

This is an Add-Script ?? .000

OVTC 24 JUNE 96

CRANKSHAFT/CAMSHAFT/IGNITION PHASING

USUAL -BY THE BOOK---FLYHEEL MARK FOR TDC

---LINE UP THE DOTS

----- DROP IN THE DIST. GEAR

OFF TO THE RACES-----

BUT-----THIS DOES NOT ALWAYS WORK ?

1/2 TOOTH OFFSET BEFORE REBUILD?

NEW / UNMARKED / REGROUND GEARS CAMSHAFTS

ENGINE DOES NOT PERFORM AS EXPECTED

NOTE MUCH EASIER TO PHASE AN ENGINE IN SHORT BLOCK FORM!!!!!!!

TDC RE FLYWHEEL / BLOCK

DIRECT DIAL TO PISTON

DIRECT CAM LOBE MEASUREMENT

CAMSHAFT INFO BK5 PG11

SYMMETRICAL VALVE ESSENTIAL FOR VOLUMETRIC EFFICIENCY

NOTE ABOUT 6/7 OF 4 STROKE CYCLE A VALVE IS ACTIVE

" 1/7 (~100 *CRANK) -----NOT MOVING

IF 1 TOOTH (CRANK) ERROR =34*

IF 1 TOOTH (CAM) ERROR=17.1*

IF 1/2 TOOTH(CAM) ERROR=8.6*

WHERE IS TDC ?

1/ MOST ACCURATE FLYWHEEL / BLOCK MARK

2/ DIRECT PISTON /DIAL GAUGE METHOD (SHORT BLOCK)

-REFER PG 13 STROKE VS SINE CRANK

-BIG /LITTLE BEARING CLEARANCE .001 ~.005?

3/ O SHIT METHOD (LONG BLOCK) (SPECIAL TOOL)

NOT AS ACCURATE AS 1 OR 2 BUT << 1/2 TOOTH (2OR 3* CRANK)

ONCE TDC IS DETERMINED ATTACH DEGREE WHEEL & POINTER AND VERIFY IT'S ACCURACY

WHERE IS THE CAM ?

OPPOSITE CYLINDER OVER LAP BREATHING REFER PG 11

HOW?

1/ MEASURE CAM LOBES DIRECT STD DIAL GAUGES

2/CUSTOM SET GAUGES AND TOOLING

WHAT ARE WE LOOKING FOR ??

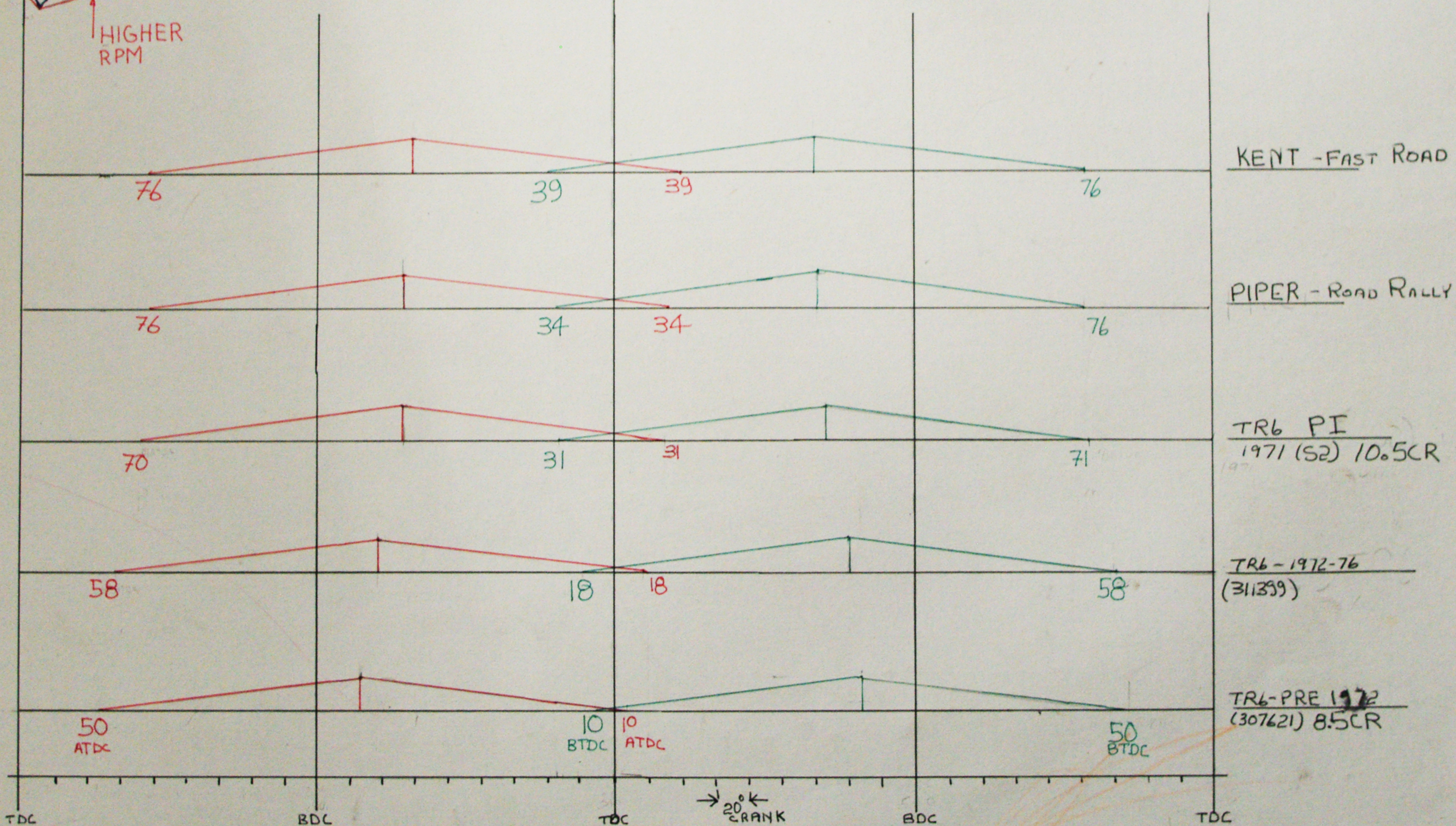
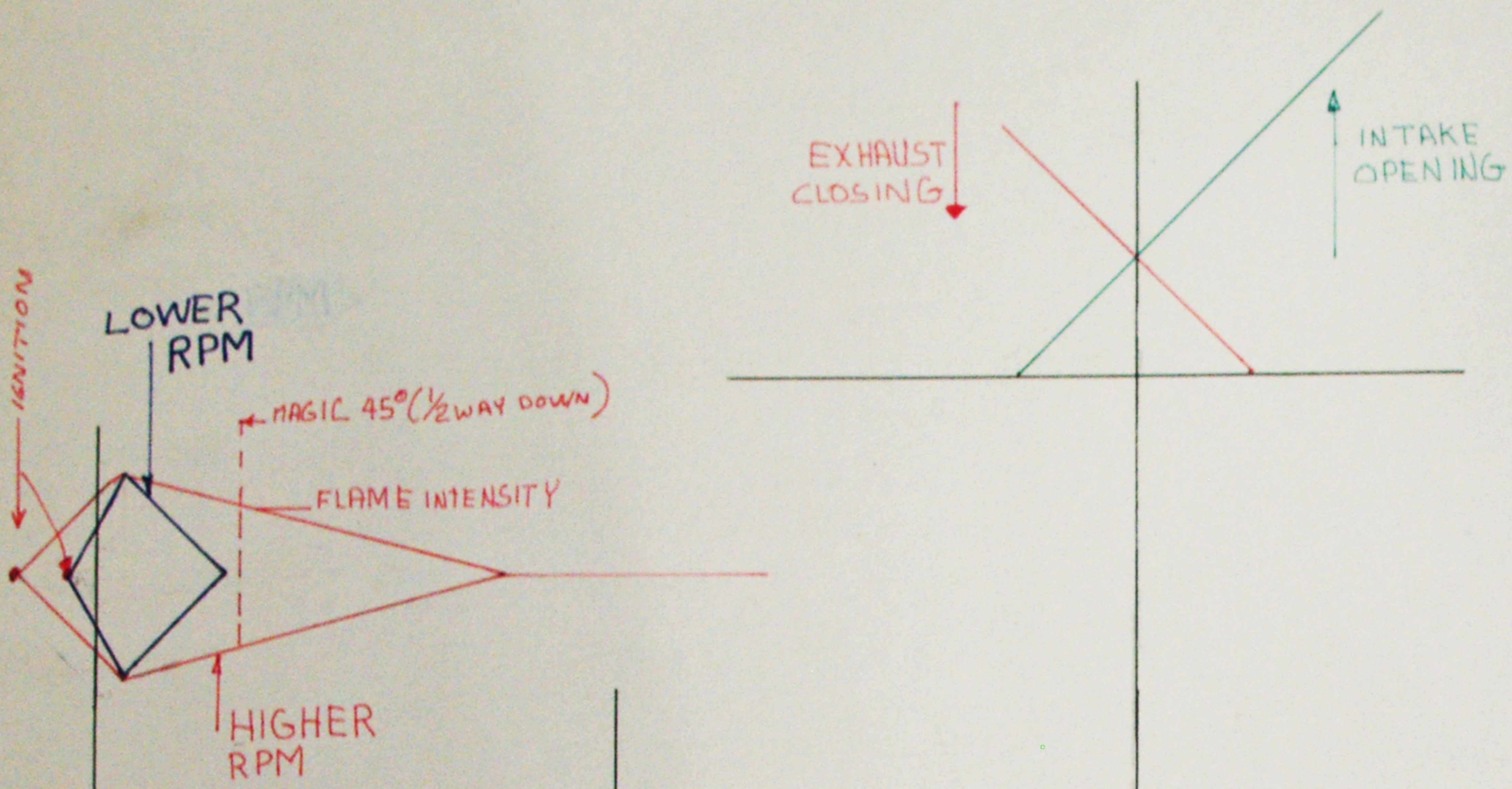
REF PG 15
ALSO ISKY PG135

