

Quality by Stainless

Stainless Equipment and Parts LLC

QMM-4 Series MARINATOR (All Models) Operating Manual



FOR COMMERCIAL USE ONLY

Customer Service: Call 1-615-306-2883

LIMITED WARRANTY

STAINLESS EQUIPMENT AND PARTS LLC warrants to the original purchaser only that its products are free from defects in material or workmanship for a period of (1) year from the date of shipment. If any part of a Stainless Equipment and Parts LLC product fails during this period because of defective workmanship the original purchaser should immediately notify the Customer Service Department of STAINLESS EQUIPMENT AND PARTS LLC. Claims should be sent to the following address: STAINLESS EQUIPMENT AND PARTS LLC, 165E Main St. Auburntown Tn 37016 STAINLESS EQUIPMENT AND PARTS LLC reserves the right to send a service representative to examine its product. If the examination, in the sole judgment of STAINLESS EQUIPMENT AND PARTS LLC proves that any part of its product has failed because of defective material or workmanship, STAINLESS EQUIPMENT AND PARTS LLC will, at its option, either repair or replace the part without charge to the original purchaser. No responsibility for any expense will be accepted by STAINLESS EQUIPMENT AND PARTS LLC without prior written approval by our Customer Service Department.

During the first ninety (90) days of the warranty period STAINLESS EQUIPMENT AND PARTS LLC shall, upon prior written approval of its Customer service Department, be responsible for any necessary and reasonable labor and freight costs associated with the repair or replacement.

LIMITATION OF DURATION AND EXCLUSION OF IMPLIED WARRANTIES

ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARISE OUT OF THE SALE OF A STAINLESS EQUIPMENT AND PARTS LLC PRODUCT ARE LIMITED TO A DURATION OF ONE (1) YEAR. AFTER THAT DATE, THESE WRITTEN WARRANTIES ARE GIVEN IN LIEU OF ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

STAINLESS EQUIPMENT AND PARTS LLC SHALL HAVE NO LIABILITY FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE SALE OR USE OF ANY OF ITS PRODUCTS.

Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitations or exclusions may not apply to you.

EXCLUSIONS

This warranty does not apply and STAINLESS EQUIPMENT AND PARTS LLC assumes no liability or responsibility for any damages that result due to the following:

1. The alteration of a STAINLESS EQUIPMENT AND PARTS LLC product.
2. The abuse or misuse of a STAINLESS EQUIPMENT AND PARTS LLC product.
3. The improper installation of a STAINLESS EQUIPMENT AND PARTS LLC product.

Repairs and/or modifications to any part or assembly of a STAINLESS EQUIPMENT AND PARTS LLC product without the written consent of STAINLESS EQUIPMENT AND PARTS LLC shall render this warranty void.

RECALL OF PRODUCTS

STAINLESS EQUIPMENT AND PARTS LLC reserves the right to request the return of any part or product claimed to be defective under the terms of this warranty. Such return shall first have the written approval of our Customer Service Department and shall be sent freight prepaid with the carrier designated by the Customer Service Department. Freight charges will be credited to the customer if the return is in the first ninety (90) days of this Warranty.

GENERAL CONDITIONS

Stainless Equipment and Parts LLC

THESE WARRANTIES ARE GIVEN IN LIEU OF ANY OTHER EXPRESS WARRANTIES. STAINLESS EQUIPMENT AND PARTS LLC DOES NOT AUTHORIZE ANY PERSON TO MAKE ANY REPRESENTATIONS TO THE CONTRARY IN CONNECTION WITH THE SELL OR INSTALLATION OF A STAINLESS EQUIPMENT AND PARTS LLC PRODUCT.

The Warranties give you specific legal rights, and you may also have other rights which vary from state to state.

This Warranty may be modified only by prior written agreement which must be signed by an officer of STAINLESS EQUIPMENT AND PARTS LLC.

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General Safety Information

POTENTIAL HAZARD	EFFECT	PREVENTION
Moving and rotating parts	Can cause injury that could be severe.	Do not operate unit at any time without safety covers in place or if safety devices are not functioning properly.
Electrical shock	Can cause serious injury or death	Disconnect the marinator from the electrical power source before performing any cleaning, maintenance, or repair work.

