
ATA 100 CHAPTER AND SECTION HEADINGS

[01 INTRODUCTION](#)
[05 PERIODIC INSPECTIONS](#)
[06 DIMENSIONS AND AREAS](#)
[07 LIFTING AND SHORING](#)
[08 LEVELING AND WEIGHING](#)
[09 TOWING AND TAXIING](#)
[10 PARKING, MOORING, STORAGE AND RETURN TO SERVICE](#)
[11 PLACARDS AND MARKINGS](#)
[12 SERVICING - ROUTINE MAINTENANCE](#)
[18 VIBRATION AND NOISE ANALYSIS \(HELICOPTER ONLY\)](#)
[20 STANDARD PRACTICES - AIRFRAME](#)
[21 AIR CONDITIONING](#)
[22 AUTO FLIGHT](#)
[23 COMMUNICATIONS](#)
[24 ELECTRICAL POWER](#)
[25 EQUIPMENT / FURNISHINGS](#)
[26 FIRE PROTECTION](#)
[27 FLIGHT CONTROLS](#)
[28 FUEL](#)
[29 HYDRAULIC POWER](#)
[30 ICE AND RAIN PROTECTION](#)
[31 INDICATING / RECORDING SYSTEMS](#)
[32 LANDING GEAR](#)
[33 LIGHTS](#)
[34 NAVIGATION](#)
[35 OXYGEN](#)
[36 PNEUMATIC](#)
[37 VACUUM](#)
[38 WATER / WASTE](#)
[39 ELECTRICAL - ELECTRONIC PANELS AND MULTIPURPOSE COMPONENTS](#)
[41 WATER BALLAST](#)
[45 CENTRAL MAINTENANCE SYSTEM \(CMS\)](#)
[46 INFORMATION SYSTEMS](#)
[49 AIRBORNE AUXILIARY POWER](#)
[51 STANDARD PRACTICES AND STRUCTURES - GENERAL](#)
[52 DOORS](#)
[53 FUSELAGE](#)
[54 NACELLES / PYLONS](#)
[55 STABILIZERS](#)
[56 WINDOWS](#)
[57 WINGS](#)
[60 STANDARD PRACTICES - PROPELLER / ROTOR](#)
[61 PROPELLERS / PROPULSORS](#)
[62 MAIN ROTOR\(S\)](#)
[63 MAIN ROTOR DRIVE\(S\)](#)
[64 TAIL ROTOR](#)
[65 TAIL ROTOR DRIVE](#)
[66 ROTOR BLADE AND TAIL PYLON FOLDING](#)
[67 ROTORS FLIGHT CONTROL](#)
[70 STANDARD PRACTICES - ENGINE](#)
[71 POWER PLANT - GENERAL](#)
[72 ENGINE](#)
[72\(T\) ENGINE - TURBINE / TURBOPROP, DUCTED FAN / UNDUCTED FAN](#)
[72\(R\) ENGINE - RECIPROCATING](#)
[73 ENGINE - FUEL AND CONTROL](#)
[74 IGNITION](#)
[75 BLEED AIR](#)
[76 ENGINE CONTROLS](#)
[77 ENGINE INDICATING](#)
[78 EXHAUST](#)
[79 OIL](#)
[80 STARTING](#)

[81 TURBINES \(RECIPROCATING ENGINES\)](#)
[82 WATER INJECTION](#)
[83 ACCESSORY GEAR BOXES \(ENGINE DRIVEN\)](#)
[84 PROPULSION AUGMENTATION](#)
[91 CHARTS](#)

ATA DEFINITIONS OF AIRCRAFT GROUPS, SYSTEMS AND SUB-SYSTEMS			
CHAP.	SEC.	TITLE	DESCRIPTION
GROUP DEFINITION — AIRCRAFT			The complete operational unit. Includes dimensions and areas, lifting and shoring, leveling and weighing, towing and taxiing, parking and mooring, required placards, servicing.
01	INTRODUCTION		
01	OPERATIONS INFORMATION		
05	PERIODIC INSPECTIONS		Manufacturers' recommended time limits for inspections, maintenance checks and inspections (both scheduled and unscheduled).
	-00	GENERAL	
	-10	TIME LIMITS	Those manufacturer recommended time limits for inspections, maintenance and overhaul of the aircraft, its systems and units, and life of parts. For engine manufacturers this will include the flight cycle lives of major rotating components and other items designated critical.
	-20	SCHEDULED MAINTENANCE CHECKS	Those manufacturer recommended maintenance checks and inspections of the aircraft, its systems and units dictated by the time limits specified in -10 above. This section shall list in more detail the items which are outlined on the airline job forms (usually by title only), and shall cross -reference the detailed procedures included in the individual Maintenance Practices.
	-30	[AS REQUIRED]	Reserved for use in those cases where the number of breakouts provided by the fourth digit of the -20 breakout is not sufficient to cover all of the maintenance checks dictated by subsystem -10 above. NOTE: Inclusion of the data described in -10 through -40 above, in any manual or manual publication is specifically prohibited unless required by government regulation. Airlines desire the manufacturer's recommended time limits and scheduled maintenance checks but these should be provided in a separate document.
	-40		
	-50	UNSCHEDULED MAINTENANCE CHECKS	Those maintenance checks and inspections on the aircraft, its systems and units which are dictated by special or unusual conditions which are not related to the time limits specified in -10 above. Includes inspections and checks such as hard landing, overweight landing, bird strike, turbulent air, lightning strike, slush ingestion, radioactive contamination, maintenance checks prior to engine-out ferry, etc.
06	DIMENSIONS AND AREAS		Those charts, diagrams, and text which show the area, dimensions, stations, access doors / zoning and physical locations, of the major structural members of the aircraft. Includes an explanation of the system of zoning and measurement used.
07	LIFTING AND SHORING		This chapter shall include the necessary procedures to lift and shore aircraft in any of the conditions to which it may be subjected. Includes lifting and shoring procedures that may be employed during aircraft maintenance and repair.
	-00	GENERAL	
	-10	JACKING	Provides information relative to jack points, adapters, tail supports, balance weights, jacks and jacking procedures utilized during aircraft maintenance and repair.
	-20	SHORING	Those instructions necessary to support the aircraft during maintenance and repair. Includes information on shoring materials and equipment, contour dimensions, shoring locations, etc.
08	LEVELING AND WEIGHING		This chapter shall include the necessary information to properly level the aircraft for any of the various maintenance, overhaul or major repairs which might become necessary during the life of the aircraft. It shall also include those units or components which are specifically dedicated to record, store or compute weight and balance data. Includes those maintenance practices necessary to

			prepare the aircraft for weighing.
	-00	GENERAL	
	-10	WEIGHING AND BALANCING	Those units or components dedicated to the specific function of recording, storing or computing weight and balance data.
	-20	LEVELING	Provides information relative to those units or components dedicated to the specific function of leveling the aircraft.
09	TOWING AND TAXIING		Those instructions necessary to tow and taxi the aircraft. Charts showing location of attachment points, turning radius, etc., shall be included. Includes those maintenance practices necessary to prepare the aircraft for towing and taxiing.
	-00	GENERAL	
	-10	TOWING	Those instructions necessary to tow or push the aircraft in normal or other conditions such as towing with engines removed, etc. Shall include equipment and materials required such as towing vehicles, tow bars, towing cables, etc.; procedures to be used such as ground turning techniques, use of interphone and brakes, connection of electrical power, etc.; precautions and limitations such as use of landing gear and control surface locks, minimum turning radius, maximum towing and pushing loads on nose landing gear, etc.
	-20	TAXIING	Those instructions necessary to taxi the aircraft in normal or abnormal conditions such as adverse weather conditions, etc. Shall include procedures to be used such as use of engines, interphone and brakes, ground turning techniques, etc.; precautions and limitations such as jet intake and exhaust danger areas, minimum turning radius, friction coefficients for various ground conditions, etc.
10	PARKING, MOORING, STORAGE AND RETURN TO SERVICE		Those instructions necessary to park, store, moor and prepare the aircraft for service in any of the conditions to which it may be subjected. Charts showing location of landing gear and control surface locks, blanking plugs and covers, mooring points, etc., shall be included. Includes those maintenance practices necessary to prepare the aircraft for parking, mooring, or storage.
	-00	GENERAL	
	-10	PARKING / STORAGE	Those instructions necessary to park or store the aircraft in normal or abnormal conditions such as with engines removed, or aircraft damaged for short or long terms. Shall include equipment and materials required such as landing gear and control surface locks, wheel chocks, blanking plugs and covers, cocooning materials, etc; procedures such as periodic engine running, control or drainage of fluid systems, static grounding, etc; precautions and limitations, such as landing gear strut pressures and wheel rotation, control of lifted equipment, etc.
	-20	MOORING	Those instructions necessary to moor or picket the aircraft in normal or abnormal conditions or with engines removed, etc.; for short or long terms in extremes of weather conditions. Shall include equipment and materials required such as wheel chocks, mooring blocks, mooring cables, etc.; procedures such as ballasting, etc.; precautions and limitations such as control in high wind conditions, etc.
	-30	RETURN TO SERVICE	Those instructions necessary to prepare the aircraft for operation following mooring, parking, or a period of storage.
11	PLACARDS AND MARKINGS		All procurable placards, labels, etc., shall be included in the illustrated Parts Catalog. They shall be illustrated, showing the part number, Legend and Location. The Maintenance Manual shall provide the approximate Location (i.e., FWD -UPPER -RH) and illustrate each placard, label, marking, self -illuminating sign, etc., required for safety information, maintenance significant information or by government regulations. Those required by government regulations shall be so identified.
	-00	GENERAL	
	-10	EXTERIOR COLOR SCHEMES AND MARKINGS	This sub-system/section breakdown reserved for airline use.
	-20	EXTERIOR PLACARDS AND MARKINGS	Those placards and markings required for ground servicing instructions, inspections, cautions, warnings, etc.
	-30	INTERIOR PLACARDS	Those placards, markings, self-illuminating signs, etc. required for interior general and emergency information, instructions, cautions, warnings, etc.
12	SERVICING - ROUTINE MAINTENANCE		Those instructions for the replenishment of fluids, scheduled and unscheduled servicing applicable to the whole airplane. The information shall be concise and preferably in tabular or chart form. Precautions to be observed in servicing a particular tank or reservoir, such as grounding and prevention of fire hazards, shall be clearly stated. Instructions regarding access to any out-of-the-way or unusual places requiring service shall be given. A diagram showing location of regular and emergency servicing points shall be included. "No-step" areas or walkways leading to any tank in a wing

