



U.S. Department
of Transportation
**Federal Aviation
Administration**

FEDERAL AVIATION ADMINISTRATION - PARTS MANUFACTURER APPROVAL

RAPCO, Inc.
445 Cardinal Lane
Hartland, WI 53029

PMA NO. PQ2101CE
SUPPLEMENT NO. 104
DATED: July 19, 2010

Supersedes FAA-PMA Supplement No. 104, Dated May 19, 2010

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Vacuum Pump Assembly	RAP215CC	Nichols-Airborne P/N: 211CC, E211CC, 215CC Aero Accessories P/N: AA211CC, AA215CC, AA3215CC, AA- 3225CC Federal Mogul P/N: CH215CC Rapco, Inc. P/N: RA211CC, RA215CC	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP215CC <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	Teledyne Continental Motors	GO-300-A, -B, -C, -D, -E, -F GTSIO-520-C, -D, -E, -F, -H, -K, -L, -M, -N IO-360-A, -B, -C, -D, -E, -G, -H, -J, -K, -AB, -DB, -GB, -HB, -JB, -KB, -ES O-300-A, -B, -C, -D, -E TSIO-360-A, -AB, -B, -C, -CB, -D, -DB, -E, -F, -G, -GB, -H, -HB, -EB, -FB, -JB, -KB, -LB, -BB, -MB, -NB, -PB, -RB, -SB TSIO-520-A, -B, -C, -D, -E, -G, -H, -J, -K, -L, -M, -N, -P, -R, -BB, -DB, -EB, -JB, -KB, -LB, -NB, -T, -U, -UB, -VB, -WB, -AE, -AF
Vacuum Pump Assembly	RAP215CC	Nichols-Airborne P/N: 211CC, E211CC, 215CC Aero Accessories P/N: AA211CC, AA215CC, AA3215CC, AA- 3225CC Federal Mogul P/N: CH215CC Rapco, Inc. P/N: RA211CC, RA215CC	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP215CC <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	AVCO Lycoming	GO-435, -C2 (O-435- 17), C2A, -C2A2, C2B, -C2B1, -C2B2, -C2C, -C2D, -C2E, -D1 GO-480, -A1A, -B, -B1, -B1A6, -B1B, -B1C, -B1D, -C1B6, -C1D6, -C2C6, -C2D6, -C2E6, -C3A6, -D1A, -E1A6, -F6, -F1A6, -F2A6, -F2D6, -F3A6, -F6, F1A6, -F2A6, -F2D6, -F3A6, -F3B6, -F4A6, -F4B6, -G1A6, -G1B6, -G1D6, -G1H6, -G1J6, -G2D6,

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Part Name	Part Number	Approved Replacement for Part Number	Approval Basis and Approved Design Data	Make Eligibility:	Model Eligibility:
				AVCO Lycoming (continued)	-G2F6 O-290, -A, -AP, -B (O-290-1), -C (O-290-3), -CP, -D (O-290-11), -D2, -D2A, -D2B, -D2C O-435, -A, -A2, -B (O-435-5), -C (O-435-1), -C1 (O-435-11), -C2 (O-435-13), -K TIO-360-A1A, -A1B, -A3B6, -C1A6D
Vacuum Pump Assembly	RAP215CC	Nichols-Airborne P/N: 211CC, E211CC, 215CC Aero Accessories P/N: AA211CC, AA215CC, AA3215CC, AA-3225CC Federal Mogul P/N: CH215CC Rapco, Inc. P/N: RA211CC, RA215CC	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP215CC <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	Lycoming Engines	O-235-A, -B, -AP, -BP, -C, -C1, -C1A, -C1B, -C1C, -C2A, -C2B, -C2C, -E1, -E1B, -E2A, -E2B, -F1, -F1B, -F2A, -F2B, -G1, -G1B, -G2A, -G2B, -H2C, -J2A, -J2B, -K2A, -K2B, -K2C, -L2A, -L2C, -M1, -M2C, -M3C, -N2A, -N2C, -P1, -P2A, -P2C, -P3C O-320-A1A, -A1B, -A2A, -A2B, -A2C, -A2D, -A3A, -A3B, -A3C, -B1A, -B1B, -B2A, -B2B, -B2C, -B3A, -B3B, -B3C, -C3C, -D1A, -D1B, -D1C, -D1D, -D1F, -D2A, -D2B, -D2C, -D2F, -D2G, -D2H, -D2J, -D3G, -E1A, -E1B, -E1C, -E1F, -E1J, -E2A, -E2B, -E2C, -E2D, -E2F, -E2G, -E2H, -E3D, -E3H, -H1AD, -H1BD, -H2AD, -H2BD, -H3AD, -H3BD O-360-A1A, -A1AD, -A1C, -A1D, -A1F, -A1F6, -A1F6D, -A1G, -A1G6, -A1G6D, -A1H, -A1H6, -A1LD, -A1P, -A2A, -A2D, -A2E, -A2F, -A2G, -A2H, -A3A, -A3AD, -A3D,

