ABSTRAK

Fuel system merupakan sistem utama yang menyediakan dan menyuplai *fuel* ke *engine*. Salah satunya adalah *distribution fuel system* yang berfungsi untuk menyuplai bahan bakar dari *main tank* menuju *engine*, untuk mendukung *fuel* terdistribusi dengan normal maka komponen pendukung harus berfungsi secara normal, jika ada satu atau lebih komponen yang tidak bekerja secara normal, hal itu akan berpengaruh pada *fuel pressure*.

Penelitian ini menggunakan metode observasi untuk mendapatkan informasi pada kegagalan *fuel on low pressure condition,* dan metode *fault tree analisys* digunakan untuk mengamati dan menganalisis kemungkinan yang menyebabkan terjadinya kegagalan tersebut berdasarkan *troubleshooting procedure manual* T.O 1T-KT-1B 22. Proses *removal/installation* mengacu pada dan t*echnical order* T.O.1T-KT1B-2-5JG-2.

Fuel on low pressure condition disebabkan oleh komponen *delivery jet pump* yang mengalami *stuck* pada *flap valve*. Setelah mengetahui permasalahan tersebut, maka dilakukan proses penggantian pada komponen *delivery jet pump* yang berdasarkan *technical order* T.O.1T-KT1B-2-5JG-2. Setelah dilakukan penggantian dan functional test yang berdasarkan pada *technical order* T.O.1T-KT1B-2-5JG-2 *page* 42-1, maka didapatkan hasil bahwa *light warning* F PRESS pada *central warning panel* (CWP) tidak menyala yang menunjukkan *fuel pressure* telah kembali pada tekanan normal. Dengan menggunakan *fault tree analysis*, terkait permasalahan *fuel on low pressure condition* ditemukan 19 *basic event* yaitu, (1) *insuffiency of fuel quantity,* (2) *fuel filter leakage,* (3) *fuel filter dirty,* (4) *cable fuel flow indicator broken,* (5) *line pressure problem,* (6) *delivery line bending,* (7) *delivery line leakage,* (8) *connector delivery line problem,* (9) *thread screw transfer jet pump problem,* (10) *filter transfer jet pump dirty,* (11) *flap valve problem,* (12) *thread screw delivery line problem,* (13) *filter delivery jet pump dirty,* (14) *electrical source boost pump problem,* (15) *cable boost pump broken,* (16) *ashandle maintenance shutoff valve broken,* (17) *maintenance shutoff valve stuck close,* (18) *flap valve stuck close,* (19) *spring flap valve broken.*

Kata Kunci: *Fuel system, Fault tree analisys, fuel on low pressure condition.*

ABSTRACT

The fuel system is the main system that provides and supplies fuel to the engine. One of them is the distribution fuel system which functions to supply fuel from the main tank to the engine, to support normal distribution of fuel, the supporting components must function normally, if one or more components do not work normally, it will affect the fuel. pressure.

This study uses the observation method to obtain information on the failure of fuel on low pressure conditions, and the fault tree analysis method is used to observe and analyze the possible causes of the failure based on the troubleshooting procedure manual TO 1T-KT-1B 22. The process of removal/installation refers to and technical order TO1T-KT1B-2-5JG-2.

The fuel on low pressure condition is caused by the delivery jet pump component stuck on the valve flap. After knowing the problem, the replacement process for the delivery jet pump component was carried out based on the technical order T.O.1T-KT1B-2-5JG-2. After the replacement and functional tests were carried out based on the technical order TO1T-KT1B-2-5JG-2 page 42-1, the result was that the F PRESS light warning on the central warning panel (CWP) did not light up, indicating that fuel pressure had returned to normal. normal pressure. By using fault tree analysis, 19 basic events related to fuel on low pressure conditions were found, namely, (1) insuffiency of fuel quantity, (2) fuel filter leakage, (3) dirty fuel filter, (4) broken fuel flow indicator cable, (5) line pressure problem, (6) delivery line bending, (7) delivery line leakage, (8) connector delivery line problem, (9) thread screw transfer jet pump problem, (10) dirty jet pump transfer filter, (11) flap valve problem, (12) thread screw delivery line problem, (13) filter delivery jet pump dirty, (14) electrical source boost pump problem, (15) cable boost pump broken, (16) ashandle maintenance shutoff valve broken, (17) maintenance shutoff valve stuck close, (18) flap valve stuck close, (19) spring flap valve broken

Keywords*: Fuel system, Fault tree analysis, Fuel on low pressure condition.*