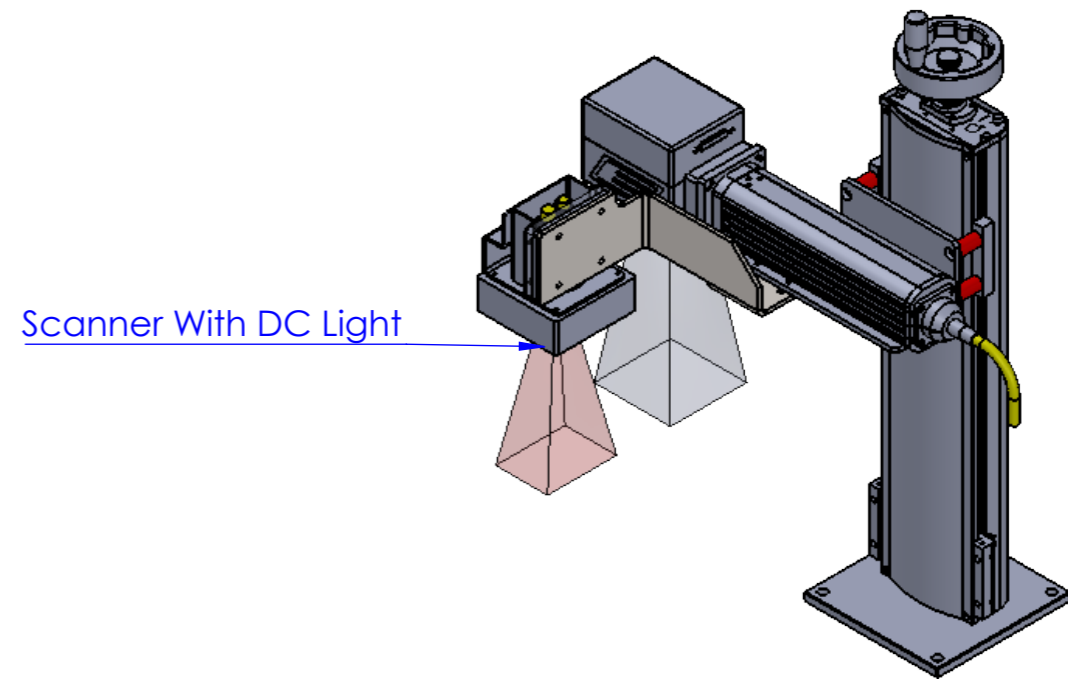
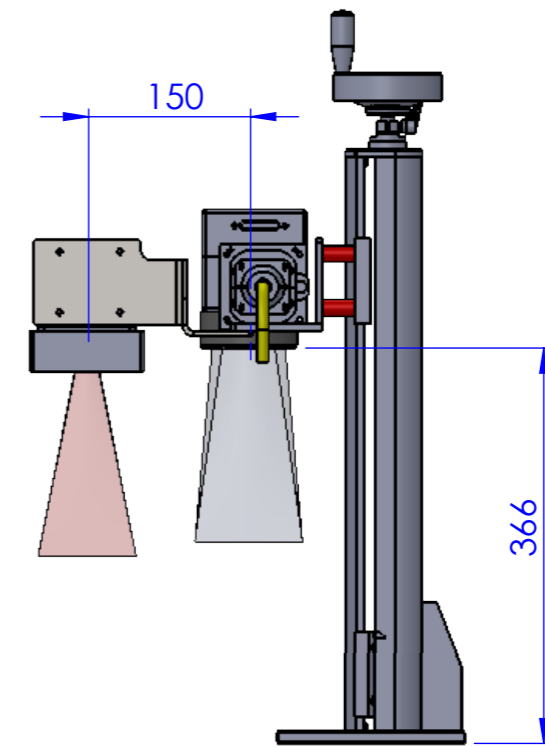
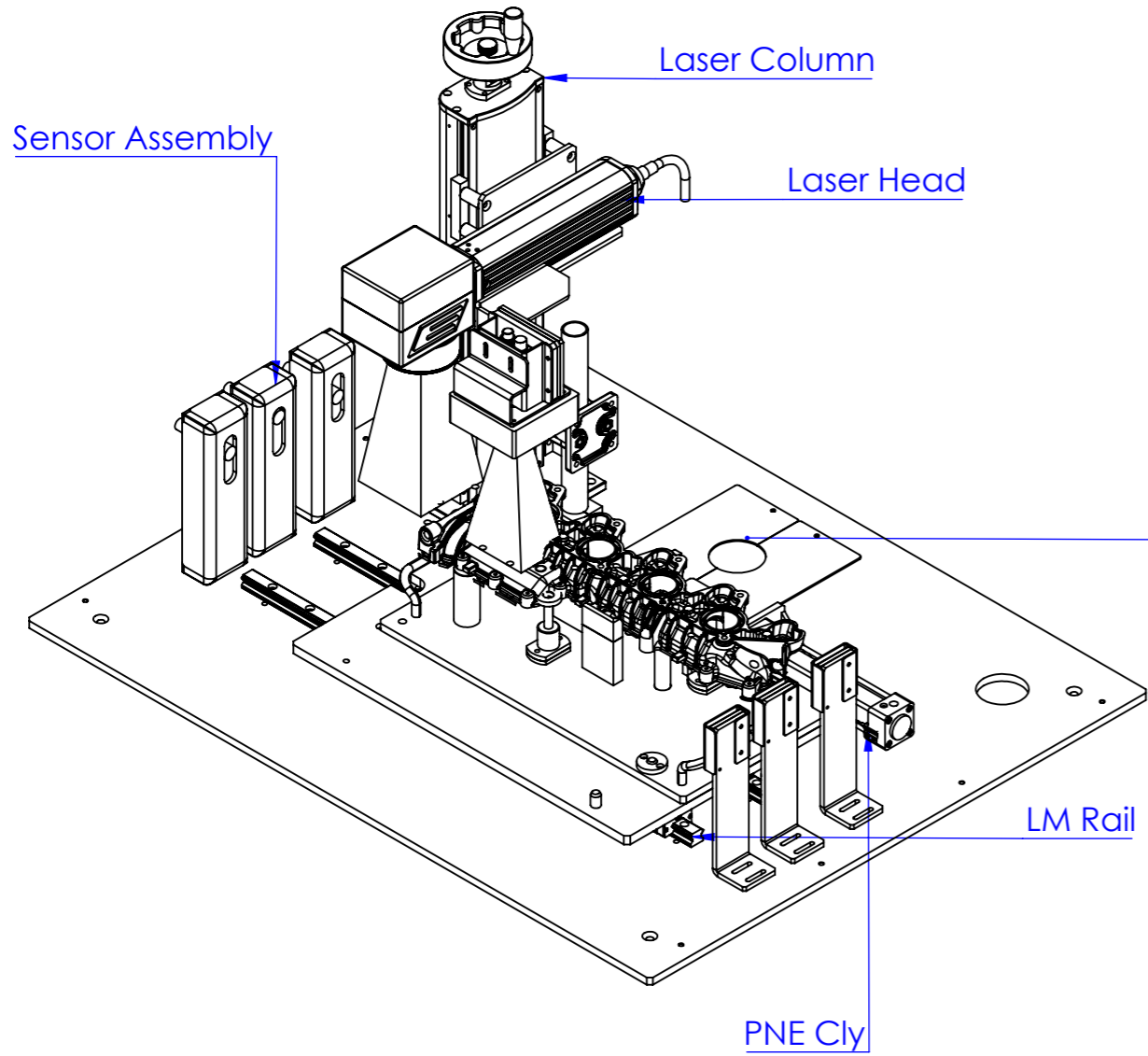
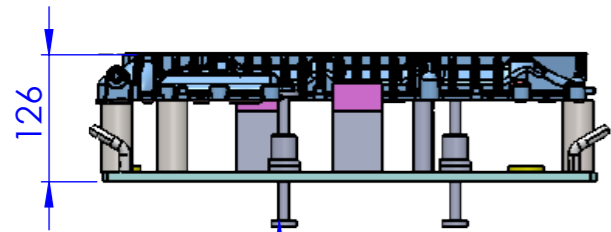
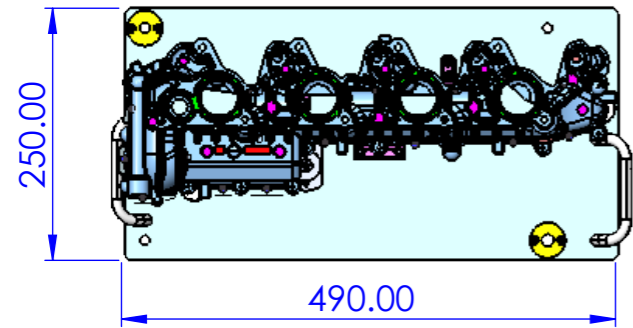


