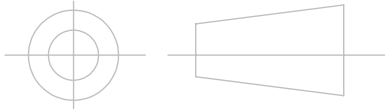
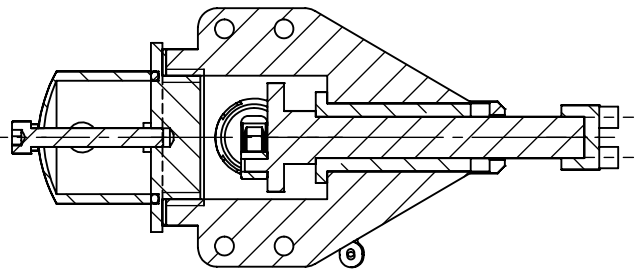
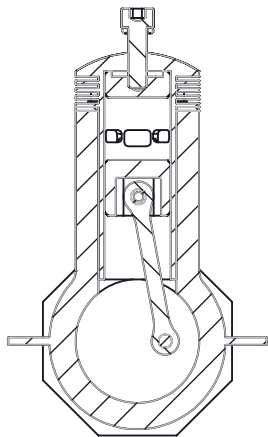


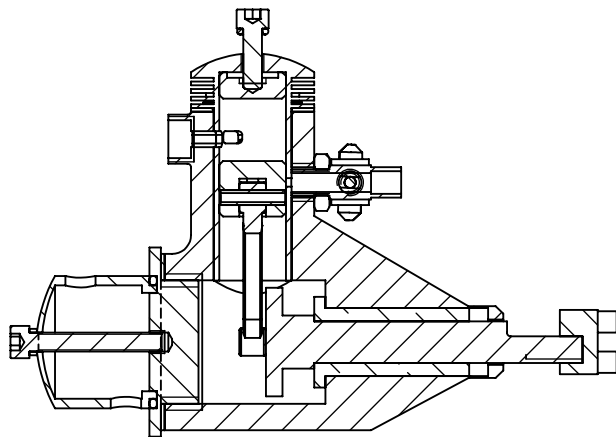
SCHOOL OF ENGINEERING UNIVERSITY OF BIRMINGHAM	AMENDMENTS						TOLERANCE UNLESS OTHERWISE STATED: DIMENSIONAL ANGULAR	N/A N/A	ALL DIMENSIONS IN mm	DO NOT SCALE DRAWING		
	ISSUE	DATE	CHANGE	ECN	BY	CKD				DATE: 10/12/18	DRAWN BY: GROUP 35	
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									THIRD ANGLE PROJECTION	DWG NO. 1		
										MATERIAL: N/A		
										FINISH: N/A	EXTERNAL VIEW	A3
											SHEET NUMBER: 1	



