Civil Aviation Authority
United Kingdom

TYPE-CERTIFICATE DATA SHEET

UK.TC.A.00061

for
Cessna 172 Series (Skyhawk)
Type Certificate Holder
Textron Aviation Inc.

One Cessna Boulevard
Wichita, Kansas 67215
USA

For models:	172R
	172S
Issue:	1
Date of issue:	23 January 2023

CONTENT

SECTION 1: GENERAL, Model 172R Type Design

A. General

This Type-Certificate Data Sheet (TCDS) is the concise definition of the type-certificated product accepted and or approved by the CAA in the UK for the affected types and models.
This TCDS includes:

a) Details of the type design that affect the TCDS that have been approved or accepted by the CAA in the UK since 01 January 2021.
b) Details of the type design that affected the TCDS and were approved or accepted by EASA before 01 January 2021, and were incorporated into EASA TCDS EASA.IM.A.051 at Issue 9 dated 29 October 2020 and are therefore accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement.

1. a) Type: b) Variant:	Model 172R N/A
2. Airworthiness Category:	Normal Category Utility Category
3. Type Certificate Holder:	Textron Aviation Inc. One Cessna Boulevard P.O. Box 7704 Wichita, Kansas 67277 USA
4. Manufacturer:	Textron Aviation Inc. One Cessna Boulevard P.O. Box 7704 Wichita, Kansas 67277 USA
5. JAA Certification Application Date:	N/A
6. JAA recommendation Date:	N/A
7. EASA Type Certification Date:	28 September 2003

B. Certification Basis

1. Reference Date for determining the applicable requirements:	FAA application date 25 September 1995
2. (Reserved)	
3. (Reserved)	
4. Certification Basis:	As defined in FAA TCDS 3A12
5. Airworthiness Requirements:	FAR 23 as defined in FAA TCDS 3A12, and JAR-23, Change 1, plus Special Conditions as defined in Garmin G-1000 EASA CRI A-

	01, Issue 5, dated 17 March 2008 for the Nav III Avionics option.
6. Requirements elected to comply:	None
7. EASA Special Conditions:	As defined in CRI A-01 for the Nav III Avionics option only.
8. EASA Exemptions:	None
9. EASA Equivalent Safety Findings:	None
10. Environmental Protection Standards Noise	ICAO Annex 16, Volume I, Chapter 10 (see TCDSN UK.TC.A.00061 for details)

C. Technical Characteristics and Operational Limitations

1. Type Design Definition:	Master Drawing List, Document No.172-96-005, latest FAA Approved Revision.
2. Description:	Single-engine, all-metal, four-place, high-wing airplane, fixed tricycle landing gear.
3. Equipment:	Equipment list, Pilot's Operating Handbooks 172RPHUS00 or 172RPHAUS00 (Garmin) or 172RPHBUS00 (GFC-700), latest revision.

4. Dimensions:

Span	10.9982 m	(36.08 ft.)
Length	8.20522 m	(26.92 ft.)
Height	2.35661 m	(7.73 ft.)
Wing Area	16.3045 m²	(175.5 ft²)

5. Engines: Lycoming IO-360-L2A, Rated at 160 hp

When modified by Cessna Modification Kit MK172-72-01 (See Note 4)
Lycoming IO-360-L2A, Rated at 180 hp

The EASA Engine Type Certification standard includes that of FAA TC 1E10, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003, Other standards conforming to TC/TCDS standards Certificated by individual EU member States prior to 28 September 2003 are also acceptable.

5.1 Engine Limits: For all operations: 2400 RPM (160 hp)

For power-plants limits refer to Owners Manual, No. 172RPHUS00, 172RPH180US00 or 172RPHAUS00 (Garmin) or 172RPHBUS00 (GFC-700), latest revision.

6. Propellers

a. (1) McCauley Propellers. Model Number 1C235/LFA7570

The EASA Propeller Type Certification standard includes that of FAA TC P12EA, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003, Other standards conforming to TC/TCDS standards Certificated by individual EU member States prior to 28 September 2003 are also acceptable.

Maximum Diameter: Not over 1.9050 m (75 in.)
Minimum Diameter: Not under 1.8796 m (74 in.)
Number of Blades: 2
No operating limitations to 2360 RPM

(2) Spinner: Drawing No. 0550236

b. <u>When Modified by Cessna Modification Kit MK172-72-01 (SEE NOTE 4)</u>

(1) McCauley Model 1A170E/JHA7660
(2) Spinner: Drawing No. 0550236

The EASA Propeller Type Certification standard includes that of FAA TC P-857, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003, Other standards conforming to TC/TCDS standards Certificated by individual EU member States prior to 28 September 2003 are also acceptable.

Propeller Limits

Static RPM at full throttle: Not over 2165 RPM; Not under 2065
No Additional Tolerance Permitted
Diameter: Not over 1.905 m (75 in.); not under 1.8796 m (74 in.)

<u>When Modified by Cessna Modification Kit MK172-72-01 (See NOTE 4)</u>
Static RPM at full throttle: not over 2.400; not under 2.300

No Additional Tolerance Permitted
Diameter: Not over 76 inches; not under 75 inches

7. Fluids:

7.1 Fuel: 100/100LL minimum grade aviation gasoline

7.2 Oil: Engine: MIL-L-6082 or SAE J1966 Aviation Grade Straight Mineral Oil or MIL-L-22851 or SAE J1899 Aviation Grade Ashless Dispersant Oil. Oil conforming to Textron Lycoming Service Instruction No. 1014, latest revision, must be used after first 50 hours or once oil consumption has stabilized.

7.3 Coolant: Not Applicable

8. Fluid capacities:

8.1 Fuel:
Total: 211.983 liters (56 US Gallons)
Usable: 200.627 liters (53 US Gallons)
[Two 105.992 liters (28 US Gallon) tanks in wings at 1.2192 m (48.0 in.) aft of datum]
See NOTE 1 for data on unusable fuel.

