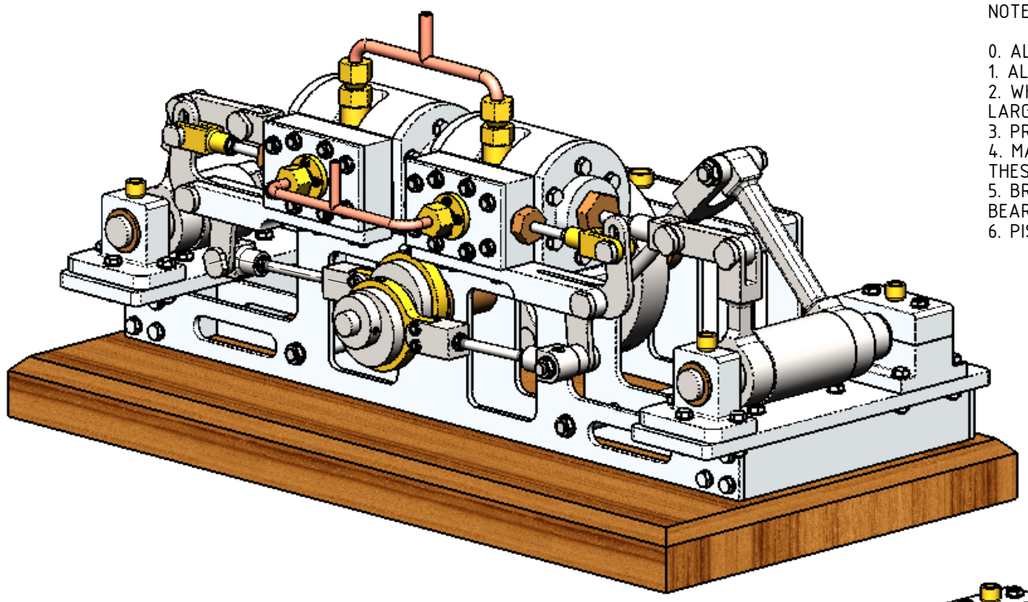

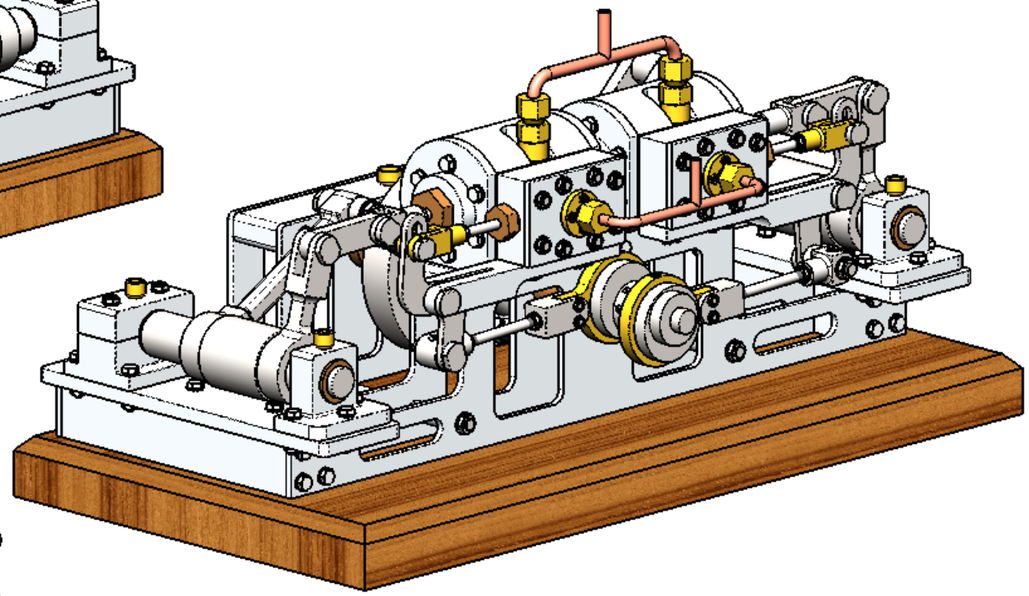

