



OPERATORS MANUAL FOR Mi-T-M®
CORONA DISCHARGE
OZONE GENERATORS



CAUTION
RISK OF INJURY!


READ MANUAL BEFORE OPERATING!

This manual is an important part of the Corona Discharge Ozone Generator
and must remain with the unit when you sell it!


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WARNING

 **WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

WARNING

 **WARNING:** This product can expose you to chemicals including carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

INTRODUCTION

Congratulations on the purchase of your new Mi-T-M Corona Discharge Ozone Generators! You can be assured your Mi-T-M Corona Discharge Ozone Generators was constructed and designed with quality and performance in mind. Each component has been rigorously tested to ensure the highest level of acceptance.

This operator's manual was compiled for your benefit. By reading and following the simple safety, installation, operation, maintenance and troubleshooting steps described in this manual, you will receive years of trouble free operation from your new Mi-T-M Corona Discharge Ozone Generators. The contents of this manual are based on the latest product information available at the time of publication. Mi-T-M reserves the right to make changes in price, color, materials, equipment, specifications or models at any time without notice.

! IMPORTANT !

These paragraphs are surrounded by a "SAFETY ALERT BOX". This box is used to designate and emphasize Safety Warnings that must be followed when operating this Corona Discharge Ozone Generator.

Accompanying the Safety Warnings are "signal words" which designate the degree or level of hazard seriousness. The "signal words" used in this manual are as follows:

DANGER: Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

WARNING: Indicates a potentially 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.



The symbols set to the left of this paragraph are "Safety Alert Symbols". These symbols are used to call attention to items or procedures that could be dangerous to you or other persons using this equipment.

ALWAYS PROVIDE A COPY OF THIS MANUAL TO ANYONE USING THIS EQUIPMENT. READ ALL INSTRUCTIONS BEFORE OPERATING THIS CORONA DISCHARGE OZONE GENERATOR AND ESPECIALLY POINT OUT THE "SAFETY WARNINGS" TO PREVENT THE POSSIBILITY OF PERSONAL INJURY TO THE OPERATOR.

Immediately write in the serial number of your generator in the space provided below.

SERIAL NUMBER _____

Inspect for signs of obvious or concealed freight damage. If damage does exist, file a claim with the transportation company immediately. Be sure that all damaged parts are replaced and that the mechanical and electrical problems are corrected prior to operation of the unit. If you require service, contact Mi-T-M Customer Service.

CUSTOMER SERVICE
CALL OUR TOLL-FREE NUMBER
for the Sales or Service Center nearest you!
800-553-9053

Please have the following information available for all service calls:

1. Model Number
2. Serial Number
3. Date and Place of Purchase

SPECIFICATIONS

MODEL	32-1192	32-1193
Ozone Output:		
Ozone Output	Low Flow (6 grams/day)	Medium Flow (12 grams/day)
Flow Rate	15 scfh	
Power Requirements:		
Voltage	95-250V 50/60HZ	95-250V 50/60HZ
Power	12 Watts	24 Watts
Shipping Weight:		
Approximate (lbs / kg)	8/3.5	
Location Requirements:		
Mounting	Wall mount in a clean, protected area.	
Ambient Temp.	30° F - 120° F (0° C - 50° C)	

The Mi-T-M Corona Discharge Series Ozone Generators described in this manual are designed to provide the benefits of ozonated water in an environmentally safe and effective manner. The high quality, specially engineered components ensure efficient ozone output and reliable performance.

As a result of proper use of the Mi-T-M Corona Discharge Ozone Generators, unpleasant effects of traditional chemical use are virtually eliminated. The Mi-T-M Corona Discharge Ozone Generators are safe and harmless to your equipment when installed properly.




IMPORTANT SAFETY WARNINGS



WARNING: When using this product, basic precautions should always be observed, including the following:

READ ALL SAFETY WARNINGS BEFORE USING THE CORONA DISCHARGE OZONE GENERATOR

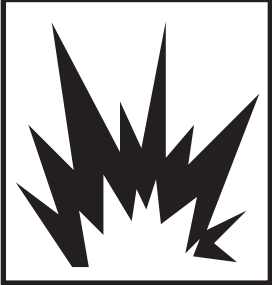


HAZARD	POTENTIAL CONSEQUENCE	PREVENTION
<p data-bbox="178 268 535 325">RISK OF ELECTRIC SHOCK OR ELECTROCUTION</p> 	<p data-bbox="552 268 966 525">Serious injury or death could occur if the Corona Discharge Ozone Generator is not properly grounded. Your Corona Discharge Ozone Generator is powered by electricity and may cause electric shock or electrocution if not installed properly.</p> <p data-bbox="552 1365 966 1459">Serious injury or death may occur if electrical repairs are attempted by unqualified persons.</p>	<p data-bbox="982 268 1526 325">Read this manual completely before attempting installation.</p> <p data-bbox="982 336 1526 399">All permanent electrical connections should be made by a qualified electrician.</p> <p data-bbox="982 409 1526 598">For cord and plug-connected units, connect to a grounded, grounding type receptacle only. If the Mi-T-M Corona Discharge Ozone Generator is connected to an independent electrical supply, then a G.F.C.I. must be installed between the generator and the electrical supply.</p> <p data-bbox="982 609 1193 640">Do not bury cord.</p> <p data-bbox="982 651 1526 714">To reduce the risk of electrical shock, replace damaged cord immediately.</p> <p data-bbox="982 724 1526 955">A pressure wire connector is provided on the outside of the unit to permit connection to a minimum No. 8 AWG (8.4 mm²) solid bonding conductor between this point and any metal equipment, metal enclosures of electrical equipment, metal water pipes, or conduit within five (5) feet (1.5 m) of the unit as needed to comply with local requirements.</p> <p data-bbox="982 966 1526 1092">Install ozone generator no less than one (1) foot above maximum water level to prevent water from contacting electrical equipment. Install in accordance with the installation instructions.</p> <p data-bbox="982 1102 1429 1134">Follow all applicable electrical codes.</p> <p data-bbox="982 1144 1526 1354">The Mi-T-M Corona Discharge Ozone Generator must be installed in an outdoor location, or indoors in a forced air ventilated room, and installed so that the orientation is exactly as shown in the wall mounting section of this manual. Install to provide water drainage of generator to protect electrical components.</p> <p data-bbox="982 1365 1526 1491">Electric shock hazard. Be sure to turn power OFF and disconnect from power source before any service work is performed. Failure to do so could result in serious injury or death.</p> <p data-bbox="982 1501 1526 1533">Never attempt any servicing while unit is wet.</p> <p data-bbox="982 1543 1526 1648">Plastic ozone supply tubing is supplied with the Mi-T-M Corona Discharge Ozone Generator. Never replace this tubing with metal tubing.</p>



