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# Instruction Sheet For Part No.1290

## *JIMS® CAM GEAR INSTALLER*

This precision tool will locate the cam gear on any 1970-99 Big Twin cam shaft, and reposition it on another cam shaft in exactly the same position. Pressing the gear on in an advanced or retarded position is also possible. Save time and ensure accuracy time after time.

No.**1290** - *Use on all Single Cam 1970-99.*

Tools needed: Press Fit Lube, 2-ton press and 3/8" ball bearing

**NOTE:** *Read all instructions before using this tool.*

### Cam Gear Exchange Overview

1. Before removing the existing gear from the cam that you will be using, you must first record the position of that cam and gear combination. For a reference **(See Diagram A)**
2. Before installing the cam gear that you will be using, you must make sure that it matches the pinion gear you will be using.
3. Refer to JIMS® Catalog or H-D service manual for cam to pinion gear fitment chart.

**NOTE:** *Always wash cam and gears before installing into tool.* For Ease of aligning cam in tool, mark the backside of gear with a felt pen for pinion gear timing mark. **(See Diagram B).** Also take note of the top of tool. **(See Diagram C)** for early and late pinholes.

1. Place cam with gear into tool with pinion gear timing mark aligned with reference mark on top of tool. At the same time gently align the notch **(See Diagram D)** at the nose of cam with the locator pin in the bore of tool. **(See Diagram C)**. Gently rotate cam clockwise, until cam locks into tool.
   **NOTE:** *At this time the two knurled thumbscrews should be loose enough to move indexer plate clockwise or counter clockwise.*
2. Gently hold cam with light pressure in the clockwise direction, at the same time rotate indexer plate of tool clockwise or counter clockwise to align pinholes to be in the center of two gear teeth **(See Diagram B).**
   Gently slip in the two tapered pins No.1298 into either the L marked holes for late cams or the E marked holes for early cams. With both pins installed and still applying light pressure clockwise, finger tighten down the two knurled thumb-screws.
3. With thumbscrews tight, you can release pressure on cam. With your felt pen, mark the two tapered pin locations on the backside of gear. Just to be safe, record the degree that the tool is now locked at. If the long line on indexer plate of tool is between two of shorter lines, this will be considered one degree.
4. Remove cam from tool by gently pulling cam straight up away from tool. **NOTE:** *Always remove tapered pins from tool as a safe guard for the next gear installation.*
5. Press cam from gear using JIMS cam gear removal tool No.1390. **NOTE:** *You need to have .0017 to .0025 press fit, for a good cam to gear lock up.*

CAUTION: Wear safety glasses. Excessive force may damage parts and tool. See JIMS® catalog for over 200 other top quality professional tools. The last tools you will ever need to buy.



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6. With cam and gear washed and cleaned ready for reassembly, apply press fit lube to cam and gear.

7. Place gear back on cam tool with felt pen mark showing and aligned with pinion reference mark. Install tapered pins back in the holes they were removed from. **(See Diagram E)**

8. Gently place the cam into bore of gear. At the same time, turn the cam in a clockwise direction. The cam will drop down about 1/8". At the same time, all clockwise rotation will stop. **NOTE:** *All clockwise rotation will stop because the ignition drive notch has mated with locator pin in the bore of the tool* and the cam should make contact with the gear. While holding the cam in this position, place your 3/8" ball bearing into the center at the end of cam. You can start pressing cam into gear. As soon as the cam's shoulder makes contact with gear, the pressing is complete.

9. As a reference, check to see if large key in cam is 180° from to the pinion reference mark you put on backside of gear.

### Example of degreeing in a cam:

10. If you decide to alter cam timing, this tool will align the gear to cam within1/4 of a degree. With the tool still locked in position for the above cam. (For example: Let us say the above cam required the tool to be set at "O" degrees just like Diagram A). Next example: If you have degreed the above cam and it is indicated that you need to retard by 2 degrees.

### Proceed as follows:

11. After reading line 10 reinstall cam assembly in tool to make it easier to adjust. **NOTE:** *Do not install the tapered pins at this time.* Rotate cam assembly clockwise until cam locks into tool (See line 1.). Loosen the two knurled thumbscrews just enough to retard indexer plate 2 degrees. (Note: Each line lasered on tool base is two degrees).

12. Retighten the two knurled thumbscrews by hand only. (Check side of tool for 2 degrees of retard).

13. Remove gear from cam with JIMS® tool No.1390.

14. Follow line 6, 7, 8.

15. You can recheck your degreeing of cam, and/or install in motor per H-D® service manual. Follow any additional instructions supplied by camshaft manufacturer.





