1. **Test Dataset: AA400004**

**S‐58 Recommended ENC Validation Checks covered in this section:**

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| **S‐58 Check** | **Description** |
| 1515a | For each feature object where a value of DATEND, DATSTA, PEREND or PERSTA does not conform to the formatting defined in S-57 Appendix B.1 Annex A. |
| 1554a | For each Group 1 feature object where SCAMIN is Present. |
| 1554b | For each meta object where SCAMIN is Present. |
| 1617 | For each DAMCON feature object which is not COVERED\_BY a LNDARE feature object of geometric primitive area. |
| 1651 | For each SWPARE feature object which OVERLAPS, CONTAINS OR is WITHIN a LNDARE, UNSARE, FLODOC, HULKES or PONTON feature object of geometric primitive area. |
| 1681 | For each RECTRC feature object of geometric primitive line where ORIENT is not Null AND TRAFFIC is Equal to 1 (inbound) OR 2 (outbound) OR 3 (one-way) AND the bearing of the line is more than 5 degrees Greater than OR Less than the value of ORIENT. |
| 1683 | For each C\_AGGR collection object with a single instance of both NAVLNE and RECTRC AND the ORIENT value of the RECTRC feature object is more than 3 degrees Greater than OR Less than the value (or reciprocal value) of the ORIENT value of the NAVLNE feature object. |

