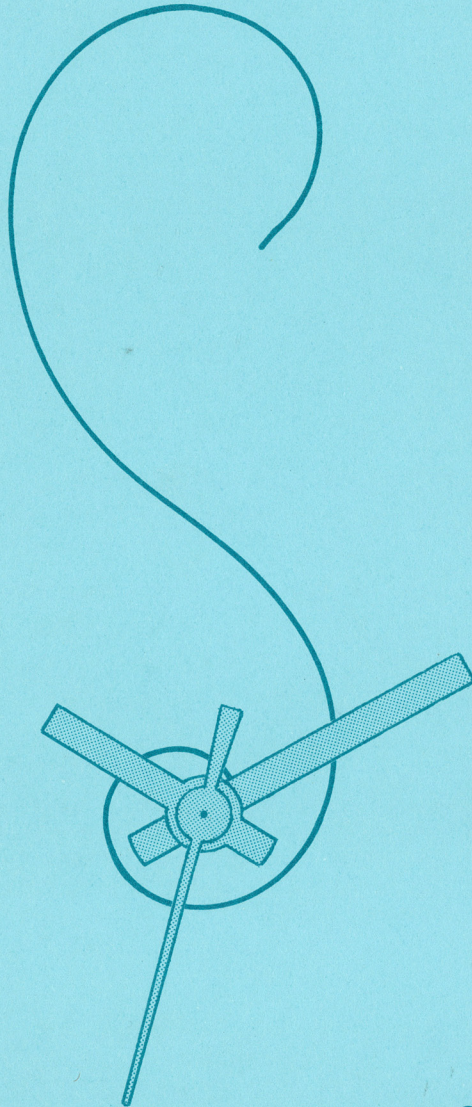


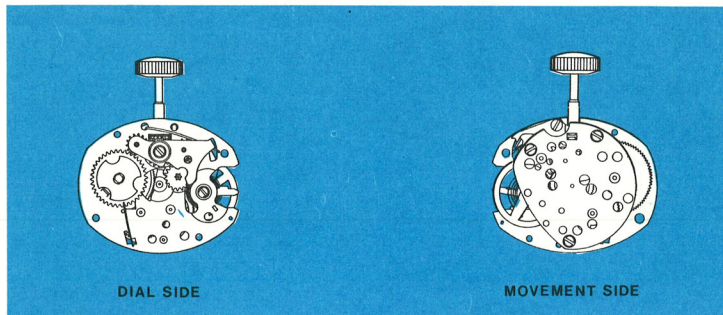
TIMEX model 100

SERVICE MANUAL
MODEL 100



8 by 9½ lig.
18.03 by 21.44 mm
.710 by .844 in.

The TIMEX® Model 100 Movement



SHOWN ACTUAL SIZE

THE TIMEX 100 IS AN 8 X 9½ LIGNE MOVEMENT FEATURING "V-CONIC" BALANCE BEARINGS AND TWO PLATE DESIGN (SIMILAR TO TIMEX MODEL 78 AND MODEL 80 MOVEMENTS).