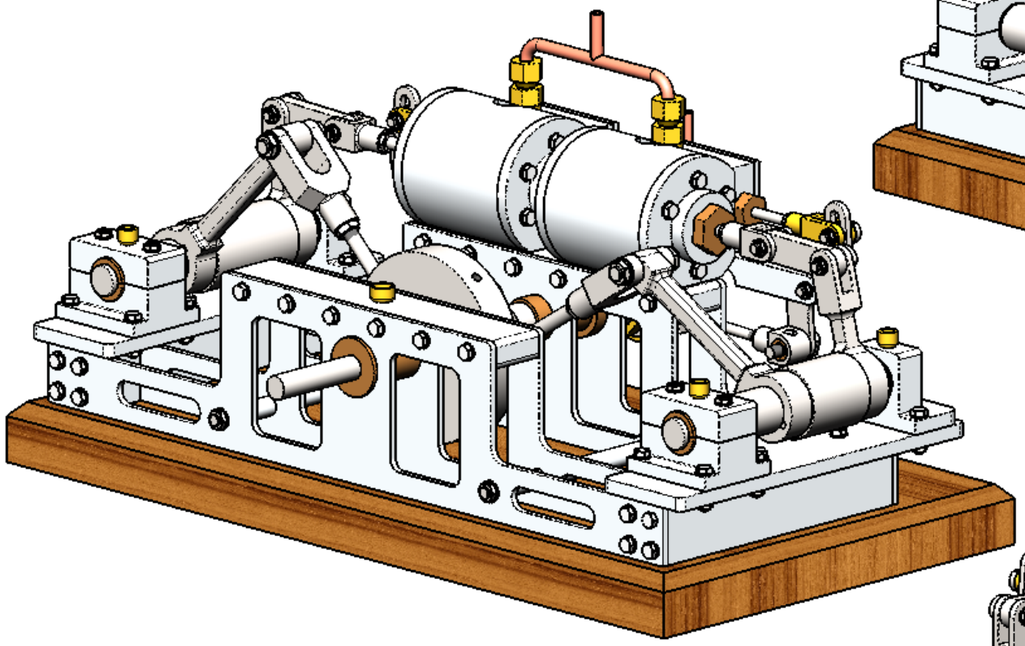

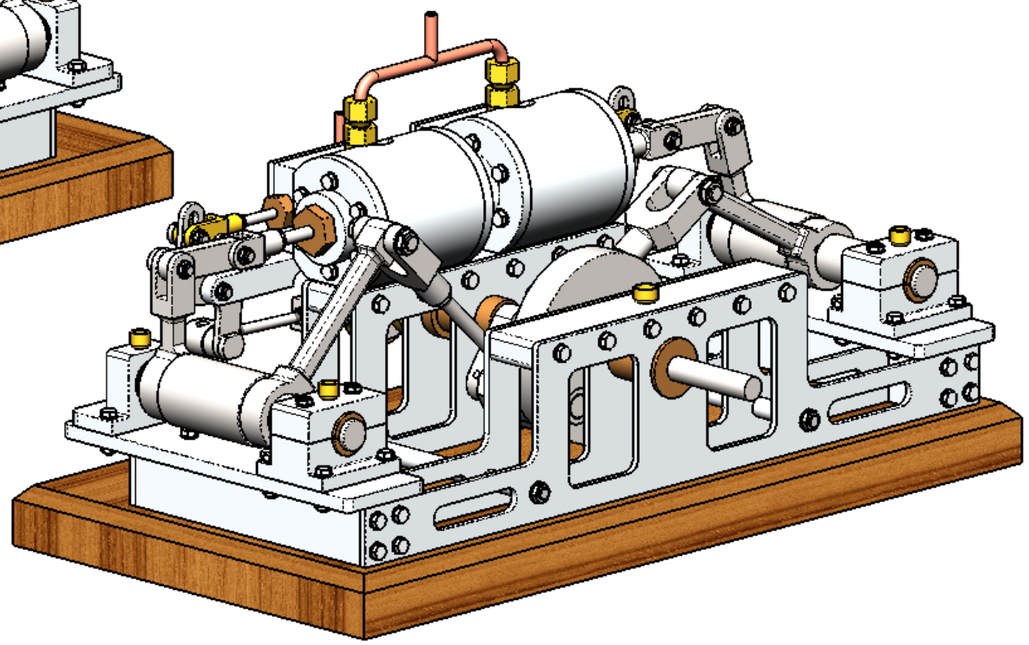

NOTES:

