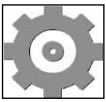


**EN CAREER PATH
(SW)**



Engineman (EN). EN duties include aligning fuel, water, and air piping systems and control operation of diesel engines used for ship propulsion, to propel small craft and to generate electrical power; cleaning, lubricating, adjusting, testing and performing other preventive maintenance on diesel engines, reduction gears, air compressors, hydraulic or pneumatic clutches, steering engines and controllable pitch propeller systems; repairing or replacing valves, pumps, compressors, heat exchangers and control devices used with diesel engines and gas turbines; making entries into and analyzing machinery operating records and reports.					
YEARS OF SERVICE	CAREER MILESTONES	AVERAGE TIME TO ADVANCE	COMMISSIONING OR OTHER SPECIAL PROGRAMS	SEA/SHORE FLOW	TYPICAL CAREER PATH DEVELOPMENT
28-30	ENCM	16.6 Yrs	CSEL, ECM, Diesel Engine Inspector (DEI)	36	4 th Shore Tour Billet: Ship Sup, ATG Lead, Training Manager, ECM/TECHAD. Duty: BUPERS, ATG, RMC, SWOS. Qualification: DEI
24-28	ENCM ENCS	16.6 Yrs 18.1	CSEL, Diesel Engine Inspector (DEI)	48	4 th Sea Tour Billet: Dept LCPO, 3MC. Duty: ACU, STAFF, CVN, DDG, LCS, LHA, LHD, LPD, LSD, SBT, NSW. Qualification: Prop Plant Mgr (U16A NEC), EOOW, ETT Coordinator, DEI, EXW
21-24	ENCM ENCS	16.6 Yrs 18.1	CWO, CSEL, ECM, CSEL, Diesel Engine Inspector (DEI)	36	3 rd Shore Tour Billet: ECM/TECHAD, Ship Sup, Instructor, Curr. Dev., RDC, Recruiter. Duty: BUPERS, NSYD, SRF, IMA, Schoolhouse, ATG. Qualification: DEI, MTS/ATS
17-21	ENCS ENC	18.1 Yrs 12.1	CWO, CSEL Diesel Engine Inspector (DEI)	48	3 rd Sea Tour Billet: LCPO, 3MC. Duty: ACU, STAFF, CVN, DDG, LCS, LHA, LHD, LPD, LSD, SBT, NSW. Qualification: Prop Plant Mgr (U16A NEC), EXW, ESWS, EAWS, EOOW, ETT Coord.
14-17	ENC EN1	12.1 Yrs 7.9	LDO, CWO, SARP Diesel Engine Inspector (DEI)	36	2 nd Shore Tour Billet: RDC, Instructor, Recruiter, Inspector Duty: RMC, Shipyard, ATG, SWOS, NSW. Qualification: ATS, MTS/ATS



**EN CAREER PATH
(SW)**



YEARS OF SERVICE	CAREER MILESTONES	AVERAGE TIME TO ADVANCE	COMMISSIONING OR OTHER SPECIAL PROGRAMS	SEA/ShORE FLOW	TYPICAL CAREER PATH DEVELOPMENT
9-14	ENC EN1 EN2	12.1 Yrs 7.9 3.1	STA-21, OCS, MECP, NAVAL ACADEMY, NROTC	60	2 nd Sea Tour Billet: Maintenance Technician Duty: ACU, CORIVRON, MCM, PC, CVN, LCC, LPD, AS, LHA, LHD, LSD, CG, PHIB CB SEADU, LCS, BCHMSTR UNITS, NSW. Qualification: WCS, ESWS, EXW.
6-9	EN1 EN2	7.9 Yrs 3.1	STA-21, OCS, MECP, NAVAL ACADEMY, NROTC, RDC, Recruiter, Instructor Duty, SARP, Staff Duty, Brig Duty	36	1 st Shore Tour Billet: ACU, BCHMSTR UNITS, SRF, NRD, PHIB CB, NSW. Instructor. Duty: RMC, SWOS, ATG. Qualification: MTS, ATS
2-6 1-2	EN2 EN3	3.1 Yrs 2.1	STA-21, OCS, MECP, NAVAL ACADEMY, NROTC	55	1 st Sea Tour Billet: Maintenance Technician. Duty: ACU, CORIVRON, MCM, PC, CVN, LCC, LPD, AS, LHA, LHD, LSD, PHIB CB SEADU, LCS, BCHMSTR UNITS. Qualification: WCS, ESWS
1+/-	ENFN ENFA Accession Training	9 Months			Recruit Training, "A" and "C" schools

Notes:

1. "A" School is not required.
2. In rate shore duty is limited; normally "A" or "C" School Instructor, IMAs, and ATGs. Most ENs can expect a tour in recruiting or as an RDC.
3. Tours at Flag Staff Duty, NPC and BUPERS require screening.
4. Tour at BUPERS 3 as an Enlisted Community Manager or Enlisted Community Manager Technical Adviser are for high-performing E8s or E9s. It is a highly competitive tour requiring thorough understanding of the Rating and manning and manpower policies. ECMs handle multiple Ratings affecting thousands of Sailors, adjudicate Career Waypoints applications, develop and present advancement, school and accession quotas, and strength policies and initiatives for community health.
5. The Diesel Engine Inspector (DEI) program is open to E-7 and above. Sea tours for DEIs are limited.
6. EOOW- Engineering Officer of the Watch.



