

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

Introduction: The following HM&E equipment require special provisioning and/or allowance preparation procedures or will not have supply support provided. This list identifies only those items that have already been reviewed and defined. Additional items will be added to this list as they are identified.

ACCUMULATORS - SEE "TANKS".

APPLIANCE, ELECTRICAL

Electrical household/kitchen type appliances that are available commercially including Egg Boilers (Cookers), Fruit Juice Extractors, Griddles, Emerson Heaters, Can Openers, Flat Irons, Fry Pans, Hand Held/Portable Food Mixers, Waffle Irons, Electric Knives, Small Coffee Pots and Microwave Ovens.

1. Not APL worthy.
2. COSAL support will not be provided.

CABLES, PUSH/PULL

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s) if maintenance significant.

CARTS AND DOLLIES, HAND-OPERATED

1. Not APL worthy.
2. COSAL support will not be provided.

CIRCUIT BREAKERS, ACB

These breakers range in frame size from ACB-640 to ACB-6400.

1. APL worthy.

CIRCUIT BREAKERS, MOLDED CASE

Includes AQB-A250, AQB-LF250, NQB-A250, AQB-A400, AQB-LF400, NQB-A400, AQB-A800, NQB-A800, AQB-A1600, and NQB-A1600 Molded case breakers.

1. APL worthy.

CIRCUIT BREAKERS, SMALL MOLDED CASE

Includes AQB-A50, NQB-A50, AQB-A100, AQB-LF100, AQB-A101, NQB-A101, ALB-1, and NLB-1 molded case breakers.

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

CLOCK, BATTERY POWERED

1. Not APL worthy.
2. AEL item.

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

COCK, DRAIN

Includes Plug Cocks and Pet Cocks.

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s) if maintenance significant.

COFFEE MAKER

1. Vacuum type coffee maker sets such as those described in Federal Specification GC-C-531, or coffee urns will be supported as follows:
 - a. APL worthy.
2. All other Coffee makers – See “APPLIANCE, ELECTRICAL”.

COILS, HEATING/COOLING, VENTILATION, DUCT TYPE/CONVECTION

A unit consisting solely of parallel tubes joined together by a header or headers, using fins to increase the surface area, installed within ventilation ducts.

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s) if maintenance significant.

CONNECTOR, PLUG OR RECEPTACLE, ELECTRICAL

An electrical fitting with male, female, or male and female contacts constructed to be affixed to the end of a cable, conduit, coaxial line, cord, or wire for convenience in joining with another electrical connector(s).

1. Apply “General APL Worthiness Guidance”.
2. Non-APL worthy connectors will be included as a line item on the NHA APL or as a line item on the appropriate ships 89000 series APL(s).

CONTROLLER, ELECTRICAL (Includes Starter Motors)

A device which, in addition to starting and stopping, performs one or more of the following functions; reverses, selects and/or regulates the speed of a motor.

Includes items operated with a rheostat or speed regulator.

1. APL worthy. Note: Thermal Release Heaters are not to be included on controller PTD. See “HEATER, THERMAL RELEASE FOR ELECTRIC CONTROLLERS AND STARTERS”.

CUTTER, FABRIC, PORTABLE ELECTRIC

1. Not APL worthy.
2. AEL item.

CYLINDER, PORTABLE GAS

Includes Oxygen and Nitrogen cylinders.

1. Not APL worthy.
2. AEL item.

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

DISPENSER, SOAP or SALT TABLET

1. Not APL worthy.
2. COSAL support will not be provided.

DISPENSER, PAPER TOWEL

1. Not APL worthy.
2. COSAL support will not be provided.

DOORS

1. Watertight, airtight and power operated.
 - a. APL Worthy.
2. Non-watertight, Non-airtight or non-power operated.
 - a. Not APL worthy.
 - b. COSAL support will not be provided.

DRILL, PORTABLE

Includes all portable drills.

1. Not APL worthy.
2. AEL item.

DUMBWAITER, HAND OPERATED

Includes Hand Powered Lifts.

