

 **Nautilus**  
**NE 2000**

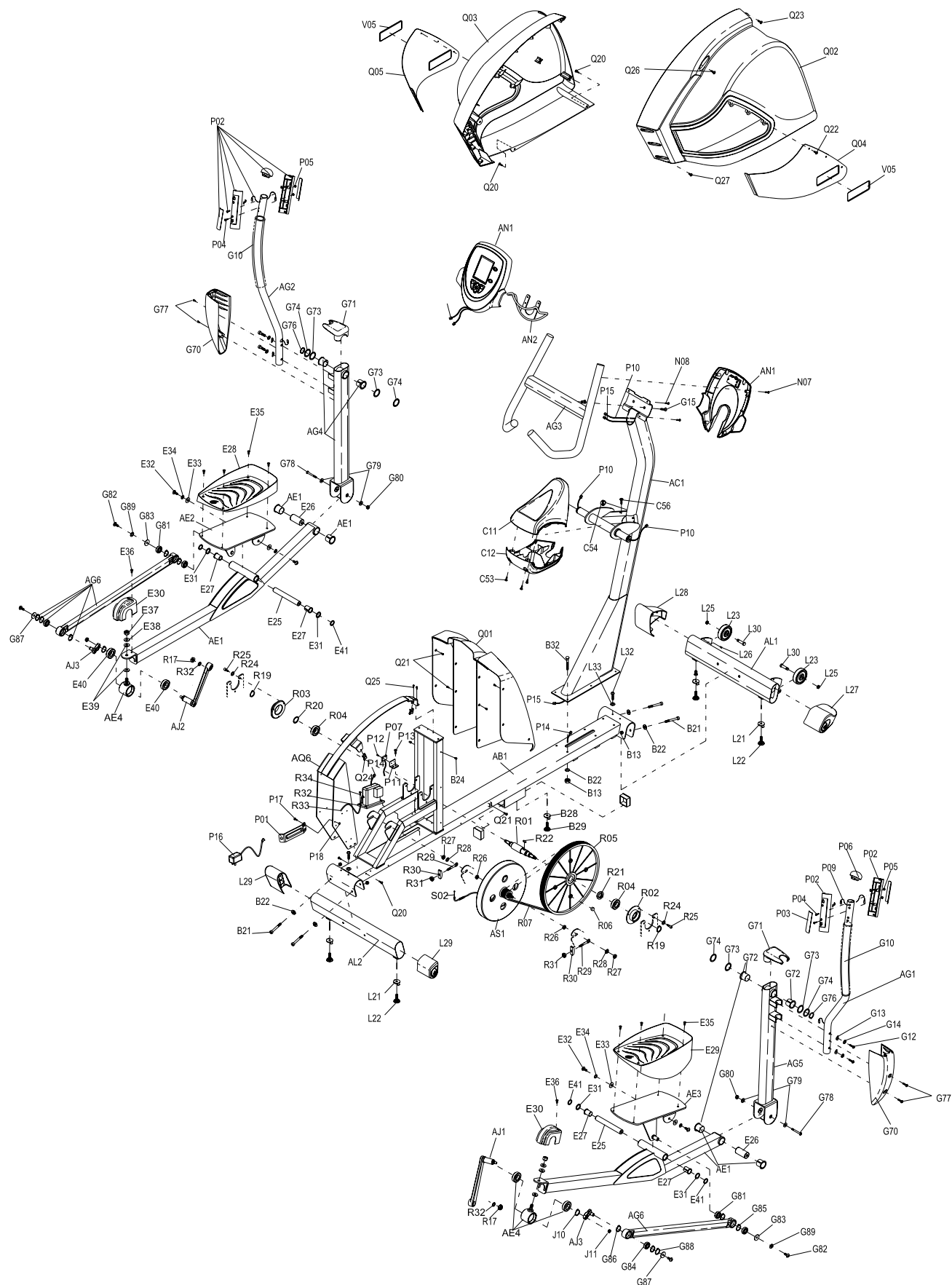
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# Nautilus

