Hand-Held Scarifiers

Needleguns

Walk-Behind Scarifiers

Impact Tools

Sanders

Specialty Tools

Industrial Vacuums

Descobrader

Walk Behind Deck Scarifier

120.113 120.223 120.133

Descobrader Configurations

Part	Description	Power	DC	Features
Descobrader, System				
120.116	DB System, Navy NSN 3895-01-145-6705	Pneumatic[1]	N	Comes with FOUR Hubs: 120.026 (Hub w/Kung-fu stars), 120.024 (Hub w/C58 cutters), 120.021 (BPH hub assy), 120.029 (HDRP Hub with Full Load of HDRP), with a 25 lb. weight (for ROTO-PEEN application) and a wrench kit.
120.216	DB System, Dust-free	Pneumatic[1]	Y	
120.174	DB System, Navy NSN 5130-01-544-3222	Elect 440-3/1750[2]	N	
120.226	DB System, Dust-free	Elect 440-3/1750[2]	Y	
Descobrader, Dust Free				
120.213	DB, Standard	Pneumatic[1]	Y	Comes with a *choice of ONE* of the following hubs: 120.026 (kung fu stars), 120.024 (5/8" cutter), 120.021 (BPH) or a 120.027 (roto-peen Hub ONLY, roto-peen EXTRA) and DUST COLLECTOR. Shroud is height adjustable and have a 3" vacuum outlet.
120.223	DB, Standard	Elect 440-3/1750[2]	Y	
120.2230	DB, Bristle	Elect 440-3/3500[4]	Y	
120.225	DB, Standard	Elect 220-1/1750[3]	Y	
120.233	DB, Standard	Gasoline 5hp	Y	
120.243	DB, Standard	Propane 5hp	Y	
Descobrader, without Dust Collector				
120.113	DB, Standard	Pneumatic[1]	N	Comes with a *choice of ONE* of the following hubs: 120.026 (kung fu stars), 120.024 (5/8" cutter), 120.021 (BPH) or a 120.027 (roto-peen Hub ONLY, roto-peen EXTRA).
120.123	DB, Standard NSN 4940-01-278-7348	Elect 440-3/1750[2]	N	
120.1230	DB, Bristle	Elect 440-3/3500[4]	N	
120.133	DB, Standard	Gasoline 5hp	N	
120.1335	DB, Standard	Propane 5hp	N	

Notes:
[1]Pneumatic Descobrader requires 125cfm at 90psi.
[2]Electric Descobrader, standard motor, (440v, 3-phase, 1,750rpm). A 220v, 3-phase is available for additional cost.
[3]Electric Descobrader, optional 220-1 motor, (220v, 1-phase, 1,750rpm).
[4]Electric Descobrader, bristle configuration (440v, 3-phase, 3,500rpm): a) comes with bristle hub, c) can NOT be used with other hubs.

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TECHNICAL MANUAL

OPERATION/MAINTENANCE INSTRUCTIONS
WITH
PARTS BREAKDOWN

ROTARY-PEENING DECK MACHINE SYSTEM
PNEUMATIC AND ELECTRIC
MODELS AF525 AND EF525

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FOREWORD

This manual describes the Model AF525 and EF525 Rotary-Peening Deck Machines and includes information for the proper operation, maintenance and repair of each unit. This information is presented as follows:

The metric conversions for the dimensions in this manual are in Appendix A.

CHAPTER 1
SAFETY PRECAUTIONS AND GENERAL INFORMATION

1.1 Safety Precautions

Listed below are the general safety precautions necessary for the protection of personnel and ship/facility. Before undertaking equipment operation or maintenance, personnel must read, understand and comply with these safety precautions. The following symbols are used throughout this manual as indicated in their descriptions:

WARNING: To call particular attention to a step of a procedure which, if not strictly followed, could result in serious injury or death of personnel.

CAUTION: To call particular attention to a step of a procedure which, if not strictly followed, could result in damage to or destruction of equipment.

NOTE: To give important information or to warn of unsafe practices that could result in equipment damage.

WARNING

Always wear goggles or full face shield, preferably the latter, and ear protection while operating machine. Wear proper respirator if working in confined spaces.

CAUTION

An authorized electrician must check polarity (direction of rotation) and wiring (for proper voltage) before operating electric powered machine. See schematic enclosed in electric box on handle.

CAUTION

Weight should be used on machine **ONLY** when flap assembly is installed. **DO NOT** use weight with other hub assemblies and **ALWAYS** remove prior to stowage.

WARNING

Always keep all hoses and cords clear of machine head at all times.

WARNING

NEVER operate machine without hub guard covering head.

WARNING

Always stop machine, shut off power supply, and disconnect any hoses or electrical cords from machines before making any adjustments, removing or reinstalling cover, or changing heads.

CAUTION

Operate the machine parallel to the edge, or change the direction so that the flaps or cutters rotate away from (or off) the edge. When stripping areas with raised sharp edges, never allow the flaps or cutters to rotate into the raised area.

WARNING

To avoid personnel injury or damage to equipment, **DO NOT** run machine over bolts or other sharp objects when using flaps, cutters or abrasive wheels. Hammer assembly should be used when stripping over protruding objects.

1.2 Introduction

This publication describes the Model AF525 and EF525, Rotary-Peening Deck Machines (herein after called deck machines) (Figures 1-1 and 1-2), and includes information for the proper operation, maintenance, and repair of the units to keep them in top running condition. The information is presented as follows:

CHAPTER 1	GENERAL SAFETY PRECAUTIONS AND GENERAL INFORMATION
CHAPTER 2	OPERATING INSTRUCTIONS
CHAPTER 3	MAINTENANCE INSTRUCTIONS
CHAPTER 4	ILLUSTRATIONS AND PARTS LISTS FOR MODEL AF525
CHAPTER 5	ILLUSTRATIONS AND PARTS LISTS FOR MODEL EF525
APPENDIX A	METRIC CONVERSION OF DIMENSIONS
APPENDIX B	PART NUMBER TO PAGE NUMBER CROSS-REFERENCE LIST

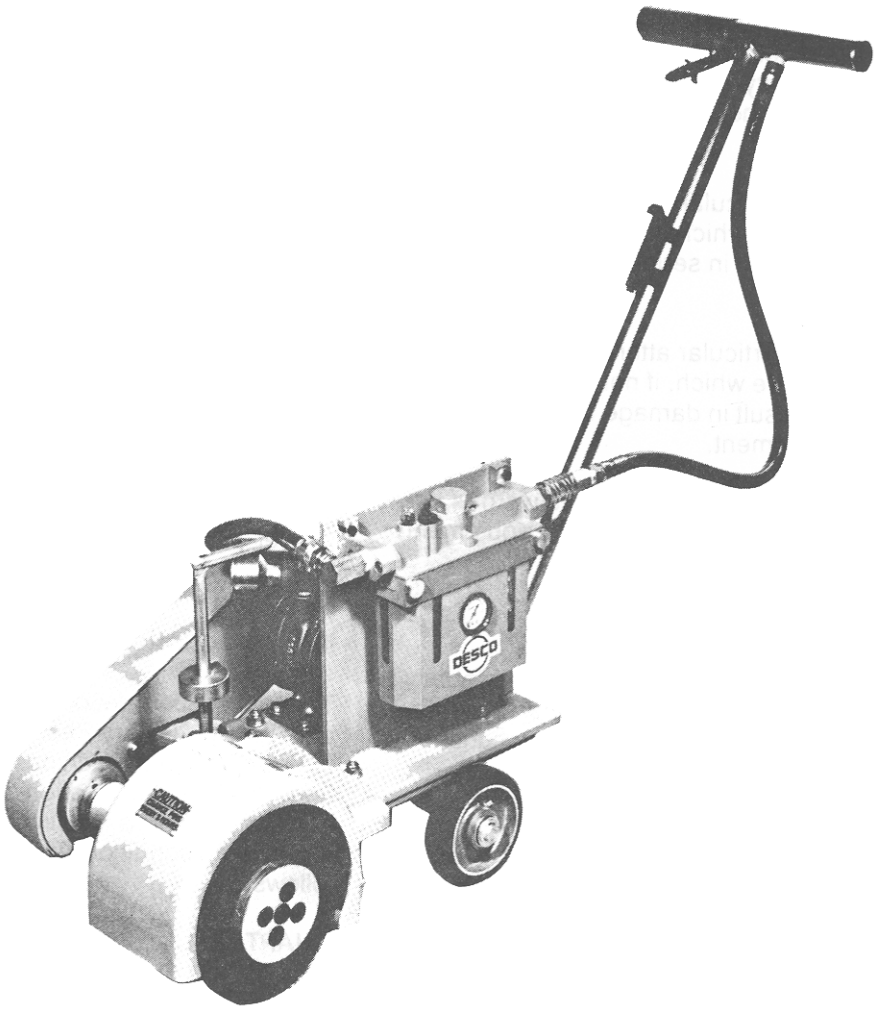


Figure 1-1 Model AF525 Rotary-Peening Deck Machine

Figure 1-2 Model EF525 Rotary-Peening Deck Machine

1.3 Purpose and Function

Using a rotating head fitted with hammers, cutters, roto-peen flaps or BPH abrasive wheels, the deck machine can be used to remove numerous deck surface coverings as described below. The basic difference in the two models of deck machines described in this manual are the power sources—pneumatic and electric.

1.4 Capabilities

The deck machine with roto-peen flaps can be used to remove paint, corrosion and light abrasive non-skid from steel or aluminum decks. With rotary hammers and cutters, it can be used to remove heavy scale, heavy non-skid, tile and underlay from steel decks only or partial non-skid and other heavy coatings from aluminum or wood decks. The abrasive wheel is used for feathering, and rust and dried tile mastic removal on steel or aluminum surfaces. These deck machines have a much higher and more efficient removal rate than standard surface preparation equipment such as deck crawlers or needle guns.

1.5 Descriptive Data

Models of the deck machines shall consist of the data found in Table 1-1.

1.6 Power and Utility Requirements

1.6.1 Model AF525: Designed to operate at 90 PSI, with 90 CFM minimum air supply. The 3 horsepower motor develops between 1700 and 1750 RPM.

1.6.2 Model EF525: Designed to operate on 3 phase 220 or 440 volt power supply, as specified. The 5 horsepower motor develops 1745 RPM.

> **NOTE:** Electric machine (Model EF525) comes wired 440 unless otherwise specified.

TABLE 1-1
DESCRIPTIVE DATA

MODEL CHARACTERISTICS	MODEL NUMBER	
	AF525	EF525
Motor:		
Air Powered	X	
Electric Powered		X
"T" Handle with dead-man, automatic lock-off type control device	X	X
Head depth adjuster(s)	X	X
Guard(s)	X	X
Lubricator/regulator/filler	X	
Wheels or Rollers	X	X
Air hose connection (min ½" ID)	X	
Air hose (min ¾" ID)	X	
Weight:		
Maximum 112.5 pounds	X	
Maximum 107.5 pounds		X

1.7 List of Items Furnished

Each Navy model deck machine comes equipped with the following:

- One cutter hub assembly (AF525 and EF525)
- One hammer hub assembly (AF525 and EF525)
- One flap hub assembly with full load of flaps (AF525 and EF525)
- One BPH abrasive wheel assembly (AF525 and EF525)
- One 100' length of ¾" ID air hose (Model AF525 only)
- Three allen wrenches (AF525 and EF525)
- One weight (21 lbs) (AF525 and EF525)
- One 25' electrical cord (EF525 only)

1.8 List of Items and/or Tools Required

The following items and tools should be on hand to perform maintenance on deck machines:

- 3/8" allen wrench
- 12" crescent wrench
- 9/16" open end wrench
- ¾" open end wrench
- 9/16" speed socket wrench
- ¼" flat head screw driver
- 1/8" right angle screw driver (EF525 Model)
- Oil (heavy cylinder oil with viscosity of 2135TH)
- Rags
- Hammer (rubber or leather)
- MIL-G-24139 grease (Aero Shell No. 6)
- Bearing pusher
- Inner race tapper
- Outer race tapper
- Shims

1.9 Preparation for Use

1.9.1 Model AF525: Before attempting to operate machine, the following must be performed:

Handle Installation: Install flat washers, then lock washers onto the 3/8" hex head bolts, insert bolts into bottom of handle and up through chassis and tighten (it is advisable to have one person position the handle while another locates the bolts). Chapter 4 shows the exploded view and parts list for this machine.

Filter-Lubricator Bowl: Remove oil fill cap from air filter-regulator-lubricator (hereinafter called lubricator), and add lubricating oil to fill lubricator bowl. Reattach oil fill cap securely.

Attach air hose to machine and ship's air supply.

1.9.2 Model EF525: Perform the following before machine operation.

CAUTION

An authorized electrician must check polarity (direction of rotation) and wiring (for proper voltage) before operating electric machine. See schematic enclosed in electric box on handle.

Handle Installation: Install flat washers, then lock washers onto the 3/8" hex head bolts, insert bolts into bottom of handle and up through chassis. Secure with flat washer and lock nut and tighten (it is advisable to have one person position the handle while another locates the bolts). Chapter 5 shows the exploded view and parts list for this machine.

Connect cord from switchbox on handle to the motor plug receptacle.

An authorized electrician must check polarity (direction of rotation) and make sure machine is wired for proper voltage. See schematic enclosed in electric box and at the end of Chapter 5 (Figure 5-6).

Connect electrical cord into proper 3-phase outlet.

> **NOTE:** Should operator elect to use any hub assembly other that then one installed by the manufacturer, he should go to Chapter 2, Paragraph 2.2 of this manual for replacement instructions.

CHAPTER 2
OPERATING INSTRUCTIONS

2.1 General Information for AF525 and EF525

Examine surface to be stripped. Select correct hub assemblies (Figure 2-1) to be used according to the following criteria:

Paint, light to medium corrosion, non-abrasive non-skid compound on steel or aluminum decks	Use flaps which provide 1-3 mil profile
Very heavy rust and scale, partial removal of thick non-skid compound on steel, aluminum, and wood decks, tile removal	Use cutters, hammers
Light paint, rust, dry tile mastic, feathering on all surfaces	Use BPH (abrasive wheel)

NOTE: If cutters or hammers have been used for non-skid removal, use flaps prior to using the BPH wheel to prevent excessive wear of the abrasive wheel.

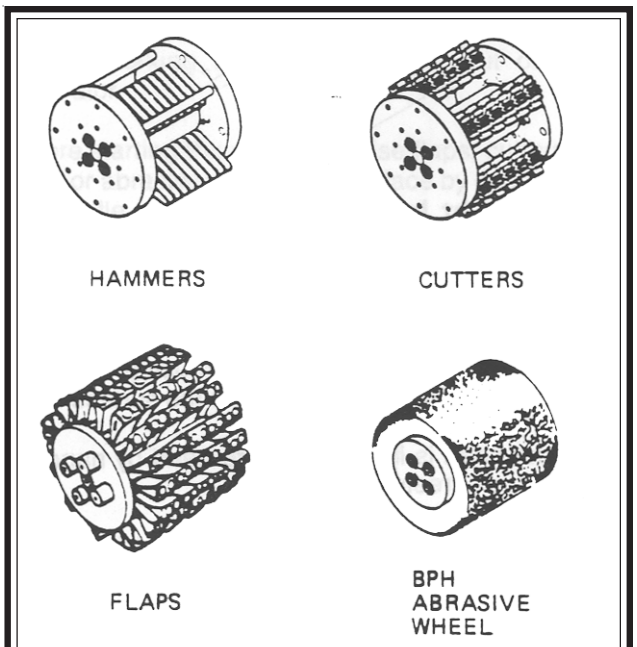


Figure 2-1 Types of Scaling Heads Used with Rotary-Peening Deck Machine

WARNING

Always stop machine, shut off power supply, and disconnect any hoses or electrical cords from machines before making any adjustments, removing or reinstalling cover, or changing heads.

2.2 Installation of Hammer, Flap, Cutter, BPH Wheel, and Abrasive Flap Wheel Assemblies

If selected head is not installed on machine, change heads as specified below (also see specific details in Chapter 3, starting with paragraph 3.2).

Remove the center allen bolt and lock washer that secures head to drive shaft.

Slide head off, slide new head on.

Replace lock washer and center allen bolt and tighten securely by striking wrench with rubber or leather hammer. **CHECK ALLEN BOLT FREQUENTLY DURING OPERATION TO ENSURE THAT IT IS SECURELY FASTENED.**

Check that head is installed properly as follows (Figure 2-2):

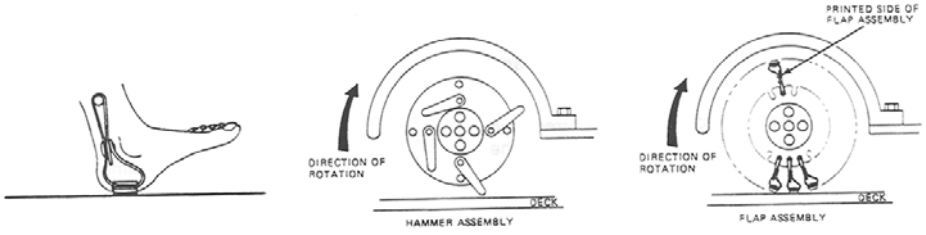
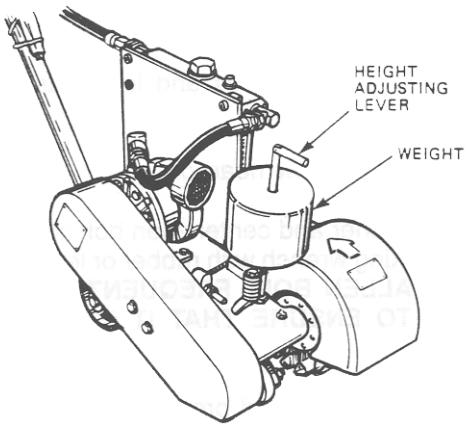


Figure 2-2 Proper Installation of Heads



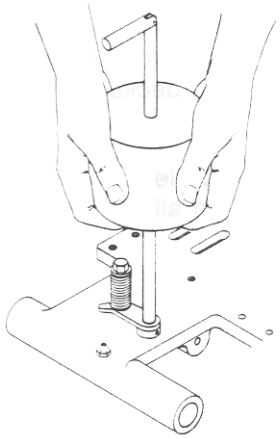


Figure 2-3 Rotary-Peening Deck Machine Weight Installation

2.2.1 Hammers: Hammers should be placed so they will be forced inward as they strike the surface.

2.2.2 Flaps: Flaps should be assembled so the printed sides of flaps are facing in direction of rotation. Imagine that the printed side of the flap is the heel of your foot and the other side is the toe. When you walk, you always put the heel down first then the toe—if not, you will wear out the toes of your shoes first. With this in mind, install the flaps properly, making sure they strike the surface in a similar manner as the foot comes down.

CAUTION

Weight should be used on machine **ONLY** when flap assembly is installed. **DO NOT** use weight with other hub assemblies and **ALWAYS** remove prior to stowage.

If flaps are being used, a weight (Figure 2-3) must be installed in order to maintain proper pressure of flaps against deck. To install weight, slide weight over height adjustment lever.

Check the distance from the center of the head to the work surface with the marked allen wrench (supplied with the machine) or a ruler as shown in Figure 2-4. The distance must be 3-3/8". If the distance is not correct, change the setting of the height adjustment lever to raise or lower the head to the proper distance. Check frequently during operation.

2.2.3 Cutters and BPH Wheel: These have no critical direction of rotation.

2.2.4 Abrasive Flap Wheel: When using abrasive flap wheel, make sure abrasive strikes the surface first.

After proper head is installed, rotate head by hand to be sure it turns freely.