8.2 Oil: 7.57082 liters (2.0 gal) at 0.33274 m (13.1 in.) forward of datum
3.31224 liters (3.5 qts) usable.

When modified by Cessna Modification Kit MK172-72-01 (See NOTE 4)
7.57082 liters (2.0 gal) at 0.33274 m (13.1 in) forward of datum
2.83906 liters (3.0 qts) usable.

9. Air Speeds:

a. Airspeed Limits

Maneuvering	99 Knots IAS	(97 Knots CAS)
Max Structural Cruising	129 Knots IAS	(126 Knots CAS)
Never Exceed	163 Knots IAS	(160 Knots CAS)
Flaps Extended	85 Knots IAS	(84 Knots CAS)

When Modified by Cessna Modification Kit MK172-72-01 (See NOTE 4)

Maneuvering	105 Knots IAS	(102 Knots CAS)
Max Structural Cruising	129 Knots IAS	(126 Knots CAS)
Never Exceed	163 Knots IAS	(160 Knots CAS)
Flaps Extended	85 Knots IAS	(84 Knots CAS)

10. Maximum Operating Altitude: With a portable oxygen system, the aircraft is limited to 5334 m (17500 ft MSL). Oxygen must be provided as required by the operating rules. Only portable oxygen systems listed in the AFM, document number 11934-002, 11934-003, or later FAA approved revisions, are allowed

11. Operational Capability: VFR Day and Night
IFR Day and Night

12. Maximum Masses:

When using POH.AFM 172RPHUS-00 or later rev or 172RPHAUS-00 thru 03

Normal Category	
Maximum Ramp	1114,48 kg (2.457 lbs)
Maximum Takeoff and Landing	1111,30 kg (2.450 lbs)

Utility Category	
Maximum Ramp	955,719 kg (2.107 lbs)
Maximum Takeoff and Landing	952,544 kg (2.100 lbs)

When using POH.AFM 172RPHAUS-04 or later rev or 172RPHBUS-00 or later

Normal Category	
Maximum Ramp	1114,48 kg (2.457 lbs)
Maximum Takeoff and Landing	1111,30 kg (2.450 lbs)

Utility Category	
Maximum Ramp	1001,00 kg (2.207 lbs)
Maximum Takeoff and Landing	997,90 kg (2.200 lbs)

When Modified by Cessna Modification Kit MK172-72-01 (see NOTE 4)

Normal Category	
Maximum Ramp	1160,29 kg (2.558 lbs)
Maximum Takeoff and Landing	1156,66 kg (2.550 lbs)

Utility Category	
Maximum Ramp	1001,53 kg (2.208 lbs)
Maximum Takeoff and Landing	997,90 kg (2.200 lbs)

13. Centre of Gravity Range:

When Using POH.AFM 172RPHUS-00 or later rev or 172RPHAUS-00 thru -03

Normal Category

(1) Aft Limits: 1,20142 m (47.3 in) aft of datum at 1111,30 kg (2.450 lbs) or less.

(2) Forward Limits: Linear variation from 1,016 m (40.0 in) aft of datum at 1111,30 kg (2.450 lbs) to 0,889 m (35.0 in) aft of datum at 884,505 kg (1.950 lbs); 0.889 m (35.0 in) aft of datum at 884,505 kg (1.950 lbs) or less

Utility Category

(1) Aft Limits: 1,0287 m (40.5 in) aft of datum at 952,554 kg (2.100 lbs) or less.

(2) Forward Limits: Linear variation from 0,9271 m (36.5 in) aft of datum at 952,544 kg (2.100 lbs) to 0.889 m (35.0 in) aft of datum at 884,505 kg (1.950 lbs); 0,889 m (35.0 in) aft of datum at 884,505 kg (1.950 lbs) or less

When using POH.AFM 172RPHAUS-04 or later rev or 172RPHBUS-00 latest rev

Normal Category

(1) Aft Limits:
1.20142 m (47.3 in) aft of datum at 1111,30 kg (2.450 lbs) or less.

(2) Forward Limits:
Linear variation from 1 016 m (40.0 in) aft of datum at 1111,30 kg (2.450 lbs) to 0,889 m (35.0 in) aft of datum at 884,505 kg (1,950 lbs); 0,889 m (35.0 in) aft of datum at 884,505 kg (1.950 lbs) or less

Utility Category

(1) Aft Limits:
1,0287 m (40.5 in) aft of datum at 997,90 kg (2.200 lbs) or less.

(2) Forward Limits:
Linear variation from 0,9525 m (37.5 in) aft of datum at 997,90 kg (2.200 lbs) to 0,889 m (35.0 in) aft of datum at 884,505 kg (1.950 lbs); 0,889 m (35.0 in) aft of datum at 884,505 kg (1.950 lbs) or less

When Modified by Cessna Modification Kit MK172-72-01 (See NOTE 4)

Normal Category

(1) Aft Limits:
1,20142 m (47.3 in) aft of datum at 1156,66 kg (2,550 lbs) or less

(2) Forward Limits:
Linear variation from 1,0414 m (41.0 in) aft of datum at 1156,66kg (2.550 lbs) to 0,889 m (35.0 in) aft of datum at 884,903 kg (1.950 lbs); 0,889 m (35.0 in) aft of datum at 884,903 kg (1.950 lbs) or less

Utility Category

(1) Aft Limits:
1,0287 m (40.5 in) aft of datum at 997,903 kg (2.200 lbs) or less

(2) Forward Limits:
Linear variation from 0,9525 m (37.5 in) aft of datum at 997,903 kg (2.200 lbs) to 0,889 m (35.0 in) aft of datum at 884,505 kg (1.950 lbs); 0,889 m (35.0 in) aft of datum at 884,903 kg (1.950 lbs) or less

14. Datum: 1.49352 m (58.8 in.);
Leading edge of MAC 13.3579 (25.9 in.) aft of datum

15. (Reserved)