		or hull, with necessary precautions, shall be indicated.
-00	GENERAL	
-10	REPLENISHING	Those instructions necessary for the replenishment of fuel, oil, hydraulic fluid, water, other fluids, tire pressure, etc. Tank and reservoir capacities in U.S., imperial and metric measure, shall be included. ANA or other standard specification number and grade (if applicable) of fuel, oil, fluid, and other material used shall be given. Specifications and grades should be shown grouped on one page to facilitate revisions. For fuel, give expansion volume, total fuel capacity, sump capacity, net fuel capacity (as applicable) for each tank. For oil, give allowance for expansion.
-20	SCHEDULED SERVICING	Those instructions necessary to carry out servicing that may be scheduled. Includes instructions such as those for periodic lubrication of components, radioactivity decontamination, aircraft external and internal cleaning, disinfection of aircraft, sanitation of drinking water, etc. Shall not include lubrication procedures required for the accomplishment of maintenance practices.
-30	UNSCHEDULED SERVICING	Those instructions necessary to carry out servicing that is normally unscheduled. Includes instructions such as those for ice and snow removal from parked aircraft, etc.
18	VIBRATION AND NOISE ANALYSIS (HELICOPTER ONLY)	This chapter shall provide the necessary information to enable operators to monitor and diagnose vibration and noise levels in order to identify imbalance, damage or misalignment in helicopter dynamic and structural components.
	-00 GENERAL	
	-10 VIBRATION ANALYSIS	Those instructions necessary to monitor, measure, diagnose and locate sources of vibration in dynamic and structural components. The instructions shall cover related maintenance procedures such as main rotor tracking, tail rotor balancing, main rotor head absorber tuning/checking, general airframe vibration monitoring, etc.
	-20 NOISE ANALYSIS	Those instructions necessary to monitor, measure, diagnose and locate sources of noise in dynamic and structural components.
GROUP DEFINITION - AIRFRAME SYSTEMS		All airframe systems except the Power Plant package.
20	STANDARD PRACTICES - AIRFRAME	GENERAL
21	AIR CONDITIONING	Those units and components which furnish a means of pressurizing, heating, cooling, moisture controlling, filtering and treating the air used to ventilate the areas of the fuselage within the pressure seals. Includes cabin supercharger, equipment cooling, heater, heater fuel system, expansion turbine, valves, scoops, ducts, etc.
	-00 GENERAL	
	-10 COMPRESSION	That portion of the system and its controls which supplies compressed air. Includes items such as controls and indicating systems related to the compressors, wiring, etc. Does not include the pressure control and indicating system for the cabin pressurization.
	-20 DISTRIBUTION	That portion of the system used to induct and distribute air. Includes equipment rack cooling systems and items such as blowers, scoops, ducting, inlets, check valves, wiring, etc. Does not include valves which are part of pressurization and temperature control.
	-30 PRESSURIZATION CONTROL	That portion of the system used to control the pressure within the fuselage. Includes items such as control valves, relief valves, indicators, switches, amplifiers, wiring, etc.
	-40 HEATING	That portion of the system and its controls which supply heated air. Includes items such as heater panels and other units, fuel system and control, ignition, indicating systems related to heater operation, wiring, etc. Does not include temperature control and indicating systems.
	-50 COOLING	That portion of the system and its controls which supply cooled air. Includes items such as the cooling unit, indicating systems related to the cooler operation, wiring, etc. Does not include temperature control and indicating systems.
	-60 TEMPERATURE CONTROL	That portion of the system used to control the temperature of the air. Includes items such as control valves, thermal sensing devices, switches, indicators, amplifiers, wiring, etc.
	-70 MOISTURE / AIR CONTAMINANT CONTROL	That portion of the system used to control moisture in the air, to control ozone concentrations, to filter radioactive debris from conditioned air, and to treat the air with deodorizers, insecticides, etc.
22	AUTO FLIGHT	Those units and components which furnish a means of automatically controlling the flight of the aircraft. Includes those units and components which control direction, heading, attitude, altitude and speed.

	-00	GENERAL	
	-10	AUTOPILOT	That portion of the system that uses radio/radar signals, directional and vertical references, air data (pitot static), computed flight path data, or manually induced inputs to the system to automatically control the flight path of the aircraft through adjustment to the pitch/roll/yaw axis or wing lift characteristics and provide visual cues for flight path guidance, i.e.: Integrated Flight Director. This includes power source devices, interlocking devices and amplifying, computing, integrating, controlling, actuating, indicating and warning devices such as computers, servos, control panels, indicators, warning lights, etc.
	-20	SPEED - ATTITUDE CORRECTION	That portion of the system that automatically maintains safe flight conditions by correcting for effects of speed and out -of-trim conditions by such means as automatic trim, mach trim or speed stability and mach feel. This includes sensing, computing, actuating, indicating, internal monitoring, and warning devices, etc.
	-30	AUTO THROTTLE	That portion of the system that automatically controls the position of the throttles to properly manage engine power during all phases of flight/attitude. This includes engaging, sensing, computing, amplifying, controlling, actuating and warning devices such as amplifiers, computers, servos, limit switches, clutches, gear boxes, warning lights, etc.
	-40	SYSTEM MONITOR	That which provides separate or external monitoring/remote readout (for maintenance or other purposes) not directly related to the internal system monitoring (for system integrity flight crew warning). This includes sensing, computing, indicating and warning devices, control panels, etc.
	-50	AERODYNAMIC LOAD ALLEVIATING	The system or portion of the system that automatically corrects/provides for gust loading / upset, aerodynamic augmentation/alleviation/suppression, ride control, etc. This includes sensing, computing, actuating, indicating internal monitoring, warning devices, etc.
23	COMMUNICATIONS		Those units and components which furnish a means of communicating from one part of the aircraft to another and between the aircraft or ground stations, includes voice, data, C -W communicating components, PA system, inter -com and tape reproducers - record player.
	-00	GENERAL	
	-10	SPEECH COMMUNICATIONS	That portion of the system which utilizes voice modulated electromagnetic waves to transmit and/or receive messages from air to air, or air to ground installations. Includes H.F., V.H.F., U.H.F, etc., inflight telephone, communication transmitting & receiving equipment.
	-15	SATCOM	That portion of the system which utilizes satellite communication systems (SATCOM).
	-20	DATA TRANSMISSION AND AUTOMATIC CALLING	That portion of the system which presents information derived from pulse coded transmissions. Includes Teleprinter, Selcal, Calsel, ACARS, etc.
	-30	PASSENGER ADDRESS, ENTERTAINMENT, AND COMFORT	That portion of the system used to address and entertain the passengers including installations for increased cabin comfort, such as active noise control systems. Includes items such as amplifiers, speakers, handsets, reproducers, control panels, control -units, etc. Also includes items of audio, video, and film equipment.
	-40	INTERPHONE	That portion of the system which is used by flight and ground personnel to communicate between areas on the aircraft. Includes items such as amplifier, handset, etc. Does not include the interphone system within the flight compartment which is part of the integrating system.
	-50	AUDIO INTEGRATING	That portion of the system which controls the output of the communications and navigation receivers into the flight crew headphones and speakers and the output of the flight crew microphones into the communications transmitters. Includes items such as audio selector control panel, micro-phones, headphones, cockpit loudspeakers, etc.
	-60	STATIC DISCHARGING	That portion of the system which is used to dissipate static electricity.
	-70	AUDIO & VIDEO MONITORING	Those installations that record, or monitor crew or passenger conversation or movement for security or safety purposes. Includes voice recorders, television, monitors, externally mounted camera, etc.
	-80	INTEGRATED AUTOMATIC TUNING	That portion of the system which maintains integrated control of the operating frequencies of communication and navigation transmitter/receivers after either a manually inserted command or a preprogrammed integrated flight system command. Includes such items as integrated frequency selector panels, digital frequency control computers, integrated frequency display panels, etc.
24		ELECTRICAL POWER	Those electrical units and components which generate, control and supply AC and/or DC electrical power for other systems, including generators and relays, inverters, batteries, etc., through the secondary busses. Also includes common electrical items such as

