OWNER'S MANUAL

UniDriv

DAVID MANUFACTURING CO.

1600 12th Street N.E., Mason City, Iowa USA 50401 641-424-7010

WARRANTY
for
UniDriv

Valid ONLY after completion and return of WARRANTY CARDS. (See next page).

The guarantee is for one year from date of installation to be free of defects in material or workmanship when properly installed and operated in accordance with instructions in this booklet. Warranted parts will be exchanged F.O.B. Mason City, Iowa without charge to the user. Damage resulting from negligence voids the warranty. Warranty does not include labor, installation or delivery of replacement parts.

Electric motors are covered by the warranties of the respective manufacturers. Electric service centers are located in all regions. Consult your dealer.

The Warranty and liability of David Manufacturing Company, its distributors, dealers and agents is limited to replacement, without charge, of defective parts, as outlined above. DMC makes no other warranties, express or implied except as stated herein, and disclaims all obligations and liabilities other than specified.

The Manufacturer reserves the right to make changes in specifications or prices without incurring obligation on previously produced merchandise.

FILL IN COMPLETELY, DETACH AND MAIL

CUT HERE

UniDriv
WARRANTY REGISTRATION

SEND TO DMC WITHIN 10 DAYS OF PURCHASE

This WARRANTY REGISTRATION must be completed and mailed to DMC Mason City, Iowa to validate the warranty.

PLEASE PRINT

Owner _____

Address _____

Town _____ State _____ Zip _____ Date Purchased _____

Serial Number _____

Dealer _____

Address _____

Town _____ State _____ Zip _____

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO 70 MASON CITY IA

POSTAGE WILL BE PAID BY ADDRESSEE

DMC - David Mfg. Co.
Attn: Warranty Registration Department
1600 12th Street N.E.
Mason City, Iowa 50401

Table of Contents

CAUTION

Safety First Pays

Read and heed all safety reminders listed below as well as those listed in the rest of the Owner's Manual.

1. A safe sturdy ladder should always be used.

2. When setting a ladder against the UniDriv, a vice grip or some type of tie down should be used in the front and the back of the track drive unit. This keeps the UniDriv from rolling or sliding around the bin while service work is being performed.

3. Because the UniDriv is suspended from the chains in the center, care has to be exercised when a ladder is to be positioned against the UniDriv. The unit can move or wing from the weight of a person climbing on the ladder.

4. Climbing out on the main beam from either a ladder or the roof manhole should NEVER be attempted.

5. During heavy service work, such as removing the main motor, tying the ladder to the main beam or some other solid component is advised.

6. Be sure to anchor the bottom of any ladder being used in a bin or silo to prevent it from slipping.

7. Do not climb down the augers to make adjustments or repairs. Slipping could cause a fall.

8. If an unusual amount of service work needs to be performed, lowering the unit onto saw horses might be the safest way.

⚠ CAUTION ⚠

BE A SAFE OPERATOR

Before operating, familiarize yourself with the machine. It will help you operate your UniDriv more efficiently, with better quality returns to you.

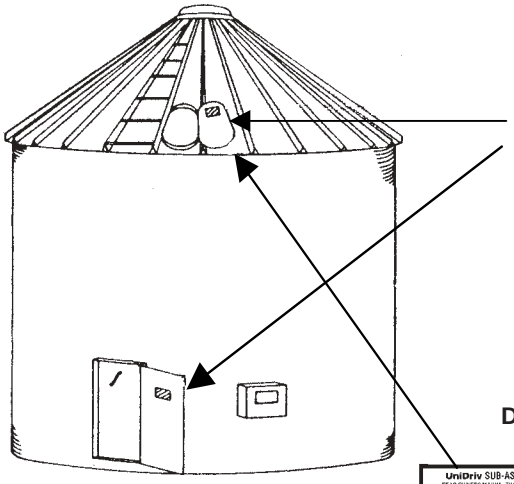
1. Read and understand the owner's manual.
2. Keep all safety shields in place.
3. Disconnect electrical power prior to inspecting, servicing, lubricating, or adjusting.
4. Keep hands, feet, and clothing from all moving parts while in operation.
5. To avoid serious injury or death, stay away from unit and make sure everyone is clear of the UniDriv before starting or operating the unit.
6. CAUTION SHOULD BE EXERCISED if it is necessary to enter the bin while the UniDriv is in operation.
7. Know how to operate and adjust your UniDriv to obtain the maximum efficiency.
8. BURYING THE UNIT WILL VOID YOUR WARRANTY.
9. DO NOT OPERATE UNIDRIV IN AN EMPTY BIN. To test the unit in an empty bin, make sure no one is in the bin, then turn power "on" and "off" immediately from the outside of the bin. Do NOT let it run in an empty bin.
10. All electrical connections should be made in accordance with the National Electric Code. Be sure equipment and bins are properly grounded.

THE DECALS SHOWN ON THIS PAGE MUST BE DISPLAYED AS SHOWN

REPLACEMENTS ARE AVAILABLE UPON REQUEST

Write to: DMC
1004 East Illinois St.
Assumption, IL 62510
217-226-4421

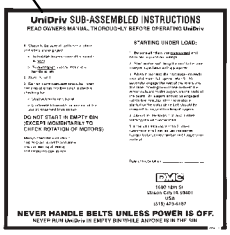
PLEASE NOTE:
1. The decals on this page are not actual size.
2. Keep all decals wiped clean at all times.
3. All deals must be replaced if they are destroyed, missing, painted over, or can no longer be read.



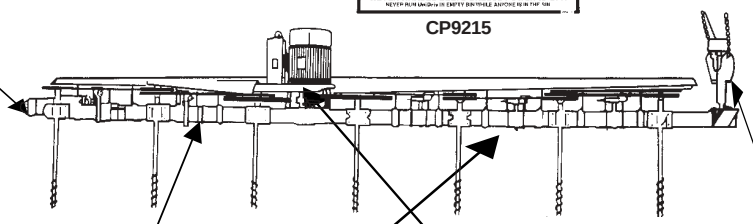
DC-552(English) & DC606 (Spanish)
Decal on inside of door

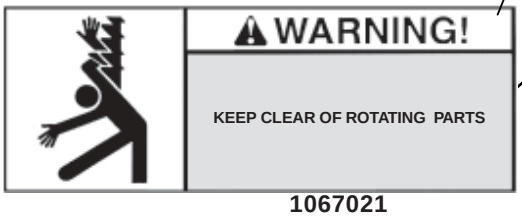
-KEEP HANDS OUT -
-USE CAUTION WHEN CLIMBING ON DRYER
-STEPS MAY BE SLIPPERY WHEN ICY OR WET
-KEEP CHILDREN OFF DRYER AT ALL TIMES

1067022



CP9215





1067021
2 Decals on both sides of Frame

104L0014

Preface

The instructions for assembly are organized into sections dealing with various assemblies on the UniDriv. Following the step by step instructions will save time in overall installation as many tips gained through field experience are provided. Close attention to assembly dimensions and installation sequences will avoid later problems in installation and operation.

DATE OF INSTALLATION: _____

Section 1 Track Installation

1. Refer to Figure 1-1. Pre-assemble the lug (256004) using the 3/8” x 1-1/4” Bolt (2FH0856), 3/8” Hex Nut (1FH0765), and 3/8” Lock Washer (3FH0791) loosely to the Track Bracket (293701). Install the track bracket assemblies using the 5/16” x 1-1/2” Bin Bolt (2FH5263), 18-3/4” apart around the inside bin wall eaves. Most bins have existing holes on 9-3/8” centers. If this is the case install the track brackets using every other hole. If the hole in the bin wall panel lies in the valley use an extra nut and washer as necessary to mount the bracket flush. The bracket can now be used as a template for the bottom hole. Use the hole that best suits the corrugation.

   NOTE: The bracket must be bolted top and bottom.

2. Place a section of track into each track bracket so its bottom edge rests on the 3/8” x 1-1/4” bolt between the lug and bracket.

3. Tighten the bolts to clamp the track in place.

4. Place a second section of track into the adjacent brackets so the end of the second section of track butts against the end of the first section of track. See Figure 1-2. Note: The track must be installed in the brackets so that the splice bolt holes are closest to the bottom edge.

5. Using the 5/16” x 1” bolts (2FH5826) install a Track Splice (255002) behind and flush with the bottom of the track. Tighten the splice so that the track section on the right is slightly lower then the one on the left.

6. Cut the last track section to fit and drill the splice holes using the cut off piece as a template.

NOTE: Caution must be taken to not leave a gap at the splice as it may cause the drive wheels to slip.

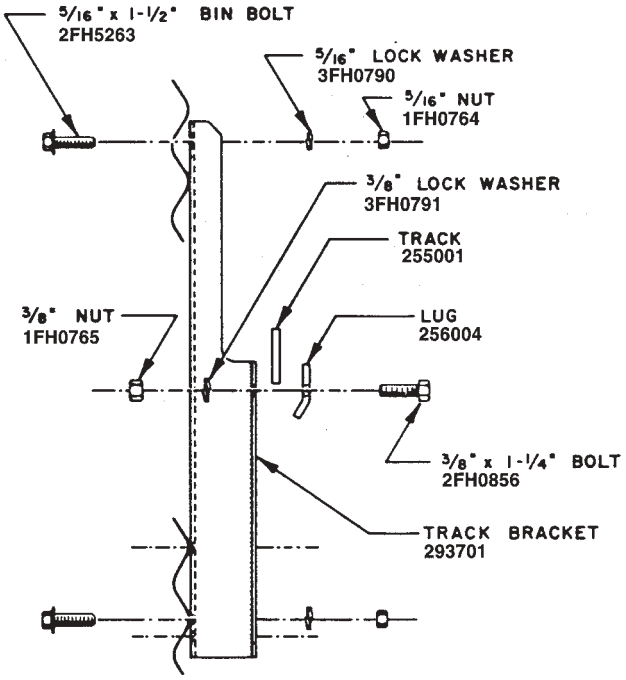


Figure 1-1 Track Bracket Assembly

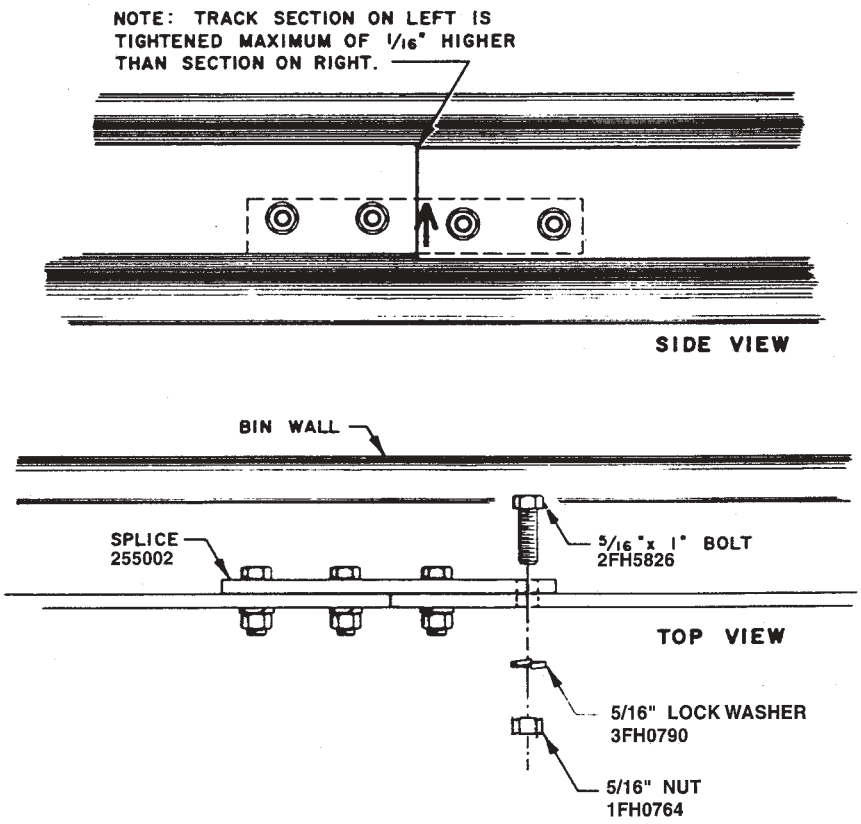


Figure 1-2 Track Splice Assembly

Section 2 Outer Drive

1. Place the horizontal beam inside the bin on blocks or horses with the outer drive mounting shaft toward the bin wall directly under the side roof hatch and the other end directly under the center fill hatch.

2. Place a 1-1/4" I. D. washer on the outer drive mounting shaft. Slide the outer drive, with the gearmotor already attached, onto the outer drive mounting shaft with the drive wheels away from the beam. Place the other 1-1/4" I.D. washer onto the outer drive mounting shaft and insert the ¼" x 2 ½" spring pin into the predrilled hole.
See Figure 2-1.

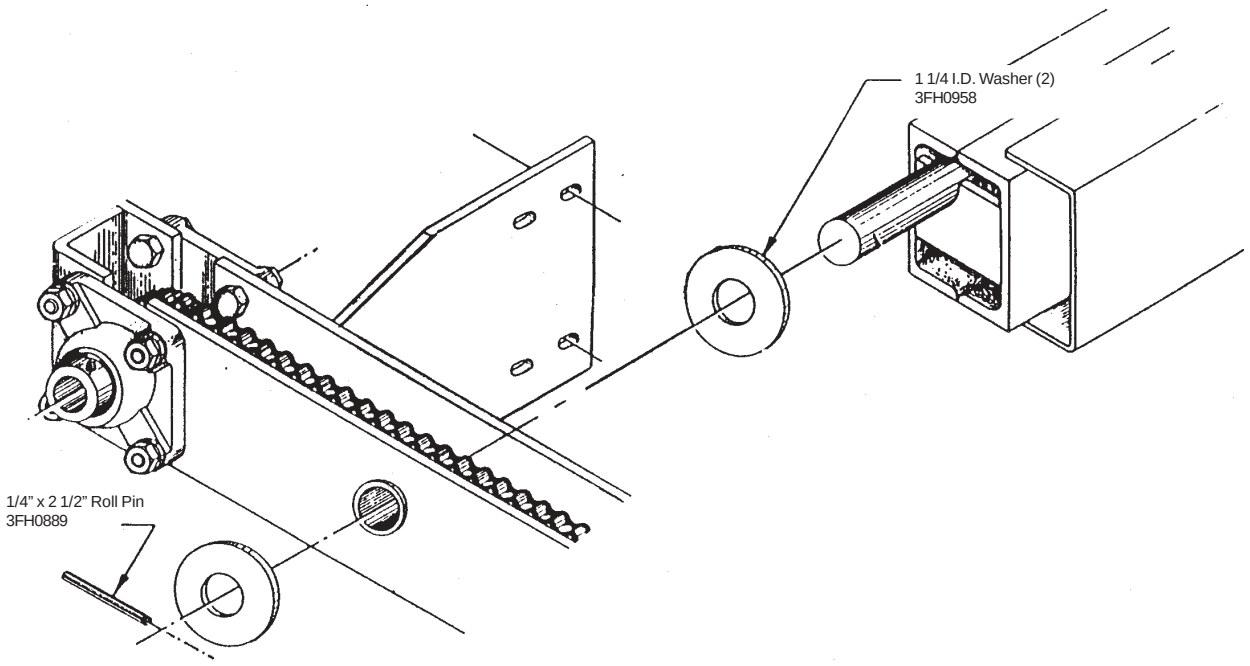


Figure 2-1 Outer Drive

Section 3 Center Hanger

For the following steps refer to Figures 3-1 and 3-2.

1. Slide the adjustable hanger bracket (252050) on the main beam until the edge of the bracket is 1 5/8" from the end of the beam. Secure in place with the 1/2" x 1 1/2" bolt.

2. Place a clip angle on the 3/4" x 3" bolt (2FH5398) with the leg facing away from the bolt head.

3. Place a spacer on the 3/4" bolt.

4. Put the end of the hanger bar between the arms of the hanger bracket so the hold is below the arms.

5. Insert the 3/4" x 3" bolt through the hole in the hanger bar until the head of the bolt holds the clip angle over the arm of the bracket.

6. Place the second spacer on the 3/4" bolt.

7. Place the second clip angle over the 3/4" x 3" bolt so the leg points toward the head of the bolt and extends over the second hanger bracket arm.

8. Now position the center hanger midway on the hanger bracket bars and tighten down the 3/4" lock washer and nut. Final adjustment will be made when filling the bin.

9. Place one piece of 1/4" proof coil chain through one hole in the hanger bracket and secure the end of the chain back to the chain body with the Quick-Link chain connector provided.

10. Repeat the above step on the opposite side of the hanger-bracket.

NOTE: The coupling on the rotary connector and the nipple on the center hanger assembly are left hand threaded.

11. Install the rotary connector onto the center hanger and tighten.

12. Place the spreader bar between the two 1/4" proof coil chains so there are an equal number of links on each side between the hanger bracket and the spreader bar. Approximately 32" between the hanger bracket and the spreader bar is appropriate for most bins. Secure the spreader bar by bolting one chain to each end of the bar with the 3/8" x 2" bolts (2FH5T296) and nuts (1FH0705) and the 3/8" flat washers (3FH0865) provided.

NOTE:In some small bin diameters the spreader bar provided may be too long. If this is the case, the desired length can be obtained by cutting off the spreader bar and re-drilling.

13. Fasten the "S" hook on the rotary stabilizer to the hanger chain just above the center hanger bracket and squeeze the "S" hook closed.

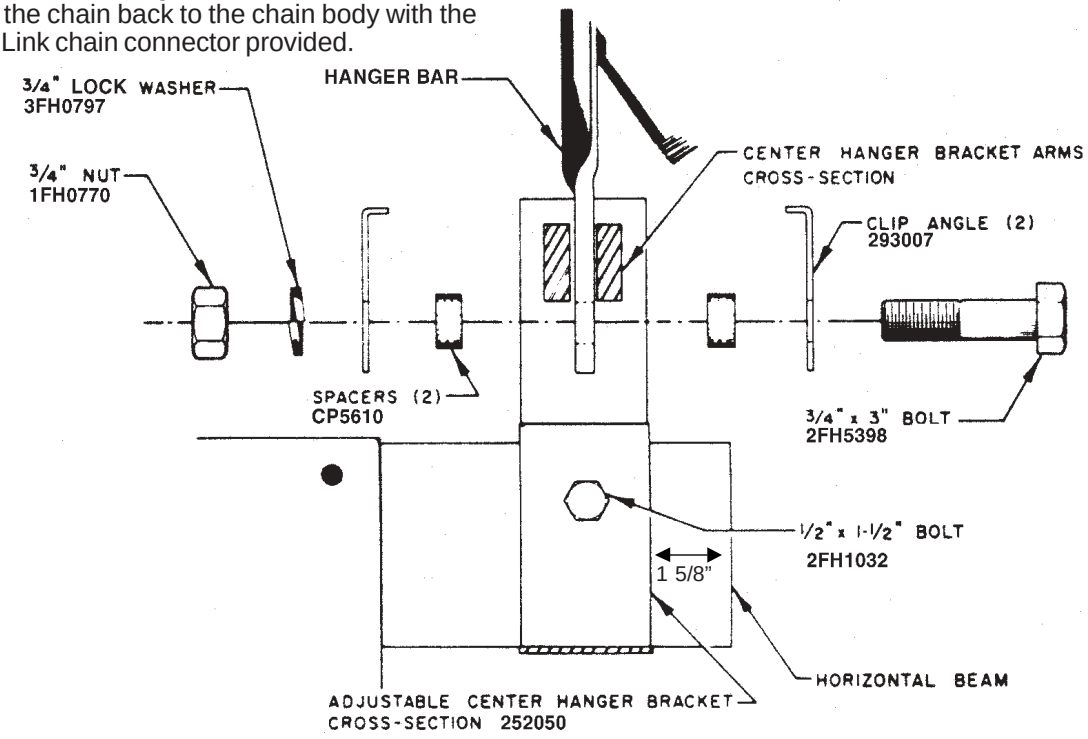


Figure 3-1 Center Hanger to Bracket Detail

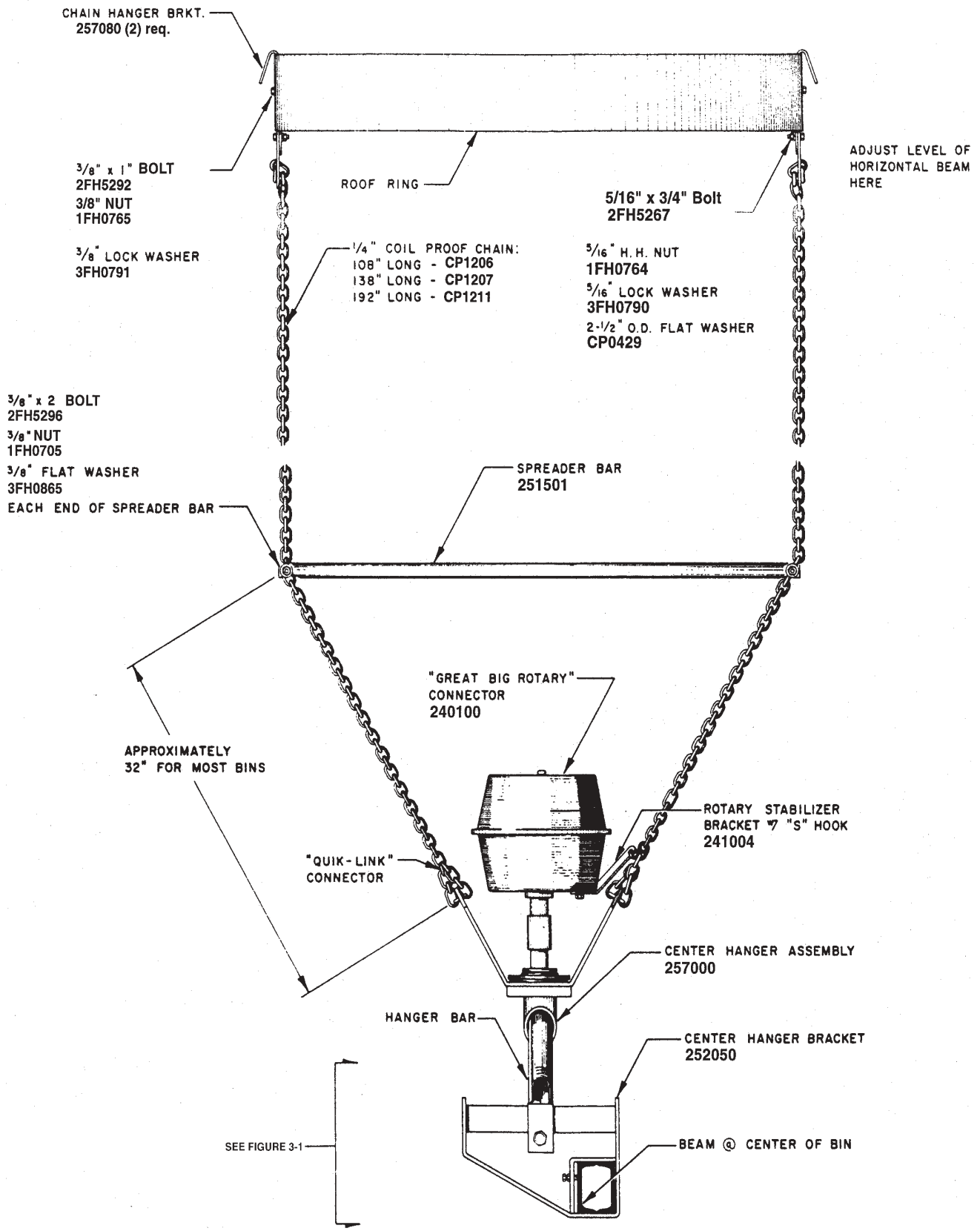


Figure 3-2 Center Hanger and Chain Assembly

Section 4 Vertical Auger Stub Shaft Assemblies

1. Depending on your unit size, refer to Figures 4-6, 4-7, and 4-8 for the following steps. Place unit up on the saw horses inside bin, with the center hanger bracket directly under the center roof hatch and the outer drive directly under the side roof hatch. Anchor with boards 8” long with holes drilled so that you can bolt the unit to the saw horses for stability. The Outer Drive can be allowed to pivot to a natural resting position during assembly. DO NOT INSTALL MAIN MOTOR UNTIL INSTRUCTED TO DO SO.

2. For your convenience the pulley, bearing, vertical drive spacers and sensing devices have already been assembled to the stub augers, ready to bolt directly to the beam brackets. The stub auger number should be affixed to the top of the topmost pulley of each assembly. If for some reason the number has come off, compare the auger in question with the other five (5) to determine which one it is.

3. The No. 4 Auger (see Figure 4-4) will always go to the outer drive side of the main motor and the No. 5 Auger (see Figure 4-5) will always go to the center hanger side of the main motor. These Assemblies contain the double 12""cast motor belt pulleys.

4. The No. 2 (see Figure 4-2) and No. 3 Auger Assemblies (see Figure 4-3) contain the Sensing Devices and are placed at either end of the beam. No. 2 Stub Auger Assembly is used in the high belt position and the No.3 Stub Auger Assembly in used in the low position. Check overall beam drawing for your particular unit length for correct positioning.

5. The No. 1 Stub Auger Assembly (see Figure 4-1) is the standard double 9” pulley assembly. It is used on all units of 5 augers or more and is placed between the two Motor Pulley Augers and the outside Sensing Device Augers.

6. Install the stub auger assemblies using the 3/8” x 1-1/4” bolts (2FH5293), Nuts (2FH0765), Lock Washers (3FH0791), and Flat Washers (3FH0948). Loose assemble the stub shaft assemblies. Level the main beam from end to end, then use the level on the Stub Shaft Assemblies as they are tightened to ensure a 90-degree alignment to the beam. Also exact spacing of the Stub Shaft Assemblies must be ensured. Check specification for your size of unit and always measure from the end (first) Stub Auger Assembly. Start at one end and work toward the other tightening bolts and lock collars as you go.

7. Slow Down Kit Option
   a. Assemble the stub shaft assembly with the 5” and 9” double pulley combination next to the auger in the center of the bin. The 9” pulley should be assembled on the top for the 24’, 27’, 42’ and 48’ size units. The 5” pulley should be assembled on top for the 30’, 33’, and 36’ size units.
   b. Assemble the stub shaft assembly with the Slow Down, Speed Sensing device on the beam in the center of the bin position.