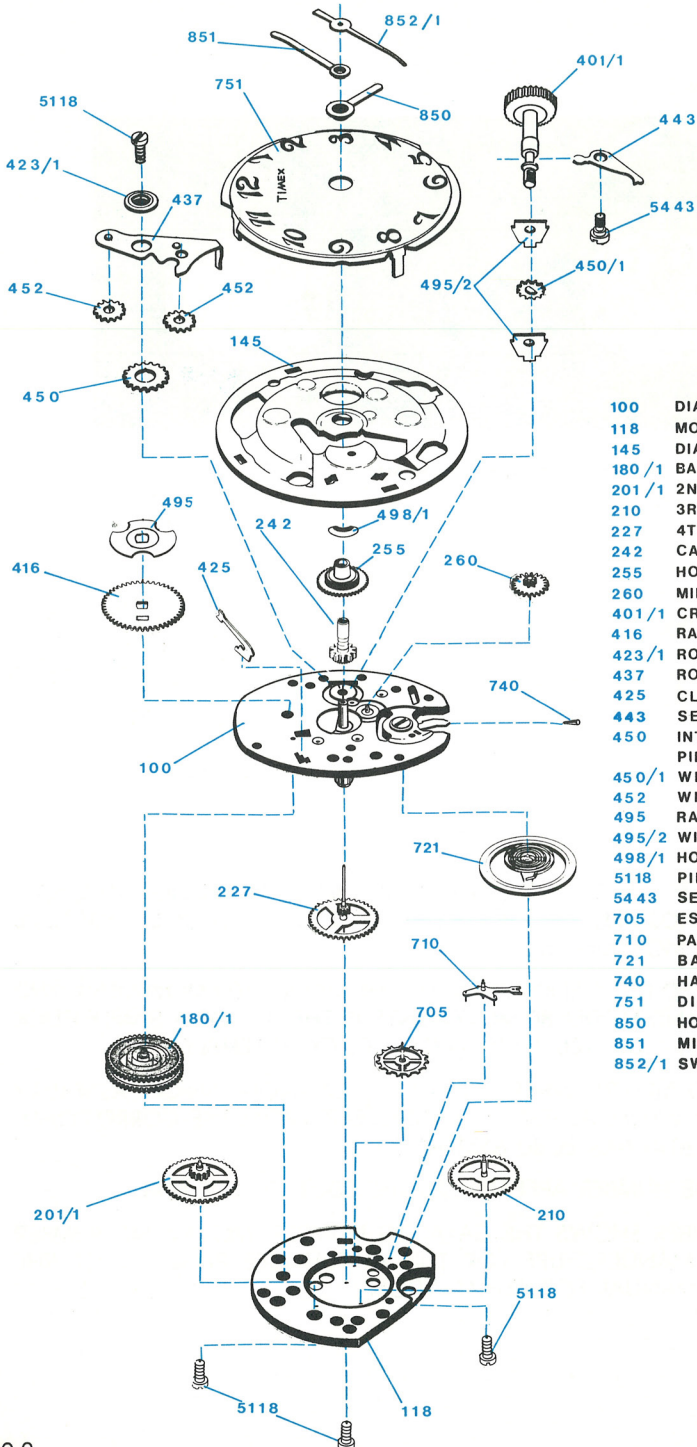
THE EASILY NOTED DIFFERENCE BETWEEN THE MODEL 100 MOVEMENT AND THE MODEL 78 AND MODEL 80 MOVEMENTS IS THE USE OF A SIMPLE CLICK SPRING ON THE MODEL 100 INSTEAD OF A CLICK ASSEMBLY.

THE MODEL 100 MINUTE WHEEL ASSEMBLY, CANNON PINION ASSEMBLY AND THE HOUR WHEEL ASSEMBLY IS DIFFERENT FROM THE CORRESPONDING MODEL 78 AND MODEL 80 ASSEMBLIES.

THE TIMEX CODE NUMBER APPEARS ON THE EDGE OF THE DIAL.

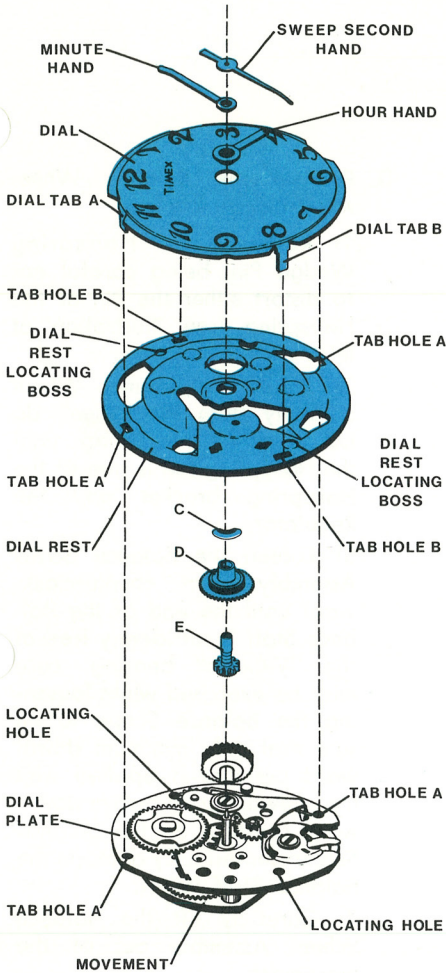
THE CODE NUMBER SHOWS THE CATALOG NUMBER, MOVEMENT NUMBER AND YEAR OF MANUFACTURE FOR THE WATCH (SEE PAGE 1.1 OF THE TIMEX SERVICE MANUAL FOR EXPLANATION).

