

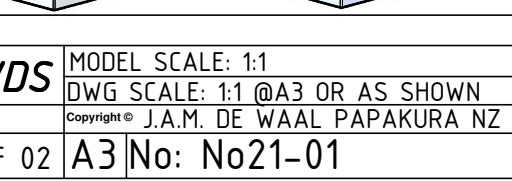
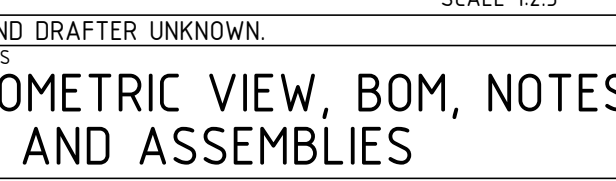
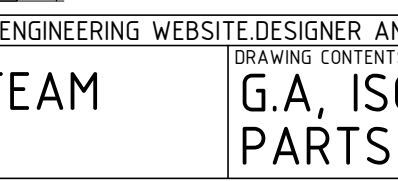
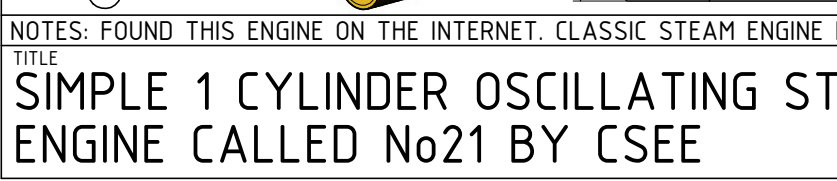
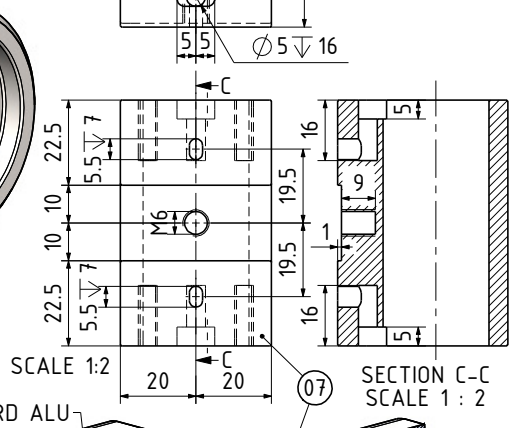
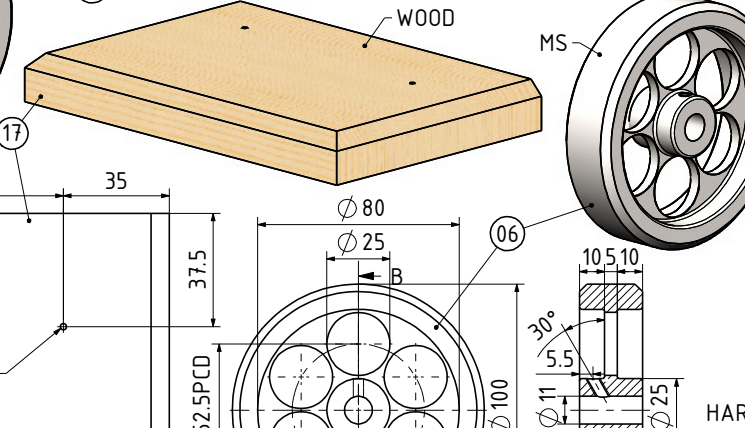
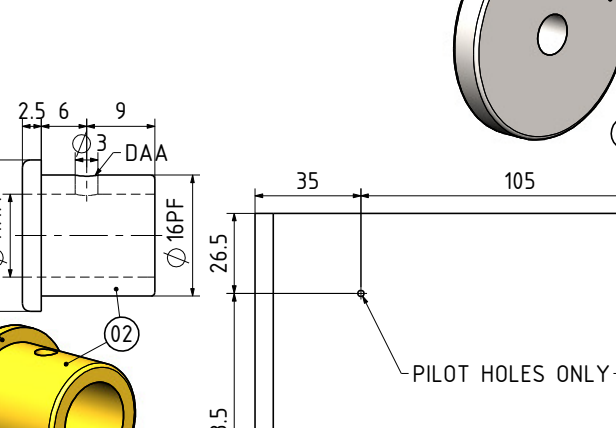
