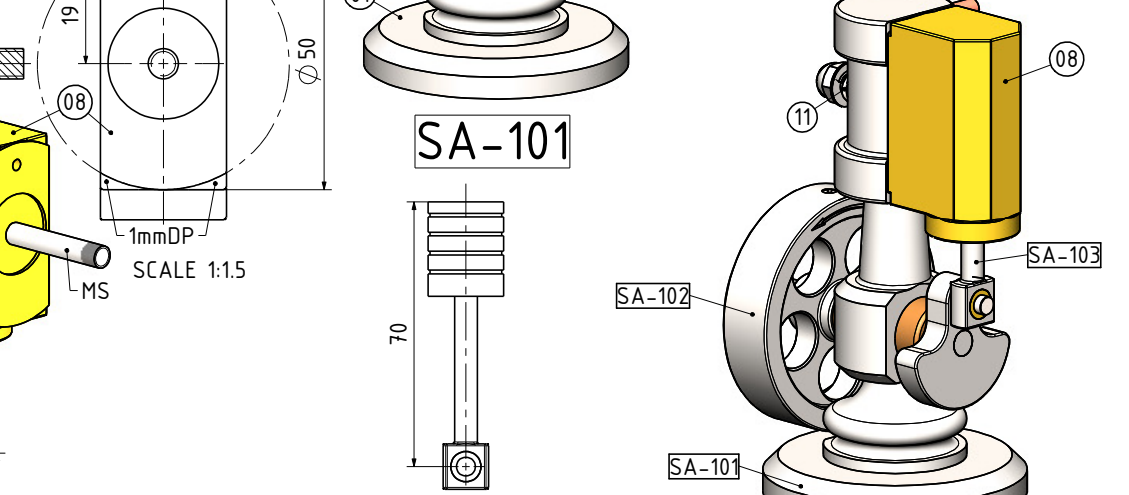
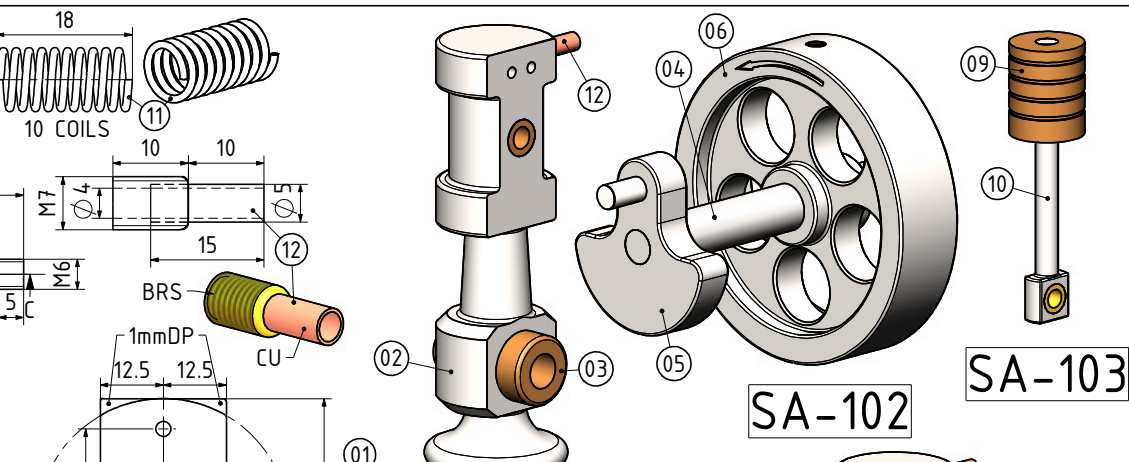
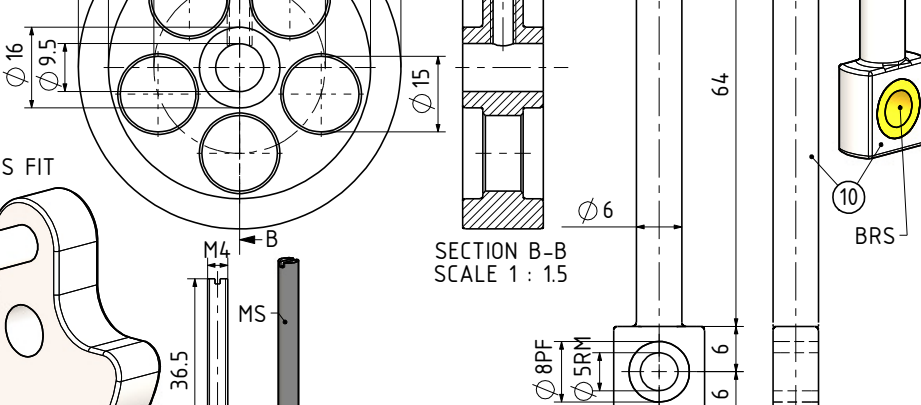
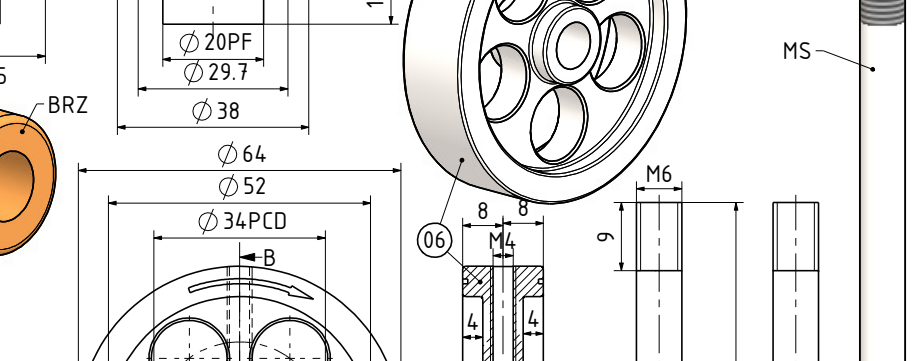
