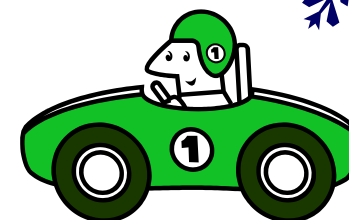




# WINTER DRIVING ORIENTATION (WDO)



**Werner Hermes**

**Safety & Occ. Health Manager**

**IMCOM Directorate Europe**

**DSN: (314) 544-2301**

**E-mail: [werner.j.hermes.ln@mail.mil](mailto:werner.j.hermes.ln@mail.mil)**

**Bldg. # 111 / Rm. # 126**



# Introduction



➤ **Driver and Supervisor Responsibilities**

➤ **Driver Attitude and Preparation**

➤ **Winterizing Cars**

-----

➤ **Distracted Driving**

-----

➤ **~~Winter Driving Video~~**

(N/A until Facebook is accessible, again)



# Introduction



## References (why WDO?):

- DoD Instruction 6055.04, DoD Traffic Safety Program
- AR 385-10, The Army Safety Program
- AR 600-55, Driver & Operator Standardization Program
- AE Reg 385-10, AE Safety Program Management  
plus many, many more ... AE Reg 385-55 ...

(Army & AE Regulations 350-series, Tech. Circular 21-305-series)

-----  
**Executive Order 13513, 1Oct2009: “Federal Leadership  
on Reducing Text Massaging while Driving”**



# Introduction



## National Highway Traffic Safety Association (NHTSA) Traffic Safety Facts 2015:

NHTSA Traffic Safety Facts 2015 / # of Fatalities

Weather Condition	Light Condition					Total
	Daylight	Dark but Lighted	Dark	Dawn or Dusk	Unknown	
Normal	13804	5275	7970	1269	67	28385
Rain	1016	521	819	100	8	2464
Snow/Sleet	251	39	141	30	4	465
Other	136	68	242	46	5	497
Unknown	101	16	144	4	90	355
Total	15308	5919	9316	1449	174	32166

More info at: <https://www-fars.nhtsa.dot.gov/Crashes/CrashesTime.aspx>

Source: U.S. DoT FARS (Fatality Analysis Reporting System)



# Introduction



## U.S. Army Privately Owned Vehicle (POV) statistics, FY2017:

Ground		Accidents		
Accident Type	Army Class	FY2017	FY2016	FY2015
POV	A*	74	73	84
	B	8	14	7
	C	225	395	462
	Total A-C	307	482	553

\* Army Class A = fatality, permanent total disability, or \$ damage  $\geq$  2 million

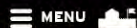
-----  
Compared to 10 Army Motor Vehicle related Military Fatalities in FY17  
(as of 10 October 2017, 04:00)



# Driver and Supervisor Responsibilities



Look here for official road condition status: <https://home.army.mil/roads/>



**WWW.IMCOM-EUROPE.ARMY.MIL**

Installation Management Command - Europe



## ROAD CONDITIONS

### Welcome!

The table below shows the current status for dispatching TMP vehicles and driving conditions for garrisons and sites. [CLICK HERE FOR MORE INFORMATION ON ROAD CONDITIONS TERMINOLOGY.](#) The Weather Warnings section shows current and future weather advisories. Click on your site for additional information. Each garrison is responsible for updating TMP dispatch, driving conditions, status and weather conditions. For more information please contact your garrison Public Affairs Office.

**Weather Warnings:** [CLICK HERE](#)

### USAG Ansbach

Site	Driving Conditions	Weather Conditions	Status	Last Updated
ANSBACH	NON-HAZARDOUS	High 47F / Low 33F / Cloudy	Normal Schedule	Nov 15, 2016, 6:20 AM
MEAB ROMANIA	NON-HAZARDOUS	High 47F Low 33F	Normal Schedule	Nov 15, 2016, 7:14 AM
NSTA BULGARIA	NON-HAZARDOUS	High 52°F / Low 45°F Mostly Cloudy	N/A	Nov 15, 2016, 7:54 AM

### USAG Bavaria

Site	Driving Conditions	Weather Conditions	Status	Last Updated
GARMISCH	NON-HAZARDOUS	Cloudy: H 47F / L 32F	Normal Operations	Nov 15, 2016, 9:18 AM
GRAFENWOERN ONE COMMUNITY ROAD	NON-HAZARDOUS	Clear: H 46F / L 35F Fog w/ Occasional Mist	One Community Road is OPEN Netzeberg Hill Road is OPEN	Nov 15, 2016, 9:23 AM
GRAFENWOERN/VILSECK	NON-HAZARDOUS	Clear: H 46F / L 35F Fog w/ Occasional Mist	Normal Operations	Nov 15, 2016, 9:19 AM
HOHENFELS	HAZARDOUS	Cloudy: H 42F / L 31F	AWBER	Nov 15, 2016, 9:19 AM

### USAG Benelux

Site	Driving Conditions	Weather Conditions	Status	Last Updated
BRUSSELS (NATO HQ)	NON-HAZARDOUS	H: 89 / L: 37; Partly Cloudy	Normal Operations	Nov 15, 2016, 3:16 AM



# ROAD CONDITION STANDARDS



## ***GREEN:***

- ***Unrestricted vehicle dispatches are authorized***
- ***Road condition, visibility, and temperature are ideal***
- ***Drivers will observe normal precautions and speed limits***



# ROAD CONDITION STANDARDS



## ***AMBER:***

- ***Road condition, temperature, and visibility are not ideal.***
- ***Unit commanders (CPT and above), directors and primary staff (S-1, S-2, S-3, S-4) will authorize dispatches under amber conditions.***
- ***Increased driving times, hazardous road conditions, and driver experience will be considered in dispatching vehicles.***





# ROAD CONDITION STANDARDS



## ***RED***

- ***Only emergency missions are authorized. The dispatch record for mission essential vehicles will be marked "mission and emergency-essential."***
- ***Battalion level commanders, including Garrison commanders, will authorize dispatch of mission essential vehicles.***
- ***A risk assessment will be completed prior to dispatching a vehicle!***



# ROAD CONDITION STANDARDS



## ***BLACK:***

- ***Only emergency-essential vehicle dispatches are authorized. The dispatch record for emergency vehicles (police, fire, ambulance, and emergency engineer) will be marked "emergency-essential."***
- ***Chiefs of appropriate offices (provost marshal, fire, medical activity, and directorate of public works) and brigade level commanders, including Garrison commanders, and above will authorize dispatch of emergency vehicles.***
- ***A risk assessment will be completed prior to dispatching a vehicle!***



