

# **ARTS2876**



# 7ci fgY<sup>\*</sup>Cj Yfj ]Yk

# GHJZZ:7cbHJWh:8YHJ]`g

### 7cbj Ybcfg

BUa Y	9a U]`	5j U]`UV]`] <b>m</b>	@cWUh]cb	D\cbY
>cY'5`]nn]	<u>^'U`]nn]4 i bgk "YXi "Ui</u>	Ncca žG_mdY UbX#cf"HYUa g"Vm Uddc]bha Ybh	C b`]bY'cf A cfj Yb 6fck b	Н68

# GWXcc``7cbhUWhʻ±bZcfa Uh]cb

GWkcc``cZGcWJU``GWJYbWYg

Fcca '%) -

A cfj Yb 6fck b 7 &\$

Ya U]`. 'gcgg4 i bgk "YXi "Ui

d\cbY. '\$&'-',) '% \$+

# 5W\_bck `YX[ Ya YbhcZ7ci bhfm

I BGK '5fhgž'8Yg][b'UbX'5fW]hYWhifY'?Ybg]b[hcb'UbX'DUXX]b[hcb'WUadigYg'UfY'Vi]hhcb'5Vcf][]bU`

 $\label{thm:condition} Hi hcf] U`g`k ]```VY`i gYX`hc`cf[Ub]gY`ga U```[fci dg`hc`YghUV`]g\`U`Wc``UVcfUhj Y`k cf_]b[Ybj]fcba Ybhk \YfY`gh XYbhg`WUb``YUfb`Zfca `cbY`Ubch\Yf''`$ 

 $FYUX]b[\ 'E'\ Ygh]cbg.':\ cf'YUWX'k\ YY\_mfYUX]b[\ z'mci''k\ ]```Z]bX'fYUX]b[\ 'Wca\ dfY\Ybg]cb'ei\ Ygh]cbg'dcghYX'hch\Y'I\ b]j\ Yfg]hm@A\ G'''H\YgY'k\ ]```\Y`d'hc'cf]Ybh'mci''k\ ]h\ 'fYgdYWh'hc'h\Y'Uf[\ i\ a\ Ybhg'dfYgYbhYX']b'h\Y\ Ugg][\ bYX'fYUX]b[\ g''\ A''\ Y''\ A'''\ A''\ A'''\ A'''\ A''\ A'''\ A''\ A''\$ 

### 5ggYgga Ybh

- Mci k]``\Uj Y'Ub'cddcfh b]mm'c [Yhi b[fUXYX'ZYYXVUW\_cb'mci f'Z]fghk cf\_Vcc\_'Ybrfm
- Mci 'k ]```\Uj Y'cb`]bY'UW]j ]h]Yg'h\Uh\Y`d'mci 'XYj Y`cd'g\_]``g'Zcf'k f]h]b[ 'mci f'k cf\_Vcc\_'UbX'YggUm
- 6ch\ 'UggYgga Ybhg 'fY`mcb`mcb'h\Y'hYl hg 'Wcbg]XYfYX']b'h\Y'Wci fgY
- Mci 'k ]```VY`UV`Y`hc`dfc[fYgg]jY`miVi]`X`cb`mcif`\_bck`YX[Y`gc`h\Uhimcif`Z]bU``YggUm`]g`]bZcfaYX`Vm YUW\`kYY\_fg`Wcbg]XYfUh]cb`cZ]XYUg`UbX`YIUad`Yg

5ggYgga Ybh'hJg_	K Y][\h	8iY'8UHY	7 ci fgY`@YUfb]b[ Ci hWca Yg`5ggYggYX	
%"K cf_Vcc_	*\$1	% #%#&\$&&`%%) - `DA	%ž <sup>.</sup> &ž <sup>.</sup> '	
&"`9ggUm	(\$1	&) #%#&\$&&`%%) - `DA	&ž'' ž'(	

### 5ggYgga Ybh% K cf\_Vcc\_

5ggYgga Ybh``Yb[h\. '5ddfcl]a UhY`m') \$\$`k cfXg`dYf`k YY\_8i Y`XUhY. '% #%#&\$&&'%%) - 'DA

 $Ghi XYbhg`k ]```dfYdUfY`k f]hhYb`Ybhf]Yg`cZ\%l\&`dU[Yg`cb`h\Y`Ugg][bYX`fYUX]b[g`YUW\`k YY\_"`H\Y`k cf\_`k ]```VYgi Va ]hhYX`UbX`UggYggYX`dYf]cX]\WJ``mh\fci [\`h\Y`hYfa "$ 

 $: YYXVUW\underline{\ }. \ K \ f] \underline{\ } hYb'Wca\ a\ Yb\underline{\ } g'UbX'[\ fUXYX'U[\ U]bghU'Wf] \underline{\ } hYf] U'g \ YYh'$ 

.

