

SERVICE INSTRUCTION

DATE: April 30, 2001

Service Instruction No. 1098G
(Supersedes Service Instruction No. 1098F)
Engineering Aspects are
FAA Approved

SUBJECT: Propeller Flange Bushing Location

MODELS AFFECTED: All Textron Lycoming direct drive engines.

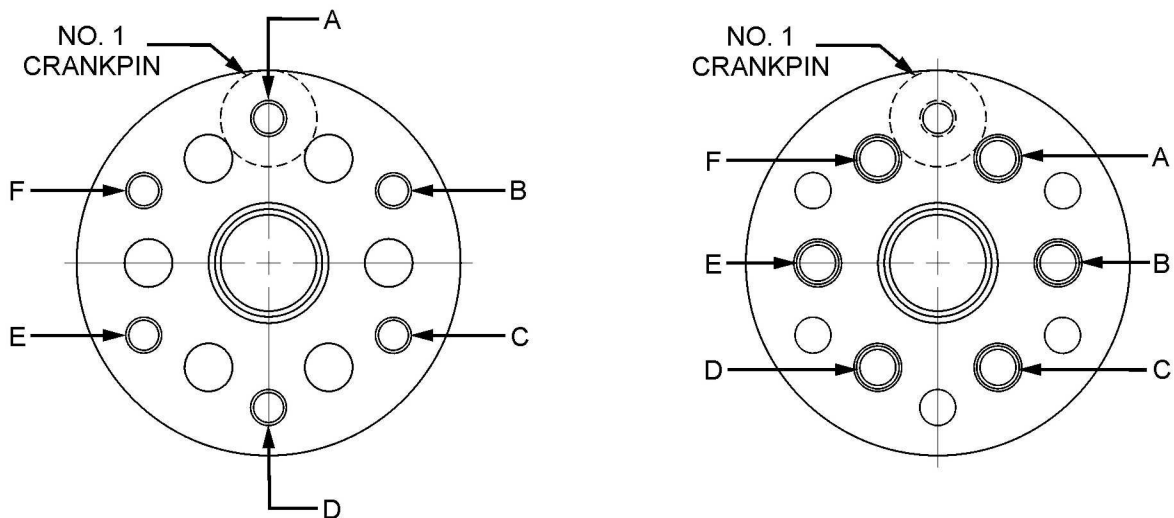
TIME OF COMPLIANCE: At owner's discretion.

These charts, pages 2 thru 5, in conjunction with Figures 1 and 2, show the correct locations, and part numbers for propeller flange bushings on all Textron Lycoming direct drive engines. When replacing flange bushings, it is extremely important that the correct size and location be observed. If a propeller is not indexed correctly, excessive propeller blade stresses may result.

To determine the correct propeller flange bushings:

- (1) Measure crankshaft flange to determine the flange thickness. (Textron Lycoming has standardized the crankshafts and bushings, refer to the latest edition of Textron Lycoming Service Instruction No. 1473.)
- (2) From the attached list, identify correct bushings for engine model and flange thickness.
- (3) Measure bushing bore in the crankshaft flange and select bushing that will give a .0005-.0020 tight fit between the bushing and bore.

Using the measurements and the engine model, select the appropriate part number from the following tables.



NOTE: These are viewed from the front of the engine looking aft.

Figure 1. Type 2. Prop. Flange Bushing Location (4-3/4 in. dia.) Figure 2. Type 1. Prop. Flange Busing Location (4-3/8 in. dia.)

NOTE

The propeller flange type can be identified by measuring from one prop. attaching bushing across the center of the crankshaft to the opposite bushing. The center to center measurement of Type 1 is 4-3/8 inches. Type 2 is 4-3/4 inches.

NOTE

For O-340-A and O-320 constant speed models incorporating 3/8 inch bolts, see latest edition of Textron Lycoming Service Bulletin No. 253.

INDEXING BUSHING ϕ		Flange Thickness				BUSHING LOCATION					
TYPE 1	FIGURE NO. 2	.19	.27	.38	.44	A	B	C	D	E	F
O-235-C1B, -C2A, -C2B, -C2C, -F2A, -F2B, -H2C, -J2A, -K2A, -K2B, -K2C, -L2A, -L2C, -N2A, -N2C (Fixed Pitch)		X				60814-S	60814-S	60814-S	60814-S	73757-S ϕ	60814-S
O-235-E2A, -G2A, -P2A (Constant Speed)											