Warnings

- ⚠ The QMM-4 Marinator is designed and sold for Commercial use only. Any use of this equipment for anything other than Commercial Food Marinating is prohibited and will void all warranties.
- ⚠ Always disconnect the marinator from the electrical power source before cleaning or performing any repair or maintenance work.
- ⚠ Allowing a drip loop in the power cable below the electrical outlet will help prevent fluids from dripping down the wire into the outlet while the equipment is connected to an electrical power source during operation.
- ⚠ Wipe equipment clean with a towel and cleaner/sanitizer solution. **DO NOT USE A HOSE OR PRESSURE WASHER TO CLEAN THE MARINATOR.**
- ⚠ **DO NOT LUBRICATE ANY BEARINGS ON THE OUTSIDE OF THE MOTOR COVER.**

- **Use only Food Grade lubricants when lubricating the casters and drive chain.**
- **CAUTION:** Risk of Electrical Shock. **DO NOT** operate or store this equipment in a refrigerated environment.
- **CAUTION:** Risk of Food Contamination. **DO NOT** use this product for any non-food applications.
- **CAUTION:** Risk of Damage to Safety Interlock. **DO NOT** operate this equipment if the tank makes contact with the cover.
- **NOTICE:** A-Weighted sound pressure level emissions do not exceed 70 dB(A) during operation.

Cleaning and Sanitizing Instructions

AFTER EACH MARINATION CYCLE:

- Remove the lid, gasket, tank, drain tray, and drain lug and take to sink.
- Rinse parts and then clean by 3-step method as outlined in your KFC *Operations Manual*.
- Replace tank on marinator frame and allow to air dry in lid-down position until next use.
- Allow lid, gasket, drain tray, and drain lug to air dry.

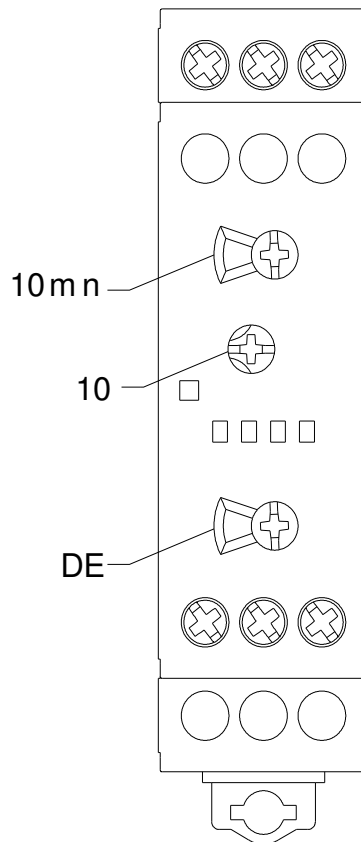
END OF DAY OR WHEN ALL MARINATIONS ARE COMPLETE:

- Repeat above steps: however, disassemble lid to clean thoroughly.
- Unplug the marinator and wipe the entire marinator chassis (including casters) with a clean towel dampened with sanitizer/cleaner solution. Allow to air dry. (**NOTE:** **DO NOT** hose the motor housing or vents under the marinator with water as damage to electrical components may result).
- Reassemble lid after parts have completely air-dried.

Operating Instructions

- Prepare marinade as outlined in your *KFC Operations Manual*.
- Place chicken and marinade in tank.
- Secure lid (Refer to Lid to Tank Assembly section on Page 7):
 - Rubber O-ring must fit securely around lip of tank opening.
 - Hold lid by handle and position locking bar parallel with length of lid.
 - Place lid on tank opening and push down to assure good seal.
 - Turn handle parallel with length of lid, and push handle down against lid to engage locking bar.
 - Roll tank upside down to check for leaks.
- Push black “Start” button to begin marination.
- **NOTE:** If for any reason you must turn off the marinator, push the red “Stop” button located on the front of the marinator above the black “Start” button. However, do not stop the marinator except in an emergency. Once turned off, the timer will automatically reset for the full cycle. At the end of the cycle, remove lid, and roll the tank lid-down to allow the marinated product to fall into drain tray over drain lug. Drain and re-bag chicken as outlined in your KFC *Operations Manual*.