OBSERVING THE DEGREE WHEEL AND THE TWO DIAL GUAGES CHECK FOR SYMETRY

RESET TOTDC #1 CLY AND PUT IN DIST /CAM GEAR
EASY IF NO OIL PUMP INSTALLED
SPECIAL TOOL IF OIL PUMP IS INSTALLED

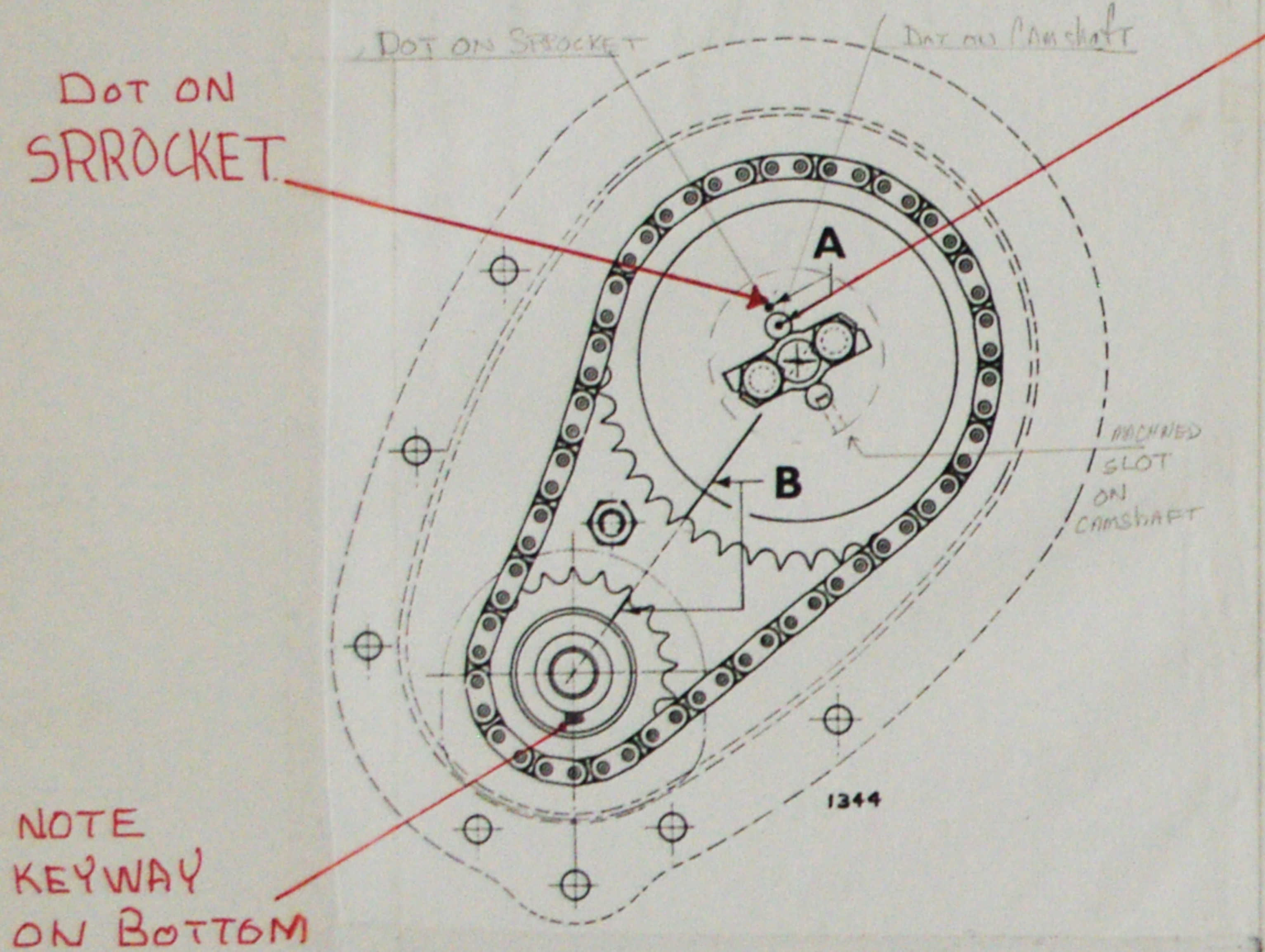
NOTE GOOD IDEA TO PRIME OIL GALLERYYS BEFORE DIST/CAM GEAR IS INSTALLED

INSTALLDIST AND VERIFY STATIC #1 POINT



POWER (BANG) EXHAUST (BLOW) INTAKE (SUCK) COMPRESSION (SQUEEZE)

