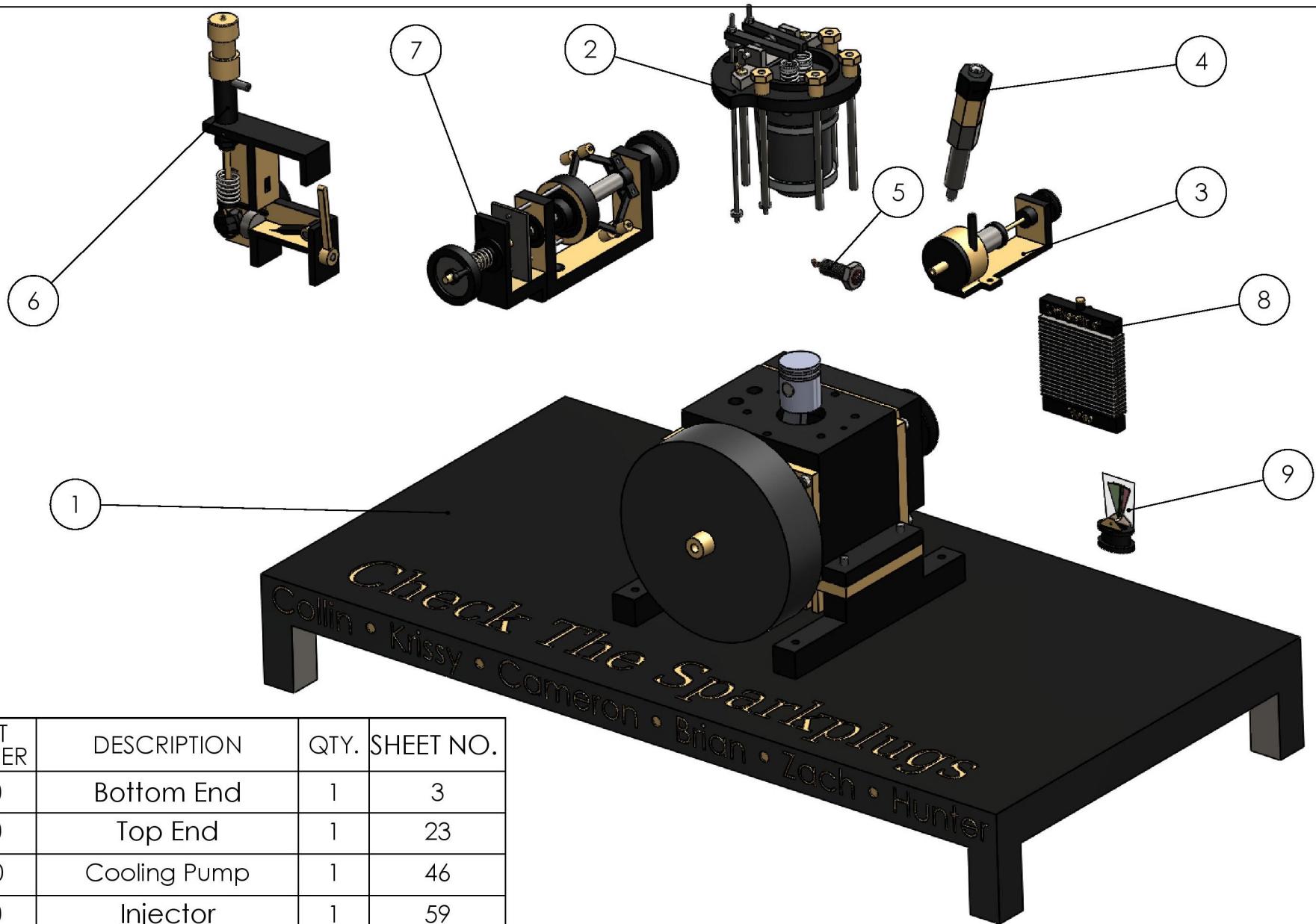
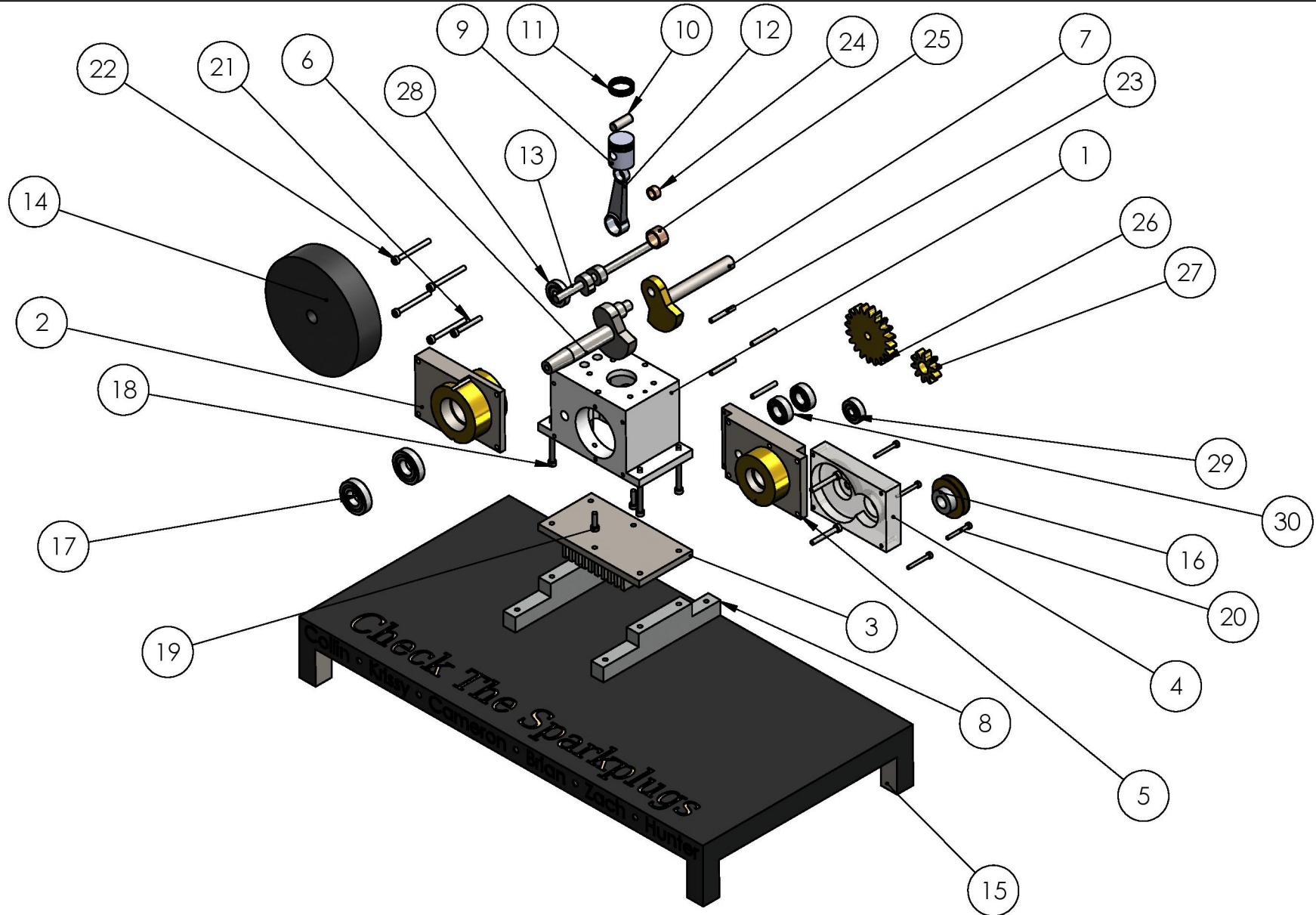


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DEFAULT TOLERANCES:	ANGULAR: $X_{\pm 2}$ $X_{\pm 2.5}$ $X_{\pm 0.30}$	DESCRIPTION: Full Engine Assembly	MATERIAL: Various	UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: $X_{\pm 5}$ $X_{\pm 2.5}$ $X_{\pm 0.25}$ $X_{\pm 0.05}$		CHECKED BY: Krissy Buckler DATE: 5/2/2016	DRAWN BY: Zachary Lipple DATE: 5/2/2016	PART #: 0-00 SCALE: 2:5	QTY: 1 SHEET: 1 OF 127
		FILE NAME: 0-00 Full Assembly.SLDprt			



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NO.
1	1-00	Bottom End	1	3
2	2-00	Top End	1	23
3	3-00	Cooling Pump	1	46
4	4-00	Injector	1	59
5	5-00	Glow Plug	1	66
6	6-00	Plunger	1	74
7	7-00	Governor	1	94
8	8-00	Radiator	1	116
9	9-00	Glow Plug Indicator	1	122

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		MATERIAL: Various		
DEFAULT TOLERANCES:		DESCRIPTION: Full Engine Assembly		UNIVERSITY OF IDAHO ME DEPARTMENT
LINEAR: X. \pm .5 X.X \pm 2.5 X.XX \pm .25 X.XXX \pm .05	ANGULAR: X. \pm 2 X.X \pm 1 X.XX \pm 0.30	CHECKED BY: Krissy Buckler	DATE: 5/1/2016	
DRAWN BY: Zachary Lipple	FILE NAME: 0-00 Full Assembly.SLDprt	DATE: 4/29/2016	PART #: 0-00	
			SCALE: 1:3	SHEET: 2 OF 127



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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

MATERIAL: Various

DEFAULT TOLERANCES:
LINEAR: X.±5
X.X±2.5
X.XXX±.25
X.XXXX±.05
ANGULAR: X.±2
X.X±1
X.XXX± 0.30'

DESCRIPTION: Bottom End Sub-Assembly
CHECKED BY: Krissy Buckler DATE: 5/1/2016
DRAWN BY: Hunter Trulock DATE: 4/30/2016
FILE NAME: 1-00 Body.SLDPRT

THE DUX 4-STROKE DIESEL

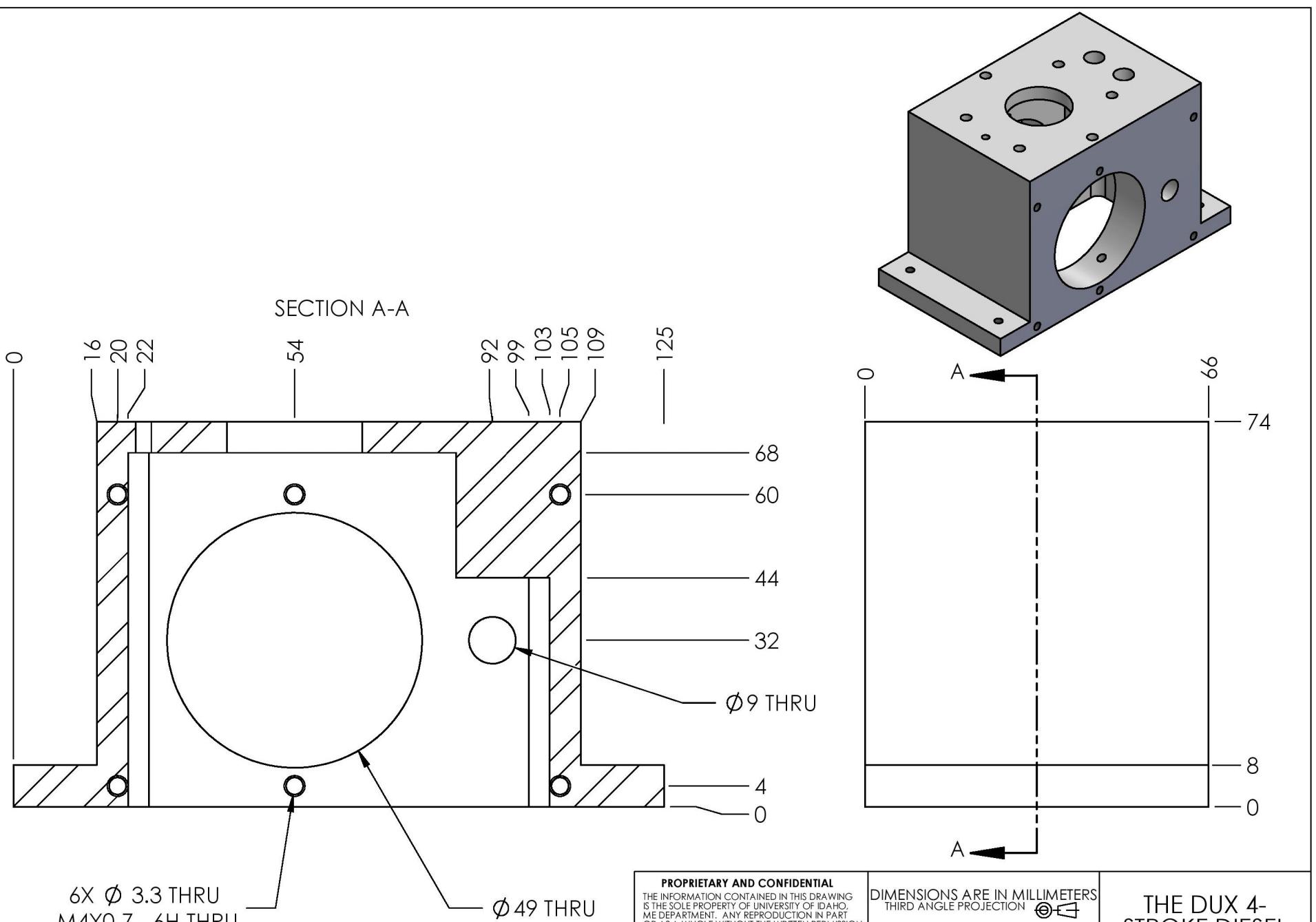
**UNIVERSITY OF IDAHO
ME DEPARTMENT**
PART #: 1-00 QTY: 1
SCALE: 1:5 SHEET: 3 OF 127

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NO.
1	1-01	Crankcase	1	6
2	1-02	Front Plate	1	8
3	1-03	Bottom Plate	1	9
4	1-04	Rear Plate	1	10
5	1-05	Rear Bearing Plate	1	11
6	1-06	Front Crankshaft	1	12
7	1-07	Rear Crankshaft	1	13
8	1-08	Crankcase Mounts	2	14
9	1-09	Piston	1	15
10	1-10	Piston Pin	1	16
11	1-11	Piston Ring	2	17
12	1-12	Connecting Rod	1	18
13	1-13	Cam Shaft	1	19
14	1-14	Flywheel	1	20
15	1-15	Mounting Table	1	21
16	1-16	Pulley	1	22
17	6658K67	Small End Bearing	1	N/A

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			MATERIAL: Various		
	DEFAULT TOLERANCES:		DESCRIPTION: Bottom End Bill of Materials		UNIVERSITY OF IDAHO ME DEPARTMENT
	LINEAR: X. [±] 5 X.X [±] 2.5 X.XX [±] .25 X.XXX [±] .05	ANGULAR: X. [±] 2 X.X [±] 1 X.XX [±] 0.30	CHECKED BY: Krissy Buckler	DATE: 4/28/2016	
	DRAWN BY: Hunter Trulock	DATE: 4/28/2016	PART #: 1-00	QUANTITY: N/A	
	FILE NAME: 1-00 Body.SLDPRT		SCALE: N/A	SHEET: 4 OF 127	

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NO.
18	6658K11	Large End Bearing	1	N/A
19	6325K97	Spur Gear	1	N/A
20	6325K95	Spur Pinion	1	N/A
21	5972K502	Ball Bearing 22-7-7	1	N/A
22	91290A175	Mounting Fasteners	4	N/A
23	5972K225	Ball Bearing	1	N/A
24	5972K830	Ball Bearing	2	N/A
25	5972K287	Ball Bearing	2	N/A
26	92605A126	Back Plate Fasteners	4	N/A
27	91292A038	Mounting Dowel	2	N/A
28	91292A020	Mounting Fasteners	4	N/A
29	91292A130	Allen type Fastener	4	N/A
30	91292A132	Front Plate Fastener	4	N/A

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MATERIAL: Various					
DEFAULT TOLERANCES:		DESCRIPTION: Bottom End Bill of Materials		UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X. [±] 5 X.X [±] 2.5 X.XX [±] .25 X.XXX [±] .05	ANGULAR: X. [±] 2 X.X [±] 1 X.XX [±] 0.30	CHECKED BY: Kissy Buckler	DATE: 4/28/2016	PART #: 1-00	QTY: N/A
DRAWN BY: Hunter Trulock	FILE NAME: 1-00 Body.SLDPR	DATE: 4/28/2016	SCALE: N/A	SHEET: 5 OF 127	

