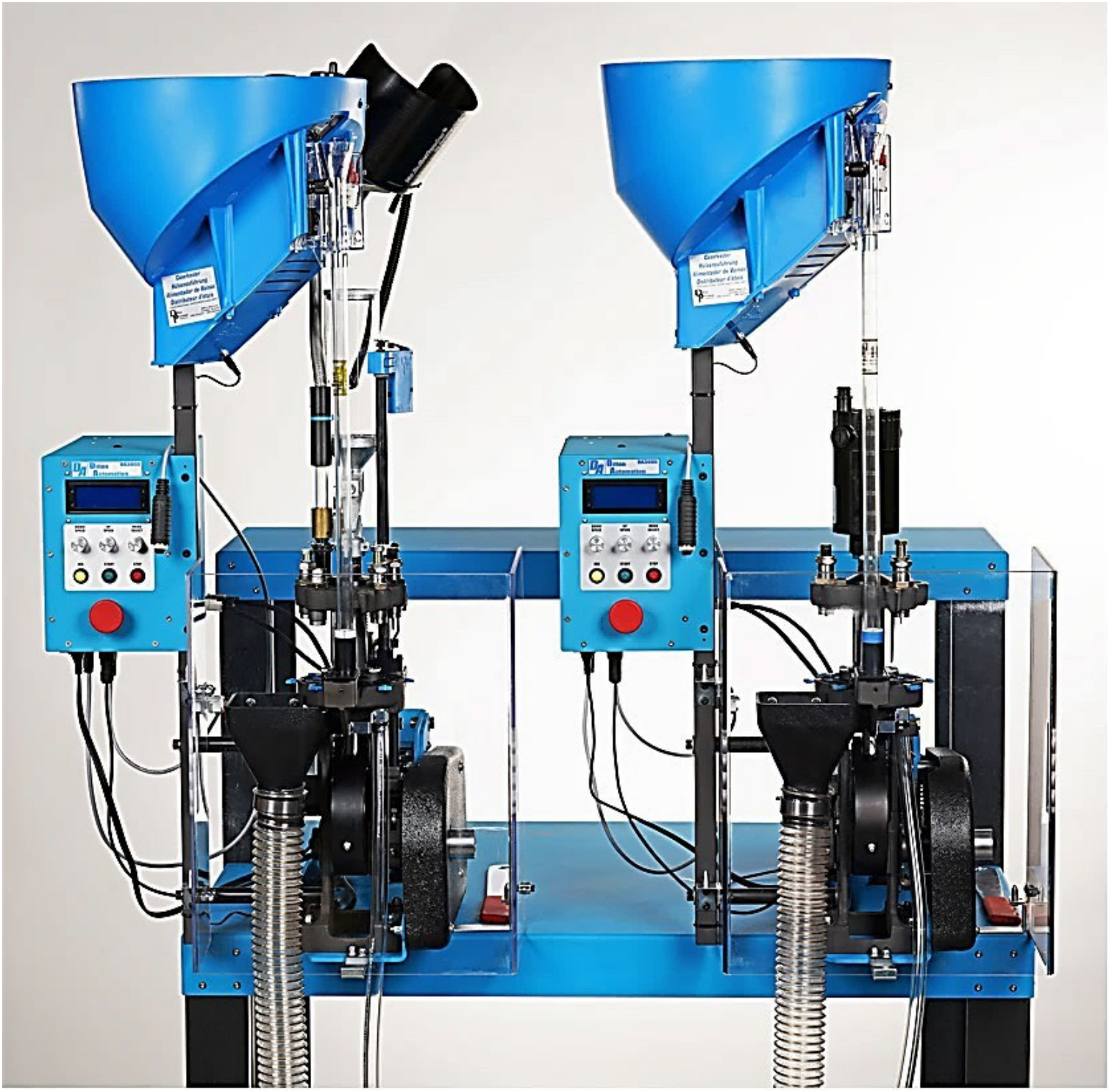
Dillon Automation DA3000™ User Instructions

for the Dillon CP2000™ and RL1100™

Dillon Automation, Inc.



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DILLON PRECISION DISCLAIMER, EXPLANATION OF SAFETY WARNINGS, DILLON CONTACT INFORMATION

DISCLAIMER

The material in this manual is for informational purposes only. The products it describes are subject to change without notice. Dillon Automation, Inc. makes no representations or warranties concerning this manual. Dillon Automation Inc. shall not be liable for any damages, losses, costs or expenses, direct, indirect or incidental, consequential or special, arising out of, or related to the use of, or the inability to use the products described herein. Read this manual before using this product. Failure to follow the instructions and safety precautions in this manual can result in injury or death. Keep this manual in a safe location for future reference.

EXPLANATION OF WARNINGS

DANGER!

Danger! Indicates a hazard with a high level of risk that, if not avoided, will result in death or severe injury

WARNING!

Warning! Indicates a hazard with a medium level of risk which, if not avoided, could result in death or severe injury.

CAUTION!

Caution! Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

NOTICE!

Notice! Indicates an issue with a minimal level of risk, if not avoided, could result in damage to the system or items being processed.

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Document Revisions

Date	Version Number	Document Changes
5-2-2022	0	First Release
12-6-2022	1	Updated pagination
1-13-2023	2	Updated part numbers, support link, return policy, email and phone number

MANDATORY SAFETY PRECAUTIONS—MUST READ

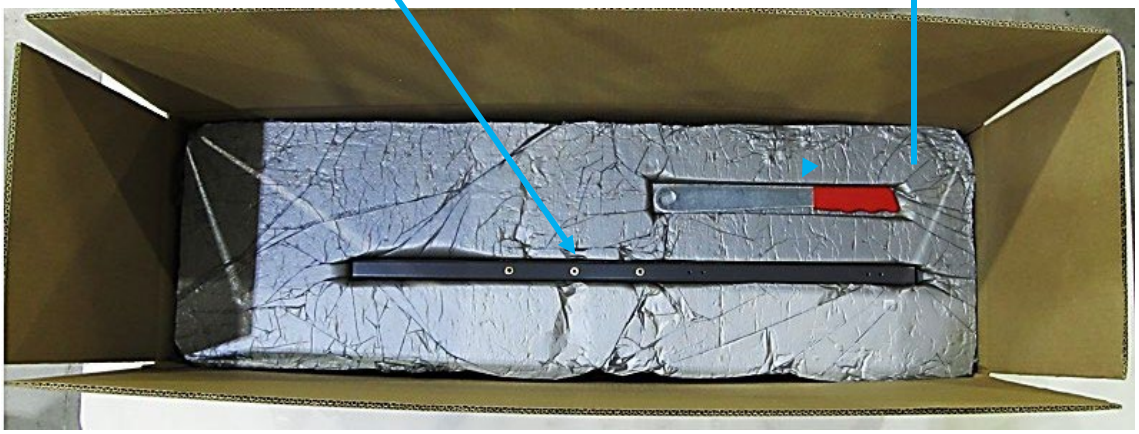
1. **THE BASIC RISK OF RELOADING, AND OVERALL DA3000 DESIGN USAGE SAFETY:**
   - 1.1. **DANGER! The reloading of ammunition and the handling of reloading components used in the reloading process is inherently dangerous. Accidents and mistakes in re-loading can and do occur, sometimes with disastrous results resulting in, but not limited to loss of hearing, vision, limbs or life. These accidents can occur with novice and experienced reloaders.**
   - 1.2. **Dillon Automation Inc. has designed the DA3000 with user safety in mind, doing everything Dillon knows to make the use of the DA3000 as safe as possible. Dillon takes no responsibility for the user's ability or inability to safely use the DA3000.**
2. **MANDATORY DA3000 USER SAFETY MINIMUM REQUIREMENTS:**
   - 2.1. **Dillon Precision Inc. cannot guarantee the complete safety of the user of the DA3000. To minimize the user's risk, use common sense and follow these basic safety rules at a minimum.**
   - 2.2. **KNOWLEDGE: Study and learn the basics, processes and specifications used in the reloading of ammunition from reputable sources and publications by a prominent bullet and powder manufacturers such as Sierra, Hornady, Speer, Western Powders and Alliant Powders; including reloading manuals such as the Lyman Reloading Manual and the Western Powder Reloading Guide.**
   - 2.3. **EYE AND EAR PROTECTION: Never operate the DA3000 without eye and ear protection.**
   - 2.4. **PAY ATTENTION: Give your full attention to the reloading process. Do not watch television, the internet or converse with anyone while loading. It is a full-time operation.**
   - 2.5. **SMOKING/IMPAIRMENT: Do not smoke or allow anyone to smoke in the reloading area. Do not allow open flames. Do not load if you have been drinking alcohol or are impaired in any way.**
   - 2.6. **SAFETY: Do not remove any safety device(s) from the DA3000 or modify the DA3000 or associated Dillon reloading presses that may be used with the DA3000 in any way. Operating an automated system without the safety shields or placing body parts or extremities inside the operating system can cause loss of life, limbs, vision or hearing.**
   - 2.7. **SAFETY: Do not remove the clear safety shield to work on any part of the system without unplugging/removing all electrical power from all parts of the system. Failure to remove all power can result in loss of limbs or life.**
   - 2.8. **AUTOMATED BULLET FEEDER REQUIRED—Do not use a DA3000 with an RL1100 automated reloading system without using an automated bullet feeder. Manually feeding bullets and or cases in an automated machine can cause loss of life, limbs or fingers.**
   - 2.9. **LEAD--CAUTION! Most primers contain a lead compound. Be sure to have proper ventilation while handling primers or when shooting. Clean up any primer residue left behind during the reloading processes. Lead causes birth defects, reproductive harm -and cancer. Wash your hands thoroughly after handling components or shooting.**
   - 2.10. **PRIMERS—DANGER! Primers contain a small amount of a shock-sensitive chemical that explodes when struck by a firing pin or hammer or accidentally crushed. Never force primers. Never attempt to clear primers that are stuck in the RF 100, Primer Pickup Tubes, or the Primer Magazine Assembly. Never, under any circumstance, insert any type of rod into these tubes to attempt to push out stuck primers—PRIMERS CAN "CHAIN DETONATE." If a primer(s) gets stuck in the Primer Filler Magazine Assembly, remove the inner tube. Flood the inner tube with penetrating oil/WD-40, throw it away and call Dillon for a free replacement.**
   - 2.11. **PROPERLY LABEL RELOADED AMMUNITION: Overall length, bullet manufacturer, type and weight, primer manufacturer and type--powder manufacturer, type and powder charge and date loaded.**
   - 2.12. **RELOADING AREA-- The reloading area should be well-lit, dry and comfortable without breezes.**
   - 2.13. **BE PATIENCE and OBSERVANT--If a problem is not obvious—CALL Dillon Automation Technical Support at (800) 421-7632 or visit the troubleshooting section at www.dillon-automation.com.**
3. **DA3000 LIMITED WARRANTY and RETURN POLICY**
   - 3.1. **Dillon Automation Inc. warrants the DA3000 for one year from the date of shipment against defects in material and workmanship. Dillon Automation Inc. will either repair or replace any part(s) that prove defective. Replacement parts may be new or repaired parts at Dillon's choice on an exchange basis. A part(s) replaced under warranty does not restart the warranty period. This limited warranty does not cover any damage to the product that results from improper installation, accident, abuse, misuse, natural disaster, insufficient or excessive electrical supply, abnormal mechanical or environmental conditions, or any unauthorized disassembly, repair or modification. This limited warranty shall not apply if: (I) the product was not used per any accompanying instructions, (ii) the product was not used for its intended function or (iii) the addition of any non-authorized equipment. Usage of the DA3000 with anything other than a Dillon Precision CP2000 or RL1100 voids the warranty. The DA3000 Controller Electronics "Control Box" is "Factory Sealed" there is nothing customer serviceable inside. Breaking the seal/opening the "Control Box" voids the warranty.**
   - 3.2. **The DA3000 may be returned for a refund up to 30 days from the date of delivery to the original purchaser. The DA3000 must be returned in the original packaging (two boxes), complete with all parts as originally shipped, in good condition, to receive credit for the purchase price less the original shipping cost of $140 and a 10% restocking fee. Used, damaged, and/or missing items may be denied a return depending upon the circumstance. You will be reimbursed within 7-10 days by the same means used for the purchase after the receipt of your return. To initiate a return, contact Dillon at Support@www.dillon-automation.com or 800-421-7632 and request a Return Material Authorization (RMA) and a no-charge Fed Ex shipping label. Take the two boxes with the label to your nearest Fed Ex facility.**
4. **AUTOMATED RELOADING LIABILITY**

   It is the customer/user's sole risk and responsibility in assembling, installing and using the DA3000 with an ammo reloading system making ammunition or processing cartridge cases including compliance with any local, state, federal or country laws. Dillon assumes no liability or responsibility for the risk in using or the inability to use the DA3000 in reloading ammunition or processing cartridge cases. The customer/user assumes all risks if any safety shield or equipment is removed or bypassed.

5. **DA3000 SHIPPING CONTENTS—Two Boxes –shown open below:**
   - 5.1. **PN85003 for use with the RL1100.**
   - 5.2. **PN85002 for use with the CP2000.**
   - 5.3. **Remove the top foam layer from the larger box and identify the following items.**

DA3000/Casefeed Mounting Post

DA3000 Manual Operating Handle



Top Layer

NOTICE! DO NOT PICK UP CONTROLLER BY THE FRONT CONTROL KNOBS—DOING SO MAY CAUSE DAMAGE !

Bottom Layer

DA3000 Baseplate and Motor Assembly

DA3000 Crankshaft and Sprocket

DA3000 Controller

5.4. **Open the Second Smaller Box Containing the Safety Shield, Chain Cover and a Box of Miscellaneous Parts.**

Safety Enclosure with Mounting Brackets

Accessory Box

Chain Cover

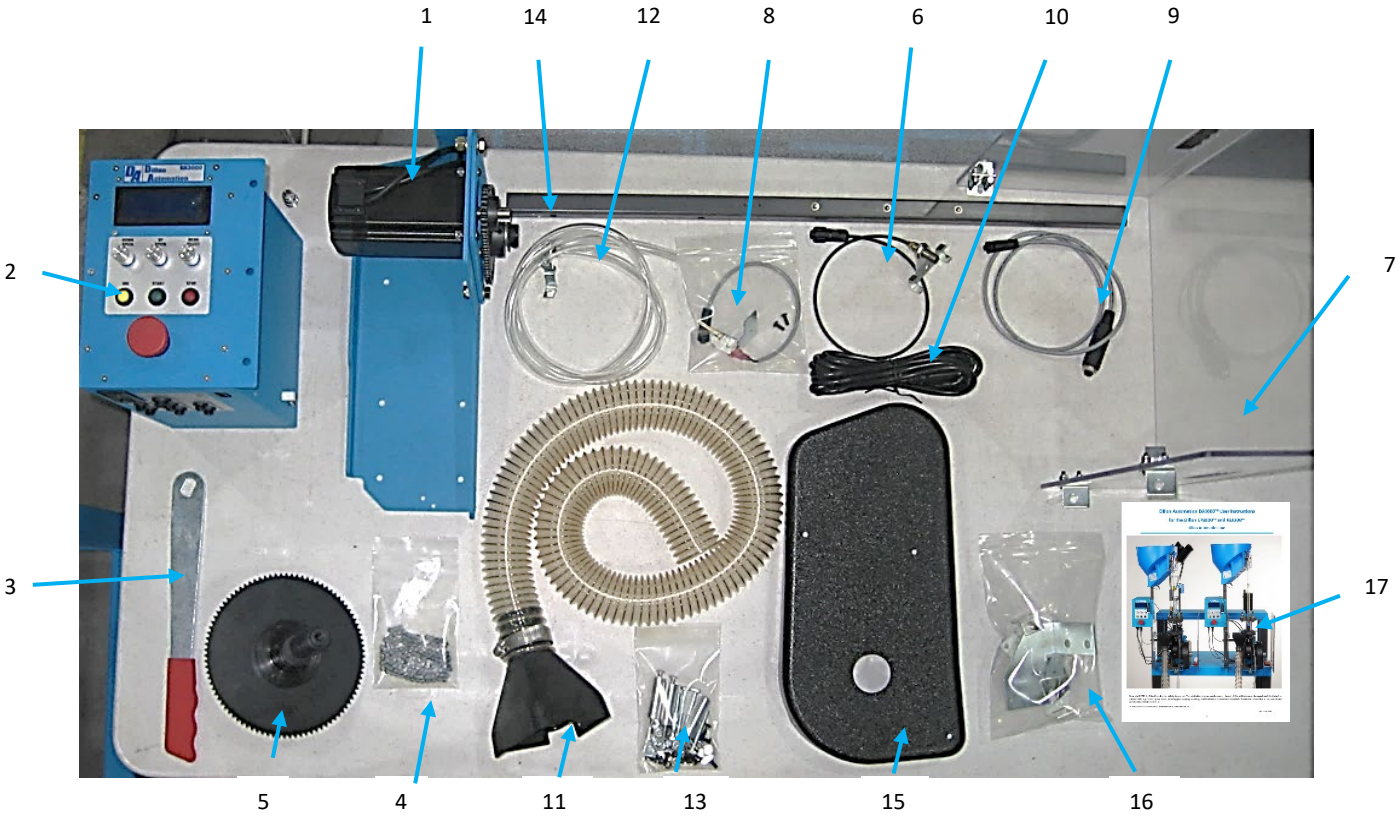
5.5. Remove The Items in The Shipping Foam from The Smaller Box and The Top Layer of Foam—Open the Box of Miscellaneous Parts.

Safety Enclosure with Mounting Brackets

Accessory Box

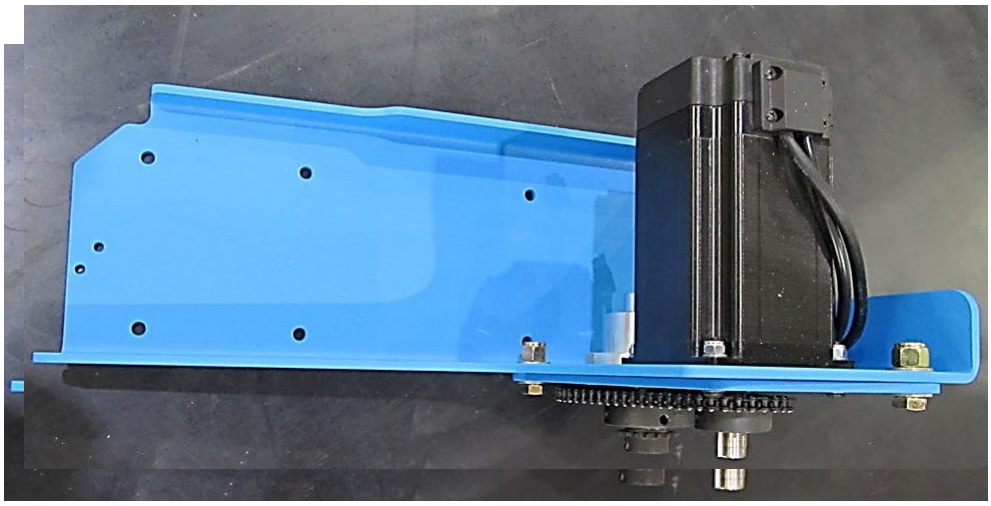
Chain Cover

5.6. Identify the Following Items:



No.	Description	Part No.	Quantity
1.	DA3000 Baseplate and Motor Assembly	85150	1
2.	DA3000 Controller	85117	1
3.	Manual Operating Handle Assembly	85162	1
4.	Main Drive Chain	85109	1
5.	Large Chain Drive Sprocket with Crankshaft- Rl1100 and CP2000 Specific	85151-(CP2000) or 85152-(RL1100)	1
6.	Home Sensor Assembly	85163	1
7.	Safety Shield Assembly with Mounting Brackets	85154	1
8.	Safety Shield Switch Assembly	85114	1
9.	Remote Stop Switch Assembly	85116	1
10.	120VAC Cord	85075	1
11.	Cartridge Catch Funnel Assembly	85155	1
12.	Spent Primer Catch Assembly	85156	1
13.	Hardware Kit	85165	1
14.	Case Feed Mounting Post	85153	1
15.	Sprocket Chain Cover	85033	1
16.	Mounting Brackets for Safety Shield (2) and Bracket for Cartridge Catch Funnel Assembly	85165, 85170, 85171, 85025	3
17.	DA3000 Assembly and Operating Instructions	85160	1

5.7. DA3000 Baseplate and Motor Assembly--PN85150



5.8. DA3000 Controller Assembly--PN85117

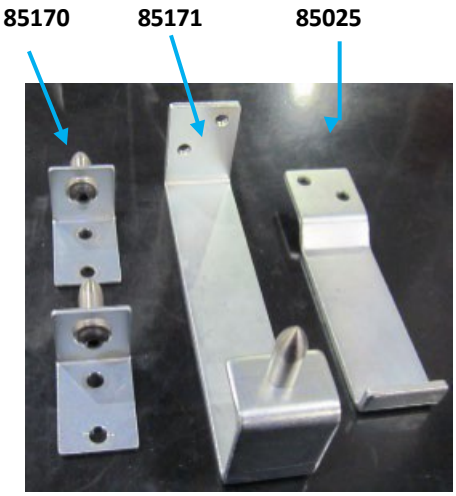
5.9. DA3000-RL1100/CP2000 Manual Operating Handle--PN85162

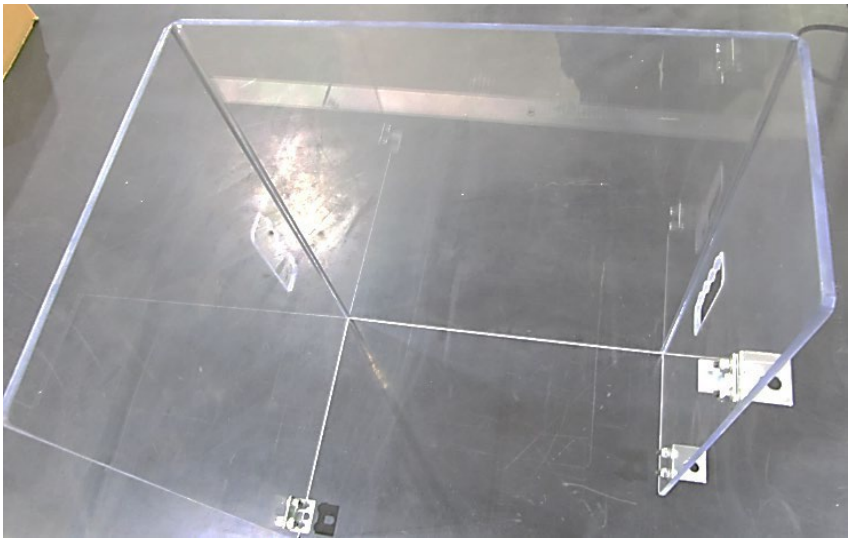
5.10. Main Drive Chain--PN85109

5.11. **DA3000 Crankshaft and Sprocket Assembly--RL1100 and CP2000 are shown for information purposes— (Only one is provided) --PN85151 (CP2000) or PN85152 (RL1100)**

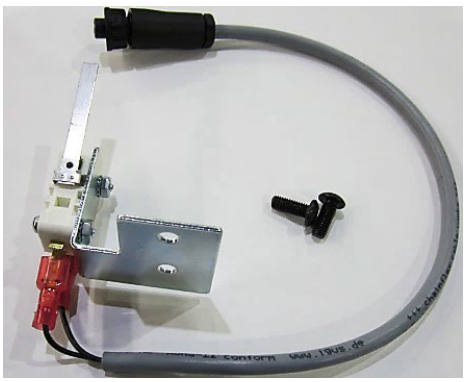
5.12. **Home Switch Cable, Connector, Mounting Bracket, and Nut--PN85163**

5.13. **Safety Shield--PN85154, with Mounting Brackets--PN85170 (2), PN85171 (1) and PN85025(1)**





5.14. **Safety Shield Switch, Cable, Connector, Mounting Bracket and Screws--PN85114**



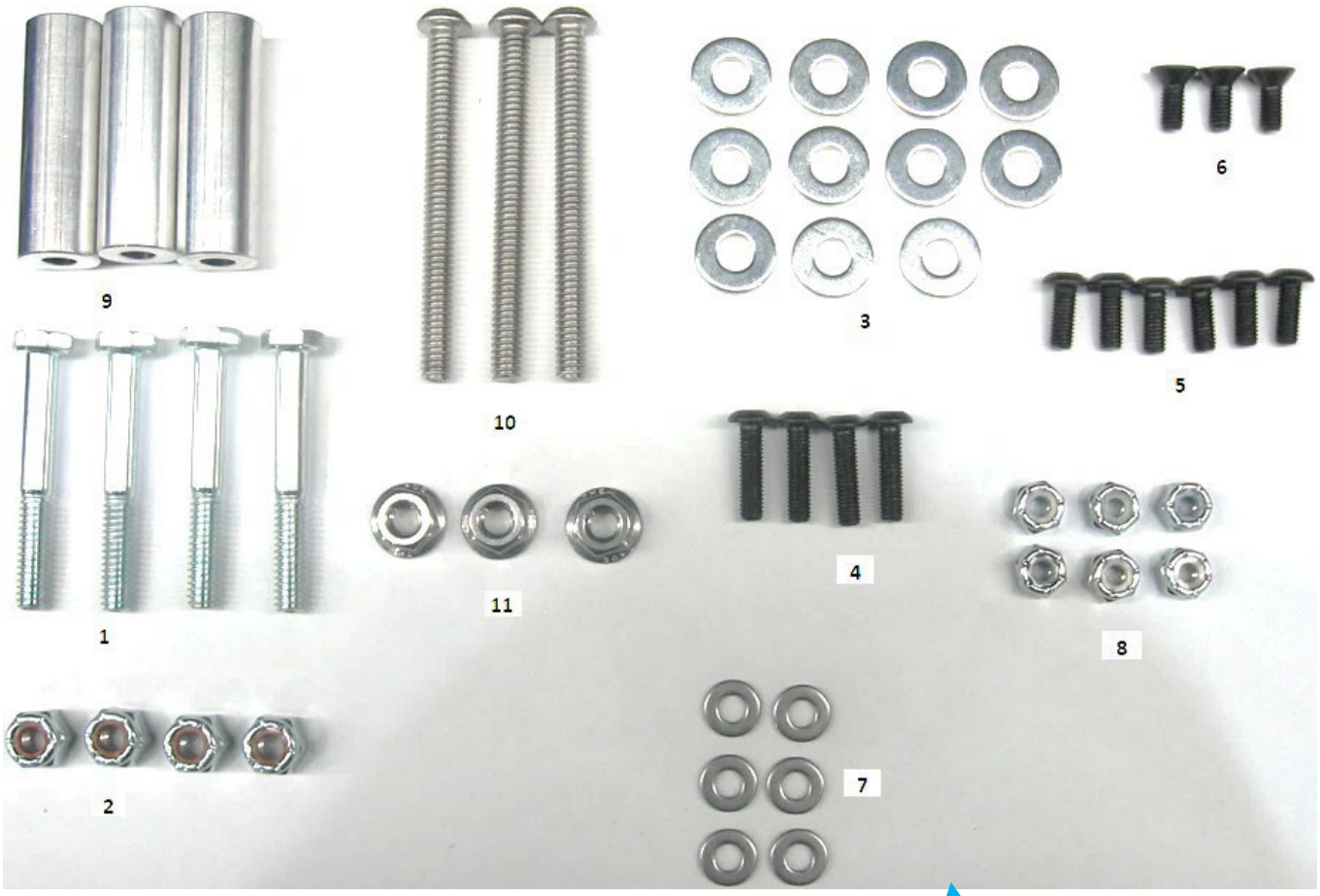
5.15. Remote Stop Switch, Cable and Connector--PN85116

5.16. 120VAC DA3000 Power Cord--PN85075

5.17. Cartridge Catch Funnel Assembly and Mounting Bracket--PN85155

5.18. Expended Primer Catch -Funnel, Bracket and Tube--PN85156

5.19. Hardware Kit--PN85165



ITEM	PART NUMBER	QTY.
1	85097--1/4-20 X 2" BOLT	4
2	85098--1/4-20 NYLOK NUT	4
3	85093--1/4-" WASHER	11
4	85090--10-32 X 3/4" BHCS	4
5	85089--10-32 X 1/2" BHCS	6
6	85103--10-32 X 3/4" FHCS	3
7	85183--#10 WASHER	6
8	85182--#10 NYLOCK NUT	6
9	85035--CHAIN COVER SPACER	3
10	85092--1/4-20 X 2 3/4" BHCS-SS	3
11	85180--1/4-20 LOCKING FLANGE NUT	3

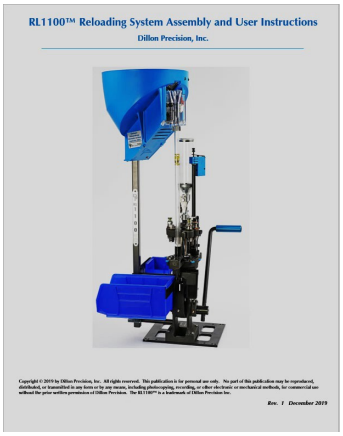
5.20. Casefeed and DA3000 Controller Mounting Post—PN85153

5.21. Chain Cover—PN85033

5.22. DA3000 Instruction and Operating Manual--PN85160

5.23. THE FOLLOWING TOOLS ARE REQUIRED:

- **5.23.1. End Wrenches and/or Ratchet and Sockets: 3/8", 7/16", 1/2", 9/16"**
- **5.23.2. Allen Wrenches: 1/8", 5/32", 1/8", 7/32", 1/4", 1/2"**
- **5.23.3. Auto chassis lube such as Schaeffer High-Performance Grease NAGL#1 High Moly Content (or equivalent/Zerk Grease Gun and 30wt. Motor oil for Main Shaft on CP2000/RL1100.**
- **5.23.4. Dillon RL1100 or CP2000 Instruction and Operating Manuals**



6. OPTIONAL RECOMMENDED ITEMS FOR USAGE WITH THE DA3000/RL1100

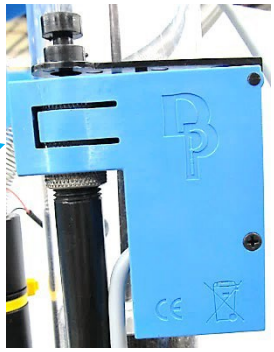
6.1. Available Dillon Low Primer Sensor with Cable/Connector for Usage with The DA3000/RL1100 System

6.1.1. PN85172--DA3000 Low Primer Sensor

DA3000 Low Primer Sensor

6.1.2. Replace the PEWS with this DA3000 Low Primer Sensor on the Existing Primer Magazine and Connect the Cable to the Labeled Low Primer Connector on the Bottom of the DA3000 Controller.