## Sample of a Risk Assessment Form



Risk Assessment for NTVs at Road Condition (circle)		Amber	Red	Black
Risikoanalyse fuer Dienstfahrzeuge bei Road Condition (einkreisen)				
Name of Operator/Name des Fahrers:				
Departure/Fahrbeginn: Date/Datum _____, Time/Uhrzeit: _____				
Route/Fahrstrecke: From/Von _____, To/Nach _____				
Type of Vehicle/Fahrzeugtyp: _____				
Operator/Fahrer:				
At fault traffic accidents within the past 2 years/Eigenverschuldete Verkehrsunfaelle mit Dienstfahrzeugender innerhalb der letzten 2 Jahre?		Yes/Ja		10
		No/Nein		0
Licensed/Besitz der Fahrlaubniss		- 1 Year/Jahr		10
		- 2 Years/Jahre		5
		> 2 Years/2 Jahre		0
Winter Driving Experience/Wintererfahrung		0 Winter		10
		1 Winter		5
		> 2 Winter		0
Driving experience with this or similar vehicle/Gefahrenre Km mit diesem oder aehn. Fahrzeug		-3000 Km		10
		-10000Km		5
		>10000 Km		0
Vehicle Information/Fahrzeug:				
Type of Tires/Reifenart		Summer/Sommer		10
		All-Weather/Allwetter		5
		Winter		0
Type of Vehicle/Fahrzeugart		Truck/Bus/LKW/Bus		10
		Pick-Up		5
		Sedan/Van/PKW		0
Type of Drive/Antriebsart		Rear/Heckantrieb		10
		Front/Frontantrieb		5
		4-WD/Allrad		0
Anti-blocking system (ABS)/Anti-Blockier System		No/Nein		5
		Yes/Ja		0



## Risk Assessment Form (cont.)



<b>Route/Strecke</b>			
<b>Distance to Destination/Entfernung zum Zielort</b>		> 100 KM	10
		20 - 100 KM	5
		-20 KM	0
<b>Weather Forecast/Wettervorhersage (COC 354-6213)</b>			
<b>Weather Trend/Wetterentwicklung</b>		<b>Worse/Verschlechterung</b>	10
		<b>Same/ keine Veraenderung</b>	5
		<b>Better/Verbesserung</b>	0
<b>Visibility/Sichtverhaeltnisse</b>		<b>Good/Gut (unbeeintraehtigt)</b>	0
		<b>restricted (night, fog, etc.)</b>	5
		Schlecht (dunkel, neblig, etc.)	
<b>Risk/Risiko</b>		<b>Result/Resultat:</b>	
<b>low risk/geringes Risiko/ (0-25) medium risk/mittleres Risiko (30-50) high risk/hohes Risiko (&gt; 50)</b>		<input type="text"/>	
<b>Operators under the influence of medicine, drugs, and/or alcohol must not operate a vehicle!</b>			
Fahrer die unter Drogen-, Medikamenten- oder Alkoholeinfluss stehen, duerfen kein Dienstfahrzeug fuehren!			
<b>Additional risk reduction measures.</b>			
Zusaetzhliche Massnahmen um das Risiko zu minimieren.			
<b>Name and signature of supervisor/Name und Unterschrift des Vorgesetzten:</b>			
<b>The trip is mission/emergency essential and can not be postponed.</b>			
Die Fahrt ist dienstlich notwendig und kann nicht verschoben werden.			
<b>Risk accepted, driver will be dispatched.</b>			
Das Risiko wird akzeptiert, die Fahrt wird angeordnet.		<b>Yes/Ja</b> <input type="checkbox"/>	<b>No/Nein</b> <input type="checkbox"/>
<b>Name and signature of director/Name und Unterschrift des Abteilungsleiters:</b>			



# Road Condition Chart

Road Condition	Road Surface	Snow	Ice	Snow	Visibility Depth	Temperature
<b>Green</b>	Dry	(1) None (2) Blowing Powder	None	None	More than 50 meters	Above 35F (+2C)
<b>Amber</b>	Wet	*Packed *Slush	*Patches *Black ice *Slush	*Less than 4 inches	*Between 20 and 50 meters	30F (-1C) to 35F (+2C)
<b>Red</b>	*Flooded	*Drifting	*Sheet ice	*> 4"	*< 20 m	< 30F (-1C)
<b>Black</b>	<i>*Heavy Flooding</i>	<i>*Heavy Drifting</i>	<i>*Extreme Sheet Ice</i>	<i>*&gt; 8"</i>	<i>*&lt; 15 m</i>	<i>&lt; 10F (-12C)</i>

When **one or more** of the road condition factors **marked with an asterisk** are noted, then the corresponding road condition must be declared.

See AE Regulation 385-55, Prevention of Motor Vehicle Accidents, 13Feb2006, Appendix H, for more exact definitions.



# Road Condition Chart

http://www.imcom-europe.army.mil/webs/docs/safety/road\_conditions\_legend.pdf army.mil

Edit Go to Favorites Help

## TMP Dispatch Terminology IAW USAREUR Regulation 385-55

Road Condition	Road Surface	Snow	Ice	Snow Depth	Visibility	Temperature
GREEN	Dry	None or blowing powder	None	None	More than 50 meters	Above 35F (+2C)
AMBER	Wet	Packed slush	Patches of black ice and slush	Less than 4 inches	Between 20 and 50 meters	Between 30 F (-1C) and 35F (+2C)
RED	Flooded	Drifting	Sheet ice	Between 4 and 8 inches	Between 15 and 20 meters	Between 10F (-12C) and 30F (-1C)
BLACK	Heavily flooded	Heavy drifting	Extreme sheet ice	More than 8 inches	Less than 15 meters	Less than 10F (-12C)



***Note: Drivers of military vehicles transitioning through USAG Installations, that have declared Black or Red road conditions, shall consult their chain of command and re-evaluate the risk of continuing the mission.***

***Weather and road conditions will be part of all mission risk management decisions.***





# Driver and Supervisor Responsibilities

---



- **Road conditions unsatisfactory: reconsider need for trip**
- **If the trip is essential, consider transportation other than an AMV or POV (if feasible).**
- **Driver: well rested / no alcoholic beverages 8 hours before and *while* driving.**
- **Driver and passengers will wear seatbelts.**
- **Driver: use techniques to compensate for other drivers and for weather and road conditions.**

**(excerpts from AE Regulation 385-55, Prevention of Motor Vehicle Accidents; Appendix D, Winter Driving Orientation)**





# WINTER DRIVING ORIENTATION

---



## **Driver Attitude and Preparation**



# Driver Attitude and Preparation



- Drivers should refresh their memories about **past winter-driving experiences.**
- Get the **feel for the road.** Try brakes occasionally or gently depress the accelerator while driving. Rising temperatures increase the slipperiness of ice and snow. Drivers should adjust speed accordingly.
- Increase **following distance.** Winter surfaces require stopping distances 3 to 12 times longer than dry surfaces. (remember the worst case: icy roads with increasing temperatures at/or just above freezing = thin water layer on ice = extremely long braking distance)
- **See and be seen.** Do not be a “peephole” driver. Make sure all lights and windows are clean.



