

Step 1: Mount both Raised Switches and connect air lines.
(Air lines are set up from the factory so they can only attached one way.)

Step 2: Connect shop air (at least 80 psi) to the male fitting on the back of the Bridge.

Step 3: Slide the two Air Clamp L-Brackets in the receiver tubes on each side of the Bridge. Position the cylindrical end below the side rail, or use a 1" cold rolled round bar, inserted in the cylinder, to span two cross-members if there is no side rail.

Connect the red air lines from each Air Clamp to the miniature female sockets on the bridge.

Step 4: Flip the toggles on both Raised Switches to lock the Bridge to the deck.

The Screwdriver and Drill Units can now be safely placed on the Bridge.

Step 8: Slide the Drill Units onto the Bridge rail.

Step 6: Slide the Screwdriver onto the Bridge rails. This may be a two man job, or the PTO pin hole on the top of the Screwdriver can be used in conjunction with a hoist.

Step 7: IMPORTANT! After the Screwdriver is in place, install the restraining screw on the end of the Bridge rail.

Step 9: IMPORTANT! After the Drill Units are in place, install the restraining screw on the end of the Bridge rail.

Step 10: Plug the air line from the last Drill Unit into the first Drill Unit, then plug the air line from the first Drill Unit into the Screwdriver.

Step 11: Attached the air lines on the Screw Feeder per the instructions on the tags.

Step 12: Plug the air line from the Screwdriver into the female socket on the back of Bridge.

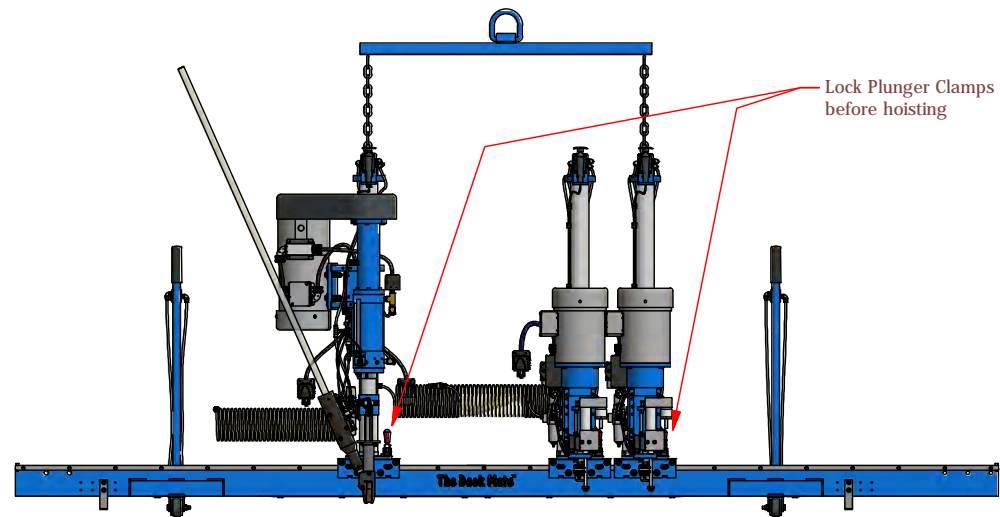
Step 13: Plug the Screwdriver into your power source, then the first Drill Unit into the Screwdriver, then the second Drill Unit into the first Drill Unit. (The Screwdriver should always be closest to the power source.)

IMPORTANT:
Check motor rotation before using the DeckMate. If the rotation is not correct, a qualified electrician can swap any two of the input power lines to reverse.

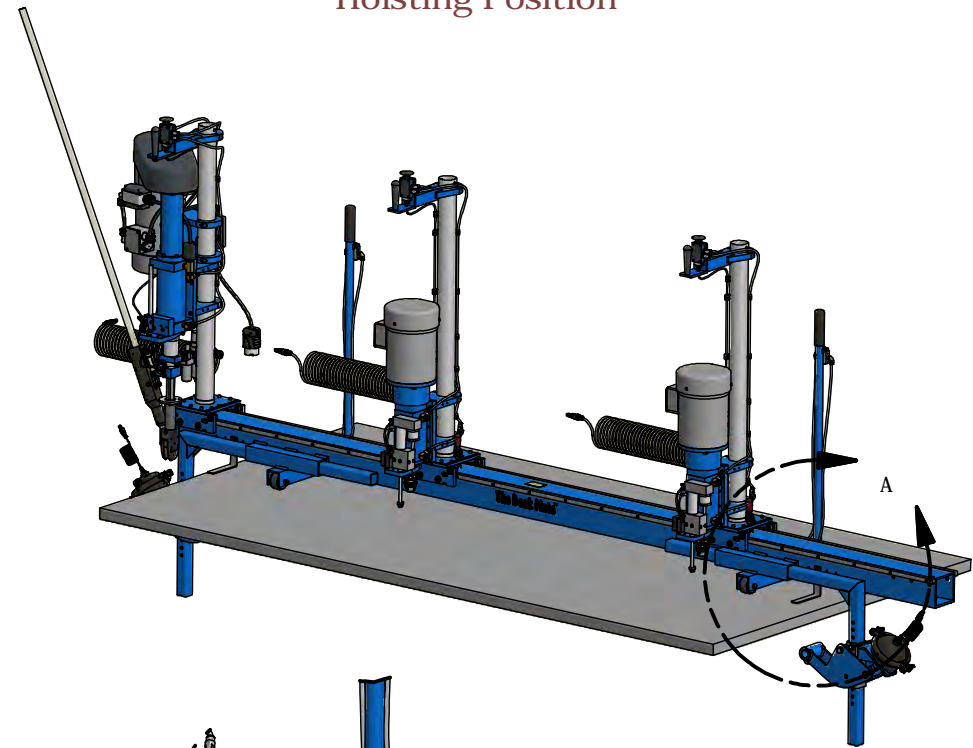
Creation Date	3/18/2016		CZ Engineering, Inc.
Last Revised	03/18/2016		
			DeckMate System Setup
Size	DeckMate-System-Setup.idw		
B	Scale:	SHEET 1 OF 2	



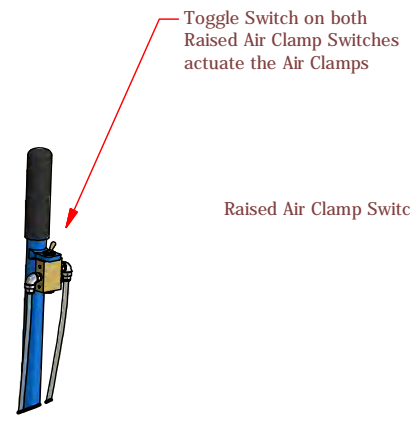
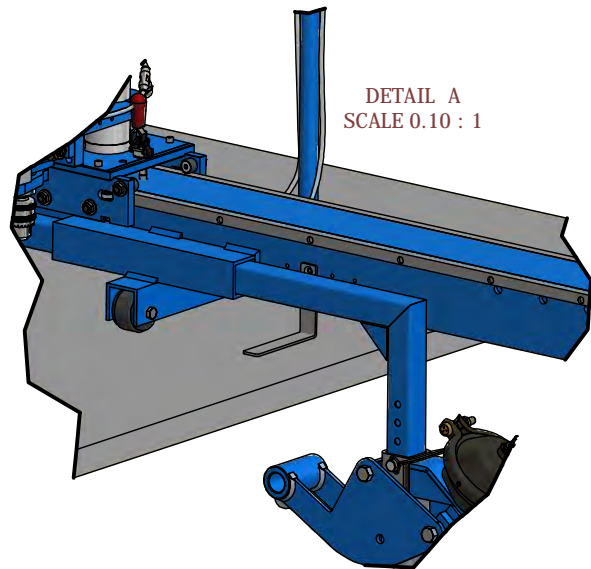
DeckMate System Setup



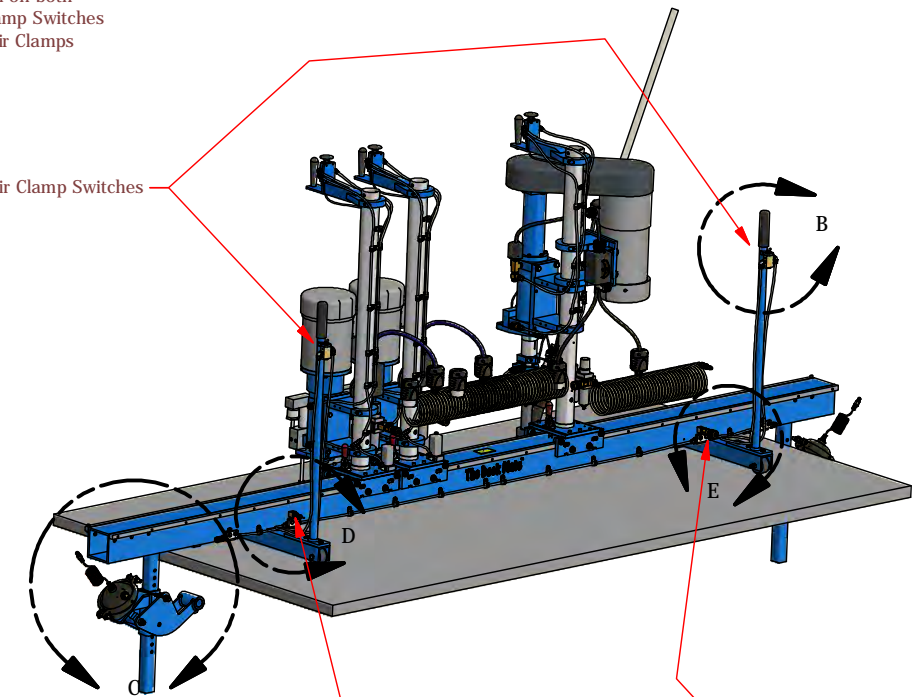
Hoisting Position



DETAIL A
SCALE 0.10 : 1

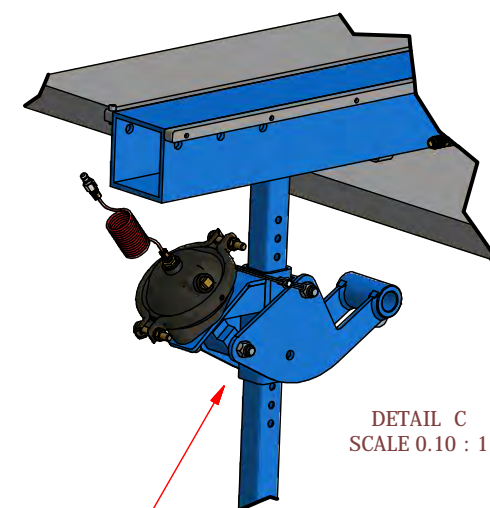


DETAIL B
SCALE 0.10 : 1



Plug shop air supply in here.

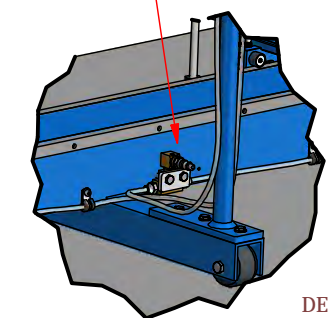
Plug air line from the Screwdriver in here, then plug the first Drill Unit into the Screwdriver and the second Drill Unit into the first Drill Unit.



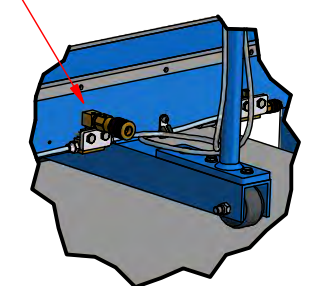
DETAIL C
SCALE 0.10 : 1

Air Clamp hold bridge in place while drilling and screwdriving processes push against the deck.

It can actuate against a side rail or it can use a 1" round rod to span two crossmembers.



DETAIL D
SCALE 0.10 : 1



DETAIL E
SCALE 0.10 : 1

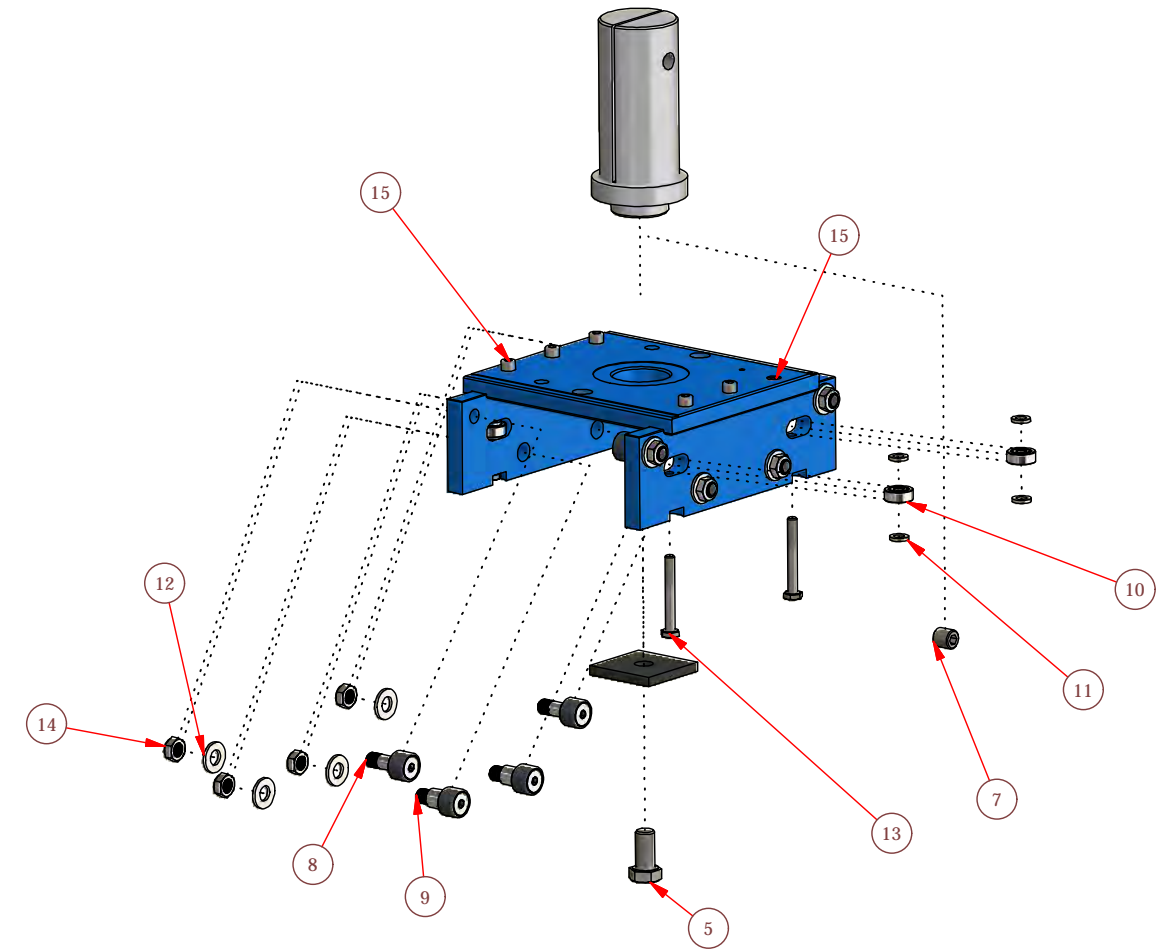
Creation Date	3/17/2016	CZ Engineering, Inc.
Last Revised	03/17/2016	
Size	DM-System-Overview.idw	
B	Scale:	SHEET 1 OF 2



