



SIL RS-83

Service Information Letter - Fuel Systems

SMALL RECIPROCATING ENGINES

RSA-10AD1

Issued 12/12/06

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**SUBJECT: Service Information for RSA-10AD1 Fuel Injection Servo
Parts List 2524311-10.**

PURPOSE: To provide repair shops with flow bench limits for RSA-10AD1 fuel injection servo parts list 2524311-10.

Service letter provides correct flow bench limits for Basic Parts List 2524514.

- A. **EFFECTIVITY:** This Service Information Letter is applicable to all RSA-10AD1 fuel injection servos, parts list 2524311-10. These servos are installed on Lycoming AEIO-540-L engines.
- B. **DESCRIPTION:** The service information found in manual 15-433D Revision 1, for parts list 2524311-10 is applicable except as follows:

1. Reference manual 15-433D, Calibration and Service Limits:

Specification Type	Old Test Specification	New Test Specification
Calibration Limits	11262-01	11589-03
Service Limits	10108-01	11591-03

These Specifications are included with this service information letter; see pages 2 & 3

11589-03
10/29/99

TEST SPECIFICATION
CALIBRATION LIMITS
PRECISION AIRMOTIVE CORPORATION - FUEL CONTROLS - EVERETT, WASHINGTON

MODEL: RSA-10AD1 PARTS LIST: _____ SERIAL NUMBER: _____
DATE: _____ OPERATOR: _____

BASIC PARTS LIST: 2524514 FUEL PRESSURE: 26 PSI ± 1 FUEL SP. GRAV. _____ @ _____ OF

TEST POINT NUMBER	1	2	3	4
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METERING SUCTION (INCHES OF WATER)	0	0	3.0	12.8
CORRESPONDING AIRFLOW (LBS/HR)	0	0	800	1600
MIXTURE CONTROL POSITION	RICH	ICO	RICH	RICH
THROTTLE POSITION	W.O.	W.O.	W.O.	W.O.

FLOWMETER LIMITS

MINIMUM OBSERVED (LBS/HR)	50.2	0	73.0	145.0
MAXIMUM	56.5	5 cc	76.0	153.0

BURETTE TIME LIMITS (Using MIL-C-7024 Type II Stoddard)

BURETTE VOLUME (cc)	300	500	850
MINIMUM OBSERVED (SECONDS)	32.4	40.1	33.9
MAXIMUM	36.5	41.8	35.8
AVG. OBSERVED ("STODDARD)		20.0	40.0

METERING HEAD

AVG. OBSERVED ("STODDARD)			
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- PROCEDURE FOR SPLIT HEAD CHECK
1. Close throttle to .006" shim in bore.
 2. Adjust idle fuel flow to 9.0-11.0 lbs/hr with wheel centered. Observe metering head. Energize boost pump to provide 35 - 40 psi. After stabilizing, fuel flow must be within ± .5 lbs/hr of value observed at specified fuel inlet pressure. Turn boost pump off.
 3. Remove .006" shim.
 4. Close throttle to 7.0 - 8.0 lbs/hr fuel flow. Observe metering head. Metering head increase from (2) 5.0" fuel max.

11591-03
10/29/99

TEST SPECIFICATION
SERVICE LIMITS
PRECISION AIRMOTIVE CORPORATION - FUEL CONTROLS - EVERETT, WASHINGTON □

MODEL: RSA-10AD1 PARTS LIST: _____ SERIAL NUMBER: _____

DATE: _____ OPERATOR: _____

BASIC PARTS LIST: 2524514 FUEL PRESSURE: 26 PSI ± 1 ENGINE MFG: TEXTRON LYCOMING

TEST POINT NUMBER	1	2	3	4
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METERING SUCTION (INCHES OF WATER)	0	0	3.0	12.8
CORRESPONDING AIRFLOW (LBS/HR)	0	0	800	1600
MIXTURE CONTROL POSITION	RICH	ICO	RICH	RICH
THROTTLE POSITION	W/O	W/O	W/O	W/O

FLOWMETER LIMITS

MINIMUM OBSERVED (LBS/HR)	50.0	0	70.0	140.0
MAXIMUM	60.0	5 cc	79.2	159.0

BURETTE TIME LIMITS (Using MIL-C-7024D, TYPE II, Stoddard)

BURETTE VOLUME (cc)	300	500	850
MINIMUM OBSERVED (SECONDS)	30.5	38.5	32.6
MAXIMUM AVG.	36.5	43.6	37.0

METERING HEAD

OBSERVED ("STODDARD)				
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