

VEHICLES
GENERAL OPERATING INSTRUCTIONS

1. GENERAL

1.01 This practice covers operating instructions that are common to all vehicles. It is necessary that every operator and potential operator of a company vehicle be familiar with the contents of this practice. If the instructions covered herein are followed, extended vehicle life, improved safety, and lower maintenance costs will result.

2. BEFORE MOVING THE VEHICLE

2.01 The method in which the operator handles the vehicle is the greatest factor in obtaining maximum economy and performance. The operator should be thoroughly instructed in the operation of the vehicle before it is placed in his care.

2.02 The following procedures should be followed before moving the vehicle:

- a. Before starting, check engine oil and coolant levels. *Place transmission in neutral* and depress clutch pedal (if provided), this lessens the load on the starter and decreases the drain on the battery. Automatic transmissions must also be placed in neutral or park.
- b. *Avoid racing the engine when first starting* as it is harmful to the engine, especially in cold weather. Even though light oils are used, the flow of oil is retarded until engine is properly warmed.
- c. Allow the engine to idle for a short period (2 to 5 minutes), and push manual choke in on vehicles so equipped before attempting to move the vehicle. *Drive vehicle conservatively until heat gauge reads normal.*
- d. *Check the oil pressure gauge*; it should rise immediately upon starting and should not drop until engine is thoroughly warmed and then only slightly. Oil pressure light indicators will go out when the pressure is up, however, a moment should be allowed for the oil to circulate.
- e. Many repair bills can be avoided by keeping the clutch in proper adjustment so that it will release properly and a smooth shift achieved. *Always check the clutch action before moving vehicle.* Clutch adjustment varies (3/4" - 2-1/2") depending upon type of vehicle.
- f. Check brakes

(1) *Air Equipped System*

The *audible warning device* should be on at pressures below 60 pounds.

Allow engine to run until pressure reaches 100 to 120 pounds.

Apply brakes several times with engine running. Pressure should drop to approximately 85 pounds then recover to maximum pressure.

Turn ignition off. Apply brakes and hold. The pressure should not drop over 5 pounds initially. With the brakes held on, the pressure should not decrease at a rate over 1 pound for each 2 minutes. (*This test is basic, and should be performed at the start of each shift.*)

(2) *Vacuum Brakes - Trucks*

Start engine and allow sufficient time for vacuum to build up in system (approximately 1 minute).

Apply brakes and check pedal travel. This should not be over 30% of the available travel distance.

Release brakes and allow engine to idle for 1 minute.

Turn off engine and apply brakes 3 times. ADEQUATE VACUUM SHOULD BE IN RESERVE TO ASSIST ON THE THIRD APPLICATION.

If the vehicle is equipped with a gauge, start engine and BUILD A VACUUM RESERVE OF 18" TO 23". Turn off engine. The vacuum should not drop over 2 inches during a 5 minute period. *This test should be performed at the start of each day.*

If the vehicle is towing a trailer equipped with vacuum brakes, check connections and hoses for leaks and damage.

Vehicles equipped with vacuum booster brakes should not be towed when there has been an engine failure, make use of a tow bar for this condition.

(3) *Light Trucks and Passenger Cars*

Depress brake pedal to a full stop position. THE PEDAL SHOULD BE FIRM.

(4) *All Systems - Operational*

Check tires for proper inflation and visible defects.

Check all lights including stop and turn signals.

After making the above initial tests, place the vehicle in gear and increase speed to 10 mph. Apply brakes. The vehicle should stop promptly without any side directional pull.

3. MOVING INSTRUCTIONS

3.01 Occasionally drivers acquire habits in driving which shorten the life of the vehicle and its component parts. Some points to observe to avoid this are listed below.

- a. *Keep the tires properly inflated*, not only to reduce the tire wear and save fuel, but also as a safety measure to insure proper braking and steering. Tire pressures will vary with size, type and usage.
- b. *Good brakes are essential* so that the vehicle will be under control at all times. A good driver rarely needs to use the brakes to their full capacity and is aware of the fact that excessive strains are placed on the entire chassis if emergency applications are made.

