

SkillsUSA 2012 Contest Projects

Technical Drafting

Click the “Print this Section” button above to automatically print the specifications for this contest. Make sure your printer is turned on before pressing the button.

Memo:

Date: June 25, 2012
To: Technical Drafting Contestants
From: Technical Drafting Committee
Re: Alstra Motor Assembly

Overview:

Alstra Industries LLC is an independently owned company specializing in the manufacture and repair of submersible motors for the water well industry. Market segments include Municipal, Industrial, Irrigation, Off Shore Platform, Mine de-watering, and more. Alstra employs skilled craftspeople to rebuild submersible pumps and submersible motors in the most cost effective and timely manner. It is our goal to form a partnership with our customers to keep their operations performing efficiently, profitably, with optimum uptime. It is your goal to demonstrate drafting skills to replicate the drawing listed below in the parts list. Due to the time constraints some of the drawings you will be asked to create a 3d rendered part given the orthographic views provided. In other drawings you will be asked to replicate both orthographic views and 3d technical illustrations.



DETAIL	DESCRIPTION	DRAWING No.
1	TOP END BELL ASSEMBLY	26-A00TE000-A
2	STATOR CAN ASSEMBLY	26-A00G000-A
3	ROTOR SHAFT ASSEMBLY	26-A00G003-A
4	LOWER BEARING HOUSING ASSY	26-A00LB00-A
5	THRUST ASSEMBLY	26-A00TH00-A
6	OIL CAN ASSEMBLY	26-A00OC000-A