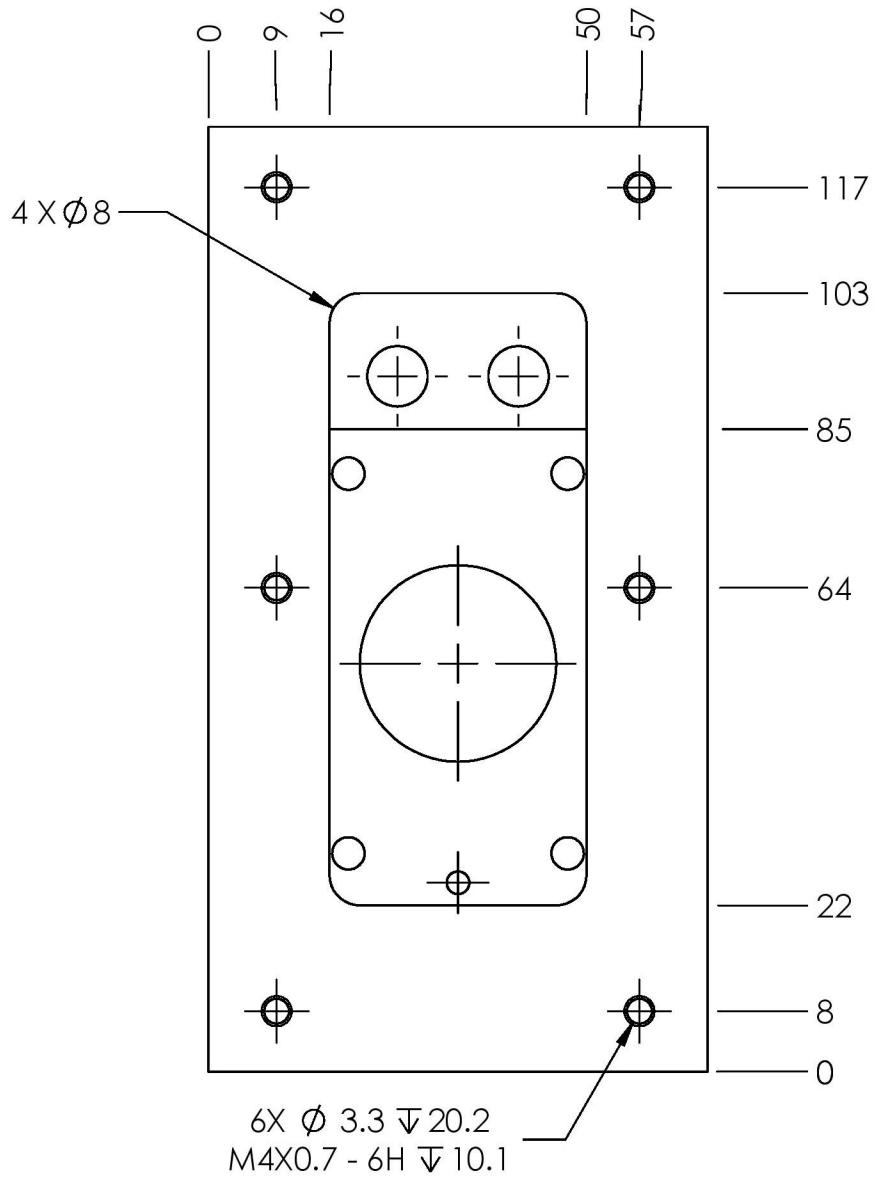
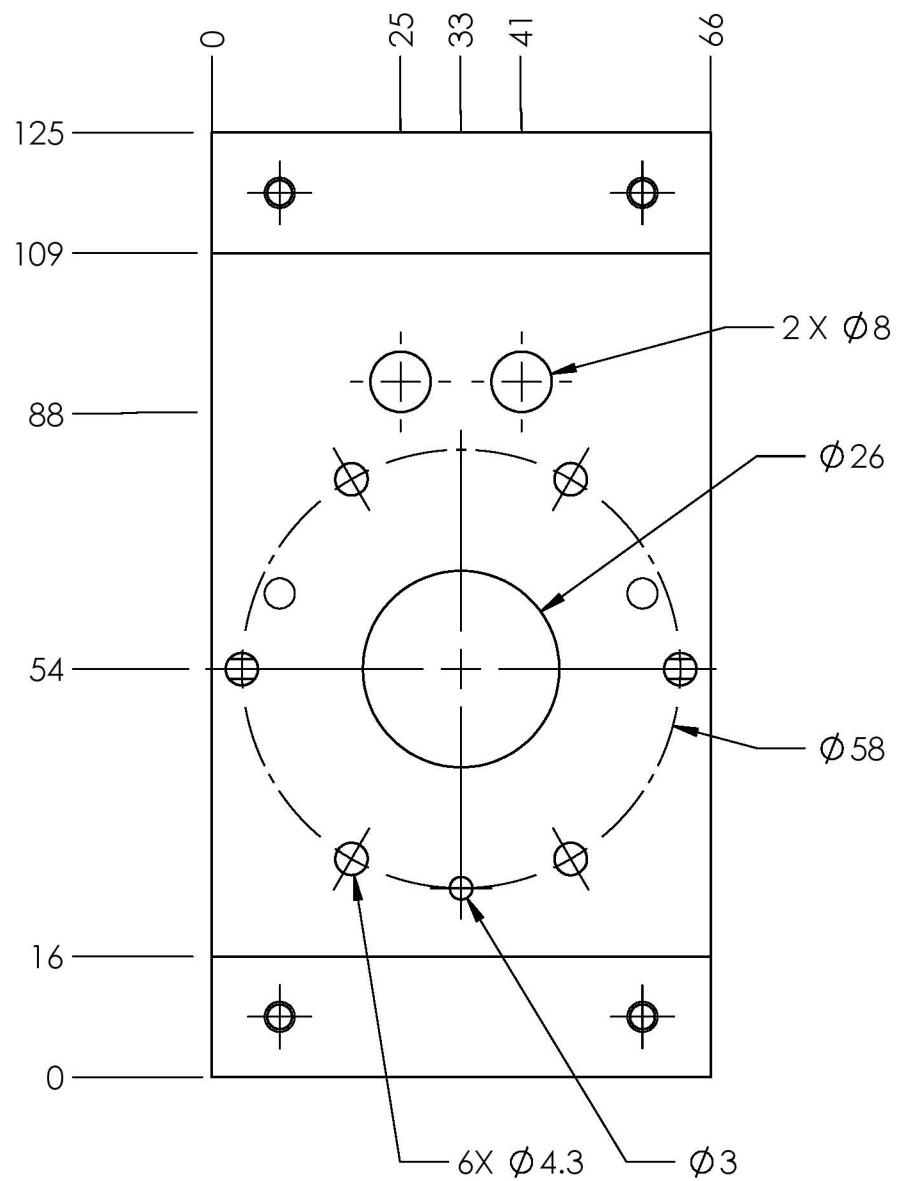


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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION
MATERIAL: AISI 1035 Steel (SS)

THE DUX 4-STROKE DIESEL

DEFAULT TOLERANCES: LINEAR: X. \pm .5 X.X \pm 2.5 X.XX \pm .25 X.XXX \pm .05	ANGULAR: X. \pm 2 X.X \pm 1 X.XX \pm 0.30	DESCRIPTION: Crankcase CHECKED BY: Krissy Buckler DATE: 4/30/2016 DRAWN BY: Hunter Trulock DATE: 4/29/2016 FILE NAME: 1-01 Crankcase.SLDprt	UNIVERSITY OF IDAHO ME DEPARTMENT PART #: 1-01 QTY: 1 SCALE: 1:1 SHEET: 6 OF 127
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DEFAULT TOLERANCES:
LINEAR: X.±5
X.X±2.5
X.XX±.25
X.XXX±.05
ANGULAR: X.±2
X.X±1
X.XX±0.30

DESCRIPTION: Crankcase

CHECKED BY: Krissy Buckler

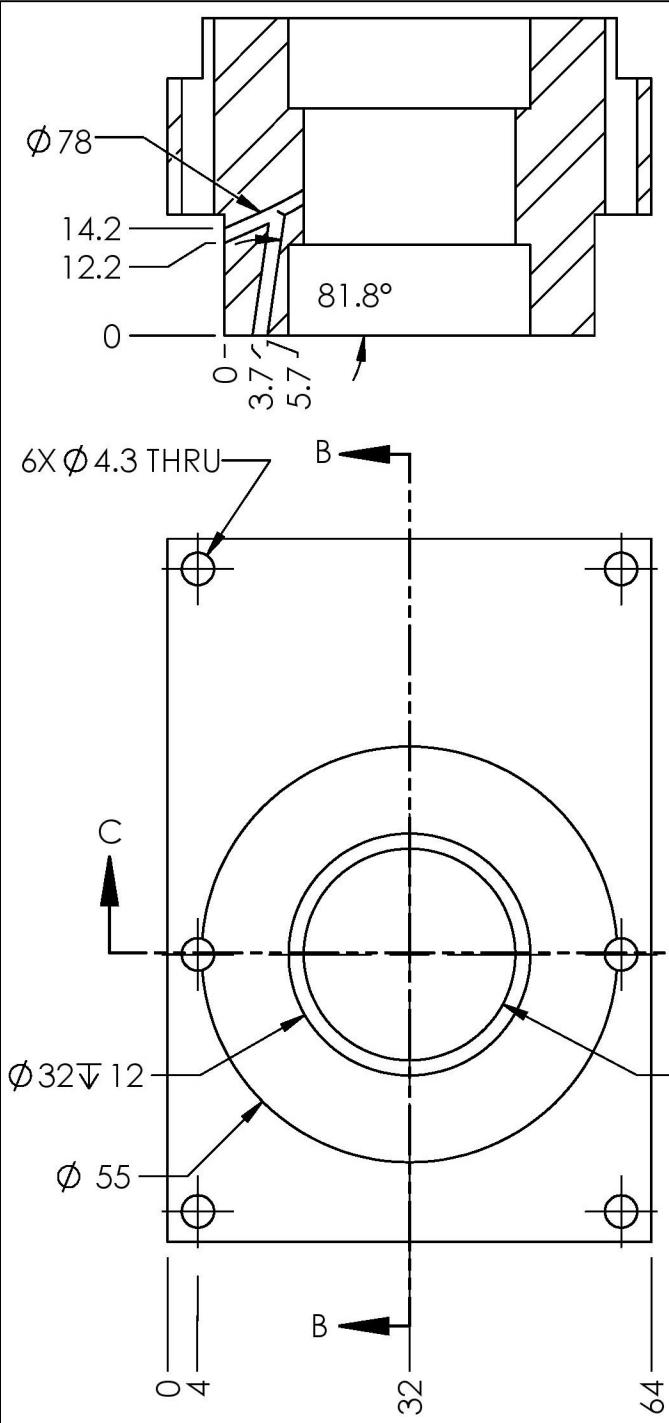
DRAWN BY: Hunter Trulock

FILE NAME: 1-01 Crankcase.SLDprt

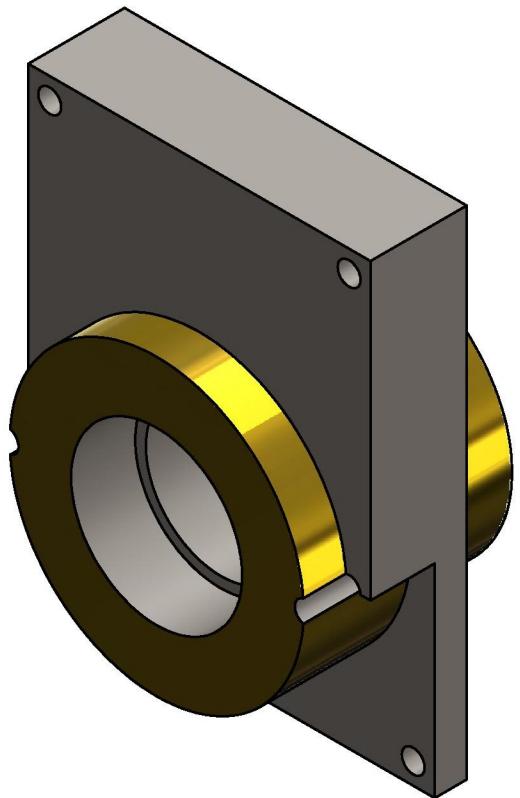
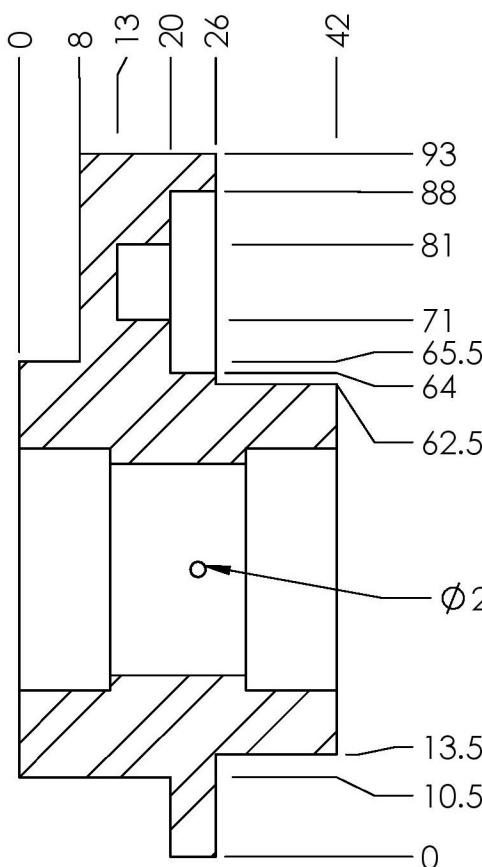
DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION
MATERIAL: AISI 1035 Steel (SS)

