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## Warnings, Cautions, Advisories and Annunciations Table for the United States Coast Guard (USCG) MH-65E Avionics Phase 3 Upgrade

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#### **Rockwell Collins**

Contract Number: HSCG23-17-C-AHH004

**CDRL B210-01** 

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Contractor Address: 400 Collins Road NE,
Cedar Rapids IA 52498

Expiration Date: March 14th, 2022

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|              | NAME             | TITLE                               | APPROVAL |
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Warnings, Cautions, Advisories and Annunciations Table for the US Coast Guard (USCG) MH-65E Avionics Phase 3 Upgrade

#### **REVISION HISTORY**

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| 946-1633-002                                                                                                                                      | Rev –                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |

### Warnings, Cautions, Advisories and Annunciations Table for the US Coast Guard (USCG) MH-65E Avionics Phase 3 Upgrade

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| 946-1633-002                                                                                                                                      | Rev –                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |

#### **Document Overview**

This document is comprised of Table 1: MH-65E Warnings, Table 2: MH-65E Cautions, Table 3: MH-65E Advisories, and Table 4: MH-65E Annunciations.

The following conventions are used in Table 1, Table 2, and Table 3 (MFD warnings, cautions, and advisories):

- The "Ack Type" column indicates how the message output parameter is set and reset. A "1" indicates that the output parameter is set and reset when the conditions are satisfied and dissatisfied. A "2" indicates that the output parameter is set when the associated conditions are satisfied, but not reset until the associated "\_Acknowledge" parameter is set to "acknowledged". A "3" indicates the output parameter is set and reset as a type 1 parameter and the associated advisory parameters are OR'd to generate the message output parameter.
- The "Ack Req'd" column indicates the acknowledged state of each WCA upon activation. A "Yes" indicates the WCA activates in an unacknowledged state. A "No" indicates the WCA activates in an acknowledged state.

The following conventions are used in Table 4 (CDU annunciations only):

• The "Ack Type" column indicates how the message output parameter is set and reset. A "1" indicates that the output parameter is set when the associated conditions are satisfied, but not reset until the associated "\_Acknowledge" parameter is set to "acknowledged". A "2" indicates that the output parameter is set when the conditions are satisfied and the output parameter is reset when the conditions are dissatisfied OR when the associated "\_Acknowledge" parameter is set to "acknowledged". A "3" indicates that the output parameter is set and reset when the conditions are satisfied and dissatisfied.

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| 946-1633-002                                                                |                                                                                        | Rev –              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |

#### Table 1: MH-65E Warnings

| 65E<br>Type | 65E Text                  | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                        | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                                     |
|-------------|---------------------------|----------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning     | ***MAINTENANCE<br>WARN*** | 1        | 22             | 2minute OEI time >10 minutes or 30 second OEI time > 30 sec or if any of the TOT resistor values are equal to their default blank values. | No           | 1           | NA                        | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 0.2 sec       | NA                            | SEL.DECU_Engine1_2min_OEI_Maint SEL.DECU_Engine2_2min_OEI_Maint SEL.DECU_Engine1_30sec_OEI_Maint SEL.DECU_Engine2_30sec_OEI_Maint SEL.CDU_DM_TOT_Config_Maint |
| Warning     | ENG1 OUT(red X)           | 2        | 15             | Flameout bit for engine 1.                                                                                                                | No           | 1           | EICAS<br>Page             | NA                    | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DECU_Engine1_Flameout                                                                                                                                     |
| Warning     | ENG2 OUT(red X)           | 3        | 15             | Flameout bit for engine 2.                                                                                                                | No           | 1           | EICAS<br>Page             | NA                    | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DECU_Engine2_Flameout                                                                                                                                     |
| Warning     | ENG 1 FUEL P              | 4        | 12             | When engine fuel pressure is less than 8.4 psi.                                                                                           | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | NA              | NA                    | 0.5 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Fuel_Pressure_Low_No_1=Active                                                                                                                         |
| Warning     | ENG 2 FUEL P              | 5        | 12             | When engine fuel pressure is less than 8.4 psi.                                                                                           | Yes          | 1           | EICAS<br>Right<br>Column  | NA                    | NA              | NA                    | 0.5 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Fuel_Pressure_Low_No_2=Active                                                                                                                         |
| Warning     | ENG 1 OIL P               | 6        | 11             | When oil pressure is below the 25 psi minimum.                                                                                            | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | TDL 1/2         | NA                    | 2.0 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Engine_1_Oil_Pressure_Low=Active                                                                                                                      |
| Warning     | ENG 2 OIL P               | 7        | 11             | When oil pressure is below the 25 psi minimum.                                                                                            | Yes          | 1           | EICAS<br>Right<br>Column  | NA                    | TDL 1/2         | NA                    | 2.0 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Engine_2_Oil_Pressure_Low=Active                                                                                                                      |
| Warning     | ENG 1 OIL TEMP            | 8        | 14             | #1 engine oil temp is high (> 115 °C).                                                                                                    | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | NA              | NA                    | 2.0 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Engine1_EOT_High=Active                                                                                                                               |
| Warning     | ENG 2 OIL TEMP            | 9        | 14             | #2 engine oil temp is high (> 115 °C).                                                                                                    | Yes          | 1           | EICAS<br>Right<br>Column  | NA                    | NA              | NA                    | 2.0 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Engine2_EOT_High=Active                                                                                                                               |
| Warning     | MGB OIL P                 | 10       | 9              | When a minimum of 9 (±1) psi is detected at the oil filter outlet.                                                                        | Yes          | 1           | EICAS<br>Center<br>Column | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Main_Gearbox_Pressure_Low=Ac tive                                                                                                                     |
| Warning     | MGB OIL TEMP              | 11       | 12             | MGB oil exceeds the maximum allowable temperature of 120 degrees C.                                                                       | Yes          | 1           | EICAS<br>Center<br>Column | NA                    | NA              | NA                    | 0.2 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Main_Gearbox_Temp_High = Active                                                                                                                       |
| Warning     | ENG 1 CHIP                | 12       | 10             | When Ferrous particles detected in engine oil system.                                                                                     | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Engine_1_Chip = Active                                                                                                                                |
| Warning     | ENG 2 CHIP                | 13       | 10             | When Ferrous particles detected in engine oil system.                                                                                     | Yes          | 1           | EICAS<br>Right<br>Column  | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Engine_2_Chip = Active                                                                                                                                |
| Warning     | MGB CHIP                  | 14       | 8              | When metal contamination of the oil is detected in the Main Gear Box.                                                                     | Yes          | 1           | EICAS<br>Center<br>Column | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Main_Gearbox_Chip=Active                                                                                                                              |

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| 65E<br>Type | 65E Text        | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                           | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                               |
|-------------|-----------------|----------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|---------------------------------------------------------|
| Warning     | TGB CHIP        | 15       | 8              | When metal contamination of the oil is detected in the Tail Gear Box.                                                                                                                                                                                                        | Yes          | 1           | EICAS<br>Center<br>Column | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Tail_Gearbox_Chip=Active                        |
| Warning     | DIF N1          | 16       | 6              | When the FADEC detects between the 2 engines a N1 difference greater than 6% or a torque difference greater than 37.57 mdaN. (= 49% torque on ARINC torque label 053). Detection is done using the cross-talk between both DECUs.                                            | Yes          | 1           | EICAS<br>Center<br>Column | NA                    | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.DIFF_N1=Active or<br>SEL.DECU.DIFF_N1=Active    |
| Warning     | FEED TANK 1     | 17       | 11             | When the fuel level in the No. 1 feed tank drops below approximately 37 lbs of usable fuel.                                                                                                                                                                                  | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Feed_Tank1_Low=Active                           |
| Warning     | FEED TANK 2     | 18       | 11             | When the fuel level in the No. 2 feed tank drops below approximately 37 lbs of usable fuel.                                                                                                                                                                                  | Yes          | 1           | EICAS<br>Right<br>Column  | NA                    | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Feed_Tank2_Low=Active                           |
| Warning     | PRI SERVO P     | 19       | 11             | When hydraulic pressure to the flight controls in either primary or secondary system drops below 145 psi indicating a system pressure loss                                                                                                                                   | Yes          | 1           | EICAS<br>Right<br>Column  | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Primary_Servo_Pressure_Low=Ac tive              |
| Warning     | ROTOR RPM LO    | 20       | 12             | Rotor Speed <= 98.57% AND Weight On Wheels is off                                                                                                                                                                                                                            | No           | 1           | EICAS<br>Center<br>Column | NA                    | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O<br>SYS MGR            | SEL.Rotor_Speed <= 98.57% and Weight_On_Wheels=inactive |
| Warning     | MODE 5 LETHAL   | 21       | 13             | The transponder has failed to reply to a Mode 5 Lethal Interrogation.                                                                                                                                                                                                        | Yes          | 1           | EICAS<br>Center<br>Column | NA                    | NA              | NA                    | 0.0 sec     | 2.0 sec       | COMM                          | SEL.Mode_5_Lethal = Active                              |
| Warning     | IFF/M4          | 22       | 6              | Momentary – Transponder has not responded to a valid Mode 4 interrogation. Steady – KIV 77 or 119 not keyed.                                                                                                                                                                 | Yes          | 1           | EICAS<br>Center<br>Column | NA                    | NA              | NA                    | 0.2 sec     | 2.0 sec       | COMM                          | SEL.IFF_Mode_4_Fail_Cau = Active                        |
| Warning     | IFF/M5          | 23       | 6              | Momentary – Transponder has not responded to a valid Mode 5 interrogation. Steady – KIV 77 or 119 not keyed.                                                                                                                                                                 | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 2.0 sec       | СОММ                          | SEL.IFF_Mode_5_Fail_Cau = Active                        |
| Warning     | SEC HYD HI P    | 24       | 12             | When the secondary system hydraulic pump pressure exceeds 3,480 psi.                                                                                                                                                                                                         | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Secondary_Hydraulic_Pressure_H igh=Active       |
| Warning     | SEC HYD ISOLATE | 25       | 15             | When the hydraulic fluid level in the secondary system reservoir is below 1 gallon, indicating that the landing gear/wheel brake/TALON hydraulic supply system, the normal hoist power, and the left body of the tail rotor flight control servo are automatically shut off. | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Secondary_Hydraulic_Isolate=Active              |
| Warning     | SEC HYD LO P    | 26       | 12             | When the secondary system hydraulic pump pressure drops below 2,450 psi.                                                                                                                                                                                                     | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Secondary_Hydraulic_Pressure_L<br>ow=Active     |

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| 65E<br>Type | 65E Text      | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                             | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                       |
|-------------|---------------|----------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|-------------------------------------------------|
| Warning     | SEC SERVO P   | 27       | 11             | When hydraulic pressure to the flight controls in either primary or secondary system drops below 145 psi indicating a system pressure loss                                                                                                                     | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Secondary_Servo_Pressure_Low=<br>Active |
| Warning     | SERVO JAM     | 28       | 9              | When there is a loss of hydraulic pressure to either hydraulic system or a jammed rotary distributor valve on any of the main or tail flight control servos.                                                                                                   | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | TDL 1/2         | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Servo_Jam_Present=Active                |
| Warning     | HEATER O/HEAT | 29       | 13             | When a high temperature is sensed at one or more of six thermoswitches. (Two in lower duct system at approximately 275 degrees F, two near bleed air mixing valve at approximately 275 degrees F and two above FADEC computers at approximately 158 degrees F) | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Heater_Overheat=Active                  |
| Warning     | ELEC PMP      | 30       | 8              | When the electric pump switch on the main instrument panel is positioned to BKP and system pressure rises above 1,377 psi.                                                                                                                                     | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Elec_Pump=Active                        |
| Warning     | BATT TEMP     | 31       | 9              | When the battery has exceeded internal temperature limit of 135 degrees F (57 degrees C).                                                                                                                                                                      | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Batt_Temp_High=Active                   |

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Table 2: MH-65E Cautions

| 65E<br>Type | 65E Text    | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                     | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                  |
|-------------|-------------|----------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Caution     | L GEAR      | 1        | 6              | Use all 3 landing gear lock inputs to control this annunciation. Both L GEAR (landing gear) lights will illuminate in conjunction with an aural intercom signal when the aircraft descends below 200 feet radar altitude, if the wheels are up         | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O<br>FLT MGR            | SEL.R_Gear_Downlock=Inactive, or<br>SEL.L_Gear_Downlock=Inactive, or<br>SEL.Nose_Gear_Downlock=Inactive, and<br>RALT_Below_200 feet=Active |
| Caution     | FADEC1 FAIL | 2        | 11             | When the engine #1 FADEC detects a loss of engine control by both FADEC control channels (Total failure). In this case, the FADEC freezes the fuel flow to the engine. The FADEC activates discrete output "PAN3" and sets ARINC label 354 bit 23 to 1 | Yes          | 1           | EICAS<br>Left<br>Column   | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.FADEC_1_Failure=Active or SEL.DECU.FADEC_1_Failure=Active                                                                          |
| Caution     | FADEC2 FAIL | 3        | 11             | When the engine #2 FADEC detects a loss of engine control by both FADEC control channels (Total failure). In this case, the FADEC freezes the fuel flow to the engine. The FADEC activates discrete output "PAN3" and sets ARINC label 354 bit 23 to 1 | Yes          | 1           | EICAS<br>Right<br>Column  | NA                    | TDL 1/2         | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.FADEC_2_Failure=Active or SEL.DECU.FADEC_2_Failure=Active                                                                          |

|                                                                                                                                                  | GOVERNMENT PURPOSE RIGHTS |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  |  |
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| 65E<br>Type | 65E Text  | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|-----------|----------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Caution     | GOV LVL 2 | 4        | 9              | When engine #1 or engine #2 FADEC detects a failure that can cause a possible degradation of the engine control (Degraded failure). Engine response time may be affected. The FADEC activates discrete output "PAN2" and sets ARINC label 354 bit 19 to 1. As a secondary source, the GOV LVL 2 Caution WCA will be triggered by either DECU1 or DECU2 setting Label 354 bit 19 active (with no delay by CDU DM in setting the WCA). As a primary source, the GOV LVL 2 Caution will be set via the GOV discrete via 1553 (DECU provided PAN2 discrete output to the DCU). A steady signal GOV discrete will be indicative of GOV LVL 2. When the GOV discrete transitions between active (ON) for 200 ms and inactive (OFF) for 200ms, that will be indicative of GOV LVL 1. To minimize false trigger conditions from the DCU input, the GOV LVL 2 alert will be set when the steady signal is active for >= 2 seconds and there is weight on wheels. If there is not weight on wheels then the GOV LVL 2 alert will be set when the steady signal is active for >= 1 second. The primary source will be used if the validity bits for the DCUs GOV discretes are set to valid. If the Primary source validity bits are not valid, the DECUs will be used for the GOV LVL2 sources if the DECUs 429 output is valid. | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | TDL 1/2         | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | IF Weight_On_Wheels = Active THEN IF (SEL.DCS.GOV.Valid = True) THEN IF [(SEL.DCS.GOV_Caution = Active for >= 2.0 sec) THEN Set GOV LVL 2 = True ELSE Set GOV LVL 2 = False ELSE IF (SEL.DCS.GOV.Valid = False THEN IF (DECU1.GOV_Level_2_Caution=Active) OR (DECU2.GOV_Level_2_Caution=Active)] THEN Set GOV LVL 2 = True ELSE Set GOV LVL 2 = False  IF Weight_On_Wheels = Inactive THEN IF (SEL.DCS.GOV.Valid = True) THEN IF [(SEL.DCS.GOV_Caution = Active for >= 1.0 sec) THEN Set GOV LVL 2 = True ELSE Set GOV LVL 2 = False ELSE IF (SEL.DCS.GOV.Valid = False THEN IF (DECU1.GOV_Level_2_Caution=Active) OR (DECU2.GOV_Level_2_Caution=Active)] THEN Set GOV LVL 2 = True ELSE Set GOV LVL 2 = True |