Inspect drive belt for proper tension and condition. Belts should be just tight enough to prevent slippage (1/4" to ½" total movement at mid-point of drive belt) and should not show any signs of parting at joint. Belt should be replaced if there are signs of cracking or fraying.

Always clean fittings before and after applying lubricant. Lubricate the following fittings with MIL-G-24139 (Aero Shell No. 6) grease every 8 hours, or prior to each use of the machine. See Figure 2-5 for lubrication points.

- Drive shaft
- Adjustment wheel
- Adjustment nut
- Adjustment fulcrum bolt
- Left and right rear wheels

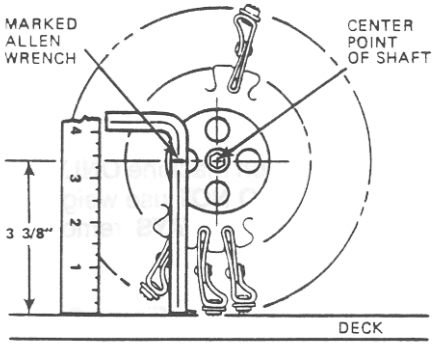


Figure 2-4 Checking Height of Head

Always wear goggles or full face shield and ear protection. If working in confined space, put on proper respirator.

Before starting the machine, raise flaps, cutters, hammers or abrasive wheel from surface by pushing down on handle.

Move machine slowly over area. Rapid back-and-forth operation is not as effective as a slow, steady rate which can clean to bare metal in one pass. Observe the following caution:

CAUTION

Operate the machine parallel to the edge or change the direction so that the flaps or cutters rotate away from (or off) the edge (Figure 2-6). When stripping areas with sharp edges, never allow the flaps or cutters to rotate into the raised areas.

NOTE: To be performed before each use and prior to prolonged stowage.

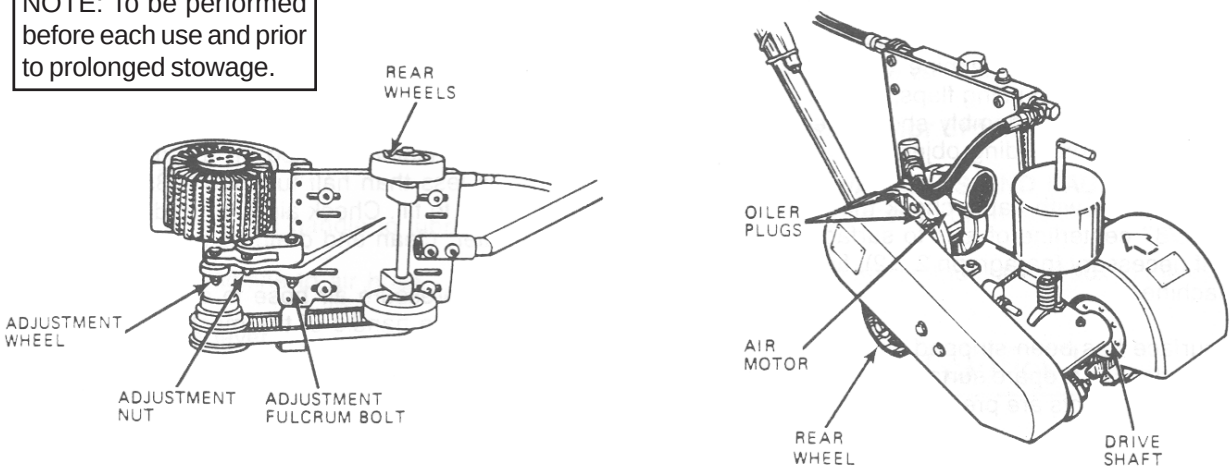


Figure 2-5 Lubricator Points on Rotary-Peening Deck Machine

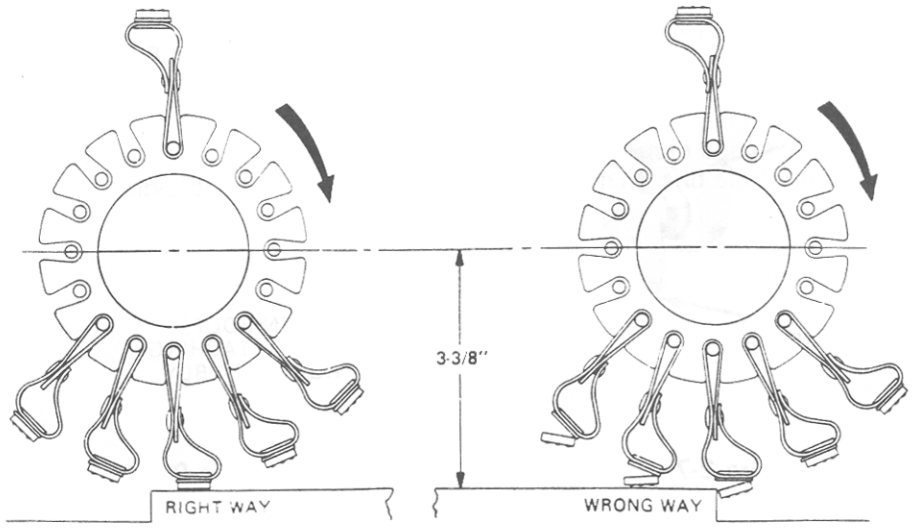


Figure 2-6 Right and Wrong Way to Strip Sharp Edges

WARNING

To avoid personnel injury or damage to equipment, DO NOT run machine over bolts or other sharp objects when using flaps, cutters or abrasive wheels. Hammer assembly should be used when stripping over protruding objects.

During operation with flaps, check the height adjustment (3-3/8" centerline of axis to surface) frequently. Adjust if necessary (Paragraph 2.2.2), first shutting off the machine.

If the surface has been stripped with cutters or hammers, use flaps to prepare surface for coating. If corrosion or contaminants are present, use the BPH wheel.

2.3 Preparation for AF525 Operation (Figure 2-7)

READ ALL WARNINGS AND CAUTIONS IN CHAPTER 1 BEFORE OPERATING THIS MACHINE.

Clean area and remove air motor oil fill set screws (4 each) and apply 5-8 drops of 2135TH (or equal lubricating oil) into each oiler before every use, and prior to stowage. Clean and reinstall set screws.

Check the lubricator installed on the machine. If oil lubricator is less than half full, add 2135TH (or equal lubricating oil) to fill. Check air filter for debris or presence of water; clean and drain as necessary.

Connect low pressure air hose to a low pressure air outlet and to the handle of the machine.

> **NOTE:** If a lubricator is installed at low pressure air outlet, it should be removed or bypassed because there is a lubricator on the AF525 deck machine.

Open air supply valve. Set regulator pressure at 90 PSIG.

> **NOTE:** All air hoses must be at least ¾" ID and connections at least ½" ID or machine will not have sufficient torque. A minimum air supply of 90 CFM and 90 PSI is necessary for proper operation.

Connect air hose from handle to lubricator.

Connect deck machine to air hose.

Depress throttle lever.

Regulate oil flow at the rate of 1-3 drops per minute by turning the adjusting screw (located between oil fill cap and slight dome) clockwise to decrease flow or counterclockwise to increase flow. The flow rate can be observed through the slight dome.

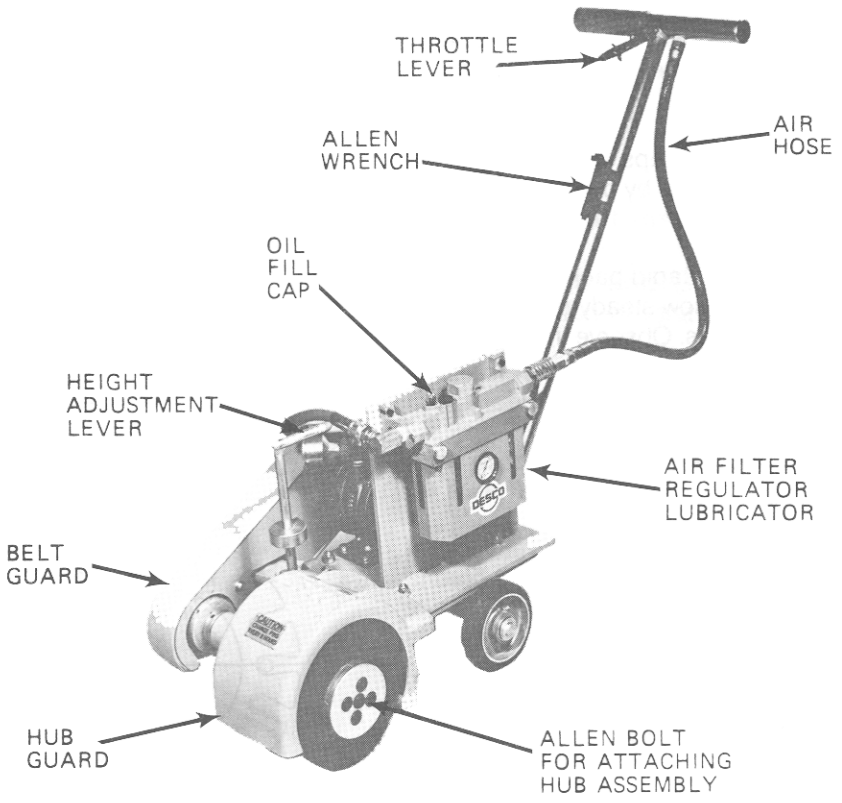


Figure 2-7 Location of Model AF525 Machine Parts

Press down on handle to raise head of machine from surface. Squeeze throttle lever and slowly lower head onto surface.

During operation, visually check to see that lubricator is at least half full. If not, add 2135TH or equal oil following directions below.

Shut air supply to lubricator unit.

Bleed air pressure from unit by depressing throttle to open position.

Remove oil fill cap.

Fill bowl with oil.

Reinstall oil fill cap.

Check air filter bowl for presence of water. If water is present, drain through flexible drain.

NOTE: Chapter 5 shows an exploded view of the lubricator.

When finished, place a few drops of symbol 2135TH or equal oil in the air inlet of the machine.

2.4 Preparation for EF525 Operation (Figure 2-8)

READ ALL WARNINGS AND CAUTIONS IN CHAPTER 1 BEFORE OPERATING THIS MACHINE.

Connect cord from handle switchbox to the motor plug receptacle.

CAUTION

An authorized electrician must check polarity (direction of rotation) and make sure the machine is wired for proper voltage before operating electric machine. See schematic enclosed in electric box on handle, schematic also shown on Figure 5-6 in Chapter 5.

Connect electrical cord into outlet.

Remember to raise cleaning head from surface by pushing down on handle before starting machine. Depress **"ON/OFF"** button, then depress deadman button. Lower head of machine and begin cleaning operation.

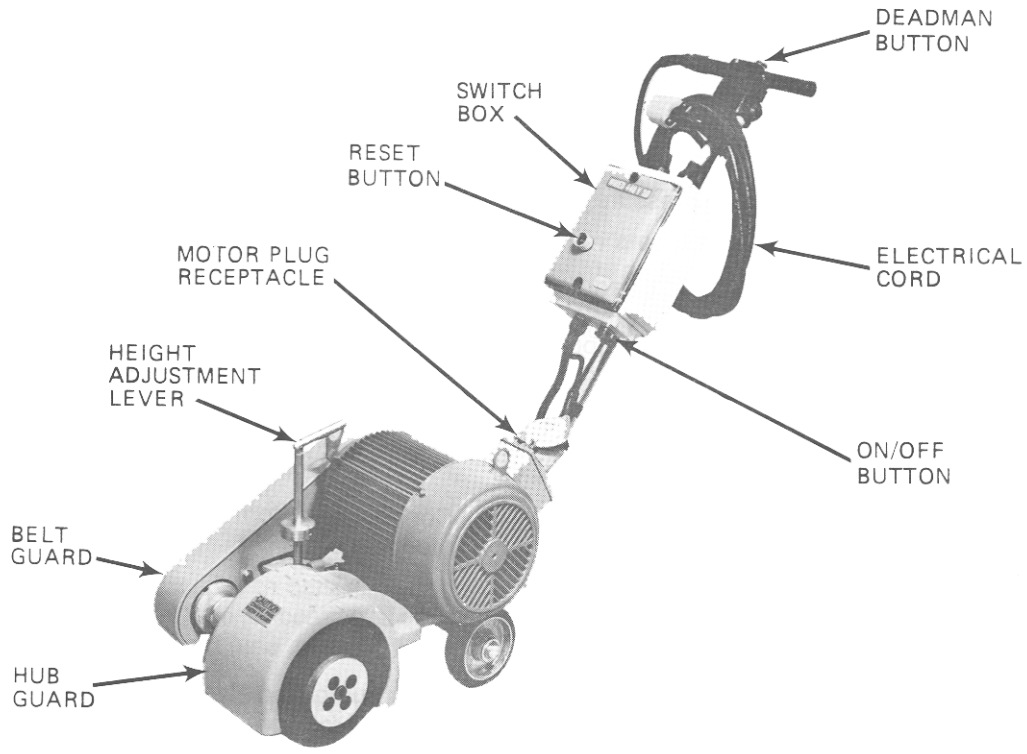


Figure 2-8 Location of Model EF525 Machine Parts

CHAPTER 3
MAINTENANCE INSTRUCTIONS

3.1 Cleaning and Lubrication

Lubricate the following fittings with MIL-G-24139 (Aero Shell No. 6) grease prior to each use of the deck machine, every eight hours of use or prior to prolonged storage periods:

- Drive shaft
- Adjustment wheel
- Adjustment nut
- Adjustment fulcrum bolt
- Left and right wheel bearings

> **NOTE:** Lubrication points can be found in Chapter 2, Figure 2-5.

Periodically, the adjustment fulcrum should be taken apart and thoroughly cleansed with a solvent to remove any build-up of debris, especially after tile removal.

3.2 Disassembly. Repair, Replacement and Reassembly

WARNING

Prior to replacement of any head, secure air supply valve, bleed air hose, and disconnect air hose form AF525; turn off power supply and unplug cords from EF525; turn water valve handle off.

3.2.1 Replacement of Worn or Broken Hammers (Figure 3-1)

Disconnect power source from machine.

Remove the center allen bolt and lock washer that secures head to drive shaft.

Slide head off.

> **NOTE:** When replacing worn or broken hammers, it is not necessary to remove the INBOARD endplates from the drive shaft hub.

Remove outboard endplates from hub by removing the 4 allen bolts and 4 lock washers.

Remove the 4 inboard pins which hold the hammers and 4 outboard pins used as support pins. Inspect pins and replace them if any ridges have developed during usage. Pins should have a smooth surface without cracks. Also, hammers can be flipped and reused after they have worn a flat surface on one side.

> **NOTE:** There are 28 hammers (7 on each inboard pin) and 28 spacers (7 on each pink between each hammer).

Reinstall 4 pins into inboard holes of inboard endplate, rotating one hole with each new loading—using previously unused holes.

Alternate hammer and spacer on each inboard pin until there are 7 hammers and 7 spacers on each pin. Be sure to start with a hammer on one pin and alternate by starting with a spacer on the next pin. This provides for overlapping of hammers.

Place new pins in the outboard pin holes, making sure that the pins are in front of the hammers, as shown in Figure 3-1.

Place holes in outboard plate over pins, making sure the X's on the inboard and outboard plates are aligned. This allows perfect alignment of allen bolts.

Replace allen bolts and lock washers; tighten.

Reinstall head on machine. Rotate head one complete turn in direction of arrow on guard by hand, making sure hammers are free to hit deck and bounce free.

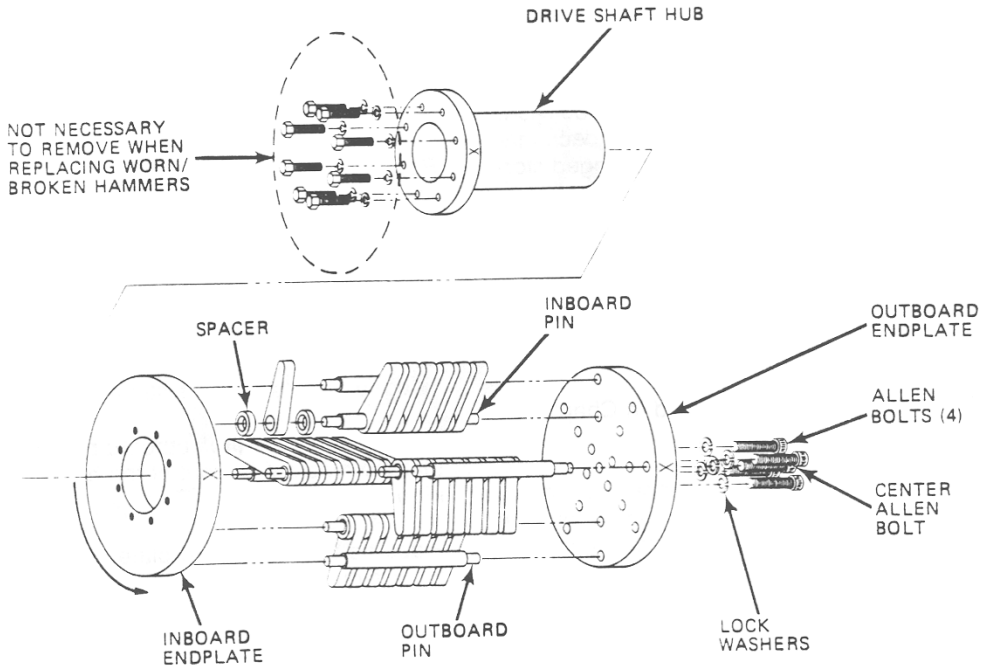
3.2.2 Replacement of Worn or Broken Cutters (Figure 3-2)

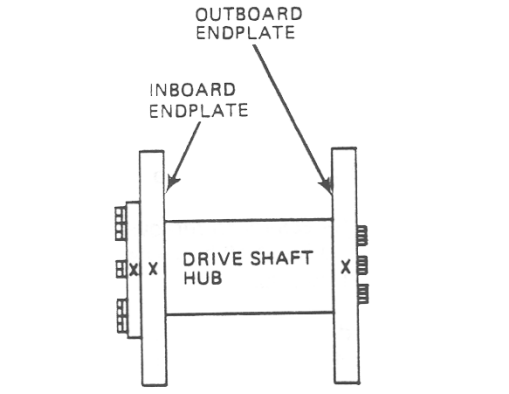
Disconnect power source from machine.

Remove the center allen bolt and lock washer that secures head to drive shaft. Slide head off.

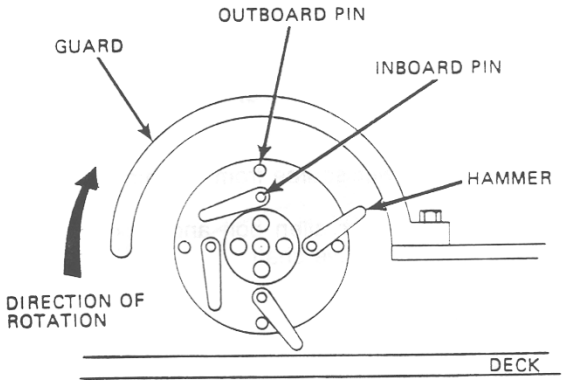
> **NOTE:** It is not necessary to remove **INBAORD** endplates from drive shaft hub when replacing worn or broken cutters.

