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FAO – Margaret Marshall

Dear Margaret

Midsomer Norton, St. John the Baptist Church – Tower Clock

Further to our engineers site visit to inspect the above clock, we are pleased to provide our engineers report & suitable quotations.

Report

I attended the above church to inspect the clock with a view to a general overhaul, and to investigate why the clock had stopped striking.

The church has a lofty west tower in the Somerset style. There is a single dial (approx. 4' diameter) on the south face of the tower. This is a cast iron skeleton pattern, stood off the stonework some distance on stout iron spacing rods so that it misses the string course above.

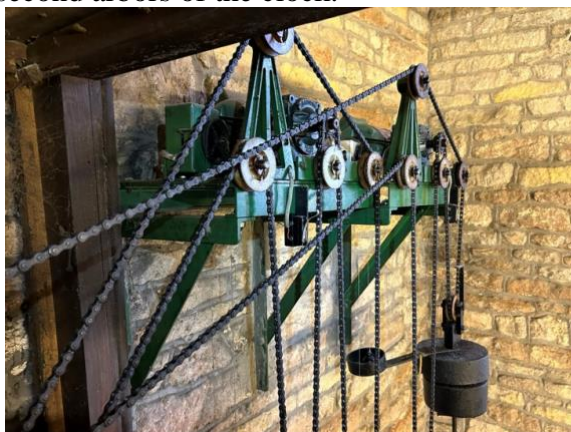


The clock movement is in a somewhat unusual position high on the south wall of the ground floor ringing chamber. It is enclosed in an ornate, glazed timber case bracketed out from the wall. There is a narrower case in the same Gothic style below the clock, enclosing the pendulum.



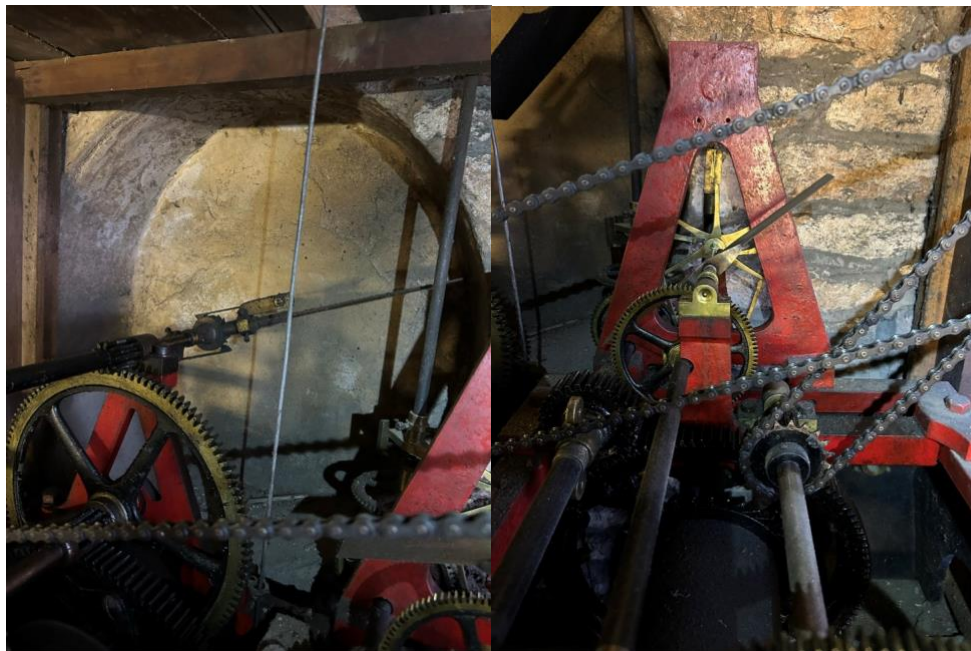
Between the glazed front doors is round glazed aperture showing the setting dial. This is much larger than usual and acts as a time indicator for the ringers, therefore runs clockwise and has its own motion work driven from the centre arbor. This indicates that the clock was supplied by G. Horstmann of Bath – presumably this was the forerunner of the Horstmann Gear Company of Bath who were makers of mechanical time switches.

Access to the movement is via a freestanding extension ladder. Winding must have been a hazardous operation, and the clock has been converted to automatic winding with the addition of a pair of Gillett & Johnston endless chain winders mounted at the same height as the movement, unenclosed on the wall to its right. These act on the second arbors of the clock.



