

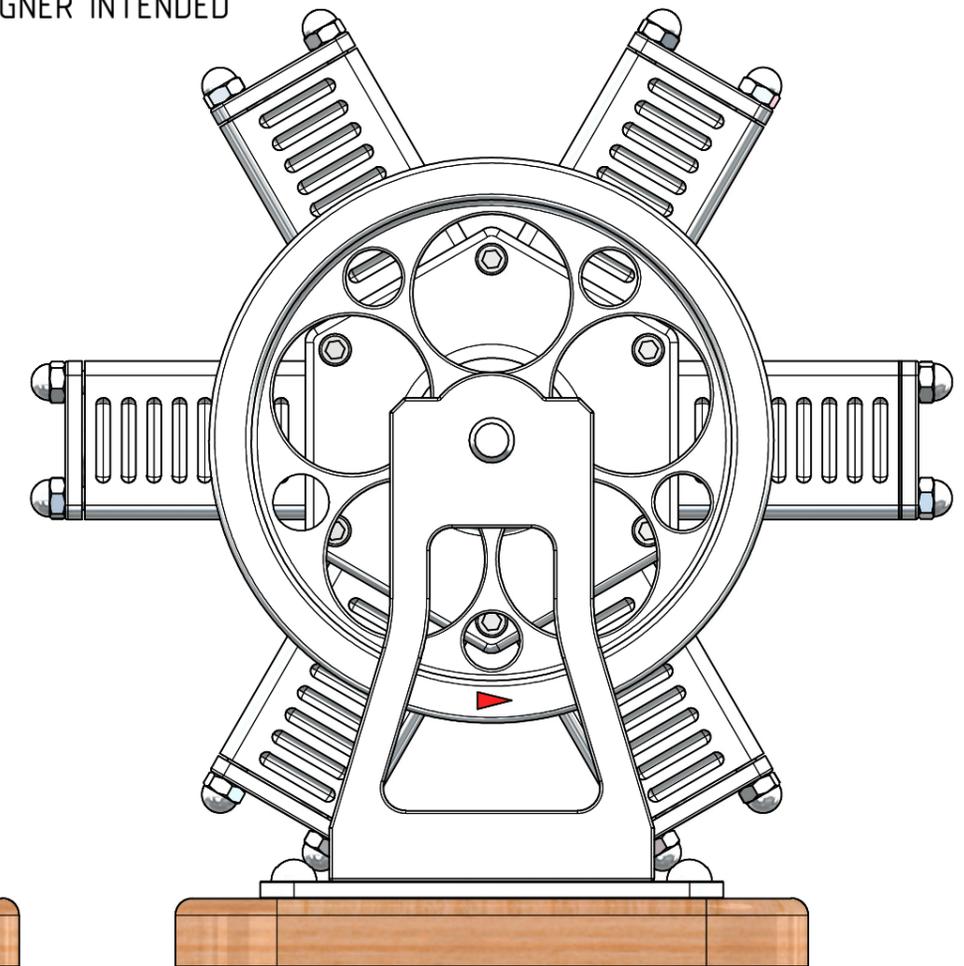
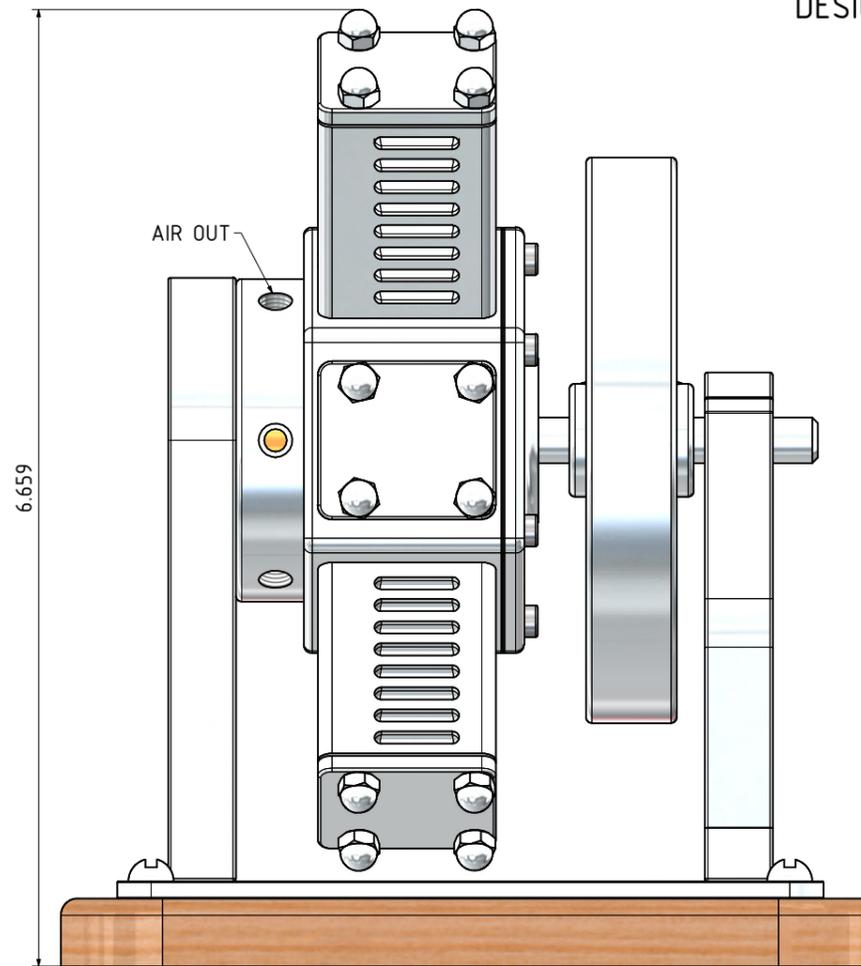
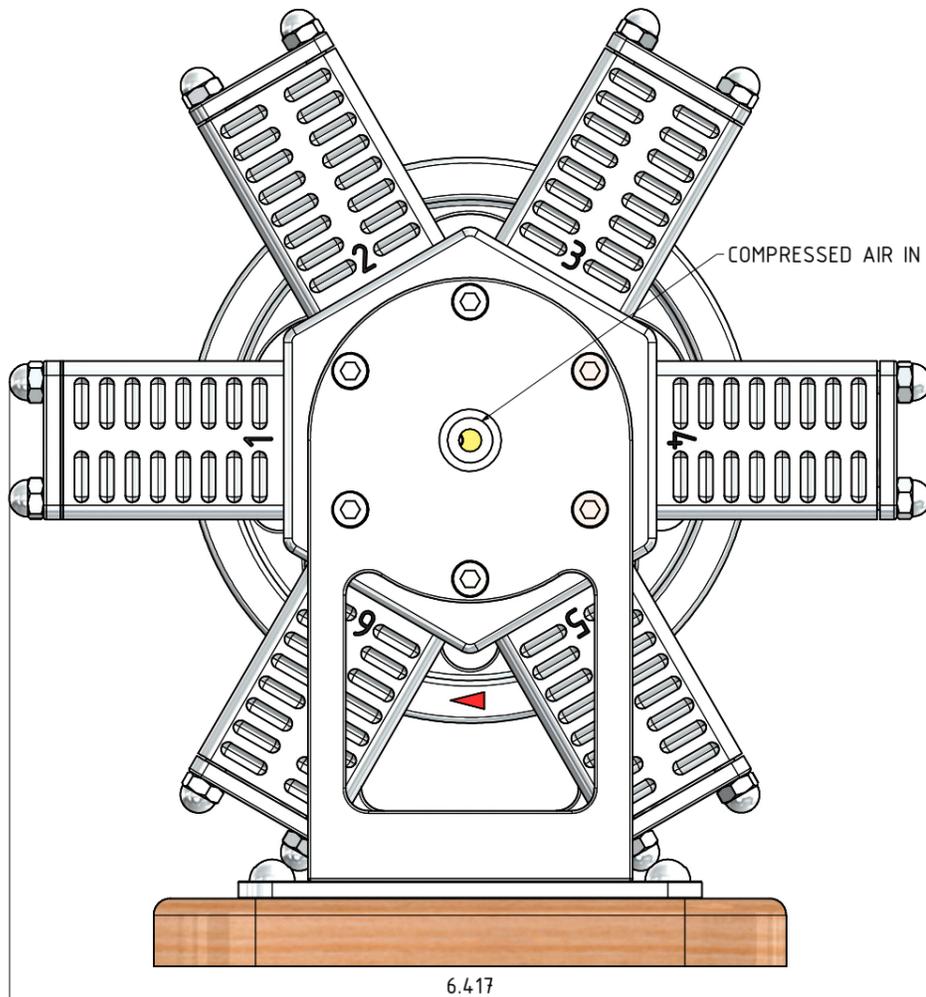
GENERAL NOTES:
 0. ALL DRAWINGS ARE IN IMPERIAL MEASUREMENTS
 1. ALL ENGINEERING PRACTICES SHALL BE APPLIED WITH REGARDS TO HOLE AND SHAFT TOLERANCES.
 2. WHERE SCREWS OR BOLTS ARE USED THE CLEARANCE HOLES SHALL BE APPROXIMATELY 5% TO 8% LARGER THAN THE MATCHING TAPPED HOLE.
 3. PREFERABLY ALL TAPPED HOLES AND MATCHING SCREWS AND/OR BOLTS TO BE UNF
 4. MATERIALS SPECIFIED ON THE DRAWINGS ARE INDICATIVE ONLY. THE BUILDER CAN MAKE HIS/HER OWN MATERIAL CHOICE.
 5. ALL CONNECTIONS/JOINTS WHICH HAVE STEAM PRESSURE APPLIED TO IT SHALL BE SILVER/HARD SOLDERED.
 6. COMPRESSION SPRINGS ARE DRAWN IN COMPRESSED STATE (CP), UNCOMPRESSED STATE IS APPROX 40% TO 60% LONGER THEN COMPRESSED STATE.
 7. WHERE PREFERRED SCREW OR RIVETED CONNECTIONS CAN BE OMITTED AND PARTS CAN BE BONDED TOGETHER BY USING EITHER HIGH STRENGTH GLUE, EPOXY RESIN, OR SOLDER.