Timer Setting



Use a small screwdriver to set the switches as shown.

Maintenance

Your QMM-4E Marinator was designed to be virtually maintenance free. However, we do recommend the following inspections be performed periodically. **Always make sure the unit is unplugged** from the electrical power source before performing any maintenance or inspections.

- 1) Inspect the electrical cord for tears, rips, cuts, etc. Repair or replace as needed.
- 2) Lubricate the casters as needed to ensure the unit rolls freely and to prevent premature failure.
- 3) Remove the Motor Cover and visually inspect the following for excessive wear and replace if necessary:
 - Spider Bearing – Item 8 on Parts Diagram
 - Shaft Seal and Spring – Items 12 and 13 respectively on Parts Diagram
 - Tank Handle Washer – Item 51 on Parts Diagram
 - Rubber Washer – Item 54 on Parts Diagram
 - Tank Lid “O” Ring – Item 2 on Parts Diagram
 - Drive Chain – Item 17 on Parts Diagram
- 4) Inspect Drive Chain – (Item 17) to insure adequate lubrication. If necessary, lubricate sparingly with lightweight Food Grade oil to ensure quiet operation.

- 5) Re-assemble the Motor Cover to the unit. Apply a small bead of clear Food Grade silicone sealant between the bottom edges of Motor Cover and Frame to thoroughly seal.
- 6) Keep your QMM-4E Marinator looking new by cleaning periodically with an approved Stainless Steel Polish / Cleaner.

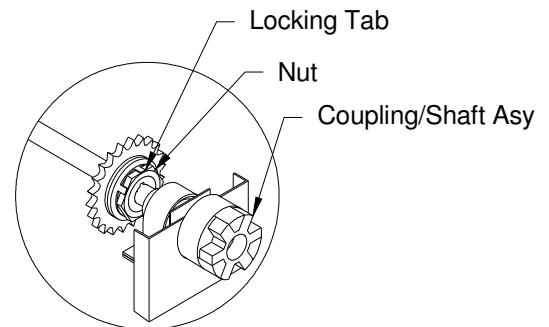
Troubleshooting

Problem	Solution
Motor runs, but tank will not turn.	• Adjust Torque Limiter (See Adjusting Torque Limiter)
Unit runs only with Start button continuously depressed.	• Bad Stop Switch. Check and replace if bad. • Bad Timer. Check and replace if bad.
Unit will not run at all.	• Check power cord. Make sure power cord is plugged in and is not damaged. • Reset button is tripped. Depress Reset button. • Cover not closed. Close cover. • Proximity switch for cover malfunctioning. • Bad Timer. Check and replace if bad.
Unit runs, but not for ten (10) minutes.	• Timer improperly set. Remove Motor Cover and reset timer to 10 minutes. • Bad Timer. Check and replace if bad.

