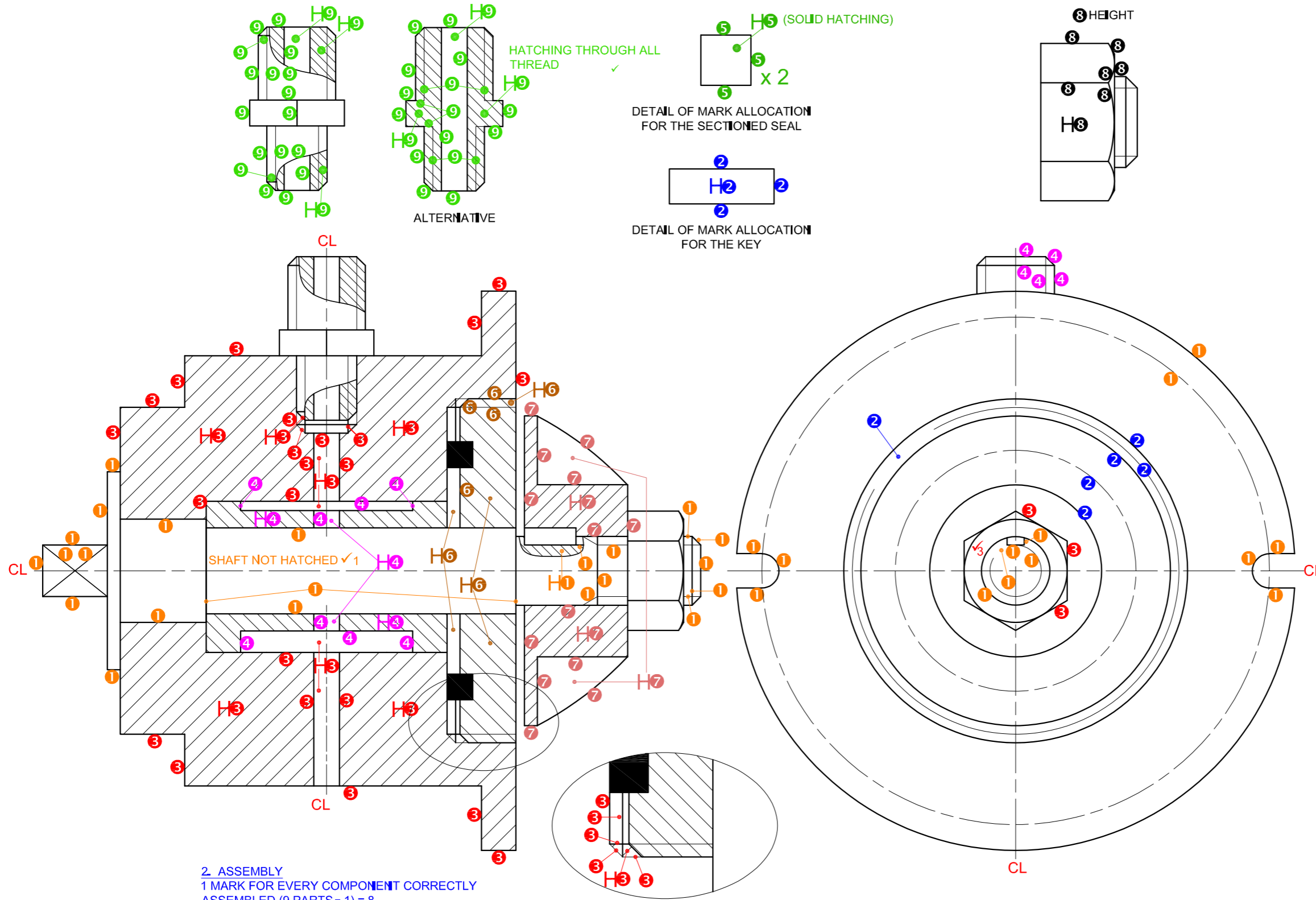


FOR OFFICIAL USE ONLY	
INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA					
LEFT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	BRACKET	5			
2	COUPLING	6			
3	FLANGE	5 1/2			
4	M10 HEX. BOLT	3 1/2			
SUBTOTAL		20			
SECTIONAL FRONT VIEW					
1	BRACKET	10 1/2			
2	BUSH	5			
3	COUPLING	18 1/2			
4	M10 HEX. BOLT	8			
5	WOODRUFF KEY	2 1/2			
6	FLANGE	8			
7	SEAL	2			
8	WASHER + M20 NUT	5 1/2			
SUBTOTAL		60			
GENERAL					
1	CENTRE LINES	3			
2	ASSEMBLY	9			
SUBTOTAL		12			
TOTAL		92			
PENALTIES (-)					
GRAND TOTAL					

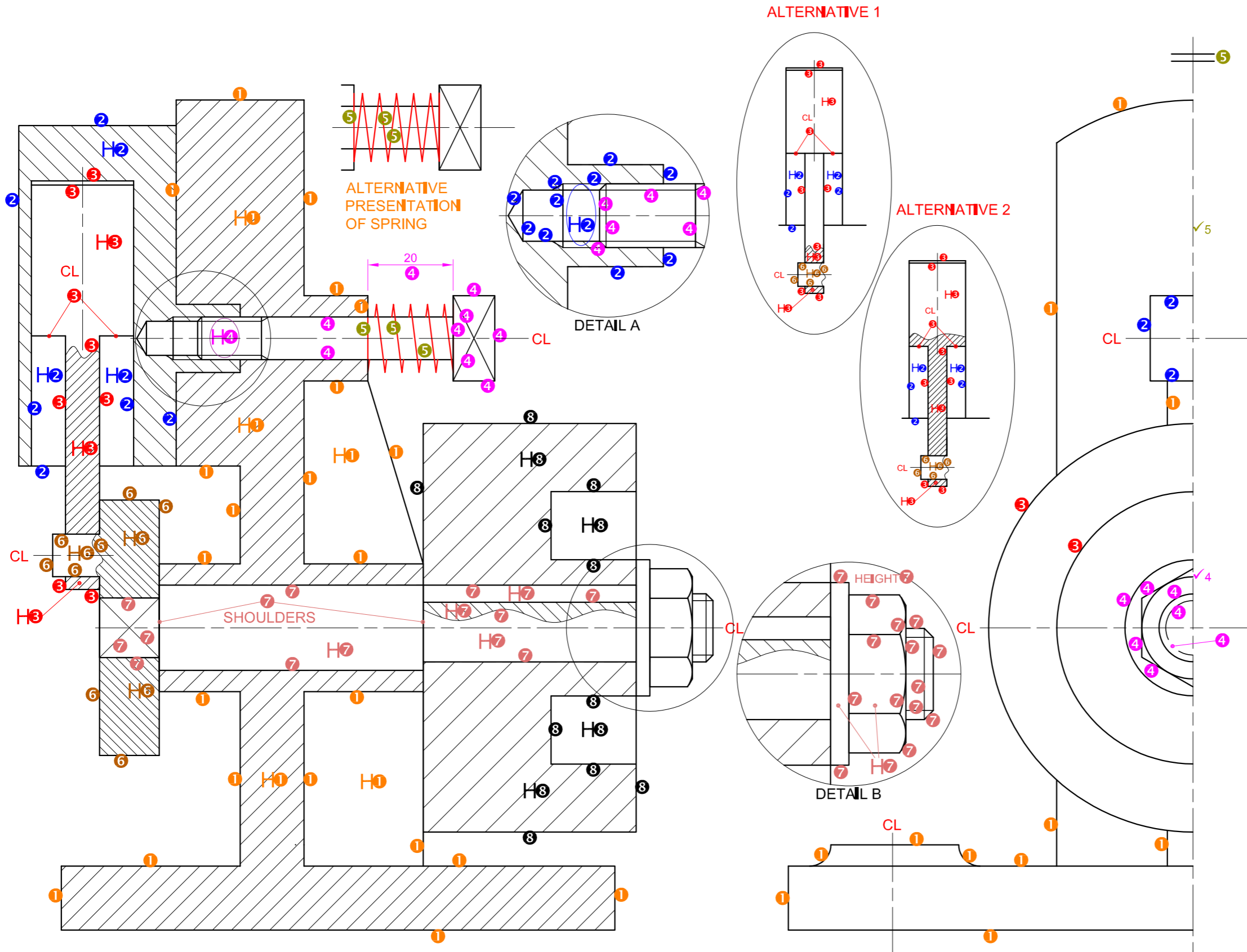


2. ASSEMBLY
1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (9 PARTS - 1) = 8

1. CENTRE LINES
SANS COMPLIANT
1-3 = 1; 4-5 = 2
NOTE: THE CONVENTION AND PCD CLs NOT INCLUDED

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INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA					
RIGHT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	HOUSING + SHAFT	6 1/2			
2	BACK PLATE + COMPRESSOR WHEEL	3			
3	M16 NUT	2 1/2			
4	OIL LINE FITTING	2 1/2			
SUBTOTAL		14 1/2			
SECTIONAL FRONT VIEW					
1	SHAFT	12 1/2			
2	KEY	2			
3	HOUSING	18			
4	BUSH	5 1/2			
5	RUBBER SEAL	4			
6	BACK PLATE	3 1/2			
7	COMPRESSOR WHEEL	8			
8	M16 NUT	4			
9	OIL LINE FITTING	10			
SUBTOTAL		67 1/2			
GENERAL					
1	CENTRE LINES	3			
2	ASSEMBLY	8			
SUBTOTAL		11			
TOTAL		93			
PENALTIES (-)					
GRAND TOTAL					



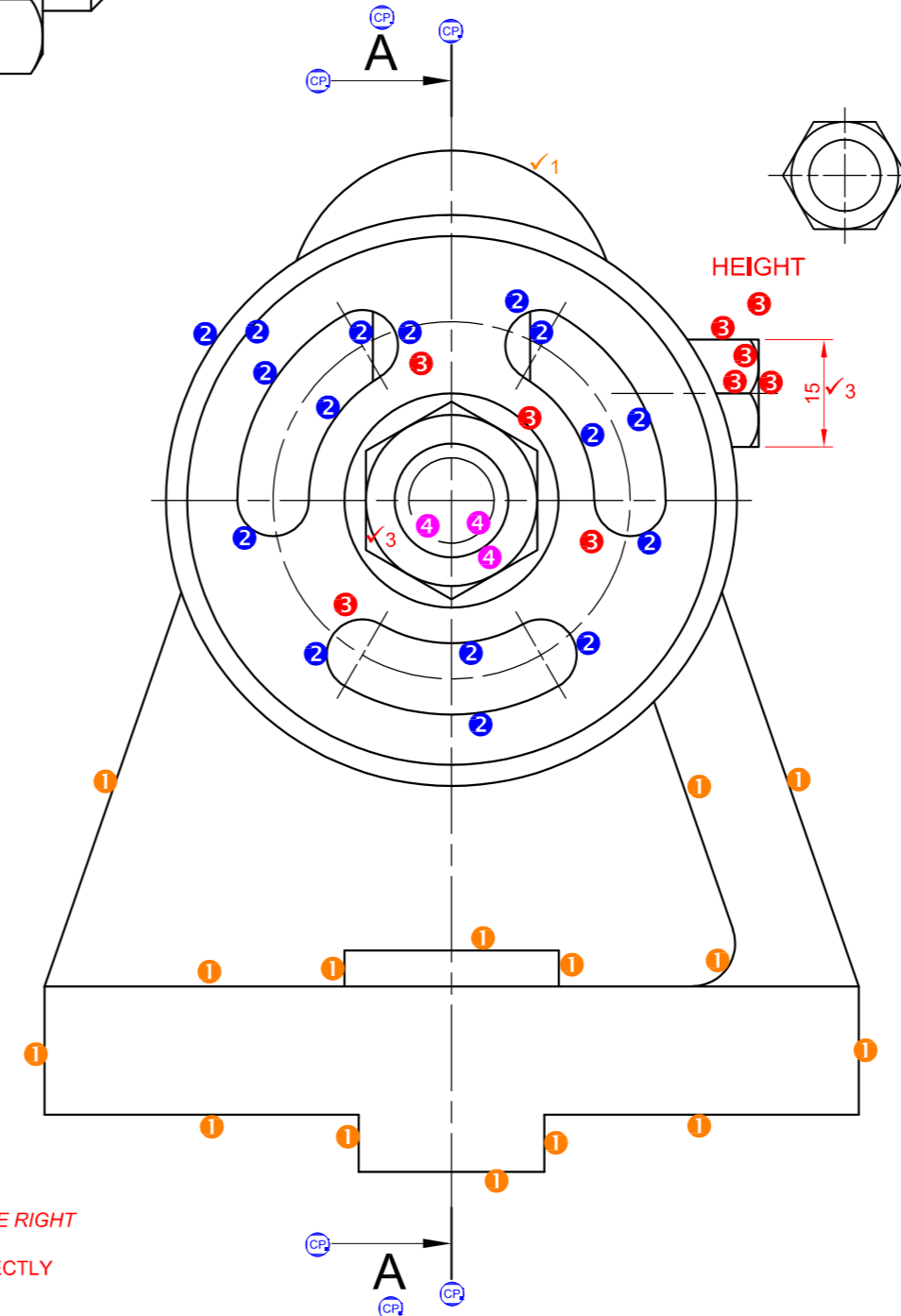
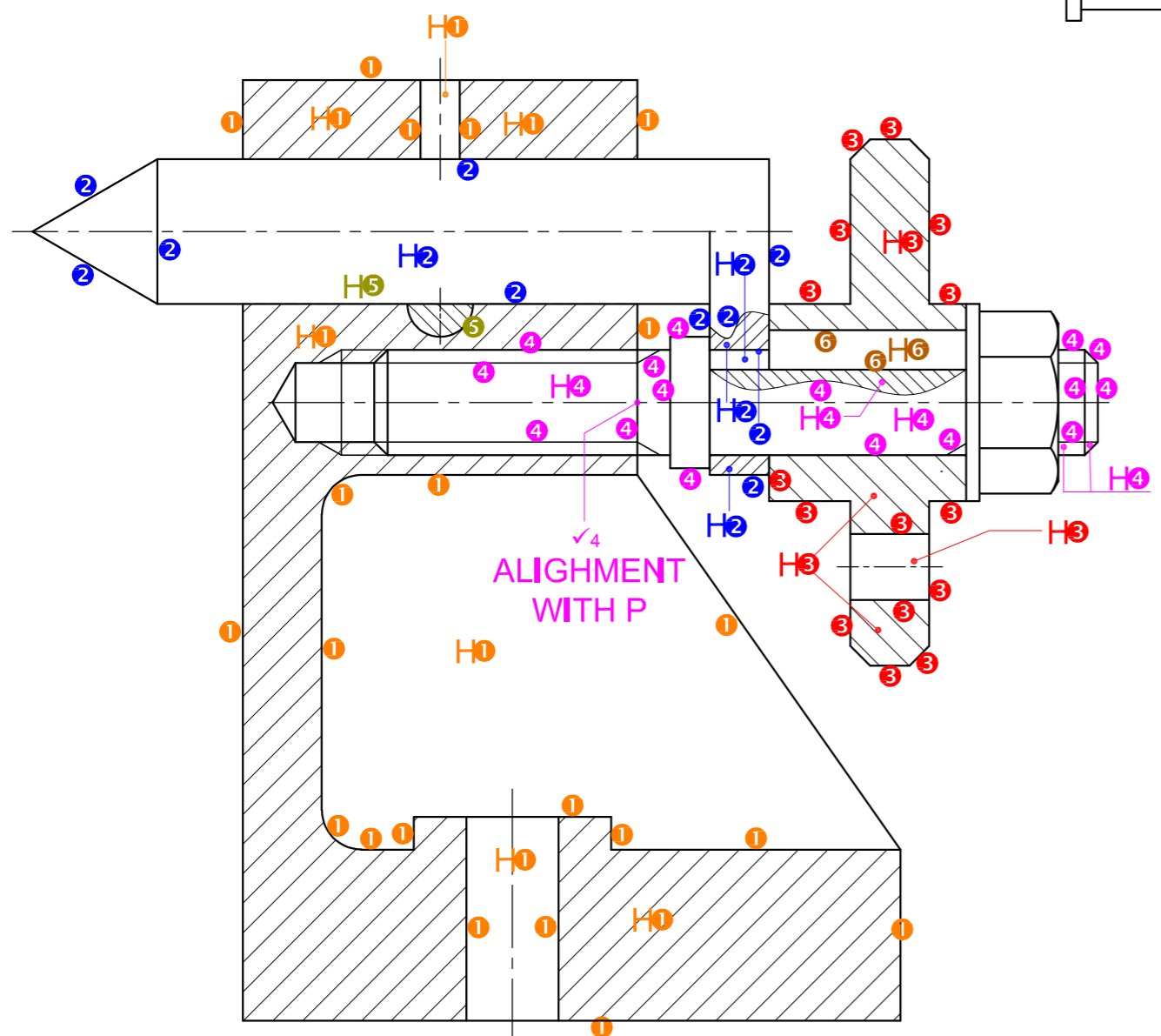
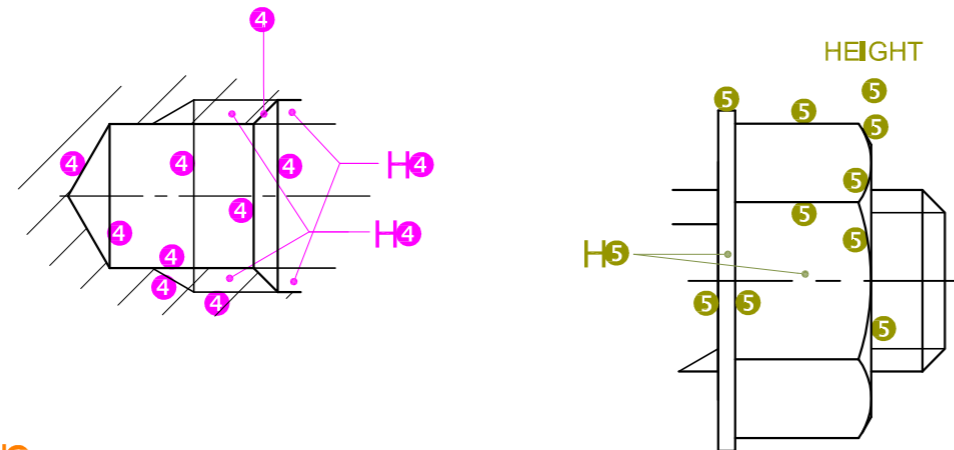
2. ASSEMBLY
1 MARK FOR EVERY COMPONENT
CORRECTLY ASSEMBLED (11 PARTS - 1) = 10

1. CENTRE LINES
SANS COMPLIANT
1 - 3 = 0,5; 4 - 7 = 1

1
1
2

FOR OFFICIAL USE ONLY	
INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA				
FRONT VIEW				
		POSSIBLE	OBTAINED	SIGNI MODERATED
1	BASE	5 1/2		
2	TENSION SCREW	1 1/2		
3	FLY WHEEL	1		
4	NUT + WASHER	4 1/2		
5	INDICATION OF SYMMETRY	2		
SUBTOTAL		14 1/2		
SECTIONAL LEFT VIEW				
1	BASE	13 1/2		
2	CYLINDER	10		
3	PISTON	5 1/2		
4	TENSION SCREW	8		
5	SPRING	1 1/2		
6	CRANK	5 1/2		
7	SHAFT + KEY + WASHER + NUT	15 1/2		
8	FLY WHEEL	7		
SUBTOTAL		66 1/2		
GENERAL				
1	CENTRE LINES	2		
2	ASSEMBLY	10		
SUBTOTAL		12		
TOTAL		93		
PENALTIES (-)				
GRAND TOTAL				