DeckMate System Overview

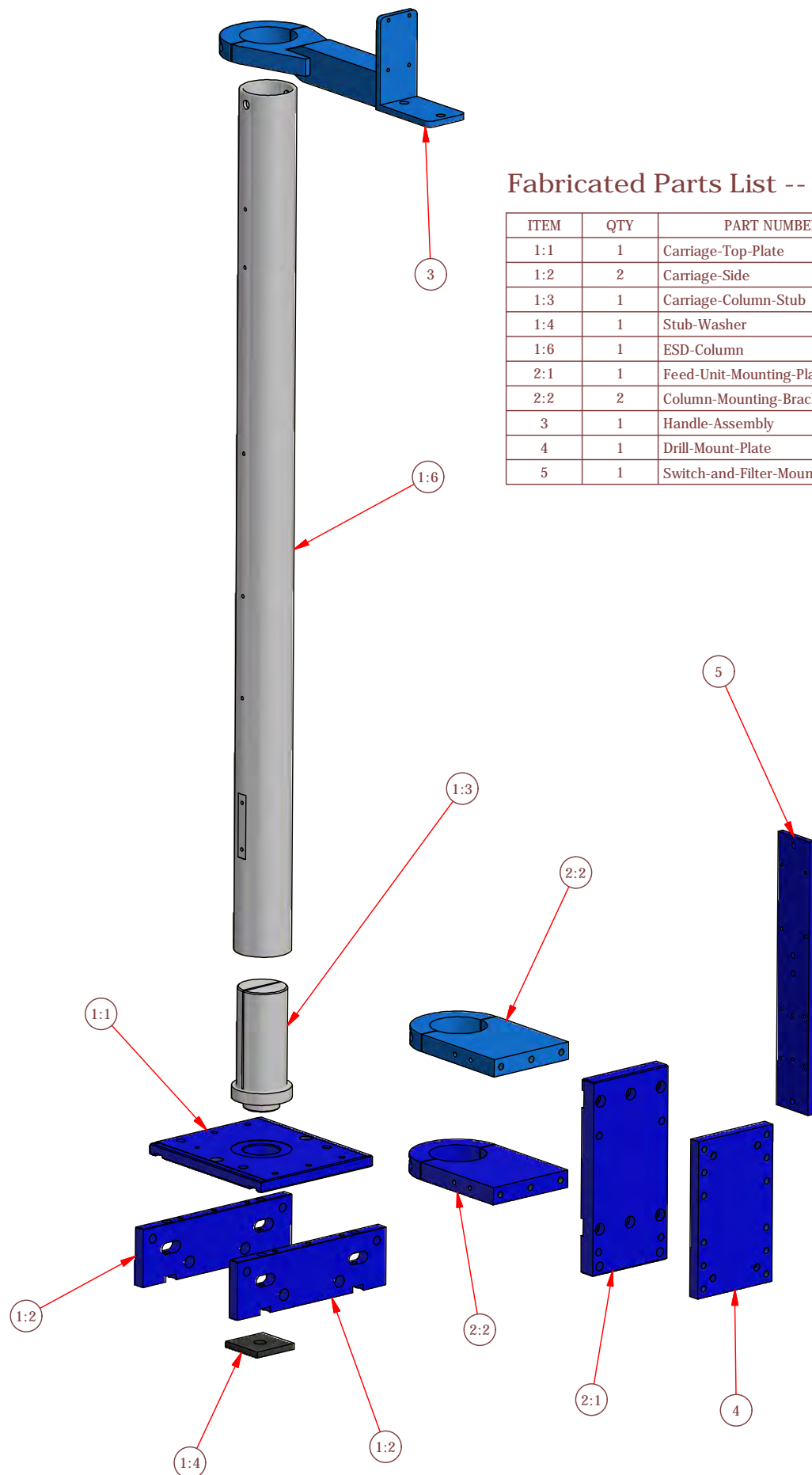
Fabricated Parts List -- Drill Unit

ITEM	QTY	PART NUMBER	DESCRIPTION
1:1	1	Carriage-Top-Plate	
1:2	2	Carriage-Side	
1:3	1	Carriage-Column-Stub	
1:4	1	Stub-Washer	
1:6	1	ESD-Column	
2:1	1	Feed-Unit-Mounting-Plate-Drill	
2:2	2	Column-Mounting-Bracket	
3	1	Handle-Assembly	
4	1	Drill-Mount-Plate	
5	1	Switch-and-Filter-Mount	



Commercial Parts List -- Drill Unit

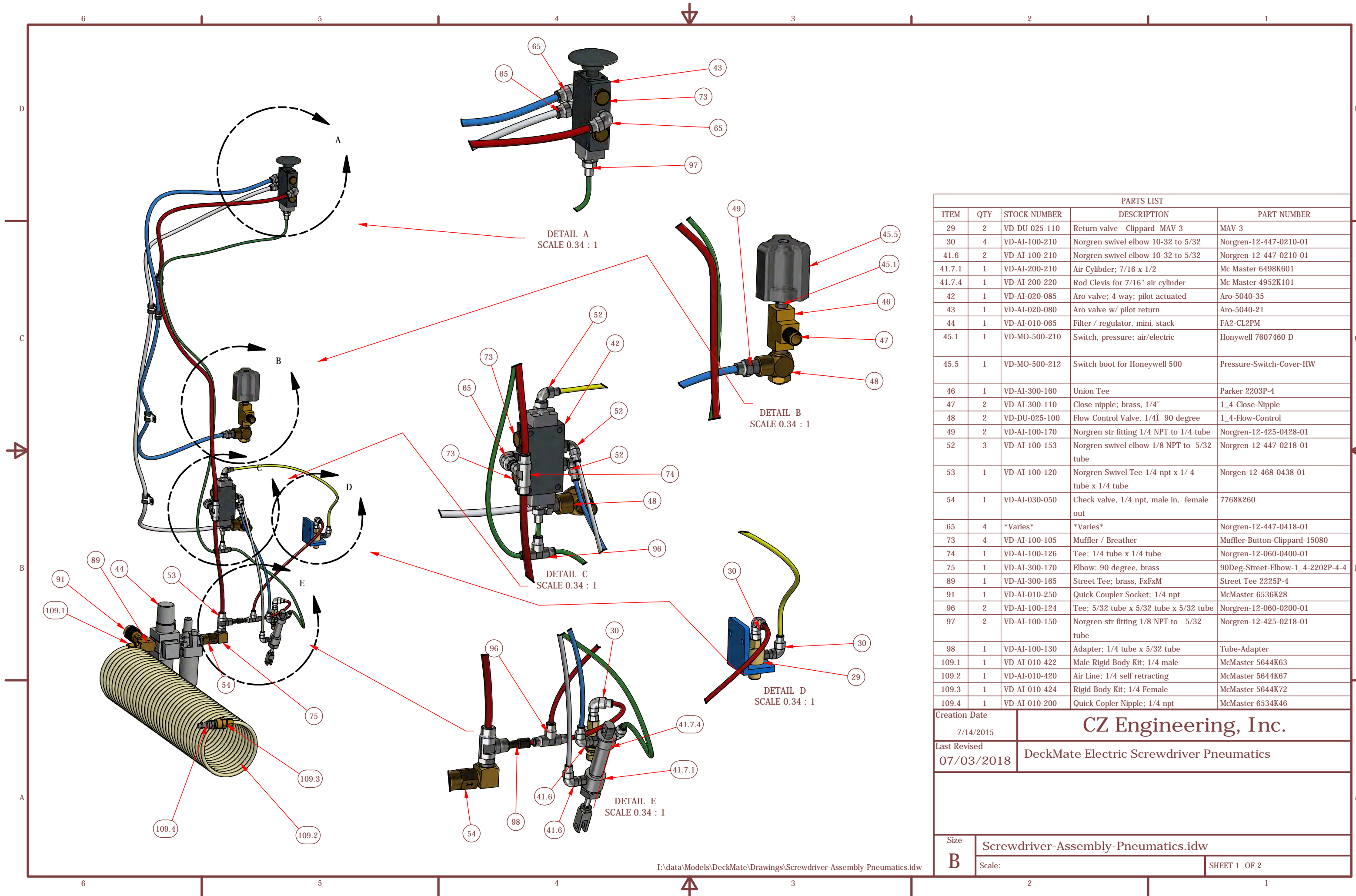
ITEM	QTY	PART NUMBER	DESCRIPTION
5	1	ANSI B18.2.1 - 1/2-20 UNF - 1	Hex Cap Screw
7	1	ANSI B18.3 - 1/2-20 UNF x 0.5	Hexagon Socket Set Screw - Flat Point
8	4	Cam-Follower-Plain	
9	4	Cam-Follower-Essentric	
10	4	Bearing-R4A-1_4	
11	8	Washer-1_4x1_2x5_64	
12	8	Washer-3_8x812	
13	4	ANSI B18.2.1 - 1/4-28 UNF - 2	Hex Cap Screw
14	8	Nut-Thin-Nylon-Lock-3_8-24	
15	6	ANSI B18.3 - 1/4-28 UNF - 1 HS HCS	Hexagon Socket Head Cap Screw



Creation Date	8/6/2015		CZ Engineering, Inc.
Last Revised	03/18/2016		
			The DeckMate
Size	Drill-Assembly-Fabricated-Parts.idw		
B	Scale:	SHEET 1 OF 2	



DeckMate Drill Unit
Fabricated and Commercial
Parts



PARTS LIST				
ITEM	QTY	STOCK NUMBER	DESCRIPTION	PART NUMBER
29	2	VD-DU-025-110	Return valve - Clippard MAV-3	MAV-3
30	4	VD-AI-100-210	Norgren swivel elbow 10-32 to 5/32	Norgren-12-447-0210-01
41.6	2	VD-AI-100-210	Norgren swivel elbow 10-32 to 5/32	Norgren-12-447-0210-01
41.7.1	1	VD-AI-200-210	Air Cylinder; 7/16 x 1/2	Mc Master 6498K601
41.7.4	1	VD-AI-200-220	Rod Clevis for 7/16" air cylinder	Mc Master 4952K101
42	1	VD-AI-020-085	Aro valve; 4 way; pilot actuated	Aro-5040-35
43	1	VD-AI-020-080	Aro valve w/ pilot return	Aro-5040-21
44	1	VD-AI-010-065	Filter / regulator, mini, stack	FA2-CL2PM
45.1	1	VD-MO-500-210	Switch, pressure; air/electric	Honywell 7607460 D
45.5	1	VD-MO-500-212	Switch boot for Honeywell 500	Pressure-Switch-Cover-HW
46	1	VD-AI-300-160	Union Tee	Parker 2203P-4
47	2	VD-AI-300-110	Close nipple; brass, 1/4"	1_4-Close-Nipple
48	2	VD-DU-025-100	Flow Control Valve, 1/4I 90 degree	1_4-Flow-Control
49	2	VD-AI-100-170	Norgren str fitting 1/4 NPT to 1/4 tube	Norgren-12-425-0428-01
52	3	VD-AI-100-153	Norgren swivel elbow 1/8 NPT to 5/32 tube	Norgren-12-447-0218-01
53	1	VD-AI-100-120	Norgren Swivel Tee 1/4 npt x 1/4 tube x 1/4 tube	Norgren-12-468-0438-01
54	1	VD-AI-030-050	Check valve, 1/4 npt, male in, female out	7768K260
65	4	*Varies*	*Varies*	Norgren-12-447-0418-01
73	4	VD-AI-100-105	Muffler / Breather	Muffler-Button-Clippard-15080
74	1	VD-AI-100-126	Tee; 1/4 tube x 1/4 tube	Norgren-12-060-0400-01
75	1	VD-AI-300-170	Elbow; 90 degree, brass	90Deg-Street-Elbow-1_4-2202P-4-4
89	1	VD-AI-300-165	Street Tee; brass, FxFxM	Street Tee 2225P-4
91	1	VD-AI-010-250	Quick Coupler Socket; 1/4 npt	McMaster 6536K28
96	2	VD-AI-100-124	Tee; 5/32 tube x 5/32 tube x 5/32 tube	Norgren-12-060-0200-01
97	2	VD-AI-100-150	Norgren str fitting 1/8 NPT to 5/32 tube	Norgren-12-425-0218-01
98	1	VD-AI-100-130	Adapter; 1/4 tube x 5/32 tube	Tube-Adapter
109.1	1	VD-AI-010-422	Male Rigid Body Kit; 1/4 male	McMaster 5644K63
109.2	1	VD-AI-010-420	Air Line; 1/4 self retracting	McMaster 5644K67
109.3	1	VD-AI-010-424	Rigid Body Kit; 1/4 Female	McMaster 5644K72
109.4	1	VD-AI-010-200	Quick Cople Nipple; 1/4 npt	McMaster 6534K46

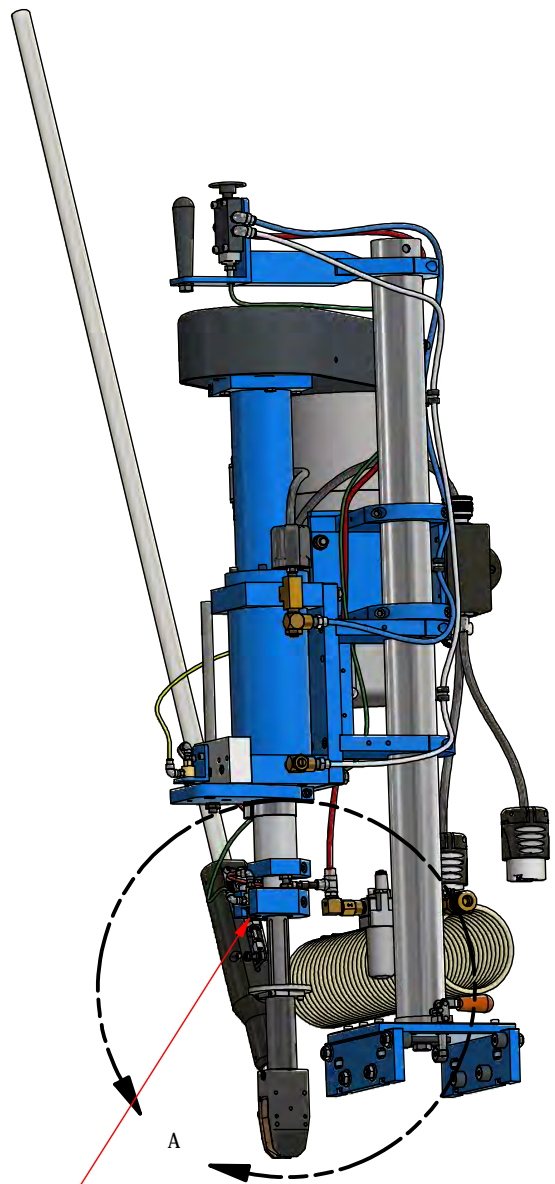
Creation Date		CZ Engineering, Inc.	
7/14/2015			
Last Revised		DeckMate Electric Screwdriver Pneumatics	
07/03/2018			
Size	Screwdriver-Assembly-Pneumatics.idw		
B	Scale:	SHEET 1 OF 2	