16.	Levelling Means:	Left side of Tailcone at 2.7432 m (108 in.) and 3.6068 m (142 in.) aft of datum
17.	Minimum Flight Crew:	1 (Pilot)
18.	Maximum Occupant Seating Capacity:	4 [2 at 0.8636 m to 1.1684 m (34 in. to 46 in.) aft of datum; 2 at 1.8542 (73 in.) aft of datum]
19.	Baggage / Cargo Compartment aft of datum	54.4311 kg (120 lbs.) at 2.413 m (95.0 in.) <u>When Modified by Cessna Modification Kit MK172-72-01 (See NOTE 4)</u> 54.4311 kg (120 lbs.) at 2.0828 m to 2.7432 m (82 to 108 in.) aft of datum 22.6796 kg (50 lbs.) at 2.4432 m to 3.6068 m (108 to 142 in.) aft of datum (Maximum combined weight capacity for baggage areas is 54.4311 kg (120 lbs.)

20. Wheels and Tires

Nose Wheel Tire Size	5.00 x 5 (6-ply)
Main Wheel Tire Size	6.00 x 6 (4-ply)

21. Control surface movements

Wing flaps Takeoff 0º - 10º
Landing 0º - 30º + 0°/-2°
Ailerons Up 20° ± 1° Down 15° ± 1°
Elevator tab Up 22° + 1°/-0° Down 19° + 1°/-0°
Elevator Up 28° + 1°/-0° Down 23° + 1°/-0°
(Neutral position is with bottom of balance area flush with bottom of stabilizer)
Rudder (Measured parallel to W.L.):
Right 16° 10'± 1° Left 16° 10' ± 1°
Rudder (Measured perpendicular to Hinge):
Right 17° 44' ± 1° Left 17° 44' ± 1°

D. Operating and Service Instructions

Airplane Flight Manual (AFM):	Document No.172RPHUS00, 172R180PHUS00 or 172RPHAUS00 or 172RPHBUS00, latest approved revision.
Airplane Maintenance Manual (AMM) (Including Airworthiness Limitations)	Document No. 172MM00, latest revision.

E. Operational Suitability Data

Master Minimum Equipment List (MMEL)	172MMELEU, Initial Issue, EASA approved 24 November 2015, or any later EASA approved

issue.

F. Notes

Production Basis
Production Certificate No. PC-4 issued March 28, 1997. Applies to airplane serial numbers 17280014, 17280015, 17280017, 17280021 through 17280029, and 17280031 and on. Airplane serial numbers not listed were produced under Type Certificate only. Textron Aviation Inc. is authorized to issue airworthiness certificates under the delegation provisions of Delegation Option Authorization No. CE-1 in accordance with Part 21 of the Federal Aviation Regulations.

Equipment
The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

NOTE 1: Weight and Balance:

Serial Nos. 17280001 and On
The certificated empty weight and corresponding center of gravity location must include unusable fuel of 8.16466 kg (18 lbs.) at 1.1684 m (46.0 in.) aft of datum, and full oil of 6.80389 kg (15.0 lbs.) at 0.33274 m (13.1 in.) forward of datum.

1. NOTE 2: The airplane must be operated according to the appropriate Pilot's Operating Handbook and FAA Approved Airplane Flight Manual (POH/AFM).
POH/AFM part number 172RPHUS00 (or later approved revision) is applicable to Production Model 172R.
POH/AFM part number 172R180PH00 (or later approved revision) is applicable to Production Model 172R airplanes when modified by Cessna Modification Kit MK172-72-01.
All POH/AFM Supplements approved for part number 172RPHUS00, are also applicable to part number 172R180PH00, unless specifically noted otherwise in the Supplement.
All FAA required placards are included in Section 2 of the applicable POH/AFM, the applicable operating rules, or the certification basis must be installed as specified via the parts list for 0500530, Airplane Assembly (A useful placarding reference is the Textron Aviation Illustrated Parts Catalogue (IPC). Any discrepancies identified between the IPC and an aircraft under inspection need to be reconciled using the previously stated parts list).

2. FAA Approved Airplane Flight Manual (AFM): Part Number 172RPHAUS-00 (or later FAA approved revisions) is applicable to the Model 172R equipped with Garmin G1000 Integrated Cockpit System.
The airplane must be operated according to the appropriate AFM.
Required placards are included in the AFM, the applicable operating rules, or the certification basis must be installed as specified via the parts list for 0500530, Airplane Assembly (A useful placarding reference is the Textron Aviation Illustrated Parts Catalogue (IPC). Any discrepancies identified between the IPC and an aircraft under inspection need to be reconciled using the previously stated parts list).

7. FAA Approved Airplane Flight Manual (AFM): Part Number 172RPHBUS-00 (or later FAA approved revisions) are applicable to the Model 172R equipped with Garmin G1000 Integrated Cockpit System and Garmin GFC-700 AFCS.

The airplane must be operated according to the appropriate AFM.

Required placards are included in the AFM, the applicable operating rules, or the certification basis must be installed as specified via the parts list for 0500530, Airplane Assembly (A useful placarding reference is the Textron Aviation Illustrated Parts Catalogue (IPC). Any discrepancies identified between the IPC and an aircraft under inspection need to be reconciled using the previously stated parts list).

NOTE 3: Special Ferry Flight Authorization. Flight Standards District Offices are authorized to issue Special overweight ferry flight authorizations. This airplane is structurally satisfactory for ferry flight if maintained within the following limits: (1) Takeoff weight must not exceed 130% of the maximum weight for Normal Category; and (2) The Never Exceed Airspeed (V_{NE}) and Maximum Structural Cruising Speed (V_C) must be reduced by 30%; and (3) Forward and aft center of gravity limits may not be exceeded; and (4) Structural load factors of +2.5 g. to -1.0 g. may not be exceeded. Requirements for any additional oil should be established in accordance with Advisory Circular AC23.1011-1. Increased stall speeds and reduced climb performance should be expected for the increased weights. Flight characteristics and performance at the increased weights have not been evaluated. Flight Permit for operations of overweight aircraft may be found in Advisory Circular AC21-4B.

