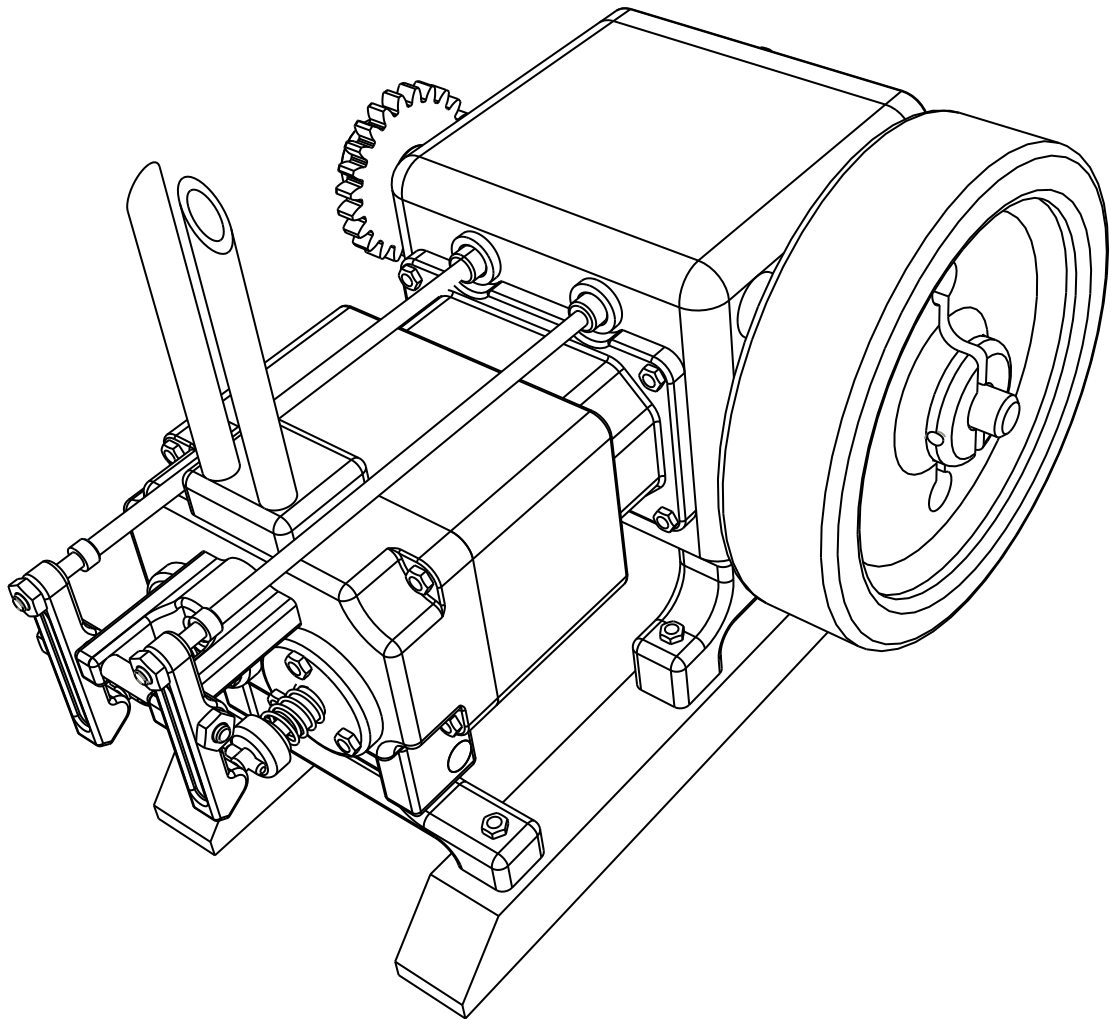


ITEM NO.	DESCRIPTION	SIZE	MATERIAL	NOTES	QN'TY
1	CRANKCASE		AL.		1
2	PUSHROD BEARING		BRASS		2
3	CAMSHAFT BEARING		BRASS		2
4	CRANK BEARING		BRASS		2
5	CYLINDER BLOCK		AL.		1
6	CYLINDER HEAD		AL.		1
7	CRANKSHAFT		H.R.S.		1
8	CON. ROD ASSY.				2
9	HH SCREW	#2-56 X 5/16" LG.	STK.		12
10	HH SCREW	#2-56 X 1/2" LG.	STK.		5



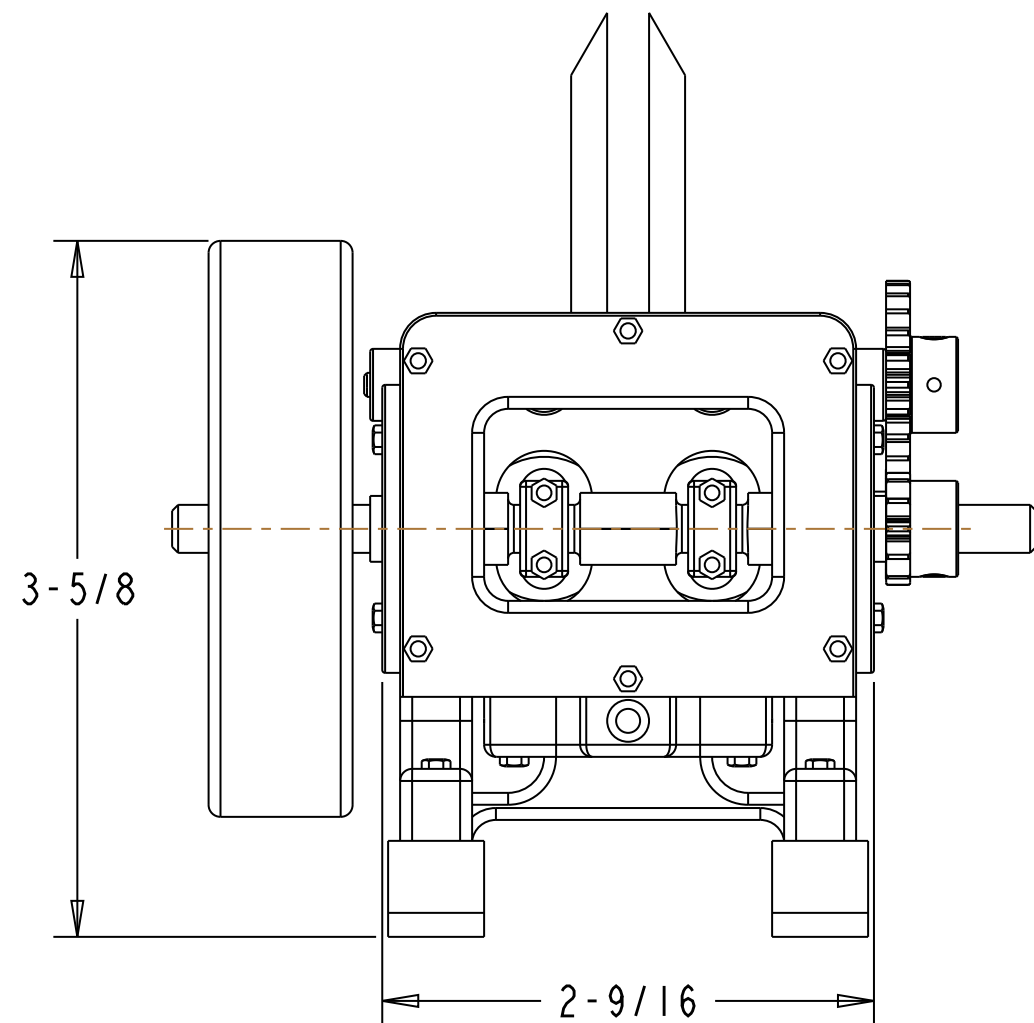
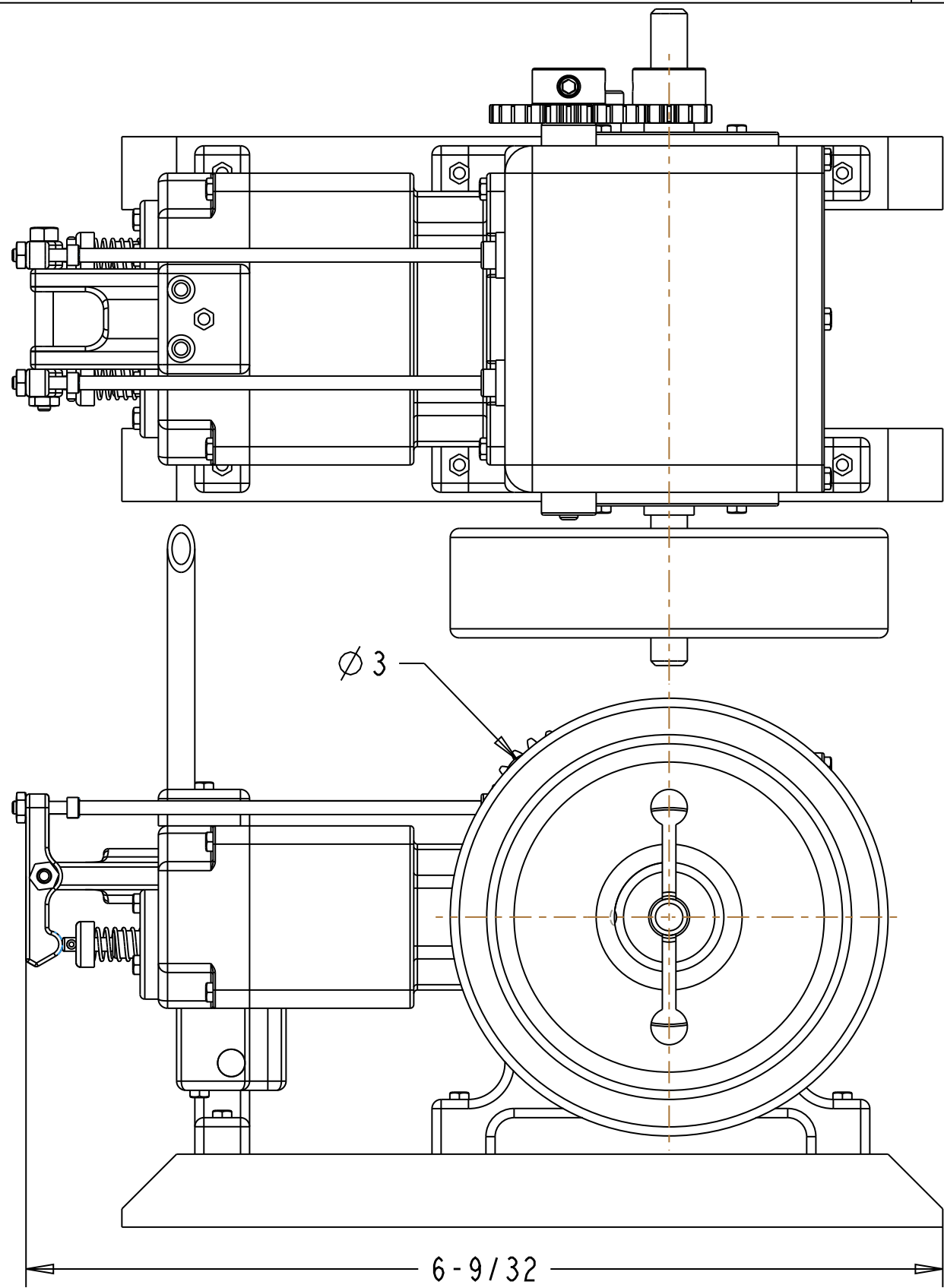
ITEM NO.	DESCRIPTION	SIZE	MATERIAL	NOTES	QN'TY
11	FLYWHEEL		C.R.S.		1
12	VALVE ASSEMBLY				2
13	ROCKER STAND		C.R.S.		1
14	ROCKER ARM		C.R.S.		2
15	ROCKER SHAFT		DRILL ROD		1
16	CAMSHAFT ASSEMBLY				1
17	ADJ. SCREW	#2-56 X 3/8" LG.	STK.		2
18	HEX NUT	#2-56	STK.		3
19	VALVE LIFTER		C.R.S.		2
20	PUSHROD		DRILL ROD		2
21	EXHAUST FLANGE		C.R.S.		1
22	EXHAUST PIPE		BRASS		2
23	SPUR GEAR	12T .5 PD 24P	STK.		1
24	IDLER GEAR	12T .5 PD 24P	STK.		1
25	SPUR GEAR	24T 1.0 PD 24P	STK.		1
26	HH SCREW	#2-56 X 3/8" LG.	STK.		12
27	S.H.C.S.	#2-56 X 1/2" LG.	STK.		5
28	VALVE BALL	3/16"	STK.		2
29	SLAVE VALVE SPRING	.016 X 9/16" LG.	STK.		2
30	HH SCREW	#2-56 X 3/4" LG.	STK.		2
31	SHOULDER SCREW		C.R.S.		1
32	GEAR WASHER		BRASS		1
33	GEAR BUSHING		C.R.S.		1
34	S.H.C.S.	#2-56 X 3/8" LG.	STK.		2
35	SET SCREW	#4-40 X 1/8" LG.			1
36	INTAKE MANIFOLD ASSY.		BRASS		1
37	CRANKCASE COVER		C.R.S.		1
38	STAND ASSY.				1

COMPRESSED AIR OPERATED
2 CYLINDER HORIZONTAL ENGINE
DESIGNED & BUILT BY
CHUCK FELLOWS
3/4" BORE X 7/8" STROKE

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ARE NOT RESPONSIBLE OR LIABLE FOR ANY LOSSES OR DAMAGES INCURRED FROM THE CREATION OR USE OF
THE PRODUCTS CONTAINED IN THIS DRAWING.

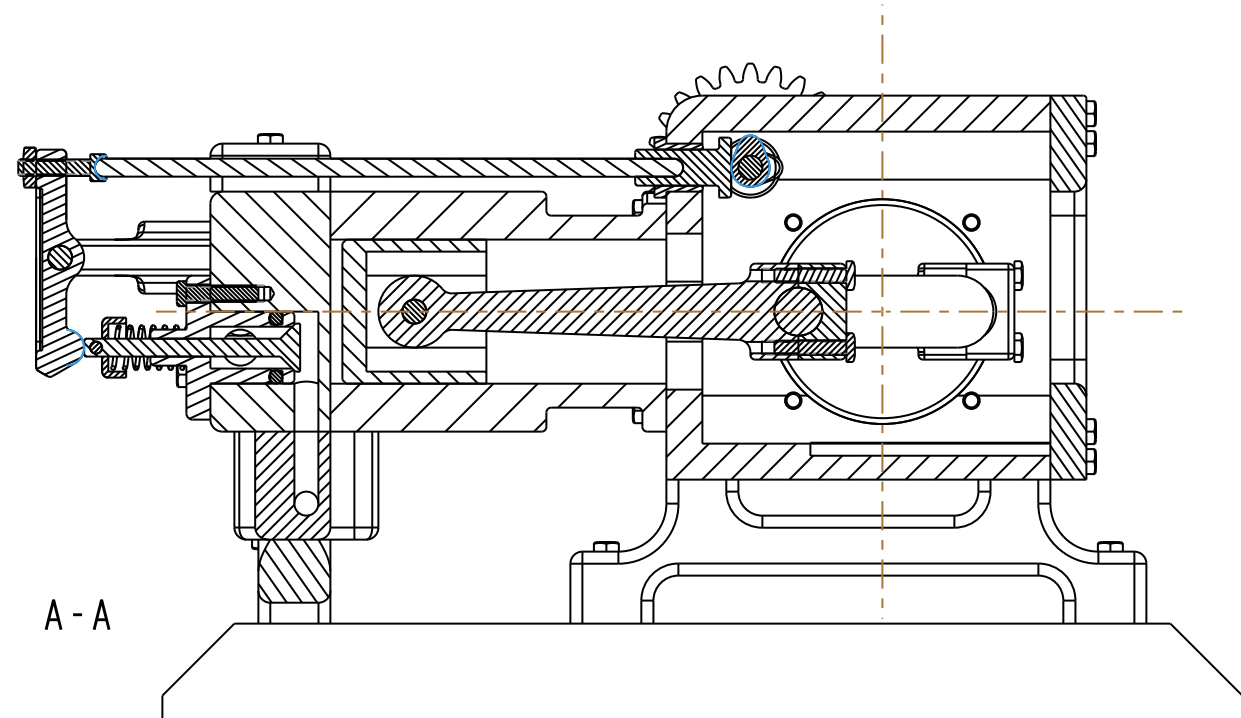
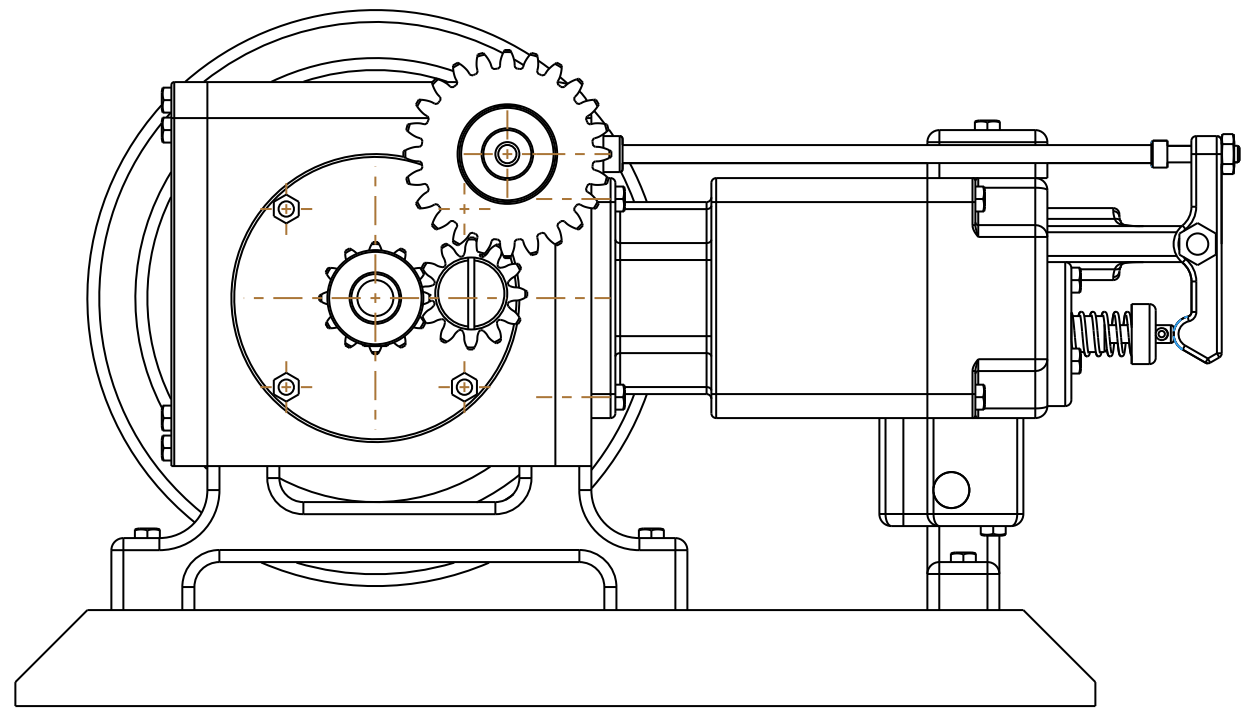
REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	ENGINE ASSEMBLY		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 5

