

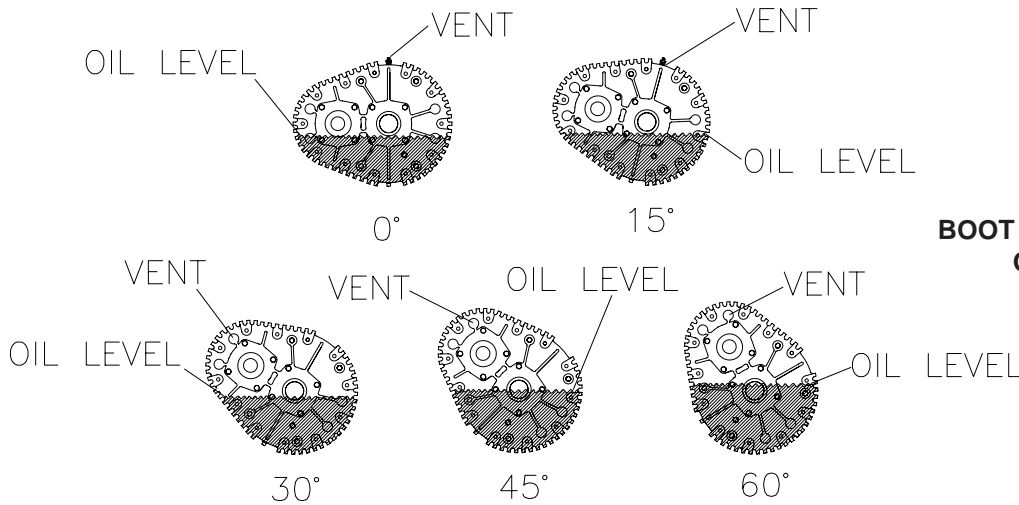
# ASSEMBLY INSTRUCTIONS

## ELECTRIC & PTO DRIVE ASSEMBLY FOR 80'-100' MODEL 50 MASS-TER MOVER

### GEAR REDUCER

**1. IMPORTANT:** Reducers are shipped without OIL. It is necessary to add the proper amount of oil before running. Use a high grade non-foaming, multi-purpose gear oil, SAE 90 weight. If the unit is expected to run in severe conditions, the use of a synthetic lube is recommended. Install the magnetic drain plug in the hole closest to the bottom of the reducer. Throw away the tape that covers the fill/ventilation plug in shipment and install plug in top most hole. (This may have been done at the factory.)

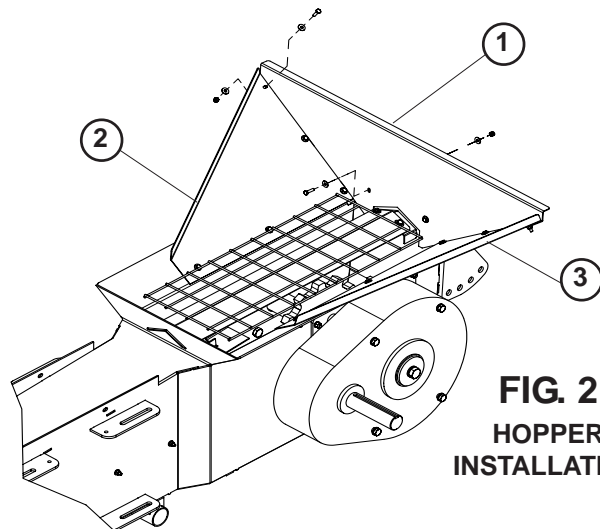
Lubrication is extremely important for satisfactory operation. The oil level will depend on the angle at which your conveyor is operating. See FIG. 1 below and determine which angle most closely matches your set-up. Fill the reducer to the approximate level shown. Too much oil will cause overheating and too little will result in gear failure. Check oil level regularly. More frequent oil changes are recommended when operating under conditions of extreme dirt or dust. Under these extreme operating conditions, the oil should be changed every 1 to 3 months, depending on severity of conditions. After an initial operation of about two weeks, the oil should be changed. After the initial break-in period the oil should be drained, magnetic drain plug cleaned, gear case flushed and refilled every 2500 hours of operation or 5 months, whichever comes first.



**FIG. 1  
BOOT DRIVE REDUCER  
OIL LEVELS**

### HOPPER ASSEMBLY

Bolt the bottom hopper plate (Ref. 1) to the boot using two 1/4" x 1" long hex head capscrews, four 1/4" flat washers and two 1/4" nylock nuts. Bolt the side hopper plates (Ref. 2 & 3) to the boot and hopper bottom plate using five 1/4" x 1" long hex head capscrews, ten 1/4" flat washers and five 1/4" nylock nuts on each panel.

