

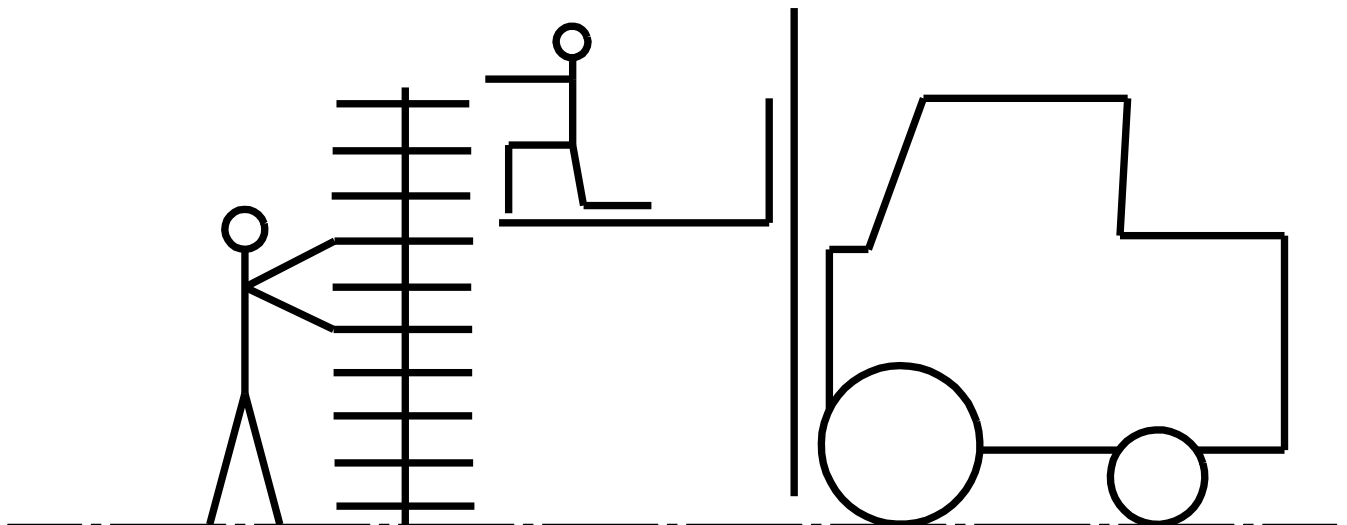
Assembly BOM Link: ASM851A02.xls (contains prints to constituent part prints)				
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02	DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019				
B:		DEBUR AND BREAK SHARP EDGES UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	PROCESSES	WEIGHT: 595.18Lbs
C:			Assemble	Soil Regeneration Unlimited
D:			Grease	
E:			DO NOT SCALE DRAWING	
NAME Daniel R. M.	SIGNATURE	A4	SCALE:1:12	SHEET 1 OF 34

ITEM NO.	PartNo	QTY.	Weight	Description	Material	Length
1	2011012C0	9	2.49	ROLLER HARTING RING DRIVER	80-55-06	
2	2011018C1	18	2.37	Harting Ring, Cast	80-55-06	
3	2011057C0	27	4.883	CCW Tine, Tabs Base, hard-faced	2011013C2	
4	2011074C1	13	20.96	Short Spacer, Cast	65-45-12	
5	2011085C0	6	3.50	End Cap	80-55-06	
6	2011185P0	2	1.60	1-3/4"-12 Grade 8 Hex Nut	Grade 8 Steel	
7	2012080P0	6	0.20	2" x 3.375" x .125" Belleville Washer, KEYBLVL# K3375-S-125	KEYBLVL# K3375-S-125	0.125
8	2012180C1	2	3.49	End Cap, drilled	2011085C0	
9	2012182C1	2	0.27	Roller nut lock flange	SH-14GA	2
10	2012184P1	2	0.008	1/4" x 1" Zinc-Plated Steel Slotted Spring Pin, MCM# 90692A742	MCM# 90692A742	
11	2012228C1	1	65.33	Arbor bolt, 9star	BAR HEX-1.75 4140 ANLD	87.25
12	ASM986A03	3	9.20	Roller Bearing Housing ASM, Greasable		

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A:				
B:		DEBUR AND BREAK SHARP EDGES	PROCESSES	
C:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°		WEIGHT:
D:				Soil Regeneration Unlimited
E:		DO NOT SCALE DRAWING		
NAME Daniel R. M.	SIGNATURE	A4	SCALE:1:12	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
		SHEET 2 OF 34		

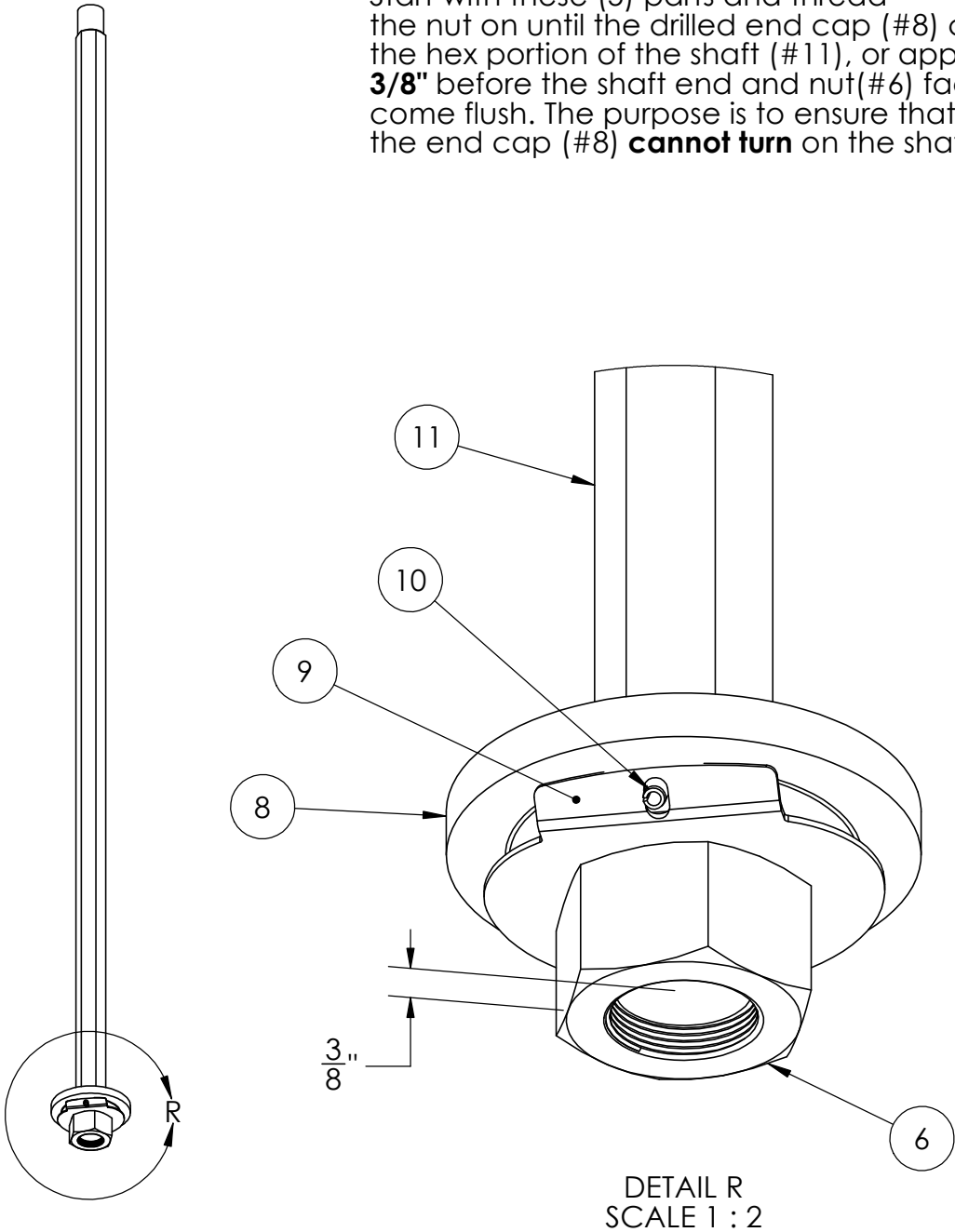
GENERAL INSTRUCTIONS

A forklift may be used to facilitate assembly and moving of the 9star roller assemblies. The roller assembly will rest on the nut of its one end during the assembly process. The surface underneath the nut should be as **level, flat, and hard** as possible. This will make steadying the shaft much **easier** and safer. A **pallet** held up by the **forklift** may be used as a platform for **parts**, and a person to add these parts to the assembly. Once the top nut of the roller assembly is **tightened**, the forklift and a **chain** may be used to lower the assembly onto the floor. **The roller assembly should be held steady by at least one person at all times**



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B:					
C:		DEBUR AND BREAK SHARP EDGES UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°		PROCESSES	
D:					
E:					
		DO NOT SCALE DRAWING		WEIGHT:	
		A4		SCALE:1:12	
NAME Daniel R. M.		SIGNATURE		SHEET 3 OF 34	
				Soil Regeneration Unlimited PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.	

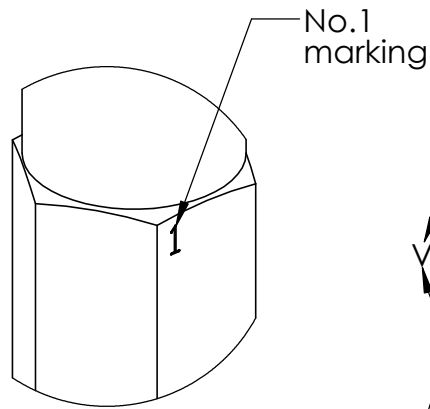
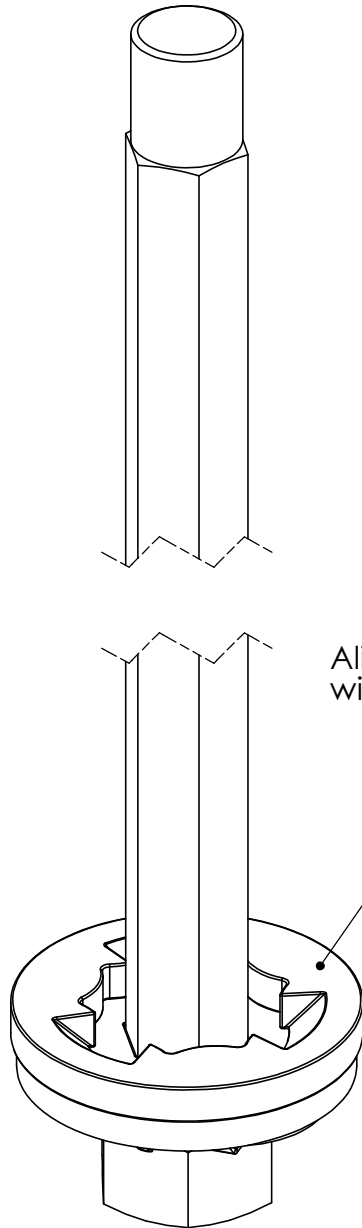
Start with these (5) parts and thread the nut on until the drilled end cap (#8) catches the hex portion of the shaft (#11), or approx. **3/8"** before the shaft end and nut(#6) face come flush. The purpose is to ensure that the end cap (#8) **cannot turn** on the shaft.



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A: Note on step 23, spline 2 to spline 1, 09/06/2019			PROCESSES	
B:		DEBUR AND BREAK SHARP EDGES	Assemble	WEIGHT: 595.18Lbs
C:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	Grease	Soil Regeneration Unlimited
D:		DO NOT SCALE DRAWING		
E:		A4	SCALE:1:12	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
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Step2

Add (1) harthing ring(#2)



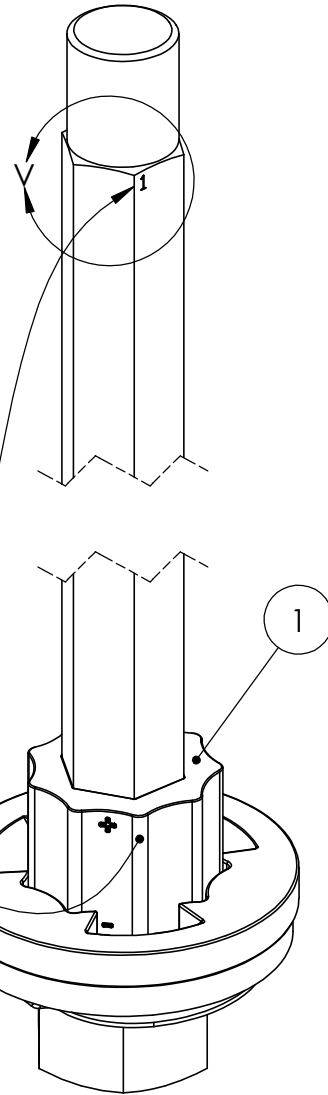
DETAIL V
SCALE 2 : 3

Align driving hub ridge
with spline No.1 of hex shaft

Step3

Align and insert (1) driving hub(#1)
into its harthing ring. Align a flute of the
driving hub OD with the spline marked
with a number "1".

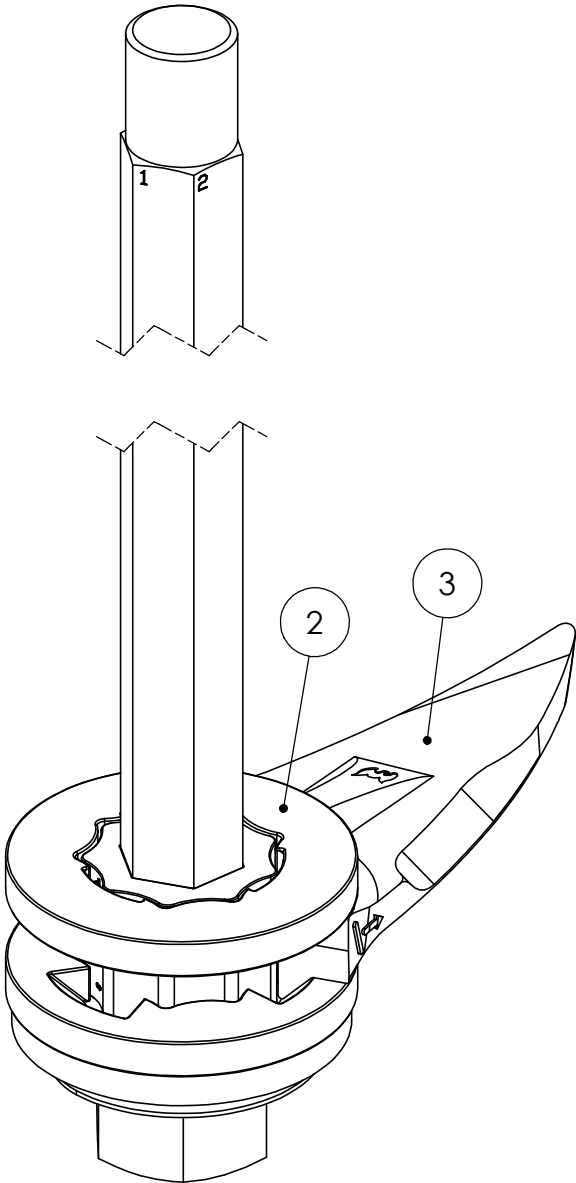
Harthing ring may be in any position.



