* **Pre-shift inspection**
	+ General Task
		- Possible hazards that may be present in the work area
		- Complete Job Safety Briefing (JSB)
* Mobile Equipment
* Obstruction and/or “Do Not Operate” tags.
* Fluid levels
* Mechanical and Safety features
* If safety defects exist, tag out and DO NOT OPERATE until repaired
* Walk around for obstructions prior to putting equipment into motion
* Controls
* Gauges
* Lights
* Switches
* Operating Controls
* How to start/How to shutdown
* Proper starting procedures
* Temporary/Long-term Shutdown Procedures (if applicable)
* Test procedures for emergency and auxiliary operating features
* Emergency stop
* Braking
* Steering
* Etc.
* Operational procedures
* Safe Equipment Operations
* Emergency Action Procedures
* What to do in case of emergency
* Summary of specific incidents

Task–training for TRUCK CAT 789



Figure 1 - Truck CAT 789

09-30-02P

This task training outline is provided solely for training purposes and should not be considered a substitute for the recommendations of the equipment manufacturer or MSHA or OSHA requirements

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# Pre-shift inspection

## General Task

One of a heavy equipment operator’s most important responsibilities is the machine inspection. Inspections not only ensure the operator’s own safety but also the safety of everyone else on your jobsite.

When an operator finds a break line leakage, a loose hose fitting, missing seat-belt, horn not working or some other problem before a failure, he or she can avoid injuries and incidents, minimize downtime, and save time and money. That’s a lot of added value for a process that only takes a few minutes.

Operators spend much time with equipment that they know it very good. That’s why they should also engage their senses of sight, smell, sound and touch to reveal clues about the status of a machine. Operators should always watch out for each other and they should never assume, but keep a good communication.

1. Horseplay will not be tolerated.
2. No tailgating.
3. No passing or racing.
4. If sleepy, stop and walk around and stretch.
5. Do not operate if a physical or psychological problem exists.
6. Watch out for other operators.
7. Use proper hand position on steering wheel (i.e., thumbs out of wheel.)
8. When in doubt about a situation, stop and check situation or call supervisor.
9. Clean windows and lights whenever necessary.

### Complete Job Safety Briefing (JSB)

Always fill out Operational Safety Checklist and mark areas that needs repair.

# Walk-around inspection

An operator should begin walk around inspection from the front side of the vehicle. Walk around truck and check for obstructions, people and “Do Not Operate” tags. The master-switch is also on the front side of the truck.

## Fluid levels/Mechanical and Safety features

Check the transmission, hoist, and brake hydraulic system for oil. Be sure bed is down and transmission is in neutral before checking.

1. Check belts.
2. Check fuel level.
3. Check box pins and tie rod ends.
4. Check tires, rims and bolts
5. Check fire suppression trigger.

### Obstruction and/or “Do Not Operate” tags.

Walk around for obstructions prior to putting equipment into motion. If safety defects exist, tag out and DO NOT OPERATE until repaired!

# Pre-operational inspection

Not only is important to check the cabin because of the law, but also to ensure safety of employees, safe operation and overall safety. A good inspection will give you a better understanding of the systems and items inside the cab.

## Controls

## Gauges

1. Engine oil pressure gauge.
2. Brake air pressure gauge.
3. Water temperature gauge.
4. Hour meter.
5. Torque converter oil temperature.
6. Tachometer.
7. Speedometer/odometer.
8. High beam indicator.

## Warning Lights and Signals

1. Steering warning light.
2. Low engine oil pressure light.
3. Park brake light.
4. Transmission filter light.
5. Fuel filter light.
6. Retarder light.
7. Coolant flow.
8. AID system (If system goes off, assume something's wrong with the truck and have it checked out.)
9. Donaldson dust detection system.
10. Fire suppression system.