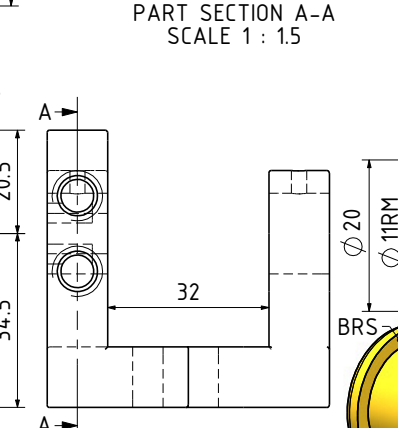
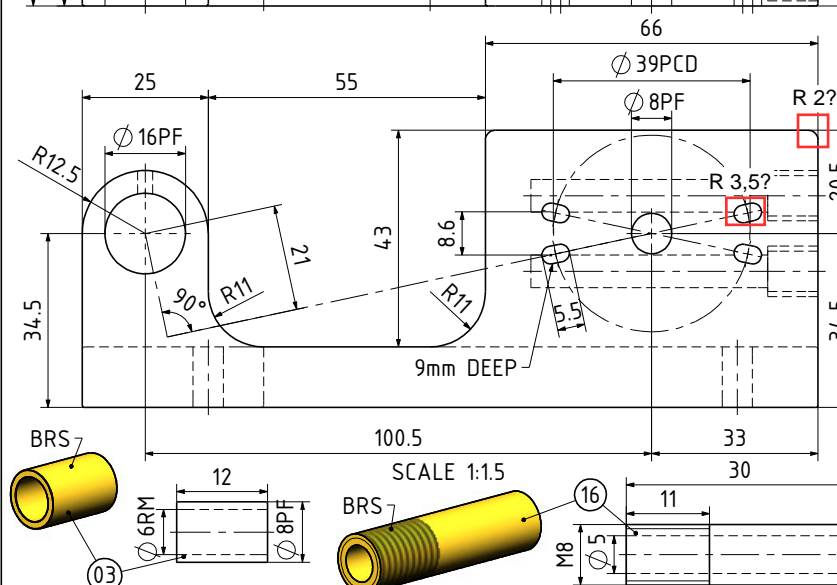
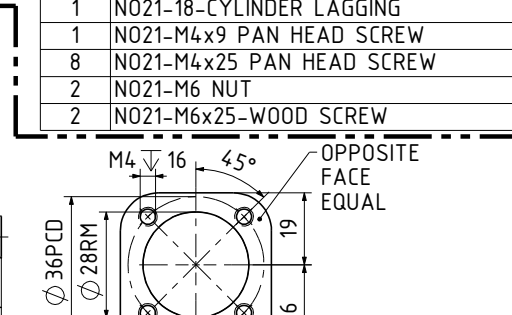
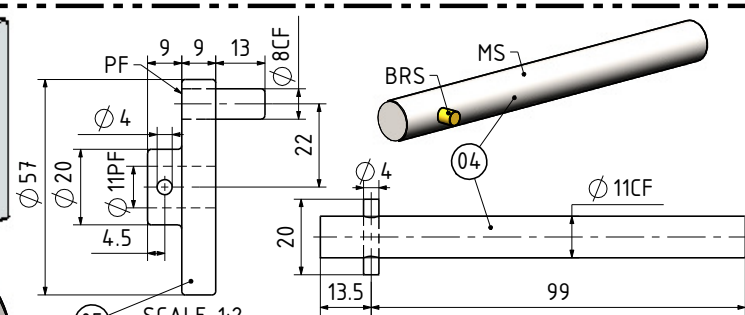
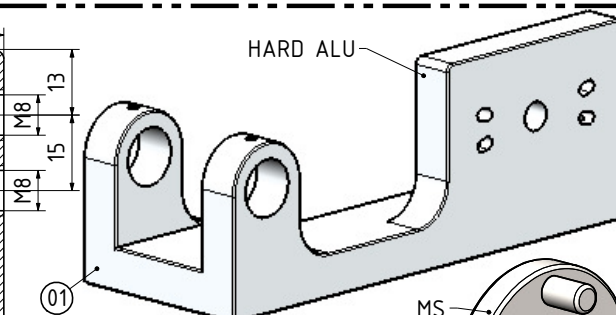
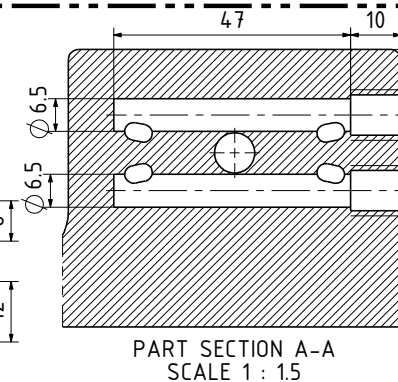
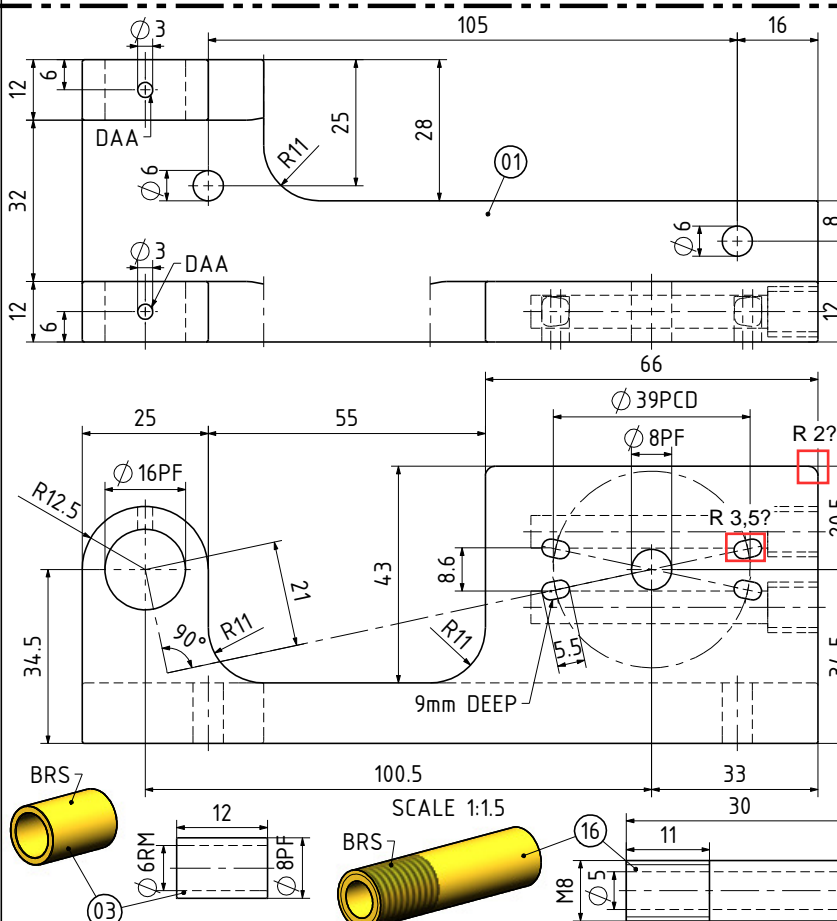
OTHER ABBREVIATIONS