H\]g`Ugg][ ba Ybh]g`gi Va ]hh/X`h\fci [\`Hi fb]h]b`UbX`gh XYbhg`Wb`gYY`Hi fb]h]b`g]a ]`Uf]hmfYdcfhg"

#### 5XX]h]cbU`XYhJ]`q

H68

### 5ggYgga Ybh& 9ggUm

5ggYgga Ybh`Yb[h\.'%) \$\$'k cfXg 8i Y'XUhY.'&) #%#&\$&&'%() - 'DA

 $Ghi XYbhg'k ] ```k f]hY'Ub'YggUm'f%) $$'k cfXgŁ'h\Uh'fYZYWhg'cb'&!' 'Wf]h]WU```YUfb]b[ 'YI dYf]YbWYg']b'fY`Uh]cb'hc Wci fqY'WcbhYbh$ 

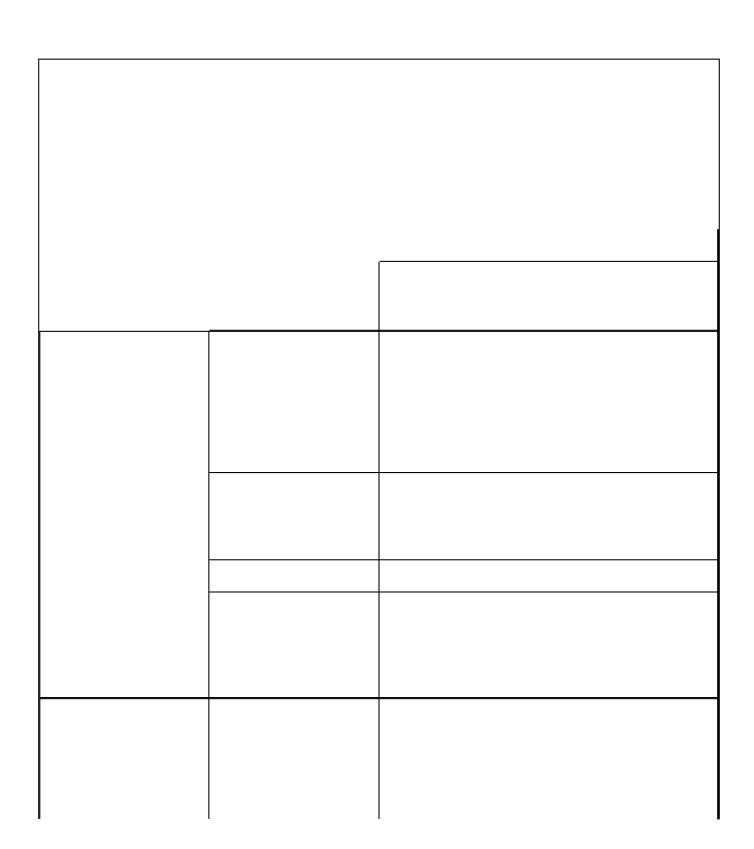
: YYXVUW\_. K f]th/b Wca a Ybtg UbX [fUXYX U[U]bghU Wf]th/f]U g\YYt'

.

H\]g`Ugg][ ba Ybh]g`gi Va ]hhYX`h\fci [\`Hi fb]h]b`UbX`gh XYbhg`Wb`gYY`Hi fb]h]b`g]a ]`Uf]hmfYdcfhg"

