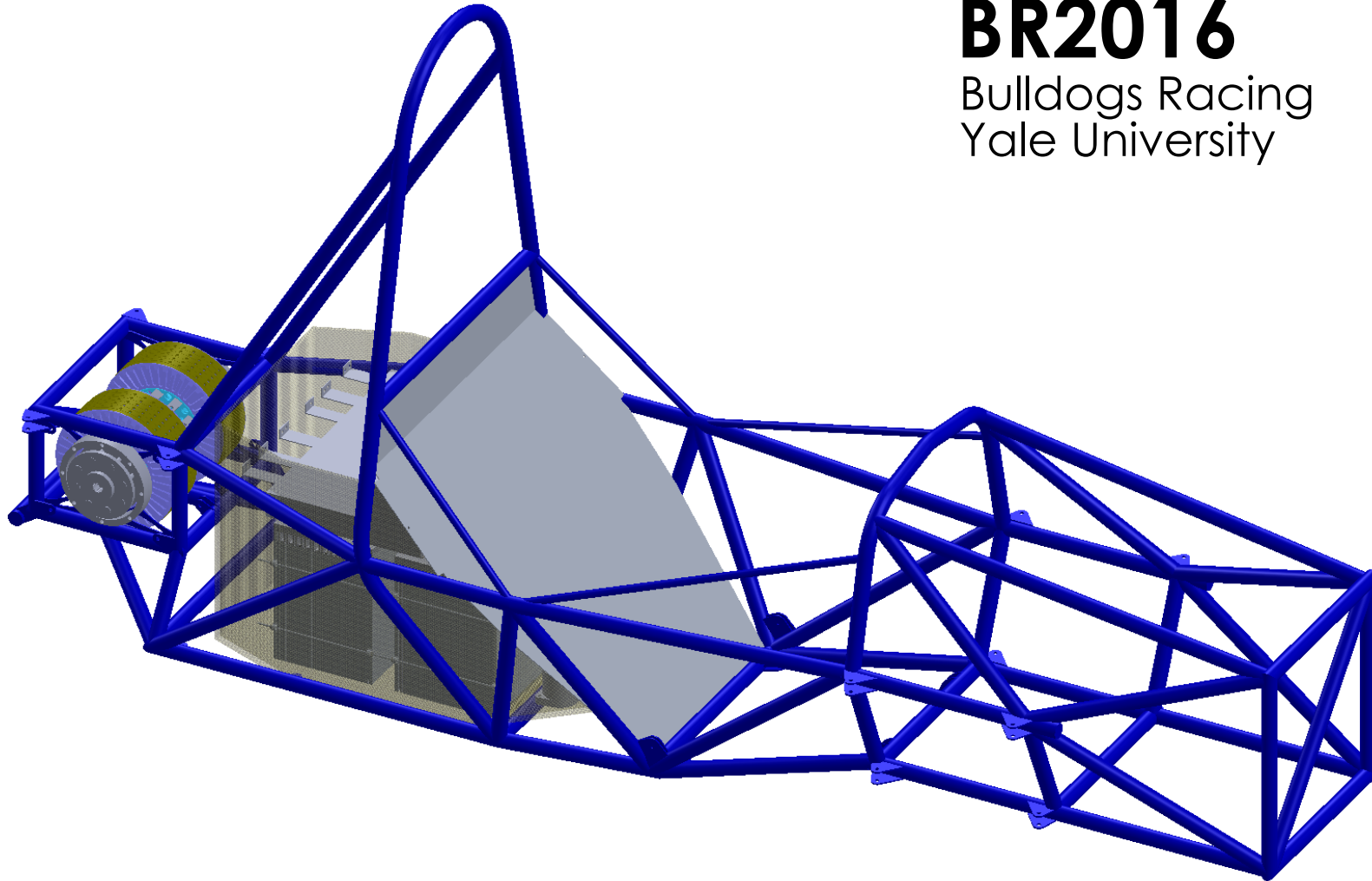


BR2016

Bulldogs Racing
Yale University



**SolidWorks Student Edition.
For Academic Use Only.**

UNLESS OTHERWISE SPECIFIED:		TITLE:	
DIMENSIONS ARE IN INCHES		Front Cover	
TOLERANCES: 1/32 in		SIZE	DWG. NO.
ANGULAR: 0.25 degrees		A Chassis Tabs	
BEND RADIUS: 1/4 in			
MATERIAL			
ANSI 4130 Steel			
COMMENTS:			
		SCALE: 1:10	SHEET 1 OF 10