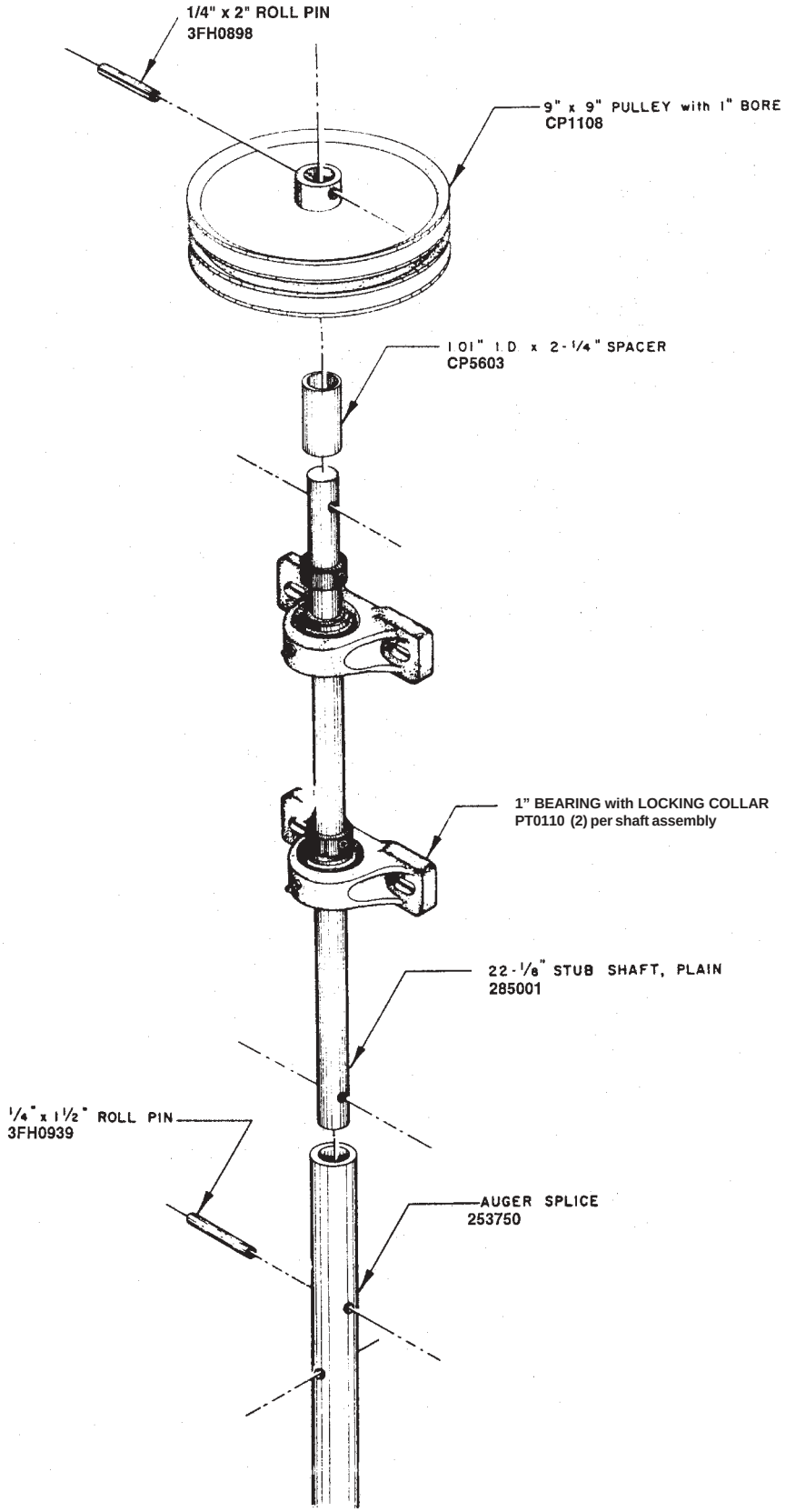


Figure 4-1 Stub Auger Assembly No. 1 (280001)

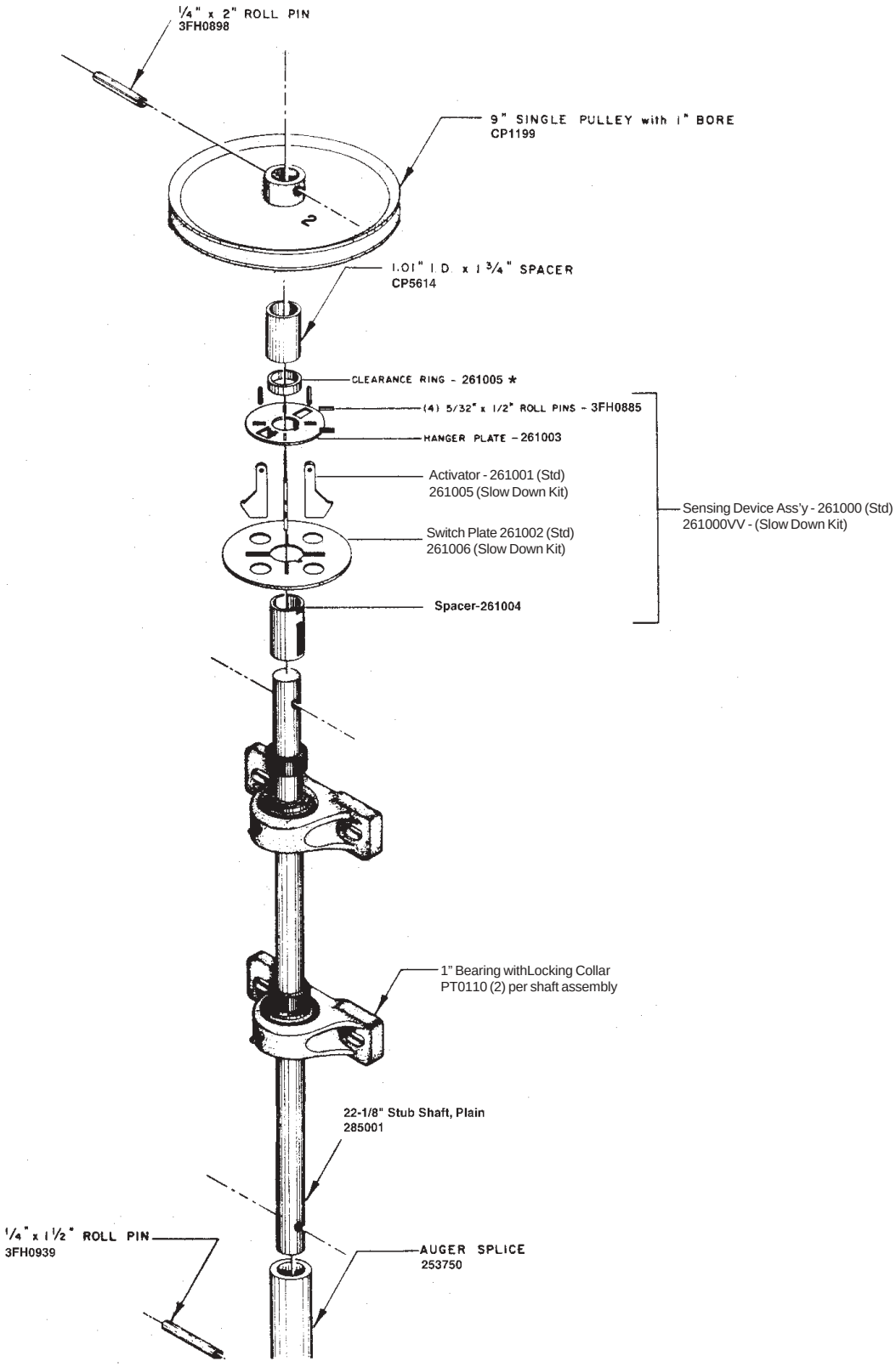


Figure 4-2 Stub Auger Assembly No. 2 (280002)

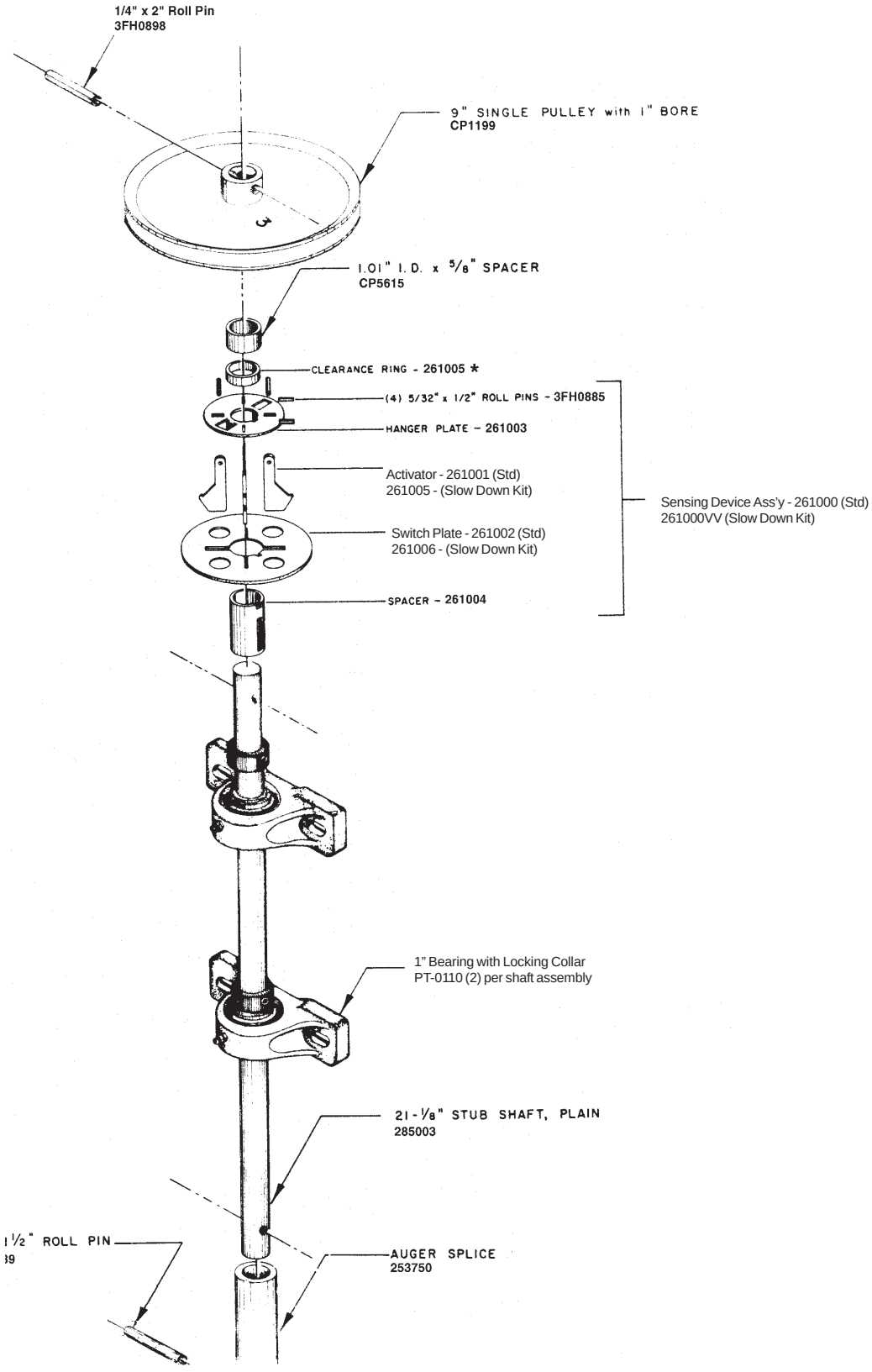


Figure 4-3 Stub Auger Assembly No. 3 (2800031)

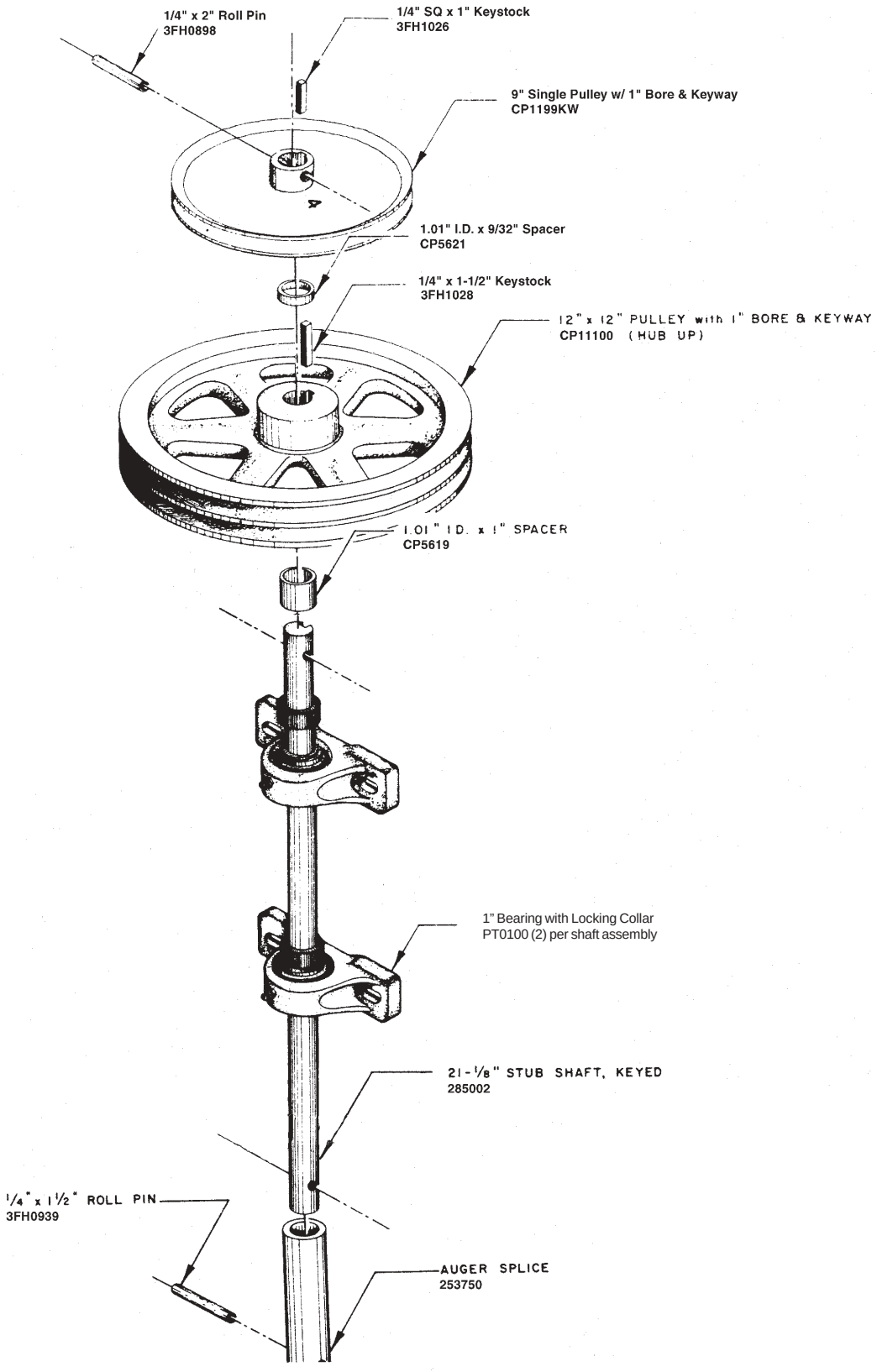


Figure 4-4 Stub Auger Assembly No. 4 (280004)

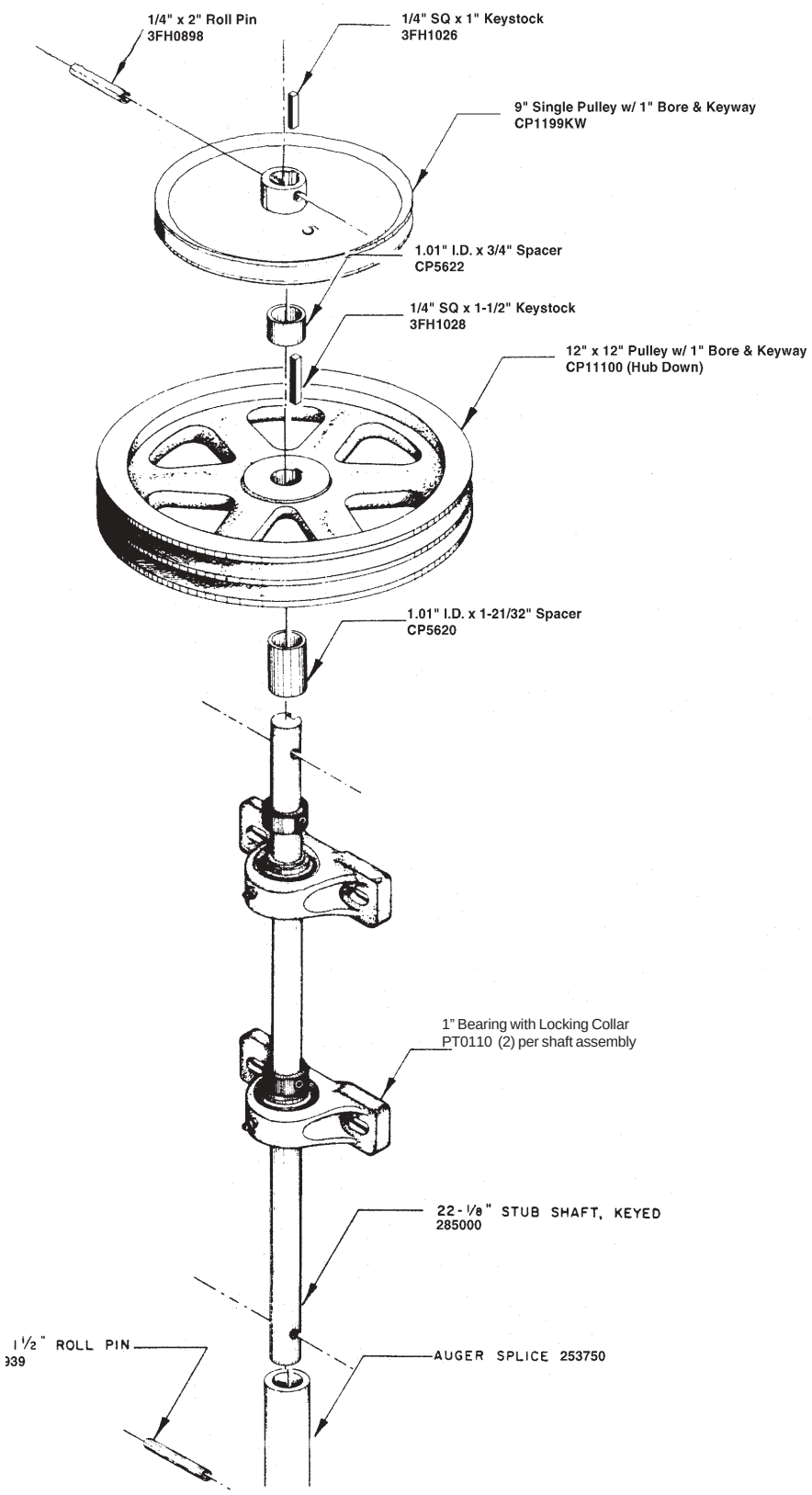


Figure 4-5 Stub Auger Assembly No. 5 (280005)

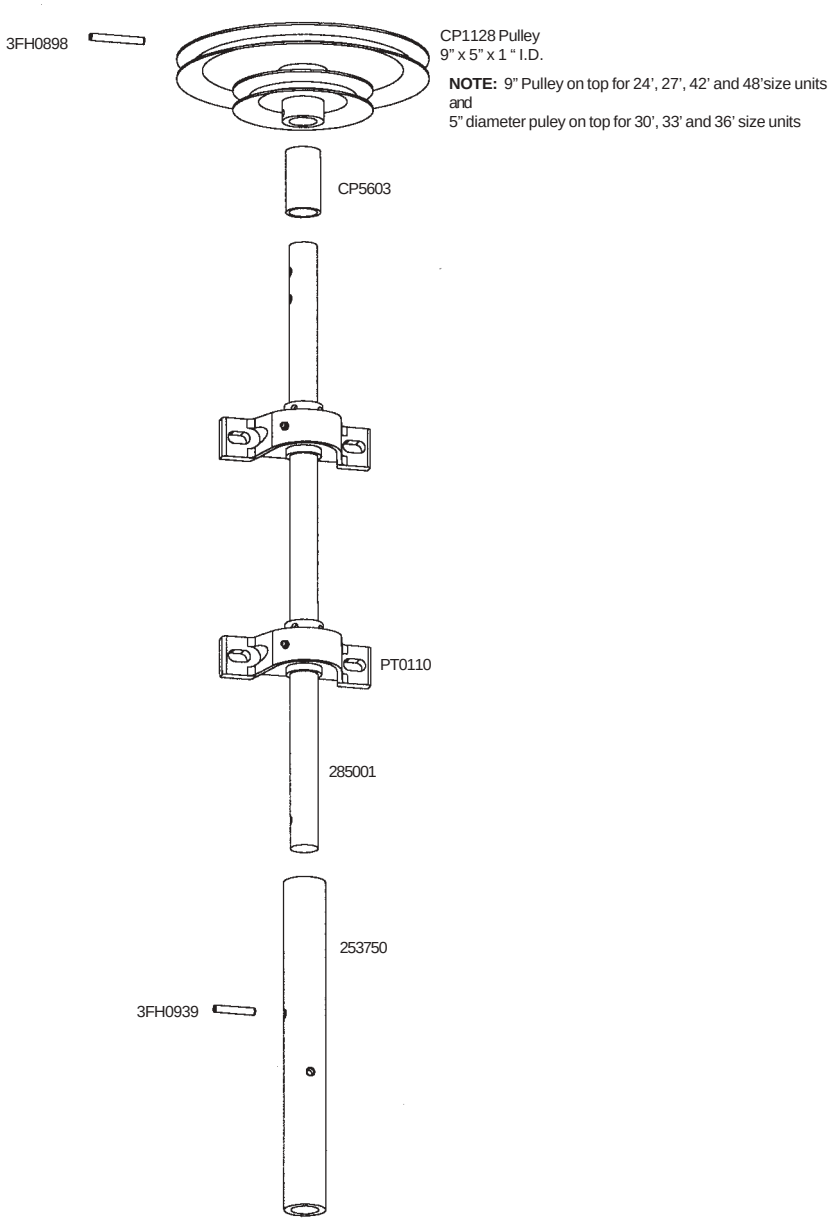


Figure 4-5 Stub Auger Assembly used with Slow Down Kit - No. 6 (280006)

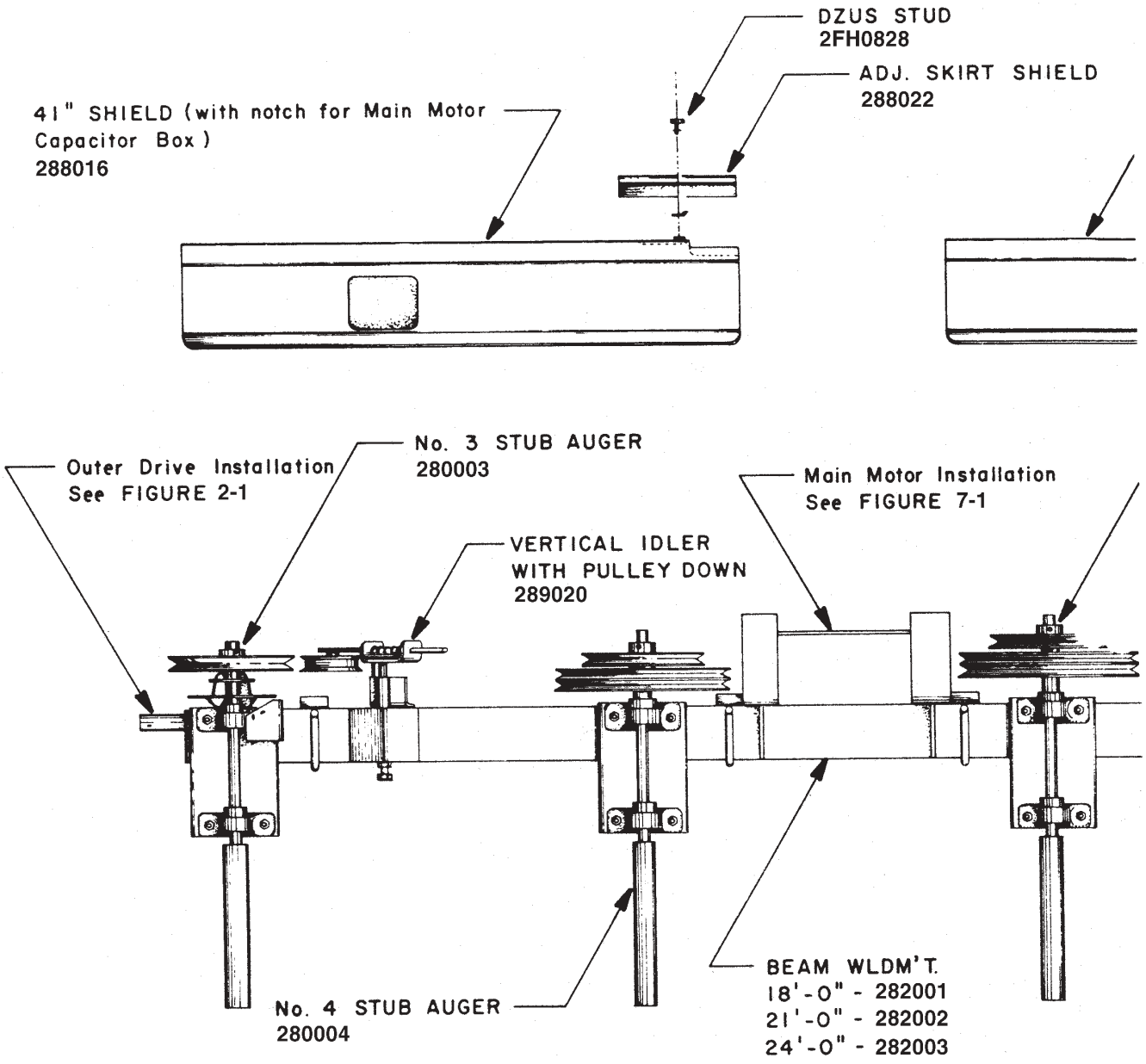
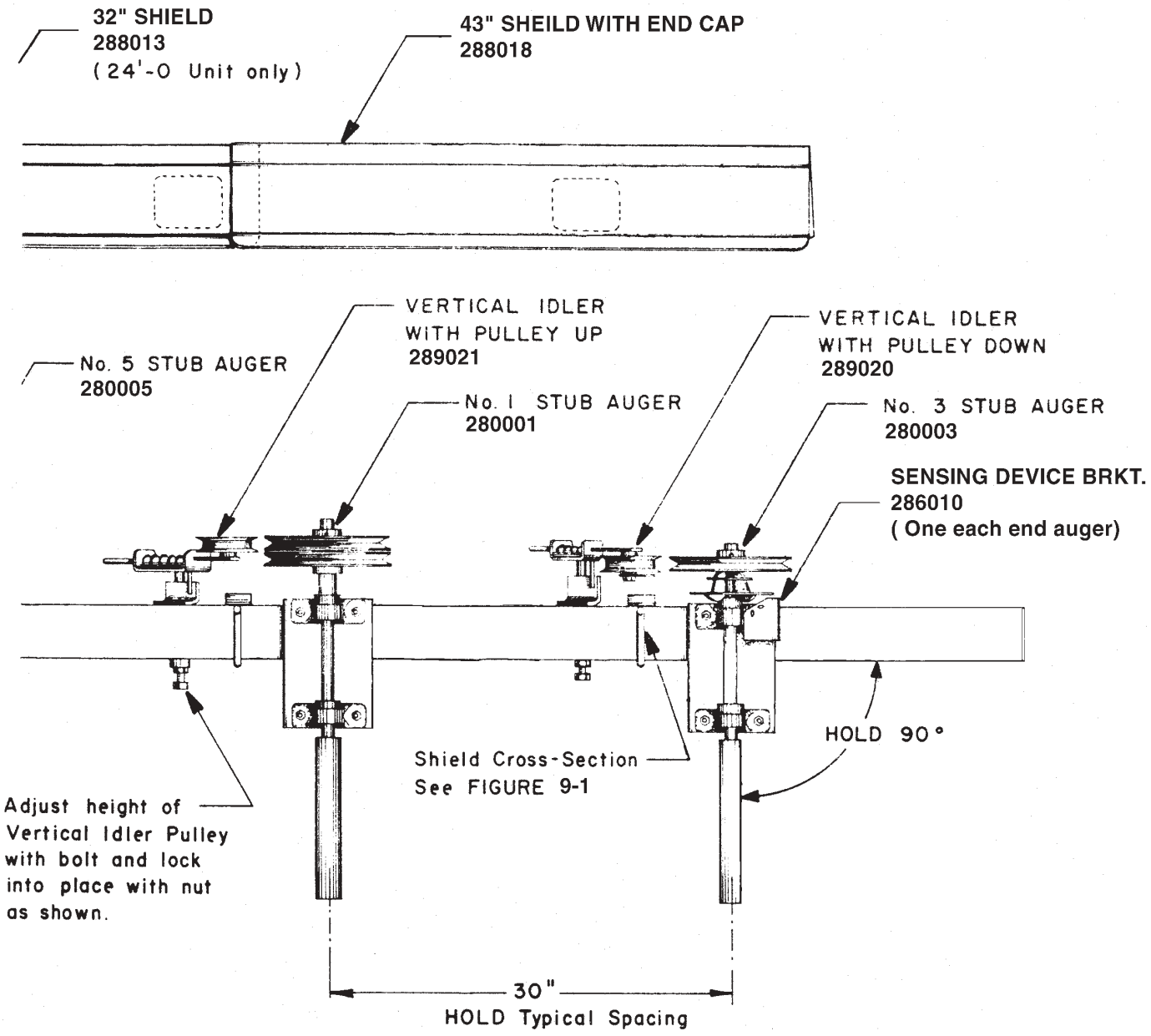


