

CHAPTER 8

MOTOR VEHICLE MECHANIC REPAIR CATEGORIES

Section 8-1 REQUIREMENT

Section 10 of the Motor Vehicle Service and Repair Act (the Act) (MCL 257.1310) establishes certain categories of mechanic certification. A mechanic may only perform repairs if certified in the category. Questions regarding mechanic repair category descriptions should be directed to:

Michigan Department of State
Business Compliance and Regulation Division
Business Regulation Section
Lansing, MI 48918

Telephone: (517) 335-1799
E-mail: BLRD@Michigan.gov

Section 8-2

AUTOMOBILE AND LIGHT TRUCK UNDER 14,000 POUNDS GROSS VEHICLE WEIGHT (GVW)

8-2.1 Automobile and Light Truck Engine Repair. Diagnosis, service, and repair of the internal components of light duty gas and diesel engines must be performed by mechanics certified in Automobile and Light Truck Engine Repair.

- a) Diagnosis, service, and repair of electrical components that directly control an internal engine component such as variable valve timing components, variable valve lift components, and variable displacement components must be performed by mechanics certified in Automobile and Light Truck Engine Repair or Automobile Light Truck Engine Tune-Up/Performance.
- b) Diagnosis, service, and repair of the engine cooling system, including electronic thermostats, electronic cooling fans, and electronic water pumps must be performed by mechanics certified in Automobile and Light Truck Engine Repair or Automobile and Light Truck Heating and Air Conditioning.
- c) Diagnosis, service, and repair of the accessory drive belt idler and tensioner pulleys may be performed by mechanics certified in any repair category.
- d) Diagnosis, service, and repair of exhaust manifolds may be performed by mechanics certified in any repair category.

- e) Diagnosis, service, and repair of induction components including intake manifolds, turbochargers, superchargers, and electronic throttle bodies must be performed by mechanics certified in Automobile and Light Truck Engine Repair or Automobile and Light Truck Tune Up/Performance.

8-2.2 Automobile and Light Truck Engine Tune-up/Performance. Preventative maintenance, diagnosis, service, and repair of light duty gasoline and light duty diesel engine performance and emissions systems must be performed by mechanics certified in Automobile and Light Truck Tune-up/Performance. This includes all ignition, fuel, and emission control systems (including catalytic converters).

- a) Any repair that involves removing the camshafts, crankshaft, connecting rod caps, or cylinder heads must be performed by technicians certified in Automobile and Light Truck Engine Repair.
- b) Timing belts, timing chains, and related timing components must be diagnosed, serviced, and repaired by mechanics certified in Automobile and Light Truck Engine Tune-up/Performance or Automobile and Light Truck Engine Repair.
- c) Light duty diesel engines must be diagnosed, serviced, and repaired by mechanics certified in Automobile and Light Truck Engine Tune-up/Performance or Heavy-duty Truck Engine Repair (Diesel).

8-2.3 Automobile and Light Truck Front End, Suspension, and Steering Systems. Preventative maintenance, diagnosis, service, and repair of front and rear suspension and steering systems must be performed by mechanics certified in Automobile and Light Truck Front End, Suspension and Steering Systems.

- a) Automobile and Light Truck Front End, Suspension, and Steering Systems mechanics are the only mechanics that may perform alignments.
- b) Shock absorbers, which are not built in combination with other components, such as a spring, do not require a certification to replace.
- c) Vehicle frames, which have not been damaged in a collision, must be replaced by mechanics certified in Automobile and Light Truck Front End, Suspension, and Steering Systems. Repairing or adjusting structural components and repairing structural damage must be performed by mechanics certified in Unitized Body and Structural Repair.

8-2.4 Automobile and Light Truck Brakes and Braking Systems. Diagnosis, service, repair, and adjustment of components in the braking system must be performed by mechanics certified in Automobile and Light Truck Brakes and Braking Systems.