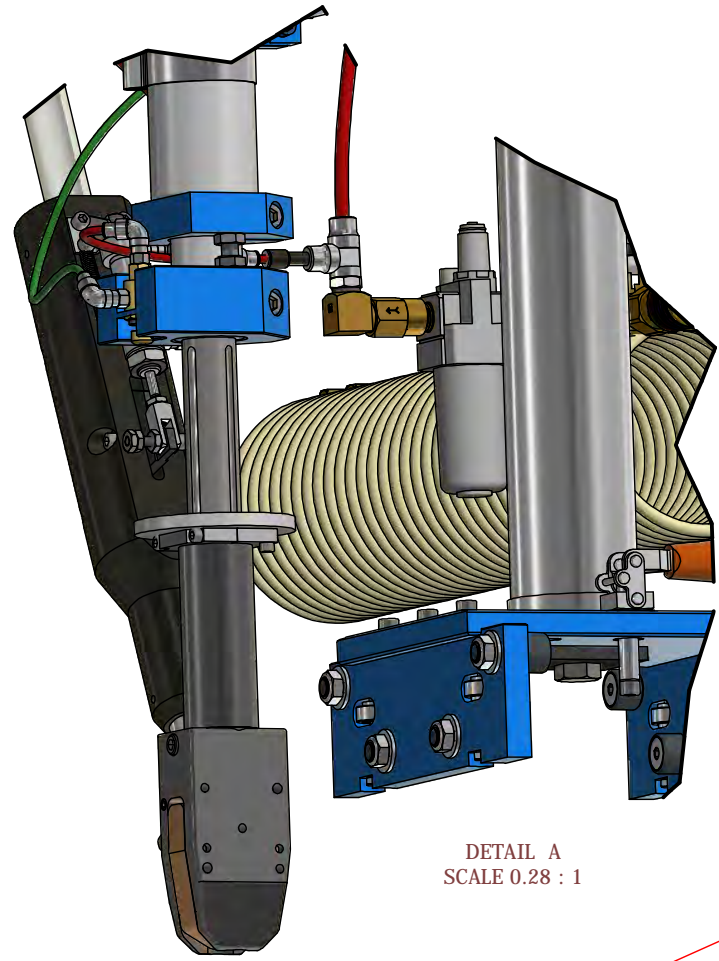
DeckMate Electric
Screwdriver Pneumatic
Part List

6 5 4 3 2 1

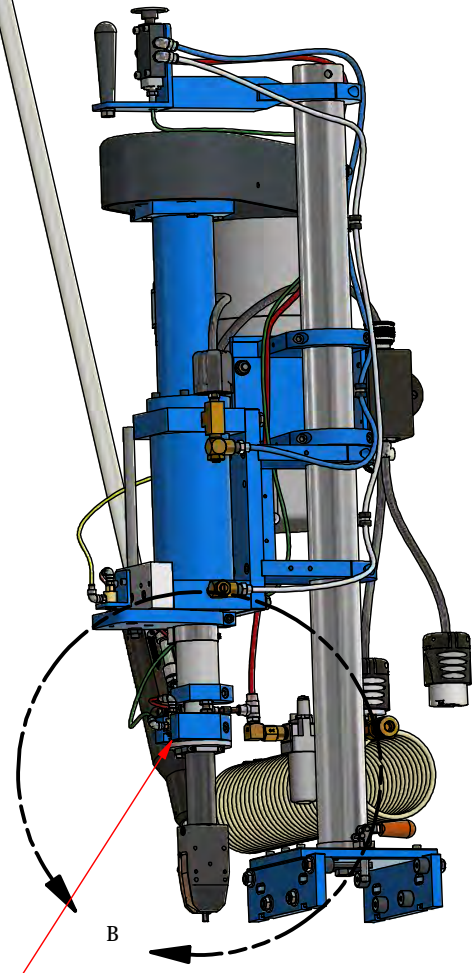
D
C
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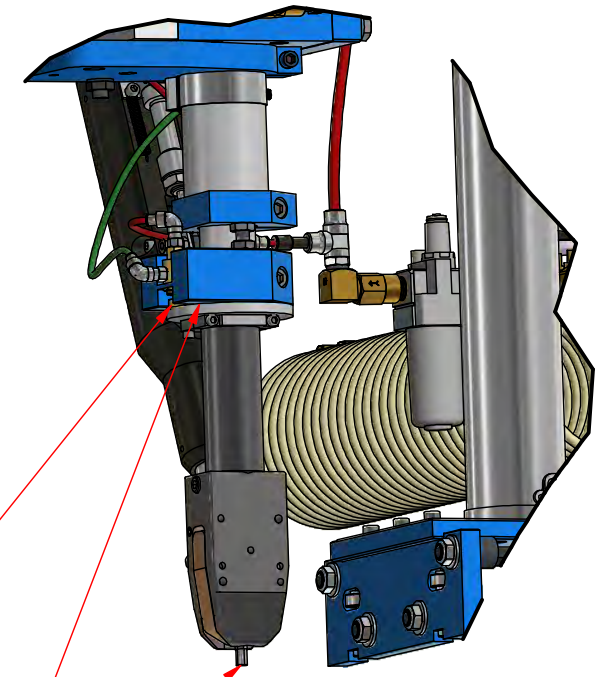
Step 1: Raise nosepiece until it bottoms out against the Return Mount



DETAIL A
SCALE 0.28 : 1



Bottom out Nosepiece Return Collar against button.



DETAIL B
SCALE 0.22 : 1

Step 2: Once bottomed out, the Torx bit protrudes from the bottom of the nosepiece and can be grasped with pliers and pulled free from the spring retaining clip.

Step 3: Replace the Torx bit by slipping a new one into the holder while still holding the nosepiece against the Return Mount. Tap in place to ensure that it is seated.

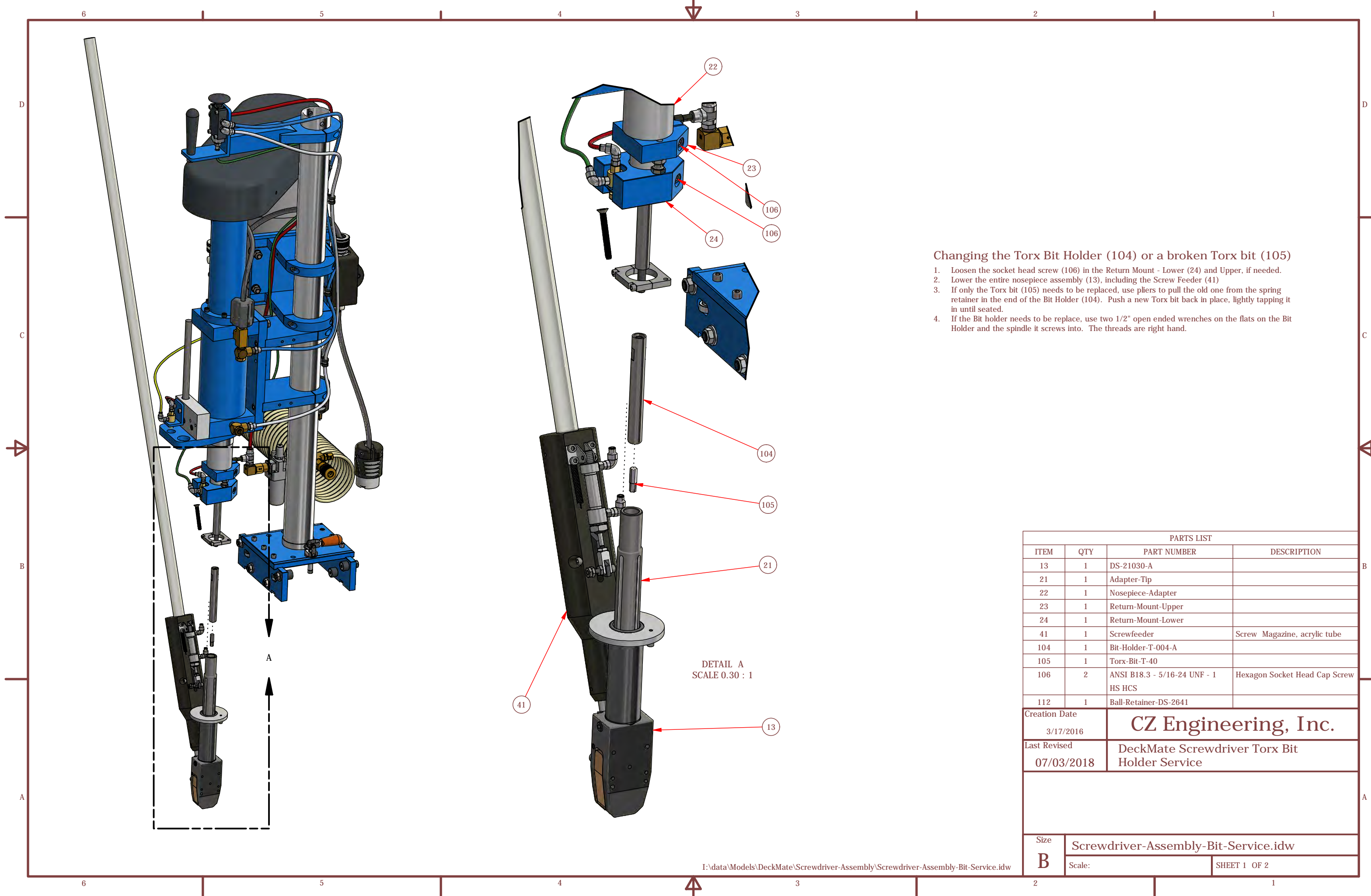
Creation Date	3/18/2016		CZ Engineering, Inc.
Last Revised	07/03/2018		
			DeckMate Screwdriver Torx Bit Change
Size	Screwdriver-Assembly-Torx-Bit-Change.idw		
B	Scale:	SHEET 1 OF 2	

6 5 4 3 2 1





DeckMate Screwdriver Torx Bit Change



Changing the Torx Bit Holder (104) or a broken Torx bit (105)

1. Loosen the socket head screw (106) in the Return Mount - Lower (24) and Upper, if needed.
2. Lower the entire nosepiece assembly (13), including the Screw Feeder (41)
3. If only the Torx bit (105) needs to be replaced, use pliers to pull the old one from the spring retainer in the end of the Bit Holder (104). Push a new Torx bit back in place, lightly tapping it in until seated.
4. If the Bit holder needs to be replace, use two 1/2" open ended wrenches on the flats on the Bit Holder and the spindle it screws into. The threads are right hand.

DETAIL A
SCALE 0.30 : 1

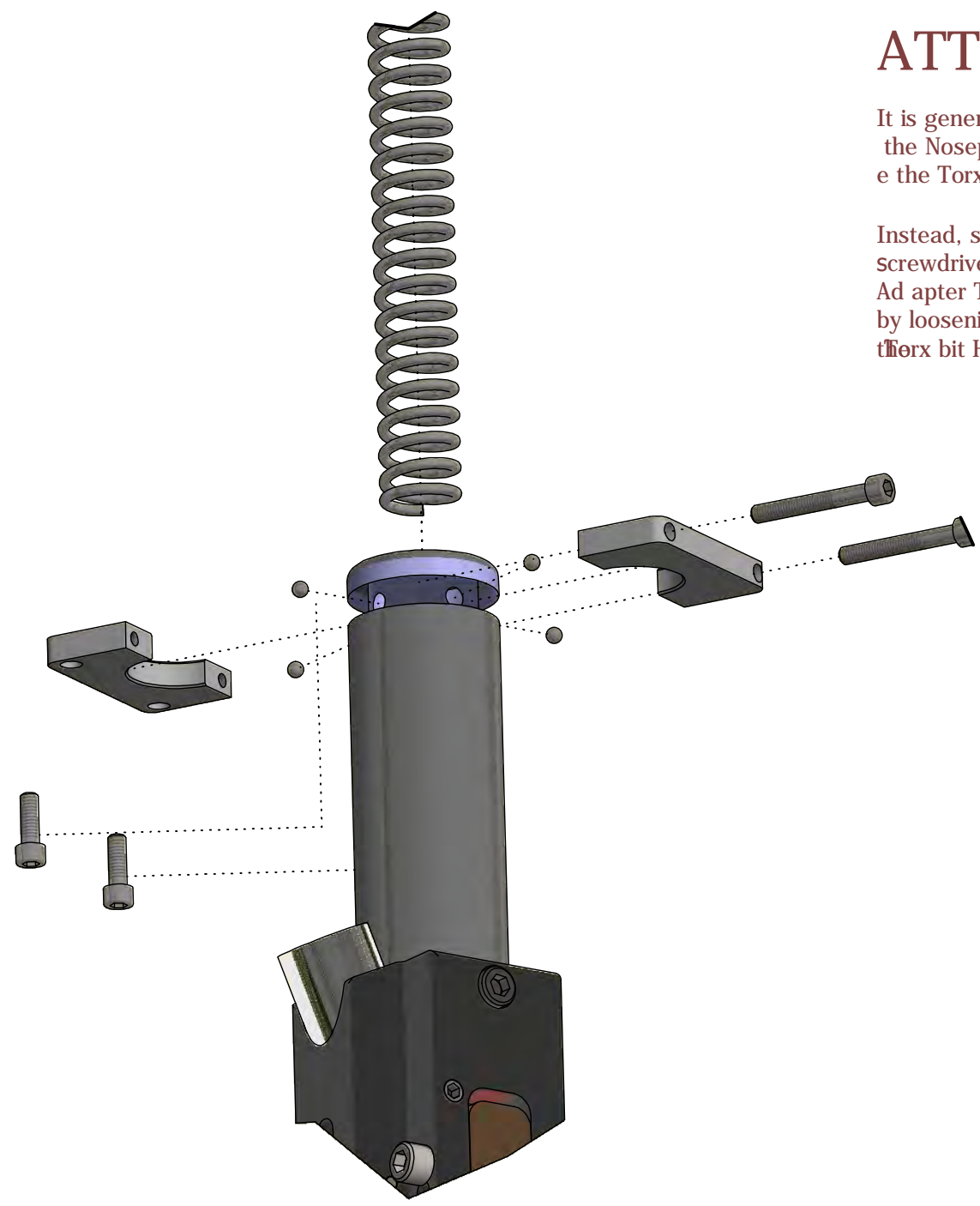
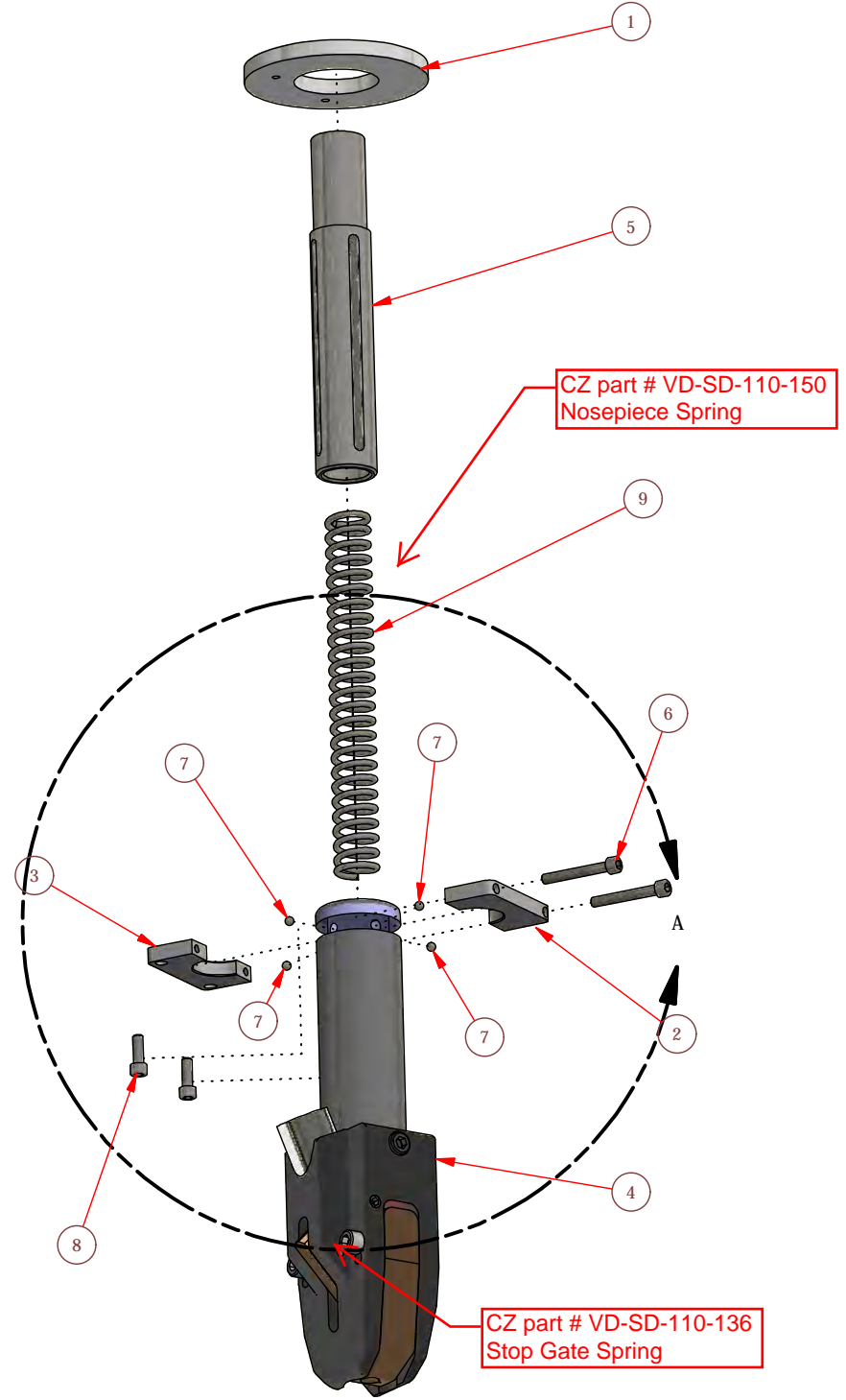
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
13	1	DS-21030-A	
21	1	Adapter-Tip	
22	1	Nosepiece-Adapter	
23	1	Return-Mount-Upper	
24	1	Return-Mount-Lower	
41	1	Screwfeeder	Screw Magazine, acrylic tube
104	1	Bit-Holder-T-004-A	
105	1	Torx-Bit-T-40	
106	2	ANSI B18.3 - 5/16-24 UNF - 1 HS HCS	Hexagon Socket Head Cap Screw
112	1	Ball-Retainer-DS-2641	

Creation Date 3/17/2016	CZ Engineering, Inc.
Last Revised 07/03/2018	
DeckMate Screwdriver Torx Bit Holder Service	

Size B	Screwdriver-Assembly-Bit-Service.idw
Scale:	SHEET 1 OF 2



Changing the Torx Bit Holder or a Broken Torx Bit



DETAIL A
SCALE 2 / 3

ATTENTION!

