Peningkatan Umur komponen Engine HD1500-7 dengan menggunakan Metode FMEA dan Fishbone Diagram. Studi Kasus: Project Full Maintenance Contract PT United Tractors Tbk = Component lifetime improvement of Engine HD1500-7 using FMEA Methode and Fishbone Diagram. Case study: Full Maintenance Contract Project of PT United Tractors Tbk

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Abstrak

Full Maintenance Contract (FMC) merupakan salah satu lini bisnis dari departemen service PT United Tractors Tbk. dalam melakukan kontrak perawatan dengan pelanggan. Terdapat beberapa hal penting sebagai tolok ukur berhasilnya bisnis FMC ini, yang pertama dari sisi eksternal (ke pelanggan) adalah unit performance PA (Physical Availability) dan yang kedua dari sisi internal (ke perusahaan) adalah bisnis performance GP (Gross Profit). Biaya perawatan merupakan salah satu faktor yang berpengaruh terhadap pencapaian profit FMC, dimana persentase terbesar dari biaya perawatan adalah biaya penggantian komponen mayor (Engine, Transmission, Axle) yaitu mencapai 46%. Berdasarkan pengamatan pada studi kasus Proyek FMC Adaro Tanjung, perlu dilakukan aktifitas Prolong Lifetime Component Engine agar biaya perawatan sampai dengan akhir periode kontrak lebih efisien. Dengan memperhatikan K3LH dan memperhatikan potensi resiko proyek ini dikerjakan dengan beberapa kombinasi tools analisa, yaitu diantaranya FMEA dan Fishbone Diagram Analysis. Hasil perbaikan dalam proyek ini mampu meningkatkan lifetime component Engine HD1500-7 sebesar 47%, dari rata-rata awal 17000 jam operasi menjadi 25000 jam operasi. Serta telah menerapkan 3 aspek keinsinyuran yaitu KEEI, K3LH dan Profesionalisme

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Full Maintenance Contract (FMC) is one of the business lines of the service department of PT United Tractors Tbk. There are several important things as Key Performance Indicator for the success level of this FMC business, the first is for the external side (to customers) is the PA (Physical Availability) performance unit and the second for the internal side (to the company) is the GP (Gross Profit) business performance. Maintenance costs are one of the most affected factor to the achievement of FMC's profit, where the largest percentage of maintenance costs is came from replacing major components (Engine, Transmission, Axle), which reaches 46%. Based on observations in the Adaro Tanjung FMC Project case study, it is necessary to carry out Prolong Lifetime Component Engine activities so that maintenance costs are more efficient until the end of the contract period. By paying attention to K3LH and paying attention to potential risks, this project was carried out using several combinations of analysis tools, namely FMEA and Fishbone Diagram Analysis. The results of the improvements in this project were able to increase the lifetime of the Engine HD1500-7 component by 47%, from an initial average of 17,000 hours of operation to 25,000 hours of operation and has implemented three aspects in engineering the three aspects are KEI, K3LH, and professionalism.