People

Taha Ramazanoglu - President
Philip Piper - Chassis Designer
Dante Archangeli - Chassis Designer
Dr. Joseph Zinter - Faculty Advisor

Phone Number

Philip Piper: 7135012744

Email Addresses

taha.ramazanoglu@yale.edu
philip.piper@yale.edu
dante.archangeli@yale.edu
joseph.zinter@yale.edu

**SolidWorks Student Edition.
For Academic Use Only.**

UNLESS OTHERWISE SPECIFIED:		TITLE:	
DIMENSIONS ARE IN INCHES TOLERANCES: 1/32 in ANGULAR: 0.25 degrees BEND RADIUS: 1/4 in		Notes	
MATERIAL ANSI 4130 Steel	SIZE	DWG. NO.	Chassis Tabs
COMMENTS:			
			SHEET 2 OF 10

ITEM NO.	QTY.	DESCRIPTION	OD x THICK (INCHES)	LENGTH
1	2	Front Bulkhead Horizontal	1 x 0.065	13.75
2	2	Front Bulkhead Vertical	1 x 0.065	14.5
3	1	Front Lower Sus Mount	1 x 0.049	27.07
4	1	Front Box Vertical	1 x 0.049	8.56
5	2	Front Roll Hoop Support	1 x 0.095	8.68
6	1	Front Box Rear Diagonal	1 x 0.049	15.33
7	1	Front Box Lower Diagonal	1 x 0.049	16.97
8	2	Side Front Longitudinal	1 x 0.065	21.59
9	1	Side Front Lower	1 x 0.065	14.47
10	2	Side Rear Longitudinal	1 x 0.065	10.07
11	1	Side Front Diagonal	1 x 0.065	18.58
12	1	Side Middle Diagonal	1 x 0.065	14.43
13	2	Side Rear Lower	1 x 0.065	10.41
14	1	Side Rear Diagonal	1 x 0.065	12.35
15	1	Shoulder Harness Mount	1 x 0.095	20.13
16	4	Rear Box Longitudinal	1 x 0.049	10.73
17	4	Rear Box Horizontal	1 x 0.049	12.5
18	1	Rear Box Middle	1 x 0.049	9.73
19	3	Rear Box Vertical	1 x 0.049	6.85
20	1	Rear Bracing Longitudinal	1 x 0.049	16.92
21	2	Rear Lower Longitudinal	1 x 0.049	23.92
22	1	Rear Bracing Diagonal	1 x 0.049	20.06
23	1	Rear Box Front Lowering	1 x 0.049	5.93
24	1	Rear Torsional Rigidity	0.5 x 0.035	13.6
25	1	Front Torsional Rigidity	0.5 x 0.035	22.18
26	1	Rear Lower Horizontal	1 x 0.049	19
27	1	Seat Belt Mount	1 x 0.065	15.5
28	2	Front Lower Horizontal	1 x 0.049	12.75
29	2	Front Box Longitudinal	1 x 0.049	14.44
30	1	Jacking Point	1 x 0.035	12
31	1	Rear Box Diagonal	1 x 0.049	13.39
32	1	Front Box Lower Diagonal	1 x 0.049	16.97
33	1	Front Lower Sus Mount	1 x 0.049	27.07
34	1	Front Bulkhead Diagonal	1 x 0.035	18.57
35	1	Front Box Final Diagonal	1 x 0.049	15.84

