DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

A3WE Revision 19 BOEING 727 Series 727-100 Series 727-100C Series 727-200 Series 727-200F Series

February 20, 1991

TYPE CERTIFICATE DATA SHEET A3WE

This data sheet, which is part of Type Certificate No. A3WE, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder: The Boeing Company

P.O. Box 3707

Seattle, Washington 98124

I. Model 727, 727-100 (approved December 24, 1963) and 727C and 727-100C (approved January 13, 1966) Transport Aircraft

Engines 3 Pratt and Whitney JT8D-1, JT8D-1A, JT8D-1B, JT8D-7, JT8D-7A, JT8D-7B,

JT8D-9, JT8D-9A, JT8D-11, JT8D-15, or JT8D-17 Turbofans (see -11, -15, and

-17 ratings under 727-200). (For engine intermix, see Note 9).

Fuel See Note 5.

Engine Ratings: JT8D-1, -1A, -1B,

Takeoff static thrust, standard day, sea level conditions (5 min) lb. 14,000 14,500

Maximum continuous static thrust, standard day, sea level conditions lb. 12,600 12,600

For engine operating limits see TC Data Sheet No. E2EA or the FAA Approved Airplane

Flight Manual.

Thrust setting: The appropriate EPR thrust setting curve (EPR or PT 7), in the FAA Approved Airplane

Flight Manual or AFM Appendices must be used for control of engine thrust.

Airspeed limits: VMO/MMO - 390/0.9 (KEAS), Dual Mode 390/350/0.88 (KEAS)

For other airspeed limits see the appropriate FAA approved Airplane Flight Manual.

C.G. Range See the appropriate FAA Approved Airplane Flight Manual.

Maximum Weights: See the appropriate FAA Approved Airplane Flight Manual.

 Model
 Eligible Serial Numbers:

 727-11
 19242

 727-14
 18908-18912, 18990, 19398

 727-17
 20327, 20328, 20512, 20513

 727-21
 18992-18999, 19005-19007, 19035-19038, 19257-19262

 727-21C
 19134-19137

Page No.	1	2	3	4	5	6	7	8	9
Rev. No.	19	19	19	19	19	19	19	19	19

<u>I. Model 727, 727-100 and 727C and 727-100C</u> (cont'd)

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Maximum Weights: (cont'd)
                              Eligible Serial Numbers:
            Model
            727-22
                              18293-18332, 18791, 18848, 18849, 18851-18857, 18859-18872, 19079-19088,
                              19140-19154
            727-22C
                              19089-19103, 19191-19205, 19805, 19806, 19890-19895
            727-23
                              18426-18450, 18900-18901, 19128, 19132, 19180-19184, 19385-19390, 19428-19432,
                              20044-20046
            727-24C
                              19524-19528
            727-25
                              18252-18291, 18965-18974
            727-25C
                              19298-19302, 19356-19360, 19717-19722, 19850-19858
            727-27
                              19499-19501, 19534, 19535
            727-27C
                              19109-19120, 19246, 19497, 19532, 19533
            727-29
                              19400, 19401
            727-29C
                              19402, 19403, 19987
            727-30
                              18360-18371, 18933-18936
            727-30C
                              19008-19012, 19310-19314, 19793
            727-31
                              18569-18578, 18750-18755, 18902-18907, 19228, 20112-20115
            727-31C
                              19229-19234
            727-35
                              18811-18817, 18845-18847, 19165-19167, 19833-19835
            727-41
                              20422-20425
            727-44
                              18892-18896, 19318
            727-44C
                              19319, 20475, 20476
            727-46
                              18874-18879, 19279-19283, 20078
            727-51
                              18797-18807, 18942-18944, 19121-19126
            727-51C
                              18897-18899, 18945-18947, 19206, 19287-19290
            727-59
                              19127, 19303, 19662, 19663
            727-61
                              19176
                              19244, 19245
            727-62C
            727-63
                              19846
            727-64
                              19255, 19256, 19427
            727-76
                              18741, 18742, 18843, 19254, 20228, 20371
            727-77
                              18743, 18744, 18844, 19253
            727-77C
                              20278, 20370
            727-78
                              18794-18796
            727-81
                              18821-18823, 18919, 18920, 18951, 18952, 19557
            727-82
                              19404-19406, 20489
            727-82C
                              19597, 19968
            727-86
                              19171, 19172, 19816, 19817
            727-89
                              19138, 19139
            727-90C
                              19169, 19170, 19728
            727-92C
                              19173, 19174
            727-95
                              18850, 18858, 19249-19252, 19595, 19596, 19836, 19837
            727-108C
                              19503
            727-109
                              19399, 19520
            727-109C
                              20111
            727-113C
                              19690, 20343
            727-114
                              19815
            727-116
                              19811, 19812, 20217
            727-116C
                              19813, 19814
            727-121C
                              19818, 19819
            727-123
                              19838, 19839
            727-134
                              19691, 19692
            727-134C
                              20042
            727-151C
                              19867, 19868
            727-155C
                              19618, 19619
            727-162
                              19243
            727-171C
                              19859, 19860
            727-172C
                              19665, 19666, 19807, 19808
            727-173C
                              19504-19509
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<u>I. Model 727, 727-100 and 727C and 727-100C</u> (cont'd)