 8. PARTS WHICH ARE DIRECTLY EXPOSED TO STEAM AND/OR WATER SHOULD BE CONSTRUCTED USING NON-FERROUS OR NON CORROSIVE MATERIAL SUCH AS BRASS, BRONZE, GUNMETAL, STAINLESS STEEL, COPPER OR MONEL.
 9. THE ORDER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED AND THE MODEL IS ASSEMBLED IS ENTIRELY LEFT TO THE BUILDER/MODEL MAKER.
 10. A COLOUR SCHEME FOR THIS PROJECT IS ENTIRELY LEFT UP TO THE MODEL MAKER.
 11. THE MANNER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED IS ENTIRELY LEFT UP TO THE BUILDER.
 12. USE LOCTITE, ON SCREW OR PRESS FIT CONNECTIONS OR SURFACES, WERE DEEMED NECESSARY TO PREVENT PARTS FROM LOOSENING.
 13. WASHERS AND/OR SPRING WASHERS SHALL BE USED WHERE DEEMED NECESSARY.
 14. USE SEALING GASKETS WERE DEEMED NECESSARY.
 15. REMOVE ALL SHARP EDGES
 XX. ERRORS AND/OR OMISSIONS MAY OCCUR IN THE DRAWINGS, DO NOT HESITATE TO CONTACT ME SO THAT THE ERRORS/OMISSIONS CAN BE RECTIFIED.