EN CAREER PATH (SW)



7. NEC Information:

a. 733B - LPD-17 Class Engineering Control System (ECS) Operator Utilizes Engineering Control System (ECS) consoles, aligns, operates, monitors, and conducts casualty control procedures in accordance with Engineering Operational Sequencing System (EOSS) on LPD-17 Class Main Propulsion Diesel Engines locally from the Propulsion Local Control Console (PLCC) and remotely from the Propulsion Auxiliary Control Console (PACC). Using the PQS manuals and EOSS procedures, course graduates will be able to perform tasks with limited supervision for all conditions of ship readiness both in port and underway.

b. U13A - LPD-17 Class Diesel Engine Technician operates and performs advanced organizational and/or intermediate maintenance to the component level on LPD-17 Main Propulsion Diesel Engines and Ships Service Generator Diesel Engines and their related systems.

c. U16A - Shipboard Engineering Plant Program Manager administers, manages and evaluates shipboard engineering programs. Recognizes engineering systems and major components external to the propulsion plant which comes under the cognizance of the Engineering Officer of the Watch (EOOW). Evaluates operating conditions and makes recommendations to the engineering officer.

d. U20A - PAXMAN Valenta Diesel Engine Operator operates and maintains PAXMAN Valenta Diesel Engines. Performs maintenance on the SF Reduction gear model BW 1500 in accordance with specifications and procedures outlined in the manufacturers technical manual or performance checklist.

e. 780B - Cummins Diesel Engines Technician operates and performs organizational and/or extensive intermediate maintenance and overhaul on the Cummins Diesel Engines (6BTA5.9M and 6B5.9M) and associated auxiliary equipment.

f. 744B - Caterpillar Diesel Technician operates and maintains Caterpillar model 3126 diesel engines in Naval Special Warfare Rigid Hull Inflatable Boats. Performs maintenance and troubleshooting in accordance with procedures as outlined in the manufacturer's technical manual or performance checklist.

g. U21A - Caterpillar Electronically Controlled Engine Technician
Performs organizational level maintenance and troubleshooting on Caterpillar B series engines.

h. U22A - MTU 2000 Series Diesel Engine Technician operates and performs organizational preventative maintenance, trouble shoots systems/components failures and performs corrective maintenance specifically on MTU 2000 series diesel engines, associated pumps and equipment in accordance with manufacturer's recommendations.

i. 745B - ALCO (251C) and General Motors EMD (645) Diesel Engine Technician operates and performs organizational and/or intermediate maintenance on the ALCO, and General Motors EMD diesel engines and associated auxiliary equipment.

j. 747B - Diesel Engine Inspector inspects and assesses material condition, monitors general readiness, provides on-board maintenance training, and diagnoses improper operating procedures and equipment casualties/failures and supports corrective actions of marine main propulsion diesel engines, diesel generators, and component systems.

k. U23A - MCM Propulsion Technician operates and maintains, at the organizational level, Isotta Fraschini diesel engines used for marine propulsion or generator service. Operates and maintains the SOLAR T-1302S-28AA Gas Turbine Generator set used on board the MCM class ships.

l. U24A - Fairbanks Morse (38D 8-1/8) and Colt Pielstick (PC2.5V) Diesel Engine Technician operates and performs organizational and/or intermediate maintenance on the Fairbanks Morse and Colt Pielstick diesel engines and associated auxiliary equipment.

m. U25A - LSD-41/49 Class Advanced Engineering Control System-Machinery Control System (AECS-MCS) Propulsion Systems Technician safely operates the Advanced Engineering Control System-Machinery Control System (AECS-MCS) using



EN CAREER PATH (SW)



Engineering Operational Sequencing System (EOSS) procedures onboard upgraded LSD 41/49 Class Ships. Operates and performs organizational maintenance on the LSD-41/49 Class AECs propulsion system. Calibrates, inspects, assembles, disassembles, troubleshoots, and overhauls the Colt-Pielstick propulsion diesel, its associated subsystem and power trains.

n. U26A - NAMTS Diesel Engine, Governor, and Injector Repair Technician Performs Navy Afloat Maintenance Training Strategy (NAMTS) intermediate-level maintenance procedures on marine diesel engines including governor/injectors used for propulsion or generator service in support of Fleet-directed requirements. Demonstrates knowledge of intermediate-level repair procedures, repair and maintenance standards, quality assurance specifications, and proper use of maintenance industrial machinery.

