

Save This Manual For
Future Reference

**Better
Lifestyles
Inc.**

**Owner's
Manual**

**MODEL NO.
MS-1**

For future reference
list the vacuum system
serial number and date
of installation below.

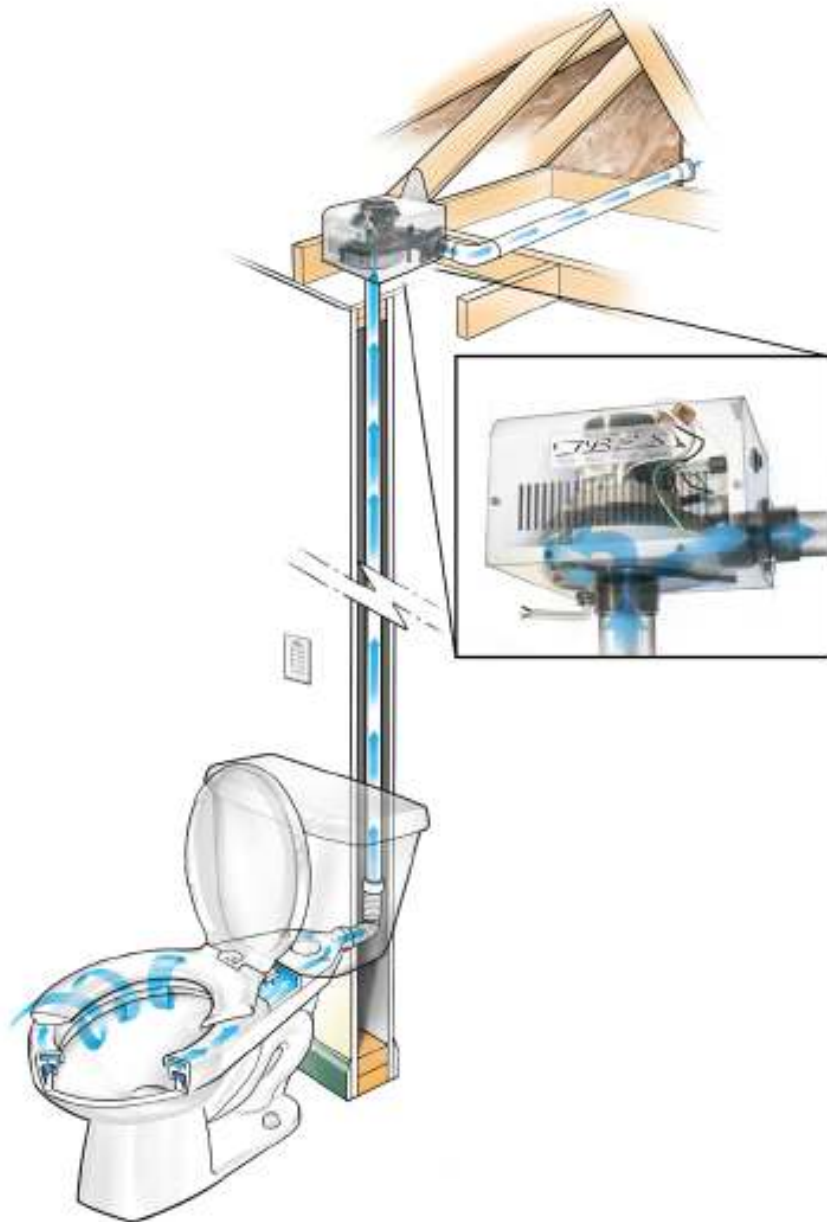
Serial Number:

Date of Installation:

**FOR YOUR
SAFETY**

**READ ALL
INSTRUCTIONS
CAREFULLY**

TOILET BOWL EXHAUST SYSTEM



VACUUM SYSTEM

- Important Safety Instructions
- Mounting
- Operation
- Maintenance
- Troubleshooting
- Replacement parts

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Important Safety Instructions

READ AND SAVE THESE INSTRUCTIONS

WARNING – TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- a) Use this unit only in the manner intended by the manufacturer. If you have questions after reading these instructions contact the manufacturer.
- b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

WARNING – To reduce the risk of fire or electrical shock, Do Not Use This Fan With Any Solid-State Speed Control Device.

CAUTION - For General Ventilating Use Only. Do Not Use To Exhaust Hazardous Or Explosive Materials And Vapors.

- Qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction, must do installation work and electrical wiring.
- When cutting or drilling into walls or ceilings, avoid damaging electrical wiring and other hidden utilities.
- This system must be vented directly to the outdoors.
- Never place objects on top of the vacuum system. Restricting the vacuum system ventilation openings can cause over heating.
- Never operate the vacuum system with the cover removed.
- The vacuum system must be mounted indoors.
- Operate with 120 volt, 60 HZ, AC power only.

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▪ Introduction

This manual provides information concerning the mounting, operation, maintenance, troubleshooting, and replacement parts for the vacuum system portion of the Toilet Bowl Exhaust System (TBES) with manually operated switching. This system is intended for residential use in one and two family dwellings only. This manual should be considered a permanent part of your toilet TBES and should remain with the vacuum system after purchase and installation. If any problems should arise not covered in these instructions, or if you have any questions about your TBES, consult your local authorized TBES dealer or call Better Lifestyles toll free at 1 (877) 748-4628. Better Lifestyles recommends that a maximum of three toilets be operated with a single vacuum system. A single vacuum system is capable of satisfactory operation of more than three toilets but the variables of lengths of PVC pipe and number of airflow direction changes will affect vacuum system performance.

Unpacking and Checking Shipping Package Contents

Ensure that the following components are contained within the vacuum motor shipping package:

- Vacuum system.
- (2) #10 x 1-3/4" mounting screws.
- (2) #6 x 1/2" screws for securing the PVC pipe to the intake and exhaust couplers.
- Optional: Timer Switch (additional timer switches can be purchased from your vacuum system supplier)

If any of the contents are damaged, return them to the place of purchase. If a component is missing, contact Better Lifestyles, Inc. for a replacement.

Mounting The Vacuum System

- CAUTION – to reduce risk of fire and to properly exhaust air, be sure to duct air outside. Do not vent exhaust air into spaces within walls or ceilings or into crawl spaces, or garages.
- The ducting used in this installation must have a flame-spread index rating not exceeding 200, or equivalent.
- The outlet of each toilet-bowl must be connected to a vertical riser extending a minimum of three feet above the toilet-bowl overflow-rim. Compliance with this requirement is part of the installation procedure during rough in of the ducting.
- The two arrows on the vacuum system-mounting tab must be pointing up when installing the vacuum system (see Fig 1 and 2).
- The approximate location for mounting the vacuum system will have been determined during the rough-in installation for the TBES.
- For vacuum systems with a thermal circuit breaker: If attic temperature will exceed 140 degrees Fahrenheit then the vacuum system should be installed in the garage to avoid nuisance tripping of the thermal circuit breaker.
- For garage installations the vacuum system should be mounted in close proximity to the electrical power supply, which is wired to the timer switch/s in the bathroom/s (see Fig 1).
- For vacuum systems mounted against drywall, use a stud finder to determine a suitable mounting location for driving the mounting screw into the framing lumber.

- Attic mounted vacuum systems must be positioned at the highest point of the PVC pipe ducting system to avoid a build up of condensation. The PVC pipe should also grade away from the vacuum system one inch for every 10 feet of run allowing any condensation build up to drain to the toilet/s or to the outside via the exhaust vent. For garage mounted vacuum systems drill a 3/16" hole on the bottom of the section of horizontal pipe just prior to entering the vacuum housing to allow condensation to escape. The minor amount of condensation draining from this hole must be allowed to drip on to a surface, which is unaffected by moisture such as a concrete or gravel floor.
- Use PVC pipe and couplers as necessary to connect vacuum system intake and exhaust ports to the PVC pipe running to the bathrooms and the outside vent. **Do not** solvent weld the PVC pipe to the intake or exhaust couplers on the vacuum housing. After fully seating the PVC pipe or PVC coupler into or onto the exhaust or intake port on the vacuum housing, drill a 1/8" hole through the PVC and housing coupler. Install the enclosed #6 x 1/2 inch screws into the holes to secure the PVC pipe to the couplers.