Maximum Weights: (cont'd)

Eligible Serial Numbers: Model 727-180C 19873, 19874 727-185C 19826, 19827 727-191 19391-19395 727-193 19304, 19305, 19620 727-1A0 20279 727-1A7C 20143 727-1F8 20421 727-1H2 20533 727-1J1 20426 727-C3 20418-20420

Minimum crew When in the mixed passenger/cargo configuration, one flight attendant is required in the

passenger compartment (review Case No. 5 dated July 17, 1963).

Maximum passengers 119

129 under provisions of Exemption No. 255.

131 under provisions of Exemption No. 255 and if compliance with FAR 25.2 is shown.

Maximum Baggage/Cargo: See appropriate Weight and Balance Control and Loading Manual.

Fuel and Oil Capacities: See appropriate Weight and Balance Control and Loading Manual.

Minimum Required Fuel: See appropriate FAA Approved Airplane Flight Manual.

Maximum Operating Altitude 42,000 feet

Datum All production stations coincide numerically with arms. Horizontal distance of datum to

nose gear jack point is 303.2 inches.

MAC 180.7 inches (L.E. of MAC is at 860.2 inches)

Certification basis CAR 4b, dated December 31, 1953, Amendments 4b-1 through 4b-11 thereto:

Special CAR SR-422B: Special Conditions listed in Attachment "A" of FAA letter to Boeing dated October 27, 1961, and FAA letter to Boeing dated June 12, 1963.

Exemptions from CAR 4b:

727, 727-100, 727C and 727-100C:

Exemption No. 255 - Exemption from CAR 4b.362(c)(1) - allows 131 passengers.

727 and 727-100:

Exemption No. 1834 - Exemption from CAR 4b.356(b) - allow removal of aisle strap from 727 and 727-100 incorporating a Type I emergency exit on each side of the fuselage near the aft end of the passenger cabin and an inflatable evacuation slide

at each side exit.

727C and 727-100C

Exemption No. 348 - Exemption from CAR 4b.362(c)(1) - allow 79 passengers

with main deck cargo (one or two cargo pallets).

Exemption No. 348 - Exemption from CAR 4b.362(c)(1) - allow 56 passengers

with main deck (three or four cargo pallets).

Other Information: See "Data Pertinent to All Models."

II. Model 727-200 (approved November 29, 1967) Transport Aircraft

3 Pratt and Whitney JT8D-1, JT8D-1A, JT8D-1B, JT8D-7, JT8D-7A, JT8D-7B, Engines

JT8D-9, JT8D-9A, JT8D-11, JT8D-15, JT8D-15A, JT8D-17, JT8D-17A, or

JT8D-17R, JT8D-17AR turbofans. (For engine intermix, see Note 9)

Fuel See Note 5.

JATO: 6 Aerojet 15KS-1000-A1 thrust augmentation units, approved for use with Pratt and

Whitney JT8D-11, JT8D-15, JT8D-15A, and JT8D-17, JT8D-17A turbofans with

15° flaps.

