WHEN DID YOU LAST DO IT?

If you have <u>any</u> doubts, seek guidance from your Local Guild/Association Officers in the first instance.

<u>1. Check Your Ropes.</u>
Generally speaking ropes do not break if they are inspected at, say two monthly intervals, and changed when wear is first detected. Once a rope breaks the end rapidly frays and this causes considerable damage and loss of what otherwise may be good rope. There should be no need to bind ropes with self-adhesive PVC (insulating) tape. Much better is to use waxed whipping twine - available from any good chandler. Ropes should be moved up a bit in the spring and lowered in the autumn - this will spread the wear and extend its life. They can also be moved to different bells to spread wear.

<u>2. Check Your Wheels.</u>
All wheel bolts should be tight and the wheel rigid on its headstock. They should run true - buckled wheels are often the cause the rope slipping the wheel. Wooden headstocks are often fitted with wheel stays (metal rods) and these should be fitted tightly to wheel and headstock. Look for signs of wood boring insect infestation and if detected bring to the attention of your PCC and church architect.

<u>3. Check Your Stays.</u>
Stays should be bolted up tight to the headstock and they should not foul either the bellframe or the slider track - this is especially important if you have Hastings stays. Inspect stays carefully - any sign of cracks or splits in the wood is a sign of weakness which will lead to failure. Only replace a broken stay with a new one made in Ash. There is no excuse for weird and wonderful shaped ""lumps"" on the end of a stay used to adjust the set of a bell. If there is a problem with how a bell sets the length of the slider track should be adjusted using suitably sized wooden blocks to achieve the objective.

<u>4. Check Your Bolts.</u>
All frame, headstock and wheel bolts should be checked for tightness at least on an annual basis. When tightening up old bolts ensure that the nut has not ""bottomed"" on the thread. If it has, remove the nut, fit a thick washer and then retighten the nut. Only ever use a spanner that fits snugly on the nut - in this way you will reduce the risk of injuring yourself or damaging the nut.

<u>5. Check Your Bearings.</u>
Plains - For preference these should be lubricated with castor oil. If you change to a mineral oil from a vegetable oil or visa versa the bearing must be thoroughly cleaned out first. Plain bearings need not be the curse they are often made out to be but they do require regular maintenance - such as oiling at two week intervals with only one or two drops of oil. Pouring in vast quantities of oil is a waste of time as it all just runs out again making a dreadful mess over the frame and belfry floor thus becoming a dust and grit trap.

Balls - these are best left alone. Over greasing can cause considerable damage to the seals and in some cases bearings stuffed full of grease have rendered the bell virtually unringable. At periods of about forty years the bearing should be removed, cleaned, inspected for signs of damage, repacked with a suitable grade of clean grease and replaced. N.B. These jobs are beyond the scope of most DIY belfry maintenance.

6. Check Your Ironwork.

At the first signs of rusting on any metalwork, steps should be taken to correct this by removing the rust and painting with suitable paints. Different primers are required for steel and cast iron. Even on wooden frames all the bolts should be painted and this includes the tie bolts. If you are fortunate enough to have stainless fittings on your frame then painting of these is unnecessary. Galvanised fittings should not require painting in the early years of their life - say for forty years!

7. Check Your Frame.

Frames should be inspected on an annual basis and any problems identified, such as movement, corrected as soon as possible. On wooden frames signs of wood boring insect infestation should be reported to your PCC and / or architect. Holes of about 3mm. diameter must be taken seriously as this could be death watch beetle. For metal frames signs of rusting should be rectified before the problem becomes serious.

8. Check Your Nuts.

All nuts must be kept tight. This includes frame fittings and bearing bed plates, all headstock fittings and clappers and all wheel fittings. The nuts on the coach bolts that hold the two halves of the wheel together (at the Meeting Spokes) are particularly prone to working loose. Nuts should only ever be tightened with correctly fitting spanners or sockets - this is for your own safety as well as to avoid damaging the nuts.

9. Check Your Clappers.

Clappers should have very little sideways movement when held against the bell - up to about 10mm. is acceptable. If excessive movement is detected check that the whole clapper assembly is not turning in the bell and tighten the crown staple nut if necessary. If the clapper is tight in the bell then it is probably time to consider re-bushing the clapper pivot. On the modern ""independent"" style of clapper staple the pivot should be greased occasionally unless fitted with a ""Teflon"" or ""nylon"" bush. Older type clappers with the baldrick style of fitting will probably have more sideways movement but even these can be improved by fitting new leathers and replacing any hardwood fittings.

10. Check Your Pulleys.

All frame pulleys as well as any others should spin freely and quietly. Any rumbling from a pulley is indicative of dry bearings. In the case of many bells which do not ""go"" well the real problem is the pulley - a little maintenance and lubrication often makes a dramatic difference and is simply accomplished.