## Switches

1. Horn.
2. Windshield wiper.
3. Dimmer switch.
4. Master switch.
5. Engine shutoff.
6. Engine start.
7. Light switch.
8. Test panel lights.
9. Climate controls.
10. Fan switch
11. Heating control
12. Warm
13. Cool
14. Air only
15. Pressurizing
16. Defogging
17. Seat controls.
18. Over-speed test switch

## Operating controls

1. Accelerator.
2. Transmission selector.
3. Brakes.
4. Park
5. Service
6. Retarder
7. Emergency
8. Turn signal.
9. Hazard flasher.
10. Box - hoist control lever.

# How to start/How to shutdown

## Proper starting procedures

1. Walk around truck and check for obstructions, people, and "Do Not Operate" tags.
2. Check the transmission, hoist, and brake hydraulic system for oil. Be sure bed is down and transmission is in neutral before checking.
3. Check belts.
4. Check fuel level.
5. Check box pins and tie rod ends.
6. Check fire suppression trigger.
7. Check engine oil. Oil level should be in the safe starting range on the 'engine stopped' side of the dipstick.
8. Check steering hydraulic tank for oil.
9. Mount the machine properly facing machine and using handrails.
10. Check coolant level gauges. (2)
11. Check air filter indicator.
12. In cab:
13. Insure all controls are in the neutral position (transmission, hoist control in float).
14. Turn on master switch.
15. Turn the run/start switch to start and release when started.
16. Insure that the park brake is set.
17. Turn the ether aid switch to the automatic position.
18. If ether is necessary:
19. Turn switch to start.
20. After engine is cranking, hold ether injector for about three seconds and release it.
21. Additional ether can be injected every three seconds until engine is running smoothly.
22. After engine is started, check for oil pressure. If pressure doesn't register in 30 seconds, shut down and find out why.
23. The low air pressure alarm will probably sound until the service brake/retarder air reservoirs are charged to approximately one-half maximum operating pressure.
24. Inspect all other gauges for correct readings.
25. Turn on all lights.
26. Dismount properly facing the machine and using the handrails.
27. Check:
28. For leaks.
29. For loose bolts and structural damage.
30. Tires, rims, lugs.
31. Lights.
32. Recheck engine oil for proper level on the 'running' side of the dipstick. (Will read low after cold start).
33. Recheck steering system for proper hydraulic oil level.
34. Recheck transmission, hoist, and brake system for proper oil level. Box must be lowered.
35. Mount the machine properly.
36. In cab:
37. Adjust seat, **Fasten seat belt.**
38. Press panel test button.
39. Look for loose items in the cab.
40. Check windows for cracks, ice, and dirt.
41. Check wipers.
42. Check backup alarm.
43. Check fire suppression system.
44. Insure hoist is in float position, Insure adequate air pressure.
45. Check Emergency Steering prior to operation.
46. Depress service brake.
47. Release park brake.
48. Use proper horn signals--one blast for forward, two for reverse.

## Proper Shutdown/Parking

### Temporary Shutdown

1. Look for and park in area clear of other equipment when:
2. Talking with supervisor.
3. Having mechanical troubles.
4. Taking lunch.
5. Do not park close to highwall.
6. Place transmission in neutral.
7. Set park brake.
8. Dismount and mount facing machine using proper handholds.
9. Prior to moving, make walk-around and use proper horn signals.

### Long-Term Shutdown

1. Find level area.
2. Do not park close to highwall.
3. Place transmission in neutral.
4. Set park brake.
5. Drain moisture from air systems (2 locations - 3 valves.)
6. When machine is properly cooled, shut down engine and dismount properly. Turn off master switch.

CAUTION: Loud noise will damage your hearing. This machine requires that you wear hearing protection when the machine is running.

### Parking

1. Place transmission in neutral.
2. Set park brake.
3. Do not set emergency brake.
4. Park on level ground.
5. Chock wheels if on an incline.

### Parking (Short Term)

1. For short term, during shift parking situations, prior to backing up you must receive positive radio or ground communications giving an all clear before you back up.
2. Trucks should park in the same location in a similar fashion. When trucks are parked end to end, they must be staggered so the operators cab is to the left of the truck in front of it.
3. Trucks should be parked so that a forward direction is possible when leaving.
4. Apply park brake.
5. Park on a level surface.
6. Use horn signals before leaving.
7. Loaded truck should not be parked close to other equipment.