IMPORTANT SAFETY WARNINGS



READ ALL SAFETY WARNINGS BEFORE USING THE CORONA DISCHARGE OZONE GENERATOR

HAZARD	POTENTIAL CONSEQUENCE	PREVENTION
<p data-bbox="105 241 487 273">RISK OF EXPLOSION OR FIRE</p>  	<p data-bbox="511 235 920 325">Serious injury or death could occur from an explosion or fire caused by a system electric spark.</p>	<p data-bbox="950 235 1477 357">This unit must be placed in an area that is well ventilated, free of flammable vapors, combustible dust, gases or other combustible materials.</p> <p data-bbox="950 378 1477 472">Do not store or use gasoline, chemicals or other flammable liquids or vapors near this or any other appliance.</p>
<p data-bbox="142 928 451 955">RISK OF ASPHYXIATION</p> 	<p data-bbox="511 928 909 991">Serious injury or death may occur from inhaling ozone gas.</p>	<p data-bbox="950 928 1477 1045">Short-term inhalation of high concentrations of ozone and long term inhalation of low concentrations of ozone can cause serious harmful physiological effects.</p> <p data-bbox="950 1087 1477 1144">DO NOT inhale ozone gas produced by this device.</p>

 **!SAVE THESE INSTRUCTIONS!** 

NOTES

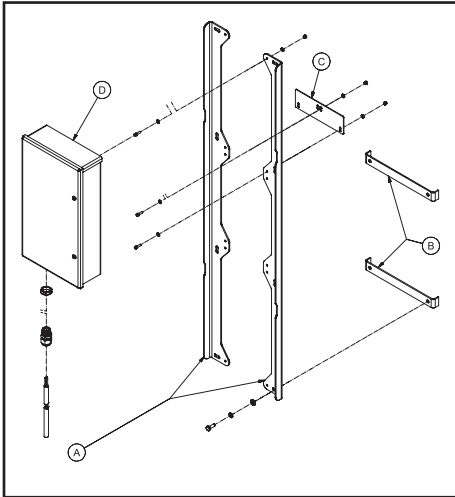
Serial Number	Reason For Change
#30007449	New style ozone generator 32-1192 and 32-1193. 32-0860, 32-0861, 32-0862, 32-0863, 32-0865, 32-0866 are Obsolete.
#331010095	New Ozone replacement parts for 32-1192 and 32-1193.

INSTALLATION



ATTIRE:

Proper attire is essential to your safety. It is advised to utilize whatever means necessary to protect eyes, ears, and skin.



(Fig. 1)

LOCATION:

The Mi-T-M Corona Discharge Ozone Generator units are designed for wall or tank mounting.

1. Mount generator in a clean, protected area, either indoors or outdoors. Locate generator out of reach of sprinklers or drainage spouts.
2. Allow sufficient access for maintenance and all tubing and electrical wires.
3. Ozone generator must be installed no less than one foot above the maximum water level.

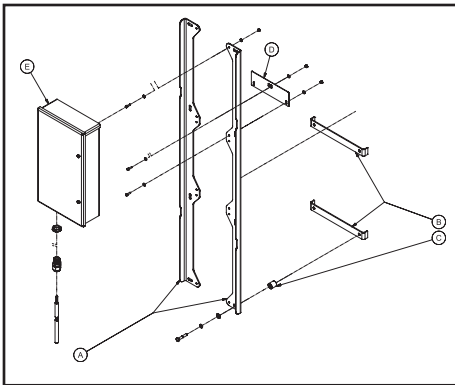
Note: Be sure shipping foam inside of the control box is removed prior to mounting.

MOUNTING:

TANK MOUNT

Refer to the following diagrams for the respective system mounting procedures:

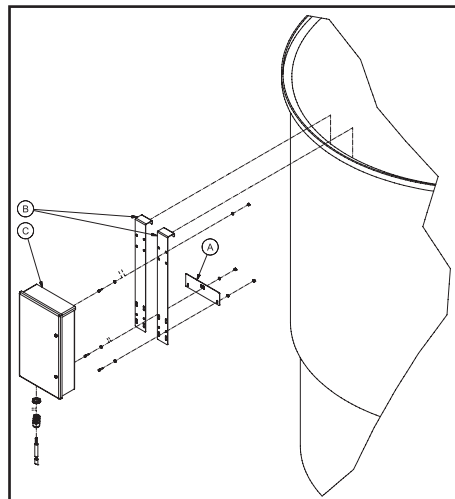
- BIO-Units: Refer to Figure 1.
- WLP/WOS-Units: Refer to Figure 2.
- WCP-Units: Refer to Figure 3.



(Fig. 2)

Note: Mounting holes in the ozone generator panel are located on the back. Open the panel door by removing the two screws in order to access the mounting holes. There are two mounting holes on the top of the back panel and one at the center bottom of the back panel.

BIO-UNITS (Fig. 1): Loosely mount generator brackets (A) to the tank using the tank mounting brackets (B). Mount the ozone generator fit plate (C) with center slots on top to the ozone generator brackets (A) as shown. Attach the generator (D) at the top two holes to the top hole of both generator brackets (A). Attach the bottom center of the generator (D) to the center hole of the fit plate (C). Tighten all mounting screws.



(Fig. 3)

WLP/WOS-UNITS (Fig. 2): Loosely mount generator brackets (A) to the tank using the mounting brackets (B). Be sure to place spacers (C) between the generator mounting brackets and the tank mounting brackets. Mount the generator fit plate (D) with center slots on top to the generator brackets as shown. Attach the generator (E) at the top two holes to the top hole of both generator brackets (A). Attach the bottom center of the generator (E) to the center hole of the fit plate (D). Tighten all mounting screws.

