These instructions will help you with the installation of the MTM Fin Kit.

I. SAFETY EQUIPMENT REQUIRED
1. Face Shield
2. Glasses
3. Ear Plugs
4. Hard Hat

II. TOOLS REQUIRED
1. Cutting Torch and Striker
2. Grinder
3. Welder
4. 7018 Low Hydrogen Rod or .045 Wire that is equivalent to 7018 Rod
5. Fin Clamp with 25” Throat - MTM Part No. 780-00090
6. Small Hydraulic Bottle Jack
7. 2 Each 2 x 2 x 12 Angle Iron Temporary Braces
8. Small Carpenters Square
9. Chipping Hammer
10. Trouble Light
11. Exhaust Fan

III. REMOVAL AND DRUM PREPARATION

NOTE: Check condition of head wear plate before beginning. If badly worn one can be purchased from your local MTM branch. III. #1 and #2.

NOTE: Generally it is not necessary to replace all of the discharge fins in the mixer drum.

1. Using the cutting torch - cut old fin off 3“ above the drum skin. This will make installation easier as it provides a guide for proper angle and direction of the new fins.

NOTE: We recommend cutting approximately two feet at a time until experience is acquired to avoid deviation in the correct pitch of the fins.

2. After cutting old fin out - grind 3” stub fin to clean and prepare for new installation.

INSTALLATION OF 3 REVERSE LIP FINS

IV. INSTALLATION OF #1 REVERSE LIP FIN RED/ORANGE

(Illustration #1 and #2)

1. Start at head of drum and work to rear.

NOTE: Reverse Lip Faces Drum Head

2. Place new reverse lip #1 fin on drum head side of the remaining 3” fin stub with lip facing drum head.

Tack weld in place.

3. Install head brace (II) between head and reverse fin as shown and tack weld in place.

4. Install head to fin gusset (I) as shown and tack weld in place.

5. Check alignment of reverse lip fin #1 with the remaining old fins. Using carpenter square check for proper angle of fin. (90 degrees to drum skin.)

6. If angle and direction agree - finish weld fin to 3” stub 100%.

7. Skip weld fin to drum skin.

V. INSTALLATION OF #2 REVERSE LIP FIN RED

(Illustration #2)

NOTE: Reverse Lip Faces Drum Head

NOTE: From this point on a fin clamp may be needed to hold fins tight to each other during welding process.

NOTE: From this point on it may be necessary to use the 2 x 2 x 12 angle irons and bottle jack to maintain desired fit before and during welding.

1. Install reverse lip fin #2 facing head and on head side of 3” stub.

2. Overlap #1 fin by 2”.

3. Tack Weld

4. Check Alignment of fins using carpenter square.

NOTE: Must maintain 90 degree angle between fin and skin.

5. If angle and direction agree - finish weld fin to 3” stub 100%.

6. Skip weld fin to drum skin.

VI. INSTALLATION OF #3 REVERSE LIP FIN RED/RED

NOTE: Lip faces drum head. (Illustration #2)

1. Install reverse lip fin #3 facing head and on head side of 3” stub.

2. Overlap #2 fin by 2”.

3. Tack Weld

4. Check alignment of fins using carpenter square.

5. Must maintain 90 degree angle between fin and skin.

6. Skip weld fin to drum skin.

VII. INSTALLATION OF FIN #4 RED/LIGHT BLUE

NOTE: The remaining fin lips will face the rear of the drum. (Illustration #2)
1. Select belly fin #4 (Red/Light Blue).
2. Install with lip facing the rear of the drum.
3. Overlap the reverse lip fin by 2".
4. Check for proper alignment and position - you may need to jack and brace the fins during welding.
5. Weld fin to 3' stub 100%.
6. Skip weld to drum as before.
7. Remove jack and brace.

VIII. INSTALLATION OF REVERSE LIP GUSSET (III)
(Illustration #2 and #3)

1. The reverse lip gusset connects the #3 reverse lip fin with the #4 fin just installed.
2. Install reverse lip gusset III at end of #3 reverse lip.
   The gusset will lay on the curved part of the #4 fin and will form a "V" when installed. See illustration.

X. INSTALLATION OF BELLY WEAR PLATES IV

NOTE: There are two wear plates in each drum. Your old drum may not have had them.

1. See illustration #3
2. Locate the horizontal drum seam that crosses the end of the #3 reverse lip fin.
3. Measure 3" up from the seam and install wear plate vertically along drum seam as shown.
4. Weld both ends solid and skip weld along sides.
5. Install second wear plate on opposite side.

XI. WEAR ROD INSTALLATION

NOTE: Wear rod should be installed after all fins are properly welded in place.

NOTE: Wear rods are cut in short lengths to make handling and shaping easier.