1. Not APL worthy.
2. COSAL support will not be provided.

EDUCTOR, AIR OR WATER POWERED

Commercial terminology for ejector, air or water powered. A device consisting of one or more jet ejectors designed to maintain a partial vacuum by the removal of air and other non-condensable gasses from a closed vessel.

1. Not APL worthy.
2. Nozzles will be included as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

EDUCTOR, STEAM POWERED

Commercial terminology for ejector, jet. A device having pressure inlet(s), discharge outlet(s), and suction inlet(s) designed to move fluids or solids by utilizing the kinetic energy of fluid forced at a high velocity through a converging nozzle(s).

1. APL worthy.

ELECTRICAL HARDWARE

Includes Battery Boxes, Cable Clamps, Conduit Boxes, Connection Boxes, Jack Boxes, Junction Boxes, Pull Boxes, Switch Boxes, Terminal Boxes, Non-APL

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

Worthy Military or NEMA Standard Connectors, Stuffing Tubes, Terminal Boards, Wiring Troughs, Electric Wiring Appliances. These are items of the standard variety found in military or NEMA standards and not expected to require replacement unless subjected to a catastrophic condition such as fire or explosion. These items are normally installed during the process of a shipboard electrical installation or modification, and otherwise are seldom required.

1. Not APL worthy.
2. Include maintenance significant parts within enclosures as line items on NHA APL or as line items on the appropriate ships 89000 series APL(s).

FLASKS - SEE "TANKS".

FRYER, DEEP FAT - SEE "HABITABILITY EQUIPMENT".

FUSES

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

FUSE BOX

1. Not APL worthy.
2. Include fuses and fuse clips as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

GAUGE OR GAGE

Includes individual instruments with scale or dial for measuring or indicating quantity, mounted in-line or on NHA equipment. Does not include differential pressure indicators and indicating switches, to which APL-worthiness rules should be applied.

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

GRINDER, CRANKSHAFT, PORTABLE

1. Not APL worthy.
2. AEL item.

HABITABILITY EQUIPMENT

Includes Galley/Food Service Equipment and Laundry/Dry Cleaning Equipment.

1. Must either use Shipboard approved equipment as identified by the Life Cycle Equipment Manager (LCEM) Catalogs or contact NSWCCD-SSES Code 9790 for approval of equipment use.

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

2. If equipment is authorized for shipboard use, an APL will be developed and COSAL support provided.
3. If equipment is not authorized for shipboard use, an APL will be developed for configuration purposes only and COSAL support will not be provided.

HAMMER, ELECTRIC, PORTABLE

1. Not APL worthy.
2. AEL item.

HATCHES – SEE “DOORS”.

HEAT EXCHANGER, SMALL BOAT ENGINE

1. Not APL worthy.
2. Include the heat exchanger and any repair parts in the applicable small boat or engine APL.

HEATER, THERMAL RELEASE FOR ELECTRIC CONTROLLERS AND STARTERS

1. Not APL worthy.
2. Include on the applicable appropriate ships 89000 series APL(s). Do not include in the controller or starter PTD.

HOIST, HAND OPERATED

1. Not APL worthy.
2. COSAL support will not be provided.

HOT PLATE - SEE “APPLIANCE, ELECTRICAL”.

INDICATOR, LIQUID LEVEL

1. APL worthy except for sight glass level indicators.
2. Sight glass level indicators will be included as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

INDICATOR, SIGHT FLOW

1. Apply “General APL Worthiness Guidance”.
2. Include Non-APL worthy indicators as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

INDICATOR, TANK LEVEL

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

IRON, WAFFLE - SEE “APPLIANCE, ELECTRICAL”.

KNIFE, ELECTRICAL - SEE “APPLIANCE, ELECTRICAL”.

LIGHT, INDICATOR

1. Not APL worthy.
2. Include as a line item on Next Higher Assembly (NHA) APL or as a line item on the appropriate ships 89000 series APL(s).