DA3000 Low Primer Sensor



Connect Low Primer Sensor

6.2. Available Dillon Low Powder Sensor with Cable/Connector for Usage with The DA3000/RL1100 System

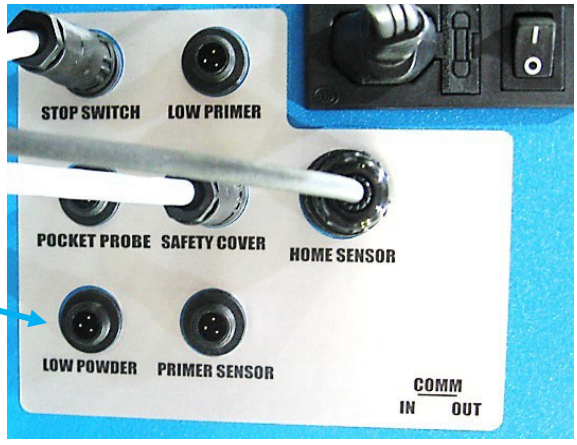
6.2.1. PN85173-- DA3000 Low Powder Sensor

DA3000 Low Powder Sensor

6.2.2. Replace the Hopper Lid with the Dillon 3000 Low Powder Sensor and Connect the Cable to the Low Powder Labeled Connector on the Bottom of the DA3000 Controller

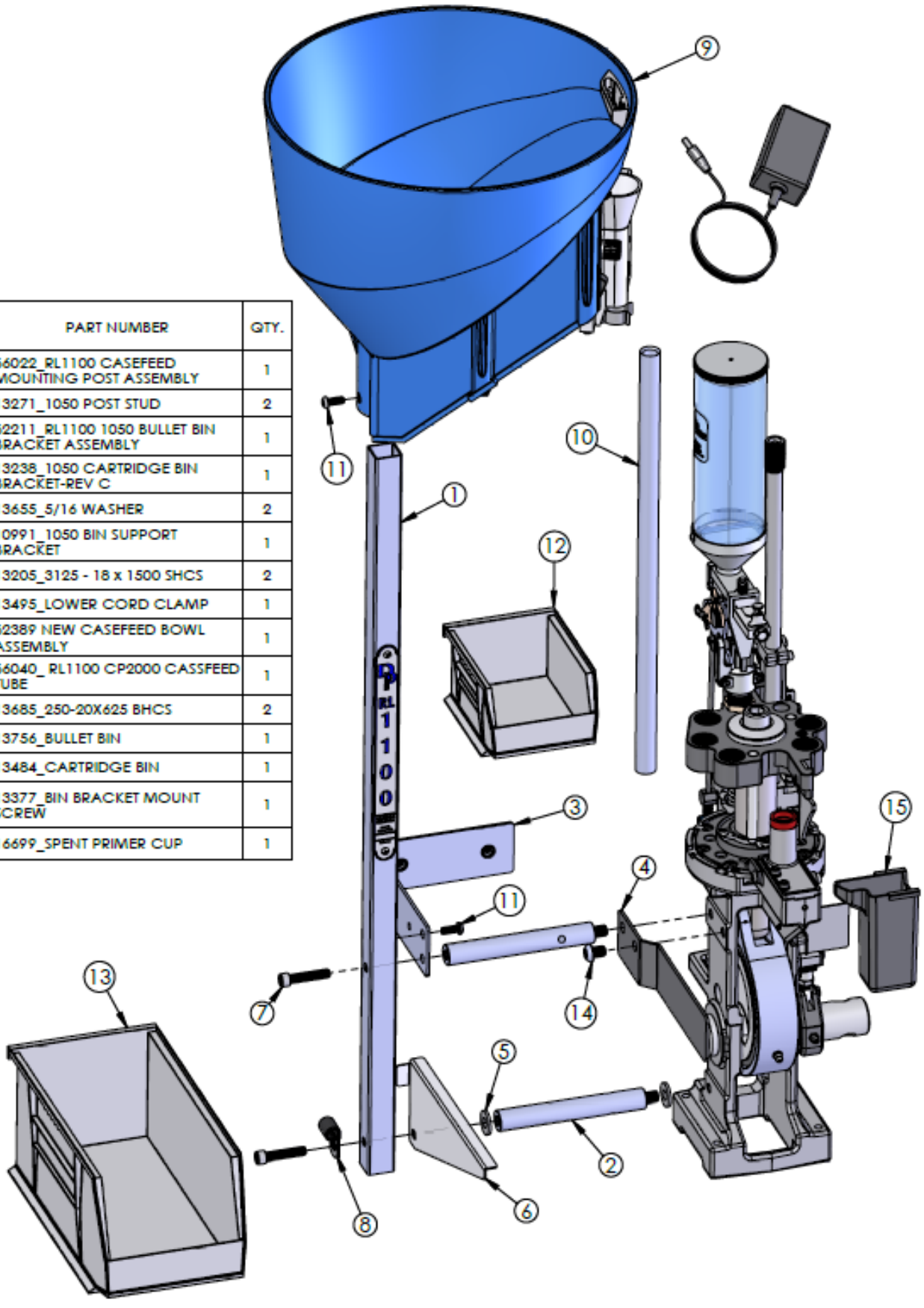
DA3000 Low Powder Sensor inside Powder Hopper

Connect Low Powder Sensor



7. **START HERE BY PREPARING AN EXISTING DILLON RL1100 FOR USAGE WITH THE DA3000—**
   - **7.1 FOR A NEW RL1100 SKIP TO SECTION 7.15**
   - **7.2 FOR AN EXISTING CP2000 SKIP TO SECTION 9**
   - **7.3 FOR A NEW CP2000 SKIP TO SECTION 9.9**
     - **Use the following "exploded view" as a disassembly reference guide for an existing RL1100.**

ITEM NO.	PART NUMBER	QTY.
1	66022_RL1100 CASEFEED MOUNTING POST ASSEMBLY	1
2	13271_1050 POST STUD	2
3	62211_RL1100 1050 BULLET BIN BRACKET ASSEMBLY	1
4	13238_1050 CARTRIDGE BIN BRACKET-REV C	1
5	13655_5/16 WASHER	2
6	10991_1050 BIN SUPPORT BRACKET	1
7	13205_3125 - 18 x 1500 SHCS	2
8	13495_LOWER CORD CLAMP	1
9	62389 NEW CASEFEED BOWL ASSEMBLY	1
10	66040_ RL1100 CP2000 CASSFEED TUBE	1
11	13685_250-20X625 BHCS	2
12	13756_BULLET BIN	1
13	13484_CARTRIDGE BIN	1
14	13377_BIN BRACKET MOUNT SCREW	1
15	16699_SPENT PRIMER CUP	1



7.4 Unplug the Dillon Casefeed Power Supply from the AC wall socket.

Unplug the Casefeed Power Supply

7.5 Remove the Casefeed Tube. Save for reinstallation.

Remove the Casefeed tube from the Casefeed Funnel Spring Clamp

Remove the Casefeed Adapter

7.6 Remove the small Barrel Plug Power Adaptor from the Socket in the bottom face of the Casefeeder.

Gently pull the Barrel Plug Adapter from the Socket in the bottom of the Casefeed Bowl

7.7 Remove the Casefeed Plate and set it aside for reinstallation.

Remove the Casefeed Plate and set it aside for reinstallation

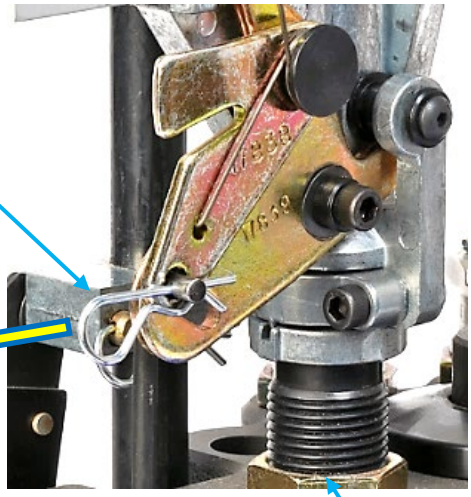
7.8 Remove the Casefeeder Bowl by loosening the ¼-20 Screw in the side of the Casefeed Bowl with a 5/32" Allen wrench. Slide the Casefeed Bowl up and off the Casefeed Mounting Post Assembly and carefully set it aside for reinstallation.

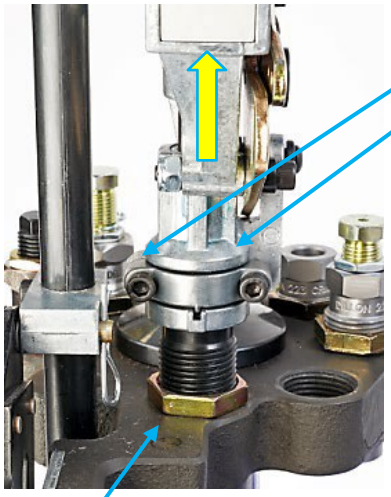
Loosen the ¼-20 Screw

Remove the Casefeed Bowl

7.9 **Remove the Powder Measure by removing the Spring Clip and sliding the Return Rod out of the Hole and Slot in the Failsafe Bracket. Store Spring Clip in the Rod. Loosen the two Powder Measure Clamp Screws until the Powder Measure can be slid up and off the Powder Die. Remove and store any powder in the Powder measure in the powder supplier's original container.**

Remove the Spring Clip from the Return Rod and reinstall the Clip in the Rod for safe keeping





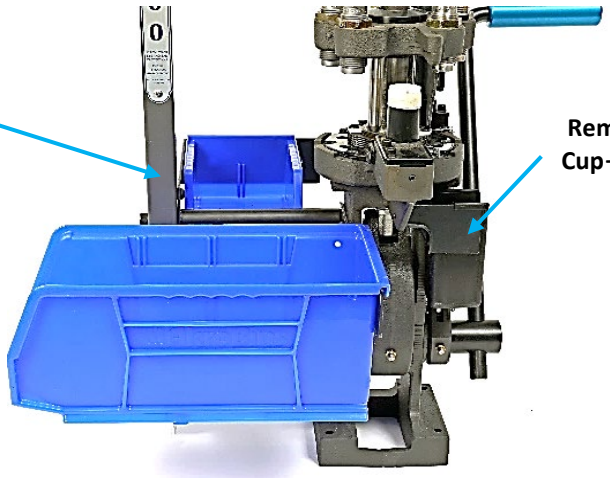
Loosen both Powder Measure Clamp Screws and slide Powder Measure up and off Powder Die Empty any powder into its original container Carefully sit the Powder measure aside for reinstallation

Powder Die

7.10 **Remove the Cartridge Bin, the Bullet Bin and the Spent Primer Cup. They will not be reused.**

Remove the Bullet Bin—not reused

Remove Cartridge Bin--not reused

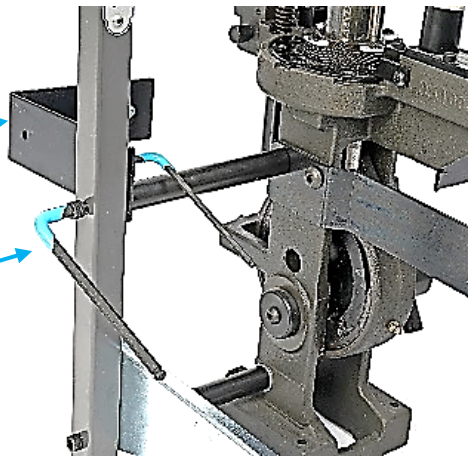


Remove Spent Primer Cup—not reused

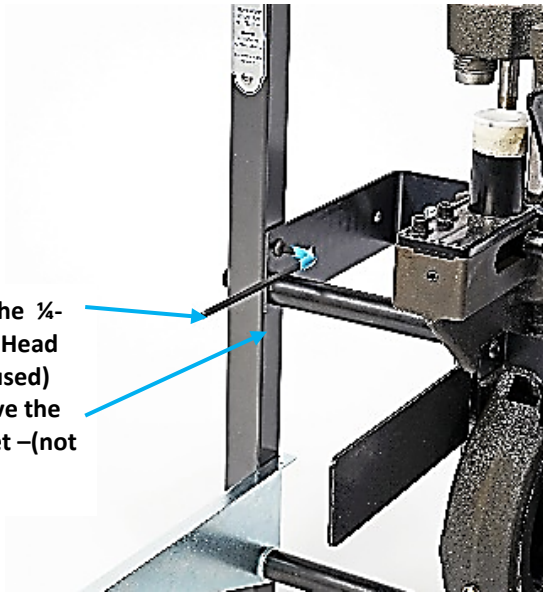
7.11 **Unscrew the Upper Post Attachment 5/16" Socket Head Screw and save it for reinstallation. Unscrew the ¼-20 Button Head Screw holding the Casefeed Mounting Post and remove the Bullet Bin Bracket—they will not be reused.**

Remove Bullet Bin Support Bracket—not reused

Unscrew 5/16" Socket Head -- reused

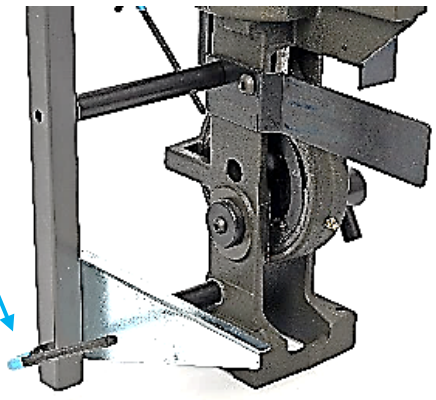


Unscrew the ¼-20 Button Head Screw (reused) and remove the Bin Bracket –(not reused)



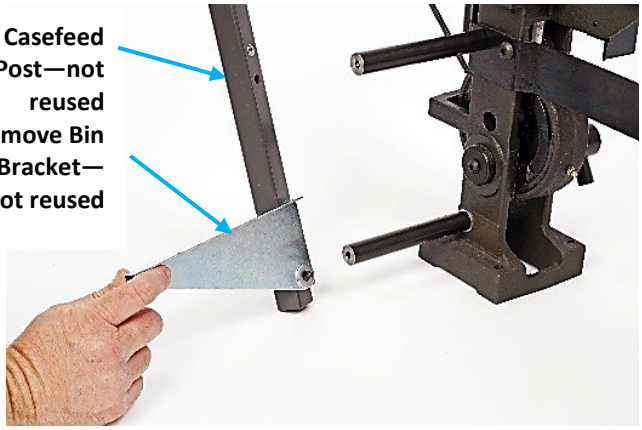
7.12 **Unscrew the Lower 5/16" Socket Head Screw and set it aside for reuse. Remove the Bin Support Bracket and the Casefeed Mounting Post--they will not be reused.**

Remove Socket Head Screw-- reused



Remove Casefeed Mounting Post—not reused

Remove Bin Support Bracket—not reused

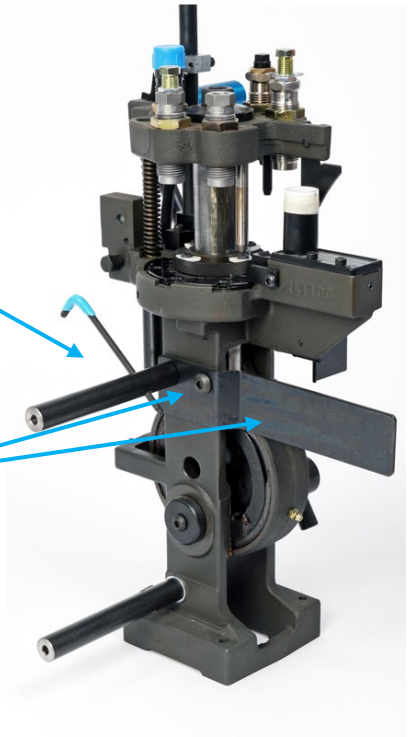


7.13 **Unscrew the Upper Post Stud (it will be reused) that holds the Bin Bracket to the RL1100 Frame. Remove the Socket Head Screw holding the Cartridge Bin Bracket to the RL1100 (it will be reused)—the Bin Bracket will not be reused.**

Use an Allen wrench through the hole in Post Stud to remove the Upper Stud—it will be reused

Remove the Socket Head Screw—it will be reused

Remove the Upper Cartridge Bin Bracket—it will not be reused



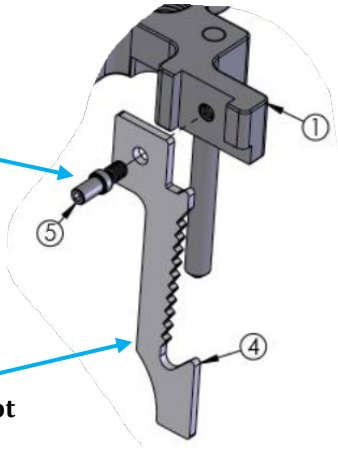
7.14 **Start here for a new RL1100—**

- **Temporarily install the RL1100 Operating Handle.**

- **The Ratchet Assembly ④ of the RL1100 and the Toolhead Spring ⑥ are not used with the DA3000. These parts are unnecessary with the DA3000® Auto Drive and will cause malfunctions if left in place. Remove the Ratchet ④. Remove the Priming System Assembly from the RL1100 by removing the two #10 Screws that fasten the Assembly to the Frame. Unscrew the Cam Guide Bolt ⑤ from the Toolhead ⑧ with an Allen Wrench and remove the**

Ratchet ④. The Ratchet ④ will not be reused. Replace the Cam Guide Bolt ⑤and retighten. Reinstall the Primer Assembly using the two saved #10 Socket Head Cap Screws.

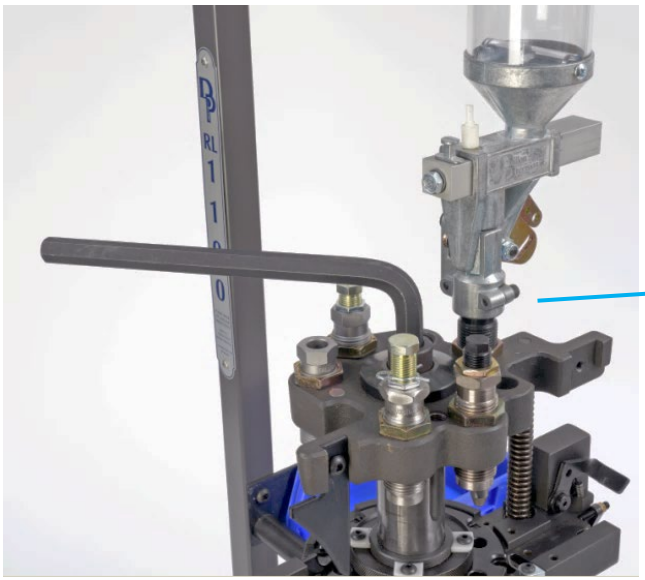
Remove the two #10 Socket Head Cap Screws that fasten the Primer Assembly to the Frame—save the Assembly for reinstallation

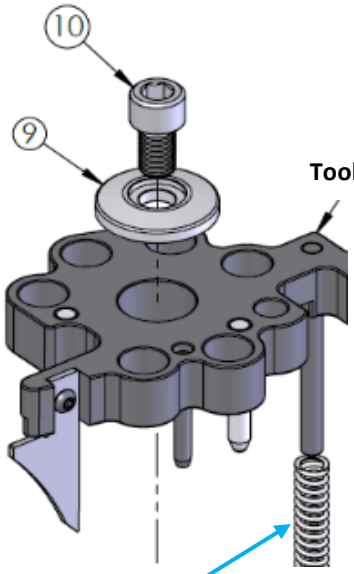


Remove Cam Guide Bolt⑤ and Ratchet ④— Carefully reinstall the Cam Guide Bolt without the Ratchet— do not over tighten

Ratchet ④—not reused

7.15 Remove the Toolhead Spring ⑥ by placing the Operating Handle in the full-up/back position. Have someone hold the Operating Handle to the back so the Main Shaft does not drop when the Toolhead is removed. Remove Toolhead Bolt and Washer ⑩ and ⑨ and carefully slide the Toolhead up and off the Main Shaft. CAUTION! THE TOOLHEAD IS SPRING-LOADED UP. Remove the Toolhead Spring and Spring Cup—they will not be reused.

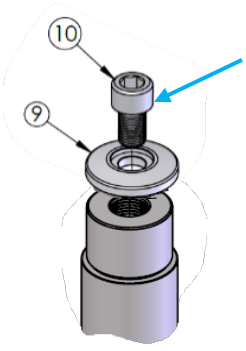




Tool Head ⑧

Tool Head Spring ⑥--not reused

Temporarily Screw the Toolhead Bolt ⑩ and Washer ⑨ 4-5 turns into the Mainshaft without the Toolhead as shown below. This provides a "handle" to hold the Mainshaft during the replacement of the Crankshaft.

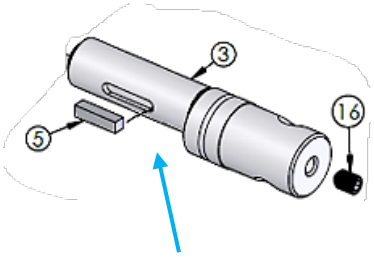


Screw Toolhead Bolt ⑩ into Mainshaft 4-5 Turns to use as a "handle"

8. REPLACE THE CRANKSHAFT IN THE RL1100

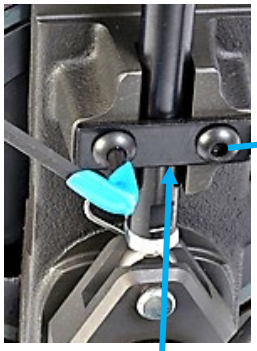
8.1. Use the RL1100 Assembly and Operating Instructions for setting up a new RL1100.

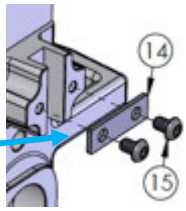
8.2. The DA3000 requires the Crankshaft in the RL1100 to be replaced with the DA3000-RL1100 Crankshaft Assembly.



Replace RL1100 Crankshaft with DA3000-Rl100 Crankshaft

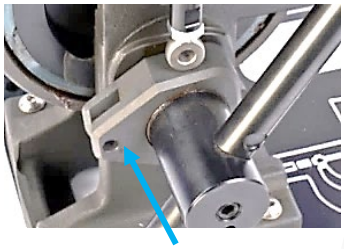
8.3. Remove the Swage Rod Assembly from the right side of the RL1100 by removing both ¼" Screws ⑮ that hold the Swager Cover Plates ⑭ over the Swage Rod. Remove the Spring Clip ⑦ and Clevis pin ⑥. Rotate the Swage Connecting Rod forward and remove the Swage Rod Assembly. Note—The Operating Handle in the up position helps provide clearance to rotate the Swage Connecting Rod to remove the Swage Rod Assembly—it may also be necessary to tighten the Eye Bolt Adjuster up flush to the bottom of the Swage Rod for clearance to remove the Swage Rod Assembly. Save the Swage Rod Assembly and Cover Plates and Screws and the Spring Clip and Clevis Pin for reinstallation.



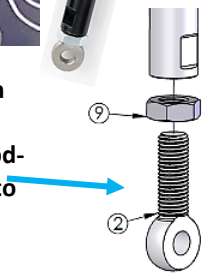


Remove the Two Screws and Cover Plate and save for

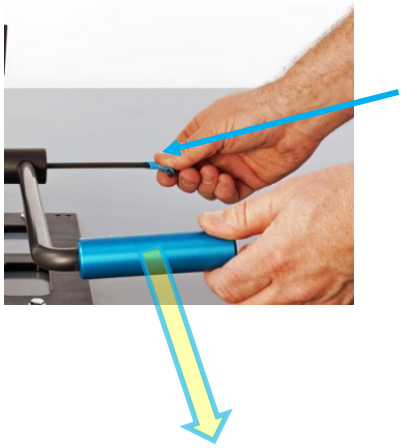
Remove the Spring Clip ⑦ and the Clevis Pin⑥—Save for reinstallation



Rotate the Swage Con Rod Sideways to remove the Swage Rod--it may be necessary to remove the adjusting Eye Bolt② and Lock Nut ⑨ also

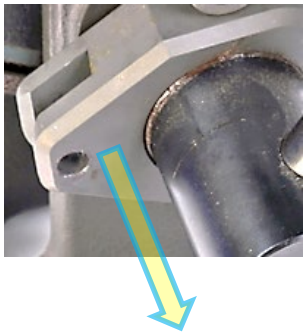


8.4. **Remove the RL1100 Operating Handle by loosening the Set Screw at the end of the Crankshaft with an Allen Wrench and sliding the Handle out of the Crankshaft. The Handle will not be reused. With the Handle removed, slide the Swage Rod Connecting Rod ⑬ off the Crankshaft and save it for reinstallation.**

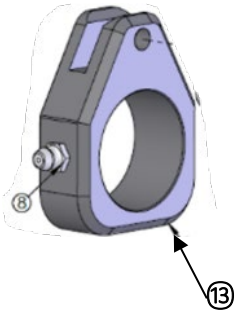


Loosen the Set Screw

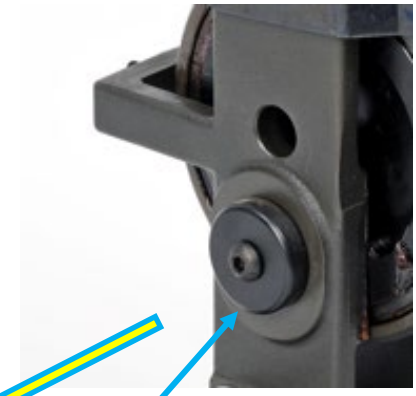
Slide the Operating Handle out of the Crankshaft—it is not reused

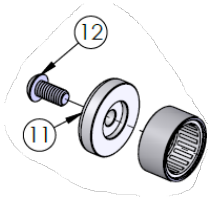


Slide the Swage Connecting Rod ⑬ off the Crankshaft—save for reinstallation



8.5. **Remove the Bearing Cap Bolt ⑫, and the Bearing Cap ⑪ on the left side and save them for reinstallation.**

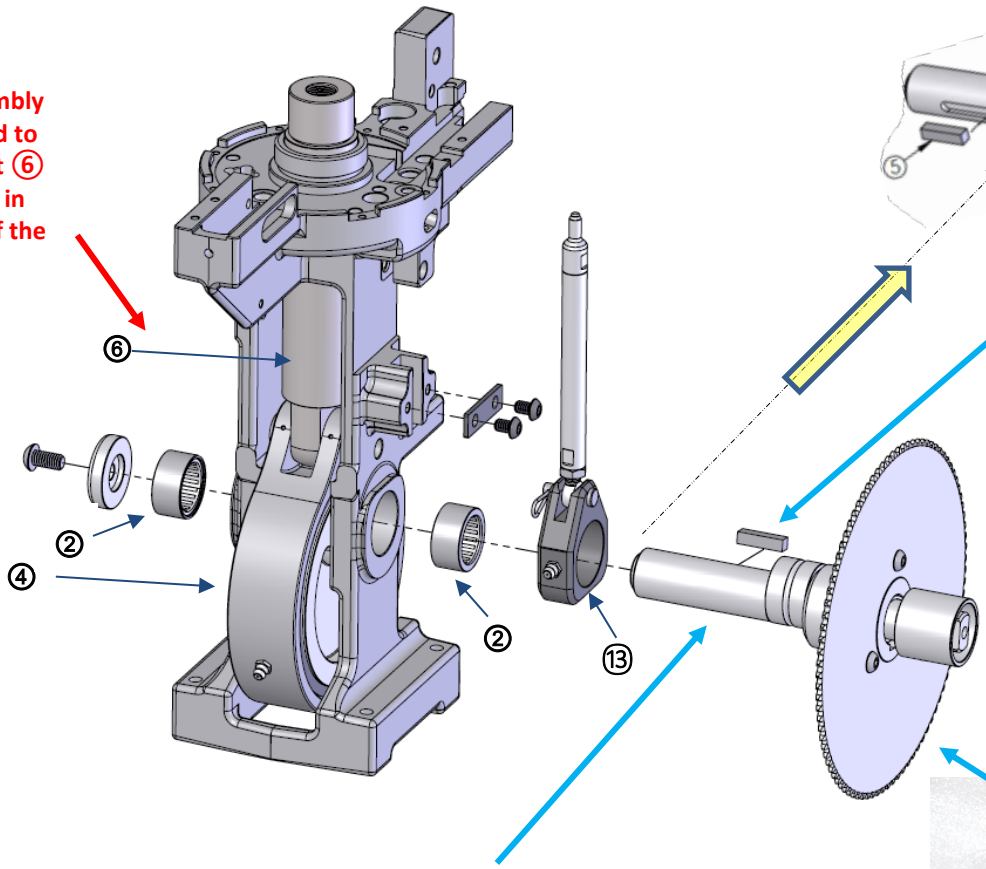


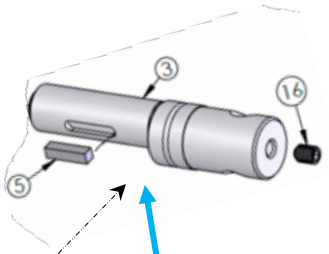


Remove Left Side Bearing Cap Bolt ⑫ and Bearing Cap ⑪--reused

8.6. ②temporarily threaded into the Mainshaft to use as a "handle." Gently pull/wiggle the Crankshaft ③ and the Journal Key out of the Frame from left to right. The Crankshaft ③ will not be reused. The Journal Key ⑤ will be reused. Clean and repack both Bearings ☙ before installation. Slide the Swage Connecting Rod (Grease Zerk forward) on the new Crankshaft. Place the Journal Key ⑤ in the Crankshaft. Align the Journal Key ⑤ facing the back of the system in the Crankshaft and align with the Lower Bearing Assembly ④. Slide the Crankshaft Assembly with the Swag Connecting Rod ⑬ and Right Side Bearing into the Lower Bearing Assembly ④ while holding up on the temporarily installed Toolhead Bolt ⑩ and Washer ⑨--"handle." It may be necessary to gently tap on the right side near the center of the Crankshaft Flange with a soft-faced hammer. Reinstall the Left Side Bearing② over the Crankshaft and into the Frame.

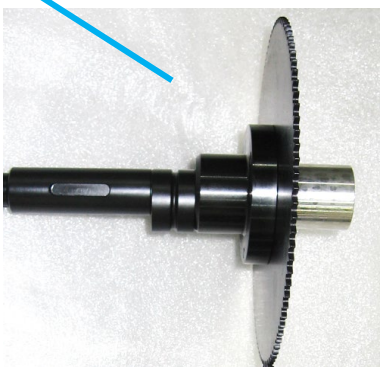
Leave Lower Bearing Assembly ④ Connected to the Mainshaft ⑥ --leave sitting in the bottom of the Frame





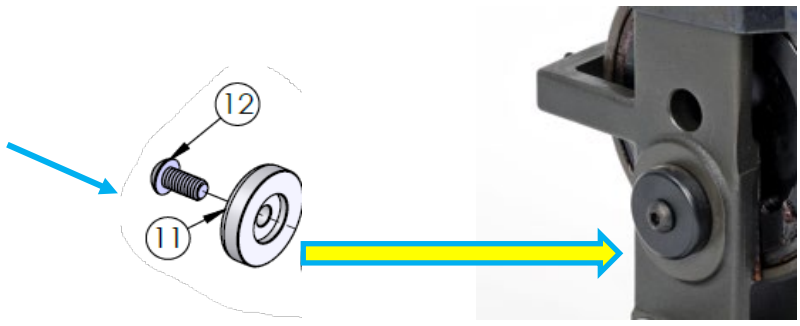
Remove Crankshaft ③ (not reused) with the Journal Key ⑤ which will be reused

Install the DA3000-RL1100 Crankshaft with the Journal Key ⑤ and slide them through the Swage Con Rod ⑬, the Right Bearing ②, the Lower Drive Bearing Assembly ④ and the Left Bearing ②

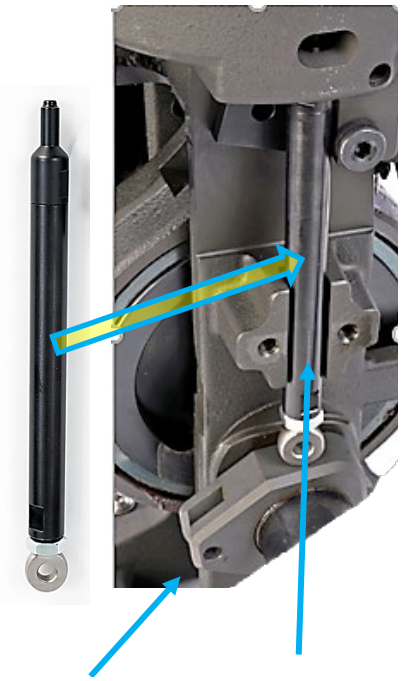


8.7. Reinstall the Bearing Cap ⑪ and tighten the Bearing Cap Bolt ⑫ to 7-10 Ft.-Lbs.

Reinstall the Bearing Cap ⑪and tighten the Bearing Cap Bolt⑫

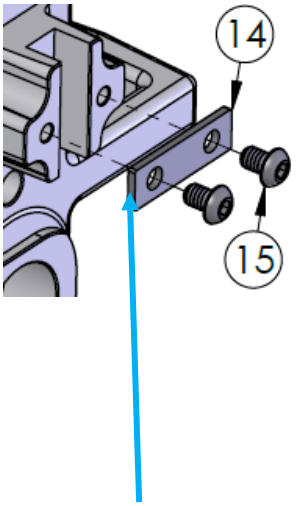


8.8. Rotate the Swage Connecting Rod sideways and Insert the Swage Rod up into the hole in the Frame and the Guide Slot. Secure the Swage Rod with the Clevis Pin and Spring Clip. Reinstall the Swage Rod Cover Plate with the two Screws previously removed. Grease the Connecting Rod using the Zerk Fitting. Wipe off excess grease.



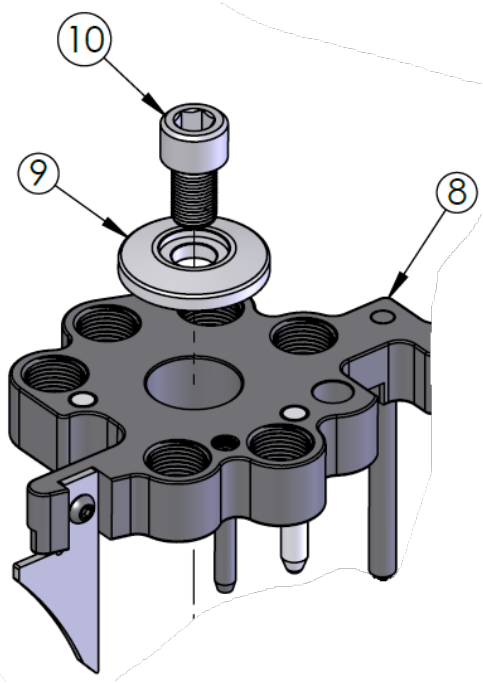
Rotate the Swag Con Rod reinstall the Swage Rod up in the hole in the Frame and in the Guide Slot

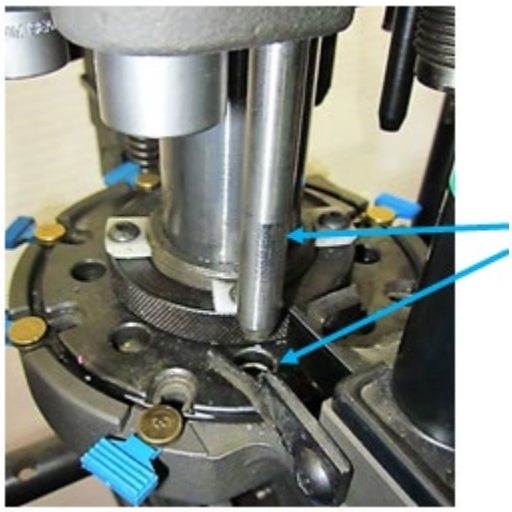
Rotate the Swage Con Rod back up to align with the Swage Rod end and reinstall the Clevis Pin ⑥ and the Spring Clip ⑦



Reinstall the Swage Rod Cover Plate ⑭ and Screws ⑮

8.9. Remove the temporarily installed Toolhead Bolt ⑩ and Washer ⑨ and reinstall the Toolhead onto the Mainshaft and lightly tighten the Toolhead Bolt ⑩. Cycle the Toolhead up and down using the new Operating Handle (refer to Section 11.8 on using the New Operating Handle) verifying that the Alignment Pins do not bind in the Shellplate or Frame Bushings. Watch for any Shellplate movement when cycling the Toolhead up and down as the Alignment Pin enters the alignment hole in the Shellplate. Adjust the alignment of the Toolhead so that the Shellplate does not move. Re-torque the Toolhead bolt to 10-15 ft-lbs. with the Toolhead down.