THE DUX 4-STROKE DIESEL

UNIVERSITY OF IDAHO
ME DEPARTMENT
PART #: 1-01 QTY: 1
SCALE: 1:1 SHEET: 7 OF 127



SECTION C-C



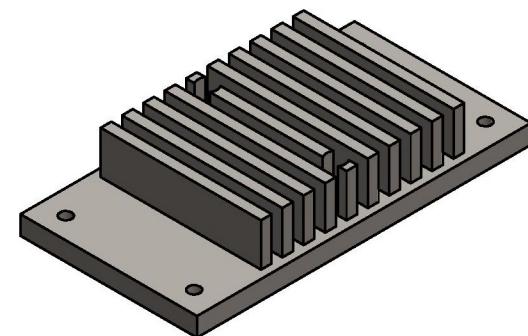
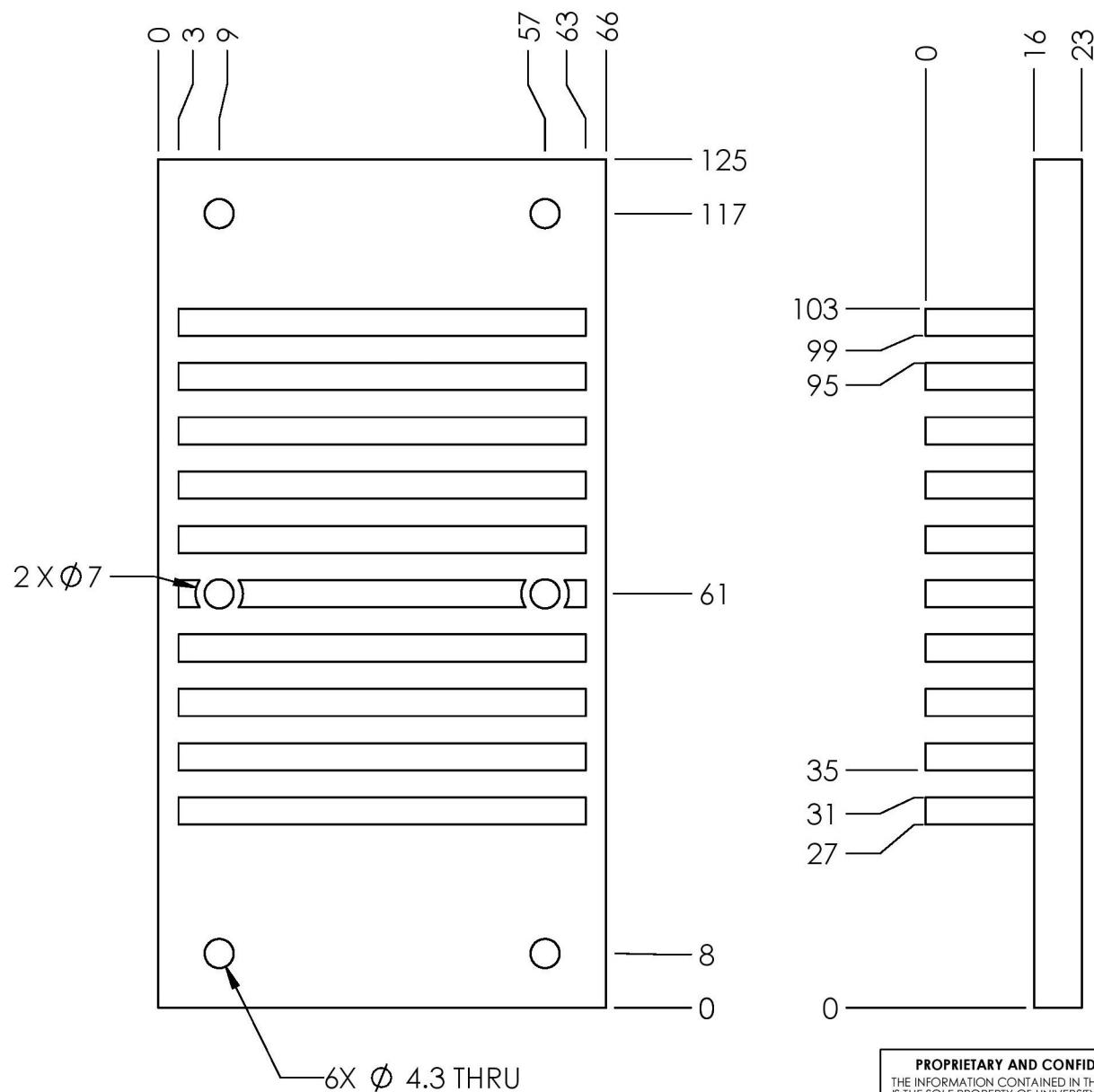
SECTION B-B

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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION
MATERIAL: AISI 1035 Steel (SS)

THE DUX 4-
STROKE DIESEL

DEFAULT TOLERANCES: LINEAR: $X_{\pm .5}$ $X_{\pm 2.5}$ $X_{\pm .25}$ $X_{\pm .05}$	ANGULAR: $X_{\pm 2}$ $X_{\pm 1}$ $X_{\pm 0.30}$	DESCRIPTION: Front Plate CHECKED BY: Krissy Buckler DRAWN BY: Hunter Trulock FILE NAME: 1-02 Front Plate.SLDPR	DATE: 4/27/2016 DATE: 4/27/2016 DATE: 4/27/2016 SCALE: 1:1 SHEET: 8 OF 127
			UNIVERSITY OF IDAHO ME DEPARTMENT



ALL EXTRUSIONS ARE 4mm THICK
AND 4mm APART, AS SHOWN

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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

MATERIAL: AISI 1035 Steel (SS)

DEFAULT TOLERANCES:
LINEAR: X.±5
X.X±2.5
X.XX±.25
X.XXX±.05

DESCRIPTION: Bottom Plate

CHECKED BY: Krissy Buckler DATE: 4/29/2016

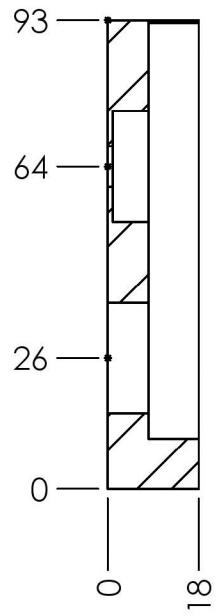
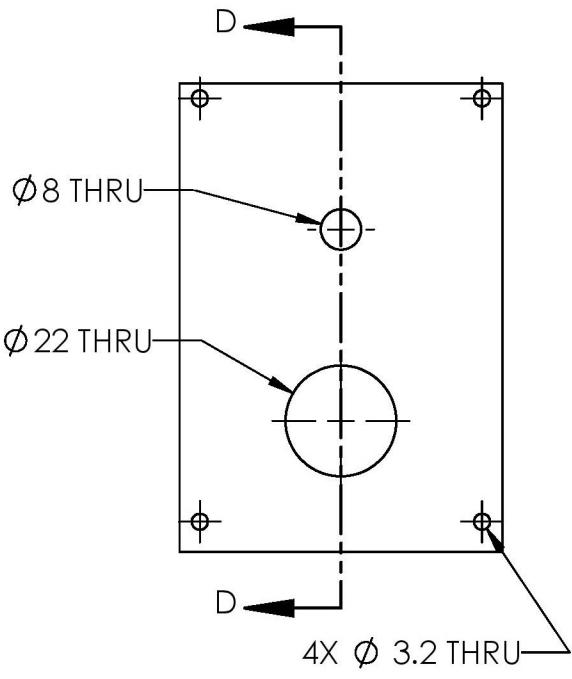
DRAWN BY: Hunter Trulock DATE: 4/29/2016

FILE NAME: 1-03 Bottom Plate.SLDprt

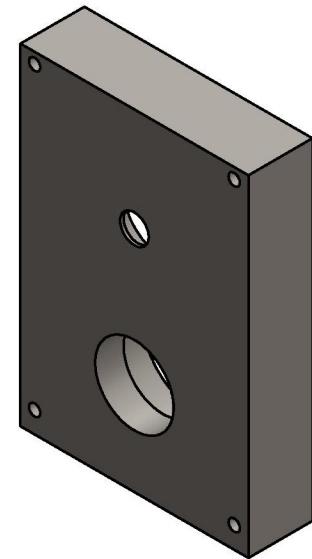
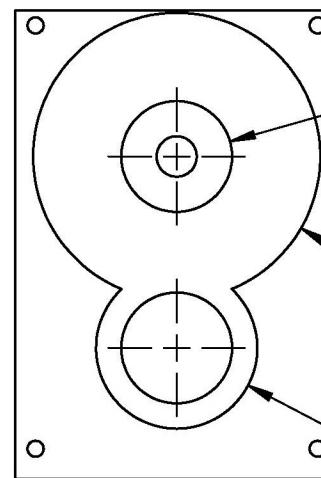
THE DUX 4-
STROKE DIESEL

UNIVERSITY OF IDAHO
ME DEPARTMENT

PART #: 1-03 QTY: 1
SCALE: 1:1 SHEET: 9 OF 127



SECTION D-D



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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

MATERIAL: AISI 1035 Steel (SS)

DEFAULT TOLERANCES:
LINEAR: X.±5
X.X±2.5
X.XX±.25
X.XXX±.05

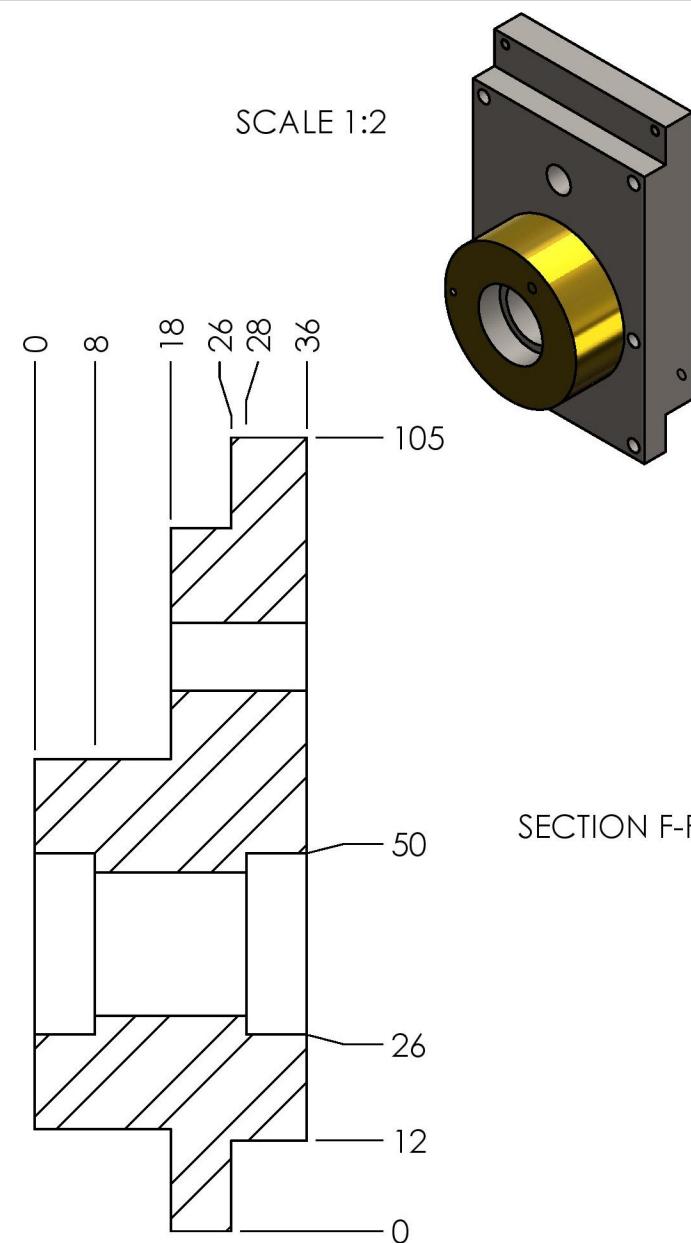
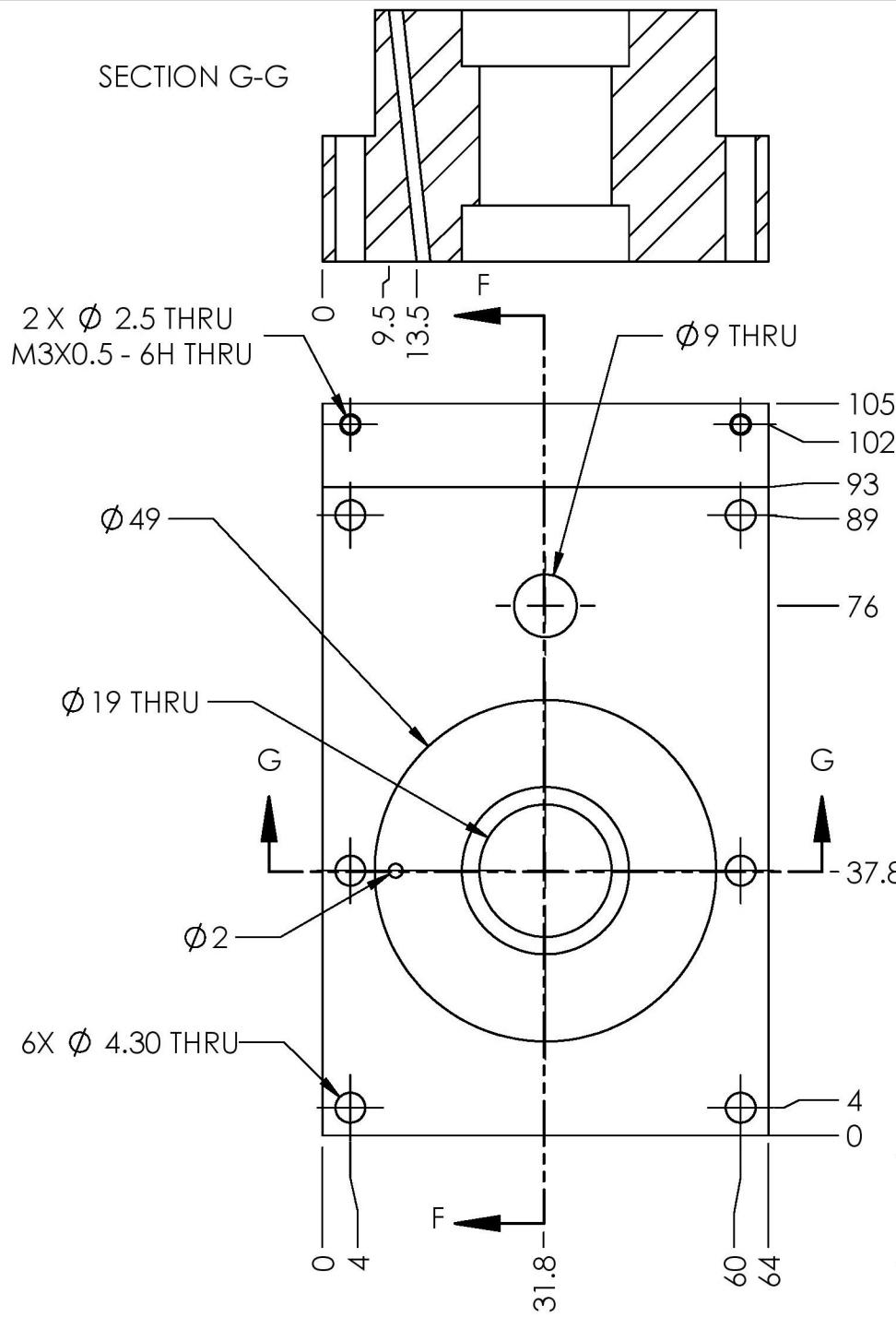
ANGULAR: X.±2
X.X±1
X.XX± 0.30'

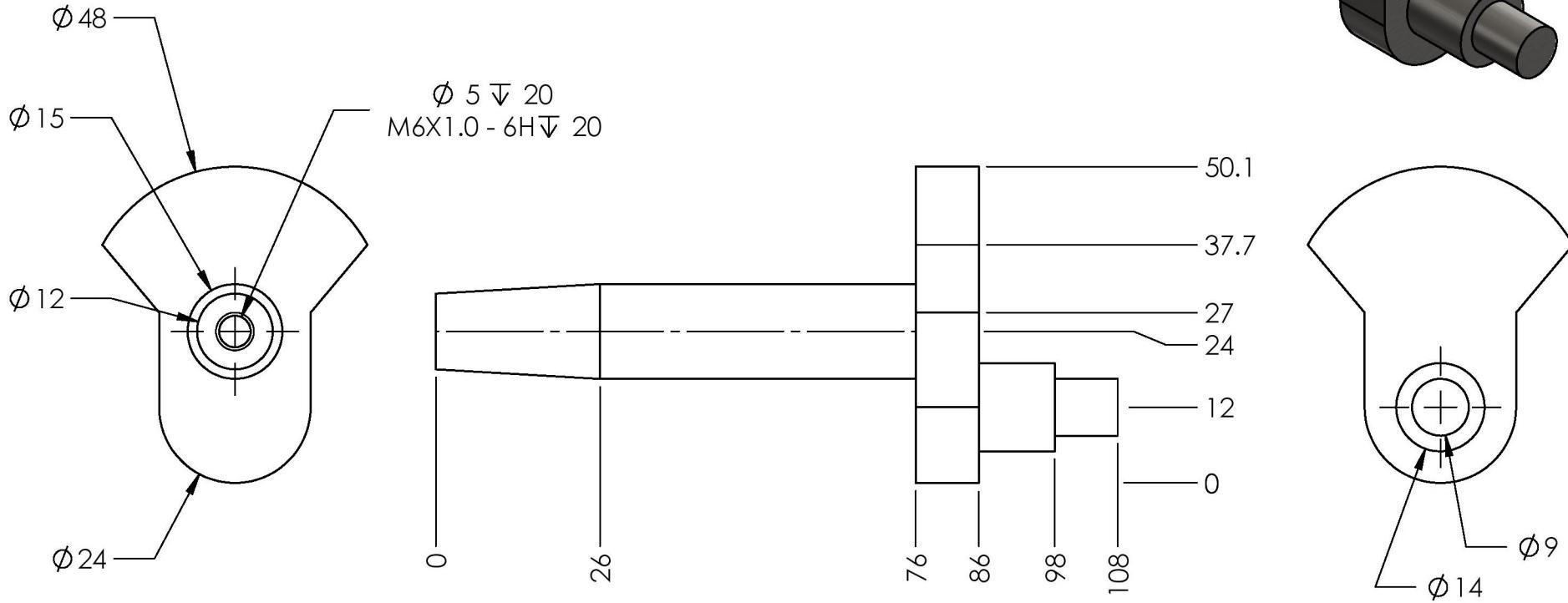
DESCRIPTION: Rear Plate
CHECKED BY: Krissy Buckler DATE: 4/27/2016
DRAWN BY: Hunter Trulock DATE: 4/20/2016
FILE NAME: 1-04 Rear Plate.SLDprt

