

Aviation Fuels Research Reciprocating Engine Aircraft Fleet Fuel Distribution Report

November 2011

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16. Abstract The Federal Aviation Administration (FAA) Aviation Fuels and Engine Test Program requested a data analysis to support the Aviation Fuels Research Planning task. The purpose of the data analysis was to establish a baseline of aviation fuels currently in use by all reciprocating engine-powered aircraft to quantitatively assess the effect of first reducing and, eventually, eliminating the tetraethyl lead content on the population of aircraft currently certificated by the FAA. A key element in the database analysis centered on an interpretation of approximately 2664 Type Certificates documents. The key product was a unique data table that converts the list of individual aircraft from the U.S. Aircraft Registry into their associated approved fuel grade. The result of the analysis identified the fleet distribution of aviation gasoline for minimum-grade 80, minimum-grade 91, and minimum-grade 100 low lead (100LL), where 80% of the 189,415 U.S.-registered aircraft with reciprocating engines use either minimum-grade 100LL (43.3%) or minimum-grade 80 (36.6%). Other approved fuels and their distributions are also shown in the report. This data served as the basis for the addition of 100VLL (very low lead) to the current ASTM D 910 specification (aviation gasoline). The FAA subsequently issued Special Airworthiness Information Bulletin, NE-11-55, allowing the use of this fuel in all piston-powered aircraft currently certificated on 100LL fuel.			
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LIST OF ACRONYMS

AvGas	Aviation gasoline
CFR	Code of Federal Regulations
FAA	Federal Aviation Administration
JETA	Identifies Jet A or Jet A-1 fuel
LL	Low lead
MG80	Minimum-grade 80 aviation gasoline
MG91	Minimum-grade 91 aviation gasoline
MG100LL	Minimum-grade 100 low-lead aviation gasoline
TCDS	Type Certificate Data Sheet

EXECUTIVE SUMMARY

The Federal Aviation Administration (FAA) Aviation Fuels and Engine Test Program requested a data analysis to support the Aviation Fuels Research Planning task. The purpose of the data analysis was to establish a baseline of aviation fuels currently in use by all reciprocating engine-powered aircraft. This baseline would serve to quantitatively assess the effect of first reducing and, eventually, eliminating the tetraethyl lead content on the population of aircraft currently certificated by the FAA. Any recommended change in aviation fuels can be quantitatively assessed to show the effect of any change on the population of aircraft currently certificated by the FAA. This would establish the breadth and focus of the research planning required by the FAA Aviation Fuels and Engine Test research team.

An interim report was published in April 2010 in which approximately 50.6% of all U.S.-registered aircraft were identified as having reciprocating engines that required aviation-grade gasoline. Approximately 42.5% of all U.S.-registered aircraft (or 84% of the 50.6%) were analyzed in the April 2010 interim report. The interim report was published to provide the FAA and industry stakeholders with a preview of the distribution of fuels that may be affected by lowering and, eventually, eliminating the tetraethyl lead currently approved for aviation-grade gasoline. However, a key element of the database analysis centered on an interpretation of approximately 2664 Type Certificate documents. Reviewing only 502 Type Certificate documents represented 84% of the fleet, and was a feasible short-term task. To analyze the remaining 16% of the fleet required more time to review the additional 2162 Type Certificate documents. The key product of the analysis was a unique data table that converts the list of individual aircraft from the U.S. Aircraft Registry into their associated approved fuel grade.

The result of the analysis identified fleet distributions for 189,415 U.S.-registered aircraft with reciprocating engines approved for using aviation gasoline for minimum-grade 80, minimum-grade 91, and minimum-grade 100 low lead (100LL). In addition to these aviation gasoline grades, this report also shows some unique distributions of other fuels, especially when the analysis identifies a 91/96 unleaded approved fuel, as well as some Jet A-approved fuels. For approved fuels with a longer heritage, a general category of Other fuel is provided, and covers, for example, 65, 70, 73, 108 or 135, and 115 or 145 approved octane fuels. While these categories provide insight into the variety of approved fuels for aircraft still approved to operate, 80% of the aircraft use either minimum-grade 100LL (43.3%) or minimum-grade 80 (36.6%). Only 0.4% of the aircraft are approved to use unleaded fuel.

This data served as the basis for the addition of 100VLL (very low lead) to the current ASTM D 910 specification (aviation gasoline). The FAA subsequently issued Special Airworthiness Information Bulletin, NE-11-55, allowing the use of this fuel in all piston-powered aircraft currently certificated on 100LL fuel.

INTRODUCTION

The Federal Aviation Administration (FAA) Aviation Fuels and Engine Test Program requested a data analysis to support the Aviation Fuels Research Planning task. The purpose of the data analysis was to establish a baseline of aviation fuels currently in use by all reciprocating engine-powered aircraft. Any recommended change in aviation fuels can be quantitatively assessed to show the effect of any change on the population of aircraft currently certificated by the FAA, and it would establish the breadth and focus of the research planning required by the FAA Aviation Fuels and Engine Test research team.

An interim report was published in April 2010 in which approximately 50.6% of the February 2010 U.S.-registered aircraft [1] were identified as having reciprocating engines requiring aviation-grade gasoline. Approximately 42.5% of the entire U.S.-registered aircraft (or 84% of the 50.6%) were analyzed in the April 2010 interim report. The interim report was published to provide the FAA and industry stakeholders with a preview of the distribution of fuels that may be affected by lowering and, eventually, eliminating the tetraethyl lead currently approved for aviation-grade gasoline. However, a key element of the database analysis centered on an interpretation of approximately 2664 Type Certificate documents. The aircraft that represented 84% of the fleet required reviewing only 502 Type Certificate documents. To analyze the remaining 16% of the fleet, more time was necessary to review the additional 2162 Type Certificate documents. A data table was produced to convert the list of individual aircraft from the U.S. Aircraft Registry into their associated approved fuel category. This report represents an analysis based on these 2664 Type Certificate Data Sheets (TCDS) using the key data table conversion.

DATA SOURCES

A quick review of publicly available aircraft data sources was conducted, and the online FAA Aircraft Registry Database was selected. Two key attributes of the FAA Aircraft Registry are the public availability and the nonproprietary data encoding. Both of these attributes allow for public access and independent review. Other data sources, such as the Aircraft Owners and Pilots Association [2] and the Research and Innovative Technology Administration's Bureau of Transportation Statistics [3], were reviewed, but found to not have the necessary details to conduct the data analyses. However, both data sources were used as benchmarks for the interim data analysis.

An interactive version of the FAA Aircraft Registry Database was investigated [4], but the approach was soon abandoned as it required a human-in-the-loop for all inquiries. Attempts to automate the retrieval of information were further impeded by java-based web tools that tailored each request for information. While the human interaction and tailoring of the requests is excellent for one-off inquiries, it did not suit the expectations of this data analysis.

The FAA also provides its complete Aviation Registry for download [5]. This database was downloaded on February 16, 2010, and was used for the entire data analysis described in this report. The analysis methodologies can be applied to subsequently downloaded versions of the

data, but the results may vary due to differences in the monthly data update that the FAA maintains.

The FAA Aircraft Registry Database has the necessary information for aircraft and engine data, but does not have the information that describes the fuel requirements. To gather fuel requirement information, the FAA Regulatory and Guidance Library's TCDS [6] were used. Each TCDS is the definitive authority for the approved fuel for each aircraft make and model. However, no data table existed that connected the aircraft in the Registry with its approved fuel; thus, one of the efforts of this analysis was to develop a linking table.

METHODOLOGY

The FAA Aircraft Registry Database was expanded from its compressed form to generate eight files, as shown in table 1.

Table 1. Content of FAA Aircraft Registry Database [5]

File Size	Modification Date and Time	Filename	Containing...
6.3M	Feb 12 23:07 2010	ACFTREFER .txt	Aircraft reference file
146K	Nov 30 10:08 2010	ARData.pdf	Data file descriptions
8.9M	Feb 12 23:08 2010	DEALER.txt	Aircraft dealer applicant file
70M	Feb 12 23:32 2010	DEREG.txt	Aircraft deregistered file
1.8M	Feb 12 17:31 2010	DOCINDEX.txt	Aircraft document index file
191K	Feb 12 23:08 2010	ENGINE.txt	Engine reference file
190M	Feb 12 23:27 2010	MASTER.txt	Aircraft registration master file
6.9M	Feb 12 23:07 2010	RESERVED.txt	Reserve N-number file

The "ARData.pdf" describes the content of each of the other seven data files¹. These data files are all text², and in each record, every field is both fixed-width and comma-delimited. These attributes make the data files very flexible for data analysis using a variety of tools.

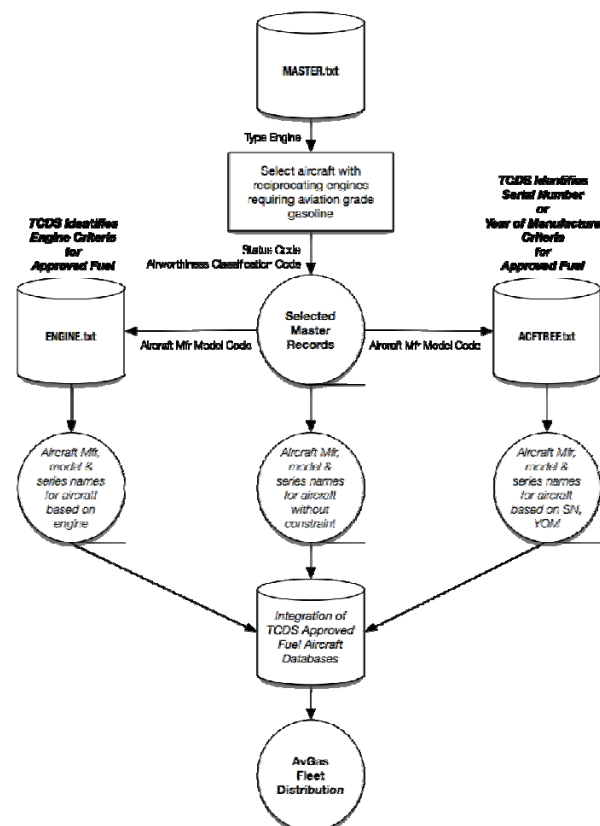
OVERALL DATA PREPROCESSING FLOW.

Figure 1 represents the data flow and the relationship between the data sets in the Aircraft Registry Database. The preceding discussion covers the data flow from MASTER.txt to SELECTED MASTER RECORDS. For many aircraft, the TCDS shows the specific approved fuel for that aircraft model and series, and the analysis is straightforward. A table of all the TCDS used in this analysis is shown in appendix D, organized by TCDS number, and shows the aircraft manufacturer, model, and series. There are also a number of aircraft for which no TCDS could be found, and those are shown as Unidentified in appendix D, and the analysis of

¹The ARData.pdf can be downloaded separately from: <http://www.faa.gov/licenses_certificates/aircraft_certification/aircraft_registry/media/ardata.pdf>

²Conforming to the Unicode Consortium, Transformation Format, 8-bit, with no byte order marks, and using carriage-return, line-feed line endings.

Approved Fuels is shown as Unknown. There are four categories in which the TCDS discriminates the approved fuel for each type certificate: (1) by engine, (2) by serial number, (3) by year of manufacture, and, for one aircraft, (4) by operation of the aircraft as either a seaplane or landplane.



SN = Serial number
YOM = Year of manufacture
Mfr = Manufacturer

Figure 1. Data Processing Flow of the Data Sets Within the Aircraft Registry Database

Most of the database processing was automated, except for the TCDS processing. Each TCDS is available in a portable document format, with all certification information concerning the particular aircraft model and series, and requires a person to read the document to find the reference to the approved fuels for that model and series aircraft. For some aircraft models and series, the approved fuel is further specified to the serial number, the year of manufacture or the engine approved for the aircraft. This TCDS processing step requires the aircraft model and series, and in some occasions, the aircraft serial number, year of manufacture, or engine for that aircraft. The TCDS process is the only resource-limited portion of the database analysis.

As shown in figure 1, the Selected Master Records results in 2664 records that represent 189,415 aircraft. Each record represents the number of aircraft for a specific manufacturer, their model, and series.

CHARACTERIZING THE APPROPRIATE AIRCRAFT FOR THIS STUDY.

The first phase of the data analysis captured the identifier for the aircraft manufacturer, model, and series. This seven-character code (Aircraft Mfr Model Code, as defined in ARData.pdf) is in both the Aircraft Registration Master File (MASTER.txt) and the Aircraft Reference File (ACFTREFER .txt). The Aircraft Reference File provides the manufacturer, model, and series names tied to the seven-character identifier. It also provides the human-readable names for the seven-character identifier while traversing the Aircraft Registration Master File for the relevant data, based on the selection criteria.

While searching the 374,340 records in the MASTER.txt file, 228,078 records were selected. These 189,415 were aircraft with reciprocating engines that require aviation-grade gasoline (of which 176,073 were reciprocating, 131 were 2 cycle, and 13,250 were 4 cycle engines, according to the Type Engine field). These data were further refined using the Status Code and Airworthiness Classification Code fields (in brackets), as shown below.

- Status Code fields are:
 - N-Number Assigned and Registered [T & V]
 - Aircraft registered to the manufacturer under their Dealer Certificate [M]
 - The Triennial Aircraft Registration form was mailed and has not been returned by the Post Office [A]
- Airworthiness Classification Codes are Standard [1] and Light Sport [7]

The resulting 189,453³ aircraft are sufficiently close to the ~161,000-168,000 aircraft from the Aircraft Owners and Pilots Associations statistics for 2003-2007 [2], and the Bureau of Transportation Statistics data of ~164,000-171,000 aircraft for 2003-2005 [3]. Other combinations of “Status Code” and “Airworthiness Classification Code” resulted in either a too low or a very high number of aircraft.

CROSS-REFERENCING THE AIRCRAFT WITH THEIR APPROVED FUEL.

The development of a table that cross-referenced the aircraft manufacturer, model, and series with the appropriate TCDS was critical to the data reduction process in this report. To determine the most widely used fuel types, every registered aircraft in the FAA system was catalogued and sorted by frequency, that is, the aircraft model and name were used to determine the frequency. There were more Piper and Cessna models in use than other manufacturers, and thus, the percentage in which a plane type occurred must be considered as to not skew results. By determining the percentage of planes assigned to a specific type of aircraft, one can assume that this fuel type is used more frequently.

³ A number of aircraft in the original 189,454 were categorized as reciprocating engine in the MASTER.txt file. However, close inspection of the ENGINE.txt file noted that the engines were either turboshaft or turboprop.

In the Aircraft Registry Database, there are 189,415 aircraft, which represent 2642 aircraft manufacturers (including the models and series). The original sampling called for processing 200 of the 2642 manufacturers, models, and series of aircraft (which represented approximately 84% of the 189,415 aircraft) to be evaluated for their fuel type. This process took about a month to complete. The fuel categories did not fall into one or two categories, but rather, were fairly distributed among many categories. Nevertheless, this advanced the data analysis and set the stage for completing the analysis.

Cataloging these fuel types became more time-consuming as the percentages lowered. When a TCDS represents a large array of aircraft (such as the Cessna 310B and Cessna 310D), the information spans a larger percentage of the aircraft fleet. However, there were TCDSs that represented only one aircraft out of 189,415 and required extensive review of the TCDS to determine its minimum approved fuel, which is the lowest grade of fuel that an aircraft is approved to operate on. Some TCDSs from the 1930s did not call for a minimum approved fuel).

The process of compiling the information resulted in four categories. There are many aircraft types that still require more information to be accurately represented. The four categories are (1) aircraft that are approved to use more than one fuel type, (2) foreign aircraft that use foreign fuel types, (3) aircraft too old to have specified a fuel type, and (4) aircraft that are unknown or not reported.

HANDLING SPECIAL REQUIREMENTS FROM THE TCDS FOR THE APPROVED FUEL.

For the first three categories, sufficient data exists from which the analysis could proceed and the specific approved fuel could be assigned. The process for defining the engine category was straightforward; the ENGINE.txt file was used to cross-reference each aircraft in the MASTER.txt file with the ACFTREFER.txt file to determine the statistic for the approved fuel or to identify cases where the approved fuel could not be determined, which were defined as Unknown. The MASTER.txt file showed the particular serial number and year of manufacture for the aircraft, and thus, the approved fuel could be determined. If the serial number and year of manufacture did not match the criteria, it was defined as Unknown.

For the last category, and for the aircraft models⁴ to which it applied, representing 1509 aircraft, no data existed in the Aircraft Registry for the analysis to objectively characterize the aircraft as either 73 octane (for the landplane) or 80 octane (required for the seaplane). All the aircraft in the Registry were identified as landplanes, but a review of some aircraft by tail number, with information available from other public records, showed that many aircraft in the MASTER.txt file were seaplanes. For these 1509 aircraft, approximately 0.8% of the aircraft analyzed, 80 octane was assigned as their approved fuel. If all these aircraft were, hypothetically, landplanes, then a 0.8% error would exist between the 73 octane approved fuel distribution and the 80 octane approved fuel distribution, which was considered acceptable.

⁴The aircraft that had the seaplane-landplane criteria in its TCDS are manufactured by LUSCOMBE and SILVAIRE. The TCDS covered only their 8A and 8E models.

A distribution of the number of aircraft, by manufacturer, is shown in appendix A. There were 241 manufacturers reflected in this report. These ranged from one manufacturer that had 74,258 aircraft (Cessna) to 48 manufacturers that had only one aircraft in the Registry.

DATA SUMMARY

The data in table 2 show the approved distribution of fuel grade for all manufacturers, representing 189,415 aircraft, and reflecting the specific approved fuel from the TCDS (Appendix C contains a table of the specific phrase from the TCDS, and its mapping to the following tables). In this detailed distribution, the highest population is “80 or 87 fuel grade” at ~29% of the 189,415 aircraft. The next highest is “100LL or 100 grade” at ~22%.

Table 2. Distribution of Approved Fuels as Listed in Aircraft TCDS

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 189,415 Aircraft (% rounded)
80 or 87 (MG80)	54,242	28.6
100LL or 100 (MG100LL)	41,012	21.7
100 or 130 (MG100LL)	36,203	19.1
73 octane (other fuel)	15,988	8.4
80 octane (MG80)	15,155	8.0
91 or 96 (MG91)	13,184	7.0
100 octane (MG100LL)	3,241	1.7
Unidentified engine (unknown)	3,219	1.7
Fuel not specified (unknown)	1,598	0.8
65 octane (other fuel)	1,465	0.8
100LL (MG100LL)	1,453	0.8
91/96 UL (unleaded)	825	0.4
87 octane	802	0.4
Fuel cannot be determined (unknown)	307	0.2
91 octane (MG91)	196	0.1
Jet A, Jet A-1 (ASTM D 1655) (JETA)	146	0.1
Aircraft serial number no match to TCDS (unknown)	137	0.1
96 or 100LL (MG100LL)	67	0.035
100 or 120 (MG100LL)	49	0.025
70 octane (other fuel)	42	0.022
Foreign fuel (unknown)	34	0.017
90 octane (MG90)	13	0.0068
115 or 145 (other fuel)	9	0.0047
97.5 or 100LL (MG100LL)	8	0.0042
Unknown (unknown)	5	0.0026
108 or 135 (other fuel)	4	0.0021

Table 2. Distribution of Approved Fuels as Listed in Aircraft TCDS (Continued)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 189,415 Aircraft (% rounded)
91 and 100 (MG91)	4	0.0021
91 or 98 (MG91)	3	0.0015
Deleted in 1950 (unknown)	1	0.00052
95 or 100LL (MG100LL)	1	0.00052
Unknown engine (unknown)	1	0.00052
Kerosene JP4 or JP5 (JETA)	1	0.00052

In tables 2 and 3, additional analyses for some aircraft models and series of the TCDS are required to specify the approved fuel. Appendix B contains tables for each manufacturer of distributions of fuel grades similar to tables 2 and 3.

Table 3. Minimum-Grade Fuel Distribution

Minimum-Grade Fuel	Number of Aircraft	Percent of 189,415 Aircraft (% rounded)
Minimum-grade 100LL	82,034	43.3
Minimum-grade 80	69,397	36.6
Other fuel	17,508	9.2
Minimum-grade 91	13,387	7.1
Unknown, etc.	5,302	2.8
Unleaded 91/96	825	0.4
87 octane	802	0.4
Jet A	147	0.1
Minimum-grade 90	13	0.0068

For cases in which manufacturers have a larger number of aircraft in the Aircraft Registry Database, the distribution of minimum-grade fuels may be different from the distribution of minimum-grade fuels for the entire population of aircraft. For example, in table B-107 in appendix B, ~95% of Cessna aircraft show 80 minimum-grade fuel (~51%) or 100LL (~44%). As shown in table B-335, ~67% of Piper aircraft show either 80 minimum-grade fuel (~30%) or 100LL (~36%), and the rest show either minimum-grade 91 (~19%) or other fuel (~11%).

The aircraft represented in this study have type certificates dating from the 1930s under the Civil Aviation Authority's Civil Aviation Regulations (CAR 3) to today's modern Code of Federal Regulations (CFR). Accordingly, while the modern CFRs show approved fuels for the aircraft type certificate, many earlier type certificates did not show approved fuels. Furthermore, the modern approved fuel standards have also evolved. A report by the ASTM D 910 Task Force of D02.J.02 [8] provides a comprehensive history of aviation gasoline (AvGas). Given that today's

AvGas is typically 80/87, 91/96, 100/130, and 100LL, this history explains why many fuels described in this report are unfamiliar to currently operated aircraft.

Table 3 shows the AvGas grades, as listed in ASTM D 910, Table 1. In addition to these AvGas grades, this report also shows some unique distributions of other fuels, such as when the analysis identified a 91/96 unleaded approved fuel, as well as some Jet A approved fuel. For approved fuels with a longer heritage, a general category of Other fuel is provided, and covers, for example, 65, 70, 73, 108 or 135, and 115 or 145 approved octane fuels. The detailed categorization of all fuels is shown in appendix C. While these categories provide insight into the variety of approved fuels for aircraft still approved to operate, 80% of the aircraft use either minimum-grade 100LL (43.3%) or minimum-grade 80 (36.6%). Only 0.4% of the aircraft are approved to use unleaded fuel [7].

CONCLUSIONS

The aircraft represented in the Federal Aviation Administration (FAA) Aircraft Registry (the February 2010 data are used in this study) is a reasonable source of data from which to assess the fleet distribution of aviation gasoline (AvGas). Two key attributes of the FAA Aircraft Registry are the public availability of the data and the nonproprietary data encoding. These attributes allow for public access and independent review.

Approximately 50.6%, or 189,415 of the 374,340 FAA-registered aircraft, have reciprocating engines that require AvGas.

The Type Certificate Data Sheet (TCDS) is a necessary component of the data analysis, which was developed to identify the approved fuel for each model and series of manufactured aircraft. The particular criteria in the TCDS (for example, the aircraft serial number within an aircraft model and series, the year of manufacture, or the engine model) was also incorporated in this data analysis process to ensure that the approved fuel is correctly associated with the particular aircraft in the FAA Aircraft Registry.

The aircraft represented in this study have type certificates dating from the 1930s under the Civil Aviation Authority's Civil Aviation Regulations. Accordingly, while the modern CFRs show approved fuels for the aircraft type certificate, many earlier type certificates did not. Furthermore, the modern approved fuel standards have also evolved. For these approved fuels with a longer heritage, a general category of Other fuel is provided (9.2%), and covers, for example, 65, 70, 73, 108, or 135, and 115 or 145 approved octane fuels. These fuel categories provide insight into the variety of approved fuels for aircraft that are still approved to operate, while being unfamiliar to currently operated aircraft.

Approximately 2.8% of the 189,415 FAA-registered aircraft with reciprocating engines have no reference, that can be found, to an approved fuel (typically due to missing data in the FAA Aircraft Registry), and they are labeled as Unknown.

This data served as the basis for the addition of 100VLL (very low lead) to the current ASTM D 910 specification (aviation gasoline). The FAA subsequently issued Special Airworthiness Information Bulletin, NE-11-55, allowing the use of this fuel in all piston powered aircraft currently certificated on 100LL fuel.

In addition to the currently used AvGas grades (minimum-grade 80, minimum-grade 91, and minimum-grade 100 low lead), this study also showed unique distributions of other fuels, such as 91/96 unleaded approved fuel (0.4%) and some Jet A approved fuel (0.1%).

Approximately 79.9% of the 189,415 FAA-registered aircraft with reciprocating engines use either minimum-grade 100 low lead (43.3%) or minimum-grade 80 (36.6%) AvGas.

REFERENCES

1. Schlickemaier, Herbert W., "Aviation Fuels Research Interim Database Report," Crown Consulting, Inc., T132-001-AFRP-REPORT-01, April 25, 2010.
2. Aircraft Owners and Pilots Association Online, "General Aviation Information: Active General Aviation Aircraft in the U.S.—1973-2011," (current as of March 2011) <http://www.aopa.org/whatsnew/stats/aircraft.html> (last visited 7/11/11).
3. Research and innovative Technology Administration, Bureau of Transportation Statistics, "Table 1-13: Active U.S. Air Carrier and General Aviation Fleet by Type of Aircraft (Number of carriers)" <http://www.bts.gov/publications/national_transportation_statistics/html/table_01_13.html (last visited 7/11/11).
4. FAA Registry, Make / Model Inquiry Results http://registry.faa.gov/aircraftinquiry/AcftRef_Inquiry.aspx (last visited 7/11/11).
5. FAA Aircraft Registry: Releasable Aircraft Database Download http://www.faa.gov/licenses_certificates/aircraft_certification/aircraft_registry/releasable_aircraft_download/ (last visited 7/11/11).
6. FAA Regulatory and Guidance Library, Type Certificate Data Sheets (Make Model), http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgMakeModel.nsf/Frameset? (last visited 7/11/11).
7. Robinson Helicopter Company Model R22.
8. Orr, M., "The History, Specification, Production, Use and Evaluation of Unleaded Aviation Gasoline," report by the ASTM D 910 Task Force of D02.J.02.

**APPENDIX A—DISTRIBUTION OF RELEVANT AIRCRAFT MANUFACTURERS IN
FEDERAL AVIATION ADMINISTRATION AIRCRAFT REGISTRY DATABASE**

**Table A-1. List of Manufacturers, Code, and Number of Aircraft That Meet the Selection
Criteria (Total Number of Aircraft in Database: 189,454)**

Manufacturer's Code	Number of Aircraft	Manufacturer's Name
014	908	Aero Commander
010	3	Aerocar
511	230	Aerofab, Inc.
018	1	Aeromarine-Klemm
021	1	Aeromere
016	40	Aeromot
019	1,693	Aeronca
211	4,107	Aeronca/Bubeck Irving
009	5	Aerotechnik
011	119	Aerotek
022	1	Aetna
026	8	Agusta Spa
044	19	Air & Space America, Inc.
032	2	Aircraft Builders
038	3	Aircraft Manufacturing
053	1	Alliance Aircraft
054	182	Alon
063	619	American
058	1	American Aeronautical
385	18	American Blimp Corp.
212	619	American Champion Aircraft
065	6	American Eaglecraft
074	3	Anderson Greenwood
114	2	Angel Aircraft Corp.
079	14	Arctic Aircraft Co., Inc.
852	5	Arrow
084	6	Arrow Aircraft & Motors
221	865	Aviat, Inc.
095	17	Avions Mudry Et Cie
096	8	Avions P Robin, Inc.