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Drawing Name: ASM851A02	REVISION 1 DATE 9/6/2019	PART NO. ASM851A02	DESCRIPTION: 9star Roller RH, CCW
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B:	DEBUR AND BREAK SHARP EDGES	Assemble	Soil Regeneration Unlimited
C:	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	Grease	
D:	DO NOT SCALE DRAWING		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
E:	A4 SCALE:1:3		
NAME Daniel R. M.	SIGNATURE	SHEET 5 OF 34	

Step4

Add (1) ccw tine (#3), and (1) harthing ring(#2)
insert in any of the three positions available



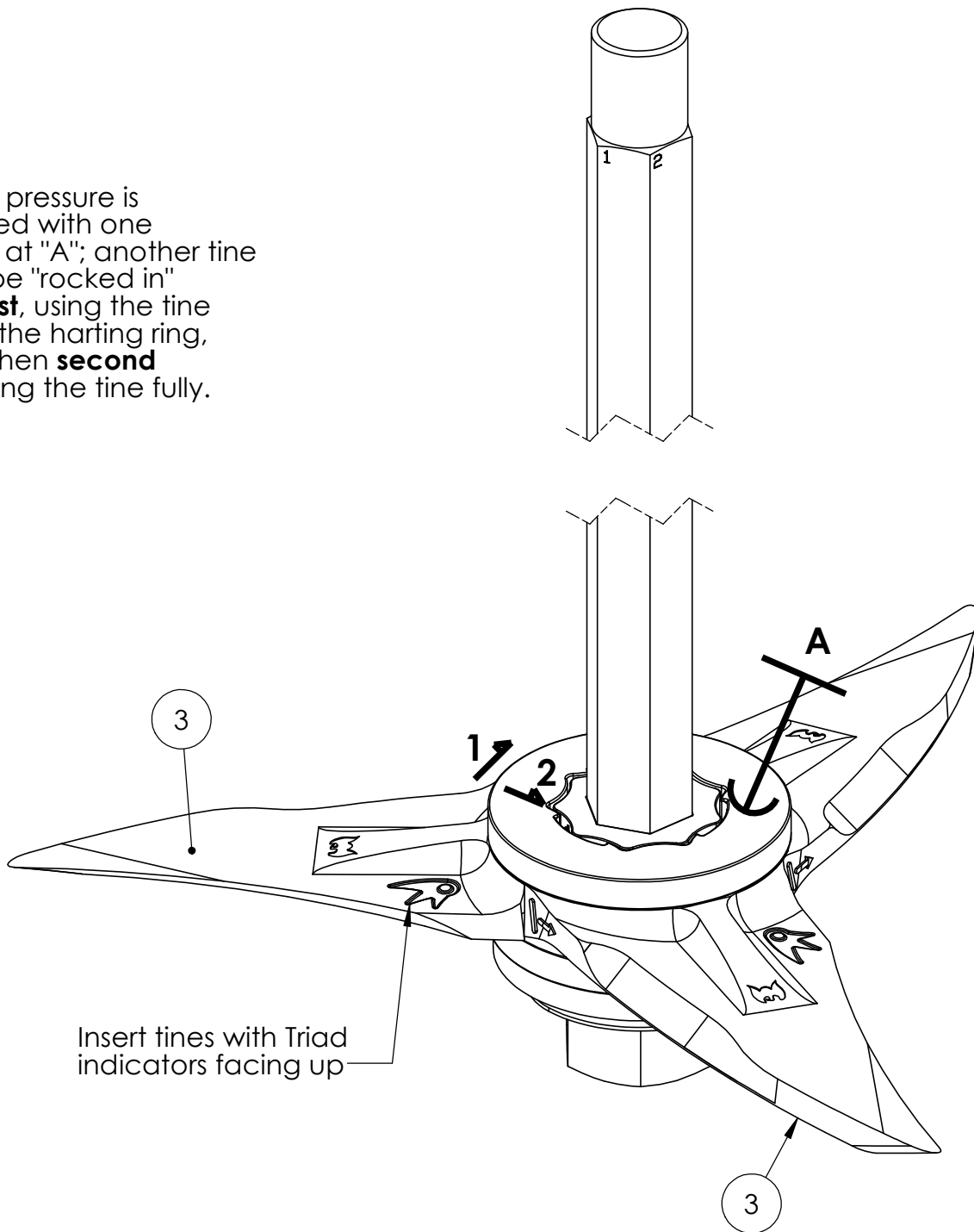
Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019		DEBUR AND BREAK SHARP EDGES UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2° DO NOT SCALE DRAWING A4 SCALE:1:3	PROCESSES		WEIGHT: 595.18Lbs
B:			Assemble		Soil Regeneration Unlimited
C:			Grease		
D:					
E:					PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
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Step5

Add (2) ccw tines (#3)

While pressure is applied with one hand at "A"; another tine can be "rocked in" by, **first**, using the tine to lift the harthing ring, and then **second** inserting the tine fully.

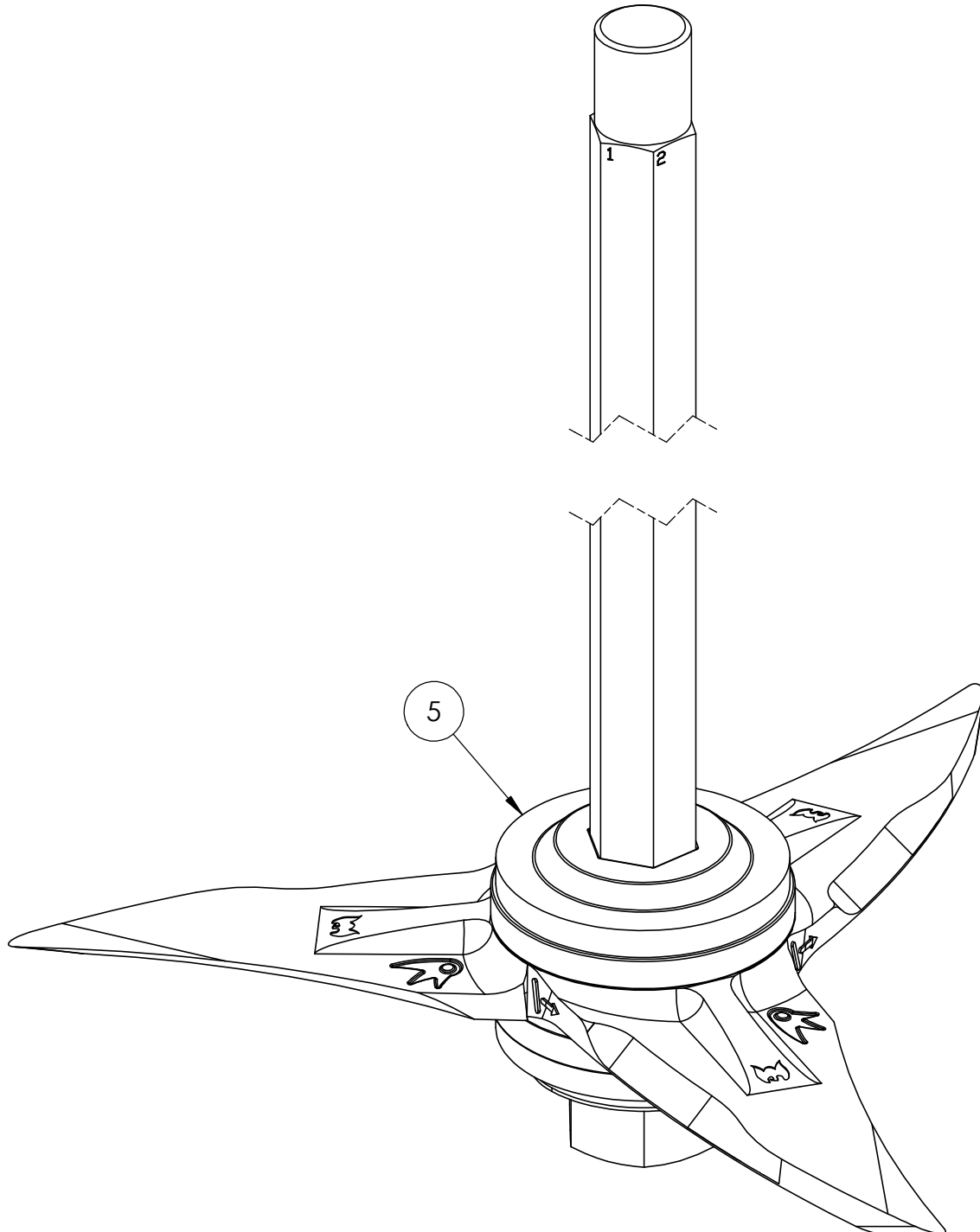


Assembly BOM Link: (contains prints to constituent part prints)		ASM851A02.xls	
Drawing Name: ASM851A02		REVISION 1	
		DATE 9/6/2019	
A: Note on step 23, spline 2 to spline 1, 09/06/2019			
B:		DEBUR AND BREAK SHARP EDGES	
C:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	
D:		DO NOT SCALE DRAWING	
E:		A4 SCALE:1:3	
NAME Daniel R. M.	SIGNATURE	SHEET 7 OF 34	

PART NO. ASM851A02	DESCRIPTION: 9star Roller RH, CCW
PROCESSES Assemble Grease	WEIGHT: 595.18Lbs
Soil Regeneration Unlimited	
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Step6

Add (1) end cap (#5)

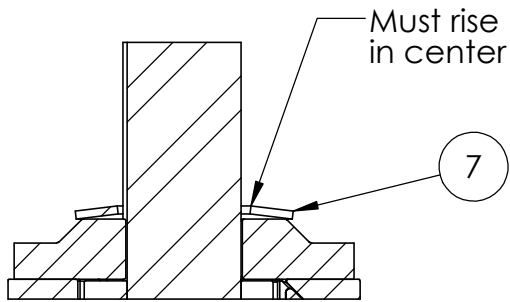


Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

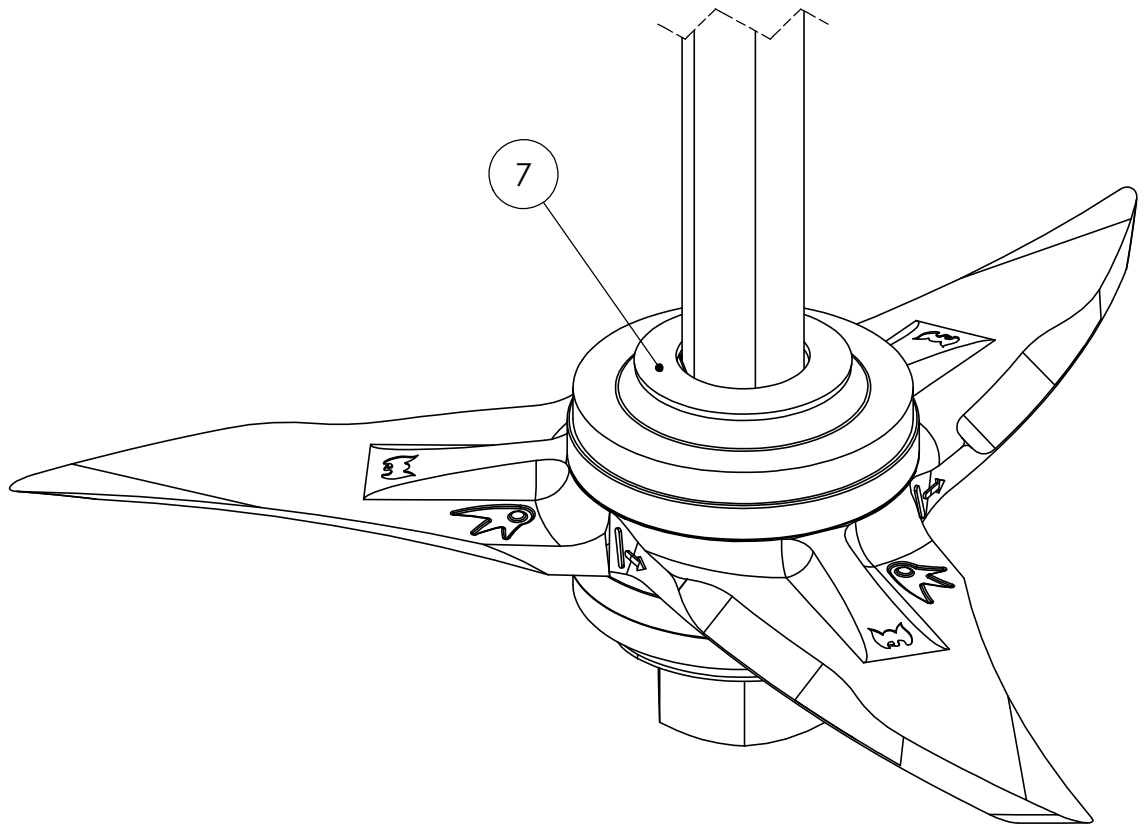
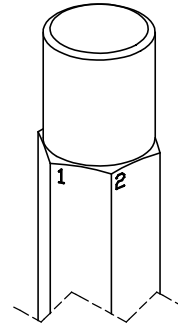
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019		DEBUR AND BREAK SHARP EDGES		WEIGHT: 595.18Lbs	
B:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°		Soil Regeneration Unlimited	
C:		DO NOT SCALE DRAWING		PROPRIETARY AND CONFIDENTIAL	
D:		A4		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.	
E:		SCALE:1:3			
NAME Daniel R. M.	SIGNATURE	SHEET 8 OF 34			

Step7

Add (1) belleville washer (#7)



SECTION Y-Y

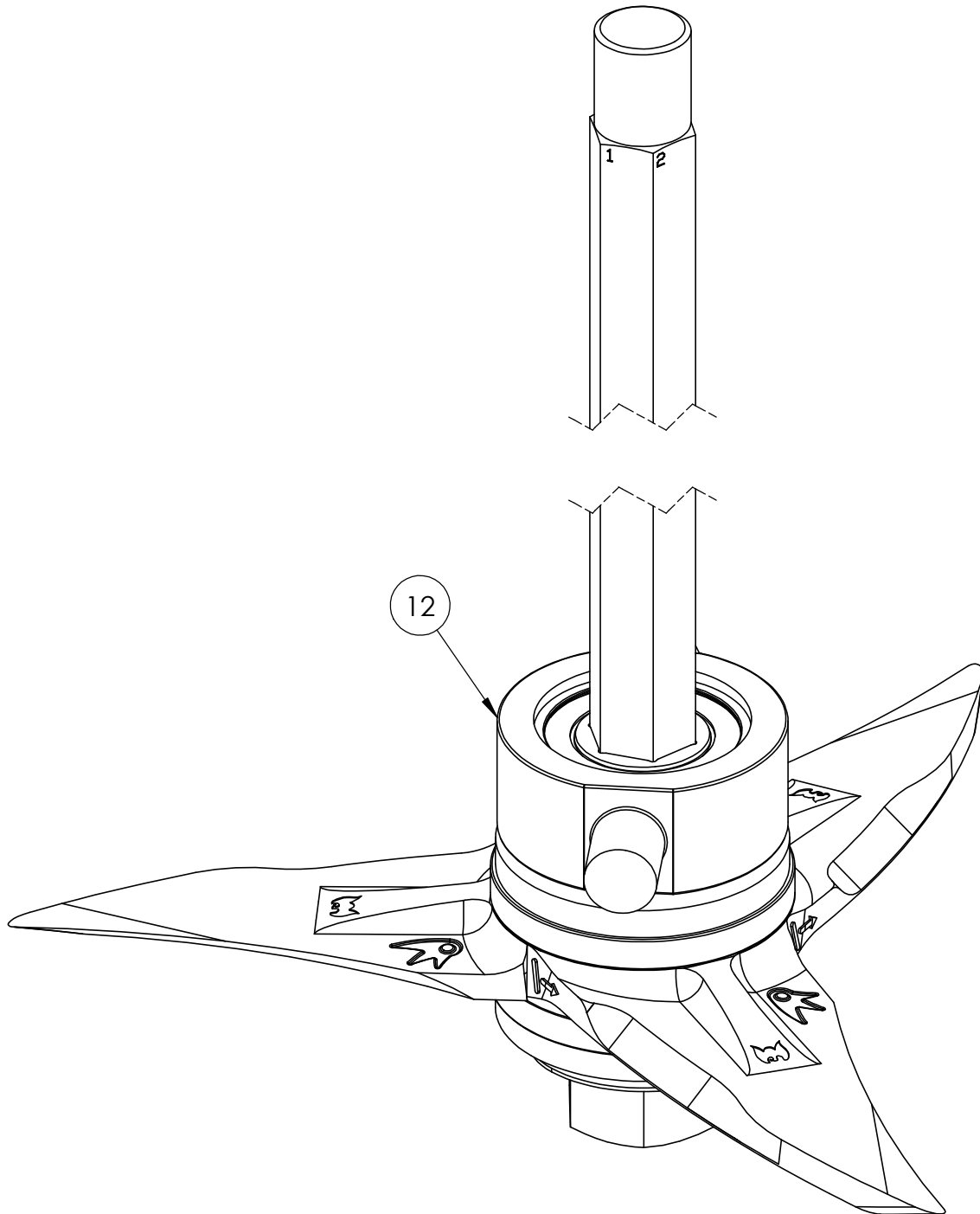


Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	Assembly BOM Link: (contains prints to constituent part prints) ASM851A02.xls	
A: Note on step 23, spline 2 to spline 1, 09/06/2019		DEBUR AND BREAK SHARP EDGES UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2° DO NOT SCALE DRAWING A4 SCALE:1:3	PART NO. ASM851A02	
B:			PROCESSES Assemble Grease	
C:				
D:				
E:				
NAME Daniel R. M.	SIGNATURE	SHEET 9 OF 34		

DESCRIPTION: 9star Roller RH, CCW	
WEIGHT: 595.18Lbs	
Soil Regeneration Unlimited	
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.	

