

MINIMUM QUALITY CONTROL STANDARD (MQCS) MQCS-7 (Version 7)

Notes:

- (a) See the specifications for setting quality control Indicators Q_1 to Q_{29} at the end of this Annex
 (b) Δ = space (ASCII 32)

<u>Element</u>	<u>Error</u>	<u>Action</u>
1	$i_T \neq 3 - 5, \Delta$	Correct manually otherwise 3
2	AAAA \neq valid year	Correct manually otherwise reject
3	MM \neq 01 - 12	Correct manually otherwise reject
4	YY \neq valid day of month	Correct manually otherwise reject
5	GG \neq 00 - 23	Correct manually otherwise reject
6	$Q_c \neq 1, 3, 5, 7$ $Q_c = \Delta$	Correct manually and $Q_{20} = 5$, otherwise $Q_{20} = 4$ $Q_{20} = 2$
7	$L_a L_a L_a \neq 000-900$ $L_a L_a L_a = \Delta\Delta\Delta$	Correct manually and $Q_{20} = 5$, otherwise $Q_{20} = 4$ $Q_{20} = 2$
8	$L_o L_o L_o L_o \neq 0000-1800$ $L_o L_o L_o L_o = \Delta\Delta\Delta\Delta$ $L_a L_a L_a = L_o L_o L_o L_o = \Delta\Delta\Delta(\Delta)$	Correct manually and $Q_{20} = 5$, otherwise $Q_{20} = 4$ $Q_{20} = 2$ Correct manually otherwise reject
<u>Time sequence checks</u>		
	Change in latitude $> 0.7^\circ/\text{hr}$	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 0.7^\circ/\text{hr}$ when lat. 00-39.9	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 1.0^\circ/\text{hr}$ when lat. 40-49.9	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 1.4^\circ/\text{hr}$ when lat. 50-59.9	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 2.0^\circ/\text{hr}$ when lat. 60-69.9	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 2.7^\circ/\text{hr}$ when lat. 70-79.9	Correct manually otherwise $Q_{20} = 3$
9	Indicator $\neq 0-3, \Delta$	Correct manually, otherwise Δ
10	$h \neq 0-9$ $h = \Delta$	Correct manually and $Q_1 = 5$, otherwise $Q_1 = 4$ $Q_1 = 9$
11	$VV \neq 90-99$ $VV = \Delta\Delta$	Correct manually and $Q_2 = 5$, otherwise $Q_2 = 4$ $Q_2 = 9$
12	$N \neq 0-9, \Delta$ $N < N_h$	Correct manually and $Q_3 = 5$, otherwise $Q_3 = 4$ Correct manually and $Q_3 = 5$, otherwise $Q_3 = 2$
13	$dd \neq 00-36, 99$ $dd = \Delta\Delta$ dd versus ff $dd = 00, ff \neq 00$ $dd \neq 00, ff = 00$	Correct manually and $Q_4 = 5$, otherwise $Q_4 = 4$ $Q_4 = 9$ Correct manually and Q_4 or $Q_5 = 5$ otherwise $Q_4 = Q_5 = 2$ Correct manually and Q_4 or $Q_5 = 5$ otherwise $Q_4 = Q_5 = 2$
14	$i_w \neq 0, 1, 3, 4$	Correct manually, otherwise $Q_5 = Q_{29} = 4$
15	$ff > 80$ knots $ff = \Delta\Delta$	Correct manually and $Q_5 = 5$, otherwise $Q_5 = 3$ $Q_5 = 9$
16	$s_n \neq 0, 1$	Correct manually, otherwise $Q_6 = 4$
17	$TTT = \Delta\Delta\Delta$ If $-25 > TTT > 40$ then when Lat. < 45.0 $TTT < -25$ $TTT > 40$ when Lat. ≥ 45.0 $TTT < -25$ $TTT > 40$	$Q_6 = 9$ $Q_6 = 4$ $Q_6 = 3$ $Q_6 = 3$ $Q_6 = 4$
<u>TTT versus humidity parameters</u>		
	$TTT < \text{WB}$ (wet bulb)	Correct manually and $Q_6 = 5$, otherwise $Q_6=Q_{19}= 2$
	$TTT < \text{DP}$ (dew point)	Correct manually and $Q_6 = Q_7 = 5$, otherwise $Q_6 = Q_7 = 2$
18	$s_t \neq 0, 1, 2, 5, 6, 7$	Correct manually, otherwise $Q_7 = 4$
19	$\text{DP} > \text{WB}$ $\text{DP} > \text{TTT}$	Correct manually and $Q_7 = 5$, otherwise $Q_7=Q_{19}= 2$ Correct manually and $Q_7 = 5$, otherwise $Q_7 = Q_6 = 2$

