PERENCANAAN PENGGANTIAN DAN PERSEDIAAN *HARD-TIME* (HT) *COMPONENT* PESAWAT KT-1B *WOONG BEE* MENGGUNAKAN METODE *MEAN TIME BETWEEN REMOVAL* (MTBR)

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ABSTRAK

KT-1B Woong Bee merupakan pesawat terbang latih lanjut dan aerobatik. Sebagai pesawat terbang memiliki peran ganda disertai utilisasi jam terbang tinggi, dan adanya aktivitas perawatan penggantian dan penyediaan komponen meningkat, maka dibutuhkan sistem informasi penjadwalan penggantian dan penyediaan komponen optimal. Dengan adanya perencanaan optimal, dapat membantu memenuhi kebutuhan komponen armada pesawat yang beroperasi sesuai misi.

Mean Time Between Removal (MTBR) merupakan metode perhitungan penjadwalan penggantian dan penyediaan komponen. Perhitungan ini berdasarkan nilai rata-rata historis umur pelepasan komponen yang dilaksanakan dan rata-rata utilisasi jam terbang pesawat. Diketahui digunakan perhitungan komponen Low Pressure Filter Web (LPFW), Fuel Filter Element (FFE), Fuel Pump Outlet Filter (FPOF), Oil Filter Element (OFE), P3 Air Filter, Cable Rudder-1, Cable Rudder-2, dan Cable Rudder-3. Komponen tersebut dipilih terdapat pada maintenance schedule SKATEK-043, selanjutnya membuat sistem informasi tambahan untuk SKATEK-043 untuk saran dari penulis.

Hasil perhitungan penjadwalan berdasarkan MTBR dengan maintenance schedule SKATEK-043 komponen LPFW, FFE, FPOF, OFE, P3 Air Filter, Cable Rudder-1, Cable Rudder-2, dan Cable Rudder-3, diperoleh rata-rata penjadwalan MTBR lebih mendekati dari riwayat penggantian komponen. Untuk perhitungan penyediaan komponen LPFW MTBR 21 unit, riwayat penggantian 18 unit, maintenance schedule 23 unit. FPOF MTBR 13 unit, riwayat penggantian 10 unit, maintenance schedule 14 unit. OFE MTBR 8 unit, riwayat penggantian 6 unit, maintenance schedule 9 unit. P3 Air Filter MTBR 8 unit, riwayat penggantian 3 unit, maintenance schedule 8 unit. Cable Rudder-1, Cable Rudder-2, dan Cable Rudder-3 MTBR 8 unit, riwayat penggantian 4 unit, dan maintenance schedule diperoleh 3 unit, diperoleh hasil penyediaan MTBR lebih optimal. Disarankan untuk penelitian lanjutan jika ketersediaan data, mengingat kurangnya optimal hasil penyediaan komponen FFE MTBR 22 unit, riwayat penggantian 30 unit, maintenance schedule 25 unit.

Kata kunci : Perencanaan, MTBR, Komponen.

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ABSTRACT

KT-1B Woong Bee is an advanced training and acrobatic aircraft. As an aircraft that has dual role with high flight hour utilization, also the increase of replacement maintenance and component supply, an information system for scheduling the replacement and optimal components supply is needed. With optimal planning, it can meet the needs of the components of the aircraft fleet that operate according to the mission.

Mean Time Between Removal (MTBR) is a calculation method of components replacement and supply scheduling. This calculation is based on the mean time (average) of replaced components and the mean time (average) of utilization of flight hours. In this method, the component calculations for Low-Pressure Filter Web (LPFW), Fuel Filter Element (FFE), Fuel Pump Outlet Filter (FPOF), Oil Filter Element (OFE), P3 Air Filter, Cable Rudder-1, Cable Rudder-2, and Cable Rudder-3, are used. They are selected for they are in the maintenance schedule of SKATEK-043, then, additional information system for SKATEK-043 is made as the suggestion from the author.

The results of scheduling calculations based on MTBR with maintenance schedule of SKATEK-043 components of LPFW, FFE, FPOF, OFE, P3 Air Filter, Cable Rudder 1, 2, and Cable Rudder 3 show that that the average of MTBR scheduling is closer to the history of component replacement. For the calculation of the supply of components; MTF LPFW (21), replacement history (18), maintenance schedule (23), FPOF MTBR (13), replacement history (10), maintenance schedule (14), OFE MTBR (8), replacement history (6), maintenance schedule (9), P3 Air Filter MTBR (8), replacement history (3), maintenance schedule (8), Cable Rudder-1, Cable Rudder-2, and Cable Rudder-3 MTBR (8), replacement history (4), and the maintenance schedule, 3 components are obtained, and the result of MTBR supply is more optimal. For further researches, it is recommended that they provide 22 components of FFE MTBR, 30 components of replacement history, and 25 components of the maintenance schedule in order to get more optimal result of the component supply.

Keywords : Planning, MTBR, Component.