# WINTER DRIVING ORIENTATION

---



## Winterizing Cars

# SEE & BE SEEN

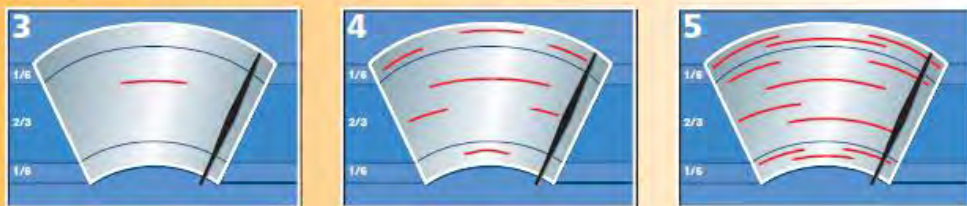
Windshield wipers: ok (1, 2); recommended to change (3,4,5); & highly recommended to change wipers (6,7,8) [Red marks indicate streaks on front windshield]

Keine Beanstandung, wenn:



- 1 keine Streifenbildung auftritt
- 2 maximal 3 bleibende Streifen im äußeren Sichtfeld auftreten
- 3 maximal 1 bleibender Streifen im zentralen Sichtfeld auftritt
- 4 maximal 4 bleibende Streifen im äußeren Sichtfeld oder maximal 12 nicht bleibende Streifen im gesamten Sichtfeld auftreten
- 5 maximal 6 bleibende Streifen im äußeren Sichtfeld oder viele bleibende / nicht bleibende Streifen gleichmäßig verteilt auftreten

Neue Wischer empfehlenswert, wenn:



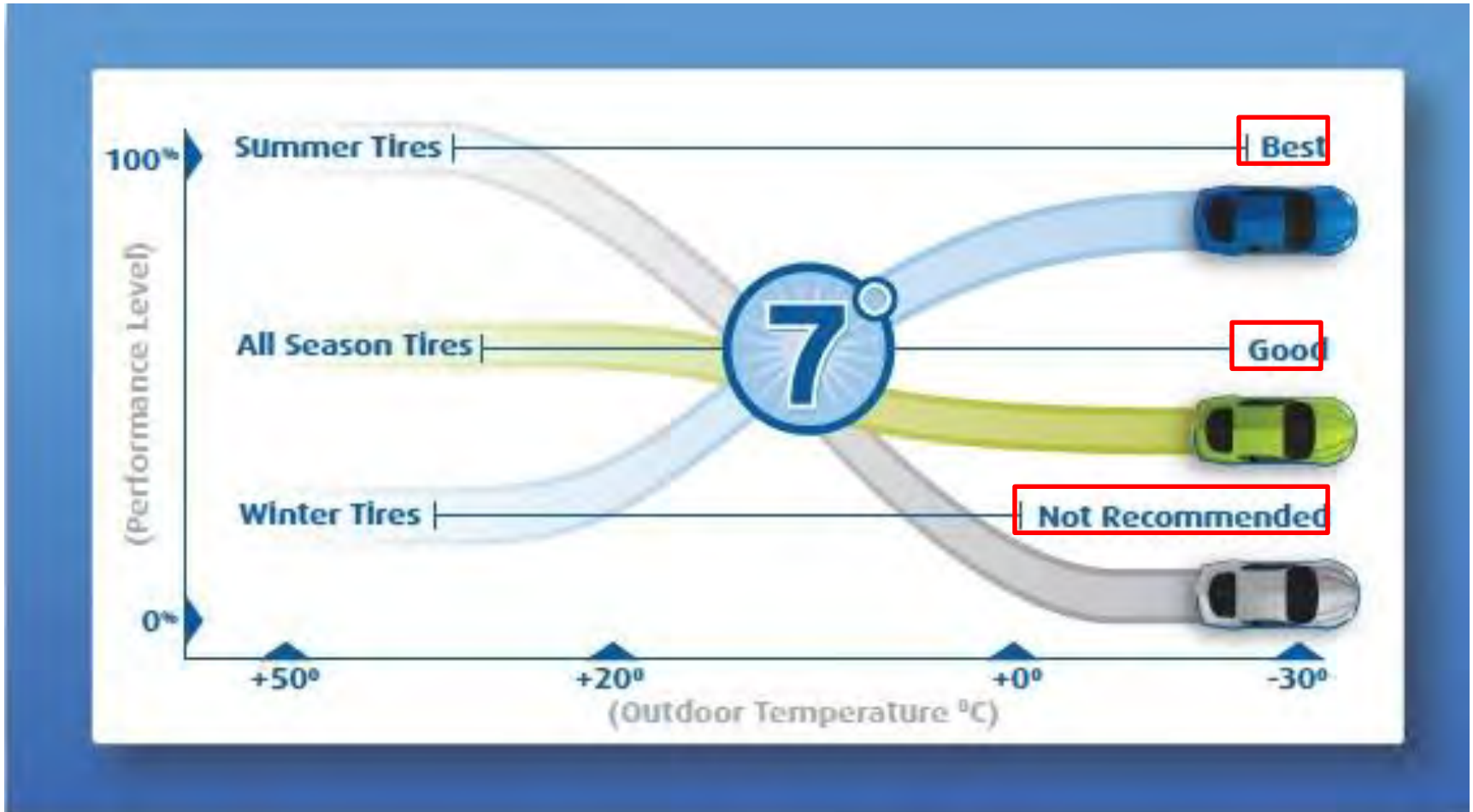
Neue Wischer zwingend erforderlich, wenn:



- 6 bleibende Wasserflächen in allen Bereichen auftreten
- 7 Schleierbildung auftritt
- 8 Rattermarken auftreten