1. 26-A00TE000-A TOP END BELL ASSEMBLY

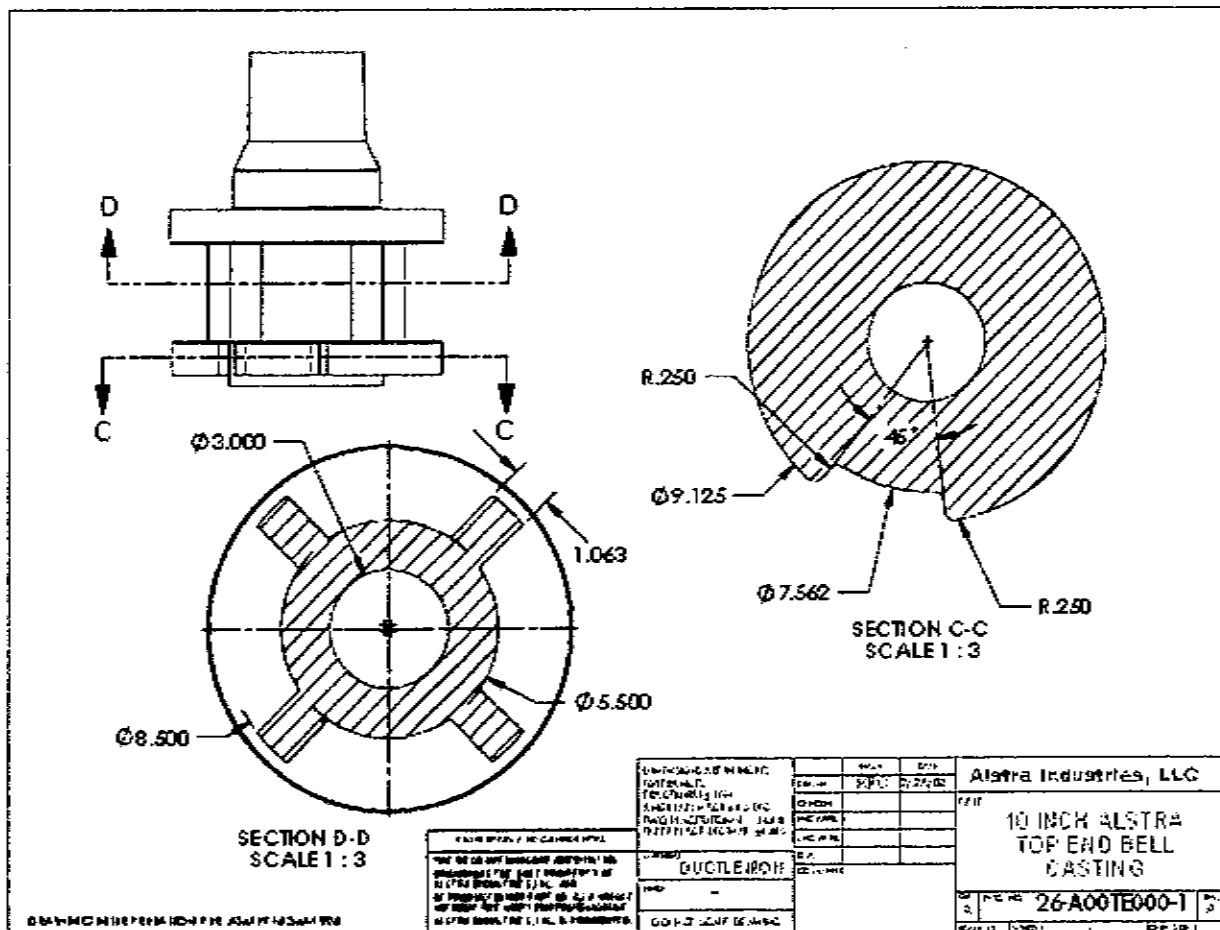
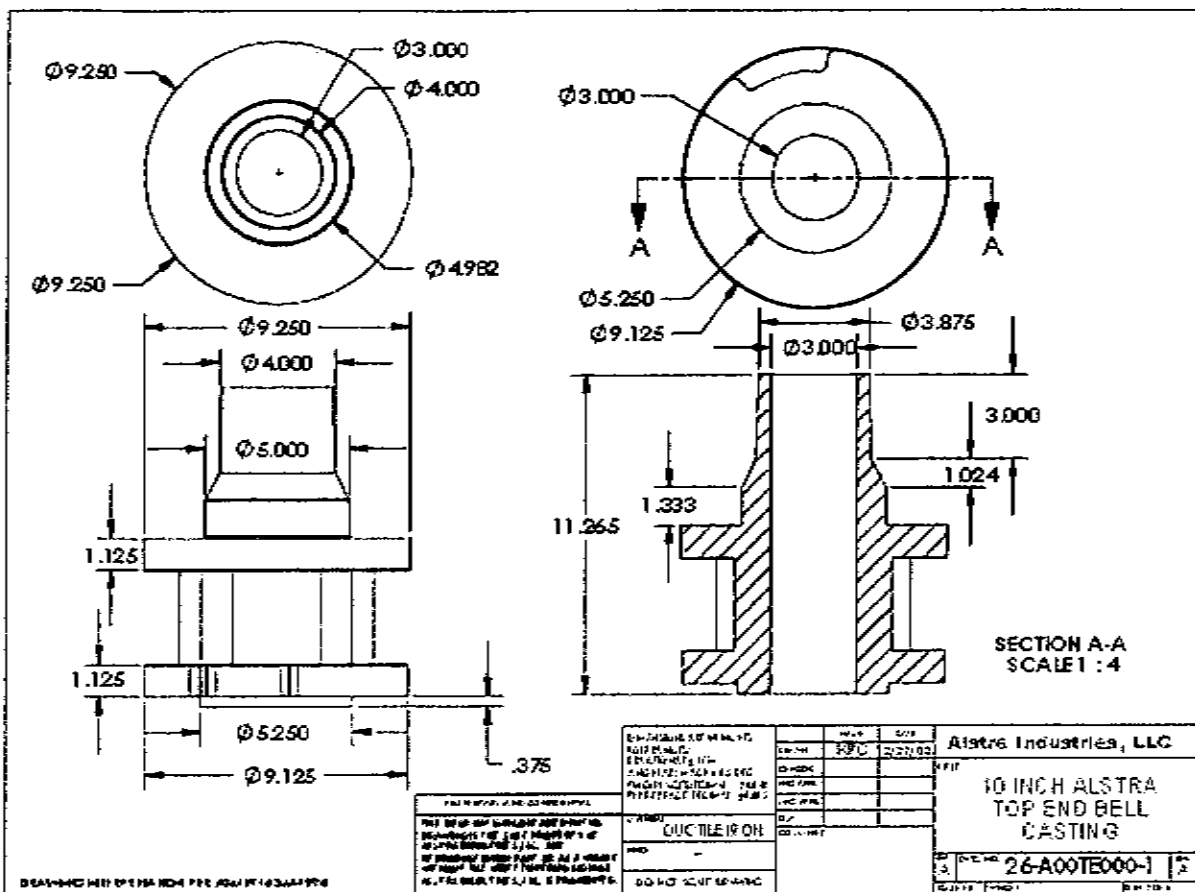
Directions: Using the following orthographic drawings and create a 3d rendered image of the Top End Bell Assembly. Insert in the following ANSI B Layout (11x17). Below is the layout design you will be using throughout this contest.

PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE ANY RELEASE OF THIS INFORMATION IS UNAUTHORIZED		DIMENSIONS ARE IN INCHES TOLERANCES FRACTIONALS 1/32 ANGULAR .0001 0.5 DEG TWO PLACE DECIMAL .0010 THREE PLACE DECIMAL .0005		NAME DATE KFC 3/4/08		Alstra Industries, LLC	
		MATERIAL DUCTILE IRON		TITLE 10 INCH ALSTRA TOP END BELL MACHINING		PART NO. 26-A00TE000-2	
		FINISH —		QUANTITY 1		REV. A	
		DO NOT SCALE DRAWING		SCALE 1:1		SHEET NO. 1 OF 1	