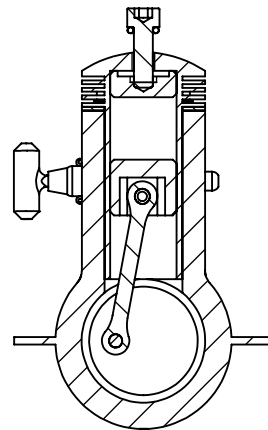
SECTION C-C



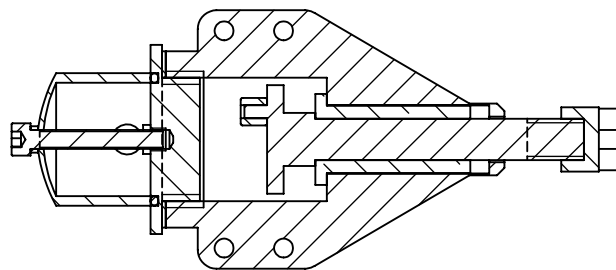
SECTION A-A



SECTION E-E



SECTION B-B



SECTION D-D

SCHOOL OF ENGINEERING
UNIVERSITY OF BIRMINGHAM

AMENDMENTS

ISSUE	DATE	CHANGE	ECN	BY	CKD

TOLERANCE UNLESS OTHERWISE STATED:
DIMENSIONAL N/A
ANGULAR N/A

ALL DIMENSIONS IN mm

DO NOT SCALE DRAWING

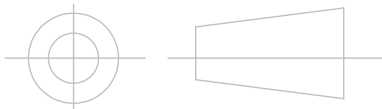
DATE: 10/12/18 DRAWN BY: GROUP 35

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SCALE 1:2

THIRD ANGLE PROJECTION



DRAWING TO BS8888

DWG NO. 2

MATERIAL: N/A

FINISH: N/A

TITLE:
INTERNAL VIEW OF ENGINE

INTERNAL VIEW

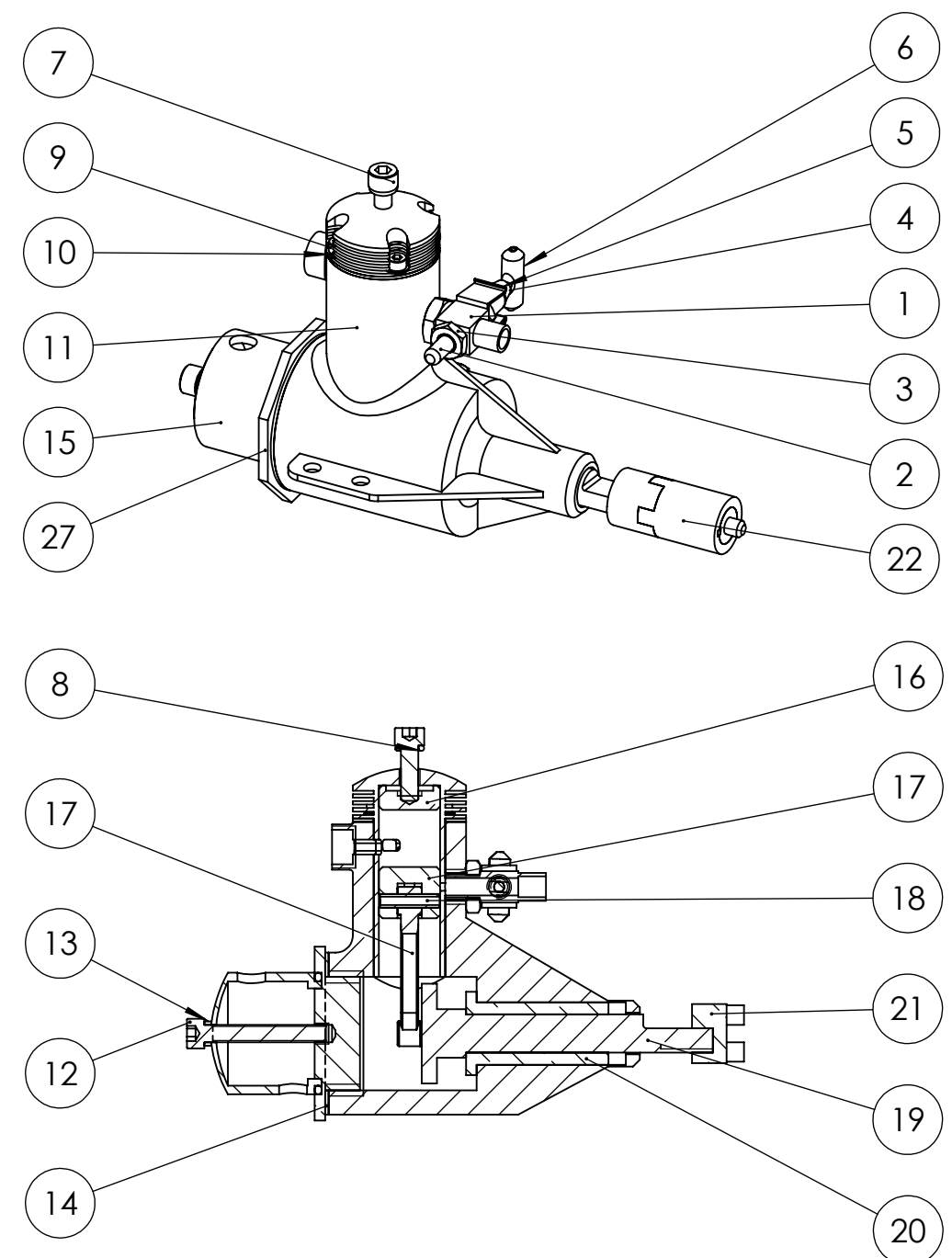
SHEET NUMBER: 2

A3

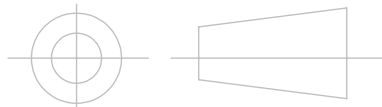
	8	7		6		5	
	ITEM NO	PART NAME	QTY	MATERIAL			
F	1	CARBURETOR	1	ALUMINIUM TO BS EN AW-4032			
	2	CARBURETOR TUBE	1	ALUMINIUM TO BS EN AW-4032			
	3	M8 NUT	2	189-608 FROM RS COMPONENTS LTD.			
	4	LOCKING CLIP	1	STAINLESS STEEL TO BS 970 416S21			
	5	NEEDLE SLEEVE	1	ALUMINIUM TO BS EN AW-4032			
E	6	NEEDLE	1	ALUMINIUM TO BS EN AW-4032			
	7	COMPRESSION SCREW	1	281-091 FROM RS COMPONENTS LTD.			
	8	WASHER	1	189-642 FROM RS COMPONENTS LTD.			
	9	M3 BOLT	4	280-981 FROM RS COMPONENTS LTD.			
	10	M3 WASHER	4	189-620 FROM RS COMPONENTS LTD.			
	11	CRANKCASE	1	CAST IRON TO BS EN 1561 JL1020			
	12	M5 FUEL BOLT	1	281-091 FROM RS COMPONENTS LTD.			
	13	FUEL O-RING	1	689-574 FROM RS COMPONENTS LTD.			
	14	TANK O-RING	1	128-906 FROM RS COMPONENTS LTD.			
D	15	FUEL TANK	1	HDPE TO BS 6564-2			
	16	CONTRA PISTON	1	ALUMINIUM TO BS EN AW-4032			
	17	CONNECTING ROD	1	STEEL TO BS 970 080M40			
	18	GUDGEON PIN	1	STEEL TO BS 970 080M40			
	19	CRANKSHAFT	1	STEEL TO BS 970 080M40			
	20	BEARING	1	GGB BP25 FROM GGB BEARINGS			
	21	SHAFT COUPLING	1	STEEL TO BS 970 080M40			
	22	DYNO COUPLING	1	STEEL TO BS 970 080M40			
	C	23	M3 BOLT	4	281-007 FROM RS COMPONENTS LTD.		
24		M3 WASHER	4	HPW-3.2-6-1-N FROM ACCU LTD.			
25		M3 NUT	4	WF15111 FROM WESTFIELD FASTENERS LTD.			
26		HEAD CYLINDER GASKET	1	COPPER TO BS 6017 CW006A			
27		BACK CRANK CASE	1	CAST IRON TO BS EN 1561 JL1020			