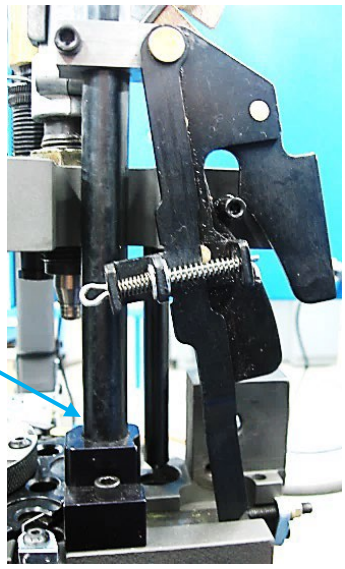




Eliminate any binding or movement of the Shellplate as the Alignment Pin slides into the Shellplate and Bushing below

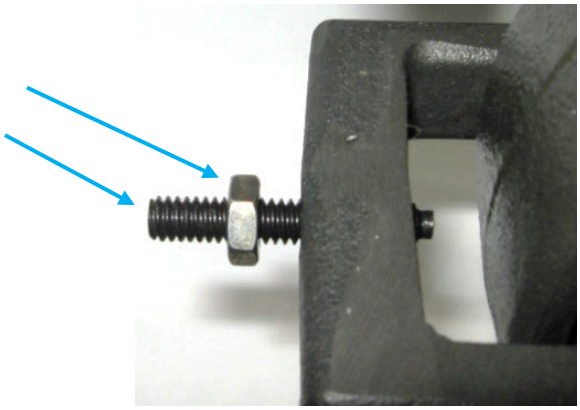
8.10. Reinstall the Primer Assembly using the two saved #10 Socket Head Cap Screws.

Primer Assembly reinstalled using the two saved #10 SHCS

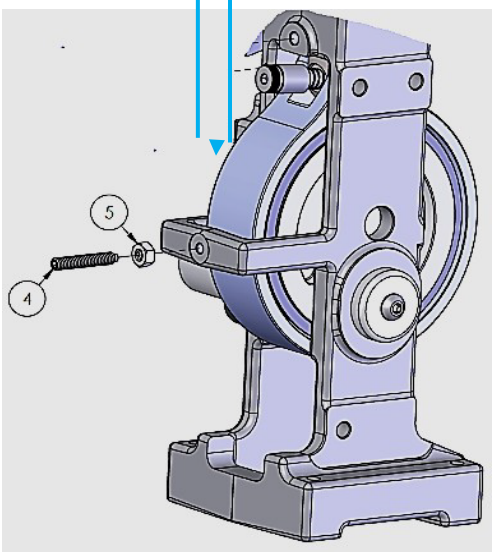


8.11. NOTICE! The "Up Position" Lower Bearing Stop must be verified/adjusted for the DA3000 to operate properly with the RL1100. Adjust the Stop as follows:

- **Loosen the 7/16" hex lock nut ⑤ from the back of the frame. Turn ④ the travel stop set screw with a ⅛" Allen Wrench out at least 2 full turns.**
- **Raise the Operating Handle to its upper travel limit.**
- **Gently push back on the Handle and adjust the Set Screw ④ CW until it contacts the Lower Bearing Drive Assembly**
- **Turn the Set Screw in one more turn and tighten the 7/16" Lock Nut ⑤ with a 7/16" End Wrench.**
- **Verify the Shellplate indexes properly by very lightly holding pressure on the Shellplate with your thumb while cycling the Operating Handle up and down.**
- **If the Shellplate under indexes, back off the Set Screw stop ¼ of a turn CCW at a time until indexing is correct.**

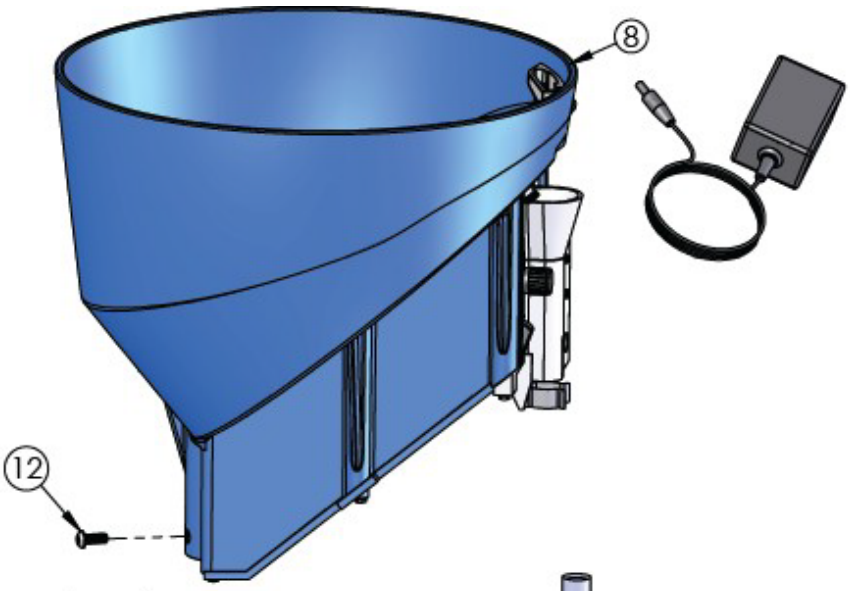


Adjusting Set Screw-Stop position and Lock Nut

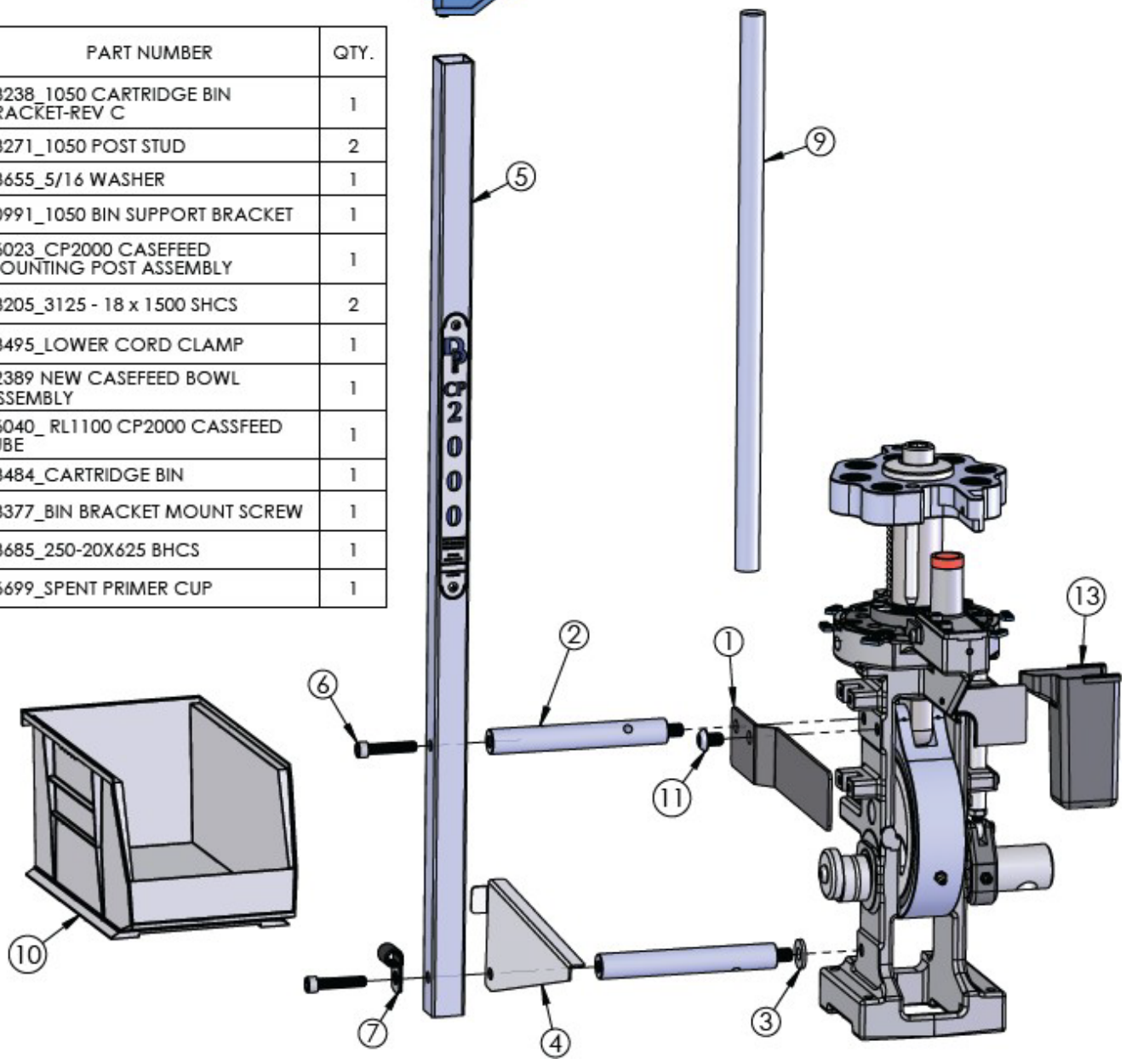


9. PREPARING AN EXISTING CP2000 FOR USAGE WITH THE DA3000

9.1 Use the following exploded view as a guide for disassembling your CP2000.



ITEM NO.	PART NUMBER	QTY.
1	13238_1050 CARTRIDGE BIN BRACKET-REV C	1
2	13271_1050 POST STUD	2
3	13655_5/16 WASHER	1
4	10991_1050 BIN SUPPORT BRACKET	1
5	66023_CP2000 CASEFEED MOUNTING POST ASSEMBLY	1
6	13205_3125 - 18 x 1500 SHCS	2
7	13495_LOWER CORD CLAMP	1
8	62389 NEW CASEFEED BOWL ASSEMBLY	1
9	66040_ RL1100 CP2000 CASSFEED TUBE	1
10	13484_CARTRIDGE BIN	1
11	13377_BIN BRACKET MOUNT SCREW	1
12	13685_250-20X625 BHCS	1
13	16699_SPENT PRIMER CUP	1



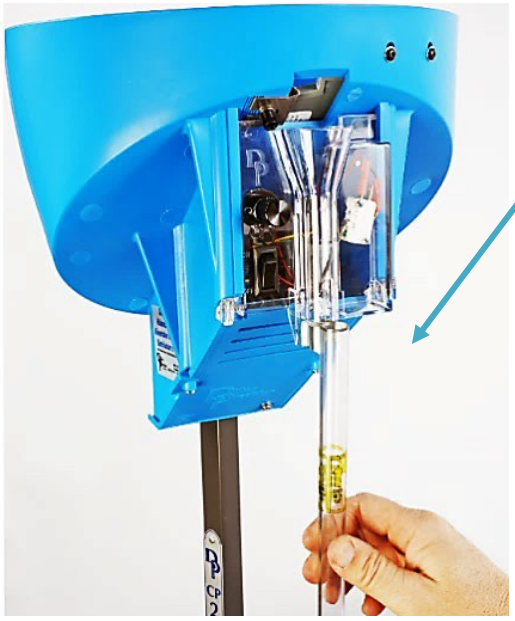
9.2 Unplug the Dillon Casefeed Power Supply from the AC wall socket.

Unplug the Casefeed Power Supply

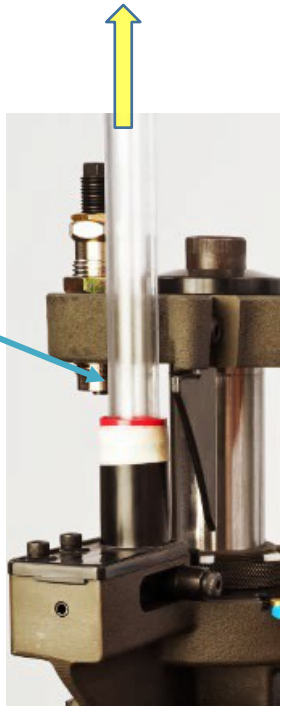
9.3 Remove the Casefeed Plate and set it aside for later reinstallation.

Remove the Casefeed Plate from inside the Casefeed Bowl and set it aside

9.4 Remove the Casefeed Tube and save it for reinstallation.



Remove the Casefeed Tube— save for reinstallation

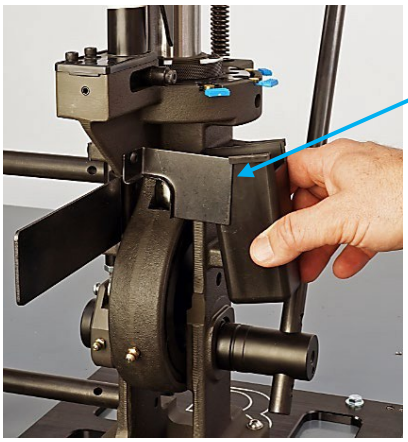


9.5 Loosen the 1/4"-20 Screw with a 5/32” hex wrench on the side of the Casefeed Bowl. Slide the Casefeed Bowl up and off the Casefeed Mounting Post Assembly and set it aside for reinstallation.

Loosen Casefeed Bowl mounting Screw

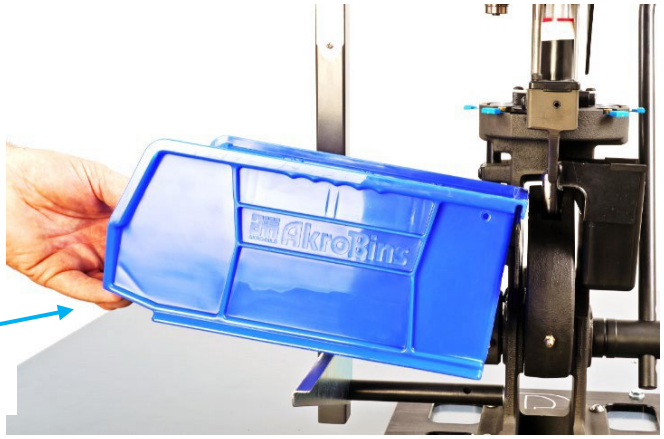
Pull the Casefeed Bowl up and off the Casefeed Post Assembly

9.6 Remove the Spent Primer Cup from the Bracket and the Collection Bin—they will not be reused

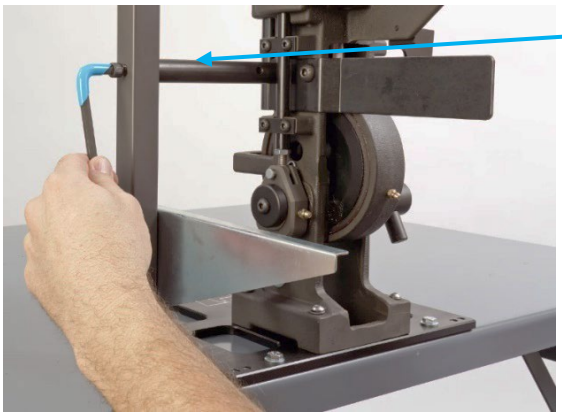


Remove Spent Primer Cup—not reused

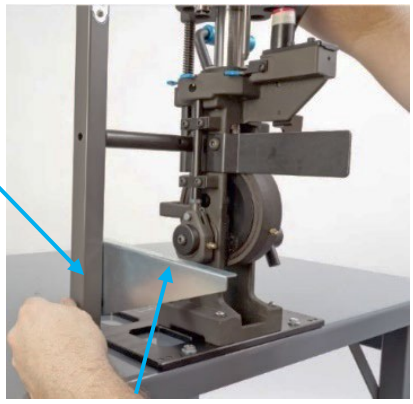
Remove Collection Bin—not reused



9.7 Use a ¼” Allen Wrench to remove the top and bottom Socket Head Screws holding the Casefeed Post to the CP2000—save the screws for reuse. The Casefeed Post and the Lower Cartridge Bin Bracket will not be reused.

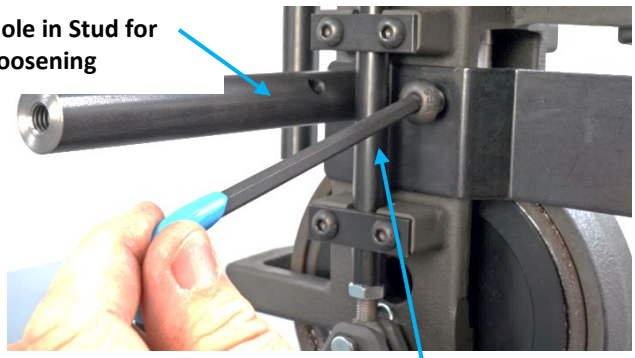


Remove Upper and Lower Mounting Screws—they will be reused

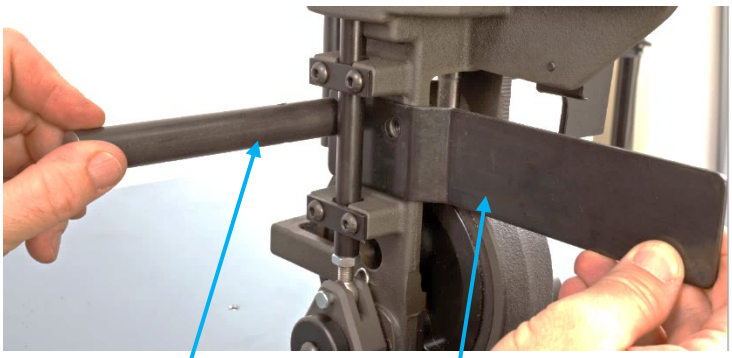


Remove Lower Bin Bracket—not reused

9.8 **Remove the Upper Post Stud with an Allen Wrench through the hole in the Post Stud and the Upper Bin Bracket Mounting Screw with an Allen Wrench—save the Screw and Post for reuse. The Upper Bin Bracket will not be reused. Leave the Lower Post Stud installed.**



Remove Upper Bin Bracket Mounting Screw--reused

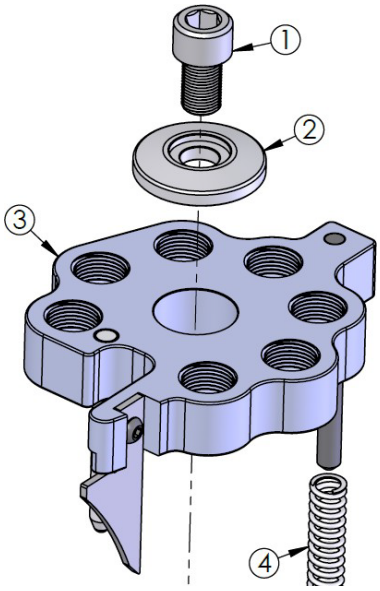


Remove/Save the Upper Post Stud--reused

Remove Upper Bin Bracket—it will not be reused

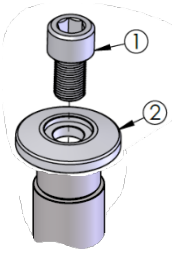
9.9 **Start here for a new CP2000—Install the CP2000 Operating Handle if not installed. Have someone hold the Operating Handle back so the Main Shaft does not drop when the Toolhead is removed. Remove Toolhead Bolt and Washer ① and ② then carefully slide the Toolhead up and off the Main Shaft. CAUTION! THE TOOLHEAD IS SPRING-LOADED UP. Remove the Toolhead Spring ④ and Spring Cup in the Frame— The Toolhead Spring must not be used when the CP2000 is used with the DA3000.**

Temporarily install the CP2000 Operating Handle



Tool Head Spring ④ not reused

9.10 **Temporarily Screw the Toolhead Bolt ① and Washer ② 4-5 turns into the Mainshaft without the Toolhead. This provides a "handle" to hold the "slippery" Mainshaft up, to assist in replacing the Crankshaft.**

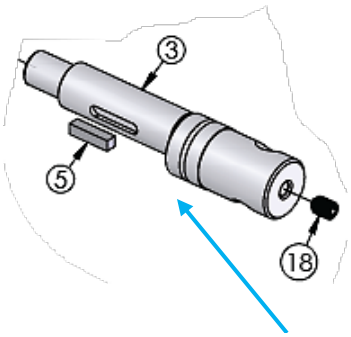


Screw Toolhead bolt ① into the Mainshaft 4-5 Turns—for use as a "handle"

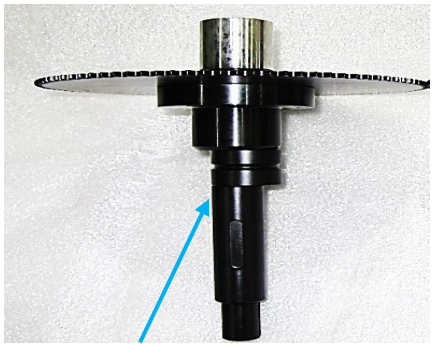
10. REPLACE THE CRANKSHAFT IN THE CP2000—

10.1. Use your CP2000 Assembly and Operating Instructions for setting up a new CP2000.

10.2. The DA3000 requires that the Crankshaft in the CP2000 be replaced with a DA3000 compatible Chain Drive Crankshaft Assembly that is unique to the CP2000 (PN85151) as shown below:



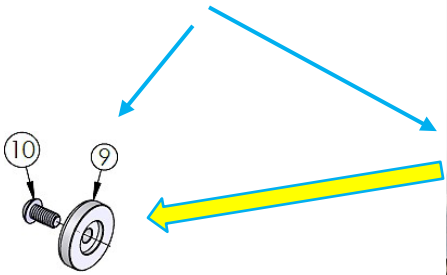
Replace CP2000
Standard Crankshaft

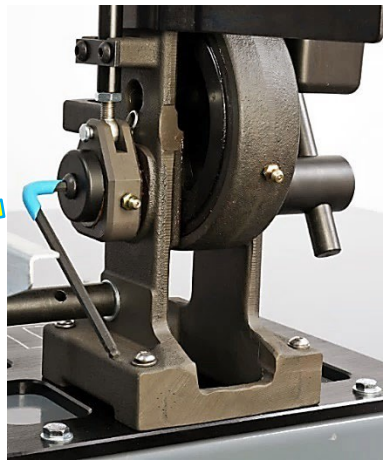


DA3000-CP2000Crankshaft

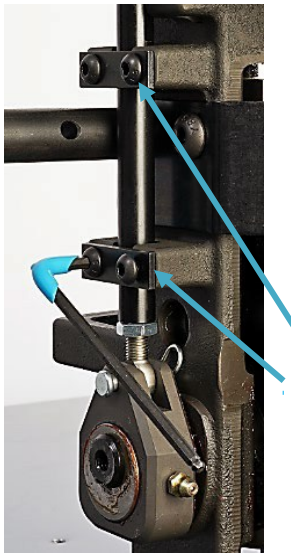
10.3. Remove Bearing Cap Bolt ⑩ and Bearing Cap ⑨ and set them aside for reinstallation.

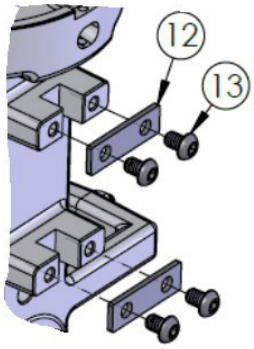
Remove Bearing Cap Bolt ⑩,
Bearing Cap ⑨





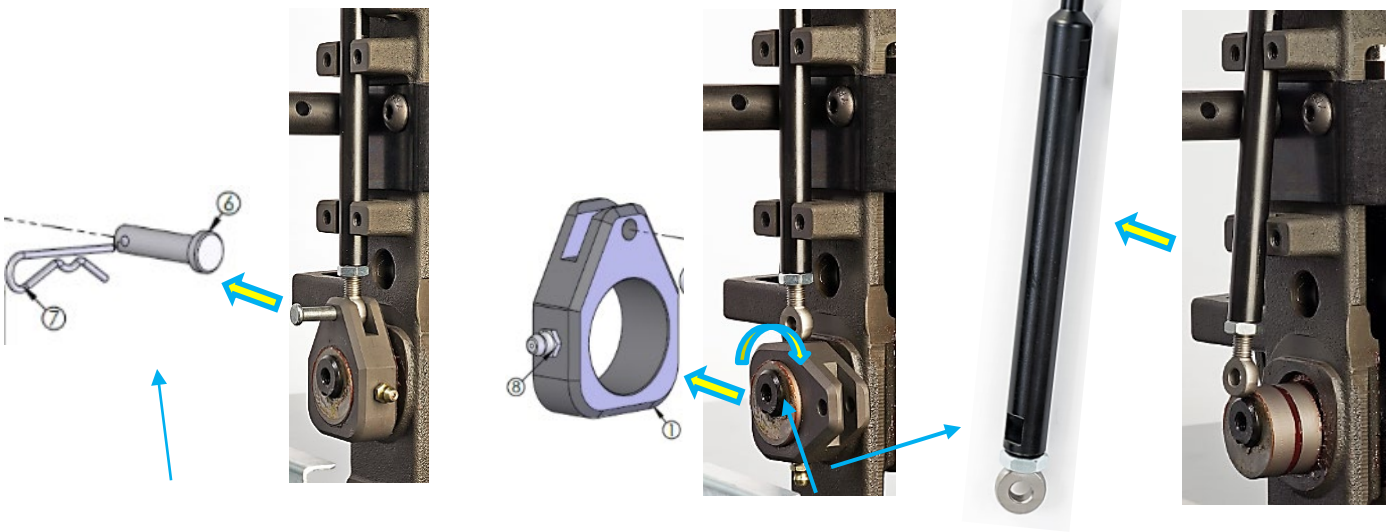
10.4. Remove the Swage Rod Assembly from the right side or the left side of the CP2000 by removing four ¼" Screws ⑬ that hold the Upper and Lower Swager Cover Plates ⑫ over the Swage Rod. The Cover Plates can be on the left or right side of the CP2000 depending on which side is being used for primer pocket swaging.





Remove 4 screws ⑬ and both Cover Plates ⑫ from the CP2000

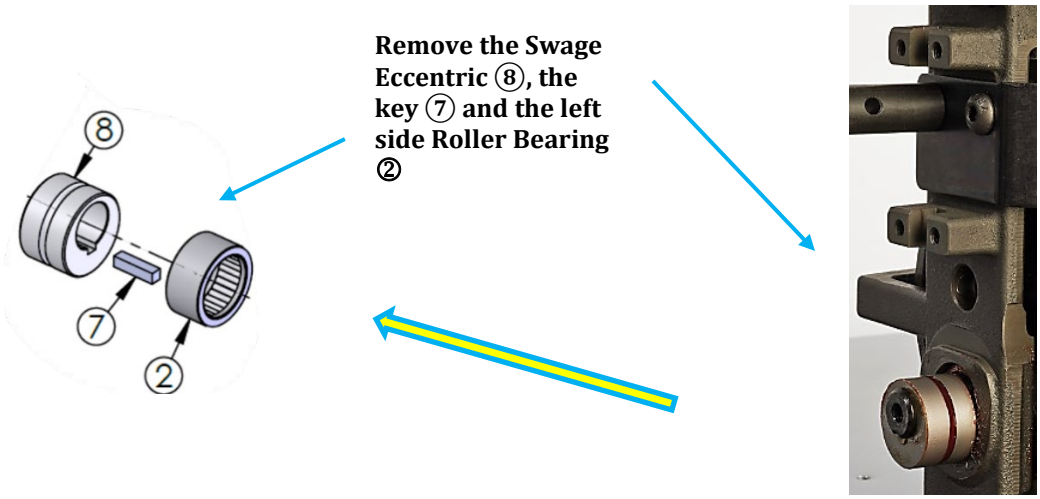
10.4.1. **Remove Spring Clip ⑦ and Clevis Pin ⑥. Rotate the Swage Connecting Rod ① Sideways and remove it and the Swage Rod Assembly. Save them for reinstallation.**



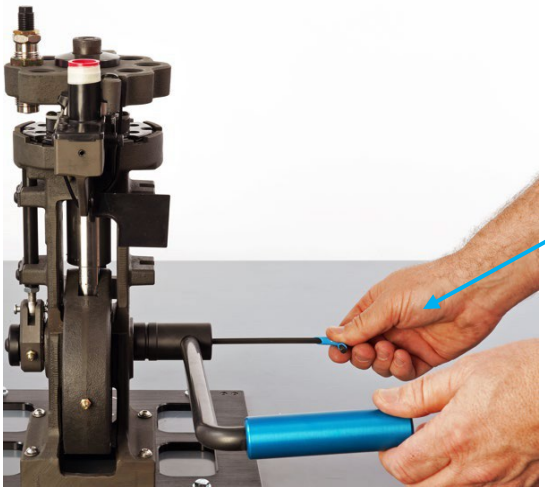
Remove the Spring Clip and Clevis Pin

Rotate the Swage Con Rod sideways and remove the Swage Rod Assembly and Con Rod

10.4.2. **Remove Left Side CP2000 Swage Eccentric ⑧, Key ⑦, with the left side Roller Bearing. Save, clean and repack/grease them before reinstallation.**



10.5. **Remove the Operating Handle by loosening the Set Screw at the end of the Crankshaft with an Allen Wrench and sliding the Handle out of the Crankshaft. The Handle will not be reused.**

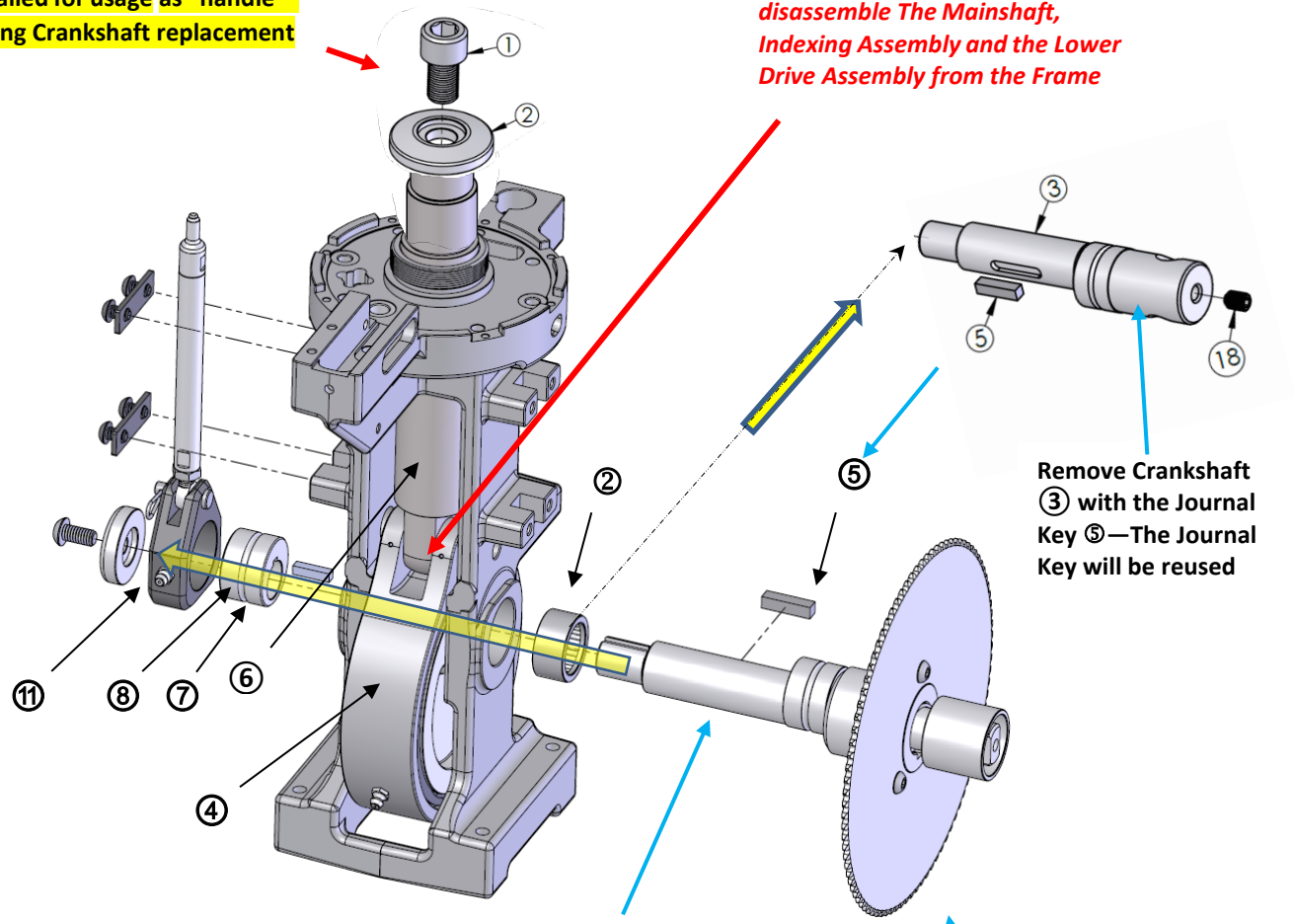


Remove the CP2000 Operating Handle—not reused

10.6. **Remove the Crankshaft ③ with the Journal Key ⑤ by gently pulling up on the Toolhead Bolt ① and Washer ② that were temporarily threaded into the Mainshaft to use as a "handle" while pulling/wiggling the Crankshaft ③ and the Journal Key ⑤ out of the Frame from left to right. The Crankshaft ③ will not be reused. The Journal Key ⑤ will be reused. Clean and repack both Bearings ② before installation. Slide the right-side Bearing② onto the DA3000 Crankshaft. *Note: If the Optional Right-Side Swage Assembly or if the Optional Pocket Probe Assembly is being used, install the Connecting Rod ⑪ with the grease Zerk forward on the Crankshaft now.* Place the Journal Key ⑤ in the Crankshaft with the Key facing the back of the System. Align the Journal Key ⑤ in the Crankshaft with the Lower Bearing Assembly ④. Slide the Crankshaft Assembly with Swage Connecting Rod (if used) ⑬ and Right Side Bearing into the Lower Bearing Assembly ④ while holding up on the temporarily installed Toolhead Bolt ① and Washer ②. It may be necessary to gently tap on the right side near the center of the Crankshaft Flange with a soft-faced hammer—do not hammer on the Sprocket. Reinstall the Left Side Bearing ② over the Crankshaft and into the Frame.**

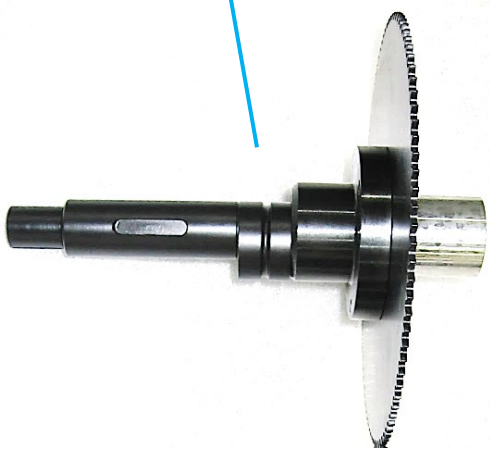
Bolt and Washer temporarily installed for usage as "handle" during Crankshaft replacement

There is no need to remove or disassemble The Mainshaft, Indexing Assembly and the Lower Drive Assembly from the Frame



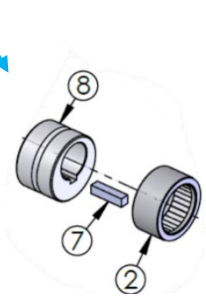
Remove Crankshaft ③ with the Journal Key ⑤—The Journal Key will be reused

Install the DA3000-CP2000 Crankshaft with the Journal Key ⑤ and slide them through the Right Bearing ②, the Lower Drive Bearing Assembly ④



10.7. Reinstall the removed left side CP2000 Bearing ②, Swage Eccentric ⑧ and Key ⑦. If the Bearing is dirty, clean and repack with grease before reinstallation.

