



*Coach House*

**PLATINUM**®

## Section 7

### Miscellaneous

*Ford Motor Company*



**E-450  
SUPER DUTY CHASSIS**

Rev: 082015



# Miscellaneous

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# Fire Extinguisher

A fire extinguisher is mounted in the Coach House behind the passenger seat on the right side of the motor home. The gauge on the unit should be checked periodically for pressure level. If the indicator is in the red, the unit should either be re-charged or replaced.







## Kitchen / Garage Fire Extinguisher

An extinguisher's rating is not based on its size. It's the measure of its firefighting capability. For example a 10-B:C extinguisher puts out twice as much "Class B" fires as one rated 5-B:C.

### Features:

- Suitable for use on fires common to the kitchen and garage.
- ULC Rated 10-B:C, Marine approved.
- High quality gauge for easy pressure check.
- Disposable.
- Strap bracket included.

### Specifications:

Product dimensions:	4.5" x 14.2" x 3.6" deep
Colour / Case Pack:	Red / 6 units
Fire Rating:	10-B:C
Charge Pressure:	100psi
Range of throw:	1.8 - 2.4 metres
Duration of discharge:	8-12 seconds
Agent base:	Dry Powder (Sodium Bicarbonate)
Limited Warranty:	6 Year
Weight:	2lb
UPC:	0-47871-66295-1



466295



R3020A





# Smoke Detector

A smoke detector is mounted near the ceiling, behind the passenger front seat (rear side of side entrance door). The detector is battery (9 volt) operated and should be tested on a regular basis. Refer to the manufacturers instruction sheet, enclosed in this section, for the proper testing procedure and battery replacement. The smoke detector should be tested after each time the motor home has been in storage, before each use and at least once each week during use of the motor home. Smoke detectors should be replaced periodically as per the manufacturer's instructions.





# Carbon Monoxide Detector

A carbon monoxide detector is mounted in the following locations for your model.

220	Driver's Side in Rear Overhead Cabinet
221 XL	Above Closet in Bathroom
232 XL	Above Refrigerator
261 XL	Above cabinets - front end of lavatory shower
261 XL (Twin Bed)	Above Refrigerator
261 XL (Sleeper Sofa)	Above cabinets - front end of lavatory shower
271 XL	Passenger Side Above Bed in Cabinet
272 XL	Above closet in Bedroom - Driver's side

The auxiliary battery and the chassis battery, which ever is stronger, power the detector and 3 amp fuses located behind the panel on which the detector is mounted, protect the unit. A green light on the detector front indicates that it is operating and any failure in the light should be investigated and remedied immediately. The detector should be tested on a regular basis as per the manufacturers instructions.







## RECREATIONAL VEHICLE (RV)

### Carbon Monoxide Alarm

#### USER'S MANUAL

#### 65 Series Surface Mount Models:

65-541, 65-541-R, 65-541-MS, 65-541-R-MS

#### 65 Series Flush / Recess Mount Models:

65-542, 65-542-R, 65-542-MS, 65-542-R-MS

ALL RIGHTS RESERVED 65RV120810-1

**ATTENTION:** This user's manual contains important Carbon Monoxide (CO) alarm installation, operation, troubleshooting and warranty information. Read, follow, and keep this manual for future reference.

**NOTE:** If you install or purchase this alarm for another person, give this manual to that person.

**IMPORTANT:** This unit must be replaced within five years of its production date. This unit has an End of Life (EOL) signal that will sound after 5 years of use. Record the installation date in the section, Owner's Replacement Record, in this manual for future use. The replacement date indicates the date beyond which the device may no longer detect carbon monoxide. The device should be replaced.

The electronic CO sensor in your SAFE-T-ALERT™ CO alarm is very sensitive to CO gas. It will not react to most other gases.

#### WHY EVERY RV NEEDS A 65 SERIES CO ALARM

Everyone is at risk for carbon monoxide poisoning! Particularly sensitive are children, pregnant women, the elderly and people with lung or heart disease or anemia! Carbon monoxide (CO) is an odorless, colorless gas that prevents the blood from carrying oxygen to vital organs. CO is 200 times more likely to replace oxygen in the blood. The Consumer Product Safety Commission (CPSC) recommends using at least one CO alarm located outside of sleeping areas. For the extra security, locate additional CO alarms in each sleeping area.

#### ABOUT THIS ALARM

Because CO is a colorless, odorless, tasteless and highly poisonous gas; it can endanger lives even at low levels of concentration. The CO Alarm will alert you to potentially dangerous situations. **The following symptoms may be related to CO POISONING. Discuss these symptoms with ALL household members and RV guests:**

- **Mild Exposure:** Headaches, running nose, sore or watery eyes, often described as "flu-like" symptoms.
- **Medium Exposure:** Dizziness, drowsiness, vomiting.
- **Extreme Exposure:** Unconsciousness, brain damage and death.

**NOTE:** Reported cases of CO gas poisoning indicate that while victims are aware they are not well, they are disoriented. They are unable to save themselves by exiting the RV or calling for assistance. **Small children and pets may be affected first.**

Your SAFE-T-ALERT™ Series alarm helps protect your family members and guests from CO produced while using your RV. CO gas is produced when any type of fuel is incompletely burned. Potential sources of CO in and around your RV can include gas or diesel engine exhaust, portable space heaters, gas stoves and ovens, furnaces, defective engine exhaust systems, charcoal, portable grills, other nearby RVs, portable generators, generator exhaust, and other propane-powered appliances. All are sources of CO.

**The following are also sources of CO that may affect your RV:**

- Extended operation of unvented fuel burning appliances can build up high CO levels.
- An idling vehicle in an open or closed garage.
- Temperature inversions can trap exhaust near the ground.
- CO build up can be caused by reverse/negative venting of fuel burning appliances including; 1) Clogged, loose or faulty stacks or chimneys of (clothes dryers, furnaces and water heaters, etc.), 2) wind direction and/or velocity, 3) simultaneous operation of multiple fuel burning appliances, and/or exhaust fans.

#### WARNING:

##### LIMITATIONS OF CO ALARMS

**THIS ALARM WILL NOT WORK WITHOUT POWER.** Some reasons for no alarm power; are a blown or missing fuse, broken wire, a faulty wire connection or circuit breaker, a discharged battery, cut lead wires, or improper supply (+) or ground (-) connections.

**THIS ALARM WILL ONLY INDICATE THE PRESENCE OF GAS AT THE SENSOR.** CO may be present in other areas. MTI recommends installing CO alarms in all sleeping areas. **Do not block or cover** the alarm with any object that can prevent carbon monoxide from reaching the sensor.

**THIS ALARM IS INTENDED FOR USE IN RV's.** It is intended for use inside the RV. It is not designed to measure compliance with commercial and industrial standards.

**THIS ALARM MAY NOT BE HEARD.** The alarm's loudness is designed to meet or exceed regulatory standards; however, the alarm may not be heard if alarms are located in remote locations or behind closed doors. Persons who are hard-of-hearing, have consumed alcoholic beverages, taken prescription, non-prescription or illegal drugs, may not hear the alarm.

**THIS ALARM IS DESIGNED TO DETECT CARBON MONOXIDE. THE ALARM IS NOT DESIGNED TO DETECT SMOKE, OR FIRE.**

**THIS ALARM MAY NOT ALARM AT LOW CO LEVELS** It is not designed to measure compliance with the Occupational Safety Health Administration (OSHA) commercial or industrial standards. Individuals with medical problems may consider using warning devices, which provide audible and visual signals for CO concentrations under 30 ppm.

#### HOW TO PROTECT YOUR FAMILY

**CAUTION-** The SAFE-T-ALERT™ 65 Series combination CO Alarm is designed to protect individuals from the acute effects of carbon monoxide exposure. It will not fully safeguard individuals with specific medical conditions. If in doubt, consult a medical practitioner.



To protect yourself, family and guests, you should:

- **INSTALL THE ALARM PROPERLY.** Carefully read and follow ALL the instructions in this manual. Test your unit every week. Alarms that do not work will not alert you to hazardous levels of CO and need to be replaced.. See the section, **Test Procedure**, in this manual for further information.
- **MAKE REGULAR VISUAL INSPECTIONS.** Check all fuel burning equipment including gas water-heaters, kitchen gas stoves, space heaters, gas dryers and all pilot lights. Check the color of the pilot flame. The color should be blue.
- **MAKE REGULAR VISUAL INSPECTIONS OF THE ENGINE AND GENERATOR EXHAUST SYSTEMS.** Cracked exhaust systems can allow CO to enter the living area.
- **PROFESSIONALLY MAINTAIN YOUR ENGINE AND GENERATOR.** Although gas engines and generators produce CO, a poorly tuned engine and generator will produce greater amounts CO.

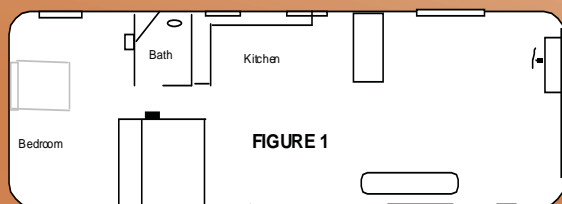
#### WHERE TO INSTALL

- MTI recommends installing a gas alarm in each sleeping area.
- The NFPA and Consumer Product Safety Commission recommends installing a CO alarm outside the sleeping area. The 65 Series CO alarm complies with that recommendation.
- **INSTALL ALARM** at least 4 inches off the floor.

#### WHERE NOT TO INSTALL 65 SERIES ALARMS

- **DO NOT INSTALL** behind furniture, drapes, in closets or areas that will block air flow to the alarm.
- **DO NOT INSTALL** within 12 inches (30cm) of opening windows, exterior doors, heating or return vents, or other drafty areas..
- **DO NOT INSTALL** on an outside wall.
- **DO NOT INSTALL** on a wall switch controlled by a power line, ground fault circuit or to a circuit breaker.

**NOTE:** Older RVs may have little or no insulation and therefore are draftier. Carefully consider mounting locations. The following diagrams provide additional alarm installation information:



■ CO DETECTOR LOCATION FOR MINIMUM SECURITY

□ CO DETECTOR LOCATION FOR ADDITIONAL SECURITY

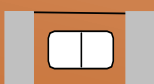
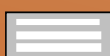
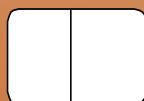


FIGURE 2

## INSTALLATION INSTRUCTIONS

### Models



### WARNING

**FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN A MALFUNCTION OR FAILURE OF THE ALARM AND MAY VOID THE WARRANTY.**

**SHOCK HAZARD: Turn off power before installing.**

#### Power Supply 12 VDC.

Recommended Wire Size 14 GA. TO 18 GA.

Connect the alarm to a properly fused circuit, maximum over protection device rating 6 amps.

**All connections must be in accordance with the National Electrical Code in the Unites Stated and the Canadian Electric Code in Canada .**

Connect to wiring or circuit that **CANNOT** be turned off by a switch or ground fault protector. Only use UL or recognized permanent wire connectors. It is acceptable to connect the 65 Series CO alarm to the main disconnect. The alarm will be off along with all other 12 volt equipment when the main disconnect is turned to the off position. The RV must not be occupied when the main disconnect is in the off position.

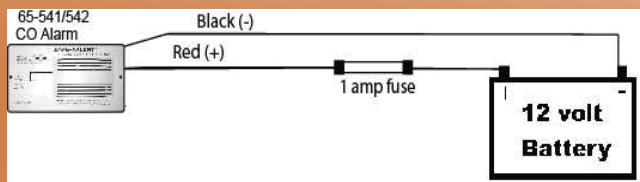
## INSTALLATION INSTRUCTIONS

Follow these instructions carefully. Failure to follow these instructions can damage the unit and void the warranty.

**Important: The 65 Series Flush / Recess mount case requires 1 1/2" (38mm) clearance behind the wall.**

#### MODEL 65-541 / 65-542

1. **Basic Model 65-541/65-542** - Select a wall location at least 4" off the floor. Cut a 5 5/8" (143mm) W x 3 1/8" (79mm) H hole. For the 60-541 Drill a 1/4" (6mm) hole for the wires.
2. Connect Supply (+) to the Red wire lead. Install a 1 amp fuse in the positive (+) circuit. Connect the Black wire to the 12 volt Ground (-).
3. Reconnect the power supply. Warm up 10 minutes then test the alarm.

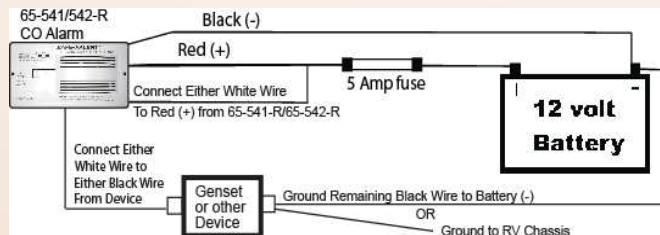


#### MODEL 65-541-R / 65-542-R (Relay Control)

1. **Model 65-541-R/65-542-R - With Normally Closed relay.** This unit supplies a relay with contacts rated 12 VDC, 3 amp (max). The relay is energized whenever the alarm is operational. It may be used to shut down a generator or to open an (optional) gas solenoid valve. The relay may also be used to interface to alarm systems, using either the normally closed or normally open contact, depending on the requirements of the alarm system. In the event of an alarm the relay will shut off. It will

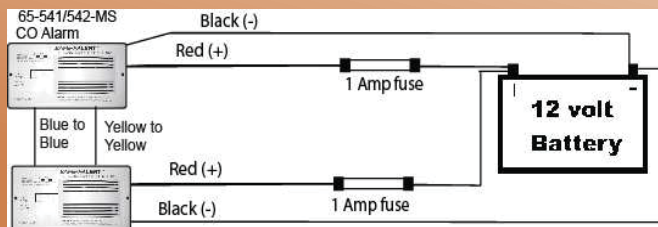
automatically re-energize after the unsafe levels of CO clears. Select a wall location at least 4" off the floor. 60-542-R Cut a 5 5/8" (143mm) W x 3 1/8" (79mm) H hole. 60-541-R drill 1/4" (6mm) hole for the wires.

2. **Do not connect to a previously installed solenoid. SEE: SPECIAL WIRING NOTICE.**
3. Connect Supply (+) to the Red wire lead. Install a 5 amp fuse in the positive (+) circuit. Connect the Black wire to the 12 volt Ground (-).
4. Reconnect the power supply. Warm up 10 minutes then test the alarm.



#### MODEL 65-541-MS / 65-542-MS

1. **Model 65-541/65-542-MS Multi-station interconnect, (Maximum 10 units and 2000 feet of wire).** Allows multiple 65-541/542MS alarms to be connected together. When one of the alarms detects unsafe levels of CO or gas it will activate. It will also activate the audible alarm of all the interconnected units. Only the alarm that detected CO or gas will have its Red LED light lit up so that you can determine the cause of the alarm. Select a wall location no between 4" and 20" off the floor. 60-542-MS Cut a 5 5/8" (143mm) W x 3 1/8" (79mm) H hole. 60-541-MS drill 1/4" (6mm) hole for the wires.
2. Connect the Red wire to the 12 volt supply (+). Install a 1 amp fuse in the positive circuit (+). **Note you must use a separate 1 amp fuse for each alarm.** Connect the Black wire to the 12 volt Ground (-).
3. Interconnect Wiring – Connect Blue wires from each alarm and Yellow wires for each alarm. Continue connecting in series (Daisy Chain).
4. Reconnect the power supply. Warm up 10 minutes then test the alarm.

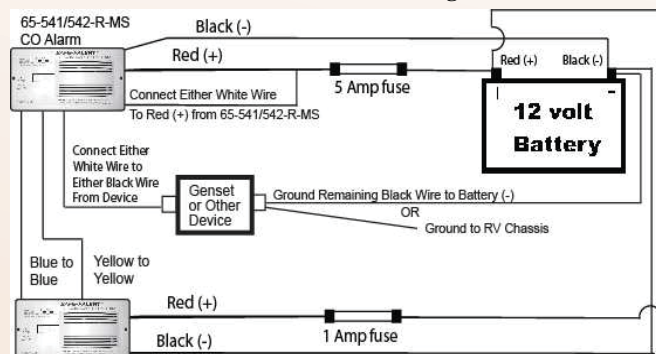


#### MODEL 65-541-R-MS / 65-542-R-MS

1. **Model 65-541-R/65-542-R-MS - With Normally Closed relay.** This unit supplies a relay with contacts rated 12 VDC, 3 amp (max). The relay is energized whenever the alarm is operational. It may be used to shut down a generator or to open an (optional) gas solenoid valve. The relay may also be used to interface to alarm systems, using either the normally closed or normally open contact, depending on the requirements of the alarm system. In the event of an alarm the relay will shut off. It will automatically re-energize after the unsafe levels of CO clears. Select a wall location at least 4" off the floor. 65-541-R-MS Cut a 5 5/8" (143mm) W x 3 1/8" (79mm) H hole. 65-542-R-MS drill 1/4" (6mm) hole for the wires.
2. **Do not connect to an existing installed solenoid. SEE: SPECIAL WIRING NOTICE.**

3. Connect Supply (+) to the Red wire lead. Install a 5 amp fuse in the positive (+) circuit. Connect the Black wire to the 12 volt Ground (-).
4. Interconnect Wiring - Connect Blue wires from each alarm and Yellow wires from each alarm. Continue connecting in series (Daisy Chain).
5. Reconnect the power supply. Warm up 10 minutes then test the alarm.

#### Model 65-541-R-MS / 65-542-R-MS Wiring -



Only use UL or recognized permanent wire connectors to replace any unit installed with spade connectors or wire nuts.

#### TEST PROCEDURE

##### ⚠ WARNING

TO REDUCE THE RISK OF CARBON MONOXIDE POISONING, TEST THIS ALARM'S OPERATION AFTER THE RV HAS BEEN IN STORAGE, BEFORE EACH TRIP AND AT LEAST ONCE PER WEEK DURING USE BY PRESSING THE TEST/RESET BUTTON.

##### ⚠ WARNING

**WARNING: THE TEST BUTTON ONLY TESTS THE ALARM CIRCUIT NOT THE SENSORS. TO TEST THE CO SENSOR USE A CAN OF SAFE-T-ALERT CO TEST GAS TO TEST THE 400 PPM CALABRATION POINT. DO NOT TRY TO GENERATE CO TO TEST THE ALARM.** The TEST/RESET button tests all ELECTRICAL functions of the alarm. It does not check the sensor operation.

The alarm may be tested at any time. The TEST/Mute switch is located on the front of the alarm. Press and hold the test button for 1 second **IMPORTANT - If this alarm does not test properly return it immediately for repair or replacement. If the alarm is over five years old replace it.**

#### SPECIAL WIRING NOTICE.

**⚠ DANGER - FIRE RISK - DO NOT CONNECT A SAFE-T-ALERT alarm to non Safe-T-Alert supplied solenoid. You must use a new solenoid with the correct electrical rating.**

#### OPERATION

When the unit is first powered up, the CO sensor requires a ten (10) minute initial warm-up period to clean the sensor element and achieve stabilization. The GREEN LED indicator will flash on and off during the 10 minute warm-up period. This unit cannot go into an alarm during the warm-up period. See Test Procedure in this manual. After the warm-up period, the GREEN power ON indicator should glow continuously. If the ON indicator light does not light, see the section, **Trouble-Shooting Guide**, in this manual for further information. **Do not attempt to fix it yourself.**

**Brownout Protection** - The unit can tolerate short power interruptions and brownouts where the circuit voltage drops as low as 1 VDC. If the brownout lasts too long, the unit will reset and operate as described above.

#### LOW POWER OPERATION

This alarm will operate normally down to 7 VDC. Do not operate this alarm below 7 VDC.