DRAWING INTERPRETATION PER ASME Y14.5M-1994

Enlarged Title Block

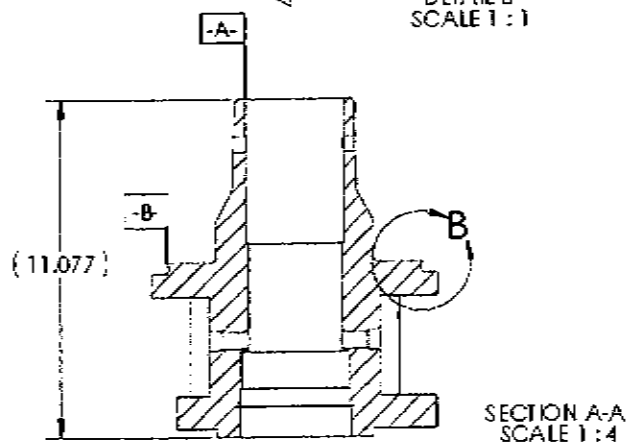
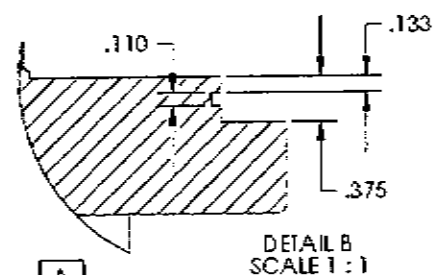
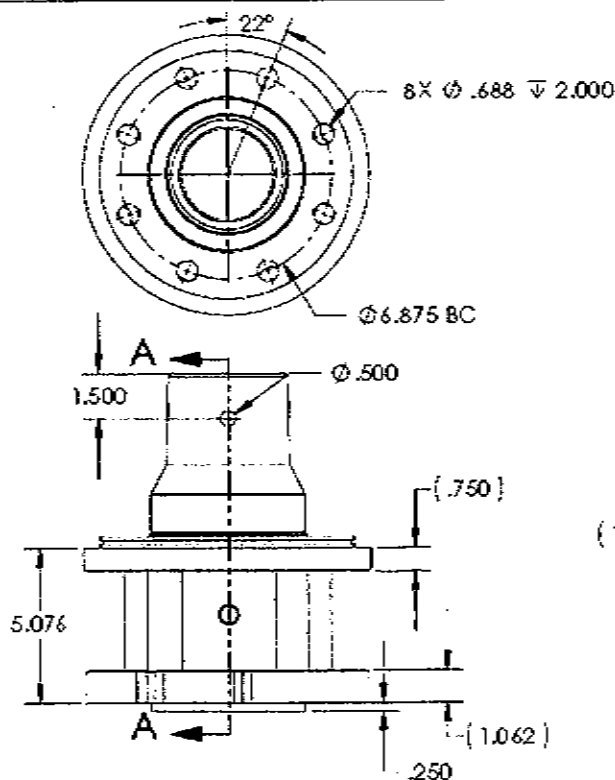
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE ANY RELEASE OF THIS INFORMATION IS UNAUTHORIZED	DIMENSIONS ARE IN INCHES TOLERANCES FRACTIONALS 1/32 ANGULAR .0001 0.5 DEG TWO PLACE DECIMAL .0010 THREE PLACE DECIMAL .0005		NAME DATE KFC 3/4/08		Alstra Industries, LLC	
	MATERIAL DUCTILE IRON		TITLE 10 INCH ALSTRA TOP END BELL MACHINING		PART NO. 26-A00TE000-2	
	FINISH —		QUANTITY 1		REV. A	
	DO NOT SCALE DRAWING		SCALE 1:1		SHEET NO. 1 OF 1	





E 4	CONTINUING TO BUILD TOP END BELL CASTING 10 INCH ALSTRA TOP END BELL CASTING	DATE	2/27/03
		TIME	10:00
10 INCH ALSTRA TOP END BELL CASTING	10 INCH ALSTRA TOP END BELL CASTING	10 INCH ALSTRA TOP END BELL CASTING	10 INCH ALSTRA TOP END BELL CASTING