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DIAGRAM "A"
TOOL DEGREE MARKING

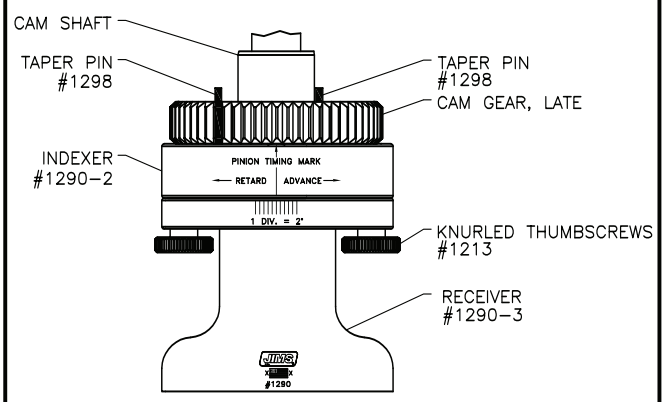



**DIAGRAM A**

DIAGRAM "B"
CAM WITH GEAR INSTALLED, GEAR BACKSIDE VIEW

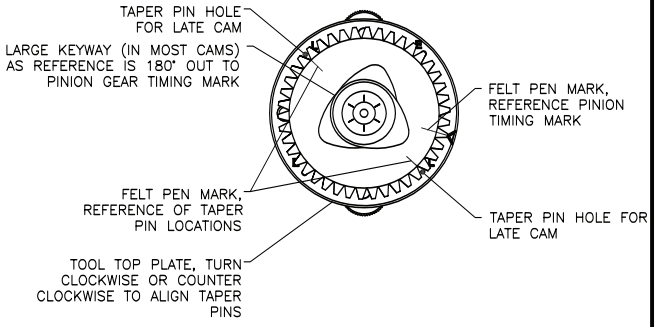



**DIAGRAM B**

DIAGRAM "C"
TOOL TOP VIEW

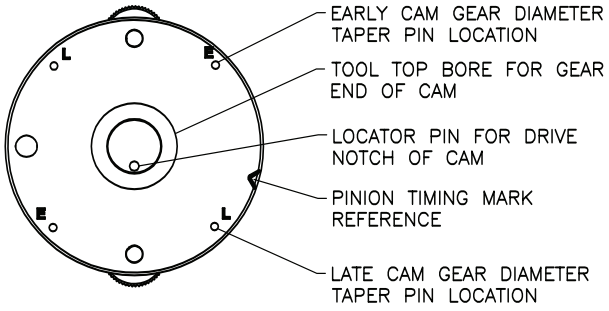



**DIAGRAM C**

DIAGRAM "D"
CAM FRONT VIEW

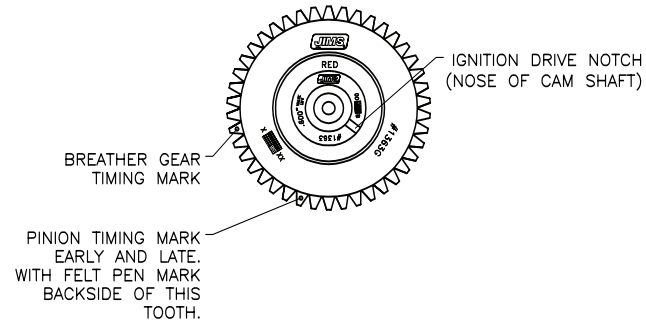



**DIAGRAM D**

DIAGRAM "E"
GEAR ON TOOL

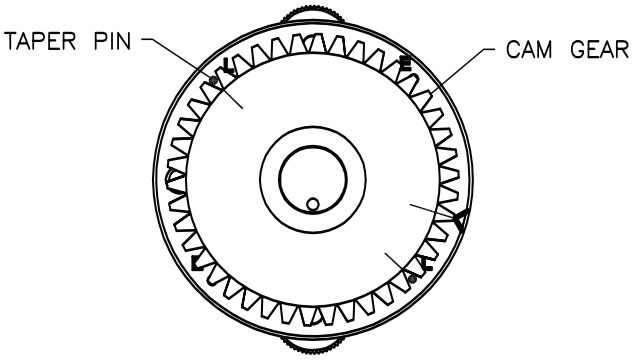
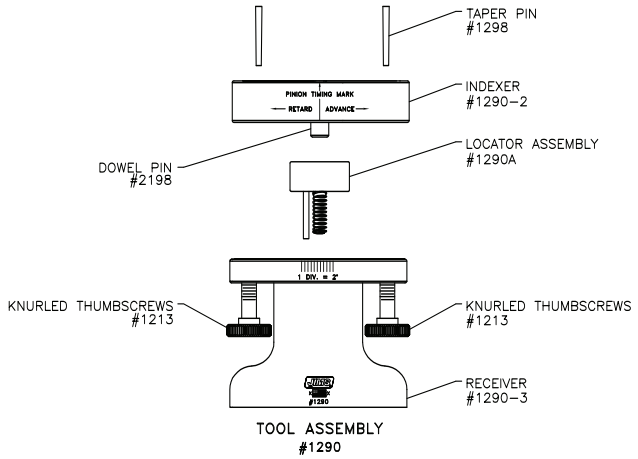



**DIAGRAM E**




TOOL ASSEMBLY
#1290

**DIAGRAM F**

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