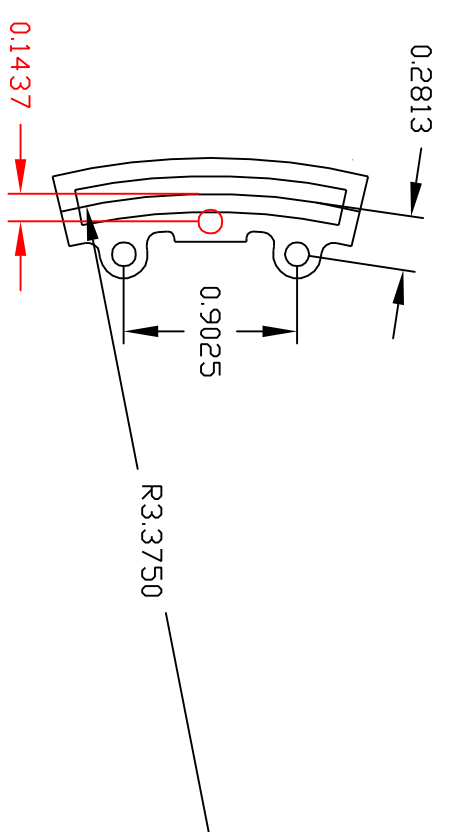
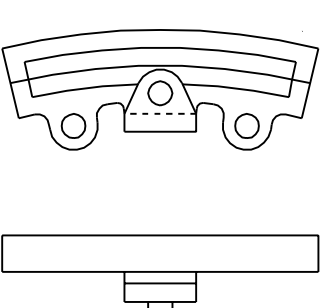


New position for weighshaft and link hanger

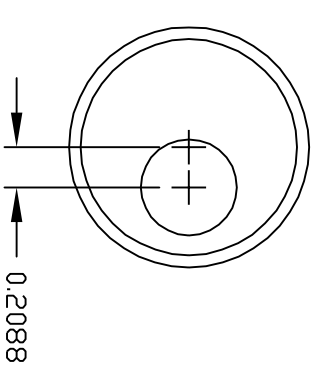


New position for eccentric rod connections

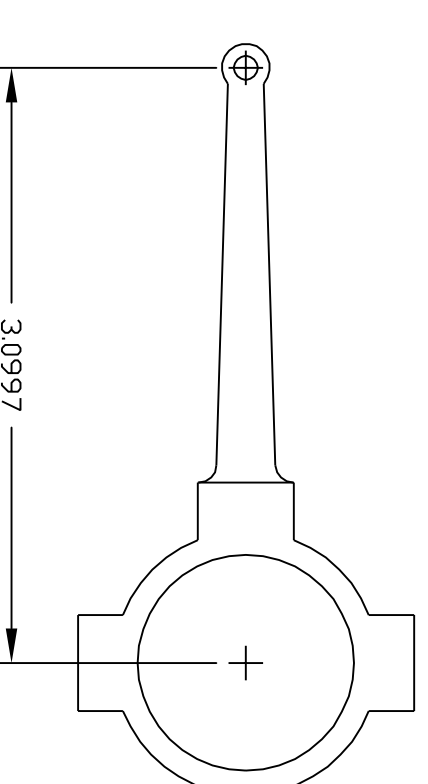
Note - Red circle shows position of suspension pin which is offset from the centreline of the link slot. This will require a little right angled bracket to mount it to the rear of the expansion link and move it away from the body to clear the end of the die block pin.



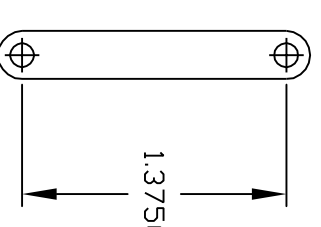
General idea for suspension pin mounting bracket - brazed or bolted to rear of expansion link



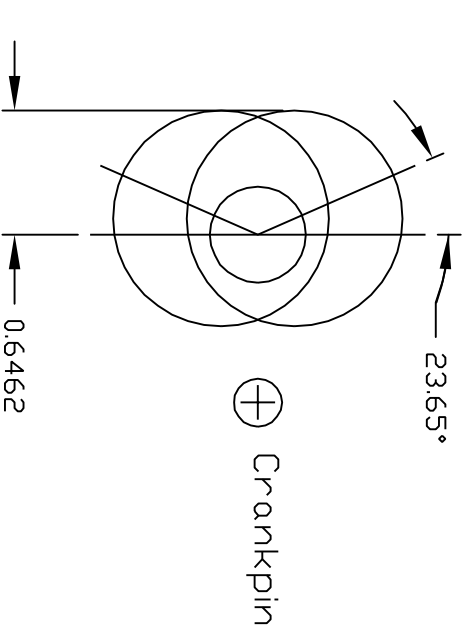
New throw for eccentrics



New length for eccentric rods



New length for lifting link



Angle of advance for eccentrics and distance for setting jig as described by Don Ashton

