

**R66 Aux Fuel Tank Installation Relay Upgrade Kit Instructions**  
*(To comply with R66 Service Bulletin SB-24)*

**NOTE**

Visit [www.robinsonheli.com](http://www.robinsonheli.com) to verify kit instructions are current revision. Review instructions before installation; contact RHC Technical Support with questions. Verify kit contents match list; contact RHC Customer Service if parts are missing or damaged.

| ITEM | PART NUMBER        | KIT CONTENTS                                                                                  | QTY |
|------|--------------------|-----------------------------------------------------------------------------------------------|-----|
| 1    | KI-239-4 Instr.    | Kit Instructions . . . . .                                                                    | 1   |
| 2    | B158-808-SB-24     | Heat Shrink – 1/2-inch [adhesive inner] diameter, 1.50 inches long (marked “SB-24”) . . . . . | 1   |
| 3    | D835-4             | Harness Assembly . . . . .                                                                    | 1   |
| 4    | XESR10-S01-FP-0787 | Time Delay Relay . . . . .                                                                    | 1   |
| 5    | MS21042L08         | Nut . . . . .                                                                                 | 2   |
| 6    | MS27039C0807       | Screw . . . . .                                                                               | 2   |
| 7    | MS3367-4-9+        | Ty-Rap (Note: “+” in part number indicates 20-qty pack) . . . . .                             | 1   |
| 8    | MS3367-5-9+        | Ty-rap (Note: “+” in contents part number indicates 20-qty pack) . . . . .                    | 1   |
| 9    | MS3367-7-9+        | Ty-rap (Note: “+” in contents part number indicates 10-qty pack) . . . . .                    | 1   |
| 10   | NAS1149FN816P+     | Washer (Note: “+” in contents part number indicates 20-qty pack) . . . . .                    | 1   |

**Kit Instructions**

1. Remove aux tank per R66 Maintenance Manual (MM) § 28-51.
2. Remove aft, right seat back (back rest) assembly per MM § 25-22.
3. Refer to Figure 1. Locate G655-3 time delay connected to airframe harness plug labeled “AUX FUEL TIME DLY”. Disconnect aux fuel time delay and remove. Determine if (removed) time delay is affected by R66 SB-24; discard if affected by SB-24, otherwise retain as spare, if desired.

**CAUTION**

Helicopters equipped with air conditioning have an additional G655-3 time delay installed. Ensure time delay removed is disconnected from harness connector labeled “AUX FUEL TIME DLY”.

4. Refer to Figure 3. Slide B158-808-SB-24 heat shrink over [removed time delay] airframe connector (marked “AUX FUEL TIME DLY”) so “SB-24” is visible and apply heat. Verify connector is insulated and heat shrink is secure.
5. Refer to Figure 1. Remove ty-raps securing G656-1 module (generator-reset) to harness but do not disconnect attached connector. If air conditioning (A/C) is installed, locate G655-3 time delay connected to airframe harness plug labeled “A/C TIME DLY” and remove ty-raps securing time delay.