Step8

Add (1) bearing assembly (#12)

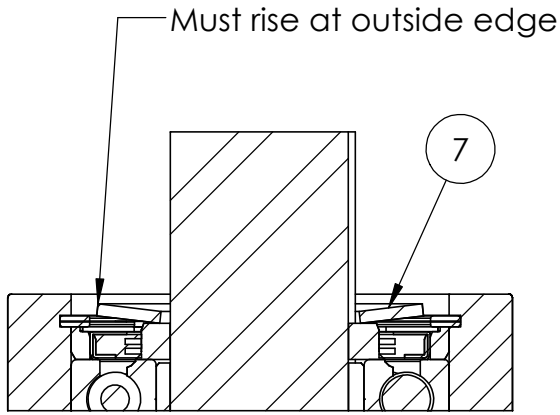


Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

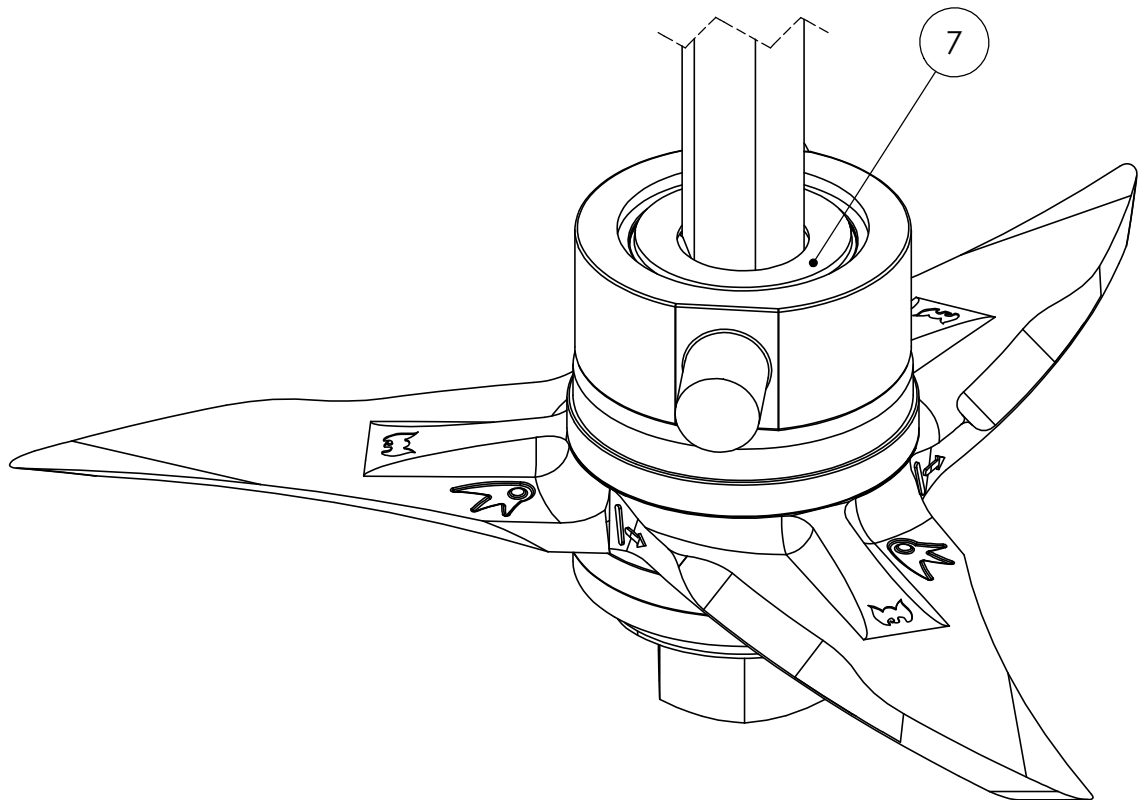
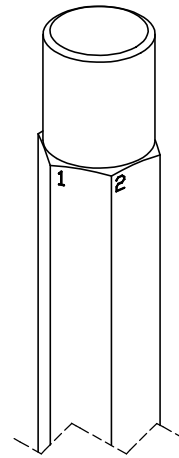
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019			PROCESSES		WEIGHT: 595.18Lbs
B:			Assemble		
C:			Grease		Soil Regeneration Unlimited
D:					
E:					PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
NAME Daniel R. M.		SIGNATURE	DO NOT SCALE DRAWING		
A4		SCALE:1:3	SHEET 10 OF 34		

Step9

Add (1) belleville washer (#7)



SECTION AA-AA
SCALE 1 : 2

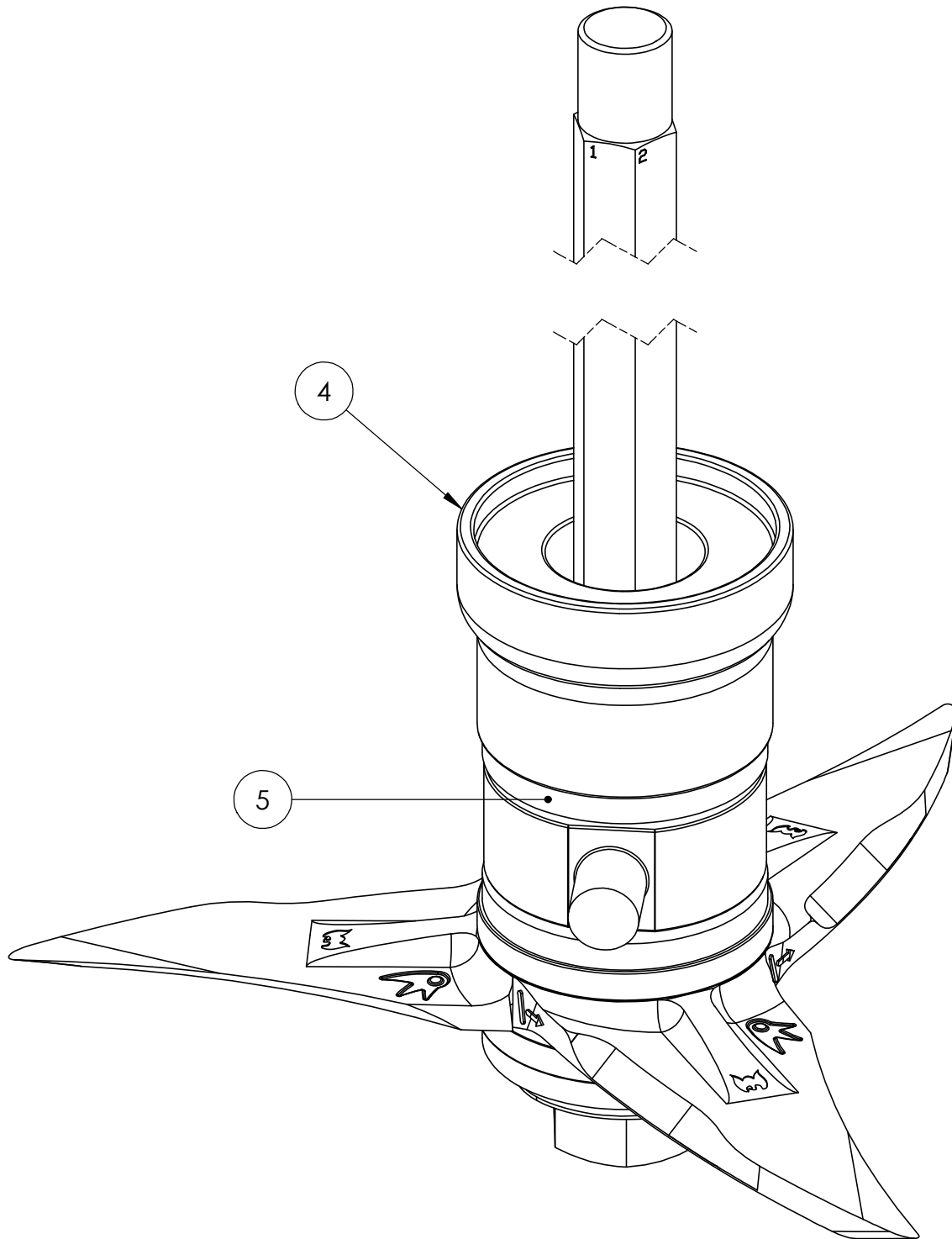


Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
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DO NOT SCALE DRAWING					
A4			SCALE:1:3		
NAME Daniel R. M.	SIGNATURE		SHEET 11 OF 34		

Step10

Add (1) end cap(#5), and
(1) short spacer (#4)

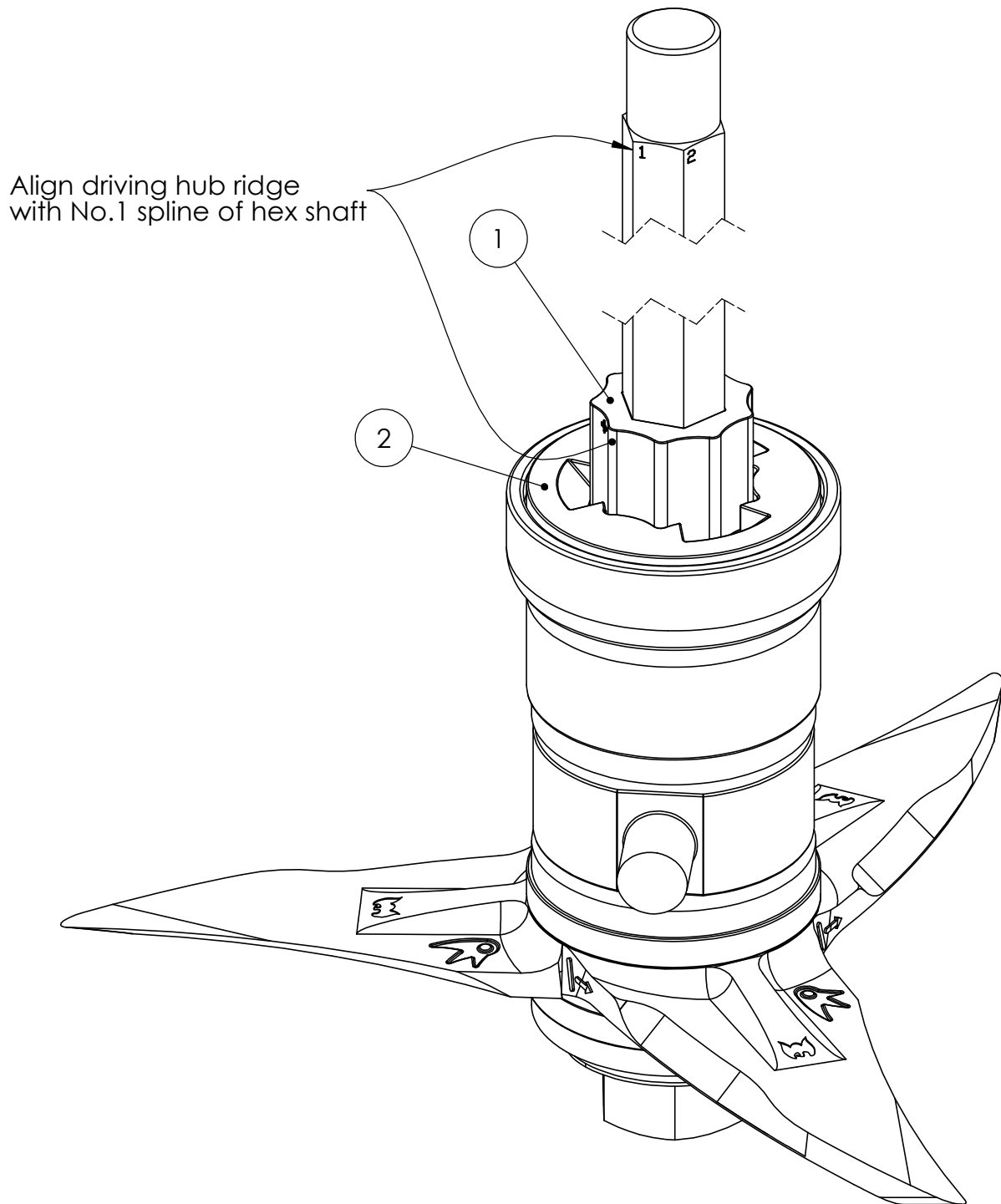


Assembly BOM Link: [ASM851A02.xls](#)
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Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
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C:			Grease		Soil Regeneration Unlimited
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DO NOT SCALE DRAWING					
A4			SCALE:1:3		
NAME Daniel R. M.	SIGNATURE		SHEET 12 OF 34		

Step 11

Add (1) Harting ring (#2)
Align and add (1) Driving hub (#1)

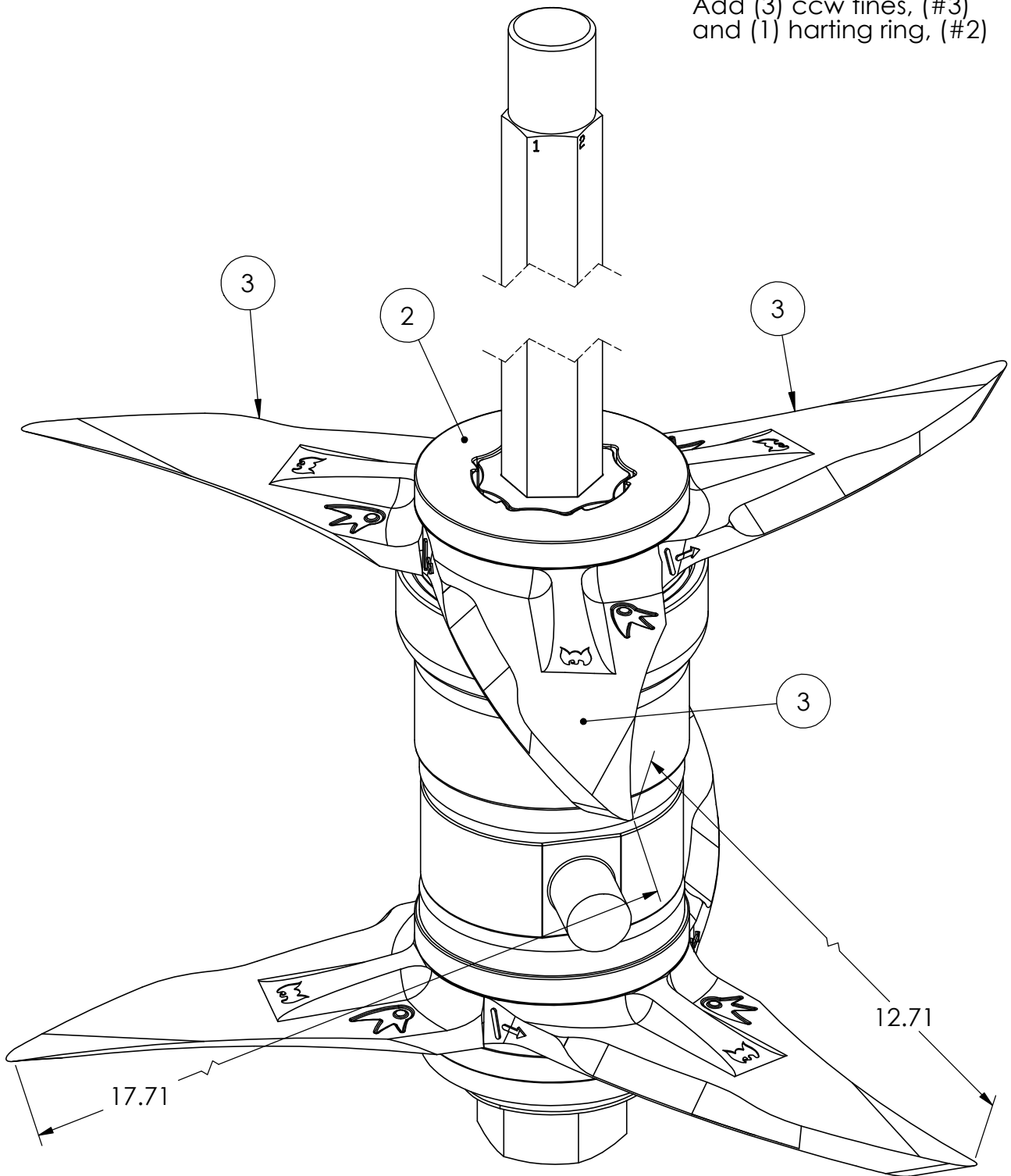


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Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019		PART NO. ASM851A02	DESCRIPTION: 9star Roller RH, CCW
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NAME Daniel R. M.	SIGNATURE		A4 SCALE:1:3		
			SHEET 13 OF 34		

Step12

Add (3) ccw tines, (#3)
and (1) harthing ring, (#2)



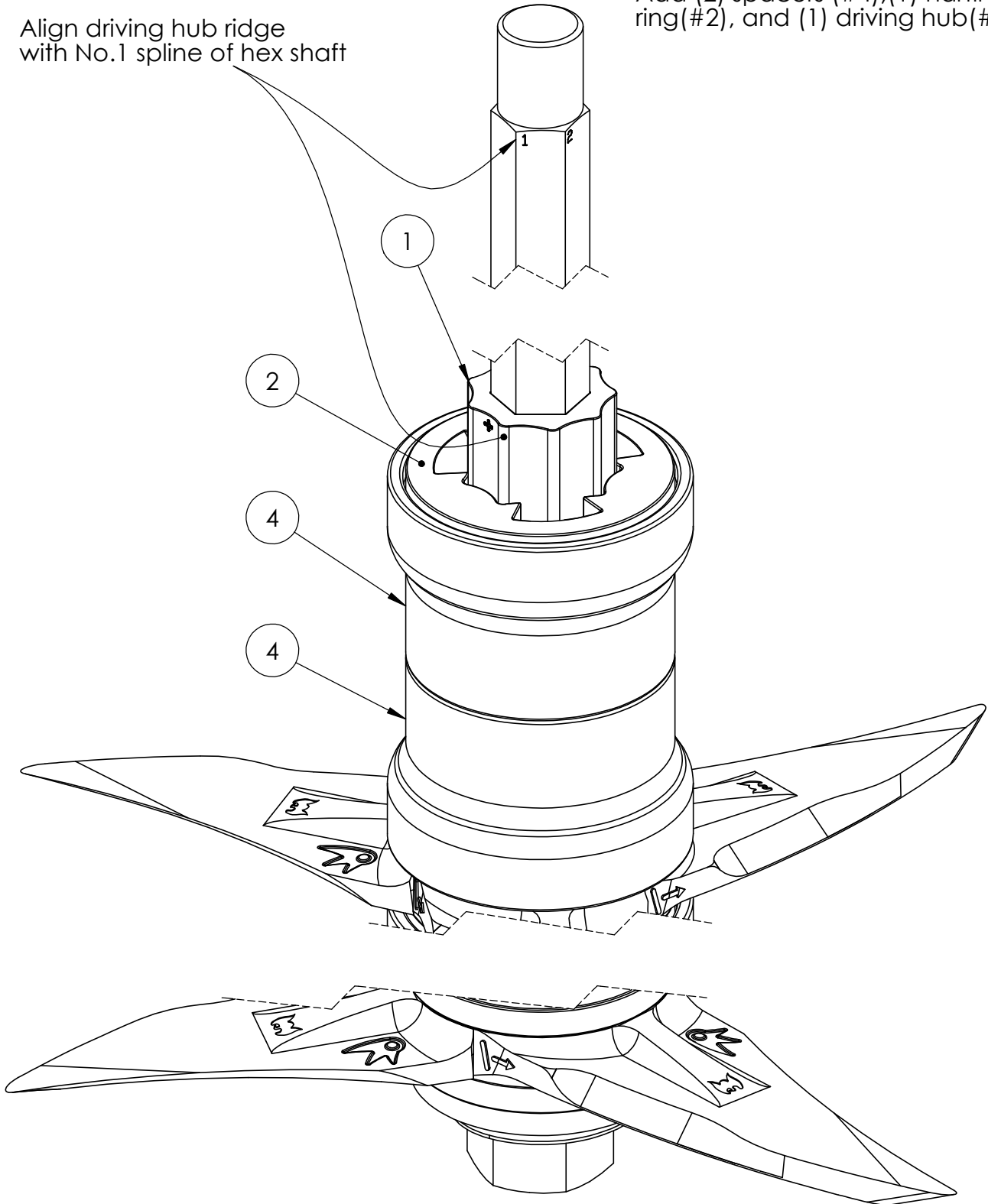
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C:			Grease		
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E:					
NAME Daniel R. M.			SIGNATURE		
SHEET 14 OF 34			A4 SCALE:1:3		