Remove outboard endplates from hub by removing the 4 allen bolts and 4 lock washers. Remove all pins and cutters. Check pins for wear and replace if any ridges have developed during use. If cutters are worn to within





WHEN OUTBOARD ENDPLATE HAS BEEN REMOVED THE "X's" MUST BE ALIGNED AS SHOWN IN THE ABOVE DRAWING. OTHERWISE THE FIVE (5) ALLEN BOLTS WILL NOT LINE UP.



HAMMERS AND PINS MUST BE ARRANGED THIS WAY OR UNIT WILL BE SUBJECTED TO EXTREME SHOCK IMPACT RESULTING IN DAMAGE.

Figure 3-1 Replacement of Worn or Broken Hammers

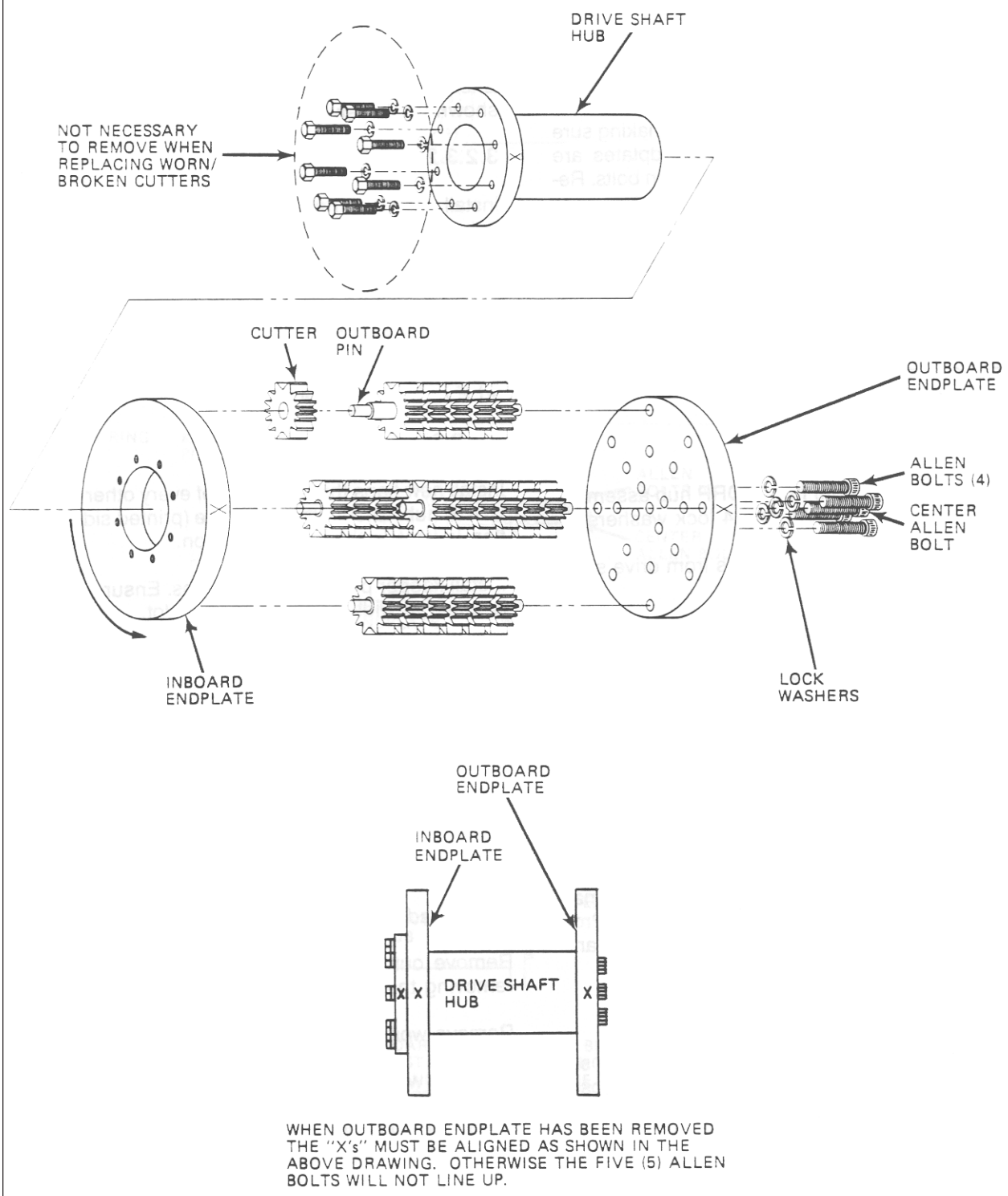
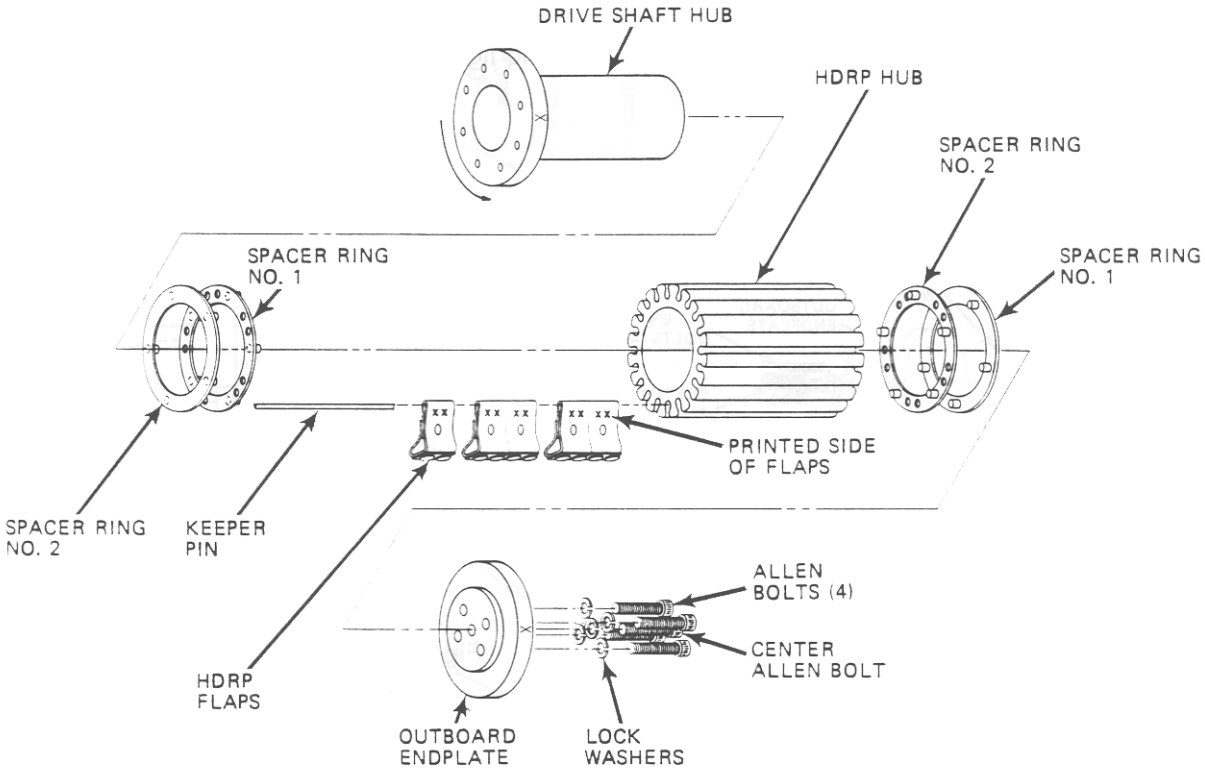
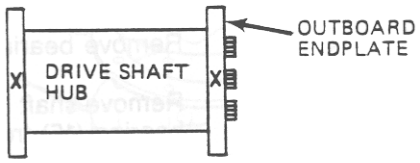


Figure 3-2 Replacement of Worn or Broken Cutters





WHEN OUTBOARD ENDPLATE HAS BEEN REMOVED THE "X's" MUST BE ALIGNED AS SHOWN IN THE ABOVE DRAWING. OTHERWISE THE FIVE (5) ALLEN BOLTS WILL NOT LINE UP.

Figure 3-3 Replacement of Worn or Broken Flaps

1/8" of solid core, replace. All cutters must be replaced at the same time or the worn ones will not hit the surface.

Replace the 4 pins in alternate outside holes on inboard endplate, rotating one hole with each loading, using previously unused holes.

> **NOTE:** There are two cutter assemblies (C58 and C516) described in this manual. The only difference is the size of the cutters: 5/8" and 5/16".

Now, place cutters onto pins (6 on each outboard pin for the C58 assembly or 12 on each pin for the C516 assembly).

Place holes in outboard endplate over pins, making sure the X's on the inboard and outboard endplates are aligned. This allows perfect alignment of allen bolts. Replace allen bolts and lock washers and tighten.

3.2.3 Replacement of Worn or Broken Flaps (Figure 3-3)

Disconnect power source from machine.

Remove the center allen bolt and lock washer that secures head to drive shaft.

Slide head off.

Remove outboard endplate form HDRP hub assembly by removing the 4 allen bolts and 4 lock washers.

Remove HDRP hub and spacer rings from drive shaft hub.

Remove spacer rings from HDRP hub ends.

Remove keeper pins and flaps from HDRP hub.

Clean rings, HDRP hub, drive shaft hub, and endplates with a stiff bristle brush.

Inspect rings, HDRP hub, drive shaft hub, endplates and keeper pins for wear and damage.

> **NOTE:** Although it is more economical in most cases to use a full load of flaps for stripping, the machine can be operated with a half load. Procedures for installation of flaps for both are shown below.

3.2.3.1 For All Loads:

Install assembled spacer rings into HDRP hub ends so that the pegs of one set are in alternate slots than those of the other set.

Put drive shaft hub on flat surface and slide HDRP hub over. To prevent jamming, use only one hand to install HDRP hub assembly onto drive shaft hub.

Now install flaps (see full and half load procedures below).

Reinstall outboard endplates; align "X's."

Reinstall lock washers and bolts.

Ensure flaps rotate so printed side hits surface first as shown previously in Chapter 2, Figure 2-2.

3.2.3.2 For Full Load:

Install new flaps the full length of each slot in the HDRP hub. Ensure that the front side (printed side) of each flap is kept in the same direction.

Install keeper pins through all flaps. Ensure pin length is equal to width of all flaps in a slot.

Insert pegs of No. 2 spacer rings through holes marked F in No. 1 spacer rings.

3.2.3.3 For Half Load:

Install new flaps the full length of every other slot in the HDRP hub. Ensure the front side (printed side) of each flap is kept in the same direction.

Install keeper pins through all flaps. Ensure pin length is equal to width of all flaps in a slot.

Insert pegs of No. 2 spacer rings through holes marked H in No. 1 spacer rings.

3.2.4 Replacement of Worn BPH Abrasive Wheel (Figure 3-4)

Disconnect power source from machine.

Remove the center allen bolt and lock washer that secures head to drive shaft.

Slide head off.

Remove outboard endplate from drive shaft hub by removing the 4 allen bolts and 4 lock washers.

Remove worn abrasive wheel from drive shaft hub.

Slip new wheel over hub.

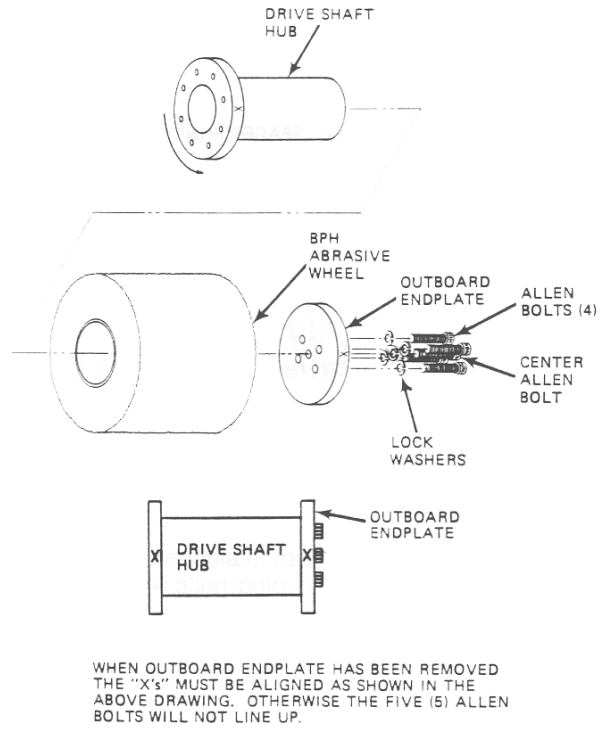


Figure 3-4 Replacment of Worn BPH Abrasive Wheel

Align X on outboard endplate with X on drive shaft hub. This allows perfect alignment of allen bolt holes.

Replace allen bolts and lock washers and tighten.

Reinstall head on machine.

3.2.5 Adjustment of Set Collar (Figure 3-5)

If the hub assembly does not turn, or if there is excessive vibration when machine is running, check to ensure that the safety set collar is properly adjusted. This could happen especially when the abrasive wheel hub assembly has been installed on the machine.

Ensure that the center allen bolt has been securely tightened on the hub assembly.

> **NOTE:** There should be from 1/16" to not more than 1/8" space between the safety set collar and the machine chassis.

There are two (in some cases only one) set screws in each hole of the set collar. If there are two in each hole, remove the first and loosen the second so that the set collar can be moved.

If the collar is too tight to be moved with the fingers, carefully insert a large screwdriver between the set collar and the pulley and pry at various points around the set collar until loosened.

3.2.6 Disassembly of AF525 Air Motor (Figure 3-6)

> **NOTE:** Numbers in parenthesis correspond with those on exploded view drawing, Figure 3-6 and Chapter 4, Figure 4-2.1.

Remove screws (2) and lock washers (3) that hold both the dead end cover (4) as well as the drive end cover (16).

Remove bearing (6) from dead endplate (7).

Remove shaft seal (17) from drive end cover (16), then bearing (15) from drive endplate (14).

Remove hex head bolts (1); eight from dead endplate (7) and eight from drive endplate (14).

Push pins (5); two in each endplate should come out when endplates are pulled from body (9). All other parts should now drop out of body.

3.2.7 Assembly of AF525 Air Motor (Figure 3-6)

Select endplate. Position drive endplate (14) over rotor shaft (13).

Position bearing (15) on rotor shaft (13). Using a bearing pusher, press bearing into drive endplates.

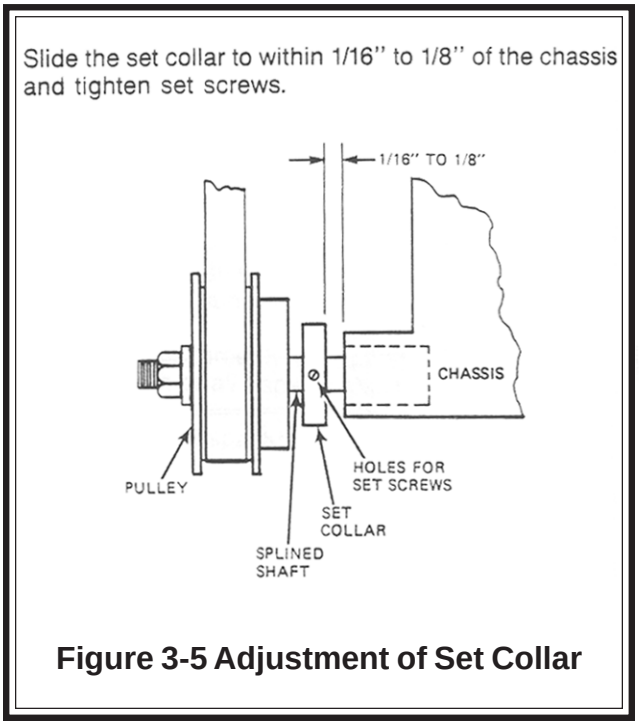


Figure 3-5 Adjustment of Set Collar

Install drive end cover (16) onto endplate (14); tighten screws as if final assembly (**DO NOT** install steal (17) at this time).

To position rotor (13), place two .0015" shims between rotor and endplate; one on each side of shaft. Using inner race tapper, tap inner race of bearing until you have a snug fit on shims between endplate and rotor. Remove drive end cover (16).

The body (9) has two long ports and can be assembled from either side. Assemble gasket (8) onto drive end of body; hold in position with a few drops of oil. Insert push pins (5) into endplate (14).

Insert rotor in body, position endplate over the gasket. Ensure oil holes in endplate are at top of body, now insert eight bolts (1), and tighten.

Rest parts on drive end cover (16). Using a .0015" shim, ensure a snug fit between tightest segment and top of body.

Insert pins (12) into holes of rotor (13).

Assemble springs (11) into slots of vanes (10) and insert into rotor (13).

Place second gasket (8) into position on dead end of body. Hold in place with oil. Insert push pins (5).

Position dead endplates (7) over shaft, place on body over gasket, tighten bolts (1), then loosen one turn.

Place bearings (6) on shaft. Using bearing pusher, position in endplate (7).

Check movement of endplate; endplate must move back and forth. If there is no movement, top clearance is not in center and you must reset top clearance. When it moves, tighten bolts.

Install dead end cover (4) and tighten screws.

Install seal (17) into drive end cover (16).

3.3 Troubleshooting

Malfunctions that might occur during operation of the rotary-peening machine, instructions for determining cause of the malfunction and the maintenance procedures required to restore operation are shown in Table 3-1.

3.4 Inspection

Instructions, including scheduling for inspection of rotary-peening machine for damage and wear, are shown in Table 3-2.

3.5 Stowage

Prior to stowage, lubricate the following fittings with specified grease:

- Drive shaft
- Adjustment wheel
- Adjustment nut
- Adjustment fulcrum bolt
- Left and right wheel bearings

> **NOTE:** Lubrication points can be found in Chapter 2, Figure 2-5.

Wipe off all dust and dirt with dry rag.

Remove, coil, and secure all hoses with a piece of wire or string.

Stow machine and accessories in designated stowage location.

To prevent corrosion from salt spray exposure during prolonged stowage period, machine should be sprayed with a silicone material.

ALWAYS remove weight from machine prior to stowage.