CONE BOTTOM-UNITS (Fig. 3): Mount fit plate (A) with center slots on top to the two generator mounting brackets (B). Attach the generator (C) at the top two holes to the top hole of both generator brackets (B). Attach the bottom center of the generator (C) to the center hole of the fit plate (A). Tighten all mounting screws. Hang bracket from the top rim of the clarifying tank.

INSTALLATION

WALL MOUNT

1. Open enclosure door to access mounting holes.
2. Refer to Figure 4 to mark the locations of the three mounting holes on the back panel of the generator.
3. Install screws through the three mounting holes built in the top two corners and bottom center of the back panel of the generator.
4. Close enclosure after mounting is complete.

ELECTRICAL:

MAIN POWER

Your Mi-T-M Corona Discharge Ozone Generator has been pre-wired to your oil/water separator.

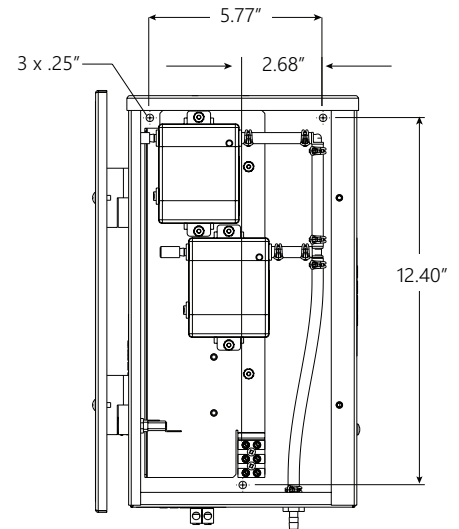
NOTE: Refer to the *IMPORTANT SAFETY INSTRUCTIONS* at the beginning of this manual for important wiring information.

GROUNDING LUG

Using a 6-14AWG conductor, connect the Grounding lug on the right side of the Mi-T-M Corona Discharge Ozone Generator to an appropriate earth contact.

PLUMBING:

1. Connect ¼" blue ozone tubing assembly to the barb at the bottom of the ozone generator box.
2. Run other end of tubing assembly to the barb on the top of the ozone injector mazzi of the water treatment system.
3. Make sure a check valve is installed and functioning properly between the ozone injector and the ozone generator.



(Fig. 4)

OPERATION

START-UP:

Upon completing all of the generator system connections, you are ready to begin start up procedures.

1. Check electrical connections.
 2. Check for proper voltage.
 3. Turn on tank circulation system.
 4. Check for leaks.
-

OPERATION:

Turning on the ozone switch will activate the ozone pump and generator. In some units an additional relay/contacter is used in conjunction with the switch to control the ozone generator. Open the generator enclosure to confirm that the light on each ozone module is on when there is power going to the generator.

The flow rate of the generator has been pre-set to 15 SCFH. The in-line ball valve in the blue ozone tube should NOT be adjusted or removed. In addition any gate valves or ball valves in ozone injector line should not be adjusted either.

When ozone generator is running properly bubbles should be visible from within the treatment tank. There should also be a noticeable ozone odor coming from the ozone treated chamber of the tank.

SHUT-DOWN:

The following sequence of steps must be followed for servicing or for storage.

1. Turn off Ozone Power Switch.
2. Turn off water separator power.
3. Turn off main power to water inlet.
4. If the system is to be shut down for an extended period, disconnect the Ozone Gas Line from the ozone generator.

MAINTENANCE

SYSTEM ELECTRO-MECHANICAL OVERVIEW: (Refer to Drawing Below)

INDICATOR LIGHTS

1. Ozone module: Each ozone module has an indicator light that signals that it is working properly. Open the generator enclosure with power on to view the lights. If the light goes out, replace the module.

INTERNAL COMPONENTS

1. Ozone module 32-1192 has one ozone module and 32-1193 has two ozone modules.
 2. Hose manifold assembly: Each generator has a hose manifold assembly that connects the ozone modules to the hose barb at the bottom of the generator enclosure.
 3. Fuse and fuse holder: Each generator has a 1 amp glass fuse and holder to protect the ozone modules.
-