Reinstall the Left Side Bearing ②and the Swage Connecting Rod Eccentric ⑧ with the Key ⑦

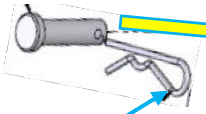


10.8. Reinstall the removed Swage Connecting Rod ⑪, the Swage Rod and the Clevis Pin and secure with the Spring Clip. Grease the Connecting Rod using the Zerk Fitting.

Reinstall the Swage Rod

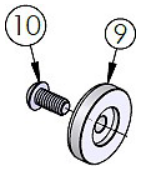
⑪

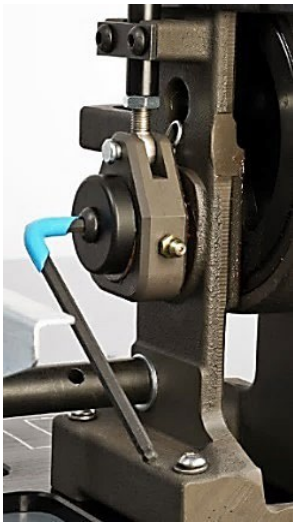
Reinstall the Swage Connecting Rod sideways and rotate to align with the Swage Rod



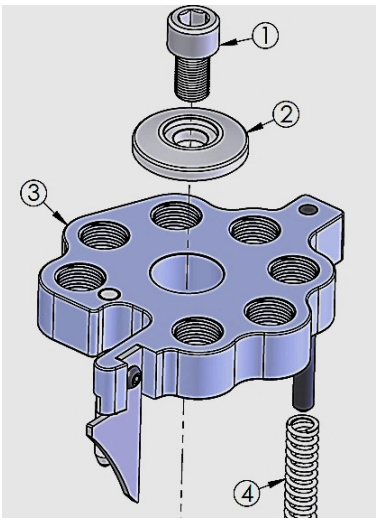
Reinstall the Clevis Pin and Spring Clip

10.9. Reinstall Bearing Cap ⑨ and tighten the Bearing Cap Bolt ⑩ to 7-10 Ft. Lbs.

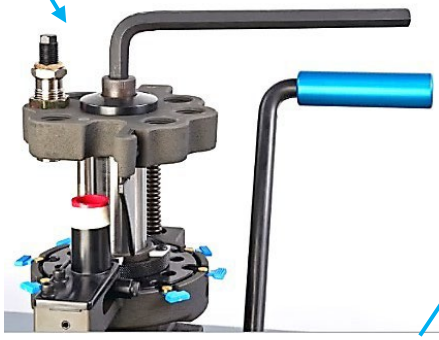


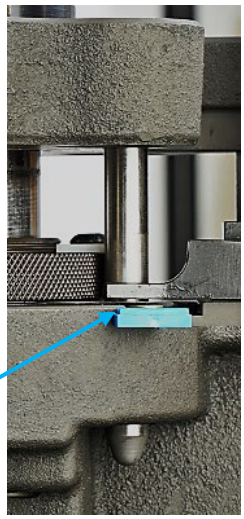


10.10. Remove the (temporarily installed) Toolhead Bolt and Washer and reinstall the Toolhead③ on the Mainshaft and lightly snug the Toolhead Bolt ① and Washer ② down against the Toolhead. Using the New DA3000 Operating Handle (refer to Section 11.8 on the usage of the New Handle), cycle the Operating Handle and Toolhead up and down making sure the Alignment Pin slides freely into its Bushing in the CP2000. Torque the Socket Head Bolt to 10-15 ft-lbs. Cycle the Handle up and down verifying that the Toolhead Pin is correctly aligned with no binding or movement of the Shellplate when the Alignment Pin enters the hole in the Shellplate and the Bushing below in the Frame. Adjust as necessary by loosening and re-tightening the Toolhead Bolt.



Re-torque to 10-15 ft-lbs.

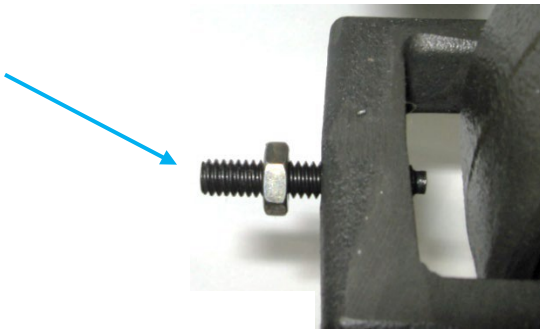




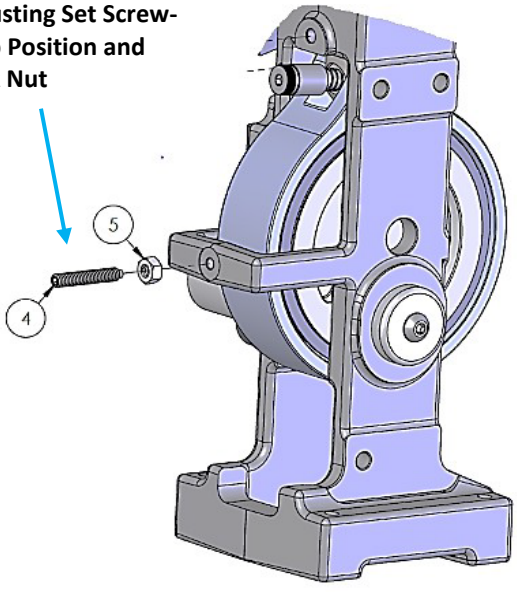
The Alignment pin must align with the hole in Shellplate and Frame without binding or moving Shellplate

10.11. NOTICE! The "Up Position" Lower Bearing Stop must be verified and adjusted for the DA3000 to operate properly with the DA3000. Adjust the Stop as follows:

- **Loosen the 7/16" hex lock nut from the back of the frame--item ⑤ below. Turn item ④ the travel stop set screw with a ⅛" Allen Wrench at least 2 full turns out.**
- **Raise the Operating Handle to its upper travel limit in the Frame—not the Set Screw Stop ⑤**
- **Gently push back on the Handle and turn the Set Screw CW until it contacts the Lower Bearing Drive.**
- **Now, turn the Set Screw in one more turn and tighten the 7/16" Lock Nut with a 7/16" End Wrench.**
- **Verify the Shellplate indexes properly by very lightly holding pressure on the Shellplate with your thumb while cycling the Operating Handle up and down.**
- **If the Shellplate under indexes, back the Set Screw stop out a ¼ of a turn CCW at a time until indexing is correct.**
- **If the Shellplate over indexes, turn the Set Screw in ¼ of a turn at a time until indexing is correct.**



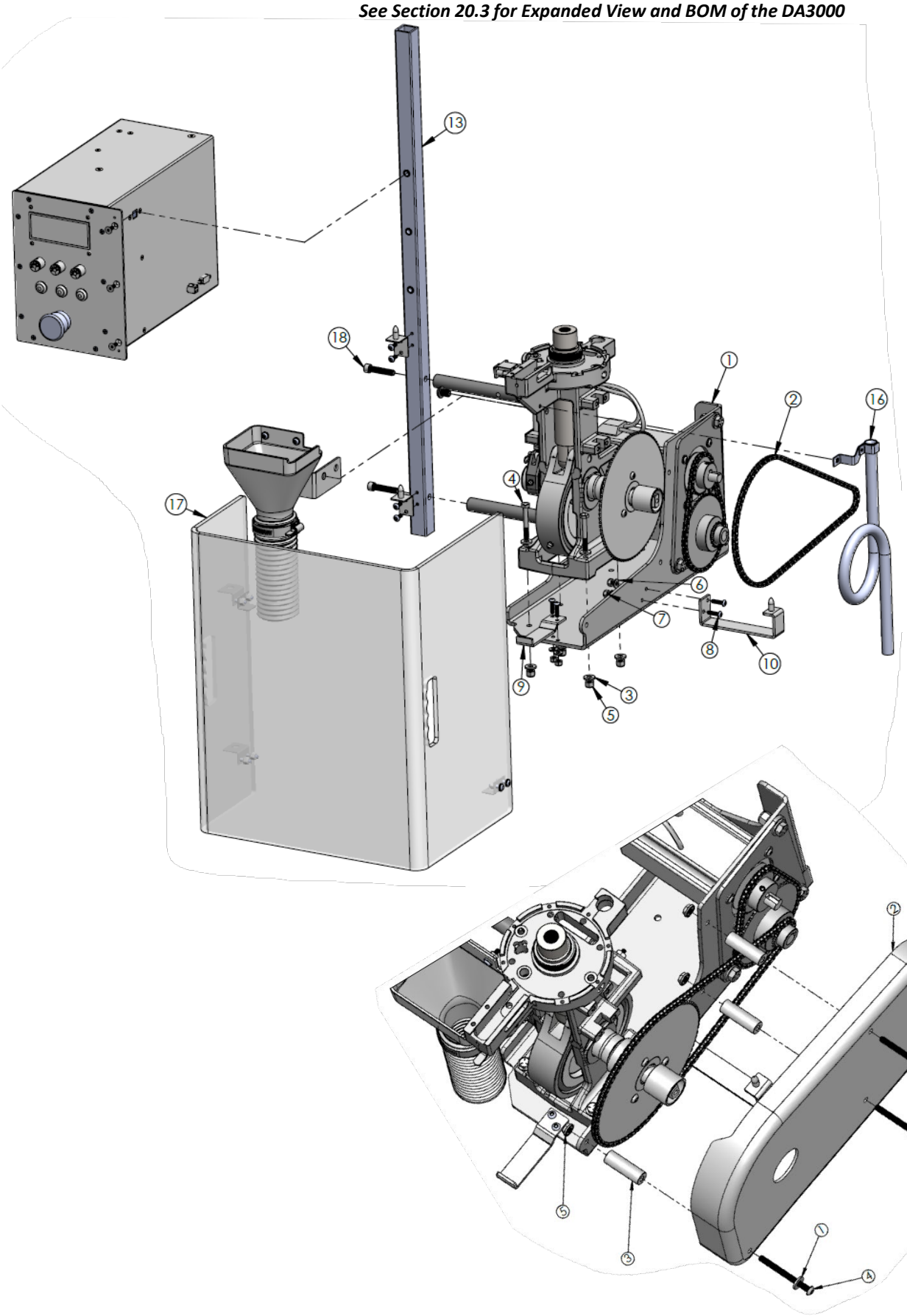
Adjusting Set Screw-Stop Position and Lock Nut



11. ASSEMBLY OF THE DA3000 WITH A CP2000 OR RL1100—

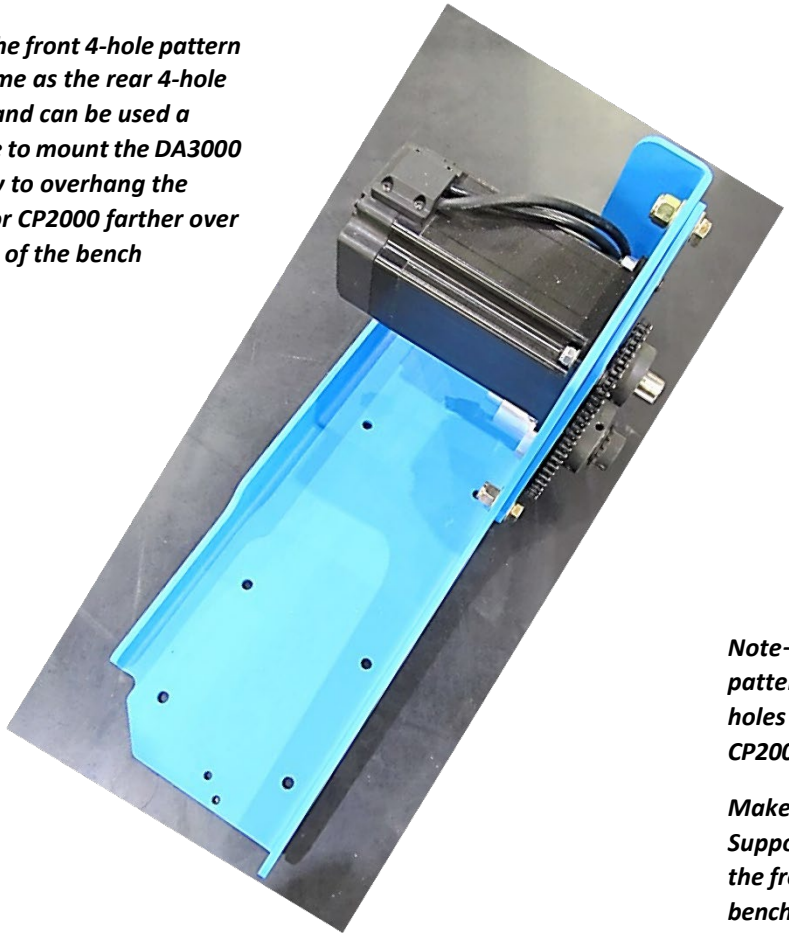
NOTICE! Usage of anything other than a CP2000 or an RL1100 with the DA3000 voids the DA3000 warranty.

See Section 20.3 for Expanded View and BOM of the DA3000



11.1. Set the DA3000 Motor Assembly and Baseplate on your mounting surface/bench along with four of each of the provided ¼-20 x 2 ½" Bolts, Washers and Self-locking Nuts. Use the Washers under the Bolt heads and Nuts.

Note—The front 4-hole pattern is the same as the rear 4-hole pattern and can be used a template to mount the DA3000 assembly to overhang the RL1100 or CP2000 farther over the edge of the bench

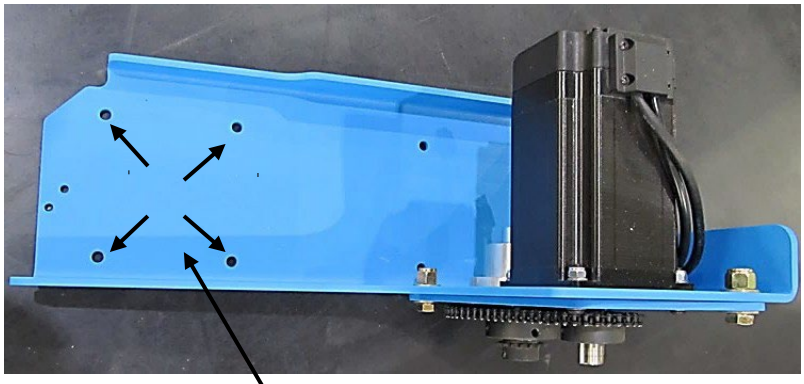


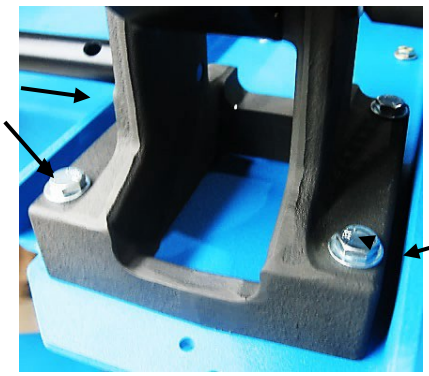
Note— These Bolts, Washers and Nuts are only used if the front mounting position of the Base Plate and CP2000/RL1100 is overhangs the edge of the users' bench

Note—The front 4-hole pattern will align with the holes in the Frame of the CP2000/RI1100

Make sure the Front Shield Support Bracket will clear the front edge of the user's bench

11.2. Position the CP2000 or the RL1100 that has been prepared as described above in Sections 7, 8, 9 and 10 over the four holes in the Baseplate and secure the CP2000 or the RL1100 with the provided four ¼-20 self-Locking Nuts, Washers, and Bolts using a 7/16" end wrenches or ratchet/socket.

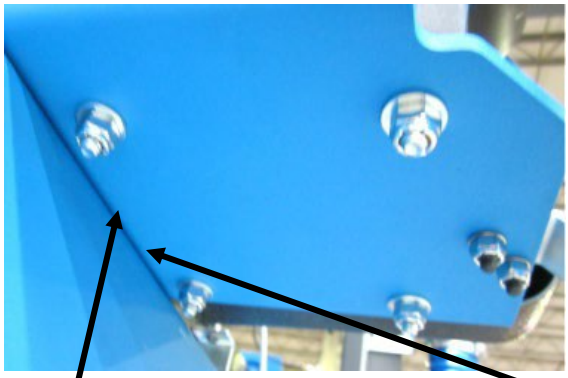




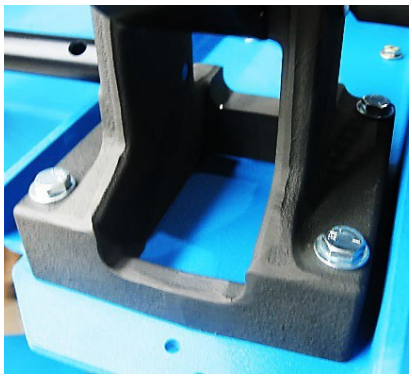
Position your CP2000 or RL1100 over these four holes in the DA3000 Baseplate/Motor Assembly and securely fasten the CP2000 or RL1100 to the Baseplate with the Four ¼-20" Bolts and Nuts and 8-¼ "Washers from the Hardware Kit—Washers go under the Bolt heads and Nuts

Note—These Bolts, Washers and Nuts are <u>only used</u> if the front mounting position of the Base Plate overhangs the edge of the user's bench

11.3. Position the DA3000 Baseplate with the CP2000 or the RL1100 on the mounting surface/bench so that the four mounting Nuts on the bottom of the DA3000 Baseplate that mount the CP2000 or RL1100 clear the bench.



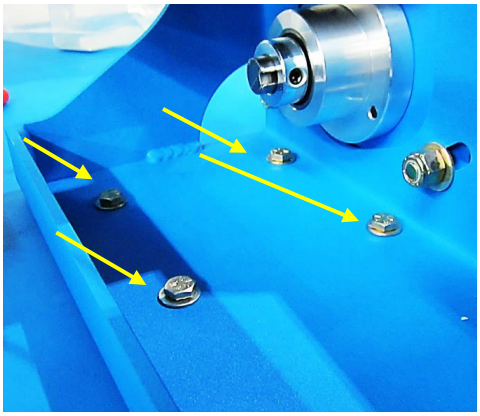
(Looking up from below)



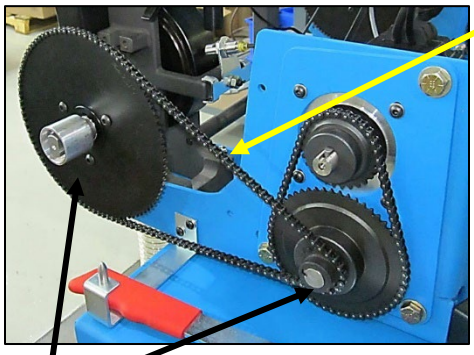
Position DA3000 Baseplate/Motor Assembly with the Press so that the Nuts clear and overhang the front edge of the bench

11.4. Mark your bench using the four mounting holes in the baseplate and drill 9/32" diameter holes through the bench. Mount the DA3000 securely to the bench using user-supplied ¼" bolts, nuts (Grade 5 minimum) and washers. Use large diameter ¼" washers on the underside of a wooden bench.

Mark the four mounting holes using the Baseplate as a template and drill and fasten the DA3000 Baseplate to the bench using user-supplied hardware



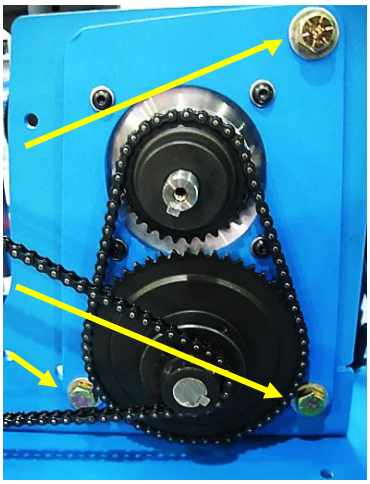
11.5. Locate the Main Drive Chain PN85109 from the shipment. Loosen the three Main Chain Adjustment Bolts and Nuts. Install the Main Chain on the Big Sprocket on the Press and the Little Sprocket on the Counter Shaft. Take the slack out of the Chain by rotating the Motor Mounting Bracket counterclockwise and tightening the three adjusting Nuts and Bolts with a 9/16" wrench and a rachet with a 6" extension. There should be no more than ¼" of slack in the chain when pushing down on the middle of the chain between the Sprockets.



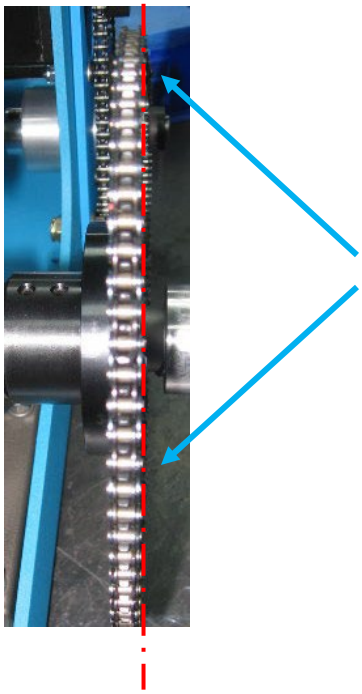
Adjust the Chain so there is no more than ¼" of slack when pushing down in the middle between the two Sprockets

Install the Chain PN85109 on these two Sprockets

Loosen the Main Chain Drive Pivot Bolt/Nut a little— Loosen the two Slotted Plate Chain Tensioning Locking Bolts and Nuts and install the Main Chain--After the Chain is tensioned, tighten the two lower adjustment Nuts and Bolts and then tighten the top Pivot Nut and Bolt



11.6. Verify that the Main Chain on the Two Sprockets is in alignment front to back.

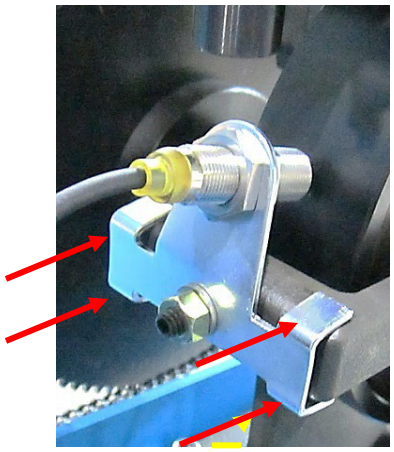


Verify that the Front and Back Sprockets and Chain are all aligned—use a straight edge if necessary

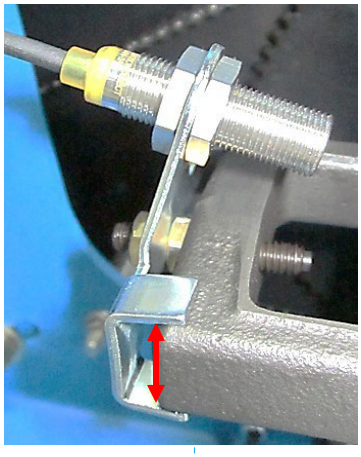
11.7. Locate the bag with the Home Sensor and Mounting Bracket and the ¼"-20 Nut from the shipment--PN85163. Mount the Home Sensor on its Mounting Bracket on the <u>existing Set Screw of the Press Rear Hard Stop</u> of the RL1100 or the CP2000 using the supplied Nut as shown below. The Home Sensor's position will require adjustment after installation—see Section 14.4.

- **NOTICE! --The Sensor must not Contact the CP2000/RL1100's Lower Drive Bearing Assembly in the up position**

Mount the Home Sensor Assembly to the existing Up Stop Set Screw using the Nut in the bag with the Sensor Assembly



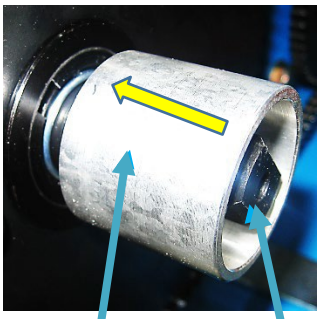
Spread the 4 alignment "ears" on the Home Sensor Bracket if necessary for a tight fit over the casting

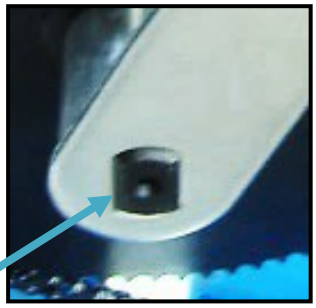


Hold the Bracket in your hand and gently spread the "ears" apart with a Crescent wrench or a pair of Pliers for a tight fit top and bottom

11.8. **The DA3000 Manual Operating Handle is designed for <u>temporary usage</u> to manually cycle the RL1100 or CP2000. The Safety Cover must be temporarily removed to use the Handle. The Crankshaft has a Spring-Loaded Collar over the Crankshaft Engagement Lug. *(This is a safety feature so that the Handle will not stay in place during motorized operation.)* Compress the Spring-Loaded Collar over the Crankshaft Lug by placing the Handle with the Finger Grooves facing toward the rear. Press the Handle firmly to the left to engage the Lug and cycle the Press up or down as needed while maintaining left pressure to keep the Handle engaged. Remove and store the Handle.**

Manual Operating Handle—Finger Gooves facing to the rear

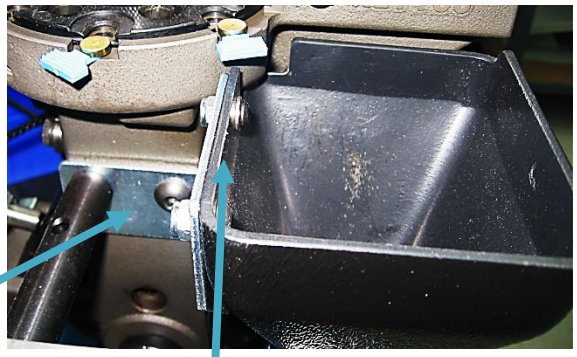


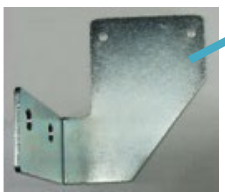


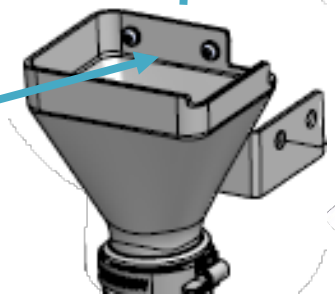
Spring Loaded Collar **Crankshaft Lug**

Align Handle with Lug--Press Handle firmly to the left maintaining pressure while cycling the Handle up and down

11.9. **Locate the DA3000 Controller/Casefeed Mounting Post PN85153, the Cartridge Catch Funnel and Hose Assembly PN85155 and the Assembly Hardware (2 each 10-32x1/2" Screws, #10 Washers and #10 Locking Nuts) from the shipment and fasten the Bracket to the Funnel as shown below:**

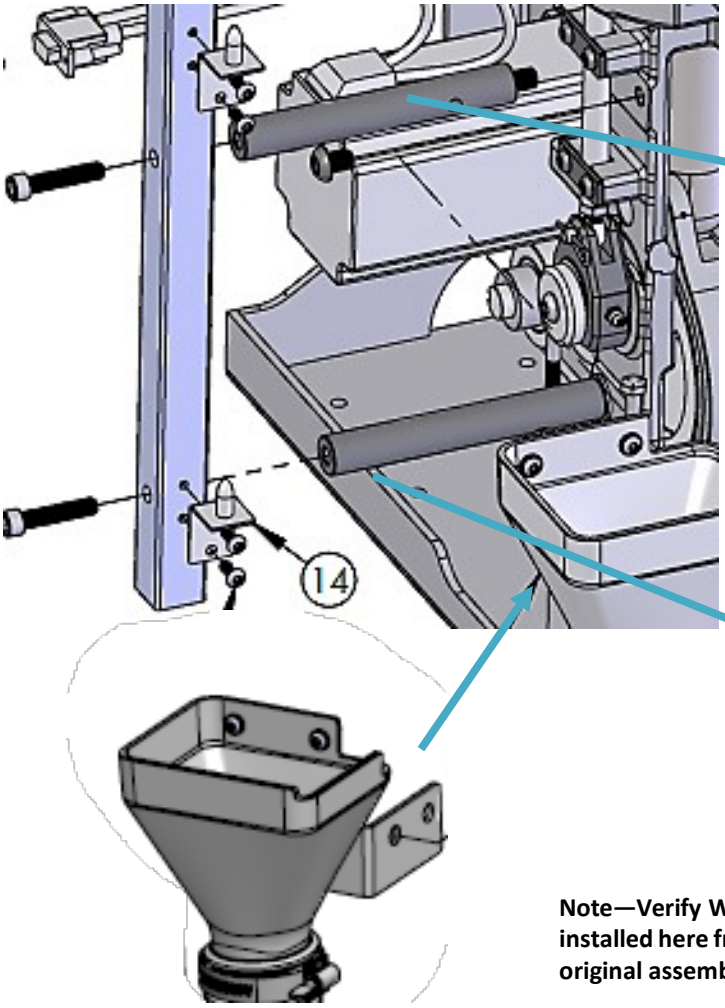


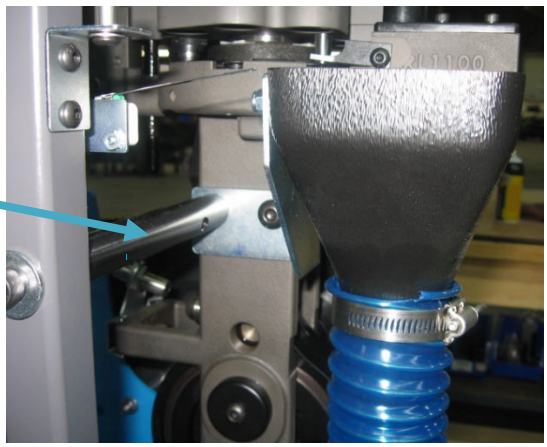




Threaded fasteners face forward on the DA3000 Casefeed/Controller Mounting Post

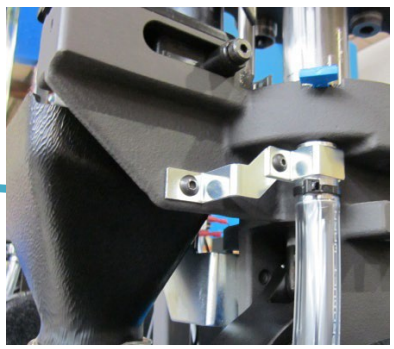
11.10. Use the saved Post Mounting Stud and the saved Button Socket Head Screw to fasten the Complete Cartridge Funnel Mounting Bracket to the RL1100 o rCP2000 Frame and fasten the DA3000 Casefeed Mounting Post to the Casefeed Post Studs with the two saved 5/16" Socket Head Screws.





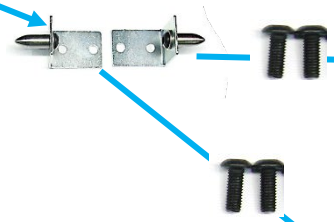
Note—Verify Washer installed here from the original assembly

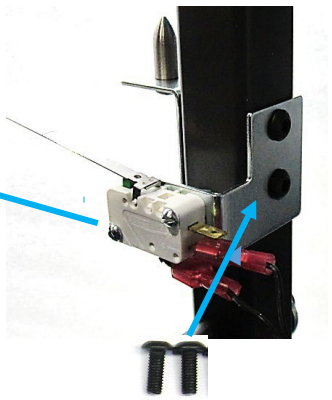
11.11. Locate the DA3000 Spent Primer Catch Mounting Bracket and Tube from the Shipment-PN85156. Fasten the Assembly to the Frame with the provided 10-32 Button Socket Head Screw from the Hardware Kit.