NOTE 4: Only certain Model 172R airplane serial numbers are eligible for modification by Cessna Modification Kit MK172-72-01. Applicable serial numbers are as follows:

17280159	17280242	17280251	17280253	17280257
17280262	17280281	17280292	17280301	17280305
17280426	17280488	17280606	17280607	17280608
17280609	17280610	17280613	17280614	17280616
17280621	17280622	17280623	17280624	17280631
17280632	17280633	17280634	17280638	17280639
17280640	17280646	17280647	17280648	17280652
17280653	17280659	17280660	17280661	17280662
17280664	17280667	17280668	17280669	17280670
17280672	17280673	17280674	17280675	17280701
17280707				

NOTE 5: <u>FAA Certification Basis (Model 172R)</u>

Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by 23-1 through 23-6, except as follows:
FAR 23.423; 23.611; 23.619; 23.623; 23.689; 23.775; 23.871; 23.1323; and 23.1563 as amended by Amendment 23-7.
FAR 23.807 and 23.1524 as amended by Amendment 23-10.
FAR 23.507; 23.771; 23.853(a),(b) and (c); and 23.1365 as amended by Amendment 23-14.
FAR 23.951 as amended by Amendment 23-15.
FAR 23.607; 23.675; 23.685; 23.733; 23.787; 23.1309 and 23.1322 as amended by Amendment 23-17.
FAR 23.1301 as amended by Amendment 23-20.
FAR 23.1353; and 23.1559 as amended by Amendment 23-21.

FAR 23.603; 23.605; 23.613; 23.1329 and 23.1545 as amended by Amendment 23-23.
FAR 23.441 and 23.1549 as amended by Amendment 23-28.
FAR 23.779 and 23.781 as amended by Amendment 23-33.
FAR 23.1; 23.51 and 23.561 as amended by Amendment 23-34.
FAR 23.301; 23.331; 23.351; 23.427; 23.677; 23.701; 23.735; and 23.831 as amended by Amendment 23-42.
FAR 23.961; 23.1093; 23.1143(g); 23.1147(b); 23.1303; 23.1357; 23.1361 and 23.1385 as amended by Amendment 23-43.
FAR 23.562(a), 23.562(b)2, 23.562(c)1, 23.562(c)2, 23.562(c)3, and 23.562(c)4 as amended by Amendment 23-44.
FAR 23.33; 23.53; 23.305; 23.321; 23.485; 23.621; 23.655 and 23.731 as amended by Amendment 23-45.

FAR 36 dated December 1, 1969, as amended by Amendments 36-1 through 36-21.

Additions for the Garmin G1000 Integrated Cockpit System (ICS) Only:

14 CFR 23.303; 23.307; 23.601; 23.1163(a); 23.1367 and 23.1381 as amended by Amendment 23- N/C.
14 CFR 23.1589 as amended by Amendment 23-13.
14 CFR 23.771(a) as amended by Amendment 23-14.
14 CFR 23.607 and (Electrical System) 23.1309(a)(1)(2), (c) as amended by Amendment 23-17.
14 CFR 23.1301; 23.1327 and 23.1547(e) as amended by Amendment 23-20.
14 CFR 23.1501 and 23.1541(a)(1), (a)(2), (b)(1), (b)(2) as amended by Amendment 23-21.
14 CFR 23.603 and 23.605 as amended by Amendment 23-23.
14 CFR 23.1529 as amended by Amendment 23-26.
14 CFR 23.561(e); 23.1523; 23.1581(a)(2); and 23.1583(a), (c), (d), (f) as amended by Amendment 23-34.
14 CFR 23.301 as amended by Amendment 23-42.
14 CFR 23.1322; 23.1331 and 23.1357(a)(b)(c)(d) as amended by Amendment 23-43.
14 CFR 23.305; 23.773(a)(1), (a)(2); 23.1525 and 23.1549 as amended by Amendment 23-45.
14 CFR 23.1303(a)(b)(c)(f); 23.1309(a)(1)(i), (a)(1)(ii), (a)(2), (b)(1), (b)(2)(i), (b)(2)(ii), (b)(3),(b)(4)(i), (b)(4)(ii), (b)(4)(iii), (b)(4)(iv), (c)(1), (c)(2)(iii), (c)(3), (d), (e), (f)(1); 23.1311; 23.1321 (a)(c)(d)(e); 23.1323(a), (b)(1), (b)(2), (c); 23.1329 (g)(h); 23.1351(a)(1), (a)(2)(i), (b)(1)(iii), (b)(2)(3), (c)(4), (d)(1); 23.1353(a)(b)(c)(d)(e); 23.1359(c); 23.1361; 23.1365(a)(b)(d)(e)(f) and 23.1431(a)(b)(d)(e) as amended by Amendment 23-49.
14 CFR 23.1325(a), (b)(1), (b)(2)(i), (b)(3), (c)(d)(e); 23.1543(b)(c); 23.1545(a), (b)(1), (b)(2), (b)(3), (b)(4); 23.1553; 23.1555(a)(b); 23.1563(a) and 23.1567(a) as amended by Amendment 23-50.
14 CFR 23.777(a)(b); 23.955(a)(2); 23.1337(a)(1), (a)(2), (b)(1), (c) as amended by Amendment 23-51.
14 CFR 23.1305(a)(1), (a)(2), (a)(3), (b)(2), (b)(3)(i), (b)(4)(i), (b)(5), (b)(6)(i) as amended by Amendment 23-52.
14 CFR 23.901(a)(b) as amended by Amendment 23-53.