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|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| Contract No. HSCG23-17-C-AHH004 Contractor Name: Rockwell Collins Contractor Address: 400 Collins Road NE, Cec Expiration Date: March 14th, 2022 | ar Rapids IA 52498 | The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |  |  |  |  |  |  |  |  |  |
| 946-1633-002                                                                                                                                     | Rev –              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  |

| 65E     | 65E Text    | PRIORITY | Text   | Trigger Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Ack   | Ack  | Primary                   | Secondary           | CDU      | CHECK        | Set     | Reset   | Primary               | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------|-------------|----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|---------------------------|---------------------|----------|--------------|---------|---------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type    |             |          | Length |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Req'd | Type | Location                  | Location            | Location | <b>EICAS</b> | Time    | Time    | Source to             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|         |             |          |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |      |                           |                     |          | WCA          |         |         | EICAS                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Caution | GOV LVL 1   | 5        | 9      | When engine #1 or engine #2 FADEC detects a failure that has no effect on engine control (Redundancy failure). FADEC sets ARINC label 354 bit 20 to 1. When the FADEC is in stop, start or idle mode, it also activates an intermittent (flashing) discrete output "PAN2". As a secondary source, the GOV LVL 1 Caution WCA will be triggered by either DECU1 or DECU2 setting Label 354 bit 20 active (with no delay by CDU DM in setting the WCA). As the primary source, the GOV LVL 1 Caution will be set via the GOV discrete via 1553 (DECU provided PAN2 discrete output to the DCU). A steady signal GOV discrete will be indicative of GOV LVL 2 (see GOV LVL 2 description above). When the GOV discrete transitions between active (ON) for 200 ms and inactive (OFF) for 200ms, that will be indicative of GOV LVL 1. To minimize false trigger conditions from the DCU input, the GOV LVL 1 Caution will be set only when the GOV discrete transitions between active (ON >= 200 ms) and inactive (OFF >= 200 ms) within a 2 second period with weight on wheels active. If weight on wheels is inactive, then the GOV LVL 1 Caution will be set only when the GOV discrete transitions between active (ON >= 200 ms) and inactive (OFF >= 200 ms) within a 1 second period. The primary source will be used if the validity bits for the DCUs GOV discretes are set to valid. If the Primary source validity bits are not valid, the DECUs will be used for the GOV LVL1 sources if the DECUs 429 output is valid. | Yes   | 1    | EICAS<br>Center<br>Column | Caution<br>Overflow | TDL 1/2  | NA           | 0.2 sec | 0.2 sec | CDU I/O               | IF Weight_On_Wheels = ActiveTHENIF (SEL.DCS.GOV.Vaild = True)THENIF [(SEL.DCS.GOV_Caution=Active for < 2.0 sec) AND (SEL.DCS.GOV_Caution=Active for >= 200 ms) AND (SEL.DCS.GOV_Caution=Inactive for >= 200 ms)]THENSet GOV LVL 1 = TrueELSESet GOV LVL 1 = FalseELSE IF (SEL.DCS.GOV.Vaild = False)THENIF [(DECU1.GOV_Level_1_Caution=Active) OR (DECU2.GOV_Level_1_Caution=Active)]THEN Set GOV LVL 1 = TrueELSE Set GOV LVL 1 = FalseIF Weight_On_Wheels = InactiveTHENIF (SEL.DCS.GOV_Vaild = True)THENIF [(SEL.DCS.GOV_Caution=Active for < 1.0 sec) AND (SEL.DCS.GOV_Caution=Active for >= 200 ms) AND (SEL.DCS.GOV_Caution=Inactive for >= 200 ms)]THENSet GOV LVL 1 = TrueELSESet GOV LVL 1 = FalseELSE IF (SEL.DCS.GOV.Vaild = False)THENIF [(DECU1.GOV_Level_1_Caution=Active) OR (DECU2.GOV_Level_1_Caution=Active)]THEN Set GOV LVL 1 = TrueELSE Set GOV LVL 1 = False |
| Caution | ENG EXCD    | 6        | 8      | Parameters for engine or MGB exceed the operational limits. An engine or MGB exceedance condition is raised by ECMS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes   | 1    | EICAS<br>Center<br>Column | Caution<br>Overflow | NA       | NA           | 0.2 sec | 2.0 sec | CDU DM-<br>Mini EICAS | Engine_Exceedance_Annun=Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Caution | MGB ZN EXCD | 7        | 11     | Main Gear Box Zone time limit is exceeded.<br>Reset by main gear box serial number<br>changed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Yes   | 1    | EICAS<br>Center<br>Column | Caution<br>Overflow | NA       | NA           | 0.2 sec | 2.0 sec | CDU DM-<br>Mini EICAS | MGB_Zone_Exceedance_Annun=Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Caution | TOT ZN EXCD | 8        | 11     | Turbine outlet temperature(TOT) zone time limit exceeded. Reset by Related engine serial number changed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes   | 1    | EICAS<br>Center<br>Column | Caution<br>Overflow | NA       | NA           | 0.2 sec | 2.0 sec | CDU DM-<br>Mini EICAS | TOT_Zone_Exceedance_Annun=Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|  | ontract No. HSCG23-17-C-AHH004 ontractor Name: Rockwell Collins ontractor Address: 400 Collins Road NE, Cedar Rapids IA 52498 xpiration Date: March 14th, 2022 | VERNMENT PURPOSE RIGHTS  The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |
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| 65E<br>Type | 65E Text       | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                    | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                             |
|-------------|----------------|----------|----------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Caution     | L BOOST PUMP P | 9        | 14             | Left boost pump pressure caution. Triggered when left fuel pressure is less than 3.6 psi or above 22 psi.                             | Yes          | 1           | EICAS<br>Left<br>Column   | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Engine_1_Fuel_Pressure_Status = Valid and (SEL.DCS.Engine_1_Fuel_Pressure < 3.6 psi or SEL.DCS.Engine_1_Fuel_Pressure>22 psi) |
| Caution     | R BOOST PUMP P | 10       | 14             | Right boost pump pressure caution. Triggered when right fuel pressure is less than 3.6 psi or above 22 psi.                           | Yes          | 1           | EICAS<br>Right<br>Column  | NA                    | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Engine_2_Fuel_Pressure_Status = Valid and (SEL.DCS.Engine_2_Fuel_Pressure < 3.6 psi or SEL.DCS.Engine_2_Fuel_Pressure>22 psi) |
| Caution     | MGB PMP MAIN   | 11       | 12             | When there is a main oil pump failure indicating pump pressure below 12 (± 1) psi.(MGB PUMP MAIN)                                     | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | TDL 1/2         | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Main_Gearbox_Pump_Pressure_L<br>ow=Active                                                                                     |
| Caution     | MGB PMP AUX    | 12       | 11             | When there is a gearbox auxiliary oil pump failure indicating a pump pressure below 12 (± 1) psi and loss of redundancy.(MGB PMP AUX) | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | TDL 1/2         | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Main_Gearbox_Aux_Pump_Press ure_Low=Active                                                                                    |
| Caution     | INVALID CONFIG | 13       | 14             | Invalid Aircraft Configuration is detected                                                                                            | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | SYS MGR                       | SEL.Invalid_Aircraft_Config_Cau = Active                                                                                              |
| Caution     | FUEL FILT 1    | 14       | 11             | When the pressure differential across the filter increases to approximately 10 psi.                                                   | Yes          | 1           | EICAS<br>Left<br>Column   | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Fuel_Filter_Bypass_No_1=Active                                                                                                |
| Caution     | FUEL FILT 2    | 15       | 11             | When the pressure differential across the filter increases to approximately 10 psi.                                                   | Yes          | 1           | EICAS<br>Right<br>Column  | NA                    | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Fuel_Filter_Bypass_No_2=Active                                                                                                |
| Caution     | FREON HI PRESS | 16       | 14             | When the condenser inlet pressure exceeds approx 392 psi for more than 20 seconds.                                                    | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Freon_Pressure_High=Active                                                                                                    |
| Caution     | L WSCRN A/I    | 17       | 11             | Failure of the regulator box of the corresponding anti-ice system.                                                                    | No           | 1           | EICAS<br>Left<br>Column   | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Left_Windscreen_Anti_Ice=Active                                                                                               |
| Caution     | R WSCRN A/I    | 18       | 11             | Failure of the regulator box of the corresponding anti-ice system.                                                                    | No           | 1           | EICAS<br>Right<br>Column  | NA                    | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Right_Windscreen_Anti_Ice=Activ e                                                                                             |

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| 946-1633-002                                                |                                                                  | Rev –              |                                                                                                                                                                                                                                                                                                                                                                               |

| 65E<br>Type | 65E Text        | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                                                                                                                          |
|-------------|-----------------|----------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Caution     | AFCS            | 19       | 4              | When one or all AFCS axes disengage.                                                                                                                                              | Yes          | 3           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Pitch_Engage_A=Inactive, or SEL.DCS.Pitch_Engage_B=Inactive OR SEL.DCS.Roll_Engage_A=Inactive, or SEL.DCS.Roll_Engag_B=Inactive OR SEL.DCS.Yaw_Engage_A=Inactive, or SEL.DCS.Yaw_Engage_B=Inactive OR SEL.DCS.Collective_Engage_A=Inactive |
| Caution     | PITCH           | 20       | 5              | Pitch axis disengaging causes steady illumination. Extinguishes when pitch axis is engaged                                                                                        | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Pitch_Engage_A=Inactive or SEL.DCS.Pitch_Engage_B=Inactive                                                                                                                                                                                 |
| Caution     | ROLL            | 21       | 4              | Roll axis disengaging causes steady illumination. Extinguishes when roll axis is engaged                                                                                          | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Roll_Engage_A=Inactive, or SEL.DCS.Roll_Engage_B=Inactive                                                                                                                                                                                  |
| Caution     | YAW             | 22       | 3              | Yaw axis disengaging causes steady illumination. Extinguishes when yaw axis is engaged                                                                                            | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Yaw_Engage_A=Inactive, or SEL.DCS.Yaw_Engage_B=Inactive                                                                                                                                                                                    |
| Caution     | COLL            | 23       | 4              | Collective axis disengaging causes steady illumination. Extinguishes when collective axis is engaged                                                                              | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Collective_Engage_A=Inactive                                                                                                                                                                                                               |
| Caution     | FD UCPL         | 24       | 7              | Indicates that the flight director is not coupled to the AFCS                                                                                                                     | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SW Trigger Condition  Discrete_Manager.Fd_Ucpl_Wca=Active (1553 logic 1 = true)                                                                                                                                                                    |
| Caution     | FD LOW ALT      | 25       | 10             | Indicates that the flight director is commanding altitude loss due to torque limiting of the aircraft.                                                                            | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 0.0 sec       | FD                            | SEL.FD_Low_Alt_Alert= Active                                                                                                                                                                                                                       |
| Caution     | EGI HDG MISCOMP | 26       | 15             | A difference between EGI(1) and EGI(2) heading of 4 degrees or more for 2 seconds.                                                                                                | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | MFD DM                        | SEL.True_Heading_Disagree_Adv= Active                                                                                                                                                                                                              |
| Caution     | ALT DISAGREE    | 27       | 12             | A difference of more than seventy feet exists between on-side and cross-side altitude data for more than 2 seconds.                                                               | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | MFD DM                        | SEL.Altitude_Disagree_Adv = Active                                                                                                                                                                                                                 |
| Caution     | ATT DISAGREE    | 28       | 12             | A difference between EGI(1) and EGI(2) pitch or roll attitudes of more than 2 degrees for 2 seconds.                                                                              | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | MFD DM                        | SEL.Attitude_Disagree_Adv = Active                                                                                                                                                                                                                 |
| Caution     | A/S DISAGREE    | 29       | 12             | A difference of more than seven knots exists between on-side and cross-side airspeed data for more than 2 seconds.                                                                | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | MFD DM                        | SEL.Airspeed_Disagree_Adv = Active                                                                                                                                                                                                                 |
| Caution     | FD DISAGREE     | 30       | 11             | A difference of 17.0 percent pitch, 6.0 percent roll, or 26.0 percent collective axis exists between the primary and alternate Flight Director sources for more then 4.0 seconds. | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | MFD DM                        | SEL.FD_Disagree_Adv = Active                                                                                                                                                                                                                       |

Contract No. HSCG23-17-C-AHH004 Contractor Name: Rockwell Collins Road NE, Cedar Rapids IA 52498 Expiration Date: March 14th, 2022 Rev –

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| 65E<br>Type | 65E Text      | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                              | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                                                                                                                                                                      |
|-------------|---------------|----------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Caution     | VSI DISAGREE  | 31       | 12             | A difference of more than 250 fpm exists between on-side and cross-side vertical speed data for more than 2 seconds.                                                            | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | MFD DM                        | SEL.VSI_Disagree_Alert = Active                                                                                                                                                                                                                                                                |
| Caution     | TRM OFF       | 32       | 7              | Indicates that the cyclic pitch and roll trim system is off/inoperative                                                                                                         | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Trim_On_A=Inactive, or SEL.DCS.Trim_On_B=Inactive                                                                                                                                                                                                                                      |
| Caution     | P TRIM        | 33       | 6              | Indicates that the pitch series actuator is displaced from its center position by more than 36 percent for longer than 4 seconds                                                | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Pitch_Out_of_Trim=Active                                                                                                                                                                                                                                                               |
| Caution     | R TRIM        | 34       | 6              | Indicates the roll series actuators are displaced from their center positions by more than 57 percent for longer than 4 seconds                                                 | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Roll_Out_of_Trim=Active                                                                                                                                                                                                                                                                |
| Caution     | Y TRIM        | 35       | 6              | Indicates that the yaw series actuator is displaced from its center position by more than 56 percent for longer than 4 seconds                                                  | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Yaw_Out_of_Trim=Active                                                                                                                                                                                                                                                                 |
| Caution     | PRI NR FAIL   | 36       | 11             | Indicates the primary NR source is providing an out of range (invalid) NR value.                                                                                                | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Rotor_Speed_2=Invalid                                                                                                                                                                                                                                                                  |
| Caution     | SEC NR FAIL   | 37       | 11             | Indicates the secondary NR source is providing an out of range (invalid) NR value.                                                                                              | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Rotor_Speed_1=Invalid                                                                                                                                                                                                                                                                  |
| Caution     | NR DISAGREE   | 38       | 11             | Indicates a mismatch of Rotor Speed if either NR source varies from the other by +/- 10 RPM, AND at least one NR source is greater than 200 RPM, AND both NR Sources are valid. | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 2.0 sec     | 2.0 sec       | NA                            | IF [(SEL.DCS.Rotor_Speed_1 = Valid AND SEL.DCS.Rotor_Speed_2 = Valid) AND (SEL.DCS.Rotor_Speed_1 OR SEL.DCS.Rotor_Speed_2 > 200 RPM) AND (Difference between SEL.DCS.Rotor_Speed_1 and SEL.DCS.Rotor_Speed_2 >= +/- 10 RPM)] THEN NR DISAGREE (WCA) = Active ELSE NR DISAGREE (WCA) = Inactive |
| Caution     | NR HI         | 39       | 5              | When the Nr High switch is in the selected position.                                                                                                                            | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.RPM_High=Active                                                                                                                                                                                                                                                                        |
| Caution     | ROTOR BRAKE   | 40       | 11             | When the rotor brake microswitch is not fully seated.                                                                                                                           | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | TDL 1/2         | Yes                   | 0.6 sec     | 0.6 sec       | CDU I/O                       | SEL.DCS.Rotor_Brake_On=Active                                                                                                                                                                                                                                                                  |
| Caution     | PARKING BRAKE | 41       | 13             | When the parking brake control handle is pulled and rotated 90 degrees thus applying a DC power. (only indicates the parking brake handle position)                             | No           | 1           | Caution<br>Overflow       | NA                    | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Parking_Brake_On=Active                                                                                                                                                                                                                                                                |

