A. HEAD DRIVE ASSEMBLY

1. Remove dirt and paint from upper end of flight shaft.

2. Install a woodruff key (or square key) provided, slide the larger pulley onto the flight shaft with the hub facing away from the auger and DO NOT tighten setscrews at this time. (See Table 1 for proper pulley size.)

B. MOTOR MOUNT ASSEMBLY

(see both Figure No. 1 & 2)

1. Install front mount plate onto head plate, using two 1/2" x 1-1/2" bolts, locknuts and 1/2" flat washers, as shown in Figure No. 1. Tighten securely.

2. Place 5/8" adjust bolt through available hole in front mount plate, and secure in place using two 5/8" hex nuts (one top, one bottom). Leave adjust bolt loose to allow for later adjustment.

NOTE: The 5/8" nuts and adjust bolt are used to adjust belt tension (see Section C, step 3).

3. Assemble rear mount plate onto tube bracket, as shown in Figure No. 1. Using two 3/8" x 1" bolts and locknuts, tighten securely.

4. Place motor mount assembly in between the two mount plates, and insert hinge rod as shown in Figure No. 2. Secure hinge rod with a 1/8" x 1-1/2" cotter pin.

5. For 10" & 13" augers, attach lower pulley shield angle to the head plate with two 1/2" x 1-1/2" bolts, locknuts and 1/2" flat washers, as shown in Figure No. 2. Tighten securely.

Table 1 Pulley Sizes / Combinations

<table>
<thead>
<tr>
<th>AUGER SIZE</th>
<th>RECOMMENDED SIZES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AUGER PULLEY</td>
</tr>
<tr>
<td>8&quot; Hopper</td>
<td>12.7&quot;</td>
</tr>
<tr>
<td>10&quot; Hopper</td>
<td>15&quot;</td>
</tr>
<tr>
<td>13&quot; Hopper</td>
<td>16&quot;</td>
</tr>
</tbody>
</table>

*Speed is calculated using a 1725 RPM electric motor.

To determine flight speed (RPM):

Divide the speed (RPM) of the motor by the outside diameter of the large auger pulley, then multiply by the outside diameter of the small motor pulley.

Example:

1725 (RPM) ÷ 15" x 3.5" = 402 RPM

NOTE: If a slower flight speed is desired, install a smaller motor pulley.

NOTE: The correct operating tension is the lowest tension at which the belts will not slip under peak load conditions.

6. For 8" systems, attach the pulley shield to the front mount plate and the end plate with four self-tapping screws. The shield is mounted to front mount plate using a single shield angle, attached with self-tapping screws.

For 10" & 13" systems, attach the pulley shield to the lower pulley shield angle and the end plate with four self-tapping screws. The shield is mounted to the end plate using two shield spacers, attached with self-tapping screws.

Table 1  Pulley Sizes / Combinations

3.25" x 3.5"

440

475

375

402

350

378

*Speed is calculated using a 1725 RPM electric motor.

To determine flight speed (RPM):

Divide the speed (RPM) of the motor by the outside diameter of the large auger pulley, then multiply by the outside diameter of the small motor pulley.

Example:

1725 (RPM) ÷ 15" x 3.5" = 402 RPM

NOTE: If a slower flight speed is desired, install a smaller motor pulley.

NOTE: The 5/8" nuts and adjust bolt are used to adjust belt tension (see Section C, step 3).

3. Assemble rear mount plate onto tube bracket, as shown in Figure No. 1. Using two 3/8" x 1" bolts and locknuts, tighten securely.

4. Place motor mount assembly in between the two mount plates, and insert hinge rod as shown in Figure No. 2. Secure hinge rod with a 1/8" x 1-1/2" cotter pin.

5. For 10" & 13" augers, attach lower pulley shield angle to the head plate with two 1/2" x 1-1/2" bolts, locknuts and 1/2" flat washers, as shown in Figure No. 2. Tighten securely.
C. ELECTRIC MOTOR INSTALLATION / ALIGNMENT

1. Place electric motor (see Table 2 for proper horsepower requirements) onto motor mount and secure. Ensure that motor shaft is parallel to and centered on discharge tube before tightening adjust bolt.

**IMPORTANT**

When using an electric motor, the following steps will apply.

1. The motor and controls should be installed by a qualified electrician in accordance with all local and national codes.
2. A magnetic starter should be incorporated to protect the motor.
3. The motor must have a manual reset button.
4. Reset and starter controls must be located so that the operator has a full view of the entire operation.
5. A main power disconnect switch should be located within reach from ground level to permit ready access in case of emergency.
6. A main power disconnect switch capable of being locked (in the off position only) must be provided.

2. Slide drive pulley onto motor shaft (see Table 1 for suggested sizes). Insert the appropriate size of square key. Do not tighten setscrew until belts are aligned.

**NOTE:** We recommend using the three belt and triple groove pulley option on all 13" augers.

3. Place belts on pulleys. Adjust the 5/8" adjust bolt on front mount plate until the belts have the proper tension, with about a 1/8" deflection.

**NOTE:** The correct operating tension is the lowest tension at which the belts will not slip under peak load conditions.

4. Align the two pulleys (use a straight edge). Once belts are aligned and under tension, lock the 5/8" hex nuts and tighten pulley setscrews.

**NOTE:** Once all bolts and setscrews are tightened, recheck alignment. Proper alignment will prolong belt life.

5. **For 8" systems**, assemble the adjustable two-piece pulley shield with two 1/4" x 1/2" bolts and washer locknuts.

**For 10" & 13" systems**, assemble the adjustable three-piece pulley shield with four 1/4" x 1/2" bolts and washer locknuts (see Figure No. 3).

6. **For 8" systems**, attach the pulley shield to the front mount plate and the end plate with four self-tapping screws. The shield is mounted to front mount plate using a single shield angle, attached with self-tapping screws.

**For 10" & 13" systems**, attach the pulley shield to the lower pulley shield angle and the end plate with four self-tapping screws. The shield is mounted to the end plate using two shield spacers, attached with self-tapping screws.

### Table 2 Horsepower Requirements

<table>
<thead>
<tr>
<th>HOPPER</th>
<th>HORSEPOWER (HP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8&quot; Hopper</td>
<td>3 - 5</td>
</tr>
<tr>
<td>10&quot; Hopper</td>
<td>5 - 7½</td>
</tr>
<tr>
<td>10&quot; Hopper LP</td>
<td>5 - 7½</td>
</tr>
<tr>
<td>13&quot; Hopper</td>
<td>10 - 15</td>
</tr>
<tr>
<td>13&quot; Hopper LP</td>
<td>10 - 15</td>
</tr>
</tbody>
</table>

Approximate electric motor horsepower requirements under normal conditions. When augering full tube of high moisture grain, additional horsepower will be needed.

**NOTE:** A shield extension is required on all powerheads using a 15" pulley.