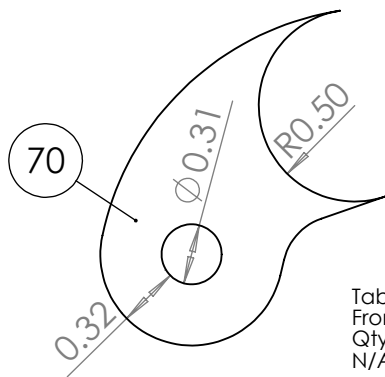
ITEM NO.	QTY.	DESCRIPTION	OD x THICK (INCHES)	LENGTH
36	1	Front Box Rear Diagonal	1 x 0.049	15.33
37	1	Front Box Vertical	1 x 0.049	8.56
38	1	Main Roll Hoop Base	1 x 0.035	18
39	1	Main Roll Hoop Brace	1 x 0.065	30.12
40	1	Rear Box Rear Lowering	1 x 0.049	14.18
41	1	Side Front Lower	1 x 0.049	14.47
42	1	Front Roll Hoop	1 x 0.095	33.94
43	1	Front Roll Hoop Brace	1 x 0.065	26.63
44	1	Main Roll Hoop	1 x 0.095	99.94
45	1	Front Box Final Diagonal	1 x 0.049	15.84
46	1	Main Roll Hoop Brace	1 x 0.065	30.12
47	1	Rear Box Rear Lowering	1 x 0.049	14.18
48	1	Side Front Diagonal	1 x 0.065	18.58
49	1	Side Middle Diagonal	1 x 0.065	14.43
50	1	Side Rear Diagonal	1 x 0.065	12.35
51	1	Rear Bracing Diagonal	1 x 0.049	20.06
52	1	Rear Bracing Longitudinal	1 x 0.049	16.92
53	1	Rear Box Front Lowering	1 x 0.049	5.93
54	1	Front Roll Hoop Brace	1 x 0.065	26.63
55	2	Jacking Point Tabs	N/A x 0.1	
56	4	Front Sus Front Upper Tabs	N/A x 0.1	
57	4	Firewall Tabs	N/A x 0.1	
58	4	Front Sus Front Lower Tabs	N/A x 0.1	
59	2	Rear Sus Rear Upper Tabs 1	N/A x 0.1	
60	2	Rear Sus Front Upper Tabs 1	N/A x 0.1	
61	4	Front Sus Rear Upper Tabs	N/A x 0.1	
62	4	Front Sus Rear Lower Tabs	N/A x 0.1	
63	4	Battery Box Tabs	N/A x 0.1	
64	2	Battery Box Middle Tabs	N/A x 0.1	

ITEM NO.	QTY.	DESCRIPTION	OD x THICK (INCHES)	LENGTH
65	2	Anti Sub Lower Tabs	N/A x 0.1	
66	2	Anti Sub Upper Tabs	N/A x 0.1	
67	2	Lap Belt Outer Tabs	N/A x 0.1	
68	2	Lap Belt Inner Tabs	N/A x 0.1	
69	8	Motor Tabs	N/A x 0.1	
70	4	Front Shock Tabs	N/A x 0.1	
71	2	Rear Sus Front Upper Tabs 2	N/A x 0.1	
72	1	Front Torsional Rigidity	0.5 x 0.035	22.18
73	4	End Caps	N/A x 0.1	
74	8	Planetary Outer Tabs	N/A x 0.1	
75	1	Rear Torsional Rigidity	0.5 x 0.035	13.6
76	2	Rear Sus Rear Upper Tabs 2	N/A x 0.1	
77	1	Rear Box Vertical	1 x 0.049	6.85

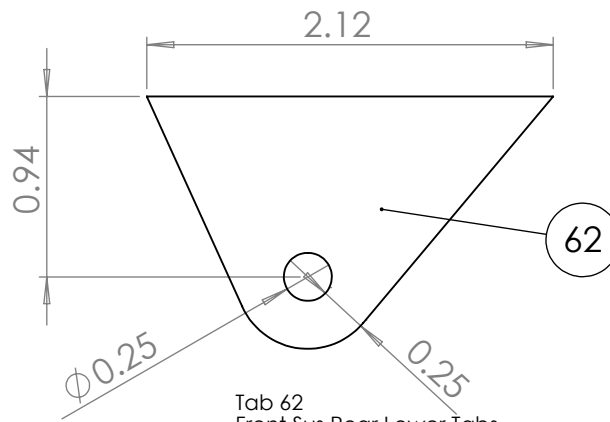
Tab 76 will be referred to as tab 75 throughout this document.

