

AVCO LYCOMING DIVISION

WILLIAMSPORT, PENNSYLVANIA 17701

Service Instruction



DATE: May 14, 1976

Service Instruction No. 1325A
(Supersedes Service Instruction No. 1325)
Engineering Aspects are
FAA (DEER) Approved

SUBJECT: Timing Change for IO-360 Series Engines

MODELS AFFECTED: IO-360-A series (not -A1B6D), -C, -D series, HIO-360-C1A, -C1B, AEIO-360-A1B6 with serial numbers prior to 14435-51; IO-360-C1D6 with serial numbers prior to 14445-51, LIO-360-C1E6 with serial numbers prior to 1063-67 and AIO-360-A1A, -A1B, -B1B with serial numbers prior to 219-63; TIO-360-A1B with serial numbers prior to 145-64. See Service Bulletin No. 380 for IO-360-C1C and -C1F models.

TIME OF COMPLIANCE: At overhaul or at owner's discretion.

Certain advantages in engine operation have been found by changing engine timing from 25° BTC to 20° BTC and reducing the lag angle to 15° on impulse coupling magnetos and 15° retard angle on retard breaker magnetos whichever is applicable. Significant improvements in engine operating characteristics are achieved in above listed aircraft engine installations particularly in the areas of normal operation and cold weather starting. During cruise operation, cooler cylinder head temperatures can be expected resulting in improved service life of intake and exhaust valves. During full throttle operation the new spark setting will reduce possibility of detonation during extreme cold weather operation. Consequently this modification has been incorporated in the production of new engines and may be incorporated in engines in service as follows:

1. Remove the left magneto and determine if it has an impulse coupling or if it is a retard breaker magneto; if it is a retard breaker magneto it cannot be converted to

the 15° retard angle. However, a Bendix blue magneto which incorporates a 15° retard angle is available through Avco Lycoming distributors. See "Parts Data" below. Install the replacement magneto as described in step 3.

2. If the left magneto has an impulse coupling, replace the coupling with a new one, LW-391429 on all models except reverse rotation engines; on these use impulse coupling LW-391427.

3. Install the magneto on the engine and retime both magnetos using the 20° timing mark on the starter ring gear instead of the 25° mark. See Avco Lycoming Operator's Manual 60297-12 for ignition timing procedure.

4. Replace the engine nameplate with a new one, Avco Lycoming P/N 61548 which indicates new timing angle. Also restamp the magneto nameplate to indicate the magneto is -9, -10 or -55 instead of -3, -6 or -45.

PARTS DATA:

15° Lag Angle Magneto	Replaces Magneto	Magneto Model	Engine Application
LW-349365-9	LW-349365-3	S4LN-1227	IO-360-A1B, -A1B6, -C1C, -C1F, -C1D6, -C1E6, AIO-360-A1A, -A1B, -B1B, AEIO-360-A1B6
LW-349365-10	LW-349365-6	S4RN-1227	LIO-360-C1E6
LW-51360-55	LW-51360-45	S4LN-21	IO-360-A1D

PARTS DATA (CONT.):

15° Retard Angle Magneto	Replaces Magneto	Magneto Model	Engine Application
LW-349285-7	LW-349285-1	S4LN-1208	IO-360-A1C, -C1C, -D1A; HIO-360-C1B; AIO-360-A1A; TIO-360-A1B
LW-349285-8	-----	S4RN-1208	LHIO-360-C1B
LW-163005-11	LW-163005-2	S4LN-200	IO-360-A1A, -A2A, -C1A; HIO-360-C1A; AEIO-360-A1A
LW-163005-12	-----	S4RN-200	LHIO-360-C1A

LW-391429 Impulse coupling, 15° lag angle (replaces LW-349359)

LW-391427 Impulse coupling, 15° lag angle (replaces LW-349358 for magnetos on reverse rotation engines)

61548 Engine nameplate (replaces nameplate with 25° BTC timing specified). See Service Instruction No. 1304 for procurement procedure.

18484, 18485 - These numbers for Avco Lycoming reference only.