THE DUX 4-STROKE DIESEL

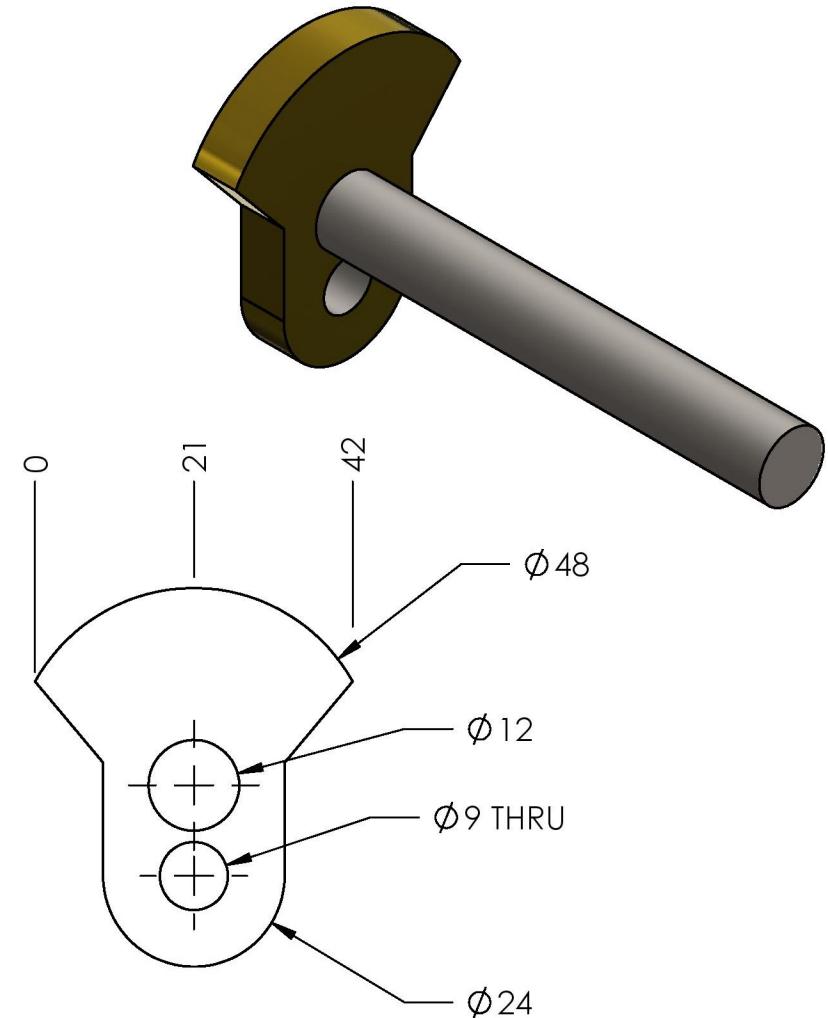
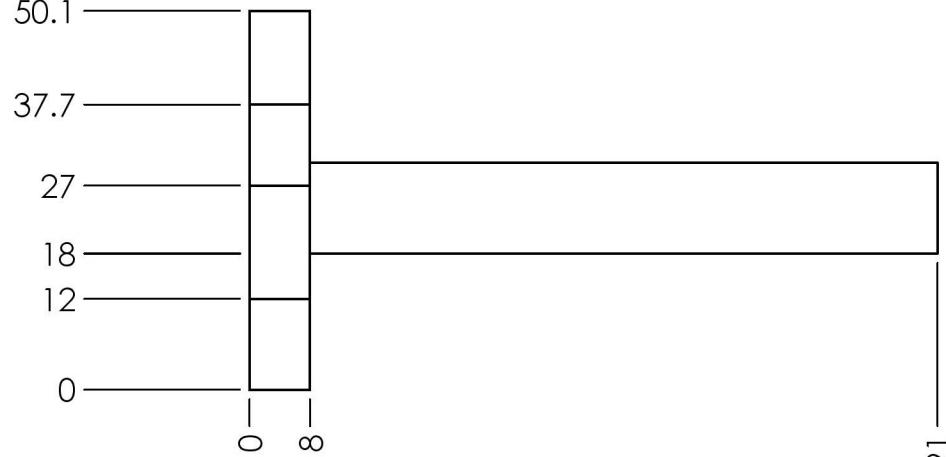
UNIVERSITY OF IDAHO ME DEPARTMENT
PART #: 1-04 QTY: 1
SCALE: 2:3 SHEET: 10 OF 127

SECTION G-G



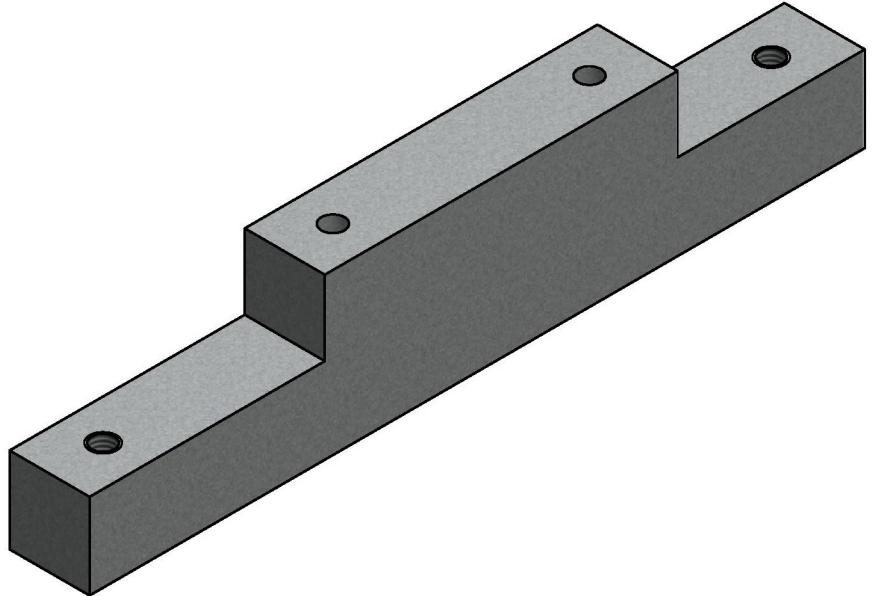
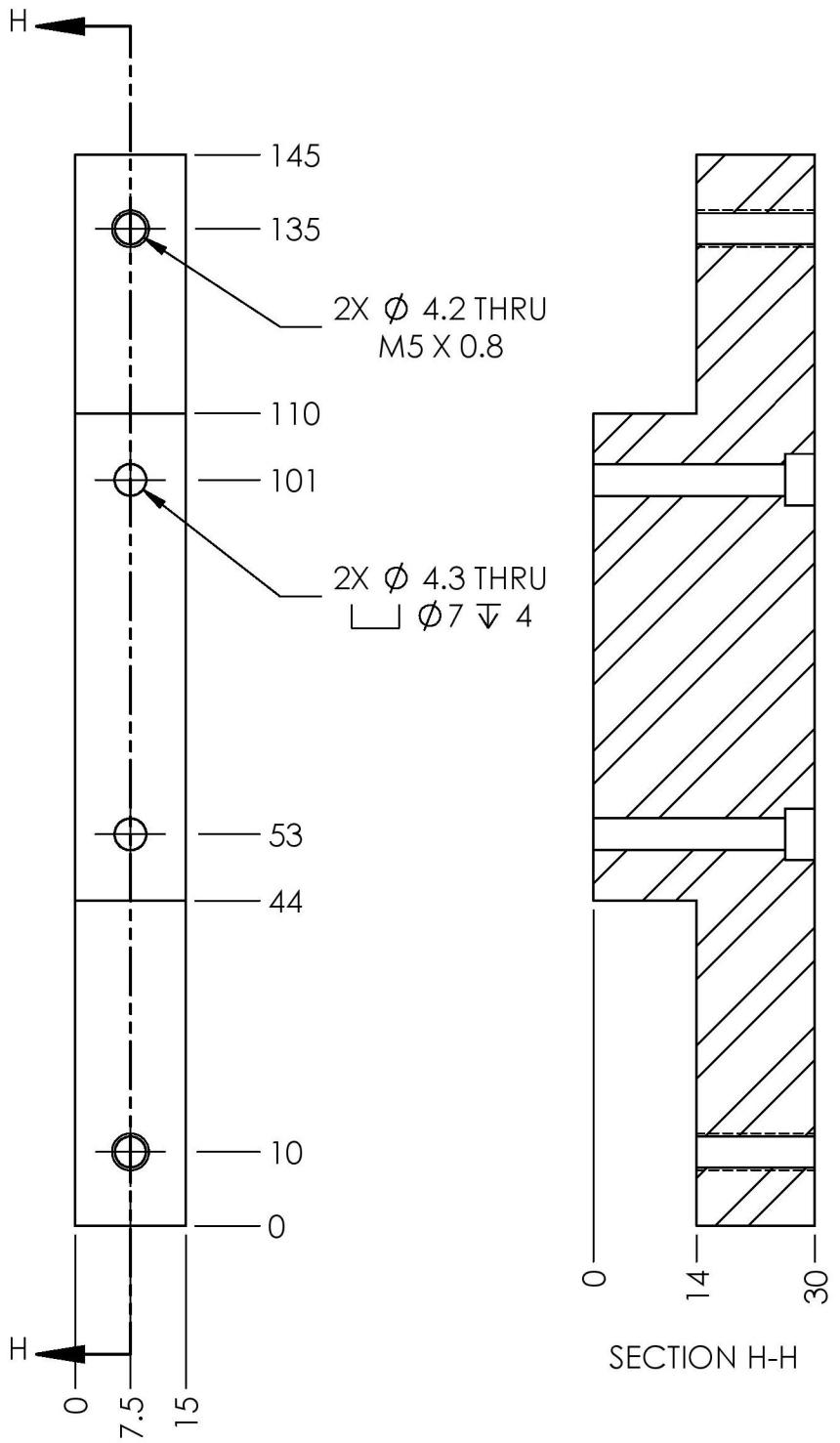


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DEFAULT TOLERANCES:	LINEAR: X. \pm .5 X.X \pm 2.5 X.XX \pm .25 X.XXX \pm .05	ANGULAR: X. \pm 2 X.X \pm 1 X.XX \pm 0.30	DESCRIPTION: Front Crankshaft CHECKED BY: Krissy Buckler DRAWN BY: Hunter Trulock FILE NAME: 1-06 Front Crankshaft.SLDPR	DATE: 5/1/2016	DATE: 5/1/2016
				PART #: 1-06	QTY: 1
				SCALE: 1:1	SHEET: 12 OF 127
UNIVERSITY OF IDAHO ME DEPARTMENT					



BOTTOM CIRCLE CONCENTRIC
WITH BOTTOM ARC

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DEFAULT TOLERANCES: LINEAR: X.±.5 X.X±2.5 X.XX±.25 X.XXX±.05		DESCRIPTION: Rear Crankshaft CHECKED BY: Krissy Buckler DATE: 4/27/2016 DRAWN BY: Hunter Trulock DATE: 4/27/2016 FILE NAME: 1-07 Rear Crankshaft.SLDPR		MATERIAL: AISI Type A2 Tool Steel
PART #: 1-07	QTY: 1	SCALE: 1:1	SHEET: 13 OF 127	UNIVERSITY OF IDAHO ME DEPARTMENT



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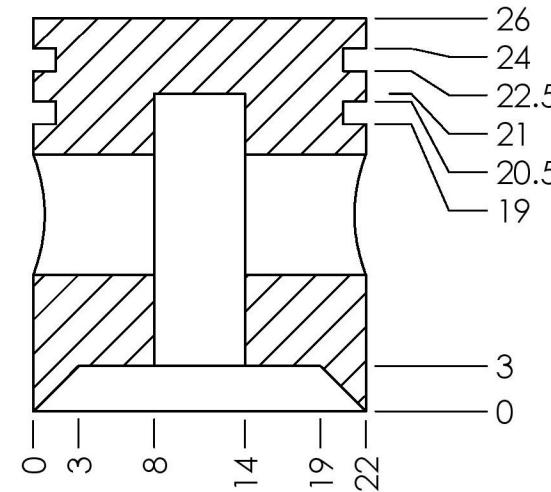
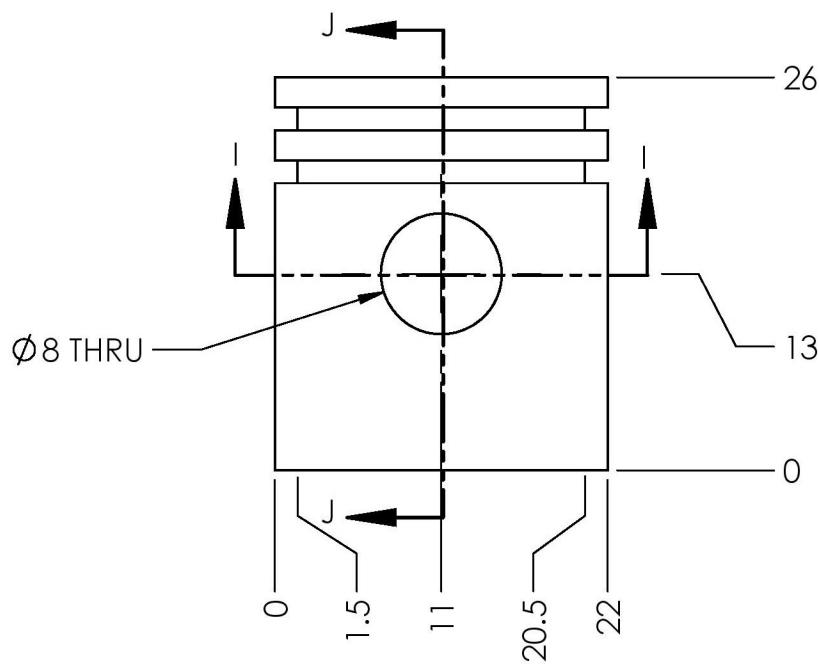
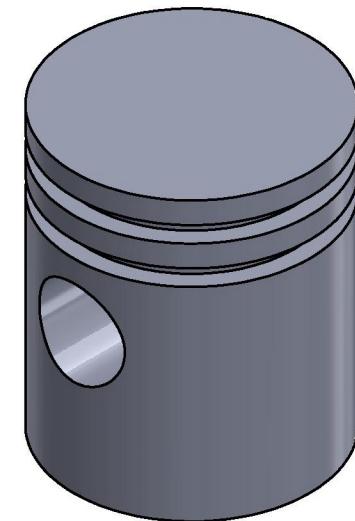
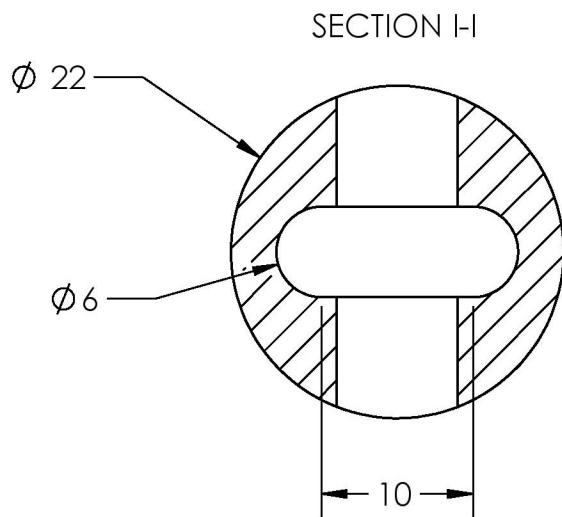
DEFAULT TOLERANCES:
LINEAR: X.±5
X.X±2.5
X.XX±.25
X.XXX±.05
ANGULAR: X.±2
X.X±1
X.XX± 0.30'

DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION
MATERIAL: AISI 1035 Steel (SS)