Additions for the Garmin GFC-700 Automatic Flight Control System (AFCS) only:

14 CFR 23.1335 as amended by Amendment 23-20,
14 CFR 23.1329 (a)(c)(d)(e)(f) as amended by Amendment 23-49.

Equivalent Safety Items

(1) Induction System Icing Protection
(3) FAR § 23.1093; Refer to FAA letter dated 5/3/96
(2) Throttle Control
(4) FAR § 23.1143(g); Refer to FAA letter dated 3/22/96
(3) Mixture Control
(5) FAR § 23.1147(b); Refer to FAA letter dated 3/22/96
(4) Anti-Collision Light System
(6) 14 CFR § 23.1401(d); Refer to ACE-07-09, FAA letter dated 10/12/07
(5) Aviation White Color Reqmt.
(7) 14 CFR § 23.1397(c); Refer to ACE-07-10, FAA letter dated 11/29/07

Date of Application for Amended Type Certificate was September 25, 1995.
Type Certificate No. 3A12 was amended June 21, 1996.

Serial Numbers Eligible 17280001 and On

Special Conditions as follows:
No. 23-159-SC, “Special Conditions: Cessna Aircraft Company; Cessna Model 172R Airplane; Installation of Electronic Flight Instrument System and the Protection of the System From High Intensity Radiated Fields (HIRF)."

SECTION 2: GENERAL, Model 172S Type Design

A. General

This Type-Certificate Data Sheet (TCDS) is the concise definition of the type-certificated product accepted and or approved by the CAA in the UK for the affected types and models.

This TCDS includes:

a) Details of the type design that affect the TCDS that have been approved or accepted by the CAA in the UK since 01 January 2021.

b) Details of the type design that affected the TCDS and were approved or accepted by EASA before 01 January 2021, and were incorporated into EASA TCDS EASA.IM.A.051 at Issue 9 dated 29 October 2020 and are therefore accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement.

1. a) Type: b) Variant:	Model 172S N/A
2. Airworthiness Category:	Normal Category Utility Category
3. Type Certificate Holder:	Textron Aviation Inc. One Cessna Boulevard P.O. Box 7704 Wichita, Kansas 67277 USA
4. Manufacturer:	Textron Aviation Inc. One Cessna Boulevard P.O. Box 7704 Wichita, Kansas 67277 USA.
5. JAA Certification Application Date:	N/A
6. JAA recommendation Date:	N/A
7. EASA Type Certification Date:	28 September 2003

B. Certification Basis

1. Reference Date for determining the applicable requirements:	FAA Application date 13 November 1997
2. (Reserved)	
3. (Reserved)	
4. Certification Basis:	As defined in FAA TCDS 3A12

5. Airworthiness Requirements: FAR 23 as defined in FAA TCDS 3A12, and JAR-23, Change 1, and Special Conditions as defined in Garmin G-1000 EASA CRI A-01, Issue 5, dated 17 March 2008 for the Nav III avionics option.

6. Requirements elected to comply: None

7. EASA Special Conditions: As defined in CRI A-01 for the Nav III avionics option only.

8. EASA Exemptions: None

9. EASA Equivalent Safety Findings: None

10. Environmental Protection Standards
Noise: ICAO Annex 16,Volume I, Chapter 10 (see TCDSN UK.TC.A.00061 for details)

C. Technical Characteristics and Operational Limitations

1. Type Design Definition: Master Drawing List, Document No.172-96-005, latest FAA Approved Revision.

2. Description: Single-engine, all-metal, four-place, high-wing airplane, fixed tricycle landing gear.

3. Equipment: Equipment list, Owner's Manual No. 172SPHUS00 or 172SPHAUS00 (Garmin) or 172SPHBUS00 (GFC-700), latest revision.

4. Dimensions:

Span	10.9982 m	(36.08 ft.)
Length	8.20522 m	(26.92 ft.)
Height	2.35661 m	(7.73 ft.)
Wing Area	16.3045 m²	(175.5 ft²)

5. Engines: Lycoming IO-360-L2A, Rated at 180 hp

The EASA Engine Type Certification standard includes that of FAA TC 1E10, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003, Other standards conforming to TC/TCDS standards Certificated by individual EU member States prior to 28 September 2003 are also acceptable.

5.1 Engine Limits: For all operations: 2700 RPM (180 hp)

For power-plants limits refer to Owners Manual, No. 172SPHUS00 or

172SPHAUS00 (Garmin) or
172SPHBUS00 (GFC-700), latest revision.

6. Propellers

(1) McCauley Propellers. Model Number 1A170E/JHA7660

(2) Spinner: Drawing No. 0550236

The EASA Propeller Type Certification standard includes that of FAA TC P-857, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003, Other standards conforming to TC/TCDS standards Certificated by individual EU member States prior to 28 September 2003 are also acceptable.

Static RPM at full throttle: Not over 2400 RPM; Not under 2300
Diameter: Not over 1.9304 m (76 in.); not under 1.905 m (75 in.)

7. Fluids:

7.1 Fuel: 100/100LL minimum grade aviation gasoline

7.2 Oil: Engine: MIL-L-6082 or SAE J1966 Aviation Grade Straight Mineral Oil or MIL-L-22851 or SAE J1899 Aviation Grade Ashless Dispersant Oil. Oil conforming to Textron Lycoming Service Instruction No. 1014, latest revision, must be used after first 50 hours or once oil consumption has stabilized.

7.3 Coolant: Not Applicable

8. Fluid capacities:

8.1 Fuel: Total: 211.983 liters (56 US Gallons)
Usable: 200.627 liters (53 US Gallons)
[Two 105.992 liters (28 US Gallon) tanks in wings at 1.2192 m (48.0 in.) aft of datum]
See NOTE 1 for data on unusable fuel.

