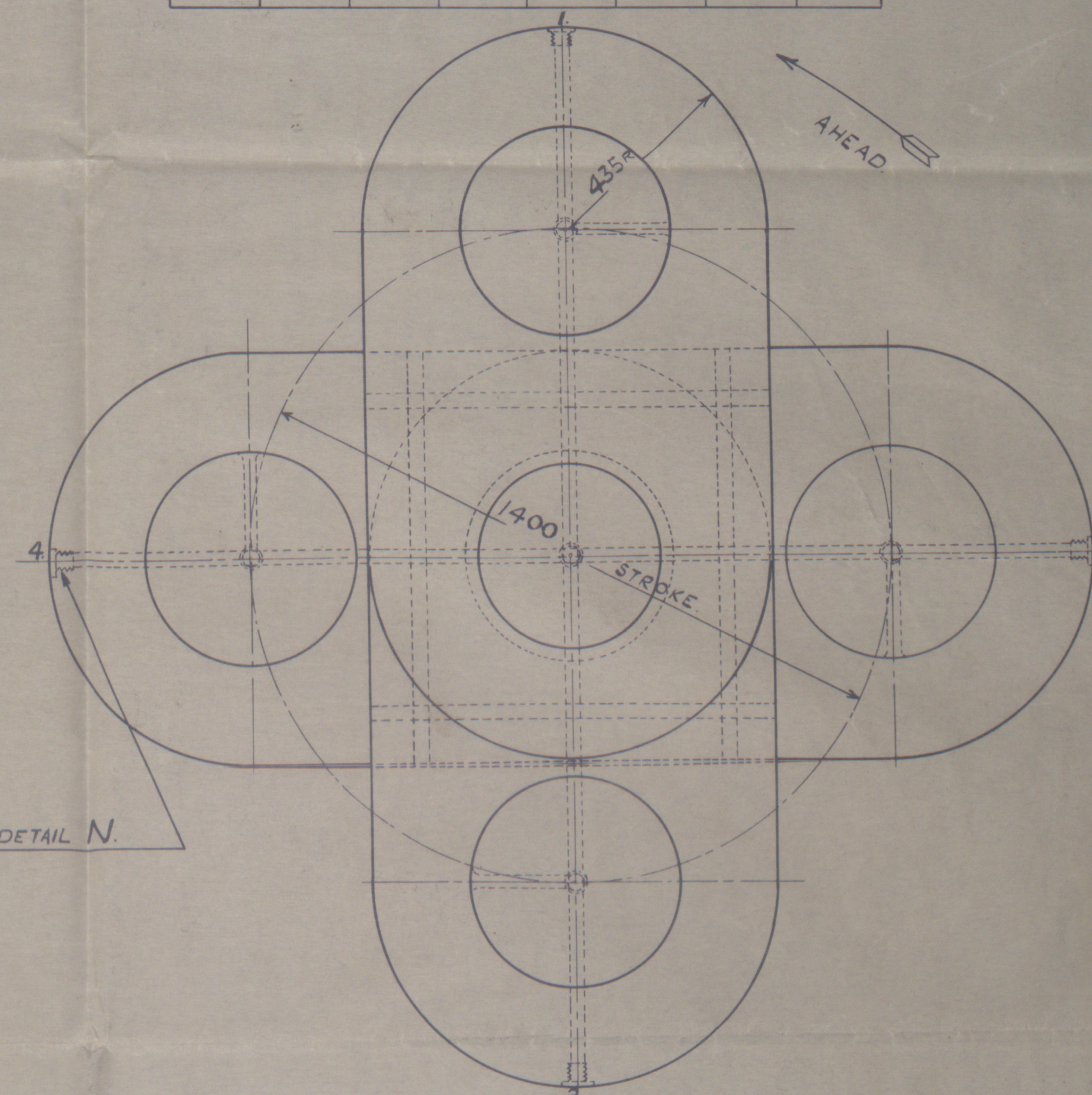


8 CYL. SUPERCHARGED DIESEL ENGINE.
BORE OF CYL. 650.
STROKE 1400.
NUMBER OF REV. 120
MAX. PRESSURE 700 LBS.
M.I.P. 135 LBS.

