Assemble Odometer from Northeast (round) Speedometer (1931)

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These are instructions for assembling the odometer number barrel used in the Northeast round speedometer. You may want to do this to apply new number stickers.

Parts list:

- 6 number wheels (5 black & 1 red)
- 5 brass gears (6-tooth, 3 of the 6 are half-teeth)
- Left end cap, with alignment tab on end surface
- Right end cap, with smooth end surface
- Brass barrel (open end faces displayed numbers)
- 1 long gear shaft
- 1 short ratchet shaft
- Brass ratchet plate
- Ratchet spring
- Drive gear

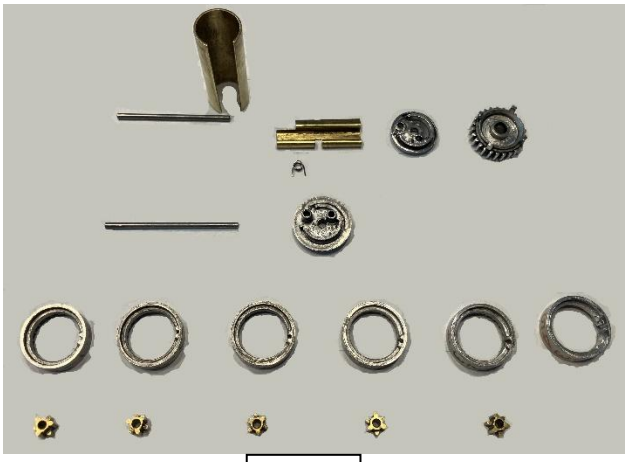


Fig 1

Place the ratchet plate on the short shaft through the spring. The ends of the spring should extend towards the outward side of the u-shaped ratchet. Fig 2.



Fig 2

Locate the left end cap with the alignment tab. The inside face is a ‘C’ where the barrel fits. Fig 3.



Fig 3

The ratchet shaft goes in the hole at the back of the ‘C’, the gear shaft goes in the hole at the open end of the ‘C’.

Place the short shaft and ratchet in the back hole with the solid end of the ratchet nearest the end plate. Fig 4.

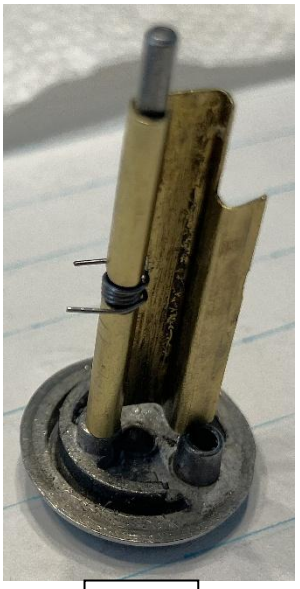


Fig 4

Place the long gear shaft in the hole at the open end of the ‘C.’
The ratchet rests against the gear shaft. Fig 5.

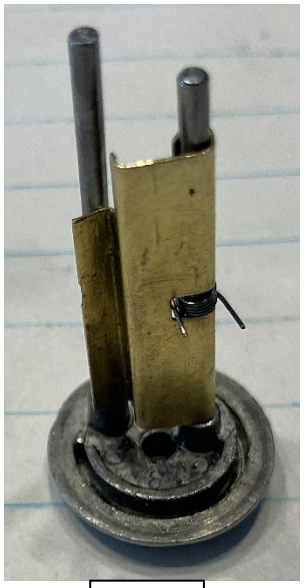


Fig 5

Insert the brass barrel into the ‘C’ slot while keeping spring tension between the barrel and the ratchet. Fig 6.



Fig 6

The spring must keep the ratchet pressed against the gear shaft. Fig 7.



Fig 7

Make sure the barrel is completely pressed into the end cap. Fig 8.



Fig 8

During assembly, align the numbers you want displayed opposite the alignment tab on the end cap, in front of the open space on the barrel. Fig 9.



Fig 9

In my example, there is a ‘7’ displayed on each wheel.

Start with the 10,000s number wheel. Fig 10.

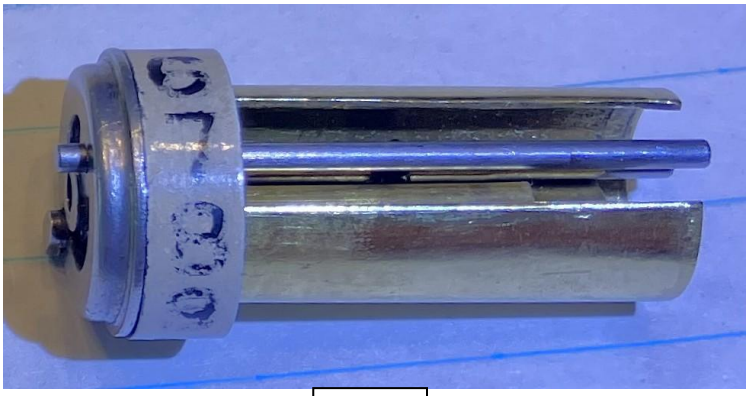


Fig 10

With the number aligned, slide a brass gear onto the shaft with the 6 solid teeth first. You must depress the ratchet to allow the gear to slide past. Fig 11.