Notes:

The new valve gear has been designed using the spreadsheet by Don Ashton and involves changing the suspension point of the expansion link from end to centre. Also some of the major dimensions have been recalculated and are shown above. All other dimensions remain as on the original drawings.

The valve events in forward gear are excellent and in reverse quite acceptable. Much better than LBSC's original which gives very unequal events for the front and rear halves of the cylinder.

Some details of the original gear may need to be adjusted to suit the new layout e.g. position of lifting arms on the weighshaft and the length of the valve rod.

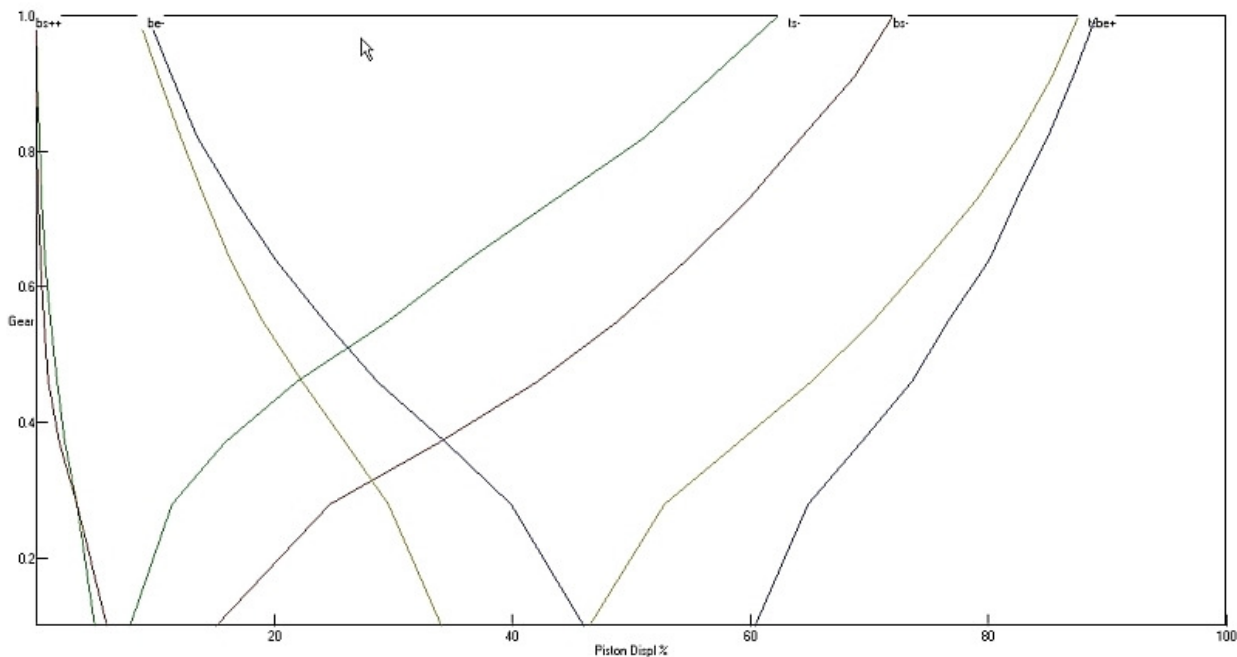
Improved Stephenson Valve Gear for Juliet