### Parking (Long Term)

1. Trucks should park in the same location in a similar fashion. If parking end to end, they must be staggered so the operators cab is to the left of the truck in front of it.
2. Trucks should be parked so that a forward direction is possible when leaving.
3. Apply park brake.
4. Park on a level surface.
5. Use horn signals before leaving.
6. No truck should be parked with a load.
7. When parked for more than 5 minutes the truck should be put on high idle.
8. Each truck has a designated parking area on the hot start line.
9. Do not plug into Kim Hot Start unless instructed to do so. Do not connect or disconnect Kim Hot Start unless you have been shown how to do so.
10. Make sure truck box is empty before going for the first load after long term parking.
11. When parking heavy equipment on hot start lines, Operators must always pull into the hot start in a forward direction. When leaving the hot start lines always drive in a forward direction of travel. **If for any reason heavy equipment has to travel in a reverse direction a guide must be present to ensure the area directly behind the equipment is clear. (This does not include equipment that is normally backed into their regular parking area such as water trucks, blades, etc. Since there is a ditch directly behind their parking area, this area is off limits to employees walking on the ground or driving any vehicles, equipment, etc. into this area.**
12. Start up and shut down should be done in accordance with the operator's manual.

### Radio Communication

1. Do not use radio unnecessarily.
2. Keep conversations short and business-like.
3. Maintain good communications with other truck drivers.
4. If in doubt about a situation, use the radio.
5. Follow FCC regulations.

# Test procedures for emergency and auxiliary operating features

## Emergency stop

As you are operating and you should experience engine loss do not shut the ignition key off, you should steer the machine to a safe location, come to a complete stop, set your park brake, shut your ignition off and call for assistance. If your Low Steering pressure light on the EMS panel should light up during operation you should also steer the machine to a safe location, come to a complete stop, set your park brake, shut off your ignition off and call for assistance. Please view “Cat Secondary Steering” Power point

## Braking

### SERVICE BRAKE CHECK

1. Start the engine and allow the air system to build up to the operating pressure.
2. Move the parking brake control to the OFF position. Do not depress the secondary brake control.
3. Move the transmission control to NEUTRAL position.
4. Depress the service brake control fully.
5. Move the transmission control to the FIRST GEAR position.
6. Increase engine speed to 1300rpm. The machine should not move.
7. If the machine moves, **DO NOT OPERATE; CONTACT MAINTANCE IMMEDIATELY.**

### PARKING BRAKES

NOTE: The air control valve for the parking brake activates all the wheel brakes. The wheel brakes are applied by spring pressure and the wheel brakes are released by oil pressure.

1. The parking brake tests consist of the following two tests.

#### Brake Drive Through Test

NOTE: This test should be conducted when the truck is empty.

1. Move the parking brake control to the ON position.
2. Move the transmission control to the FIRST GEAR position
3. Increase engine speed to 1300 rpm. The machine should not move
4. If the machine moves, DO NOT OPERATE, CONTACT MAINTENANCE IMMEDIATELY.

#### Brake Slope Test

NOTE: This test should be conducted when the truck is loaded to the normal rated capacity.

1. Load the truck to the normal rated capacity.
2. Park the machine on a slope of no more than 15 percent.
3. Depress the service brake control.
4. Shift the transmission control to NEUTRAL.
5. Move the parking brake control to the ON position
6. If the machine moves, DO NOT OPERATE, CONTACT MAINTENANCE IMMEDIATELY.

### SECONDARY BRAKE CHECK

NOTE: The secondary brake air valve activates all the wheel brakes. The wheel brakes are applied by spring pressure and the wheel brakes are released by oil pressure.

1. Start the engine and allow the air system to build up to the operating pressure.
2. Do not depress the secondary brake control.
3. Move the transmission control to the neutral position.
4. Depress the secondary brake control fully.
5. Move the transmission control to the FIRST GEAR position.
6. Increase engine speed to 1300 rpm. The machine should not move.
7. If the machine moves, DO NOT OPERATE, CONTACT MAINTENANCE IMMEDIATELY.