Figure 4-6 Stub Auger Assembly No. 6



Overall Unit Diagram for Sizes 18', 21', and 24'

Figure 4-6 Stub Auger Assembly No. 6

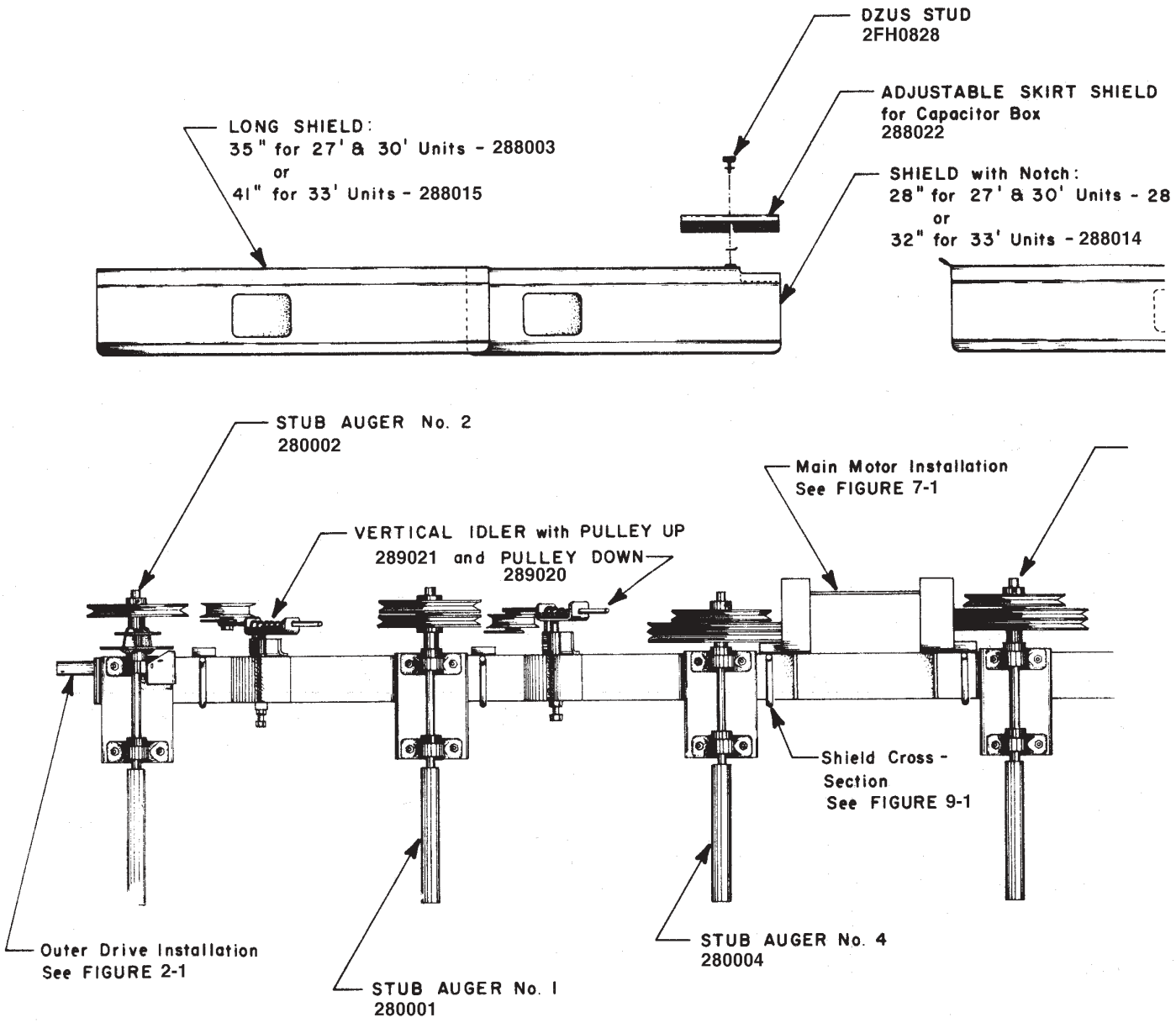
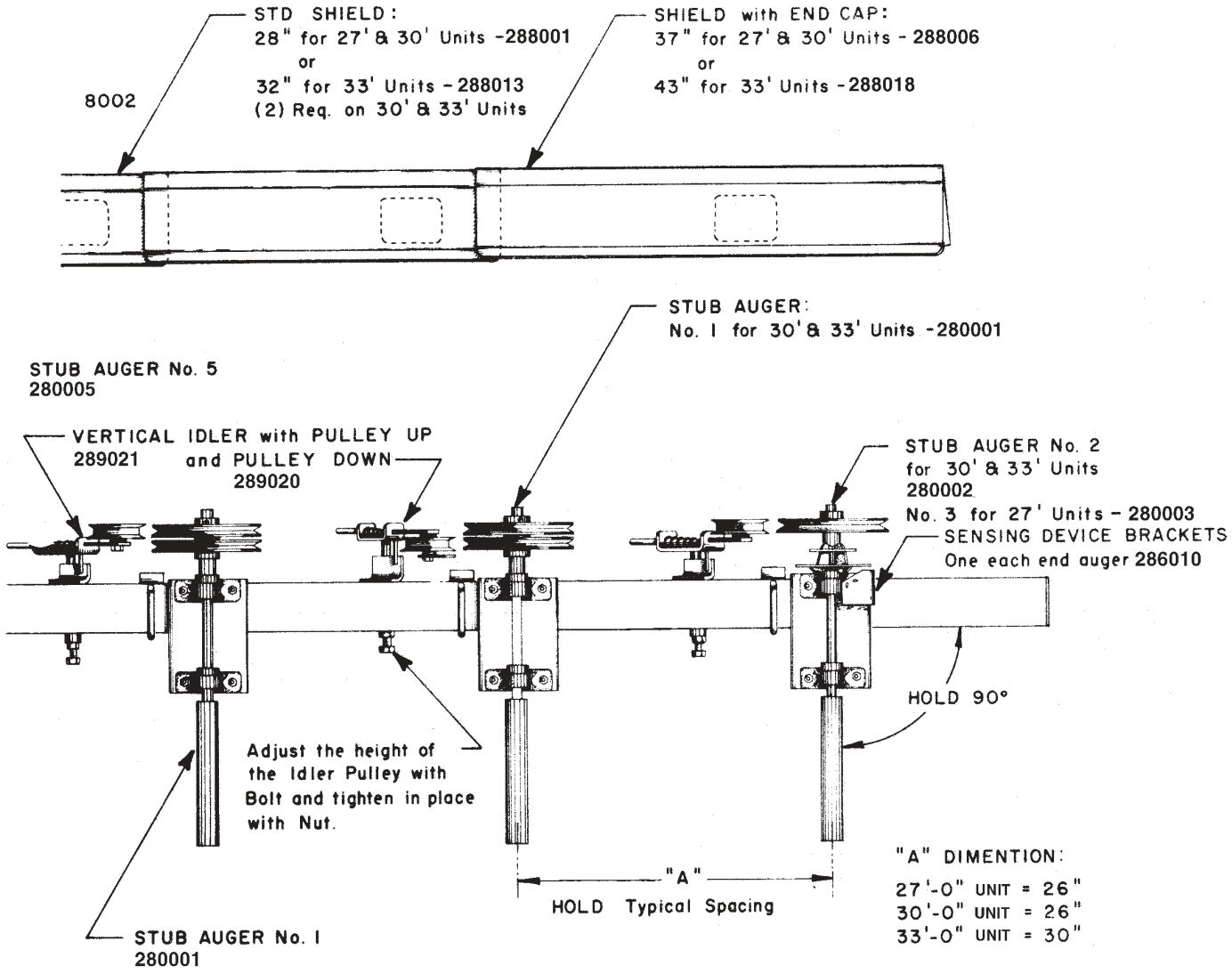


Figure 4-7 Stub Auger Assembly No. 7



Overall Unit Diagram for Sizes 27', 30', and 33'

Figure 4-7 Stub Auger Assembly No. 7

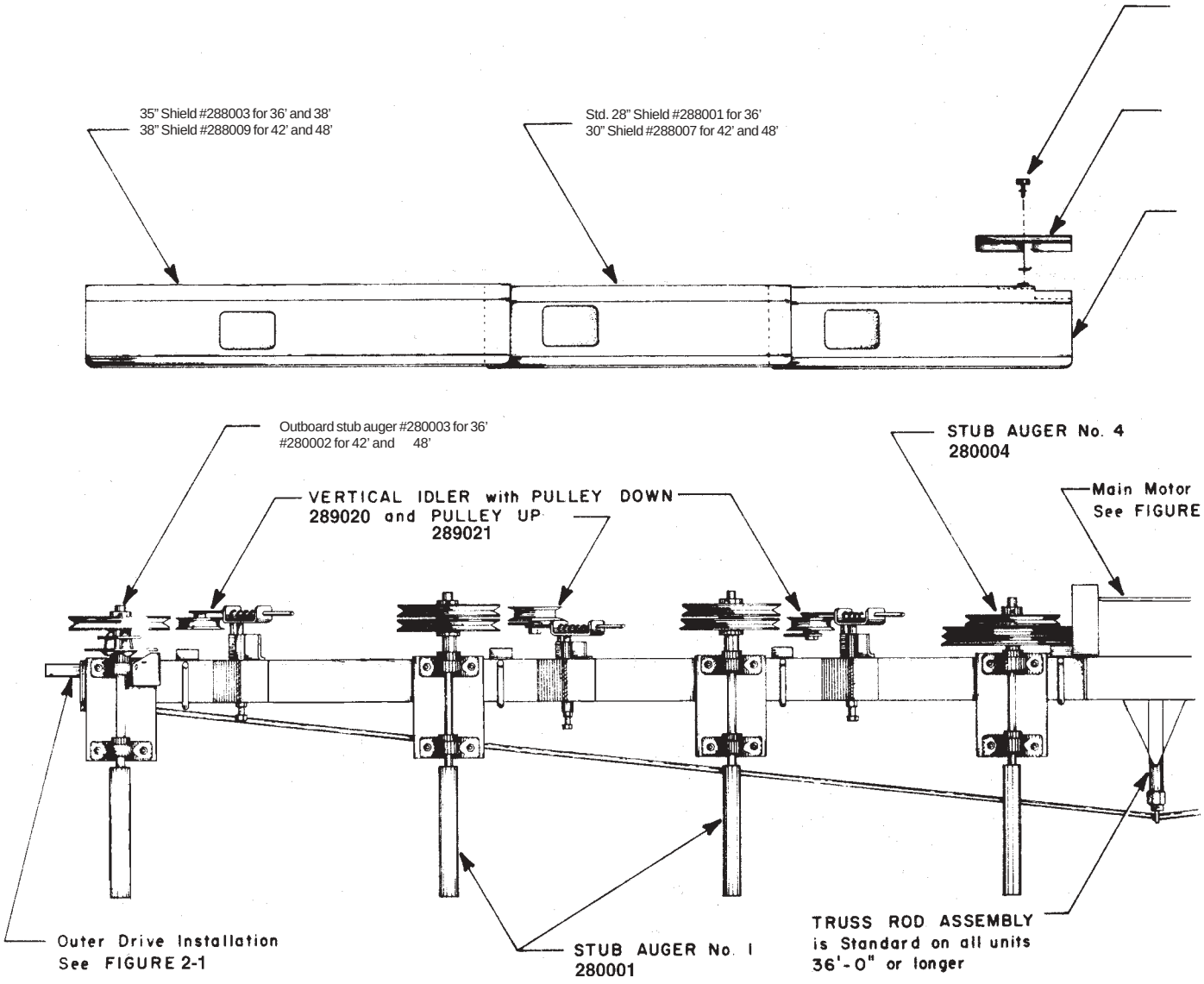
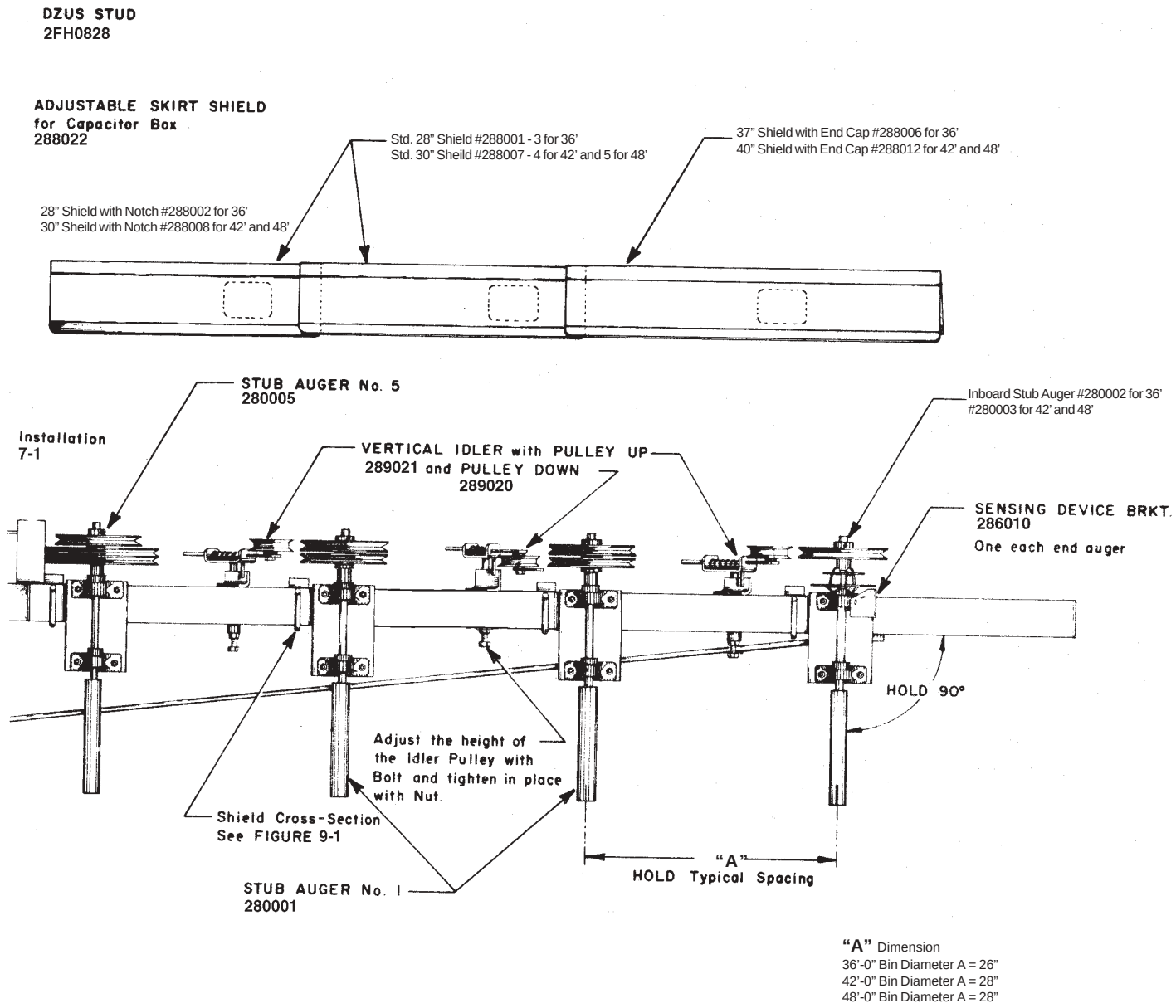


Figure 4-8 Stub Auger Assembly No. 8



Overall Unit Diagram for Sizes 36', 42' and 48'

Figure 4-8 Stub Auger Assembly No. 8

Section 5 Micro Switches

1. Refer to Figure 5-1 and install the two Micro Switch Bracket Assemblies, one on each of the two end augers. Use the ¼" x ¾" Bolts (2FH0803), Nuts (1FH0763), and Lock Washers (3FH0789) found in the Sensing Device Bracket Package (286501). Bolt to the right hand side of the auger bolting plate.

2. Lift up the Sensing Device switch plate and swing the activator out to it's limit. If it doesn't touch the Micro Switch Arm, the Sensing Device is properly set.

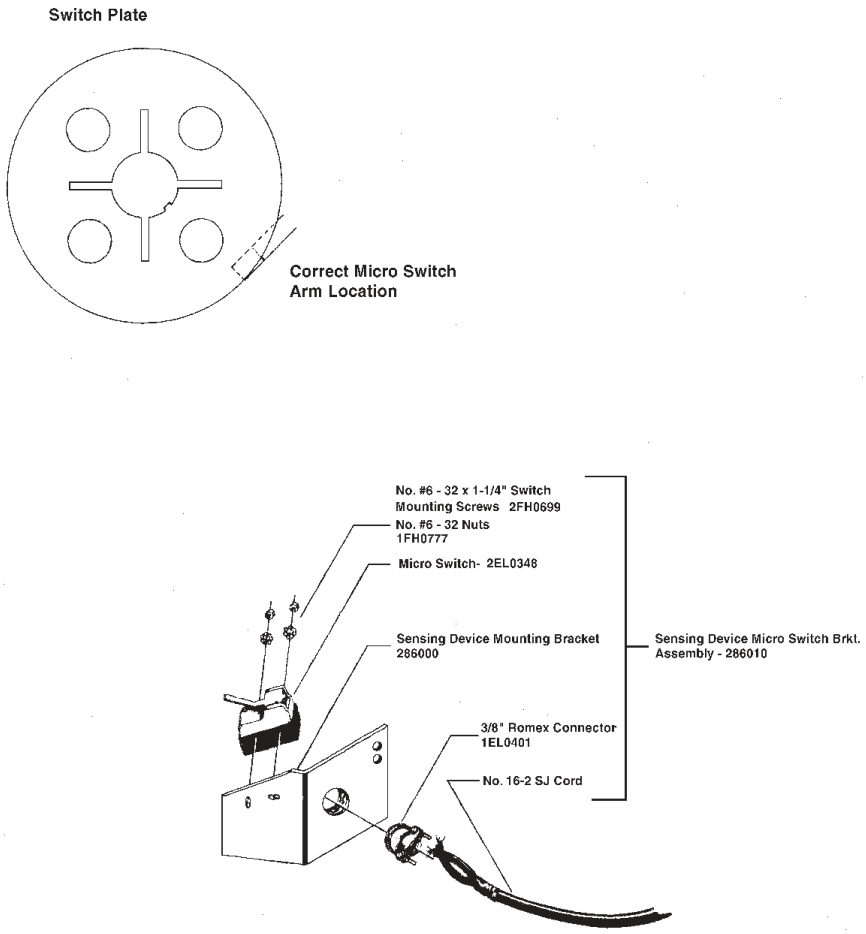


Figure 5-1 Micro Switch

Section 6 Vertical Idlers

1. For position of the Vertical Idler Assemblies see Figures 4-6, 4-7, and 4-8 depending on your unit size. The 289020 Assembly with the Pulley Down is used at the low belt positions and the 289021 Assembly with the Pulley up is used at the high belt positions.

2. Insert the ¾" pivot shaft into the bracket tube with the ½" diameter stop pin on the beam side of the stop. The stop controls the arc of the idler pulley positioning rod – engaged (to the right) and disengaged (to the left)

3. To adjust the spring tension refer to the section on auger and belt installation later on in the manual. Wait to adjust until the belts are in place.

Section 7 Main Drive Motor

1. Attach Main Motor to Motor Mount, 28-3005, with 3/8" x 1-$^{1}/_{2}$" Bolts, Nuts, Lock Washers, and Flat Washers found in the Motor Installation Sack No. 28-3050.

2. The Mercury Switch Bracket Assembly, 25-4000, will bolt on with the upper right-hand motor installation bolt, as shown.

3. Install the 3" O.D. 4-Groove Motor Pulley using the correct bushing. (Do not tighten until motor belts are in place.)

4. Place Motor Mount on Motor Mount Slides with the motor facing away from cross bar in the back. Attach Front Motor Skirt Weldment, 28-8025, by inserting bolts welded to skirt up through the holes in the arms of the motor mount. Then place the 11-$^{1}/_{2}$" long Angle Support Bolting Strap, 28-3011, on the top and finger tighten with lock washer and nut.

5. Loosely attach the 12-3/8" long Motor Mount Bolt Strap, 28-3010, at the back of motor mount with the 3/8" x 1-$^{1}/_{2}$" Bolts, Nuts, Flat Washers, and Lock Washers. The strap will be under the Motor Slides therefore holding the Motor Mount down.

6. Slide the Back Motor Skirt, 28-2021, onto the 3/8" Bolts holding the back of the Motor Mount down. Insert between the bottom strap and the motor slides.

7. Slip the Latch Hook, 28-3020, onto the Adjustment Bolts Weldment, 28-3030, with the nut. Now hook over the bar across the back of the slide assembly (as shown) and insert the adjustment bolt through the hole in the motor mount and secure with the square nut. The square nut is now captivated by the lip on the motor mount.

Main Drive Motor and Mercury Switch Bracket

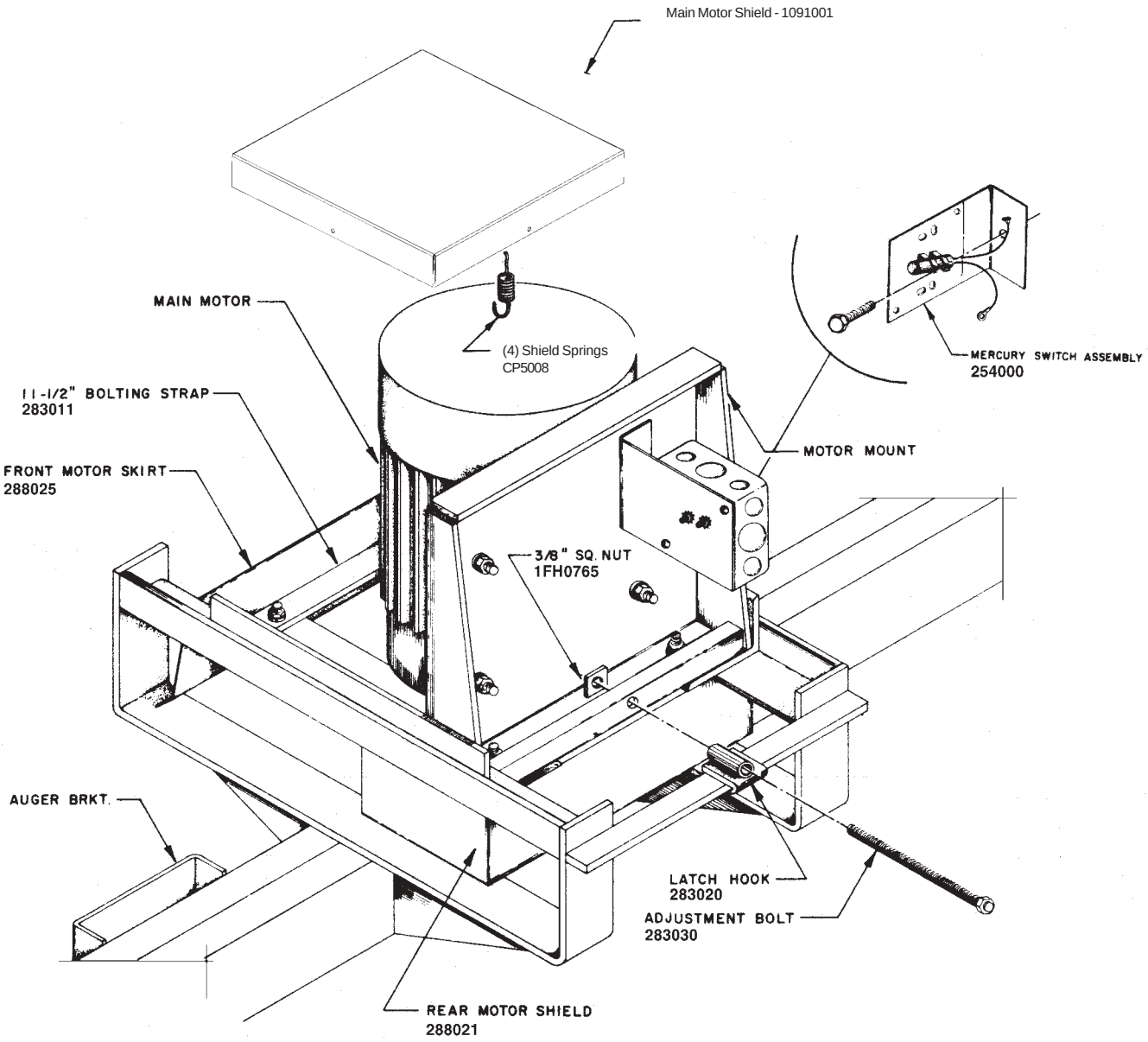


Figure 7-1 Main Motor Installation with Mercury Switch Bracket

Section 8 Belt Installation

Belt Sizing Chart

Belt Sizing Chart								
Unit Size	Motor Drive Belts		Vertical Auger Drive Belts					
		Qty.	Standard Unit	Qty.	With Slow Down Kit	Qty.		Qty.
18' - 0"	PT0497 (A55)	4	PT0511 (A87)	2	Not Available			
21' - 0"	PT0497 (A55)	4	PT0511 (A87)	2	Not Available			
24' - 0"	PT0497 (A55)	4	PT0511 (A87)	3	PT0511 (A87)	2	CP1044 (A80)	1
27' - 0"	PT0501 (A51)	4	PT0503 (A79)	4	PT0503 (A79)	3	CP1038 (A72)	1
30' - 0"	PT0501 (A51)	4	PT0503 (A79)	5	PT0503 (A79)	4	CP1038 (A72)	1
33' - 0"	PT0497 (A55)	4	PT0511 (A87)	5	PT0511 (A87)	4	CP1044 (A80)	1
36' - 0"	PT0501 (A51)	4	PT0503 (A79)	6	PT0503 (A79)	5	CP1038 (A72)	1
42' - 0"	PT0504 (A53)	4	PT0505 (A83)	7	PT0505 (A83)	6	CP1042 (A76)	1
48' - 0"	PT0504 (A53)	4	PT0505 (A83)	8	PT0505 (A83)	7	CP1042 (A76)	1

Motor Belts

1. Refer to Belt Sizing Chart above and install the motor belts, in matched sets, between the 3” O.D., 4-Groove Motor Pulley and the two double 12” Cast Motor Pulleys to either side of the Motor Mount.

