|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Rozdziały** | B1/B2 | B1 | | | | | B2 | | | | |
| LOK | TFO | SON | D/M | WMW | WUU | TFO | SON | D/M | WMW | WUU |
| **Moduł wprowadzający:** | | | | | | | | | | | |
| |  |  | | --- | --- | | 5 | Terminy obsługi technicznej/przeglądy | | X/X | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 6 | Rozmiary/powierzchnie (maksymalna masa startowa itd.) | | X/X | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 7 | Podnoszenie i podpory | | X/X | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 8 | Poziomowanie i ważenie | | X/X | — | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 9 | Holowanie i kołowanie | | X/X | — | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 10 | Parkowanie/cumowanie, przechowywanie i powrót do eksploatacji | | X/X | — | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 11 | Plakietki i oznaczenia | | X/X | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 12 | Obsługa techniczna | | X/X | — | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 20 | Praktyki standardowe — tylko dla danego typu | | X/X | — | X | — | — | — | — | X | — | — | — |
| **Śmigłowce:** | | | | | | | | | | | |
| |  |  | | --- | --- | | 18 | Analiza wibracji i hałasu (wytyczanie drogi łopaty) | | X/— | — | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 60 | Praktyki standardowe — wirnik — tylko dla danego typu | | X/X | — | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 62 | Wirnik | | X/— | — | X | X | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 62A | Wirniki — monitorowanie i wskazania | | X/X | X | X | X | X | X | — | — | X | — | X |
| |  |  | | --- | --- | | 63 | Napęd wirnika | | X/— | X | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 63A | Napęd wirnika — monitorowanie i wskazania | | X/X | X | — | X | X | X | — | — | X | — | X |
| |  |  | | --- | --- | | 64 | Śmigło ogonowe | | X/— | — | X | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 64A | Śmigło ogonowe — monitorowanie i wskazania | | X/X | X | — | X | X | X | — | — | X | — | X |
| |  |  | | --- | --- | | 65 | Napęd śmigła ogonowego | | X/— | X | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 65A | Napęd śmigła ogonowego — monitorowanie i wskazania | | X/X | X | — | X | X | X | — | — | X | — | X |
| |  |  | | --- | --- | | 66 | Składane łopatki/wspornik | | X/— | X | X | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 67 | Kontrola wirnika w czasie lotu | | X/— | X | X | — | X | X | — | — | — | — | — |
| |  |  | | --- | --- | | 53 | Struktura płatowca (śmigłowiec) |   Uwaga: uwzględnione w strukturach płatowca |  |  |  |  |  |  |  |  |  |  |  |
| |  |  | | --- | --- | | 25 | Awaryjne wyposażenie do utrzymywania się na wodzie | | X/X | X | X | X | X | X | X | X | — | — | — |
| **Struktury płatowca:** | | | | | | | | | | | |
| |  |  | | --- | --- | | 51 | Standardowe praktyki i struktury (klasyfikacja uszkodzeń, ocena i naprawa) | |  |  |  |  |  |  |  |  |  |  |  |
| |  |  | | --- | --- | | 53 | Kadłub | | X/— | — | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 54 | Gondole/wsporniki | | X/— | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 55 | Stabilizatory | | X/— | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 56 | Okna | | X/— | — | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 57 | Skrzydła | | X/— | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 27A | Powierzchnie sterowe lotu | | X/— | — | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 52 | Drzwi | | X/X | X | X | — | — | — | — | X | — | — | — |
| **Systemy płatowca:** | | | | | | | | | | | |
| |  |  | | --- | --- | | 21 | Klimatyzacja | | X/X | X | X | — | X | X | X | X | — | X | X |
| |  |  | | --- | --- | | 21A | Dopływ powietrza | | X/X | X | — | — | — | — | X | — | — | — | — |
| |  |  | | --- | --- | | 21B | Zwiększanie ciśnienia | | X/X | X | — | — | X | X | X | — | — | X | X |