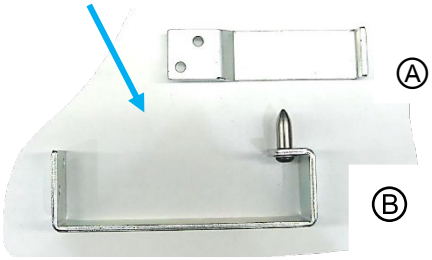
11.12. **Locate the four Safety Shield Mounting Brackets from the Bag of Brackets from the Shipment. Install the two larger Brackets to the front and bottom right side of the DA3000 Motor Platform Assembly using two each 10-32 x .750" long Button Head Hex Screws, Washers and Locking Nuts. Fasten the two smaller Brackets to the Case Feed post with two 10-32 x .500" Button Head Hex Screws. Locate the Safety Shield Switch/Cable and Mounting Bracket from the Shipment and two 10-32x.500" Button Head Cap Screws from the shipment. Install the Switch on the back of the Casefeed post as shown on the right below with the lever to the front of the system.**

Install these two Safety Shield Mounting Brackets to the Post with two 10-32x.500" BHCS ("bullet" shape pointing up)

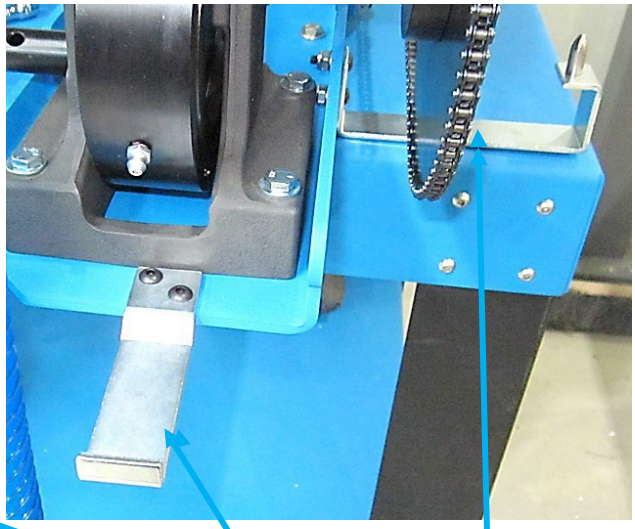


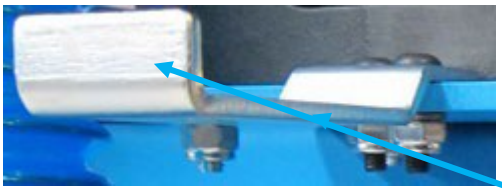


Mounting Brackets Ⓐ and Ⓑ to the Install these two Safety Shield Motor Baseplate using these Nuts, Screws and Washers from the Hardware Bag—10-32x.750" BHCS (Washer goes on Nut side)



Install Safety Shield Switch on back of Casefeed Mounting Post using the two include 10-23x.500" BHCS Screws in the bag with the Switch

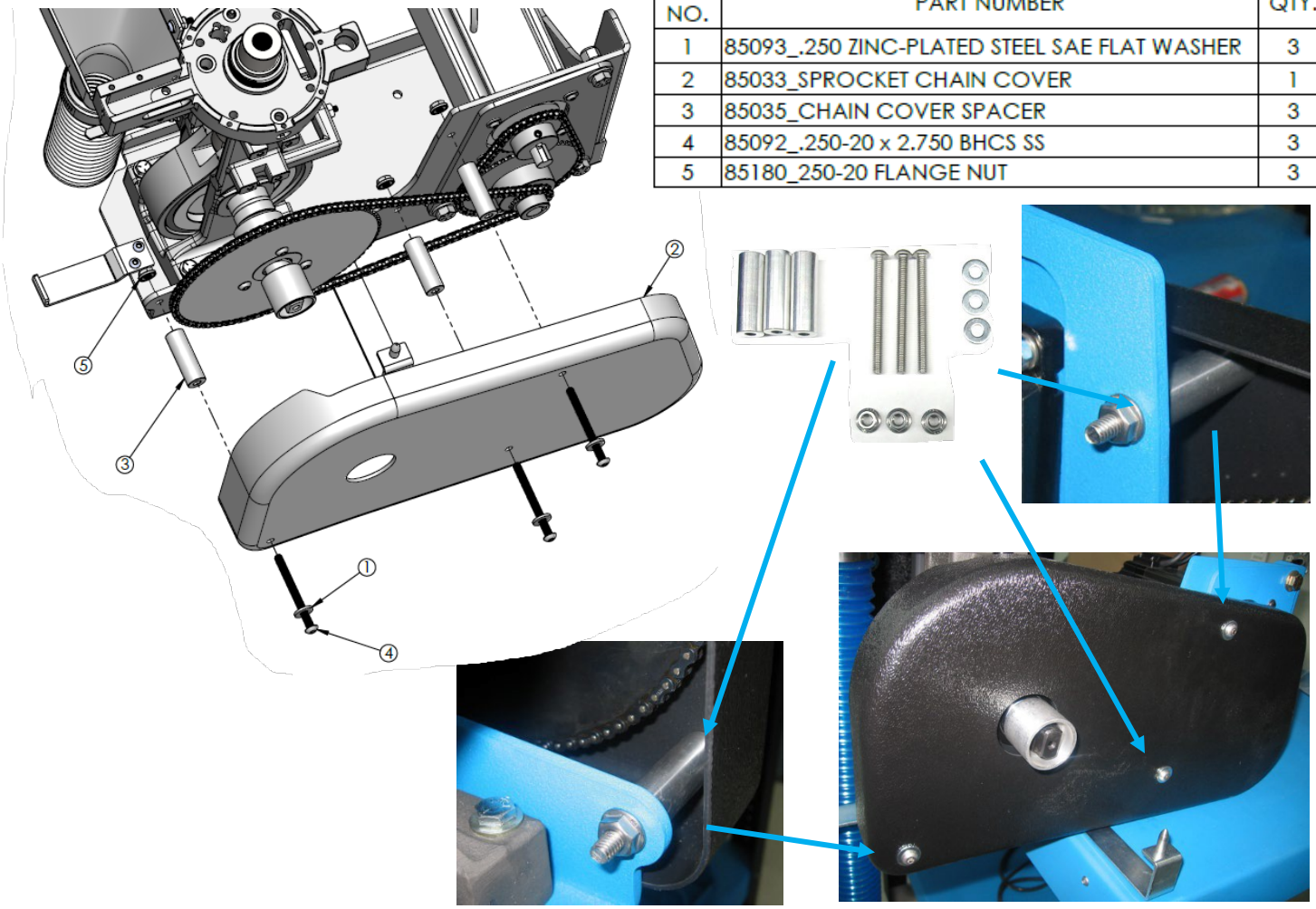




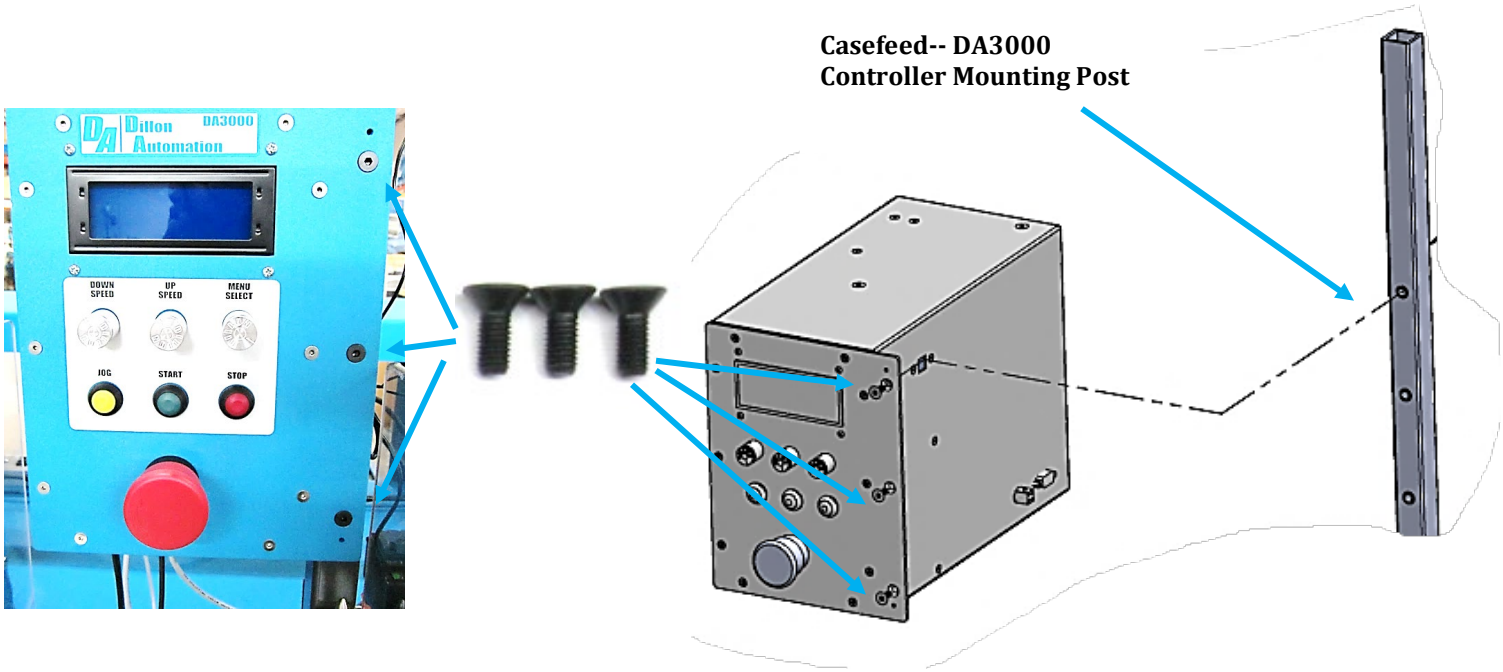
Ⓑ Ⓐ

11.13. Install the Chain Cover over the Chain and Sprockets using the three mounting holes in the DA3000 Baseplate and Chain Cover with three ¼-20 Screws, Washer, Spacers and Nuts from the Hardware kit. Washers ① go under the head of the Screws ④. Do not over-tighten (5-7ft-lbs).

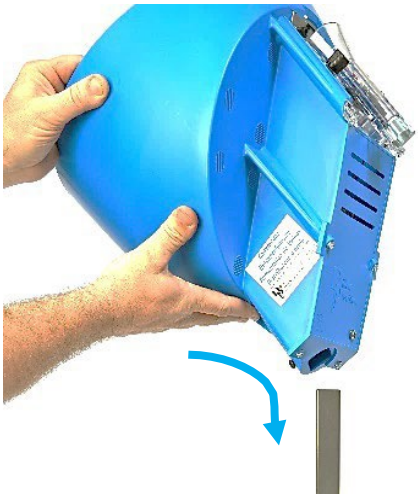
ITEM NO.	PART NUMBER	QTY.
1	85093_.250 ZINC-PLATED STEEL SAE FLAT WASHER	3
2	85033_SPROCKET CHAIN COVER	1
3	85035_CHAIN COVER SPACER	3
4	85092_.250-20 x 2.750 BHCS SS	3
5	85180_250-20 FLANGE NUT	3



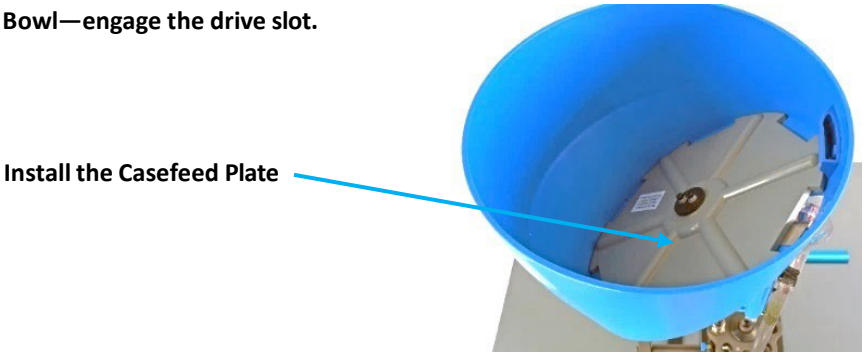
11.14. Mount the DA3000 Controller to the Case Feed Mounting Post using the three 10-32 Flat Socket Head Screws in the Hardware Kit starting with the top Screw.



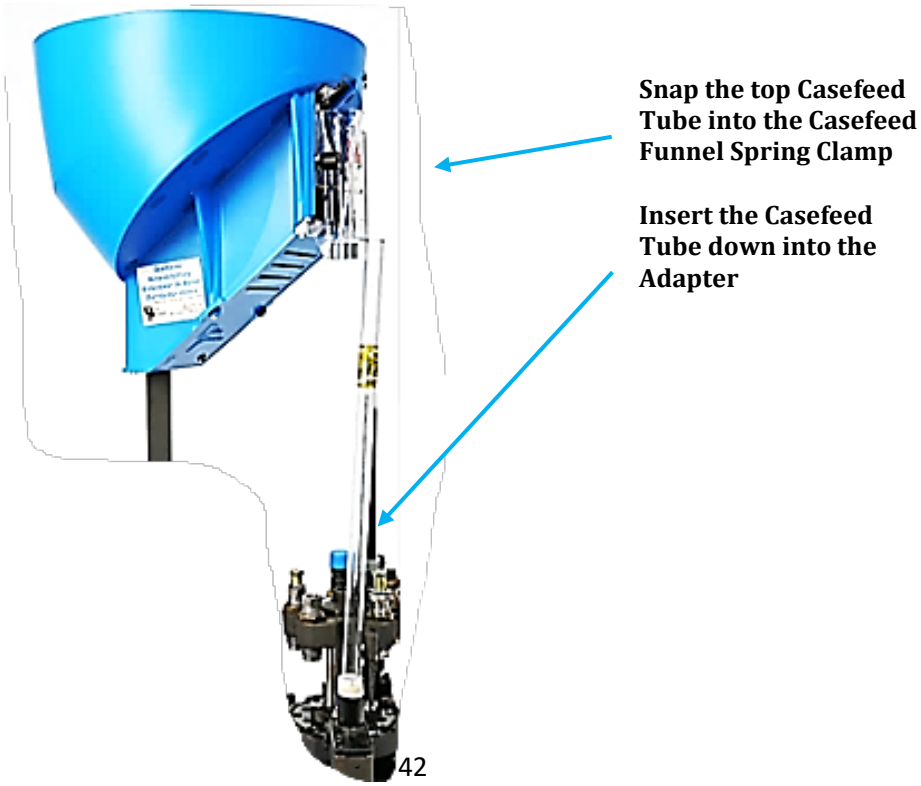
11.15. Install the Casefeeder on the Casefeed Post and tighten the Screw securing the Casefeeder to the Casefeed Post. Connect the Casefeeder Power Cable to the Casefeeder Socket.



11.16. Install the Casefeed Plate in the Case Feed Bowl—engage the drive slot.



11.17. Install the Casefeed Tube by inserting the Casefeed Tube down into the Casefeed Adapter and snapping the Casefeed Tube in the Spring Clamp on the Casefeed Funnel.



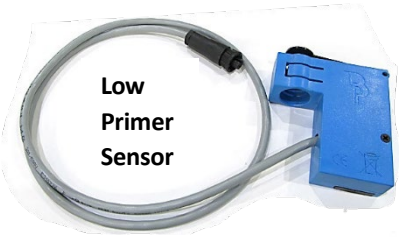
11.18. Connect the Casefeeder to your power strip.

- **The new Variable Speed Casefeeder utilizes a Universal Power Supply that works on 110-240V AC 50/60 Hz and comes with several Wall Socket Adaptors. Choose the Adaptor for the utility power in your area. Install the Adaptor into the Power Supply, by inserting the side with the raised edge opposite the sliding latch and pressing it into the pocket until the latch locks in place.**

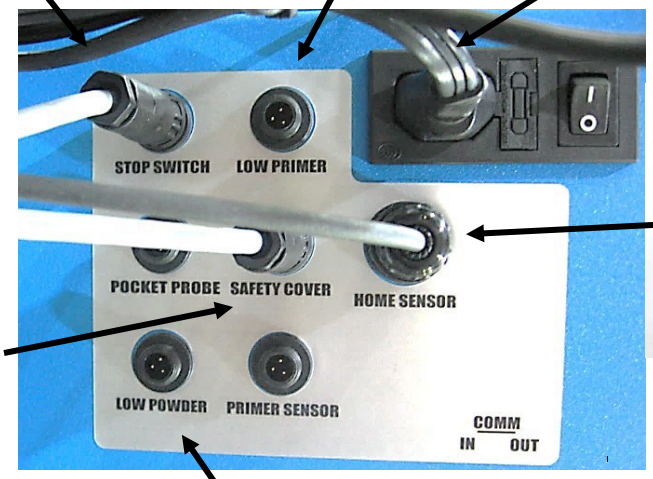
12. DA3000 POWER AND CONTROL CONNECTIONS

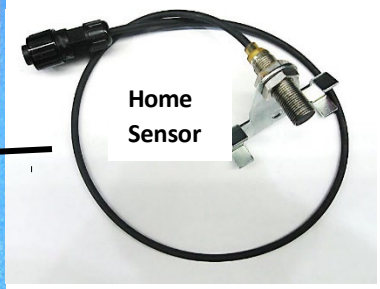
12.1 Connect the cables for the Input Power, Home Sensor, Remote Stop Switch, and Safety Cover and the two Motor Power Control cables (12.2 below) must be connected before POWERING UP the DA3000. The optional Low Primer Sensor and the Low Powder Sensor should be acquired and connected when using an RL1100 with the DA3000. —All the connections are a plug with a finger-tightened nut.

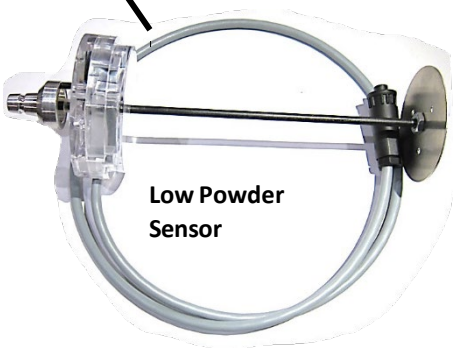
12.1.1 120 VAC Power
12.1.2 Low Primers Sensor—Opt. RL1100
12.1.3 Remote Stop Switch
12.1.4 Home Sensor
12.1.5 Safety Cover
12.1.6 Low Powder Sensor—Opt. RL1100
12.1.7 Future Primer Pocket Sensor—not shown
12.1.8 Future Primer Drop Sensor—not shown



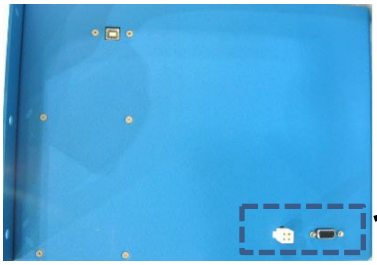
120VAC Power



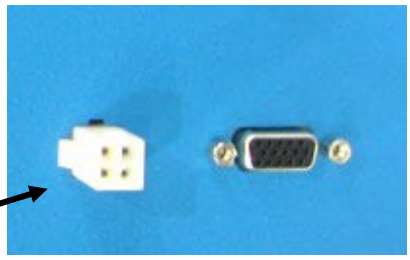


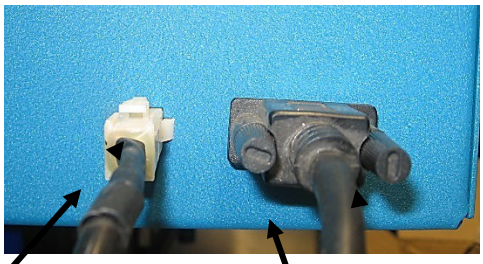


12.2 Connect the DA3000 Motor assembly to the two Connectors on the right-side bottom corner



Right Side of DA3000 Controller





Plug in the white keyed Connector until it "clicks"

Plug in 15 pin Connector and finger-tighten the two thumb screws

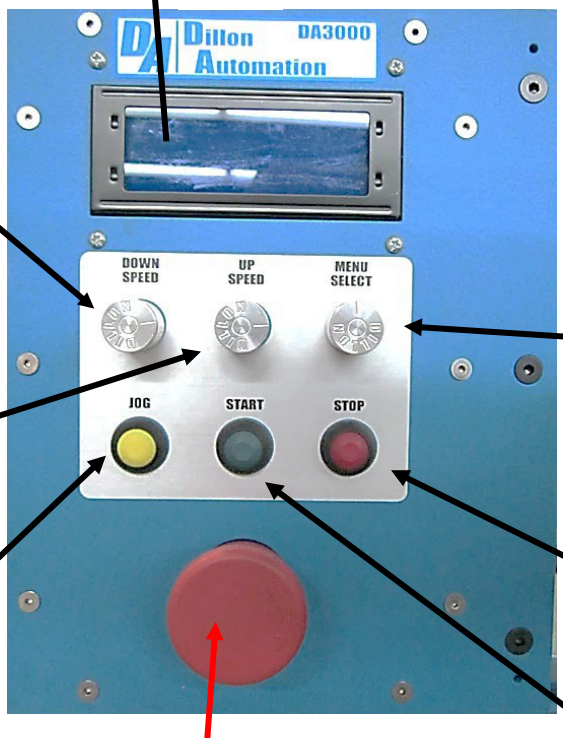
13. DA3000 FRONT PANEL CONTROLS

DA3000 MAIN START-UP SCREEN

Displays Controller Version and DA3000 Total Cycles (ODO)

AUTO OPERATION DISPLAY

During Auto Operation-- Displays– Completed Job Cycles and Cycles per Hour



DOWN SPEED CONTROL KNOB

Rotate the knob left or right to regulate the Down Velocity of the Toolhead 0-99

MENU SELECT KNOB

Press the knob to enter Menu Display Mode

Rotate to select Menus and Set Operating Parameters

UP SPEED CONTROL KNOB

Rotate the knob left or right to regulate the Up Velocity of the Toolhead 0-99

STOP BUTTON

Push to Stop Machine Operation

JOG BUTTON

*Press and Holding this Button causes the machine to cycle at a slow speed**

EMO--Push to shut off Power to the Control System and Motors—This button "locks in-off"—Rotate clockwise to reset—power on—" pops out "

START BUTTON

*Push to Start Machine Operation**

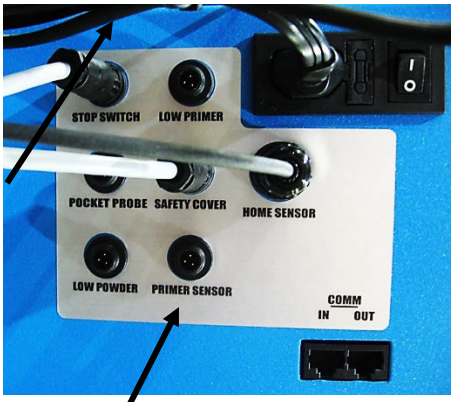
*** TO START MACHINE OPERATION ---- The Reloading Press must always be manually cycled to the down/stopped position using the Temporary Operating Handle with the Safety Cover temporarily removed!**
There must never be a cartridge case in Station 1 when doing this!

14. DA3000 CONTROL, HOME SENSOR ADJUSTMENT, CONNECTIONS AND OPERATION SCREENS

14.1. Verify that all the DA3000 Control and Motor Connections are made.

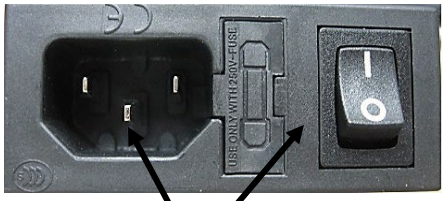
14.2. Make sure that the Emergency Off Button is reset-Popped out when rotated.

14.3. Turn on the DA3000 Controller using the On/Off (I/0) switch under the bottom left front corner.



Verify all required Connectors are in place

2 Motor Connections in place



Input Power and Power on/off Switch-- underneath (on-position shown)

DANGER! -- CHAIN COVER – MUST BE IN PLACE DURING OPERATION

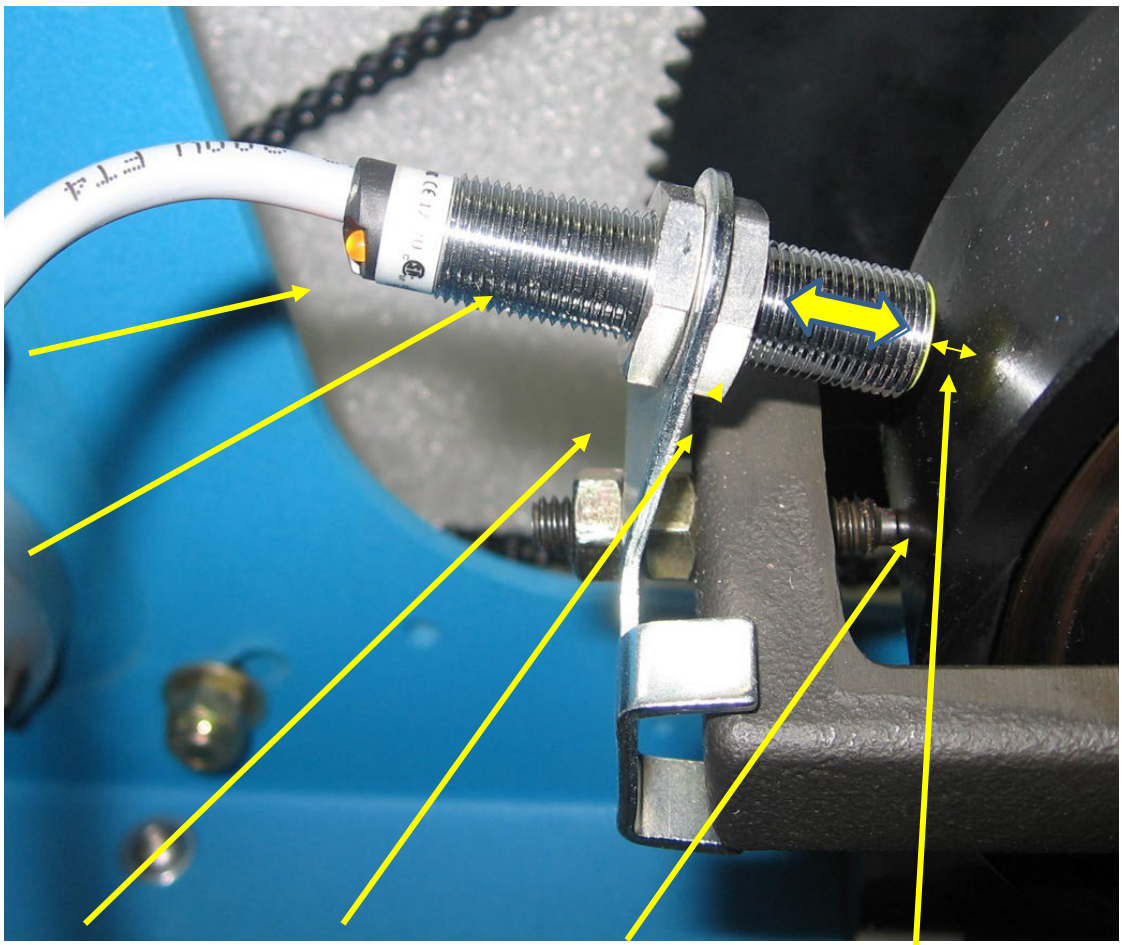
DANGER! -- SAFETY SHIELD/COVER MUST BE IN PLACE DURING AUTO OPERATION

Safety Cover/Enclosure Switch must be in place and operational

- **DANGER! —DO NOT OPERATE THE SYSTEM WITH ANY SAFETY DEVICE/SHIELDS/CHAIN COVER REMOVED OR INSERT ANY BODY PARTS-FINGERS HANDS ETC., IN THE PRESS AREA OR MOTOR CHAIN DRIVE AREA OR OPERATE THE SYSTEM WITHOUT VISION AND HEARING PROTECTION. THE DA3000 WILL CAUSE THE PRESS TO AUTOMATICALLY MOVE WHEN THE START OR JOG BUTTON IS DEPRESSED. EXTREMITIES CAN GET CAUGHT OR CRUSHED IN THE CP2000 OR THE RL1100. FAILURE TO HEED THIS WARNING CAN RESULT IN DEATH/LOSS OF LIFE, LIMBS, VISION, OR HEARING.**
- **DANGER! --DO NOT PRESS THE START OR JOG BUTTON WHILE THE DA3000 OPERATING HANDLE IS ENGAGED.**

14.4. VERIFY THAT THE HOME SENSOR IS PROPERLY ADJUSTED—NOTICE! CRITICAL ADJUSTMENT.

- **With the Safety Shield temporarily removed, verify that the power is on to the DA3000. Manually cycle the RL1100 or CP2000 to the top of its stroke using the removable Operating Handle (with the finger grooves to the back) until the mechanical "Hard-Up-Stop" is reached. The Sensor Activated Light on the back of the Home Sensor may or may not be illuminated. It is illuminated when properly adjusted sensing the outer surface of the Lower Bearing Assembly. The position of the Sensor is adjusted by the position of the two 11/16" Locknuts on either side of the bracket which is not threaded.**
- **If the Home Sensor Indicator LED light is on, loosen the rear adjusting Lock Nut on the Home Sensor 1-2 turns while holding the sensor to the rear (cord side). Loosen/unscrew the front Lock Nut while holding the Sensor to the rear until the Light goes out. Finger tighten the Front Lock nut against the bracket, moving the sensor forward until the Light just comes on, then tighten the front Lock Nut an additional 1/6 of a turn or one wrench flat on the Lock Nut. Now tighten the rear Lock Nut while keeping the front Lock Nut from moving using an 11/16" wrench—this moves the Sensor forward slightly for reliable home sensing.**
- **If the Home Sensor Indicator LED light is off, loosen the front adjusting Lock Nut on the Home Sensor 1-2 turns while holding the sensor to the front (opposite the cord). Loosen/unscrew the rear Lock Nut (while holding the Sensor to the front until the Light just comes on, then tighten the front Lock nut an additional 1/6 of a turn or one wrench flat on the Lock Nut. Now tighten the rear Lock Nut while keeping the front Lock Nut from moving using an 11/16" wrench—this moves the Sensor forward slightly for reliable home sensing.**
- **NOTICE! --There must always be a gap between the Sensor and the Press Lower Bearing/Drive Assembly.**



14.5. THE DA3000 MAIN START-UP SCREEN

- **The DA3000 displays the information below every time the DA3000 Controller is powered up. The ODO shows the total number of cycles completed from the time the Controller was first powered up—it is non-resettable.**

DA3000 START-UP SCREEN

Displayed Every time power is turned on

14.6. THE MENU SELECT KNOB—has two functions—Push and Rotate—Push and Rotate must be done gently and slowly!

MENU SELECT KNOB

GENTLY PRESS KNOB **to enter Menu Display Mode/Screen then,**

SLOWLY ROTATE KNOB **to display more Menu Items then,**

PRESS KNOB **to Select Operating Parameter then,**

ROTATE KNOB **to adjust a parameter**

To View all the Menu Selections-

--From the Main Screen

Push the Menu Select Knob one time to open the Top Menu Screen—Back to Main

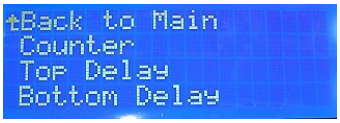
Rotate the Menu Select Knob to select--Enter Test Mode

Rotate the Menu Select Knob until the Back to Main Selection appears

Pushing the Menu Select Knob one time returns the display to the Main Startup Screen

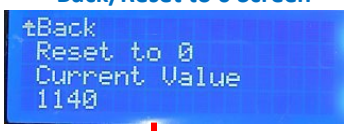
14.7. COUNTER MENU-- The Counter mode keeps track of the total number of machine cycles for a specific customer "job." It can be reset to "0" by the user. To access the Counter Screen from the Back to Main Screen, rotate the Menu Select Knob CW (clockwise) to select Counter. Press the Menu Select Knob to move the selection arrow down to Reset to "0" and press the Menu Select Knob again—the counter will be reset to "0."

