

# SERVICE NEWS

FUJI HEAVY INDUSTRIES LTD.

HEAD OFFICE ; EBISU SUBARU BLDG.  
EBISU, SHIBUYA-KU, TOKYO, JAPAN

NO. 200-033      DATE June 23, 2015

(SUPERSEDES NO.      )

REV. XXXXXX      DATE XXXXXXXX

(SUPERSEDES NO.      )

REASON      XXXXXXXX

## The Partial Revision of FA-200-180 Manual (except for 180AO) for Clarification of Applicable Propeller Dash Numbers

Japan Civil Aviation Bureau has approved of the amended type certificate about the clarification of the propeller dash numbers applicable to FA-200-180 (except for 180AO). (No. 22-13, May 7, 2015)

This service news is being issued to notify customers of partial changes in FA-200-180 SERVICE MANUAL (except for 180AO) following the approval above.

Please replace the corresponding pages of your manual in accordance with the table below.

### 1. SERVICE MANUAL

Manual No.	Pages of Service News	Pages of SERVICE MANUAL
FA200-104 (200-010003A)	3 to 8	1-1 / 1-2, 5-1 / 5-2, 5-7 / 5-8
FA200-105 (200-010013)	9 to 14	1-1 / 1-2, 5-1 / 5-2, 5-7 / 5-8

### 2. PARTS CATALOGUE

Manual No.	Pages of Service News	Pages of PARTS CATALOGUE
FA200-201 (200-010001B)	15, 16	8-17 / 8-18
FA200-202 (200-010011)	17, 18	8-13 / 8-14

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## CHAPTER 1

### GENERAL

#### 1-1 GENERAL DESCRIPTION

The light airplane AERO SUBARU is available in the following two types; one is FA-200-180 which is equipped with a 180 HP engine, and the other is FA-200-160 with a 160 HP engine.

Since the designs of both types are basically the same except for the engines and propellers, the contents of this manual are applicable to both types unless otherwise specified.

This chapter provides general description of the airplane, and covers the basic dimensions, design data, tightening torque values, and principal placards.

#### 1-2 BASIC DIMENSIONS AND DESIGN DATA OF AIRFRAME

	FA-200-160	FA-200-180
Engine	Lycoming O-320-D2A (160 HP, 2700 rpm)	Lycoming IO-360BIB (180 HP, 2700 rpm)
Propeller	McCaughey 1C172MGM7656 or 7662 Fixed pitch propeller	McCaughey B2D34C53-※/74E-0 Constant-speed propeller ※( With regard to the approved propeller dash number, refer to the latest parts catalogue. )
Maximum Diameter of Propeller	76 in	74 in
Minimum Diameter of Propeller	74 in	72.5 in
Overall Width	30 ft 10.87 in	30 ft 10.87 in
Overall Length	26 ft 1.39 in	26 ft 1.39 in
Overall Height	8 ft 5.97 in	8 ft 5.97 in
Wing Area	150.69 ft <sup>2</sup>	150.69 ft <sup>2</sup>
Length of Chord of Wing	5 ft	5 ft
Taper Ratio of Wing	1.0	1.0
Sweep Back of Wing	0°	0°
Twist of Wing	0°	0°
Incidence Angle of Wing	2.5°	2.5°
Dihedral Angle of Wing	7.0°	7.0°
H. Stabilizer Area	35.73 ft <sup>2</sup>	35.73 ft <sup>2</sup>

TABLE 1-1 BASIC DIMENSIONS AND DESIGN DATA OF AIRFRAME (1/3)



	FA-200-160	FA-200-180
H. Stabilizer Span	11 ft 4.42 in	11 ft 4.42 in
Dihedral Angle of H. T.	0°	0°
Incidence Angle of H.T.	0°	0°
V. Stabilizer Area	16.11 ft <sup>2</sup>	16.11 ft <sup>2</sup>
Incidence Angle of V.T.	0° from center line of airframe	0° from center line of airframe
Flap Area	20.16 ft <sup>2</sup>	20.16 ft <sup>2</sup>
Flap Span	13 ft 2.82 in	13 ft 2.82 in
Aileron Area	12.10 ft <sup>2</sup>	12.10 ft <sup>2</sup>
Aileron Span	12 ft 5.61 in	12 ft 5.61 in
Elevator Area	15.45 ft <sup>2</sup>	15.45 ft <sup>2</sup>
Rudder Area	9.58 ft <sup>2</sup>	9.58 ft <sup>2</sup>
Empty Weight (STD)	1,367 lbs	1,433 lbs
Max. Weight N	2,335 lbs (for 7656 propeller) 2,270 lbs (for 7662 propeller)	2,535 lbs
U	2,137 lbs	2,425 lbs
A	1,940 lbs	2,072 lbs
Fuel Capacity	54 US.GAL	54 US.GAL
Fuel Grade	Grade 91/96 (100/130)	Grade 91/96 (100/130)
Oil Capacity	8 QT.	8 QT.
Oil Grade	SAE50: above 60° F SAE40: 30° F - 90° F SAE30: 0° F - 70° F SAE20: below 10° F	SAE50: above 60° F SAE40: 30° F - 90° F SAE30: 0° F - 70° F SAE20: below 10° F
Main Wheel Track	8 ft 7.39 in	8 ft 7.39 in
Nose and Main Wheel Distance	5 ft 8.90 in	5 ft 8.90 in
Main Landing Gear Tire (STD)	6.00-6 4ply 28 psi ± 2	6.00-6 4ply 28 psi ± 2
Main Landing Gear Tire (OPT)	15×6.00-6 4ply 40 psi <sup>+2</sup> <sub>-4</sub>	15×6.00-6 4ply 40 psi <sup>+2</sup> <sub>-4</sub>

TABLE 1-1 BASIC DIMENSIONS AND DESIGN DATA OF AIRFRAME (2/3)



## CHAPTER 5

### PROPELLER

#### 5-1 GENERAL

FA-200-160 is equipped with McCauley 1C172MGM7656 or 7662 type all metal 2-blade fixed pitch propeller, and FA-200-180 with McCauley B2D34C53-\*/74E-0 type all metal 2-blade hydraulic constant-speed propeller. Each type of propeller is equipped with a spinner.