MATERIAL ABBREVIATIONS:
 ALU = ALUMINIUM
 HALU= HARD ALUMINIUM
 BRS = BRASS
 PBRZ= PHOSPHORE BRONZE
 BRZ = BRONZE OR GUNMETAL (BRZ/GM)
 OLT = OILITE
 CI = CAST IRON
 CU = COPPER
 GRA = GRAPHITE
 MS = MILD STEEL/BRIGHT MILD STEEL
 SS = SILVER STEEL OR STAINLESS STEEL
 SPS = SPRING STEEL
 PEEK= POLYETHER ETHER KETONE
 SYN = SYNTHETIC MATERIAL SUCH AS VETON, NYLON, TEFLON OR RUBBER
 IN GENERAL SYNTHETIC MATERIALS SOULD BE ABLE TO WITHSTAND THE HEAT AND PRESSURE(S) APPLIED TO THEM.
 nnn/nnn MEANS THAT EITHER MATERIAL CAN BE USED

OTHER ABBREVIATIONS
 AS = AS SHOWN
 DP = DEEP
 DAA= DRILL AFTER ASSEMBLY
 D&TAA= DRILL AND TAP AFTER ASSEMBLY
 CF = CLOSE FIT (SIZE FOR SIZE)
 PF = PRESS FIT
 PFAA= PRESS FIT AFTER ASSEMBLY
 PCD = PITCH CIRCLE DIAMETER
 RM = REAM
 HEX = HEXACON, 6SIDED
 CP = COMPRESSED
 KNL = KNURLED
 CSK = COUNTERSINK
 PL = PLACES
 DWL= DOWEL
 SPF= SPOTFACE
 (T)HESOP=(TAPPED)HOLES EQUALLY SPACED ON PCD
 (T)HESOC=(TAPPED)HOLES EQUALLY SPACED ON CIRCUMFERENCE
 OD = OUTSIDE DIAMETER
 ID = INSIDE DIAMETER
 MAX/MIN = CRITICAL DIMENSION
 [SA-xxx] = SUB ASSEMBLY-xxx

DUE TO THE LACK OF INFORMATION ON THE ORIGINAL DRAWING(S), SUCH AS VIEWS, DIMENSIONS, SECTIONS ETC AND/OR CLARITY OF COMPONENTS, OMITTED PARTS/COMPONENTS, SOME OF THE COMPONENTS MIGHT NOT BE AS CONSTRUCTED ORIGINALLY OR AS THE ORIGINAL DESIGNER INTENDED

#6-40 UNF = 6BA
 #10-24UNC = 3BA
 #12-28UNF = 1BA
 1/4-28UNF = 0BA



NOTES: FOUND ORIGINAL DRAWINGS ON INTERNET. THE ORIGINAL DRAWINGS WERE DESIGNED AND DRAWN BY J. GALBA, DATED 26/03/2011 DRAWING TITLE "6 CYLINDER - RADIAL ENGINE (PNEUMATIC)". ENGINE SHOWN ON THIS DRAWING IS 0.625 TIMES SMALLER THAN ORIGINAL AND IS CONVERTED FROM METRIC TO IMPERIAL UNITS

