



HOSHIZAKI AMERICA, INC.

SERVICE BULLETIN

SB01-0010R

November 4, 2003

Page 1 of 3

**Subject: Gear Motor Kits For F-800M, F-1000M_B, M_E & M_F
DCM-450/451/500**

(This bulletin supercedes SB97-0004R and SB01-0005)

Hoshizaki America has developed two kits to use when replacing gear motor assemblies in the units listed above. The basic difference in the kits is the use of a small output shaft gear motor for models (F-1000M_B, M_E & DCM-450/451) or a large output shaft assembly for models (F-800M, F-1000M_F & DCM-500). Below are the two kit numbers and their contents.

HS-2029 (Large Shaft) SA2030 (Small Shaft)

1. Gear motor	4A2194-01	4A2193-01
2. Fuse (1.5 AMP)	4A0893-04	4A0893-04
3. Fuse (2.0 AMP)	4A0893-05	4A0893-05
4. Fuse Holder	Not used	4A0892-02
5. Adapter Fuse Holder	Not used	4A1880-01
6. Capacitor	4A0894-01	4A0894-01
7. Barrier	3A1823-01	3A1823-01
8. Washers	7L22-0800	7L22-0800
9. Bolts	7S12-0895	7S12-0895
10. Check Sheet	2A2307-01	2A2306-01
11. Installation Sheet	2A2040-01	2A1496-01
12. Instructions	Not used	2A2056-01
13. Label (Fuse)	4A1797-01	4A1614-01
14. Label (Fuse)	Not used	4A1797-01
15. Wiring Label	Not used	2A1495-01
16. Control Label	Not used	4A1613-01
17. Bracket Chute	Not used	4A1712-01
18. Notice Label	Not used	4A1881-01

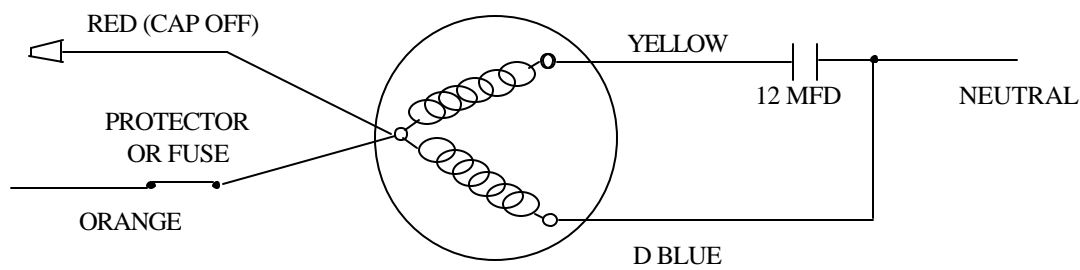
Use these general instructions when installing the new gear motor assembly.

1. The new gear motor mounts in the same location as the old gear motor using the same bolts.
2. The barrier bolts to the top of the motor assembly.
3. In the case of Gear Motor kit SA2030, the protector supplied with this assembly may be different than previous protectors and may require some field modification to the control box for mounting. In earlier models it may be necessary to enlarge the hole in the control box so that the new fuse holder will fit. In most cases however, the hole will be too large and it will be necessary to follow the instructions for Gear Motor Protector kit (HS-2009) supplied with Gear Motor kit SA2030.

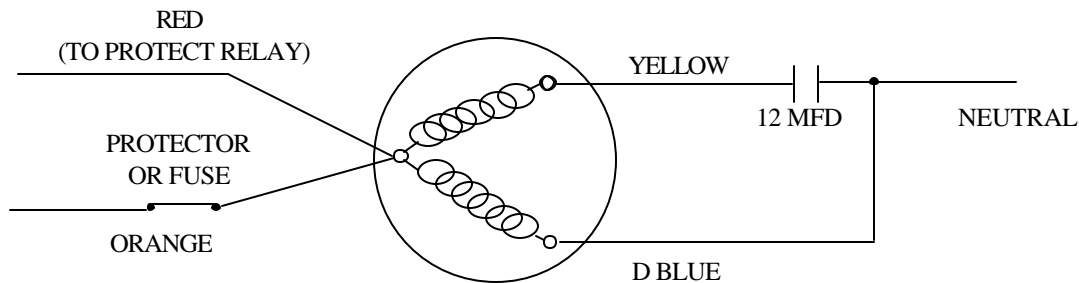
Note: This motor comes with a 90 day “off the shelf part warranty”. The new fuse holder as well as the appropriate fuse must be installed in order to validate the warranty for this replacement gear motor.