※(With regard to the approved propeller dash number, refer to the latest parts catalogue.)

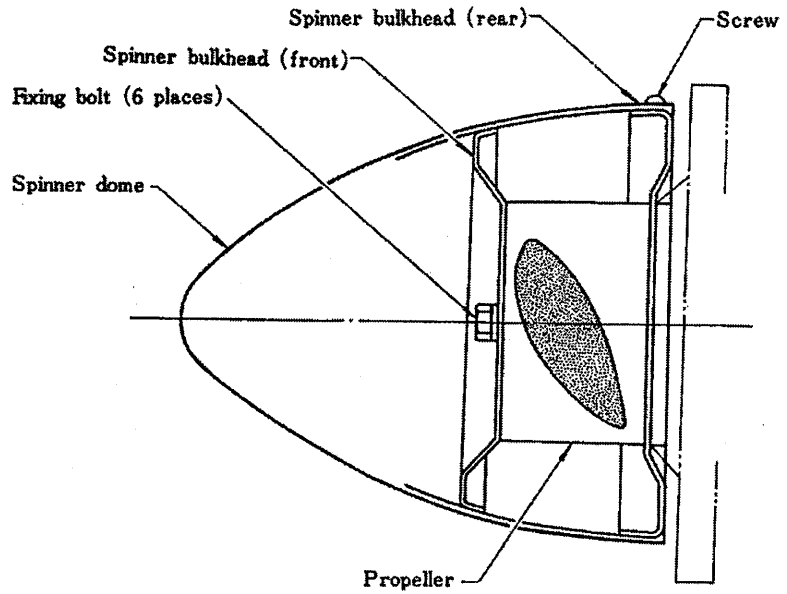
#### 5-2 FIXED PITCH PROPELLER

##### 5-2-1 FIXED PITCH PROPELLER REMOVAL

- (1) Dismount the spinner dome by removing spinner dome fixing screw and washers.
- (2) Cut and remove the safety wire of propeller fixing bolts.
- (3) Remove bolts and dismount the propeller from the propeller fixing flange of the engine.

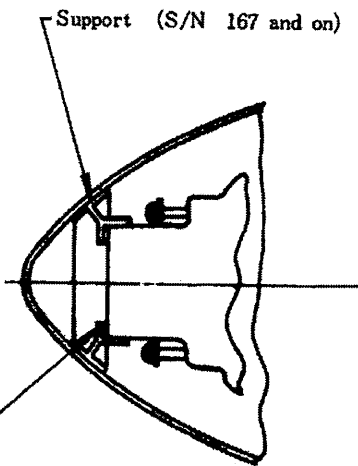
##### 5-2-2 FIXED PITCH PROPELLER INSTALLATION (SEE FIG. 5-1)

- (1) Clean the surfaces of the propeller and the propeller fixing flange of the engine.
- (2) Position the propeller and bulkheads (front and rear) as shown in Fig 5-1 and install propeller fixing bolts.
- (3) Mount the propeller to the propeller fixing flange of the engine and tighten bolts.
- (4) The tightening torque of bolts is 300±10 IN-LBS.
- (5) Safety wire bolts and install the spinner dome.



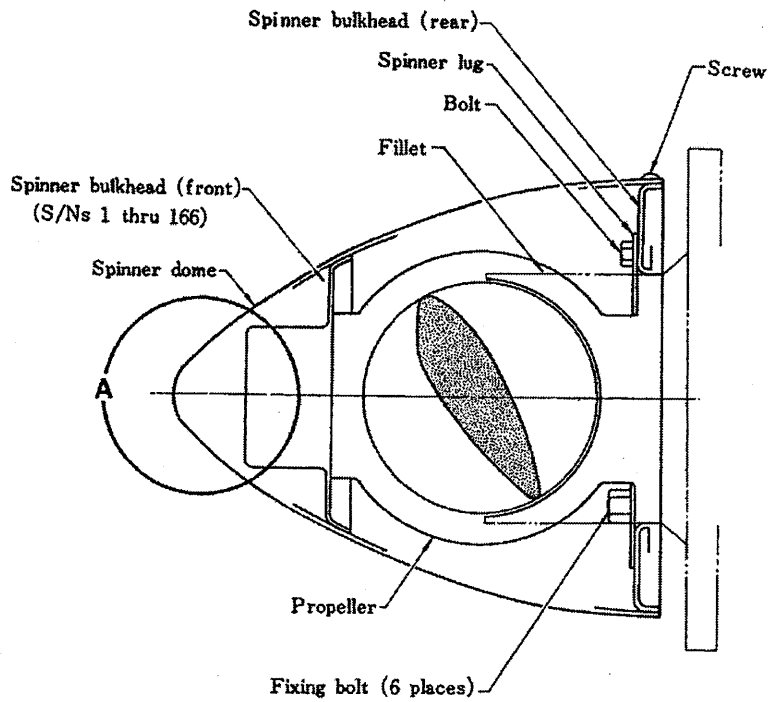
FA-200-160

FIG 5-1 FIXED PITCH PROPELLER



Place shims as required for adjustment to provide snug seating of support.