TITLE
6 CYLINDER RADIAL COMPRESSED AIR ENGINE
(BORE=0.7874inch STROKE=.08661inch)

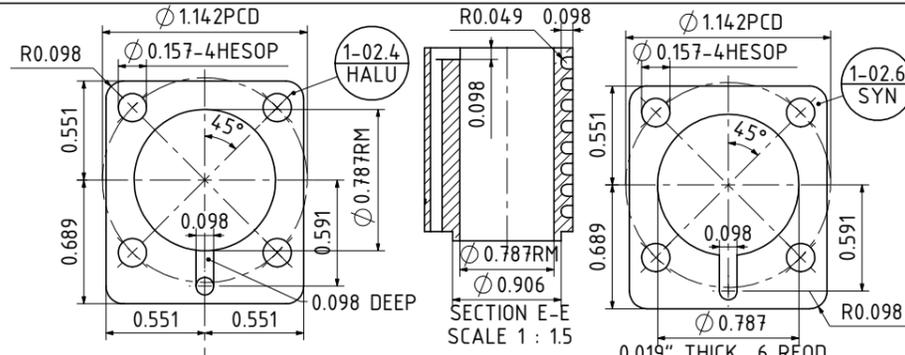
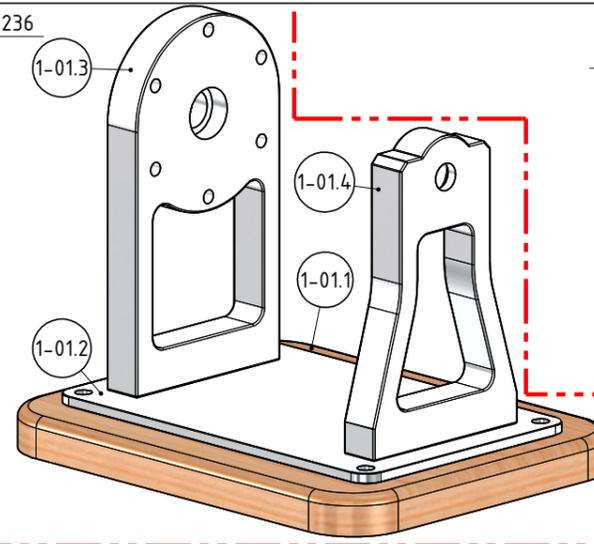
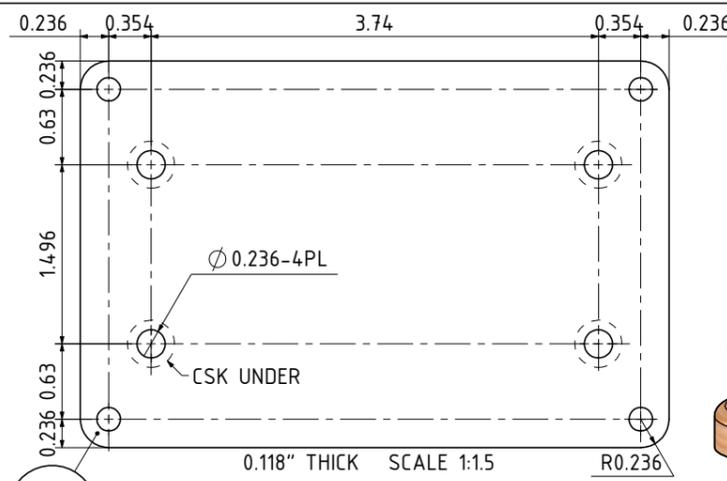
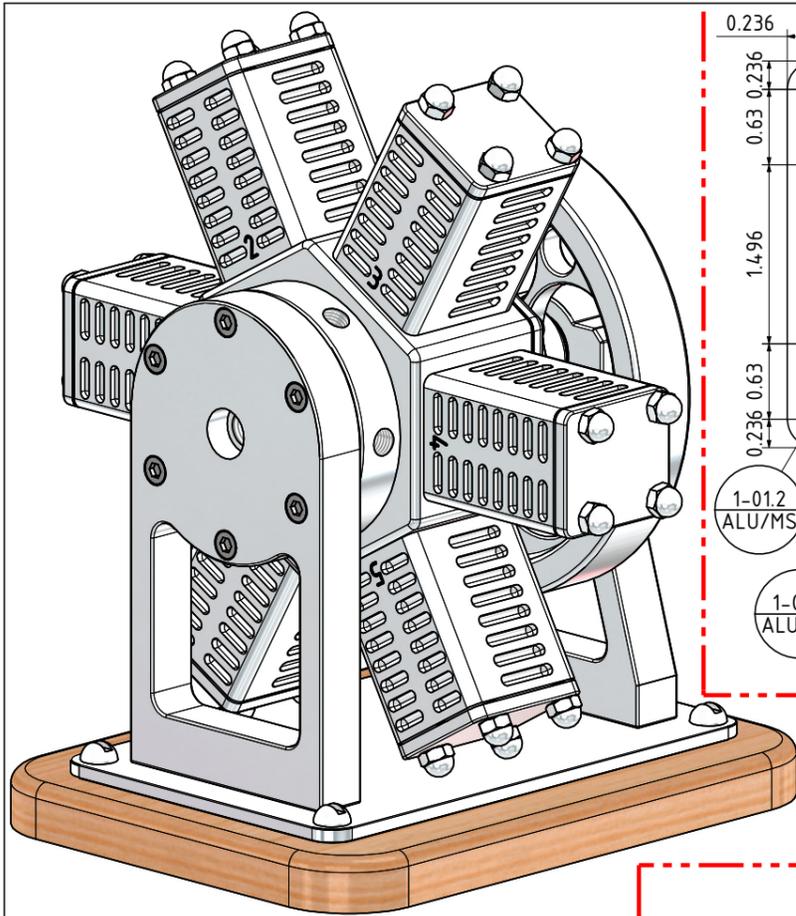
DRAWING CONTENTS
GENERAL ARRANGEMENT, NOTES

