

# MALONE®



## Trailer Checklist & Maintenance Manual

*Take a couple minutes to read through this manual for commonly asked questions and some basic trailer maintenance that will ensure your trailer is performing at its best.*

*And as always please feel free to contact us with any questions you may have.*

*Thank you for choosing Malone.*

**CHANGING THE WAY YOU GET THERE**

## ***Congratulations on your new Malone trailer!***

***Take a couple minutes to read through this manual for commonly asked questions and some basic trailer maintenance that will ensure your trailer is performing at its best.***

***And as always please free to contact us with any questions you may have.***

***Thank you for choosing Malone.***

### ***Basic Trailering Checklist:***

**Before hitting the road for your next trip be sure to check the following.**

- ~ Coupler, hitch and hitch ball are all the same size (2" ball required)
- ~ Coupler and safety chains are safely secured to hitch of tow vehicle
- ~ All fasteners are properly tightened
- ~ Boat is securely tied down to trailer ( a winch line IS NOT a tie down)
- ~ Wheel Lug Nuts are properly tightened
- ~ Wheel bearing are properly adjusted and maintained
- ~ Load is within maximum load carrying capacity
- ~ Tires are properly inflated
- ~ All trailer lighting are working properly by having a friend or family member occasionally stand behind your trailer and make sure the brake lights, taillights and turn signals are in good working order

### ***Additional checks you can do.***

**Conduct routine maintenance by having a friend or family member occasionally stand behind your trailer and make sure the brake lights, taillights and turn signals are in good working order. As with your boat, a thorough freshwater wash down of your trailer after each use will extend the life of your hubs and lights. It's also a great boat maintenance idea to invest in a spare wheel, just in case.**

**Trailer hubs and lights can potentially get dunked twice every time you go boating. You need to pamper them as you would your boat - this is an essential element of boat trailer maintenance.**

**Do an occasional hub inspection by popping off the cap with a screwdriver. If the bearings are dry, add grease. It's simple. Lets jump to the next page for a detailed step by step.**

**Be sure to review the table on the next page for trailer FAQs' and specifications.**

MALONE TRAILER SPECIFICATIONS							Revised: 09/09/2020 By: MP	
	Ecolight	LowMax	MicroSport		MegaSport			
WEIGHT (WITHOUT ACCESSORIES)	145 LBS	206 LBS	197 LBS (BASE "G")		325 LBS			
			230 LBS (XT)		425 LBS (LOWBED)			
			190 LBS (LOWBED)					
LENGTH	10' 6"	12'	13' 3"		14' 6"			
WIDTH WITH CROSSBARS	58"	78"	78"		86"			
WIDTH WITHOUT CROSSBARS	55"	60"	55"		68"			
FRAME WIDTH ASSEMBLED	40"	40"	40"		48"			
REQUIRED BALL SIZE	2"							
BALL HEIGHT: FROM GROUND - TO TOP OF BALL	14"	18"	18" (BASE G & LOWBED)		16"			
			15" (XT)					
LOAD CAPACITY	400 LBS	600 LBS	800 LBS (DOUBLE LEAF SPRING)		1000 LBS (TRIPLE LEAF SPRING)			
MAXIMUM BOAT LENGTH (CENTERED/NOT CENTERED)	14'/12'	17'/15'	20'/18'		20'/18'			
RECOMMENDED TIRE PRESSURE	40 PSI, 90 PSI MAX	40 PSI, 90 PSI MAX	40 PSI, 90 PSI MAX		40 PSI, 90 PSI MAX			
TIRE SIZE	4.80/4.00-8"	215/60-8"	4.80-12"		20.5x8.0-10"			
TIRE SPECIFICATIONS	LOAD RANGE B (785 LBS), 4 P.R.	LOAD RANGE C (990 LBS), 6 P.R.	LOAD RANGE B (785 LBS), 4 P.R.		LOAD RANGE E (1520 LBS), 10 P.R.			
	RATED TO 70MPH	RATED TO 70MPH	RATED TO 75MPH (L)		RATED TO 70MPH			
	8" WHEEL DIAMETER	8" WHEEL DIAMETER	12" WHEEL DIAMETER		10" WHEEL DIAMETER			
WHEEL + HUB SPECIFICATIONS	1.98" HUB I.D.							
	5-9/16" STUDDED FLANGE O.D.							
	5x4.5" BOLT PATTERN, 1/2"-20 STUD THREAD PITCH							
	1-1/16" AXLE SPINDLE DIAMETER							
TONGUE WEIGHT (UNLOADED)	12 LBS	16 LBS	25 LBS		63 LBS			
CROSSBAR SPREAD	38.5" MAX	48.5" MAX	44"-63"		68" FIXED			
HEIGHT OF CROSSBARS FROM GROUND	24"	24"	30" (BASE G & XT)		31"			
			22" AND 58" (LOWBED)		25" AND 56" (LOWBED)			
FRAME & TONGUE MATERIAL	MARINE GRADE PRE-GALVANIZED 11 GAUGE STEEL							
FRAME CONSTRUCTION	C-CHANNEL 1.5" WIDE x 3.5" HIGH							
TONGUE CONSTRUCTION	2"x3"x90"	2"x3"x90"	2"x3"x90"		2"x3"x90"			
	2 PIECE DESIGN	2 PIECE DESIGN						
CROSSBAR CONSTRUCTION	1.25" SQUARE PRE-GALVANIZED 14 GAUGE STEEL							
LIGHTING	STANDARD INCANDESCENT LIGHT KIT	L.E.D. LIGHT KIT WITH CUSTOM PLUG & PLAY WIRING HARNESS						
SHIPPING BOX COUNT (BASE TRAILER)	3	4	4		6			
			4 (LOWBED)		8 (LOWBED)			