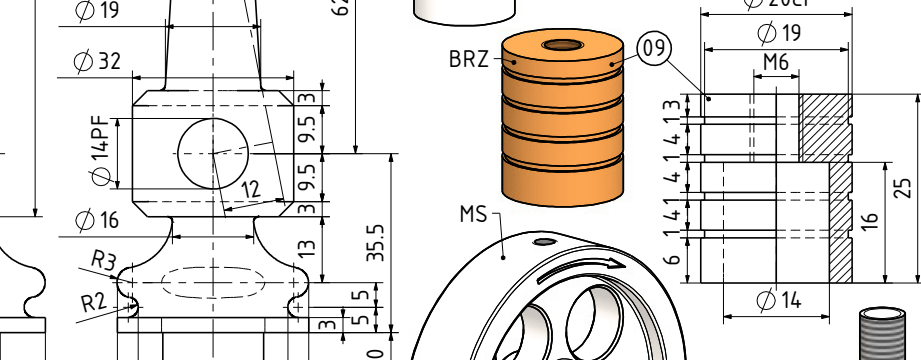
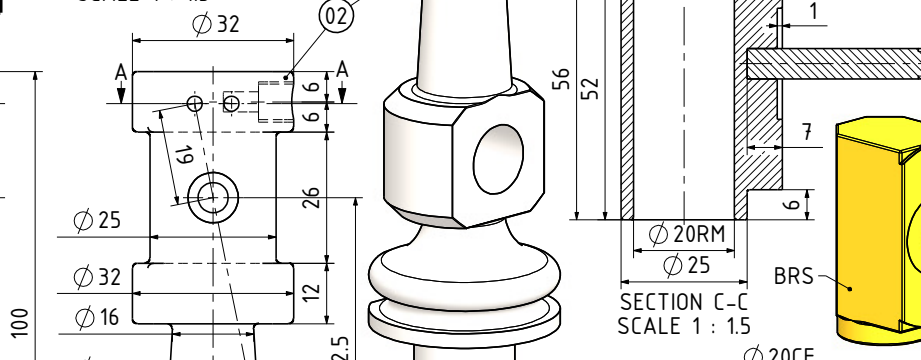
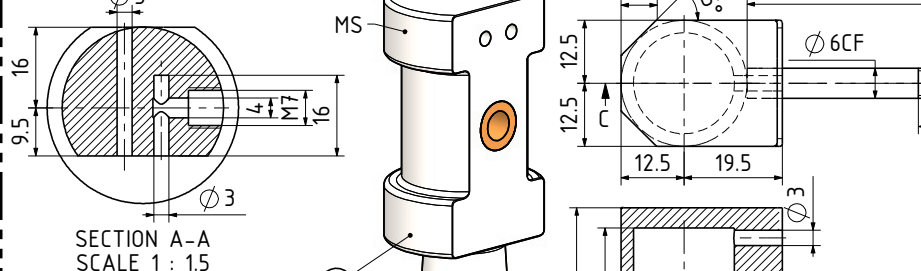
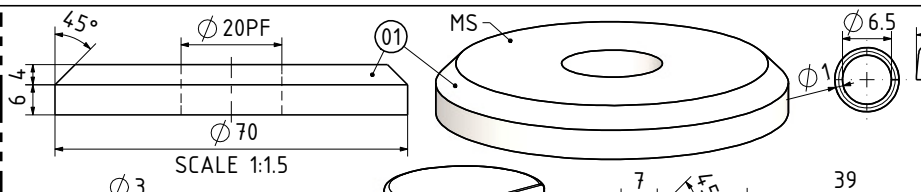


