

FAIRCHILD ENGINE DIVISION
FAIRCHILD ENGINE AND AIRPLANE CORPORATION

MODELS: Fairchild (Ranger) SGV-770C Series and Military Models V-770-6, -8, -11, -15

T.C. NUMBER: T.C. 232

Model - SGV-770	C-1	C-1B	C-1C	C-2A (V-77 0-8), C-2C
Type - 12VIA	(V-770-6)	(V-770-11)	(V-770-15)	----
Rating:	3: 2 reduction gearing	----	----	----
Maximum continuous, hp, rpm, in.Hg., at:				
Rated pressure altitude (ft.)	450-3000-36.0- 1200	450-3000-36.5- 12500	450-3000-36.0- 12300	500-3150-39.5- 9000
Sea level pressure altitude (ft.)	450-3000-38.0- S.L.	450-3000-38.0- S.L.	450-3000-37.5- S.L.	500-3150-41.0- S.L.
Take-off (one minute)	520-3150-44.5	520-3150-43.0	500-3150-43.0	550-330-45.5
Fuel (minimum octane aviation gasoline) (CFR Motor Method fuel)	91	----	----	----
Bore and stroke, in.	4 X 5.125	----	----	----
Displacement, cu. in.	773	----	----	----
Compression ratio	6.5: 1	----	----	----
Weight (dry), lbs.	740	759	746	760, 765
Propeller shaft, SAE No.	30	----	----	----
Supercharging (impeller gear ratio)	9.5: 1	----	----	----
Carburetion	Holley 700 F or H carburetor	Stromberg QD- 9B1 carburetor with 2-1/4 in. venturi	Holley 700 F or H carburetor	Stromberg QD- 9B1 carburetor with 2-1/4 in. venturi
Ignition, dual	Scintilla DFN magneto	Scintilla DFLN6 magneto	----	----
Spark plugs	BG-AS-460	AC-LA-47	----	AC-LA-47 (C-2C) B-AS-557 (C-2A)
Ignition timing, degrees BTC	25	----	----	----
Special propeller facilities	Constant speed	Constant speed or two-position	Constant speed	Constant speed (C- 2A, C), two- position (C-2C)
Certification basis	Type Certificate No. 232			

NOTE 1. Maximum permissible cylinder head, barrel, and oil inlet temperatures, 520 degrees F., 315 degrees F., and 200 degrees F., respectively, for all engines except that the cylinder barrel limit for the model C-1 is 300 degrees F.

NOTE 2. These engines are characterized additionally by the following components:

Model C-1	Bronze main and rod bearings, steel finned barrels, and Aero-thread spark plug to read inserts.
Model C-1B	Silver main and rod bearings, al-fin cylinders, impeller fuel injection, heli-coil spark plug thread inserts, and turbulent flow cooling baffles.
Model C-1C	Bronze main bearings and silver rod bearings, al-fin cylinders, heli-coil spark plug thread inserts, and turbulent flow cooling baffles.
Model C-2A	Silver main and rod bearings, al-fin cylinders, Aero-thread spark plug thread inserts, heavier torsional dampers, high pressure valve springs, and impeller fuel injection.
Model C-2C	Same as C-2 except spark plug inserts, turbulent flow cooling baffles, and propeller control provisions.

NOTE 3. The following accessories are satisfactory for use on these engines at the indicated additional weights:

<u>Accessory</u>	<u>Weight (lbs.)</u>
Fuel Pump	
Ceco Model CH 2E3-3	(included in dry weight)
Thompson Model TFD400	(included in dry weight)
Starter	
Eclipse Model 398	25
Eclipse Model 915 (C-4B only)	32
Generator	
AC No. 95-32274 - with regulator (all except C-1B)	34
Eclipse Model 314 (C-1B only)	34
Leece-Neville O-1 (C-1B only)	32
Vacuum Pump	
Pesco Model 3P-207JA	5
Hydraulic Pump	
Pesco Model 1P-204-R	4

NOTE 4. The military engines listed are identical to the correspondingly indicated certificated models.
A

new designation plate indicating the Type Certificate No. and certificated model designation will be furnished by the engine manufacturer and should be incorporated in the engine when installed in certificated aircraft.

NOTE 5. Approval expired 9/25/50. No engines of these models manufactured after this date or with serial numbers above RO 40777 eligible for use in certificated aircraft.