Step13

Align driving hub ridge
with No.1 spline of hex shaft

Add (2) spacers (#4), (1) harthing
ring(#2), and (1) driving hub(#1)

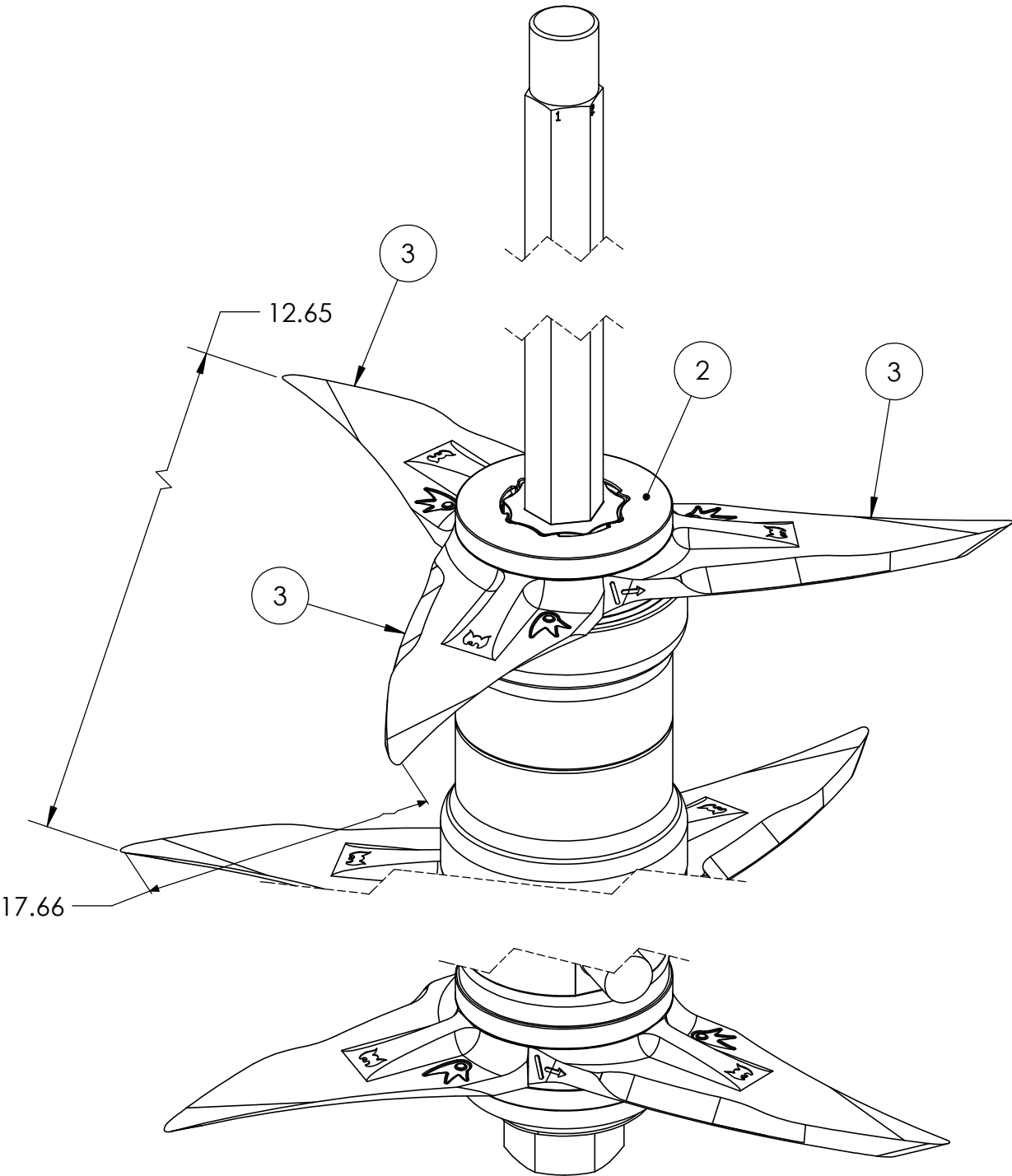


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B:			Assemble		Soil Regeneration Unlimited
C:			Grease		
D:					
E:					PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
NAME Daniel R. M.	SIGNATURE	A4	SCALE: 1:3	SHEET 15 OF 34	

Step14

Add (3) ccw tines(#3)
and (1) harting (#2)



Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name:
ASM851A02

REVISION 1
DATE 9/6/2019

PART NO.

ASM851A02

DESCRIPTION:
9star Roller RH, CCW

A: Note on step 23, spline 2 to spline 1,
09/06/2019

B:

DEBUR AND BREAK SHARP
EDGES

PROCESSES

WEIGHT: 595.18Lbs

C:

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
SURFACE FINISH:
TOLERANCES:
LINEAR: 1/16"
ANGULAR: 2°

Assemble

Soil Regeneration
Unlimited

D:

Grease

E:

DO NOT
SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL

NAME
Daniel R. M.

SIGNATURE

A4 SCALE:1:4

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SHEET 16 OF 34

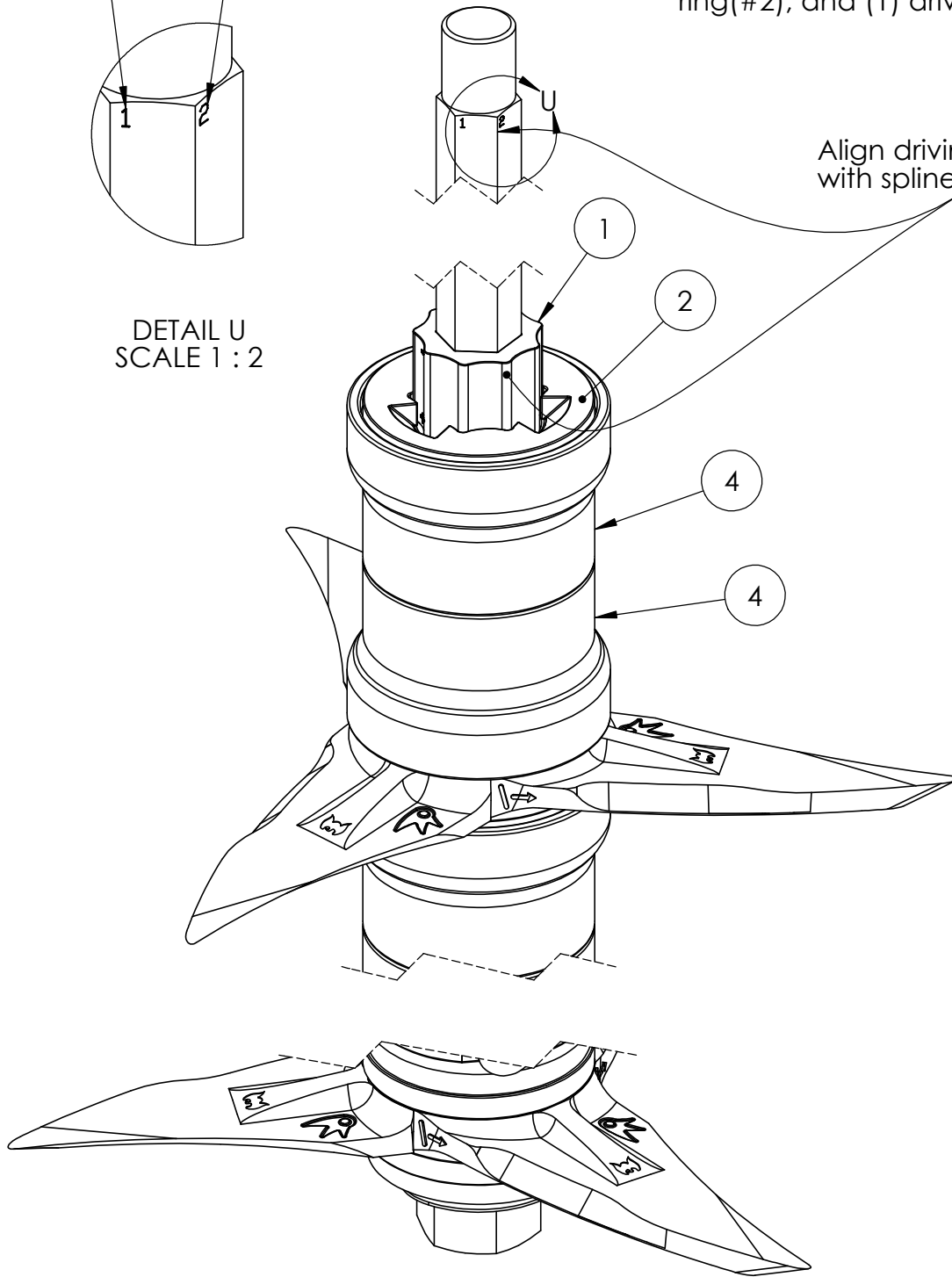
Step15

No.1 marking
No.2 marking

Add (2) spacers (#4),(1) harting ring(#2), and (1) driving hub(#1)

Align driving hub ridge with spline No.2 of hex shaft

DETAIL U
SCALE 1 : 2

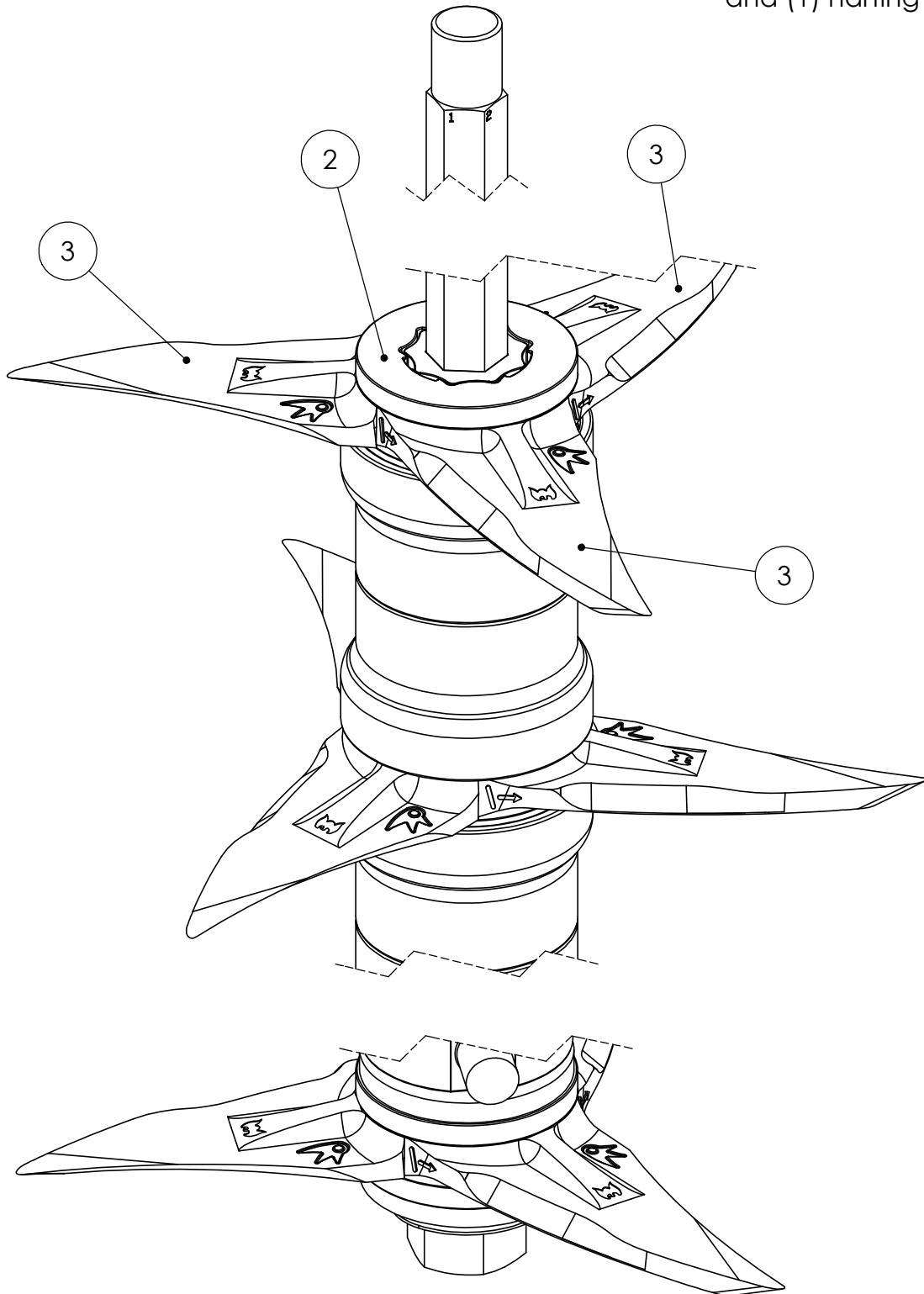


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Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019			PART NO. ASM851A02	DESCRIPTION: 9star Roller RH, CCW
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D:					Grease	
E:			DO NOT SCALE DRAWING			PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
NAME Daniel R. M.		SIGNATURE	A4	SCALE:1:4		
			SHEET 17 OF 34			

Step16

Add (3) ccw fines(#3)
and (1) harthing (#2)

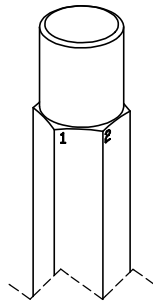


Assembly BOM Link: [ASM851A02.xls](#)
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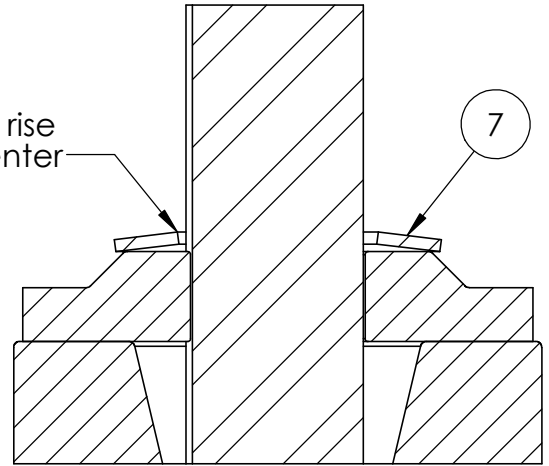
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019			PROCESSSES		WEIGHT: 595.18Lbs
B:			Assemble		
C:			Grease		Soil Regeneration Unlimited
D:					
E:					PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
NAME Daniel R. M.			SIGNATURE		
SHEET 18 OF 34			A4 SCALE: 1:4		