			wiring, switches, connectors, etc.
	-00	GENERAL	
	-10	GENERATOR DRIVE	Mechanical devices that drive the generators at a desired RPM. Includes items such as oil system, connecting devices, indicating and warning systems for the drive, etc.
	-20	AC GENERATION	That portion of the systems used to generate, regulate, control, and indicate AC electrical power. Includes items such as inverters, AC generators/alternators, control and regulating components, indicating systems, etc., all wiring to but not including main busses.
	-30	DC GENERATION	That portion of the systems used to generate, regulate, control and indicate DC electrical power. Includes items such as generators/alternators, transformers, rectifiers, batteries, control and regulating components, indicating systems, etc., all wiring to but not including main busses.
	-40	EXTERNAL POWER	That portion of the system within the aircraft which connects external electrical power to the aircraft's electrical system. Includes items such as receptacles, relays, switches, wiring, warning lights, etc.
	-50	AC ELECTRICAL LOAD DISTRIBUTION	That portion of the system which provides for connection of AC power to using systems. Includes items such as AC main and secondary busses, main system circuit breakers, power system devices, etc.
	-60	DC ELECTRICAL LOAD DISTRIBUTION	That portion of the system which provides for connection of DC power to using systems. Includes items such as DC main and secondary busses, main system circuit breakers, power system devices, etc.
25		EQUIPMENT / FURNISHINGS	Those removable items of equipment and furnishings externally mounted on the aircraft or contained in the flight, passenger, cargo, and accessory compartments. Includes emergency, buffet, and lavatory equipment. Does not include structures of equipment assigned specifically to other chapters.
	-00	GENERAL	
	-10	FLIGHT COMPARTMENT	The compartment above the floor and between the forward passenger partition and the forward pressure dome. Includes items such as flight crew seats, tables, pilot check lists and food containers, wardrobes, curtains, manuals, electronic equipment rack, spare bulbs, fuses, etc. Does not include cargo compartments.
	-20	PASSENGER COMPARTMENT	The areas in which the passengers are seated. Includes lounges but not dressing rooms. Includes items such as seats, berths, overhead storage compartments, curtains, wall coverings, carpets, magazine racks, wardrobes, movable partitions, wall type thermometers, spare bulbs, fuses, etc.
	-30	BUFFET / GALLEY	The areas in which food and beverages are stored and prepared. Includes items such as removable and fixed cabinets, ovens, refrigerators, garbage containers, dish racks, coffee maker and dispensers, containers, electrical outlets, wiring, etc.
	-40	LAVATORIES	The toilet and dressing room areas containing wash basins, dressing tables, and water closet. Includes items such as mirrors, seats, cabinets, dispensing equipment, electrical outlets, wiring, etc. Wash basins and water closets are included in Chapter 38.
	-50	CARGO COMPARTMENTS	Those compartments for storage of cargo and those components which are or can be mounted on the aircraft and used to load/unload, restrain, guide or service cargo. Includes drive systems, rollers, latches, restraint nets, etc.
	-60	EMERGENCY	Those items of equipment carried for use in emergency procedures. Includes items such as evacuation equipment, life rafts, jackets, emergency locator transmitters, underwater locator devices, first aid kit, incubators, oxygen tents, medical stretchers, landing and signal flares, drag parachutes, evacuation signaling systems, etc. Does not include fire extinguishers, oxygen equipment or masks.
	-70	ACCESSORY COMPARTMENTS	Those compartments used for the housing of various components or accessories. Includes wheel wells, tail-hydraulic-electrical/electronic equipment racks, main battery structure, etc.
	-80	INSULATION	Those insulation blankets which are used for heat and sound insulation. Includes flight compartments, passenger compartment, cargo and accessory compartment insulation, etc.
26		FIRE PROTECTION	Those fixed and portable units and components which detect and indicate fire or smoke and store and distribute fire extinguishing agent to all protected areas of the aircraft; including bottles, valves, tubing, etc.
	-00	GENERAL	
	-10	DETECTION	That portion of the system which is used to sense and indicate the presence of overheat, smoke, or fire.
	-20	EXTINGUISHING	That portion of those fixed or portable systems which is used to extinguish fire.
	-30	EXPLOSION SUPPRESSION	That portion of the system which is used to sense, indicate and

			extinguish a flame propagating into the fuel vent or scoop to prevent an explosion in the fuel system.
27		FLIGHT CONTROLS	Those units and components which furnish a means of manually controlling the flight attitude characteristics of the aircraft, including items such as hydraulic boost system, rudder pedals, controls, mounting brackets, etc. Also includes the functioning and maintenance aspects of the flaps, spoilers, and other control surfaces, but does not include the structure which is covered in the Structures Chapters. Does not include rotorcraft rotor controls which are covered in the Rotor Chapter 65.
	-00	GENERAL	
	-10	AILERON AND TAB	That portion of the systems which controls the position and movement of the ailerons/elevons and tabs. Includes items such as the control wheels, cables, boosters, linkages, control surfaces, indicators, etc.
	-20	RUDDER / RUDDEVATOR AND TAB	That portion of the systems which controls the position and movement of the rudder / rudder tabs. Includes items such as the rudder pedals, tab control wheel, cables, boosters, linkages, control surfaces, position indicators, etc.
	-30	ELEVATOR AND TAB	That portion of the systems which controls the position and movement of the elevator / elevon and tabs. Includes items such as the control column, stickshaker units, automatic stall recovery devices, tab control wheels, cables, boosters, linkages, control surfaces, position indicators, stall warning systems, etc.
	-40	HORIZONTAL STABILIZER / STABILATOR	That portion of the system which controls the position and movement of the horizontal stabilizer/canard. Includes items such as control handle, cables, jackscrews, motors, warning systems, linkages, control surfaces, position indicators, etc.
	-50	FLAPS	That portion of the systems which controls the position and movement of the trailing edge flaps. Includes items such as control handles, cables, actuators, warning systems, linkages, control surfaces, position indicators, etc.
	-60	SPOILER, DRAG DEVICES AND VARIABLE AERODYNAMIC FAIRINGS	That portion of the systems which controls the position and movement of the spoilers, drag devices and variable aerodynamic fairings. Includes fairings. Includes items such as control handles, cables, warning systems, linkages, spoilers, drag devices, position indicators, etc.
	-70	GUST LOCK AND DAMPER	That portion of the systems which protects the control surfaces from movement by wind while the aircraft is on the ground. Does not include locking the control by means of flight control boost system.
	-80	LIFT AUGMENTING	That portion of the systems which controls the position and movement of variable opening wings slots, leading edge wing flaps, and other similar auxiliary devices used for increasing aerodynamic lift. Includes items such as control handles, cables, actuators, linkages, warning systems, control surfaces, position indicators, etc. Does not include trailing edge flaps.
28		FUEL	Those units and components which store and deliver fuel to the engine. Includes engine driven fuel pumps for reciprocating engines, includes tanks (bladder), valves, boost pumps, etc., and those components which furnish a means of dumping fuel overboard. Includes integral and tip fuel tank leak detection and sealing. Does not include the structure of integral or tip fuel tanks and the fuel cell backing boards which are covered in the Structures Chapters, and does not include fuel flow rate sensing, transmitting and / or indicating, which are covered in Chapter 73.
	-00	GENERAL	
	-10	STORAGE	That portion of the system which stores fuel. Includes tank sealing, bladder type cells, ventilating system, cell and tank inter - connectors, over wing filler necks and caps, etc. Also includes reservoir feed pumping systems and reservoirs within the tanks which are not part of the distribution system.
	-20	DISTRIBUTION - DRAIN VALVES	That portion of the system which is used to distribute fuel from the filler connector to the storage system and from the storage system to and including the power plant fuel quick disconnect. Includes items such as plumbing, pumps, valves, controls, etc.
	-30	DUMP	That portion of the system which is used to dump fuel overboard during flight. Includes items such as plumbing, valves, controls, chutes, etc.
	-40	INDICATING	That portion of the system which is used to indicate the quantity, temperature, and pressure of the fuel. Includes pressure warning systems for pumping systems within the tank, etc. Does not include engine fuel flow or pressure.
29		HYDRAULIC POWER	Those units and components which furnish hydraulic fluid under pressure (includes pumps, regulators, lines, valves, etc.) to a common point (manifold) for redistribution to other defined systems.

	-00	GENERAL	
	-10	MAIN	That portion of the system which is used to store and deliver hydraulic fluid to using systems. Includes items such as tanks, accumulators, valves, pumps, levers, switches, cables, plumbing, wiring, external connectors, etc. Does not include the supply valves to the using systems.
	-20	AUXILIARY	That portion of the system which is classified as auxiliary, emergency or standby, and which is used to supplement or take the place of the main hydraulic system. Includes items such as tanks and accumulators which are separate from the main system, hand pumps, auxiliary pumps, valves, plumbing, wiring, etc.
	-30	INDICATING	That portion of the system which is used to indicate the quantity, temperature and pressure of the hydraulic fluid. Includes items such as transmitters, indicators, wiring, warning systems, etc.
30		ICE AND RAIN PROTECTION	Those units and components which provide a means of preventing or disposing of formation of ice and rain on various parts of the aircraft. Includes alcohol pump, valves, tanks, propeller / rotor anti-icing system, wing heaters, water line heaters, pitot heaters, scoop heaters, windshield wipers and the electrical and heated air portion of windshield ice control. Does not include the basic windshield panel. For turbine type power plants using air as the anti-icing medium, engine anti-icing is contained under Air System.
	-00	GENERAL	
	-10	AIRFOIL	That portion of the system which is used to eliminate or prevent the formation of ice on all airfoil surfaces. Includes wings, airfoil sections of the empennage, and pylons.
	-20	AIR INTAKES	That portion of the system which is used to eliminate or prevent the formation of ice in or around air intakes. Includes power plant cowling anti-icing.
	-30	PITOT AND STATIC	That portion of the system which is used to eliminate or prevent the formation of ice on the pitot and static systems.
	-40	WINDOWS, WINDSHIELDS, AND DOORS	That portion of the system which is used to eliminate or prevent the formation of ice, frost or rain on the windows, windshields and doors.
	-50	ANTENNAS AND RADOMES	That portion of the system which is used to eliminate or prevent the formation of ice on antennas and radomes.
	-60	PROPELLERS / ROTORS	That portion of the system which is used to eliminate or prevent the formation of ice on propellers or rotors. Includes all components up to but not including rotating assembly.
	-70	WATER LINES	That portion of the system which is used to prevent the formation of ice in water supply and drain lines.
	-80	DETECTION	That portion of the system which is used to detect and indicate the formation of ice.
31		INDICATING / RECORDING SYSTEMS	Pictorial coverage of all instruments, instrument panels and controls. Procedural coverage of those systems which give visual or aural warning of conditions in unrelated systems. Units which record, store or compute data from unrelated systems. Includes systems/units which integrate indicating instruments into a central display system and instruments not related to any specific system.
	-00	GENERAL	
	-10	INSTRUMENT AND CONTROL PANELS	Coverage of all panels fixed or movable with their replaceable components such as instruments, switches, circuit breakers, fuses, etc. Also includes general coverage of instrument panel vibrators and other panel accessories.
	-20	INDEPENDENT INSTRUMENTS	Those instruments, units and components which are not related to specific systems. Includes items such as inclinometers, clocks, etc.
	-30	RECORDERS	Those systems and components used for recording data not related to specific systems. Includes items such as flight recorders, performance or maintenance recorders, VG recorders, etc.
	-40	CENTRAL COMPUTERS	Those systems and components used for computing data from a number of different sources without a preponderance of functions in any one system. Includes items such as Digital Core Avionic System (DCAS), stored check list, emergency procedures, company regulations, etc., for call up on a display, integrated instrument systems such as engine, airplane power and central warning indicators when combined into a central display.
	-50	CENTRAL WARNING SYSTEMS	Those systems and components which give audible or visual warning of conditions in unrelated systems. Includes items such as master warning or flight warning systems, central instrument warning, or caution and warning systems, tone generators, annunciators, etc.
	-60	CENTRAL DISPLAY SYSTEMS	Those systems and components which give visual display of conditions in unrelated systems.
	-70	AUTOMATIC DATA REPORTING SYSTEMS	Those systems and components used for collating and computing data from unrelated systems and transmitting same automatically. Includes ASDAR systems and components.

