



Date: August 23, 2005

Navion Service Bulletin No. 101A  
(Supersedes Service Bulletin 101)

Subject: Fuel System – Fuel Selector Valve

Effectivity: Serial Numbers NAV-4-002 thru NAV-4-2561

Purpose: Previous design has a history of wear, causing internal leakage, valve step air ingestion and improper valve selector positioning. Internal leakage of the valve is suspected in several cases resulting in inadvertent fuel transfer between main and auxiliary tanks. Improper valve selector positioning and air ingestion has been implicated in several crashes – some fatal. The improper positioning is more likely to occur as detents in the original body wear, making positive tank selection less obvious.

Compliance: Mandatory

Description: The existing fuel selector valve must be removed and replaced as follows:

- a) Navion Part Number 147-30013-201 is the only approved valve for use with Navions equipped with ON/ OFF fuel valves for the main tank. This valve replaces both 145-48001-11 (Deutch D-51) and 145-48066-1 (Parker 702-FG).
- b) Navion Part Number 147-30013-202 is the only approved valve for use with Navions equipped with Main and auxillary selectable tanks. This valve replaces (Whittaker Part Number 6235), Navion Part Number 145-48076-1 (Whittaker W7000-2D), 145-48031 (Koehler Part Number 7651-2) and Imperial Part Number 108-HD.
- c) Navion Part Number 147-30013-203 is the only approved valve for use with Navions equipped with left tip, right tip and main tanks. This valve replaces Imperial Part Number 114-HD, Navion Part Number 147-30013-28 (Imperial 115-HD).

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## Installation Instructions

1. Drain ALL fuel tanks in accordance with applicable Navion Service Manual.
2. Remove Guard Assembly in nose wheel well (Navion P/N 145-31019-3).
3. Remove Interior Aft Guard Assembly (Navion P/N 145-52402-9).
4. Remove existing Fuel Selector Valve.
5. Install 145-51402-40 in accordance with applicable Navion Service Manual with flange facing aft and up.
6. Temporarily install Aft Guard Assembly in aircraft, ensuring that it is secured tightly against the cabin floor. Cut hole in existing Guard Assembly if needed to align with new Fuel Selector Body.
7. Install Upper Fuel Valve Assembly with Upper Guard Assembly (Navion P/N 145-52402-30). Install and slide rod into Lower Assembly until it bottoms out. Measure distance between existing Guard Assembly and the bottom flange of -38 Guard. Remove length from rod if needed until -38 guard is touching with no preload.
8. Install -38 Guard with NAS1032 screws and plate nuts.
9. Reinstall plumbing and safety wire banjo fittings.
10. Check valve for full range of motion and leaks.
11. Reinstall Aft Nose Wheel Well Guard.

Figure 1: 147-30013-203 Installation viewed from Nose Wheel Well looking Aft  
(147-30013-203 shown)

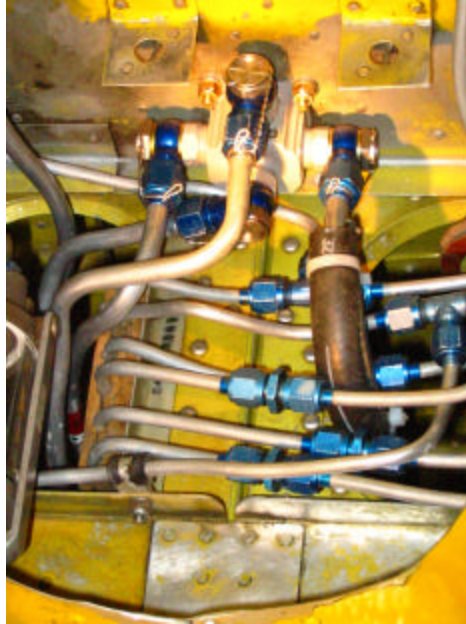


Figure 2: Sample Installation Looking Forward From Cockpit Floor  
(147-30013-201 shown)