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 = HEXAGON, 6SIDED
CP = COMPRESSED
KNL = KNURLED
CSK = COUNTERSINK
PL = PLACES
DWL= DOWEL
HESOP=HOLES EQUALLY SPACED ON PCD
[SA-n-xxx]= SUB ASSEMBL-n-xxx

MATERIAL ABBREVIATIONS:

ALU = ALUMINIUM
BRS = BRASS
BRZ = BRONZE OR GUNMETAL (BRZ/GM)
CI = CAST IRON
CU = COPPER
GRA = GRAPHITE
MS = MILD STEEL/BRIGHT MILD STEEL
S/S = 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 SHOULD BE ABLE TO WITHSTAND THE HEAT AND PRESSURE(S) APPLIED TO THEM.
nnn/nnn MEANS THAT EITHER MATERIAL CAN BE USED

QTY.	PART NUMBER
1	NO21-01-BASE FRAME
2	NO21-02-CRANKSHAFT BEARING BUSH
1	NO21-03-CYLINDER PIVOT BUSH
1	NO21-04-CRANKSHAFT
1	NO21-05-CRANK DISC
1	NO21-06-FLYWHEEL
1	NO21-07-CYLINDER
1	NO21-08-CYLINDER FRONT LID
1	NO21-09-CYLINDER REAR LID
1	NO21-10-CYLINDER PIVOT SHAFT
1	NO21-11-PIVOT SHAFT SPRING
1	NO21-12-PISTON ROD GLAND
1	NO21-13-PISTON ROD
1	NO21-14-PISTON
1	NO21-15-PISTON ROD BIG END
2	NO21-16-INLET-OUTLET PIPE
1	NO21-17-WOOD BASE
1	NO21-18-CYLINDER LAGGING
1	NO21-M4x9 PAN HEAD SCREW
8	NO21-M4x25 PAN HEAD SCREW
2	NO21-M6 NUT
2	NO21-M6x25-WOOD SCREW



NOTES: FOUND THIS ENGINE ON THE INTERNET. CLASSIC STEAM ENGINE ENGINEERING WEBSITE.DESIGNER AND DRAFTER UNKNOWN.

