



# ARTS3049

@jHyfUfm5b]a U`gž'A cbghYfg`UbX`A UW\]bYg

HYfa `C.bY`##`&\$%-



GWcc`cZ\Y`5ftg`UbX`A YX]U`##`I BGK `5ftg`UbX`GcWJU`GWYbWg

7ci fgY`Cj Yfj ]Yk

`GHUZZ7cbhUWh8YHJ`g`

`7cbj Ybcfg`

B Ua Y	9a U`	5j U]UV] ]m	@cWjhcb	

7 ci fgY'8YHJ]`g

7 fYX]hDc]bqg`\*`

Gi a a UfmicZ`h`Y'7 ci fgY

Gi V`Y`W`h`5`f`Y`U`.'`7`'`Y`f`e`Z`

H`\\`g`W`c`i` f`g`Y`W`b`U`'`g`c`V`Y`'`g`h` X`]`Y`X`'`j`b`'`h`Y`'`Z`c`'`c`k` ]`b`[`'`g`d`Y`W`U`'`]`g`U`h`c`b`.'`?` W`W`[`S`l`'`5`g`'`f`g`d`W`S`'`V`'`F`W`U`Z`'`a`'`a`Y`k`

K` ]`X`Y`g`d`f`Y`U`X`'`j`b`'`h`Y`'`\\`i` a` Ub`]`h`Y`g`U`h`h`Y`'`a` ca` Y`b`h`]`g`U`'`f`Y`h` ]`b`\_]`b`[`'`c`Z`k` \\`U`h`]`h`a` Y`U`b`g`'`h`c`'`V`Y`'`\\`i` a` Ub`"`. `b`'`h` ]`g`'`W`c`i` f`g`Y`  
m`c`i` 'k` ]`'`c`c`\_`U`h`\\`c`k`'` ]`h`Y`f`U`h` f`Y`'`U`b`X`'`Z`'`a` 'i` g`Y`'`h`Y`'`b`c`b`\\`i` a` Ub`'`g`i` V`Y`W`h`j` ]`m`i`c`Z`U`b`]`a` U`'`g`z`a` c`b`g`h`f`g`'`U`b`X`'`a` U`W`X` ]`b`Y`g`  
h`c`'`g`\\`U`d`Y`'`c`i` f`i` b`X`Y`f`g`h`U`b`X` ]`b`[`'`c`Z`h`Y`'`\\`i` a` Ub`"`. `6`m`Y`l` U`a` ]`b`]`b`[`'`h`Y`'`W`X`U`b`[` ]`b`[`'`d`f`Y`g`Y`b`h`U`h`c`b`'`c`Z`U`b`]`a` U`'`g`z`a` c`b`g`h`f`g`  
U`b`X`'`a` U`W`X` ]`b`Y`g`'`]`b`'`U`'`f`U`b`[` Y`'`c`Z`h`Y`l` h`g`'`Z`f`c`a` 'h`Y`'`g`Y`j` Y`b`h`Y`b`h`'`W`b`h` f`m`h`f`c`i` [` \\`h`c`'`h`Y`'`V`Y`[` ]`b`b`]`b`[`'`c`Z`h`Y`'`h`k` Y`b`h`m`  
Z`f`g`h`W`b`h` f`m`z`m`c`i` 'k` ]`'`]`b`j` Y`g`h`[` U`h`Y`'`\\`c`k` 'U`Y`g`h`Y`h`W`d`f`U`W`h`W`g`'`g`i` W`X`'`U`g`'` ]`h`Y`f`U`h` f`Y`'`U`b`X`'`Z`'`a` 'Y`l` h`Y`b`X`'`U`b`X`'`h`Y`g`h`c`i` f`  
g`m`a` d`U`h`Y`h`W`]`a` U`[` ]`b`U`h`c`b`'`V`m`U`'`c`k` ]`b`[`'`i` g`'`h`c`'`]`b`\\`U`V`]`h`g`i` V`Y`W`h`d`c`g`]`h`c`b`g`'`h`U`h`k` Y`'`U`f`Y`'`b`c`f`a` U`'`m`i` b`U`V`'`Y`'`h`c`  
]`b`\\`U`V`]`h`'`'`b`'`h`U`\_]`b`[`'`h` ]`g`'`W`c`i` f`g`Y`z`m`c`i` 'k` ]`'`X`Y`j` Y`'`c`d`'`U`'`g`Y`b`g`Y`'`c`Z`h`Y`'`Y`h` ]`W`U`'`z`g`c`W`U`'`z`d`c`'`]`h`W`U`'`U`b`X`'`d`\\` ]`c`g`c`d`\\` ]`W`U`  
j` U`i` Y`'`c`Z`'`h`Y`f`U`h` f`Y`'`U`b`X`'`Z`'`a` "