INDEXING BUSHING ϕ		Flange Thickness				BUSHING LOCATION					
TYPE 1	FIGURE NO. 1	.19	.27	.38	.44	A	B	C	D	E	F
O-235-C1, -C1B (Constant Speed)		X				60814-S	60814-S	60814-S	60814-S	60814-S	60814-S
O-235-C1, -C1B, -C1C, -F1B, -M1 (Fixed Pitch)		X				73757-S ϕ	60814-S	60814-S	60814-S	60814-S	60814-S
O-290 Series			X			72067-S	72067-S	72067-S	72067-S	72067-S	72067-S
O-320-A2A, -A2B, -A2C, -A2D, -B2A, -B2B, -B2C, -D2A, -D2B, -D2C, -D3G, -E2A, -E2B, -E2C, -E3D, -E3H			X			72066-S ϕ	72067-S	72067-S	72067-S	72067-S	72067-S
IO-320-E2A, -E2B					X	LW-18921-S ϕ	LW-18922-S	LW-18922-S	LW-18922-S	LW-18922-S	LW-18922-S
AEIO-320-E2A, -E2B											
O-320-A1A, -A1B, -A3A, -A3B, -A3C, -B1A, -B1B, -B3A, -B3B, -B3C, -D1A, -D1C, -D1D, -D1F, -E1A, -E1C, -E1F, -E1J			X			72065-S ϕ	72063-S	72064-S	72063-S	72063-S	72064-S
O-320-H2AD "76" Series (Constant Speed), -H1CD					X	LW-18817-S ϕ	LW-18815-S	LW-18816-S	LW-18815-S	LW-18815-S	LW-18816-S
IO-320-D1A, -D1B, -E1A, -E1B											
AEIO-320-D1B, -E1A, -E1B											
AIO-320-A1B, -B1B, -C1B											
LIO-320-B1A, -C1A, -D1A											
O-320-D2F, -D2G, -D2J, -E2D, -E2F, -E2G, -E2H			X			72065-S ϕ	72063-S	72063-S	72063-S	72063-S	72063-S
IO-320-B2A					X	LW-18817-S ϕ	LW-18815-S	LW-18815-S	LW-18815-S	LW-18815-S	LW-18815-S
O-320-H2AD "76" Series (Fixed Pitch)											
AEIO-320-D2B											
IO-320-B1A, -B1C, -B1D, -C1A, -F1A			X			72065-S ϕ	72064-S	72063-S	72063-S	72064-S	72063-S
					X	LW-18817-S ϕ	LW-18816-S	LW-18815-S	LW-18815-S	LW-18816-S	LW-18815-S
O-360-A1A, -A1AD, -A1B, -A1C, -A1D, -A1F, -A1F6, -A1G, -A1G6, -A1G6D, -A1H, -A1K6, -A1H6, -A1LD, -A2A, -A2D, -A2E, -A2F, -A2G, -A4D, -A4G, -A4J, -A4JD, -A4K, -A4N, -A4P, -A5AD, -B1A, -B1B, -B2A, -B2C, -C1A, -C1C, -C1E, -C1F, -C2A, -C2B, **C2C, -C2D, -C2E, -C4F, -C4P, -D2A, -D2B, -D2C, -F1A6, -G1A6				X		72062-S	72062-S	72061-S	72062-S	72062-S	72060-S ϕ
O-360-E1AD, -E1A6D "76" Series					X	75656-S	75656-S	72155-S	75656-S	75656-S	75657-S ϕ

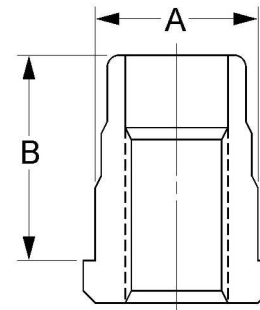
** - Not used if wooden propeller is installed.