# Which tires for which temperature ranges

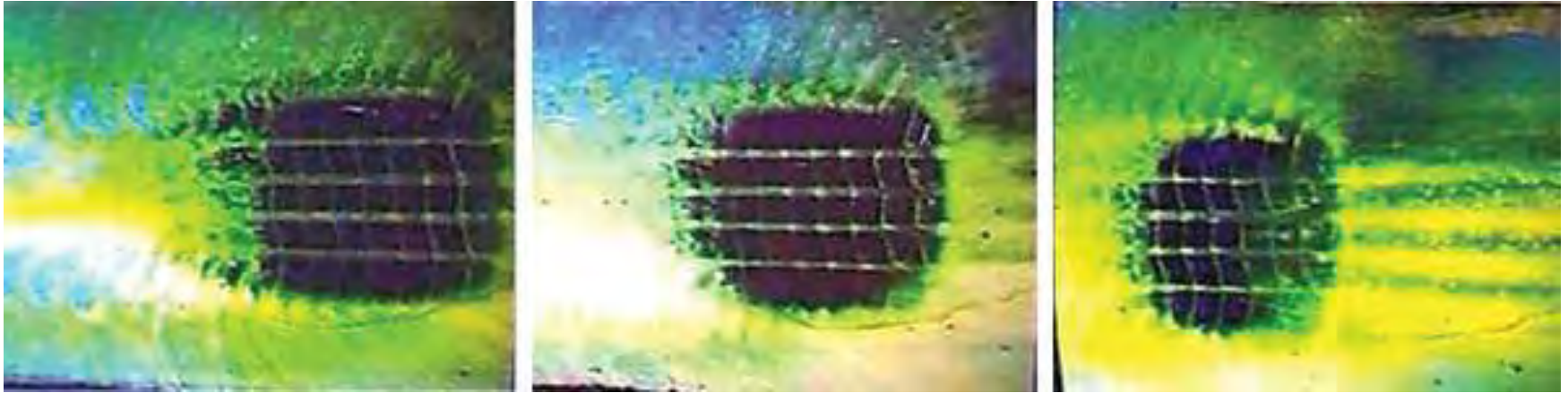


7° Celsius  $\approx$  45° Fahrenheit

Summer tires best  $> 45^{\circ}\text{F}$  / All Season = compromise / Winter tires  $< 45^{\circ}\text{F}$



# Hydroplaning



## Losing its grip

These photos from beneath a moving tire show how even new tread is likelier to hydroplane as speed increases. At 20 mph (left), tread has full contact with the road surface. Hydroplaning begins at 40 mph (center) and gets worse by 60 mph (right). Shallow tread grooves increase the risk of hydroplaning.

Pay attention to these traffic signs:



This is a supplemental sign which you see in conjunction with a speed limit sign, only. "Bei Nässe" = When wet

# Winterizing Cars

## ➤ Tires.

- Winter tires mounted before the first snowfall/icy roads
- Unevenly worn tires may result in skids.
- Each tire must have an even tread of the required amount.
  - 1.6 mm vs. 4 mm respectively
  - 1/16" vs. 5/32" // **legal** minimum vs. **performance** based minimum
- Tires must be inflated to the proper pressure; low pressure may increase the tendency of the vehicle to skid or slide.
  - Rule of thumb: drop of 10 degrees Fahrenheit = 1 psi less in tire pressure
  - Check inflation at least monthly, better weekly (cold tire!)



## ➤ Brakes. properly adjusted and inspected




# Winterizing Cars



The following sentence was inserted into the German Traffic Ordinance:

"Equipment of vehicles must be **adjusted to the weather condition**. This includes adequate Tires (Winter Tires or All Season Tires) and antifreeze in the Windshield Wiper Tank."

- situation-based requirement
- M&S vs.  tri-peak-mountain/snowflake symbol, also called Alpine symbol (in Europe)

Most current change in German Traffic Ordinance as of 2017:  
Tires manufactured after 2017 must have alpine symbol to be accepted as winter tire. M&S tires manufactured before 2018: still acceptable as winter tires until end of September 2024.

Remember the DOT information? i.e., 2916 = week # 29 in 2016  
("tire language") 0718 = week # 7 in 2018







# Winterizing Cars



## **Adequate** tires for the road situation (snow, ice, etc.)!

Definition: It does **not** mean that you shall equip your vehicle with winter tires [M&S, and/or might be adequate. Of course, it depends upon where you plan to go to, and present or forecasted weather conditions. If your vehicle is **not** equipped with winter tires (minimum: M&S, better: ) and the road is covered with **snow** and/or **ice**, **you shall not operate your vehicle** but use alternative transportation. If you endanger other road users, cause a traffic jam or an accident due to inadequate tires (summer tires) you'll be held liable and will be fined – even worse in case of an accident.

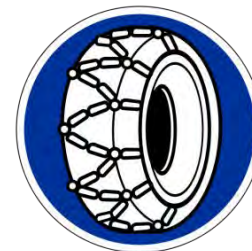
**0€**      **vs**      **60€/100€/120€ + 1 traffic point assessed!**  
endangerment /    jam    / accident

# Winterizing Cars

**Our “road condition system” (green/amber/red/black) is a good indicator for when to park the private vehicle, too.**

*Recommendation, only; this is not a card blanche to not go to work  
– check with leadership/management, first.*

**§ Violators (inadequate tires/reduced sight due to frozen windshield washer fluid/no tire chains where required by signs & conditions) will be fined and your vehicle insurance will be in jeopardy.**



# Winterizing Cars



vs.

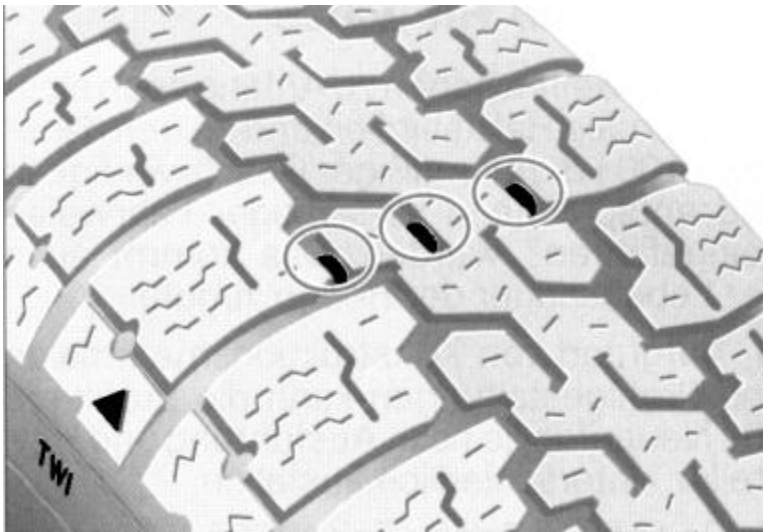


Date of tire manufacture, for example: 0404 = week 4 of 2004 // 2709 = week 27 in 2009

