



## ARTS2908

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HYfa 'CbY' '#`&\$%-



7ci fgY'8YHJ>`g

7fYX]hDc]bhtg`\*`

Gi a a UfmicZ`hY'7ci fgY

Gi V`YWh5fYU. l` a\_ W`ie S` V`9 W`VWdE fgV[W`e  
H\]g`W`ci fgY`W`b`U`gc`V`Y`gh`X]YX`]b`h`Y`Z`c`k`]b[ `gdY`W`U`]gU`h`cbg. `3e[S` E fgV[W`et : [efackl <SbS` W`eW  
E fgV[W`e

H\]g`W`ci fgY`c`ZYfg`U`h`Ya`U`h`W`c`j`Y`f`j`Y`k`c`Z`>UdUbYgY` \]g`h`c`f`m`i`Z`c`a` `d`f`Y` \]g`h`c`f`m`i`h`c` `h`Y` `A` `Y`]`-`a` d`Y`f`]`U`  
F`Y`g`h`c`f`U`h`c`b`c`Z`%` \*` ,` ž`]g` `W`b`h`f`U` `h`Y`a` `Y` `V`Y`]b[ ` `h`Y` ` \]g`h`c`f`m`i`c`Z`k` ca` Y`b`ž`[ `Y`b`X`Y`f` `U`b`X` `g`Y`i` `U`]`h`Y`g`" `5`g` `h`Y` `W`ci` fgY`  
]g` `Y`g`g`Y`b`h`]`U` `m`U` `W` `h`i` f`U` ` `U`b`X` `g`c`W`U` ` \]g`h`c`f`m`i`ž`m`c`i` `k` ]` ` `b`c`h`c`b`m`X`]g`W` gg` `h`Y` `]X`Y`U`g` `U`b`X` `g`c`W`U` `d`f`U`W`]`W`g` `c`Z`  
f`i` `]b[ ` `W`U`g`g`Y`g` `f`W`] `]` `U`f`]g`h`c`W`U`h`g` `U`b`X` `h`Y`b` `V`i` g` \]#` U`f`f`]c`f`g`L`ž` `V`i` h`k` ]` ` `U`gc` `Y`i` U`a` `]b`Y` `d`c`d`i` `U`f` `6`i` X`X` \]g`a` ž`Z` ` \_`  
f`Y` ]` [ `]b`ž`d`Y`U`g`U`b`h`f`Y`V`Y` `]c`b`ž`W`c`a` a` c`b`Y`f` `f`Y`g`]g`h`U`b`W`ž` `U`b`X` `U`g`d`Y`W`g` `c`Z`d`c`d`i` `U`f` `W` `h`i` f`Y`"

7ci fgY`@YUfb]b[ `Ci hWca Yg

%` 8`Ya` c`b`g`h`f`U`h` ` \_`b`c`k` `Y`X`[ `Y` `c`Z`h`Y` ` \]g`h`c`f`m`i`c`Z`d`f`Y`a` c`X`Y`f`b` `>`U`d`U`b`  
&" `5`b`U` `m`g`Y` `d`f`Y`a` c`X`Y`f`b` `>`U`d`U`b`Y`g`Y` `<` ]g`h`c`f`m`i`h`f`c`i` [ ` \` `h`Y` ` `Y`b`g` `c`Z`[ `Y`b`X`Y`f` `U`b`X` `Z`Y`a` `]b`]g`h`g`W`X`c` `U`f`g` \]d`"  
'` " `7`c`b`g`h`f`i` `W`h`U`f`[ `i` a` Y`b`h`g` `U`V`c`i` h`d`f`Y`a` c`X`Y`f`b` `>`U`d`U`b`Y`g`Y` `<` ]g`h`c`f`m`i`]b` `k` `f`]h`Y`b` `U`b`X`#`c`f`j` `Y`f`V`U` `Z`c`f`a` "  
(` " `=>`X`Y`b`h`]`Z`m`\_`Y`m`X`Y`V`U`h`Y`g` `U`b`X` `W`c`b`W`d`h`g` `]b` `d`f`Y`a` c`X`Y`f`b` `>`U`d`U`b`Y`g`Y` ` \]g`h`c`f`m`i`  
)` " `@`c`W`U`h`Y` `U`b`X` `U`b`U` `m`g`Y` `d`f`]a` U`f`m`U`b`X`#`c`f`g`Y`W`c`b`X`U`f`m`a` U`h`Y`f`]U` `f`Y` `Y`j` `U`b`h`c` `d`f`Y`a` c`X`Y`f`b` `>`U`d`U`b`Y`g`Y` ` \]g`h`c`f`m`i`