INDEXING BUSHINGφ		Flange Thickness				BUSHING LOCATION					
TYPE 2	FIGURE NO. 1	.19	.27	.38	.44	A	B	C	D	E	F
IO-360-A1A, -A1B, -A1B6, -A1B6D, -A1C, -A1C6, -A1D, -A1D6, -A1D6D, -A2A, -A2B, -A2C, -B1A, -B1B, -B1BD, -B1D, -B1E, -B1F, -B1G6, -B2E, -B2F6, -C1A, -C1B, -C1C, -C1C6, -C1D6, -C1CD, -C1E, -C1E6, -C1E6D, -C1F, -C1G6, -D1A, -E1A, -F1A, -L2A, -M1A				X		72062-S	72062-S	72061-S	72062-S	72062-S	72060-S φ
AIO-360-A1A, -A1B, -B1B, -A2A, -A2B					X	75656-S	75656-S	72155-S	75656-S	75656-S	75657-S φ
AEIO-360-A1A, -A1B, -A1B6, -A1C, -A1D, -A1E, -A2A, -A2B, -A2C, -B1B, -B1D, -B1F, -B1F6, -B2F6, -B1G6, -H1A, -H1B											
TIO-360-E1A6D "76" Series, -C1A6D, -F1A6D											
TIO-360-A1B, -A1A6D, -B1A6D, -C1A6D											
VO-360-A1A, -A1B, -B1A, -G1A											
IVO-360-A1A											
HO-360-A1A, -B1A, -B1B, -C1A											
HIO-360-A1A, -B1A, -B1B, -C1A, -C1B, -D1A											
LO-360-A1G6D "76" Series											
LHIO-360-C1A											
LO-360-A1H6, -A2D											
†O-360-C1G				X		72061-S	72062-S	72062-S	72061-S	72062-S	72074-S φ
O-360-A1P, -A3D6D											
IO-360-A3B6, -A3B6D, -J1A6D					X	72155-S	75656-S	75656-S	72155-S	75656-S	79024-S φ
O-360-J2A					X	01K22155-S	01K22155-S	01K22155-S	01K22155-S	01K22155-S	01K22156-S φ
O-360-A3A, -A3AD, -A4A, -A4AD, -A4M				X		74249-S	74249-S	74249-S	74249-S	74249-S	74248-S φ
IO-360-B2F, -B4A					X	LW-18819-S	LW-18819-S	LW-18819-S	LW-18819-S	LW-18819-S	LW-18818-S φ
AEIO-360-B2F, -B4A											
O-360-C2C (Wooden Prop.) (Long Bushings)				X		75561-S	75561-S	75561-S	75561-S	75561-S	75560-S φ
					X	01K21700-S	01K21700-S	01K21700-S	01K21700-S	01K21700-S	01K21699-S φ
IO-360-K2A					X	75656-S	75656-S	75656-S	75656-S	75656-S	79024-S φ
HIO-360-C1A, -C1B, -E1AD, -E1BD, -F1AD Enstrom (Long Bushings)				X		72061-S	75561-S	75561-S	72061-S	75561-S	75560-S φ
					X	72155-S	01K21700-S	01K21700-S	72155-S	01K21700-S	01K21699-S φ
LO-360-E1AD, -E1A6D "76" Series				X		72062-S	72061-S	72062-S	72062-S	72061-S	72074-S φ
LIO-360-C1E6, -C1E6D					X	75656-S	72155-S	75656-S	75656-S	72155-S	79024-S φ
LTO-360-E1A6D "76" Series					X	75656-S	72155-S	75656-S	75656-S	72155-S	79024-S φ
TIO-360-A3B6				X		72062-S	72062-S	72062-S	72062-S	72061-S	72074-S φ
					X	75656-S	75656-S	75656-S	75656-S	72155-S	79024-S φ

TIO-540-AJ1A												φ
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INDEXING BUSHINGφ		Flange Thickness				BUSHING LOCATION					
TYPE 2	FIGURE NO. 1	.19	.27	.38	.44	A	B	C	D	E	F
TIO-540-S1AD					X	75656-S	72155-S	75656-S	75656-S	72155-S	79024-S
TIO-541-A1A					X	75656-S	75656-S	72155-S	75656-S	75656-S	75657-S
TIO-541-E1A4, -E1B4, -E1C4					X	72156-S	72156-S	72155-S	72156-S	72156-S	73811-S
IO-720-A1A, -A1B, -B1B, -B1BD, -C1B, -D1B, -D1BD, -D1C, -D1CD					X	72156-S	72156-S	72156-S	72156-S	72155-S	73811-S

BUSHING PART NO.	PROP. BOLT THREAD SIZE	DIMENSION A	DIMENSION B
60814-S	3/8"	.6255-.6260	.95
72060-S	1/2"	.7818-.7823	.59
72061-S	1/2"	.7505-.7510	.59
72062-S	1/2"	.7505-.7510	.78
72063-S	7/16"	.6255-.6260	.90
72064-S	7/16"	.6255-.6260	.48
72065-S	7/16"	.6725-.6730	.90
72066-S	3/8"	.6725-.6730	1.02
72067-S	3/8"	.6255-.6260	1.02
72074-S	1/2"	.7818-.7823	.78
72155-S	1/2"	.7505-.7510	.65
72156-S	1/2"	.7505-.7510	.97
73757-S	3/8"	.6725-.6730	.95
73811-S	1/2"	.7818-.7823	.97
74248-S	1/2"	.7818-.7823	.98
74249-S	1/2"	.7505-.7510	.98
75560-S	1/2"	.7818-.7823	1.63
75561-S	1/2"	.7505-.7510	1.63
75656-S	1/2"	.7505-.7510	.84
75657-S	1/2"	.7818-.7823	.65
79024-S	1/2"	.7818-.7823	.84
LW-18815-S	7/16"	.6255-.6260	1.01
LW-18816-S	7/16"	.6255-.6260	.59
LW-18817-S	7/16"	.6725-.6730	1.01
LW-18818-S	1/2"	.7818-.7823	1.04
LW-18819-S	1/2"	.7505-.7510	1.04
LW-18921-S	3/8"	.6725-.6730	1.13
LW-18922-S	3/8"	.6255-.6260	1.13
01K21699-S	1/2"	.7818-.7823	1.69
01K21700-S	1/2"	.7505-.7510	1.69
01K22155-S	3/8"	.7505-.7510	1.19
01K22156-S	3/8"	.7818-.7823	1.19



NOTE

Service replacements for all flange bushings are available in the following oversizes.

P05	P10	P15	P20
.005	.010	.015	.020

Tool No. ST-115 is used to remove and replace all propeller flange bushings.

NOTE: Revision "G" adds Note to Figures 1 and 2, adds new models and bushings.