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Part Name	Part Number	Approved Replacement for Part Number	Approval Basis and Approved Design Data	Make Eligibility:	Model Eligibility:
				Lycoming Engines (continued)	-A4A, -A4AD, -A4D, -A4G, -A4J, -A4K, -A4M, -A4N, -A4P, -A5AD, -B1A, -B1B, -B2A, -B2B, -B2C, -C1A, -C1C, -C1E, -C1F, -C1G, -C2A, -C2B, -C2B, -C2C, -C2D, -C2E, -C4PM -C4F, -D1A, -D2A, -D2B, -E1AD, -E1A6D, -E2AD, -E1BD, -E2BD, -F1A6, -G1A6, -J2A O-540-A1A, -A1A5, -A1B5, -A1C5, -A1D, -A1D5, -A2B, -A3D5, -A4A5, -A4B5, -A4C5, -A4D5, -B1A5, -B1B5, -B1D5, -B2A5, -B2B5, -B2C5, -B4A5, -B4B5, -D1A5, -E4A5, -E4B5, -E4C5, -F1A5, -F1B5, -G1A5, G2A5, -H1A5, -H2A5, -H1A5D, -H2A5D, -H1B5D, -H2B5D, -J1A5D, -J2A5D, -J1B5D, -J2B5D, -J3A5D, -J1C5D, -J2C5D, -J1D5D, -J2D5D, -J3C5D, -L3C5D IO-320-A1A, -A2A, -B1A, -B1B, B1C, -B1E, B1D, -B2A, -C1A, -C1B, -D1A, -D1C, -D1B, -E1A, -E1B, -E2A, -E2B, -F1A IO-360-A1A, -A1B, -A1B6, -A1B6D, -A1C, -A1D, -A1D6, -A1D6D, -A2A, -A2B, -A2C, A3B6, -A3B6D, -A3D6D, -B1A, -B1B, -B1C, -B1D, -B1E, -B1F, -B1F6, -B1G6, -B2E, -B2F, -B2F6, -B4A, -C1A, -C1B, -C1C, -C1C6, -C1D6, -C1E6, -C1E6D, -C1F, -C1G6, -D1A, -E1A, -F1A, -J1AD, -J1A6D, -K2A, -62A, -M1A, -M1A, -M1B

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Part Name	Part Number	Approved Replacement for Part Number	Approval Basis and Approved Design Data	Make Eligibility:	Model Eligibility:
				Lycoming Engines (continued)	IO-540-A1A5, -B1A5, -B1B5, -B1C5, -C1B5, -C1C5, -C2C, -C4B5, -C4B5D, -C4D5, -C4C5, -C4D5D, -D4A5, -D4B5, -D4C5, -E1A5, -E1B5, -E1C5, -G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -G1F5, -J4A5, -K1A5, -K1A5D, -K1B5, -K1B5D, -K1C5, -K1D5, -K1E5, -K1E5D, -K1F5, -K1F5D, -K1G5, -K1G5D, -K1H5, -K1J5, -K1J5D, -K1K5, -K2A5, -L1A5, -L1A5D, -L1B5D, -L1C5, -M1A5, -M1A5D, -M1C5, -M2A5D, -N1A5, -P1A5, -R1A5, -S1A5, -T4A5D, -T4B5, -T4B5D, -T4C5D, -U1A5D, -U1B5D, -V4A5D, -V4A5, -W1A5, -W1A5D, W3A5D, -AA1A5, -AA1B5, -AB1A5, -AC1A5, -AE1A5, -AF1A5 TIO-540-A1A, -A1B, -A2A, -A2B, -A1C, -A2C, -C1A, -E1A, -F2BD, -G1A, -H1A, -J2B, -J2BD, -K1AD, -N2BD, -R2AD, -S1AD, -T2AD, -U2A, -V2AD, -W2A, -AA1AD, -AB1AD, -AB1BD, -AE2A, -AF1A, -AF1B, -AG1A, -AH1A, -AJ1A, -AH1A
Vacuum Pump Assembly	RAP215CC	Nichols-Airborne P/N: 211CC, E211CC, 215CC Aero Accessories P/N: AA211CC, AA215CC, AA3215CC, AA- 3225CC Federal Mogul	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP215CC <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	Textron Lycoming	GSO-480-A1A6, -A1C6, A2A6, -B1A6, -B1B6 (O-480-1), -B1C6, -B1E6, -B1F6, -B1G6, -B1J6, -B2C6, -B2D6, -B1B3, -B2G6, -B2H6 IO-720-A1A, -A1B, -A1BD, -B1A, -B1B, -B1BD, -C1B, -C1BD,