PROJECT No 09F-03-01
 JDW DRAUGHTING SERVICES
 J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAPA KURA
 2110, NEW ZEALAND. PHONE: 0064 09 2988815. MOB:
 0211791000 E-MAIL: dewaal@xtra.co.nz.

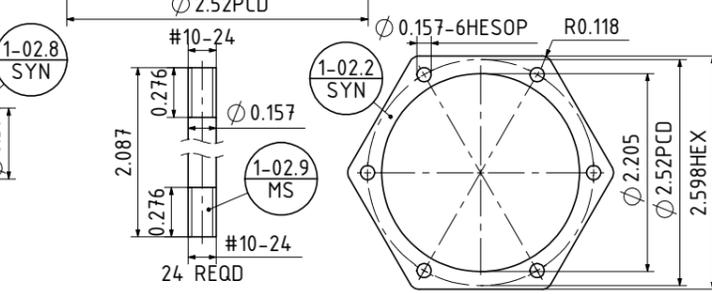
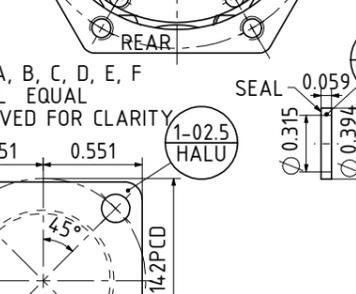
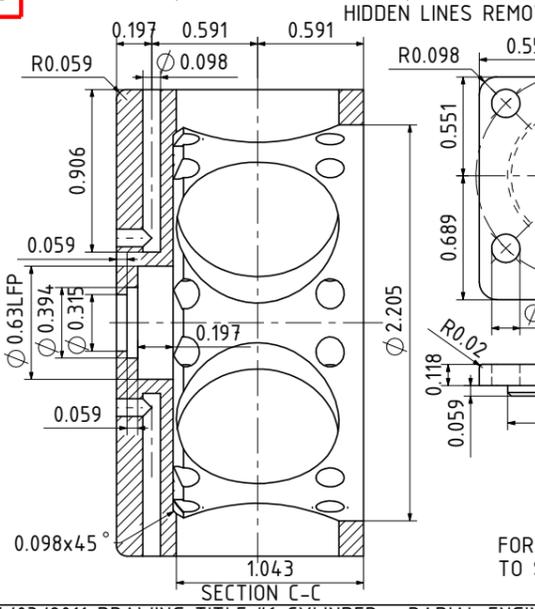
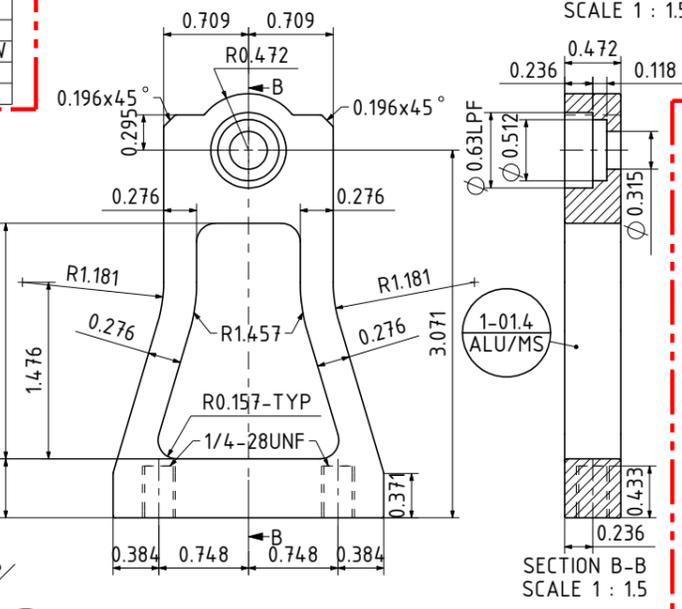
