning in the down position until you are ready to roll up the awning.

> **CAUTION**
>
> The awning will try to roll up as soon as the locking lever is flipped to the "ROLL UP" position.

5. Slide the pull strap to the center and using it to control speed, allow the awning to return to the side of the vehicle. Allow the strap to wind diagonally to prevent a bulge in the fabric.
6. Tighten the black adjustment knob and flip the travel lock latch down. Repeat on other side. The awning is now ready for travel.

Window Awning (Optional)

Also optional on this unit, are the matching window awnings for the bedroom and the slide out room windows. To operate these, use the following instructions:

EXTENDING

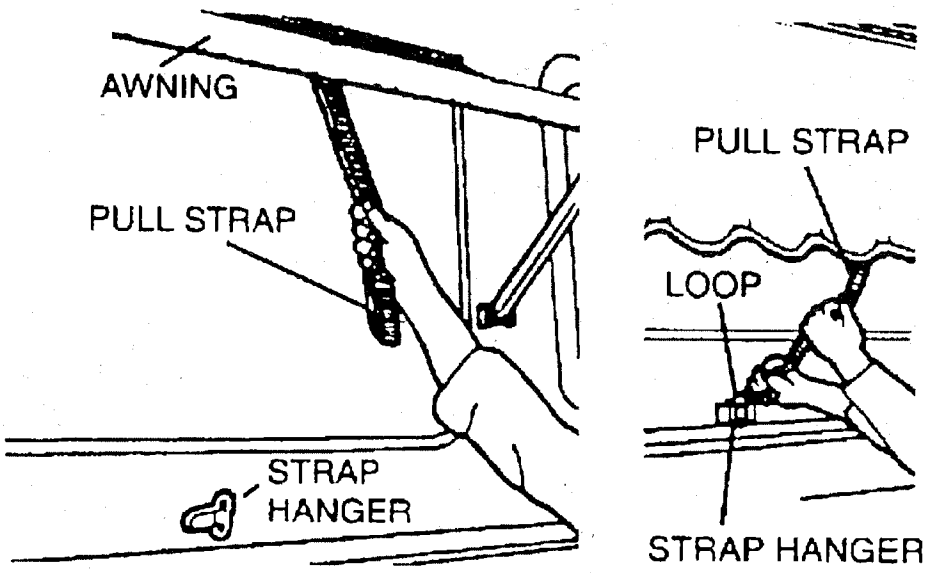
1. Grasp the loop on the pull strap and pull down to extend the awning. Then hook the loop onto the window strap hanger.

RETRACTING

1. Remove loop on the pull strap from the window strap hanger.

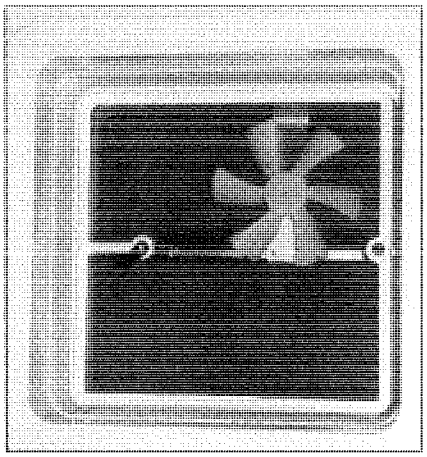
> **CAUTION**
>
> Do not release the strap as the window awning is under tension and may snap back against the vehicle.

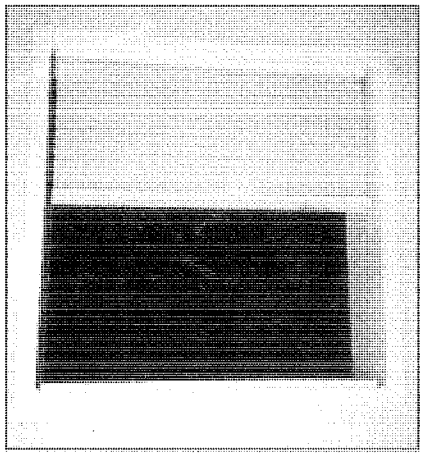
2. Slowly allow the awning to roll back to the closed position by feeding the pull strap upwards and diagonally. This prevents the strap from building up and creating a bulge in the fabric.
3. The window awning is now ready for travel with no further locking required.



Vents

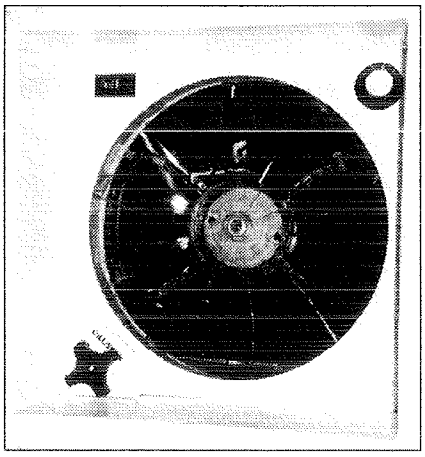
There is one standard vent in the unit. It is located in the bath area. This vent operates on 12 volt electricity. The vent is controlled by an on/off switch on the wall. An optional vent of this style may have been added at time of production.





An optional skylight is available in the bathroom. If the skylight is installed, it may be equipped with an optional soft shade for added privacy. To open or close the shade, simply move the bottom rail in the direction desired.

In the kitchen, a possible option would be the installation of a 12 volt Fantastic Vent with rain sensor. This vent is controlled by the wall thermostat. When on, it will run until the desired temperature is reached. If, while the unit is on, it starts to rain, the sensor will automatically shut the unit off and the vent cap on the roof will close.



Doors

The entrance door is a radius door with a dead bolt lock for added security. The door can be held open with the door stop. With the door open, simply lift the "T" section on the door and place it in the holder on the exterior sidewall of the unit. Next to the entrance door you will find the standard lighted grab handle. This handle will assist anyone entering the unit. Next to the exterior handle, you will find the door bell button if the optional door bell was installed. This door bell operates on four C cell batteries.

