Service Record

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| **Manufacturer** | Pertec |
| **Description** | Hard Disk Drive : 5Mb Removable Cartridge +5Mb fixed Disk |
| **Model** | D344-E024-NWU |
| **Serial Number** | 481607182 |
| **Service Manual** | Pertec Operating and Service Manual No. 104630 |

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| **Date** | **Initial Inspection Observation** | **Tech** |
| 20 Oct 2013 | Top sheet metal is banged up pretty much, screws missing | MFE |
| 20 Oct 2013 | Black plastic on front panel seems weirdly painted | MFE |
| 20 Oct 2013 | Foam gaskets and foam pre-filter have turned to powder | MFE |
| 20 Oct 2013 | Logic board hinge is bent | MFE |
| 20 Oct 2013 | Power switch is broken | MFE |
| 20 Oct 2013 | Interface ribbon cable is smashed | MFE |
| 20 Oct 2013 | Interlock switch is maladjusted | MFE |
| 20 Oct 2013 | Left-front-lower corner of aluminum frame is broken off | MFE |
| 20 Oct 2013 | Left front panel bracket is broken | MFE |
| 20 Oct 2013 | No disk cleaning brush, no access hole for one | MFE |
| 20 Oct 2013 | All read/write heads are dirty | MFE |
| 20 Oct 2013 | Positioner carriage is stuck back against magnet | MFE |
| 20 Oct 2013 | Positioner carriage bearings sound very dry | MFE |
| 20 Oct 2013 | Obviously failed tantalum cap near U385 on logic board | MFE |
| 21 Oct 2013 | Plating on spindle hub is flaking off | MFE |

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| **Date** | **Replacement/Repair** | **Tech** |
| 20 Oct 2013 | Replace 2.7 uF, 35V cap near U385 on logic board |  |
|  | Clean absolute air filter, replace foam air pre-filter (homemade) | MFE |
|  | Straighten top sheet metal, remove rust, and wax | MFE |
|  | Repair & clean front panel assembly |  |
|  | Remove remains of foam gaskets, clean gasket debris, replace gaskets with adhesive foam insulation (very similar to original.) | MFE |
|  | Re-glue glass positioner reticle | MFE |
|  | Clean, re-grease all positioner carriage bearings | MFE |
|  | Replace positioner scale with used one. Clean. | MFE |
|  | Clean positioner shaft and everything else accessible | MFE |
|  | Clean motor pulley surface | MFE |
|  | Replace idler pulley and bearing with used ones | MFE |
|  | Replace belt | MFE |
|  | Replace power switch rocker (keeping the rest of the switch) | MFE |
| 28 Oct 2013 | Replace several front panel lamps | MFE |
|  | Repair blown trace in power supply near Q31 | MFE |
|  | Clean everything, especially inside disk cavities | MFE |
|  | Replace fixed disk | MFE |

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| **Date** | **Section** | **Adjustment** | **Tech** |
| 21 Oct 2013 |  | Check raw power supply voltages (all ok) | MFE |
|  | 6.6.2 | Adjust to exactly 5.0V and 10.0V | MFE |
|  | 6.6.3 | Adjusted AC motor speed control (ok) | MFE |
| 28 Oct 2013 | 6.7.11 | Reticle-to-scale gap set to .005” | MFE |
|  | 6.8.1 | TP20 voltage = 12.2V P-P +/-0.1V across entire range | MFE |
|  | 6.8.2 | TP2 voltage = 12.2V P-P | MFE |
|  | 6.8.3 | Quadrature adjusted | MFE |
|  | 6.8.4 | TP6 voltage is between -9.5V and +10V (ok), TP14 ok | MFE |
|  | 6.8.5 | TP3 is between -9.4V and +9.9V (ok), TP7 ok | MFE |
|  | 6.9.2 | Procedure performed - ok | MFE |
|  | 6.9.3 | Not necessary - crossover was already at ground | MFE |
|  | 6.9.4 | TP15 adjusted to 1.40V P-P (ok) | MFE |
|  | 6.9.5 | Adjust to 38 mS | MFE |
|  | 6.9.6, 6.9.7 | Overshoot adjusted to 0.4V | MFE |
|  |  | Reposition velocity transducer so that it does not scrape coil | MFE |
|  | 6.9.8 | Adjust t1 to 300 uS. TP3 swings from +4.6V to -9V (ok) | MFE |
|  | 6.9.9.2 | Check overshoot: TP20 0.5V max (ok) | MFE |
|  | 6.9.9.3 | Measured:Step Tracks Spec Measured 7 0-1 <10 mS 6.8 mS (ok) 8 200-201 <10 mS 6.8 mS (ok) 9 404-405 <10 mS 6.8 mS (ok) 10 0-134 <40 mS 37.6 mS (ok) 11 0-405 <65 mS 61.2 mS (ok) | MFE |
|  | 6.10.2 | Test AC speed with Adexer: 24984 uS/rev (ok) | MFE |
|  | 6.4.1 | Clean and inspect heads | MFE |
|  | 6.11 | ok | MFE |
|  | 6.12.1.2 | 42.5nS (ok) | MFE |
|  | 6.12.2.2 | Adjust to 300 nS (ok) | MFE |
|  | 6.12.2.3 | 135 nS (ok) | MFE |
|  | 6.12.3.2 | Both TP15 and TP16 are 125 nS (ok) | MFE |
| 5 Mar 2014 | 6.14.7.3 | CE radial alignment | MFE |
| 5 Mar 2014 | 6.14.8 | CE Circumferential alignment | MFE |
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