Some trailers now have an integrated 'zerk' on the backside of the hub. For the customer it means they can do periodic grease "freshenings" without disassembly of the hubs.

***Procedure for hub with integrated zerk fitting:***

- i. Prepare a disposable container for the old grease to fall into.
- ii. Remove the wheel and dust cap.
- iii. Clean/Wipe the grease fitting and Attach grease gun to the grease fitting.
- iv. Pump fresh grease in until fresh clean grease is visible oozing out the front bearing. (about 1/3 of a tube)
  1. If the old grease is just dark the condition of the hub should be fine for another season.
  2. If there is any water or if the grease is a white milky color then the grease seal has likely failed.
    - a. The hub must be disassembled, the grease seal replaced, bearings likely will need to be replaced too.
  3. If there are shiny metal fragment in the old grease then the bearings are failing and must be replaced.
  4. Wipe excess from front and re-install the dust cap.

Integrated zerk fitting on  
the backside of the hub



***Procedure for hubs with-out a zerk fitting:***

- i. Prepare a disposable container for the old grease to fall into.
- ii. Remove dust cap, cotter pin, crown nut, washer. Pull hub off spindle.
- iii. Inspect inside the hub where the cups seat and the spindle for scoring, pitting, bending, dents, thread or other damage.
- iv. With the hub removed, hand-pack fresh grease in until fresh clean grease is visible oozing out the front bearing. (about 1/3 of a tube)
  1. If the old grease is just dark the condition of the hub should be fine for another season.
  2. If there is any water or if the grease is a white milky color then the grease seal has likely failed.
    - a. The hub must be disassembled, the grease seal replaced, bearings likely will need to be replaced too.
  3. If there are shiny metal fragment in the old grease then the bearings are failing and must be replaced.
  4. Wipe excess from front and re-install the hub and dust cap.

### *Adding your own Zerk fitting to avoid the previous steps above:*

- i. You can add your own zerk fitting to the front of your hub by adding a Bearing Buddy® Protector.
- ii. Look for Model# 1980A and follow the manufactures instructions for use.