# Winterizing Cars

**Tread Wear Indicators (TWI) are elevated rubber markers within the tire grooves:**

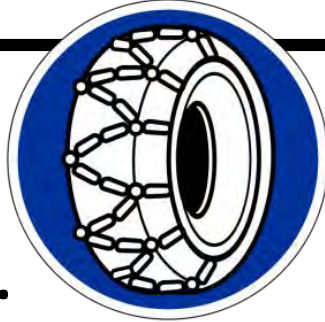
**“Regular” TWI at 1.6 mm / 1/16”; = minimum legal tread depth / these regular TWIs can be found on summer, all-season/all-weather, and on winter tires.**



**Winter tire: additional set of TWIs at 4 mm – 5/32” (performance-based minimum)  
Usually these winter TWIs are marked on tire sidewall (by snow crystal or similar indicator)**



# Winterizing Cars



## ➤ Tire Chains.

(1) Tire chains offer increased traction, reduced stopping distance, & more protection from skids than any other device. Note - max. authorized speed: **50 kph or 30 mph**

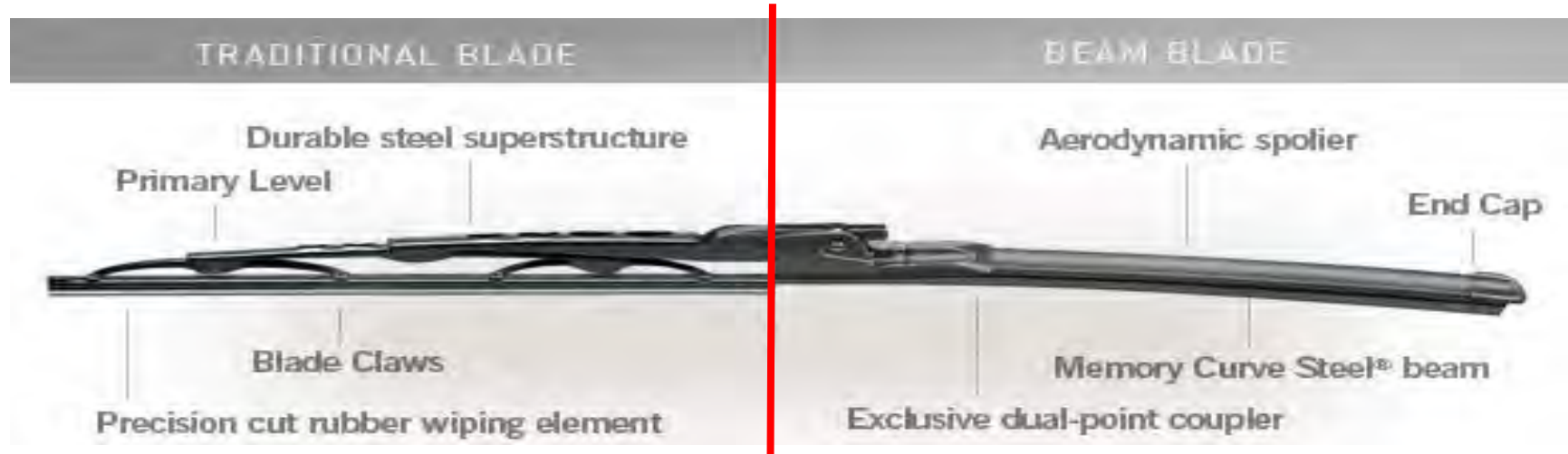
(2) Life and performance of tire chains are improved by proper application. Twice the mileage may be obtained by applying them snugly according to mounting instructions.

➤ **Windshield Wipers.** Wiper blades should operate with enough pressure to remove rain, sleet, and snow from the windshield without streaking. The windshield spray bottle should be full and shall be protected from freezing.





# Winterizing Cars



Sample websites:

US: <http://www.tricoproducts.com/Drivers/UnderstandingWipers/Wipers101>

Germany: [http://www.gtue.de/sixcms/media.php/374/licht-sicht-ratgeber\\_2011-07.pdf](http://www.gtue.de/sixcms/media.php/374/licht-sicht-ratgeber_2011-07.pdf)

# Winterizing Cars



- **Heater and Defroster.** This equipment must be able to keep the windshield and windows clear.
- **Muffler/Exhaust System.** This system must be free from leaks to protect against carbon monoxide (CO) poisoning. Running vehicle engines in confined spaces or sitting in closed, parked cars with the engine running can be fatal.

Remember: CO is color- and odorless!!!

- **Windshield.** No cracks or chippings in the field of vision, no sand-blast effect (causing glare)



# Winterizing Cars

- **Antifreeze.** The cooling system may require flushing, all connections tightened, and antifreeze added. The radiator and hoses should be checked for leaks. Also: check windshield washer fluid reservoir/add sufficient antifreeze **in time**.
- **Winter Tune-up.** A winter tune-up may be essential for cold-weather starting and preventing stalls of older cars – modern cars have electronic components which don't require tune-ups.
- **Battery.** The battery must be in good condition (properly charged, cells filled, terminals clean and tight, free from cracks and corrosion, no “crystal – build-up” on terminals).







# CHECK YOUR VEHICLE



 BATTERY

 ANTIFREEZE

 WIPERS & FLUID

 IGNITION SYSTEM

 THERMOSTAT

 LIGHTS

 ALL SEASON (M&S)  
OR WINTER TIRES

 HAZARD LIGHTS

 EXHAUST SYSTEM

 HEATER

 BRAKES

 DEFROSTER

 OIL LEVEL

 TRANSMISSION



# WINTER CAR KIT

- ▣ WARNING TRIANGLE
- ▣ WINDSHIELD WASHER FLUID
- ▣ REFLECTIVE SAFETY VEST
- ▣ FIRST AID KIT
- ▣ SNOW BRUSH W/ SCRAPER
- ▣ FLASHLIGHT W/ BATTERIES
- ▣ BLANKET
- ▣ MITTENS, SOCKS & HAT
- ▣ SMALL SHOVEL
- ▣ SACK OF SAND OR KITTY LITTER
- ▣ JUMPER CABLES





# WINTER CAR KIT



- ❑ **WARNING TRIANGLE \***
- ❑ **WINDSHIELD WASHER FLUID \***
- ❑ **REFLECTIVE SAFETY VEST \***
- ❑ **First Aid Kit \***

**\* = mandatory items (legally required in Germany, besides proper tires)**



- ❑ SNOW BRUSH W/ SCRAPER
- ❑ FLASHLIGHT W/ BATTERIES
- ❑ BLANKET
- ❑ MITTENS, SOCKS & HAT
- ❑ SMALL SHOVEL
- ❑ SACK OF SAND OR KITTY LITTER
- ❑ JUMPER CABLES





# More tire info

Some exemplary websites for more information about winter tires:

<https://www.tirerack.com/winter/tech/index.jsp>

<http://www.consumerreports.org>  
- look for 'winter tires'