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		P/N: CH215CC		Textron Lycoming (continued)	-D1B, -D1BD, -D1C, -D1CD
		Rapco, Inc. P/N: RA211CC, RA215CC			
Vacuum Pump Assembly	RAP215CC	Nichols-Airborne P/N: 211CC, E211CC, 215CC	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP215CC <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	Pratt & Whitney Canada	PT6A-6, -6A, -6B, -6/C20, -11, -11AG, -15AG, -20, -20A, -20B, -21, -25, -25A, -25C, -27, -28, -29, -34, -34B, -34AG, -35, -36, -38, -40, -41, -41AG, -42, -42A, -45, -45A, -45B, -45R, -50, -52, -60, -60A, -60AG, -61, -61A, -65B, -65R, -65AR, -65AG, -66, -66A, 66B, -66D, -67, -67A, -67AF, -67P, - 67B, -67D, -67R, -64, -66B, -68, -67AG, -67T, -67F, -110, -112, -114, -114A, -116, -121, -135, -135A
		Aero Accessories P/N: AA211CC, AA215CC, AA3215CC, AA- 3225CC			
		Federal Mogul P/N: CH215CC			
		Rapco, Inc. P/N: RA211CC, RA215CC			
					PT6B-36, -36A, -36B, -37, -37A
Vacuum Pump Assembly	RAP215CC-9	Nichols-Airborne P/N: 211CC-9, 215CC-9	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP215CC-9 <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	Cessna	150, A150K, A150L, A150M, F150K, F150L, F150M, FA150K, FA150L, 172, 177
		Aero Accessories P/N: AA211CC- 9, AA215CC-9, AA3215CC-9, AA-3225CC-9			
		Federal Mogul P/N: CH215CC-9			
		Rapco, Inc. P/N: RA211CC- 9, RA215CC-9			
Vacuum Pump Assembly	RAP215CC-9	Nichols-Airborne P/N: 211CC-9, 215CC-9	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP215CC-9 <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	Teledyne Continental Motors	C90-16F O-200-A, O-200-B, O-200-C
		Aero Accessories P/N: AA211CC- 9, AA215CC-9, AA3215CC-9, AA-3225CC-9			
		Federal Mogul P/N: CH215CC-9			