Fig. 62. Checking sprocket alignment



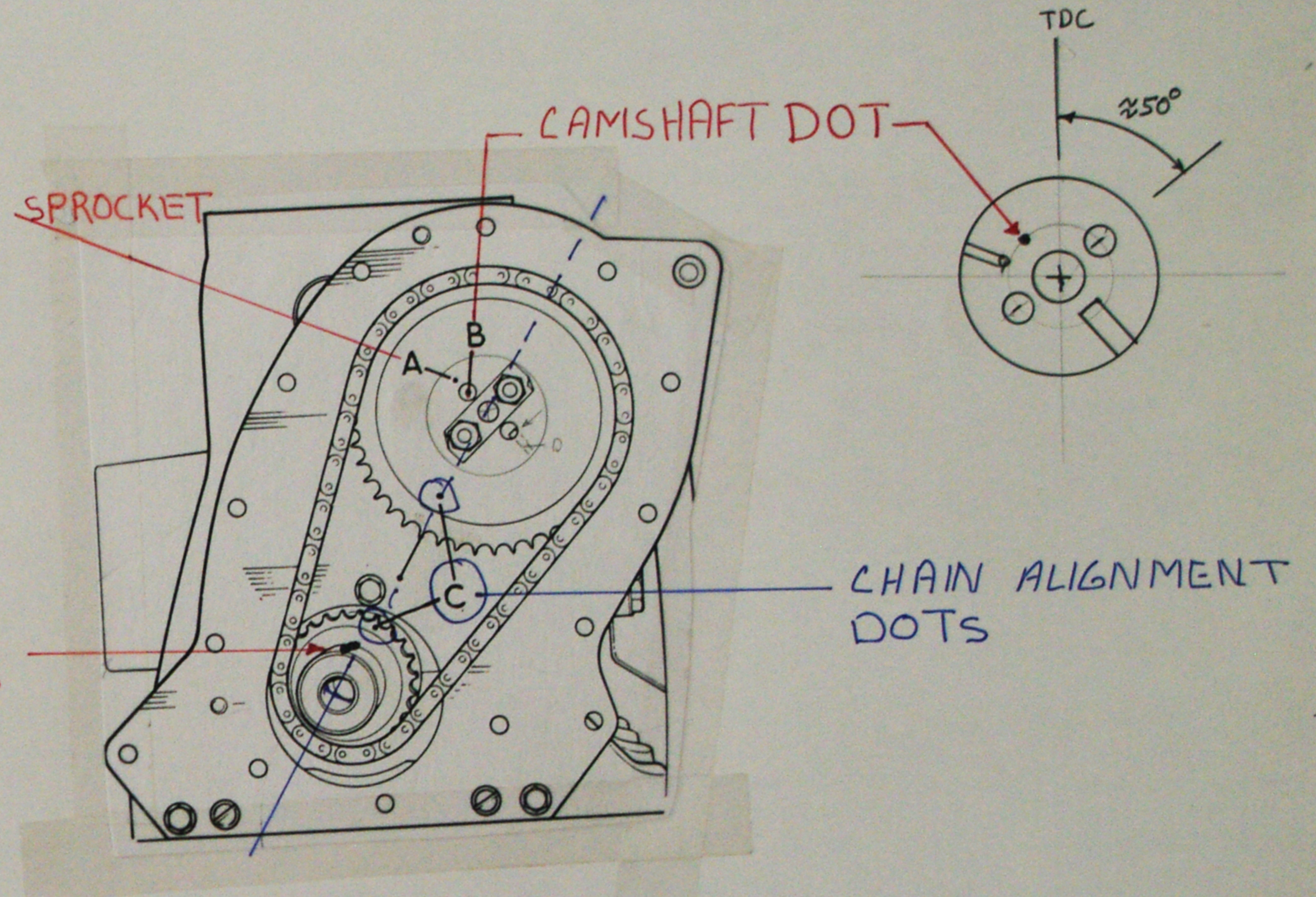
4 CYL

DOT ON CAMSHAFT

DOT ON SPROCKET

