|  |  |  |  |
| --- | --- | --- | --- |
| **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 |