From the Top Menu Screen --Back to Main



Rotate the Menu Knob to select Counter

Press the Menu Knob to enter Back/Reset to 0 Screen

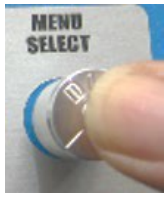


Rotate the Menu Knob To select Reset to Zero

Press the Menu Knob to Reset Current Value from (1140) to 0

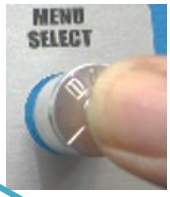
Rotate the Menu Knob to select Back

Press the Menu Knob to return to the Counter Menu



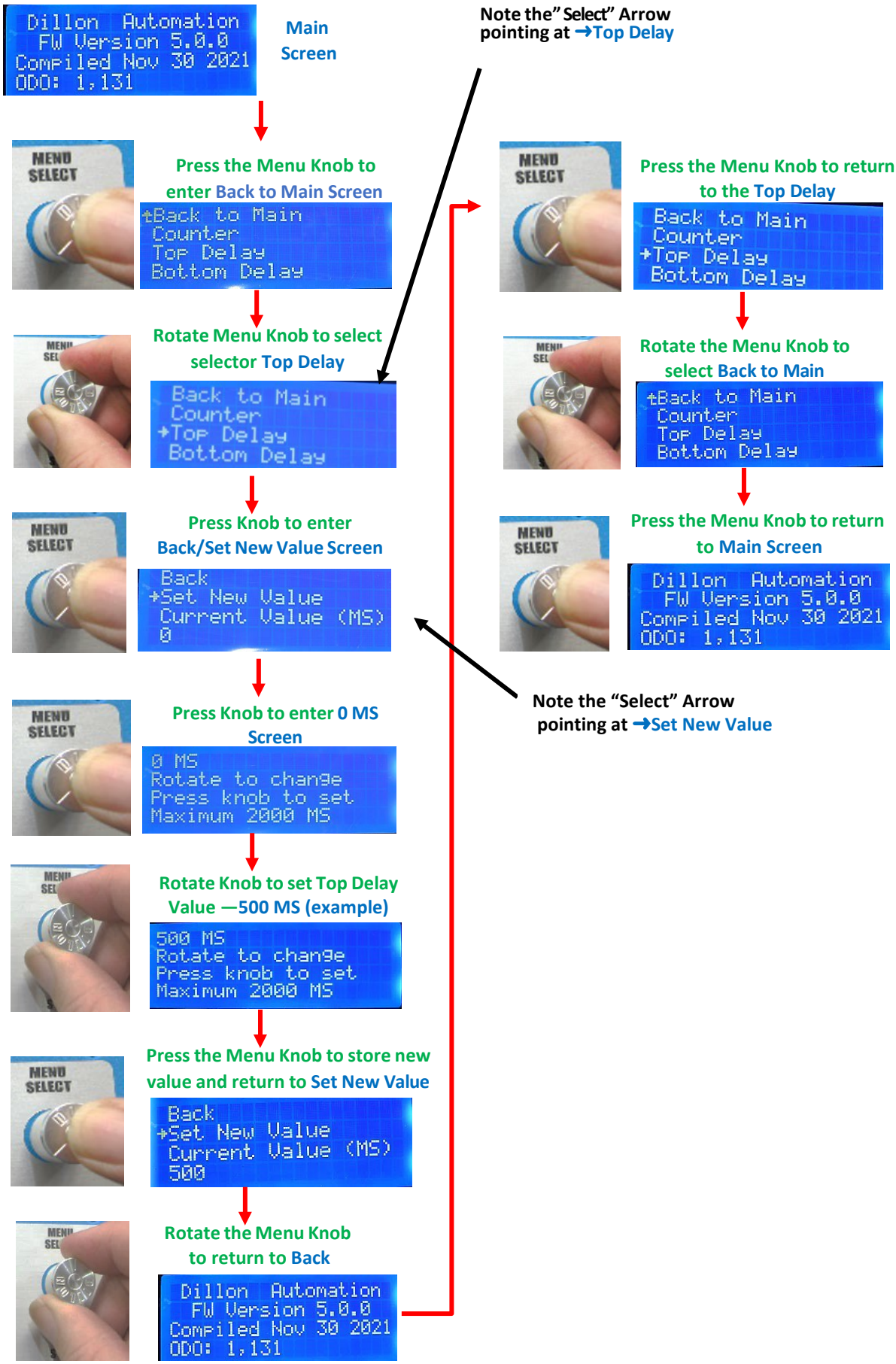
Rotate the Menu Knob to select Back to Main

Push the Menu Select Knob to return to the Main Screen



Note the" Point-Select" Arrow pointing at ➔Counter

14.8. TOP DELAY MENU—The Top Delay sets the "dwell time" that the Toolhead of the CP2000 or RL1100 remains motionless at the top position of the system cycle. This allows time for the Cartridge Case to stabilize before the Toolhead comes down. It is adjustable from 0-2000 milliseconds in 100-millisecond increments. (2000 milliseconds = 2 seconds/100 milliseconds = 0.1 seconds)



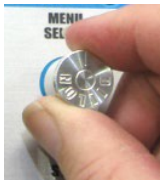
14.9. BOTTOM DELAY MENU--The Bottom Delay sets the "dwell time" that the Toolhead of the CP2000 or RL1100 remains motionless at the bottom position of the machine cycle. This allows time for the Powder Charge to "drop" and the Dillon Case Trimmer to complete its work. It is adjustable from 0-2000 milliseconds in 100-millisecond increments. (2000 milliseconds = 2 seconds 100 milliseconds = 0.1 seconds)

From the Main Screen

Note the "Select" Arrow pointing at →Bottom Delay

Press the Menu Knob to enter Back to Main Screen

```
→Back to Main
 Counter
 Top Delay
 Bottom Delay
```



Rotate Menu Knob to select Bottom Delay

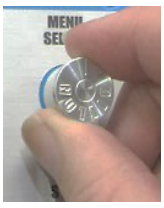
```
 Back to Main
 Counter
 Top Delay
→Bottom Delay
```

Press Knob to enter Back/Set New Value Screen

```
 Back
→Set New Value
 Current Value (MS)
 0
```

Press Knob to enter 0 MS/Rotate to change Screen

```
0 MS
Rotate to change
Press knob to set
Maximum 2000 MS
```



Rotate Knob to select Top Delay Value —500 MS (example)

```
500 MS
Rotate to change
Press knob to set
Maximum 2000 MS
```

Press the Menu Knob to store new value and return to Set New Value

```
 Back
→Set New Value
 Current Value (MS)
 500
```

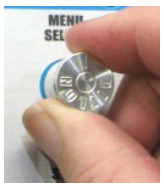
Rotate the Menu Knob to return to Back Screen

```
→Back
 Set New Value
 Current Value (MS)
 500
```

Note the "Select" Arrow pointing at→Set New Value

Press the Menu Knob to return to the Bottom Delay Screen

```
 Back to Main
 Counter
 Top Delay
→Bottom Delay
```



Rotate the Menu Knob to select Back to Main

```
→Back to Main
 Counter
 Top Delay
 Bottom Delay
```

Press the Menu Knob to return to Main Screen

```
 Dillon  Automation
  FW Version 5.0.0
Compiled Nov 30 2021
ODO: 1,131
```

14.10. TEST MODE MENU--(This Menu is to help determine if any switch or sensor is not operating correctly that may be causing a System Error/Fault. This Menu is used to make sure that the UP and DOWN SPEED CONTROL knobs are providing the correct 0-99% output value. Secondarily this display of (0-99%) can be used to document the Down (Forward) and Up (Reverse) Speed of the motor that results in the net Cycles per hour that is displayed on the Main Operating Screen when the system is operating in the Auto Mode. This can assist the user in returning to a previously used run rate—cycles per hour.

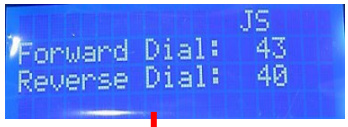
From the Main Screen

Push the Menu Select Knob one time to open the Top Menu Screen—Back to Main

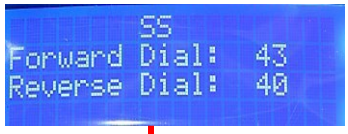
Move selector arrow → down by Rotating the Menu Knob to Enter Test Mode

Press the Menu Knob to enter the Forward-Reverse Dial Screen

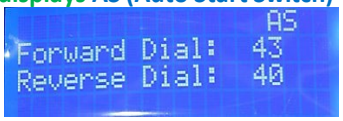
Pressing the JOG Button displays JS (Jog Switch)



Pressing the STOP Button or Remote Stop Button displays SS (Stop Switch)

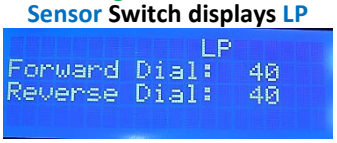


Pressing the START Button displays AS (Auto Start Switch)



Depressing Safety Cover Switch Displays SC (Safety Cover)

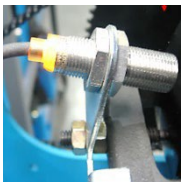
Pressing the Low Powder Sensor Switch displays LP



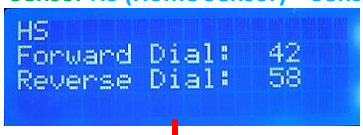
DA3000/RL1100 Low Powder Sensor

Pressing the Low Primers Lever displays PS

DA3000/RL1100 Low Primer Sensor



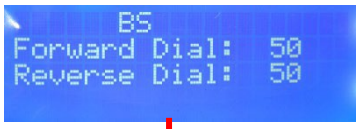
Cycle Press to top of cycle to display Home Sensor HS (Home Sensor)—Sensor light on



Home Sensor activated--Indicator LED On

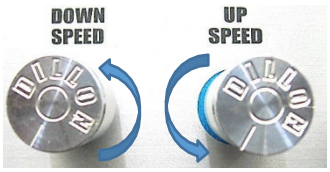
Activating the Berdan Sensor displays BS

Future "Berdan" Sensor

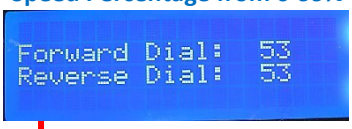


Activating the Primer Pocket Sensor displays PP

Future Primer Pocket Sensor



Knobs Adjust and Screen Displays Down (Forward) and Up (Reverse) Speed Percentage from 0-99%

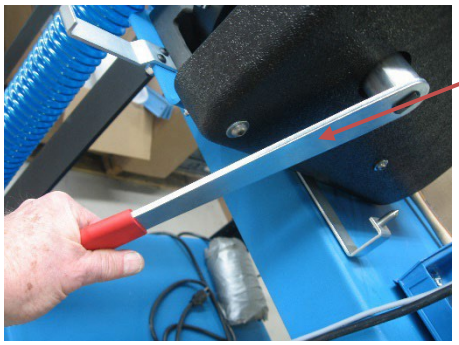


Press the Menu Knob to return to the Exit Test Mode Screen

Press the Menu Knob again to return to the Main Screen

14.11. THE JOG BUTTON—for system testing---can be used to process cases through the Press Loading Die setup.

- **The DA3000 and Dillon Press will slowly cycle at a fixed rate of approximately 270 CPH (Cases per Hour) for adjusting the reloading functions of the reloading press. "Jogging" will continue if the button is depressed and will stop when released. DANGER! —DO NOT PLACE FINGERS or HANDS, IN THE OPERATING SYSTEM, PRESS, OR CHAIN DRIVE AREA DURING "JOGGING." DO NOT PRESS THE START BUTTON OR THE JOG BUTTON WHILE THE OPERATING HANDLE IS INSTALLED.**
- **To initiate the Jog Operation--Place the CP2000 or RL1100 Toolhead manually in the down position using the DA3000 Operating Handle with the Eccentric drive against the "hard" down stop in the RL1100 or CP2000 Frame.**

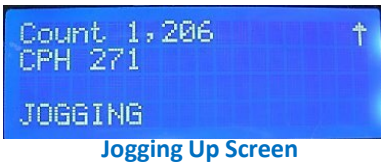


*NOTE: POSITION THE ECCENTRIC DRIVE AGAINST THE "HARD" DOWN STOP IN THE FRAME TO (RE) START THE "JOGGING" OPERATION-- THERE MUST BE NO CASE IN STATION #1 WHEN LOWERING THE HANDLE

- **If the Jog Button is pressed, the system will slowly cycle, and the Display will show an incrementing count number as well as the approximate Cycles Per Hour (after a complete cycle) as well as the notation—JOGGING and a changing Up and Down Arrow indicating the direction of the Toolhead.**

Press/ Hold Jog Button

Total Cycles
Cycles per Hr.
Jog Mode



Jogging Up Screen

Toolhead direction shown when Jogging

Jogging Down Screen

14.12. THE START BUTTON—INITIATES AUTOMATIC OPERATION ONLY FROM THE MAIN SCREEN

- **Pushing the Start Button initiates automatic operation of the DA3000 system only when the Main Screen is being displayed and the RL1100/CP2000 has been manually cycled to the down position.**
- **Upon starting, the Main Screen will change to the Auto Operation Screen as shown below displaying total systems cycles and the current cycles per hour.**
- **NOTICE: The Down and Up Speed Control knobs are active when the system is in the Automatic Operation Mode. Adjusting either will change the CPH. (Cases Per Hour)**
- **All the CP2000, RL1100 and DA3000 operating parameters must be properly configured before initiating automatic operation.**

The System must display the Main Screen to start automatic operation

Press the Start Button to initiate automatic operation

Total Cycles since reset by user

AUTO OPERATION SCREEN

Toolhead Direction

AUTO OPERATION

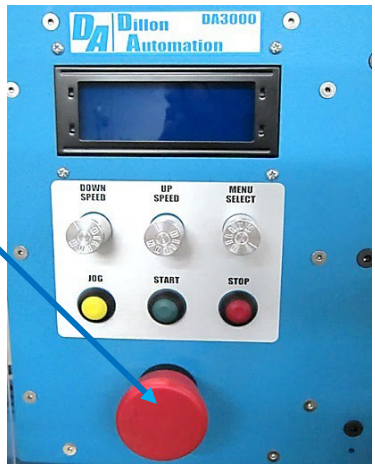
Current Cycles per Hour

- **CYCLES PER HOUR—When getting started, run the System while empty and adjust the up and down speeds. Start at slow speeds with cases, adjusting the up and down speed gradually. *DO NOT TRY TO OPERATE THE SYSTEM AT THE MAXIMUM RATES*——THE RATE DEPENDS ON THE CARTRIDGE and LOADS BEING PROCESSED AND MUST BE INDIVIDUALLY TUNED.**
- **The JOG, the START and the MENU SELECT Button are disabled when the DA3000 is operating in the Automatic Mode.**

JOG, START, AND MENU SELECT Buttons ARE DISABLED in the Automatic Operation Mode

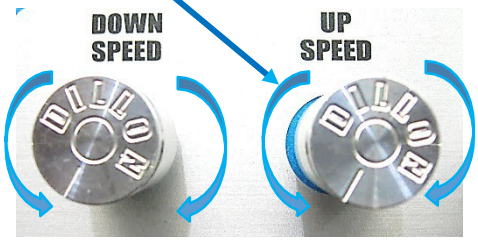
- **The STOP BUTTON, DOWN AND UP SPEED KNOBS and EMERGENCY OFF (EMO) are active when the DA3000 is operating in the Automatic Mode.**

NOTICE! —THE DOWN AND UP SPEED KNOBS, THE STOP AND EMERGENCY OFF BUTTON ARE ACTIVE in the Automatic Operation Mode



- **NOTICE! --Moving the DOWN and the UP-SPEED Knob will change the displayed and actual cycle rate of the system when in the Automatic Operation mode.**

CCW Decreases Cycles per Hour



CW Increases Cycles per Hour

14.13. THE STOP BUTTON, HAND SWITCH, AND THE REMOTE STOP SWITCH (SS)

- **The Stop Button stops the machine and displays two alternating screens:**

Pressing Stop Button

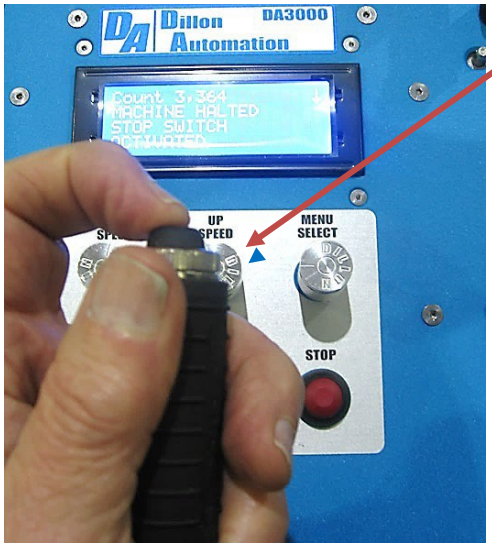
Alternating displays when Stop Button activated

MACHINE HALTED SCREEN

Alternating

FINISH OPERATIONS SCREEN

- **The REMOTE STOP SWITCH also stops the press operation, the same as the Red STOP Button and again alternately displays the same two screens—It is suggested to keep the REMOTE STOP SWITCH in hand when monitoring system operation.**



REMOTE STOP SWITCH

Alternating displays when the Remote Stop Button is Pressed

Alternating

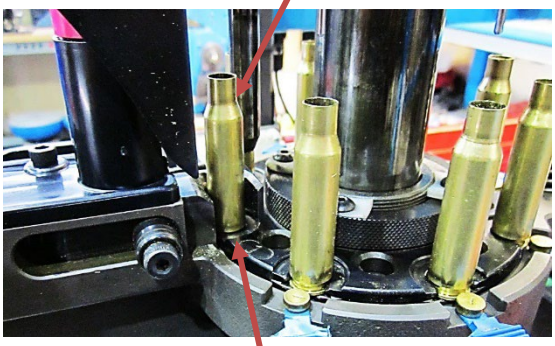
FINISH OPERATIONS SCREEN

- **TO RESTART—**

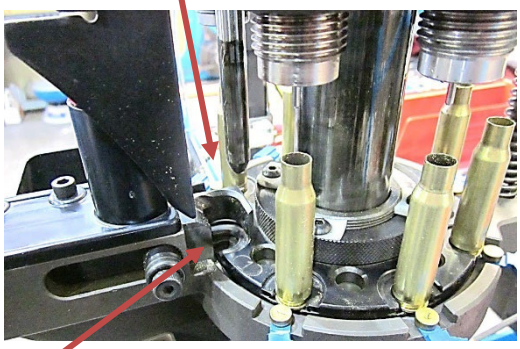
Correct any issues and make any necessary adjustments.

NOTICE! A cartridge case in Station 1 must be removed manually from the Case Feed Slide/Shellplate before cycling the Press to the Down Starting Position. If not, the case will be pulled back "crashing" into the next case in the black plastic Case Feed Housing. This prevents reaching the Down Starting Position and can break the Case Feed Housing. It will result in a SHORT STROKE Fault if the START BUTTON is pushed.

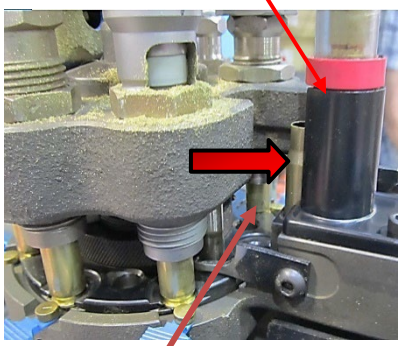
Case in Station 1 in Case feed Slide



Case removed from Station 1 in Case feed Slide



Case Feed Housing



REMOVE THE CASE IN STATION 1 IN THE SHELLPLATE/ CASE FEED SLIDE MANUALLY, BEFORE MANUALLY CYCLING THE SYSTEM TO THE DOWN STARTING POSITION

FAILURE TO REMOVE THE CASE IN STATION 1 WILL CAUSE THE CASE TO REVERSE AND "CRASH" INTO THE NEXT CASE IN THE CASE FEED HOUSING WHEN MANUALLY CYCLING TO THE DOWN STARTING POSITION

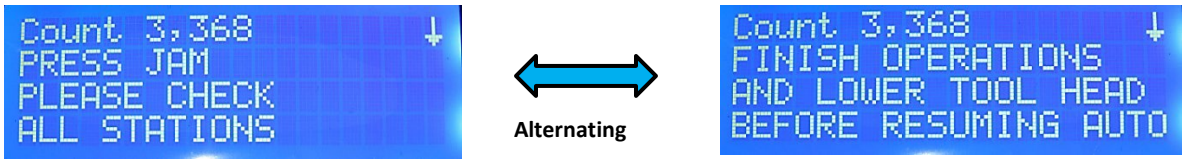
- **Place the CP2000 or RL1100 Toolhead manually in the down position with the Eccentric Lower Drive against the "hard" down stop in the Frame using the DA3000 Operating Handle and Press the Start Button.**

Press Start Button

15. FAULT SCREEN

15.1. JAM FAULT

- **The DA3000 will stop and display the following alternating screens when something jams (prevents normal movement of the Toolhead/Shellplate) in the RL1100 or CP2000:**



PRESS JAM SCREEN **FINISH OPERATIONS SCREEN**

- **TEMPORARILY Remove the Safety Shield/Cover and correct the cause for the system stoppage-PRESS JAM—**
  - **Verify the brass is clean and properly lubricated with Dillon Case Lube and the correct Size Dies are installed.**
  - **Manually cycle one piece of brass through all stations to check for obstructions and that the Toolhead reaches the bottom of the stroke at each Station of the Press—stop at the bottom of the cycle in each station to verify that the Toolhead does not "spring back"—if it does determine why.**
  - **Remove any brass case that has stopped in a Size Die and verify that the case is not "blown out."**
  - **Verify that each die is properly adjusted.**
  - **Is the Depriming Stem broken/bent—was there an obstruction inside a case i.e., Rock, smaller case (22LR or ??), or is it a Berdan case?**
  - **Is the Swage Rod and associated Backup Rod set to the proper heights?**
  - **Is there something up inside one of the Dies--Smaller Case/bullet?**
  - **Are the Toolhead Alignment pins hitting or binding in the Toolhead/Shellplate? —Verify the Index Mechanism is not broken and correctly adjusted along with the adjustment of the 'Up" stop on the press—refer to the CP2000 or RL1100 Manual.**
- **Restore Power to the DA3000 and the Dillon Press/Casefeeder/Bullet Feeder.**
- **Turn the DA3000 On and manually place the CP2000/RL1100 Toolhead in the fully down position with the Press e Lower Bearing Drive Assembly against the "hard" down stop in the Press Frame making sure there is no case in Station 1. Reinstall the Safety Shield/Cover.**
- **Press the START BUTTON to resume Auto Operation**

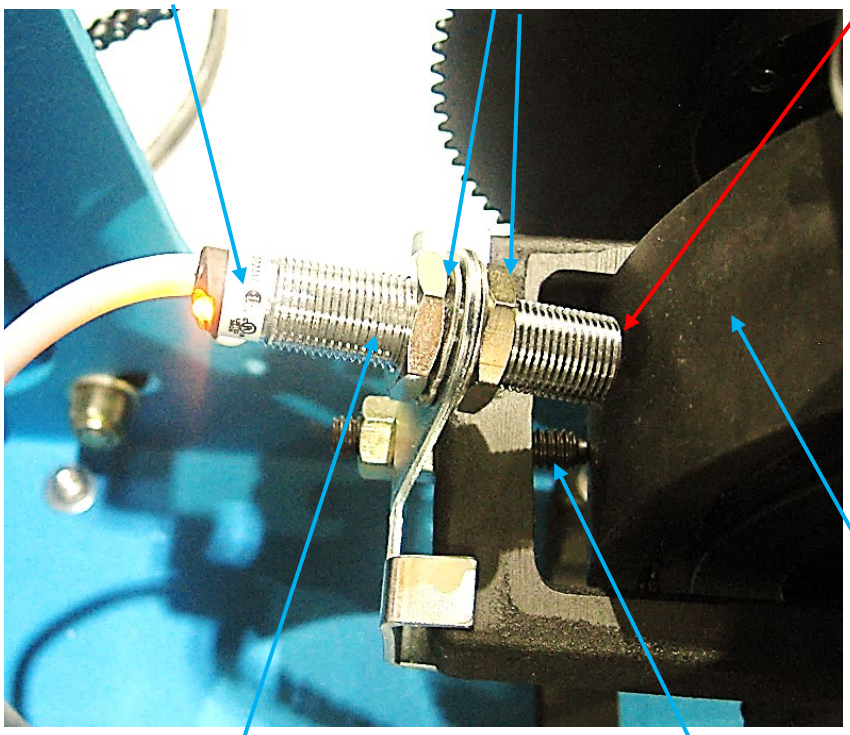
15.2. **The Home Sensor Fault will also be displayed if the CP2000/RL1100 Toolhead does not move due to a loose Chain HOME SENSOR FAULT**

- **The Home Sensor senses the "Up Stop/Home Position" of the Press Toolhead from the position of the Lower Bearing Drive Assembly. If the Home Sensor is not Connected or misadjusted, the NO HOME SWITCH FOUND SCREEN will be displayed momentarily and then change to the FINISH OPERATIONS SCREEN. THE MECHANICAL UP STOP FOR THE PRESS MUST BE VERIFIED AND ADJUSTED PER SECTION 10.11.**
- **The Home Sensor Fault will also be displayed if the CP2000/RL1100 Toolhead does not move due to a loose Chain Sprocket on the Motor, Counter Shaft, or Press or if a Chain is off the sprockets or is broken.**

Up/Home Sensor activated-momentary indicator on light at up position

Adjustable Up/Home Sensor, Lock Nuts and Mounting Bracket

NOTICE! --PRESS MUST NOT STOP-ON OR "HIT" SENSOR IN UP POSITION—Note gap--~.140"



NO HOME SWITCH FOUND FAULT SCREEN Momentarily Displayed

FINISH OPERATIONS SCREEN

RL1100/CP2000 Eccentric/Lower Bearing Drive— "triggers" Home Sensor

Additional Lock Nut is used to mount the DA3000 Up/Home Sensor on existing Up Stop Set Screw on RL1100/CP2000

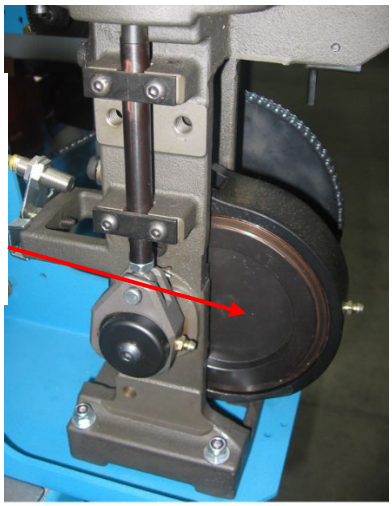
Mechanical RL1100/CP2000 "Up Stop" Set Screw with Lock Nut

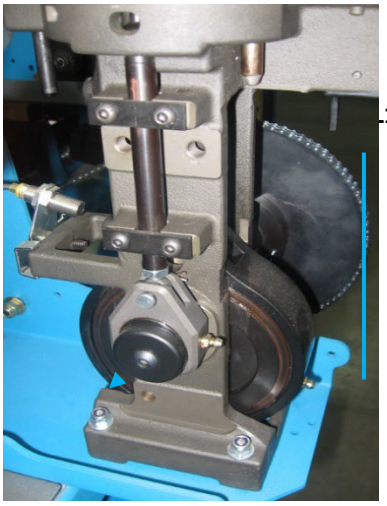
- **Correct the reason for the Home Sensor Fault--:**
  - **Check that the Home Sensor Connector in the Bottom of the DA3000 Controller is properly connected and that the Home Sensor is not loose, hitting Lower Eccentric Bearing or incorrectly adjusted.**
  - **All 3 Sprockets are securely fastened and properly aligned to their respective Shafts. Refer to Sections 11.5 and 11.6.**
  - **The Chain is in place—not broken, aligned and tensioned properly. Refer to Sections 11.5 and 11.6.**
- **Replace Safety Shields.**
- **Turn the DA3000 on and manually place the DP2000/RL1100 Toolhead in the fully down position with the Press Eccentric Drive against the "hard" down stop in the Press Frame. Again, make sure there is no cartridge case in Station 1.**
- **Press the START BUTTON to resume Auto Operation.**

15.3. SHORT STROKE FAULT

- **Failure to place the Eccentric drive in its fully down position and trying to initiate Auto Operations (Pressing Start Button) will cause the system to move up, hitting the ("Mechanical Up stop" of the CP2000 or RL1100") and then alternately displaying the SHORT STROKE SCREEN and the FINISH OPERATION SCREEN….**

WRONG START POSITION OF THE RL1100/CP2000 Eccentric DRIVE IN THE MIDDLE OF A STROKE





1100/CP2000 ECCENTRIC DRIVE SOLIDLY AT THE BOTTOM STOP—<u>CORRECT POSITION</u>

SHORT STOKE FAULT SCREEN

Alternating displays--when SHORT STROKE fault activated

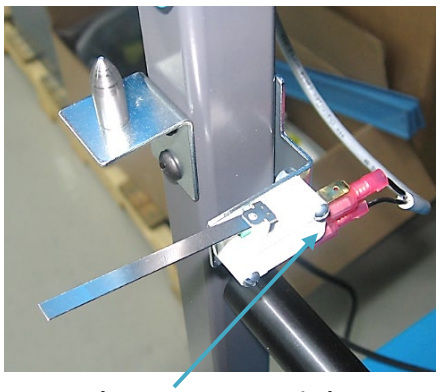
Alternating

FINISH OPERATIONS FAULT SCREEN

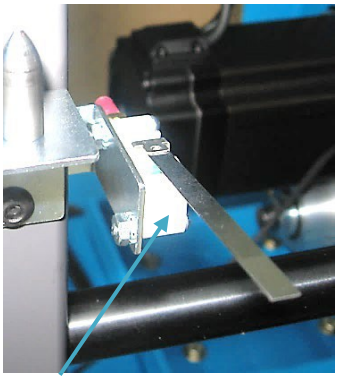
- **Manually place the CP2000/RL1100 Lower Drive against the "hard" down stop in the Press Frame with the Removable Operating Handle. <u>Again, make sure there is no case in Station 1.</u>**
- **Cycle the Press to the down position and press the START BUTTON to reinitiate Auto Operation.**

15.4. FRONT SAFETY COVER (SC)/SHIELD/ENCLOSURE FAULT

- **The Safety Cover/Shield Enclosure must be in place and the Interlock Microswitch must be Connected to the DA3000 Controller.**
- **The DA3000 will not initiate Auto Operations if the Safety Shield/Enclosure is not in place "closing" the Interlock Microswitch and will display the INTERLOCK ERROR SCREEN alternating with the FINISH OPERATIONS SCREEN.**



Note the correct two Switch connections



No Safety Cover/Enclosure – switch not "closed"

INTERLOCK ERROR SCREEN

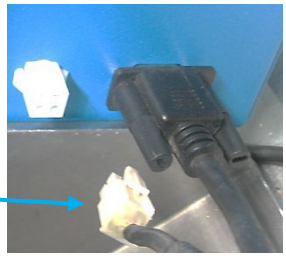
Alternating

FINISH OPERATIONS SCREEN

15.5. MOTOR CONNECTION FAULT

- **If one or both Motor Power or Motor Control cables are not properly Connected, the NO HOME SWITCH FOUND SCREEN will be displayed alternating with the FINISH OPERATIONS SCREEN….**

Motor Cables not Connected



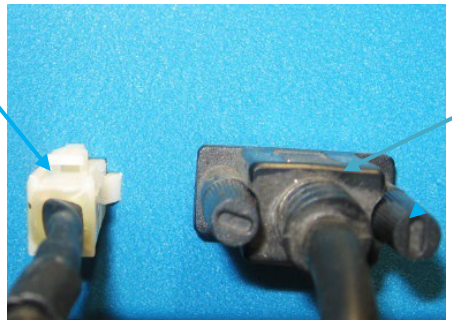
NO HOME SWITCH FOUND FAULT SCREEN

Alternating

FINISH OPERATIONS SCREEN

- **Make sure the left white Molex power Connector is fully latched to the DA3000 Socket and that the right Black Motor Control Connector is fully seated in the D-socket on the DA3000 with the two thumbscrews lightly tightened. Cycle the Press manually to the down position and press the START BUTTON.**

Seated and Latched



Seated and Thumb Screws lightly tightened

15.6. NO DISPLAY FAULT--when DA3000 On/Off switch is placed in the On Position

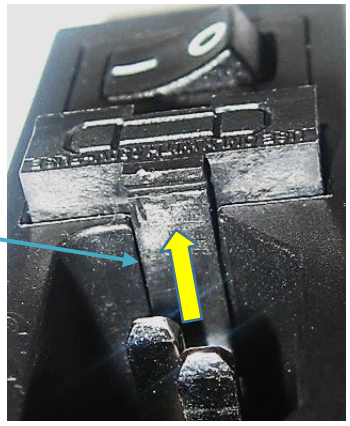
- **Verify there is power in the customer-supplied Power Surge Strip and that the DA3000 is properly plugged into the Power Strip.**
- **Verily that the 120VAC 3-Prong Power Cord is fully seated in the receptacle in the bottom of the DA3000.**
- **The Emergency Off Button has not been reset—turn clockwise to unlock.**

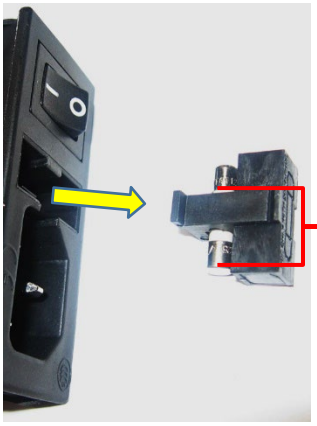
3-Prong Power Cord goes here

On Position of Main Power Switch

- **If still no Display, unplug the Power Cord and use a medium-sized blade screwdriver to gently pry the incoming Power Fuse Housing up and out of the Power Block. Check the continuity of the Fuse end-to-end. If open replace the Fuse with a PN85074 Six Amp Fuse and replace the Fuse into the Fuse Housing. Push the Fuse Housing back into the Power Block.**

Pry up here to access System Fuse



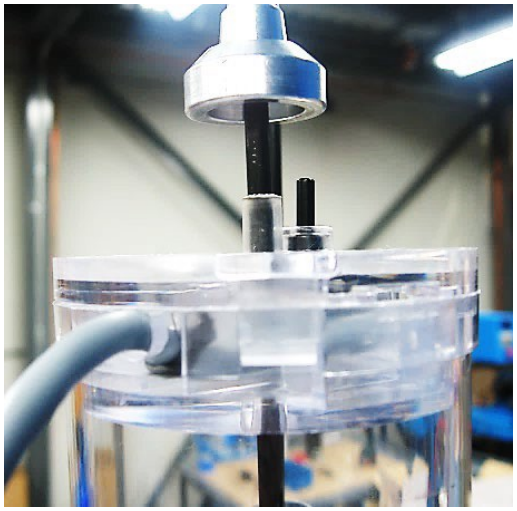


Check Fuse Continuity— Replace if open-- 6 Amp--PN85074

- **If still no display, contact Dillon.**

15.7. LOW POWDER FAULT when using the DA3000 with an RL1100

- **The System will stop at the bottom of its cycle when the Low Powder Sensor is activated, alternatively displaying LOW POWDER PLEASE REFILL POWDER HOPPER and FINISH OPERATIONS SCREENS…**



LOW POWDER FAULT SCREEN

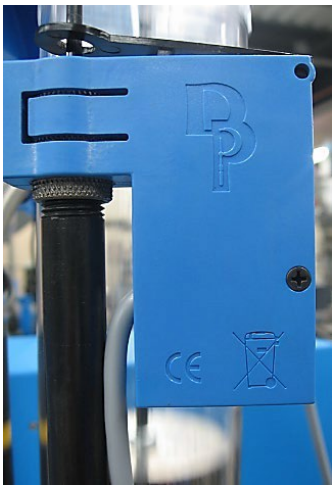
Alternating

FINISH OPERATIONS SCREEN

- Refill the Powder Hopper and press the START BUTTON to resume Auto Operation--the Press stopped at the bottom of its cycle by design, for immediate restart—no need to manually cycle press to the down position.

