

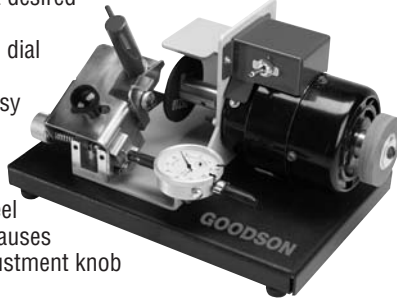
Gas Porting Tool Kits Replacement Parts

Description	Size	Order No.
Gas Porting Tool Kits	.043"	GPT-043
	.062" / 1.5mm	GPT-062
	.078"	GPT-078
Replacement Drill Bits (5 pack)	.040" for GPT-043	GPT-040-DB
	.062" for GPT-062 & GPT-078	GPT-062-DB

Goodson's Powered Ring Filer with deburring wheel is available to make any ring filing quick and easy!

PRF-812DW

- No more tedious filing and rechecking to get desired end gap, set it once and cut multiple rings • Easy to read integral dial indicator and positive ring stop make repeatable precision quick and easy
- Fits 2½"-5"/63.5-127mm diameter rings • High torque motor
- Adjustable guide holds rings square to the cutting wheel • Table pivots past cutting wheel
- No open ways to gather grinding dust that causes premature wear • Handy knurled in-feed adjustment knob
- Order No. **PRF-812DW**



See page 102 of the 2009 catalog for more details or give us a call at 1-800-533-8010

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Tools and Supplies for Engine Builders

156 Galewski Drive • P.O. Box 847 • Winona, MN 55987-0847

Toll-Free 1-800-533-8010 • Local 507-452-1830 • www.goodson.com

Gas Porting Tool Kits Instructions

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Gas Porting

Please read instructions before using.



General Information

Gas Porting Tools for High Performance Pistons

You can virtually eliminate side ring clearance by drilling gas ports in your piston ring lands. These tiny ports apply compression pressure directly to the back of the ring pushing it against the cylinder wall with greater force while minimizing compression leakage. Gas ports work best with piston-compression heights of 1.2" or less on engines running at high rpm (7,000 or higher).

These simple Tool Kits take all of the guess-work out of gas porting and include everything you'll need to get started. The complete kit includes: Drill Fixture, Depth Bushing and one Drill Bit

Instructions

Set Screw **A&B** shown (Figure 1) are used to eliminate fixture rock parallel to ring groove. Turn in equal distance until no movement is observed. This stabilizes drill perpendicular to piston.

1. Determine the number of gas ports you will need and mark them at evenly spaced intervals on your piston. Measure the width of the ring groove and select the appropriate tool. (Figure 2)

TIP: Layout can be as simple as using tape measure wrapped around piston top, and marking with a marker. Usually 7-9 ports are used.

2. Insert the drill bit into the drilling fixture and slip on the depth stop. Using roll pin **C** (Figure 1) as the drilling depth stop. Advance the bit until the very point of it shows on the curved side of the fixture. Chuck the bit into your drill. (Figure 3)

Complete Kit includes:
Gas Porting Tool, Drill Bit,
& Collar



Figure 1

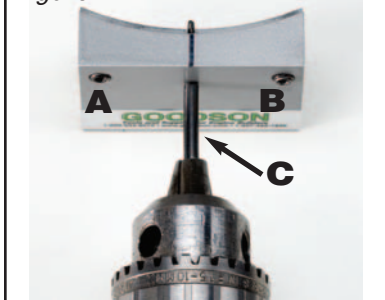


Figure 2



Figure 3



Warning: Drilling gas port deeper than ring groove can destroy the piston by drilling through piston valve reliefs or inside of piston.

3. Align the drilling fixture with your first mark. Use the set screws on the outer edges of the fixture to reduce any rocking or play that may occur. (Figure 4)

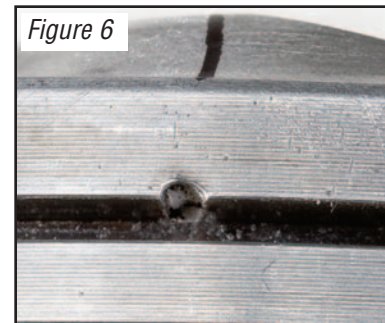
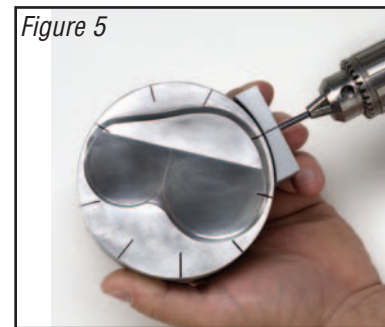
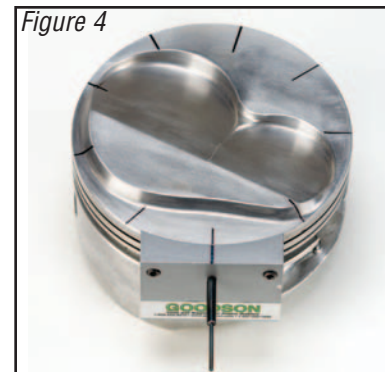
4. Hold the piston, drilling fixture and drill firmly. Advance the drill bit just far enough to touch the back of the ring land. **DO NOT drill beyond that point.** (Figure 5)

Align groove on tool top to marker line on piston. Drill first port carefully checking hole depth. To continue drilling, align marks and proceed to correct depth. **Adjust drill stop if incorrect.**

5. The image to the right (Figure 6) is an example of what your gas port should look like when you're done. Once desired depth is obtained. Repeat these steps at the remaining points you've marked.

6. Drill bit will leave a burr. Use a fine file or deburring tool to complete. Ring must fit freely to operate correctly.

- Use Goodson's **DFS-2 or DFS-6** Diamond Files for deburring.



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