Engine ratings

<i>6</i> ·	JT8D-11	JT8D-15, -15A	JT8D-17, -17A	JT8D-17R*, -17AR
Takeoff static thrust, standard day, sea level conditions	15.000	15.500	15,000	17,400
(5 min.) lb. Maximum continuous static	15,000	15,500	16,000	17,400
thrust standard day, sea level conditions lb.	12.600	13,750	15.200	15.200
Conditions to.	12,000	13,730	13,200	13,200

^{*}A takeoff thrust setting limited to the alternate takeoff rating of 16,400 lbs. static thrust at sea level, flat rated to 77°F ambient temperature has been established for normal takeoff operation. When the automatic reset mechanism in the fuel control is utilized, operation to the alternate takeoff operating limits will prevent the engine from exceeding the takeoff rating operating limits when the reset mechanism is actuated.

NOTE: For engine operating limitations see engine T.C. data sheet No. E2EA, or the FAA Approved Airplane Flight Manual.

Thrust setting The appropriate EPR thrust setting curve (EPR or PT 7), in the FAA Approved Airplane

Flight Manual or AFM Appendices must be used for control of engine thrust.

Airspeed limits VMO/MMO Single mode 390/0.9 (KEAS) - Dual Mode for 191,000 lb. GW or less

390/350/.9(KEAS) - Greater than 191,000 lbs. GW 390/350/.88(KEAS) For other

airspeed limits see the appropriate FAA Approved Airplane Flight Manual.

See the appropriate FAA Approved Airplane Flight Manual. C.G. range

Maximum weights See the appropriate FAA Approved Airplane Flight Manual.

<u>Model</u>	Eligible Serial Numbers
727-208	22295
727-212	21347-21349, 21458-21460, 21945-21948
727-214	19683-19689, 20161-20169, 20366, 20367, 20678, 20679, 20875, 21512, 21513,
	21691, 21692, 21958
727-217	21055, 21056
727-221	22535-22542
727-222	19537-19542, 19899-19915, 20037-20041, 21398-21425, 21557-21574, 21892-21921
727-223	19475-19495, 19700-19704, 20180-20193, 20984-20997, 21084-21090, 21369-21374,
	21382-21391, 21519-21527, 22006-22015, 22459-22470
727-224	19510-19514, 19797-19804, 20243-20245, 20384-20388, 20463-20465, 20654-20668,
	22448-22452
727-225	20144-20155, 20379-20383, 20415, 20416, 20441-20448, 20614-20628, 20823, 20824,
	21288-21293, 21449-21453, 21578-21581, 21854-21861, 22432-22441, 22548-22557,
	22559
727-227	20392-20394, 20608-20613, 20729-20738, 20772-20775, 20837-20840, 21041-21045,
	21118, 21119, 21242-21249, 21363-21366, 21394, 21395, 21461-21466, 21488-21493,
	21529-21532, 21669, 21670, 21996-22005, 22091, 22092
727-228	19543-19546, 19861-19865, 22075, 20202-20204, 20409-20411, 20470, 20538-20540,
	22081-22085, 22287-22290