Step17

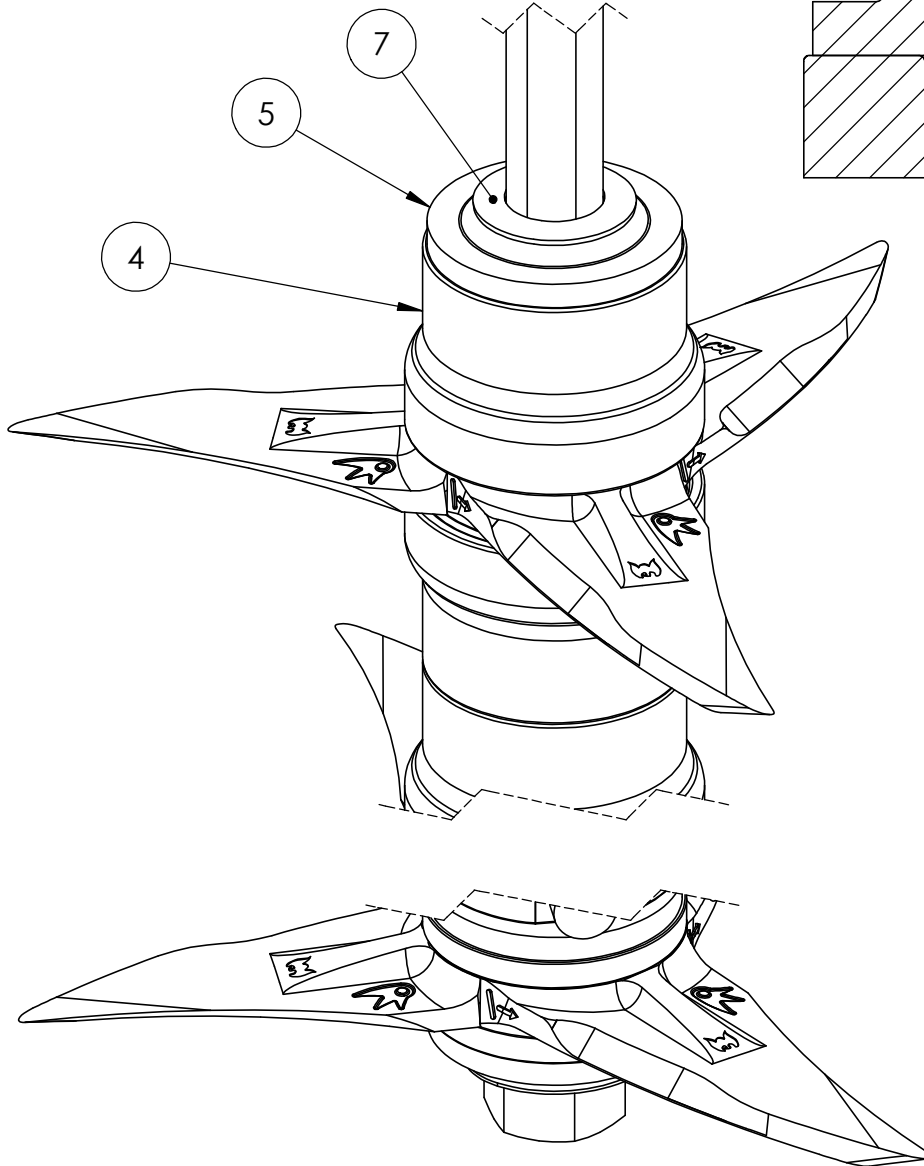
Add (1) spacer (#4),
(1) end cap(#5), and
(1) thrust washer (#7)



Must rise
in center



SECTION W-W
SCALE 1 : 2



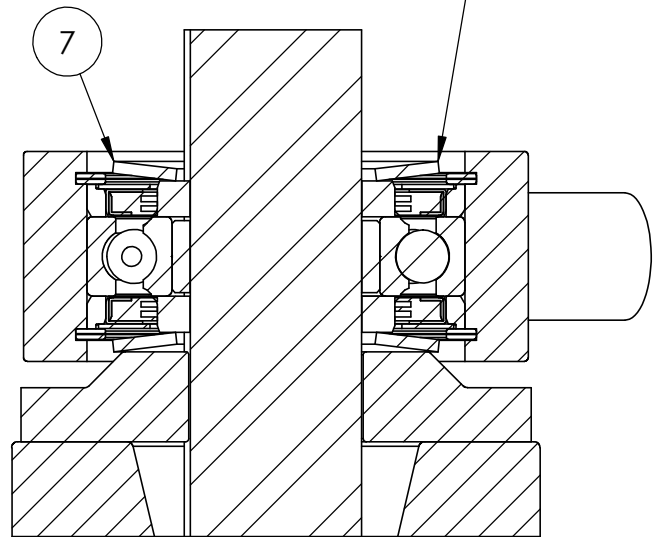
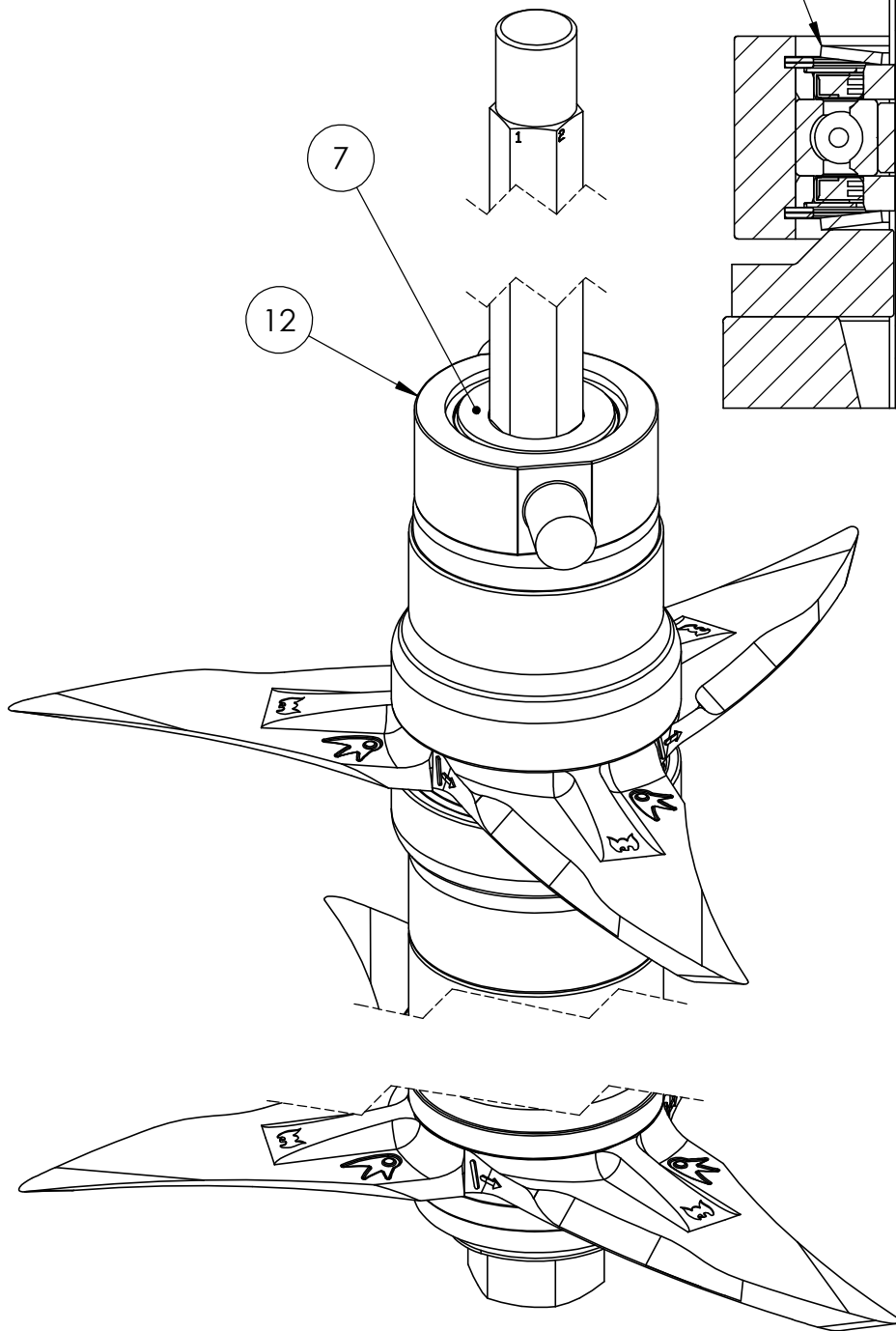
Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019			PART NO. ASM851A02	DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019						
B:			DEBUR AND BREAK SHARP EDGES		PROCESSES	WEIGHT: 595.18Lbs
C:			UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°		Assemble	Soil Regeneration Unlimited
D:					Grease	
E:			DO NOT SCALE DRAWING			PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
NAME Daniel R. M.		SIGNATURE	A4	SCALE:1:4		
			SHEET 19 OF 34			

Step18

Add (1) bearing assembly(#12),
and (1) thrust washer (#7)

Outside edge
must rise



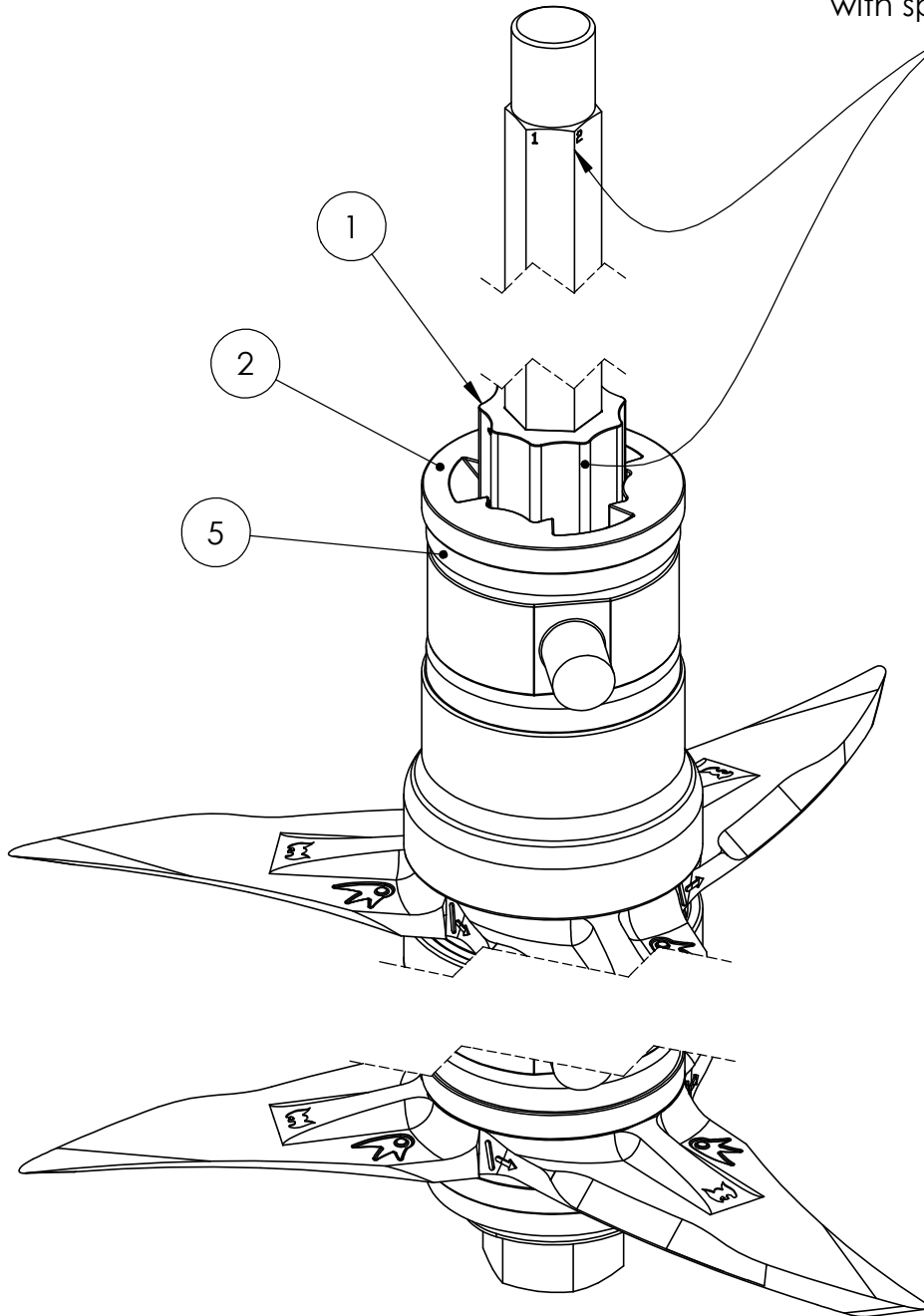
SECTION AB-AB
SCALE 1 : 2

Assembly BOM Link: ASM851A02.xls (contains prints to constituent part prints)			
Drawing Name: ASM851A02	REVISION 1 DATE 9/6/2019		PART NO. ASM851A02
A: Note on step 23, spline 2 to spline 1, 09/06/2019			DESCRIPTION: 9star Roller RH, CCW
B:		PROCESSES	
C:		DEBUR AND BREAK SHARP EDGES	WEIGHT: 595.18Lbs
D:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	Soil Regeneration Unlimited
E:		DO NOT SCALE DRAWING	
NAME Daniel R. M.	SIGNATURE	A4 SCALE:1:4	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
SHEET 20 OF 34			

Step19

Add (1) end cap (#5),(1) harthing ring(#2), and (1) driving hub(#1)

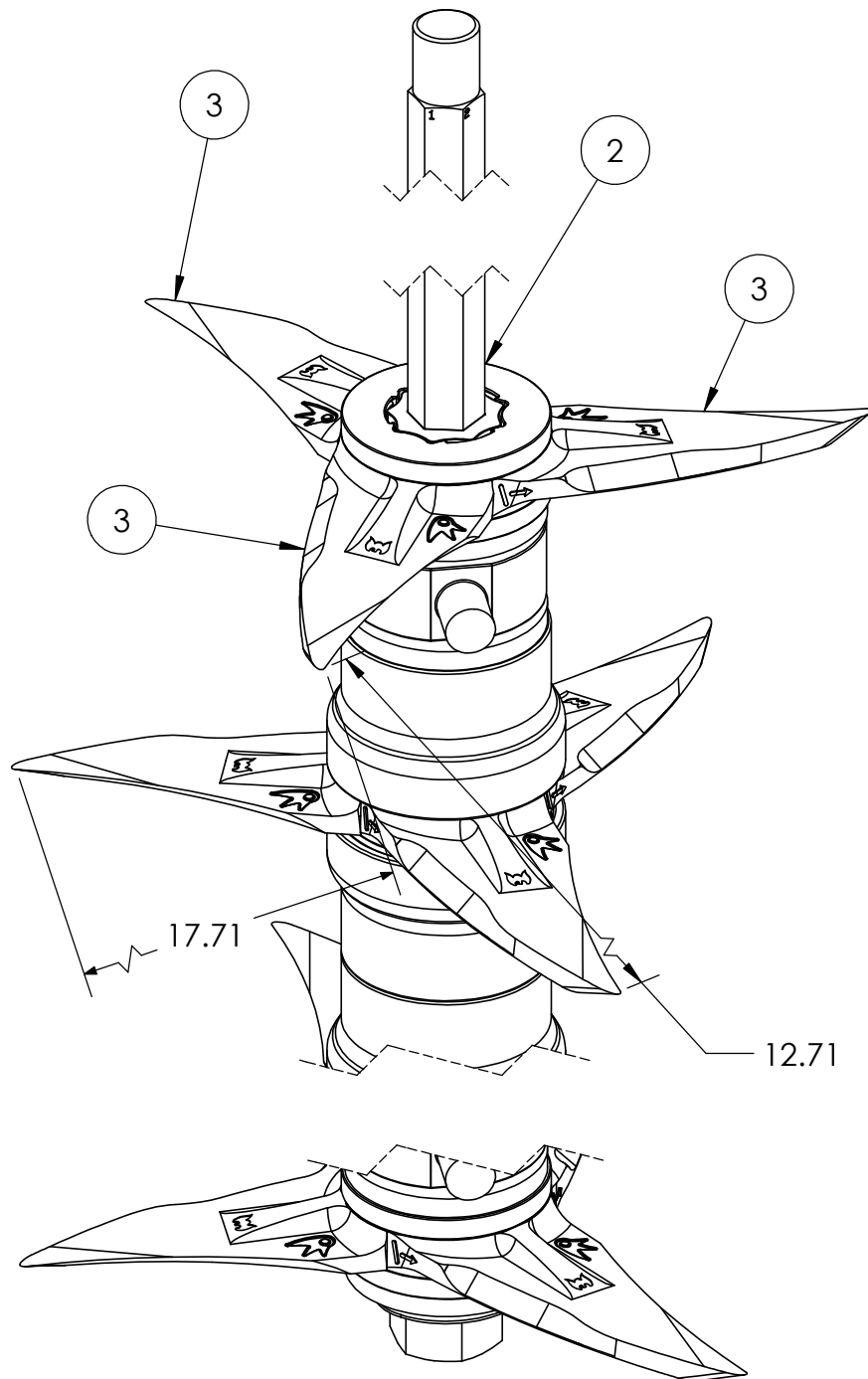
Align driving hub ridge with spline No.2 of hex shaft



Assembly BOM Link: ASM851A02.xls (contains prints to constituent part prints)			
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02
A: Note on step 23, spline 2 to spline 1, 09/06/2019		DEBUR AND BREAK SHARP EDGES UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	PROCESSES
B:			Assemble
C:			Grease
D:			
E:			
NAME Daniel R. M.		SIGNATURE	DO NOT SCALE DRAWING A4 SCALE:1:4 SHEET 21 OF 34
			DESCRIPTION: 9star Roller RH, CCW WEIGHT: 595.18Lbs Soil Regeneration Unlimited PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.