32		LANDING GEAR	Those units and components which furnish a means of supporting and steering the aircraft on the ground or water, and make it possible to retract and store the landing gear in flight. Includes tail skid assembly, brakes, wheels, floats, skids, skis, doors, shock struts, tires, linkages, position indicating and warning systems. Also includes the functioning and maintenance aspects of the landing gear doors but does not include the structure which is covered in Chapter 52 DOORS.
	-00	GENERAL	
	-10	MAIN GEAR AND DOORS	That portion of the system which provides the major support for the aircraft while on the ground. Includes items such as shock struts, bogie axles, drag struts, linkages, attach bolts, etc.
	-20	NOSE GEAR / TAIL GEAR AND DOORS	That portion of the system which supports the nose of the aircraft while the aircraft is on the ground. Includes items such as shock struts, drag struts, linkages, attach bolts, etc.
	-30	EXTENSION AND RETRACTION	That portion of the system which is used to extend and retract the landing gear and open and close the landing gear doors. Includes items such as actuating mechanisms, bogie trim, bungees, up and down latches, operating controls, valves and motors, cables, wiring, plumbing, etc.
	-40	WHEELS AND BRAKES	That portion of the system which provides for rolling and stopping the aircraft while on the ground and stopping wheel rotation after retraction. Includes items such as bearings, tires, valves, de - boosters, swivel glands, anti-skid devices, pressure indicators, plumbing, etc.
	-50	STEERING	That portion of the system which is used to control the direction of movement of the aircraft on the ground. Includes items such as actuating cylinders, controls, bogie swivel unlock, etc.
	-60	POSITION, WARNING, AND GROUND SAFETY SWITCH	That portion of the system which is used to indicate and warn of the position of the landing gear/doors. Includes items such as switches, relays, lights, indicators, horns, wiring, etc.
	-70	SUPPLEMENTARY GEAR - SKIS, FLOATS	Devices used to stabilize the aircraft while on the ground and prevent damage by ground contact. Includes items such as shock strut, skid block, wheels, etc.
33		LIGHTS	Those units and components (electrically powered) which provide for external and internal illumination such as landing lights, taxi lights, position lights, rotating lights, ice lights, master warning lights, passenger reading and cabin dome lights, etc. Includes light fixtures, switches and wiring. Does not include warning lights for individual systems or self -illuminating signs (see Chapter 11).
	-00	GENERAL	
	-10	FLIGHT COMPARTMENT AND ANNUNCIATOR PANEL	The lighting sub-systems in the compartment above the floor and between the forward passenger partition and the forward pressure dome. Does not include cargo compartment. Includes direct and indirect illumination of work areas, panels, and instruments. Includes master warning light and warning light dimming systems, where not integrated with a central audio or visual system under 31-50.
	-20	PASSENGER COMPARTMENT	The lighting sub-systems in the areas in which the passengers are seated and in buffet / galley, lavatories, lounges and coat rooms. Includes items such as direct and indirect illumination, passenger call system, lighted signs, etc.
	-30	CARGO AND SERVICE COMPARTMENTS	The lighting sub-systems in the compartments for stowage of cargo and the housing of various components of accessories.
	-40	EXTERIOR LIGHTING	The lighting sub-systems used to provide illumination outside of the aircraft. Includes lights such as landing, navigation, position indicating, wing illumination, rotating, courtesy, taxi, etc.
	-50	EMERGENCY LIGHTING	The separate and independent sub-system used to provide illumination in case of primary electrical power failure. Includes items such as inertia flashlights, lanterns, etc.
34		NAVIGATION	Those units and components which provide aircraft navigational information. Includes VOR, pitot, static, ILS, flight director, compasses, indicators, etc.
	-00	GENERAL	
	-10	FLIGHT ENVIRONMENT DATA	That portion of the system which senses environmental conditions and uses the data to influence navigation. Includes such items as Central Air Data Computers, pitot/static systems, air temperature, rate -of-climb, airspeed, high speed warning, altitude, altitude reporting, altimeter correction system, air disturbance detection system, etc.
	-20	ATTITUDE AND DIRECTION	The portion of the system which uses magnetic or inertia forces to sense and display the direction or attitude of the aircraft. This includes sensing, computing, indicating and warning devices such as magnetic compasses, vertical and directional references, magnetic heading systems, attitude director systems, symbol generators, turn and bank, rate of turn, amplifiers, indicators, etc. Includes Flight Director when it is not integral with the auto pilot computation.
	-30	LANDING AND TAXIING AIDS	That portion of the system which provides guidance during

			approach, landing and taxiing. Includes items such as localizer, glide slope, ILS, markers, paravision director ground guidance systems, etc.
	-40	INDEPENDENT POSITION DETERMINING	That portion of the system which provides information to determine position and is mainly independent of ground installations or orbital satellites. Includes items such as inertial guidance systems, weather radar, Doppler, proximity warning, collision avoidance, star tracker, etc. Also includes sextants/octants, etc.
	-50	DEPENDENT POSITION DETERMINING	That portion of the system which provides information to determine position and is mainly dependent on ground installations or orbital satellites. Includes items such as DME, transponders, radio compass, LORAN, VOR, ADF, OMEGA, GLOBAL POSITIONING, etc.
	-60	FLIGHT MANAGEMENT COMPUTING	That portion of the system which combines navigational data to compute or manage the aircraft's geographical position or theoretical flight path. Includes items such as course computers, flight management computers, performance data computers, and associated control display units, warning annunciators, etc.
35		OXYGEN	Those units and components which store, regulate, and deliver oxygen to the passengers and crew, including bottles, relief valves, shut-off valves, outlets, regulators, masks, walk-around bottles, etc.
	-00	GENERAL	
	-10	CREW	That portion of the system which furnishes oxygen to the crew.
	-20	PASSENGER	That portion of the system which furnishes oxygen to the passengers.
	-30	PORTABLE	That portion of the system which has an independent oxygen supply and which can be transported about the airplane.
36		PNEUMATIC	Those units and components (Ducts and Valves) which deliver large volumes of compressed air from a power source to connecting points for such other systems as air conditioning, pressurization, deicing, etc.
	-00	GENERAL	
	-10	DISTRIBUTION	That portion of the system which is used to distribute high or low pressure air to using systems. Includes items such as ducts, valves, actuators, heat exchangers, controls, etc. Does not include the supply valves to the using systems.
	-20	INDICATING	That portion of the system which is used to indicate temperature and pressure of the pneumatic system. Includes temperature and pressure warning systems.
37		VACUUM	Those units and components used to generate, deliver and regulate negative air pressure, including pumps, regulators, lines, etc., through and including the manifold.
	-00	GENERAL	
	-10	DISTRIBUTION	That portion of the system which is used to distribute negative pressure air to using systems.
	-20	INDICATING	That portion of the system which is used to indicate pressure. Includes pressure warning system.
38		WATER / WASTE	Those fixed units and components which store and deliver for use, fresh water, and those fixed components which store and furnish a means of removal of water and waste. Includes wash basins, toilet assemblies, tanks, valves, etc.
	-00	GENERAL	
	-10	POTABLE	That portion of the system which is used to store and deliver fresh drinking water. Includes wash water system if the potable water is also used for washing.
	-20	WASH	That portion of the system which is used to store and deliver wash water which is not potable.
	-30	WASTE DISPOSAL	That portion of the system which is used for disposal of water and waste. Includes items such as wash basins, water closets, flushing systems, etc.
	-40	AIR SUPPLY	That portion of the system common to more than one sub-system which is used for pressurizing supply tanks to insure fluid flow.
39		ELECTRICAL - ELECTRONIC PANELS AND MULTIPURPOSE COMPONENTS	
	-00	GENERAL	
	-10	INSTRUMENT AND CONTROL PANELS	