<https://www.adac.de/infotestrat/reifen/winterreifen/default.aspx>



-----  
“In 1999, The U.S. Rubber Manufacturers Association (RMA) and the Rubber Association of Canada (RAC) agreed on a performance based standard to identify passenger and light truck tires that attain a traction index equal to, or greater than 110 (compared to a reference tire which is rated 100) during the specified American Society for Testing and Materials traction tests on packed snow. The new standard helps ensure that drivers can easily identify tires that provide a higher level of snow traction.” (Source: ASTM Standards F1805 [vehicle] and E1136 [test tire])



		TIRE PERFORMANCE RATINGS														Total Miles Reported
		Rank Within Category	% v.t. Best In Category	Would Buy Again?	Hydroplaning Resistance	WET Traction	Wet Cornering Stability	DRY Traction	Steering Response	Light Snow Traction	Deep Snow Traction	WINTER/SNOW Ice Traction	Ride Comfort	Noise Comfort	Treadwear	
Passenger All-Season																
<a href="#">Goodyear Assurance TripleTred All-Season</a>	1	100%	6.5	8.2	8.2	8.6	9.0	8.6	8.0	7.1	6.7	7.5	6.4	7.9		4,403,059
<a href="#">Goodyear Assurance ComforTred</a>	2	97%	6.8	8.0	8.0	7.9	8.6	7.8	7.2	6.6	6.5	3.6	3.6	7.5		20,300,494
<a href="#">Michelin Energy Saver A/S</a>	3	89%	6.1	7.6	7.4	7.7	8.4	8.1	5.8	4.7	4.8	8.3	7.8	8.1		2,596,719
<a href="#">Goodyear Assurance Fuel Max</a>	4	84%	4.7	7.2	7.2	7.1	8.0	7.2	6.2	5.4	5.0	7.2	6.6	6.9		3,777,680
<a href="#">Firestone FR710</a>	5	84%	5.0	6.8	6.7	7.4	8.0	7.6	6.0	5.2	4.6	7.5	6.8	7.2		4,781,449
<a href="#">Yokohama AVID S34F</a>	6	81%	4.4	5.9	6.2	7.2	6.8	7.4	6.2	5.5	5.3	6.9	6.2	7.9		235,830
<a href="#">Michelin Energy LX4</a>	7	80%	4.5	6.4	6.6	7.2	7.7	7.4	5.5	4.8	4.8	7.4	6.8	5.5		16,931,718
<a href="#">Bridgestone Insignia SE200</a>	8	70%	4.0	5.6	5.8	6.1	7.0	6.3	4.7	3.8	3.9	6.6	6.3	5.8		6,156,656
<a href="#">Yokohama AVID S34D</a>	9	70%	2.0	5.9	6.3	7.9	7.9	7.9	4.9	3.7	3.5	5.8	4.1	3.8		350,560
<a href="#">Goodyear Integrity</a>	10	64%	3.0	4.7	4.9	5.4	6.5	5.8	4.3	3.7	3.5	6.4	8.0	5.5		58,802,948
<a href="#">Dunlop SP31 A/S</a>	11	58%	1.8	5.1	5.2	5.8	6.7	6.0	3.5	2.5	2.5	5.1	4.7	4.0		3,739,696
<a href="#">Yokohama AVID S33</a>	12	55%	0.8	3.8	2.7	5.3	6.4	6.5	0.3	1.4	1.9	6.6	7.1	4.3		319,600

### Color Key

Info based on consumers completing Tire Rack's online survey "10" is the highest. See key below or [read detailed descriptions of survey categories](#).

#### Tire Performance Ratings:

Superior 8.6-10    Excellent 6.6-8.5    Good 4.6-6.5    Fair 2.6-4.5    Unacceptable 0-2.5

#### Would buy again?

Definitely 8.6-10    Probably 6.6-8.5    Possibly 4.6-6.5    Probably Not 2.6-4.5    Definitely Not 0-2.5



## Sample of a German ADAC Tire Test 2017

<div> <div>Unfall, Schaden &amp; Panne</div> <div>Rechtsberatung</div> <div>Tanken, Kraftstoffe &amp; Antrieb</div> <div>Umwelt &amp; Innovation</div> <div>Reifen</div> <div>Technik &amp; Zubehör</div> <div>Mobil mit Behinderung</div> <div>Motorrad &amp; Roller</div> <div>ADAC im Einsatz</div> <div>Oldtimer &amp; Youngtimer</div> <div>Mobilität 2040</div> <div>Motorsport</div> <div>ADAC Mitglied werden</div> </div> <div> <div>Ergebnis im Detail</div> <div>Videos</div> <div>Test</div> <div>Hintergrund</div> </div>										
Hersteller/Modell	Preis (Euro)	ADAC Urteil	Trocken	Nass	Schnee	Eis	Geräusch/Komfort	Kraftstoffverbrauch	Verschleiß	
			15%	30%	20%	10%	5%	10%	10%	
<input type="checkbox"/> <a href="#">Continental WinterContact TS860</a>	74	+	+	+	+	+	○	+	+	
<input type="checkbox"/> <a href="#">Esa+Tecar Super Grip 9</a>	49	+	+	+	+	+	○	+	+	
<input type="checkbox"/> <a href="#">Kleber Krisalp HP 3</a>	63	+	+	+	+	+	○	+	+	
<input type="checkbox"/> <a href="#">Dunlop Winter Response 2</a>	73	○	○ <sup>1</sup>	+	+	+	○	+	+	
<input type="checkbox"/> <a href="#">Goodyear UltraGrip 9</a>	74	○	+	+	○ <sup>1</sup>	+	○	+	+	
<input type="checkbox"/> <a href="#">Hankook i*cept RS 2 W452</a>	59	○	+	○	○ <sup>1</sup>	+	⊖	+	+	
<input type="checkbox"/> <a href="#">Vredestein Snowtrac 5</a>	64	○	+	○	○	+	⊖	+	○	
<input type="checkbox"/> <a href="#">Yokohama W.drive V905<sup>2</sup></a>	58	○	+	○	+	+	⊖	+	○ <sup>1</sup>	
<input type="checkbox"/> <a href="#">Falken Eurowinter HS01</a>	59	○	○	○	○ <sup>1</sup>	○	⊖	+	+	
<input type="checkbox"/> <a href="#">Firestone Winterhawk 3</a>	59	○	+	○ <sup>1</sup>	○	+	○	+	+	
<input type="checkbox"/> <a href="#">Nokian WR D4</a>	65	○	+	○ <sup>1</sup>	+	+	⊖	+	○	
<input type="checkbox"/> <a href="#">Michelin Alpin 5</a>	77	○	+	+	○ <sup>1</sup>	○	○	○	++	
<input type="checkbox"/> <a href="#">Aeolus SnowAce 2 AW08</a>	50	○	+	○	○ <sup>1</sup>	+	○	+	○	
<input type="checkbox"/> <a href="#">Kumho WinterCraft WP51</a>	57	○	+	○ <sup>1</sup>	○	+	⊖	+	+	
<input type="checkbox"/> <a href="#">Sava Eskimo S3+</a>	60	○	○ <sup>1</sup>	○	+	+	○	+	+	
<input type="checkbox"/> <a href="#">Semperit Master-Grip 2</a>	63	⊖	⊖ <sup>1</sup>	+	+	○	○	+	○	