Table A-1. List of Manufacturers, Code, and Number of Aircraft That Meet the Selection Criteria (Total Number of Aircraft in Database: 189,454) (Continued)

Manufacturer's Code	Number of Aircraft	Manufacturer's Name
103	1	Barnard
112	9	Beagle
115	17,209	Beech-Parks
118	302	Bell
120	196	Bellanca
122	2,501	Bellanca
113	40	Bentley John O
138	1,164	Boeing/Stiles R
140	9	Bolkow
144	72	Brantly
383	1	Brditschka
152	61	Britten Norman
130	2	Brown Kerry D
684	35	Bruner-Winkle
165	7	Buhl
166	63	Burkhart Grob Luft-Und
035	1	Bushmaster
171	11	Butler Aircraft Company
172	1	Butler Aircraft Corporation
189	8	Camair
190	1	Canadair
192	3	Canadian Car & Foundry
193	1	Cavalier
207	74,258	Cessna/Inland Valley Avia
213	3,383	Cirrus Design Corp.
224	45	Classic Aircraft Corp.
232	1	Columbia Aircraft
515	521	Columbia Aircraft Mfg
235	8	Command-Aire
237	139	Commonwealth
240	175	Consolidated Aeronautics, Inc.
242	122	Convair

Table A-1. List of Manufacturers, Code, and Number of Aircraft That Meet the Selection Criteria (Total Number of Aircraft in Database: 189,454) (Continued)

Manufacturer's Code	Number of Aircraft	Manufacturer's Name
003	57	Corben
247	42	Cub Crafters, Inc.
258	1	Cunningham Hall
261	2	Curtiss-Robertson
270	20	Dart
274	11	Davis
439	2	Dee Howard Company
280	381	De Havilland
290	2	Detroit
299	1,143	Diamond Aircraft Industries, Inc.
417	6	Diamond Aircraft Industries, Inc.
302	256	Douglas
308	385	Downer
316	2	Driggs
957	1	Drilk Terri M
320	1	Duramold
736	2	Eads Pzl Warszawa-Okecie SA
040	6	Eaglerock
327	11	Emigh
330	283	Enstrom Helicopter Corp.
042	1,757	Erco
334	2	Evangel Air
702	199	Extra Flugzeugproduktions-Und
337	518	Fairchild
338	1	Falcon Aircraft Corp.
358	2	Fft Gmbh
146	70	Fleet
348	20	Fleet Reed S J IV
349	1	Fleetwings
359	7	Ford
364	19	Found
368	3	Franklin

Table A-1. List of Manufacturers, Code, and Number of Aircraft That Meet the Selection Criteria (Total Number of Aircraft in Database: 189,454) (Continued)

Manufacturer's Code	Number of Aircraft	Manufacturer's Name
373	2	Fuji
372	3	Funk
377	3	General Aircraft Corp.
384	3	General Avia Costruzioni
379	2	General Dynamics
390	8	Gippsland Aeronautics Pty, Ltd.
380	43	Glaser-Dirks Flugzeugbau Gmbh
387	5	Goodyear Airship
391	145	Great Lakes
395	157	Grumman
396	1,747	Grumman American Aviation Corp.
397	321	Gulfstream-Schweizer A/C Corp.
408	1	Hamilton
409	1	Hamilton Metalplane
432	1	Hammond Aircraft Corp.
416	5	Harlow
420	1	Hartmann
422	158	Hawker Beechcraft Corp.
425	1	Heath Aviation
430	120	Helio
433	5	Helton
436	171	Hiller-Osborn
467	8	Hoffman-Flugzeugbau
469	96	Howard Aircraft
447	254	Hughes-Filipoff
815	7	Iniziativa Industraili Italia
455	7	Inland
457	1	Intermountain
185	126	Interstate/Smith
465	2	Jamieson
476	1	Kaiser
490	1	Keystone Aircraft

Table A-1. List of Manufacturers, Code, and Number of Aircraft That Meet the Selection Criteria (Total Number of Aircraft in Database: 189,454) (Continued)

Manufacturer's Code	Number of Aircraft	Manufacturer's Name
494	6	Kinner
507	4	Laird
566	16	Lanshe Aerospace, LLC
520	85	Liberty Aerospace Incorporated
768	15	Lincoln
526	49	Lockheed
535	6	Luscombe Airplane Corp.
545	9	Martin
056	244	Martin Edwin W
546	1,005	Maule
547	219	Maule
548	131	McClish
550	17	McCulloch Aircraft Corp.
551	1	McDanel
560	1	Mercury
562	8	Messerschmitt-Bolkow-Blohm
565	88	Meyers Industries, Inc.
579	1	Mong Sport
581	72	Monocoupe
925	14	Monocoupe
587	6,764	Mooney Mite Aircraft Corp.
591	5	Morane Saulnier
592	27	Moravan
594	24	Morrissey Aviation, Inc.
600	2	Moth
608	4	Nardi
612	76	Naval Aircraft Factory
895	5	Neely Buddy Ray
705	2	New Standard
629	2	Nicholas Beazley
633	6	Noorduyn
640	553	North American

Table A-1. List of Manufacturers, Code, and Number of Aircraft That Meet the Selection Criteria (Total Number of Aircraft in Database: 189,454) (Continued)

Manufacturer's Code	Number of Aircraft	Manufacturer's Name
675	1	Paramount
678	51	Partenavia S.P.A.
679	1	Pasped
882	1	Pdps Pzl-Bielsko
693	2	Phillips Aviation Co.
696	14	Piaggio
709	5	Pilatus
708	3	Pilatus Britten-Norman, Ltd.
110	4	Pine Air
710	46,030	Piper Aircraft, Inc.
714	4	Pirtle
718	12	Pitcairn
648	96	Porterfield-Rankin
069	4	Powrachute, LLC
732	12	Quartz Mountain Aerospace, Inc.
735	3	Quicksilver Aircraft
750	1	Rawdon
715	568	Raytheon Aircraft Company
707	29	Rearwin
753	44	Reims Aviation S.A.
757	1	Republic
764	2,249	Robinson Helicopter Co.
763	464	Rockwell International
771	9	Rose-Rhinehart
783	162	Ryan
615	1,012	Ryan
784	2	Ryan Aircraft
840	65	S.O.C.A.T.A.
792	3	Saint Louis
805	329	Schweizer
062	2	Security National Aircraft, Corp.
810	10	Short Bros. & Harland

Table A-1. List of Manufacturers, Code, and Number of Aircraft That Meet the Selection Criteria (Total Number of Aircraft in Database: 189,454) (Continued)

Manufacturer's Code	Number of Aircraft	Manufacturer's Name
812	65	Siai-Marchetti
814	33	Sikorsky
819	1,818	Silvaire
541	1	Simuflight Seattle-1-STOL
825	1	Sioux
060	1,417	Six Chuter, Inc.
813	62	Sky International, Inc.
836	225	Smith
838	1	Snow
868	355	Socata Group Aerospatiale
843	27	Spartan
848	2	Star
856	22	Stearman Aircraft
857	1	Stearman Aviation
863	458	Stinson
865	1	Stits Playboy
864	8	Stol
722	47	Strode-Pitts
985	2	Sukhoi
873	113	Superior
876	4	Swallow
886	3	Taylor-Young
885	2,198	Taylorcraft
888	4	Teal-Washac Industries, Inc.
889	29	Temco Luscombe
059	118	Teraton
894	1	Thorp Aero, Inc.
230	1	Thunder & Colt
896	6	Thurston
399	151	Tiger Aircraft, LLC
898	7	Timm
262	170	Travel Air

Table A-1. List of Manufacturers, Code, and Number of Aircraft That Meet the Selection Criteria (Total Number of Aircraft in Database: 189,454) (Continued)

Manufacturer's Code	Number of Aircraft	Manufacturer's Name
922	1	United Consultants
923	2,280	Universal
937	10	Valentin GmbH
935	95	Varga Aircraft Corp.
952	5	Viking Flying Boat Co.
955	4	Volaircraft
960	517	Waco
962	1	Waggon Und Maschinenbau
970	1	WDL
967	5	White
728	1	Wiley Post Aircraft Corp.
972	1	Windecker
969	4	Wing
974	1	Winstead Bros. Airplane Co.
914	1	Worldwide Aeros Corp.
981	19	Wsk-Pzl-Mielec
995	25	Zenair, Ltd.
997	2	Zlin
998	1	Zlt Zeppelin Luftschifftechnik

APPENDIX B—ANALYSIS OF FUELS BY AIRCRAFT MANUFACTURER

Table B-1. Minimum-Grade Fuel Distribution for Aero Commander
(Manufacturer Code 014 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 908 Aircraft (% rounded)
Minimum-grade 100LL	699	77.0
Minimum-grade 80	179	19.7
Minimum-grade 91	29	3.2
Unknown, etc.	1	0.1

Table B-2. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aero Commander (Manufacturer Code 014 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 908 Aircraft (% rounded)
100 or 130 (MG100LL)	570	62.8
80 or 87 (MG80)	179	19.7
100 octane (MG100LL)	96	10.6
100LL or 100 (MG100LL)	33	3.6
91 or 96 (MG91)	29	3.2
Unidentified engine (unknown)	1	0.1

Table B-3. Minimum-Grade Fuel Distribution for Aerocar (Manufacturer Code 010 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Minimum-grade 80	3	100.0

Table B-4. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aerocar (Manufacturer Code 010 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
80 or 87 (MG80)	3	100.0

Table B-5. Minimum-Grade Fuel Distribution for Aerofab, Inc. (Manufacturer Code 511 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 230 Aircraft (% rounded)
Minimum-grade 100LL	151	65.7
Minimum-grade 91	67	29.1
Minimum-grade 80	9	3.9
Unknown, etc.	3	1.3

Table B-6. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aerofab, Inc. (Manufacturer Code 511 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 230 Aircraft (% rounded)
100 or 130 (MG100LL)	98	42.6
91 or 96 (MG91)	67	29.1
100LL or 100 (MG100LL)	53	23.0
80 or 87 (MG80)	9	3.9
Unidentified engine (unknown)	3	1.3

Table B-7. Minimum-Grade Fuel Distribution for Aeromarine-Klemm (Manufacturer Code 018 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-8. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aeromarine-Klemm (Manufacturer Code 018 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-9. Minimum-Grade Fuel Distribution for Aeromere (Manufacturer Code 021 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 80	1	100.0

Table B-10. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aeromere (Manufacturer Code 021 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
80 or 87 (MG80)	1	100.0

Table B-11. Minimum-Grade Fuel Distribution for Aeromot (Manufacturer Code 016 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 40 Aircraft (% rounded)
Minimum-grade 100LL	40	100.0

Table B-12. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aeromot (Manufacturer Code 016 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 40 Aircraft (% rounded)
100LL (MG100LL)	39	97.5
100 or 130 (MG100LL)	1	2.5

Table B-13. Minimum-Grade Fuel Distribution for Aeronca (Manufacturer Code 019 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1693 Aircraft (% rounded)
Other fuel	1249	73.8
Minimum-grade 80	346	20.4
Unknown, etc.	98	5.8

Table B-14. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aeronca (Manufacturer Code 019 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1693 Aircraft (% rounded)
73 octane (other fuel)	1245	73.5
80 octane (MG80)	346	20.4
Fuel not specified (unknown)	98	5.8
65 octane (other fuel)	4	0.2

Table B-15. Minimum-Grade Fuel Distribution for Aeronca/Bubeck Irving (Manufacturer Code 211 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4107 Aircraft (% rounded)
Other fuel	2093	51.0
Minimum-grade 80	2012	49.0
Unknown, etc.	2	0.048

Table B-16. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aeronca/Bubeck Irving (Manufacturer Code 211 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4107 Aircraft (% rounded)
73 octane (other fuel)	2093	51.0
80 or 87 (MG80)	1093	26.6
80 octane (MG80)	919	22.4
Unidentified engine (unknown)	2	0.048

Table B-17. Minimum-Grade Fuel Distribution for Aerotechnik (Manufacturer Code 009 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Unknown, etc.	5	100.0

Table B-18. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aerotechnik (Manufacturer Code 009 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Foreign fuel (unknown)	5	100.0

Table B-19. Minimum-Grade Fuel Distribution for Aerotek (Manufacturer Code 011 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 119 Aircraft (% rounded)
Minimum-grade 100LL	119	100.0

Table B-20. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aerotek (Manufacturer Code 011 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 119 Aircraft (% rounded)
100 or 130 (MG100LL)	119	100.0

Table B-21. Minimum-Grade Fuel Distribution for Aetna (Manufacturer Code 022 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Other fuel	1	100.0

Table B-22. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aetna (Manufacturer Code 022 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
73 octane (other fuel)	1	100.0

Table B-23. Minimum-Grade Fuel Distribution for Agusta Spa (Manufacturer Code 026 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Minimum-grade 91	8	100.0

Table B-24. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Agusta Spa (Manufacturer Code 026 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 8 Aircraft (% rounded)
91 or 96 (MG91)	8	100.0

Table B-25. Minimum-Grade Fuel Distribution for Air & Space America, Inc. (Manufacturer Code 044 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 19 Aircraft (% rounded)
Minimum-grade 100LL	19	100.0

Table B-26. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Air & Space America, Inc. (Manufacturer Code 044 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 19 aircraft (% rounded)
100 octane (MG100LL)	19	100.0

Table B-27. Minimum-Grade Fuel Distribution for Aircraft Builders (Manufacturer Code 032 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-28. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aircraft Builders (Manufacturer Code 032 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Fuel not specified (unknown)	2	100.0

Table B-29. Minimum-Grade Fuel Distribution for Aircraft Manufacturing (Manufacturer Code 038 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Minimum-grade 80	3	100.0

Table B-30. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aircraft Manufacturing (Manufacturer Code 038 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
80 octane (MG80)	3	100.0

Table B-31. Minimum-Grade Fuel Distribution for Alliance Aircraft (Manufacturer Code 053 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-32. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Alliance Aircraft (Manufacturer Code 053 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-33. Minimum-Grade Fuel Distribution for Alon
(Manufacturer Code 054 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 182 Aircraft (% rounded)
Minimum-grade 80	182	100.0

Table B-34. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Alon (Manufacturer Code 054 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 182 Aircraft (% rounded)
80 octane (MG80)	182	100.0

Table B-35. Minimum-Grade Fuel Distribution for American (Manufacturer Code 063 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 619 Aircraft (% rounded)
Minimum-grade 80	619	100.0

Table B-36. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for American (Manufacturer Code 063 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 619 Aircraft (% rounded)
80 or 87 (MG80)	619	100.0

Table B-37. Minimum-Grade Fuel Distribution for American Aeronautical (Manufacturer Code 058 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-38. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for American Aeronautical (Manufacturer Code 058 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-39. Minimum-Grade Fuel Distribution for American Blimp Corp. (Manufacturer Code 385 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 18 Aircraft (% rounded)
Minimum-grade 100LL	18	100.0

Table B-40. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for American Blimp Corp. (Manufacturer Code 385 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 18 Aircraft (% rounded)
100LL (MG100LL)	15	83.3
100LL or 100 (MG100LL)	3	16.7

Table B-41. Minimum-Grade Fuel Distribution for American Champion Aircraft
(Manufacturer Code 212 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 619 Aircraft (% rounded)
Minimum-grade 80	502	81.1
Minimum-grade 91	115	18.6
Other fuel	2	0.3

Table B-42. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for American Champion Aircraft (Manufacturer Code 212 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 619 Aircraft (% rounded)
80 or 87 (MG80)	476	76.9
91 or 96 (MG91)	115	18.6
80 octane (MG80)	26	4.2
73 octane (other fuel)	2	0.3

Table B-43. Minimum-Grade Fuel Distribution for American Eaglecraft
(Manufacturer Code 065 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Unknown, etc.	4	66.7
Other fuel	2	33.3

Table B-44. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for American Eaglecraft (Manufacturer Code 065 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Fuel not specified (unknown)	4	66.7
73 octane (other fuel)	2	33.3

Table B-45. Minimum-Grade Fuel Distribution for Anderson Greenwood
(Manufacturer Code 074 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Minimum-grade 100LL	3	100.0

Table B-46. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Anderson Greenwood (Manufacturer Code 074 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
100 or 130 (MG100LL)	3	100.0

Table B-47. Minimum-Grade Fuel Distribution for Angel Aircraft Corp. (Manufacturer Code 114 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-48. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Angel Aircraft Corp. (Manufacturer Code 114 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unidentified engine (unknown)	2	100.0

Table B-49. Minimum-Grade Fuel Distribution for Arctic Aircraft Co., Inc. (Manufacturer Code 079 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 14 Aircraft (% rounded)
Unknown, etc.	14	100.0

Table B-50. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Arctic Aircraft Co., Inc. (Manufacturer Code 079 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 14 Aircraft (% rounded)
Fuel cannot be determined (unknown)	14	100.0

Table B-51. Minimum-Grade Fuel Distribution for Arrow (Manufacturer Code 852 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Unknown, etc.	5	100.0

Table B-52. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Arrow (Manufacturer Code 852 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Fuel not specified (unknown)	5	100.0

Table B-53. Minimum-Grade Fuel Distribution for Arrow Aircraft & Motors (Manufacturer Code 084 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Unknown, etc.	6	100.0

Table B-54. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Arrow Aircraft & Motors (Manufacturer Code 084 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Fuel not specified (unknown)	6	100.0

Table B-55. Minimum-Grade Fuel Distribution for Aviat, Inc. (Manufacturer Code 221 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 865 Aircraft (% rounded)
Minimum-grade 100LL	865	100.0

Table B-56. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Aviat, Inc. (Manufacturer Code 221 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 865 Aircraft (% rounded)
100LL or 100 (MG100LL)	697	80.6
100 or 130 (MG100LL)	168	19.4

Table B-57. Minimum-Grade Fuel Distribution for Avions Mudry Et Cie (Manufacturer Code 095 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 17 Aircraft (% rounded)
Minimum-grade 91	17	100.0

Table B-58. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Avions Mudry Et Cie (Manufacturer Code 095 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 17 Aircraft (% rounded)
91 or 96 (MG91)	17	100.0

Table B-59. Minimum-Grade Fuel Distribution for Avions P Robin, Inc. (Manufacturer Code 096 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Unknown, etc.	8	100.0

Table B-60. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Avions P Robin, Inc. (Manufacturer Code 096 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Unidentified engine (unknown)	8	100.0

Table B-61. Minimum-Grade Fuel Distribution for Barnard (Manufacturer Code 103 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-62. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Barnard (Manufacturer Code 103 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-63. Minimum-Grade Fuel Distribution for Beagle (Manufacturer Code 112 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 9 Aircraft (% rounded)
Minimum-grade 100LL	9	100.0

Table B-64. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Beagle (Manufacturer Code 112 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 9 Aircraft (% rounded)
100 or 130 (MG100LL)	9	100.0

Table B-65. Minimum-Grade Fuel Distribution for Beech-Parks (Manufacturer Code 115 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 17,200 Aircraft (% rounded)
Minimum-grade 100LL	10,807	62.8
Minimum-grade 80	3,907	22.7
Minimum-grade 91	2,395	13.9
Unknown, etc.	63	0.4
87 octane	15	0.1
Other fuel	13	0.1

Table B-66. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Beech-Parks (Manufacturer Code 115 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 17,200 Aircraft (% rounded)
100LL or 100 (MG100LL)	6,953	40.4
100 or 130 (MG100LL)	3,854	22.4
91 or 96 (MG91)	2,395	13.9
80 octane (MG80)	2,261	13.1
80 or 87 (MG80)	1,646	9.6
Fuel cannot be determined (unknown)	26	0.2
Fuel not specified (unknown)	19	0.1
Unidentified engine (unknown)	18	0.1
87 octane	15	0.1
73 octane (other fuel)	13	0.1

Table B-67. Minimum-Grade Fuel Distribution for Bell (Manufacturer Code 118 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 298 Aircraft (% rounded)
Minimum-grade 80	137	46.0
Minimum-grade 100LL	92	30.9
Minimum-grade 91	48	16.1
Unknown, etc.	21	7.0

Table B-68. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Bell (Manufacturer Code 118 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 298 Aircraft (% rounded)
80 octane (MG80)	93	31.2
100 or 130 (MG100LL)	92	30.9
91 octane (MG91)	48	16.1
80 or 87 (MG80)	44	14.8
Unidentified engine (unknown)	21	7.0

Table B-69. Minimum-Grade Fuel Distribution for Bellanca (Manufacturer Code 120 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 196 Aircraft (% rounded)
Minimum-grade 80	183	93.4
Other fuel	8	4.1
Unknown, etc.	5	2.6

Table B-70. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Bellanca (Manufacturer Code 120 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 196 Aircraft (% rounded)
80 octane (MG80)	183	93.4
65 octane (other fuel)	8	4.1
Fuel not specified (unknown)	3	1.5
Unidentified engine (unknown)	2	1.0

Table B-71. Minimum-Grade Fuel Distribution for Bellanca (Manufacturer Code 122 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2501 Aircraft (% rounded)
Minimum-grade 80	1530	61.2
Minimum-grade 100LL	831	33.2
Minimum-grade 91	139	5.6
Unknown, etc.	1	0.039

Table B-72. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Bellanca (Manufacturer Code 122 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2501 Aircraft (% rounded)
80 or 87 (MG80)	1530	61.2
100 or 130 (MG100LL)	782	31.3
91 or 96 (MG91)	139	5.6
100 or 120 (MG100LL)	49	2.0
Unidentified engine (unknown)	1	0.039

Table B-73. Minimum-Grade Fuel Distribution for Bentley John O (Manufacturer Code 113 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 40 Aircraft (% rounded)
Minimum-grade 100LL	35	87.5
Unknown, etc.	5	12.5

Table B-74. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Bentley John O (Manufacturer Code 113 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 40 Aircraft (% rounded)
100LL (MG100LL)	35	87.5
Unidentified engine (unknown)	5	12.5

Table B-75. Minimum-Grade Fuel Distribution for Boeing/Stiles R (Manufacturer Code 138 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1164 Aircraft (% rounded)
Other fuel	1111	95.4
87 octane	30	2.6
Unknown, etc.	19	1.6
Minimum-grade 100LL	2	0.2
Minimum-grade 90	1	0.1
Minimum-grade 80	1	0.1

Table B-76. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Boeing/Stiles R (Manufacturer Code 138 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1164 Aircraft (% rounded)
65 octane (other fuel)	1109	95.3
87 octane	30	2.6
Unidentified engine (unknown)	18	1.5
100 octane (MG100LL)	2	0.2
108 or 135 (other fuel)	1	0.1
90 octane (MG90)	1	0.1
73 octane (other fuel)	1	0.1
80 or 87 (MG80)	1	0.1
Fuel not specified (unknown)	1	0.1

Table B-77. Minimum-Grade Fuel Distribution for Bolkow (Manufacturer Code 140 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 9 Aircraft (% rounded)
Unknown, etc.	8	88.9
Minimum-grade 80	1	11.1

Table B-78. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Bolkow (Manufacturer Code 140 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 9 Aircraft (% rounded)
Unidentified engine (unknown)	8	88.9
80 or 87 (MG80)	1	11.1

Table B-79. Minimum-Grade Fuel Distribution for Brantly (Manufacturer Code 144 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 72 Aircraft (% rounded)
Minimum-grade 91	69	95.8
Minimum-grade 100LL	3	4.2

Table B-80. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Brantly (Manufacturer Code 144 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 72 Aircraft (% rounded)
91 or 96 (MG91)	69	95.8
100 or 130 (MG100LL)	3	4.2

Table B-81. Minimum-Grade Fuel Distribution for Brditschka (Manufacturer Code 383 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 100LL	1	100.0

Table B-82. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Brditschka (Manufacturer Code 383 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 aircraft (% rounded)
100LL (MG100LL)	1	100.0

Table B-83. Minimum-Grade Fuel Distribution for Britten Norman (Manufacturer Code 152 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 61 Aircraft (% rounded)
Minimum-grade 91	60	98.4
Unknown, etc.	1	1.6

Table B-84. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Britten Norman (Manufacturer Code 152 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 61 Aircraft (% rounded)
91 or 96 (MG91)	60	98.4
Unidentified engine (unknown)	1	1.6

Table B-85. Minimum-Grade Fuel Distribution for Brown Kerry D (Manufacturer Code 130 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-86. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Brown Kerry D (Manufacturer Code 130 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unidentified engine (unknown)	2	100.0

Table B-87. Minimum-Grade Fuel Distribution for Bruner-Winkle (Manufacturer Code 684 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 35 Aircraft (% rounded)
Unknown, etc.	35	100.0

Table B-88. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Bruner-Winkle (Manufacturer Code 684 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 35 Aircraft (% rounded)
Fuel not specified (unknown)	34	97.1
Unidentified engine (unknown)	1	2.9

Table B-89. Minimum-Grade Fuel Distribution for Buhl (Manufacturer Code 165 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 7 Aircraft (% rounded)
Unknown, etc.	7	100.0

Table B-90. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Buhl (Manufacturer Code 165 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 7 Aircraft (% rounded)
Fuel not specified (unknown)	7	100.0

Table B-91. Minimum-Grade Fuel Distribution for Burkhart Grob Luft-Und (Manufacturer Code 166 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 63 Aircraft (% rounded)
Minimum-grade 100LL	63	100.0

Table B-92. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Burkhart Grob Luft-Und (Manufacturer Code 166 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 63 Aircraft (% rounded)
96 or 100LL (MG100LL)	49	77.8
100LL or 100 (MG100LL)	14	22.2

Table B-93. Minimum-Grade Fuel Distribution for Bushmaster (Manufacturer Code 035 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 80	1	100.0

Table B-94. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Bushmaster (Manufacturer Code 035 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
80 or 87 (MG80)	1	100.0

Table B-95. Minimum-Grade Fuel Distribution for Butler Aircraft Company (Manufacturer Code 171 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 11 Aircraft (% rounded)
Minimum-grade 100LL	11	100.0

Table B-96. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Butler Aircraft Company (Manufacturer Code 171 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 11 Aircraft (% rounded)
100 or 130 (MG100LL)	11	100.0

Table B-97. Minimum-Grade Fuel Distribution for Butler Aircraft Corporation (Manufacturer Code 172 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-98. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Butler Aircraft Corporation (Manufacturer Code 172 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-99. Minimum-Grade Fuel Distribution for Camair (Manufacturer Code 189 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Minimum-grade 91	7	87.5
Unknown, etc.	1	12.5

Table B-100. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Camair (Manufacturer Code 189 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 8 Aircraft (% rounded)
91 or 96 (MG91)	7	87.5
Unidentified engine (unknown)	1	12.5

Table B-101. Minimum-Grade Fuel Distribution for Canadair (Manufacturer Code 190 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-102. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Canadair (Manufacturer Code 190 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Foreign fuel (unknown)	1	100.0

Table B-103. Minimum-Grade Fuel Distribution for Canadian Car & Foundry (Manufacturer Code 192 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Minimum-grade 91	2	66.7
Unknown, etc.	1	33.3

Table B-104. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Canadian Car & Foundry (Manufacturer Code 192 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
91 octane (MG91)	2	66.7
Unidentified engine (unknown)	1	33.3