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CHAPTER 14

ROUTINE MAINTENANCE

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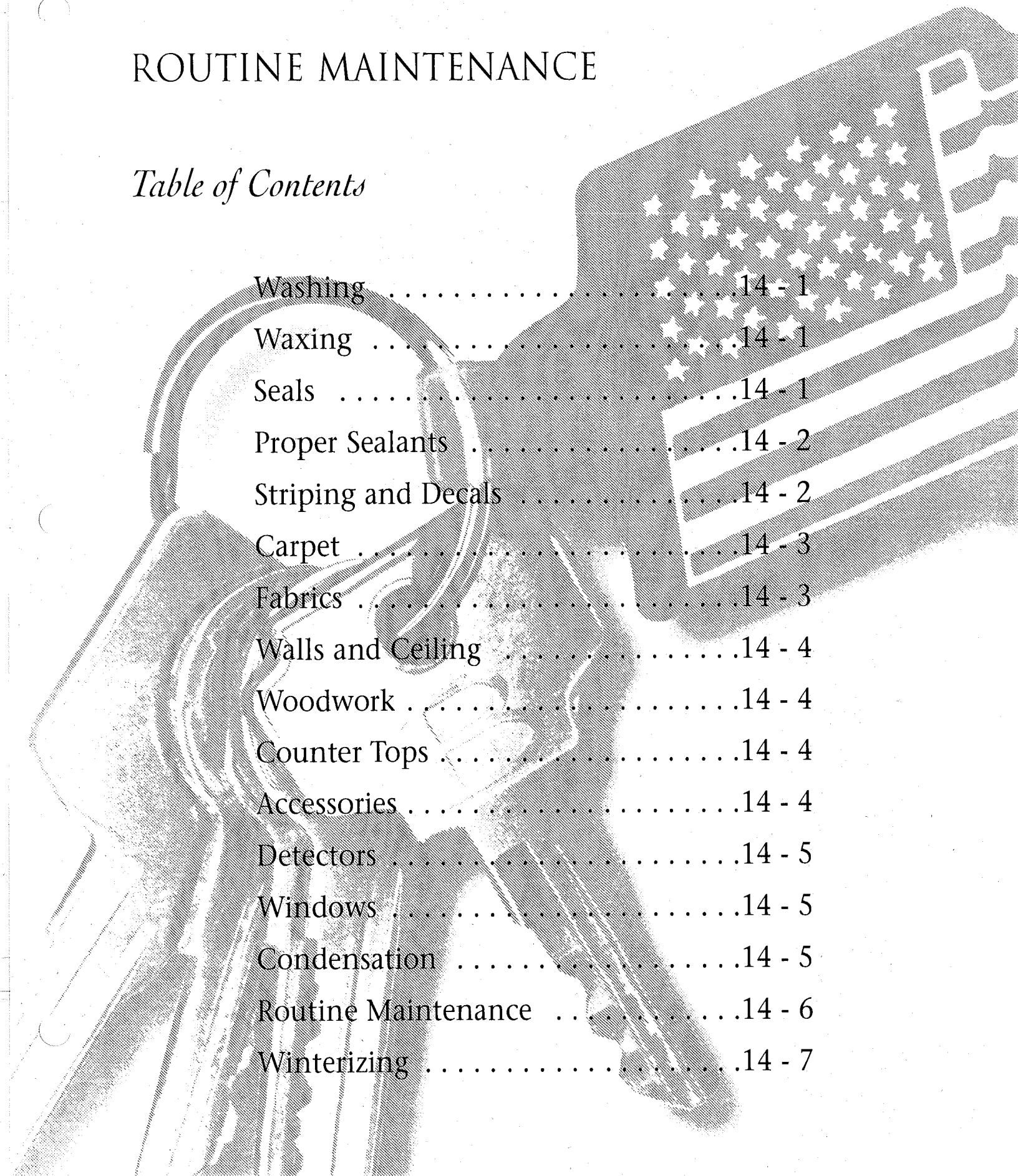

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EXTERIOR CARE

Washing

The exterior of your new camping vehicle is made of pre-finished aluminum and fiberglass. Frequent washings and thorough cleanings are recommended to prevent damage to the vehicle finish after exposure due to damaging salts, calcium chloride, road tar, tree sap, insects, and other foreign material. Never wash the vehicle in direct sunlight, while the vehicle is hot, or with hot water. Build up of mud and dirt under the body can cause damaging rust on steel parts and can add needless weight to the vehicle. Corrosive materials, such as those used for ice and snow removal and dust control, also accumulate on the underside of the vehicle. These materials should be removed by flushing the underbelly regularly with water, especially areas where mud and other foreign materials collect. The chance of corrosion can be minimized by frequent washings of the vehicle. When washing the vehicle, make certain that the undercarriage and the wheel wells are cleaned, as well as the exterior of the coach. Do not use strong soaps or detergents for washing the vehicle. Always use a mild soap in warm water, a commercially prepared product for automotive finishes, or your local car wash. Be careful when using a pressure-type washer to avoid loosening any exterior decals or sealants, etc. After washing, carefully inspect the caulking around window frames and vents and any other joints that may have separated. Recaulking, if necessary, is relativity simple.

> IMPORTANT
>
> Never use a strong solvent, such as lacquer thinner, or harsh abrasives, on any of the exterior painted surfaces.

Waxing

The exterior finish will require a routine waxing. When water will not bead and roll off a freshly washed vehicle, a new coat of wax is needed. Wax not only improves the appearance of the vehicle, but it also protects the finish against oxidation and corrosive materials. The recommended type of wax is one that is compatible with painted and gel-coated fiberglass finishes. Cleaning with a polishing compound will improve a dull or discolored finish.

> IMPORTANT
>
> When using a polishing compound that does not contain a wax preservative, reapplying a coat of hard wax after polishing is recommended.

Seals

The seals around doors, windows, vents, and external seams should also be checked at least twice a year. Check the roof seams once a year for cracking or peeling. If deterioration is noted, reseal the seams or seals with an approved sealant to prevent leaks. Your dealer can

perform the resealing inspections and work for you. Your dealer is also able to inform you of the appropriate sealants to be used, if you prefer to do the job yourself. Sealants can be purchased from your Newmar Dealer.

Proper Sealants for Application

Plas-T-Cote	Metal or fiberglass roof
Surebond #SB-140	All Skylights
Carlisle #502-LSW Self Leveling Sealant	Rubber roof
Silicone Sealant	To cover butyl and other sealants, not to be used as the main sealant
Sikaflex-221	To seal or glue side walls, frame rails, etc.
Sikaflex-255 FC	To glue windshield and windshield gasket to cap
Neoprene Black Tape #P-8125	¼" x ½" to seal windows with clamp ring, baggage doors
Butyl Tape #5000-G	To seal screws in windows from outside. Any place that screws are used
Parbond	To seal across tops of windows, etc. on exterior where silicone is not used
Dicor #710-SA Splice Cement	To splice rubber roofs

Striping and Decals

The striping and decals on your vehicle require very little maintenance. Treat these as you would any painted surface on your vehicle. Wash them with mild soap and warm water, or any retail car soap. Rinse thoroughly to prevent soap residue accumulation. Use caution with high pressure wash nozzles. Keep them at least 18 inches from the edge of the decals. High pressure water may cause the decal to loosen and peel. Test small sections of decals when using any type of cleaning solution.

IMPORTANT

Do not use solvents such as acetone, MEK, toluene, etc. on the decals. Any solvent including alcohol may soften or smear colors. Do not use lacquer thinner or paint on decals. Do not overcoat the decals with clear paint. Do not allow gasoline or other fuels to drip or stay on the decals for any length of time. If this occurs, immediately flush the area with water.

INTERIOR CARE

WARNING

Urea-formaldehyde is used in the productions of particle board, hardwood plywood, and most paneling. Urea-formaldehyde resin may release formaldehyde vapors into the air, which may cause headaches, and in some people, eye, nose, and throat irritation. Formaldehyde may intensify some allergies or upper respiratory problems like asthma. Proper ventilation should reduce the risk of such problems.

Carpet

A weekly routine of vacuuming the carpet and fabrics, throughout the vehicle is recommended. Doing this will prevent an accumulation of dirt that can detract from the materials appearance and shorten its life.