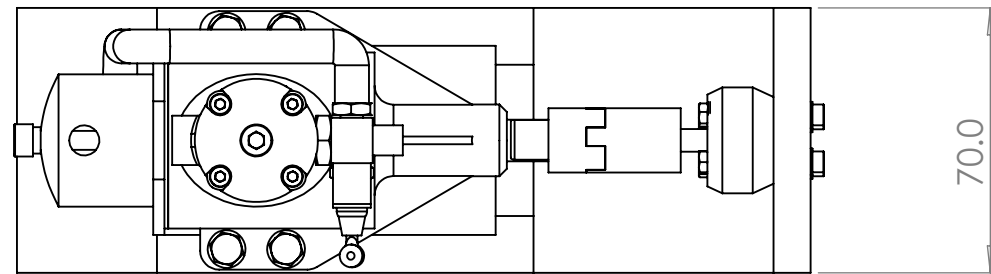
PARTS 23 TO 25 ARE INCLUDED IN THE ENGINE BUT NOT IN THIS DRAWING - REQUIRED FOR TEST FRAME MOUNTING.

ENGINE CAN BE ASSEMBLED USING ALLEN KEY.

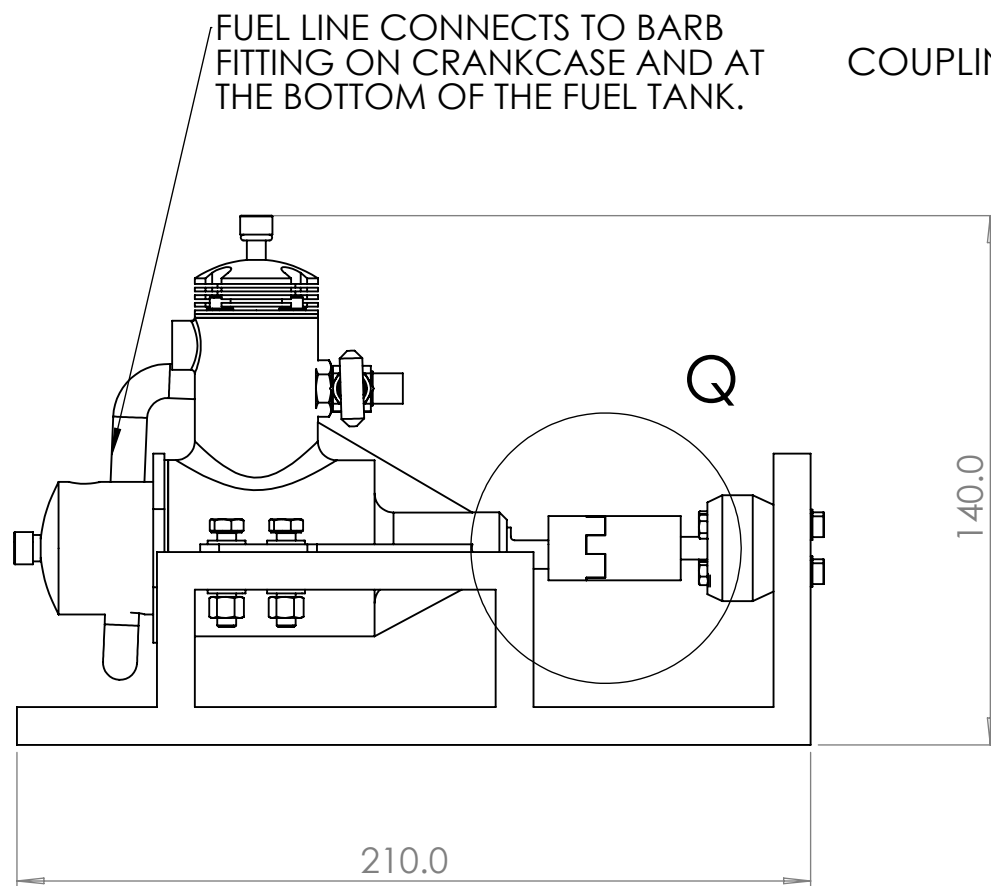
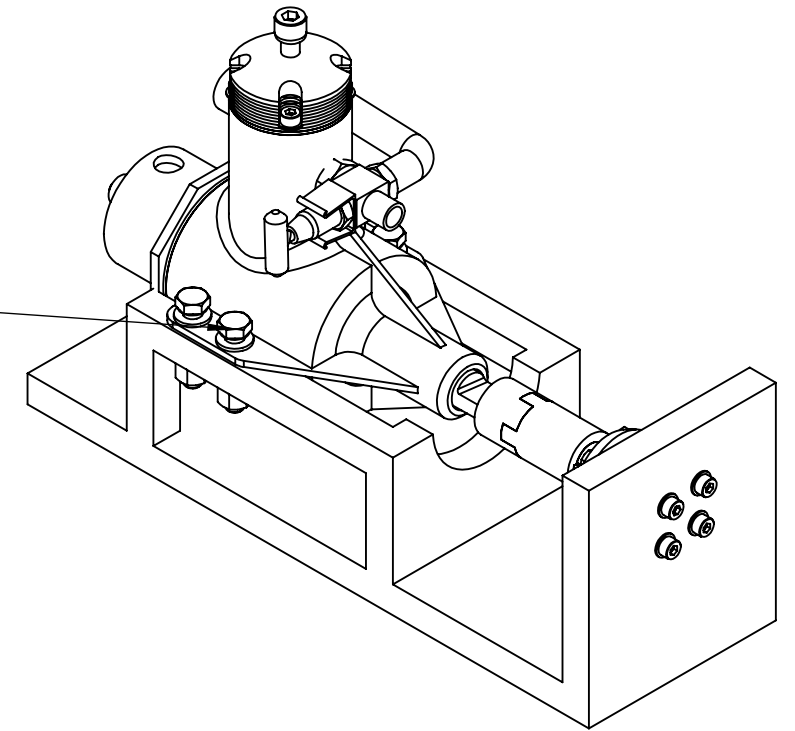