H\]g`]g`U`&) \$\$!k cfX`YggUmžXi Y`cb`Hi Yg`A Um+`fk YY\_`%&E" Bc`ei Ygh]cbg`k ]``VY`gYhZcf`h\]g`Ugg][ ba YbH'





F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

Dfla UfmiHl hg

H\YgY`hY hg`UFY`Uj Uj`UV`Y`Zca`hY`I`BGK`Vcc\_g\cd"McI`a`Umi`gY`chYf`YX]hcbgZ]Znci`U`fYUXm\Uj`Y`hYa`"

>c\b`6Yf[YfZ`3Tagf>aa][`Y`fB`cca`gVi`fnt

fBcfc b`7`qW`9X]k]z`9g`hWde`FdShWe`fBcfc b`7`f]hW`9X]hcbE

A`UfmG\Y`Ymz`8dS`]W`efW[`fBcfc b`7`f]hW`9X]hcbE"K`Yfi`VY`i`g]b[`hY`%`%`YX]hcb`cZ`hY`hY`h`

<"`;"`K`Y`gZ`FZW;e`S`V`aX6aUfad?`adMSg`fB`fcUXj`Yk`9X]hcbE

:`fUbn`?`UZ`Uz`?`WfS`\_`adbZae[e`S`V`A`fZWdE`fadWe`fDYb[`i`]b`9X]hcbE

D\`j`d`?"`8]W\_z`6a`3`Vda[Ve`6dMS`\_`aX7`WUfd[U`E`ZWb1



≠U\`F YnU`Bci fVU\_\g\ž“8Y\i a Ub]n]b[ `F cVchg””DaTaf 8gfgdWē f7 Ua Vf]X[ YžA UggUWwi gYhtg. `A ≠H`DfYggž  
&\$% Ł `(-!\*(`

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:i fhYf`fWca a YbXYX`fYUX]b[

8]Ua cbXž7 cfU" "H\Y'8]Z]W`hmicZF YU`]miUbX`hY'8]Z]W`hmicZD\]cgcd\mž"BSdf[S^3`ei Wde, 3 <agd S^aX  
>[fWdSfgdWS` V fZW: [efack aX;VWSe %"&fbi bY'&\$ \$' Ł' %d &-"5j U]UV'Y'j ]U'Dfc'YVhA i gY'Uh  
\hd.##a i gY`^i "YXi #ci fbU'g#dUfh]U'Subgk Yfg# \$\$\$%#&"X]Ua cbX`ha`

; i bb]b[ žHca "FZW8[\_ e aX8dfl >S` Y, 3^WadVde aXH[e[a` S` V? aVWd [fk f@cbXcb. '6f]hg\` : ]a` bgh]h hYž  
&\$\$L"G'+- %(' \$&' '#%&

Bcff]gžA Uf[ ch'4Wsefe aXfZW? aVWd ;\_ SY[ Sf[a` , 6Sd [ Ł @Wf] eUZW =S] Sł 7d efl` >Si dW UW  
f6U`ha cfY. H\Y`>c\b g<cd\_]bg'l b]j Yfg]mDfYggž%-, ) Ł", \$- "- ' ' , ( #%

Bci fVU\_\g\ž≡U\`F YnU"DaTaf 8gfgdVde f7 Ua Vf]X[ YžA UggUWxi gYhrg. A #DfYggž&\$\$ Ł"