- a) Wheel bearings, wheel bearing/hub assemblies, wheel hubs, universal joints, and continuous velocity axles must be serviced by mechanics certified in Automobile and Light Truck Brakes and Braking Systems; Automobile and Light Truck Front End, Suspension, and Steering Systems; Automobile and

Light Truck Automatic Transmissions; or Automobile and Light Truck Manual Transmission, Front and Rear Drive Axles.

8-2.5 Automobile and Light Truck Automatic Transmission. Diagnosis, service and repair of automatic transmissions and automatic transaxles must be performed by mechanics certified in Automobile and Light Truck Automatic Transmissions.

- a) Diagnosis and replacement of transmission cooler lines may be performed by mechanics certified in any repair category.
- b) Automatic transmission fluid may be changed as a maintenance items without a mechanics certification.
- c) Any diagnosis of an automatic transmission's internal components must be performed by mechanics certified in Automobile and Light Truck Automatic Transmissions.

8-2.6 Automobile and Light Truck Manual Transmission, Front and Rear Drive Axles.

Diagnosis, service, and repair of manual transmissions, manual transaxles, clutches, drive shafts, differential assemblies, axles, and transfer cases must be performed by mechanics certified in Automobile and Light Truck Manual Transmission, and Front and Rear Drive Axles.

- a) Transfer cases may also be diagnosed, serviced, and repaired by mechanics certified in Automobile and Light Truck Automatic Transmissions.
- b) Wheel bearings, wheel bearing/hub assemblies, wheel hubs, universal joints, and continuous velocity axles may be serviced by mechanics certified in Automobile and Light Truck Brakes and Braking Systems; Automobile and Light Truck Front End, Suspension, and Steering Systems; Automobile and Light Truck Automatic Transmissions; or Automobile and Light Truck Manual Transmission, Front and Rear Drive Axles.

8-2.7 Automobile and Light Truck Electrical Systems. Diagnosis, service, and repair of electrical systems must be performed by mechanics certified in Automobile and Light Truck Electrical systems. A mechanic who is certified in another category may also work on the electrical components and circuits that are directly related to the diagnosis and repair of components within that category.

- a) Diagnosis, service, and repair of vehicle control modules must be performed by mechanics certified in Automobile and Light Truck Electrical systems or by mechanics certified in the repair category relevant to the system being diagnosed.
- b) Diagnosis, service, and repair of vehicle restraint systems not involved in a collision must be performed by a mechanic certified in Automobile and Light Truck Electrical Systems. If the vehicle has been involved in a collision or an airbag has deployed, the mechanic must be certified in Collision-Related Mechanical Repair.

8-2.8 Automobile and Light Truck Heating and Air Conditioning. Diagnosis, service, repair and adjustment of heating and air conditioning systems must be performed by mechanics certified in Automobile and Light Truck Heating and Air Conditioning.

- a) Automobile and Light Truck Heating and Air Conditioning is the only repair category that may evacuate and/or recharge air conditioning systems.
- b) Blower motors, heating, ventilation and air conditioning (HVAC) control units, and other repairs that do not require coolant or refrigerant to be evacuated or recharged may also be performed by mechanics certified in Automobile and Light Truck Electrical Systems.

8-2.9 Collision-Related Mechanical Repair. Mechanics certified in Collision-Related Mechanical Repair may remove and replace motor vehicle components that are clearly damaged by collision. The diagnosis, repair, replacement, or overhaul of mechanical components not damaged by collision must be performed by mechanics certified in the appropriate repair categories. A mechanic certified in Collision-Related Mechanical Repair may disconnect other vehicle components in order to gain access to the collision-damaged components.

The following cannot be performed under Collision-Related Mechanical Repair:

- a) Advanced Driver-Assisted Systems (ADAS) and Vehicle Calibration must be performed by a mechanic with the Electrical Systems specialty;
- b) Charging of air conditioning systems must be performed by mechanics certified in Heating and Air Conditioning;
- c) Wheel alignment must be performed by mechanics certified in Front End, Suspension, and Steering Systems.