## NE 2000





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| REF# | PART#           | DESCRIPTION                                                                 |                                                                                                                                                                                                                                                                               |
|------|-----------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AC1  | 70549           | CONSOLE MAST, NO WIRING (07 REV: 002-3387)                                  |                                                                                                                                                                                                                                                                               |
| AB1  | 70695 . . . . . | MAIN FRAME                                                                  |                                                                                                                                                                                                                                                                               |
| B21  | 70624 . . . . . | SOCKET HEAD CAP SCREW                                                       | SERVICE NOTE: Paint and plastics for this product were revised in December, 2006. Frame parts are stocked in new and old colors, plastics are only ordered in new style. Once existing stock of old style plastics is depleted use revised parts for both old and new models. |
| B22  | 15546 . . . . . | WASHER                                                                      |                                                                                                                                                                                                                                                                               |
| B13  | 70633 . . . . . | NYLON NUT                                                                   |                                                                                                                                                                                                                                                                               |
| B28  | 91652 . . . . . | LEVELER LOCK NUT                                                            |                                                                                                                                                                                                                                                                               |
| B29  | 84995 . . . . . | LEVELER                                                                     |                                                                                                                                                                                                                                                                               |
| C11  | 70564 . . . . . | WATER TOP COVER                                                             |                                                                                                                                                                                                                                                                               |
| C12  | 70565 . . . . . | WATER BOTTOM COVER                                                          |                                                                                                                                                                                                                                                                               |
| C53  | 70602 . . . . . | PAN HEAD SCREW                                                              |                                                                                                                                                                                                                                                                               |
| C54  | 70570 . . . . . | MAST SLEEVE (JACKET)                                                        |                                                                                                                                                                                                                                                                               |
| C56  | 70604 . . . . . | PAN HEAD SCREW                                                              |                                                                                                                                                                                                                                                                               |
| AE1  | 70698 . . . . . | SUB PEDAL ARM (07 REV: 002-1858)                                            |                                                                                                                                                                                                                                                                               |
| AE2  | 70700 . . . . . | LEFT PEDAL ARM (07 REV: 002-1859)                                           |                                                                                                                                                                                                                                                                               |
| AE3  | 70701 . . . . . | RIGHT PEDAL ARM (07 REV: 002-1860)                                          |                                                                                                                                                                                                                                                                               |
| AE4  | INCL WAJ1&2     | PIVOT TUBE                                                                  |                                                                                                                                                                                                                                                                               |
| E25  | 70690 . . . . . | PIVOT AXLE                                                                  |                                                                                                                                                                                                                                                                               |
| E26  | 70692 . . . . . | BUSHING                                                                     |                                                                                                                                                                                                                                                                               |
| E27  | 70596 . . . . . | BEARING                                                                     |                                                                                                                                                                                                                                                                               |
| E28  | 70561 . . . . . | LEFT FOOTPLATE                                                              |                                                                                                                                                                                                                                                                               |
| E29  | 70562 . . . . . | RIGHT FOOTPLATE                                                             |                                                                                                                                                                                                                                                                               |
| E30  | 70556 . . . . . | PEDAL ARM COVER                                                             |                                                                                                                                                                                                                                                                               |
| E31  | 70662 . . . . . | NYLON WASHER                                                                |                                                                                                                                                                                                                                                                               |
| E32  | 70627 . . . . . | SOCKET HEAD CAP SCREW                                                       |                                                                                                                                                                                                                                                                               |
| E33  | 15053 . . . . . | WASHER                                                                      |                                                                                                                                                                                                                                                                               |
| E34  | 15509 . . . . . | SPRING WASHER                                                               |                                                                                                                                                                                                                                                                               |