The **TIMEX**® Model 100 Movement (exploded view)



- 100 DIAL PLATE
- 118 MOVEMENT PLATE
- 145 DIAL REST
- 180 /1 BARREL ASS'Y.
- 201 /1 2ND. WHEEL ASS'Y.
- 210 3RD. WHEEL ASS'Y.
- 227 4TH. WHEEL ASS'Y.
- 242 CANNON PINION ASS'Y.
- 255 HOUR WHEEL ASS'Y.
- 260 MINUTE WHEEL ASS'Y.
- 401 /1 CROWN & STEM ASS'Y.
- 416 RATCHET WHEEL
- 423 /1 ROCKING BAR BUSHING
- 437 ROCKING BAR ASS'Y.
- 425 CLICK
- 443 SET LEVER
- 450 INTERMEDIATE WIND PINION
- 450 /1 WINDING STEM PINION
- 452 WIND & SET PINION (2)
- 495 RATCHET WHEEL WASHER
- 495 /2 WINDING BRIDGE (2)
- 498 /1 HOUR WHEEL WASHER
- 5118 PILLAR SCREW (4)
- 5443 SET LEVER SCREW
- 705 ESCAPE WHEEL ASS'Y.
- 710 PALLET LEVER ASS'Y.
- 721 BALANCE WHEEL ASS'Y.
- 740 HAIRSPRING WEDGE PIN
- 751 DIAL
- 850 HOUR HAND
- 851 MINUTE HAND
- 852 /1 SWEEP SECOND HAND

Disassembly of Movement (Model 100)



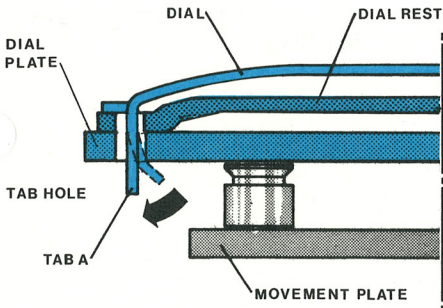
To disassemble the Model 100 for cleaning it is necessary to:

- A. Remove all hands.
- B. Straighten the two Dial tabs marked A in the illustration at the left so they will pass through the holes.

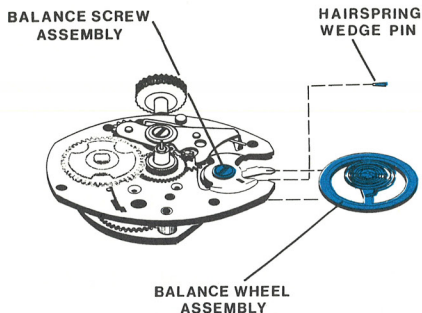
Hold the Dial in place and straighten Dial tabs marked B slightly to permit the Dial to come free of the movement.

Turn the Assembly over and lift off the Dial.

- C. Remove the Hour Wheel Washer, Hour Wheel Assembly and Cannon Pinion Assembly marked C, D and E respectively.



Disassembly of Movement Cont'd.



D. Remove the Balance Wheel Assembly as follows:

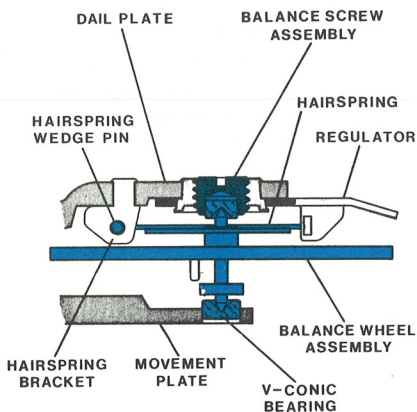
1) Remove the Hairspring Wedge Pin, being careful not to distort either the Pin or the Hairspring (see illustration at left).