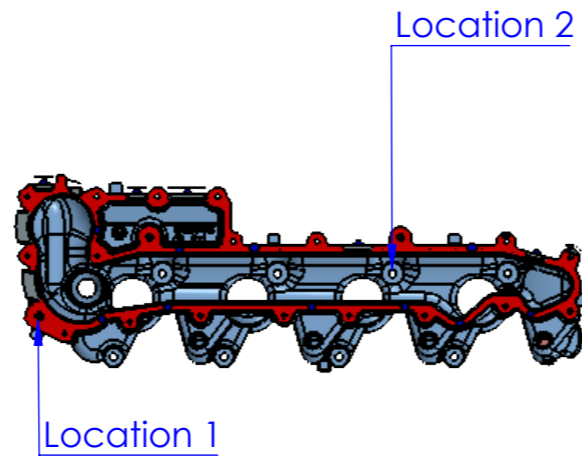
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				PURSHOTAM COMPANY PVT.LTD.			
				TITLE: Endurance Marking Machine			
DRAWN		ROHIT		DWG NO.		PA796-A-000-R2	
CHK'D		ROHIT		SCALE:1:50			
APPV'D		ROHIT		WEIGHT:		SHEET 2 OF 10	
MFG							
QTY							
						A3	



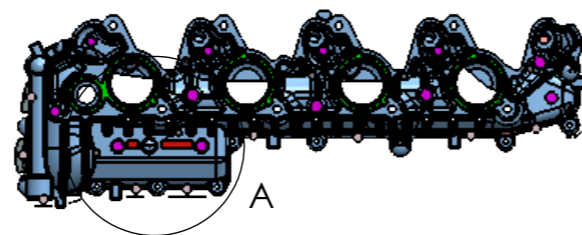
FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
				PURSHOTAM COMPANY PVT.LTD.			
				TITLE: Endurance Marking Machine			
DRAWN: ROHIT		SIGNATURE:		DATE:		DWG NO.:	
CHK'D: ROHIT						PA796-A-000-R2	
APPV'D: ROHIT							
MFG:				MATERIAL:		SCALE:1:50	
QTY:				WEIGHT:		SHEET 4 OF 10	
						A3	



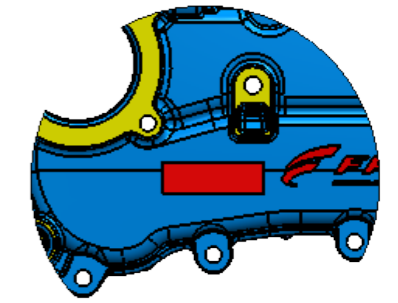
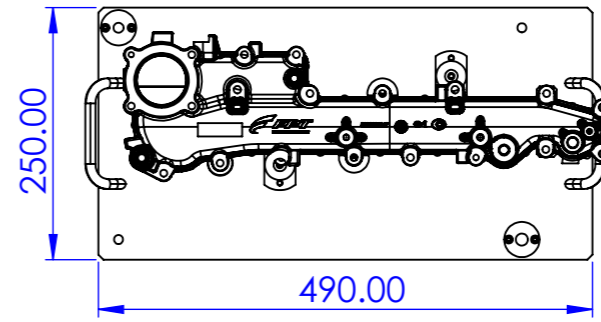
Plunger assembly for proper resting conformation



