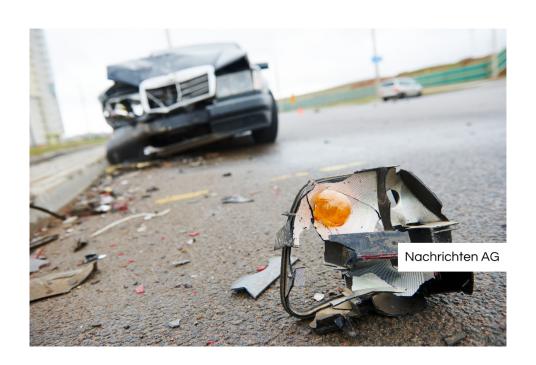


## HÒX`]WXYf'7fUg\'Ui Z'5%\$.'NkY]'@YVYb'Ua FUghd`Uhn'GWXk]Y`ckgYY'jYf`cfYb'

$$\label{lem:hoxing} \begin{split} &\text{HOX'}]\text{WNYf'I} \ b \text{ZU'``Ua} \ \text{`FUghd`Uhn'GWNk}]\text{Y`ckgYY.'NkY]'} \\ &\text{ghYfVYb} \text{Z'b} \text{UWNXYa} \ \text{']}\text{\f'CdY'`i} \ b \text{hYf'Y}]\text{bYb'} \\ &\text{@Ughk} \ \text{U[Yb'[Yf]Yh''} \end{split}$$



F Ughd`Uhn`GW\k]Y`ck gYYž'8Yi hgW\`UbX`!`5a `&- "'5df]``&\$&)
\_Ua `Yg`ni `Y]bYa `hfU[]gW\Yb`I bZU```Ub`XYf`5i hcVU\b`5%\$`]b

F]W\hi b[`8fY]YW\_'GdfYYUi "'8Yf`J cfZU```YfY][bYhY`g]W\`Ua

F Ughd`Uhn`GW\k]Y`ck gYYž'k c`Y]b`CdY``Ui g`V]g\Yf`i b[Y\_`ÀfhYf
I fgUW\Y`a]h`\c\Yf'; YgW\k]bX][\_Y]h`i bhYf`Y]bYb`@Ughk U[Yb
[YfUhYb`]gh"'6Y]`XYa `Ni gUa a YbdfU```j Yf`cfYb`nk Y]`\bgUggYb`XYg
CdY`g`]\f`@YVYbž'k Ug`X]Y`8fUa Uh]\_`XYg`I bZU``g`i bhYfghfY]W\h"`

A Un!Cb`]bY`VYf]W\hYhž`XUgg`X]Y`Bchfi Za Y`Xi b[`VY]': Yi Yfk Y\fž
FYhhi b[gX]Ybgh'i bX`Dc`]nY]`[Y[Yb`%+"()`I\f`Y]b[Y[Ub[Yb`]gh"

8]Y'9]bgUhn\_fÀZhY'gdYffhYb'X]Y'I bZU``ghY``Y'k Y]hfÀi a ]['UV'i bX j YfgUa a Y`hYb'g]W\']b'[fc»Yf'NU\``j cf'Cfh"'BYVYb'XYf'Dc`]nY]'k Uf Ui W\'X]Y'?f]a ]bU`dc`]nY]'dfÀgYbhž'i a 'X]Y'I a ghÀbXY'XYg'I bZU``g

Y]b[Y\YbX'ni ii bhYfgi W\Yb"'9]b; i hUW\hYf']gh'ni f'FY\_cbghfi \_h]cb
XYg'I bZU``\Yf[Ub[g'\]bni [Ync[Yb'k cfXYbži bX'Yg'k i fXY'Y]b
HcXYgYfa ]hh`i b[gj YfZU\fYb'Y]b[Y`Y]hYh"'8Yf'F Ughd`Uhn
GW\k]Y`ck gYY'k i fXY'Ui Z[fi bX'XYg'hfU[]gW\Yb'J cfZU``g
j cfØVYf[Y\YbX'[YgW\`cggYbži bX'Y]b'5VgW\`YddX]Ybgh'k i fXY'a ]h
XYf'6Yf[i b['XYg'ghUf\_'VYgW\ÀX][hYb'CdY`g'VYUi ZhfU[h"