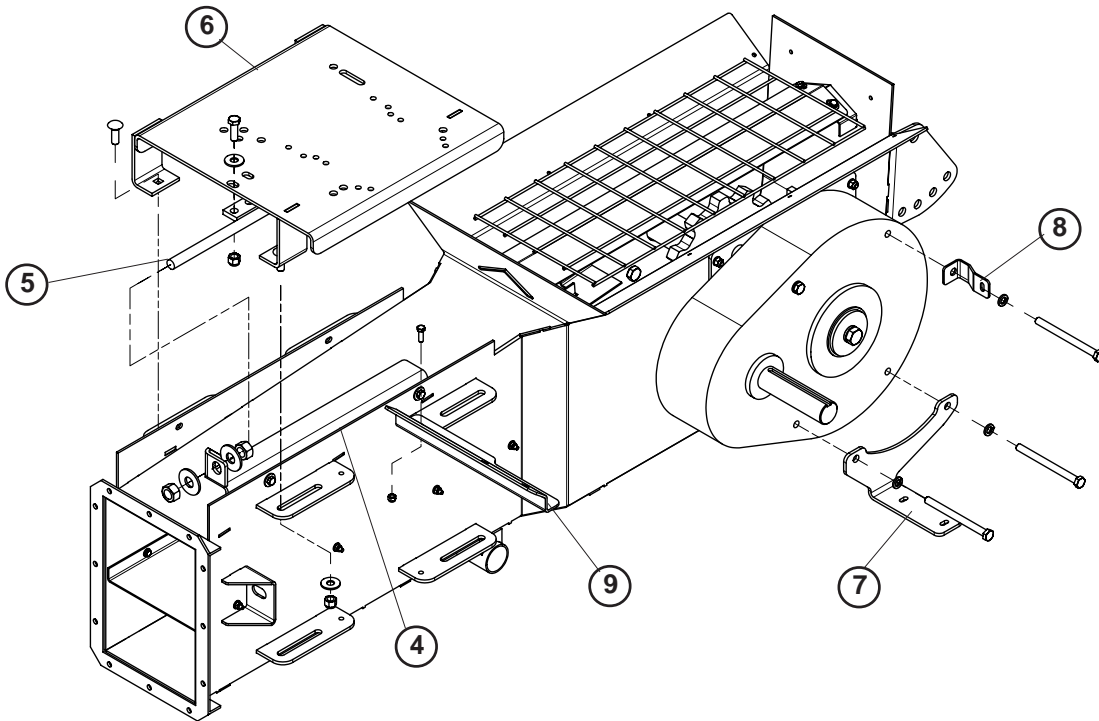


**FIG. 2  
HOPPER  
INSTALLATION**

# ASSEMBLY INSTRUCTIONS

## ELECTRIC DRIVE ASSEMBLY

1. Bolt the motor mount tightener bracket (Ref. 4) to the boot using two 3/8" x 1-1/4" long hex head capscrews, two 3/8" flat washers and two 3/8" nylock nuts.
2. Bolt the motor mount tightener (Ref. 5) to the motor mount plate (Ref. 6) using two 1/2" x 1-1/2" long hex head capscrews, two 1/2" flat washers and two 1/2" nylock nuts.
3. Thread one 3/4" non-lock nut onto the motor mount tightener, followed by a 3/4" flat washer.
4. Slide the motor mount tightener rod into the slot on the motor mount tightener bracket and set the feet of the motor mount plate on the brackets welded to the inlet sides.
5. Loosely bolt the motor mount plate (Ref. 6) to the boot, using four 1/2" x 1-1/4" carriage bolts, four 1/2" flat washers and four 1/2" nylock nuts.
6. Put the remaining 3/4" flat washer on the motor mount tightener rod and loosely thread on the 3/4" non-lock nut.
7. Remove the two lowest bolts and lockwashers holding on the reducer and reinstall through lower belt guard bracket (Ref. 7).
8. Remove the top bolt and lockwasher closest to the hitch that holds the reducer on and reinstall through the top belt guard bracket (Ref. 8). Orient the bracket as shown, with the flat 90° from the lower belt guard bracket.
9. Bolt the upper belt guard bracket (Ref. 9) to the boot as shown, using a 5/16" x 1" long hex head capscrew and a 5/16" nylock nut.