D\]a i gžF cVYfiA " ;` fa fZWG` ]` ai` , FZW7ha'gf[a` aXE U[W UW8[Uf[a` Xba\_ 8dS` U[e 9 aVi [ fa : ž9ž  
l W'e f6Yf\_Y'Ym'l b]j Yfg]micZ7U]Zcfb]U'DfYggž%+\$Ł"G, \$- " , +\*#

F ]W hYfžJ ]f[ ]b]U">[fWdSfgdW3XWd6Sd [ , : g\_S` 4Wsefe [ l WefWd 8[Uf[a` Ł #\*' +ž#+%+ f6Ug]b[ ghc\_Y.  
DU[ fUj Y`A UWa ]`Ubž&\$\$%&"

K Y]ž? Uf]"FZ[ ] [ Y 3` [ S'e, l Zk 3` [ S^E fgV[Wde @ai 3'fBYk 'Mcf\_`7c'i a V]U'l b]j Yfg]mDfYggž&\$\$&Ł"  
5j U]UV'Y'cb`]bY'j ]U'hY'l BGK ``]VfUfm

K UfbYfžA Uf]bU"8S` fSef[U? WfS\_ adZaeWde A fZWdI adVe, l Ske aXFw`f Y fZWE WXfC l ZcfX. C l ZcfX  
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K c`Zž7 Ufm`l ZSf;e BaefZg\_ S` [e\_ 1 fA ]bbYUdc`]g. l b]j Yfg]micZA ]bbYgchU'DfYggž&\$\$L"%(- # ( `

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H\]g`]g`hY`Z]fgh]a Y`h.Uh`hY`Wde fgY`\Ug`fi`b`]b`hY`bYk`%\$!k YY\_`hYfa` "Gh XYb]g`k`]`VY`YbWde fu[ YX`hc`Z`  
ci`hcb`]bY`gi`fj`YmZcfa`g`Uh`hY`YbX`cZ`hY`Wde fgY`gc`h`Uh]a`dfcj`Ya`Yb]g`a`UmVY`a`UXY`"

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

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

Ẓmci `YbWci bhYf`U`dfcV`Ya `k \Yb`U`H`Ya dh]b[ `hc`gi Va ]hmc i f`Ugg][ ba YbhHfci [ \`Hi fb]h]bžd`YUgY  
H`Yd\cbY`9I H`fbU`Gi ddcfhcb`-` , ) `` `` ` %cf`Ya U]`H`Ya `cb`YI H`fbU`H`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`m`YUfL` Ẓmci  
UfY`i bUV`Y`hc`gi Va ]hmc i f`Ugg][ ba YbhXi Y`hc`U`ZU`i`hik ]H`Hi fb]h]b`mci `a UmiUdd`miZc`f`Ub`YI H`bg]cbžVi hmc i  
a i ghfYH]b`mci f`h]W`Yhbi a VYf`Zca `9I H`fbU`Gi ddcfhfU`cb[ `k ]H`Ubmch`Yf`fY`Yj UbhXcW a YbHgE`hc  
]bWi XY`Ug`Yj ]XYbW`hc`gi ddcfhmci f`YI H`bg]cb`Udd`]W]h]cb" Ẓmci `Ya U]`9I H`fbU`Gi ddcfhmci `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 gž 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[ Ygž UfhUbX`XYg][ b`dfc`YWgž`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`U`b[ ]b[ `U`ZYk`k cfXg`UbX`d`fUgYg`k`Y`a cghmifYU]b]b[ `hY`cf][ ]bU`  
ghfi W`fY`UbX`#`f`dfc[ fYgg]cb`cZ]XYUg`cZ`hY`cf][ ]bU`ž`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`Yž`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`XUHYž`cf`Zc`f`hY`di fdcgY`cZ`hY`a



5 WXYa ]WbZcfa Uhcb`

: cfYggYbhU`ghi XYbh]bZcfa Uhcb`fY`Uh]b[ `rc.