15.8. LOW PRIMER FAULT when using the DA3000 with an RL1100

- The system will stop at the bottom of its cycle when the Low Primer Sensor is activated alternately displaying LOW PRIMERS, PLEASE REFILL PRIMER MAGAZINE and FINISH OPERATIONS SCREENS



LOW PRIMERS FAULT SCREEN

Alternating

FINISH OPERATIONS SCREEN

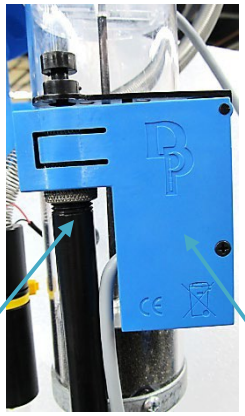
- Refill the Primer Magazine and Press the START BUTTON to resume Auto Operation—the Press stopped at the bottom of its cycle by design, for immediate restart—no need to manually cycle press to the down position.

16. RECOMMENDED OPTIONS for the RL1100 and CP2000

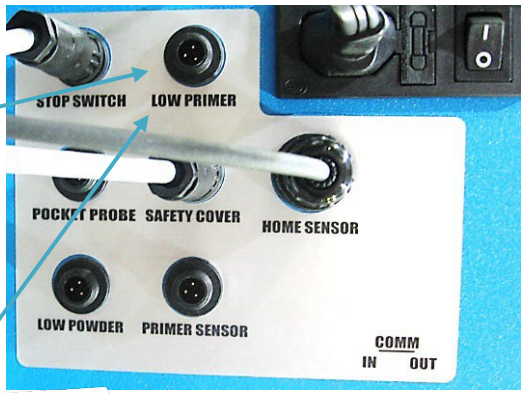
16.1. If you are using an RL1100 for automated loading with the DA3000, you should purchase and install the DA3000 specific Low Primer Sensor System PN85172 designed to work with the DA3000/RL1100.

- This option stops the DA3000/RL1100 system when the Primer Magazine is about out of primers preventing processing cartridges without primers. Running at 1200 CPH will require adding 100 primers every 5 minutes! The Dillon RF100 Auto Primer Filler is suggested.
- The DA3000 will stop at the bottom of the downstroke ready to restart once the Primer Magazine is refilled and the Start Button is pushed.
- Replace the PEWS with this DA3000 Low Primer Sensor on the Existing Primer Magazine, Connect the Cable to the Labeled Low Primer Connector on the Bottom of the DA3000 Controller and reinstall the standard Dillon Primer Follower Rod—The Follower Rod actuates the Lever on top which actuates the Sensor.

Reinstall Required Dillon Primer Follower Rod



Connect Low Primer Sensor Here



Dillon DA3000 Low Primer Sensor replaces the existing Dillon Primer PEWS

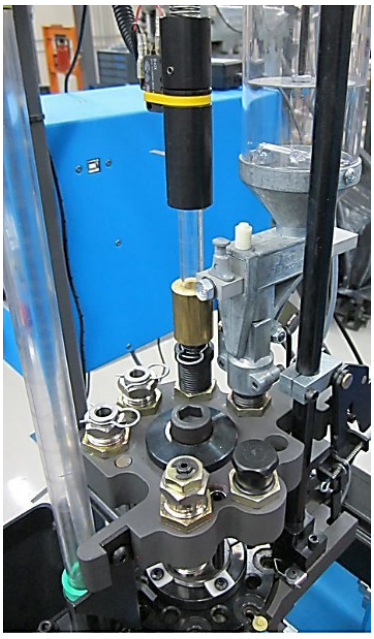
16.2. **If you are using an RL1100 for automated loading with the DA3000, you should purchase and install the DA3000 specific Dillon Low Powder Alarm System PN85173 designed to work with the DA3000/RL1100.**

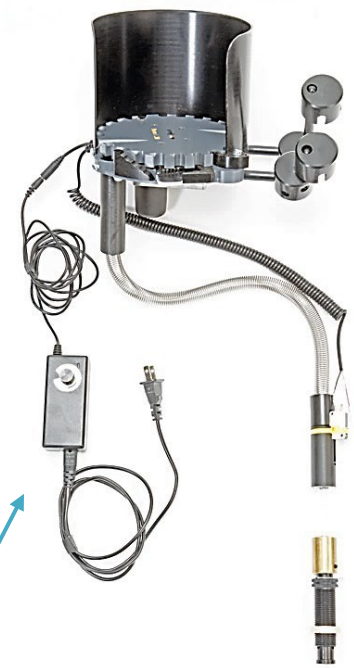
- **This option stops the system when the Powder Hopper is getting low on powder.**
- **The DA3000 will stop at the bottom of the downstroke ready to restart once the Powder Hopper is refilled and the Start Button is pushed.**
- **Replace the Hopper Lid with the Dillon 3000 Low Powder Sensor and Connect the Cable to the Low Powder Labeled Connector on the Bottom of the DA3000 Controller.**

Dillon DA3000— Low Powder Alarm replaces the Standard Powder Hopper Lid

Connect Low Powder Sensor

16.3. **If you are using an RL1100 for automated loading with the DA3000, you must install an automated Bullet Feeder in Station 6, such as the Mr. Bullet Feeder available from Dillon. Refer to the Mr. Bullet Feeder instructions for installation on the RL1100 and Connect it to your power strip.** **DANGER! —DO NOT ATTEMPT TO PLACE BULLETS ON CASES BY HAND IN THE PRESS DURING AUTOMATIC OPERATION.**

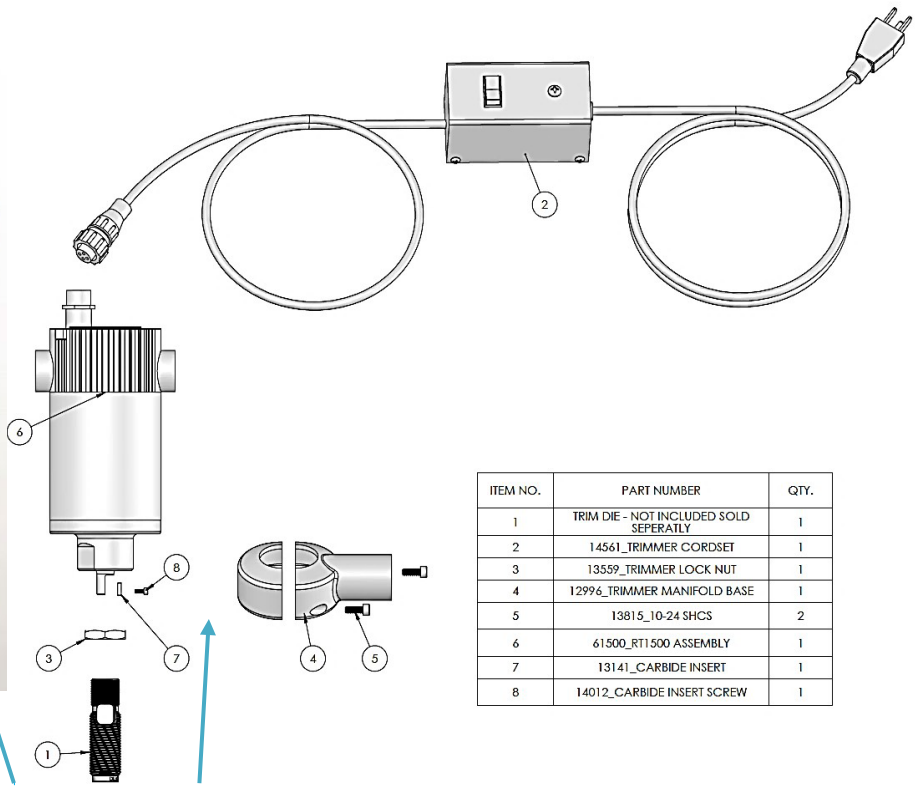




Mr. Bullet Feeder—Station 6

16.4. If you have a CP2000 and you are going to trim brass, refer to your CP2000 Instructions Manual for installation of the Dillon Rapid Trim™ Assembly and Dillon Size Trim Dies. Connect the Power Cord to the Trimmer and your Power Strip.

16.5.



ITEM NO.	PART NUMBER	QTY.
1	TRIM DIE - NOT INCLUDED SOLD SEPERATLY	1
2	14561_TRIMMER CORDSET	1
3	13559_TRIMMER LOCK NUT	1
4	12996_TRIMMER MANIFOLD BASE	1
5	13815_10-24 SHCS	2
6	61500_RT1500 ASSEMBLY	1
7	13141_CARBIDE INSERT	1
8	14012_CARBIDE INSERT SCREW	1

Dillon Rapid Trim Assembly

17. TROUBLESHOOTING GUIDE

No.	Category	Issue	Corrective Action
1.	No Power or No Display	Nothing Happens	1. Verify Power Switch is in the ON position. 2. All Power and Control Cables are properly Connected. 3. Verify there is power in the incoming power receptacle/power strip. 4. Check the fuse in the Switch-Power Block of the DA3000. 5. Verify that the Emergency Off Button is not activated—locked off.
2.	No Auto Start	Nothing Happens	1. Verify DA3000 Power Switch is in the ON position. 2. All Motor Cables are properly Connected. 3. Press not placed in the down position—manually cycle press fully down.
3.	Press Stops--Jam	Stops on Case in Sizing Station	1 Size Die is dirty—Remove and Clean. 2. Brass is not lubed or inadequate amount of sizing Lube—Relube with Dillon Case Lube. 3. Brass Case is "blown-out"—Discard Case. 4. Decapping pin damaged—Remove Size Die and replace Decapping Pin. 5. Berdan Case—Discard the case and replace the Decapping Pin if damaged. 6. Size die is not properly set—oversizing the case/Die hitting the Shellplate. 7. Foreign object inside the case—Remove the case and replace the decapping pin if damaged. 8. Case failed to insert into Shellplate and fell over.
4.	Press makes a banging noise and stops--Jam	Stops on Case in Swaging Station	1. Swage Rod set too high. 2. Swage Backup rod set to low. 3. Foreign object in case—broken Depriming Pin
		Press makes a banging noise then Stops	1. Something in chain/sprockets—remove the obstruction. 2. Chains out of alignment. 3, Home Sensor is not connected, defective. or out of adjustment.
		Stops on the case in the Trimer Station of CP2000	1. Size Die is dirty—Remove and Clean. 2. Brass is not lubed or inadequate amount of sizing Lube—Relube with Dillon Case Lube. 3. Brass Case is "blown-out"—Discard Case.
		The chain(s) is in a bind—sprockets loose on shafts	1. Chain Sprockets loose. --Align sprockets and tighten sprocket set screws on shafts. 2. Sprockets damaged or out of alignment Chain Broken—Replace chain, align sprockets and tighten shafts, retention chain.
		Toolhead Alignment Pins hitting or binding on Shellplate	1. Operating the DA3000 too fast--slow down the cycle rate. 2. Over or under indexing—refer to the Troubleshooting section in your CP2000 or RL1100 Instruction Manual. 3. Toolhead is out of alignment.

5.	**Reloading Issues**	**Sizing, Depriming, Seating, Primer Swaging, Crimping, Powder Dispensing**	**1. Refer to the Troubleshooting Section in your RL1100 or CP2000 Instruction Manuals.**
6.	**Fault**	**Jam**	**1. Remove brass causing a jam and inspect. -Discard if defective.** **2. Brass is over-pressured/blown out—Discard Brass.** **3. Foreign object or small case inside brass-Remove and discard.** **4. Depriming Pin/Stem bent or broken— Replace Depriming Pin or Assembly.** **5. Size die is not set properly. —Adjust the die.** **6. Swage Rod/Backup Rod not set properly—Adjust both per CP2000/RL1100 Manual.** **7. Index pins hitting Shellplate—indexing off-adjust per RL1100 and CP2000 Manual/Toolhead out of alignment—Realign so pins not dragging on holes in Frame and Shellplate.** **8. Index Lever or Toggle broken or worn—Replace Index lever assembly.** **10. Sprockets loose or chains misaligned—align and tighten.** **11. All the used primers were not removed.** **12. Foreign object between the Shellplate and Toolhead.** **13. Berdan Case—Discard.**
		No Home Switch	**1. Check that Home Sensor, Cable and Connector are intact and properly Connected.** **2. The Home Sensor is loose or misadjusted-adjusted—Adjust and Tighten Mount/Sensor as described in Section 14.4.** **3. One or both Motor Cable Connectors are not connected—re-connect** **4. The Home Sensor failed. Test per Section 14.10.3--Go to the TEST SCREEN—check for HS indicator when sensor-activated—Screen readout and LED Sensor indicator on.**
		Short Stroke	**1. Auto Start initiated without RL1100 or CP2000 Lower Drive Bearing fully down against lower stop—Cycle press manually down to the" hard" stop and restart.** **2. Auto Start initiated with a Case in Station #1 of the RL1100 or CP2000 preventing the Lower Eccentric Drive from being fully down against the lower stop— Remove the case from Station #1, Cycle press manually down to the" hard" stop and restart.**
		Safety Cover	**1. The Safety Cover is not installed—Install Cover.** **2. The Safety Cover Switch is not Connected—re-connect the switch.** **3. Manually activating the Safety Cover Switch is not sensed per Section 14.10.3—SS not displayed on Menu Screen—switch is defective—replace the switch and re-check.**
		No Display	**1. No Power to DA3000 Controller—Turn on the power.** **2. DA3000 not Connected to power—Plug in.** **3. DA3000 is not switched on--Turn on DA3000 Power Switch.** **4. Fuse in DA3000 input Power Block defective—Remove, check and replace, as necessary.**
		Low Primers	**1. The Primer magazine needs to be refilled.**
		Low Powder	**1, The Powder Hopper needs to be refilled.**

18. CLEANING AND LUBRICATION OF THE DA3000

18.1. DANGER! REMOVE ALL ELECTRICAL POWER BEFORE REMOVING SHIELDS OR GUARDS TO CLEAN OR LUBRICATE THE DA3000 DRIVE AND RL1100 or CP2000.

18.2. The reloading process is inherently "dirty" from used primer particles, leftover corn cob and case lube, spilled powder and metal shavings from length trimming on the system. The reloading process of sizing and seating bullets and primers can also generate metal particles. The amount of residue is increased with the higher cycle rates with the automated system. Blow out and wipe the system down after 8 hours of operation.

18.3. Use compressed air to remove residue in the press and drive area.

18.4. Wipe down any "grease/oil residue with a "shop towel" dampened with an appropriate solvent/degreaser like Simple Green or equivalent. Warning--Do not spray anything on the drive or press.

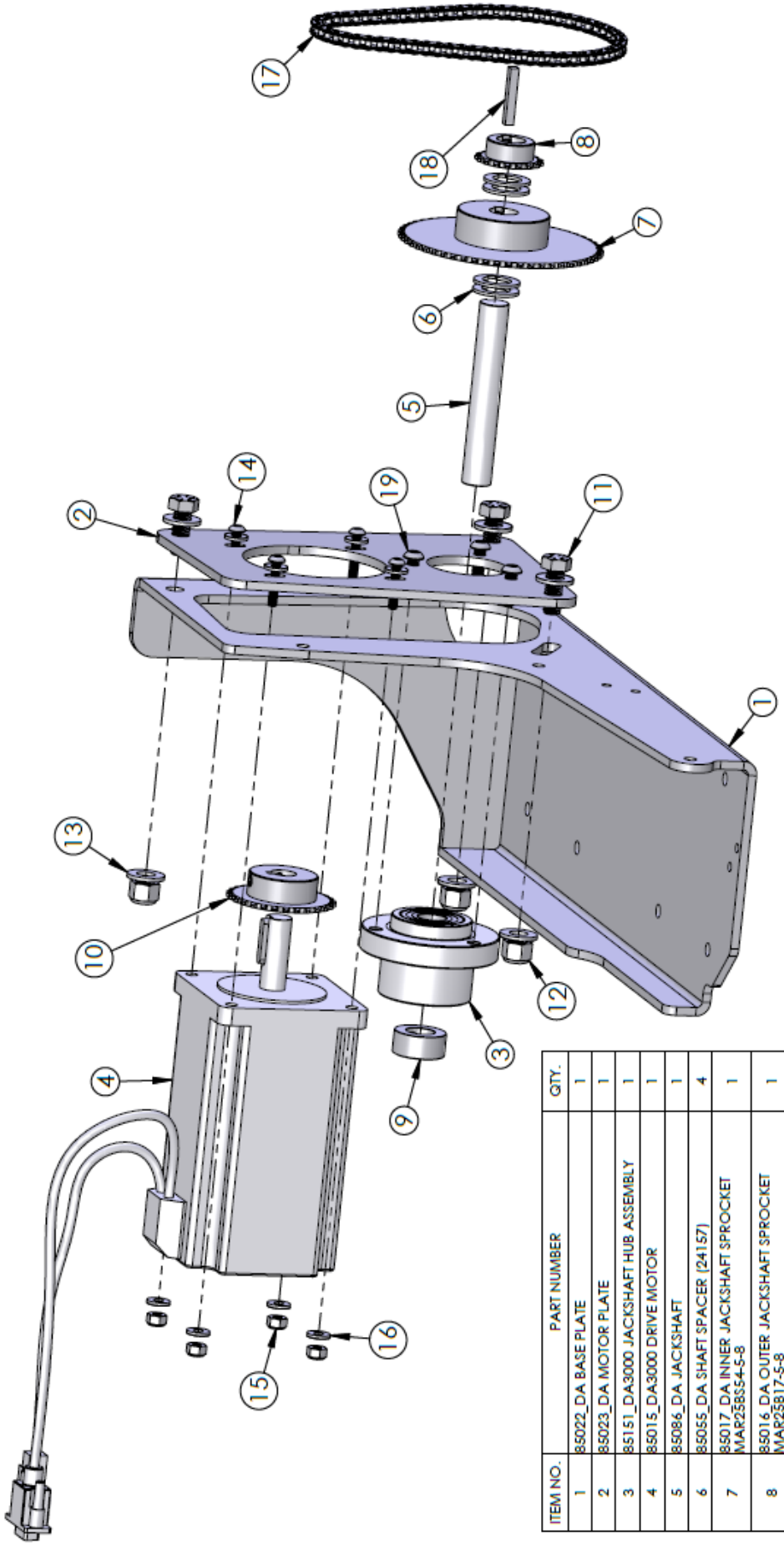
18.5. Blow off both chains and remove residue from the chain with a clean Shop Towel--

18.6. Re-lubricate the chain with auto chassis lube such as Schaeffer High-Performance Grease NLGI#229 High Moly Content (or equivalent Chain Lube). Wipe off excess.

18.7. For cleaning and lubricating the CP2000 or RL1100, refer to the Dillon CP2000 or RL1100 System Assembly and User Instructions.

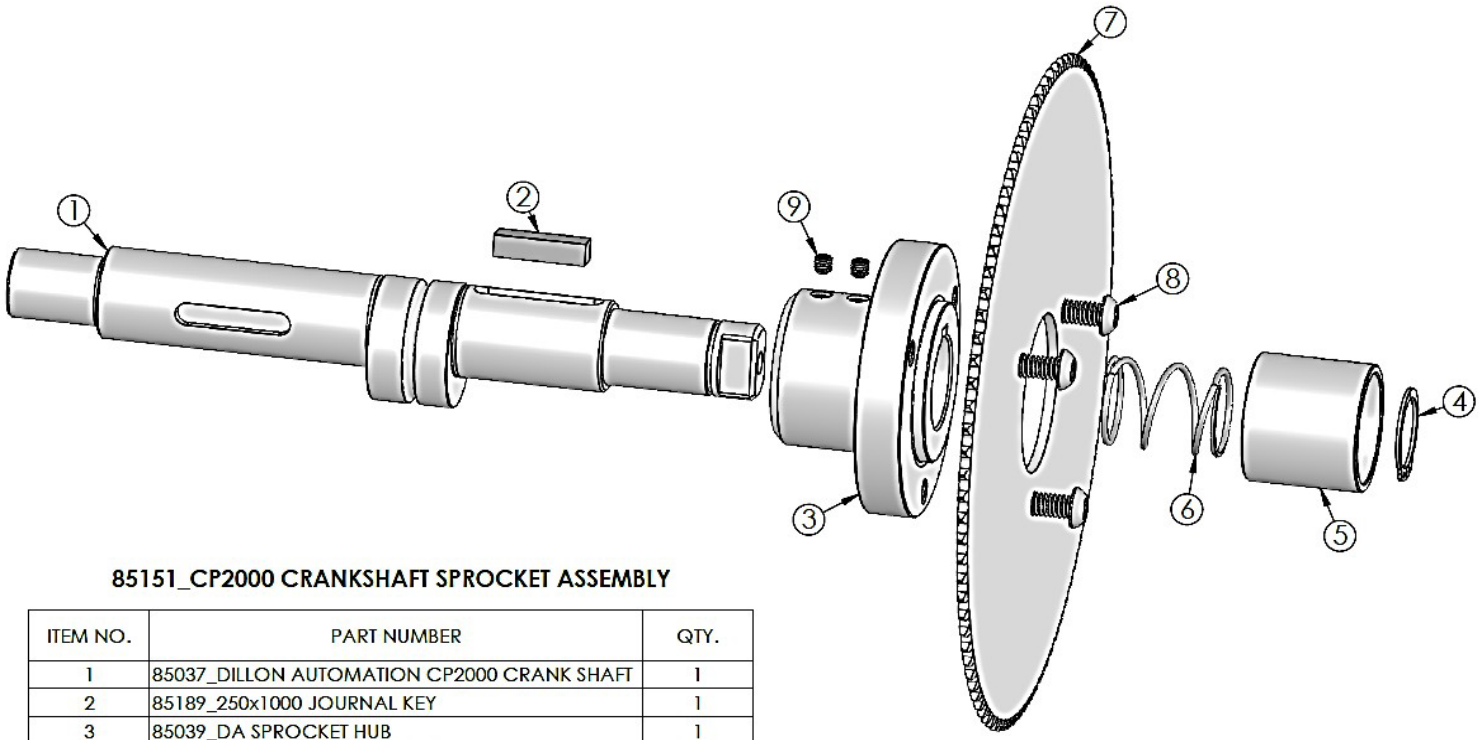
19. DA3000 SUB-ASSEMBLIES AND PARTS IDENTIFIERS—"EXPANDED VIEWS"

19.1. DA3000 BASEPLATE, MOTOR PLATE AND DRIVE ASSEMBLY PN85150



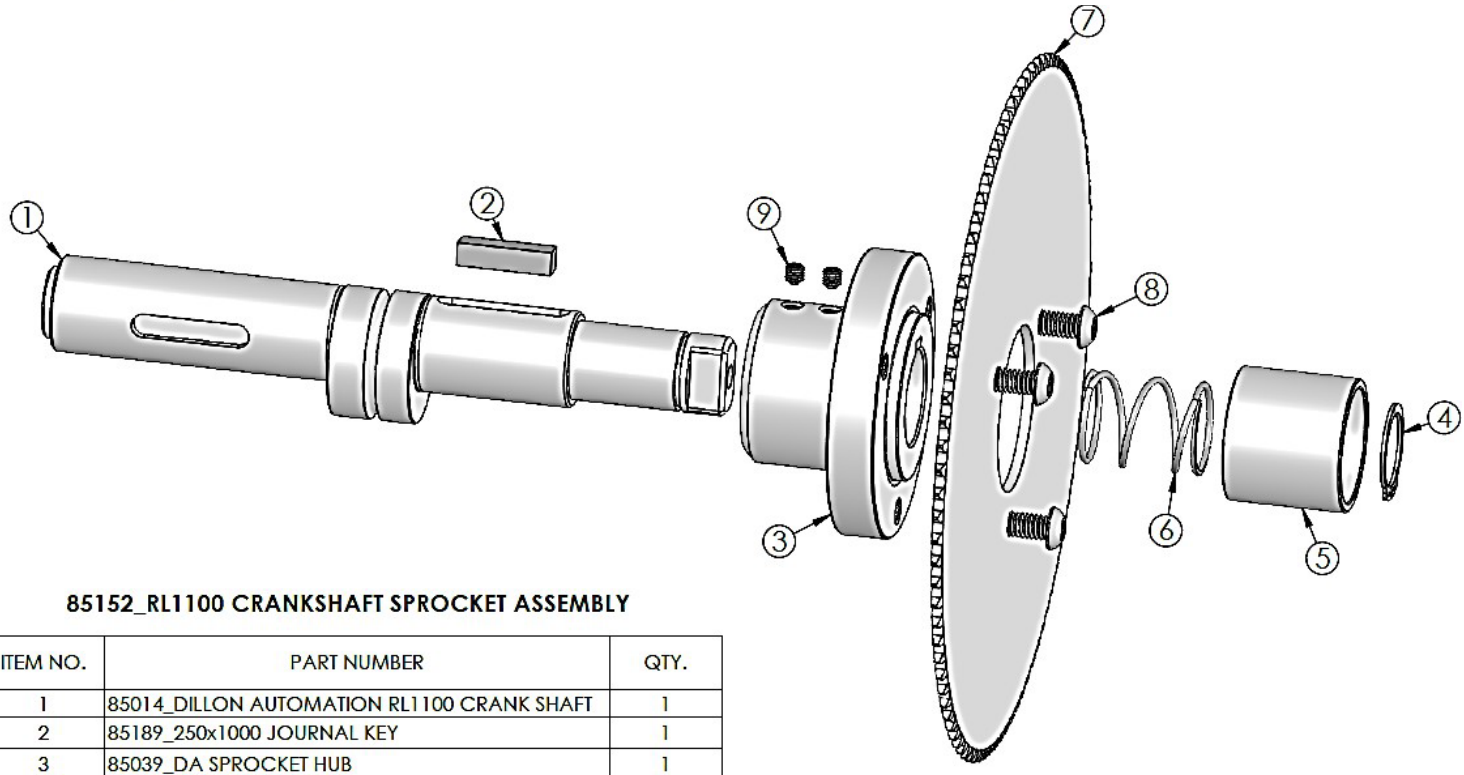
ITEM NO.	PART NUMBER	QTY.
1	85022_DA BASE PLATE	1
2	85023_DA MOTOR PLATE	1
3	85151_DA3000 JACKSHAFT HUB ASSEMBLY	1
4	85015_DA3000 DRIVE MOTOR	1
5	85086_DA JACKSHAFT	1
6	85055_DA SHAFT SPACER (24157)	4
7	85017_DA INNER JACKSHAFT SPROCKET MAR25B854-5-8	1
8	85016_DA OUTER JACKSHAFT SPROCKET MAR25B17-5-8	1
9	85088_ DA JACKSHAFT COLLAR (58SET)	1
10	85018_DA DRIVE SPROCKET MOTOR MAR25B328-14MM	1
11	85095_.375x16 1IN GR8 HEX BOLT	3
12	85096_.375 NYLOCK NUT GR8	3
13	85094_.375 GR8 ZINC WASHER	6
14	85014_10-32 x 1" BHCS ALLOY	4
15	16340_10-32 NYLOCK NUT ZINC	4
16	13738_#10 ZINC-PLATED STEEL SAE FLAT WASHER	8
17	85108_MOTOR DRIVE CHAIN	1
18	85143_.1875 x 1.25 MACHINE KEY	1
19	85144_.250-20 x .750 BHCS ALLOY	3

19.2. DA3000/CP2000/RL1100 CRANKSHAFT ASSEMBLY PN85151/PN85152—NOTE DIFFERENCE IN CRANKSHAFTS



85151_CP2000 CRANKSHAFT SPROCKET ASSEMBLY

ITEM NO.	PART NUMBER	QTY.
1	85037_DILLON AUTOMATION CP2000 CRANK SHAFT	1
2	85189_250x1000 JOURNAL KEY	1
3	85039_DA SPROCKET HUB	1
4	85057_ROTOR CLIP SH-84 ST PA	1
5	85038_DA CRANK SHAFT SLIDE	1
6	85145_HANDLE SLIDE SPRING	1
7	85019_CRANK DRIVE SPROCKET MAR25A91	1
8	85181_250-20X625 BHCS	3
9	85146_10-32 x .250 ALLOY CUP SET SCREW	2

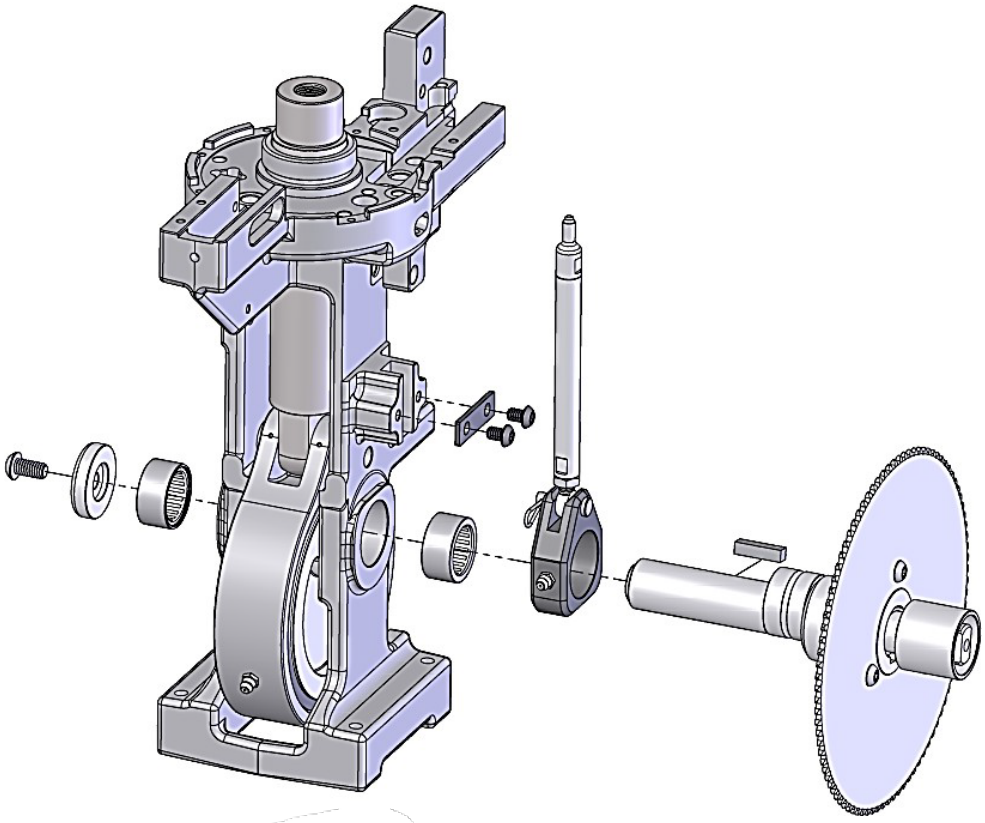


85152_RL1100 CRANKSHAFT SPROCKET ASSEMBLY

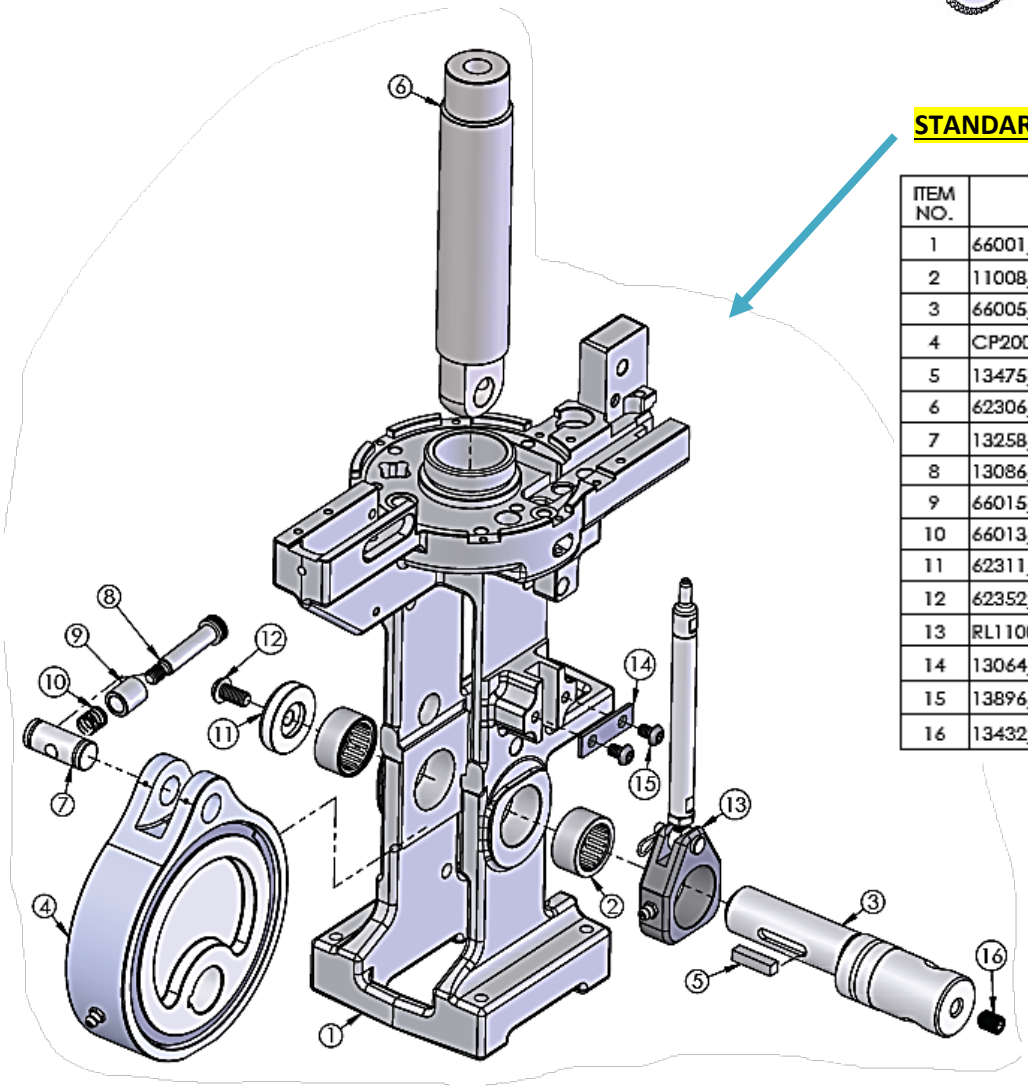
ITEM NO.	PART NUMBER	QTY.
1	85014_DILLON AUTOMATION RL1100 CRANK SHAFT	1
2	85189_250x1000 JOURNAL KEY	1
3	85039_DA SPROCKET HUB	1
4	85057_ROTOR CLIP SH-84 ST PA	1
5	85038_DA CRANK SHAFT SLIDE	1
6	85145_HANDLE SLIDE SPRING	1
7	85019_CRANK DRIVE SPROCKET MAR25A91	1
8	85181_250-20X625 BHCS	3
9	85146_10-32 x .250 ALLOY CUP SET SCREW	2