It is generally not necessary to disassemble the Nosepiece from the Adapter Tip in order to change the Torx bit or clear double screw feeds.

Instead, see the drawing sheet *DeckMate S Screwdriver Torx Bit Holder Service*. Note that the Adapter Tip can be separated from the Return-Mount by loosening one screw and that will give access to the Torx bit Holder.

NOTE:

Use only dry lubricant, sparingly, on the Nosepiece to avoid attracting dirt that will gum up the action.

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	Nosepiece-Return-Collar	
2	1	Ball-Retainer-half-2	
3	1	Ball-Retainer-half-1	
4	1	DS-21030-A	
5	1	Adapter-Tip	
6	2	ANSI B18.3 - 8-36 UNF - 1.25 HS HCS	Hexagon Socket Head Cap Screw
7	4	Nosepiece-Ball	
8	2	ANSI B18.3 - No. 8 - 32 UNC - 1/2 HS HCS	Hexagon Socket Head Cap Screw
9	1	Nosepiece-Spring	

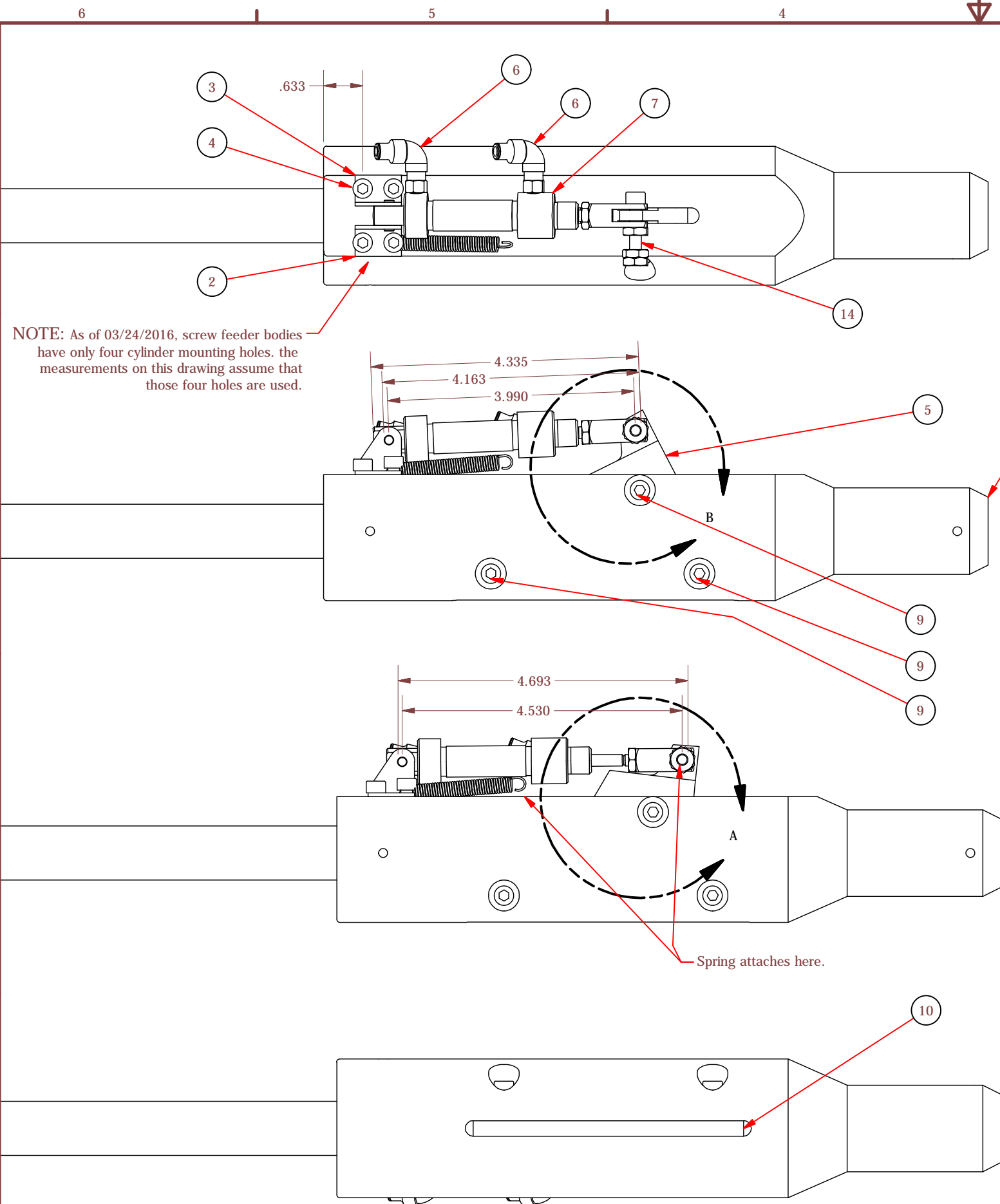
Creation Date	3/21/2016	CZ Engineering, Inc.
Last Revised	03/20/2016	
		Nosepiece Adapter Tip Assembly

Size	Nosepiece-Assembly-Exploded.idw	
B	Scale:	SHEET 1 OF 2



Nosepiece Adapter Tip Assembly





NOTE: As of 03/24/2016, screw feeder bodies have only four cylinder mounting holes. the measurements on this drawing assume that those four holes are used.

To set up a new air cylinder, first install the clevis on the cylinder's piston rod and make this distance .6" when the rod is fully extended.

DETAIL A
SCALE 1 / 2

DETAIL B
SCALE 1 / 2

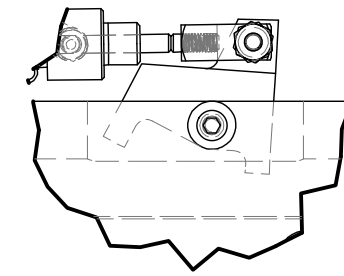
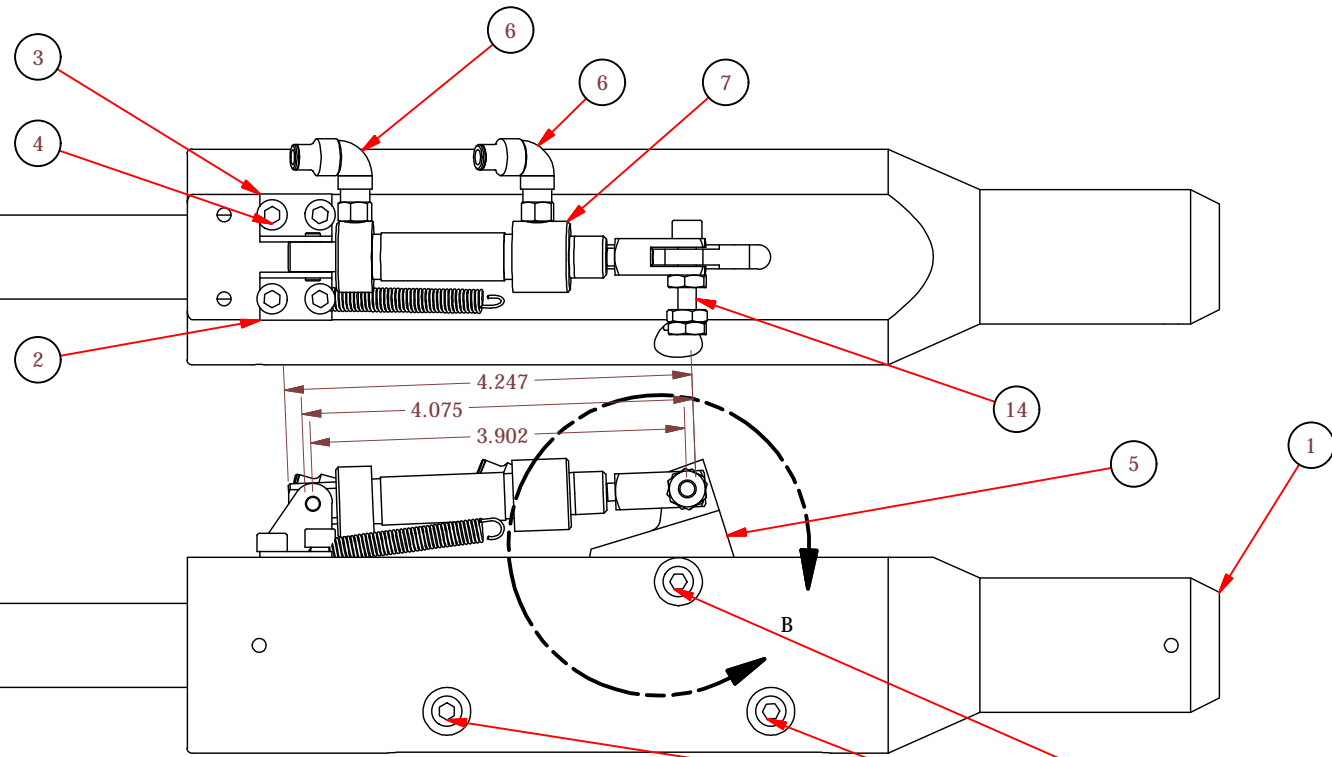
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	Screw-Feeder-Body	
2	1	6498K710-air-cylinder-right-bracket	
3	1	6498K710-air-cylinder-left-bracket	
4	4	ANSI B18.3 - No. 10 - 24 UNC - 1/2 HS HCS	Hexagon Socket Head Cap Screw
5	1	Screw-Feeder-Paw-1	
6	2	Norgren-12-447-0210-01	Norgren swivel elbow 10-32 to 5/32
7	1	Norgren-Air-Cylinder-7_16x1_2-Stroke	Cylinder, air; 7/16" bore, 1/2
9	3	ANSI B18.3 - No. 10 - 24 UNC - 1 1/4 HS HCS	Hexagon Socket Head Cap Screw
10	1	Screw-Feeder-Wear-Plate	
11	1	Screw-Feeder-Paw-Spring	
13	1	Screw-Magazine-Tube	
14	1	ANSI B18.3 - 10-32 UNF - 1 HS HCS	Hexagon Socket Head Cap Screw
15	3	ANSI B18.6.3 - 10 - 32	Hex Machine Screw Nut

Creation Date 4/16/2015	CZ Engineering, Inc.	
Last Revised 03/24/2016		
Design change as of 03/24/2016. Cylinder mounting holes reduced from six to four. Cylinder total extended length is longer, allowing for the use of the jam screw on the clevis end.		
Size B	Screwfeeder.idw	SHEET 1 OF 3
	Scale:	

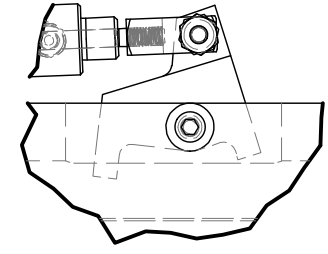


Screw Feeder Setup

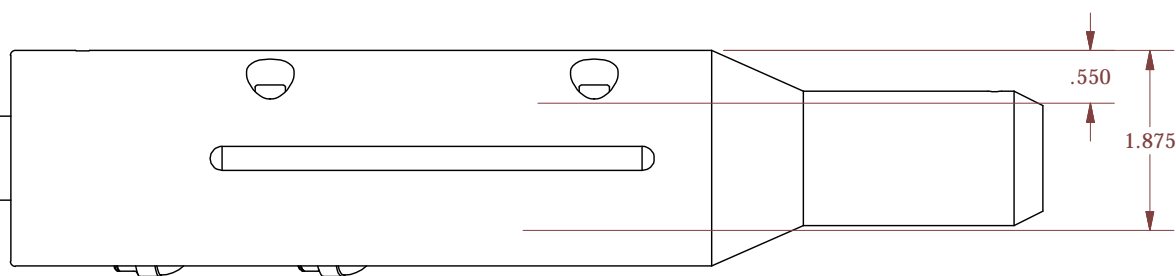
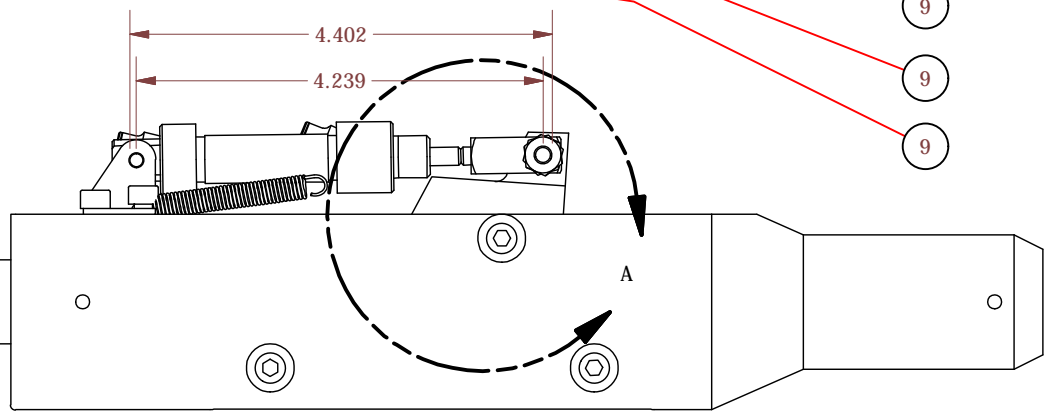
Pre 03/24/2016



DETAIL A
SCALE 1 / 2



DETAIL B
SCALE 1 / 2



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	Screw-Feeder-Body	
2	1	6498K710-air-cylinder-right-bracket	
3	1	6498K710-air-cylinder-left-bracket	
4	4	ANSI B18.3 - No. 10 - 24 UNC - 1/2 HS HCS	Hexagon Socket Head Cap Screw
5	1	Screw-Feeder-Paw-1	
6	2	Norgren-12-447-0210-01	Norgren swivel elbow 10-32 to 5/32
7	1	Norgren-Air-Cylinder-7_16x1_2-Stroke	Cylinder, air; 7/16" bore, 1/2
9	3	ANSI B18.3 - No. 10 - 24 UNC - 1 1/4 HS HCS	Hexagon Socket Head Cap Screw
10	1	Screw-Feeder-Wear-Plate	
11	1	Screw-Feeder-Paw-Spring	
13	1	Screw-Magazine-Tube	
14	1	ANSI B18.3 - 10-32 UNF - 1 HS HCS	Hexagon Socket Head Cap Screw
15	3	ANSI B18.6.3 - 10 - 32	Hex Machine Screw Nut