NOTE: The PVC pipe entering the intake side of the vacuum system must be removable to allow access to the air filter element. (see Fig 1)

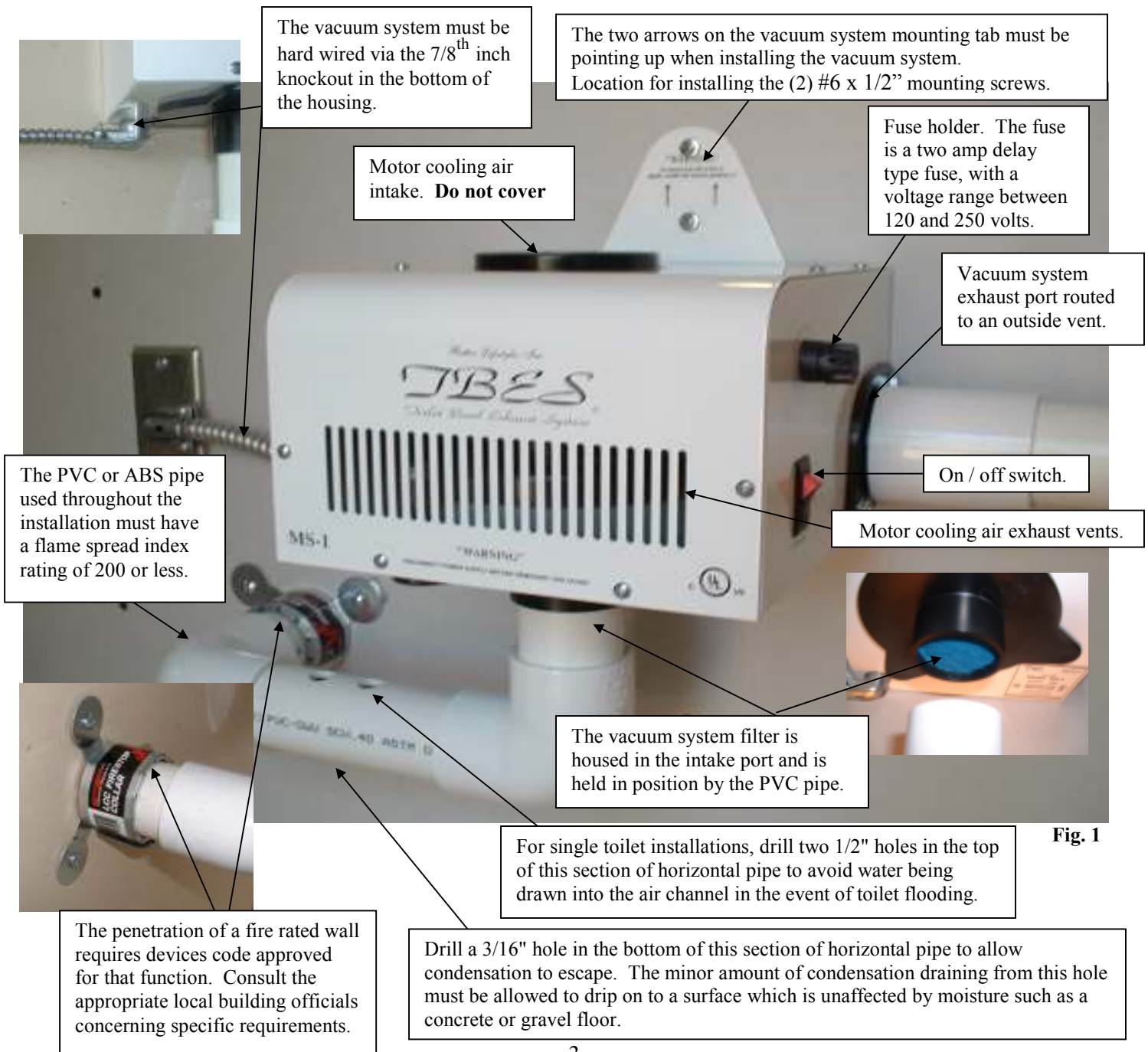


Fig. 1

Electrical Connections

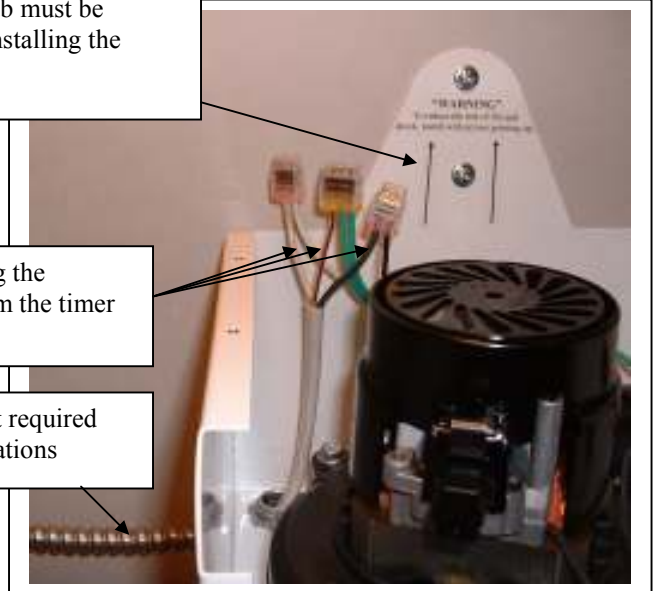
- Remove the eight screws securing the vacuum system housing cover and remove the cover.
- Route the incoming conductors through the 7/8" knockout in the bottom of the vacuum system.
- Strip 7/16" from the ends of the conductors that enter the vacuum system from the timer switch.
- Insert each conductor into the connector having the same colored conductor already attached.
 - Black to Black
 - White to White
 - Green to Green (bare)
- After the wires are connected, bend the wires down into the vacuum housing.
- Place the vacuum system housing cover on the vacuum system housing and secure with eight screws.