2. Align the Motor Pulley with the belts and tighten down Bushing on Motor Shaft.

3. To tighten Motor Belts, first make sure the four bolts holding the motor mount to the slides are loose enough to allow the Motor Mount to bolt until the slack in the motor belts is taken out.

Vertical Belts

4. The vertical belts can be installed between the 9” pulleys by moving the vertical idler handles to the left and slipping the belts into position. The idlers are now disengaged.

5. As each belt is installed, move the idler handle to the right placing it in the engaged position.

6. In the engaged position, the idler spring should be compressed 3/4”. To adjust your spring compression, disengaged the idler arm and loosen the 1/2” bolt. Now you can slide the idler pulley and tighten in the new position.

7. Engage the idler arm. If the spring compression is still not correct, repeat the above step.

   IMPORTANT: Adjust the Idler Belt Retainers directly below the idler pulley (refer to the Parts Section of this manual) so it supports the belt when the idler is disengaged.

8. To adjust the Idler Arm height, use the 3/8” x 3” Full Threaded Bolt and 3/8” Nut found in Sack #28-9090. First thread the bolt into the nut found in the sack. Now thread the bolt into the nut welded in the bottom of the idler bracket tube until the belt hits the center of the idler pulley. Now lock into position by threading the nut tightly against the tube.

Section 9 Harness Installation

1. Mount 6x6x4 (outside) plastic junction box to frame using two self-drilling screws. The box should be right below the shield bracket and about one inch away from the gear-motor. See Figure 9-2.

2. Install ½" conduit connector in upper left hand corner of box. Install Romex connector in bottom of box. Install fuse and fuse holder in middle left hand side of box using two self drilling screws. See Figure 9-3.

3. Mount 4x4x4 (middle) plastic junction box to frame using two self-drilling screws. The box should be to the right of the motor mount. See Figure 9-1.

4. Install one ½" and two ¾" conduit connectors and one Romex connector as shown in Figure 9-4.

5. Install 1" to ¾" pipe reducer to threaded pipe coming down from great big rotary contactor. Install ¾" 90 degree conduit connector to motor junction box. Attach ¾" conduit between pipe reducer and middle junction box. Attach ¾" conduit between middle junction box and motor junction box. Cut to fit. Use conduit holders as necessary. See Figure 9-1.

6. Attach ½" conduit from middle junction box to outside junction box. Cut to fit. Use conduit holders as necessary. See Figure 9-1.

7. Install plastic ½" conduit connectors in gearmotor and outside junction box. See Figure 9-2. Attach plastic conduit between connectors with wires from gearmotor inside.

8. Run 16-2 cable from outside micro-switch to outside junction box. Run 16-2 cable from mercury switch box to middle junction box. Run 16-2 cable from inside micro-switch to middle junction box and extend through ½" conduit to outside junction box. Connect cables to C and NC terminals on both micro-switches using ring terminals. It does not matter which color wire goes on which of these two terminals. Connect cable to mercury switch using wire nuts.

9. Run motor wires and white, yellow, red and black 16 gauge wires from great big rotary contactor to middle junction box. Extend motor wires to motor junction box. Motor wires consists of one green wire and 2 (1 ph) or 3 ph) large black wires. Connect wires to motor according to motor nameplate.

Section 9 Harness Installation continued

Rotary Contactor
Connect white wire to wire #5. Connect yellow wire to wire #7. Connect red wire to wire #6. Connect green wire to wire #8. Use wire nuts. See rotary wiring detail Figures 9-5, 9-6, and 9-7.

Single Phase
Connect one large black wire to wires #2 and #4. Connect other large black wire and 16 gauge black wire to wires #1 and #3. Use wire nuts or split bolts. See rotary wiring detail Figure 9-5.

Three Phase
Connect three large black wires to wires #2, #4, and #1 respectively. Connect 16 gauge black wire to wire #3. Use wire nuts or split bolts. See rotary wiring detail Figure 9-6.

Middle Junction Box
Connect black wire to black wire in 16-2 cable. Connect new black wire to white wire in 16-2 cable. Use wire nuts. See Figure 9-4. Run this new black wire along with the white, yellow and red wires to the outside junction box.

Outside Junction box
1. Put solid state timer and capacitor in outside junction box. See Figure 9-3.

2. Connect black wire to fuse holder using blue spade connector. Attach new black wire from other fuse holder terminal to capacitor using blue spade connectors. Connect red wire and black wire in 16-2 cable (inside micro-switch) to timer terminal 1 using yellow spade connector. Connect yellow wire and black wire in 16-2 cable (outside micro-switch) to timer terminal 3 using yellow spade connector. Connect white wires from both 16-2 cables together using wire nut.

3. Connect white wire to the white and red wires from the gearmotor using wire nut. Connect black wire from gearmotor to capacitor. Put this on the same terminal set as the black wire coming from the fuse holder. Connect blue wire from gearmotor to other terminal set on capacitor.

Section 9 Harness Installation continued

460 Volt Option

1. Mount transformer and 2x4 junction box with fuse holders to frame underneath motor mount. Use self-drilling screws. Install one Romex connector in both the transformer and the 2x4 junction box.

2. Run 16-2 cable from motor junction box through conduit to middle junction box then to 2x4 junction box. Connect cable to any two of the three large black wires in motor junction box. Connect black wire in cable to one fuse holder and white wire to the other fuse holder using blue spade connectors.

3. Run 16-2 cable from junction box to transformer. Connect cable to remaining terminals on fuseholders using blue spade connectors. Connect cable to high voltage side of transformer using wire nuts.

4. Run 16-2 cable from transformer to middle junction box. Connect cable to low voltage (115VAC) side of transformer. Splice white wire from cable with white 16 gauge wire in middle junction box. Splice black wire from cable with black 16 gauge wire in middle junction box. This black 16 gauge wire originates from rotary contactor. Use wire nuts.

Two Mercury Switch Option

1. Install the additional two mercury switches in mercury switch box. Run 16-2 cable from mercury switch box to middle junction box. Connect one wire from each mercury switch together. Connect black wire in cable to one mercury switch. Connect white wire in cable to other mercury switch. Use wire nuts.

2. Cut into16-2 cable from inside micro-switch. Do this within middle junction box. Reconnect the black wires together. Connect each of the white wires to the cable from the two mercury switches. Use wire nuts. See wiring schematic Figures 9-8, 9-9, and 9-10.

Lowery Special Option

There are no micro-switches with this option. Install two mercury switches in mercury switch box. Run 16-2 cable from mercury switch box to middle junction box then through conduit to outside junction box. Connect one wire from each mercury switch together. Connect black wire in cable to one mercury switch. Connect white wire in cable to other mercury switch. Use wire nuts.

Within outside junction box, connect the black wire in cable to terminal #1 on timer. Connect the white wire in cable to terminal #3. Use blue spade connectors.