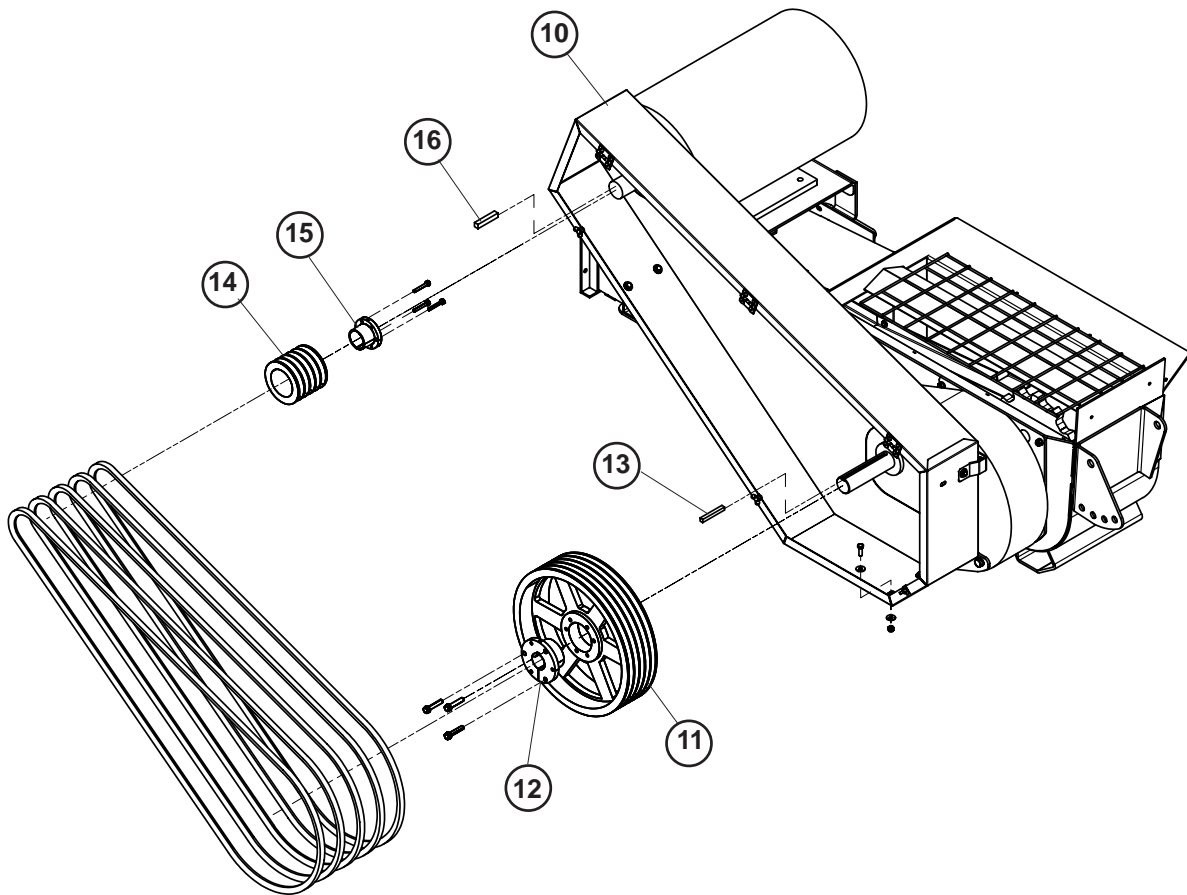


**FIG. 3**  
**ELECTRIC DRIVE**  
**ASSEMBLY**

# ASSEMBLY INSTRUCTIONS

## ELECTRIC DRIVE ASSEMBLY - CONT.

10. Bolt the electric belt guard (Ref. 10) to the three brackets using five 5/16" x 1" long hex head capscrews, ten 5/16" flat washers and five 5/16" nylock nuts.
11. Bolt the 15.4" pitch diameter sheave (Ref. 11) to the input shaft of the reducer using the 1-3/4" bushing (Ref. 12) and 3/8" x 3" long key (Ref. 13). Install the sheave as close to the reducer as space allows to minimize overhung loads on the reducer input shaft.
12. Bolt the 4.2" pitch diameter sheave (Ref. 14) to the motor shaft, using the 1-7/8" bushing (Ref. 15) and supplied key (Ref. 16).
13. Install the 105" B-Belts over the sheaves and use the motor mount tightener rod to tension the belts. Tighten the motor mount plate bolts at this time and check all other fasteners to ensure they are secure.