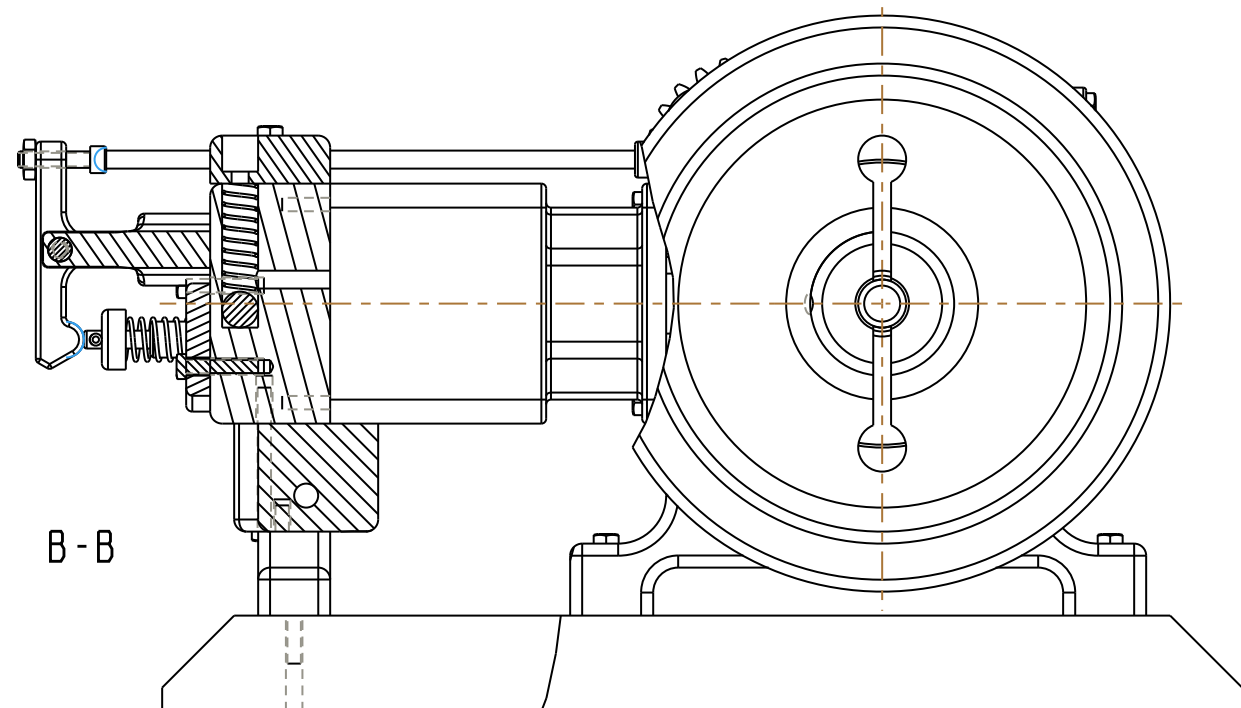
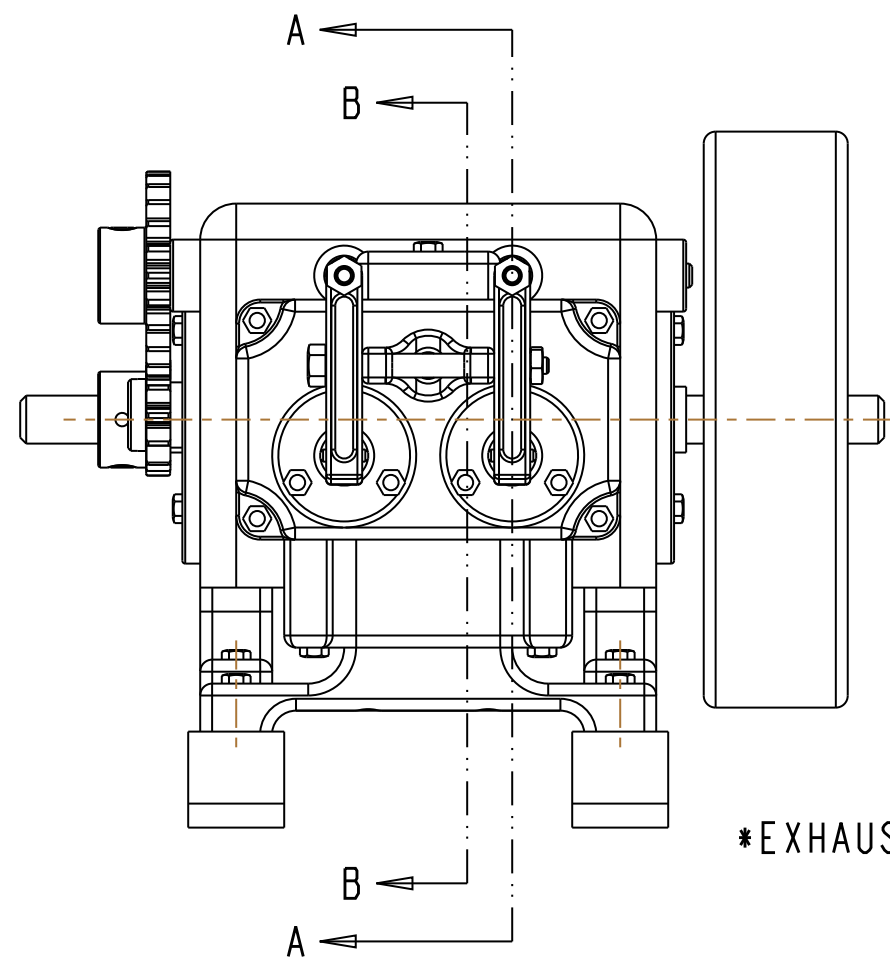


REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	ENGINE ASSEMBLY		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	2 OF 5



SECTION A-A

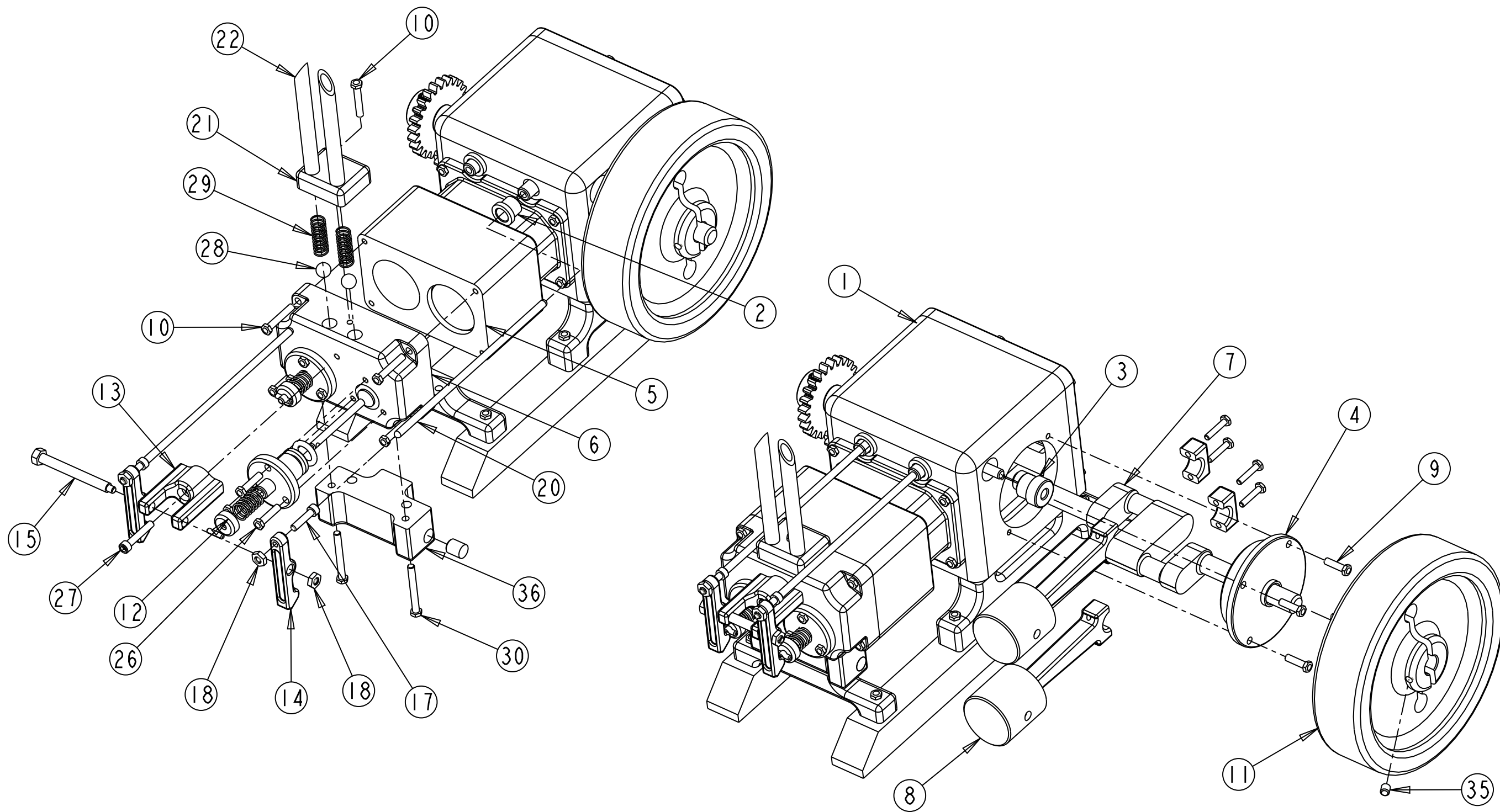


SECTION B-B

EXHAUST PIPES NOT SHOWN

REV.	DATE	DESCRIPTION
0	3-17-2019	

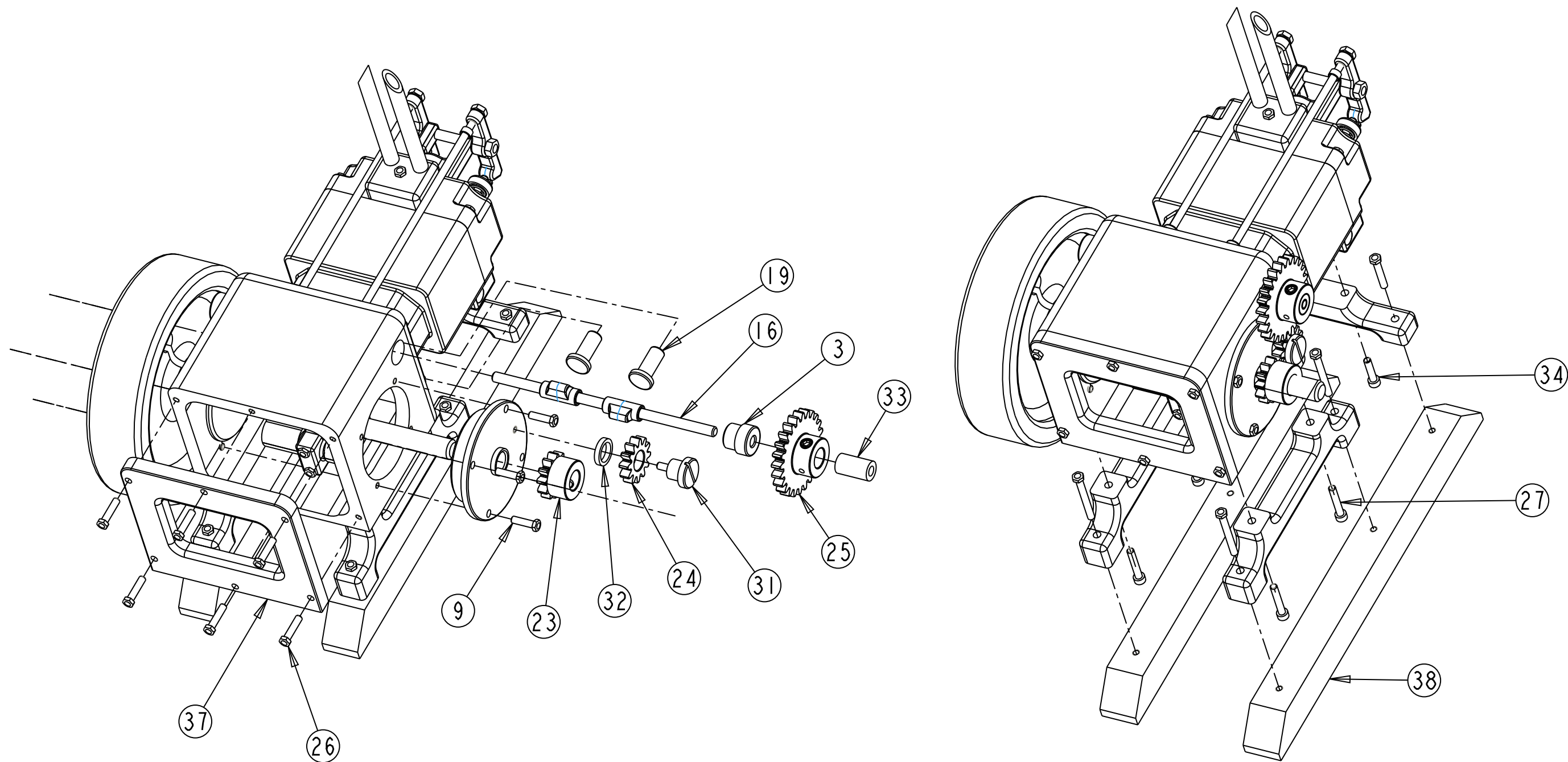
GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	ENGINE ASSEMBLY		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	3 OF 5



SCALE 0.750

REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	ENGINE ASSEMBLY		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	4 OF 5

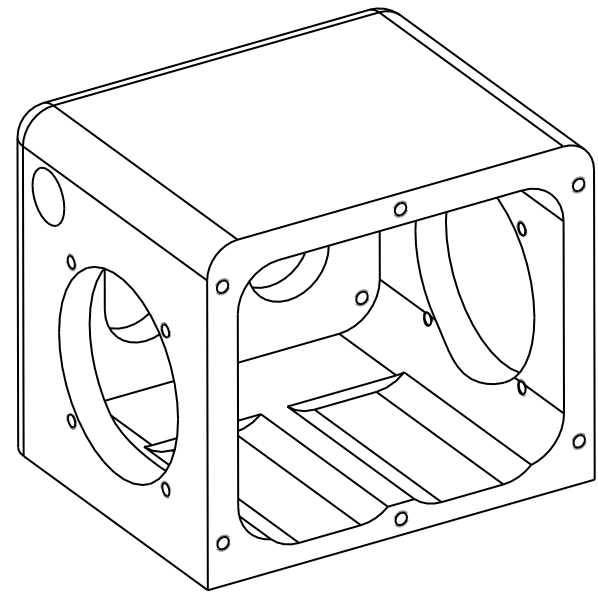


SCALE 0.750

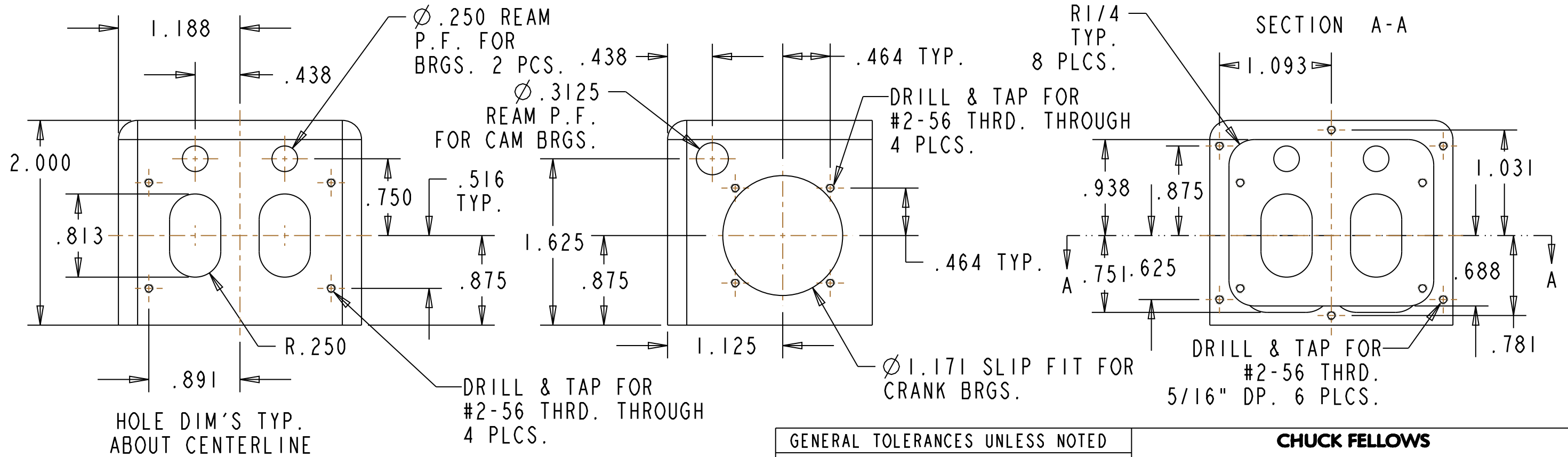
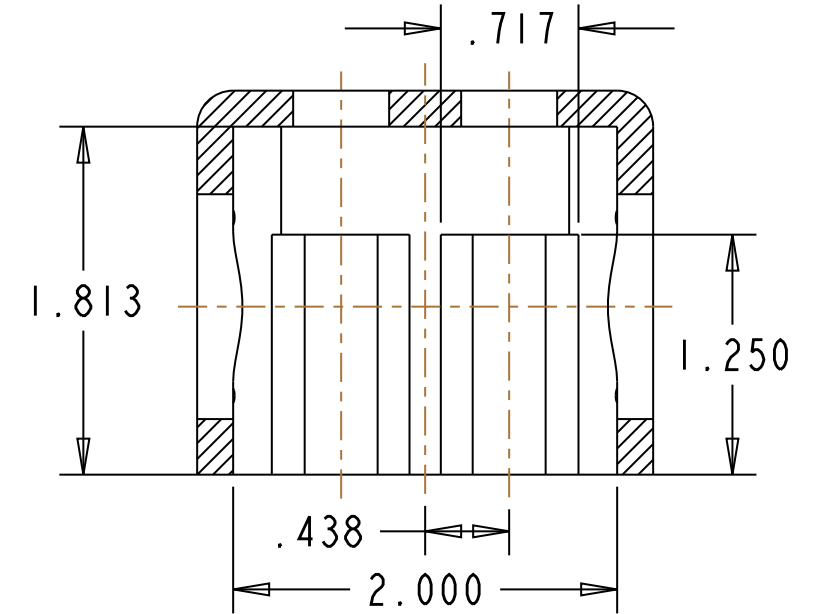
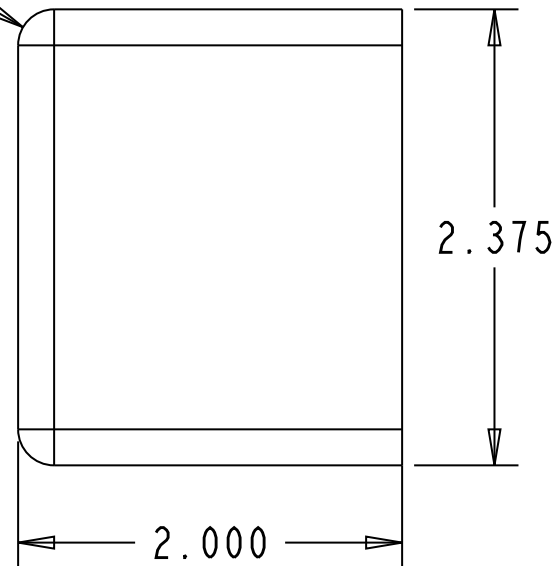
REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	ENGINE ASSEMBLY		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	5 OF 5