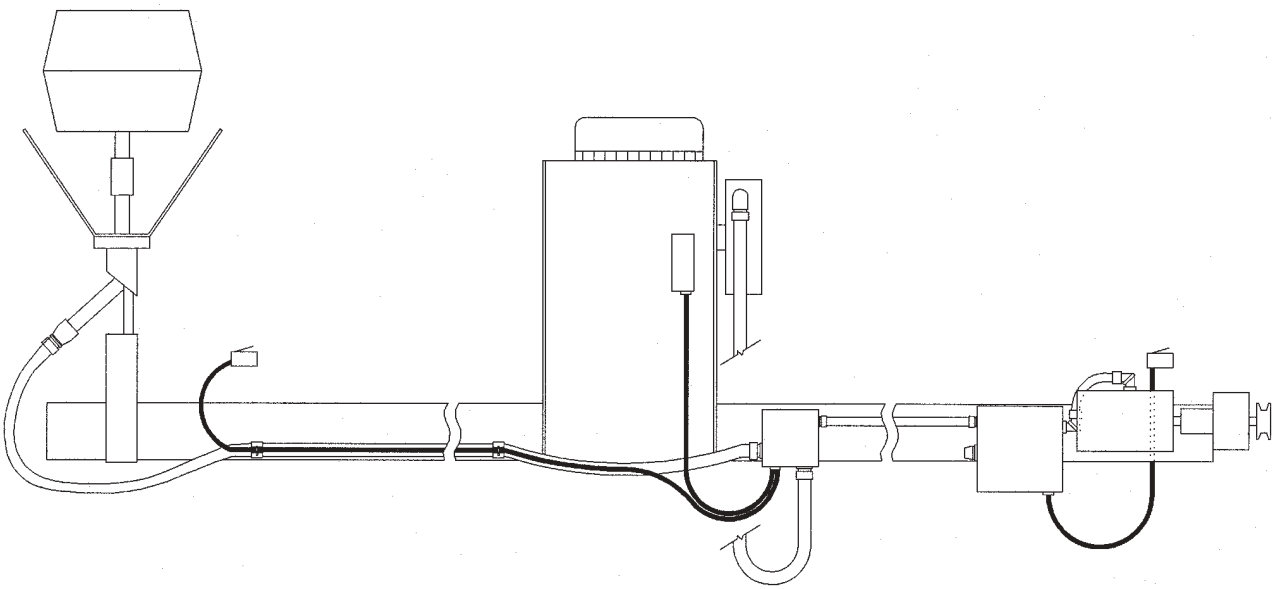


Figure 9-1 Wiring Harness

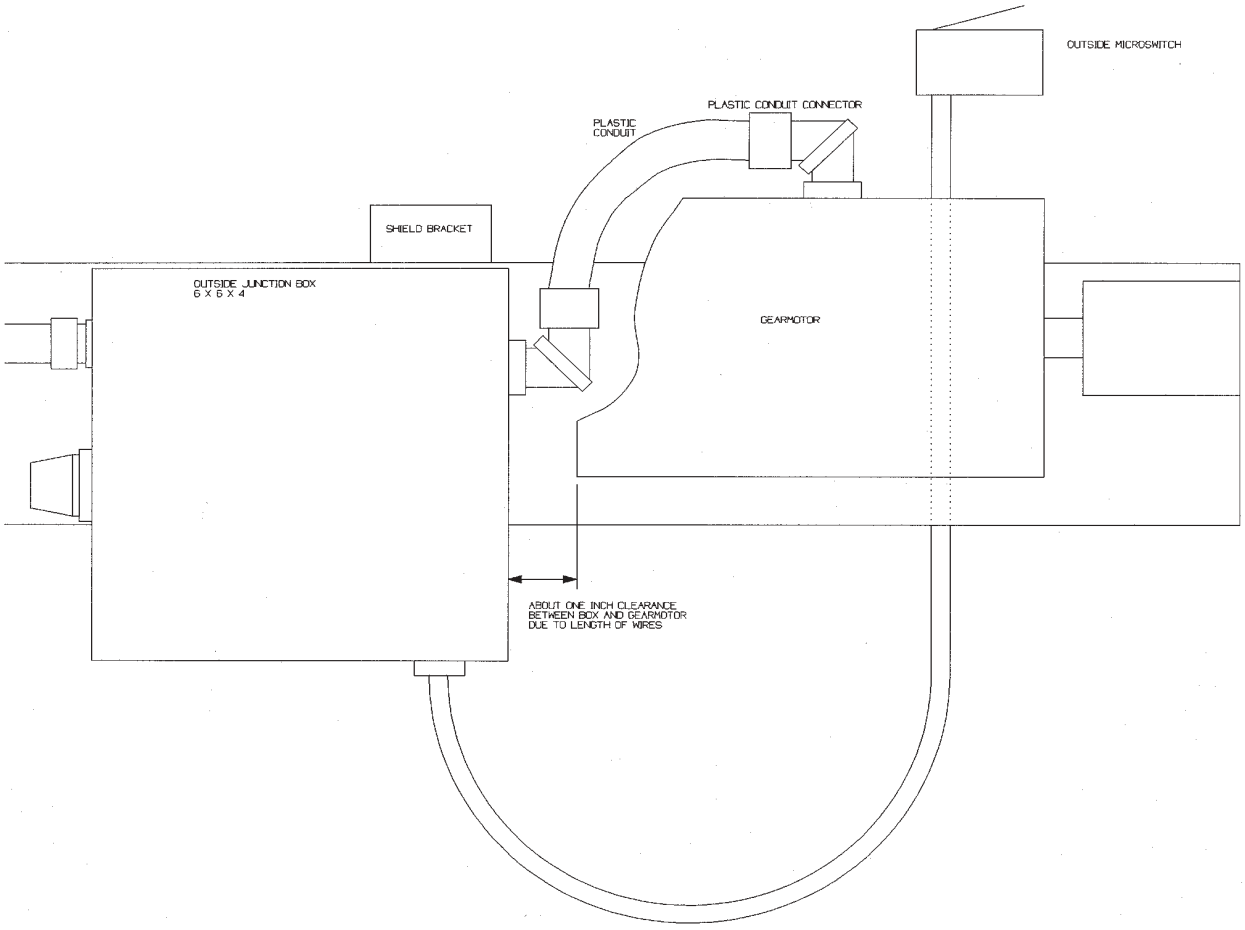


Figure 9-2 Outside Junction Box Location

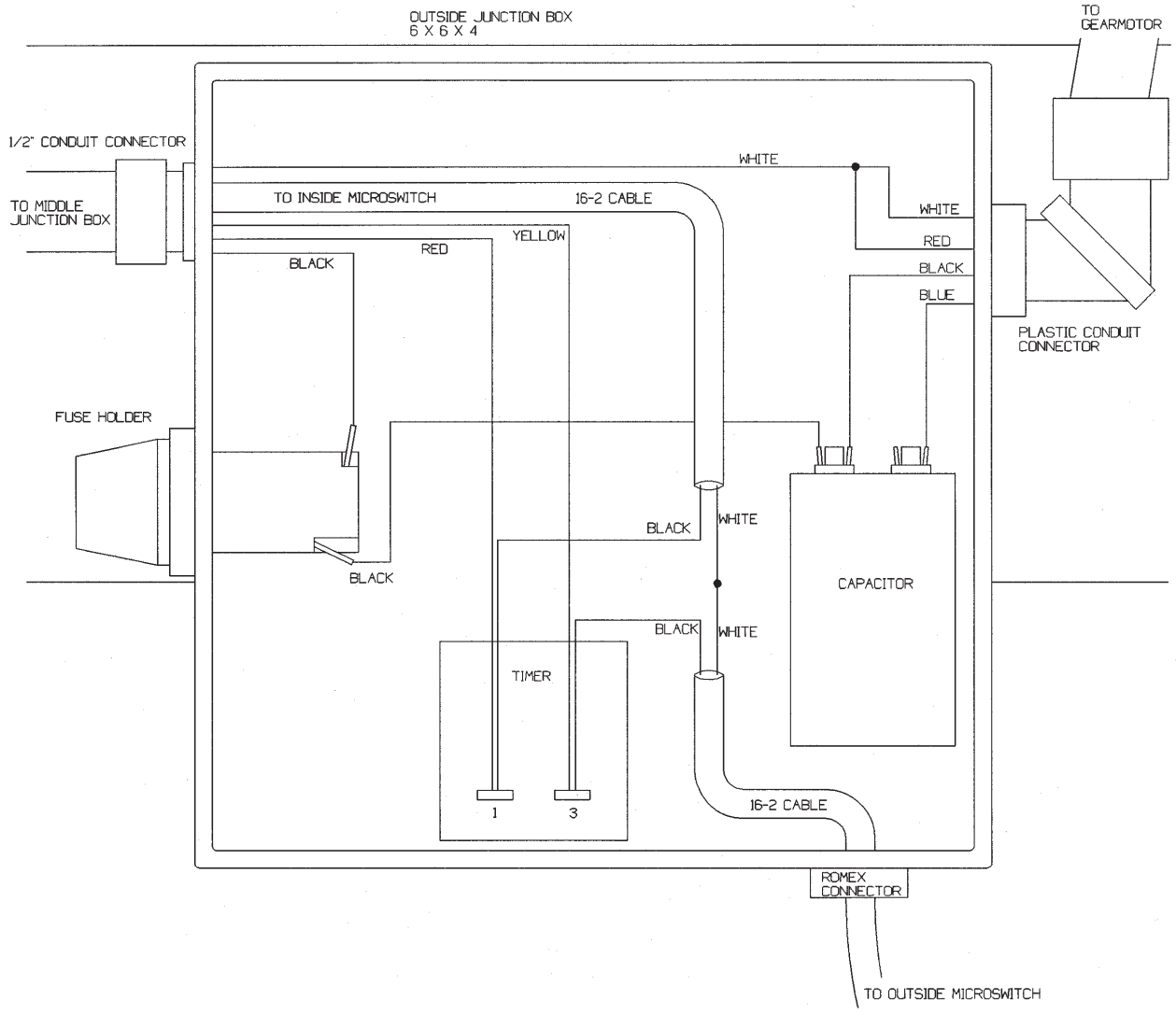


Figure 9-3 Outside Junction Box Wiring Diagram

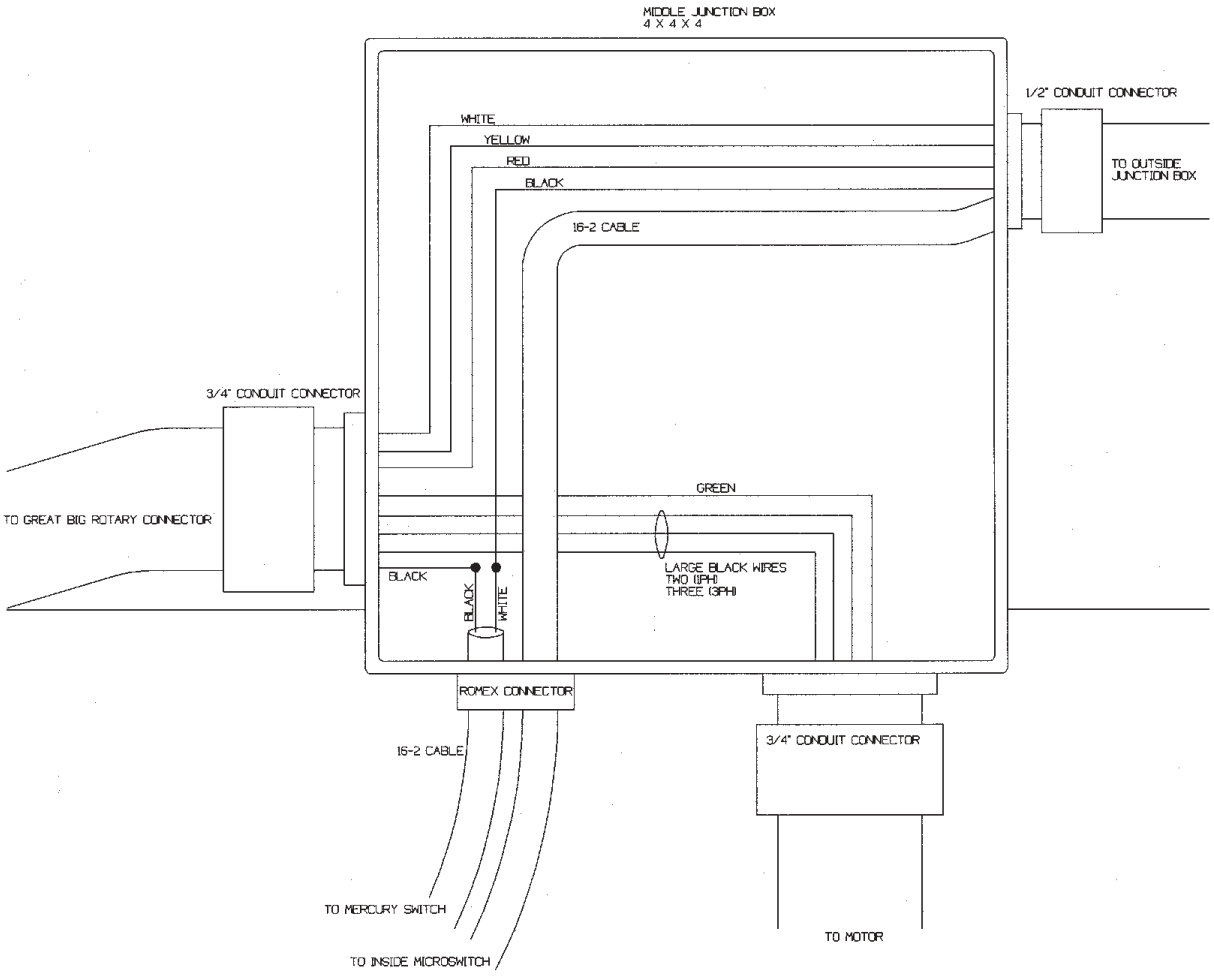


Figure 9-4 Middle Junction Box Wiring Diagram

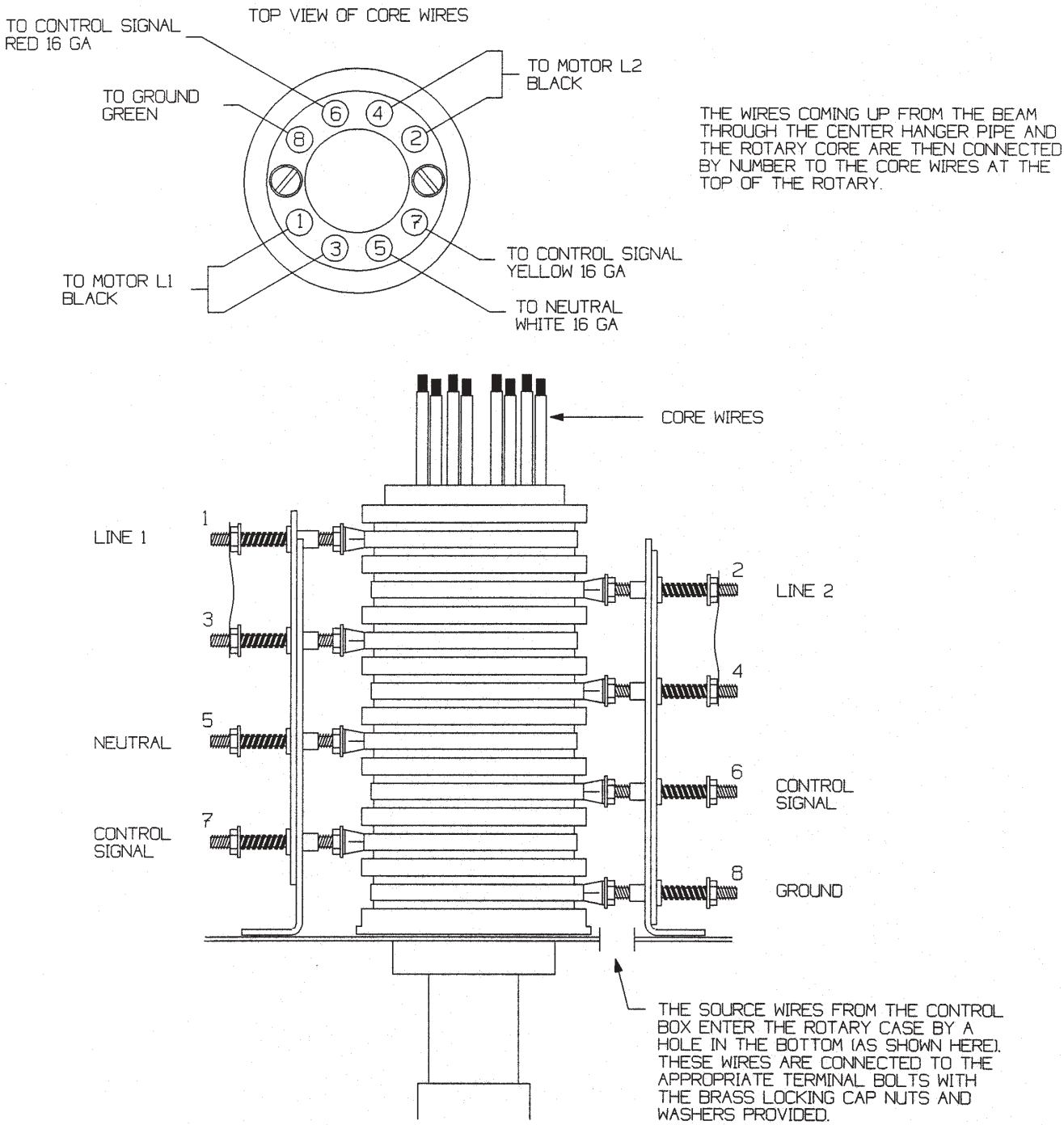


Figure 9-5 230 VAC Single Phase Rotary Wiring Detail

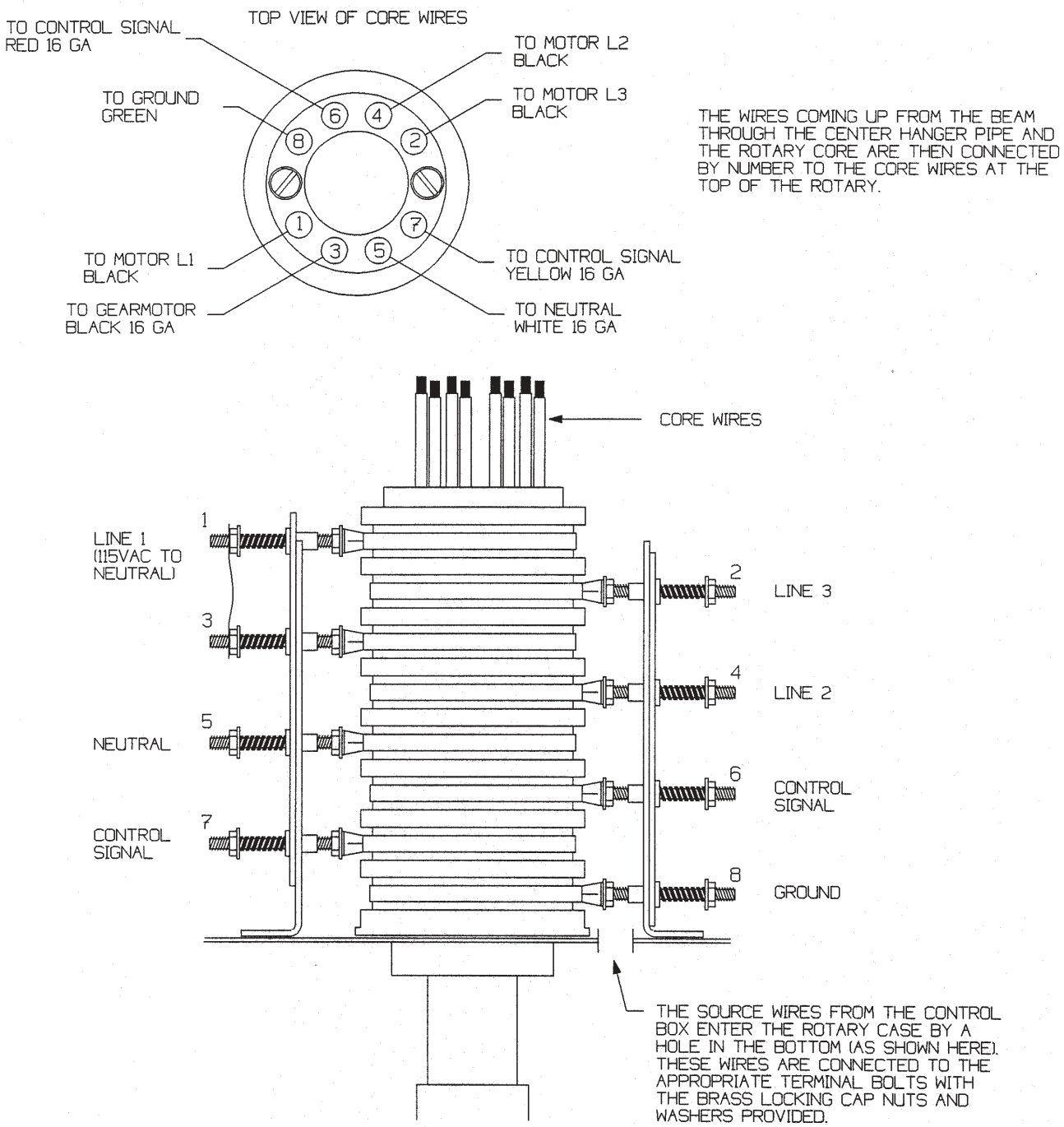


Figure 9-6 230 VAC Three Phase Rotary Wiring Detail

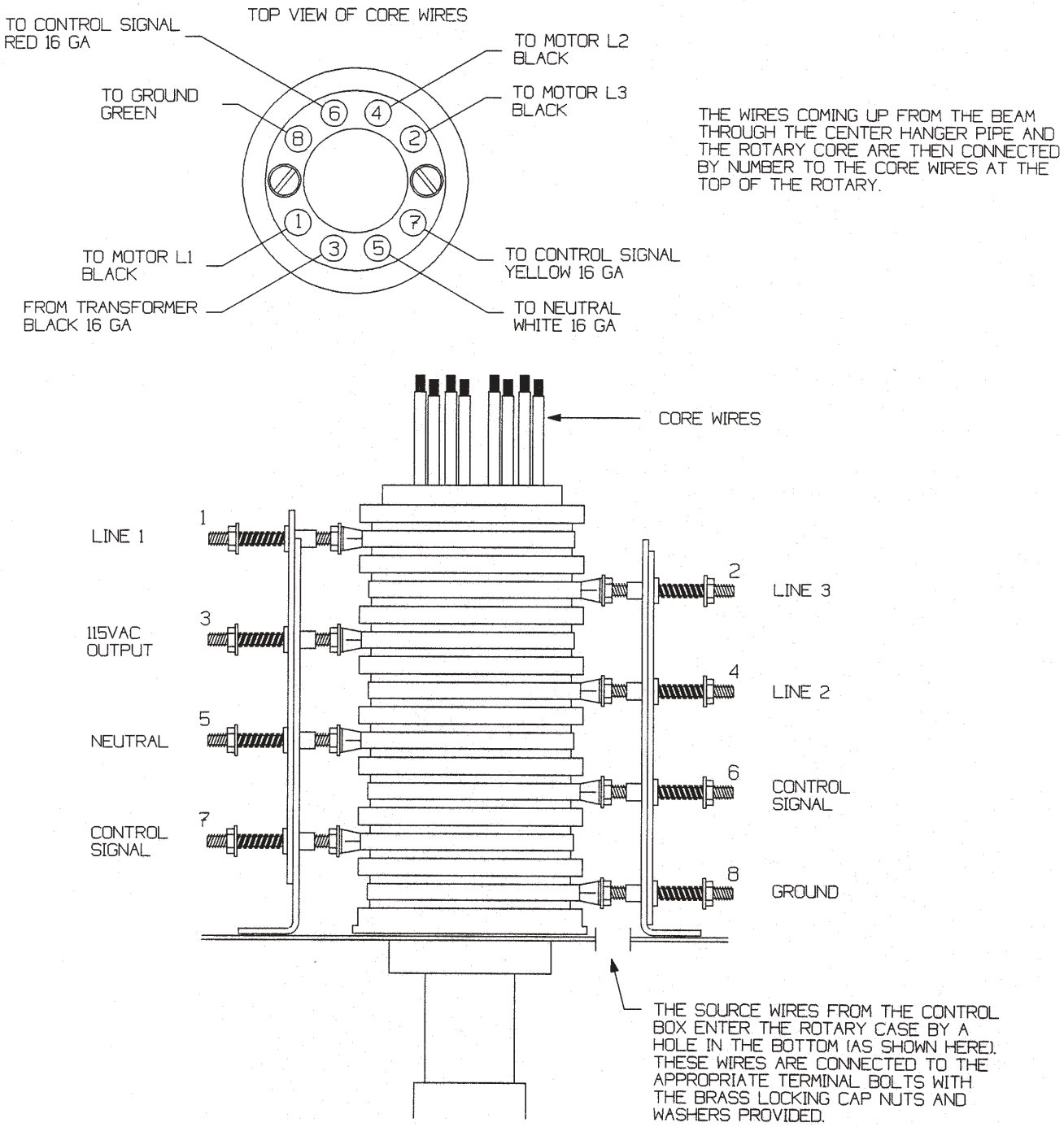


Figure 9-7 460 VAC Three Phase Rotary Wiring Detail

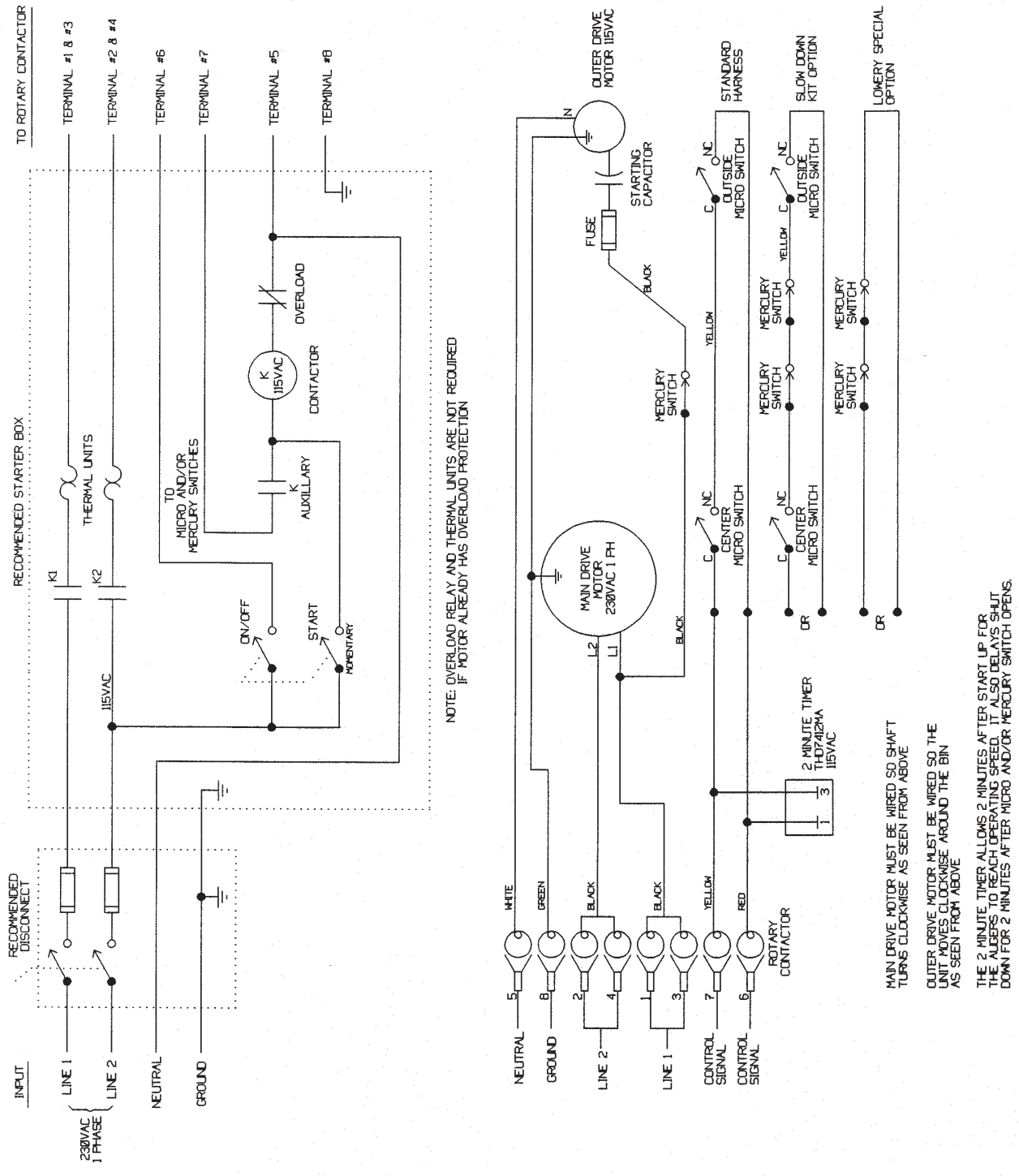


Figure 9-8 230 VAC Single Phase Schematic

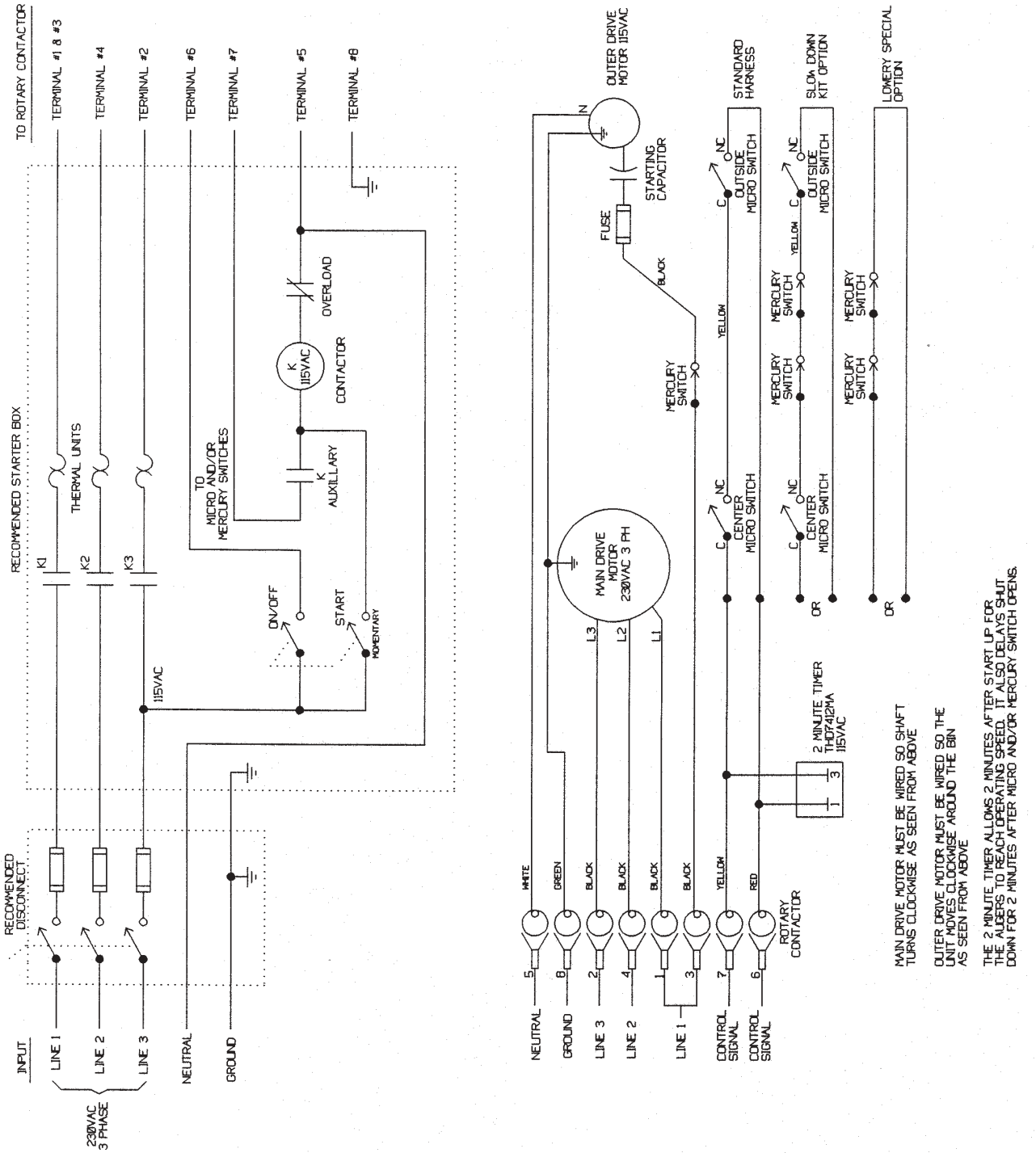


Figure 9-9 230 VAC Three Phase Schematic

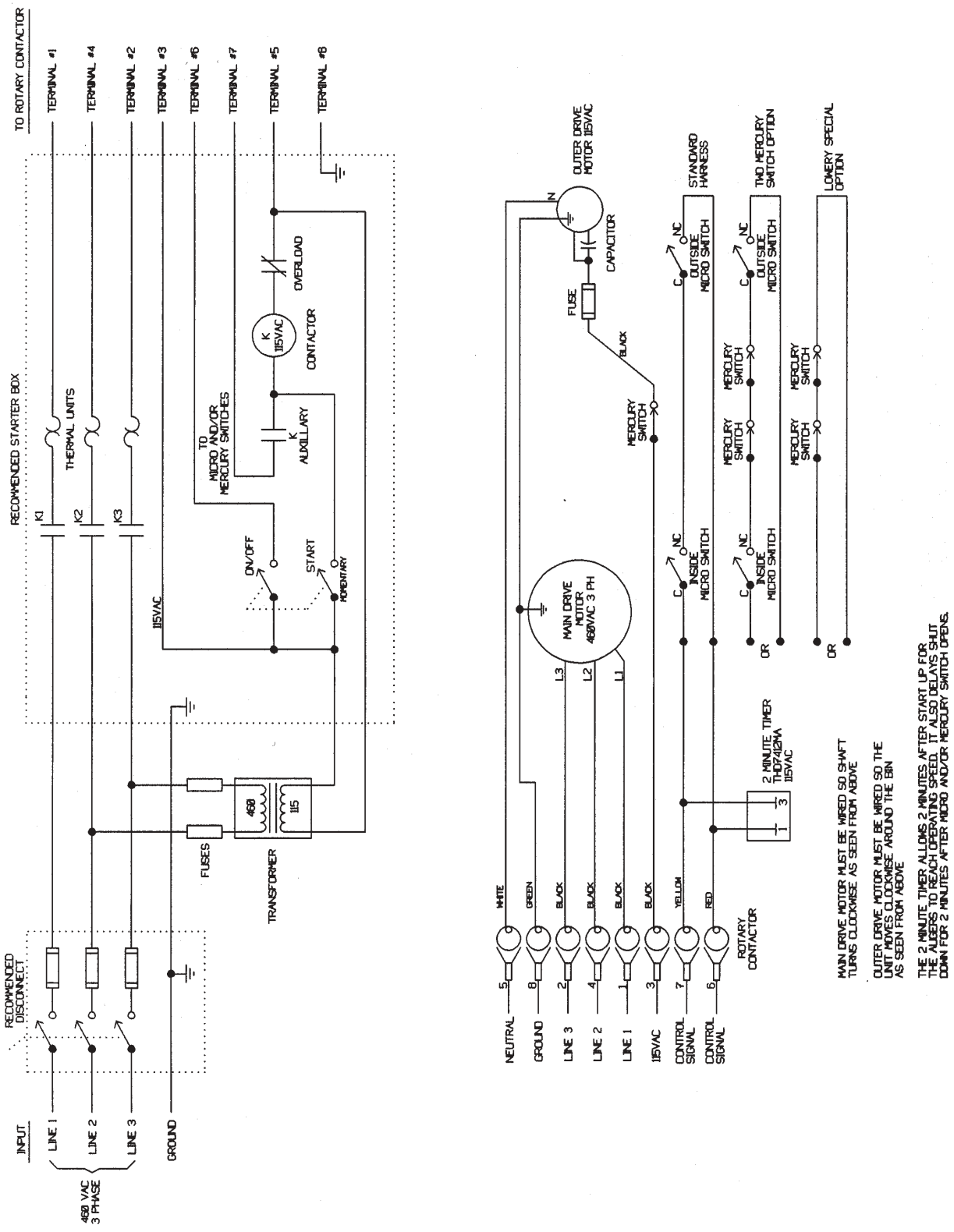


Figure 9-10 460 VAC Three Phase Schematic

Section 10 Shields Installation

1. Refer to the overall beam drawings in Figure 4-6, 4-7 or 4-8 depending on your unit size. Also check the Shield Parts List for shields that pertain to your units' spacing. Some of the shorter units will not use all the shields listed, the drawing will show the shields to be used.

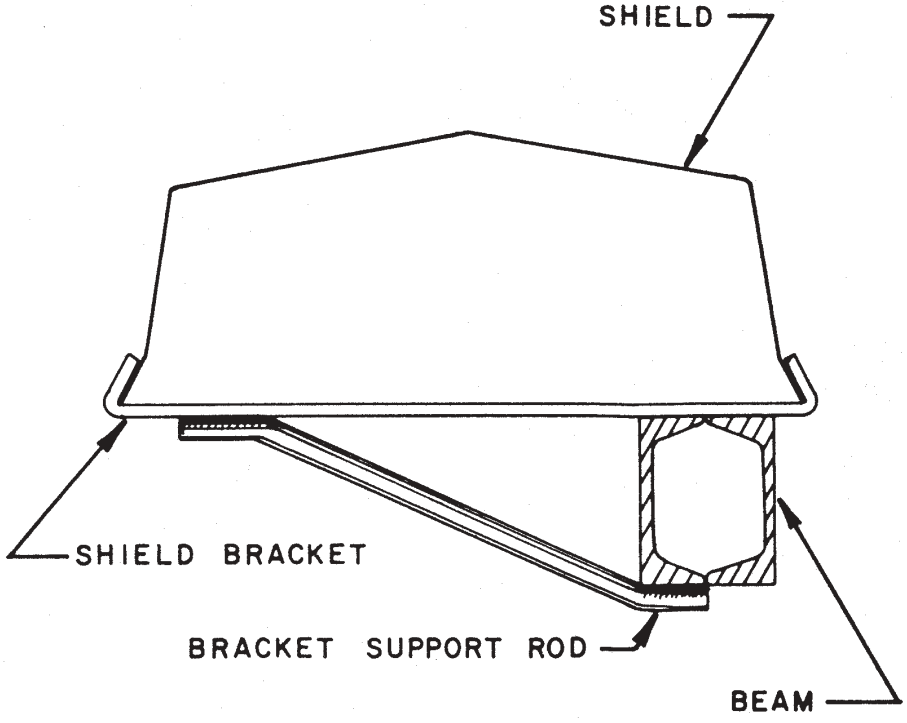
2. The shields will spring fit between the legs of the shield bracket. The shields on either side of the motor are placed on first.

3. Install the shields starting at the Main Motor position and continuing out to the ends of the beam. The shield lap is approximately 2" at the shield bracket, but should be adjusted so that the vertical idler arm swing freely through the notch in the side of the shield.

4. The shield to outer drive side of the Main Motor will have a notch in the top and an adjusting slot with a Dzus Receptacle in it. This notch is to accommodate the capacitor box on the 1 phase motors. Insert the Dzus Stud through the skirt shield, 28-8022, the retaining ring and into the receptacle in the shield beneath. Slide the skirt as close as possible to the capacitor box and tighten down the stud.

5. To install motor shield, place one end of the three springs in each of the holes around shield (as shown in Figure 17.) Then pull the other end down with pliers until the hook can catch under the edge of the motor cap.

6. The Outer Drive and Motor Shield installations are covered in their respective sections.



Section 11 Beam Installation

1. Attach the jack cables to each end of the horizontal beam.

2. Attach a separate rope to the ends of the center hanger chains.

3. After cables are in place, take up the slack in the cables and lift unit slightly, enough to take saw horses out from under it.

4. Now let the unit down to the floor and rest it on its' back so that you can attach the auger nearest the center hanger. The weight of the auger should offset the weight of the motor. If the center auger is not installed while the unit is on the floor, then the weight of the motor could cause the beam to swing upside down during lifting.

5. Clean the top 7 inches of each auger shaft using emery cloth to remove rust, paint and burrs.

6. Install the auger with a $^{1}/_{4}$" x 1-$^{1}/_{2}$" Roll Pin, 3FH0939. Make sure to drive the roll pin into the auger splice so that it is completely flush.

7. The unit can now be raised into position on the track.

   NOTE: The man who is to operate the center hatch jack should take the two chain hangers with necessary hardware and a drill with him when he goes to the roof.

8. Raise both ends of the beam at approximately the same speed to keep the unit level and the weight evenly distributed between the jacks.

Section 12 Auger Installation

1. The remaining vertical augers will be attached to the Auger Splices with $^{1}/_{4}$" x 1-$^{1}/_{2}$" Roll Pins.

   IMPORTANT: A 4" MINIMUM CLEARANCE IS NEEDED BETWEEN THE BOTTOM OF THE VERTICAL AUGERS AND THE FLOOR (or bin sweep if one is installed.) If augers are too long, they can be cut to the proper length with a torch. If possible, cut the auger at a point where the flighting is welded to the auger shaft. If this cannot be done, the flighting must be re-welded to the auger shaft to prevent the flighting from unwrapping under load. The bottom two wraps should be welded on both sides of flighting, 3/4" of weld one each side of shaft. The next four wraps are welded on the bottom of the flighting only, $^{1}/_{2}$" of weld one each side of the shaft.

Section 13 Balancing the Unit

1. For proper operation, all augers should be vertical. To obtain the correct balance loosen the 3/4” x 3” bolt in the center hanger and slide the center hanger bracket in the slot between the arms of the hanger bracket until the augers are vertical. Secure the unit by tightening the 3/4” x 3” bolt.

2. As the bin is filled with grain the augers will tend to pull under the beam so it will be necessary to change the balance point when the bin is full. The balance point can be changed in the following manner while the unit is running.

3. Loosen the 3/4” x 3” bolt and tap the center hanger sideways in the slot between the arms of the hanger bracket.

4. **NEVER MOVE THE CENTER HANGER MORE THAN ONE INCH AT A TIME.** After moving the center hanger, wait 10 to 15 minutes to give the unit a chance to react to the correction.

5. Repeat this process until the augers are running vertically, then tighten the 3/4” x 3” bolt to secure the unit.

Section 14 Stirall UniDriv Precautionary Check List

1. Be sure to consider the check points listed below and follow all starting and running instructions.

2. Your warranty is contingent upon the switch being located near the roof hatch so the unit can be observed while starting and the instruction sticker being placed by the start switch.

WIRING: Be sure the motor shaft turns clockwise as seen from above. The MAIN DRIVE MOTOR must be wired for 230 VOLTS. Be sure outer drive moves the unit clockwise as seen from above. The OUTER DRIVE MOTOR must be wired for 115 VOLTS.

4. Check all set screws on bearing collar to be sure they are tight.

5. Vertical augers must clear the bin floor by a minimum of 4 inches.

Section 14 Stirall UniDriv Precautionary Check List (continued)

6. All obstructions must be removed from the bin so the horizontal beam and auger can rotate freely.

7. Check alignment and tension of all belts and pulleys.

8. Check all nuts and bolts, including those on factory assemblies, to be sure they are tight.

9. NOTE: When the unit is not in use for extended periods of time, disengage idlers to relax belt tension and increase belt life.

NEVER HANDLE BELTS UNLESS POWER IS OFF.

!!Caution!! DO NOT OPERATE UniDriv in an empty bin. To test if powered, make sure no one is inside bin, then turn power "ON" and "OFF" IMMEDIATELY from OUTSIDE of the bin. Do NOT let it run in an empty bin. Take time for proper installation.

Section 15 Operating Instructions

1. Unit may be started with all the augers engaged with ONE RING OF GRAIN IN THE BIN.

2. Always start the unit when one ring of grain is in the bin and ALLOW IT TO RUN DURING REMAINING FILLING AND EMPTYING OPERATIONS.

3. Check to be sure all belts are in place and idlers are engaged.
   A. To engage augers, move idler handle to right.
   B. To disengage augers, move idler handle to left.

4. Start the unit.

NEVER HANDLE BELTS UNLESS POWER IS OFF.

NEVER OVERFILL THE BIN: The top of the grain hill at any given auger should be 3" below the bottom bearing. If the grain level is at or below the bottom of the top ring but the grain level on the center auger is too close to the bottom bearing, you can place a Bow Tie Spreader, 25-3920, on that auger. The Bow Tie Spreader should not have to run in deep corn, it could ruin the bearings on that auger. Also, we do not suggest having to use more than one on a unit.

Section 16 Starting Under Load

1. Be sure all idlers are disengaged and belts are in place on pulleys.

2. Start motor, watching the unit to be sure everything is functioning properly.

3. When the motor and the first auger on each side of it reach full speed (after 5-10 seconds), engage the rest of the idlers one at a time, moving from those nearest the motor outward to the augers on the ends of the beam. All augers should be engaged within two minutes after the motor is started or the outer drive belt should be removed to prevent binding of augers.

4. Always follow steps 1, 2, and 3 when starting the unit under load.

5. If the unit lists more than 3^{o} when running in a full bin, adjust the center hanger balance mechanism until augers run vertical. See SECTION 13 for procedure in balancing the unit.

Section 17 UniDriv Management And Maintenance

The degree of success you enjoy with your UniDriv will depend largely on the way you set up and manage your drying system. The following information has been gathered through extensive field experience and may be helpful to you in avoiding problems with your system.

Provide Adequate Roof Openings

As a rule of thumb, we suggest a minimum of four side hatch openings plus the center roof opening in all bins. (This may vary due to size of hatches and amount of opening at the eaves.) In bins of 24-foot diameter and larger even more roof openings should be provided. Consult your salesperson for the proper amount of roof opening based on bin size, fan and heater size and the use of a UniDriv in your system. Having too few roof openings allows the hot moist air to circulate inside the bin before it can get out. This circulation brings the air in contact with the cool metal of the bin wall and bin roof causing condensation of moisture back into the grain and reducing drying efficiency. Having an increased number of roof openings will allow air to escape without increasing static pressure.

Cool The Grain Adequately Before Shutting Down Your Drying System

When the grain has reached the desired moisture content, the fan and stirring device should be allowed to run with the heat off until the grain mass has cooled to the outside air temperature. This is critical, because if the system is shut off without cooling the grain, this warm moist air will come in contact with the bin wall causing condensation in cool weather, producing the condition generally known as bin-wall moisture. Three checks can be made to determine whether the grain has been adequately cooled. The first is to look at the inside of the exposed areas of the bin roof and sidewalls. When the grain has been cooled adequately no condensation will appear on the roof or sidewalls.

The second check is to reach down into the grain piles near the UniDriv augers as it is moving around the bin. This grain, which is being brought up from lower levels in the bin, should feel just as cool as the outside air.