The two arrows on the vacuum system-mounting tab must be pointing up when installing the vacuum system.

Conductors entering the vacuum system from the timer switch.

Electrical conduit required for garage installations

Fig. 2



Vacuum System Operation

1. The vacuum system will be activated by either a manual timer switch or a wall switch. The timer switch settings are off, 2, 5, 10, and 15 minutes.
2. The switches in each bathroom are wired in parallel to the vacuum system, which allows for concurrent operations. The switch activated with the longest available duration will determine the time remaining before the vacuum system shuts down.
3. Avoid the introduction of water into the air-channel; if the toilet becomes clogged, turn the vacuum system off until the blockage is corrected.

Maintenance of the Vacuum System

No maintenance is required for this vacuum system. All motor bearings are sealed and required no additional lubrication.

Break in Procedure – must be performed prior to initial vacuum system operation and after vacuum motor replacement.

1. Place the vacuum system on/off switch to the on position. Begin running the vacuum using either the manual timer switch or the wall switch, depending on your configuration. Allow the vacuum to run for 30 minutes straight.
2. After the vacuum system operates for 30 minutes it will then be ready for normal operations.

Preventive Maintenance

Although your system has been designed for maximum performance and service life, there are guidelines you can follow to help prolong its serviceability and life.

1. It is advantageous to operate the vacuum system with timer switches instead of on/off wall switches to ensure that the vacuum system is not operated unnecessarily. Operations with a timer switch will reduce unintentional vacuum run time, which will result in reduced brush wear and electricity usage.
2. During servicing, with the vacuum motor housing cover removed, use compressed air to eliminate any built up of foreign material in the vacuum housing.
3. Annually, clean the vacuum system filter with mild detergent and warm water, allow filter element to dry and then reinstall.

Note: Unauthorized service or repair of your vacuum system may void your warranty.

Vacuum System Troubleshooting

Note: Your vacuum system may be configured with a thermal circuit breaker/switch combination or a separate switch and fuse. Attic installed vacuum systems that are configured with a thermal circuit breaker are susceptible to nuisance tripping if the temperature in the attic exceeds 140 degrees Fahrenheit. Check and reset thermal circuit breaker as required.

1. If the vacuum system fails to operate when a timer switch in the bathroom/s is activated:
 - Check to see that the power switch on the vacuum housing is in the on position.
 - On the vacuum housing check and reset the thermal circuit breaker or replace the fuse as required. If replacement of the fuse is necessary ensure it is of the same amperage and voltage rating required by the manufacturer. This

information is printed adjacent to the fuses holder on the vacuum system housing. Delay type fuse, 2 Amp with a voltage range between 120V to 250V. Replacement fuses are available at your local electronics store.

- Check the line circuit breaker at the circuit breaker panel.
2. If the vacuum system still fails to activate after the above listed procedures have been carried out, the trouble may exist in the vacuum motor. The following inspection and motor replacement require the vacuum housing cover to be removed; therefore an electrician or qualified repairperson should perform vacuum motor replacement addressed below.

Note: Brush replacement is not authorized and any attempt to do so will void the warranty.

- **Worn out Brushes:** The vacuum system will operate approximately 1800 hours prior to brush wear sufficient to cause the need for motor replacement. Vacuum motor replacement due to expired brushes will be required after approximately five years if the vacuum system is operated an average of one hour a day.
- **Tripping of the thermal cutout:** The vacuum motor is equipped with a one-time thermal cut-off device attached to the field windings that protects against overheating and could trip causing the vacuum system to become inoperable. This thermal cut-off device is the primary protector. The vacuum systems thermal circuit breaker or the fuse (depending on your systems configuration) should deactivate the vacuum motor prior to the thermal cut-off device activation. The installation of a fuse with a higher rating than required by the manufacture could cause thermal cut-off activation under certain conditions i.e. locked rotor. If the thermal cut-off device has activated then replacement of the motor assembly is required. Contact Better Lifestyle Inc, for further assistance.