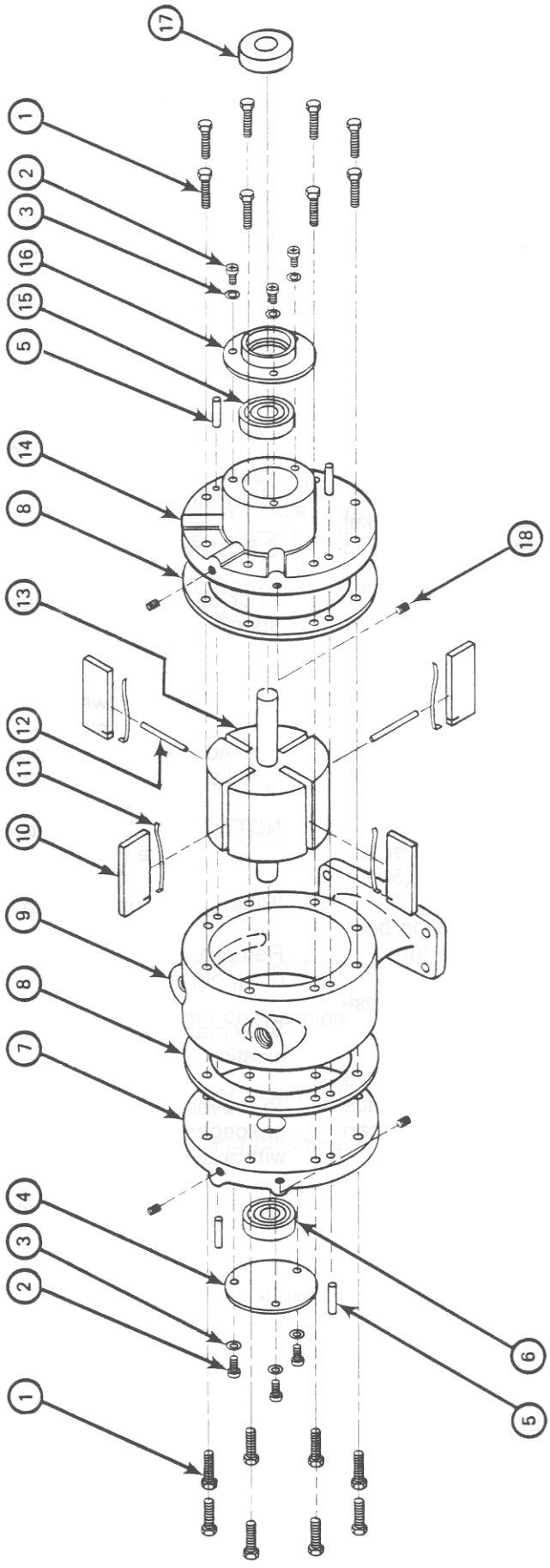


Figure 3-6 AF525 Air Motor, Assembly/Disassembly

TABLE 3-1
TROUBLESHOOTING CHART FOR MODEL AF525 AND EF525 ROTARY-PEENING DECK MACHINES

MALFUNCTION	PROBABLE CAUSE	SOLUTION
Loss of air pressure	Dirty filter element in lubricator	Replace filter
	Clogged Muffler	Clean screen and felt in muffler
	Frozen air motor	Service interior of motor
Loss of power	Blown fuse	Replace fuse
	3-phase has been changed to single phase (wire loose). Motor has hum	Electrician to check electrical circuits
	Safety set collar incorrect spacing	Adjust safety set collar as shown previously in Figure 3-5
Hub does not turn	Safety set collar needs adjustment	Adjust safety set collar as shown previously in Figure 3-5
Belt fraying	Pulley out of line	Line up pulleys
	Belt too loose	Tighten belt
Premature flap wear	Direction of rotation not correct	Install flaps printed side first
	Improper height adjustment	Install weight and reset height
Excessive pin breakage	Weight on machine	Remove weight
	Improper height adjustment	Adjust for proper height
	Operating machine over bolts	Use correct procedures
Hub will not fasten on shaft with center allen bolt	X's not lined up on hub assembly	Line up X's as shown previously in Figure 3-1
	Minor adjustment	Loosen outboard endplate parameter allen bolts—tighten center bolt, then tighten parameter bolts
Abrasive wheel slips	Wrong endplate	Use BPH endplate only
	Bolts not tight	Tighten bolts
	Minor problem	Add spacer between hub flange and abrasive wheel to obtain additional compression
Excessive vibration with abrasive wheel	Wheels need dressing	Dress wheel by going over sharp edge or non-skid
	Bushings worn	Insert new bushings (to be performed by experienced machinist)

TABLE 3-2
INSPECTION AND REPLACEMENT SCHEDULE FOR PARTS
MODELS AF525 and EF525

PART	INSPECTION	REPLACEMENT
Hammers	Daily	Replace when worn so hammer doesn't strike surface or when hammer is broken.
Cutters	Daily	Replace when worn to within 1/8" of solid core.
Flaps	Daily	Replace when tips are worn off or fabric is torn.
Abrasive Wheel	Daily	Replace when worn to within ¼" of flange.
Pins	Daily	Replace pins if any ridges or cracks are found. Pins should have a smooth surface.
Hoses	Daily	If leaks are discovered, hose should be replaced. If leaks are around fittings, hose may be repairable.
Cords	Daily	If cracks or fraying are seen, replace electrical cords
Belts	Daily	If belt shows signs of fraying or extreme wear, replace as needed.
O-Rings	30-60 Days	If o-rings become hard or cracked, they should be replaced. To prevent drying out, always coat o-rings with lubricant such as petroleum jelly before installation.
Air Motor:		
Body	30-60 Days	Examine ID of body for rough circular grooves. If grooves are in excess of .005" deep, replace body. Minor scoring and rust can be removed with a fly-bur tool.
Rotor	30-60 Days	Examine the rotor shaft for wear. If shaft has worn to where it can be inserted into the bearings without having to be press fitted, rotor should be replaced.
Endplates	30-60 Days	Examine both the front and rear endplates for wear. If the face shows wear greater than a depth of .005", the endplates should be replaced.
Bearings	30-60 Days	Hold the inner race and rotate the outer race of the bearing by hand. If rough movement or substantial play are detected, replace bearing.
Rotor Bearings	30-60 Days	Compare the width of an old rotor blade with the width of a new blade. If the old blades show 20% or more wear, they should be replaced.

CHAPTER 4
ILLUSTRATIONS AND PARTS LISTS FOR MODEL AF525 ROTARY-PEENING DECK MACHINE

This chapter presents illustrations and parts breakdown for the AF525 Model Rotary-Peening Deck Machine. Each illustration is an exploded view of the equipment and is accompanied by a table showing the list of parts.

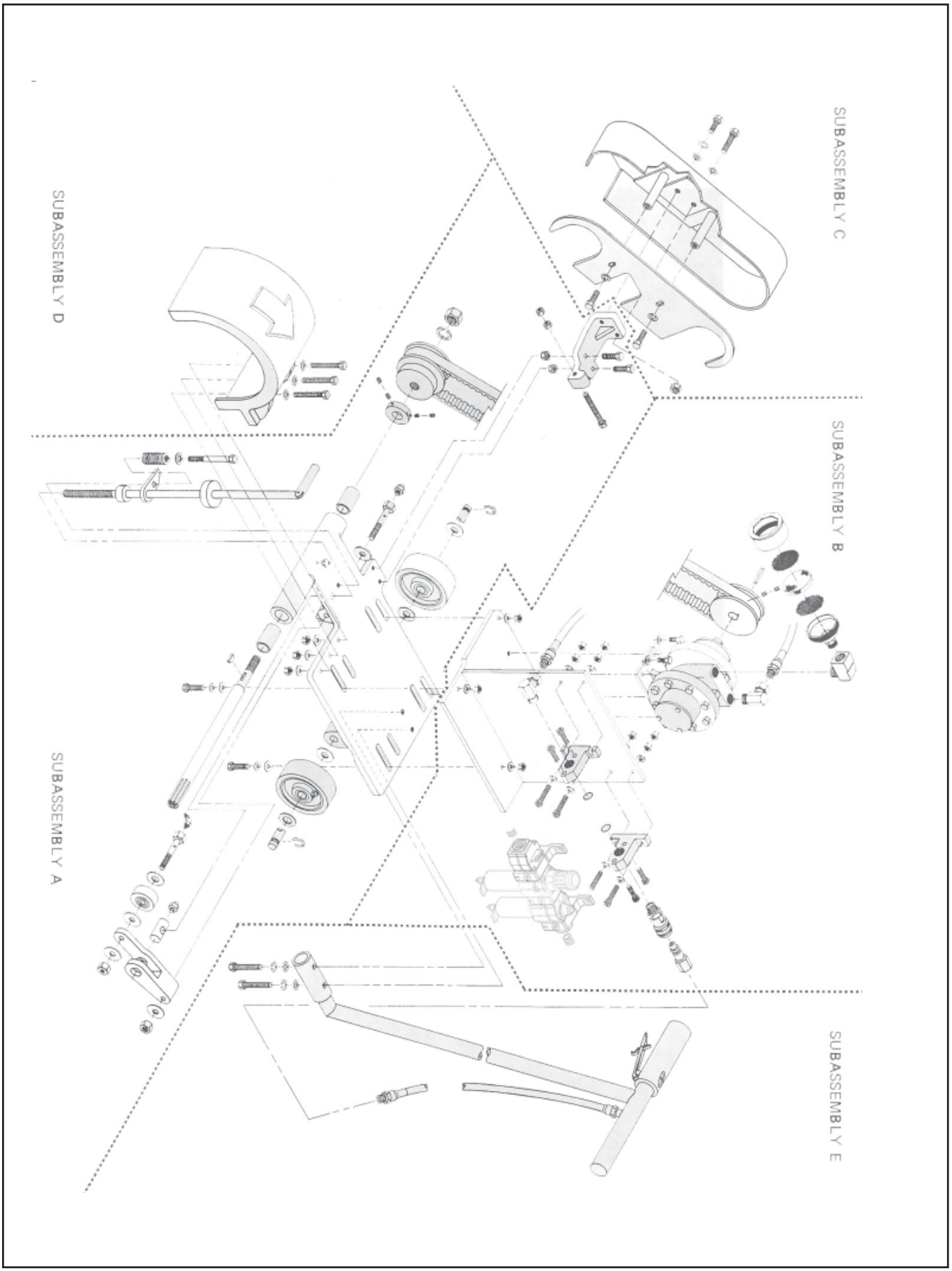


Figure 4-0 AF525 Rotary-Peening Deck Machine

TABLE 4-1: PARTS BREAKDOWN
MODEL AF525 SUBASSEMBLY A

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	120.080	Belt Guard Support	1
2	750.020	3/8” x 1-3/4” Hex Head Bolt	2
3	120.081	Safety Bolt	1
4	750.066	3/8” Hex Nut	2
5	750.061	3/8” Hex Lock Nut	2
6	750.065	¾” Hex Nut	1
7	750.055	¾” Lock Washer	1
8	120.109	Timing Belt Pulley	1
9	750.105	5/16” x 3/8” Set Screw	4
10	120.110	Splined Shaft Safety Collar	1
11	500.074	1/8” NPT Grease Fitting	3
12	120.089	Adjustment Fulcrum Bolt	1
13	750.115	½” Flat Washer	5
14	120.059	Bushing Splined Shaft	2
15	120.094	Adjustment Tension Bolt (3/8” x 3-1/2”)	1
16	750.050	3/8” Flat Washer SAE	1
17	120.092	Adjustment Tension Spring	1
18	120.095	Adjustment Lever Weld Assembly	1
19	120.108	3/16” x ¾” Woodruff Key	1
20	120.111	Splined Shaft	1
21	500.145	1/8” NPT Grease Fitting (90 degree)	1
22	120.087	Adjustment Wheel Bolt	1
23	120.086	Adjustment Wheel	1
24	120.088	Adjustment Fulcrum	1
25	750.060	½” Lock Nut	2
26	120.090	Adjustment Nut	1
27	120.162	Main Axle	1
28	120.106	Snap Ring-Chassis Wheel	2
29	750.055	¾” Flat Washer	4
30	120.163	Wheel 5” Diameter	2
31	120.071	Sub Assembly Main Chassis	1

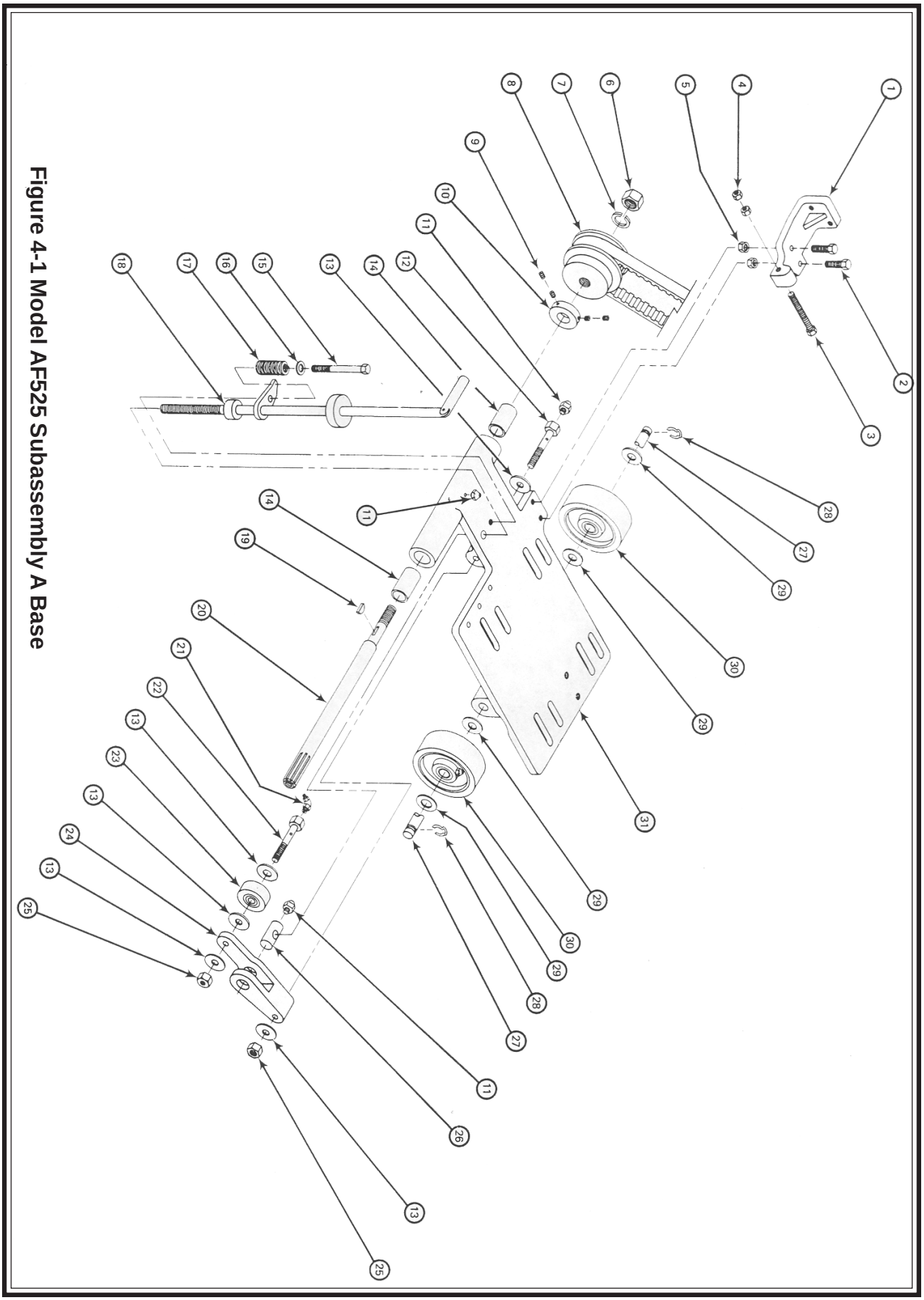


Figure 4-1 Model AF525 Subassembly A Base

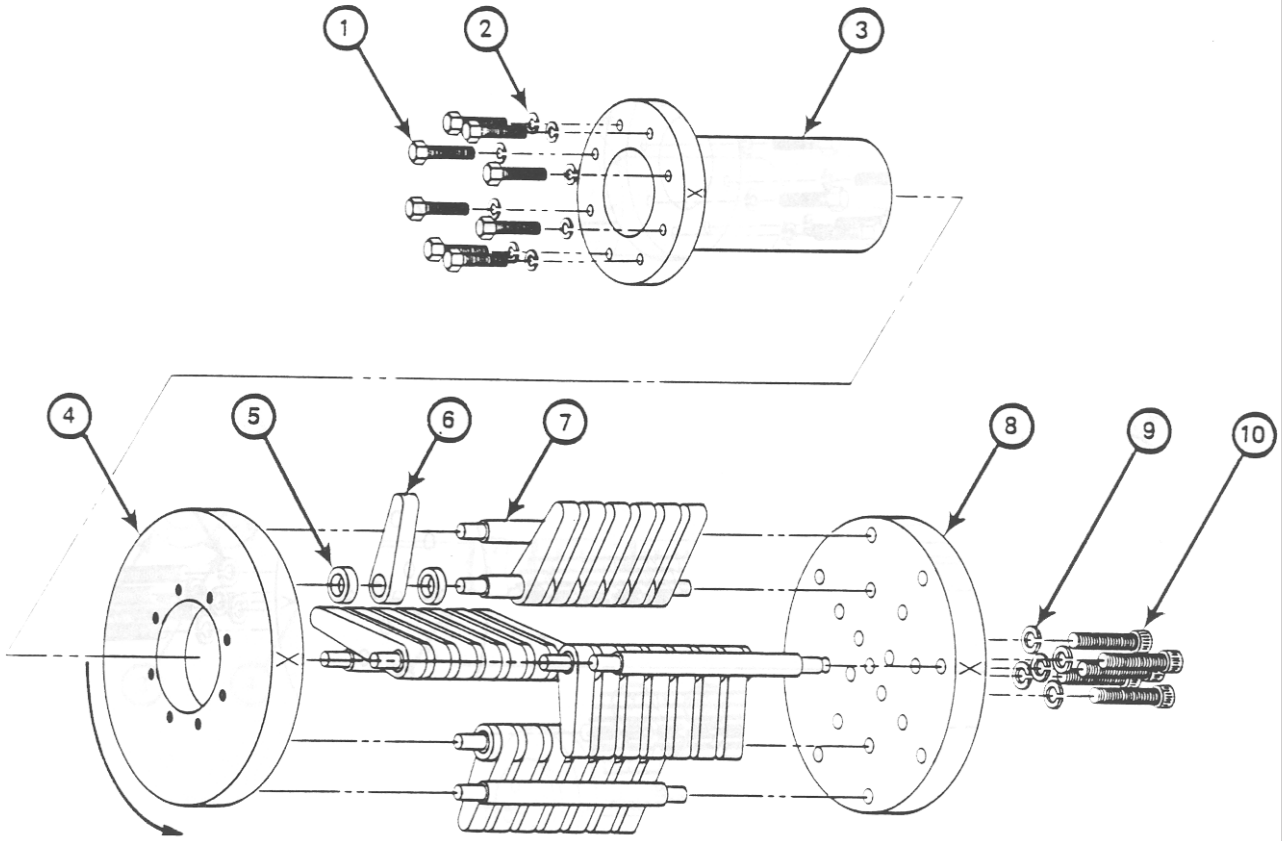


Figure 4-1.1 Model AF525 Subassembly A.1 Hammer Hub, Part Number 120.030

TABLE 4-1.1: PARTS BREAKDOWN
MODEL AF525 SUBASSEMBLY A.1
(120.030 HAMMER HUB)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	750.028	5/16” X 1” Hex Head Bolt, Grade 5	8
2	750.057	5/16” Lock Washer	8
3	120.112	Hub Desco	1
4	120.164	Endplate, Inboard	1
5	550.045	Spacer	28
6	800.094	Hammer	28
7	120.055	Pin	8
8	120.074	Endplate, Outboard	1
9	120.076	½” x 3/16” Lock Washer	4
10	120.075	½” x 1-1/4” Socket Head Bolt	4

