NAVIGATION AND PITOT-STATIC SYSTEMS

1. GENERAL

This chapter describes the navigation systems, units, and components which provide airplane navigational information. Included are pitot-static, gyros, compass, landing aids, global positioning system (GPS), and indicators. The subjects to be covered in this chapter are as follows:

The Flight Environmental Data/Pitot Static Section describes systems which sense environmental conditions and use the data to influence navigation of the airplane. This includes components that depend on the pitot-static system such as vertical speed indicator, airspeed indicator, and altimeter. (Refer to 34-10)

The Attitude and Direction Section describes systems which use magnetic, gyroscopic and inertia forces. This includes gyros, magnetic compass, and turn coordinator. (Refer to 34-20)

The Landing and Taxiing Aids Section describes systems which provide guidance during approach, landing, and taxiing. This includes components such as the glideslope and marker beacon systems. (Refer to 34-30)

The Independent Position Determining Section describes systems which provide information to determine position from sources which are mainly independent of ground installations. This includes the optional Stormscope, SkyWatch, Terrain Awareness and Warning System (TAWS), and XM Weather systems. (Refer to 34-40)

The Dependent Position Determining Section describes systems which provide information to determine position from sources which are mainly dependent on ground installations. This includes the global positioning system (GPS), horizontal situation indicator, transponder, and radio navigational aids. (Refer to 34-50)

Navigational system instrument layout: (See Figure 34-001)

Pitot-Static system schematic: (See Figure 34-002)

Note: This chapter does not address specific instrument repair. Federal Aviation Regulations require malfunctioning instruments be sent to an approved instrument overhaul and repair station or returned to the manufacturer for servicing.
Navigation and Pitot-Static System - Serials 0002 thru 0434, 0435 thru 0820 w/o PFD

Figure 34-001

Serials 0002 thru 0434, 0435 thru 0820 w/o PFD.

**LEGEND**

1. Airspeed Indicator (34-10)
2. Attitude Indicator (34-20)
3. Magnetic Compass (34-20)
4. Altitude Selector/Alertaer (22-11)
5. Altimeter (34-10)
6. Multifunction Display (34-60)
7. Audio Panel w/ Marker Beacon (34-30)
8. VOR/LOC (34-50)
9. Turn Coordinator (34-20)
10. HSI (34-50)
11. Vertical Speed Indicator (34-10)
12. Transponder (34-50)
13. System 55X Autopilot (22-11)
14. GPS/COM/NAV Receiver (34-40)
Figure 34-001
Navigation And Pitot-Static System - Serials 0435 - 0820 w/ PFD, 0821 thru 1662 (Sheet 2 of 3)

LEGEND
1. Airspeed Indicator (34-10) 9. Turn Coordinator (mounted behind RH bolster)
2. Attitude Indicator (34-20) 12. Transponder (34-50)
4. Altimeter (34-10) 14. GPS/COM/NAV Receiver (34-40)
5. Attitude Indicator (34-20) 15. Primary Flight Display (34-60)
6. Multifunction Display (34-60)
7. Audio Panel w/ Marker Beacon (34-30)
Figure 34-001
Navigation And Pitot-Static System - Serials 1663 & subs (Sheet 3 of 3)

LEGEND
1. Airspeed Indicator (34-10) 9. Turn Coordinator (mounted behind RH bolster)
2. Attitude Indicator (34-20) 12. Transponder (34-50)
5. Altimeter (34-10) 14. GPS/COM/NAV Receiver (34-40)
6. Multifunction Display (34-60) 15. Primary Flight Display (34-60)
7. Audio Panel w/ Marker Beacon (34-30)

Serials 1602, 1644, 1663 & subs.

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Serials 1663 & subs

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Figure 34-002
Pitot-Static System Schematic

Serials 0435 thru 0820 w/ PFD, 0821 & subs.

Serials 0002 thru 0434, 0435 thru 0820 w/o PFD.

EFFECTIVITY:
All
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