	-20	ELECTRICAL AND ELECTRONIC EQUIPMENT RACKS	
	-30	ELECTRICAL AND ELECTRONIC JUNCTION BOXES	
	-40	MULTIPURPOSE ELECTRONIC COMPONENTS	
	-50	INTEGRATED CIRCUITS	
	-60	PRINTED CIRCUIT CARD ASSEMBLIES	
41		WATER BALLAST	Those units and components provided for the storage, balancing, control, filling, discharge, and dumping of water ballast. Does not include units or components covered in Chapter 38.
	-00	GENERAL	
	-10	STORAGE	That portion of the system which stores water solely for the purpose of providing airship ballast. Includes removable tanks (bladder cells), interconnecting balance pipes, filler valves, etc.
	-20	DUMP	That portion of the system used to dump water ballast during flight. Includes valves, remote/direct, manual/automatic controls, etc.
	-30	INDICATION	That portion of the system used to indicate quantity, condition and relative distribution of the water ballast.
45		CENTRAL MAINTENANCE SYSTEM (CMS)	Those units, components and associated system which interfaces with multiple aircraft systems. Contains checkout and fault isolation procedures using a central computer complex and/or standard fault isolation procedures to locate a single system or component malfunction.
	-00	GENERAL	
	-05	CMS / AIRCRAFT GENERAL	Central Maintenance System interfaces with General Aircraft systems and identification of maintenance functions related to Aircraft General.
	-19		
	-20	CMS / AIRFRAME SYSTEMS	Central Maintenance System interfaces with Airframe Systems, and identification of maintenance functions related to Airframe Systems.
	-44		
	-45	CENTRAL MAINTENANCE SYSTEM	Central Maintenance System That portion of the system which interfaces with other airplane systems, flight line mechanics, and radio communications. Includes computers, storage devices, control and display devices.
	-46	CMS / AIRFRAME SYSTEMS	Central Maintenance System interfaces with Airframe Systems, and identification of maintenance functions related to Airframe Systems.
	-49		
	-50	CMS / STRUCTURES	Central Maintenance System interfaces with Structures, and identification of maintenance functions related to Structures.
	-59		
	-60	CMS / PROPELLERS	Central Maintenance System interfaces with Propeller, and identification of maintenance functions related to Propellers.
	-69		
	-70	CMS / POWER PLANT	Central Maintenance System interfaces with Power Plant, and identification of maintenance functions related to Power Plant. NOTE: Subsystem/Section Code is selected to match applicable system interface. For example, 45 -21-XX would identify all air conditioning monitoring and testing provided by the Central Maintenance System, and would provide directions for using the Central Maintenance System to execute those maintenance functions. Detailed testing not capable of coverage in Chapter 45 would be appropriately cross referenced and would be provided in Chapter 21. Similarly, 45 -32-XX would identify landing gear monitoring and testing provided by the Central Maintenance System. 45 -45 -XX would identify the Central Maintenance System itself.
-89			
46		INFORMATION SYSTEMS	Those units and components which furnish a means of storing, updating, and retrieving digital information traditionally provided on paper, microfilm, or microfiche. Includes units that are dedicated to the information storage and retrieval function such as the Electronic Library mass storage and controller. Does not include units or components installed for other uses and shared with other systems, such as flight deck printer or general use display.
	-00	GENERAL	
	-10	AIRPLANE GENERAL INFORMATION SYSTEMS	
	-20	FLIGHT DECK INFORMATION SYSTEMS	That portion of the onboard information system that supports the flight deck systems, flight deck crew and flight operations.
	-30	MAINTENANCE INFORMATION SYSTEMS	That portion of the onboard flight information system that supports all onboard maintenance system functions, maintenance technicians, and any ground based maintenance activity.
	-40	PASSENGER CABIN INFORMATION SYSTEMS	That portion of the onboard information system that supports the passenger cabin, cabin operations, and flight attendants.
	-50	MISCELLANEOUS INFORMATION SYSTEMS	That portion of the onboard information system that supports other functions, as defined by the user, that cannot be related to the flight

			deck, passenger cabin, or maintenance.
49		AIRBORNE AUXILIARY POWER	Those airborne power plants (engines) which are installed on the aircraft for the purpose of generating and supplying a single type or combination of auxiliary electric, hydraulic, pneumatic or other power. Includes power and drive section, fuel, ignition and control systems; also wiring, indicators, plumbing, valves, and ducts up to the power unit. Does not include generators, alternators, hydraulic pumps, etc. or their connecting systems which supply and deliver power to their respective aircraft systems.
	-00	GENERAL	
	-10	POWER PLANT	For definitions see Chapter 71.
	-20	ENGINE	For definitions see Chapter 72.
	-30	ENGINE FUEL AND CONTROL	For definitions see Chapter 73.
	-40	IGNITION / STARTING	For definitions see Chapter 74 and 80.
	-50	AIR	For definitions see Chapter 75.
	-60	ENGINE CONTROLS	For definitions see Chapter 76.
	-70	INDICATING	For definitions see Chapter 77.
	-80	EXHAUST	For definitions see Chapter 78.
	-90	OIL	For definitions see Chapter 79.
GROUP DEFINITION - STRUCTURES			
51		STANDARD PRACTICES AND STRUCTURES - GENERAL	GENERAL Standard Practices, General Procedures and typical repairs applicable to more than one chapter and are not specifically covered under Chapters 52 thru 57 Sub-Sys / Sect breakdown.
	-00	GENERAL	Airplane major structural breakdown diagram. Primary and secondary structure diagram. Principal area and dimensional data. Restricted area diagram. Zoning diagram. Access door and panel identification. Glossary.
	-10	INVESTIGATION, CLEANUP AND AERODYNAMIC SMOOTHNESS	Definition of damage classifications. Cleanup of dents, cracks, scratches, corrosion, etc. Aerodynamic smoothness requirements for the airplane, and permissible contour variations, gaps, and mismatch data.
	-20	PROCESSES	Special processes for use in the repair of the airplane. Will not include general engineering practices unless specific deviations are required. Unique processes such as welding specifications, etc., relative to a single repair shall be incorporated in the repair and only referenced here.
	-30	MATERIALS	Description of materials (metallic and non-metallic) including extrusions, formed sections, sheet, sealants, adhesives, and special materials used in airplane repair. Where possible, permissible substitutes and sources of supply will be given.
	-40	FASTENERS	Description of fastener types, materials, and sizes. Procedures for fastener installation and removal including hole preparation. Fastener strength values and substitution data.
	-50	SUPPORT OF AIRPLANE FOR REPAIR AND ALIGNMENT CHECK PROCEDURES	Procedure for supporting the airplane to relieve loads during repairs. Includes locations for supports and contour dimensions for required ground equipment.
	-60	CONTROL-SURFACE BALANCING	Procedures for adjusting the mass balance of control surfaces after repair. Where applicable, individual repairs will contain their own balancing instructions.
	-70	REPAIRS	Typical repairs suitable for general use, not limited to one ATA Chapter.
	-80	ELECTRICAL BONDING	Topics concerning the electrical bonding of aircraft structure as well as electrical bonding of subsystems to aircraft structure.
52		DOORS	Removable units used for entrance or exit, and for enclosing other structure contained within the fuselage. Includes passenger and crew doors, cargo doors, emergency exits, etc. Electrical and hydraulic systems associated with door control are included as appropriate.
	-00	GENERAL	
	-10	PASSENGER / CREW	Doors used for entrance and exit of the passengers and crew to and from the aircraft. Includes items such as structure, latching mechanisms, handles, insulation, lining, controls, integral steps, ramps, handrails, attach/attached fittings, etc.
	-20	EMERGENCY EXIT	Exit doors used to facilitate evacuation that are not normally used for exit. Includes items such as structure, latching mechanisms, handles, insulation, lining, controls, attach / attached fittings, etc.
	-30	CARGO	Exterior doors used primarily to gain access to cargo compartments. Includes items such as structure, latching mechanisms, handles, insulation, lining, controls, integral steps, ramps, handrails, attach/attached fittings, etc.
	-40	SERVICE	Exterior doors used primarily to gain access for servicing aircraft

