

Motor Vehicle Safety Standard

1.0 PURPOSE

This standard specifies the requirements for the safe operation and maintenance of motor vehicles

2.0 DEFINITIONS

2.1 Carrier

The holder of a certificate of registration for a commercial vehicle, and The Certificate of Fitness (i.e. SaskPower).

2.2 Certificate of Safety Fitness

A Certificate of Safety Fitness contains the NSC number, which is the unique identifier for each commercial operator and will have a Satisfactory (Audited), Satisfactory (Unaudited), Conditional or Unsatisfactory rating.

2.1 Class

A level at which a vehicle is registered, characterized by its required uses. (eg.) class A, C, D, LV, as determined by the Vehicle Classification and Registration Regulations

2.1 Commercial Vehicle

- i) a vehicle registered in Class A, C, D or LV having a gross vehicle weight exceeding 5000 kg; or
- ii) a vehicle registered in class PB or PS with a seating capacity according to the manufacturer of that vehicle of more than ten persons including the driver.

2.2 Commercial Vehicle Safety Alliance (CVSA) Inspection

CVSA inspections are a set of safety standard for North America for the on-road inspection of heavy vehicles by enforcement offices

2.3 Defensive Driving

Defensive driving is a compilation of techniques used to reduce the risk of road hazards.

2.4 Design Factor

A measure of safety added into the design by a professional engineer to account for assumptions made during calculations.

2.5 Emergency Supplies

A compilation of supplies that can be used in the event of an emergency that may include candle, matches, blanket, flashlight, batteries, gloves and toque.

2.6 Fire Extinguisher Inspection

A fire extinguisher inspection is a “quick check” that a fire extinguisher is available and will operate. It is intended to give reasonable assurance that the extinguisher is fully charged and operable.

2.7 Fire Extinguisher Maintenance

Fire extinguisher maintenance is a thorough examination of the fire extinguisher. It is intended to give a maximum assurance that a fire extinguisher will operate effectively and safely. Repair and hydro-static testing is required by a qualified fire extinguisher service technician.

2.7.1 First Aid Supplies

A collection of bandages, antiseptic wipes, and other medical equipment to provide treatment to a person with a minor injury, or interim treatment while the person is transported to a health care facility, pursuant to Table 10 in *The Occupational Health and Safety Regulations*, 1996.

2.9 Gradient

Incline, slope or embankment as in up or down a hill or grade.

2.10 Gross Vehicle Weight (GVW)

The combined weight of the vehicle and the load carried on the vehicle.

2.10 Gross Vehicle Weight Rating (GVWR)

The total weight all designed components of a vehicle can withstand/support (i.e. the manufacture says all designed components can withstand this amount of weight in total.)

2.11 National Safety Code (NSC)

a minimum performance standard for the safe operation of commercial vehicles, agreed to by all jurisdictions in Canada.

2.12 Portable Fire Extinguisher

A portable fire extinguisher is a portable device carried and operated by hand, containing an extinguishing agent that can be expelled under pressure for the purpose of suppressing or extinguishing fire.

2.13 Power Unit

A vehicle that is equipped to haul a 5th wheel / semi-trailer

2.14 Rated Attachment Points

Engineered attachment points on vehicle. These points are colour (Yellow) coded to indicate they are rated attachment points for that vehicle. These attachments points are rated for 2:1 for an in-line pulls. Attachment points are de-rated for angular pulls (refer to vehicle specific charts).

2.15 Readily Accessible

A means capable of being reached quickly for operation, renewal, or inspections without requiring those to whom ready access is required to climb over or remove obstacles or to resort to portable ladders, chairs, etc. This definition, however, does not preclude the use of a lock on the mounting bracket or bin provided the key or combination is readily available.

2.16 Recovery System

Includes the rated attachment points on the vehicle and all related rigging.

2.17 Rigging (for vehicle recovery)

Rigging includes rope, wire rope, cable, chain, sling, sheave, shackles and associated fittings. All rigging is to be rated at a 2 to 1 safety factor (twice the GVWR of the vehicle being recovered).

2.18 Schedule 1 (Pre-Trip Inspections)

Detailed information from the Trip Inspection Regulations that define criteria for defects and out-of-service conditions when performing pre-trip inspections.

2.19 Shock Load

A force that results from rapid application of a force (such as impact or jerking) or rapid movement of a static load. A shock load significantly adds to the static load.

2.20 Sling Shotting

Rapidly taking up slack in the recovery system to dislodge the stuck vehicle.

2.21 Static Load

The tongue weight is the static force the trailer tongue exerts on the hitch.

2.22 Total Vehicle Resistance

The total weight of resistance after calculating the mire resistance and factoring in any gradient resistance.