SECTION E-E

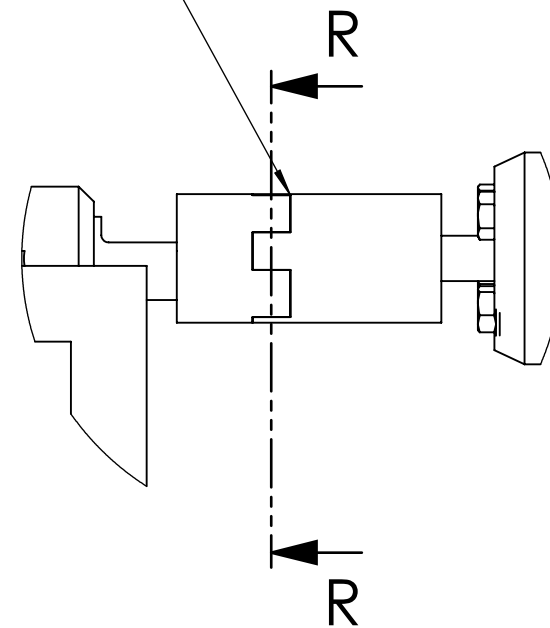
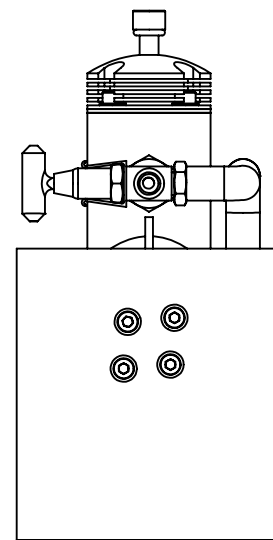
SCHOOL OF ENGINEERING UNIVERSITY OF BIRMINGHAM	AMENDMENTS						TOLERANCE UNLESS OTHERWISE STATED: DIMENSIONAL N/A ANGULAR N/A		ALL DIMENSIONS IN mm		DO NOT SCALE DRAWING	
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							<div>THIRD ANGLE PROJECTION</div> 		DWG NO. 3			
									MATERIAL: N/A		SHEET NUMBER: 3	
									FINISH: N/A			



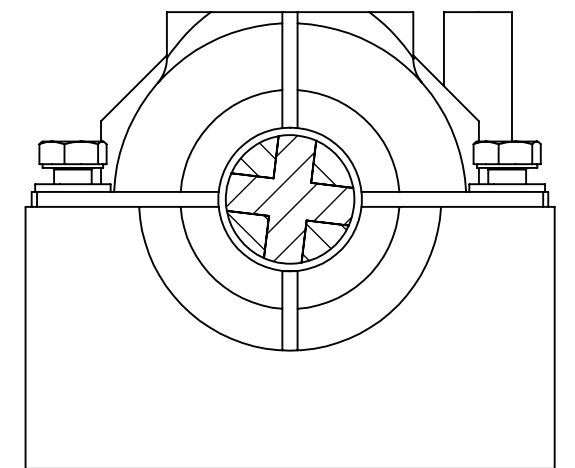
ALL TEST FRAME BOLTS AND
SCREWS MUST BE USED WITH
WASHERS- TO AVOID DAMAGE
ON ENGINE.