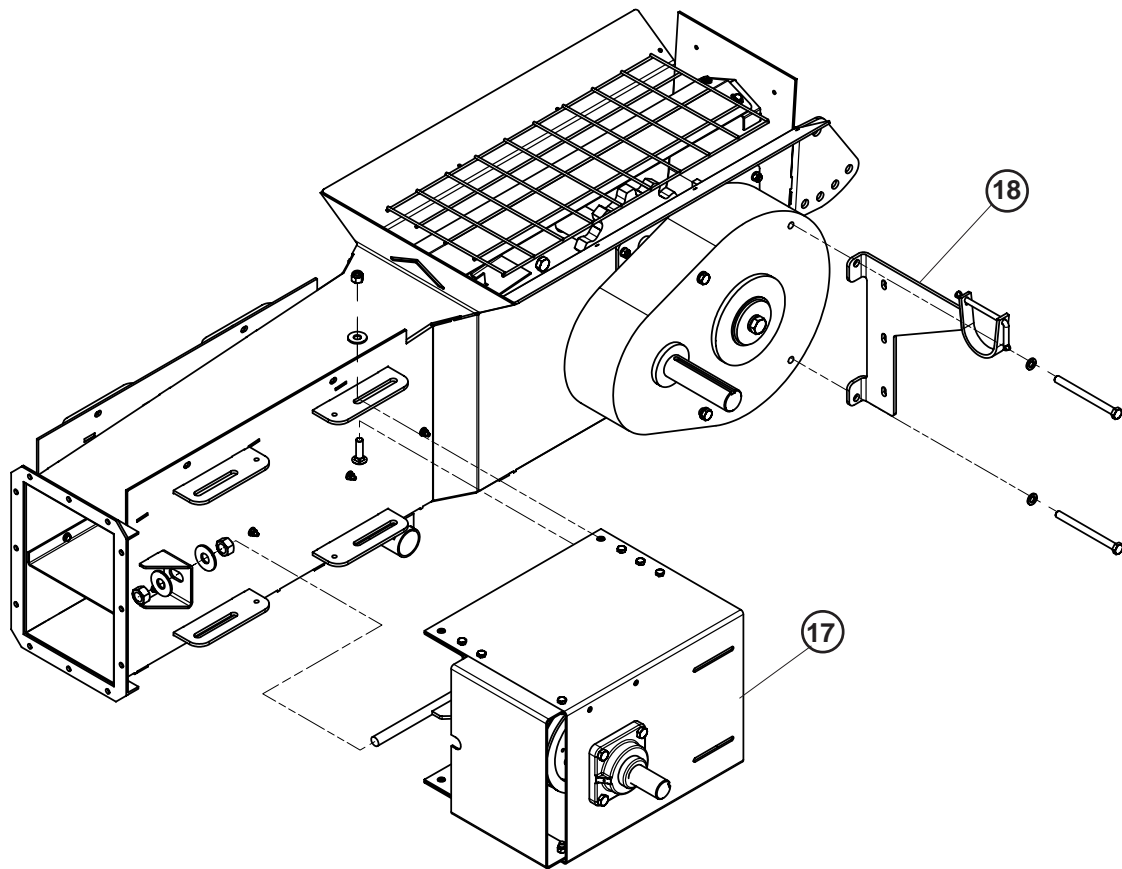


**FIG. 4**  
**ELECTRIC DRIVE**  
**ASSEMBLY - CONT.**

# ASSEMBLY INSTRUCTIONS

## PTO DRIVE ASSEMBLY

1. Thread one 3/4" non-lock nut onto the PTO tightener, followed by a 3/4" flat washer.
2. Guide the tightener rod into the bracket on the boot and set the top of the PTO housing (Ref. 17) on the upper mounting brackets. Loosely bolt the PTO housing to the boot, using four 1/2" x 1-1/2" long carriage bolts, four 1/2" washers and four 1/2" nylock nuts.
3. Remove the two bolts and lockwashers closest to the hitch that hold the reducer on and reinstall through the belt guard bracket/PTO shaft holder (Ref. 18).