Creation Date 4/16/2015	CZ Engineering, Inc.	
Last Revised 08/20/2015		
Size B	Screwfeeder.idw	
	Scale:	SHEET 1 OF 2



Screw Feeder Setup

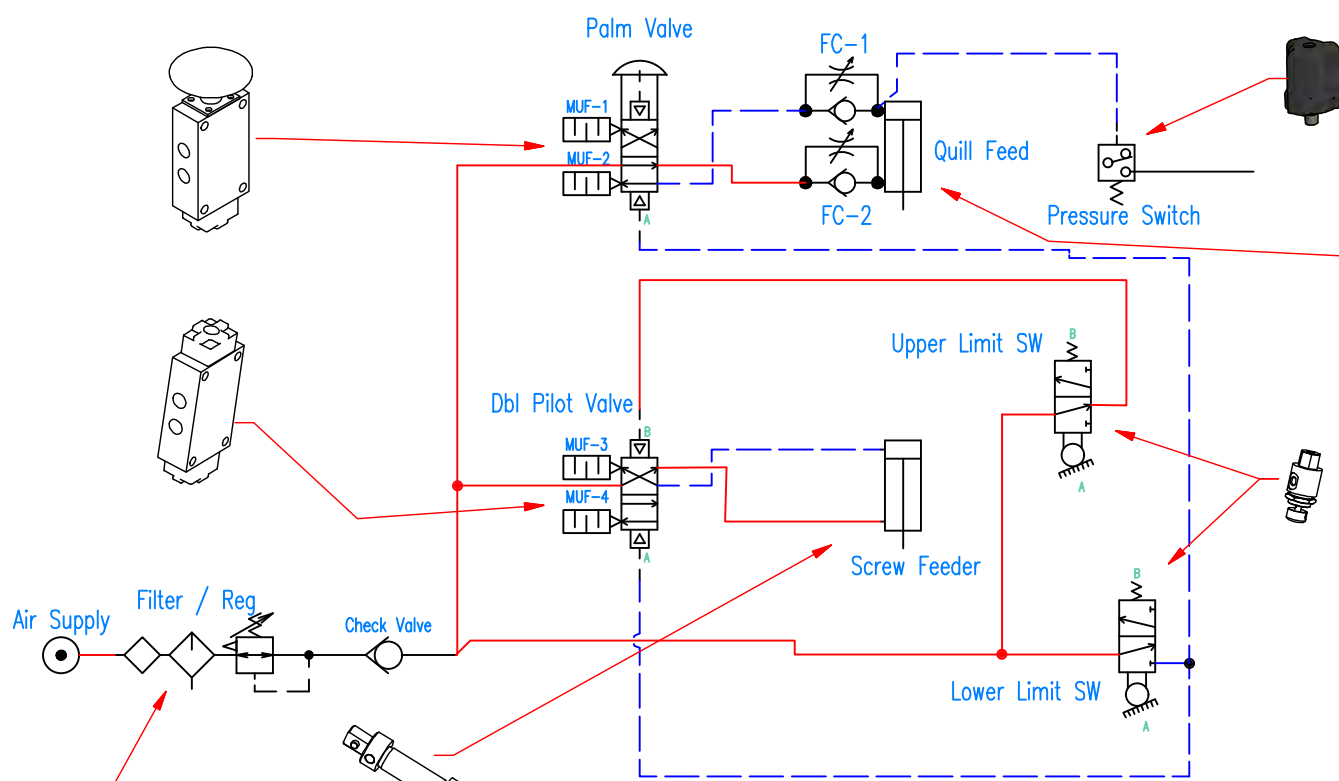


FIG. A - System Ready Position
When returning to this position after driving a screw, a new screw falls into position.

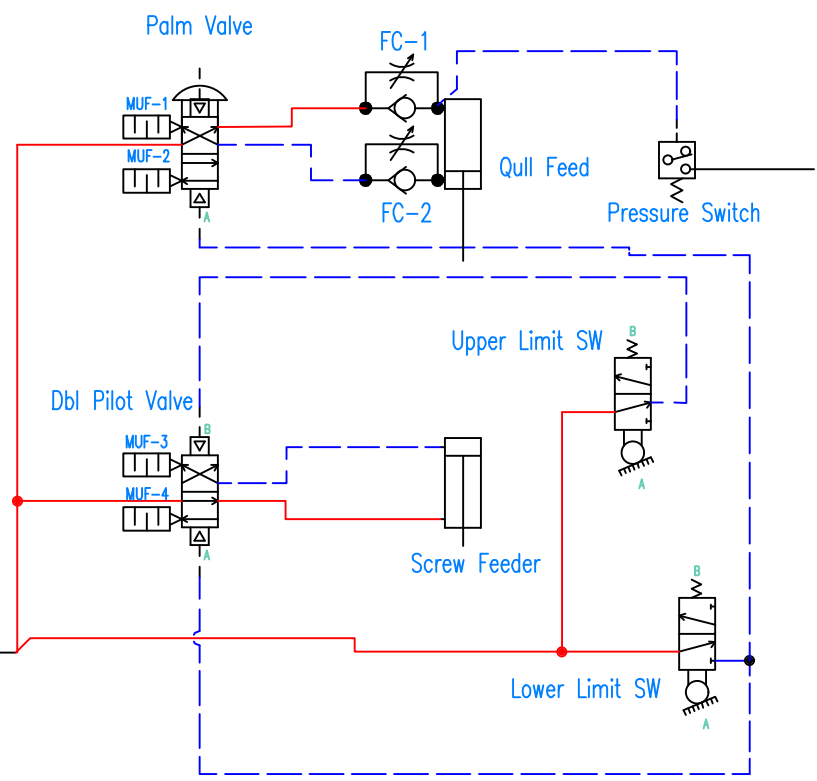


FIG. B - Quill advancing, but screw not yet engaged.

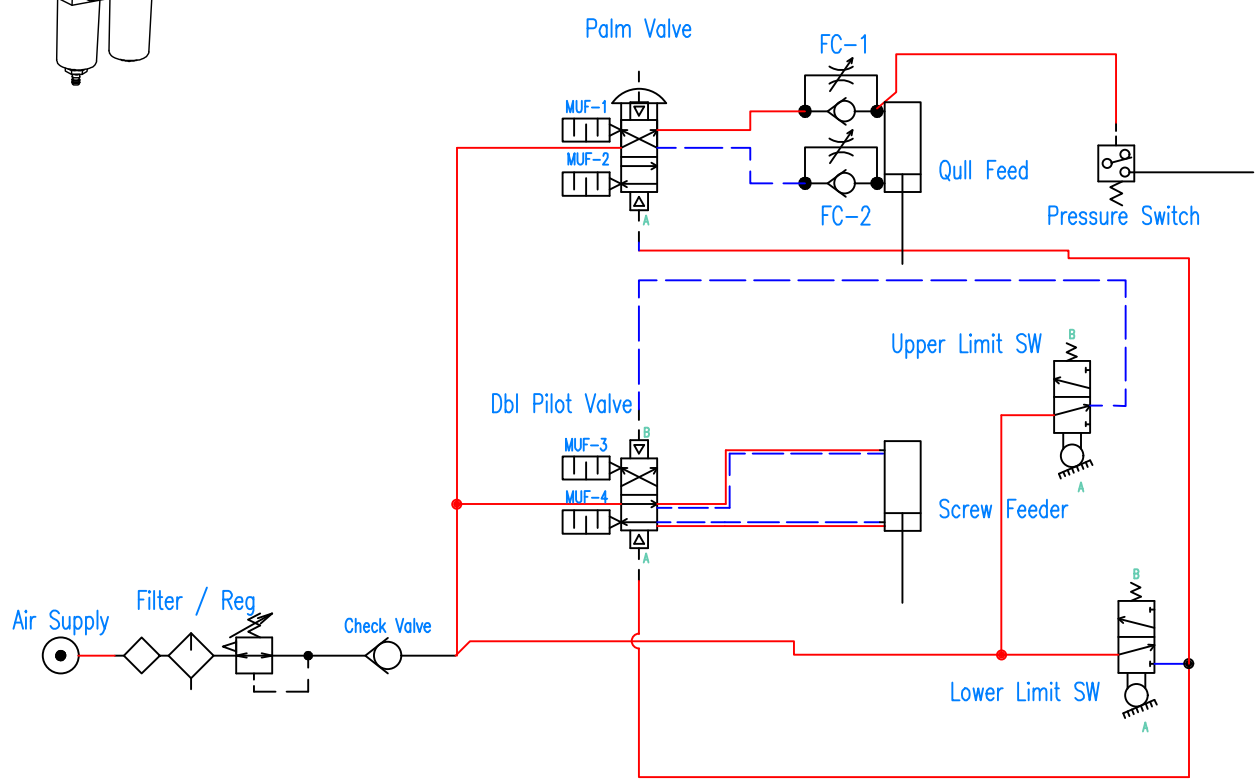


FIG. C - Screw reaches the desired depth.
Screwfeeder actuates to make ready the next screw, but does not drop it.

Air line under pressure: _____
Air line NOT under pressure: _____

Creation Date	7/11/2015		CZ Engineering, Inc.
Last Revised	ESD Pneumatic Schematic		
Showing various states of the screwdriving cycle.			
Size	ESD-Pneumatic-Schematic.dwg		SHEET 1 OF 2
B	Scale:		



ESD Pneumatic Schematic

DeckMate Screwdriver Troubleshooting Guide

Proper Operation:

When the quill reaches the "ready" (fully retracted) position, a screw should freely fall passed the Stop Gate and the Stop Gate should prevent the screw from backing up. The nosepiece jaws and two internal balls hold the screw in place until the Torx bit engages, with a small length of the screw protruding out the bottom of the nosepiece.

If you don't see part of the screw protruding, vertically, out the bottom of the nosepiece, stop and find out what is wrong.

Screw Feeding Problems:

Does the nosepiece freely slide up and down the full length of its rail?

- There must be no sticking points.
- The four ball grooves must be kept clean and the four balls must be round and smooth.
- Use only a dry lubricant and use it sparingly. Grease and dust buildup will bind the nosepiece.
- A mixture of 1 part liquid lanolin (available online or at health food stores) to 12 parts Isopropyl alcohol (HEET fuel additive in the red bottle) works well. Aggressively shake it before use.

Are the screws 2 1/4" long or less?

- Without special modification, the nosepiece will not reliably feed screws over 2 1/4" long.

Are the screws 5/16" in diameter?

- The standard nosepiece is designed for 5/16" screws.

Are the screw heads no more than 0.60" in diameter?

- Some manufacturers make larger diameter heads on their screws than others. If the head is too large, the screws will not reliably feed.

Are the air lines plumbed properly?

- The screw feed paw must operate at the proper time for reliable screw feeding. See the cycle sequence at the left of this page and consult the operator manual for plumbing details.

Is the Stop Gate impeding screw travel?

- If a screw fed partially, but is not protruding vertically out the bottom of the nosepiece, pivot the Stop Gate with your finger. If the screw falls in place, assuming the screws are the correct size, the Stop Gate may need to be tuned.
- To verify that the Stop Gate is impeding screw passage, it can be removed. If screws feed reliably without the Stop Gate in place, the Stop Gate spring (and possibly the Stop Gate) may need to be replaced.

Double Feeding Screws:

Is the screw feeder return spring in place?

- Without the spring, screws may drop past the paw when there is no air pressure.

Are the air lines plumbed properly?

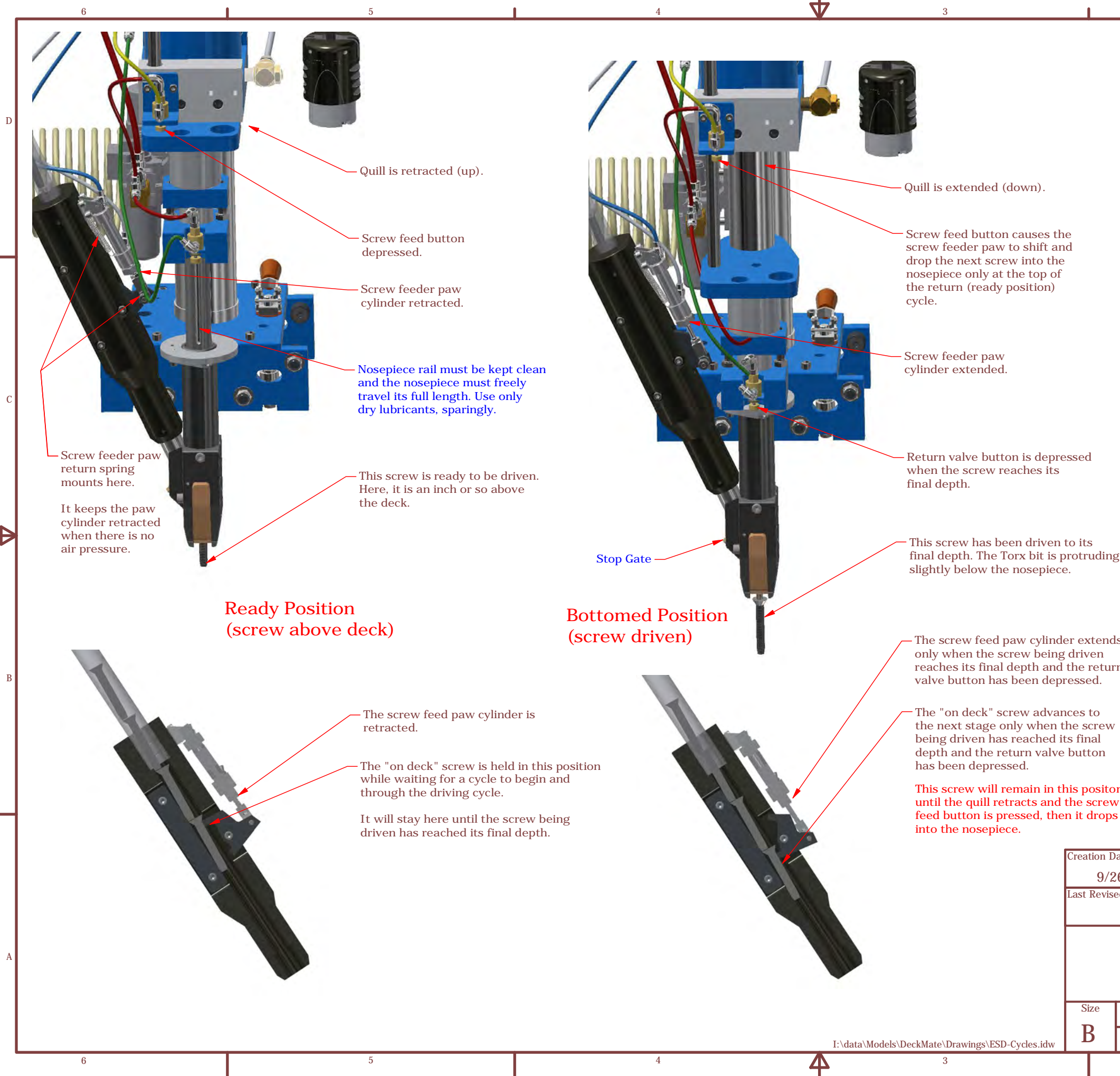
- Properly plumbed air lines are essential to the proper screw feeding sequence.

Is the feeder paw worn?

- After many, many thousands of screws the paw can become worn enough to allow screws to pass when they shouldn't.