#### VISUAL AND AUDIBLE ALARM SIGNALS

This SAFE-T-ALERT™ CO Alarm is designed to be easy-to-operate. The alarm has two indicator lights that display a specific color for each monitored condition. There also is a matching sound pattern for alarm conditions.

#### CO ALARM

The Red CO LED will flash and the alarm will sound 4 “BEEPS” then silent for 5 Seconds. **IMMEDIATE ACTION IS REQUIRED.** See **Procedures To Take During An Alarm.** This cycle will continue until the TEST/Mute button on the front of alarm is pressed. Ventilate the RV. The RED light will stay ON until the CO has cleared, or the alarm will reactivate in approximately 6 minutes if the CO is still present. DO NOT RE-ENTER THE RV. This alarm will return to normal operation after the RV is properly ventilated.

**MALFUNCTION/SERVICE SIGNAL** If any malfunction is detected, the Gas LED will remain off and the Operational/CO LED will alternate Red/Green and the alarm will sound once every 15 seconds. Press the Test/Mute button. If the Test/Mute button does not clear the signals, check the battery voltage. **If the battery voltage is not low and the unit will not return to normal operation, immediately remove the alarm and return for service or warranty replacement.** See the warranty section in this manual.

OPERATION	AUDIBLE SIGNAL	VISUAL SIGNAL
NORMAL	NONE	STEADY GREEN
CO ALARM	4 “BEEPS” 5 SECONDS OFF	STEADY RED
ALARM MALFUNCTION	BEEP” EVERY 25 SECONDS	ALTERNATING RED/GREEN
END OF LIFE SIGNAL	BEEPS EVERY 25-30 SECONDS	RED RED GREEN GREEN FLASHING

**MEMORY FEATURE** – This alarm has a Peak Level Memory feature that remembers the approximate amount of CO that activated it. The memory feature does not record brief exposure to CO that would not activate the alarm. This alarm will indicate one of four levels with chirps and blinks with the CO LED:

**To activate alarm level memory, press the TEST/RESET button for less than 1 second.**

- 1 Chirp and 1 Green Blink = CO memory is clear
- 2 Chirps and 2 Red = below 100 ppm
- 3 Chirps and 3 Red Blinks = below 200 ppm
- 4 Chirps and 4 Red Blinks = above 200 ppm

#### End of Life Signal – The Sensor has a 5 Year Service Life

All 65 Series models include an End of Life (EOL) Signal indicating the sensor has reached the end of its service life and you must replace the alarm. The signal is the LED flashing RED RED GREEN GREEN with a beep every 25-30 seconds. The EOL Signal may be

reset by pushing TEST / RESET button on the alarm. This will reset the EOL Signal for a period of 72 hours (3 days) for a total of up to 30 days. After 30 days the signal cannot be reset and the alarm must be replaced. DO NOT DISCONNECT THE ALARM UNTIL YOU HAVE A REPLACEMENT ALARM AVAILABLE TO INSTALL.

#### TROUBLE-SHOOTING GUIDE

Use this chart to trouble-shoot problems with this 65 Series Alarm.

PROBLEM	CAUSE/SOLUTION
Green Operational LED Off	1. Wire Connection 2. Reversed Wiring 3. Main Power Off 4. Missing or Blown Fuse 5. Contact Customer Service
No Sound When Testing No Red LED When Testing	Contact Customer Service Contact Customer Service
Locked In Alarm	Contact Customer Service
<b>MALFUNCTION ALARM</b>	
LED Flashing Red/Green - Beeps Every 25 Seconds	1. Check Battery Voltage
Battery Voltage is Good and Alarm Will Not Reset	2. Contact Customer Service
End of Life Signal LED Flashing RED RED GREEN GREEN Beeps Every 25 Seconds	1. Press Test/Reset Button to reset for 72 Hours. Can repeat for up to 30 Days 2. Replace Alarm

#### HOW TO TAKE CARE OF YOUR ALARM

This CO Alarm is designed to be as maintenance free as possible. To keep your alarm in good working order, you must:

- **TEST THE ALARM WEEKLY** using the Test/Reset Button. See the section, **Test Procedure**, in this manual for further information.
- **VACUUM THE DUST OFF THE ALARM COVER.** At least once a year (more frequently in dusty locations), use the soft brush attachment from your vacuum to clean the alarm covers.
- **CLEAN THE ALARM COVER WHEN DIRTY.** Wash the alarm cover by hand. Use a cloth dampened in clean water. Dry with a soft cloth.
- **DO NOT SPRAY CLEANING AGENTS OR WAXES DIRECTLY ONTO THE FRONT PANEL.** This action may damage the sensor, cause an alarm or cause an alarm malfunction.
- **OBSERVE THE COLOR OF THE INDICATOR LIGHT.** At frequent intervals and during your weekly test, check the indicator light on the on the front panel of the alarm.
- See the section, **Operation**, in this manual for further information.

#### SPECIFICATIONS


MODELS	65-541, 65-541-R, 65-541-MS, 65-541-R-MS 65-542, 65-542-R, 65-542-MS, 65-542-R-MS
POWER SUPPLY	12 VDC
NOMINAL CURRENT DRAW	108mA
OPERATIONAL TEMPERATURE	-40° F to +150° F    -40° C to +66° C
RELATIVE HUMIDITY	15% (+/- 5%) to 95% (+/- 4%)
AUDIBLE OUTPUT	85 dB @ 10 feet
CO ALARM TRIGGER	4 -15 Minutes @ 400 ppm
CASE DIMENSIONS	65-541 5.5"W x 3.5"H x 1.38"D 65-542 6.5"W x 3.5"H, 1.38"D
WARRANTY	1 Year Limited
TESTING LABORATORY STANDARD	Underwriters Laboratories UL 2034, Third Edition




## PROCEDURES TO TAKE DURING AN ALARM

Follow the alarm procedures for your country. The emergency number depends on your travel location.

### PROCEDURES TO TAKE DURING A CO ALARM IN THE USA

 **WARNING:** Actuation of this device indicates the presence of carbon monoxide (CO) gas, which can KILL YOU. If signal sounds (4 beeps and flashing or solid red light): **1)** Operate the Test/Mute button; **2)** Call your emergency local service (Phone Number \_\_\_\_\_) (fire department or 911); **3)** Immediately move to fresh air - outdoors or by an open door/window. Check that all persons are accounted for. Do not reenter the premises or move away from the open door / window until the emergency responders have arrived, the premises have been aired out and your alarm remains in its normal operation. **4)** After following steps 1-3, if your alarm reactivates within a 24-hour period, repeat steps 1-3 and call a qualified appliance technician. (Phone Number \_\_\_\_\_) to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturers' instructions, or contact the manufacturer directly, for more information about CO safety and this equipment. Make sure that the motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

### PROCEDURES TO TAKE DURING A CO ALARM IN CANADA

 **WARNING:** Actuation of this device indicates the presence of carbon monoxide (CO) gas which can KILL YOU. If signal sounds (4 beeps and flashing or solid red light: 1) Operate the Test/Mute. Immediately move to fresh air - outdoors or by an open door/window. Check that all persons are accounted for. Do not reenter the premises or move away from the open door/window until the emergency responders have arrived, the premises have been aired out, and your alarm remains in its normal condition; 2) call your emergency local service (telephone number \_\_\_\_\_) ( Fire department or 911).

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## LIMITED PRODUCTS WARRANTY

**MTI INDUSTRIES, INC.** warrants to the original retail purchaser that its products will be free from defects of material or workmanship for a period of One (1) year from the date of retail purchase. If proven to have been defective in original materials or workmanship and returned, delivery costs prepaid, MTI INDUSTRIES, INC. will replace this product free of charge.

### LIMITS OF WARRANTY

Replacement is your exclusive remedy under this limited warranty or any other warranty (including any implied warranty of merchantability for a particular purpose). Any and all implied warranties or merchantability or fitness for a particular purpose shall be limited to the warranty period from the original date of retail purchase. MTI INDUSTRIES, INC., its dealers and distributors shall in no case be responsible or in any way liable for any incidental or consequential damages for any reason. Some states do not allow the limitation or exclusion of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific rights, and you may also have other rights, which may vary, from state to state.

### PRODUCT NOT WARRANTED

**NOTE- There are no user serviceable parts inside the case. Opening any SAFE-T-ALERT™ product for any reason voids the warranty.** This warranty does not cover damage or failure resulting from acts of God, abuse, misuse, neglect, or faulty installation.

### WARRANTY RETURN PROCEDURES

It is MTI's experience that a CO Alarm is sounding for a reason. Call, ask your dealer to call, or e-mail our Customer Service Department (as listed below) to trouble shoot the situation.

**Customer Service Phone No. - 800-383-0269**

Fax No. 847-546-9007

E-mail Service@mtiindustries.com

Web Site: [www.mtiindustries.com](http://www.mtiindustries.com)

If Customer Service determines that the unit is defective, a Replacement Authorization (RA) number will be issued. **No product will be accepted for service or replacement without first obtaining a RA number.**

**If authorized, return this product to:**

**MTI Industries, Inc.**

**Warranty Dept. RA # (INSERT RA NUMBER HERE)**

**31632 N. Ellis Drive Unit 301**

**Volo, IL 60073**

**NOTE: Mark the RA number in the area shown on the outside of the box!**

### OWNERS REPLACEMENT RECORD

Replace this **SAFE-T-ALERT™ 65 SERIES CO** alarm within 5 years, of the installation of the alarm.

**Installation Date** \_\_\_\_\_

**Replace Date** \_\_\_\_\_

**Installer** \_\_\_\_\_

**NOTE:** The replacement date indicates the date beyond which the device may no longer detect accurately.

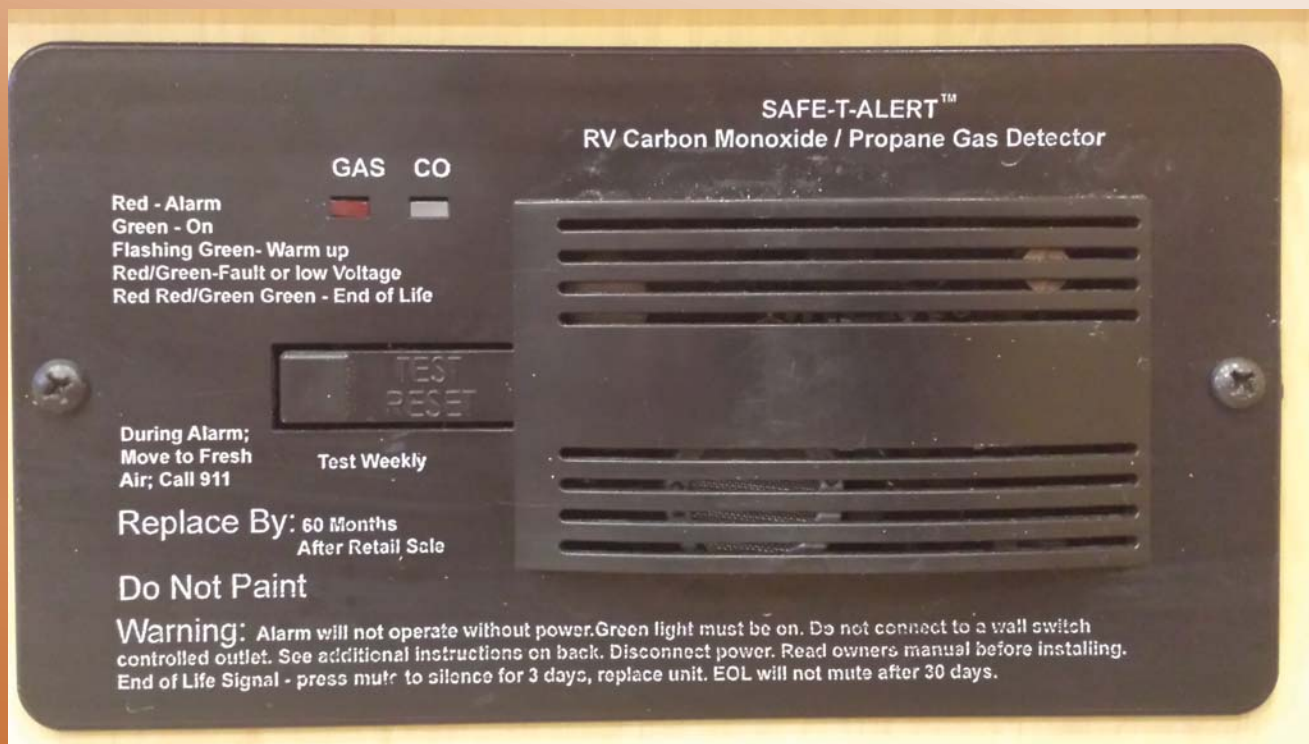


# L.P. Gas Detector

A L.P. Gas detector is mounted in the following locations for your model.

220	Base of Bed on Driver's Side
221 XL	Rear Dinette Base
232 XL	Base of Rear Bed
261 XL	Rear Dinette Base
261 XL (Twin Bed)	Base of Bed on Driver's Side
261 XL (Sleeper Sofa)	Rear Dinette Base
271 XL	Below Swivel Lounge Chair
272 XL	Below Swivel Lounge Chair

L.P. Gas is heavier than air and will fall. It also has an odor additive which smells like rotten eggs so that it is readily detected when a leak is present. Check the operation of your detector on a regular basis to ensure it is working properly.







**RECREATIONAL VEHICLE (RV)  
Combination Carbon Monoxide and Gas Alarm  
USER'S MANUAL**

**70 Series Models 70-742, 70-742-MS  
70-742-R Kit, 70-742-R-MS Kit**

PATENT US 7,248,156 ALL RIGHTS RESERVED 70RV062009-6

**ATTENTION:** This user's manual contains important Carbon Monoxide (CO) and gas alarm installation, operation, troubleshooting and warranty information. Read, follow, and keep this manual for future reference.

**NOTE:** If you install or purchase this alarm for another person, give this manual to that person.

**IMPORTANT:** This unit must be replaced within five years of its production date. Record the manufacture date in the section, Owner's Replacement Record, in this manual for future use. The replacement date indicates the date beyond which the device may no longer detect carbon monoxide, propane or natural gas accurately. The device should be replaced.

**DUAL SENSOR TECHNOLOGY**

The SAFE-T-ALERT™ 70 Series combination CO / Gas Alarm is an alarm that combines into a single compact system, a powerful alarm that detects both Carbon Monoxide (CO) and explosive gases Propane (LPG) and Methane (Natural Gas). The 70 Series uses the latest microprocessor technology combined with two electronic self-cleaning sensors that operate independently of each other. The combined unit can detect both CO and explosive gases simultaneously.

This detector is UL Listed as a CO Propane and Methane (Natural Gas) detector for RV use. Other explosive gases detected, but not tested by UL, include Acetone, Alcohol, Butane, and Gasoline all of which you may have in your RV.

To prevent false alarms from brief "puffs" of gas the detector has a recheck cycle before alarming. If high levels of gas remain during the recheck cycle, the detector will alarm.

The electronic CO sensor in your SAFE-T-ALERT™ CO alarm is very sensitive to CO gas. It will not react to most other gases.

**WHY EVERY RV NEEDS A 70 SERIES CO AND GAS ALARM**

Everyone is at risk for carbon monoxide poisoning! Particularly sensitive are children, pregnant women, the elderly and people with lung or heart disease or anemia! Carbon monoxide (CO) is an odorless, colorless gas that prevents the blood from carrying oxygen to vital organs. CO is 200 times more likely to replace oxygen in the blood. The Consumer Product Safety Commission (CPSC) recommends using at least one CO alarm located outside of sleeping areas. For the extra security, locate additional CO alarms in each sleeping area. Safe-T-Alert CO alarms are available for secondary installations.

Propane gas can cause explosions! Using propane requires taking safety precautions to avoid injury. These gases are usually identified by an unpleasant odor. Certain conditions may make some people unable to detect this unpleasant odor. These conditions include advanced age, colds, allergies, and the use of tobacco, alcohol or drugs that may diminish the sense of smell.

**ABOUT THIS ALARM**

Because CO is a colorless, odorless, tasteless and highly poisonous gas; it can endanger lives even at low levels of concentration. The CO Alarm will alert you to potentially dangerous situations. **The following symptoms may be related to CO POISONING. Discuss these symptoms with ALL household members and RV guests:**

- **Mild Exposure:** Headaches, running nose, sore or watery eyes, often described as "flu-like" symptoms.
- **Medium Exposure:** Dizziness, drowsiness, vomiting.
- **Extreme Exposure:** Unconsciousness, brain damage and death.

**NOTE:** Reported cases of CO gas poisoning indicate that while victims are aware they are not well, they are disoriented. They are unable to save themselves by exiting the RV or calling for assistance. **Small children and pets may be affected first.**

Your SAFE-T-ALERT™ 70Series alarm helps protect your household members and guests from CO produced while using your RV. CO gas is produced when any type of fuel is incompletely burned. Potential sources of CO in and around your RV can include gas or diesel engine exhaust, portable space heaters, gas stoves and ovens, furnaces, defective engine exhaust systems, portable grills, other nearby RVs, portable generators, generator exhaust, and other propane-powered appliances. All are sources of CO.

**The following are also sources of CO that may affect your RV:**

- Extended operation of unvented fuel burning appliances can build up high CO levels.
- An idling vehicle in an open or closed garage.
- Temperature inversions can trap exhaust near the ground.
- CO build up can be caused by reverse/negative venting of fuel burning appliances including: 1) Clogged, loose or faulty stacks or chimneys of (clothes dryers, furnaces and water heaters, etc.), 2) wind direction and/or velocity, 3) simultaneous operation of multiple fuel burning appliances, and/or exhaust fans.



**WARNING:**

**LIMITATIONS OF CO and GAS ALARMS**

**THIS ALARM WILL NOT WORK WITHOUT POWER.** Some reasons for no alarm power; are a blown or missing fuse, broken wire, a faulty wire connection or circuit breaker, a discharged battery, cut lead wires, or improper supply (+) or ground (-) connections.

**THIS ALARM WILL ONLY INDICATE THE PRESENCE OF GAS AT THE SENSOR.** CO or explosive propane/natural gas gases may be present in other areas. MTI recommends installing CO alarms in all sleeping areas. **Do not block or cover** the alarm with any object that can prevent a gas leak or carbon monoxide from reaching the sensor.

**THIS ALARM IS INTENDED FOR USE IN RV's. It is intended for use inside the RV.** It is not designed to measure compliance with commercial and industrial standards.

**THIS ALARM MAY NOT BE HEARD.** The alarm's loudness is designed to meet or exceed regulatory standards; however, the alarm may not be heard if alarms are located in remote locations or behind closed doors. Persons who are hard-of-hearing, have consumed alcoholic beverages, taken prescription, non-prescription or illegal drugs, may not hear the alarm.

**THIS ALARM IS DESIGNED TO DETECT CARBON MONOXIDE AND PROPANE GAS. THE ALARM IS NOT DESIGNED TO DETECT SMOKE, OR FIRE.**



**THIS ALARM MAY NOT ALARM AT LOW CO LEVELS** It is not designed to measure compliance with the Occupational Safety Health Administration (OSHA) commercial or industrial standards. Individuals with medical problems may consider using warning devices, which provide audible and visual signals for CO concentrations under 30 ppm.

## HOW TO PROTECT YOUR FAMILY

**CAUTION-** The SAFE-T-ALERT™ 70 Series combination CO and Gas Alarm is designed to protect individuals from the acute effects of carbon monoxide exposure and gas leaks. It will not fully safeguard individuals with specific medical conditions. If in doubt, consult a medical practitioner.