J Baguley July 2014

LEGEND: t = top end, b = bottom end

s = steam, e = exhaust

+ = port opens, - = port closes

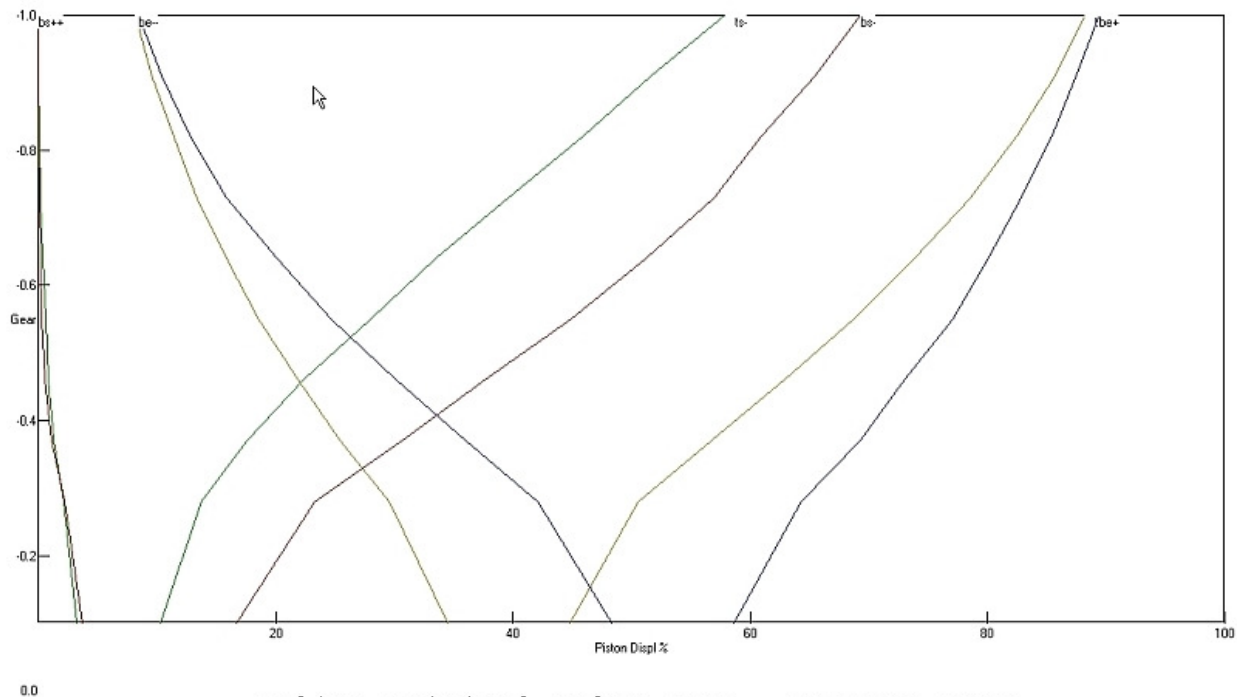


Juliet Original Valve Gear - Forward Gear

LEGEND: t = top end, b = bottom end

s = steam, e = exhaust

+ = port opens, - = port closes

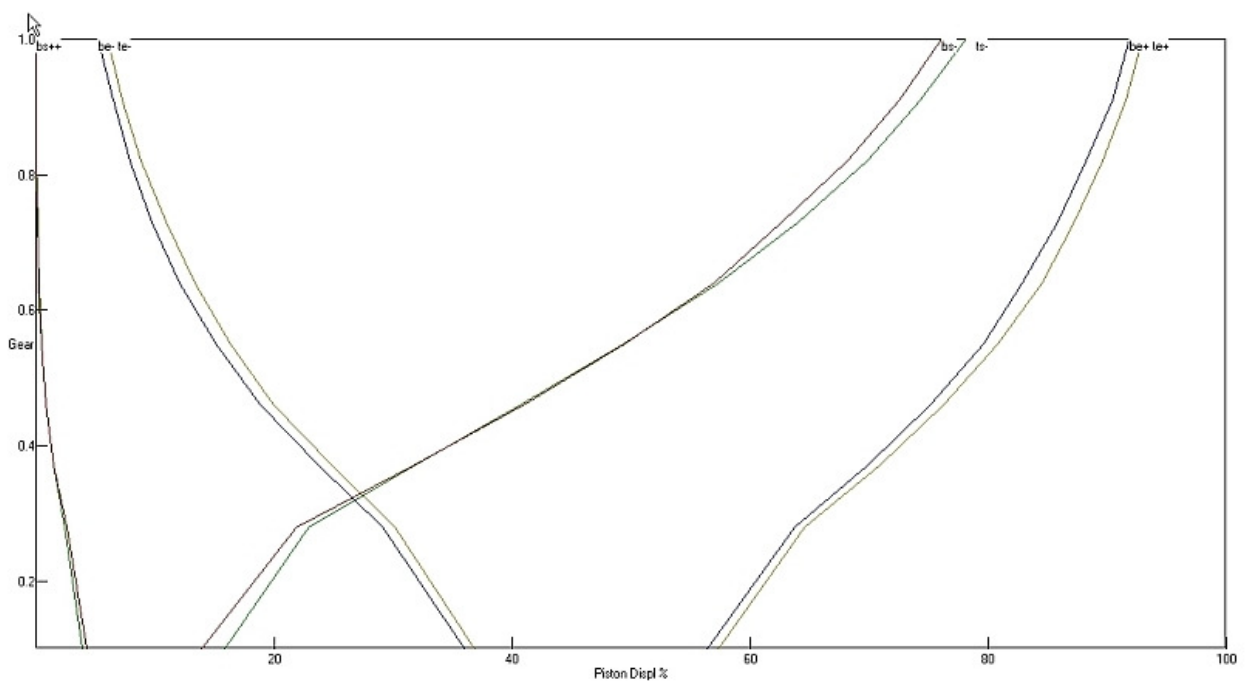