Is the screw driving cycle being interrupted or was the Return Valve Button depressed before the screw in the nosepiece was driven?

- Study and understand the screwdriving sequence described on the left of this page. Ensure each step is performed in the automatic cycle.



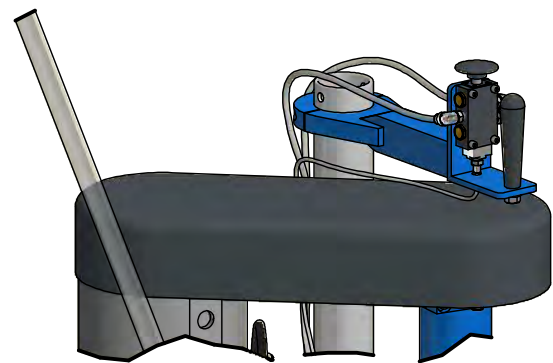
**Ready Position
(screw above deck)**

**Bottomed Position
(screw driven)**

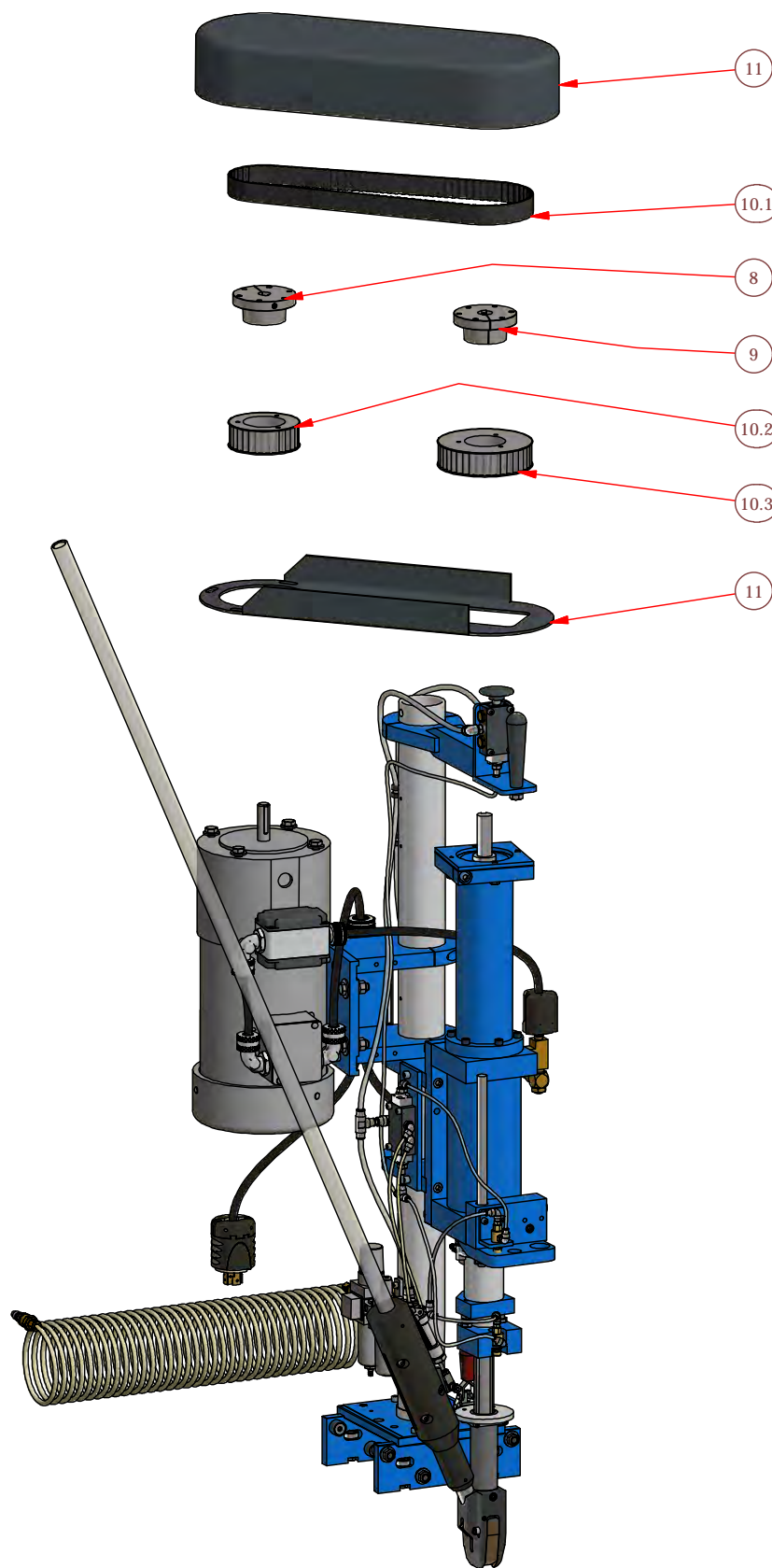
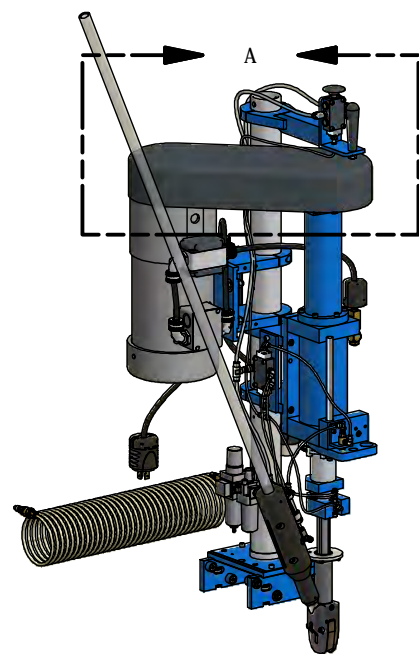
Creation Date	9/26/2018	CZ Engineering, Inc.
Last Revised	DeckMate Screwdriver Troubleshooting Guide	
Size	ESD-Cycles.idw	
B	Scale:	SHEET 1 OF 2

DeckMate Screwfeeding Cycle and Troubleshooting Guide





DETAIL A
SCALE 0.13 : 1



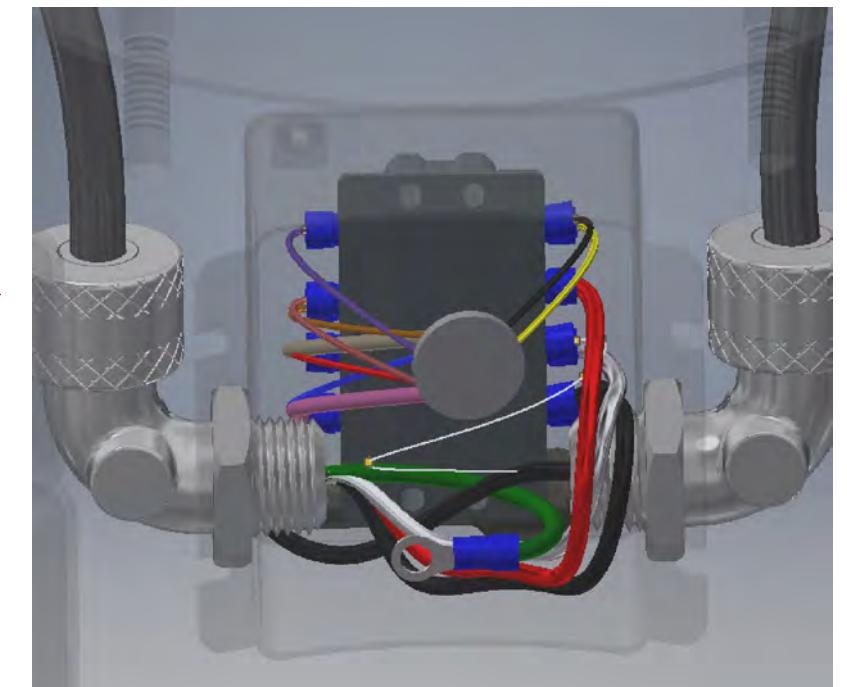
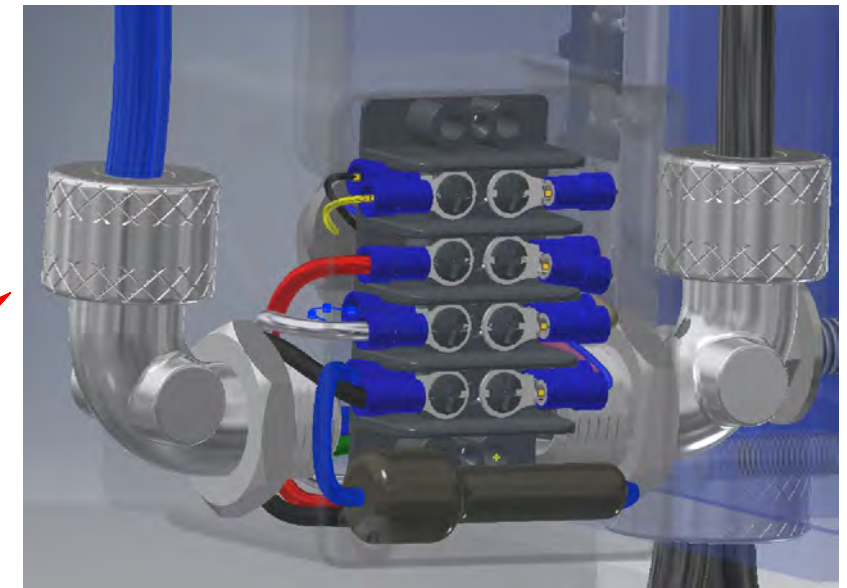
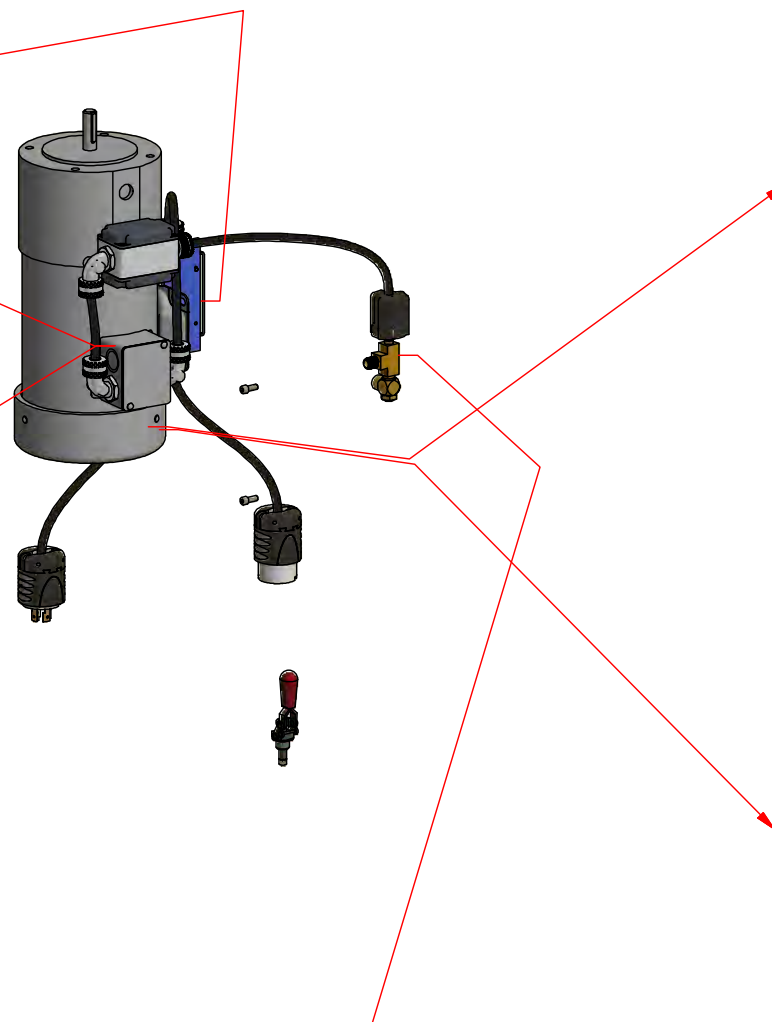
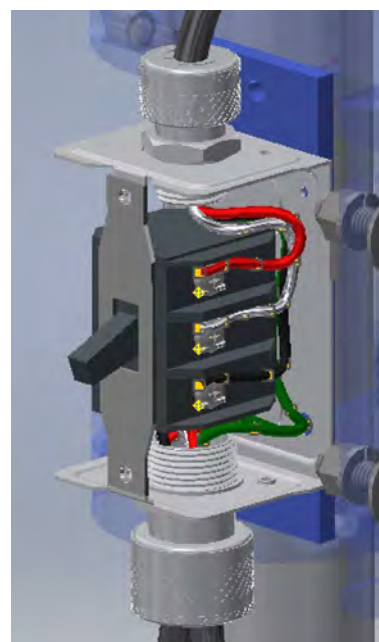
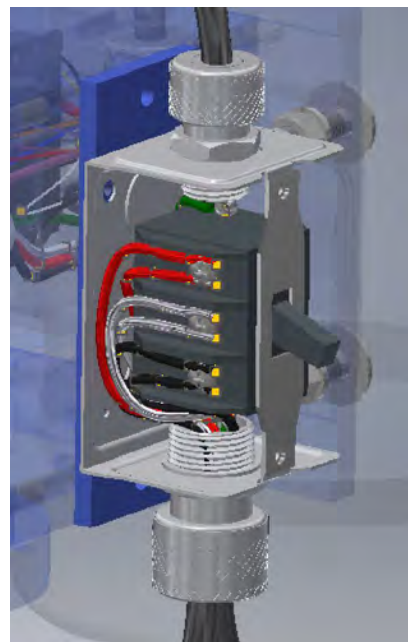
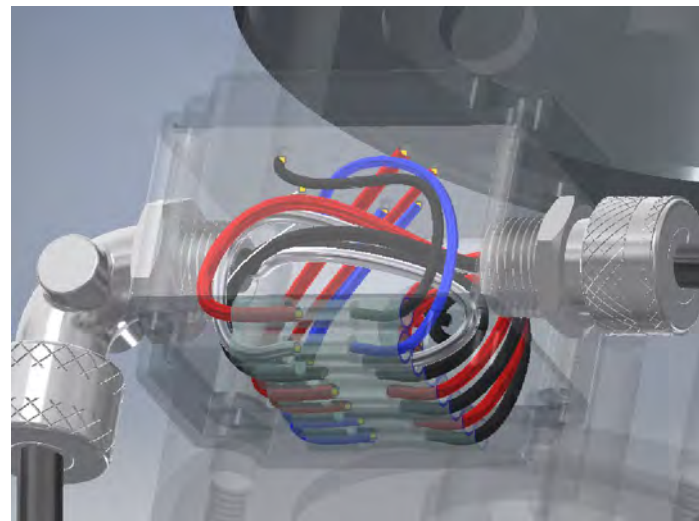
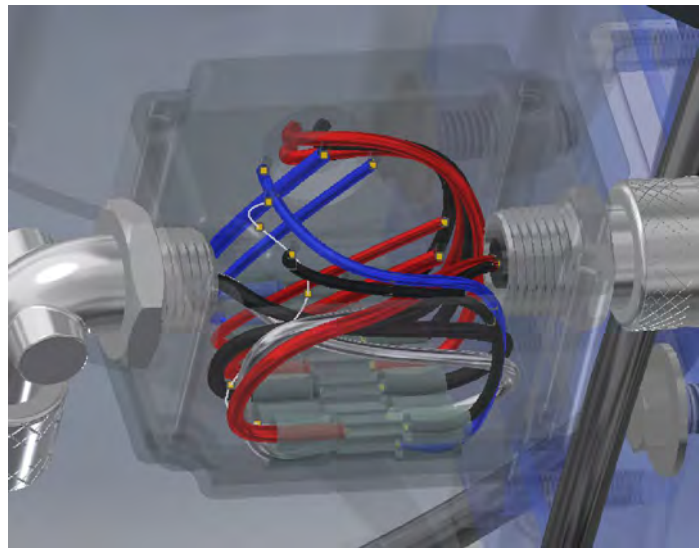
PARTS LIST				
ITEM	QTY	PART NUMBER	DESCRIPTION	STOCK NUMBER
8	1	Mc Master-Carr 6086K312	QD-Bushing for pulley - 5/8" bore (motor)	VD-MO-600-110
9	1	Mc Master-Carr 6086K313	QD-Bushing-3_4-6086K313-A	VD-MO-600-120
10.1	1	Mc Master-Carr - 6484K356	Timing Belt; 1" x 3/8" pitch, 36.75" long	VD-MO-600-250
10.2	1	Mc Master-Carr 6495K417	Pulley; timing belt - 3.581 pitch - 30 tooth	VD-MO-600-210
10.3	1	Mc Master-Carr 6495K42	Pulley; timing belt - 4.775 pitch - 40 tooth	VD-MO-600-220
11	2	Belt Guard	*Varies*	VD-MO-650-120