8.2 Oil: 7.57082 liters (8.0 qts) at 0.33274 m (13.1 in.) forward of datum
2.83906 liters (3.0 qts) unusable.

9. Air Speeds:

a. Airspeed Limits	Maneuvering	105 Knots IAS	(102 Knots CAS)
	Max Structural Cruising	129 Knots IAS	(126 Knots CAS)
	Never Exceed	163 Knots IAS	(160 Knots CAS)
	Flaps Extended	85 Knots IAS	(84 Knots CAS)

10. Maximum Operating Altitude: With a portable oxygen system, the aircraft is limited to 5334 m (17500 ft MSL). Oxygen must be provided as required by the operating rules. Only portable oxygen systems listed in the AFM, document number 11934-002, 11934-003, or later FAA approved revisions, are allowed

11. Operational Capability: VFR Day and Night
IFR Day and Night

12. Maximum Masses:

<u>Normal Category</u>	
Maximum Ramp	1160.29 kg (2,558 lbs.)
Maximum Takeoff and Landing	1156.66 kg (2,550 lbs.)
<u>Utility Category</u>	
Maximum Ramp	1001.53 kg (2,107 lbs.)
Maximum Takeoff and Landing	997.903 kg (2,200 lbs.)

13. Centre of Gravity Range:

<u>Normal Category</u>	
(1) Aft Limits	1.20142 m (47.3 in.) aft of datum at 1156.66 kg (2,550 lbs.) or less.
(2) Forward Limits	Linear variation from 1.0414 m (41.0 in.) aft of datum at 1156.66 kg (2,550 lbs.) to 0.889 m (35.0 in.) aft of datum at 884.505 kg (1,950 lbs.); 0.889 m (35.0 in.) aft of datum at 884.505 kg (1,950 lbs.) or less.
<u>Utility Category</u>	
(1) Aft Limits	1.0287 m (40.5 in.) aft of datum at 997.903 kg (2,200 lbs.) or less.
(2) Forward Limits	Linear variation from 0.9525 m (37.5 in.) aft of datum at 997.903 kg (2,200 lbs.) to 0.889 m (35.0 in.) aft of datum at 884.505 kg (1,950 lbs.); 0.889 m (35.0 in.) aft of datum at 884.505 kg (1,950 lbs.) or less.

14. Datum: 1.49352 m (58.8 in.); Leading edge of MAC 13.3579 (25.9 in.) aft of datum

15. (Reserved)

16. Levelling Means: Left side of Tailcone at 2.7432 m (108 in.) and 3.6068 m (142 in.) aft of datum

17. Minimum Flight Crew: 1 (Pilot)

18. Maximum Passenger Seating Capacity: 4 [2 at 0.8636 m to 1.1684 m (34 in. to 46 in.) aft of datum; 2 at 1.8542 (73 in.) aft of datum]

19.	Baggage / Cargo Compartment	54.4311 kg (120 lbs.) at 2.0828 m to 2.7432 m (82 to 108 in.) aft of datum 22.6795 kg (50 lbs.) at 2.7432 to 3.6068 m (108 to 142 in.) aft of datum (Maximum combined weight capacity for baggage areas is 54.4311 kg (120 lbs.)
20.	Wheels and Tires	
	Nose Wheel Tire Size	5.00 x 5 (6-ply)
	Main Wheel Tire Size	6.00 x 6 (6-ply)
21.	Control surface movements	Wing flaps Takeoff 0º - 10º Landing 0º - 30º + 0°/-2° Ailerons Up 20° ± 1° Down 15° ± 1° Elevator tab Up 22° + 1°/-0° Down 19° + 1°/-0° Elevator Up 28° + 1°/-0° Down 23° + 1°/-0° (Neutral position is with bottom of balance area flush with bottom of stabilizer) Rudder (Measured parallel to W.L.): Right 16° 10'± 1° Left 16° 10' ± 1° Rudder (Measured perpendicular to Hinge): Right 17° 44' ± 1° Left 17° 44' ± 1°

D. Operating and Service Instructions

Airplane Flight Manual (AFM):	Document No.172SPHUS00 or 172SPHAUS00 or 172SPHBUS00, latest approved revision.
Airplane Maintenance Manual (AMM) (Including Airworthiness Limitations)	Document No. 172MM00, latest revision.

E. Operational Suitability Data

Master Minimum Equipment List (MMEL)	172MMELEU, Initial Issue, EASA approved 24 November 2015, or any later EASA approved issue.

F. Notes

Production Basis

Production Certificate No. PC-4 issued August 27, 1998. Applies to airplane serial numbers 172S8003 and on. Airplane serial numbers not listed were produced under Type Certificate only. Textron Aviation Inc. is authorized to issue airworthiness certificates under the delegation provisions of Delegation Option Authorization No. CE-1 in accordance with Part 21 of the Federal Aviation Regulations.

Company name change effective 29 July 2015. The following serials are manufactured under the name Textron Aviation Inc.: 172S11615 and On.

Equipment
The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

NOTE 1: Weight and Balance:

Serial Nos. 172S8001 and On
The certificated empty weight and corresponding center of gravity location must include unusable fuel of 8.16466 kg (18 lbs.) at 1.1684 m (46.0 in.) aft of datum, and full oil of 6.80389 kg (15.0 lbs.) at 0.33274 m (13.1 in.) forward of datum.

1. NOTE 2: Pilot's Operating Handbook and FAA Approved Airplane Flight Manual (POH/AFM): part number 172SPHUS-00 (or later approved revision) is applicable to the Model 172S.
The airplane must be operated according to the appropriate POH/AFM.
All FAA required placards are included in Section 2 of the POH/AFM, the applicable operating rules, or the certification basis must be installed as specified via the parts list for 0500531, Airplane Assembly (A useful placarding reference is the Textron Aviation Illustrated Parts Catalogue (IPC). Any discrepancies identified between the IPC and an aircraft under inspection need to be reconciled using the previously stated parts list).