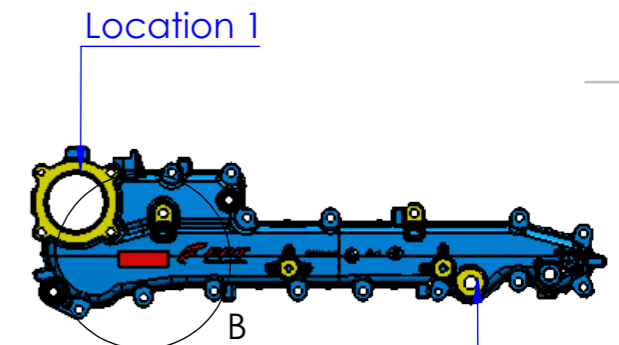
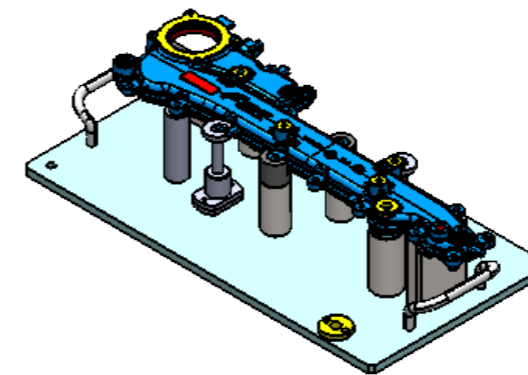
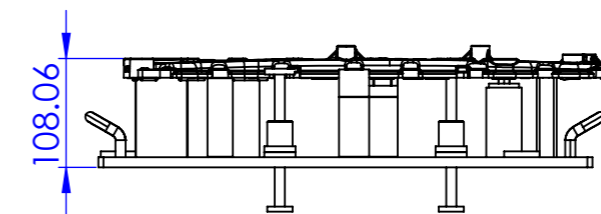
Locations Are taken As per DAP Discussion