QTY.	PART NUMBER
1	EVG-P15-01-BASE PLATE
1	EVG-P15-02-COLUMN
1	EVG-P15-03-CRANKSHAFT BEARING
1	EVG-P15-04-CRANKSHAFT
1	EVG-P15-05-CRANK
1	EVG-P15-06-FLYWHEEL
1	EVG-P15-07-FLYWHEEL CRANKSHAFT FASTENER
1	EVG-P15-08-CYLINDER
1	EVG-P15-09-PISTON
1	EVG-P15-10-CON-ROD
1	EVG-P15-11-PIVOT SPRING
1	EVG-P15-12-STEAM INLET CONNECTOR
1	EVG-P15-M6 DOME NUT
1	EVG-P15-M6 WASHER



**MATERIAL ABBREVIATIONS:**  
 ALU = ALUMINIUM/DURALMIN/HARD 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

**OTHER ABBREVIATIONS**  
 DP = DEEP  
 PF = PRESS FIT  
 PCD = PITCH CIRCLE DIAMETER  
 RM = REAM  
 HEX = HEXACON, 6SIDED  
 CP = COMPRESSED  
 KNL = KNURLED  
 CSK = COUNTERSINK  
 PL = PLACES  
 CF = CLOSE FIT (SIZE FOR SIZE)  
 D.A.A.= DRILL AFTER ASSEMBLY  
 PFAA= PRESSFIT AFTER ASSEMBLY  
 LCT = USE LOCTITE  
 LPF = LIGHT PRESS FIT  
 [SA-xxx]= SUB ASSEMBLY-xxx

**NOTES:**  
 0. ALL DRAWINGS ARE IN METRIC 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 METRIC FINE (MF)  
 4. MATERIALS SPECIFIED ON THE DRAWINGS ARE INDICATIVE ONLY. THE BUILDER CAN MAKE HIS/HER OWN MATERIAL CHOICE.  
 5. N/A  
 6. ALL CONNECTIONS/JOINTS WHICH HAVE STEAM PRESSURE APPLIED TO IT SHALL BE SILVER/HARD SOLDERED.  
 7. COMPRESSION SPRINGS ARE DRAWN IN COMPRESSED STATE (CP), UNCOMPRESSED STATE IS APPROX 40% TO 60% LONGER THAN COMPRESSED STATE.  
 8. 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.  
 9. 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.  
 10. THE ORDER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED AND THE MODEL IS ASSEMBLED IS ENTIRELY LEFT TO THE BUILDER/MODEL MAKER.  
 11. ERRORS AND/OR OMISSIONS MAY OCCUR IN THE DRAWINGS, DO NOT HESITATE TO CONTACT ME SO THAT THE ERRORS/OMISSIONS CAN BE RECTIFIED.  
 12. A COLOUR SCHEME FOR THIS PROJECT IS ENTIRELY LEFT UP TO THE MODEL MAKER.  
 13. THE MANNER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED/CONSTRUCTED IS ENTIRELY LEFT UP TO THE BUILDER.

NOTES: THE ORIGINAL DRAWINGS AND ARTICLE OF THIS ENGINE WERE BY ELMER VERBURG AND PUBLISHED IN A BOOK AS CHAPTER 15. THE ORIGINAL DRAWINGS WERE POSTED ON: WWW.JOHN-TOM.COM (THIS ENGINE IS 2 TIMES LARGER THAN THE ORIGINAL)

TITLE  
**1 CYL. VERTICAL OSCILLATING STEAM ENGINE CALLED "FANCY"**

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

PROJECT No 10-15-00  
**JDW DRAUGHTING SERVICES**  
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 NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000  
 E-MAIL: dewaal@xtra.co.nz.

PROJECTION  
  
**JDWDS**  
 DATE: FEBRUARY-2016

MODEL SCALE: 1:1  
 DWG SCALE: 1:1 @A3 OR AS SHOWN  
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 SHEET: 01 OF 01  
**A3** No: EVG-P15-01