| |  |  | | --- | --- | | 21C | Urządzenia zabezpieczające i ostrzegawcze | | X/X | — | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 22 | Autopilot | | X/X | — | — | — | X | — | X | X | X | X | X |
| |  |  | | --- | --- | | 23 | Komunikacja | | X/X | — | X | — | X | — | X | X | X | X | X |
| |  |  | | --- | --- | | 24 | Energia elektryczna | | X/X | X | X | X | X | X | X | X | X | X | X |
| |  |  | | --- | --- | | 25 | Sprzęt i wyposażenie | | X/X | X | X | X | — | — | X | X | X | — | — |
| |  |  | | --- | --- | | 25A | Wyposażenie elektroniczne, w tym wykorzystywane w nagłych wypadkach | | X/X | X | X | X | — | — | X | X | X | — | — |
| |  |  | | --- | --- | | 26 | Ochrona przeciwpożarowa | | X/X | X | X | X | X | X | X | X | X | X | X |
| |  |  | | --- | --- | | 27 | Sterowanie lotem | | X/X | X | X | X | X | X | X | — | — | — | — |
| |  |  | | --- | --- | | 27A | Działanie systemu: elektryczne, sztuczna stateczność i sterowanie „fly-by-wire” | | X/X | X | X | X | X | — | X | — | X | — | X |
| |  |  | | --- | --- | | 28 | Systemy paliwowe | | X/X | X | X | X | X | X | X | X | — | X | — |
| |  |  | | --- | --- | | 28A | Systemy paliwowe — monitorowanie i wskazania | | X/X | X | — | — | — | — | X | — | X | — | X |
| |  |  | | --- | --- | | 29 | Siła hydrauliczna | | X/X | X | X | X | X | X | X | X | — | X | — |
| |  |  | | --- | --- | | 29A | Siła hydrauliczna — monitorowanie i wskazania | | X/X | X | — | X | X | X | X | — | X | X | X |
| |  |  | | --- | --- | | 30 | Ochrona przed zamarzaniem i deszczem | | X/X | X | X | — | X | X | X | X | — | X | X |
| |  |  | | --- | --- | | 31 | Systemy rejestracji/wskazań | | X/X | X | X | X | X | X | X | X | X | X | X |
| |  |  | | --- | --- | | 31A | Systemy instrumentowe | | X/X | X | X | X | X | X | X | X | X | X | X |
| |  |  | | --- | --- | | 32 | Podwozie samolotu | | X/X | X | X | X | X | X | X | X | X | X | — |
| |  |  | | --- | --- | | 32A | Podwozie samolotu — monitorowanie i wskazania | | X/X | X | — | X | X | X | X | — | X | X | X |
| |  |  | | --- | --- | | 33 | Światła | | X/X | X | X | — | X | — | X | X | X | X | — |
| |  |  | | --- | --- | | 34 | Nawigacja | | X/X | — | X | — | X | — | X | X | X | X | X |
| |  |  | | --- | --- | | 35 | Tlen | | X/— | X | X | X | — | — | X | X | — | — | — |
| |  |  | | --- | --- | | 36 | Pneumatyka | | X/— | X | — | X | X | X | X | — | X | X | X |
| |  |  | | --- | --- | | 36A | Pneumatyka — monitorowanie i wskazania | | X/X | X | X | X | X | X | X | X | X | X | X |
| |  |  | | --- | --- | | 37 | Próżnia | | X/— | X | — | X | X | X | — | — | — | — | — |
| |  |  | | --- | --- | | 38 | Woda/odpady | | X/— | X | X | — | — | — | X | X | — | — | — |
| |  |  | | --- | --- | | 41 | Balast wodny | | X/— | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 42 | Zintegrowane moduły awioniczne | | X/X | — | — | — | — | — | X | X | X | X | X |
| |  |  | | --- | --- | | 44 | Systemy kabinowe | | X/X | — | — | — | — | — | X | X | X | X | X |
| |  |  | | --- | --- | | 45 | Systemy obsługi technicznej na pokładzie (lub uwzględnione w pkt 31) | | X/X | X | X | X | X | X | X | X | X | X | X |
| |  |  | | --- | --- | | 46 | Systemy informatyczne | | X/X | — | — | — | — | — | X | — | X | X | X |
| |  |  | | --- | --- | | 50 | Przedziały ładunkowe i dodatkowe | | X/X | — | X | — | — | — | — | — | — | — | — |
| **Moduł silnika turbinowego/tłokowego:** | | | | | | | | | | | |
| |  |  | | --- | --- | | 70 | Praktyki standardowe — silniki — tylko dla danego typu | | — | — | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 70A | Ustalenia konstrukcyjne i działanie (wlot instalacyjny, kompresory, sekcja spalania, sekcja turbinowa, łożyska i uszczelki, systemy smarowania) | | X/X | — | — | — | — | — | — | — | — | — | — |
| **Silniki turbinowe:** | | | | | | | | | | | |