**SolidWorks Student Edition.
For Academic Use Only.**

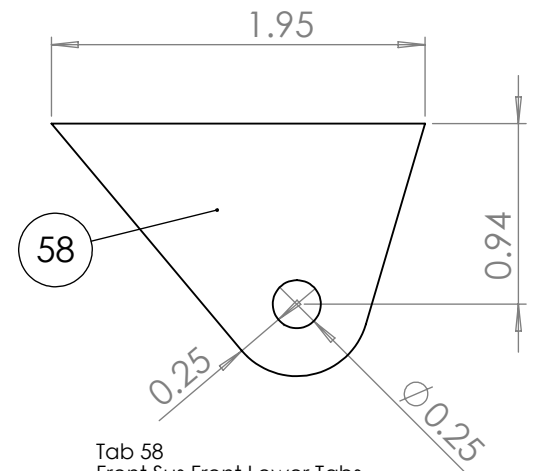
UNLESS OTHERWISE SPECIFIED:		TITLE:	
DIMENSIONS ARE IN INCHES TOLERANCES: 1/32 in ANGULAR: 0.25 degrees BEND RADIUS: 1/4 in		Cut List	
MATERIAL ANSI 4130 Steel		SIZE	DWG. NO.
COMMENTS:		Chassis Tabs	
		SCALE: N/A	
		SHEET 3 OF 10	



Tab 70
Front Shock Tabs
Qty: 4
N/A x 0.1



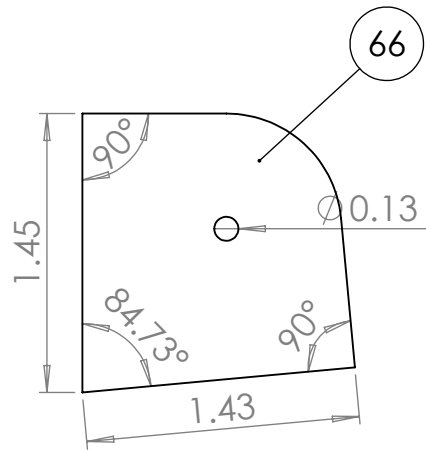
Tab 62
Front Sus Rear Lower Tabs
Qty: 4
N/A x 0.1



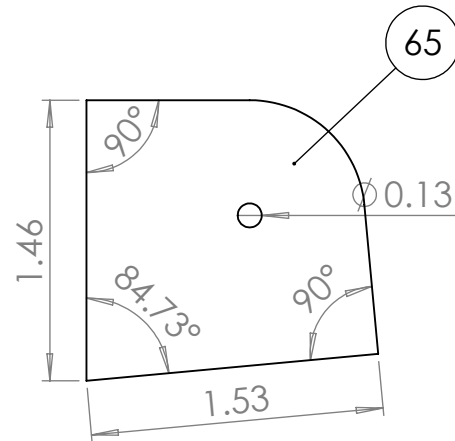
Tab 58
Front Sus Front Lower Tabs
Qty: 4
N/A x 0.1

**SolidWorks Student Edition.
For Academic Use Only.**

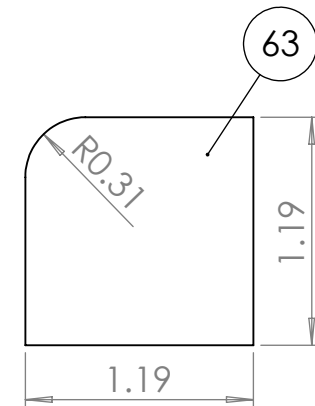
UNLESS OTHERWISE SPECIFIED:		TITLE:	
DIMENSIONS ARE IN INCHES		Car Base Front Tabs	
TOLERANCES: 1/32 in		SIZE	DWG. NO.
ANGULAR: 0.25 degrees		Chassis Tabs	
BEND RADIUS: 1/4 in			
MATERIAL			
ANSI 4130 Steel			
COMMENTS:			
		SCALE: 1:1	SHEET 4 OF 10



