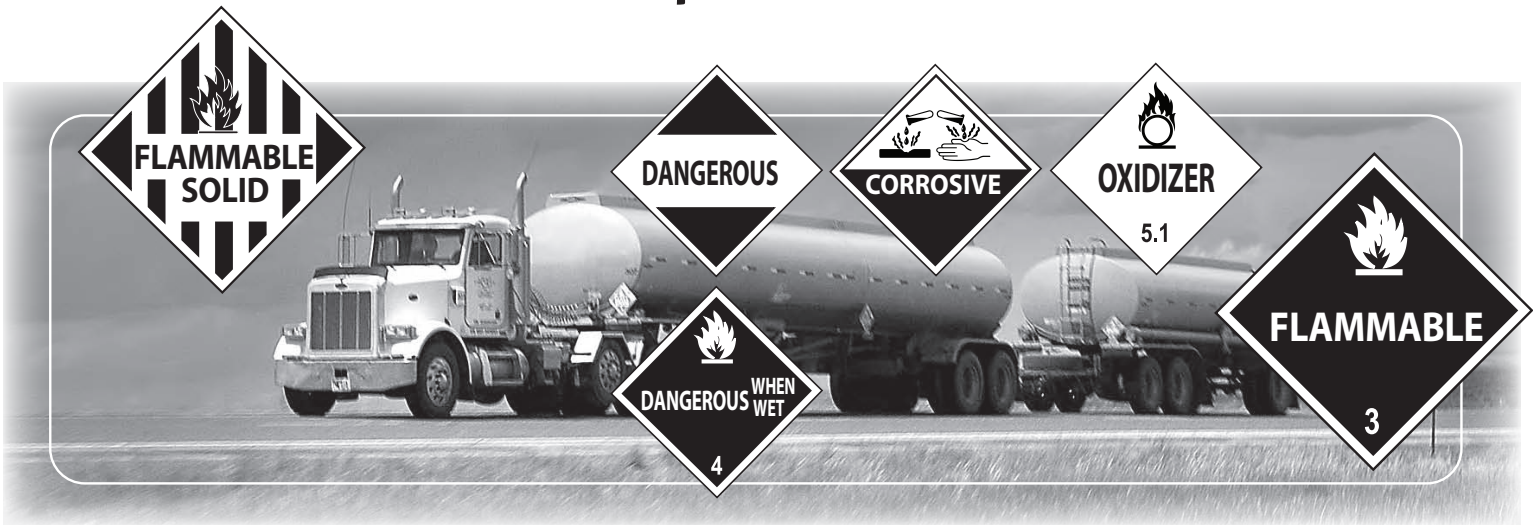


# WISCONSIN COMMERCIAL DRIVER'S MANUAL

## VOLUME 2: HAZ MAT, SCHOOL BUS

April 2012



# **WISCONSIN COMMERCIAL DRIVER'S MANUAL**

## **VOLUME 2: HAZ MAT, SCHOOL BUS**

**April 2012**

The original front cover for the Wisconsin Commercial Driver's Manual is not included here in order to reduce the file size, so you may download the handbook quickly.

## Information

Commercial Driver License (CDL) information . . . . .	<a href="http://www.cdl.wi.gov">www.cdl.wi.gov</a>
DMV home page . . . . .	<a href="http://www.wisconsin.dmv.gov">www.wisconsin.dmv.gov</a>
General Information . . . . .	(414) 266-1000
Schedule Skills Test . . . . .	<a href="http://www.dot.wisconsin.gov/drivers/docs/tp3.pdf">www.dot.wisconsin.gov/drivers/docs/tp3.pdf</a>

## Federal Web Information

Federal Motor Carrier Safety Regulations, Rules and Notices	<a href="http://www.fmcsa.dot.gov/rulesregs/fmcsrhome.htm">www.fmcsa.dot.gov/rulesregs/fmcsrhome.htm</a>
FMCS Forms . . . . .	<a href="http://www.fmcsa.dot.gov/factsfigs/forms.htm">www.fmcsa.dot.gov/factsfigs/forms.htm</a>
FMCSA Important Web sites (FAQs for more Information) . . .	<a href="http://www.fmcsa.dot.gov/factsfigs/postcardnu.htm">www.fmcsa.dot.gov/factsfigs/postcardnu.htm</a>
FMCSA Medical Advisory Criteria for Evaluation Under 49 CFR Part 391.41 . . . . .	<a href="http://www.fmcsa.dot.gov/rulesregs/fmcsr/medical.htm">www.fmcsa.dot.gov/rulesregs/fmcsr/medical.htm</a>
FMCSA Medical Reports . . . . .	<a href="http://www.fmcsa.dot.gov/rulesregs/medreports.htm">www.fmcsa.dot.gov/rulesregs/medreports.htm</a>
FMCSA Motor Carrier and Driver Laws . . . . .	<a href="http://www.fmcsa.dot.gov/rulesregs/fmcsr/laws.htm">www.fmcsa.dot.gov/rulesregs/fmcsr/laws.htm</a>
FMCSA Motor Carrier Safety Programs . . . . .	<a href="http://www.fmcsa.dot.gov/safetyprogs/saftprogs.htm">www.fmcsa.dot.gov/safetyprogs/saftprogs.htm</a>
FMCSA Regulations: CDL Standards, Requirements and Penalties . . . . .	<a href="http://www.fmcsa.dot.gov/rulesregs/fmcsr/regs/383.htm">www.fmcsa.dot.gov/rulesregs/fmcsr/regs/383.htm</a>
FMCSA Regulations: Driving of Commercial Motor Vehicles .	<a href="http://www.fmcsa.dot.gov/rulesregs/fmcsr/regs/392.htm">www.fmcsa.dot.gov/rulesregs/fmcsr/regs/392.htm</a>
FMCSA Regulations: Qualifications of Drivers . . . . .	<a href="http://www.fmcsa.dot.gov/rulesregs/fmcsr/regs/391.htm">www.fmcsa.dot.gov/rulesregs/fmcsr/regs/391.htm</a>
FMCSA Regulations: Revised Hours of Service Regulations.	<a href="http://www.fmcsa.dot.gov/Home_Files/revised_hos.asp">www.fmcsa.dot.gov/Home_Files/revised_hos.asp</a>
FMCSA Regulatory Guidance for the Federal Motor Carrier Safety Regulations . . . . .	<a href="http://www.fmcsa.dot.gov/rulesregs/fmcsr/fmcsrguide.htm">www.fmcsa.dot.gov/rulesregs/fmcsr/fmcsrguide.htm</a>
Medical Exam Report Form . . . . .	<a href="http://www.fmcsa.dot.gov/safetyprogs/spe_pdfs/Medical_Report.pdf">www.fmcsa.dot.gov/safetyprogs/spe_pdfs/Medical_Report.pdf</a>
Office of Hazardous Materials Safety (HazMat Regulations and Interpretations) . . . . .	<a href="http://www.myregs.com/dotrspa/">www.myregs.com/dotrspa/</a>

## Wisconsin State Web Information

Visit [www.cdl.wi.gov](http://www.cdl.wi.gov) for:

- CDL: How to apply
- CDL: An overview
- CDL pre-trip and Road Tests
- Change Your Mailing Address
- Commercial Driving Schools
- Disqualifications
- Endorsements
- Federal Medical Certificate (Fed Med) and your CDL
- Hazardous Materials
- Medical Requirements for CDL
- Motor Carriers and Trucking
- Wisconsin Commercial Driver's Manual
- and more!

DMV home page . . . . .	<a href="http://www.wisconsin.dmv.gov">www.wisconsin.dmv.gov</a>
DMV online services . . . . .	<a href="http://www.dot.wisconsin.gov/drivers/online.htm">www.dot.wisconsin.gov/drivers/online.htm</a>
Motor Carriers and Trucking information . . . . .	<a href="http://www.dot.wisconsin.gov/business/carriers/index.htm">www.dot.wisconsin.gov/business/carriers/index.htm</a>
Oversize/Overweight Permits . . . . .	<a href="http://www.dot.wisconsin.gov/business/carriers/osowgeneral.htm">www.dot.wisconsin.gov/business/carriers/osowgeneral.htm</a>

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## Warnings and Penalties

### WARNING

If you drive a vehicle over 10,000 lbs. in interstate commerce, you may be subject to Federal Motor Carrier safety regulations.

Contact a State Patrol office for details (see “Wisconsin State Patrol Regions Map” in this manual).

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### Penalty For Operating Without a CDL (for Drivers):

#### 1st Offense:

\$200–\$600 fine *or*  
not more than 6 months in jail;  
3 points

#### 2nd within 3 years:

\$300–\$1,000 fine *or*  
5 days to 6 months in jail;  
3 points

#### 3rd or more within 3 years:

\$1,000–\$2,000 fine *and*  
10 days to 6 months in jail;  
3 points

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### INTERSTATE COMMERCE:

**Any trade, traffic or transportation in the U.S. between a place in a State and a place outside of such State OR is between two places in a State through another State or a place outside of the U.S.**

Special note: Transportation with a CMV within state lines is considered interstate commerce if the origin and/or destination of the load crosses state lines.

### WISCONSIN'S IMPLIED CONSENT LAW:

If a law enforcement officer asks you to submit to testing to determine a concentration of alcohol or other drugs in your system, you must do so. If you refuse to take a test requested by the officer, your operating privilege will be revoked for a minimum of one year and you will be subject to other penalties. Wis. Stats. 343.305

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### Penalty For Operating Without a CDL (for Employers):

The penalty for employers who place unqualified drivers on the road is a \$2,500–\$10,000 fine OR not more than 90 days in jail; OR both.

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### INTRASTATE COMMERCE:

Any trade, traffic or transportation in any State which is not described in the term “interstate” commerce.

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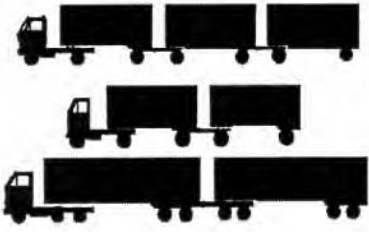
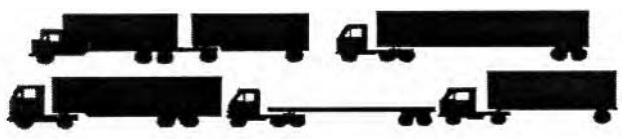
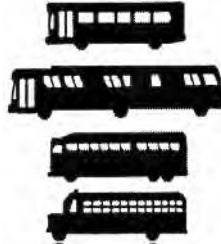
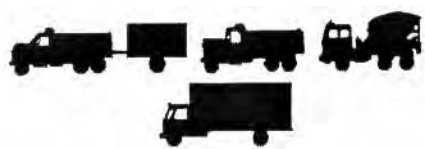

### NEW DRIVERS:

To drive in **intrastate or interstate commerce**, you must have passed a medical examination, within the past two years, in accordance with Federal Motor Carrier Safety Regulations 49 CFR 391, Subpart E.

See “Commercial driver license medical/physical requirements” in this manual or on the Internet at [www.cdl.wi.gov](http://www.cdl.wi.gov) for more information.

# How to Use This Manual

(This page includes both Volume 1 and 2 section information)

If you want to get a license to drive this type of vehicle or a similar tank vehicle,	Study these sections of the driver's manual.
	<p>Section 1: Introduction            Section 2: Driving Safely            Section 3: Cargo            Section 5: Air Brakes            Section 6: Combination Vehicles            Section 7: Doubles and Triples            Section 9: Haz Mat (if needed) in Volume 2</p>
	<p>Section 1: Introduction            Section 2: Driving Safely            Section 3: Cargo            Section 5: Air Brakes            Section 6: Combination Vehicles            Section 9: Haz Mat (if needed) in Volume 2</p>
	<p>Section 1: Introduction            Section 2: Driving Safely            Section 3: Cargo            Section 4: Passengers            Section 5: Air Brakes (if needed)            Section 10: School Bus  <b>Note:</b> Volume 2</p>
	<p>Section 1: Introduction            Section 2: Driving Safely            Section 3: Cargo            Section 5: Air Brakes            Section 6: Combination Vehicles (If needed)            Section 9: Haz Mat (if needed) in Volume 2</p>
<p>(CDL required only if these vehicles are used to haul hazardous materials)</p> 	<p>Section 1: Introduction            Section 2: Driving Safely            Section 3: Cargo            Section 9: Haz Mat (if needed) in Volume 2</p>
<p>If you want a tank vehicle endorsement, also study Section 8.</p>	

# CMV and CDL Guide

To determine if a vehicle is a Commercial Motor Vehicle (CMV), use the **greater** of the:

- Gross Vehicle Weight Rating (GVWR), or
- actual gross weight, or
- registered weight, or
- Gross Combination Weight Rating (GCWR) when the towed unit has a GVWR, registered weight or actual gross weight over 10,000 pounds.

Vehicle examples:

1. A combination vehicle 26,001 or more pounds is a Class "A" CMV only if the trailer being towed has a gross vehicle weight rating, registered weight or actual gross weight of more than 10,000 pounds.
2. When the weight of the combination vehicle is exactly 26,000 pounds, it is not a CMV and does not require a

CDL. Example: A tractor weighs 16,000 pounds and the towed unit weighs 10,000 pounds.

3. When the towing vehicle is 26,000 or less pounds and the towed unit is 10,000 or less pounds, it is not a CMV and does not require a CDL. Example: A tractor weighs 25,500 pounds and the towed unit weighs 8,000 pounds.
4. A CDL with an "N" tank vehicle endorsement is required only when the capacity of the tank is 1,000 gallons or more and the vehicle fits the description of a CMV.
5. A CDL with a "P" passenger endorsement is required when the vehicle is designed to transport or is actually transporting the driver and 15 or more passengers.

VEHICLE EXAMPLES						LICENSE REQUIREMENTS			
	TRACTOR OR SINGLE UNIT TRUCK	TRAILER	CARRIES HAZMAT	IS DESIGNED TO TRANSPORT 16 OR MORE PASSENGERS INCLUDING THE DRIVER	IS A SCHOOL BUS	IS THIS A CMV?	DO I NEED A CDL?	WHAT CLASS IS IT?	WHICH ENDORSEMENT?
1	18,000#	12,000#	✓			Yes	Yes	A	H
2	8,000#	20,000#				Yes	Yes	A	
3	26,500#					Yes	Yes	B	
4	27,000#	10,000#				Yes	Yes	B	
5	27,000#			✓	✓	Yes	Yes	B	P and S
6	29,000#			✓		Yes	Yes	B	P
7	12,000#		✓			Yes	Yes	C	H
8	25,000#			✓		Yes	Yes	C	P
9	25,000#			✓	✓	Yes	Yes	C	P and S
10	5,000#		✓			Yes	Yes	C	H
11	16,000#	10,000#				No	No	D	
12	26,000#	8,000#				No	No	D	
13	20,000#	8,000#				No	No	D	
14	10,000#				✓	No	No	D	S
15	6,000#	20,000#				No	No	D	
<b>TANK TRUCK</b>									
16	26,000#					No	No	D	
17	26,010#					Yes	Yes	B	N
18	26,000#	10,000#				No	No	D	
19	26,000#	10,000#	✓			Yes	Yes	C	H-N
20	20,000#	10,500#				Yes	Yes	A	N

# Commercial Driver License (CDL) – Overview

Commercial driver licenses (CDL) are required to operate vehicles that:

- weigh over 26,000 pounds as determined by the highest of the following weights:
  - » manufacturer's Gross Vehicle Weight Rating (GVWR)
  - » manufacturer's Gross Combination Weight Rating (GCWR) when the towed unit has a GVWR, registered weight or actual gross weight over 10,000 pounds
  - » actual gross weight
  - » registered weight
- transport hazardous materials that require placarding under federal or state law.
- are designed or used to carry 16 or more persons including the driver. (Buses and some school buses.)

There are federal and state regulations governing the operation of commercial motor vehicles.

- Wisconsin law requires:
  - a classified licensing system.
  - issuing of only one license to each driver.
  - testing of commercial drivers, who must pass a knowledge exam and driving skills test in the type of vehicle they wish to drive.
    - » School bus drivers are required to pass knowledge and highway signs tests and an abbreviated driving skills test at each renewal.
    - » Commercial drivers with an "H" endorsement are required to pass a hazardous materials knowledge test at each renewal (every 4 years.)
- enforcement of the law through the Commercial Driver License Information System (CDLIS), a computer network of all states.
- enforcement of CDL disqualifications for alcohol and serious traffic violations (see "Wisconsin General CDL Disqualifications" chart in this manual.)

If you hold an "H" endorsement and are disqualified at any time, you must surrender the "H" endorsement.

## Requirements for Hazardous Materials (H)

**Endorsement** (See also "School Bus and Hazmat Licensing Requirements" and "Hazardous Materials Disqualifications" charts in Volume 2.)

You will need to provide proof of U.S. citizenship. In addition, you will also need to meet the following requirements:

- Fingerprinting.
  - » When applying for, renewing or transferring a hazmat endorsement on a CDL, applicants must provide their fingerprints for an FBI criminal background check. When you file your application with DMV, DMV will give you a list of locations where you can have your fingerprints taken.
- Background check.
- "H" endorsement holders are subject to a name-based FBI criminal history records check and a check of Federal databases. You will not be permitted to obtain, renew or transfer your "H" endorsement if you:
  - » have been convicted (in any jurisdiction, military or civilian) or found not guilty by reason of insanity of certain felonies over the past 7 years.
  - » have been in prison within the last 5 years for any of those certain felonies.
  - » are wanted or under indictment for any of those certain felonies.
  - » have ever been found mentally incompetent or have been committed involuntarily to a mental institution.

## REQUIREMENTS FOR SCHOOL BUS (S) ENDORSEMENT

The driver must:

- Have an "S" endorsement on his/her Wisconsin driver license.
- Possess a valid Wisconsin driver license of the appropriate class.
- Be at least 18 years of age.
- Have sufficient use of both hands and the foot normally used to operate the foot brake and foot accelerator correctly and efficiently.
- Meet the physical/medical standards for school bus endorsement referenced in Admin. Rule Trans. 112 by providing either a current federal medical card or an MV3030B (medical examination report for "S" or "P" endorsement).
- Have no convictions for offenses that will result in disqualification for obtaining an "S" endorsement. Refer to the chart "School Bus Disqualifications" in Volume 2 for a list of convictions and their associated term of disqualification.



# Federal Medical Certificate and your Commercial Driver License (CDL)

## What you need to know

Federal regulations require drivers of commercial motor vehicles to self-certify their type of vehicle operation. The type of driving you do will determine your certification.

The type of certification (tier) you choose will determine whether you must provide a copy of your Federal Medical Certificate (Fed Med card) to the DMV. If you must provide a copy of your Fed Med card to the DMV, you will also be required to keep your card up to date and provide a copy to the DMV when you renew or get a new card.

New CDL applicants must certify their type of vehicle operation to the DMV upon application.

### WHAT TIER AM I?

Ask yourself: Am I an interstate or intrastate driver?  
Do I operate in an excepted\* industry listed below?  
Your answer will determine your self-certification:

- You are an interstate driver if cargo you transport crosses state lines at any point during its trip. You will choose Tier 1 if you are operating interstate, not under an exception. You will choose Tier 2 if you are operating interstate under an exception.
- You are an intrastate driver if cargo you transport stays within the state (it does not cross state lines). You will choose Tier 3 if you are operating intrastate, not under an exception. You will choose Tier 4 if you are operating intrastate under a federal or state exception.

### NOW YOU ARE READY TO CHOOSE YOUR TIER OF CERTIFICATION:

- **Tier 1: Non-Excepted Interstate** – You need to provide a valid Fed Med card to DMV.

This is the most flexible tier of certification and covers you under any circumstance.

If you are engaged in interstate commerce, you are required to provide a valid Fed Med card to DMV. Failure to maintain a valid card will result in loss of interstate CDL privileges unless excepted\*. Information from your Fed Med card such as the doctor's name, date of exam, certificate expiration date, etc., will be recorded on your driving record and will be made available to law enforcement.

- **Tier 2: Excepted Interstate** – You do not need a Fed Med card.  
This tier means you are engaged in interstate commerce but operating under an exception\*.
- **Tier 3: Non-Excepted Intrastate** – You need a valid Fed Med card to drive a commercial vehicle. You will need to provide it to DMV when a license is issued, but you do not have to forward a copy of it to the DMV to keep on file when the card is updated.  
You are engaged in intrastate commerce.  
Tier 3 does not include exceptions\*.

- **Tier 4: Excepted Intrastate** – You do not need a Fed Med card.  
You are engaged in intrastate commerce and subject to an exception\*.  
Tier 4 includes Wisconsin exceptions as follows:
  - » **Tow trucks** (if requested by a federal, state or local officer to move a wrecked or disabled vehicle).
  - » **Grandfathered** (held valid CDL since July 29, 1996 that has not been revoked).
  - » **Wisconsin diabetes exemption** to the Fed Med card.
  - » **Wisconsin vision exemption** to the Fed Med card.

### \*EXCEPTIONS INCLUDE:

- All school bus operations.
- Transportation performed by any political subdivision.
- Transportation of human corpses or sick and injured persons.
- Operation of fire trucks and rescue vehicles while involved in emergency and related operations.
- Operation of vehicles designed or used to transport between 9 and 15 passengers not for direct compensation.
- Transportation of propane winter heating fuel or responding to a pipeline emergency.
- Farm custom operation, custom-harvesting operations, transporting farm machinery, supplies, or both to or from a farm for custom-harvesting operations on a farm, or transport custom-harvested crops to storage or market.
- Operation of a commercial motor vehicle controlled and operated by a beekeeper engaged in the seasonal transportation of bees.
- Operation of private motor carrier of passengers (non-business).
- Occasional transportation of personal property not for compensation or commercial enterprise.

If you certify in tiers 2–4, you may still be required to have a Fed Med card due to state statutes or employer policy. However, you do not have to furnish a copy of the Fed Med card to the DMV outside of a normal trip for a license renewal or replacement.

If you already have your CDL but have not yet certified your tier of operation, you may upload your Fed Med card and self certify your tier of operation online at [www.dot.wisconsin.gov/drivers/drivers/selfcert.htm](http://www.dot.wisconsin.gov/drivers/drivers/selfcert.htm). All CDL holders must self-certify their type of vehicle operation to the DMV by January 30, 2014.

Please contact the DMV Driver Resolution and Eligibility Unit with questions:

**Telephone:** (608) 264-7049

**Email:** dre.dmv@dot.wi.gov

# Commercial Driver License Medical Requirements

To drive in intrastate or interstate commerce, you must have passed a medical examination, within the past 2 years, in accordance with Federal Motor Carrier Safety Regulations 49 CFR 391, Subpart E., as defined in the Federal Motor Carrier Safety Administration's (FMCSA) Medical Examination Report at [www.fmcsa.dot.gov/documents/safetyprograms/Medical-Report.pdf](http://www.fmcsa.dot.gov/documents/safetyprograms/Medical-Report.pdf). A summary of medical and physical qualifications for drivers is found on the following page.

## ACCEPTABLE PROOF OF EXAMINATION

Acceptable proof of examination is a fully completed Medical Examiner's Certificate found on the last page at [www.fmcsa.dot.gov/documents/safetyprograms/Medical-Report.pdf](http://www.fmcsa.dot.gov/documents/safetyprograms/Medical-Report.pdf). A medical examiner will need to complete the FMCSA Medical Examination Report for Commercial Driver Fitness Determination as well as the certificate at the end of the packet. You will need to carry a copy of this certificate with you when operating a commercial motor vehicle. We recommend that you make a copy of your card to keep in your files. Instructions for the medical examiner are included in this document.

## MEDICAL EXAMINER

A medical examiner is defined as any person who is licensed, certified, and/or registered, in accordance with applicable state laws and regulations to perform physical examinations. The term includes, but is not limited to, doctors of medicine, doctors of osteopathy, physician assistants, advanced practice nurses and doctors of chiropractic. It is important that the person completing it understands the qualifications. Instructions for the examiner are at [www.fmcsa.dot.gov/rules-regulations/topics/medical/aboutDOTexam.htm](http://www.fmcsa.dot.gov/rules-regulations/topics/medical/aboutDOTexam.htm).

## A WAIVER OF CERTAIN PHYSICAL IMPAIRMENTS OR DISEASES MAY BE AVAILABLE

For information on federal exceptions or waivers see the FMCSA Exemptions Programs at [www.fmcsa.dot.gov/rules-regulations/topics/medical/exemptions.htm](http://www.fmcsa.dot.gov/rules-regulations/topics/medical/exemptions.htm) or Skill Performance Evaluation at [www.fmcsa.dot.gov/rules-regulations/topics/medical/spepackage.htm](http://www.fmcsa.dot.gov/rules-regulations/topics/medical/spepackage.htm).

If you do not hold a federal medical card or are not grandfathered, you will be issued a restricted commercial driver license. This license would only be valid if you are a school bus driver or are employed by a political subdivision (village, town, state, etc.).