To protect your family, you should:

- **INSTALL THE ALARM PROPERLY.** Carefully read and follow ALL the instructions in this manual. Test your unit every week. Alarms that do not work will not alert you to hazardous levels of CO or explosive gas. See the section, Test Procedure, in this manual for further information.
- **MAKE REGULAR VISUAL INSPECTIONS.** Check all fuel burning equipment including gas water-heaters, kitchen gas stoves, space heaters, gas dryers and all pilot lights. Check the color of the pilot flame. The color should be blue.
- **MAKE REGULAR VISUAL INSPECTIONS OF THE ENGINE AND GENERATOR EXHAUST SYSTEMS.** Cracked exhaust systems can allow CO to enter the living area.
- **PROFESSIONALLY MAINTAIN YOUR ENGINE AND GENERATOR.** Although gas engines and generators produce CO, a poorly tuned engine and generator will produce greater amounts CO.
- If you smell unusual odors you may have a gas leak, immediately call a local propane gas supplier or fire department to check for possible leaks.

## WHERE TO INSTALL

- Install the 70 Series in the kitchen area near sources of a potential gas leaks. Some potential sources are a furnace, refrigerator, stove or oven. If potential sources of a gas leak are in separate areas, MTI recommends installing a gas alarm in each area.
- The NFPA and Consumer Product Safety Commission recommends installing a CO alarm outside the sleeping area. The 70 Series combination CO and gas alarm complies with that recommendation.
- INSTALL ALARM at least 4inches off the floor but no more than 20 inches off the floor.

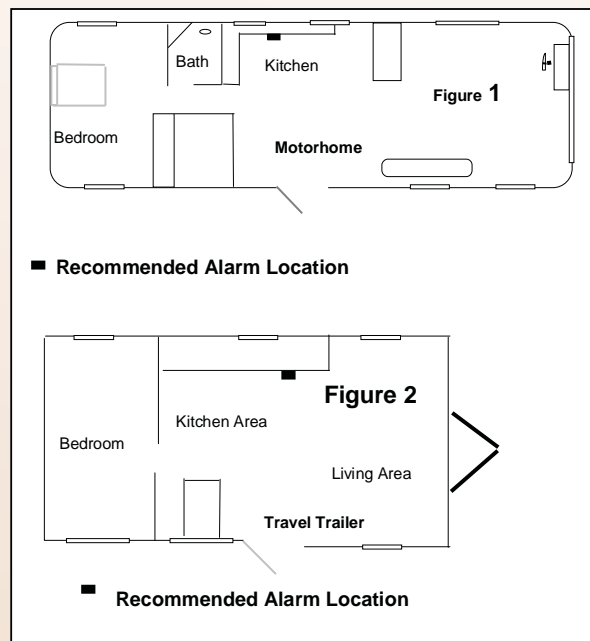
## WHERE NOT TO INSTALL 70 SERIES ALARMS

- DO NOT INSTALL behind furniture, drapes, in closets or areas that will block air flow to the alarm.
- DO NOT INSTALL within 12 inches (30cm) of opening windows, exterior doors, heating or return vents, or other drafty areas..
- DO NOT INSTALL on an outside wall.
- DO NOT INSTALL on a wall switch controlled by a power line, ground fault circuit or to a circuit breaker.
- **NOTE:** Older RVs may have little or no insulation and therefore are draftier. Carefully consider mounting locations.

## ⚠ WARNING

**ATTENTION: CCI CONTROLS GAS LEAK DETECTOR REPLACEMENT - DO NOT CONNECT ANY SAFE-T-ALERT alarm to non Safe-T-Alert supplied solenoids. You must use the new solenoid included in your Kit.**

The following diagrams provide additional alarm installation information:



## INSTALLATION INSTRUCTIONS

### Models

70-742 70-742-MS 70-742-R Kit  
70-742-R-MS Kit

## ⚠ WARNING

**FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN A MALFUNCTION OR FAILURE OF THE ALARM AND MAY VOID THE WARRANTY.**

**SHOCK HAZARD:** Turn off power before installing.

**Power Supply 12 VDC.**

Recommended Wire Size 14 GA. TO 18 GA.

Connect the alarm to a properly fused circuit, maximum over protection device rating 15 amps.

**All connections must be in accordance with the National Electrical Code in the Unites Stated and the Canadian Electric Code in Canada .**

Connect to wiring or circuit that **CANNOT** be turned off by a switch or ground fault protector. Only use UL or recognized permanent wire connectors. It is acceptable to connect the 70 Series CO / LP gas alarm to the main disconnect. The alarm will be off along with all other 12 volt equipment when the main disconnect is turned to the off position. The RV must not be occupied when the main disconnect is in the off position.

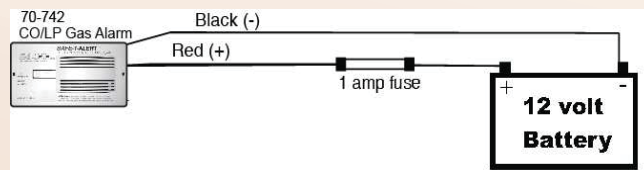
## INSTALLATION INSTRUCTIONS

Follow these instructions carefully. Failure to follow these instructions can damage the unit and void the warranty.

**Important: The 70 Series case requires 1 1/2" (38mm) clearance.**

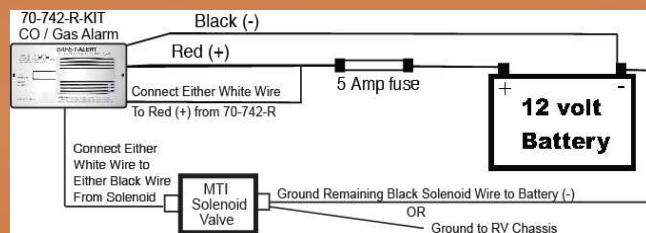
**MODEL 70-742**

1. **Basic Model 70-742** - Select a wall location between 4" and 20" off the floor. Cut a 5 5/8" (143mm) W x 3 1/8" (79mm) H hole.
2. Connect Supply (+) to the Red wire lead. Install a 1 amp fuse in the positive (+) circuit. Connect the Black wire to the 12 volt Ground (-).
3. Reconnect the power supply. Warm up 10 minutes then test the alarm.



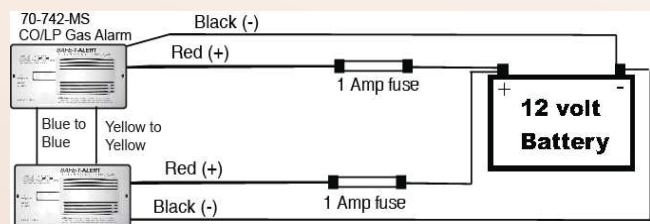
## MODEL 70-742-R KIT

1. **Model 70-742-R Kit - With Normally Closed relay.** This unit supplies a relay with contacts rated 12 VDC, 3 amp (max). The relay is energized whenever the alarm is operational. It may be used to shut down a generator or to open an (optional) gas solenoid valve. The relay may also be used to interface to alarm systems, using either the normally closed or normally open contact, depending on the requirements of the alarm system. In the event of an alarm the relay will shut off. It will automatically energize after the unsafe levels of CO or explosive gas clears.  
Select a wall location between 4" and 20" off the floor. Cut a 5 5/8" (143mm) W x 3 1/8" (79mm) H hole.
2. **Mount the solenoid according to its separate instructions. You must install the solenoid included with the 70-742-R Kit. Do not connect to an existing installed solenoid. SEE: SPECIAL WIRING NOTICE.** Connect the Red wire and either White wire from the alarm to the 12 volt supply (+). Install a 5 amp fuse in the positive (+) circuit between this connection and the battery.  
Connect the Black wire to the 12 volt Ground (-).
3. **Relay Output –** Connect the remaining White wire from the alarm to either black wire from the solenoid.  
Ground the remaining Black wire from the solenoid to the negative side (-) of the 12 volt battery OR ground it to the RV Chassis.  
Note: Some devices do not require correct polarity and can be connected to either terminal or wire.
4. **Reconnect the power supply. Warm up 10 minutes then test the alarm.**



**MODEL 70-742-MS**

- 1. Model 70-742-MS Multi-station interconnect, (Maximum 10 units and 2000 feet of wire).** Allows multiple 70-742-MS alarms to be connected together. When one of the alarms detects unsafe levels of CO or gas it will activate. It will also activate the audible alarm of all the interconnected units. Only the alarm that detected CO or gas will have its Red LED light lit up so that you can determine the cause of the alarm. Select a wall location no between 4" and 20" off the floor. Cut a 5 5/8" (143mm) W x 3 1/8" (79mm) H hole.
- 2. Connect the Red wire to the 12 volt supply (+). Install a 1 amp fuse in the positive circuit (+). **Note you must use a separate 1 amp fuse for each alarm.**** Connect the Black wire to the 12 volt Ground (-).
- 3. Interconnect Wiring –** Connect Blue wires from each alarm and Yellow wires for each alarm. Continue connecting in series (Daisy Chain).
- 4. Reconnect the power supply. Warm up 10 minutes then test the alarm.**

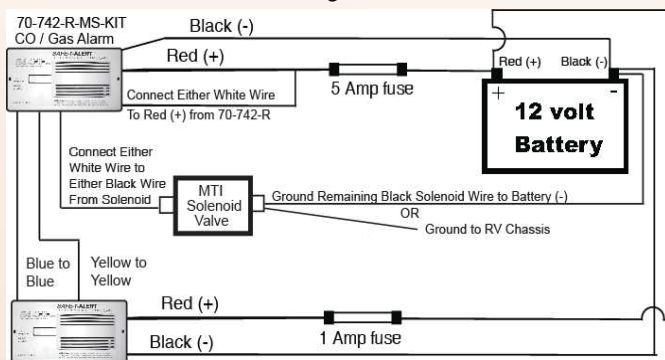


## MODEL 70-742-R-MS KIT

1. **Model 70-742-R-MS Kit - With Normally Closed relay.** This unit supplies a relay with contacts rated 12 VDC, 3 amp (max). The relay is energized whenever the alarm is operational. It may be used to shut down a generator or to open an (optional) gas solenoid valve. The relay may also be used to interface to alarm systems, using either the normally closed or normally open contact, depending on the requirements of the alarm system. In the event of an alarm the relay will shut off. It will automatically energize after the unsafe levels of CO or gas clears.  
Select a wall location between 4" and 20" off the floor. Cut a 5 5/8" (143mm) W x 3 1/8" (79mm) H hole.
2. **Mount the solenoid according to its separate instructions. You must install the solenoid included with the 70-742-R-MS KIT. Do not connect to an existing installed solenoid. SEE: SPECIAL WIRING NOTICE.** Connect the Red wire and either White wire from the alarm to the 12 volt supply (+). Install a 5 amp fuse in the positive (+) circuit between this connection and the battery. **Note you must use a separate 5 amp fuse for each alarm.** Connect the Black wire to the 12 volt Ground (-).
3. **Relay Output –** Connect the remaining White wire from the alarm to either black wire from the solenoid. Ground the remaining Black wire from the solenoid to the negative side (-) of the 12 volt battery OR ground it to the RV Chassis.  
Note: Some devices do not require correct polarity and can be connected to either terminal or wire.
4. **Interconnect Wiring -** Connect Blue wires from each alarm and Yellow wires from each alarm. Continue connecting in series (Daisy Chain).
5. **Reconnect the power supply.** Warm up 10 minutes then test the alarm.

**⚠ DANGER - FIRE RISK - CCI CONTROLS GAS LEAK DETECTOR REPLACEMENT**  
**- DO NOT CONNECT A SAFE-T-ALERT alarm to non Safe-T-Alert supplied solenoid. You must use the new solenoid included in your Kit. DO NOT CONNECT TO A CCI SOLENOID.**

## Model 70-742-R-MS-KIT Wiring -



**SPECIAL WIRING NOTICE:** When replacing CCI Controls LP Gas Leak Detectors they may have two power leads. Safe-T-Alert units only have one power lead. Simply connect the Safe-T-Alert power lead (Red) to the coach/house power supply and cap or remove the other power lead. **DO NOT CONNECT BOTH POWER LEADS TO THE Safe-T-Alert ALARM – this will result in a dead chassis battery.**

Only use UL or recognized permanent wire connectors to replace any unit installed with spade connectors or wire nuts.

### TEST PROCEDURE



**TO REDUCE THE RISK OF CARBON MONOXIDE POISONING OR PROPANE GAS EXPLOSION, TEST THIS ALARM'S OPERATION AFTER THE RV HAS BEEN IN STORAGE, BEFORE EACH TRIP AND AT LEAST ONCE PER WEEK DURING USE BY PRESSING THE TEST/RESET BUTTON.**



**WARNING: THE TEST BUTTON ONLY TESTS THE ALARM CIRCUIT NOT THE SENSORS. YOU MAY USE PROPANE OR BUTANE GAS TO TEST THE GAS SENSOR. Note it may take up to 10 seconds for the alarm to sound.**

**TO TEST THE CO SENSOR USE A CAN OF SAFE-T-ALERT CO TEST GAS TO TEST THE 400 PPM CALABRATION POINT. DO NOT TRY TO GENERATE CO TO TEST THE ALARM.** The TEST/RESET button tests all ELECTRICAL functions of the alarm. It does not check the sensor operation.

The alarm may be tested at any time. The TEST/Mute switch is located on the front of the alarm. Press and hold the test button for 1 second **IMPORTANT - If this alarm does not test properly return it immediately for repair or replacement. If the alarm is over five years old replace it.**

### OPERATION

When the unit is first powered up, the CO sensor requires a ten (10) minute initial warm-up period to clean the sensor element and achieve stabilization. The GREEN LED indicator will flash on and off during the 10 minute warm-up period. This unit cannot go into a alarm during the warm-up period. See Test Procedure in this manual. After the warm-up period, the GREEN power ON indicator should glow continuously. If the ON indicator light does not light, see the section, **Trouble-Shooting Guide**, in this manual for further information. **Do not attempt to fix it yourself.**

**Gas Alarm:** When you power the alarm, it has a warm-up period of approximately 1 minute. This unit cannot go into a gas alarm during the warm-up period. After 1 minute the alarm can detect explosive gas and will energize the relay on models 70-742-R Kit and 70-742-R-MS Kit.

**Simultaneous CO and Gas Alarms—** Because the risk of a propane gas explosion is generally a more serious danger, your alarm unit gives the gas alarm a higher priority during simultaneous alarm condition.

If your unit generates alarms for both Gas and CO at the same time, the gas LED will flash red and the beeper will sound. The CO LED will be a solid Red until the CO is ventilated out of the RV, at which time the LED will return to the Green operational/safe color.

**Brownout Protection -** The unit can tolerate short power interruptions and brownouts where the circuit voltage drops as low as 1 VDC. If the brownout lasts too long, the unit will reset and operate as described above.

### LOW POWER OPERATION

This alarm will operate normally down to 7 VDC. Do not operate this alarm below 7 VDC.

### VISUAL AND AUDIBLE ALARM SIGNALS

This SAFE-T-ALERT™ CO / Propane Gas Alarm is designed to be easy-to-operate. The alarm has two indicator lights that display a specific color for each monitored condition. There also is a matching sound pattern for alarm conditions.

#### CO ALARM

The Red CO LED will flash and the alarm will sound 4 “BEEPS” then silent for 5 Seconds. These signals indicates that the CO level is over 70 ppm. **IMMEDIATE ACTION IS REQUIRED.** See **Procedures To Take During An Alarm.** This cycle will continue until the TEST/Mute button on the front of alarm is pressed. Ventilate the RV. The RED light will stay ON until the CO has cleared, or the alarm will reactivate in approximately 6 minutes if the CO is still present. DO NOT RE-ENTER THE RV. This alarm will return to normal operation after the RV s properly ventilated.

#### PROPANE GAS ALARM

The Red LED will Flash and the alarm will sound a steady tone whenever a dangerous level of propane or methane gas is detected. **IMMEDIATE ACTION IS REQUIRED.** See **Procedures Take During A Gas Alarm** The detector will continue to alarm until the Test/Mute switch on the front of the alarm is pressed. Ventilate the RV. The RED Gas LED will continue to flash until the gas has cleared, or the gas alarm will reactivate in approximately 5 minutes if the gas is still present. DO NOT RE-ENTER THE RV. This alarm will return to normal operation after the RV s properly ventilated.

**MALFUNCTION/SERVICE SIGNAL** If any malfunction is detected, the Gas LED will remain off and the Operational/CO LED will alternate Red/Green and the alarm will sound once every 15 seconds. Press the Test/Mute button. If the Test/Mute button does not clear the signals, check the battery voltage. **If the battery voltage is not low and the unit will not return to normal operation, immediately remove the alarm and return for service or warranty replacement.** See the warranty section in this manual.

OPERATION	AUDIBLE SIGNAL	VISUAL SIGNAL
NORMAL	NONE	STEADY GREEN
CO ALARM	4 “BEEPS” 5 SECONDS OFF	STEADY RED
PROPANE ALARM	CONSTANT	FLASHING RED
ALARM MALFUNCTION	BEEP” EVERY 25 SECONDS	ALTERNATING RED/GREEN
END OF LIFE SIGNAL	BEEPS EVERY 25-30 SECONDS	RED RED GREEN GREEN FLASHING



**MEMORY FEATURE** – This alarm has a Peak Level Memory feature that remembers the approximate amount of CO that activated it. The memory feature does not record brief exposure to CO that would not activate the alarm. This alarm will indicate one of four levels with chirps and blinks with the CO LED:

To activate alarm level memory, press the TEST/RESET button for less than 1 second.

- 1 Chirp and 1 Green Blink = CO memory is clear
- 2 Chirps and 2 Red = below 100 ppm
- 3 Chirps and 3 Red Blinks = below 200 ppm
- 4 Chirps and 4 Red Blinks = above 200 ppm

## TROUBLE-SHOOTING GUIDE

Use this chart to trouble-shoot problems with this 70 Series Alarm.

PROBLEM	CAUSE/SOLUTION
Green Operational LED Off	1. Wire Connection 2. Reversed Wiring 3. Main Power Off 4. Missing or Blown Fuse 5. Contact Customer Service
No Sound When Testing	Contact Customer Service
No Red LED When Testing	Contact Customer Service
Locked In Alarm	Contact Customer Service
<b>MALFUNCTION ALARM</b>	
LED Flashing Red/Green - Beeps Every 25 Seconds	1. Check Battery Voltage
Battery Voltage is Good and Alarm Will Not Reset	2. Contact Customer Service
End of Life Signal LED Flashing RED RED GREEN GREEN Beeps Every 25 Seconds	1. Press Test/Reset Button to reset for 72 Hours. Can repeat for up to 30 Days 2. Replace Alarm

## HOW TO TAKE CARE OF YOUR ALARM

This CO / Propane Gas Alarm is designed to be as maintenance free as possible. To keep your alarm in good working order, you must:

- **TEST THE ALARM WEEKLY** using the Test/Reset Button. See the section, **Test Procedure**, in this manual for further information.
- **Test the Alarm every six months** with Safe-T-Alert CO Test Gas and with a butane lighter. See **Test Procedure** Section.
- **VACUUM THE DUST OFF THE ALARM COVER.** At least once a year (more frequently in dusty locations), use the soft brush attachment from your vacuum to clean the alarm covers.
- **CLEAN THE ALARM COVER WHEN DIRTY.** Wash the alarm cover by hand. Use a cloth dampened in clean water. Dry with a soft cloth.
- **DO NOT SPRAY CLEANING AGENTS OR WAXES DIRECTLY ONTO THE FRONT PANEL.** This action may damage the sensor, cause an alarm or cause an alarm malfunction.
- **OBSERVE THE COLOR OF THE INDICATOR LIGHT.** At frequent intervals and during your weekly test, check the indicator light on the on the front panel of the alarm.
- See the section, **Operation**, in this manual for further information.