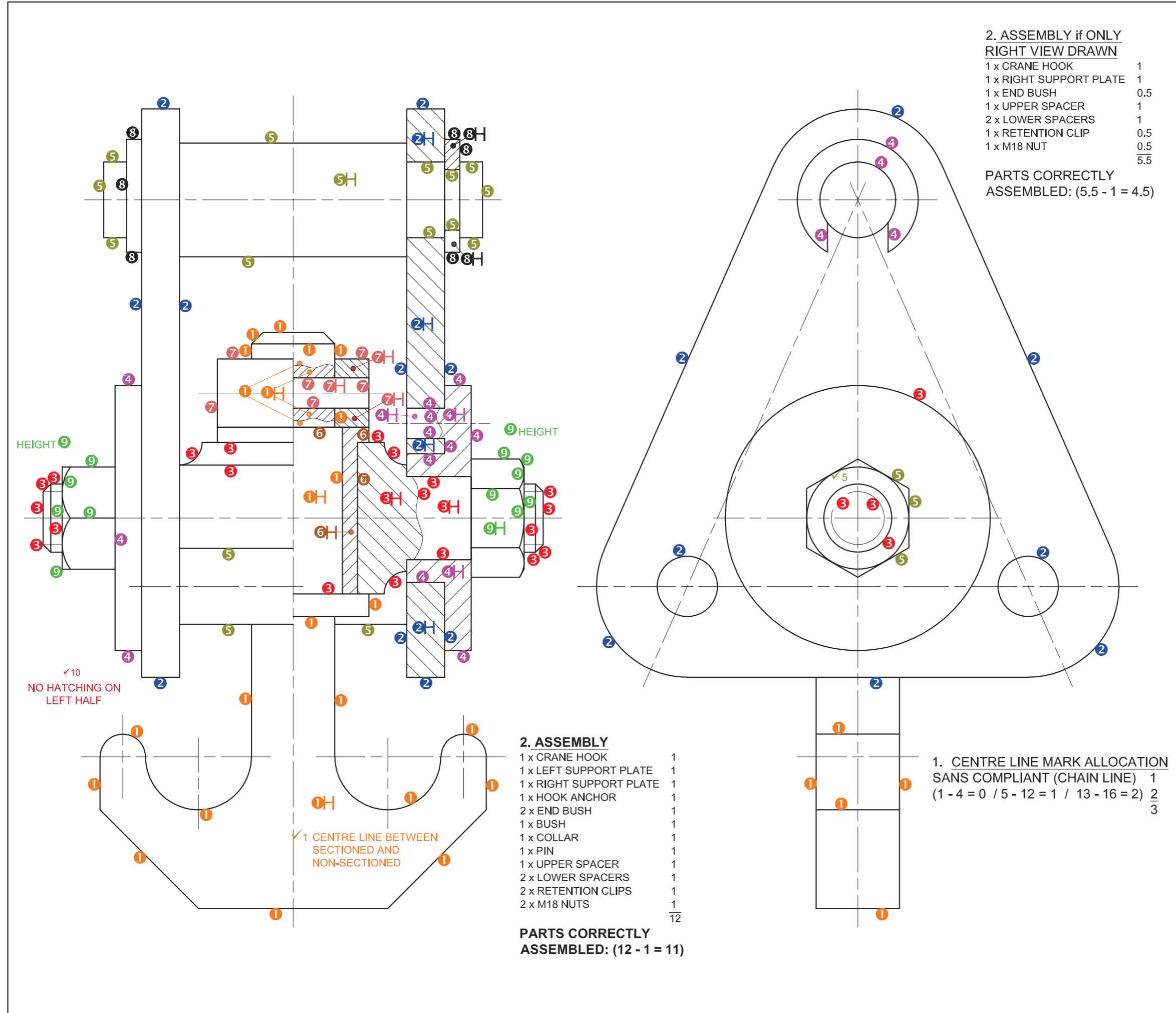
3. ASSEMBLY
1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (8 PARTS - 1) = 7

3. ASSEMBLY (ALTERNATIVE IF ONLY THE RIGHT VIEW WAS DRAWN)
1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (7 PARTS - 1) = 6

1. CENTRE LINE MARK ALLOCATION
SANS COMPLAINT (LINE TYPE) 1
CENTRE LINES 3
(1 to 4 = 1 / 5 to 11 = 2 / 12 to 14 = 3)
TOTAL 4

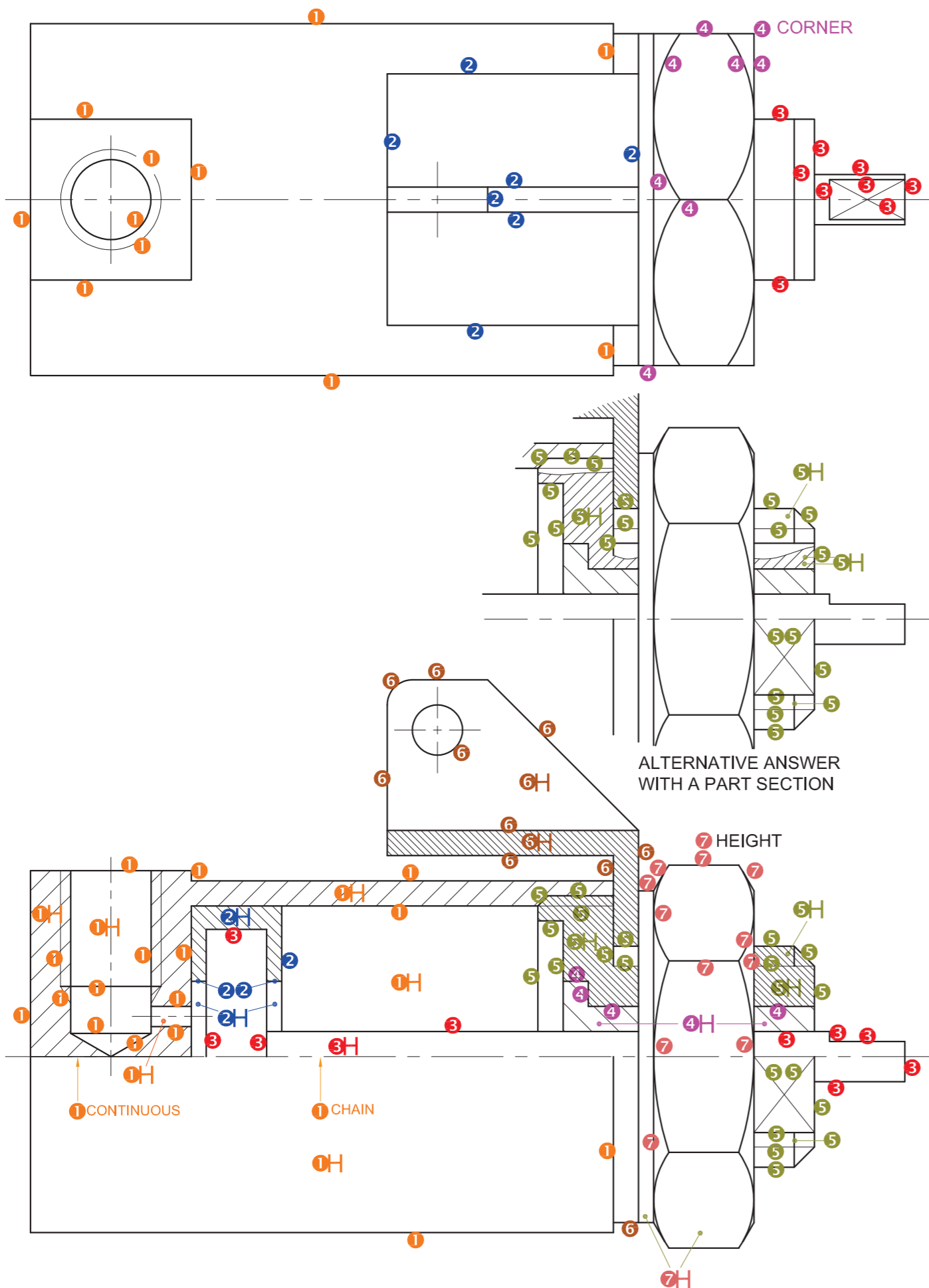
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INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA				
RIGHT VIEW				
		POSSIBLE	OBTAINED	MODERATED
1	TAILSTOCK	8 1/2		
2	ADJUSTING WHEEL + DEAD CENTRE	8		
3	M16 NUT + WASHER + LOCKING NUT	6 1/2		
4	ADJUSTING STUD	1 1/2		
SUBTOTAL		24 1/2		
SECTIONAL FRONT VIEW				
1	TAILSTOCK	14		
2	DEAD CENTRE	7		
3	ADJUSTING WHEEL	9		
4	ADJUSTING STUD	16 1/2		
5	M16 NUT + WASHER + M10 LOCKING BOLT	6 1/2		
6	KEY	1 1/2		
SUBTOTAL		54 1/2		
GENERAL				
1	CENTRE LINES	4		
2	CUTTING PLANE	3		
3	ASSEMBLY	7		
SUBTOTAL		14		
TOTAL		93		
PENALTIES (-)				
GRAND TOTAL				



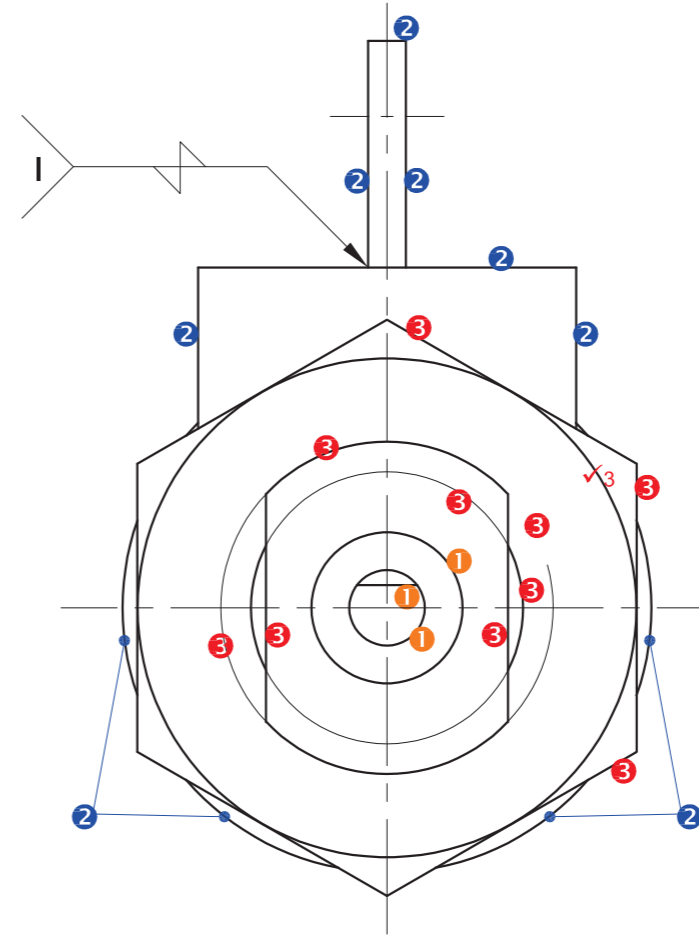
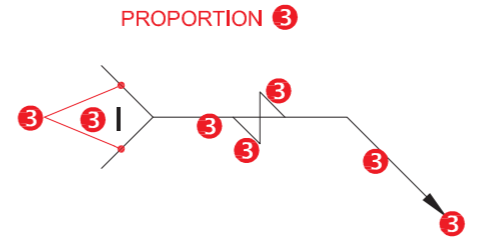
FOR OFFICIAL USE ONLY	
INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA					
RIGHT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	CRANE HOOK	2 1/2			
2	SUPPORT PLATES + LOWER SPACERS	4			
3	HOOK ANCHOR + END BUSH	2			
4	RETENTION CLIP + UPPER SPACER	2			
5	M18 NUT	2 1/2			
SUBTOTAL		13			
HALF SECTIONAL FRONT VIEW					
1	CRANE HOOK	13			
2	SUPPORT PLATES	7			
3	HOOK ANCHOR	11			
4	END BUSHES	7 1/2			
5	UPPER + LOWER SPACERS	8			
6	BUSH	2			
7	COLLAR + PIN	4 1/2			
8	RETENTION CLIPS	4			
9	M18 NUTS	7			
10	NO HATCHING LEFT HALF	1			
SUBTOTAL		65			
GENERAL					
1	CENTRE LINES	3			
2	ASSEMBLY	11			
SUBTOTAL		14			
TOTAL		92			
PENALTIES (-)					
GRAND TOTAL					
EXAMINATION NUMBER					
EXAMINATION NUMBER					



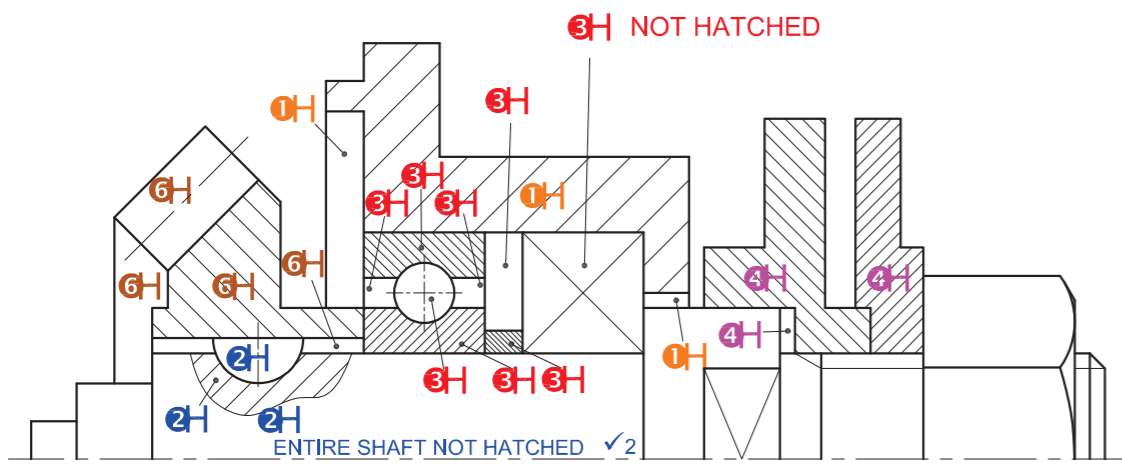
1. CENTRE LINE MARK ALLOCATION
 SANS COMPLIANT (LINE TYPE) 1
 7 CENTRE LINES (1-2 = 0, 3-5 = 1, 6-7 = 2) 2
TOTAL 3

2. ASSEMBLY
 1 MARK FOR EVERY
 COMPONENT CORRECTLY
 ASSEMBLED (9 PARTS -1) = 8

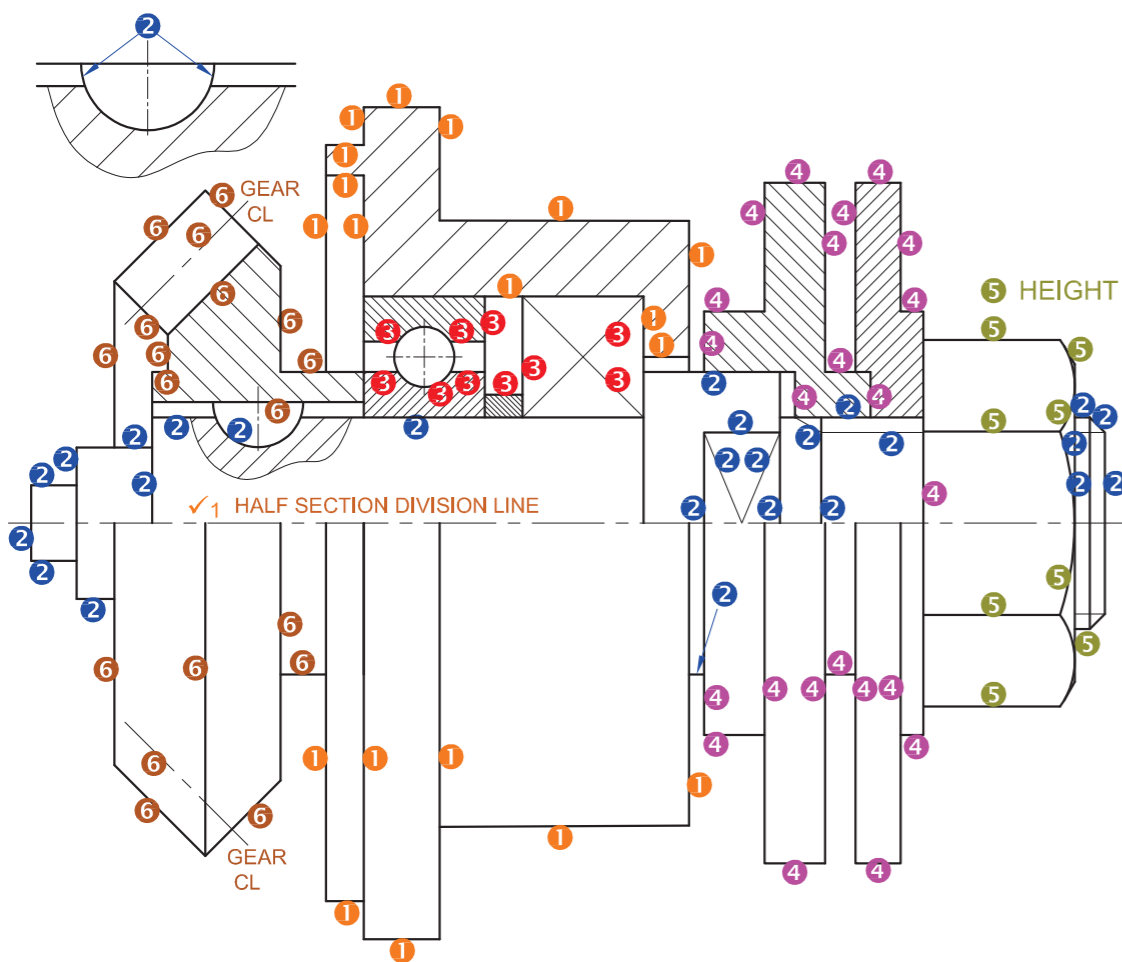


FOR OFFICIAL USE ONLY	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

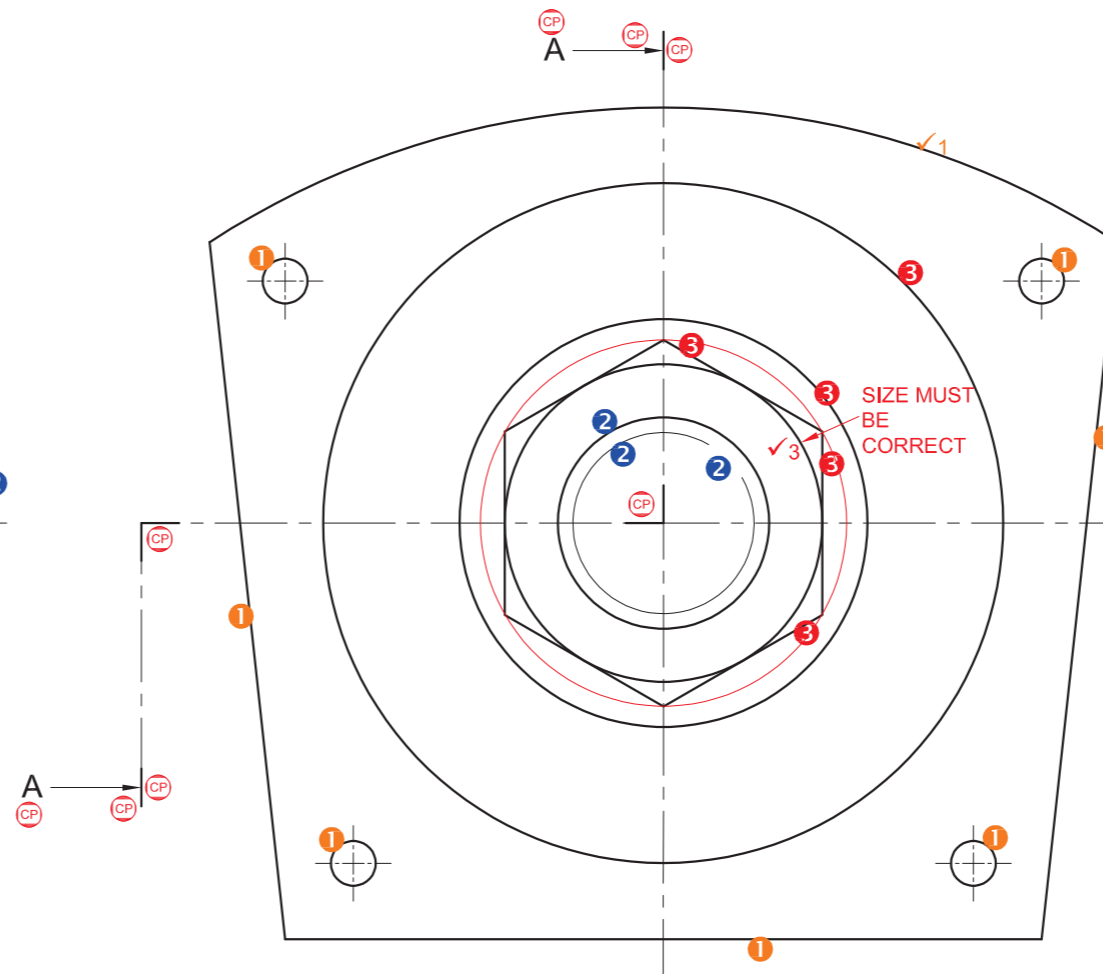
ASSESSMENT CRITERIA					
RIGHT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	SHAFT + BUSH	1 1/2			
2	CYLINDER + BRACKET + HOOK	4			
3	M44 NUT + GUIDE	6			
SUBTOTAL		11 1/2			
HALF-SECTIONAL FRONT VIEW					
1	CYLINDER	12			
2	RUBBER SEAL	2 1/2			
3	PLUNGER	5			
4	BUSH	2 1/2			
5	GUIDE	11 1/2			
6	BRACKET + HOOK	6			
7	M44 NUT + WASHER	6 1/2			
SUBTOTAL		46			
TOP VIEW					
1	CYLINDER	5 1/2			
2	BRACKET + HOOK	3 1/2			
3	GUIDE + SHAFT	4 1/2			
4	M44 NUT + WASHER	4			
SUBTOTAL		17 1/2			
GENERAL					
1	CENTRE LINES	3			
2	ASSEMBLY	8			
3	WELDING SYMBOL	4			
SUBTOTAL		15			
TOTAL		90			
PENALTIES (-)					
GRAND TOTAL					
EXAMINATION NUMBER					
EXAMINATION NUMBER					