NOTE KEYWAY ON BOTTOM

MACHINED SLOT ON CAMSHAFT



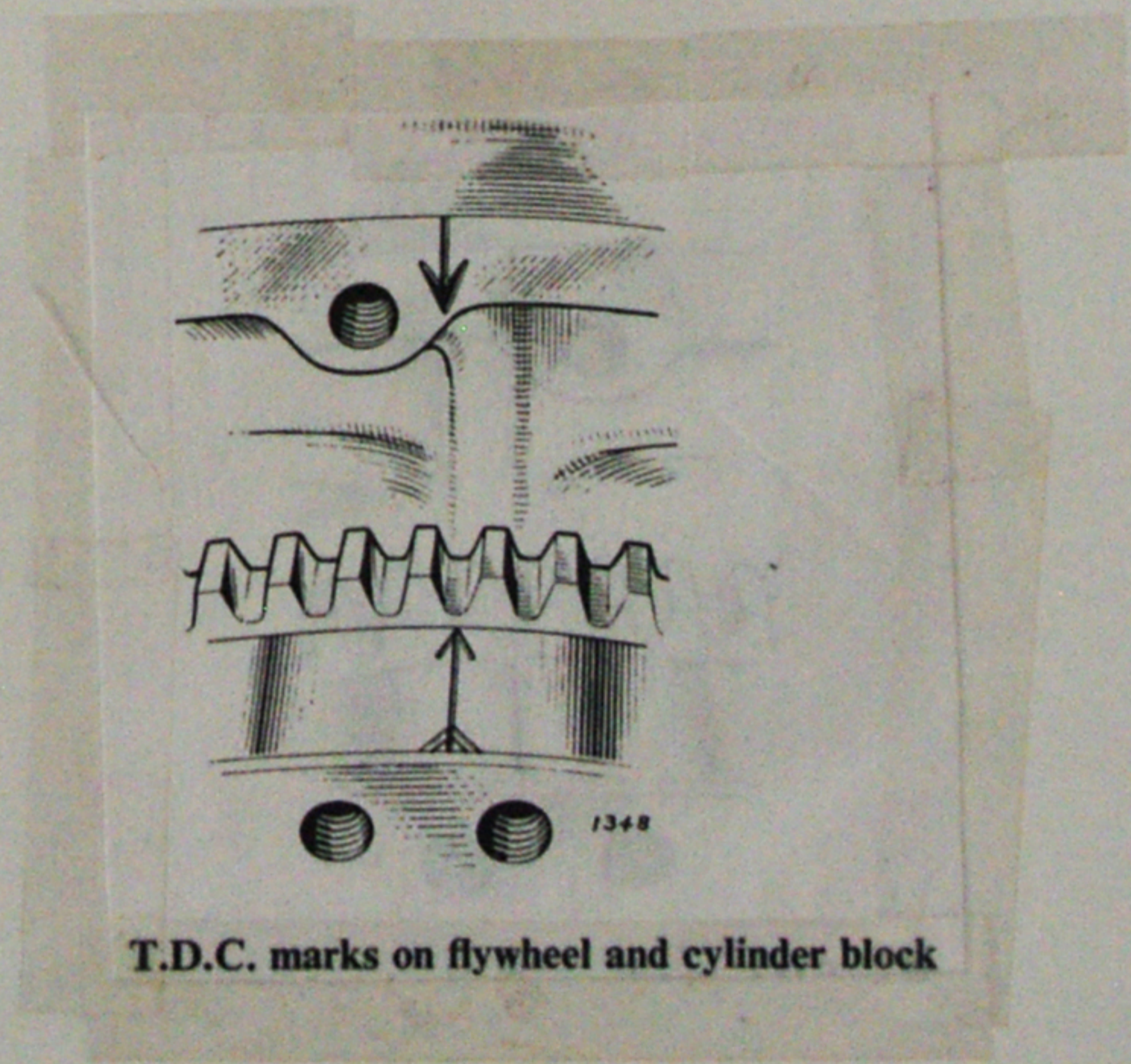
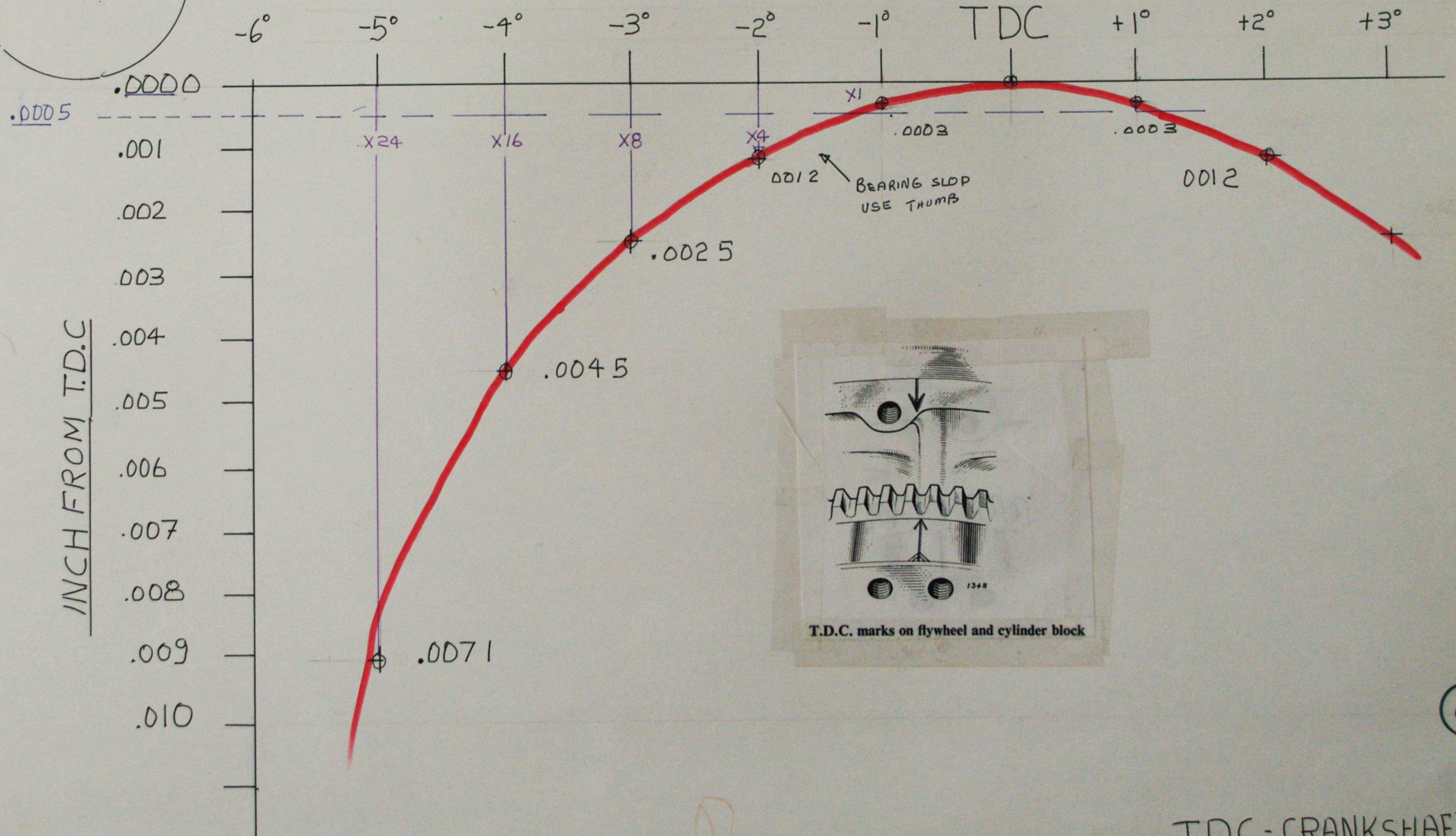