3. If the vacuum system seems to be operating normally but its ability to remove odor becomes less effective, then remove the air filter located in the intake port of the vacuum system (see Fig 1). Clean the filter with mild detergent and warm water, allow filter element to dry and then reinstall.

Note: Unauthorized service or repair of your vacuum system may void your warranty.

Parts

To order parts for the vacuum system contact Better Lifestyles directly. When ordering, identify the serial number and the model number of the vacuum system and the number of the part or parts requested as indicated in the parts list depicted below. Example Serial number: xxx. Model Number: MS-1. Then indicated the numbered parts required from the list below.

Vacuum System Parts



1. Vacuum motor housing cover
2. Vacuum motor housing
3. Vacuum motor to vacuum motor housing seal
4. Inlet connector
5. Inlet connector gasket (see note)
6. Wire bundle tie
7. Wire mount
8. Aluminum rivet for attaching wire mount
9. Exhaust connector
10. Self-tapping screws for attaching the exhaust connector to the motor housing
11. Vacuum motor with connectors
12. Self-tapping bolts: attach the motor to the vacuum housing via the intake connector
13. Hot wire lead with connectors
14. Grounding leads with connectors
15. Screws: attach the housing cover to the vacuum motor housing
16. Switch / thermal circuit breaker 2.5A
17. Motor grounding screw
18. Lock nut secures the grounding strap to the motor housing
19. Jumper with connectors
20. Fuse holder with 2A delay fuse (purchase fuse separately)
21. On/off switch
22. Filter element (not pictured)

Note: A clear rubber silicone sealant is used to seal the space between the exhaust connector (#9) and the motor exhaust port. The inlet connector gasket (#5) can be replaced with a clear rubber silicone sealant. Your vacuum system may be configured in one of two ways: With a thermal circuit breaker/switch combination #16 or with a separate switch, fuse holder, and jumper wirer (20, 21, 19).

*THIS INFORMATION IS FOR PART IDENTITY ONLY,
IT IS NOT TO BE USED AS DISASSEMBLY OR
ASSEMBLY INSTRUCTIONS.*

▪ **Product Service Support and Warranty Information**

Better Lifestyles stands behind the products we provide with a warranty against defects in material and workmanship as provided below. Contact our Customer Service Department toll free at 1-877-748-4628 if you encounter any difficulties with the Toilet Bowl Exhaust System not covered in this manual.

If the problem cannot be resolved on the telephone, we may suggest that you return the product to our factory for inspection.

If product return is required, we will provide you with a **return merchandise authorization (RMA)** number and shipping instructions for returning the vacuum system. Please ensure that the **RMA** is included on the package you are returning. Products returned without a **RMA** cannot be repaired or given credit consideration. If the vacuum system is under warranty, please provide a copy of the purchase receipt as proof of purchase. If the warranty card was completed and returned then a receipt is not required.

Freight costs for product returns are the responsibility of the customer. Products under warranty will be repaired or replaced at Better Lifestyles Inc. sole discretion and returned at our expense. Products outside the warranty limits will be repaired and returned with costs invoiced to the customer. Written repair estimates are available. Better Lifestyles out of warranty repairs are covered for a period of six months. In-warranty repairs or replaced products are covered for the duration of the original warranty. Better Lifestyles is not responsible for shipping damages. Better Lifestyles will, however, help you file a claim with the freight carrier.

Better Lifestyles warrants the Toilet Bowl Exhaust System (MS-1 vacuum) to be free of defects in material and workmanship, under normal usage, for a period of one year from the date of installation as recorded on the returned warranty card supplied with the vacuum system. It is necessary to complete the warranty card and return it to Better Lifestyles immediately. If warranty card is not returned, warranty starts from the date of factory shipment or the date on the purchase receipt.

Please note the following additional terms of our warranty and return policy:

- Warranties cover manufacturing defects only and do not cover costs resulting from abuse, improper handling, care or maintenance, normal wear and tear or nonobservance of operating or installation instructions.
- Liability is limited to repair or replacement of the defective product at Better Lifestyles discretion. All other liabilities, in particular liability for damages, including, without limitation, consequential or incidental damages are excluded.
- **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO EMPLOYEE, REPRESENTATIVE OR DEALER IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR TO GRANT ANY OTHER WARRANTY.**