MARK ALLOCATION FOR HATCHING



NOT SECTIONED / HATCHED IN BOTTOM HALF ✓1

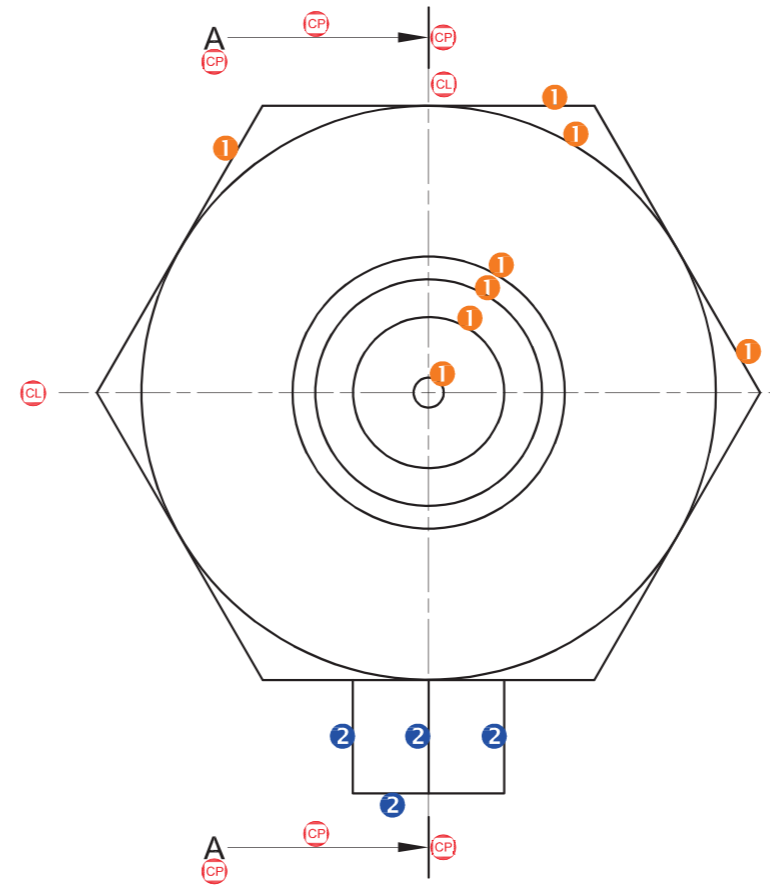
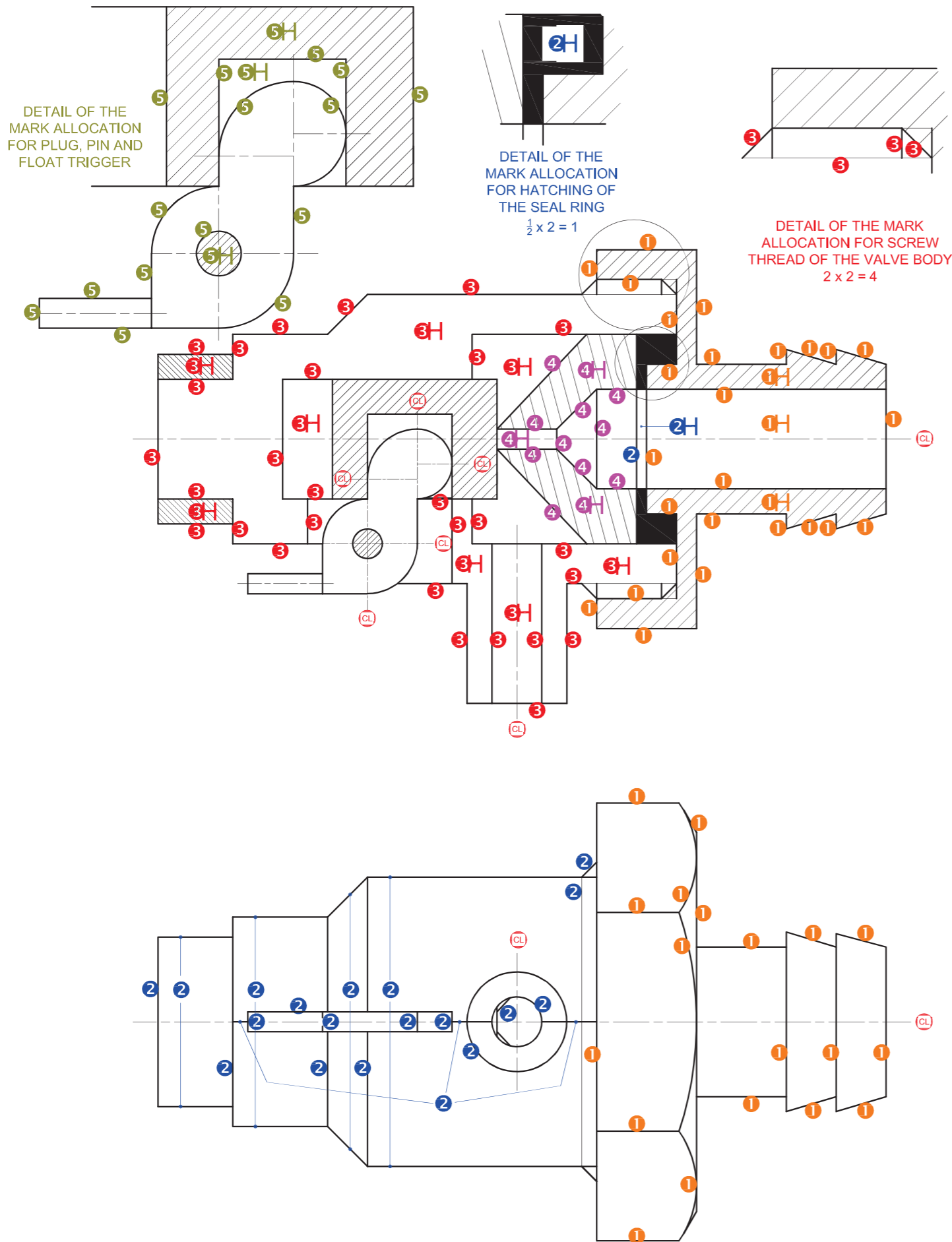


1. CENTRE LINE MARK ALLOCATION
SANS COMPLIANT (LINE TYPE) 2
CENTRE LINES
(0 to 3 = 0); (4 to 9 = 1); (10 to 13 = 2) 2
TOTAL 4

3. ASSEMBLY
1 MARK FOR EVERY COMPONENT
CORRECTLY ASSEMBLED
(10 PARTS -1) = 9

FOR OFFICIAL USE ONLY	
INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA					
RIGHT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	BODY	4½			
2	SHAFT	1½			
3	M28 NUT + FLANGE	3½			
SUBTOTAL		9½			
HALF SECTIONAL FRONT VIEW					
1	BODY	13			
2	SHAFT + KEY	16			
3	BEARING + SPACER	9			
4	FLANGES	13			
5	M28 NUT	4½			
6	GEAR	11			
SUBTOTAL		66½			
GENERAL					
1	CENTRE LINES	4			
2	CUTTING PLANE A-A	4			
3	ASSEMBLY	9			
SUBTOTAL		17			
TOTAL		93			
PENALTIES (-)					
GRAND TOTAL					

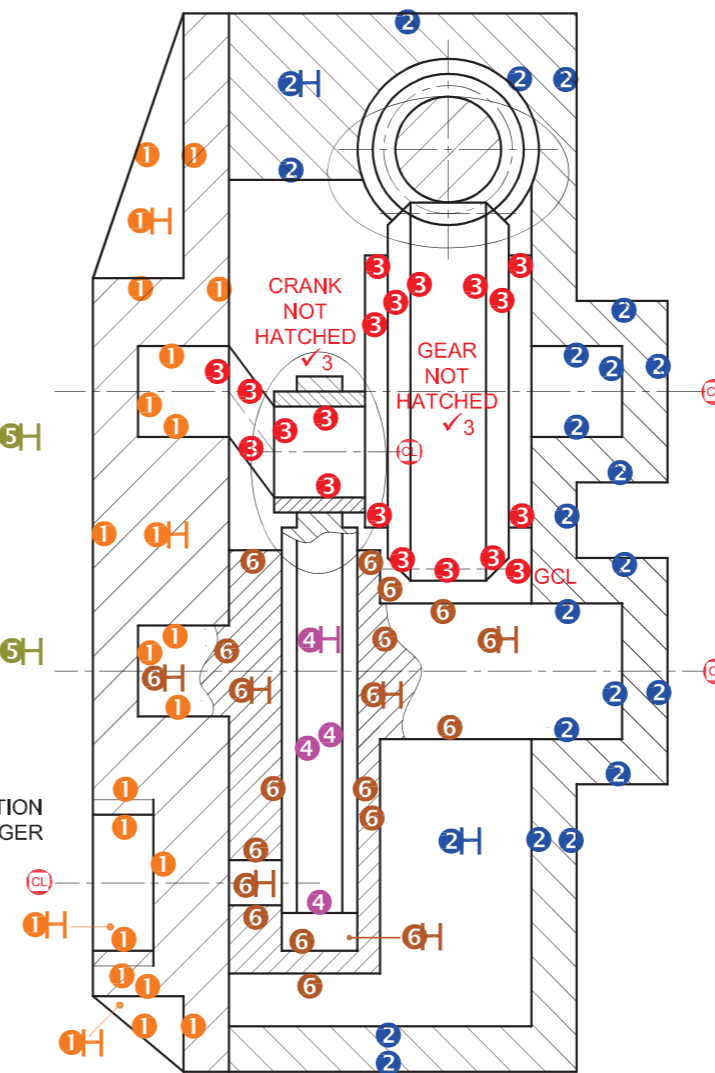
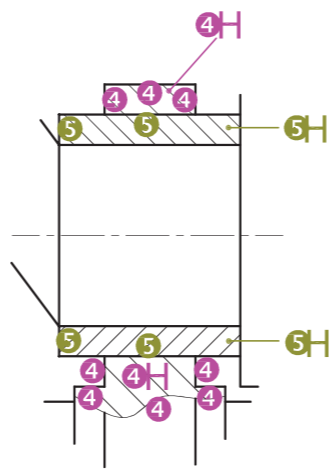
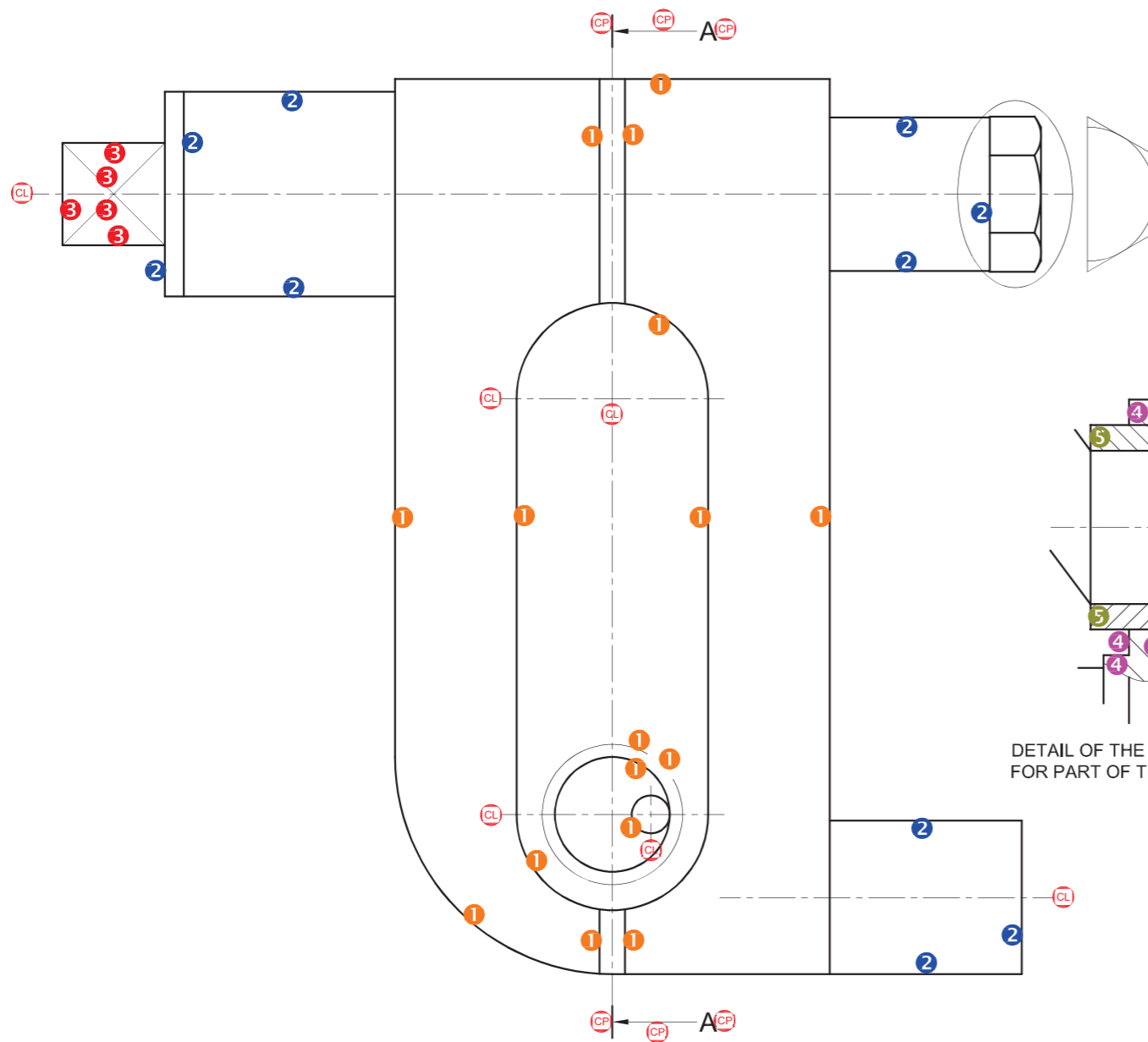
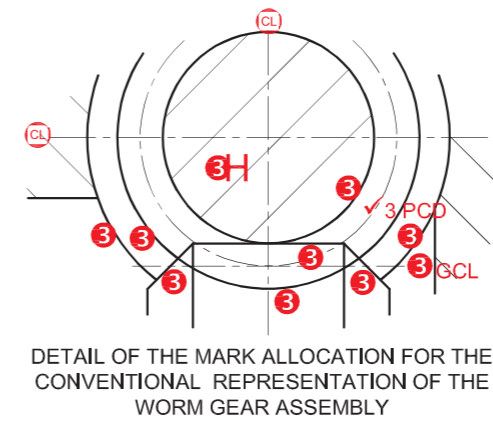
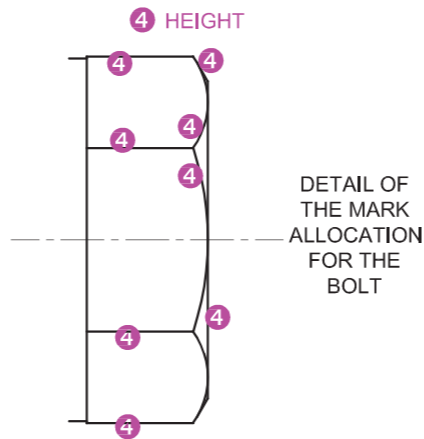


3. ASSEMBLY
 1 MARK FOR EVERY
 COMPONENT CORRECTLY
 ASSEMBLED (9 PARTS -1) = 8

1. CENTRE LINE MARK ALLOCATION
 SANS COMPLIANT (LINE TYPE) 2
 11 CENTRE LINES 2
TOTAL 4

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INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA					
RIGHT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	INLET + JET	4			
2	VALVE BODY	2			
SUBTOTAL		6			
SECTIONAL FRONT VIEW					
1	INLET	14 1/2			
2	SEAL RING	2			
3	VALVE BODY + RETAINING RING	22			
4	JET	6 1/2			
5	FLOAT TRIGGER + PIN + PLUG	9			
SUBTOTAL		54			
BOTTOM VIEW					
1	INLET	9 1/2			
2	VALVE BODY + RETAINING RING + JET	9 1/2			
SUBTOTAL		19			
GENERAL					
1	CENTRE LINES	4			
2	SECTION A-A	3			
3	ASSEMBLY	8			
SUBTOTAL		15			
TOTAL		94			
PENALTIES (-)					
GRAND TOTAL					

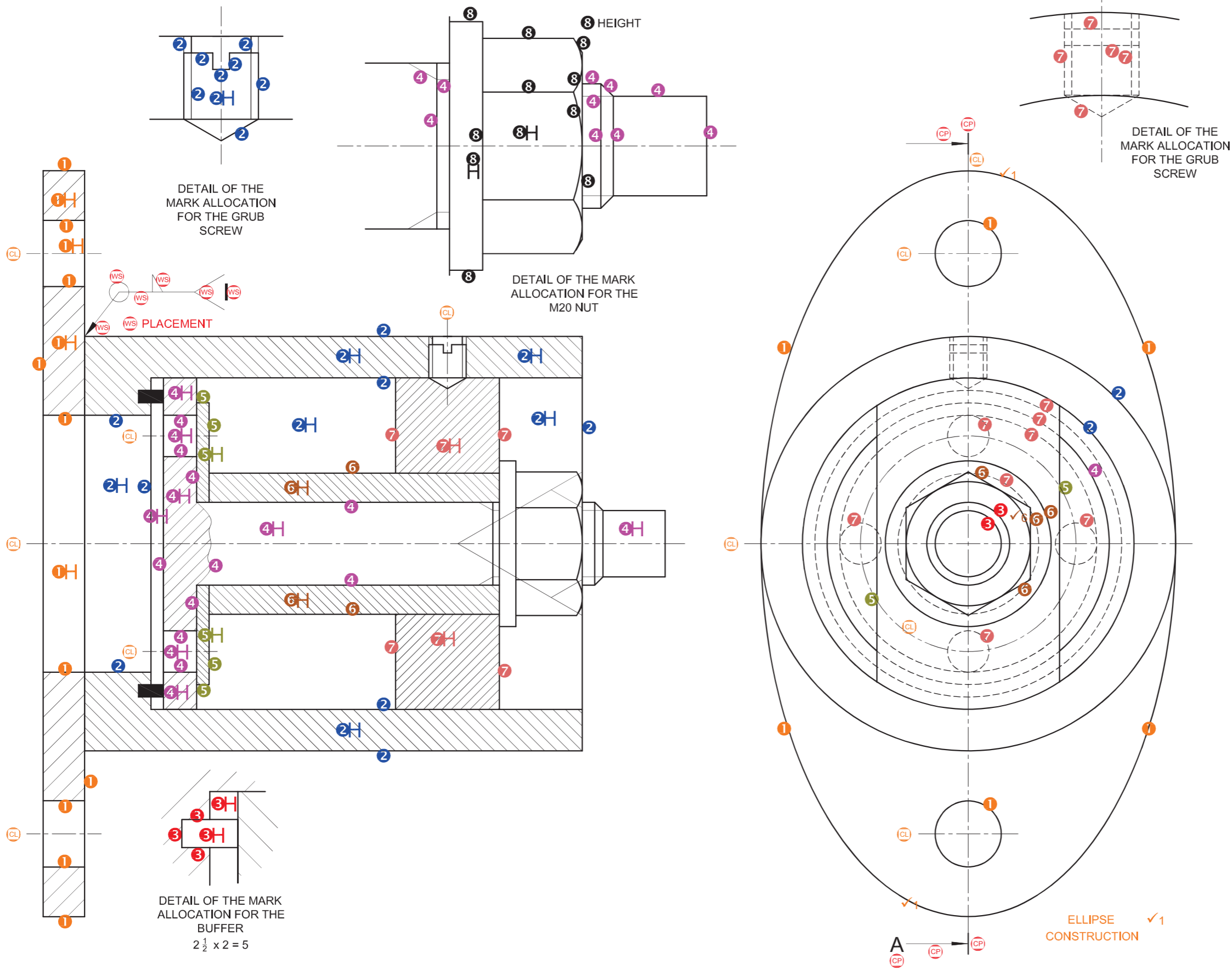


3. ASSEMBLY
1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (10 PARTS -1) = 9

1. CENTRE LINE MARK ALLOCATION
SANS COMPLIANT (LINE TYPE) 2
14 CENTRE LINES 2
TOTAL 4

FOR OFFICIAL USE ONLY	
INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA					
FRONT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	COVER PLATE	8			
2	PUMP BODY + BUSH	5			
3	WORM SHAFT	2 ½			
4	M14 RETAINING BOLT	4 ½			
SUBTOTAL		20			
SECTIONAL RIGHT VIEW					
1	COVER PLATE	11 ½			
2	PUMP BODY	11 ½			
3	CRANK GEAR + SHAFT	17			
4	PUMP PLUNGER	7			
5	SPLIT BUSH	3			
6	PUMP HOUSING	10			
SUBTOTAL		60			
GENERAL					
1	CENTRE LINES	4			
2	SECTION A-A	3			
3	ASSEMBLY	9			
SUBTOTAL		16			
TOTAL		96			
PENALTIES (-)					
GRAND TOTAL					