The third check is to probe down along the bin wall to determine that no hard spots exist. If all three of these checks give satisfactory results, it is safe to shut the unit down.

Note that if drying is done in warm weather it may be necessary to go through another cooling period when the temperature drops. For example, if the drying cycle occurs in 50 degree weather and the grain is cooled to 50 degrees and then the unit is shut down, the air in the grain mass will also be at 50 degrees. Then if the temperature drops to 20 degrees there again exists a condition of warm air in the bin compared with cool air outside the bin which can cause condensation on the inside of the bin wall. If such a condition of significant temperature change occurs, it will be wise to run the fan and UniDriv to cool the grain to the ambient temperature. It should be noted that bin-wall moisture generally occurs after the drying cycle is completed and is not a result of inadequate stirring with the UniDriv.

Section 17 UniDriv Management And Maintenance (continued)

The symptoms of bin-wall moisture caused by inadequate cooling of the grain are that the moisture will occur from approximately one ring below the top surface of the grain to approximately one ring above the drying floor. Moisture will not occur in the top ring or the bottom ring of the grain mass. The UniDriv, having multiple augers which stir the entire radius of the bin at one time, maintains an auger at the bin wall at all times, providing an even flow of air across the bin, which insures against the occurrence of bin wall moisture in a properly managed drying cycle.

Drying Wet Grain – 30 Percent Or More
Dry one ring of grain with air and heat only, NO STIRRING. Then follow normal filling and drying procedures.

Batch And Layer Drying
The charts published in Specialized Products literature are based upon batch drying techniques and show a daily fill, daily drying rate. It should be noted that in batch drying with batches of from 10 to 12 foot depths, high temperatures could be used to obtain fast drying rates. However, in layer drying as additional layers of grain are added the temperature should be reduced and more time allowed for the drying process.

If excessive condensation occurs on the bin roof and sidewalls during the drying process, too much heat is probably being applied. Thus, reducing the heat and extending the drying time will increase the drying efficiency in a layer-drying situation.

Maintain The Unit
Prior to operating the unit each year make a thorough inspection of bearings, belts, idler pulleys, motors, outer drive train and electrical system to insure that the unit is in good running condition. In particular, be sure to check the roll pin, which holds the outer drive assembly on the horizontal beam. Preventive maintenance done before the season can prevent costly time loss during harvest.

During the season make periodic inspections of belts, bearings, and idler pulleys and check for proper belt alignment. Grease zerks once a week. If belts show signs of wear such as fraying or cracking, replace them to prevent a breakdown while the unit is unattended. It is good practice to keep a few extra belts and bearings on hand in case of a breakdown during the season.

IMPORTANT:
THE UNIDRIV SHOULD **NEVER BE COVERED** OVER WITH GRAIN UNDER ANY CIRCUMSTANCE – even for storage only, as it may pull in the bin walls when you empty the grain.

With proper management, your UniDriv can give you years of dependable drying service. Utilize the information given in this management section of the instructions and you can minimize the problems and maximize the efficiency of your overall drying system.

Section 18 Performance Characteristics Of The UniDriv

The UniDriv consists of multiple vertical augers evenly spaced across the radius of the bin at fixed distances. It travels clockwise around the bin with the augers producing a concentric pattern in the grain. This unalterable concentric pattern is advantageous because it produces even air flow across the radius of the bin while maintaining one auger in close proximity to the bin wall at all times. Also, the augers cannot work their way around any hard spots and must travel through them, thereby breaking them up and loosening grain. By traveling together in a concentric pattern, the augers also produce a very desirable leveling affect on the grain mass. This is most noticeable in filling and emptying the bin when high spots or coning may occur. Running the UniDriv during emptying will allow much more grain to be removed from the bin before it is necessary to use a bin sweep.

University of Illinois studies indicate, and field experience proves that a vertical auger will stir a 15-inch radius and thereby provide stirring between the augers of the UniDriv. This can be demonstrated both by probing behind the UniDriv as it goes around the bin and by taking moisture samples from grain across the entire UniDriv stirring pattern. Probing will reveal that the grain is loose all the way across the pattern and moisture readings will show less than one point variance across the radius of the bin in a properly managed drying system.

One of the most important features of the UniDriv is the stability of its running characteristics. Once the unit is balanced, the running conditions do not change significantly. Specifically, the augers do not drag back and catch up, starting and stopping the outer drive motor as they go. Once the augers are vertical they will remain vertical and run smoothly throughout the cycle. This greatly reduces wear and tear on all components of the unit increasing their life expectancy and eliminating irregularity in the stirring pattern.

The value of the performance characteristics discussed here will become more apparent to you as you become involved with the UniDriv in your drying system.

Parts Section

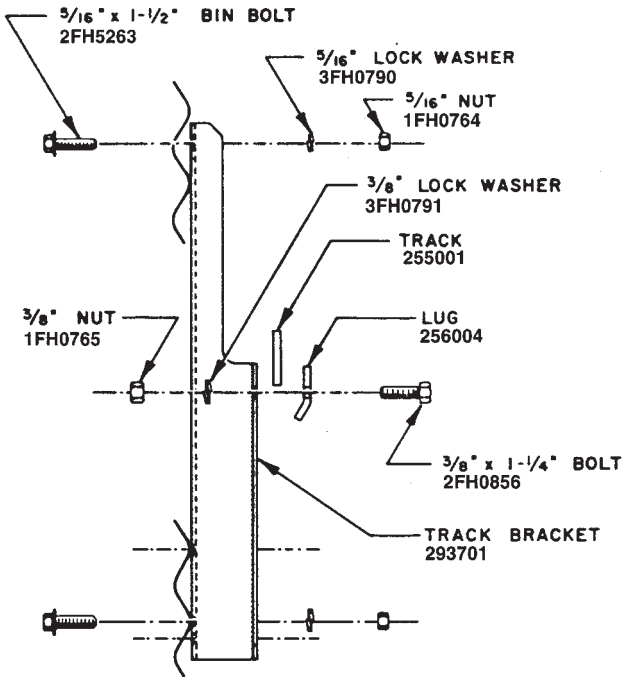


Figure 1 - Track Bracket Assembly

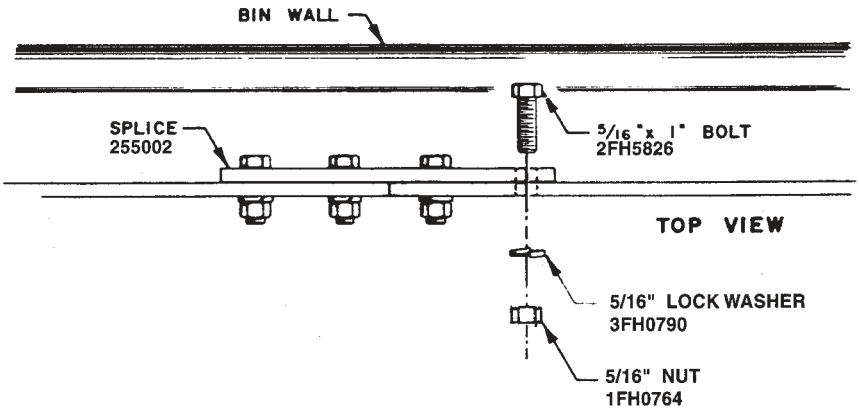
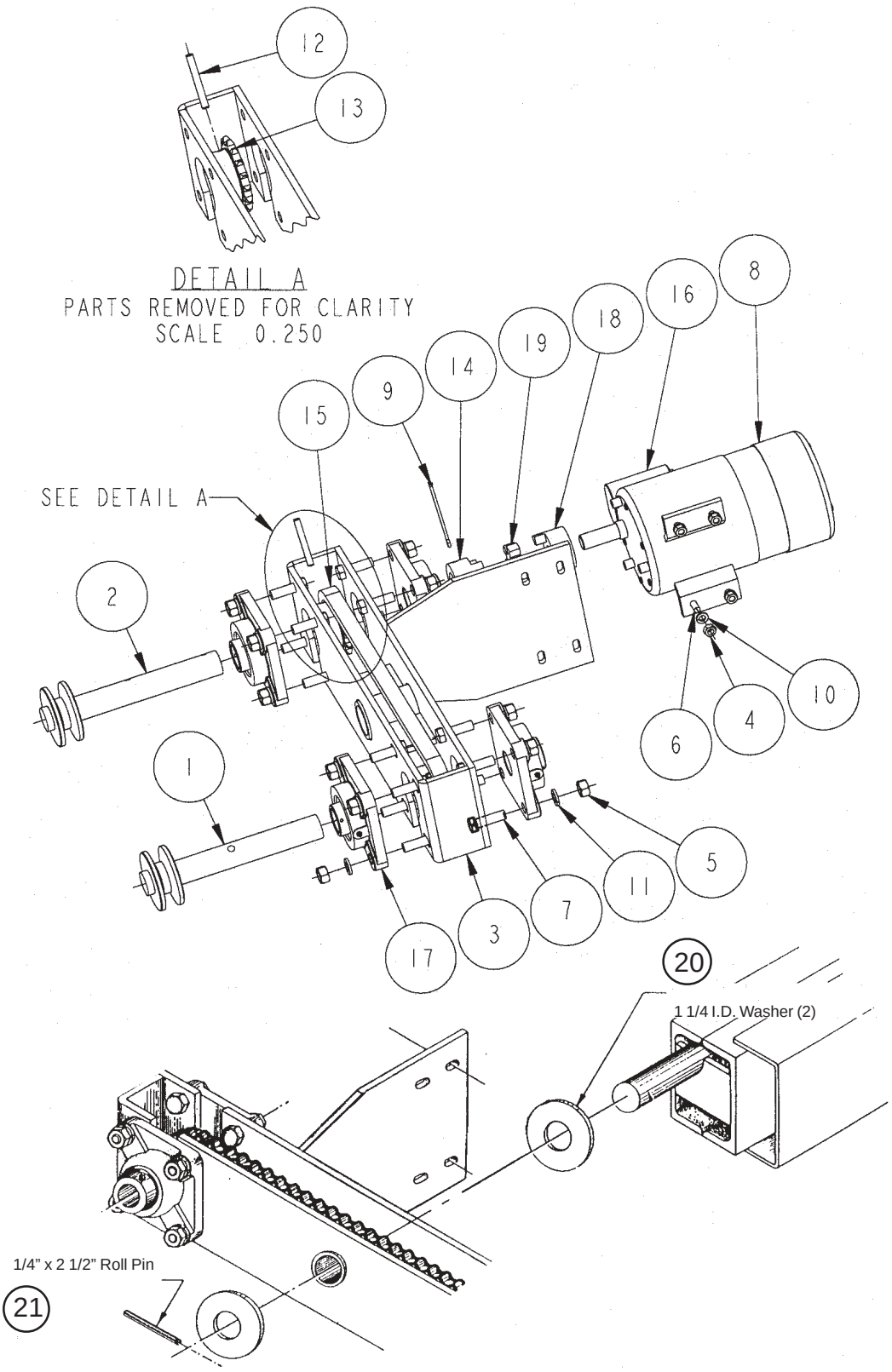


Figure 2 - Track Splice Assembly

Figure 3 - Frame Outer Drive Assembly (Short)



Outer Drive Parts List

Ref. Number	Part Number	Item
1	251008	Shaft-driven Weldment
2	251009	Shaft-driven Weldment
3	284018	Frame-Outer Drive Weldment
4	1FH0763	Nut-Hex 1/4" - 20
5	1FH0765	Nut-Hex 3/8" - 16
6	2FH0803	Bolt-Hex 1/4" x 3/4" GRD 2
7	2FH0856	Bolt-Hex 3/8" x 1 1/4"
8	3EL4020	Gearmotor 1/20 HP 1 PH 120 VAC
9	3FH0735	Pin-Cotter 3/16" x 2 1/2"
10	3FH0789	Washer Lock 1/4"
11	3FH0791	Washer Lock 3/8"
12	3FH0898	Pin-Spring 1/4" x 2"
13	CP1300	Sprocket-SP 16T 1" ID #40
14	CP1601	Coupler-Half 1" ID
15	CP1205S	Chain-Drive, #40, 33 1/4"
16	CP2013C	Gearmotor - Capacitor
17	PT0139	Bearing-w/ Housing 1"
18	PT0935	Coupler-Half 5/8"
19	PT0937	Coupler-Insert, Plastic
20	3FH0958	Washer- 1 1/4", SAE, Flat
21	3FH0889	Pin-Spring, 1/4" x 2 1/2"

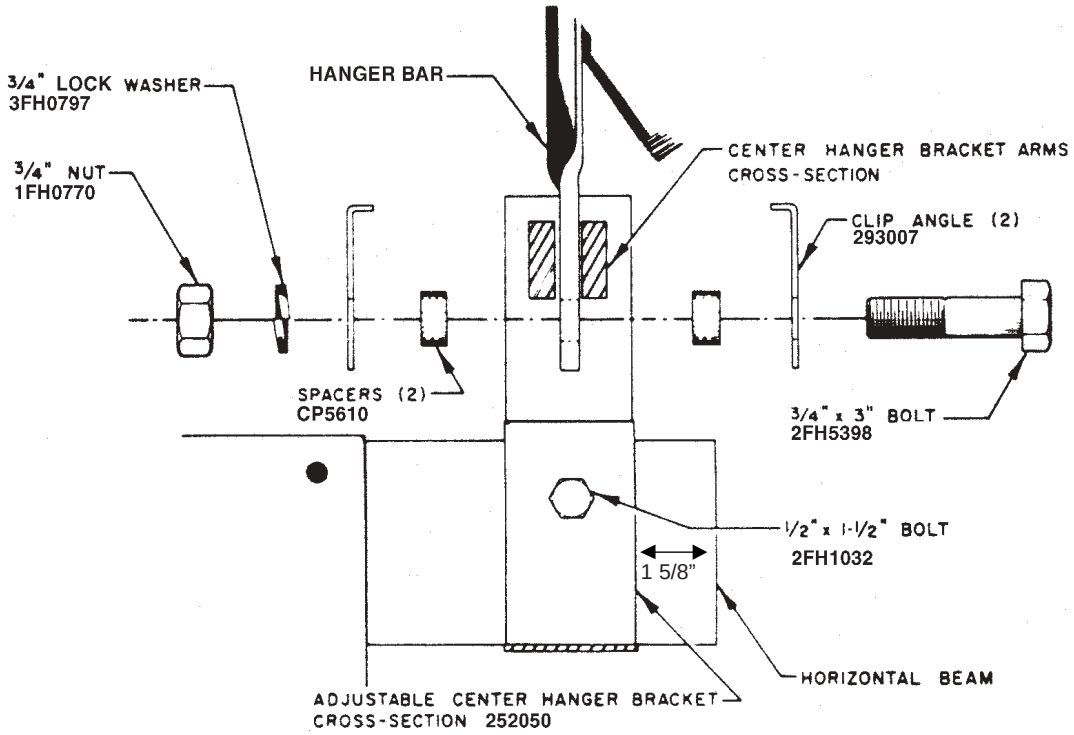


Figure 3-1 Center Hanger to Bracket Detail

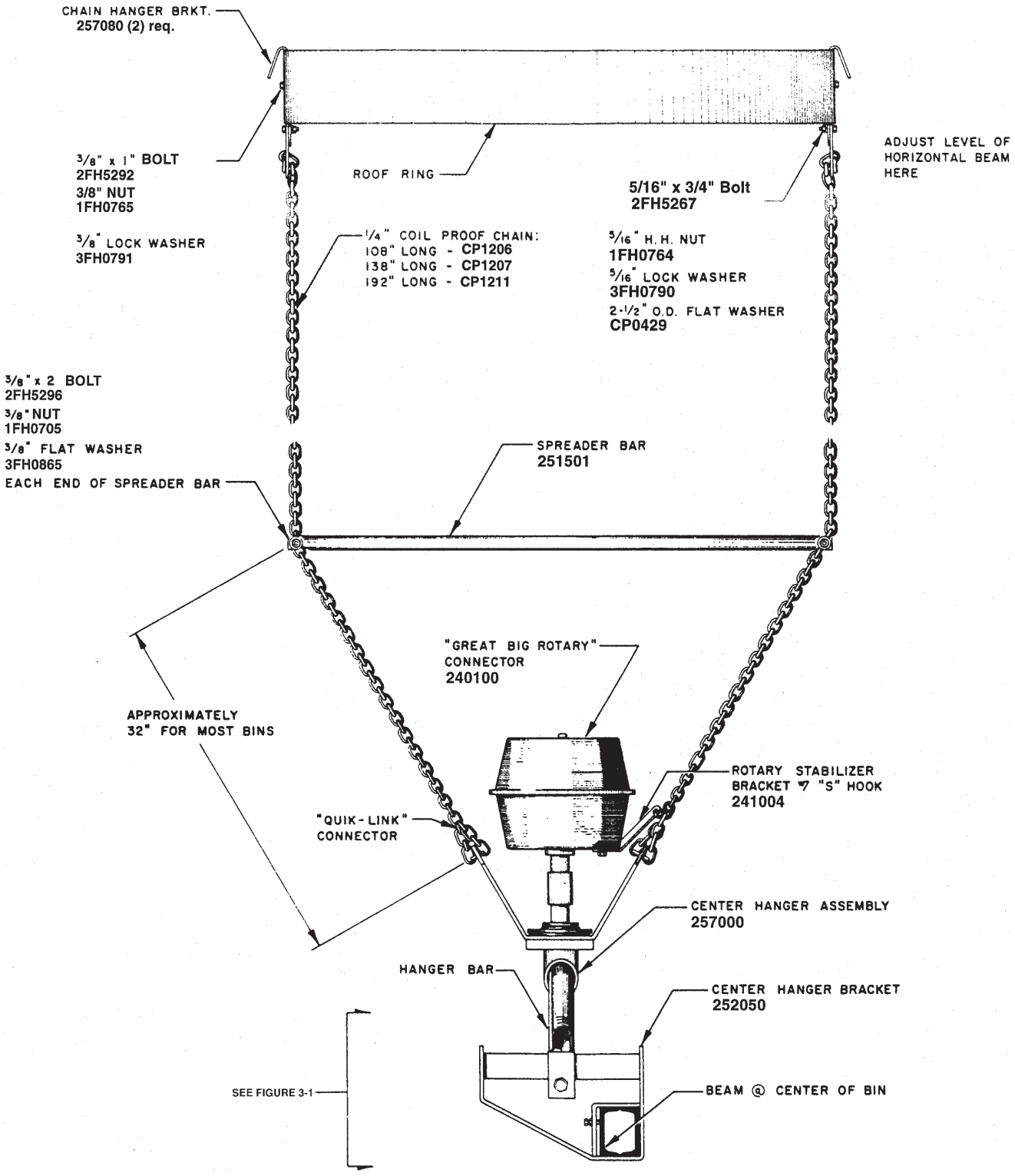


Figure 3-2 Center Hanger and Chain Assembly

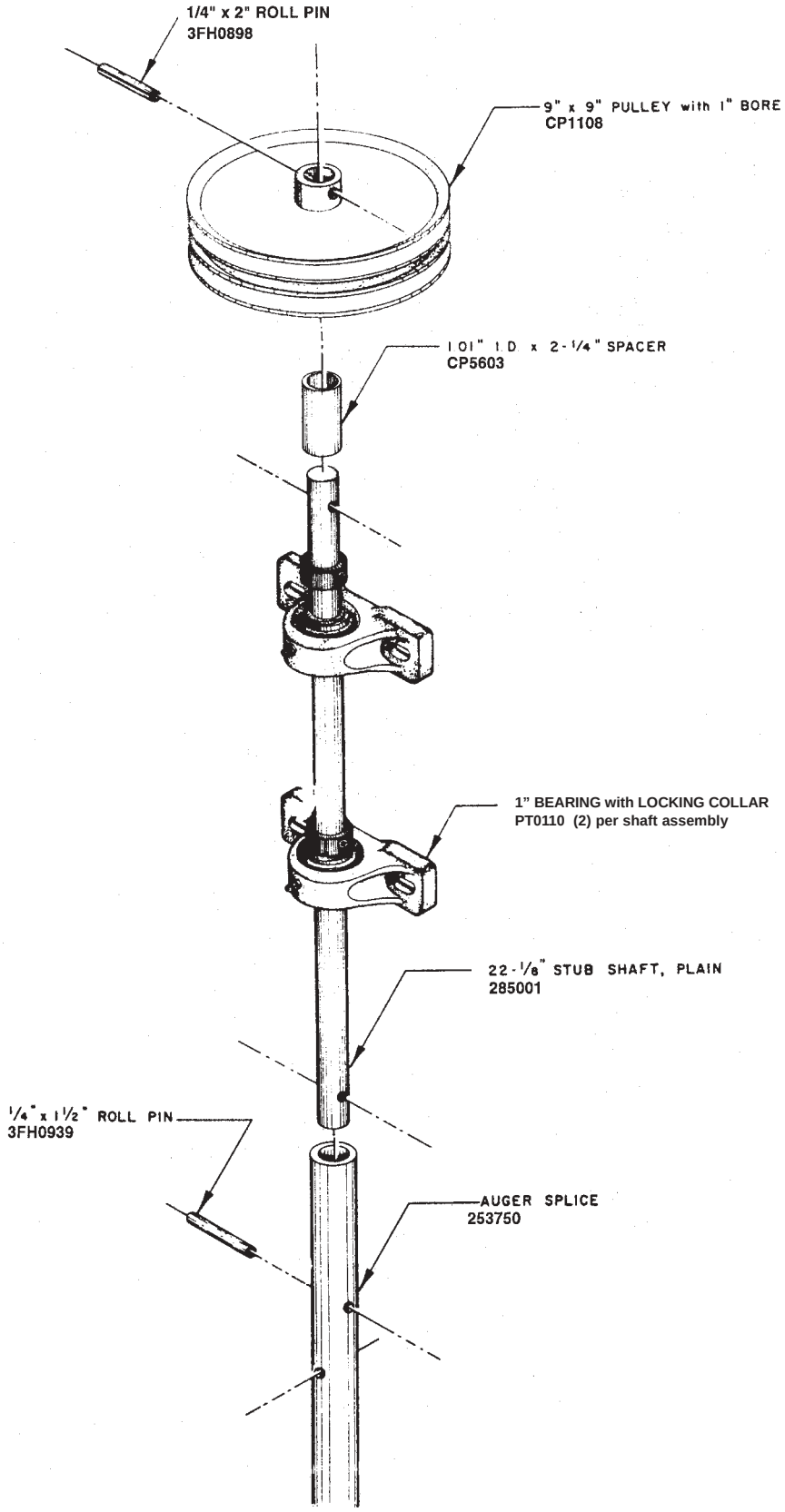


Figure 4-1 Stub Auger Assembly No. 1 (280001)

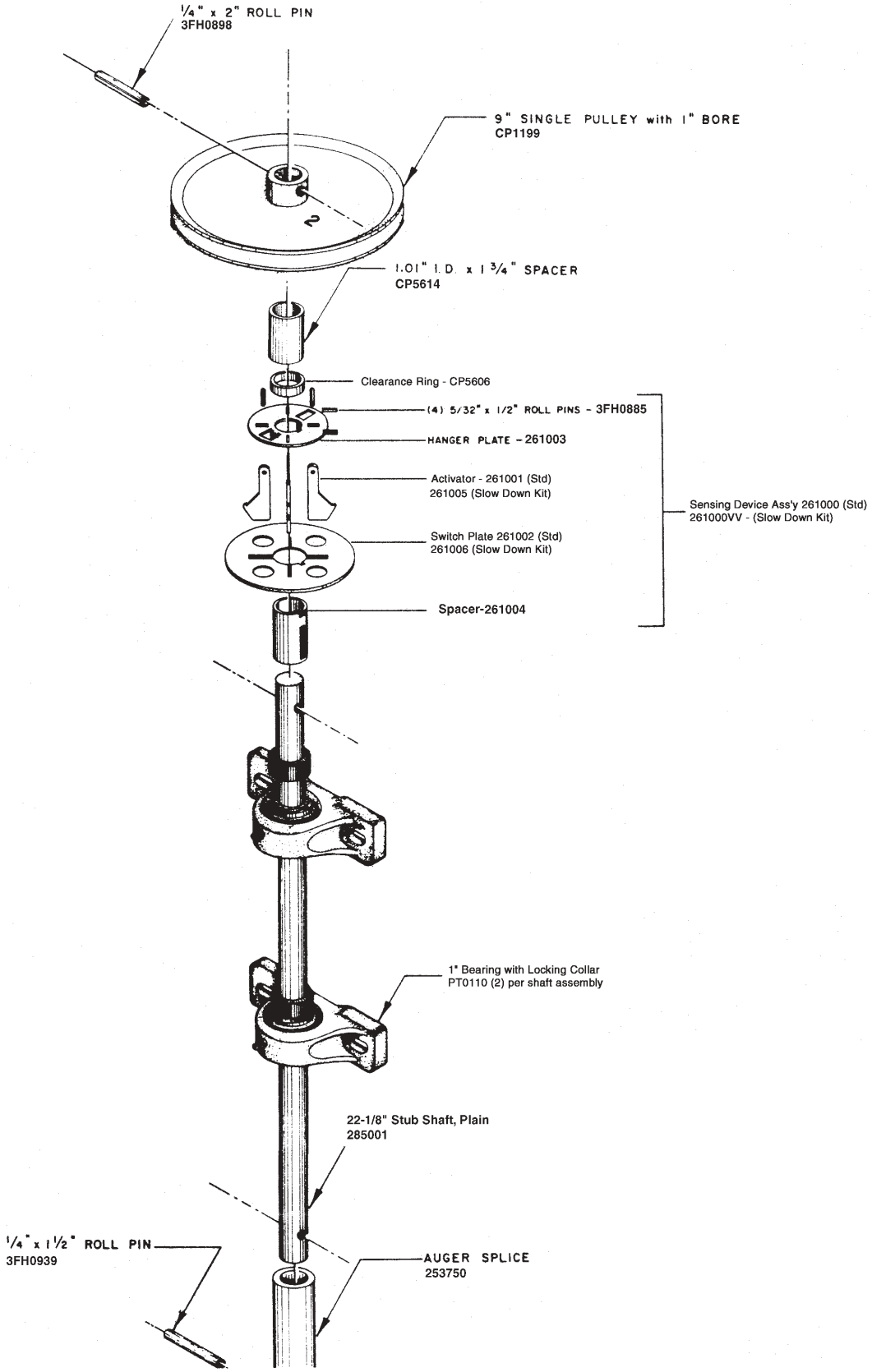


Figure 4-2 Stub Auger Assembly No. 2 (280002)

