II. AIRFRAME SYSTEMS AND COMPONENTS—Continued

Teaching level	
(1)	34. Inspect, check, troubleshoot, service, and repair heating, cooling, air-conditioning, and pressurization systems.
(2)	35. Inspect, check, troubleshoot, service and repair oxygen systems.
	D. AIRCRAFT INSTRUMENT SYSTEMS
(1)	36. Inspect, check, service, troubleshoot, and repair electronic flight instrument systems and both mechanical and electrical heading, speed, altitude, temperature, pressure, and position indicating systems to include the use of built-in test equipment.
(2)	37. Install instruments and perform a static pressure system leak test.
	E. COMMUNICATION AND NAVIGATION SYSTEMS
(1)	38. Inspect, check, and troubleshoot autopilot, servos and approach coupling systems.
(1)	39. Inspect, check, and service aircraft electronic communication and navigation systems, including VHF passenger address interphones and static discharge devices, aircraft VOR, ILS, Radar beacon transponders, flight management computers, and GPWS.
(2)	40. Inspect and repair antenna and electronic equipment installations.
	F. AIRCRAFT FUEL SYSTEMS
(1)	41. Check and service fuel dump systems.
(1)	42. Perform fuel management transfer, and defueling.
(1)	43. Inspect, check, and repair pressure fueling systems.
(2)	44. Repair aircraft fuel system components.
(2)	45. Inspect and repair fluid quantity indicating systems.
(2)	46. Troubleshoot, service, and repair fluid pressure and temperature warning systems.
(3)	47. Inspect, check, service, troubleshoot, and repair aircraft fuel systems.
	G. AIRCRAFT ELECTRICAL SYSTEMS
(2)	48. Repair and inspect aircraft electrical system components; crimp and splice wiring to manufacturers' specifications; and repair pins and sockets of aircraft connectors.
(3)	49. Install, check, and service airframe electrical wiring, controls, switches, indicators, and protective devices.
(3)	50.a. Inspect, check, troubleshoot, service, and repair alternating and direct current electrical systems.
(1)	50.b. Inspect, check, and troubleshoot constant speed and integrated speed drive generators.
	H. POSITION AND WARNING SYSTEMS
(2)	51. Inspect, check, and service speed and configuration warning systems, electrical brake controls, and anti-skid systems.
(3)	52. Inspect, check, troubleshoot, and service landing gear position indicating and warning systems.
	I. ICE AND RAIN CONTROL SYSTEMS
(2)	53. Inspect, check, troubleshoot, service, and repair airframe ice and rain control systems.
	J. FIRE PROTECTION SYSTEMS
(1)	54. Inspect, check, and service smoke and carbon monoxide detection systems.
(3)	55. Inspect, check, service, troubleshoot, and repair aircraft fire detection and extinguishing systems.

[Amdt. 147–2, 35 FR 5535, Apr. 3, 1970, as amended by Amdt. 147–5, 57 FR 28960, June 29, 1992; Docket FAA–2017–0733, Amdt. 147–8, 82 FR 34399, July 25, 2017]

APPENDIX D TO PART 147—POWERPLANT CURRICULUM SUBJECTS

This appendix lists the subjects required in at least 750 hours of each powerplant curriculum, in addition to at least 400 hours in general curriculum subjects.

The number in parentheses before each item listed under each subject heading indicates the level of proficiency at which that item must be taught.

I. POWERPLANT THEORY AND MAINTENANCE

Teaching level	
	A. RECIPROCATING ENGINES
(1)	1. Inspect and repair a radial engine.
(2)	2. Overhaul reciprocating engine.
(3)	3. Inspect, check, service, and repair reciprocating engines and engine installations.
(3)	4. Install, troubleshoot, and remove reciprocating engines.
	B. TURBINE ENGINES
(2)	5. Overhaul turbine engine.
(3)	6. Inspect, check, service, and repair turbine engines and turbine engine installations.
(3)	7. Install, troubleshoot, and remove turbine engines.
	C. ENGINE INSPECTION
(3)	8. Perform powerplant conformity and air worthiness inspections.

II. POWERPLANT SYSTEMS AND COMPONENTS

Teaching level	
	A. ENGINE INSTRUMENT SYSTEMS
(2)	9. Troubleshoot, service, and repair electrical and mechanical fluid rate-of-flow indicating systems.
(3)	10. Inspect, check, service, troubleshoot, and repair electrical and mechanical engine temperature, pressure, and r.p.m. indicating systems.
	B. ENGINE FIRE PROTECTION SYSTEMS
(3)	11. Inspect, check, service, troubleshoot, and repair engine fire detection and extinguishing systems.
	C. ENGINE ELECTRICAL SYSTEMS
(2)	12. Repair engine electrical system components.
(3)	13. Install, check, and service engine electrical wiring, controls, switches, indicators, and protective devices.
	D. LUBRICATION SYSTEMS
(2)	14. Identify and select lubricants.
(2)	15. Repair engine lubrication system components.
(3)	16. Inspect, check, service, troubleshoot, and repair engine lubrication systems.
	E. IGNITION AND STARTING SYSTEMS
(2)	17. Overhaul magneto and ignition harness.
(2)	18. Inspect, service, troubleshoot, and repair reciprocating and turbine engine ignition systems and components.
(3)	19.a. Inspect, service, troubleshoot, and repair turbine engine electrical starting systems.