



The Cutting Edge ACCESSORIES

ROTTLER CARBIDE PILOT CATALOG

SG7 – SG8 – SG9 SG9A AND SG80A MODELS



ROTTLER MANUFACTURING COMPANY

8029 South 200th Street ~ Kent, Washington 98032 USA

Phone: (253) 872-7050 ~ Fax: (253) 395-0230

Web Site: www.rottlermfg.com



12-20-08

Rottler Unipilot Solid Carbide Pilots are manufactured from fine grain sintered tungsten carbide and are ground to a very high degree of accuracy, straightness and surface finish - designed for a life time of precision machining!

The part number of the pilot represents the actual diameter in metric of the straight/parallel part of the pilot where the pilot fits into the valve guide.

The length of the pilot is also critical; the string part of the pilot should go true the full length of the valve guide and about .250" (6.35mm) of the taper part of the pilot. The shank needs to go about 90% minimum of the length of the tool holder.

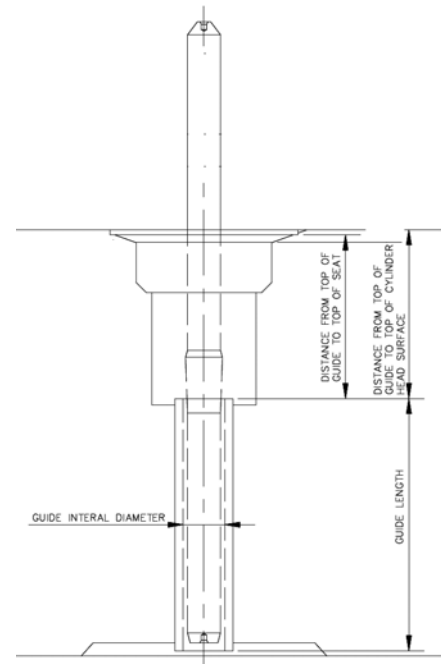
Measure the distance from the top of the valve guide to the surfaces of the cylinder head, and make sure it has enough shank for the tool holder to go true and have a full length support. Some Diesel cylinder heads like Caterpillar are common to need as extra length pilots. (See figure)

We have some extended length pilots on stock, see list below on extended Length pilot.

For example for Caterpillar 3500E cylinder head we recommended few sizes:

UCP0946EL9 means that the diameter of the part of the pilot that goes into the valve guide is **9.46mm (0.3724")** and the length is **9.00" (228.60mm)**.

The pilot size are the same length that we have on the standard length pilots, the extended length is only on the shank part of the pilot.



Example on standard length pilot (**7.500" – 190.50mm**):

UCP0700 means that the diameter of the part of the pilot that goes into the valve guide is **7.00mm (0.2756")**

UCP1270 means that the diameter of the part of the pilot that goes into the valve guide is **12.70mm (0.5000")**

Pilots are available in increments of .01mm (0.0004"). Normally, a small amount of clearance approx .01mm (0.0004") is required between the pilot and the valve guide.

Most new valve guides are manufactured to a **nominal size** and the valve stem diameters are manufactured to be smaller than the nominal size to allow clearance for heat expansion of the valve stem when the engine is operating. For example: a 7mm valve guide has an internal diameter of exactly 7.00mm (.2756") The valve stem diameter of the intake valve is 6.98mm (.2748") and the exhaust is 6.96mm (.2740"). In order for the pilot to fit most all valve guides, the first choice could be UCP0699 to give .01mm (0.0004") clearance. If the valve guide is used and has some wear, then the second choice of pilot could be UCP0700(0.2756").

Rottler makes 3 sizes of shanks of pilots:

6.00mm (0.2362") for small valves guides 6mm (0.236") and below. The part number for these pilots is UCPM.