Refer to "Chapter Trans 327 Motor Carrier Safety Frequently Asked Questions" in this manual for answers to some of the most common questions about federal medical standards and grandfathering. Direct other questions regarding federal medical standards to:

U.S. DOT Office of Motor Carriers  
1 Point Place Suite 101  
Madison, WI 53719-2809

Telephone: (608) 662-2010  
(federal medical standard  
questions only please)

If you have other questions about your Wisconsin CDL, contact:

WI DOT Driver Regulation Eligibility  
P.O. Box 7995  
Madison, WI 53707-7995

Email: [dre.dmv@dot.wigov](mailto:dre.dmv@dot.wigov)  
Telephone: (608) 264-7049

**Federal Motor Carrier Safety Regulations 49 CFR 391, Subpart E – Physical Qualifications and Examinations:**

- (a) A person shall not drive a commercial motor vehicle unless he/she is physically qualified to do so and, except as provided in 391.67, has on his/her person the original, or a photographic copy, of a medical examiner's certificate that he/she is physically qualified to drive a commercial motor vehicle.
- (b) A person is physically qualified to drive a commercial motor vehicle if that person -
  - (1) Has no loss of a foot, a leg, a hand, or an arm, or has been granted a waiver pursuant to 391.49;
  - (2) Has no impairment of:
    - (i) A hand or finger which interferes with prehension or power grasping; or
    - (ii) An arm, foot, or leg which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or any other significant limb defect or limitation which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or has been granted a waiver pursuant to 391.49.
  - (3) Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control;
  - (4) Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis, or any other cardiovascular disease of a variety known to be accompanied by syncope, dyspnea, collapse, or congestive cardiac failure;
  - (5) Has no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with his/her ability to control and drive a commercial motor vehicle safely;
  - (6) Has no current clinical diagnosis of high blood pressure likely to interfere with his/her ability to operate a commercial motor vehicle safely;
  - (7) Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which interferes with his/her ability to control and operate a commercial motor vehicle safely;
  - (8) Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a commercial motor vehicle;
  - (9) Has no mental, nervous, organic, or functional disease or psychiatric disorder likely to interfere with his/her ability to drive a commercial motor vehicle safely;
  - (10) Has distant visual acuity of at least 20/40 (Snellen) in each eye without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green, and amber;
  - (11) First perceives a forced whispered voice in the better ear at not less than 5 feet with or without the use of a hearing aid or, if tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz, and 2,000 Hz with or without a hearing aid when the audio metric device is calibrated to American National Standard (formerly ASA Standard) Z24.5-1951-1
  - (12) Does not use a Schedule 1 drug or other substance identified in Appendix D to this subchapter, an amphetamine, narcotic, or any other habit-forming drug, except that a driver may use such a substance or drug if the substance or drug is prescribed by a licensed medical practitioner who is familiar with the driver's medical history and assigned duties and who has advised the driver that the prescribed substance or drug will not adversely affect the driver's ability to safely operate a commercial motor vehicle; and
  - (13) Has no current clinical diagnosis of alcoholism.

## CHAPTER TRANS 327 MOTOR CARRIER SAFETY FREQUENTLY ASKED QUESTIONS

WI Department of Transportation

BDS218 2/2012

**Effective July 29, 1996:** Drivers of commercial motor vehicles (CMV) operating in *intrastate commerce* must meet the federal medical standards and present a valid federal medical card when they apply for a commercial driver license (CDL) unless they have been grandfathered or are exempt by federal or state law.

**What is Interstate Commerce?** Any trade, traffic, or transportation in the U.S. which is between a place in a State and a place outside of such State, or is between two places in a State through another State, or a place outside of the U.S. **Note:** Transportation with a CMV within state lines is considered interstate commerce if the origin and/or destination of the load crosses state lines.

**What is Intrastate Commerce?** Any trade, traffic, or transportation in any State which is not described in the term "interstate commerce."

**Is there a simple definition of commerce?** Everyone in a CMV is considered to be in commerce unless they are exempt (driving for a political subdivision or driving a school bus).

**Who was grandfathered?** Drivers who had a Wisconsin CDL prior to July 29, 1996. However, those drivers will lose their grandfathered status if their CDL is revoked on or after July 29, 1996.

**What are the benefits of being grandfathered?** Grandfathered drivers are not required to have a federal medical exam or meet federal medical standards to qualify for a CDL which allows driving in intrastate commerce. Grandfathered drivers must still meet the state CDL medical standards such as visual acuity of 20/60 in the best eye. However, if they don't meet the state medical standards, drivers are allowed to appeal to the Medical Review Board.

**Can grandfathered status be transferred from one state to another?** No.

**Do CMV Drivers employed by a political subdivision need a federal medical card?** No. Drivers employed by any political subdivision (federal, state, county, city, township or village) operating a CMV owned by the political subdivision are exempt from the federal standards.

**Do school bus drivers employed by a school district or private contractor need the federal medical card?** Drivers employed by a school district and driving a bus owned by the district are exempt from the federal standards. They may cross state lines to transport students between home and school or when driving for curricular or extracurricular activities and charter trips.

Drivers employed by a private contractor and driving a bus owned by the contractor are exempt from the federal standards while operating within Wisconsin and when crossing state lines to transport students between home and school. A valid federal medical card is required when operating across state lines for curricular or extracurricular activities and charter trips.

## **CHAPTER TRANS 327 MOTOR CARRIER SAFETY FREQUENTLY ASKED QUESTIONS (continued)**

**Are CMV drivers operating a passenger bus exempt from federal medical standards?** No. Drivers needing a “P” endorsement who do not have the federal medical card and are not grandfathered will be issued a license with two restrictions (“No CMV Operation in Interstate Commerce” and “No CMV Operation in Intrastate Commerce unless Exempt by State or Federal Law”).

For drivers needing a “P” endorsement, such as those driving buses owned by a municipality (which is exempt), having both restrictions is fine. For those driving buses for a private human service agency (which is not exempt), “No CMV Operation in Interstate Commerce” and “No CMV Operation in Intrastate Commerce” restrictions will not be acceptable and they will need to present the federal medical card, unless grandfathered, to avoid these restrictions. Drivers must know the type of operation involved to determine if they need a federal medical card.

**Can drivers with an instruction permit (CDLI) with a “P” endorsement, practice operating a school bus without a federal medical card?** Yes, they may practice in the school bus when accompanied by a qualified instructor or a properly licensed person 21 years of age or older who holds a valid license authorizing passenger vehicle operation. However, they may not transport passengers.

**Can drivers with a commercial instruction permit (CDLI) practice operating a truck without a federal medical card?** No, if the vehicle is owned by a commercial driving school or an employer who is not a political subdivision.

Yes, if the vehicle is owned by a Wisconsin Technical College or an employer who is a political subdivision.

**What happens to drivers who don’t pass a vision test, yet have a federal medical card?**

They will be referred to a vision or other appropriate medical specialist. If issuance continues, the license will have the “No CMV Operation in Interstate Commerce” restriction and, if the driver is not grandfathered, the “No CMV Operation in Intrastate Commerce” restriction.

**What type of driving can drivers perform if they were not grandfathered and do not have a federal medical card?** They can drive for exempt groups (political subdivision or school districts, if they meet the Wisconsin school bus driver standards or are approved by the Medical Review Board).

**Do Drivers age 18, 19, and 20 need a federal medical card?** Yes, if they wish to operate a CMV in intrastate commerce and have not been grandfathered or are not exempt by federal or state law. If they present a federal medical card their CDL will be issued with the “No CMV Operation in Interstate Commerce” restriction because federal law does not permit a person under age 21 to operate a CMV in interstate commerce.

**Who can appeal to the Medical Review Board?** Drivers who are grandfathered may appeal to the board for intrastate driving. Also, new drivers who plan to drive for the exempt groups (political subdivision or school districts) may also appeal to the board. The board cannot make any exceptions to the federal standards. Any person who is required to have a federal medical card may not appeal to the board.

**If not grandfathered, can a person with insulin dependent diabetes get a CDL for intrastate driving?** Yes, if they file with the DMV Medical Review Unit, two satisfactory medical reports from two physicians. They will be issued a CDL with restrictions, “No CMV Operation in Interstate Commerce” and “No CMV Operation in Intrastate Commerce Unless Exempt by State or Federal Law”. They will also get a letter to carry, while operating a CMV, that states they have qualified for this exemption.

# Wisconsin General CDL Disqualifications

## Violations on or after 7/1/87 but prior to 9/30/2005

DISQUALIFYING OFFENSES:	DISQUALIFY CDL 1st CMV Conviction	DISQUALIFY CDL 1st Non-CMV Conviction	DISQUALIFY CDL 2nd CMV Conviction	DISQUALIFY CDL 2nd Non-CMV Conviction
Operating While Intoxicated (OWI)				
OWI causing injury				
OWI causing great bodily harm				
OWI causing death				
Commercial Alcohol (CA) .04-.07	1 year or, if HAZ MAT conviction: 3 years	N/A	Life	N/A
CA causing injury				
CA causing great bodily harm				
CA causing death				
Operating under influence of controlled substance				
Refusal				
Failure to stop/report accident				
Felony				
Controlled substance felony	Life			

## Violations on or after 9/30/2005

DISQUALIFYING OFFENSES:	DISQUALIFY CDL 1st CMV Conviction	DISQUALIFY CDL 1st Non-CMV Conviction	DISQUALIFY CDL 2nd CMV Conviction	DISQUALIFY CDL 2nd Non-CMV Conviction
Operating While Intoxicated (OWI)		1 year		Life
Operating with a Prohibited Alcohol Concentration (PAC)		1 year		Life
OWI causing injury		1 year		Life
OWI causing great bodily harm		1 year		Life
OWI causing death		1 year		Life
Commercial Alcohol (CA) .04-.07	1 year or, if HAZ MAT conviction: 3 years	N/A	Life	N/A
CA causing injury		N/A		
CA causing great bodily harm		N/A		
CA causing death		N/A		N/A
Operating under influence of controlled substance		1 year		Life
Refusal (IC; ICU)		1 year		Life
Failure to stop/report accident (FSA; FSU; DSP)		1 year		Life
Felony		1 year		Life
Driving a CMV when CDL is rev/sus/can/dqf		N/A		N/A
Causing a fatality/negligent operation of CMV		N/A		N/A
Controlled substance felony	Life	Life		Life
Imminent Hazard	As ordered by FMCSA			

# Wisconsin General CDL Disqualifications

## Violations on or after 7/1/87 but prior to 9/30/2005

SERIOUS DISQUALIFYING OFFENSES:	DISQUALIFY CDL 1st CMV Conviction	DISQUALIFY CDL 1st Non-CMV Conviction	DISQUALIFY CDL 2nd CMV Conviction	DISQUALIFY CDL 2nd Non-CMV Conviction
Speeding 15 or more over the limit	N/A	N/A	2 offenses within 3 years: 60 days  3 offenses within 3 years: 120 days	N/A
Reckless driving				
Passing illegally				
Improper or erratic lane change				
Following too closely				
Moving violation arising from a fatal accident				

## Violations on or after 9/30/2005

SERIOUS DISQUALIFYING OFFENSES:	DISQUALIFY CDL 1st CMV Conviction	DISQUALIFY CDL 1st Non-CMV Conviction	DISQUALIFY CDL 2nd CMV Conviction	DISQUALIFY CDL 2nd Non-CMV Conviction
Speeding 15 or more over the limit	N/A	N/A	2 offenses within 3 years: 60 days  3 offenses within 3 years: 120 days	2 offenses within 3 years: 60 days  3 offenses within 3 years: 120 days if the conviction results in revocation, suspension, or cancel of CDL holder's license or non-CMV driving privileges
Reckless driving				
Passing illegally				
Improper or erratic lane change				
Following too closely				
Moving violation arising from a fatal accident				
Driving a CMV without obtaining a CDL				
Driving a CMV without a CDL in possession				
Driving a CMV without proper class/endorsement				

## Violations on or after 10/4/2002

RAILROAD-HIGHWAY GRADE CROSSING: DRIVER FAILS TO:	DISQUALIFY CDL 1st CMV Conviction	DISQUALIFY CDL 1st Non-CMV Conviction	DISQUALIFY CDL 2nd CMV Conviction	DISQUALIFY CDL 2nd Non-CMV Conviction
Slow down to ensure tracks clear	1st offense: 60 days	N/A	2 offenses within 3 years: 120 days  3 offenses within 3 years: 1 year	N/A
Stop if the tracks are not clear				
Stop before driving onto crossing				
Drive through crossing without stopping				
Obey a traffic control device or officer				
Ensure sufficient undercarriage clearance				

## Wisconsin General CDL Disqualifications

### Violations on or after 12/21/1995

FALSIFIED APPLICATION FOR A CMV:	DISQUALIFY CDL 1st CMV Conviction	DISQUALIFY CDL 1st Non-CMV Conviction	DISQUALIFY CDL 2nd CMV Conviction	DISQUALIFY CDL 2nd Non-CMV Conviction
Falsified application for a CMV	60 days	N/A	60 days 3rd offense: 60 days	N/A

### Violations on or after 8/1/2000

OPERATING CMV WHILE OUT-OF-SERVICE:	DISQUALIFY CDL 1st CMV Conviction	DISQUALIFY CDL 1st Non-CMV Conviction	DISQUALIFY CDL 2nd CMV Conviction	DISQUALIFY CDL 2nd Non-CMV Conviction
<p>Operating CMV while out-of-service</p> <p>HAZ penalties apply if violation occurred while transporting HAZ MAT or while operating a vehicle designed to carry 16 or more passengers</p>	<p>1st offense: 90 days</p> <p>HAZ MAT or passenger: 180 days</p>	N/A	<p>2nd offense within 10 years: 1 year HAZ MAT or passenger: 3 years</p> <p>3rd offense within 10 years: 3 years HAZ MAT or passenger: 3 years</p>	N/A

Revised March 2012



## School Bus and Hazmat Licensing Requirements

REQUIREMENT	SCHOOL BUS	HAZMAT
Special application (in addition to Form MV3001)	Yes (Self-certification Form MV3740)	Yes (Application for "H" endorsement, Form MV3735)
Fingerprinting	Only required of those who have been a resident of another state in the past two years.	Yes, all new, renewal and out-of-state transfer applicants for "H" endorsement.
Background check	Yes, at original issuance, each renewal, issuance of a duplicate and once every 4 years. (Transparent to the driver and requires no WisDOT intervention.) Endorsement will be denied or cancelled if there are "hits" mandating disqualification.	Yes, all new, renewal and out-of-state transfer applicants for "H" endorsement.
Self certification	Yes. If convicted of certain crimes and/or offenses listed in Wis. Stats 343.12(7) or Ch. Trans 112.15 WI Admin Code, endorsement will be denied or cancelled.	Yes. If convicted of certain crimes identified in 49 CFR 1572.103, applicant will be disqualified.
Threat assessment	No.	Yes. Includes fingerprints, a criminal history records check, proof of U.S. citizenship or lawful permanent residence in the U.S. and military service information including branch, date and type of discharge.
Certain convictions or medical declarations will result in denial or cancellation of the endorsement.	Yes. See "Medical Examination Report" and also "School Bus Disqualifications" charts in this manual.	Yes. See "Hazardous Materials Disqualifications" chart in this manual.
Testing at renewal	Yes. Knowledge test, signs test and abbreviated skills test.	Yes. Knowledge test.
Medical Exam	Yes, at original issuance and renewal, plus biennial proof of physical fitness. If 70 or older, annual physical fitness reports are required.	No.

BDS 337(e) 5/2011

## Hazardous Materials Disqualifications

List of disqualifying crimes that pose a potential threat to the nation's transportation network

All new, renewal or out-of-state transfer applicants for an "H" endorsement must submit biographical information and fingerprints so the Transportation Security Administration can complete a criminal history records check on the individual.

The following list of crimes, identified in 49 CFR 1572.103, disqualify you from an "H" endorsement. All of the crimes listed are disqualifying regardless of the jurisdiction; civilian or military.

**These crimes disqualify you for 7 years** if you were convicted during the 7 years before the date of your application or you were released from incarceration for any of these crimes during the 5 years before the date of your application:

Arson	Dishonesty, fraud, or misrepresentation, including identity fraud
Assault with intent to murder	Robbery
Kidnapping or hostage taking	Bribery
Rape or aggravated sexual abuse	Smuggling
Extortion	Immigration violations
Unlawful possession, use, sale, manufacture, purchase, distribution, receipt, transfer shipping, transporting delivery, import, export of, or dealing in a firearm or other weapon	Conspiracy or attempt to commit any of the crimes listed
Distribution of, possession with intent to distribute, or importation of a controlled substance	Violations of the Racketeer Influenced and Corrupt Organizations Act; 18 U.S.C 1961, et seq. or a State law that is comparable, other than the violations listed in paragraph (a)(10) of this section

**These crimes disqualify you for a lifetime:**

Any crime listed in 18 U.S.C. Chapter 1138 – Terrorism, or a State law that is comparable	Unlawful possession, use, sale, distribution, manufacture, purchase, receipt, transfer, shipping, transporting, import, export, storage of, or dealing in an explosive or explosive device
Espionage	Sedition
Treason	Murder
Violations of the Racketeer Influenced and Corrupt Organizations Act, 18 U.S.C. 1961, et seq., or a State law that is comparable, where one of the predicate acts found by jury or admitted by the defendant, consists of one of the offenses in paragraphs (a)(4) or (a)(8) of this section	Conspiracy or attempt to commit crimes listed
A crime involving a transportation security incident	Improper transportation of a hazardous material under 49 U.S.C 5124 or a State law that is comparable

Federal regulations under 49 CFR 1572.5(b) require you to notify the State of Wisconsin within 24 hours if you are convicted, or found not guilty by reason of insanity, of any disqualifying crime, or adjudicated as a mental defective or committed to a mental institution, while you hold a hazardous materials endorsement. You may voluntarily surrender your "H" endorsement at anytime by visiting a Wisconsin DMV Service Center.

**Privacy Act Notice:** *Authority:* The authority for collecting this information is 49 U.S.C. 114, 40113, and 49 U.S.C. 5103a. Purpose: This information is needed to verify your identity and to conduct a security threat assessment to evaluate your suitability for a hazardous materials endorsement for a commercial drivers license. Your Social Security Number (SSN) or alien registration number will be used as your identification number in this process and to verify your identity. Furnishing this information, including your SSN or alien registration number, is voluntary; however, failure to provide it will prevent the completion of your security threat assessment, without which you may not be granted a hazardous materials endorsement. Routine Uses: Routine uses of this information include disclosure to the FBI to retrieve your criminal history record; to TSA contractors or other agents who are providing services relating to the security threat assessments; to appropriate governmental agencies for licensing, law enforcement, or security purposes, or in the interests of national security; and to foreign and international governmental authorities in accordance with law and international agreement.

BDS336(e) 4/2011

# School Bus Disqualifications

Wisconsin Department of Transportation  
List from form MV3740 02/2011

Any driver applying for, renewing or transferring a school bus endorsement must complete an application and submit to a criminal background check to identify convictions. The result of any of the convictions listed in the following chart can be two years to a lifetime disqualification from driving a school bus.

## Offenses or Crimes under s.343.12(7) Wisconsin Statutes, or Chapter Trans. 112.15 Wisconsin Administrative Code

Felony	Length of Disqualification	Felony	Length of Disqualification
Abandonment of a child	Lifetime	Commercial vehicle used in commission of felony	5 years
Abduction of another's child; constructive custody	Lifetime	Commercial operating while intoxicated	5 years
Abuse of vulnerable adults	Lifetime	Concealing death of a child (At birth)	Lifetime
Abuse and neglect of patients and residents	Lifetime	Contributing to the delinquency of a minor	Lifetime
Acquire or obtain possession of controlled substance by fraud or forgery – counterfeit substance or packaging	5 years	Criminal damage to railroads	2 years
Administering dangerous or stupefying drug	Lifetime	Criminal gang member solicitation and contact	Lifetime
Arson of buildings; damage of property by explosives	5 years	Destruction of documents subject to subpoena	5 years
Arson of property other than buildings	5 years	Drug related crimes - Any of the following drug-related crimes: <ul style="list-style-type: none"><li>• Manufacture, distribution or delivery</li><li>• Possession with intent to manufacture, distribute or deliver</li><li>• Possession of piperidine</li><li>• Possession – gamma-hydroxybutyric acid, gamma-butyrolactone, ketamine or flunitrazepam</li><li>• Distribute or deliver or attempt to deliver or distribute an imitation controlled substance</li><li>• Conspiracy</li><li>• Counterfeit substance</li><li>• Possession</li></ul>	Distribution or delivery or intent to deliver or distribute are lifetime, all others are 5 year disqualifiers.  See above See above See above See above See above See above See above
Arson with intent to defraud	5 years	Distribution of controlled substances to persons under age 18	Lifetime
Assaults by prisoners	5 years	Disarming a peace officer	5 years
Assisting or permitting escape	5 years	Endangering safety by use of a dangerous weapon	2 years
Assisting suicide	5 years	Exposing genitals or pubic area to child	Lifetime
Attempt to elude officer	5 years	Exposing a child to harmful material or harmful descriptions or narrations	Lifetime
Battery; substantial battery; aggravated battery	Lifetime	Engaging in repeated acts of sexual assault of the same child	Lifetime
Battery to a pregnant woman or unborn child	Lifetime	Falsified application	2 years
Bomb scares	5 years	Failure to comply with officer's attempt to take person into custody	5 years
Burglary	5 years	Failure to stop after accident	5 years
Careless driving (Out of state)	2 years	Felony murder	Lifetime
Causing a child to view or listen to sexual activity	Lifetime	Firearm silencers	5 years
Causing mental harm to a child	Lifetime	First-degree intentional homicide	Lifetime
Child enticement	Lifetime	First-degree reckless homicide	Lifetime
Child sex offender working with children	Lifetime	Forgery	5 years
Commercial alcohol	5 years	Great bodily harm	5 years
Commercial alcohol causing death	5 years	Harboring or aiding felons	5 years
Commercial alcohol causing great bodily harm	5 years	Hazardous commercial alcohol causing death	5 years
Commercial alcohol causing injury	5 years	Hazardous commercial alcohol causing great bodily harm	5 years
Commercial OWI causing great bodily harm	5 years	Hazardous commercial alcohol causing injury	5 years
Commercial careless driving (Out of state)	2 years	Hazardous commercial OWI causing great bodily harm	5 years
Commercial controlled substance felony	5 years	Hazardous commercial alcohol	5 years
Commercial OWI – controlled substance	5 years	Hazardous commercial controlled substance felony	5 years
Commercial failure to stop after accident – attended vehicle	5 years		
Commercial negligent homicide intoxicated	5 years		
Commercial implied consent and not a drop	5 years		
Commercial OWI causing injury	5 years		
Commercial failure to stop at accident-unattended vehicle	5 years		
Commercial 0.0 not a drop	5 years		
Commercial possession of intoxicating beverage	5 years		
Commercial reckless driving	2 years		

### School Bus Disqualifications *(continued)*

Felony	Length of Disqualification
Hazardous commercial OWI – controlled substance	5 years
Hazardous commercial failure to stop after accident – attended vehicle or unattended	5 years
Hazardous commercial negligent homicide intoxicated	5 years
Hazardous commercial implied consent and implied consent not a drop	2 years
Hazardous commercial OWI causing injury	5 years
Hazardous commercial vehicle used in commission of felony	5 years
Hazardous commercial operating while intoxicated	5 years
Homicide by intoxicated use of vehicle or firearm	Lifetime
Homicide by negligent operation of a vehicle	Lifetime
Implied consent	2 years
Implied consent underage	2 years
Incest	Lifetime
Incest with a child	Lifetime
Injury by intoxicated use of a vehicle	5 years
Keep or maintain any place for drug use, manufacture, keeping or delivering	lifetime
Keeping a place of prostitution	Lifetime
Kidnapping	Lifetime
Kidnapping or missing persons – false information	5 years
Leaving or storing a loaded firearm within the reach or easy access of a child	Lifetime
Lewd and lascivious behavior	Lifetime
Loan sharking prohibited (Extortionate means – use or threat of violence for non-payment)	5 years
Machine guns and other weapons	5 years
Mayhem	Lifetime
Making lewd, obscene or indecent drawings	Lifetime
Molotov cocktails	5 years
Neglecting a child	Lifetime
Negligent homicide	5 years
Negligent homicide intoxicated	5 years
Negligent operation of a motor vehicle	2 years
Obscene material or performance	Lifetime
Obstructing emergency or rescue personnel	2 years
Obstructing justice	5 years
Operating after revocation	2 years
Operating while intoxicated causing injury	5 years
Operating under the influence of Intoxicant or controlled substance	5 years
Operating while disqualified	2 years
Operating while suspended	2 years
Pandering	Lifetime
Patronizing prostitutes	Lifetime
Perjury	2 years
Physical abuse of a child	Lifetime
Placing foreign objects in edibles	5 years

Felony	Length of Disqualification
Possession of child pornography	Lifetime
Possession and disposal of waste from manufacture of methamphetamine	5 years
Possession of electric weapon	5 years
Possession of a firearm (By felon)	5 years
Possession of firearm in school zone	Lifetime
Possession of short-barreled shotgun or rifle	5 years
Prohibited alcohol concentration	5 years
Prostitution	Lifetime
Public fornication	Lifetime
Reckless driving	2 years
Recklessly endangering safety	5 years
Reckless injury	Lifetime
Robbery	Lifetime
Sabotage	Lifetime
Second-degree intentional homicide	Lifetime
Second-degree reckless homicide	Lifetime
Sedition	Lifetime
Serious violation with occupational holder	2 years
Sending obscene or sexually explicit electronic messages	Lifetime
Sexual assault	Lifetime
Sexual assault of a child	Lifetime
Sexual assault of a student age 16 or older by a school instructional staff person	Lifetime
Sexual exploitation by a therapist	5 years
Sexual intercourse with a child age 16 or older	Lifetime
Sexual exploitation of a child	Lifetime
Sexual gratification	Lifetime
Soliciting a child for prostitution	Lifetime
Solicitation of a child to commit a felony	Lifetime
Soliciting prostitutes	Lifetime
Taking hostages	Lifetime
Tampering with household products	5 years
Treason	Lifetime
Threats to injure or accuse of crime	5 year
Unauthorized use of an individual's personal identifying information or documents	5 years
Underage alcohol operation	5 years
Unsafe burning of building	5 years
Use or possession of a handgun and an armor-piercing bullet during crime	5 years
Using a child for illegal drug distribution or manufacturing	Lifetime
Use of a computer to facilitate a child sex crime	Lifetime
Violation of occupational license	2 years
Vehicle used in commission of felony (Operating without owner's consent)	5 years

## School Bus or Alternative Vehicle

### The Transportation of Pupils in School Buses and Other Vehicles

#### School Bus Definition s.340.01(56)

A **"SCHOOL BUS"** is: (See chart on next page for examples.) A motor vehicle painted school bus yellow *when transporting*:

**OR**

A motor vehicle carrying 10 or more passengers in addition to the driver *when transporting*:

- Pupils (K-12) to or from public, private, vocational, technical or adult education school.
- Pupils (K-12) to or from curricular or extracurricular school activities (not-charter operation).
- Pupils (K-12) to or from religious instruction on days when school is in session.
- Children (under 21 years of age) with exceptional needs, to or from an education program approved by the Department of Public Instruction.
- Persons with disabilities or elderly persons in a vehicle **painted school bus yellow** in connection with any transportation assistance program.