Creation Date	5/3/2016	CZ Engineering, Inc.
Last Revised	05/03/2016	

Size	Screwdriver-Drive.idw	
B	Scale:	SHEET 1 OF 2



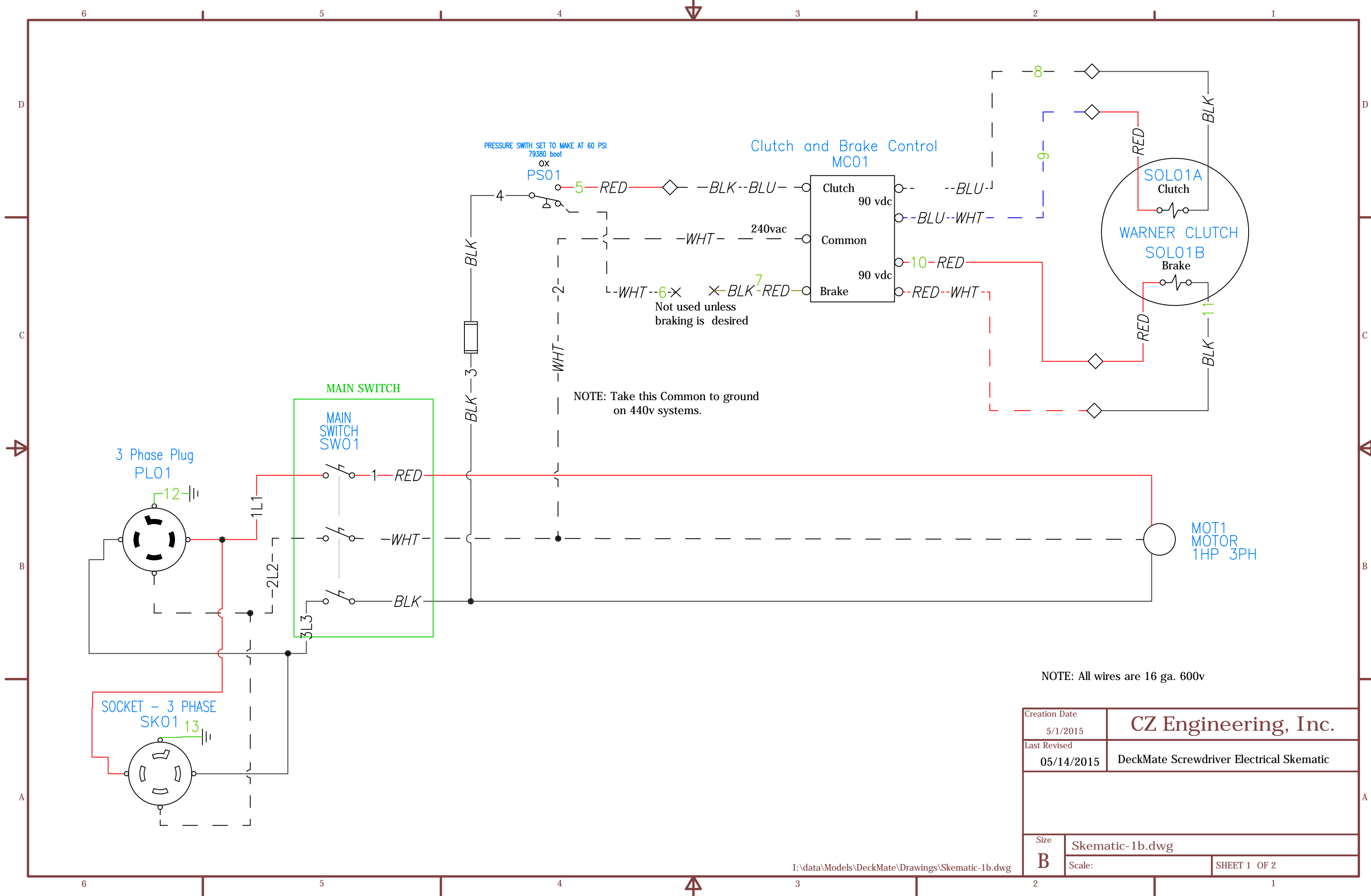
DeckMate Screwdriver
Drive Components



Creation Date	6/29/2015		CZ Engineering, Inc.
Last Revised	08/21/2015		
			Wiring Illustrations
Size	Screwdriver-Wiring-Illustrated.idw		
B	Scale:	SHEET 1 OF 2	



Wiring Illustrations

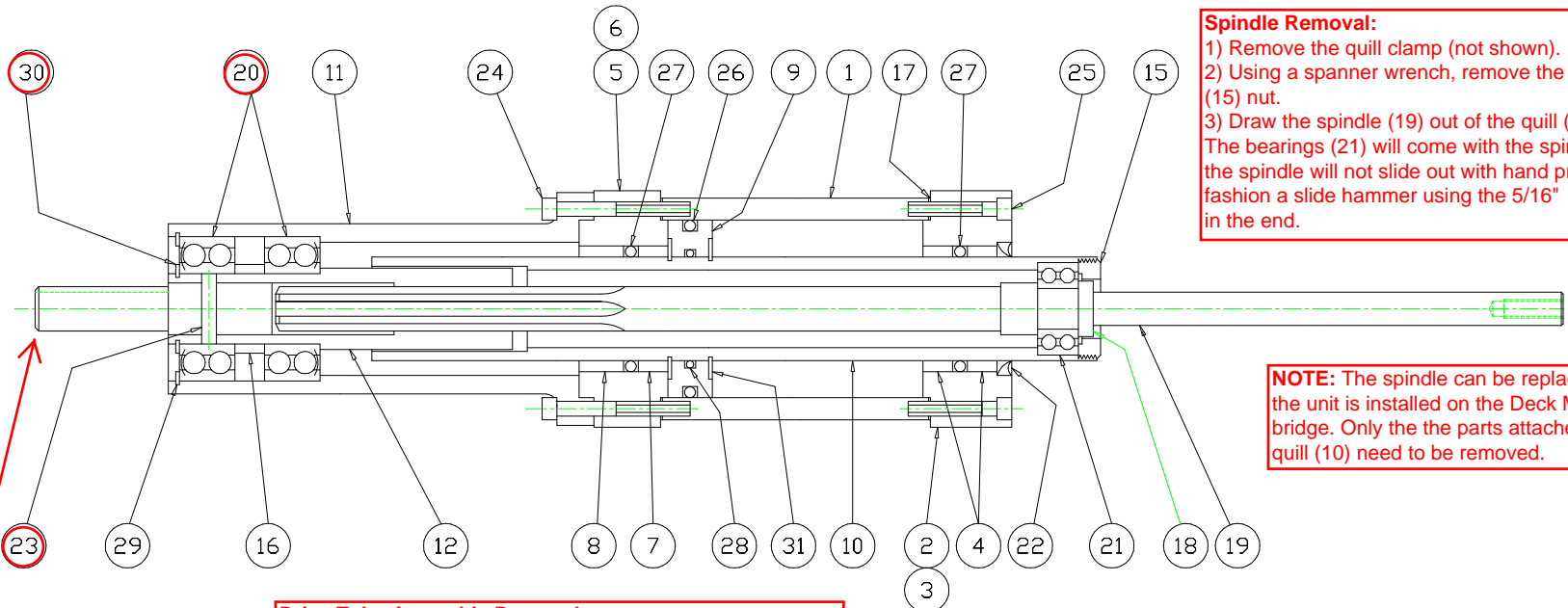


Creation Date	5/1/2015		CZ Engineering, Inc.
Last Revised	05/14/2015		
			DeckMate Screwdriver Electrical Schematic
Size	Skematic-1b.dwg		
B	Scale:	SHEET 1 OF 2	



DeckMate Screwdriver Electrical Schematic

ITEM NO.	NO. REQ'D.	DRAWING NO.	PART DESCRIPTION	ITEM NO.	NO. REQ'D.	DRAWING NO.	PART DESCRIPTION	ITEM NO.	NO. REQ'D.	DRAWING NO.	PART DESCRIPTION
1	1	175-B	CYLINDER	13				25	6		1/4-20 X 1-1/2 LG. S.H.C.S.
2	1	363-B	FRONT HEAD ASSEMBLY	14				26	1		O-RING #ANG227B-37
3	1	355-B	FRONT HEAD	15	1	364-A	SHEDDER	27	2		O-RING #ANG227B-30
4	2	361-A	FRONT HEAD BUSHING	16	1	1236-A	SPACER	28	1		O-RING #ANG230B-2
5	1	1207-A	REAR HEAD ASSEMBLY	17	2	362-A	GASKET	29	1		#5000-244 SNAP RING
6	1	1204-B	REAR HEAD	18	1	366-A	BEARING RETAINER NUT	30	1		#5100-118 SNAP RING
7	1	361-A	REAR HEAD BUSHING <FRONT>	19	1	23229-B	SPINDLE	31	2		#5108-177 SNAP RING
8	1	1206-A	REAR HEAD BUSHING <REAR>	20	2		#5206-F BALL BEARING				
9	1	2108-A-0	PISTON	21	1		#5203-F BALL BEARING				
10	1	1233-B	QUILL	22	1		#T40400 QUILL WIPER				
11	1	1234-B	REAR HOUSING	23	1		DRIV-LOK PIN 1/4 DIA. X 1" LG.				
12	1	1214-A-6	DRIVE TUBE ASSEMBLY	24	6		1/4-20 X 2-1/4 LG. S.H.C.S.				



Spindle Removal:

- 1) Remove the quill clamp (not shown).
- 2) Using a spanner wrench, remove the shedder (15) nut.
- 3) Draw the spindle (19) out of the quill (10). The bearings (21) will come with the spindle. If the spindle will not slide out with hand pressure, fashion a slide hammer using the 5/16" threads in the end.

NOTE: The spindle can be replaced while the unit is installed on the Deck Mate bridge. Only the the parts attached to the quill (10) need to be removed.

Pully Shaft - 300-P-S-1205A

Drive Tube Assembly Removal:

- 1) Remove #30, the Snap Ring..
- 2) Pull on the Pulley Shaft to remove the assembly.
- 3) If it's too tight to remove using 1 & 2, above, remove the six screws (#24) that hold the Rear Housing (#11) in place.
- 4) Tap the Drive Tube Assembly out toward the Pulley Shaft from the inside..