#### 5XX]h]cbU`XYhU]`g

H68



}	

	Hi hcf]U`	5gʻgW、YXi `YX"
	5ggYgga Ybh	K cf_Vcc_
		K cf_Vcc`mci f`Ybhf]Yg`Zcf`k YY_g`' ž'(ž')ž'+ž', ž'- fk`]b`hchJ`Ł'UfY`Xi Y`cb`Gi bXUmBcj Ya VYf`% h\`Vm %%")-da
K YY_'%\$.'%( 'Bcj Ya VYf !'% 'Bcj Ya VYf	@YWhi fY	:]bU```YWiffY`!`8YUh\`UbX`h\Y`GY`Z!`6YW <u>\</u> Yf
! 79 DCJ fa VII		Hi YgXUmBcj Ya VYf^%) h
		Cb`]bY`!`gYY`AccX`Y`Zcf`XYHJ]`g
	F YUX]b[	6YW_Yfž9"'f1%+' ŁH\Y'8Yb]U``cZ8YUh\ž: fYY DfYggžBYk 'Mcf_ž9I WYfdhg`d"]I!I žUbX`dd"%I,
		%\$!%%ž%)!&\$
	Hi hcf]U`	5gʻgW、YXi `YX
	5ggYgga Ybh	BchY.
		Mci f'YggUm]g'Xi Y'cb'&) h\'cZBcj Ya VYf'Vm %%") - da

# FYgci fWfg

### DfYgWf]VYX F Ygci fWYg

 $Df]bhWcd]Yg`cZhY'k YY\_mUgg][bYX`fYUX]b[g`\Uj Y`VYYb`Wcad]YX`]bhc`Ub`f5FHG\&, +*`Ghi Xm?]hfik \]WX`]gUj U]`UV`Y`Zcf`di fWXUgY`Uhh\Y`I BGK `6cc_g\cd"``9`YWfcb]WWcd]Yg`cZh\Y`fYUX]b[g`UfY`U`gc`Uj U]`UV`Y`cb h\Y`5FHG&, +*`A ccX`Y`dU[Y.`\\hd.#\acx`Y\hY`h'ibgk \\YXi\\Ui\\\$ 

.

### 7ci fgY 9j U`i Uh]cb UbX 8Yj Y`cda Ybh

 $Gh XYbhZYXVUW_k ]``VY'[Uh YfYX'h fci[ \a m9l dYf]YbWY'gi fj Ymgž'UbX'mci k ]``VY'[]j Yb'cddcfh b]hJYg h fci[ \ci hh Y'gYa YghYfhc'[]j Y']bZcfa U``ZYYXVUW_"``$ 

### 5 WUXYa ]W<cbYglmUbX D`U[]Uf]ga

D`U[]Uf]ga i]gii g]b[ih\Yik cfXgicfi]XYUgicZch\YfgiUbXidfYgYbh]b[ih\Ya iUgimci fick b"i±i\WbihU\_Yia Ubm Zcfa gžZfca iXYi]VYfUhYiW\YUh]b[ihciU\W]XYbhU`m\Wcdm]b[iZfca iUigci f\Wik]h\ci hiU\w\_bck iYX[Ya Ybh'

IBGK [fcidg'd'U[]Uf]ga ]bhc'h\Y'Zc``ck]b[ 'WUhY[cf]Yg.

- 7 cdm]b[.'I g]b['h\Y'gUa Y'cf'j Yfmg]a]'Uf'k cfXg'hc'h\Y'cf][]bU'hYI hcf']XYU'k]h\ci hUW\_bck 'YX[]b[h\Y'gci fW'cf'i g]b['ei chUh]cb'a Uf\_g"'H\]g']bWi XYg'Wcdm]b['a UhYf]U'gž]XYUg'cf'WcbW'dhg'Zfca 'U Vcc\_ž'Ufh]WYž'fYdcfhcf'ch\Yf'k f]hHYb'XcW a Ybhž'dfYgYbhUh]cbž'Wca dcg]h]cbž'Uffk cf\_ž'XYg][bž XfUk]b['z'W]fWi]hfmž'Wca di hYf'dfc[fUa 'cf'gcZhk UfYž'k YVg]hYž']bhYfbYhž'ch\Yf'Y'YWfcb]WfYgci fWYž'cf Ubch\Yf'dYfgcbfq'Uqq][ba Ybhk]h\ci hUddfcdf]UhY'UW\_bck 'YX[Ya Ybh'
- $\pm$ 0Uddfcdf]UhY dUfUd\fUg]b[ . '7\Ub[]b[ 'U'ZYk 'k cfXg'UbX'd\fUgYg'k\]Y'a cghmfYhU]b]b[ 'h\Y