COUPLING HUB FOR TORQUE TRANSMISSION



DETAIL Q
SCALE 1 : 1



SECTION R-R
SCALE 1 : 1

SCHOOL OF ENGINEERING
UNIVERSITY OF BIRMINGHAM

AMENDMENTS

ISSUE	DATE	CHANGE	ECN	BY	CKD

TOLERANCE UNLESS OTHERWISE STATED:
DIMENSIONAL N/A
ANGULAR N/A

ALL DIMENSIONS IN mm

DO NOT SCALE DRAWING

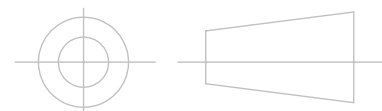
DATE: 10/12/18 DRAWN BY: GROUP 35

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SCALE 1:2

THIRD ANGLE PROJECTION



DRAWING TO BS8888

DWG NO. **4**

MATERIAL: N/A

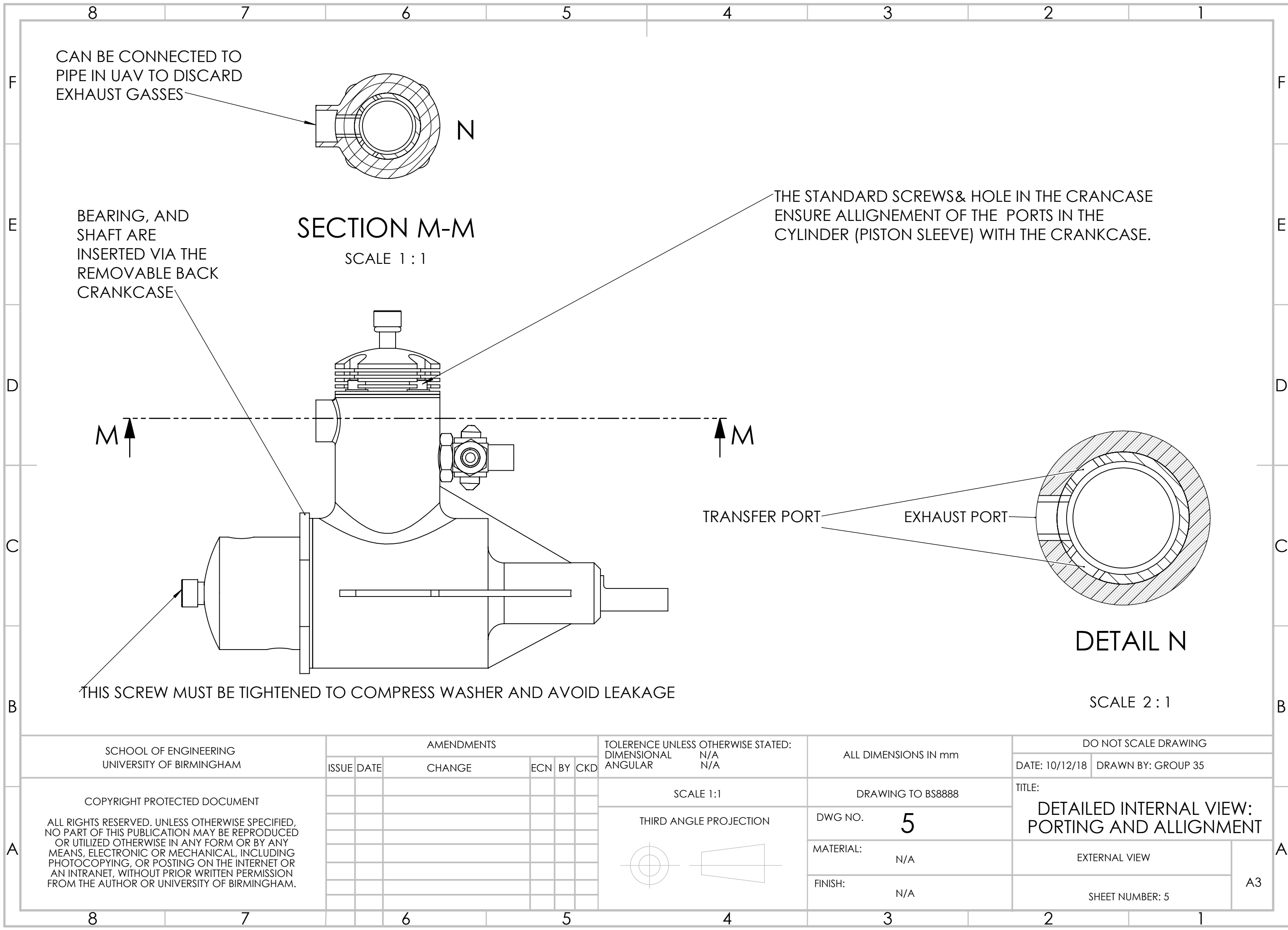
FINISH: N/A

TITLE:
ENGINE ON TEST FRAME

EXTERNAL VIEW

SHEET NUMBER: 4

A3



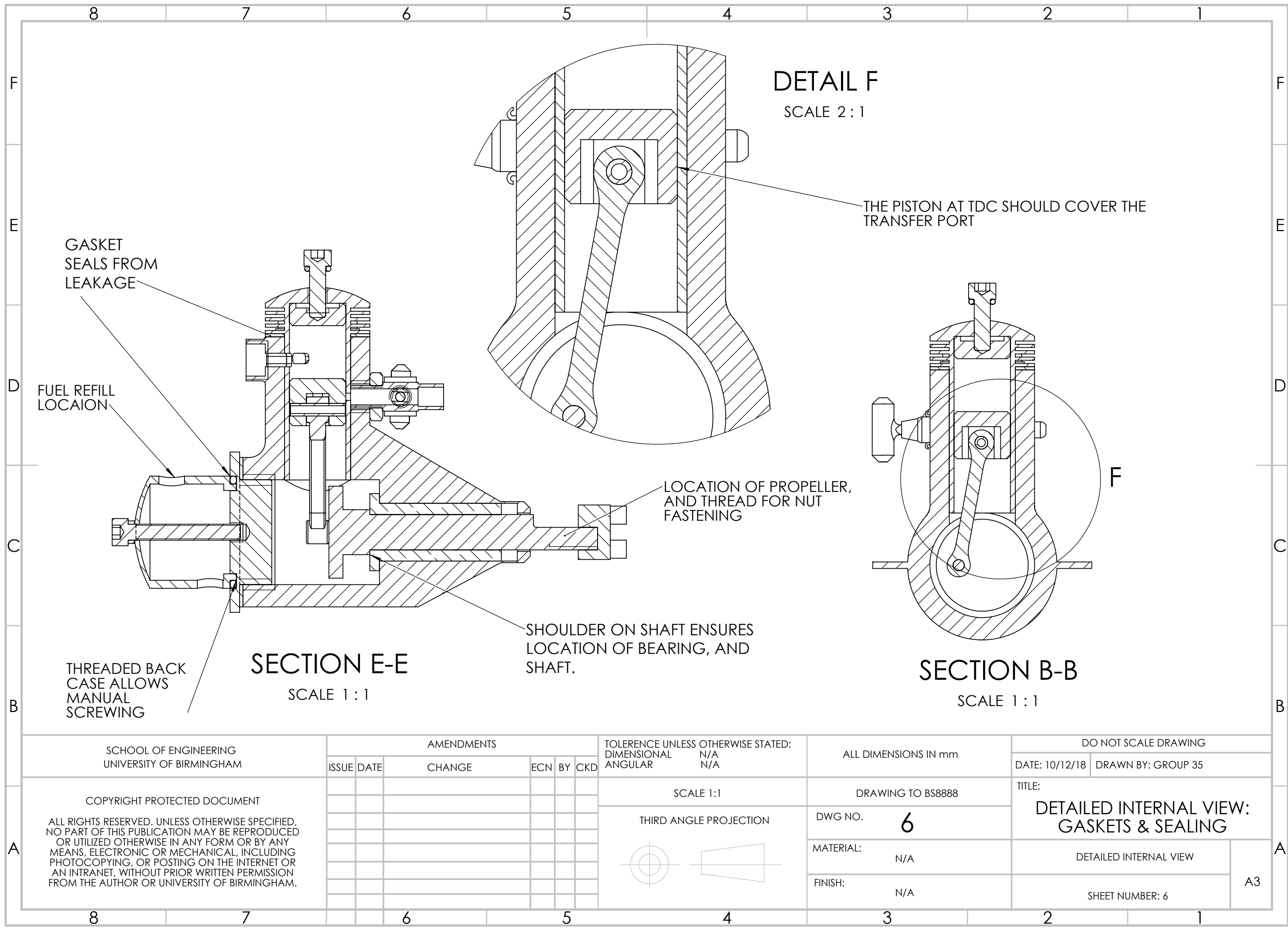
SECTION M-M

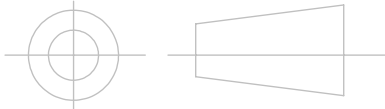
SCALE 1 : 1

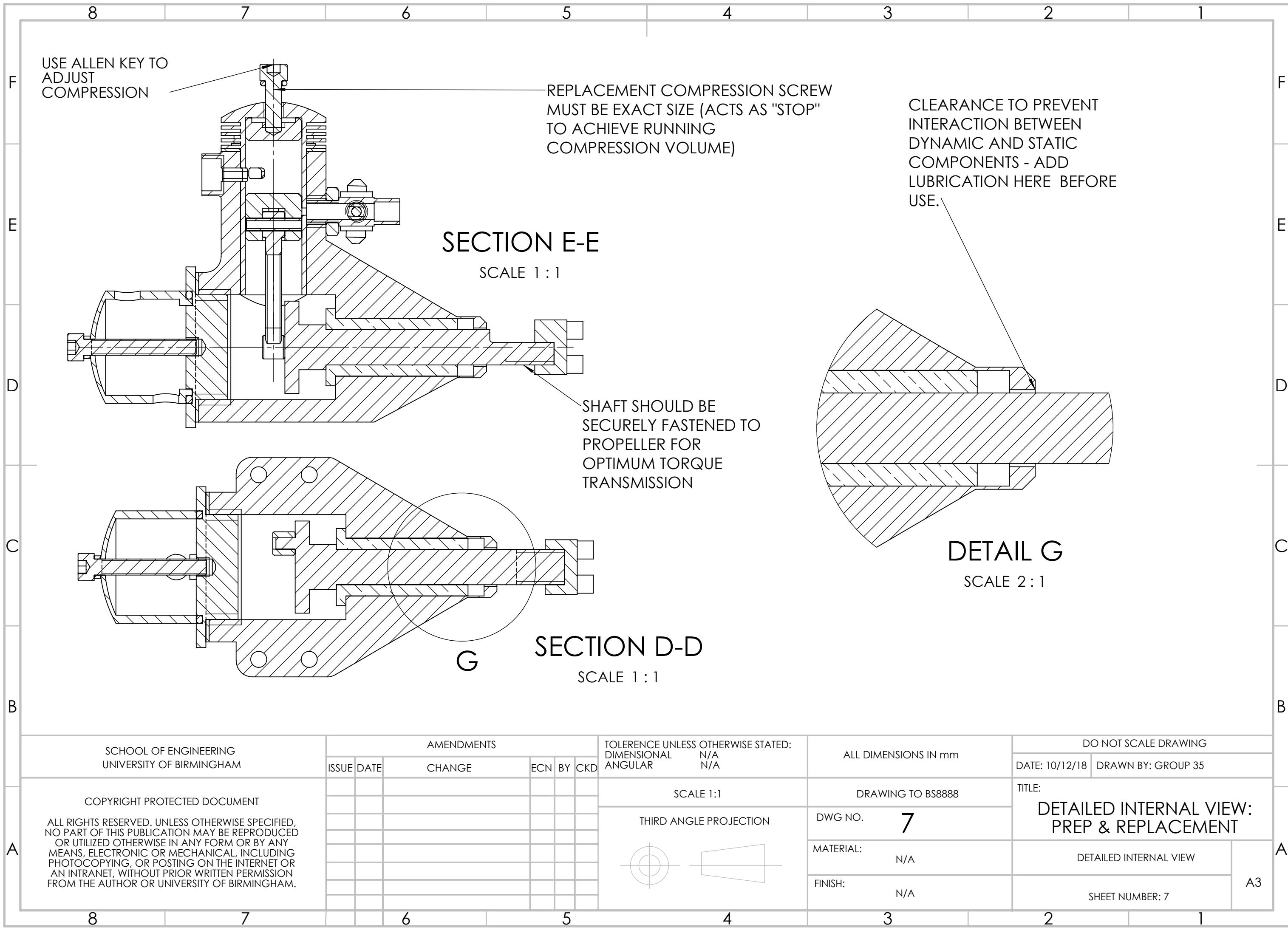
DETAIL N

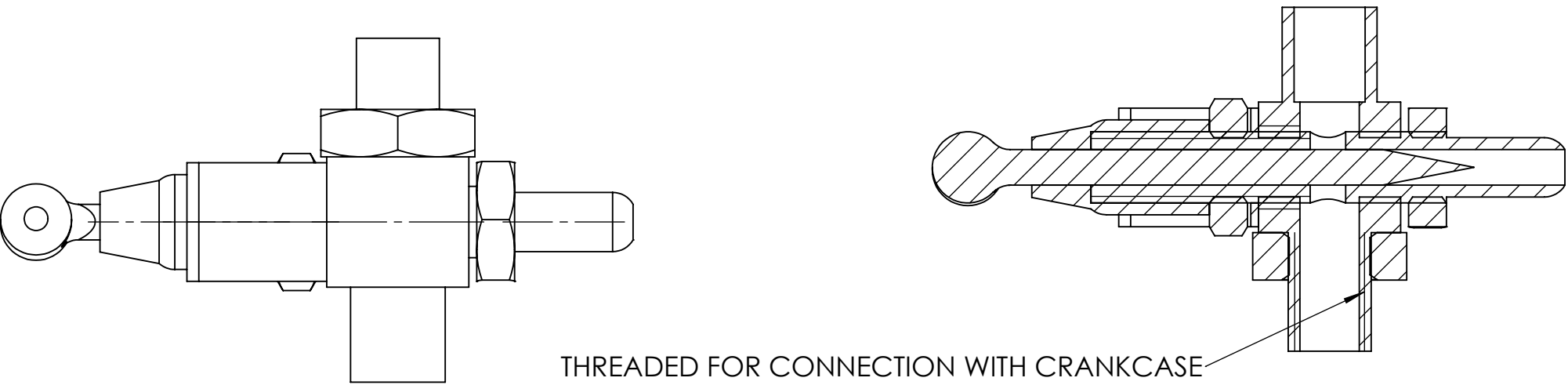
SCALE 2 : 1

A	SCHOOL OF ENGINEERING UNIVERSITY OF BIRMINGHAM		AMENDMENTS				TOLERANCE UNLESS OTHERWISE STATED: DIMENSIONAL ANGULAR		ALL DIMENSIONS IN mm		DO NOT SCALE DRAWING	
			ISSUE	DATE	CHANGE	ECN	BY	CKD			DATE: 10/12/18	DRAWN BY: GROUP 35
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									THIRD ANGLE PROJECTION 	DWG NO. 5		
										MATERIAL: N/A	EXTERNAL VIEW	A3
										FINISH: N/A	SHEET NUMBER: 5	