Juliet Original Valve Gear - Reverse Gear

LEGEND: t = top end, b = bottom end

s = steam, e = exhaust

+ = port opens, - = port closes

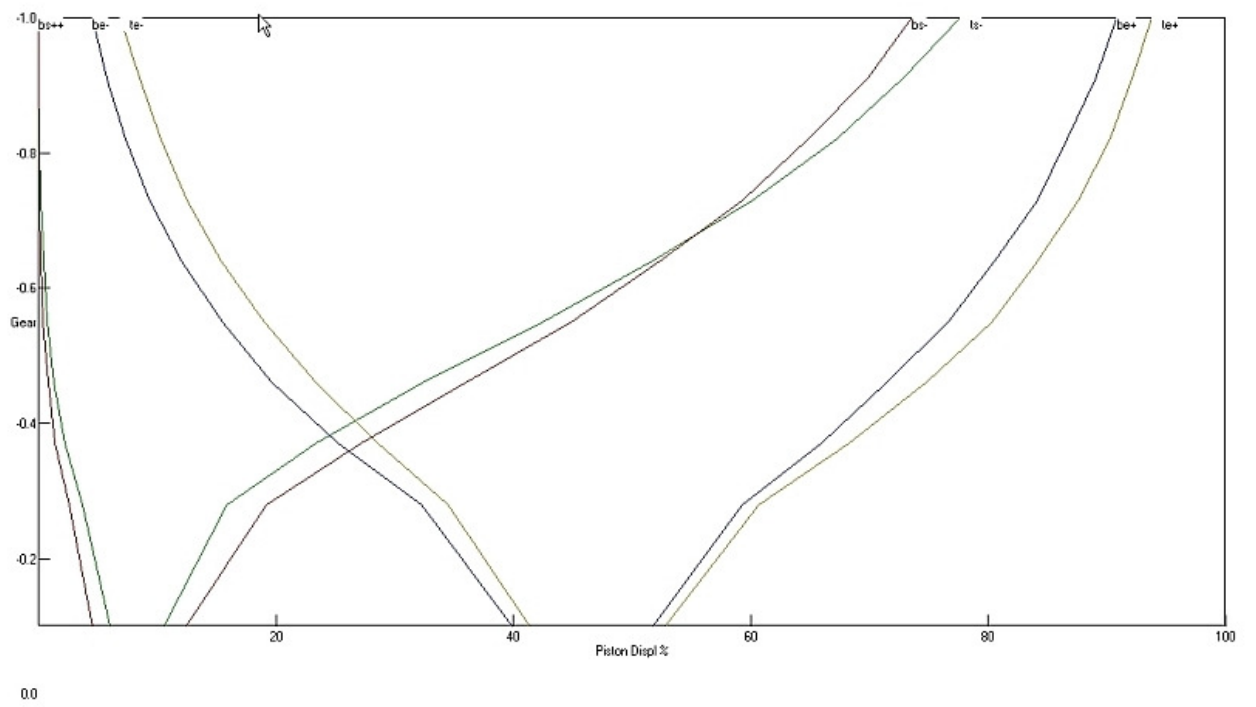


Juliet Revised Valve Gear - Forward Gear

LEGEND: t = top end, b = bottom end

s = steam, e = exhaust

+ = port opens, - = port closes



Juliet Revised Valve Gear - Reverse Gear