## PROCEDURES TO TAKE DURING AN ALARM

Follow the alarm procedures for your country. The emergency number depends on your travel location.

## PROCEDURES TO TAKE DURING GAS ALARM

1. Turn off all Gas appliances (Stove, Heater, Furnace, Refrigerator, etc.), extinguish all flames and smoking material.
2. Press the Test/Mute switch. **DO NOT DISCONNECT POWER**
3. Evacuate the RV. Make sure everyone is accounted for. Leave the door and windows open.
4. Turn off the propane tank valve.
5. Determine and repair the source of the leak. Get professional help if necessary. **CAUTION- DO NOT RE-ENTER UNTIL THE PROBLEM IS CORRECTED.**

## PROCEDURES TO TAKE DURING A CO ALARM IN THE USA

**⚠ WARNING:** Actuation of this device indicates the presence of carbon monoxide (CO) or propane gases, which can KILL YOU. If signal sounds (4 beeps and flashing or solid red light): 1) Operate the Test/Mute button; 2) Call your emergency local service (Phone Number \_\_\_\_\_) (fire department or 911); 3) Immediately move to fresh air - outdoors or by an open door/window. Check that all persons are accounted for. Do not reenter the premises or move away from the open door / window until the emergency responders have arrived, the premises have been aired out and your alarm remains in its normal operation. 4) After following steps 1-3, if your alarm reactivates within a 24-hour period, repeat steps 1-3 and call a qualified appliance technician. (Phone Number \_\_\_\_\_) to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturers' instructions, or contact the manufacturer directly, for more information about CO safety and this equipment. Make sure that the motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

## PROCEDURES TO TAKE DURING A CO ALARM IN CANADA

**⚠ WARNING:** Actuation of this device indicates the presence of carbon monoxide (CO) and propane gases which can KILL YOU. If signal sounds (4 beeps and flashing or solid red light): 1) Operate the Test/Mute. Immediately move to fresh air - outdoors or by an open door/window. Check that all persons are accounted for. Do not reenter the premises or move away from the open door/window until the emergency responders have arrived, the premises have been aired out, and your alarm remains in its normal condition; 2) call your emergency local service (telephone number \_\_\_\_\_) ( Fire department or 911).

### End of Life Signal – The Sensor has a 5 Year Service Life

All 70 Series models include an End of Life (EOL) Signal indicating the sensor has reached the end of its service life and you must replace the alarm. The signal is the LED flashing RED GREEN GREEN with a beep every 25-30 seconds. The EOL Signal may be reset by pushing TEST / RESET button on the alarm. This will reset the EOL Signal for a period of 72 hours (3 days) for a total of up to 30 days. After 30 days the signal cannot be reset and the alarm must be replaced. **DO NOT DISCONNECT THE ALARM UNTIL YOU HAVE A REPLACEMENT ALARM AVAILABLE TO INSTALL.**

MODELS	70-742, 70-742-MS, 70-742-R Kit, 70-742-R-MS Kit
POWER SUPPLY	12 VDC
NOMINAL CURRENT DRAW	108 mA
OPERATIONAL TEMPERATURE	-40° F to +150° F    -40° C to +66° C
RELATIVE HUMIDITY	15% (+/- 5%) to 95% (+/- 4%)
AUDIBLE OUTPUT	85 dB @ 10 feet
GAS ALARM TRIGGER	< 25% of the LEL of Propane and Methane
GAS LEVEL CONFIRMATION	8 Second delay before alarm
CO ALARM TRIGGER	4 -15 Minutes @ 400 ppm
CASE DIMENSIONS	6.5"W x 3.5"H x 1.38"D
WARRANTY	1 Year Limited
TESTING LABORATORY STANDARD	Underwriters Laboratories UL 1484, Fourth Edition UL 2034, Third Edition

### LIMITED PRODUCTS WARRANTY

**MTI INDUSTRIES, INC.** warrants to the original retail purchaser that its products will be free from defects of material or workmanship for a period of One (1) year from the date of retail purchase. If proven to have been defective in original materials or workmanship and returned, delivery costs prepaid, **MTI INDUSTRIES, INC.** will replace this product free of charge.

### LIMITS OF WARRANTY

Replacement is your exclusive remedy under this limited warranty or any other warranty (including any implied warranty of merchantability for a particular purpose). Any and all implied warranties or merchantability or fitness for a particular purpose shall be limited to the warranty period from the original date of retail purchase. **MTI INDUSTRIES, INC.**, its dealers and distributors shall in no case be responsible or in any way liable for any incidental or consequential damages for any reason. Some states do not allow the limitation or exclusion of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific rights, and you may also have other rights, which may vary, from state to state.

### PRODUCT NOT WARRANTED

**NOTE- There are no user serviceable parts inside the case. Opening any SAFE-T-ALERT™ product for any reason voids the warranty.** This warranty does not cover damage or failure resulting from acts of God, abuse, misuse, neglect, or faulty installation.

### WARRANTY RETURN PROCEDURES

It is MTT's experience that a CO / Propane Gas Alarm is sounding for a reason. Call, ask your dealer to call, or e-mail our Customer Service Department (as listed below) to trouble shoot the situation.

**Customer Service Phone No. - 800-383-0269**

Fax No. 847-546-9007

E-mail [Service@mtiindustries.com](mailto:Service@mtiindustries.com)

Web Site: [www.mtiindustries.com](http://www.mtiindustries.com)

If Customer Service determines that the unit is defective, a Replacement Authorization (RA) number will be issued. **No product will be accepted for service or replacement without first obtaining a RA number.**

**If authorized, return this product to:**

**MTI Industries, Inc.**

**Warranty Dept. RA # (INSERT RA NUMBER HERE)**

**31632 N. Ellis Drive Unit 301**

**Volo, IL 60073**

**NOTE: Mark the RA number in the area shown on the outside of the box!**

#### NOTE:

70-742 is the basic unit (Single-station) with no interconnect, no relay, and no solenoid.

70-742-MS is the Multi-station unit with interconnect, no relay, and no solenoid.

70-742-R Kit is the basic unit (Single-station) with no interconnect, with a relay, and with a solenoid.

70-742-R-MS Kit is the Multi-station unit with interconnect, with a relay, and with a solenoid.

### OWNERS REPLACEMENT RECORD

Replace this SAFE-T-ALERT™ 70 SERIES CO / GAS propane alarm within 5 years, of the production date on the back of the alarm.

**Production Date** \_\_\_\_\_

**Replace Date** \_\_\_\_\_

**Installer** \_\_\_\_\_

**NOTE:** The replacement date indicates the date beyond which the device may no longer detect accurately.

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# Parker Solenoid Valve

Your LP Detector is installed with an electric Solenoid Valve which will shut off the flow of LP Gas to your motorhome in the event that the LP Detector senses gas. This automatic valve will help deter the harmful effects of unwanted LP Gas inside your motorhome. In the event that your LP Detector trips, open all windows and doors to immediately “FLUSH” the air inside your motorhome.





# Gold Ring™ Solenoid Valve Installation and Maintenance Instructions



## 2-Way Direct Acting Combustion Valves Normally Closed

NEMA 1  
Series NM22-0501  
NPT 3/8  
Orifice 5/16

Parker Hannifin Corporation  
Skinner Valve Division

Bulletin 7262 Effective 1 Sept87  
Revision C Revised 1 Jun91

### Warnings

1. Check nameplate for correct catalog number, pressure, voltage and service. Do not install if unsuitable.
2. For protection and proper operation of the solenoid valve, install a strainer or filter suitable for the service involved as close to the valve inlet as possible.
3. This valve requires periodic cleaning and inspection depending on the service. This should be done at least once every 12 months or every 500,000 cycles, whichever occurs first.
4. Turn off electrical power supply and line pressure to the valve. Bleed trapped pressure from the lines before inspecting, cleaning, servicing, or repairing the valve.

### Description:

NM22 solenoid valves are direct-acting and have integral seats.

### Operation:

**NORMALLY CLOSED**

Closed when de-energized; open when energized.

### Installation:

#### 1. Application

Refer to Parker Gold Ring™ catalog for application information.

#### 2. Positioning

Unit valves may be mounted in any position. It is recommended that unit valves be mounted vertical and upright to prevent accumulation of debris in plunger tube.

#### 3. Piping

Connect piping to valve according to markings on valve body. Apply pipe compound or sealing material sparingly to male pipe threads only. If applied to valve thread, it may enter valve and cause operational difficulties. Pipe strain should be avoided by proper support and alignment of piping. **Do not use valve as a lever when tightening pipe.**

#### 4. Wiring

Wiring must comply with local and national electrical codes.

#### 5. Solenoid Temperature

Standard catalog valves are supplied with coils designed for continuous duty service. When the solenoid is energized for a long period, the solenoid frame becomes hot and can be touched with the bare hand for only an instant. This is a safe operating temperature. Excessive heating will be indicated by the smoke and odor of burning coil insulation.

## **Maintenance:**

### **1. Cleaning**

Periodic cleaning of solenoid valves is recommended. Frequency will depend on fluid and service, but should never be less than every 12 months or 500,000 cycles whichever occurs first. In general, if the voltage to the coil is correct, sluggish operation, excessive leakage or noise will indicate cleaning or repair is required. Clean valve filter or strainer when cleaning valve. See valve disassembly and reassembly instructions below.

### **2. Preventative Maintenance**

- a. Keep media flowing through valve as free from dirt and foreign matter as possible.
- b. While not in service, operate valve at least once a month to insure proper opening and closing.
- c. Periodic inspection (depending on media and service conditions) of internal valve parts for damage or excessive wear is recommended. Inspect at least every 12 months or 500,000 cycles, whichever occurs first. Thoroughly clean all parts. Replace worn or damage parts with Gold Ring™ Rebuild Kit. Use all parts for best results. Clean valve filter or strainer when cleaning valve.

### **3. Troubleshooting Guide**

#### **a. Faulty Controls Circuit**

Check the electrical system by energizing the solenoid. A metallic click signifies solenoid is operating. Absence of click indicates loss of power supply. Check for loose or blown out fuses, open-circuit or grounded coil, broken lead wires or splices.

#### **b. Burned-Out Coil**

Check for open-circuited coil. Replace coil if necessary.

#### **c. Low Voltage**

Check voltage across the coil lead. Voltage must be least 85% of nameplate rating.

#### **d. Incorrect Pressure**

Check valve pressure. Pressure to valve must be within range specified on nameplate.

### **e. Excessive Leakage**

Disassemble valve and clean all parts. Replace worn or damaged parts with a Gold Ring™ Rebuild Kit. Use all parts for best results. Install filtration if indicated. See valve disassembly and reassembly instructions.

### **4. Coil Replacement**

Turn off electrical power supply and disconnect coil lead wires. Refer to exploded view.

### **5. Valve Disassembly and Reassembly (Refer to Exploded Views)**

Turn off electrical power supply and line pressure. Bleed trapped pressure from lines.

- a. To replace coil, remove the two (2) screws and remove the flux frame and coil off the eyelet. Remove coil and spring washer from flux frame. The coil can now be replaced.
- b. Lift off the enclosure tube assembly and the plunger assembly.
- c. All parts are accessible for cleaning or replacement.
- d. Inspect valve body seat for scratches, nicks, dents or other blemishes. Replace if damaged.
- e. Reassemble in reverse order of disassembly, paying careful attention to Exploded Views provided. Apply  $44 \pm 4$  inch pounds of torque to the screws. Lubricate all gaskets with DOW CORNING® DC 200 oil or an equivalent high grade silicone oil.
- f. DO NOT alter, modify, or use parts not obtained in Rebuild Kit from original manufacturer.

## **Parker Gold Ring™ Rebuild Kits**

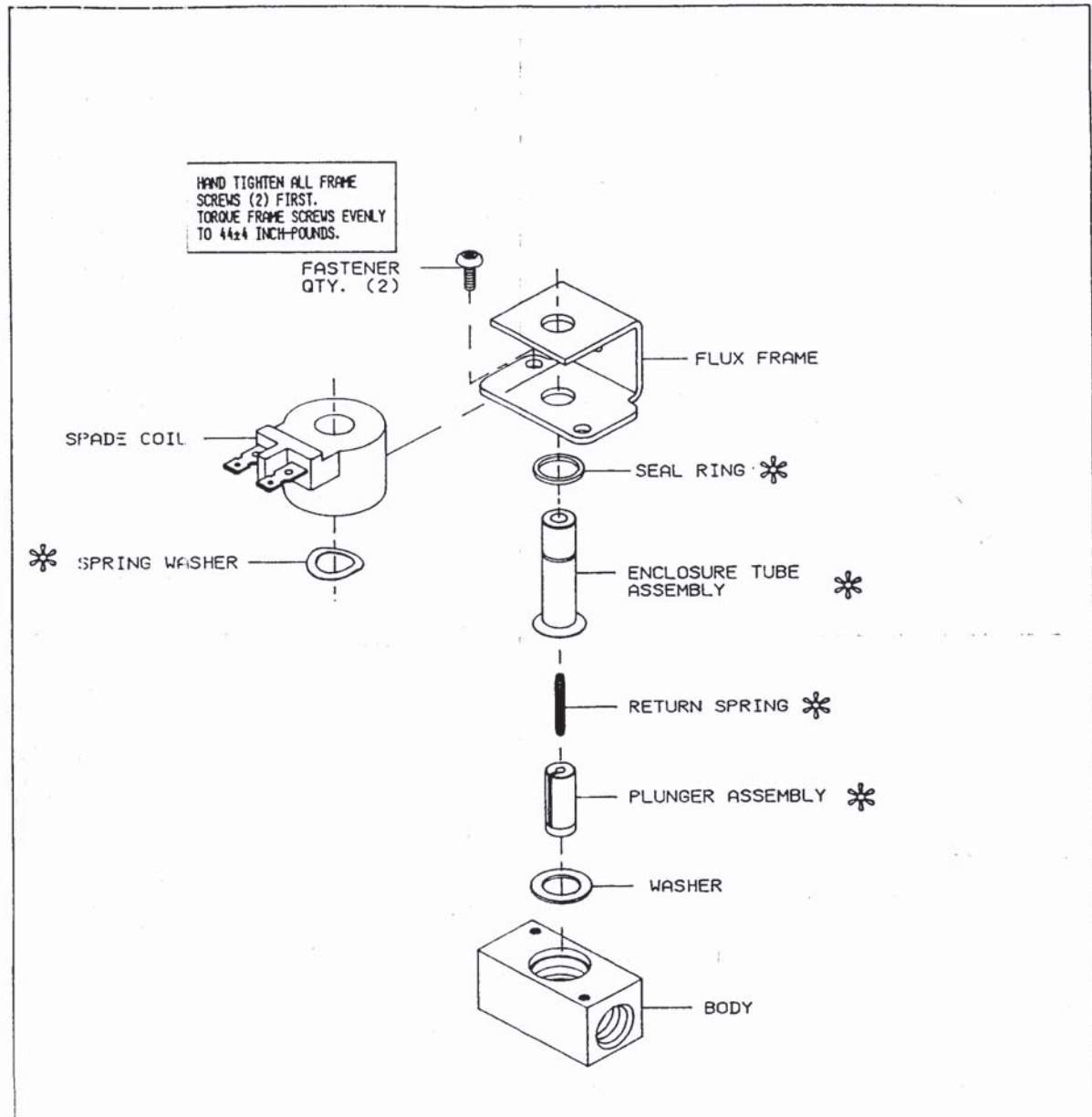
Rebuild Kits and Unit Solenoid are available for Gold Ring™ Valves. Parts marked with an asterisk (\*) are included in Rebuild Kits (See Exploded Views).

## **Ordering Information For Rebuild Kits**

When ordering Parker Gold Ring™ Rebuild Kits or Unit Solenoids, specify Valve Catalog Number, Serial Number and Voltage.



**NORMALLY CLOSED  
3/8" NPT  
ALUMINUM**



**1. Electrical Rating:**

Voltage: 24V  
Frequency: 60HZ  
Rated Current: .294A  
Minimum Current: .237A  
Maximum Current: .337A

**2. Ambient Operating Temperature Limits:**

Maximum 125°F  
Minimum 32°F

\* PARTS INCLUDED IN  
REBUILD KITS

**Parker Hannifin Corporation**  
147 W. Hwy Road  
Madison, MS 39110  
(601) 356-4123





# High Definition Television Antenna

An external antenna is mounted on the roof of your motorhome. This antenna will receive and supply HD signals over the air to your television.

The signal can vary while the motor home is in motion, parked in a fringe area, or near large obstacles. The antenna automatically searches your immediate area to “lock on” to the strongest television signal it can find. Moving the location of your motorhome will affect the strength and quality of your television reception.





# Television Channel Search

The Winegard Rayzar Television Antenna comes with an automatic channel search function.

Press the “search” button in the top right corner to have your antenna search for the strongest television signal in your area. This process could take 3-5 minutes to “lock on” to the signal. The control panel will show how many channels are available to view based on your location and the signal strength. If an error message shows, please consult the operation manual.

You may also search for channels manually by following the instructions in the Winegard Rayzar owner’s manual.





# Insert HD Television Antenna Manual Here



# MOR/ryde Suspension



Ford Chassis are equipped with MOR/ryde suspension enhancements to smooth out the ride and dampen road irregularities. This system has been adjusted for the E-450 chassis and your Coach House motorhome. No adjustments or maintenance should be required for the life of your vehicle.

Warranty and contact information for MOR/ryde is located of the following page.





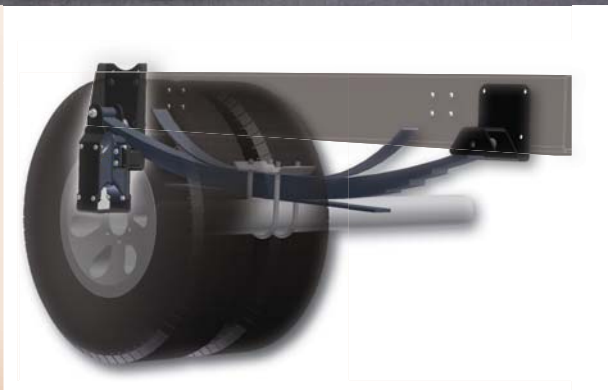
# MOR/RYPDE RS

## TODAY'S ROADS ARE ROUGHER THAN EVER

That is why Coach House specifies the MOR/ryde RS Suspension System for their high quality motorhomes.

At the heart of every MOR/ryde suspension system are unique rubber shear springs. MOR/ryde incorporates rubber's natural ability to isolate and absorb road shock into a suspension system that works in concert with the existing leaf spring suspension system. The result is a suspension system that delivers a markedly smoother ride.

Whether it is chuck holes, dirt roads, railroad tracks, or uneven highways, the MOR/ryde RS suspension works to absorb the harsh road shock. And, the MOR/ryde RS system does all this with no air leaks, compressors, or air lines. That means simplicity of operation and a more cost effective alternative.



### MOR/ryde RS Suspension System LIMITED WARRANTY

#### Summary of Warranty

We, MOR/ryde International, Inc., 1966 Moyer Avenue, P.O. Box 579, Elkhart, Indiana 46515 ("MOR/ryde"), warrant you, the original first purchaser of new MOR/rye rubber suspension system ("Product"), for a period of three (3) years from the date of original first purchase, or use of operation for a distance of seventy thousand (70,000) miles, whichever occurs first ("Warranty Period"), that the Product is free of defects in material or workmanship under normal use and service and will meet or exceed all of our advertised written specifications, excepting items and uses excluded from this Warranty. Labor charges will be covered for 12 months from the date of the original purchase.