(Illustration #5)

1. Reverse Lip fin Re-Rod installation.
   a. Begin at front tip of #1 reverse lip fin.
   b. Install re-rod under reverse lip fin and on the very edge of the fin. See Illustration #5
   c. Re-rod should continue along front edge of reverse fin to the tip of reverse lip gusset III. See illustration
   d. Weld re-rod every 3" leaving 6" between welds.
2. Re-Rod on Fins #4 through #9

NOTE: Fins #4 through #9 will have two rows of re-rod.
One row will be installed one inch from edge of fin. Row two will be installed just below the curve of the fin. See Illustration #4, #6 and #7

a. Top Row - Edge of Fin
   1. Begin at end of reverse lip fin #3 and continue to end of #9 fin.
   2. Maintain rod 1 " from edge of fin lip.
   Illustration #7
   3. Weld re-rod every 3" leaving 6" between welds. See Illustration #4 - #6
b. Lower Row - Below Curve of Fin
   1. Begin at end of reverse lip fin #3 and continue to end of #9 fin.
   2. Maintain rod just below curve of fin.
   Illustration #7
   3. Weld re-rod every 3" leaving 5" between welds. See Illustration #4 and #6

This should conclude your installation and extend the life of your fins.
ILLUSTRATION #3

REVERSE LIP #2
FACES DRUM HEAD

BELLY WEAR PLATE IV

NEXT TO DRUM SEAM

*DRUM HORIZONTAL SEAM

REVERSE LIP #3
FACES DRUM HEAD

REVERSE LIP GUSSET III

FIN #4 LIP FACES REAR OF DRUM
ILLUSTRATION #4
FINS #7-8-9

END OF RE-ROD

#7 FIN
#8 FIN
RE-ROD
#9 FIN
MAY HAVE TO BE SHORTENED TO FIT BETWEEN #8 AND OLD FINS
ILLUSTRATION #7

MAIN FIN RE-ROD LOCATION CHART
(FINS #4 - #9 ONLY)

NOTE: SEE ILL. #5 FOR PROPER RE-ROD LOCATION ON FIRST 3 REVERSE LIP FINS.

RE-ROD #1 IS
APPROXIMATELY 1" FROM
THE TIP OF THE FIN AND
RE-ROD #2 IS JUST
BELOW THE CURVE OF
THE FIN.

NOTE: SEE ILL. #5 FOR PROPER RE-ROD LOCATION ON FIRST 3 REVERSE LIP FINS.
VIEW OF ONE FIN ROW FROM THE FRONT OF THE DRUM LOOKING TOWARD THE REAR SPOUT.

*NOTE: EACH FIN IS LAIRED ON THE NEXT FIN SO THAT THE EDGES OVERLAP ABOUT TWO INCHES.

*NOTE: FIN NUMBERS ARE TO SHOW THE ORDER OF INSTALLATION. THE NUMBER OF FINS NEEDED DEPENDS ON THE SIZE OF THE DRUM AND THE EXTENT OF WEAR ON THE OLD FINS.

*NOTE: ALL 3 REVERSE LIPS MUST FACE TOWARD HEAD ALL REMAINING LIPS FACE REAR OF DRUM.
ILLUSTRATION #6
REVERSE LIP FIN #1 AND 2
RE-ROD LOCATION

HEAD OF DRUM

RE-ROD LOCATED ON UNDER SIDE OF THE REVERSE LIP

EDGE OF FIN

RE-ROD

REVERSE LIP FIN #1

2 3/8" RE-RODS

REVERSE LIP FIN #2

NOTE: RE-ROD MUST BE PLACED UNDER THE REVERSE LIP OF THE FIRST 3 FINS.
ILLUSTRATION #6

REVERSE LIP FIN
LIP FACES HEAD

NOTE: 2 ROWS
OF RE-ROD

ON FIN #4-9

REVERSE LIP
GUSSET III

RE-ROD STOPS
AT END OF GUSSET

FIN #4 LIP
FACING REAR
OF DRUM
10 1/2-11 Yard Fin Kit
Part #580-152517
Parts List

2 Head Fins - Reverse Lip #1 (Red/Orange)
2 Front Cone Fins - Reverse Lip #2 (Red)
2 Belly Transitional Fins - Reverse Lip #3 (Red/Red)
4 Belly Fin #4 (Red/Light Blue)

NOTE: 2 used in 10 1/2 yard application

2 1/2 Fin #5 (Red)

NOTE: 2 used in 10 1/2 yard application only

2 2/3 Fin #6 (Red/Green)
6 Cone Fin #7 and #8 (Blue)
2 Transitional Fin #9 (Yellow/Orange)
2 I Gusset - Head to Fin
2 II Gusset - Head Brace
2 III Gusset - Reverse Lip
2 IV Belly Wear Plate
24' Re-Rod

10 Yard and Smaller Fin Kit MTM
MTM Part #580-152518
Parts List

2 Head Fins - Reverse Lip #1 (Red/Orange)
2 Front Cone Fins - Reverse Lip #2 (Red)
2 Belly Transitional Fins Reverse Lip #3 (Red/Red)
2 Belly Fin #4 (Red/Light Blue)

NOTE: #5 fin on diagram not used in 10 yard application.

2 1/2 Fin #5 (Red)
2 2/3 Fin #6 (Red/Green)
6 Cone Fin #7 and #8 (Blue)

NOTE: May need only two #8 fins in some applications

2 Transitional Fin #9 (Yellow/Orange)
2 I Gusset - Head to Fin
2 II Gusset - Head Brace
2 III Gusset - Reverse Lip
2 IV Belly Wear Plate
24' Re-Rod