- c. *Avoid allowing engine to idle for long periods*; this will result in dilution of the oil on the cylinder walls. This means that the cylinder walls, bearing, and pistons will not be properly lubricated. At idling speeds, engines will draw in more fuel than is actually consumed, and unburned fuel has a tendency to form harmful carbon deposits, dilute oil and foul spark plugs.
- d. *Stopping on hills*—When it is necessary to stop on a hill, *be sure that the hand brake is set before leaving the vehicle*. If grade is particularly steep, **IT IS ADVISABLE TO BLOCK WHEELS WITH CHOCK BLOCKS ON HEAVY DUTY VEHICLES**. When parking parallel to curbs, be sure to turn wheels *toward curb* if vehicle is *facing downhill*, and turn wheels *away from curb* if vehicle is *facing uphill*.
- e. Be sure to watch dashboard gauges for indications of overheating of engine, excessive discharging or charging of generator/alternator, and low oil pressures. It is important that these gauges be checked intermittently during all operations of the vehicle. Check for excessive oil and water leaks under vehicle when backing or driving from a parking location.
- f. Vehicle speed limits: No person shall drive a vehicle faster than is reasonable or prudent having due regard for the traffic on, and the surface and width of, the highway and in no event at a speed which endangers the safety of persons or property. **THIS IS IN ADDITION TO POSTED SPEED LIMITS WHICH SHALL NOT BE EXCEEDED.**

3.02 Manual Shift Transmissions -

- a. When shifting gears, move the gear shift lever as far as it will go, to assure that they gears are fully engaged. When gears are not fully engaged, they will wear rapidly or chip.
- b. Avoid driving with foot resting on the clutch pedal (referred to as “riding the clutch”), as this may cause the clutch to slip; it may also cause premature wear of the clutch facing, release bearing and engine thrust bearing. *Gradually* release the clutch when starting or changing gears. Avoid jackrabbit starts.
- c. **INCORRECT USE OF THE ENGINE AS A BRAKE MAY CAUSE A GREAT DEAL OF UNNECESSARY MOTOR TROUBLE.** If the engine is forced to run faster than the rated speed or the speed permitted by a governor setting, internal engine parts will not react fast enough and can completely destroy the engine. For example, if the engine is governed at 4,000 RPM, permitting the vehicle to travel 40 miles per hour in high gear, and the unit is driven downhill at a speed of 50 miles per hour, momentum of the vehicle will force the engine to run 800 RPM over the governed speed. This increase is enough to destroy the engine.
- d. When traveling downgrade, it is advisable to change to the same gear as required to go up the grade, or one gear lower. This will normally provide adequate engine braking action. *Always* keep the motor running. *In all cases* brakes *must* be reserved as the main factor in retarding the descent. Do not rely on brakes alone on long grades as they will become hot and “Fade.” Over prolonged use, brake fade will result in complete temporary (until cooled off) loss of braking. *Do not* allow engine to operate in excess of governed speed.
- e. Lugging the engine on uphill grades at low engine speeds promotes overheating and is harmful to all working parts of the engine. Although it is desirable to have an engine that will pull exceptionally well, proper engine speed should be maintained by selecting a lower gear when traveling uphill. (Lugging is defined as being unable to increase speed by depressing the accelerator.)

- f. There are certain types of field conditions where it is practically impossible to shift to a lower gear without stopping the vehicle. For example, operating in loose sand where the momentum of the vehicle is rapidly decreasing, the gears on the main shaft of the transmission will lose their momentum faster than those of the driveshafts. In this type of soil, it is desirable to bring the vehicle to a complete stop before attempting to shift. When vehicle is at a standstill, select the proper gear before resuming operations.

3.03 *Four-Wheel Drive* – DRIVERS MUST BE FAMILIAR WITH THE FUNCTIONS OF THE FOUR-WHEEL-DRIVE TRANSFER ASSEMBLY TO OBTAIN SAFETY AND EFFICIENCY. Refer to manufacturer's instructions for specific vehicles.

3.04 *Automatic Transmissions* – In present use are various automatic transmissions each of which operate somewhat differently. Avoid driving with left foot on brake pedal as this will wear brakes and place a strain on the transmission and engine.

4. CARE OF VEHICLE CAB

4.01 Tools and work equipment are NOT to be carried in the cab of the vehicle. Under no condition will an employee drive or ride in the cab of a vehicle while wearing tool belts, climbers, lineman's safety belt or tool pouch.

4.02 Cabs must be kept in a clean orderly condition at all times.

5. PRECAUTIONS FOR VEHICLES AT JOB LOCATIONS

5.01 When locating vehicle at job site, safety is a most important consideration; therefore, the workmen or crew should complete the necessary precautions listed below, as applicable:

- a. Direct vehicle operator when backing vehicle to job site location.
- b. Place traffic cones, "Men Working" signs and high level warning devices as applicable.
- c. Place flasher lights.
- d. Check aerial clearances before derrick is raised into place.
- e. Inspect site to prevent property damage.
- f. Secure dolly or poles.
- g. Make sure that vehicle is in gear or "park" and EMERGENCY BRAKE AND MICO-BRAKE LOCK are applied when left unattended.
- h. Place chock blocks when parking vehicle on hills and grades. Do not rely on brake lock devices such as mico-lock, or hand vacuum and air controls for unattended parking on grades.