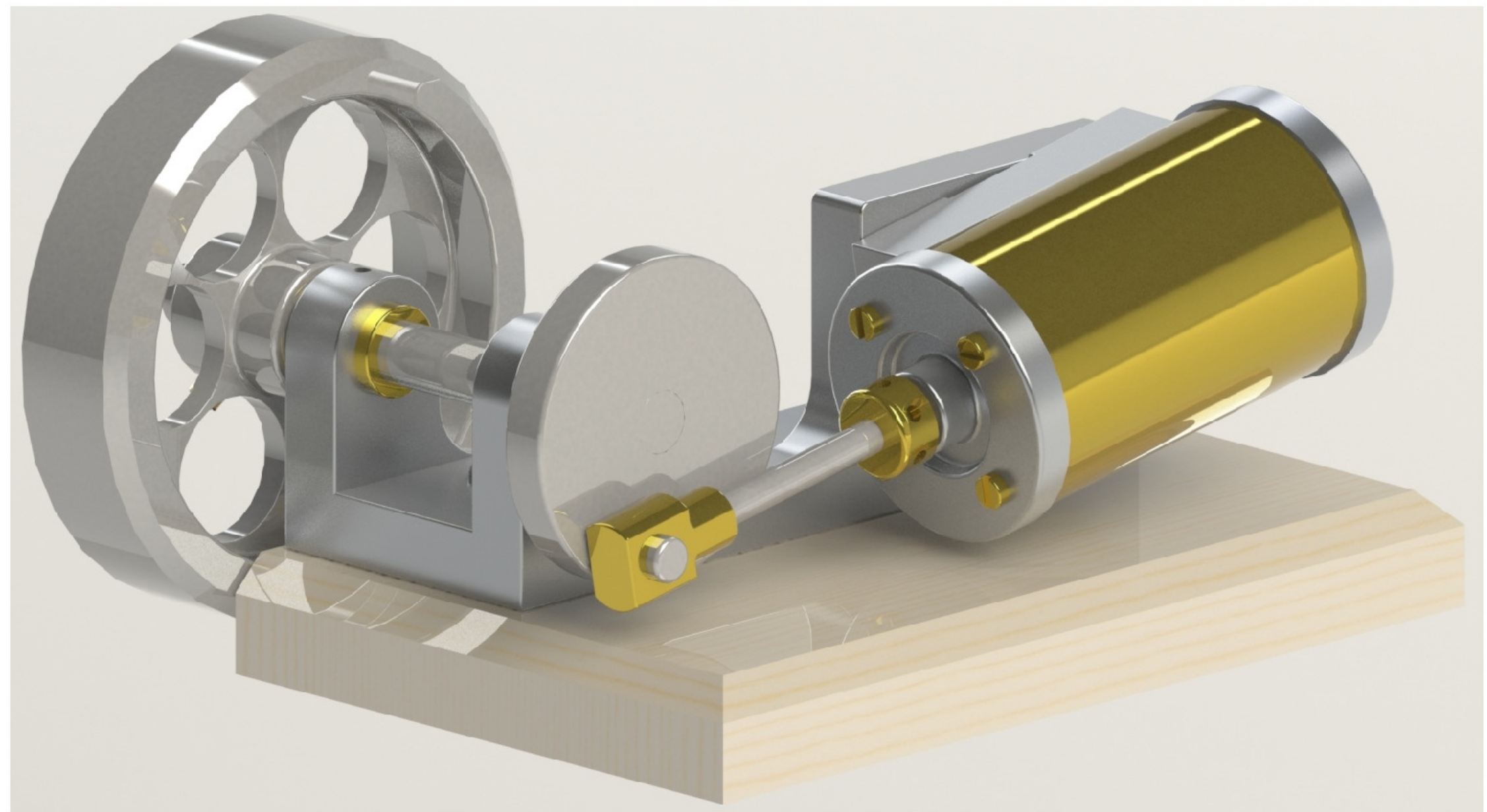
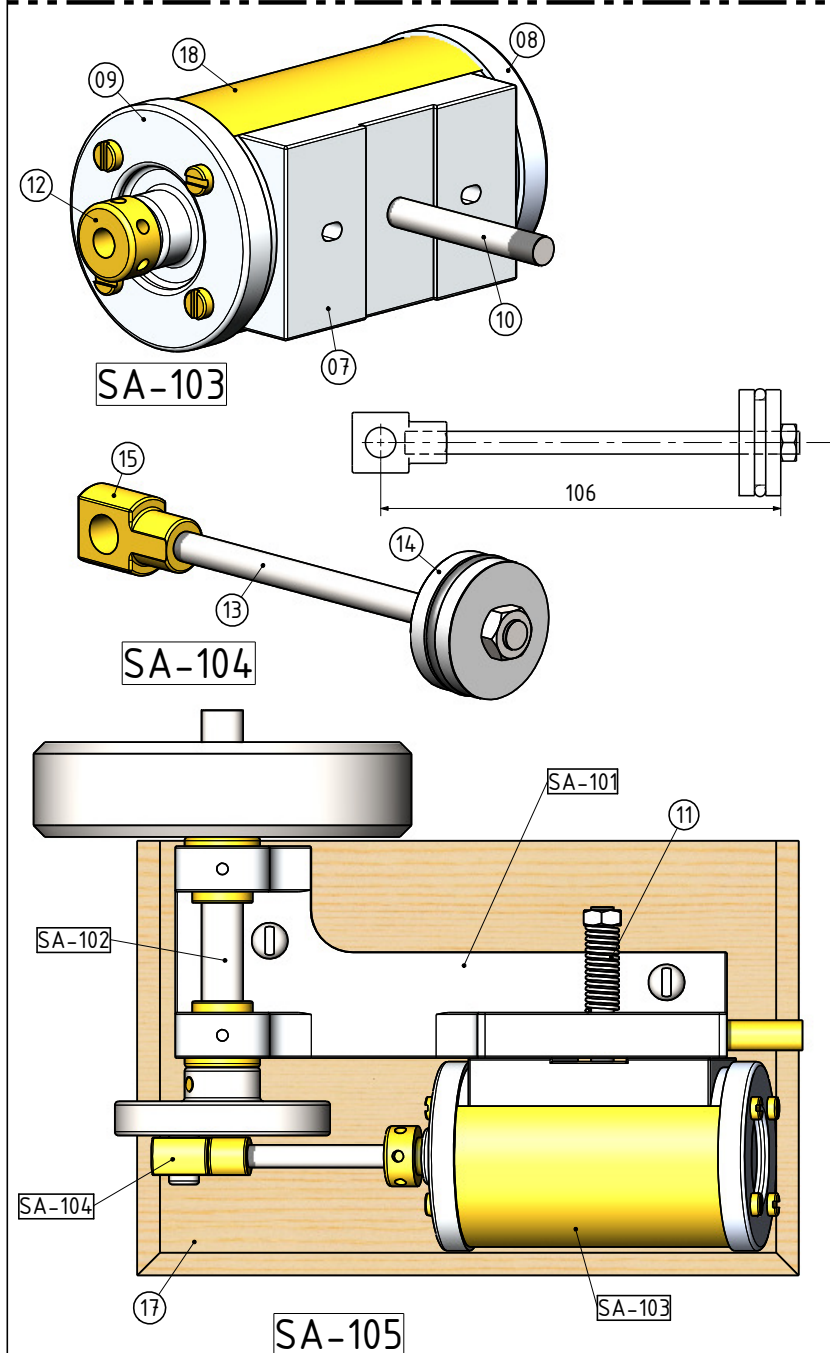