Included in the Owner's Information Package is the carpet manufacturer's Carpet Care Guide. The Carpet Care Guide lists detailed information on cleaning soiled areas and removing stains from the fine carpet installed in the unit.

Fabrics

The fabrics used in this unit for the bedspread, draperies, headboard, and valances may contain fire retardant additives that can be damaged by use of improper cleaning products. Water-based products are not recommended for cleaning the fabrics in your new unit. Most water-based household cleaning products are not formulated for use on these fabrics and may cause excessive shrinkage or fading. Always test any cleaning product on a hidden area of fabric before using on visible areas. For best results, the fabrics in this unit should be cleaned by a professional carpet and upholstery cleaner.

Spills, spots, or stains should be treated as soon as possible to avoid permanent damage. If a spill occurs, blot the fluid with a dry towel. Do not rub the spill. Rubbing may cause the liquid to 'set' in the fabric. When attempting to clean a spot or stain, always start from the outside and work inward to avoid spreading it further. Some stains or soils are extremely difficult or impossible to be removed completely. These should receive immediate professional attention.

WARNING

When cleaning the upholstery and fabric in the unit, do not use lacquer thinner, nail polish remover, laundry soaps, or bleach. Never use carbon tetrachloride or gasoline for cleaning purposes. These items may cause damage to the materials being cleaned and most are highly flammable.

The vinyl material used in creating the interior of this unit should be cleaned with a soft damp cloth and mild detergent. Do not use solvents of any kind. Solvents may damage the surface of the vinyl.

IMPORTANT

The fading of upholstery, carpet and other interior fabrics is generally caused by excessive sunlight. The drapes, blinds or shades should be kept closed when the vehicle is parked for an extended period of time to minimize the fading.

Walls and Ceiling

The wall and ceiling coverings should be cleaned periodically to maintain a new appearance. Use a non-abrasive cleaner with a soft cloth on the walls. The ceiling panels should be steam cleaned by a professional carpet cleaner.

Woodwork

The wood cabinetry should be cared for with furniture polish to sustain the natural beauty and luster of the wood. This will also keep your cabinetry looking new and prevent the wood from drying. The plank flooring should be protected from dents, scratches, and nicks by installing protective pads on the bottom of chairs and tables. Use of area rugs and floor mats by the entrance door is recommended to trap dirt. Sweep or vacuum the floor often and wipe up spills as soon as possible. Clean with a hardwood floor cleaner. Do not use wax, dish washing detergent, abrasive chemicals or oil cleaners on the wood floor. Silicone or solvent based polishes (for example, waxes, oil soap, vinegar, ammonia, Pledge, Fantastic, Formula 409, etc.) will make the floor harder to clean because of residual deposits.

Counter Tops

To care properly for the countertop in your new unit, always use a heat pad or trivet to protect the surface from hot objects that may mar or damage the surface. Wipe the counter top with a damp cloth to remove water spots. For stains, wipe with soapy water or ammonia based cleaners.

Accessories

The brass light fixtures, bath accessories, and faucets can be cleaned by wiping with a soft damp cloth. Washing with warm water will remove dry water spots. Do not use cleaners that contain harsh or abrasive chemicals. Alcohol or similar solvents should never be used.

Detectors

The CO and LP detectors are self-contained and DO NOT require any maintenance other than normal cleaning and dusting. When cleaning the exterior of the case use a damp cloth or paper towel. Do not spray cleaners or wax directly into the case as it may cause false alarms.

Windows

The glass in the windows may develop water spots, especially if water containing salts or other matter is not properly removed. The spotting effect is magnified when the glass has a reflective finish. Using a squeegee immediately after washing will help reduce water spotting.

Condensation

The following information is to make the retail owner of this unit aware of the potential problem with condensation in a recreational vehicle. Damage may occur to your unit if excessive condensation exists.

Accumulation of condensation on surfaces within your unit occurs when warm moist air contacts a cool surface. It is most evident on the inside of windows not protected by storm windows during the winter season. This problem can be controlled by the occupants of the recreational vehicle by:

1. Opening a window or roof vent slightly to allow the moisture to escape from the unit.
2. Using a small dehumidifier to remove moisture from the air.

- Condensation levels are highest during times when a person is cooking or taking a shower in the unit, but these are not the only times condensation is present.
- Condensation may cause many problems with your new unit. It can migrate through ceiling panels and saturate the fiberglass insulation in your ceiling cavity. This condition often causes the occupants to believe the recreational vehicle has a roof leak when it drips back into the interior of the coach. Walls and ceiling panels may also become wet when the moisture accumulates on these surfaces.
- Since surface condensation within the coach cannot be controlled by the manufacturer, damage caused by condensation is not covered by your warranty agreement.
- Although condensation can be a serious problem, it can be easily controlled by the occupants of a recreational vehicle. By following the above guidelines your new coach can be used in cool climates without condensation problems.
- Newmar Corporation does not recommend the use of un-vented catalytic heaters. If catalytic heaters are used the customer must use a dehumidifier in conjunction with the catalytic heater. The use of unvented catalytic heaters may cause carbon monoxide poisoning.

ROUTINE MAINTENANCE

Below is a brief list of basic routine maintenance items that should be checked as follows;

Every Trip

- Check the tire pressure of all tires.
- Tighten all lug nuts on all of the wheels.

Every 5,000 Miles

- Clean exhaust fan filter and blades.
- Check gas lines for leaks with soap solution or leak detector.
- Test smoke alarm, carbon monoxide detector, and LP gas detector.
- Check operation of windows, latches, and hinges.
- Clean the roof ducted air conditioner filter.

Every 6,000 Miles or 3 Months

- Clean all door and window seals.
- Inspect and repair broken seals around the tub and shower area.
- Lubricate the exterior door hinge and latch with a graphite (silicone) lubricant.
- Check, clean, and tighten battery cables.

Every 12,000 Miles or 6 Months

- Lubricate exterior doors and locks with silicone.
- Inspect the slide out room for alignment, adjust if necessary.
- Rotate tires.
- Check all gas appliances for proper operation.
- Clean window and door seals with a mild soap and spray with silicone lubricant.
- Lubricate the moveable parts on the entrance step.
- Check the wheels and nuts for cracks, and check the tightness of the lug nuts.
- Have the LP system checked by a qualified technician.

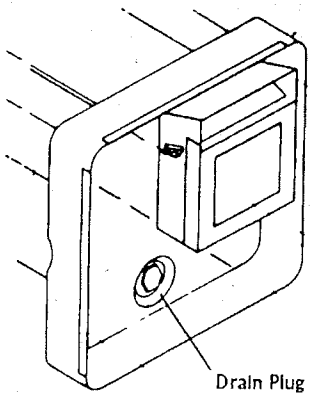
Annually

- Inspect roof seams and joints. Reseal when necessary or consult your dealer.
- Sanitize the fresh water system.
- Have the axle bearings re-packed.

