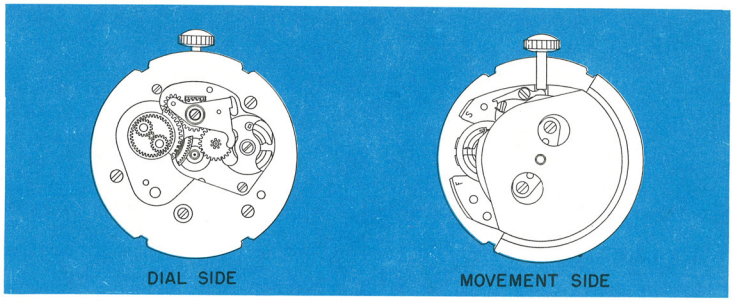
TIMEX model 31

13 lig.
29.08 mm
1.145 in.

the TIMEX Model 31 Movement



The TIMEX Model 31 movement is a new thin self winding watch which uses the basic construction of the Model 24. A new planetary gear winding system located on the front frame provides a compact method of obtaining the necessary gear reduction between the self winding weight and the mainspring.

The reserve power of the mainspring when the watch is worn by a normally active person is sufficient to run the watch for a full day.

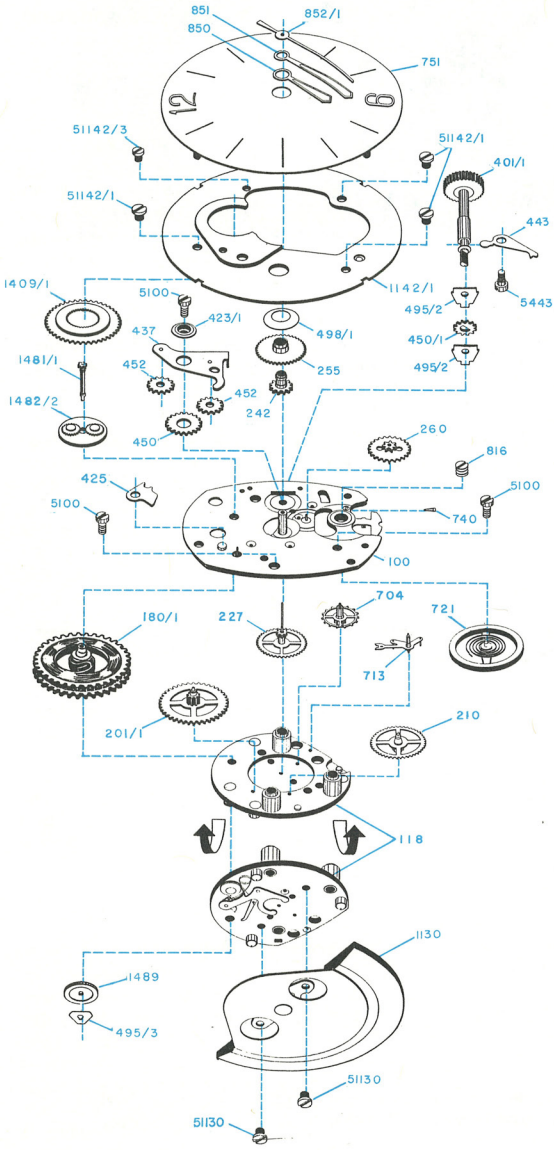
To clean the Model 31 movement, it is necessary to remove only the sweep second hand, dial, mounting ring, planetary gear system, and balance.

TIMEX has found that the best method of cleaning is with only the aforementioned parts removed. The cleaning fluid, while removing any contamination from the movement will also remove oil from the gear train, pivots and holes. The illustrations on Pages 31.3 and 31.4 show proper procedures for disassembly.