## HOW IT WORKS

The MOR/ryde RS System works in conjunction with the chassis drive axle leaf springs. The RS system replaces the leaf spring hanger and shackle with a MOR/ryde hanger and rubber shear spring. The rubber shear spring works to isolate and absorb road shock as the motorhome goes over rough roads, chuck holes, and pot holes. By cushioning and absorbing the road shock, the MOR/ryde RS is able to deliver:

- ▶ A MUCH SMOOTHER RIDE
- ▶ GREATER DRIVER & PASSENGER COMFORT
- ▶ BETTER PROTECTION OF THE MOTORHOME FROM DAMAGING ROAD SHOCK

### MOR/ryde International

1966 Moyer Avenue

P.O. Box 579

Elkhart, Indiana 46515-0579

Phone: 574.293.1581

Fax: 574.294.4936

[www.morryde.com](http://www.morryde.com)



# Hydraulic Room Extension



HWH Hydraulic Room Extensions (Slide Outs) are Standard Equipment on the following models:

221 XL	232 XL	261 XL
271 XL	272 XL	

**Read Owner's manual for room extension system before operating.**

## **To Extend:**

Level motor home and set parking brake before extending slide-out portion.

Turn ignition key to accessory position, turn control panel key to ON position and push switch to extend.

Turn off control panel and ignition switch and remove keys.

## **To Retract:**

Set parking brake, turn ignition to accessory position, turn control panel key to ON and push switch to retract.

Turn off control panel and ignition switch and remove keys.





# Insert HWH Slide Out Manual Here

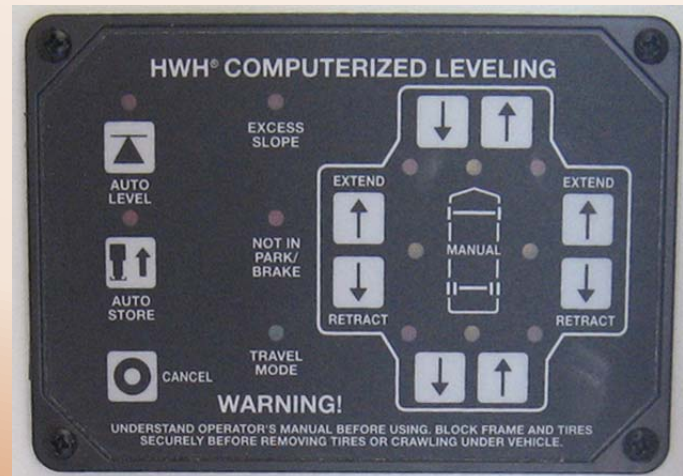


# Fully Automatic Leveling System



Standard on 272 XL Models

Optional Equipment on 220, 221 XL, 232 XL, 261 XL and 271 XL Models



If you purchased the Fully Automatic Leveling System (Leveling Jacks) on your motorhome, the manual is included with your H.W.H. Slide-Out instruction manual. The control panel pictured above is located in the "Tower of Power" just inside the motorhome entrance door to the right.







# Dometic Slide Topper

Your **PLATINUM** has been equipped with a Dometic Slide Topper if you have a hydraulic room extension (slide-out) installed on your motorhome.



The Slide Topper will extend or retract automatically when the slide out is in operation. The slide topper helps to keep debris and water away from the top of your slide-out.

 **Dometic**







RECORD THIS UNIT INFORMATION FOR  
FUTURE REFERENCE:

Model Number \_\_\_\_\_

Serial Number \_\_\_\_\_

Date Purchased \_\_\_\_\_



# SLIDE TOPPER™

## ELITE SLIDE TOPPER MODEL with FULL COVER

86196(XX).(XXX)-(X)

86200(XX).(XXX)-(X)

86202(XX).(XXX)-(X)

86300(XX).(XXX)-(X)

### USA

SERVICE OFFICE  
Dometic Corporation  
2320 Industrial Parkway  
Elkhart, IN 46516  
574-294-2511

### CANADA

Dometic Corporation  
46 Zatonski, Unit 3  
Brantford, ON N3T 5L8  
CANADA  
519-720-9578

For Service Center  
Assistance Call:  
800-544-4881

### ⚠ WARNING

This manual must be read and understood before installation, adjustment, service, or maintenance is performed. This unit must be installed by a qualified service technician. Modification of this product can be extremely hazardous and could result in personal injury or property damage.

### ⚠ AVERTISSEMENT

Lire et comprendre ce manuel avant de procéder à l'installation, à des réglages, de l'entretien ou des réparations. L'installation de cet appareil doit être effectuée par un réparateur qualifié. Toute modification de cet appareil peut être extrêmement dangereuse et entraîner des blessures ou dommages matériels.

## INSTALLATION & OPERATING INSTRUCTIONS

## MODELS

86196 Elite FC

86200 Elite FC

86202 Elite FC

86300 Elite FC

### REVISION

Form No. 3308250.020 7/05

(Replaces 3308250.012)

(French 3308310.022)

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LaGrange, IN 46761

**Important:** These instructions must  
stay with unit.  
Owner read carefully.

# APPLICATION GUIDE

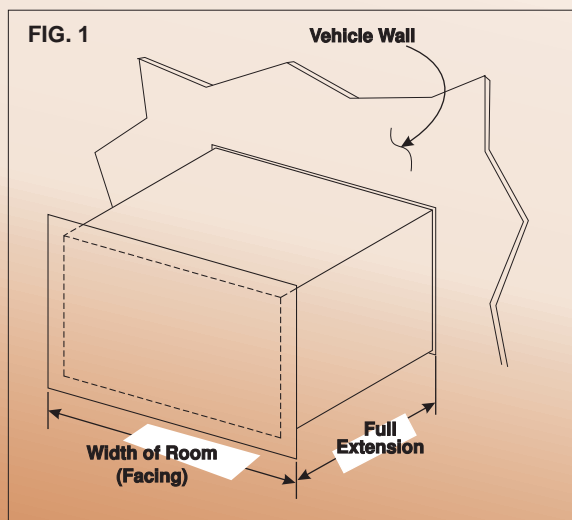
## Models: 86196, 86200, 86202 and 86300 Elite FC

The A&E Slide Topper is designed to protect the top of an RV's slide-out-room from weather and debris. It is not waterproof, some drips, condensation, or wind blown precipitation can be present under the canopy.

### 1. DETERMINE SLIDE TOPPER LENGTH:

To determine the size of Slide Topper you require, measure your room according to the picture below and then use the chart supplied.

The Slide Topper will **NOT** work on rooms with a full extension greater than 44 inches.



### 2. DETERMINE BRACKETS REQUIRED FOR THE SLIDE OUT:

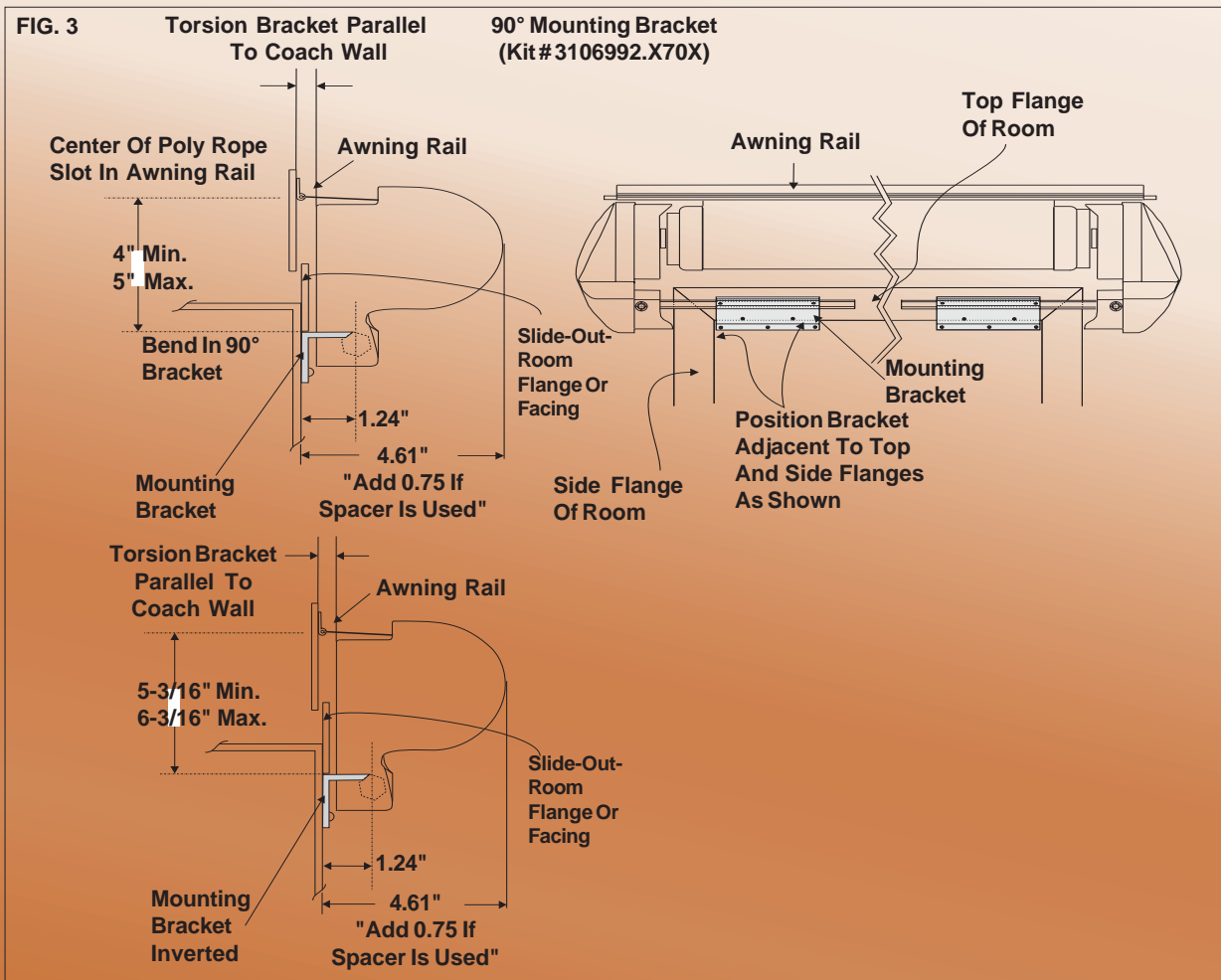
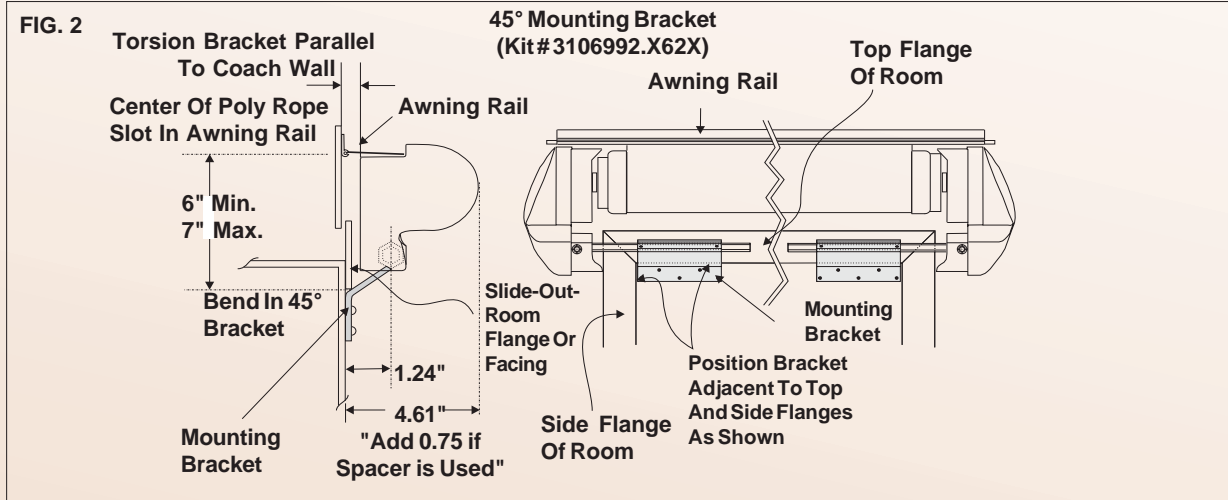
- 3106992.062(X) Bracket Kit
- 3106992.162(X) Bracket Kit (See Note)
- 3106992.070(X) Bracket Kit
- 3106992.170(X) Bracket Kit (See Note)

**Note:** Use **ONLY** with 86(XXX)(XX).060 Models.

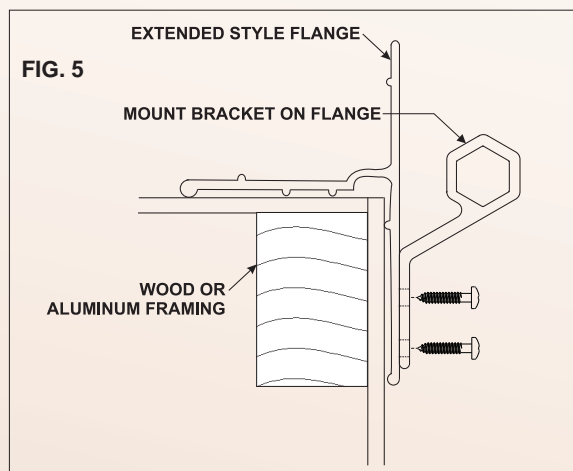
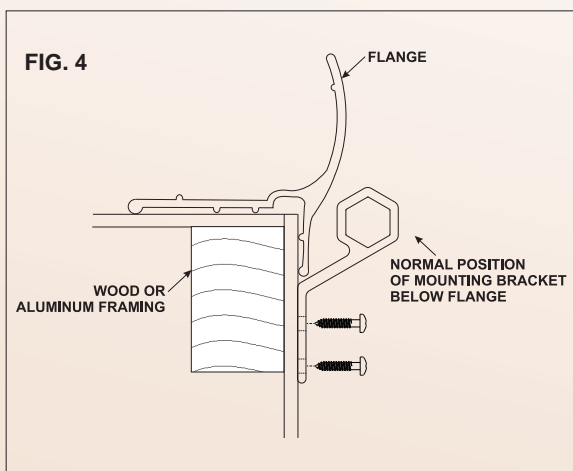
Width Of Room	Recommended Awning Length
50" to 55-3/4"	(See Note)
56" to 61-3/4"	66"
62" to 67-3/4"	72"
68" to 73-3/4"	78"
74" to 79-3/4"	84"
80" to 85-3/4"	90"
86" to 91-3/4"	96"
92" to 97-3/4"	102"
98" to 103-3/4"	108"
104" to 109-3/4"	114"
110" to 115-3/4"	120"
116" to 121-3/4"	126"
122" to 127-3/4"	132"
128" to 133-3/4"	138"
134" to 139-3/4"	144"
140" to 145-3/4"	150"
146" to 151-3/4"	156"
152" to 157-3/4"	162"
158" to 163-3/4"	168"
164" to 169-3/4"	174"
170" to 175-3/4"	180"
176" to 181-3/4"	186"
182" to 187-3/4"	192"



**Note:** The greater the distance between the awning rail and the mounting bracket, the better water and debris will run off, however, **DO NOT** exceed maximum distances shown. Exceeding these recommended distances will result in the wind deflector interfering with drip/gutter rails.

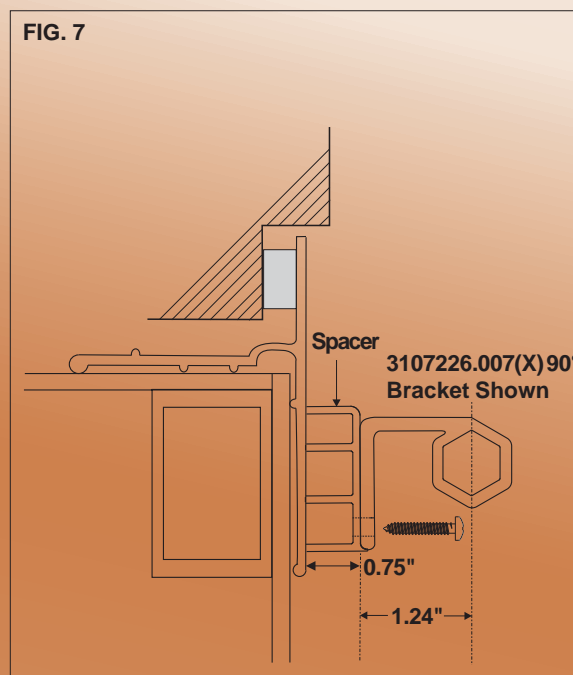
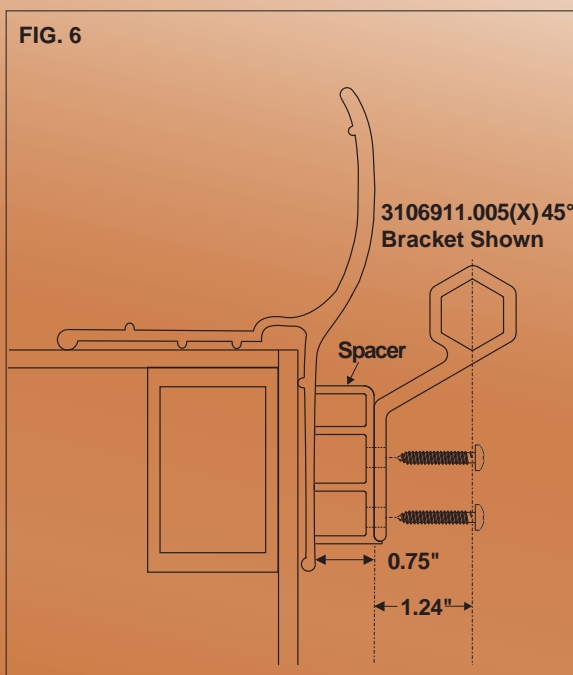


When installing the A&E Slide Topper on vehicles with extra large slide-out-room flanges, it may be necessary to install the mounting bracket directly on the flange. See FIG. 5.



### 3107940.003 SPACER KIT

**Important:** Spacer Kit can be installed when additional clearance is required between the slide topper and the outside wall of the RV which is the case with recessed rooms. When 3107940.003 Spacer Kit is used, the center support bracket will also need to be spaced properly. Use 3308393.002 Center Support Bracket Spacer Kit.



## SAFETY INSTRUCTIONS

This manual has safety information and instructions to help users eliminate or reduce the risk of accidents and injuries.

## RECOGNIZE SAFETY INFORMATION



This is the safety-alert symbol. When you see this symbol in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating instructions.

## UNDERSTAND SIGNAL WORDS

A signal word, **WARNING** OR **CAUTION** is used with the safety-alert symbol. They give the level of risk for potential injury.