Detail A



FA-200-180

FIG 5-2 VARIABLE PITCH CONSTANT-SPEED PROPELLER



## - CAUTION -

The out-of-track of the blade end comes into existence owing to the combination of the propeller assembling tolerances. The tolerances are measured in the unit of 1/1000 in. Since the assembled parts are located near the center of the propeller rotating shaft, however, the sum of the tolerances is enlarged by several times at the blade end.

Once the propeller starts rotating, the out-of-track of the propeller does not affect the functions of the propeller, for the centrifugal force pushes the blades hard against the support bearings. While the propeller is rotating, such an out-of-track not only is not noticeable, but also does not affect the strength.

- (6) Since cracks may develop from the nicks found on the blade leading edge, smooth all of them out. In finishing the nicks, use clean emery cloth. (See Figure 5-4)  
As for both sides of the blades, polish them lightly with sandpaper and apply a small amount of oil or wax.
- (7) In case repair of excessive damage and internal damage or alteration is required, send the propeller to the repair shop.

**5-4 TROUBLE-SHOOTING OF PROPELLER**

Trouble	Probable Cause	Remedy
1. Pitch angle of blade does not vary.	1. Slipping, catching or breakage in control system. 2. Trouble with governor. 3. Trouble with blade angle varying mechanism or excessive friction of blade.	1. Check control system and make connection, repair or replace. 2. Replace governor. 3. Repair or replace propeller.
2. Pitch angle of blade does not vary perfectly	1. Equipment for controlling governor is inadequate. 2. Trouble with governor.	1. Correct equipment. 2. Replace governor.
3. Response to propeller	1. High-speed revolution stop setting of governor is too high.	1. Repair or replace propeller



Trouble	Probable Cause	Remedy
4. Speed of revolutions on ground is too high.	<ol style="list-style-type: none"> <li>1. High-speed revolution stop setting of governor is too high.</li> <li>2. Trouble with governor.</li> <li>3. Low pitch angle of blade is incorrect.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust high-speed revolution stop setting (See 5-5-4).</li> <li>2. Replace governor.</li> <li>3. Correct blade angle.</li> </ol>
5. Speed of revolutions on ground is too low.	<ol style="list-style-type: none"> <li>1. High-speed revolution stop setting is too low.</li> <li>2. Trouble with governor.</li> <li>3. Low pitch angle of blades is incorrect.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust high-speed revolution stop setting (See 5-5-4).</li> <li>2. Replace governor.</li> <li>3. Correct blade angle.</li> </ol>
6. Engine revolution is unstable.	<ol style="list-style-type: none"> <li>1. Governor contains dirt.</li> <li>2. Trouble with governor.</li> <li>3. Excessive friction of blade varying mechanism or blades.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove dirt and clean governor.</li> <li>2. Replace governor.</li> <li>3. Repair or replace propeller.</li> </ol>
7. Oil leak at propeller fixed position.	<ol style="list-style-type: none"> <li>1. "O"-ring seal between engine and propeller is damaged.</li> <li>2. Foreign matter is deposited on the fixing faces of engine and propeller, or fixing bolts are loose.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace "O" ring seal.</li> <li>2. Clean each fixing face or correctly tighten bolts.</li> </ol>
8. Excessive vibrations of cylinder and hub.	<ol style="list-style-type: none"> <li>1. Gasket is damaged or screw loosened.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace gasket or correctly tighten screws.</li> </ol>
9. Excessive vibrations of propeller.	<ol style="list-style-type: none"> <li>1. Propeller fixing bolts are loosened.</li> <li>2. Propeller is unbalanced.</li> <li>3. Pitch angles of blades are unequal.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten bolts correctly.</li> <li>2. Correct balance.</li> <li>3. Correct the pitch angle.</li> </ol>

#### 5-5 PROPELLER GOVERNOR (SEE FIG. 5-7)

The light airplane FA-200-180 is equipped with a Woodward B210452 single-action centrifugal-type governor. "Single-action" means that the hydraulic pressure changes the propeller pitch in one direction only. Namely, when the McCauley B2D34C53-\*/74E-0 propeller is used, the hydraulic

\*(With regard to the approved propeller dash number, refer to the latest parts catalogue.)



## CHAPTER 1

### GENERAL

#### 1-1 GENERAL DESCRIPTION

The light airplane AERO SUBARU is available in the following three models: FA-200-160, -180 and -180AO. Since the designs of these three models are basically the same except for the engine and propeller, the contents of this manual are applicable to all models unless otherwise specified. This chapter provides general description of the airplanes, and covers the basic dimensions, design data, tightening torque values, and principal placards.