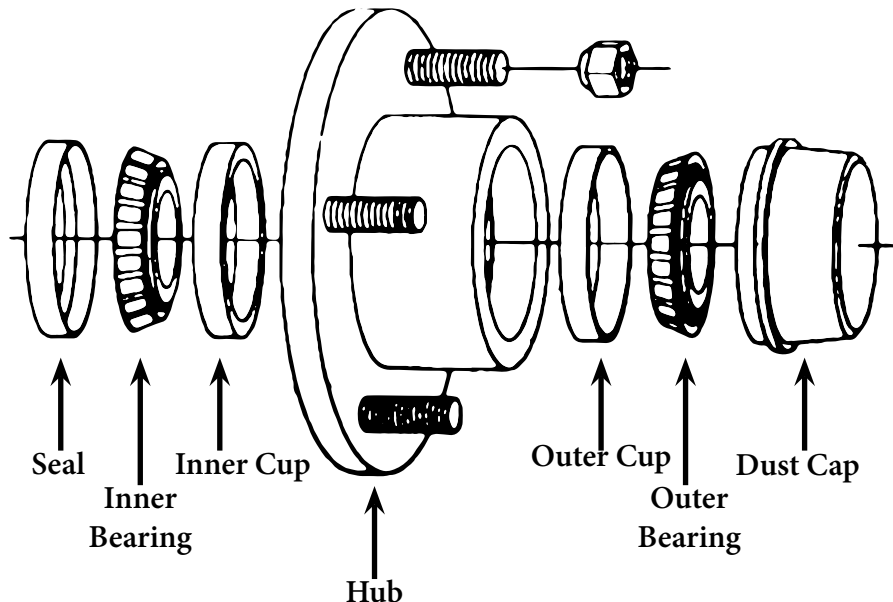
### *Type of grease to use:*

Automotive bearing grease is OK in a pinch, marine wheel-bearing grease is better, and synthetic marine-wheel bearing grease is best. Best advice: Use a high-quality synthetic marine grease that's water resistant, and do the best job possible cleaning out the old grease when repacking. Don't mix old and new greases if possible, and record what grease you're using, so you know what to apply when your bearings need a shot of the slippery stuff.

### *Damaged Bearings? Replace them right away with a new Bearing Kit*

**Procedure: For all of your spare part needs Visit [www.maloneautoracks.com/Replacement-Parts](http://www.maloneautoracks.com/Replacement-Parts)**

1. Remove dust cap, cotter pin, crown nut, washer. Pull hub off spindle.
2. Use a hammer and a mild steel bar to drive out old inner cups.
3. Use a solvent such as kerosene to clean the hub, nut, washer and spindle. All dirt and old grease must be removed.
4. Inspect inside the hub where the cups seat and the spindle for scoring, pitting, bending, dents, thread or other damage. Pay close attention to the raised rear surface of the spindle where the grease seal grips. If it is scored or pitted the grease seal may leak.
5. File off nicks or burrs using a fine file or emory cloth, then wipe away any filings, then re-clean with solvent.
6. Coat the spindle and the inside of the hub lightly with grease.
7. Use the mild steel bar to drive the new cups in to the hub until they are solidly seated. Do not damage the cup surfaces.
8. Pack both bearings with grease forcing grease inside the cage in-between all the rollers starting at the large end until grease shows at the small end.
9. Install the packed rear bearing in the hub.



Cont. on next page

## *Damaged Bearings? Replace them right away. Continued*

### *Procedure: Continued*

10. Install the grease seal. Don't hammer directly on the seal. Use a block of wood. Take care to drive the seal in straight. Seal should be flush to the outside surface of the hub.
11. Fill the hub, in behind the seal, with grease then slide the hub over the spindle being careful not to damage the seal against the spindle. Pack the hub full of grease.
12. Install the packed outer bearing and cup then pack more grease into any voids and install the washer and nut.
13. While turning the hub, use a 12" wrench to tighten the nut until the hub begins to bind indicating that all the bearing parts are sealed properly.
14. Back off the nut about ¼ turn, as needed, until you have between .001" to .007" of end play.
15. Warning: Failure to back off the nut to allow end play may cause the bearings to over heat and fail creating a risk of serious bodily harm.
16. Lock the nut in place using a new cotter pin.
17. Re-check end play. Install the dust cap.

### Notes

### ***Towing Speeds/Tips:***

The hubs on your trailer are already fully packed with a high-speed, high-temp grease, allowing you to **safely tow at any posted speed limit. Including highway speeds.**

You need to allow for extra time and room when switching lanes, stopping, and passing other vehicles when towing a trailer. You must also swing out wider when traveling around bends and corners as the trailer does not follow the exact path as the vehicle on turns.

Travel at moderate speeds to conserve fuel. Use a lower gear to ease stress on your transmission and engine when climbing long steep hills. Shifting out of overdrive and into a lower gear may also improve vehicle gas mileage.

Use extra caution around potholes and other large bumps. They can damage the tow vehicle, trailer hitch, and trailer. When pulling a trailer, ***take your time and be careful.***

If for some reason (a gust of wind, a downgrade, a pass by a larger vehicle, etc.) the trailer does begin to sway, the driver needs to assess the situation to determine the proper course of action. Here is a list of dos and don'ts to think about.