|  | ontract No. HSCG23-17-C-AHH004 ontractor Name: Rockwell Collins ontractor Address: 400 Collins Road NE, Cedar Rapids IA 52498 xpiration Date: March 14th, 2022 | DVERNMENT PURPOSE RIGHTS  The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |
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| 65E<br>Type | 65E Text      | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                                                | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                          |
|-------------|---------------|----------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Caution     | L PITOT       | 42       | 7              | When power is applied to the aircraft and the related PITOT HEAT switch is OFF or the PITOT HEAT switch is ON and the related pitot heat circuit has failed.                                                                                                                                                                      | No           | 1           | EICAS<br>Left<br>Column   | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Pitot_Heat-LH=Active                                                                                                                       |
| Caution     | R PITOT       | 43       | 7              | When power is applied to the aircraft and the related PITOT HEAT switch is OFF or the PITOT HEAT switch is ON and the related pitot heat circuit has failed.                                                                                                                                                                      | No           | 1           | EICAS<br>Right<br>Column  | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Pitot_Heat-RH=Active                                                                                                                       |
| Caution     | L EXT         | 44       | 5              | When pressure in a fire extinguisher drops below 230 psi.                                                                                                                                                                                                                                                                         | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | TDL 1/2         | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.L_EXT=Active                                                                                                                               |
| Caution     | R EXT         | 45       | 5              | When pressure in a fire extinguisher drops below 230 psi.                                                                                                                                                                                                                                                                         | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | TDL 1/2         | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.R_EXT=Active                                                                                                                               |
| Caution     | PEDAL LIMIT   | 46       | 11             | The "PEDAL LIMIT" Caution annunciation will be displayed when full right pedal deflection is achieved.                                                                                                                                                                                                                            | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS_Right_Pedal_Switch=Active                                                                                                                  |
| Caution     | SERVO LIMIT   | 47       | 11             | The SERVO LIMIT WCA will become active when the following condition is true: Microswitches in the aircraft are actuated by an excessive fore or aft cyclic movement, or an excessive load limit cause the Servo Limit DCU discrete to become active.  If the condition above is false, then the SERVO LIMIT WCA will be inactive. | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.0 sec     | 0.1 sec       | CDU I/O                       | IF (SEL.DCS_Servo_Limit is Valid and not Stale AND SEL.DCS_Servo_Limit = Active) THEN SERVO LIMIT (WCA) = Active ELSE SERVO LIMIT (WCA) = Inactive |
| Caution     | NO GPS APPR   | 48       | 11             | FMS detects invalid Approach Status crossing 2NM prior to FAF                                                                                                                                                                                                                                                                     | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 1.0 sec     | 2.0 sec       | FLT MGR                       | SEL.No_GPS_Appr = Active                                                                                                                           |
| Caution     | CHK ANP       | 49       | 7              | Operational Mode is CIVIL and one of the following is true: •Primary navigator solution is Invalid OR •Primary navigator solution is a Pure INU Solution OR •Primary navigator solution is a Blended Solution with no GPS included OR •ANP validity is INVALID (includes first 3 bullets) OR •ANP exceeds RNP                     | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.CHK_ANP = Active                                                                                                                               |
| Caution     | TIV WARN      | 50       | 8              | This caution is displayed when the aircraft is determined to be in the range of a threat                                                                                                                                                                                                                                          | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | TSA MGR                       | SEL.TIV_Warn = Active                                                                                                                              |
| Caution     | 26 VAC FAIL 1 | 51       | 13             | 26VAC 1 Source condition set to Fail                                                                                                                                                                                                                                                                                              | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.26VAC_Fail1=Active                                                                                                                         |

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|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|
| Contract No.<br>Contractor Name:<br>Contractor Address:<br>Expiration Date: | HSCG23-17-C-AHH004<br>Rockwell Collins<br>400 Collins Road NE, Ced<br>March 14th, 2022 | ar Rapids IA 52498 | The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |  |  |  |  |  |  |  |  |
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| 65E<br>Type | 65E Text       | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                                                                                                                           | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|----------------|----------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Caution     | 26 VAC FAIL 2  | 52       | 13             | 26VAC 2 Source condition set to Fail                                                                                                                                                                                                                                                                                                                                                                         | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.26VAC_Fail2=Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Caution     | AV RACK O/HEAT | 53       | 14             | Illuminates the AV RACK O/HEAT light at 109.4 °F.                                                                                                                                                                                                                                                                                                                                                            | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.AV_Rack_Overheat=Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Caution     | EICAS DEGRADE  | 54       | 13             | Miscompares of engine parameters exist that raise this caution.                                                                                                                                                                                                                                                                                                                                              | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 2.0 sec       | CDU I/O                       | Engine_TOT_DECU_Miscompare_Alert = True Or Enginee_N1_DECU_Miscompare_Alert = True Or Engine_N2_DECU_Miscompare_Alert = True                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Caution     | ENG PARM DEGR  | 55       | 13             | An amber ENG PARM DEGR annunciation will appear anytime one of the Engine 1 N1 parameters is invalid, one of the Engine 2 N1 parameters is invalid, one of the Engine 1 TOT parameters is invalid, one of the Engine 2 TOT parameters is invalid, one of the Engine 1 Q parameters is invalid or one of the Engine 2 Q parameters is invalid. If ENG PARM FAIL is true, ENG PARM DEGR will not be displayed. | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 2.0 sec       | CDU I/O                       | Assume Invalid = 0 and Valid = 1(ENG PARM FAIL is not true) and ((SEL.DCS.Engine_1_N1_Status=Invalid xor SEL.DECU.Engine_1_N1_Status=Invalid) or(SEL.DCS.Engine_2_N1_Status=Invalid xor SEL.DECU.Engine_2_N1_Status=Invalid) or(CDU1.Engine_TOT_Display_Status=Invalid d xor SEL.DECU.Engine_1_T4_Status=Invalid) or(CDU2.Engine_TOT_Display_Status=Invalid d xor SEL.DECU.Engine_1_Torque_Status=Invalid d xor SEL.DECU.Engine_1_Torque_Status=Invalid d xor SEL.DECU.Engine_1_Torque_Status=Invalid d xor SEL.DECU.Engine_1_Secondary_Torque_Status=Invalid d xor SEL.DECU.Engine_2_Torque_Status=Invalid d xor SEL.DECU.Engine_2_Torque_Status=Invalid d xor SEL.DECU.Engine_2_Torque_Status=Invalid d xor SEL.DECU.Engine_2_Secondary_Torque_Status=Invalid) Note: Engine 1 Secondary Torque Status is supplied by Label 057 of DECU2 and Engine 2 Secondary Torque is supplied by Label 057 of DECU1. |

|  | ontract No. HSCG23-17-C-AHH004 ontractor Name: Rockwell Collins ontractor Address: 400 Collins Road NE, Cedar Rapids IA 52498 xpiration Date: March 14th, 2022 | VERNMENT PURPOSE RIGHTS  The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |
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| 65E<br>Type | 65E Text       | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                                                                  | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|----------------|----------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Caution     | ENG PARM FAIL  | 56       | 13             | An amber ENG PARM FAIL annunciation will appear anytime both of the Engine 1 N1 parameters is invalid, both of the Engine 2 N1 parameters is invalid, both of the Engine 1 TOT parameters is invalid, both of the Engine 2 TOT parameters is invalid, both of the Engine 1 Q parameters is invalid or both of the Engine 2 Q parameters is invalid. | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 2.0 sec       | CDU I/O                       | Assume Invalid = 0 and Valid = 1 (SEL.DCS.Engine_1_N1_Status=Invalid and SEL.DECU.Engine_2_N1_Status=Invalid) or (SEL.DCS.Engine_2_N1_Status=Invalid) or (CDU1.Engine_TOT_Display_Status=Invalid and SEL.DECU.Engine_1_T4_Status=Invalid) or (CDU2.Engine_TOT_Display_Status=Invalid and SEL.DECU.Engine_1_T4_Status=Invalid) or (CDU2.Engine_TOT_Display_Status=Invalid and SEL.DECU.Engine_1_Torque_Status=Invalid d and SEL.DECU.Engine_1_Torque_Status=Invalid d and SEL.DECU.Engine_1_Secondary_Torque_Status=Invalid d and SEL.DECU.Engine_2_Torque_Status=Invalid d and SEL.DECU.Engine_2_Torque_Status=Invalid d and SEL.DECU.Engine_2_Secondary_Torque_Status=Invalid) Note: Engine 1 Secondary Torque Status is supplied by Label 057 of DECU2 and Engine 2 Secondary Torque is supplied by Label 057 of DECU1. |
| Caution     | RESERVE FUEL   | 57       | 12             | Warns that total fuel remaining equals the fuel reserve quantity. Reserve fuel is being burned. Cleared by clear key or condition corrected.                                                                                                                                                                                                        | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.2 sec     | 2.0 sec       | CDU I/O                       | Total fuel remaining (SEL.DCS.Fuel_Quantity_1 + SEL.DCS.Fuel_Quantity_2) =Total Reserve fuel remaining (Eng1_Fuel_Quantity_Reserve +Eng2_Fuel_Quantity_Reserve)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Caution     | TALON LOCKED   | 58       | 12             | indicates that the TALON probe is engaged                                                                                                                                                                                                                                                                                                           | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.5 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.Talon_Locked=Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Caution     | BINGO FUEL     | 59       | 10             | When the current fuel remaining is less than the bingo fuel which includes planned fuel additions.  OR There is insufficient fuel to complete the existing flight plan with a 10% reserve or 20 minute reserve for MAX RANGE.                                                                                                                       | Yes          | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | "SEL.PPOS_Bingo_Fuel_Alert = Active Or SEL.BINGO_Fuel_Alert = Active"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Caution     | RADAR TRANSMIT | 60       | 14             | The RADAR TRANSMIT caution will become active when the radar is transmitting and WOW = True.                                                                                                                                                                                                                                                        | No           | 1           | EICAS<br>Center<br>Column | Caution<br>Overflow   | NA              | Yes                   | 0.2 sec     | 2.0 sec       | MSN SNSR                      | SEL.Rdr_Transmit_Cau=Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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| 946-1633-002                  |                                                                    | Rev –                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |

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| 65E     | 65E Text    | PRIORITY | Text   | Trigger Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ack   | Ack  | Primary  | Secondary | CDU      | CHECK        | Set     | Reset   | Primary            | Condition                                            |
|---------|-------------|----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|----------|-----------|----------|--------------|---------|---------|--------------------|------------------------------------------------------|
| Туре    |             |          | Length |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Req'd | Туре | Location | Location  | Location | EICAS<br>WCA | Time    | Time    | Source to<br>EICAS |                                                      |
| Caution | CHECK EICAS | 61       | 11     | Set: When set/active, Indicates that a Non-Ackable Caution has been set on the EICAS Page (by EICAS SW) and no other MFD in the cockpit is currently displaying an EICAS Page. Note: This Non-Ackable Caution will only be displayed on the Primary Flight Display (PFD). Since this Non-Ackable Caution must only be displayed on PFD (Caution Block in lower right hand corner of the display), the logic for implementing will be performed entirely within MFD DM SW.Reset: Selection of EICAS page from any MFD or ACK of Caution on the PFD page will automatically remove the message from the PFD Caution Block.Special cases: If PTRIM or RTRIM or YTRIM cautions become true, an 8 second wait will be employed before the CHECK EICAS caution is displayed for either of these 3 trim cautions. | Yes   | NA   | PFD      | NA        | NA       | NA           | 0.2 sec | 1.0 sec | NA                 | See MFD DM SRS section titled "CHECK EICAS Caution". |

Table 3: MH-65E Advisories

| 65E<br>Type | 65E Text    | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                     | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                                                       |
|-------------|-------------|----------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advisory    | BLEED VLV 1 | 1        | 11             | DECU 1 ARINC 429 Data Bus Label 355 BIT 24: 0 =BV closed, 1 = BV open. Displayed when Engine 1 bleed valve input is "open".                                                            | No           | 1           | EICAS<br>Left<br>Column   | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 1.0 sec       | CDU I/O                       | SEL.DECU.Bleed_Valve_1=Open                                                                                                                                                     |
| Advisory    | BLEED VLV 2 | 2        | 11             | DECU 2 ARINC 429 Data Bus Label 355 BIT 24: 0 =BV closed, 1 = BV open. Displayed when the Engine 2 bleed valve input is "open".                                                        | No           | 1           | EICAS<br>Right<br>Column  | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 1.0 sec       | CDU I/O                       | SEL.DECU.Bleed_Valve_2=Open                                                                                                                                                     |
| Advisory    | CHK TORQUE  | 3        | 10             | In the normal AEO mode, and if DIFF N1 output is not activated, if the difference between TRQ1 and TRQ2 exceeds 7.5%.                                                                  | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.2 sec     | 2.0 sec       | CDU I/O                       | Engine_Driving = AEO  AND  SEL.DCS.DIFF_N1 = InActive and  SEL.DECU.DIFF_N1= InActive  AND  Difference between  (SEL.DECU.Engine_1_Q / 2) and  (SEL.DECU.Engine_2_Q / 2) > 7.5% |
| Advisory    | T/R         | 4        | 3              | Connects the AC powered transformer/rectifier to the DC System  →ON indicates emergency power is being supplied to the DC system  →OFF indicates normal with both generators operating | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | TDL 2/2         | Yes                   | 0.0 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.EMER_TR_ON=Active                                                                                                                                                       |
| Advisory    | L WSCRN ON  | 5        | 10             | When the W/S ANTI-ICE switch is set to ON. (the Left anti-ice circuit will illuminate the L WSCRN ON advisory lights)                                                                  | No           | 1           | EICAS<br>Left<br>Column   | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.L_Windscreen_On=Active                                                                                                                                                  |
| Advisory    | R WSCRN ON  | 6        | 10             | When the W/S ANTI-ICE switch is set to ON. (the Right anti-ice circuit will illuminate the R WSCRN ON advisory lights)                                                                 | No           | 1           | EICAS<br>Right<br>Column  | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.R_Windscreen_On=Active                                                                                                                                                  |
| Advisory    | L LIGHT ON  | 7        | 10             | When the landing light control switch on the Co-Pilot Collective Grip is pressed to turn the Left landing light on.                                                                    | No           | 1           | EICAS<br>Left<br>Column   | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.L_Light_On=Active                                                                                                                                                       |
| Advisory    | R LIGHT ON  | 8        | 10             | When the landing light control switch on the Pilot Collective Grip is pressed to turn the Right landing light on.                                                                      | No           | 1           | EICAS<br>Right<br>Column  | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 0.2 sec       | CDU I/O                       | SEL.DCS.R_Light_On=Active                                                                                                                                                       |
| Advisory    | TCAS MUTE   | 9        | 9              | Illuminated when TCAS is muted.                                                                                                                                                        | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 1.0 sec       | Mission<br>Sensor             | SEL.TCAS_Mute=Active                                                                                                                                                            |
| Advisory    | EGI REV     | 10       | 7              | Indicates that the AFCS is in single EGI reversionary operation (was GYRO REV in relation to the Gyro Compass)                                                                         | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.EGI_Reversion=Active                                                                                                                                                    |

| GOVERNMENT PURPOSE RIGHTS |                                                                                        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |
|---------------------------|----------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|
| Contractor Name:          | HSCG23-17-C-AHH004<br>Rockwell Collins<br>400 Collins Road NE, Ced<br>March 14th, 2022 | ar Rapids IA 52498 | The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |  |  |  |  |  |  |  |  |
| 946-1633-002              |                                                                                        | Rev –              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |

| 65E<br>Type | 65E Text           | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Ack<br>Req'd | Ack<br>Type | Primary<br>Location  | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Advisory    | HOV VEL<br>MISCOMP | 11       | 15             | A difference of more than 10 degrees or 10 knots exists between on-side and cross-side hover velocity data for more than 2 seconds.  A difference of more than 12 fps exists between on-side and cross-side EGI velocity for more than 2 seconds.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | MFD DM                        | SEL.Hover_Velocity_Disagree_Alert = Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Advisory    | DATA MISCOMPARE    | 12       | 15             | Any of the following conditions will activate the DATA MISCOMPARE advisory message: Efp_Data_Miscompare = TrueTacan_Data_Miscompare = True Vor_Data_Miscompare = True Rad_Alt_Data_Miscompare = True (DCS1_Fuel_Quantity-1_CM_Valid = False) (DCS1_Fuel_Quantity-1_CM_Valid = False) (DCS1_Fuel_Quantity-2_CM_Valid = False AND DCS2_Fuel_Quantity-2_CM_Valid = False AND DCS2_Fuel_Quantity-2_CM_Valid = False AND DCS2_Rotor_Speed_1_CM_Valid = False AND DCS2_Rotor_Speed_2_CM_Valid = False AND DCS2_Rotor_Speed_2_CM_Valid = False) (DCS1_Engine_Oil_Pressure-1_CM_Valid = False) (DCS1_Engine_Oil_Pressure-1_CM_Valid = False) (DCS1_Engine_Oil_Pressure-2_CM_Valid = False) (DCS1_Engine_Oil_Temp-1_CM_Valid = False) (DCS1_Engine_Oil_Temp-1_CM_Valid = False AND DCS2_Engine_Oil_Temp-1_CM_Valid = False AND DCS2_Engine_Oil_Temp-1_C | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.5 sec     | 1.0 sec       | EICAS                         | SEL.Efp_Data_Miscompare_Alert = Active ORSEL.Tacan_Data_Miscompare_Alert = Active ORSEL.Vor_Data_Miscompare_Alert = Active ORSEL.Rad_Alt_Data_Miscompare_Alert = Active OR(DCS1_Fuel_Quantity- 1_CM_Valid = False AND DCS2_Fuel_Quantity-1_CM_Valid = False) OR(DCS1_Fuel_Quantity-2_CM_Valid = False AND DCS2_Fuel_Quantity- 2_CM_Valid = False) OR(DCS1_Rotor_Speed_1_CM_Valid = False AND DCS2_Rotor_Speed_1_CM_Valid = False) OR(DCS1_Rotor_Speed_2_CM_Valid = False AND DCS2_Rotor_Speed_2_CM_Valid = False) OR(DCS1_Engine_Oil_Pressure- 1_CM_Valid = False AND DCS2_Engine_Oil_Pressure-1_CM_Valid = False) OR(DCS1_Engine_Oil_Pressure- 2_CM_Valid = False AND DCS2_Engine_Oil_Pressure-2_CM_Valid = False) OR(DCS1_Engine_Oil_Temp- 1_CM_Valid = False AND DCS2_Engine_Oil_Temp-1_CM_Valid = False) OR(DCS1_Engine_Oil_Temp- 2_CM_Valid = False AND DCS2_Engine_Oil_Temp-2_CM_Valid = False) OR |

| GOVERNMENT PURPOSE RIGHTS                                                                                                                        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|
| Contract No. HSCG23-17-C-AHH004 Contractor Name: Rockwell Collins Contractor Address: 400 Collins Road NE, Ced Expiration Date: March 14th, 2022 | ar Rapids IA 52498 | The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |  |  |  |  |  |  |  |  |
| 946-1633-002                                                                                                                                     | Rev –              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |

| 65E<br>Type | 65E Text        | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Ack<br>Req'd | Ack<br>Type | Primary<br>Location  | Secondary<br>Location | CDU<br>Location | CHECK | Set<br>Time | Reset<br>Time | Primary<br>Source to | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|-----------------|----------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|----------------------|-----------------------|-----------------|-------|-------------|---------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advisory    | DATA MISCOMPARE | 12       | 15             | Any of the following conditions will activate the DATA MISCOMPARE advisory message: (DCS1_Gas_Generator_Speed_NG_1_CM_V alid = False AND DCS2_Gas_Generator_Speed_NG_1_CM_V alid = False) (DCS1_Gas_Generator_Speed_NG_2_CM_V alid = False AND DCS2_Gas_Generator_Speed_NG_2_CM_V alid = False AND DCS2_Gas_Generator_Speed_NG_2_CM_V alid = False) (DCS1_Power_Turbine_Speed_NP_1_CM_V alid = False AND DCS2_Power_Turbine_Speed_NP_1_CM_V alid = False AND DCS2_Power_Turbine_Speed_NP_2_CM_V alid = False AND DCS2_Power_Turbine_Speed_NP_2_CM_V alid = False AND DCS2_Power_Turbine_Speed_NP_2_CM_V alid = False AND DCS2_Turbine_Gas_Temp_TGT_1_CM_Valid = False AND DCS2_Turbine_Gas_Temp_TGT_2_CM_Valid = False AND DCS2_Turbine_Gas_Temp_TGT_2_CM_Valid = False AND DCS2_Turbine_Gas_Temp_TGT_2_CM_Valid = False AND DCS2_Main_XMSN_Oil_Pressure_CM_Valid = False AND DCS2_Main_XMSN_Oil_Temp_CM_Valid = False AND DCS2_Main_XMSN_Oil_Temp_CM_Valid = False AND DCS2_Main_XMSN_Oil_Temp_CM_Valid = False AND DCS2_Main_XMSN_Oil_Temp_CM_Valid = False AND DECU1_Engine_Torque_No_1_CM_Valid = False AND DECU2_Engine_Torque_No_1_CM_Valid = False AND DECU2_Engine_Torque_No_2_CM_Valid = False AND DECU2_En | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes   | 0.5 sec     | 1.0 sec       | EICAS                | (DCS1_Gas_Generator_Speed_NG_1_CM_Valid = False AND DCS2_Gas_Generator_Speed_NG_1_CM_Valid = False) OR (DCS1_Gas_Generator_Speed_NG_2_CM_Valid = False AND DCS2_Gas_Generator_Speed_NG_2_CM_Valid = False) OR (DCS1_Power_Turbine_Speed_NP_1_CM_Valid = False AND DCS2_Power_Turbine_Speed_NP_1_CM_Valid = False) OR (DCS1_Power_Turbine_Speed_NP_2_CM_Valid = False) OR (DCS1_Power_Turbine_Speed_NP_2_CM_Valid = False) OR (DCS1_Power_Turbine_Speed_NP_2_CM_Valid = False) OR (DCS1_Turbine_Gas_Temp_TGT_1_CM_Valid = False) OR (DCS1_Turbine_Gas_Temp_TGT_1_CM_Valid = False) OR (DCS1_Turbine_Gas_Temp_TGT_2_CM_Valid = False) AND DCS2_Turbine_Gas_Temp_TGT_2_CM_Valid = False AND DCS2_Turbine_Gas_Temp_TGT_2_CM_Valid = False) (DCS1_Main_XMSN_Oil_Pressure_CM_Valid = False) (DCS1_Main_XMSN_Oil_Pressure_CM_Valid = False) (DCS1_Main_XMSN_Oil_Temp_CM_Valid = False) (DCS1_Main_XMSN_Oil_Temp_CM_Valid = False) (SEL.DECU1.Torque_Engine_On-side_Label-053_Validity = False AND SEL.DECU2.Torque_Engine_Other_Engine_Label-057_Validity = False AND SEL.DECU2.Torque_Engine_Other_Engine_Label-053_Validity = False) |

| GOVERNMENT PURPOSE RIGHTS |                          |                    |                                                                                                          |  |  |  |  |  |  |  |  |
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| Contract No.              | HSCG23-17-C-AHH004       |                    | data within the government without restriction and release or disclose technical data outside the        |  |  |  |  |  |  |  |  |
|                           | Rockwell Collins         |                    | Government and authorize persons to whom release or disclosure has been made to use, modify,             |  |  |  |  |  |  |  |  |
|                           | 400 Collins Road NE, Ced | ar Rapids IA 52498 | reproduce, release, perform, display, or disclose that data for United States government purposes. No    |  |  |  |  |  |  |  |  |
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| 946-1633-002              |                          | Rev –              |                                                                                                          |  |  |  |  |  |  |  |  |

| 65E<br>Type | 65E Text    | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                              | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS                                                                     | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|-------------|----------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advisory    | √LRU STATUS | 13       | 12             | ADC1 FAILADC2 FAILCDU 1 FAILCDU 2 FAILDCU1 FAILDCU2 FAIL DF FAILEGI1 FAILEGI2 FAILPSM1 FAILPSM2 FAILHF FAILHF SEC FAILIFF FAILIFF SEC FAILCM1 FAILCM1 SEC FAILMFD 1 FAILMFD 2 FAILMFD 3 FAILMFD 4 FAILRALT FAIL | Yes          | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | "FLT MGRFLT MGRSYS MGRSYS MGRSYS MGRSYS MGRFLT MGRFLT MGRFLT MGRSYS MGRSYS MGRSYS MGRCOMM COMMCOM | SEL.ADC1_Fail_Adv = Active  ORSEL.ADC2_Fail_Adv = Active  ORSEL.CDU_1_Fail_Adv = Active  ORSEL.CDU_2_Fail_Adv = Active  ORSEL.DCS1_Fail_Cau = Active  ORSEL.DCS2_Fail_Cau = Active  ORSEL.EGI_1_Fail_Adv=Active  ORSEL.EGI_1_Fail_Cau = Active  ORSEL.EGI_2_Fail_Cau = Active  ORSEL.GPPU1_Fail_Adv = Active  ORSEL.GPPU2_Fail_Adv = Active  ORSEL.ARC_220_Fail_Adv = Active  ORSEL.ARC_220_SEC_Fail_Adv = Active  ORSEL.IFF_Fail_Adv = Active  ORSEL.IFF_Fail_Adv = Active  ORSEL.ARC_210_1_Fail_Adv = Active  ORSEL.ARC_210_1_Fail_Adv = Active  ORSEL.ARC_210_1_Fail_Adv = Active  ORSEL.MFD_2_Fail_Adv = Active  ORSEL.MFD_2_Fail_Adv = Active  ORSEL.MFD_3_Fail_Adv = Active  ORSEL.MFD_4_Fail_Adv = Active  ORSEL.RALT_Fail_Adv = Active |
| Advisory    | √LRU STATUS | 13       | 12             | TACAN FAIL VOR FAIL TCAS FAIL RDR FAIL HUD FAIL ICS FAIL CM2 FAIL CM3 FAIL VFDR FAIL DTU FAIL EOIR FAIL HIDS FAIL VPM FAIL                                                                                      | Yes          | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | "FLT MGR FLT MGR MSN SNR MSN SNR COMM COMM COMM SYS MGR SYS MGR MSN SNR MSN SNR SYS MGR           | SEL.TACAN_Fail_Adv = Active OR SEL.VOR_Fail_Adv = Active OR SEL.TCAS_Fail_Adv = Active OR SEL.RDR_Fail_Adv = Active SEL.HUD_Fail_Adv = Active OR SEL.ICS_Fail_Cau = Active OR SEL.CM2_Fail_Cau = Active OR SEL.CM3_Fail_Adv=Active OR SEL.VFDR_Fail_Cau = Active OR SEL.DTU_Fail_Cau = Active OR SEL.DTU_Fail_Adv = Active OR SEL.HIDS_Fail_Adv = Active OR SEL.HIDS_Fail_Adv = Active OR SEL.VPM_Fail_Adv = Active OR                                                                                                                                                                                                                                                                                                                         |
| Advisory    | IFF JAMMING | 14       | 11             | Indicates that the IFF is being jammed (Noise Status from IFF is set)                                                                                                                                           | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | COMM                                                                                              | SEL.IFF_Jamming = Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Advisory    | IFF STBY    | 15       | 8              | Aircraft has lifted off with the IFF in standby                                                                                                                                                                 | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | СОММ                                                                                              | SEL.IFF_Standby_Adv = Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Contract No.<br>Contractor Name:<br>Contractor Address:<br>Expiration Date: | HSCG23-17-C-AHH004<br>Rockwell Collins<br>400 Collins Road NE, Ceda<br>March 14th, 2022 |       | VERNMENT PURPOSE RIGHTS  The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |
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| 946-1633-002                                                                |                                                                                         | Rev – |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| 65E<br>Type | 65E Text           | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                     | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                             |
|-------------|--------------------|----------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|---------------------------------------|
| Advisory    | ADS-B DISABLED     | 16       | 14             | IFF 1553 TXSA 1 Word 8 bit 7 "Extended Squitter Disable Status" = 1 This includes the following conditions: - Crew initiated ADS-B disable Mode S has been disabled while ADS-B is enabled A Non-WGS-84 Datum has been entered while ADS-B is enabled. | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Adsb_Disable_Adv = Active         |
| Advisory    | IFF MODE SWITCH    | 17       | 15             | Displayed when mode 4 automatically switches.                                                                                                                                                                                                          | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.IFF_Mode_4_Switch_Alert = Active  |
| Advisory    | CHK IFF MODE 4     | 18       | 14             | Advisory to notify operator to switch to Code B in Manual Mode.                                                                                                                                                                                        | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Chk_Iff_Mode_4_Adv = Active       |
| Advisory    | NO APPR RAIM       | 19       | 12             | FMS has not performed successful automatic predictive RAIM check prior to 2 NM before FAF.AND Aircraft is within 30 NM of Destination Airport                                                                                                          | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | Sel.No_Appr_RAIM = Active             |
| Advisory    | NAV FAIL           | 20       | 8              | All Navigators are unusable. No valid navigation mode. Cleared by upgrading to valid navigation mode.                                                                                                                                                  | Yes          | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Nav_Fail_Alert = Active           |
| Advisory    | MSN CARD ?         | 21       | 10             | The correct configuration file is not listed on the CF card loaded in the DTU.                                                                                                                                                                         | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 15.0<br>sec | 1.0 sec       | SYS MGR                       | SEL.Missn_Card_Not_Found_Adv = Active |
| Advisory    | NO MAINT CARD      | 22       | 13             | No maintenance card is available for writing                                                                                                                                                                                                           | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 15.0<br>sec | 1.0 sec       | SYS MGR                       | SEL.No_Maint_Card_Ann = Active        |
| Advisory    | √ NAV DB DATE      | 23       | 13             | NAV Database date exceeds the 28 day limit.                                                                                                                                                                                                            | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Chk_NAV_DB_Date_Adv = Active      |
| Advisory    | GPPU<br>MISCOMPARE | 24       | 15             | OFP version mismatch                                                                                                                                                                                                                                   | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | SYS MGR                       | SEL.GPPU_Miscompare_Adv = Active      |
| Advisory    | MFD<br>MISCOMPARE  | 25       | 14             | OFP version mismatch                                                                                                                                                                                                                                   | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | SYS MGR                       | SEL.MFD_Miscompare_Adv = Active       |
| Advisory    | DCU<br>MISCOMPARE  | 26       | 14             | OFP version mismatch                                                                                                                                                                                                                                   | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | SYS MGR                       | SEL.DCS_Miscompare_Adv = Active       |
| Advisory    | CDU<br>MISCOMPARE  | 27       | 14             | OFP version mismatch                                                                                                                                                                                                                                   | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | SYS MGR                       | SEL.CDU_Miscompare_Adv = Active       |
| Advisory    | NAV DB<br>MISMATCH | 28       | 15             | This advisory occurs when a database mismatch condition exists between Nav Databases in CDU 1 & 2.                                                                                                                                                     | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.DB_Mismatch = Active              |
| Advisory    | NO NAV DB          | 29       | 9              | Navigation Database is not loaded or not accessible.                                                                                                                                                                                                   | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.No_Nav_DB = Active                |
| Advisory    | NO NAV DB 1        | 30       | 11             | There is no Nav DB in CDU 1.                                                                                                                                                                                                                           | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.No_NAV_DB_1 = Active              |
| Advisory    | NO NAV DB 2        | 31       | 11             | There is no Nav DB in CDU 2.                                                                                                                                                                                                                           | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.No_NAV_DB_2 = Active              |

| GOVERNMENT PURPOSE RIGHTS                                                                                                                        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|
| Contract No. HSCG23-17-C-AHH004 Contractor Name: Rockwell Collins Contractor Address: 400 Collins Road NE, Ced Expiration Date: March 14th, 2022 | ar Rapids IA 52498 | The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |  |  |  |  |  |  |  |  |  |  |
| 946-1633-002                                                                                                                                     | Rev –              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  |  |