Winterizing

To store your unit for the winter months, it is necessary to winterize the water system to help prevent freezing. To do this, follow these instructions:

1. The water heater must remain off during this process. Shut off the water pump and make sure the water supply valves are closed. Disconnect the city water fill.
2. To drain the fresh water tank, open the drain valves.
3. Open the low point drain valves. There is one drain valve for each water line, one cold and one hot. This is done to drain all of the water out of the system.
4. After the water heater has cooled off, remove the drain plug to drain the water from the water heater. In the exterior compartment beside the water heater there are two water heater shut off valves and a by-pass valve. The shut off valves must be closed and the by-pass valve must be open, prior to winterizing to prevent the antifreeze solution from entering the water heater.



5. Close the low point drains to prevent the antifreeze from draining through the lines onto the ground.
6. Close the water supply valve that flows from the pump to the tank. Remove the water filter, if installed. (See Chapter 11 for more information.)
7. Use only non-toxic antifreeze that has been approved for use in drinking/potable water systems. Place the in-take hose into the antifreeze supply. Open the antifreeze valve to allow the solution to flow freely. Once the water pump is turned on, proceed to the kitchen faucet, bath faucet, inside and outside shower, turning on the hot and cold, and flushing the stool until the antifreeze solution flows freely. If the unit is equipped with a washer, be certain to purge the air from it also. This forces the antifreeze through all of the water lines and faucets. It also allows the antifreeze solution to enter the drain lines and prevent the P-traps from freezing. Check the antifreeze solution from time to time to make sure there is an adequate supply.
8. Close the antifreeze valve when the winterizing process is complete. Store the in-take hose and turn the water pump off.
9. Open the water supply valve that flows from the pump to the tank to help prevent freezing on that water line.
10. To de-winterize your unit, open both of the low point drains to allow the antifreeze solution to drain from the water system. Next, close the low point drains and connect your unit to city water. Put water in the fresh water tank and pump at least one gallon through the water pump in order to remove the antifreeze from the water pump. Keep the water heater supply valve closed and the water heater bypass valves open. The supply valve for the fresh water tank from the pump must remain closed. As in winterizing, open the kitchen faucet, bath faucet, inside and outside shower, turning on

both the hot and the cold, and flushing the stool until the antifreeze solution is flushed out of the system and the water flows clear. Once the system has been flushed, open the water heater supply valve and close the water heater bypass valve. Open the fresh water tank supply valve from the pump and the ice maker valve. Reinstall the water filter. Be sure to close the fresh water tank drain valves to allow the tank to fill.

Notes

CHAPTER 15

CHARTS & DIAGRAMS

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IMPORTANT INFORMATION FOR YOUR NEWMAR TRAILER

Coach: Year _____ Model _____ Serial _____

Appliance	Brand	Model	Serial
Refrigerator			
Water Heater			
Range			
Converter			
Washer			
Dryer			
Microwave			
Icemaker			
Television, front			
Television, rear			
Radio			
CD Player			
Generator			
Air Conditioner, front			
Air Conditioner, rear			
Blender			
Video Cassette Recorder (VCR)			
Furnace, front			
Furnace, rear			
Dishwasher			

Notes

Maintenance Record

Date Mileage	Type of Service Performed	Cost	

Maintenance Record

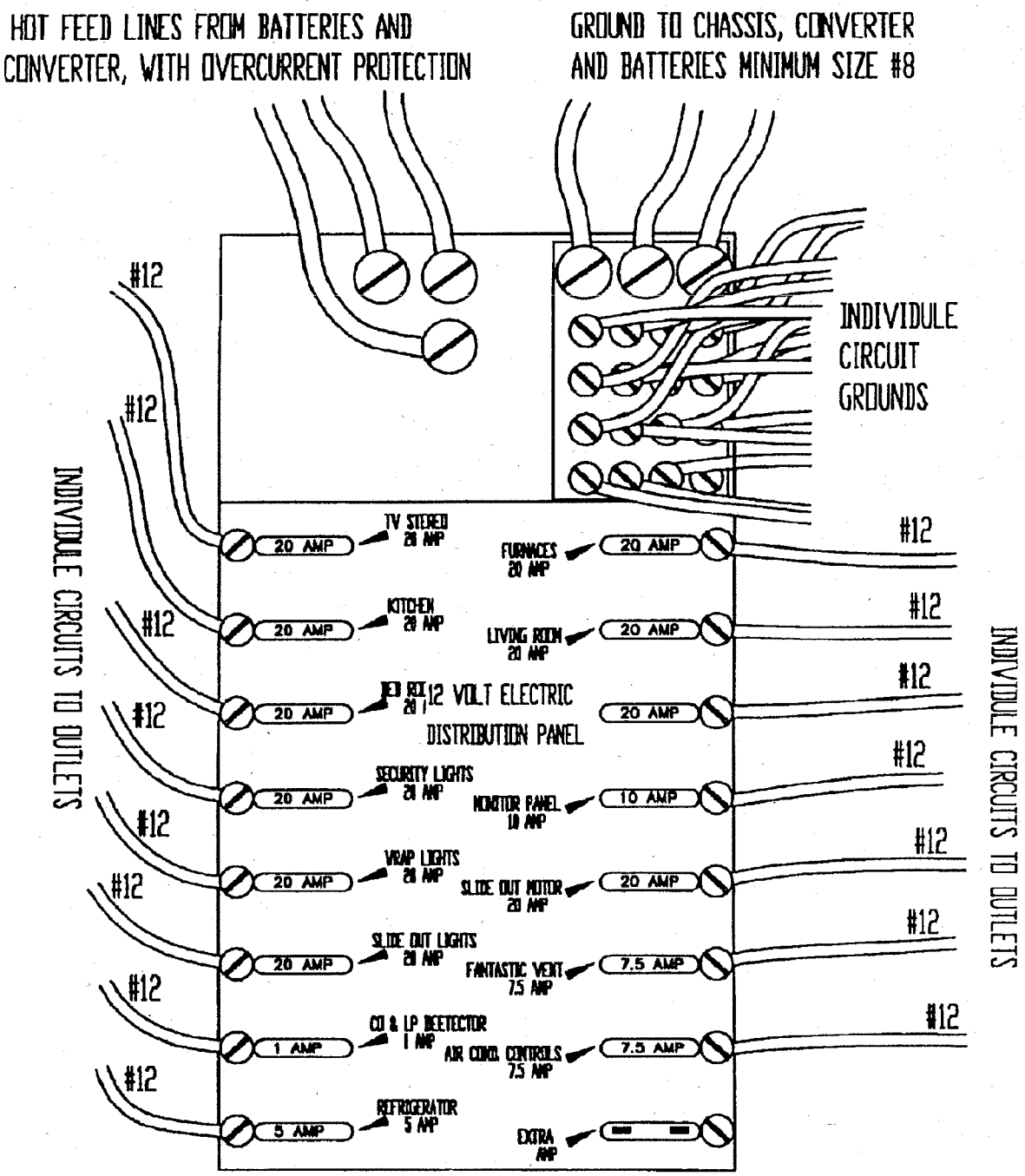
Date Mileage	Type of Service Performed	Cost	

Fuel, Oil & MPG Record

Date	Odometer Mileage	Fuel Gals.	Oil Qt..	Ave. MPG	Cost		Date	Odometer Mileage	Fuel Gals.	Oil Qt..	Ave. MPG	Cost	