1 Führt zur Abwertung in der Gesamtnote  
2 Laut Anbieter ist inzwischen ein Nachfolgemodell verfügbar

+ sehr gut   
 + gut   
 ○ befriedigend   
 ⊖ ausreichend   
 ⊖ mangelhaft

Die Gesamtnote und ergänzende Informationen erhalten Sie durch Klicken auf das Reifenmodell. Reifen mit identischen

Note:

ADAC tire testing is similar to the ASTM procedure, while “Tire Rack’s online survey” is based on subjective ratings, only.



# SUMMARY-Remember these Winter Tips:

---



- Winter tires are worth it
- In traction we trust
- Never forget the pressure
- Tread depth matters
- Extra room & don't tailgate
- Remain a smooth operator



# SUMMARY-Remember these Winter Tips\*:

\* Thanks to a creative mind at "Tire Rack"



- **W**inter tires are worth it



- **I**n traction we trust



- **N**ever forget the pressure

Check at least monthly

Psi – bar – hPa - atm

- **T**read depth matters **1/16" vs 5/32" // 1.6mm vs. 4mm**  
**Legal vs. Recommended min. tread depth**

- **E**xtra Room & don't tailgate



- **R**emain a smooth operator







# SUMMARY-Remember these Winter Tips:



Sample safety poster;  
more at US Army  
Safety Center (CRC)

**HERE IT COMES** Are you ready to hit the road?

- Accelerate and decelerate slowly
- Increase your following distance eight to 10 seconds to provide more room to stop
- Know your brakes
- Don't power up hills and don't stop while going uphill unless necessary
- Take a fully charged cellphone, food, water and warm clothing
- Don't go out unless absolutely necessary

**READY ...OR NOT?**

**Ready ... or Not** is a call to action for leaders, Soldiers, Army Civilians and Family members to assess their "readiness" for what lies ahead—the known as well as the unknown.

Throughout our professional and personal lives, events happen all around us. We are often able to shape the outcome



ARMY STRONG:



<https://safety.army.mil>



# SUMMARY-Remember these Winter Tips:



## HERE IT COMES

*Don't wait for the storm to come. Now is the time to get your vehicle ready.*

- Emergency kit
- Blanket
- Flashlight
- Heat source

## READY ...OR NOT?

**Ready ... or Not** is a call to action for leaders, Soldiers, Army Civilians and Family members to assess their "readiness" for what lies ahead—the known as well as the unknown.

Throughout our professional and personal lives, events happen all around us. We are often able to shape the outcome





# Driver Distraction

- Distractions now join alcohol and speeding as leading factors in fatal and serious injury crashes.
- Hands-free devices offer no safety benefit when driving.
- Hands-free devices do not eliminate cognitive distraction.

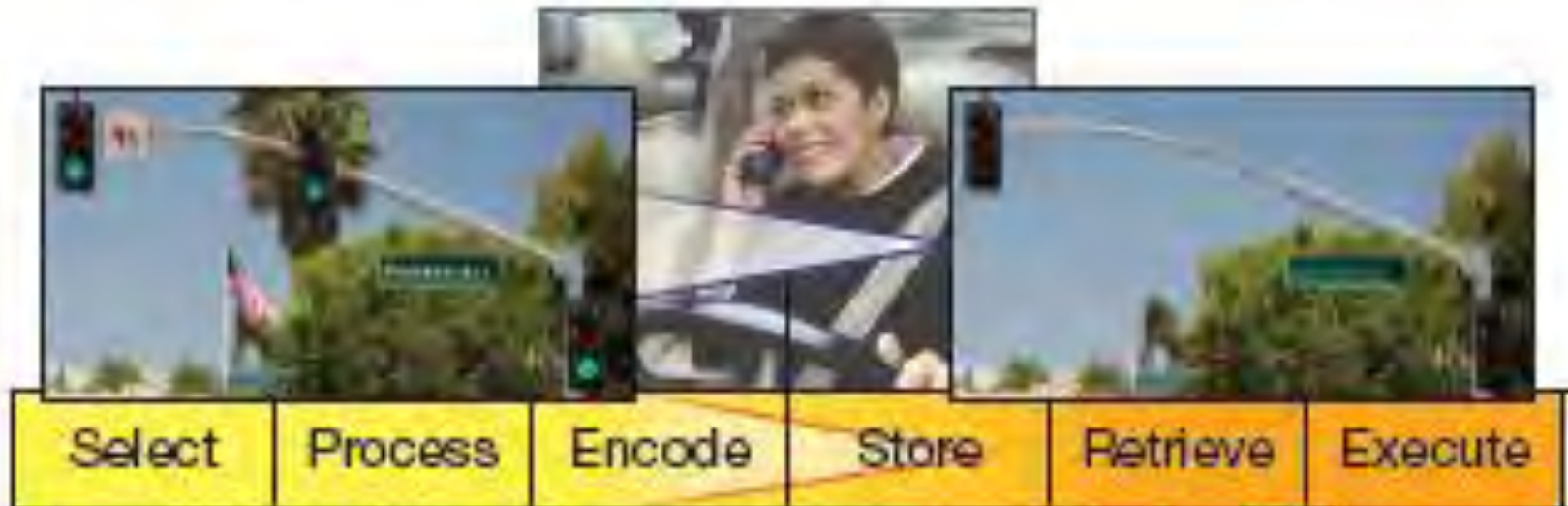
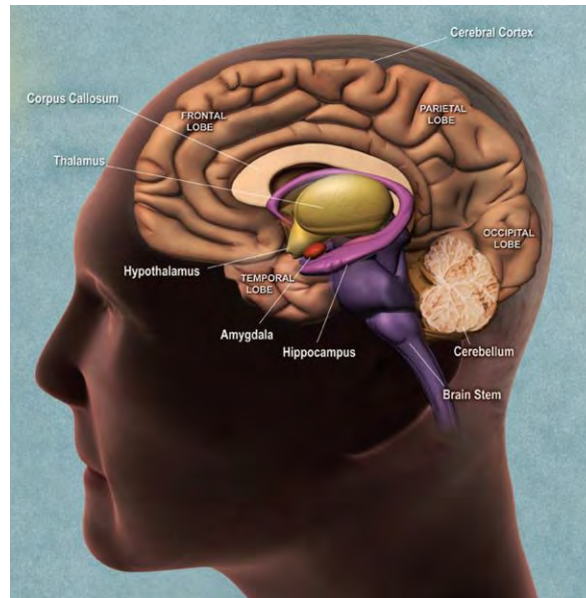


Figure 1. Inattention blindness and encoding. Source: National Safety Council

# Driver Distraction

- Driving while talking on cell phones – **handheld and hands-free** – increases risk of injury and property damage crashes fourfold.
- Drivers believe their own crash risk is lower than other drivers.