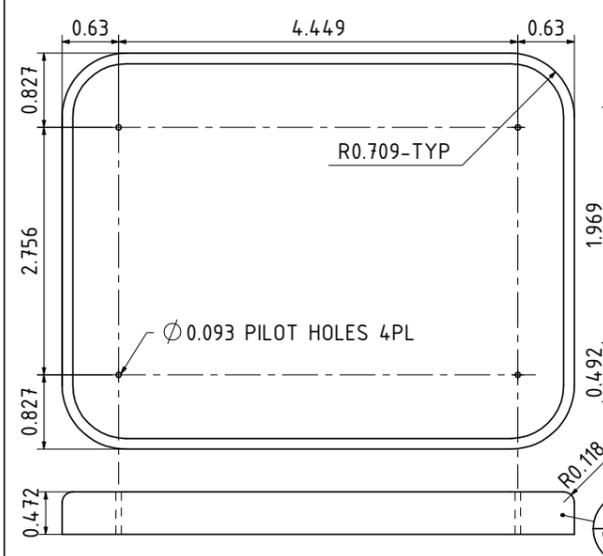
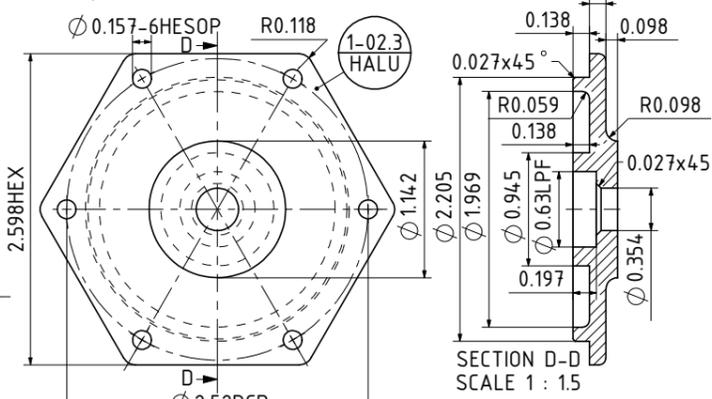
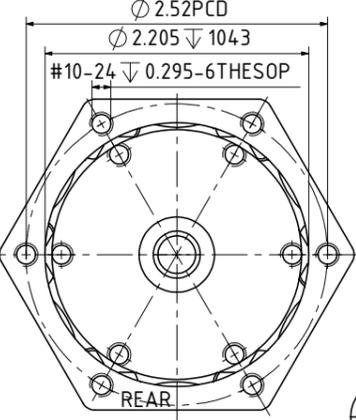
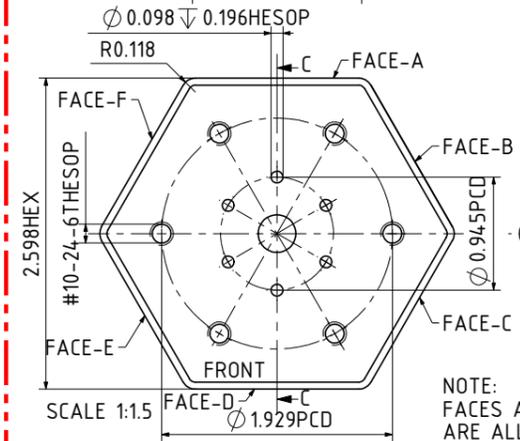
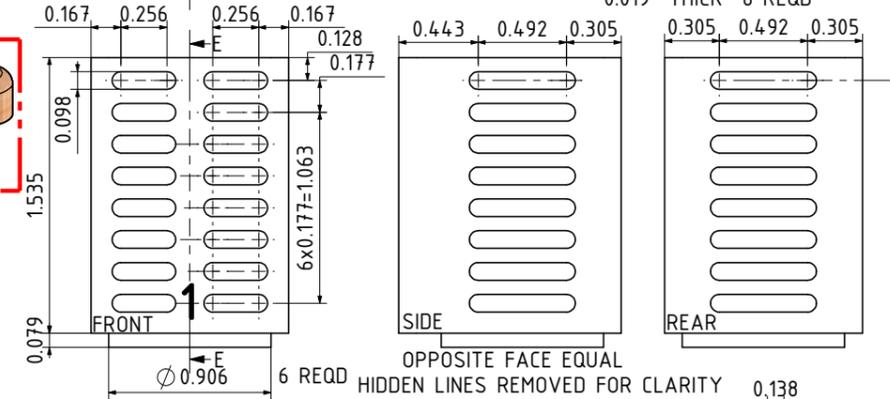
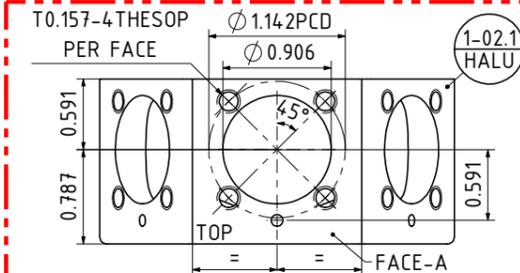
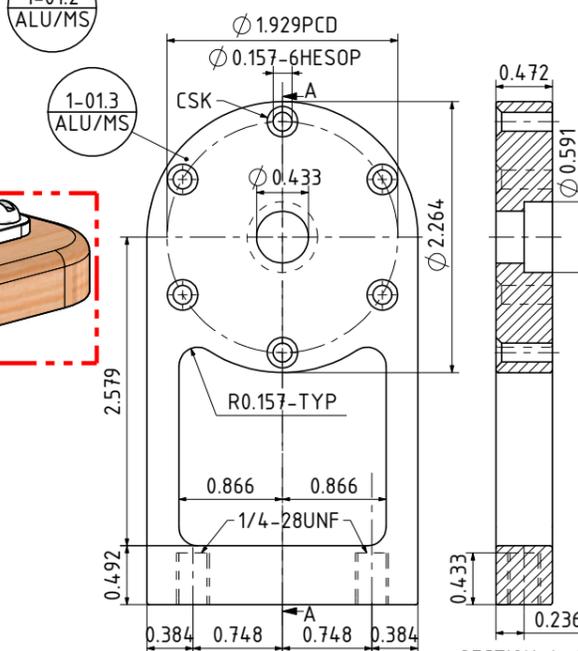
PROJECTION
JDWDS
 DATE JUNE 2025
 SHEET: 01 OF 03

