

Publications and Training Solutions

Course Syllabus: 523-0808167

COURSE TITLE: Attitude Heading System (AHS-3000)
Flight Line Maintenance (Level I)

PREREQUISITES:

Students should have a basic knowledge of aircraft avionics systems and a working command of the English language. Students should be familiar with MS Windows® based Operating Systems.

PURPOSE:

This course provides line maintenance personnel with the knowledge that is necessary to operate and maintain the AHS-3000 Attitude Heading System.

OBJECTIVES: Upon completing this course, the student should be able to:

1. Describe the purpose of the AHS-3000 system and the Line Replaceable Units (LRU) that comprise the system.
2. Briefly describe the theory of operation of the AHS-3000 Attitude Heading System.
3. Describe the controls, indicators, and annunciations associated with the AHS-3000 Attitude Heading System.
4. Troubleshoot the AHS-3000 Attitude Heading System, isolating faults to the LRU level.
5. Perform the Post Installation test and Compensation Procedures which are required to return the system to service.

COURSE LENGTH: 1 Hour

REFERENCES:

- | | |
|---|-------------|
| 1. Hawker 800XP Avionics System Manual | 523-0780103 |
| 2. Beechcraft Premier I Avionics System Manual | 523-0778447 |
| 3. Raytheon King Air Pro Line 21 Avionics System Manual | 523-0790063 |

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COURSE OUTLINE

0. Welcome & Introductions

1. Overview of the AHS-3000 Attitude Heading System

- A. AHS-3000 System
 - i. Attitude Heading Computer AHC-3000
 - ii. External Compensation Unit ECU-3000
 - iii. Flux Detector Unit FDU-3000

2. AHS-3000 Theory of Operation

- A. Normal Mode
- B. Directional Gyro (DG) Mode
- C. Slew Switch
- D. Control Features
- E. Inertial Measurement Unit (IMU)
- F. Rate Measurement
- G. Acceleration Measurement

3. Power Up System

- A. AHS Mode
- B. AHS Initialization Time
- C. AHS Physical Location
 - i. King Air
 - ii. Hawker
 - iii. Premier I

4. Post Installation Testing and Compensation Procedures

- A. Post Installation Test Procedure
- B. AHS Compensation Procedure
- C. MMT Leveling Procedure

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5. AHS-3000 Fault Isolation and Troubleshooting

- A. Fault Isolation of Heading Errors
- B. AHS Troubleshooting
- C. FDU Troubleshooting

6. Summary/Test

EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Attitude Heading Computer	AHC-3000	822-1110-002
Attitude Heading Computer – Mounting Tray	MMT-3010	822-1290-003
External Compensation Unit	ECU-3000	822-1200-002
Flux Detector Unit	FDU-3000	822-1193-001