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 7% LARGER THAN THE MATCHING TAPPED HOLE.
3. PREFERABLY ALL TAPPED HOLES TO BE METRIC FINE (MF).
4. MATERIALS OF PARTS HAVE BEEN SPECIFIED ON THE DRAWINGS, IT IS UP TO THE BUILDER TO USE THESE MATERIALS OR MATERIALS WHICH WOULD BE SUITED FOR THE BUILDER.
5. BRONZE BUSHES CAN BE SUBTITUTED FOR BRASS BUSHES IF PREFERED OR REPLACED WITH BALL BEARINGS IF SO DESIRED.
6. PISTON RING TO BE MADE OUT OF EITHER TEFLON OR VETON OR NYLON

ABBREVIATIONS:

RM = REAM.
SA-xx = SUB-ASSEMBLY-xx

ALUM = ALUMINIUM
CIG = CAST IRON OR GRAPHITE.
COP = COPPER
BRS = BRASS.
BRZ = BONZE OR GUN METAL
BMS = BRIGHT MILD STEEL.
S/S = STAINLESS OF SILVER STEEL.

QTY.	PART NUMBER
2	M-MONITOR-01-FRONT AND REAR OUTER BASE FRAME
2	M-MONITOR-02-FRONT AND REAR INNER BASE FRAME
2	M-MONITOR-03-OUTRIGGER BASE FRAME
2	M-MONITOR-04-OUTRIGGER TOP PLATE
2	M-MONITOR-05-BASE FRAME TIE ROD TYPE-A
4	M-MONITOR-06-BASE FRAME TIE ROD TYPE-B
2	M-MONITOR-07-FRONT ROCKER SHAFT BEARING BASE
2	M-MONITOR-08-FRONT BEARING LINING
2	M-MONITOR-09-REAR ROCKER SHAFT BEARING BASE
2	M-MONITOR-10-REAR BEARING SPLIT LINING
2	M-MONITOR-12-CRANK SHAFT FRONT MAIN BEARING
2	M-MONITOR-13-CRANK SHAFT MAIN BEARINGLOCKING RING
1	M-MONITOR-14- CYLINDER MOUNTING PLATE
1	M-MONITOR-15-REAR FRAME SPACER PLATE
2	M-MONITOR-16A-CYLINDER
2	M-MONITOR-16B-CYLINDER LINING
2	M-MONITOR-16C-PISTON ROD BUSH
1	M-MONITOR-17-RH-CYLINDER OUTER COVER
1	M-MONITOR-18-RH-CYLINDER INNER COVER
1	M-MONITOR-19-LH-CYLINDER INNER COVER
1	M-MONITOR-20-LH-CYLINDER OUTER COVER
2	M-MONITOR-21A-STEAM CHEST
2	M-MONITOR-21B-STEAM CHEST PORT SEPARATION PLATE
2	M-MONITOR-22-STEAM CHEST COVER
2	M-MONITOR-23-STEAM INLET GLAND
2	M-MONITOR-24-PISTON ROD GLAND
2	M-MONITOR-25-VALVE ROD GLAND
2	M-MONITOR-26A-STEAM INLET GLAND NUT
2	M-MONITOR-26B-STEAM OUTLET GLAND NUT
2	M-MONITOR-27-STEAM OUTLET GLAND
2	M-MONITOR-28-STEAM CHEST OUTRIGGER
1	M-MONITOR-29-MAIN CRANK SHAFT
1	M-MONITOR-29-MAIN CRANK SHAFT
1	M-MONITOR-30-INNER FLYWHEEL
1	M-MONITOR-31-FLYWHEEL INSERT
1	M-MONITOR-32-CRANK
1	M-MONITOR-33-CRANK PIN
1	M-MONITOR-34A-CRANK SHAFT SHORT KEY
1	M-MONITOR-34B-CRANK SHAFT LONG KEY
2	M-MONITOR-35-ROCKER SHAFT
2	M-MONITOR-36-ROCKER SHAFT FRONT SPACER