II. Model 727-200 (cont'd)	
Maximum weights (cont'd)	
727-230	20430, 20431, 20525, 20526, 20560, 20673-20677, 20757, 20788-20792, 20899-20906,
121 230	20918, 21113, 21114, 21442, 21618-21623
727-231	19558-19565, 19828-19832, 20047-20055, 20098, 20099, 20232-20234, 20306-20310,
	20460-20462, 20490-20491, 20843-20859, 21628-21634, 21967-21969, 21983-21989
727-232	20634-20647, 20743-20756, 20860-20867, 21018-21020, 21060-21062, 21074-21077,
	21142-21153, 21222, 21223, 21232, 21233, 21256-21259, 21271-21274, 21303-21315,
	21430-21433, 21469-21472, 21582-21587, 21702, 21703, 21813, 21814, 22045-22049,
	22073, 22076, 22385-22387, 22391, 22392, 22493, 22494, 22677
727-233	20932-20942, 21100-21102, 21624-21626, 21671-21675, 22035-22042, 22345-22350,
	22621-22623
727-235	19450-19474
727-243	21264-21270, 21661-21664, 22052, 22053, 22165-22168, 22702
727-247	20263-20268, 20579-20581, 20648, 20649, 20868-20874, 21057-21059, 21327-21331,
	21392, 21393, 21481-21485, 21697-21701, 22108-22112, 22532-22534
727-251	19970-19985, 20289-20296, 21154-21161, 21322-21325, 21375-21379, 21503-21506,
	21788, 21789, 22152-22155, 22543, 22544
727-254	20250-20252, 20437, 20438
727-256	20592-20607, 20811-20821, 20974, 20975, 21609-21611, 21777-21781
727-259	22474-22476
727-260	21978, 21979, 22759
727-264	20432-20434, 20709, 20710, 20780, 20787, 20894-20896, 21071, 21072, 21577, 21617,
	21637, 21638, 21836-21838, 22156-22158, 22409-22414, 22661-22664, 22676,
	22982-22984, 23014
727-269	22359-22361, 22763
727-270	21197-21199, 22261, 22262, 23052
727-276	20552-20555, 20950, 20951, 21171, 21479, 21646, 21696, 22017, 22069
727-277	20548-20551, 20978, 20979, 21178, 21480, 21647, 21695, 22016, 22068, 22641-22644
727-281	20285, 20286, 20435, 20436, 20466-20469, 20509, 20510, 20568-20573, 20724-20728,
	20876-20878, 21455, 21456, 21474
727-282	20972, 20973, 21949, 21950, 22430
727-284	19536, 20003-20006, 20201
727-286	20945-20947, 21078, 21079
727-287	21688-21690, 22603-22606
727-290	21510, 21511, 22146, 22147
727-291	19991-19995
727-294	21203-21205, 22043, 22044
727-295	19444-19449, 20139-20141, 20248, 20249
727-2A1	21341-21346, 21600, 21601
727-2A7	20240, 20241
727-2B6	20304, 20471, 20705, 21068, 21297-21299, 22377
727-2B7 727-2D3	20302, 20303, 21953, 21954, 22162-22164 20885, 20886, 21021, 22268-22271
727-2D3 727-2D4	21849, 21850
727-2D4 727-2D6	20472, 20473, 20955, 21053, 21210, 21284, 22372-22375, 22765
727-2B0 727-2F2	20980-20983, 21260, 21603, 22992, 22993, 22998, 22999
727-2F9	21426, 21427
727-2H3	20545, 20739, 20822, 20948, 21179, 21234, 21235, 21318-21320
727-2H9	20930, 20931, 21037-21039, 22393, 22394, 22665, 22666
727-2J0	21105-21108
727-2J1	21036
727-2J4	20764-20766, 21438, 21676, 22079, 22080, 22574
727-2J7	20706, 20707, 20879, 20880
727-2K3	21082, 21494, 21495, 22770
727-2K5	21851-21853
727-2 K 3	21010
727-2L5	21050-21052, 21229, 21230, 21332, 21333, 21539, 21540
727-2L8	21040, 21080
727-2M1	21091
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II. Model 727-200 (cont'd)

Maximum weights (cont'd)

727-2M7 21200-21202, 21457, 21502, 21655, 21656, 21741, 21742, 21823, 21824, 21951, 21952

727-2N6 22825

727-2N8 21842, 21844-21847

727-2P1 21595 727-2Q4 22424, 22425 727-2Q6 21971, 21972 727-2Q8 21608, 21826 727-2Q9 21930, 21931

727-2R1 21636

727-287 22019-22021, 22344, 22490-22492

727-2T3 22078 727-2U5 22362 727-2X3 22608, 22609 727-2X8 22687 727-2Y4 22968

Maximum passengers: 170

189 if compliance with FAR 25.2(b), (c), and (d) is shown.

Maximum baggage/cargo: See appropriate Weight and Balance Control and Loading Manual.

Fuel and oil capacities: See appropriate Weight and Balance Control and Loading Manual (for fuel and

oil capacities, including undumpable and unusable amounts).

Minimum required fuel: See appropriate FAA Approved Airplane Flight Manual.

Maximum operating altitude: 42,000 feet

Datum: See appropriate Weight and Balance Control and Loading Manual. Horizontal

distance of datum to nose gear jack point is 183.2 inches.

MAC: 180.7 inches (L.E. of MAC is 860.2 inches).

Certification basis CAR 4b, dated December 31, 1953, Amendments 4b-1 through 4b-11 thereto:

Special CAR SR-422B; Special Conditions set forth in FAA letter to Boeing dated February 2, 1967, as revised by FAA letters to Boeing dated June 20, 1967, September 1 and 13, 1967; FAR Amendment 25-15; FAR Amendment 36-2.