AHEAD ORDER OF FIRING							
1	6	2	5	8	3	7	4



ITEM 2 LOOKING IN DIRECTION OF ARROW Q

CRANK SHAFTS MACHINED ALL OVER.
MATERIAL:- CRANK SHAFTS TO BE FORGED FROM THE BEST
SIEMENS MARTIN INGOT STEEL PERFECTLY SOUND & FREE
FROM FLAWS & OTHER DEFECTS.
FORGINGS TO BE ANNEALED & TO HAVE THE FOLLOWING QUALITIES.
ULTIMATE TENSILE STRENGTH OF 28-32 TONS Q.
WITH AN ELONGATION OF NOT LESS THAN 25 TO 29%
ON STANDARD TEST PIECE. BENDING TEST ANGLE 180°
YIELD POINT NOT TO BE LESS THAN 50% OF TENSILE STRENGTH.
SURVEY:- ALL TO BE IN ACCORDANCE WITH LLOYD'S LATEST TESTS.
REQUIREMENTS & INSPECTIONS, R. & W. HANTHORN LESLIE
& CO'S SATISFACTION.

LIST OF PARTS									
QUANTITIES GIVEN ARE FOR ONE ENGINE NO ONLY									
MARK	DESCRIPTION	QTY	NO OFF.	WORKING	REMARKS	MATERIAL	MAKERS	D. O.	COST INDEX
1	CRANK SHAFT (AFT HALF)	ONE	-	-	FINISHED	STEEL			7
2	CRANK SHAFT (FORW HALF)	ONE	-	-	FINISHED	STEEL			7
3	COUPLING BOLT	12	-	-	FINISHED	STEEL			5
4	NUT FOR (3)	12	-	-	FINISHED	STEEL			5
5	PLUG 1 GAS	8	-	-	FINISHED	BRASS			7
6	PLUG 1/2 GAS	16	-	-	FINISHED	BRASS			7
7	SET SCREW	24	-	-	FINISHED	STEEL			7
8	COUPLING BOLTS (SPARE)	-	-	-	FINISHED	STEEL			5
9	SPLIT PIN	12	-	-	FINISHED	STEEL			5