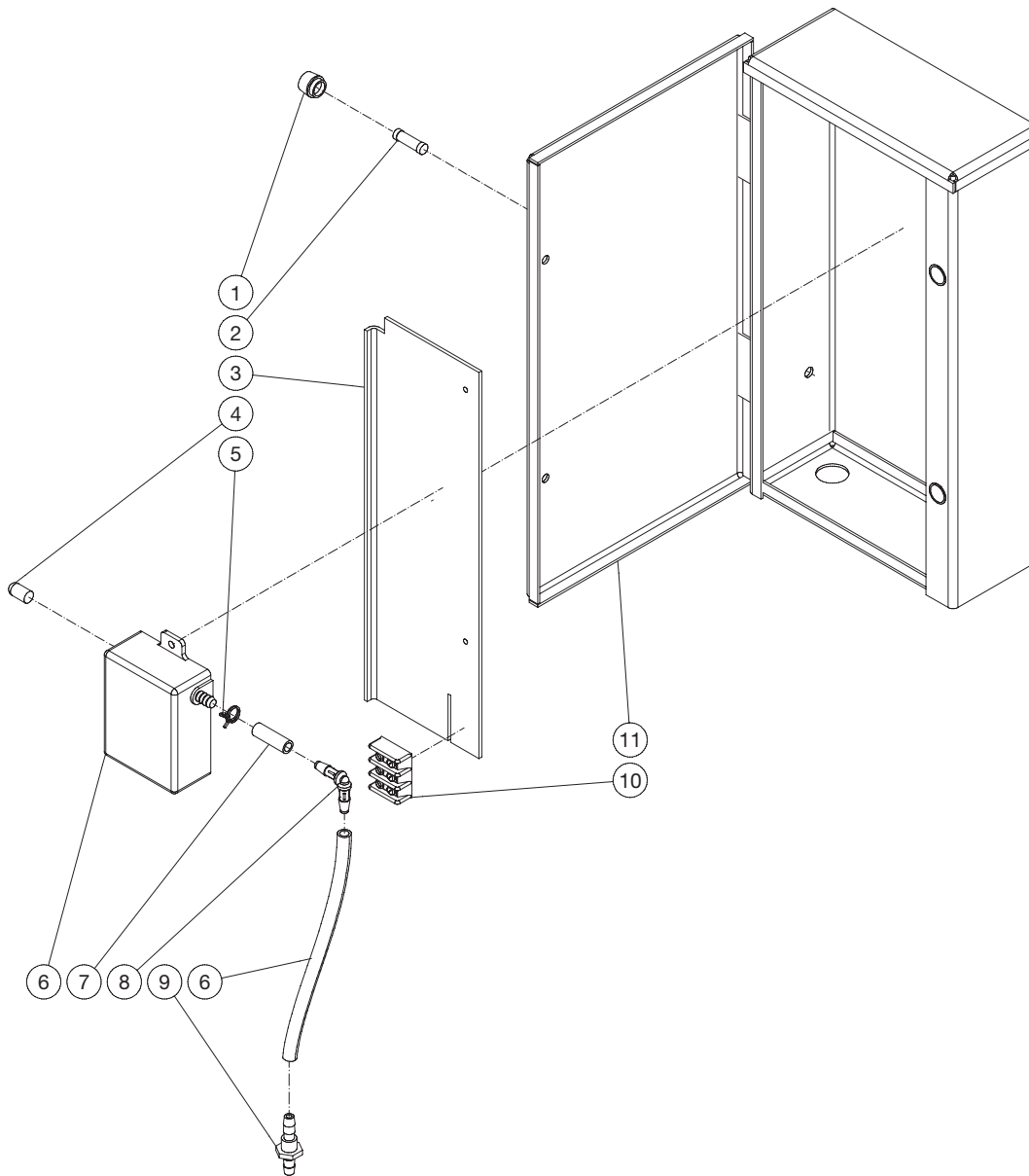
SYSTEM MAINTENANCE:

1. There are green indicator lights located on each ozone module within the generator enclosure. When the light is on it signifies the module is working properly. When the indicator light goes out replace the module.
2. Each ozone module should be replaced after 15,000 hours of operation even if the indicator light is glowing, the ozone module may be producing little or no ozone after this period of time.
3. Replace the hose manifold assembly within the enclosure whenever damaged or every two years of operation. Replace ozone module filter every year.

NOTE: *15,000 hours equals approximately 5 years if the recycle system operates 8 hours/day 365 days of the year, or approximately 2 years if the pool system operates 24 hours/day 365 days of the year.*

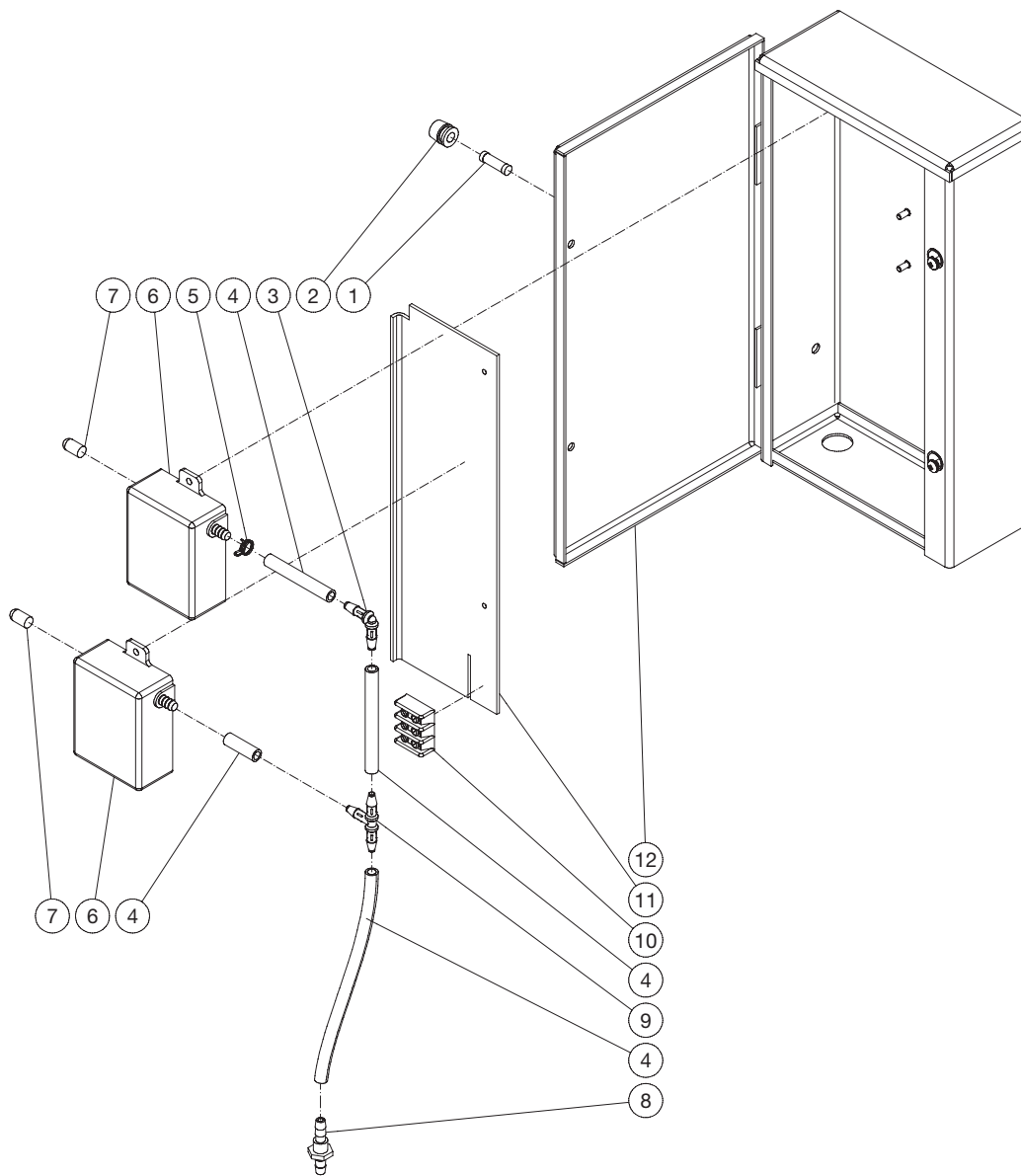
4. Regularly check and inspect ozone supply tubing for cracks or wear. Replace ozone supply tubing as necessary.
5. Regularly check the “ozone check valve” for a proper seal.
6. Replace “ozone check valve” (replacement part #22-0286) every 15,000 hours, or as needed.
7. While operating, check to see if bubbles are entering the water.