ITEM NO.	DESCRIPTION	SIZE	MATERIAL	NOTES	QN'TY
1	CRANKCASE		AL.		1



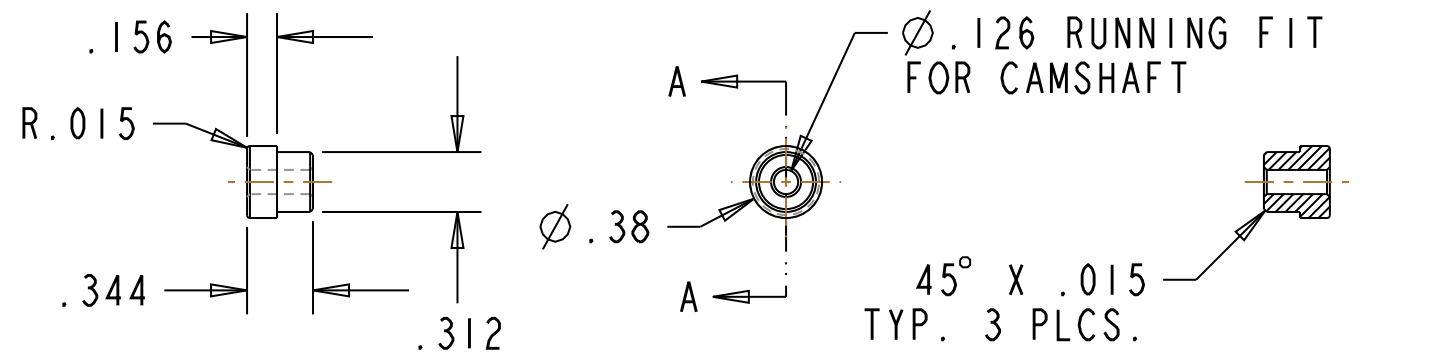
R3/16 TYP.
AS SHOWN



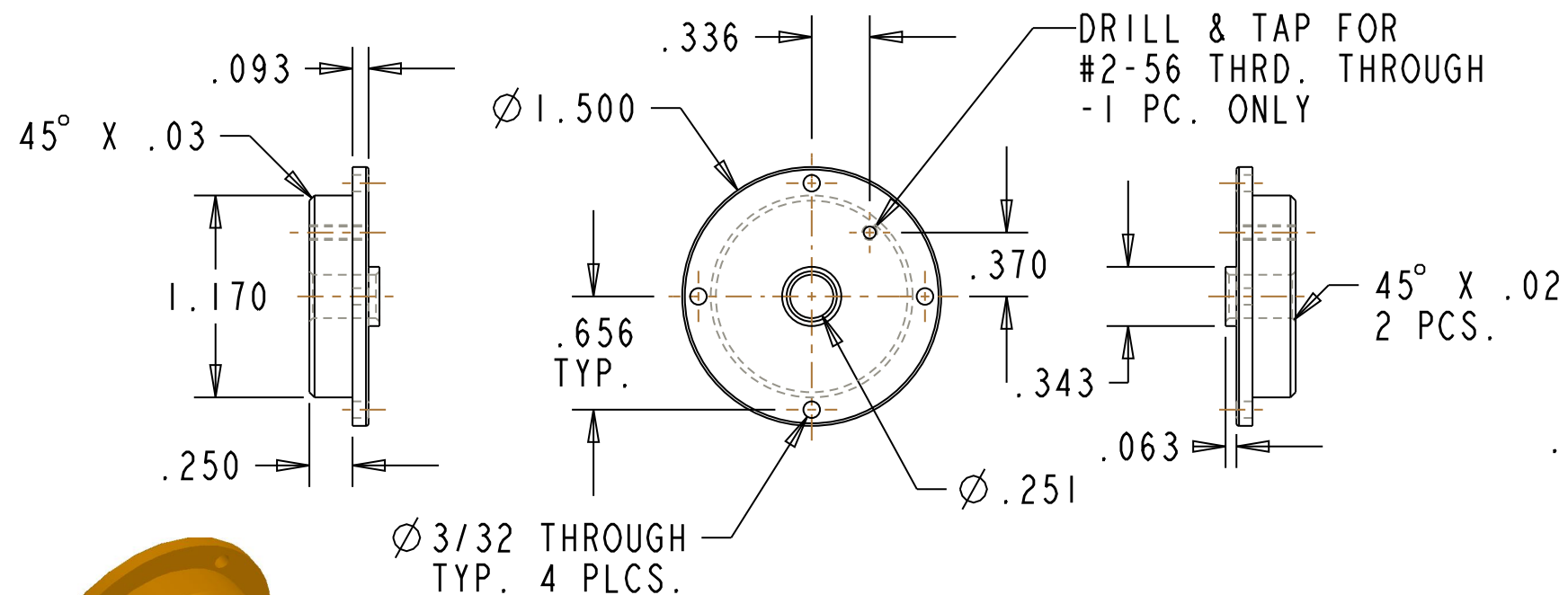
① CRANKCASE
MAT'L: AL.
REQ'D: 1 AS SHOWN

REV.	DATE	DESCRIPTION
0	3-17-2019	

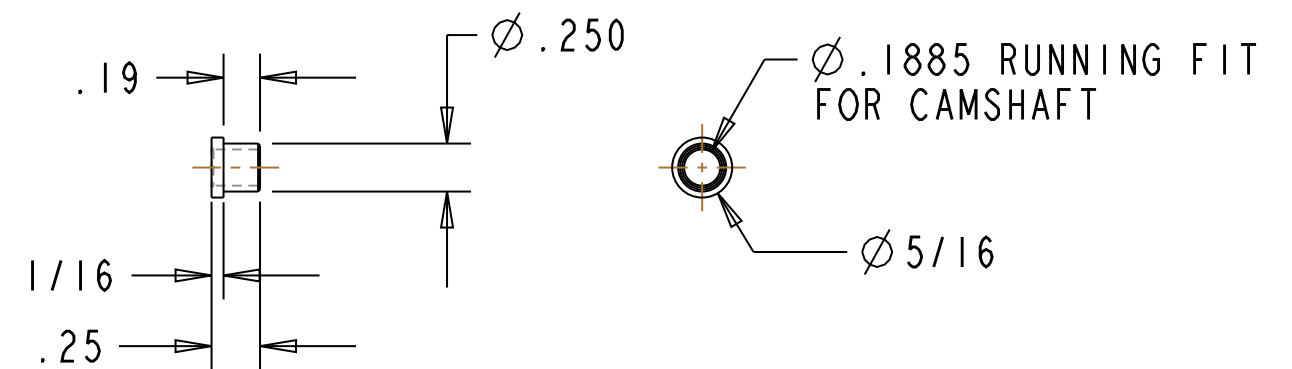
GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS JOHN DEERE ENGINE			
.XXX .XX ANGLES							
0.005 0.015 0.50				SIZE B	DRAWING NAME CRANKCASE		
DRAWN:	JCM	DATE	3-17-2019				
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 1



③ CAMSHAFT BEARINGS
2 REQ'D AS SHOWN
MAT'L: BRASS



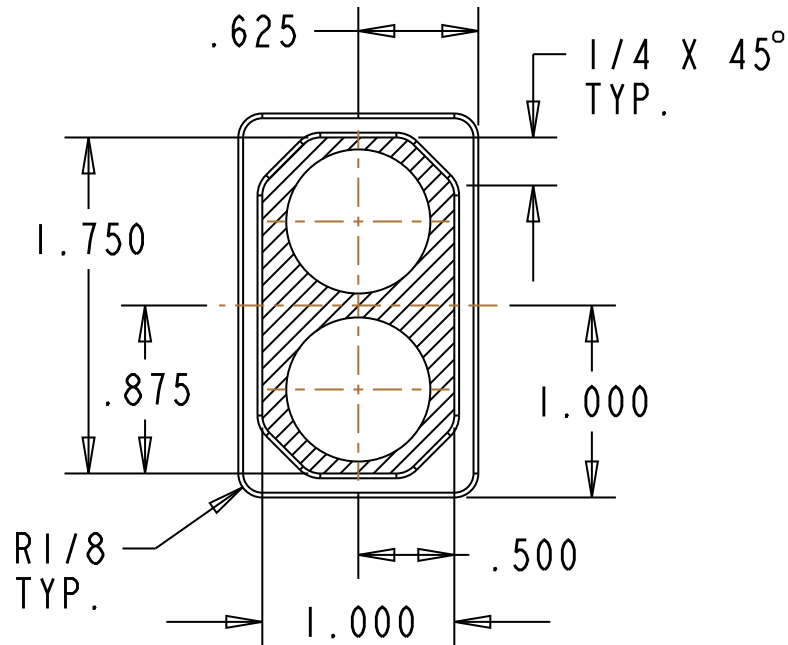
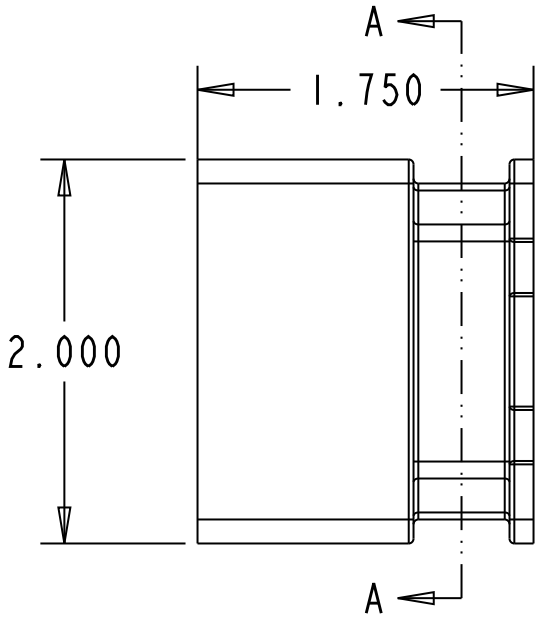
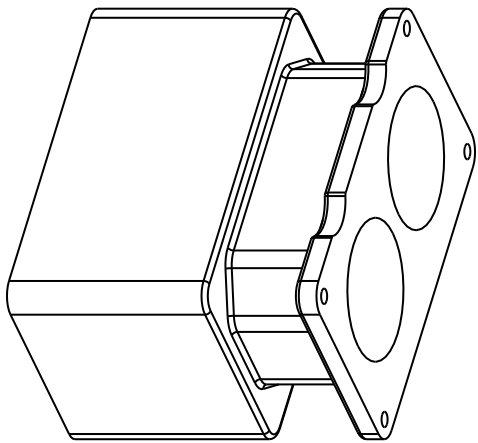
④ CRANKSHAFT BEARINGS
2 REQ'D EXCEPT AS SHOWN
MAT'L: BRASS



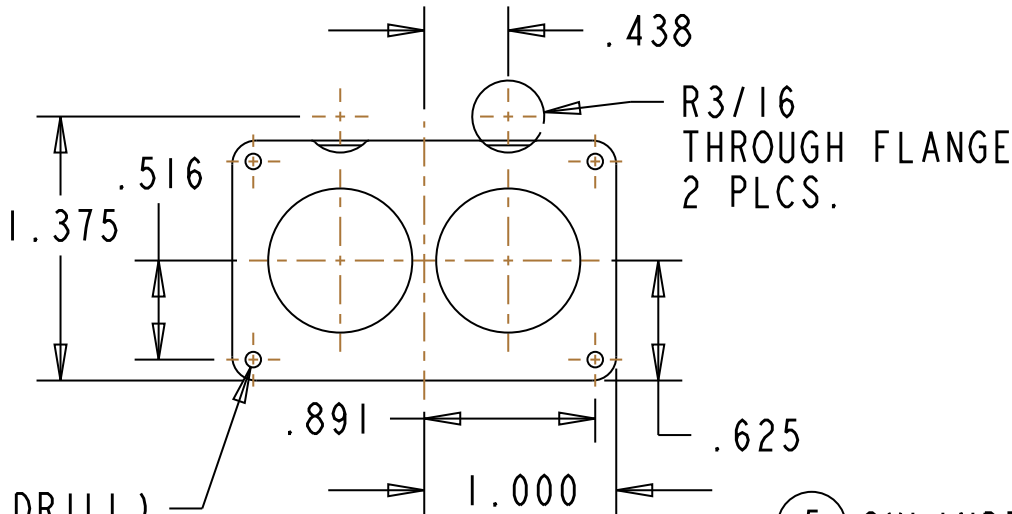
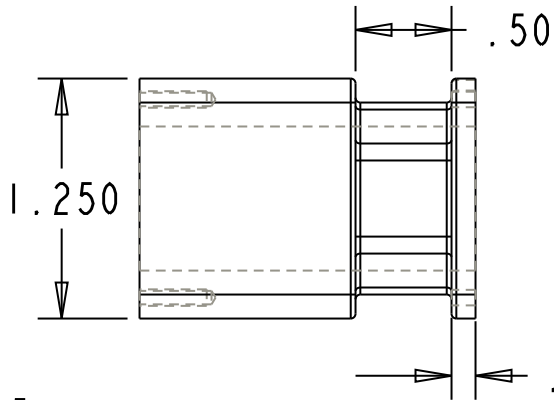
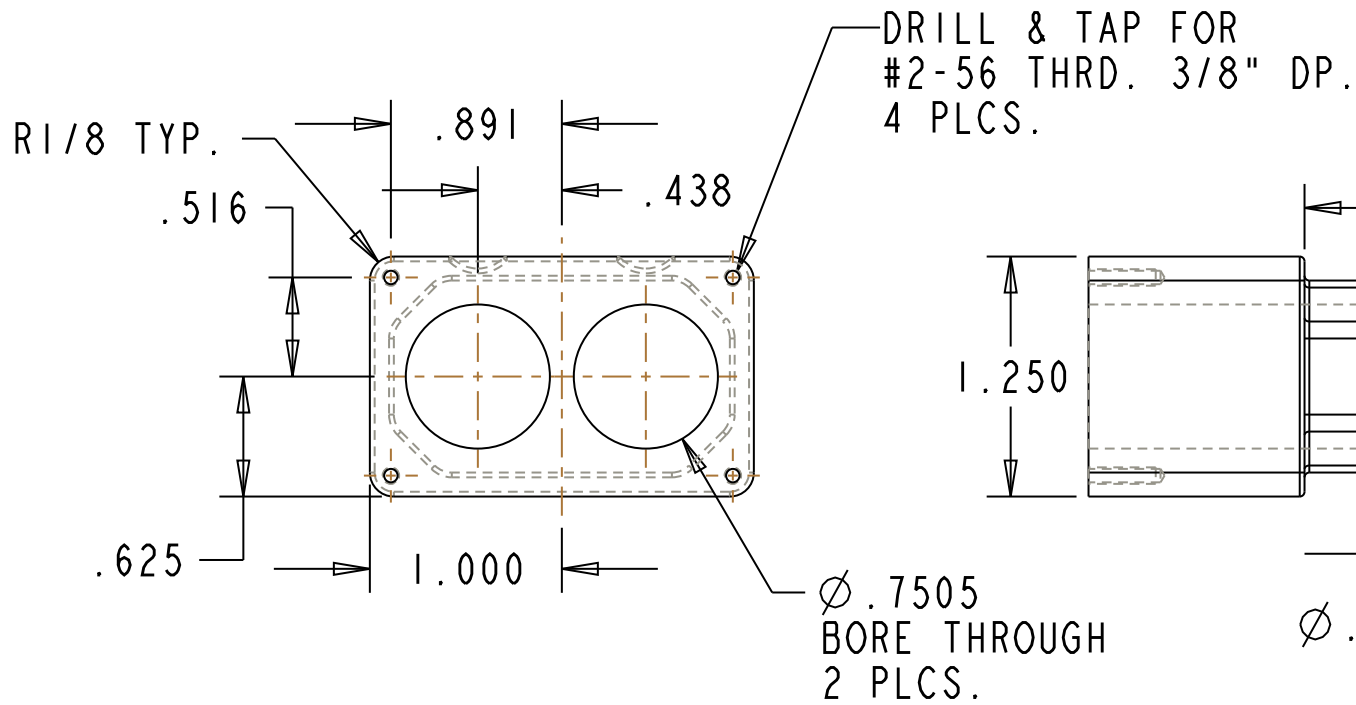
② PUSHROD BEARINGS
2 REQ'D AS SHOWN
MAT'L: BRASS

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	BEARINGS		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 1

ITEM NO.	DESCRIPTION	SIZE	MATERIAL	NOTES	QN'TY
1	CYLINDER BLOCK		AL.		1



SECTION A-A



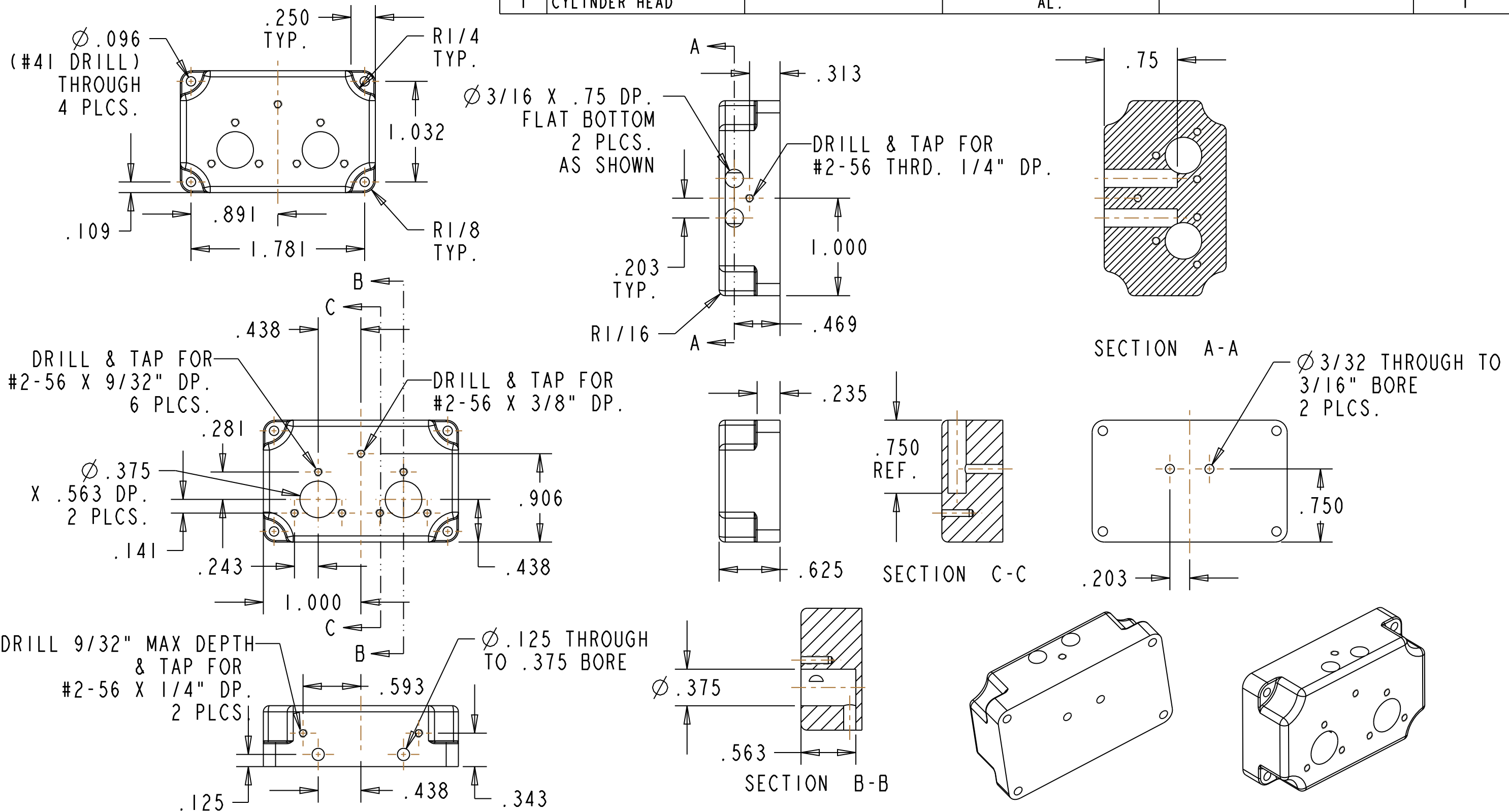
5 CYLINDER BLOCK
MAT'L: AL.
REQ'D: 1 AS SHOWN

