

QTY.	PART NUMBER	QTY.	PART NUMBER
2	MONITOR-01-FRONT AND REAR OUTER BASE FRAME	2	MONITOR-46-CRANK ROD BEARING END
2	MONITOR-02-FRONT AND REAR INNER BASE FRAME	2	MONITOR-47-CON-ROD
2	MONITOR-03-OUTRIGGER BASE FRAME	2	MONITOR-48-CON-ROD YOKE
2	MONITOR-04-OUTRIGGER TOP PLATE	2	MONITOR-49-CON-ROD YOKE PIN
2	MONITOR-05-BASE FRAME TIE ROD TYPE-A	1	MONITOR-50-ROCKER SHAFT REAR RH SPACER
4	MONITOR-06-BASE FRAME TIE ROD TYPE-B	1	MONITOR-51-ROCKER SHAFT REAR LH SPACER
2	MONITOR-07-FRONT ROCKER SHAFT BEARING BASE	2	MONITOR-52-CENTRIC SHEAVE
2	MONITOR-08-FRONT BEARING LINING	2	MONITOR-53-ECCENTRIC STRAP
2	MONITOR-09-REAR ROCKER SHAFT BEARING BASE	2	MONITOR-54-ECCENTRIC STRAP EXTENSION
2	MONITOR-10-REAR BEARING SPLIT LINING	2	MONITOR-55-ECCENTRIC ROD
1	MONITOR-11-CRANK SHAFT REAR MAIN BEARING	2	MONITOR-56-ECCENTRIC ROD END
1	MONITOR-12-CRANK SHAFT FRONT MAIN BEARING	2	MONITOR-57-VALVE ROCKER
2	MONITOR-13-CRANK SHAFT MAIN BEARING LOCKING RING	2	MONITOR-58-SLIDE VALVE
1	MONITOR-14-CYLINDER MOUNTING PLATE	2	MONITOR-59-SLIDE VALVE BUCKLE
1	MONITOR-15-REAR FRAME SPACER PLATE	2	MONITOR-60-SLIDE VALVE ROD END
2	MONITOR-16-CYLINDER	2	MONITOR-61-SLIDE VALVE ROD
1	MONITOR-17-RH-CYLINDER OUTER COVER	1	MONITOR-62-STEAM INLET PIPE
1	MONITOR-18-RH-CYLINDER INNER COVER	1	MONITOR-63-STEAM OUTLET PIPE
1	MONITOR-19-LH-CYLINDER INNER COVER	6	MONITOR-64-PISTON LINK PLATE BOLT
1	MONITOR-20-LH-CYLINDER OUTER COVER	4	MONITOR-65-BEARING OILCUP
2	MONITOR-21-STEAM CHEST	1	MONITOR-66-LH-VALVE ROCKER PLATE PIN
2	MONITOR-22-STEAM CHEST COVER	1	MONITOR-67-RH-VALVE ROCKER PLATE PIN
2	MONITOR-23-STEAM INLET GLAND	1	MONITOR-68-RH-VALVE ROCKER PLATE PIN SPACER
2	MONITOR-24-PISTON ROD GLAND	2	MONITOR-69-VALVE ROD END PIN
2	MONITOR-25-VALVE ROD GLAND	1	MONITOR-70-WOOD BASE
2	MONITOR-26A-STEAM INLET GLAND NUT	8	MONITOR-9001-1-4 NUT
2	MONITOR-26B-STEAM OUTLET GLAND NUT	4	MONITOR-9002-1-4 WASHER
2	MONITOR-27-STEAM OUTLET GLAND	4	MONITOR-9003-1-4x.75
2	MONITOR-28-STEAM CHEST OUTRIGGER	8	MONITOR-9004-1-8 NUT
1	MONITOR-29-MAIN CRANK SHAFT	4	MONITOR-9006-1-8x0.75 ROLL PIN
1	MONITOR-29-MAIN CRANK SHAFT	1	MONITOR-9007-1-8x0.4063 GRUB SREW
1	MONITOR-30-INNER FLYWHEEL	4	MONITOR-9008-2BA NUT
1	MONITOR-31-FLYWHEEL INSERT	4	MONITOR-9009-2BAx1.875 STUD
1	MONITOR-32-CRANK	10	MONITOR-9010-3-16 NUT
1	MONITOR-33-CRANK PIN	10	MONITOR-9011-3-16 WASHER
1	MONITOR-34-CRANK SHAFT KEY	8	MONITOR-9012-3-32x0.25 P-HEAD SCREW
2	MONITOR-35-ROCKER SHAFT	24	MONITOR-9013-4BAx0.4375 P-HEAD SCREW
2	MONITOR-36-ROCKER SHAFT FRONT SPACER	4	MONITOR-9014-5BAx0.4375 P-HEAD SCREW
2	MONITOR-37-PISTON ROCKER ARM	38	MONITOR-9015-6BA NUT
2	MONITOR-38-VIBRATING ARM	6	MONITOR-9016-6BAx0.25 GRUB SREW
2	MONITOR-39-ROCKER SHAFT KEY	4	MONITOR-9017-6BAx0.62 STUD
1	MONITOR-40-ROCKER SHAFT RH ARM CENTER SPACER	4	MONITOR-9018-6BAx0.75 P-HEAD SCREW
1	MONITOR-41-ROCKER SHAFT LH ARM CENTER SPACER	24	MONITOR-9019-6BAx0.4688 P-HEAD SCREW
2	MONITOR-42-PISTON	2	MONITOR-9020-6BAx0.5625 C-SINK SCREW
2	MONITOR-43-PISTON ROD	34	MONITOR-9021-6BAx0.5625 P-HEAD SCREW
2	MONITOR-44-PISTON ROD END	16	MONITOR-9022-6BAx1.125 STUD
2	MONITOR-45-PISTON ROD END LINK	8	MONITOR-9023-7BA NUT
		4	MONITOR-9024-7BAx.7813 STUD