**Any vehicle which meets the definition of a school bus must be painted school bus yellow in accordance with Wis. Statute 347.44 and equipped in accordance with Admin. Rule Trans. 300.**

#### School Bus Driver Requirements:

- The driver must have an "S" endorsement on his/her Wisconsin driver license.
- Possess a valid Wisconsin driver license of the appropriate class.
- Be at least 18 years of age.
- Have sufficient use of both hands and the foot normally used to operate the foot brake and foot accelerator correctly and efficiently.
- Meet the physical/medical standards for school bus endorsement referenced in Admin. Rule Trans. 112 by providing either a current federal medical card or an MV3030B (medical examination report for "S" or "P" endorsement).
- No felony convictions for offenses that will result in disqualification for obtaining an "S" endorsement. Refer to the "School Bus Disqualifications" chart in this manual for a list of convictions and their associated term of disqualification.

#### **"SCHOOL BUS" does NOT include: (See chart on next page for examples)**

- Vehicles owned or operated by a parent or guardian transporting his or her children regardless if there is any contract or paid compensation.
- "Alternative" vehicles (see next page).
- A motor bus painted a color other than school bus yellow used for school-related curricular or extracurricular transportation (charter operation).
- A motor bus operated in an urban mass transit system.
- A yellow painted school bus used in a charter operation that is NOT school-related.
- A "human service vehicle" (s.340.01(23G)) painted a color other than school bus yellow transporting persons with disabilities or elderly persons under any government transportation assistance program.

#### Additional School Bus Information

- A school bus may not tow a trailer.
- A school bus, motor bus or motor vehicle used in transportation for extracurricular activities must be under the immediate supervision of a competent adult.
- A school bus may not be used to transport more persons than can be seated on the permanently mounted seats facing forward without interfering with the operator.

### Alternative Vehicle Definition s.121.555

A school board or governing body of a private school may provide pupil transportation services by the following alternative methods:

- Use a motor vehicle not painted school bus yellow to transport 9 or less passengers in addition to the operator.

**OR**

- For **emergency** transportation - **temporarily** use a motor vehicle, not painted school bus yellow, to transport 10 or more passengers, when the school board or governing body requests the Secretary of Transportation to determine that an emergency exists because no regular transportation is available.

### Alternative Vehicle Driver Requirements

- Possess a valid Wisconsin driver license or a valid license of the appropriate class and endorsement from another jurisdiction.
- Be at least 18 years of age.
- Have sufficient use of both hands and the foot normally used to operate the foot brake and foot accelerator correctly and efficiently.
- No felony convictions for offenses that will result in disqualification for obtaining an “S” endorsement. Refer to the “School Bus Disqualifications” chart in this manual for a list of convictions and their associated term of disqualification.

(Example) Color of vehicle	# of People (including driver) Vehicle design (including driver) Vehicle GVWR (Gross Vehicle Weight Rating)	Type of Passenger	Transporting where and when	Required Driver License Class and “Endorsement”
(1) Yellow	15 or less (includes driver). Vehicle designed to carry less than 16 people 26,000 lbs or less GVWR.	K-12	To and from school or religious training during school hours, or school-related curricular or extracurricular activities.	D with “S”
(2) Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,000 lbs or less GVWR.	K-12	To and from school or religious training during school hours, or school-related curricular or extracurricular activities.	C with “P” and “S”
(3) Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,001 lbs or more GVWR.	K-12	To and from school or religious training during school hours, or school-related curricular or extracurricular activities.	B with “P” and “S”
(4) Yellow	15 or less (includes driver). Vehicle designed to carry less than 16 people 26,000 lbs or less GVWR.	Anyone	Non school-related transportation. Example: A club to a Brewer’s game (charter trip).	D
(5) Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,000 lbs or less GVWR.	Anyone	Non school-related transportation. Example: A scout group to a summer camp (charter trip).	C with “P”
(6) Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,001 lbs or more GVWR.	Anyone	Non school-related transportation. Example: A club to a Badger football game (charter trip).	B with “P”
(7) Non-Yellow (Alternative Vehicle)	10 or less (includes driver). Vehicle designed to carry less than 16 people 26,000 lbs or less GVWR.	K-12	To and from any school function. Examples: Students from day care center to school. Student with disabilities to school.	D
(8) Non-Yellow	11 to 15 (includes driver). Vehicle designed to carry less than 16 people 26,000 lbs or less GVWR.	Anyone	Non school-related transportation. Example: Adult softball team to Badger State Games (charter trip).	D
(9) Non-Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,000 lbs or less GVWR.	Anyone	Non school-related transportation. Example: A church group to a picnic (charter trip).	C with “P”
(10) Non-Yellow (charter bus)	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,001 lbs or more GVWR.	K-12	Curricular or extracurricular school-related activities (charter trip).	B with “P”

# Division of State Patrol Regions Map

11/2011



## SPOONER POST

Capt. Jeffrey J. Frenette, Commander  
Lt. Nicholas R. Wanink, Executive Officer  
W7102 Green Valley Rd.  
Spooner, WI 54801  
Telephone (715) 635-2141  
Fax (715) 635-6373

## WAUSAU POST

Capt. J.D. Lind, Commander  
Lt. Jeffry W. Liethen, Executive Officer  
2805 Martin Ave.  
Wausau, WI 54401-7172  
Telephone (715) 845-1143  
Fax (715) 848-9255

## FOND DU LAC POST

Capt. Nick Scorcio Jr. Commander  
851 S. Rolling Meadows Dr.  
P.O. Box 984  
Fond du Lac, WI 54936-9927  
Telephone (920) 929-3700  
Fax (920) 929-7666

## EAU CLAIRE POST

Capt. Jeffrey J. Frenette, Commander  
Lt. Jeffrey D. Lorentz, Executive Officer  
5005 Hwy 53 South  
Eau Claire, WI 54701-8846  
Telephone (715) 839-3800  
Fax (715) 839-3841

## WISCONSIN STATE PATROL ACADEMY

Capt. Christopher M. Neuman  
95 S. 10th Ave.  
Ft. McCoy, WI 54656-5168  
Telephone (608) 269-2500  
Fax (608) 269-5681

## TOMAH POST

Capt. Charles R. Teasdale, Commander  
(I-90, Tomah Exit Hwy. 131)  
23928 Lester McMullen Dr.  
Tomah, WI 54660-5376  
Telephone (608) 374-0513  
Fax (608) 374-0599

## DEFOREST POST

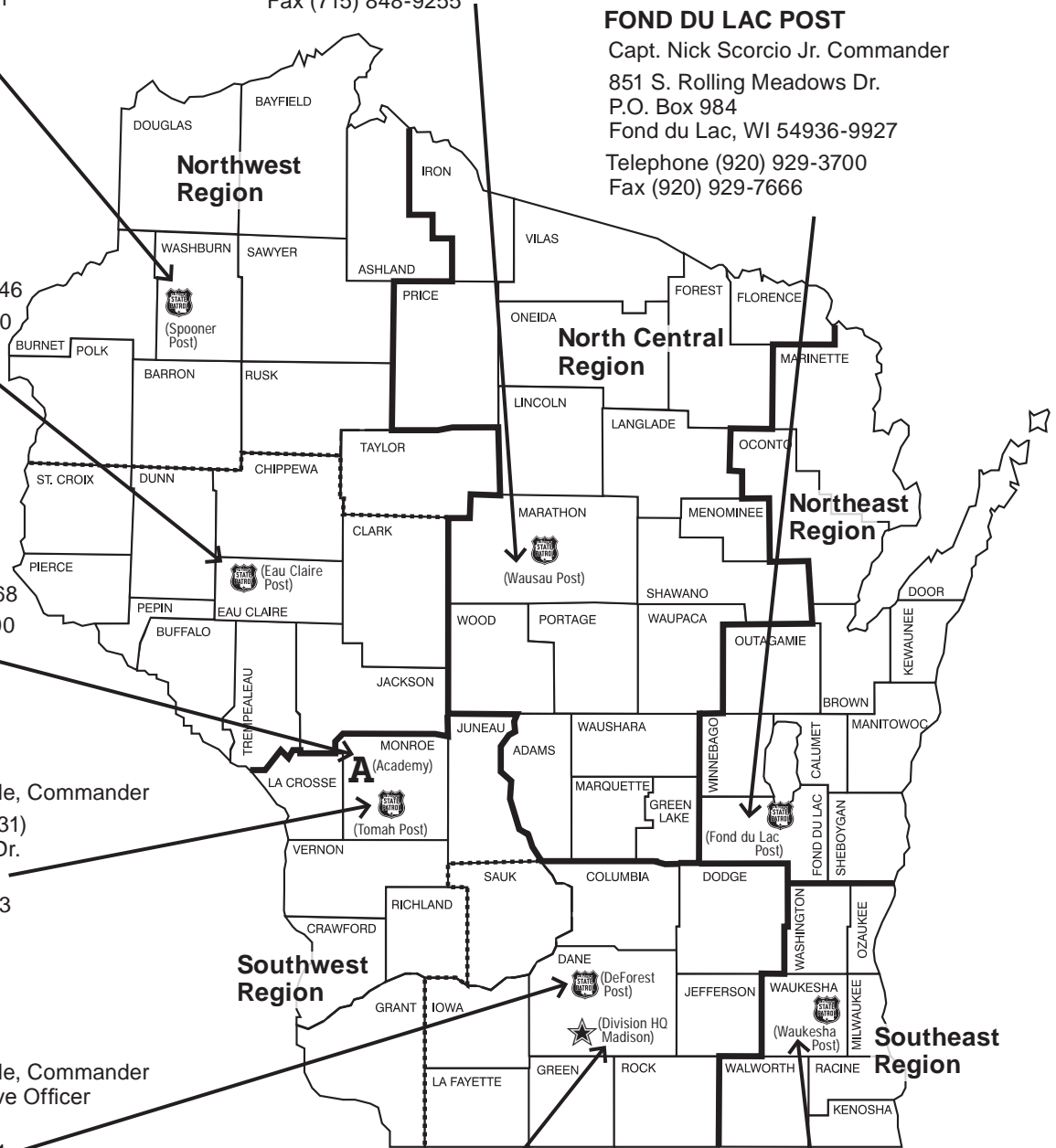
Capt. Charles R. Teasdale, Commander  
Lt. Brad Altman, Executive Officer  
911 W North St.  
DeForest, WI 53532-1971  
Telephone (608) 846-8500  
Fax (608) 846-8523

## DIVISION HEADQUARTERS

Stephen Fitzgerald, Superintendent  
Benjamin H. Mendez, Colonel  
4802 Sheboygan Ave., Rm. 551,  
P.O. Box 7912  
Madison, WI 53707-7912  
Telephone (608) 266-3212  
Fax (608) 267-4495

## WAUKESHA POST

Capt. Timothy L. Carnahan  
Lt. James M. Kicmol, Executive Officer  
21115 East Moreland Blvd.  
Waukesha, WI 53186-2985  
Telephone (262) 785-4700  
Fax (262) 785-4723



Drivers applying for, or renewing, an “S” (School Bus) endorsement must pass the “SIGNS” test. Study the following traffic sign information to help prepare yourself for the “SIGNS” test for your “S” endorsement.

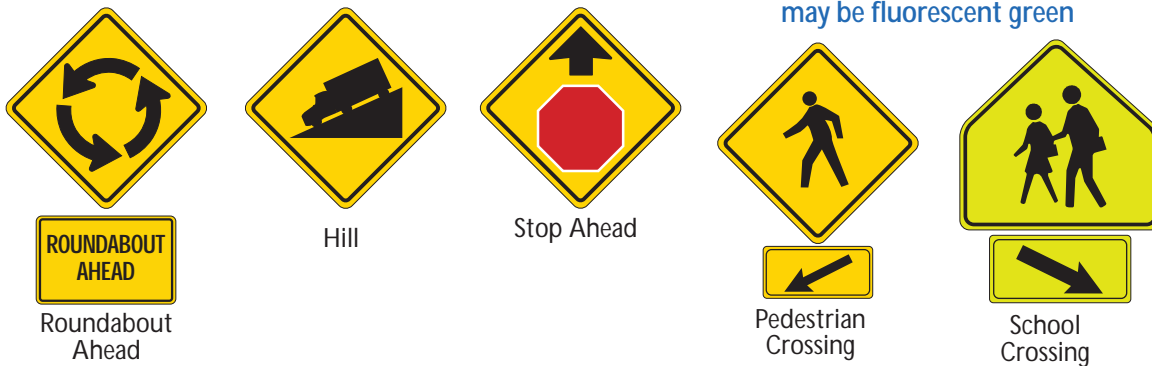
## TRAFFIC SIGNS

Traffic signs tell you about traffic rules, hazards, where you are, how to get to where you want to go and where services are located. Each type of sign is identified by its **shape** and **color**.

**Warning Signs:** These signs are yellow with **black lettering or symbols** and most are **diamond shaped**. They warn you about a special situation or that a hazard is ahead. Some common warning signs are:



**School Signs:** New crossing signs may be fluorescent green



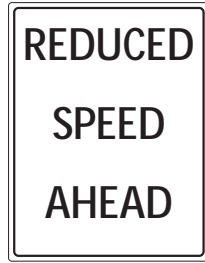
**Regulatory Signs:** These signs are **square, rectangular, or have a special shape** and are **usually white or red with black, red, white or green letters or symbols**. They tell you the requirements for stopping, yielding, traffic direction, lane use, turning, speed limits, parking and other special situations.

Some regulatory signs have a **red circle with a red slash over a symbol**. These signs prohibit certain actions, i.e., no left turn, no right turn, no U-turn, etc.



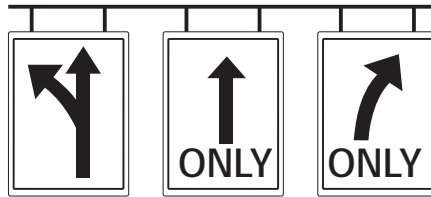
**Do Not Enter.** A square sign with a **white horizontal line inside a red ball** means you cannot enter. You will see this sign at openings to roadways that you should not enter such as exit ramps where you would be going in the wrong direction, in crossovers on divided roadways and on one-way streets.





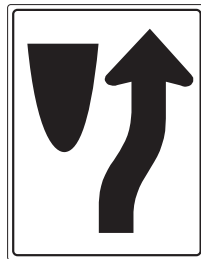
**Common types of other regulatory signs are:**

**Speed Limit Signs.** These signs tell you the maximum speed allowed, the minimum speed required, or of a change in speed limit. The maximum limit should be driven only in ideal driving conditions. You must reduce your speed when conditions require it. For example, you should reduce your speed for curves and when the roadway is slippery (during rain, snow, icy conditions), or when it is foggy and difficult to see clearly down the road. Some high speed roads have minimum speed limits and you are required to travel at least this fast so you are not a hazard to other drivers. If the minimum posted speed limit is too fast for you, you should use another road.



**Lane Use Control Signs.**

These signs tell you where you can turn or what direction you can turn from a certain lane. They often use an **arrow symbol**. These signs may be located on the side of the road or hanging over the lane of travel.



Keep Right



The 'dot' to the left of the arrow represents the island in the center of a roundabout. It shows that the driver is required to drive counter-clockwise around the island in the center to make a left turn.

Sometimes arrows are also painted on the road.



**No Passing.** Pavement markings, along with these optional signs, show where you can not pass. A **yellow pennant** NO PASSING ZONE sign facing you on the left side of the road indicates the beginning of a no passing zone. Passing areas are based on how far ahead you can see. Where it is permitted to pass, you may do so only if it is safe.



**Stop.** A stop sign has **eight sides** and is **red with white letters**.

You must come to a **full** stop. You must wait until crossing vehicles and pedestrians have cleared your path. You can go only when it is safe to do so. If you cannot see traffic from your first stop, slowly move ahead and stop again **before** entering the intersection. Check for cross traffic and pedestrians before you go.



**Yield.** A yield sign is a **downward pointing triangle**.

It is **red and white with red letters**. It means you must slow down and yield the right-of-way to traffic in the intersection you are crossing or the roadway you are entering.



**Slow Moving Vehicle.** A **reflective orange triangle** on the rear of a vehicle means it may be traveling less than 25 mph. You may see this sign on construction equipment and, in rural areas, on farm vehicles or horse drawn wagons or carriages.

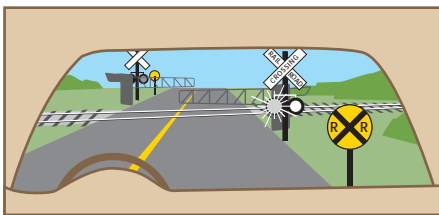
**Note:** *Amish are not required to use this symbol (religious reasons), nor are bicyclists. However, both should still have reflective material on the rear of the vehicle.*



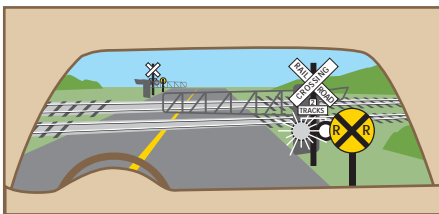
**Railroad Crossing Warning Signs.** Many railroad crossings have signs or signals to warn you that a train is near. **Never** try to beat a train across the tracks. **Never** start to cross railroad tracks if you will have to stop on the tracks because there isn't room for your vehicle on the far side. It is wise not to shift gears when crossing railroad tracks, just in case your vehicle might stall. Remember... trains are large and may be moving faster than they seem.

A **round yellow warning** sign with an "X" symbol and **black "RR" letters** is placed along the road before you get to a railroad crossing.

A **white, X-shaped sign** or "crossbuck" with "Railroad Crossing" on it is located at the railroad crossing. This sign has the same meaning as a "Yield" sign. You must yield to crossing trains.



Crossings may have an "exempt" or "tracks out-of-service" sign. "tracks out-of-service" means the crossing is no longer used by trains. "Exempt" means certain vehicles are not required to stop before crossing tracks marked "exempt" or "tracks out-of-service." However, be cautious and look both ways before crossing these tracks.



At some crossings, along with the crossbuck sign, you will see side-by-side lights that will flash alternately when a train is approaching. When the lights are flashing, you must stop and wait until the train has passed and the track is clear. At some crossings there is also a crossing gate that will lower when a train is coming. Do not drive around the gate or under a raising or lowering gate. Some crossings also have a bell or a horn that will sound. Do not cross until the bell or horn has stopped.

Crossings with more than one train track will often post a sign showing the number of tracks. These signs warn you there is more than one track and there may be more than one train crossing. Not all crossings with more than one train track will have these signs, so it is important to check for more than one track before crossing.





Road Workers Ahead



Road Work Ahead



Flagger Ahead

**Construction Signs:** These construction, maintenance or emergency operations signs are generally **diamond or rectangular** shaped, **orange with black letters or symbols** and warn you about people working on or near the roadway. These warnings include reduced speed, detours, slow moving construction equipment and lane closures. In work areas, traffic may be controlled by a person with a sign or flag. You must obey these persons.

**NOTE:** *Traffic fines double in work areas.*

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## Section 9: Hazardous Materials

This section covers:

- The Intent of the Regulations
- Who Does What, Including Driver Responsibilities
- Communications Rules
- Loading and Unloading
- Bulk Packaging Marking, Loading and Unloading
- Driving and Parking Rules
- Emergencies
- Glossery of Terms

Hazardous materials are products that pose a risk to health, safety, and property during transportation. The term often is shortened to HAZMAT, which you may see on road signs, or to HM in government regulations. Hazardous materials include explosives, various types of gas, solids, flammable and combustible liquids, and other materials. Because of the risks involved and the potential consequences these risks impose, the handling of hazardous materials is very heavily regulated by all levels of government.

The Hazardous Materials Regulations (HMR) are found in parts 100–185 of title 49 of the Code of Federal Regulations. The common reference for these regulations is 49 CFR 100–185.

The Hazardous Materials Table in the regulations contains a list of hazardous materials. However, the list is not all-inclusive. Whether or not a material is considered hazardous is based on its characteristics and the shipper's decision on whether or not the material meets the definition of a hazardous material in the regulations.

The regulations require vehicles transporting certain types or quantities of hazardous materials to display diamond-shaped, square-on-point warning signs called placards.

This section is designed to assist you in understanding your role and responsibilities in hauling hazardous materials. Due to the constantly changing nature of government regulations, it is impossible to guarantee absolute accuracy of the materials in this section. It is essential for you to have an up-to-date copy of the complete regulations. A complete glossary of terms is included in them.

You must have a commercial driver license (CDL) with a hazardous materials endorsement before you drive any size vehicle that is used to transport hazardous material as defined in 49 CFR 383.5. You must pass a knowledge test about the regulations and requirements to get this endorsement.

Everything you need to know to pass the knowledge test is in this section. However, this is only a beginning. Most drivers need to know much more on the job. You can learn more by reading and understanding the federal and state rules applicable to hazardous materials as well as attending hazardous materials training courses. Your employer, colleges and universities, and various associations usually offer these courses. You can get copies of the Federal Regulations (49 CFR) through your local Government Printing Office bookstore or various industry publishers. Union or company offices often have copies of the rules for driver use too. Find out where you can get your own copy to use on the job.

The regulations require training and testing for all drivers involved in transporting hazardous materials. Your employer or a designated representative is required to provide this training and testing. Hazardous materials employers are required to keep a record of that training for each employee as long as that employee is working with hazardous materials, and for 90 days thereafter. The regulations require that hazardous materials employees be trained and tested at least once every three years.

All drivers must be trained in the security risks of hazardous materials transportation. This training must include how to recognize and respond to possible security threats.

The regulations also require that drivers have special training before operating a vehicle transporting certain flammable gas materials or highway route controlled quantities of radioactive materials. In addition, drivers transporting cargo tanks and portable tanks must receive specialized training. Each driver's employer or their designated representative must provide such training.

Some locations require permits to transport certain explosives or bulk hazardous wastes. States and counties also may require drivers to follow special hazardous materials routes. The federal government may require permits or exemptions for special hazardous materials cargo such as rocket fuel. Find out about permits, exemptions and special routes for the places you drive.

### 9.1 The Intent of the Regulations

#### CONTAIN THE MATERIAL

Transporting hazardous materials can be risky. The regulations are intended to protect you, those around you, and the environment. They inform shippers about how to package the materials safely, and drivers on how to load, transport, and unload the material. These are called "containment rules."

#### COMMUNICATE THE RISK

To communicate the risk, shippers must warn drivers and others about the material's hazards. The regulations require shippers to put hazard warning labels on packages, provide proper shipping papers, emergency response information, and placards. These steps communicate the hazard to the shipper, the carrier, and the driver.

#### ASSURE SAFE DRIVERS AND EQUIPMENT

In order to get a hazardous materials endorsement on a CDL, you must pass a written test about transporting hazardous materials. To pass the test, you must know how to:

- Identify what are hazardous materials.
- Safely load shipments.
- Properly placard your vehicle in accordance with the rules.
- Safely transport shipments.

Learn the rules and follow them. Following the rules reduces the risk of injury from hazardous materials. Taking shortcuts by breaking rules is unsafe. Non-compliance with regulations can result in fines and jail.