11. Check Your Rope Holes.

Where ropes pass through a floor/ceiling it is preferable that the rope passes through a hard wood or metal boss. Such bosses reduce friction thus making the bells easier to ring well and they also extend the life of the ropes. At any location where a rope is cutting a grove in, say, a floor board this should be rectified as a matter of urgency. Investigate why the rope is so out of line that this is occurring - is it threaded through correctly? Is there a problem elsewhere which is the route cause of the problem?

12. Check Your Ringing Room.

Is your ringing room clean and tidy? Are there old ropes piled in a corner which could constitute a trip hazard? A piled up broken rope is of no use to any body – either repair it so that it is available for instant use when required or consider getting rid of it! Can the ropes be locked up out of the way and/or can the ringing room be securely locked? - this is a matter of safety. Are all electrical fittings in good working order including the emergency lighting system? If you have an upstairs ringing room the stairway is probably your only means of getting out in an emergency. Are the stairs clear of rubbish (with no old brooms hidden behind the tower door), well lit, and easy to use? A ringing room should not be used as a repository of unwanted ""Church junk"". It should be a place where you would be proud to take a non ringer saying that ""this is the room from which the bells are rung"" - clean tidy and comfortable.

13. Check Your Belfry.

Is your belfry clean and tidy? Is the netting in place to prevent the ingress of birds in good condition and effective? Rectify as appropriate. Ideally a belfry should be swept out on an annual basis - that way it never becomes especially bad thus making the task unpleasant. Remember that the dust from bird droppings can be harmful. A good standard of lighting in the belfry is highly desirable and will make the various tasks that have to be performed there much easier.

14. Check Your Chiming and Clock Hammers.

No hammers should actually rest on the bell. For clock hammers there should be spring to hold it clear of the bell. Ensure that all hammers can be lifted (or dropped) clear of the bells so that they can be rung. A hammer that fouls a bell or a wheel can cause very extensive and hence expensive damage. Is the means of lifting hammers clear in the ringing room clearly marked and easy to use? A system that involves winding a piece of rope round a coat hook in the hope that the hammer is lifted clear cannot be considered as satisfactory.

15. Check Your Garters

The garter hole is the hole in the sole of the wheel through which the rope passes. This is the point of maximum wear so it is worth paying close attention to the condition they are in. There should be no roughness at any point where the rope makes contact and any points where the rope has to change direction should be to a smooth radius. Any sharp bends are highly undesirable. Smoothing can generally be achieved by the use of abrasive paper.

16. Check Your Sliders

The slider track should be free of grit, bird droppings, dirt, oil and grease. The slider should move freely within the limits of the slider track and it must fit securely on it's pivot. Modern installations have some means installed to prevent the slider from jumping off the pivot and wherever possible older installations without this feature should be suitably modified to incorporate it - normally a fairly simple task. The wood of a slider should have no evidence of cracks or splits.

17. Check Your Roof.

Any leaks in the tower roof will allow water to fall on to the bells and frame. This is highly undesirable as the corrosion of ironwork and the rotting of wood work is accelerated. If leaks are detected the matter must be reported to your PCC as a matter of urgency.

18. Check Your Gudgeons.

Gudgeons must be tight within their mounting. Both bolted and hot riveted gudgeons can become loose and early evidence of this will be the cracking of paint around the fixing point especially on the inside face of the headstock or gudgeon plate. Evidence of rusting or "cocoa powder" is a clear indicator of a loose gudgeon. The nut on a bolted gudgeon can just be tightened. A loose hot riveted one is a more difficult matter and the bell-hanger should be consulted.

Note - even the slightest slackness will lead to premature failure and potential damage to wheel and bell.

19. Check Your Rumbles.

Occasionally and with assistance of other members of your band silence all the bells in turn and whilst standing in a safe position have an assistant ring each one up in turn. Apart from a slight noise of the rope stretching through the garter hole and running over the roller (pulley) and, when the bell is up, a light tap as the stay engages with the slider **any** other knocking or rumbling should be investigated. Things to look for include bell loose or wheel loose on headstock, bearings in poor condition, bearing bedplates loose, roller bearings in poor condition etc.

20. Check Your Lights.

All lighting should be fully functioning with any failed bulbs replaced at the earliest opportunity. Emergency lighting in the ringing room and on the exit route down stairs and/or through the church should be tested on a regular (monthly) basis and a record kept of the test.

21. Check your Go.

If you or a member of the band comments on the "go" of a bell, especially if it is one that they are use to ringing, investigate the matter as it could be an early warning of something serious manifesting itself. Remember that bells are mechanical systems and although very rare failures can occur.