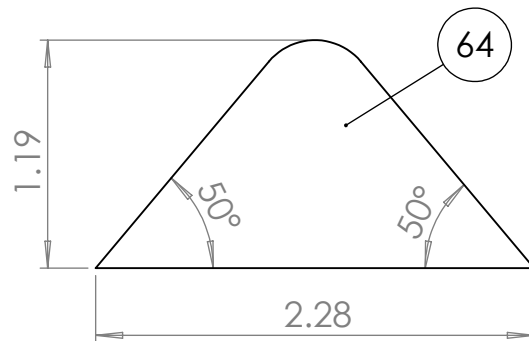
Tab 66
Anti Sub Upper Tabs
Qty: 2
N/A x 0.1



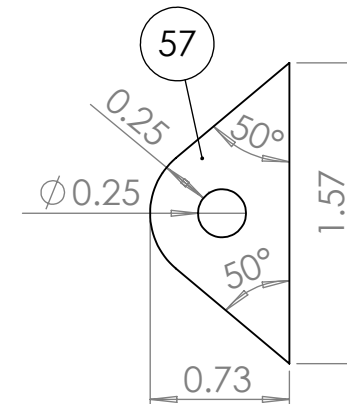
Tab 65
Anti Sub Lower Tabs
Qty: 2
N/A x 0.1



Tab 63
Battery Box Tabs
Qty: 4
N/A x 0.1



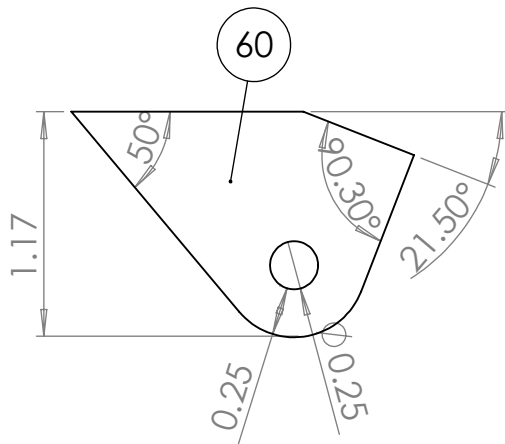
Tab 64
Battery Box Middle Tabs
Qty: 2
N/A x 0.1



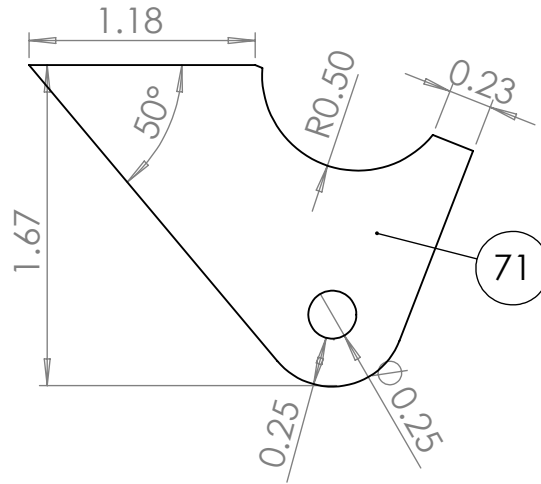
Tab 57
Firewall Tabs
Qty: 4
N/A x 0.1

**SolidWorks Student Edition.
For Academic Use Only.**

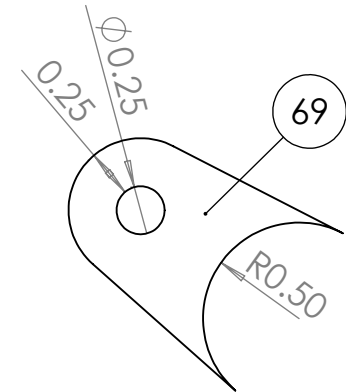
UNLESS OTHERWISE SPECIFIED:		TITLE:	
DIMENSIONS ARE IN INCHES		Car Base Rear Tabs	
TOLERANCES: 1/32 in		SIZE	DWG. NO.
ANGULAR: 0.25 degrees		Chassis Tabs	
BEND RADIUS: 1/4 in			
MATERIAL			
ANSI 4130 Steel			
COMMENTS:			
		SCALE: 1:1	SHEET 5 OF 10