HYUW ]b[ `G`h`f`U`h`[ `]Yg`

H\]g`W`ci fgY`]b`f`c`X`i` W`g` `g`h` X`Y`b`h`g` `h`c` ` \_`Y`m`X`Y`V`U`h`Y`g` `U`V`c`i` h`h`Y` `Y`U`f`m`i`a` c`X`Y`f`b` ` \]g`h`c`f`m`i`c`Z`>UdUbžk` ]h` `U`b`  
Ya` d` \]U`g`]g` `c`b` `k` ca` Y`b`h`g` `U`b`X` `]` `Y`b`X`Y`f` ` \]g`h`c`f`m`i`" `#`i` g`Y`g` `Y`W`h`i` `f`Y`g` `h`c` `h`Y`U`W`X` `W`c`b`h`Y`b`h`ž` `U`b`X` `h`i` `h`c`f`]U` `g` `h`c` `U` `c`k`  
g`h`i` X`Y`b`h`g` `h`c` `X`]g`W` gg` `h`Y`f` `f`Y`U`X`]b[ ` " `H`i` `h`c`f`]U` `U`g`g`Y`g`g`a` Y`b`h`g` `U`f`Y` `X`Y`g`[ `b`Y`X` `V`c`h` `h`c` `Y`b`W`c`i` f`U`[ `Y` `g`h`Y`U`X`m`  
Y`b`[ `U`[ `Y`a` Y`b`h`f`d`U`f`h`]W`d`U`h`c`b`E` `U`b`X` `h`c` `U`X`X` `X`Y`d`h` `h`c` `h`i` `h`c`f`]U` `X`]g`W` gg`]c`b` `f`&l` `f`Y`g`d`c`b`g`Y`g`ž`d`i` `g` `X`]g`W` gg`]c`b`  
ei` Y`g`h`]c`b`g`L` `H`Y` `f`Y`g`Y`U`f`W` `d`f`c` `Y`W`h` `Y` `d`g` `g`h`i` X`Y`b`h`g` `h`c` `i` b`X`Y`f`U`\_`Y` `g`h`f`i` `W`h`i` `f`Y`X`ž`]b`X`Y`d`Y`b`X`Y`b`h`f`Y`g`Y`U`f`W`"

# 5ggYgga Ybh

## 5ggYgga YbhHUg\_g

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!WUgg'HYgh%	&\$!	% #\$( #&\$%- '%%\$\$'5A	%&&ž(
!WUgg'HYgh&	&\$!	\$' #\$( #&\$%- '%%\$\$'5A	%&&ž(
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7f]hWU'6]V'c[ fUd\m	( \$!	&, #\$( #&\$%- '%%) - 'DA	%&&ž ž( ž)

## 5ggYgga Ybh8YHJ]`g

### 5ggYgga Ybh% !WUgg'HYgh%

GHUfhXUH. 'K YY\_-(

8YHJ]`g. '7cj Yfg'WcbhYbhZca 'k YY\_g'&! ("H\Y'hYghk ]`Wcbg]ghcZ&\$'a i 'hd'Y!Wc]W'ei Ygh]cbg'VUgYX'cb hY'fYUX]b[ gž`YWfi fY'UbX'hi hf]U'WcbhYbhfY'Yj Ubhfc'hY'k YY\_g'VY]b[ 'UggYggYX"'Mci f'a Uf\_'k ]`VY fY'YUgYX'Uddfcl ]a UH'mcbY'k YY\_'UZf'cb'A ccX'Yž'UbX'ž fhYf'ZYXVUW\_'k ]`VY' [ ]j Yb']b'U'gi VgYei Ybh hi hf]U'j ]U'U' [ YbYfU'X]gW gg]cb"

### 5ggYgga Ybh& !WUgg'HYgh&

GHUfhXUH. 'K YY\_+

8YHJ]`g. '7cj Yfg'WcbhYbhZca 'k YY\_g')!+"H\Y'hYghk ]`Wcbg]ghcZ&\$'a i 'hd'Y!Wc]W'ei Ygh]cbg'VUgYX'cb hY'fYUX]b[ gž`YWfi fY'UbX'hi hf]U'WcbhYbhfY'Yj Ubhfc'hY'k YY\_g'VY]b[ 'UggYggYX"'Mci f'a Uf\_'k ]`VY fY'YUgYX'Uddfcl ]a UH'mcbY'k YY\_'UZf'cb'A ccX'Yž'UbX'ž fhYf'ZYXVUW\_'k ]`VY' [ ]j Yb']b'U'gi VgYei Ybh hi hf]U'j ]U'U' [ YbYfU'X]gW gg]cb"