| E35  | 70609 . . . . . | PAN HEAD SCREW                                                              |                                                                                                                                                                                                                                                                               |
| E36  | 70602 . . . . . | PAN HEAD SCREW                                                              |                                                                                                                                                                                                                                                                               |
| E37  | 70636 . . . . . | NYLON NUT                                                                   |                                                                                                                                                                                                                                                                               |
| E38  | 15543 . . . . . | WASHER                                                                      |                                                                                                                                                                                                                                                                               |
| E39  | 93301 . . . . . | TEFLON WASHER                                                               |                                                                                                                                                                                                                                                                               |
| E40  | 92961 . . . . . | BEARING 6005ZZ                                                              |                                                                                                                                                                                                                                                                               |
| AG1  | 70548 . . . . . | RIGHT HANDLEBAR (ONLY AVAILABLE IN SLVR. FOR GRAY UNITS REPLACE BOTH SIDES) |                                                                                                                                                                                                                                                                               |
| AG2  | 70547 . . . . . | LEFT HANDLEBAR (ONLY AVAILABLE IN SLVR. FOR GRAY UNITS REPLACE BOTH SIDES)  |                                                                                                                                                                                                                                                                               |
| AG3  | 70546 . . . . . | HANDLEBAR                                                                   |                                                                                                                                                                                                                                                                               |
| G10  | 70563 . . . . . | HANDLEBAR GRIP                                                              |                                                                                                                                                                                                                                                                               |
| G11  | NA . . . . .    | BRASS INSERTS NUT                                                           |                                                                                                                                                                                                                                                                               |
| G12  | 70623 . . . . . | SOCKET HEAD CAP SCREW                                                       |                                                                                                                                                                                                                                                                               |
| G13  | 70658 . . . . . | CURVE WASHER                                                                |                                                                                                                                                                                                                                                                               |
| G14  | 15509 . . . . . | SPRING WASHER                                                               |                                                                                                                                                                                                                                                                               |
| G15  | 70620 . . . . . | SOCKET HEAD CAP SCREW                                                       |                                                                                                                                                                                                                                                                               |
| AG4  | 70709 . . . . . | LEFT SWING ARM (07 REV: 002-1865)                                           |                                                                                                                                                                                                                                                                               |
| AG5  | 70710 . . . . . | RIGHT SWING ARM (07 REV: 002-1866)                                          |                                                                                                                                                                                                                                                                               |
| AG6  | 70711 . . . . . | UPPER ARM (07 REV: 002-1867)                                                |                                                                                                                                                                                                                                                                               |
| G70  | 70557 . . . . . | SIDE COVER FOR PEDAL ARM                                                    |                                                                                                                                                                                                                                                                               |
| G71  | 70558 . . . . . | TOP COVER FOR PEDAL ARM                                                     |                                                                                                                                                                                                                                                                               |
| G72  | 70597 . . . . . | BEARING                                                                     |                                                                                                                                                                                                                                                                               |
| G73  | 70664 . . . . . | NYLON NUT                                                                   |                                                                                                                                                                                                                                                                               |
| G74  | 70663 . . . . . | WAVE WASHER                                                                 |                                                                                                                                                                                                                                                                               |
| G76  | 92415 . . . . . | C CLIP S30                                                                  |                                                                                                                                                                                                                                                                               |
| G77  | 70601 . . . . . | PAN HEAD SCREW                                                              |                                                                                                                                                                                                                                                                               |
| G78  | 70611 . . . . . | SOCKET HEAD CAP SCREW                                                       |                                                                                                                                                                                                                                                                               |
| G79  | 80086 . . . . . | WASHER                                                                      |                                                                                                                                                                                                                                                                               |