Inspect your vehicle before and during each trip. Law enforcement officers may stop and inspect your vehicle. They may check your shipping papers, vehicle placards, the hazardous materials endorsement on your driver license, and your knowledge of hazardous materials.

## 9.2 Hazardous Materials Transportation - Who Does What

### THE SHIPPER

- Sends products from one place to another by truck, rail, vessel, or airplane.
- Uses the hazardous materials regulations to determine the product's:
  - » Proper shipping name
  - » Hazard class
  - » Identification number
  - » Packing group
  - » Correct packaging
  - » Correct label and markings
  - » Correct placards
- Must package, mark, and label the materials
- Prepare shipping papers
- Provide emergency response information
- Supply placards
- Certify on the shipping paper that the shipment has been prepared according to the rules (unless you are pulling cargo tanks supplied by you or your employer).

### THE CARRIER

- Takes the shipment from the shipper to its destination.
- Prior to transportation, checks that the shipper correctly described, marked, labeled, and otherwise prepared the shipment for transportation.
- Refuses improper shipments.
- Reports accidents and incidents involving hazardous materials to the proper government agency.

### THE DRIVER

- Makes sure the shipper has identified, marked, and labeled the hazardous materials properly.
- Refuses leaking packages and shipments.
- Placards vehicle when loading, if required.
- Safely transports the shipment without delay.
- Follows all special rules about transporting hazardous materials.
- Keeps hazardous materials shipping papers and emergency response information in the proper place.

## 9.3 Communication Rules

### DEFINITIONS

Some words and phrases have special meanings when talking about hazardous materials. Some of these may differ from meanings you are used to. The words and phrases in this section may be on your test. The meanings of other important words are in the glossary at the end of Section 9.

A material's hazard class reflects the risks associated with it. There are nine different hazard classes. The types of materials included in these nine classes are in Figure 9.1.

**Figure 9-1: Hazardous Materials Hazard Class/Division Table**

CLASS	DIVISION	NAME OF CLASS OR DIVISION	EXAMPLE
1	1.1	Mass Explosion	Dynamite
	1.2	Projection Hazard	Flares
	1.3	Fire Hazard	Display Fireworks
	1.4	Minor Explosion	Ammunition
	1.5	Very Insensitive	Blasting Agents
	1.6	Extremely Insensitive	Explosive Devices
2	2.1	Flammable Gases	Propane
	2.2	Non-Flammable Gases	Helium
	2.3	Poisonous/ Toxic Gases	Fluorine, Compressed
3	—	Flammable Liquids	Gasoline
4	4.1	Flammable Solids	Ammonium Picrate,
	4.2	Spontaneously Combustible	Wetted White Phosphorus
	4.3	Dangerous When Wet	Sodium
5	5.1	Oxidizers	Ammonium Nitrate
	5.2	Organic Peroxides	Methyl Ethyl Ketone Peroxide
6	6.1	Poison (Toxic Material)	Potassium Cyanide
	6.2	Infectious Substances	Anthrax Virus
7	-	Radioactive	Uranium
8	-	Corrosives	Battery Fluid
9	-	Miscellaneous Hazardous Materials	Polychlorinated Biphenyls (PCB)
e	-	ORM-D (Other Regulated Material-Domestic)	Food Flavorings, Medicines
-	-	Combustible Liquids	Fuel Oil

## SHIPPING PAPERS

A shipping paper describes the hazardous materials being transported. Shipping orders, bills of lading, and manifests are all shipping papers. Figure 9-6 shows an example shipping paper.

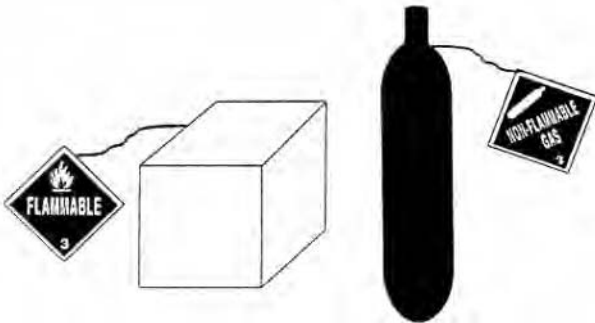
After an accident or hazardous materials spill or leak, you may be injured and unable to communicate the hazards of the materials you are transporting. Firefighters and police can prevent or reduce the amount of damage or injury at the scene if they know what hazardous materials are being carried. Your life, and the lives of others, may depend on quickly locating the hazardous materials shipping papers. For that reason the rules require:

- Shippers to describe hazardous materials correctly and include an emergency response telephone number on shipping papers.
- Carriers and drivers to quickly identify hazardous materials shipping papers, or to keep them on top of other shipping papers and keep the required emergency response information with the shipping papers.
- Drivers to keep hazardous materials shipping papers:
  - » In a pouch on the driver's door, or
  - » In clear view within immediate reach while the seat belt is fastened while driving, or
  - » On the driver's seat when out of the vehicle.

## PACKAGE LABELS

Shippers put diamond-shaped hazard warning labels on most hazardous materials packages. These labels inform others of the hazard. If the diamond label won't fit on the package, shippers may put the label on a tag securely attached to the package. For example, compressed gas cylinders that will not hold a label will have tags or decals. Labels look like the examples shown in Figure 9-2.

Figure 9-2: Example of HAZMAT Labels



## PLACARDS

Placards are used to warn others of hazardous materials. Placards are signs put on the outside of a vehicle and on bulk packages, which identify the hazard class of the cargo.

A placarded vehicle must have at least four identical placards. They are put on the front, rear and both sides of the vehicle. See Figure 9.3.

Placards must be readable from all four directions. They are at least 10 3/4 inches square, square-on-point, in a diamond shape.

Cargo tanks and other bulk packaging display the identification number of their contents on placards or orange panels or white square-on-point displays that are the same size as placards.

Figure 9-3: Placard and Panel Locations

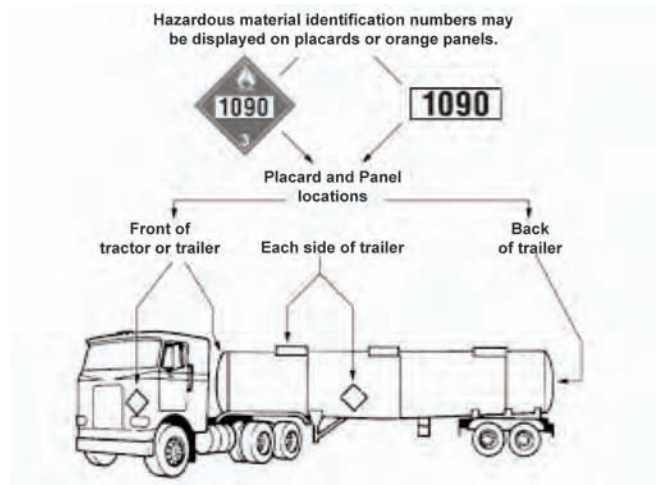
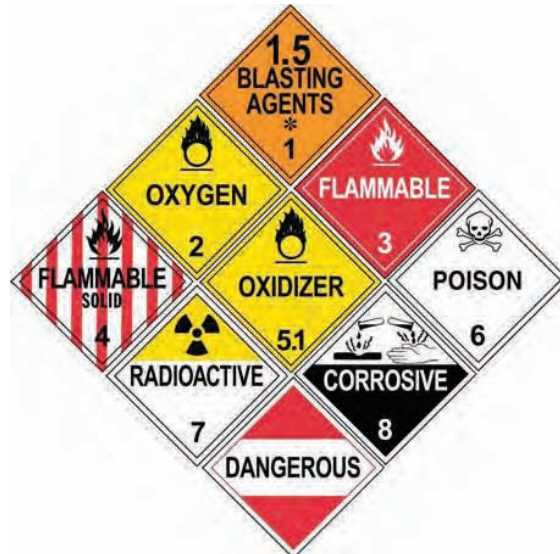


Figure 9-3a: Examples of Hazmat Placards



Identification numbers are a four-digit code used by first responders to identify hazardous materials. An identification number may be used to identify more than one chemical. The letters "NA" or "UN" will precede the identification number. The United States Department of Transportation's Emergency Response Guidebook (ERG) lists the chemicals and the identification numbers assigned to them



**Figure 9-4: Part of the Hazardous Materials Table**

49 CFR 172.101 HAZARDOUS MATERIALS TABLE									
Symbols	Hazardous materials description and proper shipping names	Hazard class or Division	Identification Numbers	PG	Label Codes	Special provisions (172.102)	Packaging 173.***		
							Excep-tions	Non-bulk	Bulk
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8a)	(8b)	(8c)
A	Acetaldehyde ammonia	9	UN1841	III	9	1B8, 1P6	155	204	240

**LISTS OF REGULATED PRODUCTS**

There are three main lists used by shippers, carriers, and drivers when trying to identify hazardous materials. Before transporting a material, look for its name on all three lists. Some materials are on all lists, others on only one. Always check the following lists:

- Section 172.101 the Hazardous Materials Table (see example in Figure 9-4);
- Appendix A to Section 172.101, the List of Hazardous Substances and Reportable Quantities (see Figure 9-5); and
- Appendix B to Section 172.101, the List of Marine Pollutants.

**The Hazardous Materials Table.** Figure 9-4 shows part of the Hazardous Materials Table. Column 1 tells which shipping mode(s) the entry affects and other information concerning the shipping description. The next five columns show each material’s shipping name, hazard class or division, identification number, packaging group and required labels.

Six different symbols may appear in Column 1 of the table.

- (+) Shows the proper shipping name, hazard class, and packing group to use, even if the material does not meet the hazard class definition.
- (A) Means the hazardous material described in Column 2 is subject to the HMR only when offered or intended for transport by air unless it is a hazardous substance or hazardous waste.
- (W) Means the hazardous material described in Column 2 is subject to the HMR only when offered or intended for transportation by water unless it is a hazardous substance, hazardous waste or marine pollutant.
- (D) Means the proper shipping name is appropriate for describing materials for domestic transportation, but may not be proper for international transportation.
- (I) Identifies a proper shipping name that is used to describe materials in international transportation. A different shipping name may be used when only domestic transportation is involved.
- (G) Means this hazardous material described in Column 2 is a generic shipping name. A generic shipping name must be accompanied by a technical name on the shipping paper. A technical name is a specific chemical that makes the product hazardous.

Column 2 lists the proper shipping names and descriptions of regulated materials. Entries are in alphabetical order so you can more quickly find the right entry. The table shows proper shipping names in regular type. The shipping paper must show proper shipping names. Names shown in italics are not proper shipping names.

Column 3 shows a material’s hazard class or division, or the entry “Forbidden.” Never transport a “Forbidden” material. Placard hazardous materials shipments based on the quantity and hazard class. You can decide which placards to use if you know these three things:

- Material’s hazard class.
- Amount being shipped.
- Amount of all hazardous materials of all classes on your vehicle.

Column 4 lists the identification number for each proper shipping name. Identification numbers are preceded by the letters “UN” or “NA.” The letters “NA” are associated with proper shipping names that are only used within the United States, and to and from Canada. The identification number must appear on the shipping paper as part of the shipping description and also appear on the package. It must also appear on cargo tanks and other bulk packaging. Police and firefighters use this number to quickly identify the hazardous materials.

Column 5 shows the packing group (in Roman numeral) assigned to a material.

Column 6 shows the hazard warning label(s) shippers must put on packages of hazardous materials. Some products require use of more than one label due to a dual hazard being present.

Column 7 lists the additional (special) provisions that apply to this material. When there is an entry in this column, you must refer to the federal regulations for specific information. The numbers 1-6 in this column mean the hazardous material is a poison inhalation hazard (PIH). PIH materials have special requirements for shipping papers, marking and placards.

Column 8 is a three-part column showing the section numbers covering the packaging requirements for each hazardous material.

.....  
**Note:** Columns 9 and 10 do not apply to transportation by highway.  
 .....

**Appendix A to 49 CFR 172.101: The List of Hazardous Substances and Reportable Quantities.** The DOT and the EPA want to know about spills of hazardous substances. They are named in the List of Hazardous Substances and Reportable Quantities (see Figure 9-5). Column 3 of the List shows each product's reportable quantity (RQ). When these materials are being transported in a reportable quantity or greater in one package, the shipper displays the letters RQ on the shipping paper and package. The letters RQ may appear before or after the basic description. You or your employer must report any spill of these materials which occurs in a reportable quantity.

If the words INHALATION HAZARD appear on the shipping paper or package, the rules require display of the POISON INHALATION HAZARD or POISON GAS placards, as appropriate. These placards must be used in addition to other placards which may be required by the product's hazard class. Always display the hazard class placard and the POISON INHALATION HAZARD placard, even for small amounts.

**Figure 9-5:** List of Hazardous Substances

APPENDIX A TO 49 CFR 172 LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES	
Hazardous substances	Reportable quantity (RQ) pounds (kilograms)
Phenyl mercaptan@	100 (45.4)
Phenylmercuric acetate	100 (45.4)
N-Phenylthiourea	100 (45.4)
Phorate	10 (4.54)
Phosgene	10 (4.54)
Phosphine	100 (45.4)*
Phosphoric acid	5000 (2270)
Phosphoric acid, diethyl 4-nitrophenyl ester	100 (45.4)
Phosphoric acid, lead salt	10 (4.54)

\*Spills of 10 pounds or more must be reported

**Appendix B to 49 CFR 172.101: List of Marine Pollutants.** Appendix B is a listing of chemicals that are toxic to marine life. For highway transportation, this list is only used for chemicals in a container with a capacity of 119 gallons or more without a placard or label as specified by the HMR.

Any bulk packages of a Marine Pollutant must display the Marine Pollutant marking (white triangle with a fish and an "X" through the fish). This marking (it is not a placard) must also be displayed on the outside of the vehicle. In addition, a notation must be made on the shipping papers near the description of the material: "Marine Pollutant."

## Test Your Knowledge

1. Shippers package in order to (fill in the blank) the material.
2. Drivers placard their vehicle to (fill in the blank) the risk.
3. What three things do you need to know to decide which placards, if any, are needed?
4. A hazardous materials identification number must appear on the (fill in the blank) and on the (fill in the blank). The identification number must also appear on cargo tanks and other bulk packagings.
5. Where must you keep shipping papers describing hazardous materials?

These questions may be on your test. If you are unable to answer them all, re-read pages 9:1 through 9:5.

## THE SHIPPING PAPER

The shipping paper shown in Figure 9-6 describes a shipment. A shipping paper for hazardous materials must include:

- Page numbers if the shipping paper has more than one page. The first page must tell the total number of pages. For example, "Page 1 of 4."
- A proper shipping description for each hazardous material.
- A **shipper's certification**, signed by the shipper, indicating they prepared the shipment according to the regulations.

## THE ITEM DESCRIPTION

If a shipping paper describes both hazardous and non-hazardous products, the hazardous materials will be either:

- Described first, or
- Highlighted in a contrasting color, or
- Identified by an "X" placed before the shipping name in a column captioned "HM." The letters "RQ" may be used instead of "X" if a reportable quantity is present in one package.

The basic description of hazardous materials includes the proper shipping name, hazard class or division, the identification number, and the packing group, if any, in that order. The packing group is displayed in Roman numerals and may be preceded by "PG."

Shipping name, hazard class and identification number must not be abbreviated unless specifically authorized in the hazardous materials regulations. The description must also show:

- The total quantity and unit of measure.
- The letters RQ, if a reportable quantity.
- If the letters RQ appear, the name of the hazardous substance.
- For all materials with the letter "G" (Generic) in Column 1, the technical name of the hazardous material.

Shipping papers must also list an emergency response telephone number. The emergency response telephone number is the responsibility of the shipper. It can be used

**Figure 9-6: Example of Shipping Paper**

"RQ" means this is a reportable quantity

Hazard Class from Column 3 of the Hazardous Materials Table

Proper shipping name from Column 2 of the Hazardous Materials Table

ID Number from Column 4 of the Hazardous Materials Table

**SHIPPING PAPER**

**TO:** Wafers R US  
88 Valley Street  
Silicon Junction, CA

**FROM:** Essex Corporation  
5775 Dawson Avenue  
Coleta, CA 93117

Page 1 of 1

QTY	HM	DESCRIPTION	WEIGHT
1 cyl	RQ	Phosgene, 2.3, UN1076, Poison, Inhalation Hazard, Zone A	25 lbs

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Shipper: Essex Corp  
Per: Shultz  
Date: 6/27/03

Carrier: Knuckle Bros.  
Per: Jones  
Date: 7/1/03

**SPECIAL INSTRUCTIONS:** 24 Hr. Emergency Contact, Ed Shultz, 1-800-555-5555

by emergency responders to obtain information about any hazardous materials involved in a spill or fire. Some hazardous materials do not need a telephone number. You should check the regulations to determine which do need a telephone number.

Shippers must also provide emergency response information to the motor carrier for each hazardous material being shipped. The emergency response information must be able to be used away from the motor vehicle and must provide information on how to safely handle incidents involving the material. It must include information on the shipping name of the hazardous material, risks to health, fire, explosion and initial methods of handling spills, fires and leaks of the material.

Such information can be on the shipping paper or some other document that includes the basic description and technical name of the hazardous material. Or, it may be in a guidance book such as the Emergency Response Guidebook (ERG). Motor carriers may assist shippers by keeping an ERG on each vehicle carrying hazardous materials. The driver must provide the emergency response information to any federal, state, or local authority responding to or investigating a hazardous materials incident.

Total quantity must appear before or after the basic description. The packaging type and the unit of measurement may be abbreviated. For example:

10 ctns. Paint, 3, UN1263, PG II, 500 lbs.

The shipper of hazardous wastes must put the word WASTE before the proper shipping name of the material on the shipping paper (hazardous waste manifest). For example:

Waste Acetone, 3, UN1090, PG II.

A non-hazardous material may not be described by using a hazard class or an identification number.

**SHIPPER'S CERTIFICATION**

When the shipper packages hazardous materials, he/she certifies that the package has been prepared according to the rules. The signed shipper's certification appears on the original shipping paper. The only exceptions are when a shipper is a private carrier transporting their own product and when the package is provided by the carrier (for example, a cargo tank). Unless a package is clearly unsafe or does not comply with the HMR, you may accept the shipper's certification concerning proper packaging. Some carriers have additional rules about transporting hazardous materials. Follow your employer's rules when accepting shipments

**PACKAGE MARKINGS AND LABELS**

Shippers print required markings directly on the package, an attached label or tag. An important package marking is the name of the hazardous material. It is the same name as the one on the shipping paper. The requirements for marking vary by package size and material being transported. When required, the shipper will put the following on the package:

- The name and address of shipper or consignee.
- The hazardous material's shipping name and identification number.
- The labels required.

It is a good idea to compare the shipping paper to the markings and labels. Always make sure that the shipper shows the correct basic description on the shipping paper and verifies that the proper labels are shown on the packages. If you are not familiar with the material, ask the shipper to contact your office.

If rules require it, the shipper also will put RQ, MARINE POLLUTANT, BIOHAZARD, HOT or INHALATION-HAZARD on the package. Packages with liquid containers inside will

also have package orientation markings with the arrows pointing in the correct upright direction. The labels used always reflect the hazard class of the product. If a package needs more than one label, the labels must be close together, near the proper shipping name.

## RECOGNIZING HAZARDOUS MATERIALS

Learn to recognize shipments of hazardous materials. To find out if the shipment includes hazardous materials, look at the shipping paper. Does it have:

- An entry with a proper shipping name, hazard class and identification number?
- A highlighted entry, or one with an X or RQ in the hazardous materials column?

Other clues suggesting hazardous materials:

- What type of business is shipping the material? Paint dealer? Chemical supply? Scientific supply house? Pest control or agricultural supplier? Explosives, munitions or fireworks dealer?
- Are there tanks with diamond labels or placards on the premises?
- What type of package is being shipped? Cylinders and drums are often used for hazardous materials shipments.
- Is a hazard class label, proper shipping name or identification number on the package?
- Are there any handling precautions?

## HAZARDOUS WASTE MANIFEST

When transporting hazardous wastes, you must sign by hand and carry a Uniform Hazardous Waste Manifest. The name and EPA registration number of the shippers, carriers, and destination must appear on the manifest. Shippers must prepare, date, and sign the manifest by hand. Treat the manifest as a shipping paper when transporting the waste. Only give the waste shipment to another registered carrier or disposal/treatment facility. Each carrier transporting the shipment must sign the manifest by hand. After you deliver the shipment, keep your copy of the manifest. Each copy must have all needed signatures and dates, including those of the person to whom you delivered the waste.

## PLACARDING

Attach the appropriate placards to the vehicle before you drive it. You are only allowed to move an improperly placarded vehicle during an emergency, in order to protect life or property.

Placards must appear on both sides and both ends of the vehicle. Each placard must be:

- Easily seen from the direction it faces.
- Placed so the words or numbers are level and read from left to right.
- At least 3 inches away from any other markings.
- Kept clear of attachments or devices such as ladders, doors, and tarpaulins.
- Be affixed to a background of contrasting color.
- The use of *Drive Safely* and other slogans is prohibited.
- The front placard may be on the front of the tractor or the front of the trailer.
- Kept clean and undamaged so the color, format, and message are easily seen.

To decide which placards to use, you need to know:

- The hazard class of the materials.
- The amount of hazardous materials shipped.
- The total weight of all classes of hazardous materials in your vehicle

## PLACARD TABLES

There are two placard tables, Table 1 and Table 2. Table 1 materials must be placarded whenever **any** amount is transported. See Figure 9-7.

**Figure 9-7 Placard Table 1: any amount**

IF YOUR VEHICLE CONTAINS ANY AMOUNT OF ...	PLACARD AS ...
1.1 Mass Explosives	Explosives 1.1
1.2 Project Hazards	Explosives 1.2
1.3 Mass Fire Hazards	Explosives 1.3
2.3 Poisonous/Toxic Gases	Poison Gas
4.3 Dangerous When Wet	Dangerous When Wet
5.2 (Organic Peroxide, Type B, liquid or solid, Temperature controlled)	Organic Peroxide
6.1 (Inhalation hazard zone A and B only)	Poison/Toxic Inhalation
7 (Radioactive Yellow III label only)	Radioactive

Except for bulk packagings, the hazard classes in Table 2 need placards only if the total amount transported is 1,001 lbs. or more including the package. Add the amounts from all shipping papers for all the Table 2 products you have on board. See Figure 9-8.

You may use DANGEROUS placards instead of separate placards for each Table 2 hazard class when:

- You have 1,001 lbs. or more of two or more Table 2 hazard classes, requiring different placards, and
- You have not loaded 2,205 lbs. or more of any Table 2 hazard class material at any one place. (You must use the specific placard for this material.)

The DANGEROUS placard is an option, not a requirement. You can always placard for the materials.

If the words INHALATION HAZARD are on the shipping paper or package, you must display POISON GAS or POISON INHALATION placards in addition to any other placards needed by the product's hazard class. The 1,000 pound exception does not apply to these materials.

Materials with a secondary hazard of dangerous when wet must display the DANGEROUS WHEN WET placard in addition to any other placards needed by the product's hazard class. The 1,000-pound exception to placarding does not apply to these materials.

Placards used to identify the primary or subsidiary hazard class of a material must have the hazard class or division number displayed in the lower corner of the placard. Permanently affixed subsidiary hazard placards without the hazard class number may be used as long as they stay within color specifications.

Placards may be displayed for hazardous materials even if not required, as long as the placard identifies the hazard of the material being transported.

Bulk packaging is a single container with a capacity of 119 gallons or more. A bulk package, and a vehicle transporting a bulk package, must be placarded, even if it only has the residue of a hazardous material. Certain bulk packages only have to be placarded on the two opposite sides or may display labels. All other bulk packages must be placarded on all four sides.

**Figure 9-8 Placard table 2: 1001 lbs or more**

CATEGORY OF MATERIAL (HAZARD CLASS OR DIVISION NUMBER AND ADDITIONAL DESCRIPTION, AS APPROPRIATE)	PLACARD NAME
1.4 Minor Explosion	Explosives 1.4
1.5 Very Insensitive	Explosives 1.5
1.6 Extremely Insensitive	Explosives 1.6
2.1 Flammable Gases	Flammable Gas
2.2 Non-Flammable Gases	Non-Flammable Gas
3 Flammable Liquids	Flammable
Combustible Liquid	Combustible*
4.1 Flammable Solids	Flammable Solid
4.2 Spontaneously Combustible	Spontaneously Combustible
5.1 Oxidizers	Oxidizer
5.2 (Other than organic peroxide, Type B, liquid or solid, Temperature controlled)	Organic Peroxide
6.1 (other than inhalation hazard zone A or B)	Poison
6.2 Infectious Substances	(None)
8 Corrosives	Corrosive
9 Miscellaneous Hazardous Materials	Class 9**
ORM-D	(None)

\* FLAMMABLE placard may be used in place of a COMBUSTIBLE placard on a cargo tank or portable tank.  
 \*\* Class 9 Placard is not required for domestic transportation.