### ***Good Towing Practice:***

- Gradually reduce speed
- Steady the steering wheel - sudden turns can cause more sway
- Pull to side of roadway if needed

### ***NOT Good Towing Practice:***

- Do not slam on the brakes - jackknifing could occur
- Do not attempt to steer out of a sway situation
- Do not increase speed - trailer sway increases at faster speeds
- Do not tow a trailer that continues to sway
- Consider reloading the trailer or perhaps adding a sway control or a weight distribution system with sway control

An unbalanced load can also create trailer 'sway' when in tow. When loading gear keep in mind the tongue weight, downward pressure on the ball by the coupler, shouldn't exceed 10%-15% of the overall weight. If you experience any sway when towing, stop and adjust your payload forward or back as needed.

**DON'T FORGET:** When loading gear keep in mind the tongue weight, downward pressure on the ball by the coupler, shouldn't exceed 10%-15% of the overall weight. If you experience any sway when towing, stop and adjust your payload forward or back as needed.

## Electrical/Lighting

Properly functioning trailer lights are a must for safety, so check your lights every time you use your trailer. Some problems, such as a burned-out bulb or a bad ground wire, can be a snap to fix—others can be a real pain to diagnose and repair.

### Wiring Diagram For Trailer Lights

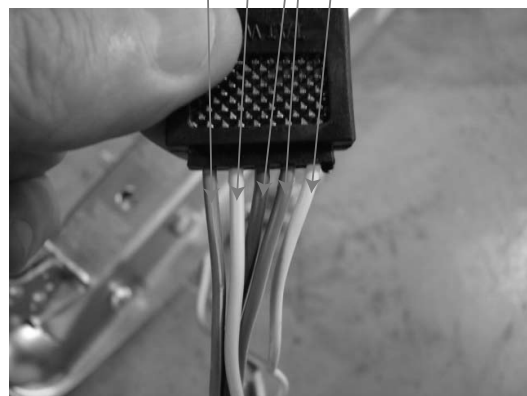
**Note:** Wiring colors are the same from incandescent lights and LED light kits.

Green (Passenger side turn signal)

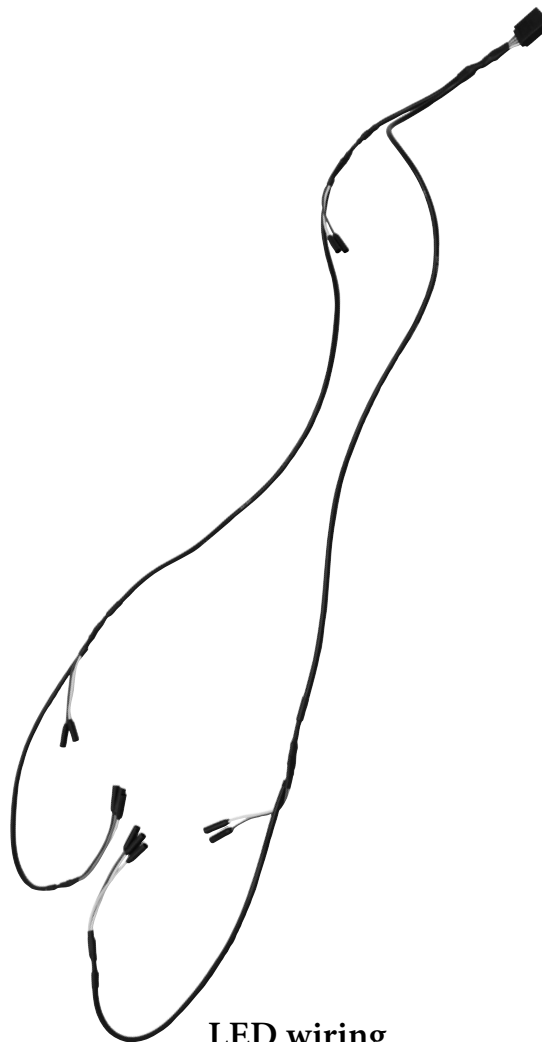
Yellow (driver's side turn signal)

Brown x 2 (running lights , both sides)

White (common ground)