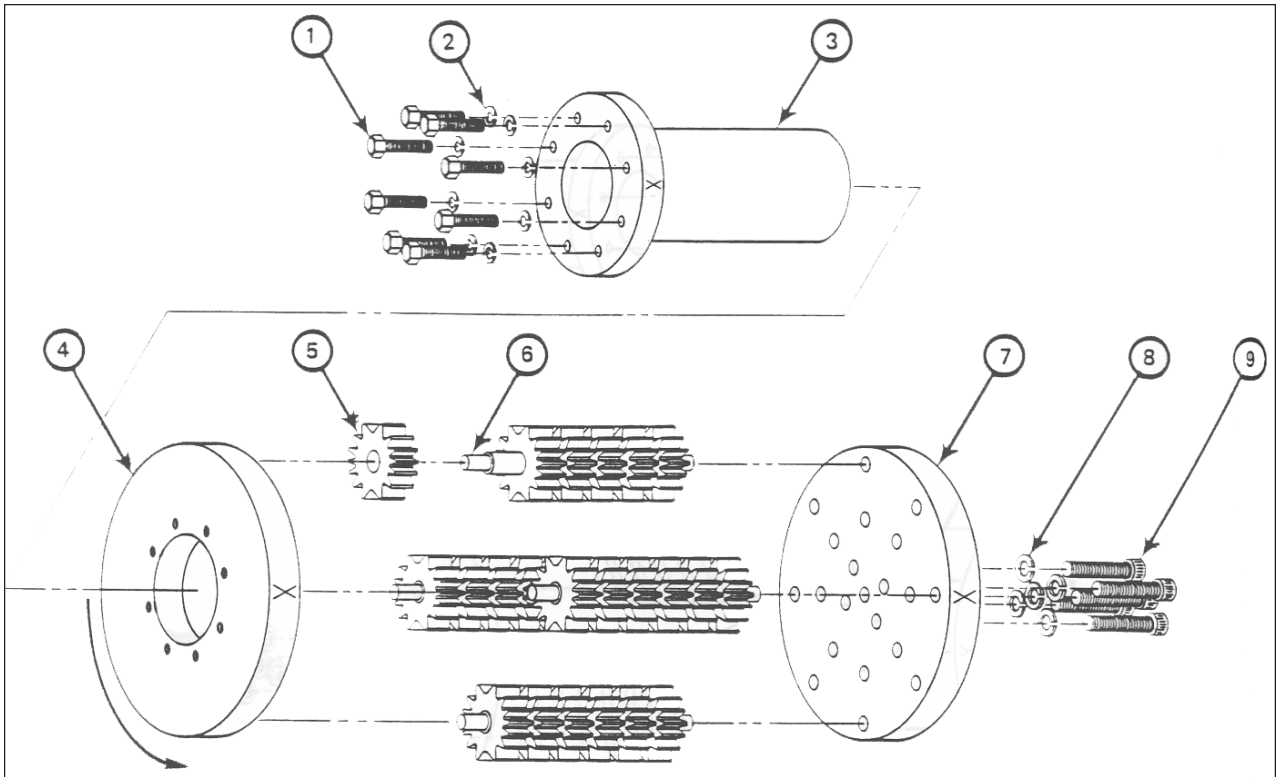


FIGURE 4-1.2 Model AF525 Subassembly A.2 Cutter Hub and Subassembly A.3 Cutter Hub (not shown) Part Numbers 120.024 and 120.023

TABLE 4-1.2: PARTS BREAKDOWN
MODEL AF525 SUBASSEMBLIES A.2 AND A.3
(120.024 AND 120.023 CUTTER HUBS)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	750.028	5/16” x 1” Hex Head Bolt, Grade 5	8
2	750.057	5/16” Lock Washer	8
3	120.112	Hub Desco	1
4	120.164	Inboard Endplates	1
5	800.058	5/8” Cutter	24
6	120.055	Pin	4
7	120.074	Outboard Endplate	1
8	120.076	½” x 3/16” Lock Washer	4
9	120.075	½” x 1-1/4” Socket Head Bolt	4
10*	800.516	5/16” Cutter	48 [1]

*Not shown.
* Not shown.
[1] All parts on subassemblies A.2 and A.3 are same except size of cutters.

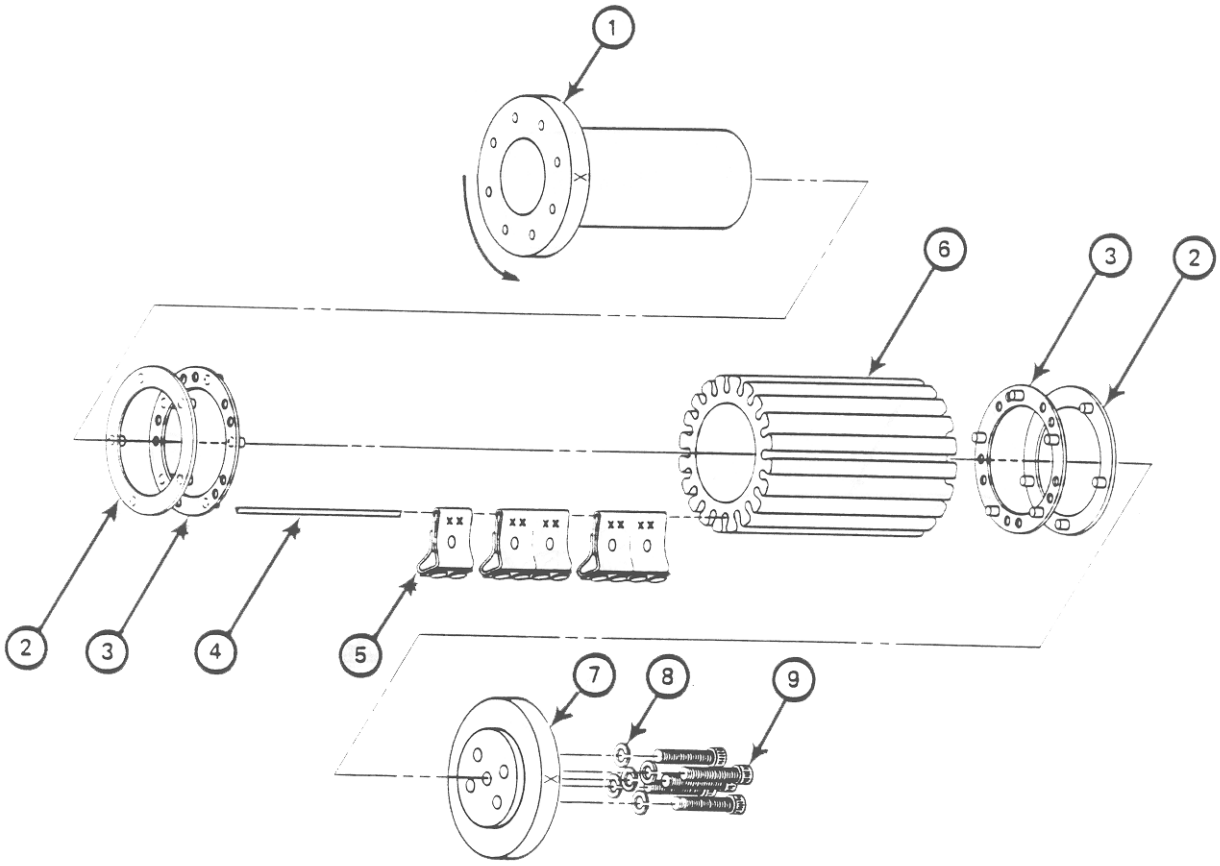


FIGURE 4-1.3 Model AF525 Subassembly A.4 Flap Hub. Part Number 120.029

TABLE 4-1.3: PARTS BREAKDOWN
MODEL AF525 SUBASSEBLY A.4
(120.029 FLAP HUB)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	120.112	Hub Desco	1
2	120.078	Spacer Ring 2	2
3	120.077	Spacer Ring 1	2
4	120.066	5” Keeper Pin	20
5	120.028	HDRP Flaps, Reload	1
6	120.065	HDRP Hub	1
7	500.094	Outboard Endplate	1
8	120.076	½” x 3/16” Lock Washer	4
9	120.075	½” x 1-1/4” Socket Head Bolt	4

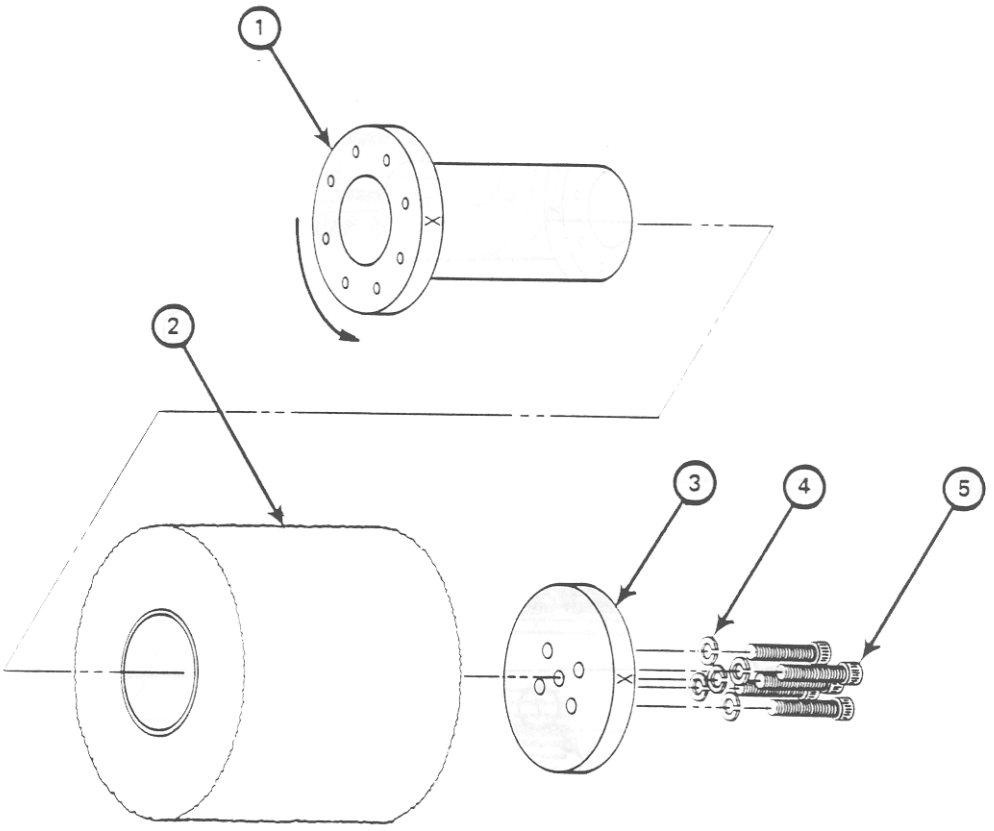


Figure 4-1.4 Model AF525 Subassembly A.5 BPH Abrasive Wheel Hub. Part Number 120.021

TABLE 4-1.4: PARTS BREAKDOWN
MODEL AF525 SUBASSEMBLY A.5
(120.021 BPH ABRASIVE WHEEL HUB)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	120.112	Hub Desco	1
2	170.023	5-1/4” x 7” Abrasive Wheel	1
3	120.015	Outboard Endplate	1
4	120.076	½” x 3/16” Lock Washer	4
5	120.075	½” x 1-1/4” Socket Head Bolt	4

TABLE 4-2: PARTS BREAKDOWN
MODEL AF525 SUBASSEMBLY B

REFERENCE NUMBER	PART NO.	PART NAME	QUANTITY
1	120.134	Muffler Assembly	1
2	120.136	½" Elbow- 90°	1
3	750.038	¼"-20 x ¼" Set Screw	2
4	120.157	Key	1
5	550.402	Timing Belt	1
6	120.137	Timing Belt Pulley	1
7	120.121	Hose Assembly Regulator Motor	1
8	120.135	Swivel Fitting	2
9	120.122	Air Motor Assembly	1**
10	750.028	5/16" x ¾" Hex Head Bolt	4
11	750.057	5/16" Lock Washer	4
12	750.064	¼" Nut	8
13	750.054	¼" Lock Washer	8
14	120.119	Base Plate Assembly- Weld	1
15	120.120	Mounting Bracket	2
16	750.081	¼" x ¾" Socket Heads Screw	4
17	750.077	¼" x 1-1/2" Socket Head Screw	4
18	120.117	½" QD Socket-Hansen	1
19	120.132	½" QD Plug- Hansen	1
20	120.062	"O" Ring	2
21	120.165	Filter-Regulator-Lubricator	1***
22	750.050	3/8" Flat Washer SAE	8
23	750.066	3/8" Hex Lock Nut	4
24	550.405	3/8" Spacer	4
25	750.020	3/8" x 1-3/4" Hex Head Bolt	4

*Items cannot be purchased separately; must purchase assembly (PN 120.134)
**Exploded view of this unit is shown in Figure 4-2.1
***Exploded view of this unit is shown in Figure 4-2.2

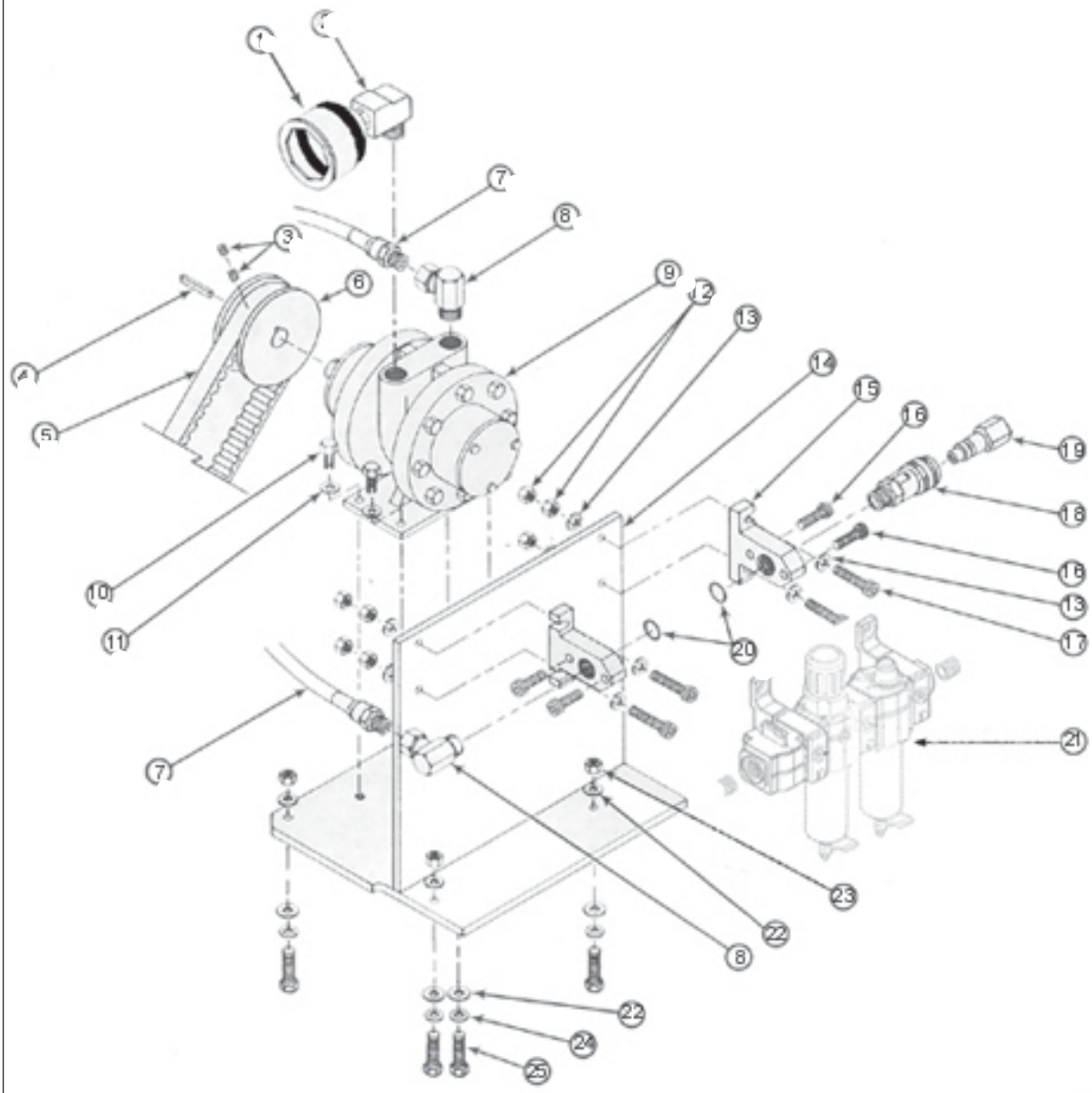


Figure 4-2 Model AF525 Subassembly B Motor.

TABLE 4-2.1: PARTS BREAKDOWN
MODEL AF525 SUBASSEMBLY B.1
(120.122 AIR MOTOR)

REFERENCE NUMBER	PART NO.	PART NAME	QUANTITY
1	750.033	5/16”-24 x ¾” Hex Head Bolt	16
2	750.091	¼”-20 x ¾” Screw	6
3	750.054	¼” Lock Washer	6
4	550.310	End Cover, Dead	1
5	550.519	Dowel Pin	4
6	550.316	Bearing, Dead	1
7	550.317	Endplate, Dead	1
8	550.315	Body Gasket	2
9	550.313	Body	1
10	550.312	Vane	4
11	550.308	Vane Spring	4
12	550.314	Push Pin	2
13	550.319	Rotor Assembly	1
14	550.318	Endplate, Drive	1
15	550.307	Bearing, Drive	1
16	550.309	End Cover, Drive	1
17	550.311	Shaft Seal	1
18	750.037	Oil Fill Set Screws	4

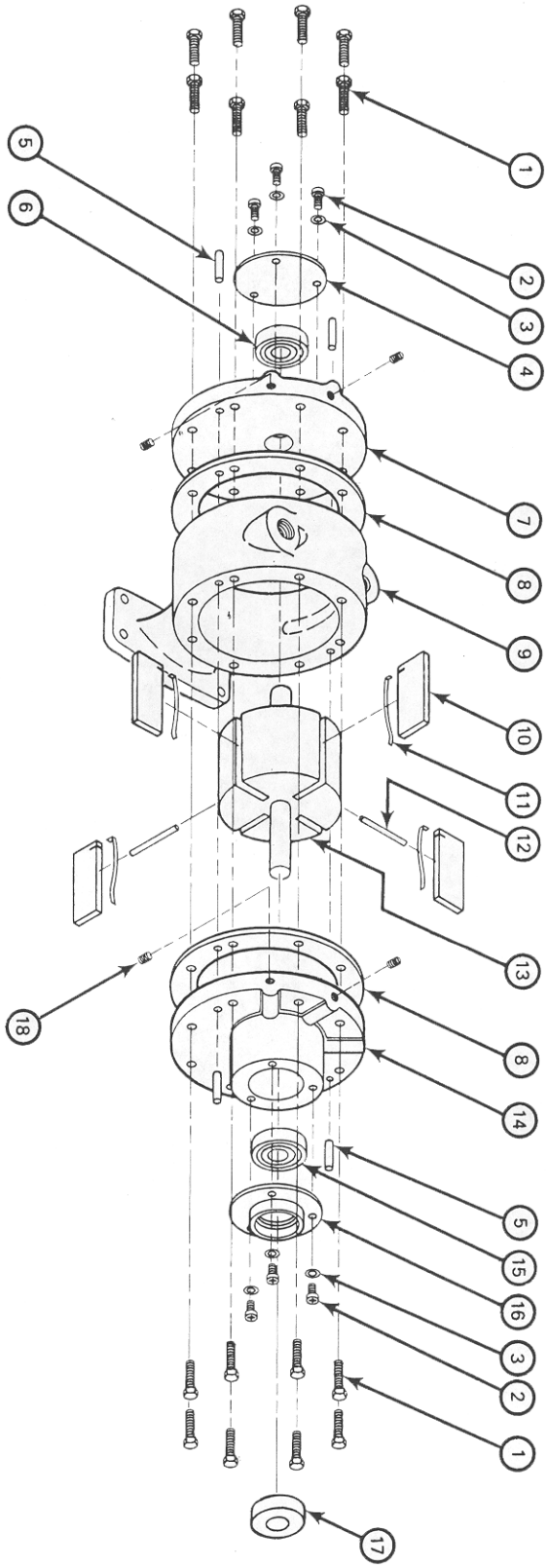


FIGURE 4-2.1 Model AF525 Subassembly B.1 Air Motor. Part Number 120.122

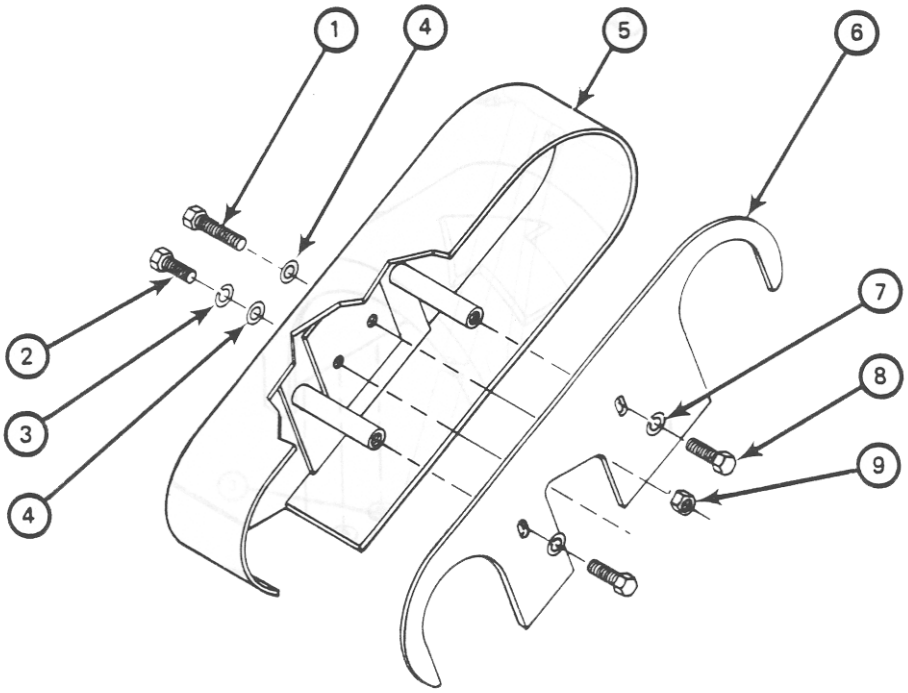


Figure 4-3 Model AF525 Subassembly C Belt Guard.