**⚠ WARNING**: Indicates a potential hazardous situation which, if not avoided, could result in death or serious injury.

**⚠ CAUTION**: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

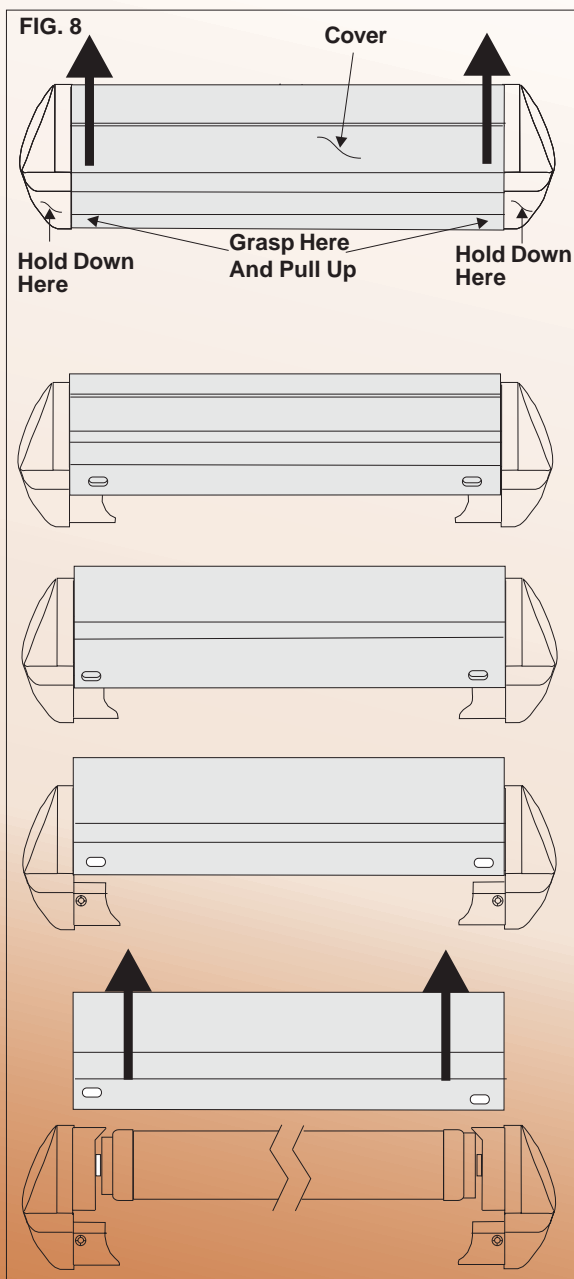
**CAUTION**: Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Read and follow all safety information and instructions.

Learn how to operate the awning properly.

## GENERAL INFORMATION INSTALLATION PREPARATION

1. Remove slide topper from the shipping tube.
2. Remove plastic bag from around slide topper.
3. Lay slide topper on a clean flat surface.
4. Grasp the cover at the bottom edge near one end of the torsion brackets and pry the cover up approximately 1-2" with one hand while holding the torsion bracket with the other hand. Repeat the same process at the other end and continue lifting the cover until it can be fully removed. See FIG. 8. Lay cover aside.



5. Roll slide topper over and remove all mounting hardware, literature and hex extension bars if they have been included with the slide topper.

## ⚠ WARNING

Do not remove the cotter pins located on each end of the FRTA until instructed to do so. The FRTA is pre-wound and under tension. Rapid spin-off will occur if the cotter pin is removed.

## 6. Check installation hardware against the following list.

		86196	86200	86202	86300
	730099-(X) Awning Rail	X	—	—	—
(1)	3308241.003(X) Kit, Center Support Bracket	X	X	X	X
(1)	3105445.013 Screw, #10-12 x 1.0 PHCR	X	X	X	X
(2)	3105445.013 Screw, #10-12 x 1.0 PHCR	X	X	X	X
(4)	312300.041 Screw, 1/4"-20 x 5/8" PH	X	X	X	X
(2)	3307879.002 Screw, #10-32 x .50"	X	X	X	X
(1)	3106806.049 Kit, Hardware	—	X	—	X
(10)	3105445.013 Screw, #10-12 x 1.0"	—	X	—	X
(2)	310359.012 Screw, #6-20 x .44 HHW	—	X	—	X
(4)	3103855.023 Screw, 10-16 x .63"	—	X	—	X
(2)	3106792.041Q 15" Hex Extension Bar	—	*X	—	*X
(2)	3106911.005(X) 45° Wall Bracket	—	X	—	—
(2)	3107226.007(X) 90° Wall Bracket	—	—	—	X
(1)	3307879.002 Screw, 10-32 x .50	X	X	X	X
(1)	3308276.009(X) Kit, Z-Clip	—	—	—	X
(4)	3105445.006 Screw, 10-12 x 0.75	—	—	—	X
** (1)	3106992.(XXX)-(X) Kit, Wall Bracket	X	—	X	—

\* Except 86(XXX)(XX).060-(X) Use 3106792.058Q 18" Hex Extension Bar

\*\* Wall Bracket Kit is ordered separately. It does not come with the Slide Topper Fabric Roller Tube Assembly. The kit numbers are: 3106992.062(X) 45° Wall Bracket Kit w/15" Hex Extension Bar  
3106992.070(X) 90° Wall Bracket Kit w/15" Hex Extension Bar  
3106992.170(X) 90° Wall Bracket Kit w/18" Hex Extension Bar

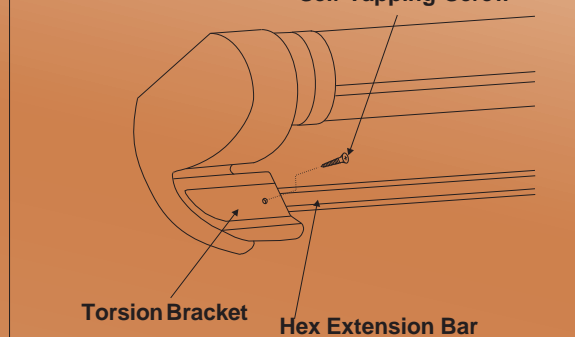
NOTE: Replace (X) with color letter code

B = Polar White H = Mende  
S = Satin R = Champagne  
U = Black V = Gold

## INSTALLATION INSTRUCTIONS

1. Install awning rail. Some slide topper models are not furnished with awning rail. If not supplied with slide topper, installer will need to furnish. See figure 2 and 3 to determine the correct location for the awning rail. Apply a sealant to the back edge of the awning rail to prevent leaks, and install the awning rail using #6-20 x 1/2" screws. The rail must be FIRMLY mounted to the vehicle.  
Remove any drip shields or flashings which conflict with the awning.
2. Install one (1) hex extension bar in the torsion bracket hexslot. Press into hole until hexrod bottoms out. See FIG. 9. (Some applications will have one hex extension bar already secured to the torsion bracket when received from Dometic.)

**FIG. 9** #10-32 x 1/2" Self-Tapping Screw

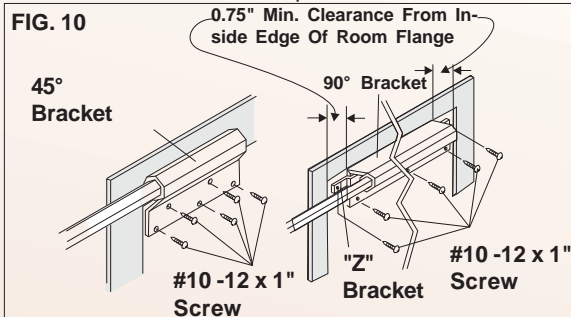


3. Locate and install slide topper wall mounting brackets on the slide-out-room wall with ten (10) #10-12 x 1" PHCR screws provided. See FIG. 10. Position bracket as shown in FIG. 2 & 3. Install "Z" clips at the top of the bracket as shown in FIG. 10. Pre drill the hole with a 1/8" drill bit and install screw.

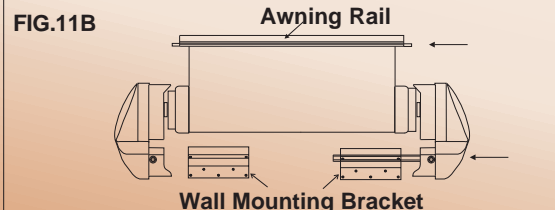
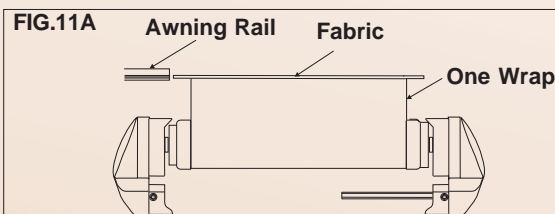
**Note:** If the vehicle has a laminated wall, mark and drill hole

locations with a 3/16" drill bit and use expanding rivets to secure the bracket and "Z" clips.

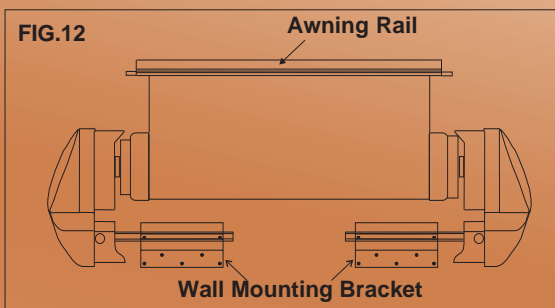
**FIG. 10**



4. Unroll **ONE** wrap of fabric from the fabric roller tube. See FIG. 11A.
5. Move slide topper awning and remaining hex extension bar to RV and install fabric into the awning rail. See FIG. 11A & 11B. Slip the pre-mounted hex extension bar into one previously mounted wall mounting bracket on the slide room as the fabric is installed into the awning rail. See FIG. 11A & 11B.

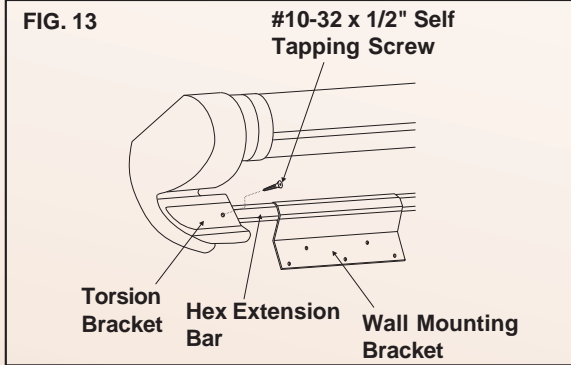


6. Install the second hex extension bar through the previously mounted wall mounting bracket and into the torsion bracket. Again, press into hex hole until hexrod bottoms out. See FIG 12.



**Important:** Do not secure either hex extension bar to the wall mounting brackets at this time.

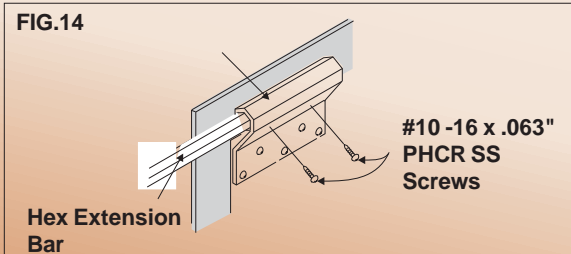
FIG. 13



7. Position the slider topper appropriately (center between wall mounting brackets )

**Important:** Do not secure the hex extension bars to the wall mounting brackets at this time.

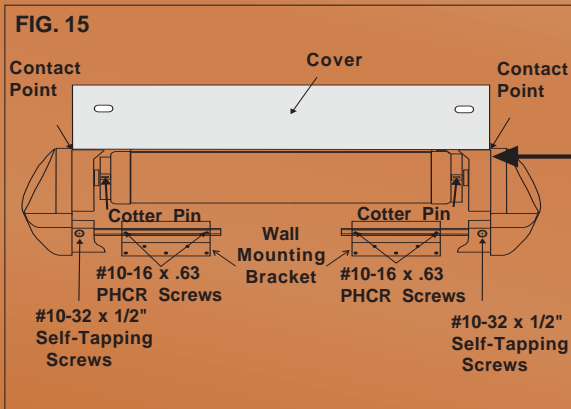
FIG. 14



8. Retrieve the cover and slide the center mounting bracket to the center of the cover. See FIG. 18. Now place it upside down on top of the torsion brackets, allowing it to rest on the inside flange of the torsion brackets. See FIG. 15.

**Important:** Care must be taken to keep the cover from inadvertently falling off the torsion brackets while performing the next step.

FIG. 15

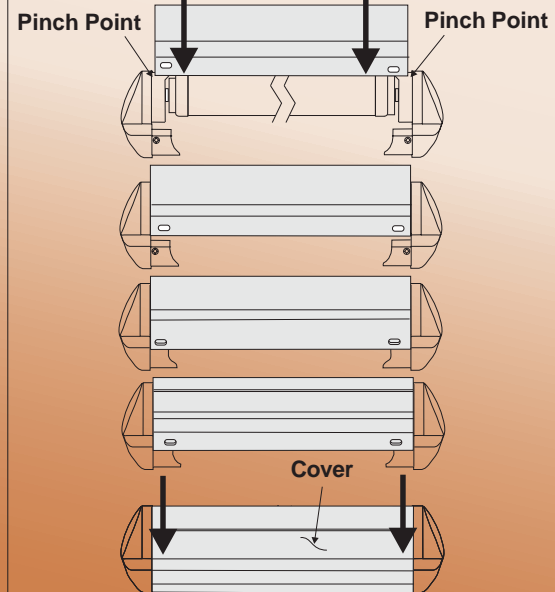


9. Move one torsion bracket until cover touches both contact points. See FIG. 15.
10. Remove the cotter pin by pulling it straight out. See FIG. 15.
11. Now secure the hex extension bars to the wall mounting bracket using 4 #10-16 x .63" PHCR SS self drilling screws. Predrill hexrod through holes (dim. 11/64") in torsion bracket. Secure torsion brackets to hexrod using 10-32 x 1/2" self tapping flathead screws provided. Take care not to change torsion bracket position during this step; torsion bracket should have back edge parallel to coach wall before, during, and after this step. See FIG. 2,3,14,and 15.
12. Roll cover downward and push it straight onto the torsion brackets until it "snaps" into place. See Fig. 16. To avoid being pinched, keep fingers and hands away from the area between the cover and torsion brackets.

### CAUTION

**Pinch point. Keep fingers and hands away from the area between the cover and the torsion brackets.**

FIG. 16



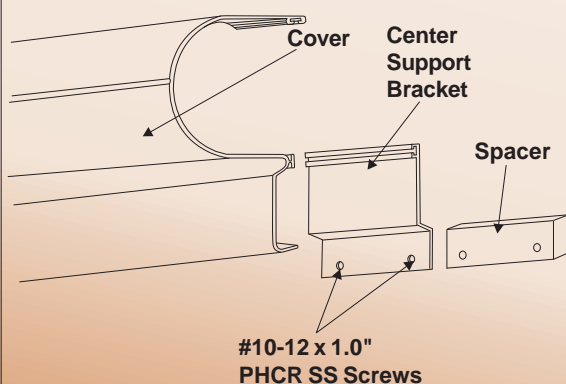


13. Initial Awning Adjustment-Cycle the slide-out-room four or five times to align fabric. When satisfied with the alignment, secure fabric by driving a #6-20 x .44" Tek screw through the rail and into the fabric rope. See FIG. 17 for screw location. Repeat at opposite end.

FIG. 17

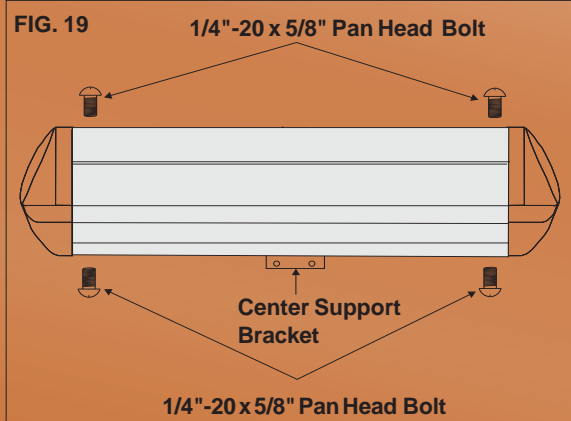


FIG. 18



14. Adjust cover from side to side if necessary. Equally space the distance between the cover and the torsion bracket on both ends.
15. Secure cover to torsion brackets using one (1) 1/4"-20 x 5/8" pan head bolt provided in each corner of the cover. See FIG. 19.

FIG. 19

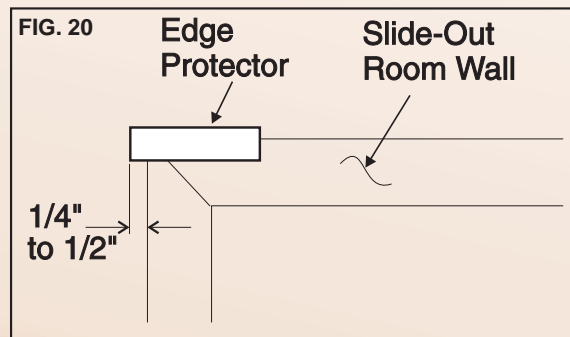


16. Attach center support bracket to slide-out-room wall using two (2) #10-12 x 1.0" PHCR SS screws provided. See FIG 18 & 19. If 3107940.003 Spacer Kit was used to space the wall mounting bracket the center support bracket will need to be spaced as well. Use 3308393.002 Center Support Spacer Kit. If there is no spacer behind the center support bracket, oscar rivets (not supplied) may be used if there is no backing behind the outside skin of the RV.

17. Install (not supplied) edge protector on each end of slide-out-room molding. See FIG. 20. Allow protector to extend beyond edge of molding by 1/4" to 1/2".

**Note:** Not all installations will be able to use a Dometic edge protector. If a Dometic edge protector is not used, a similar type **MUST** be used. Units which are damaged by the slide-out-room will **NOT** be covered under warranty.

FIG. 20



**Note:** Oscar rivets and edge protectors are available as separate items.

113008P10 Oscar Rivet=Package of 10

113008P100 Oscar Rivet=Package of 100

3308176.001 Edge Protector=Package of 10

3308176.019 Edge Protector=Package of 100

## OPERATING INSTRUCTIONS

The slide topper will automatically open and close as your slide-out-room opens and closes.

Because the awning is level, water may puddle on top of the canopy. As the slide out room is closed and the awning rolls up, these puddles will spill over the sides of the awning.

### CAUTION

**Do not use the slide topper in snowing or freezing-rain conditions. Such use will prevent the awning from retracting with the slide room and damage the awning and the slide-out-room.**

### HELPFUL HINTS FOR AWNING CARE

- If the awning is wet when rolled up, as soon as conditions allow, roll it out and let it dry before rolling it up again. This will help prevent mildew and staining.
- **WHEN TO GET MORE HELP:**  
If malfunctions occur that cannot be corrected by reviewing this installation and operating instructions manual, contact a Dometic Service Center or qualified service technician for assistance. For Service Center Assistance Call 800-544-4881.