**Test Your Knowledge**

1. What is a shipper's certification? Where does it appear? Who signs it?
2. When may non-hazardous materials be described by hazard class words or ID numbers?
3. Name five hazard classes that require placarding in **any** amount.
4. A shipment described on the Hazardous Waste Manifest may only be delivered to another (fill in the blank) carrier or treatment facility, which then signs the (fill in the blank) giving you a copy which you must keep.
5. Your load includes 20 lbs. of Division 2.3 gas and 1,001 lbs. of flammable gas. What placards do you need, if any?

These questions may be on your test. If you are unable to answer them all, re-read pages 9:1 through 9:8

**9.4 Loading and Unloading**

Do all you can to protect containers of hazardous materials. Don't use any tools which might damage containers or other packaging during loading. Don't use hooks.

**GENERAL LOADING REQUIREMENTS**

Before loading or unloading, set the parking brake. Make sure the vehicle will not move.

Many products become more hazardous when exposed to heat. Load hazardous materials away from heat sources.

Watch for signs of leaking or damaged containers: LEAKS SPELL TROUBLE! Do not transport leaking packages. Depending on the material, you, your truck and others could be in danger. It is illegal to move a vehicle with leaking hazardous materials.

Containers of hazardous materials must be braced to prevent movement of the packages during transportation.

**No Smoking.** When loading or unloading hazardous materials, keep fire away. Don't let people smoke nearby. Never smoke around:

- Class 1 Explosives
- Class 2.1 Flammable Gas
- Class 3 Flammable Liquids
- Class 4 Flammable Solids
- Class 5 Oxidizers

**Secure Against Movement.** Brace containers so they will not fall, slide, or bounce around during transportation. Be very careful when loading containers that have valves or other fittings. All hazardous materials packages must be secured during transportation.

After loading, do not open any package during your trip. Never transfer hazardous materials from one package to another while in transit. You may empty a cargo tank, but do not empty any other package while it is on the vehicle.

**Cargo Heater Rules.** There are special cargo heater rules for loading:

- Class 1 Explosives
- Class 2.1 Flammable Gas
- Class 3 Flammable Liquids

The rules usually forbid use of cargo heaters, including automatic cargo heater/air conditioner units. Unless you have read all the related rules, don't load the above products in a cargo space that has a heater.

**Use Closed Cargo Space.** You cannot have overhang or tailgate loads of:

- Class 1 Explosives
- Class 4 Flammable Solids
- Class 5 Oxidizers

You must load these hazardous materials into a closed cargo space unless all packages are:

- Fire and water resistant.
- Covered with a fire and water resistant tarp.

## PRECAUTIONS FOR SPECIFIC HAZARDS

**Class 1 (Explosives) Materials.** Turn your engine off before loading or unloading any explosives. Then check the cargo space. You must:

- Disable cargo heaters. Disconnect heater power sources and drain heater fuel tanks.
- Make sure there are no sharp points that might damage cargo. Look for bolts, screws, nails, broken side panels and broken floor boards.
- Use a floor lining with Division 1.1, 1.2 or 1.3. The floors must be tight and the liner must be either non-metallic material or non-ferrous metal.

Use extra care to protect explosives. Never use hooks or other metal tools. Never drop, throw, or roll packages. Protect explosive packages from other cargo that might cause damage.

Do not transfer a Division 1.1, 1.2 or 1.3 from one vehicle to another on a public roadway except in an emergency. If safety requires an emergency transfer, set out red warning reflectors, flags or electric lanterns. You must warn others on the road.

Never transport damaged packages of explosives. Do not take a package that shows any dampness or oily stain.

Do not transport Division 1.1 or 1.2 in triples or in vehicle combinations if:

- There is a marked or placarded cargo tank in the combination.
- The other vehicle in the combination contains:
  - Division 1.1 A (Initiating Explosives)
  - Packages of Class 7 (Radioactive) materials labeled "Yellow III,"
  - Division 2.3 (Poisonous Gas) or Division 6.1 (Poisonous) material
  - Hazardous materials in a portable tank, on a DOT Spec 106A or 110A tank.

**Class 4 (Flammable Solids) and Class 5 (Oxidizers) Materials.** Class 4 materials are solids that react (including fire and explosion) to water, heat and air or even react spontaneously.

Class 4 and 5 materials must be completely enclosed in a vehicle or covered securely. Class 4 and 5 materials, which become unstable and dangerous when wet, must be kept dry while in transit and during loading and unloading. Materials that are subject to spontaneous combustion or heating must be in vehicles with sufficient ventilation.

**Class 8 (Corrosive) Materials.** If loading by hand, load breakable containers of corrosive liquid one by one. Keep them right side up. Do not drop or roll the containers. Load them onto an even floor surface. Stack carboys only if the lower tiers can bear the weight of the upper tiers safely.

Do not load nitric acid above any other product.

Load charged storage batteries so their liquid won't spill. Keep them right side up. Make sure other cargo won't fall against or short circuit them.

Never load corrosive liquids next to or above:

- Division 1.4 (Explosives C)
- Division 4.1 (Flammable Solids)
- Division 4.3 (Dangerous When Wet)
- Class 5 (Oxidizers)
- Division 2.3, Zone B (Poisonous Gases)

Never load corrosive liquids with:

- Division 1.1 or 1.2
- Division 1.2 or 1.3
- Division 1.5 (Blasting Agents)
- Division 2.3, Zone A (Poisonous Gases)
- Division 4.2 (Spontaneously Combustible Materials)
- Division 6.1, PGI, Zone A (Poison Liquids)

**Class 2 (Compressed Gases) Including Cryogenic Liquids.** If your vehicle doesn't have racks to hold cylinders, the cargo space floor must be flat. The cylinders must be:

- Held upright
- In racks attached to the vehicle or in boxes that will keep them from turning over.

Cylinders may be loaded in a horizontal position (lying down) if designed so the relief valve is in the vapor space.

**Figure 9-9: Prohibited Loading Combinations**

DO NOT LOAD...	IN THE SAME VEHICLE WITH...
Division 6.1 or 2.3 (POISON or poison inhalation hazard labeled material)	Animal or human food unless the poison package is over packed in an approved way. Foodstuffs are anything you swallow. However, mouthwash, toothpaste and skin creams are not foodstuff.
Division 2.3 (Poisonous) gas Zone A or Division 6.1 (Poison) liquids, PGI, Zone A	Division 1.1, 1.2, 1.3 Explosives, Division 5.1 (Oxidizers), Class 3 (Flammable Liquids), Class 8 (Corrosive Liquids), Division 5.2 (Organic Peroxides), Division 1.1, 1.2, 1.3 Explosives, Division 1.5 (Blasting Agents), Division 2.1 (Flammable Gases), Class 4 (Flammable Solids).
Charged storage batteries	Division 1.1.
Class 1 (Detonating primers)	Any other explosives unless in authorized containers or packages.
Division 6.1 (Cyanides or cyanide mixtures)	Acids, corrosive materials or other acidic materials which could release hydrocyanic acid. For example: <ul style="list-style-type: none"> <li>• Cyanides, Inorganic, n.o.s.</li> <li>• Silver Cyanide</li> <li>• Sodium Cyanide</li> </ul>
Nitric acid (Class 8)	Other materials unless the nitric acid is not loaded above any other material.

**Division 2.3 (Poisonous Gas) or Division 6.1 (Poisonous materials).** Never transport these materials in containers with interconnections. Never load a package labeled POISON or POISON INHALATION HAZARD in the driver's cab or sleeper or with food material for human or animal consumption. There are special rules for loading and unloading Class 2 materials in cargo tanks. You must have special training to do this.

**Class 7 (Radioactive) Materials.** Some packages of Class 7 (radioactive) materials bear a number called the "transport index." The shipper labels these packages Radioactive II or Radioactive III, and prints the package's transport index on the label. Radiation surrounds each package, passing through all nearby packages. To deal with this problem, the number of packages you can load together is controlled. Their closeness to people, animals, and unexposed film is also controlled. The transport index tells the degree of control needed during transportation. The total transport index of all packages in a single vehicle must not exceed 50.

Table A to this section shows rules for each transport index. It shows how close you can load Class 7 (radioactive) materials to people, animals, or film. For example, you can't leave a package with a transport index of 1.1 within 2 feet of people or cargo space walls.

**Mixed Loads.** The rules require some products to be loaded separately. You cannot load them together in the same cargo space. Figure 9-9 lists some examples. The regulations (the Segregation Table for Hazardous Materials) name other materials you must keep apart.

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### Test Your Knowledge

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1. Around which hazard classes must you never smoke?
2. Which three hazard classes should not be loaded into a trailer that has a heater/air conditioner unit?
3. Should the floor liner required for Division 1.1 or 1.2 be stainless steel?
4. At the shipper's dock you're given a paper for 100 cartons of battery acid. You already have 100 lbs. of dry Silver Cyanide on board. What precautions do you need to take?
5. Name a hazard class that uses transport indexes to determine the amount that can be loaded in a single vehicle.

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These questions may be on your test. If you are unable to answer them all, re-read Section 9.4.

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## 9.5 Bulk Packaging Marking, Loading and Unloading

The glossary at the end of this section gives the meaning of the word bulk. **Cargo tanks** are bulk packagings permanently attached to a vehicle. Cargo tanks remain on the vehicle when you load and unload them. **Portable tanks** are bulk packaging which are not permanently attached to a vehicle. The product is loaded or unloaded while the portable tanks are off the vehicle. Portable tanks are then put on a vehicle for transportation. There are many types of cargo tanks in use. The most common cargo tanks are MC306 for liquids and MC331 for gases.

## MARKINGS

You must display the identification number of the hazardous materials in portable tanks and cargo tanks and other bulk packagings (such as dump trucks). Identification numbers are in column 4 of the Hazardous Materials Table. The rules require black 100 mm (3.9 inch) numbers on orange panels, placards, or a white, diamond-shaped background if no placards are required. Specification cargo tanks must show re-test date markings.

Portable tanks must also show the lessee or owner's name. They must also display the shipping name of the contents on two opposing sides. The letters of the shipping name must be at least 2 inches tall on portable tanks with capacities of more than 1,000 gallons and 1 inch tall on portable tanks with capacities of less than 1,000 gallons. The identification number must appear on each side **and** each end of a portable tank or other bulk packaging that hold 1,000 gallons or more and on two opposing sides, if the portable tank holds less than 1,000 gallons. The identification numbers must still be visible when the portable tank is on the motor vehicle. If they are not visible, you must display the identification number on both sides and ends of the motor vehicle.

Intermediate bulk containers (IBCs) are bulk packages, but are not required to have the owner's name or shipping name.

## TANK LOADING

The person in charge of loading and unloading a cargo tank must be sure a qualified person is always watching. This person watching the loading or unloading must:

- Be alert.
- Have a clear view of the cargo tank.
- Be within 25 feet of the tank.
- Know of the hazards of the materials involved.
- Know the procedures to follow in an emergency, and
- Be authorized to move the cargo tank and able to do so.

There are special attendance rules for cargo tanks transporting propane and anhydrous ammonia.

Close all manholes and valves before moving a tank of hazardous materials, no matter how small the amount in the tank or how short the distance. Manholes and valves must be closed to prevent leaks. It is illegal to move a cargo tank with open valves or covers unless it is empty according to 49 CFR 173.29.

## FLAMMABLE LIQUIDS

Turn off your engine before loading or unloading any flammable liquids. Only run the engine if needed to operate a pump. Ground a cargo tank correctly before filling it through an open filling hole. Ground the tank before opening the filling hole, and maintain the ground until after closing the filling hole.

## COMPRESSED GAS

Keep liquid discharge valves on a compressed gas tank closed except when loading and unloading. Unless your engine runs a pump for product transfer, turn it off when loading or unloading. If you use the engine, turn it off after product transfer, before you unhook the hose. Unhook all loading/unloading connections before coupling, uncoupling or moving a cargo tank. Always chock trailers and semi-trailers to prevent motion when uncoupled from the power unit.

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## Test Your Knowledge

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1. What are cargo tanks?
2. How is a portable tank different from a cargo tank?
3. Your engine runs a pump used during delivery of compressed gas. Should you turn off the engine **before** or **after** unhooking hoses after delivery?

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These questions may be on your test. If you are unable to answer them all, re-read Section 9.5.

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## 9.6 Driving and Parking Rules

### Parking with Division 1.1, 1.2 or 1.3 Explosives

Never park with Division 1.1, 1.2 or 1.3 explosives within five feet of the traveled part of the road. Except for short periods of time needed for vehicle operation necessities (e.g., fueling), do not park within 300 feet of:

- A bridge, tunnel or building.
- A place where people gather, or
- An open fire.

If you must park to do your job, do so but only briefly.

Don't park on private property unless the owner is aware of the danger. Someone must always watch the parked vehicle. You may let someone else watch it for you only if your vehicle is:

- On the shipper's property, or
- On the carrier's property, or
- On the consignee's property.

You are allowed to leave your vehicle unattended in a safe haven. A safe haven is an approved place for parking unattended vehicles loaded with explosives. Designation of authorized safe havens are usually made by local authorities.

### Parking A Placarded Vehicle Not Transporting Division 1.1, 1.2 or 1.3 Explosives

You may park a placarded vehicle (not laden with explosives) within five feet of the traveled part of the road only if your work requires it. Do so only briefly. Someone must always watch the vehicle when parked on a public roadway or shoulder. Do not uncouple a trailer with hazardous materials and leave it on a public street. Do not park within 300 feet of an open fire.

### ATTENDING PARKED VEHICLES

The person attending a placarded vehicle must:

- Be in the vehicle, awake and not in the sleeper berth, or within 100 feet of the vehicle and have it within clear view.
- Be aware of the hazards of the materials being transported.
- Know what to do in emergencies, and
- Be able to move the vehicle, if needed.

### NO FLARES!

If your vehicle breaks down and you need to use stopped vehicle signals, use only reflective triangles or red electric lights. Never use burning signals, such as flares or fusees, around a:

- Tank used for Class 3 (flammable liquids) or Division 2.1 (flammable gas) whether loaded or empty.
- Vehicle loaded with Division 1.1, 1.2 or 1.3 explosives.

### ROUTE RESTRICTIONS

Some states and counties require permits to transport hazardous materials or wastes. They may limit the routes you can use. Local rules about routes and permits change often. It is your job as driver to find out if you need permits or must use special routes. Make sure you have all needed papers before starting.

If you work for a carrier, ask your dispatcher about route restrictions or permits. If you are an independent trucker and are planning a new route, check with state agencies where you plan to travel. Some localities prohibit transportation of hazardous materials through tunnels, over bridges, or other roadways. Always check before you start.

Whenever placarded, avoid heavily populated areas, crowds, tunnels, narrow streets and alleys. Take other routes, even if inconvenient, unless there is no other way. Never drive a placarded vehicle near open fires unless you can safely pass the fire without stopping.

If transporting Division 1.1, 1.2 or 1.3 explosives, you must have a written route plan and follow that plan. Carriers prepare the route plan in advance and give the driver a copy. You may plan the route yourself if you pick up the explosives at a location other than your employer's terminal. Write out the plan in advance. Keep a copy of it with you while transporting the explosives. Deliver shipments of explosives only to authorized persons or leave them in locked rooms designed for explosives storage.

A carrier must choose the safest route to transport placarded radioactive materials. After choosing the route, the carrier must tell the driver about the radioactive materials, and show the route plan.

### NO SMOKING

Do not smoke within 25 feet of a placarded cargo tank used for Class 3 (flammable liquids) or Division 2.1 (gases). Also, do not smoke or carry a lighted cigarette, cigar or pipe within 25 feet of any vehicle which contains:

- Class 1 Explosives
- Class 3 Flammable Liquids
- Class 4 Flammable Solids
- Class 4.2 Spontaneously Combustible

### REFUEL WITH ENGINE OFF

Turn off your engine before fueling a motor vehicle containing hazardous materials. Someone must always be at the nozzle, controlling fuel flow.

### 10 B:C FIRE EXTINGUISHER

The power unit of placarded vehicles must have a fire extinguisher with a UL rating of 10 B:C or more.



## CHECK TIRES

Make sure your tires are properly inflated. Check placarded vehicles with dual tires at the beginning of every trip and each time the vehicle is parked. The only acceptable way to check tire pressure is to use a tire pressure gauge.

Do not drive with a tire that is leaking or is flat, except to go to the nearest safe place to fix it. Remove any overheated tire. Place it a safe distance from your vehicle. Don't drive until you correct the cause of the overheating. Remember to follow the rules about parking and attending placarded vehicles. They apply even when checking, repairing, or replacing tires.

## WHERE TO KEEP SHIPPING PAPERS AND EMERGENCY RESPONSE INFORMATION

Do not accept a hazardous materials shipment without a properly prepared shipping paper. A shipping paper for hazardous materials must always be easily recognized. Other people must be able to find it quickly after a crash.

- Clearly distinguish hazardous materials shipping papers from others by tabbing them or keeping them on top of the stack of papers.
- When you are behind the wheel, keep shipping papers within your reach (with your seat belt on), or in a pouch on the driver's door. They must be easily seen by someone entering the cab.
- When not behind the wheel, leave shipping papers in the driver's door pouch or on the driver's seat.
- Emergency response information must be kept in the same location as the shipping paper.

## PAPERS FOR DIVISION 1.1, 1.2 OR 1.3 EXPLOSIVES

A carrier must give each driver transporting Division 1.1, 1.2 or 1.3 explosives a copy of Federal Motor Carrier Safety Regulations (FMCSR), Part 397. The carrier must also give written instructions on what to do if delayed or in an accident. The written instructions must include:

- The names and telephone numbers of people to contact (including carrier agents or shippers).
- The nature of the explosives transported.
- The precautions to take in emergencies such as fires, accidents or leaks.

Drivers must sign a receipt for these documents.

You must be familiar with, and have in your possession while driving, the:

- Shipping papers.
- Written emergency instructions.
- Written route plan.
- A copy of FMCSR, Part 397.

## EQUIPMENT FOR CHLORINE

A driver transporting chlorine in cargo tanks must have an approved gas mask in the vehicle. The driver must also have an emergency kit for controlling leaks in dome cover plate fittings on the cargo tank.

## STOP BEFORE RAILROAD CROSSINGS

Stop before a railroad crossing if your vehicle:

- Is placarded, or
- Carries any amount of chlorine, or
- Has cargo tanks, whether loaded or empty, used for hazardous materials.

You must stop 15 to 50 feet before the nearest rail. Proceed only when you are sure no train is coming and you can clear the tracks without stopping. Don't shift gears while crossing the tracks.

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## 9.7 Hazardous Materials - Emergencies

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- **No Smoking**
  - **Warn Others**
  - **Keep People Away**
  - **Avoid Contact or Inhaling**
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### EMERGENCY RESPONSE GUIDEBOOK (ERG)

The U.S. Department of Transportation has a guidebook for firefighters, police and industry workers on how to protect themselves and the public from hazardous materials. The guide is indexed by proper shipping name and hazardous materials identification number. Emergency personnel look for these things on the shipping paper. That is why it is vital that the proper shipping name, identification number, label and placards are correct.

### CRASHES/INCIDENTS

As a professional driver, your job at the scene of a crash or incident is to:

- Keep people away from the scene.
- Limit the spread of material, **only if you can safely do so.**
- Communicate the danger of the hazardous materials to emergency response personnel.
- Provide shipping papers and emergency response information to emergency responders.

Follow this checklist:

- Check to see that your driving partner is OK.
- Keep shipping papers with you.
- Keep people far away and upwind.
- Warn others of the danger.
- Call for help.
- Follow your employer's instructions.

### FIRES

You may need to control minor truck fires on the road. **However, unless you have the training and equipment to do so safely, don't fight hazardous materials fires.** Dealing with hazardous materials fires requires special training and protective gear.

When you discover a fire, call for help. You may use the fire extinguisher to keep minor truck fires from spreading to cargo before firefighters arrive. Feel trailer doors to see if they are hot before opening them. If hot, you may have a cargo fire and

should not open the doors. Opening doors lets air in and may make the fire flare up. Without air, many fires only smolder until firemen arrive, doing less damage. If your cargo is already on fire, it is not safe to fight the fire. Keep the shipping papers with you to give to emergency personnel as soon as they arrive. **Warn other people of the danger and keep them away.**

If you discover a cargo leak, identify the hazardous materials leaking by using shipping papers, labels or package location. **Do not touch any leaking material—many people injure themselves by touching hazardous materials.** Do not try to identify the material or find the source of a leak by smell. Toxic gases can destroy your sense of smell and can injure or kill you even if they don't smell. Never eat, drink or smoke around a leak or spill.

If hazardous materials are spilling from your vehicle, do not move it any more than safety requires. You may move off the road and away from places where people gather, if doing so serves safety. Only move your vehicle if you can do so without danger to yourself or others.

Never continue driving with hazardous materials leaking from your vehicle in order to find a phone booth, truck stop, help or other similar reason. Remember, the carrier pays for the cleanup of contaminated parking lots, roadways and drainage ditches. The costs are enormous, so don't leave a lengthy trail of contamination. If hazardous materials are spilling from your vehicle:

- Park it.
- Secure the area.
- Stay there.
- Phone or send someone else for help.

When sending someone for help, give that person:

- A description of the emergency.
- Your exact location and direction of travel.
- Your name, the carrier's name and the name of the community or city where your terminal is located.
- The proper shipping name, hazard class and identification number of the hazardous materials, if you know them.

This is a lot for someone to remember. It is a good idea to write it all down for the person you send for help. The emergency response team must know these things to find you and to handle the emergency. They may have to travel miles to get to you. This information will help them to bring the right equipment the first time, without needing to go back for it.

Never move your vehicle, if doing so will cause contamination or damage the vehicle. Keep upwind and away from roadside rests, truck stops, cafes and businesses. Never try to repack leaking containers. Unless you have the training and equipment to repair leaks safely, don't try it. Call your dispatcher or supervisor for instructions and, if needed, emergency personnel.

## RESPONSES TO SPECIFIC HAZARDS

**Class 1 (Explosives).** If your vehicle has a breakdown or accident while carrying explosives, warn others of the danger. Keep bystanders away. Do not allow smoking or open fire near the vehicle. If there is a fire, warn everyone of the danger of explosion.

Remove all explosives before separating vehicles involved in a collision. Place the explosives at least 200 feet from the vehicles and occupied buildings. Stay a safe distance away.

**Class 2 (Compressed Gases).** If compressed gas is leaking from your vehicle, warn others of the danger. Only permit those involved in removing the hazard or wreckage to get close. You must notify the shipper if compressed gas is involved in any accident.

Unless you are fueling machinery used in road construction or maintenance, do not transfer a flammable compressed gas from one tank to another on any public roadway.

**Class 3 (Flammable Liquids).** If you are transporting a flammable liquid and have an accident or your vehicle breaks down, prevent bystanders from gathering. Warn people of the danger. Keep them from smoking.

Never transport a leaking cargo tank farther than needed to reach a safe place. Get off the roadway if you can do so safely. Don't transfer flammable liquid from one vehicle to another on a public roadway except in an emergency.

**Class 4 (Flammable Solids) and Class 5 (Oxidizing Materials).** If a flammable solid or oxidizing material spills, warn others of the fire hazard. Do not open smoldering packages of flammable solids. Remove them from the vehicle if you can safely do so. Also, remove unbroken packages if it will decrease the fire hazard.

**Class 6 (Poisonous Materials and Infectious Substances).** It is your job to protect yourself, other people and property from harm. Remember that many products classed as poison are also flammable. If you think a Division 2.3 (Poison Gases) or Division 6.1 (Poison Materials) might be flammable, take the added precautions needed for flammable liquids or gases. Do not allow smoking, open flame or welding. Warn others of the hazards of fire, of inhaling vapors or of coming in contact with the poison.

A vehicle involved in a leak of Division 2.3 (Poison Gases) or Division 6.1 (Poisons) must be checked for stray poison before being used again.

If Division 6.2 (Infectious Substances) package is damaged in handling or transportation, you should immediately contact your supervisor. Packages that appear to be damaged or show signs of leakage should not be accepted.

**Class 7 (Radioactive Materials).** If radioactive material is involved in a leak or broken package, tell your dispatcher or supervisor as soon as possible. If there is a spill, or if an internal container might be damaged, do not touch or inhale the material. Do not use the vehicle until it is cleaned and checked with a survey meter.

**Class 8 (Corrosive Materials).** If corrosives spill or leak during transportation, be careful to avoid further damage or injury when handling the containers. Parts of the vehicle exposed to a corrosive liquid must be thoroughly washed with water. After unloading, wash out the interior as soon as possible before reloading.

If continuing to transport a leaking tank would be unsafe, get off the road. If safe to do so, contain any liquid leaking from the vehicle. Keep bystanders away from the liquid and its fumes. Do everything possible to prevent injury to yourself and others.