Special Condition 25-64-NW-2 issued August 6, 1975, and Amendment 1 thereto issued November 16, 1976, applies to Model 727-200 series airplanes equipped with an operative automatic takeoff thrust control system (called by Boeing an "Automatic Performance Reserve" (APR) system) issued an original airworthiness

certificate before December 3, 1980.

Special Condition 25-64-NW-2, Amendments 2 and 3 thereon, issued 5/18/79, and 12/12/79, respectively, apply to Boeing Model 727-200 series airplanes equipped with an operative automatic takeoff thrust control (ATTCS) system and issued an

original airworthiness certificate on and after 12/3/80.

Exemptions from CAR 4b: Exemption 1834 - Exemption from CAR 4b.356(b) - allow removal of aisle strap from 727-200 incorporating a Type I emergency exit on each side of the fuselage near the aft end of the passenger cabin and an inflatable

evacuation slide at each such exit.

Other information: See "Data Pertinent to All Models."

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III. Model 727-200F (approved June 22, 1983) Transport Aircraft

Engines 3 Pratt and Whitney JT8D-17A turbofans.

Fuel See Note 5.

JATO None

Engine ratings: JT8D-17A

Takeoff static thrust, standard day, sea level

conditions (5 min.) lb.

Maximum continuous static thrust standard day,

sea level condition lb. 15,200

NOTE: For engine operating limitations see engine TC Data Sheet No. E2EA,

or the FAA Approved Airplane Flight Manual.

Thrust setting The appropriate EPR thrust setting curve (EPR or PT 7), in the FAA Approved

Airplane Flight Manual or AFM Appendices must be used for control of engine thrust.

Airspeed limits VMO/MMO Single mode 350/0.88 (KEAS)

For other airspeed limits see the appropriate FAA Approved Airplane Flight Manual.

C.G. Range See the appropriate FAA Approved Airplane Flight Manual.

Maximum weights See the appropriate FAA Approved Airplane Flight Manual.

<u>Model</u> <u>Eligible Serial Numbers</u>:

727-2S2F 22924-22938

Maximum passengers None

Maximum baggage/cargo See appropriate Weight and Balance Control and Loading Manual.

Fuel and oil capacities See appropriate Weight and Balance Control and Loading Manual (for fuel and oil

capacities, including undumpable and unusable amounts).

Minimum required fuel See appropriate FAA Approved Airplane Flight Manual.

Maximum operating altitude 42,000 feet

Datum See appropriate Weight and Balance Control and Loading Manual. Horizontal

distance of datum to nose gear jack point is 183.2 inches.

MAC 180.7 inches (L.E. of MAC is 860.2 inches.)

Certification basis CAR 4b, dated December 31, 1953, Amendments 4b-1 through 4b-11 thereto:

Special CAR SR-422B; Special Conditions set forth in FAA letter to Boeing dated February 2, 1967, as revised by FAA letters to Boeing dated June 20, 1967, September 1 and 13, 1967; FAR Amendment 25-15; FAR 25.723 (Amendment

25-46); FAR 36.2 (Amendment 36-10).

Special Condition 25-64-NW-2, Amendments 2 and 3 thereon, issued 5/18/79, and 12/12/79, respectively, apply to Boeing Model 727-200 series airplanes equipped with an operative automatic takeoff thrust control (ATTCS) system and issued an

original airworthiness certificate on and after 12/3/80.

Equivalent Safety Findings exist with respect to CAR 4b.651(d)(3)(i) and

CAR 4b.651(d)(3)(iii).

Other information See "Data Pertinent to All Models."

Data Pertinent to All Models

Minimum crew for all flights Three (3) pilot, copilot, and flight engineer

Leveling means A plumb bob attachment and leveling provision scale are provided in the left wheel

well on 727/727-100 and 727C/727-100C airplanes, and in the right wheel well on

727-200 airplanes.