2) Rotate the Balance Wheel carefully (turn the Wheel, do not touch the Hairspring) until the Hairspring tail is free of the Hairspring bracket and the Regulator.

3) Loosen the Balance Screw Assembly (turn counterclockwise) until the end of the Balance Staff is sufficiently free of the "V-Conic" bearing, care must be exercised while loosening the Balance Screw to be sure that only minimum downward pressure is applied with the screwdriver. Excessive downward pressure on the Balance Screw can seriously damage the Balance Staff Points.

4) Carefully lift the Balance Wheel Assembly out of the movement.

5) Tighten Balance Screw Assembly several turns to prevent loss during cleaning and handling.



Cleaning the Model 100 Movement

The movement with only the Balance Wheel Assembly and loose parts removed can be cleaned satisfactorily in standard watch cleaning machines (including ultrasonic baths). The movement should be placed in the machine with the Dial Plate down to insure proper drainage of the fluid from the mainspring barrel. The movement must be emersed in two sets of rinsing fluid. The final rinsing solution must be absolutely clean. After cleaning is completed, the movement must be thoroughly dried.

The Balance Wheel Assembly must be cleaned separately in order to prevent damage to the Balance Staff Points and the Hairspring. The cleaning procedure is as described above.

Other metal parts may be cleaned as described above for the movement.

Only standard watch cleaning solutions should be used in the cleaning procedures described above.

Caution must be exercised when cleaning Cases, Dials, Hands, Special Rings, etc. which may contain materials other than metal because paint, lacquer and plastic finishes can be damaged by some standard watch cleaning solutions.