Torque Limiter Adjustment

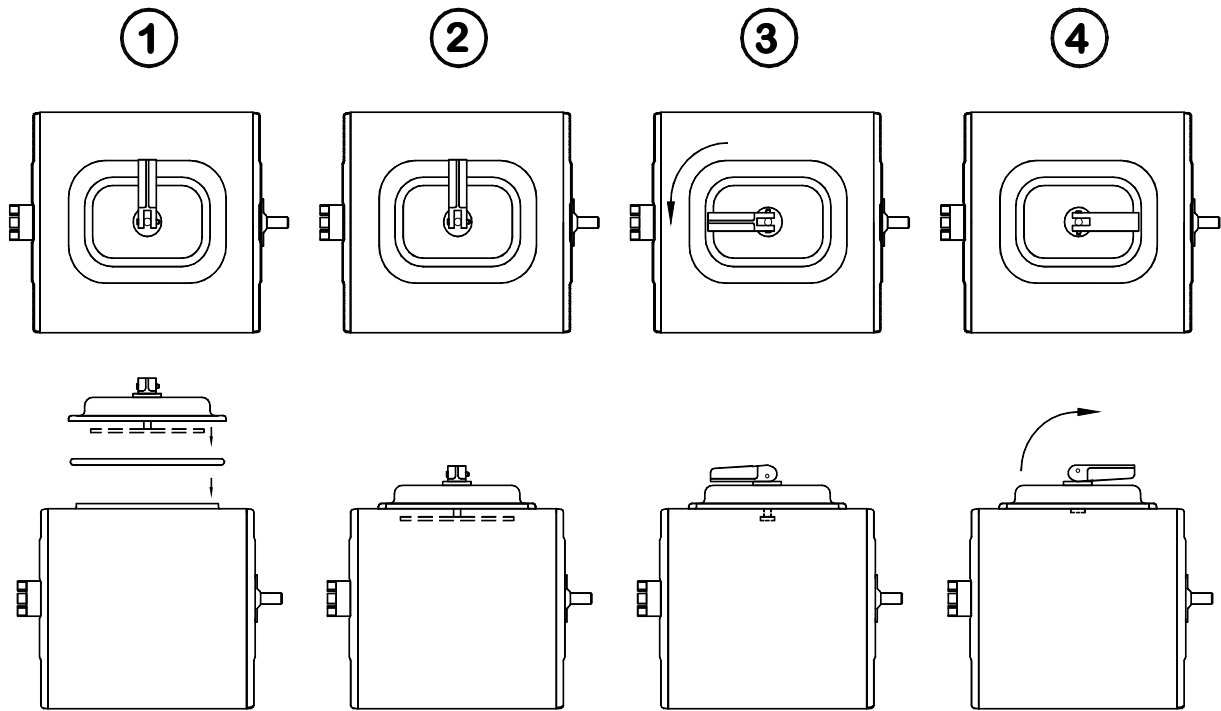
The Torque Limiter is factory set to 125 – 150 inch-lbs (14 - 17 N-m). During the life of your Marinator it may be necessary to adjust the Torque Limiter. This is usually a result of extended wear on the friction pads. This will be evident when the tank begins to show signs of inconsistent performance (e.g. jerking, slipping or will not turn at all). When this occurs, perform the steps outlined below to adjust the Torque Limiter:

1. Disconnect the marinator from the electrical power source.
2. Remove the Safety Covers and Motor Cover.
3. Bend the Locking Tabs up.
4. Hold the Coupling Shaft Assembly with pliers.
5. Tighten the Nut a ¼ turn.
6. Test the unit to see if tank will turn smoothly without any stopping or jerking.
7. If the tank does not turn smoothly, tighten Nut another ¼ turn and return to step 4.
8. If the tank turns smoothly, fold down locking tabs to secure nut.



☞ **CAUTION:** Do not adjust the torque of the Torque Limiter to over 150 inch-lbs (17 N-m).

Lid to Tank Assembly



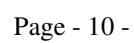
Tank Removal

1. Make sure casters are in the locked position.
2. Slide safety cover back into the open position.
3. Empty the tank of any contents.
4. Check to ensure that the lid is securely attached to the tank.
5. Firmly grab both ends of tank with hands.
6. Lift up on spindle (right hand) end of tank until it clears the white plastic bearing.
7. Slide the tank to the right until the couplings disengage.
8. Gently pull the tank forward until it is clear of the marinator frame.