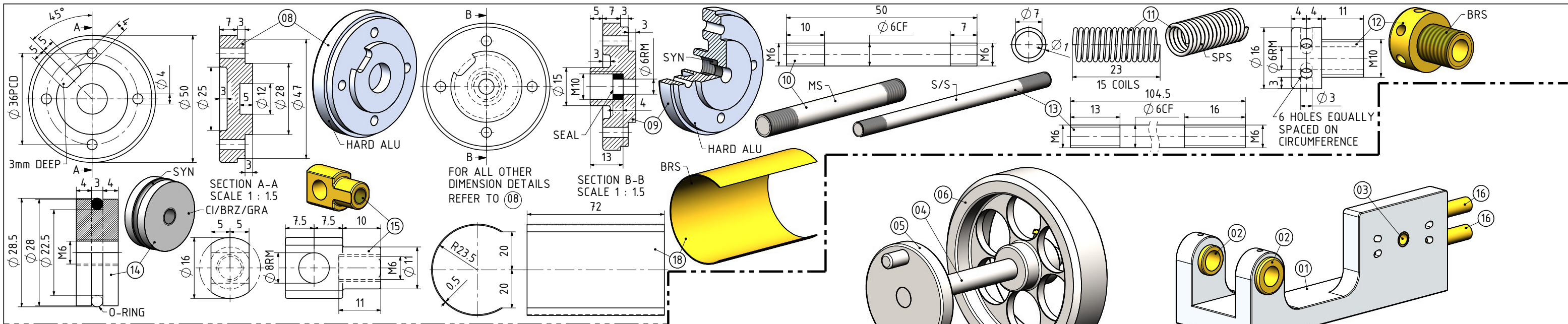
TITLE
SIMPLE 1 CYLINDER OSCILLATING STEAM ENGINE CALLED No21 BY CSEE