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Vacuum Pump Assembly	RAP215CC-9	<p>Rapco, Inc. P/N: RA211CC-9, RA215CC-9</p> <p>Nichols-Airborne P/N: 211CC-9, 215CC-9</p> <p>Aero Accessories P/N: AA211CC-9, AA215CC-9, AA3215CC-9, AA-3225CC-9</p> <p>Federal Mogul P/N: CH215CC-9</p> <p>Rapco, Inc. P/N: RA211CC-9, RA215CC-9</p>	<p>Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP215CC-9 <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*</p>	<p>Lycoming Engines (formerly Textron Lycoming)</p>	<p>O-320-A1A, -A1B, -A2A, -A2B, -A2C, -A2D, -A3A, -A3B, -A3C, -B1A, -B1B, -B2A, -B2B, -B2C, -B2D, -B2E, -B3A, -B3B, -B3C, -C1A, -C1B, -C2A, -C2B, -C2C, -C3A, -C3B, -C3C, -D1A, -D1B, -D1C, -D1D, -D1F, -D2A, -D2B, -D2C, -D2F, -D2G, -D2H, -D2J, -D3G, -E1A, -E1B, -E1C, -E1F, -E1J, -E2A, -E2B, -E2C, -E2D, -E2F, -E2G, -E2H, -E3D, -E3H, -H1AD, -H1BD, -H2AD, -H2BD, -H3AD, -H3BD</p>
Vacuum Pump Assembly	RAP216CW	<p>Nichols-Airborne P/N: 212CW, E212CW, 216CW</p> <p>Aero Accessories P/N: AA212CW, AA216CW, AA3216CW, AA-3226CW</p> <p>Federal Mogul P/N: CH216CW</p> <p>Rapco, Inc. P/N: RA212CW, RA216CW</p>	<p>Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP216CW <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*</p>	<p>Teledyne Continental Motors</p>	<p>E185-1, -2, -3, -5, -8, -9</p> <p>E225-2, -4, -8, -9</p> <p>GO-300-A, -B, -C, -D, -E, -F</p> <p>IO-240-A, -B</p> <p>IO-346-A, -B</p> <p>IO-470-D, -E, -F, -G, -H, -J, -K, -L, -LO, -M, -N, -P, -R, -S, -T, -U, -V, -VO</p> <p>IO-520-A, -B, -BA, -BB, -C, -CB, -D, -E, -F, -J, -K, -L, -M, -MB, -N, -NB</p> <p>IO-550-A, -B, -C, -D, -E, -F, -G, -L, -N, -P, -R</p> <p>O-470-4, -11, -11B, -11-CI, -11B-CI, -13, -13A, -15</p> <p>TSIO-470-B, -C, -D</p> <p>TSIO-520-A, -B, -C,</p>

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				Teledyne Continental Motors	-D, -E, -G, -H, -J, -K, -L, -M, -N, -P, -R, -BB, -DB, -EB, -JB, -KB, -LB, -NB, -T, -U, -UB, -VB, -WB, -AE, -AF
Vacuum Pump Assembly	RAP216CW	Nichols-Airborne P/N: 212CW, E212CW, 216CW Aero Accessories P/N: AA212CW, AA216CW, AA3216CW, AA-3226CW Federal Mogul P/N: CH216CW Rapco, Inc. P/N: RA212CW, RA216CW	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP216CW <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	Franklin	6A-335-A, -B, -B1A, -D 6A-350-C1, -C1A, -C2, -C2A, -D, -D1, -D1A, -D1B, -A, -B, -C1R, -C1L
Vacuum Pump Assembly	RAP216CW	Nichols-Airborne P/N: 212CW, E212CW, 216CW Aero Accessories P/N: AA212CW, AA216CW, AA3216CW, AA-3226CW Federal Mogul P/N: CH216CW Rapco, Inc. P/N: RA212CW, RA216CW	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP216CW <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	AVCO Lycoming	GO-435, -C2 (O-435-17), -C2A, -C2A2, -C2B, -C2B1, -C2B2, -C2C, -C2D, -C2E, -D1 L1O-360-C1E6, -M1A T1O-541-A1A, -E1A4, -E1B4, -E1C4, -E1D4
Vacuum Pump Assembly	RAP216CW	Nichols-Airborne P/N: 212CW, E212CW, 216CW Aero Accessories P/N: AA212CW, AA216CW, AA3216CW, AA-3226CW Federal Mogul P/N: CH216CW Rapco, Inc. P/N: RA212CW, RA216CW	Test and Computations per 14 CFR § 21.303 <u>Dwg No.:</u> RAP216CW <u>Rev.:</u> - <u>Date:</u> FEB/23/2010*	Rolls-Royce Corporation	250-B15A, -B15E, -B15G, -B17, -B17B, -B17C, -B17D, -B17E, -B17F, -B17F/1, -B17F/2

-----END OF LISTING-----

NOTE 1: (*) Denotes "Or Later, FAA Approved Revisions"

NOTE 2: Provide minor design changes in a manner as determined by the ACO. Handle major design changes to drawings and specifications in the same manner as that for an original FAA-PMA.

NOTE 3: The FAA approved ICA for the above parts with their designs. These ICA may refer to those of the respective parts from the holders of type certificates. Otherwise, provide supplemental ICA for differences in the replacement parts. Make referral statements or supplemental ICA readily available per 14 CFR 21.50.

A handwritten signature in black ink, appearing to read "Richard P. Warren", written over a horizontal line.

Richard P. Warren
Manager, Minneapolis MIDO