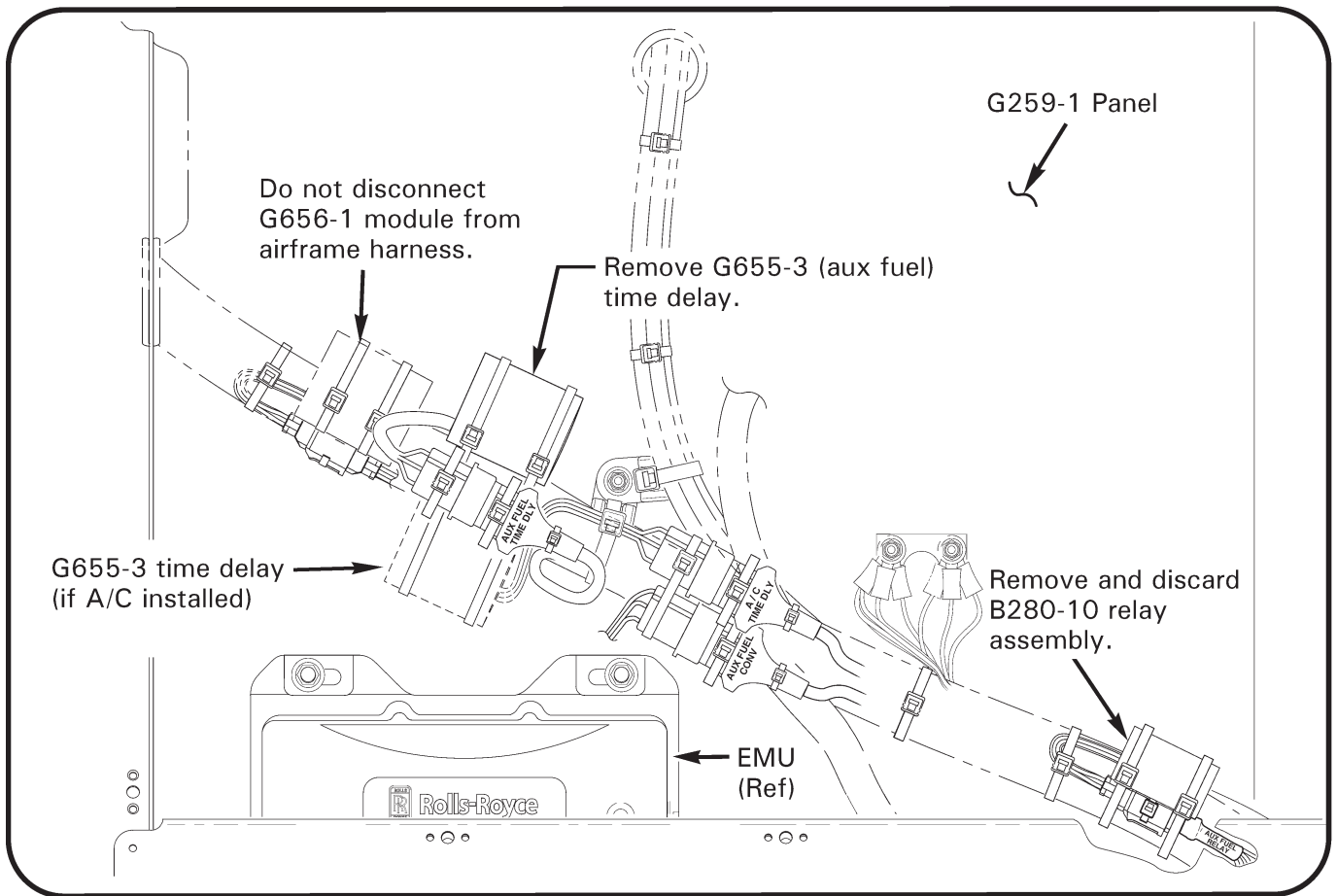
**Kit Instructions (continued)**

6. Refer to Figure 2. Lay out (lower) hole location for XESR10-S01-FP-0787 time delay relay as shown. Position vacuum cleaner nozzle adjacent to capture debris. Drill (1) 0.170-inch hole. Deburr hole and clean up debris. Temporarily install time delay relay in newly drilled hole using appropriate sized CLECO sheet metal fastener. Using time delay relay as template, trace remaining hole with scribe. Remove time delay relay and using vacuum cleaner, drill (1) 0.170-inch hole thru center of scribed hole. Deburr hole and clean up debris.
7. Refer to Figure 3. Install time delay relay using (2) MS27039C0807 screw, (2) NAS1149FN816P washer, and (2) MS21042L08 nut. Verify security.
8. Refer to Figure 1. Locate B280-10 relay assembly connected to airframe harness plug labeled "AUX FUEL RELAY". Disconnect relay, remove and discard. Connect D835-4 harness assembly to [removed relay] airframe plug. Secure connector using (1) MS3367-4-9 ty-rap. Cinch ty-rap until snug without over-tightening, and trim tips flush with heads. Verify security.
9. Refer to Figure 3. Route D835-4 harness assembly along airframe main harness as shown. Connect harness assembly to newly installed XESR10-S01-FP-0787 time delay relay.
10. Verify integrity of respective connections and secure D835-4 harness assembly, G656-1 module, G655-3 A/C time delay (if installed), and aux fuel time delay harness to airframe harness, using appropriately-sized ty-raps as required. Cinch ty-raps until snug without over-tightening, and trim tips flush with heads. Verify security and ensure sufficient slack at time delay relay connection to prevent preload on wires.