HOLE DIM'S TYPICAL
ABOUT CENTERLINE

REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	CYLINDER BLOCK		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 1

ITEM NO.	DESCRIPTION	SIZE	MATERIAL	NOTES	QN'TY
1	CYLINDER HEAD		AL.		1

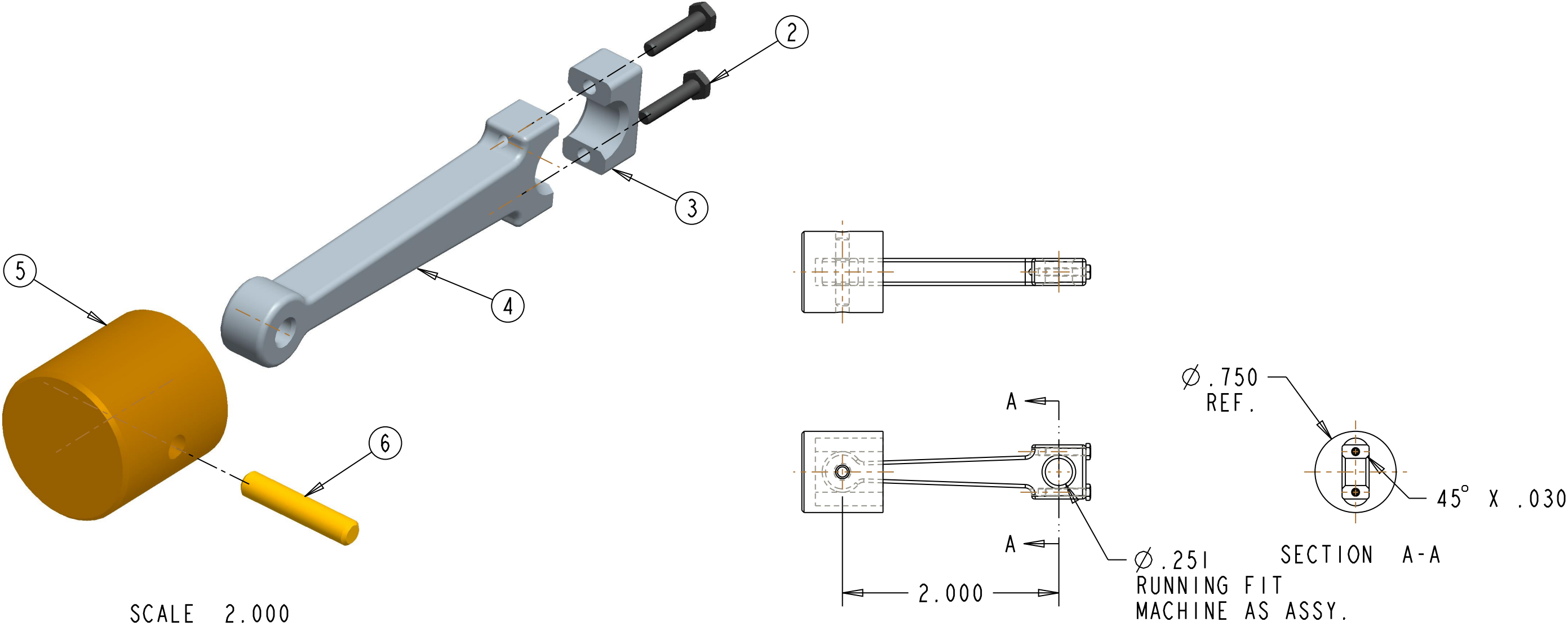


6 CYLINDER HEAD
MAT'L: AL.
REQ'D: 1 AS SHOWN

REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS JOHN DEERE ENGINE			
.XXX .XX ANGLES							
0.005 0.015 0.50							
DRAWN:	JCM	DATE	3-17-2019	SIZE	DRAWING NAME		
CHECKED:		DATE		B	CYLINDER HEAD		
				SCALE: 1:1	DWG. NO.:	SHEET	1 OF 1

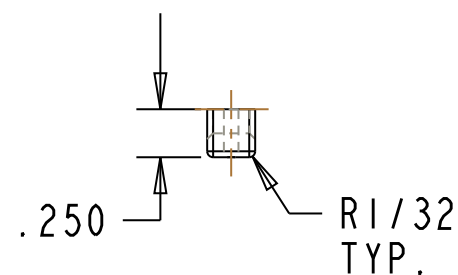
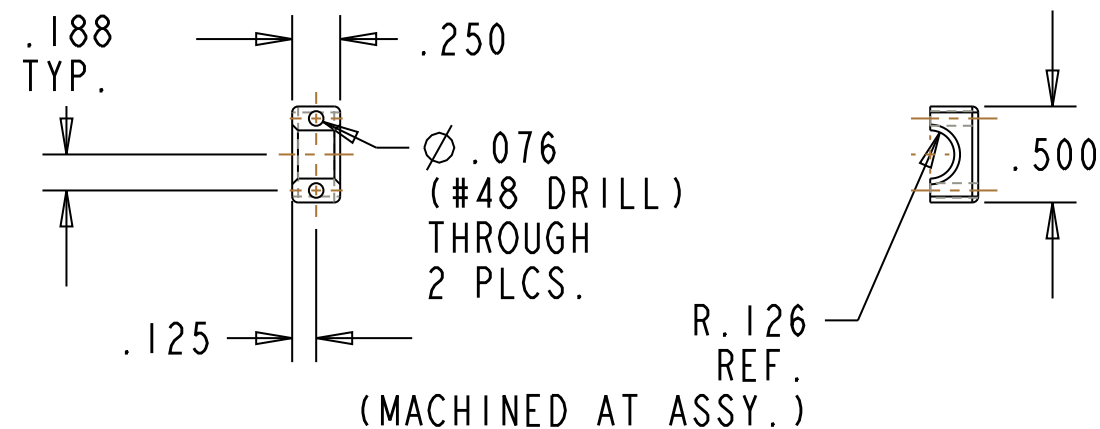
ITEM NO.	DESCRIPTION	MATERIAL	SIZE	NOTES	QN'TY
1	CON. ROD ASSY.				1
2	HH SCREW	STK.	#1-72 X 3/8" LG		2
3	CON. ROD CAP	AL.			1
4	CON. ROD	AL.			1
5	PISTON	BRASS			1
6	PISTON PIN	BRASS			1



⑧ CONNECTING ROD ASSEMBLY
REQ'D: 2 AS SHOWN

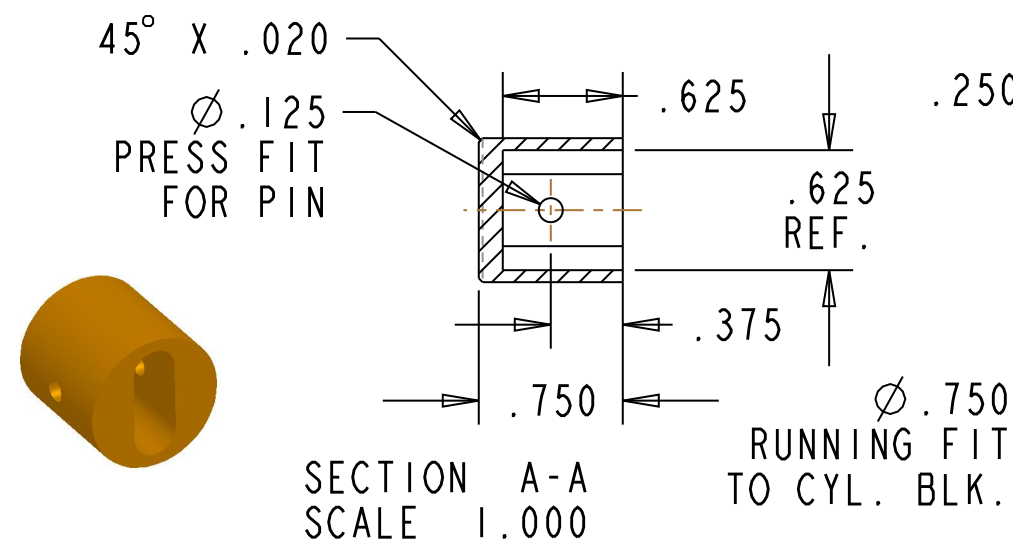
REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS JOHN DEERE ENGINE			
.XXX .XX ANGLES				SIZE B	DRAWING NAME		
0.005	0.015	0.50			CONNECTING ROD ASSEMBLY		
DRAWN:	JCM	DATE	3-17-2019				
CHECKED:		DATE					
				SCALE: 1:1	DWG. NO.:	SHEET	1 OF 2

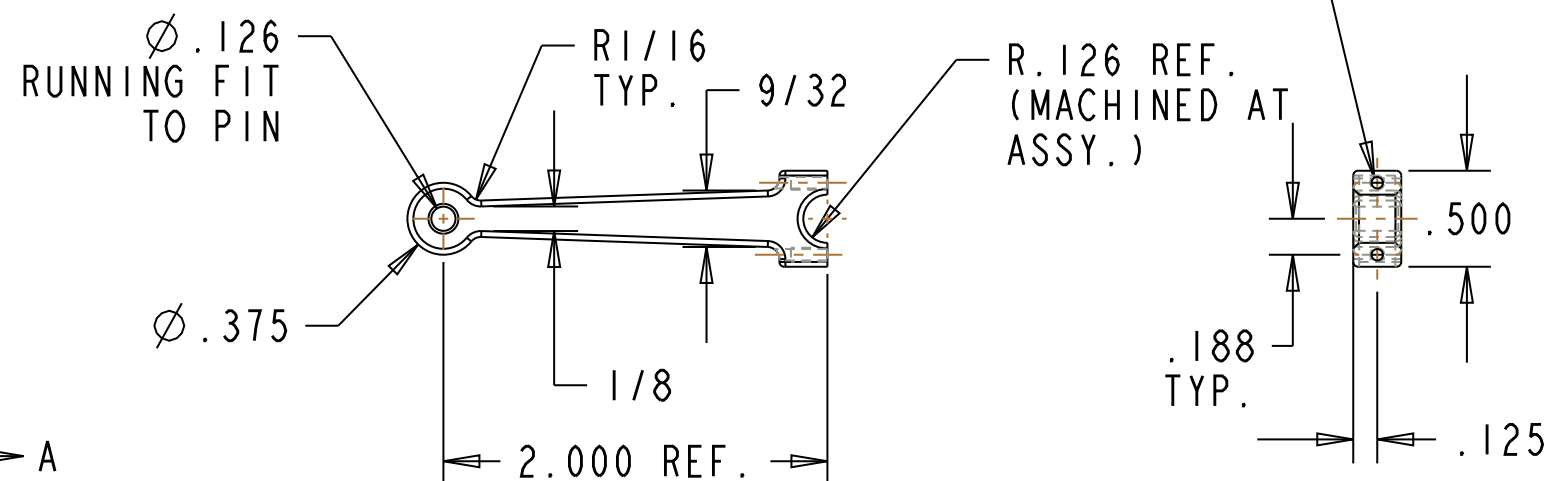


- ③ CON. ROD CAP
MAT'L: AL.
REQ'D: 2 AS SHOWN

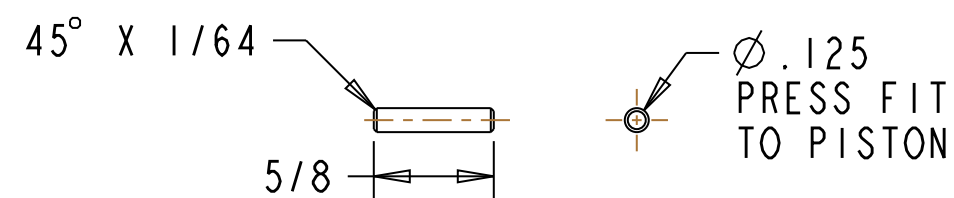
SCALE 2.000



- ⑤ PISTON
MAT'L: BRASS
REQ'D: 2 AS SHOWN



- ④ CONNECTING ROD
MAT'L: AL.
REQ'D: 2 AS SHOWN

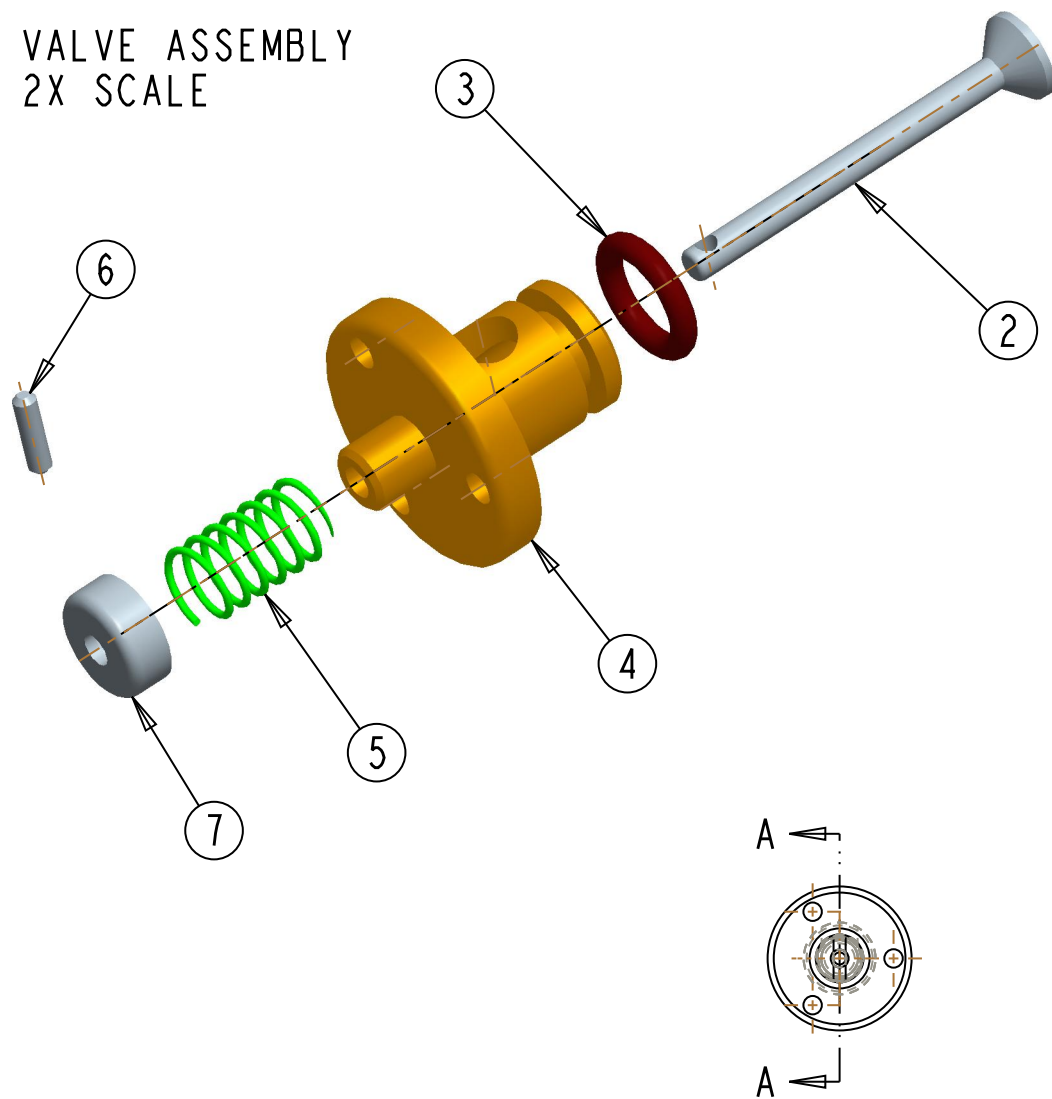


- ⑥ PISTON PIN
MAT'L: BRASS
REQ'D: 2 AS SHOWN

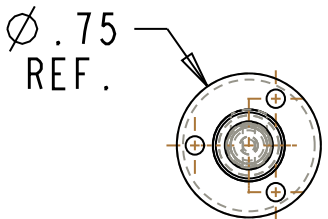
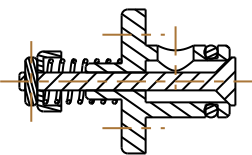
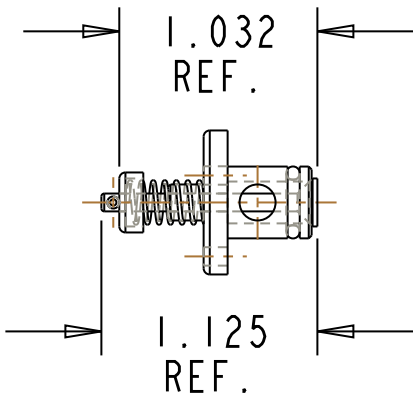
REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS JOHN DEERE ENGINE				
.XXX .XX ANGLES								
0.005 0.015 0.50				SIZE B	DRAWING NAME CONNECTING ROD ASSEMBLY			
DRAWN:	JCM	DATE	3-17-2019					
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	2 OF 2	

VALVE ASSEMBLY
2X SCALE



ITEM NO.	DESCRIPTION	MATERIAL	SIZE	NOTES	QN'TY
1	VALVE ASSEMBLY				1
2	VALVE	C.R.S.			1
3	O-RING	STK.	1/16 X 3/8" O.D.		1
4	VALVE CAGE	BRASS			1
5	VALVE SPRING	STK.	.016 X 1/2" LG.		1
6	RETAINING PIN	C.R.S.			1
7	VALVE SPRING RETAINER	C.R.S.			1

