

ANNEX 1 TO RECOMMENDATION 9 (JCOMM-I)

AMENDMENTS TO THE MANUAL ON MARINE METEOROLOGICAL SERVICES (WMO-No. 558)

Delete entirely Section 6.2.2 — Exchange of sea-surface current data obtained from a ship's set and drift.

Maintain Appendix I.17 as documented metadata of the procedures previously used.

ANNEX 2 TO RECOMMENDATION 9 (JCOMM-I)

MINIMUM QUALITY CONTROL STANDARDS
(VERSION 4, JUNE 2001)

NOTE: See specification for quality control indicators Q_1 to Q_{20} at the end of this appendix. Δ = space (ASCII 32)

Element	Error	Action
1	$i_T \neq 3-5$	Correct manually otherwise = Δ
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	$Q \neq 1, 3, 5, 7$ $Q = \Delta$	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
Time sequence checks		
	Change in latitude $> 0.7^\circ/\text{hr}$	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 0.7^\circ/\text{hr}$ when latitude 00-39.9	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 1.0^\circ/\text{hr}$ when latitude 40-49.9	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 1.4^\circ/\text{hr}$ when latitude 50-59.9	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 2.0^\circ/\text{hr}$ when latitude 60-69.9	Correct manually otherwise $Q_{20} = 3$
	Change in longitude $> 2.7^\circ/\text{hr}$ when latitude 70-79.9	Correct manually otherwise $Q_{20} = 3$
9		No checking
10	$h \neq 0-9, \Delta$ $h = \Delta$	Correct manually and $Q_1 = 5$, otherwise $Q_1 = 4$ $Q_1 = 9$
11	$VV \neq 90-99, \Delta \Delta$ $VV = \Delta \Delta$	Correct manually and $Q_2 = 5$, otherwise $Q_2 = 4$ $Q_2 = 9$
12	$N \neq 0-9, \Delta, /$ $N < Nh$	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 $Q_5 = 4$

Element	Error	Action
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 $-25 > \text{TTT} > 40$ then when latitude < 45.0 TTT < -25 TTT > 40 when latitude ≥ 45.0 TTT < -25 TTT > 40	$Q_6 = 9$ $Q_6 = 4$ $Q_6 = 3$ $Q_6 = 3$ $Q_6 = 4$
TTT versus humidity parameters		
	TTT < WB (wet bulb) TTT < DP (dew point)	Correct manually and $Q_6 = 5$, otherwise $Q_6 = Q_{19} = 2$ Correct manually and $Q_6 = Q_7 = 5$, otherwise $Q_6 = Q_7 = 2$
18	$s_t \neq 0, 1, 2, 5, 6, 7, 9$	Correct manually, otherwise $Q_7 = 4$
19	DP > WB DP > TTT WB = DP = $\Delta \Delta \Delta$	Correct manually and $Q_7 = 5$, otherwise $Q_7 = Q_{19} = 2$ Correct manually and $Q_7 = 5$, otherwise $Q_7 = Q_6 = 2$ $Q_7 = 9$
20	930 > PPPP > 1050 hPa 870 > PPPP > 1070 hPa PPPP = $\Delta \Delta \Delta \Delta$	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° ww = $\Delta \Delta$, //	Correct manually and $Q_9 = 5$, otherwise $Q_9 = 4$ $Q_9 = 9$
22, 23	W_1 or $W_2 = 7$ and latitude < 20° $W_1 < W_2$ $W_1 = W_2 = \Delta$, /	Correct manually and $Q_9 = 5$, otherwise $Q_9 = 4$ Correct manually and $Q_9 = 5$, otherwise $Q_9 = 2$ $Q_9 = 9$
24-27	$N = 0$ and $N_h C_L C_M C_H \neq 0$ $N = \Delta$ and $N_h C_L C_M C_H \neq \Delta$ $N = 9$ and not ($N_h = 9$ and $C_L C_M C_H = \Delta$) $N = \Delta$, / and $N_h C_L C_M C_H = \Delta$, /	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 $Q_3 = 2$ $Q_3 = 9$
28	$s_n \neq 0, 1$	Correct manually otherwise $Q_{10} = 4$
29	$T_w T_w T_w = \Delta$, /// if $-2.0 > T_w T_w T_w > 37.0$ then when latitude < 45.0 $T_w T_w T_w < -2.0$ $T_w T_w T_w > 37.0$ when latitude ≥ 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 $\neq 0-7$, Δ	Correct manually, make it Δ if not correctable
31	Indicator $\neq 0-9$, Δ	Correct manually, make it Δ if not correctable
32	$20 < P_w P_w < 30$ $P_w P_w \geq 30$ and $\neq 99$ $P_w P_w = \Delta \Delta$, //	$Q_{11} = 3$ $Q_{11} = 4$ $Q_{11} = 9$
33	$35 < H_w H_w < 50$ $H_w H_w \geq 50$ $H_w H_w = \Delta \Delta$, //	$Q_{12} = 3$ $Q_{12} = 4$ $Q_{12} = 9$
34	$d_{w1} d_{w1} \neq 00-36, 99$, $\Delta \Delta$ $\text{swell}_1 = \text{swell}_2 = \Delta$	Correct manually and $Q_{13} = 5$, otherwise $Q_{13} = 4$ $Q_{13} = 9$
35	$25 < P_{w1} P_{w1} < 30$ $P_{w1} P_{w1} \geq 30$ and $\neq 99$	$Q_{13} = 3$ $Q_{13} = 4$