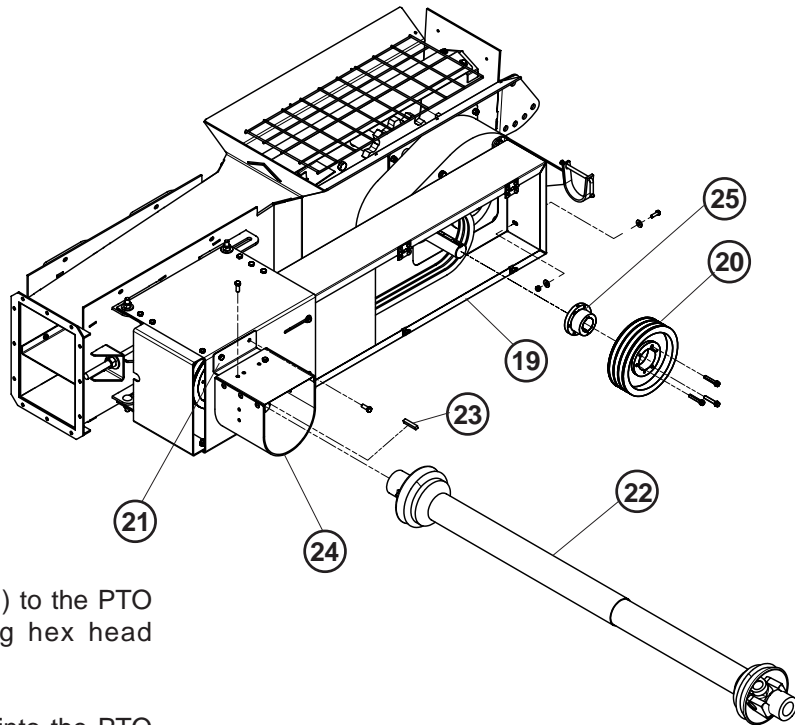


**FIG. 5**  
**PTO DRIVE**  
**ASSEMBLY**

# ASSEMBLY INSTRUCTIONS

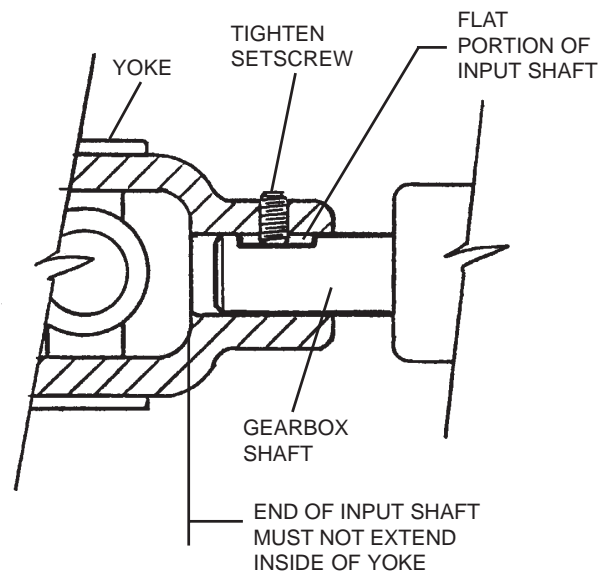
## PTO DRIVE ASSEMBLY - CONT.

**FIG. 6**  
PTO DRIVE  
ASSEMBLY - CONT.



4. Bolt the PTO shield hanger (Ref. 21) to the PTO housing using two 3/8" x 1" long hex head capscrews and two 3/8" nylock nuts.
5. Slide the PTO belt guard (Ref. 19) into the PTO housing and loosely bolt together using two 5/16" x 1" long hex head capscrews, four 5/16" flat washers and two 5/16" nylock nuts.
6. Bolt the belt guard to the belt guard bracket, using three 5/16" x 1" long hex head capscrews, six 5/16" flat washers and three 5/16" nylock nuts.
7. Bolt the 8.6" sheave (Ref. 20) to the reducer, using the 1-3/4" bushing (Ref. 25) and 3/8" x 3" long key, making sure the sheave is aligned with the sheave in the PTO housing.
8. Pull the belts inside the PTO housing to the reducer and install over sheaves. Put the other 3/4" flat washer and 3/4" nut over the PTO tightener rod and use to tighten belt. Tighten all bolts that were left loose for adjustment purposes.
9. Mount the u-joint shield to the mounting bracket on the PTO housing directly above the PTO housing input shaft, using two 3/8" x 1" long hex head capscrews, two 3/8" washers and two 3/8" nylock nuts.
10. Connect the 1-1/2" bore diameter end of the PTO driveline (Ref. 22) to the PTO housing input shaft. Use the 3/8" x 2" long square key (Ref. 23).
11. Set the PTO driveline into the PTO shaft holder.

**IMPORTANT:** For the setscrew in the PTO driveline yoke to be properly engaged on the input shaft, slide the yoke onto the shaft until the setscrew will sit on the flat portion of the input shaft. See FIG. 7. DO NOT extend the gearbox input shaft beyond the inside edge of the yoke.



**FIG. 7**  
PTO DRIVELINE TO PTO HOUSING  
INPUT SHAFT DETAIL