■ 2014년 11월 15일 14시 30분

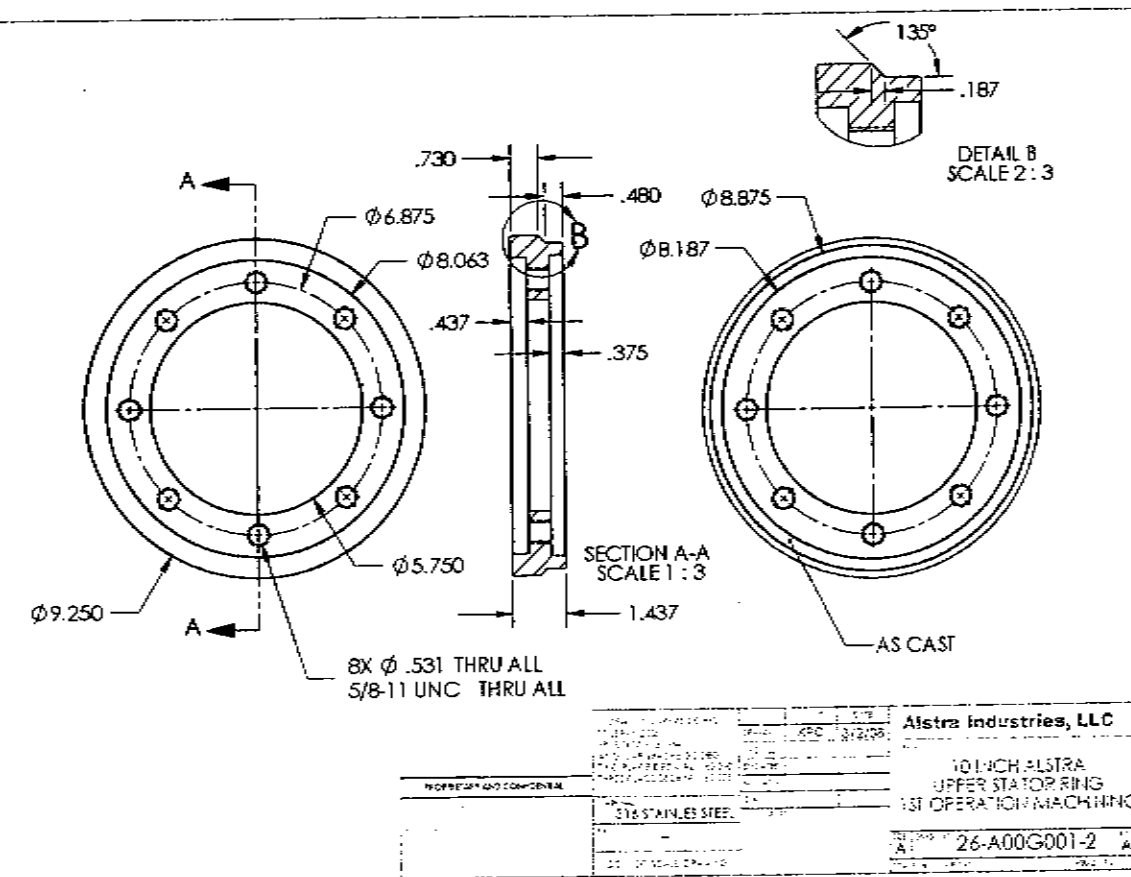
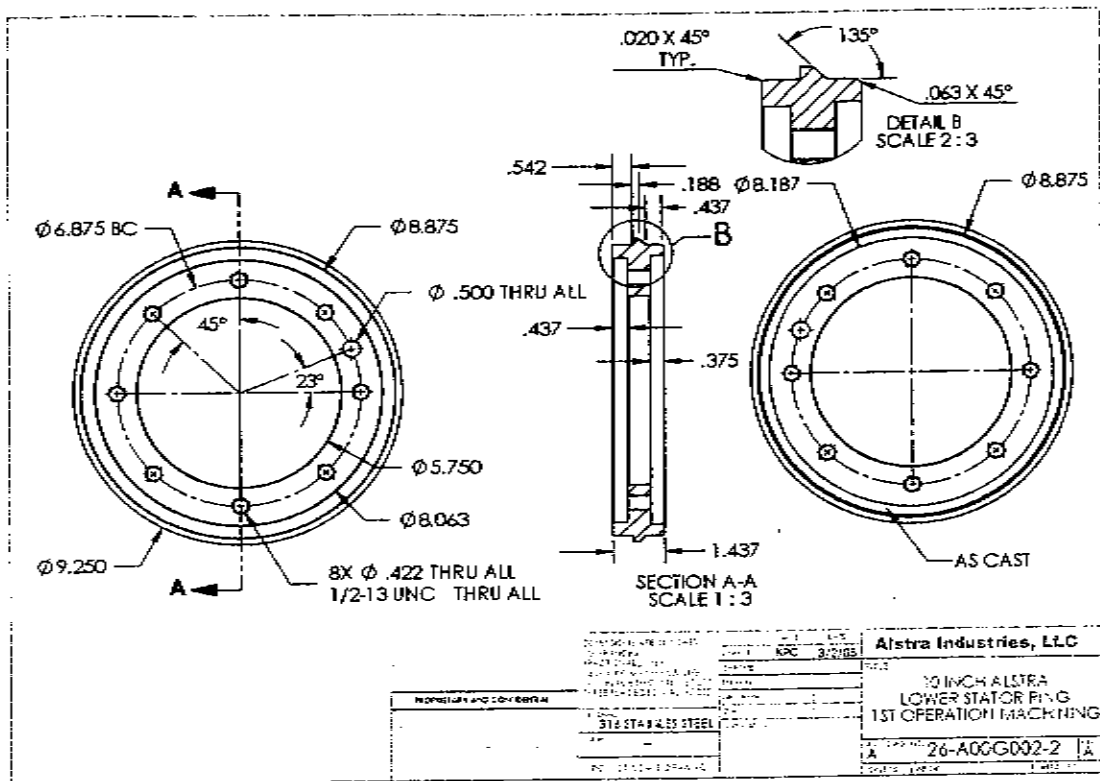
[illegible]