TABLE 4-3: PARTS BREAKDOWN MODEL AF525 SUBASSEMBLY C

REFERENCE NUMBER	PART NUMBER	PART NUMBER	QUANTITY
1	750.020	3/8” X 1-3/4” Hex Head Bolt	1
2	750.019	3/8” x 1-1/4” Hex Head Bolt	1
3	750.056	3/8” Lock Washer	1
4	750.050	3/8” Flat Washer	2
5	120.057	Belt Guard	1
6	120.058	Belt Guard Cover Plate	1
7	750.054	¼” Lock Washer	2
8	750.014	¼”-20 x 5/8” Hex Head Bolt	2
9	750.061	3/8” Hex Lock Nut	1

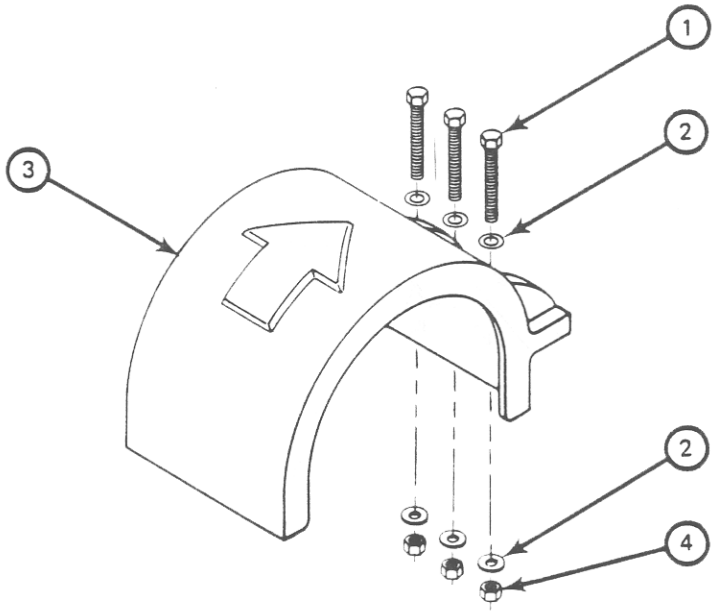


Figure 4-4 Model AF525 Subassembly D Hub Guard.

TABLE 4-4: PARTS BREAKDOWN
MODEL AF525 SUBASSEMBLY D

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	750.020	3/8” x 1-3/4” Hex Head Bolt	3
2	750.050	3/8” Flat Washer SAE	6
3	120.079	Hub Guard	1
4	750.061	3/8” Hex Lock Nut	3
5*	120.003	Dust Collector Outlet Attachment (optional)	1

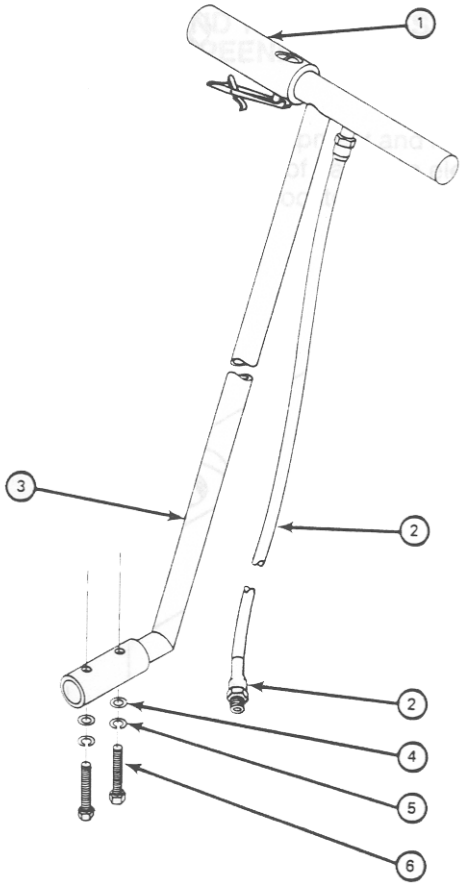


Figure 4-5 Model AF525 Subassembly E Handle.

TABLE 4-5: PARTS BREAKDOWN
MODEL AF525 SUBASSEMBLY E

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	120.130	Handle Air Valve Assembly	1*
2	120.131	Hose Assembly, Handle Power	1
3	120.082	Handle Assembly	1
4	750.050	3/8” Flat Washer	2
5	750.056	3/8” Lock Washer	2
6	750.023	3/8” x 2-1/4” Hex Head Bolt	2

* Exploded view of this unit is shown in Figure 4-5.1

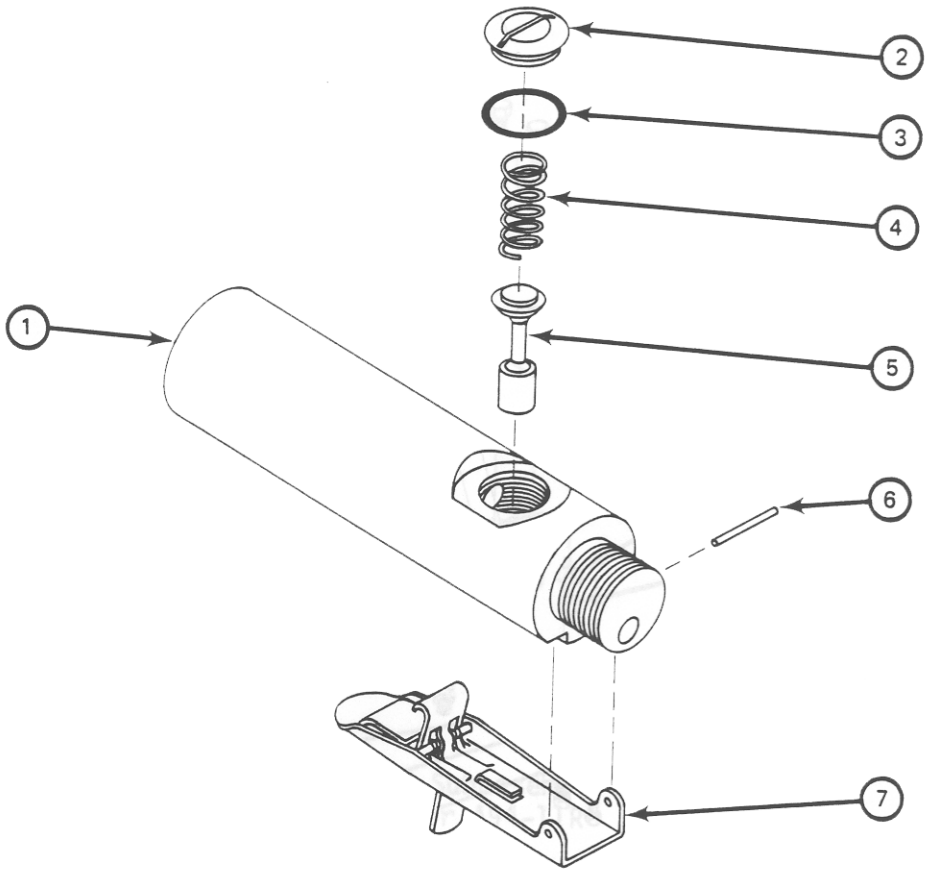


Figure 4-5.1 Model AF525 Subassembly E.1 Handle Air Valve
PART NUMBER 120.130

TABLE 4-5.1: PARTS BREAKDOWN
MODEL AF525 SUBASSEMBLY E.1
(120.130 HANDLE AIR VALVE)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	120.124	Air Valve Body	1
2	120.167	Air Valve Cover	1
3	120.128	“O” Ring	1
4	120.127	Spring	1
5	120.125	Air Valve	1
6	500.116	Lock-Off Lever	1
7	550.464	Pin	1

CHAPTER 5
ILLUSTRATIONS AND PARTS LISTS FOR MODEL EF525 ROTARY-PEENING DECK MACHINE

This chapter presents illustrations and parts breakdown for the EF525 Model Rotary-Peening Deck Machine. Each illustration is an exploded view of the equipment and is accompanied by a table showing the list of parts. An electrical schematic for the EF525 unit is located at the end of this chapter.

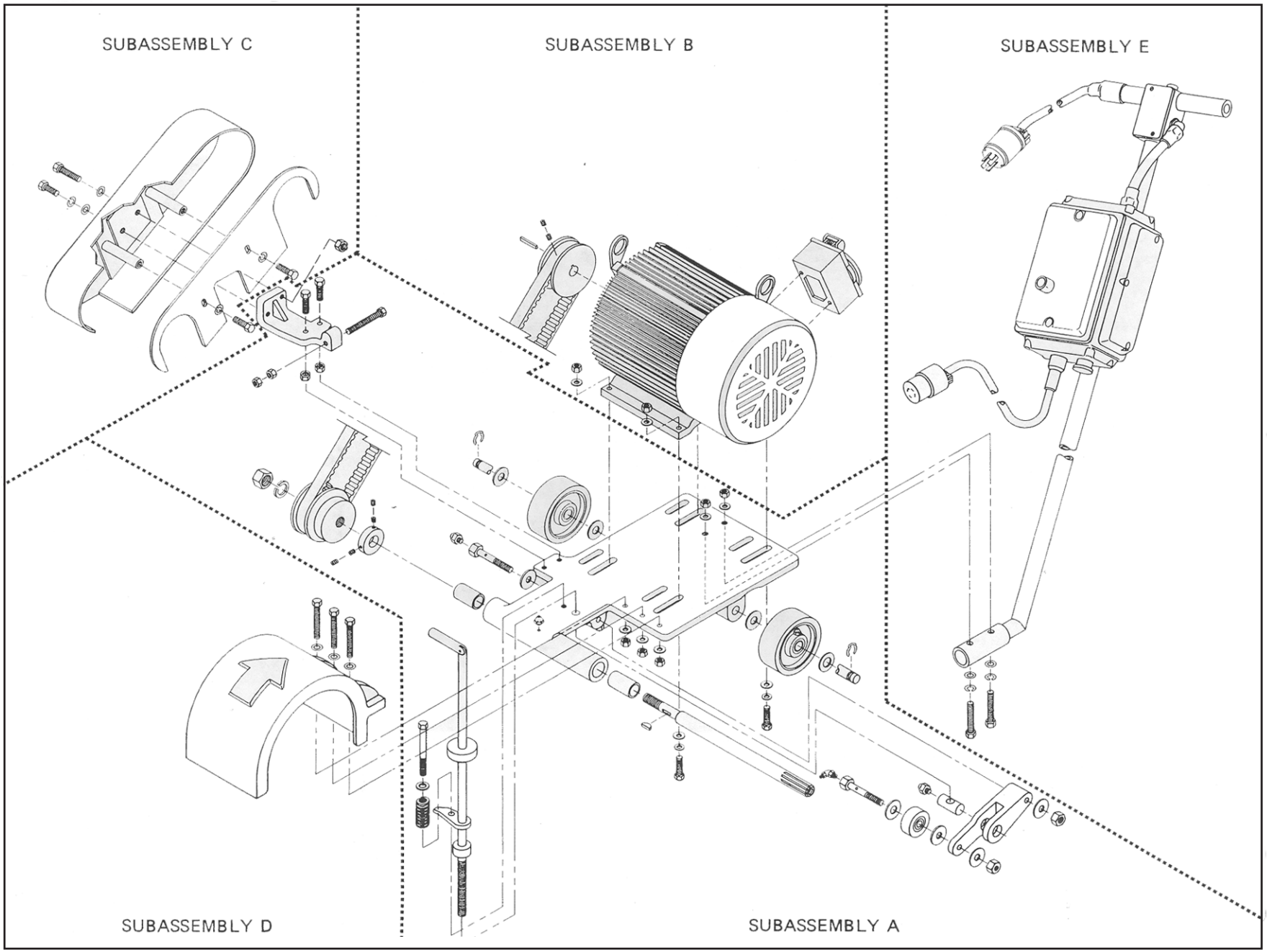


Figure 5-0 Model EF525 Rotary-Peening Deck Machine

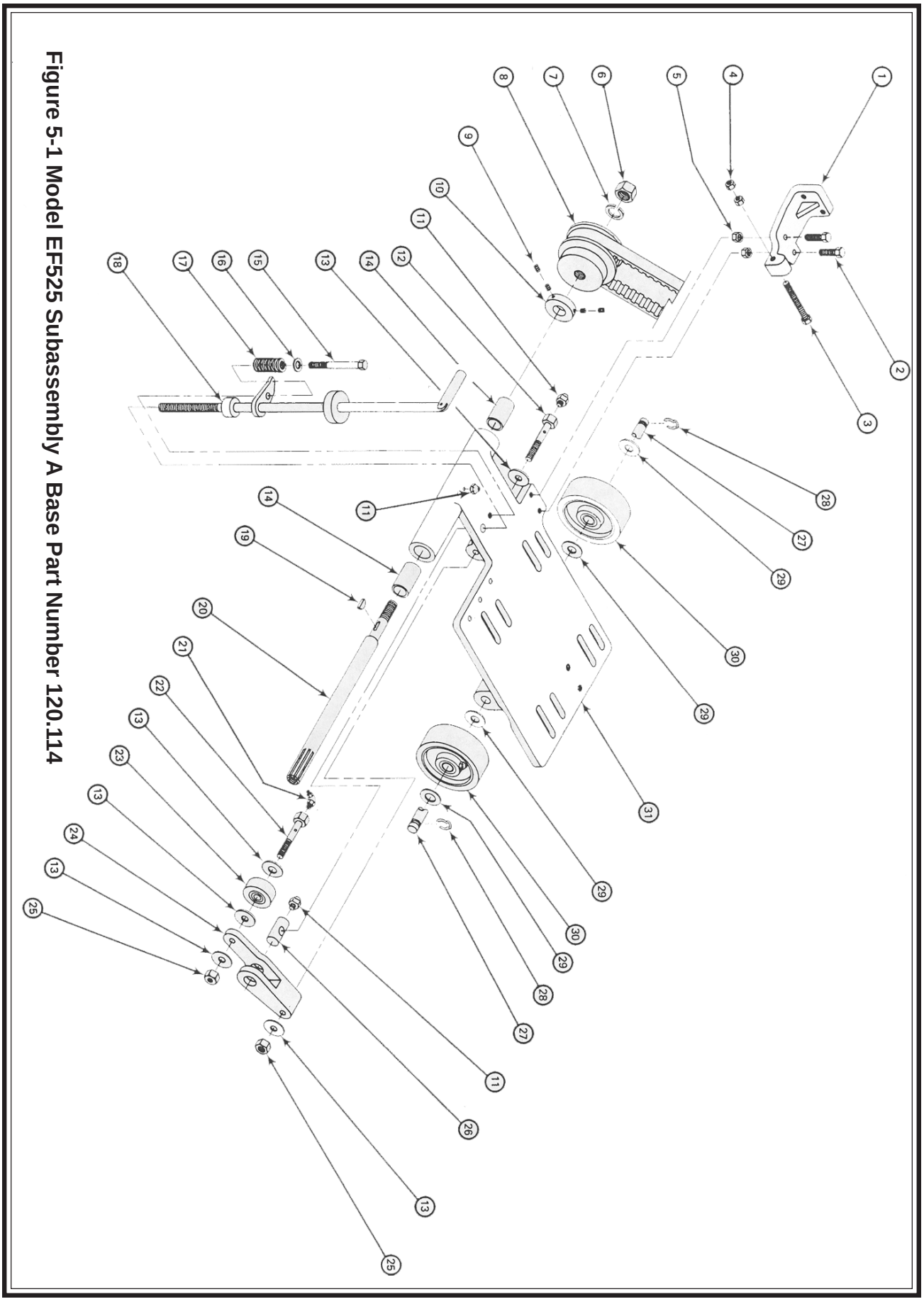


Figure 5-1 Model EF525 Subassembly A Base Part Number 120.114

TABLE 5.1: PARTS BREAKDOWN
MODEL EF525 SUBASSEMBLY A
(120.114 BASE)

REFERENCE NUMBER	PART NO.	PART NAME	QUANTITY
1	120.080	Belt Guard Support	1
2	750.020	3/8" x 1-3/4" Hex Head Bolt	2
3	120.081	Safety Bolt	1
4	750.066	3/8" Hex Nut	2
5	750.061	3/8" Hex Lock Nut	2
6	750.065	¾" Hex Nut	1
7	750.055	¾" Lock Washer	1
8	120.109	Timing Belt Pulley	1
9	750.041	5/16" x 3/8" Set Screw	4
10	120.110	Splined Shaft Safety Set Collar	1
11	500.074	1/8" NPT Grease Fitting	3
12	120.089	Adjustment Fulcrum Bolt	1
13	750.115	½" Flat Washer	5
14	120.059	Bushing Splined Shaft	2
15	120.094	Adjustment Tension Bolt (3/8" x 3-1/2")	1
16	750.050	3/8" Flat Washer SAE	1
17	120.092	Adjustment Tension Spring	1
18	120.095	Adjustment Lever Weld Assembly	1
19	120.108	3/16" x ¾" Woodruff Key	1
20	120.111	Splined Shaft	1
21	500.145	1/8" NPT Grease Fitting (90°)	1
22	120.087	Adjustment Wheel Bolt	1
23	120.086	Adjustment Wheel	1
24	120.088	Adjustment Fulcrum	1
25	750.060	½" Lock Nut	2
26	120.090	Adjustment Nut	1
27	120.162	Main Axle	1
28	120.160	Snap Ring-Chassis Wheel	2
29	750.049	¾" Flat Washer	4
30	120.163	Wheel 5" Diameter	2
31	120.071	Sub Assembly Main Chassis	1