**Secondary Errors**

Critical – 547

Error – 26b, 28, 569, 570, 1553, 1787, 1791b

Warnings – 44, 1516

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| **Dataset Name** | AA400004 | | | **S‐58 Check** | | | 1515a | | | | **Type** | | C |
| **S-58 Description** | For each feature object where a value of DATEND, DATSTA, PEREND or PERSTA does not conform to the formatting defined in S-57 Appendix B.1 Annex A. | | | | | | | | | | | | |
| **Message** | Date attribute not formatted according to ISO 8601:1988. | | | | | | | | | | | | |
| **Solution** | Amend formatting to conform to ISO 8601:1988. | | | | | | **Conformity** | | | 2.1.5 | | | |
| **Test Case No. 1** | 4 BCNSPP (P) objects with Date attributes not formatted according to ISO 8601:1988. | | | | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | | | | **FRID** | **FOID** | | | | **VRID** |
| 32°20'14.99"S 61°09'39.53"E | | BCNSPP (P) | PEREND = JULY0918 | | | | | FE-20 | AA 2260313639 00020 | | | | - |
| 32°20'15.11"S 61°09'43.51"E | | BCNSPP (P) | PERSTA = 31122018 | | | | | FE-36 | AA 3273789499 00035 | | | | - |
| 32°20'14.21"S 61°09'32.30"E | | BCNSPP (P) | DATSTA = 00122016 | | | | | FE-37 | AA 3473191198 00036 | | | | - |
| 32°20'14.60"S 61°09'28.59"E | | BCNSPP (P) | DATEND = 12312017 | | | | | FE-32 | AA 3865514003 00032 | | | | - |
| **Screen Capture** |  | | | | | | | | | | | | |
| **Expected Test Results** | 1515a: 4 errors “Date attribute not formatted according to ISO 8601:1988” must be triggered. | | | | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Dataset Name** | AA400004 | | | **S‐58 Check** | | | 1554a | | | | **Type** | | C |
| **S-58 Description** | For each Group 1 feature object where SCAMIN is Present. | | | | | | | | | | | | |
| **Message** | SCAMIN present for a Group 1 object. | | | | | | | | | | | | |
| **Solution** | Remove SCAMIN. | | | | | | **Conformity** | | | 2.2.7 | | | |
| **Test Case No. 1** | SCAMIN attribution assigned to Group 1 objects. | | | | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | | | | **FRID** | **FOID** | | | | **VRID** |
| 32°20'49.99"S 61°09'16.46"E | | FLODOC (A) | SCAMIN=45000 | | | | | FE-16 | AA 2428659641 00016 | | | | - |
| 32°22'07.84"S 61°09'16.75"E | | PONTON (A) | SCAMIN=45000 | | | | | FE-17 | AA 4057664043 00017 | | | | - |
| 32°20'12.18"S 61°09'39.43"E | | LNDARE (A) | SCAMIN=45000 | | | | | FE-18 | AA 1648245827 00018 | | | | - |
| 32°22'32.13"S 61°09'09.34"E | | UNSARE (A) | SCAMIN=45000 | | | | | FE-22 | AA 1630439092 00022 | | | | - |
| 32°21'20.80"S 61°09'08.56"E | | HULKES (A) | SCAMIN=45000 | | | | | FE-26 | AA 0439459982 00026 | | | | - |
| 32°22'30.64"S 61°09'24.34"E | | DEPARE (A) | SCAMIN=45000 | | | | | FE-33 | AA 0570087124 00033 | | | | - |
| 32°23'06.15"S 61°09'17.95"E | | DRGARE (A) | SCAMIN=45000 | | | | | FE-34 | AA 2450145019 00034 | | | | - |
| **Screen Capture** |  | | | | | | | | | | | | |
| **Expected Test Results** | 1554a: 7 errors “SCAMIN present for a Group 1 object” must be triggered. | | | | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Dataset Name** | AA400004 | | | **S‐58 Check** | | | 1554b | | | | **Type** | | C |
| **S-58 Description** | For each meta object where SCAMIN is Present. | | | | | | | | | | | | |
| **Message** | SCAMIN present for a meta object. | | | | | | | | | | | | |
| **Solution** | Remove SCAMIN. | | | | | | **Conformity** | | | 2.2.7 | | | |
| **Test Case No. 1** | Assigned SCAMIN for meta objects. | | | | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | | | | **FRID** | **FOID** | | | | **VRID** |
| 32°22'25.39"S 61°07’20.13"E | | M\_COVR (A) | SCAMIN=45000 | | | | | FE-15 | AA 3953435764 00003 | | | | - |
| 32°22'25.39"S 61°07’20.13"E | | M\_NSYS (A) | SCAMIN=45000 | | | | | FE-14 | AA 0970257508 00002 | | | | - |
| 32°22'25.39"S 61°07’20.13"E | | M\_QUAL (A) | SCAMIN=45000 | | | | | FE-11 | AA 2036148987 00001 | | | | - |
| **Screen Capture** |  | | | | | | | | | | | | |
| **Expected Test Results** | 1554b: 3 errors “SCAMIN present for a meta object.” must be triggered. | | | | | | | | | | | | |
| **Secondary Critical Errors** | 547: 2 additional errors “Attribute not permitted on object class” must be triggered. | | | | | | | | | | | | |
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| **Dataset Name** | AA400004 | | | **S‐58 Check** | | | 1617 | | | | **Type** | | C |
| **S-58 Description** | For each DAMCON feature object which is not COVERED\_BY a LNDARE feature object of geometric primitive area. | | | | | | | | | | | | |