### RETARDER BRAKE CHECK

NOTE: The retarder air control valve activates the front brakes and the rear brakes/

1. Stop the machine in a level area.
2. Pull the manual retarder control lever completely to the down position
3. Move the transmission control to the NEUTRAL position.
4. Move the parking brake control to the OFF position.
5. Move the transmission control to the FIRST GEAR position.
6. Increase engine speed to 1300 rpm. The machine should not move.
7. If the machine moves, DO NOT OPERATE, CONTACT MAINTENANCE IMMEDIATELY.

## Steering

### Check auxiliary steering prior to operation.

1. (Make sure that the area in which you are checking the steering is clear of any obstacles and personnel). There are actually several steps in order to check the emergency steering on the CAT 789 trucks. While performing your inspection take not of where the oil level is in the sight gauge on the hydraulic tank. If the engine is shut down the oil should appear in the top sight gauge. If the engine is running the oil should appear in the bottom sight gauge.
2. The CAT 785 is assisted in its steering with accumulated pressure. If the machine is running and you can steer the truck from the left to right and back again then you can assume that the auxiliary steering is also in working order, because both work off of the same system. One will not work without the other.
3. It is not necessary to shut the truck off in order to test the auxiliary steering. However, if an MSHA inspector told you to shut your engine off to test your steering you should not shut the engine down by way of the ignition key. By doing so will immediately begin to reduce the accumulator pressure and thus you may not be able to steer the machine. You should use the ground shut off to shut the truck down.

## Hot Tire Procedures

At times, tires are overlooked by operators and service people. All personnel at the Red Hills Mine must fully understand the potential hazards involved when working around tires and rims and an effort must be made by everyone to alleviate and prevent blowouts and know certain procedures to follow when a hot tire is suspected.

Tires can and do explode every day, and under pressure pack the explosive force of dynamite. Of equal force, a broken rim part under pressure could blow apart and kill the moment the lugs on dual assemblies are removed, and even though a tire appears to be flat, it may still contain enough air to be dangerous.

### Operator Awareness

The operator may be the first person that has contact with a possible hot tire. The operator should be aware of some of the warning signs. Some of the warning signs associated with any hot tire include:

1. The tire is actually smoking.
2. The tire may be warmer than a tire in a similar position on the machine.
3. The tire may be hot to the touch.

These warning signs can be caused by a number of reasons:

1. Overheated differential, which may transfer heat to the tire.
2. Brakes that may be dragging or hung up which could also overheat the rim and consequently the tire.
3. One dual still inflated running with an adjacent flat tire will overload and cause a tire to run hot.
4. Tire separation.

Operators need to get in the habit of checking tires on their pre-shift and walk around inspections of their machines. A simple touching of the tire should alert the operator of a warmer than normal tire temperature. A visual examination should also be made, looking for abnormalities, cuts, bulges or smoke.

If an operator is suspicious of a hot tire in the field, the operator of the machine should cease operating the machine and park in a fashion to minimize the health hazard potential. The machine should be parked so that the suspected tire is facing an area free of other people and away from any traffic. The area should be secured to prevent personnel from getting too close.

### Maintenance technicians and mechanics

 Maintenance technicians and mechanics are probably the most exposed personnel to the actual hazards associated with hot tires. Maintenance technicians and mechanics especially, must also get in the habit of checking tires and rim temperatures of equipment when they come in for a maintenance check, especially when a brake is dragging or a differential is overheating. They must also be cognizant of the fact that there may be a heat transference to an adjacent tire.

 Under no circumstances should a piece of equipment with a suspected hot tire be allowed to park in or near the shop. The equipment should be parked on the road just to the East of the hot start line (see diagram below) so that the tire faces east to protect any personnel which might be working in the area.

 The equipment should also be parked so that there is no danger of damaging any other equipment such as electrical power cable. The area should be secured to prevent any personnel from getting too close to the suspected hot tire. This can be accomplished by putting up safety ribbon or setting cones up around the area to identify the potential hazard.