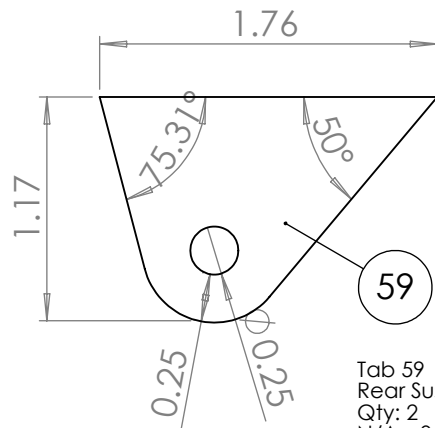
Tab 60
Rear Sus Front Upper Tabs 1
Qty: 2
N/A x 0.1



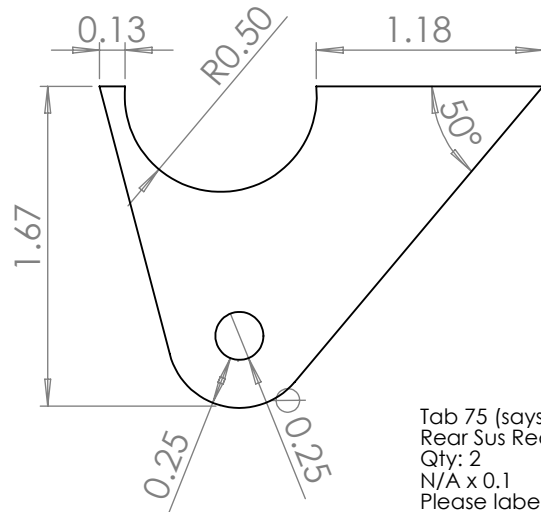
Tab 71
Rear Sus Front Upper Tabs 2
Qty: 2
N/A x 0.1



Tab 69
Motor Tabs
Qty: 8
N/A x 0.1



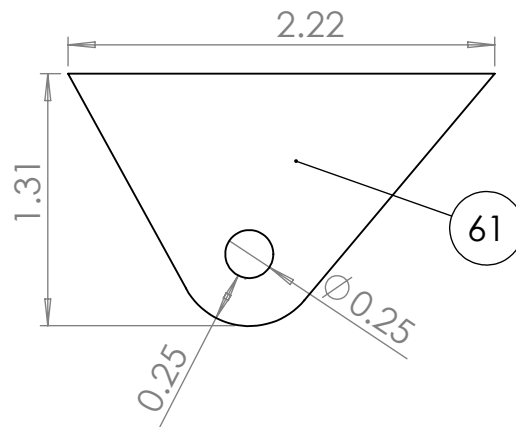
Tab 59
Rear Sus Rear Upper Tabs 1
Qty: 2
N/A x 0.1



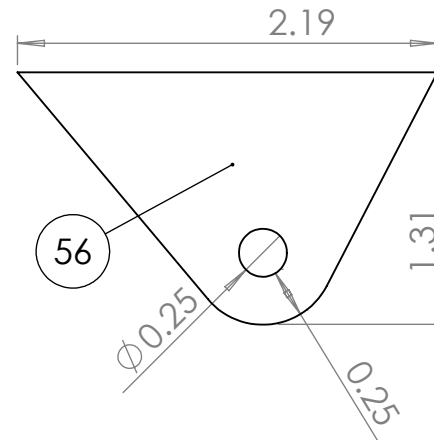
Tab 75 (says 76 on cut list)
Rear Sus Rear Upper Tabs 2
Qty: 2
N/A x 0.1
Please label as tab 75, not tab 76

**SolidWorks Student Edition.
For Academic Use Only.**

UNLESS OTHERWISE SPECIFIED:		TITLE:	
DIMENSIONS ARE IN INCHES		Rear Box Tabs	
TOLERANCES: 1/32 in		SIZE	DWG. NO.
ANGULAR: 0.25 degrees		Chassis Tabs	
BEND RADIUS: 1/4 in		SCALE: 1:1	
MATERIAL		SHEET 6 OF 10	
ANSI 4130 Steel			
COMMENTS:			



