SAE RECOMMENDED PRACTICE J624 JUN84
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Tapped and Flanged Exhaust Connections for Small Engines—SAE J624 JUN84

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ϕ TAPPED AND FLANGED EXHAUST CONNECTIONS FOR SMALL ENGINES—SAE J624 JUN84

SAE Recommended Practice

Report of the Construction and Industrial Machinery Technical Committee, approved June 1960, completely revised by the Engine Committee June 1984.

1. Purpose—This SAE Recommended Practice is intended to define tapped and flanged exhaust connections for small gasoline engines.

2. Scope—This recommended practice applies to domestic four-cycle air- and water-cooled engines having a maximum of 20 hp (14.9 kW) or less in power output and/or 50 in³ (0.82 L) or less in displacement, with horizontal or vertical crankshafts.

2.1 The engine shall be furnished with a minimum of either a tapped exhaust port or two tapped holes and flat port face making possible use of a threaded connector or one of the flanges shown on Fig. 1.

2.2 Exhaust flanges are sized to be used with mild steel or aluminized steel butt welded tubing.

3. Recommended port tap sizes and exhaust flanges for both horizontal and vertical crankshaft engines are noted in Fig. 1.

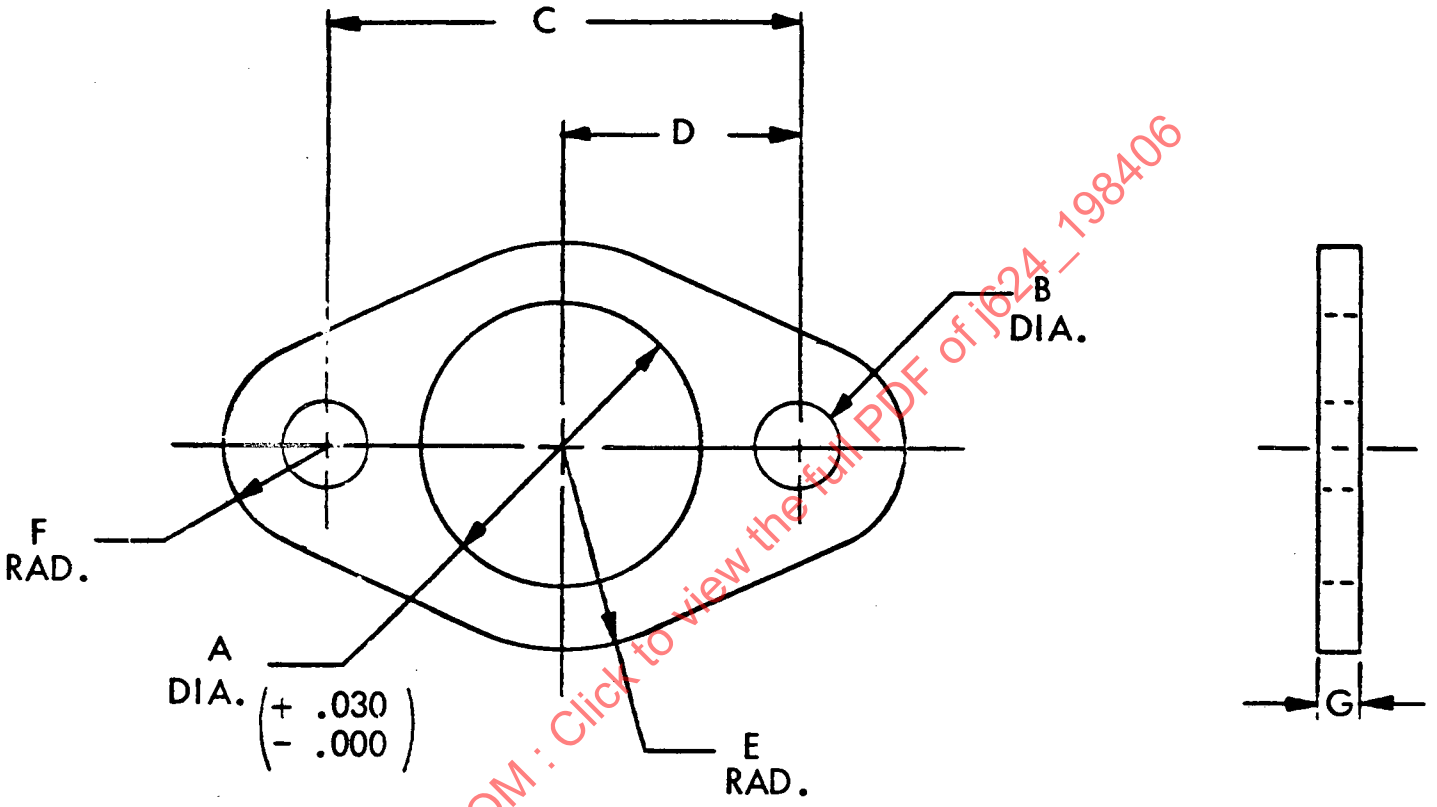

FIG. 1—EXHAUST FLANGE

	ENGINE HORSEPOWER PER CYLINDER							
	1 thru 4 hp 0.75 thru 3 kW		4 thru 8 hp 3 thru 6 kW		8 through 16 hp 6 thru 12 kW		16 thru 20 hp 12 thru 15 kW	
	Exhaust Port Tap							
	1/2–14 NPSF		3/4–14 NPSF		1–11-1/2 NPSF		1-1/4–11-1/2 NPSF	
	in	mm	in	mm	in	mm	in	mm
Bore Diameter A	0.635	16.13	0.885	22.48	1.135	28.83	1.385	35.18
Hole Diameter A	0.281	7.14	0.281	7.14	0.343	8.71	0.343	8.71
Hole Spacing C	1.375	34.93	1.625	41.28	2.000	50.80	2.250	57.15
Center Distance D	0.688	17.48	0.812	20.62	1.000	25.40	1.125	28.58
Flange Radius E	0.62	15.75	0.75	19.05	0.88	22.35	1.000	25.40
Flange Radius F	0.31	7.87	0.31	7.87	0.44	11.18	0.44	11.18
Flange Thickness G	0.125	3.18	0.125	3.18	0.188	4.78	0.188	4.78

Tolerance unless specified: three place decimals, ±0.010 in ±0.25 mm
two place decimals, ±0.030 in ±0.76 mm

The ϕ symbol is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. If the symbol is next to the report title, it indicates a complete revision of the report.