1. Active Clause Analysis

<table>
<tr><th>Clause</th><th>Cases</th></tr>
<tr><td>arg < 13</td><td>
<table>
<tr><th>arg</th><th>result</th></tr>
<tr><td>T</td><td>T</td></tr>
<tr><td>F</td><td>F</td></tr>
</table>
</td></tr>
<tr><td>enabled && ((tcas_equipped && intent_not_known) || !tcas_equipped

A : enabled
B : tcas_equipped
C : intent_not_known
D: tcas_equipped && intent_not_ know
E : !tcas_equipped</td><td>
<table>
<tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>Result</th></tr>
<tr><td>T</td><td>T</td><td>T</td><td>T</td><td>F</td><td>T</td></tr>
<tr><td>T</td><td>T</td><td>F</td><td>F</td><td>F</td><td>F</td></tr>
<tr><td>T</td><td>F</td><td>T</td><td>F</td><td>T</td><td>T</td></tr>
<tr><td>F</td><td>T</td><td>T</td><td>T</td><td>F</td><td>F</td></tr>
<tr><td>~~F~~</td><td>~~T~~</td><td>~~F~~</td><td>~~F~~</td><td>~~F~~</td><td>~~F~~</td></tr>
<tr><td>~~T~~</td><td>~~F~~</td><td>~~F~~</td><td>~~F~~</td><td>~~T~~</td><td>~~T~~</td></tr>
<tr><td>~~F~~</td><td>~~F~~</td><td>~~T~~</td><td>~~F~~</td><td>~~T~~</td><td>~~F~~</td></tr>
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need_upward_RA && need_downward_RA

need_upward_RA	need_downward_RA	Result
T	**T**	**T**
T	**F**	**F**
F	**T**	**F**
~~F~~	~~F~~	~~F~~

```
!(Own_Below_Threat())
||
((Own_Below_Threat())
&& (!(Down_Separation
>= ALIM())))
```

A : !(`Own_Below_Threat()`)

B: `Own_Below_Threat()`

C: `Down_Separation >= ALIM()`

D: !(`Down_Separation >= ALIM()`)

A || B && D

A	B	C	D	Result
F	T	T	F	F
F	T	F	F	F
T	F	T	T	T
T	F	F	T	T

`Own_Above_Threat() && (Cur_Vertical_Sep >= 300 ) && (Up_Separation>= ALIM())`

`Own_Above_Threat()`	`Cur_Vertical_Sep >= 300`	`Up_Separation>= ALIM()`	Result
T	**T**	**T**	**T**
T	**T**	**F**	**F**
T	**F**	**T**	**F**
F	**T**	**T**	**F**
~~F~~	~~T~~	~~F~~	~~F~~
~~T~~	~~F~~	~~F~~	~~F~~
~~F~~	~~F~~	~~T~~	~~F~~
~~F~~	~~F~~	~~F~~	~~F~~

Own_Below_Threat() && (Cur_Vertical_Sep >= 300) && (Down_Separation >= ALIM())

Own_Above_Threat()	Cur_Vertical_Sep >= 300	Down_Separation >= ALIM()	Result
T	**T**	**T**	**T**
T	**T**	**F**	**F**
T	**F**	**T**	**F**
F	**T**	**T**	**F**
~~F~~	~~T~~	~~F~~	~~F~~
~~T~~	~~F~~	~~F~~	~~F~~
~~F~~	~~F~~	~~T~~	~~F~~
~~F~~	~~F~~	~~F~~	~~F~~

!(Own_Above_Threat()) || ((Own_Above_Threat()) && (Up_Separation >= ALIM()))

A : !(**Own_Above_Threat()**)

B: **Own_Above_Threat()**

C: **Up_Separation >= ALIM()**

A || B && C

A	B	C	Result
F	T	T	T
F	T	F	F
T	F	T	T
T	F	F	F