FOR OFFICIAL USE ONLY	
INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA					
RIGHT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	BASE	6			
2	SLEEVE	1			
3	PLUNGER	1			
4	SEAL	1/2			
5	GUIDE	1			
6	NUT + WASHER	3			
7	HIDDEN DETAIL	6 1/2			
SUBTOTAL		19			

SECTIONAL FRONT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	BASE	7			
2	SLEEVE + GRUB SCREW	11 1/2			
3	BUFFER	5			
4	PLUNGER	14			
5	SEAL	3			
6	BUSH	2			
7	GUIDE	3			
8	NUT + WASHER	6			
SUBTOTAL		51 1/2			

GENERAL					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	CENTRE LINES	4			
2	ASSEMBLY	9			
3	CUTTING PLANE	3			
4	WELDING SYMBOL	3 1/2			
SUBTOTAL		19 1/2			

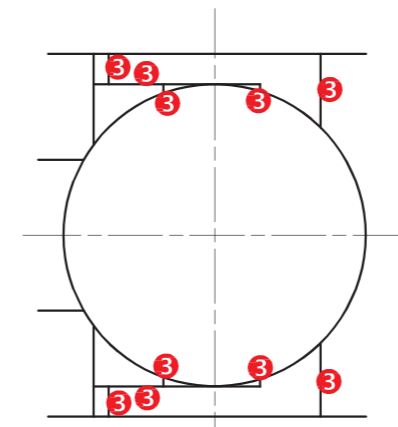
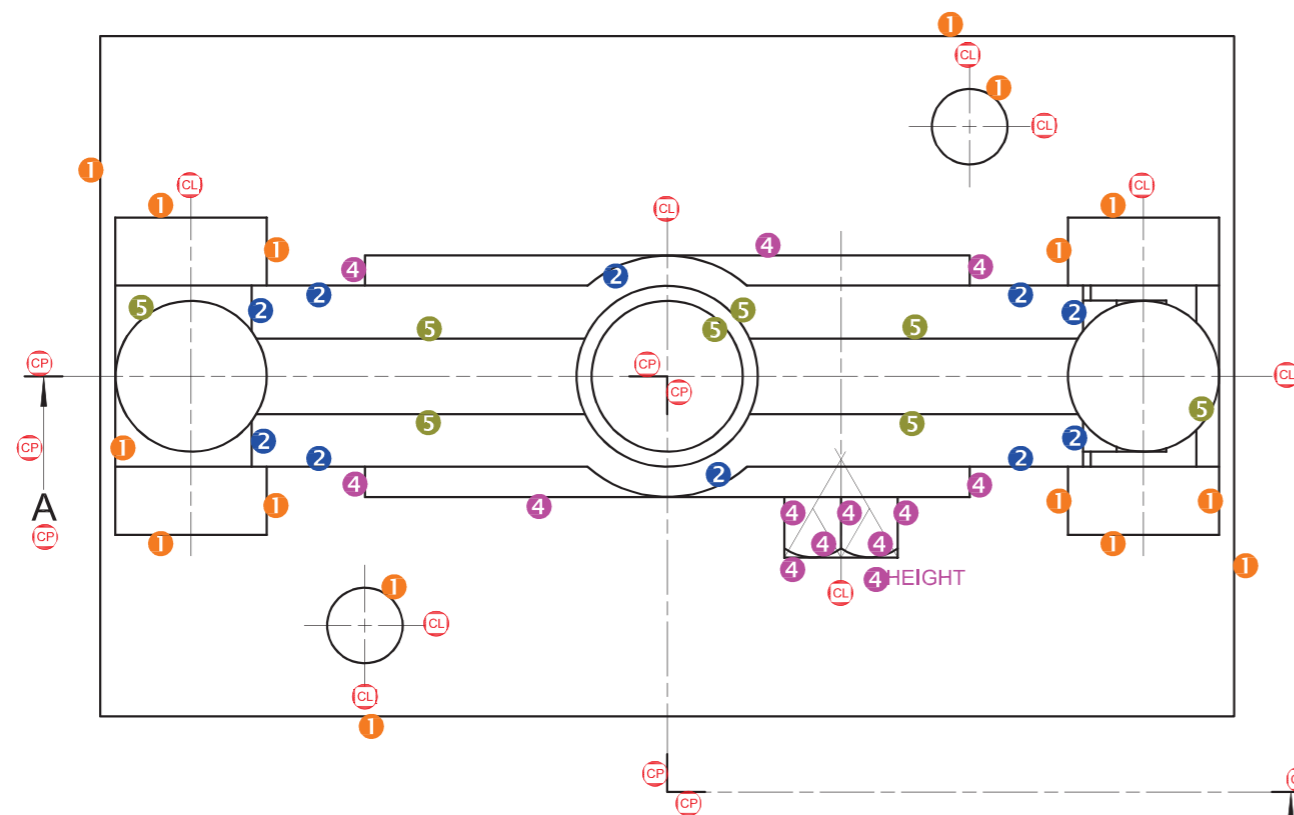
TOTAL	90				
PENALTIES (-)					

GRAND TOTAL					
EXAMINATION NUMBER					
EXAMINATION NUMBER					6

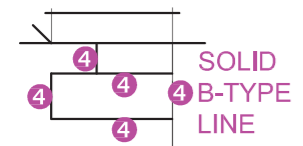
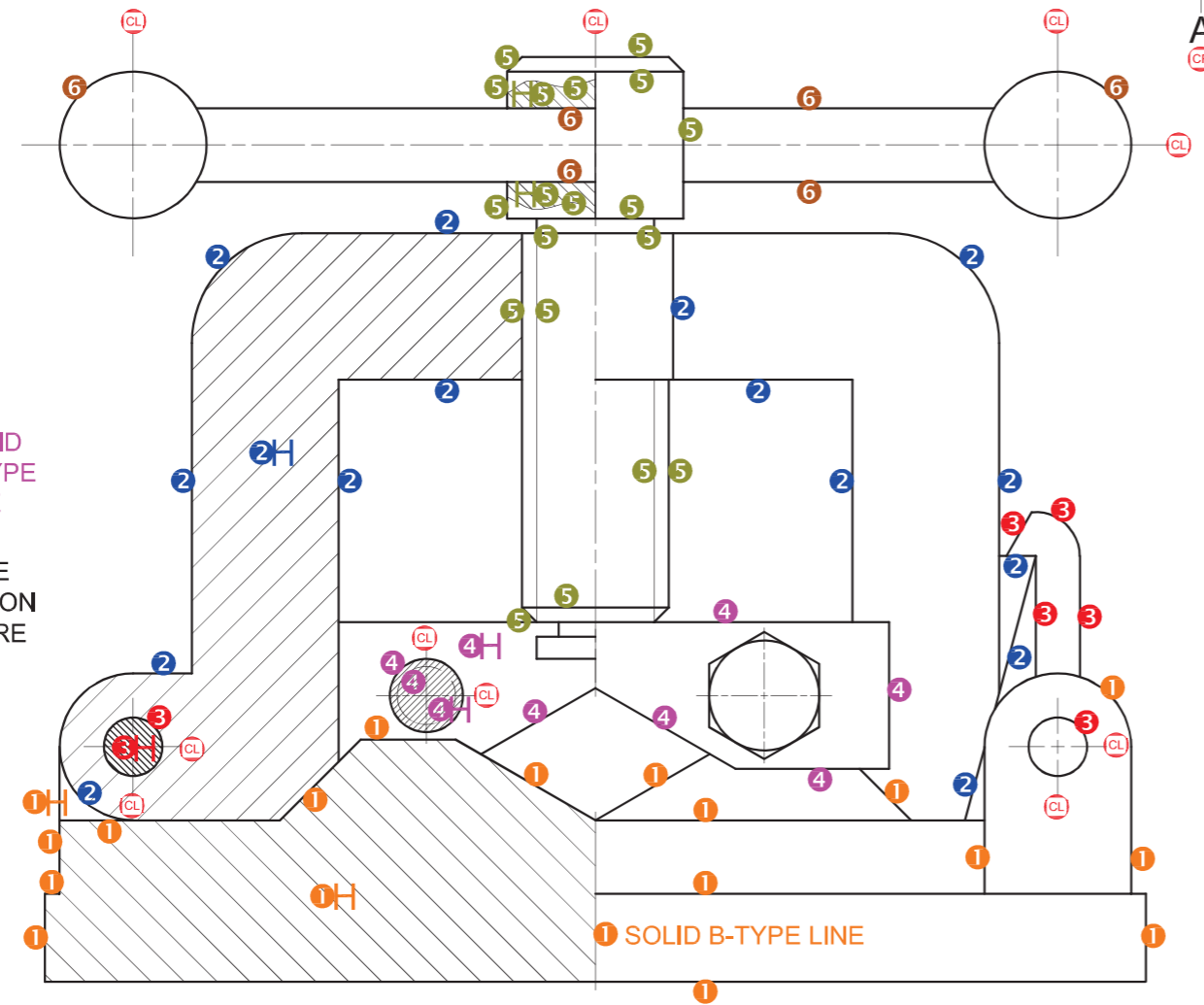
1. CENTRE LINE MARK ALLOCATION
 SANS COMPLIANT (LINE TYPE) 2
 11 CENTRE LINES 2
TOTAL 4

2. ASSEMBLY MARK ALLOCATION
 ALLOCATE 1 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED (10 PARTS -1) = 9

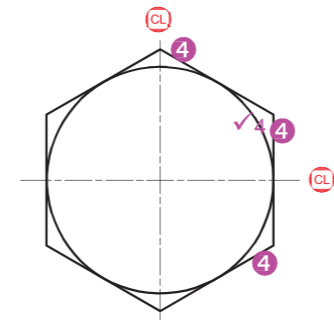
PAPER 2 QUESTION 4
 GRADE 12
 SCE 2018
 MARKING GUIDELINE



DETAIL OF THE MARK ALLOCATION FOR THE HOOK



DETAIL OF THE MARK ALLOCATION FOR THE CENTRE OF THE JAW



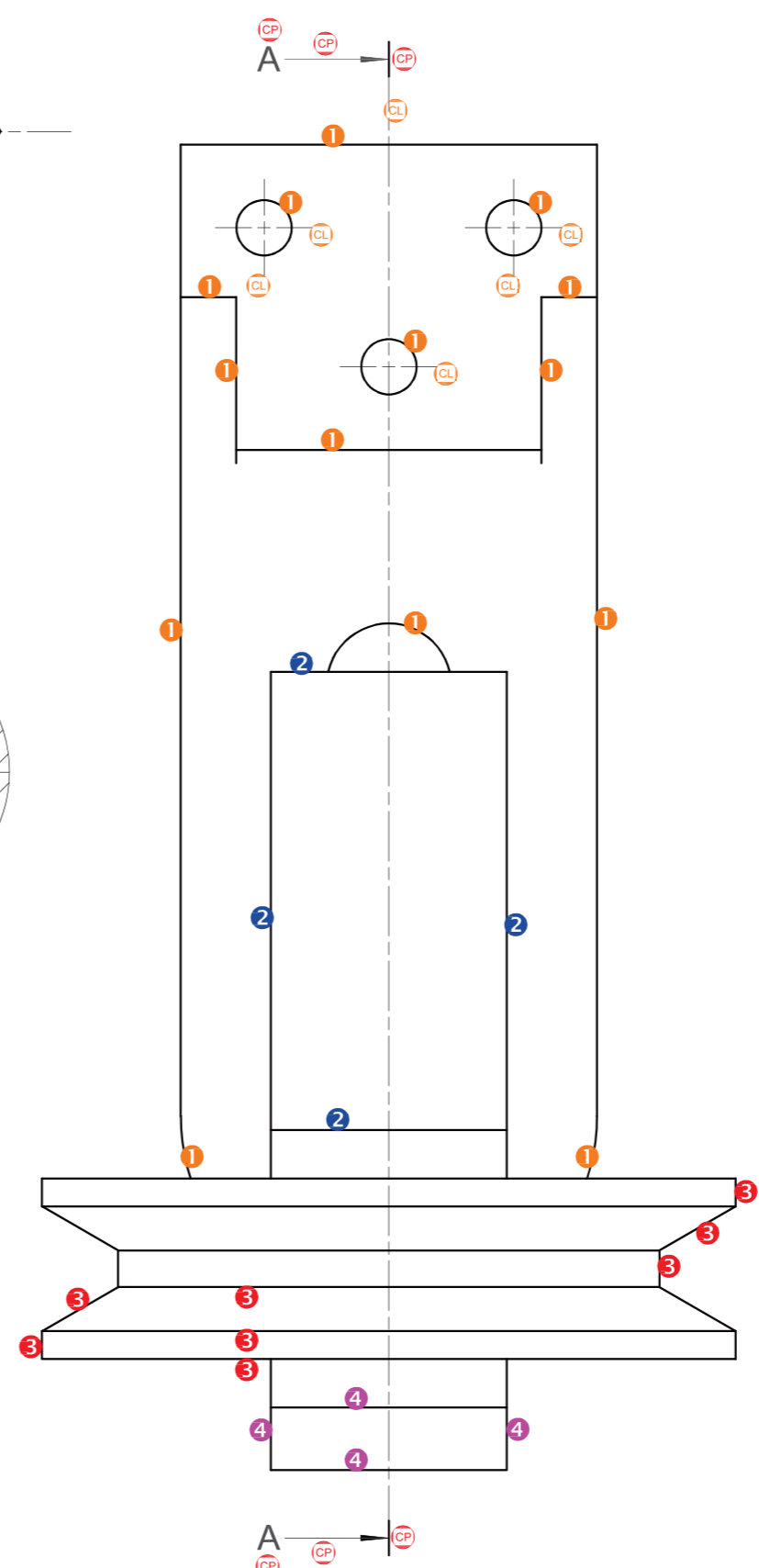
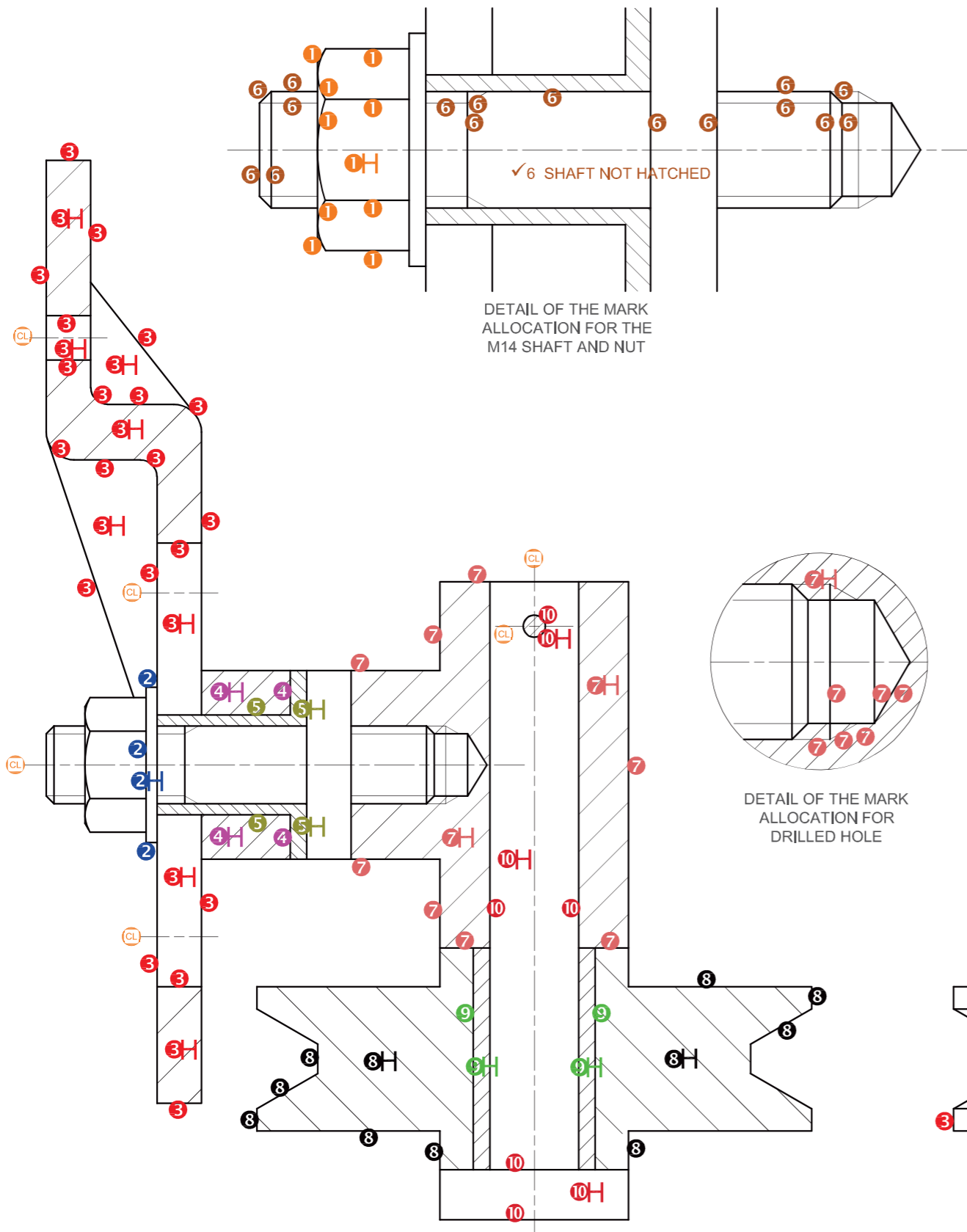
DETAIL OF THE MARK ALLOCATION FOR THE M10 BOLT

1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (10 PARTS -1) = 9

PAPER 2 QUESTION 4
GRADE 12
November 2017
MARKING GUIDELINES

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INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT OVERALL SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL PENALTIES (-)	

ASSESSMENT CRITERIA				
TOP VIEW				
		POSSIBLE	OBTAINED	SIGN MODERATED
1	BASE	8		
2	FRAME	5		
3	HOOK	5		
4	JAW + M10 BOLT	6½		
5	WORM SCREW + LEVER	4		
SUBTOTAL		28½		
SECTIONAL FRONT VIEW				
1	BASE	9½		
2	FRAME	8		
3	PINS + HOOK	3½		
4	JAW + M10 BOLT	9½		
5	WORM SCREW	9½		
6	LEVER	3		
SUBTOTAL		43		
GENERAL				
1	CENTRE LINES	10½		
2	ASSEMBLY	9		
3	CUTTING PLANE	5		
SUBTOTAL		24½		
TOTAL		96		
PENALTIES (-)				
GRAND TOTAL				
EXAMINATION NUMBER				
EXAMINATION NUMBER				