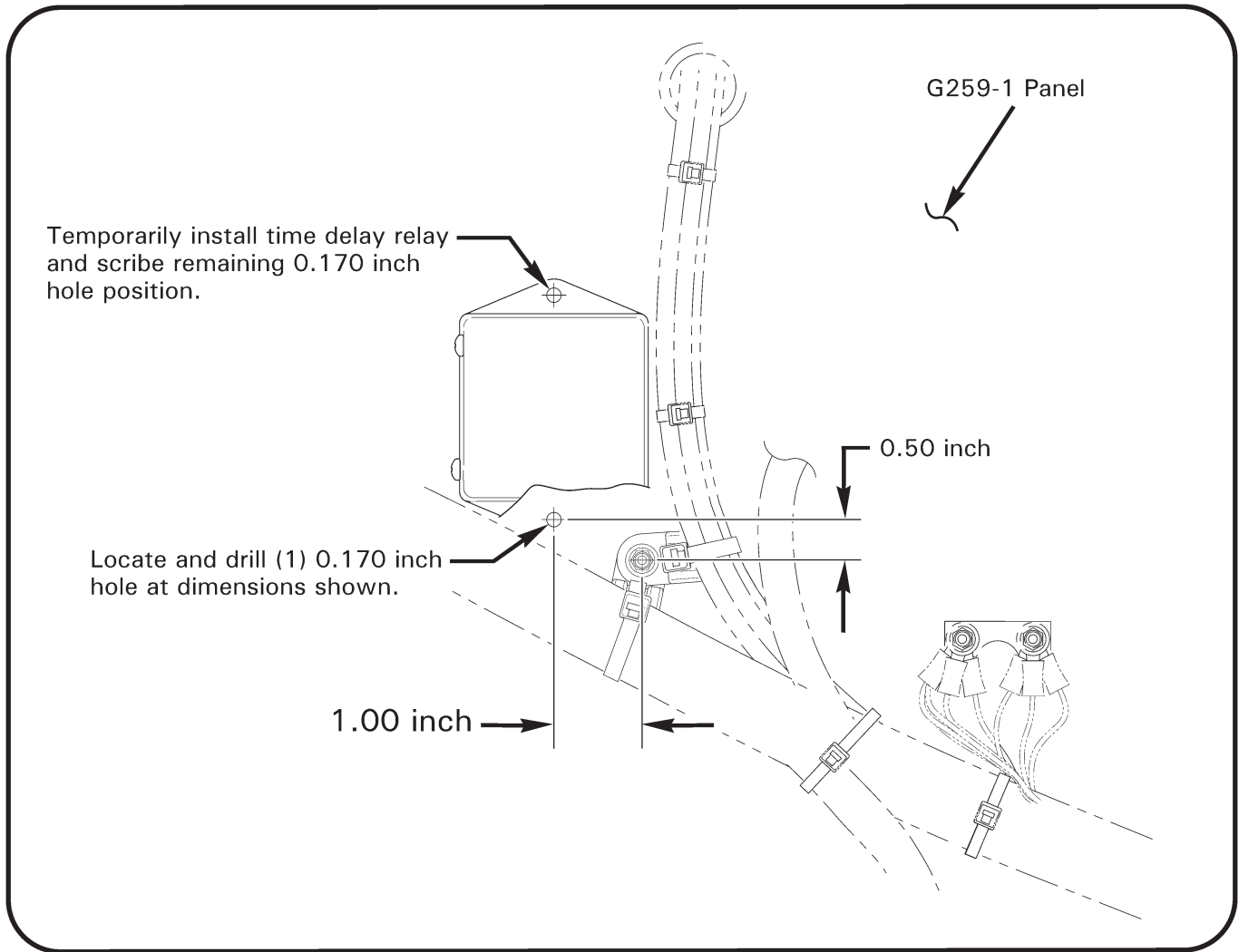
**CAUTION**

Do not secure D835-4 harness assembly to main harness across inboard-side connector, or across G656-1 module connector. Damage is likely to occur to connector.