OZONE GENERATOR



32-1192 102215			
OZONE GENERATOR			
ITEM	DESCRIPTION	PART #	QTY
1	FUSE HOLDER	32-1196	1
2	FUSE	32-1195	1
3	OZONE MOUNTING PLATE	N/A	1
4	OZONE MODULE FILTER	19-0310	1
5	1/4" TUBE CLAMP	N/A	4
6	LRG OZONE MODULE	32-1329	1
7	HOSE 1/4 ID 3/8 OD	N/A	1
8	1/4" 90 DEG BARB	N/A	1
9	1/4" BARB BULKHEAD	N/A	1
10	TERMINAL STRIP	N/A	1
11	BOX FOR OZONE GENERATOR	N/A	1

OZONE GENERATOR



32-1193 090121			
OZONE GENERATOR			
ITEM	DESCRIPTION	PART #	QTY
1	FUSE	32-1195	1
2	FUSE HOLDER	32-1196	1
3	1/4" ELBOW BARB	N/A	1
4	HOSE	N/A	2
5	1/4" TUBE CLAMP	N/A	8
6	OZONE MODULE	32-1329	2
7	OZONE MODULE FILTER	19-0310	2
8	1/4" BARB BULKHEAD	N/A	1
9	1/4" BARB TEE	N/A	1
10	TERMINAL STRIP 4 PAIR	N/A	1
11	OZONE MOUNTING PLATE	N/A	1
12	BOX FOR OZONE GENERATOR	N/A	1

SERVICE

GENERATOR SERVICING

1. The Mi-T-M Corona Discharge Ozone Generator may be serviced on the wall or tank without disconnecting any plumbing or wiring. Remove the two screws on the right side of the enclosure door. Always ensure power is shut-off to the unit before any servicing begins.

OZONE MODULE AND HOSE REPLACEMENT

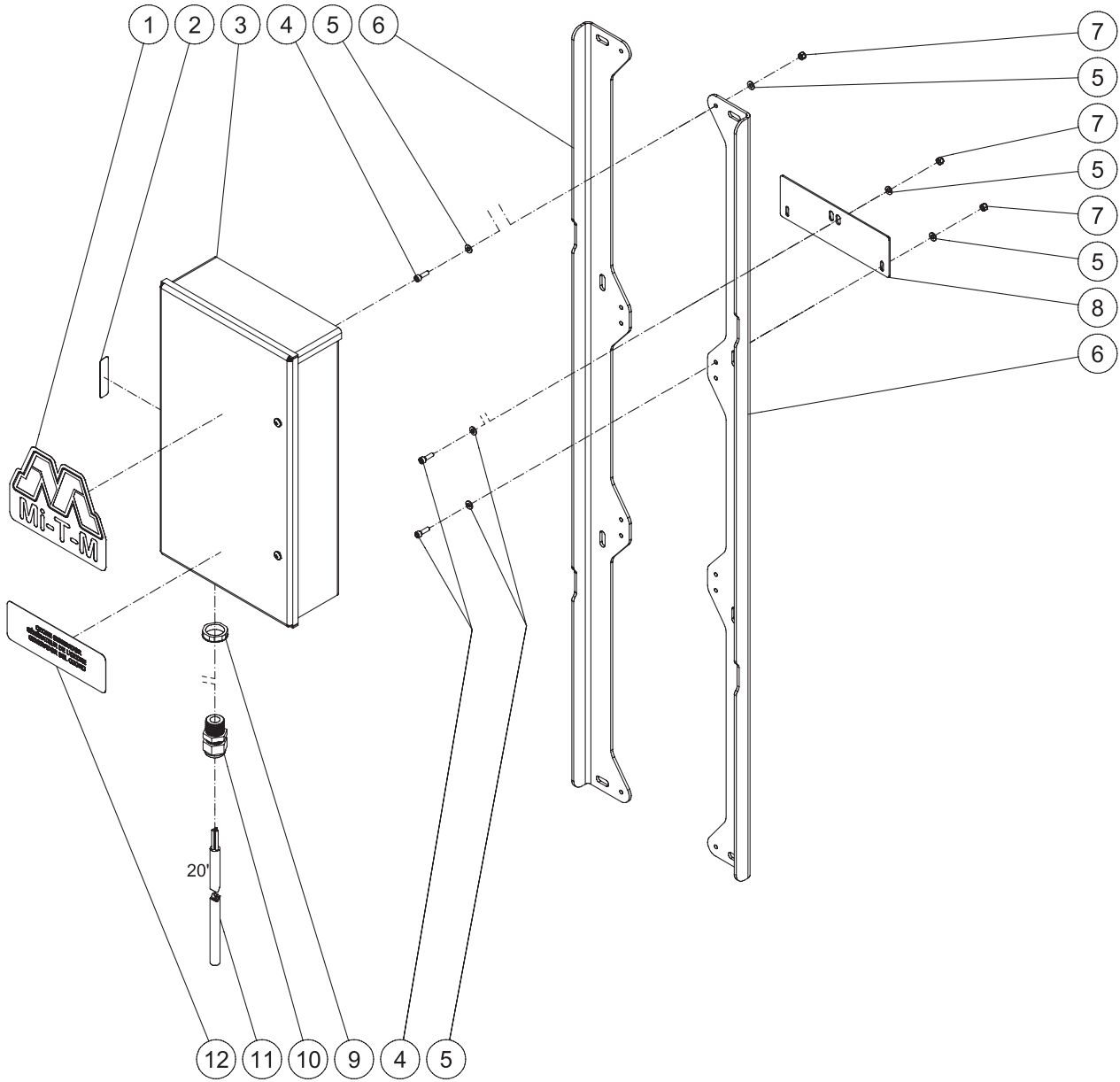
1. Replace ozone modules every 15,000 hours (2 years of constant operation) or when the light on the module goes out.
 - With power off, disconnect the ozone module from the manifold by pinching the tube clamp and pulling the tubing off of the module barb.
 - Disconnect the module from the wire harness to the power terminal.
 - Remove the module by removing the nut at the top and bottom of the module.
 - Remove the ozone module.
 - Install the new ozone module by reversing the steps above.