Intake Manifold: - p05802802403 Fixture

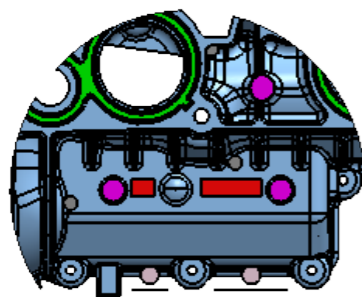


Marking Area



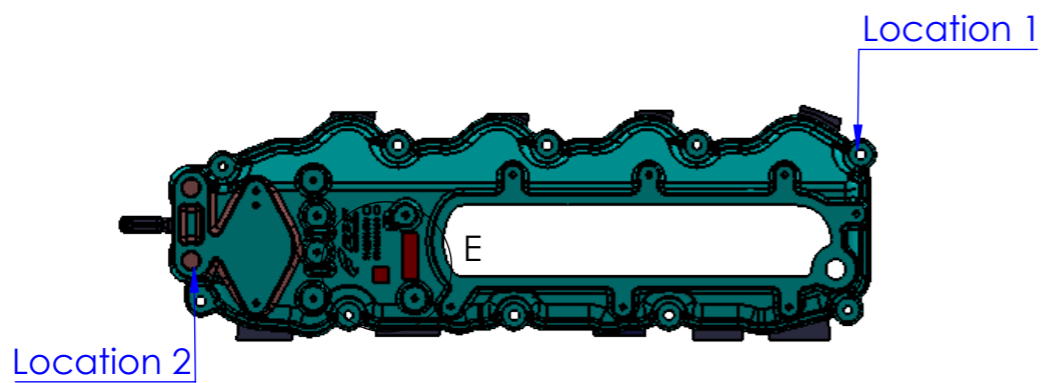
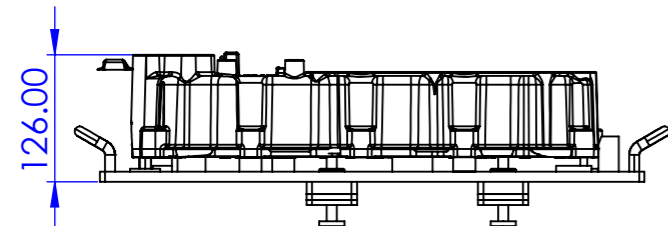
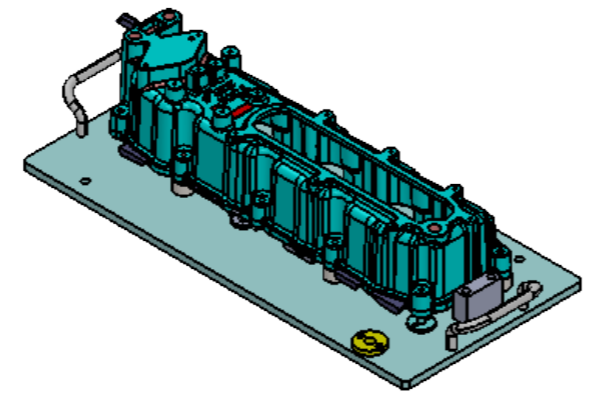
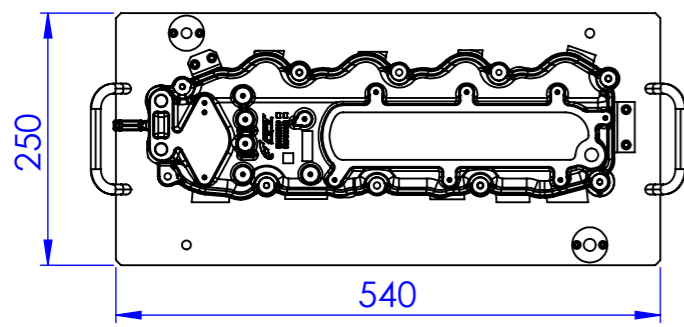
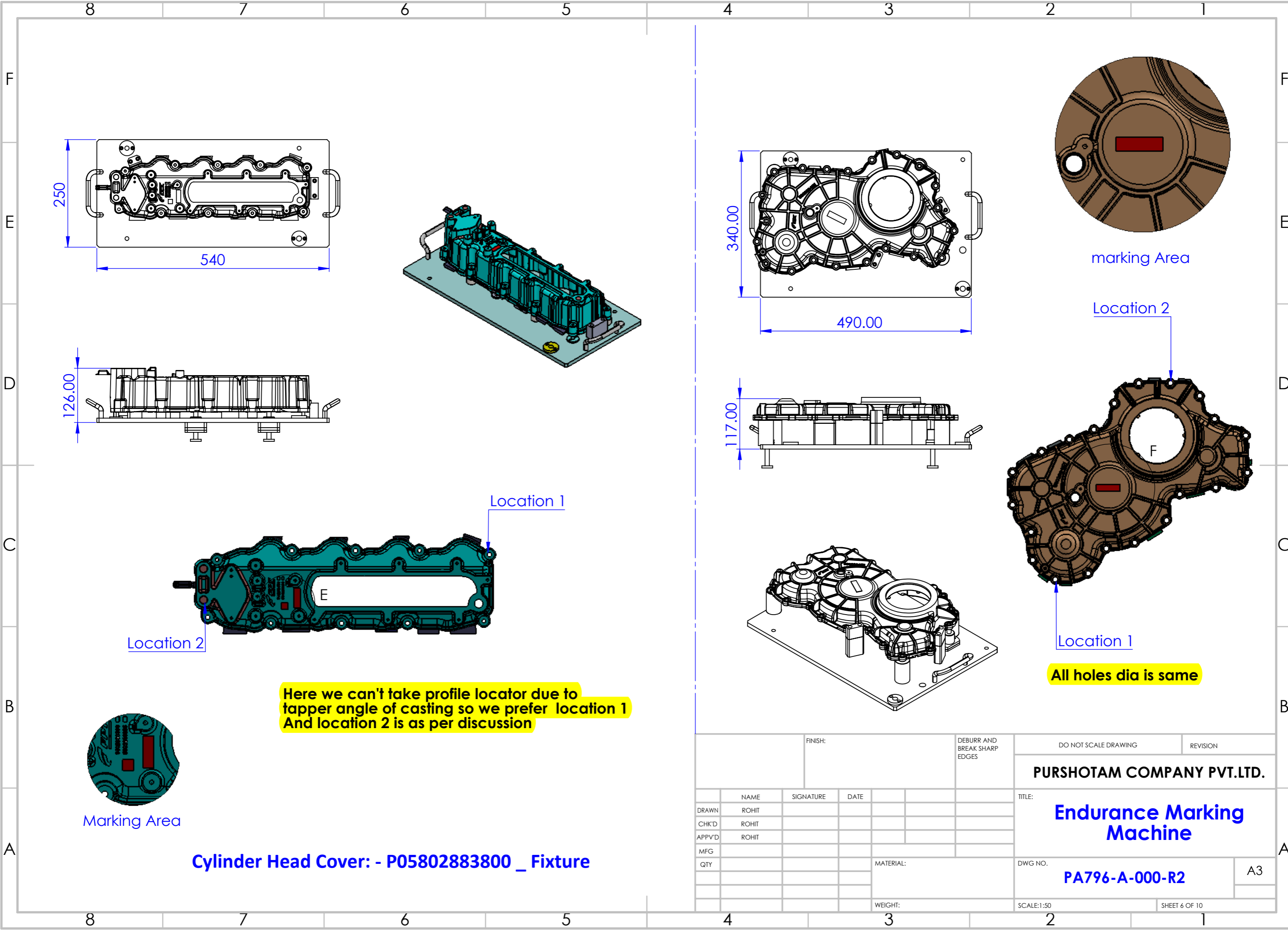
Locations Are taken As per DAP Discussion