13

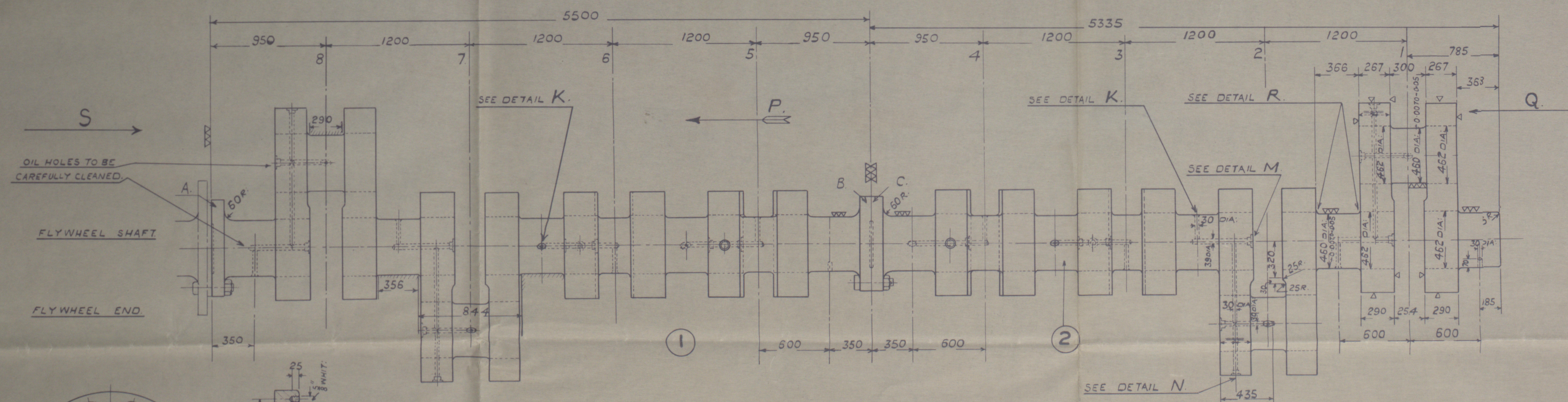
San Refining

DRAWING NO 311.1

ENGINE Nos. 3937-841

W120-0099

2019

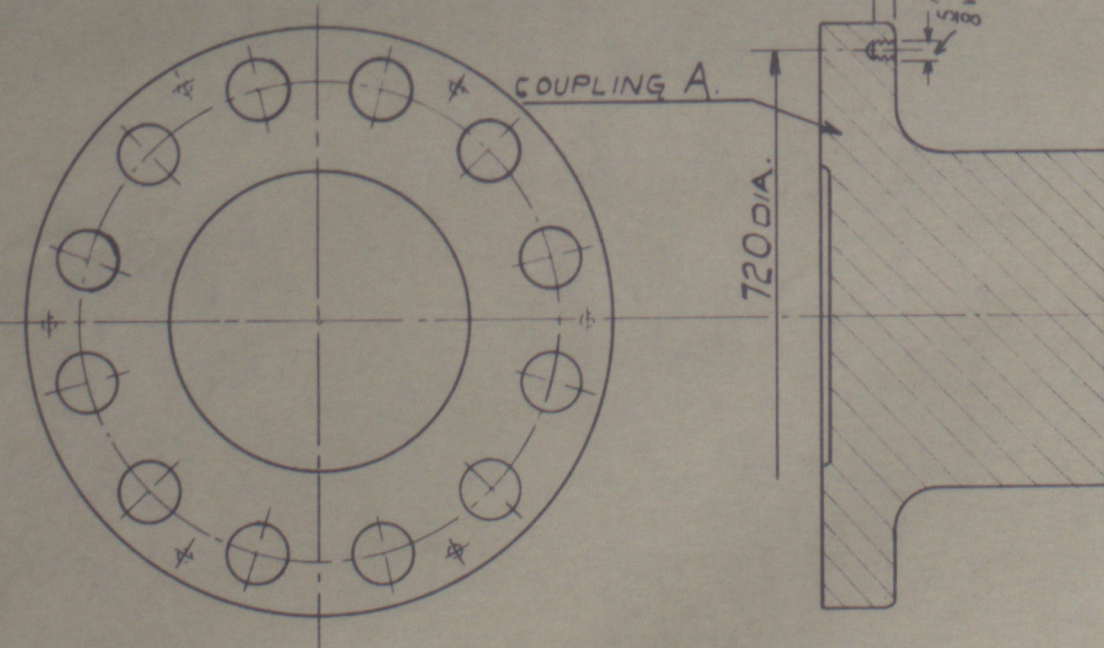


CLEARANCE BETWEEN CRANK WEBS AND BEARING EDGES
SO DIVIDED THAT TOTAL = 2.5 AT FORW END.