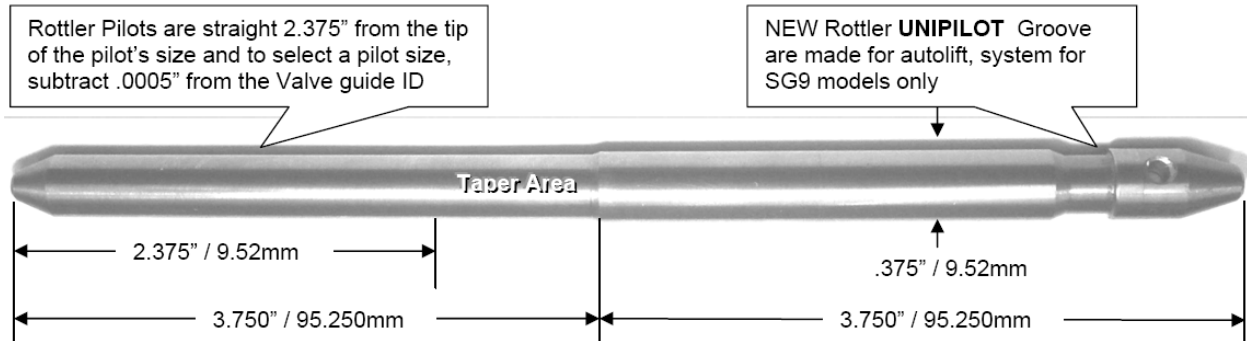
0.375" (9.52mm) for common size valve guides, 6-14mm (.236-.625"). The part number for these pilots is UCP.

20mm (0.7874mm) for large valve guides for SG80A machine. These pilots are made to order specifications.



The Cutting Edge ACCESSORIES

Below is an example of a standard 9.52mm with 0.375" (9.52mm) shank diameter pilot:



NOTE:

See accessories catalog for list of Tooling Carbide Inserts Profiles and list of Carbide Pilots

SUGGESTED 6.00MM SHANK DIAMETER SOLID CARBIDE PILOTS	
UCPM0397	3.97mm .1563" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0398	3.98mm .1567" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0399	3.99mm .1570" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0400	4.00mm .1575" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0445	4.45mm .1752" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0447	4.47mm .1760" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0448	4.48mm .1764" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0449	4.49mm .1768" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0450	4.50mm .1772" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0497	4.97mm .1957" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0498	4.98mm .1961" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0499	4.99mm .1964" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0500	5.00mm .1968" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0546	5.46mm .2149" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0547	5.47mm .2153" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0548	5.48mm .2157" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0549	5.49mm .2161" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0550	5.50mm .2165" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0551	5.51mm .2169" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0552	5.52mm .2173" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0556	5.56mm .2189" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0592	5.92mm .2331" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0595	5.95mm .2343" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0597	5.97mm .2350" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0598	5.98mm .2354" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0599	5.99mm .2358" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0600	6.00mm .2362" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0601	6.01mm .2366" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0602	6.02mm .2370" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0651	6.51mm .2563" UNIPILOT Carbide Pilot with 6.00mm Shank diameter



The Cutting Edge ACCESSORIES

UCPM0658	6.58mm .2590" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0659	6.59mm .2594" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0660	6.60mm .2598" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0661	6.61mm .2602" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0697	6.97mm .2744" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0699	6.97mm .2752" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0700	7.00mm .2756" UNIPILOT Carbide Pilot with 6.00mm Shank diameter
UCPM0714	7.14mm .2811" UNIPILOT Carbide Pilot with 6.00mm Shank diameter

.375" (9.52mm) SHANK DIA. SOLID CARBIDE PILOTS (STANDARD LENGTH)

SUGGESTED .375" SHANK DIAMETER SOLID CARBIDE PILOTS

FCP0445	4.45mm .1752" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0445	4.45mm .1752" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0497	4.97mm .1957" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0498	4.98mm .1961" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0499	4.99mm .1965" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0500	5.00mm .1968" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0544	5.44mm .2141" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0547	5.47mm .2153" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0548	5.48mm .2157" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0549	5.49mm .2161" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0550	5.50mm .2165" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0551	5.51mm .2169" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0552	5.52mm .2173" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0556	5.56mm .2188" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0591	5.91mm .2327" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0595	5.95mm .2343" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0597	5.97mm .2350" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0598	5.98mm .2354" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0599	5.99mm .2358" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0600	6.00mm .2363" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0601	6.01mm .2366" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0602	6.02mm .2370" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0603	6.03mm .2374" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0606	6.06mm .2386" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0627	6.27mm .2468" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0634	6.34mm .2496" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0636	6.36mm .2504" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0637	6.37mm .2508" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0646	6.46mm .2543" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0649	6.49mm .2555" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0650	6.50mm .2559" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0655	6.55mm .2578" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0656	6.56mm .2583" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0657	6.57mm .2587" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0658	6.58mm .2591" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0659	6.59mm .2594" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0660	6.60mm .2598" Fixed Carbide Pilot .375" (9.52mm) Shank diameter