8-2.10 Unitized Body and Structural Repair. Repairing or replacing components that affect the structural integrity of a vehicle must be performed by mechanics certified in Unitized Body and Structural Repair. This includes persons who diagnose damaged vehicles.

- a) Repairing a dent from a roof or quarter panel, without cutting or welding, is not viewed as “affecting the structural integrity of the vehicle” and does not require certification.
- b) Sectioning or replacement of the roof panel or quarter panel requires the person performing the repair to be certified in Unitized Body and Structural Repair.
- c) Repair or replacement of a bolt-on non-structural components, such as a hood, fender, door, deck lid, hatch or bumper, does not require certification.

8-2.11 Pre-1973 Vehicle Repair. Mechanics who are engaged exclusively in the repair of vehicles manufactured before 1973 may be certified in the specialty category of Pre-1973 Vehicles. This also applies to mechanics who are engaged in the reconditioning, replacement, adjustment, or alteration of the operating condition of pre-1973 vehicles. Mechanics currently certified in other appropriate categories may also work on pre-1973 vehicles, but a mechanic only certified in Pre-1973 Vehicle Repair may not diagnose, service, or repair vehicle manufactured during or after 1973.

- a) The pre-1973 vehicle mechanic may *not* perform body structural repairs. The mechanic must be certified in Unitized Body and Structural Repair.
- b) The Pre-1973 Vehicles category is *not* necessary for a Master Mechanic certificate.

Section 8-3

HEAVY-DUTY TRUCKS OVER 14,000 POUNDS GROSS VEHICLE WEIGHT RATING (GVWR)

8-3.1 Heavy-duty Truck Engine Repair (Gasoline). Preventive maintenance, diagnosis, and repair of gasoline engines in trucks over 14,000 pounds GVWR must be performed by mechanics certified in Heavy-duty Truck Engine Repair (Gasoline).

8-3.2 Heavy-duty Truck Engine Repair (Diesel). Diagnosis, service, repair and adjustment of diesel engines in trucks over 14,000 pounds GVWR must be performed by mechanics certified in Heavy-duty Truck Engine Repair (Diesel).

8-3.3 Heavy-duty Truck Drive Train. Diagnosis, service, repair and adjustment of transmissions, clutches, propeller shafts and driving axle assemblies in vehicles over 14,000 pounds GVWR must be performed by mechanics certified in Heavy-duty Truck Drive Train.

8-3.4 Heavy-duty Truck Brakes and Braking Systems. Diagnosis, service, repair and adjustment of components in the braking systems on trucks over 14,000 pounds GVWR must be performed by mechanics certified in Heavy-duty Truck Brakes and Braking Systems.

8-3.5 Heavy-duty Truck Suspension and Steering Systems. Diagnosis, service, repair and adjustment of suspension and steering systems of vehicles over 14,000 pounds GVWR must be performed by mechanics certified in Heavy-duty Truck Suspension and Steering Systems.

- a) This is the only repair category that may perform alignments on vehicles weighing over 14,000 pounds.

8-3.6 Heavy-duty Truck Electrical Systems. Diagnosis, service, repair and adjustment of electrical systems on trucks over 14,000 pounds GVWR must be performed by mechanics certified in Heavy-duty Truck Electrical Systems. A mechanic who is certified in another category may also work on the electrical components and circuits that are directly interrelated to the repair of components within that category.

Section 8-4

MOTORCYCLE

Diagnosis, service, repair and adjustment of motorcycles and component parts, including engine and fuel systems, electrical systems, braking systems, drive trains, and chassis must be performed by mechanics certified in Motorcycle Repair.