# Nautilus NE 2000

## REF# PART# DESCRIPTION

|     |                            |                                    |
|-----|----------------------------|------------------------------------|
| G80 | 92950 . . . . .            | NYLON NUT                          |
| G81 | 98353 . . . . .            | BEARING 6002ZZ                     |
| G82 | 80095 . . . . .            | SOCKET HEAD CAP SCREW              |
| G83 | 15546 . . . . .            | WASHER                             |
| G84 | 70598 . . . . .            | BEARING                            |
| G85 | 000-0385 . . . . .         | C CLIP R32                         |
| G86 | 97972 . . . . .            | C CLIP R35                         |
| G87 | 70652 . . . . .            | WASHER                             |
| G88 | 93558 . . . . .            | C CLIP S15                         |
| G89 | 95623 . . . . .            | SPRING WASHER                      |
| G90 | 70622 . . . . .            | SOCKET HEAD CAP SCREW              |
| AJ1 | 002-1863 . . . . .         | RIGHT CRANK                        |
| AJ2 | 002-1864 . . . . .         | LEFT CRANK                         |
| AJ3 | 70708 . . . . .            | SUB CRANK                          |
| J10 | 91610 . . . . .            | C CLIP S25                         |
| J11 | 70638 . . . . .            | NUT                                |
| AL1 | 70704 . . . . .            | FRONT STABILIZER                   |
| AL2 | 70705 . . . . .            | REAR STABILIZER                    |
| L21 | 91652 . . . . .            | LEVELER LOCK NUT                   |
| L22 | 84995 . . . . .            | LEVELER                            |
| L23 | 70551 . . . . .            | TRANSPORT WHEEL                    |
| L25 | 92950 . . . . .            | NYLON NUT                          |
| L26 | 70616 . . . . .            | PAN HEAD SCREW                     |
| L27 | 70567 . . . . .            | RIGHT END CAP FOR FRONT STABILIZER |
| L28 | 70568 . . . . .            | LEFT END CAP FOR FRONT STABILIZER  |
| L29 | 70566 . . . . .            | END CAP FOR REAR STABILIZER        |
| L30 | 70613 . . . . .            | SOCKET HEAD CAP SCREW              |
| L33 | 70658 . . . . .            | WASHER                             |
| AN1 | 002-1894 . . . . .         | NE2000 COMPUTER                    |
| AN2 | 70712 . . . . .            | READING BRACKET                    |
| N06 | 98111 . . . . .            | CHEST STRAP                        |
| P01 | 70687 . . . . .            | DC BRACKET                         |
| P02 | 70569 . . . . .            | GRIP HR HOUSING                    |
| P03 | N/A . . . . .              | GRIP HR PLATE                      |
| P04 | N/A . . . . .              | PAN HEAD SCREW                     |
| P05 | N/A . . . . .              | HEX NUT                            |
| P06 | 50065 . . . . .            | END CAP FOR GRIP PLUSE             |
| P07 | 70576 . . . . .            | SENSOR WIRE                        |
| P09 | 70581 . . . . .            | HEART RATE WIRE                    |
| P10 | 70582 . . . . .            | HEART RATE EXTENDED LINE           |
| P11 | 70684 . . . . .            | SENSOR BRACKET                     |
| P12 | 70602 . . . . .            | PAN HEAD SCREW                     |
| P13 | 70602 . . . . .            | PAN HEAD SCREW                     |
| P14 | 70723 . . . . .            | CONSOLE EXTENDED CABLE             |
| P15 | 70584 . . . . .            | CONSOLE CABLE                      |
| P16 | 30048 . . . . .            | A/C ADAPTOR                        |
| P17 | 70600 . . . . .            | PAN HEAD SCREW                     |
| P18 | 70632 . . . . .            | NYLON NUT                          |
| Q01 | <del>70552</del> . . . . . | FRONT SHROUD                       |
| Q02 | <del>70555</del> . . . . . | RIGHT SHROUD                       |
| Q03 | <del>70722</del> . . . . . | LEFT SHROUD                        |
| Q04 | 70685 . . . . .            | RIGHT ACCESS PANEL                 |
| Q05 | 70686 . . . . .            | LEFT ACCESS PANEL                  |

SERVICE NOTE: Paint and plastics for this product were revised in December, 2006. Frame parts are stocked in new and old colors, plastics are only ordered in new style. Once existing stock of old style plastics is depleted use revised parts for both old and new models.

**NOTE: Welded on most models, replace whole unit if damaged.**  
(07 REV: 002-1864)

(Only available in 07 REV version)  
(07 REV: 002-1868)

Shrouds are not  
available. No ETA.



