
SECTION HEADING

AUTO 2113: Manual Drivetrain and Axles

Description

Manual Drivetrain and Axles describes the fundamentals of conventional and light truck manual transmission and clutches. Contents will include power flow, design, adjustment, overhaul procedures, diagnosis, and repairs.

Credits

3

Prerequisite

TRAN 1100

Corequisite

None

Topics to be Covered

1. Manual transmission and clutch fundamentals
2. Manual transmission systems
3. Clutch systems
4. Testing and repair of manual transmission and clutch systems

Learning Outcomes

1. Identify and interpret drive train concerns; determine needed action
2. Inspect clutch pedal linkage, cables, automatic adjuster mechanisms, brackets, bushings, pivots, and springs; determine needed action.
3. Inspect flywheel and ring gear for wear and cracks; determine needed action.
4. Inspect and/or replace clutch pressure plate assembly, clutch disc, release bearing, linkage, and pilot bearing/bushing.
5. Inspect, adjust, lubricate, and/or replace shift linkages, brackets, bushings, cables, pivots, and levers.
6. Diagnose and repair drive shaft and half shaft, universal and constant-velocity (CV) joint. (Front, Rear, All-wheel, Four-wheel drive)
7. Diagnosis and Repair drive axels
8. Diagnose and repair four-wheel drive/all-wheel drive components
9. Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations
10. *The required outcomes follow the Auto Service Technician (AST) model of the Board of the National Institute for Automotive Service Excellence (ASE)

Credit Details

Lecture: 1

Lab: 2

OJT: 0

MnTC Goal Area(s): None