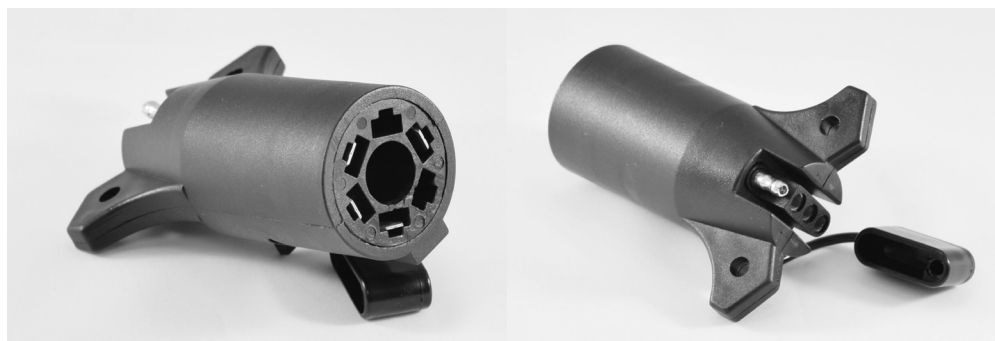


Incandescent wiring



LED wiring

Our trailers use a standard flat four pin connection at the harness. Some larger vehicles are outfitted with a round 7 pin configuration. If this is the case on your vehicle you'll need to use an adapter like the one pictured.





## *Electrical/Lighting Continued*

We can't cover every scenario in this manual but here's some trouble shooting we can do to help get your trailer back in top condition.

Having a helper standing behind the vehicle to see if the lights are working will make the process go a lot quicker..and save you from running back and forth.

### *1). Start at the Vehicle*

If your lights seem dim or don't work at all, lets start with the harness at the vehicle. This will require an electrical tester that you can find at your local hardware store. This tester will tell you right away if you have a problem from your car or truck. If the tester shows a problem, check the operation of all your vehicle lights to make sure you don't have a blown fuse, a burned-out light or a bad flasher. Clean the connections and check again. Check for broken wires near the connector. If you still have problems, make an appointment to have the wiring checked.

If the lights on the tester function properly, the problem is the trailer lights or harness.

### *2). Clean Every Connector*

If we've determined the vehicle is okay and lights still aren't working properly, clean all the contact pins with a good quality electrical contact cleaner and a fine wire brush.

### *3). Check the Ground*

Most problems occur because of a bad ground. If your using incandescent lights, they should be grounded at the front of the trailer along the metal frame (should be a white wire).

Double check and clean all connections with sandpaper. If the ground screw is corroded it should be replaced.

LED lights on the hand use the vehicle as the ground. SO if theres a grounding issue it's back at the vehicles plug or wiring.

### *4). Replace Bad Bulbs & Clean Corroded Sockets*

If you have just a single light out chances are you just need to replace the bulb. Remove the lens cover, replace the bulb(s). Test it and if ti works your on your way.

If the light still fails to work, we need to check and clean all the sockets of any corrosion. Some simple sandpaper around a wooden dowel works great.

### *5). Testing the Continuity*

Bad, or broken wiring can also lead to failures. Check the trailer wiring with a continuity tester available at your local automotive shop. Follow manufactures instructions for use and testing procedure.

### *6). Replace the Wiring*

If you're finding badly corroded parts and all else fails, you can buy a new wire harness for about \$30-\$60. A new harness should include the wiring connector, lights and lenses, and complete instructions. In most cases, it can be installed in about two hours or less.