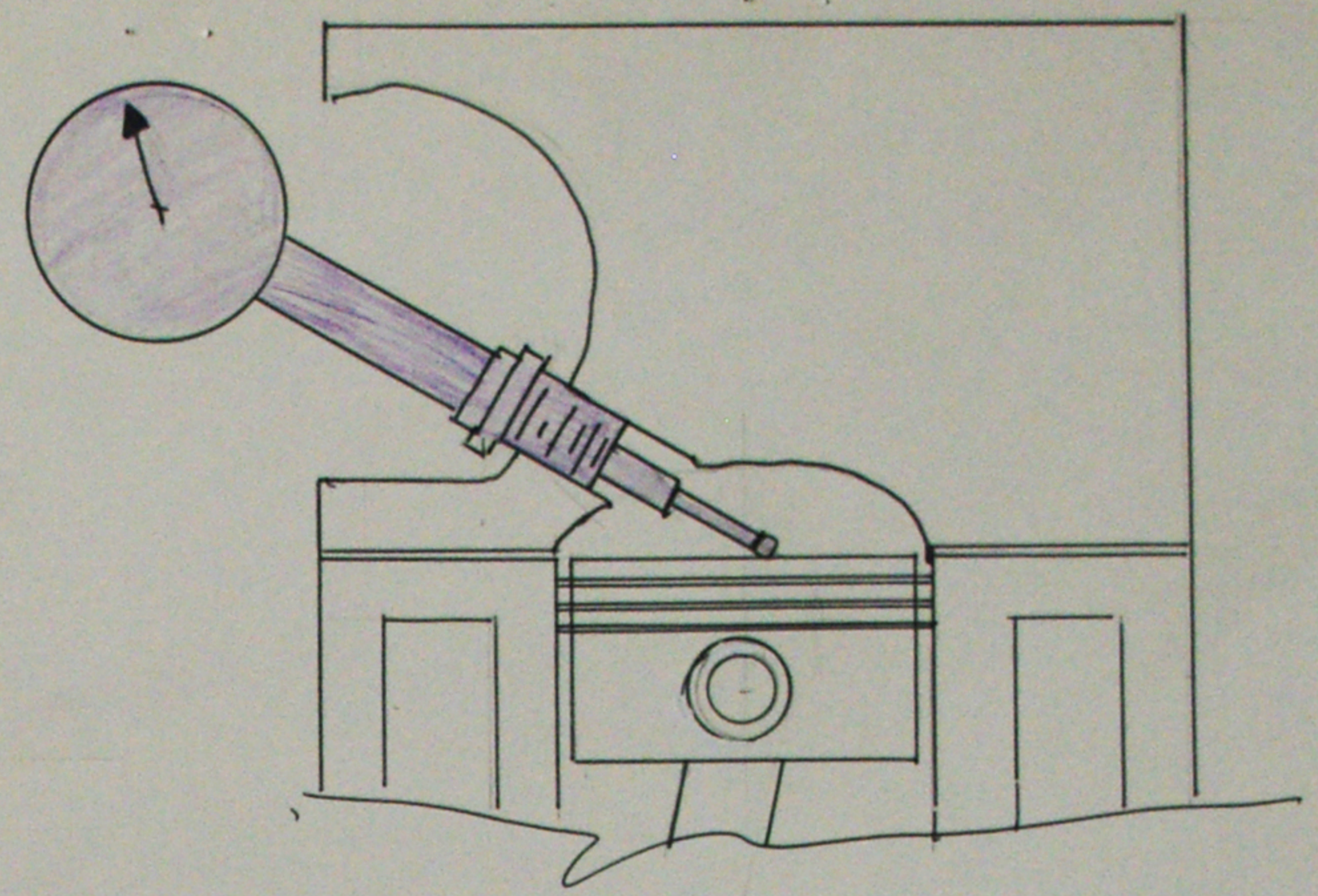
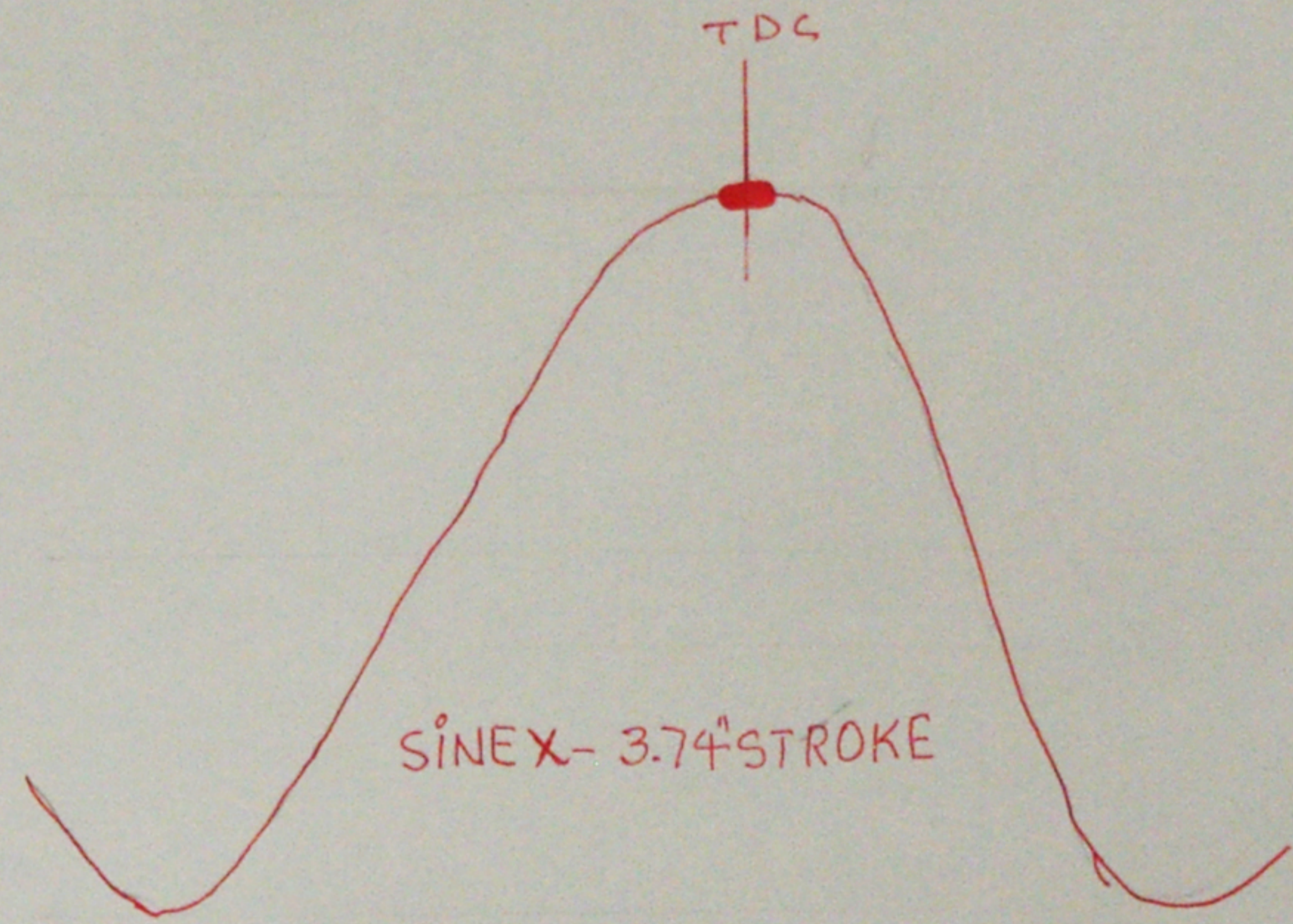
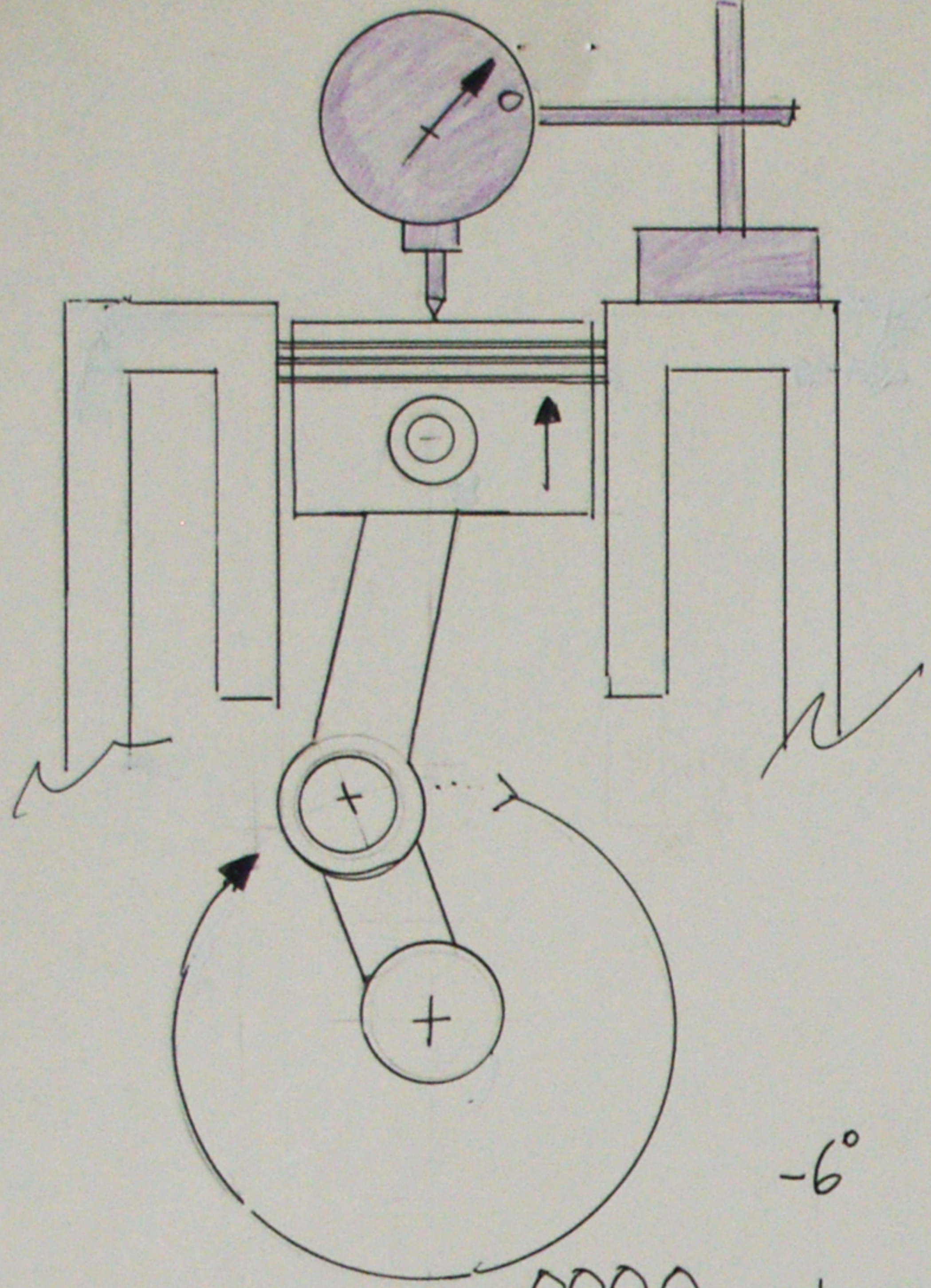
6 CYL