Intake Cover: - EHP00771_F28 Fixture

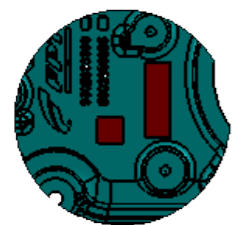


Marking Area

FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
DRAWN: ROHIT				PURSHOTAM COMPANY PVT.LTD.			
CHK'D: ROHIT				TITLE: Endurance Marking Machine			
APPV'D: ROHIT				DWG NO. PA796-A-000-R2			
MFG				MATERIAL:		SCALE:1:50	
QTY				WEIGHT:		SHEET 5 OF 10	
						A3	

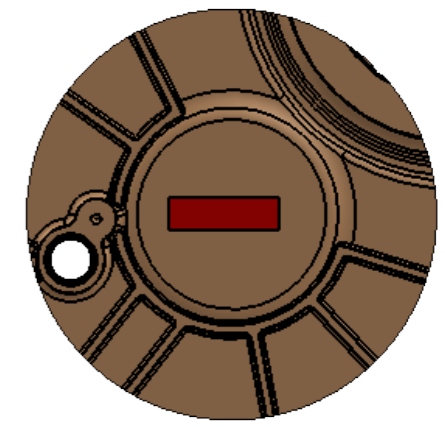
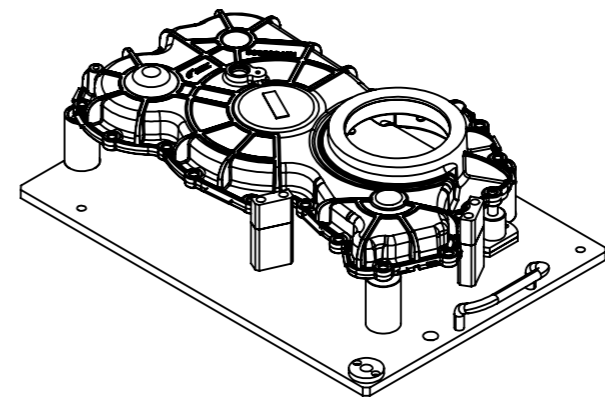
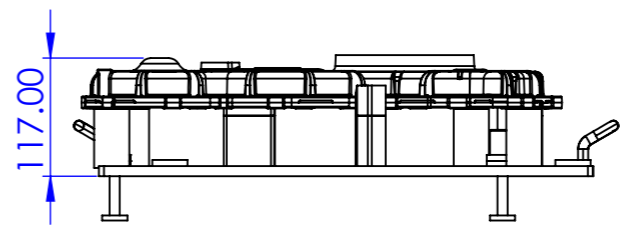
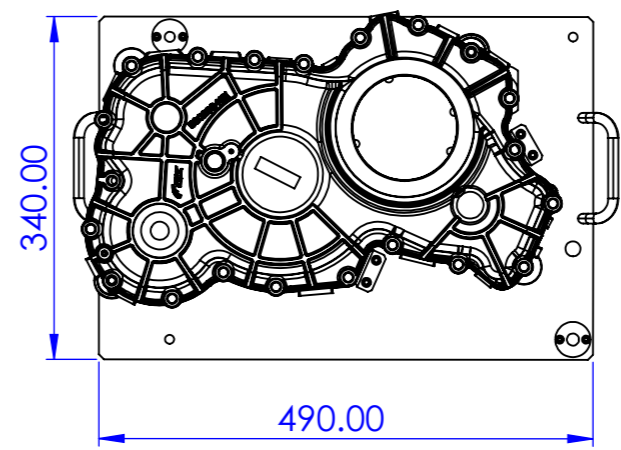