Marinator Parts List

Item	Part Number - Description
1	202414 – Door, Marinator – New-
2	902338 – O-Ring
3	200104 – Tank Sub Assembly
4	200108 – Bearing, Delrin Tank
5	200109 – Frame Assembly
6	900031 – Caster, 3 Brake Stem, Swivel
7	900032 – Caster, 3 Stem Swivel
8	900061 – Bearing, Spider
9	200122 – Assembly, Coupling and Shaft
10	902432 – Screw, 8/32 x ¼ S/S Machine
11	200125 – Key, Shaft
12	200126 – Seal, Shaft
13	900033 – Spring
14	200127 – Plate, Spring
15	900237 – Link, #40 Connecting
16	900039 – Bearing, Torque Limiter w/Set Screw
17	900041 – Chain, Roller ½ Pitch
18	900042 – Bearing, Pillow Block & 3/4
19	900042-1 – Housing, Pillow Block
20	902451 – Washer, Flat 5/16 S/S
21	902450 – Washer, Lock 5/16 S/S Split
22	902449 – Nut, S/S Hex Head 5/16-18
23	902459 – Washer, Lock 3/8 S/S
24	902460 – Nut, Hex 3/8-16 S/S
25	902433 – Bolt, Hex Head 3/8-16 x 2.50 S/S
26	900058 – Sprocket, ¾ Plated w/Set Screw
27	902434 – Bolt, Hex Head 5/16-18 x ¾” S/S
28	902431 – Screw, Mach 10-32 x ½ RH S/S
29	900053 – Bushing, Electric Restrainer
30	900063 – Motor, ¼ HP – 120V AC – (U.S. Model)
31	902225 – Label, Torque
32	200912 – Tray, Drain (w/holes)
33	900080 – Container, Polyethylene Max Box
34	900137 – Sprocket, Torque Limiter Plate
35	902226 – Circuit Protector, (Before 1/2002)

Item	Part Number - Description
36	902227 – Ring, Retainer (Before 1/2002)
35	91F6100 – Breaker, (After 1/2002)
36	18C2994 – Boot, Pushbutton Breaker (After 1/2002)
37	202482 – Rail, Din
38	902409 – Stop, Din Rail
39	902410 – Terminal, Input Din Rail
40	240CON – Contactor (European Model)
40	120CON – Contactor (U.S. Model)
41	902621 – Timer, Multi-voltage
42	200323 – Assembly, Power Cord – (U. S. Model)
43	202464 – Assembly, Outer Cover (European Model)
44	202478 – Assembly, Inner Cover (European Model)
45	AKA1-1032-130 – Insert, Nut (10-32) AL Flush (Euro. Model)
46	202380 – Housing, Marinator Motor (U.S. Model)
47	TFTS-305-101-208-376 – Stud, ¼-20 Weld
48	92141A029 – Washer, ¼” S/S .050” Flat
49	902452 – Nut, ¼-20 S/S Hex
50	202420 – Assembly, Marinator (New) Latch
51	200089 – Washer, Delrin Handle
52	200225 – Handle, Cam
53	12SS-07 – Pin, ¼ x 1.3 Quick Release
54	900035 – Washer, ½” I.D. Rubber
55	200400 – Kit, Stop Switch
56	200399 – Kit, Start Switch
57	202418 – Assembly, Door Lid (Items 1, 50 thru 54) - Not Shown
58	202381 – Assembly, Motor Housing (U.S. Model) - Not Shown
59	202480 – Assembly, Motor Housing (Euro. Model) - Not Shown
60	900054 – Timer, Electric 120V AC (U.S. Model)
61	88-309-IQ – Assembly, Cord, Power (European Model)
62	910210 – Motor, Marinator – 220V AC – (European Model)
63	202480 – Housing, Marinator Motor (European Model)
64	902480 – Switch, Proximity with cord
65	Obsolete
	64K9105 – Resistor, 25k Ohm (Not Shown)
	16F3700 – Suppressor, Surge (Not Shown)



Critical replacements part specifications

<u>Part No</u>	<u>Description</u>		
902621	Timer		
YC1U-9A240	Contactor (240V)		
YC1U-9A120	Contactor (120 V)		
902480	Proximity Switch		
902481	Prox. Switch Cord		
910210	Motor (230V/50Hz)		
900063	Motor (115V/60Hz)		
900039	Torque Limiter		

QMM-4	5004526	220V marinator with safety cover
QMM-4	5004542	220V marinator without safety cover
QMM-4	5004559	220V marinator w/o safety cover,w/plasticubs
QMM-4	5004543	120V marinator with safety cover
QMM-4	5004544	120V marinator without safety cover
QMM-4	5004560	120V marinator w/o safety cover.w/plastic tubs
QMM-4	5004565	220V double marinator
QMM-4	5004566	120V double marinator