2.23 Vehicle Recovery

A controlled pull to extricate a stuck vehicle. May include pulling with another vehicle or winching.

2.24 Working Load Limit (WLL)

Maximum load that may be applied to a component of a load securement system during normal service.

2.25 Working Load Limit

The maximum force which the recovery system can be loaded to in general service.

3. METHOD / PRACTICE

Before attempting operating any vehicle or equipment, a hazard/aspect and risk assessment shall be completed. Work shall be reassessed and hazard/aspect and risk assessment performed if conditions change. This includes, but is not limited to, determining the weather forecast and road conditions.

3.1 Weight and Dimensions

3.1.1 No employee shall operator a motor vehicle that exceeds:

- The legal weight and dimensions as set by the Vehicle Weight and Dimension Regulations (unless a vehicle permit is issued)
- the manufacturer's Gross Vehicle Weight Rating,
- The manufacturer's Gross Combined Vehicle Weight
- The manufacturer's specified Gross axle weight rating for each axle.

3.1.2 No employee shall tow a trailer that exceeds:

- The manufacturer's Gross weight rating, or gross trailer weight rating
- One times the pulling unit's weight for ball or pintle trailers
- Two times the towing unit's weight for weight distributing hitches, gooseneck or 5th wheel hitches

3.2 Vehicle Maintenance

No person shall operate a Commercial Vehicle which does not have a valid Periodic Motor Vehicle Inspection (PMVI) / SGI Highway Safety. All SaskPower vehicles registered over 5,000kg must have a valid annual PMVI. All Power units must have a PMVI every 6 months. It is the operator's responsibility to ensure this is valid prior to operating the vehicle. Copies of all PMVI inspections shall be forwarded to Fleet Services

3.3 Pre-Trip Inspections

- All SaskPower employees shall ensure that any motor vehicle is inspected prior to use to ensure it is safe to operate.
- All vehicles registered over 5,000kg shall have a documented pre-trip inspection at the start of each shift, or every 24 hours when in use. Refer to the unit's Log Book, provided by Fleet Services.
 - Operators shall document all deficiencies, and notify their supervisor of any major defect.
 - Vehicles with major defect(s) shall be considered out-of-service Operator shall ensure that a SaskPower Log book containing:
 - the appropriate pre-trip inspection forms
 - a copy "Schedule 1"
 - a valid Certificate of Safety Fitness and copy of the valid PMVI form is present in the truck.
 - If these are not present in the vehicle, please contact Fleet Services to obtain copies prior to operation.
- Operators shall submit copies of the trip inspections every twenty days to their out of scope supervisor. The out of scope supervisor is responsible to review these reports to ensure deficiencies are being corrected. Inspection reports shall be retained for a minimum of 6 months.

3.4 Hours of Service Log

Operators of commercial vehicles as defined in this standard, shall complete a hours of service log as prescribed by The Commercial Vehicle Hours of Service Regulations, and submit these to their out of scope supervisor for review every 20 days.

Two and three axle trucks (not towing trailers) are exempt from completing an hours of service log.

3.5 Security of Loads

All operators of SaskPower vehicles operated on public roads shall ensure that all cargo is firmly immobilized, secured or contained on or within a vehicle by structures of adequate strength, as prescribed by the Security of Loads Regulation, and the NSC.

All tie downs and tie down components shall be marked by the manufacture to indicate the working load limit. When chain is used as a tie down component, the working load limit shall be determined by the grade and size of chain. All tie downs shall be connected to suitable or designed (refer to SOP?) anchor points.

All cargo that is transported within the operator compartment of a vehicle shall be suitably immobilized, secured or contained to ensure that it will not create a hazard in the event of a vehicle accident or roll over.

3.6 Record Keeping

Each business area is responsible for keeping the following records to ensure compliance to applicable standards and regulations. The following records shall be kept for four years plus the current year (unless noted below).

1. Drivers Profile including:
 - Copy of valid drivers license
 - driving record issued within last 12 months
 - record of traffic and criminal driving convictions, while operating SaskPower Vehicles
 - a driver must report and supply to the employer copies of any convictions, accidents, on-road or terminal inspections at least once every 14 days
2. Hours Of Service logs (retain for 6 months)
3. Pre-trip Inspections (retain for 6 months)
4. Accident reports (via SMS)
5. Vehicle Inspection Documents
 - On road, terminal and CVSA inspection reports
 - A copy of the PMVI certificates (to be forwarded and retained by Fleet Services)
6. Dangerous Goods
 - copies of all shipping documents and manifests prepared under the Dangerous Goods Regulations for a period of two years

3.7 Vehicle Recovery

Professional vehicle recovery services are the recommended approach to vehicle extrication.