 Explosion temperatures of tires vary depending on the make, size, ply rating, wear and general conditions of the tire and to try and pinpoint a specific temperature would be impossible. However, it is known that the rubber of tires start to revert to a liquid state at 105 degrees C. or 221 degrees F.

 External temperatures can be greatly different than internal temperatures and there is no safe or easy way to measure internal temperatures, however a temperature gun can be used at a distance to give us an idea of how hot a tire might be externally.

## Operational procedures/ Safe Equipment Operations

### Pre-Haulage Checks

1. If hauling at night, be sure light plant is set-up in proper location, running, and positioned properly.
2. Check road and ramp conditions. If wet and slippery, be sure to operate at a safe speed.
3. Check highwall stability and proper berm height for safe dumping. If soft or unstable near edge, stay 10-15 feet from edge when dumping. Berm must be at least the height of half the wheel height of the truck.
4. Perform a complete walk around inspection of truck prior to operating. If any safety defects exists, tag out the truck, notify shop and supervisor of the problem.

### Road Travel

1. Operate your truck at a speed where you will not lose dirt out of your box.
2. Maintain adequate clearance from road maintenance equipment. Blades have the right of way.
3. Avoid rocks.
4. If possible, do not drive on windrows.
5. Be aware of slippery conditions because of rain, water truck, and snow.
6. Do not tailgate. Maintain at least (6 truck lengths) between trucks on the road.
7. Before passing under a cable tree double check that your box is down.
8. Do not park on the haul road. Pull off to the side if possible. If truck breaks down, chock wheels if on a slope.
9. A traffic flow plan should be developed and followed by all the fleet.
10. Offset your wheel tracks in soft areas.
11. Whenever you see a light vehicle enter your roadway, assume they do not understand your traffic flow and give them added clearance.
12. Do not pass like pieces of equipment.
13. Passing other equipment should be done only in areas where there is adequate visibility and clearance.
14. Drive defensively at all times.
15. Use back up lights only where there is a purpose. Do not leave them on at all times.
16. When you meet any other traffic on the haul road, dim the driving lights.
17. When operating around the shovel at night be aware that your lights can be a hazard to the other equipment in the area. Shut truck headlights off when getting loaded or waiting to avoid blinding other operators.
18. Avoid turning around to your blind side.
19. Don't overdrive your ability.
20. If rough or soft roads are encountered SLOW DOWN!
21. Overburden trucks have large blind spots; you cannot see every angle.
22. When on the major roads obey all traffic signs. A yield sign means you must be able to stop. A stop sign means STOP.
23. If it is necessary to travel a road too narrow for two-way traffic, signs should be placed on both ends of the area and radio communication used prior to utilizing the affected area.
24. Make sure all berms are in place. If you see an area beside the road lacking a berm it is your responsibility to call your supervisor.

### Operational Guidelines for dumping near overhead power lines

1. Use alternate equipment when possible, such as scrapers.
2. Dump 100 ft. from power lines
3. Utilize daylight hours as much as possible.
4. Dump with truck proceeding away from power lines.
5. Have a fill dozer present to spot truck.
6. Lower box completely before leaving fill.
7. Utilize portable sign.
8. Overhead Cable tree poles are marked at 30 feet for reference.

### Traffic Patterns

1. Follow standard patterns unless otherwise posted (i.e., left hand traffic.)
2. Drive according to conditions (dust, fog, snow, mud, rain, night, traffic, steam.)
3. Maintain steady cycle times.
4. Watch for water truck (slippery spots, curves, un-surfaced roads.)
5. No tailgating.
6. No passing like equipment.
7. No passing on ramps.
8. Be aware of other vehicles using haul roads.
9. Always be prepared to stop.
10. Watch transmission temperature on steep grades.
11. If stalled on ramp, wait for assistance.
12. Report hazardous conditions to supervisor.
13. Watch for crossing traffic.
14. Reduce speed on sharp corners.
15. Avoid spilling on haul roads.
16. Stay a safe distance from the shoulder.
17. Use retarder whenever possible (avoid service brakes on grades.)
18. Dim lights when meeting other vehicles.
19. Pump brakes in slippery conditions. Do not lock up.
20. Report narrow haul roads to supervisor.
21. In dry conditions, do not travel in same path. Compact entire road.
22. No coasting in neutral.
23. Never drive truck with passenger standing on walkway.
24. Use caution around overheads and power cables.
25. Avoid chunks and rocks on road.
26. In soft conditions, lock transmission only in the highest gear the truck will maintain to avoid unnecessary shifting.