## REQUIRED NOTIFICATION

The National Response Center helps coordinate emergency response to chemical hazards. It is a resource to the police and firefighters. It maintains a 24-hour toll-free line listed below. You or your employer must phone when any of the following occur as a direct result of a hazardous materials incident:

- A person is killed.
- An injured person requires hospitalization.
- Estimated property damage exceeds \$50,000.
- The general public is evacuated for more than one hour.
- One or more major transportation arteries or facilities are closed or shut down for one hour or more.
- Fire, breakage, spillage or suspected radioactive contamination occurs.
- Fire, breakage, spillage or suspected contamination occurs involving shipment of etiologic agents (bacteria or toxins).
- A situation exists of such a nature (e.g., continuing danger to life exists at the scene of an incident) that, in the judgment of the carrier, should be reported.

## NATIONAL RESPONSE CENTER (800) 424-8802

Persons telephoning the National Response Center should be ready to give:

- Their name.
- Name and address of the carrier they work for.
- Phone number where they can be reached.
- Date, time, and location of incident.
- The extent of injuries, if any.
- Classification, name and quantity of hazardous materials involved, if such information is available.
- Type of incident and nature of hazardous materials involvement and whether a continuing danger to life exists at the scene.

If a reportable quantity of hazardous substance was involved, the caller should give the name of the shipper and the quantity of the hazardous substance discharged.

Be prepared to give your employer the required information as well. Carriers must make detailed written reports within 30 days of an incident.

## 911

Call 911 to alert law authorities.

## CHEMTREC (800) 424-9300

The Chemical Transportation Emergency Center (CHEMTREC) in Washington also has a 24-hour toll-free line. CHEMTREC was created to provide emergency personnel with technical information about the physical properties of hazardous materials. The National Response Center and CHEMTREC are in close communication. If you call either one, they will tell the other about the problem when appropriate.

Do not leave radioactive yellow-II or yellow-III labeled packages near people, animals or film longer than shown in Table A.

## Test Your Knowledge

1. If your placarded trailer has dual tires, how often should you check the tires?
2. What is a safe haven?
3. How close to the traveled part of the roadway can you park with Division 1.2 or 1.3 materials?
4. How close can you park to a bridge, tunnel or building with the same load?
5. What type of fire extinguisher must placarded vehicles carry?
6. You're hauling 100 lbs. of Division 4.3 (dangerous when wet) material. Do you need to stop before railroad-highway crossings?
7. At a rest area you discover your hazardous materials shipment is slowly leaking from the vehicle. There's no phone around. What should you do?
8. What is the Emergency Response Guide (ERG)?

These questions may be on your test. If you are unable to answer them all, re-read Sections 9.6 and 9.7.

**TABLE A: RADIOACTIVE SEPARATION TABLE**

TOTAL TRANSPORT INDEX	MINIMUM DISTANCE IN FEET TO NEAREST UNDEVELOPED FILM					TO PEOPLE OR CARGO COMPARTMENT PARTITIONS
	0-2 hours	2-4 hours	4-8 hours	8-12 hours	Over 12 hours	
None	0	0	0	0	0	0
0.1 to 1.0	1	2	3	4	5	1
1.1 to 5.0	3	4	6	8	11	2
5.1 to 10.0	4	6	9	11	15	3
10.1 to 20.0	5	8	12	16	22	4
20.1 to 30.0	7	10	15	20	29	5
30.1 to 40.0	8	11	17	22	33	6
40.1 to 50.0	9	12	19	24	36	

**(Note: You will not be tested on the numbers in this table.)**

**TABLE B: TABLE OF HAZARD CLASS DEFINITIONS**

**Kinds of Hazardous Materials**

Hazardous materials are categorized into nine major hazard classes and additional categories for consumer commodities and combustible liquids. The classes of hazardous materials are as follows:

CLASS	CLASS NAME	EXAMPLE
1	Explosives	Ammunition, Dynamite, Fireworks
2	Gases	Propane, Oxygen, Helium
3	Flammable	Gasoline Fuel, Acetone
4	Flammable Solids	Matches, Fuses
5	Oxidizers	Ammonium Nitrate, Hydrogen Peroxide
6	Poisons	Pesticides, Arsenic
7	Radioactive	Uranium, Plutonium
8	Corrosives	Hydrochloric Acid, Battery Acid
9	Miscellaneous Hazardous Materials	Formaldehyde, Asbestos
None	ORM-D (Other Regulated Material - Domestic)	Hair Spray or Charcoal
None	Combustible Liquids	Fuel Oils, Lighter Fluid

(Note: You will not be tested on this table.)

**9.8 Hazardous Materials Glossary**

This glossary presents definitions of certain terms used in this section. A complete glossary of terms can be found in the federal Hazardous Materials Rules (49 CFR 171.8). You should have an up-to-date copy of these rules for your reference.

(Note: You will not be tested on this glossary.)

**Sec. 171.8 Definitions and abbreviations.**

**Bulk packaging** means a packaging, other than a vessel, or a barge, including a transport vehicle or freight container, in which hazardous materials are loaded with no intermediate form of containment and which has:

- (1) A maximum capacity greater than 450 L (119 gallons) as a receptacle for a liquid;
- (2) A maximum net mass greater than 400 kg (882 pounds) or a maximum capacity greater than 450 L (119 gallons) as a receptacle for a solid; or
- (2) A water capacity greater than 454 kg (1,000 pounds) as a receptacle for a gas as defined in Sec. 173.115.

**Cargo tank** means a bulk packaging which:

- (1) Is a tank intended primarily for the carriage of liquids or gases and includes appurtenances, reinforcements, fittings, and closures (for "tank", see 49 CFR 178.345-1(c), 178.337-1, or 178.338-1, as applicable);

- (2) Is permanently attached to or forms a part of a motor vehicle, or is not permanently attached to a motor vehicle but which, by reason of its size, construction, or attachment to a motor vehicle is loaded or unloaded without being removed from the motor vehicle; and
- (3) Is not fabricated under a specification for cylinders, portable tanks, tank cars or multi-unit tank car tanks.

**Carrier** means a person engaged in the transportation of passengers or property by:

- (1) Land or water as a common, contract, or private carrier, or
- (2) Civil aircraft

**Consignee** means the business or person to whom a shipment is delivered.

**Division** means a subdivision of a hazard class.

**EPA** means U.S. Environmental Protection Agency.

**FMCSR** means the Federal Motor Carrier Safety Regulations.

**Freight container** means a reusable container having a volume of 64 cubic feet or more, designed and constructed to permit being lifted with its contents intact and intended primarily for containment of packages (in unit form) during transportation.

**Fuel tank** means a tank, other than a cargo tank, used to transport flammable or combustible liquid or compressed gas for the purpose of supplying fuel for propulsion of the transport vehicle to which it is attached, or for the operation of other equipment on the transport vehicle.

**Gross weight or Gross mass** means the weight of a packaging plus the weight of its contents.

**Hazard class** means the category of hazard assigned to a hazardous material under the definitional criteria of Part 173 and the provisions of the Sec. 172.101 Table. A material may meet the defining criteria for more than one hazard class, but is assigned to only one hazard class.

**Hazardous materials** means a substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials and materials designated as hazardous in the hazardous materials table of Sec. 172.101 and materials that meet the defining criteria for hazard classes and divisions in Part 173, subchapter c of this chapter.

**Hazardous substance** means a material, including its mixtures and solutions, that:

- (1) Is listed in Appendix A to Sec. 172.101;
- (2) Is in a quantity, in one package, which equals or exceeds the reportable quantity (RQ) listed in Appendix A to Sec. 172.101; and
- (3) When in a mixture or solution -
  - (i) For radionuclides, conforms to paragraph 7 of Appendix A to Sec. 172.101.

- (ii) For other than radionuclides, is in a concentration by weight which equals or exceeds the concentration corresponding to the RQ of the material, as shown in the following table of Hazardous Substance Concentrations:

RQ POUNDS (KILOGRAMS)	CONCENTRATION BY WEIGHT	
	PERCENT	PPM
5,000 (2270)	10	100,000
1,000 (454)	2	20,000
100 (45.4)	0.2	2,000
10 (4.54)	0.02	200
1 (0.454)	0.002	20

This definition does not apply to petroleum products that are lubricants or fuels (see 40 CFR 300.6).

**Hazardous waste**, for the purposes of this chapter, means any material that is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR Part 262.

**Intermediate Bulk Container (IBC)** – A rigid or flexible portable packaging, other than a cylinder or portable tank, which is designed for mechanical handling. Standards for IBCs manufactured in the United States are set forth in subparts N and O Sec. 178.

**Limited quantity** means the maximum amount of a hazardous material for which there may be specific labeling or packaging exception.

**Marking** means the descriptive name, identification number, instructions, cautions, weight, specification or UN marks or combinations thereof, required by this subchapter on outer packagings of hazardous materials.

**Mixture** means a material composed of more than one chemical compound or element.

**Name of contents** means the proper shipping name as specified in Sec. 172.101.

**Non-bulk packaging** means a packaging which has:

- (1) A maximum capacity of 450 L (119 gallons) as a receptacle for a liquid;
- (2) A maximum net mass less than 400 kg (882 pounds) and a maximum capacity of 450 L (119 gallons) or less as a receptacle for a solid; or
- (3) A water capacity greater than 454 kg (1,000 pounds) or less as a receptacle for a gas as defined in Sec. 173.115.

**N.O.S.** means not otherwise specified.

**Outage or ullage** means the amount by which a packaging falls short of being liquid full, usually expressed in percent by volume.

**Portable tank** means a bulk packaging (except a cylinder having a water capacity of 1,000 pounds or less) designed primarily to be loaded onto, or on, or temporarily attached to a transport vehicle or ship and equipped with skids, mountings or accessories to facilitate handling of the tank by mechanical means. It does not include a cargo tank, tank car, multi-unit tank car tank or trailer carrying 3AX, 3AAX or 3T cylinders.

**Proper shipping name** means the name of the hazardous materials shown in Roman print (not italics) in Sec. 172.101.

**P.s.i. or psi** means pounds per square inch.

**P.s.i.a. or psia** means pounds per square inch absolute.

**Reportable quantity (RQ)** means the quantity specified in Column 2 of the Appendix to Sec. 172.101 for any material identified in Column 1 of the Appendix.

**RSPA – now PHMSA** – The Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, Washington, DC 20590.

**Shipper's certification** means a statement on a shipping paper, signed by the shipper, saying he/she prepared the shipment properly according to law. For example:

“This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations or the Department of Transportation.”

**or**

“I hereby declare that the contents of this consignment are fully and accurately described above the proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by \* according to applicable international and national government regulations.”

*\*words may be inserted here to indicate the mode of transportation (rail, aircraft, motor vehicle, vessel)*

**Shipping paper** means a shipping order, bill of lading, manifest or other shipping document serving a similar purpose and containing the information required by Sec. 172.202, 172.203, and 172.204.

**Technical name** means a recognized chemical name or microbiological name currently used in scientific and technical handbooks, journals, and texts.

**Transport vehicle** means a cargo-carrying vehicle such as an automobile, van, tractor, truck, semi-trailer, tank car, or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, rail car, etc.) is a separate transport vehicle.

**UN standard packaging** means a specification packaging conforming to the requirements in Subpart L and M of Part 178.

**UN** means United Nations.

## Section 10: School Bus

This section covers:

- License Requirements
- General School Bus Rules
- Danger Zones and Use of Mirrors
- Loading and Unloading
- Student Management
- Emergency Exit and Evacuation
- Railroad-Highway Grade Crossings
- Antilock Braking Systems
- Special Safety Considerations

You should be thoroughly familiar with all school bus procedures, laws, regulations and local school district procedures.

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### 10.1 License Requirements

You must have a school bus (“S”) endorsement if you drive a vehicle (painted school bus colors) transporting:

- Pupils to or from school, or points designated by the school.
- Persons with disabilities or elderly persons in connection with any transportation assistance program.

*For further clarification, see “School Bus or Alternative Vehicle” in this manual or contact your nearest DMV Service Center.*

#### QUALIFICATIONS AND TESTS

To operate a school bus, drivers must have a school bus (“S”) endorsement. To operate a school bus, which is a commercial motor vehicle (CMV), drivers must also have a commercial driver license (CDL) with a passenger (“P”) endorsement. Section 4 (in Vol. 1) outlines the information you need to qualify for a CDL with a passenger endorsement. In addition, you will need to take a special school bus knowledge test, highway signs test and pass a skills test in a school bus. Prepare for the CDL knowledge tests by studying the information included in Sections 2 through 4 in the Wisconsin Commercial Driver’s Manual Volume 1. Prepare for the school bus knowledge test by studying this section.

Anyone taking a skills test in a bus that is a CMV without air brakes will be restricted to “No CMV operation with air brakes”.

If you take the skills test in a school bus designed to carry fewer than 16 passengers (including the driver), you will be restricted to driving a school bus of this size (non-CMV).

#### ADDITIONAL REQUIREMENTS

There are additional requirements for a school bus endorsement. To qualify for the endorsement, school bus drivers must:

- Be at least 18 years old. (If you are under 21 years of age, you will be restricted to intrastate operation only—“No CMV operation in interstate commerce”).

- Not have been convicted of reckless driving, operating a motor vehicle while under the influence of an intoxicant or controlled substance or any felony listed on the chart “School Bus Disqualifications” in this manual. Refer to the Table of Contents for the page number of “School Bus Disqualifications”.
- Have sufficient use of both hands and the foot normally used to operate the foot brake and accelerator safely.
- Have at least 20/40 vision corrected or uncorrected in each eye, have a minimum of 70 degrees field of vision in each eye and be able to identify traffic signal colors.
- Be able to hear a forced whisper at five feet with or without a hearing aid.
- Pass a special physical examination as required by Wisconsin law or present the Federal Medical Card.
- To retain the “S” endorsement, you must pass a physical every 2 years and upon renewal (every year if age 70 or older).
- At each renewal of the “S” endorsement, or other time frames determined by Wisconsin Statutes, school bus drivers must be retested (if 70 or older, they must be retested every 2 years).

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### 10.2 General School Bus Rules

In addition to knowing and obeying general traffic rules applicable to all buses and large vehicles, school bus drivers must comply with the following rules and safe driving practices:

- Keep doors closed when moving, except when crossing railroad tracks.
- Transport authorized passengers only.
- Keep aisles, stairwells, and steps clear of book bags, band instruments, etc.
- Conduct a complete inspection prior to each trip. (See “Pre-Trip Inspection” in Section 11.)
- Keep children out of the back row of seats except when the bus is filled. Sitting near the front of the bus provides greater protection in rear end collisions.
- Seat students with special needs near the driver.
- Keep students seated when the bus is moving unless they are going to a door before stopping or to their seat immediately after loading.
- Prohibit smoking on the bus.
- Maintain a time schedule but not at the expense of safety.
- Use approved routes and pickup or discharge points.
- Follow approved routes except in an emergency.
- NEVER leave the bus unattended with the engine running and the keys in the ignition.
- Wear the safety belt.

## 10.3 Danger Zones and Use of Mirrors

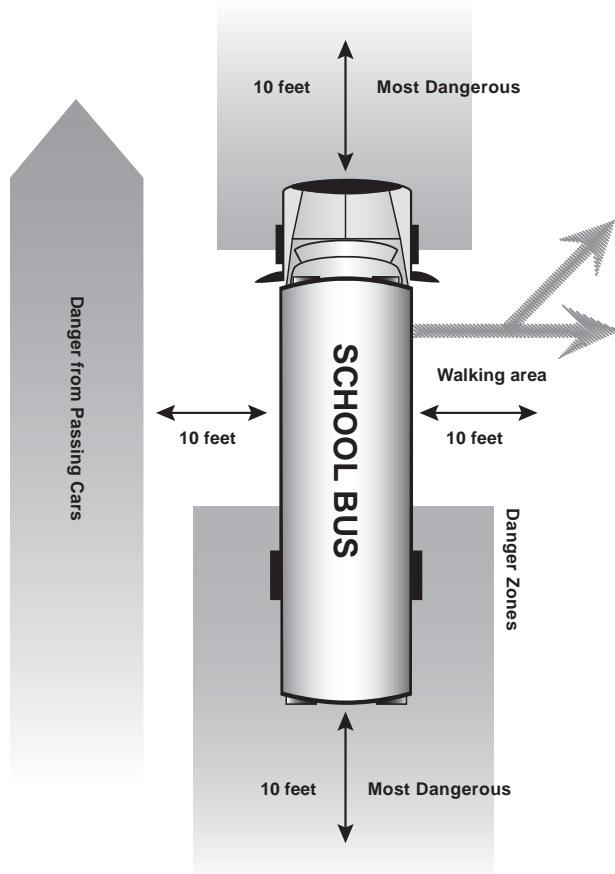
### DANGER ZONES

The danger zone is the area on all sides of the bus where children are in the most danger of being hit, either by another vehicle or their own bus. The danger zone extends as much as 30 feet from the front bumper with the first 10 feet being the most dangerous, 10 feet from the left and right sides of the bus and 10 feet behind the rear bumper of the school bus. In addition, the area to the left of the bus is always considered dangerous because of passing vehicles. Figure 10-1 illustrates these danger zones.

### CORRECT MIRROR ADJUSTMENT

Proper adjustment and use of all mirrors is vital to the safe operation of a school bus. This allows the driver to observe the danger zones around the bus and to look for students, traffic and other objects in this area. You should always check each mirror before operating the school bus to obtain a maximum viewing area. If necessary, have the mirrors adjusted.

Figure 10-1: The Danger Zones



### Outside Left and Right Side Flat Mirrors

Flat mirrors are mounted at the left and right front corners of the bus at the side or front of the windshield. They are used to monitor traffic, check clearances and observe students on the sides and to the rear of the bus. There is a blind spot immediately below and in front of each mirror and directly in back of the rear bumper. The blind spot

behind the bus extends 50 to 150 feet and could extend up to 400 feet depending on the length and width of the bus.

Ensure the mirrors are properly adjusted so you can see:

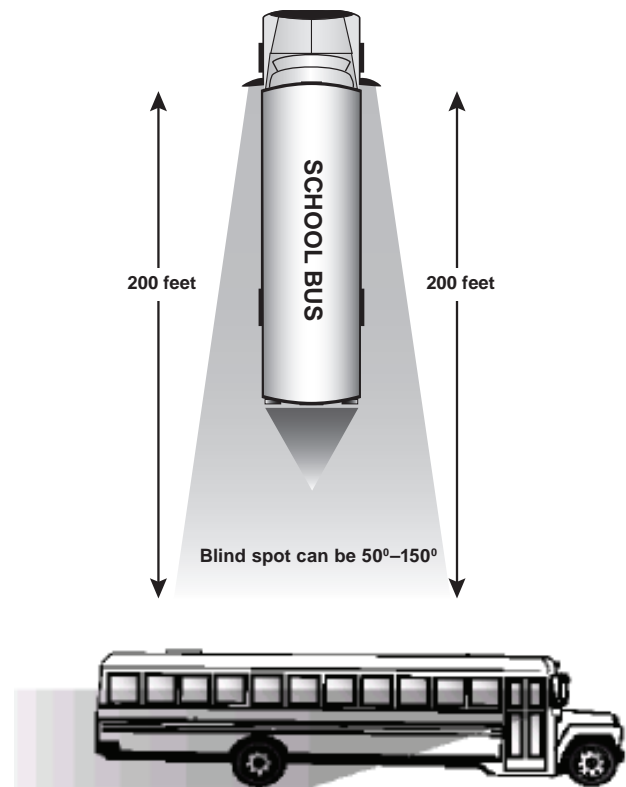
- 200 feet or 4 bus lengths behind the bus.
- Along the sides of the bus.
- The rear tires touching the ground.

Figure 10-2 shows how both the outside left and right side flat mirrors should be adjusted.

### Outside Left and Right Side Convex Mirrors

Convex mirrors are located below the outside flat mirrors. They are used to monitor the left and right sides at a wide angle. They provide a view of traffic, clearances and students at the side of the bus. These mirrors present a view of people and objects but they do not accurately reflect size and distance from the bus.

Figure 10-2: Left and Right Side Flat Mirrors



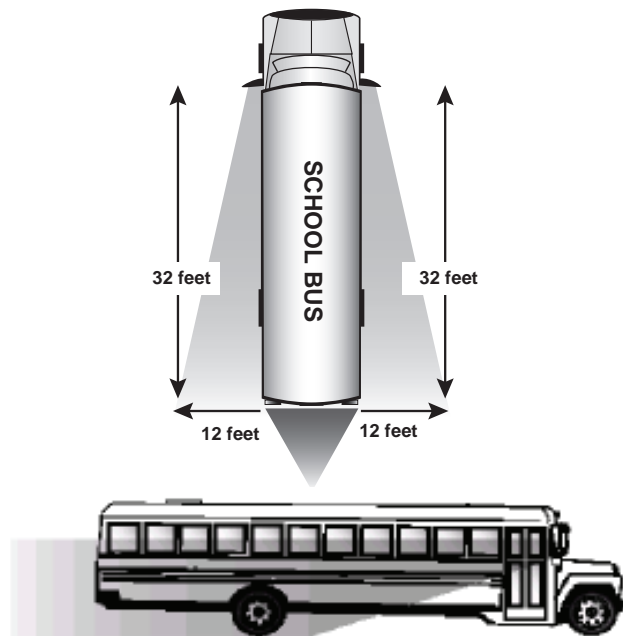
May use in conjunction with the left and right side convex mirrors to obtain desired visibility.

You should position these mirrors to see:

- The entire side of the bus up to the mirror mounts.
- The front of the rear tires touching the ground.
- At least one traffic lane on either side of the bus.

Figure 10-3 shows how both the outside left and right side convex mirrors should be adjusted.

**Figure 10-3: Left and Right Side Convex Mirrors**



May use in conjunction with the left and right side standard (flat) mirrors to obtain desired visibility.

### Outside Left and Right Side Crossover Mirrors

Crossover mirrors are mounted on both the left and right front corners of the bus. They are used to see the danger zone area directly in front of the bus that is not visible by direct vision and to view the danger zone areas to the left side and right side of the bus, including the service door and front wheel areas. The crossover mirrors present a view of people and objects but they do not accurately reflect their size and distance from the bus. The driver must ensure that these mirrors are properly adjusted.

Ensure these mirrors are properly adjusted so you can see:

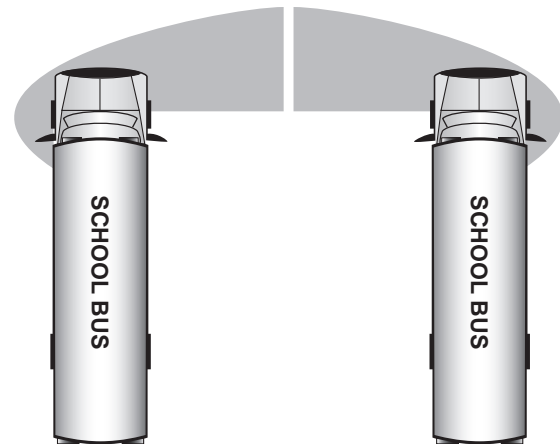
- The entire area in front of the bus from the front bumper at ground level to a point where direct vision is possible. Direct vision and mirror view vision should overlap.
- The right and left front tires touching the ground.
- The area from the front of the bus to the service door.

These mirrors, along with the convex and flat mirrors, should be viewed in a logical sequence to ensure that a child or object is not in any of the danger zones.

Figures 10-4a and 10-4b illustrate how the left and right side crossover mirrors should be adjusted.

**Figura 10-4a:**  
Left Crossover Mirror

**Figura 10-4b:**  
Right Crossover Mirror



### Overhead Inside Rearview Mirror

The rearview mirror is mounted directly above the windshield on the driver's side area of the bus. This mirror is used to monitor passenger activity inside the bus. It may also provide limited visibility directly behind the bus if the bus is equipped with a glass-bottomed rear emergency door.

There is a blind spot area directly behind the driver's seat as well as a large blind spot area beginning at the rear bumper that can extend up to 400 feet or more behind the bus. You must use the exterior side mirrors to monitor traffic approaching and entering this area.

You should position the mirror to see:

- The top of the rear window in the top of the mirror.
- All of the students, including the heads of the students right behind you.

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## 10.4 Loading and Unloading

More students are killed while getting on or off a school bus each year than are killed as passengers inside of a school bus. As a result, knowing what to do before, during and after loading or unloading students is critical. This section will give you procedures to help you avoid unsafe conditions that may result in injuries or fatalities during and after loading and unloading students.

### ROUTES, STOPS, PICKUP AND DISCHARGE POINTS

Each school district establishes official routes and official school bus stops. All stops should be approved by the school district prior to making the stop. You should never change the location of a bus stop without written approval from the appropriate school district official.



Select pickup and discharge points carefully. Report those sites that are dangerous to local School Boards. Other drivers should be able to see the bus in plenty of time.

### USING FLASHING RED WARNING LIGHTS

A school bus has no special right-of-way privileges on highways except when picking up or discharging students. When you stop, you must use the flashing red warning lights and the stop arm.

All vehicles must stop no closer than 20 feet to a stopped school bus with flashing red warning lights and stop arm extended. The only exception is vehicles traveling in the opposite direction on a divided highway. Do not use flashing red warning lights where both sides of the road have curb and sidewalk, unless required by local ordinance.