DRAWING INTERPRETATION PER ASME Y14.5M-1994

2. 26-A00G001-2 and 26-A00G002-2 **STATOR CAN ASSEMBLY** (upper and lower stator ring)
 Directions: Using the following orthographic drawings create a 3d rendered
 Images: including the orthographic's of the upper and lower stator ring, together
 with its rendered image.

DETAIL	DESCRIPTION	DRAWING No.
2-1	UPPER STATOR RING	26-A00G001-2
2-2	LOWER STATOR RING	26-A00G002-2
2-3	LAM STACK RETAINING RING	26-A00G000-3
2-4	LAM STACK ASSEMBLY	26-A00G000-4
2-5	STATOR CAN	26-A00G000
2-6	ANTI ROTATION PIN	26-A00G000-6

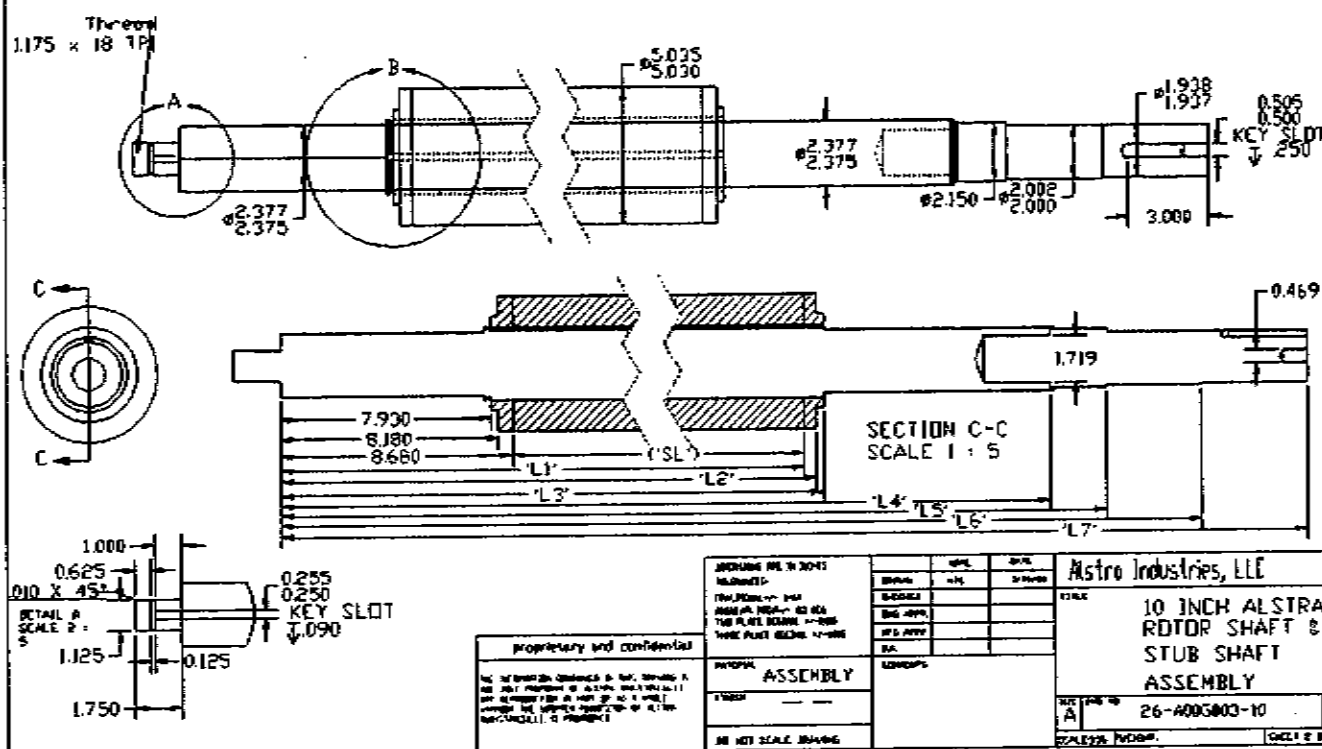
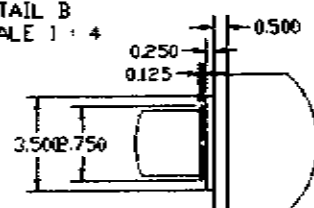
PROPERTY AND CONFIDENTIAL THIS DRAWING IS THE PROPERTY OF ALSTRA INDUSTRIES, LLC. IT IS TO BE USED ONLY FOR THE PURPOSES SPECIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, OR DISTRIBUTED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF ALSTRA INDUSTRIES, LLC.		WORKSHEET ASSEMBLY DRAWN BY: KPC CHECKED BY: KPC DATE: 1/2/10	Alstra Industries, LLC TITLE 10 INCH ALSTRA STATOR ASSEMBLY REV. DATE: 26-A00G000-A REV. A
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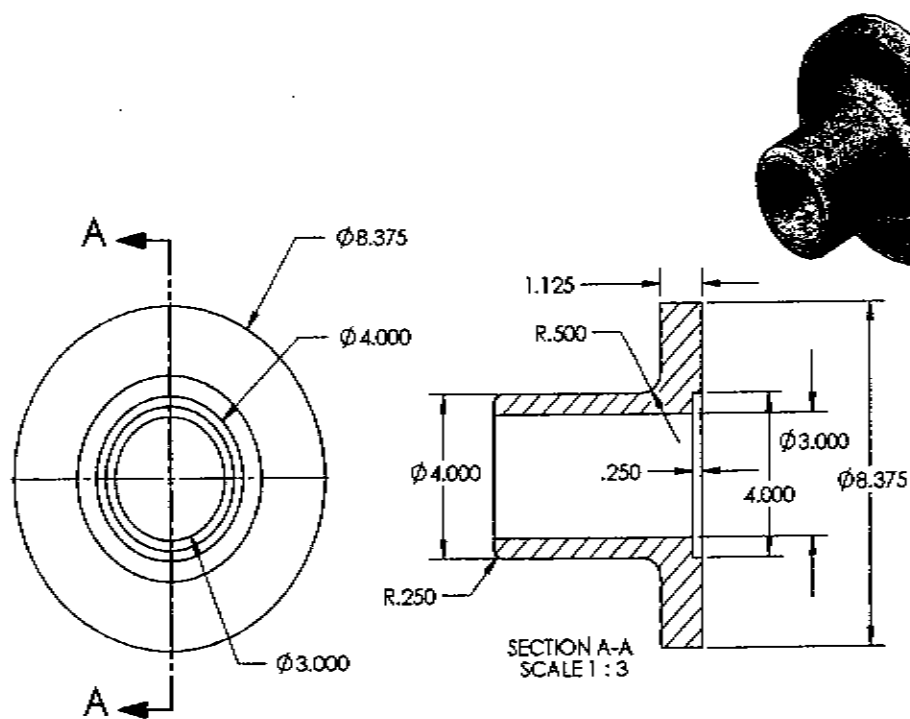
3. 26-A00G003-A ROTOR SHAFT ASSEMBLY