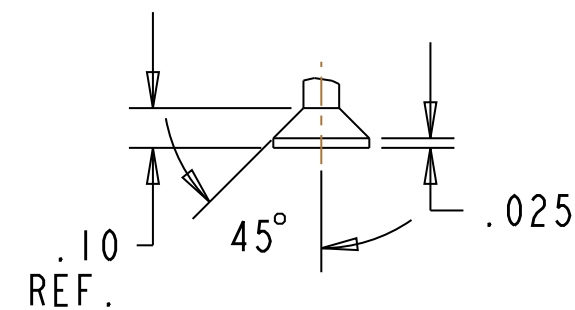
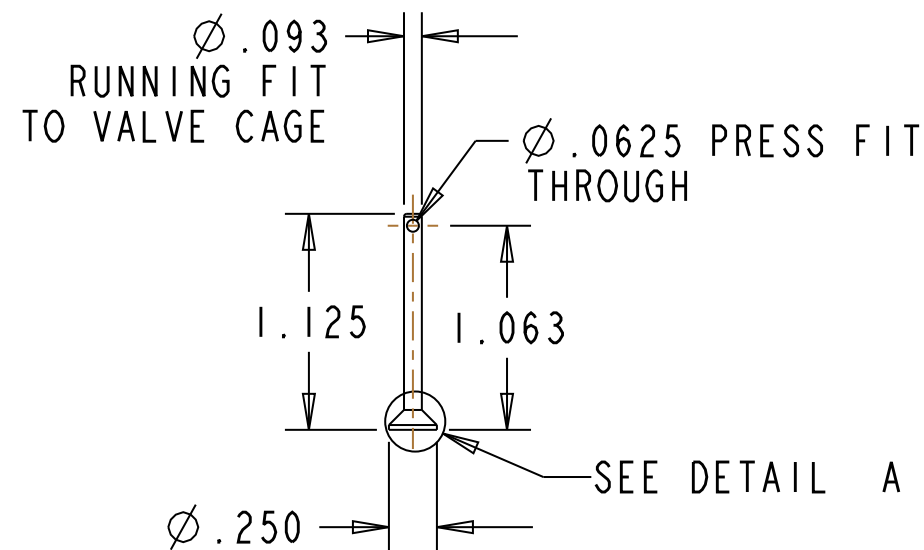


SECTION A-A
SCALE 1.000

12 VALVE ASSEMBLY
2 ASSEMBLIES REQ'D AS SHOWN

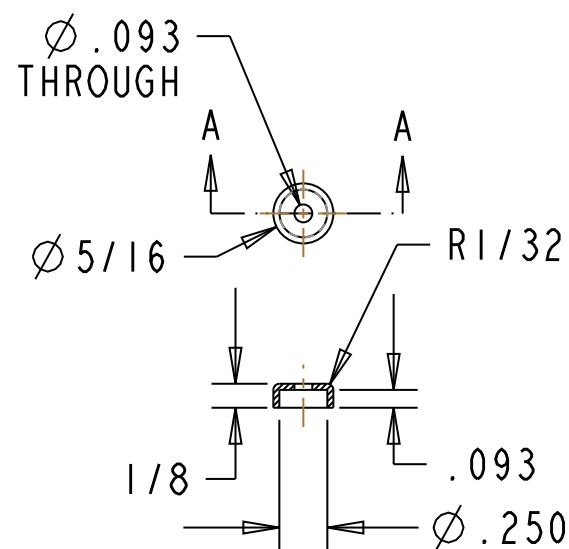
REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	VALVE ASSEMBLY		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 2

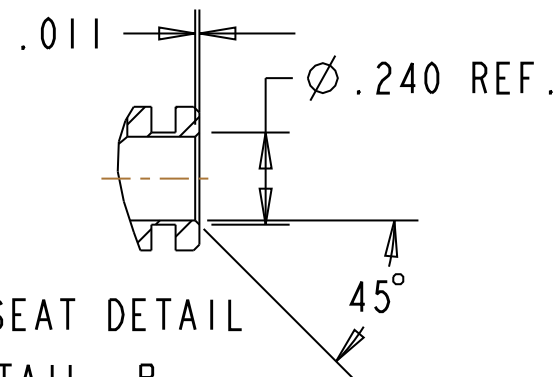


DETAIL A
SCALE 2.000

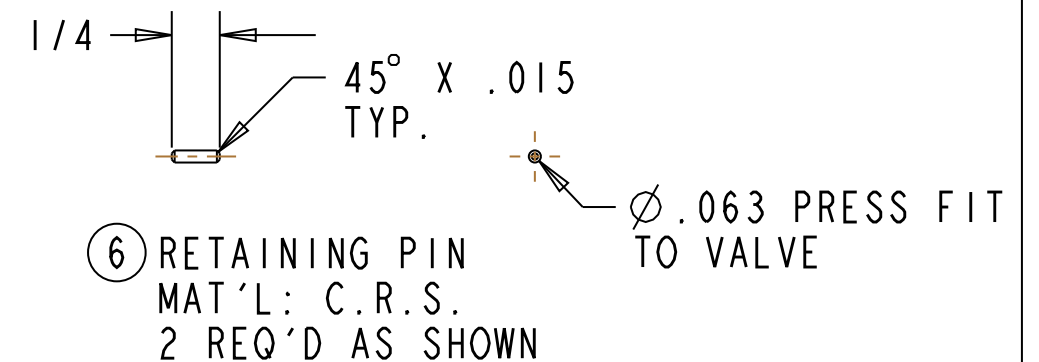
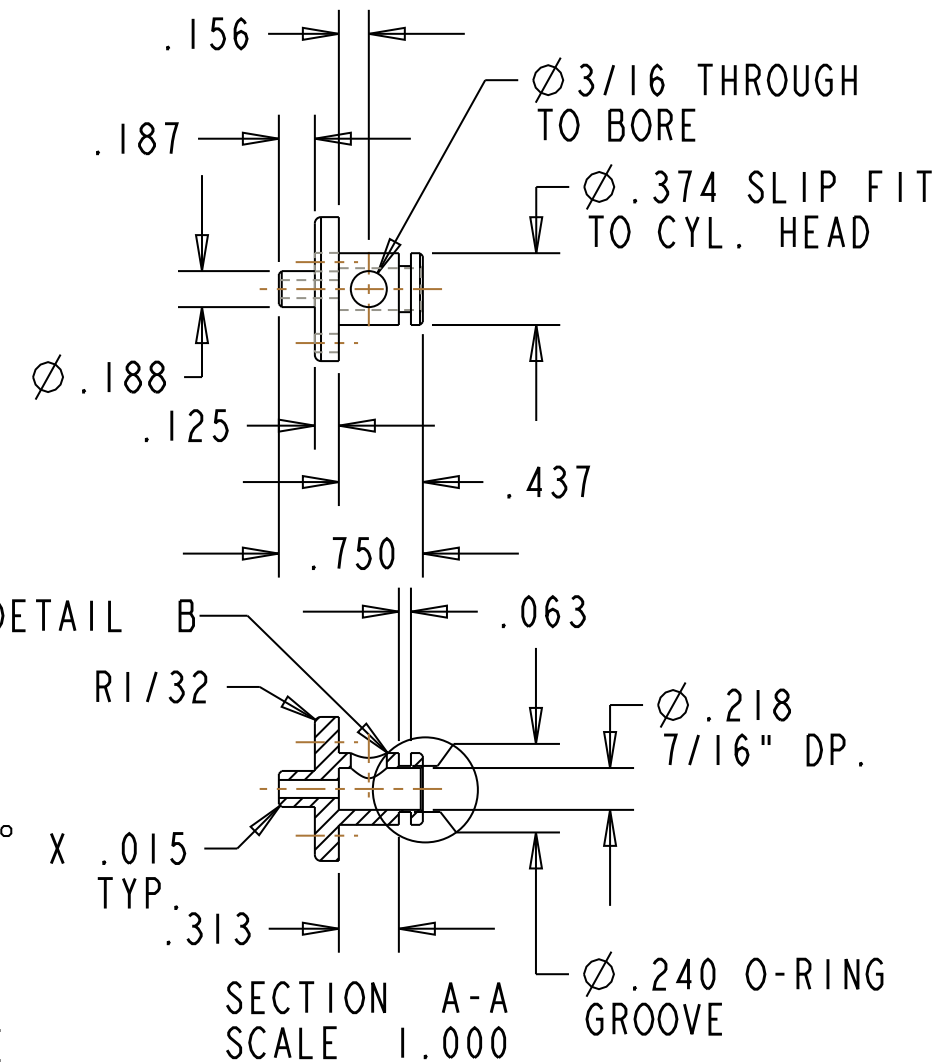
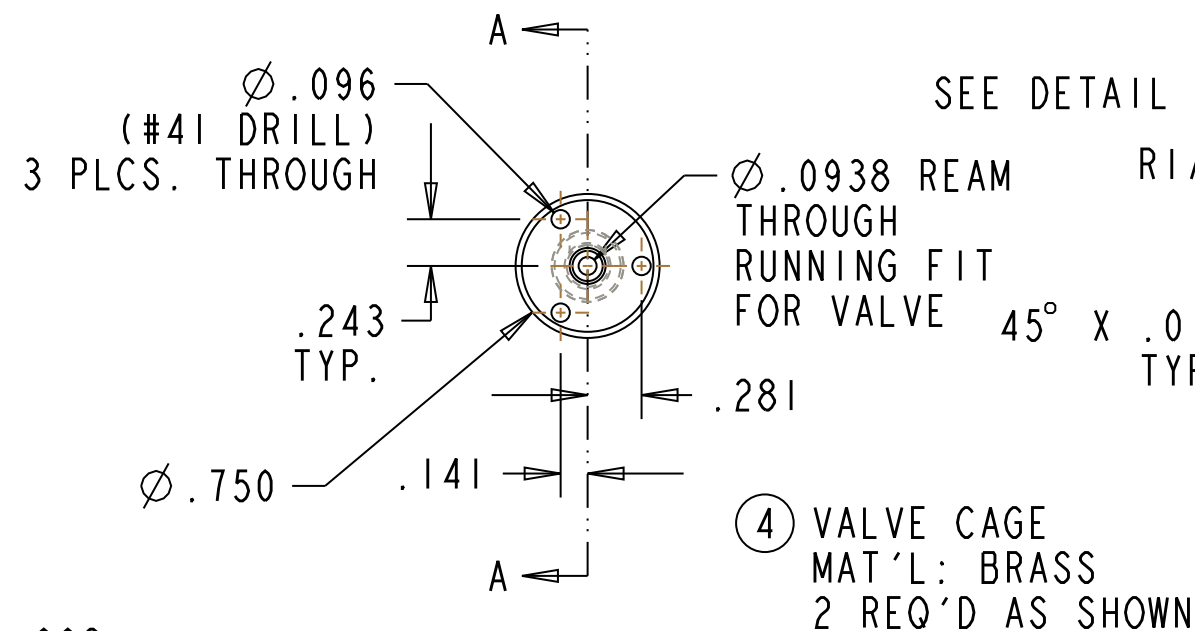
② VALVE
MAT'L: C.R.S.
2 REQ'D AS SHOWN



SECTION A-A
SCALE 1.000



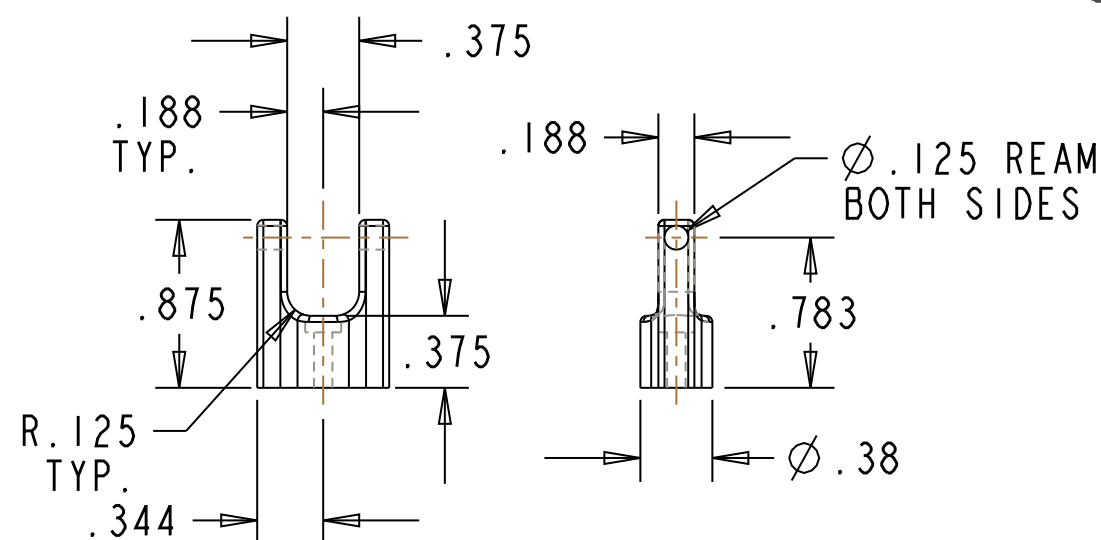
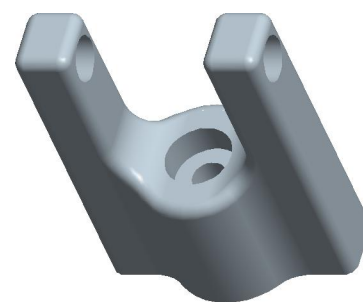
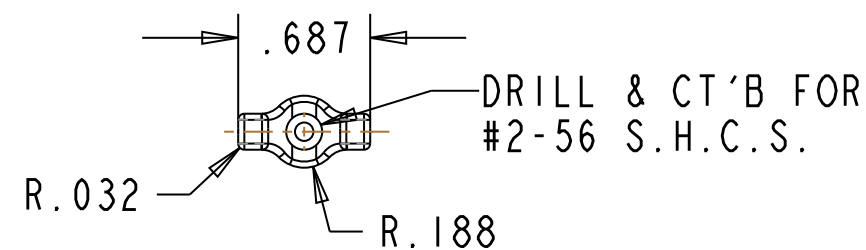
VALVE SEAT DETAIL
DETAIL B
SCALE 2.000



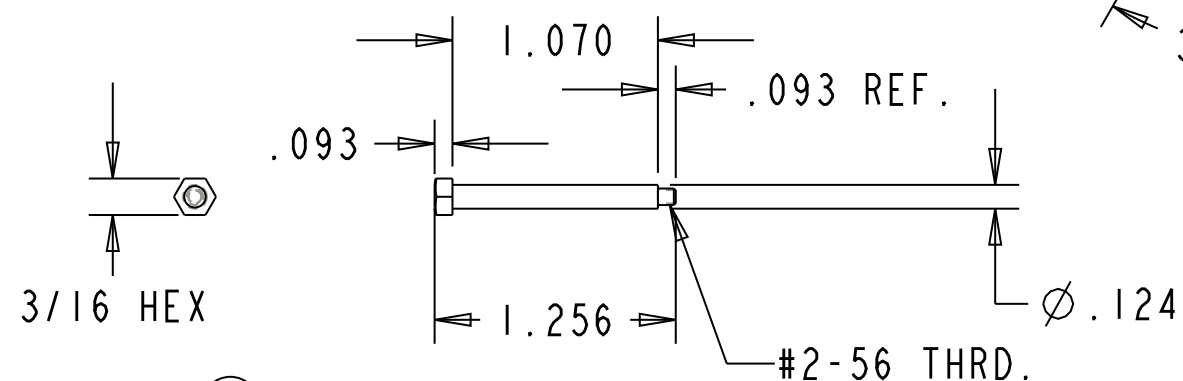
⑦ VALVE SPRING RETAINER
MAT'L: C.R.S.
2 REQ'D AS SHOWN

REV.	DATE	DESCRIPTION
0	3-17-2019	

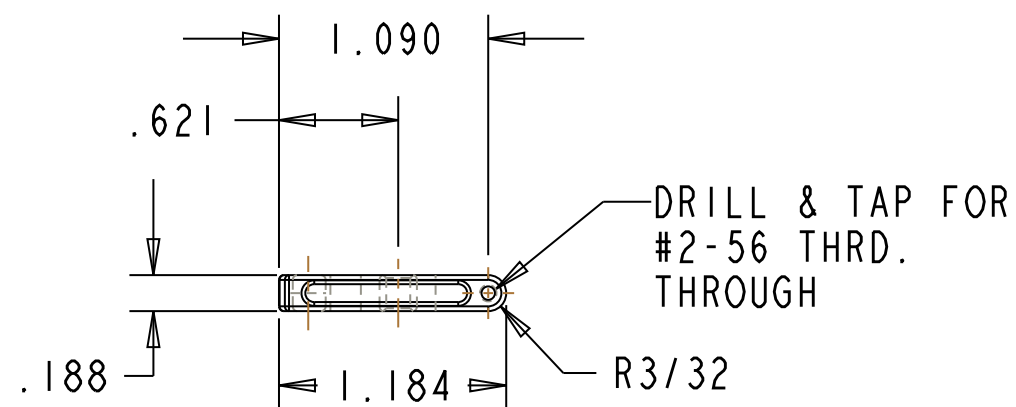
GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS JOHN DEERE ENGINE			
.XXX .XX ANGLES							
0.005 0.015 0.50							
DRAWN:	JCM	DATE	3-17-2019	SIZE	DRAWING NAME		
CHECKED:		DATE		B	VALVE ASSEMBLY		
				SCALE: 1:1	DWG. NO.:	SHEET	2 OF 2



