

Operating Engineers Local 3 – JAC Rancho Murieta Training Center

Heavy Duty Repairman (HDR) courses offered are:

Electrical/Electronic – 2 week course

The student will learn electrical safety, basic electrical theory, components and their operation as found on mobile equipment today. Areas of study include component analysis, system functions, starting and charging systems, schematics, troubleshooting techniques.

Hydraulic/Pneumatic – 2 week course

The student will learn hydraulic/pneumatic safety, theory, components and their operation as found on mobile equipment today. Areas of study include tanks, pumps, valves (directional, pressure & flow), actuators, circuit analysis, schematics and troubleshooting techniques.

Engines – 2 week course

The student will learn engine safety, theory of operation, components and their operation as found on engines. Areas of study include engine structure, intake/exhaust systems, fuel systems cooling systems, lubrication systems, specialty tool usage, diagnostics and troubleshooting.

Power Train – 2 week course

The student will learn power train safety, theory of operation, components and their operation as found on mobile equipment. Areas of study include manual/power shift planetary/counter shaft transmissions, torque converters, differentials, final drives, diagnostics and troubleshooting techniques.

Welding – 2 week course

The student will learn welding safety, theory of cutting/welding and the required equipment. Areas of study include oxy/acetylene cutting, carbon air arc, all position SMAW, all position FCAW, plan reading, metallurgical properties, failure analysis and structure repair.

Lube Technician – 2 week course

The student will learn how to perform preventative maintenance on a variety of equipment. Daily, weekly, monthly, semi-annual and yearly requirements are covered in this course. The importance of record keeping is emphasized.

Air Conditioning (A/C) - 2 days course

This course is designed to help the trainee understand the principles, components, systems, troubleshooting, diagnosing and repair of AC systems. Upon successful completion of this course the student will receive a MACS AC certification.

Advanced Electronics – 3 days course

This course offers an examination of the electronics found on today's mobile equipment. This course covers EMS & CMS and the ability of a machine to self diagnose electrical problems through fault codes. The use of clicker boxes, laptops and multi-meters are emphasized in this course.

Prerequisite: Basic understanding of electricity and basic computer skills.

Air Brakes – 1 day course

This course is designed to give an in-depth understanding of off-road equipment air brakes. This course covers components, systems, diagnostics, repair and adjustments.

Check the web @ <http://www.oe3.org/training/california.html> for more information and class schedules or contact the Rancho Murieta Training Center @ (916) 354-2029.