| 65E<br>Type | 65E Text           | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                | Ack<br>Req'd | Ack<br>Type | Primary<br>Location  | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                             |
|-------------|--------------------|----------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|----------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|---------------------------------------|
| Advisory    | CHK APPR DATUM     | 32       | 14             | With a database, non-precision flight plan approach, Datum 47 (WGS-84) not selected when operator Flight Mode transitions to TERMINAL OR a Datum other than Datum 47 (WGS-84) is selected while in TERMINAL mode OR Datum 47 (WGS-84) not selected when operator Flight Mode is in APPROACH mode. | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.CHK_Appr_Datum = Active           |
| Advisory    | VERIFY DATUM       | 33       | 12             | A datum change occurred due to transitioning from Military mode to Civil mode.                                                                                                                                                                                                                    | Yes          | 2           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Verify_Datum = Active             |
| Advisory    | LSR ILLUM ARMED    | 34       | 15             | Indicates that the ESS Laser Illuminator is Armed                                                                                                                                                                                                                                                 | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | MSN SNSR                      | SEL.Laser_Armed_Adv = Active          |
| Advisory    | LSR ILLUM ON       | 35       | 12             | Indicates that the ESS Laser Illuminator is ON                                                                                                                                                                                                                                                    | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | MSN SNSR                      | SEL.Laser_On_Adv = Active             |
| Advisory    | EOIR OPERATE       | 36       | 12             | The EOIR indicates that it is set to operate mode.                                                                                                                                                                                                                                                | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | MSN SNSR                      | SEL.EOIR_Operate_Adv = Active         |
| Advisory    | EOIR CAGED         | 37       | 10             | EOIR Indicates that it is in the caged mode.                                                                                                                                                                                                                                                      | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 3.0 sec       | MSN SNSR                      | SEL.EOIR_Caged_Adv = Active           |
| Advisory    | EOIR STANDBY       | 38       | 12             | The EOIR indicates that it is set to standby mode.                                                                                                                                                                                                                                                | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | MSN SNSR                      | SEL.EOIR_Standby_Adv = Active         |
| Advisory    | NO RMM             | 39       | 6              | No RMM is installed.                                                                                                                                                                                                                                                                              | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.No_RMM_Adv = Active               |
| Advisory    | HIDS DOOR OPEN     | 40       | 14             | HIDS Door is open.                                                                                                                                                                                                                                                                                | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.HIDS_Door_Open_Adv = Active       |
| Advisory    | RMM SANITIZING     | 41       | 14             | RMM Sanitize/Erase is in process. Cleared at completion of Sanitize process.                                                                                                                                                                                                                      | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.RMM_Zeroizing = Active            |
| Advisory    | RMM 15 MIN LEFT    | 42       | 15             | Approximately 15 minutes of record time is left until RMM is full.                                                                                                                                                                                                                                | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 15 sec        | SYS MGR                       | SEL.HIDS_15_Min_Avail_Adv = Active    |
| Advisory    | AUDIO RECORD?      | 43       | 13             | On for 3 seconds at initial selection to record audio, then off if audio is not selected to record. Off if audio is selected for record.                                                                                                                                                          | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.RMM_Classify_Q_Adv = Active       |
| Advisory    | AUDIO<br>RECORDING | 44       | 15             | On and latched until power cycle if audio is selected for recording.                                                                                                                                                                                                                              | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.RMM_Classified_Adv = Active       |
| Advisory    | HIDS TIME ERROR    | 45       | 15             | Time sync fault detected from the HIDS.                                                                                                                                                                                                                                                           | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.HIDS_Time_Sync_Error_Adv = Active |
| Advisory    | RMM OVERWRITE      | 46       | 13             | RMM is full and is overwriting video, audio, or data files.                                                                                                                                                                                                                                       | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.HIDS_Cyclic_Record_Adv = Active   |
| Advisory    | FLOAT 1 ARMED      | 47       | 13             | Indicates the emergency flotation system is armed.                                                                                                                                                                                                                                                | No           | 1           | Advisory<br>Overflow | NA                    | NA              | NA                    | 0.5 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Float_1_Armed=Active          |
| Advisory    | FLOAT 2 ARMED      | 48       | 13             | Indicates the emergency flotation system is armed.                                                                                                                                                                                                                                                | No           | 1           | Advisory<br>Overflow | NA                    | NA              | NA                    | 0.5 sec     | 2.0 sec       | CDU I/O                       | SEL.DCS.Float_2_Armed=Active          |

|  | ontract No. HSCG23-17-C-AHH004 ontractor Name: Rockwell Collins ontractor Address: 400 Collins Road NE, Cedar Rapids IA 52498 xpiration Date: March 14th, 2022 | VERNMENT PURPOSE RIGHTS  The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |
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| 65E<br>Type | 65E Text           | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                      | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                          |
|-------------|--------------------|----------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|------------------------------------|
| Advisory    | WOW                | 49       | 3              | Indicates weight on wheels                                                                                                                                              | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 0.2 sec       | SYS MGR                       | Weight_On_Wheels = Active          |
| Advisory    | EGI INTEGRITY      | 50       | 13             | Both EGI1 and EGI2 Blended INAV positions are valid and differ by more than the Alert Limit for the Scaling Mode                                                        | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.EGI_Integrity_Adv = Active     |
| Advisory    | GPS INTEGRITY      | 51       | 13             | Both GPS1 and GPS2 Smoothed solution positions (G-6 Foreground Smooth Solutions) are valid and their positions differ by more than the Alert Limit for the Scaling Mode | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_Integrity_Adv = Active     |
| Advisory    | CHECK NAV<br>ERROR | 52       | 15             | 95% error of the navigation solution exceeds the navigation warning limit                                                                                               | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Check_Nav_Error = Active       |
| Advisory    | EGI1 NAV FAIL      | 53       | 13             | EGI1 solution transition to an unusable state.                                                                                                                          | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.EGI_1_Nav_Failure_Adv = Active |
| Advisory    | EGI2 NAV FAIL      | 54       | 13             | EGI2 solution transition to an unusable state.                                                                                                                          | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.EGI_2_Nav_Failure_Adv = Active |
| Advisory    | GPS1 NAV FAIL      | 55       | 13             | No data sent to GPS 1 receiver during navigation.                                                                                                                       | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_1_Nav_Failure_Adv = Active |
| Advisory    | GPS2 NAV FAIL      | 56       | 13             | No data sent to GPS 2 receiver during navigation.                                                                                                                       | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_2_Nav_Failure_Adv = Active |
| Advisory    | INU1 IMA FAIL      | 57       | 13             | 30 minutes has elapsed since the INU1 started the In-Motion Alignment, and the INU1 has not indicated that Nav mode is available.                                       | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | Sel.INU1_IMA_Fail = Active         |
| Advisory    | INU2 IMA FAIL      | 58       | 13             | 30 minutes has elapsed since the INU2 started the In-Motion Alignment, and the INU2 has not indicated that Nav mode is available.                                       | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | Sel.INU2_IMA_Fail = Active         |
| Advisory    | NAV<br>PROGRESSION | 59       | 15             | 10 Seconds prior to switching to the next navigator.                                                                                                                    | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.NAV_Progression = Active       |
| Advisory    | PNAV CHANGE        | 60       | 11             | The navigation solution for the currently selected navigator becomes UNAVAILABLE. (Navigator Selection Mode can be MANUAL or AUTOMATIC)                                 | Yes          | 2           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | Sel.PNAV_Mode_Change = Active      |
| Advisory    | NAV UP AVAIL       | 61       | 12             | A higher priority navigator becomes usable and the operator is in manual navigator selection mode.                                                                      | Yes          | 2           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | Sel.NAV_Up_Mode_Avail = Active     |
| Advisory    | INU1 NAV READY     | 62       | 14             | INU1 indicates that enable nav can be selected to put the INU into nav mode.                                                                                            | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.INU1_Nav_Ready_Adv = Active    |
| Advisory    | INU2 NAV READY     | 63       | 14             | INU2 indicates that enable nav can be selected to put the INU into nav mode.                                                                                            | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.INU2_Nav_Ready_Adv = Active    |
| Advisory    | EMCON ACTIVE       | 64       | 13             | EMCON has been selected for ALL emitters.                                                                                                                               | Yes          | 1           | Advisory<br>Overflow      | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | SYS MGR                       | SEL.EMCOM_Active_Adv = Active      |
| Advisory    | SIMULATION ACTV    | 65       | 15             | Model Aircraft function is turned on.                                                                                                                                   | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Simulation_Active_Adv = Active |

| Contract No.<br>Contractor Name:<br>Contractor Address:<br>Expiration Date: | HSCG23-17-C-AHH004<br>Rockwell Collins<br>400 Collins Road NE, Ceda<br>March 14th, 2022 |       | VERNMENT PURPOSE RIGHTS  The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |
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| 946-1633-002                                                                |                                                                                         | Rev – |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| 65E<br>Type | 65E Text           | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                        | Ack<br>Req'd | Ack<br>Type | Primary<br>Location  | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                   |
|-------------|--------------------|----------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|----------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|---------------------------------------------|
| Advisory    | CM1 RCVD MESS      | 66       | 13             | Transmission of data from another terminal is received.                                                                                                                   | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 3.0 sec       | COMM                          | SEL.V1_Message_Received_Adv = Active        |
| Advisory    | HF RCVD<br>MESSAGE | 67       | 15             | A message has been received                                                                                                                                               | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 3.0 sec       | COMM                          | SEL.Rcvd_Message_Pending_Adv = Active       |
| Advisory    | √CM3 DISTRESS      | 68       | 14             | A distress message has been received by the RT-5000 SAR                                                                                                                   | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Check_F5_Distress_Adv = Active          |
| Advisory    | CHK RNP VALUE      | 69       | 13             | Operator entered Manual RNP Value is greater than base RNP value.                                                                                                         | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | Sel.Chk_RNP_Value = Active                  |
| Advisory    | MIL MODE ACTIVE    | 70       | 15             | Indicates that the operational mode (Military or Civil) is selected to MILITARY.                                                                                          | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | FLT MGR                       | Sel.Mil_Mode_Active = Active                |
| Advisory    | GUID MODE OFF      | 71       | 13             | Disengagement of active guidance mode.                                                                                                                                    | Yes          | 2           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT DIR                       | SEL.Guidance_Mode_Disengaged_Alert = Active |
| Advisory    | ALARM CLOCK 1      | 72       | 14             | When the alarm is on and the "ALARM SET" value is reached                                                                                                                 | Yes          | 2           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.Alarm_Clock_1_Ann = Active              |
| Advisory    | ALARM CLOCK 2      | 73       | 13             | When the alarm is on and the "ALARM SET" value is reached                                                                                                                 | Yes          | 2           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.Alarm_Clock_2_Ann = Active              |
| Advisory    | √ TIMER 1          | 74       | 9              | Timer 1 count-down to zero.                                                                                                                                               | Yes          | 2           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.Check_Timer_1_Ann = Active              |
| Advisory    | √ TIMER 2          | 75       | 9              | Timer 2 count-down to zero.                                                                                                                                               | Yes          | 2           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.Check_Timer_2_Ann = Active              |
| Advisory    | √ TIMER 3          | 76       | 9              | Timer 3 count-down to zero.                                                                                                                                               | Yes          | 2           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 0.0 sec       | SYS MGR                       | SEL.Check_Timer_3_Ann = Active              |
| Advisory    | NO INTERCEPT       | 77       | 12             | Time to next moving waypoint exceeds the maximum specified time.                                                                                                          | Yes          | 2           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Intercept_Impossible_Alert = Active     |
| Advisory    | UNABLE FPLN SEQ    | 78       | 15             | Helicopter will not be able to sequence a point in the flight plan due to aircraft lateral or vertical flight path.                                                       | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Unable_FpIn_Seq = Active                |
| Advisory    | MISSED APPR        | 79       | 11             | The ILS mode is active and the lateral or vertical deviation has exceeded the threshold                                                                                   | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 3.0 sec       | FLT DIR                       | SEL.Missed_Approach_Alert = Active          |
| Advisory    | APPROACH<br>ACTIVE | 80       | 15             | When the Missed Approach Point (MAP) is the active LEG (i.e., Approach (APR) leg is the active leg).                                                                      | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | Sel.Approach_Active = Active                |
| Advisory    | APPR REF ONLY      | 81       | 13             | When the aircraft is within the terminal area of the destination airport with an approach selected in the Active Flight Plan that is not approved for primary navigation. | Yes          | 2           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.1 sec     | 1.0 sec       | FLT MGR                       | Sel.Appr_Ref_Only = Active                  |
| Advisory    | OFFSET CNCLD       | 82       | 12             | Parallel offset automatically cancelled.                                                                                                                                  | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 3.0 sec       | FLT MGR                       | SEL.Offset_Canceled_Alert = Active          |
| Advisory    | OFFSET LIMITED     | 83       | 14             | ** Not Supported in RNP RNAV 9.04** For Offsets including a turn of greater than 90 degrees, and the offset turn point exceeds the offset distance by a factor of 2.      | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Offset_Limited = Active                 |

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| 946-1633-002 F                                                                                                                                       | Rev – |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| 65E<br>Type | 65E Text           | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                                                                                              | Ack<br>Req'd | Ack<br>Type | Primary<br>Location  | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                  |
|-------------|--------------------|----------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|----------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|------------------------------------------------------------------------------------------------------------|
| Advisory    | OFFSET WILL END    | 84       | 15             | Within two minutes Time To Go on active leg prior to an automatic offset cancellation.                                                                                                                                                                                                                                                                                          | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Offset_Will_End = Active                                                                               |
| Advisory    | OFFSET             | 85       | 6              | Parallel offset is applied                                                                                                                                                                                                                                                                                                                                                      | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Offset_Alert = Active                                                                                  |
| Advisory    | INTERCEPT ACTV     | 86       | 14             | An intercept point is the TO flight plan point.                                                                                                                                                                                                                                                                                                                                 | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Intercept_Active_Alert = Active                                                                        |
| Advisory    | EXITING HOLD       | 87       | 12             | Hold is Exiting via EXIT HOLD OR automatic transition.                                                                                                                                                                                                                                                                                                                          | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Exiting_Hold = Active                                                                                  |
| Advisory    | HOLD ACTIVE        | 88       | 11             | Hold Datum is the "TO" flight plan point                                                                                                                                                                                                                                                                                                                                        | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Hold_Active_Alert = Active                                                                             |
| Advisory    | PATTERN ACTIVE     | 89       | 14             | Circle, Impromptu, Expanding Square,<br>Ladder, or Sector SAR pattern is active.<br>Pattern is being executed                                                                                                                                                                                                                                                                   | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Pattern_Active_Alert = Active                                                                          |
| Advisory    | PROC TURN RQD      | 90       | 13             | When the FAF is the active leg and a Procedure Turn will occur. Note: Removed when PROC TURN ACTV is active. Raised during Military approach procedures only.                                                                                                                                                                                                                   | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Proc_Turn_Rqd = Active                                                                                 |
| Advisory    | PROC TURN ACTV     | 91       | 14             | When a procedure turn is active. Note: Annunciation will stay up for entire procedure turn. Raised during Military approach procedures only.                                                                                                                                                                                                                                    | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | Sel.Proc_Turn_Actv = Active                                                                                |
| Advisory    | MOVING ACP<br>ACTV | 92       | 15             | When a Moving ACP is the active LEG.                                                                                                                                                                                                                                                                                                                                            | No           | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | Sel.Moving_ACP_Actv = Active                                                                               |
| Advisory    | LON CG LIMITS      | 93       | 14             | Longitudinal CG falls outside of predefined limits. OR Longitudinal CG falls outside of predefined limits in Flight Leg XXX.                                                                                                                                                                                                                                                    | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | "SEL.PPOS_LON_CG_Out_Of_Limit_Alert<br>= Active<br>OR<br>SEL.LON_CG_Out_Of_Limit_Alert = Active"           |
| Advisory    | EXCESS TRQ         | 94       | 10             | The required torque for the recommended airspeed/groundspeed from performance is greater than the power limit for the aircraft, where the power limit is based on either the aircraft transmission limit or torque available, which ever is most conservative.  OR  Power required for one or more legs XXX of the flight plan is greater than engine or transmission capacity. | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | "SEL.PPOS_Excess_Power_Required_Alert = Active OR SEL.Excess_Power_Required_Alert = Active"                |
| Advisory    | IMPOSS SPD         | 95       | 10             | When the performance recommended airspeed is limited by the aircraft never exceed airspeed.  OR  Aircraft exceeds aircraft speed envelope for one or more of the flight plan legs XXX                                                                                                                                                                                           | Yes          | 1           | Advisory<br>Overflow | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | "SEL.PPOS_Impossible_Airpseed_Required _Alert = Active OR SEL.Impossible_Airspeed_Required_Alert = Active" |