FAA Approved Airplane Flight Manual (AFM): Part Number 172SPHAUS-00 (or later FAA approved revisions) is applicable to Model 172S equipped with Garmin G1000 Integrated Cockpit System.
The airplane must be operated according to the appropriate AFM.
Required placards are included in the AFM, the applicable operating rules, or the certification basis must be installed as specified via the parts list for 0500531, Airplane Assembly (A useful placarding reference is the Textron Aviation Illustrated Parts Catalogue (IPC). Any discrepancies identified between the IPC and an aircraft under inspection need to be reconciled using the previously stated parts list).

FAA Approved Airplane Flight Manual (AFM): Part Number 172SPHBUS-00 (or later FAA approved revisions) are applicable to the Model 172S equipped with Garmin G1000 Integrated Cockpit System and Garmin GFC-700 AFCS.

The airplane must be operated according to the appropriate AFM.

Required placards are included in the AFM, the applicable operating rules, or the certification basis must be installed as specified via the parts list for 0500531, Airplane Assembly (A useful placarding reference is the Textron Aviation Illustrated Parts Catalogue (IPC). Any discrepancies identified between the IPC and an aircraft under inspection need to be reconciled using the previously stated parts list).

NOTE 3: Special Ferry Flight Authorization. Flight Standards District Offices are authorized to issue Special overweight ferry flight authorizations. This airplane is structurally satisfactory for ferry flight if maintained within the following limits: (1) Takeoff weight must not exceed 130% of the maximum weight for Normal Category; and (2) The Never Exceed Airspeed (V_{NE}) and Maximum Structural

Cruising Speed (V_C) must be reduced by 30%; and (3) Forward and aft center of gravity limits may not be exceeded; and (4) Structural load factors of +2.5 g. to -1.0 g. may not be exceeded. Requirements for any additional oil should be established in accordance with Advisory Circular AC23.1011-1. Increased stall speeds and reduced climb performance should be expected for the increased weights. Flight characteristics and performance at the increased weights have not been evaluated. Flight Permit for operations of overweight aircraft may be found in Advisory Circular AC21-4B.

NOTE 4: <u>FAA Certification Basis (Model 172S)</u>

Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by 23-1 through 23-6, except as follows:
FAR 23.423; 23.611; 23.619; 23.623; 23.689; 23.775; 23.871; 23.1323; and 23.1563 as amended by Amendment 23-7.
FAR 23.807 and 23.1524 as amended by Amendment 23-10.
FAR 23.507; 23.771; 23.853(a),(b) and (c); and 23.1365 as amended by Amendment 23-14.
FAR 23.951 as amended by Amendment 23-15.
FAR 23.607; 23.675; 23.685; 23.733; 23.787; 23.1309 and 23.1322 as amended by Amendment 23-17.
FAR 23.1301 as amended by Amendment 23-20. FAR 23.1353; and 23.1559 as amended by Amendment 23-21.
FAR 23.603; 23.605; 23.613; 23.1329 and 23.1545 as amended by Amendment 23-23.
FAR 23.441 and 23.1549 as amended by Amendment 23-28.
FAR 23.779 and 23.781 as amended by Amendment 23-33.
FAR 23.1; 23.51 and 23.561 as amended by Amendment 23-34.
FAR 23.301; 23.331; 23.351; 23.427; 23.677; 23.701; 23.735; and 23.831 as amended by Amendment 23-42.
FAR 23.961; 23.1093; 23.1143(g); 23.1147(b); 23.1303; 23.1357; 23.1361 and 23.1385 as amended by Amendment 23-43.
FAR 23.562(a), 23.562(b)2, 23.562(c)1, 23.562(c)2, 23.562(c)3, and 23.562(c)4 as amended by Amendment 23-44.
FAR 23.33; 23.53; 23.305; 23.321; 23.485; 23.621; 23.655 and 23.731 as amended by Amendment 23-45.

FAR 36 dated December 1, 1969, as amended by Amendments 36-1 through 36-21.

<u>Additions for the Garmin G1000 Integrated Cockpit System (ICS) Only:</u>

14 CFR 23.303; 23.307; 23.601; 23.1163(a); 23.1367 and 23.1381 as amended by Amendment 23- N/C.
14 CFR 23.1589 as amended by Amendment 23-13.
14 CFR 23.771(a) as amended by Amendment 23-14.
14 CFR 23.607 and (Electrical System) 23.1309(a)(1)(2), (c) as amended by Amendment 23-17.
14 CFR 23.1301; 23.1327 and 23.1547(e) as amended by Amendment 23-20.
14 CFR 23.1501 and 23.1541(a)(1), (a)(2), (b)(1), (b)(2) as amended by Amendment 23-21.
14 CFR 23.603 and 23.605 as amended by Amendment 23-23.
14 CFR 23.1529 as amended by Amendment 23-26.
14 CFR 23.561(e); 23.1523; 23.1581(a)(2); and 23.1583(a), (c), (d), (f) as amended by Amendment 23-34.

14 CFR 23.301 as amended by Amendment 23-42.
14 CFR 23.1322; 23.1331 and 23.1357(a)(b)(c)(d) as amended by Amendment 23-43.
14 CFR 23.305; 23.773(a)(1), (a)(2); 23.1525 and 23.1549 as amended by Amendment 23-45.
14 CFR 23.1303(a)(b)(c)(f); 23.1309(a)(1)(i), (a)(1)(ii), (a)(2), (b)(1), (b)(2)(i), (b)(2)(ii), (b)(3),(b)(4)(i), (b)(4)(ii), (b)(4)(iii), (b)(4)(iv), (c)(1), (c)(2)(iii), (c)(3), (d), (e), (f)(1); 23.1311; 23.1321 (a)(c)(d)(e); 23.1323(a), (b)(1), (b)(2), (c); 23.1329 (g)(h); 23.1351(a)(1), (a)(2)(i), (b)(1)(iii), (b)(2)(3), (c)(4), (d)(1); 23.1353(a)(b)(c)(d)(e); 23.1359(c); 23.1361; 23.1365(a)(b)(d)(e)(f) and 23.1431(a)(b)(d)(e) as amended by Amendment 23-49.
14 CFR 23.1325(a), (b)(1), (b)(2)(i), (b)(3), (c)(d)(e); 23.1543(b)(c); 23.1545(a), (b)(1), (b)(2), (b)(3), (b)(4); 23.1553; 23.1555(a)(b); 23.1563(a) and 23.1567(a) as amended by Amendment 23-50.
14 CFR 23.777(a)(b); 23.955(a)(2); 23.1337(a)(1), (a)(2), (b)(1), (c) as amended by Amendment 23-51.
14 CFR 23.1305(a)(1), (a)(2), (a)(3), (b)(2), (b)(3)(i), (b)(4)(i), (b)(5), (b)(6)(i) as amended by Amendment 23-52.
14 CFR 23.901(a)(b) as amended by Amendment 23-53.