### 5ggYgga Ybh' . !WUgg'HYgh'

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8YHJ]`g. '7cj Yfg'WcbhYbhZca 'k YY\_g'&! ("H\Y'hYghk ]`Wcbg]ghcZ&\$'a i 'hd'Y!Wc]W'ei Ygh]cbg'VUgYX'cb hY'fYUX]b[ gž`YWfi fY'UbX'hi hf]U'WcbhYbhfY'Yj Ubhfc'hY'k YY\_g'VY]b[ 'UggYggYX"'Mci f'a Uf\_'k ]`VY fY'YUgYX'Uddfcl ]a UH'mcbY'k YY\_'UZf'cb'A ccX'Yž'UbX'ž fhYf'ZYXVUW\_'k ]`VY' [ ]j Yb']b'U'gi VgYei Ybh hi hf]U'j ]U'U' [ YbYfU'X]gW gg]cb"H\]g'g'hY'ž]bU'UggYgga YbhZcf'UH'bxUbW' di fdcgYg"

### 5ggYgga Ybh( . 7f]hWU'6]V'c[ fUd\m

GHUfhXUH. 'K YY\_`%\$

8YHJ]`g. 'Mci 'k ]`XYj Y'cd'mci f'ck b'fYgYUfW'ei Ygh]cb'hc'Ubgk Yfž'cb'U'hd]WfY'UH'X'hc'cbY'cZ'hY'k YY\_g ]b'hY'Wci fgy"'Mci f'W]hW'V]V'c[ fUd\m]g'ci 'X'VY'gfi Wfi fYX'i g]b[ 'hY'h'a d'UH'h'Uhk ]`VY'dfcj ]YX'Zcf mci "'H\Y'hc'U''Yb[ h' ]g'(% \$\$'k cfxg!'mci 'g'ci 'X'i gY'\*'gci fW'g'UbX'k f]h' &\$'k cfxg'Zcf YUW'gci fW'ž U'cb[ 'k ]h'U'\$\$'k cfx' ]b]fcXi W]cb'fk \Yf' mci 'k ]`dfcj ]XY'U'Vf]YZVUW\_[ fci bX'hc'hY'hd]WUbX'ghUH'mci f

fYgYUfW 'ei Yghcb'UbX'U'%'\$!k cfX'W'cbW' g]cb'fk \YfY'mci 'k ]''fY]h'fUf' h'Y'Ubgk Yf'hc'mci f'ei Yghcb'UbX  
dfcj ]XY'U'Vf]YZgi a a UfmcZmci f'fYgYUfW'5''gci fW'g'i gYX'a i ghVY'Zca 'Y]h'Yf'dYYf!fYj ]Yk YX'ci fbU'g  
cf'W'Udh'fg'Zca 'YX]h'X'Vcc\_'W'Y'W'cbg": YYXVUW\_k ]''VY'[ ]j Yb'hc'mci 'k ]h' ]bX]j ]Xi U'W'a a Yb'g'j ]U  
; fUXYa Uf'\_cb'Hi fb]h]bž ]b'UXX]hcb'hc'U'ei U]h]h]j Y' [ fUX]b[ 'fi Vf]W

Hi fb]h]b'gYh]b [ . 'H\]g'Ugg][ ba Ybh]g'gi Va ]h'X'h'fci [ \ 'Hi fb]h]b'UbX'ghi XYb'g'Xc'bc'gYY'Hi fb]h]b  
g]a ]Uf]m'fYdc'f'g"

5 hYbXUbW`F Yei ]fYa Ybhg

Gh XYbhg`UFY`ghfcb[ `mYbWci fU[ YX`hc`UhhYbX`U`WUggYg`UbX`fYj ]Yk ``YWhi fY`fYWc`fX]b[ g"

7 ci fgY`GWXYXi `Y

[J\]Yk`WUgg`hja`YhUV`Y](#)

H]a`YhUV`Y`

8UhY	HmdY	7cbhYbh
K YY_`%`%` : YVfi Ufm!`&(` : YWfi Ufm %o		%o



Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Hi fb]h]b`Gi Va ]gg]cb

≠mci`YbWci bHYf`U`dfcV`Ya`k`Yb`U`HYa`dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybh`h`fci`[`\`Hi`fb]h]b`z`d`YUgY`  
HY`Yd`cbY`9I`HYfbU`Gi`ddcfhcb`-`,`),`'`,`'`,`%cf`Ya`U]`h`Ya`cb`YI`HYfbU`HY`hgi`ddcfh4`i`bgk`"YXi`"Ui`"Gi`ddcfh`  
`ci`fg`UfY`,`.\$\$Ua`-`%\$.\$\$da`cb`k`YY`XUmg`UbX`-`.\$\$Ua`-`,`).\$\$da`cb`k`YY`YbXg`fI`\*)`XUmg`U`mY`UfL`≠mci`  
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhXi`Y`hc`U`ZU`hik`]h`Hi`fb]h]b`mci`a`Um`Udd`mi`Zc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`  
a`i`ghfY`hU]b`mci`f`h]W`Yhbi`a`VYf`Zca`9I`HYfbU`Gi`ddcfhfU`cb[`k`]h`Ubmc`h`Yf`fY`Yj`UbhXcW`a`Yb`hg`L`hc`  
]bWi`XY`Ug`Yj`]XYbW`hc`gi`ddcfhmc`i`f`YI`HYbg]cb`Udd`]W]h]cb"≠mci`Ya`U]`9I`HYfbU`Gi`ddcfhmc`i`k`]"`