Fuel, Oil & MPG Record

Date	Odometer Mileage	Fuel Gals.	Oil Qt..	Ave. MPG	Cost		Date	Odometer Mileage	Fuel Gals.	Oil Qt..	Ave. MPG	Cost	



WIRE OVER CURRENT PROTECTIONIS PER THIS CHART

WIRE SIZE	AMPACITY	WIRE SIZE	AMPACITY
# 6	55	# 8	40
#10	30	#12	20
#14	15	#16	8
#18	6		

12 VOLT ELECTRIC DISTRIBUTION PANEL

Notes

load	protection
30 AMP MAIN	
AIR CONDITIONER	# 1 20 AMP
MICROWAVE	# 2 15 AMP
CONVERTER & 8 RECEPTS	# 3 15 AMP
REFRIGERATOR & 8 RECEPTS	# 4 15 AMP
WATER HEATER	# 5 15 AMP

30 AMP 110 SERVICE

30 Amp lead in cord & wire = 10/2 w/ground
20 Amp circuit wire = 12/2 w/ground
15 Amp circuit wire = 14/2 w/gruond

Maximum of 10 outlets (lights and recepts) on any 15 amp circuit with no other appliance on that line. Circuits 3 and 4may have recepts as noted at left. NOTE: A duplex recept is counted as 1 recept.

Not all units will get all of these items

Notes

load	protection		
1st AIR COND.	# 1 20 AMP	50 AMP MAIN	
MICROWAVE	# 2 15 AMP		
CONVERTER & 5 RECEPTS	# 3 15 AMP		
REFRIGERATOR FOOD CENTER & 5 RECEPTS	# 4 15 AMP		
		protection	load
WATER HEATER	# 5 15 AMP	# 13 15 AMP	MAY HAVE 10 RECEPTS
DRYER	# 6 15 AMP	# 14 15 AMP	MAY HAVE 10 RECEPTS
WASHER	# 8 15 AMP	# 15 15 AMP	MAY HAVE 10 RECEPTS
2nd AIR COND.	# 8 20 AMP	# 16 15 AMP	DISHWASHER & 2 RECEPTS

This is a 50 Amp 220 service

50 Amp lead in cord to box = 6/3 w/ground
20 Amp circuit wire = 12/2 w/ground
15 Amp circuit wire = 14/2 w/gruond

Maximum of 10 outlets (lights and recepts) on any 15 amp circuit with no other appliance on that line. Circuits 3, 4, and 16 may have recepts as noted at left. NOTE: A duplex recept is counted as 1 recept.

This is a fully loaded system for which there has been a calculation done. Not all units will get all of these items.

Notes

Wiring Color Scheme

8 gauge

Grounds	White
Battery	Red
Converter	Black
Solar Prep	Green

10 gauge

Grounds	White
Living Room Entry Lights (hot feed)	Red
Bedroom Lights (hot feed)	Orange
Kitchen Lights (hot feed)	Green
Bathroom Lights (hot feed)	Brown
Power Rear Awning & Freezer	Purple w/Yellow
Power Step (hot feed)	Green w/Black
Power Jacks	Yellow
Electric Brakes (tri-axle)	Blue
100 Watt Inverter	Red w/White

16 gauge

Larson Monitor Panel Tank Harness

Fresh Water Tank	White*
	Gray w/Black (replaces Red tank lead) *
	Black w/Yellow (replaces Blue tank lead) *
Gray Water Tank	White*
	Green w/White (replaces Red tank lead) *
	Blue w/Black (replaces Blue tank lead) *
Black Water Tank	White*
	Red w/White (replaces Red tank lead) *
	Blue w/White (replaces Blue tank lead) *

* - multiple applications for this color

12 gauge

Grounds	White
Living Room & Entryway Lights (hot to switch)	Red
Living Room & Entryway Lights (switched)	Red w/White
Bedroom Lights (hot to switch)	Orange
Bedroom Lights (switched)	Orange w/White
Bathroom Lights (hot to switch)	Brown
Bathroom Lights (switched)	Brown w/White
Kitchen Lights (hot to switch)	Green
Kitchen Lights (switched)	Green w/White
Wrap & Storage Compartment Lights	Black
TV and Stereo	Pink
Furnaces	Green w/Black
3 Way Switches (commons)	Red w/Black
Fantastic Vent and Water Heater	Brown w/Black
Monitor Panel	Yellow
Security Lights (hot to switch)	Purple
Security Lights (switched)	Purple w/White
Slide Out Module (hot feed)	Green/Yellow
Slide Out Motor & Voice Module	Black w/Yellow & Red w/Yellow
Slide out Lights	Grey
Water Pump	Yellow w/Black
Power Step Switch	Black w/White
Electric Brakes (tandem axle)	Blue

