

Re: 50 hz timer motor

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- *From:* ****THE-RFI-EMI-GUY**** <rhyolite@xxxxxxxxxxxxx>
 - *Date:* Wed, 16 Nov 2005 02:50:26 GMT
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My bet is that the timer is OK. The washer has a quick wash feature button and further is supposed to be energy efficient. I bet the timer is turned on and off by a separate master timer, the interval of which is determined by demand. I think the technology is fooling the original poster.

Joe

Sam Goldwasser wrote:

"Ron(UK)" <ron@xxxxxxxxxxxxxxxxxxxxxxxx> writes:

Sam Goldwasser wrote:

I now have the timer mechanism in my possession.
There is a synchronous motor which drives 4 gears as follows:
Driven Drive
Shaft Teeth Teeth Gear:Gear Ratio Period
(60Hz)

Motor 12 Motor:G1 12:50 1:4.17 15 Hz
G1 50 16 G1:G2 16:40 1:2.5 3.6 Hz
G2 40 10 G2:G3 10:45 1:4.5 1.44 Hz
G3 45 12 G3:G4 12:48 1:4 0.32 Hz
G4 48 0.08 Hz (12.5 s)
Gear G4 engages the inside of a funny large ring gear - it has teeth

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missing
every 12th position. Every 12.5 s, the
cam switch moves one position.
However, there is a lever in the middle
of the mechanism which seems to
be wanting to engage something that isn't
there. When that lever is
prevented from moving a certain way, the
main cam doesn't step. However,
I can't quite see what it's really doing
without further disassembly.
So, is it possible there is some
escapement that is missing
on this unit? There are at least two
posts that look like they may be
for additional gears or something but
that's not conclusive.
Perhaps the original theory that
something is missing deserves more
consideration.
One thing I'm quite sure of is that the
50/60 Hz thing is irrelevant
as
far as this mechanism is concerned. The
motor feels like it has around
the 8 poles required to account for the
15 rps speed at which it is running
(at 60 Hz).
--- sam

Sam, there`s usually a kind of 'rocking lever' a
bit like a clock
escapement. It`s difficult to see where any parts
could go missing to
unless it`s been 'got at' previously.

Here's a photo. Sorry about the quality:

<http://repairfaq.cis.upenn.edu/Misc/tmp/gears.jpg>

Just above the center hub, there is a white nylon tab sticking out, which
is part of a lever that's mostly hidden behind the black plate.
That's the lever I'm talking about. Now, it could just be an indicator

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to show what's going on but it could also be part of some type of escapement. There are also a post visible on either side of the white tab which are different than the other posts used to just key the top. They could be for missing parts (or optional parts).

The blue ring gear just visible through the window is moved by the final white gear - there is a mating gear on the other side of the black plate. The blue ring gear rotates freely inside the cam cylinder, but also cycles the position of the lever. When the lever moves into a certain position, it engages the cam cylinder and causes it to move by one click. Limiting the travel of the lever prevents this movement.

What would make the most sense is that there is something missing that's supposed to do every 4th rotation of the final white gear to move the cam. That would be one minute at 50 Hz.

Isn't there anyone at the French company who can answer the simple question as to whether just powering the timer should cause the cam to move in 1 minute increments? Don't confuse them with 50/60 Hz! :)

Thanks.

--- sam | Sci.Electronics.Repair FAQ:
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<http://www.repairfaq.org/REPAIR/> +Lasers | Sam's Laser FAQ:
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Joe Leikhim K4SAT
"The RFI-EMI-GUY"

"Follow The Money"

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