NOTE KEYWAY ON TOP

SPROCKET

CAMSHAFT DOT

CHAIN ALIGNMENT DOTS



TDC-CRANKSHAFT

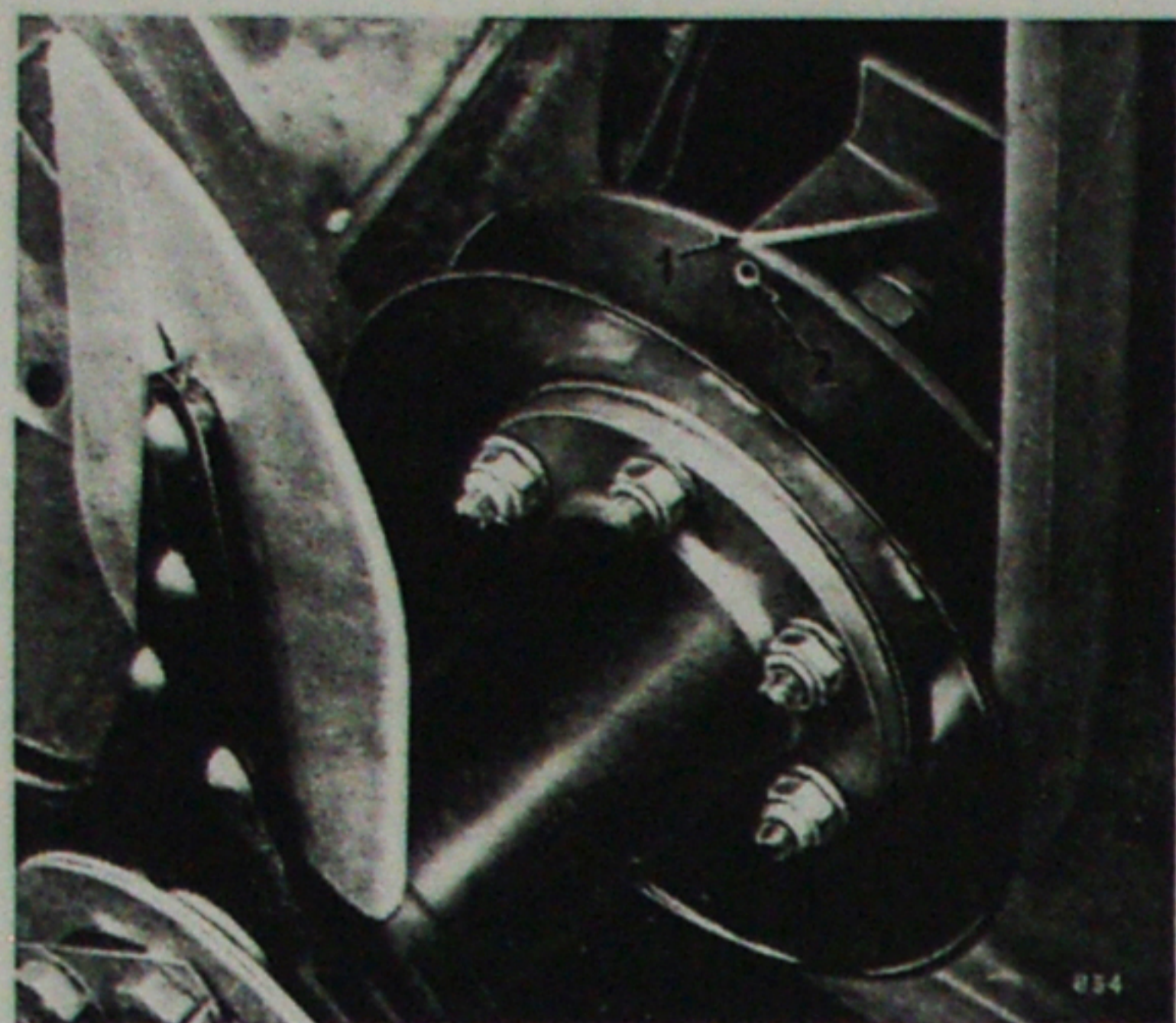
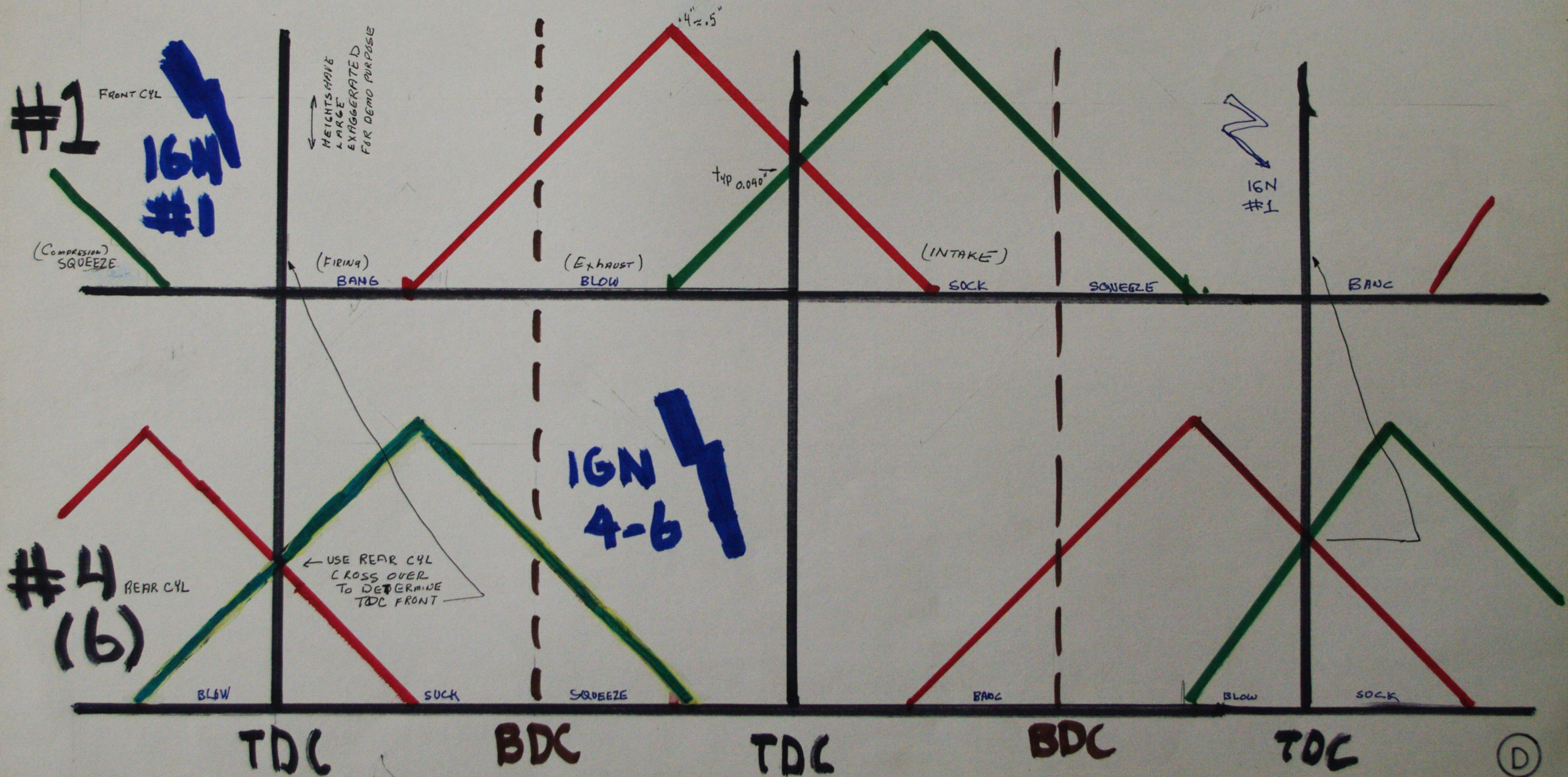


Fig. 67. A small hole in the fan pulley is aligned with a pointer when No. 1 piston is at T.D.C.