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

D`U[ ]Uf]ga `]g`i g]b[ `hY`k cfXg`cf]XYUg`cZchYfg`UbX`dfYgYbh]b[ `hYa `Ug`mci f`ck b" `hWUb`hU`Y`a Ubm  
Zcfa gZ`Zca `XY`]VYfUHY`WXYU]b[ `hc`UWV]XYbhU`mW`dm]b[ `Zca `U`gci fW`k ]h`ci hUW\_bck`YX[ Ya Ybh`

I BGK `[ fci dg`d`U[ ]Uf]ga `]bhc`hY`Zc`ck ]b[ `WUHY[ cf]Yg.

7 cdm]b[ .`i g]b[ `hY`gUa Y`cf`j Yfmg]a ]Uf`k cfXg`hc`hY`cf][ ]bU`hYI hcf]XYU`k ]h`ci hUW\_bck`YX[ ]b[ `hY`  
gci fW`cf`i g]b[ `ei chU]cb`a Uf\_g" `H\]g`U`gc`Udd`]Yg`hc`]a U[ YgZ`UfhUbX`XYg][ b`dfc`YWgZ`Ug`k Y`Ug  
dfYgYbhU]cbg`k \YfY`gca YcbY`dfYgYbh]g`UbchYf`g`]XYUg`cf`k cfXg`k ]h`ci hWYX]h`

hUddfcdf]UHY`dUfUd`fUg]b[ .`7`Ub[ ]b[ `U`ZYk `k cfXg`UbX`d`fUgYg`k \]Y`a cghmifYU]b]b[ `hY`cf][ ]bU`  
ghfi W`i fY`UbX`#`f`dfc[ fYgg]cb`cZ]XYUg`cZ`hY`cf][ ]bU`Z`UbX`]bZcfa U]cb`k ]h`ci hUW\_bck`YX[ Ya Ybh`H\]g`U`gc  
Udd`]Yg`]b`dfYgYbhU]cbg`k \YfY`gca YcbY`dUfUd`fUgYg`UbchYf`g`]XYUg`cf`k cfXg`k ]h`ci hWYX]hU`bX`hc  
d]YW]b[ `hc[ YhYf`ei chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk `k \c`YZ`k ]h`ci hUddfcdf]UHY`fYZYfYbW]b[ "

7 c`i g]cb. `k cf\_]b[ `k ]h`chYfg`Vi hdUgg]b[ `cZ`hY`k cf\_]Ug`U`dYfgcb`g`]bX]j ]Xi U`k cf\_]7 c`i g]cb`U`gc  
]bWi XYg`dfcj ]X]b[ `mci f`k cf\_]hc`UbchYf`gh`XYbhVYZc`fY`hY`Xi Y`XUHYZ`cf`Zc`f`hY`di fdcgY`cZ`hY`a

- i bXYfghUbx'mci f'f][ \hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[ ]Uf]ga ž'Wc'dmf][ \hž' BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5W'W'dhUV'Y'I gY'cZ I BGK '⇒H'F'Ygci f'W'g'Dc`]W'h
- VY'Uk UfY'cZ'Y'ghUbxUfXg'cZVY\Uj ]ci f'YI dY'W'X'cZYj Yfmcby']b'h'Y'I BGK 'W'a a i b]m
- 'cW'W'h'gYfj ]W'g'UbX' ]bZ'fa U]cb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZ'Y'gY'UfY'Ug'k ]''VY'ZJa ]]Uf'hc'mci ž'c'h'Yfg'k ]''VY'bYk "'; U]b]b[ 'U'gc`]X'i bXYfghUbx]b[ 'cZU''h'Y fY'UH'X'UgdY'W'g'cZ9@-G9'k ]''\Y'd'mci 'a U\_Y'h'Y'a cghcZmci f'gh X]Yg'Uhl BGK ""

[\h'hd.##ji V'Y'W'i \]X'Yg" \]VfUfm'i bgk "YXi "Ui #' \]gY#\]Vci h' \]gY](#)

5 WUXYa ]WbZcfa Uh]cb`

: cf`YggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[ `hc.

- fYei Ygh]Zc`fYI hYbg]cb/
- `UhY`gi Va ]gg]cbg`[ i ]XY`]bYg/
- fYj ]Yk `cZa Uf\_g/
-