The going winder is operating satisfactorily, but the striking winder had stopped working with the weight right down and the counterweight jammed against the idler pulley. I reset the overwind switch and the winder resumed normal working.

The clock movement is by Gillett & Co. Of Croydon and dates from 1880. It is a two-train flatbed with double-three-legged gravity escapement and count wheel striking. There doesn't appear to be a huge amount of wear, and I could only detect pivot movement in the escape arbor front bush, and that was only a small amount. To keep the case overhang as shallow as possible, the striking fly rotates in a circular aperture cut into the tower wall behind the movement. Given the ladder access, it was impossible to get a photo of the whole clock.



The main issue is that most of the top of the case is missing, and during cleaning work in the tower when the tenor bell was rehung, a large amount of dust and dirt has dropped into the case and into the clock.



The winders are even more dirty with no enclosure of any sort.



We would suggest that the best course of action for the clock movement is for it to be stripped and thoroughly cleaned on-site, this would also allow all the bearings to be checked for wear & working surfaces polished. Given the lack of serious wear, and the fact that the clock is still running.

The strike auto winding unit was reset but understand it only lasted a short period of time before it stopped again. We would therefore propose re-auto winding the movement.

The proposed automatic winding units would be situated above the clock movement on suitable bracket work, with the drive being via the barrel arbors, which meets the current DAC code of practice. The clock is currently driven through the second arbors. The weights would fall down the existing weight position to the righthand side of the movement.

The cost to dismantle & clean the movement & replace the automatic winding system is shown in quotation 1.

These winding units can be supplied as mains driven or battery driven depending on the frequency and duration of power failures. Battery backed units should always be installed when there is a possibility of power failures lasting more than 24 hours. Where power failures are only a few hours' long mains driven units are preferred.

The automatic winding units manufactured by the Cumbria Clock Company are the only units to come complete with a ten-year guarantee.

After the winding units have been fitted it must be realized that the clocks time keeping is still regulated by the pendulum. Therefore, it will still be necessary for somebody to attend to the regulation and undertake the summer and wintertime changes.

We can, if necessary, fit an auto-regulation system to undertake these procedures if it proves difficult to find somebody to do so. We have submitted quotation 2 for one of these systems, which will provide accurate time keeping, & automatic BST/GMT alterations.

The dial is manufactured from cast iron, a skeleton design approximately 4ft [1220mm] in diameter, with the roman numerals & minute marks, all are in a poor & faded condition in need of restoration. We would propose carrying out the dial restoration using our rope access equipment, to remove the need for expensive scaffold. The dial surface would be cleaned down; we would then apply a coat of primer/ undercoat & finish in quality black gloss paint, using the Rust-oleum paint system.

We would also dismantle & clean the dial motion work paying particular attention to the outer ends, which protrude through the dial thus being exposed to all weather elements.

The cost to restore the dial is shown in quotation 3.

Following this work, we would recommend that the clock is serviced on an annual basis, the cost is shown in quotation 4.

We are pleased to submit the following quotations.

Quotation 1 – Dismantling & cleaning of the movement on site & replace the movement to automatic winding

Two engineers to attend on site, erect a zip up / portable scaffold to gain access to the clock movement & auto winding positions. Lower the weights to a safe position, dismantle the movement, wash, clean, check all bearings for wear, polish all working surfaces, freshly oil & reassemble.

Dismantle the auto winding system & lower to ground level, leaving the brackets in position, take details for the new auto winding system & confirm any electrical requirements. Remove the scaffold.

In our workshop to manufacture 2x 240volt mains epicyclic automatic winding units.

To manufacture 2x split sprockets to fit barrel arbors of the striking and going trains.

Manufacture support bracket work.

Return to site erect the scaffold, fit sprockets to barrel arbors.

Fit the bracket work to the wall, install the automatic winding units and hang the weights using the original auto wind bracket work to the right-hand side of the movement.

Service the strike hammer & replace the hammer wire with stainless steel wire, check that it operates on the bell correctly.

Test and leave in full working order.

For the sum of ... £12,760 [Twelve Thousand, Seven Hundred & Sixty Pounds] net plus VAT.

Quotation 2 – Auto Regulator

In our works to manufacture, an auto regulator system to provide accurate time keeping & automatic BST/GMT alterations.