<i>Product Name</i>	<i>SKU#</i>	<i>EcoLight™</i>	<i>LowMax™</i>	<i>MicroSport™</i>	<i>MicroSport™ LowBed™</i>	<i>MegaSport™</i>	<i>MegaSport™ LowBed™</i>	<i>XtraLight™</i>
MegaWing SOT™ Large Fishing Kayak Wing Carrier	MPG207	●	●	●	●	●	●	●
12" Galvanized Spare Tire w/ Lockable Attachment	MPG465			●	●			
Trailer Tongue Kick Stand	MPG467	●	●	●	●			●
Double Leaf Springs	MPG468		●	●	●			
MicroSport™ 2nd Tier Kit with 50" Load Bars	MPG474			●	●			
Trailer Storage Trunk	MPG481	●	●	●				●
Fiberglass Safety Pole	MPG488	●	●	●	●	●	●	●
MicroSport™ Retractable Tongue Kit	MPG494			●	●			
MegaSport™ Trailer Plastic Storage Trunk w/Hdwr	MPG536					●		
MegaSport™ Storage Drawer w/ Rollers & Wheels	MPG537					●		
MegaSport™ Jack Stand	MPG538					●	●	
Flood Light (hard wired version)	MPG539		●	●	●	●	●	
MegaSport™ Spare Tire w/Lockable Attachment	MPG540					●	●	
Fishing Rod Storage Tube w/Mounting Hdwr	MPG541	●	●	●	●	●	●	●
Flood Light w/ Magnetic Mount	MPG542	●	●	●	●	●	●	●
Electrical Charging Station	MPG543	●	●	●	●	●	●	●
MegaSport™ 2nd Tier Kit with Load Bars	MPG545					●		
MegaSport™ Milk Crate Cage w/ Mounting Hdwr	MPG546					●	●	
MegaSport™ Wire Basket with Hdwr	MPG547					●		
MicroSport™ SUP Transport Pads	MPG553			●				
Large Kayak Bunk Kit	MPG561	●	●	●	●	●	●	●
8" Spare Tire w/ Lockable Attachment	MPG562	●						●
8" Pontoon Spare Tire w/ Non-Lockable Attachment	MPG562		●					
LowMax™ 2nd Tier	MPG597		●					
Pilot™ Tray Style Bike Rack (for trailer only)	MPG2100	●	●	●	●			●
Hobie® Style Cradle Adapter (Set of 6)	MPG5576-6	●	●	●	●	●	●	●
MicroSport™ LowBed™ 2nd Tier	6052				●			

● = Accessory Fits Trailer Model

# **MALONE**

## **CHANGING THE WAY YOU GET THERE**

### **Limited Five (5) Year Warranty**

The Malone Auto Racks (Malone) Limited 5 Year Warranty covers certain Malone-brand products that have been specifically identified for inclusion in the program. This warranty is in effect for five (5) years, from the time of sale, for the original retail purchaser of the product. This warranty is terminated after five years from the date of purchase, or, when the original retail purchaser sells or otherwise transfers the product to any other person or entity during the five year warranty period.

Subject to the limitations and exclusions described in this warranty, Malone will remedy defects in materials and/or workmanship by repairing or replacing, at its option, a defective product without charge for parts or labor. Malone may elect, at its option, not to repair or replace a defective product but rather issue to the original retail purchaser a refund equal to the purchase price paid for the product, or credit to be used toward the purchase of a replacement Malone product.

This warranty does not cover, and no warranty is given for defects or problems caused by normal wear and tear, which includes, but is not limited to, surface (aesthetic) metal corrosion, scratches, dents, deformities, accidents, unlawful vehicle operation, or any modification of a product not performed or authorized in writing by Malone.

In addition, this warranty does not cover problems resulting from conditions beyond Malone's control including, but not limited to, theft, misuse, overloading, or failure to assemble, mount or use the product in accordance with Malone's written instructions or guidelines included with the product provided to the original retail purchaser.

No warranty is given for Malone products purchased outside of the continental United States, Canada and Mexico.

If the product is believed to be defective, the original retail purchaser should contact the Malone dealer from whom it was purchased, who will give the original retail purchaser instructions on how to proceed. If the original retail purchaser is unable to contact the Malone dealer, or the dealer is not able to remedy the defect, the original retail purchaser should contact Malone by email at [support@maloneautoracks.com](mailto:support@maloneautoracks.com).

In the event that the product must be returned to Malone, a technician at the email address above will provide the original purchaser with return shipping instructions. The original purchaser will be responsible for the cost of mailing the product to Malone. In order to be eligible to receive any remedy under this warranty, a copy of the original purchase receipt, a description of the defect and a return address must be provided.

### **Disclaimer of Liability**

Repair or replacement of a defective product, or the issue of a refund or credit (as determined by Malone) is the original retail purchaser's sole and exclusive remedy under this warranty. Damage to original purchaser's vehicle, cargo, or property, and/ or to any other person or property is not covered by this warranty.

This warranty is expressly made in lieu of any and all other warranties, express or implied, including the warranties of merchantability and fitness of a particular purpose

Malone's sole liability to any purchaser is limited to the remedy set forth above. In no event will Malone be liable for any direct, indirect, consequential, incidental, special, exemplary, or punitive damages , or, for any other damages of any kind or nature (including but not limited to, lost profits, lost income or lost sales).

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not be applicable.

In addition, all vehicular transports are potentially hazardous. Any person(s) using Malone products are personally responsible for following the given directions for use and/or installation and accepts full responsibility for any and all damages or injury of any kind including death, which may result from their use and/or installation.

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