4. The capacitor for the gear motor assembly will be installed in the control box. The wiring of the new capacitor will be the same as the original capacitor.
5. When replacing a three-wire motor, the orange, yellow, and blue wires will be used. The red should be capped off. When replacing a four-wire motor all four wires will be used.

The following diagrams will show the proper wiring of this motor depending on your specific application.



3 WIRE APPLICATION



4 WIRE APPLICATION

Failure Diagnosis:

It is sometimes difficult to diagnose the true reason for failure of the gear motor/box assembly and/or the gear motor fuse. Since there are many possible causes sometimes the root cause can be overlooked. We have developed two guides to assist you in finding the possible solutions.

If you are working on an F-1000M, F-800M or a DCM-500B and it is necessary that you replace the gearmotor or gearmotor fuse. We will now require that you attach a completed copy of this work sheet (part number 2A2307-01) to the white copy of your warranty claim. A copy of this work sheet will be sent with all replacement gear motors for these models.

If you have any questions or would like to discuss this work sheet please do not hesitate to contact the Technical Support Department at 1-800-233-1940.

FLAKER GEAR MOTOR / GEAR MOTOR FUSE CHECKLIST

**F-1000M_B/-C, F-1000M_E/-C, F-650M_E/-C
F-450M_F/-C, F-300BAF, F-500BAF/-C, DCM-450B_E**

Attn: When replacing a gear motor or gear motor fuse, this form must be completed and attached to the white copy of your warranty labor claim form. Failure to do so may result in denial of your labor claim.

Model # _____ Serial # _____ Fail Date _____ Labor Claim _____

1. What was exact customer complaint? _____

2. When was the unit last cleaned? _____

3. Gear motor amperage? _____
With no load _____
With Load (making ice) _____

4. Ambient temperature _____

5. Water temperature _____

6. Is the machine installed on a water softener or R.O. system? _____

7. What type of extruding head is installed? (F) Flaker _____ (N) Cublet _____ (C) DCM _____
(Please refer to letter on top of extruding head) (4 flights for 70mm Ext. head) (8 flights for 70mm Ext. head) (8 flights)
(3 flights for 45mm Ext. head) (6 flights for 45mm Ext. head)

8. What type of cutter head is installed? Flaker _____ Cublet _____ DCM _____
(8 Blades for 70mm Ext. head) (1 or 2 Blades for 70mm Ext. head) (1 pin)
(4 Blades for 45mm Ext. head) (2 Blades for 45mm Ext. head)

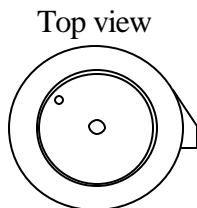
9. Extruding head appearance (Please circle all that apply)

A. Dents B. Fins Bent C. Scale D. Surface smooth E. Surface rough F. No damage G. Other

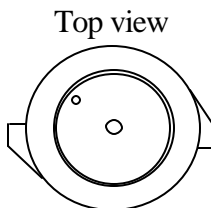
10. Are all connecting bolts between the gear motor & lower housing, tight? _____

11. Are all connecting bolts between the evaporator & extruding head, tight? _____

12. Which Auger is installed? (Circle one)



Single Flight



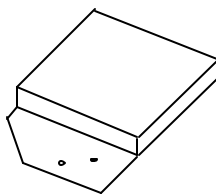
Double Flight

13. Voltage at the gear motor while making ice? _____
14. Is the ice machine on its own independent power supply? _____
15. Inspect bearing wear (Use .020 feeler gauge) OK? _____
16. Does the bearing surface show any cracks or dents? _____
17. Does the evaporator barrel/cylinder show signs of scoring? _____

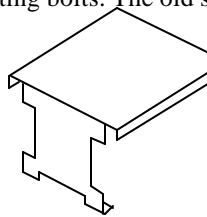
18. Is there any condensation dripping into gear motor windings? _____
- If yes, please indicate source _____
- What steps were taken to stop condensation? _____

19. When replacing the gear motor on the following models F-1000M_B/-C, F-10000M_E/-C and F-650M_E/-C, confirm that the new galvanized shield has been installed over the gear motor?

(The new shield mounts using two of the gear motor mounting bolts. The old style screwed to the top of the motor.)