### Loading

1. The transmission should be placed in neutral and the service brake or retarder set while being loaded.
2. Apply park brake whenever leaving the cab of the truck.
3. Do not drive forward under bucket.
4. Never load over the cab.
5. Spot one truck at a time.
6. Make sure shovel operator is in cab to assist with backing and spotting.
7. When poor visibility, contact loader operator by radio for assistance with backing.
8. Position truck on firm ground, if possible.
9. Watch mirrors closely when backing.
10. Be aware of loader's problems and responsibilities.
11. Stay in cab during loading.
12. Watch for counterweight of shovel.
13. Do not overload. Load according to conditions.
14. Driver should be aware of cables, pumps, sumps, light vehicles, personnel, highwall conditions, spoil piles, and chunks. Notify supervisor if there are any hazardous conditions.
15. Watch for obstructions on blind side. Avoid blind side turns. If necessary to do so, be alert to problems.
16. Watch for overhead cables (location and clearance).
17. Report narrow roads to supervisor.
18. Avoid backing whenever possible.
19. Avoid running over chunks.
20. When unsure about a loading situation, get out and check.
21. When stuck, do not spin tires. Call for help.
22. Report improper lighting conditions to supervisor.
23. If in doubt, use radio.
24. Be careful of front end of truck snowplowing.

### Pit Traffic

1. If necessary to change traffic other than posted signs, the sign should be changed before entering ramp.
2. Be aware of all equipment in pit.
3. Be aware of highwall and spoil conditions.
4. Watch for personnel in pit (surveyors, pump crew).
5. Watch for dragline (stay out of swing radius unless direct radio contact has been established and the job has been planned between both departments).
6. Be aware of traffic pattern and any changes.
7. Be aware of sumps, pumps, hoses, electrical cables, tie off, skids.
8. Report narrow, unstable roads in pit to supervisor.

### Maneuvering Around Shovel

1. Approach from front of shovel.
2. If not possible to approach from front call the shovel operator.
3. Maintain adequate distance from shovel. Utilize a stationary part of the shovel to line up such as circle gear.
4. Be aware that the shovel track position may change from load to load.
5. Back in square so that the side of the truck is parallel with the front of the shovel.
6. When approaching the shovel examine the area where you will be loading before you back in.
7. watch out for rocks
8. backing up on the tail
9. holes
10. sub-cut
11. other equipment and personnel
12. soft spots
13. trail cable
14. Be sure before you back in. If unsure call, get out, but never assume.
15. Always use horn signals (1 - forward, 2 - reverse) when not in a working situation or at any time when there are people or equipment that are unaware of your activities.
16. You cannot rely totally on the mirrors to back up because different mirrors are adjusted differently.
17. While waiting to pull into shovel, maintain at least two truck lengths of buffer between your truck and the truck being loaded.

