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FORWARD

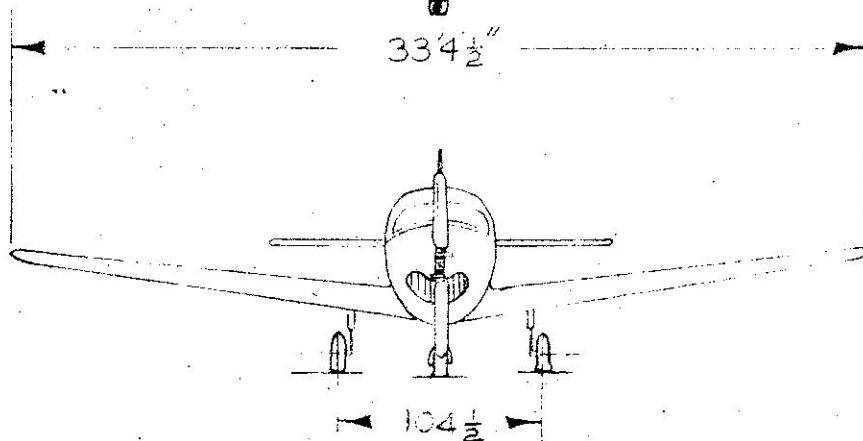
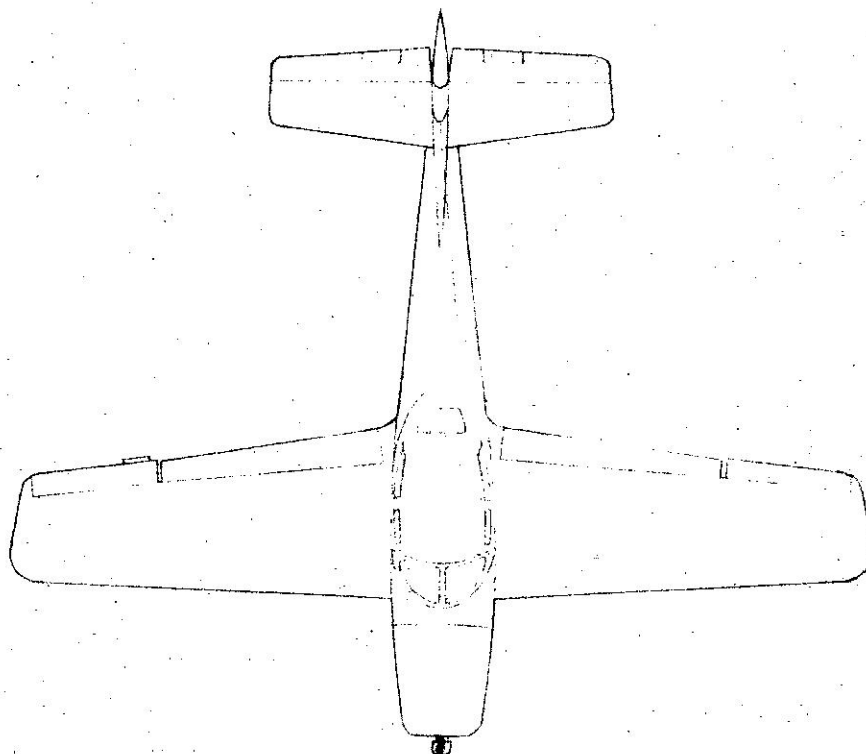
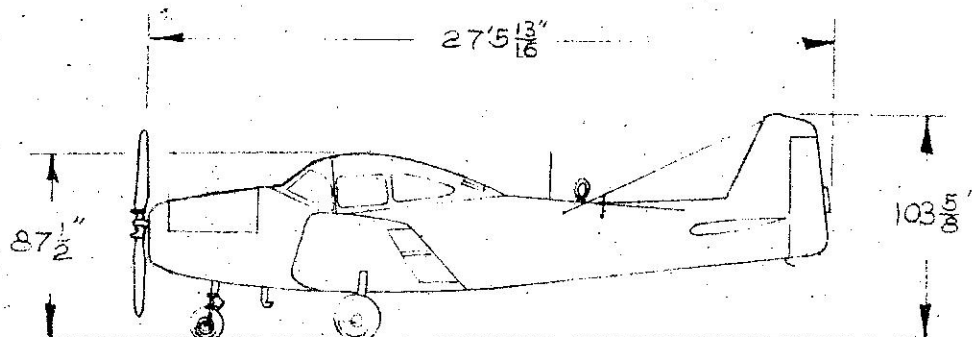
This specification describes the commercial Navion-B Airplane except for the addition of certain items of special L-17B equipment and finish which supplement or replace normally used commercial equipment. The special items are as follows:

Exterior Finish	Paragraph 1.2.3 - Page 1
Interior Gray Naugahyde Trim	Paragraph 12.3 - Page 14
Gyro Instrument Panel	Paragraph 6.2 - Page 10 and Appendix "A" - Page 16 and 18
ARC-12 Radio	Paragraph 10.1 - Page 13 and Appendix A - Page 19
Underseat Fuel Tank	Paragraph 5.71 - Page 9
Oil Cooler Shutter	Paragraph 5.6.1 - Page 9

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1. INTRODUCTION

1.1 TYPE AND MODEL

1.1.1 <u>Basic Type</u>	Private Airplane
1.1.2 <u>Manufacturer's Name</u>	Ryan Aeronautical Company
1.1.3 <u>Manufacturer's Model Name</u>	NAVION-B
1.1.4 <u>Number of Places</u>	Four
1.1.5 <u>Engines</u>	
Number	One
Name and Type	Lycoming GO-435-C2
1.1.6 <u>Airworthiness Requirements</u>	C.A.A. Type Certificate No. 782

1.2 AIRPLANE SUMMARY

- 1.2.1 General Description: The airplane conforming to this specification will be a four-place, low wing land monoplane powered by a single aircooled engine. The alighting gear shall be of the tricycle type, fully retractable.
- 1.2.2 Airplane Categories: The NAVION airplane is designed for use in two categories; namely, "Normal" and "Utility". In the "Normal" category, this airplane may be flown as a private transport, single engine scheduled transport, or as a cargo carrier. No acrobatics may be performed when operating in this category. In the "Utility" category, this airplane may be used for all normal operations and limited acrobatic maneuvers. The latter does not include snap or inverted maneuvers, but does permit such maneuvers as are normally included in pilot training, henceforth, in this specification, the terms "Normal" and "Utility", when referring to the operational categories, shall be defined as given above.
- 1.2.3 Finish: The finish for the airplane for protective treatment shall be in accordance with Ryan Drawing 143-00024, Revision J, dated 11 February 1949. The external finish shall be of Aluminum Lacquer. Insignia and markings shall be in accordance with Ryan Drawing 154-00010, Change H, dated 24 March 1949.

2. GENERAL REQUIREMENTS

2.1 APPLICABLE SPECIFICATIONS

- 2.1.1 Engine Manufacturer's Model Specification: Lycoming No. 2073-Dtd. July 12, 1949.
- 2.1.2 Engine Manufacturer's Drawing: Lycoming No. 63702A - dated 18 Aug., 1949.

3. CHARACTERISTICS

3.1 SUMMARY OF PERFORMANCE

Gross Weight 2850 Lb.
Maximum Speed at Sea Level
(Full Throttle - 3000 rpm) 174 mph

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3. CHARACTERISTICS

3.1 SUMMARY OF PERFORMANCE - Continued

Average Maximum Cruising Speed
(Not more than 194 bhp at 3000 rpm at 7000 ft.) 170 mph T.A.S.
Landing Speed (Full Load) 55 mph I.A.S.
Maximum Rate of Climb at Sea Level
(Full Throttle - 3400 rpm) 1250 F.P.M.
Service Ceiling 18,000 Ft.
Normal Range (59½ Gallons of Fuel) 640 Mi.
Maximum Range Economy Cruise Settings (59½ Gallons of Fuel) 900 Mi.
Take-off Distance (No Wind, Flaps Up)
Ground Run 400 Ft.
Total Distance over 50 Foot Obstacle 770 Ft.
Landing in 0 Wind (Flaps Full Down)
Ground Roll 470 Ft.
Total Distance over 50 Foot Obstacle 875 Ft.

3.2 AIRPLANE WEIGHT AND BALANCE

3.2.1 Weight

Useful Load 860 Lbs.

Pilot 170 Lbs.
Front Passenger 170 Lbs.
Rear Passenger (One) 170 Lbs.
Oil, 12 Quarts 22.5 Lbs.
Fuel, 39.5 Gallons 237 Lbs.
Baggage or 15 Gallons Auxiliary Fuel 90.5 Lbs.
(Additional baggage up to 167 lb. maximum
will be permitted within the limitations
of certificated gross weight and balance.)

Weight Empty 1990 Lbs.

Gross Weight 2850 Lbs.

3.2.2 Balance

Horizontal C. G. location in % M.A.C. aft leading edge of M.A.C.

	<u>Weight</u>	<u>Horizontal C. G.</u>
Gross Weight (Wheels Down)	2850 Lbs.	98.98 Inches
Gross Weight (Wheels Up)	2850 Lbs.	99.49 Inches
Most Rearward C. G. Condition	2850 Lbs.	104.37 Inches
(Wheels Down, Pilot, Rear Passengers Maximum Baggage (167 Lbs.) and Minimum Fuel - 20 Gallons Main Tanks - 7 Gallons Auxiliary Tank)		