			systems and equipment. Includes items such as structure, latching mechanisms, handles, insulation, lining, controls, integral steps, handrails, attach/attached fittings, etc.
	-50	FIXED INTERIOR	Interior Doors inside the fuselage installed in fixed partitions. Includes items such as structure, latching mechanisms, handles, lining, attach/attached fittings, etc. Does not include doors installed in movable partitions which are covered in Chapter 25.
	-60	ENTRANCE STAIRS	Stairs which operate in conjunction with but are not an integral part of entrance doors. Stairs whose primary structure is a door shall be covered under the appropriate topic. Includes items such as structure, actuating mechanisms and controls, handrails, attach/attached fittings, etc.
	-70	DOOR WARNING	That portion of the system which is used to indicate whether the doors are closed and properly latched. Includes items such as switches, lights, bells, horns, etc. Does not include landing gear door warning which is covered in Chapter 32.
	-80	LANDING GEAR	Structure of the doors used to enclose the landing gear compartments. Includes items such as structure, latching mechanisms, handles, insulation, lining, controls, attach/attached fittings, etc.
53		FUSELAGE	Structural units and associated components and members which make up the compartments for equipment, passengers, crew, cargo, plus the structure of the envelope and gondola of airships. Includes skins, belt frames, stringers, floor beams, floor, pressure dome, scuppers, tail cone, fuselage -to-wing and -empennage fillets, attach/attached fittings, load curtains, cables, ballonets, etc.
	-00	GENERAL	
	-10	MAIN FRAME	Fuselage Sections Skins, main structure, secondary structure, and fairings of the complete fuselage with any structural differences grouped together and highlighted by fuselage section location. The section locations shall be defined by manufacturing joints or other suitable demarcations in sequence from front to rear. Does not include movable partitions covered in Chapter 25 nor the functional and maintenance aspects of variable aerodynamic fairings covered in Chapter 27.
	-20	AUXILIARY STRUCTURE	
	-30	PLATES-SKIN	
	-40	ATTACH FITTINGS	
	-50	AERODYNAMIC FAIRINGS	
	-60	[AS REQUIRED]	
	-70	[AS REQUIRED]	
	-80	[AS REQUIRED]	
-90	[AS REQUIRED]		
54		NACELLES / PYLONS	Structural units and associated components and members which furnish a means of mounting and housing the power plant or rotor assembly. Includes skins, longerons, belt frames, stringers, clamshells, scuppers, doors, nacelle fillets, attach/attached fittings, etc. Also includes the structure of power plant cowling inclusive of the structural portion of the inlet whether or not integral with the aircraft. Structural portions of the exhaust system are excluded where they are not integral with the airframe.
	-00	GENERAL	
	-10	[AS REQUIRED]	Nacelle Section Skins, primary structure, secondary structure, fillets, and fairings of a complete nacelle with any structural differences grouped together and highlighted by specific nacelle designator. The section locations shall be defined by manufacturing joints or other suitable demarcations in a logical sequence.
	-20	[AS REQUIRED]	
	-30	[AS REQUIRED]	
	-40	[AS REQUIRED]	
	-50	[AS REQUIRED]	Pylon Section Skins, primary structure, secondary structure, fillets, and fairings of a complete pylon with any structural differences grouped together and highlighted by specific pylon designator. The section locations shall be defined by manufacturing joints or other suitable demarcations in a logical sequence.
	-60	[AS REQUIRED]	
	-70	[AS REQUIRED]	
	-80	[AS REQUIRED]	
-90	[AS REQUIRED]		
55		STABILIZERS	Horizontal and vertical stabilizers include the structure of the elevator and rudder.
	-00	GENERAL	
	-10	HORIZONTAL STABILIZER / STABILATOR OR CANARD	The horizontal airfoil of the tail or nose section to which the elevator is attached. Includes items such as spars, ribs, stringers, skins, access covers, tips, attach / attached fittings, etc.
	-20	ELEVATOR - ELEVON	Removable airfoil which is attached to the horizontal stabilizer or canard and used for pitch control. Includes items such as spars, ribs, stringers, skins, access covers, tabs, balance devices, attach/ attached fittings, etc.
	-30	VERTICAL STABILIZER	Vertical airfoil to which the rudder is attached. Includes items such as spars, ribs, stringers, skins, access covers, tips, attach/attached fittings, etc.
	-40	RUDDER - RUDDEVATOR	Removable airfoil which is attached to the vertical stabilizer and used for yaw control. Includes items such as spars, ribs, stringers, skins, access covers, tabs, balance devices, attach/attached fittings, etc.

56		WINDOWS	Fuselage and crew compartment windows inclusive of windshield; also those windows installed in doors.
	-00	GENERAL	
	-10	FLIGHT COMPARTMENT	Compartment above the floor and between the forward passenger partition and the forward pressure dome. Includes items such as the transparent material and its frame of sliding and fixed windows and windshields, handles, latching mechanisms, etc. Does not include door or inspection/observation windows.
	-20	PASSENGER COMPARTMENT	Area in which the passengers are seated. Includes lounges, lavatories, buffets / galleys and coatrooms. Includes items such as transparent material, its frame, frost shield, etc.
	-30	DOOR	Doors used for entrance and exit of the passengers, flight crew and service personnel to and from the airplane. Includes items such as transparent material, its frame, etc. Does not include emergency exit windows.
	-40	INSPECTION AND OBSERVATION	Windows used for examining compartments and equipment in and about the airplane, and astrodomes used for celestial navigation. Includes items such as transparent material, its frame, etc.
57		WINGS	Center wing and outer wing structural units and associated components and members which support the aircraft in flight. Includes spars, skin, ribs, stringers, clamshells, scuppers, etc., and integral fuel tank structure of the flaps, slats, ailerons or elevons (complete with tabs), spoilers, and wing folding system.
	-00	GENERAL	
	-10	CENTER	Wing Skins, primary structure, fillets, and fairings of the center wing, and attach / attached fittings.
	-20	OUTER	Wing Skins, primary structure, fillets, and fairings of the outer wing, and attach / attached fittings.
	-30	WING TIP	Skins and structure of the wing tip and attached fittings.
	-40	LEADING EDGE AND LEADING EDGE DEVICES	Skins and structure of the wing leading edge and removable leading edge airfoils such as flaps, slats, attach/attached fittings, etc.
	-50	TRAILING EDGE AND TRAILING EDGE DEVICES	Trailing Edge Devices Skins and structure of the wing and trailing edge and removable edge airfoils such as flaps and attach/attached fittings.
	-60	AILERONS AND ELEVONS	Skins and structure of wing-mounted spoilers, airbrakes, lift dumpers, attach/attached fittings, etc.
	-70	SPOILERS	Skins and structure of wing-mounted spoilers, airbrakes, lift dumpers, attach/attached fittings, etc.
	-80	[AS REQUIRED]	
	-90	WING FOLDING SYSTEM	System that controls the on-ground movement of any portion of the main wing structure. Includes mechanisms, linkages, actuators, locks, indicating/warning systems, etc.
GROUP DEFINITION PROPELLER / ROTOR			Complete propeller / rotor system excluding propeller / rotor anti-icing system.
60		STANDARD PRACTICES - PROPELLER / ROTOR	
61		PROPELLERS / PROPULSORS	The complete mechanical or electrical propeller, pumps, motors, governor, alternators, and those units and components external to or integral with the engine used to control the propeller blade angle. Includes propeller spinner synchronizers. Also includes propulsor duct assemblies, including aerodynamic fairing of mechanical components, stators, vectoring systems, etc.
	-00	GENERAL	
	-10	PROPELLER ASSEMBLY	That portion of the system which rotates except the engine propeller shaft. Includes items such as blades, dome, hub, spinner, slip ring, deicer boot, distributor valve, etc.
	-20	CONTROLLING	That portion of the system which controls the pitch of the propeller blades. Includes items such as governor synchronizers, switches, wiring, cables, levers, etc. Does not include any parts which rotate with the propeller assembly. Also includes all those units and components provided for the propulsor vector drive system. Includes flight deck control, drive motors, gearboxes, drive shafts, synchronizing shafts, etc.
	-30	BRAKING	That portion of the system which is used to decrease run -down time or stop propeller rotation during engine power -off conditions. Includes brake mechanisms, levers, pulleys, cables, switches, wiring, plumbing, etc.
	-40	INDICATING	That portion of the system used to indicate operation or activation of propeller/propulsor systems. Includes items such as light, switches, wiring etc.

	-50	PROPULSOR DUCT	The complete duct assembly including vector drive attachment, fairings, stators, gearbox covers, etc.
62		MAIN ROTOR(S)	Rotor head assembly(ies) and rotor blades, including the swashplate assembly(ies) and the rotor shaft unit(s) if not an integral part of the gear box(es). Does not include the rotor anti-icing system which is dealt with in chapter 30 "Ice and Rain Protection".
	-00	GENERAL	
	-10	ROTOR BLADES	Rotor blade assemblies, including the heating mate (electrical resistors) for anti-icing.
	-20	ROTOR HEAD(S)	Complete rotor head(s), including blade folding system(s). Includes sleeves, spindles, dampers, rotor head fairing(s) as well as rotor shaft(s) and swashplate(s) if the rotor head and shaft constitute a non-dissociable assembly.
	-30	ROTOR SHAFT(S) / SWASHPLATE ASSEMBLY(IES)	Rotor shaft(s) / swashplate assembly(ies) not included in -20.
	-40	INDICATING	That portion of the system which indicates operation or activation of rotor systems. Includes items such as lights, gauges, switches, wiring, etc.
63		MAIN ROTOR DRIVE(S)	Includes all components transmitting power to the rotor(s): engine coupling components, drive shaft(s), clutch and free wheel units, gear box(es), its (their) components, systems and securing elements.
	-00	GENERAL	
	-10	ENGINE / GEARBOX COUPLINGS	Drive shaft(s) between engine(s) and main gear box(es) and, if applicable, clutch and free wheel unit(s).
	-20	GEARBOX(ES)	Part of the system driving the rotor(s). Includes the mechanical power take-off(s) and accessory drives but does not include the accessories themselves (alternators, hydraulic pumps, etc.). Includes the G.B. lubricating system(s) and the rotor brake(s) if the latter form(s) part of the G.B.(s).
	-30	MOUNTS, ATTACHMENTS	Suspension bars, vibration damping system providing attachment of the G.B.(s) to the airframe.
	-40	INDICATING	That portion of the system which indicates operation or activation of rotor systems. Includes items such as lights, gauges, switches, wiring, etc.
64		TAIL ROTOR	Assembly that rotates in a plane nearly parallel to the symmetry plane and delivers a thrust opposing to the main rotor torque thus ensuring yaw control. Includes the rotor blades and rotor head. Does not include the rotor anti-icing system which is dealt with in chapter 30: "Protection against ice and rain".
	-00	GENERAL	
	-10	ROTOR BLADES	Blade assemblies, including heating mats (electrical resistors) for anti-icing. For an integral rotor blade/rotor head unit, only one section will be used.
	-20	ROTOR HEAD	Tail rotor head. For an integral rotor blade/rotor head unit, only one section will be used.
	-30	[AVAILABLE]	
	-40	INDICATING	That portion of the system which indicates operation or activation of rotor systems. Includes items such as lights, gauges, switches, wiring, etc. Note: For an integral unit, only one section will be used.
65		TAIL ROTOR DRIVE	Includes all the components transmitting power to the tail rotor: drive shafts, bearings, gearboxes.
	-00	GENERAL	
	-10	SHAFTS	Drive shafts, bearings, flexible couplings.
	-20	GEARBOXES	Intermediate gearbox. Tail gearbox.
	-30	[AVAILABLE]	
	-40	INDICATING	That portion of the system which indicates operation or activation of rotor systems. Includes items such as lights, gauges, switches, wiring, etc.
66		ROTOR BLADE AND TAIL PYLON FOLDING	The whole of the system ensuring automatic or manual folding and spreading of the rotor blades and/or tail pylon. NOTE: such rigging also affects the components described in other chapters.
	-00	GENERAL	
	-10	ROTOR BLADES	Part of the system ensuring rotor blade folding and spreading; includes the mechanical, hydraulic and electrical means permanently fitted on the aircraft.
	-20	TAIL PYLON	Part of system ensuring tail pylon folding and spreading; includes mechanical, hydraulic and electrical means permanently fitted on the aircraft.