FOR OFFICIAL USE ONLY			
NOT IN THIRD ANGLE			
INCORRECT OVERALL SCALE			
INCORRECT HATCHING			
PARTS NOT ASSEMBLED			
PENALTY TOTAL (-)			

ASSESSMENT CRITERIA					
RIGHT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	BRACKET	7			
2	SWIVEL ARM	2			
3	PULLEY	4			
4	M14 SHAFT	2			
SUBTOTAL		15			
SECTIONAL FRONT VIEW					
1	M14 NUT	5			
2	WASHER	2			
3	BRACKET	14			
4	SPACER	2			
5	BUSH	2			
6	M14 SHAFT	9			
7	SWIVEL ARM	8 1/2			
8	PULLEY	5 1/2			
9	BUSH	2			
10	SHAFT + PIN	4			
SUBTOTAL		54			
GENERAL					
1	CENTRE LINES	6			
2	ASSEMBLY	10			
3	CUTTING PLANE	3			
SUBTOTAL		19			
TOTAL		88			
PENALTY (-)					
GRAND TOTAL					

PAPER 2 QUESTION 4
 GRADE 12
 SCE 2017
 MARKING GUIDELINES

EXAMINATION NUMBER	
EXAMINATION NUMBER	6

FOR OFFICIAL USE ONLY	
INCORRECT ORTHOGRAPHIC PROJECTION	
INCORRECT SCALE	
INCORRECT HATCHING	
PARTS NOT ASSEMBLED	
TOTAL	

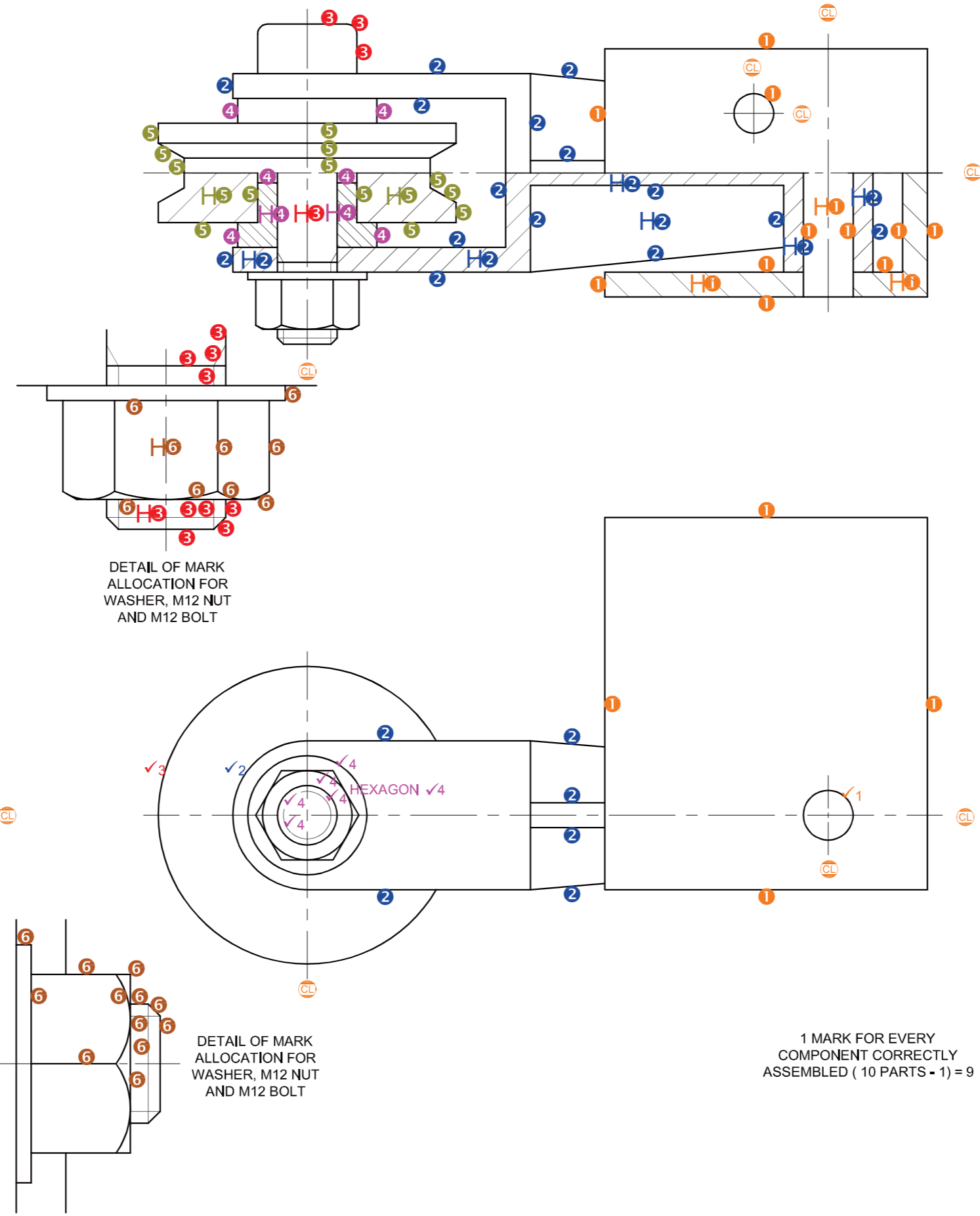
ASSESSMENT CRITERIA			
FRONT VIEW			
1	HOUSING + PIN	3	
2	FORK	4	
3	PULLEY	1	
4	M12 BOLT + WASHER + M12 NUT	6	
SUBTOTAL		14	

SECTIONAL TOP VIEW			
1	HOUSING + PIN	7	
2	FORK	10 1/2	
3	M12 BOLT	7	
4	BUSH	4	
5	PULLEY	7 1/2	
6	WASHER + M12 NUT	4 1/2	
SUBTOTAL		40 1/2	

LEFT VIEW			
1	HOUSING	4 1/2	
2	FORK	1 1/2	
3	SPRING	2	
4	BUSH	1	
5	PULLEY	4 1/2	
6	M12 BOLT + WASHER + M12 NUT	8 1/2	
SUBTOTAL		22	

GENERAL			
1	CENTRE LINES	6 1/2	
2	ASSEMBLY	9	
SUBTOTAL		15 1/2	
TOTAL		92	

PENALTIES (+)			
GRAND TOTAL			
EXAMINATION NUMBER			
EXAMINATION NUMBER			6

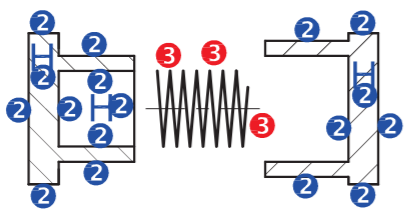
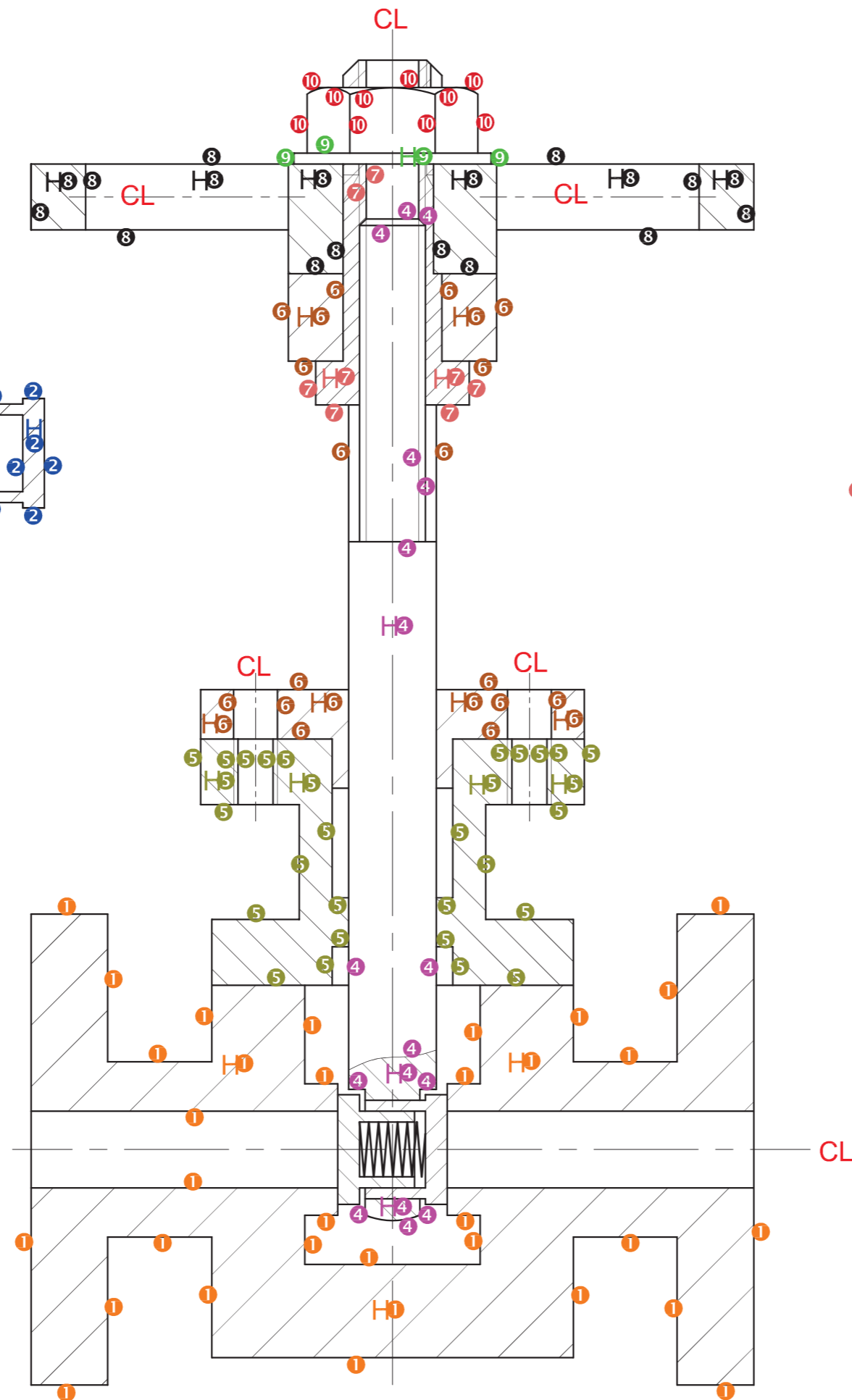


3. SPRING MARK ALLOCATION
 FREEHAND 1
 TOP CURVE 2
 SPRING PROFILE 1
 2

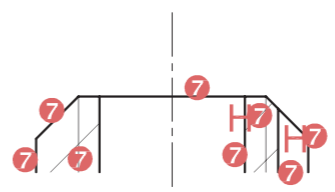
DETAIL OF MARK ALLOCATION FOR WASHER, M12 NUT AND M12 BOLT

DETAIL OF MARK ALLOCATION FOR WASHER, M12 NUT AND M12 BOLT

1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (10 PARTS - 1) = 9



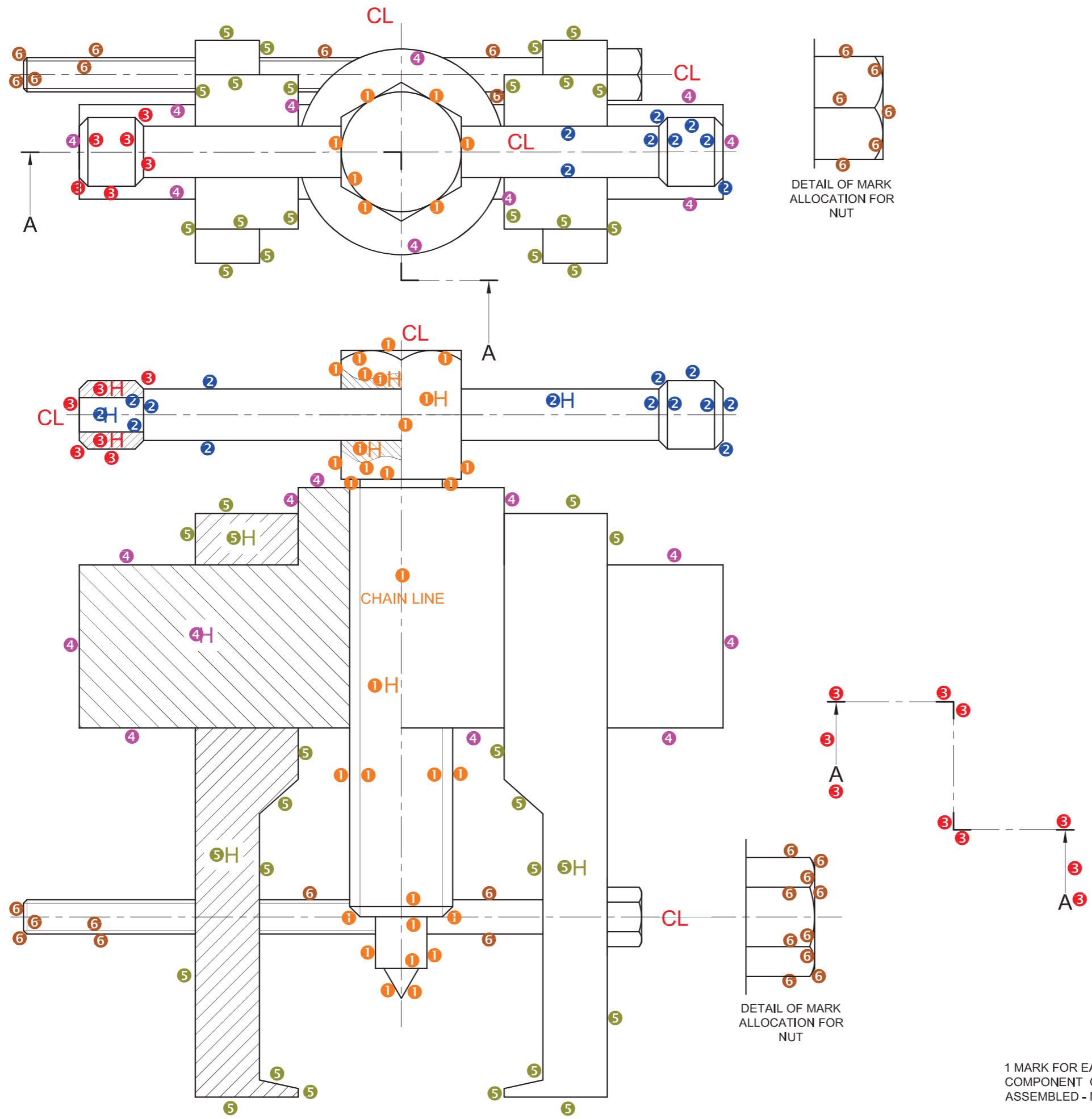
DETAIL OF THE MARK ALLOCATION FOR THE VALVE CAPS AND THE SPRING



DETAIL OF MARK ALLOCATION FOR TOP PART OF THE SPACING BOLT

FOR OFFICIAL USE ONLY		
INCORRECT SCALE		
INCORRECT HATCHING		
PARTS NOT ASSEMBLED		
TOTAL PENALTIES (-)		

ASSESSMENT CRITERIA					
SECTIONAL FRONT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	VALVE BASE	16 1/2			
2	VALVE CAPS	8 1/2			
3	SPRING	1 1/2			
4	CONNECTING ROD	8 1/2			
5	FILLER PIECE	15			
6	SPLIT PIECE	11			
7	SPACING BOLT	8			
8	HAND WHEEL	9			
9	WASHER	2			
10	M18 NUT	5			
SUBTOTAL		85			
GENERAL					
1	CENTRE LINES	3			
2	ASSEMBLY	10			
SUBTOTAL		13			
TOTAL		98			
TOTAL PENALTIES(-)					
GRAND TOTAL					
EXAMINATION NUMBER					
EXAMINATION NUMBER					

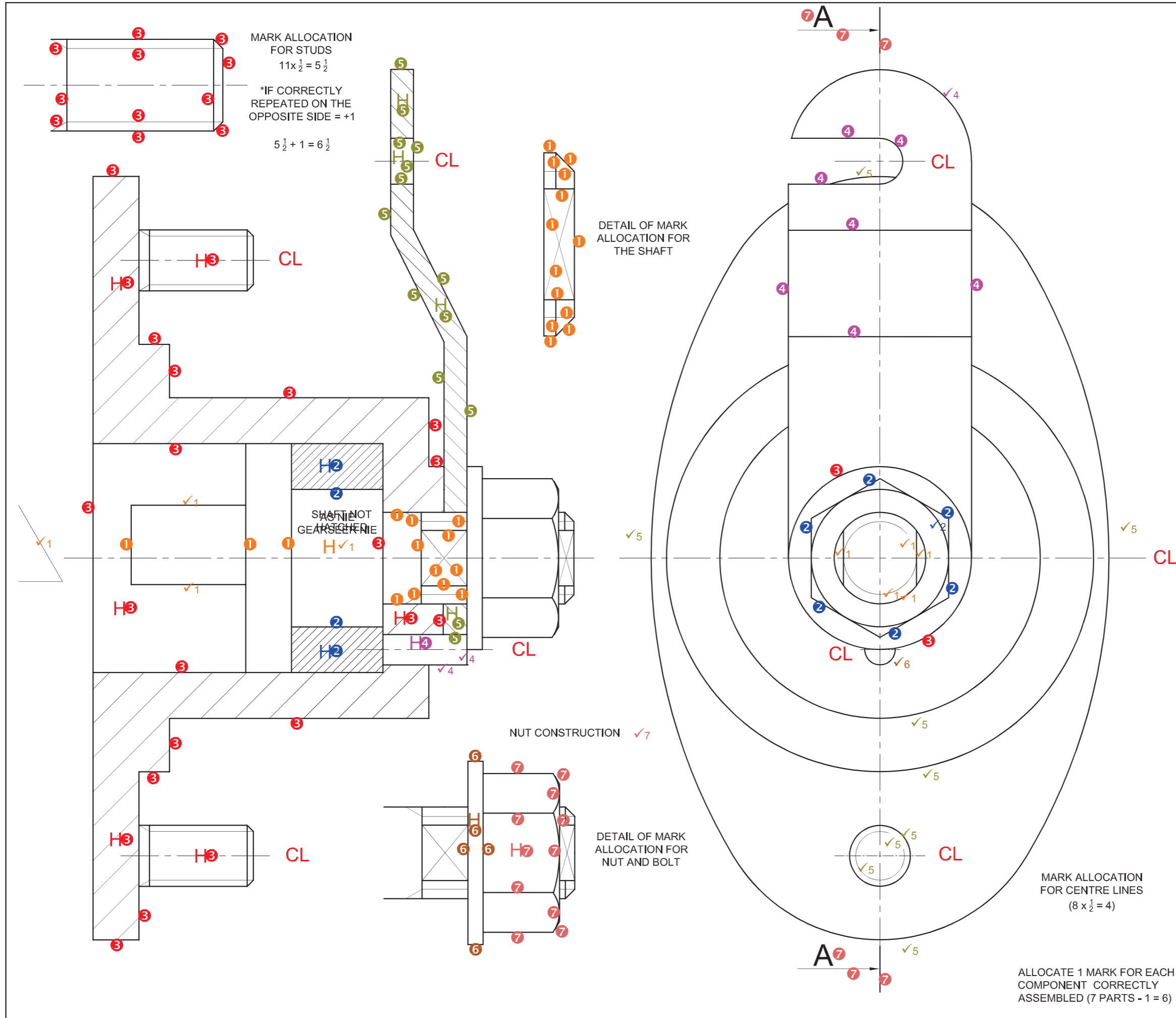


DETAIL OF MARK ALLOCATION FOR NUT

1 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED - MAKSIMUM 6

PENALTIES		
NOT IN THIRD ANGLE		
INCORRECT OVERALL SCALE		
INCORRECT HATCHING		
NOT ASSEMBLED		
TOTAL PENALTIES (-)		

ASSESSMENT CRITERIA					
TOP VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	WORM SCREW	3½			
2	LEVER	4			
3	END RING	3			
4	BEAM	4½			
5	STRONG ARM	10			
6	M8 BOLT	7			
SUBTOTAL		32			
SECTIONAL FRONT VIEW					
1	WORM SCREW	15			
2	LEVER	7			
3	END RING	3			
4	BEAM	5½			
5	STRONG ARM	10½			
6	M8 BOLT	9			
SUBTOTAL		50			
GENERAL					
1	CENTRE LINES	3			
2	ASSEMBLY	6			
3	CUTTING PLANE	5			
SUBTOTAL		14			
TOTAL		96			
TOTAL PENALTIES(-)					
GRAND TOTAL					
EXAMINATION NUMBER					
EXAMINATION NUMBER				6	