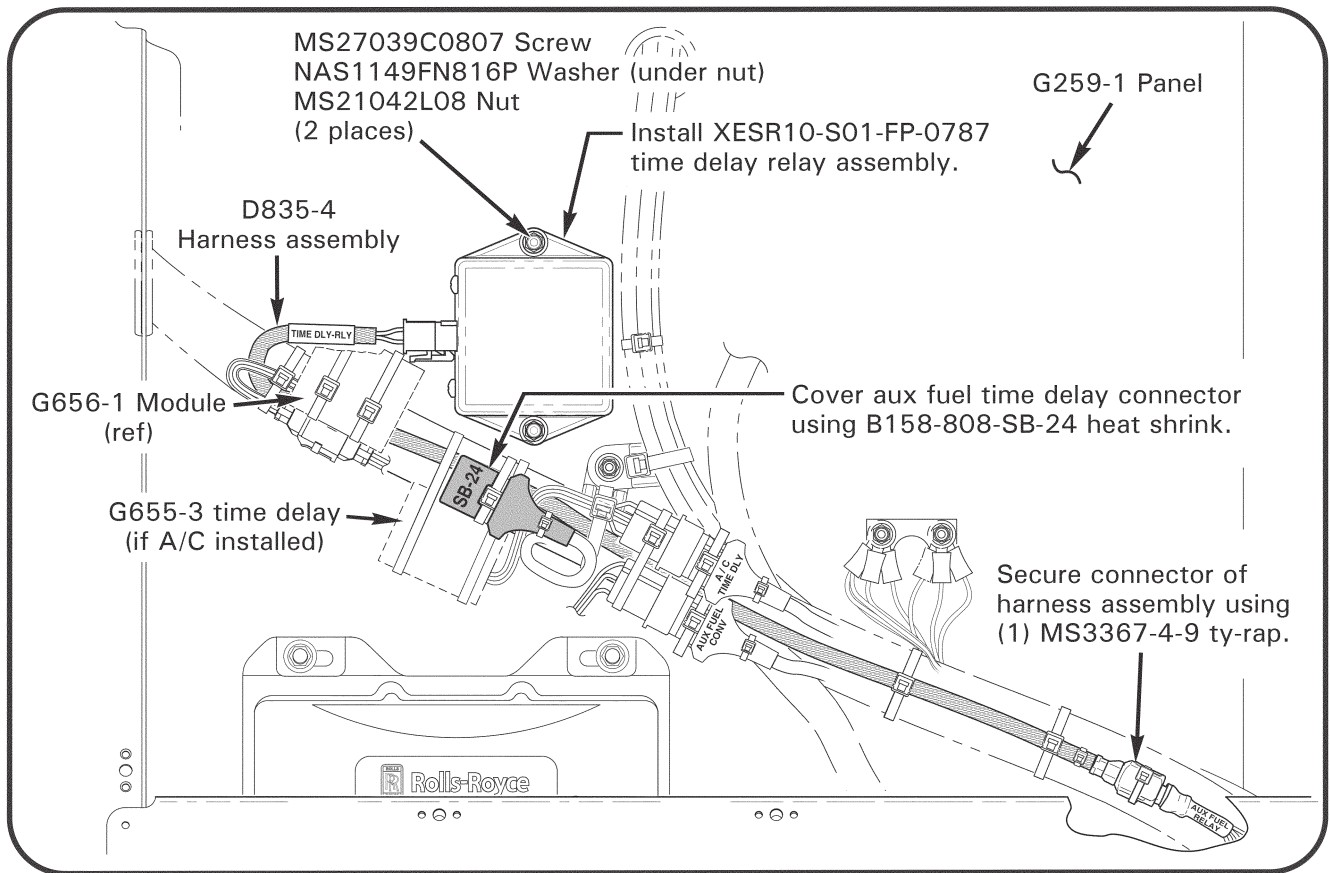
11. Verify area cleanliness and install aft right seat back (back rest) assembly per MM § 25-22.
12. Install aux tank per MM § 28-51.
13. Load approximately one gallon of fuel into aux fuel tank. Verify main fuel tank has space to receive fuel in aux fuel tank. Connect ground power to external receptacle. Turn battery switch ON, press QUANTITY button to check aux fuel quantity and verify NO FLOW light illuminates. Turn aux fuel pump switch ON and verify NO FLOW light illuminates in one to two minutes (indicating fuel transfer from aux tank to main tank is complete). Turn aux fuel pump and battery switches OFF. Disconnect ground power.
14. Make appropriate maintenance record entries. No change to Weight and Balance Record is required.



**FIGURE 1**  
(view looking aft)



**FIGURE 2**  
(view looking aft)



**FIGURE 3**  
(view looking aft)