Table B-105. Minimum-Grade Fuel Distribution for Cavalier (Manufacturer Code 193 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-106. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Cavalier (Manufacturer Code 193 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-107. Minimum-Grade Fuel Distribution for Cessna/Inland Valley Avia (Manufacturer Code 207 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 74,248 Aircraft (% rounded)
Minimum-grade 80	37,998	51.2
Minimum-grade 100LL	32,697	44.0
Other fuel	2,750	3.7
Minimum-grade 91	709	1.0
Unknown, etc.	94	0.1

Table B-108. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Cessna/Inland Valley Avia (Manufacturer Code 207 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 74,248 Aircraft (% rounded)
80 or 87 (MG80)	32,670	44.0
100LL or 100 (MG100LL)	23,771	32.0
100 or 130 (MG100LL)	8,926	12.0
80 octane (MG80)	5,328	7.2
73 octane (other fuel)	2,750	3.7
91 or 96 (MG91)	709	1.0
Unidentified engine (unknown)	75	0.1
Fuel not specified (unknown)	12	0.01
Unknown (unknown)	4	0.0053
Aircraft serial number no match to TCDS (unknown)	3	0.0040

Table B-109. Minimum-Grade Fuel Distribution for Cirrus Design Corp.
(Manufacturer Code 213 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3383 Aircraft (% rounded)
Minimum-grade 100LL	3383	100.0

Table B-110. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Cirrus Design Corp. (Manufacturer Code 213 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3383 Aircraft (% rounded)
100LL or 100 (MG100LL)	3383	100.0

Table B-111. Minimum-Grade Fuel Distribution for Classic Aircraft Corp.
(Manufacturer Code 224 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 45 Aircraft (% rounded)
Minimum-grade 80	45	100.0

Table B-112. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Classic Aircraft Corp. (Manufacturer Code 224 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 45 Aircraft (% rounded)
80 octane (MG80)	45	100.0

Table B-113. Minimum-Grade Fuel Distribution for Columbia Aircraft (Manufacturer Code 232 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-114. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Columbia Aircraft (Manufacturer Code 232 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-115. Minimum-Grade Fuel Distribution for Columbia Aircraft Mfg (Manufacturer Code 515 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 521 Aircraft (% rounded)
Minimum-grade 100LL	520	99.8
Unknown, etc.	1	0.2

Table B-116. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Columbia Aircraft Mfg (Manufacturer Code 515 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 521 Aircraft (% rounded)
100LL or 100 (MG100LL)	520	99.8
Unidentified engine (unknown)	1	0.2

Table B-117. Minimum-Grade Fuel Distribution for Command-Aire (Manufacturer Code 235 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Unknown, etc.	8	100.0

Table B-118. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Command-Aire (Manufacturer Code 235 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Fuel not specified (unknown)	8	100.0

Table B-119. Minimum-Grade Fuel Distribution for Commonwealth (Manufacturer Code 237 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 139 Aircraft (% rounded)
Other fuel	105	75.5
Unknown, etc.	28	20.1
Minimum-grade 80	6	4.3

Table B-120. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Commonwealth (Manufacturer Code 237 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 139 Aircraft (% rounded)
73 octane (other fuel)	105	75.5
Fuel not specified (unknown)	28	20.1
80 octane (MG80)	6	4.3

Table B-121. Minimum-Grade Fuel Distribution for Consolidated Aeronautics, Inc. (Manufacturer Code 240 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 175 Aircraft (% rounded)
Minimum-grade 100LL	159	90.9
Minimum-grade 91	16	9.1

Table B-122. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Consolidated Aeronautics, Inc. (Manufacturer Code 240 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 175 aircraft (% rounded)
100 or 130 (MG100LL)	156	89.1
91 or 96 (MG91)	16	9.1
100LL or 100 (MG100LL)	3	1.7

Table B-123. Minimum-Grade Fuel Distribution for Convair (Manufacturer Code 242 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 122 Aircraft (% rounded)
Minimum-grade 80	94	77.0
Minimum-grade 91	11	9.0
Minimum-grade 100LL	8	6.6
Other fuel	5	4.1
Unknown, etc.	4	3.3

Table B-124. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Convair (Manufacturer Code 242 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 122 Aircraft (% rounded)
80 or 87 (MG80)	82	67.2
80 octane (MG80)	12	9.8
91 or 96 (MG91)	11	9.0
100 or 130 (MG100LL)	8	6.6
108 or 135 (other fuel)	3	2.5
73 octane (other fuel)	2	1.6
Fuel not specified (unknown)	2	1.6
Fuel cannot be determined (unknown)	1	0.8
Unidentified engine (unknown)	1	0.8

Table B-125. Minimum-Grade Fuel Distribution for Corben (Manufacturer Code 003 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 57 Aircraft (% rounded)
Unknown, etc.	57	100.0

Table B-126. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Corben (Manufacturer Code 003 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 57 Aircraft (% rounded)
Unidentified engine (unknown)	57	100.0

Table B-127. Minimum-Grade Fuel Distribution for Cub Crafters, Inc. (Manufacturer Code 247 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 42 Aircraft (% rounded)
Minimum-grade 100LL	28	66.7
Minimum-grade 80	14	33.3

Table B-128. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Cub Crafters, Inc. (Manufacturer Code 247 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 42 Aircraft (% rounded)
100LL or 100 (MG100LL)	28	66.7
80 or 87 (MG80)	14	33.3

Table B-129. Minimum-Grade Fuel Distribution for Cunningham Hall (Manufacturer Code 258 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-130. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Cunningham Hall (Manufacturer Code 258 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-131. Minimum-Grade Fuel Distribution for Curtiss-Robertson (Manufacturer Code 261 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-132. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Curtiss-Robertson (Manufacturer Code 261 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Fuel not specified (unknown)	2	100.0

Table B-133. Minimum-Grade Fuel Distribution for Dart (Manufacturer Code 270 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 20 Aircraft (% rounded)
Unknown, etc.	20	100.0

Table B-134. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Dart (Manufacturer Code 270 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 20 Aircraft (% rounded)
Fuel not specified (unknown)	20	100.0

Table B-135. Minimum-Grade Fuel Distribution for Davis (Manufacturer Code 274 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 11 Aircraft (% rounded)
Unknown, etc.	11	100.0

Table B-136. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Davis (Manufacturer Code 274 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 11 Aircraft (% rounded)
Fuel not specified (unknown)	11	100.0

Table B-137. Minimum-Grade Fuel Distribution for Dee Howard Company (Manufacturer Code 439 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Other fuel	2	100.0

Table B-138. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Dee Howard Company (Manufacturer Code 439 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
115 or 145 (other fuel)	2	100.0

Table B-139. Minimum-Grade Fuel Distribution for De Havilland (Manufacturer Code 280 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 381 Aircraft (% rounded)
Minimum-grade 80	340	89.2
Minimum-grade 91	18	4.7
Minimum-grade 100LL	17	4.5
Unknown, etc.	6	1.6

Table B-140. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for De Havilland (Manufacturer Code 280 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 381 Aircraft (% rounded)
80 or 87 (MG80)	278	73.0
80 octane (MG80)	62	16.3
91 or 96 (MG91)	18	4.7
100 or 130 (MG100LL)	17	4.5
Fuel not specified (unknown)	6	1.6

Table B-141. Minimum-Grade Fuel Distribution for Detroit (Manufacturer Code 290 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-142. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Detroit (Manufacturer Code 290 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unidentified engine (unknown)	2	100.0

Table B-143. Minimum-Grade Fuel Distribution for Diamond Aircraft Industries, Inc. (Manufacturer Code 299 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1143 Aircraft (% rounded)
Minimum-grade 100LL	991	86.7
Jet A	146	12.8
Minimum-grade 91	4	0.3
Unknown, etc.	1	0.1
Minimum-grade 80	1	0.1

Table B-144. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Diamond Aircraft Industries, Inc. (Manufacturer Code 299 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1143 Aircraft (% rounded)
100LL (MG100LL)	990	86.6
Jet A, Jet A-1 (ASTM 1655) (JETA)	146	12.8
91 or 96 (MG91)	4	0.3
Unidentified engine (unknown)	1	0.1
80 or 87 (MG80)	1	0.1
100 or 130 (MG100LL)	1	0.1

Table B-145. Minimum-Grade Fuel Distribution for Diamond Aircraft Industries, Inc.
(Manufacturer Code 417 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Minimum-grade 100LL	6	100.0

Table B-146. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Diamond Aircraft Industries, Inc. (Manufacturer Code 417 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 6 Aircraft (% rounded)
96 or 100LL (MG100LL)	5	83.3
100LL (MG100LL)	1	16.7

Table B-147. Minimum-Grade Fuel Distribution for Douglas (Manufacturer Code 302 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 254 Aircraft (% rounded)
Unknown, etc.	161	63.4
Minimum-grade 91	46	18.1
Minimum-grade 100LL	17	6.7
87 octane	15	5.9
Minimum-grade 90	12	4.7
Other fuel	3	1.2

Table B-148. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Douglas (Manufacturer Code 302 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 254 Aircraft (% rounded)
Unidentified engine (unknown)	119	46.9
91 octane (MG91)	46	18.1
Fuel cannot be determined (unknown)	32	12.6
87 octane	15	5.9
100 or 130 (MG100LL)	15	5.9
90 octane (MG90)	12	4.7
Fuel not specified (unknown)	10	3.9
115 or 145 (other fuel)	3	1.2
100 octane (MG100LL)	2	0.8

Table B-149. Minimum-Grade Fuel Distribution for Downer (Manufacturer Code 308 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 385 Aircraft (% rounded)
Minimum-grade 80	270	70.1
Minimum-grade 100LL	109	28.3
Unknown, etc.	6	1.6

Table B-150. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Downer (Manufacturer Code 308 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 385 Aircraft (% rounded)
80 octane (MG80)	210	54.5
100 or 130 (MG100LL)	109	28.3
80 or 87 (MG80)	60	15.6
Unidentified engine (unknown)	6	1.6

Table B-151. Minimum-Grade Fuel Distribution for Driggs (Manufacturer Code 316 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-152. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Driggs (Manufacturer Code 316 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Fuel not specified (unknown)	2	100.0

Table B-153. Minimum-Grade Fuel Distribution for Drilk Terri M (Manufacturer Code 957 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-154. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Drilk Terri M (Manufacturer Code 957 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-155. Minimum-Grade Fuel Distribution for Duramold (Manufacturer Code 320 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-156. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Duramold (Manufacturer Code 320 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-157. Minimum-Grade Fuel Distribution for Eads Pzl Warszawa-Okecie SA (Manufacturer Code 736 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Minimum-grade 100LL	2	100.0

Table B-158. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Eads Pzl Warszawa-Okecie SA (Manufacturer Code 736 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
100LL or 100 (MG100LL)	2	100.0

Table B-159. Minimum-Grade Fuel Distribution for Eaglerock (Manufacturer Code 040 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Unknown, etc.	6	100.0

Table B-160. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Eaglerock (Manufacturer Code 040 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Fuel not specified (unknown)	5	83.3
Unidentified engine (unknown)	1	16.7

Table B-161. Minimum-Grade Fuel Distribution for Emigh (Manufacturer Code 327 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 11 Aircraft (% rounded)
Minimum-grade 80	11	100.0

Table B-162. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Emigh (Manufacturer Code 327 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 11 Aircraft (% rounded)
80 octane (MG80)	11	100.0

Table B-163. Minimum-Grade Fuel Distribution for Enstrom Helicopter Corp. (Manufacturer Code 330 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 283 Aircraft (% rounded)
Minimum-grade 100LL	283	100.0

Table B-164. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Enstrom Helicopter Corp. (Manufacturer Code 330 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 283 Aircraft (% rounded)
100 or 130 (MG100LL)	283	100.0

Table B-165. Minimum-Grade Fuel Distribution for Erco (Manufacturer Code 042 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1757 Aircraft (% rounded)
Other fuel	1590	90.5
Unknown, etc.	84	4.8
Minimum-grade 80	83	4.7

Table B-166. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Erco (Manufacturer Code 042 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1757 Aircraft (% rounded)
73 octane (other fuel)	1590	90.5
Unidentified engine (unknown)	84	4.8
80 octane (MG80)	83	4.7

Table B-167. Minimum-Grade Fuel Distribution for Evangel Air (Manufacturer Code 334 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Minimum-grade 100LL	2	100.0

Table B-168. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Evangel Air (Manufacturer Code 334 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
100 or 130 (MG100LL)	2	100.0

Table B-169. Minimum-Grade Fuel Distribution for Extra Flugzeugproduktions-Und
(Manufacturer Code 702 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 199 Aircraft (% rounded)
Minimum-grade 100LL	197	99.0
Unknown, etc.	2	1.0

Table B-170. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Extra Flugzeugproduktions-Und (Manufacturer Code 702 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 199 Aircraft (% rounded)
100LL or 100 (MG100LL)	197	99.0
Unidentified engine (unknown)	2	1.0

Table B-171. Minimum-Grade Fuel Distribution for Fairchild (Manufacturer Code 337 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 518 Aircraft (% rounded)
Other fuel	232	44.8
Unknown, etc.	134	25.9
87 octane	80	15.4
Minimum-grade 80	72	13.9

Table B-172. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Fairchild (Manufacturer Code 337 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 518 Aircraft (% rounded)
65 octane (other fuel)	136	26.3
Fuel not specified (unknown)	132	25.5
73 octane (other fuel)	96	18.5
87 octane	80	15.4
80 octane (MG80)	72	13.9
Unidentified engine (unknown)	2	0.4

Table B-173. Minimum-Grade Fuel Distribution for Falcon Aircraft Corp.
(Manufacturer Code 338 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 80	1	100.0

Table B-174. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Falcon Aircraft Corp. (Manufacturer Code 338 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
80 or 87 (MG80)	1	100.0

Table B-175. Minimum-Grade Fuel Distribution for Fft Gmbh (Manufacturer Code 358 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Minimum-grade 100LL	2	100.0

Table B-176. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Fft Gmbh (Manufacturer Code 358 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
100LL or 100 (MG100LL)	2	100.0

Table B-177. Minimum-Grade Fuel Distribution for Fleet (Manufacturer Code 146 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 70 Aircraft (% rounded)
Unknown, etc.	70	100.0

Table B-178. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Fleet (Manufacturer Code 146 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 70 Aircraft (% rounded)
Fuel not specified (unknown)	69	98.6
Unidentified engine (unknown)	1	1.4

Table B-179. Minimum-Grade Fuel Distribution for Fleet Reed S J IV (Manufacturer Code 348 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 20 Aircraft (% rounded)
Other fuel	20	100.0

Table B-180. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Fleet Reed S J IV (Manufacturer Code 348 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 20 Aircraft (% rounded)
73 octane (other fuel)	20	100.0

Table B-181. Minimum-Grade Fuel Distribution for Fleetwings (Manufacturer Code 349 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-182. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Fleetwings (Manufacturer Code 349 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-183. Minimum-Grade Fuel Distribution for Ford (Manufacturer Code 359 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 7 Aircraft (% rounded)
Unknown, etc.	7	100.0

Table B-184. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Ford (Manufacturer Code 359 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 7 Aircraft (% rounded)
Fuel not specified (unknown)	7	100.0

Table B-185. Minimum-Grade Fuel Distribution for Found (Manufacturer Code 364 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 19 Aircraft (% rounded)
Minimum-grade 100LL	19	100.0

Table B-186. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Found (Manufacturer Code 364 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 19 Aircraft (% rounded)
100 or 130 (MG100LL)	19	100.0

Table B-187. Minimum-Grade Fuel Distribution for Franklin (Manufacturer Code 368 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Unknown, etc.	3	100.0

Table B-188. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Franklin (Manufacturer Code 368 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Fuel not specified (unknown)	3	100.0

Table B-189. Minimum-Grade Fuel Distribution for Fuji (Manufacturer Code 373 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Minimum-grade 91	2	100.0

Table B-190. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Fuji (Manufacturer Code 373 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
91 or 96 (MG91)	2	100.0

Table B-191. Minimum-Grade Fuel Distribution for Funk (Manufacturer Code 372 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Unknown, etc.	3	100.0

Table B-192. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Funk (Manufacturer Code 372 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Fuel not specified (unknown)	3	100.0

Table B-193. Minimum-Grade Fuel Distribution for General Aircraft Corp. (Manufacturer Code 377 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Unknown, etc.	3	100.0

Table B-194. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for General Aircraft Corp. (Manufacturer Code 377 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Fuel not specified (unknown)	3	100.0

Table B-195. Minimum-Grade Fuel Distribution for General Avia Costruzioni (Manufacturer Code 384 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Unknown, etc.	2	66.7
Minimum-grade 100LL	1	33.3

Table B-196. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for General Avia Costruzioni (Manufacturer Code 384 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Unidentified engine (unknown)	1	33.3
100LL (MG100LL)	1	33.3
Fuel not specified (unknown)	1	33.3

Table B-197. Minimum-Grade Fuel Distribution for General Dynamics (Manufacturer Code 379 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Minimum-grade 91	1	50.0
Unknown, etc.	1	50.0

Table B-198. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for General Dynamics (Manufacturer Code 379 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unidentified engine (unknown)	1	50.0
91 or 96 (MG91)	1	50.0

Table B-199. Minimum-Grade Fuel Distribution for Gippsland Aeronautics Pty, Ltd. (Manufacturer Code 390 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Minimum-grade 100LL	8	100.0

Table B-200. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Gippsland Aeronautics Pty, Ltd. (Manufacturer Code 390 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 8 Aircraft (% rounded)
100 or 130 (MG100LL)	8	100.0

Table B-201. Minimum-Grade Fuel Distribution for Glaser-Dirks Flugzeugbau Gmbh
(Manufacturer Code 380 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 43 Aircraft (% rounded)
Minimum-grade 100LL	30	69.8
Unknown, etc.	13	30.2

Table B-202. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Glaser-Dirks Flugzeugbau Gmbh (Manufacturer Code 380 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 43 Aircraft (% rounded)
100LL (MG100LL)	29	67.4
Foreign fuel (unknown)	11	25.6
Unidentified engine (unknown)	2	4.7
95 or 100LL (MG100LL)	1	2.3

Table B-203. Minimum-Grade Fuel Distribution for Goodyear Airship (Manufacturer Code 387 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Minimum-grade 100LL	4	80.0
Minimum-grade 80	1	20.0

Table B-204. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Goodyear Airship (Manufacturer Code 387 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
100 or 130 (MG100LL)	4	80.0
80 or 87 (MG80)	1	20.0

Table B-205. Minimum-Grade Fuel Distribution for Great Lakes (Manufacturer Code 391 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 145 Aircraft (% rounded)
Minimum-grade 91	103	71.0
Other fuel	24	16.6
Unknown, etc.	13	9.0
Minimum-grade 80	5	3.4

Table B-206. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Great Lakes (Manufacturer Code 391 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 145 Aircraft (% rounded)
91 or 96 (MG91)	103	71.0
73 octane (other fuel)	24	16.6
Fuel cannot be determined (unknown)	7	4.8
Fuel not specified (unknown)	6	4.1
80 or 87 (MG80)	5	3.4

Table B-207. Minimum-Grade Fuel Distribution for Grumman (Manufacturer Code 395 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 157 Aircraft (% rounded)
87 octane	90	57.3
Minimum-grade 80	34	21.7
Minimum-grade 91	18	11.5
Minimum-grade 100LL	12	7.6
Unknown, etc.	3	1.9

Table B-208. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Grumman (Manufacturer Code 395 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 157 Aircraft (% rounded)
87 octane	90	57.3
80 or 87 (MG80)	33	21.0
91 octane (MG91)	18	11.5
100 or 130 (MG100LL)	7	4.5
100 octane (MG100LL)	5	3.2
Unidentified engine (unknown)	2	1.3
Unknown engine (unknown)	1	0.6
80 octane (MG80)	1	0.6

Table B-209. Minimum-Grade Fuel Distribution for Grumman American Aviation Corp. (Manufacturer Code 396 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1747 Aircraft (% rounded)
Minimum-grade 80	947	54.2
Minimum-grade 100LL	799	45.7
Unknown, etc.	1	0.1

Table B-210. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Grumman American Aviation Corp. (Manufacturer Code 396 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1747 Aircraft (% rounded)
80 or 87 (MG80)	947	54.2
100 octane (MG100LL)	689	39.4
100 or 130 (MG100LL)	110	6.3
Fuel cannot be determined (unknown)	1	0.1

Table B-211. Minimum-Grade Fuel Distribution for Gulfstream-Schweizer A/C Corp.
(Manufacturer Code 397 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 321 Aircraft (% rounded)
Minimum-grade 100LL	208	64.8
Minimum-grade 80	112	34.9
Unknown, etc.	1	0.3

Table B-212. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Gulfstream-Schweizer A/C Corp. (Manufacturer Code 397 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 321 Aircraft (% rounded)
100 octane (MG100LL)	208	64.8
80 or 87 (MG80)	112	34.9
Fuel cannot be determined (unknown)	1	0.3

Table B-213. Minimum-Grade Fuel Distribution for Hamilton (Manufacturer Code 408 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 100LL	1	100.0

Table B-214. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Hamilton (Manufacturer Code 408 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
100 or 130 (MG100LL)	1	100.0

Table B-215. Minimum-Grade Fuel Distribution for Hamilton Metalplane (Manufacturer Code 409 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-216. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Hamilton Metalplane (Manufacturer Code 409 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-217. Minimum-Grade Fuel Distribution for Hammond Aircraft Corp. (Manufacturer Code 432 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-218. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Hammond Aircraft Corp. (Manufacturer Code 432 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-219. Minimum-Grade Fuel Distribution for Harlow (Manufacturer Code 416 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Unknown, etc.	5	100.0

Table B-220. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Harlow (Manufacturer Code 416 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Fuel not specified (unknown)	5	100.0

Table B-221. Minimum-Grade Fuel Distribution for Hartmann (Manufacturer Code 420 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Other fuel	1	100.0

Table B-222. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Hartmann (Manufacturer Code 420 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
73 octane (other fuel)	1	100.0

Table B-223. Minimum-Grade Fuel Distribution for Hawker Beechcraft Corp. (Manufacturer Code 422 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 158 Aircraft (% rounded)
Minimum-grade 100LL	158	100.0

Table B-224. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Hawker Beechcraft Corp. (Manufacturer Code 422 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 158 Aircraft (% rounded)
100 or 130 (MG100LL)	158	100.0

Table B-225. Minimum-Grade Fuel Distribution for Heath Aviation (Manufacturer Code 425 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-226. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Heath Aviation (Manufacturer Code 425 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-227. Minimum-Grade Fuel Distribution for Helio (Manufacturer Code 430 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 120 Aircraft (% rounded)
Minimum-grade 100LL	103	85.8
Minimum-grade 80	15	12.5
Minimum-grade 91	2	1.7

Table B-228. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Helio (Manufacturer Code 430 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 120 Aircraft (% rounded)
100 or 130 (MG100LL)	95	79.2
80 or 87 (MG80)	15	12.5
100LL or 100 (MG100LL)	8	6.7
91 or 98 (MG91)	2	1.7

Table B-229. Minimum-Grade Fuel Distribution for Helton (Manufacturer Code 433 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Minimum-grade 80	5	100.0

Table B-230. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Helton (Manufacturer Code 433 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
80 or 87 (MG80)	5	100.0

Table B-231. Minimum-Grade Fuel Distribution for Hiller-Osborn (Manufacturer Code 436 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 163 Aircraft (% rounded)
Minimum-grade 91	64	39.3
Minimum-grade 100LL	51	31.3
Minimum-grade 80	36	22.1
Unknown, etc.	12	7.4

Table B-232. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Hiller-Osborn (Manufacturer Code 436 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 163 Aircraft (% rounded)
91 octane (MG91)	64	39.3
100LL or 100 (MG100LL)	47	28.8
80 or 87 (MG80)	24	14.7
Unidentified engine (unknown)	12	7.4
80 octane (MG80)	12	7.4
100 or 130 (MG100LL)	4	2.5

Table B-233. Minimum-Grade Fuel Distribution for Hoffman-Flugzeugbau (Manufacturer Code 467 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Minimum-grade 100LL	8	100.0

Table B-234. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Hoffman-Flugzeugbau (Manufacturer Code 467 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 8 Aircraft (% rounded)
97.5 or 100LL (MG100LL)	8	100.0

Table B-235. Minimum-Grade Fuel Distribution for Howard Aircraft (Manufacturer Code 469 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 96 Aircraft (% rounded)
Minimum-grade 80	92	95.8
Other fuel	3	3.1
Unknown, etc.	1	1.0

Table B-236. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Howard Aircraft (Manufacturer Code 469 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 96 Aircraft (% rounded)
80 or 87 (MG80)	89	92.7
73 octane (other fuel)	3	3.1
80 octane (MG80)	3	3.1
Fuel not specified (unknown)	1	1.0

Table B-237. Minimum-Grade Fuel Distribution for Hughes-Filipoff (Manufacturer Code 447 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 254 Aircraft (% rounded)
Minimum-grade 100LL	138	54.3
Minimum-grade 91	98	38.6
Unknown, etc.	18	7.1

Table B-238. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Hughes-Filipoff (Manufacturer Code 447 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 254 Aircraft (% rounded)
100 or 130 (MG100LL)	138	54.3
91 or 96 (MG91)	98	38.6
Unidentified engine (unknown)	18	7.1

Table B-239. Minimum-Grade Fuel Distribution for Iniziative Industraili Italia
(Manufacturer Code 815 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 7 Aircraft (% rounded)
Minimum-grade 100LL	5	71.4
Unknown, etc.	2	28.6

Table B-240. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Iniziative Industraili Italia (Manufacturer Code 815 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 7 Aircraft (% rounded)
100LL (MG100LL)	5	71.4
Foreign Fuel (unknown)	2	28.6

Table B-241. Minimum-Grade Fuel Distribution for Inland (Manufacturer Code 455 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 7 Aircraft (% rounded)
Unknown, etc.	7	100.0

Table B-242. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Inland (Manufacturer Code 455 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 7 Aircraft (% rounded)
Fuel not specified (unknown)	6	85.7
Unidentified engine (unknown)	1	14.3

Table B-243. Minimum-Grade Fuel Distribution for Intermountain (Manufacturer Code 457 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 80	1	100.0

Table B-244. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Intermountain (Manufacturer Code 457 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
80 or 87 (MG80)	1	100.0

Table B-245. Minimum-Grade Fuel Distribution for Interstate/Smith (Manufacturer Code 185 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 126 Aircraft (% rounded)
Other fuel	92	73.0
Minimum-grade 80	29	23.0
Unknown, etc.	5	4.0

Table B-246. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Interstate/Smith (Manufacturer Code 185 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 126 Aircraft (% rounded)
73 octane (other fuel)	92	73.0
80 octane (MG80)	27	21.4
Unidentified engine (unknown)	3	2.4
80 or 87 (MG80)	2	1.6
Fuel cannot be determined (unknown)	2	1.6

Table B-247. Minimum-Grade Fuel Distribution for Jamieson (Manufacturer Code 465 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Other fuel	2	100.0

Table B-248. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Jamieson (Manufacturer Code 465 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
73 octane (other fuel)	2	100.0