The four lobes of the brain.  
Source: National Institutes of Health

# Driver Distraction

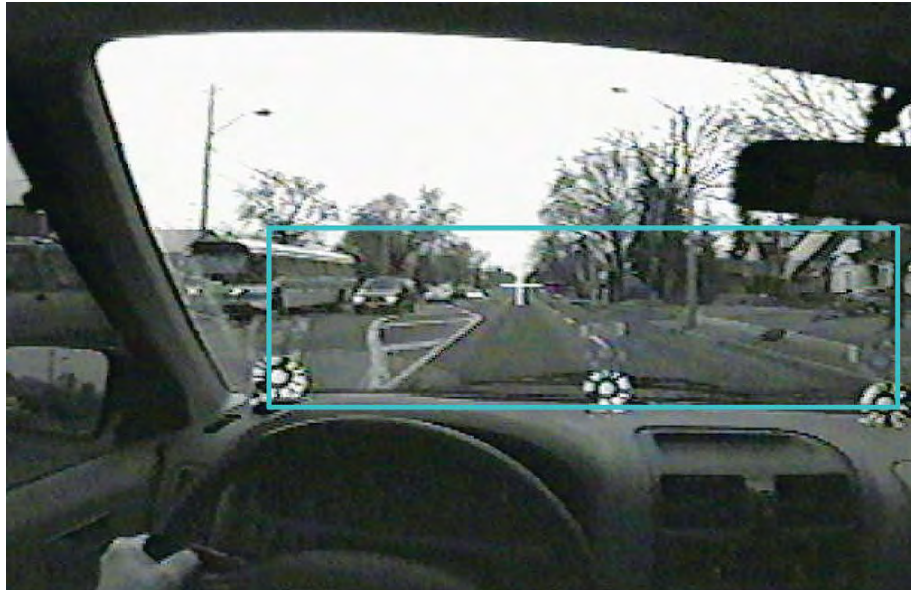
## MULTI-TASKING: THE BIG FAT MYTH

The brain quickly toggles between tasks – but can't do two things at the same time.

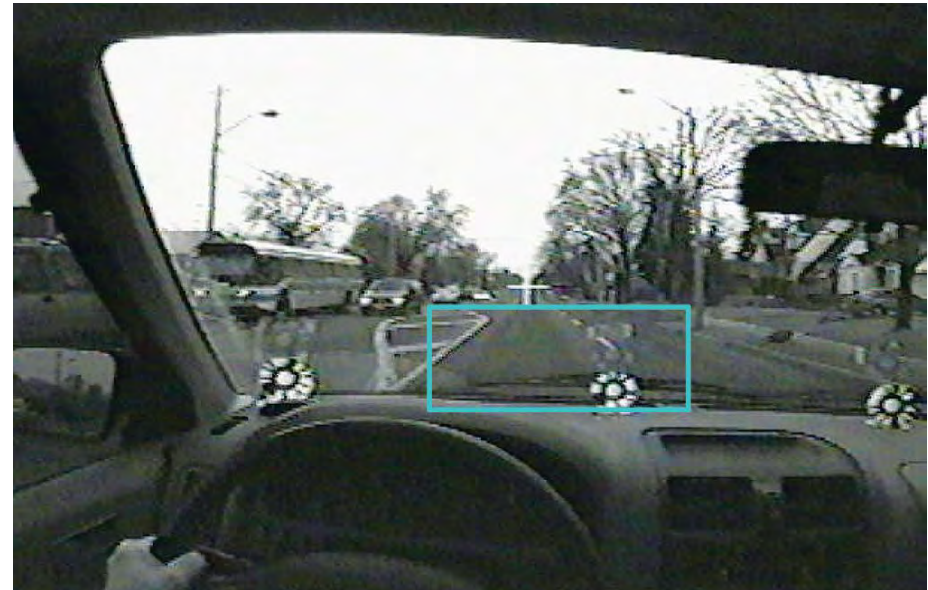
The activity in the area of the brain that processes moving images **decreases by up to 1/3** when listening to talking on a phone.



# Driver Distraction/Field of Vision



**Figure 4. Where drivers **not** using a hands-free cell phone looked.**  
Source: Transport Canada



**Figure 5. Where drivers using a hands-free cell phone looked.**  
Source: Transport Canada





# Driver Distraction




Take the **Focused Driver** Challenge  
An estimated 1 in 4 crashes involve cell phone distraction, handheld or hands-free. Choose to drive cell free.




**Calls kill**  
Hands-free is not risk-free  
Find out why at [nsc.org/cellfree](http://nsc.org/cellfree)  
#CallsKill

At any moment, **9% OF DRIVERS** are talking on cell phones.

About **26% OF ALL CAR CRASHES** involve cell phone use – including hands-free!



**WHAT'S HANDS-FREE?**

- earpiece
- dashboard system
- speakerphone

[distracteddriving.nsc.org](http://distracteddriving.nsc.org)



## Questions?



If you see this sign  
you're in Canada!

Note: in Austria, M+S tires are mandatory from 1Nov – 15Apr with  $\geq 4\text{mm}$  tread depth



## Winter Driving Safety Video.

<https://www.youtube.com/watch?v=TZQXuWzBC18>

Note: try Mozilla Firefox if MS Internet Explorer doesn't work

Disregard as long as 'youtube' is not accessible



Final comment:

for those who attended the 2017 townhall – remember “boot eats high heel”?

I have an add-on to it:

When you're driving and the road is icy or snow covered, and you're torn between “slow down/adjust to road conditions” and “time pressure/I must make it in time to that meeting/appointment, or start of work”:

use an improvised acoustical picture, like that old Beatles song “All you need is love”, just replace ‘love’ with ‘grip’, and sing the song:

“All you need is grip, dabadabadu, all you need is grip, grip, ... grip is all you need ...”  
And I bet you this song and the reminder of the ‘heel-hungry-boot’  
will help you to slow down ...