Attend on site & install

For the sum of ... £2,670 [Two Thousand, Six Hundred & Seventy Pounds] net plus VAT.

Quotation 3 – Restoration of the dial

To attend on site, rig up our rope access equipment, approach the dial remove the hands, check the dial fixings for safety & withdraw the dial motion works internally.

Clean down the dial surfaces & fixings, apply a primer / undercoat & finish in a black gloss paint. Re-gild the roman numerals, minute marks & hands using 23-¾ carat double thick English gold leaf.

To dismantle the dial motion works, wash, clean, check the bearings for wear, polish all working surfaces, re-grease & re-assemble.

For the sum of ... £6,670 [Six Thousand, Six Hundred & Seventy Pounds] net plus VAT.

Exclusions

The provision of a suitable electrical supply in the form a double 13amp socket for quotation 1 & a 1x socket for quotation 2. The details & positions of the power points would be confirmed on our first visit to site.

Points to Note

To gain safe access to the movement & auto winding system we have including the cost to hire a portable scaffold

The work would be carried out by experienced & trained engineers, our rope access engineers are trained to IRATA [Industrial Rope Access Trade Association] standards so working to a high health & safety standard.

We use the best quality materials including 23¾-carat double thickness English gold leaf, which we would expect to last in excess of 20 years.

Quotation 4 – Annual Service

Our annual maintenance visit consists of attending onsite once a year, inspecting the clock installation and checking that it is safe, and that there are no apparent signs of wear or areas of concern that may cause problems in the following twelve months.

We will then clean and lubricated the clock movement and all other accessible parts within the building including the dial motion works, bevel gearing and the universal joints. We will also check the bell hammers and bell cranks lubricating and cleaning where necessary. Any adjustments to the hammer wires or hammer check springs will be undertaken.

Once new steel weight lines and hammer wires have been fitted by us, they will be replaced free of charge should they break whilst the clock is under our care.

We will attend as soon as possible once notified of a breakdown and correct the fault free of charge. However, if the fault is caused by normal wear and tear, vandalism or misuse it may be necessary for us to charge for the visit.

If we have any areas of concern regarding your clock installation, we will supply a report and necessary quotations for the work free of charge and without obligation.

The agreement does not include provision for making the Summer/Wintertime alterations, or for the regulation and correct timekeeping of the clock, which should be the responsibility of a local person. We will, however, if asked give instruction on how to look after the clock on a week-to-week basis, again free of charge when we are in the area.

The cost for the above service would be ... £195 [One Hundred & Ninety-Five Pounds] net plus VAT.

If you would like us to look after your clock please get in contact, no official form of contract is exchanged and this quotation, together with your letter of acceptance, is considered sufficiently binding.

The Annual Maintenance Service Agreement will remain in force until terminated by either party.

Price Maintenance

These prices are firm for a period of six months from the date of this letter and thereafter, subject to price increase to accord with increased costs of labour, materials and travelling costs if necessary.

Guarantees

All new parts made by us carry our ten-year guarantee against failure through faulty workmanship or materials.

When a turret clock movement has been brought into our workshops for a complete overhaul, we will give a 10-year guarantee on its performance and reliability, if maintained on an annual basis by the CCC.

This does not include failure of original materials or automatic winding systems not supplied by the CCC.

Repair work is similarly guaranteed for a period of twelve months. Suspension springs and electrical or electronic components of units not of our manufacture, are specifically excluded from our guarantees, but carry the manufacturers own warranty.

Terms Payment

30% with orders over £ 1,000.00, the balance within 14 days of the date of invoice following completion of the work.

In some cases progress payments may be asked for.

All goods remain the property of the vendor until full payment has been made and any relevant cheques cleared. Risk passes on delivery.

The above quotation is exclusive of Value Added Tax at 20%.

The Cumbria Clock Company Ltd complies with the “Code of Practice for Turret Clock Work” produced by the Clocks Advisers Forum of DAC Clock Advisers in collaboration with Turret Clock Companies and the Church Buildings Council.

Trusting the above information is helpful to you, but in the event you should have any questions to ask, please do not hesitate to contact us.

We assure you of our best care and attention, at all times and look forward to hearing from you in the near future.

Yours sincerely

Keith Cotton.

Technical Sales Manager

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