2	M-MONITOR-37-PISTON ROCKER ARM
2	M-MONITOR-38-VIBRATING ARM
2	M-MONITOR-39-ROCKER SHAFT KEY
1	M-MONITOR-40-ROCKER SHAFT RH ARM CENTER SPACER
1	M-MONITOR-41-ROCKER SHAFT LH ARM CENTER SPACER
2	M-MONITOR-42A-PISTON
2	M-MONITOR-42B-PISTON RING
2	M-MONITOR-43-PISTON ROD
2	M-MONITOR-44-PISTON ROD END
2	M-MONITOR-45-PISTON ROD END LINK
2	M-MONITOR-46-CRANK ROD BEARING END
2	M-MONITOR-47-CON-ROD
2	M-MONITOR-48-CON-ROD YOKE
2	M-MONITOR-49-CON-ROD YOKE PIN
1	M-MONITOR-50-ROCKER SHAFT REAR RH SPACER
1	M-MONITOR-51-ROCKER SHAFT REAR LH SPACER
2	M-MONITOR-52-CCENTRIC SHEAVE
2	M-MONITOR-53-ECCENTRIC STRAP
2	M-MONITOR-54-ECCENTRIC STRAP EXTENSION
2	M-MONITOR-55-ECCENTRIC ROD
2	M-MONITOR-56-ECCENTRIC ROD END
2	M-MONITOR-57-VALVE ROCKER
2	M-MONITOR-58-SLIDE VALVE
2	M-MONITOR-59-SLIDE VALVE BUCKLE
2	M-MONITOR-60-SLIDE VALVE ROD END
2	M-MONITOR-61-SLIDE VALVE ROD
1	M-MONITOR-62-STEAM INLET PIPE
1	M-MONITOR-63-STEAM OUTLET PIPE
2	M-MONITOR-64-ROCKER LINK PLATE CENTER BOLT
4	M-MONITOR-65-BEARING OILCUP
1	M-MONITOR-66-LH-VALVE ROCKER PLATE PIN
1	M-MONITOR-67-RH-VALVE ROCKER PLATE PIN
1	M-MONITOR-68-RH-VALVE ROCKER PLATE PIN SPACER
2	M-MONITOR-69-VALVE ROD END PIN
4	M-MONITOR-70-PISTON LINK PLATE BOLT
2	M-MONITOR-71-CRANK BEARING OILCUP
1	M-MONITOR-72-WOOD BASE
8	M-MONITOR-M2.5x6 P-HEAD SCREW
8	M-MONITOR-M3 NUT
4	M-MONITOR-M3 WASHER
4	M-MONITOR-M3x15 STUD
4	M-MONITOR-M3x18 HEX BOLT
4	M-MONITOR-M3x20 ROLL PIN
6	M-MONITOR-M3x6 GRUB SREW
48	M-MONITOR-M4 NUT
133	M-MONITOR-M4 WASHER
52	M-MONITOR-M4x12 HEX BOLT
34	M-MONITOR-M4x15 HEX BOLT
4	M-MONITOR-M4x23 STUD
16	M-MONITOR-M4x30 STUD
2	M-MONITOR-M4x6 GRUB SREW
9	M-MONITOR-M5 NUT
7	M-MONITOR-M5 WASHER
4	M-MONITOR-M5x50 STUD
8	M-MONITOR-M6 NUT
8	M-MONITOR-M6 WASHER
4	M-MONITOR-M6x20 HEX BOLT

NOTES: THIS ENGINE WAS ORIGINALLY DESIGNED AND BUILT BY Mr. R. MIDDLETON, MUNDESLEY, NORFOLK, ENGLAND. DRAWINGS CONVERTED TO METRIC BY Mr J.A.M. DE WAAL PAPAKURA, NEW ZEALAND

TITLE
HORIZONTAL STEAM ENGINE OF THE "MONITOR" TYPE

DRAWING CONTENTS
ISOMETRIC VIEWS, NOTES AND BILL OF MATERIALS

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

PROJECTION
DATE SEPT-2013
SHEET:02 OF 07

MODEL SCALE: 1:1
DWG SCALE: NTS @A3 OR AS SHOWN

A3 No: M-MONITOR-02