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*Operators of vehicles proceeding in the opposite direction on a divided highway are not required to stop for stopped school buses displaying flashing red warning lights (s.346.48(1)), Wisconsin Statutes.*

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School bus drivers are responsible for reporting to appropriate law enforcement agencies, incidents of drivers who do not stop for a stopped school bus with flashing red warning lights activated and stop arm extended. Note time and location, license number, color and type of vehicle, weather and road conditions.

### APPROACHING THE STOP

You must use extreme caution when approaching a school bus stop. You are in a very demanding situation when entering these areas. It is critical that you understand and follow all state and local laws and regulations regarding approaching a school bus stop. This includes the proper use of mirrors, flashing red warning lamps, the moveable stop arm and when equipped, the crossing control arm.

When approaching the stop, you should:

- Approach cautiously at a slow rate of speed.
- Look for pedestrians, traffic or other objects before, during and after coming to a stop.
- Continuously check all mirrors.

### UNLOADING PROCEDURES

Any school bus driver approaching the front or rear of a stopped school bus that is displaying flashing red warning lights shall also display its flashing red warning lights and stop arm while stopped.

The following are stopped and unloading procedures:

- Turn on flashing red warning lights at least 100 feet before the stop or sooner if conditions warrant.
- Determine if other drivers have observed flashing red warning lights and have time to stop.
- Stop in the farthest right driving lane.
- Recheck traffic and all mirrors.
- Activate the stop arm only after the bus has stopped and before opening the door.
- Use the stop arm only when the flashing red warning lights are used.

- Shift to neutral and apply the foot brake to prevent the bus from accidentally moving.
- Recheck traffic and all mirrors, especially the right outside mirror.
- Open the door and count the students as they leave the bus.
- After counting the students exiting the bus, partially close the door so other students do not enter or exit.
- Students living on the left side of the road should wait 10–12 feet in front of the bus.
- Those living on the right should move away from the bus immediately. However, they should not move toward the rear of the bus.
- Recheck traffic and all mirrors, especially the left outside mirror.
- After determining it is safe to cross, give a clear hand signal to students while keeping a lookout for traffic. Choose a predetermined signal such as sounding the horn to warn students if there is danger. Choose a signal that will not be misunderstood by the other drivers. Continuously monitor all mirrors.
- Recount all students who have been discharged. (Those crossing the road and on the right side of the bus.)
- If you cannot account for a student who has been discharged, secure the bus, take the key and check around and underneath the bus.
- When all students are accounted for, prepare to leave by:
  - » Checking all mirrors, including the crossover mirror(s).
  - » Closing the door to retract the stop arm.
  - » Engaging the transmission.
  - » Turning off the flashing red warning lamps.
  - » Allowing congested traffic to disperse.
  - » Check crossover mirror(s) and both outside rear view mirrors again.
- When it is safe, move the bus into the flow of traffic and continue the route.

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**Note:** If you have missed a student's unloading stop, do not back up. Be sure to follow local procedures.

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### ADDITIONAL PROCEDURES FOR STUDENTS WHO MUST CROSS THE ROADWAY

You should understand what students are to do when exiting a school bus and crossing the street in front of the bus. In addition, you should also understand that students might not always do what they are supposed to do.

If a student or students must cross the roadway, they should follow these procedures:

- » Walk approximately 10 feet away from the side of the school bus to a position where you can see them.
- » Walk to a location at least 10 feet in front of the right corner of the bumper, but still remaining away from the front of the school bus.
- » Stop at the right edge of the roadway. You should be able to see the student's feet.

- Upon your signal, the students should:
  - » Cross far enough in front of the school bus to be in your view.
  - » Walk to the left edge of the school bus, stop, and look again for your signal to continue crossing the roadway.
  - » Look for traffic in both directions, making sure the roadway is clear.
  - » Proceed across the roadway, continuing to look in all directions.

The school bus driver should:

- Instruct students about the hazards that are part of riding the bus or crossing the road.
- Instruct them how to protect themselves in a crash and the proper evacuation procedures.
- Remind children to continually follow safety procedures.
- Inform them of expected, acceptable behavior.
- Handle disciplinary problems as they occur.

### LOADING PROCEDURES

Use the unloading procedure guidelines for loading students, except instruct them to wait for a signal before crossing the road to the bus. Inform new students and remind all students of proper procedure at the beginning of each school year.

Do not use the flashing red warning lights when operating a school bus to transport adults or when a school bus is being used for non-school functions. When the bus is used for these situations, cover the words, "school bus" on the front and rear of the bus.

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**Wisconsin Exception:** If transporting children for any purpose, school bus markings may remain uncovered and flashing red lights used (s.346.48(2)(c), Wisconsin Statutes)

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### WITHOUT FLASHING WARNING LIGHTS

If you are loading or discharging students in areas where flashing warning lights are not required, follow these procedures:

- Activate the yellow hazard lights at least 100 feet before the stop.
- Check traffic and move over to the right curb.
- Observe traffic carefully.
- Tell students to stand away from the road when waiting to board and to move away from the bus immediately after they get off.
- Instruct students who must cross the street to go to the cross walk and wait until it is safe to proceed.
- When students are safely aboard or unloaded, turn off the hazard warning lights, check traffic and use the left turn signal to re-enter traffic. Teach students these procedures. Work with parents to promote safety.

### LOADING PROCEDURES AT SCHOOL

The loading procedure is essentially the same wherever you load students, but there are slight differences at some locations. When students are loading at the school campus, you should:

- Arrive before students are in the loading area at dismissal time.
- Drive slowly in and near the school loading area.
- Park in designated loading area.
- Turn off the ignition switch.
- Remove the key if you are leaving the driver's compartment and set the parking brake.
- Position yourself to supervise loading as required or recommended by your state or local regulations.
- After loading is complete, enter the traffic flow and continue the route.
- Do not pass other buses, remain in line.
- Maintain proper following distances, etc.

### UNLOADING PROCEDURES AT SCHOOL

State and local laws and regulations regarding unloading students at schools, particularly in situations where such activities take place in the school parking lot or other location that is off the traveled roadway, are often different than unloading along a school bus route. It is important that the school bus driver understands and obeys state and local laws and regulations. The following procedures are meant to be general guidelines when unloading at the school:

- Drive slowly in and near the school unloading area.
- Park in designated area.
- Never back a bus on school grounds.
- Come to a complete stop.
- Shift to neutral and apply foot brake.
- Secure the bus by:
  - » Turning off the ignition switch, engage the parking brake.
  - » Removing the key if you are leaving the driver's compartment.
- Have the students remain seated until they are told to exit.
- Position yourself to supervise unloading as required or recommended by your state or local regulations.
- Have students exit in an orderly fashion.
- Observe the students as they step from the bus to see that they all promptly move away from the unloading area.
- Walk through the bus and check for hiding/sleeping students and items left by students.
- Check all mirrors. Make certain no students are returning to the bus.
- If you cannot account for a student outside the bus and the bus is secure, check around and underneath the bus.
- When all students are accounted for, prepare to leave by:
  - » Closing the door.
  - » Fastening your safety belt.
  - » Starting the engine.
  - » Engaging the transmission.
  - » Releasing the parking brake.
  - » Turning on your left turn signal.
  - » Checking all mirrors again.
- When it is safe, pull away from the unloading area.

## **SPECIAL DANGERS OF LOADING AND UNLOADING**

### **Dropped or Forgotten Objects**

Always focus on students as they approach the bus and watch for any who disappear from sight.

Students may drop an object near the bus during loading and unloading. Stopping to pick up the object, or returning to pick it up, may cause the student to disappear from your sight at a very dangerous moment.

Students should be told to leave any dropped object and move to a point of safety out of the danger zones. They should attempt to get the driver's attention before trying to retrieve the object.

### **Handrail Hang-ups**

Students have been injured or killed when clothing, accessories or even parts of their body get caught in the handrail or door as they exited the bus. You should closely observe all students exiting the bus to confirm they are in a safe location prior to moving the bus.

## **POST-TRIP INSPECTION**

When your route or school activity trip is finished, you should conduct a post-trip inspection of the bus by walking through and around the bus looking for:

- Articles left on the bus.
- Sleeping students.
- Open windows and doors.
- Mechanical/operational problems with the bus, with special attention to items that are unique to school buses – mirror systems, flashing warning lamps and stop signal arms.
- Damage or vandalism.

Any problems or special situations should be reported immediately to your supervisor or school authorities.

## **TRANSPORTING PERSONS WITH DISABILITIES**

Transporting persons with special needs or physical disabilities requires patience and understanding. Follow your company guidelines. Some general rules are:

- When raising or lowering persons on the power ramp, hold onto the wheel chair.
- Secure the wheel first and then the occupant.
- Know an individual's special health or behavioral problems.
- Practice vehicle evacuation.

Establish an understanding with the parents, guardians or other caregivers on their involvement in loading and unloading the person at home. Work with the parents and school officials to determine the location for pick up and discharge. Do not leave your bus unattended to assist a person with special needs unless the engine is shut off, parking brake is set and the keys are removed from the ignition.

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## **10.5 Student Management**

### **DON'T DEAL WITH ON-BUS PROBLEMS WHEN LOADING AND UNLOADING**

Getting children to accept part of the responsibility for their safety on the bus is a challenging task school bus drivers face. Establishing a positive relationship between the driver and the passengers helps gain this cooperation.

In order to get students to and from school safely and on time, you need to be able to concentrate on the driving task. Loading and unloading requires all your concentration. Don't take your eyes off what is happening outside the bus.

If there is a behavior problem on the bus, wait until students who are unloading are safely off the bus and have moved away. If necessary, pull the bus over to handle the problem.

### **HANDLING SERIOUS PROBLEMS**

Tips on handling serious problems:

- Follow your school's procedures for discipline or refusal of the right to ride the bus.
- Stop the bus. Park in a safe location off the road (perhaps a parking lot or a driveway.)
- Secure the bus. Take the ignition key with you if you leave your seat.
- Stand up and speak respectfully to the offender or offenders. Speak in a courteous manner but with a firm voice. Remind the offender of the expected behavior. Do not show anger, but do show that you mean business.
- If a change of seating is needed, request the student move to a seat near you.
- Never put a student off the bus except at school or at his or her designated school bus stop. If you feel the offense is serious enough that you cannot safely drive the bus, calling for a school administrator or the police to come and remove the student may be appropriate. Always follow your state or local procedures for requesting assistance.

Maintaining proper discipline on the school bus reduces distractions and allows the driver to give full attention to driving. Students' behavior must not distract the driver or interfere with safety or other passengers.

Local school boards develop the rules for student behavior. Copies of the rules should be distributed to students and their parents. Rule enforcement is a responsibility shared by the school bus driver, school officials and parents.

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## **10.6 Emergency Exit and Evacuation**

An emergency situation can happen to anyone, anytime, anywhere. It could be a crash, a stalled school bus on a railroad-highway crossing or in a high-speed intersection, an electrical fire in the engine compartment, a medical emergency with a student on the school bus, etc. Knowing what to do in an emergency can mean the difference between life or death.

## HANDLING EMERGENCIES

School bus drivers should prepare for unexpected situations. Carry emergency cards listing telephone numbers for the sheriff, local police, school officials, ambulance service and garage.

If possible, do not leave the children unattended. Give the card to two responsible children who will go for help. Select and train several students for this responsibility. Two way radios and cellular phones are valuable in emergency situations.

Following a crash or breakdown, the school bus driver must decide whether to evacuate the students. They may be safer on the bus. If evacuation is necessary, select a safe place and supervise the unloading.

It is extremely important that the bus is visible in the event of a breakdown or crash. To maximize your visibility:

- Move off roadway if possible.
- Activate the hazard lights and after dark, turn on the parking lights, clearance lights and strobe light (if equipped).
- Set out traffic warning devices.

Then account for all of your students and administer necessary first aid. Report school bus crashes immediately to a local law enforcement agency.

## FIRE

In the event of a fire from a collision or an equipment malfunction, follow this procedure:

- Evacuate the students.
- Set out traffic warning devices.
- Send two responsible children for help with the emergency cards.

## PLANNING FOR EMERGENCIES

### Determine the Need to Evacuate the Bus

The first and most important consideration is for you to recognize the hazard. If time permits, school bus drivers should contact their dispatcher to explain the situation before making a decision to evacuate the school bus.

As a general rule, student safety and control is best maintained by keeping students on the bus during an emergency and/or impending crisis situation, if it does not expose them to unnecessary risk or injury. Remember, the decision to evacuate the bus must be a timely one.

A decision to evacuate should include consideration of the following conditions:

- Is there a fire or danger of fire?
- Can you smell leaking fuel?
- Is there a chance the bus could be hit by other vehicles?
- Is the bus in the path of a sighted tornado or rising waters?
- Are there downed power lines?
- Would removing the students expose them to speeding traffic, severe weather or a dangerous environment such as downed power lines?

- Would moving the students complicate injuries such as neck and back injuries or broken bones?
- Is there a hazardous spill involved? Sometimes, it may be safer to remain on the bus and not come in contact with the material.

## Mandatory Evacuations

The driver must evacuate the bus when:

- The bus is on fire or there is a threat of a fire.
- The bus is stalled on or adjacent to a railroad-highway crossing.
- The position of the bus could change and increase the danger.
- There is an imminent danger of collision.
- There is a need to quickly evacuate because of a hazardous materials spill.

## EVACUATION PROCEDURES

### Be Prepared and Plan Ahead.

Each school bus driver should practice evacuation procedures early in the school year and conduct periodic reviews of the procedure. Organize a safety patrol on each bus to assist in school bus evacuation and other emergencies.

Use the school grounds to conduct an evacuation drill using the front door only. To practice a drill using the service door and emergency exit, find an area where there is no traffic.

When possible, assign two responsible, older student assistants to each emergency exit. Teach them how to assist the other students off the bus. Assign another student assistant to lead the students to a safe place after evacuation. However, you must recognize that there may not be older, responsible students on the bus at the time of an emergency. Therefore, emergency evacuation procedures must be explained to all students. This includes ensuring that they know the location and operation of the various emergency exits, and the importance of listening to and following all instructions given by you.

Some tips to determine a safe place:

- A safe place for the students will be at least 100 feet off the road in the direction of oncoming traffic. This will keep them from being hit by debris if another vehicle collides with the bus.
- Lead the students upwind of the bus if fire is present.
- Lead the students as far away from railroad tracks as possible and in the direction of any oncoming train.
- Lead the students upwind of the bus at least 300 feet if there is a risk from spilled hazardous materials.
- If the bus is in the direct path of a sighted tornado and evacuation is ordered, escort the students to a nearby ditch or culvert if shelter in a building is not readily available. Direct them to lie face down with their hands covering their head. They should be far enough away so the bus cannot topple on them. Avoid areas that are subject to flash floods.

## General Procedures

First determine if evacuation is in the best interest of safety.

- Then determine the best type of evacuation:
  - » Front, rear or side door evacuation, or some combination of doors.
  - » Roof or window evacuation.
- Secure the bus by:
  - » Placing the transmission in Park, or if there is no shift point, put it in Neutral.
  - » Setting the parking brake.
  - » Shutting off the engine.
  - » Removing the ignition key.
  - » Activating the hazard-warning lamps.
- If time allows, notify your dispatch office of the evacuation location, conditions and type of assistance needed.
- Dangle a radio microphone or telephone out of the driver's window for later use, if operable.
- If there is no radio, or the radio is inoperable, dispatch a passing motorist or area resident to call for help. As a last resort, dispatch two older, responsible students to go for help.
- Order the evacuation.
- Evacuate the students from the bus.
- Direct a student assistant to lead the students to the nearest safe place.
- Walk through the bus to ensure no students remain on the bus. Retrieve emergency equipment.
- Join the waiting students. Account for all students and check for their safety.
- Protect the scene. Set out emergency warning devices as necessary and appropriate.
- Prepare information for emergency responders.

**Note:** Do not move a student you believe may have suffered a neck or spinal injury unless his or her life is in immediate danger. Special procedures must be used to move neck and/or spinal injury victims to prevent further injury.

## Types of Evacuation

In an evacuation, calm the students and give them instructions. If the driver is unable to conduct the evacuation because of injury, the school patrol members should take over.

The front door evacuation procedure is:

- Students in the left front seat exit first followed by those in the right front seat.
- Continue alternating from the front to the rear of the bus until all students are off.

The rear door evacuation procedure is:

- Assign two patrol members or older children to exit first and help the others out of the door.
- Students in the left rear seat exit first followed by those in the right rear seat.
- Continue alternating until all students are off the bus.
- If possible, use both doors for evacuation. Start at both doors alternating as above. Have the students assemble in one location immediately after the evacuation. Do not allow students to cross the road or re-enter the bus. Always account for all of the students.

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## 10.7 Railroad-Highway Crossings

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**Note:** In Wisconsin, all school buses, loaded or empty, must stop at railroad crossings unless the tracks are posted "exempt" or "abandoned."

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### TYPES OF CROSSINGS

#### Passive Crossings

A passive crossing does not have any type of traffic control device. You must stop at these crossings and follow proper procedures. However, the decision to proceed rests entirely in your hands. Passive crossings require you to recognize the crossing, search for any train using the tracks and decide if there is sufficient clear space to cross safely. Passive crossings have yellow circular advance warning signs, pavement markings and crossbucks to assist you in recognizing a crossing.

#### Active Crossings

An active crossing has a traffic control device installed at the crossing to regulate traffic. These active devices can include flashing red lights, flashing red lights with bells and flashing red lights with bells and gates.

### WARNING SIGNS AND DEVICES

#### Advance Warning Signs

The round, black-on-yellow warning sign is placed ahead of a public railroad-highway crossing. (see Figure 10-5.) The advance warning sign tells you to slow down, look and listen for the train, and be prepared to stop at the tracks if a train is coming.

**Figure 10-5:** Round Yellow Warning Sign



### Pavement Markings

Pavement markings mean the same as the advance warning sign. They consist of an “X” with the letters “RR” and a no-passing marking on two-lane roads. See Figure 10-6.

There is also a no passing zone sign on two-lane roads. There may be a white stop line painted on the pavement before the railroad tracks. The front of the school bus must remain behind this line while stopped at the crossing.

**Figure 10-6:** Pavement Markings



### Crossbuck Signs

A crossbuck sign marks the crossing. It requires you to yield the right-of-way to the train. If there is no white line painted on the pavement, you must stop the bus before the crossbuck sign. When the road crosses over more than one set of tracks, a sign below the crossbuck indicates the number of tracks. See Figure 10-7.

**Figure 10-7:** Multiple Tracks



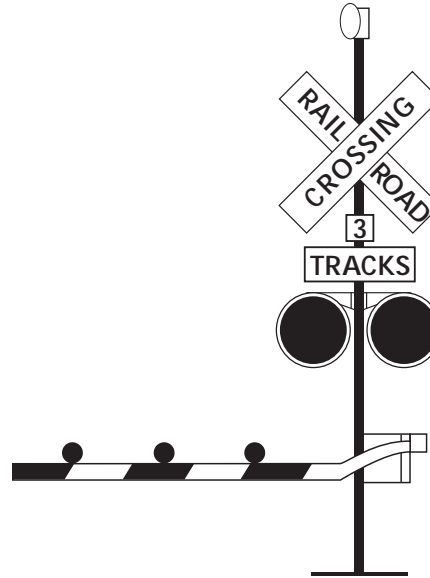
### Flashing Red Light Signals

At many highway-rail grade crossings, the crossbuck sign has flashing red lights and bells. When the lights begin to flash, stop! A train is approaching. You are required to yield the right-of-way to the train. If there is more than one track, make sure all tracks are clear before crossing. See Figure 10-8.

### Gates

Many railroad-highway crossings have gates with flashing red lights and bells. Stop when the lights begin to flash and before the gate lowers across the road lane. Remain stopped until the gates go up and the lights have stopped flashing. Proceed when it is safe. If the gate stays down after the train passes, do not drive around the gate. Instead, contact your dispatcher. See Figure 10-8.

**Figure 10-8:** Gates/Lights



### RECOMMENDED PROCEDURES

Each state has laws and regulations governing how school buses must operate at railroad-highway crossings. It is important for you to understand and obey these state laws and regulations. In general, school buses must stop at all crossings and ensure it is safe before proceeding across the tracks. The specific procedures required in each state vary.

A school bus is one of the safest vehicles on the highway. However, a school bus does not have the slightest edge when involved in a crash with a train. Because of a train's size and weight it cannot stop quickly. An emergency escape route does not exist for a train. You can prevent school bus/train crashes by following these recommended procedures.

### Railroad Crossings

All school buses, loaded or empty, must stop at railroad crossings unless the tracks are posted “exempt” or “abandoned.” The procedure for stopping at railroad crossings is:

- Check traffic before slowing.
- Turn on yellow hazard lamps at least 100 feet before the stop.
- Stop in the farthest right driving lane, no closer than 15 feet and no farther than 50 feet from the nearest rail where you have the best view of the tracks. Whenever an auxiliary lane is provided for stopping at a railroad, operators of vehicles required to stop shall use such lanes for stopping s.346.45(2), Wisconsin Statutes.

- Use foot brake to prevent the bus from moving.
- Ask passengers to be quiet.
- Completely open the service door (or driver's side window on vehicles without driver controlled service door) and listen carefully for an approaching train.
- Look left, then right.
- Recheck again. Never rely on railroad mechanical flashing lights.
- Check mirrors for traffic behind the bus.
- Select the lowest gear that will permit crossing the tracks without shifting.

The service door shall remain open until the front wheels of the bus have cleared the first set of tracks for each required stop. The service door shall be closed before shifting.

When crossing multiple tracks, stop between tracks when there is more than 15 feet between the front and rear of the bus and any tracks.

- Cross the tracks in a low gear. Do not change gears while crossing.

## **SPECIAL SITUATIONS**

### **Bus Stalls or is Trapped on the Tracks**

If your bus stalls or is trapped on the tracks, get everyone out of the bus and off the tracks immediately! Move everyone far away from the bus at an angle, which is both away from the tracks and toward the train.

### **Police Officer at the Crossing.**

If a police officer is at the crossing, obey directions. If there is no police officer, and you believe the signal is malfunctioning, contact your dispatcher to report the situation and ask for instructions on how to proceed.

### **Obstructed View of Tracks**

Plan your route so it provides maximum sight distance at highway-rail grade crossings. Do not attempt to cross the tracks unless you can see far enough down the track to know for certain that no trains are approaching. Passive crossings are those that do not have any type of traffic control device. Be especially careful at passive crossings. Even if there are active railroad signals that indicate the tracks are clear, you must look and listen to be sure it is safe to proceed.

### **Containment or Storage Areas**

If it won't fit, don't commit! Know the length of your bus and the size of the containment area at highway-rail crossings on the school bus route, as well as any crossing you encounter in the course of a school activity trip. When approaching a crossing with a signal or stop sign on the opposite side, pay attention to the amount of room there. Be certain the bus has enough containment or storage area to completely clear the railroad tracks on the other side if there is a need to stop. As a general rule, add 15 feet to the length of the school bus to determine an acceptable amount of containment or storage area.

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## **10.8 Antilock Braking Systems**

### **VEHICLES REQUIRED TO HAVE ANTILOCK BRAKING SYSTEMS (ABS)**

The Department of Transportation requires antilock braking systems be on:

- Air brakes vehicles, (trucks, buses, trailers and converter dollies) built on or after March 1, 1998.
- Hydraulically braked trucks and buses with a gross vehicle weight rating of 10,000 lbs. or more built on or after March 1, 1999.

Many buses built before these dates have been voluntarily equipped with ABS.

Your school bus will have a yellow ABS malfunction lamp on the instrument panel if it is equipped with ABS.

### **HOW ABS HELPS YOU**

When you brake hard on slippery surfaces in a vehicle without ABS, the vehicle's wheels may lock up. When your steering wheels lock up, you lose steering control. When your other wheels lock up, you may skid or even spin the vehicle.

ABS helps to avoid wheel lock up and maintain control. You may or may not be able to stop faster with ABS, but you should be able to steer around an obstacle while braking, and avoid skids caused by over-braking.

### **BRAKING WITH ABS**

When you drive a vehicle with ABS, you should brake as you always have. In other words:

- Use only the braking force necessary to stop safely and stay in control.
- Brake the same way, regardless of whether your bus has ABS or not. However, in emergency braking, do not pump the brakes on a bus with ABS.
- As you slow down, monitor your bus and back off the brakes (if it is safe to do so) to stay in control.

### **BRAKING IF ABS IS NOT WORKING**

Without ABS, you still have normal brake functions. Drive and brake as you always have.

Vehicles with ABS have yellow malfunction lamps to tell you if something is not working. The yellow ABS malfunction lamp is on the bus's instrument panel.

As a system check on newer vehicles, the malfunction lamp comes on at start-up for a bulb check and then goes out quickly. On older systems, the lamp could stay on until you are driving over 5 mph.

If the lamp stays on after the bulb check, or goes on once you are under way, you may have lost ABS control at one or more wheels.

Remember, if your ABS malfunctions, you still have regular brakes. Drive normally, but get the system serviced soon.