| |  |  | | --- | --- | | 70B | Osiągi silnika | | — | — | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 71 | Zespół silnikowy | | X/— | X | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 72 | Silnik turbinowy/ turbośmigłowy/ turbowentylatorowy/ śmigłowo-wentylatorowy | | X/— | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 73 | Paliwo silnikowe i sterowanie | | X/X | X | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 73A | Systemy FADEC | | X/X | X | — | X | X | X | X | — | X | X | X |
| |  |  | | --- | --- | | 74 | Zapłon | | X/X | X | — | — | — | — | X | — | — | — | — |
| |  |  | | --- | --- | | 75 | Powietrze | | X/— | — | — | X | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 76 | Sterowanie silnikiem | | X/— | X | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 77 | Silnikowe systemy wskazań | | X/X | X | — | — | X | X | X | — | — | X | X |
| |  |  | | --- | --- | | 78 | Wydech | | X/— | X | — | — | X | — | — | — | — | — | — |
| |  |  | | --- | --- | | 79 | Olej | | X/— | — | X | X | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 80 | Rozruch | | X/— | X | — | — | X | X | — | — | — | — | — |
| |  |  | | --- | --- | | 82 | Wtrysk wody | | X/— | X | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 83 | Pomocnicza skrzynia przekładniowa | | X/— | — | X | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 84 | Wspomaganie napędu | | X/— | X | — | — | — | — | — | — | — | — | — |
| **Pomocnicze zespoły zasilania (APU):** | | | | | | | | | | | |
| |  |  | | --- | --- | | 49 | Pomocnicze zespoły zasilania (APU) | | X/— | X | X | — | — | X | — | — | — | — | — |
| **Silniki tłokowe:** | | | | | | | | | | | |
| |  |  | | --- | --- | | 70 | Praktyki standardowe — silniki — tylko dla danego typu | | — | — | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 70A | Ustalenia konstrukcyjne i działanie (wlot instalacyjny, kompresory, sekcja spalania, sekcja turbinowa, łożyska i uszczelki, systemy smarowania) | | X/X | — | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 70B | Osiągi silnika | | — | — | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 71 | Zespół silnikowy | | X/— | X | X | — | — | — | — | X | — | — | — |
| |  |  | | --- | --- | | 73 | Paliwo silnikowe i sterowanie | | X/X | X | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 73A | Systemy FADEC | | X/X | X | — | X | X | X | X | X | X | X | X |
| |  |  | | --- | --- | | 74 | Zapłon | | X/X | X | — | — | — | — | X | — | — | — | — |
| |  |  | | --- | --- | | 76 | Sterowanie silnikiem | | X/— | X | — | — | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 77 | Silnikowe systemy wskazań | | X/X | X | — | — | X | X | X | — | — | X | X |
| |  |  | | --- | --- | | 78 | Wydech | | X/— | X | — | — | X | X | — | — | — | — | — |
| |  |  | | --- | --- | | 79 | Olej | | X/— | — | X | X | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 80 | Rozruch | | X/— | X | — | — | X | X | — | — | — | — | — |
| |  |  | | --- | --- | | 81 | Turbiny | | X/— | X | X | X | — | X | — | — | — | — | — |
| |  |  | | --- | --- | | 82 | Wtrysk wody | | X/— | X | — | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 83 | Pomocnicza skrzynia przekładniowa | | X/— | — | X | X | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 84 | Wspomaganie napędu | | X/— | X | — | — | — | — | — | — | — | — | — |
| **Śmigła:** | | | | | | | | | | | |
| |  |  | | --- | --- | | 60A | Praktyki standardowe — śmigło | | — | — | — | X | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 61 | Śmigła/napęd | | X/X | X | X | — | X | X | — | — | — | — | — |
| |  |  | | --- | --- | | 61A | Konstrukcja śmigła | | X/X | — | X | — | — | — | — | — | — | — | — |
| |  |  | | --- | --- | | 61B | Sterowanie skoku śmigła | | X/— | X | — | X | X | X | — | — | — | — | — |
| |  |  | | --- | --- | | 61C | Synchronizacja śmigła | | X/— | X | — | — | — | X | — | — | — | X | — |
| |  |  | | --- | --- | | 61D | Elektroniczne sterowanie śmigła | | X/X | X | X | X | X | X | X | X | X | X | X |
| |  |  | | --- | --- | | 61E | Ochrona przed oblodzeniem śmigła | | X/— | X | — | X | X | X | — | — | — | — | — |
| |  |  | | --- | --- | | 61F | Obsługa techniczna śmigła | | X/X | X | X | X | X | X | X | X | X | X | X |