TROUBLESHOOTING

Knowledge of electrical applications is required for troubleshooting. Contact a certified electrician if you are unsure of your ability to service the equipment. Improper servicing will void generator warranty.

SYMPTOM	PROBABLE CAUSE	REMEDY
<i>ELECTRICAL</i>		
"Main Power" light out when recycling system is on.	No power to the generator module from the power source.	<p>Check circuit breaker at the power distribution box.</p> <p>Check for loose connections or wiring breaks from the power distribution box to the generator.</p> <p>The fuse in the unit has blown and needs to be replaced. The fuse is a replaceable glass, .25"X1.25", 1amp, slo-blo type. Part number is 32-1195</p>
GFCI has tripped	Check power cord.	Reset GFCI.
Ozone tube becomes yellow/brown and brittle.	The high concentration of ozone as well as environmental conditions like UV sunlight will deteriorate the hose over time.	<p>This is normal and acceptable as long as the tubing doesn't become cracked. Replace ozone tube and check valves every 1 or 2 years.</p> <p><i>NOTE: If GFCI or breaker continues to trip after reset, call 1-800-553-9053 for technical assistance.</i></p>

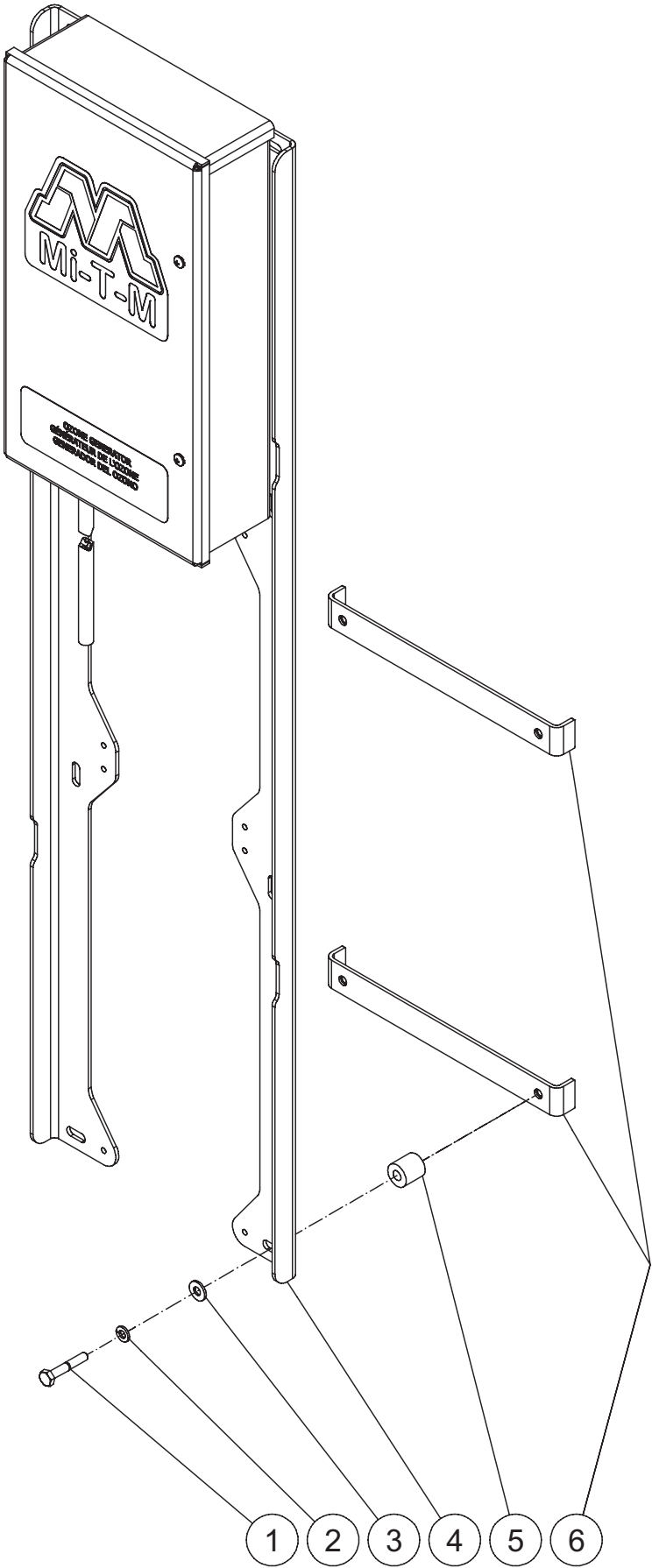
OZONE GENERATOR ASSEMBLY (855-0045/855-0047)



OZONE GENERATOR ASSEMBLY

ITEM	DESCRIPTION	PART #	QTY
1	DECAL - Mi-T-M	34-2169	1
2	DECAL	N/A	1
3	OZONE GENERATOR (855-0045)	32-1192	1
-	OZONE GENERATOR (855-0047)	32-1193	1
4	SCREW	27-8835	5
5	WASHER	28-0010	10
6	BRACKET	20-1444A18	2
7	LOCKNUT	30-8152	5
8	FIT PLATE	20-1445A18	1
9	ELECTRICAL LOCKNUT	32-0108	1
10	STRAIN RELIEF	32-0437	1
11	CORD	32-0074	1
12	OZONE DECAL	34-2115	1

OZONE GENERATOR MOUNTING (STAINLESS STEEL TANKS)