3.7.1 Equipment Selection

- a) The vehicle recovery system kit and rigging shall be rated for the vehicle being recovered not the pulling vehicle. Refer to the Instruction Guide for Heavy Duty Recovery Kit and associated information on specific kits for type of vehicle.
 - i) Recovery system kits shall be a stock coded item available from stores and include:
 - Tow/recovery rope/ straps.
 - Rigging hardware
 - ii) Recovery system kits will be supplied with all new vehicles from Fleet Services.
 - iii) Recovery rigging shall be rated at 2 to 1 safety factor (twice the GVWR of the vehicle being recovered).
 - iv) Recovery rigging for vehicles with non-engineered attachment points (not retrofitted) shall refer to the Safety Alert – Tow Directive.
 - Tow ropes shall be equipped with soft eyes.
 - Metal hardware shall not be used for joining of synthetic tow ropes.
 - Tow ropes can be joined for additional length using the basket rigging method.
- b) Rated attachments points shall be engineered to Fleet Services Technical Specifications.
 - i) Off-Highway Trucks shall meet the heavy duty chassis technical specifications issued by Fleet Services with continuous frame rail to the front bumper.
 - ii) Attachment Points shall be colour coded (Yellow) to indicate they are a rated attachment point for that vehicle.

- c) Recovery vehicle(s) weight must be equal to or of greater weight than the total vehicle resistance weight of the vehicle being recovered.
 - i) When using all-terrain vehicles i.e. track machines, farm tractors etc. as a recovery vehicle, 3.7.1 ci) may not apply.

3.7.2 Equipment Use and Inspection

- a) SaskPower approved recovery system kits supplied for the vehicle shall be used for vehicle recovery.
 - Rated shackles shall only be permitted when terminating a tow rope on a closed eye attachment point.
- b) Rated attachment points shall be used for vehicle recovery.
 - When 2 attachment points are available both shall be used in the recovery.
- c) When the vehicle to be recovered has a trailer attached, when possible the trailer should be disconnected and recovered separately.
- d) A recovery vehicle shall drop any trailer prior to extrication.
- e) Sling shotted is strictly prohibited under any circumstance, do not shock load the recovery system.
- f) Recovery systems shall be inspected prior to and after use and document recovery history in the vehicle logbook.
- g) Damaged rigging shall be removed immediately from service and replaced as soon as possible based on manufacturer's guidelines.

3.7.3 Vehicle Recovery – Rated Attachment Points

- a) When vehicle is mired, avoid making the situation worse by continuing to attempt to extricate the vehicle without adequate assistance. Contact the Environment Department before extracting the equipment if it is mired in a wetland or you have broken through ice impacting a wetland.
- b) Vehicle recovery shall be supervised to ensure all personnel (including contractors) are informed of all hazards.
- c) Consider reducing total vehicle resistance by shoveling, lifting with outriggers to install traction aids, etc. (Refer to vehicle specific chart in vehicle logbook).
- d) When vehicle is mired at body depth or proper equipment is unavailable, assistance from a commercial towing service should be considered.
- e) Ensure that all personnel (employees and public) stay clear of the recovery area to avoid pinch points and prevent injury in the event of a recovery system component failure.
- f) Identify and maintain communication methods to be used by all personnel involved during the recovery process (i.e. hand signals, radios, spotters, etc.).
- g) Ensure the recovery vehicle takes up the rigging slack slowly to preload the recovery system before applying recover power.
- h) Whenever possible an inline pull shall be used to recover the vehicle.
 - Refer to vehicle charts if pulling at angles.

3.7.4 Training

SaskPower Divisions shall:

- a) Identify employees who are informed on vehicle recovery and extrication
- b) Provide information on:
 - i) Hazards of vehicle recovery.
 - ii) Use and maintenance of vehicle recovery systems kits.
 - iii) Use of vehicle specific mire resistance tables and forms for vehicle recovery.
 - iv) Local procedures for vehicle recovery.

3.8 Safety Equipment

3.8.1 Selection

- Safety equipment must include:
 - First aid supplies
 - High visibility vest or high visibility clothing
- Safety equipment may include:
 - Automated External Defibrillator (AED)
- A hazard/aspect and risk assessment process shall be used to identify additional vehicle safety equipment. This may include:
 - Vehicle recovery kit
 - Shovel
 - Fire Extinguishers, as per Section 3.3
 - Emergency supplies
 - Survival kit
 - Functional communication system

3.8.2 Inspection

- All kits are to be inspected, at a minimum, annually.
- Any deficiencies shall be remedied.

