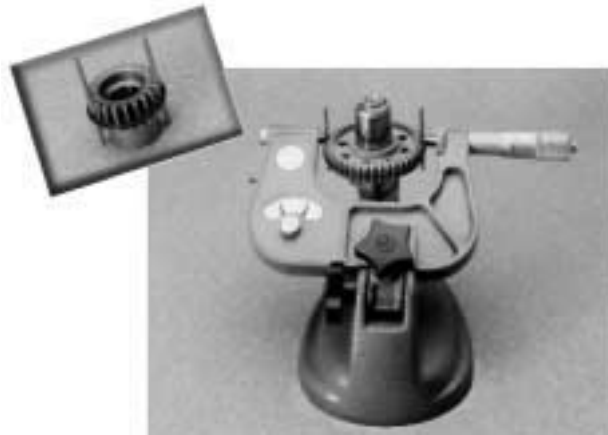
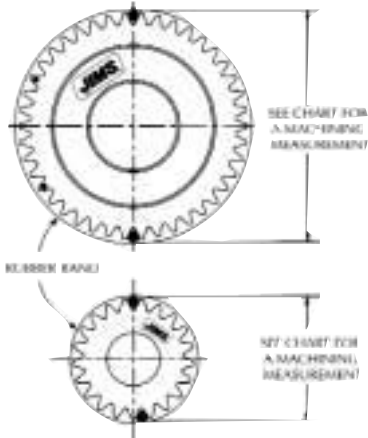




# Instruction Sheet For Tool #1110 & #1111

## Cam and Pinion Gear Gauge Pins for checking cam and pinion gear sizes.

#1110 - Use on Big Twin 1954-89  
#1111 - Use on Big Twin 1990 Present



*Please refer to H.D.® Service Manual for specifications.*

Choosing the right size pinion gear to match the cam gear is very important for a quieter and longer running engine. If too much gear lash is present, you will hear a clicking noise (sounding like bad lifters), which is the cam falling back on the pinion gear as one valve opens and another one closes. To eliminate the possible clicking, and to have a slight whine when motor is cold (which goes away when motor heats up), do the following:

1. With cam gear clean, hold gauge pins in place with a rubber band (see diagram).
2. Using the best micrometer, one that will read in .0000, measure over pins.
3. Match your micrometer reading with chart "A" or "B".  
 Use .105 pins to measure pinion gears - 1954-1977 use chart "A"  
 Use .105 pins to measure pinion gears - 1978-1989 use chart "B"  
 Use .108 pins to measure pinion gears - 1990-present.
4. For example if the gear you are checking measures between 2.7675-2.768, then your cam is going to need a pinion gear JIMS® part #24010-RE to be a matching set. **\*\*SEE CHART A\*\***
5. If your cam gear measures between 2.7354-2.7364 then your cam is going to need a pinion gear, JIMS® part #24043-48 to be matching set. **\*\*SEE CHART B\*\***

CHART A	Order No.	Gear Size Over .105 pins	Cam Gear Over .105 pins	Color Code
No.24010-OR	1.4490-1.4485	2.7665-2.767	Orange	
No.24010-BL	1.4485-1.448	2.767-2.7675	Black	
No.24010-RE	1.4480-1.4475	2.7675-2.768	Red	
No.24010-BLU	1.4475-1.447	2.768-2.7685	Blue	
No.24010-GR	1.4470-1.4465	2.7685-2.769	Green	
No.24010-WH	1.4465-1.446	2.769-2.7695	White	
No.24010-BR	1.4460-1.4455	2.7695-2.770	Brown	
No.24010-YE	1.4455-1.445	2.770-2.7705	Yellow	
No.24010-YERE	1.445-1.4445	2.7705-2.771	Yellow / Red	
No.24010-BRRE	1.4445-1.444	2.771-2.7715	Brown / Red	

CHART B	Order No.	Gear Size Over .105 pins	Cam Gear Over .105 pins	Color Code
No.24040-78	1.4751-1.4756	2.7324-2.7334	Orange	
No.24041-78	1.4745-1.4751	2.7334-2.7344	White	
No.24042-78	1.4737-1.4745	2.7344-2.7354	Yellow	
No.24043-78	1.4729-1.4737	2.7354-2.7364	Red	
No.24044-78	1.4721-1.4729	2.7364-2.7374	Blue	
No.24045-78	1.4715-1.4721	2.7374-2.7384	Green	
No.24046-78	1.4710-1.4715	2.7384-2.7394	Black	

**CAUTION:** Wear safety glasses. Excessive force may damage parts! See JIMS® catalog for over 100 other top quality professional tools. The last tools you will ever need to buy.

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