PENALTIES		
THIRD ANGLE		
INCORRECT SCALE		
HATCHING		
TOTAL PENALTIES (-)		

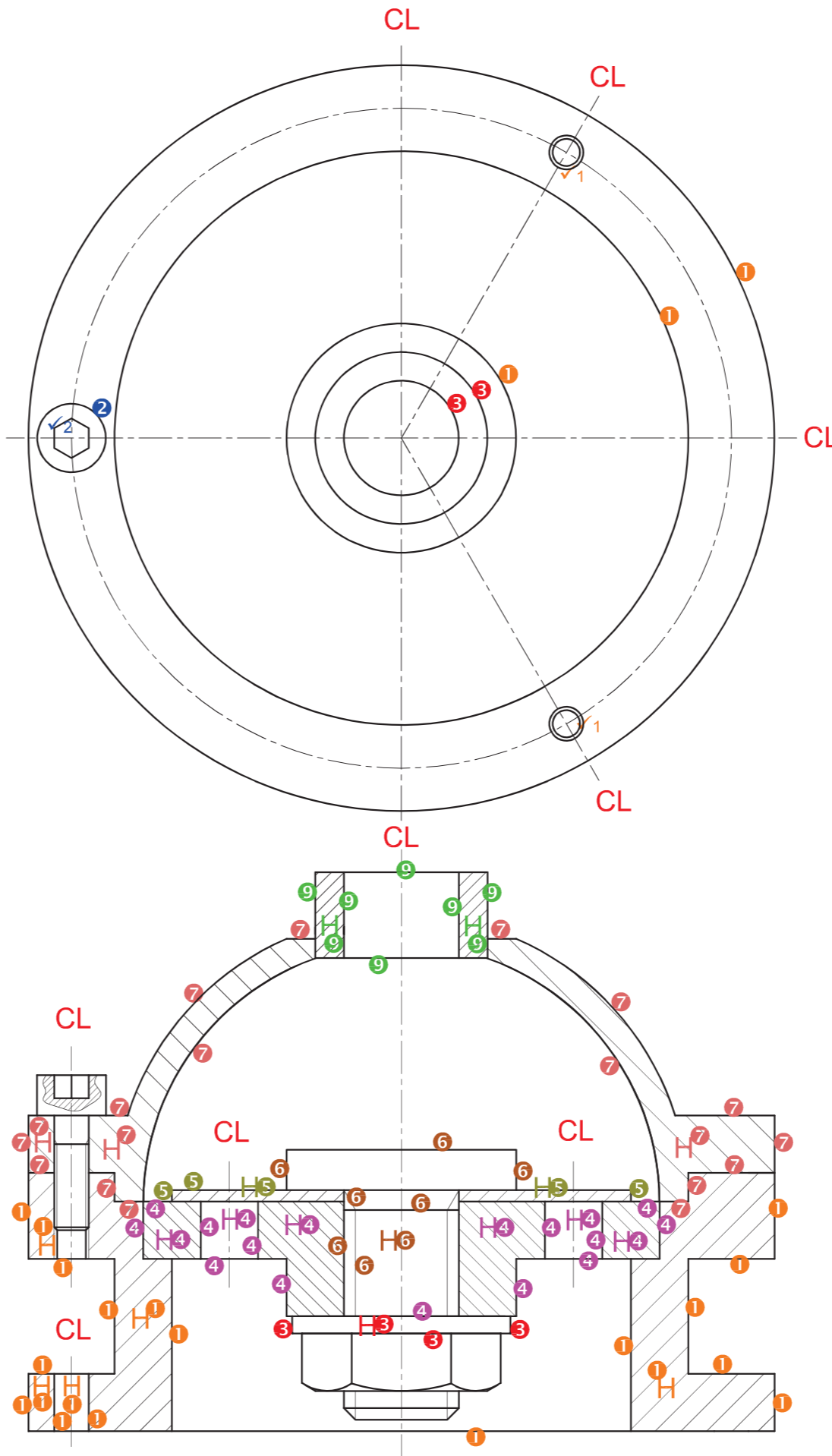
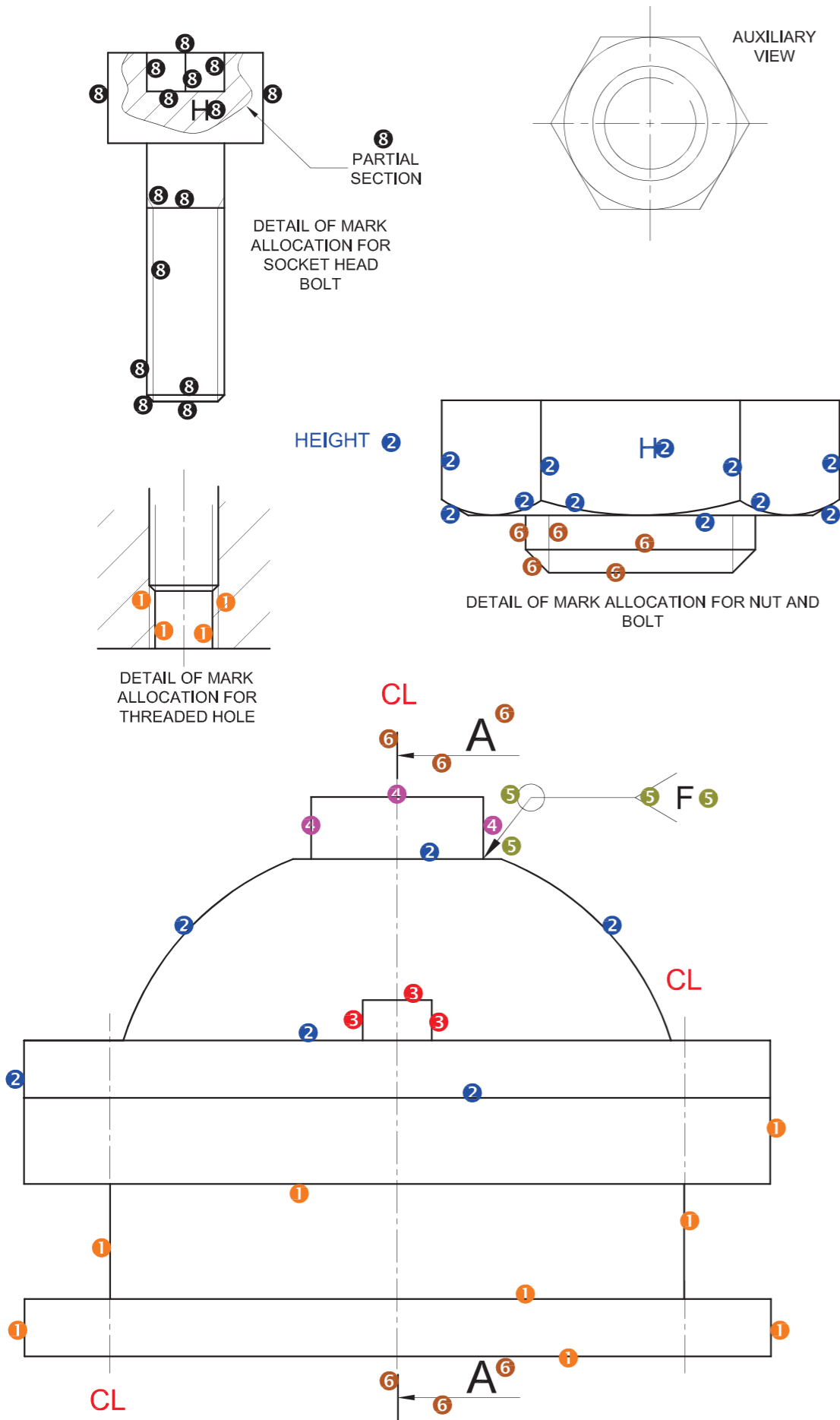
ASSESSMENT CRITERIA					
SECTIONAL FRONT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	SHAFT	17 ½			
2	SEAL	2			
3	BASE	18 ½			
4	GUIDE PIN	2 ½			
5	LOCKING LEVER	7			
6	WASHER	2 ½			
7	M12 NUT	6 ½			
SUBTOTAL		56 ½			

RIGHT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	SHAFT	5			
2	M12 NUT	4			
3	WASHER	1			
4	LOCKING LEVER	4 ½			
5	BASE	9			
6	GUIDE PIN	1			
7	CUTTING PLANE	3			
SUBTOTAL		27 ½			

GENERAL					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	CENTRE LINES	4			
2	ASSEMBLY	6			
SUBTOTAL		10			
TOTAL		94			

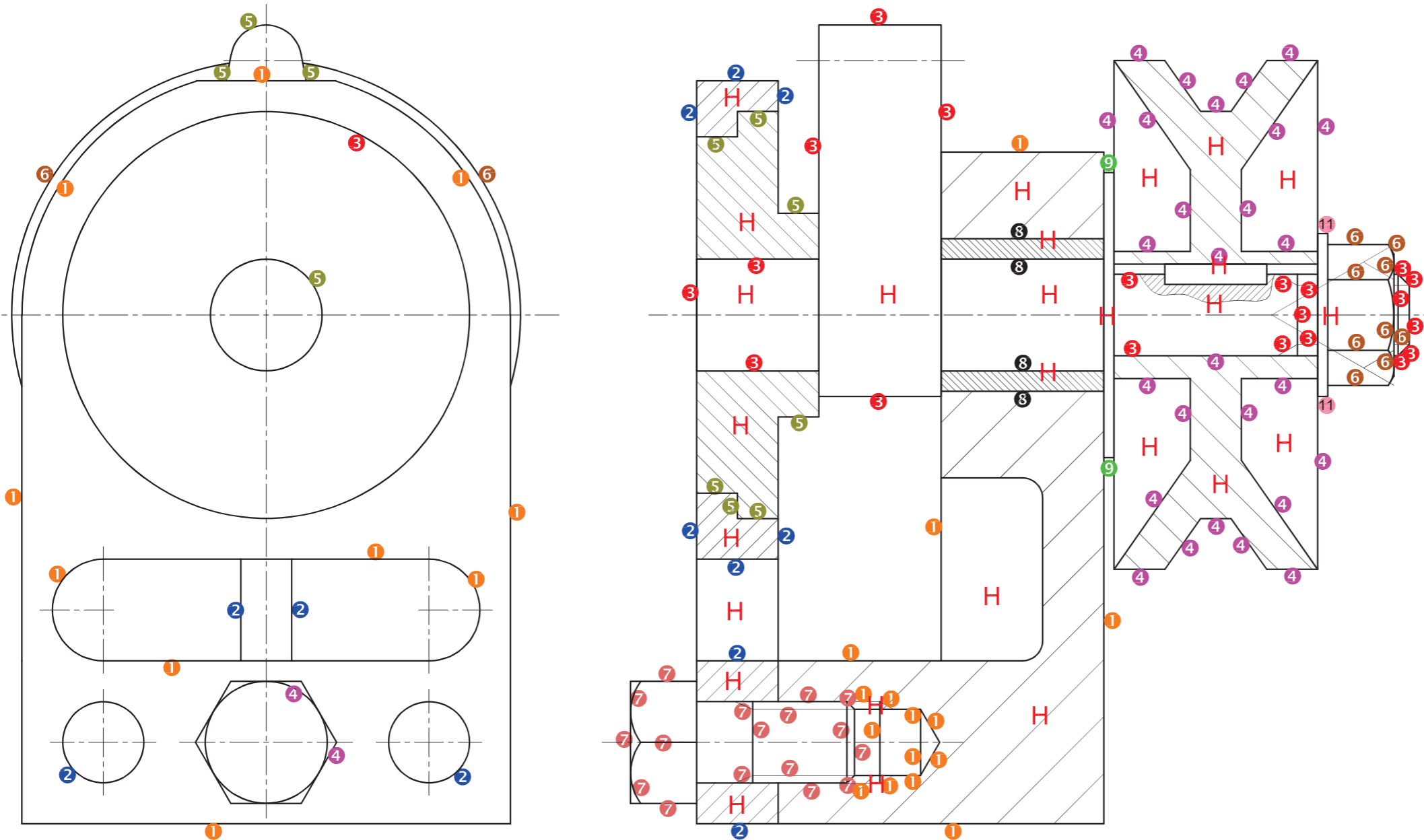
TOTAL PENALTIES (-)			
FINAL TOTAL			
EXAMINATION NUMBER			
EXAMINATION NUMBER			6

ALLOCATE 1 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED (9 PARTS - 1 = 8)



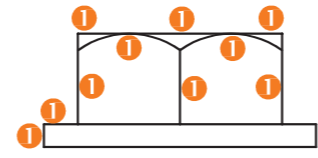
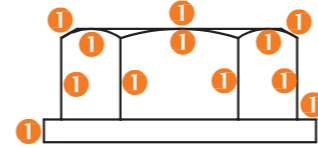
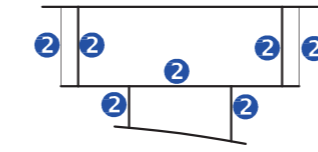
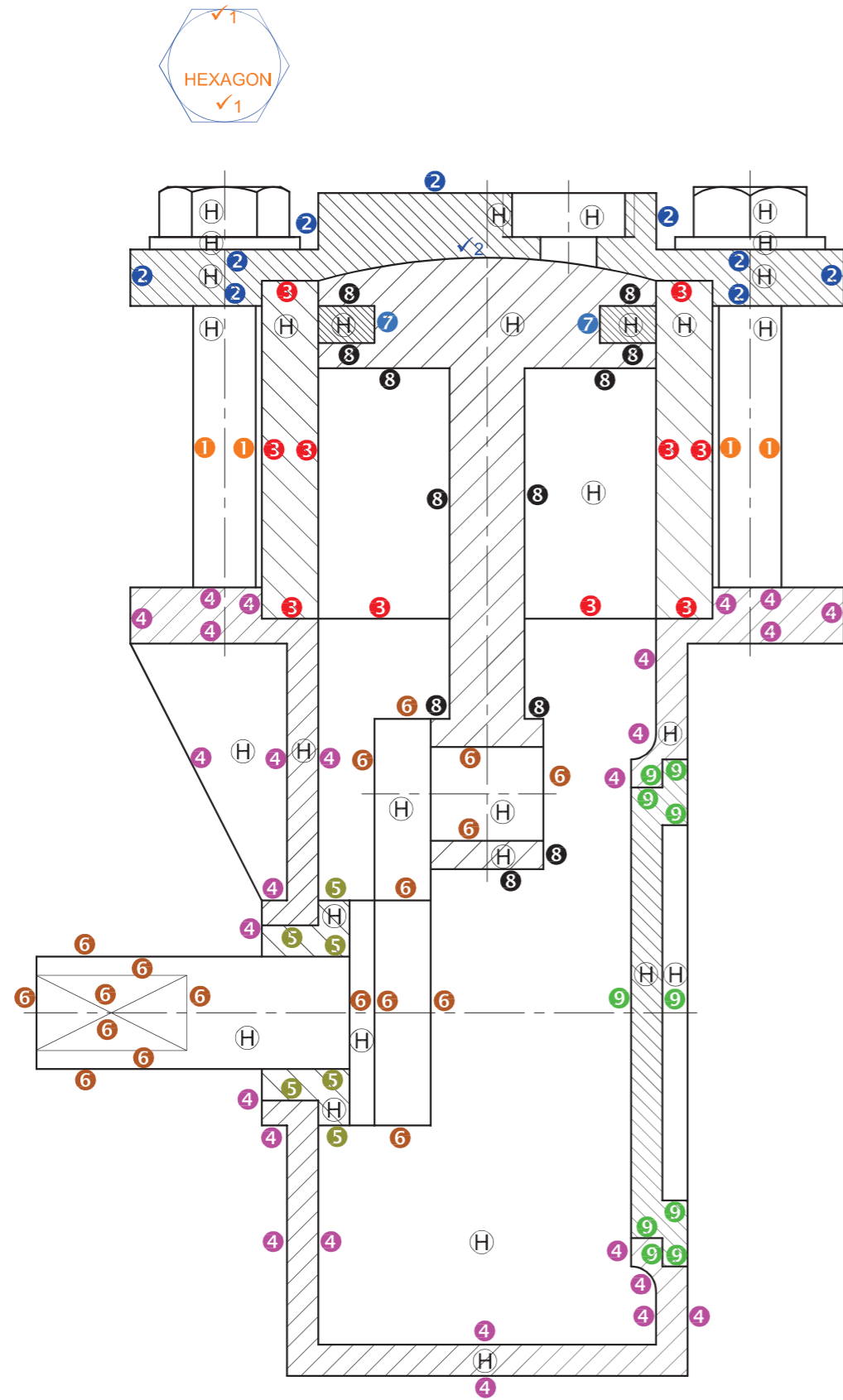
PENALTIES		
THIRD ANGLE (TA)		
INCORRECT SCALE (IS)		
NUT CONSTRUCTION (NC)		
HATCHING (H)		
TOTAL		
Carry the TOTAL over to the penalties row under GENERAL		

ASSESSMENT CRITERIA					
SECTIONAL FRONT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATED
1	CYLINDER	12			
2	M20 NUT	6			
3	WASHER	2			
4	VALVE PLATE	9 1/2			
5	DIAPHRAGM	2 1/2			
6	FLANGE STUD	6 1/2			
7	CYLINDER HEAD	9 1/2			
8	SOCKET HEAD BOLT	8			
9	OUTLET PIPE	4			
SUBTOTAL		60			
TOP VIEW					
1	CYLINDER HEAD	3 1/2			
2	SOCKET HEAD BOLT	1 1/2			
3	OUTLET PIPE	1			
SUB TOTAL		6			
LEFT VIEW					
1	CYLINDER	4			
2	CYLINDER HEAD	3			
3	SOCKET HEAD BOLT	1 1/2			
4	OUTLET PIPE	1 1/2			
5	WELDING SYMBOL	2			
6	CUTTING PLANE	3			
SUBTOTAL		15			
GENERAL					
1	CENTRE LINES	6			
2	ASSEMBLY	8			
SUBTOTAL		14			
PENALTIES (-)					
TOTAL		95			
EXAMINATION NUMBER					
EXAMINATION NUMBER					

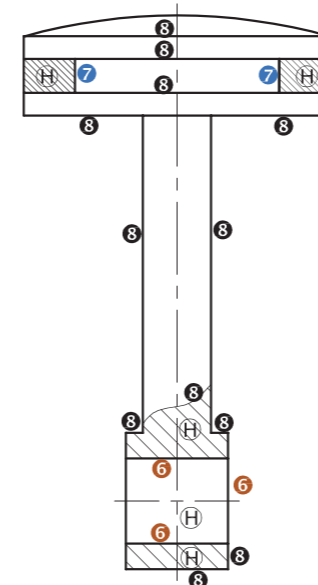


AN ASSEMBLY CONSTITUTES TWO OR MORE PARTS SO ALLOCATE 1 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED (11 PARTS -1=10)

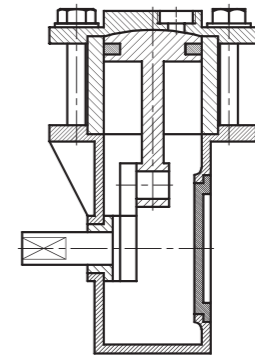
ASSESSMENT CRITERIA				
SECTIONAL FRONT VIEW				
1	BRACKET	7 1/2		
2	SIDE PLATE	4		
3	CAM SHAFT	10		
4	BELT PULLEY	13 1/2		
5	COLLAR	3 1/2		
6	M16 NUT	5		
7	M16 BOLT	8		
8	BUSH	2		
9	SPACER	1		
10	KEY	1 1/2		
11	WASHER	1		
H	HATCHING	13 1/2		
SUBTOTAL		70 1/2		
LEFT VIEW				
1	SIDE PLATE	5		
2	BRACKET	2		
3	COLLAR	1/2		
4	BOLT	1		
5	CAM SHAFT	2		
6	PULLEY	1		
SUBTOTAL		11 1/2		
GENERAL				
1	CENTRE LINES	8		
2	ASSEMBLY	5		
SUBTOTAL		13		
PENALTIES (-)				
TOTAL		95		
EXAMINATION NUMBER				
EXAMINATION NUMBER				



MARK ALLOCATION FOR THE HEXAGONAL BOLT HEADS SHOWING TWO FACES AND FOR THREE FACES AND THE WASHER.