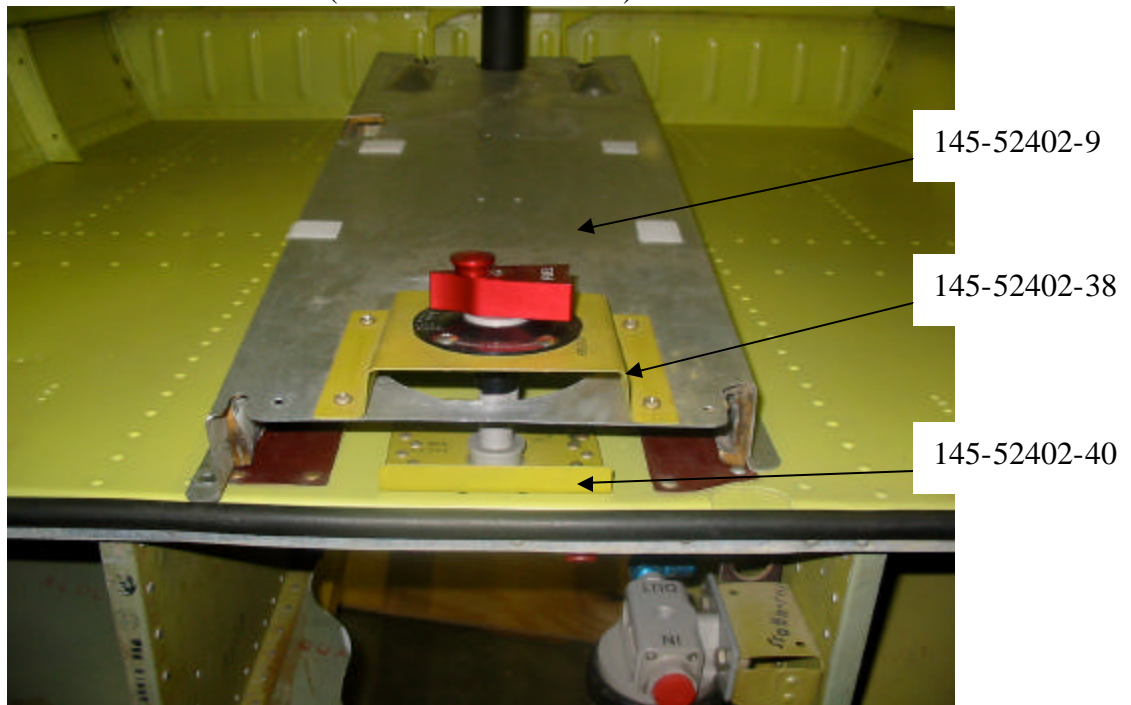


Figure 3: 147-30013-202 Selector Valve

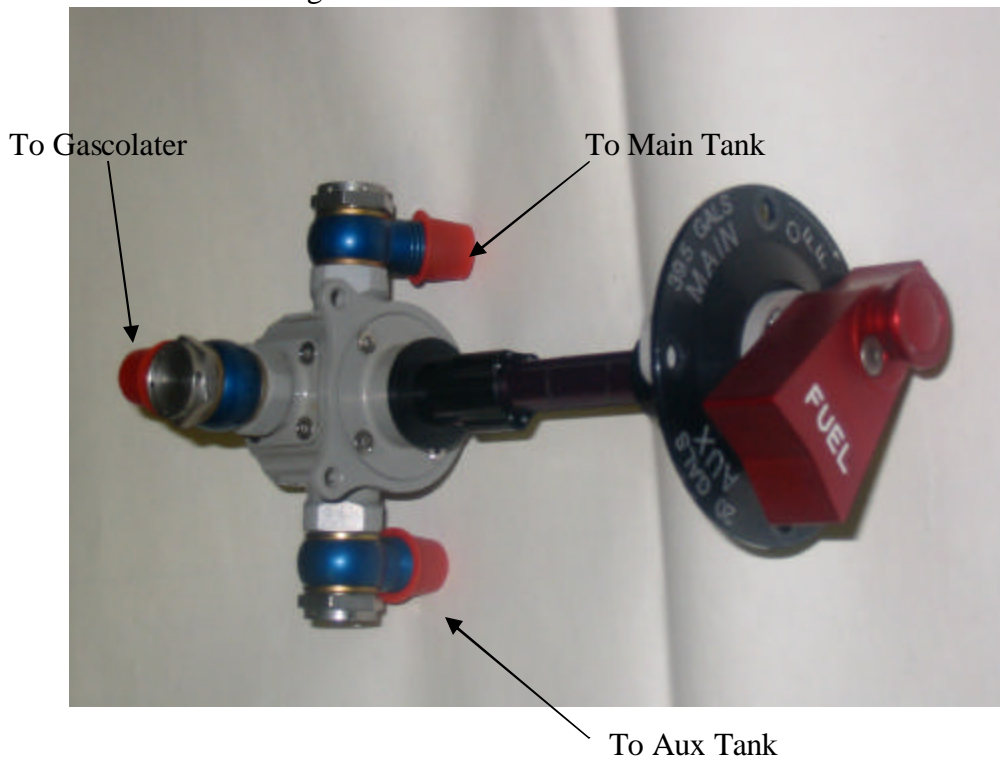