| **Message** | DAMCON not covered by LNDARE. | | | | | | | | | | | | |
| **Solution** | Ensure DAMCON object is covered by a LNDARE object. | | | | | | **Conformity** | | | 4.8.5 | | | |
| **Test Case No. 1** | DAMCON (A) object created which is not covered by LNDARE (A). | | | | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | | | | **FRID** | **FOID** | | | | **VRID** |
| 32°22'54.25"S 61°09'22.65"E | | DAMCON (A) | - | | | | | FE-12 | AA 3843051824 00014 | | | | - |
| **Screen Capture** |  | | | | | | | | | | | | |
| **Expected Test Results** | 1617: An error “DAMCON object is not covered by LNDARE” must be triggered. | | | | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Dataset Name** | AA400004 | | | **S‐58 Check** | | | 1651 | | | | **Type** | | C |
| **S-58 Description** | For each SWPARE feature object which OVERLAPS, CONTAINS OR is WITHIN a LNDARE, UNSARE, FLODOC, HULKES or PONTON feature object of geometric primitive area. | | | | | | | | | | | | |
| **Message** | SWPARE object not covered by DRGARE or DEPARE objects. | | | | | | | | | | | | |
| **Solution** | Amend limits of SWPARE object or edit Group 1 objects. | | | | | | **Conformity** | | | 5.6 | | | |
| **Test Case No. 1** | SWPARE overlap created on LNDARE, UNSARE, FLODOC, HULKES and PONTON features. | | | | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | | | | **FRID** | **FOID** | | | | **VRID** |
| 32°21'33.33"S 61°09'10.26"E | | SWPARE (A) | DRVAL1=200 | | | | | FE-13 | AA 2036097680 00015 | | | | - |
| **Screen Capture** |  | | | | | | | | | | | | |
| **Expected Test Results** | 1651: An error “SWPARE object not covered by DRGARE or DEPARE objects” must be triggered. | | | | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Dataset Name** | AA400004 | | | **S‐58 Check** | | | 1681 | | | | **Type** | | C |
| **S-58 Description** | For each RECTRC feature object of geometric primitive line where ORIENT is not Null AND TRAFFIC is Equal to 1 (inbound) OR 2 (outbound) OR 3 (one-way) AND the bearing of the line is more than 5 degrees Greater than OR Less than the value of ORIENT. | | | | | | | | | | | | |
| **Message** | RECTRC where ORIENT does not correspond to the bearing of the line. | | | | | | | | | | | | |
| **Solution** | Populate an appropriate value of ORIENT consistent with the geometry of the RECTRC object. | | | | | | **Conformity** | | | 10.1.1 | | | |
| **Test Case No. 1** | RECTRC created with inappropriate ORIENT. | | | | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | | | | **FRID** | **FOID** | | | | **VRID** |
| 32°24’11.73”S 61°09’30.72”E | | RECTRC (L) | ORIENT=100 | | | | | FE-25 | AA 0088888762 00025 | | | | VE-25 |
| 32°24’14.92”S 61°09’27.48”E | | RECTRC (L) | ORIENT=100 | | | | | FE-27 | AA 0336445492 00027 | | | | VE-27 |
| 32°24’08.45”S 61°09’30.72”E | | RECTRC (L) | ORIENT=100 | | | | | FE-24 | AA 1223042484 00024 | | | | VE-24 |
| **Screen Capture** |  | | | | | | | | | | | | |
| **Expected Test Results** | 1681: An error “RECTRC where ORIENT does not correspond to the bearing of the line” must be triggered. | | | | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Dataset Name** | AA400004 | | | | **S‐58 Check** | 1683 | | | | | | **Type** | C |
| **S-58 Description** | For each C\_AGGR collection object with a single instance of both NAVLNE and RECTRC AND the ORIENT value of the RECTRC feature object is more than 3 degrees Greater than OR Less than the value (or reciprocal value) of the ORIENT value of the NAVLNE feature object. | | | | | | | | | | | | |
| **Message** | RECTRC and NAVLNE objects as part of a C\_AGGR do not have consistent values of ORIENT. | | | | | | | | | | | | |
| **Solution** | Amend values of ORIENT to agree for RECTRC or NAVLNE. | | | | | | **Conformity** | | | 10.1.2 | | | |
| **Test Case No. 1** | NAVLNE and RECTRC objects created with different ORIENT values. | | | | | | | | | | | | |
| **Location** | | **Feature** | **Attributes** | | | | | **FRID** | **FOID** | | | | **VRID** |
| 32°24’34.19”S 61°09’36.87”E | | NAVLNE (L) | CATNAV=1;ORIENT=80 | | | | | FE-29 | AA 0500129662 00029 | | | | VE-28; VE-29 |
| 32°24’35.29”S 61°09’29.42”E | | RECTRC (L) | CATTRK=1; ORIENT=84;  TRAFIC=1 | | | | | FE-28 | AA 2970194112 00028 | | | | VE-28 |
| **Screen Capture** |  | | | | | | | | | | | | |
| **Expected Test Results** | 1683: An error “RECTRC and NAVLNE as part of a C\_AGGR do not have consistent values of ORIENT.” must be triggered. | | | | | | | | | | | | |
| **Secondary Critical Errors** | None | | | | | | | | | | | | |