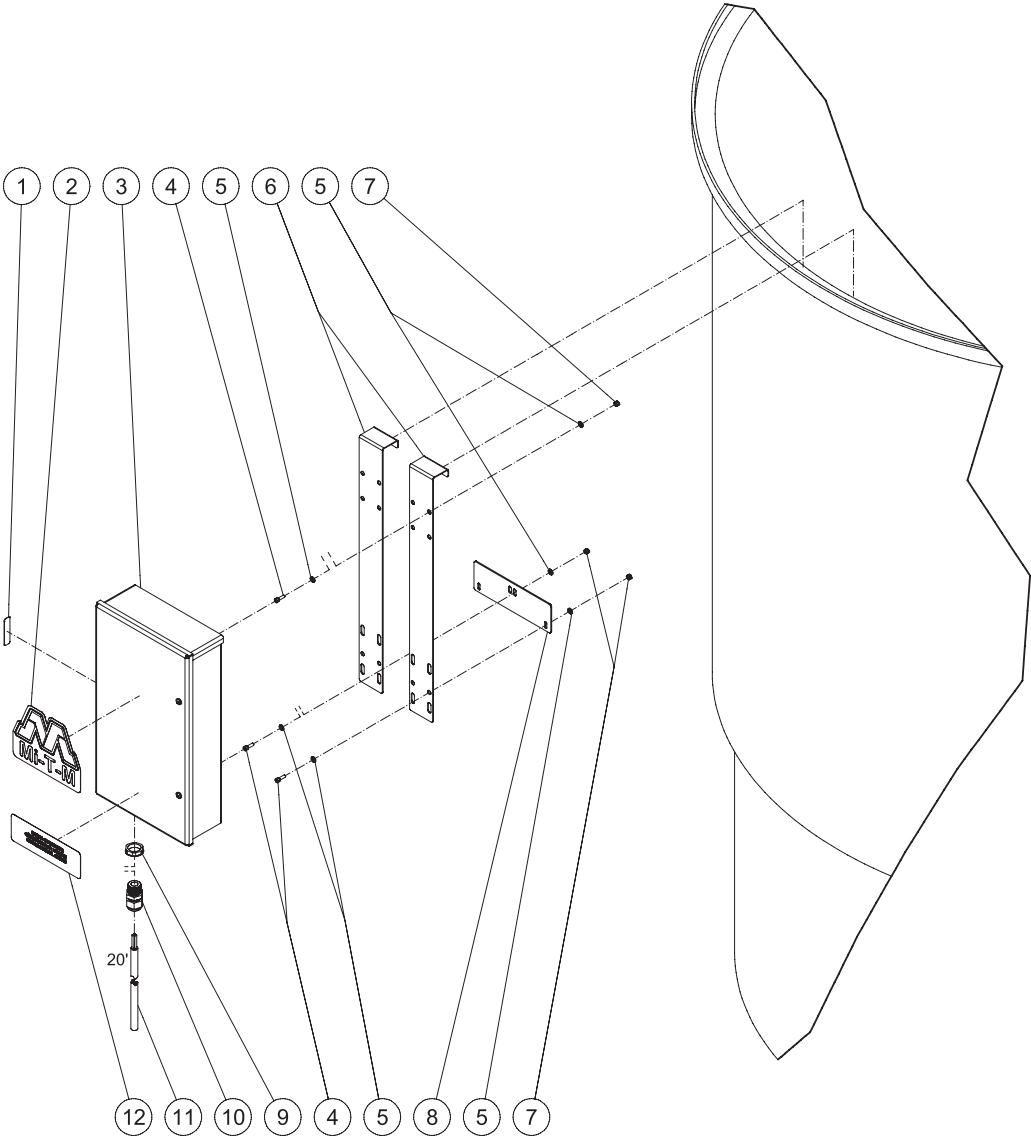


OZONE GENERATOR MOUNTING SS TANKS 102815 MLK

OZONE GENERATOR MOUNTING 102815 MLK			
OZONE GENERATOR MOUNTING (STAINLESS STEEL TANKS)			
ITEM	DESCRIPTION	PART #	QTY
1	BOLT (WLP , WOS)	27-5031	4
-	BOLT (BIO'S)	27-5016	4
2	LOCKWASHER	29-1006	4
3	WASHER	28-0121	4
4	OZONE GENERATOR ASSEMBLY (855-0045)	SEE CHART	1
-	OZONE GENERATOR ASSEMBLY (855-0047)	SEE CHART	1
5	SPACER (WLP , WOS)	33-0358	4
6	ELECTRICAL BRACKET	--	2

UNIT MODEL NUMBER	855-0045	855-0047
WLP-08-0M10	X	
WOS-15-0M10	X	
WOS-30-0M10		X
WLP-20AB-0M11/0M31		X
WLP-20-0M10		X
BIO-20,25,35R-0M10/30		X
WLP-30-0M10		X
WLP-40AB-0M11/0M31		X
WLP-40-0M10		X

OZONE GENERATOR MOUNTING (855-0046/855-0048)