#### 1-2 BASIC DIMENSIONS AND DESIGN DATA OF AIRFRAME

	FA-200-160	FA-200-180 & -180AO
Engine	Lycoming O-320-D2A (160 HP , 2700 rpm)	(180) Lycoming IO-360BIB (180 HP , 2700 rpm) (180AO) Lycoming O-360-A5AD (180 HP , 2700 rpm)
Propeller	McCaughey 1C160/FGM7656 Fixed pitch propeller	(180) McCaughey B2D34C53-*/74E-0 Constant-speed propeller ※ [ With regard to the approved propeller dash number, refer to the latest parts catalogue. ] (180AO) McCaughey 1A170/EFA7658 Fixed pitch propeller

TABLE 1-1 BASIC DIMENSIONS AND DESIGN DATA OF AIRFRAME (1/4)



	FA-200-160	FA-200-180 & -180AO
Maximum Diameter of Propeller	76 in	74 in(180) 76 in(180AO)
Minimum Diameter of Propeller	74 in	72.5 in(180) 74 in(180AO)
Overall Width	30 ft 10.87 in	30 ft 10.87 in
Overall Length	26 ft 10 in	26 ft 10 in
Overall Height	8 ft 5.97 in	8 ft 5.97 in
Wing Area	150.69 ft <sup>2</sup>	150.69 ft <sup>2</sup>
Length of Chord of Wing	5 ft	5 ft
Taper Ratio of Wing	1.0	1.0
Sweep Back of Wing	0°	0°
Twist of Wing	0°	0°
Incidence Angle of Wing	2.5°	2.5°
Dihedral Angle of Wing	7.0°	7.0°
H. Stabilizer Area	35.73 ft <sup>2</sup>	35.73 ft <sup>2</sup>
H. Stabilizer Span	11 ft 4.42 in	11 ft 4.42 in
Dihedral Angle of H. T.	0°	0°
Incidence Angle of H.T.	0°	0°
V. Stabilizer Area	16.11 ft <sup>2</sup>	16.11 ft <sup>2</sup>
Incidence Angle of V.T.	0° from center line of airframe	0° from center line of airframe
Flap Area	20.16 ft <sup>2</sup>	20.16 ft <sup>2</sup>
Flap Span	13 ft 2.82 in	13 ft 2.82 in
Aileron Area	12.10 ft <sup>2</sup>	12.10 ft <sup>2</sup>
Aileron Span	12 ft 5.61 in	12 ft 5.61 in
Elevator Area	15.45 ft <sup>2</sup>	15.45 ft <sup>2</sup>
Rudder Area	9.58 ft <sup>2</sup>	9.58 ft <sup>2</sup>
Empty Weight (STD)	1,386 lbs	1,433 lbs(180) 1,411 lbs(180AO)
Max. Weight N	2,335 lbs	2,535 lbs(180) 2,510 lbs(180AO)
U	2,137 lbs	2,425 lbs
A	1,940 lbs	2,072 lbs
Fuel Capacity	54 US.GAL	54 US.GAL
Fuel Grade	Grade 100/130	Grade 100/130
Oil Capacity	8 QT.	8 QT.

TABLE 1-1 BASIC DIMENSIONS AND DESIGN DATA OF AIRFRAME (2/4)



## CHAPTER 5

### PROPELLER

#### 5-1 GENERAL

All metal 2-blade fixed pitch propellers, McCauley 1C160/FGM7656 and 1A170/EFA7658, are installed on FA-200-160 and -180AO respectively; while all metal 2-blade constant-speed propeller, McCauley B2D34C53-\*/74E-0, is employed on FA-200-180. A streamlined spinner is provided for each propeller.

※(With regard to the approved propeller dash number, refer to the latest parts catalogue.)

#### 5-2 FIXED PITCH PROPELLER

##### 5-2-1 FIXED PITCH PROPELLER REMOVAL

- (1) Dismount the spinner dome by removing spinner dome attaching screws and washers.
- (2) Cut and remove the safety wire of propeller attaching bolts.
- (3) Remove bolts and remove propeller from the mating flange of engine.

##### 5-2-2 FIXED PITCH PROPELLER INSTALLATION (SEE FIG. 5-1)

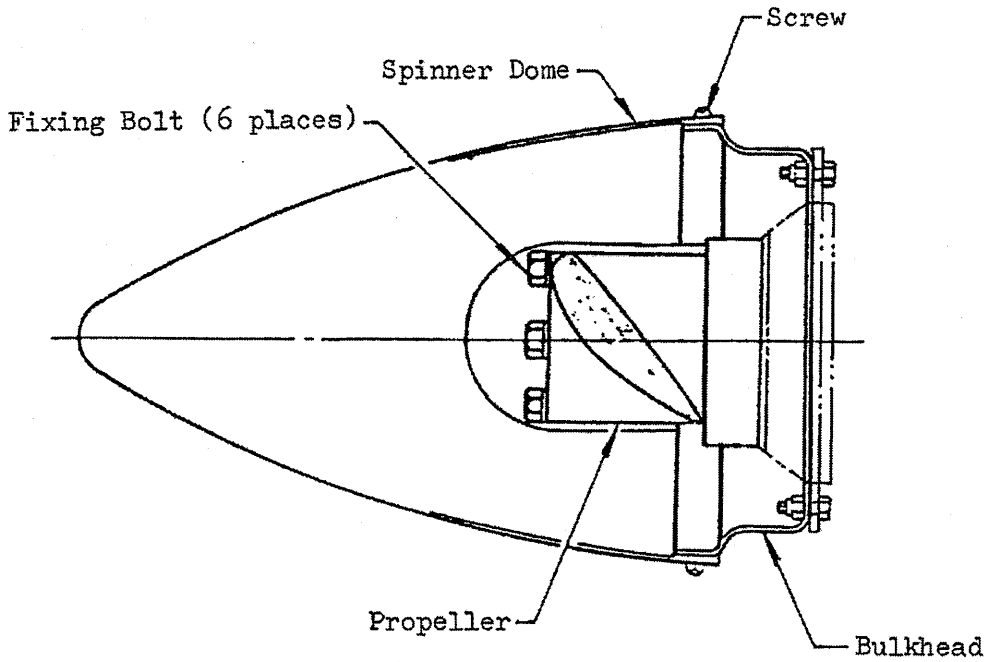
- (1) Clean the surfaces of propeller and the mating flange of engine.
- (2) Position and install propeller spinner bulkhead as shown in Fig 5-1.
- (3) Position propeller on the mating flange of engine and install attaching bolts.
- (4) Tighten attaching bolts to 300 to 360 in-lbs (FA-200-160) or 660 to 780 in-lbs (FA-200-180AO), and secure with safety wire.
- (5) Install propeller spinner with screws and washers.