<u>Element</u>	<u>Error</u>	<u>Action</u>
20	WB = DP = $\Delta\Delta\Delta$ 930 > PPPP > 1050 hPa 870 > PPPP > 1070 hPa PPPP = $\Delta\Delta\Delta\Delta$	Q ₇ =Q ₁₉ = 9 Correct manually and Q ₈ = 5, otherwise Q ₈ = 3 Correct manually and Q ₈ = 5, otherwise Q ₈ = 4 Q ₈ = 9
21	ww = 22-24, 26, 36-39, 48, 49, 56, 57, 66-79, 83-88 93-94 and latitude <20° if i _x = 7: w _a w _a = 24 - 25, 35, 47-48, 54-56, 64-68, 70-78, 85-87 and latitude <20°	Correct manually and Q ₉ = 5, otherwise Q ₉ = 4 Correct manually and Q ₉ = 5, otherwise Q ₉ = 3 Correct manually and Q ₉ = 5, otherwise Q ₉ = 4
22, 23	W ₁ or W ₂ = 7 and latitude <20° W ₁ < W ₂	Correct manually and Q ₉ = 5, otherwise Q ₉ = 4 Correct manually and Q ₉ = 5, otherwise Q ₉ = 2
24-27	W ₁ = W ₂ = ww = $\Delta\Delta\Delta\Delta$ N = 0, and N _h C _L C _M C _H ≠ 0000 N = Δ , and N _h C _L C _M C _H ≠ $\Delta\Delta\Delta\Delta$ N = 9, and not (N _h =9 and C _L C _M C _H ≠ $\Delta\Delta\Delta$ N= Δ , and N _h C _L C _M C _H = $\Delta\Delta\Delta\Delta$	Q ₉ = 9 Correct manually and Q ₃ = 5, otherwise Q ₃ = 2 Correct manually and Q ₃ = 5, otherwise Q ₃ = 2 Correct manually and Q ₃ = 5, otherwise Q ₃ = 2
28	s _n ≠ 0, 1	Q ₃ = 9 Correct manually otherwise Q ₁₀ = 4
29	T _w T _w T _w = $\Delta\Delta\Delta$ if -2.0 > T _w T _w T _w > 37.0 then when Lat. < 45.0 T _w T _w T _w < -2.0 T _w T _w T _w > 37.0 when Lat. ≥ 45.0 T _w T _w T _w < -2.0 T _w T _w T _w > 37.0	Q ₁₀ = 9 Control manually and Q ₁₀ = 5, otherwise Q ₁₀ = 4 Control manually and Q ₁₀ = 5, otherwise Q ₁₀ = 3 Control manually and Q ₁₀ = 5, otherwise Q ₁₀ = 3 Control manually and Q ₁₀ = 5, otherwise Q ₁₀ = 4
30	Indicator ≠ 0-7, Δ	Correct manually, otherwise Δ
31	Indicator ≠ 0-9, Δ	Correct manually, otherwise Δ