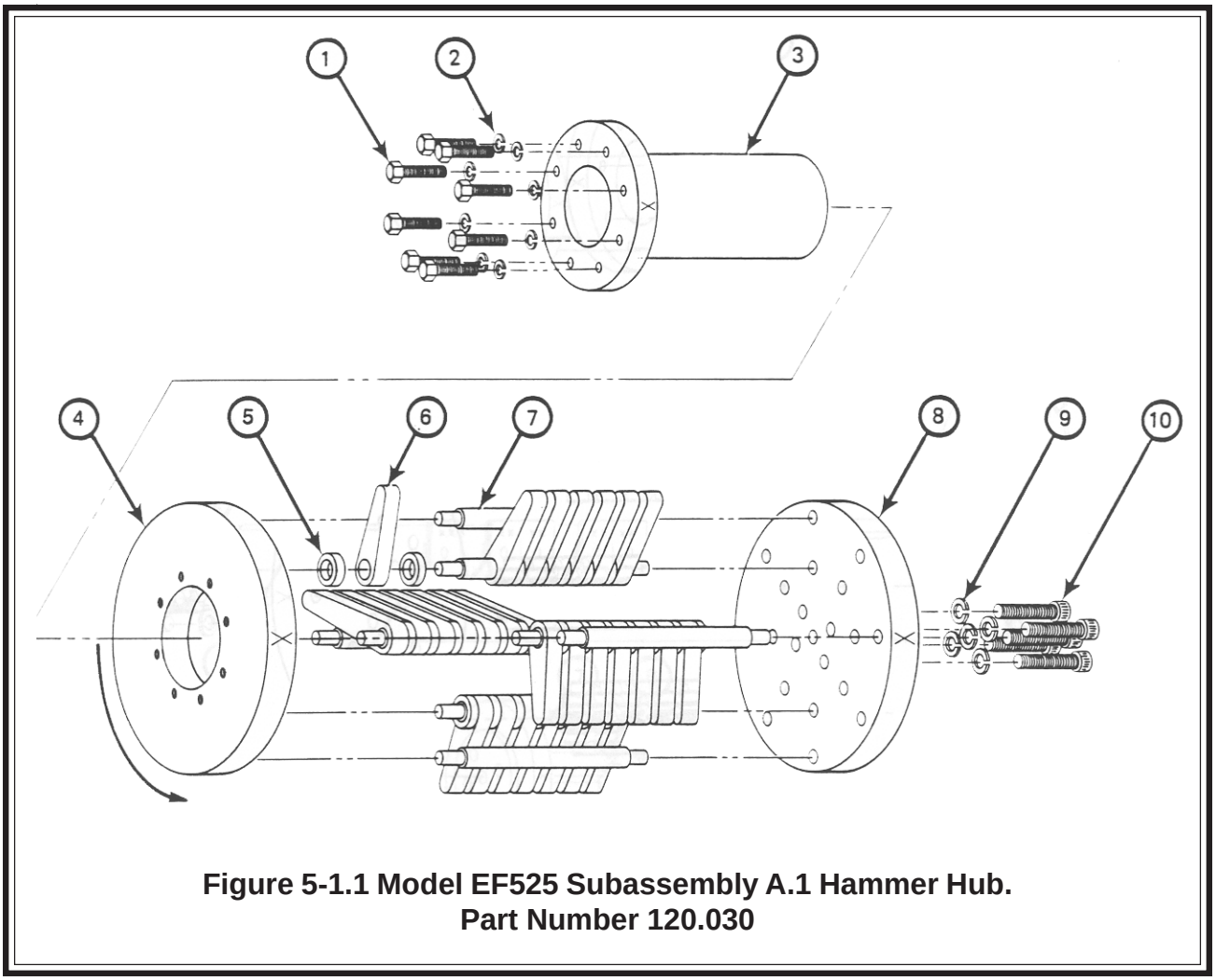


Figure 5-1.1 Model EF525 Subassembly A.1 Hammer Hub.
Part Number 120.030

TABLE 5-1.1: PARTS BREAKDOWN
MODEL EF525 SUBASSEMBLY A.1
(120.030 HAMMER HUB)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	750.028	5/16” x 1” Hex Head Bolt, Grade 5	8
2	750.057	5/16” Lock Washer	8
3	120.112	Hub Desco	1
4	120.164	Endplate, Inboard	1
5	550.405	Spacer	28
6	800.094	Hammer	28
7	120.055	Pin	8
8	120.074	Endplate, Outboard	1
9	120.076	½” x 3/16” Lock Washer	4
10	120.075	½” x 1-1/4” Socket Head Bolt	4

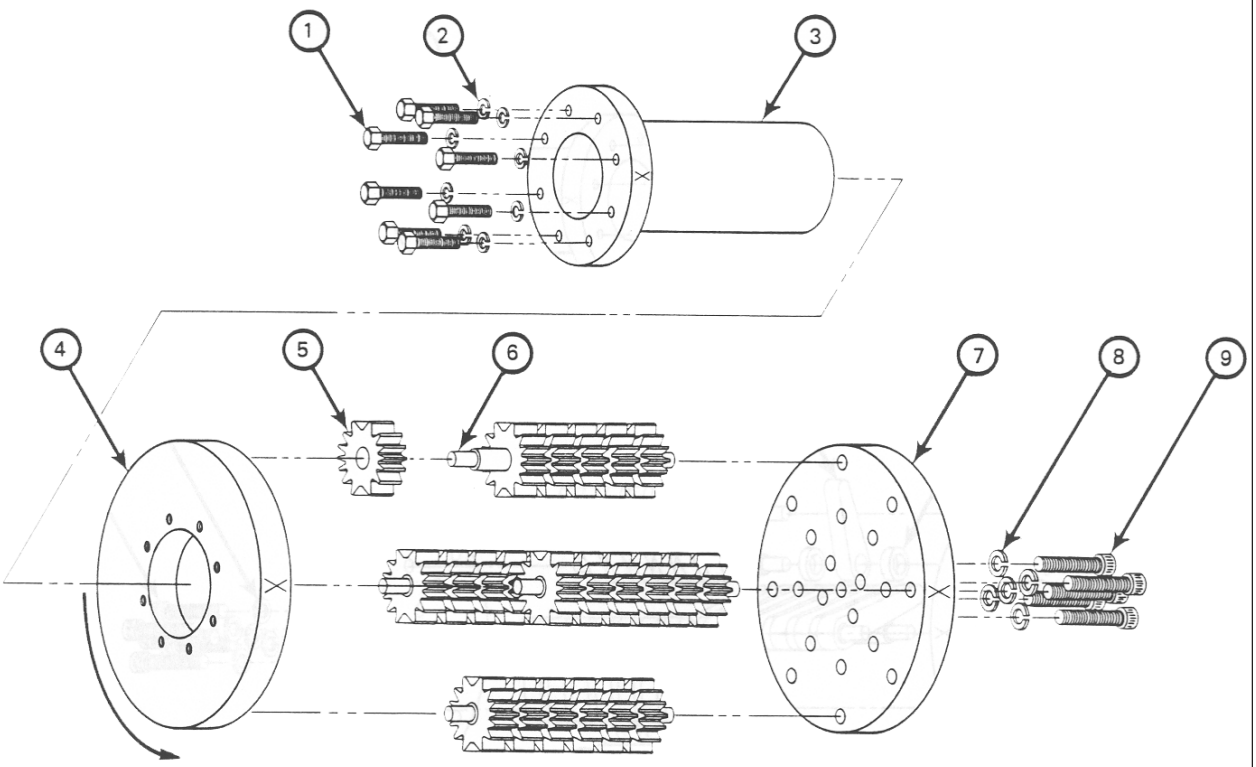


Figure 5-1.2 Model EF525 Subassembly A.2 Cutter Hub and Subassembly A.3 Cutter Hub (not shown). Part Number 120.024 and 120.023

TABLE 5-1.2: PARTS BREAKDOWN
MODEL EF525 SUBASSEMBLIES A.2 AND A.3
(120.024 AND 120.023 CUTTER HUB)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	750.028	5/16” x 1” Hex Head Bolt, Grade 5	8
2	750.057	5/16” Lock Washer	8
3	120.112	Hub Desco	1
4	120.164	Endplate, Inboard	1
5	800.058	5/8” Cutter	24
6	120.055	Pin	4
7	120.074	Outboard Endplate	1
8	120.076	½” x 3/16” Lock Washer	4
9	120.075	½” x 1-1/4” Socket Head Bolt	4
10*	800.516	5/16” Cutter	48**

*Not Shown
**All parts on subassemblies A.2 and A.3 are same except size of cutters.

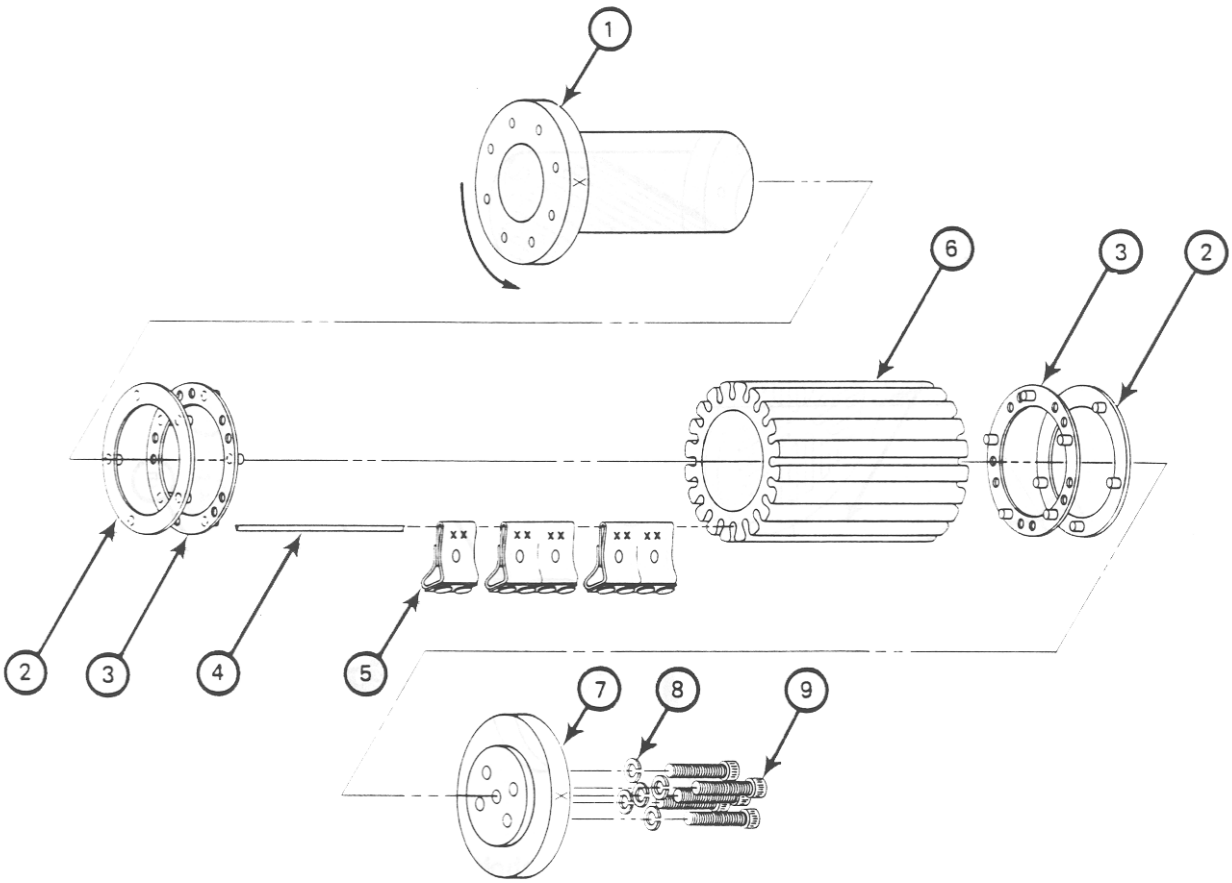


Figure 5-1.3 Model EF525 Subassembly A.4 Flap Hub
Part Number 120.029

TABLE 5-1.3: PARTS BREAKDOWN
MODEL EF525 SUBASSEMBLY A.4
(120.029 FLAP HUB)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	120.112	Hub Desco	1
2	120.078	Spacer Ring 2	2
3	120.077	Spacer Ring 1	2
4	120.066	5” Keeper Pin	20
5	120.028	HDRP Flaps, Reload	1
6	120.065	HDRP Hubs	1
7	500.094	Outboard Endplate	1
8	120.076	½” x 3/16” Lock Washer	4
9	120.075	½” x 1-1/4” Socket Head Bolt	4

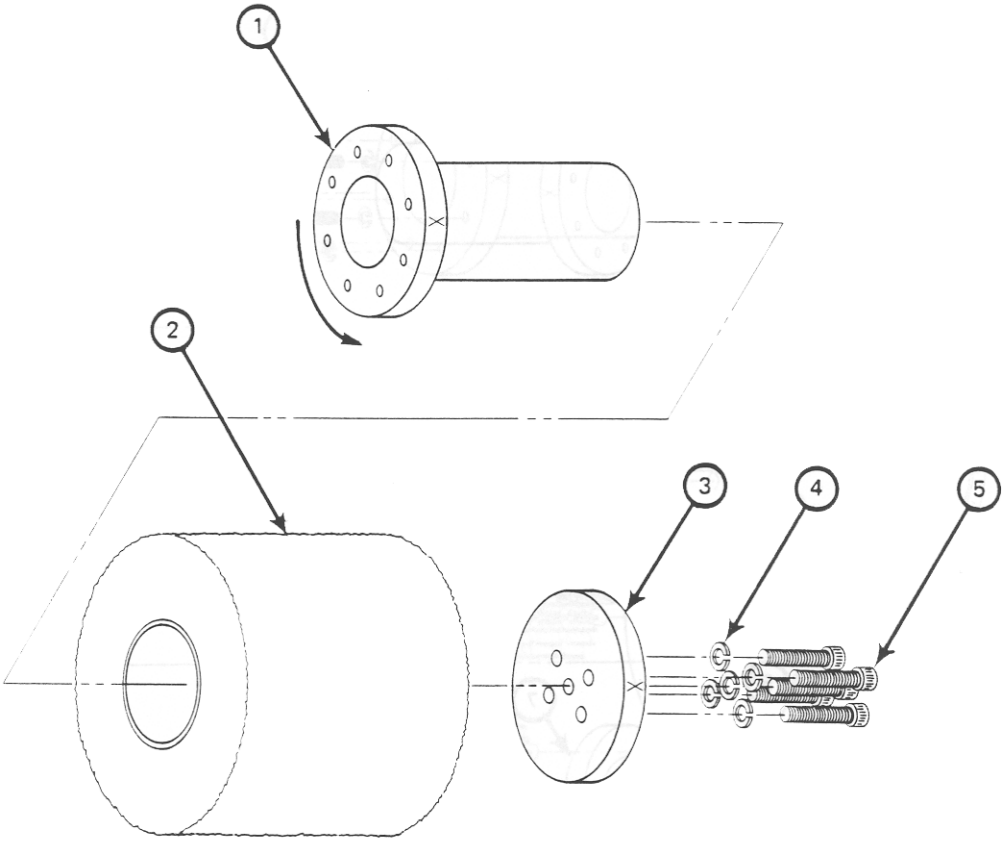


Figure 5-1.4 Model EF525 Subassembly A.5 BPH Abrasive Wheel Hub. Part Number 120.021

TABLE 5-1.4: PARTS BREAKDOWN
MODEL EF525 SUBASSEMBLY A.5
(PART NUMBER 120.021 BPH ABRASIVE WHEEL HUB)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	120.112	Hub Desco	1
2	170.023	5-1/4” x 7” Abrasive Wheel	1
3	120.015	Outboard Endplate	1
4	120.076	½” x 3/16” Lock Washer	4
5	120.075	½” x 1-1/4” Socket Head Bolt	4

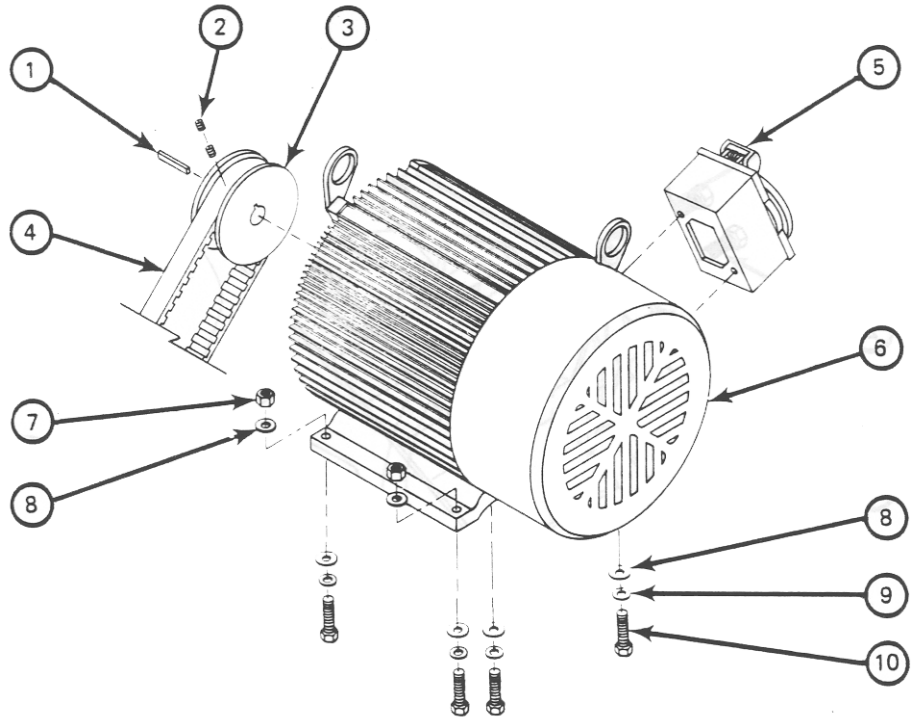


Figure 5-2 Model EF Subassembly B Motor

TABLE 5-2: PARTS BREAKDOWN
MODEL EF525 SUBASSEMBLY B

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	120.157	Key	1
2	750.038	¼”-20 x ¼” Set Screw	2
3	120.142	Timing Belt Pulley	1
4	550.402	Timing Belt	1
5	120.063	Motor Plug Receptacle Assembly	1
6	120.143	Motor	1
7	750.061	3/8” Lock Nut	4
8	750.050	3/8” Flat Washer SAE	8
9	550.405	3/8” Spacer	4
10	750.020	3/8” x 1-3/4” Hex Head Bolt	4