Element	Error	Action
36	$35 < H_{w1}H_{w1} < 50$	$Q_{13} = 3$
	$H_{w1}H_{w1} \geq 50$	$Q_{13} = 4$
37	$I_s \neq 1-5, \Delta$	Correct manually, otherwise Δ
38	$E_sE_s \neq 00-99, \Delta\Delta$	Correct manually, otherwise $\Delta\Delta$
39	$R_s \neq 0-4, \Delta$	Correct manually, otherwise Δ
40	Source $\neq 0-6$	Correct manually, otherwise Δ
41	Platform $\neq 0-9$	Correct manually, otherwise Δ
42	No call sign	Insert manually, mandatory entry
43	No country code	Insert manually
44		No quality control
45	$Q \neq 0-6, 9$	Correct manually, otherwise Δ
46	$i_x \neq 1-7$	Correct manually, otherwise Δ
47	$i_R = 0-2$ and $RRR = 000, ///, \Delta\Delta\Delta$	Correct manually, otherwise $Q_{14} = 4$
	$i_R = 3$ and $RRR \neq 000, ///, \Delta\Delta\Delta$	Correct manually, otherwise $Q_{14} = 2$
	$i_R = 4$ and $RRR \neq ///, \Delta\Delta\Delta$	Correct manually, otherwise $Q_{14} = 2$
	$i_R \neq 0-4$	Correct manually, otherwise $Q_{14} = 4$
48	$RRR \neq 001-999$ and $i_R = 1, 2$	Correct manually and $Q_{14} = 5$, otherwise $Q_{14} = 2$
49	$t_R \neq 0-9$	Correct manually and $Q_{14} = 5$, otherwise $Q_{14} = 4$
50	$s_w \neq 0, 1, 2, 5, 6, 7, 9$	Correct manually, otherwise $Q_{19} = 4$
51	$WB < DP$	Correct manually and $Q_{19} = 5$, otherwise $Q_{19} = Q_7 = 2$
	$WB = ///, \Delta\Delta\Delta$	$Q_{19} = 9$
	$WB > TTT$	Correct manually and $Q_{19} = 5$, otherwise $Q_{19} = Q_6 = 2$
52	$a \neq 0-8, \Delta$	Correct manually and $Q_{15} = 5$, otherwise $Q_{15} = 4$
	$a = 4$ and $ppp \neq 000$	Correct manually and Q_{15} or $Q_{16} = 5$, otherwise $Q_{15} = Q_{16} = 2$
	$a = 1, 2, 3, 6, 7, 8$ and $ppp = 0$	Correct manually and Q_{15} or $Q_{16} = 5$, otherwise $Q_{15} = Q_{16} = 2$
	$a = \Delta$	$Q_{15} = 9$
53	$250 \geq ppp > 150$	Correct manually and $Q_{16} = 5$, otherwise $Q_{16} = 3$
	$ppp > 250$	Correct manually and $Q_{16} = 5$ otherwise $Q_{16} = 4$
	$ppp = \Delta\Delta\Delta$	$Q_{16} = 9$
54	$D_s \neq 0-9, \Delta, /$	Correct manually and $Q_{17} = 5$, otherwise $Q_{17} = 4$
	$D_s = \Delta, /$	$Q_{17} = 9$
55	$V_s \neq 0-9, \Delta, /$	Correct manually and $Q_{18} = 5$, otherwise $Q_{18} = 4$
	$V_s = \Delta, /$	$Q_{18} = 9$
56	$d_{w2}d_{w2} \neq 00-36, 99$	Correct manually and $Q_{13} = 5$, otherwise $Q_{13} = 4$
57	$25 < P_{w2}P_{w2} < 30$	$Q_{13} = 3$
	$P_{w2}P_{w2} \geq 30$ and $\neq 99$	$Q_{13} = 4$
58	$35 < H_{w2}H_{w2} < 50$	$Q_{13} = 3$
	$H_{w2}H_{w2} \geq 50$	$Q_{13} = 4$
59	$c_1 \neq 0-9, \Delta, /$	Correct manually, otherwise Δ
60	$s_1 \neq 0-9, \Delta, /$	Correct manually, otherwise Δ
61	$b_1 \neq 0-9, \Delta, /$	Correct manually, otherwise Δ
62	$D_1 \neq 0-9, \Delta, /$	Correct manually, otherwise Δ
63	$z_1 \neq 0-9, \Delta, /$	Correct manually, otherwise Δ
86	Minimum quality control (MQC) standards version identification	1 = MQC-I (Original version) 2 = MQC-II (Version 2, May 1996) 3 = MQC-III (Version 3, May 2000) 4 = Present version

Specifications for quality control indicators Q_1 to Q_{20}

- | | |
|---|---|
| 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 | Reserved for GCC |
| 7 | Reserved for GCC |
| 8 | Reserve |
| 9 | The value of the element is missing |