19.3. DA3000 RL1100 LOWER FRAME ASSEMBLY--(Standard Rl1100 Shown for Reference)

DA3000 RL1100 LOWER FRAME ASSEMBLY



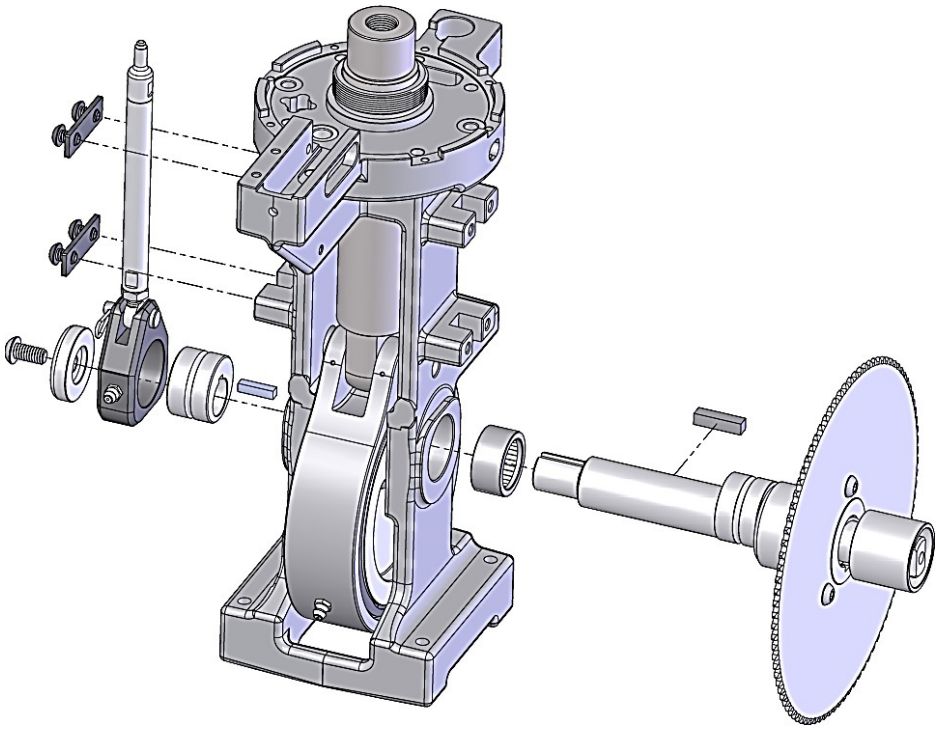
STANDARD RL1100 SHOWN FOR REFERENCE



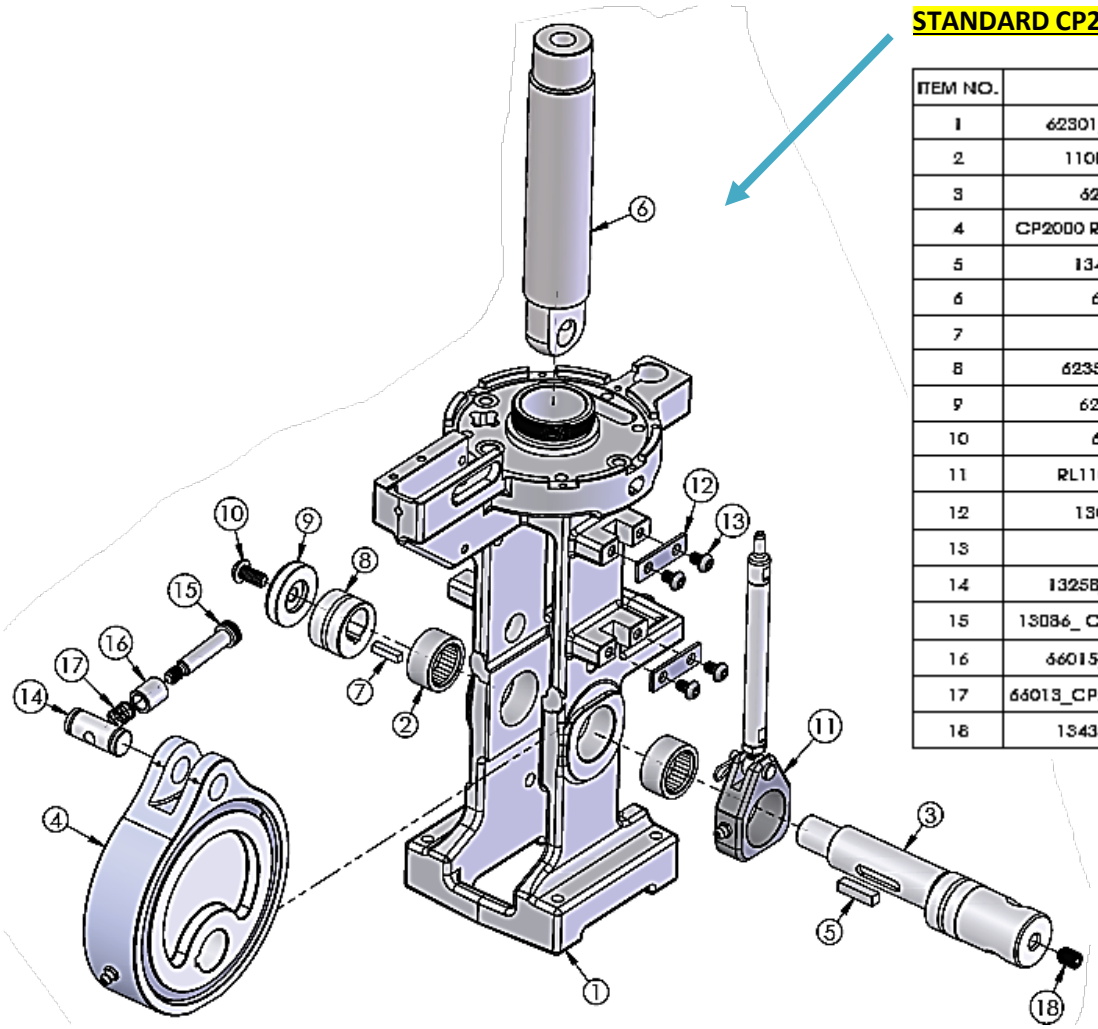
ITEM NO.	PART NUMBER	QTY.
1	66001_RL1100 FRAME - MACHINING	1
2	11008_ CRANK BEARING	2
3	66005_RL1100 CRANK SHAFT	1
4	CP2000 RL1100 LOWER BEARING ASSEMBLY	1
5	13475_250x1000 JOURNAL KEY	1
6	62306_CP2000 MAINSHAFT	1
7	13258_RL1050 MAINSHAFT PIVOT PIN	1
8	13086_ CP2000 RL1100 INDEX ROLLER BOLT	1
9	66015_CP2000 RL1100 INDEX ROLLER	1
10	66013_CP2000 RL1100 INDEX ROLLER SPRING	1
11	62311_CP2000 BEARING CAP	1
12	62352_BEARING CAP BOLT	1
13	RL1100 CP2000 SWAGE ASSEMBLY	1
14	13064_SWAGER COVER PLATE	1
15	13896_250-20 BHCS	2
16	13432_375-24x500 CUP SET SCREW	1

19.4. DA3000 RL1100 LOWER FRAME ASSEMBLY--(Standard Cp2000 Shown for Reference)

DA3000 CP2000 LOWER FRAME ASSEMBLY



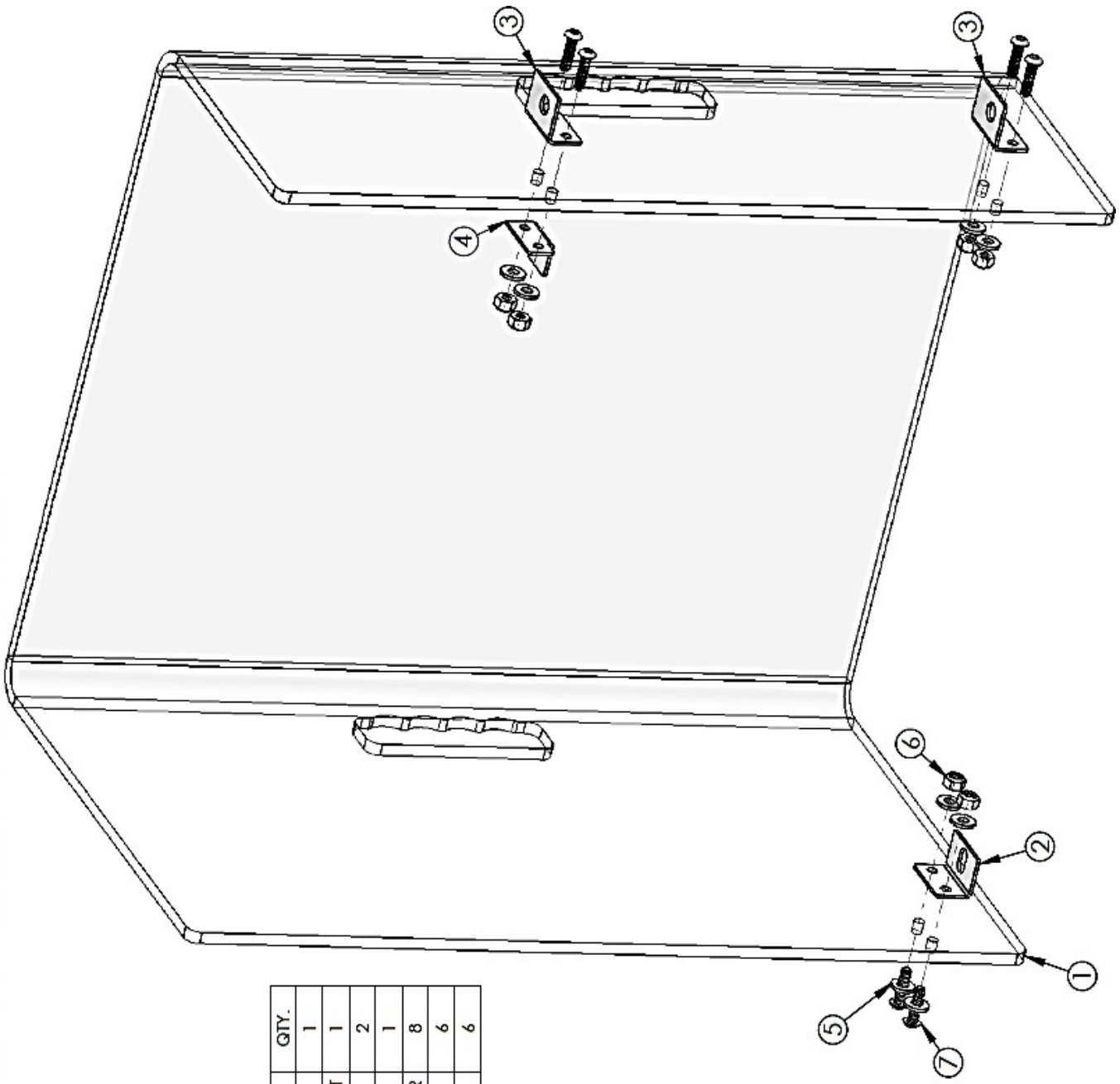
STANDARD CP2000 SHOWN FOR REFERENCE



ITEM NO.	PART NUMBER	QTY.
1	62301_CP2000 FRAME - MACHINING	1
2	11008_BH-1610 ROLLER BEARING	2
3	62305_CP2000 CRANK SHAFT	1
4	CP2000 RL1100 LOWER BEARING ASSEMBLY	1
5	13475_250x1000 JOURNAL KEY	1
6	62306_CP2000 MAINSHAFT	1
7	66035_316 x 750 KEY	1
8	62351_CP2000 SWAGE ECENTRIC	1
9	62311_CP2000 BEARING CAP	1
10	62352_BEARING CAP BOLT	1
11	RL1100 CP2000 SWAGE ASSEMBLY	1
12	13064_SWAGER COVER PLATE	2
13	13896_250-20 BHCS	4
14	13258_RL1050 MAINSHAFT PIVOT PIN	1
15	13086_ CP2000 RL1100 INDEX ROLLER BOLT	1
16	66015_CP2000 RL1100 INDEX ROLLER	1
17	66013_CP2000 RL1100 INDEX ROLLER SPRING	1
18	13432_375-24x500 CUP SET SCREW	1

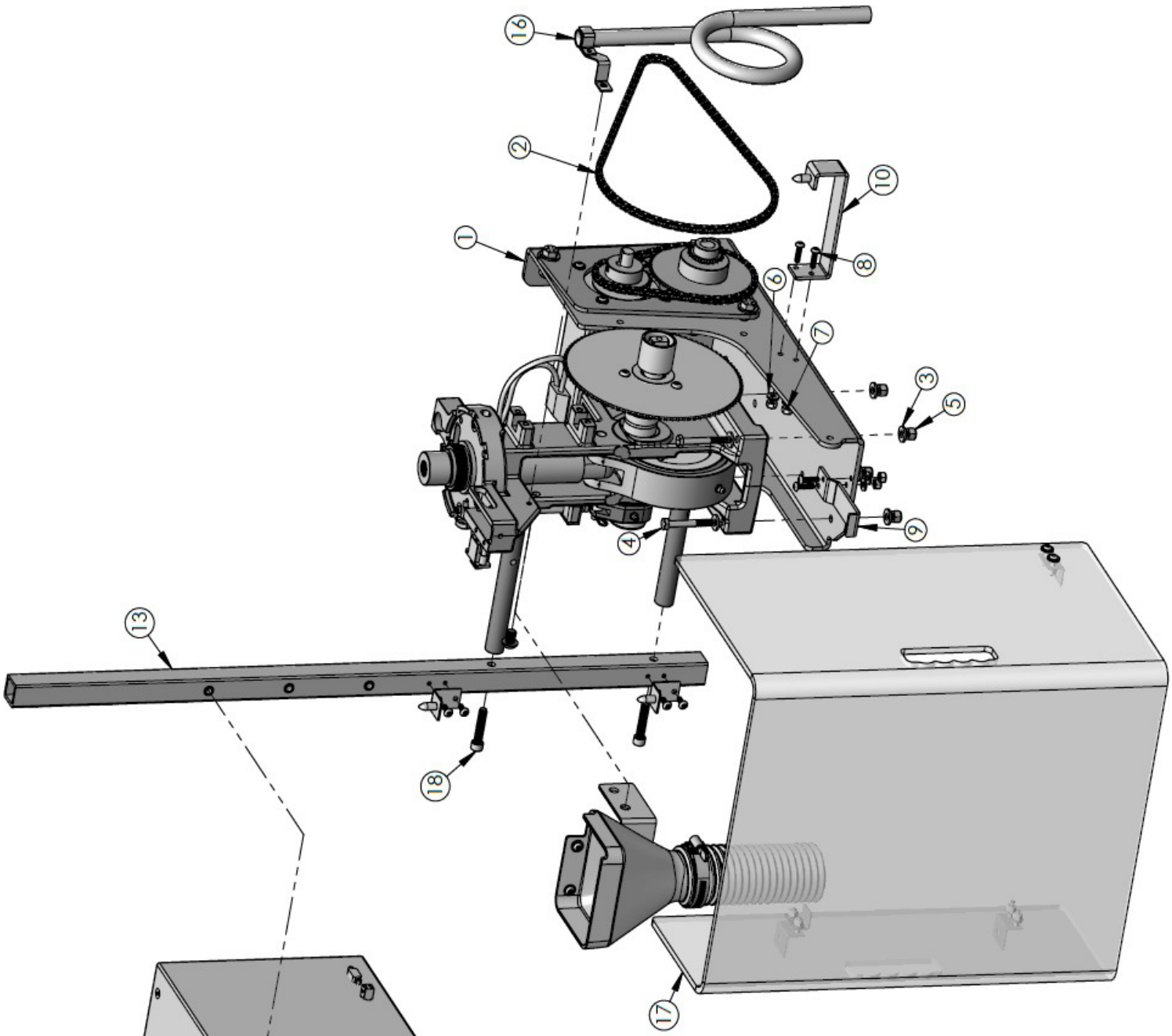
19.5. DA3000 FRONT SHIELD ASSEMBLY PN85154 FOR USE WITH RL1100 AND CP2000

85154 DA3000 FRONT SHIELD ASSEMBLY



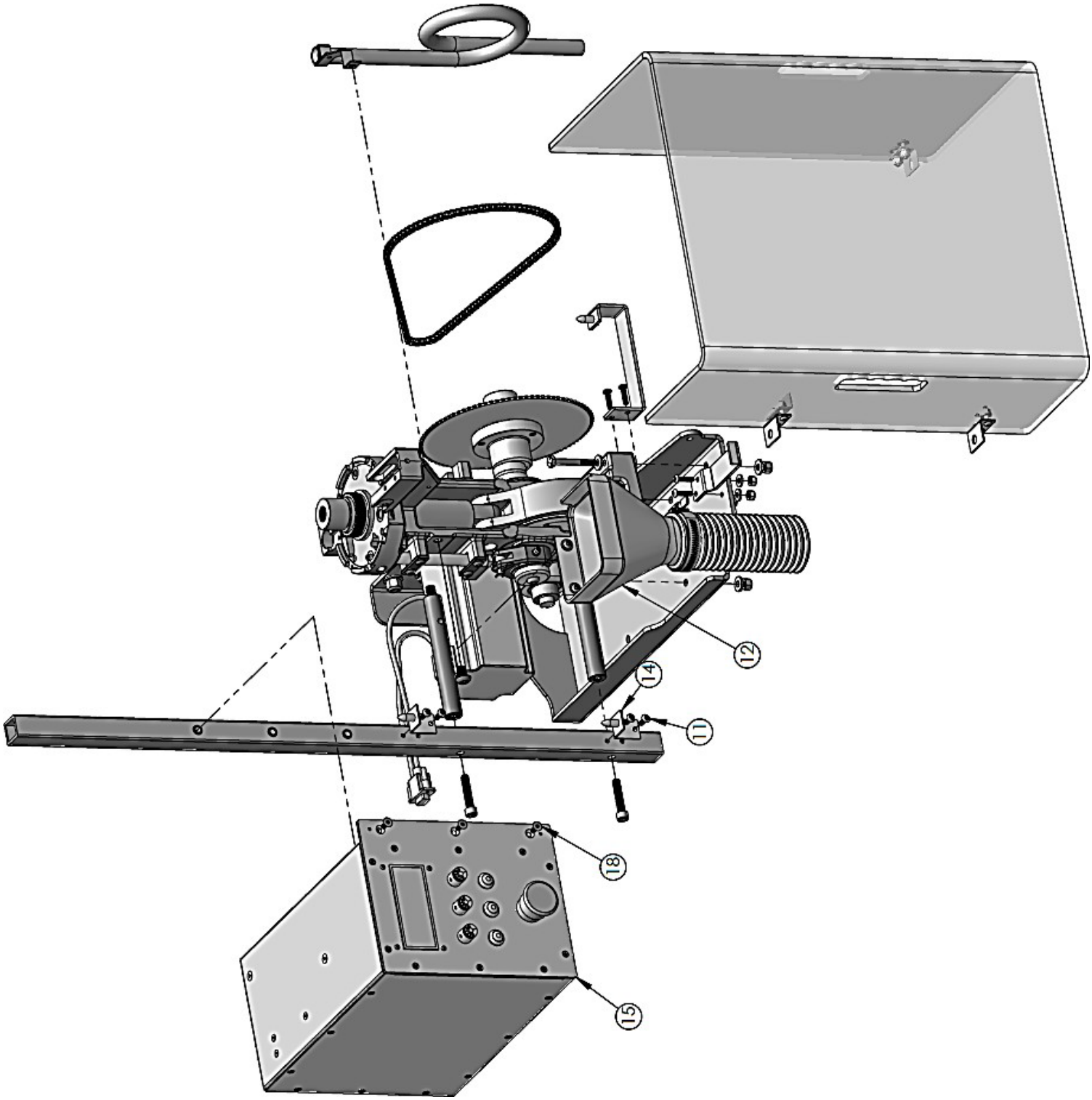
ITEM NO.	PART NUMBER	QTY.
1	85034_DA FRONT SHIELD	1
2	85026_DA FRONT SHIELD SIDE SUPPORT BRACKET	1
3	85027_DA FRONT SHIELD MOUNT BRACKET	2
4	85028_DA MICRO SWITCH TAB	1
5	85183_#10 ZINC-PLATED STEEL SAE FLAT WASHER	8
6	85182_10-32 LOCKNUT ZINC	6
7	85090_DA SCREW 10-32x.750 BHCS	6

19.6. DA3000--RL1100/CP2000 ASSEMBLY—Sheet 1



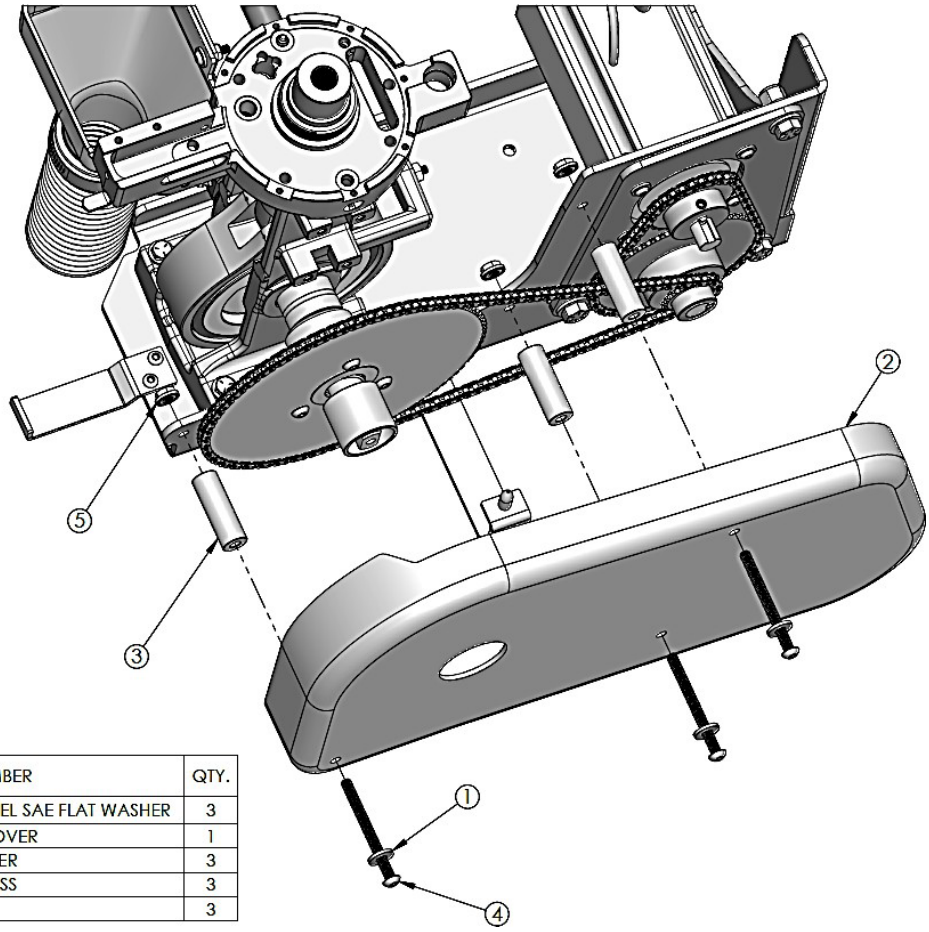
ITEM NO.	PART NUMBER	QTY.
1	DA3000 CP2000 LOWER FRAME ASSEMBLY	1
2	85109_MAIN DRIVE CHAIN	1
3	85093_.250 ZINC-PLATED STEEL SAE FLAT WASHER	8
4	85097_.250-20 2IN HEX BOLT GR5	4
5	85098_.250-20 NYLOCK NUT GR5	4
6	85183_#10 ZINC-PLATED STEEL SAE FLAT WASHER	7
7	85182_10-32 LOCKNUT ZINC	4
8	85090_DA SCREW 10-32x.750 BHCS	4
9	85025_DA CENTER FRONT SHIELD SUPPORT	1
10	85024_DA FRONT SHIELD SIDE SUPPORT	1
11	85089_DA 10-32 X .500 BHCS	7
12	85155_CARTRIDGE CATCH FUNNEL ASSEMBLY	1
13	85153_MOUNTING POST COMPLETE	1
14	85030_DA SHIELD SUPPORT BRACKET	2
15	85117_CONTROL BOX	1
16	85156_SPENT PRIMER CATCH ASSEMBLY	1
17	85154_DA3000 FRONT SHIELD COMPLETE	1
18	85103_10-32 X .500 FHCS ALLOY	3

19.7. DA3000--RL1100/CP2000 ASSEMBLY—SHEET 2—Refer to Sheet 1 (page 70) for Parts Identification



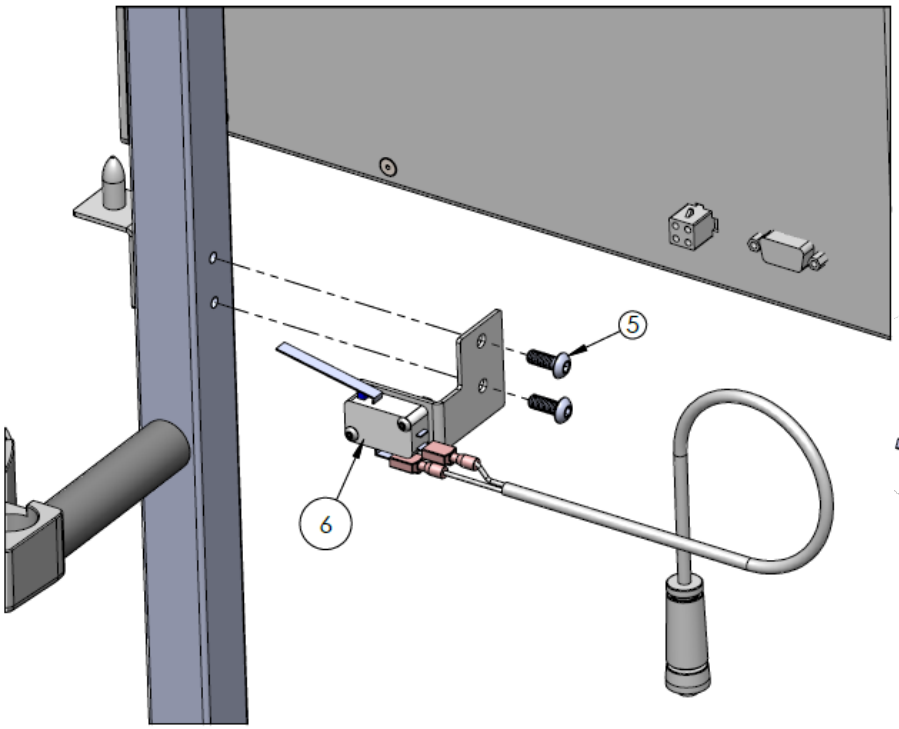
19.8. CHAIN COVER AND SAFETY COVER SWITCH ASSEMBLIES

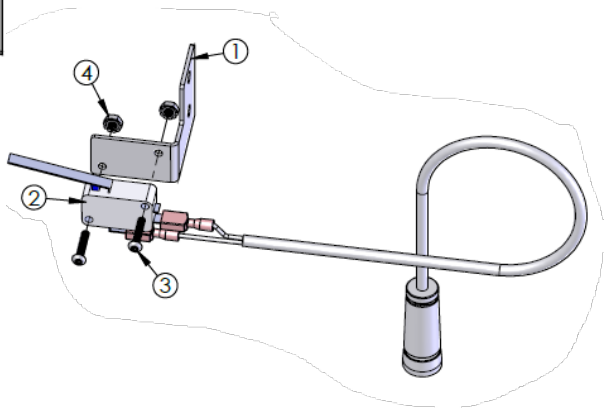
- **Chain Cover PN85033**



ITEM NO.	PART NUMBER	QTY.
1	85093_.250 ZINC-PLATED STEEL SAE FLAT WASHER	3
2	85033_SPROCKET CHAIN COVER	1
3	85035_CHAIN COVER SPACER	3
4	85092_.250-20 x 2.750 BHCS SS	3
5	85180 250-20 FLANGE NUT	3

- **Safety Shield Switch Bracket Assembly PN85114**

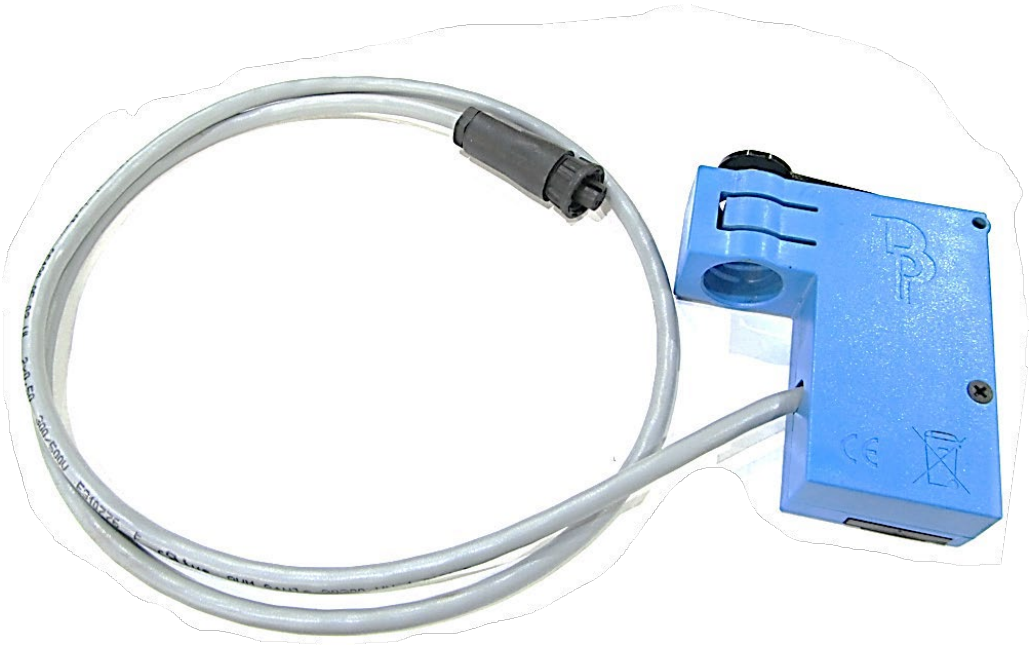




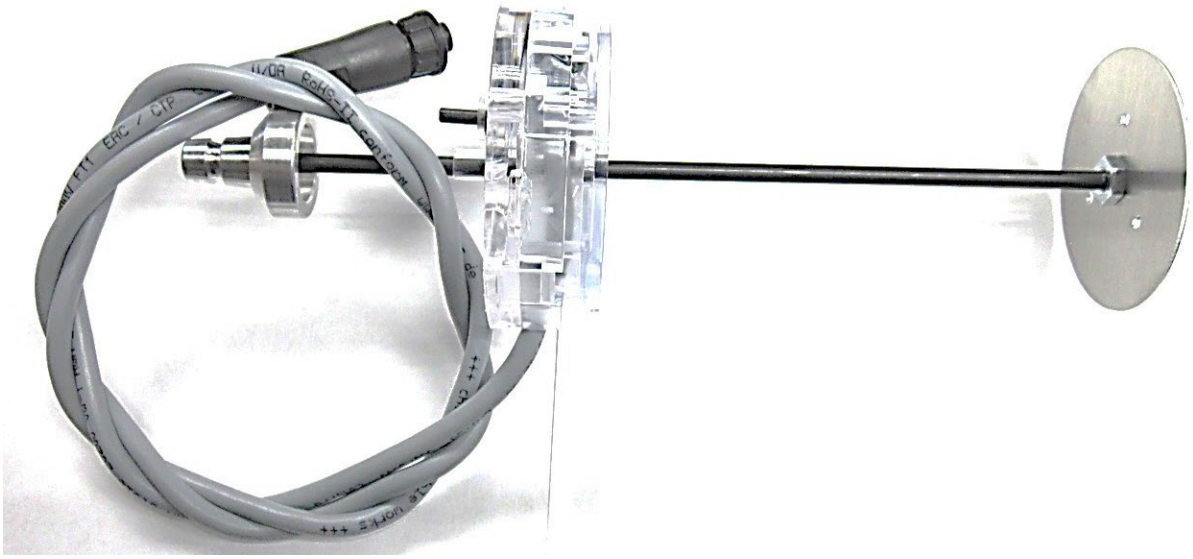
ITEM NO.	PART NUMBER	QTY.
5	85089_DA 10-32 X .500 BHCS	2
6	SAFTEY SHIELD SWITCH BRACKET ASSEMBLY	1

ITEM NO.	PART NUMBER	QTY.
1	85029_DA MICROSWITCH MOUNT BRACKET	1
2	85114_SAFTEY SHIELD SWITCH ASSEMBLY	1
3	13954_4-40x625 BHCS	2
4	14038_4-40 KEPSNUT	2

19.9. Low Primer Sensor-PN85172



19.10. Low Powder Sensor-PN85173



20. NOTES

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Division of Dillon Precision Inc.
8009 E. Dillon's Way
Scottsdale, AZ 85260
480-948-8009 1-800-421-7632
FAX 480-998-2786
Website--www.dillon-automation.com
E-mail: support@dillon-automation.com