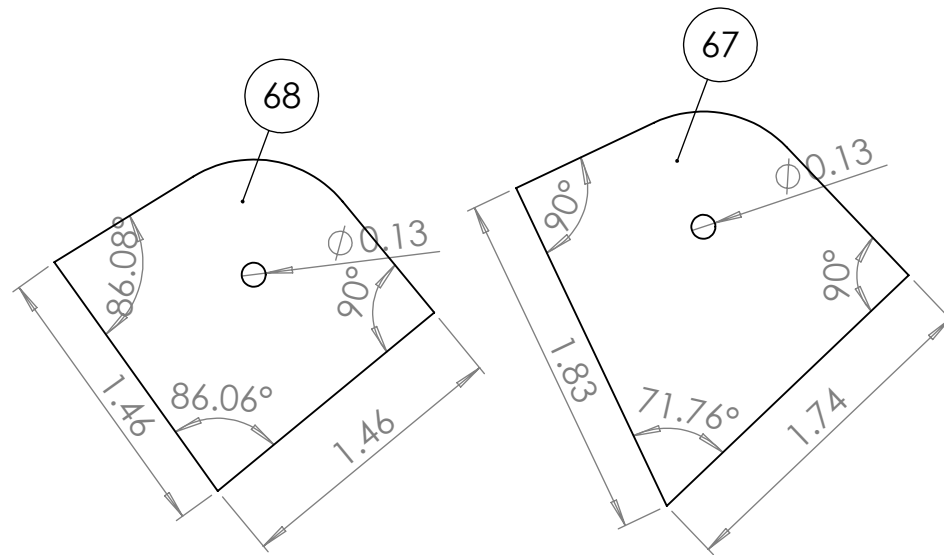
Tab 61
Front Sus Rear Upper Tabs
Qty: 4
N/A x 0.1



Tab 56
Front Sus Front Upper Tabs
Qty: 4
N/A x 0.1

**SolidWorks Student Edition.
For Academic Use Only.**

UNLESS OTHERWISE SPECIFIED:		TITLE:	
DIMENSIONS ARE IN INCHES TOLERANCES: 1/32 in ANGULAR: 0.25 degrees BEND RADIUS: 1/4 in		Front Box Tabs	
MATERIAL ANSI 4130 Steel		SIZE	DWG. NO.
COMMENTS:		Chassis Tabs	
		SCALE: 1:1	SHEET 7 OF 10

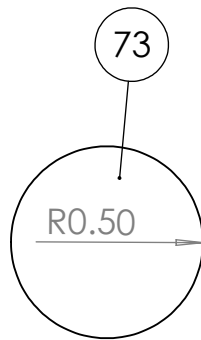


Tab 68
Lap Belt Inner Tabs
Qty: 2
N/A x 0.1

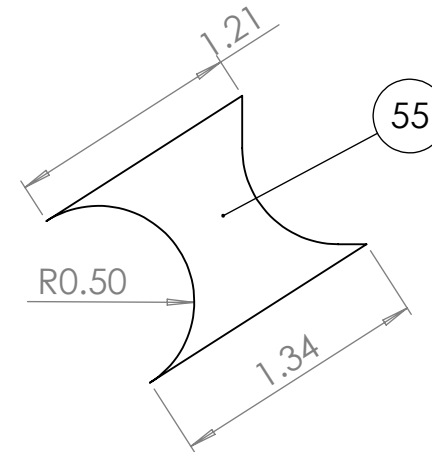
Tab 67
Lap Belt Outer Tabs
Qty: 2
N/A x 0.1

**SolidWorks Student Edition.
For Academic Use Only.**

UNLESS OTHERWISE SPECIFIED:		TITLE:	
DIMENSIONS ARE IN INCHES TOLERANCES: 1/32 in ANGULAR: 0.25 degrees BEND RADIUS: 1/4 in		Side Structure Tabs	
MATERIAL ANSI 4130 Steel		SIZE	DWG. NO.
COMMENTS:		Chassis Tabs	
		SCALE: 1:1	SHEET 8 OF 10