32	20 < P _w P _w < 30 P _w P _w ≥ 30 and ≠ 99 P _w P _w = $\Delta\Delta$	Q ₁₁ = 3 Q ₁₁ = 4 Q ₁₁ = 9
33	35 < H _w H _w < 50 H _w H _w ≥ 50 H _w H _w = $\Delta\Delta$	Q ₁₂ = 3 Q ₁₂ = 4 Q ₁₂ = 9
34	d _{w1} d _{w1} ≠ 00-36, 99 swell ₁ = swell ₂ = Δ	Correct manually and Q ₁₃ = 5, otherwise Q ₁₃ = 4 Q ₁₃ = 9
35	25 < P _{w1} P _{w1} < 30 P _{w1} P _{w1} ≥ 30 and ≠ 99	Q ₁₃ = 3 Q ₁₃ = 4
36	35 < H _{w1} H _{w1} < 50 H _{w1} H _{w1} ≥ 50	Q ₁₃ = 3 Q ₁₃ = 4
37	I _s ≠ 1-5, Δ	Correct manually, otherwise Δ
38	E _s E _s ≠ 00-99, $\Delta\Delta$	Correct manually, otherwise $\Delta\Delta$
39	R _s ≠ 0-4, Δ	Correct manually, otherwise Δ
40	Source ≠ 0-6	Correct manually, otherwise Δ
41	Platform ≠ 0-9	Correct manually, otherwise Δ
42	No call sign	Insert manually, mandatory entry
43	No country code	Insert manually
44	No Quality Control	
45	Q ≠ 0-6, 9	Correct manually, otherwise Δ
46	i _x ≠ 1-7	Correct manually, otherwise Δ
47	i _R = 0-2 and RRR = 000, $\Delta\Delta\Delta$ i _R = 3 and RRR ≠ $\Delta\Delta\Delta$ i _R = 4 and RRR ≠ $\Delta\Delta\Delta$ i _R ≠ 0- 4	Correct manually, otherwise Q ₁₄ = 4 Correct manually, otherwise Q ₁₄ = 2 Correct manually, otherwise Q ₁₄ = 2 Correct manually, otherwise Q ₁₄ = 4
48	RRR ≠ 001-999 and iR = 1, 2	Correct manually and Q ₁₄ = 5, otherwise Q ₁₄ = 2
49	t _R ≠ 0-9, Δ	Correct manually and Q ₁₄ = 5, otherwise Q ₁₄ = 4
50	s _w ≠ 0, 1, 2, 5, 6, 7	Correct manually, otherwise Q ₁₉ = 4
51	WB < DP WB = $\Delta\Delta\Delta$ WB > TTT	Correct manually and Q ₁₉ = 5, otherwise Q ₁₉ =Q ₇ =2 Q ₁₉ = 9 Correct manually and Q ₁₉ = 5, otherwise Q ₁₉ =Q ₆ =2
52	a ≠ 0-8 a = 4 and ppp ≠ 000	Correct manually and Q ₁₅ = 5, otherwise Q ₁₅ = 4 Correct manually and Q ₁₅ or Q ₁₆ = 5, otherwise Q ₁₅ =Q ₁₆ =2