##### 5-2-3 CLEANING, INSPECTION AND REPAIR OF FIXED PITCH PROPELLER

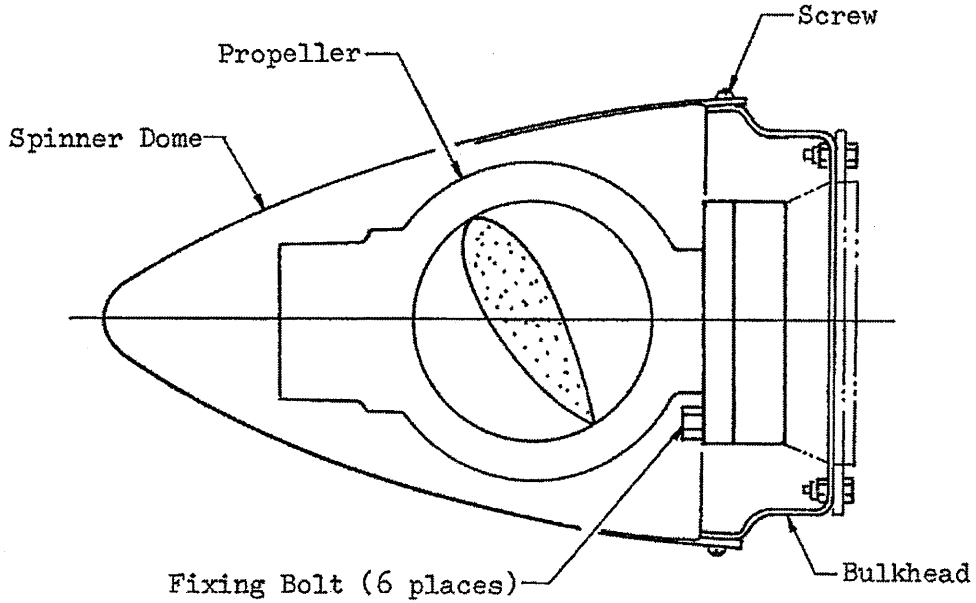
- (1) Clean the spinner, bulkhead and blades with non-corrosive solvent.
- (2) Inspect blades for damage, corrosion or crack.
- (3) Nicks in leading edges of blades should be filed out and all edges rounded, as cracks sometimes start from such places. Use fine emery cloth for finishing. Each blade face should be sanded lightly and painted, when necessary, with a flat black paint to retard glare.
- (4) A light application of oil or wax may be applied to the surfaces to prevent corrosion.

#### 5-3 CONSTANT-SPEED PROPELLER

This propeller changes the pitch angle by means of the governor-controlled hydraulic pressure,



**FIXED PITCH PROPELLER**



**VARIABLE PITCH CONSTANT-SPEED PROPELLER**

**FIG. 5-1 PROPELLER**

**5-4 TROUBLE-SHOOTING OF PROPELLER**

Trouble	Probable Cause	Remedy
1. Pitch angle of blade does not vary.	<ol style="list-style-type: none"><li>1. Slipping, catching or breakage in control system.</li><li>2. Trouble with governor.</li><li>3. Trouble with blade angle varying mechanism or excessive friction of blade.</li></ol>	<ol style="list-style-type: none"><li>1. Check control system and make connection, repair or replace.</li><li>2. Replace governor.</li><li>3. Repair or replace propeller.</li></ol>
2. Pitch angle of blade does not vary perfectly	<ol style="list-style-type: none"><li>1. Equipment for controlling governor is inadequate.</li><li>2. Trouble with governor.</li></ol>	<ol style="list-style-type: none"><li>1. Correct equipment.</li><li>2. Replace governor.</li></ol>
3. Response to propeller	<ol style="list-style-type: none"><li>1. High-speed revolution stop setting of governor is too high.</li></ol>	<ol style="list-style-type: none"><li>1. Repair or replace propeller</li></ol>
4. Speed of revolutions on ground is too high.	<ol style="list-style-type: none"><li>1. High-speed revolution stop setting of governor is too high.</li><li>2. Trouble with governor.</li><li>3. Low pitch angle of blade is incorrect.</li></ol>	<ol style="list-style-type: none"><li>1. Adjust high-speed revolution stop setting (See 5-5-4).</li><li>2. Replace governor.</li><li>3. Correct blade angle.</li></ol>
5. Speed of revolutions on ground is too low.	<ol style="list-style-type: none"><li>1. High-speed revolution stop setting is too low.</li><li>2. Trouble with governor.</li><li>3. Low pitch angle of blades is incorrect.</li></ol>	<ol style="list-style-type: none"><li>1. Adjust high-speed revolution stop setting (See 5-5-4).</li><li>2. Replace governor.</li><li>3. Correct blade angle.</li></ol>
6. Engine revolution is unstable.	<ol style="list-style-type: none"><li>1. Governor contains dirt.</li><li>2. Trouble with governor.</li><li>3. Excessive friction of blade varying mechanism or blades.</li></ol>	<ol style="list-style-type: none"><li>1. Remove dirt and clean governor.</li><li>2. Replace governor.</li><li>3. Repair or replace propeller.</li></ol>