MODEL SCALE: 1:1
 DWG SCALE: 1:1 @A3 OR AS SHOWN
 Copyright © J.A.M. DE WAAL PAPA KURA NZ
A3 No:09F-03-01-SHT-01

DRAWINGS ARE FOR PERSONAL USE ONLY NOT FOR COMMERCIAL PURPOSES



QTY.	PART NUMBER
1	09F-03-01-1-01-BASE+STANDS
1	09F-03-01-1-02-ENGINE BLOCK
3	09F-03-01-1-03-BALL BEARING 688RS-8IDx160Dx5W
1	09F-03-01-2-01-CRANKSHAFT+FLYWHEEL
1	09F-03-01-2-02-CON-ROD BIG END HUB
6	09F-03-01-2-03-PISTON
5	09F-03-01-2-04-CON-ROD
1	09F-03-01-2-04-CON-ROD
1	09F-03-01-2-05-ROTATING VALVE
24	09F-03-01-#10-24 UNC DOME NUT
6	09F-03-01-#10-24 UNCx0.393 A-K CYL HEAD SCREW
4	09F-03-01-1-4-28 UNFx0.472 A-K C-SINK SCREW
4	09F-03-01-#12-28 UNFx0.551-ROUND HEAD WOOD SCREW
6	09F-03-01-#10-24 UNCx1.259 A-K C-SINK SCREW
2	09F-03-01-#6-40 UNFx0.275 A-K GRUB SCREW



NOTES: FOUND ORIGINAL DRAWINGS ON INTERNET. THE ORIGINAL DRAWINGS WERE DESIGNED AND DRAWN BY J. GALBA, DATED 26/03/2011 DRAWING TITLE "6 CYLINDER - RADIAL ENGINE (PNEUMATIC)". ENGINE SHOWN ON THIS DRAWING IS 0.625 TIMES SMALLER THAN ORIGINAL AND IS CONVERTED FROM METRIC TO IMPERIAL UNITS