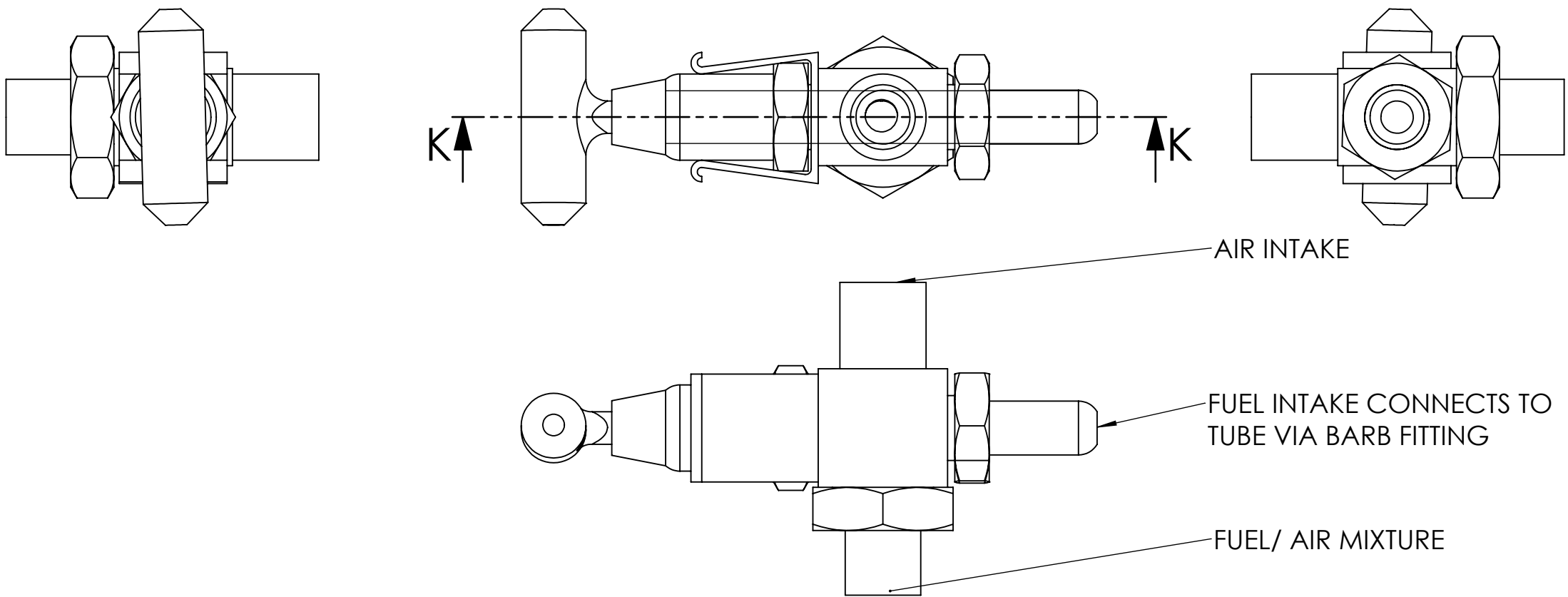


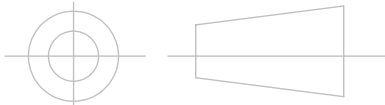
SCHOOL OF ENGINEERING UNIVERSITY OF BIRMINGHAM	AMENDMENTS						TOLERANCE UNLESS OTHERWISE STATED: DIMENSIONAL N/A ANGULAR N/A	ALL DIMENSIONS IN mm	DO NOT SCALE DRAWING	
	ISSUE	DATE	CHANGE	ECN	BY	CKD			DATE: 10/12/18	DRAWN BY: GROUP 35
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							THIRD ANGLE PROJECTION	DWG NO. 6		
								MATERIAL: N/A	DETAILED INTERNAL VIEW	
								FINISH: N/A	SHEET NUMBER: 6	





SECTION K-K
SCALE 2 : 1



SCHOOL OF ENGINEERING UNIVERSITY OF BIRMINGHAM	AMENDMENTS						TOLERANCE UNLESS OTHERWISE STATED: DIMENSIONAL ANGULAR	N/A N/A	ALL DIMENSIONS IN mm	DO NOT SCALE DRAWING	
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								THIRD ANGLE PROJECTION	DWG NO. 8		
									MATERIAL: N/A	DETAILED INTERNA VIEW	
									FINISH: N/A	SHEET NUMBER: 8	