

DESL 1013 : Diesel Brakes

3 credit hours (2 lecture/2 lab)

This course covers the operation of the complete air and brake system including troubleshooting and repair of air systems, foundation brakes, valving, compressors, antilock, traction control and stability management systems used on trucks and trailers. The course is a mixture of textbook, videos, lecture, hands-on exercises and on-site instruction at a local diesel repair facility.

Topical Outline

- Shop Safety
- Brake Components
- Air pressure principles
- Compressors
- Storage tanks
- Air lines and fittings
- Tractor protection valves
- Drum brakes
- Disc brakes
- Parking brakes
- Anti-lock brakes
- Air Brake leak down test

Course Outcomes

At the end of this course, students will be able to:

1. Demonstrate proper shop safety practices while using brake tools and equipment.
2. Utilize tools and equipment used to repair brake systems.
3. Identify and explore operation, construction, and nomenclature of braking system components including hydraulic, air, and mechanical control devices.
4. Use safety procedures while servicing caged spring brake systems.
5. Diagnose, service, and repair air brake systems.
6. Test and service air supply and storage circuits.
7. Perform air brake leak down test.
8. Inspect, test, and repair air brake lines and hoses.
9. Perform the CDL air brake leak down safety test and inspection.