Table B-249. Minimum-Grade Fuel Distribution for Kaiser (Manufacturer Code 476 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-250. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Kaiser (Manufacturer Code 476 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-251. Minimum-Grade Fuel Distribution for Keystone Aircraft (Manufacturer Code 490 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-252. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Keystone Aircraft (Manufacturer Code 490 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0%

Table B-253. Minimum-Grade Fuel Distribution for Kinner (Manufacturer Code 494 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Unknown, etc.	6	100.0

Table B-254. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Kinner (Manufacturer Code 494 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Fuel not specified (unknown)	6	100.0

Table B-255. Minimum-Grade Fuel Distribution for Laird (Manufacturer Code 507 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Unknown, etc.	4	100.0

Table B-256. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Laird (Manufacturer Code 507 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Unidentified engine (unknown)	2	50.0
Fuel not specified (unknown)	2	50.0

Table B-257. Minimum-Grade Fuel Distribution for Lanshe Aerospace, LLC (Manufacturer Code 566 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 16 Aircraft (% rounded)
Minimum-grade 100LL	16	100.0

Table B-258. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Lanshe Aerospace, LLC (Manufacturer Code 566 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 16 Aircraft (% rounded)
100LL or 100 (MG100LL)	16	100.0

Table B-259. Minimum-Grade Fuel Distribution for Liberty Aerospace Incorporated (Manufacturer Code 520 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 85 Aircraft (% rounded)
Minimum-grade 100LL	85	100.0

Table B-260. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Liberty Aerospace Incorporated (Manufacturer Code 520 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 85 Aircraft (% rounded)
100LL or 100 (MG100LL)	85	100.0

Table B-261. Minimum-Grade Fuel Distribution for Lincoln (Manufacturer Code 768 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 15 Aircraft (% rounded)
Unknown, etc.	15	100.0

Table B-262. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Lincoln (Manufacturer Code 768 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 15 Aircraft (% rounded)
Fuel not specified (unknown)	14	93.3
Unidentified engine (unknown)	1	6.7

Table B-263. Minimum-Grade Fuel Distribution for Lockheed (Manufacturer Code 526 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 49 Aircraft (% rounded)
Minimum-grade 80	17	34.7
Minimum-grade 100LL	12	24.5
Minimum-grade 91	9	18.4
Unknown, etc.	7	14.3
Other fuel	4	8.2

Table B-264. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Lockheed (Manufacturer Code 526 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 49 Aircraft (% rounded)
80 or 87 (MG80)	17	34.7
100 or 130 (MG100LL)	12	24.5
Fuel not specified (unknown)	7	14.3
91 octane (MG91)	5	10.2
115 or 145 (other fuel)	4	8.2
91 & 100 (MG91)	4	8.2

Table B-265. Minimum-Grade Fuel Distribution for Luscombe Airplane Corp.
(Manufacturer Code 535 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Unknown, etc.	6	100.0

Table B-266. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Luscombe Airplane Corp. (Manufacturer Code 535 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Fuel not specified (unknown)	6	100.0

Table B-267. Minimum-Grade Fuel Distribution for Martin (Manufacturer Code 545 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 9 Aircraft (% rounded)
Minimum-grade 100LL	9	100.0

Table B-268. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Martin (Manufacturer Code 545 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 9 Aircraft (% rounded)
100 or 130 (MG100LL)	9	100.0

Table B-269. Minimum-Grade Fuel Distribution for Martin Edwin W (Manufacturer Code 056 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 244 Aircraft (% rounded)
Unknown, etc.	116	47.5
Minimum-grade 100LL	108	44.3
Minimum-grade 80	15	6.1
Minimum-grade 91	2	0.8
Other fuel	2	0.8
87 octane	1	0.4

Table B-270. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Martin Edwin W (Manufacturer Code 056 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 244 Aircraft (% rounded)
Unidentified engine (unknown)	106	43.4
100LL (MG100LL)	61	25.0
100LL or 100 (MG100LL)	44	18.0
80 or 87 (MG80)	15	6.1
Foreign fuel (unknown)	6	2.5
Fuel not specified (unknown)	4	1.6
96 or 100LL (MG100LL)	3	1.2
73 octane (other fuel)	2	0.8
91 or 96 (MG91)	2	0.8
87 octane	1	0.4

Table B-271. Minimum-Grade Fuel Distribution for Maule (Manufacturer Code 546 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1004 Aircraft (% rounded)
Minimum-grade 100LL	945	94.1
Minimum-grade 80	56	5.6
Unknown, etc.	3	0.3

Table B-272. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Maule (Manufacturer Code 546 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1004 Aircraft (% rounded)
100LL or 100 (MG100LL)	945	94.1
80 or 87 (MG80)	56	5.6
Unidentified engine (unknown)	3	0.3

Table B-273. Minimum-Grade Fuel Distribution for Maule (Manufacturer Code 547 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 219 Aircraft (% rounded)
Minimum-grade 100LL	219	100.0

Table B-274. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Maule (Manufacturer Code 547 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 219 Aircraft (% rounded)
100LL or 100 (MG100LL)	219	100.0

Table B-275. Minimum-Grade Fuel Distribution for McClish (Manufacturer Code 548 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 131 Aircraft (% rounded)
Other fuel	114	87.0
Unknown, etc.	17	13.0

Table B-276. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for McClish (Manufacturer Code 548 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 131 Aircraft (% rounded)
73 octane (other fuel)	114	87.0
Fuel not specified (unknown)	17	13.0

Table B-277. Minimum-Grade Fuel Distribution for McCulloch Aircraft Corp. (Manufacturer Code 550 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 17 Aircraft (% rounded)
Minimum-grade 100LL	17	100.0

Table B-278. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for McCulloch Aircraft Corp. (Manufacturer Code 550 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 17 Aircraft (% rounded)
100 or 130 (MG100LL)	17	100.0

Table B-279. Minimum-Grade Fuel Distribution for McDaneld (Manufacturer Code 551 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-280. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for McDaneld (Manufacturer Code 551 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-281. Minimum-Grade Fuel Distribution for Mercury (Manufacturer Code 560 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-282. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Mercury (Manufacturer Code 560 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-283. Minimum-Grade Fuel Distribution for Messerschmitt-Bolkow-Blohm (Manufacturer Code 562 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Unknown, etc.	8	100.0

Table B-284. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Messerschmitt-Bolkow-Blohm (Manufacturer Code 562 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Unidentified engine (unknown)	8	100.0

Table B-285. Minimum-Grade Fuel Distribution for Meyers Industries, Inc. (Manufacturer Code 565 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 88 Aircraft (% rounded)
Other fuel	46	52.3
Minimum-grade 100LL	29	33.0
Minimum-grade 80	13	14.8

Table B-286. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Meyers Industries, Inc. (Manufacturer Code 565 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 88 Aircraft (% rounded)
73 octane (other fuel)	46	52.3
100 or 130 (MG100LL)	29	33.0
80 octane (MG80)	13	14.8

Table B-287. Minimum-Grade Fuel Distribution for Mong Sport (Manufacturer Code 579 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-288. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Mong Sport (Manufacturer Code 579 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-289. Minimum-Grade Fuel Distribution for Monocoupe (Manufacturer Code 581 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 72 Aircraft (% rounded)
Unknown, etc.	66	91.7
Minimum-grade 80	6	8.3

Table B-290. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Monocoupe (Manufacturer Code 581 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 72 Aircraft (% rounded)
Fuel not specified (unknown)	63	87.5
80 octane (MG80)	6	8.3
Unidentified engine (unknown)	3	4.2

Table B-291. Minimum-Grade Fuel Distribution for Monocoupe (Manufacturer Code 925 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 14 Aircraft (% rounded)
Unknown, etc.	14	100.0

Table B-292. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Monocoupe (Manufacturer Code 925 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 14 Aircraft (% rounded)
Fuel not specified (unknown)	14	100.0

Table B-293. Minimum-Grade Fuel Distribution for Mooney Mite Aircraft Corp. (Manufacturer Code 587 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 6764 Aircraft (% rounded)
Minimum-grade 100LL	6236	92.2
Minimum-grade 91	322	4.8
Minimum-grade 80	205	3.0
Unknown, etc.	1	0.014

Table B-294. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Mooney Mite Aircraft Corp. (Manufacturer Code 587 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 6764 Aircraft (% rounded)
100 or 130 (MG100LL)	5384	79.6
100LL or 100 (MG100LL)	581	8.6
91 or 96 (MG91)	322	4.8
100LL (MG100LL)	271	4.0
80 octane (MG80)	205	3.0
Deleted in 1950 (unknown)	1	0.014

Table B-295. Minimum-Grade Fuel Distribution for Morane Saulnier (Manufacturer Code 591 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Unknown, etc.	5	100.0

Table B-296. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Morane Saulnier (Manufacturer Code 591 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Unidentified engine (unknown)	5	100.0

Table B-297. Minimum-Grade Fuel Distribution for Moravan (Manufacturer Code 592 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 27 Aircraft (% rounded)
Minimum-grade 100LL	27	100.0

Table B-298. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Moravan (Manufacturer Code 592 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 27 Aircraft (% rounded)
100 or 130 (MG100LL)	27	100.0

Table B-299. Minimum-Grade Fuel Distribution for Morrissey Aviation, Inc. (Manufacturer Code 594 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 24 Aircraft (% rounded)
Minimum-grade 80	24	100.0

Table B-300. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Morrissey Aviation, Inc. (Manufacturer Code 594 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 24 Aircraft (% rounded)
80 or 87 (MG80)	24	100.0

Table B-301. Minimum-Grade Fuel Distribution for Moth (Manufacturer Code 600 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-302. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Moth (Manufacturer Code 600 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Fuel not specified (unknown)	2	100.0

Table B-303. Minimum-Grade Fuel Distribution for Nardi (Manufacturer Code 608 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Minimum-grade 91	4	100.0

Table B-304. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Nardi (Manufacturer Code 608 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4 Aircraft (% rounded)
91 or 96 (MG91)	4	100.0

Table B-305. Minimum-Grade Fuel Distribution for Naval Aircraft Factory (Manufacturer Code 612 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 76 Aircraft (% rounded)
Other fuel	76	100.0

Table B-306. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Naval Aircraft Factory (Manufacturer Code 612 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 76 Aircraft (% rounded)
73 octane (other fuel)	76	100.0

Table B-307. Minimum-Grade Fuel Distribution for Neely Buddy Ray (Manufacturer Code 895 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Minimum-grade 80	3	60.0
Unknown, etc.	2	40.0

Table B-308. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Neely Buddy Ray (Manufacturer Code 895 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
80 or 87 (MG80)	3	60.0
Unidentified engine (unknown)	2	40.0

Table B-309. Minimum-Grade Fuel Distribution for New Standard (Manufacturer Code 705 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-310. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for New Standard (Manufacturer Code 705 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Fuel not specified (unknown)	2	100.0

Table B-311. Minimum-Grade Fuel Distribution for Nicholas Beazley (Manufacturer Code 629 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-312. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Nicholas Beazley (Manufacturer Code 629 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Fuel not specified (unknown)	2	100.0

Table B-313. Minimum-Grade Fuel Distribution for Noorduyn (Manufacturer Code 633 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Minimum-grade 91	6	100.0

Table B-314. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Noorduyn (Manufacturer Code 633 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 6 Aircraft (% rounded)
91 octane (MG91)	6	100.0

Table B-315. Minimum-Grade Fuel Distribution for North American (Manufacturer Code 640 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 553 Aircraft (% rounded)
87 octane	470	85.0
Unknown, etc.	69	12.5
Minimum-grade 100LL	11	2.0
Minimum-grade 91	3	0.5

Table B-316. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for North American (Manufacturer Code 640 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 553 Aircraft (% rounded)
87 octane	470	85.0
Unidentified engine (unknown)	69	12.5
100 or 130 (MG100LL)	11	2.0
91 or 96 (MG91)	3	0.5

Table B-317. Minimum-Grade Fuel Distribution for Paramount (Manufacturer Code 675 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-318. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Paramount (Manufacturer Code 675 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-319. Minimum-Grade Fuel Distribution for Partenavia S.P.A. (Manufacturer Code 678 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 51 Aircraft (% rounded)
Minimum-grade 100LL	51	100.0

Table B-320. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Partenavia S.P.A. (Manufacturer Code 678 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 51 Aircraft (% rounded)
100 or 130 (MG100LL)	34	66.7
100LL or 100 (MG100LL)	17	33.3

Table B-321. Minimum-Grade Fuel Distribution for Pasped (Manufacturer Code 679 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-322. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Pasped (Manufacturer Code 679 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-323. Minimum-Grade Fuel Distribution for Pdps Pzl-Bielsko (Manufacturer Code 882 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-324. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Pdps Pzl-Bielsko (Manufacturer Code 882 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-325. Minimum-Grade Fuel Distribution for Phillips Aviation Co. (Manufacturer Code 693 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-326. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Phillips Aviation Co. (Manufacturer Code 693 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Fuel not specified (unknown)	2	100.0

Table B-327. Minimum-Grade Fuel Distribution for Piaggio (Manufacturer Code 696 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 14 Aircraft (% rounded)
Minimum-grade 100LL	7	50.0
Minimum-grade 80	7	50.0

Table B-328. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Piaggio (Manufacturer Code 696 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 14 Aircraft (% rounded)
80 or 87 (MG80)	7	50.0
100 or 130 (MG100LL)	7	50.0

Table B-329. Minimum-Grade Fuel Distribution for Pilatus (Manufacturer Code 709 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Minimum-grade 91	3	60.0
Minimum-grade 100LL	2	40.0

Table B-330. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Pilatus (Manufacturer Code 709 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
91 or 96 (MG91)	3	60.0
100 or 130 (MG100LL)	2	40.0

Table B-331. Minimum-Grade Fuel Distribution for Pilatus Britten-Norman Ltd.
(Manufacturer Code 708 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Minimum-grade 91	3	100.0

Table B-332. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Pilatus Britten-Norman Ltd. (Manufacturer Code 708 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
91 or 96 (MG91)	3	100.0

Table B-333. Minimum-Grade Fuel Distribution for Pine Air (Manufacturer Code 110 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Minimum-grade 91	4	100.0

Table B-334. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Pine Air (Manufacturer Code 110 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4 Aircraft (% rounded)
91 or 96 (MG91)	4	100.0

Table B-335. Minimum-Grade Fuel Distribution for Piper Aircraft, Inc. (Manufacturer Code 710 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 46,028 Aircraft (% rounded)
Minimum-grade 100LL	16,941	36.8
Minimum-grade 80	13,914	30.2
Minimum-grade 91	8,921	19.4
Other fuel	5,316	11.5
Unknown, etc.	936	2.0

Table B-336. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Piper Aircraft, Inc. (Manufacturer Code 710 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 46,028 Aircraft (% rounded)
100 or 130 (MG100LL)	12,254	26.6
80 or 87 (MG80)	12,114	26.3
91 or 96 (MG91)	8,921	19.4
73 octane (other fuel)	5,270	11.4
100LL or 100 (MG100LL)	2,957	6.4
80 octane (MG80)	1,800	3.9
100 octane (MG100LL)	1,730	3.8
Unidentified engine (unknown)	650	1.4
Fuel not specified (unknown)	143	0.3
Aircraft serial number no match to TCDS (unknown)	134	0.3
70 octane (other fuel)	32	0.1
65 octane (other fuel)	14	0.030
Fuel cannot be determined (unknown)	9	0.019

Table B-337. Minimum-Grade Fuel Distribution for Pirtle (Manufacturer Code 714 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Minimum-grade 80	4	100.0

Table B-338. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Pirtle (Manufacturer Code 714 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4 Aircraft (% rounded)
80 octane (MG80)	4	100.0

Table B-339. Minimum-Grade Fuel Distribution for Pitcairn (Manufacturer Code 718 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 12 Aircraft (% rounded)
Unknown, etc.	12	100.0

Table B-340. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Pitcairn (Manufacturer Code 718 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 12 Aircraft (% rounded)
Fuel not specified (unknown)	7	58.3
Unidentified engine (unknown)	5	41.7

Table B-341. Minimum-Grade Fuel Distribution for Porterfield-Rankin (Manufacturer Code 648 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 96 Aircraft (% rounded)
Unknown, etc.	96	100.0

Table B-342. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Porterfield-Rankin (Manufacturer Code 648 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 96 Aircraft (% rounded)
Fuel not specified (unknown)	96	100.0

Table B-343. Minimum-Grade Fuel Distribution for Wiley Post Aircraft Corp. (Manufacturer Code 728 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-344. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Wiley Post Aircraft Corp. (Manufacturer Code 728 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-345. Minimum-Grade Fuel Distribution for Powrachute, LLC (Manufacturer Code 069 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Unknown, etc.	4	100.0

Table B-346. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Powrachute, LLC (Manufacturer Code 069 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Unidentified engine (unknown)	4	100.0

Table B-347. Minimum-Grade Fuel Distribution for Quartz Mountain Aerospace, Inc. (Manufacturer Code 732 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 12 Aircraft (% rounded)
Minimum-grade 100LL	12	100.0

Table B-348. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Quartz Mountain Aerospace, Inc. (Manufacturer Code 732 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 12 Aircraft (% rounded)
100LL or 100 (MG100LL)	12	100.0

Table B-349. Minimum-Grade Fuel Distribution for Quicksilver Aircraft (Manufacturer Code 735 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Minimum-grade 100LL	3	100.0

Table B-350. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Quicksilver Aircraft (Manufacturer Code 735 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
100LL (MG100LL)	3	100.0

Table B-351. Minimum-Grade Fuel Distribution for Rawdon (Manufacturer Code 750 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 80	1	100.0

Table B-352. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Rawdon (Manufacturer Code 750 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
80 or 87 (MG80)	1	100.0

Table B-353. Minimum-Grade Fuel Distribution for Raytheon Aircraft Company (Manufacturer Code 715 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 567 Aircraft (% rounded)
Minimum-grade 100LL	567	100.0

Table B-354. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Raytheon Aircraft Company (Manufacturer Code 715 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 567 Aircraft (% rounded)
100LL or 100 (MG100LL)	364	64.2
100 or 130 (MG100LL)	203	35.8

Table B-355. Minimum-Grade Fuel Distribution for Rearwin (Manufacturer Code 707 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 29 Aircraft (% rounded)
Other fuel	25	86.2
Unknown, etc.	4	13.8

Table B-356. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Rearwin (Manufacturer Code 707 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 29 Aircraft (% rounded)
65 octane (other fuel)	25	86.2
Fuel not specified (unknown)	4	13.8

Table B-357. Minimum-Grade Fuel Distribution for Reims Aviation S.A. (Manufacturer Code 753 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 44 Aircraft (% rounded)
Minimum-grade 100LL	27	61.4
Minimum-grade 80	16	36.4
Unknown, etc.	1	2.3

Table B-358. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Reims Aviation S.A. (Manufacturer Code 753 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 44 Aircraft (% rounded)
80 or 87 (MG80)	16	36.4
100 or 130 (MG100LL)	15	34.1
100LL or 100 (MG100LL)	12	27.3
Unknown (unknown)	1	2.3

Table B-359. Minimum-Grade Fuel Distribution for Republic (Manufacturer Code 757 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-360. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Republic (Manufacturer Code 757 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-361. Minimum-Grade Fuel Distribution for Robinson Helicopter Co. (Manufacturer Code 764 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2249 Aircraft (% rounded)
Minimum-grade 100LL	1203	53.5
Unleaded 91/96	825	36.7
Unknown, etc.	221	9.8

Table B-362. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Robinson Helicopter Co. (Manufacturer Code 764 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2249 Aircraft (% rounded)
100 or 130 (MG100LL)	1203	53.5
91/96 UL (unleaded)	825	36.7
Fuel cannot be determined (unknown)	214	9.5
Unidentified engine (unknown)	7	0.3

Table B-363. Minimum-Grade Fuel Distribution for Rockwell International (Manufacturer Code 763 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 464 Aircraft (% rounded)
Minimum-grade 100LL	358	77.2
Unknown, etc.	106	22.8

Table B-364. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Rockwell International (Manufacturer Code 763 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 464 Aircraft (% rounded)
100 or 130 (MG100LL)	358	77.2
Unidentified engine (unknown)	106	22.8

Table B-365. Minimum-Grade Fuel Distribution for Rose-Rhinehart (Manufacturer Code 771 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 9 Aircraft (% rounded)
Unknown, etc.	9	100.0

Table B-366. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Rose-Rhinehart (Manufacturer Code 771 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 9 Aircraft (% rounded)
Fuel not specified (unknown)	5	55.6
Unidentified engine (unknown)	4	44.4

Table B-367. Minimum-Grade Fuel Distribution for Ryan (Manufacturer Code 783 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 162 Aircraft (% rounded)
Other fuel	124	76.5
Unknown, etc.	37	22.8
Minimum-grade 80	1	0.6

Table B-368. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Ryan (Manufacturer Code 783 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 162 Aircraft (% rounded)
73 octane (other fuel)	124	76.5
Fuel not specified (unknown)	36	22.2
Unidentified engine (unknown)	1	0.6
80 octane (MG80)	1	0.6

Table B-369. Minimum-Grade Fuel Distribution for Ryan (Manufacturer Code 615 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1012 Aircraft (% rounded)
Minimum-grade 80	889	87.8
Minimum-grade 100LL	113	11.2
Minimum-grade 91	9	0.9
Unknown, etc.	1	0.1

Table B-370. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Ryan (Manufacturer Code 615 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1012 Aircraft (% rounded)
80 octane (MG80)	758	74.9
80 or 87 (MG80)	131	12.9
100 or 130 (MG100LL)	113	11.2
91 or 96 (MG91)	9	0.9
Unidentified engine (unknown)	1	0.1

Table B-371. Minimum-Grade Fuel Distribution for Ryan Aircraft (Manufacturer Code 784 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-372. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Ryan Aircraft (Manufacturer Code 784 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Fuel not specified (unknown)	2	100.0

Table B-373. Minimum-Grade Fuel Distribution for S.O.C.A.T.A. (Manufacturer Code 840 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 65 Aircraft (% rounded)
Minimum-grade 80	60	92.3
Minimum-grade 91	5	7.7

Table B-374. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for S.O.C.A.T.A. (Manufacturer Code 840 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 65 Aircraft (% rounded)
80 or 87 (MG80)	60	92.3
91 or 96 (MG91)	5	7.7

Table B-375. Minimum-Grade Fuel Distribution for Saint Louis (Manufacturer Code 792 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Unknown, etc.	3	100.0

Table B-376. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Saint Louis (Manufacturer Code 792 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Fuel not specified (unknown)	2	66.7
Unidentified engine (unknown)	1	33.3

Table B-377. Minimum-Grade Fuel Distribution for Schweizer (Manufacturer Code 805 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 329 Aircraft (% rounded)
Minimum-grade 100LL	321	97.6
Minimum-grade 91	6	1.8
Unknown, etc.	2	0.6

Table B-378. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Schweizer (Manufacturer Code 805 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 329 Aircraft (% rounded)
100 or 130 (MG100LL)	321	97.6
91 or 96 (MG91)	6	1.8
Unidentified engine (unknown)	2	0.6

Table B-379. Minimum-Grade Fuel Distribution for Security National Aircraft Corp. (Manufacturer Code 062 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-380. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Security National Aircraft Corp. (Manufacturer Code 062 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unidentified engine (unknown)	1	50.0
Fuel not specified (unknown)	1	50.0

Table B-381. Minimum-Grade Fuel Distribution for Short Bros. & Harland
(Manufacturer Code 810 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 10 Aircraft (% rounded)
Unknown, etc.	10	100.0

Table B-382. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Short Bros. & Harland (Manufacturer Code 810 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 10 Aircraft (% rounded)
Foreign Fuel (unknown)	9	90.0
Unidentified engine (unknown)	1	10.0

Table B-383. Minimum-Grade Fuel Distribution for Siai-Marchetti (Manufacturer Code 812 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 65 Aircraft (% rounded)
Minimum-grade 100LL	31	47.7
Minimum-grade 91	19	29.2
Unknown, etc.	15	23.1

Table B-384. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Siai-Marchetti (Manufacturer Code 812 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 65 Aircraft (% rounded)
100 or 130 (MG100LL)	31	47.7
91 or 96 (MG91)	19	29.2
Unidentified engine (unknown)	15	23.1

Table B-385. Minimum-Grade Fuel Distribution for Sikorsky (Manufacturer Code 814 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 31 Aircraft (% rounded)
Minimum-grade 100LL	13	41.9
Minimum-grade 91	8	25.8
Unknown, etc.	5	16.1
Minimum-grade 80	4	12.9
Jet A	1	3.2

Table B-386. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Sikorsky (Manufacturer Code 814 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 31 Aircraft (% rounded)
100 or 130 (MG100LL)	13	41.9
91 octane (MG91)	7	22.6
80 or 87 (MG80)	4	12.9
Unidentified engine (unknown)	3	9.7
Fuel not specified (unknown)	2	6.5
91 or 96 (MG91)	1	3.2
Kerosene JP4 or JP5 (JETA)	1	3.2

Table B-387. Minimum-Grade Fuel Distribution for Silvaire (Manufacturer Code 819 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1818 Aircraft (% rounded)
Minimum-grade 80	1718	94.5
Other fuel	100	5.5

Table B-388. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Silvaire (Manufacturer Code 819 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1818 Aircraft (% rounded)
80 octane (MG80)	1718	94.5
73 octane (other fuel)	100	5.5

Table B-389. Minimum-Grade Fuel Distribution for Simuflight Seattle-1-Stol
(Manufacturer Code 541 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 80	1	100.0

Table B-390. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Simuflight Seattle-1-Stol (Manufacturer Code 541 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
80 octane (MG80)	1	100.0

Table B-391. Minimum-Grade Fuel Distribution for Sioux (Manufacturer Code 825 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-392. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Sioux (Manufacturer Code 825 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Fuel not specified (unknown)	1	100.0

Table B-393. Minimum-Grade Fuel Distribution for Six Chuter, Inc. (Manufacturer Code 060 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1417 Aircraft (% rounded)
Unknown, etc.	1392	98.2
Minimum-grade 80	14	1.0
Other fuel	11	0.8

Table B-394. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Six Chuter, Inc. (Manufacturer Code 060 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1417 Aircraft (% rounded)
Unidentified engine (unknown)	1389	98.0
80 or 87 (MG80)	14	1.0
73 octane (other fuel)	11	0.8
Fuel not specified (unknown)	3	0.2

Table B-395. Minimum-Grade Fuel Distribution for Sky International, Inc. (Manufacturer Code 813 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 62 Aircraft (% rounded)
Minimum-grade 100LL	62	100.0

Table B-396. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Sky International, Inc. (Manufacturer Code 813 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 62 Aircraft (% rounded)
100 or 130 (MG100LL)	62	100.0

Table B-397. Minimum-Grade Fuel Distribution for Smith (Manufacturer Code 836 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 225 Aircraft (% rounded)
Minimum-grade 100LL	219	97.3
Unknown, etc.	6	2.7

Table B-398. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Smith (Manufacturer Code 836 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 225 Aircraft (% rounded)
100 or 130 (MG100LL)	219	97.3
Unidentified engine (unknown)	6	2.7

Table B-399. Minimum-Grade Fuel Distribution for Snow (Manufacturer Code 838 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-400. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Snow (Manufacturer Code 838 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-401. Minimum-Grade Fuel Distribution for Socata Group Aerospatiale (Manufacturer Code 868 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 355 Aircraft (% rounded)
Minimum-grade 100LL	339	95.5
Unknown, etc.	14	3.9
Minimum-grade 91	2	0.6