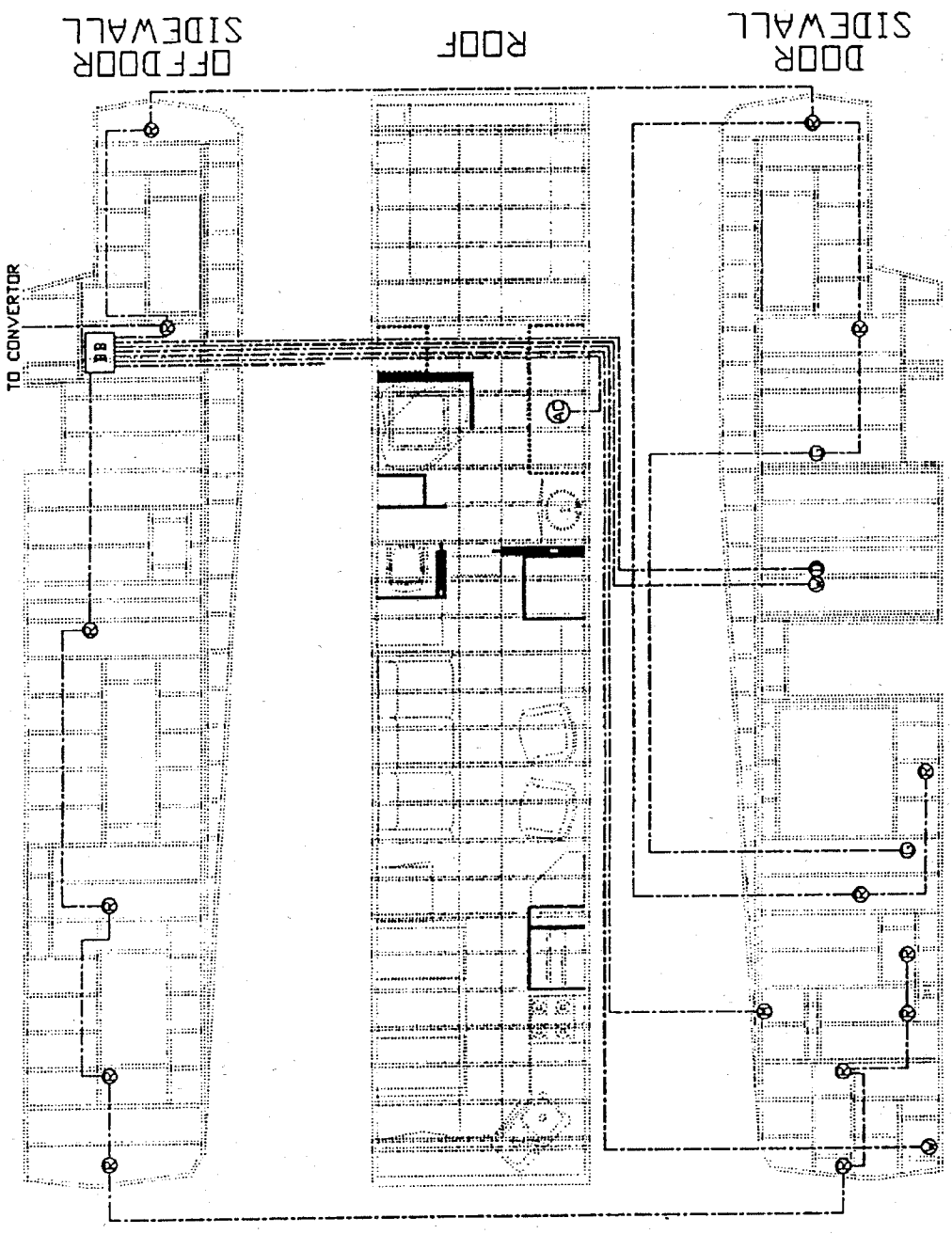
16 gauge

Grounds	White
Back-up Lights	Yellow
Ignition to Power Step	Pink
Clearance & Running Lights	Green
Right Turn Lights	Brown
Left Turn Lights	Red
Ignition to Slide Out Motor	Pink w/Green
Class A Blower Fan (in holding tank area)	Orange
Slide Out Switch	Purple
Courtesy Lights (hot to switch)	Grey
Courtesy Lights (switched)	Grey w/White
Detectors, CO & LP	Red w/Black
Rear Center Brake Light	Blue
LP Fuel Gauge	Red w/Yellow
Air Conditioner Controls	Pink w/Black
Monoplex Water Pump Switch	Yellow w/Black
Refrigerator Controls	Purple w/White
Vent Thermostats	Black
	Red w/White*
Water Heater DSI Switch Harness	Green w/White*
	Blue w/White*
	Red w/White*
Gas Generator	Green w/White*
Diesel Generator Start/Stop Switch Harness	Blue w/White*
	Grey w/Black*
	Black w/Yellow*
	White*

* - multiple applications for this color

Notes

TYPICAL 110 VOLT WIRING DIAGRAM – FIFTH WHEEL

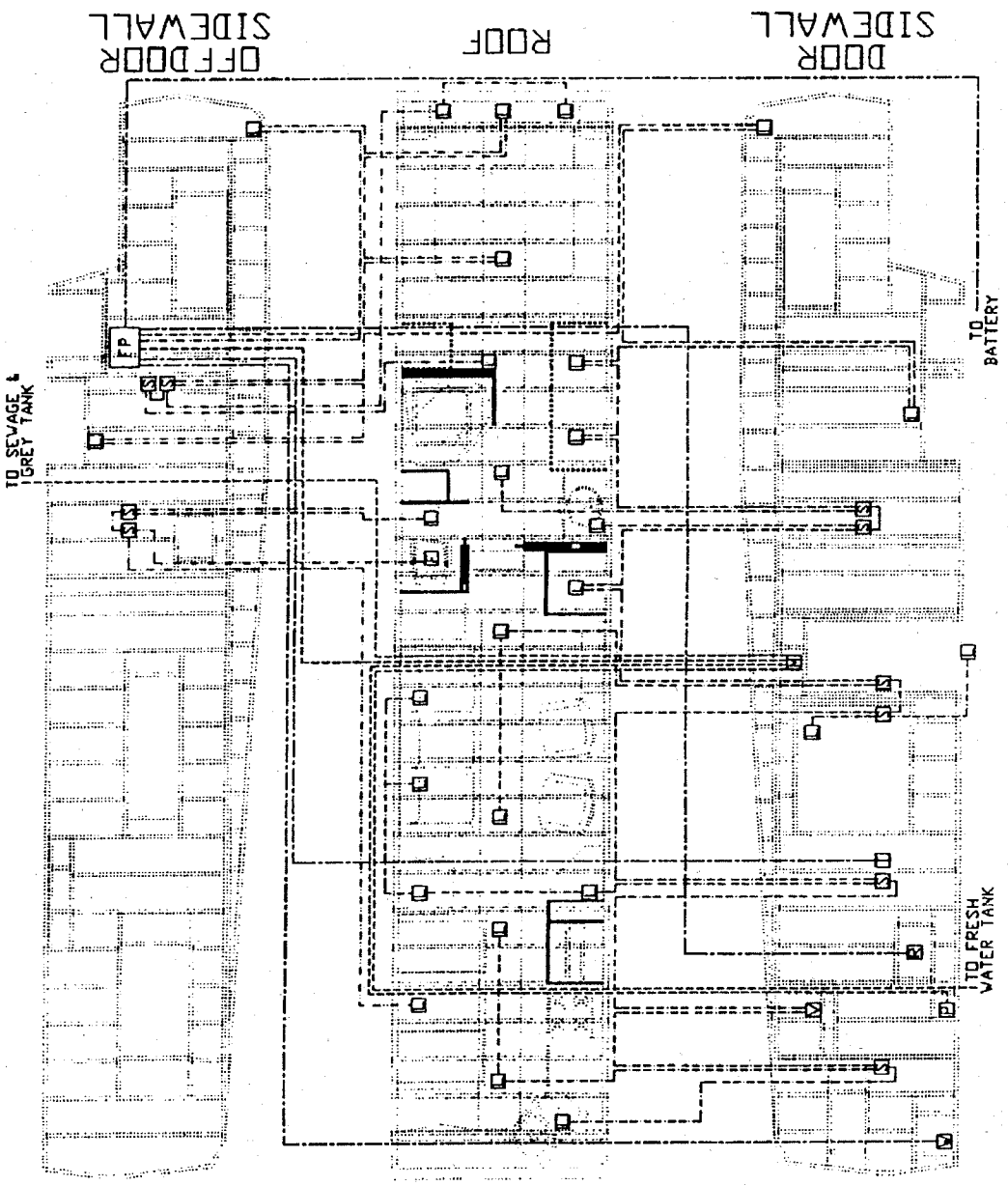


——————— 110 VOLT LINE
R - RECEPT
G - GFI BREAKER & RECEPT
W - WATER HEATER
M - MICROWAVE
BB - BREAKER BOX
WD - WASHER & DRYER
AC - AIR COND CONTROL BOX

NOTE:
ALL WIRES SHOWN DO NOT NECESSARILY RUN THROUGH A SPECIFIC STUD. THIS PRINT SHOWS GENERAL LOCATIONS OF WIRES ONLY.