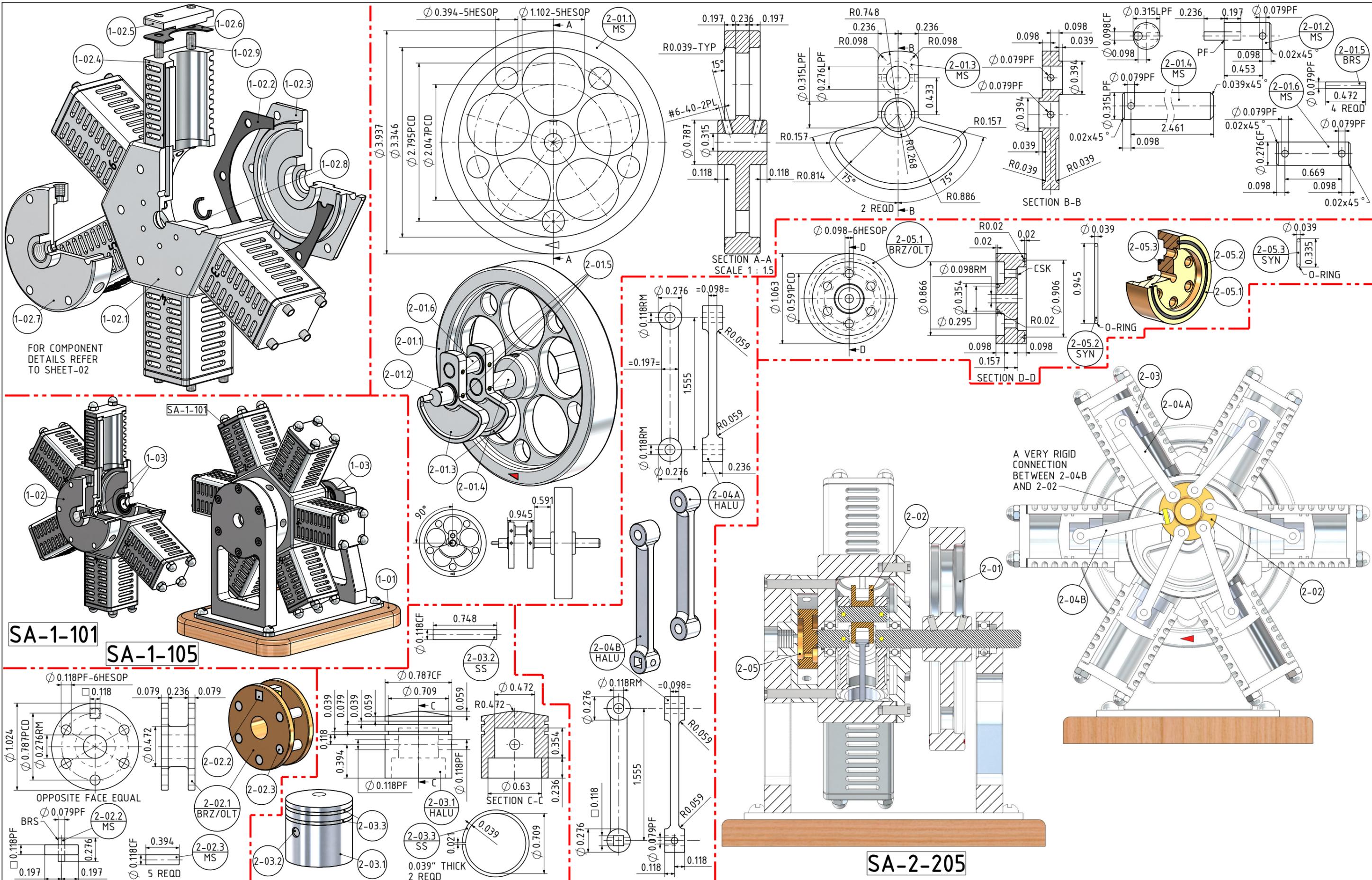
TITLE
6 CYLINDER RADIAL COMPRESSED AIR ENGINE
 (BORE=0.7874inch STROKE=.08661inch)

DRAWING CONTENTS
ISOMETRIC VIEW, BILL OF MATERIALS
PARTS AND ASSEMBLIES

PROJECT No 09F-03-01
 JDW DRAUGHTING SERVICES
 J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAPAOKURA
 2110, NEW ZEALAND. PHONE: 0064 09 2988815. MOB:
 0211791000 E-MAIL: dewaal@xtra.co.nz.

PROJECTION
JDWDS
 DATE JUNE 2025
 SHEET: 02 OF 03
 MODEL SCALE: 1:1
 DWG SCALE: 1:1 @A3 OR AS SHOWN
 Copyright © J.A.M. DE WAAL PAPAOKURA NZ
A3 No:09F-03-01-SHT-02

DRAWINGS ARE FOR PERSONAL USE ONLY NOT FOR COMMERCIAL PURPOSES



FOR COMPONENT
DETAILS REFER
TO SHEET-02

SA-1-101

SA-1-105

SA-2-205

NOTES: FOUND ORIGINAL DRAWINGS ON INTERNET. THE ORIGINAL DRAWINGS WERE DESIGNED AND DRAWN BY J. GALBA, DATED 26/03/2011 DRAWING TITLE "6 CYLINDER - RADIAL ENGINE (PNEUMATIC)". ENGINE SHOWN ON THIS DRAWING IS 0.625 TIMES SMALLER THAN ORIGINAL AND IS CONVERTED FROM METRIC TO IMPERIAL UNITS

TITLE
6 CYLINDER RADIAL COMPRESSED AIR ENGINE PARTS AND ASSEMBLIES
(BORE=0.7874inch STROKE=.08661inch)

DRAWING CONTENTS

PROJECT No 09F-03-01
JDW DRAUGHTING SERVICES
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAPAOKURA
2110, NEW ZEALAND. PHONE: 0064 09 2988815. MOB:
0211791000 E-MAIL: dewaal@xtra.co.nz.

PROJECTION	JDWDS	MODEL SCALE: 1:1
DATE	JUNE 2025	DWG SCALE: 1:1 @A3 OR AS SHOWN
SHEET: 03 OF 03	A3	Copyright © J.A.M. DE WAAL PAPAOKURA NZ
No:09F-03-01-SHT-03		

DRAWINGS ARE FOR PERSONAL USE ONLY NOT FOR COMMERCIAL PURPOSES