Table B-402. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Socata Group Aerospatiale (Manufacturer Code 868 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 355 Aircraft (% rounded)
100 octane (MG100LL)	339	95.5
Unidentified engine (unknown)	14	3.9
91 or 96 (MG91)	2	0.6

Table B-403. Minimum-Grade Fuel Distribution for Spartan (Manufacturer Code 843 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 27 Aircraft (% rounded)
Minimum-grade 80	19	70.4
Unknown, etc.	8	29.6

Table B-404. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Spartan (Manufacturer Code 843 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 27 Aircraft (% rounded)
80 octane (MG80)	19	70.4
Fuel not specified (unknown)	8	29.6

Table B-405. Minimum-Grade Fuel Distribution for Star (Manufacturer Code 848 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-406. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Star (Manufacturer Code 848 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Fuel not specified (unknown)	2	100.0

Table B-407. Minimum-Grade Fuel Distribution for Stearman Aircraft (Manufacturer Code 856 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 22 Aircraft (% rounded)
Unknown, etc.	22	100.0

Table B-408. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Stearman Aircraft (Manufacturer Code 856 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 22 Aircraft (% rounded)
Fuel not specified (unknown)	20	90.9
Unidentified engine (unknown)	2	9.1

Table B-409. Minimum-Grade Fuel Distribution for Stearman Aviation (Manufacturer Code 857 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-410. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Stearman Aviation (Manufacturer Code 857 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-411. Minimum-Grade Fuel Distribution for Stinson (Manufacturer Code 863 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 458 Aircraft (% rounded)
Other fuel	155	33.8
Unknown, etc.	111	24.2
87 octane	101	22.1
Minimum-grade 80	91	19.9

Table B-412. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Stinson (Manufacturer Code 863 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 458 Aircraft (% rounded)
73 octane (other fuel)	155	33.8
87 octane	101	22.1
Fuel not specified (unknown)	99	21.6
80 octane (MG80)	91	19.9
Unidentified engine (unknown)	12	2.6

Table B-413. Minimum-Grade Fuel Distribution for Stits Playboy (Manufacturer Code 865 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-414. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Stits Playboy (Manufacturer Code 865 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-415. Minimum-Grade Fuel Distribution for Stol (Manufacturer Code 864 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 8 Aircraft (% rounded)
Minimum-grade 100LL	8	100.0

Table B-416. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Stol (Manufacturer Code 864 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 8 Aircraft (% rounded)
100 or 130 (MG100LL)	8	100.0

Table B-417. Minimum-Grade Fuel Distribution for Strobe-Pitts (Manufacturer Code 722 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 47 Aircraft (% rounded)
Minimum-grade 100LL	46	97.9
Unknown, etc.	1	2.1

Table B-418. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Strobe-Pitts (Manufacturer Code 722 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 47 Aircraft (% rounded)
100 or 130 (MG100LL)	46	97.9
Unidentified engine (unknown)	1	2.1

Table B-419. Minimum-Grade Fuel Distribution for Sukhoi (Manufacturer Code 985 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unknown, etc.	2	100.0

Table B-420. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Sukhoi (Manufacturer Code 985 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unidentified engine (unknown)	2	100.0

Table B-421. Minimum-Grade Fuel Distribution for Superior (Manufacturer Code 873 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 113 Aircraft (% rounded)
Other fuel	69	61.1
Minimum-grade 80	43	38.1
Minimum-grade 100LL	1	0.9

Table B-422. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Superior (Manufacturer Code 873 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 113 Aircraft (% rounded)
73 octane (other fuel)	69	61.1
80 octane (MG80)	43	38.1
100 or 130 (MG100LL)	1	0.9

Table B-423. Minimum-Grade Fuel Distribution for Swallow (Manufacturer Code 876 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Unknown, etc.	4	100.0

Table B-424. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Swallow (Manufacturer Code 876 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Fuel not specified (unknown)	4	100.0

Table B-425. Minimum-Grade Fuel Distribution for Taylor-Young (Manufacturer Code 886 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Unknown, etc.	3	100.0

Table B-426. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Taylor-Young (Manufacturer Code 886 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 3 Aircraft (% rounded)
Unidentified engine (unknown)	3	100.0

Table B-427. Minimum-Grade Fuel Distribution for Taylorcraft (Manufacturer Code 885 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2198 Aircraft (% rounded)
Other fuel	1958	89.1
Minimum-grade 80	169	7.7
Minimum-grade 100LL	37	1.7
Unknown, etc.	34	1.5

Table B-428. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Taylorcraft (Manufacturer Code 885 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2198 Aircraft (% rounded)
73 octane (other fuel)	1931	87.9
80 or 87 (MG80)	97	4.4
80 octane (MG80)	72	3.3
100 or 130 (MG100LL)	37	1.7
Fuel not specified (unknown)	33	1.5
65 octane (other fuel)	17	0.8
70 octane (other fuel)	10	0.5
Unidentified engine (unknown)	1	0.045

Table B-429. Minimum-Grade Fuel Distribution for Teal-Washac Industries, Inc. (Manufacturer Code 888 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Minimum-grade 80	4	100.0

Table B-430. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Teal-Washac Industries, Inc. (Manufacturer Code 888 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4 Aircraft (% rounded)
80 or 87 (MG80)	4	100.0

Table B-431. Minimum-Grade Fuel Distribution for Temco Luscombe (Manufacturer Code 889 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 29 Aircraft (% rounded)
Minimum-grade 80	29	100.0

Table B-432. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Temco Luscombe (Manufacturer Code 889 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 29 Aircraft (% rounded)
80 octane (MG80)	29	100.0

Table B-433. Minimum-Grade Fuel Distribution for Teraton (Manufacturer Code 059 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 118 Aircraft (% rounded)
Unknown, etc.	117	99.2
Other fuel	1	0.8

Table B-434. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Teraton (Manufacturer Code 059 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 118 Aircraft (% rounded)
Unidentified engine (unknown)	117	99.2
73 octane (other fuel)	1	0.8

Table B-435. Minimum-Grade Fuel Distribution for Thorp Aero, Inc. (Manufacturer Code 894 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 80	1	100.0

Table B-436. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Thorp Aero, Inc. (Manufacturer Code 894 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
80 or 87 (MG80)	1	100.0

Table B-437. Minimum-Grade Fuel Distribution for Thunder & Colt (Manufacturer Code 230 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 80	1	100.0

Table B-438. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Thunder & Colt (Manufacturer Code 230 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
80 or 87 (MG80)	1	100.0

Table B-439. Minimum-Grade Fuel Distribution for Thurston (Manufacturer Code 896 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 6 Aircraft (% rounded)
Minimum-grade 80	6	100.0

Table B-440. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Thurston (Manufacturer Code 896 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 6 Aircraft (% rounded)
80 or 87 (MG80)	6	100.0

Table B-441. Minimum-Grade Fuel Distribution for Tiger Aircraft, LLC (Manufacturer Code 399 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 151 Aircraft (% rounded)
Minimum-grade 100LL	151	100.0

Table B-442. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Tiger Aircraft, LLC (Manufacturer Code 399 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 151 Aircraft (% rounded)
100 octane (MG100LL)	151	100.0

Table B-443. Minimum-Grade Fuel Distribution for Timm (Manufacturer Code 898 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 7 Aircraft (% rounded)
Other fuel	6	85.7
Unknown, etc.	1	14.3

Table B-444. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Timm (Manufacturer Code 898 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 7 Aircraft (% rounded)
65 octane (other fuel)	6	85.7
Fuel not specified (unknown)	1	14.3

Table B-445. Minimum-Grade Fuel Distribution for Travel Air (Manufacturer Code 262 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 170 Aircraft (% rounded)
Unknown, etc.	158	92.9
Minimum-grade 100LL	10	5.9
Minimum-grade 80	2	1.2

Table B-446. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Travel Air (Manufacturer Code 262 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 170 Aircraft (% rounded)
Fuel not specified (unknown)	158	92.9
100 or 130 (MG100LL)	10	5.9
80 octane (MG80)	2	1.2

Table B-447. Minimum-Grade Fuel Distribution for United Consultants (Manufacturer Code 922 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 100LL	1	100.0

Table B-448. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for United Consultants (Manufacturer Code 922 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
100 or 130 (MG100LL)	1	100.0

Table B-449. Minimum-Grade Fuel Distribution for Universal (Manufacturer Code 923 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2280 Aircraft (% rounded)
Minimum-grade 80	2091	91.7
Unknown, etc.	139	6.1
Other fuel	47	2.1
Minimum-grade 91	2	0.1
Minimum-grade 100LL	1	0.043

Table B-450. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Universal (Manufacturer Code 923 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2280 Aircraft (% rounded)
80 or 87 (MG80)	1642	72.0
80 octane (MG80)	449	19.7
Unidentified engine (unknown)	139	6.1
73 octane (other fuel)	47	2.1
91 or 98 (MG91)	1	0.043
100LL (MG100LL)	1	0.043
91 or 96 (MG91)	1	0.043

Table B-451. Minimum-Grade Fuel Distribution for Valentin GmbH (Manufacturer Code 937 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 10 Aircraft (% rounded)
Minimum-grade 100LL	10	100.0

Table B-452. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Valentin GmbH (Manufacturer Code 937 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 10 Aircraft (% rounded)
96 or 100LL (MG100LL)	10	100.0

Table B-453. Minimum-Grade Fuel Distribution for Varga Aircraft Corp.
(Manufacturer Code 935 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 95 Aircraft (% rounded)
Minimum-grade 80	82	86.3
Minimum-grade 91	11	11.6
Unknown, etc.	2	2.1

Table B-454. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Varga Aircraft Corp. (Manufacturer Code 935 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 95 Aircraft (% rounded)
80 or 87 (MG80)	82	86.3
91 or 96 (MG91)	11	11.6
Unidentified engine (unknown)	2	2.1

Table B-455. Minimum-Grade Fuel Distribution for Viking Flying Boat Co.
(Manufacturer Code 952 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Unknown, etc.	5	100.0

Table B-456. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Viking Flying Boat Co. (Manufacturer Code 952 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Fuel not specified (unknown)	5	100.0

Table B-457. Minimum-Grade Fuel Distribution for Volaircraft (Manufacturer Code 955 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Minimum-grade 80	4	100.0

Table B-458. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Volaircraft (Manufacturer Code 955 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4 Aircraft (% rounded)
80 or 87 (MG80)	4	100.0

Table B-459. Minimum-Grade Fuel Distribution for Waco (Manufacturer Code 960 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 517 Aircraft (% rounded)
Unknown, etc.	312	60.3
Other fuel	146	28.2
Minimum-grade 80	59	11.4

Table B-460. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Waco (Manufacturer Code 960 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 517 Aircraft (% rounded)
Fuel not specified (unknown)	287	55.5
65 octane (other fuel)	146	28.2
80 octane (MG80)	59	11.4
Unidentified engine (unknown)	25	4.8

Table B-461. Minimum-Grade Fuel Distribution for Waggon Und Maschinenbau (Manufacturer Code 962 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-462. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Waggon Und Maschinenbau (Manufacturer Code 962 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-463. Minimum-Grade Fuel Distribution for WDL (Manufacturer Code 970 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 100LL	1	100.0

Table B-464. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for WDL (Manufacturer Code 970 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
100LL or 100 (MG100LL)	1	100.0

Table B-465. Minimum-Grade Fuel Distribution for White (Manufacturer Code 967 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Unknown, etc.	5	100.0

Table B-466. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for White (Manufacturer Code 967 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 5 Aircraft (% rounded)
Fuel not specified (unknown)	3	60.0
Unidentified engine (unknown)	2	40.0

Table B-467. Minimum-Grade Fuel Distribution for Windecker (Manufacturer Code 972 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-468. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Windecker (Manufacturer Code 972 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-469. Minimum-Grade Fuel Distribution for Wing (Manufacturer Code 969 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 4 Aircraft (% rounded)
Minimum-grade 100LL	4	100.0

Table B-470. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Wing (Manufacturer Code 969 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 4 Aircraft (% rounded)
100 or 130 (MG100LL)	4	100.0

Table B-471. Minimum-Grade Fuel Distribution for Winstead Bros. Airplane Co. (Manufacturer Code 974 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unknown, etc.	1	100.0

Table B-472. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Winstead Bros. Airplane Co. (Manufacturer Code 974 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Unidentified engine (unknown)	1	100.0

Table B-473. Minimum-Grade Fuel Distribution for Worldwide Aeros Corp. (Manufacturer Code 914 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 100LL	1	100.0

Table B-474. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Worldwide Aeros Corp. (Manufacturer Code 914 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
100LL (MG100LL)	1	100.0

Table B-475. Minimum-Grade Fuel Distribution for Wsk-Pzl-Mielec (Manufacturer Code 981 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 19 Aircraft (% rounded)
Minimum-grade 100LL	19	100.0

Table B-476. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Wsk-Pzl-Mielec (Manufacturer Code 981 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 19 Aircraft (% rounded)
100LL or 100 (MG100LL)	19	100.0

Table B-477. Minimum-Grade Fuel Distribution for Zenair, Ltd. (Manufacturer Code 995 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 25 Aircraft (% rounded)
Minimum-grade 100LL	25	100.0

Table B-478. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Zenair, Ltd. (Manufacturer Code 995 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 25 Aircraft (% rounded)
100LL or 100 (MG100LL)	25	100.0

Table B-479. Minimum-Grade Fuel Distribution for Zlin (Manufacturer Code 997 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Minimum-grade 100LL	1	50.0
Unknown, etc.	1	50.0

Table B-480. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Zlin (Manufacturer Code 997 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 2 Aircraft (% rounded)
Unidentified engine (unknown)	1	50.0
100 or 130 (MG100LL)	1	50.0

Table B-481. Minimum-Grade Fuel Distribution for Zlt Zeppelin Luftschifftechnik (Manufacturer Code 998 in FAA Aircraft Registry Database)

Minimum-Grade Fuel	Number of Aircraft	Percent of 1 Aircraft (% rounded)
Minimum-grade 100LL	1	100.0

Table B-482. Distribution of Approved Fuels as Listed in Aircraft Type Certificate Data Sheet for Zlt Zeppelin Luftschifftechnik (Manufacturer Code 998 in FAA Aircraft Registry Database)

Approved Fuel Grade in Aircraft TCDS (refer to minimum group)	Number of Aircraft	Percent of 1 Aircraft (% rounded)
100LL or 100 (MG100LL)	1	100.0

APPENDIX C—SPECIFIC PHRASING FROM THE TYPE CERTIFICATE DATA SHEET AND ITS GROUPING FOR THE ANALYSIS

Table C-1 maps the grouped phrases used in the report with the specific phrase used in the Type Certificate Data Sheet (TCDS). For the “Unknown” cases, this table summarizes the rationale for grouping based on the criteria that was not met by the TCDS.

Table C-1. Cross-Reference of the Detailed Aviation Gasoline Phrase Used in the Analysis With the Exact Aviation Gasoline Phrase Cited in Each Type Certificate Data Sheet

Detailed Phrases	Based on the Following Exact Phrases Used in the TCDS
100 octane (MG100LL)	• 100 Minimum grade • 100 minimum grade • 100 minimum octane • 100 octane • 100 octane minimum • 100/100 minimum grade • Minimum 100 Octane Low Lead (LL).
100 or 120 (MG100LL)	• 100/120 minimum grade
100 or 130 (MG100LL)	• *100/130 minimum-grade aviation gasoline (See Note 3) and (See NOTE 5 for alcohol-based fuels warning.) • 100LL minimum grade or 100/130 minimum grade • 100/130 • 100/130 Grade for WRIGHT C9HD SERIES engines • 100/130 Minimum grade • 100/130 and 100LL minimum • 100/130 and 100LL minimum grade • 100/130 grade • 100/130 min. grade • 100/130 min. or 100LL minimum grade • 100/130 minimum grade • 100/130 minimum-grade aviation fuel or 100 low lead (blue) • 100/130 minimum-grade aviation gasoline • 100/130 minimum-grade aviation gasoline (1977 Model) • 100/130 minimum-grade aviation gasoline (turbocharged engine) • 100/130 minimum-grade aviation gasoline for S/N 20700363 through 20700414 • 100/130 minimum-grade aviation gasoline, 100, 100LL • 100/130 minimum grade for S/N 18800833 through 18803046 • 100/130 minimum octane • 100/130 minimum octane for IO-470-N engine (kit 45-9002) • 100/130 octane • 100/130 octane minimum grade • 100/130 or 100 low-lead minimum-grade aviation gasoline • 100/130 or 100/100LL minimum grade • 100/130 or 100LL minimum grade • 100/130 or 115/145 minimum grade • 100/130LL • 100/300 minimum grade • 100LL or 100 (Formerly 100/130) Grade • 100LL or 100/130 aviation gasoline • 100LL or 100/130 minimum grade

Table C-1. Cross-Reference of the Detailed Aviation Gasoline Phrase Used in the Analysis With the Exact Aviation Gasoline Phrase Cited in Each Type Certificate Data Sheet (Continued)

Detailed Phrases	Based on the Following Exact Phrases Used in the TCDS
100 or 130 (MG100LL)	• 100LL or 100/130 octane minimum grade • 100LL/130 minimum grade for S/N 18803047 and on • 115/145 or 100/130 minimum-grade aviation gasoline for R-2800-48 engine (R-2800 series) • 115/145, 100/130 minimum grade • Aviation gasoline Grade 100LL or 100 minimum, and Chinese aviation gasoline RH-95/130 and RH-100/130 • Aviation gasoline grade 100LL or 100 minimum, and Chinese aviation gasoline RH-95/130 and RH-100/130 • Aviation gasoline oct. grade min. 100/130, 100, 100LL. • Aviation gasoline octane grade minimum 100/130 (green) or 115/145 (violet) .100 L . 100LL. • Continental TSIO-470-B Engine. 100/130 minimum-grade aviation gasoline • Grade 100/ 130, 100LL • Grade 100/130 • Grade 100/130 (green) or 115/145 (purple) or 100LL (blue), MIL-F-5572 Minimum-grade aviation gasoline. • Grade 100/130, 108/135 or 115/145 • Grade 115/145, 100/130 or 108/135 • Minimum-grade 100/130 • Minimum-grade 100/130. Maximum lead content 5.5 mls. TEL/Imperial Gallon • grade 100/130
100LL (MG100LL)	• 100LL or 100 octane minimum grade • 100LL • 100LL (blue) minimum grade • 100LL minimum grade • AvGas 100LL (only if super grade gasoline is not available) • AvGas 100LL • AvGas 100LL (Premium 94 RON or unleaded) • AvGas min. grade 100LL • Automobile Gasoline 87 Octane Minimum (R +M/2 method). Aviation Gasoline 100LL Grade Aviation Fuel (Blue) • AvGas 100LL • Aviation Gasoline, Grade 100LL. (Blue) • Aviation gasoline 100LL
100LL or 100 (MG100LL)	• 100 (green) minimum-grade aviation fuel or 100 low lead (blue) • 100 (green) or 100LL (blue) grade aviation fuel • 100LL or 100 minimum grade • 100 or 100LL aviation grade • 100 or 100LL minimum grade • 100 or 100 low-lead minimum grade • 100 or 100LL • 100 or 100LL Min. grade • 100 or 100LL aviation grade

Table C-1. Cross-Reference of the Detailed Aviation Gasoline Phrase Used in the Analysis With the Exact Aviation Gasoline Phrase Cited in Each Type Certificate Data Sheet (Continued)

Detailed Phrases	Based on the Following Exact Phrases Used in the TCDS
100LL or 100 (MG100LL)	• 100/100LL • 100/100 Low Lead minimum grade • 100/100LL • 100/100LL Minimum grade • 100/100LL aviation grade • 100/100LL grade • 100/100LL minimum grade • 100/100LL minimum-grade aviation gasoline • 100/or 100LL Minimum grade • 100LL or 100 minimum grade • 100LL or 100 minimum grade and 115/145 alternate grade • 100LL or 100 minimum-grade aviation gasoline and 115/145 alternate grade aviation gasoline • 100LL/100 • 100LL/100 aviation grade gasoline • 100LL/100 aviation grade gasoline (1978 Model and on) • 100LL/100 grade • 100LL/100 min. grade • 100LL/100 minimum aviation grade gasoline for S/N 20700415 and up • 100LL/100 minimum grade • AvGas 100 or 100LL • AvGas 100 or 100LL. • AvGas 100 or 100LL • AvGas 100 or 100LL • Aviation gasoline Grade 100LL or 100 minimum • Grade 100LL or 100 minimum • Grade 100 or 100LL • Grade 100LL or 100 minimum • NOT SHOWN for SR22. TCDS shows 100/100LL for SR20.
108 or 135 (other fuel)	• 108/135 grade aviation gasoline • Aviation gasoline: Minimum-grade 108/135
115 or 145 (other fuel)	• 115/145 minimum-grade aviation gasoline with Water/Methanol Mixture Ratio 50/50 • Grade 115/145
65 octane (other fuel)	• 65 minimum grade • 65 minimum octane
70 octane (other fuel)	• 70 minimum octane
73 octane (other fuel)	• 73 Octane • 73 min. octane • 73 minimum Octane • 73 minimum grade • 73 minimum octane • 73 minimum octane/ 80 minimum octane aviation gasoline with Item 311D(3) when it is approved for use as 75 hp engine in this model aircraft. Also required with Items 311D(4) and 311D(5)

Table C-1. Cross-Reference of the Detailed Aviation Gasoline Phrase Used in the Analysis With the Exact Aviation Gasoline Phrase Cited in Each Type Certificate Data Sheet (Continued)

Detailed Phrases	Based on the Following Exact Phrases Used in the TCDS
80 octane (MG80)	• 73 minimum octane // 80 minimum octane required for seaplane • 80 Minimum octane aviation gasoline for W-670 Series engines • 80 minimum grade • 80 minimum octane • 80 minimum octane aviation gasoline • 80 minimum octane aviation gasoline for O-470-13 and O-470-13A engine • 80 octane • 80 octane minimum • Minimum-grade 69 Octane, lead content - nil.; OR Minimum-grade 69 Octane, containing not more than 3.33 mls. Tetra Ethyl lead/U.S. gallon; OR Minimum-grade 77 Octane, containing not more than 3.33 mls. Tetra Ethyl lead/U.S. gallon; OR Minimum-grade 80 Octane, containing not more than 3.33 mls. Tetra Ethyl lead/U.S. gallon. (SEE TCDS FOR INFORMATION) • minimum-grade 80 octane
80 or 87 (MG80)	• 80 min. grade aviation gasoline. 87 min. grade for takeoff at 450 hp. • 80 minimum octane (87 minimum octane for takeoff) • 80 minimum octane (CFR) (87 minimum for takeoff) • 80 minimum octane aviation gasoline for continuous rating and takeoff rating of 400 hp OR 87 minimum octane aviation gasoline for takeoff rating of 450 hp. (SEE TCDS FOR INFORMATION) • 80/87 • 80/87 Min. grade • 80/87 Minimum grade • 80/87 Octane • 80/87 min. grade • 80/87 min. grade aviation gasoline for O-320-A2A • 80/87 minimum grade • 80/87 minimum grade OR AvGas 100/100LL • 80/87 minimum-grade aviation fuel • 80/87 minimum-grade aviation gasoline AvGas 100/100LL • 80/87 minimum-grade aviation gasoline or 100 L AvGas • 80/87 minimum-grade aviation gasoline with standard ejector exhaust system • 80/87 minimum octane • 80/87 minimum octane aviation gasoline P&W R1340 SERIES engines • 80/87 miniumum grade • 80/87 octane • 80/87 octane minimum • 80/87 or 100/130 minimum grade • 80/87 or 91/96 minimum grade • 80/87 or AvGas 100 L grade aviation gasoline • 80/87 or AvGas 100LL grade • 80/87minimum grade • 87 min. octane aviation gasoline 80 min. octane may be used provided engine power is limited to 400 hp for all operations • 87 min. octane aviation gasoline 80 min. octane may be used provided engine power is limited to 400 hp for all operations. • 87 min. octane aviation gasoline for takeoff at 450 hp OR 80 min. octane aviation gasoline for max. except takeoff and takeoff at 400 hp (SEE TCDS FOR INFORMATION) • 87 or 80 minimum octane (SEE TCDS FOR SPECIFICATIONS)

Table C-1. Cross-Reference of the Detailed Aviation Gasoline Phrase Used in the Analysis With the Exact Aviation Gasoline Phrase Cited in Each Type Certificate Data Sheet (Continued)

Detailed Phrases	Based on the Following Exact Phrases Used in the TCDS
80 or 87 (MG80)	• 91/98 min. octane grade 80/87 min. octane when equipped with modified M-4-5 Marvel-Schebler carburetors, Part No. 10-3391-1, and cowl flap extensions specified in Ryan Service • 91/98 min. octane grade aviation gasoline. 80/87 min. octane when equipped with modified M-4-5 Marvel-Schebler carburetors, Part No. 10-3391-1, and cowl flap extensions specified in Ryan Service Bulletin No. 20 dated March 17, 1953 • 91/98 min. octane grade aviation gasoline. 80/87 min. octane when equipped with modified M-4-5 Marvel-Schebler carburetors, Part No. 10-3391-1, and cowl flap extensions specified in Ryan Service Bulletin No. 20 dated March 17, 1953. • AvGas minimum 80/87 • Minimum-grade 80/87
87 octane	• 87 minimum grade • 87 minimum octane
90 octane (MG90)	• 90 minimum grade • 90 minimum octane
91 & 100 (MG91)	• 91 & 100 Min. grade for WRIGHT 1820F56 engines • 91 & 100 Min. grade for WRIGHT R-1820-66 engines • 91 Min. Grade or 91 & 100 Min. grade for WRIGHT R-1820 SER engines
91 octane (MG91)	• 91 Min. Grade for WRIGHT C9GC&D SERIES engines • 91 minimum grade • 91 minimum octane
91 or 96 (MG91)	• 100LL or 91/96 octane minimum grade • 91-96 minimum grade • 91/96 • 91/96 Minimum grade • 91/96 min. grade • 91/96 minimum grade • 91/96 minimum grade and 100/130 may be used 100% of the time • 91/96 minimum grade and 100/130 may be used 100% of the time. • 91/96 minimum-grade aviation fuel • 91/96 minimum-grade aviation fuel for Lycoming AEIO-360-B1G6 engines • 91/96 minimum-grade aviation gasoline (normally aspirated engine) • 91/96 minimum-grade aviation gasoline 100L 100LL. • 91/96 minimum-grade aviation gasoline. AvGas 100/100LL • 91/96 minimum-grade aviation gasoline; 100L; 100LL. • 91/96 or 100/130 • 91/96, 100/130 or 100LL min. grade aviation gasoline • Minimum-grade 91/96. Maximum lead content 4.56 mls. TEL/U.S. gallon
91 or 98 (MG91)	• 91/98 Min. grade • 91/98 minimum grade
91/96 UL (unleaded)	• 100/130 minimum grade (for O-320-B2C engine) or 91/96 UL minimum grade (for all engines) or 100LL minimum grade (for all engines) • 91/96 UL, 100LL OR 100/130 minimum-grade aviation gasolines for O-320-B2C • 91/96 UL, 100LL OR 100/130 minimum-grade aviation gasolines for O-320-B2C or O-360-J2A
95 or 100LL (MG100LL)	• Aviation gasoline 100LL (if premium fuel 95 octane is not available)

Table C-1. Cross-Reference of the Detailed Aviation Gasoline Phrase Used in the Analysis With the Exact Aviation Gasoline Phrase Cited in Each Type Certificate Data Sheet (Continued)

Detailed Phrases	Based on the Following Exact Phrases Used in the TCDS
96 or 100LL (MG100LL)	• Aviation gasoline 100LL or leaded MOGAS, minimum ROZ 96 octane. • Aviation gasoline 100LL or minimum ROZ 96 octane. • Aviation gasoline 100LL or minimum ROZ 96 octane
97.5 or 100LL (MG100LL)	• Aviation gasoline 100LL or minimum ROZ 97.5 octane
Aircraft serial number no match to TCDS (unknown)	• AIRCRAFT SERIAL NUMBER DOES NOT MEET TCDS CRITERIA FOR APPROVED FUEL • Missing series#
Deleted in 1950 (unknown)	• Deleted in 1950
Foreign Fuel (unknown)	• Foreign - See TCDS for more information
Fuel cannot be determined (unknown)	• FUEL CANNOT BE DETERMINED. AMA/EXPR UNKNOWN ENG • FUEL CANNOT BE DETERMINED. ENGINE CODE IS DIFFERENT FROM THOSE IDENTIFIED IN TCDS • FUEL CANNOT BE DETERMINED. ENGINE CODE IS FOR Lycoming O-320-B2C or O-360-J2A (See TCDS NOTE 11, retrofit R22 from R22 BETA) AND ALLOWS 91/96 UL, 100LL OR 100/130 minimum-grade aviation gasoline • FUEL CANNOT BE DETERMINED. ENGINE CODE IS TOO GENERAL IN AIRCRAFT MASTER FILE TO DECIDE BETWEEN 80 minimum octane aviation gasoline OR 80/87 minimum octane aviation gasoline • FUEL CANNOT BE DETERMINED. ENGINE CODE IS TOO GENERAL IN AIRCRAFT MASTER FILE TO DECIDE BETWEEN 80/87 OR 100 or 100LL min. grade aviation gasoline • FUEL CANNOT BE DETERMINED. ENGINE CODE IS TOO GENERAL IN AIRCRAFT MASTER FILE TO DECIDE BETWEEN 80/87 minimum-grade aviation gasoline (for O-320-A2B and A2C) OR 100/130 minimum-grade aviation gasoline (for O-320-B2C) • FUEL CANNOT BE DETERMINED. ENGINE CODE IS TOO GENERAL IN AIRCRAFT MASTER FILE TO DECIDE BETWEEN Grade 100/130 OR Grade 108/135 • FUEL CANNOT BE DETERMINED. NO ENGINE CODE IN AIRCRAFT MASTER FILE
Fuel not specified (unknown)	• FUEL NOT SPECIFIED
Jet A, Jet A-1 (ASTM 1655) (JETA)	• Jet A, Jet A-1 (ASTM 1655)
Kerosene JP4 or JP5 (JETA)	• Aviation Kerosene JP4 or JP5 (General Electric Co. Spec. No. D50T1011 or subsequent revisions thereto.)
Unidentified engine (unknown)	• UNIDENTIFIED
Unknown (unknown)	• UNKNOWN
Unknown engine (unknown)	• UNKNOWN FUEL for AMA/EXPR UNKNOWN ENG

APPENDIX D—TYPE CERTIFICATE DATA SHEETS AND ASSOCIATED AIRCRAFT MANUFACTURERS, MODELS, AND SERIES

Table D-1 shows the cross-reference of the Type Certificate Data Sheet with the aircraft manufacturers, models, and series. Table D-2 is a list of the aircraft manufacturers, models, and series where a Type Certificate Data Sheet was not identified.