Directions: Using the following orthographic drawings create a 3d rendered image of the Rotor Shaft Assembly. Fit rendered image in the orthographic drawing. Insert in the following ANSI B Layout (11x17)

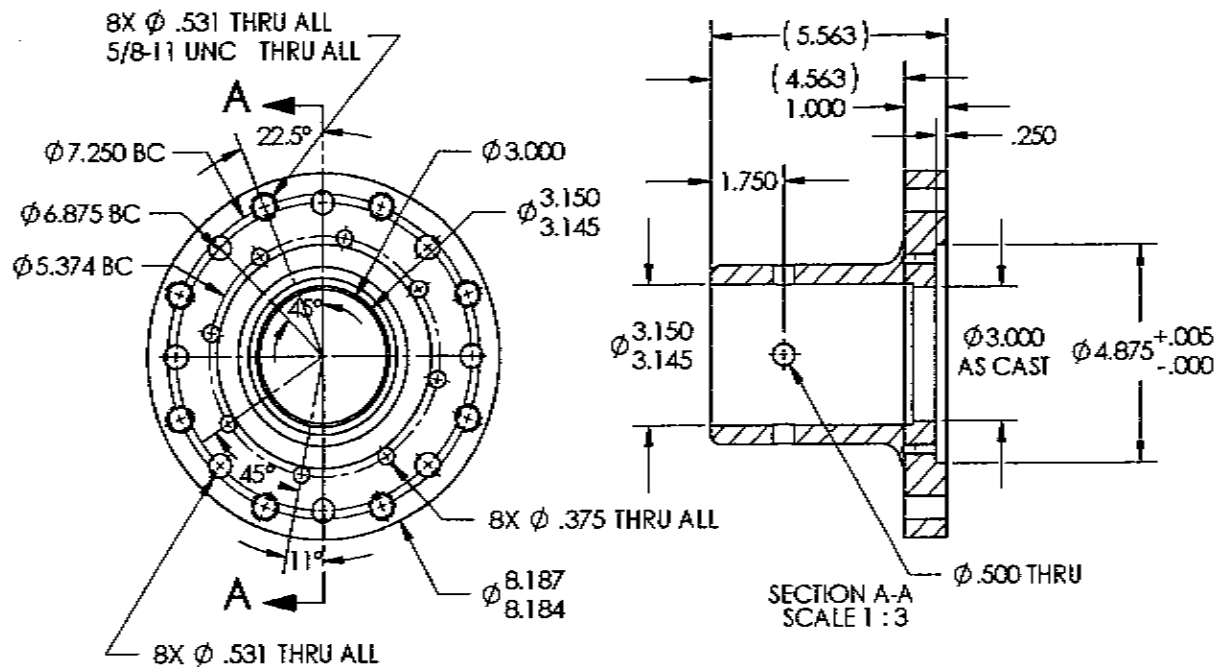
DETAIL B
SCALE 1 : 4



Directions: Using the following orthographic drawings create a 3d rendered image of the Machined lower bearing housing. The UN machined housing assembly is placed here for your information. Fit rendered image in the orthographic drawing. Insert in ANSI B Layout (11x17)



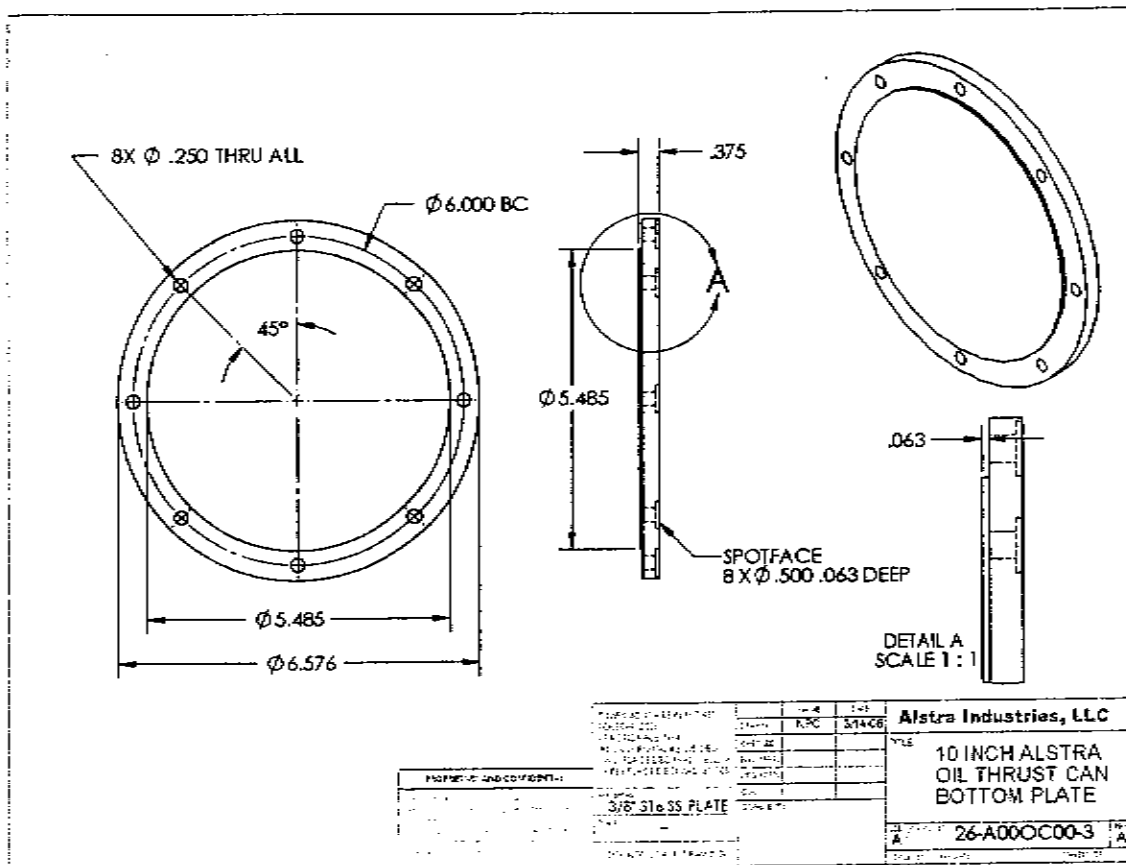
PROPERTY AND CONFIDENTIAL		Alstra Industries, LLC	
CARBON STEEL		10 INCH ALSTRA LOWER BEARING HOUSING CASTING	
26-A00LB00-1		A	



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	MATERIAL: 26-A00LB00-1 CASTING	FINISH: AS CAST	TITLES 10 INCH ALSTRA LOWER BRG HSG MACHINING	PART NAME 26-A00LB00-2	PART NUMBER 26-A00LB00-2	PART NAME 26-A00LB00-2
	SCALE: 1:3	DATE 5/8/07	DRAWN BY KPC	CHECKED BY KPC	APPROVED BY KPC	PART NAME 26-A00LB00-2
	DO NOT SCALE DRAWING	DATE 5/8/07	DRAWN BY KPC	CHECKED BY KPC	APPROVED BY KPC	PART NAME 26-A00LB00-2