Cleaning, reoiling and reassembly procedures are given on Page 31.5

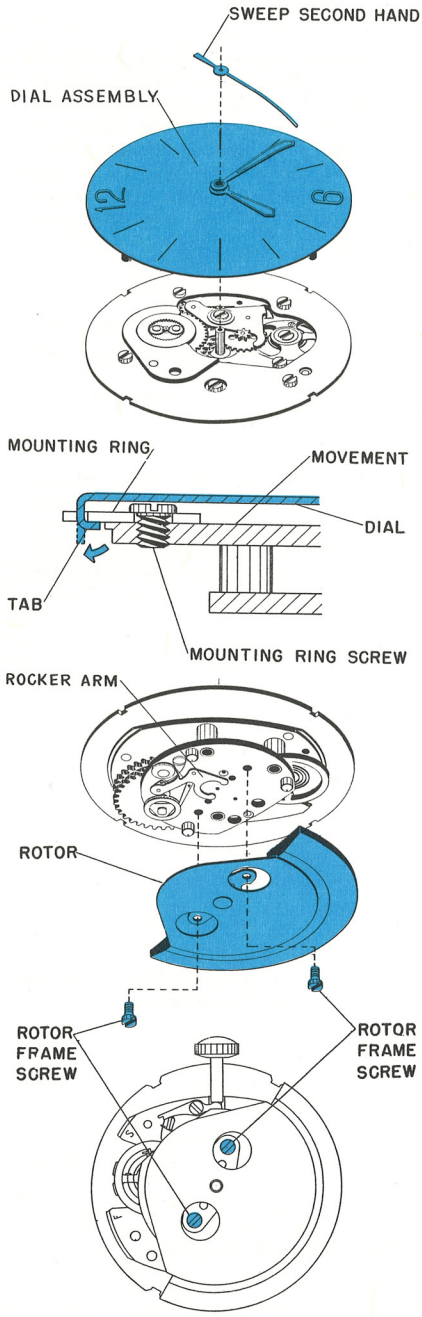
If further dismantling is required, follow the instructions for the Model 24 movement. An exploded view of the Model 31 movement is shown on Page 31.2 to guide reassembly.

the TIMEX model 31 movement (exploded view)



100	Dial Plate Assembly
118	Movement Plate Assembly
180/1	Barrel Complete (with Mainspring)
201/1	Second Wheel Assembly
210	Third Wheel Assembly
227	Seconds Wheel Assembly
242	Cannon Pinion Assembly
255	Hour Wheel
260	Minute Wheel Assembly
401/1	Winding Stem with Crown
423/1	Rocking Bar Bushing
425	Click
437	Rocking Bar
443	Setting Lever
450	Setting Wheel
450/1	Stem Wind Pinion
452	Wind and Set Pinion
495/1	Retaining Ring (Cap Jewel)
495/2	Winding Bridge
495/3	Winding Ratchet Wheel Lock Washer
498/1	Hour Wheel Washer
704	Escape Wheel Assembly
713	Pallet Lever Assembly
721	Balance Assembly
740	Hairspring Wedge Pin
751	Dial Assembly
816	Balance Screw Assembly
850	Hour Hand
851	Minute Hand
852/1	Sweep Second Hand
1130	Rotor Plate Assembly
1142/1	Mounting Ring
1409/1	Ratchet Wheel
1481/1	Planet Wind Pinion
1482/2	Planet Pinion Assembly
1489	Winding Ratchet Wheel Assembly
5100	Pillar Screw
5443	Set Lever Screw
51130	Rotor Plate Screw
51142/1	Mounting Ring Screw
51142/3	Mounting Ring Screw

Disassembly of Movement for Cleaning (model 31)



Removing the Dial and Hands

a) Removing the sweep second hand. Do not remove the hour or minute hand.

b) The dial is clamped to the movement mounting ring by four tabs protruding from the outside of the dial. Straighten these tabs as indicated by the arrow and dotted lines in the illustration and remove the entire assembly.