Notes

TYPICAL 12 VOLT WIRING DIAGRAM – FIFTH WHEEL



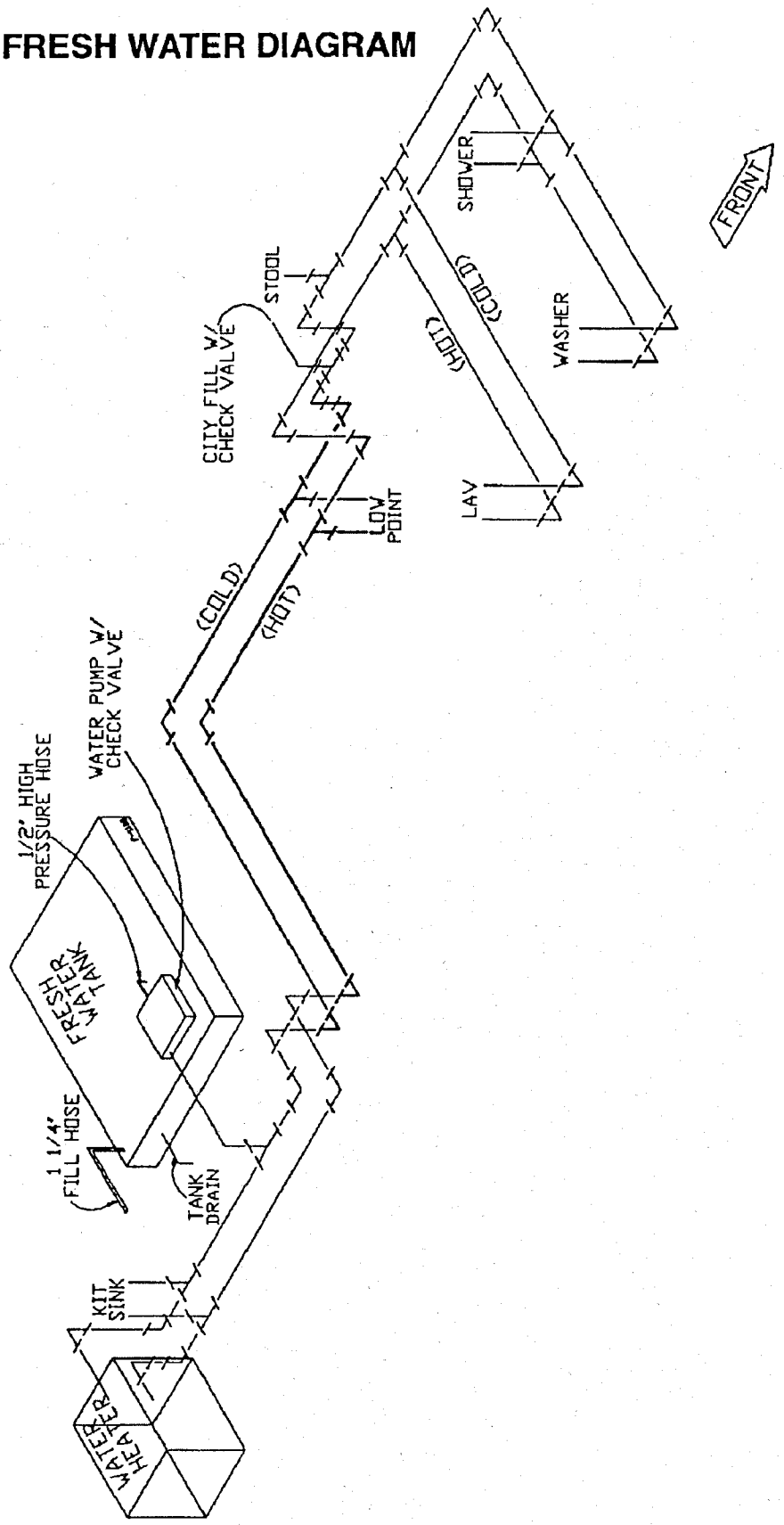
L - LIGHT
S - SWITCH
T - TV JACK
V - RANGE VENT FAN
R - REFRIGERATOR
W - W.HEATER (REIGNITOR OPT.)
M - MONITOR PANEL
F - BATH VENT FAN
FP - FUSE PANEL
P - WATER PUMP

---------- MONITOR LINE
---------- DOOR SIDE
---------- OFFDOOR SIDE
---------- INDIVIDUAL LINE

NOTE:
ALL WIRES SHOWN DO NOT NECESSARILY RUN THROUGH A SPECIFIC STUD. THIS PRINT SHOWS GENERAL LOCATIONS OF WIRES ONLY.