NOTES:

- ALL DRAWINGS ARE IN IMPERIAL MEASUREMENTS.
- ALL ENGINEERING PRACTICES SHALL BE APPLIED WITH REGARDS TO HOLE AND SHAFT TOLERANCES.
- WHERE SCREWS OR BOLTS ARE USED THE CLEARANCE HOLES SHALL BE APPROXIMATELY 8% TO 10% LARGER THAN THE MATCHING TAPPED HOLE.
- PREFERABLY ALL TAPPED HOLES TO BE UNF OR AS STATED.
- 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.
- BRASS BUSHES CAN BE SUBSTITUTED FOR BRONZE BUSHES IF PREFERRED OR REPLACED WITH BALL BEARINGS IF SO DESIRED.
- PISTON RING TO BE MADE OUT OF EITHER TEFLON OR VETON OR NYLON (PISTON RING NOT SHOWN ON DRAWINGS)


ABBREVIATIONS:

RM = REAM.
 THRD = TREAD(ED)
 T-xx = TAP(PED)-xx.
 SA-xx = SUB-ASSEMBLY-xx

CI = CAST IRON OR GRAPHITE.
 COP = COPPER
 BRS = BRASS.
 BRZ = BRONZE OR GUN METAL
 BMS = BRIGHT MILD STEEL.
 S/S = STAINLESS OF SILVER STEEL.

TITLE
**HORIZONTAL STEAM ENGINE OF THE
 "MONITOR" TYPE**

DRAWING CONTENTS
BILL OF MATERIALS & NOTES

NOTES:	SHEET: 06 of 14	
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.	DATE: SEPT 2013	MODEL SCALE: 1:1
	DWG SCALE: NTS@A4 OR AS SHOWN	
	Copyright © J.A.M. DE WAAL PAPA KURA NZ	
 A4 No: MONITOR-06		