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers,
Models and Series

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
1A1	Piper PA-16
1A2	Alaska Dept of Public Safety PA-18 150, Cub Crafters PA18-150, Cubs Unlimited/Piper PA 18-150, Ellis Wendell Kirk PA-18-150, Piper / Harris PA-18, Piper L-18C, L-21A, L-21B, PA-18, PA-18 105, PA-18-105 Special, PA-18-125, PA-18-135, PA-18-150, PA-18A, PA-18A 150, PA-18A-135, PA-18AS-125, PA-18AS-135, PA-18S, PA-18S-125, PA-18S-135, PA-18S-150, PA-19, Piper-Root PA-18 Super Cub, Piper/Cub Crafters PA-18-150, Piper/Lepping Kurt PA-18-150, Piper/Meyer Alfred R PA 18-150, and Piper/White Theodore F PA-18-150
1A3	Bellanca 14-19, 14-19-2, 14-19-3, 17-30, 17-31, 17-31TC, Downer 14-19-2, 14-19-3, 14-19-3A, Downer Bellanca 14-19, 14-19-2, 14-19-3, and 14-19-3A
1A4	Piper PA-20, PA-20-115, PA-20-135, PA-20S with Lycoming 0-290 Series, and PA-20S-135 with Lycoming 0-290 Series
1A6	Piper PA-22, PA-22-108, PA-22-135, PA-22-150, PA-22-160, PA-22S-135, PA-22S-150, and PA-22S-160
1A7	Martin 404
1A8	Helio Aircraft Limited H-391, Helio Aircraft Ltd H800, Helio H-250, H-295, H-391B, H-395, H-700, HT-295, Helio USAF U-10B, and U-10D
1A9	Taylorcraft Aviation Corp 19, F19, Taylorcraft Aviation Corp. F21, Taylorcraft Corp F-21A, F-22, Taylorcraft F21B, F22A, F22B, and F22C
1A10	Piper PA-23, PA-23-160, PA-23-235, PA-23-250, PA-23-250 (6PCLM), and PA-E23-250
1A13	Aerofab Inc Lake 250, LA-250, LA-4-200, LA-4-250, Colonial C-1, C-2, Consolidated Aeronautics Inc Lake Model 250, Consolidated Aeronautics Inc. Lake LA-4, LA-4-200, Lake Aircraft Inc LA250, Lake LA-4, LA-4-200, LA-4A, Lanshe Aerospace LLC Lake 250, and Revo Inc Lake 250

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
1A15	Piper PA-24, PA-24-250, PA-24-260 with Ama/Expr Unknown Eng, PA-24-260 with Lycoming 0-540 Series, PA-24-260 with Lycoming 0-540F1 Serie, PA-24-260 with Lycoming I0360 Ser, PA-24-260 with Lycoming IO-540 Ser, PA-24-260 with Lycoming IO-540-D4A5, PA-24-260 with Lycoming IO-540-N1A5, PA-24-260 with Lycoming IO-720, PA-24-260 with Lycoming O&GO-145C Ser, PA-24-260 with Lycoming O&VO-360 Ser, PA-24-260 with Lycoming TI0-540 Ser, PA-24-260 with Lycoming TIO-540-A1A, PA-24-260 with No Engine Code, and PA-24-400
1A16	Grumman Acft Eng Cor-Schweizer G-164B with Ama/Expr Unknown Eng, G-164B with P&W R1340 Series, Grumman American Avn. Corp. G-164B, Grumman G-164 with Cont Motor W670 Series, G-164A, and Gulfstream-Schweizer A/C Corp Gulfstream Am G-164B with Ama/Expr Unknown Eng
1A18	North American Nomad NA-260 and North American/Kenney NA-260
1A19	De Havilland Caribou DHC-4 and DHC-4A
1A21	Aero Commander 100, 100-180, and Volaircraft 10A
1H2	Sikorsky S-52-3
1H4	Sikorsky S-55B and S55B
1H11	Sikorsky S-58, S-58B, S-58C, S-58D, S-58H, S-58J, and S58E
1H17	Air & Space America Inc 18A
2-309	Buhl CA-3E
2-558	Marrin Michael D Pitts S-1
2A1	Riley D-16, D-16A, Universal Temco D-16, and D-16A
2A2	Camair 480
2A3	Aerostar Acft Corp of Texas M20C, M20E, M20F, Mooney Aircraft Corp. M20, M20K, M20S, Mooney Airplane Co Inc M20Tn, Mooney M-20G, M20A, M20B, M20C, M20D, M20E, M20F, M20J, M20L, M20M, and M20R
2A4	Aero Commander 560-F, 680, 680-E, 680-F, 680FL, 680FL P, 685, 720, and Rockwell International 685
2A8	Piper PA-25, PA-25-235, and PA-25-260
2A11	Lockheed Aircraft Intl 402-2

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
2A13	New Piper Aircraft Inc PA-28-181 with S/N 2890206 through 2890231; and 2843001 and up, PA-28R-201, New Piper PA-28-161 with S/N 2816110 through 2816119; and 2842001 and up, Piper Aircraft Inc PA-28-161 with S/N 2816110 through 2816119; and 2842001 and up, PA-28-181 with S/N 2890206 through 2890231; and 2843001 and up, PA28R-201, Piper PA-28, PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-181, PA-28-201T, PA-28-236, PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T, PA-28S-160, PA-28S-180, and Piper/Valdes-Ervin PA-28-235
2H1	Bell 47J, 47J-2, 47J-2A, and 47K
2H2	Brantly B-2, B-2A, and B-2B
2H3	Bell 47G-2A, 47G-2A-1, 47G-3B, 47G-3B-1, 47G-4, 47G-5, 47G-5A, 47G3B2A, Bell-Huddleston and Wilson 47G-3B1, and Bell-Intermountain 47G-3B-1
3A1	Estumkeda Ltd dba Micco Acft MAC-145A, MAC-145B, Lanshe Aerospace LLC MAC-145B, and Meyers MAC-145
3A3	Taylorcraft 15A and 20
3A10	Cessna 310, 310A, 310B, 310C, 310D, 310E, 310F, 310G, 310H, 310I, 310J, 310K, 310L, 310N, 310P, 310Q, 310R, E310H, T-310P, T310Q, T310R, U-3A, and Cessna/Weaver 305E
3A12	Cessna 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N with S/N 17261445; 17267585 through 17269309, 172N with S/N 17261578; 17269310 through 17274009, 172P, 172Q, 172R, 172S, and Piper PA-28-235
3A13 (rev 69)	Cessna R182, T182, and T182T
3A13 (rev. 69)	Cessna 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q with S/N 18265176 through 18265965, 182Q with S/N 18265966 through 18267715, 182Q with S/N R18201789, 182Q with S/Ns 18201789; 18263479 & 18268432, 182Q with S/Ns 18201789; 18263479 & 18268432, 182R, 182S, 182T, and TR182
3A14	Cessna 305B and 305E
3A15	Beech 35-33, 35-A33, 35-B33, 35-C33, 35-C33A, 36, A36, A36TC, E33, E33A, E33C, F33, F33A, F33C, G33, H35, J35, K35, M35, N35, P35, S35, V35, V35A, V35B, Beech/Goedkerj L A36, Hawker Beechcraft Corp G36, Raytheon Aircraft Company A36, and G36

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
3A16	Beech 56TC, 58, 95, 95-55, 95-A55, 95-B55, 95-B55 (T42A), 95-B55B (T42A), 95-C55, A56TC, B-55, B95, B95A, D55, D95A, E-55, E95, Hawker Beechcraft Corp G58, Raytheon Aircraft Company 58, and G58
3A17	Cessna 172RG, 175, 175A, 175B, 175C, P172D, R172E, R172G, R172J, R172K with S/N 680, R172K with S/N R17203409, R172K with S/N R1722000 through R1722724, R172K with S/N R1722725 and on, T-41B, T41C, Reims Aviation S.A. Cessna FR172K with S/N 0603, and Reims Cessna FR172F
3A18	Aero Commander 200, 200D, Meyers Industries Inc 200A, 200B, 200C, and 200D
3A19	Cessna 150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M, A150K, A150L, A150M, A152, and Reims Aviation S.A. Cessna 150K
3A20	Beech 65, 65 (LF-23F), 65-80, 65-88, 65-A80, 65-A80-8800, 65-B80, 70, A65, and A65-8200
3A21 (rev. 47)	Cessna 210, 210-5, 210-5(205), 210-5A, 210-5A(205A), 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M with S/N 21061574 through 21062273, 210M with S/N 21062274 through 21062953, 210M with S/N 61799, 210N, 210R, P210N, P210R, T210F, T210G, T210H, T210J, T210K, T210L, T210N, and T210R
3A23	Maule Bee Dee M-4, M-4-210, Maule M-4, M-4-180C, M-4-180V, M-4-210, M-4-210C, M-4-210S, M-4-220C, M-4C, M-4S, M-4T, M-5-180C, M-5-200, M-5-210C, M-5-210TC, M-5-220C, M-5-235C, M-5-235C, M-6-180, M-6-235, M-7-235, M-7-235A, M-7-235B, M-7-235C, M-7-260, M-7-260C, M-8-235, MT-7-235, MT-7-260, MX-7-160, MX-7-180, MX-7-180, MX-7-180A, MX-7-180AC, MX-7-180B, MX-7-180C, MX-7-235, MXT-7-160, MXT-7-180, and MXT-7-180A
3A24	Cessna 185, 185A, 185B, 185C, 185D, 185E, A185E, A185F with S/N 18502091 - 18503153, and A185F with S/N 18503154 and on
3A25	Cessna 320, 320A, 320B, 320C, 320D, 320E, 320F, 335, 340, and 340A
4A2	Aircraft Manufacturing Texas Bullet 205
4A10	Douglas DC-7, DC-7B, and DC-7C
4A14	Morrissey Aviation Inc 2000C
4A16	Aerocar One
4A17	Lockheed 1649A-98 and 1649A-98

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
4A19	Morrissey 2150, 2150A, Morrissey-Shinn 2150-A, Varga Aircraft Corp 2180, and Varga Aircraft Corp. 2150A
4A29	Bay Aviation Super V
4H10	Hiller H-23D, UH-12D, and Hiller-Osborn UH-12D
4H11	Hiller UH-12E
4H12	Hughes 269A, 269A-1, 269B, 269C, Hughes-Filipoff 269A, Schweizer 269A, 269C, 269C-1, Schweizer Hughes 269C, and Schweizer(Hughes)Aircraft Corp TH55A/269A
5A2	Cessna 140A
5A3	Beech 45, A45 (T-34A) with Cont Motor IO-470 Series, A45 (T-34A) with Cont Motor IO 520 Series, A45 (T-34A) with Cont Motor O-470-13A, A45 with Ama/Expr Unknown Eng, A45 with Cont Motor O-470-4, A45 with Cont Motor E225 Series, A45 with Cont Motor IO-470 Series, A45 with Cont Motor IO 520 Series, A45 with Cont Motor IO-470 Ser, A45 with Cont Motor IO-520-Ba, A45 with Cont Motor IO-550 Series, A45 with Cont Motor O-470 Series, A45 with No Engine Code, B-45 (T-34A) with Cont Motor IO-470 Ser, B-45 with Cont Motor IO 520 Series, B-45 with Cont Motor IO-470 Ser, B-45 with Cont Motor O-470 Series, D-45, D-45 (T-34B), T-34A with Cont Motor IO-470 Ser, T-34A with Cont Motor IO-470-N, T-34A with Cont Motor IO-550 Series, T-34A with Cont Motor O-470 Series, T-34A with No Engine Code, T-34B, Beech-Nogle D-45, Beech-Novak D-45, Beech-Parks A45 with Cont Motor IO 520 Series, Beech-Parks Beech-Parks D-45, Beech/Blackwell D D A-45 with Cont Motor IO-470 Ser, and Beech/Briggs A-45 (B-45) with Cont Motor O-470 Series
5A4	Beech 50, B50, C-50, D-50, D50A, D50B, D50C, D50E, E50, F50, G50, H50, J50, and Beech/Bond E50
5A5	Cessna 0-1A, 305A, 305A (O-1A), 305C (O-1E), 305F, Cessna Claassen 305A(O-1A), Cessna Ector 305A, Cessna O-1G, Cessna-Macone 305A, Cessna/Air Repair Inc 305F, Cessna/Inland Valley Avia 305 C, and Cessna/Whitehouse 305A
5A6	Cessna 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K with S/N 18052771 - 18052905, and 180K with S/N 18052906 and on
6A1	Aero Commander 500, 500 S, 500-A, 500-B, 500-U, 520, 560, 560-A, 560-E, and Rockwell International 500-S
6A2	Douglas DC-3S/R4D-8, Douglas Super DC-3, R4D-8, and R4D-8Z

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
6A3	Douglas C-118A with No Engine Code, C-118A with P & W R-2800 Series, DC-6A with Ama/Expr Unknown Eng, DC-6A with No Engine Code, DC-6A with P & W R-2800 Series, and DC-6A with P&W Dw-Cb Series
6A4	Douglas DC-6B with Ama/Expr Unknown Eng, DC-6B with No Engine Code, DC-6B with P & W R-2000 Series, DC-6B with P & W R-2800 Series, DC-6B with P&W Dw-Cb Series, and DC-6B with P&W R1340 Series
6A5	Lockheed 1049H-82
6A6	Convair 340-32 with P & W R-2800 Series, 340-70 with Ama/Expr Unknown Eng, C-131B with P & W R-2800 Series, and C-131F with P & W R-2800 Series
6H1	Hiller H-23A, UH-12, and UH-12A
6H2	Hiller - World Helicopters UH-12C, Hiller H-23B, UH-12B, UH-12C, Hiller-Heli-Cab UH-12B, Hiller-Lott 12C, Hiller-Mitchell UH-12B, Hiller-Nunes UH-12C, Hiller-Tri-Plex Ind.Inc. UH-12B, Hiller-Trident Helicopters UH-12C, and Hiller/United Helicopter Corp UH 12C
7A4	Piaggio P.166
7A5	Nardi FN-333
7A11	Aeromere F.8L Falco
7A13	Dornier DO28 A-1 and DO28 B-1
7A14	S.O.C.A.T.A. Ms Rallye 235C, S.O.C.A.T.A. MS893E, MS894A, S.O.C.A.T.A. Rallye 150 St, and 235E
7A15	Pilatus PC-6 and PC-6/350-H2
678	Stinson SR-10C, SR-10G, SR-10J, and SR-10J3
760	Piper L-14
821CE	American Champion Aircraft 8KCAB and 8KCAB180
A-2-569	Naval Aircraft Factory N3N-3
A-2-571	Cons Vultee/Basinger BT-13A, Consolidated Vultee BT-13, BT-13A, BT-13B (SNV-2), BT-15, SNV-1, SNV-2, Consolidated Vultee/Gunderson BT-13A, Convair BT-13, BT-13A, BT-13B, BT-15, SNV-1, and Vultee/Reed Ron BT-13A
A-2-573	Timm N2T-1

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A-2-575R-16	Buehn North American SNJ-5, North American / Crosser G AT6A, North American AT-6, AT-6A, AT-6B, AT-6C, AT-6C(SNJ-4), AT-6D, AT-6F, North American Medore T-6G, North American SNJ-2, SNJ-3, SNJ-4, SNJ-5, SNJ-6, SNJ-7, T-6G, North American-Banaire Entprs. SNJ-4, North American-Buehn T-6G, North American-Collins AT-6A, North American-Kalashian T-6G, North American-Maslon SNJ-4, North American-Medore SNJ-4, SNJ-5, North American/Benner R A Jr SNJ-5, North American/Schwamm AT-6F, North American/Victoria Mnt Lt AT-6A, North American/Walbrun T6-G, North American/Walker/Screws AT6C, and North American/Whiteford G A NA AT 6/SNJ
A-2-578	Canadian Car & Foundry Norseman Mark V and Noorduyn UC-64A
A-2-582	Beech AT-11 and SNB-1
A-306	Monocoupe 90, 90A, 90AF, and 90AL-115
A-319	Cessna 152
A-351	Aeronca C-2, C-2 Scout, and C-2 Standard
A-396	Aeronca C-3 and PC-3
A-533	Waco YKC, YKC-S, YKS-6, and ZKS-6
A-535	Fairchild 24 C8C
A-591	Commonwealth Rearwin 9000-L, Rearwin 8500, 8500 Deluxe, 9000-KR, 9000-L, and 9000-L Deluxe
A-596	Aeronca LB
A-614	Aeronca LC
A-618	Douglas DC3-G102A and DC3-G202A
A-634	Aeronca K and KS
A-642	Waco UPF-7 and VPF-7
A-643	Taylorcraft A
A-649	Beech D17S
A-655	Aeronca KC
A-669	Douglas C-47, C-47A, C-47B, DC-3A-S1C3G, DC3A-S4C4G, DC3A-SC3G, DC3C-R-1830-90C, DC3C-S1C3G, and DC3C-S4C4G
A-675	Aeronca 50-C, 65-C, 65-CA, KCA, S-65-C, S-65-CA, and Aeronca/Browne 65-CA
A-676	Aeronca KM
A-684	Beech 18D
A-688	Aeronca 50-F

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A-691	Piper / Duke J3-C65, PA-11, Piper / Laudeman J3C-65, Piper Aircraft Corp J3C65, Piper J-3C-65/L-4, J3C-50, J3C-50S, J3C-65, J3C-65 (Army L4-B), J3C-65S, L-4A, L-4B, L-4H, L-4J, NE-1, PA-11, PA-11S, Piper-Carter PA-11, Piper-Rhyne J3C-65, Piper/Mckinney J3C-65, and Piper/Wallys Flyers, Inc. J3C-65
A-692	Piper J3F-50, J3F-60, and J3F-65
A-694	Luscombe 8, 8A, 8B, 8C, 8D, 8E, 8F, T-8F, Luscombe/Pedersen T-8F, Silvaire 8F, Silvaire Luscombe 8, 8A, 8B, 8C, 8D, 8E, 8F, and T-8F
A-696	Taylorcraft Bc, BC-65, BC12-65, BC12-D, BC12-D1, BC12D-4-85, BC12D-85, BCS, BCS-65, BCS12-65, BCS12-D, BCS12D-4-85, Taylorcraft/Peterson BC12-D, Universal Taylorcraft BC12-D, BC12-D1, and BCS12D85
A-698	Piper J3L, J3L-65, and J3L-65S
A-699	Taylorcraft Bf, BF-60, BF-65, and BF12-65
A-700	Taylorcraft Bl, BL-65, BL12-65, and Taylorcraft/Ellis BL-65
A-701	Cessna C-145 and C-165
A-702	Aeronca 50-L, 65-LA, and 65-LB
A-703	Piper J4, J4A, J4A-S, and Piper-Crockett J-4A
A-706	Fairchild 24R-40, 24R-46, 24R-46A, 24R-46S, and 24R-9
A-707	Fairchild 24W-40, 24W-41, 24W-41A, 24W-46, 24W-46S, and 24W-9
A-709	Stinson 10 and HW75
A-715	Funk B, B75L, B85C, McClish Funk B, B75L, and B85C
A-717	Howard Aircraft DGA-15J and DGA-15P
A-718	Engineering & Research 415-C, 415-CD, Engineering & Research Ercoupe 415-C, 415-CD, Erco 415-C, 415-CD, Ercoupe 415-C, and 415-CD
A-720	Northwestern Porterfield CP-65, LP-65, Porterfield CP-55, CP-65, FP-65, LP-65, and Porterfield-Rankin CP-65
A-722	Cessna JRC-1, T-50, and UC-78
A-723	Lockheed 18 with Wright C9HD Series, 18-08 with Wright 1820F56, 18-50 with Wright C9GC&D Series, 18-50 with Wright R-1820-66, 18-56 with Wright 1820F56, 18-56 with Wright C9GC&D Series, 18-56 with Wright C9HD Series, and 18-56 with Wright R-1820 Ser
A-724	Fairchild Funk M62C F-23A, Fairchild M-62A, M-62A-3, M-62A-4, M-62B, PT-19, PT-19A, PT-23, PT-26, PT-26A, and Fairchild(Howard) M-62C(PT-23A)

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A-725	Piper AE-1, J5A, J5A-80, J5B, and J5C
A-728	Aeronca 50-TL, 60-TF, 65-TAC, 65-TAF, 65-TAL, 65-TC, 65-TF, 65-TL, L-3, and YO-58
A-729	Commonwealth 185, Commonwealth Rearwin 175, 180F, 185, Rearwin 175, 180, 180F, 185, and 190F
A-730	Culver LCA, LFA, Superior Culver LCA, and LFA
A-734	Grumman G-44, G-44A, and Grumman Scan Type 30
A-736	Meyers OtW, OTW-145, and OTW-160
A-737	Interstate S-1A, S-1A-65F, S-1A-85F, and S-1A-90F
A-738	Stinson 10A
A-740	Piper J4E
A-743	Boeing 75, A75, A75J1, A75L3, A75L300, A75N1, A75N1(PT17), B75, B75N1, D75N1, E75, E75(N2S-5), E75N1, IB75A, N2S-3, N2S-4, N2S-5, PT-13, PT-13B, PT-13D, PT-17, Boeing Stearman/Huff A75-N1, Boeing-Brown Stearman E75N1, Boeing/Gardner PT-17, Boeing/Jonas Edwin A Jr Boeing/Jonas 1B75A, Boeing/Mays A75N1, Boeing/Mountain View Air Rep A75N1, Boeing/Porter/Epperson B-75N1, Boeing/Regan Richard P PT13, Boeing/Smith A75N1, Boeing/Stiles R B75N1, and Boeing/Wright Joe W B75N1
A-746	Taylorcraft DC-65, DCO-65, DF-65, DL-65, L-2, L-2B, L-2M, Taylorcraft/Barkmann Dco 65, and Taylorcraft/Coburn DCO-65L2M
A-748	Helton Lark 95
A-749	Ryan Aeronautical PT-22 and ST3Kr
A-751	Aeronca 0-58A, 0-58B, L-3B, and L-3C
A-754	Arctic Aircraft Co Inc S-1B2 with Lycoming 0-320 Series, S-1B2 with No Engine Code, Interstate L-6, S-1B1, S-1B2 with Lycoming 0-320 Series, and Interstate/Smith L6 S1B1
A-757	Beech C-45 and C18S
A-758	Aero Commander Callair A-9, A-9B, Callair A, A-2, A-3, A-4, and Intermountain Callair A-9