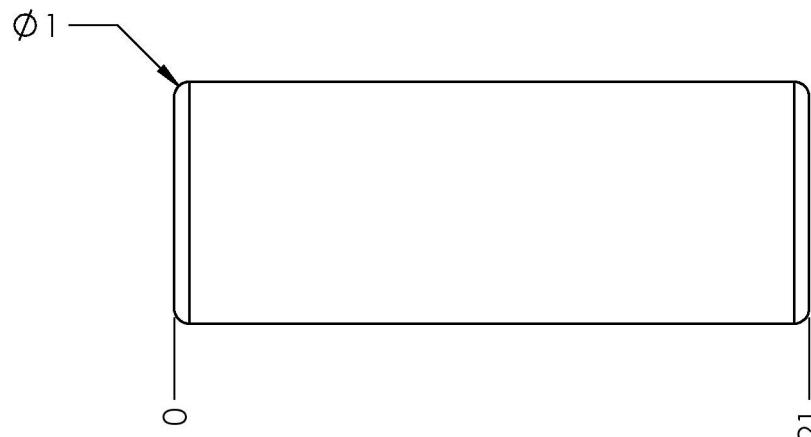
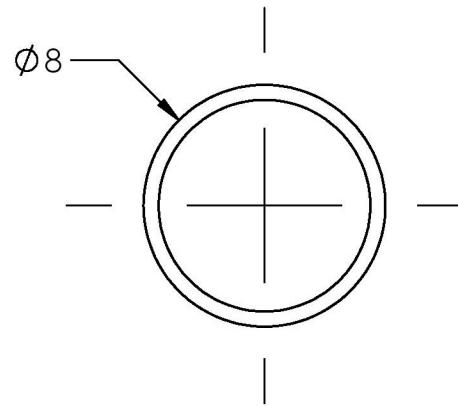
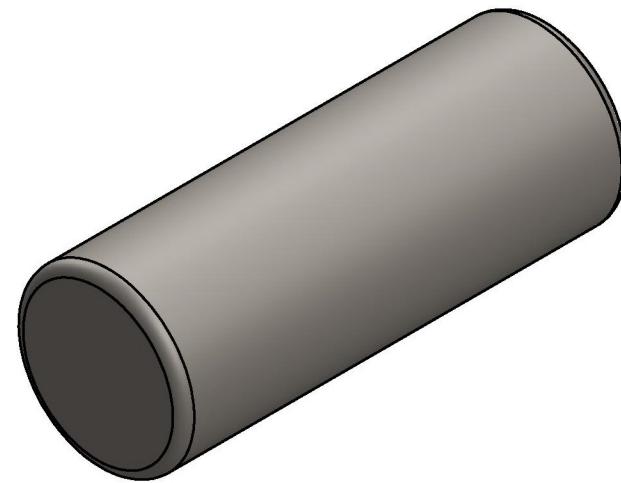
DESCRIPTION: Crankcase Mounting System
CHECKED BY: Krissy Buckler DATE: 4/27/2016
DRAWN BY: Hunter Trulock DATE: 4/27/2016
FILE NAME: 1-08 Crankcase Mounts.SLDPRT

THE DUX 4-STROKE DIESEL

UNIVERSITY OF IDAHO ME DEPARTMENT
PART #: 1-08 QTY: 2
SCALE: 1:1 SHEET: 14 OF 127



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DEFAULT TOLERANCES:	ANGULAR: X. \pm .5 X.X \pm 2.5 X.XX \pm .25 X.XXX \pm .05	DESCRIPTION: Piston	CHECKED BY: Krissy Buckler DATE: 4/27/2016	UNIVERSITY OF IDAHO ME DEPARTMENT
LINERAR: X. \pm .5 X.X \pm 2.5 X.XX \pm .25 X.XXX \pm .05	X. \pm 2 X.X \pm 1 X.XX \pm 0.30	DRAWN BY: Hunter Trulock FILE NAME: 1-09 Piston.SLDPRT	DATE: 4/27/2016	PART #: 1-09 QTY: 1 SCALE: 2:1 SHEET: 15 OF 127



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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

MATERIAL: AISI Type A2 Tool Steel

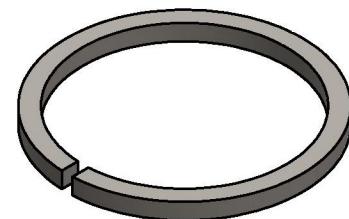
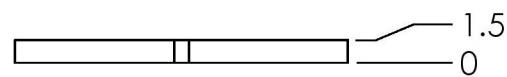
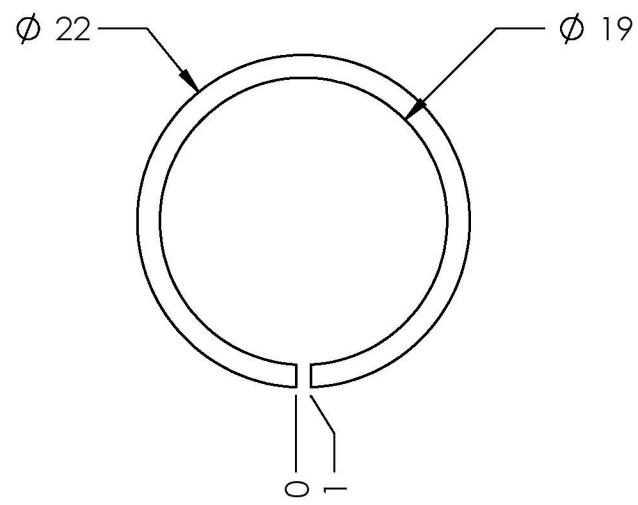
DEFAULT TOLERANCES:
LINEAR: X.±.5
X.X±2.5
X.XX±.25
X.XXX±.05

DESCRIPTION: Piston Pin
ANGULAR: X.± 2
X.X± 1
X.XX± 0.30
DRAWN BY: Hunter Trulock
FILE NAME: 1-10 Piston Pin.SLDPR

CHECKED BY: Krissy Buckler
DATE: 4/27/2016
DATE: 4/22/2016

**THE DUX 4-
STROKE DIESEL**

**UNIVERSITY OF IDAHO
ME DEPARTMENT**
PART #: 1-10 QTY: 1
SCALE: 4:1 SHEET: 16 OF 127



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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

MATERIAL: AISI 1035 Steel (SS)

DEFAULT TOLERANCES:
LINEAR: X.±.5
X.X±2.5
X.XX±.25
X.XXX±.05

DESCRIPTION: Piston Ring

CHECKED BY: Krissy Buckler

DATE: 4/27/2016

DRAWN BY: Hunter Trulock

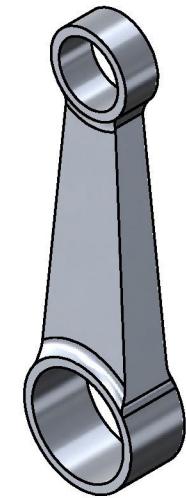
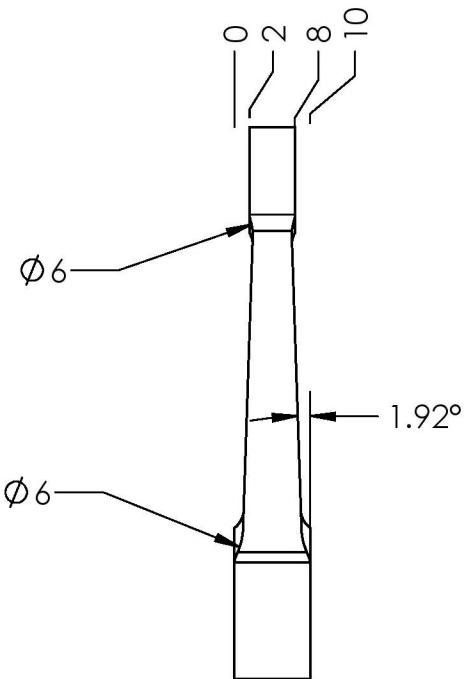
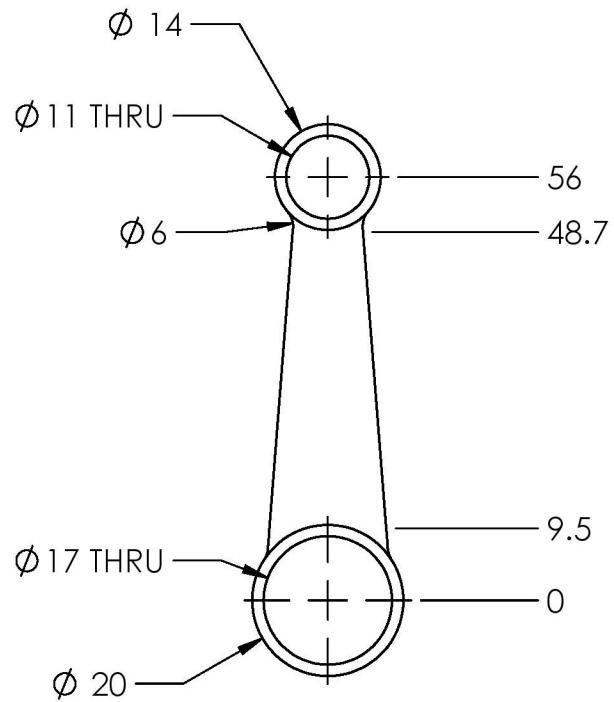
DATE: 4/22/2016

FILE NAME: 1-11 Piston Ring.SLDprt

THE DUX 4-STROKE DIESEL

**UNIVERSITY OF IDAHO
ME DEPARTMENT**

PART #: 1-11 QTY: 2
SCALE: 2:1 SHEET: 17 OF 127



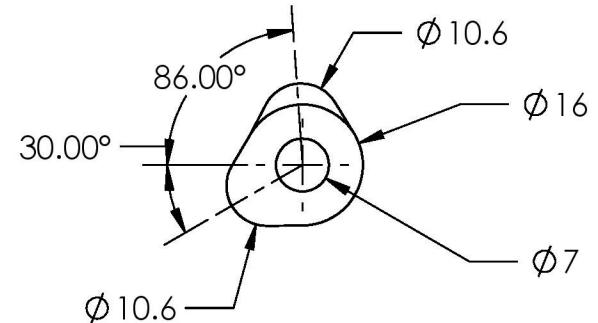
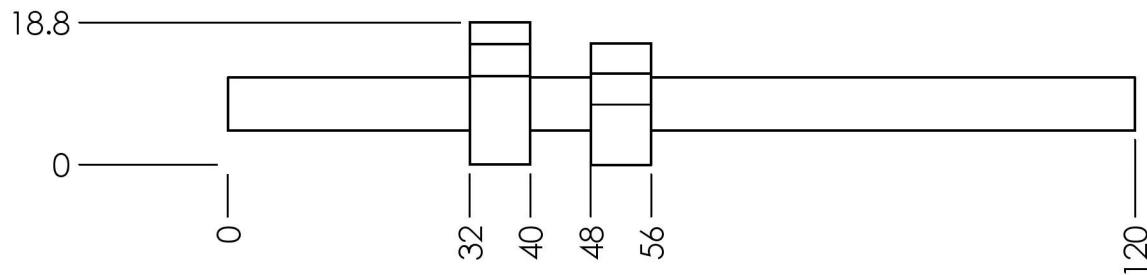
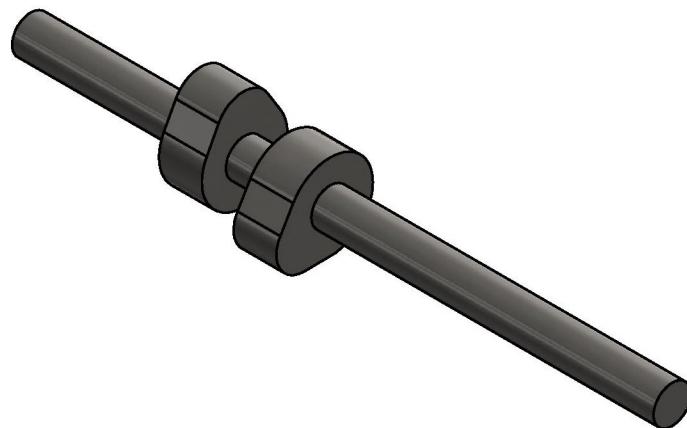
ALL FILLETS 6 mm DIAMETER

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THIRD ANGLE PROJECTION

THE DUX 4-STROKE DIESEL

DEFAULT TOLERANCES: LINEAR: X. [±] 5 X.X [±] 2.5 X.XX [±] .25 X.XXX [±] .05	ANGULAR: X. [±] 2 X.X [±] 1 X.XX [±] 0 30'	DESCRIPTION: Connecting Rod CHECKED BY: Krissy Buckler DRAWN BY: Hunter Trulock FILE NAME: 1-12 Connecting Rod.SLDprt	DATE: 4/27/2016 DATE: 4/22/2016	PART #: 1-12 SCALE: 1:1	QTY: 1 SHEET: 18 OF 127
UNIVERSITY OF IDAHO ME DEPARTMENT					