A&E Systems

## LIMITED ONE (1) YEAR WARRANTY

THE SELLER NAMED BELOW MAKES THE FOLLOWING WARRANTY WITH  
RESPECT TO THE DOMETIC PRODUCT:

1. This Warranty is made only to the first purchaser (hereinafter referred to as the "Original Purchaser") who acquires the product for his own use and is installed and operated within the continental United States and Canada.
2. This Warranty will be in effect for one (1) year from the date of purchase by the original purchaser. It is suggested that the original purchaser retain a copy of the dated bill of sale as evidence of the date of purchase.
3. This Warranty covers only specified parts which shall be free from defects in material and workmanship under normal use. This warranty does NOT cover conditions unrelated to the material and workmanship of the product. Such unrelated conditions include, but are not limited to: (a) damage not reported within seven (7) days of ownership; (b) failure or damage caused by storms, rain, water pooling, or any acts of God; (c) faulty installation and any damage resulting from such; (d) the need for normal maintenance and any damage resulting from the failure to provide such maintenance; (e) failure to follow Sellers instructions for use of this product; (f) any accident to or misuse of any part of this product and any alteration by anyone other than the Seller or its authorized representative; (g) damage or failure caused by installation of accessories not manufactured and marketed by the Seller; and (h) normal wear and product abuse.
4. The specified parts covered by this warranty, where applicable, are as follows: (a) Roller tube against rust, corrosion and extrusion defects; (b) Fabric free from quality defects (normal wear is not covered); (c) Screen assemblies free from quality defects (normal wear is not covered); (d) Torsion assemblies, including motor-driven assemblies, against extrusion defects, electrical faults, or breakage; and (d) Hardware against extrusion defects.
5. In order to obtain the benefits of this warranty, you should return the product which you find defective to the Seller named below or to a Dometic Authorized Service Center during the period that this warranty is in effect. The original owner is responsible for all charges incurred in delivery of the product to the Seller, or Dometic Authorized Service Center, and in pick up after the warranty service has been completed. To obtain the location of the nearest Authorized Service Center, please call 1-800-544-4881. In Canada, call 1-519-653-4390.
6. Any item returned in the manner described in paragraph 5 will be examined by the Seller or the Authorized Dometic Service Center. If it is found that the returned item was defective in material and workmanship, the Seller or the Authorized Dometic Service Center will repair the product per the terms of this one (1) year limited warranty without charge for material or labor during the first year of ownership by the original purchaser. **CONFIRM THE SERVICE AGENCY IS AN AUTHORIZED DOMETIC SERVICE CENTER. DO NOT PAY THE SERVICE AGENCY FOR WARRANTY REPAIRS. SUCH PAYMENTS WILL NOT BE REIMBURSED.**
7. Dometic Corporation will pay freight on replacement parts during the first ninety (90) days of ownership by the original purchaser.
8. The Seller does not authorize any person or company to create any warranty obligations or liability on their behalf. This warranty is not extended by the length of time which you are deprived of the use of the product. Repairs and replacement parts provided under the terms of this warranty shall carry only the non-expired portion of this warranty.
9. In no event shall either Seller be liable for incidental or consequential damages. This includes any damage to another product or products resulting from such a defect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply.
10. Any implied warranty, including the implied warranty of merchantability and fitness for any purpose, is limited to the duration of this limited warranty. Some states do not allow limitations on how long an implied warranty can last, so the above limitation may not apply.
11. **THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.** No action to enforce this warranty shall be commenced later than ninety (90) days after the expiration of the warranty period. Claims must be submitted in writing to the Dometic Warranty Department for arbitration.
12. All products (except those specifically built for commercial use) are warranted only when installed on vehicles built to R.V.I.A. and C.R.V.A., Z-240 Standards.
13. The Seller reserves the right to change the design of any product without notice and with no obligation to make corresponding changes in products previously manufactured.

### REVISION

Form No. 3104715.044 6/05  
(Replaces 3104715.036)  
(French 3108128.038)  
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LaGrange, IN 46761 U.S.A.

### DOMETIC CORPORATION

Warranty Department  
2320 Industrial Parkway  
Elkhart, Indiana 46515  
Phone: 574-294-2511  
Fax: 574-389-3975



The Sign of Comfort



# Automatic Entry Step

Kwikkee Entry Steps will automatically extend and retract when you open the main entrance door to your motorhome. If you would like the step to stay in the “open” position when you are parked, flip the “override” switch located on the main switch panel just inside your motorhome door.

*Kwikkee*







# Insert Kwikkee Installation Manual #888 Here



# MCD American Duo Roller Shades

Your coach is equipped with MCD American Duo Roller Shades. This system allows you to use the Day Shade or the Night Time Privacy Shade. Refer to the MCD Innovations Owner's manual for care and warranty instructions.



3303 N. McDonald St.  
McKinney, TX 75071  
972.548.1850  
800.804.1757  
[www.mcdinnovations.com](http://www.mcdinnovations.com)



# Insert MCD American Duo Owner's Manual Here





# Illumagrip Entry Handle

Entry Handles installed by Coach House Motorhomes are illuminated by L.E.D. bulbs which are connected to the outside lighting circuits. These handles will light up when the porch/step light circuit is turned on. Follow the care and cleaning guide on the following page for a long life of these handles.





# Caring for your IllumaGrip™ Assist Handles

## CLEANING:

These handles must be cleaned with mild soap and water only.

Use of any harsh or abrasive cleaning agents will void all warranties.

Clean with lukewarm water a mild, nonabrasive cleaner and a clean, soft cloth.

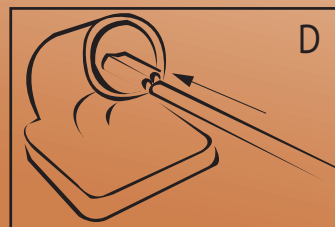
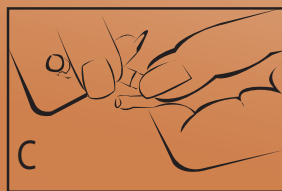
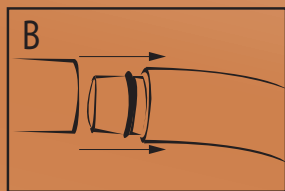
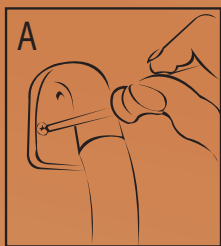
Use only light pressure and avoid rubbing dirt or grit into the surface.

Turn the cloth often and replace with a clean cloth frequently.

## LED CHANGING:

Many of our handles are lit with an LED assembly in the end cap. If you need to replace the LED, follow these simple instructions.

1. Remove the screws holding the handle to the mounting surface. (See Fig. A)
2. Gently pull the handle from surface, being careful not to pull too hard on the wiring.
3. Remove the top end cap where the LED is housed. (See Fig. B)
4. Locate the LED assembly wiring that will exit the top end cap.
5. Pull the quick disconnect fittings apart. (See Fig. C) Be careful not to let the wiring fall back into the wall.  
We suggest taping the wiring to the side of the mounting surface until you're ready to connect the new LED
6. Push the LED wires until the LED assembly exits the front of the end cap.
7. Pull the LED completely out of the end cap.
8. Push the new LED assembly into the front of the end cap making sure the wires exit through the back side of the end cap. (See Fig. D)
9. Connect the quick disconnect fittings from the new LED assembly to the wiring.
10. Bring power to your light to make sure that the connection is correct. LEDs are polarity sensitive.  
If the LED will not light, reverse the connections (quick disconnect fittings)
11. Push the wiring into the wall and reattach the screws holding the handle to the wall.



CORPORATE: 230 E. Lakewood Blvd., PO Box 8338, Holland, MI 49422-8338

Phone: 616-396-1355 ~ Fax: 616-396-1152

ELKHART: 1015 Verdant, Elkhart, IN 46516

Phone 574-389-8986 - Fax: 574-389-8687

E-Mail: [sales@itc-us.com](mailto:sales@itc-us.com)

Websites: [www.itc-marine.com](http://www.itc-marine.com); [www.itc-rv.com](http://www.itc-rv.com); [www.itc-industrial.com](http://www.itc-industrial.com)

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# IllumaGrip™ Installation Instructions

The IllumaGrip™ series of assist handles are shipped completely assembled and either glued or taped in final installation position. This assure that the handle will be in the correct orientation when installed on your unit. In order to maintain the correct orientation of the components, the following installation procedure is recommended.

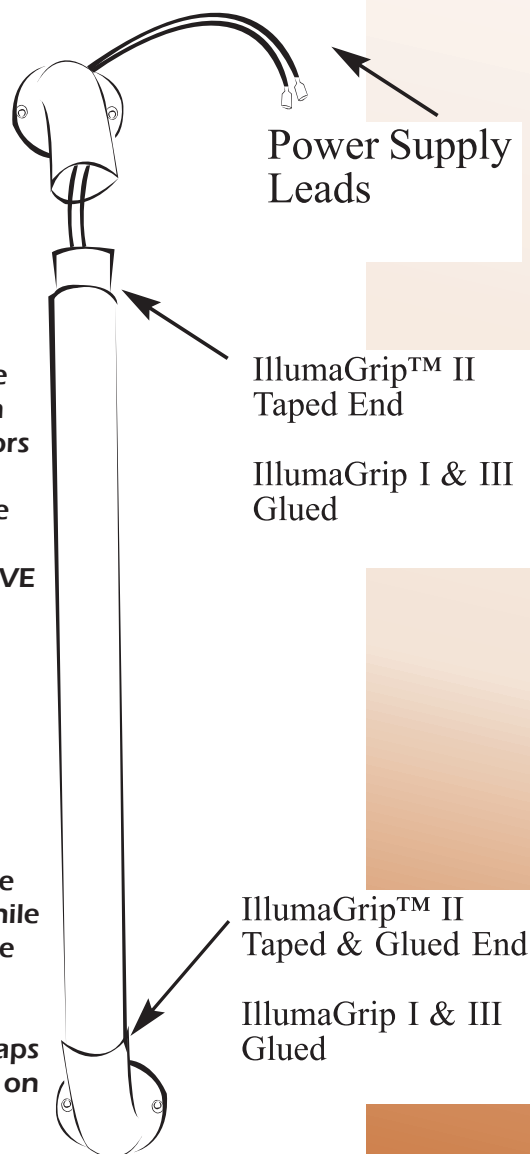
## NOTE:

IllumaGrip™ II end caps are shipped with tape around the joints between the acrylic handle and the end cap. Leave this tape in place until installation in complete. IllumaGrip™ I and III end caps are glued to the acrylic.

## MOUNTING YOUR HANDLES:

1. Align the IllumaGrip™ in the desired mounting location and mark screw holes.  
**IF YOUR HANDLE IS UNLIT, PROCEED WITH STEPS 3-5**  
**IF YOUR HANDLE IS LIT WITH AN LED:** Pre-drill the wire access hole through the wall and locate the connection wiring. Connect the supplied wire pigtail and connectors to your internal wiring. Test the light.  
**CAUTION:** LED's are polarity sensitive. The **BLACK** wire must connect to the **POSITIVE** side of the vehicle's 12 volt line. The **WHITE** wire must connect to the **NEGATIVE (GROUND)** of the vehicle's 12 volt line.

2. Feed the wires from the top end cap through the hole you made in step 1.
3. Install #8 flat head screws to mount the end caps.
4. Apply a slight downward pressure on the top end cap may assist in alignment of the top end cap of the handle to the unit and hold the end cap firmly to the acrylic while installing. Torque all screws to the point where they are firmly seated into the countersink of the base.
5. Remove the shipping tape (if present) from both end caps where they join to the acrylic and the protective sleeve on the acrylic (if present).



CORPORATE: 230 E. Lakewood Blvd., PO Box 8338, Holland, MI 49422-8338  
Phone: 616-396-1355 ~ Fax: 616-396-1152

ELKHART: 1015 Verdant, Elkhart, IN 46516  
Phone 574-389-8986 - Fax: 574-389-8687

E-Mail: sales@itc-us.com

Websites: www.itc-marine.com; www.itc-rv.com; www.itc-industrial.com 0905



#### ITC INCORPORATED CONDITIONS OF SALE (Quotation/Confirmation)

- Expiration of Quotation. Any quotation by ITC, Incorporated ("ITC") will be held open for acceptance for a period of 60 days from the date of the quotation; however, ITC reserves the right to correct clerical and typographical errors, including price and quantity numbers, within 15 days after acceptance of an order based on the quotation.
- Acceptance. This order is subject to the following terms and conditions. Terms stated by the Buyer in any other communication, prior or subsequent hereto, shall NOT be binding on ITC if different from or in addition to any of the provisions hereof or the quotation, unless expressly agreed to in writing by ITC. Acceptance by the Buyer of this order, orally or in writing, or of any goods provided hereunder or payment therefore, shall constitute acceptance of these terms and conditions.
- Payment. Payment is due on a NET 30 DAYS basis unless otherwise agreed in writing. All payments not made by the due date shall bear interest at a rate of 1½% per month. If the Buyer fails to fulfill the terms of payment, or ITC has any doubt at any time as to the Buyer's financial responsibility, ITC may either decline to make further deliveries except upon receipt of cash or other satisfactory security, or may terminate the entire agreement. The Buyer shall reimburse ITC for any costs of collection incurred in collecting any past due sums, including attorneys' fees. To secure the Buyer's obligation to pay ITC the purchase price of the goods, the Buyer grants to ITC a security interest in the goods and any proceeds thereof, with full rights as a secured party under the Uniform Commercial Code, and the Buyer appoints ITC as its attorney in fact to sign any financing statements evidencing such security interest on behalf of the Buyer.
- Shipment and Risk of Loss. The Buyer shall take delivery of the goods F.O.B. ITC's facility, unless otherwise agreed in writing. Method and route of shipment are at ITC's discretion, unless the Buyer supplies instructions otherwise. All expenses and risks of loss or any damages incurred in the transportation of the goods, including any risks of loss in loading or unloading, shall be borne solely by the Buyer, unless otherwise specified. All claims for loss, damage or delay against the carrier must be made by the Buyer. The Buyer shall accept partial delivery of any order and any defect related to said partial delivery or failure to make any subsequent partial delivery shall be severable and not constitute a breach of the entire agreement. Freight shall be shipped on ITC's shipper account unless otherwise agreed to between ITC and Buyer. To qualify for shipping collect (against Buyer's account number), the customer must be in good standing and have reached a minimum of US\$10,000 in annual sales with ITC. If freight for a collect account is invoiced back to ITC for any reason, ITC reserves the right to charge Buyer all the associated freight along with a fee of \$50 for processing. For Buyers with credit card payment terms, freight collect shipments from ITC will not be allowed.
- Delays and Damages. ITC shall attempt to make deliveries in accordance with its quotation or production order, but if for any reason ITC fails to make such deliveries or to make them within the time stated, or cancels any order, ITC shall not be liable for any loss or damage resulting from any such failure or delay in delivery, or from any such cancellation or for loss of use or loss of profits, or for any other consequential, incidental or special damages on account of delay in delivery.
- Rejection of Non-Conforming Goods. The Buyer must notify ITC in writing of any rejection of goods deemed non-conforming within 6 months of delivery. The notification shall identify each alleged non-conforming of the goods and describe that portion of the shipment being rejected. If the Buyer shall fail to give such notice or if the Buyer uses the goods in any manner inconsistent with the rights of ITC, the goods shall be deemed to conform to the terms hereof in all respects and the Buyer shall be bound to accept and pay for the goods in accordance with these terms.
- Cancellation or Modification. Any order accepted by ITC may be canceled or modified by the Buyer only upon the written approval of ITC. The Buyer shall reimburse ITC for all expenses incurred by ITC in connection with such order, including without limitation for engineering drawings and materials. Custom parts specifically designed and/or manufactured for the Buyer are subject to notification in writing to ITC by the Buyer in the event of any one of the following occurrences: 1) the termination of any program that would affect the custom part purchases, 2) any engineering change pertaining to the custom part, and 3) any decision that would cause the Buyer to cease purchases of the custom part. In any one of these occurrences, other than non-performance by ITC, the Buyer agrees to pay ITC for inventory held by ITC.
- Limited Warranty and Limitation of Remedy and Damages. ITC warrants the goods to be free from defects in material or workmanship under normal operating conditions from the date of delivery, regardless of the date of installation or first use. In the event Buyer supplied the drawings for the goods, ITC's warranty is further limited to manufacturing the goods to the specifications on the drawings and ITC assumes no obligation or liability for design and/or fitness for particular purpose. Any claim under this warranty shall be deemed waived unless ITC is notified within 30 days of the discovery of the defect and given the opportunity to inspect such defect, and, if necessary, the goods are returned to ITC. ITC's obligation under this warranty shall be LIMITED, at its option, to the modification, repair or replacement of the goods by ITC. In no event shall ITC be liable for consequential, incidental or special damages, loss of profit or production, or for transportation, installation or other costs associated with the goods. THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. This warranty shall not apply to any goods which have been subject to abuse, accident, alteration or misuse.
- Limitation of Liability. ITC's liability on any claim of any kind, including negligence, strict or product liability, or breach of warranty or contract, for any loss or damage arising out of or connected with this contract, or the performance or breach thereof, or the manufacture, sale or use of the goods furnished hereunder shall in no case exceed the price allocable to such goods which gives rise to the claim, and shall not include any liability for any consequential, incidental or special damages.
- Reliance Upon Buyer's Information. In the preparation of the quotation and the goods, ITC has relied on information supplied by the Buyer. In the event such information is inaccurate, ITC shall not be liable for any claim resulting from such inaccurate information, including negligence, strict or product liability, or breach of warranty or contract, with respect to the goods, the performance of breach of this contract, or any defects of design, material or workmanship.
- Indemnification. Buyer shall defend, indemnify and hold harmless ITC and its agents from any claims, damages or expenses including attorneys' fees, arising or alleged to arise from any asserted deficiencies or defects in the goods caused by any alteration thereof with or without ITC's consent made by the Buyer, the improper handling, storage or installation by the Buyer, or any action taken by the Buyer which voids the UL certification.
- Non-Performance. Neither party shall be liable to the other for failure to perform its obligation in whole or in part when performance is prevented by flood, drought, fire or any other casualty, war, riot, insurrection, acts of God, restrictions or interference by any government or governmental agency, strike, labor action, or any similar cause beyond the control of the party failing to perform, for the period during which such cause of failure exists.
- Limitation Period for Bringing Action. No action may be commenced to enforce this contract or for any breach hereof, or for any defect or deficiency of the goods to be delivered hereunder, whether on warranty, contract, negligence, or strict products liability, unless such action is brought within 12 months after accrual of such cause of action.
- Choice of Law and Forum. This contract shall be governed by the laws of the State of Michigan, notwithstanding any state's choice of law rules to the contrary. The Buyer consents and agrees that any action brought to enforce this contract, or for any breach hereof, or for any defect or deficiency of the goods to be delivered hereunder, whether on warranty, contract, negligence, or strict products liability, shall be brought solely in a state or federal court sitting in the State of Michigan, and the Buyer consents and submits to the jurisdiction of such court.

#### GENERAL PRODUCT LIMITED WARRANTY

ITC warrants, to the original consumer, that the product will be free of defects in materials and/or workmanship for the period of time set forth herein. This warranty period will begin from the later of the original date of purchase of the product or the date of sale of the recreational vehicle or boat in which the product is installed is first sold to the first consumer provided that adequate documentation of said consumer sale date is provided to ITC. Adequacy of the authenticity of the consumer sale date will be determined by ITC in its sole discretion. In the event the consumer sale date is not provided or not determined to be adequate by ITC, then the warranty period will begin on the original date of purchase of the product from ITC. Except as set forth below, this general product limited warranty will extend for three years. All exterior faucets, exterior showers, exterior plumbing products, and clocks will have a one year warranty period. All assist handles will have a two year warranty period, provided that crazing caused by chemical attack from a contaminant is not covered by any warranty. Products that are primarily comprised of 316 stainless steel will have a five year warranty period. Bulbs, including halogen, incandescent, xenon, and light emitting diodes (LEDs) are excluded from the warranty.

**MAXIMUM LIABILITY** ITC's liability to repair or replace a damaged item shall be limited to the original purchaser of the item at the original invoice price of the damaged unit, acceptable labor charges, acceptable freight charges, and dealer charge backs mandated by state law. ITC will not credit customers for excessive labor or freight charges or unauthorized dealer or customer markup fees. Acceptable freight and labor charges are available from ITC upon request.

**INSPECTION** ITC reserves the right to review the damaged product and the site where the damage occurred. ITC may require the purchaser to ship the item to ITC for inspection. The damaged item must remain available for inspection until the claim is finalized. In the event ITC requests to inspect the product, it agrees to dispatch its findings pertaining to the alleged defective product within 45 days of receiving the product. Whenever claims are settled, ITC reserves the right to be subrogated under any existing insurance policies the purchaser may have.

**EVENTS THAT VOID WARRANTY** All above warranties are null and void if any one or more of the following events occurs: (a) the item is not provided to ITC for inspection upon ITC's request; (b) ITC determines that the item has been improperly installed, altered in any way or tampered with; (c) ITC determines that the item was not used under normal operating conditions or in accordance with labels or instructions for the item including, (d) ITC determines the product was not properly maintained, and/or; (e) ITC determines that an unauthorized repair, modification, disassembly, or other changes to the product created the alleged defect. In addition to the foregoing, this Warranty does not protect against damage to the product when ITC determines, in its sole discretion, that the damage resulted from acts of God such as lightning, flood, earthquake, war, vandalism, theft, normal-use wear and tear, terrorism, strikes, and labor stoppages. This warranty specifically excludes damage, deterioration or discoloration caused by sunlight or similar ultraviolet rays and/or wavelengths and/or dents, holes or scratches to the unit caused by stones, rocks, debris and/or vehicles.