Figure 4: 147-30013-203 Selector Valve

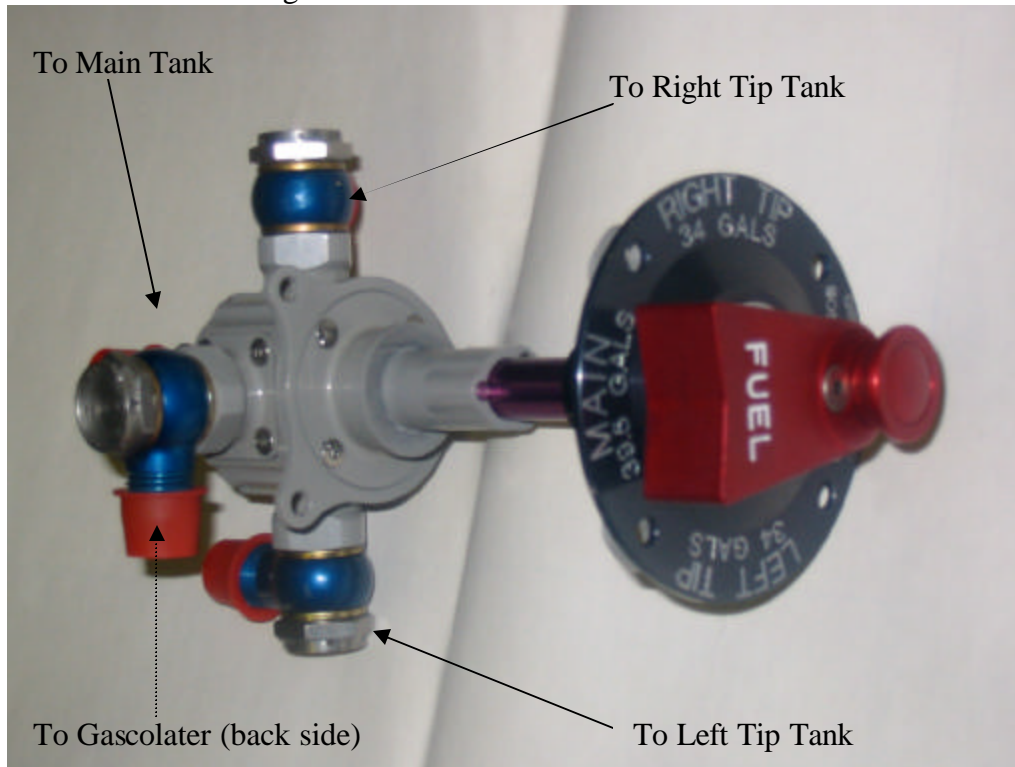


Figure 5: 147-30013-201 Selector Valve