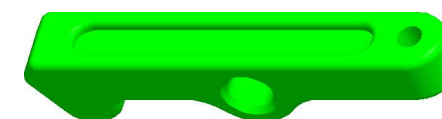
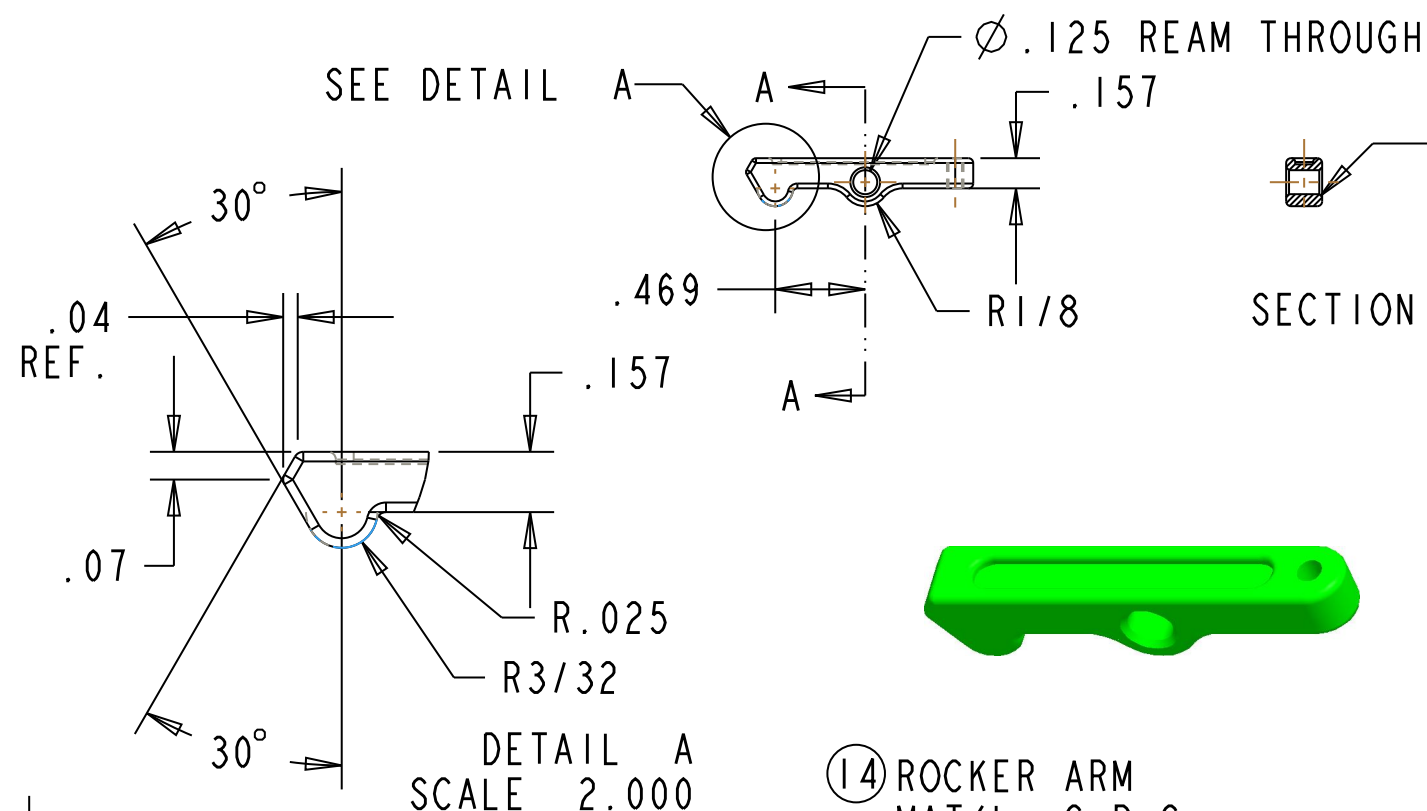
⑬ ROCKER STAND
MAT'L: AL.
REQ'D: 1 AS AS SHOWN



⑮ ROCKER SHAFT
MAT'L: DRILL ROD
REQ'D: 1 AS AS SHOWN



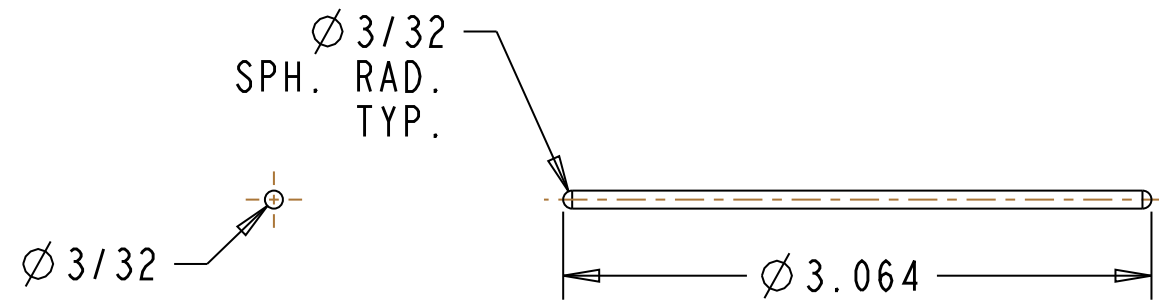
SEE DETAIL A



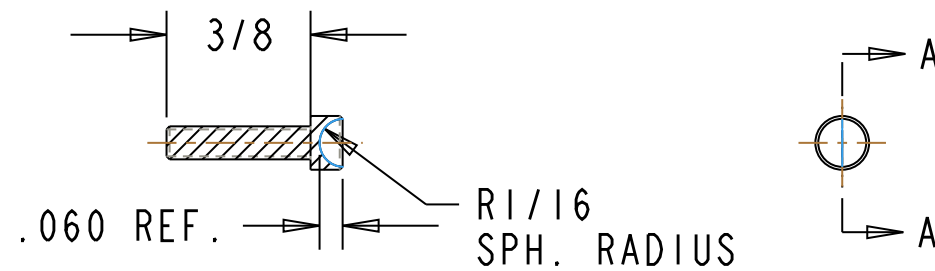
⑭ ROCKER ARM
MAT'L: C.R.S.
REQ'D: 2 AS AS SHOWN

REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	CYLINDER HEAD PARTS		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 2

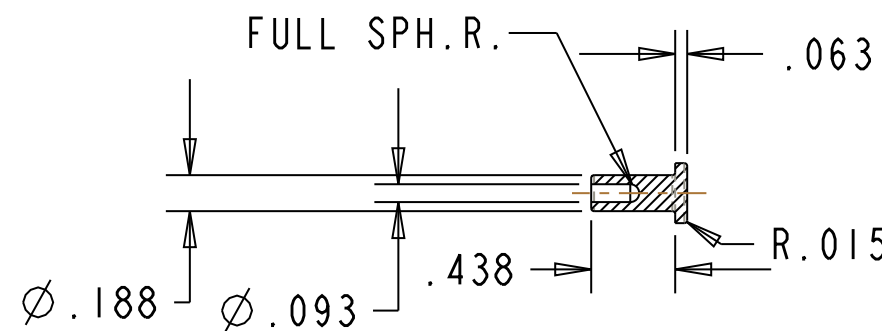


(20) PUSH ROD
MAT'L: DRILL ROD
REQ'D: 2 AS AS SHOWN



SECTION A-A
SCALE 2.000

(17) ROCKER ADJUSTING SCREW
MAKE FROM #2-56 X #1/8" S.H.C.S.
REQ'D: 2 AS SHOWN

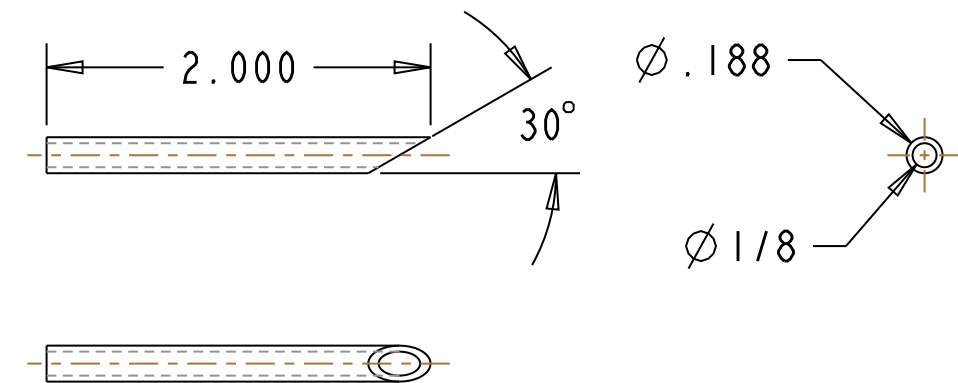
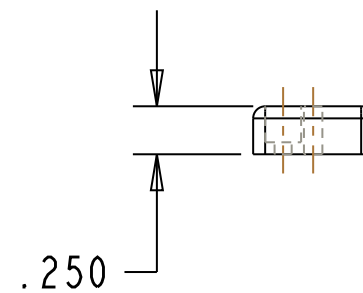
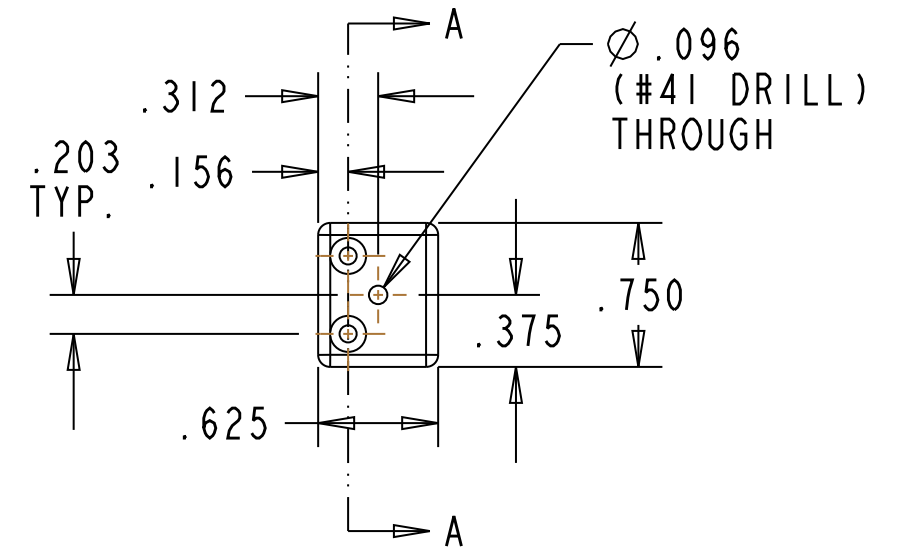


SECTION A-A
SCALE 1.000

(19) VALVE LIFTER
MAT'L: C.R.S.
REQ'D: 2 AS SHOWN



(21) EXHAUST FLANGE
MAT'L: C.R.S.
REQ'D: 1 AS AS SHOWN

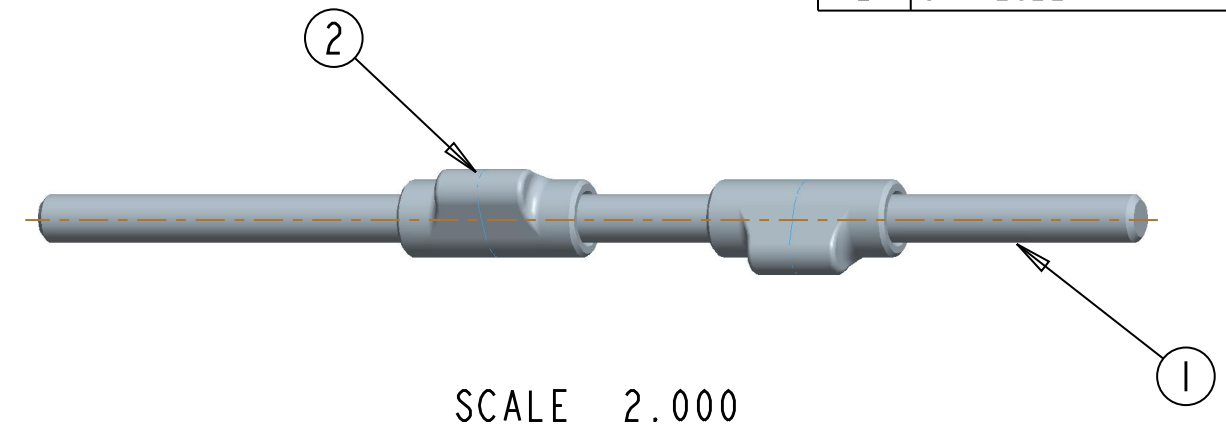


(22) EXHAUST PIPE
MAT'L: BRASS
REQ'D: 2 AS SHOWN
SOLDER TO EXHAUST FLANGE

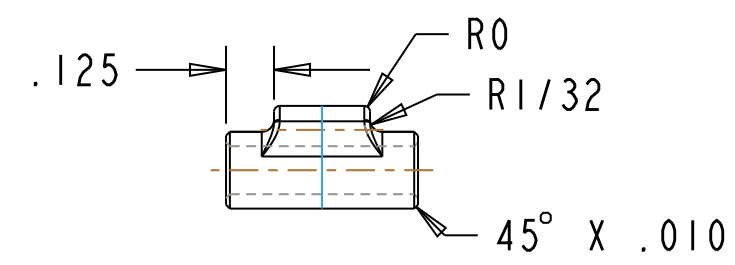
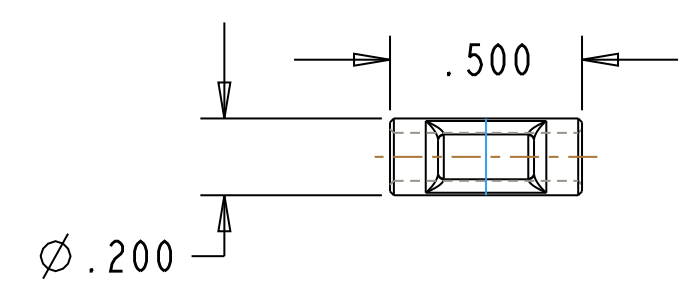
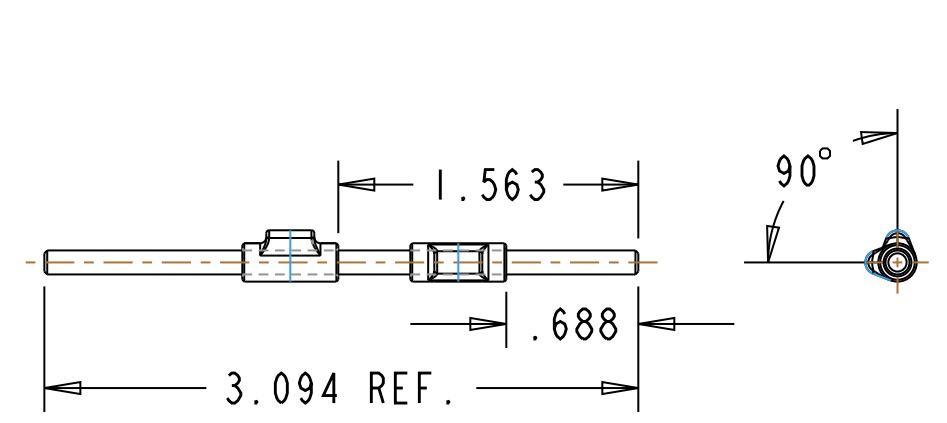
REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	CYLINDER HEAD PARTS		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	2 OF 2

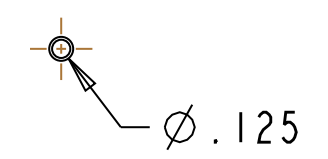
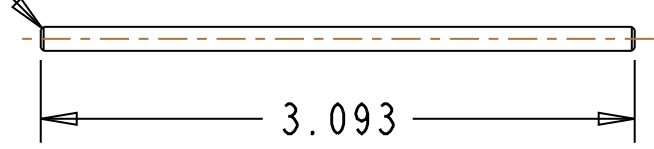
SOLDER AT ASSEMBLY



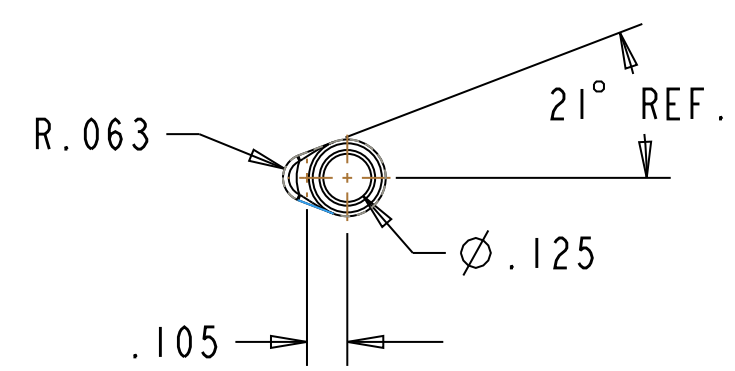
SCALE 2.000



45° X .015



① CAMSHAFT
MAT'L: DRILL ROD
REQ'D: 1 AS SHOWN

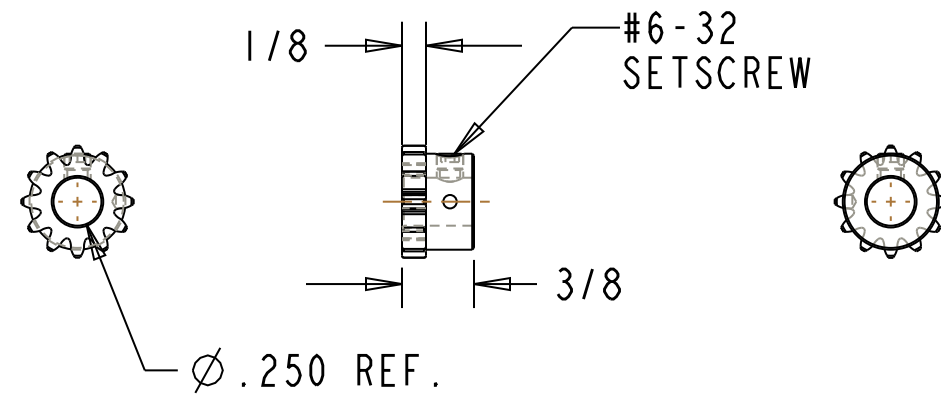


② CAM LOBE
MAT'L: DRILL ROD
REQ'D: 2 AS SHOWN

ITEM NO.	DESCRIPTION	SIZE	MATERIAL	NOTES	QN'TY
1	CAMSHAFT		DRILL ROD		1
2	CAM LOBE		DRILL ROD		2

REV.	DATE	DESCRIPTION
0	3-17-2019	

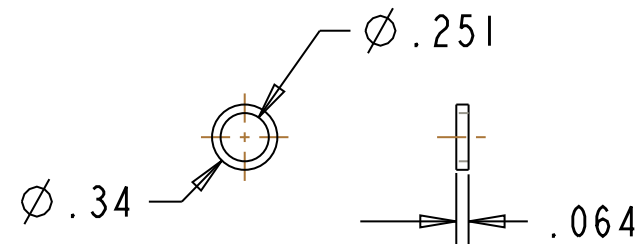
GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	CAMSHAFT ASSEMBLY		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 1



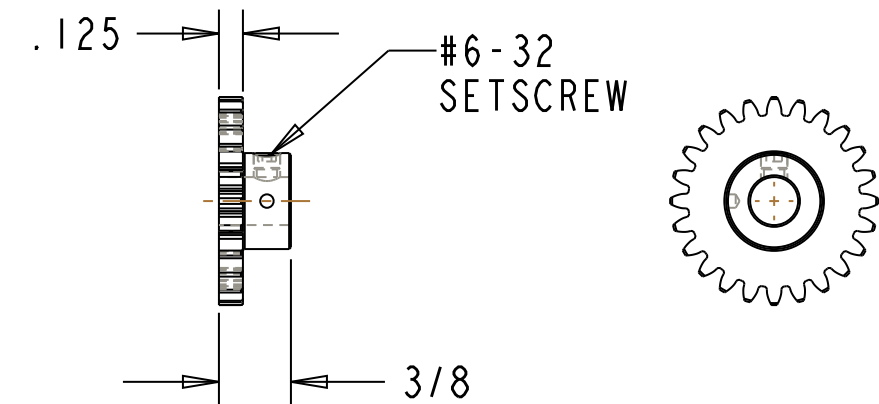
- (23) SPUR GEAR (DRIVER)
MAT'L: SS
REQ'D: 1
12T 24P 20° PA
SDP/SI #SI066Z-024S012



