COMPASS - NAVIGATOR'S

ARMY TYPE D-12  F. S. S. C. NUMBER 88-C-845

NAMES:
1. Navigator's compass
2. Compass assembly — navigation
3. Compass — top reading
4. Compass, navigation (aircraft long-period)

DESCRIPTION: The Army type D-12 navigator's compass is aperipheral, and indicates magnetic north with no appreciable overshooting. A more complete description is given on page 282. It may be mounted on a table or on the floor.

CHARACTERISTICS:
- Dimensions: 7 1/4 inches high by 7 inches diameter
- Weight: approximately 4½ pounds
- Dial size: 5 1/4 inches diameter
- Illumination: N/A
- Markings: Principal — radioactive material, Minor — white paint

ARMY

A. E. REFERENCE NUMBER: 60-1400
SPECIFICATIONS:
- General: 94-2050
- Detail: 94-2055
- A. A. F. DRAWING NUMBER: 342148 (compensator assembly)
- TYPE DESIGNATION: D-12
- A. S. C. STOCK NUMBER: Refer to chart.
- TECHNICAL ORDER NUMBER: Refer to chart.
- PRODUCTION STATUS: Under procurement.
- SHIPMENT DATA: Shipped as a complete unit.
- Dimensions of carton: approximately 12 by 12 by 9 inches
- Gross weight: approximately 9 pounds

NAVY

BUREAU OF AERONAUTICS DRAWING NUMBER: 894-8X
F. S. S. C. STOCK NUMBER: 88-C-845

ALL MODELS BELOW ARE INTERCHANGEABLE
Models are used in services as noted in column 4:
A. Army, N. Navy, B. British, C. Commercial

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Manufacturer's Model Identification</th>
<th>Part and Drawing Number</th>
<th>Air Service Stock Number</th>
<th>Army Code</th>
<th>Technical Order Number</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1801</td>
<td>1801-1A</td>
<td>A-19</td>
<td>65006395500</td>
<td>0.51 - 3</td>
<td>1004/432</td>
<td></td>
</tr>
</tbody>
</table>
The US Army Air Force Type D-12 Direct Reading Aperiodic Compass was used at the navigators station across many US WWII aircraft, including heavy bombers B-17, B-24, B-29, medium bombers B-25 and B-26, and transports C-46, C-47, and C-54. Made by Bendix, part number 1832-1-A, it has a serial number prefix of AF-45, indicative of a manufacturing year 1945.

The navigators' direct reading compass is known as an aperiodic (without a period) compass, since the needle returns to rest quickly and without appreciable overswing when deflected from its position. Radial arms or vanes attached to the card dampen the swing of the needle. This type of compass is mounted horizontally, and is read through a glass cover on the top. The compass consists primarily of a cylindrical metal bowl filled with compass fluid. In the center of the bowl is a semi-float type card to which are attached the magnetized needles and the radial arms. The card is marked with the four cardinal points, with an arrow indicating North. Inside the bowl, a fixed mark acts as the lubber’s line. A graduated rotatable ring (verge), with two clamping screws, is fastened to the upper edge of the compass bowl. Across the inside of the ring are two horizontal, parallel white wires, spaced equally on either side of the N and S markings. In making readings, the ring is
turned until the two white wires are parallel to the North-South lines on the card. The airplane heading is read as the marking on the ring which is directly above the lubber’s line. A box containing magnets which may be turned to compensate for deviation is located on the bottom of the compass.

This example no longer contains fluid, and the fill port on the bottom has a small crack. Otherwise, it is a fine example.

Measures ~7 inches diameter and ~4 inches in height.