Step20

Add (3) ccw tines(#3)
and (1) harting (#2)



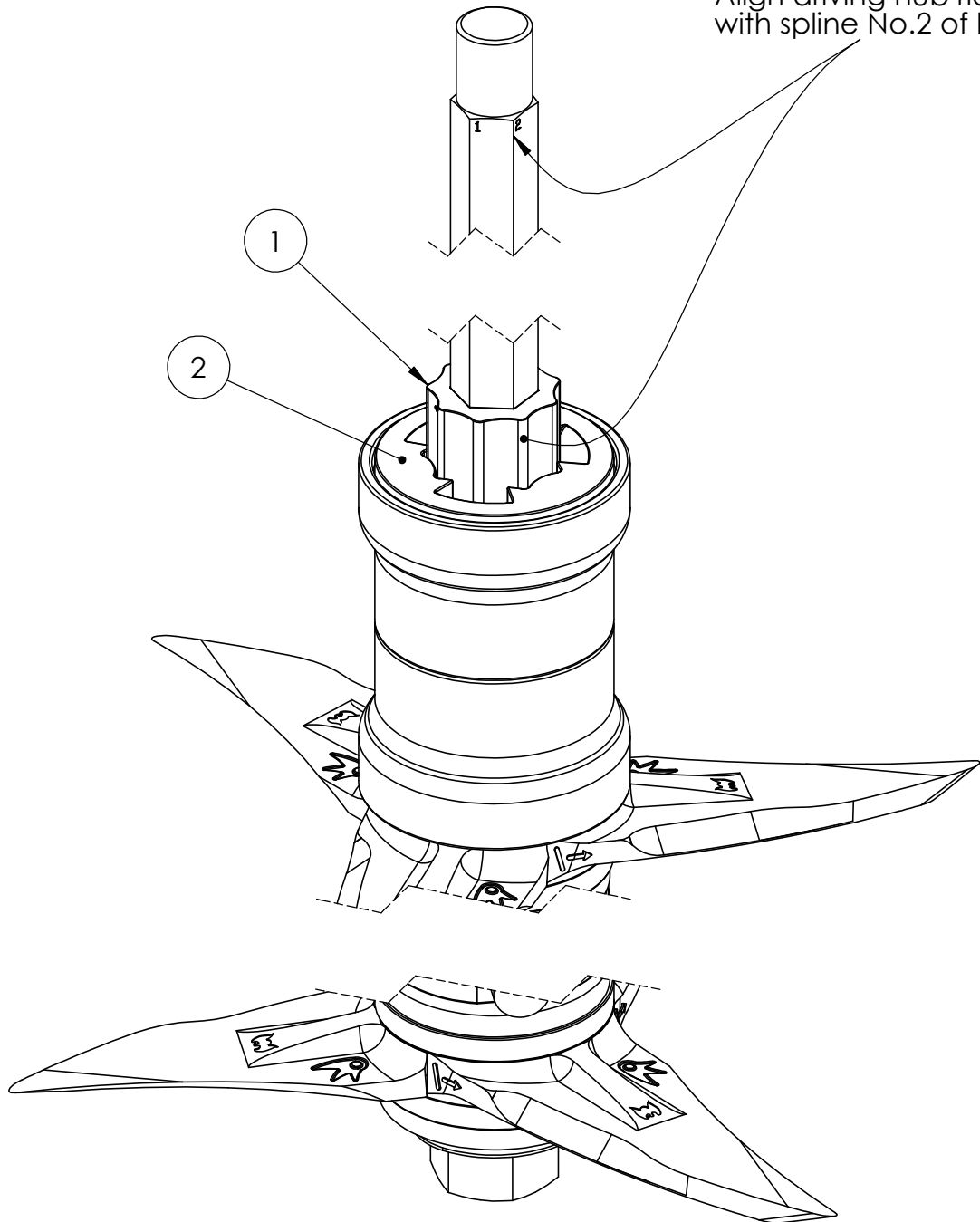
Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW	
A: Note on step 23, spline 2 to spline 1, 09/06/2019			PROCESSSES		WEIGHT: 595.18Lbs	
B:			Assemble			
C:			Grease		Soil Regeneration Unlimited	
D:						
E:					PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.	
NAME Daniel R. M.	SIGNATURE	DO NOT SCALE DRAWING				
		A4	SCALE:1:5			
		SHEET 22 OF 34				

Step21

Add (1) harthing ring(#2),
and (1) driving hub(#1)

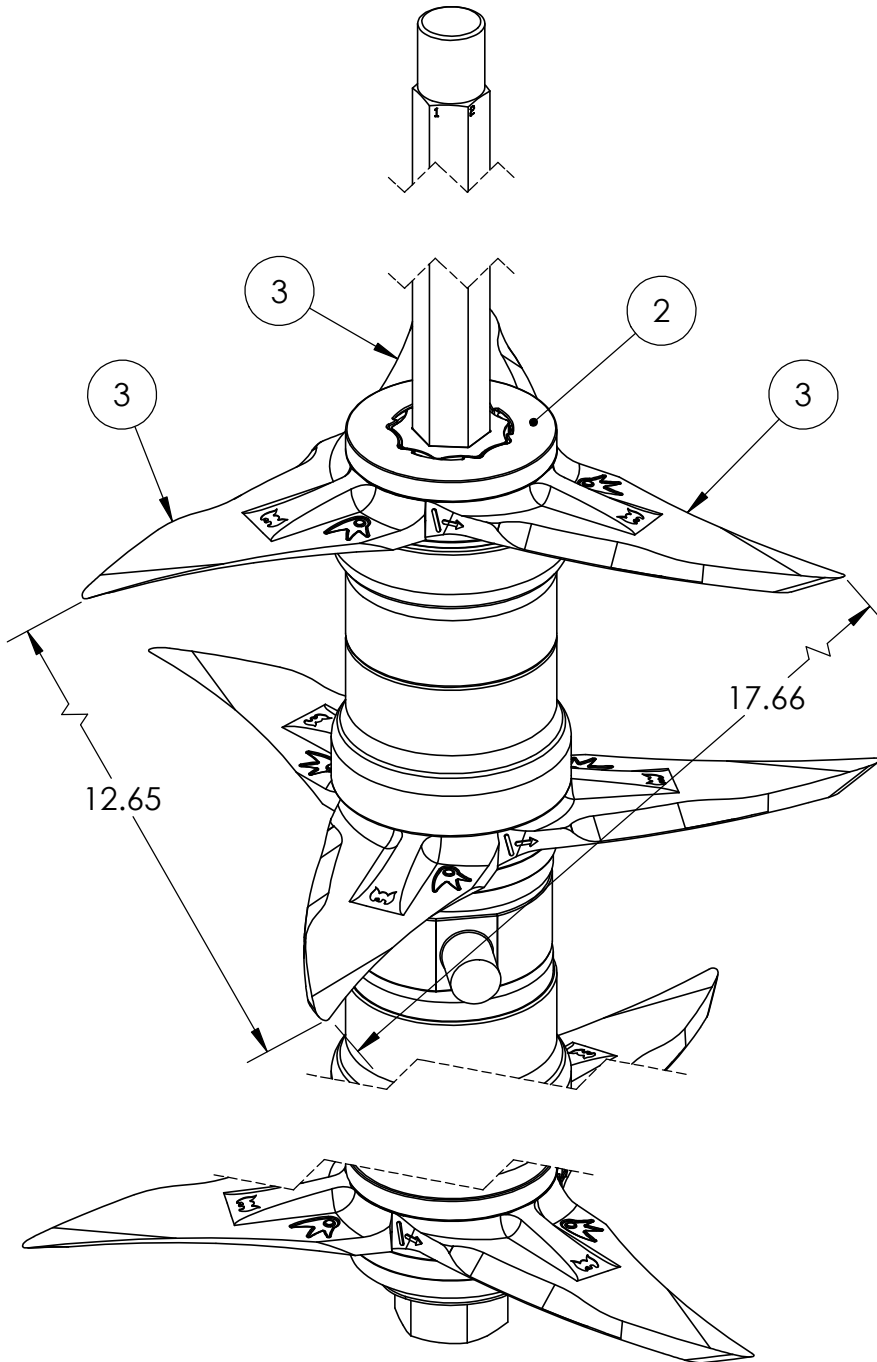
Align driving hub ridge
with spline No.2 of hex shaft



Assembly BOM Link: ASM851A02.xls (contains prints to constituent part prints)			
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02
A: Note on step 23, spline 2 to spline 1, 09/06/2019		DEBUR AND BREAK SHARP EDGES UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	PROCESSES
B:			Assemble
C:			Grease
D:			
E:			
NAME Daniel R. M.		SIGNATURE	DO NOT SCALE DRAWING A4 SCALE:1:4 SHEET 23 OF 34
			DESCRIPTION: 9star Roller RH, CCW WEIGHT: 595.18Lbs Soil Regeneration Unlimited PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.

Step22

Add (3) ccw tines(#3)
and (1) harting ring(#2)



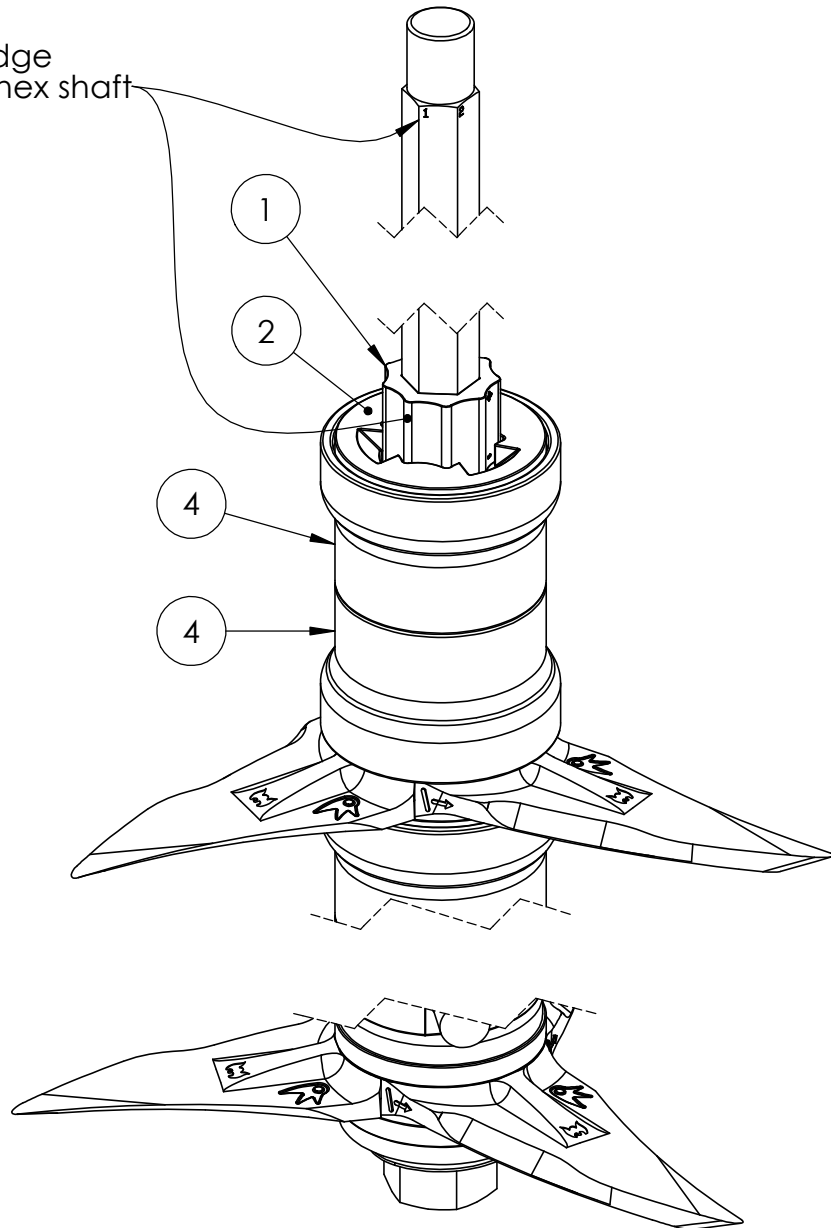
Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019			PROCESSSES		WEIGHT: 595.18Lbs
B:			Assemble		
C:			Grease		Soil Regeneration Unlimited
D:					
E:					PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
NAME Daniel R. M.	SIGNATURE		DO NOT SCALE DRAWING		
		A4	SCALE:1:5		
			SHEET 24 OF 34		

Step23

Add (2) spacers (#4),(1) harthing ring(#2), and (1) driving hub(#1)

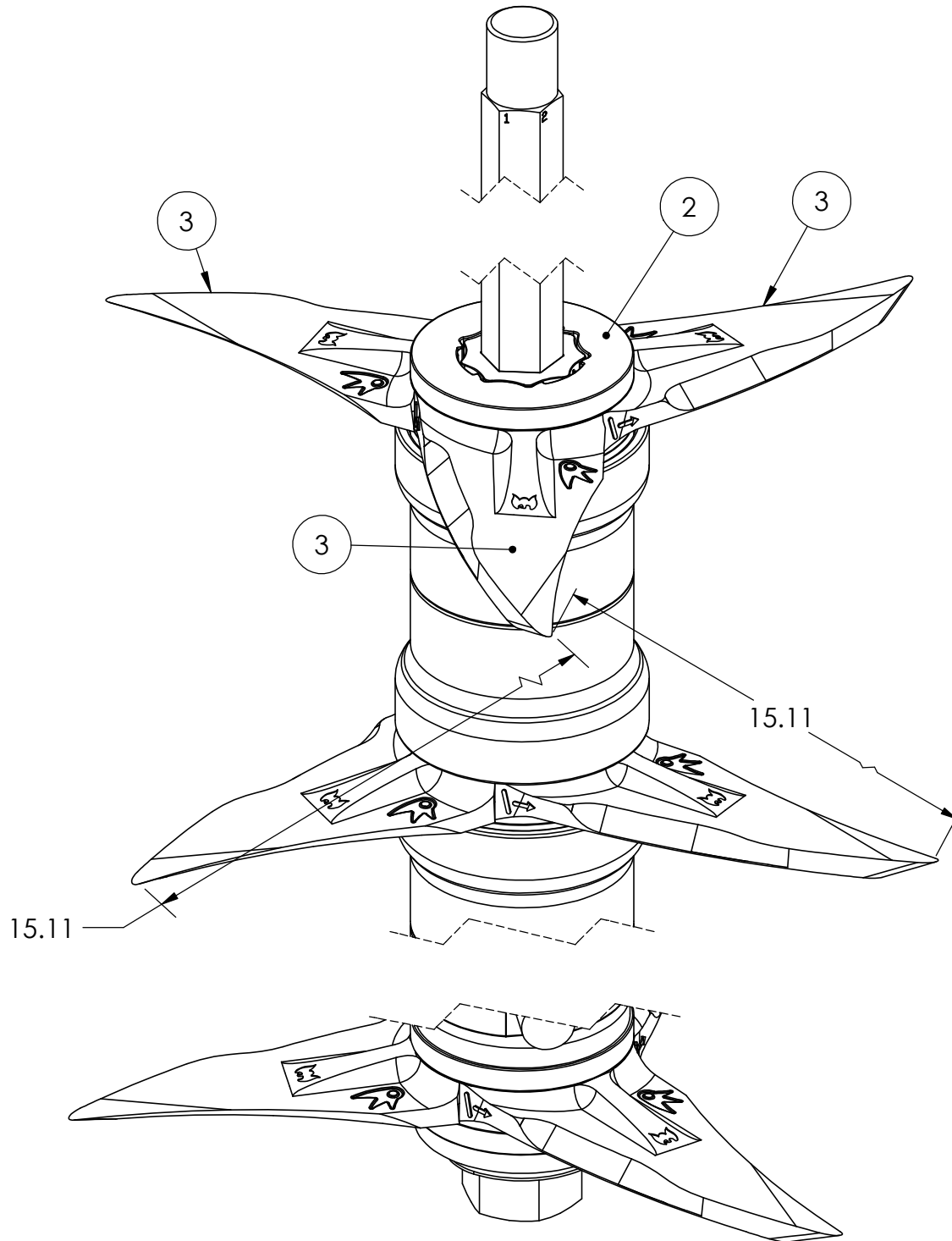
Align driving hub ridge
with spline No.1 of hex shaft



Assembly BOM Link: ASM851A02.xls (contains prints to constituent part prints)			
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02
A: Note on step 23, spline 2 to spline 1, 09/06/2019			DESCRIPTION: 9star Roller RH, CCW
B:		DEBUR AND BREAK SHARP EDGES	
C:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	PROCESSES Assemble Grease
D:		DO NOT SCALE DRAWING	WEIGHT: 595.18Lbs
E:		A4 SCALE:1:5	Soil Regeneration Unlimited
NAME Daniel R. M.	SIGNATURE	SHEET 25 OF 34	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.