	-30	CONTROLS AND INDICATING	Part of the system intended for controlling folding/spreading sequences and for indicating the system operation. Includes the control units, caption lights, indicators, wiring, etc.
67		ROTORS FLIGHT CONTROL	The system which provides means of manually controlling the flight attitude of the helicopter. Includes items such as control linkage and control cables for collective pitch, cyclic pitch, directional control, servo-controls and corresponding system. The trim system and the indicating and monitoring system. NOTE: this chapter includes the complete rigging of rotor control including the associated items not described under this system, such as auto -pilot, servo -control unit, automatic trim (Ch. 22), blade pitch change rod (Ch. 63), swashplate.
	-00	GENERAL	
	-10	ROTOR CONTROL	That portion of the system which controls the attitude by the angle of attack of the rotor blades. Includes items such as collective pitch lever, cyclic pitch stick and corresponding linkage and cable controls, coupling, and mixing units, and artificial feel unit system. Also includes the control position indicating system.
	-20	ANTI-TORQUE ROTOR CONTROL (YAW CONTROL)	That portion of the controls which control the direction of the helicopter (yaw control). Includes items such as tail rotor control pedals, relevant linkage and cable controls, bellcranks constituting the yaw control channel and the control position indicating system.
	-30	SERVO-CONTROL SYSTEM	That portion of the system which from a power source ensures distribution to the rotor servo-control.
GROUP DEFINITION - POWER PLANT			
70		STANDARD PRACTICES - ENGINE	
71		POWER PLANT - GENERAL	The overall power package inclusive of engine, air intake, mount, cowling, scoops, cowl flaps.
	-00	GENERAL	This topic shall include general information, limits and procedures. In the maintenance manual this section shall cover subjects such as engine changes, run-up, externally mounted spare power plants, etc. In the overhaul manual, this section shall cover subjects such as power plant build-up, teardown, etc.
	-10	COWLING	Those removable coverings which extend over and around the power plant assembly. Includes the functioning and maintenance aspects of items such as accessory section cowls, cowl flaps, cowling supports, and attach and locking mechanisms, etc. Does not include the structure integral with the airframe which shall be covered in the applicable Structures chapter.
	-20	MOUNTS	The frame work, either of build-up construction or forgings which support the engine and attach it to the nacelle or pylon. Includes items such as engine mounts, vibration dampeners, support links, mounting bolts, etc.
	-30	FIRESEALS AND SHROUDS	Those fire-resistant partitions and seals mounted on or about the power package for the purpose of isolating areas subject to fire. Does not include those fire-walls which are included in Chapter 54.
	-40	ATTACH FITTINGS	Those fittings and brackets which are used for the support of equipment in and about the power package.
	-50	ELECTRICAL HARNESS	Those electrical cables, conduits, plugs, sockets, etc., which serve several power plant systems, but which are banded together to facilitate removal and installation of the power plant. Does not include the wiring which is specifically covered under another system.
	-60	ENGINE AIR INTAKES	That portion of the power plant system which directs and may or may not vary the mass air flow to the engine. Includes items such as nose ring cowls, scoops, compressor fan cowls, buried engine ducts, vortex generators, actuators, control handles, cables, wiring, plumbing, linkages, doors, warning systems, position indicators, etc. Does not include integral structure with the airframe, which shall be included in the applicable Structures chapter.
	-70	ENGINE DRAINS	Those components and manifold assemblies which are used to drain off excess fluids from the power plant and its accessories. Includes drainlines, manifolds, tanks, flame arrestors, vents, and their supporting brackets, etc. Also includes components that are an integral part of, or fitted to the power plant cowling.
72		ENGINE	Those units and components which are: used to induce and convert fuel-air mixture into power. Includes, for the turbine engine, air inlet, compressor, diffuser, combustion chambers, turbine and exhaust; and for the reciprocating engine, blower and clutch, clutch control valve, cylinder, cylinder baffles, intake pipes, crankshaft assembly, etc. Used to transmit power to the propeller shaft, if any, and accessory drives. Includes reduction gearing, gear trains, extension shaft and torque meter.

			<p>Within the profile of the basic engine, used to supplement the functioning of other defined systems external to the engine. Includes items such as accessory drive, mechanical portion of the spark advance mechanism, oil transfer tubes from the propeller governor pad to the propeller shaft, BMEP section, etc.</p> <p>Used to control and direct the flow of lubrication through the engine from the inlet fitting to the outlet fitting. Includes engine pumps (pressure and scavenger), pressure relief valves, screens, oil lines (internal and external), etc.</p>
72(T)		ENGINE - TURBINE / TURBOPROP, DUCTED FAN / UNDUCTED FAN	
	-00	GENERAL	This topic is intended to cover general information, limits and procedures. In the engine overhaul manual, this section would include such subjects as tear down, cleaning, inspection, assembly, testing, etc.
	-10	REDUCTION GEAR AND SHAFT SECTION (TURBOPROP AND/OR FRONT MOUNTED DRIVEN PROPULSOR)	The section of the engine which contains the propeller shafts and reduction gears. Includes items such as drives for hose mounted accessories, etc. If applicable, the section of the engine which uses mechanical force, through a gear-driven system, to drive front mounted propulsors which provide the majority of the energy generated. Includes items such as Propulsor Blades, Actuation systems, Reduction Gears, Drive-Shafts, etc.
	-20	AIR INLET SECTION	The section of the engine through which air enters the compressor section. Includes items such as guide vanes, shrouds, cases, etc.
	-30	COMPRESSOR SECTION	The section of the engine in which the air is compressed. Includes items such as cases, vanes, shrouds, rotors, diffusers, etc. Also includes the maintenance and overhaul of stator blades but not the operation of variable stator blades which is covered under Chapter 75 - 30. Does not include compressor bleed section.
	-40	COMBUSTION SECTION	The section of the engine in which the air and fuel are combined and burned. Includes items such as burner cans, cases, etc.
	-50	TURBINE SECTION	The section of the engine containing the turbines. Includes items such as turbine nozzles, turbine rotors, cases, etc.
	-60	ACCESSORY DRIVES	The mechanical power take-offs to drive accessories. Includes items such as engine-mounted gear boxes, gears, seals, pumps, etc. Does not include remotely installed gear boxes which are covered in Chapter 83.
	-70	BY-PASS SECTION	The section of the engine which by-passes a portion of the normal engine airflow (either ram or compressed air) for the prime purpose adding to engine thrust of reducing specific fuel consumption.
	-80	PROPULSOR SECTION (REAR MOUNTED)	The section of the engine which contains a propulsor(s) and provides the majority of the energy generated. The propulsor may be turbine-driven or gear-driven. Includes such items as propulsor turbines, propulsor blades, blade actuation, and frames (rotating and/or stationary.)
72(R)		ENGINE - RECIPROCATING	
	-00	GENERAL	This topic is intended to cover general information, limits and procedures. In the engine overhaul manual, this section would include such subjects as tear down, cleaning, inspection, assembly, testing, etc.
	-10	FRONT SECTION	The section of the engine which contains the propeller shafts and reduction gears. Includes items such as drives for nose mounted accessories.
	-20	POWER SECTION	The section of the engine which contains the crankshaft, master and link rod assemblies, cams, cam drives gears, tappet guides, roller, carriers, etc.
	-30	CYLINDER SECTION	The section of the engine which contains the cylinders, valves, pistons, push rods, intake pipes, baffles, etc. Also includes rocker arm assembly, valve springs, etc.
	-40	SUPERCHARGER SECTION	The section of the engine which contains the cases, shroud plates, PRT coupling and gearing, impeller and drives, accessory drives, bushings, etc.
	-50	LUBRICATION	Those units and components which are used to distribute oil throughout the engine. Includes front and rear pressure and scavenger pumps, sumps, strainers, valves, etc. Also includes those oil lines not included in chapter 79. Does not include those items which form integral passages within the engine.
73		ENGINE - FUEL AND CONTROL	<p>For turbine engines, those units and components and associated mechanical systems or electrical circuits which furnish or control fuel to the engine beyond the main fuel quick disconnect; and thrust augmentor, fuel flow rate sensing, transmitting and/or indicating units whether the units are before or beyond the quick disconnect.</p> <p>Includes coordinator of equivalent, engine driven fuel pump and filter assembly, main and thrust augmentor fuel controls, electronic temperature datum control, temperature datum valve, fuel manifold, fuel nozzles, fuel enrichment system, speed sensitivity switch, relay</p>