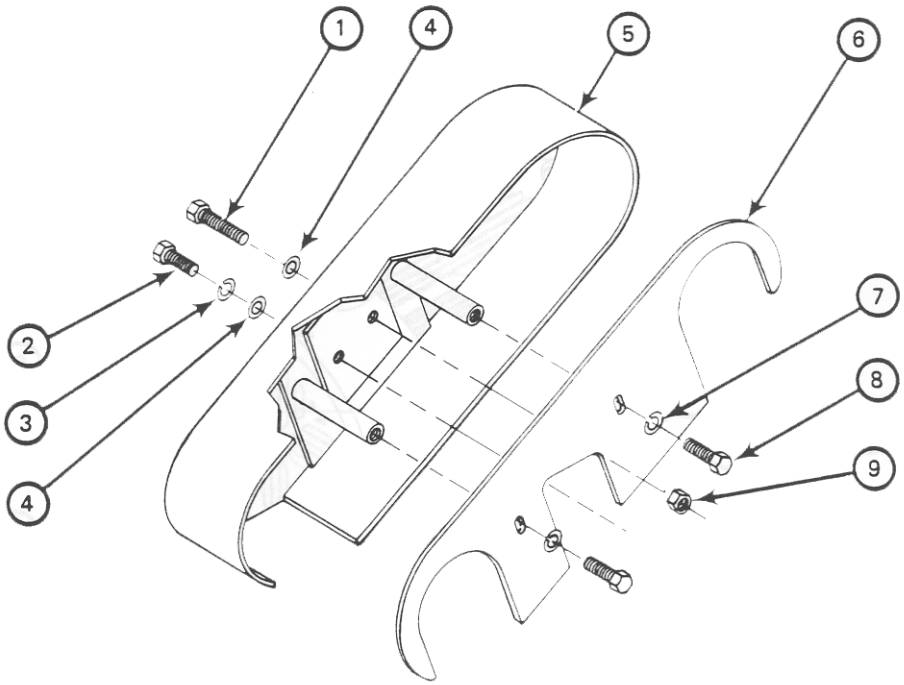


Figure 5-3 Model EF525 Subassembly C Belt Guard

TABLE 5-3: PARTS BREAKDOWN
MODEL EF525 SUBASSEMBLY C

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	750.020	3/8” x 1-3/4” Hex Head Bolt	1
2	750.019	3/8” x 1-1/4” Hex Head Bolt	1
3	750.056	3/8” Lock Washer	1
4	750.050	3/8” Flat Washer	2
5	120.057	Belt Guard	1
6	120.058	Belt Guard Cover Plate	1
7	750.054	¼” Lock Washer	2
8	750.014	¼”-20 x 5/8” Hex Head Bolt	2
9	750.061	3/8” Hex Lock Nut	1

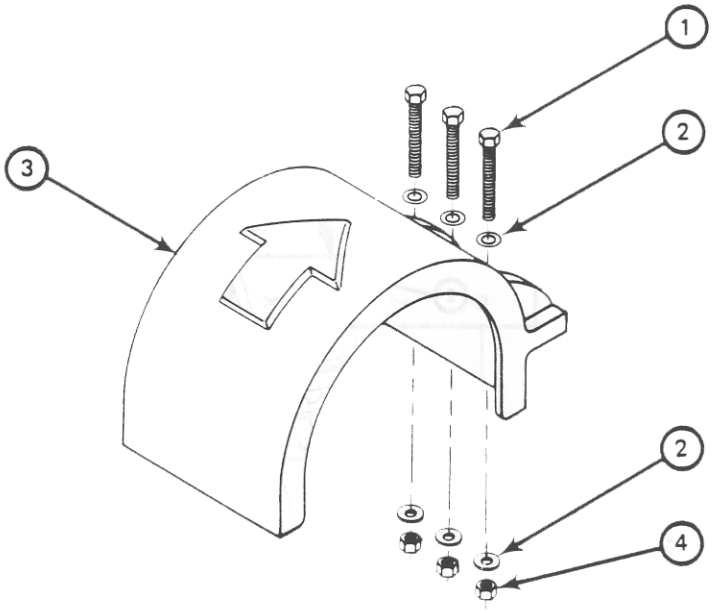


Figure 5-4 Model EF525 Subassembly D Hub Guard

TABLE 5-4: PARTS BREAKDOWN
MODEL EF525 SUBASSEMBLY D

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	750.020	3/8” x 1-3/4” Hex Head Bolt	3
2	750.050	3/8” Flat Washer SAE	6
3	120.079	Hub Guard	1
4	750.061	3/8” Hex Lock Nut	3
5	120.003	Dust Collector Outlet Attachment (Optional)	1

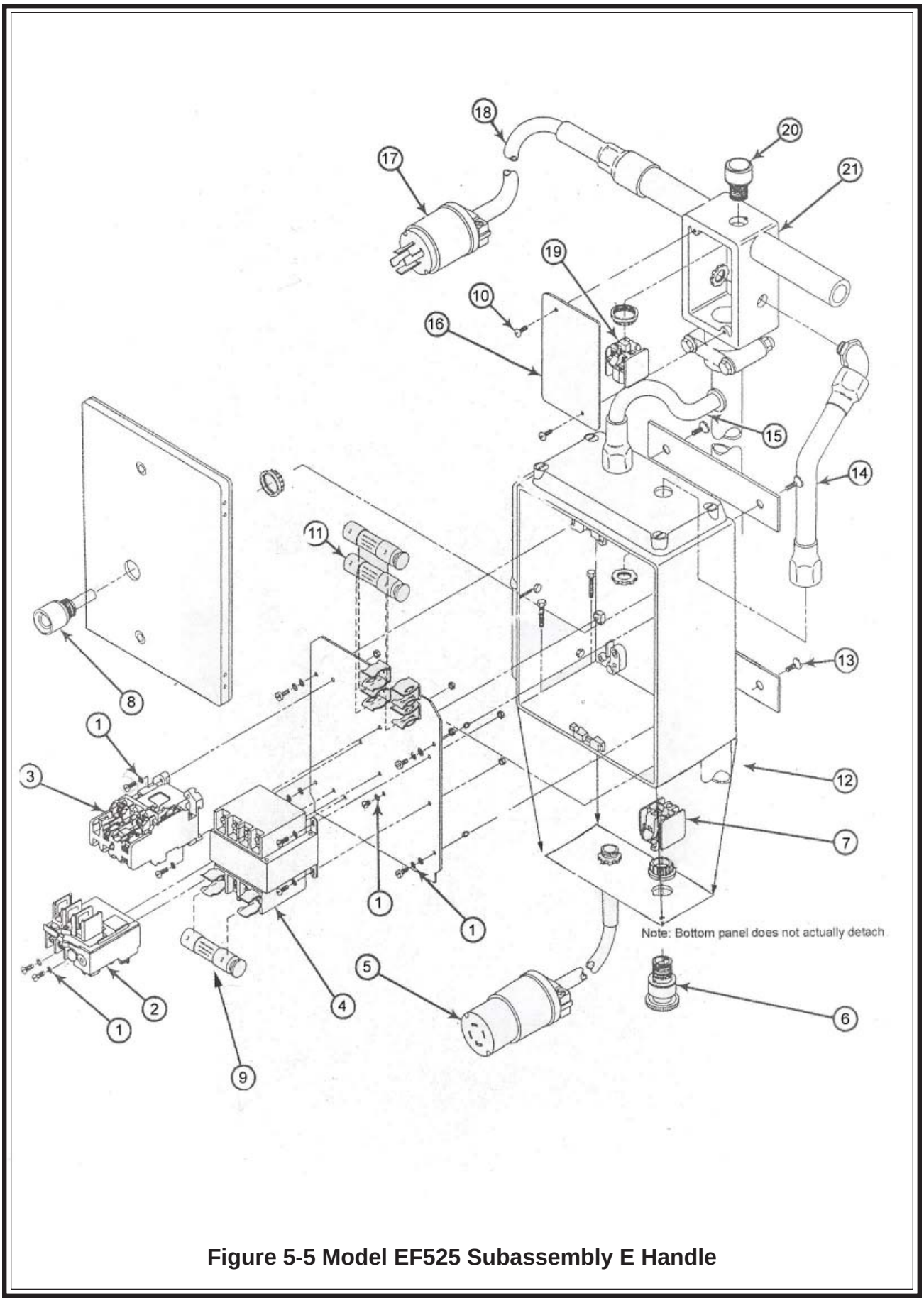


Figure 5-5 Model EF525 Subassembly E Handle

TABLE 5-5: PARTS BREAKDOWN
MODEL EF525 SUBASSEMBLY E.1
(120.202 Handle Electrical Box)

REFERENCE NUMBER	PART NUMBER	PART NAME	QUANTITY
1	750.095	8-32 Star Washer	11
2	120.020	Overlay Relay	1
3	120.018	Contactor	1
4	120.019	Transformer	1
5	120.064	Receptacle	1
6	120.139	ON/OFF Switch	1
7	120.140	Contact Block (closed)	1
8	120.250	Reset Button	1
9		Secondary Fuse	1
10	750.086	10-32x1/2” Round Head Screw	2
11	120.031	Primary Fuse	2
12	120.150	Handle Welded Assembly, Electric*	1
13	750.104	Mounting Nut	4
14	120.146	T&B No. 2523-Str Rel Conn (CGB 195)	1
15	550.306	Rubber Grommet	1
16	120.144	Cover Plate	1
17	120.063	Plug	1
18	120.201	“T” Handle Assy with Electric Cord	1
19	120.035	Contact Block (open)	1
20	120.036	Deadman Push Button	1
21	120.148	Tee Handle	1

* Cannot be purchased separately

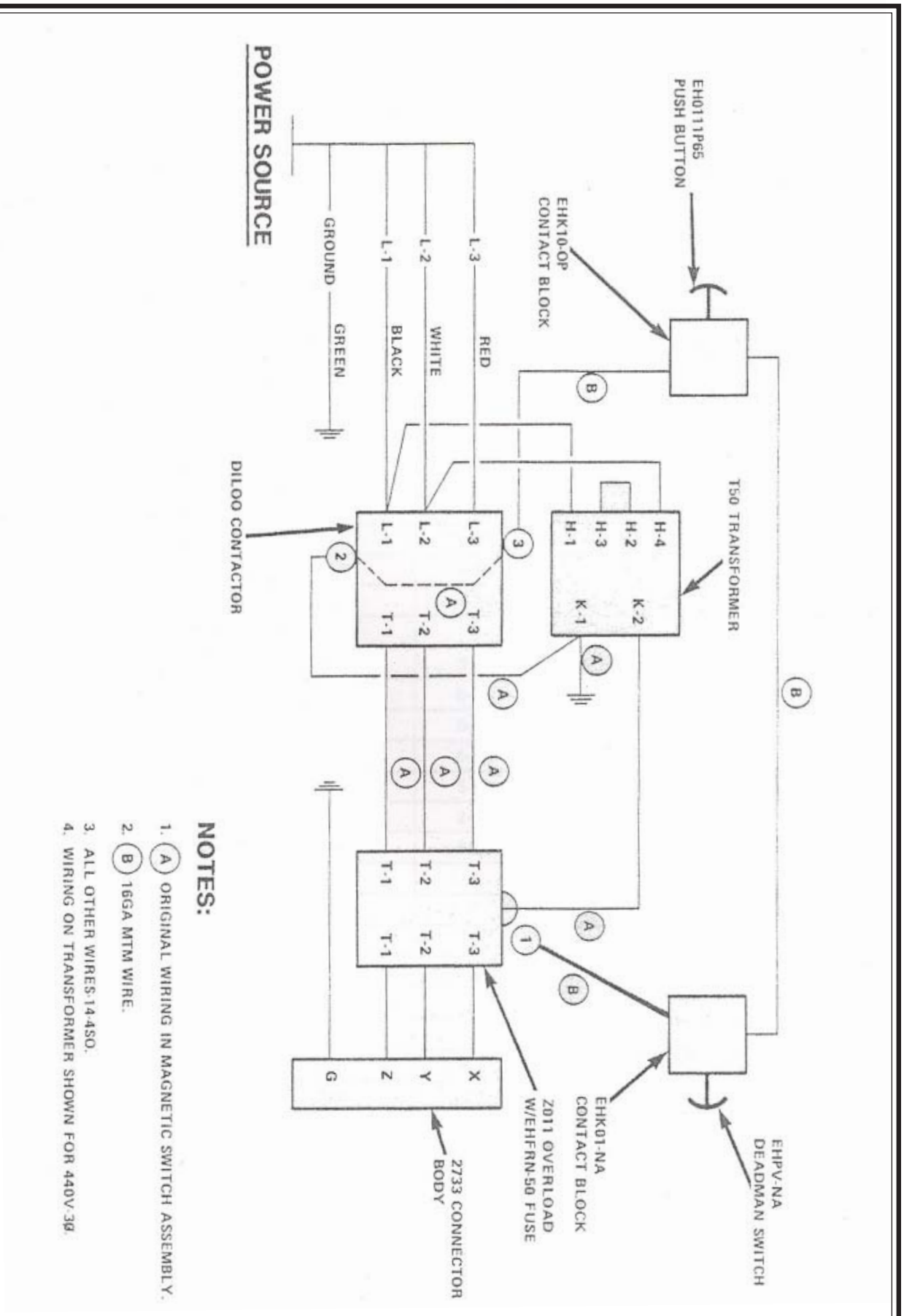


Figure 5-6 Model EF525 Handle Switchbox Schematic

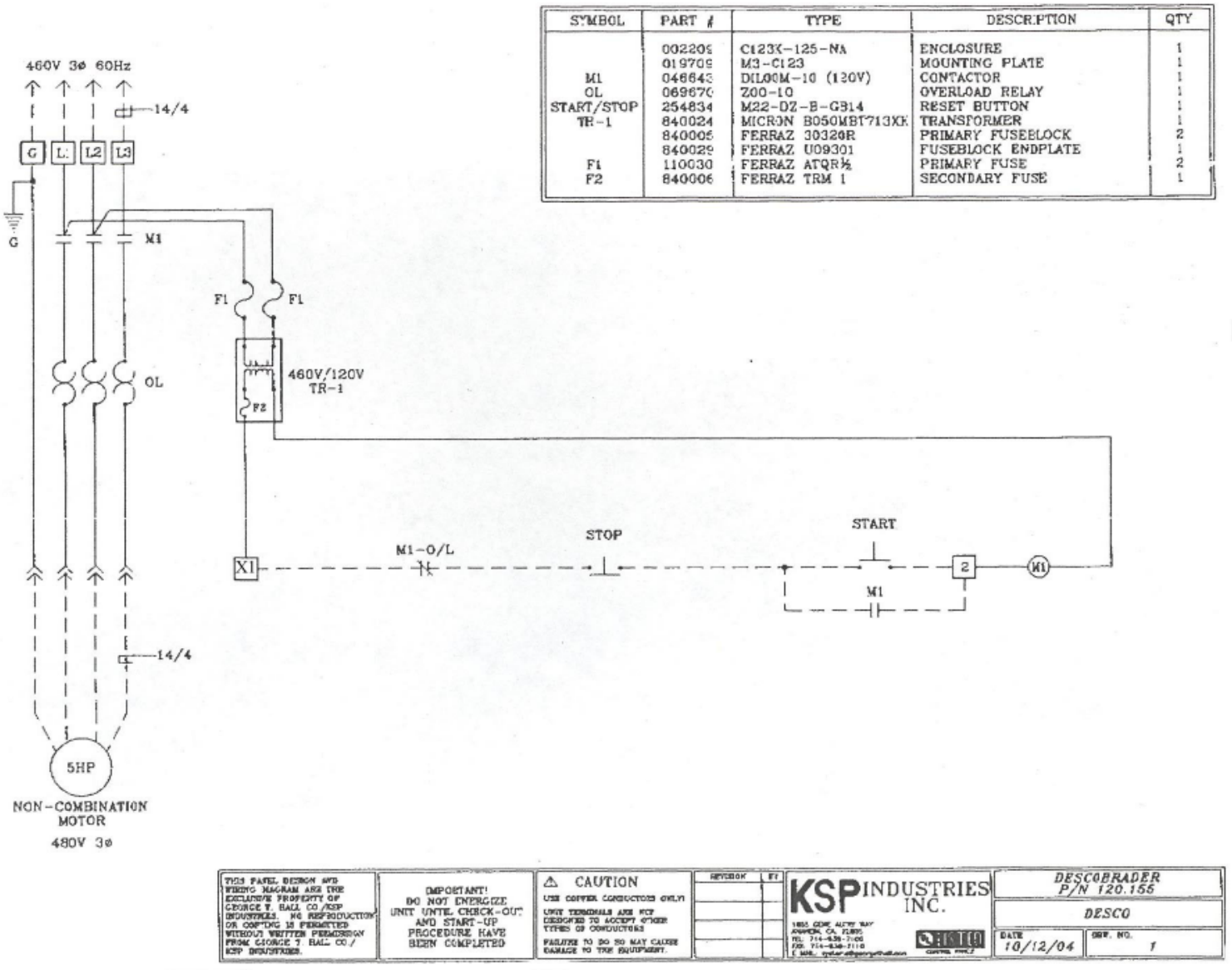


Figure 5-7 Model EF525 Electric Box Wiring Schematic

APPENDIX A
METRIC CONVERSION OF DIMENSIONS

INCHES	MILLIMETERS	INCHES	MILLIMETERS
1/15	1.58	3-1/4	82.6
1/8	3.18	3-3/8	85.7
3/16	4.76	3-1/2	88.9
¼	6.35	3-5/8	92.0
5/16	7.94	3-3/4	95.2
3/8	9.53	3-7/8	98.4
7/16	11.1	4	102
½	12.7	4-1/8	105
9/16	14.2	4-1/4	108
5/8	15.9	4-3/8	112
11/16	17.4	4-1/2	114
¾	19.1	4-5/8	118
13/16	20.6	4-3/4	121
7/8	22.2	4-7/8	124
15/16	23.8	5	127
1	25.4	5-1/8	130
1-1/8	28.6	5-1/4	133
1-1/4	31.8	5-3/8	136
1-3/8	34.9	5-1/2	140
1-1/2	38.1	5-5/8	142
1-5/8	41.2	2-3/4	146
1-3/4	44.4	5-7/8	149
1-7/8	47.6	6	152
2	50.8	7	178
2-1/8	54.0	8	203
2-1/4	57.2	9	228
2-3/8	60.3	10	254
2-1/2	63.5	11	279
2-5/8	66.6	12	305
2-3/4	69.8	24	610
2-7/8	73.0	36	914
3	76.2	37	940
3-1/8	79.4	38	965

3 feet is equal to .914 meters
10 feet is equal to 3.05 meters
25 feet is equal to 7.62 meters
50 feet is equal to 15.3 meters
100 feet is equal to 30.5 meters

APPENDIX B
PART NUMBER TO PAGE NUMBER CROSS-REFERENCE LIST

PART NUMBER	PAGE NUMBER
120.003	36, 49
120.015	28, 46
120.028	27, 45
120.055	25, 26, 43, 44
120.057	35, 47, 48
120.058	35, 48
120.059	23, 42
120.062	29
120.063	47
120.065	27, 45
120.066	27, 45
120.071	23, 42
120.074	25, 26, 43, 44
120.075	25, 26, 27, 28, 43, 44, 45, 46
120.076	25, 26, 27, 28, 43, 44, 45, 46
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120.112	25, 26, 27, 28, 43, 44, 45, 46
120.117	29
120.119	29
120.120	29
120.121	29
120.122	29

APPENDIX B
PART NUMBER TO PAGE NUMBER CROSS-REFERENCE LIST

PART NUMBER	PAGE NUMBER
120.124	38
120.125	38
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120.130	37
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550.315	31
550.316	31
550.317	31

APPENDIX B
PART NUMBER TO PAGE NUMBER CROSS-REFERENCE LIST

PART NUMBER	PAGE NUMBER
550.318	31
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550.405	29, 43, 47
550.464	38
550.519	31
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800.516	26, 44