FORGING SPECIFICATIONS
ALL SCALE TO BE REMOVED
TRIM FLASH FLUSH WITH BODY OF SHAFT & CAMS
STRAIGHTEN FORGING
ENDS OF FORGING TO BE FLAT FOR CENTERING
CAM NOSES TO BE IN PLANES SHOWN WITHIN TWO DEGREES
PROVIDE FOR FINISH ALL OVER EXCEPT ON Nº 1 & 6 BRGS.
WHICH ARE TO HAVE 3/32 FINISH ALSO THE RADIUS
OF ALL CAM PEAKS IS TO HAVE 3/32 FINISH

CURVED SURFACES ON CAM NOSES
TO BE PARALLEL WITH LONGITUDINAL
℄ OF CAMSHAFT WITHIN ±.0002 PER 1/4 INCH.

FLANK RADIUS TANGENT
TO CLEARANCE CIRCLE &
NOSE RADIUS

.0005 RISE PER DEGREE
BOTH SIDES OF CAM

.001 RISE PER DEGREE
BOTH SIDES OF CAM

INTAKE

EXHAUST

THE CAM BASE CIRCLE DIA. IS 1.542
BUT SHAFTS WILL BE ACCEPTED WITH
CAMS ANYTHING UP TO .010 UNDER SIZE,
PROVIDED NO CAM IS MORE THAN .002
DIFFERENT THAN ANY OTHER CAM
ON THAT PARTICULAR SHAFT.

.0005 RISE PER DEGREE
BOTH SIDES OF CAM

.001 RISE PER DEGREE
BOTH SIDES OF CAM

1.1962
.771
.025
6 | 1.9922
.3237 DIA

GRIND
BRG Nº 1
STAMP PART Nº & VENDORS MARK
J-471
Nº 2 BRG.
Nº 3 BRG.
1.2485 to 1.2495 Gr.
Nº 4 BRG.
Nº 5 BRG.
Nº 1 CAMS
Nº 2 CAMS
Nº 3 CAMS
Nº 4 CAMS
Nº 5 CAMS
Nº 6 CAMS
Nº 7 CAMS
Nº 8 CAMS
1 3/16
2 3/8
20 15/16 ±1/32
1/8-DRILL 4-HOLES
SEE SECTION-D-D

EXHAUST CAM SHAFT J-471

FIRING SEQUENCE - 1-6-2-5-8-3-7-4

STAMP PART NO. & VENDORS MARK
NOT OVER 3/4 SOFT.
41 31/32 ±1/32
31 1/32 ±1/32
21 13/16 ±1/64
11 3/32 ±1/32
GRIND SQUARE WITH SHAFT WITHIN ±.0005
1.2485 +.0005 -.0002 ALL BEARINGS
1.3135 +.0005 -.0002 P.D. BASIS
1/16 x 45° CHAMFER
.406 ±.005
2.844 +.0005 -.001
3 25/32 ±1/64
8 13/32 ±1/64
13 19/32 ±1/64
18 1/32 ±1/64
23 21/32 ±1/64
28 5/32 ±1/64
33 9/32 ±1/64
37 25/32 ±1/64
ALL CAMS
1 3/4
DRILL
1 3/8 DIA. THRU BOTH TUNNEL SECTIONS CAMS & BEARINGS
BRG Nº 1
BRG Nº 2
BRG Nº 3
BRG Nº 4
BRG Nº 5
BRG Nº 6
Nº 1 CAMS
Nº 2 CAMS
Nº 3 CAMS
Nº 4 CAMS
Nº 5 CAMS
Nº 6 CAMS
Nº 7 CAMS
Nº 8 CAMS
GRIND
TO MATE WITH GEAR J-662 WITH .002 TO .005 BACKLASH
ECCENTRICITY OF PITCH LINE TO BE HELD WITHIN .003 INDICATOR READING
TEETH TO BE FINISHED SMOOTH & HARDENED
14 PITCH - - 11 TEETH
60° RH SPIRAL ANGLE
PITCH DIA = 1.5708
OUTSIDE DIA = 1.7138
ROOT DIA = 1.403
THICKNESS OF TOOTH ON PITCH LINE = .1122-.110
RUN ON 1.2386 CENTERS.
1/8-DRILL 5 HOLES
SEE SECTION-C-C
1/32 x 45° CHAMFER
60° DIA.

INTAKE CAM SHAFT J-470

FIRING SEQUENCE - 1-6-2-5-8-3-7-4

TENTATIVE TIMING
EX. OP. 40° B.B.C.
EX. CL. 12° A.T.C.
IN. OP. 21° B.T.C.
IN. CL. 40° A.B.C.

LOCATION ℄ OF Nº 1 CAM NOSE.
1.875 ±.001
2 3/8
FRONT VIEW
CLOCKWISE ROTATION.
TAP 5/16-24 U.S.F. THD 1/2 x 45° CHAMFER
6 HOLES EQUALLY SPACED WITHIN .002
FLANGE TO BE SOFT.
TAP AFTER GRINDING
P. DIA. THD. .2854 .2864

ROTATION
SECTION-A-A.
INTAKE CAMSHAFT.

ROTATION
SECTION-B-B.
EXHAUST CAMSHAFT.

NOTE:- PACK HARDEN & REMOVE SCALE.
SCLEROSCOPE HARDNESS OF CAMS = 80 (BULB) MINIMUM.
SCLEROSCOPE HARDNESS OF BEARINGS = 80 (BULB) MINIMUM.
BREAK CORNERS ON ALL CAMS.
GRIND CAMS, BEARINGS & THRUST FACES DEAD SMOOTH TO BE FREE FROM SCRATCHES MARKS OR OTHER DEFECTS.
OIL HOLES TO BE ROUNDED SMOOTHLY AFTER GRINDING.
BEARINGS TO BE ROUND WITHIN .00025.
CAM NOSES TO BE IN PLANES SHOWN WITHIN ONE DEGREE CHECKING WITH CLEARANCE OF .050.
WHEN SHAFT IS SUPPORTED ON END BEARINGS IN "V" BLOCKS HOLD TO .0015 INDICATOR READING FOR RUNOUT OF CAMS & BEARINGS.
FINISH ALL OVER REMOVE SHARP EDGES.
TOLERANCE ±.010 ON ALL FRACTIONAL DIMENSIONS UNLESS OTHERWISE SPECIFIED.

#1 INT. CAMS.
#1 EXH. CAMS.
ROTATION
#6 ℄ OIL HOLE B'RG.
#5 ℄ OIL HOLE B'RG.
#4 ℄ OIL HOLE B'RG.
#3 ℄ OIL HOLE B'RG.
#2 ℄ OIL HOLE B'RG.
#1 ℄ OIL HOLE B'RGS.
SECTION-C-C
INTAKE CAMSHAFT
LOOKING IN DIRECTION OF ARROWS.
SECTION-D-D
EXHAUST CAMSHAFT.

	MATERIAL SAE 1020 STEEL FORGING	NAME: CAMSHAFT	
	M & PROD. SPEC.		
	SCALE: FULL	DR. WILCOX	PART NO. J-470
	DATE: 2/10/28	CKD. [illegible]	No. EX-J-471
		APPROVED	