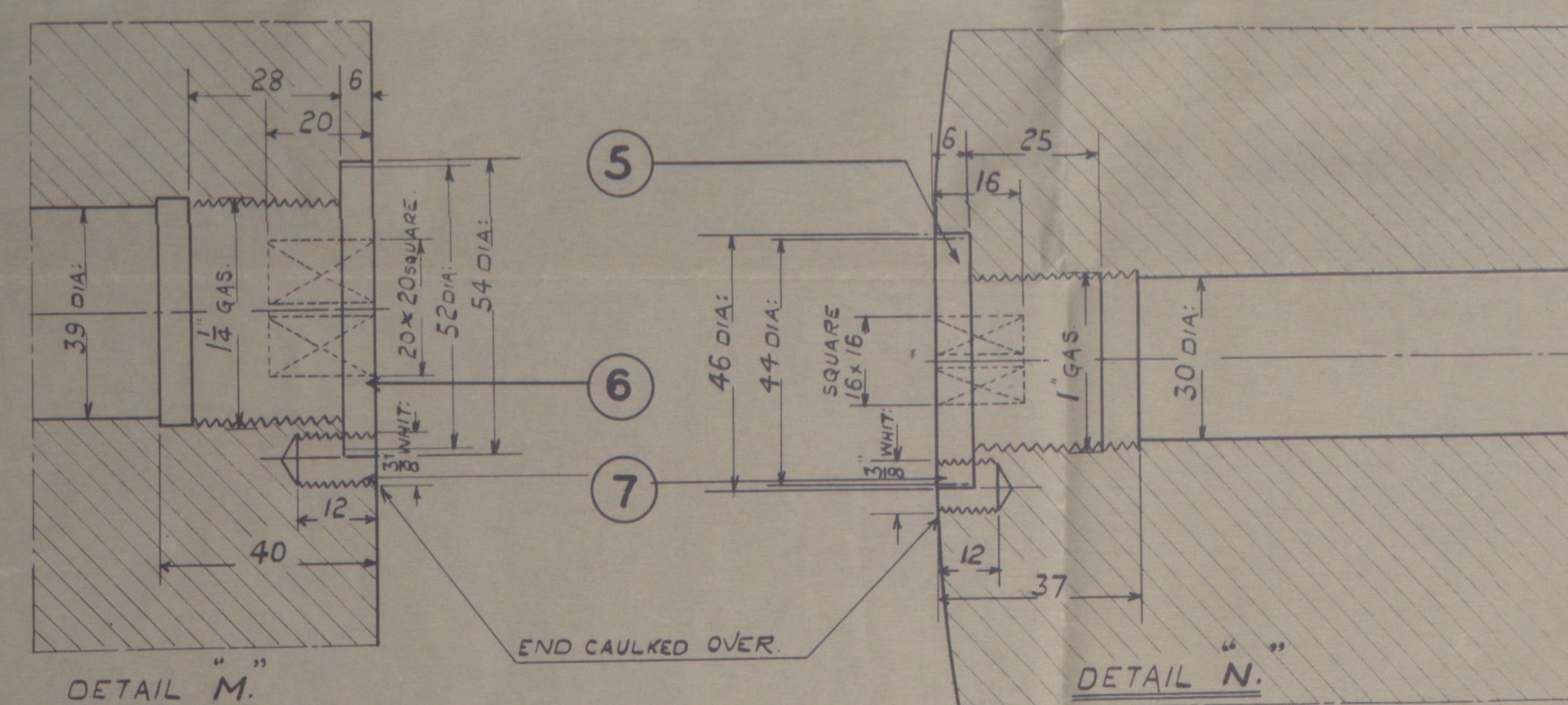
OVAL TOLERANCE FOR JOURNALS & CRANK PINS = 0.025 mm
OUT OF LINE OF THE JOURNALS & CRANK PINS NOT
TO EXCEED 0.15 mm ON 1 METRE.
MAX. VARIATION OF THE JOURNALS WHEN TURNED AROUND = 0.03 mm
MAX. VARIATION ON THE DISTANCE OF THE CENTRES OF THE CRANK PINS 0.2 mm
MAX. VARIATION OF THE DISTANCE OF CRANK 1 TO CRANK 4 = 1 mm
ANGLE BETWEEN CRANKS TO BE 90° ± 3°

JOURNALS & CRANK PINS 450 - 0.05 DIA
OVAL TOLERANCE FOR PINS & JOURNALS 0.025
CRANK THROW TOLERANCE 0.03
OBliquITY OF CRANK PIN RELATIVE TO
JOURNAL:- MAX. TOLERANCE OF 0.15 PER METRE