Control surface movements To insure proper operation of airplane, the movement of the various control surfaces

must be carefully controlled by proper rigging of the flight control systems. The airplane must therefore be rigged in accordance with the following FAA-approved data:

Roeing	Drawing	Numbers
DOCHIE	LHAWINS	Numbers

<u>727-200</u>	727/727-100 and 727C/727-100C	
65-56801	65-20801 Control Installation	Aileron and Spoiler
65-56802	65-20802 Control Installation	Elevator
65-56803	65-20803 Control Installation	Rudder
65-56804	65-20804 Control Installation	Stabilizer Trim
65-56805	65-20805 Control Installation	Aileron Trim
65-56806	65-20806 Control Installation	Rudder Trim
65-56808	65-20808 Control Installation	Wing Flap
65-56816	65-20816 Control Installation	Speed Flap

Certification basis See Section I or Section II, as appropriate.

Compliance with the following optional requirements has been established:

CAR 4b.361, "Ditching Provision" CAR 4b.640, "Ice Protection"

Production basis Production Certificate Number 700.

Required equipment The basic required equipment as prescribed in the applicable airworthiness regulations

(see certification basis) must be installed in the aircraft for certification. The required equipment is included in the type design data. See appropriate Weight and Balance

Manuals and Note 8 for replacement passenger seats.

Service information Boeing Report D6-4062, "Structural Repair Manual" is FAA-approved. Service

bulletins and other service information when FAA-approved, will carry a statement

to that effect.

NOTE 1. Current weight and balance document, including list of equipment included in certificated weight empty and loading instructions, must be in each aircraft at the time of original certification and at all times thereafter,

except in the case of operators having an approved weight control system.

NOTE 2. The aircraft must be operated in accordance with the FAA Approved Airplane Flight Manual.

NOTE 3. Reserved.

NOTE 4. (a) The fuel controls approved for use with these engines are Hamilton Standard Models JFC 60-1 (JT8D-1, -1A, -7, -7A, and -7B), JFC 60-2 (JT8D-9, -11, -15, -15A, and -17, -17A), and JFC 60-3

(JT8D-17R, 17AR).

(b) The anti-icing system airflow regulating valve approved for use with this engine is Pratt & Whitney Part No. 480888. P&WA Orifice Plate Part No. 528226 may be used in lieu of the valve.

NOTE 5. (a) JP-1, JP-4 and JP-5 fuels conforming to P&WA Specification No. 522 and later revisions may be used separately or mixed in any proportions without adversely affecting the engine operation or power output. No fuel control adjustment is required when switching fuel types.

(b) Phillips anti-icing fuel additive PFA-55MB may be used if concentration delivered to airplane does not exceed 0.15% by volume. No fuel system anti-icing credit is allowed.

NOTE 6. A list of the FAA-approved Interior Arrangement Drawings for all models of the Boeing 727 aircraft is contained in Boeing Document D6-6903.

NOTE 7. Reserved.

NOTE 8. The airplane design vertical load factors exceed TSO C-39 requirements at all fuselage stations for 727, 727-100, 727C, and 727-100C models and aft fuselage station 950D for 727-200 models: therefore, replacement passenger seats must be evaluated for compliance with CAR 4b.358(c) accordingly.

NOTE 9. Combinations of engines which can be intermixed and their respective limitations are covered in the FAA Approved Flight Manuals or AFM Appendices.

NOTE 10. Noise:

Model 727, 727-100, 727C, 727-100C, 727-200 and 727-200F. Airplanes of these models that have not had any flight time before December 1, 1973, and are issued an original U.S. Standard Airworthiness Certificate after December 1, 1973, must show compliance with FAR Part 36. Configurations that meet the noise requirements are shown in Appendix 33 of the FAA Approved Airplane Flight Manual for the Model 727, 727-100, 727C, and 727-100C, and in Appendix 12 of the FAA Approved Flight Manual for the Model 727-200 and 727-200F.

<u>Model 727-200</u>. Noise characteristics, approved type design configurations, including required acoustical treatment and certification status of Model 727-200 airplanes operated at brake release gross weight from 172,500 pounds to a maximum of 203,100 pounds approved before December 1, 1973, are shown in the FAA Approved Model 727-200 Airplane Flight Manual.

NOTE 11. There are service bulletins which call for modifications which do not comply with the Type Certification Basis. These service bulletins are listed in Boeing Document D6-9825 titles "Service Bulletin 727." The records of airplanes imported into the USA should be reviewed to be sure that further modifications are accomplished to ensure compliance, if the non FAA-approved service bulletins modifications have been installed.

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