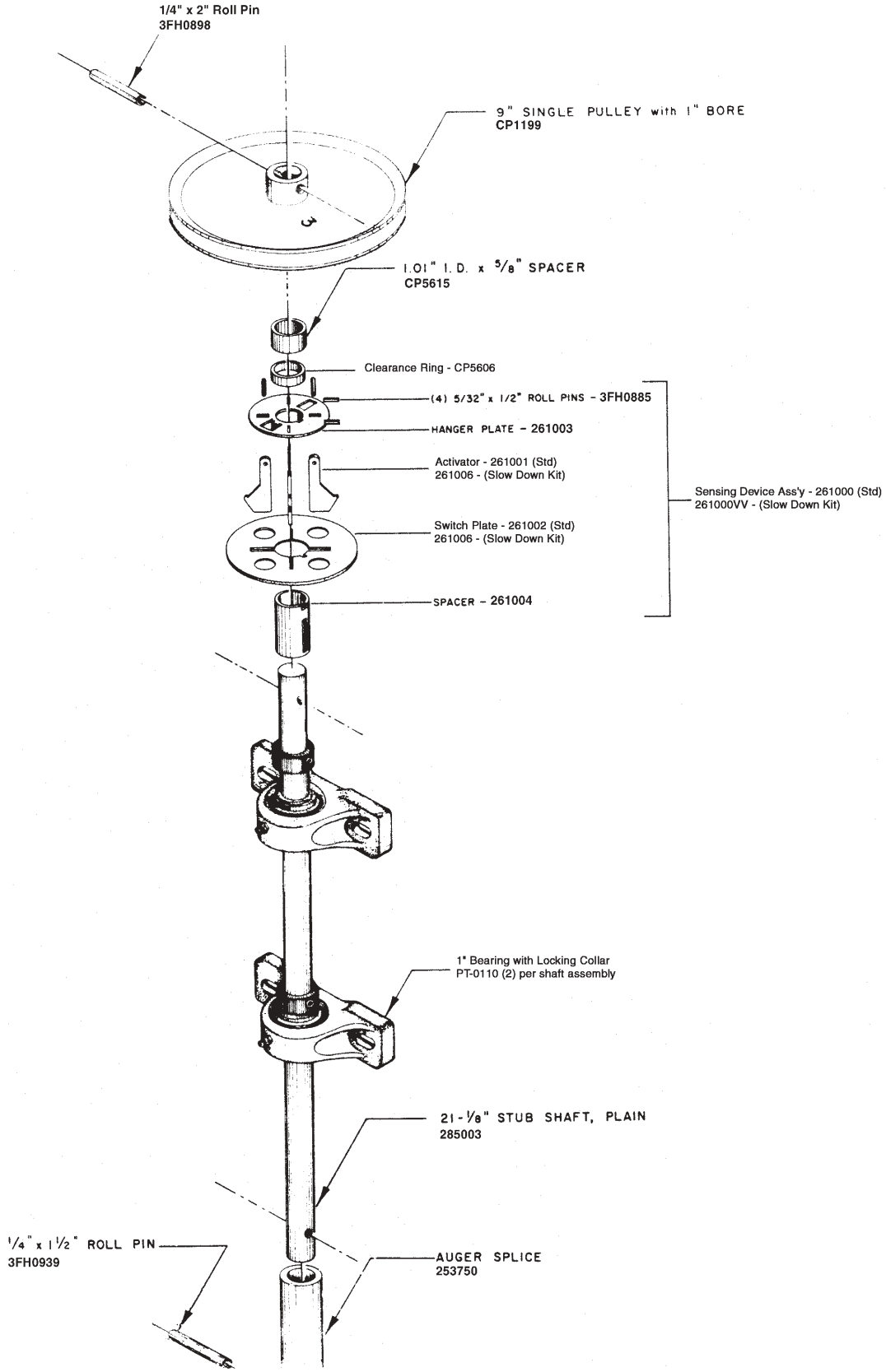


Figure 4-3 Stub Auger Assembly No. 3 (280003)

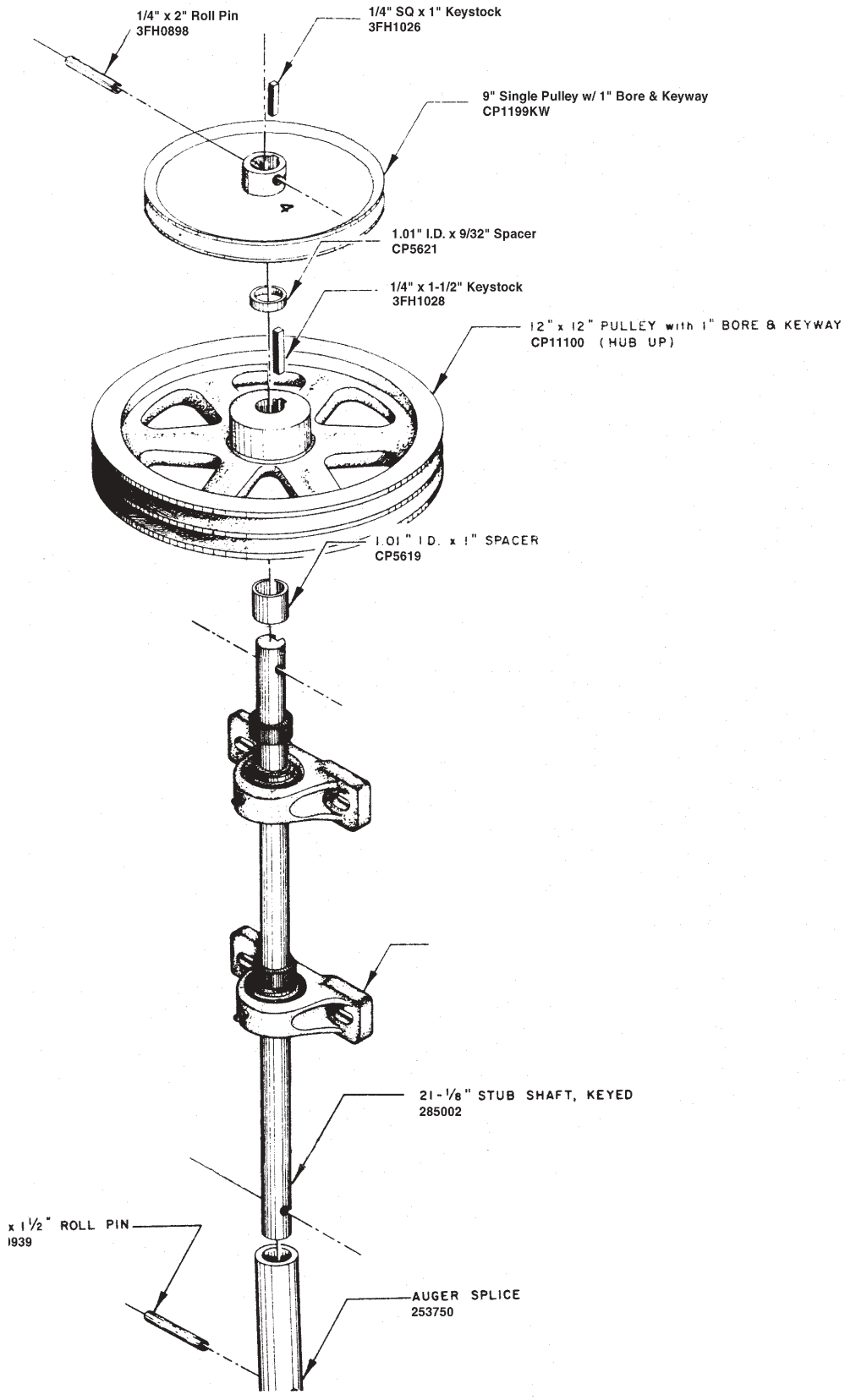


Figure 4-4 Stub Auger Assembly No. 4 (280004)

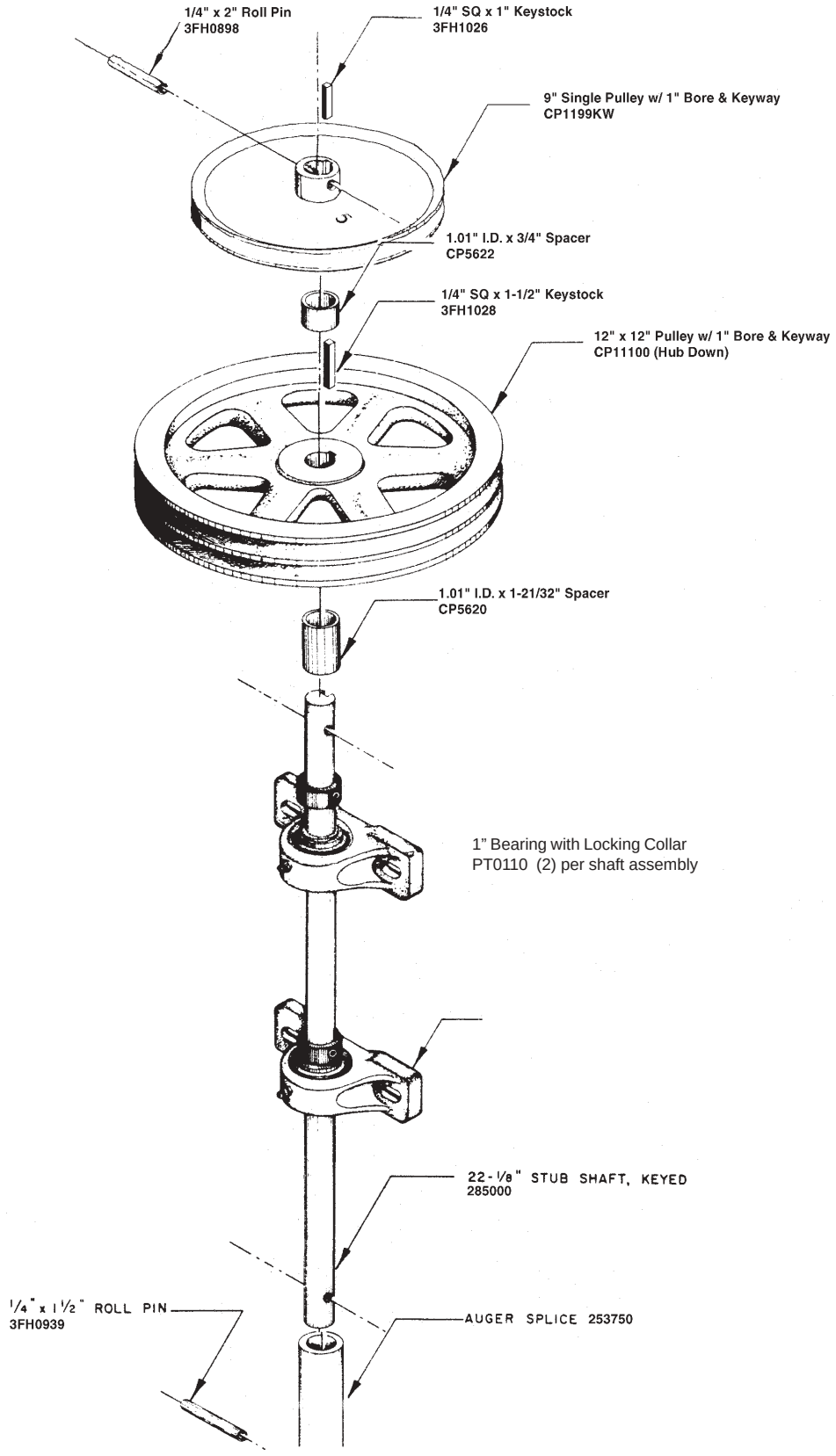


Figure 4-5 Stub Auger Assembly No. 5 (280005)

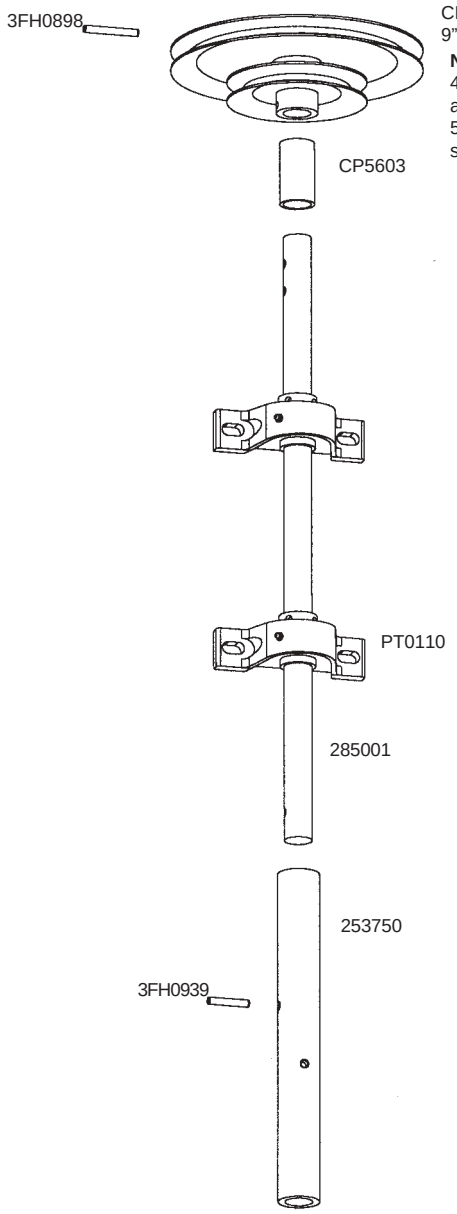
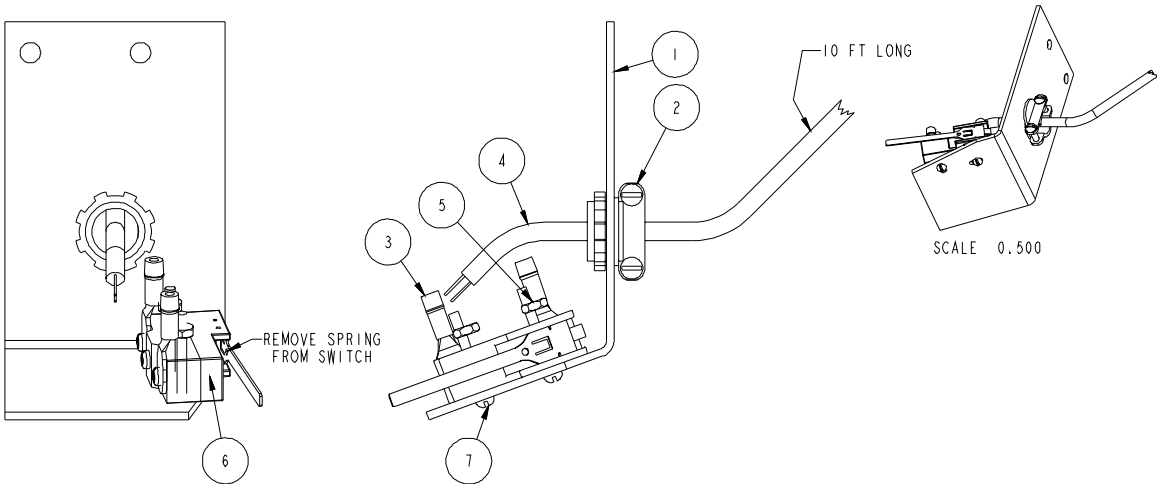


Figure 4-5 Stub Auger Assembly used with Slow Down Kit - No. 6 (280006)



Bracket - Sensing Device Assembly - (286010)

Ref. Number	Part Number	Item	Qty
1	286000	Bracket Sensing Device	1
2	1EL0401	Connector - Romex	1
3	1EL0547	Terminal Ring Tongue	2
4	1EL2953	Cord - Type SJ, (W4626)	1
5	1FH0777	Nut - Machine Screw	2
6	2EL0348	Switch - Basic	1
7	2FH0700	Screw - Mach, Rd, Sltd, HD	2

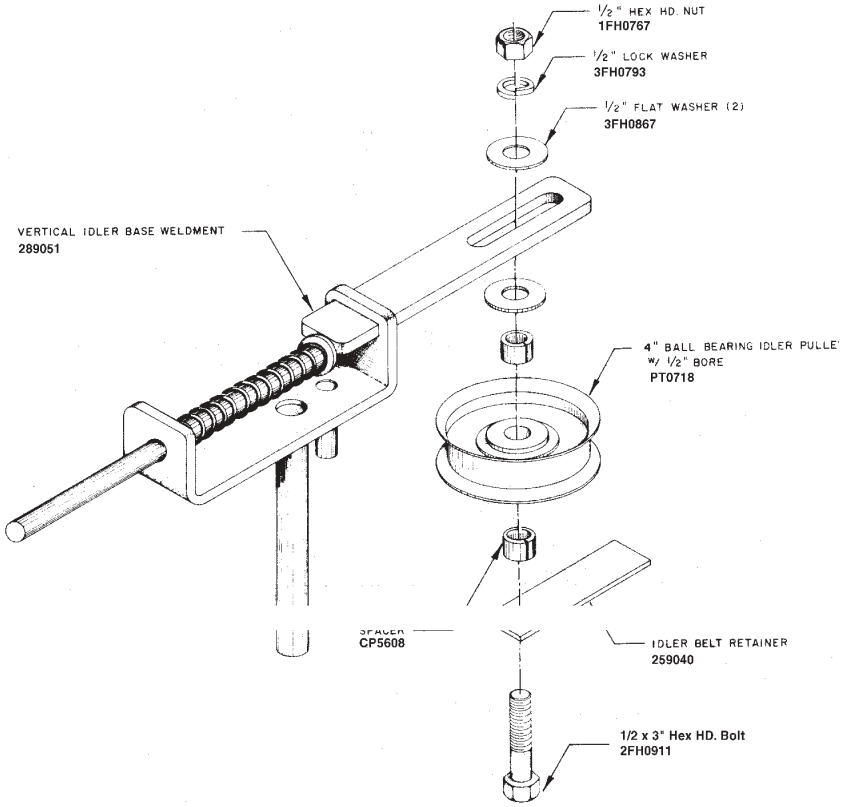


Figure 6-1 Vertical Idler Arm with Pulley Down (289020)

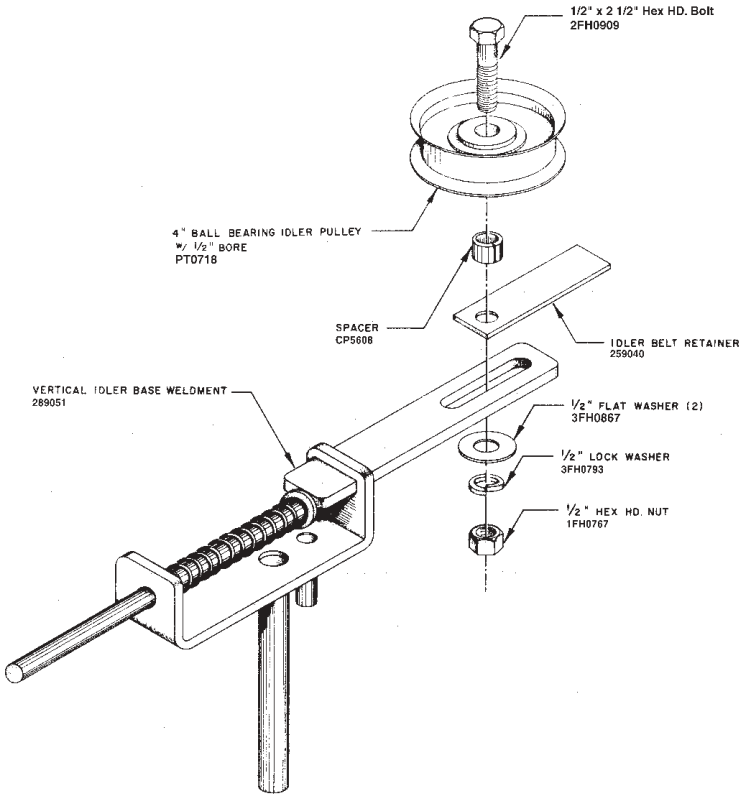
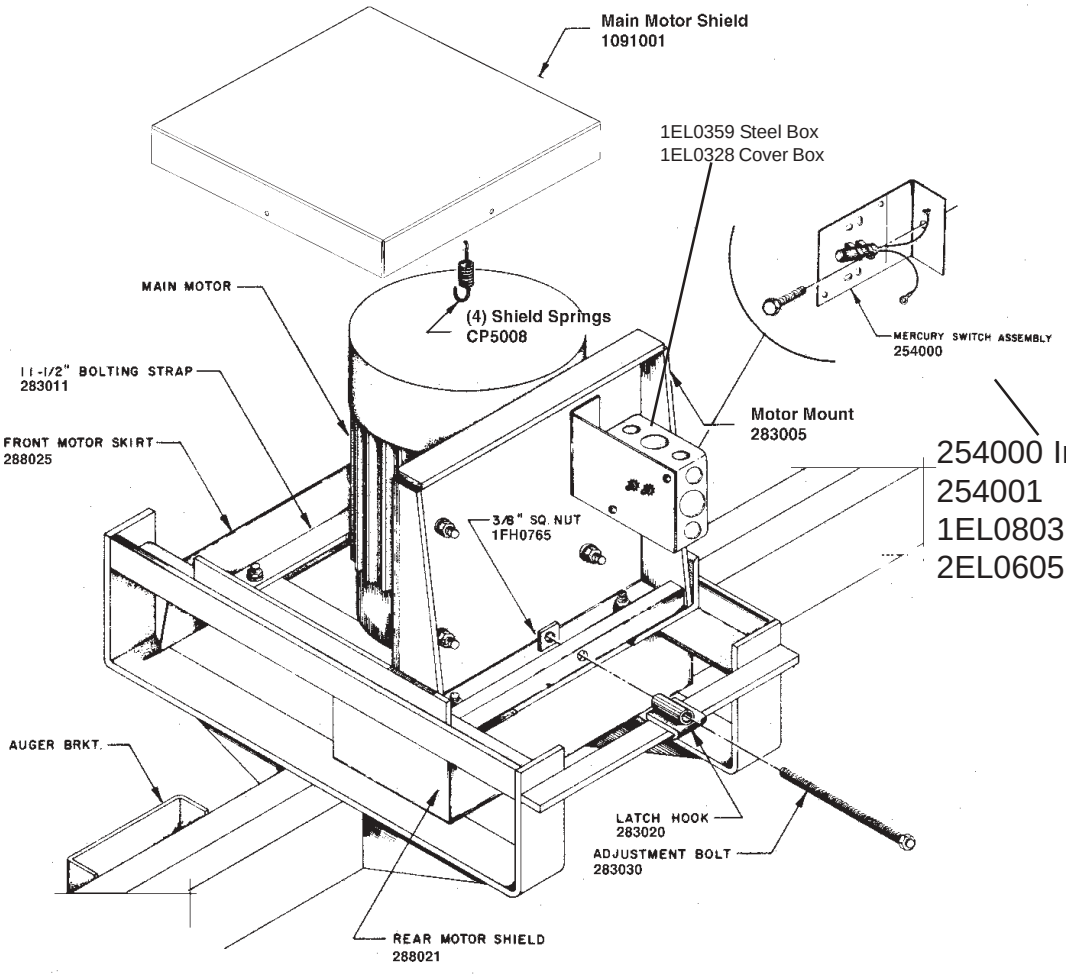


Figure 6-2 Vertical Idler Arm with Pulley Up (289021)



Not Shown:

PT0720 Motor Pulley (3.25" O.D. x 4A)
PT1295 Motor Pulley Bushing for 1/8 Motor Shaft
PT1296 Motor Pulley Bushing for 1 3/8 Motor Shaft
PT1297 Motor Pulley Bushing for 1 5/8 Motor Shaft

Figure 7-1 Main Motor Installation with Mercury Switch Bracket

Belt Sizing Chart

Belt Sizing Chart								
Unit Size	Motor Drive Belts		Vertical Auger Drive Belts					
		Qty.	Standard Unit	Qty.	With Slow Down Kit	Qty.		Qty.
18' - 0"	PT0497 (A55)	4	PT0511 (A87)	2	Not Available			
21' - 0"	PT0497 (A55)	4	PT0511 (A87)	2	Not Available			
24' - 0"	PT0497 (A55)	4	PT0511 (A87)	3	PT0511 (A87)	2	CP1044 (A80)	1
27' - 0"	PT0501 (A51)	4	PT0503 (A79)	4	PT0503 (A79)	3	CP1038 (A72)	1
30' - 0"	PT0501 (A51)	4	PT0503 (A79)	5	PT0503 (A79)	4	CP1038 (A72)	1
33' - 0"	PT0497 (A55)	4	PT0511 (A87)	5	PT0511 (A87)	4	CP1044 (A80)	1
36' - 0"	PT0501 (A51)	4	PT0503 (A79)	6	PT0503 (A79)	5	CP1038 (A72)	1
42' - 0"	PT0504 (A53)	4	PT0505 (A83)	7	PT0505 (A83)	6	CP1042 (A76)	1
48' - 0"	PT0504 (A53)	4	PT0505 (A83)	8	PT0505 (A83)	7	CP1042 (A76)	1

Shields Parts List

(See Figures 4-6, 4-7, and 4-8)

Part No.	Item
Shields for Units with 26" Spacing: (27', 30', and 36' Units)	
28-8001	Standard Short Shield - 28"
28-8002	Short Shield with Notch for 1 Phase Motor - 28"
28-8003	Long Shield - 35"
28-8005	Long Shield with End Cap - 37"
Shields for Units with 28" Spacing (42' and 48' Units)	
28-8007	Standard Short Shield - 30"
28-8008	Short Shield with Notch for 1 Phase Motor - 30"
28-8009	Long Shield - 38"
28-8011	Long Shield with End Cap - 40"
Shields for Units with 30" Spacing (18', 21', 24', 33' Units)	
28-8013	Standard Short Shield - 32"
28-8014	Short Shield with Notch for 1 Phase Motor - 32"
28-8015	Long Shield - 41"
28-8017	Long Shield with End Cap - 43"
28-8021	Rear Motor Skirt
28-8022	Adjustable Motor Skirt
28-8025	Front Motor Skirt Weldment
1091001	Main Motor Shield
28-8050	Shield Installation Sack
CP-5008	Motor Shield Springs (4)
CP-0802	Duez Stud
CP-0804	Duez Retaining Ring