Step24

Add (3) ccw tines(#3)
and (1) harthing ring(#2)



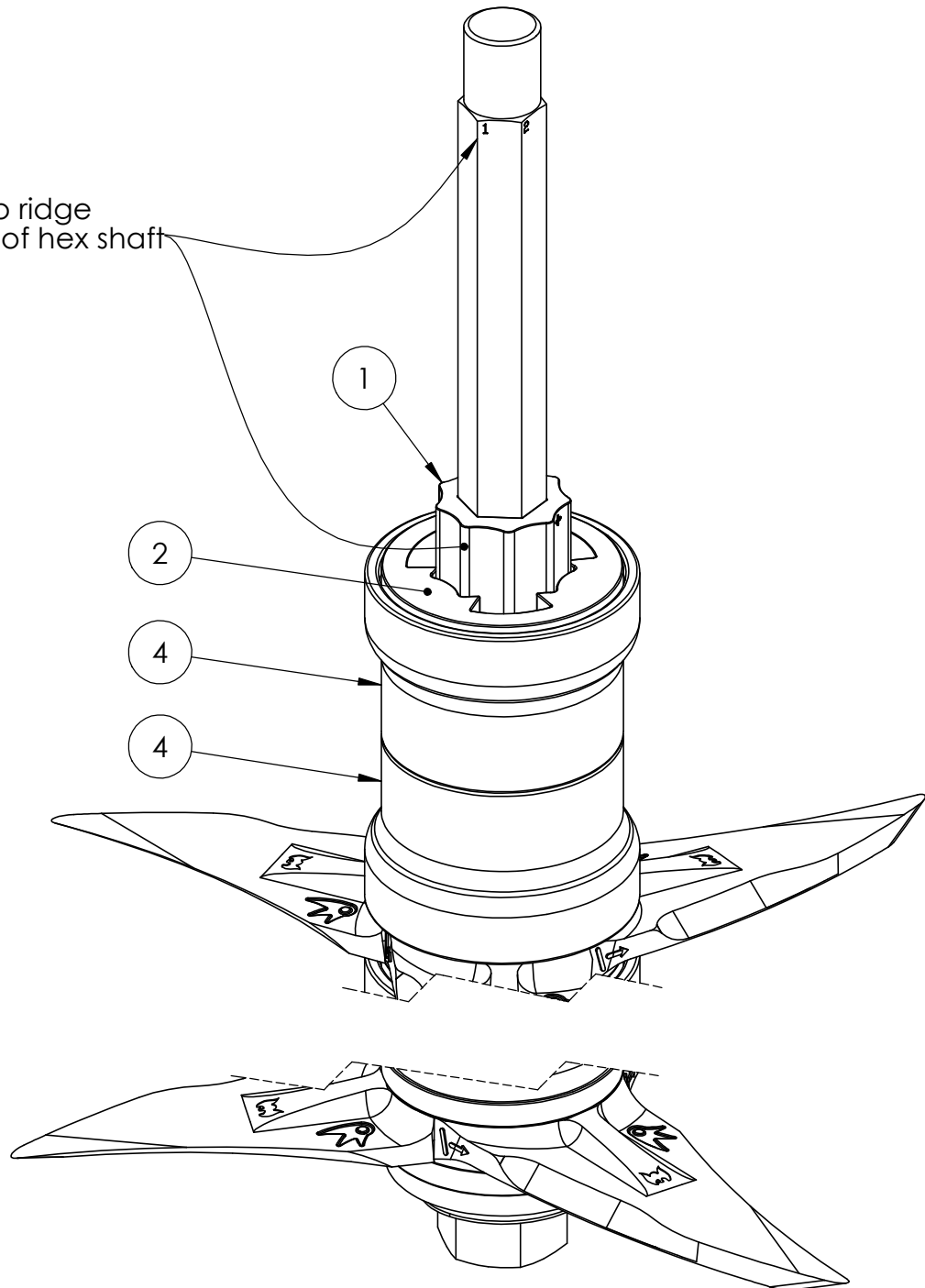
Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019			PROCESSES		WEIGHT: 595.18Lbs
B:			Assemble		
C:			Grease		Soil Regeneration Unlimited
D:					
E:					PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
NAME Daniel R. M.			SIGNATURE		
DO NOT SCALE DRAWING			A4 SCALE: 1:4		
SHEET 26 OF 34					

Step25

Add (2) spacers (#4), (1) harthing ring (#2), and (1) driving hub (#1)

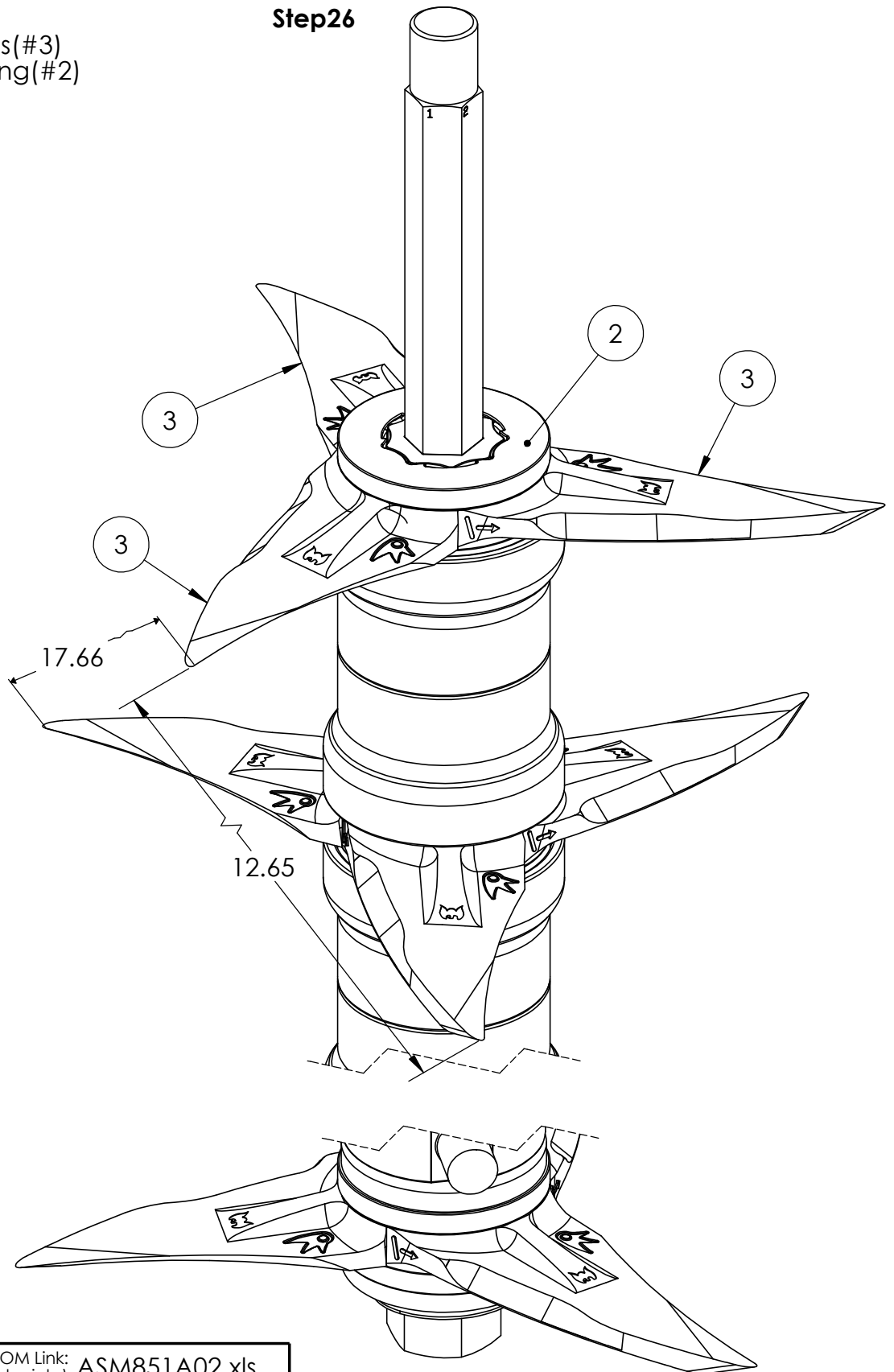
Align driving hub ridge with spline No.1 of hex shaft



Assembly BOM Link: ASM851A02.xls (contains prints to constituent part prints)					
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019					
B:		DEBUR AND BREAK SHARP EDGES		PROCESSES	
C:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°		Assemble	
D:				Grease	
E:		DO NOT SCALE DRAWING			
NAME Daniel R. M.		SIGNATURE		WEIGHT: 595.18Lbs	
		A4		SCALE: 1:4	
		SHEET 27 OF 34		Soil Regeneration Unlimited	
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.					

Step26

Add (3) ccw tines(#3)
and (1) harting ring(#2)

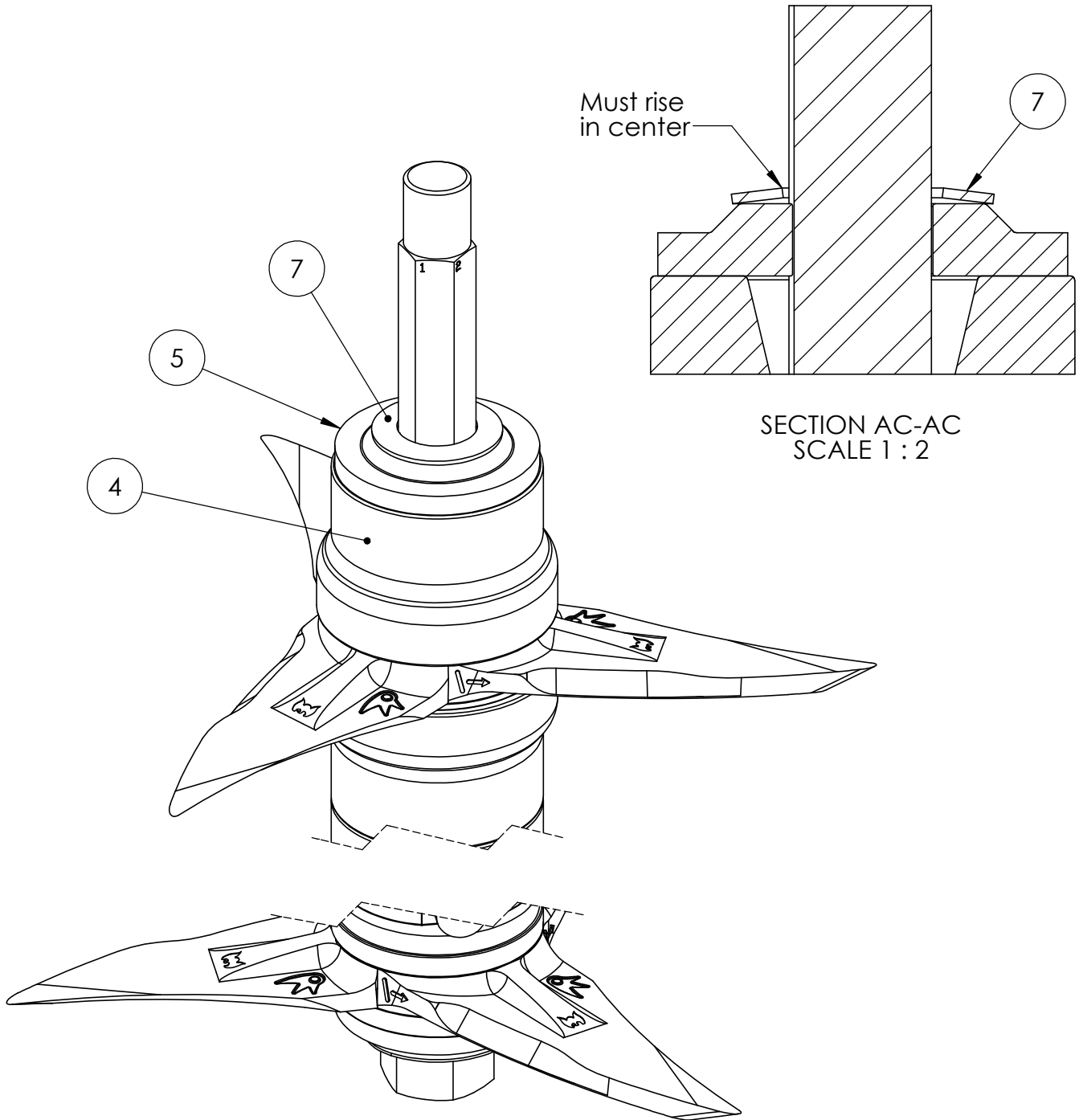


Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019			PROCESSES		WEIGHT: 595.18Lbs
B:			Assemble		Soil Regeneration Unlimited
C:			Grease		
D:					PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
E:					
NAME Daniel R. M.			SIGNATURE		
SHEET 28 OF 34			A4 SCALE:1:4		

Step27

Add (1) spacer (#4),
(1) end cap(#5), and
(1) thrust washer (#7)



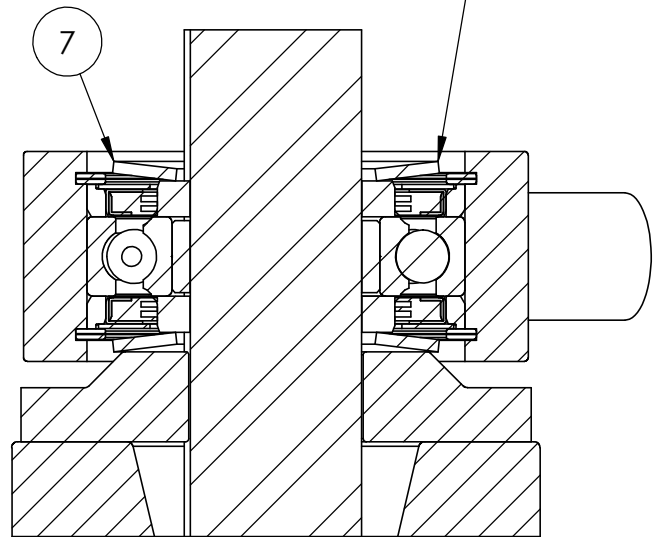
Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019		DEBUR AND BREAK SHARP EDGES		WEIGHT: 595.18Lbs	
B:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°		Soil Regeneration Unlimited	
C:		DO NOT SCALE DRAWING		PROPRIETARY AND CONFIDENTIAL	
D:		A4		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.	
E:		SCALE: 1:4			
NAME Daniel R. M.	SIGNATURE	SHEET 29 OF 34			

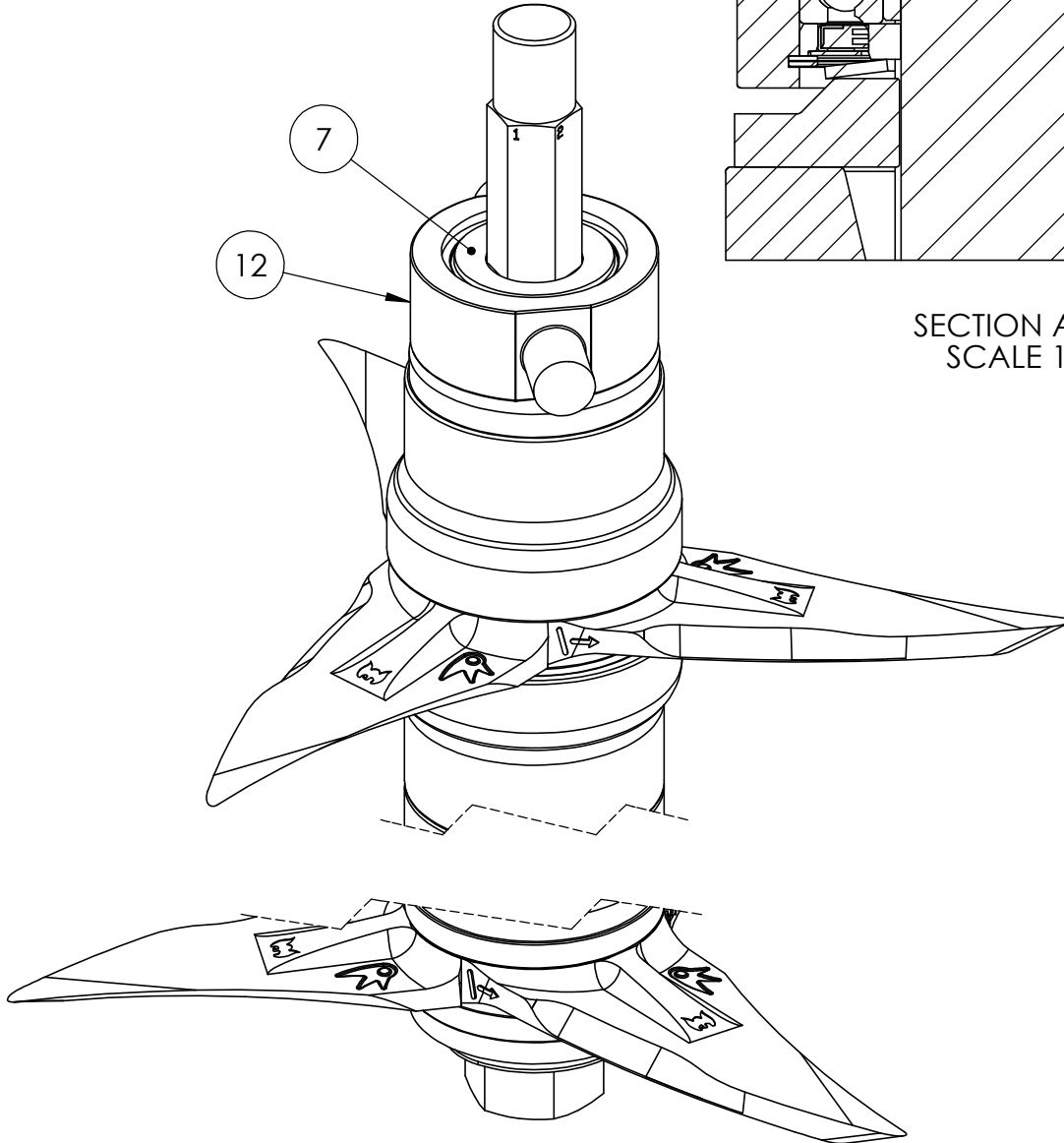
Step28

Add (1) bearing assembly (#12),
and (1) thrust washer (#7)