Lubricating the Model 100 Movement

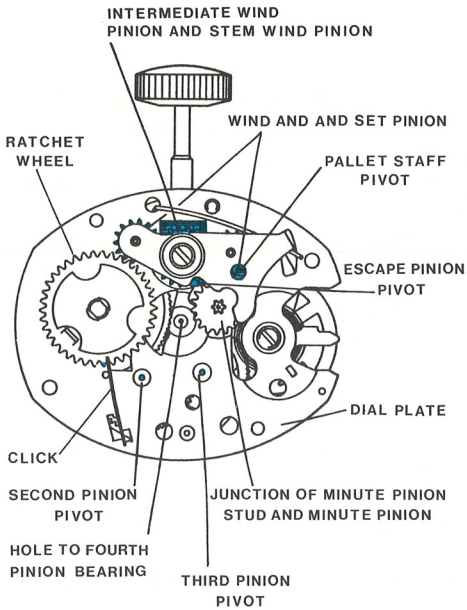


FIGURE A

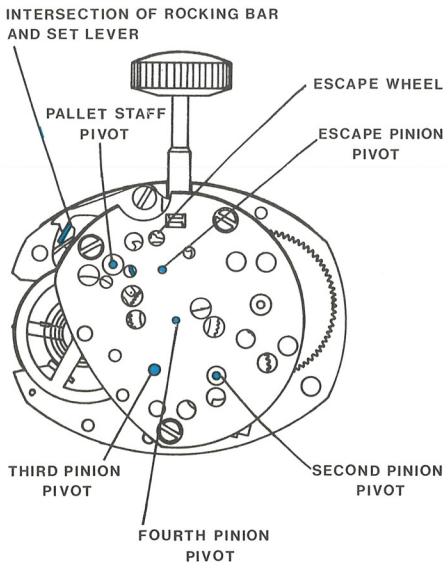


FIGURE B

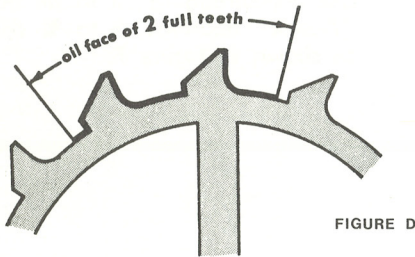
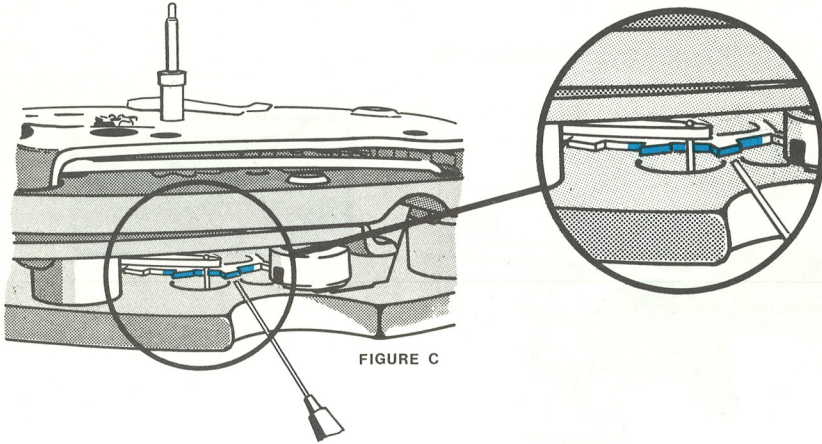
The Timex Model 100 movement should be lubricated using only High Grade Watch Lubricants. The Mainspring is permanently lubricated with a dry film lubricant which is not affected by normal watch cleaning solutions, therefore the Mainspring requires no lubrication.

Spreading Type Watch Oil ([Woods AAAA Oil is used in the factory](#)) is put at two points at the side of the main arbor having the greater gap between the ratchet wheel washer and the main arbor. Also put spreading type oil on the main arbor on the movement plate side and on the sweep second staff where it passes through the post at the center of the Dial Plate.

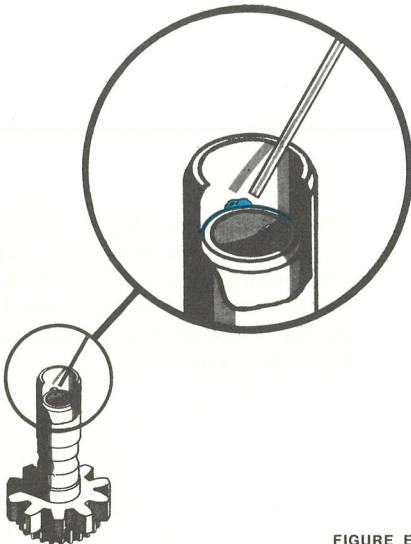
Lubricate teeth of ratchet wheel and click with non spreading watch oil.

Lubricate the movement as noted on Figure A (front view) and Figure B (rear view) with a non-spreading type oil ([Moebius Synt-A-Lube is used in the factory](#)).

Lubricating the Model 100 Movement



In addition to the lubricant applied as outlined on Page 100.6, also apply the non-spreading watch oil to the full working surfaces of two escape wheel teeth as shown in Figures C and D.



Apply the non-spreading watch oil to the end of the Cannon Pinion Assembly as shown in Figure E.

Lubricating the Model 100 Movement

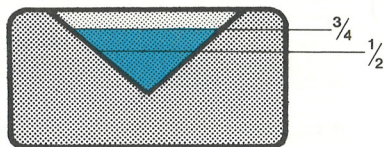


FIGURE F

Use non-spreading oil to fill both "V-conic" bearings $\frac{1}{2}$ to $\frac{3}{4}$ deep as shown in Figure F.

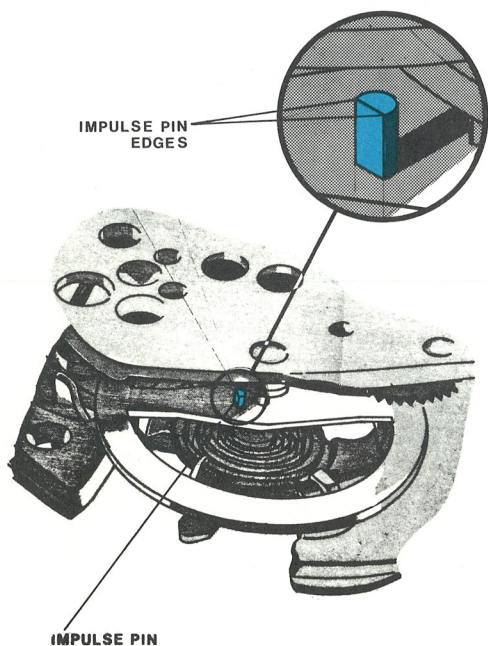


FIGURE G

After the Balance Wheel Assembly is replaced in the movement, apply non-spreading watch oil to both edges of the impulse pin (see Figure G) where contact is made with the Pallet Lever Fork.