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| 65E<br>Type | 65E Text           | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                  | Ack<br>Req'd | Ack<br>Type | Primary<br>Location      | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                          |
|-------------|--------------------|----------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|--------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|----------------------------------------------------------------------------------------------------|
| Advisory    | EXCESS GWT<br>RAMP | 96       | 15             | The aircraft ramp gross weight exceeds the maximum allowable gross weight of 9590lbs.                                                                                                                                               | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | "SEL.PPOS_Excess_Ramp_Weight_Alert = Active"                                                       |
| Advisory    | EXCESS GWT FLT     | 97       | 14             | The aircraft gross weight exceeds the maximum allowable flight gross weight of 9480lbs.  OR The helicopter empty weight plus fuel and passengers/cargo weight is greater than the helicopters capacity during one or more legs XXX. | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | "SEL.PPOS_Excess_Gross_Weight_Alert = Active OR SEL.Excess_Gross_Weight_Alert = Active"            |
| Advisory    | EXCESS SPD         | 98       | 10             | When the performance recommended airspeed is limited by the aircraft stall speed. OR Speed will put CGI in the yellow zone in Flight Leg XXX                                                                                        | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | "SEL.PPOS_Excess_Airspeed_Required_Al ert = Active OR SEL.Excess_Airspeed_Required = Active"       |
| Advisory    | EXCESS ZONE WT     | 99       | 14             | Raised when a cargo zone weight exceeds a cargo zone weight limit. OR Raised when a cargo zone weight exceeds a cargo zone weight limit for a given FP leg XXX.                                                                     | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | "SEL.PPOS_Excess_Cargo_Zone_Weight_ Alert = Active OR SEL.Excess_Cargo_Zone_Weight_Alert = Active" |
| Advisory    | PERF CALC<br>ERROR | 100      | 15             | The PDB does not have tabular data due to an operational envelope.                                                                                                                                                                  | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Invalid_Torque_Required = Active                                                               |
| Advisory    | UNABLE ETA/ETD     | 101      | 14             | Performance predicts that a RTA/RTD on FPP XXX will not achieved, even after adjusting other required parameters.                                                                                                                   | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Unable_Eta_Etd_Alert = Active                                                                  |
| Advisory    | UNABLE AS XXX      | 102      | 13             | The required airspeed for Flight Leg XXX cannot be flown due to aircraft performance limitations.                                                                                                                                   | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Unable_Asf_Alert = Active                                                                      |
| Advisory    | UNABLE GS XXX      | 103      | 13             | The required groundspeed for Flight Leg XXX cannot be flown due to aircraft performance limitations.                                                                                                                                | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Unable_Gsf_Alert= Active                                                                       |
| Advisory    | UNABLE ETE XXX     | 104      | 14             | The required time enroute for Flight Leg XXX cannot be achieved due to aircraft performance limitations.                                                                                                                            | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Unable_Eef_Alert = Active                                                                      |
| Advisory    | EXCESS WIND XXX    | 105      | 15             | The predicted wind magnitude results in a negative GS computation in Flight Leg XXX.                                                                                                                                                | Yes          | 1           | Advisory<br>Overflow     | NA                    | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Excess_Wind_Alert = Active                                                                     |
| Advisory    | ENG IDLE           | 106      | 8              | The ENG IDLE annunciation is displayed in white whenever the corresponding DECU1 switch is placed in the IDLE position.                                                                                                             | No           | 1           | EICAS<br>Left<br>Column  | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | CDU I/O                       | SEL.DECU.Engine_1_Idle                                                                             |
| Advisory    | ENG IDLE           | 107      | 8              | The ENG IDLE annunciation is displayed in white whenever the corresponding DECU2 switch is placed in the IDLE position.                                                                                                             | No           | 1           | EICAS<br>Right<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | CDU I/O                       | SEL.DECU.Engine_2_Idle                                                                             |

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| 65E<br>Type | 65E Text        | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                 | Ack<br>Req'd | Ack<br>Type | Primary<br>Location       | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|-----------------|----------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advisory    | HEAT ON         | 108      | 7              | Placing the overhead HEAT switch to ON illuminates the HEAT ON advisory text on the EICAS page, energizes the cabin temperature probe fan and opens the bleed air shut-off valve.                                                                                                                  | No           | 1           | Advisory<br>Overflow      | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.P2_Heat_Control=Active                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Advisory    | LDG LOCK        | 109      | 8              | A LDG LOCK indicates that the landing gear is in the down position                                                                                                                                                                                                                                 | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | NA                    | 0.0 sec     | 1.0 sec       | CDU I/O                       | SEL.R_Gear_Downlock=Active, and<br>SEL.L_Gear_Downlock=Active, and<br>SEL.Nose_Gear_Downlock=Active                                                                                                                                                                                                                                                                                                                                                                        |
| Advisory    | TALON ARMED     | 110      | 11             | Indicates the Talon momentary switch is in the engaged positioned.                                                                                                                                                                                                                                 | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | NA                    | 0.5 sec     | 1.0 sec       | CDU I/O                       | SEL.DCS.Talon_Armed=Active                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Advisory    | C SYNC          | 111      | 6              | Indicates that collective mode is being synchronized using the COLL SYNC pushbutton on the collective when FD is coupled, Collective Engage is Active, and any of the following modes Active - THOV Vertical (including native FD Hover Mode), HOV AUG Vertical, VSPD, BALT, RALT, or GA Vertical. | No           | 1           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 0.1 sec       | CDU I/O                       | SEL.DCS.Collective_Sync_On=Active, AND Discrete_Manager.Fd_Ucpl_Wca=Inactive, AND SEL.DCS.Collective_Engage_A=Active, AND [Sel.Thov_Mode_Vert_State=Active OR Sel.Vertical_Speed_Select_Mode_State=Active OR Sel.Barometric_Altitude_Select_Mode_State =Active OR Sel.Radar_Altitude_Select_Mode_State=Active OR Sel.Radar_Altitude_Select_Mode_State=Active OR Sel.Ga_Mode_Vert_State=Active OR Sel.Hov_Mode_Vert_State = Active OR Sel.Hov_Aug_Mode_Vert_State = Active] |
| Advisory    | RALT/BALT TRANS | 112      | 15             | Transition to barometric altimeter data from radar altimeter data during RALT to BALT guidance mode transition.                                                                                                                                                                                    | Yes          | 2           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT DIR                       | SEL.RALT/BALT_Transition_Alert = Active                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Advisory    | FD FUNC INOP    | 113      | 12             | When any input required by the mode being selected is invalid.                                                                                                                                                                                                                                     | Yes          | 2           | EICAS<br>Center<br>Column | Advisory<br>Overflow  | NA              | Yes                   | 0.0 sec     | 1.0 sec       | FLT DIR                       | SEL.Function_Inop_Alert = Active                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Advisory    | CHECK EICAS     | 114      | 11             | A pilot critical advisory has been set on the EICAS page and no MFD is on the EICAS page.  Note: See the CHECK EICAS WCA column for Advisories included.                                                                                                                                           | Yes          | NA          | PFD                       | NA                    | NA              | NA                    | 0.2 sec     | 1.0 sec       | NA                            | See MFD DM SRS section titled "CHECK EICAS Advisory".                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| 946-1633-002     |                                                                    | Rev – |                                                                                                                                                                                                                                                                                                                                                                                                                                        |

Table 4: MH-65E Annunciations

| 65E<br>Type               | 65E Text            | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                     |
|---------------------------|---------------------|----------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|-------------------------------|
| Annunci<br>ation -<br>CDU | ENTER UTC           | 1        | 9              | On power up if time is not available and crew has not entered time, or if bus control is switched with time not valid.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Enter_UTC_Ann = Active    |
| Annunci<br>ation -<br>CDU | CHK IFF TIME        | 2        | 12             | The IFF has reported an issue with Mode 5 time of day (TOD) functionality. IFF 1553 TXSA 22 Word 3 bit 3-6 "Crypto TOD Status" = 0, 2, or 3. KIV-77 Installed ((M5 Interlock, SA22 W2 B15 = 1) AND (M4 Interlock, SA22 W2 B8 = 0)) AND one of the following anomalies has occurred: 0 - KIV-77 TOD is not operational. 2 - KIV-77 TOD is operational, but the transponder had to auto update the KIV-77 TOD at least twice within the last 3 hour period. Note: This can only happen when Auto Time Update is enabled and may indicate a potential problem. 3 - The transponder has received a platform TOD update this is not consistent with previous platform TOD updates. | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Chk_Iff_Time = Active     |
| Annunci<br>ation -<br>CDU | NON WGS 84<br>DATUM | 3        | 16             | Any of the following conditions will activate the NON WGS 84 DATUM CDU Annunciation:  1. An attempt to enable ADS-B Out is performed when the Primary Navigator datum is not WGS 84.  2. The Primary Navigator is changed away from a WGS 84 datum when ADS-B Out is ON.  3. Mode S is enabled when the Primary Navigator datum is not WGS 84.                                                                                                                                                                                                                                                                                                                                | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Non_Wgs_84_Datum = Active |
| Annunci<br>ation -<br>CDU | ADS-B POSN FAIL     | 4        | 15             | The position data required for ADS-B Out functionality is not being provided by the position source.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.ADSB_Posn_Fail = Active   |
| Annunci<br>ation -<br>CDU | SYNC IFF TOD        | 5        | 12             | The IFF has reported an issue with Mode 5 time of day (TOD) functionality. IFF 1553 TXSA 22 Word 3 bit 3-6 "Crypto TOD Status" = 4. (KIV-77 Installed) 4 - The KIV-77 TOD is not within 2 seconds of the most current platform provided TOD. (Out-of-Sync Time Warning) Note: This can only happen when Auto Time Update is disabled                                                                                                                                                                                                                                                                                                                                          | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Sync_Iff_Tod = Active     |

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| 946-1633-002                            |                                                                                        | Rev –              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  |

| 65E<br>Type               | 65E Text                  | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                          | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                              |
|---------------------------|---------------------------|----------|----------------|-----------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|----------------------------------------|
| Annunci<br>ation -<br>CDU | PTT FOR XMIT BIT          | 6        | 16             | HF IBIT has been initiated and Push to Talk is required for IBIT completion.                                                | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Arc_220_Test_Ptt_Ann = Active      |
| Annunci<br>ation -<br>CDU | MODE 4 REPLY              | 7        | 12             | The IFF indicates a MODE 4 REPLY condition, except when IFF indicates mode 4 is unavailable tied to the IFF is unavailable. | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.M4_Reply = Active                  |
| Annunci<br>ation -<br>CDU | MODE 5 REPLY              | 8        | 12             | The IFF indicates a MODE 5 REPLY condition, except when IFF indicates mode 5 is unavailable tied to the IFF is unavailable. | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.M5_Reply = Active                  |
| Annunci<br>ation -<br>CDU | CM1 DAMA<br>ZEROIZED      | 9        | 17             | DAMA has been zeroized                                                                                                      | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Dama_Zeroized_Ann = Active      |
| Annunci<br>ation -<br>CDU | CM1 DAMA OFFLINE          | 10       | 16             | Logged out of the Network by the Channel<br>Controller                                                                      | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Dama_Offline_Ann = Active       |
| Annunci<br>ation -<br>CDU | CM1 SLOT<br>DISCONNECTED  | 11       | 21             | 25K DC preset becomes inactive                                                                                              | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Slot_Disconnected_Ann = Active  |
| Annunci<br>ation -<br>CDU | CM1 DAMA LOGIN<br>FAILURE | 12       | 22             | Unsuccessful login to the DAMA network                                                                                      | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Dama_Login_Failure_Ann = Active |
| Annunci<br>ation -<br>CDU | CM1 OOS                   | 13       | 7              | An out of service notification has been received from the channel controller in 25K DAMA.                                   | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Oos_Ann = Active                |
| Annunci<br>ation -<br>CDU | CM1 CONSTANT<br>KEY ALARM | 14       | 22             | PTT has been keyed for 17 minutes and the Net Controller is going to log user out of network                                | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Constant_Key_Alarm_Ann = Active |
| Annunci<br>ation -<br>CDU | CM1 CONFIG<br>CHANGE      | 15       | 17             | Net Controller has changed the channel, format or mode of terminal                                                          | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Config_Change_Ann = Active      |
| Annunci<br>ation -<br>CDU | CM1 CALL FAILED           | 16       | 15             | Attempt to make a DAMA call was unsuccessful                                                                                | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Call_Failed_Ann = Active        |
| Annunci<br>ation -<br>CDU | CM1 DASA FAIL             | 17       | 13             | A DASA channel did not get set up successfully                                                                              | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Dasa_Failed_Ann = Active        |
| Annunci<br>ation -<br>CDU | CM1 DAMA HANGUP           | 18       | 15             | A DAMA call has been remotely deactivated                                                                                   | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Dama_Hangup_Ann = Active        |
| Annunci<br>ation -<br>CDU | CM1 DAMA ONLINE           | 19       | 15             | Successful login to the DAMA network                                                                                        | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Dama_Online_Ann = Active        |
| Annunci<br>ation -<br>CDU | CM1 DAMA POOR             | 20       | 13             | DAMA link quality is POOR                                                                                                   | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Dama_Poor_Ann = Active          |

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| 65E<br>Type               | 65E Text              | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                             | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                      |
|---------------------------|-----------------------|----------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|------------------------------------------------|
| Annunci<br>ation -<br>CDU | CM1 GUARD<br>UPDATED  | 21       | 17             | Net Controller has updated the guard list                                                                                                      | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Guard_Updated_Ann = Active              |
| Annunci<br>ation -<br>CDU | CM1 INFO REQUEST      | 22       | 16             | An information request has been received.                                                                                                      | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Info_Request_Ann = Active               |
| Annunci<br>ation -<br>CDU | CM1 CALL IN<br>QUEUE  | 23       | 17             | DAMA/DASA call request has been placed in queue                                                                                                | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Call_In_Queue_Ann = Active              |
| Annunci<br>ation -<br>CDU | CM1 DAMA<br>PREEMPT   | 24       | 16             | 5k DAMA call has been preempted                                                                                                                | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Dama_Preempt_Ann = Active               |
| Annunci<br>ation -<br>CDU | CM1 CALL ACTIVE       | 25       | 15             | A DAMA call has become active                                                                                                                  | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Call_Active_Ann = Active                |
| Annunci<br>ation -<br>CDU | CM1 SLOT<br>CONNECTED | 26       | 18             | 25K DC preset becomes active                                                                                                                   | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Slot_Connected_Ann = Active             |
| Annunci<br>ation -<br>CDU | CM1 DASA ACTIVE       | 27       | 15             | A DASA channel has become active                                                                                                               | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Dasa_Active_Ann = Active                |
| Annunci<br>ation -<br>CDU | CM1 CALL<br>COMPLETE  | 28       | 17             | A DAMA call has been terminated by the user                                                                                                    | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.V1_Call_Complete_Ann = Active              |
| Annunci<br>ation -<br>CDU | CM1 CALL WAITING      | 29       | 16             | Notification that a call from another user is waiting                                                                                          | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Call_Waiting_Ann = Active               |
| Annunci<br>ation -<br>CDU | CM1 INCOMING<br>DATA  | 30       | 17             | Transmission of data from another terminal is in process                                                                                       | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Incoming_Data_Ann = Active              |
| Annunci<br>ation -<br>CDU | CM1 INCOMING<br>MSG   | 31       | 16             | Transmission of data from another terminal is in process                                                                                       | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Incoming_Msg_Ann = Active               |
| Annunci<br>ation -<br>CDU | CM1 CHECK OPT #       | 32       | 15             | COMSEC settings and opt numbers are not compatible                                                                                             | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.V1_Check_Opt_Num_Ann = Active              |
| Annunci<br>ation -<br>CDU | HF INOP MODE          | 33       | 12             | Presently selected HF mode is inoperable                                                                                                       | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Arc_220_Inop_Mode_Ann = Active             |
| Annunci<br>ation -<br>CDU | HF TIME FAIL          | 34       | 12             | The HF GPS_Time_Request command failed. Operationally manual entry of time on the HF Start is required to operate the radio in ECCM or ALE LP. | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Time_Fail_Ann = Active             |
| Annunci<br>ation -<br>CDU | √ HF POSN             | 35       | 9              | Position report has been received by the HF radio                                                                                              | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Check_Arc_220_Psn_Report_Received = Active |