5.02 Warning devices or flagmen are required when traffic may be hindered by the job-site parked vehicle near hills, curves or other obstructions to other drivers' vision are encountered.

5.03 Before raising, swinging or otherwise operating the lift, boom or derrick *make sure there will be no interference from traffic, nearby objects* OR POWER FACILITIES. All operations shall be done with the vehicle facing with the direction of traffic, when practicable.

- 5.04 Before entering or leaving the vehicle, the driver should always assure himself that boom, basket, derrick, ladder, or any other part of the vehicle is not in contact with any object that might energize the truck. *If there is any doubt, it must be assumed that the truck is energized.*

SAFETY PRECAUTIONS: Plan and conduct work in the vicinity of power structures as though any metallic part of the power structure is alive with a dangerous voltage. Avoid all contacts, directly or indirectly, with any metallic part of the power system.

If shocks are experienced, due to other than normal telephone voltages and currents, work involving contact with wires should be stopped immediately.

When an accidental contact with power wires is made, **NO ONE SHALL APPROACH AND MAKE CONTACT WITH VEHICLE OR WIRES.** Vehicle driver, operator or any other person who may be on the vehicle, shall remain on the vehicle until the contact can be cleared.

5.05 *Moving vehicles with a man in the operator basket -*

- a. When a workman/operator is in the basket of a lift, boom or ladder the driver shall not leave the cab of the truck unless the engine is turned off, hand brake set, and the vehicle is either in low or reverse gear "park" position. If the vehicle is on a grade, in addition to the above, chock blocks must be placed against the wheels.
- b. Any movement of the truck, while a workman/operator is in the basket, is to be made only at the direction of that workman.
- c. When operating on inclines or terrain where the vehicle is not level, exercise caution as stability of the vehicle is reduced. While traveling over uneven ground, speeds must be reduced and the boom or ladder must be retracted, lowered and aligned with the vehicle.

When moving the vehicle with the boom or ladder elevated, the speed should not exceed 2 miles per hour. The driver should be alert for instructions from the workman/operator in the basket. No wires, lines, strand, or cable should be attached to the boom or ladder, except as permitted in detailed instructions for specific vehicles. Under all conditions when a man is in the basket, the vehicle must be operated in the lowest possible gear.

- 5.06 No person driving, or in control of, or in charge of, a motor vehicle shall permit it to stand on any highway unattended without first effectively setting brakes therein and stopping the motor thereof as stated in paragraph 5. (A Vehicle Code effective in many states.)

This means, in effect, that a workman/operator SHALL NOT BE IN THE BASKET OF ANY AERIAL PERSONNEL CARRIER WITH NO ONE IN CONTROL OR ATTENDANCE AT THE VEHICLE CAB WITH THE ENGINE RUNNING. The only exception is a vehicle that is specifically designed for security during one-man operation.

6. **INTERCOMMUNICATION SPEAKERS**

- 6.01 Intercommunication speakers are provided in most areas for all aerial lift, boom basket and ladder vehicles. These speakers are located in the basket area and in the cab of the vehicle. They are to provide two-way communications between the workman/operator and the driver.

CAUTION: An intercom should be used whenever there are two men on the vehicle; one man in the basket and the other in the vehicle.

7. FLASHER WARNING SIGNALS

- 7.01 Certain vehicles have been equipped with special amber warning lights. The conditions under which these lamps may be used are limited. Their use is confined to periods when utility crews are actually engaged in construction, removal, maintenance or inspection of telephone plant during such times that our vehicles shall be either moving at a rate of speed less than the normal flow of traffic, thereby creating a hazard, or parked *other* than adjacent to a curb.
- 7.02 *Warning lamps are intended to augment and not to take the place of* traffic safety warning devices such as, cones, signs, flags, flasher lights, and high level warning standards, presently required by safety practices.

8. VEHICLE SECURITY

- 8.01 To prevent losses of tools, materials or other property, the following measures shall be taken:
- a. All tools and materials not in use shall be placed in the proper compartments on the vehicle, not on the bed of the truck or the ground nearby.
 - b. When leaving the vehicle unattended at a work location or when stopping for lunch, all bins and compartments containing tools and materials and cab shall be *locked* and the *keys shall be removed from the truck*. Other items should be removed and placed in protective tool areas, chained and locked to the vehicle.

9. REPORTING VEHICLE TROUBLE

- 9.01 All vehicle defects which create unsafe conditions or potential mechanical failures to the driver or workman/operator, shall be reported as directed by local procedure.