## SAFETY REMINDERS

- ABS will not allow you to drive faster, follow more closely or drive less carefully.
- ABS will not prevent power or turning skids—ABS should prevent brake-induced skids but not those caused by spinning the drive wheels or going too fast in a turn.
- ABS will not necessarily shorten stopping distance. ABS will help maintain vehicle control but not always shorten stopping distance.
- ABS will not increase or decrease ultimate stopping power. ABS is an “add-on” to your normal brakes, not a replacement for them.
- ABS will not change the way you normally brake. Under normal braking conditions, your vehicle will stop as it always stops. ABS only comes into play when a wheel would normally have locked up because of over-braking.
- ABS won’t compensate for bad brakes or poor brake maintenance.
- Remember: The best vehicle safety feature is still a safe driver.
- Remember: Drive so you never need to use your ABS.
- Remember: If you need it, ABS could help to prevent a serious crash.

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## 10.9 Special Safety Considerations

### STROBE LIGHTS

The flashing white strobe light increases visibility in all types of weather. Its use does not require motorists to stop. It is required equipment on buses initially registered on or after Oct. 1, 1998; optional on buses registered before that date.

If your bus is so equipped, the overhead strobe light should be used when you have limited visibility. This means you cannot easily see around you – in front, behind, or beside the school bus. Your visibility could be only slightly limited or it could be so bad you can see nothing at all.

In all instances, understand and obey your state or local regulations concerning the use of these lights. See Wisconsin Administrative Code, Chapter Trans 300 for additional information.

### DRIVING IN HIGH WINDS

Strong winds affect the handling of a school bus! The side of a school bus acts like a sail on a sailboat. Strong winds can push the school bus sideways. They can even move the school bus off the road or, in extreme conditions, tip it over.

If you are caught in strong winds:

- Keep a strong grip on the steering wheel. Try to anticipate gusts.
- You should slow down to lessen the effect of the wind, or pull off the roadway and wait.
- Contact your dispatcher to get more information on how to proceed.

## BACKING

Backing a school bus is strongly discouraged. You should back your bus only when you have no other safe way to move the vehicle. You should never back a school bus when students are outside the bus. Backing is dangerous and increases your risk of a collision. If you have no choice and you must back your bus, follow these procedures:

- Post a lookout, preferably inside the school bus, looking out the rear window. The purpose of the lookout is to warn you about obstacles, approaching persons and other vehicles. The lookout should not give directions on how to back the bus.
- Signal for quiet on the bus.
- Constantly check all mirrors and rear windows.
- Activate hazard warning lights.
- Back slowly and smoothly.
- If no lookout is available:
  - » Set the parking brake.
  - » Turn off the motor and take the keys with you.
  - » Walk to the rear of the bus to determine whether the way is clear.
- If you must back up at a student pick-up point, be sure to pick up students before backing and watch for late comers at all times.
- Be sure all students are in the bus before backing.

If you must back up at a student drop-off point, be sure to unload students **after** backing. When discharging students, follow these general guidelines before backing onto the highway or backing into a driveway:

- Drive past the driveway to allow enough space to maneuver.
- Check traffic carefully. Allow traffic to pass.
- Use hazard warning lights.
- Back into drive.
- Discharge students after backing.
- Check traffic and yield to oncoming vehicles.
- Proceed out of the drive.

## TURNING AROUND

Like backing, turning around in a driveway is done only when necessary. Plan routes to reduce the need for this maneuver.

If you must turn around in a driveway, there are two methods. The driver is responsible for making the choice after evaluating the conditions. When pulling into a driveway:

- Signal the turn.
- Check traffic and yield to oncoming vehicles.
- Pull into the drive until the bus is straight.
- Pick up students before backing.
- Post a lookout.
- Check traffic carefully.
- Use hazard warning lights.
- Back slowly and smoothly.
- Turn off hazard warning lights and proceed.



## TAIL SWING

A school bus can have up to a three-foot tail swing. You need to check your mirrors before and during any turning movements to monitor the tail swing.

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### Test Your Knowledge

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1. Define the danger zone. How far does the danger zone extend around the bus?
2. What should you be able to see if the outside flat mirrors are adjusted properly? The outside convex mirrors? The crossover mirrors?
3. You are loading students along the route. When should you activate your alternately flashing warning lamps?
4. You are unloading students along your route. Where should students walk to after exiting the bus?
5. After unloading at school, why should you walk through the bus?
6. What position should students be in front of the bus before they cross the roadway?
7. Under what conditions must you evacuate the bus?
8. How far from the nearest rail should you stop at a highway-rail crossing?
9. What is a passive highway-rail crossing? Why should you be extra cautious at this type of crossing?
10. How should you use your brakes if your vehicle is equipped with antilock brakes (ABS)?

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These questions may be on your test. If you are unable to answer them all, re-read Section 10.

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## 10.10 Pre-Trip Inspection for School Bus

### PRE-TRIP INSPECTION

Each driver is required to make, and may be held accountable for, a pre-trip inspection of the bus to determine whether or not the vehicle is safe to operate on the highway. Review Section 11 of this manual for detailed information on pre-trip inspection. Additionally, school bus drivers must:

- Check stop arm control.
- Check operation of emergency door and buzzer.
- Check for properly equipped first aid kit.
- Activate headlights, white strobe light if bus is so equipped, hazard warning lights and red flashers, leave activated for exterior inspection.

You, as a driver, will be evaluated by driver licensing personnel on the inspection of the vehicle as part of the examination for original or renewal school bus (“S”) endorsement. You may use the “Vehicle Inspection Memory Aid (School Bus)” in this manual as a guide when performing the pre-trip inspection.

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**Note:** Third Party (non-DMV) testers/examiners are also authorized to administer CDL skills tests. See inside front cover for the web address for Third Party tester information.

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**Note:** Studded snow tires are allowed on school buses between November 15th and April 1st. *s.347.45(2)(c)2, Wisconsin Statutes.*

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## Section 11: Pre-Trip for School Bus

This section covers:

- Internal and External Inspections

During the pre-trip inspection, you must show that the vehicle is safe to drive. You will need to walk around the vehicle and point to or touch each item and explain to the examiner what you are checking and why. You will NOT need to crawl under the vehicle. Opening the hood is the driver's option.

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### 11.1 All Vehicles

Study the following vehicle parts for the type of vehicle you will be using during the CDL skills tests. You should be able to identify each part and tell the examiner what you are looking for or inspecting.

#### ENGINE COMPARTMENT (ENGINE OFF)

##### Leaks/Hoses

- Look for puddles on the ground.
- Look for dripping fluids on underside of engine and transmission.
- Inspect hoses for condition and leaks.

##### Oil Level

- Indicate where dipstick is located.
- Check oil level to make sure it is within safe operating range. Level must be above refill mark.

##### Coolant Level

- Inspect reservoir sight glass, or
- (If engine is not hot), remove radiator cap and check for visible coolant level.

##### Power Steering Fluid

- Indicate where power steering fluid dipstick is located.
- Check for adequate power steering fluid level. Level must be above refill mark.

##### Engine Compartment Belts

- Check the following belts for snugness (up to 3/4 inch play at center of belt), cracks or frays:
  - » Power steering belt.
  - » Water pump belt.
  - » Alternator belt.
  - » Air compressor belt.

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**Note:** If any of the components listed above are not belt driven, you must:

- » Tell the examiner which component(s) are not belt driven.
- » Make sure component(s) are operating properly, are not damaged or leaking, and are **mounted securely**.

#### CAB CHECK/ENGINE START

##### Clutch/Gearshift

- Depress clutch.
- Place gearshift lever in neutral (or park, for automatic transmissions).
- Start engine, then release clutch slowly.

##### Oil Pressure Gauge

- Make sure oil pressure gauge is working.
- Check that oil pressure gauge shows increasing or normal oil pressure or that the warning light goes off.
- If equipped, oil temperature gauge should begin a gradual rise to the normal operating range.

##### Temperature Gauge

- Make sure the temperature gauge is working.
- Temperature should begin to climb to the normal operating range or temperature light should be off.

##### Air/Vacuum Gauge

- Check for proper operation of, and acceptable readings on air and/or vacuum gauge(s). See air brake check on the following pages.

##### Ammeter/Voltmeter

- Check gauges to make sure they show the alternator and/or generator is charging or that warning light is off.

#### WISCONSIN

##### Speedometer

- Drive the vehicle 5 mph and confirm the speedometer functions properly.

##### Mirrors and Windshield

- Mirrors should be clean and adjusted properly from the inside.
- Windshield should be clean with no illegal stickers, obstructions or damage to the glass.

##### Emergency Equipment

- Check for spare electrical fuses.

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**Note:** If the vehicle is not equipped with electrical fuses, you must mention this to the examiner.

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- Check for three red reflective triangles, 6 fuses or 3 liquid burning flares.
  - Check for a properly charged and rated fire extinguisher.
  - Sixteen item first aid kit, per Trans. 300.42, Wisconsin Administration Code.

##### Steering Play

- Non-power steering: Check for excessive play by turning steering wheel back and forth. Play should not exceed 10 degrees (or about two inches on a 20-inch wheel).
- Power steering: With the engine running, check for excessive play by turning the steering wheel back and forth. Play should not exceed 10 degrees (or about two inches on a 20-inch wheel) before front left wheel barely moves.

### Wipers/Washers

- Check that wiper arms and blades are secure, not damaged and operate smoothly.
- If equipped, windshield washers must operate correctly.

### Lights/Reflectors/Reflector Tape Condition (Sides and Rear)

- Test that dash indicators work when corresponding lights are turned on:
  - » Left turn signal.
  - » Right turn signal.
  - » Four-way emergency flashers.
  - » High beam headlight.
  - » Strobe light indicator, if equipped.
  - » Flashing warning lights indicator.
  - » Anti-lock Braking System (ABS) indicator.
- Verify that all external lights and reflective equipment are clean and functional. Light and reflector checks include:
  - » Clearance lights (red on rear, amber elsewhere).
  - » Headlights (high and low beams).
  - » Taillights.
  - » Turn signals.
  - » Four-way flashers.
  - » Brake lights.
  - » Red reflectors (on rear) and amber reflectors (elsewhere).
  - » Strobe lights, if equipped.
  - » Stop lights.
  - » Alternately flashing warning lights and stop arm lights.

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**Note:** Checks of brake, turn signal and four-way flasher functions must be done separately. You may ask the examiner for help checking lights.  
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### Horn

- Check that air horn and/or electric horn work.

### Heater/Defroster

- Test that the heater and defroster are in working order.

### Emergency Exit

- Make sure all emergency exits are not damaged, operate smoothly, and close securely from the inside.
- Check that any emergency exit warning devices are working.

### Seating

- Look for broken seat frames and check that seat frames are firmly attached to the floor.
- Make sure seat cushions are attached securely to the seat frames.

### Parking Brake Check

- Apply parking brake only and make sure it will hold the vehicle by shifting into a lower gear and gently pulling against the brake.

### Hydraulic Brake Check

- With the engine running, apply firm pressure to the brake pedal and hold for five seconds. The brake pedal should not move (depress) during the five seconds.
- If equipped with a hydraulic brake reserve (back-up) system, with the key off, depress the brake pedal and listen for the sound of the reserve system electric motor.
- Make sure the warning buzzer or light is off.
- Check the service (foot) brake operation. Move the vehicle forward slowly (about 5 mph) and apply the brakes firmly. Note any vehicle "pulling" to one side or unusual feel or delayed stopping action.

### Air Brake Check (air brake equipped vehicles only)

- Failure to perform all three components of the air brake check correctly will result in an automatic failure of the Vehicle Inspection Test. Air brake safety devices vary. However, this procedure is designed to make sure any safety device operates correctly as air pressure drops from normal to a low-air condition. For safety purposes, in areas where an incline is present, you will use wheel chocks during the air brake check. The proper procedures for inspecting the air brake system are:

#### (L) LEAKS

With a fully charged air system (typically 120 psi), turn off the engine, chock the wheels, release (push in) the parking brake button. Apply firm pressure to the service (foot) brake pedal. Watch the air supply gauge and listen for air leaks. After the initial pressure drop, the loss rate for single vehicles should be no more than 3 psi in one minute. If the air loss rate exceeds that figure, your air brake system will need to be repaired prior to continuing with the skills test.

#### (A) ALARM/SIGNAL

Turn the key to the on position. Rapidly apply and release (fanning) the service (foot) brake pedal to reduce air tank pressure. The low air pressure warning signal (light, buzzer, etc.) must come on before the pressure drops to less than 60 psi in the air tank.

#### (B) CHECK THAT THE SPRING BRAKES COME ON AUTOMATICALLY.

Continue to rapidly apply and release the service "brake pedal to further reduce air tank pressure. The parking brake button should pop out when the air pressure falls to the manufacturer's specification (usually between 20 to 40 psi). This causes the spring brakes to come on.

**Check rate of air pressure buildup.** When the engine is operating at 1,800 RPM, the pressure should build from 85 to 100 psi within 45 seconds in dual air systems. (If the vehicle has larger than minimum air tanks, the buildup time can be longer and still be safe. Check the manufacturer's specifications.)

If air pressure does not build up fast enough, your pressure may drop too low during driving, requiring an emergency stop. Don't drive until you get the problem fixed.

### Service Brake Check

You will be required to check the application of air or hydraulic service brakes. This procedure is designed to determine that the brakes are working correctly and that the vehicle does not pull to one side or the other.

- Pull forward at 5 mph, apply the service brake and stop. Check to see that the vehicle does not pull to either side and that it stops when brake is applied.

### Safety Belt

- Make sure the safety belt is securely mounted, adjusts, latches properly and is not ripped or frayed.

### Stop Arm

- Check the stop arm to make sure it is mounted securely to the frame of the vehicle. Also, check for loose fittings, wiring and damage.

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## 11.3 External Inspection (School Bus)

### STEERING

#### Steering Box/Hoses

- Verify the steering box is securely mounted and not leaking. Look for any missing nuts, bolts and cotter keys.
- Check for power steering fluid leaks or damage to power steering hoses.

#### Steering Linkage

- See that connecting links, arms and rods from the steering box to the wheel are not worn or cracked.
- Check that joints and sockets are not worn or loose and that there are no missing nuts, bolts or cotter keys.

### SUSPENSION

#### Springs/Air/Torque

- Look for missing, shifted, cracked or broken leaf springs.
- Look for broken or distorted coil springs.
- If vehicle is equipped with torsion bars, torque arms or other types of suspension components, check that they are not damaged and are mounted securely.
- Air ride suspension should be checked for damage and leaks.

#### Mounts

- Look for cracked or broken spring hangers, missing or damaged bushings, and broken, loose or missing bolts, U-bolts or other axle mounting parts. (The mounts should be checked at each point where they are secured to the vehicle frame and axle[s]). This includes mounts used for air ride systems.

#### Shock Absorbers

- Verify shock absorbers are secure and have no leaks.

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Note: Be prepared to perform the same suspension components inspection on every axle.

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### BRAKES

#### Slack Adjustors and Pushrods

- Look for broken, loose or missing parts.
- The angle between the push rod and adjustor arm should be a little over 90 degrees when the brakes are released, and not less than 90 degrees when the brakes are applied.
- When pulled by hand, the push rod should not move more than one inch (with the brakes released).

#### Brake Chambers

- Check that brake chambers are not leaking, cracked or dented and are mounted securely.

#### Brake Hoses/Lines

- Look for cracked, worn or leaking hoses, lines and couplings.

#### Brake Drum or Rotor

- Check for cracks, dents or holes. Also check for loose or missing bolts.
- Check for contaminants such as debris, oil or grease.
- Brake linings or pads (where visible) should not be worn dangerously thin.

#### Brake Linings

- On some brake drums, there are openings where the brake linings can be seen from outside the drum. For this type of drum, check that a visible amount of brake lining is showing.

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Note: Be prepared to perform the same brake components inspection on every axle.

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### WHEELS

#### Rims

- Check for damaged or bent rims. Rims cannot have welding repairs.

#### Tires

- The following items must be inspected on every tire:
  - » Tread depth: Check for minimum tread depth (4/32 on steering axle tires, 2/32 on all other tires).
  - » Tire condition: Check tread for even wear and look for cuts or other damage to tread or sidewalls. Also, make sure valve caps and stems are not missing, broken or damaged.
  - » Tire inflation: Check for proper inflation by using a tire gauge.

#### Hub Oil Seals/Axle Seals

- See that hub oil/grease seals and axle seals are not leaking and, if wheel has a sight glass, oil level is adequate.

#### Lug Nuts

- Check that all lug nuts are present. Verify they are free of cracks and distortions, and show no signs of looseness such as rust trails or shiny threads.
- Make sure all bolt holes are not cracked or distorted.

### **Spacers or Budd Spacing**

- If equipped, verify spacers are not bent, damaged or rusted through.
  - Spacers should be evenly centered, with the dual wheels and tires evenly separated.
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**Note:** Be prepared to perform the same wheel inspection on every axle.

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### **SIDE OF VEHICLE**

#### **Passenger Entry/Lift**

- Check to make sure the entry door is not damaged, operates smoothly, and closes securely from the outside.
- Hand rails are secure and the step light is working, if equipped.
- The entry steps must be clear with the treads not loose or worn excessively.
- If equipped with a lift for the disabled, look for leaking, damage, or missing parts and explain how lift should be checked for correct operation. Lift must be fully retracted and latched securely.

#### **Mirror(s)**

- Check that mirror(s) and mirror brackets are not damaged and are mounted securely with no loose fittings.

#### **Fuel Tank**

- Verify tank(s) are secure, cap(s) are tight and that there are no leaks from tank(s) or lines.

#### **Battery/Box**

- Wherever located, see that battery(s) are secure, connections are tight and cell caps are present.
- Battery connections should not show signs of excessive corrosion.
- Battery box and cover or door must be secure.
- Baggage door must be secure, if equipped.

#### **Drive Shaft**

- Verify drive shaft is not bent or cracked.
- Couplings should be secure and free of foreign objects.

#### **Exhaust System**

- Check system for damage and signs of leaks such as rust or carbon soot.
- System should be connected tightly and mounted securely.

#### **Frame**

- Look for cracks, broken welds, holes or other damage to the longitudinal frame members, cross members, box and floor.

### **REAR OF VEHICLE**

#### **Splash Guards**

- If equipped, check that splash guards or mud flaps are not damaged and are mounted securely.

#### **Doors/Ties/Lifts**

- Verify doors and hinges are not damaged and that they open, close, and latch properly from the outside, if equipped.
- Ties, straps, chains and binders must also be secure.
- If equipped with a cargo lift, look for leaking, damaged or missing parts and explain how it should be checked for correct operation.
- Lift must be fully retracted and latched securely.

## SCHOOL BUS

**Note:** All drivers may use this aid during their pre-trip inspection test. Be prepared to point to or touch the listed items and explain what you would look for.

**Note:** Shaded components will not be required on the pre-trip inspection test, but should be checked on a daily basis.

### ENGINE COMPARTMENT

- alternator mounted securely & belt \*
- water pump mounted securely & belt \*
- air compressor mounted securely & belt \*
- if gear driven, mention to the examiner
- coolant, oil and power steering levels
- leaks and hoses

### VEHICLE FRONT

- steering box and steering linkage
- springs and spring mounts
- shock absorber
- brake hose or line
- brake drum or rotor
- tire and rim
- lug nuts and hub oil seal

### If air brake equipped

- brake hose
- slack adjuster
- brake chamber

### VEHICLE SIDE

- mirror and passenger entry
- fuel tank mounted securely, leaks and cap
- frame and drive shaft
- exhaust
- battery and/or baggage door
- springs or air bag
- spring mounts or air bag mounts
- shock absorber
- brake hose or line
- brake drum or rotor
- tires and rim
- spacer
- lug nuts and hub oil seal

**\*Belt**—Check for proper tension, cracks or frays.

### If air brake equipped

- brake hose
- slack adjuster
- brake chamber

### VEHICLE REAR

- door and hinges (bus emergency exit)
- splash guards and reflectors

### VEHICLE LIGHTS

- headlights (high and low beam)
- front signal and 4-way flashers
- front clearance
- side clearance and reflectors
- rear tail
- rear signals and 4-way flashers
- rear clearance and brake lights
- flashing lights and stop arm

### INSIDE VEHICLE

- clutch (depressed) and gearshift (neutral)
- all gauges (oil, voltmeter, air/vacuum, etc.)
- light indicators
- steering wheel play
- horn and wipers
- mirrors adjusted and windshield condition
- heater and defroster
- safety/emergency equipment
- emergency exit(s), buzzer(s) and seating
- parking brake
- brake system check (see next page for correct procedure)
- speedometer
- service (foot) brake check (see next page for correct procedure)

**Note:** All drivers are required to complete a brake system check correctly in order to pass their pre-trip inspection. If your vehicle is air brake equipped, you must locate and identify all air brake system components, test your service brakes and correctly perform the LAB in order to pass the air brake portion of the pre-trip inspection. The correct process is listed on the next page according to the braking system of the vehicle.

## **BRAKE SYSTEM CHECK FOR HYDRAULIC BRAKES**

With the engine running, apply firm pressure to the service (foot) brake pedal and hold for five seconds. The brake pedal should not move.

## **BRAKE SYSTEM CHECK FOR AIR BRAKES**

Check for leaks (L), warning alarm/signal (A) and for the button (B). This test is commonly referred to as the LAB inspection.

### **(L) LEAKS**

With a fully charged air system (typically 120 psi), turn off the engine, chock the wheels, release (push in) the parking brake button. Apply firm pressure to the service (foot) brake pedal. Watch the air supply gauge and listen for air leaks. After the initial pressure drop, the loss rate for single vehicles should be no more than 3 psi in one minute. If the air loss rate exceeds that figure, your air brake system will need to be repaired prior to continuing with the skills test.

### **(A) ALARM/SIGNAL**

Turn the key to the on position (electrical power on). Rapidly apply and release (fanning) the service (foot) brake pedal to reduce air tank pressure. The low air pressure warning signal (light, buzzer, etc.) must come on before the pressure drops to less than 60 psi in the air tank.

### **(B) BUTTON**

Continue to rapidly apply and release (fanning) the service (foot) brake pedal to further reduce air tank pressure. The parking brake button should pop out when the air pressure falls to the manufacturer's specification (usually between 20 to 40 psi). This causes the spring brakes to come on.

## **TEST SERVICE (FOOT) BRAKES PRIOR TO OPERATING**

If your vehicle has **air brakes**, build up your air pressure to normal operating range (typically 120 psi), release (push in) the parking brake button. Move forward slowly (about 5 mph), and apply the service (foot) brake pedal firmly. Note any vehicle "pulling" to one side, unusual feel, or delayed stopping action.

If your vehicle has **hydraulic brakes**, move forward slowly (about 5 mph), and apply the service (foot) brake pedal firmly. Note any vehicle "pulling" to one side, unusual feel or delayed stopping action.

## Other Information

The Department of Transportation intends for the products and services it offers to be accessible to all. If you need accommodations or do not understand any part of this publication, please contact any Division of Motor Vehicles (DMV) Service Center.

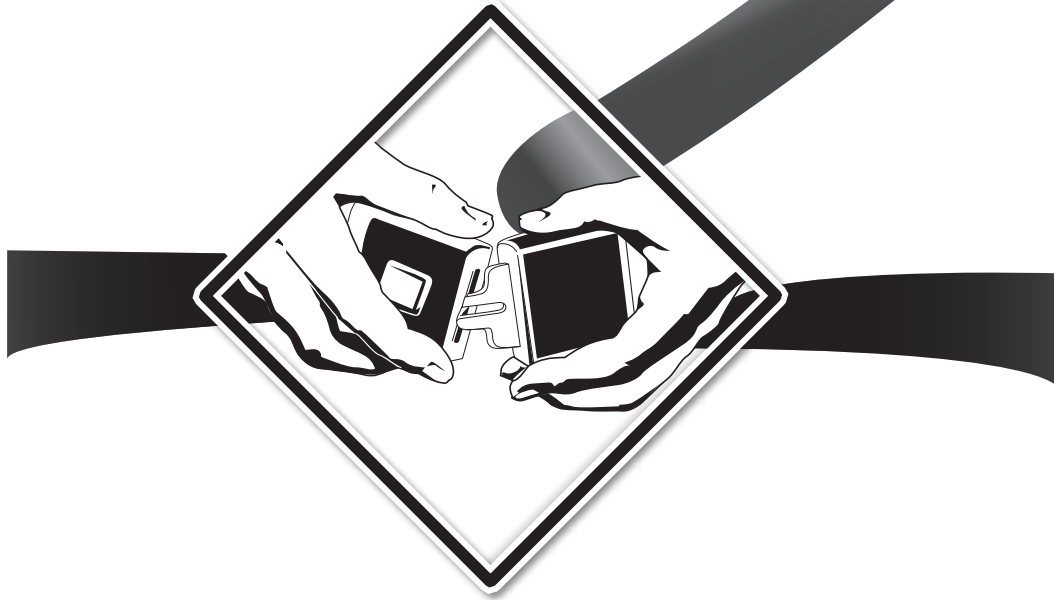
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**Note:** Information in this and other handbooks and manuals published by the Division of Motor Vehicles is not all inclusive and is subject to change due to law changes. For the latest information, contact a DMV Service Center.

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# BUCKLE UP



# IT'S THE LAW

Wisconsin Department of Transportation  
Division of Motor Vehicles

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