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| 946-1633-002                                                                                                                                     | Rev – |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| 65E<br>Type               | 65E Text               | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                             | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                               |
|---------------------------|------------------------|----------|----------------|--------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|-----------------------------------------|
| Annunci<br>ation -<br>CDU | HF SEND DATA           | 36       | 12             | HF is transmitting message data                                                                                                | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Arc_220_Send_Data_Ann = Active      |
| Annunci<br>ation -<br>CDU | HF POSN FAIL           | 37       | 12             | HF transmittal of position report failed                                                                                       | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Arc_220_Position_Fail_Ann = Active  |
| Annunci<br>ation -<br>CDU | HF POSN ERROR          | 38       | 13             | HF did not have time data available for sending a position report                                                              | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Position_Error_Ann = Active |
| Annunci<br>ation -<br>CDU | HF RCV DATA            | 39       | 11             | HF is receiving data message                                                                                                   | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Receive_Data_Ann = Active   |
| Annunci<br>ation -<br>CDU | HF GO DATA             | 40       | 10             | Channel quality is good enough for data only - voice not recommended                                                           | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Go_Data_Ann = Active        |
| Annunci<br>ation -<br>CDU | HF CALL FAIL           | 41       | 12             | HF ALE call has failed                                                                                                         | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Call_Fail_Ann = Active      |
| Annunci<br>ation -<br>CDU | HF HELD                | 42       | 7              | HF is holding an ALE link                                                                                                      | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Held_Ann = Active           |
| Annunci<br>ation -<br>CDU | HF LINKED              | 43       | 9              | HF link has been established                                                                                                   | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Linked_Ann = Active         |
| Annunci<br>ation -<br>CDU | HF CALLING             | 44       | 10             | HF is placing a call                                                                                                           | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Calling_Ann = Active        |
| Annunci<br>ation -<br>CDU | HF RCVG <xxx></xxx>    | 45       | 13             | HF is receiving an ALE voice call                                                                                              | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Receiving_Ann = Active      |
| Annunci<br>ation -<br>CDU | HF SOUNDING            | 46       | 11             | HF is performing an ALE sounding operation                                                                                     | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Sounding_Ann = Active       |
| Annunci<br>ation -<br>CDU | HF SCANNING            | 47       | 11             | HF is in an ALE or ALE/ECCM mode and is scanning                                                                               | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Arc_220_Scanning_Ann = Active       |
| Annunci<br>ation -<br>CDU | KY-100 REQUEST<br>FAIL | 48       | 19             | The KY-100 failed to reach the end state from the last command.                                                                | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Ky_Request_Fail_Ann = Active        |
| Annunci<br>ation -<br>CDU | KY LOCKED              | 49       | 9              | A menu lock or unlock operation failed.                                                                                        | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Ky_Locked_Ann = Active              |
| Annunci<br>ation -<br>CDU | KY ABORT               | 50       | 8              | KY-100 indicates that the transmission has been preempted during MILSTAR voice operation in the Narrowband Black Digital mode. | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Ky_Abort_Ann = Active               |

| Contract No. HSCG23-17-C-AHH00-<br>Contractor Name: Rockwell Collins<br>Contractor Address: 400 Collins Road NE, 0<br>Expiration Date: March 14th, 2022 |       | WERNMENT PURPOSE RIGHTS  The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions |  |  |  |  |  |  |  |
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| thereof marked with this legend must also reproduce the markings.                                                                                       |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |
| 946-1633-002                                                                                                                                            | Rev – |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |

| 65E<br>Type               | 65E Text       | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                              | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                        |
|---------------------------|----------------|----------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|----------------------------------|
| Annunci<br>ation -<br>CDU | KY BAD CLOCK   | 51       | 12             | KY-100 has no clock signal present in Narrowband Black Digital mode.                                                                                                                            | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Ky_Bad_Clock_Ann = Active    |
| Annunci<br>ation -<br>CDU | KY BAD EBM     | 52       | 10             | The user has attempted to enter the EMERGENCY BKUP (EB) mode with corrupted or non-existent EB key.                                                                                             | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Ky_Bad_Ebm_Ann = Active      |
| Annunci<br>ation -<br>CDU | KY BAD KEY     | 53       | 10             | KY-100 indicates the unit has incorrect or corrupted encryption key selected.                                                                                                                   | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Ky_Bad_Key_Ann = Active      |
| Annunci<br>ation -<br>CDU | KY COMM ERROR  | 54       | 13             | KY-100 indicates a communication error has occurred between the Modem and COMSEC PCBs.                                                                                                          | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Ky_Comm_Error_Ann = Active   |
| Annunci<br>ation -<br>CDU | KY DEV ERROR   | 55       | 12             | KY-100 indicates a fill device error.                                                                                                                                                           | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.Ky_Device_Error_Ann = Active |
| Annunci<br>ation -<br>CDU | KY EB ERROR    | 56       | 11             | KY-100 indicates that the COMSEC subsystem received a restricted command while in EB mode.                                                                                                      | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Ky_Eb_Error_Ann = Active     |
| Annunci<br>ation -<br>CDU | KY ERROR REKEY | 57       | 14             | KY-100 indicates the terminal has received a signal with a preamble indicating that the message is a rekeying message, a noisy receive signal, or a poor clock in Black Digital mode.           | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.KY_Error_Rekey_Ann = Active  |
| Annunci<br>ation -<br>CDU | KY FAIL KEY    | 58       | 11             | KY-100 indicates incorrect or corrupted key selected.                                                                                                                                           | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.KY_Fail_Key_Ann = Active     |
| Annunci<br>ation -<br>CDU | HF CT ONLY     | 59       | 10             | The user selected PT mode with the terminal configured for CT ONLY operation.                                                                                                                   | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.Arc_220_Ct_Only_Ann = Active |
| Annunci<br>ation -<br>CDU | KY-100 KEYS    | 60       | 11             | The current update counter for the selected TEK location is 00 and the location contains no valid TEK. or the KY-100 performs a cold start-up and the KY-100 has no valid TEK variables stored. | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.KY_Keys_Ann = Active         |
| Annunci<br>ation -<br>CDU | HF NO TEK      | 61       | 9              | KY-100 indicates the selected TEK location does not contain a valid TEK.                                                                                                                        | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.ARC_220_No_TEK_Ann = Active  |
| Annunci<br>ation -<br>CDU | HF PT ONLY     | 62       | 10             | Plain text Only. The terminal has experienced a COMSEC failure or does not contain a valid TEK.                                                                                                 | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | СОММ                          | SEL.ARC_220_PT_Only_Ann = Active |
| Annunci<br>ation -<br>CDU | KY RCV NG      | 63       | 9              | KY-100 indicates that a signal has been received, but the preamble is corrupted due to a noisy signal or poor external clock in the Black Digital modes.                                        | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.KY_Receiving_Ng_Ann = Active |
| Annunci<br>ation -<br>CDU | KY RMV NCD     | 64       | 10             | KY-100 indicates that the user has improperly configured the Network Control Device (NCD) during a NCD related operation.                                                                       | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | SEL.KY_RMV_NCD_Ann = Active      |

|                                                                                                                                                                        | GOVERNMENT PURPOSE RIGHTS |                               |                                                                                                     |                                                                                                                                                                      |                                                                                                 |                                                                       |                                |  |  |  |  |  |
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| Contract No. Contractor Name: Contractor Address: Contractor Address: Expiration Date:  HSCG23-17-C-AHH004 Rockwell Collins 400 Collins Road NE, Ceda March 14th, 2022 | r Rapids IA 52498         | data<br>Gov<br>repre<br>restr | within the governmen<br>ernment and authorize<br>oduce, release, perfor<br>rictions apply after the | ight to use, modify, repri<br>t without restriction and<br>persons to whom relea<br>m, display, or disclose the<br>expiration date shown a<br>gend must also reprodu | release or disclose to<br>se or disclosure has<br>nat data for United S<br>above. Any reproduct | technical data outside<br>been made to use, it<br>tates government pu | e the<br>modify,<br>rposes. No |  |  |  |  |  |
| 946-1633-002                                                                                                                                                           | 946-1633-002 Rev –        |                               |                                                                                                     |                                                                                                                                                                      |                                                                                                 |                                                                       |                                |  |  |  |  |  |

| 65E Text                 | PRIORITY                                                                                                                                                                                                                          | Text<br>Length                                                                                                                                                                                                                                                                                                                                                                                                                         | Trigger Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ack<br>Req'd                                                                         | Ack<br>Type    | Primary<br>Location                                                                           | Secondary<br>Location                                                                                 | CDU<br>Location                                                 | CHECK<br>EICAS<br>WCA | Set<br>Time                                                        | Reset<br>Time                                                                                                                                   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| KY TX NOGO               | 65                                                                                                                                                                                                                                | 10                                                                                                                                                                                                                                                                                                                                                                                                                                     | KY-100 indicates that the transmit operation failed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| CM1 ZEROIZE FAIL         | 66                                                                                                                                                                                                                                | 16                                                                                                                                                                                                                                                                                                                                                                                                                                     | The ARC-210 radio failed to zeroize.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| CM2 M2 KEYS<br>ERASED    | 67                                                                                                                                                                                                                                | 18                                                                                                                                                                                                                                                                                                                                                                                                                                     | The RT-5000 radio module 2 keys were successfully zeroized.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| CM2 M3 KEYS<br>ERASED    | 68                                                                                                                                                                                                                                | 18                                                                                                                                                                                                                                                                                                                                                                                                                                     | The RT-5000 radio module 3 keys were successfully zeroized.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| CM3 M3 KEYS<br>ERASED    | 69                                                                                                                                                                                                                                | 18                                                                                                                                                                                                                                                                                                                                                                                                                                     | The RT-5000 SAR radio module 3 keys were successfully zeroized.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| CM2 M2 KEY ERASE<br>FAIL | 70                                                                                                                                                                                                                                | 21                                                                                                                                                                                                                                                                                                                                                                                                                                     | The RT-5000 radio module 2 keys failed to zeroize.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| CM2 M3 KEY ERASE<br>FAIL | 71                                                                                                                                                                                                                                | 21                                                                                                                                                                                                                                                                                                                                                                                                                                     | The RT-5000 radio module 3 keys failed to zeroize.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| CM3 M3 KEY ERASE<br>FAIL | 72                                                                                                                                                                                                                                | 21                                                                                                                                                                                                                                                                                                                                                                                                                                     | The RT-5000 SAR radio module 3 keys failed to zeroize.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| SEARCHING                | 73                                                                                                                                                                                                                                | 9                                                                                                                                                                                                                                                                                                                                                                                                                                      | Reference Point Identifier (RPID) Search Request.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N/A                                                                                  | 2              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| SAFE KEYS                | 74                                                                                                                                                                                                                                | 10                                                                                                                                                                                                                                                                                                                                                                                                                                     | COMSEC keys are zeroized.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| CM1 CUE ACTIVE           | 75                                                                                                                                                                                                                                | 14                                                                                                                                                                                                                                                                                                                                                                                                                                     | Cue channel activity is detected by the ARC-210 when in SINCGARS ECCM mode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | N/A                                                                                  | 3              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| DTU NOT READY            | 76                                                                                                                                                                                                                                | 13                                                                                                                                                                                                                                                                                                                                                                                                                                     | When an attempt is made to read the data card and no mission data card is installed in the data loader                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                         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| DTU LOAD FAIL            | 77                                                                                                                                                                                                                                | 13                                                                                                                                                                                                                                                                                                                                                                                                                                     | If a failure occurs during an upload of data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SYS MGR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SEL.DTU_Load_Fail_Ann = Active                     |
| DTU SAVE FAIL            | 78                                                                                                                                                                                                                                | 13                                                                                                                                                                                                                                                                                                                                                                                                                                     | If a failure occurs during the saving operation of data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SYS MGR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SEL.DTU_Save_Fail_Ann = Active                     |
| ALARM CLOCK 1            | 79                                                                                                                                                                                                                                | 14                                                                                                                                                                                                                                                                                                                                                                                                                                     | When the alarm is on and the "ALARM SET" value is reached                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SYS MGR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SEL.Alarm_Clock_1_Ann = Active                     |
| ALARM CLOCK 2            | 80                                                                                                                                                                                                                                | 13                                                                                                                                                                                                                                                                                                                                                                                                                                     | When the alarm is on and the "ALARM SET" value is reached                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N/A                                                                                  | 1              | CDU                                                                                           | NA                                                                                                    | NA                                                              | NA                    | 0.0 sec                                                            | 1.0 sec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SYS MGR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SEL.Alarm_Clock_2_Ann = Active                     |
|                          | KY TX NOGO  CM1 ZEROIZE FAIL  CM2 M2 KEYS ERASED  CM2 M3 KEYS ERASED  CM3 M3 KEYS ERASED  CM2 M2 KEY ERASE FAIL  CM2 M3 KEY ERASE FAIL  CM3 M3 KEY ERASE FAIL  CM3 M3 KEY ERASE FAIL  DTU NOT READY  DTU LOAD FAIL  ALARM CLOCK 1 | KY TX NOGO       65         CM1 ZEROIZE FAIL       66         CM2 M2 KEYS ERASED       67         CM2 M3 KEYS ERASED       68         CM3 M3 KEYS ERASE FAIL       70         CM2 M2 KEY ERASE FAIL       71         CM2 M3 KEY ERASE FAIL       72         SEARCHING       73         SAFE KEYS       74         CM1 CUE ACTIVE       75         DTU NOT READY       76         DTU SAVE FAIL       78         ALARM CLOCK 1       79 | KY TX NOGO         65         10           CM1 ZEROIZE FAIL         66         16           CM2 M2 KEYS ERASED         67         18           CM2 M3 KEYS ERASED         68         18           CM3 M3 KEYS ERASED         69         18           CM2 M2 KEY ERASE FAIL         70         21           CM2 M3 KEY ERASE FAIL         71         21           CM3 M3 KEY ERASE FAIL         72         21           SEARCHING         73         9           SAFE KEYS         74         10           CM1 CUE ACTIVE         75         14           DTU NOT READY         76         13           DTU LOAD FAIL         77         13           DTU SAVE FAIL         78         13           ALARM CLOCK 1         79         14 | Length   KY TX NOGO   65   10   KY-100 indicates that the transmit operation failed. | Length   Req'd | Length   KYTX NOGO   65   10   KY-100 indicates that the transmit operation failed.   N/A   1 | Length   Length   KY TX NOGO   65   10   KY 100 indicates that the transmit operation   N/A   1   CDU | Length   Length   Req'd   Type   Location   Location   Location | Length                | Length   Length   Req'd   Type   Location   Location   EICAS   MCA | Length   Length   Req'd   Type   Location   Location | Longth   Longth   Rey   Type   Location   Location | Length                                             |

Contract No. HSCG23-17-C-AHH004
Contractor Name: Rockwell Collins
Contractor Address: 400 Collins Road NE, Cedar Rapids IA 52498
Expiration Date: March 14th, 2022