Additions for the Garmin GFC-700 Automatic Flight Control System (AFCS) only:

14 CFR 23.1335 as amended by Amendment 23-20,
14 CFR 23.1329 (a)(c)(d)(e)(f) as amended by Amendment 23-49.

Additions for the Garmin GI 275 Electronic Flight Instrument Only:

14 CFR 23.1327 as amended by Amendment 23-20. 23.1501 as amended by Amendment 23-21. 23.1529 as amended by Amendment 23-26. 23.1523(b) and 23.1581(a)(1)(2) as amended by Amendment 23-34. 23.1322 and 23.1331 as amended by Amendment 23-43. 23.1525 as amended by Amendment 23-45. 23.1303(a)(b)(f), 23.1309(a)(1)(2)(b)(c)(1)(2)(iii)(3)(d)(e)(f), 23.1311(a)(b), 23.1321(a)(c)(d)(e), 23.1323(a)(c), 23.1351(a)(1)(2)(i), 23.1359(c), 23.1365(a)(d)(e) and 23.1431 (a)(b) as amended by Amendment 23-49. 23.1325(a)(b)(1)(i)(ii)(iii)(2)(i), 23.1543(b)(c), 23.1545(a)(b)(1)(2)(3)(4) and 23.1555(a)(b) as amended by Amendment 23-50. 23.777(a)(b) as amended by Amendment 23-51. 23.1308(a)(b)(c) as amended by Amendment 23-57. 23.1306(a)(b) as amended by Amendment 23-61. 23.2010 and 23.2510 as amended by Amendment 23-64.

Equivalent Safety Items
(1) Induction System Icing Protection
FAR § 23.1093; Refer to FAA letter dated 5/1/98
(2) Throttle Control
FAR § 23.1143(g); Refer to FAA letter dated 5/1/98
(3) Mixture Control
FAR § 23.1147(b); Refer to FAA letter dated 5/1/98
(4) Anti-Collision Light System
14 CFR § 23.1401(d); Refer to ACE-07-09, FAA letter dated 10/12/07
(5) Aviation White Color Reqmt.
14 CFR § 23.1397(c); Refer to ACE-07-10, FAA letter dated 11/29/07

Date of Application for Amended Type Certificate for the 172S was November 13, 1997.

Type Certificate No. 3A12 was amended May 1, 1998 for the Model 172S.

Serial Numbers Eligible 172S8001 and on

Special Conditions as follows:
No. 23-159-SC, “Special Conditions: Cessna Aircraft Company; Cessna Model 172S Airplane; Installation of Electronic Flight Instrument System and the Protection of the System From High Intensity Radiated Fields (HIRF)."

SECTION 3: Reserved

ADMINSTRATIVE SECTION

I. Acronyms

Acronym / Abbreviation	Definition
A/C	Aircraft
AFM	Airplane Flight Manual
ASTM	American Society for Testing and Materials
ATA	Air Transport Association
CAA	(United Kingdom) Civil Airworthiness Authority
CFR	Code of Federal Regulations
CG	Centre of Gravity
CRI	Certification Review Item
CS	Certification Specification
EASA	European Union Aviation Safety Agency
ELOS	Equivalent Level of Safety
FAA	Federal Aviation Administration
HIRF	High Intensity Radiated Field
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
JAA	Joint Aviation Authorities
KCAS	Knots Calibrated Airspeed
Kg	Kilograms
Lbs	U.S. Pounds
MAC	Mean Aerodynamic Chord
MTOM	Maximum Take-off Mass
No	Number
OSD	Operational Suitability Data
PSI	Pounds per Square Inch (pressure)
Ref	Reference
STA	Station
STC	Supplemental Type Certificate
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TCDSN	Type Certificate Data Sheet for Noise
TCH	Type Certificate Holder
USA	United States of America
VFR	Visual Flight Rules
V_{MO}	Maximum Operating Limit Speed (KCAS)
WBM	Weight and Balance Manual

II. **Type Certificate Holder Record**

TCH Record	Period
Textron Aviation Inc. One Cessna Boulevard P.O. Box 7704 Wichita, Kansas 67277 USA	29 July 2015 to Present.

III. Change Record

Issue	Date	Change	TC issue no & date
1	03 January 2023	The content of the initial issue of this UK CAA TCDS was taken from EASA TCDS EASA.IM.A.051 at Issue 9 dated 29 October 2020 which was the current EASA version at 31 December 2020 and therefore the version of the TCDS for the Cessna 206 accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement, except as listed below: Editorial changes/Changes to reflect EU Exit: • Section 1.A: “General” Explanatory note added. • Section 1.F “Notes” Note 2 AFM references updated. • Section 2.A: “General” Explanatory note added. • Section 2.F “Notes” Note 2 AFM references updated. • Section 2.F “Notes” Note 6 updated cert basis to include:-Additions for the Garmin GI 275 Electronic Flight Instrument as an ISI, as approved under CAA approval ref UK.MAJ.00178. Section I: Additional Acronyms and Abbreviations added.	03 Jan 2023

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