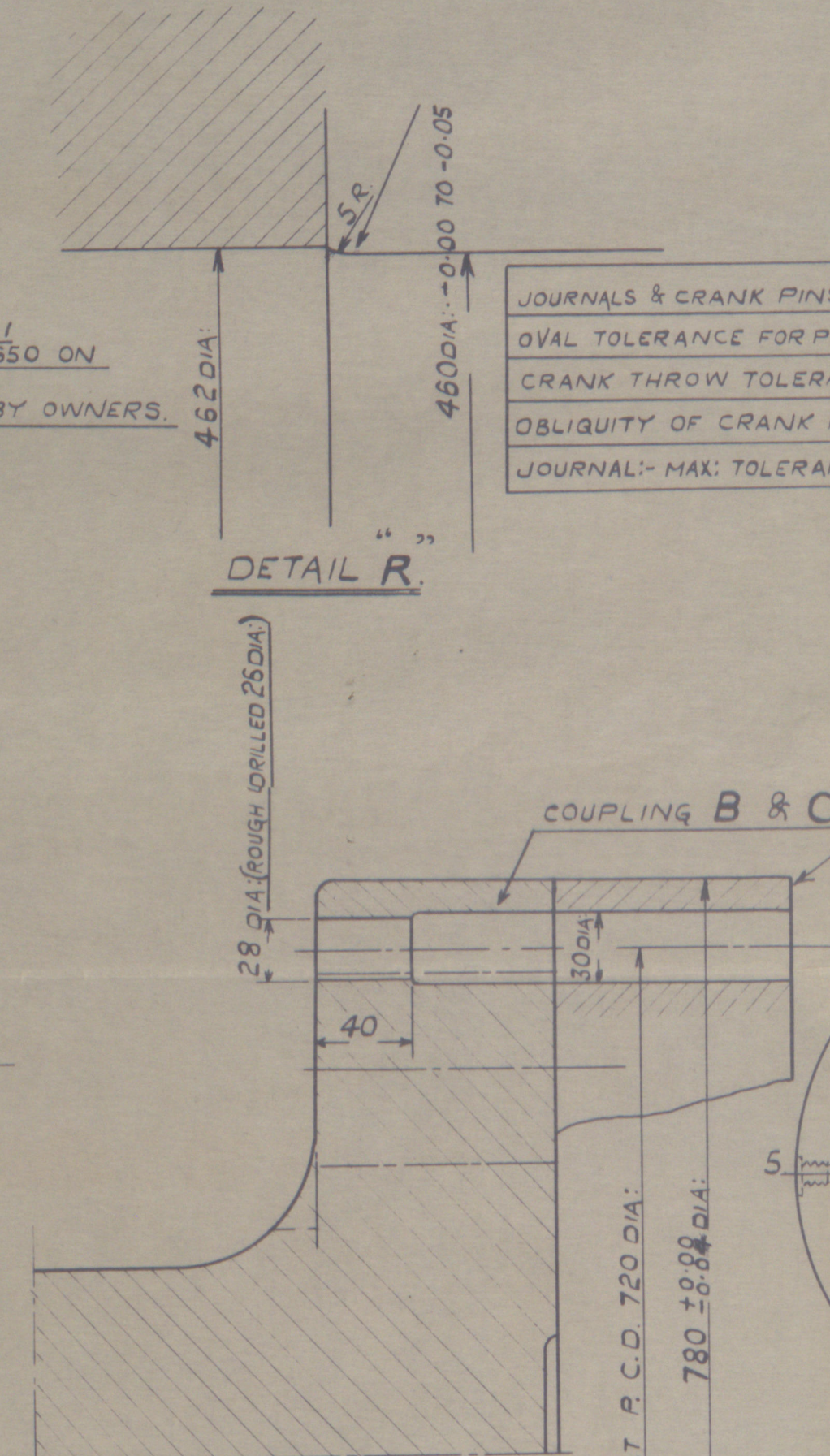
ALLOWANCE FOR SHRINKING 600 TO 650 ON
DIAMETER. METHOD TO BE APPROVED BY OWNERS



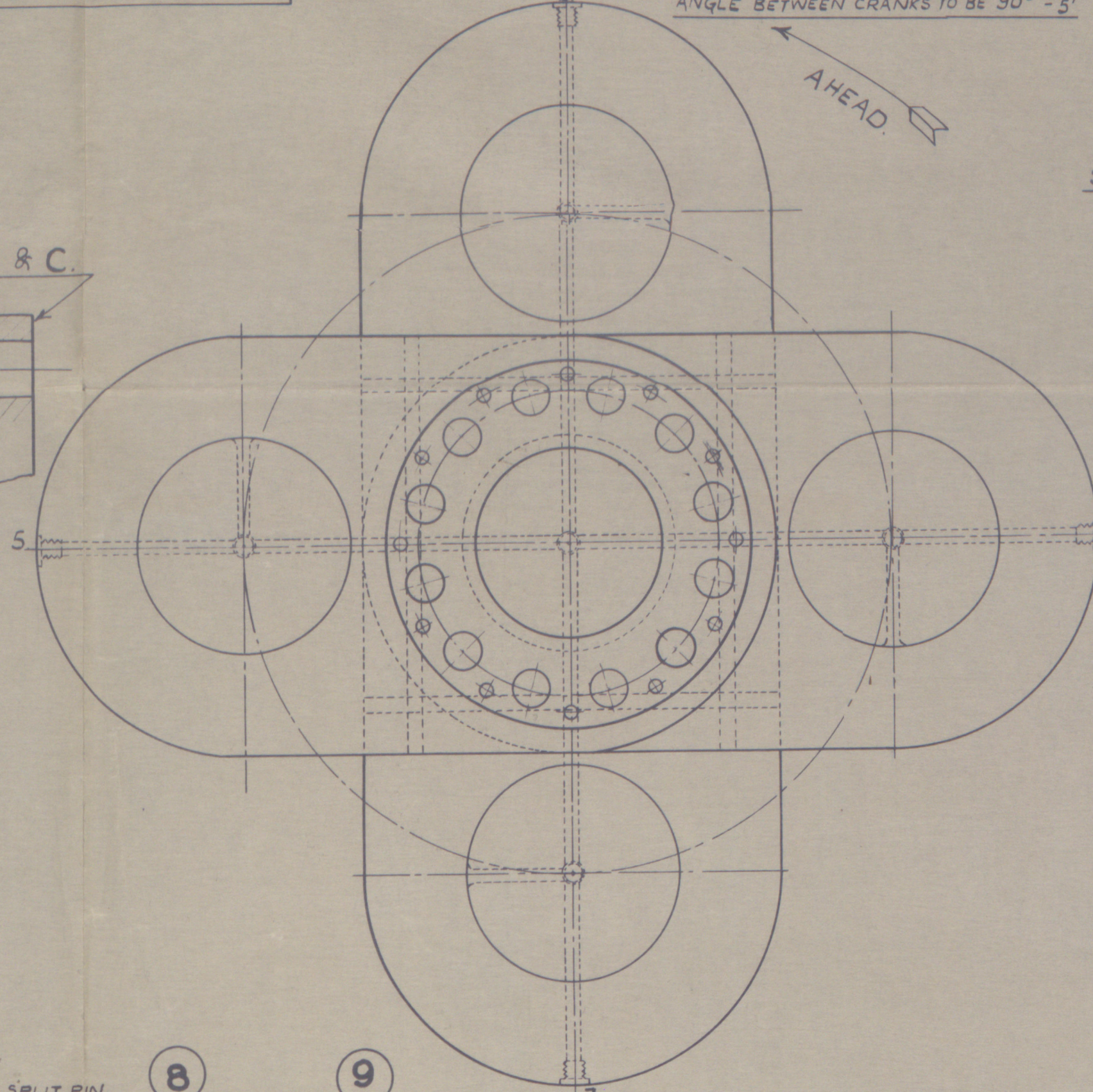
VIEW IN DIRECTION OF ARROW S



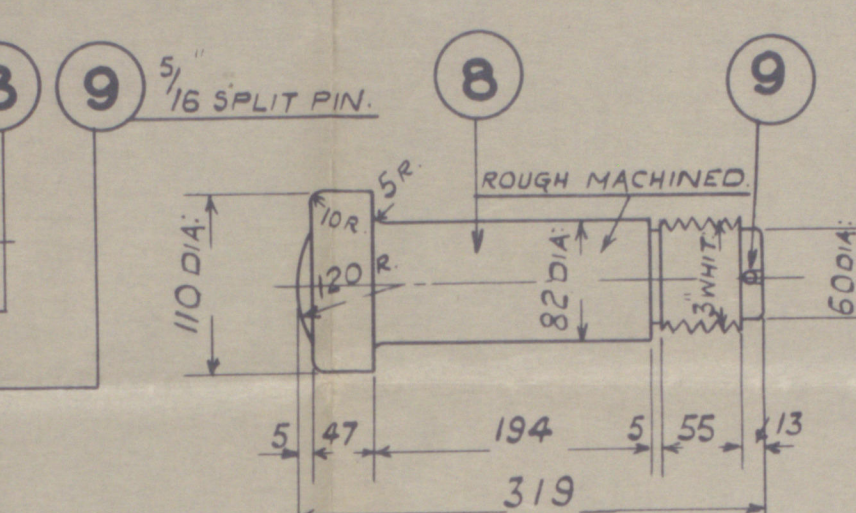
DETAIL M



DETAIL N



ITEM 1 LOOKING IN DIRECTION OF ARROW P



DETAIL K

NOTE:- DIMENSIONS GIVEN ARE IN MILLIMETRES EXCEPT WHERE
OTHERWISE STATED.

MACHINING:- Δ ROUGH MACHINED. ∇ MEDIUM FINISH
 \sim SMOOTH FINISH. NO MACHINING.
GROUND FINISHING ETC. AS SPECIFIED ON DRAWING.

DRAWN BY: [Signature]
TRACED BY: A. SOMERVILLE
CHECKED BY: [Signature]
DATE: 15.5.37