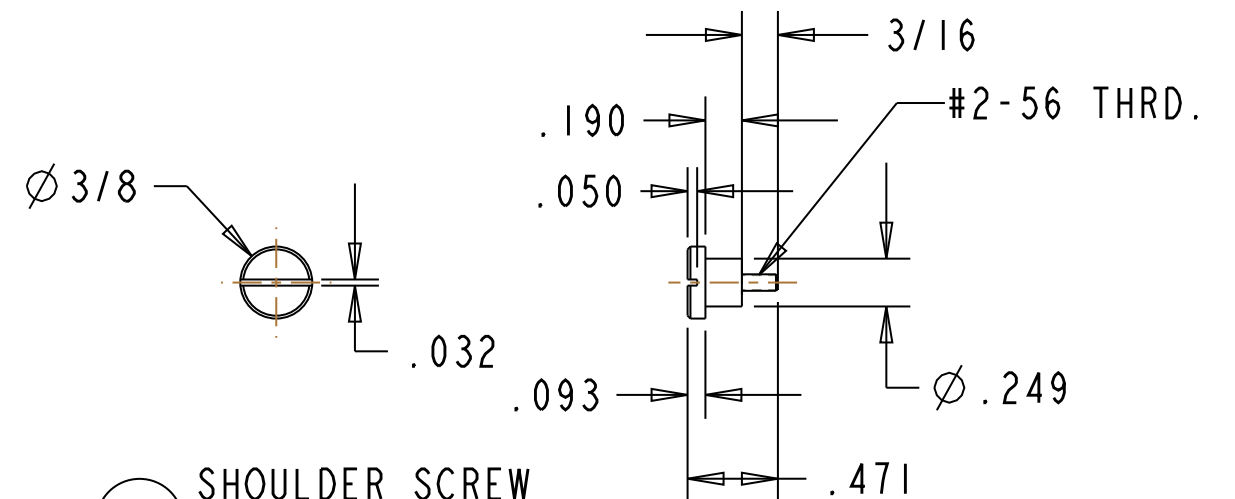
- (24) SPUR GEAR (IDLER)
MAT'L: SS
REQ'D: 1
12T 24P 20° PA
SDP/SI #SI066Z-024S012
MODIFIED AS SHOWN



- (32) GEAR WASHER
MAT'L: BRASS
REQ'D: 1



- (25) SPUR GEAR (DRIVEN)
MAT'L: SS
REQ'D: 1
24T 24P 20° PA
SDP/SI #SI066Z-024S024

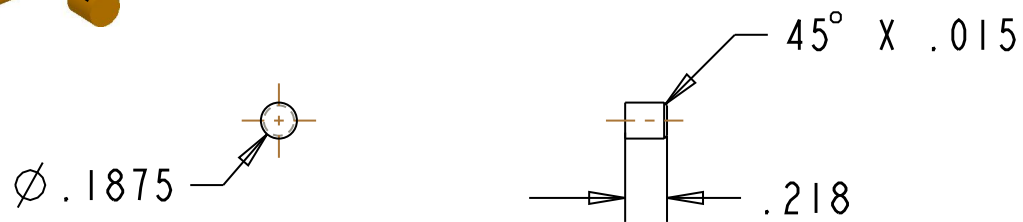
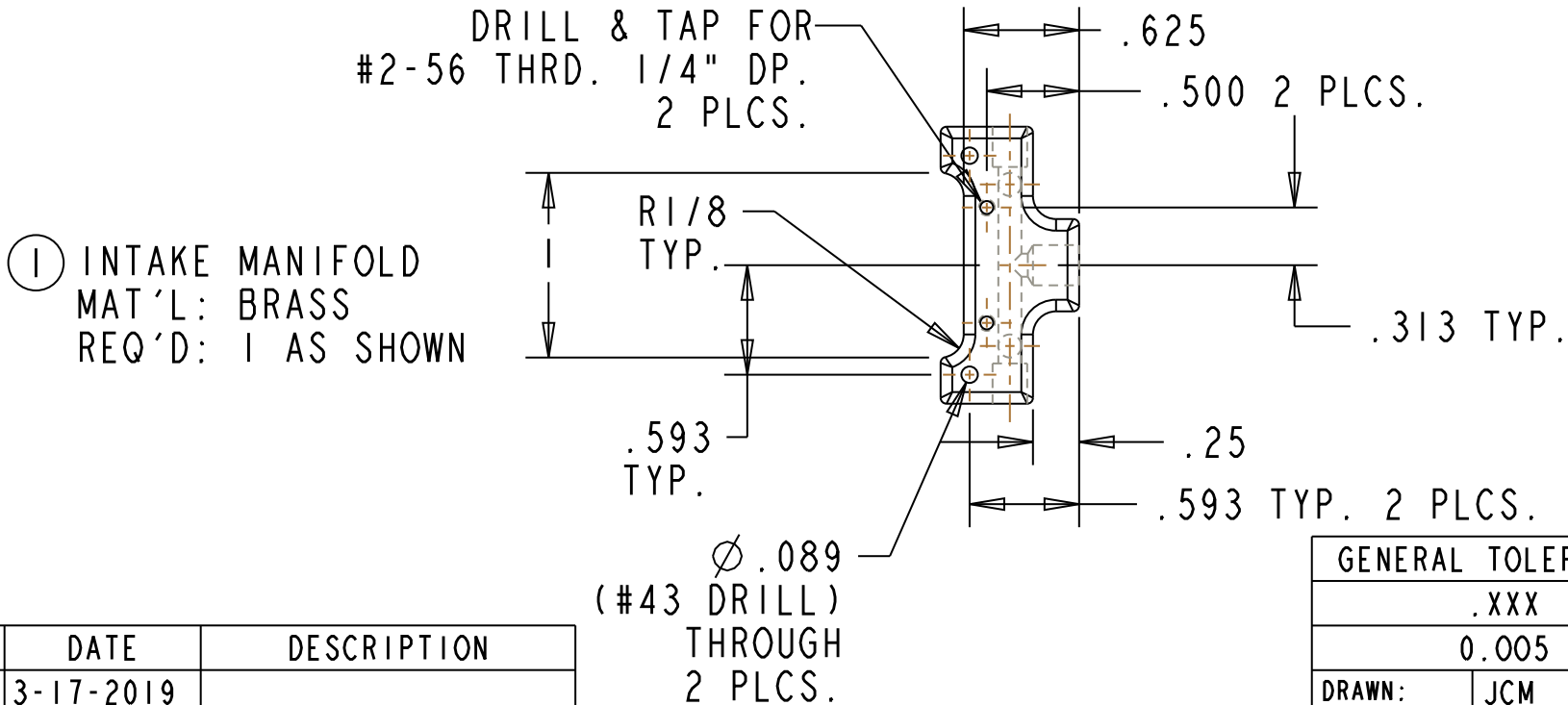
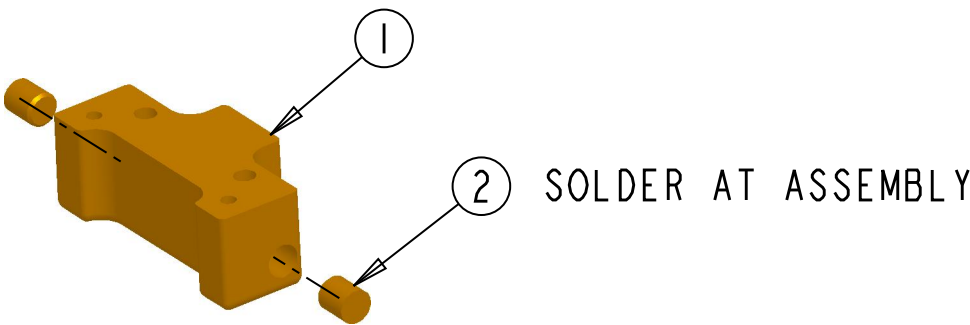
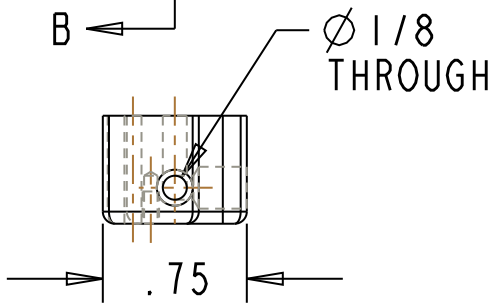
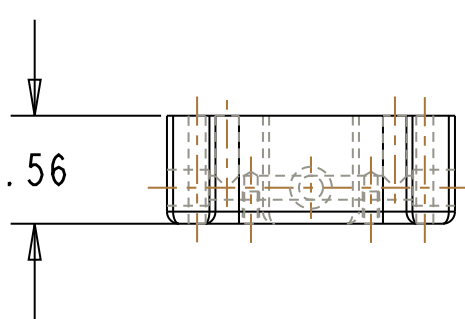
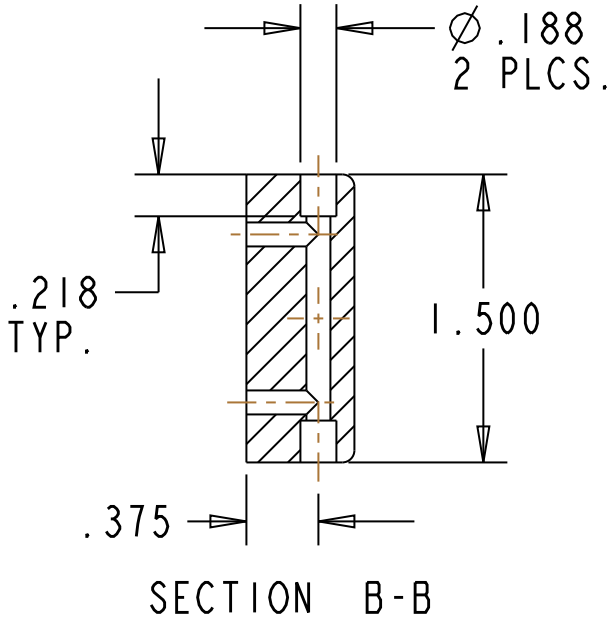
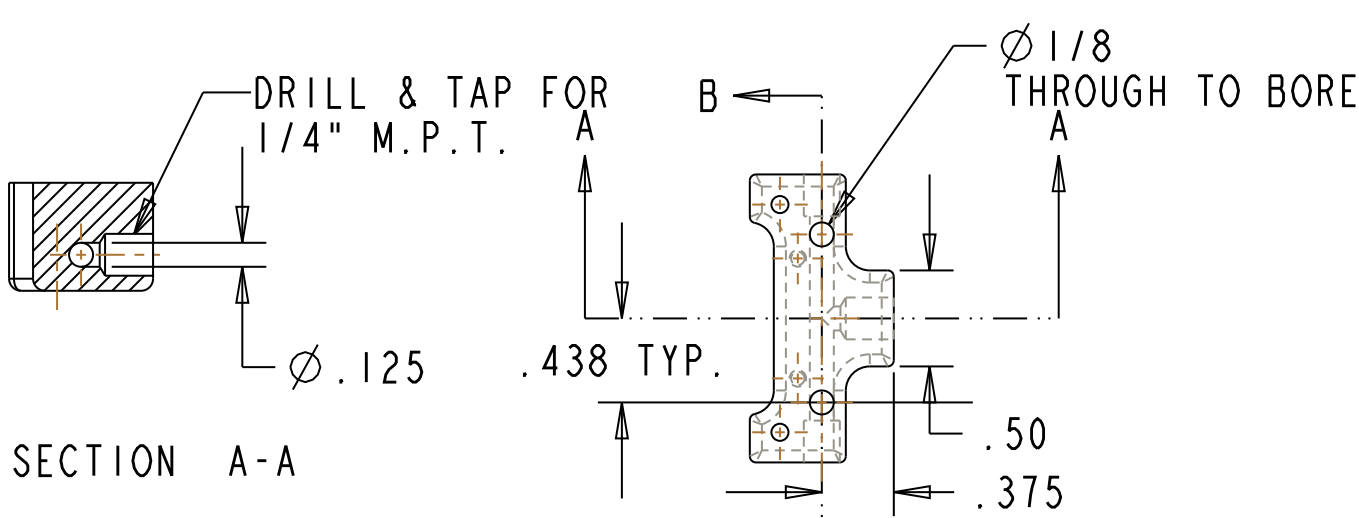


- (31) SHOULDER SCREW
MAT'L: C.R.S.
REQ'D: 1

REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	GEARTRAIN PARTS		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 1

ITEM NO.	DESCRIPTION	SIZE	MATERIAL	NOTES	QN'TY
1	INTAKE MANIFOLD		BRASS		1
2	PLUG		BRASS		2



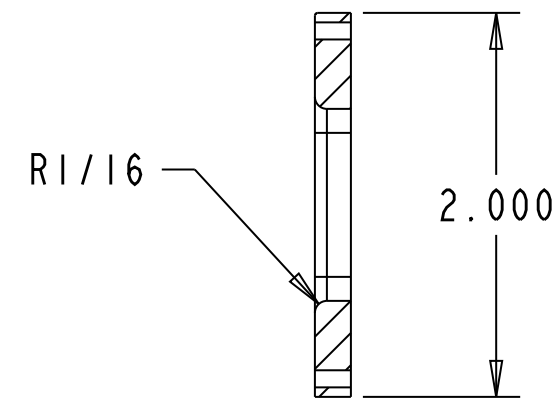
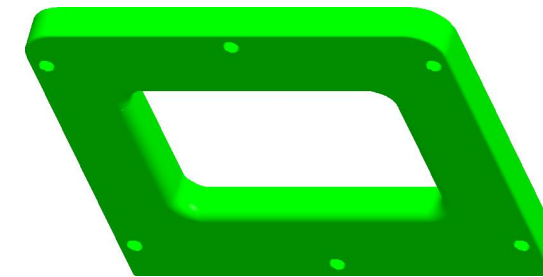
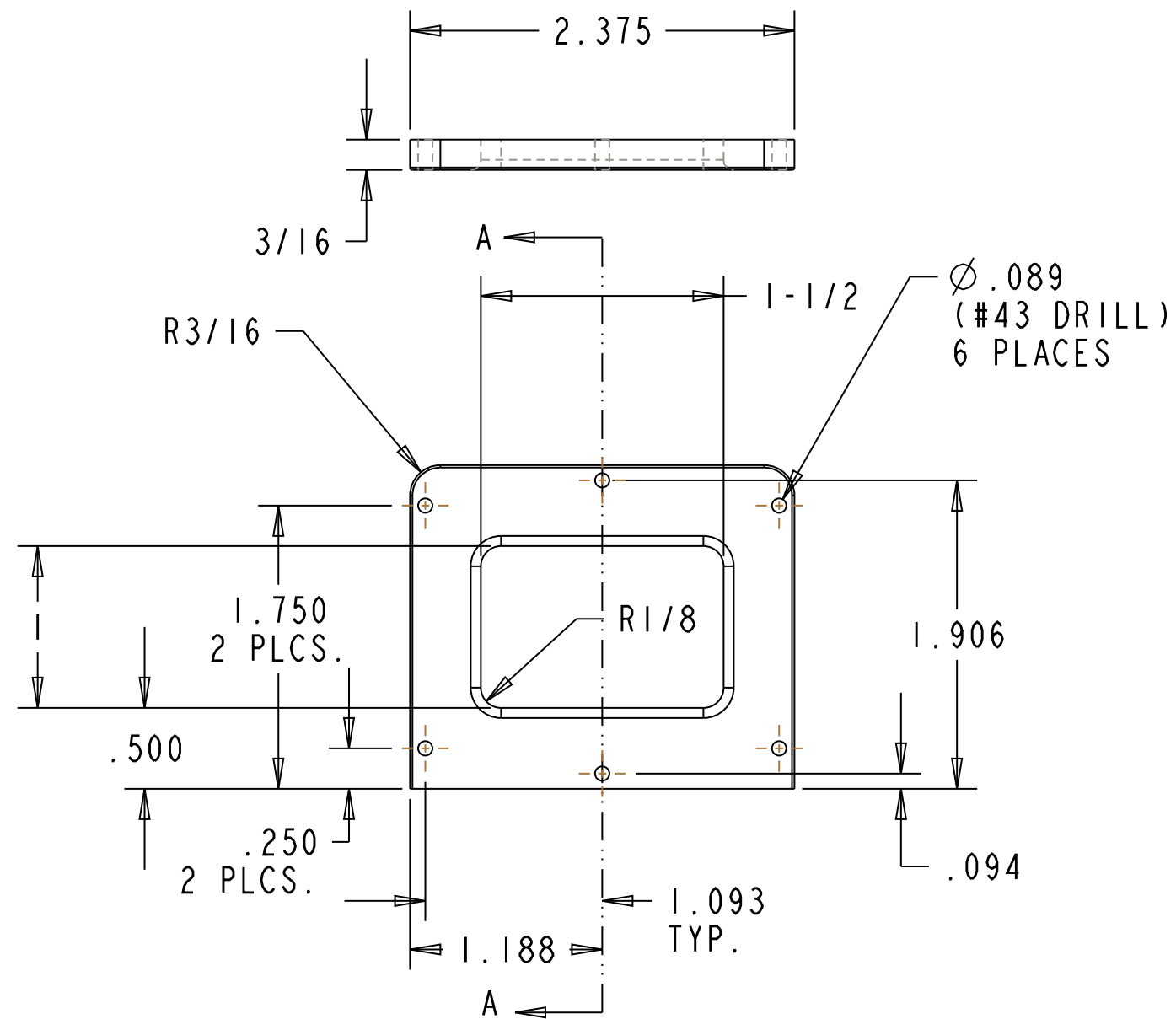
1 INTAKE MANIFOLD
MAT'L: BRASS
REQ'D: 1 AS SHOWN

2 PLUG
MAT'L: BRASS
REQ'D: 2 AS SHOWN

36 INTAKE MANIFOLD ASSEMBLY
MAT'L: BRASS
REQ'D: 1 AS SHOWN

REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS JOHN DEERE ENGINE			
.XXX .XX ANGLES							
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	INTAKE MANIFOLD		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 1