Trouble	Probable Cause	Remedy
7. Oil leak at propeller fixed position.	<ol style="list-style-type: none"> <li>1. "O"-ring seal between engine and propeller is damaged.</li> <li>2. Foreign matter is deposited on the fixing faces of engine and propeller, or fixing bolts are loose</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace "O" ring seal.</li> <li>2. Clean each fixing face or correctly tighten bolts.</li> </ol>
8. Excessive vibrations of cylinder and hub.	<ol style="list-style-type: none"> <li>1. Gasket is damaged or screw loosened.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace gasket or correctly tighten screws.</li> </ol>
9. Excessive vibrations of propeller.	<ol style="list-style-type: none"> <li>1. Propeller fixing bolts are loosened.</li> <li>2. Propeller is unbalanced.</li> <li>3. Pitch angles of blades are unequal.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten bolts correctly.</li> <li>2. Correct balance.</li> <li>3. Correct the pitch angle.</li> </ol>

### 5-5 PROPELLER GOVERNOR (SEE FIG. 5-6)

The light airplane FA-200-180 is equipped with a Woodward B210452 single-action centrifugal-type governor. "Single-action" means that the hydraulic pressure changes the propeller pitch in one direction only. Namely, when the McCauley B2D34C53-※/74E-0 propeller is used, the hydraulic pressure produced by the governor acts in the direction of increasing the pitch angle of the propeller blade. Decrease in pitch angle depends on the centrifugal force of the blade and the force of the spring incorporated in the propeller hub. The governor consists of a gear pump to boost hydraulic pressure from the engine, a relief valve to control the outlet pressure of the gear pump, a pilot valve to control oil flow into the propeller and oil flow returning from the propeller, a fly weight and speeder spring to actuate the pilot valve and an operating lever to change the load on the speeder spring.

※(With regard to the approved propeller dash number, refer to the latest parts catalogue.)

#### 5-5-1 REMOVAL OF GOVERNOR

- (1) Remove the governor control cable from the governor.
- (2) Remove the nuts and washers fixing the governor to the engine and dismount the governor from studs.

#### 5-5-2 INSTALLATION OF GOVERNOR

- (1) Clean the fixing portions of the governor and engine.
- (2) Place a filter screen at the engine fixing portion with the screen face towards the governor, align the governor fixing holes with studs, and insert the governor shaft spline into the engine spline shaft for a close fit. When making this fit, do not use force. Install washers and nuts. The tightening torque of the nuts is 110-150 IN-LBS.
- (3) Attach the operating cable to the governor.
- (4) Operate the propeller pitch lever and check to see if the governor operating lever touches the low pitch stopper. Be sure that the cable works smoothly.



FIG & INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
		1234567		
39-51	200-914134-007	•RESTRICTOR ASSY .....	1	E
	AN924-4	•NUT.....	1	E
	AN960-716	•WASHER.....	2	E
	203-960001-001	•PROPELLER INSTALLATION .....	REF	C
	203-960010-001	•PROPELLER INSTALLATION .....	REF	G
	203-960010-101	•PROPELLER INSTALLATION .....	REF	I
	203-960001-601	•SPINNER ASSY .....	REF	
-52	203-960002-003	•SPINNER.....	1	C
	203-960011-003	•SPINNER.....	1	G
	203-960011-005	•SPINNER.....	1	I
-53	203-960004-001	•BULKHEAD ASSY, PROPELLER, FRONT .....	1	C
	203-960013-001	•BULKHEAD ASSY, PROPELLER, FRONT .....	1	G
	MS20995C32	•WIRE.....	AR	
-53A	203-960014-005	•SUPPORT.....	1	I
	203-960015-003	•SHIM.....	4	I
	203-960015-005	•SHIM.....	1	I
-54	203-960003-001	•BULKHEAD ASSY, PROPELLER, REAR.....	1	C
	203-960012-001	•BULKHEAD ASSY, PROPELLER, REAR.....	1	D
-55	203-960107-003	•PLATE.....	2	
-56	AN3-4	•BOLT.....	12	
	AN310-3	•NUT.....	12	
	AN380-2-2	•PIN, COTTER.....	12	
	AN960-10	•WASHER.....	24	
-57	MS27039-1-08	•SCREW.....	24	C
	MS27039-1-08	•SCREW.....	16	G
	MS27039-1-08	•SCREW.....	12	I
	AN960-10L	•WASHER.....	24	C
	AN960-10L	•WASHER.....	16	G
	AN960-10L	•WASHER.....	12	I
-58	B2D34C53-*/74E-0	•PROPELLER (MCL).....	1	
		[ *Non Rev, A, J, K, XN, AM, JM, KM, XMN, AMN, JMN, KMN, MN, N, XMNO, AMNO, JMNO, KMNO, MNO, NO, O ]		
-58A	A-3150-1	•PIN (MCL) .....	6	
	MS20995C32	•WIRE.....	AR	
-59	REM40E	•SPARK PLUG (CHA) .....	8	
	or SR-88D	•SPARK PLUG (AC) .....	8	
	or RS-801A	•SPARK PLUG (NGK) .....	8	
-60	200-950053-003	•CLAMP .....	2	
-61	200-950054-003	•CLAMP .....	2	
-62	AN3-5A	•BOLT.....	4	
	NAS679A3W	•NUT.....	4	
	AN960-10L	•WASHER.....	4	
-63	200-950058-003	•SPRING, SHORT .....	2	
-64	200-950059-003	•SPRING, LONG.....	2	
-64A	AN4-5A	•BOLT.....	2	
	NAS679A4W	•NUT.....	2	
	AN960C416L	•WASHER.....	4	
-64B	200-950057-003	•PLATE.....	1	
-65	AN3-7	•BOLT.....	2	
	AN320-3	•NUT.....	2	
	AN381-2-12	•PIN, COTTER.....	2	
	NAS43-3-20	•SPACER.....	2	
	MS35489-9	•GROMMET.....	2	
	200-914160-003	•WASHER.....	4	
	AN960C10	•WASHER.....	4	
-66	200-914132-005	•RESTRICTOR .....	1	
-67	SRC79-4-0180	•HOSE, OIL PRESSURE (SRC) .....	1	