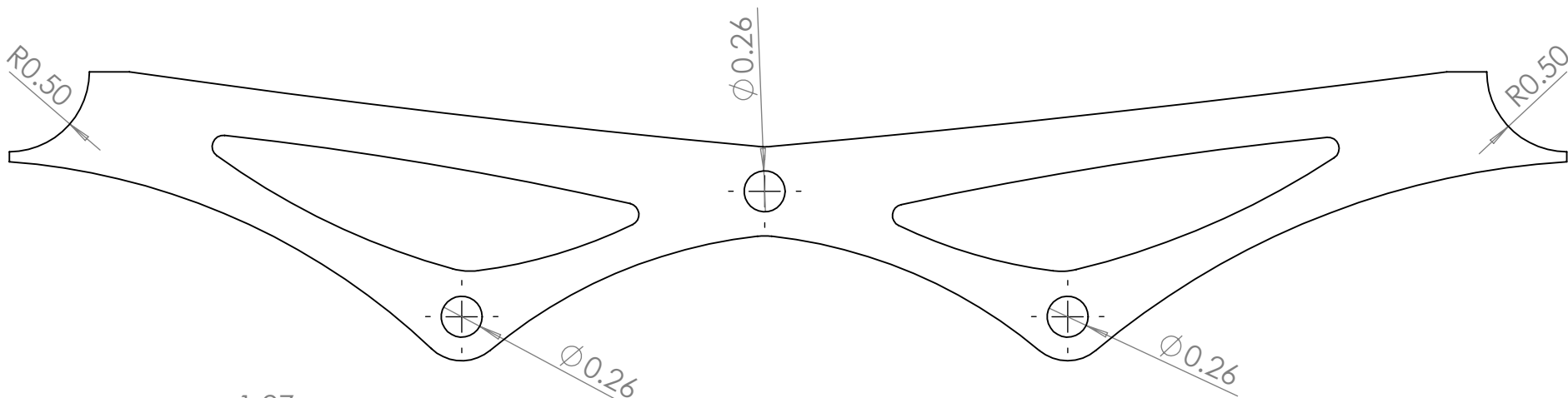
Tab 73
End Caps
Qty: 4
N/A x 0.1



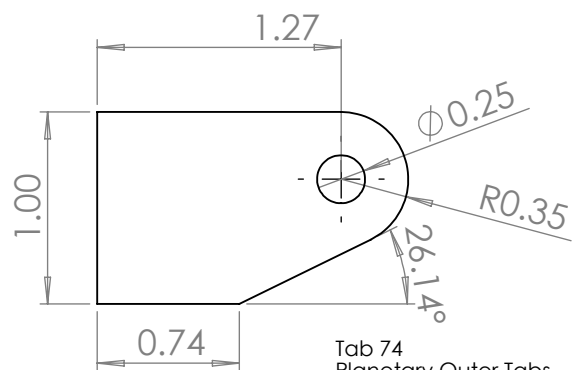
Tab 55
Jacking Point Tabs
Qty: 2
N/A x 0.1

**SolidWorks Student Edition.
For Academic Use Only.**

UNLESS OTHERWISE SPECIFIED:		TITLE:	
DIMENSIONS ARE IN INCHES TOLERANCES: 1/32 in ANGULAR: 0.25 degrees BEND RADIUS: 1/4 in		Jacking Point Tabs	
MATERIAL ANSI 4130 Steel		SIZE	DWG. NO.
COMMENTS:		Chassis Tabs	
		SCALE: 1:1	SHEET 9 OF 10



No tab number
Planetary Inner Tabs
Qty: 4
N/A x 0.1
Please label with tab name



Tab 74
Planetary Outer Tabs
Qty: 8
N/A x 0.1
For this tab please label with name, not number

**SolidWorks Student Edition.
For Academic Use Only.**

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES: 1/32 in
ANGULAR: 0.25 degrees
BEND RADIUS: 1/4 in

MATERIAL
ANSI 4130 Steel

COMMENTS:

TITLE:

Planetary Tabs

SIZE DWG. NO.

Achassis Tabs

SCALE: 1:1

SHEET 10 OF 10