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| REF# | PART#           | DESCRIPTION                     |
|------|-----------------|---------------------------------|
| Q20  | 70628 . . . . . | PAN HEAD SCREW                  |
| Q21  | 70603 . . . . . | PAN HEAD SCREW                  |
| Q22  | 70621 . . . . . | SOCKET HEAD CAP SCREW           |
| Q23  | 70618 . . . . . | PAN HEAD SCREW                  |
| Q24  | N/A . . . . .   | C CLIP                          |
| Q25  | 70605 . . . . . | PAN HEAD SCREW                  |
| Q26  | 70607 . . . . . | PAN HEAD SCREW                  |
| R01  | INCL W/70591    | AXLE                            |
| R02  | 70669 . . . . . | BEARING HOUSING RIGHT           |
| R03  | 70670 . . . . . | BEARING HOUSING LEFT            |
| R04  | 93298 . . . . . | BEARING 6204ZZ                  |
| R05  | 70591 . . . . . | PULLEY                          |
| R06  | 70587 . . . . . | MAGNET                          |
| R07  | 70599 . . . . . | DRIVE BELT                      |
| R17  | 70638 . . . . . | NUT                             |
| R19  | 92417 . . . . . | C CLIP S20                      |
| R20  | 93306 . . . . . | C CLIP R47                      |
| R21  | 93307 . . . . . | NUT                             |
| R22  | 70644 . . . . . | PIN                             |
| R24  | 70660 . . . . . | WASHER                          |
| R25  | 70610 . . . . . | SOCKET HEAD CAP SCREW           |
| R32  | 70665 . . . . . | TRAY WASHER                     |
| AS1  | 70593 . . . . . | MAGNET UNIT                     |
| R26  | 33157 . . . . . | HEX NUT                         |
| R27  | 70630 . . . . . | HEX NUT                         |
| R28  | 70654 . . . . . | WASHER                          |
| R29  | 70619 . . . . . | EYE HOOK SCREW                  |
| R30  | 70689 . . . . . | EYE HOOK COVER                  |
| R31  | 70634 . . . . . | NYLON NUT                       |
| R35  | 80119 . . . . . | DC MOTOR                        |
| R34  | 70618 . . . . . | PAN HEAD SCREW                  |
| V05  | 70680 . . . . . | SHROUD DECAL (07 REV: 002-1893) |
| V11  | 70682 . . . . . | ASSEMBLY GUIDE                  |
| V12  | 70683 . . . . . | OWNER'S MANUAL                  |
| AZ1  | 70667 . . . . . | HARDWARE PACK                   |
|      | 70640 . . . . . | MAST HRDWRE                     |
| S02  | 70721           | CBL BRAKE NE2000                |

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## ***ELECTRONIC TROUBLESHOOTING***

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### **1. PROBLEM:** Console has no display.

- SOLUTION:**
- Using a volt meter\*, check the voltage output from the adapter by placing the positive lead on the inside of the round connector and the negative lead on the outside of the connector. The voltage should be in the range of 9 to 14 VDC. If the voltage is not in this range replace the adapter. If the voltage is good, see step b.
  - Disconnect the wire from the back of the computer and check the black and red wires for voltage. If the voltage is between 9 and 14 VDC, replace the computer. If there is no voltage see step c.
  - Disconnect the computer mast and check the connection to the lower wire harness. If the connection is good, check the continuity of the lower and upper wire harness. Replace the bad wire harness.



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### **2. PROBLEM:** Console works but resistance will not vary.

- SOLUTION:**
- To determine if the computer is not sending power to the motor, disconnect the wire from the back of the computer and use two paper clips or pieces of wire to short power across the connector as outlined below.

1. Insert one end of a paper clip or wire in PIN 1 (black wire) and the other end in PIN 5 (pink wire).

2. Insert one end of the other clip or wire in PIN 2 (red wire) and briefly insert the other end in PIN 4 (white wire) and listen for the sound of the tension motor spinning.

Do not leave the second wire connected for more than a few seconds.

If you hear the motor, replace the computer. If you do not hear the motor see step b.

- Check the wire for continuity and make sure all connections are secure. If the wire is good, replace the motor.