Here we can't take profile locator due to taper angle of casting so we prefer location 1
And location 2 is as per discussion



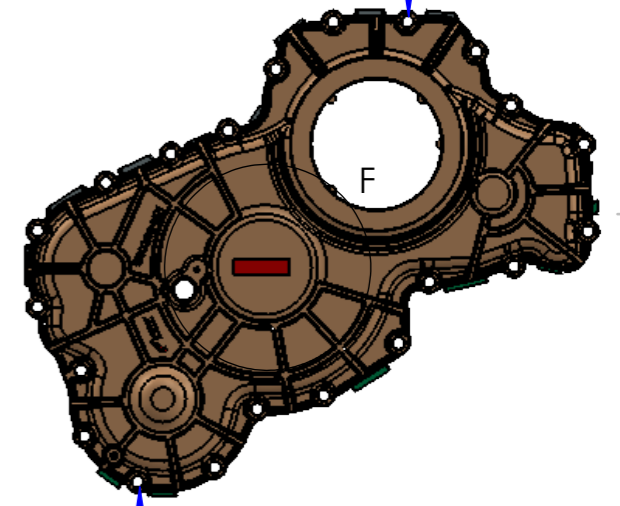
Marking Area

Cylinder Head Cover: - P05802883800 _ Fixture



marking Area

Location 2



Location 1

All holes dia is same

FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
DRAWN: ROHIT				PURSHOTAM COMPANY PVT.LTD.			
CHK'D: ROHIT				TITLE: Endurance Marking Machine			
APPV'D: ROHIT				DWG NO. PA796-A-000-R2			
MFG:				SCALE:1:50		SHEET 6 OF 10	
QTY:				WEIGHT:		A3	

CYCLE TIME -

SR NO	OPERATION	TIME IN SEC
1	Component loading (operator depedent)	10
2	Encloser Door Close	3
2	Cycle start push button Press	2
3	slide of component for scanning	4
4	Laser marking	20
5	component slide backward	4
8	Pneumatic door open	3
11	Component unloading (operator depedent)	10
	Total	56

STANDARD BOUGHTOUTS

SR NO	DESCRIPTION	MAKE
1	PNEUMATIC CYLINDER	SMC
2	MARKING MACHINE	HERKKIMER
3	SENSOR	SICK
4	PANEL AC	COLLING SYSTEM
5	SAFTY LIGHT CURTAINS	OMRON
6	FUME EXTRACTOR	HAFI

FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
PURSHOTAM COMPANY PVT. LTD.							
DRAWN				TITLE:			
NAME				Endurance Marking Machine			
SIGNATURE				DWG NO. PA796-A-000-R2			
DATE							
CHK'D				SCALE:1:20			
NAME							
APPV'D				SHEET 7 OF 10			
NAME							
MFG				WEIGHT:			
QTY							