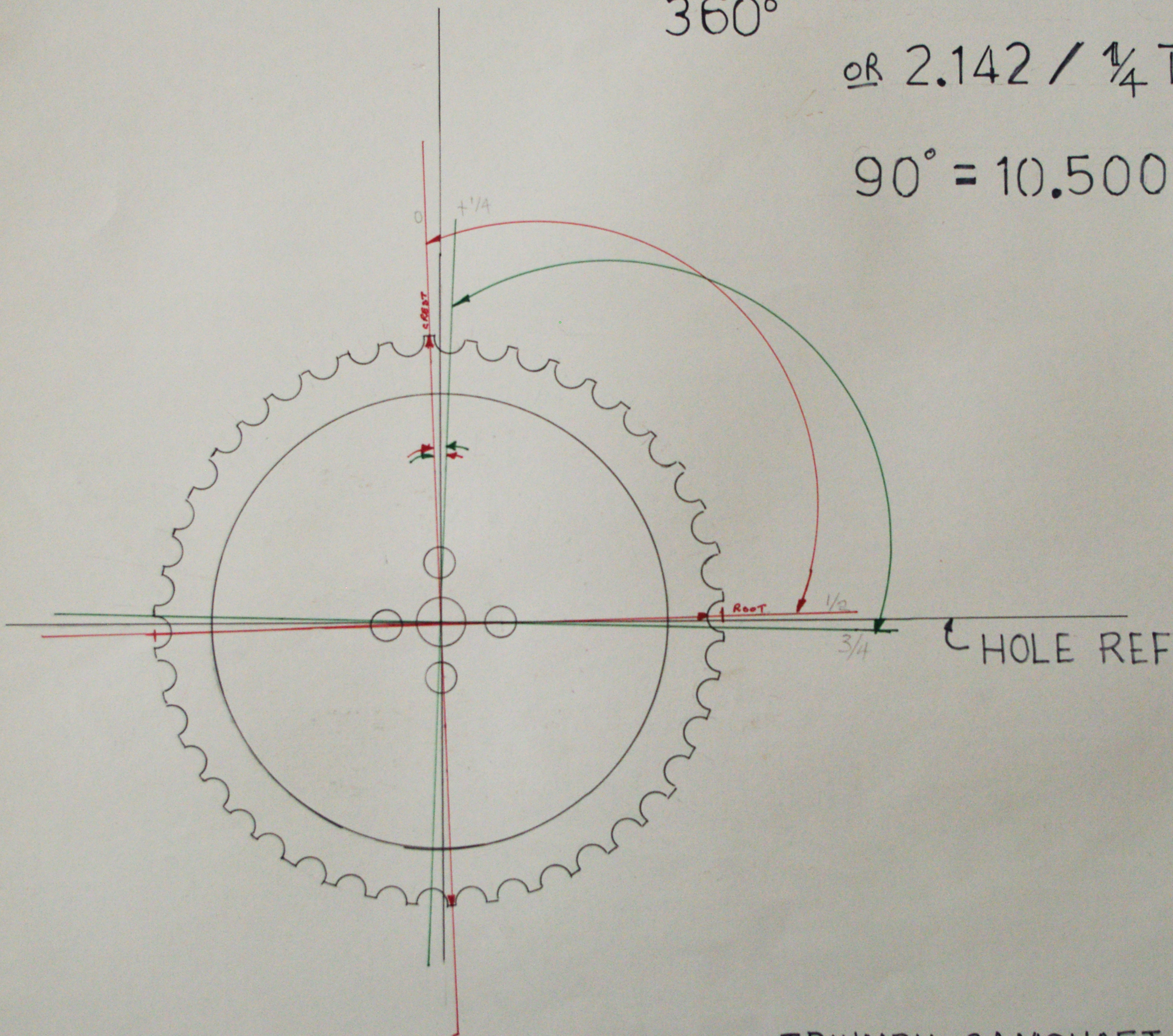
Confusing
 IE CYL #1 & #4
 ARE BOTH UP
 WHICH IS FIRING



$$\frac{42 \text{ TEETH}}{360^\circ} = 8.571^\circ \text{ TOOTH}$$

$$\text{OR } 2.142 / \frac{1}{4} \text{ TOOTH}$$

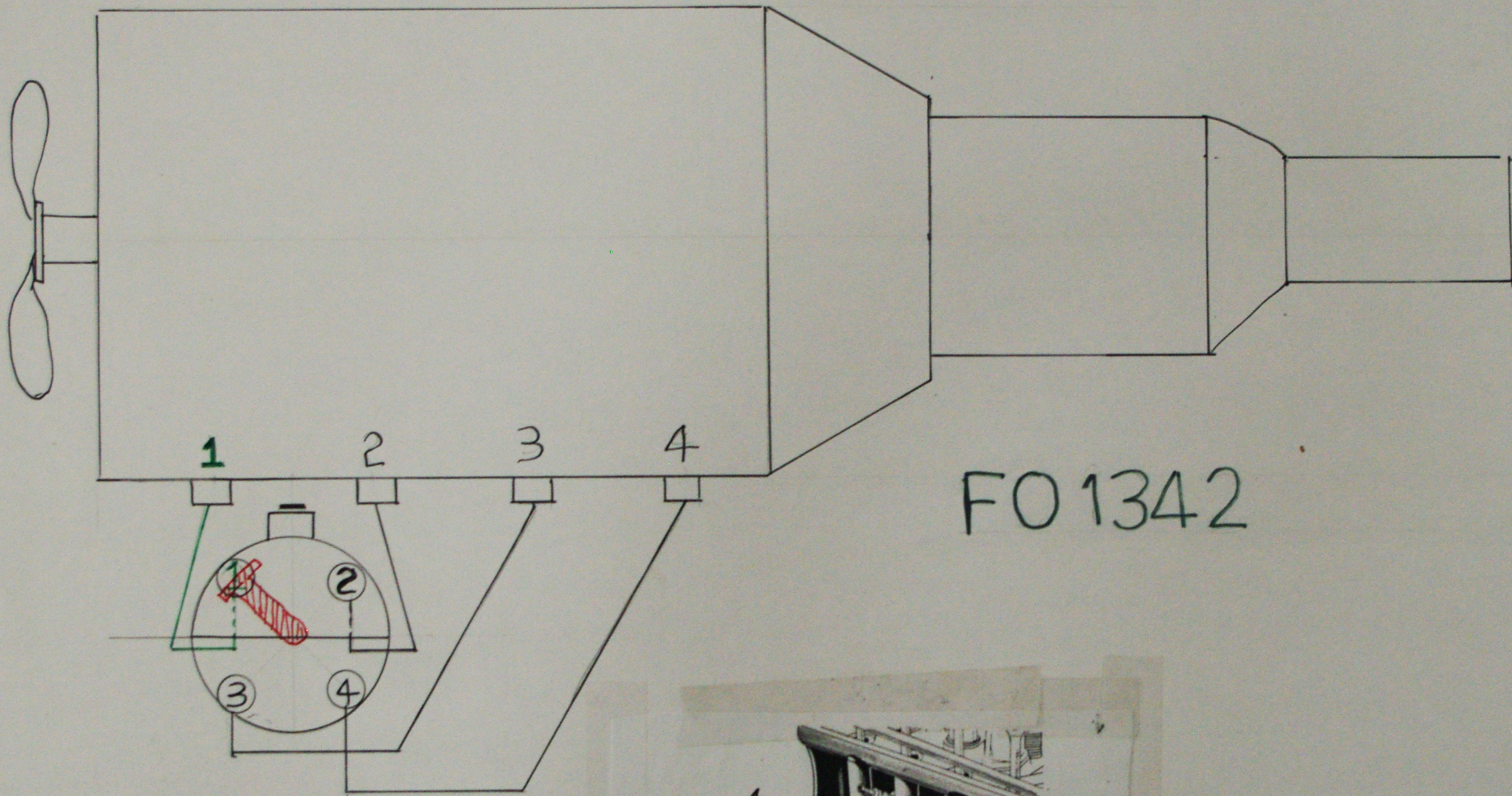
$$90^\circ = 10.500 \text{ TEETH}$$



(E)