LIGHTING FIXTURES, GENERAL

Includes fluorescent and incandescent lighting fixtures such as overhead, bulkhead, berth, mirror and desk fixtures.

1. Not APL worthy.
2. Include lamp ballast, lamp, lamp holder and lamp starters as a line item on Next Higher Assembly (NHA) APL or as a line item on the appropriate ships 89000 series APL(s).

LIGHTING FIXTURES, SPECIAL PURPOSE

Includes special purpose fixtures such as navigation, rotating beacon, deck edge and searchlights.

1. APL worthy.

MOTOR, AIR

1. Not APL worthy.
2. Include as a line item on Next Higher Assembly (NHA) APL or as a line item on the appropriate ships 89000 series APL(s).

MOTORS, ELECTRIC (.5 HORSE POWER (HP) AND BELOW)

1. Not APL worthy.
2. Include as a line item on NHA APL.

MOTORS, ELECTRIC (GREATER THAN .5 HP)

1. APL worthy.

MOUNTS, RESILIENT

Includes devices designed to isolate equipment from the ship structure to achieve low noise and/or vibration levels. The mounts are constructed wholly or in part of rubber or some similar resilient, but deteriorate, substance.

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

MUFFLER, AUTOMOTIVE TYPE

1. Not APL worthy.

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

2. Include as a line item on Next Higher Assembly (NHA) PTD.

NOZZLES, FIRE FIGHTING

1. Not APL worthy.
2. For fire fighting systems such as foam proportioners, include as a line item on NHA APL.
3. All other nozzles are AEL items.

OFFICE MACHINES, COMMERCIAL

Includes Adding Machines, Duplicating Machines and Typewriters.

1. Not APL worthy.
2. AEL item.

PLUMBING GEAR (FIXTURES)

Includes Deck Drains, Floor Drains, Lavatory Drains, Multiple Waste Drains, Sink Drains, Faucets, Lavatories, Urinals, Water Closets, Service Sinks, Shower Heads, Drain Traps, Steam Traps, Plumbing Fixture Globe Valves, Water Mixing Shower Valves and Self-Closing Shower-Valves.

1. Not APL worthy.
2. COSAL support will not be provided.

PRINT SHOP EQUIPMENT

Under the cognizance of Navy Publications and Printing Service Office (NPPSO).

1. Not APL worthy.
2. AEL item.

PROJECTOR

Includes projectors, motion and still, silent and sound, and projection screens.

1. Not APL worthy.
2. AEL item.

PUMP, HAND

1. Not APL worthy.
2. AEL item.

READER PRINTER, MICROFILM/MICROFICHE

1. Not APL worthy.
2. AEL item.

RELAY

1. Apply "General APL Worthiness Guidance".
2. Non-APL worthy relays will be included as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

SCUTTLES – SEE “DOORS”.

SENSORS

1. PTD is required.
2. Sensors will be included as a line item for components where the Original Equipment Manufacturer (OEM) provides the sensor installed as an integral part of the component.
3. Sensors not provided, as an integral part of the component by the OEM will be added as line items to the monitoring system APL.

SHIPBOARD WELFARE/QUALITY OF LIFE EQUIPMENT

Includes Televisions, VCRs, Popcorn Poppers, Soda Machines, Stereo Equipment, etc.

1. Not APL worthy.
2. COSAL support will not be provided.

SHOP EQUIPMENT

1. Small, hand held, portable shop equipment is considered Non-repairable.
 - a. Not APL worthy.
 - b. COSAL support will not be provided.
2. All other shop equipment.
 - a. APL worthy.
 - b. Only high failure, maintenance significant parts such as bearings, belts, bushings, gaskets, fuses, packing, seals, switches, and lower components (i.e.-motors, switches, etc.) will be provisioned.

SIGNAL, AUDIBLE

Includes Bells, Buzzers, horns and Sirens.

1. Apply “General APL Worthiness Guidance”.
2. Non-APL worthy Audible Signals will be included as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

SINK, SERVICE

1. Not APL worthy.
2. COSAL support will not be provided.

SOLDERING GUN, ELECTRIC - See “SHOP EQUIPMENT”.