DRAWING CONTENTS
G.A, ISOMETRIC VIEW, BOM, NOTES, PARTS AND ASSEMBLIES

PROJECT No 09A-20-00
JDW DRAUGHTING SERVICES
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAPAURA 2110.
NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000
E-MAIL: dewaal@xtra.co.nz.

PROJECTION
JDWDS
DATE
JULY-2016
SHEET: 01 OF 02

MODEL SCALE: 1:1
DWG SCALE: 1:1 @A3 OR AS SHOWN
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A3 No: No21-01



NOTES: FOUND THIS ENGINE ON THE INTERNET. CLASSIC STEAM ENGINE ENGINEERING WEBSITE.DESIGNER AND DRAFTER UNKNOWN.

TITLE
SIMPLE 1 CYLINDER OSCILLATING STEAM
ENGINE CALLED No21 BY CSEE

DRAWING CONTENTS
PARTS AND ASSEMBLIES AND
RENDERED PICTURE

PROJECT No 09A-20-00
JDW DRAUGHTING SERVICES
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAPAURA 2110.
NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000
E-MAIL: dewaal@xfra.co.nz.

PROJECTION
DATE
JULY-2016
SHEET: 02 OF 02

MODEL SCALE: 1:1
DWG SCALE: 1:1 @A3 OR AS SHOWN
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A3 No: No21-02