			box assembly, solenoid drip valve, etc.
			For reciprocating engines, those units and components which deliver metered fuel and air to the engine. The fuel portion includes the carburetor/master control from the inlet side to the discharge nozzle(s), injection pumps, carburetor, injection nozzles, and fuel primer. The air portion includes units from the scoop inlet to the vapor return, and impeller chamber.
	-00	GENERAL	
	-10	DISTRIBUTION	That portion of the system from the main quick disconnect to the engine, which distributes fuel to the engine burner section and the thrust augmentor. Includes items such as plumbing, pumps, temperature regulator, valves, filters, manifold, nozzles, etc. Does not include main of thrust augmentor control.
	-20	CONTROLLING - GOVERNING	The main fuel control which meters fuel to the engine and the thrust augmentor. Includes items such as hydro-mechanical or electronic fuel control, levers, actuators, cables, pulleys, linkages, sensors, valves, etc. which are components of the fuel control units.
	-30	INDICATING	That portion of the system which is used to indicate the flow rate, temperature, and pressure of the fuel. Includes items such as transmitters, indicators, wiring, etc. Does not include indication, if indication is accomplished as part of an integrated engine instrument system (ref. 77-40).
74		IGNITION	Those units and components which generate, control, furnish, or distribute an electrical current to ignite the fuel air mixture in the cylinders of reciprocating engines or in the combustion chambers or thrust augmentor of turbine engines. Includes induction vibrators, magnetos, switches, lead filters, distributors, harnesses, plugs, ignition relays, exciters, and the electrical portion of spark advance.
	-00	GENERAL	
	-10	ELECTRICAL POWER SUPPLY	That portion of the system which generates electrical current for the purpose of igniting the fuel mixture in the combustion chambers and thrust augmentors. Includes items such as magnetos, distributors, booster coils, exciters, transformers, storage capacitors, and compositors, etc.
	-20	DISTRIBUTION	That portion of the system that conducts high or low voltage electricity from the electrical power supply to the spark plugs or igniters. Includes wiring between magneto and distributors in those systems where they are separate units. Includes items such as ignition harness, high tension leads, coils used in "low tension" systems, spark plugs igniters, etc.
	-30	SWITCHING	That portion of the system which provides a means of rendering the electrical power supply inoperative. Includes items such as ignition switches, wiring, connectors, etc.
75		BLEED AIR	For turbine engines, those external units and components and integral basic engine parts which go together to conduct air to the extension shaft and torquemeter, assembly, if any. Includes compressor bleed systems used to control flow of air through the engine, cooling air systems and heated air systems for engine anti-icing. Does not include aircraft anti-icing, engine starting systems, nor exhaust supplementary air systems.
	-00	GENERAL	
	-10	ENGINE ANTI-ICING	That portion of the system which is used to eliminate and prevent the formation of ice by bleed air in all parts of the engine, excluding power plant cowling which is covered by Chapter 30. Includes items such as valves, plumbing, wiring, regulators, etc. Electrical anti-icing is covered in Chapter 30.
	-20	ENGINE COOLING	That portion of the system which is used to ventilate the engine and accessories. Includes items such as valves, plumbing, wiring, jet pumps, vortex spoilers, etc.
	-30	COMPRESSOR CONTROL	That portion of the system which is used to control the flow of air through the engine. Includes items such as governors, valves, actuators, linkages, etc. Also includes the operation of variable stator blades, but not the maintenance and overhaul, which shall be covered under 72-30.
	-40	INDICATING	That portion of the system which is used to indicate temperature, pressure, control positions, etc. of the air systems. Includes items such as transmitters, indicators, wiring, etc.
76		ENGINE CONTROLS	Those controls which govern operation of the engine. Includes units and components which are interconnected for emergency shutdown. For turbo-prop engines, includes linkages and controls to the coordinator or equivalent to the propeller governor, fuel control unit or other units being controlled. For reciprocating engine, include controls for blowers. Does not include units or components which are specifically included in other chapters.
	-00	GENERAL	
	-10	POWER CONTROL	That portion of the system which furnishes a means of controlling the main fuel control or coordinator. Includes controls to the

			propeller regulator on turbo-prop engines. Includes items such as linkages, cables, levers, pulleys, switches, wiring, etc. does not include the units themselves.
	-20	EMERGENCY SHUTDOWN	That portion of the system which furnishes a means of controlling the flow of fluids to and from the engine during emergency procedures. Includes items such as levers, cables, pulleys, linkages, switches, wiring, etc. Does not include the units themselves.
77		ENGINE INDICATING	Those units, components and associated systems which indicate engine operation. Includes indicators, transmitters, analyzers, etc. For turbo-prop engines includes phase detectors. Does not include systems or items which are included in other chapters except when indication is accomplished as part of an integrated engine instrument system (ref. 77-40).
	-00	GENERAL	
	-10	POWER	That portion of the system which directly or indirectly indicates power or thrust. Includes items such as BMEP, pressure-ratio, RPM, etc.
	-20	TEMPERATURE	That portion of the system which indicates temperatures in the engine. Includes items such as cylinder head, exhaust (turbine inlet), etc.
	-30	ANALYZERS	That portion of the system which is used to analyze engine performance or condition by means of instruments or devices such as oscilloscopes, etc. Includes items such as generators, wiring, amplifiers, oscilloscopes, etc.
	-40	INTEGRATED ENGINE INSTRUMENT SYSTEMS	That portion of the system which as an integrated concept receives several/all engine operating parameters and transmits this to a central processor for crew presentation. Includes items such as display units, transmitters, receivers, computers, etc.
78		EXHAUST	Those units and components which direct the engine exhaust gases overboard. For turbine engines, includes units external to the basic engine such as thrust reverser and noise suppressor. For reciprocating engines, includes augmentors, stacks, clamps, etc. Excludes exhaust-driven turbines.
	-00	GENERAL	
	-10	COLLECTOR - NOZZLE	That portion of the system which collects the exhaust gases from the cylinders or turbines and conducts them overboard. Includes items such as collector rings, exhaust and thrust augmentor ducts, variable nozzles, actuators, plumbing, linkages, wiring, position indicators, warning systems, etc. Does not include power recovery turbines, turbo-superchargers, etc., nor noise suppressors or thrust reversers where they are not an integral part of the nozzle system.
	-20	NOISE SUPPRESSOR	That portion of the system which reduces the noise generated by the exhaust gases. Includes items such as pipes, baffles, shields, actuators, plumbing linkages, wiring, position indicators, warning systems, etc. Use -10 where integral part of nozzle system.
	-30	THRUST REVERSER	That portion of the system which is used to change the direction of the exhaust gases for reverse thrust. Includes items such as clamshells, linkages, levers, actuator, plumbing, wiring, indicators, warning systems, etc. Use -10 where integral part of nozzle system.
	-40	SUPPLEMENTAL AIR	That portion of the system which varies and controls supplementary air flow of the exhaust system. Includes items such as tertiary doors, actuators, linkages, springs, plumbing, wiring, position indicators, warning systems, etc.
79		OIL	Those units and components external to the engine concerned with storing and delivering lubricating oil to and from the engine. Covers all units and components from the lubricating oil engine outlet to the inlet, including the inlet and outlet fittings, tank, radiator, by-pass valve, etc., and auxiliary oil systems.
	-00	GENERAL	
	-10	STORAGE (DRY SUMP)	That portion of the system used for storage of oil. Includes items such as tanks, filling systems, internal hoppers, baffles, tank sump and drain, etc. Does not include tanks which are an integral portion of the engine.
	-20	DISTRIBUTION	That portion of the system which is used to conduct oil to and from the engine. Includes items such as plumbing, valves, temperature regulator, control systems, etc.
	-30	INDICATING	That portion of the system which is used to indicate oil quantity, temperature, and pressure of the oil. Includes items such as transmitters, indicators, wiring, warning systems, etc. Does not include indication if indication is accomplished as part of an integrated engine instrument system (ref. 77-40).
80		STARTING	Those units, components and associated systems used for starting the engine. Includes electrical, inertial air or other starter systems. Does not include ignition systems which are covered in chapter 74,

			IGNITION.
	-00	GENERAL	
	-10	CRANKING	That portion of the system which is used to perform the cranking portion of the starting operation. Includes items such as plumbing, valves, wiring, starters, switches, relays, etc.
81		TURBINES (RECIPROCATING ENGINES)	For reciprocating engines only. Includes power recovery turbine assembly and turbo-supercharger unit when external to the engine.
	-00	GENERAL	
	-10	POWER RECOVERY	The turbines which extract energy from the exhaust gases and are coupled to the crankshaft.
	-20	TURBO-SUPERCHARGER	The turbines which extract energy from the exhaust gases and drive an air compressor.
82		WATER INJECTION	Those units and components which furnish, meter, and inject water or water mixtures into the induction system; includes tanks, pumps, regulators, etc.
	-00	GENERAL	
	-10	STORAGE	That portion of the system which is used to for the storage of water or water mixtures. Includes tank sealing, attachment of bladder type cells, ventilating system, cell and tank interconnects, filling systems, etc.
	-20	DISTRUBUTION	That portion of the system which is used to conduct water or water mixtures from the tanks or cells to the engine. Includes items such as plumbing, crossfeed systems, pumps, valves, controls, etc.
	-30	DUMPING AND PURGING	That portion of the system which is used to dump injection water and to purge the system. Includes items such as plumbing, valves, controls, etc.
	-40	INDICATING	That portion of the system which is used to indicate the quantity, temperature, and pressure of the water mixtures. Includes items such as transmitters, indicators, wiring, etc.
83		ACCESSORY GEAR BOXES (ENGINE DRIVEN)	Those units and components which are remotely installed and connected to the engine by a drive shaft and which drive multiple type of accessories. Does not include those accessory drives which are bolted to and are immediately adjacent to the engine. The latter item shall be covered under Chapter 72, ENGINE.
	-00	GENERAL	
	-10	DRIVE SHAFT SECTION	That portion of the system which is used to conduct power from the engine to the gearbox. Includes items such as drive shaft, adapters, seals, etc.
	-20	GEAR BOX SECTION	The case which contains the gear trains and shafts. Includes items such as gears, shafts, seals, oil pumps, coolers, etc.
84		PROPULSION AUGMENTATION	Those units and components that, independent of the primary propulsion system, furnish additional thrust of short duration. Includes solid or liquid propellants, controls, indicator, etc.
	-00	GENERAL	
	-10	JET ASSISTED TAKEOFF	Those units or components dedicated to jet assisted takeoff (JATO) systems.
91		CHARTS	Miscellaneous charts not applicable to any particular system, such as spare wire charts, junction box charts, disconnect plug charts, conduit and wire routing charts, rigid tube charts, flexible hose charts and control cables.

[LOAD HOME PAGE](#)