The Cutting Edge ACCESSORIES

FCP0661	6.61mm .2602" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0662	6.62mm .2606" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0688	6.88mm .2709" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0691	6.91mm .2720" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0692	6.92mm .2724" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0693	6.91mm .2728" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0694	6.94mm .2732" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0695	6.95mm .2736" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0696	6.96mm .2740" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0697	6.97mm .2744" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0698	6.98mm .2748" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0699	6.99mm .2752" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0700	7.00mm .2756" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0701	7.01mm .2760" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0702	7.02mm .2764" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0703	7.03mm .2768" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0704	7.04mm .2772" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0705	7.05mm .2776" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0706	7.06mm .2780" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0707	7.07mm .2783" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0708	7.08mm .2787" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0709	7.09mm .2791" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0710	7.10mm .2795" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0711	7.11mm .2799" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0713	7.13mm .2807" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0714	7.14mm .2811" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0715	7.15mm .2814" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0716	7.16mm .2818" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0719	7.19mm .2830" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0720	7.20mm .2835" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0721	7.21mm .2839" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0722	7.22mm .2843" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0724	7.24mm .2850" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0725	7.25mm .2854" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0734	7.34mm .2890" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0742	7.42mm .2921" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0743	7.43mm .2925" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0750	7.50mm .2953" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0777	7.77mm .3059" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0785	7.85mm .3091" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0786	7.86mm .3094" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0787	7.87mm .3098" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0788	7.88mm .3102" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0789	7.89mm .3106" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0790	7.90mm .3110" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0791	7.91mm .3114" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0792	7.92mm .3118" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0793	7.93mm .3122" Fixed Carbide Pilot .375" (9.52mm) Shank diameter



The Cutting Edge ACCESSORIES

FCP0794	7.94mm .3126" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0795	7.95mm .3130" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0796	7.96mm .3134" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0797	7.97mm .3138" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0798	7.98mm .3142" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0799	7.99mm .3146" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0800	8.00mm .3150" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0801	8.01mm .3154" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0802	8.02mm .3157" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0803	8.03mm .3161" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0804	8.04mm .3165" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0805	8.05mm .3169" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0806	8.06mm .3173" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0807	8.07mm .3177" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0808	8.08mm .3181" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0811	8.11mm .3192" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0820	8.20mm .3228" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0825	8.25mm .3248" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0826	8.26mm .3252" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0828	8.28mm .3260" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0829	8.29mm .3264" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0830	8.30mm .3268" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0831	8.31mm .3272" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0832	8.32mm .3276" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0833	8.33mm .3279" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0834	8.34mm .3283" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0835	8.35mm .3287" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0836	8.36mm .3291" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0838	8.38mm .3299" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0846	8.46mm .3331" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0847	8.47mm .3334" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0848	8.48mm .3339" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0849	8.49mm .3342" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0850	8.50mm .3346" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0851	8.51mm .3350" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0858	8.58mm .3378" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0859	8.59mm .3382" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0860	8.60mm .3386" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0864	8.64mm .3402" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0865	8.65mm .3405" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0867	8.67mm .3413" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0868	8.68mm .3417" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0869	8.69mm .3421" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0870	8.70mm .3425" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0871	8.71mm .3429" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0872	8.72mm .3433" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0873	8.73mm .3437" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0874	8.74mm .3441" Fixed Carbide Pilot .375" (9.52mm) Shank diameter



The Cutting Edge ACCESSORIES

FCP0875	8.75mm .3445" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0876	8.76mm .3449" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0877	8.77mm .3453" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0878	8.78mm .3457" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0879	8.79mm .3461" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0880	8.80mm .3464" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0885	8.85mm .3484" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0891	8.91mm .3508" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0892	8.92mm .3512" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0894	8.94mm .3519" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0895	8.95mm .3523" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0896	8.96mm .3527" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0897	8.97mm .3531" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0898	8.98mm .3535" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0899	8.99mm .3539" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0900	9.00mm .3543" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0901	9.01mm .3547" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0902	9.02mm .3551" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0904	9.04mm .3559" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0905	9.05mm .3563" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0906	9.06mm .3566" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0907	9.07mm .3571" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0908	9.08mm .3575" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0909	9.09mm .3579" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0910	9.10mm .3583" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0911	9.11mm .3587" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0932	9.32mm .3569" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0935	9.35mm .3681" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0936	9.36mm .3685" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0941	9.41mm .3705" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0942	9.42mm .3709" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0943	9.43mm .3713" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0944	9.44mm .3717" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0945	9.45mm .3720" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0946	9.46mm .3724" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0947	9.47mm .3728" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0948	9.48mm .3732" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0949	9.49mm .3736" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0950	9.50mm .3740" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0951	9.51mm .3744" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0952	9.52mm .3748" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0953	9.53mm .3752" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0955	9.55mm .3760" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0956	9.56mm .3764" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0958	9.58mm .3772" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0960	9.60mm .3780" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0964	9.64mm .3795" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0965	9.65mm .3800" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.