CAM LOBES HELD IN PLACE
WITH SILVER SOLDER

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THIRD ANGLE PROJECTION

MATERIAL: AISI 1020 Steel

THE DUX 4-
STROKE DIESEL

DEFAULT TOLERANCES:
LINEAR: X.[±].5
X.X[±]2.5
X.XX[±].25
X.XXX[±].05

DESCRIPTION: Cam Shaft

CHECKED BY: Krissy Buckler

DATE: 4/28/2016

DRAWN BY: Hunter Trulock

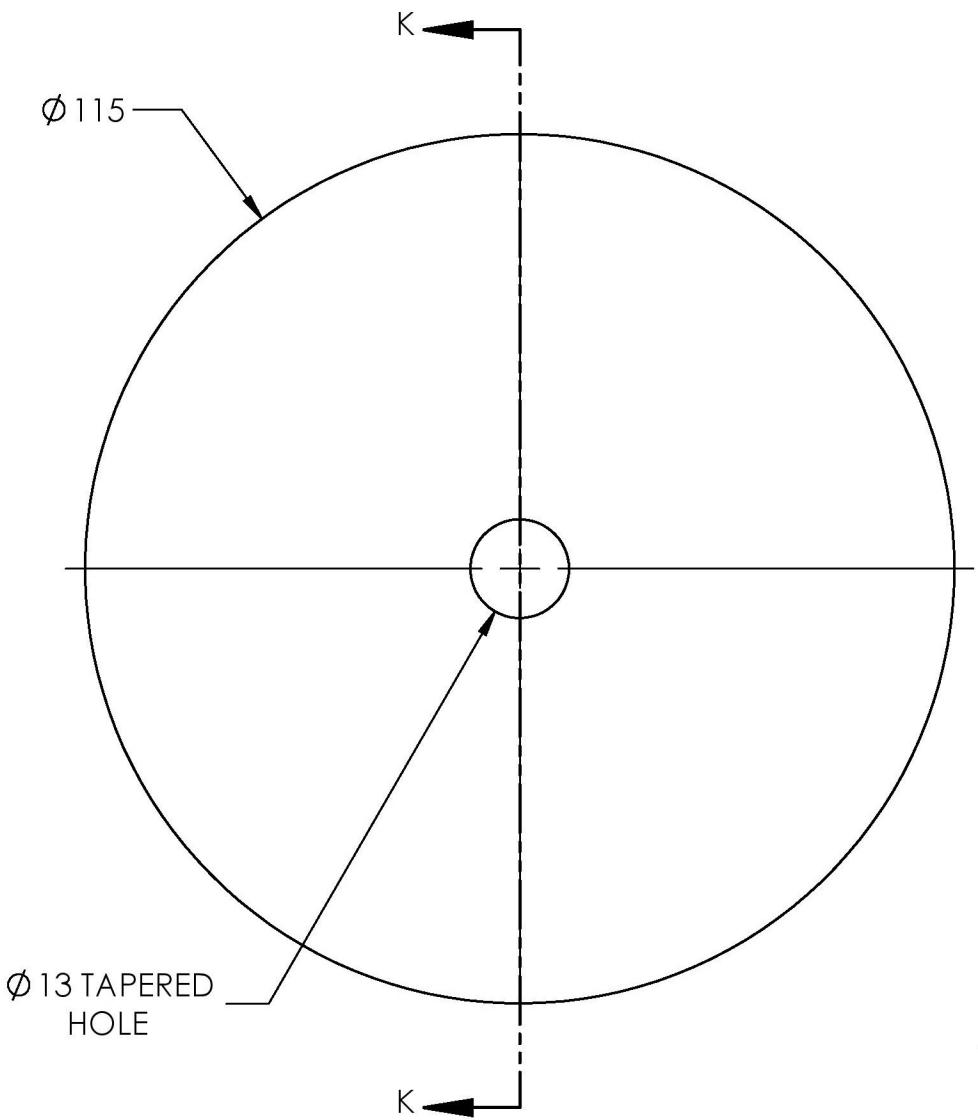
DATE: 4/28/2016

FILE NAME: 1-13 Cam Shaft.SLDprt

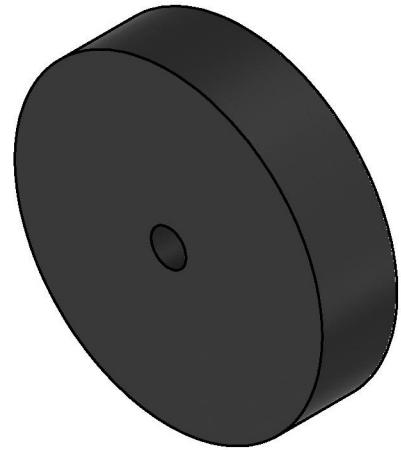
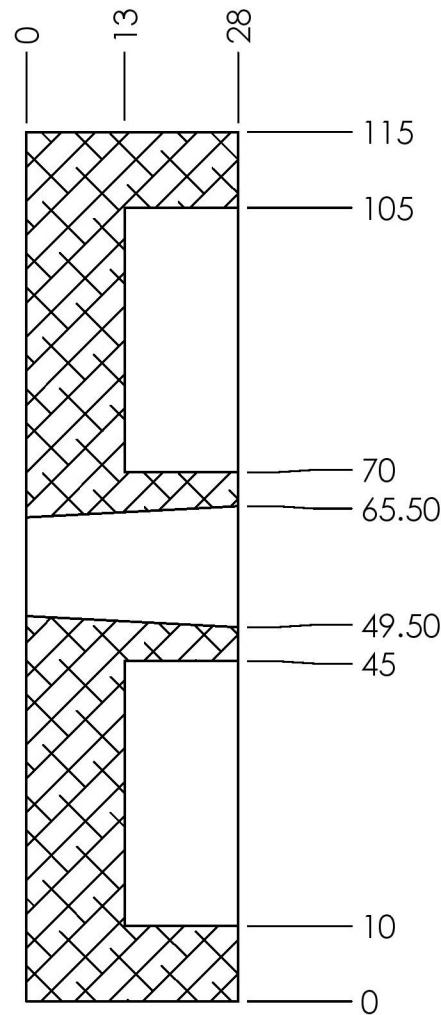
UNIVERSITY OF IDAHO
ME DEPARTMENT

PART #: 1-13 QTY: 1

SCALE: 1:1 SHEET: 19 OF 127



SECTION K-K



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DEFAULT TOLERANCES:	LINEAR: X. [±] .5 X.X [±] 2.5 X.XX [±] .25 X.XXX [±] .05	ANGULAR: X. [±] 2 X.X [±] 1 X.XX [±] 0.30	DESCRIPTION: Flywheel CHECKED BY: Krissy Buckler DRAWN BY: Hunter Trulock FILE NAME: 1-14 Flywheel.SLDPR	DATE: 5/2/2016 DATE: 5/2/2016 PART #: 1-14 SCALE: 1:1 QTY: 1 SHEET: 20 OF 127
UNIVERSITY OF IDAHO ME DEPARTMENT				

260

Check The Sparkplugs

0

65

Collin • Krissy • Cameron • Brian • Zach • Hunter

40

0

20

480

500



TEXT WOULD BE LASER CUT OR CNC MILLED
DIMENSIONS ARE NOT CRITICAL

INCLUDE MOUNTING HOLES AS NECESSARY FOR
COMPONENTS

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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

MATERIAL: AISI 1035 Steel (SS)

**THE DUX 4-
STROKE DIESEL**

DEFAULT TOLERANCES:
LINEAR: X.±5
X.X±2.5
X.XX±.25
X.XXX±.05

DESCRIPTION: Mounting Plate

CHECKED BY: Krissy Buckler

DATE: 5/1/2016

DRAWN BY: Zachary Lipple

DATE: 5/1/2016

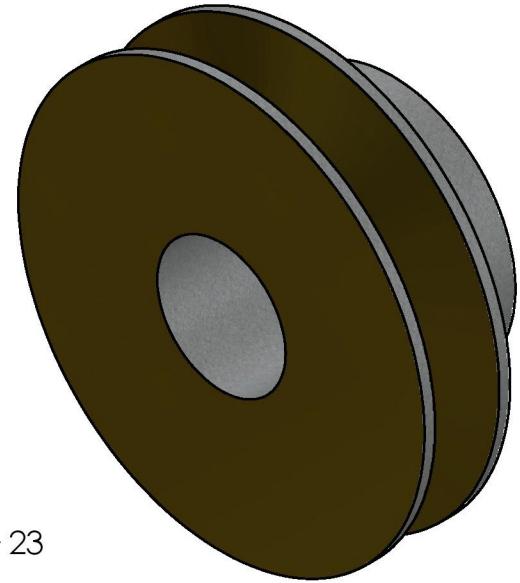
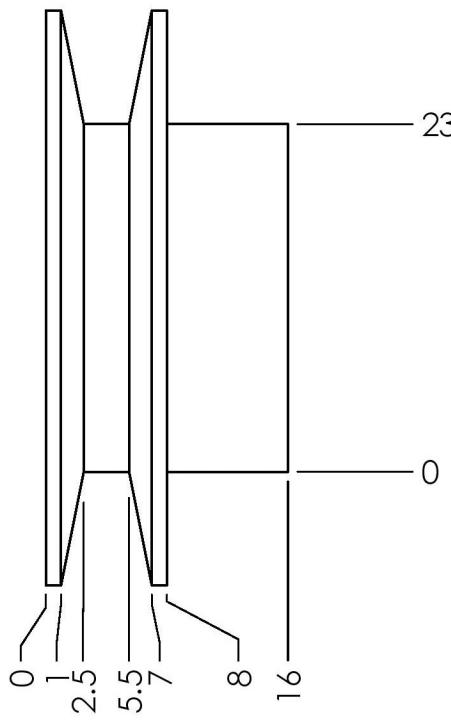
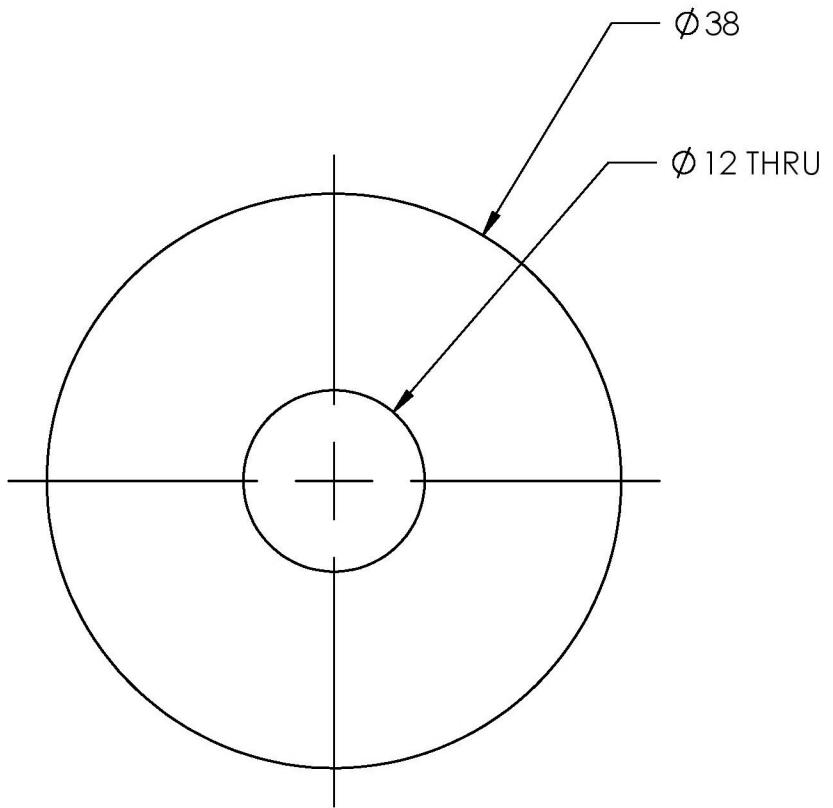
FILE NAME: 1-15 Mounting Table.SLDPRT

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PART #: 1-15 QTY: 1

SCALE: 1:5

SHEET: 21 OF 127



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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

MATERIAL: AISI 1035 Steel (SS)

DEFAULT TOLERANCES:

LINEAR:
X.±5
X.X±2.5
X.XXX±.25
X.XXXX±.05

ANGULAR:
X.±2
X.X±1
X.XX± 0.30'

DESCRIPTION: Pulley

CHECKED BY: Krissy Buckler

DRAWN BY: Zachary Lipple

FILE NAME: 1-16 Pulley.SLDprt

DATE: 4/28/2016

DATE: 4/28/2016

PART #: 1-16

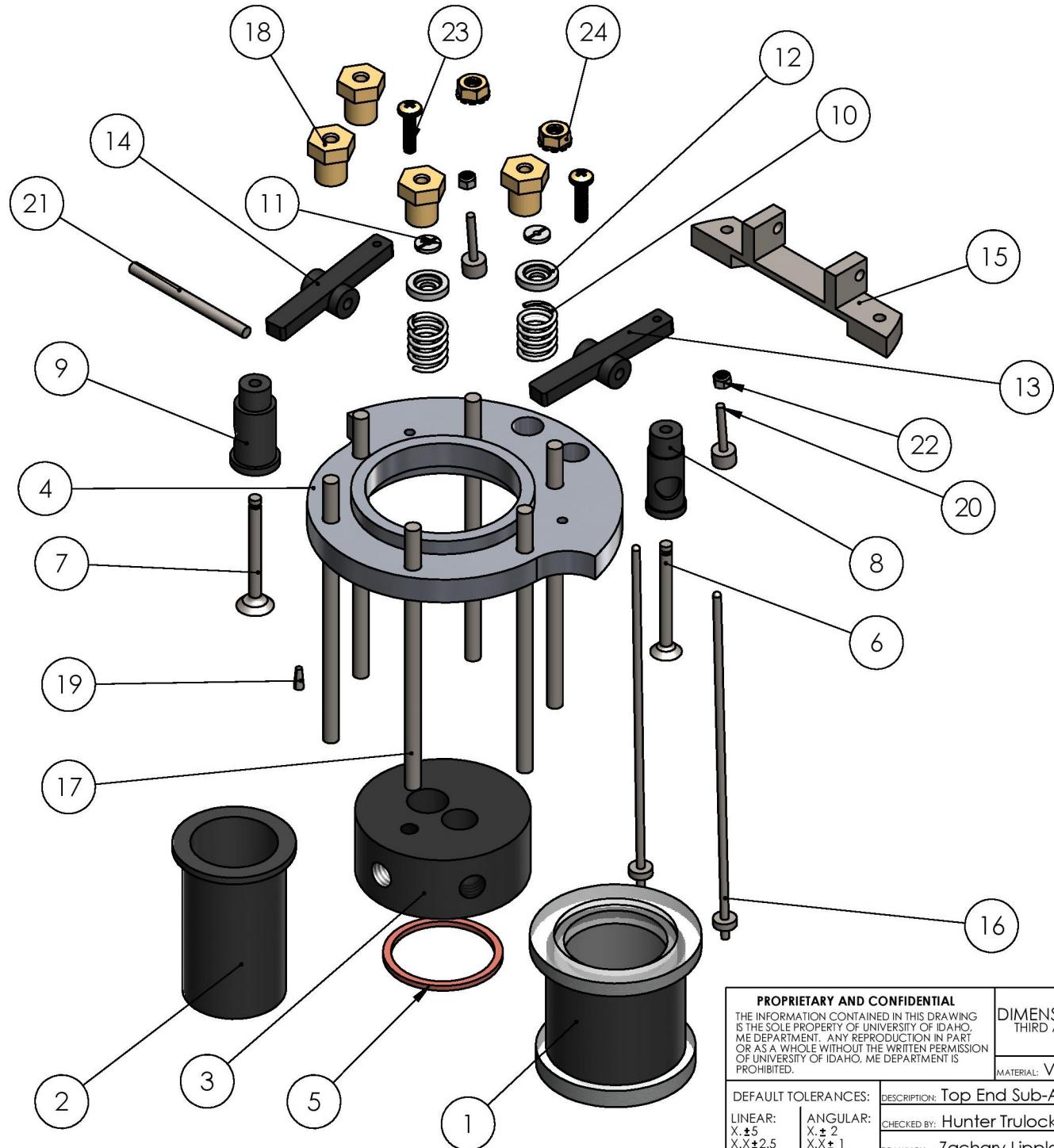
QTY: 1

SCALE: 2:1

SHEET: 22 OF 127

THE DUX 4-STROKE DIESEL

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DEFAULT TOLERANCES:

LINEAR:
X. \pm .5
X.X \pm 2.5
X.XX \pm .25
X.XXX \pm .05

ANGULAR:
X. \pm 2
X.X \pm 1
X.XX \pm 0.30

DESCRIPTION: Top End Sub-Assembly

CHECKED BY: Hunter Trulock

DATE: 5/2/2016

DRAWN BY: Zachary Lipple

DATE: 5/2/2016

FILE NAME: 2-00 Top End.SLDPR

MATERIAL: Various

DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

THE DUX 4-STROKE DIESEL

UNIVERSITY OF IDAHO ME DEPARTMENT

PART #: 2-00 QTY: 1
SCALE: 2:3 SHEET: 23 OF 127

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NO.
1	2-01	Cylinder	1	25
2	2-02	Cylinder Sleeve	1	26
3	2-03	Cylinder Head	1	27
4	2-04	Cylinder Head Cover	1	28
5	2-05	Cylinder Head Gasket	1	29
6	2-06	Exhaust Valve	1	30
7	2-07	Intake Valve	1	31
8	2-08	Exhaust Valve Seat	1	32
9	2-09	Intake Valve Seat	1	33
10	2-10	Spring	1	34
11	2-11	Spring Retainer Half Rings	2	35
12	2-12	Spring Retainer	2	36
13	2-13	Left Rocker Arm	1	3
14	2-14	Right Rocker Arm	1	38
15	2-15	Rocker Arm Support	1	39
16	2-16	Push Rod	2	40
17	2-17	Stud, Clamp Plate	6	41
18	2-18	Special Nut	4	42
19	2-19	Tapered Head Pin	1	43
20	2-20	Push Rod Adjuster	2	44
21	2-21	Rocker Arm Support Rod	1	45
22	93625A101	Push Rod Adjuster Nut	2	N/A
23	92005A122	Rocker Arm Support Fastener	2	N/A
24	93825A120	Stud Clamp Lock Nut	2	N/A