### Dumping on Stockpile or Fill

1. If the driver is in doubt about a level area on which to dump, the dozer operator or supervisor should be contacted.
2. Dump on level area.
3. Dump loads in position to conserve dumping area and maintain a level surface.
4. Keep outside edges high, but stay a safe distance from the edge.
5. If not suitable for dumping, wait for dozer to level pile.
6. Avoid dumping uphill.
7. Report improper lighting on stockpile to supervisor.
8. If starting to tip, stop. Call supervisor.
9. Operate according to conditions. Visibility, chunks, steam, holes.
10. Keep visibility and good communications with dozer in dump area.
11. Do not dump near stuck vehicles.
12. Maintain uniform pile.
13. Never dump on a side slope.
14. The fill dozer is responsible for the fill area. The fill dozer also has the right of way.
15. When dumping you should dump left to right.
16. When backing up to the berm make sure you are square with the berm.
17. When backing up to a berm watch out for #6.
18. If adequate berm is not in place dump at a safe location.
19. When dumping back all the way against the berm.
20. Release the box before you drive away from the berm. The box should be lowered approximately 50% of the way down before driving away. If there are poor conditions such as bad roads, sticky dirt, etc., it may be necessary to lower the box more.
21. Do not use the park brake for dumping. Use the service brake or retarder instead.
22. It is not always necessary to raise the box all the way up to dump your load. Bottoming out you cylinders is possible if the box is raised too high at high RPM's.
23. Transmission should be placed in neutral with the engine idling before raising the box.
24. Truck should be at a complete stop with the engine at a low idle before going from forward to reverse.
25. Do not pull in behind the fill dozer. Avoid the area where the dozer is actively backing.
26. Dumping uphill can cause the front end to lift off the ground. Avoid this situation.

### Subsoil Spreading

1. Surface conditions should be stable and level.
2. Raise box until dirt starts to come out.
3. Drive ahead slowly (no faster than 2nd gear).
4. Continue raising box until dirt is gone.
5. Slow down and lower box until approximately 50% down.
6. Spreading other than this application is done at the supervisor's discretion. Procedures to be discussed at that time.

### Towing and Pushing

1. No one person towing procedures are allowed at any time.
2. If it is necessary to tow a vehicle:
3. Use only approved nylon tow ropes, cable, or chains.
4. Use only hooks when provided.
5. Prior to moving, use beacons, flashers, or other suitable warning devices.
6. Towed vehicle must be under control at all times. Make sure brakes and steering are operable.
7. Maintain towing speed for existing conditions.
8. Never tow another vehicle while backing.
9. Do not hurry.
10. Tow truck only if shafts and drive-lines have been removed.

### Getting Stuck

1. Transmission should never be put into gear unless the engine is at a low idle.
2. Tow cables should be hooked up on the high side of the truck. Exception may be if there is a possibility of twisting truck frame; then it may be better on low side and pull at an angle.
3. Get help to carry and hook up tow cables.
4. Double tow cable whenever possible.
5. If there is a chance of damage or tipping, contact the supervisor before trying to get the truck out.
6. Use caution when handling tow cables. Watch for frayed cable ends.

When truck is stuck dismounting can be dangerous. You may need to get help.

### Traffic in and Around Shop

1. Reduce speed.
2. Use proper horn signals.
3. 1 blast - forward
4. 2 blasts - reverse
5. Park safe distance from other equipment.
6. Backing (see below).
7. Watch out for all personnel.
8. Observe "no parking" areas and park in designated areas only.
9. Stop and sound horn before entering shop.
10. Have two ground men for entering and leaving old shop; one for new shop.
11. Be aware of lighting changes when entering shop.

### Backing

1. No backing out of shop unless a ground man is present giving directions. Two ground men required in old shop.
2. No backing up to stuck equipment without ground man.
3. Avoid backing up whenever possible.
4. If it is necessary to back up with a truck, one of the following four requirements must be met:
5. A guide must be present to assist the operator.
6. Guidance by radio communication is acceptable.
7. The operator may do a walk-around to inspect area for obstructions.
8. Can back up to a sufficient berm.

### Weather Conditions

1. Notify supervisor of changing weather conditions.
2. Do not operate if unsafe conditions exist.
3. Reduce speed accordingly.
4. Drive defensively.
5. Be aware of longer stopping distances.
6. Bad conditions include rain, snow, ice, mud, dust, fog, and steam.