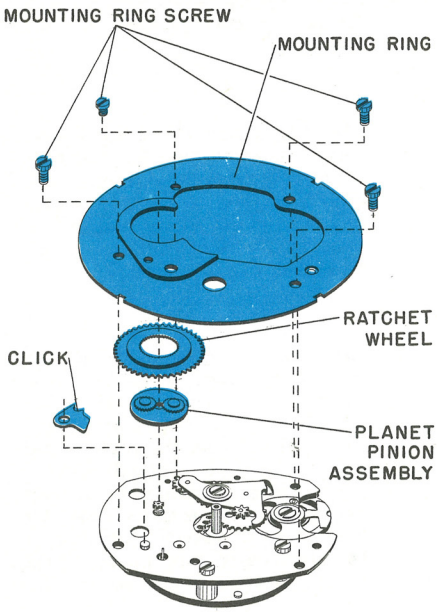
3) Once the dial assembly is off the movement there is no need for further dismantling of the dial assembly unless severe contamination is present on the friction and cannon pinions. Should further dismantling be required, removal of the minute hand will free the friction and cannon pinion assembly. The friction pinion is held in the cannon pinion by a snap fit.

Removing the Rotor

a) Invert the movement so that the movement plate is facing you and remove the two rotor frame screws.

b) Lift the rotor assembly slightly to free the dowels which position it. Since the rocker arm fits between the rotor frame and the rotor weight assembly, the rotor weight must me removed by sliding it along the movement plate until it is free of the rocker arm. Any attempt to lift the weight before it is free of the rocker arm will result in damage to the movement.

Disassembly of Movement for Cleaning Cont'd.

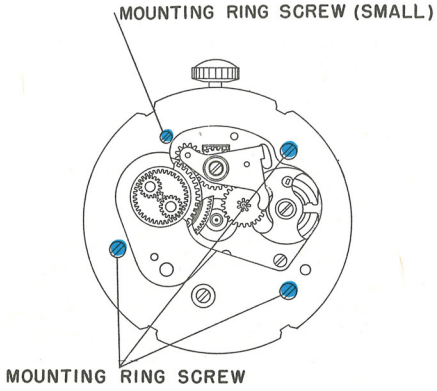


Removing the Mounting Ring

a) Before removal of the mounting ring, the mainspring power must be fully let down. Grasp the crown in the fingers of one hand and move the click out of engagement with the ratchet wheel. Let the crown revolve slowly in the fingers being careful not to let the crown slip.

Note: To disengage the click, hold the click spring back and turn the crown forward. The click will fall out of engagement.

b) After letting the power of the mainspring down, remove the four mounting ring screws. Next remove the mounting ring ratchet wheel, planet pinion assembly and click.



Removing the Crown and Stem

Proceed as directed on Page 24.4 for the Model 24 movement.

Removing the Balance Wheel

Proceed as directed on Page 24.5 for the Model 24 movement.

Cleaning and Lubricating the Model 31

After disassembly of the sweep second hand, dial, rotor, mounting ring, planetary gear system, click and balance, the movement is ready to be cleaned. The same instructions for cleaning as given for the Model 24 movement apply to the Model 31. Care should be exercised to insure complete cleaning of all self winding parts.

The same reoiling instructions given for the Model 24 movement apply to the Model 31. In addition, all moving parts of the self winding and planetary gear system should be oiled.

As noted on the Model 24 movement, the mainspring is permanently lubricated and should **not** be oiled.

Reassembly of the Model 31

Use the disassembly procedures for the Model 31 and 24 movements as a guide for reassembly. Reassembly procedures for the balance wheel, position of the hairspring and positioning of sweep second hand are given on Page 24.7.

Helpful Hints

1. Oiling—When oiling the movement plate balance cup, to facilitate the precise entry of the oil to the bottom of the cup, insert the oiler through the dial plate balance screw hole before the balance screw is assembled.

2. A drop of oil applied to both sides of the stem wind pinion before assembly will hold the pinion and its bridges together thus facilitating assembly should complete dismantling of the movement be necessary.

3. Model 31 Movement—Examine the action of the rotor on the winding frame. Be certain the staking is secure and that the rotor is free to make a complete revolution without interference. Check that the spring which holds the movement in the bezel is properly located in its groove.

Check the freeness of the rocker arm and the clicks which are attached to it. Check that the yoke of the rocker arm slides freely on the cam attached to the Self-wind weight without interference.

Check the action of the winding ratchet wheel. Each rotation of the rotor should move this wheel forward approximately 6 teeth.

Check the action of the mainspring and the barrel. The mainspring should have 5 to 6 full turns before the sliding tail begins to revolve in the barrel.