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DIMENSIONS ARE IN MILLIMETERS
 THIRD ANGLE PROJECTION 

MATERIAL: Various

DEFAULT TOLERANCES:
 LINEAR: X.[±]5
 X.X[±]2.5
 X.XX[±].25
 X.XXX[±].05
 X.XXXX[±].05

DESCRIPTION: Top End Bill of Materials

CHECKED BY: Krissy Buckler DATE: 4/27/2016

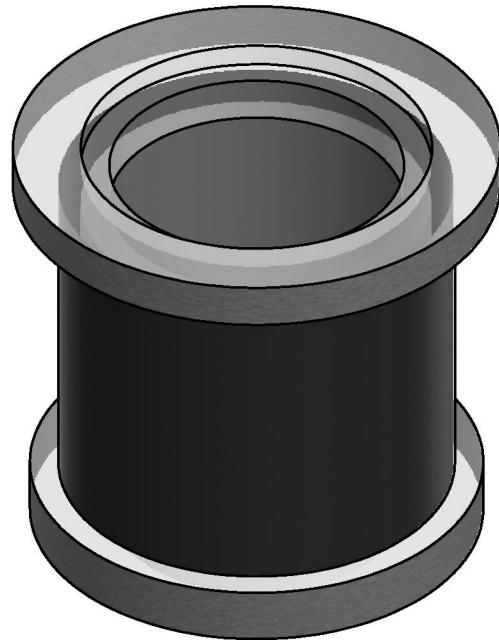
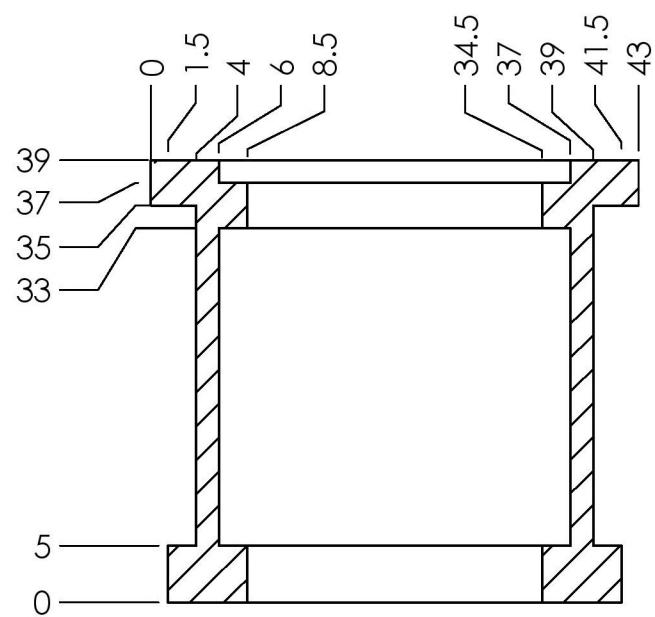
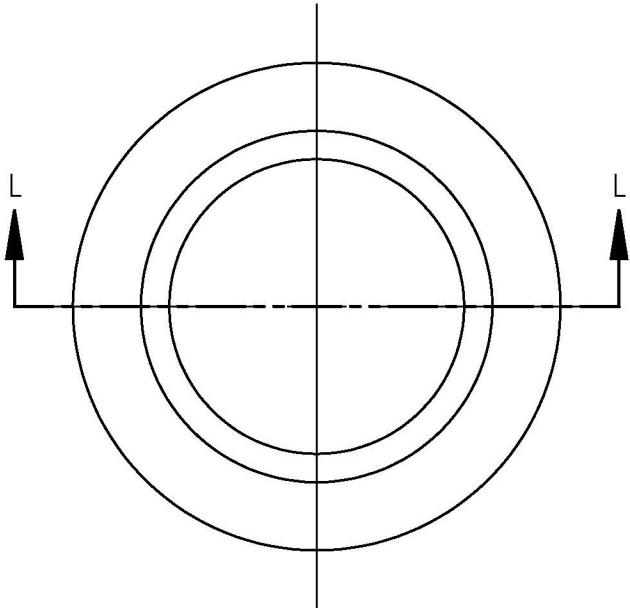
DRAWN BY: Zachary Lipple DATE: 4/25/2016

FILE NAME: 2-00 Top End.SLDPRT

THE DUX 4-
 STROKE DIESEL

UNIVERSITY OF IDAHO
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PART #: 2-00 QTY: 1
 SCALE: N/A SHEET: 24 OF 127



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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

MATERIAL: Grey Cast Iron

DEFAULT TOLERANCES:

LINEAR:
 $X \pm .5$
 $X \pm 2.5$
 $X \pm .25$
 $X \pm .05$

ANGULAR:
 $X \pm 2$
 $X \pm 1$
 $X \pm 0.30$

DESCRIPTION: Cylinder

CHECKED BY: Hunter Trulock

DATE: 4/27/2016

DRAWN BY: Zachary Lipple

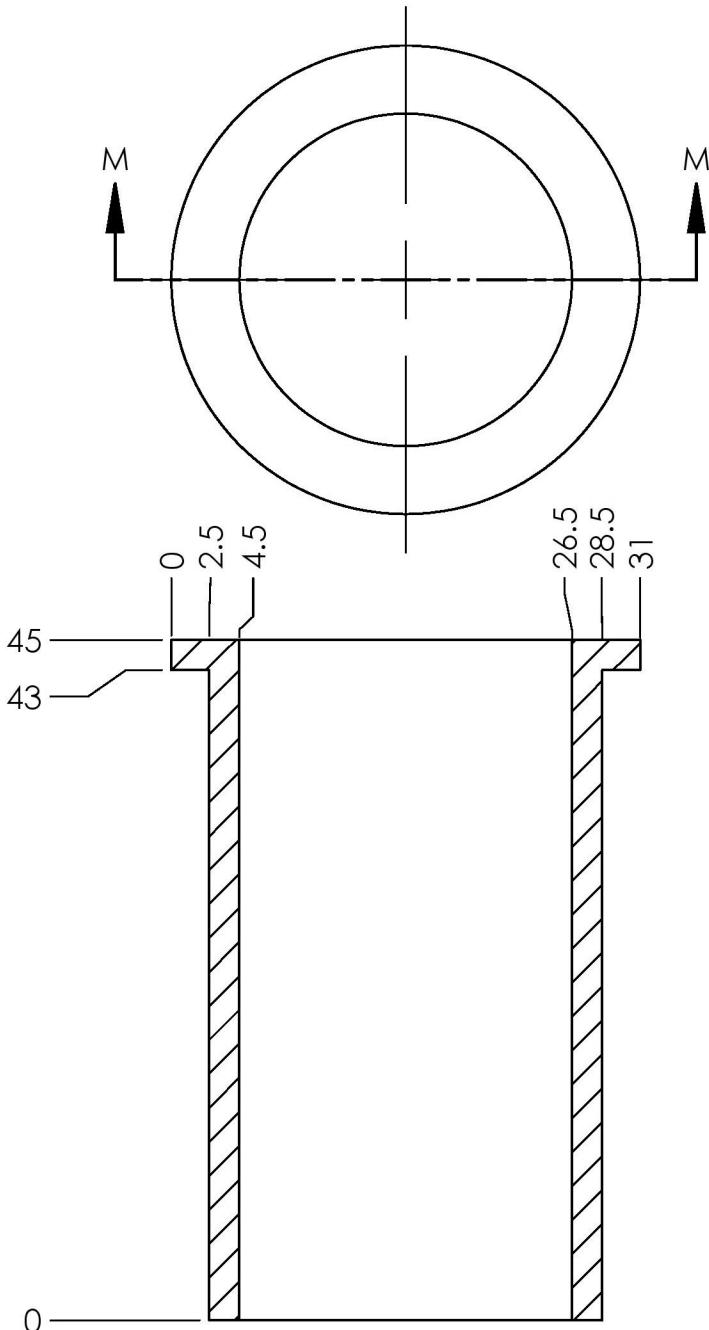
DATE: 4/22/2016

FILE NAME: 2-01 Cylinder.SLDPR

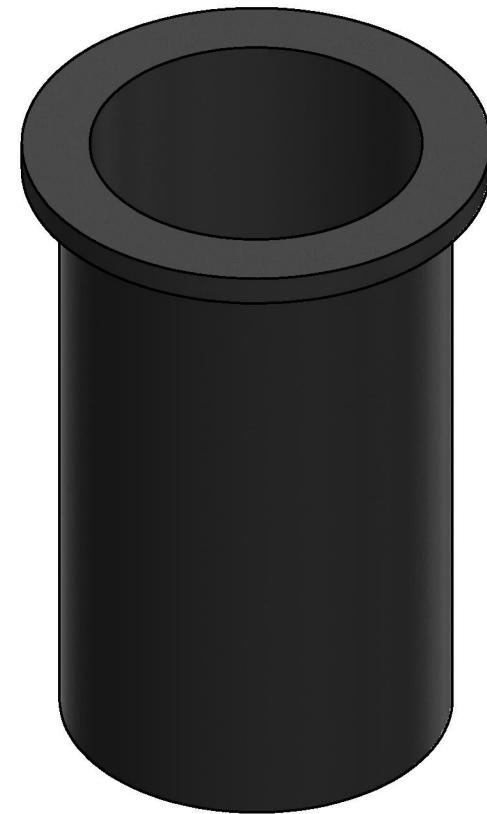
THE DUX 4-STROKE DIESEL

UNIVERSITY OF IDAHO ME DEPARTMENT

PART #: 2-01 QTY: 1
SCALE: 3:2 SHEET: 25 OF 127

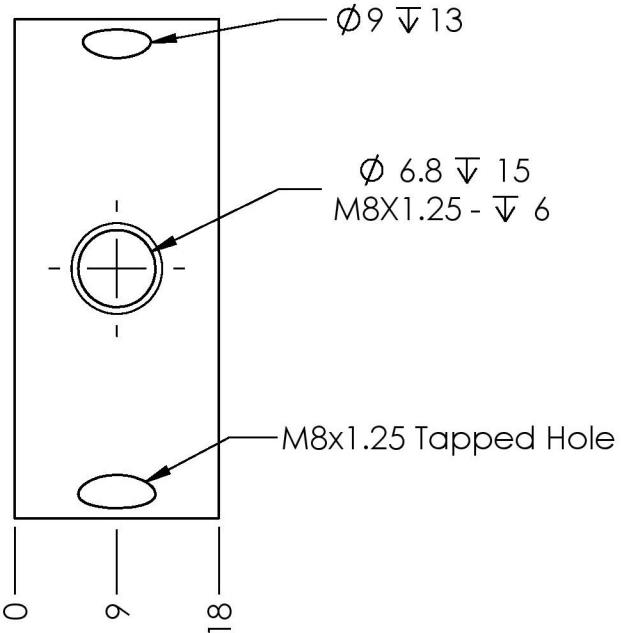
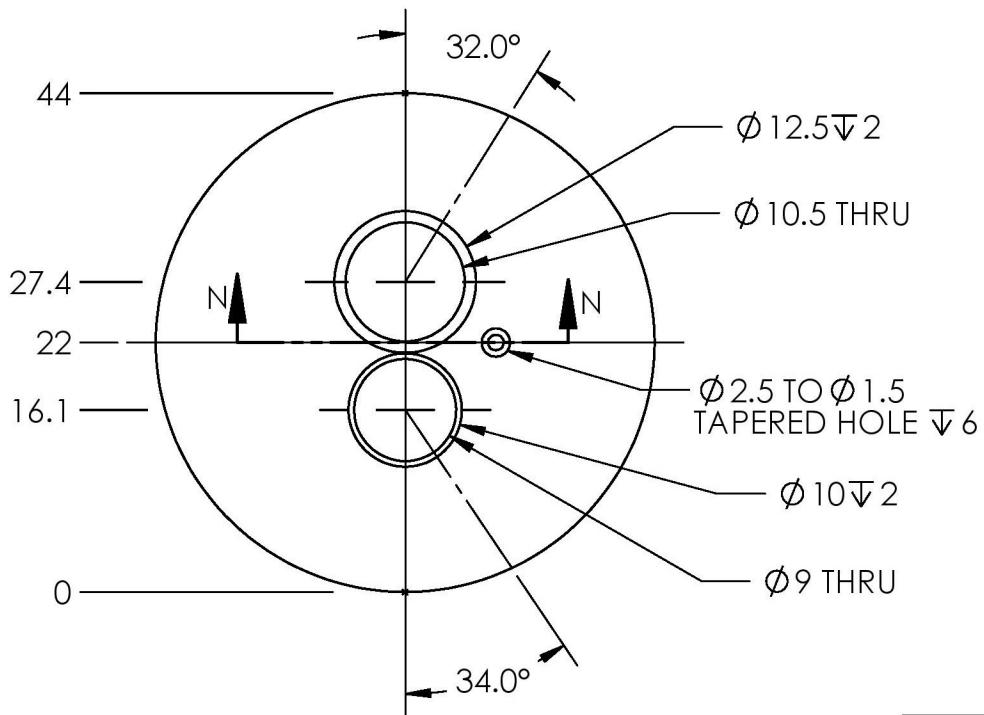
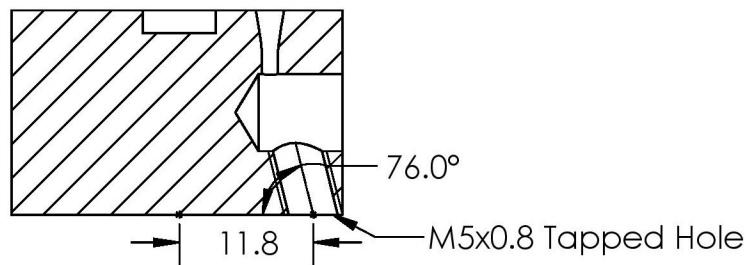


SECTION M-M

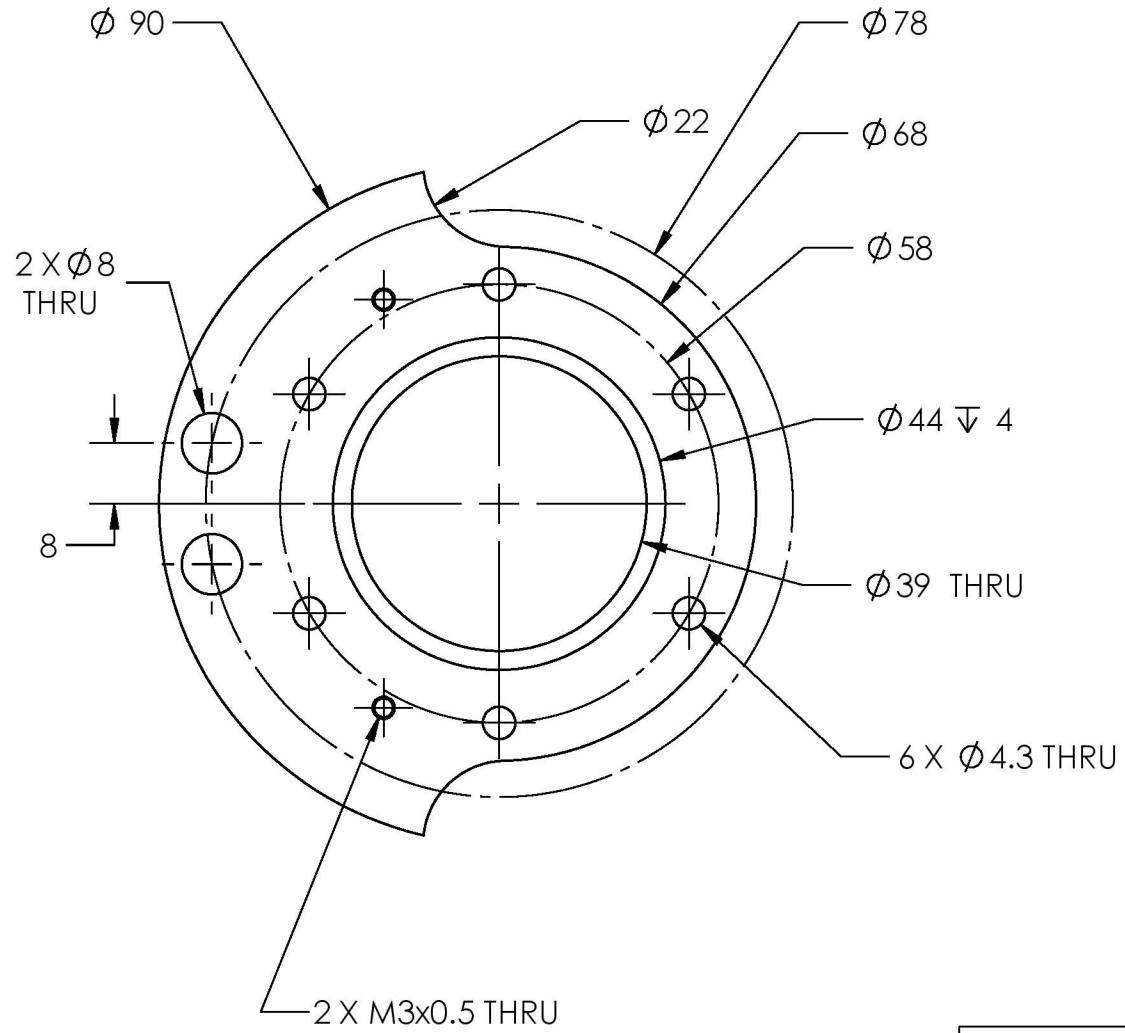


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		MATERIAL: Grey Cast Iron		
DEFAULT TOLERANCES:	LINEAR: X.±5 X.X±2.5 X.XX±.25 X.XXX±.05	ANGULAR: X.±2 X.X±1 X.XX± 0.30°	DESCRIPTION: Cylinder Sleeve CHECKED BY: Krissy Buckler DATE: 5/1/2016 DRAWN BY: Zachary Lipple DATE: 4/22/2016 FILE NAME: 2-02 Cylinder Sleeve.SLDprt	UNIVERSITY OF IDAHO ME DEPARTMENT
			PART #: 2-02 QTY: 1 SCALE: 2:1 SHEET: 26 OF 127	