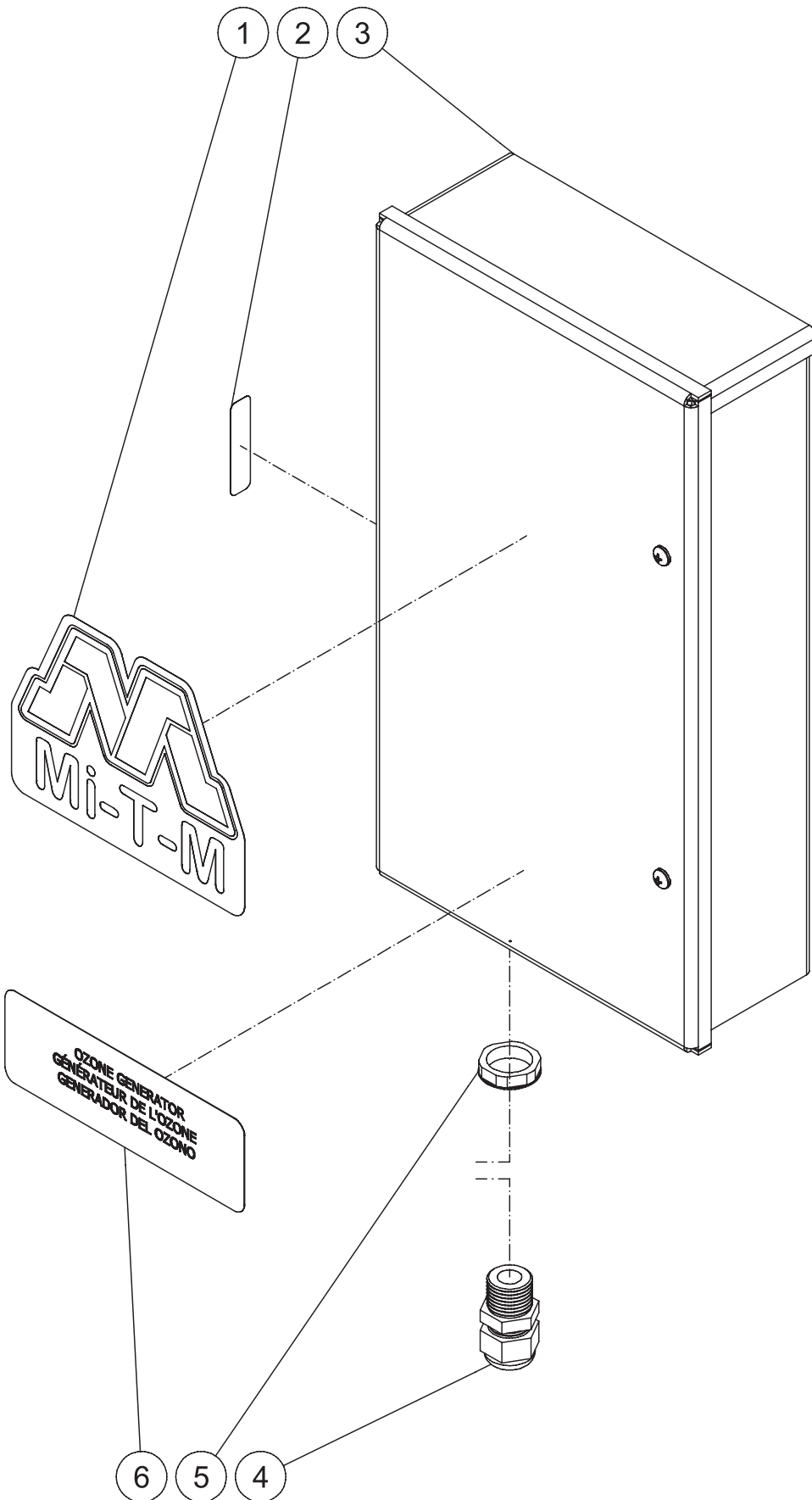


855-0046_8 102615 MLK

OZONE GENERATOR MOUNTING			
ITEM	DESCRIPTION	PART #	QTY
1	DECAL - OZONE GENERATOR SERIAL #	N/A	1
2	DECAL - #3M	34-2169	1
3	OZONE GEN-LOW FLOW 110-230VAC (855-0046)	32-1192	1
-	OZONE GEN-MED FLOW 110-230VAC (855-0048)	32-1193	1
4	BOLT	27-8835	5
5	WASHER	28-0010	10
6	HANGER BRACKET	21-0177	2
7	LOCKNUT	30-8152	5
8	OZONE GEN. FIT PLATE - PAINTED	20-1445A18	1
9	LOCKNUT	32-0108	1
10	STRAIN RELIEF	32-0437	1
11	CORD	32-0074	1
12	DECAL: OZONE GENERATOR	34-2115	1

UNIT MODEL NUMBER	855-0046	855-0048
BIO-15-010/30	X	
WCP-10-0M10	X	
WCP-10AB-0M10/30	X	
WCP-20-0M10		X
WCP-30-0M10		X
WCP-30AB-0M10/30		X
WCL-30D-0M10		X

OZONE GENERATOR ASSEMBLY (855-0049/855-0050)



855-0049_50 102815 MLK

855-0049_50 102815 MLK			
OZONE GENERATOR ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	DECAL - Mi-T-M	34-2169	1
2	DECAL	N/A	1
3	OZONE GENERATOR (855-0049)	32-1192	1
-	OZONE GENERATOR (855-0050)	32-1193	1
5	ELECTRICAL LOCKNUT	32-0108	1
4	STRAIN RELIEF	32-0437	1
6	OZONE DECAL	34-2115	1

STATEMENT OF WARRANTY

Mi-T-M warrants all parts (except those referred to below) of your new Mi-T-M Corona Discharge Ozone Generator to be free from defects in materials and workmanship during the following periods:

For One (1) Year from the date of original purchase.

Defective parts not subject to normal wear and tear will be repaired or replaced at Mi-T-M's option during the warranty period. In any event, reimbursement is limited to the purchase price paid.

EXCLUSIONS

1. Parts damaged due to:
 - normal wear, misapplication, modifications/alterations, abuse,
 - operation at other than recommended speeds, pressures or temperature,
 - the use of caustic liquids,
 - chloride corrosion or chemical deterioration,
 - fluctuations in electrical or water supply,
 - operating unit in an abrasive, corrosive or freezing environment.
2. Parts damaged by failure to follow recommended:
 - installation, operating and maintenance procedures.
3. This warranty does not cover the cost of:
 - normal maintenance or adjustments,
 - labor charges,
 - transportation charges to Service Center,
 - freight damage.
4. The use of other than genuine Mi-T-M parts will void warranty. Parts returned, prepaid to Mi-T-M's factory or to an Authorized Service Center will be inspected and replaced free of charge if found to be defective and subject to warranty. There are no warranties which extend beyond the description of the face hereof. Under no circumstances shall Mi-T-M bear any responsibility for loss of use of the unit, loss of time or rental, inconvenience, commercial loss or consequential damages.

For Service or Warranty consideration, contact:
Mi-T-M Corporation, 50 Mi-T-M Drive, Peosta, IA 52068-0050
563-556-7484 / 800-553-9053 / Fax 563-556-1235
Monday-Friday 8:00 a.m. - 5:00 p.m. CST

Manufactured by Mi-T-M
50 Mi-T-M Drive, Peosta IA 52068
563-556-7484/ Fax 563-556-1235