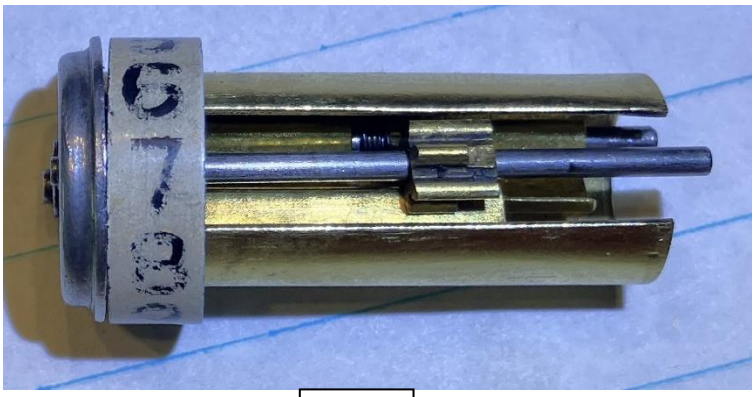


Fig 11

There will be 3 half teeth. Make sure to insert a half tooth into the number wheel directly under the displayed number. Fig 12. If you insert a full tooth there, the number will not display properly centered.

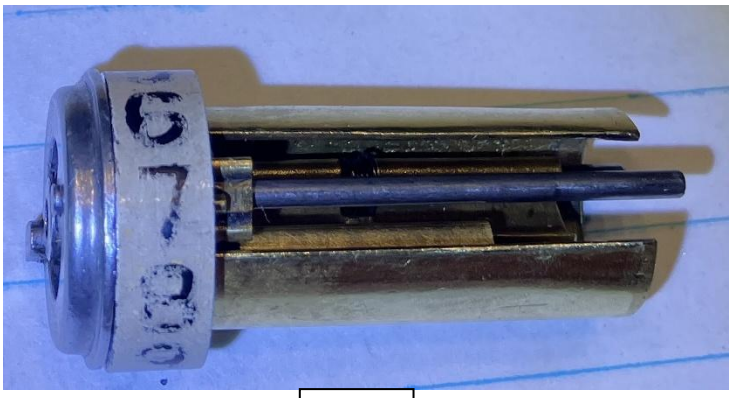


Fig 12

Add another number wheel and gear. Rotate the number wheel forward and back past ‘0’ to ensure the previous number wheel advances and the numbers remain centered. Repeat until all 6 wheels and 5 gears are installed. Gears go between wheels. No gear on the end. Figs 13, 14, 15, 16, 17.



Fig 13

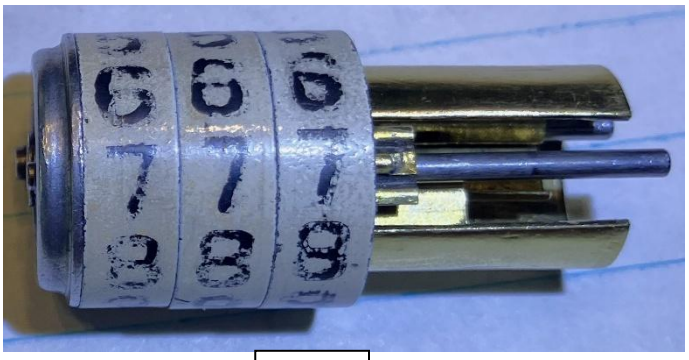


Fig 14



Fig 15



Fig 16

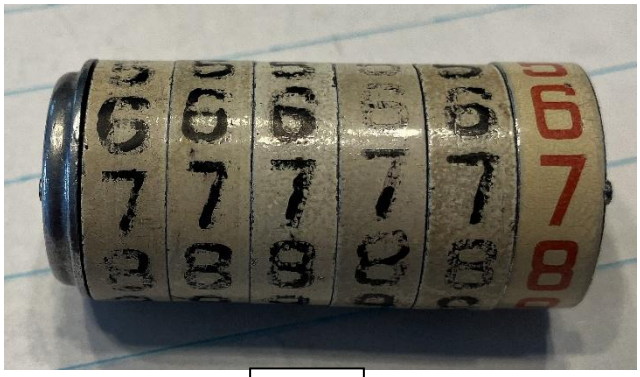


Fig 17

Locate the right end cap and notice the spacing of the two holes. The ratchet spring tends to push the 2 shafts together. Fig 18.



Fig 18

Insert a wedge between the two shafts to approximate the space between the holes. Figs 19 & 20.

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Fig 19



Fig 20

Push in the gear shaft (long shaft) so that it is the same height as the short shaft. Gently wiggle the cap until both shafts align. Once aligned, firmly press the 2 end caps together until fully seated. Fig 21.



Fig 21

The 4 tabs on the drive gear fit over the end cap and into the slots on the 1/10s number wheel. Fig 22.



Fig 22

The assembly is ready to insert into the housing. Fig 23. Be sure that the alignment tab goes into the slot on the left and slides to the bottom. Insert the axle rod Fig 24 and pivot the locking tab over the end. Fig 25.



Fig 23



Fig 24



Fig 25

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