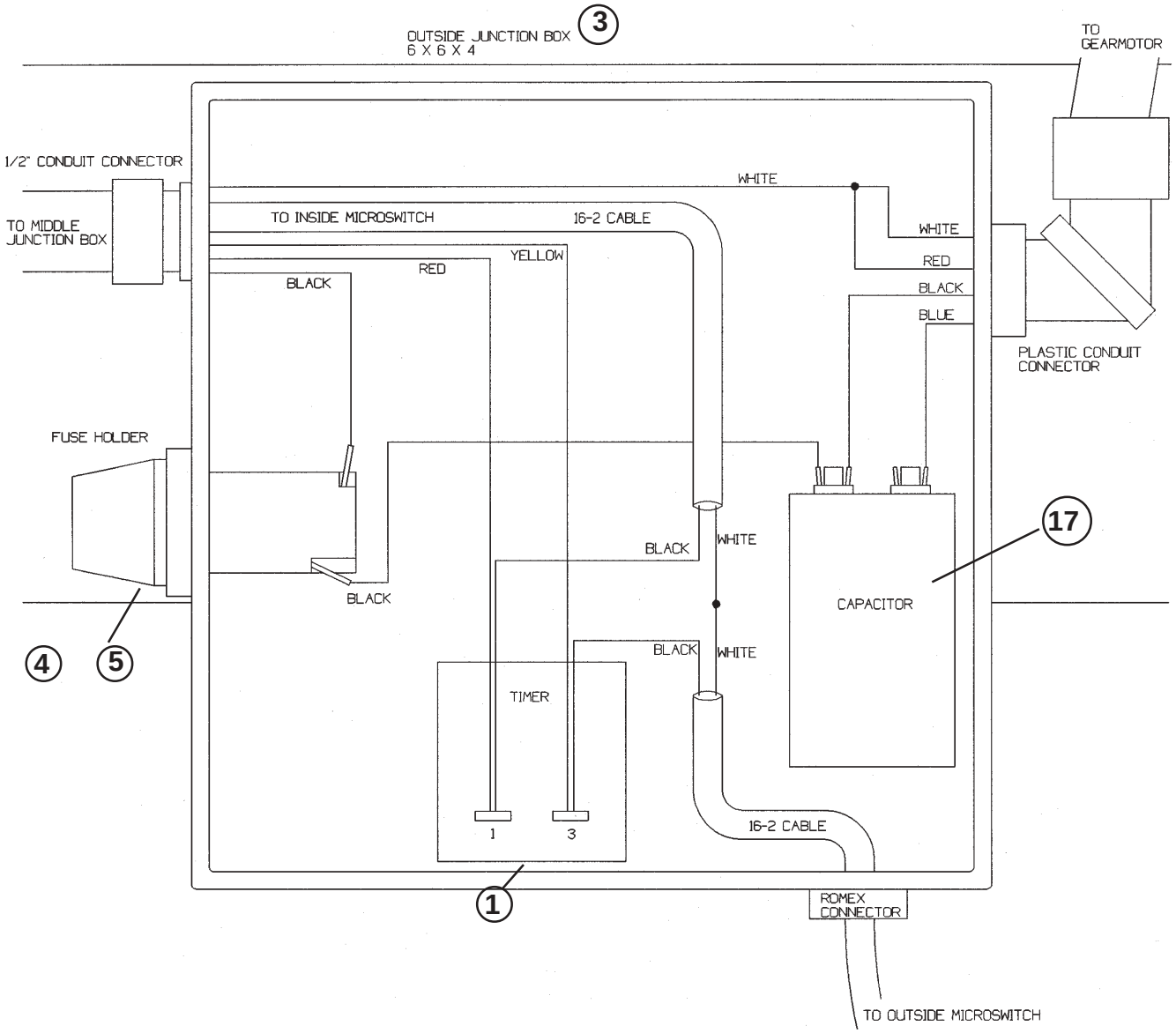


Figure 9-3 Outside Junction Box Wiring Diagram

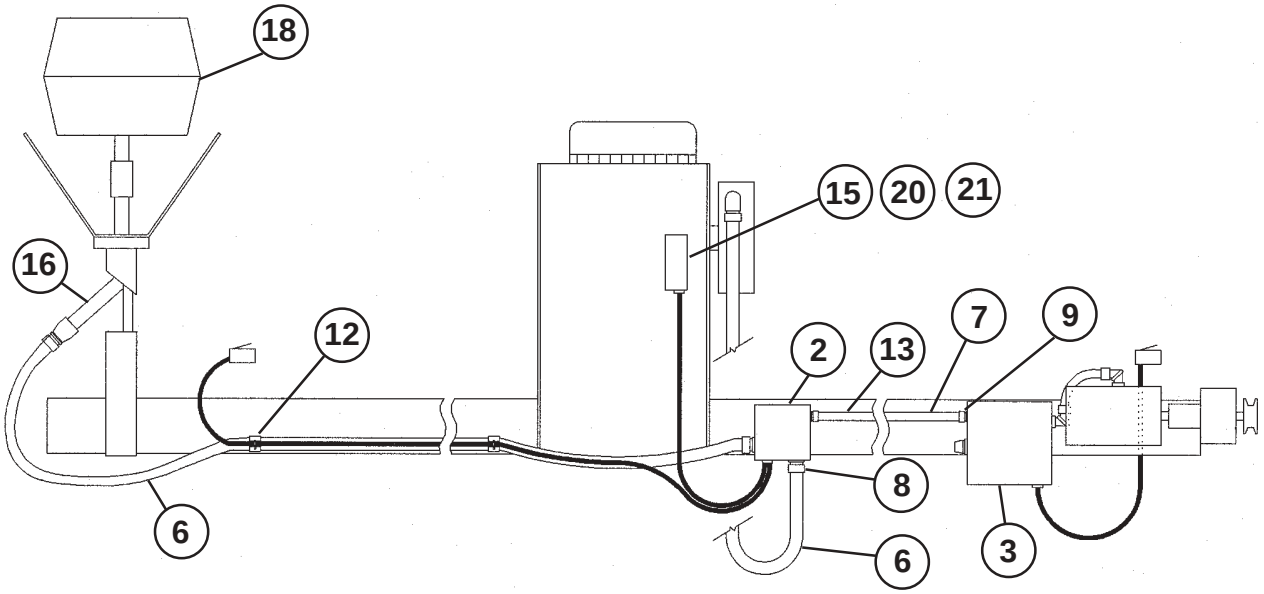


Figure 9-1 Wiring Harness

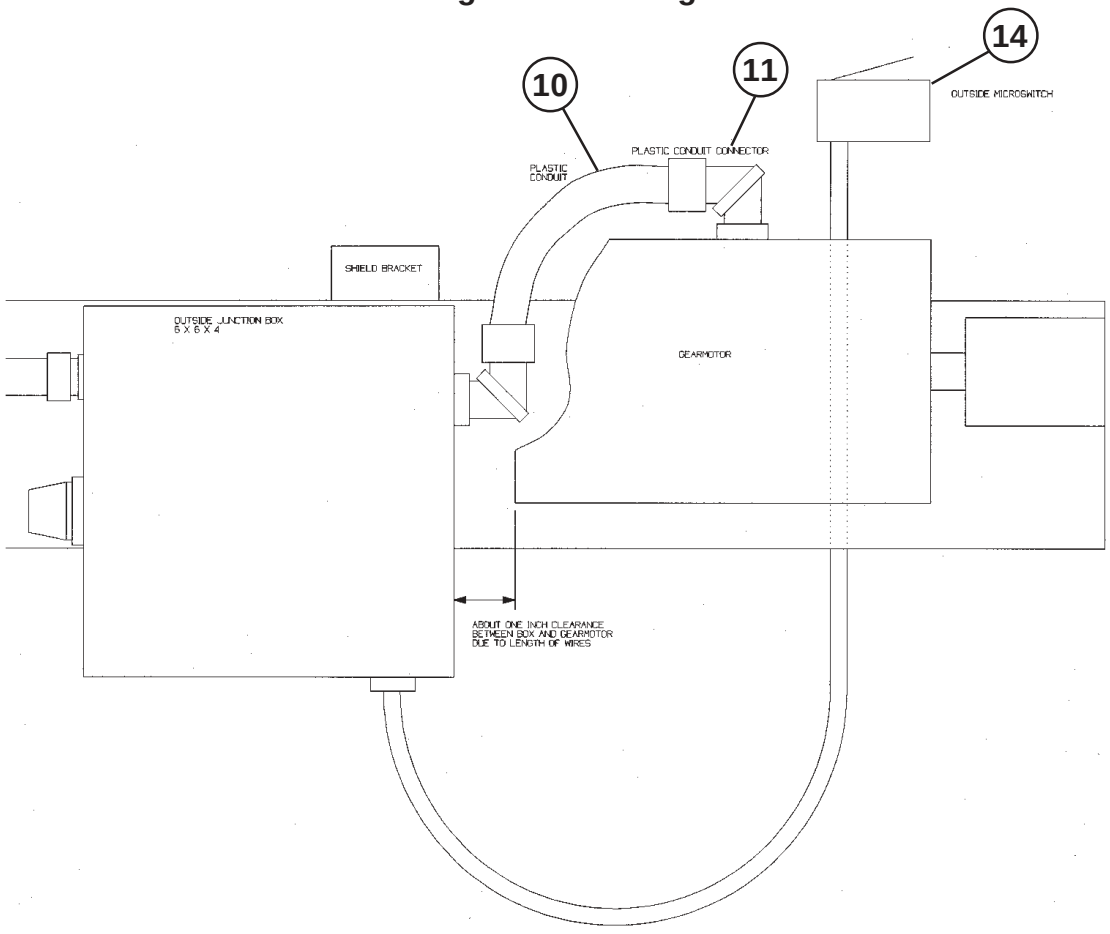
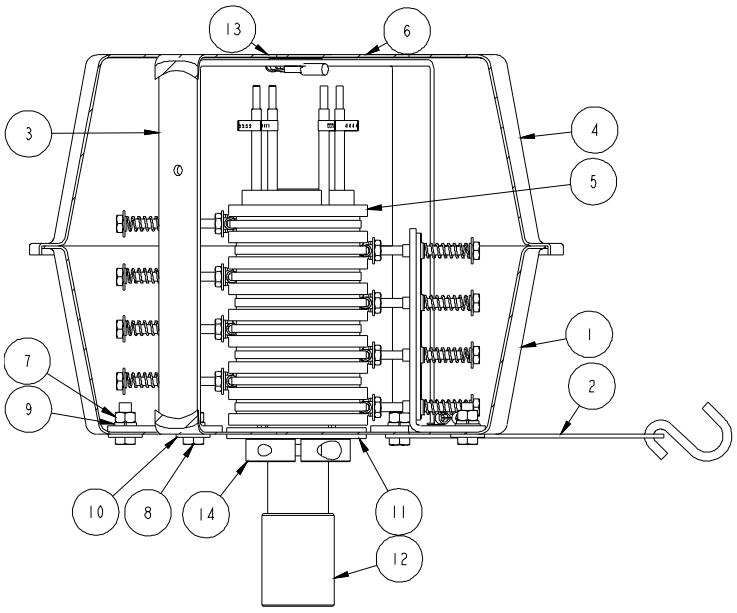


Figure 9-2 Outside Junction Box Location

Wiring Harness Parts List

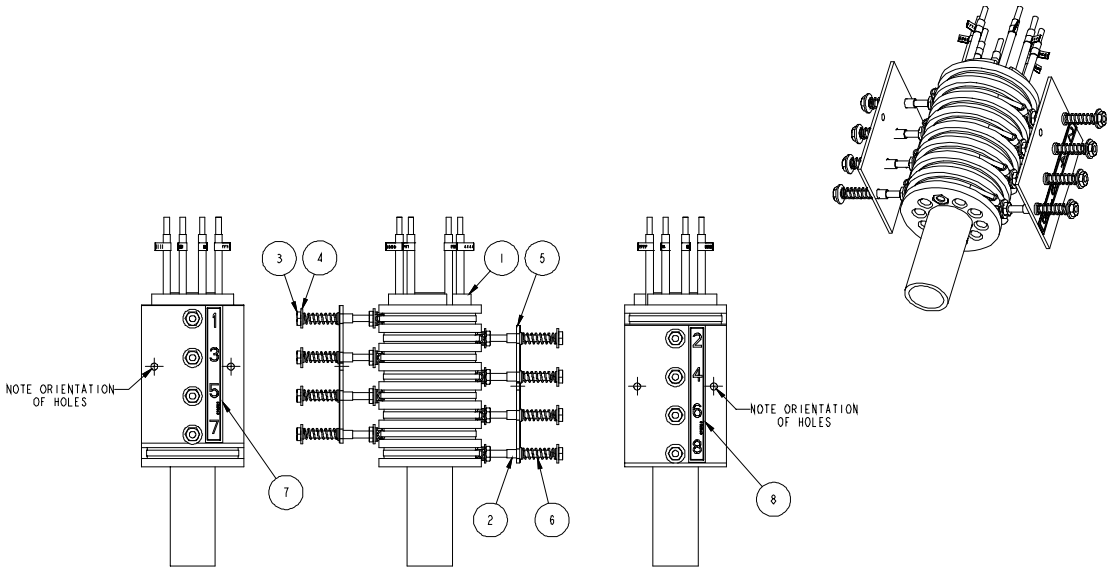


SECTION A-A

NOTES:
1. ROTARY CONNECTOR SACK (24-3000) IS TO BE PLACED INSIDE COVER.
2. INSTALL ELECTRICAL ASSEMBLY INTO BOTTOM COVER ASSEMBLY SO TERMINAL 8 IS NEXT TO CASE GROUND JUMPER.

Ref. Number	Part Number	Item	Qty
1	241000	Cover Bottom Assembly	1
2	241004	Bracket - Stabilizer Assembly	1
3	241007	Bracket - Cover Assembly	1
4	241009	Cover - Top Assembly	1
5	242000	Electrical Assembly - Assembly Complete	1
6	104L0014	Decal - !CAUTION! Disconnect Power	1
7	1FH0763	Nut - Hex, 1/4-20 UNC Finished, Pltd, Grade 2	2
8	2FH0803	Bolt - Hex, Std., Thrd-Grd 2 1/4 - 20 Unc x 3/4, Pltd	2
9	3FH0789	Washer - Lock, Regular 1/4, Pltd	2
10	3FH0863	Washer - Flat, Standard 1/4, Pltd	1
11	CP1508	Washer - 3 x 1 - 11/32 x 3/32 M/F MS5429, Nylatron GS	2
12	CP2330	Couple - Pipe	1
13	CP9220	Decal Serial No.	1
14	PT0956	Collar - Split Aluminum	1

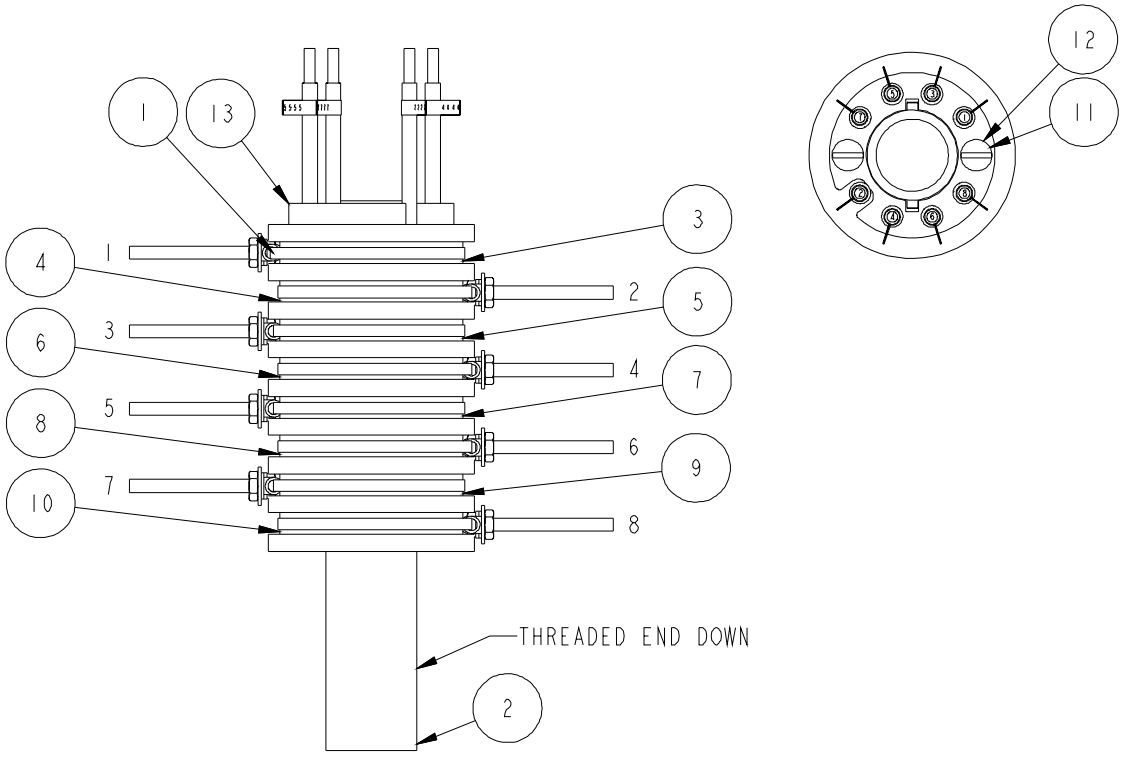
Rotary Connector - Assembly (240100)



NOTE:
1. ELECTRICAL ASSEMBLY IS INSTALLED ON BOTTOM COVER ASSEMBLY BY SPREADING INSULATOR BOARDS AND SLIDING THEM OVER INSULATOR BRACKETS SO ALIGNMENT HOLES SLIP OVER DRIV-LOK-PINS.

Ref. Number	Part Number	Item	Qty
1	242001	Core Assembly	1
2	1EL2009	Insulator - Screw .20 ID x .39 Flg x .38 L	8
3	1FH0784	Nut - Machine Screw #10 - 24 Unc. Brass, Grd 2	8
4	3FH0972	Washer - Flat, Standard 3/16" Brass	8
5	CP2347	Board - Insulator M/F MS5427, Makes 84 Pcs	2
6	CP5004	Spring - Terminal Special (1/4" x 1")	8
7	CP9202	Decal - Rotary Connector Terminal No. 1, 3, 5, 7	1
8	CP9203	Decal - Rotary Connector Terminal No. 2, 4, 6, 8	1

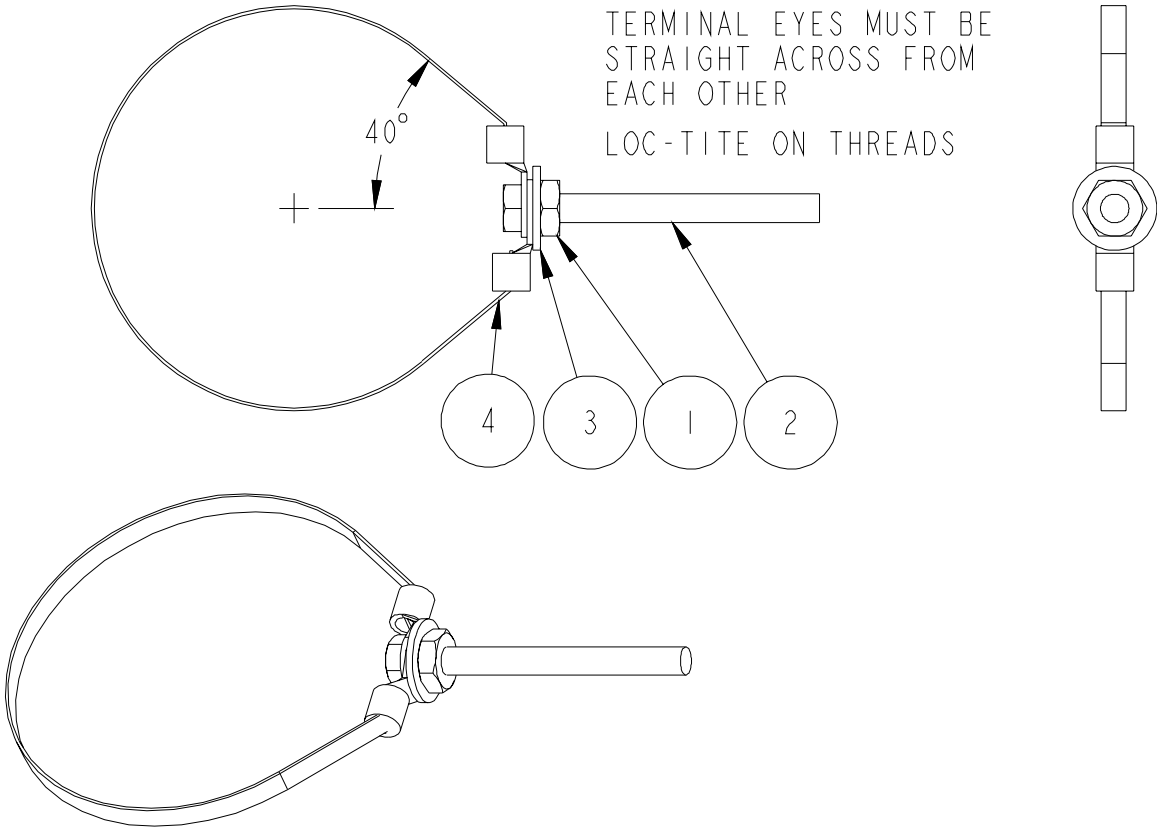
Electrical Assembly - Assembly Complete (242000)



NOTE:
1. THE VERTICAL POSITION OF EACH TRANSFER RING ASSEMBLY AND THE RADIAL POSITION OF EACH TRANSFER RING ASSEMBLY WIRE ARE INDICATED BY THE LAST DIGIT OF THE RING ASSEMBLY PART NUMBER, WHICH CORRESPONDS TO THE POSITION NUMBERS ON THIS PRINT.

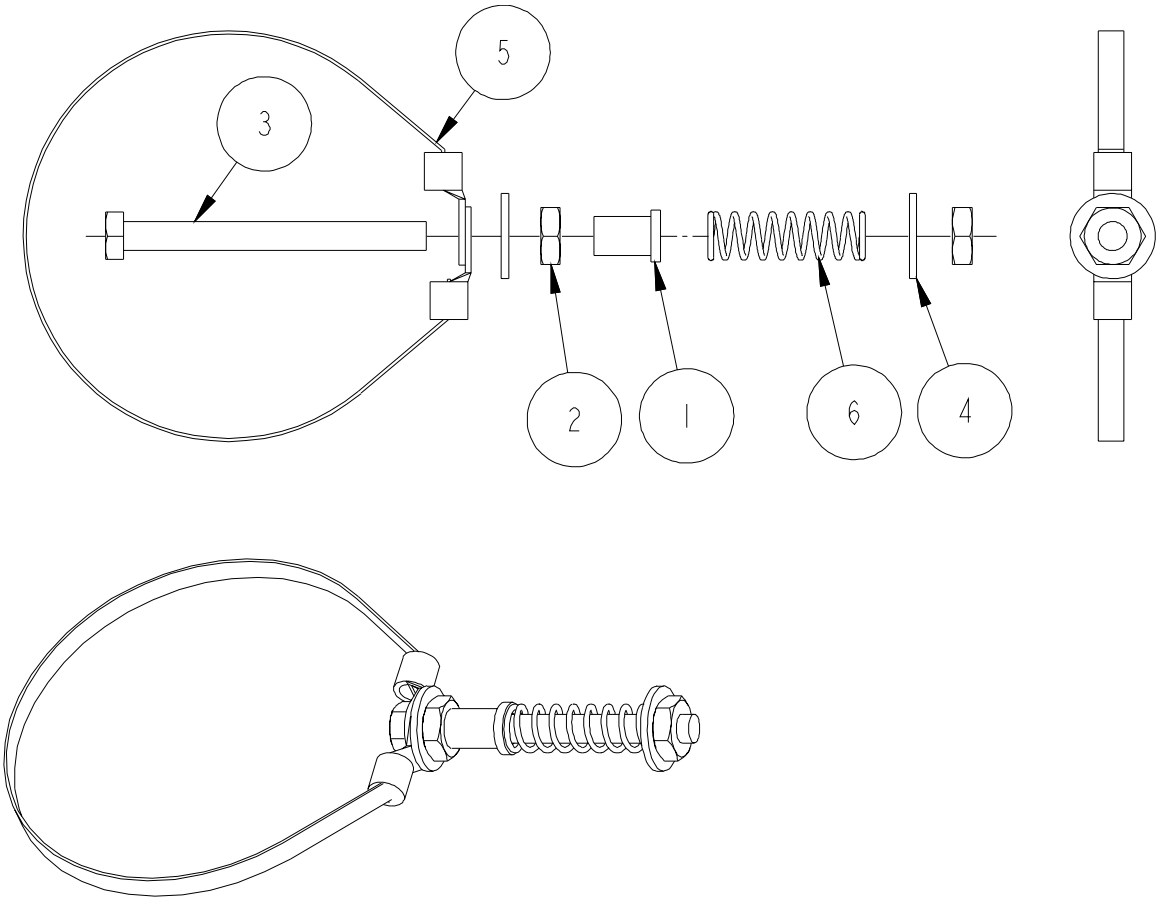
Ref. Number	Part Number	Item	Qty
1	242018	Lead Shunt Assembly	8
2	242020	Pipe-Core, Assembly	1
3	2420021	Ring-Transfer (#1) Assembly	1
4	2420022	Ring-Transfer (#2) Assembly	1
5	2420023	Ring-Transfer (#3) Assembly	1
6	2420024	Ring-Transfer (#4) Assembly	1
7	2420025	Ring-Transfer (#5) Assembly	1
8	2420026	Ring-Transfer (#6) Assembly	1
9	2420027	Ring-Transfer (#7) Assembly	1
10	2420028	Ring-Transfer (#8) Assembly	1
11	1FH0734	Nut-Lock, 1/4-20 UNC Two-way, Pltd, Grade 2	2
12	CP0034	Screw-1/4-20 x 4-13/16" (M/F 2FH0737)	2
13	CP2904	Insulator-Ring Special (Molded Plastic)	9

Core - Assembly (242001)



Ref. Number	Part Number	Item	Qty
1	1FH0784	Nut-Machine Screw #10 - 24 UNC, Brass, Grd 2	1
2	2FH0438	Bolt-Hex, Std. Thrd -Grd 2, #10 - 24 UNC x 2, Brass	1
3	3FH0972	Washer-Flat, Standard 3/16", Brass	1
4	CP2602	Lead - Shunt Assembly	1

Lead - Shunt Assembly (242018)



Ref. Number	Part Number	Item	Qty
1	1EL2009	Insulator-Screw, .20 ID x .39 Flg x .38L	1
2	1FH0784	Nut-machine Screw, #10-24 UNC, Brass, GRD 2	2
3	2FH0438	Bolt-Hex, Std, Thrd-GRD 2, #10-24 UNC x 2, Brass	1
4	3FH0972	Washer-flat, Standard 3/16" Brass	2
5	CP2602	Lead-Shunt Assembly	1
6	CP5004	Spring-Terminal Special (1/4" x 1")	1

Lead - Shunt, Assembly Complete (242018C)

UniDriv Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	SOLUTION
Unit stops on track – drive motor still running.	Track splice high on right.	Loosen splice bolts and realign splice.
	Pin sheared or dogs broken on coupler.	Replace roll pin and/or coupler.
Unit stops on track – drive motor not running – the rest of the machine still running.	Gear motor fuse blown.	Test and replace fuse. Determine if motor or gear-case has failed.
	Gearmotor has failed.	Replace needed parts or complete unit.
	Mercury switch has stopped unit.	Balance machine at center hanger.
	Mercury switch has failed.	Test switch and replace as needed.
	Electrical system failure.	Inspect electrical system checking for short circuits and bad connections.
Track drive motor starts and stops.	Machine out of balance.	Balance machine.
	Faulty mercury switch.	Test switch and replace as needed.
	Mercury switch adjustment.	Adjust to 3 degrees.
1 or more down augers stop turning. *	Idler disengaged.	Re-engage clutch.
	Belt broken or worn.	Replace belt.
	Roll pin sheared in pulley or auger splice.	Replace roll pin.
Main motor belts squeal.	Belts loose.	Adjust motor bracket.
	Overloaded drive train.	Disengaged some of the load and re-engage in sequence.
Main motor belts roll or will not stay on. *	Misaligned motor pulley	Align pulleys.
Main motor belts fail prematurely. *	Over-tight adjustment	Back off tension bolt.
	Misaligned pulleys.	Re-align pulleys.
Severe vibration in unit.	Bent down auger.	Replace down auger.
	Bent down auger pulley.	Replace pulley.
Machine shuts down 2 minutes after start or restart.	Centrifugal switch not activating properly.	Disc on sensing device still in contact with micro switch. Check disc for free travel and adjustment.
	Micro-switch failure.	Test switch and replace as needed.
	Timer failure.	Test timer and replace as needed.
Machine fails to start.	Electrical system malfunction.	Inspect entire electrical system for short circuits and bad connections. Inspect stop/start systems.
	Faulty Motor.	Check all thermal overloads. **Note:** Some machines may include more than one thermal protector. Replace motor.

* These will cause the unit to shut down in 2 minutes.

UniDriv
Owner's Manual

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