Section 8-5**RECREATIONAL TRAILER**

8-5.1 Definition. A recreational trailer is a travel trailer, camper trailer, or other special purpose or utility trailer used on the highway and towed by an automobile or light truck with a gross towing weight of less than 10,000 pounds. Diagnosis, service, repair, and adjustment of the mechanical, electrical and suspension components, including brakes, axles, bearings, and springs of the recreational trailer, must be performed by mechanics certified in Recreational Trailer Repair.

Section 8-6**REPAIR CATEGORY CHARTS**

8-6.1 Automobile and Light Truck Repair Areas of Repair Key. Below is a key and chart for common repairs and which mechanic specialty category is necessary to diagnose, service, or repair an area of an automobile or light truck. This is not intended to be an all-inclusive list. Please contact the Business Regulation Section if you have questions about an area of repair that is not found on the chart below.

Category and Abbreviation		Category and Abbreviation	
Engine Repair	ER	Automatic Transmission	AT
Manual Transmission, Front & Rear Drive	MT	Front End, Suspension, & Steering	FE
Brakes & Braking Systems	B	Electrical Systems	E
Heating & Air-Conditioning	HAC	Engine Tune-up & Performance	ET

8-6.2 Automobile and Light Truck Areas of Repair Chart

Area Serviced	Acceptable Certification
A/C compressor	HAC
A/C compressor clutch (without discharging refrigerant or coolant)	E, HAC, Collision Related Mechanical Repair in conjunction with a collision repair
A/C evaporator	HAC
Air bags and other restraint system components not damaged in a collision.	E
Air bags and other restraint system components that have been damaged by a collision.	Collision Related Mechanical (scanning/clearing of a trouble code requires electrical certification)
Alternator	E
Axle bearings and hubs	FE, B,
Blower motor, blower motor resistor, HVAC actuators, and switches	HAC, E
Catalytic converter	ET
Clutch	MT, ER
Cooler lines and auxiliary coolers	Any Auto Light Truck or Heavy-Duty Truck Category
Engine assembly (removal and replacement)	ER, ET
Exhaust manifold	Any Auto Light Truck or Heavy-Duty Truck Category
Fan (electrical)	ER, ET, HAC, E

Fan clutch	ER, ET, HAC
Fuel filler tube	Any Auto Light Truck Category
Flexplate	ET, ER, AT
Flywheel	ET, ER, MT
Freeze (core) plugs	Any Auto Light Truck or Heavy-Duty Truck Category
Accessory drive belt, idler, and tensioner pulleys.	Any Auto Light Truck or Heavy-Duty Truck Category
Fuel pump (electrical) and/or sending unit.	ET, E
Fuel injection	ET
Fuel pump (mechanical)	ER, ET
Heater Core	HAC
In-car temperature sensor	HAC, E
Instrument Clusters	E
Intake manifold or gasket	ER, ET
Parking brake	B
Parking brake - Electronic	B, E
Radios, info/entertainment screens, other control panels	E
Rear control arms	FE
Rocker arms and push rods	ER, ET
Shift linkage	AT, MT
Stabilizer bushings and links	Any Auto Light Truck or Heavy-Duty Truck Category
Tappet or rocker covers and gaskets	ER, ET
Thermostat and External Water Pump	ER, HAC
Timing belt and/or chain and gears	ER, ET
Transfer Case	MT, AT
Wiring Repairs	E

8-6.3 Heavy-Duty Truck Areas of Repair Key. Below is a key and chart for common repairs and which mechanic specialty category is necessary to diagnose, service, or repair an area of a heavy-duty truck (over 14,000 pounds). This is not intended to be an all-inclusive list. Please contact the Business Regulation Section if you have questions about an area of repair that is not found on the chart below.

