SUPPLEMENT A20
TO THE AIRPLANE FLIGHT MANUAL DA 40 D

COURSE DEVIATION INDICATOR
GI 106A
GARMIN

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0.1 RECORD OF REVISIONS

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1. GENERAL

This Supplement supplies the information necessary for the efficient operation of the airplane when the CDI GI 106A is installed. The information contained within this Supplement is to be used in conjunction with the complete Manual.

This Supplement is a permanent part of this Manual and must remain in this Manual as long as the CDI GI 106A is installed.

2. OPERATING LIMITATIONS

No change.

3. EMERGENCY PROCEDURES

No change.

4A. NORMAL OPERATING PROCEDURES

No change.

4B. ABNORMAL OPERATING PROCEDURES

No change.

5. PERFORMANCE

No change.

6. MASS AND BALANCE

Upon removal or installation of the CDI the change of empty mass and corresponding center of gravity of the airplane must be recorded according to Chapter 6 of the Airplane Flight Manual.

7. DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS

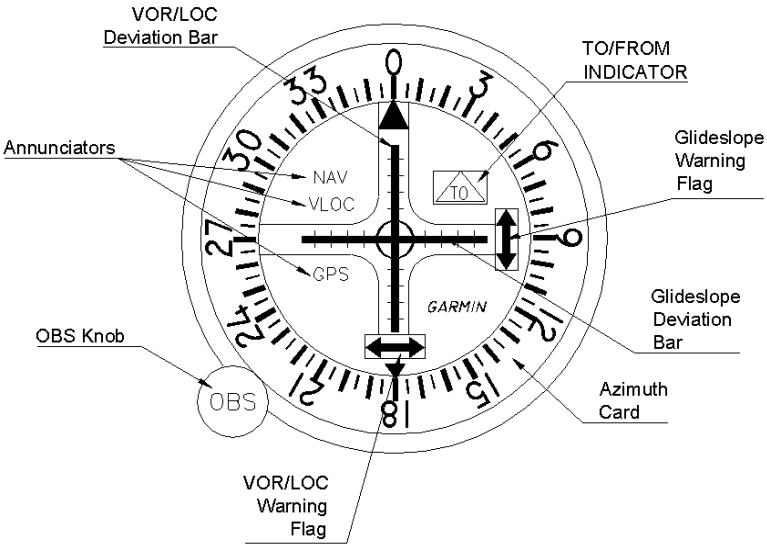
7.14 AVIONICS

GENERAL

The GI 106A Course Deviation Indicator is designed to operate with VHF and GPS navigational equipment to provide VOR, Localizer (LOC), GPS and Glideslope (GS) information.

The GI 106A is designed to accept signals from a remote mounted VOR converter or GPS receiver. Additionally it will accept signals from a glideslope receiver which will drive the Glideslope Deviation Bar along with an Glideslope warning flag. The unit incorporates NAV, GPS and VLOC (VOR/LOC as displayed on the Garmin GNS 430) annunciation with photocell dimming.

When GPS is selected for display, the GI 106A receives inputs from the GPS receiver to provide a visual presentation to the pilot. All information presented on the navigation indicator is generated from this external receiver.



VOR OPERATION

Channel the VOR/ILS receiver to the desired VOR frequency and positively identify the station by listening to received audio. Determine the left/right (VOR/LOC) warning flag is out of view.

Flying inbound to a VOR station is accomplished by first rotating the OBS knob to center the deviation indicator, and determining the TO/FROM indicator is in the TO condition. Read the 'To' bearing under the top indicator index and maneuver the airplane to approximately fly the magnetic course 'To' the station. When the airplane is on course, the vertical pointer will be centered. If the airplane moves off the course, the deviation bar will move away from the center position and flying in the direction of pointer deflection (left or right) is required to re-intercept the course.

The procedure for flying outbound from a VOR station is the same as flying inbound, except the OBS knob is first rotated to cause a 'FROM' indication to appear with the pointer centered.

To intercept a selected VOR radial (from the station) and fly outbound, turn the OBS knob to set the desired radial under the top indicator index. Maneuver the airplane to fly the selected radial magnetic heading plus or minus 45° which will provide a sufficient intercept angle. The intercept angle should be reduced as the deviation needle approaches an on course condition (center) to prevent excessive course bracketing.

LOCALIZER OPERATION

Select the desired localizer frequency and observe that the localizer flag is concealed. The TO/FROM indicator is not functional for localizer operation. When flying on the front course or outbound on the back course make corrections toward the localizer (vertical) needle deflection. The localizer path narrows as the approach end of the runway becomes closer. When flying inbound on the back course or outbound on the front course, the corrections are made away from the direction of needle deflection.

A helpful hint when flying the localizer is to set the localizer heading on the OBS dial under the lubber line for quick reference.

GLIDESLOPE OPERATION

The glideslope (horizontal) deviation bar provides the pilot with vertical steering information during ILS approaches. The glideslope circuitry is energized when the associated localizer frequency is selected on the navigation receiver. Observe that the glideslope warning flag is concealed. The glideslope deviation bar deflects towards the direction the pilot must fly to remain on the glide path.

If the glideslope deviation bar deflects upward, the airplane is below the glide path and the pilot must climb to again intercept the glide path and center the deviation bar. If the deviation bar deflects downward, the airplane is above the glide path and the pilot must descend to again intercept the glide path and center the deviation bar. When the deviation bar is centered the airplane is on the glide path.

8. AIRPLANE HANDLING, CARE AND MAINTENANCE

No change.