3.8.3 Fire Extinguishers

- Multi-purpose dry chemical (ABC) fire extinguishers shall be provided in motor vehicles as follows:
 - For commercial vehicles up to 4,999 kg GVWR, one extinguisher of 2.5 kg or equivalent capacity is optional based on business requirement.
 - Extinguishers of 2.5 kg or equivalent capacity in commercial vehicles of 5000 GVWR + e.g. 1 tons, highway tractors.
 - One 2.5 kg fire extinguisher and one 5 kg fire extinguisher in crane, digger or bucket trucks regardless of GVWR.
 - One 2.5 kg fire extinguisher and one 10 kg fire extinguisher regardless of GVWR that is transporting flammable products.
- When placing fire extinguishers on vehicles consideration shall be given to vehicle use and limited access occurring from location limiting factors.
- Fire extinguishers in or on motor vehicles shall be secured by approved mounting brackets or secured in clearly marked tool bin on the vehicle.

- Extinguishers shall be located so as to be readily accessible to the operator of the vehicle in case of fire.
- Safety equipment, including fire extinguishers and mounting brackets shall be supplied through SaskPower Central Stores or through the Divisions purchasing process.
- Fire extinguisher inspections shall be performed monthly and records retained.
- First extinguisher maintenance shall be performed by a trained person regularly.
- Fire extinguishers shall have a tag or label securely attached that indicates the month and year that the maintenance was performed and that identifies the person performing the service.

3.9 Safe Driving

3.9.1 Control Methods

- Before a trip, the driver shall:
 - Perform the driving HARA.
 - perform a circle check.
 - Have a communication device.
 - not engage in any activities that distract from driving.
 - consider the hours of work requirements established in the Fatigue Management Standard.
 - Evaluate weather conditions and if deemed safe, drive appropriately.
 - ensure that all occupants of the vehicle wear seat belts in compliance with Provincial driving regulations.
 - Equip the vehicle with a winter survival kit and suitable winter clothing.
 - Advise someone about departure time, route to be taken and expected time of arrival.
- If travel is deemed to be hazardous, the driver shall:
 - Cancel or postpone the trip.
 - Consider alternate routes to the destination.
 - Consider other methods of participation, such as telephone or video conferencing.
- Appropriate driver training and / or awareness shall be provided to employees.

3 REFERENCES

4.1 Saskatchewan

- Vehicle Administration Act
 - The Vehicle and Equipment Regulations, 1987
- Highway Traffic Act,
 - The Commercial Vehicle Hours of Service Regulations
- The Motor Carrier Act
- Motor Carrier Conditions of Carrier RegulationsThe Highways and Transportation Act, 1997
 - The Trip Inspection Regulations
 - The Security of Loads Regulations, 2013
 - The Vehicle Weight and Dimension Regulations, 2010
- Dangerous Goods Transportation Act
 - Dangerous Goods Transportation Regulations
- Occupational Health and Safety Regulations, 1996
- The Vehicle Classification and Registration Regulations

4.2 Canada

- National Safety Code
- National Safety Code Standard 10 – Cargo Securement

4.3 Third Party

- North American Cargo Securement Standard
- National Fire Code – NFPA 10 Standard for Portable Fire Extinguishers 1998 edition
- Fire Commission Canada 401 (M) – Standard for Fire Extinguisher, November 1976

4.4 SaskPower

- Standard Operating Procedures: (These may require updated references)
 - Wheel Re-torque
 - Security of Loads
- Pre-trip Chassis Inspection Checklist
- Pre-trip Air Inspection Checklist
- SaskPower Safety Briefing #7 Towing/Equipment Retrieval Safe Work Directive
- Fatigue Management Standard
- Instruction Guide for Heavy Duty Recovery Kit

EXHIBIT “A” – FIRE EXTINGUISHER SELECTION CHART

List of vehicle sizes	Minimum number of extinguishers and size	Type	Location on vehicle
5,000kg+ GVWR (e.g. 1 tons, highway tractors, etc.)	One 2.5 kg (5lb)	ABC	Mounted in truck cab or labelled bin
Crane, Digger, or Bucket Truck (regardless of GVWR)	One 2.5 kg (5lb) One 5 kg (10lb)	ABC	Mounted in truck cab Externally mounted on truck or in labeled bin
Vehicles transporting flammable products (regardless of GVWR)	One 2.5 kg (5lb) One 10 kg (20lb)	ABC	Mounted in truck cab Externally mounted on truck or in labeled bin

*Note: Depending on location two extinguishers may be required depending if extinguisher is blocked when vehicle is used next to above ground structures.

*Note: two 5kg (10lb) fire extinguishers can be used to satisfy the requirement of a 10kg (20lb) fire extinguisher

*Note: vehicles less than 5,000 kg GVWR do not require a Fire Extinguisher (optional based on business requirement).