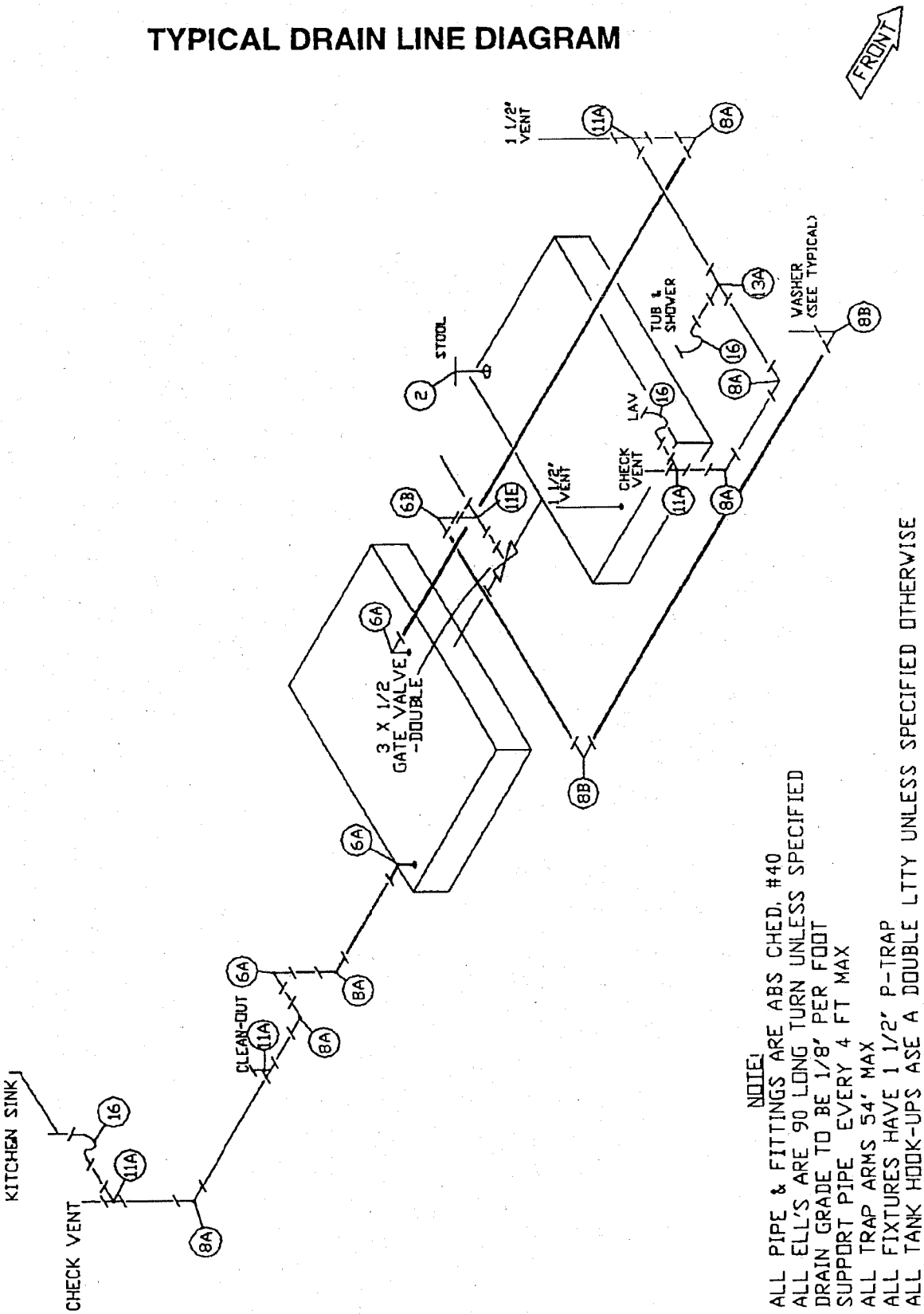
Notes

TYPICAL FRESH WATER DIAGRAM



Notes

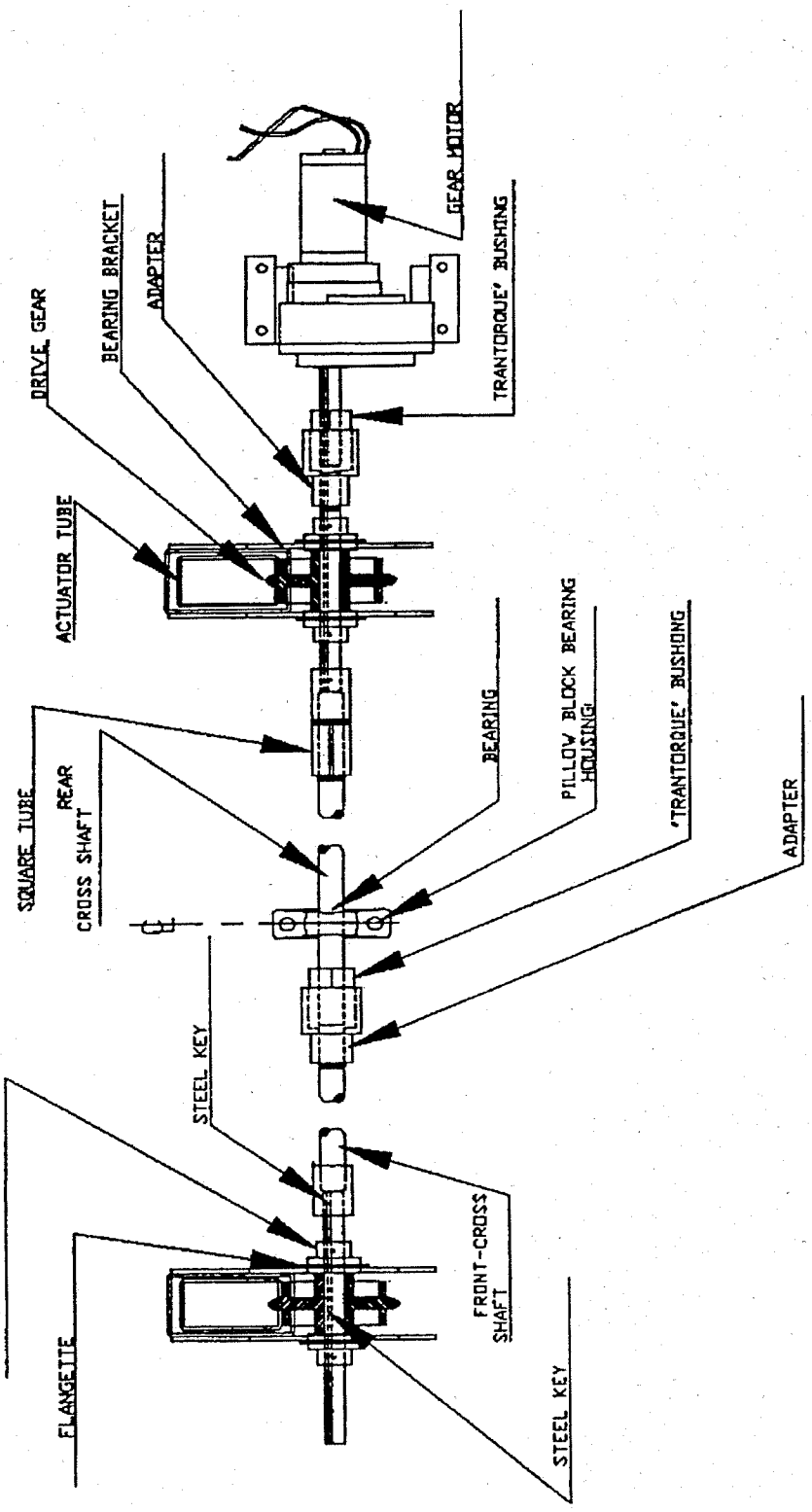
TYPICAL DRAIN LINE DIAGRAM



NOTE:
ALL PIPE & FITTINGS ARE ABS CHED. #40
ALL ELL'S ARE 90 LONG TURN UNLESS SPECIFIED
DRAIN GRADE TO BE 1/8" PER FOOT
SUPPORT PIPE EVERY 4 FT MAX
ALL TRAP ARMS 54" MAX
ALL FIXTURES HAVE 1 1/2" P-TRAP
ALL TANK HOOK-UPS ASE A DOUBLE LTTY UNLESS SPECIFIED OTHERWISE BELOW FLOOR PLUMBING

Notes

SLIDE-OUT MECHANISM



Notes

Mountain Aire Towable	
Description	Item #
Antenna, TV	QD 18380
Door, Main Entrance	ID 10984
Door, Furnace	QC 21868
Door, Refer Vent	QF 11526
Door, Water Heater	QG 24915
Faucet, Lav	CM 22540
Faucet, Kitchen, Sgl Hdl	CM 29207
Faucet, Shower	CM 22541
Grab Handle, Door	NA 19447
Ladder	EH 29633
Light, Brake	EH 10678
Light, Scare	EH 10674
Recept, 12 Volt, White	EB 10641
Recept, 120 Volt, White	EB 10551

Mountain Aire Towable	
Description	Item #
Recept, GFCI	EB 10553
Register, Floor	QC 12292
Register, Ceiling	QC 22580
Roof Rack	NA 11820
Sink Cover	IS 26471
Skylight	ID 14607
Step, Kwikee	EB 26468
Switch, 12 Volt, Double, White	EB 24810
Switch, 12 Volt, Single, White	EB 24809
Switch, 12 Volt, Triple, White	EB 24811
Switch, 120 Volt, White	EB 10543
Switch, 120 Volt, Brown	NA 10542
T-Stat, Dometic	QA 27782
T-Stat, FanTastic Vent	IS 1513

Notes