Outside edge
must rise



SECTION AB-AB
SCALE 1 : 2



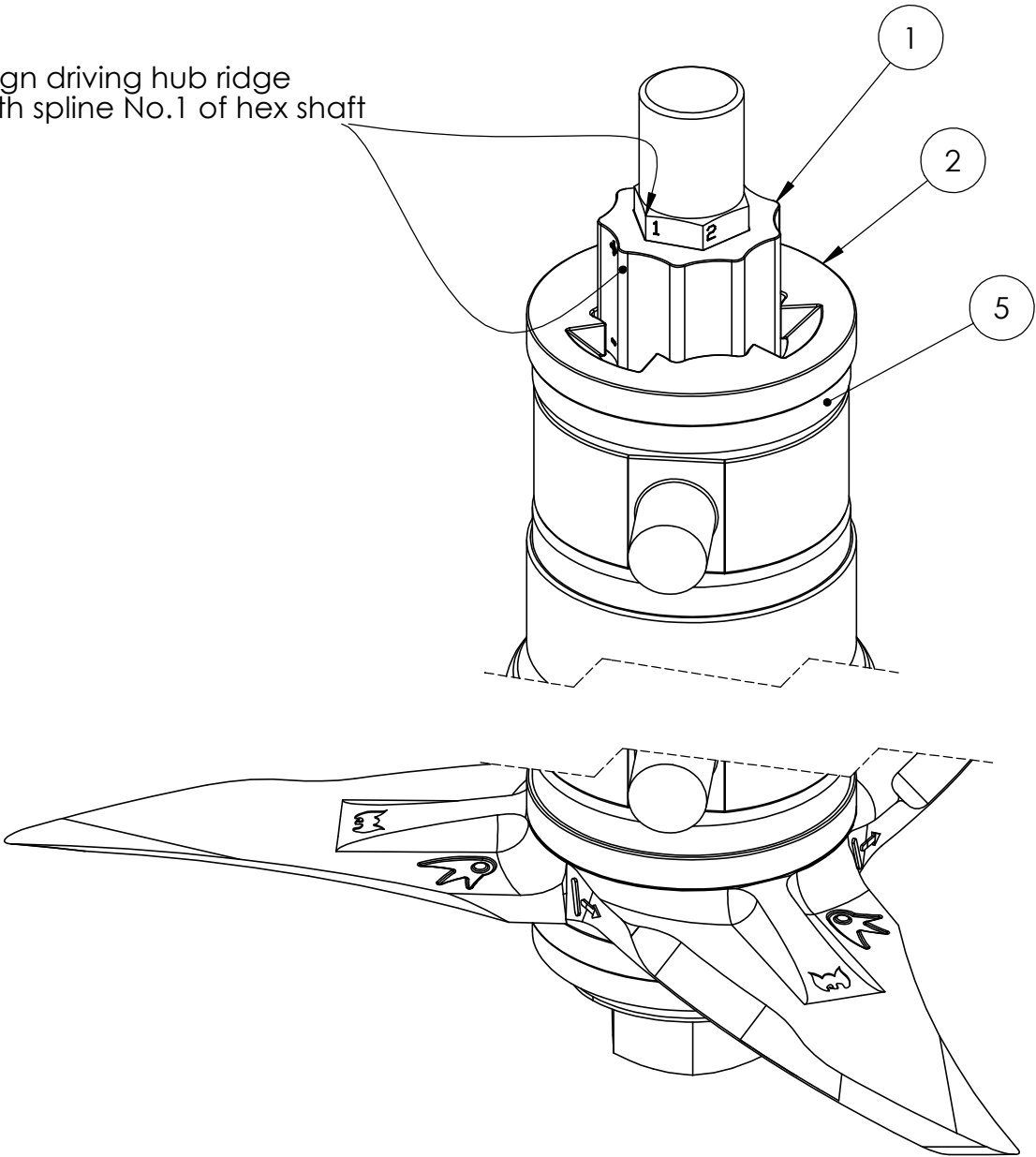
Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019		DEBUR AND BREAK SHARP EDGES		WEIGHT: 595.18Lbs	
B:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°		Soil Regeneration Unlimited	
C:		DO NOT SCALE DRAWING		PROPRIETARY AND CONFIDENTIAL	
D:		A4		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.	
E:		SCALE: 1:4			
NAME Daniel R. M.	SIGNATURE	SHEET 30 OF 34			

Step 29

Add (1) end cap (#5),
(1) harthing ring (#2),
and (1) driving hub (#1)

Align driving hub ridge
with spline No.1 of hex shaft

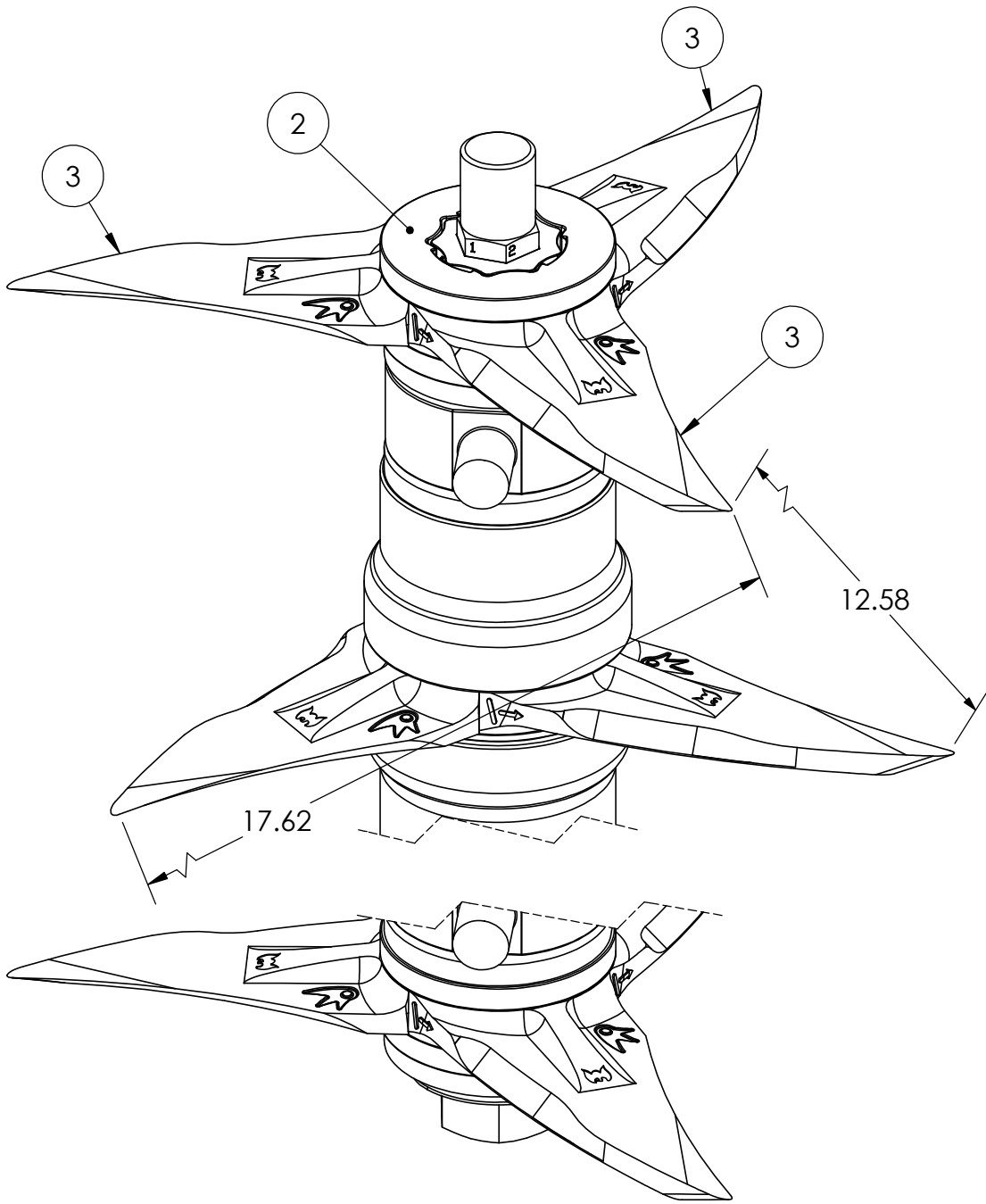


Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019					
B:		DEBUR AND BREAK SHARP EDGES	PROCESSES		WEIGHT: 595.18Lbs
C:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	Assemble		
D:			Grease		
E:					
		DO NOT SCALE DRAWING			PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
NAME Daniel R. M.	SIGNATURE	A4	SCALE:1:3		
		SHEET 31 OF 34			

Step 30

Add (3) ccw tines (#3),
and (1) harthing ring (#2)



Assembly BOM Link: ASM851A02.xls (contains prints to constituent part prints)				
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02	DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019		DEBUR AND BREAK SHARP EDGES UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2° DO NOT SCALE DRAWING	PROCESSES	WEIGHT: 595.18Lbs
B:			Assemble	Soil Regeneration Unlimited
C:			Grease	
D:				
E:				
NAME Daniel R. M.	SIGNATURE	A4	SCALE: 1:4	SHEET 32 OF 34

Step 31

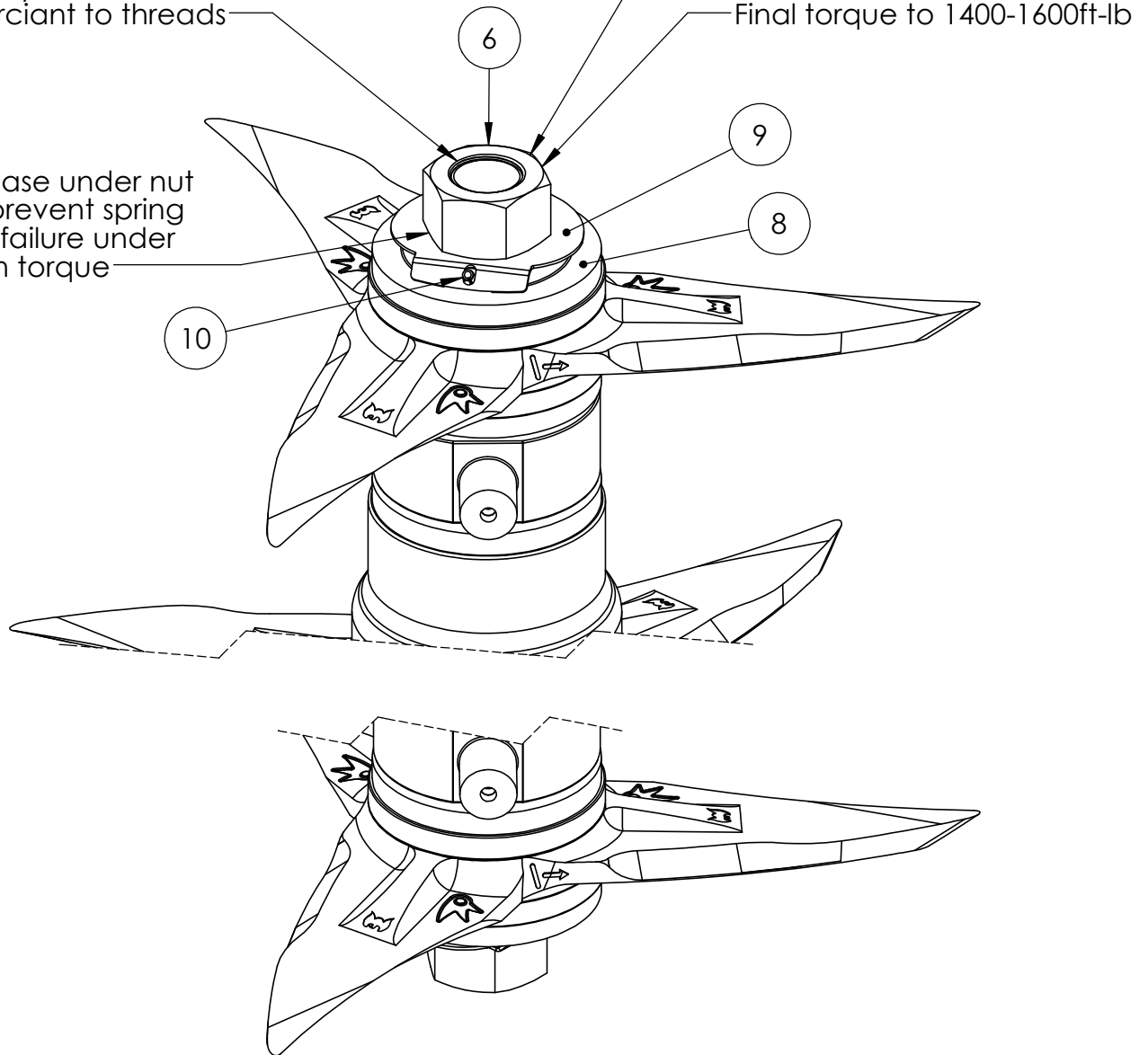
Add (1) end cap (#8),
(1) lock flange (#9),
(1) spring pin (#10),
and (1) nut (#6)

Apply Never-Seize
lubricant to threads

Grease under nut
to prevent spring
pin failure under
high torque

While assembly is still
upright, tighten nut to
100-200ft-lb or until
end cap does not
turn freely on hex shaft

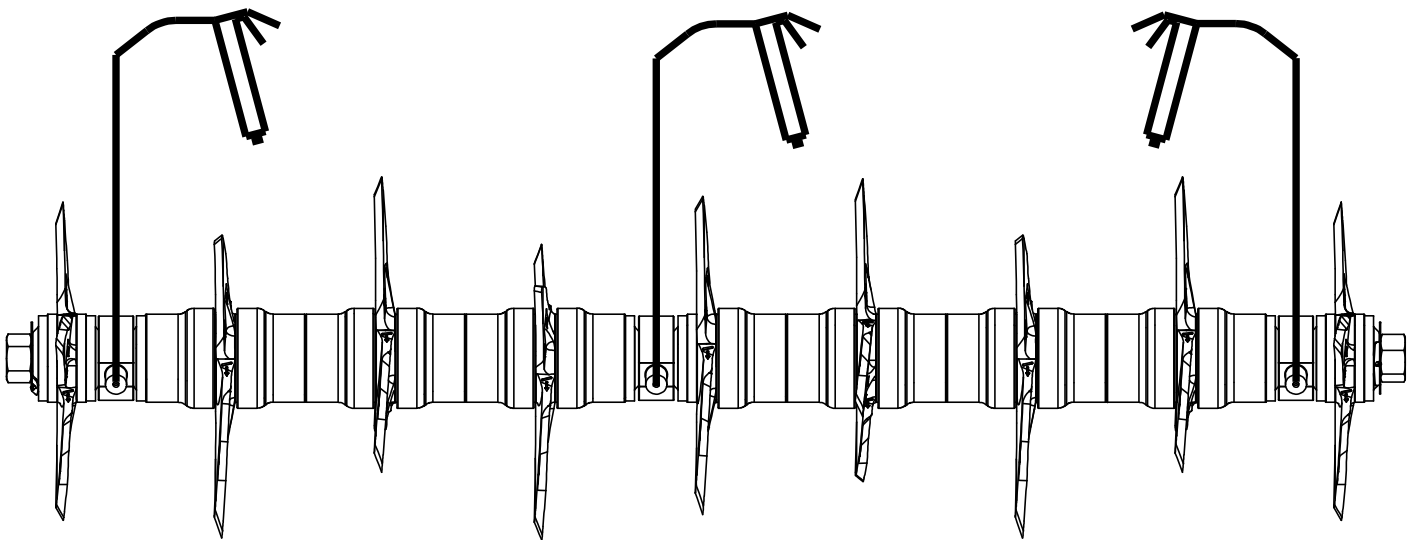
Final torque to 1400-1600ft-lb



Assembly BOM Link: [ASM851A02.xls](#)
(contains prints to constituent part prints)

Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02		DESCRIPTION: 9star Roller RH, CCW
A: Note on step 23, spline 2 to spline 1, 09/06/2019			PROCESSES		WEIGHT: 595.18Lbs
B:			Assemble		
C:			Grease		Soil Regeneration Unlimited
D:					
E:					PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
NAME Daniel R. M.			SIGNATURE		
A4			SCALE: 1:4		
SHEET 33 OF 34					

Before final tightening shaft to 1400-1600 ft-lbs, lube bearings with approx. 18 pumps of grease (or until grease appears), and be sure that bearings can **rotate freely**.



Assembly BOM Link: ASM851A02.xls (contains prints to constituent part prints)			
Drawing Name: ASM851A02		REVISION 1 DATE 9/6/2019	PART NO. ASM851A02
A: Note on step 23, spline 2 to spline 1, 09/06/2019		DEBUR AND BREAK SHARP EDGES UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: TOLERANCES: LINEAR: 1/16" ANGULAR: 2°	PROCESSES
B:			Assemble
C:			Grease
D:			
E:			
NAME Daniel R. M.		SIGNATURE	DESCRIPTION: 9star Roller RH, CCW WEIGHT: 595.18Lbs Soil Regeneration Unlimited PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SOIL REGENERATION UNLIMITED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SOIL REGENERATION UNLIMITED IS PROHIBITED.
		DO NOT SCALE DRAWING	
		A4	SCALE: 1:12
		SHEET 34 OF 34	