**EXCLUSIVE REMEDY** This Warranty contains the sole warranty of ITC with respect to the product and is given in lieu of all other warranties. There are no other warranties, express or implied, including implied warranties of merchantability or fitness for a particular purpose and any implied warranties that cannot be waived and/or excluded are hereby limited in duration to the terms of this Warranty.1

**LIMITATION ON LIABILITY** In no event shall ITC or any affiliate of ITC be liable for direct, indirect, special, incidental, consequential, or multiple damages arising out of the use of the item, regardless of the legal theory on which such claim is based, even if ITC has been advised of the possibility of such damage. Consequential damages shall include, but are not limited to loss of profits, loss of savings or revenue.

- Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not be applicable.

#### ITC SAMPLE POLICY

We at ITC understand the necessity of sending out samples to our customers for review for product quality and to determine if the product will work in the application for which it has been suggested. It is not cost-effective for us to send samples to all of our customers without charging or memo-billing for some of the products because of the prohibitive costs involved in doing so. It is the policy of ITC to send out samples at no charge for any items if the accumulated invoice amount of the samples is not over US\$60.00. In the event that the invoice amount exceeds US\$60, it is our policy to send the customers a memo bill. The memo bill would become payable by the customer after 90 days if they have not returned the products to either an ITC representative or returned the products against an RGA. We understand that variations to this policy will sometimes be required. When such circumstances arise, the customer's ITC representative is responsible for communicating the deviation from the policy throughout the ITC organization, which includes, but is not limited to, customer service and accounts receivable.

#### ITC RETURN POLICY

- ITC will accept absolutely no returns for product found defective at the distributor or returned by a dealer or customer as a warranty claim without a Return Authorization Number (RGA). Customers should contact our Quality Department (Phone 616-396-1355 or Fax 616-394-5881 or Email: quality@itc-us.com) to obtain a Return Authorization Number (RGA) prior to sending product back to ITC, Inc.
- All correspondence and credits pertaining to the alleged non-conforming product will reference the RGA number. If your company uses its own return goods numbering system, ITC will make every effort to include both reference numbers on ITC's RGA. All returns must be accommodated by our RGA number or they will not be processed. If product is received without our RGA number written on the outside of the carton, it will be refused upon receipt. All customers have 90 days to return product or the RGA will be voided.
- ITC will reimburse a customer for credit on returned parts that are determined defective by ITC. Credit is entered based on the current Distributor quoted price for said part, acceptable labor charges and Dealer charge backs mandated by State law. ITC will not credit customers for unauthorized Dealer mark-ups or customer mark-up fees.
- ITC will not issue credit for parts that were damaged or inappropriately handled by customer. Alterations to an ITC part will invalidate the warranty.
- To preserve your claim, please securely package all parts before shipping to ITC. All claims are reviewed by ITC's Quality Department to determine the validity of the claim.
- Invalid returned parts (non-ITC parts) shall be held for 15 days maximum, then destroyed or returned at customer's expense. ITC will notify customer accordingly. Repeated submission of invalid parts will warrant us charging the offending customer a handling fee. If a part is damaged or lost during transit, customer is responsible for directing a claim to the courier service, not ITC.
- ITC is not responsible for freight charges of parts that the customer has ordered in error or for parts that are found not defective. For all returns and warranty claims accepted by ITC, the chart below shows the maximum amount of ground freight charges allowed which are refundable by ITC (over 20 LBS requires prior approval).
- 8) A 25% or \$25.00 (whichever is greater) restocking fee will be invoiced or deducted from the return credit for parts that are not defective or parts ordered in error.
- 9) If a scrap credit is authorized by ITC, we will issue an RGA number and apply the credit to the customer's account without inspecting the product or having it returned to ITC.
- 10) ITC warranty is attached for reference purposes.

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Holland, MI 49422-8338

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**ELKHART OFFICE**  
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Revised 9/14/09

**PLATINUM**  
Rev: 082015

**3480 Technology Drive • Nokomis • Florida • 34275**  
**(800) 235-0984 • (941) 485-0984 • (941) 488-4095 FAX**  
**www.coachhouserv.com**

**7-71**



# Outside Shower Assembly

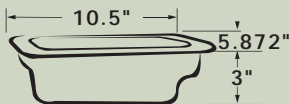
Coach House Motorhomes come with an outside shower assembly which provides hot and cold running water for outdoor applications.

## Specifications:

- Designed for use in a pressure regulated, portable water system with a maximum operating pressure of 40 psi.
- Maximum flow rate with the faucets fully opened - 2/5 GPM.
- DO NOT ALLOW TO FREEZE
- Do not connect directly to a high pressure residential water supply.

## Exterior Shower

- Compact Unit
- Available in arctic white, black, or grey
- Choose from latching or locking shower door
- Impact & temperature resistant, paintable and UV stable housing
- 5' hose standard with 8' hose option available
- Stainless steel hinge pin
- Anti-siphon vacuum breaker



97022-A-5 | White Latching Exterior Shower



97023-B-5 | Black Locking Exterior Shower

ITEM NUMBER	DESCRIPTION	FINISH/COLOR	CUTOUT	LISTINGS	CASE QTY
97022-A-5	Exterior Shower, Latching Door	Arctic White	4.5" x 9"	CSA	10
97022-B-5		Black			
97022-G-5		Grey			
97023-A-5	Exterior Shower, Locking Door	Arctic White			
97023-B-5		Black			
97023-G-5		Grey			
97022-001	Replacement Shower Head	Arctic White			
97022-008	Replacement Faucet Set (Includes: Valve Body, Valve Nuts, Handles)	N/A			
97020-080	Replacement Straight Nipple, Seal Collar & O-Rings				
97020-004	Exterior Shower 8' Hose				
97022-006	Replacement Vacuum Breaker				



# Hardwood Cabinet Doors



## **Limited Three Year Warranty for Coach House Owners**

Congratulations on the purchase of a *Coach House* Luxury Motor Home! This warranty covers the wood cabinet doors found throughout your new motor home.

Wood is a material formed by nature not man and must be handled as such. Characteristics of wood are what give it its beauty and charm. Therefore, there may be some slight color variances due to the natural color variations in wood. The infinite variety in color, grain, and texture is what gives wood its natural character. Because of the differences among varying wood species, even within the same species, no two trees are alike. Climate, light, rainfall and minerals in the soil all create diverse and unique grain and color patterns in each piece of wood. These natural variations are not considered defects. We guarantee our doors free from defect in material and workmanship for three years from the purchase date of your Coach House model. Our warranty applies to the original motor home owner only.

Natural wood will expand and contract with climate and temperature conditions. Our doors are built to allow for proper wood movement. We will not be liable for damages done due to negligence or improper handling and/or cleaning of our doors.

We will guarantee against warpage, twisting or swelling for doors that have been given responsible treatment and are within our minimum or maximum sizes. Warp or twist of 3/16" or less is not considered a defect.

### **Reasonable Treatment Required for Wood Doors**

Doors should not be subjected to abnormal heat, cold, extreme humid or dry conditions or any sudden changes in temperature or humidity and they should never be left open to the elements.

### **Replacement Policy**

Contact your salesperson within one business week of receiving the defective materials. Your representative will arrange to inspect the doors. We may request the defective products be returned for inspection; if so please repackage the doors for shipment. We will have the materials returned to us at no charge to you. In order to minimize the inconvenience to you, Georgia Hardwoods will do our best to replace any defective products as soon as possible.

### **Contact Information**

For Warranty Issues, please contact us at 800-992-6462 to initiate the claim process.





# 12 Ton Bottle Jack



## PRODUCT SPECIFICATIONS

MODEL #:	7384
DESCRIPTION:	BOTTLE JACK
CAPACITY:	12 TON
JACK SIZE:	5 1/4" (L) X 5 1/8" (W)
MIN. HEIGHT:	9 3/8"
MAX. HEIGHT:	18 1/2"
SCREW EXT.:	3 1/8"
HANDLE LENGTH:	18 1/8"
OPERATING FORCE:	102.0 LBS
SADDLE DIM.:	1 3/4"
NET WEIGHT:	17.4 LBS
VOLUME OF HD. OIL:	360 C.C.
COLOR BOX DIM.:	5 5/8" (L) X 5 1/2" (W) X 10 1/4" (H)
GROSS WEIGHT:	72.6 LBS / 4 PCS
CARTON BOX DIM.:	11 7/8" (L) X 11 5/8" (W) X 11 3/8" (H)
CUFT.:	0.91 CUFT (2120 PCS/ 20' CTN)

## FEATURE

- MEETS ASME/ANSI - PALD SAFETY STANDARDS
- LIFTING RANGE: 9 3/8" TO 18 1/2"
- PATENTED BUILT-IN BY-PASS DEVICE MECHANISM
- TWO PCS. HANDLE
- HEAT TREATED EXTENSION SCREW

## ONE YEAR LIMITED WARRANTY

For a period of one (1) year from date of purchase, **ATD Tools Inc.** will repair or replace, at its option, without charge, any of its products which fails due to a defect in material or workmanship under normal usage. This limited warranty is a consumer's exclusive remedy.

Performance of any obligation under this warranty may be obtained by returning the warranted product, freight prepaid, to **ATD Tools Inc.** Warranty Service Department, 160 Enterprise Drive, Wentzville, MO 63385.

Except where such limitations and exclusions are specifically prohibited by applicable law, (1) THE CONSUMER'S SOLE AND EXCLUSIVE REMEDY SHALL BE THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS AS DESCRIBED ABOVE. (2) **ATD Tools Inc.** SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGE OR LOSS WHATSOEVER. (3) ANY IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED TO ONE YEAR, OTHERWISE THE REPAIR, REPLACEMENT OR REFUND AS PROVIDED UNDER THIS EXPRESS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER, AND IS PROVIDED IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. (4) ANY MODIFICATION, ALTERATION, ABUSE, UNAUTHORIZED SERVICE OR ORNAMENTAL DESIGN VOIDS THIS WARRANTY AND IS NOT COVERED BY THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## SAFETY INSTRUCTIONS

### BEFORE USE

1. Verify that the product and the application are compatible.
2. Before using this product, read the owner's manual completely and familiarize yourself thoroughly with the product, its components and recognize the hazards associated with its improper use.
3. Open the release valve (counter-clockwise no more than 1/2 full turn).
4. With ram fully retracted, locate and remove the oil filler plug. Insert the handle into the handle sleeve, then pump 6 to 8 strokes. This will help release any pressurized air which may be trapped within the reservoir. Ensure the oil level is just below the oil filler plug hole. Reinstall the oil filler plug.
5. Check to ensure that jack rolls freely (if so equipped) and that the pump operates smoothly before putting into service. Replace worn or damaged parts and assemblies with AtD Tools Authorized Replacement Parts only. (See Replacement Parts Section)
6. Inspect before each use. Do not use if bent, broken or cracked components are noted.



### WARNING

- Study, understand, and follow all instructions provided with and on this device before use.
- Do not exceed rated capacity.
- Use only on hard, level surfaces capable of sustaining rated capacity loads.
- Lifting device only.
- Immediately after lifting, support the vehicle with appropriately rated stands
- Never work on, under or around a load supported by this device.
- Failure to heed these markings may result in personal injury and/or property damage.



## OPERATION

### Lifting

1. Assemble handle, ensure that spring clips align with slots.
2. Secure the load to prevent inadvertent shifting and movement.
3. Place vehicle in part gear.
4. Position the jack near desired lift point.
5. Close the release valve by turning it clockwise until it is firmly closed.

**Note:** Use the handle provided with this product or an authorized replacement handle to ensure proper release valve operation. When using to lift vehicle, lift only on the manufacturer's recommended lift points and in accordance with the published guidelines in your vehicle owners manual. Always use jack stands to support the load immediately after lifting.

5. Insert and secure handle into handle sleeve. Pump handle until saddle contacts load.
6. Raise load to desired height, then immediately transfer the load to appropriately rated support devices such as jack stands.



### WARNING



To avoid crushing and related injuries:  
**NEVER** work on, under or around a load supported only by jack. **ALWAYS** use adequately rated jack stands.

### Lowering

1. Raise load enough to carefully remove jack stands.
2. Insert handle onto release valve and slowly turn handle counterclockwise, but no more than 1/2 turn.
3. If load fails to lower:
  - a. Carefully transfer the load to another lifting device and jack stands.
  - b. Carefully remove affected jack, and then the jack stands. Lower the load, again by slowly turning the release valve no more than 1/2 turn.

### ! SAFETY MESSAGE !

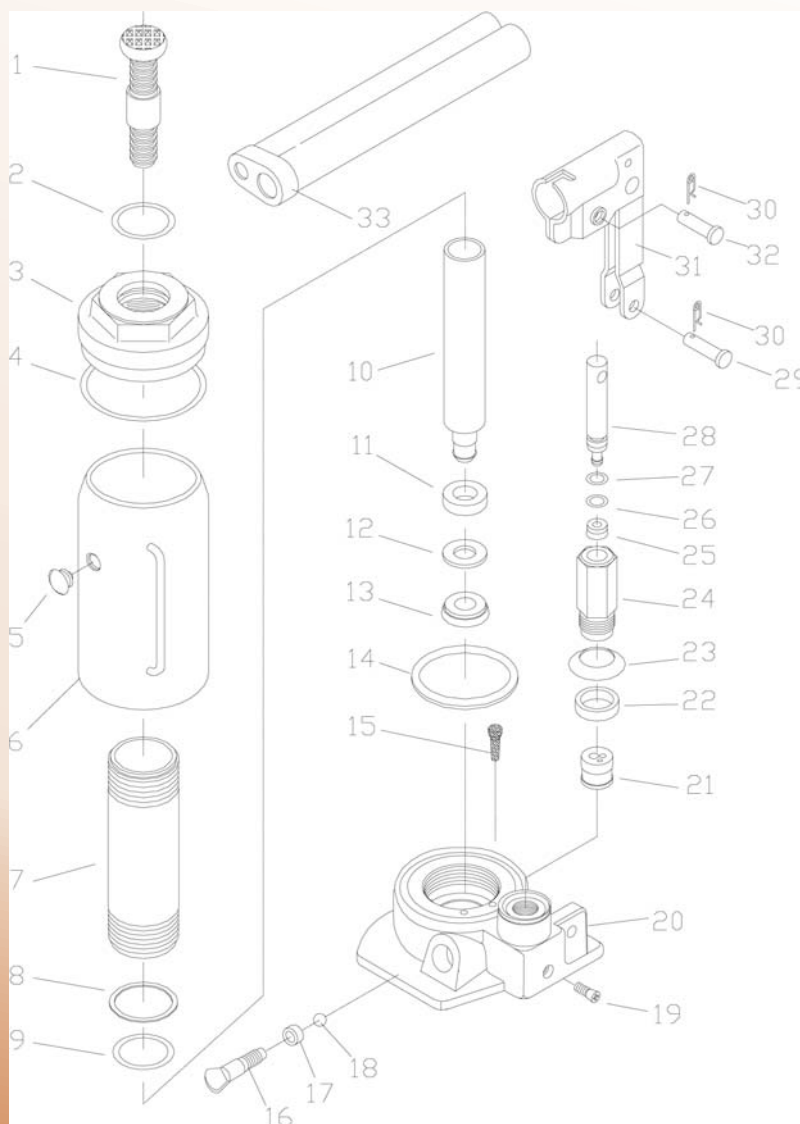
Be sure all tools and personnel are clear before lowering load. No alterations shall be made to this device. Only attachments and/or adapters supplied by the manufacturer shall be used.

4. After removing jack from under the load, push ram and handle sleeve down to reduce exposure to rust and contamination.



ITEM	PARTCODE	DESCRIPTION	QTY
1	*	extension screw	1
2	*	o-ring	1
3	*	top nut	1
4	*	gasket (upper)	1
5	5905-00100-000	filler plug	1
6	B120-14000-000	reservoir	1
7	*	cylinder	1
8	*	back-up ring	1
9	*	o-ring	1
10	*	ram piston	1
11	B120-13001-000	ram bearing	1
12	*	back-up ring	1
13	*	u-cup	1
14	*	gasket	1
15	B120-10003-000	filter	1
16	B020-10005-000	release valve	1
17	*	seal	1
18	5601-00635-000	steel ball	1
19	*	screw	1
20	*	base	1
21	B020-16000-000	hyd. cartridge	1
22	*	seal	1
23	B020-15002-000	washer	1
24	B080-15001-000	pump cylinder	1
25	*	u-cup	1
26	*	back-up ring	1
27	*	o-ring	1
28	B080-15101-000	pump piston	1
29	5405-07027-000	pin	1
30	5405-02018-000	snap ring	2
31	B080-14000-000	handle sleeve assy.	1
32	5405-07024-000	pin	1
33	B080-20000-000	handle	1

\* part is not available



## MAINTENANCE

**Important:** Use only a good grade hydraulic jack oil. Avoid mixing different types of fluid and NEVER use brake fluid, turbine oil, transmission fluid, motor oil or glycerin. Improper fluid can cause premature failure of the jack and the potential for sudden and immediate loss of load. We recommend Mobil DTE 13M.

### Adding oil

1. With saddle fully lowered and pump piston fully depressed, set jack in its upright, level position. Remove oil filler plug.
2. Fill until oil is level with the filler plug hole, reinstall oil filler plug.

### Changing oil

For best performance and longest life, replace the complete fluid supply at least once per year.

1. With saddle fully lowered and pump piston fully depressed, remove the oil filler plug.
2. Lay the jack on its side and drain the fluid into a suitable container.

**Note:** Dispose of hydraulic fluid in accordance with local regulations.

3. Fill with good quality jack oil. Reinstall oil filler plug.

### Lubrication

1. A coating of light lubricating oil to pivot points, axles and hinges will help to prevent rust and assure that assemblies move freely.
2. Periodically check the pump piston and ram for signs of rust or corrosion. Clean as needed and wipe with a clean, oil soaked rag.

**Note:** Never use sandpaper or abrasive material on these surfaces !

### Storage

When not in use, store the jack with pump piston and ram fully retracted.

## TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Jack will not lift load	<ul style="list-style-type: none"><li>• Release valve not tightly closed</li><li>• Overload condition</li></ul>	<ul style="list-style-type: none"><li>• Ensure release valve tightly closed</li><li>• Remedy overload condition</li></ul>
Jack bleeds off after lift	<ul style="list-style-type: none"><li>• Release valve not tightly closed</li><li>• Overload condition</li><li>• Hydraulic unit malfunction</li></ul>	<ul style="list-style-type: none"><li>• Ensure release valve tightly closed</li><li>• Remedy overload condition</li><li>• Contact ATD Tech. Service</li></ul>
Jack will not lower after unloading	<ul style="list-style-type: none"><li>• Reservoir overfilled</li></ul>	<ul style="list-style-type: none"><li>• Drain fluid to proper level</li></ul>
Poor lift performance	<ul style="list-style-type: none"><li>• Fluid level low</li><li>• Air trapped in system</li></ul>	<ul style="list-style-type: none"><li>• Ensure proper fluid level</li><li>• With ram fully retracted, remove oil filler plug to let pressurized air escape, reinstall oil filler plug</li></ul>
Will not lift to full extension	<ul style="list-style-type: none"><li>• Fluid level low</li></ul>	<ul style="list-style-type: none"><li>• Ensure proper fluid level</li></ul>