The Cutting Edge ACCESSORIES

FCP0966	9.66mm .3803" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0967	9.67mm .3807" Fixed Carbide Pilot .375" (9.52mm) Shank diameter.
FCP0968	9.68mm .3811" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0969	9.69mm .3815" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0973	9.73mm .3831" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0974	9.74mm .3834" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0980	9.80mm .3858" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0983	9.83mm .3870" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0984	9.84mm .3874" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0985	9.85mm .3878" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0987	9.87mm .3886" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0988	9.88mm .3890" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0989	9.89mm .3894" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0990	9.90mm .3898" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0992	9.92mm .3906" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0994	9.94mm .3913" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0995	9.95mm .3917" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0996	9.96mm .3906" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0997	9.97mm .3925" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0998	9.98mm .3929" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP0999	9.99mm .3933" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1000	10.00mm .3937" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1002	10.02mm .3945" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1004	10.04mm .3953" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1005	10.05mm .3957" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1006	10.06mm .3961" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1016	10.16mm .4000" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1020	10.20mm .4016" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1021	10.21mm .4020" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1024	10.24mm .4031" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1026	10.26mm .4039" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1027	10.27mm .4043" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1028	10.28mm .4047" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1051	10.51mm .4138" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1054	10.54mm .4150" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1090	10.90mm .4291" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1092	10.92mm .4299" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1093	10.93mm .4303" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1094	10.94mm .4307" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1096	10.96mm .4315" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1097	10.97mm .4319" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1098	10.98mm .4323" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1099	10.99mm .4327" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1100	11.00mm .4331" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1101	11.01mm .4335" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1102	11.02mm .4339" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1103	11.03mm .4343" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1104	11.04mm .4346" Fixed Carbide Pilot .375" (9.52mm) Shank diameter



The Cutting Edge ACCESSORIES

FCP1105	11.05mm .4350" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1107	11.07mm .4358" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1108	11.08mm .4362" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1109	11.09mm .4366" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1110	11.10mm .4370" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1111	11.11mm .4374" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1114	11.14mm .4385" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1116	11.16mm .4393" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1119	11.19mm .4405" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1120	11.20mm .4409" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1123	11.23mm .4421" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1130	11.30mm .4449" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1132	11.32mm .4457" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1140	11.40mm .4488" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1144	11.44mm .4504" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1145	11.45mm .4508" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1146	11.46mm .4512" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1147	11.47mm .4516" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1148	11.48mm .4520" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1149	11.49mm .4524" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1150	11.50mm .4528" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1151	11.51mm .4531" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1168	11.68mm .4598" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1186	11.86mm .4645" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1187	11.87mm .4673" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1195	11.95mm .4705" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1196	11.96mm .4709" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1197	11.97mm .4712" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1198	11.98mm .4717" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1199	11.99mm .4720" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1200	12.00mm .4724" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1201	12.01mm .4728" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1202	12.02mm .4732" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1204	12.04mm .4740" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1239	12.39mm .4878" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1242	12.42mm .4890" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1250	12.50mm .4921" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1251	12.51mm .4925" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1252	12.52mm .4930" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1260	12.60mm .4961" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1261	12.61mm .4965" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1262	12.62mm .4968" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1263	12.63mm .4972" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1264	12.64mm .4976" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1265	12.65mm .4980" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1268	12.68mm .4992" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1269	12.69mm .4996" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1270	12.70mm .5000" Fixed Carbide Pilot .375" (9.52mm) Shank diameter



The Cutting Edge ACCESSORIES

FCP1271	12.71mm .5004" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1274	12.74mm .5015" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1397	13.97mm .5500" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1398	13.98mm .5504" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1422	14.22mm .5600" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1425	14.25mm .5610" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1435	14.35mm .5650" Fixed Carbide Pilot .375" (9.52mm) Shank diameter
FCP1903	19.03mm .7492" Fixed Carbide Pilot .375" (9.52mm) Shank diameter