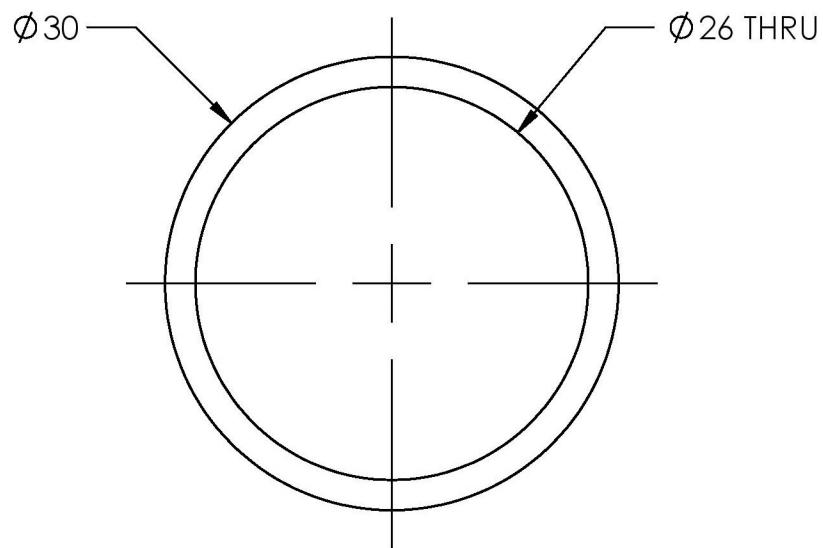
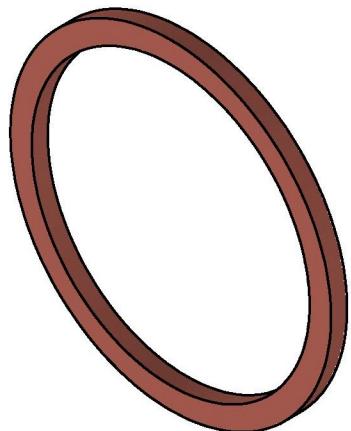
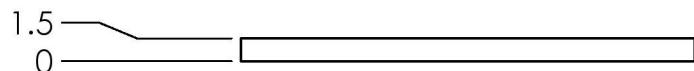
SECTION N-N



PROPRIETARY AND CONFIDENTIAL		DIMENSIONS ARE IN MILLIMETERS THIRD ANGLE PROJECTION		THE DUX 4-STROKE DIESEL
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DEFAULT TOLERANCES:	ANGULAR: $X_{\pm 5}$ $X_{\pm 2.5}$ $X_{\pm .25}$ $X_{\pm .05}$	LINEAR: $X_{\pm 2}$ $X_{\pm 1}$ $X_{\pm 0.30}$	DESCRIPTION: Cylinder Head CHECKED BY: Zachary Lipple DRAWN BY: Cameron Moore FILE NAME: 2-03 cylinder Head.SLDprt	UNIVERSITY OF IDAHO ME DEPARTMENT DATE: 5/1/2016 DATE: 5/2/2016 PART #: 2-03 QTY: 1 SCALE: 3:2 SHEET: 27 OF 127



PROPRIETARY AND CONFIDENTIAL		DIMENSIONS ARE IN MILLIMETERS THIRD ANGLE PROJECTION		THE DUX 4-STROKE DIESEL	
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DEFAULT TOLERANCES:	LINEAR: X. \pm .5 X.X \pm 2.5 X.XX \pm .25 X.XXX \pm .05	ANGULAR: X. \pm 2 X.X \pm 1 X.XX \pm 0.30	DESCRIPTION: Cylinder Head Cover	CHECKED BY: Hunter Trulock	DATE: 4/27/2016
			DRAWN BY: Zachary Lipple	DATE: 5/2/2016	PART #: 2-04 QTY: 1
			FILE NAME: 2-04 Cylinder Head Cover.SLDprt		SCALE: 1:1 SHEET: 28 OF 127



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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION

MATERIAL: Copper

DEFAULT TOLERANCES:
LINEAR: X.±.5
X.X±2.5
X.XX±.25
X.XXX±.05

DESCRIPTION: Cylinder Head Gasket

CHECKED BY: Brian Aldrimk DATE: 4/21/2016

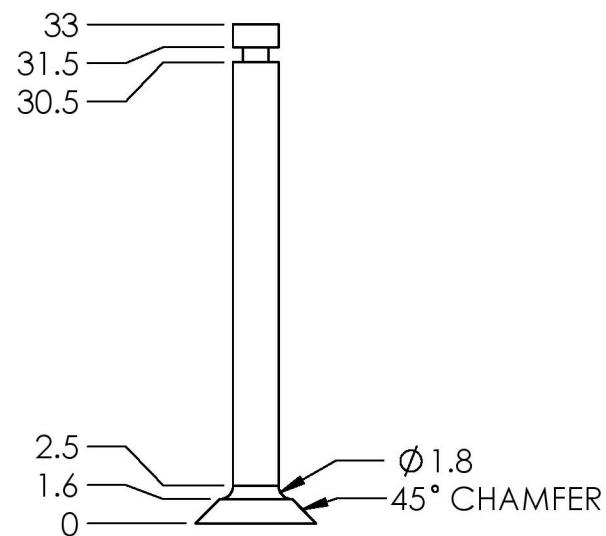
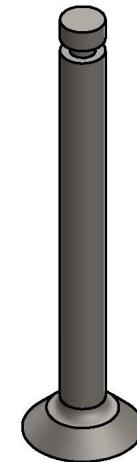
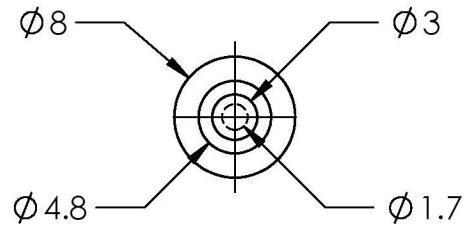
DRAWN BY: Zachary Lipple DATE: 4/20/2016

FILE NAME: 2-05 Cylinder Head Gasket.SLDprt

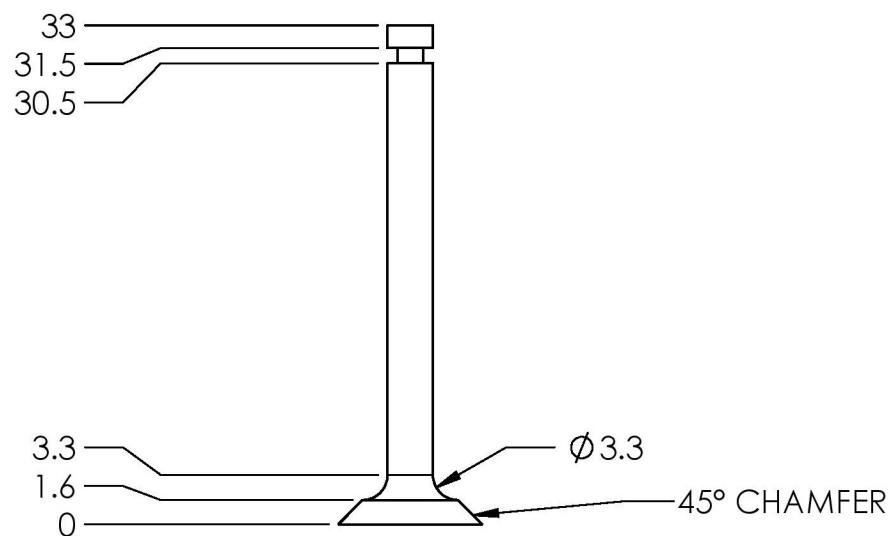
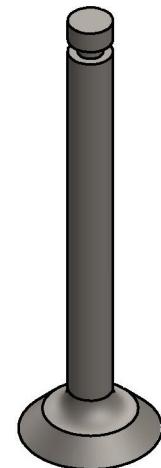
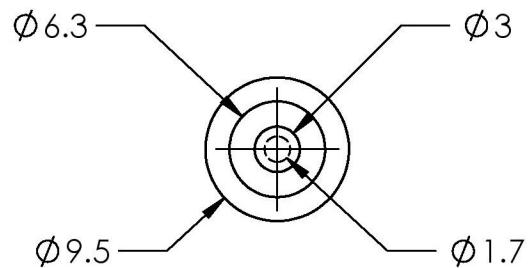
THE DUX 4-STROKE DIESEL

**UNIVERSITY OF IDAHO
ME DEPARTMENT**

PART #: 2-05 QTY: 1
SCALE: 2:1 SHEET: 29 OF 127



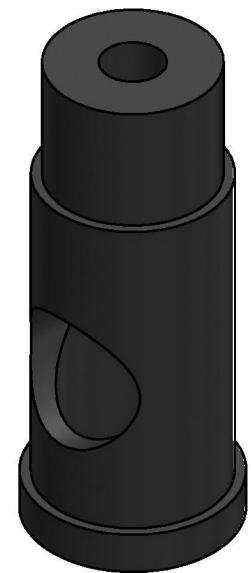
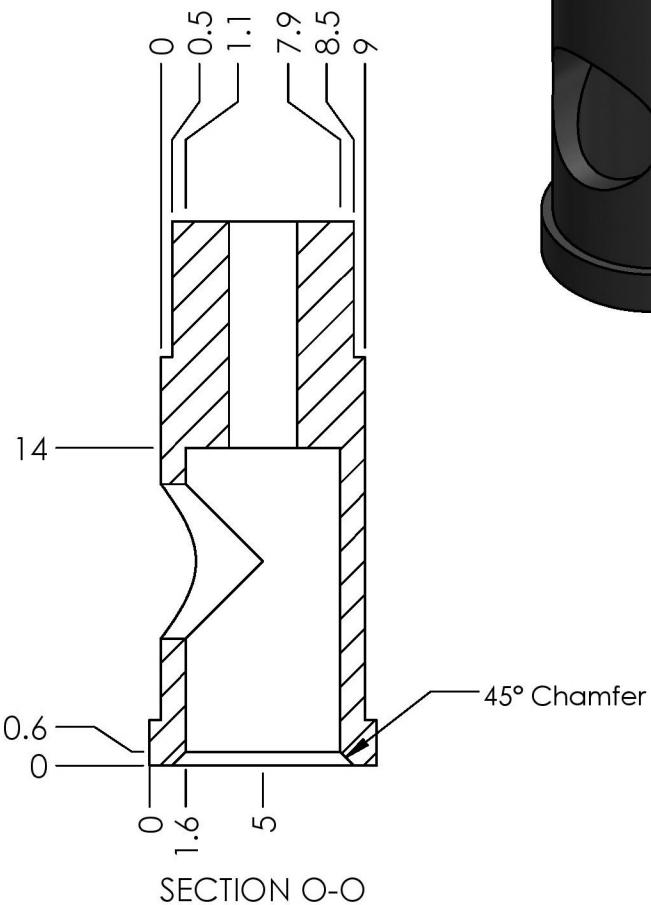
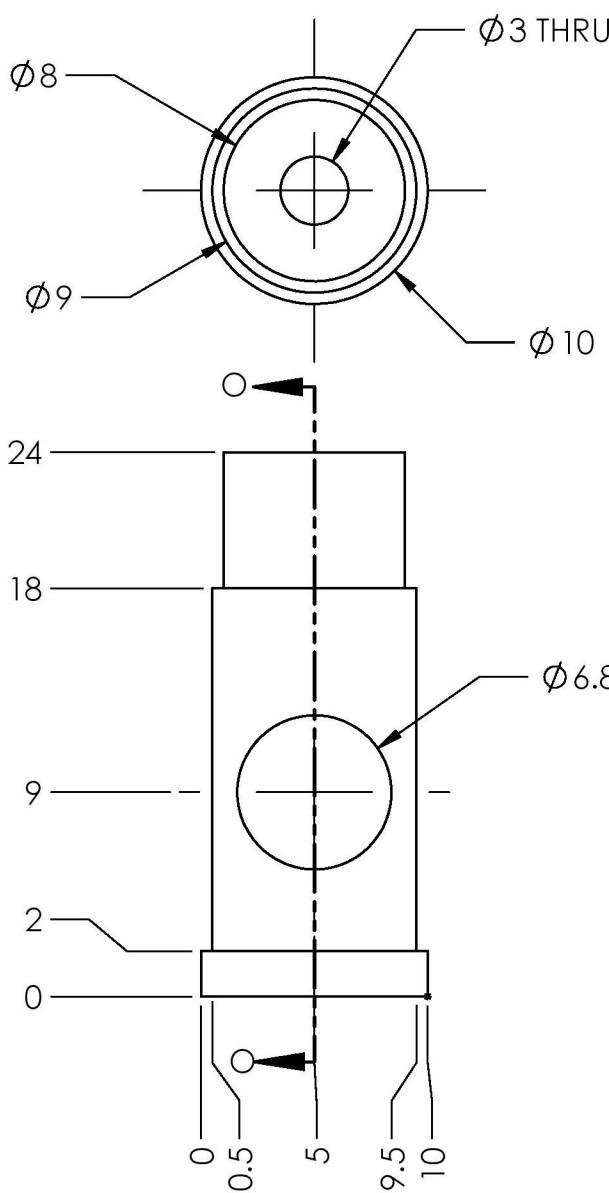
PROPRIETARY AND CONFIDENTIAL		DIMENSIONS ARE IN MILLIMETERS THIRD ANGLE PROJECTION		THE DUX 4-STROKE DIESEL	
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DEFAULT TOLERANCES:	ANGULAR: $X_{\pm .5}$ $X_{\pm 2.5}$ $X_{XX \pm .25}$ $X_{XXXX \pm .05}$	DESCRIPTION: Exhaust Valve	MATERIAL: AISI Type A2 Tool Steel	UNIVERSITY OF IDAHO ME DEPARTMENT	
	CHECKED BY: Brian Aldrimk	DATE: 4/21/2016		PART #: 2-06	QTY: 1
	DRAWN BY: Zachary Lipple	DATE 4/20/2016		SCALE: 2:1	SHEET: 30 OF 127
	FILE NAME: 2-06_Exhaust Valve.SLDprt				



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DIMENSIONS ARE IN MILLIMETERS
THIRD ANGLE PROJECTION
MATERIAL: AISI Type A2 Tool Steel

DEFAULT TOLERANCES:	DESCRIPTION: Intake Valve		THE DUX 4-STROKE DIESEL	
LINEAR: X. [±] .5 X.X [±] 2.5 X.XX [±] .25 X.XXX [±] .05	ANGULAR: X. [±] 2 X.X [±] 1 X.XX [±] 0 30'	CHECKED BY: Brian Aldrimk DATE: 4/21/2016	DRAWN BY: Zachary Lipple DATE: 4/20/2016	UNIVERSITY OF IDAHO ME DEPARTMENT
		FILE NAME: 2-07 Intake Valve.SLDPRT	PART #: 2-07 QTY: 1	SCALE: 2:1 SHEET: 31 OF 127



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DIMENSIONS ARE IN MILLIMETERS



MATERIAL: Grey Cast Iron

DEFAULT TOLERANCES:

LINEAR:
 $X_{\pm 5}$
 $X_{\pm 2.5}$
 $X_{\pm 0.25}$
 $X_{\pm 0.05}$

ANGULAR:
 $X_{\pm 2}$
 $X_{\pm 1}$
 $X_{\pm 0.30}$

DESCRIPTION: Exhaust Valve Seat

CHECKED BY: Hunter Trulock

DATE: 4/28/2016

DRAWN BY: Zachary Lipple

DATE: 4/26/2016

FILE NAME: 2-08 Exhaust Valve Seat.SLDprt

THE DUX 4-STROKE DIESEL

**UNIVERSITY OF IDAHO
ME DEPARTMENT**

PART #: 2-08 QTY: 1
SCALE: 3:1 SHEET: 32 OF 127