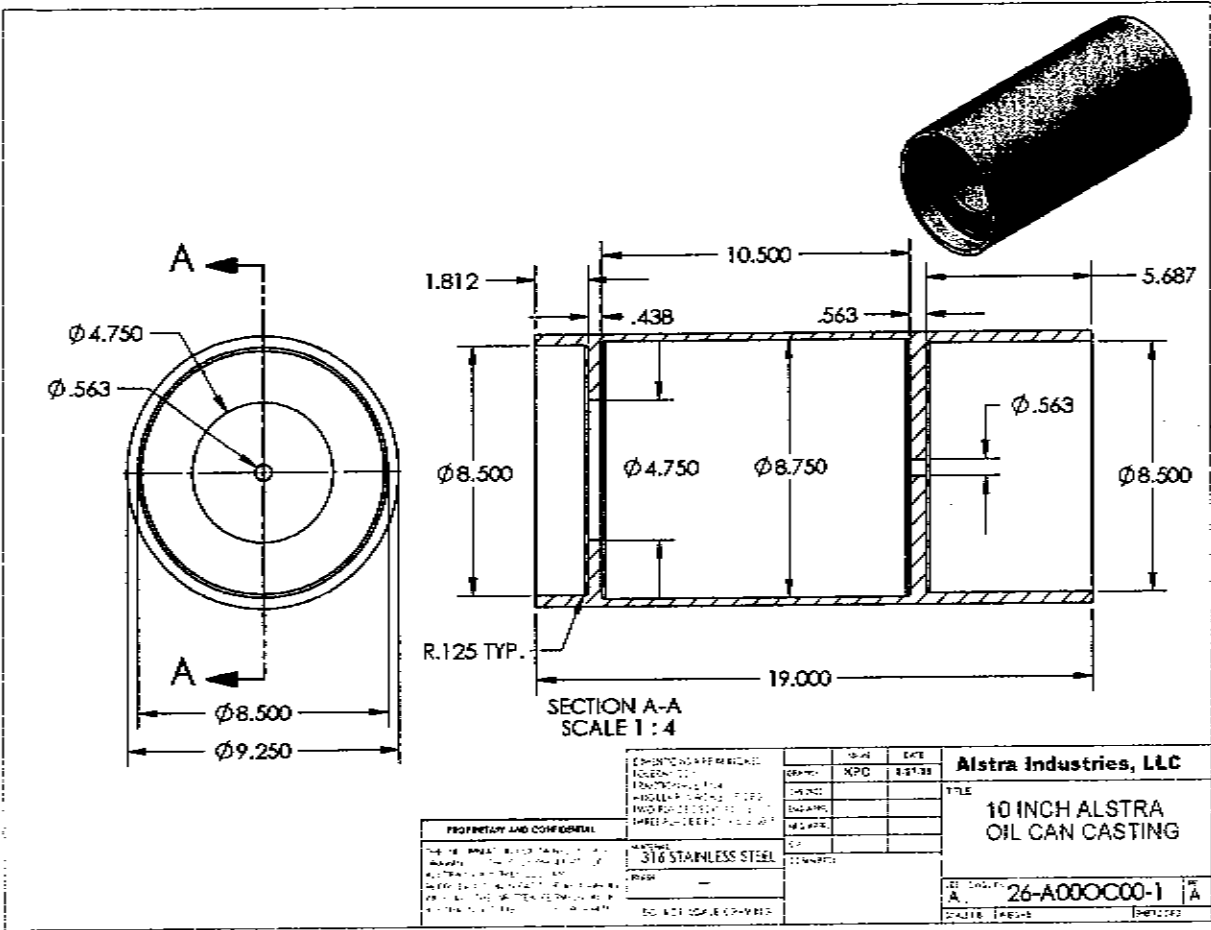
5. 26-A00TH00-A THRUST ASSEMBLY

Directions: Using the following orthographic drawings create a 3d rendered Image of the Oil Thrust Can Bottom Plate. Insert in the following ANSI B Layout (11x17) Below is the layout design you will be using throughout this contest.



6. 26-A00OC00-1: OIL CAN ASSEMBLY

Directions: Using the following orthographic drawings create a 3d rendered Image of the Oil Can Casting Assembly. Insert in the following ANSI B Layout (11x17) Below is the layout design you will be using throughout this contest.



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	MATERIAL 316 STAINLESS STEEL	FINISH POLISHED	TOLERANCES UNLESS OTHERWISE SPECIFIED	TITLE 10 INCH ALSTRA OIL CAN CASTING	PART NO. 26-A000C00-1
	SCALE AS SHOWN	QUANTITY 1	DRAWN BY KPC	CHECKED BY KPC	DATE 10/1/10
	APPROVED BY KPC	DATE 10/1/10	SCALE AS SHOWN	QUANTITY 1	PART NO. 26-A000C00-1