Category and Abbreviation		Category and Abbreviation	
Engine Repair (Gasoline)	HD	Brakes & Braking Systems	HDB
Engine Repair (Diesel)	HD	Suspension & Steering Systems	HDS
Drivetrains	HDT	Electrical Systems	HDE

8-6.4 Heavy-Duty Truck Areas of Repair Chart

Area to be Serviced	Acceptable Certification
Air compressors	HDB, HDG, HDD
Air shift components	HDT, HDB
Air starters	HDD, HDB, B
Air suspension system	HDS, HDB
Brake gauges and instrumentation	HDB, HDE
Clutch (with major engine repairs)	HDT, HDG, HDD
Cylinder head gasket	HDG, HDD
Diesel exhaust after treatment system	HDD
Driving axle suspension	HDS, HDT
Electric trailer brakes	HDB, Recreational Trailer
Exhaust manifold	Any Auto Light Truck or Heavy-Duty Truck Category
Flywheel or flexplate	HDG, HDD, HDT
Fan clutch	ER, HDG, HDD, HAC
Freeze (core) plugs	HDG, HDD, ER, ET, HAC
Front or rear pulley or harmonic balancer	Any Heavy-Duty Truck Certification
Fuel pump	HDG, HDD
Grease seals	HDT
Heater water valve	HDG, HDD, HAC
Hydraulic brake systems	HDB
Ignition system	HDG, HDD, HDE
Oil pan and gaskets	Any Heavy-Duty Truck Certification
Rocker arms and push rods	HDG, HDD
Shift linkage (mechanical)	HDT, HDG, HDD
Tappet or rocker covers and gaskets	HDG, HDD
Temperature gauge units	HDE
Thermostat	HDG, HDD, HAC
Torque converter planetary transmissions	HDT
Towed vehicle suspension	HDS, HDB
Transmission or drive shaft mounted parking brakes	HDB, HDT
Transmission mounts	Any Auto Light Truck or Heavy-Duty Truck Category
Water pump	Any Auto Light Truck or Heavy-Duty Truck Category
Wheel bearings	HDB, HDT, HDS
Wheel hubs	HDB, HDT, HDS
Wheel studs	HDB, HDT, HDS

Section 8-7**MECHANIC CERTIFICATION REQUIREMENTS INVOLVING SUBLET REPAIRS**

When vehicles or major components are sublet to another repair facility for repair, the following requirements must be met:

8-7.1 Vehicles Sublet to Another Facility for Major Repairs:

- The second facility must employ, and have the repairs performed by, a properly certified mechanic;
- If the first facility diagnosed the need for repair, the name and certification number of the diagnosing mechanic must appear on the customer's invoice, along with the name and certification number of the mechanic who performed the repairs.

8-7.2 Components (such as an engine or a transmission) Sublet to Another Facility for Repairs:

- The facility removing the part must employ a properly certified mechanic to diagnose, remove, or reinstall the part;
- The names and certification numbers of the mechanics who diagnosed, removed, or reinstalled the part must appear on the final invoice given to the customer.

Section 8-8**MINOR REPAIRS**

Mechanic certification is not required while performing minor repair services. "Minor repair services" means lubrication; oil changes; installing, changing, or otherwise servicing the antifreeze or other coolant; body repairing, except for unitized body structural repair; or the replacement, adjustment, repair, or servicing of any of the following parts and assemblies:

- a) Air cleaner element;
- b) Accessory drive belt;
- c) 12-volt battery;
- d) Ground cable for 12-volt battery;
- e) Positive cable for 12-volt battery;
- f) Hold-down strap for 12-volt battery;
- g) Engine oil filter;

- h) Exhaust pipe, muffler, tail pipe and associated attaching parts;
- i) Fuel filter;
- j) Fuses;
- k) Heater hoses;
- l) Horns;
- m) Light bulbs and headlamps;
- n) Ornamental accessories;
- o) Radiators;
- p) Radiator hoses, upper and lower;
- q) Radiator reserve tank;
- r) Rear springs, leaf or coil, except MacPherson strut type assemblies;
- s) Shock absorbers which are not built in combination with other parts of the suspension;
- t) Wheels, except alignment;
- u) Windshield washer hose;
- v) Windshield washer tank;
- w) Wiper blades.