SUGGESTED EXTENDED LENGTH CARBIDE PILOTS FOR .375" (952MM) SHANK DIAMETER

FCP0793EL9	7.93mm .3122" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length)
FCP0794EL9	7.94mm .3126" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length)
FCP0868EL9	8.68mm .3417" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length)
FCP0876EL9	8.76mm .3449" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) Detroit 60 Series
FCP0877EL9	8.77mm .3453" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) Detroit 60 Series
FCP0878EL9	8.78mm .3457" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) Detroit 60 Series
FCP0925EL9	9.25mm .3645" Fixed Carbide Pilot .375" (9.52mm) Shank Diameter (9.00" extended length) Waukesha Cylinder heads
FCP0926EL9	9.26mm .3648" Fixed Carbide Pilot .375" (9.52mm) Shank Diameter (9.00" extended length) Waukesha Cylinder heads
FCP0946EL9	9.46mm .3724" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) CAT 3500
FCP0947EL9	9.47mm .3728" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) CAT 3500
FCP0948EL9	9.48mm .3732" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) CAT 3500
FCP0949EL9	9.49mm .3736" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) CAT 3500
FCP0950EL9	9.50mm .3740" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) CAT 3500
FCP0951EL9	9.51mm .3744" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) CAT 3500
FCP0952EL9	9.52mm .3748" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length) CAT 3500
FCP1029-10EL	10.29mm .4051" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (10.00" extended length AIRCRAFT APPLICATION ONLY)
FCP1100EL9	11.00mm .4331" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length)
FCP1249EL12	12.49mm .4917" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (12.00" extended length)
FCP1260EL9	12.60mm .4961" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length)
FCP1261EL9	12.61mm .4965" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length)
FCP1269EL9	12.69mm .4996" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (9.00" extended length)
FCP1270EL12	12.70mm .500" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (12.00" extended length) CAT D8 - D9 -353 - 342 Engines
FCP1401EL12	14.01 mm .5516" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (12.00" extended length)
FCP561EL12	14.22mm .5600" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (12.00" extended length)
FCP1423EL12	14.23mm .5602" Fixed Carbide Pilot .375" (9.52mm) Shank diameter (12.00" extended length)



SUGGESTED FIXED CARBIDE PILOT FOR LARGE CYLINDER HEADS 20.00mm Shank Diameter

FCP434EL1220	11.04mm .4346" Fixed Carbide Pilot .7874" (20.00mm) Shank Diameter (12.00" Length) Waukesha Cylinder heads VGF series
FCP435EL1220	11.05mm .4350" Fixed Carbide Pilot .7874" (20.00mm) Shank Diameter (12.00" Length) Waukesha Cylinder heads VGF series
FCP499EL1220	12.69mm .4996" Fixed Carbide Pilot .7874" (20.00mm) Shank Diameter (12.00" Length) Waukesha Cylinder heads 1197 series
FCP500EL1220	12.70mm .5000" Fixed Carbide Pilot .7874" (20.00mm) Shank Diameter (12.00" Length) Waukesha Cylinder heads 1197 series
FCP560EL1220	.560" - 14.27mm Fixed Carbide Pilot (20.00mm) Shank diameter (12.00" Length) VHP7042 - GL7042 -3711 Waukesha Cylinder heads
FCP562EL1220	.562" - 14.27mm Fixed Carbide Pilot (20.00mm) Shank diameter (12.00" Length) VHP7042 - GL7042 -3711 Waukesha Cylinder heads
FCP625EL1220	.625" - 15.87mm Fixed Carbide Pilot (20.00mm) Shank diameter (12.00" Length) VHP7042 - GL7042 -3711 Waukesha Cylinder heads
FCP630EL1520	.630" - 16.00mm Fixed Carbide Pilot (20.00mm) Shank diameter (15.00" Length) For Caterpillar 3600 Cylinder Head
FCP631EL1520	16.02mm .631" Fixed Carbide Pilot .7874" (20.00mm) Shank diameter (15.00" Length) For Caterpillar 3600 Cylinder Head
FCP632EL1520	16.00mm .632" Fixed Carbide Pilot .7874" (20.00mm) Shank diameter (15.00" Length) For Caterpillar 3600 Cylinder Head
FCP872EL1320	22.15mm .872" Fixed Carbide Pilot .7874" (20.00mm) Shank diameter (13.00" Length) For white Superior Cylinder Head
FCP873EL1320	22.17mm .873" Fixed Carbide Pilot .7874" (20.00mm) Shank diameter (13.00" Length) For white Superior Cylinder Head
FCP874EL1320	22.20mm .874" Fixed Carbide Pilot .7874" (20.00mm) Shank diameter (13.00" Length) For white Superior Cylinder Head



ROTTLER SPECIAL PILOT ORDER FORM

Company Name: _____ Account No.: _____
 Contact Name: _____ Phone No.: _____

The part number of the pilot represents the actual diameter in metric of the straight/parallel part of the pilot where the pilot fits into the valve guide.