Reassembly of the Model 100 Movement

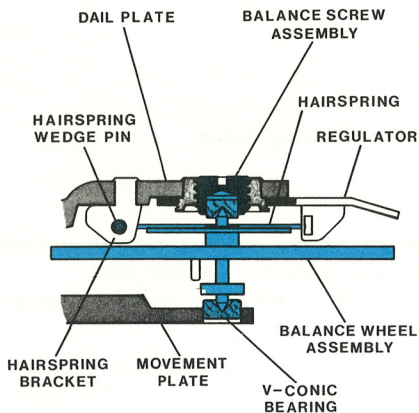


FIGURE H

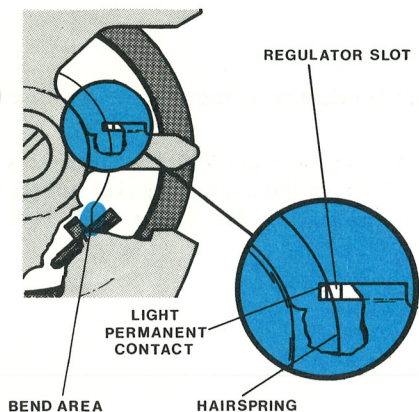


FIGURE J

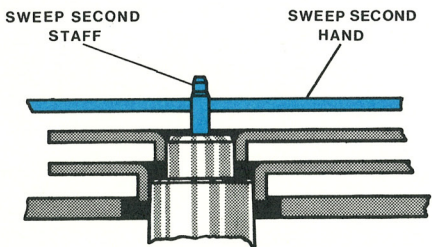


FIGURE K

A) Replace Balance Wheel Assembly.

- 1) Loosen the Balance Screw Assembly several turns.
- 2) Tilt the Balance Wheel Assembly and carefully insert the Dial side pivot (Hairpring end) and then the other pivot into the "V-conic" bearings, tighten the Balance Screw Assembly enough to hold the Balance Wheel Assembly in place (See Figure H).
- 3) Insert the end of the Hairpring into the slot in the regulator and then into the hole in the Hairspring bracket by rotating the Balance Wheel and guiding the end of the spring. Check that the impulse pin is in the slot of the Pallet Lever and then secure the Hairspring in the bracket with the Wedge Pin (see Figure J).
- 4) Adjust the Balance Wheel end shake using caution to apply minimum downward pressure on the Balance Screw. Excessive pressure can damage the points of the Balance Staff.
- 5) Check for proper functioning of the Balance Wheel Assembly which requires that the Hairspring be in light, permanent contact with the inside edge of the regulator slot as shown in Figure J. Adjust the Hairspring by bending within the area noted in Figure J. The Hairspring should not leave the inside edge of the regulator slot at any time during the complete maximum oscillation of the Balance Wheel Assembly.

Reassembly of the Model 100 Movement

B) Reassemble the Watch.

1) Replace parts on the movement in the following order:

Cannon Pinion Assembly

Hour Wheel Assembly

Hour Wheel Washer

Dial Rest Assembly—orient the dial rest on the movement as shown on Page 100.3 being sure the two bosses are seated in the dial plate.

Dial—orient the dial as shown on Page 100.3 and insert the tabs through the holes in the dial rest and into the dial plate.

2) Hold the dial securely in place on the movement, carefully turn the assembly over and bend the A tabs and the B tabs under the Dial plate to secure the dial firmly in place.

3) Turn the assembly over and assemble the hands as shown in Figure K. Be certain the sweep second hand is set below the chamfer on the top of the staff.

C) Replace the Dial and Movement Assembly in the Case.

D) Water Resistant Models—Special Gasket Lubrication is required to maintain proper sealing.

1) Apply Silicon Fluid ([Dow Corning 200 Silicon Fluid 200 CS Viscosity is used in the factory](#)) to at least one half ($\frac{1}{2}$) of the exposed gasket surface inside the Crown Assembly (before assembling the Crown and Stem through the Case into the movement).