<u>Element</u>	<u>Error</u>	<u>Action</u>
	a = 1,2,3,6,7,8 and ppp=000	Correct manually and Q ₁₅ or Q ₁₆ = 5, otherwise Q ₁₅ =Q ₁₆ = 2
53	a = Δ 250 ≥ ppp > 150 ppp > 250 ppp = ΔΔΔ	Q ₁₅ = 9 Correct manually and Q ₁₆ = 5, otherwise Q ₁₆ = 3 Correct manually and Q ₁₆ = 5 otherwise Q ₁₆ = 4 Q ₁₆ = 9
54	D _s ≠ 0-9 D _s = Δ	Correct manually and Q ₁₇ = 5, otherwise Q ₁₇ = 4 Q ₁₇ = 9
55	V _s ≠ 0-9 V _s = Δ	Correct manually and Q ₁₈ = 5, otherwise Q ₁₈ = 4 Q ₁₈ = 9
56	d _{w2} d _{w2} ≠ 00-36, 99, ΔΔ	Correct manually and Q ₁₃ = 5, otherwise Q ₁₃ = 4
57	25 < P _{w2} P _{w2} < 30 P _{w2} P _{w2} ≥ 30 and ≠99	Q ₁₃ = 3 Q ₁₃ = 4
58	35 < H _{w2} H _{w2} < 50 H _{w2} H _{w2} ≥ 50	Q ₁₃ = 3 Q ₁₃ = 4
59	c _i ≠ 0-9, Δ	Correct manually, otherwise Δ
60	S _i ≠ 0-9, Δ	Correct manually, otherwise Δ
61	b _i ≠ 0-9, Δ	Correct manually, otherwise Δ
62	D _i ≠ 0-9, Δ	Correct manually, otherwise Δ
63	z _i ≠ 0-9, Δ	Correct manually, otherwise Δ
64	version ≠ 0-9, A-C, Δ	Correct manually, otherwise Δ
65	version ≠ 0-4, Δ	Correct manually, otherwise Δ
86	Minimum Quality Control Standard (MQCS) version identification	1= MQCS-1 (Original version, Feb. 1989) CMM-X 2= MQCS-2 (Version 2, March 1997) CMM-XII 3= MQCS-3 (Version 3, April 2000) SGMC-VIII 4= MQCS-4 (Version 4, June 2001) JCOMM-I 5= MQCS-5 (Version 5, July 2004) ETMC-I 6 = MQCS-6 (Version 6, November 2009) JCOMM-III) 7 = MQCS-7 (Version 7, in effect from June 2012) JCOMM-IV
87	HDG ≠ 001-360 HDG = ΔΔΔ	Correct manually and Q ₂₂ = 5, otherwise Q ₂₂ = 4 Q ₂₂ = 9
88	COG ≠ 000-360 COG = ΔΔΔ	Correct manually and Q ₂₃ = 5, otherwise Q ₂₃ = 4 Q ₂₃ = 9
89	SOG ≠ 00 - 99 SOG = ΔΔ SOG > 33	Correct manually and Q ₂₄ = 5, otherwise Q ₂₄ = 4 Q ₂₄ = 9 Correct manually and Q ₂₄ = 5, otherwise Q ₂₄ = 3
90	SLL ≠ 00-99 SLL = ΔΔ SLL > 40	Correct manually and Q ₂₅ = 5, otherwise Q ₂₅ = 4 Q ₂₅ = 9 Correct manually and Q ₂₅ = 5, otherwise Q ₂₅ = 3
91	s _L ≠ 0,1	Correct manually and Q ₂₇ = 5, otherwise Q ₂₇ = 4
92	hh ≠ 00 – 99 hh = ΔΔ hh >= 13 hh < -01	Correct manually and Q ₂₇ = 5, otherwise Q ₂₇ = 4 Q ₂₇ = 9 Correct manually and Q ₂₇ = 5, otherwise Q ₂₇ = 3 Correct manually and Q ₂₇ = 5, otherwise Q ₂₇ = 4
93	RWD ≠ 000 - 360, 999 RWD = ΔΔΔ	Correct manually and Q ₂₈ = 5, otherwise Q ₂₈ = 4 Q ₂₈ = 9
94	RWS ≠ 000 - 999 RWS = ΔΔΔ RWS > 110 kts	Correct manually and Q ₂₉ = 5, otherwise Q ₂₉ = 4 Q ₂₈ = 9 Correct manually and Q ₂₉ = 5, otherwise Q ₂₉ = 3
<u>RWD versus RWS</u>		
	RWD = 000, RWS ≠ 000	Correct manually and Q ₂₈ or Q ₂₉ = 5, otherwise Q ₂₈ = Q ₂₉ = 2
	RWD ≠ 000, RWS = 000	Correct manually and Q ₂₈ or Q ₂₉ = 5, otherwise Q ₂₈ = Q ₂₉ = 2
<u>Specifications for setting quality control Indicators Q₁ to Q₂₉</u>		

<u>Element</u>	<u>Error</u>	<u>Action</u>
0	No quality control (QC) has been performed on this element	
1	QC has been performed; element appears to be correct	
2	QC has been performed; element appears to be inconsistent with other elements	
3	QC has been performed; element appears to be doubtful	
4	QC has been performed; element appears to be erroneous	
5	The value has been changed as a result of QC	
6	The original flag is set "1" (correct) and the value will be classified by MQCS as inconsistent, dubious, erroneous or missing	
7	The original flag is set "5" (amended) and the value will be classified by MQCS as inconsistent, dubious, erroneous or missing	
8	Reserve	
9	The value of the element is missing	