FIG & INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y	USABLE ON CODE
		1234567		
39-68	AN837-4D	•ELBOW.....	1	
	AN924-4	•NUT.....	1	
	AN960-716	•WASHER.....	1	
-69	AN742D8	•CLAMP.....	4	
	MS35207-263	•SCREW.....	2	
	AN960-10L	•WASHER.....	2	
	NAS679A3W	•NUT.....	2	
-70	AN913-1D	•PLUG.....	1	
-71	203-914135-001	•TANK ASSY, SURGE, FUEL PRESS.....	1	E
-71A	MS21919DG28	•CLAMP.....	1	E
	MS35207-264	•SCREW.....	1	E
	AN960-10L	•WASHER.....	1	E
	NAS679A3W	•NUT.....	1	E
-72	AN929-4	•CAP.....	1	E
-73	AN815-4D	•UNION.....	1	E
-74	MS25083-1BB5	•JUMPER, BONDING.....	1	
	AN735D8	•CLAMP.....	1	
	AN735D6	•CLAMP.....	1	
	MS35207-264	•SCREW.....	2	
	AN960D10	•WASHER.....	4	
	AN935-10	•WASHER, SPRING.....	2	
	NAS679A3W	•NUT.....	2	
-75	AN742D8	•CALMP, OIL LINE.....	2	
	MS35207-263	•SCREW.....	1	
	NAS679A3W	•NUT.....	1	
	AN960-10L	•WASHER.....	1	
-76	MS21919DG12	•CLAMP, OIL BREATHER LINE.....	1	
	MS21919DG8	•CLAMP, IGNITION HARNESS..... (BX MAGNETO ONLY)	1	
	MS21919DG6	•CLAMP, IGNITION HARNESS..... (SLK MAGNETO ONLY)	1	
	MS35207-263	•SCREW.....	1	
	NAS679A3W	•NUT.....	1	
-77	MS21919DG12	•CLAMP, IGNITION HARNESS & ENGINE MOUNT ASSY..... (BX MAGNETO ONLY)	2	
	MS21919DG8	•CLAMP, IGNITION HARNESS & ENGINE MOUNT ASSY..... (SLK MAGNETO ONLY)	1	
	MS21919DG6	•CLAMP, IGNITION HARNESS & ENGINE MOUNT ASSY..... (SLK MAGNETO ONLY)	1	
	MS35207-263	•SCREW.....	1	
	NAS679A3W	•NUT.....	1	
-78	MS21919DG11	•CLAMP, IGNITION HARNESS..... (BX MAGNETO ONLY)	1	
	MS21919DG8	•CLAMP, VACCUMPUMP BREATHER LINE..... (BX MAGNETO ONLY)	1	
	MS21919DG8	•CLAMP, IGNITION HARNESS & VACCUMPUMP BREATHER LINE..... (SLK MAGNETO ONLY)	2	
-79	AN832-3	•UNION.....	1	F
	AN924-3	•NUT.....	1	F
	AN960-616	•WASHER.....	1	F
-80	SRC79-3-0230	•HOSE ASSY, FUEL PRESSURE (S·R·C).....	1	F
-81	MS35489-20	•GROMMET, ENGINE BAFFLE.....	1	F