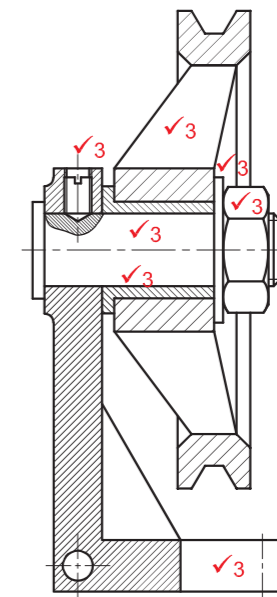
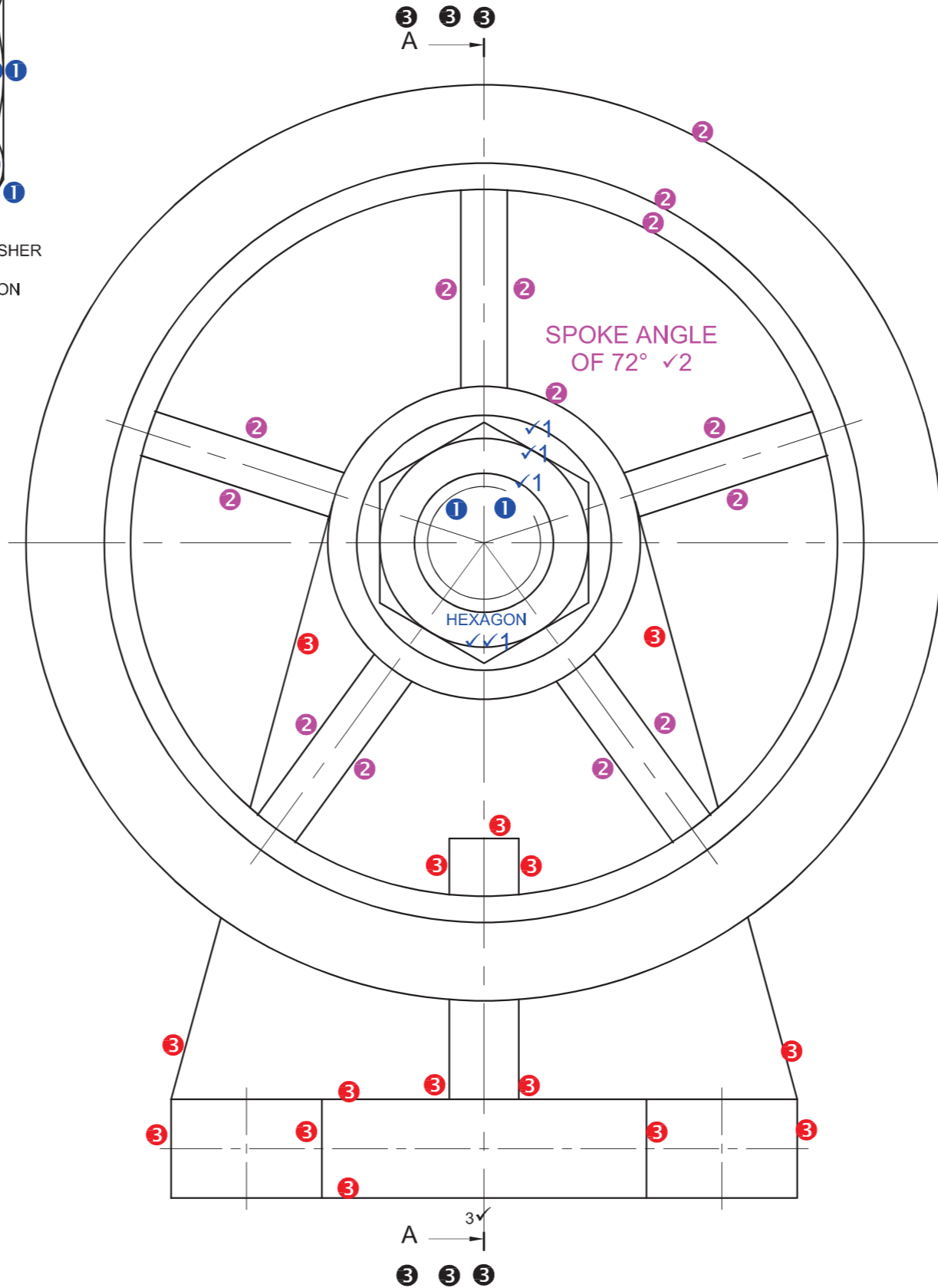
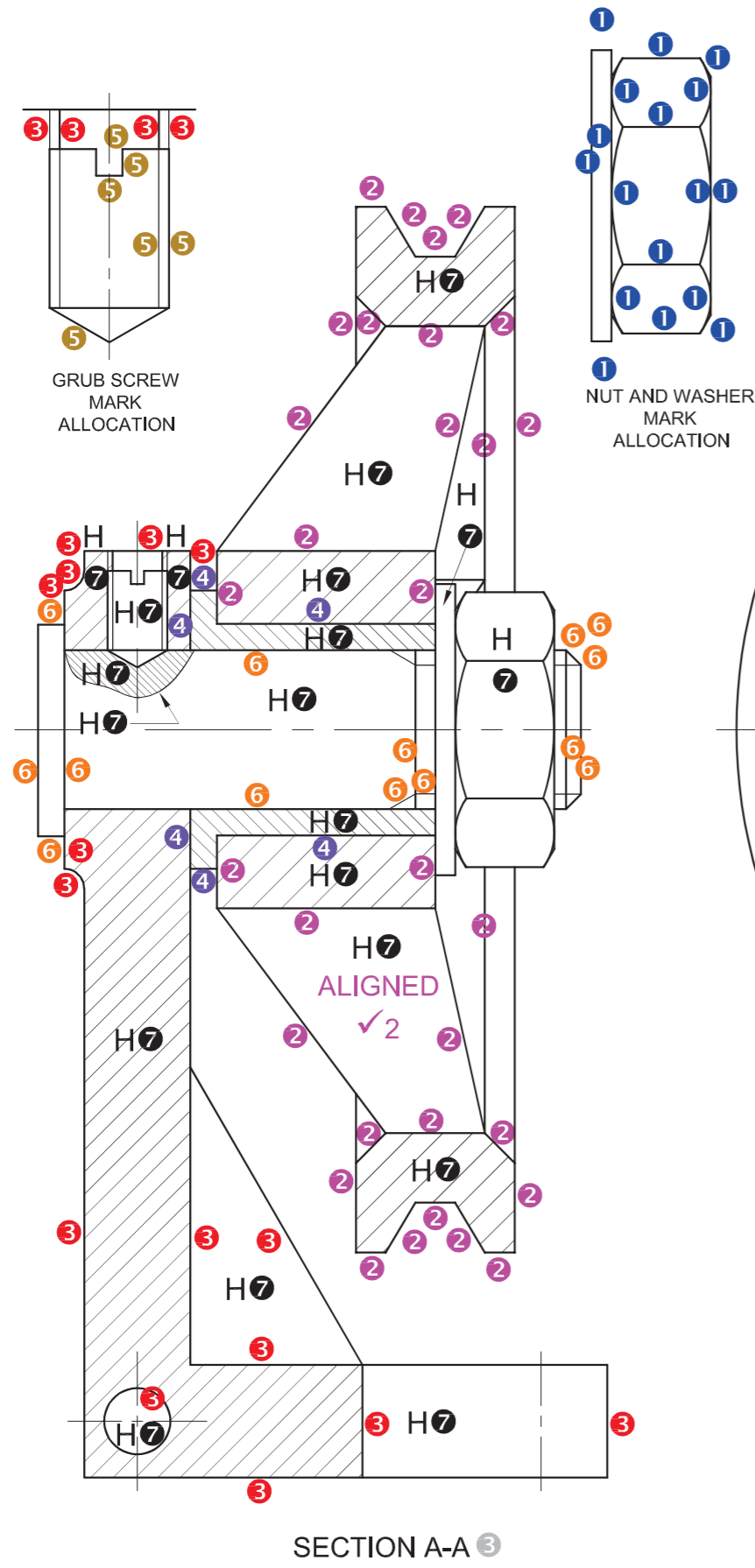
ALTERNATIVE ANSWER FOR THE PRESENTATION OF THE PISTON SHOWING THE REDISTRIBUTION OF MARKS (8).



1 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED
MAXIMUM 9

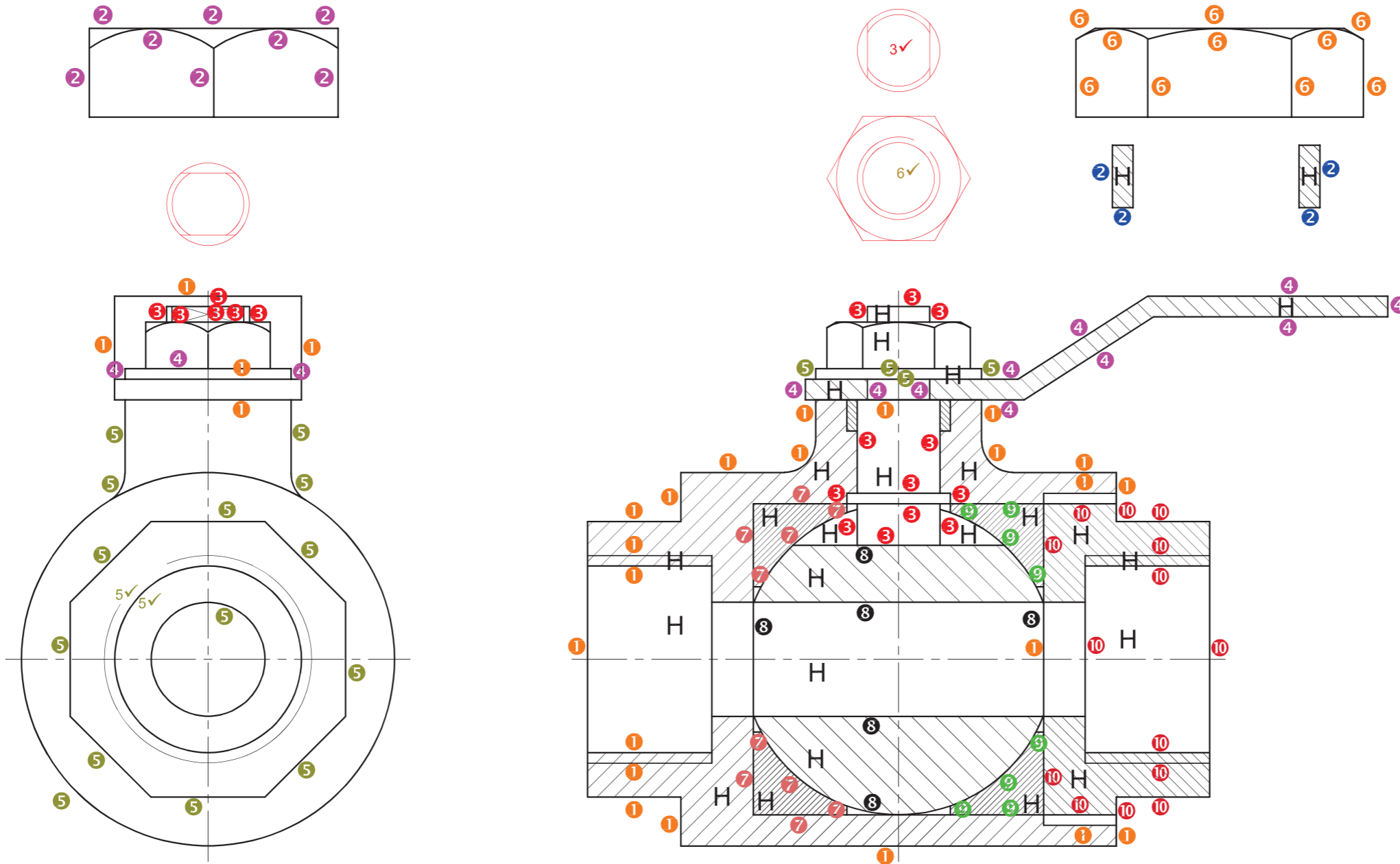
ASSESSMENT CRITERIA				
SECTIONAL FRONT VIEW				
1	M12 BOLT + WASHER	15		
2	CYLINDER HEAD	9		
3	CYLINDER	5		
4	CRANK CASE	13		
5	BUSH	3		
6	CRANK SHAFT	9		
7	PISTON RING	1		
8	PISTON	6		
9	CRANK CASE COVER	5		
H	HATCHING	15		
SUBTOTAL		81		
GENERAL				
1	CENTRE LINES	3		
2	ASSEMBLY	9		
SUBTOTAL		12		
TOTAL		93		

EXAMINATION NUMBER	
EXAMINATION NUMBER	



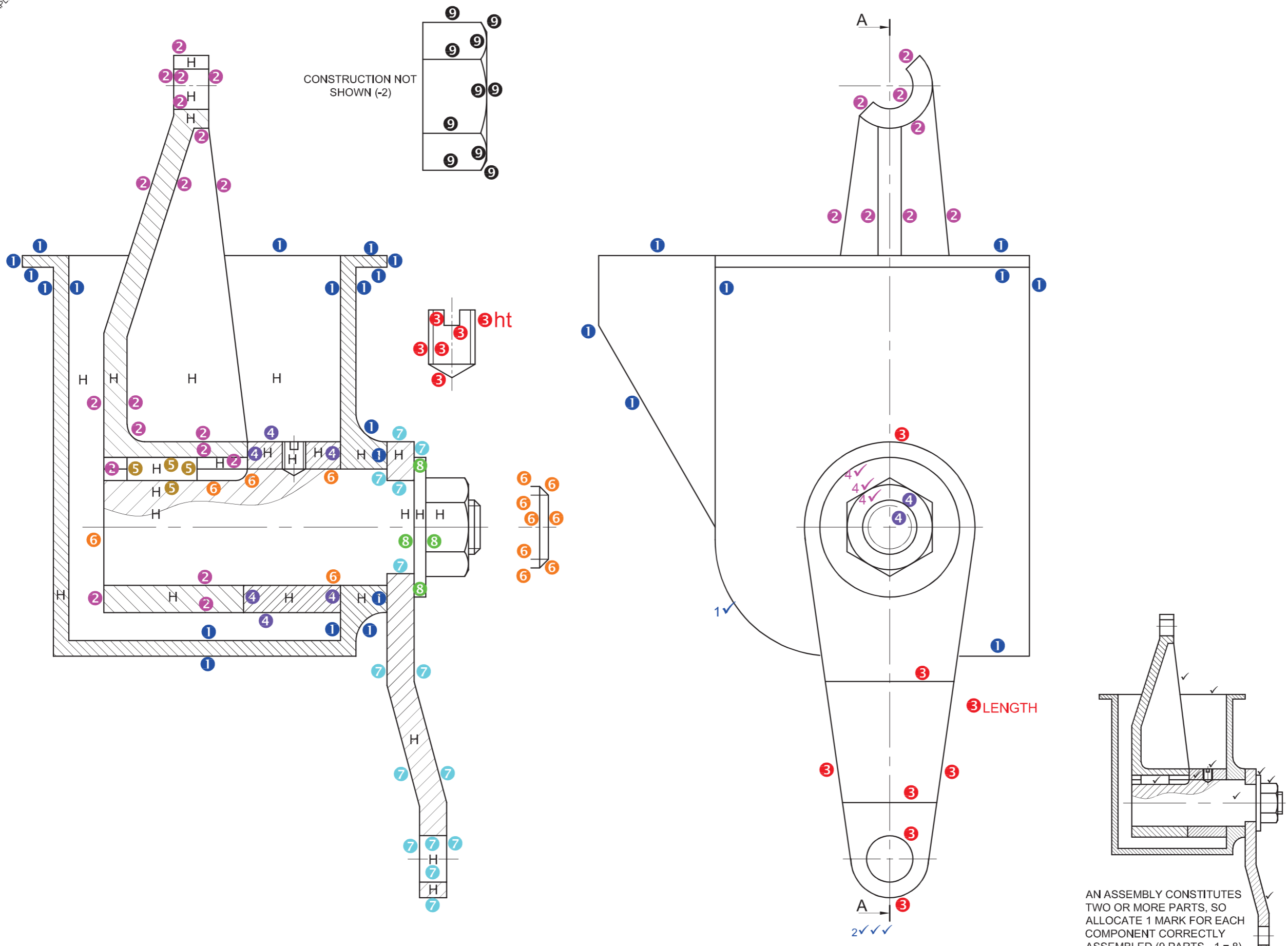
1 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED (7 PARTS - 1 = 6)

ASSESSMENT CRITERIA				
SECTIONAL FRONT VIEW				
1	M24 NUT + WASHER	8½		
2	PULLEY	16		
3	BRACKET	9½		
4	BUSH	3		
5	GRUB SCREW	3		
6	SHAFT	7		
7	HATCHING	10		
SUBTOTAL		57		
RIGHT VIEW				
1	M24 NUT + WASHER	6		
2	PULLEY	8		
3	BRACKET	7½		
SUBTOTAL		21½		
GENERAL				
1	CENTRE LINES	7		
2	CUTTING PLANE + LABEL	3½		
3	ASSEMBLY	6		
SUBTOTAL		16½		
TOTAL		95		
EXAMINATION NUMBER				
EXAMINATION NUMBER				



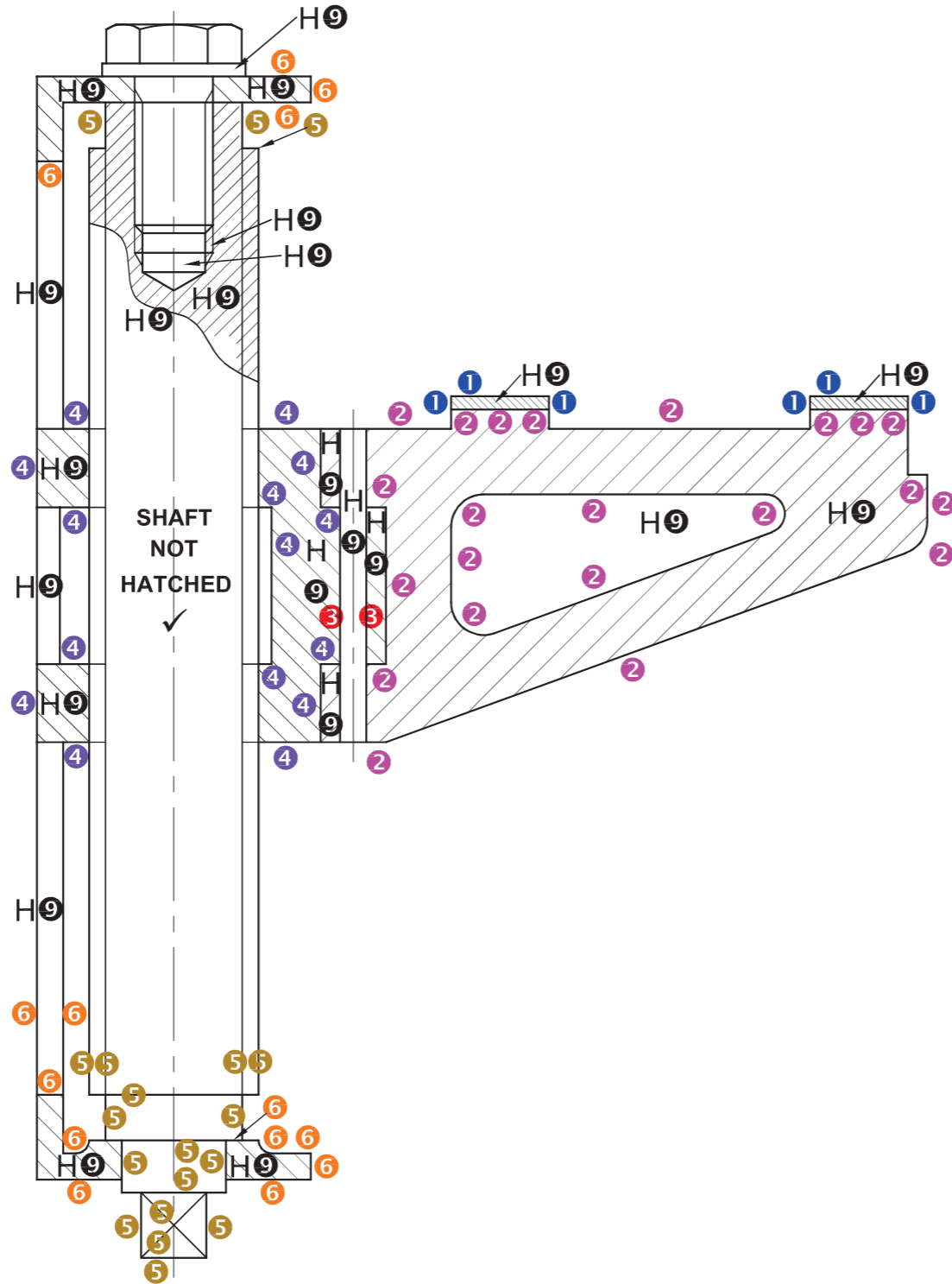
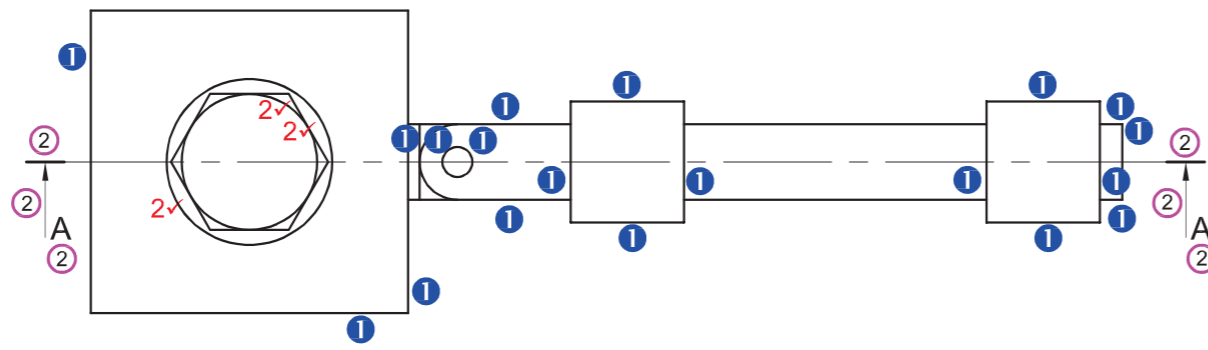
AN ASSEMBY CONSTITUTES TWO OR MORE PARTS SO ALLOCATE 1 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED (10 PARTS -1=9)