# Emergency Action Procedures

## What to do in case of emergency

1. Loss of engine.
2. Pull over and stop immediately.
3. Try to get out of traffic.
4. Loss of air pressure.
5. Pull over and stop immediately.
6. Set park brakes.
7. Shut down engine.
8. Turn wheels to hold truck (berm).
9. Flat or low tire.
10. Pull over and shut down.
11. Keep both hands on wheel and in the proper position.
12. Set park brakes.
13. Fire
14. Stop and shut down engine.
15. Radio for help.
16. Turn off master switch.
17. Activate fire suppression for large fire.
18. Use fire extinguisher, if small.
19. Leave area of the machine. No machine is worth a life.
20. Stay clear of burning tires.
21. Loss of steering.
22. Grip steering wheel securely.
23. Stop immediately.
24. Loss of brakes.
25. Apply park brake.
26. Hit soft spot, ditch, hole, berm, side of large spoil, highwall (right side of truck). Look for area free of obstacles and personnel.
27. Use good common sense.
28. Throttle sticking.
29. Use brakes.
30. Put on retarder.
31. Find soft spot or hole (stall it out).
32. When truck is under control, shut off engine. Be aware that steering will be lost.
33. Use fire extinguisher in air intake if all else fails.
34. Slippery roads (loss of control).
35. Drive safely, keep truck under control.
36. Keep truck going straight if possible.
37. Don't lock-up brakes.
38. Feather or fan retarder or brake as necessary.
39. Tipping.
40. Stay in cab while tipping with seat belt fastened.
41. Shut engine and master switch off.
42. Contact supervisor.
43. Watch for fire.
44. Loss of lights.
45. Stop out of traffic, if possible.
46. Set up cones or blinking lights.
47. Contact supervisor.
48. Warn oncoming traffic. (Use flashlight and radio.)
49. Loss of park brakes.
50. Use wheel chocks.
51. Keep foot on service brakes.

Contact shop or supervisor immediately.

# Summary of specific incidents

1. An overburden truck developed a massive oil leak which went undetected by the operator. As a result the truck suffered extensive engine damage. Gauges should be monitored closely, during walk around inspections before and during shift operators should check for leaks, and operators should always be on the alert for evidence of leaks from other trucks.
2. The front left corner of an overburden truck was damaged when it was hit by a dozer backing in the fill area. Contributing factors were a soft fill area, congested work area, and the dozer operator losing the truck in its blind spot. Operators should maintain good communications at all times.
3. While waiting to be loaded by the shovel, one overburden truck backed into another overburden truck parked behind it. Contributing factors were blind spots and a congested work area. If you can't see to back don't back. Dove tails to cabs are expensive and a very serious potential for tragedy.
4. An overburden truck deck and handrail were bent when the truck slid into the highwall during icy conditions. Trucks should stay a minimum of 10 feet from the highwall at all times.
5. Three cable trees, two sections of 23 kv power cable, three sections of 8 kv cable, and a rabbit house were damaged when an overburden truck was driven through the cable trees with the box up. Shift inhibitors on the 789's provide some protection but the operator must be aware of the box position at all times. This is extremely important.
6. An overburden truck rolled into another truck parked in front of it causing damage to all the front hand rails. The park brake was not set or was inadvertently released when the operator got out of the truck. The trucks were not parked staggered. The operator is responsible for making sure the park brake is set each time they leave the cab. Parking in a staggered pattern is imperative to prevent the dove tail to cab accidents.
7. An overburden truck was damaged when the truck hit the shovel while backing in to be loaded. The cause was inexperience. When backing up to the shovel the potential for accident is greatly increased. The operator must watch both mirrors, ground conditions, and never assume. If you are uncertain of the backing path, call for assistance.
8. An access ladder was damaged when the truck box was lowered on it after performing maintenance. A thorough walk around inspection would have prevented this incident.
9. While dumping a load an overburden truck was tipped on it’s side. The cause was an insufficient berm. The berm is an overburden truck's best friend. Always be on the look out for berm placement and height. Berms must be at least half the height of the largest vehicle using the road. For an OB truck that is 5 1/2 feet high. If you see a berm problem, deal with it immediately. DO NOT back into or drive by an area where the berm is not sufficient.
10. An operator failed to do a walk around inspection before taking off. A service person who was on a step ladder between the duals, had to jump to safety. Always do a thorough walk around inspection. It is the responsibility of the truck operator to insure the area is clear.
11. While dumping a load of coal at the truck dump, an employee noticed a coal hauler tire was smoking. The truck was then taken to a remote area to allow the tire to cool. The tire blew out shortly after the operator left the truck.