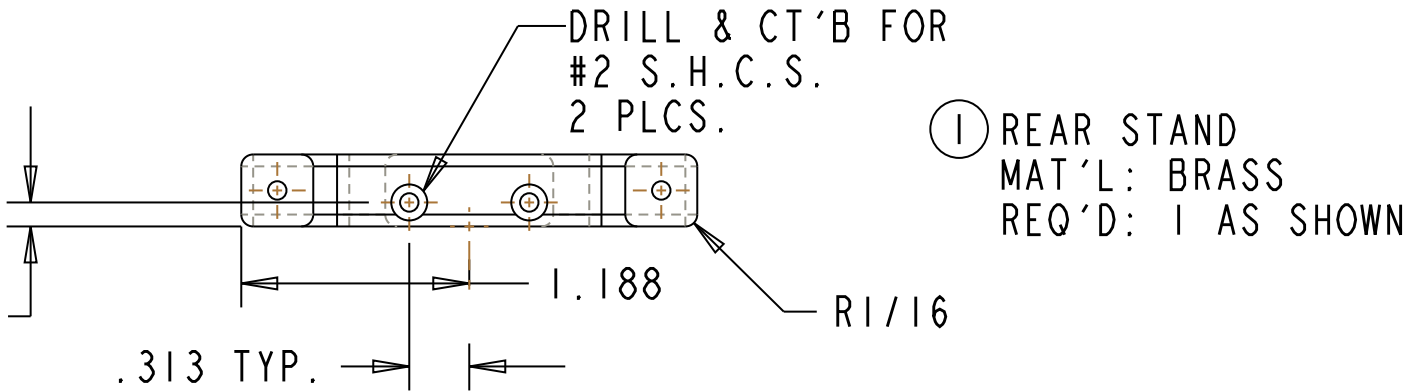
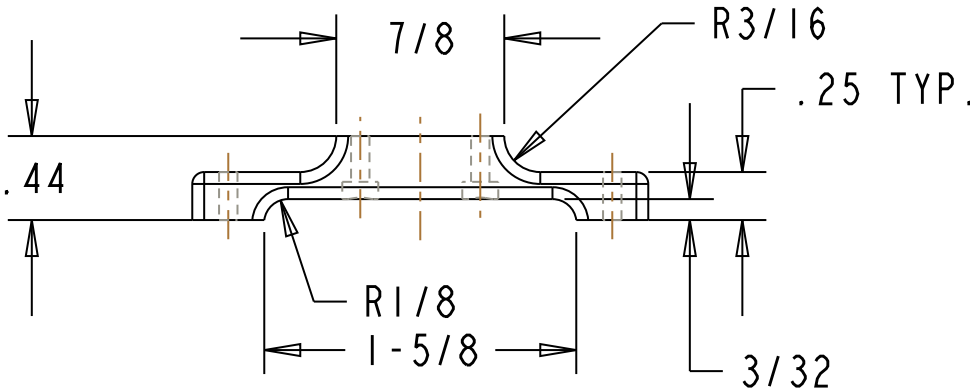
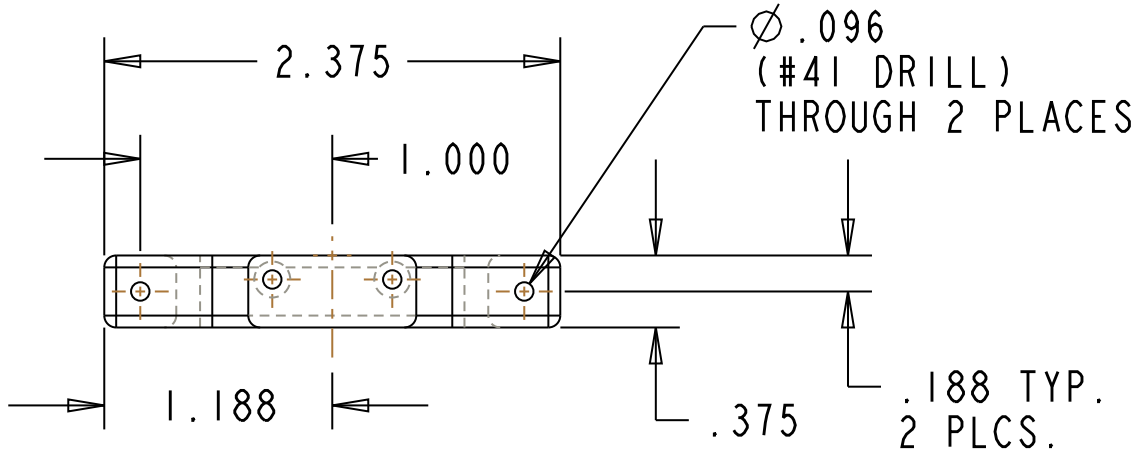
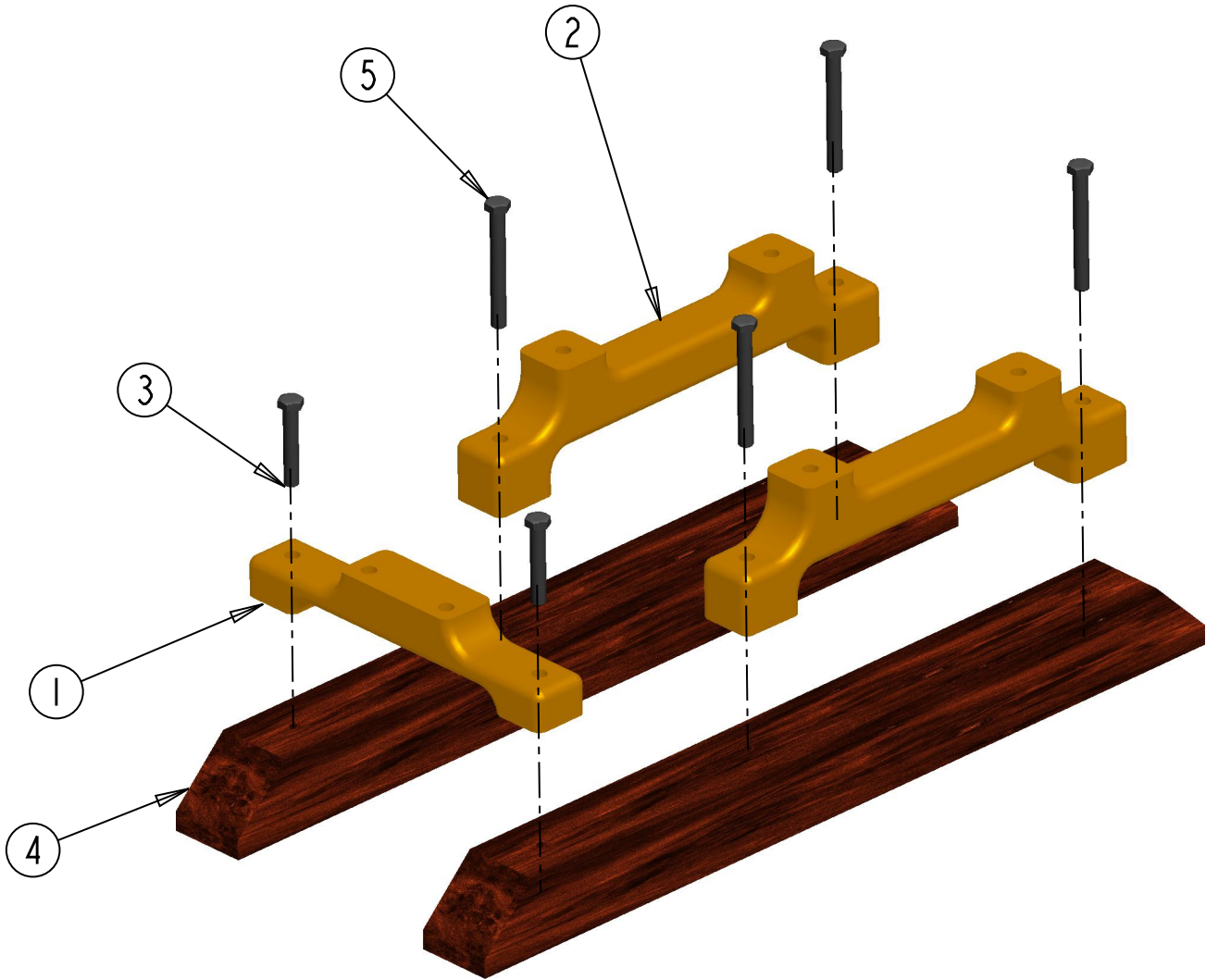
SECTION A-A

(37) CRANKCASE COVER
MAT'L: C.R.S.
REQ'D: 1 AS SHOWN

REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	CRANKCASE COVER		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	1 OF 1

ITEM NO.	DESCRIPTION	SIZE	MATERIAL	NOTES	QN'TY
1	REAR STAND		BRASS		1
2	STAND				2
3	HH SCREW	#2-56 X 1/2" LG.	STK.		2
4	SKID		OAK		2
5	HH SCREW	#2-56 X 3/4" LG.	STK.		4

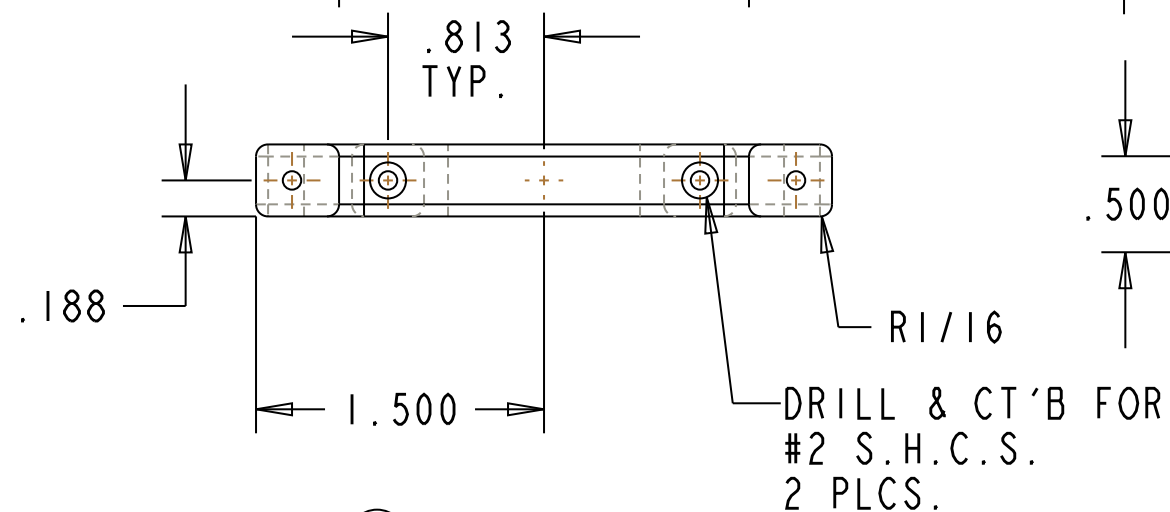
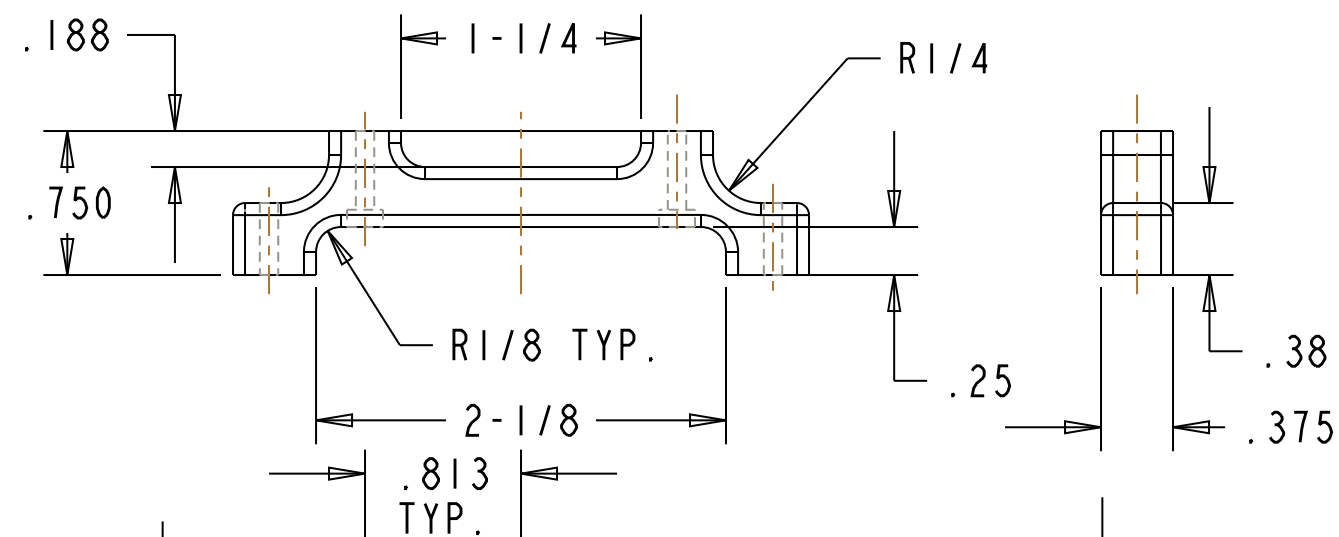
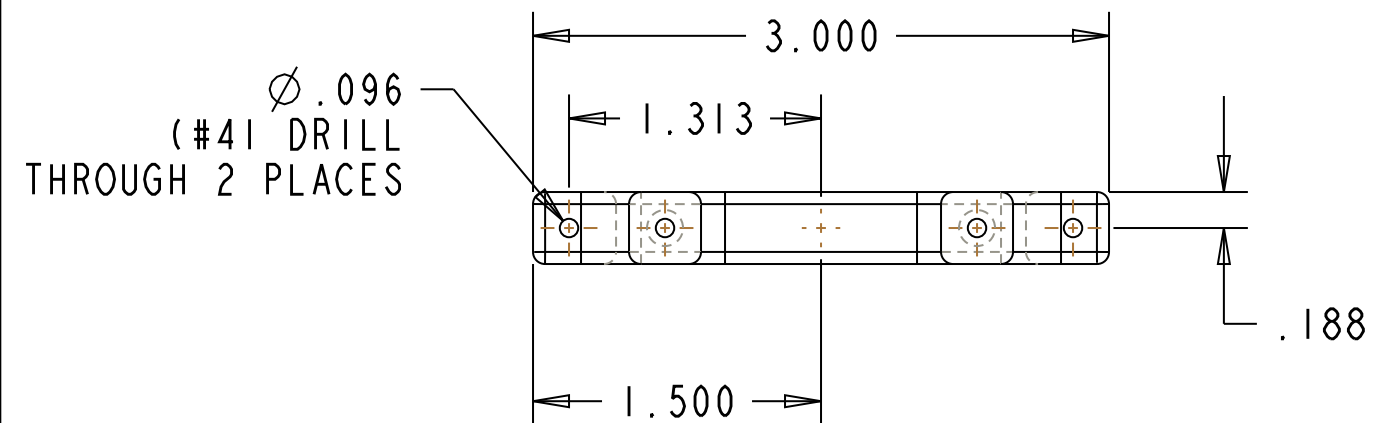


1 REAR STAND
MAT'L: BRASS
REQ'D: 1 AS SHOWN

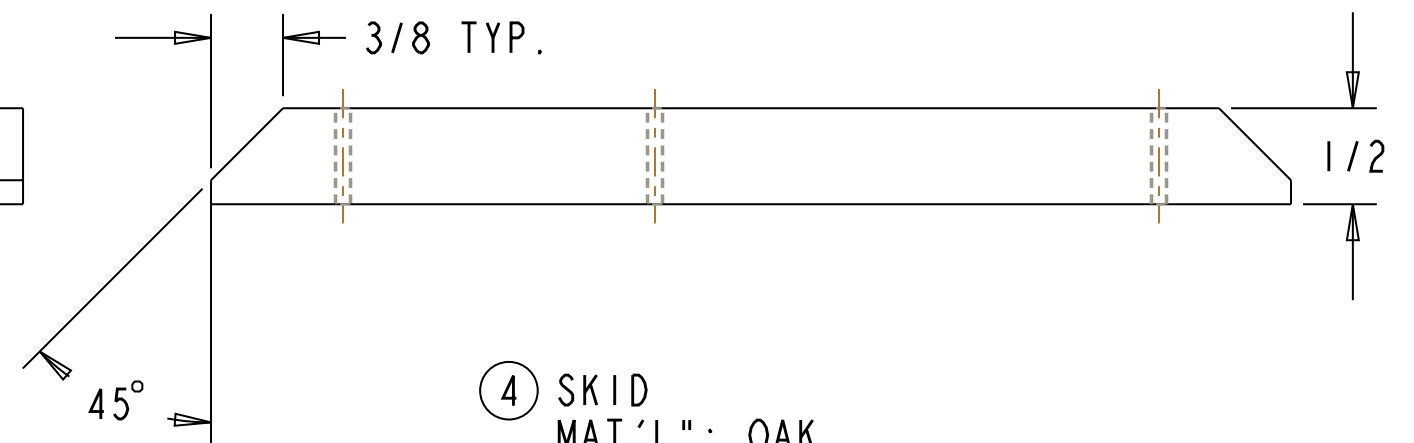
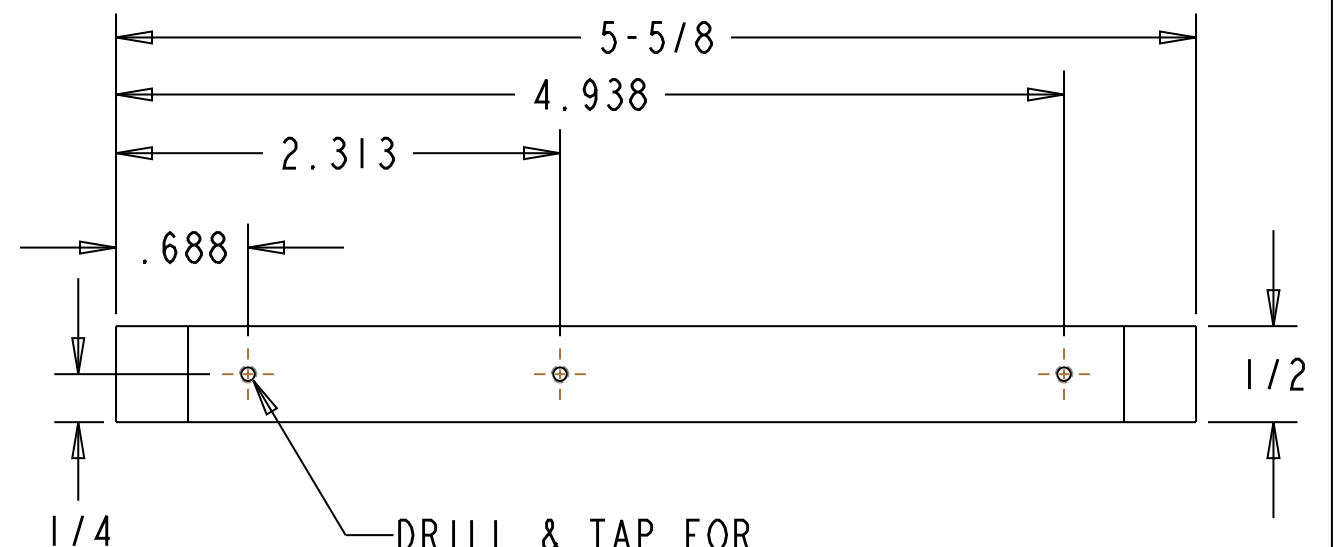
38 STAND ASSEMBLY
REQ'D: 1 AS SHOWN

REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS JOHN DEERE ENGINE			
.XXX .XX ANGLES							
0.005 0.015 0.50							
DRAWN:	JCM	DATE	3-17-2019	SIZE	DRAWING NAME		
CHECKED:		DATE		B	STAND ASSEMBLY		
				SCALE: 1:1	DWG. NO.:	SHEET	1 OF 2



② STAND
MAT'L: BRASS
REQ'D: 1 AS SHOWN



④ SKID
MAT'L: OAK
REQ'D: 2 AS SHOWN

REV.	DATE	DESCRIPTION
0	3-17-2019	

GENERAL TOLERANCES UNLESS NOTED				CHUCK FELLOWS			
.XXX .XX ANGLES				JOHN DEERE ENGINE			
0.005 0.015 0.50				SIZE	DRAWING NAME		
DRAWN:	JCM	DATE	3-17-2019	B	STAND ASSEMBLY		
CHECKED:		DATE		SCALE: 1:1	DWG. NO.:	SHEET	2 OF 2