TRIUMPH CAMSHAFT SPROCKET SAGA

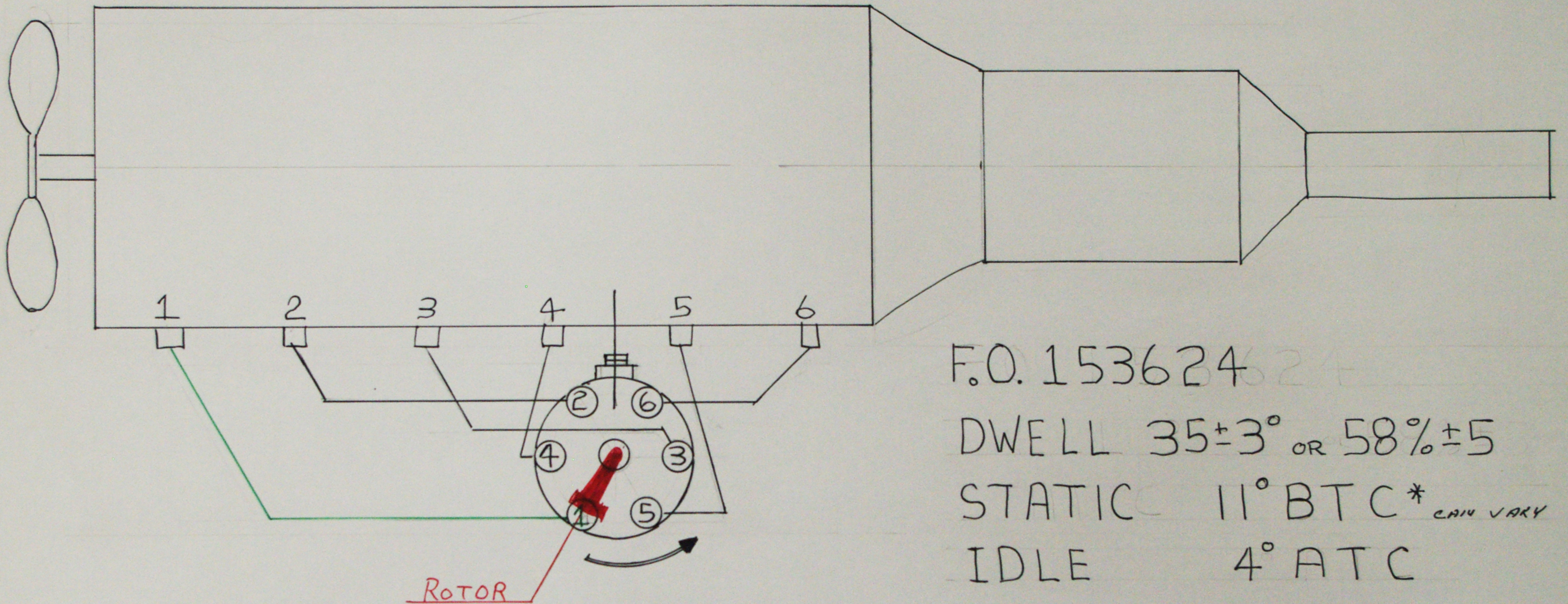
B.Mills JAN2002



FO 1342



(F)

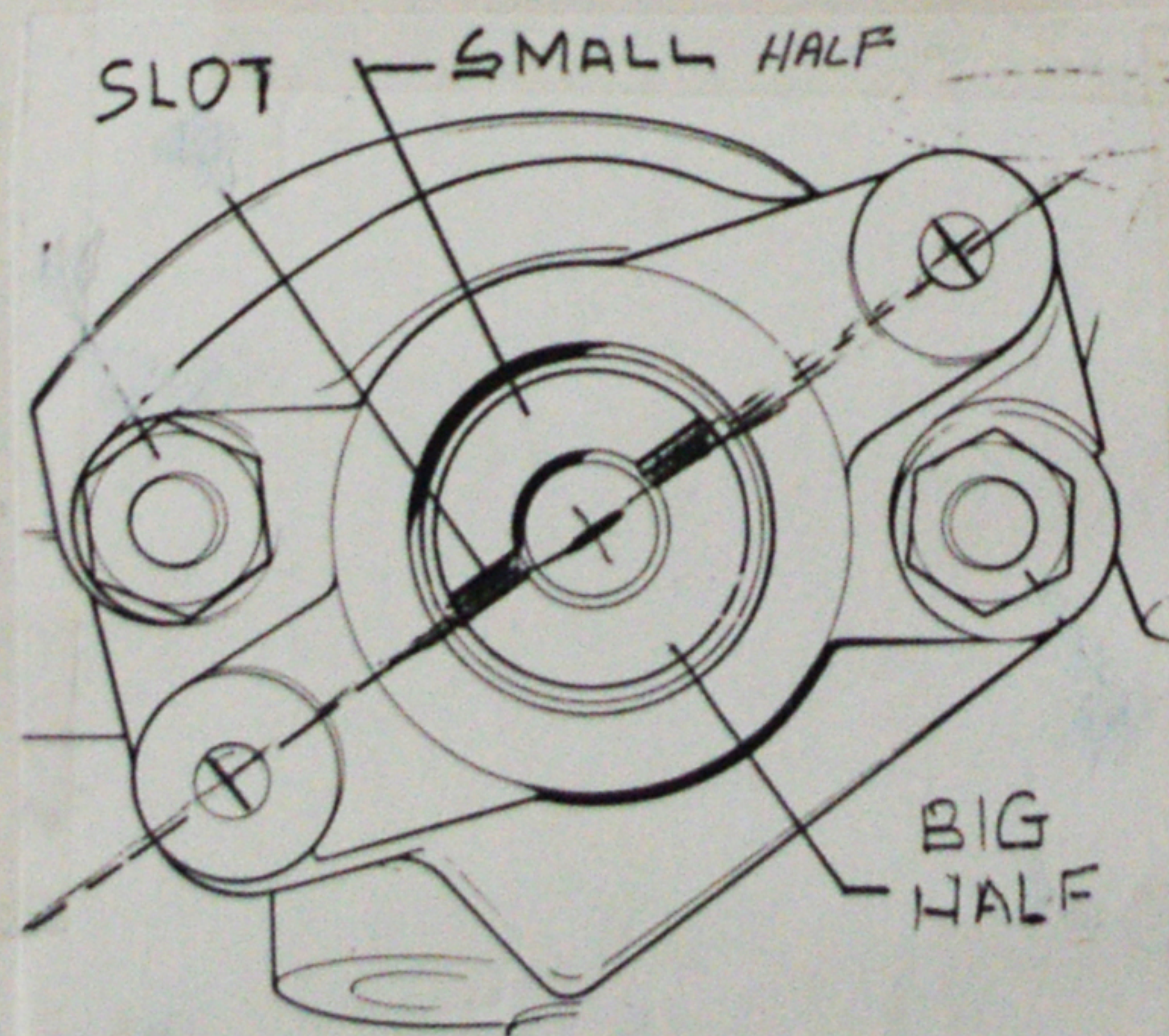


F.O. 153624

DWELL $35 \pm 3^\circ$ OR $58\% \pm 5$

STATIC 11° BTC* CAN VARY

IDLE 4° ATC



typical 6 CYL. - TR6