The length of the pilot is also critical; the string part of the pilot should go true the full length of the valve guide and about .250" (6.35mm) of the taper part of the pilot. The shank needs to go about 90% minimum of the length of the tool holder.

Measure the distance from the top of the valve guide to the surfaces of the cylinder head, and make sure it has enough shank for the tool holder to go true and have a full length support. Some Diesel cylinder heads like Caterpillar are common to need as extra length pilots. (See figure)

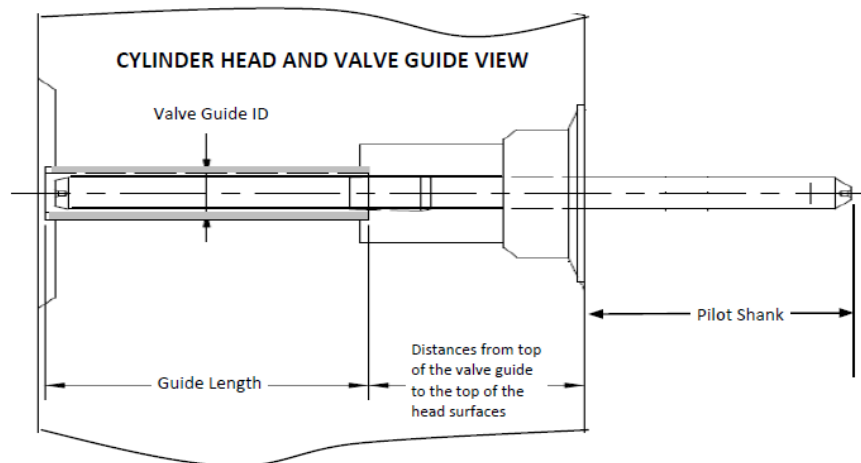
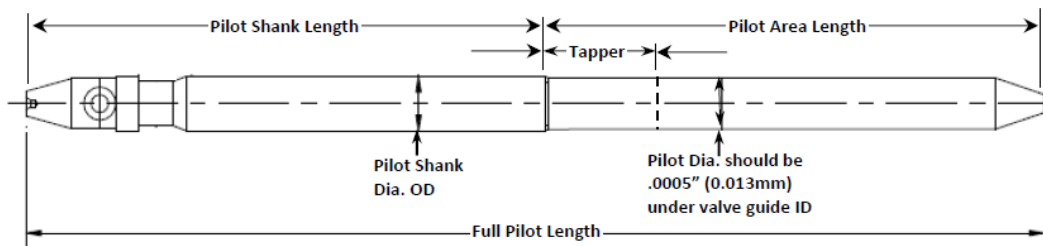
Example on standard length pilot (7.500" – 190.50mm):

UCP0700 means that the diameter of the part of the pilot that goes into the valve guide is **7.00mm (0.2756")**

UCP1270 means that the diameter of the part of the pilot that goes into the valve guide is **12.70mm (0.5000")**

Pilots are available in increments of .01mm (0.0004"). Normally, a small amount of clearance approx .01mm (0.0004") is required between the pilot and the valve guide.

Most new valve guides are manufactured to a **nominal size** and the valve stem diameters are manufactured to be smaller than the nominal size to allow clearance for heat expansion of the valve stem when the engine is operating. For example: a 7mm valve guide has an internal diameter of exactly 7.00mm (.2756") The valve stem diameter of the intake valve is 6.98mm (.2748") and the exhaust is 6.96mm (.2740"). In order for the pilot to fit most all valve guides, the first choice could be UCP0699 to give .01mm (0.0004") clearance. If the valve guide is used and has some wear, then the second choice of pilot could be UCP0700 (0.2756").



Engine Maker and Model	Valve Guide ID	Pilot Shank Dia.	Pilot Size Dia.	Pilot Area length	Pilot Shank Length	Full Pilot length