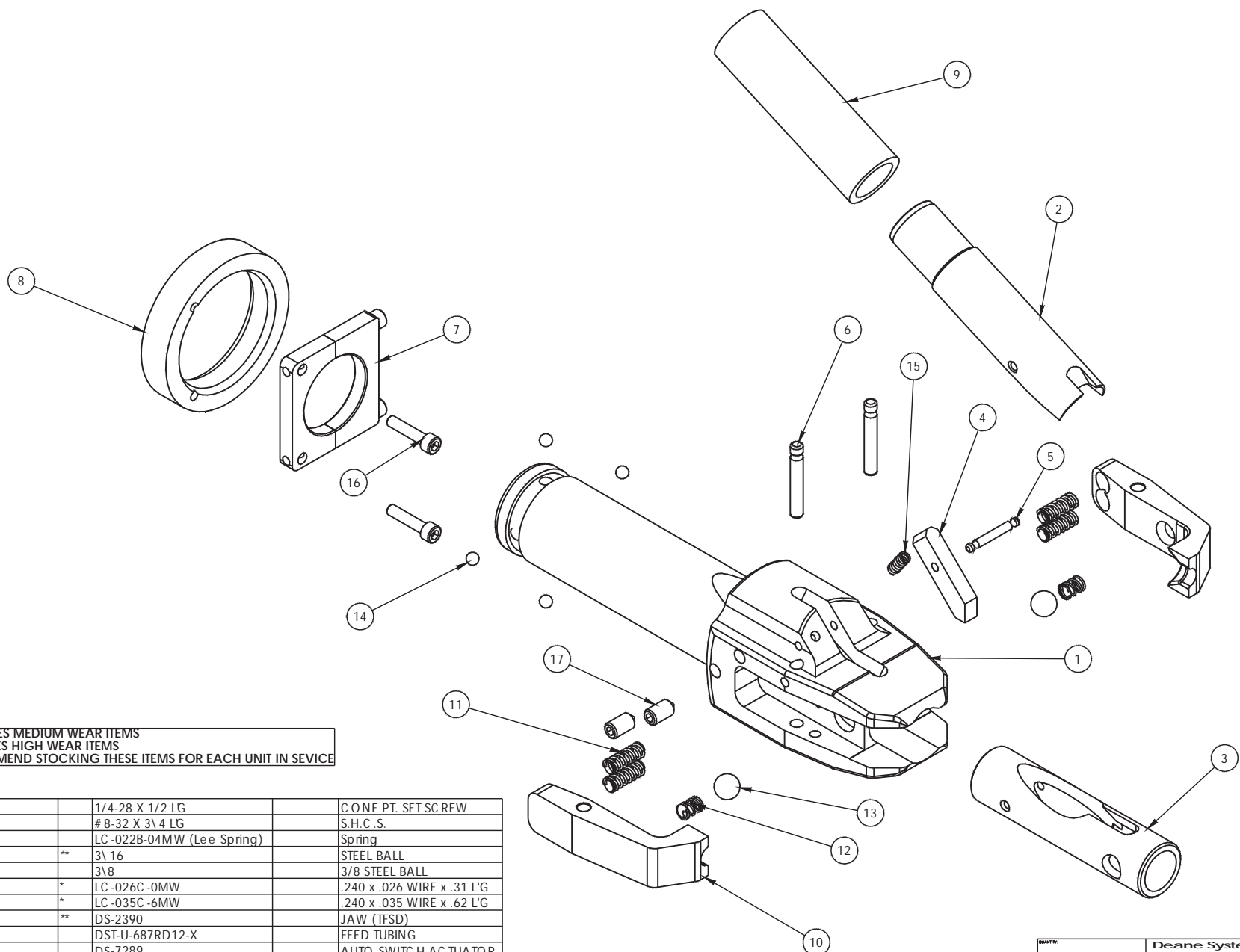
REVISIONS

HYPNEUMAT
MODEL
DQ-36
UNIT

HYPNEUMAT INC.
5900 WEST FRANKLIN DRIVE
FRANKLIN, WI. 53132-9178

DRAWN BY: T.K. DATE: 05-23-05

SCALE: NONE DWG. NO. 23230-B

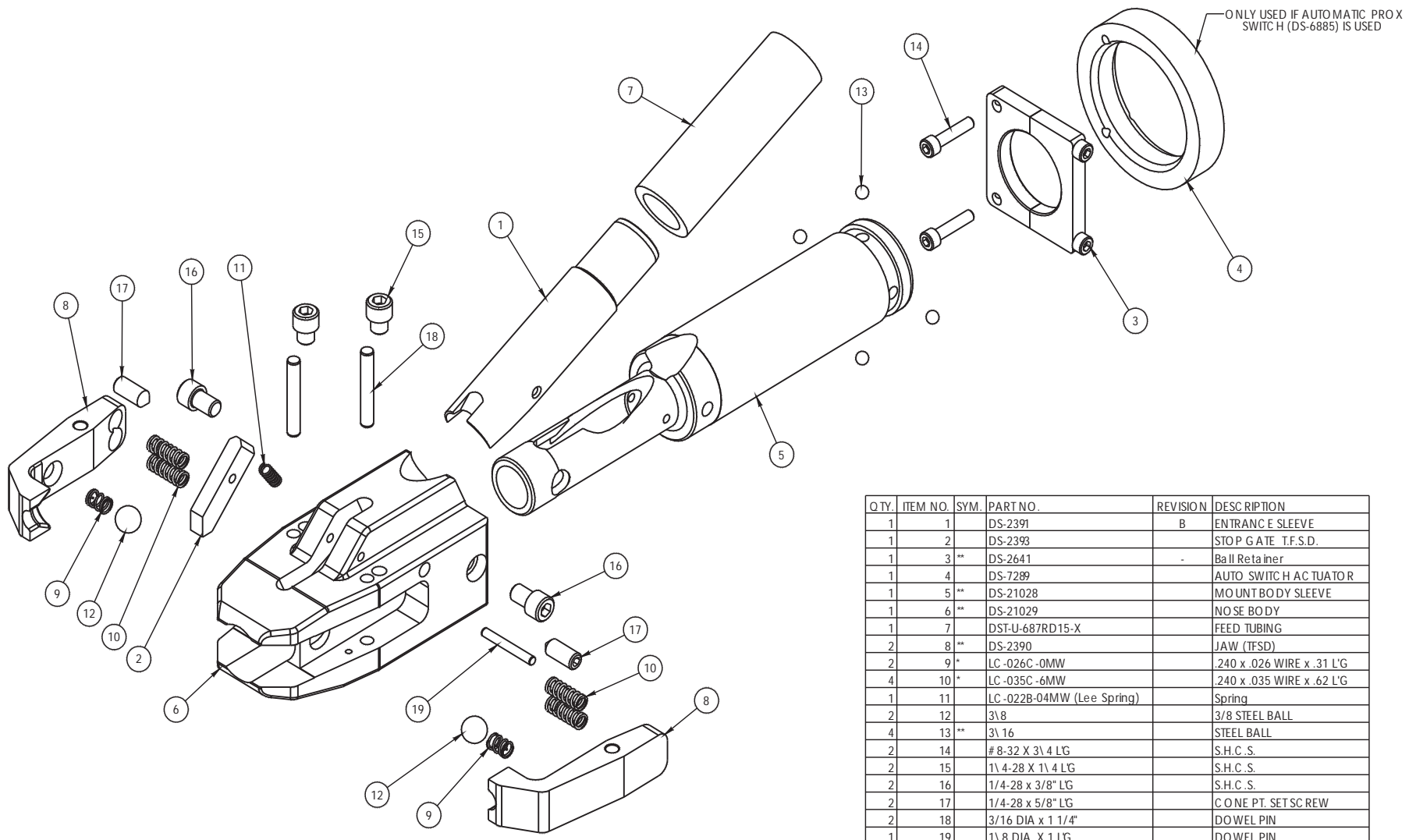


* DENOTES MEDIUM WEAR ITEMS
 ** DENOTES HIGH WEAR ITEMS
 WE RECOMMEND STOCKING THESE ITEMS FOR EACH UNIT IN SERVICE

QTY.	ITEM NO.	BUILD	PURCHASE	SYM.	PART NO.	REVISION	DESCRIPTION
2	17	-	\$		1/4-28 X 1 1/2 LG		CONE PT. SET SCREW
2	16	-	\$		# 8-32 X 3/4 LG		S.H.C. S.
1	15	-	\$		LC-022B-04MW (Lee Spring)		Spring
4	14	-	\$	**	3\ 16		STEEL BALL
2	13	-	-		3\ 8		3/8 STEEL BALL
2	12	-	-	*	LC-026C-0MW		.240 x .026 WIRE x .31 L'G
4	11	-	-	*	LC-035C-6MW		.240 x .035 WIRE x .62 L'G
2	10 B	-	-	**	DS-2390		JAW (TFSD)
1	9 B	-	-		DST-U-687RD12-X		FEED TUBING
1	8 B	-	-		DS-7289		AUTO SWITCH ACTUATOR
1	7 B	-	-	**	DS-2641	-	Ball Retainer
2	6 B	-	-	*	DS-2395	A	JAW RELEASE PIN
1	5 B	-	-	*	DS-2394	A	STOP GATE RELEASE PIN
1	4	-	-		DS-2393		STOP GATE T.F.S.D.
1	3 B	-	-	**	DS-2392		BODY SLEEVE
1	2 B	-	-		DS-2391	B	ENTRANCE SLEEVE
1	1 B	-	-		DS-2389	B	TRAILER SCREW NOSE

QUANTITY:		Deane Systems LLC
MATERIAL:	See Bom	P.O. BOX 960, 402 HURON GRAYLING, MI. 49738
PLANT/PROCESS:		UNUSUAL TOLERANCE UNLESS OTHERWISE SPECIFIED
CONTRACT:		UNLESS INDICATED OTHERWISE
DRAWN:		1 PLACE TO DIM 3 PLACE 1:41
FRANK:		2 PLACE TO DIM 4 PLACE 1:4000
DATE:	7/13/11	REWORK ALL DIMS AND SHARP CORNERS
SCALE:	1:1	SHARP CORNERS UNLESS INDICATED
REV:	1	DO NOT SCALE DRAWING
REV LEVEL:	1	
REV SCALE:	1:1	
DESCRIPTION:	TFSD	
	TFSD	
	Nose Assembly	
	DS-2369	

STOCK SIZE

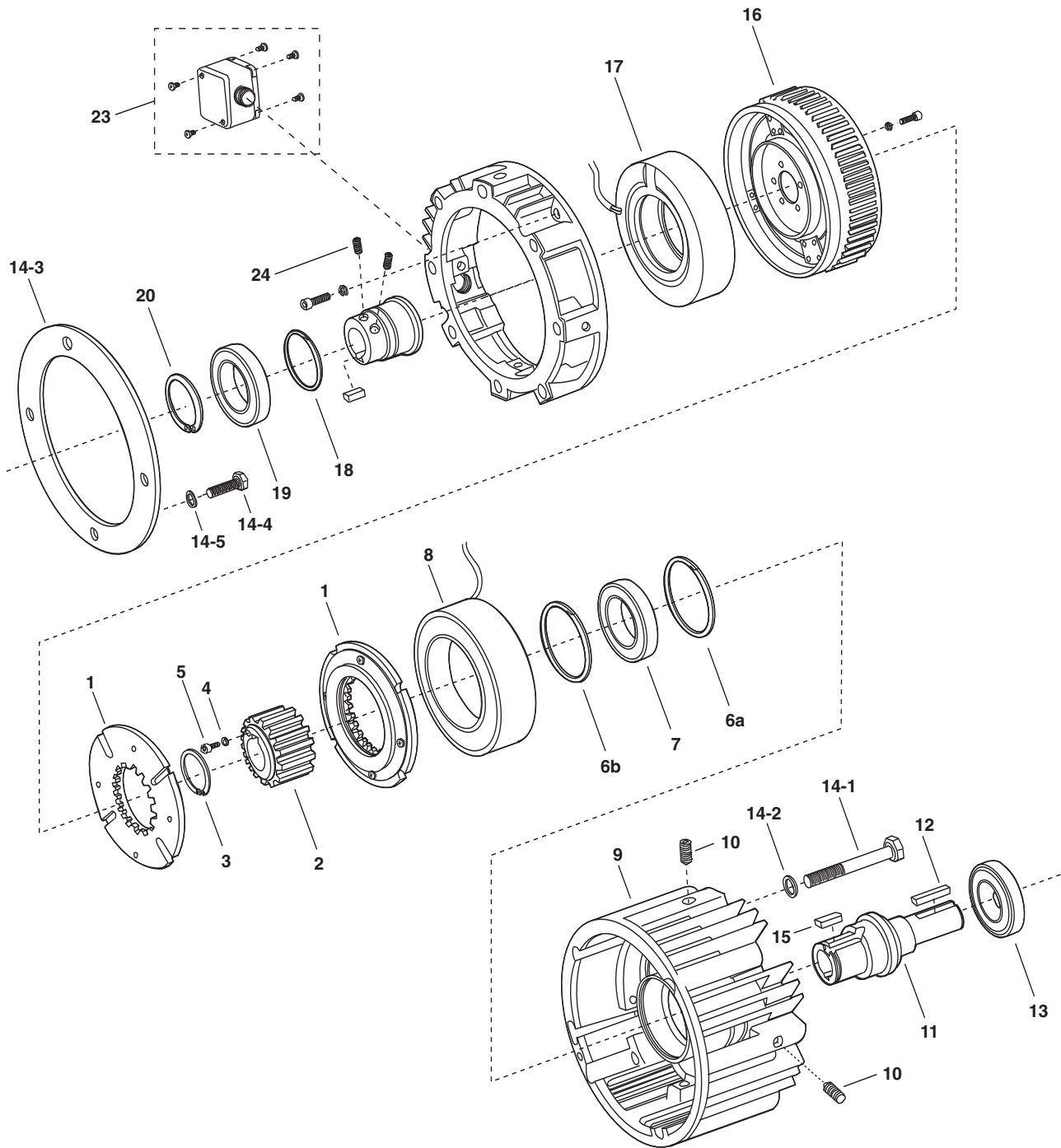


QTY.	ITEM NO.	SYM.	PART NO.	REVISION	DESCRIPTION
1	1		DS-2391	B	ENTRANCE SLEEVE
1	2		DS-2393		STOP GATE T.F.S.D.
1	3	**	DS-2641	-	Ball Retainer
1	4		DS-7289		AUTO SWITCH ACTUATOR
1	5	**	DS-21028		MOUNT BODY SLEEVE
1	6	**	DS-21029		NOSE BODY
1	7		DST-U-687RD15-X		FEED TUBING
2	8	**	DS-2390		JAW (TFSD)
2	9	*	LC-026C-0MW		.240 x .026 WIRE x .31 L'G
4	10	*	LC-035C-6MW		.240 x .035 WIRE x .62 L'G
1	11		LC-022B-04MW (Lee Spring)		Spring
2	12		3\8		3/8 STEEL BALL
4	13	**	3\16		STEEL BALL
2	14		# 8-32 X 3\4 LG		S.H.C.S.
2	15		1\4-28 X 1\4 LG		S.H.C.S.
2	16		1\4-28 X 3\8" LG		S.H.C.S.
2	17		1\4-28 X 5\8" LG		CONE PT. SET SCREW
2	18		3\16 DIA x 1 1\4"		DOWEL PIN
1	19		1\8 DIA. X 1 LG		DOWEL PIN

* DENOTES MEDIUM WEAR ITEMS
 ** DENOTES HIGH WEAR ITEMS
 WE RECOMMEND STOCKING THESE ITEMS FOR EACH UNIT IN SERVICE

QUANTITY: See Bom		Deane Systems LLC P.O. BOX 960, 402 HURON GRAYLING, MI. 49738	
MATERIAL: See Bom		UNLESS OTHERWISE SPECIFIED: FINISH: 1 PLACE 16-24 1 PLACE 1-11 SURFACE: 2 PLACE 16-24 3 PLACE 1-11 1 PLACE 16-24 4 PLACE 1-11 FINISHES: 1 PLACE 1-11 2 PLACE 1-11	
PROCESS:		REMOVE ALL BURRS AND SHARP CORNERS SHARP ANGLE PROJECTION DO NOT SCALE DIMENSIONS	
FINISH:		TFSD	
DATE: JLG 2/28/13	SCALE: 1:1	DESCRIPTION: NOSE ASSEMBLY Trailer Floor Screw	DRAWING NUMBER: DS-21030

UM-1020 Clutch/Brake Combination



UM-1020 Clutch/Brake Combination

Component Parts

Item	Description	UM-50		UM-100		UM-180		UM-210		UM-215	
		Part No.	Qty.	Part No.	Qty.	Part No.	Qty.	Part No.	Qty.	Part No.	Qty.
1	Armature Assembly	5370-111-011	2	5370-111-013	2	5370-111-013	2	5371-111-005	2	5371-111-005	2
2	Armature Hub	540-1638	1	540-1642	1	540-1642	1	540-0741	1	540-0741	1
3	Retaining Ring	748-0445	1	748-0676	1	748-0676	1				
4	Lockwasher							950-0372	6	950-0372	6
5	Capscrew							797-0081	6	797-0081	6
6a	Retaining Ring	748-0113	1	748-0101	1	748-0101	1	748-0112	1	748-0112	1
6b	Retaining Ring	748-0113	1								
7	Ball Bearing	166-0149	1	166-0101	1	166-0101	1	166-0142	1	166-0142	1
8	Magnet		1		1		1		1		1
	6 volt	5370-631-008		5370-631-002		5370-631-002		5371-631-002		5371-631-002	
	24 volt	5370-631-010		5370-631-005		5370-631-005		5371-631-005		5371-631-005	
	90 volt	5370-631-007		5370-631-003		5370-631-003		5371-631-003		5371-631-003	
9	Housing	535-0165	1	535-0162	1	535-0162	1	535-0163	1	535-0163	1
10	Setscrew	797-0471	4	797-0471	4	797-0471	4	797-0471	4	797-0471	4
11	Shaft	798-0046	1	798-0128	1	798-0085	1	798-0051	1	798-0254	1
12	Key	590-0029	1	590-0029	1	590-0029	1	590-0019	1	590-0124	1
13	Ball Bearing	166-0155	1	166-0143	1	166-0143	1	166-0144	1	166-0144	1
14	Mounting Accessory	5370-101-040	1	5370-101-040	1	5370-101-040	1	5371-101-020	1	5371-101-020	1
	14-1 Capscrew	797-1378	4	797-1378	4	797-1378	4	797-1440	4	797-1440	4
	14-2 Washer	950-0354	4	950-0354	4	950-0354	4	950-0111	4	950-0111	4
	14-3 Adapter			807-0218	1			104-0321	1	104-0321	1
	14-4 Capscrew							797-1442	4	797-1442	4
	14-5 Washer							950-0101	4	950-0101	4
15	Key	590-0043	1	590-0084	1	590-0084	1				
16	Rotor Assembly (with fan and hub)	5370-751-019	1	5370-751-022	1	5370-751-017	1	5371-751-012	1	5371-751-031	1
17	Field (with housing)		1		1		1		1		1
	6 volt	5370-451-062		5370-451-057		5370-451-057		5371-451-027		5371-451-027	
	24 volt	5370-451-064		5370-451-059		5370-451-059		5371-451-029		5371-451-029	
	90 volt	5370-451-063		5370-451-058		5370-451-058		5371-451-028		5371-451-028	
18	Retaining Ring	748-0101	1	748-0101	1	748-0101	1	748-0558	1	748-0558	1
19	Bearing	166-0150	1	166-0101	1	166-0101	1	166-0168	1	166-0168	1
20	Retaining Ring	748-0018	1	748-0001	1	748-0001	1	748-0067	1	748-0067	1
23	Conduit Box (Optional)	5370-101-042	1	5370-101-042	1	5370-101-042	1	5370-101-042	1	5370-101-042	1
24	Set Screw	797-1098	2	797-0069	2	797-0069	2	797-1098	2	797-1098	2
	Key	5370-101-072	1	5370-101-072	1	5370-101-072	1	5371-101-043	1	5371-101-044	1

Refer to Service Manual P-213.

These units meet the standards of UL 508 and are listed under guide card #NMTR 2, file #59164. These units are CSA certified under file #LR11543.

Note: As of June, 2000 all rotors are manufactured as a single piece design. The rotor assembly part number remains the same and now includes the hub and set screws.