o. U29A - Causeway Lighterage Engineer maintains the Improved Navy Lighterage System Warping Tug (WT) and/or Causeway Ferry (CF).

p. U69A - LCS-1 (Freedom Variant) Readiness Control Officer (RCO) Cross-trained in Main Propulsion and Support systems, Auxiliary systems, Electrical systems, Damage Control systems and the Main Propulsion Control and Monitoring System (MPCMS). Serve in supervisory and watch team management as well as advanced technical positions as RCO at sea and Engineering Duty Officer (EDO) in port. Utilizing Human Machine Interfaces (HMIs), Local and Remote Control Panels and Consoles, System Diagrams, oversee or perform aligning, operating, monitoring and casualty control procedures on all engineering systems in accordance with Engineering Operational Sequencing System (EOSS). Using PQS manuals, oversee career training of junior personnel. Using PMS maintenance cards, ship's technical manuals and EOSS procedures, supervise and guide planned and corrective maintenance. Perform tasks associated with the RCO (underway) and EDO (in port) shipboard watch station/position with limited to no supervision under all conditions of readiness.

q. U70A - LCS-2 (Independence Variant) Readiness Control Officer (RCO) Cross-trained in Main Propulsion and Support systems, Auxiliary systems, Electrical systems, Damage Control systems and the Engineering Control system (ECS). Serve in supervisory and watch team management as well as advanced technical positions as RCO at sea and Engineering Duty Officer (EDO) in port. Utilizing Human Machine Interfaces (HMIs), Local and Remote Control Panels and Consoles, System Diagrams, oversee or perform aligning, operating, monitoring and casualty control procedures on all engineering systems in accordance with Engineering Operational Sequencing System (EOSS). Using PQS manuals, oversee career training of junior personnel. Using PMS maintenance cards, ship's technical manuals and EOSS procedures, supervise and guide planned and corrective maintenance. Perform tasks associated with the RCO (underway) and EDO (in port) shipboard watch station/position with limited to no supervision under all conditions of readiness.

Considerations for advancement from E6 to E7

1. Sea Assignments (all)

- LPO/WCS at Sea/Operational/Joint
- Qualified EDO/EOOW/RCO (LCS specific) a plus
- At least one warfare pin
- DCTT/ETT
- Command Collateral with documented impact
- Qualified 3M 301-305
- FCPOA involvement
- Sailor 360 involvement

2. Shore Assignments (all)

- RDC(w/MTS)/ATG(w/ATS)/TYCOM Staff/BUPERS//Expeditionary Service/SPECWAR/Expeditionary/Rating Instructor (All screened billets)
- Instructor Duty (805A) (MTS at all levels)
- Completed PPME, USMAP



EN CAREER PATH (SW)



- Community involvement

Considerations for advancement from E7 to E8

1. Sea Assignments (all)

- Department LCPO/ LCPO FDNF a plus
- Should be qualified EDO/EOOW/RCO (LCS specific) (w/NEC U16A a plus)
- DEI a plus
- At least one warfare pin
- ETT Coordinator a plus
- Command Collateral with documented impact
- Completed PPME/JPME/USMAP/SEA
- Active CPO Mess involvement, holding a position with documented performance
- Sailor 360 involvement and leading a committee/Season

2. Shore Assignments (all)

- Recruiting Duty (serving as LSO or LCPO)/RDC/ATG (obtained ATS/MTS)/TYCOM Staff/BUPERS/SPECWAR/Expeditionary/Rating Instructor (obtained MTS) (All screened billets)/FLC's (impact billet on the waterfront)/ASD (with documented impact) Disaster Preparedness operations team leader.
- Completed PPME/JPME/SEJPME I/USMAP/SEA

Considerations for advancement from E8 to E9

1. Sea Assignments (all)

- DLCPO/LCPO(CVN) at Sea/Operational/Joint, FDNF a plus
- DEI a plus
- At least one warfare pin
- ETT Coordinator, EOOW/EDO/RCO (LCS specific)
- Command Collateral with documented impact
- Completed PPME/JPME/USMAP/SEA
- Active CPO Mess involvement, holding a position with documented performance
- Sailor 360 involvement and leading a committee/Season

2. Shore Assignments (all)

- Recruiting Duty (serving as LSO or LCPO)/RDC (Ship LCPO)/ATG (obtained ATS/MTS)/TYCOM Staff/BUPERS/SPECWAR/Expeditionary/Rating Instructor (obtained MTS) (All screened billets)/FLC's (impact billet on the waterfront)/ASD (with documented impact)
- Completed PPME/JPME/SEJPME I and II/USMAP/SEA
- Served as SEL or DLCPO