SPEEDOMETER

1. Apply “General APL Worthiness Guidance”.
2. Non-APL worthy Speedometers should be included as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

SPRINKLER HEAD, FIRE PROTECTION AND WASHDOWN SYSTEM

1. Not APL worthy.
2. COSAL support will not be provided.

STAND, PORTABLE, ELECTRIC DRILL

1. Not APL worthy.
2. COSAL support will not be provided.

STRAINERS (1 INCH AND ABOVE)

1. APL worthy.

STRAINERS (LESS THAN 1 INCH)

1. Not APL worthy.
2. Include as a line item on Next Higher Assembly (NHA) APL or as a line item on the appropriate ships 89000 series APL(s).

STRAINERS, SIMPLE NON-ENCLOSED

Includes simple, non-enclosed gravity, plate, mesh, or screen type strainers.

- a. Not APL worthy.
- b. COSAL support will not be provided.

SWITCHES

Includes Pressure Switches, Knife Switches and Temperature Switches.

1. Apply Allowance Parts List (APL) worthiness rules.
2. Non-APL worthy switches will be included as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

TANKS (INTEGRAL TO SHIP STRUCTURE)

1. Not APL worthy.
2. Include repair parts as a line item on the appropriate ships 89000 series APL(s).

TANKS (NOT INTEGRAL TO SHIP STRUCTURE)

1. APL worthy.

THERMOMETER

Includes individual instruments with scale or dial for measuring or indicating temperatures normally mounted in-line or on equipment.

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

TOASTERS

HULL, MECHANICAL AND ELECTRICAL (HM&E) APL WORTHINESS GUIDANCE

1. For heavy duty pop-up type similar to that described in Spec W-T-550 or continuous type similar to that described in Spec MIL-T-16215, see “HABITABILITY EQUIPMENT”.
2. For electrical household/kitchen toasters obtainable commercially, see “APPLIANCE, ELECTRICAL”.

TRANSFORMERS

1. Not APL worthy.
2. Include as a line item on NHA APL or as a line item on the appropriate ships 89000 series APL(s).

VALVES

1. Provisioning Technical Documentation (PTD) is required.
2. Allowance Parts Lists (APL) will be developed.
3. PTD will not be developed for the valves listed in paragraph 3a, these valves will be listed on the applicable ships 89000 series APLs.
 - a. PTD is not required for valves 2.00 IPS Union End Silver Braze (UESB) or below, with a pressure rating of 600 PSI or less, and are non-powered. These include Gate, Globe, Angle, Check, Needle, Plug, Cross, Stop Check, Y Valves, and Ball valves.
 - b. PTD is not required for all .250 OD Gage Valves. Valves should be listed on the applicable ships 89000 series APLs, or as a line item on the next higher assembly (NHA).
 - c. PTD is not required for all Scupper Valves. Valves should be listed on the applicable ships 89000 series APLs.
 - d. A small valve, installed as part of a piece of equipment or system for which an APL has been developed, should be listed as a line item on the PTD for the parent equipment or system. Example: a .250 OD gage valve installed on an air dehydrator should be listed as a line item on the PTD for the dehydrator.
4. Complete PTD for APL development is required for the following:
 - a. All Subsafe and Level I Valves.
 - b. All valves over 2.00 IPS that pass the APL worthiness test in the above paragraphs 1 through 4.
 - c. All valves less than 2.00 IPS that meet the following criteria:
 - Pressure and Temperature Regulators
 - Control Valves
 - High pressure nonferrous valves (to include globe, angle, stop check and check) Similar to CPV Type valves.
 - Inline Check Valves
 - Oxygen System Valves
 - Relief Valves
 - Special Propulsion System Valves
 - Boiler Safety Valves

**HULL, MECHANICAL AND ELECTRICAL (HM&E)
APL WORTHINESS GUIDANCE**

- Boiler Blow-off Valves
- Manifold valves