SCOPE OF SUPPLY

➤ Technical scope of supply: -

CUSTOMER NAME -		Endurance Technologies Chakan		
APPLICATION-		Laser marking on Intake Manifold, Cylinder Head Cover, Timing Gear Box, Intake Cover		
SR.NO	ITEMS	MAKE / RESPONSIBILITY	QTY	COST
1	Laser marking machine, Model-Hercle, Marking window-100x100	Herkklmer H Company	1	
2	Base structure weldment for system	HHCPL	1	
3	Sheet metal top enclosure with pneumatic automatic up-down door	HHCPL	1	
4	Fixture for clutch housing with 4 variants	HHCPL	1	
5	Cross pneumatic slide for fixture movement to perform PCM grading of marked code, stroke-150 mm	HHCPL	1	
6	Column for marking machine with manual linear adjustment and focal distance adjustment along Z axis	HHCPL	1	
7	Mounting arrangement for computer screen and keyboard	HHCPL	1	
8	Mounting of fixed mount scanner and DC light	HHCPL	1	
9	Fume extractor	Hati-Electra	1	
10	Pneumatics for the system	SMC	Set	
11	Computer for the system	Dell / Lenovo	1	
12	UPS for the laser machine, capacity: - 1.1 Kva	APC / Delta	1	
13	UPS for computer, capacity: - 0.8 Kva	APC / Delta	1	
14	Marking interfacing software	HHCPL	1	
15	MS-Office licence (Student & Home version)	Microsoft	1	
16	PLC for the system, Model-FX5U	Mitsubishi	1	
17	Electrical controls components	Standard	Set	
18	Control panel	Eidon	1	
19	Sensor for part presence	SICK	4	
20	Panel AC for laser controller	Cooling system	1	
21	Tower lamp	SMC	1	
22	Safety light curtains, length-450 mm	Omron	1	
23	DC light for scanner	Standard		
24	Filed wiring	HHCPL	-	
25	Installation and commissioning	HHCPL	3	
26	Training and handover	HHCPL	days	
27	Fixed mount DPM scanner, Model- DM262SX	Cognex	1	

FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
				PURSHOTAM COMPANY PVT. LTD.			
				Endurance Marking Machine			
DRAWN: ROHIT		SIGNATURE:		DATE:		TITLE:	
CHK'D: ROHIT							
APPV'D: ROHIT							
MFG:						DWG NO. PA796-A-000-R2	
QTY:				MATERIAL:		A3	
				WEIGHT:		SCALE:1:20	
						SHEET 8 OF 10	

STANDARD OPERATING PROCEDURE-

- 1) Operator will make machine controls ON.
- 2) He will select marking program from computer and will put part to mark on machine fixture directly inside enclosure.
- 3) He will give cycle start signal by pressing two hand safety push buttons.
- 4) Then enclosure door will get closed. Fixture is in front of scanner. Initially it will be checked that part is already marked or not.
- 5) If not then fixture slide will come in front of laser marking machine.
- 6) Marking will start, marking will be done on component. After marking operation, Fixture will come back in front of scanner.
- 7) Scanner will scan code and PCM code quality verification of code will be done. Respective grade of code will be saved in interfacing software.
- 8) After scanning of code, enclosure door will get opens.
- 9) Operator will unload marked part from fixture and load new part for marking operation.
- 10) Same process needs to repeat for marking of next component.

		FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
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	NAME	SIGNATURE	DATE			TITLE:			
DRAWN	ROHIT					Endurance Marking Machine			
CHK'D	ROHIT								
APPV'D	ROHIT								
MFG									
QTY					MATERIAL:	DWG NO.		A3	
						PA796-A-000-R2			
					WEIGHT:	SCALE:1:20		SHEET 9 OF 10	

Safety Features

List of safety features which will be provided in the system is stated below:

- 1) Necessary interlocks & Emergency push button will be provided .
- 2) Door limit switch will be provided with programming interlock.(PLUNGER TYPE)
- 3) PokaYoke For Perviously Marked Component, repeat marking is provided in the system.

Assumptions/ Notes

- 1) Operator will have to select the correct model from PC.
- 2) COMPONENT IDENTIFICATION POKAYOKE IS NOT CONSIDERED.
- 3) Opearator will have to place correct component in respective features.

Prepared by : ----

Sunil B. Regude

Approved By : ----

Date :

		FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
						PURSHOTAM COMPANY PVT. LTD.			
						TITLE:		Endurance Marking Machine	
	NAME	SIGNATURE	DATE			DWG NO.		A3	
DRAWN	ROHIT					PA796-A-000-R2			
CHK'D	ROHIT								
APPV'D	ROHIT								
MFG									
QTY					MATERIAL:				
					WEIGHT:	SCALE:1:20		SHEET 10 OF 10	