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A-759	Aeronca 7AC, 7AC-Conv, 7BCM, 7BCM/Conv, 7CCM, 7DC, 7DC-Conv, 7EC, 7FC, 7GCB, 7GCBC, 7JC, L-16A, L-16B, S7Ac, S7Ccm, American Champion Aircraft 7AC, 7EC, 7EC, 7EC, 7ECA, 7GCAA, 7GCBC, Bellanca 7ACA, 7ECA, 7GCAA, 7GCBC, 7KCAB, Champion 7AC, 7BCM, 7CCM, 7DC, 7EC, 7EC(Conv), 7ECA, 7FC, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7GCBC, 7HC, 7JC, 7KC, 7KCAB, Champion Aeronca 7AC, 7BCM, 7CCM, 7DC, 7EC, 7FC, 7GC, 7GCB, 7HC, L-16B, S7Ec, Champion S7Dc, and S7Ec
A-761	Aeronca 11AC, 11BC, 11BC-Conv, S11Ac, S11Bc, and Champion 11BC
A-762	Douglas C-54G, C54D-Dc, C54E-Dc, C54G-Dc, and DC-4
A-764	Consolidated L5, L5E1, Stinson L-5, L-5B, L-5C, L-5E, L-5E-1, L-5G, and Stinson/Wilbur L-5G
A-765	Beech 3 TM, 3N, 3NM, C-45G, C-45H, D18S, E18S, E18S-9700, G18S, H-18, JRB-6, RC-45J, SNB-5, TC-45G, TC-45H, TC-45J, and UC-45J
A-766	Globe GC-1A, GC-1B, Universal Globe GC-1A, and GC-1B
A-767	Consolidated Aircraft Corp 108-2, Consolidated Vultee Acft Corp 108, Stinson 108, 108-1, 108-2, 108-3, Universal Stinson 108, 108-1, 108-2, and 108-3
A-768	Cessna 140 and 140
A-769	Cessna 120, Downer RC-3, Downer Republic RC-3, Republic RC-3, and Simuflight SEATTLE-1-Stol RC-3
A-773	Bellanca 14-13, 14-13-2, and 14-13-3
A-774	Stinson AT-19, V77, and Stinson/Shacklette AT-19
A-777	Beech 35, 35R, A35, B35, C35, D35, E35, F35, and G35
A-778	Culver V and Superior Culver V
A-780	Piper PA-12 and PA-12S
A-781	Douglas DC-6 with No Engine Code
A-782	Navion L-17A, L-17B, L-17C, Navion A, B, D, E, F, G, H, North American Aviation Inc Navion, North American Navion, North American Navion A, B, D, F, G, L-17A, L-17B, Ryan Aeronautical Navion, Ryan Navion, Ryan Navion A, B, D, E, G, and L-17B
A-783	Grumman G-73
A-787	Aircoupe F-1A, Alon A-2A, A2, Engineering & Research 415-D, Engineering & Research Ercoupe 415-D, Erco 415-D, Ercoupe 415-D, E, G, Forney 415-D, E, F-1, F-1A, G, Mooney A-2A, and M10

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A-789	Curtiss Wright C-46A, C-46D, and C-46F
A-790	Cessna 190, 195, 195A, and 195B
A-791	Indus Aviation Inc T-11 Sky Skooter, T-211 Thorpedo, T211 Thorpedo, Indus Aviation Inc Thorpedo Lp, Leineke Walter L Thorp T-211, Thorp Aero Inc T 211, and Thorp Aircraft Co T-211
A-793	Convair 240, 240-0, 240-27, 240-4, 240-5, and T-29B
A-796	Aeronca 11CC and S11Cc
A-797	Piper PA-14
A-799	Cessna 170, 170A, 170B, and 170B
A-800	Piper PA-15
A-801	Emigh Trojan A-2
A-802	Aeronca 15AC and S15Ac
A-803	Mooney M-18C, M-18C 55, M-18L, M-18La, and Mooney Mite Aircraft Corp. M-18
A-804	Luscombe 11A, Quartz Mountain Aerospace Inc 11E, and Temco Luscombe 11A
A-805	Piper PA-17
A-806	De Havilland Beaver DHC-2, DHC-2 Mk.1, L-20A, U-6, U-6A, De Havilland DHC-2, DHC-2 Mk 1, DHC-2 Mk. I(L20A), DHC-2 Mk.I, DHC-2-L-20, De Havilland-Kenmore DHC-2, De Havilland/Lake Union Air DHC2 MK1, and De Havilland/Peters DHC-2
A-807	De Havilland DH104 Dove 2A and DH104 Dove 6A
A-812	Boeing 377MG
A-813	Piaggio P.136-L1 and P.136-L2
A-815	De Havilland Otter DHC-3, U-1A, and De Havilland-Hansen DHC-3
A-816	De Havilland D H 114 Heron 2DA, De Havilland Dh 114 Heron 2X, and De Havilland DH-114
A1CE	Beech 19A, 23, A23, A23-19, A23-24, A23A, A24, A24R, B-19 Sport, B19, B23, B24R, C23, and C24R
A1EA	Piper PA-30 and PA-39
A1EU	Bolkow Bolkow Jr.
A1SW	Dee Howard Company 500
A1WE	Hamilton T-28R-2
A2CE	Cessna 336

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A3CE	Champion 402
A00003SE	Cessna Aircraft Co LC41-550FG, LC42-550FG, Cessna LC41-550FG, Columbia Aircraft Mfg LC41-550FG, LC42-550FG, Lancair Company LC-40-550FG, LC41-550FG, LC42-550FG, and Pacific Aviation Composites US LC 40-550FG
A3SO	New Piper Aircraft Inc PA-32-301XTC, PA-32R-301, PA-32R-301T, PA32-301FT, Piper Aircraft Inc PA-32R-301T, PA32-301FT, Piper PA-32-260, PA-32-300, PA-32-301, PA-32-301T, PA-32R-300, PA-32R-301, PA-32R-301T, PA-32RT-300, PA-32RT-300T, PA-32S-300, PA32-301FT, and PA32-301XTC
A4CE (rev. 47)	Cessna 206, 206H, P206, P206A, P206B, P206C, P206D, P206E, T206H, TP206A, TP206B, TP206C, TP206D, TP206E, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G with S/N 05575, TU206G with S/N U20602589 and U20604075 and up, TU206G with S/N U20603213, TU206G with S/N U20603522 through U20604074, U206, U206A, U206B, U206C, U206D, U206E, U206F, and U206G with S/N U20604075 and up
A4EU	Reims Aviation Cessna F172E, F172M, Reims Aviation S.A. Cessna F172N, Reims Cessna F172F, and F172H
A4PC	Fuji FA-200-160
A5IN	Pine Air Super V
A00005LA	Eagle Aircraft Eagle 150B
A5PC	De Havilland DH82A, De Havilland Tiger Moth Dh 82A, and De Havilland/Oliver DH-82A
A6CE	Cessna 337, 337A, 337B, 337C, 337D, 337E, 337F, 337G, 337H, M337B, P337H, T337B, T337C, T337D, T337E, T337F, T337G, and T337H
A6EA	Stol UC-1 and United Consultants UC-1
A00006SE	Cub Crafters CC18-180 and Cub Crafters Inc CC18-180
A6SW	Mooney M22
A7CE	Cessna 401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, and 421C
A7EA	Found Acft Canada Inc FBA-2C1 and FBA-2C2
A7NM	Ryson Aviation Corp ST-100
A7SO	New Piper Aircraft Inc PA-34-220T, Piper Aircraft Inc PA-34-220T, Piper PA-34-200, PA-34-200T, and PA-34-220T

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A00008DE	Liberty Aerospace Incorporated Liberty XL-2 and Liberty Aerospace Incorporated XL-2
A8EA	Piper PA-31P
A8EU	De Havilland Tiger Moth DH-82C and DH82
A8IN	Dornier Do 27-Q6
A8S0	Aviat Aircraft Inc Pitts S-2B, S-2C, Aviat Aircraft Inc S-2C, Aviat Inc Pitts S-1T, S-2B, and S-2S
A8SO	Aerotek Inc Pitts S-2B, Aerotek Pitts S-1T, S-2, S-2A, Aerotek Pitts Special S-1S, Christen Industries Inc Pitts S-1T, S-2A, S-2B, S-2S, Pitts Acrobatics Pitts S-1T, Pitts Aerobatics S-2B, Pitts S-1S, S-1T, S-2A, S-2S, and Sky International Inc S-2C
A9CE	Cessna 188, A188, A188A, A188B for S/N 18803047 and on, A188B with S/N 18800833 through 18803046, and T188C
A00009CH	Cirrus Design Corp SR20 and SR22
A00009DE	Adam Aircraft Industries Inc A500
A9EU	Siai-Marchetti 205-20/R and S.205/22R
A9SO	Piper PA-36-300 and PA-36-375
A9WE	Wing D-1
A10EU	Agusta Spa F.260D, Siai Marchetti F.260C, Siai-Marchetti F.260, and F260D
A11EA	American AA-1, AA-1B, American Aviation AA-1A, Grumman American Avn. Corp AA-1A, Grumman American Avn. Corp. AA-1B, and AA-1C
A11EU	Beagle B.206 Series 1 and B.206 Series 2
A00011LA	Gippsland Aeronautics Pty Ltd GA 8 and Gippsland GA-8
A11SW	Anderson Greenwood AND-51-A and Bellanca Aircraft Corp. 51
A12CE	Beech 60, A60, and B-60
A12IN	Sud Aviation Gardan Gy 80-180
A12SO	Aero Commander 112, Commander Aircraft Co 114-B, 114TC, Rockwell International 112, 112B, 112TC, 112TCA, 114, and 114A
A13CE	Cessna 177, 177A, 177B with S/N 17701371 through 17702522, and 177B with S/N 17702523 and on
A13EA	Found Centennial 100
A13EU	Reims Cessna F150H, F150L, F150M, F152, FA150K, and FA150L
A15EA	Teal-Washac Industries Inc. TSC-1A2, Thurston TSC-1A, and TSC-1A1

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A16CE (rev. 22)	Cessna 207, 207A with S/N 20700363 through 20700414, 207A with S/N 20700415 and up, 207A with S/N 20700415 and up, T207, and T207A with S/N 20700415 and up
A16EA	American AA-5, American General Acft Corp AG5B, Grumman American Avn. Corp. AA-5, AA-5A, AA-5B, Gulfstream American Corp AA-5A, AA-5B, and Tiger Aircraft LLC AG-5B
A16SO	Falcon Aircraft Corp F-1
A17CE	Evangel Air 4500-300 and 4500-300-II
A17EU	Britten-Norman BN-2 Islander, BN-2A, BN-2A-20, BN-2A-21, BN-2A-27, BN-2A-6, BN-2A-8, BN-2A-9, BN-2B-26, BN2A-26 Islander, Pilatus Britten-Norman BN-2B-26, Pilatus Britten-Norman Ltd. BN-2A-26, and BN-2B-21
A17SO	Grumman American Avn. Corp. GA-7 and Gulfstream American Corp GA-7
A17WE	Butler Aircraft Company Aerostar 600, 601, Piper Aerostar 600, 601, 601P, 602P, Piper Aircraft Corp PA-60-700P, Piper Aircraft Corporation PA-60-601P, Piper PA-60-602P, Smith Aerostar 600, 601, and 601P
A18CE	Bellanca 17-30A, 17-31A, and 17-31ATC
A18EA	Great Lakes 2T-1A, 2T-1A-1 with Lycoming 0-320 Series, 2T-1A-1 with Lycoming I0360 Ser A&C, 2T-1A-1 with Lycoming IO-320 Series, 2T-1A-2 with Lycoming AEIO-360 Ser, 2T-1A-2 with Lycoming AEIO-360-B1G6, 2T-1A-2 with Lycoming GSO-435 Serie, 2T-1A-2 with Lycoming I0360 Ser, 2T-1A-2 with Lycoming O&VO-360 Ser, and 2T-1A-2 with No Engine Code
A18SO	Piper PA-38-112
A19SO	New Piper Aircraft Inc PA-44-180, Piper Aircraft Inc PA-44-180, and Piper PA-44-180
A19WE	Bushmaster 2000
A20CE	Cessna 177RG with S/N 177RG0001 through 177RG1051, 177RG with S/N 177RG0001 through 177RG1051, and 177RG with S/N 177RG1052 and up
A20SO	Piper PA-31, PA-31-300, PA-31-325, and PA-31-350
A21CE	American Champion Aircraft 8GCBC, Bellanca 8GCBC, 8KCAB, and Champion 8KCAB
A21EA	Canadair CL-601-2A12
A22NM	Aviat Aircraft Inc A-1, A-1A, A-1B, A-1C, A-1C-180, A-1C-200, Aviat Inc A-1, and Christen Industries Inc A-1

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A22SO	Grumman Aircraft Eng Corp G-111
A23CE	Beech 58P, 58PA, 58TC, and 58TCA
A23EU	Cessna FT337Gp, Reims Aviation Cessna FT337Gp, and Reims Cessna F337H
A25CE	Cessna 404
A25SO	New Piper PA46-350P, Piper Aircraft Inc PA 46-350P, Piper Aircraft Inc PA46R-350T, Piper PA 46-350P, and Piper PA-46-310P
A26EU	Reims Aviation Cessna F177RG and Reims Cessna F177RG
A26NM	De Havilland DHC-1B-2-S3 and DHC-1B-2-S5
A29CD	Beech 76
A29EU	Britten Norman Bn 2A Mk III 2 and Britten Norman BN-2A Mk III
A30CE	Beech 77
A30EU	Zlin 526L
A31EU	Partenavia P68-TC Observer, Partenavia S.P.A P 68 C/TC, Partenavia S.P.A. P 68 Observer, Partenavia S.P.A. P68, P68B, Partenavia Spa P.68C, Vulcanair P68 Observer 2, Vulcanair Spa P68 TC Observer, P68C, and P68OB2
A33SO	Grumman Hu 16E
A34CE	Cessna T303
A34EU	Ffa Flugzeugwerke Altenrhein AS202/18A4
A36EU	Avions Mudry Et Cie Cap 10B
A41CE (rev. 7)	Iniziativa Industriali Italian Sky Arrow 650TCN
A41EU	Short Bros Shorts SD3-60
A42EU	Reims Aviation Cessna FR182, Reims Aviation S.A. Cessna F182Q (Manufactured in 1977), and F182Q (Manufactured in 1979)
A43CE	Extra Flugzeugbau Gmbh EA-400
A44CE	PZL-Mielec M26 and M2601
A44EU	De Havilland Chipmunk 22A, De Havilland DHC-1 Chipmunk, DHC-1 Chipmunk 22, DHC-1 Series 22, and DHC-1 T.Mk. 10
A46CE	OMF OMF-100-160 and Symphony Aircraft Ind Inc SA 160
A47CE	Diamond Aircraft Ind Gmbh DA 40, Diamond Aircraft Ind Inc DA 40, and Diamond Aircraft Ind Inc DA40 F
A49CE	Grob-Werke G 120A

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
A51EU	Socata Group Aerospatiale TB9, Socata TB 10, 9 Tampico, Socata TB-20 Trinidad, TB20, TB200, and TB21
A52CE	Sky Arrow 650 Tcns
A52CE (rev. 1)	Iniziativa Industraili Italia Sky Arrow 650TCNS
A55CE	Beriev Aircraft Company BE-103
A55EU	Eads PZL Warszawa-Okecie SA PZL-104M Wilga 2000 and PZL-104Ma Wilga 2000
A57CE	Diamond Aircraft Ind Gmbh DA 42 and Diamond Aircraft Ind Inc DA 42
A57EU	Burkhart Grob G115C and Burkhart Grob Luft-Und Grob G115C2
A58EU	FFT Gmbh SC01 B-160
A64EU	Brooklands Aerospace Grp Plc OA7 Optica
A67EU	Extra Flugzeugbau EA 300/S, Extra Flugzeugbau Gmbh EA 300/L, Extra Flugzeugbau Gmbh EA-300, EA300/200, and Extra Flugzeugproduktions-Und EA 300/L
A68EU	WSK PZL Mielec M-18A, WSK-PZL Warzawa-Okecie PZL-104 Wilga 80, and WSK-PZL-Mielec M-20-03 "Mewa"
A69EU	Koliber PZL-150A, P Z L Koliber 150A, and PZL 110 Koliber 160A
A75EU	General Avia Costruzioni F22B
A76EU	Moravan Z143L and Z242L
A77EU	Ruschmeyer Luftfahrttechnik R90-230RG
AL-2	North American B-25J, B-25N, and TB-25N
AR-7	Piper PA-18A Restricted
AR-30	North American T-28A
AR-31	Rawdon T1 with Lycoming 0-320 Series
AR-36	Grumman AF-2S with P & W R-2800 Series
AS1CE	ZLT Zeppelin Luftschifftechnik LZ N07-100
AS1EU	Airship Industries Uk Ltd Airship 600
AS1NM	American Blimp Corp A-60+ and A60R
AS2NM	US/LTA 138S
AS3EU	Thunder & Colt GA42
AS4EU	WDL 1B
ATC-450	American Eaglecraft Eaglet B-31
ATC-542	Waco Classic Aircraft Corp YMF and Waco Classic Aircraft YMF-F5C

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
ATC11	General Aircraft Corp. Aristocraft 102-A
ATC13	Waco GXE and GXE/ASO
ATC17	American Eagle 101, A-1, and Roos American Eagle 101
ATC18	Pitcairn PA-5
ATC21	Swallow Swallow
ATC25	Ryan Aircraft B1
ATC28	Lincoln Page 1928 and Roos Lincoln Page 1928
ATC32	Curtiss Wright Travel Air 4000 and Travel Air 4000
ATC41	Waco ASO
ATC42	Waco DSO
ATC48	Stinson SM-2
ATC55	Stearman Aircraft C3-B
ATC70	Hawkins 1928 Monocoupe 70, Monocoupe 70, and Universal Moulded Products Monocoupe 70
ATC73	Spartan C3-120
ATC92	Pitcairn PA-6
ATC101	Bird A
ATC105	Swallow TP
ATC108	New Standard D-25 and White New Standard D-25
ATC113	Monocoupe 113 and Universal Moulded Products Monocoupe 113
ATC123	Waco ATO
ATC124	American Eagle 129 and American Eagle A 129
ATC138	Star Cavalier
ATC142	Ryan Aircraft B-5
ATC145	Stinson SM-2Aa
ATC161	Stinson SM-2Ab
ATC166	Viking Flying Boat Co Kitty Hawk B-4
ATC194	Franklin A
ATC195	Spartan C3-165
ATC196	Pitcairn PA-7S
ATC201	Universal Moulded Products Monocoach
ATC239	Bird BK and Perth Amboy Bird BK

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
ATC240	Waco CSO
ATC251	Stearman Aircraft C3-R
ATC257	Waco CTO
ATC265	Paramount Cabinaire
ATC277	Saint Louis C-2-110
ATC279	Lincoln PT-K
ATC284	Lincoln PT-W
ATC286	Spartan C3-225
ATC292	Stearman Aircraft 4E
ATC293	American Eagle 201
ATC295	Stinson SM-8A
ATC298	Stinson SM-7A
ATC305	Stearman Aircraft 4D
ATC311	Waco RNF
ATC313	Waco KNF
ATC329	Stinson SM-7B
ATC362	Waco CRG
ATC380	American Eaglecraft Eaglet 230
ATC382	Bird BW
ATC388	Bird CK and Perth Amboy Bird CK
ATC392	Viking Flying Boat Co Kitty Hawk B-8
ATC412	Waco QDC
ATC414	Sioux Coupe 90-B
ATC416	Waco QCF
ATC420	Stinson SM-6000-B
ATC427	Spartan C2-60
ATC455	Piper E-2
ATC456	Heath Aviation LNB-4
ATC459	Stearman Aircraft 6L
ATC464	Waco PBA
ATC466	Waco RBA
ATC467	Waco UEC

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
ATC473	Waco UBF
ATC478	Pittcairn PA-18
ATC479	Waco UBA
ATC499	Waco UIC
ATC502	Waco PLA
ATC511	Waco ULA
ATC525	Piper F-2
ATC528	Waco UKC, UKC-S, UKS-6, and VKS-6
ATC529	Monocoupe D145 and Universal Moulded Products Monocoupe D-145
ATC530	Stinson SR-5, SR-5A, and SR-5E
ATC538	Waco CJC and DJC-6
ATC542	Classic Aircraft Corp Waco YMF and Waco YMF
ATC546	Waco UMF
ATC556	Stinson A
ATC561	Post Aircraft Corp Wiley A
ATC567	Northwestern Porterfield 35, 35-70, Porterfield 35, and 35-70
ATC569	Waco YOC and YOC-1
ATC575	Waco CUC-1 and CUC-2
ATC580	Stinson SR-6, SR-6A, and SR-6B
ATC586	Waco YPF, YPF-7, ZPF-6, and ZPF-7
ATC594	Stinson SR-7B
ATC595	Piper J-2
ATC597	Waco DQC-6 and EQC-6
ATC608	Stinson SR-8B and SR-8C
ATC609	Stinson SR-8D
ATC613	Arrow F and State Securities Arrow F
ATC621	Stinson SR-9B and SR-9C
ATC625	Stinson SR-9E
ATC627	Waco ZGC-7
ATC639	Waco EGC-7
ATC640	Stinson SR-9F
ATC660	Piper J-3 and Piper-Dahl J-3

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
ATC681	Ryan Aeronautical St-A Special
B01CE	Sky Balloons Sky 90-24
bird	Perth Amboy Bird A
G01CE	DG Flugzeugbau Gmbh DG-800B and DG-Flugzeugbau Gmbh DG-808 C
G1NE	Schweizer Acft Corp Schweizer Sgm 2-37 and Schweizer SGM2-37
G03CE	Alexander Schleicher Gmbh & Co Ash 26 E and Schleicher Alexander Gmbh & Co Ash 26 E
G06CE	Stemme Ag Stemme S 10-VT and Stemme Gmbh & Co S10-VT.
G07CE	Diamond Aircraft Ind Gmbh Hk 36 TC, 36 TTC, Diamond Aircraft Ind Inc Hk 36 TC, Diamond Aircraft Industries Hk 36 TTC, and Diamond Aircraft Industries HK-36Tts
G09CE	Schleicher ASH25M
G16CE	Scheibe SF-25C
G19CE	Schempp-Hirth Flugzeugbau Gmbh Duo Discus T
G20CE	DG-Flugzeugbau Gmbh DG-1000T
G43EU	Burkhart Grob Flugzeugbau G109 and Burkhart Grob G-109B
G50EU	Valentin Gmbh Taifun 17E
G51EU	Diamond Aircraft Industries Hk 36R Super Dimona, Hoac-Austria Hk 36R Super Dimona, Hoffman-Flugzeugbau H 36 Dimona, and Hoffmann Hk 36R Super Dimona
G52EU	Glaser-Dirks DG-400
G55EU	Brditschka HB23/2400
G58EU	Stemme Gmbh & Co S-10
G59EU	DG-Flugzeugbau Gmbh DG-500Mb and Glaser-Dirks DG-500M
G72EU	Aerotechnik L-13 Sdm Vivat, L-13 Seh Vivat, and L13 Se Vivat
Group 3	De Havilland Gipsy Moth Dh.60G and De Havilland Gypsy Moth
GROUP3	Kegebein B E/Kegebein P A Kolb Twinstar Mk III and Kroeplin Daniel Kolb Mark III
GTC6	Hickman-Bell Briegleb BG-6

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
H-1	Bell 47B, 47B3, 47D, 47D1, 47G, 47G-2, 47H-1, Bell Continental Copters 47G, Bell Kitz Kopters 47D1, Bell-Continental Copters Inc. 47G2, Bell-Faulkenberry 47-G, Bell-Huddleston 47G2, Bell-K-Copter 47G-2, Bell-Olympic Helicopters Inc. 47G2, Bell-Shippey Bell 47G, Bell-Transworld Helicopter Cor 47G-2, Bell-Transworld Helicopters 47D1, Bell-Watson 47-G, and Bell-Yehnert 47G-2
H-2	Sikorsky S-51
H1CE	Enstrom 280, 280FX, F-28A, F-28C, F-28F, Enstrom Helicopter Corp 280C, and 280F
H1WE	Hiller UH-12L and UH-12L4
H2EA	Sikorsky HSS-2
H3SW	Brantly 305
H6WE	McCulloch Aircraft Corp. J-2
H10WE	Robinson Helicopter Company R22 Mariner with Lycoming O-320 Series, R22 Mariner with Lycoming 0-360-A1D, R22 Mariner with Lycoming 0-360-C1F, R22 Mariner with Lycoming O&VO-360 Ser, R22 Mariner with Lycoming O-360 Series, R22 with Ama/Expr Unknown Eng, R22 with Lycoming O-320 Series, R22 with Lycoming 0-360-A1D, R22 with Lycoming 0-360-C1F, R22 with Lycoming 0-540F1 Serie, R22 with Lycoming O&VO-360 Ser, R22 with Lycoming O-320-B2C, R22 with Lycoming O-360 Series, R22 with Lycoming O-360-J2A, R22 with No Engine Code, Robinson Helicopter R22 Alpha with Ama/Expr Unknown Eng, R22 Alpha with Lycoming 0-320 Series, R22 Alpha with Lycoming 0-540 Series, R22 Alpha with No Engine Code, R22 Beta with Ama/Expr Unknown Eng, R22 Beta with Cont Motor 0-200 Series, R22 Beta with Lycoming 0-320 Series, R22 Beta with Lycoming 0-360-A1D, R22 Beta with Lycoming 0-360-C1F, R22 Beta with Lycoming I0360 Ser, R22 Beta with Lycoming I0360 Ser A&C, R22 Beta with Lycoming O&VO-360 Ser, R22 Beta with Lycoming O-320-B2C, R22 Beta with Lycoming O-360 Series, R22 Beta with Lycoming O-360-J2A, and R22 Beta with No Engine Code
H11NM	Robinson Helicopter Company R44 II and Robinson Helicopter R44
H15WE	Sikorsky CH34C
HR1SO	Sikorsky CH-19E
L-8-2	Grumman TBM-3
L-25-2	Grumman FM-2
L-28-2	Superior Culver PQ-14B

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
LTC-11	North American P-51C, P-51D, and North American/Aero Classics P-51D
S00002SE	American Blimp Corp A-1-50 and A-1-70
S00007LA	Worldwide Aeros Corp AEROS-40B
TA1CH	Quicksilver Aircraft GT-500
TA4CH	Diamond Aircraft Ind Inc DA 20-A1 and 20-C1
TA5CH	Zenair Ltd CH 2000
Taylorcraft TG-6	Taylorcraft TG-6
TC 40 or 68	Curtiss Wright Robin and Curtiss-Robertson Robin
TC2-21	Pitcairn PA-4
TC2-84	Curtiss Wright Travel Air D-4000 and Travel Air D-4000
TC2-107	Golden Eagle Chief
TC2-110	Arrow Aircraft & Motors Arrow Sport
TC2-119	Davis V-3
TC2-176	B&F Technik Vertriebs Gmbh Fk 9 Mark IV and B&F Technik Vertriebs Gmbh Spe Fk 9 Mark IV
TC2-178	Travel Air D-4-D
TC2-189	Laird LC-1B-300
TC2-191	Star Cavalier D
TC2-202	Timm COLLEGIATEM-150
TC2-258	Aircraft Builders Student Prince X
TC2-276	Barnard New Standard D-31
TC2-329	Hamilton Metalplane H47
TC2-339	Great Lakes 2T-1(Menasco Special
TC2-361	Waco Jym
TC2-368	Curtiss Wright Travel Air 2000T
TC2-381	Curtiss Wright Travel Air B9-4000
TC2-391	Sikorsky S-39-C
TC2-393	De Havilland Puss Moth 80A
TC2-394	Davis D-1-W
TC2-403	Curtiss Wright Travel Air B-14-R
TC2-439	De Havilland Dh Fox Moth 83
TC2-452	Monocoupe 110 Special