FIG & INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y	USABLE ON CODE
		1234567		
33- 32	NAS1307-50D	•BOLT .....	4	
	AN310-7	•NUT.....	4	
	AN960-716	•WASHER.....	12	
	AN960-716L	•WASHER.....	12	
	AN380-3-4	•PIN, COTTER .....	4	
- 33	B2D34C53-*/74E-0	•PROPELLER .....	1	
		[ *Non Rev, A, J, K, XN, AM, JM, KM, XMN, AMN, JMN, KMN, MN, N, XMNO, AMNO, JMNO, KMNO, MNO, NO, O ]		
	MS20995C32	•WIRE, LOCK .....	AR	
- 34	203-960203-001	•BULKHEAD ASSY.....	1	
- 35	AN4-11A	•BOLT .....	12	
	MS21042L4	•NUT.....	12	
	AN960PD416	•WASHER.....	12	
- 36	203-960202-003	•SPINNER .....	1	
- 37	MS27039-1-10	•SCREW.....	10	
	AN960-10L	•WASHER.....	10	
- 38	200-411071-101	•COWLING, ASSY, UPPER.....	1	
- 39	82-32-101-17	••SNAP RING (LORD).....	6	
	82-11-12-16	••STUD (LORD).....	6	
- 40	200-411071-103	••DOOR ASSY, OIL FILLER.....	1	
	200-411071-109	••HINGE.....	1	
	200-411071-111	••PIN .....	1	
	H-5000-064-125	••LATCH ASSY (HARTWELL).....	1	
- 41	4002-8	••STUD (COMLOC).....	10	
	4002-H	••GROMMET (COMLOC) .....	10	
	R4G	••SNAP RING (COMLOC) .....	10	
- 42	200-411072-101	•COWLING, ASSY, LOWER .....	1	
- 43	244-16	••RECEPTACLE .....	10	
- 44	82-32-101-17	••SNAP RING (LORD).....	6	
	82-11-12-16	••STUD (LORD).....	6	
- 45	NAS221-11	•SCREW.....	4	
	AN960D4	•WASHER.....	4	
- 46	MS25083-2BB7	•BONDING JUMPER.....	2	
	NAS679A3W	•NUT.....	2	
	MS51958-63	•SCREW.....	2	
	MS35338-43	•WASHER.....	4	
	MS35207-264	•SCREW.....	2	
	AN960D10	•WASHER.....	4	
	AN960-10L	•WASHER.....	4	
- 47	B210452	•GOVERNOR, PROP (WO) .....	1	
- 48	200-914263-001	•BRACKET.....	1	
	MS35207-263	•SCREW.....	4	
	AN960-10	•WASHER.....	4	
- 49	10-163005-2	•MAGNETO, LH (BX) TYPE S4LN-200 .....	1	
	or 66GR25SANN	•MAGNETO, LH (SLK) TYPE 4347 .....	1	
	10-163045-3	•MAGNETO, RH (BX) TYPE S4LN-204 .....	1	
	or 66GP-0SANN	•MAGNETO, RH (SLK) TYPE 4370 .....	1	
- 49A	203-364006-101	•HARNESS ASSY, IGNITION SYSTEM, ENGINE..... (BX MAGNETO ONLY)	1	
	203-364006-201	•HARNESS ASSY, IGNITION SYSTEM, ENGINE..... (SLK MAGNETO ONLY)	1	
- 50	40296	•PUMP, ENGINE DRIVEN FUEL (AC).....	1	
- 51	200-914131-145	•TUBE ASSY .....	1	
- 52	MS21919DG12	•CLAMP .....	1	
	MS21919DG4	•CLAMP .....	1	
	MS35206-245	•SCREW.....	1	



FIG & INDEX NO.	PART NO.	DESCRIPTION	UNITS PER ASS'Y	USABLE ON CODE
		1234567		
33- 52	NAS679A08W	•NUT .....	1	
- 53	AN742D12	•CLAMP .....	1	
	AN742D4	•CLAMP .....	1	
	MS35206-245	•SCREW .....	1	
	NAS679A08W	•NUT .....	1	
- 54	200-914131-043	•TUBE .....	1	
- 55	106200H-12-38	•HOSE .....	1	
	AN737-38	•CLAMP .....	2	
- 56	MS21919DG14	•CLAMP .....	4	
	MS35206-245	•SCREW .....	2	
	NAS679A08W	•NUT .....	2	
- 57	MS21919DG14	•CLAMP, HOSE ASSY .....	1	
	MS21919DG12	•CLAMP, ENGINE MOUNT ASSY .....	1	
	MS35206-245	•SCREW .....	1	
	NAS679A08W	•NUT .....	1	
- 58	200-914070-001	•OIL COOLER .....	1	
- 59	200-914262-001	•DUCT ASSY .....	1	
- 60	F-0470-760650	•DUCT .....	1	
- 61	MS21919DG50	•CLAMP, DUCT .....	2	
	MS21919DG12	•CLAMP, ENGINE MOUNT ASSY .....	2	
	MS35206-245	•SCREW .....	2	
	NAS679A08W	•NUT .....	2	
- 62	200-550076-009	•CLAMP .....	2	
- 63	AN3-40A	•BOLT .....	4	
- 64	AE624023-6-0300	•HOSE .....	1	
- 65	AE624000-6-0300	•HOSE .....	1	
- 66	MS20822-6-6D	•ELBOW .....	2	
- 67	AN816-6-6D	•NIPPLE .....	2	
- 68	SRC79-4-0180	•HOSE, OIL PRESSURE (SRC) .....	1	
- 69	200-914132-005	•RESTRICTOR .....	1	
- 70	AN837-4	•ELBOW .....	1	
	or AN837-4D			
	AN924-4	•NUT .....	1	
	AN960-716	•WASHER .....	2	
- 71	2524147-3	•FUEL INJECTOR (BX) .....	1	
	or 2524147-5			
- 72	MS35207-263	•SCREW .....	4	
	NAS679A3W	•NUT .....	4	
	AN960-10	•WASHER .....	8	
- 72A	200-914101-7	•SEAL .....	2	
- 72B	200-914101-5	•PLATE .....	2	
		/ATTACHING PARTS/		
- 72C	MS35207-263	•SCREW .....	2	
	NAS679A3W	•NUT .....	2	
	AN960-10L	•WASHER .....	4	
		*-----*		
- 72D	TSWTF-1/4-NT	•WRAP (PAC) (L=100 mm) .....	4	
- 72E	NO NUMBER	•TWINE (MIL-T-43435, TP-V, SZ-3, FH-C) .....	AR	
- 73	SRC79-3-0240	•HOSE ASSY, FUEL PRESSURE (SRC) .....	1	
- 74	MS35489-20	•GROMMET, ENGINE BAFFLE .....	1	
- 75	AN832-3	•UNION .....	1	
	AN924-3	•NUT .....	1	
	AN960-716	•WASHER .....	1	