(Old Style)



(New Style)

20. Is the gear motor capacitor 12uF? _____

21. Gear motor overload

Has the original overload reset been replaced with the fuse kit? _____

Does the unit have the correct fuse? _____

F-300 (ALL), F-500 (ALL)

F-450 (ALL), F-650 (ALL)

DCM-450 (ALL)

F-1000 Flaker version only (F-1000M_B, F-1000M_E)

Require Bussman GMD 1.5A fuse P/N 4A0893-04

F-1000 Cublet (F-1000M_B-C, F-1000M_E-C)

Requires Bussman GMD 2.0A fuse P/N 4A0893-05

22. Is the Gear motor wired correctly and all connections tight? _____

(Refer to unit's wiring diagram)

23. Is the bin control wired correctly and are all connections tight? _____

24. Make sure there are no magnetic components interfering with the bin Control proximity switch. (Top Panel, brackets etc.) _____

25. Does the bin control paddle move freely? _____

26. If gear motor is being replaced what is exact failure _____
- (Locked, Noisy, Windings open, shorted etc.).

27. Any additional comments? Please use the back of this form.

FLAKER GEAR MOTOR / GEAR MOTOR FUSE CHECKLIST

F-1000M_F/-C, F-800M_F/-C, DCM-500B_F MODELS

Attn: When replacing a gear motor or gear motor fuse, this form must be completed and attached to the white copy of your warranty labor claim form. Failure to do so may result in denial of your labor claim.

Model # _____ Serial # _____ Fail Date _____ Labor Claim _____

1. What was exact customer complaint? _____

2. When was the unit last cleaned? _____

3. Gear motor amperage? _____
With no load _____
With Load (making ice) _____

4. Ambient temperature _____

5. Water temperature _____

6. Is the machine installed on a water softener or R.O. system? _____

7. What type of extruding head is installed? (F) Flaker _____ (N) Cublet _____ (C) DCM _____
(Please refer to the letter on top of extruding head) (4 flights) (8 flights) (8 flights)

8. What type of cutter head is installed? Flaker _____ Cublet _____ DCM _____
(8 Blades for 70mm Ext. head) (1 or 2 Blades for 70mm Ext. head) (1 pin)

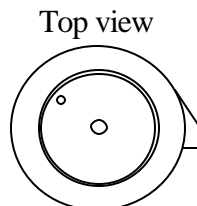
9. Extruding head appearance (Please circle all that apply)

A. Dents B. Fins Bent C. Scale D. Surface smooth E. Surface rough F. No damage G. Other

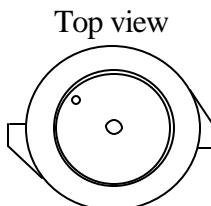
10. Are all connecting bolts between the gear motor & lower housing, tight? _____

11. Are all connecting bolts between the evaporator & extruding head, tight? _____

12. Which Auger is installed? (Circle one)



Single Flight



Double Flight

13. Voltage at the gear motor while making ice? _____

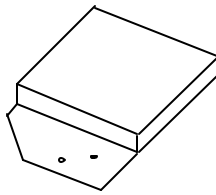
14. Is the ice machine on its own independent power supply? _____

15. Inspect bearing wear (Use .020 feeler gauge) OK? _____
16. Does the bearing surface show any cracks or dents? _____
17. Does the evaporator barrel/cylinder show signs of scoring? _____

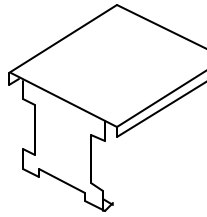
18. Is there any condensation dripping into gear motor windings? _____
 If yes, please indicate source _____
 What steps were taken to stop condensation? _____

19. Is the new galvanized shield installed on the F-1000M_F/-C, F-800M_F/-C? (No gear motor shield for DCM-500B_F models).

(The new shield mounts using two of the gear motor mounting bolts. The old style screwed to the top of the motor.)



(Old Style)



(New Style)

20. Is the gear motor capacitor 12uF? _____

21. Gear motor overload

Has the original overload reset been replaced with the fuse kit? _____

Does the unit have the correct fuse? _____

F-800 (ALL), F-1000 Flaker version only (F-1000M_F)

DCM-500 (ALL)

Require Bussman GMD 1.5A fuse P/N 4A0893-04

F-1000 Cublet (F-1000M_F-C)

Require Bussman GMD 2.0A fuse P/N 4A0893-05

22. Is the Gear motor wired correctly and all connections tight? _____

(Refer to unit's wiring diagram)

23. Is the bin control wired correctly and are all connections tight? _____

24. Make sure there are no magnetic components interfering with the bin Control proximity switch. (Top Panel, brackets etc.) _____

25. Does the bin control paddle move freely? _____

26. If gear motor is being replaced what is exact failure _____
 (Locked, Noisy, Windings open, shorted etc.).

27. Any additional comments? Please use the back of this form.