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
TC2-496	Stinson Jr. S and SR
TC2-505	Fairchild KR-34B2
TC2-514	Rose Parrakeet A-1
TC2-527	Bird A-T
TC2-530	Porterfield CP-40
TC2-535	Nicholas Beazley NB-8G
TC2-539	Vultee V-1A Special
TC2-544	Grumman G-32A
TC2-545	Duramold F46A
TC2-546	Pasped Skylark W1
TC2-549	Curtiss Wright A22
TC2-560	Curtiss Wright Travel Air L-4000 and Travel Air L-4000
TC2-562	Phillips Aviation Co Phillips Fleet 7
TC2-564	Funk C
TC2-566	Fleet 16B and Fleet Reed S J IV Fleet 16B
TC2-576	Douglas B-23
TC2-583	American Eaglecraft Eaglet A-31-1B
TC2-584	Jamieson J-1
TC19	Fairchild KR-31
TC30	Curtiss Wright Travel Air 2000 and Travel Air 2000
TC31	Curtiss Wright Travel Air 3000 and Travel Air 3000
TC49	Lockheed Vega 1
TC57	Eaglerock A-1
TC59	Eaglerock A-3 and A-4
TC72	Cessna Aw
TC87	Ford 4-AT-B
TC89	Fairchild 71
TC116	Curtiss Wright Travel Air A-6000-A
TC120	Command-Aire 3C-3B
TC122	Fleet 1
TC129	Bellanca CH300 Pacemaker
TC130	Curtiss Wright Travel Air S-6000-B and Travel Air S-6000-B

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
TC131	Brewster Fleet 2, Brewster/Haselton Fleet 2, and Fleet 2
TC132	Ford 4-AT-E
TC133	Boeing 100
TC135	Butler Aircraft Corporation Black Hawk
TC139	Eaglerock A-12
TC143	Curtiss Wright Robin C-1
TC144	Curtiss Wright Robin C-2
TC146	Curtiss Wright Travel Air B-4000 and Travel Air B-4000
TC149	Curtiss Wright Travel Air C-4000 and Travel Air C-4000
TC150	Command-Aire 3C-3
TC151	Command-Aire 3C-3A
TC156	Ford 5-AT-B
TC162	Fairchild KR-34C
TC165	Ford 5-AT-C
TC167	Great Lakes 2T-1
TC177	Cunningham Hall PT-6F
TC178	Alliance Aircraft Argo
TC184	Command-Aire 5C-3
TC188	Curtiss Wright Travel Air E-4000 and Travel Air E-4000
TC191	Curtiss Wright Fledgling
TC197	American Moth Corp DH60Gm Gipsy Moth and Moth 60-GM
TC204	Aeromarine-Klemm L-26-A
TC208	Apollo Aircraft Inc Monsoon and Monsoon
TC215	Fairchild KR-21
TC220	Curtiss Wright Robin J-1
TC242	Fairchild 42
TC254	Curtiss Wright Travel Air 4-D
TC259	Inland S300
TC272	Davis D-1-K
TC278	Travel Air 10-D
TC303	Driggs Skylark 3
TC309	Curtiss-Robertson 4C-1A

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
TC315	Inland W500
TC317	Davis D-1-66
TC319	Bellanca CH400 Skyrocket
TC327	Monocoupe 110
TC336	American Aeronautical Marchetti S-56-B
TC343	Inland R400
TC352	Curtiss Wright Travel Air 6-B and Travel Air 6-B
TC353	Laird LC-B-200
TC354	Great Lakes 2T-1E
TC374	Brewster Fleet 10, 7, Fleet 7, 7 Deluxe, and 7-C
TC384	Lockheed Vega 5C
TC397	Curtiss Wright CW-1 and Curtiss Wright Jr CW1
TC401	Curtiss Wright Travel Air 12-Q
TC405	Buhl LA-1
TC407	Curtiss Wright Travel Air 12-W and Travel Air 12-W
TC408	Fairchild 22 C7
TC411	Travel Air 16-K
TC428	Fleet 8 and 9
TC430	Franklin 90
TC438	Fairchild 22 C7A
TC442	Curtiss Wright Travel Air A-14-D
TC444	Curtiss Wright Sedan 15-D
TC463	Curtiss Wright Travel Air 16-E and Travel Air 16-E
TC470	American Airplane & Engine Pilgrim 100B
TC475	Fairchild 24 C8
TC483	Fairchild 22 C7B
TC485	Curtiss Wright Travel Air B-14-B
TC490	Kinner Sportster K
TC497	Fairchild 24 C8A
TC498	Fairchild 24 C8B
TC503	Fairchild 22 C7D
TC515	Fairchild 22 C7E

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
TC516	Kinner Sportster B-1 and B
TC517	Fairchild 22 C7F
TC522	Kinner Sportwing B-2
TC540	Douglas DC2
TC543	Waco S3HD
TC551	Lockheed Electra 10-A
TC552	Luscombe Airplane Corp. Phantom 1
TC558	Boeing 247D
TC560	Beech B17L
TC571	Ryan Aeronautical St-A
TC573	Cessna C-34
TC574	Commonwealth Rearwin 7000 and Rearwin 7000
TC579	Beech B17R
TC590	Lockheed Electra 10-E
TC598	Waco AQC-6, YQC-6, and ZQC-6
TC600	Fairchild 24 C8E
TC602	Beech C17B and C17L
TC603	Fairchild F-45
TC604	Beech C17R
TC610	Fairchild 24 C8F and FC-2-W2
TC611	Porterfield 35W and 75C
TC612	Howard Aircraft DGA-8
TC616	Lockheed 12A
TC622	Cessna C-37
TC626	Waco YKS-7 and ZKS-7
TC628	Spartan 7W
TC632	Fairchild 24 H and 24 Hs
TC633	Fairchild 24 G
TC637	Hartmann Welch OW5M
TC638	Beech D17R
TC641	Beech E17B, E17L, and SE17B
TC648	Waco UKS-7, VKS-7, and VKS-7F

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
TC653	Rearwin 6000
TC654	Grumman G-21A
TC658	Ryan Aeronautical SCW-145
TC659	Harlow PJC-2
TC661	Rearwin 6000M
TC663	Fairchild 24 J
TC664	Waco AGC-8 and ZGC-8
TC665	Waco EGC-8
TC667	Fairchild 24 K and 24 KS
TC668	Cessna C-38
TC672	Howard Aircraft DGA-11
TC674	Dart G, GC, Gk, and Gw
TC677	Waco AVN-8
TC679	Stinson SR-10E
TC680	Kaiser F5
TC685	Stinson SR-10F
TC687	Luscombe Airplane Corp. 4
TC689	Beech F17D
TC690	Porterfield CP-50
TC695	Piper J3P
TC708	Piper J4B
TC711	Pigman Reed Rearwin 8135, Rearwin 8090, 8125, 8135, and 8135T
TC714	Waco ARE, HRE, and SRE
TC716	Bellanca 14-9 and 14-9L
TC719	Boeing S307
TC721	Piper J4F
TC731	Phillips Aviation Co. CT-2
TC733	Aetna Aerocraft 2SA
TC739	Howard Aircraft DGA-18K
TC742	General Aircraft Corp G1-80
TC744	Mercury BT-120
TC745	Bellanca 14-12F-3
TC776	Johnson Rocket 185 and Pirtle Johnson Rocket 185

Table D-1. Cross-Reference of Type Certificate Data Sheet With the Aircraft Manufacturers, Models and Series (Continued)

Type Certificate Data Sheet	Aircraft Manufacturers, Models, and Series
TC779	Beech G17S
TC785	Consolidated PBY-5A, Consolidated Vultee 28-5ACF, PBY-5A, Consolidated-Vultee 28-5ACF, and General Dynamics 28-5ACF
TCAL-13	Lockheed PV-1
TCAR-1	Curtiss/Whittington Bros P-40 Kittyhawk
TCAR10	Consolidated Vultee L-13
TCL-1-3	Boeing B-17G
TCL-3-4	Douglas A-26B and A-26C
TCL-10-3	Lockheed P-38L
TCNO1	Goodyear Airship GZ-19A and Goodyear GZ-20A
TG00004AT	Aeromot AMT-100, AMT-200(Supr Ximngo), and AMT-200S

Table D-2. List of Aircraft Manufacturer, Models, and Series Where a Type Certification Data Sheet was not Identified

Aero AT Sp Zoo AT-4 Lsa, Aero Commander S2R, Aero Sp Z O O AT-4 Lsa, Aerofab Inc Lake Seawolf, Aerofab LA-4, Aeronca/Bubeck Irving Bubeck-Aeronca, Aeronca/Lane Champion, Aeropro Cz A220, A240, Eurofox, Aeropro Cz Eurofox Lsa, Aeropro Cz Eurofox Lsa 2K, 3K, Aerospool s.r.o. Dynamic WT9, Aerosport Ltd C42B, Aerosport Ltd Ikarus Breezer, C42, C42 FB100, C42 FB80, C42E, C42E, C42E, Air Creation Arv Tanarg, Air Creation Buggy 582J, Air Creation Gt-Bi, Gte, Air Creation Sport Acft USA LLC Arv Tanarg, Air Creation Twin, Airborne Edge X 582/W, Airborne Windsports Outback, Airborne Windsports Pty Ltd Edge X-582-L, Airborne Windsports Pty Ltd Edge XT 912-B, Airborne Windsports Pty Ltd Edge XT-582-L, XT-582-L, XT-912, XT-912-L, XT-912-L, Airborne Windsports Pty Ltd XT-912-L, Airborne Windsports XT 912, Aircraft Mechanics Inc Comb Eaglerock 3POLB, Aircraft Mfg & Design LLC CH601Xl Slsa, CH601Xli Slsa, CH650Ls, CH750 Stol, Aircraft Mfg & Design LLC Zodiac CH650Ls, Aircraft Mfg & Development Co CH 2000, 601XL Slsa, Aircraft Mfg & Development Co CH601Xl, CH601Xl Slsa, Aircraft Mfg & Dvlpmt Co CH601Xl Slsa, CH601Xli Slsa, Aircraft Sales and Parts Ltd Steel Breeze, Airmax Construcoes Aeronautica Seamax-M22, Aliseo Flying Boat, Alliant Aviation Fusion, American Legend Aircraft Co AL11, AL11C-100, AL3, AL3C-100, Anderson Raymond D Challenger II, Angel Aircraft Corp Angel 44, Anglin James Leroy Anglin RV-6, Apollo Aircraft Inc Delta Jet as-III912S, Apollo Aircraft Inc Fox, Apollo Aircraft Inc Jet Star as-II, Apollo North America Inc Delta Jet as-III912S, Arion Aircraft LLC Lightning LS-1, Atec Vos Atec 322 Faeta, Atec Vos Faeta, Atec Vos Faeta 322, Austin Howard Rans S-12Xl, Avcat Airframes 2P, Avcatairframes 2 P, Aveko s.r.o. VL-3 Lsa, VL-3C-1, Aviadesign Inc A16, Avions P Robin Inc R. 2160, B&F Technik Vertriebe Gmbh FK-

Table D-2. List of Aircraft Manufacturer, Models, and Series Where a Type Certification Data Sheet was not Identified (Continued)

9, B-N Group Ltd BN2T Islander, Ballard Richard J Stewart 51, Beech 24R, 33, 3NMT, A36AT, B-80, B17E, T42, U-8D, U-8F, V35-TC, V35A-TC, Bell 47D1G, H-13, H-13E, H-13H, H13G, HTL-3, OH-13G, TH-13T, Bell-Carson 47G-Super C-4, Bellanca 14-12, 31-55A, 8KCAB-180, Bentley John O Silhouette I, Bert Floyd S BF6, Bilsam Aviation Ind Sp.Z0.0 Sky Cruiser, Blanke/Flightstar II Sl, Boeing 204, E75L300, Boeing/Hayes N2S 2, Bolkow 208C, Bolkow Junior 208, Breezer Aircraft Breezer, Brown Donald R Kitfox Series 5, Brown Kerry D Air Command 532, Brown Monoplane, Brown W D Jr Stolp Starlet SA500, Bruner-Winkle C-Bird, Buckeye Aviation Dream Machine, Buckeye Breeze, Buckeye Dream Machine, Buckeye Eagle 503, Buckeye Industries Inc 582 Dream Machine, Buller James P TA-3, Burger Eddie R Cosmos Phase 3, Burns Stephen A Trike, Byler Evans Vp II, C A Tecnam Srl P2002 Sierra, P92 Echo Super, CA Tecnam Srl P2004 Bravo, Cada Tim Christavia Mk 4, Callair S-1A, S-1A-90C, Camair 480C, Canadian Car & Foundry Harvard Mk IV, Canadian Light Acft Sales & Svc Bushcaddy Explorer, Canadian Light Acft Sales & Svc Bushcaddy Lsa, Cavalier F51D Mustang, Cessna 182RG, 185F, 303, 305, L-19, L-19A, L-19E, LC-126B, LC-126C, O-2A, P337, UC-78B, Cessna Wren 182G 460, 182H 460, 182K460, Cessna-Loomis-Buehn Cessna L-19A, Cgs Aviation Inc Hawk Arrow II, Chauvin Eugene J Jr Kitfox III, Chester Special Racer, Clawson Richard S Nuventure, Cochrans Buckshot, Columbia Aircraft Mfg 400, Columbia Aircraft Xjl, Colyaer Martin 3 S-100, Colyaer Sl Freedom, S100 Freedom, Combs Geoffrey W RV-10, Composite Aeronautic Group Toxo Slsa, Condor, Consolidated PT-3, Construzioni Aeronautiche Tecn P2004 Bravo, Corben Baby Ace, Costruzioni Aeronautiche Tecna P2002 Sierra, P2004 Bravo, P92 Eaglet, P92 Echo Classic, P92 Echo Super, Craddock Vernon C Zenair Stol CH 701, Cub Crafters Inc CC11-100, Cubcrafters Inc CC11-160, Czech Aircraft Works Spol s.r.o. CH 601 Xl Rtf, Czech Aircraft Works Spol s.r.o. Mermaid, Sportcruiser, Czech Aircraft Works s.r.o. Sportcruiser Rtf, Czech Sport Aircraft A S Sportcruiser, Dearing Ted E Hummelbird, Delta Trikes Aviation Sarl Voyageur II, Destiny Aircraft Corp Destiney 2000, Destiny Aircraft Corp Xlt 2000, Detroit Parks P2A, Diamond Aircraft Ind Gmbh DA 40-180 Diamond St, Dornier 27Q5, Douglas B-26, C-117D, C-54, C54-D, DC-7Bf, DC-7Cf, DC3, DC3A, DC3A 1830-94, DC3C, DC3C 1830-94, DC3C-R, M-2, Dova Aircraft s.r.o. DV-1 Skylark, Dova as DV-1 Skylark, DV-1 Skylark, Skylark, Drilk Terri M Goose, Dta Voyageur II, Eagle Aircraft Co LLC EA-100, Earthstar Aircraft Gull 2000, Edwards Douglas L Sky Ranger, Edwards Lewis A Hatz CB-1, Eipper Aircraft Inc Quicksilver Gt, Eipper Quicksilver Mxl, Engineering & Research 415-E, 415-G, Engineering & Research Ercoupe 415-E, 415-G, Englert Robert C Long Ez, Ercoupe 415-E, 415-G, Evektor - Aerotechnik A S Sportstar Max, Evektor-Aerotechnik as Sportstar, Evektor-Aerotechnik as Sportstar Plus, Sl, Extra Flugzeugbau Gmbh 260, Extra Flugzeugproduktions-Und Ex 300/L, Extra-Flugzeugbau Gmbh 300/S, Fagerberg John Cozy Mark IV, Fairchild M-62, Falcon Aircraft Inc A16, Fantasy Air s.r.o. Allegro 2000, 2007, Farley Glen D Express, Farrand Lowell Soneria II L, Fenn Stanley T Challenger 1, Fields Rex A Flightstar II Sl, Flaming Air Gmbh FA-04 Peregrine, Fleet 10F, Fleetwings Seabird, Flight Design Gmbh CT2K, Ctls, Ctsw, Flightstar II-Sl, Flightstar II Fix Wing, Floatplanes & Amphibs LLC A-22 Valor, Flyitalia Srl MD3 Rider, Forney 415-C, 415-E, Foxair LLC Kitfox Light Sport,

Table D-2. List of Aircraft Manufacturer, Models, and Series Where a Type Certification Data Sheet was not Identified (Continued)

Fpna A-22 Valor, Fpna LLC A-22 Valor, A-22 Valor, Freije George Lancair IV, Furr Donald E Jr Hummingbird, G N S Aeroclub Challenger II, Gardner Gary E Quad City Chlnger II, Geese Ronald Lee Dragonfly, General Avia Costruzioni F22, General Dynamics Corp. 240-27, Giallo Joseph F II RV-7A, Glaser-Dirks DG-400M/17, Glaser-Dirks Flugzeugbau GmbH DG-505 Orion, Gobin Henry E GN-1 Aircmpr-Ptnpol, Golden Circle T-Bird II, Graber Benjaminum Sonex, Gross Michael L M L G 1, Grumman F8F-1B, J2F6, Gryf Aircraft Spol s.r.o. Md 3 Rider, Hammond Aircraft Corp Hammond 100, Hand Baby Ace #1, Harris Timothy John Kitfox Model 1, Harris William F Glasair RG, Helton Sheril L Stodard-Hmltn Glstr, Henderson David L Searey, Higher Class Aviation Hornet, Higher Class Aviation Sport Hornet, Hill Juan Kitfox, Hiller OH-23B, OH-23C, OH-23D, OH-23G, Hiller Randy L Pegasus, Hills Flying Service LLC Hill Super Cub PA-18, Hook Jerry L Northway 2, Hudson Donald G Hyperlight SNS-8, Hudson Kenneth G Avid Flyer Speedwing, Hughes Engineering SP-2000 Outback, Hughes TH-55, TH-55A, Infinity 2000, Classic, Infinity LLC IPP4, IPP4, Infinity Power Parachutes Infinity 2004, 2007 Comman, Infinity Power Parachutes LLC C-912S, Infinity Power Parachutes LLC Infinity 2002, Iniziative Industriali Italian Sky Arrow 600 Sport, 600 Sport, Inland/Nelson Inland Sport, Interplane S R O Skyboy, Interplane Skyboy, Interplane Spol Skyboy, Interplane Spol s.r.o. Skyboy, Interplane s.r.o. Skyboy Ul, Irwin Allan E Skybolt, Jabiru USA Sport Aircraft LLC Calypso Sp, Jabiru USA Sport Aircraft LLC J170-Sp, J230-Sp, J250-Sp, Jihlavan Airplanes s.r.o. Kp 5 Asa, Jihlavan Airplanes s.r.o. KP5, Jimenez Michael Gene Vans RV-7A, Jones Peter M Boeing/Jones 75, Jones Stan R Wag-A-Bond, Just Aircraft LLC Highlander, Highlander, Kemmeries Aviation Inc Arv Tanarg, Keystone Aircraft K84 Commuter, Kidd Chris Harmon Rocket 2, Laird LC-RW300, Whirlwind, Lake Larry C 8 Lake Experimental, Leftwich Jimmy Allen Nieuport C1, Lichte Gary Sh 2 RG, Luscombe Silvaire Acft Co Inc S-LSA-8R, Luscombe Silvaire Acft Co Inc Silvaire LSA-8 Renai, M-Squared Inc Breese II Ss, Maroz Howard Kitfox Speedster, Marr/Eckberg Long-Ez, Martin Edwin W Fisher Classic, Matula John S New Avenger, Maule M 6 180C, Maule M-6-235C, Mc Manus Jack Wagaero Sptsman 2+2, McCarty Kirk Avid Magnum, McDaneld Roamair, McDonald Don A Vans RV10, McIntire John P Skyranger, McKee Robert H Lancair 320, Messerschmitt-Bolkow-Blohm Bo 209 Monsun, Mol William D Wolf W-II Boredom, Mong Sport MS-2A, Monocoupe 90AW, G, Monte-Copter 15, Moore Sport 2S, Moore William B Jr GS1, Morane Saulnier MS893A, Morane-Saulnier MS880B, Neely Buddy Ray Thorp T-18, Nelson R / Moore J Minimax, North American AT-6G, AT6J, North American British Harvard, North American F-51D, North American Harvard II A, B, North American Harvard III, North American Harvard Mk II A, North American Harvard Mkii, North American Medore T-6D, North American SNJ-5B, SNJ-5C, SNJ-6B, T-6, T-6D, North American/Buehn Harvard II, North American/Cashen SNJ-5C, North Wing Apache, North Wing Inc Apache, North Wing Uum Inc Scout X-C, North Wing Uum Inc Sport X-C, X2, X2-A, X2-N, Xtc, Northwing Design Apache Sport, P&M Aviation Ltd Pegasus Quik 912S, P&M Aviation Ltd Quik GT450 912S, P&M Aviation Ltd Quikr, Paradise Industria Aeronautica Paradise P-I Lsa, Paradise USA LLC Paradise P-1 Slsa, P-1 Slsa Lw, P-1 Slsa Sp, Paradise USA LLC Paradise P-I Lsa, Pdps PZL-Bielsko SZD-45A Ogar, Pegasus Quantum Super Sport,

Table D-2. List of Aircraft Manufacturer, Models, and Series Where a Type Certification Data Sheet was not Identified (Continued)

Peterson Stewart A Quicksilver Mx II, Pfeiffer Eugene J Long-Ez, Piper Aerostar 601B, Piper Aircraft Inc PA46-350T, Piper J-3C, J3-L4J, J3C-115, J3C-75, J3C-85, J3C-90, J3C-90-8F, J3F-90, Piper PA 31P 350, Piper PA-20-150, PA-22-20-150, PA-23-150, PA-23-180, PA-24-180, PA-31-310, PA-32RT-301T, PA-34, PA18-160, PA22-20-135, Piper/Aubin PA 11-90, Piper/Clausen Claude G Piper J-3-C-100, Piper/Dear J3C, Piraino Philip A Piraino PR-1 Eglewng, Pitcairn PA-7, PA8, PCA2, Pitrolo Edward R GL-25 Std Hmltn Glas, Ploof Donald G Rans S-6Es, Powrachute Airwolf, Powrachute Corp Airwolf, Pegasus, Pegasus, Powrachute LLC Airwolf, Powrachute LLC Airwolf 912, 912, 912ULS, Powrachute LLC Pegasus, Pegasus, Pegasus, Powrachute Pegasus, Powrachute Sky Rascal, Prestige Aircraft Co LLC Storm Rally Lsa, Prince G E/Prince J Lancair 320, Propulsion Parachute Delta Mot Discovery 618, Puritz Herbert Quickie, Quad City Challenger 1, Quad City Ultralight Acft Corp Challenger Special, Quad City Ultralight Challenger, Quicksilver Sprint II Sprint II, Quicksilver Sprint, Rainbow Aircraft (Pty) Ltd Cheetah Xls, Rainbow Aircraft Pty Ltd Cobra, Rajchl Vladimir Airplane Swing 06, Ramphos USA Inc Ramphos Trident, Ramphosusa Inc Ramphos Trident, Rans Aircraft Co S-6Es, Rans Designs Inc S-7Ls, S-7Ls, Rans Employee Flying Club Rans S-6S, Rans Inc Rans S-7Ls, Rans Inc S-19, S-6Es, S-7Ls, Rans S-19Ls, Rapid Launch Sportsman, Raum Ronald Anthony Titan Tornado, Reimus Francis Louis FR1, Remos Acft Gmbh Flugzeugbau Remos Gx, Remos Aircraft Gmbh G-3, G-3 Mirage, G-3/600, Remos Aircraft Gmbh Gemini Remos G-3/600, Remos Aircraft Gmbh Remos G-3, G-3/600, Gx, Republic P-47, RC-3-1, Riter Russell W R.E.C., Robinson Helicopter Co R22 Beta II, Robinson Helicopter Company R44 Astro, Robison Lester H Q-2, Rockwell International 112A, Rocky Mountain Kitplanes LLC S-6S, Rodecker Richard L Steen Skybolt, Rodgers Ray V Kitfox 5, Roemer-Thorp T-18, Rose Ralph A 420, Rose-Rhinehart A4-C, Ryan M-1, Ryan Navion Nav 4, S C Aerostar S .A. Festival R40S, Saint Louis Cardinal C2, Sankara Holdings Group LLC Aliseo Flying Boat, Satterlee Royce Glasair II RG, Schott Daniel G Lancair 4P, Schwartz Kenneth Sport, Schweizer 300C, Sea & Sky Inc dba Krucker Acft Cygnet, Sea & Sky Inc Krucker Cygnet, Sea-Bow International Inc B-4, Security National Acft Corp S1-B, Seibold Lary L BD-4, Short Bros. & Harland Solent Mark 3, Siai-Marchetti Sf.260B, SF260, Siciliano Frank Charles Zenith, Sikorsky H-34, S-43H, Six Chuter Inc Legend P103, XI, XI, Six Chuter Inc Legend XT SsdC, Six Chuter Inc SP103, Six Chuter Inc XT SsdC, Skyco Inc Sha Glasair, Skyeton America Inc K-10 Swift, Skykits Corp Savannah Vgw, Skykits USA Corp Savannah, Skykits USA Corp Savannah Adv, Vg, Smith Aerostar 600A, 601B, Snodgrass James T 1984 Rotoway 90 Exec, Snow S2C, Soaring Concepts Inc Sky Trek, Socata Tampico TB 9C, Sorrell Aircraft Co Ltd SNS-8, Stauter Robert D SR 3500 Moose Td, Stearman 4CM-1, Stearman Aircraft M-2, Stearman Aviation B, Stinson L-9B, OY-2, SM1-B, SR-8E, SR-9, Stits Playboy SA3B, Stoner John Timothy Kitfox III, Storch Aircraft LLC FI-156C, Stormaircraft Rally Lsa, Lsa, Stormaircraft Storm Century, Strode-Pitts 66, Sukhoi SU-26Mx, SU-29, T&T Aviation Inc Falcon Ls, Tayler Baron Falcon, Voyager, Taylor E-2, J-2, Taylor-Young "A", Taylorcraft 500, Temco D-16, D-16A, GC-1B, Teraton Terra II, Test Spol s.r.o. TST-14M Bonus, Test s.r.o. Tst 13 Junior, Thompson Glen Maurice Jr Kitfox Vixen, Tl Ultralight s.r.o. Sting S3, Tl Ultralight s.r.o. Stingsport, Tl Ultralight s.r.o. Stingsport TL2000,

Table D-2. List of Aircraft Manufacturer, Models, and Series Where a Type Certification Data Sheet was not Identified (Continued)

Tobin James M RV-8, Urban Air s.r.o. Samba Xxl, Urban Air s.r.o. UFM-13 Lambada, Vans Aircraft Inc RV-12, Var 912PT, Varga Aircraft Corp 2180TG, Vargo Mj/Quicksilver Sport 2S, Waco 10, 9, Iba, Inf, QCF-2, UBF-2, YMF-3, Waggon Und Maschinenbau Bolkow Bo 208C Jr., Wallace Aircraft Co B-330, White New Standard D-25A, Williams-Harold B8Mv, Windecker A/C7, Winstead Bros Airplane Co Winstead Special, Woodard Osceola RV-6A, Wright Charles D Horizon 1, Wright Larry D Lancair 360, Wright William B Rans S-9, X Air LLC XA85, X-Air LLC XA85, Yarbrough Peter A Yarbrough Skybolt, Zaklady Lotnicze 3XTRIM Spzoo 3XLS Navigator 600, Zentner Paul Bandit, Zlin Aviation s.r.o. Savage, and Zlin Z242L.