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| 65E<br>Type               | 65E Text                 | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                 | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                            |
|---------------------------|--------------------------|----------|----------------|--------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|--------------------------------------|
| Annunci<br>ation -<br>CDU | √ TIMER 1                | 81       | 9              | Timer 1 count-down to zero.                                                                                        | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | SYS MGR                       | SEL.Check_Timer_1_Ann = Active       |
| Annunci<br>ation -<br>CDU | √ TIMER 2                | 82       | 9              | Timer 2 count-down to zero.                                                                                        | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | SYS MGR                       | SEL.Check_Timer_2_Ann = Active       |
| Annunci<br>ation -<br>CDU | √TIMER 3                 | 83       | 9              | Timer 3 count-down to zero.                                                                                        | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | SYS MGR                       | SEL.Check_Timer_3_Ann = Active       |
| Annunci<br>ation -<br>CDU | DISCONTINUITY            | 84       | 13             | Designated Pilot Flight Plan Discontinuity status is active (except when the active leg is a MFP when applicable). | N/A          | 3           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Discontinuity = Active           |
| Annunci<br>ation -<br>CDU | LOADING FPLN             | 85       | 12             | Flight plan load requested by operator                                                                             | N/A          | 3           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Loading_Flight_Plan_Ann = Active |
| Annunci<br>ation -<br>CDU | SAVING FPLN              | 86       | 11             | Flight plan save requested by operator                                                                             | N/A          | 3           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Saving_Flight_Plan_Ann = Active  |
| Annunci<br>ation -<br>CDU | HH:MM:SS                 | 87       | 8              | Time of Day- Appears when TOD is toggled to the ON state on the Start 1/2 page                                     | N/A          | 3           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Time_of_Day = Active             |
| Annunci<br>ation -<br>CDU | SEQ INHIBITED            | 88       | 13             | FPLN leg sequence is unable due to Manual sequence mode.                                                           | N/A          | 3           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Seq_Inhibited = Active           |
| Annunci<br>ation -<br>CDU | CHK FPLN ALT             | 89       | 12             | Flight Plan Altitude entered does not follow ascending/descending requirement for procedure in question.           | N/A          | 3           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.Chk_FpIn_Alt = Active            |
| Annunci<br>ation -<br>CDU | GPS1 ZEROIZE<br>ERROR    | 90       | 18             | GPS1 Key Status indicates CONTAINS KEYS after Send GPS1 Zeroize Keys command is sent.                              | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_1_Zeroize_Error_Adv = Active |
| Annunci<br>ation -<br>CDU | GPS2 ZEROIZE<br>ERROR    | 91       | 18             | GPS2 Key Status indicates CONTAINS KEYS after Send GPS2 Zeroize Keys command is sent.                              | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_2_Zeroize_Error_Adv = Active |
| Annunci<br>ation -<br>CDU | GPS1 KEYS<br>ZEROIZED    | 92       | 18             | GPS1 Key Status indicates NO KEYS after Send GPS1 Zeroize Keys command is sent.                                    | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_1_Keys_Zeroized_Adv = Active |
| Annunci<br>ation -<br>CDU | GPS2 KEYS<br>ZEROIZED    | 93       | 18             | GPS2 Key Status indicates NO KEYS after Send GPS2 Zeroize Keys command is sent.                                    | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_2_Keys_Zeroized_Adv = Active |
| Annunci<br>ation -<br>CDU | GPS1 2 HOUR<br>ALERT     | 94       | 17             | The GPS1 SA/AS keys will expire in 2 hours.                                                                        | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_1_2_Hour_Alert_Adv = Active  |
| Annunci<br>ation -<br>CDU | GPS2 2 HOUR<br>ALERT     | 95       | 17             | The GPS2 SA/AS keys will expire in 2 hours.                                                                        | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_2_2_Hour_Alert_Adv = Active  |
| Annunci<br>ation -<br>CDU | GPS1 KEY<br>RECEIVED BAD | 96       | 21             | Daily Key In Use (Incorrect) received from EGI1.                                                                   | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_1_Key_Rcvd_Bad_Adv = Active  |

Contract No. HSCG23-17-C-AHH004
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| 65E<br>Type                  | 65E Text                 | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                             | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                               |
|------------------------------|--------------------------|----------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|-----------------------------------------|
| Annunci<br>ation -<br>CDU    | GPS2 KEY<br>RECEIVED BAD | 97       | 21             | Daily Key In Use (Incorrect) received from EGI2.                                                                                                                               | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_2_Key_Rcvd_Bad_Adv = Active     |
| Annunci<br>ation -<br>CDU    | GPS1 KEY NOT<br>VERIFIED | 98       | 21             | Daily Key In Use (Unverified) received from EGI1 for longer than 10 seconds.                                                                                                   | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_1_Key_Not_Verified_Adv = Active |
| Annunci<br>ation -<br>CDU    | GPS2 KEY NOT<br>VERIFIED | 99       | 21             | Daily Key In Use (Unverified) received from EGI2 for longer than 10 seconds.                                                                                                   | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_2_Key_Not_Verified_Adv = Active |
| Annunci<br>ation -<br>CDU    | GPS1 KEY BAD             | 100      | 12             | Key Failed Parity received from EGI1.                                                                                                                                          | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_1_Key_Bad_Adv = Active          |
| Annunci<br>ation -<br>CDU    | GPS2 KEY BAD             | 101      | 12             | Key Failed Parity received from EGI2.                                                                                                                                          | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_2_Key_Bad_Adv = Active          |
| Annunci<br>ation -<br>CDU    | GPS1 NEEDS KEYS          | 102      | 15             | Insufficient Keys received from EGI1 for longer than 10 seconds, or SIS Mode indicates Y-CODE ONLY from EGI1 and GPS1 Key Status indicates NO KEYS for longer than 10 seconds. | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_1_Needs_Keys_Adv = Active       |
| Annunci<br>ation -<br>CDU    | GPS2 NEEDS KEYS          | 103      | 15             | Insufficient Keys received from EGI2 for longer than 10 seconds, or SIS Mode indicates Y-CODE ONLY from EGI2 and GPS2 Key Status indicates NO KEYS for longer than 10 seconds. | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | FLT MGR                       | SEL.GPS_2_Needs_Keys_Adv = Active       |
| Annunci<br>ation -<br>CDU    | √ CH121.5                | 104      | 9              | Channel 121.5 data is being received by the RT-5000 (FM) SAR Module. Lost signal or below squelch threshold.                                                                   | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | RT5000_SAR_CH1215_Rec=Active            |
| Annunci<br>ation -<br>CDU    | √ CH16                   | 105      | 6              | Channel 16 data is being received by the RT-5000 (FM) SAR Module. Lost signal or below squelch threshold.                                                                      | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | RT5000_SAR_CH16_Rec=Active              |
| Annunci<br>ation -<br>CDU    | √ CH243.0                | 106      | 9              | Channel 243.0 data is being received by the RT-5000 (FM) SAR Module. Lost signal or below squelch threshold.                                                                   | N/A          | 2           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | RT5000_SAR_CH243_Rec=Active             |
| Annunci<br>ation -<br>CDU    | HF MSG FAIL              | 107      | 11             | HF message transmittal failed. Cleared by another HF transaction taking place or the clear key.                                                                                | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | HF_MessageTX_Fail=Active                |
| Annunci<br>ation -<br>CDU    | HF SND TIME              | 108      | 11             | HF is transmitting an ALE LP time broadcast. Cleared by clear key or HF time broadcast is finished.                                                                            | N/A          | 1           | CDU                 | NA                    | NA              | NA                    | 0.0 sec     | 1.0 sec       | COMM                          | HF_TX_ALE_LP=Active                     |
| Annunci<br>ation \<br>FD-PFD | LOC (White)              | 1        | 3              | Lateral Axis is Armed for ILS Localizer                                                                                                                                        | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA                                      |
| Annunci<br>ation \<br>FD-PFD | BC (White)               | 2        | 2              | Lateral Axis is Armed for ILS Localizer<br>Backcourse                                                                                                                          | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA                                      |

|                                         | GOVERNMENT PURPOSE RIGHTS                                                               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  |
|-----------------------------------------|-----------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| Contractor Name:<br>Contractor Address: | HSCG23-17-C-AHH004<br>Rockwell Collins<br>400 Collins Road NE, Ceda<br>March 14th, 2022 | ar Rapids IA 52498 | The Government has the right to use, modify, reproduce, release, perform, display, or disclose technical data within the government without restriction and release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. |  |  |  |  |  |  |  |  |  |
| 946-1633-002                            |                                                                                         | Rev –              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  |

| 65E<br>Type                  | 65E Text       | PRIORITY | Text<br>Length | Trigger Conditions                                  | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition |
|------------------------------|----------------|----------|----------------|-----------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|-----------|
| Annunci<br>ation \<br>FD-PFD | TCN (White)    | 3        | 3              | Lateral Axis is Armed for TACAN                     | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | VOR (White)    | 4        | 3              | Lateral Axis is Armed for VOR                       | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | Reserved       | 5        | N/A            | N/A                                                 | N/A          | N/A         | N/A                 | NA                    | NA              | NA                    | N/A         | N/A           | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | VNV (White)    | 6        | 3              | Vertical Axis is Armed for FPLN                     | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | G/S (White)    | 7        | 3              | Vertical Axis is Armed for ILS Glideslope           | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | LOC (Green)    | 8        | 3              | Lateral Axis is Active for ILS Localizer            | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | BC (Green)     | 9        | 2              | Lateral Axis is Active for Backcourse               | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | TCN (Green)    | 10       | 3              | Lateral Axis is Active for TACAN                    | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | TCN PT (Green) | 11       | 6              | Lateral Axis is Active for TACAN Point-to-<br>Point | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | VOR (Green)    | 12       | 3              | Lateral Axis is Active for VOR                      | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | Reserved       | 13       | N/A            | N/A                                                 | N/A          | N/A         | N/A                 | NA                    | NA              | NA                    | N/A         | N/A           | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | FPLN (Green)   | 14       | 4              | Lateral Axis is Active for Flight Plan              | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | TRK (Green)    | 15       | 3              | Lateral Axis is Active for Track Select             | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | HDG (Green)    | 16       | 3              | Lateral Axis is Active for Heading Select           | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | VNV (Green)    | 17       | 3              | Vertical Axis is Active for Flight Plan             | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |

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| 946-1633-002                                                                                                                                     | Rev – |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |

| 65E<br>Type                  | 65E Text      | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                                    | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition |
|------------------------------|---------------|----------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|-----------|
| Annunci<br>ation \<br>FD-PFD | G/S (Green)   | 18       | 3              | Vertical Axis is Active for ILS Glideslope                                                                                                                                            | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | VSPD (Green)  | 19       | 4              | Vertical Axis is Active for Vertical Speed Select                                                                                                                                     | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | BALT (Green)  | 20       | 4              | Vertical Axis is Active for Barometric Altitude Select                                                                                                                                | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | RALT (Green)  | 21       | 4              | Vertical Axis is Active for Radar Altitude<br>Select                                                                                                                                  | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | ASPD (Green)  | 22       | 4              | Longitudinal Axis is Active for Airspeed Select                                                                                                                                       | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | GSPD (Green)  | 23       | 4              | Longitudinal Axis is Active for Groundspeed Select                                                                                                                                    | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | FASPD (Green) | 24       | 5              | Longitudinal Axis is Active for Flight Plan<br>Speed Select (Air Speed)                                                                                                               | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | FGSPD (Green) | 25       | 5              | Longitudinal Axis is Active for Flight Plan<br>Speed Select (Ground Speed)                                                                                                            | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | ISPD (Green)  | 26       | 4              | Longitudinal Axis is Active for ILS Speed Select                                                                                                                                      | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | THOV (Green)  | 27       | 4              | Any Axis (Lat, Long or Vert) is Active for Transition to Hover (i.e. THOV) Mode                                                                                                       | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | HOV (Green)   | 28       | 3              | Any Axis (Lat, Long or Vert) is Active for Hover (i.e. THOV) Mode                                                                                                                     | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | HAUG (Green)  | 29       | 4              | All axes (Lat, Long or Vert) are Active for Hover Augmentation (i.e. HOV_AUG) Mode.                                                                                                   | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | ISPD (White)  | 30       | 4              | Longitudinal Axis is Armed for ILS Speed<br>Select                                                                                                                                    | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | THOV (White)  | 31       | 4              | Any Axis (Lat, Long or Vert) is Armed for Transition to Hover (i.e. THOV) Mode                                                                                                        | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |
| Annunci<br>ation \<br>FD-PFD | FBALT (White) | 32       | 5              | FPLN mode is selected, FMF referenced<br>Altitude is used, Active Flight Plan Leg<br>Altitude is defined in MSL (Mean Sea Level),<br>and Barometric Altitude Select Mode is<br>Armed. | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA        |

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| 65E<br>Type                  | 65E Text        | PRIORITY | Text<br>Length | Trigger Conditions                                                                                                                                                         | Ack<br>Req'd | Ack<br>Type | Primary<br>Location | Secondary<br>Location | CDU<br>Location | CHECK<br>EICAS<br>WCA | Set<br>Time | Reset<br>Time | Primary<br>Source to<br>EICAS | Condition                                                                                                          |
|------------------------------|-----------------|----------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------------------|-----------------------|-----------------|-----------------------|-------------|---------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Annunci<br>ation \<br>FD-PFD | FBALT (Green)   | 33       | 5              | FPLN mode is selected, FMF referenced Altitude is used, Active Flight Plan Leg Altitude is defined in MSL (Mean Sea Level), and Barometric Altitude Select Mode is Active. | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA                                                                                                                 |
| Annunci<br>ation \<br>FD-PFD | FRALT (Green)   | 34       | 5              | FPLN mode is selected, FMF referenced Altitude is used, Active Flight Plan Leg Altitude is defined in AGL (Above Ground Level), and Radar Altitude Select Mode is Active.  | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA                                                                                                                 |
| Annunci<br>ation \<br>FD-PFD | GA (Green)      | 35       | 2              | Airspeed is <40 KTAS and Go Around is commanded.                                                                                                                           | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | NA                                                                                                                 |
| Annunci<br>ation \<br>FD-PFD | THOV (Caution)  | 36       | 4              | Longitudinal Axis is Active for Transition to Hover (i.e. THOV) Mode and FD_LOW_ALT is Active                                                                              | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | SEL.FD_Low_Alt_Alert= Active And (Thov_Mode_Vert_State= Active)                                                    |
| Annunci<br>ation \<br>FD-PFD | HOV (Caution)   | 37       | 3              | Longitudinal Axis is Active for Hover (i.e. THOV) Mode and FD_LOW_ALT is Active                                                                                            | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | SEL.FD_Low_Alt_Alert= Active And (Hov_Mode_Vert_State = Active)                                                    |
| Annunci<br>ation \<br>FD-PFD | HAUG (Caution)  | 38       | 4              | Longitudinal Axis is Active for Hover<br>Augmentation (i.e. HAU_AUG) Mode and<br>FD_LOW_ALT is Active                                                                      | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | SEL.FD_Low_Alt_Alert= Active And<br>Hov_Aug_Mode_Vert_State = Active                                               |
| Annunci<br>ation \<br>FD-PFD | BALT (Caution)  | 39       | 4              | Vertical Axis is Active for Barometric Altitude Select and FD_LOW_ALT is Active                                                                                            | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | SEL.FD_Low_Alt_Alert= Active And Barametric_Altitude_Select_Mode_State = Active                                    |
| Annunci<br>ation \<br>FD-PFD | RALT (Caution)  | 40       | 4              | Vertical Axis is Active for Radar Altitude<br>Select and FD_LOW_ALT is Active                                                                                              | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | SEL.FD_Low_Alt_Alert= Active And<br>Radar_Altitude_Select_Mode_State = Active                                      |
| Annunci<br>ation \<br>FD-PFD | FBALT (Caution) | 41       | 5              | Vertical Axis is Active for FMF referenced<br>Barometric Altitude Select and<br>FD_LOW_ALT is Active                                                                       | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | SEL.FD_Low_Alt_Alert= Active And Barometric_Altitude_Select_Mode_State = Active AND Fmf_Controlled_Altitude = True |
| Annunci<br>ation \<br>FD-PFD | FRALT (Caution) | 42       | 5              | Vertical Axis is Active for FMF referenced Radar Altitude Select and FD_LOW_ALT is Active                                                                                  | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | SEL.FD_Low_Alt_Alert= Active And Radar_Altitude_Select_Mode_State = Active AND Fmf_Controlled_Altitude = True      |
| Annunci<br>ation \<br>FD-PFD | VSPD (Caution)  | 43       | 4              | Vertical Axis is Active for Vertical Speed Select and FD_LOW_ALT is Active                                                                                                 | N/A          | N/A         | PFD                 | NA                    | NA              | NA                    | 0.0 sec     | 0.0 sec       | N/A                           | SEL.FD_Low_Alt_Alert= Active AND Vertical_Speed_Select_Mode_State = Active                                         |

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