## $I bZU^ghUh]gh]_i bXJYf_Y\fgg]WXYf\Y]h$

I bZÀ``Y`k]Y`XYf`hfU[]gWXY`JcfZU```Ua `FUghd`Uhn`GWXk]Y`ckgYY kYfZYb`Y]b`GWX`U[`]WXh`Ui Z`X]Y`[YbYfY``Y`JYf\_Y\fgg]WXYf\Y]h`]b 8 Yi hgWX`UbX"`@Ui h`8 YghUh]g`k YfXYb`I bZU``ghUh]gh]\_Yb`[Ybi hnhžia 'X]Y`JYf\_Y\fgg]WXYf\Y]hg`U[Y`ni 'Yj U`i]YfYb`i bX`YZZY\_h]j Y A U» bU\a Yb`]b`XYb`6YfY]WXYb`; YgYhn[YVi b[ž`JYf\_Y\fgYfn]Y\i b[gck]Y`GhfU» YbVUi 'ni 'Ybhk]W\_Y`b"`GhUh]gh]\_Yb`Ybh\U`hYb i a ZUggYbXY`5b[UVYb`ni I bZU``i fgUWXYbž`VYhY]`][hYb`: U\fnYi [Ybi bX`XYb`VYhfcZZYbYb`DYfqcbYb"

 $\label{eq:localized_norm} N]Y``XYf`GhfU``Ybj`Yf_Y\fgi bZU``ghUh]gh]_']gh`Ygž`X]Y`Ghfi _hi fYb`XYg l bZU``[YgWXY\Ybg'i bX`X]Y`Ni gUa a Yb\Ab[Y`nk]gWXYb j YfgWX]YXYbYb'i bZU``VYgh]a a YbXYb': U_hcfYb'ni 'j YfXYi h`]WXYb'' Gc`WXY`8 UhYb'g]bX`YbhgWXY]XYbX`ZØf`X]Y`9bhk ]\w_`i b['Y]bYf ghUUh`]\wXYb'JYf_Y\fgdc`]h]_ž`]bgVYgcbXYfY`]a '< ]bV`]\w_`Ui Z \&\ZfUghfi _hi f!'i bX`JYf_Y\fgg]\wXYf\Y]h''$ 

±b 'Y]bYf'NY]hž']b 'XYf'J Yf\_Y\fgg]WXYf\Y]h'Y]bYb '\c\Yb'GhY``Ybk Yfh\\Uhž'a U\bh'X]YgYf'J cfZU``'ni f'5WX hgUa \_Y]h'i bX'F YgdY\_h]Yfi b[ 'XYfJ Yf\_Y\fgfY[ Y`b"'¾XYf'hÒX`]WXY'J Yf\_Y\fgi bZU````Àggh'g]WX'Ui ZAYbgWX`]WX\_Y]h'ni fØW\_ZØ\fYb' 'X]Y'J Yf`Yhn`]WXYb'Ui Z'i bgYfYbGhU» Yb'j YfX]YbYb'VYqcbXYfY'5i Za Yf\_gUa \_Y]h"

8YhU]`g	
J c f ZU``	JYf_Y\fgi bZU``
I fgUWX Y	ib[Y_`ÀfhY`IfgUWXY
Cfh	FUghd`Uhn`GWXk]Y`ckgYYž'8YihgWX`UbX
EiY``Yb	• k k k "a Un!cb`]bY"XY
	<ul><li>k k k "XYghUh]g"XY</li></ul>

## 6 Ygi WX Yb 'G]Y 'i bg 'Ui Z. 'b!U[ "XY