\* SEE "HOW TO USE A MULTIMETER" IN GENERAL INFORMATION SECTION.

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## ***ELECTRONIC TROUBLESHOOTING***

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### **3. PROBLEM:** Console displays normally, but RPM display shows zero.

- SOLUTION:**
- Disconnect the wire from the back of the computer and use a volt meter to check PIN 9 (blue wire) and PIN 3 (yellow wire). Set the volt meter on OHMs and slowly pedal. Watch for a reading as the magnet passes the sensor.
  - If there is no reading, remove the shrouds and make sure the magnet is in place.
  - If the magnet is in place, make sure the sensor is aligned and is within 2 to 4mm of the magnet.
  - If magnet and sensor are aligned, check the continuity and connections of the lower wire harness.
  - If wire harness is good or you get a constant reading on the volt meter in step a, replace the sensor.



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### **3. PROBLEM:** No heart rate from chest strap or incorrect reading.

- SOLUTION:**
- Confirm that the chest strap has a new battery. Make sure the chest strap is polar compatible, and that it is rated for extended distance. If the chest strap does not meet all three conditions it is not compatible and must be changed out with a compatible strap. If your strap does meet all three requirements go to step b.
  - Try moving your machine to an area away from electrical components, i.e. television, microwave oven, etc. If still getting incorrect readings, try a new strap. If moving the equipment and changing out the strap do not help replace console.



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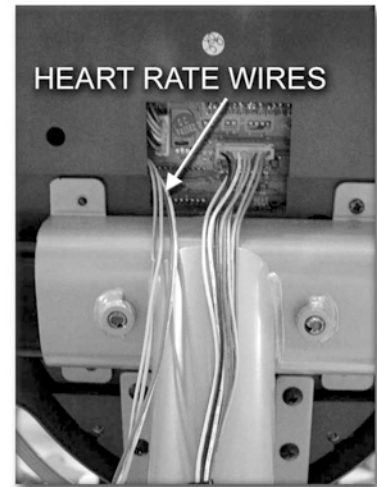
## ***ELECTRONIC TROUBLESHOOTING***

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**5. PROBLEM:** No contact heart rate reading.

- SOLUTION:**
- Grasp the contact grips and see if a heart symbol starts blinking. If there is no heart symbol, check the four-pin connection on the back of the computer. If the connection is intact, see step b.
  - Disconnect the four-pin connector and use a multimeter\* set to read resistance (OHMS) to measure continuity from the pins to the metal plates on the handgrips. Pins 1&2 should have a Black wire and Black&White striped wire that correspond to only one side (left or right) on the bike. Pins 3&4 should have the same thing but go to the other grip. To check for continuity or short circuits, you will need to place a probe on pin 1 and the other probe on one of the metal plates. Check each metal plate for a reading. Only one plate should have a reading of less than three OHMS. If more than one plate has a reading of less than three OHMS, you have a short circuit (wires are touching each other or the handle bar). If you have a reading of infinite (open) on all of the metal plates, then you have a broken wire or loose connection. Repeat this test for each pin. If all of the wires and connections are ok, replace the computer.



\* SEE "HOW TO USE A MULTIMETER" IN GENERAL INFORMATION SECTION.



## MECHANICAL TROUBLESHOOTING

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### 1. **PROBLEM:** Belt slipping, too tight or makes noise

**SOLUTION:** a. Check the belt for cracks or wear and Adjust the belt tension using the tensioners. If there are cracks in the belt or adjusting the tension does not solve the problem, replace the belt



### 2. **PROBLEM:** Workout resistance needs adjustment

**SOLUTION:** a. Adjust cable. See procedure below.

To adjust the cable, first shift the bike to level 16 then loosen the locking nut using a 10mm wrench or adjustable wrench, turning it counter clockwise.

To tighten the cable, turn the adjustment barrel clockwise.

To loosen the cable, turn the adjustment barrel counter clockwise.

The brake is adjusted properly if the bottom of the cable stop lies between the two lines to the right of the slot.

After the adjustment is made firmly tighten the locking nut (clockwise) while holding the adjusting nut fixed.