ASSESSMENT CRITERIA				
SECTIONAL FRONT VIEW				
1	VALVE BODY	11		
2	FIBRE SEAL	2		
3	SHAFT	7		
4	HANDLE	5		
5	WASHER	2		
6	M16 NUT	6		
7	LEFT CUP SEAL	3		
8	VALVE	3		
9	RIGHT CUP SEAL	3		
10	END CAP	7		
H	HATCHING	13		
SUBTOTAL		62		
LEFT VIEW				
1	HANDLE	2½		
2	M16 NUT	4		
3	SHAFT	3		
4	WASHER	1½		
5	VALVE BODY	9		
SUBTOTAL		20		
GENERAL				
1	CENTRE LINES	2		
2	ASSEMBLY	9		
SUBTOTAL		11		
TOTAL		93		
EXAMINATION NUMBER				
EXAMINATION NUMBER				

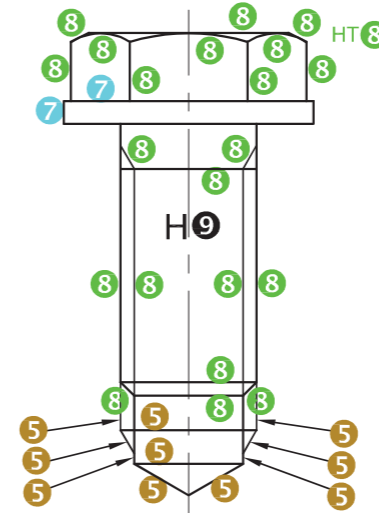


ASSESSMENT CRITERIA		
SECTIONAL FRONT VIEW		
1	HOUSING	9
2	RELEASE ARM	9½
3	GRUB SCREW	3
4	SPACER	3
5	KEY	2
6	SHAFT	6½
7	LEVER	7
8	WASHER	2
9	M14 NUT	5
H	HATCHING	13
SUBTOTAL		60
RIGHT VIEW		
1	HOUSING	5
2	RELEASE ARM	4
3	LEVER	4
4	WASHER + M14 NUT	4
SUBTOTAL		17
GENERAL		
1	CENTRE LINES	4
2	CUTTING PLANE	3
3	ASSEMBLY	8
SUBTOTAL		15
TOTAL		92

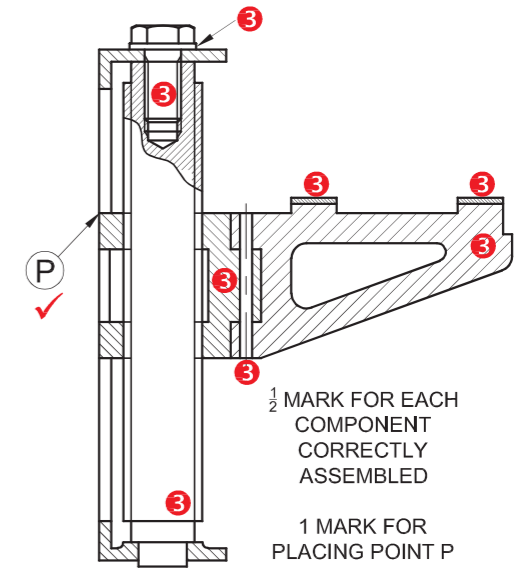
STAPLE



SECTION A-A ✓



BOLT DETAIL



1/2 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED

1 MARK FOR PLACING POINT P

ASSESSMENT CRITERIA

SECTIONAL FRONT VIEW

1	PAD	3		
2	JACK ARM	11		
3	PIN	1		
4	JACK	7½		
5	SHAFT	14½		
6	BRACKET	7		
7	WASHER	1		
8	M12 BOLT	11		
9	HATCHING	13		
SUBTOTAL		69		

TOP VIEW

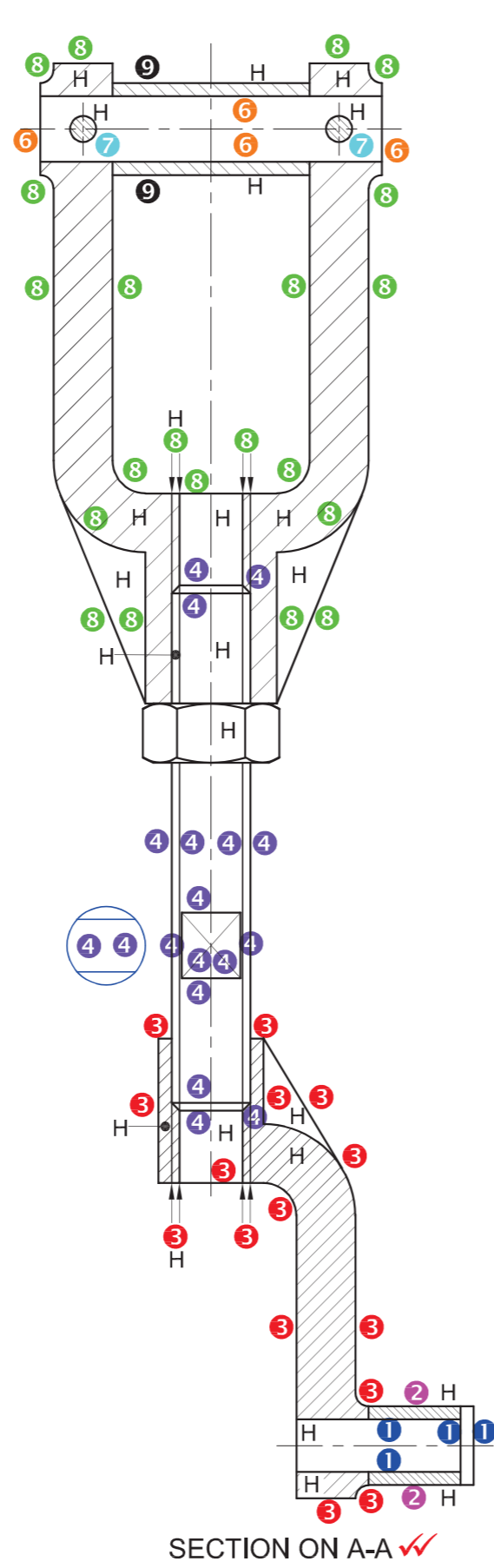
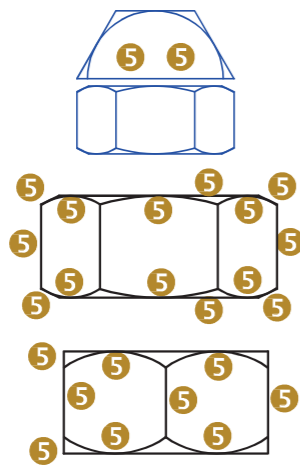
1	OUTLINE	10		
2	M12 BOLT + WASHER	3		
SUBTOTAL		13		

GENERAL

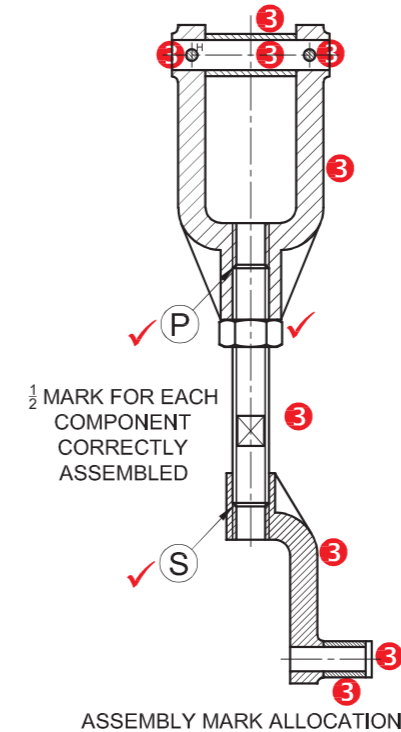
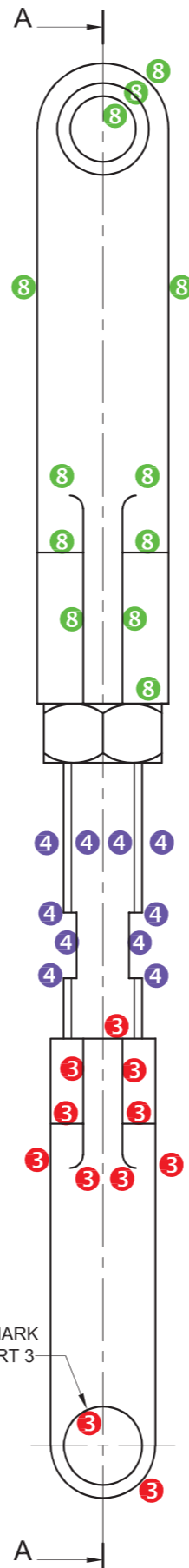
1	CENTRE LINES	2		
2	CUTTING PLANE + TITLE	4		
3	ASSEMBLY	5		
SUBTOTAL		11		
TOTAL		93		

EXAMINATION NUMBER

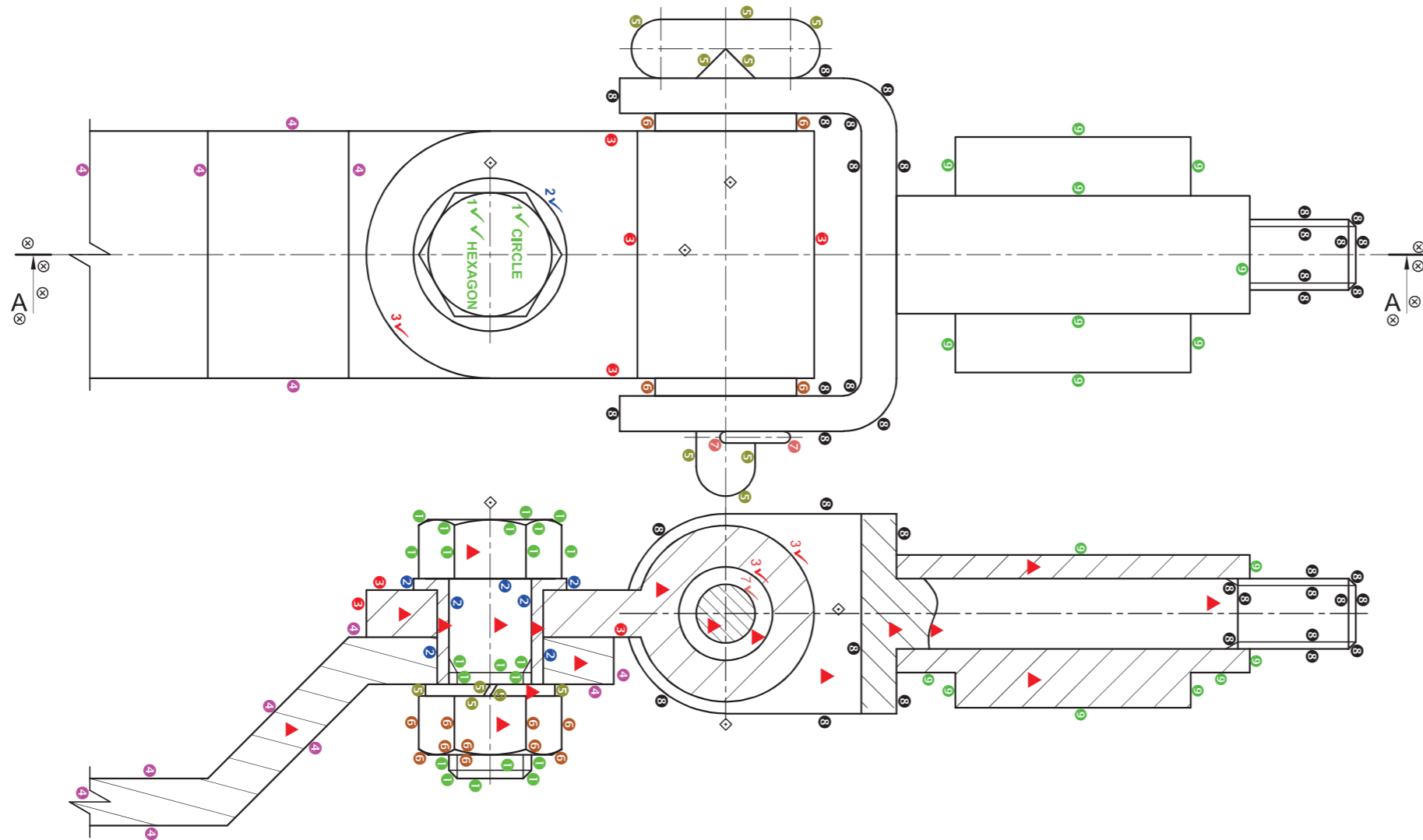
EXAMINATION NUMBER



PART 1, MARK WITH PART 3



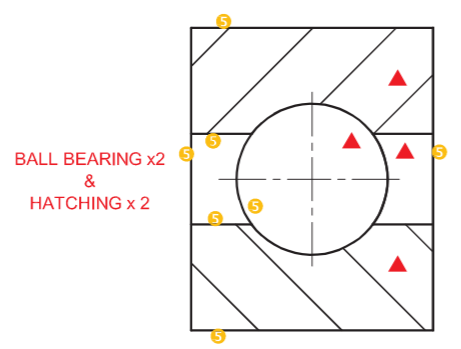
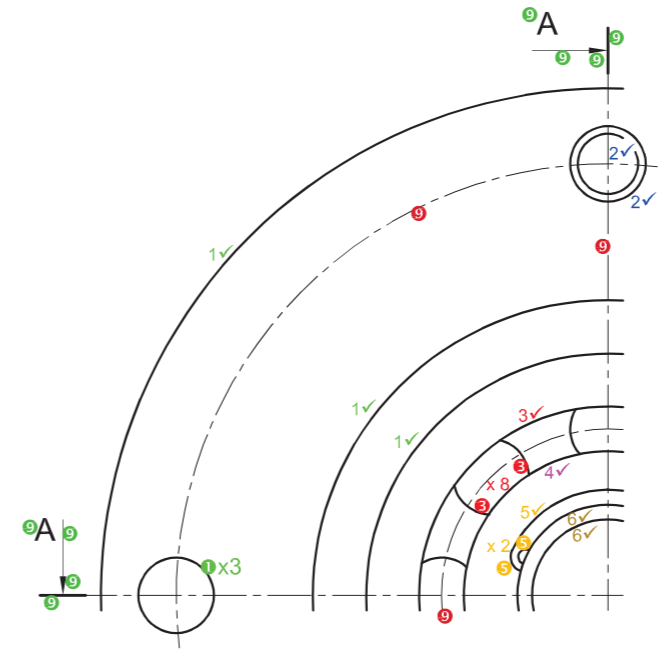
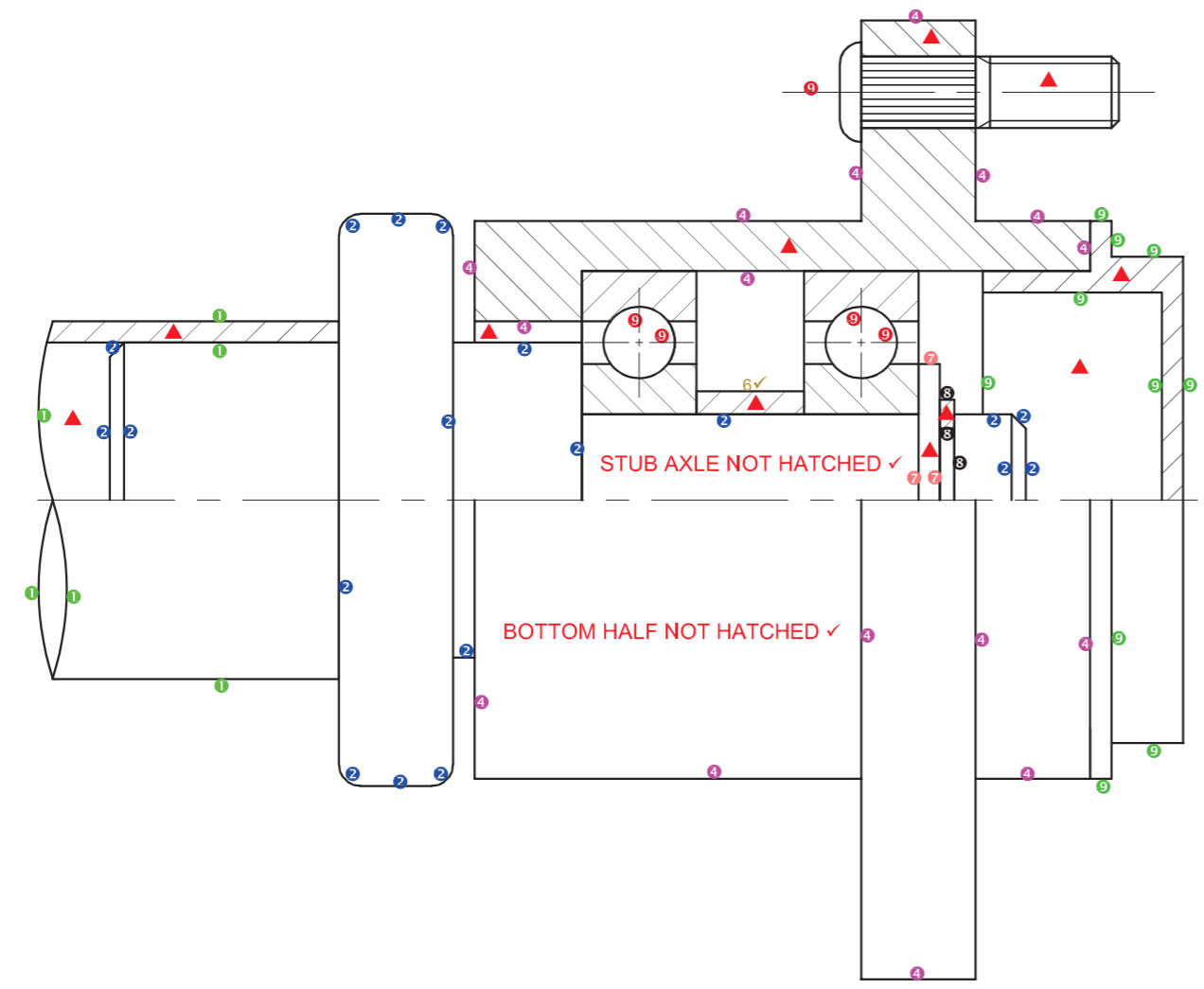
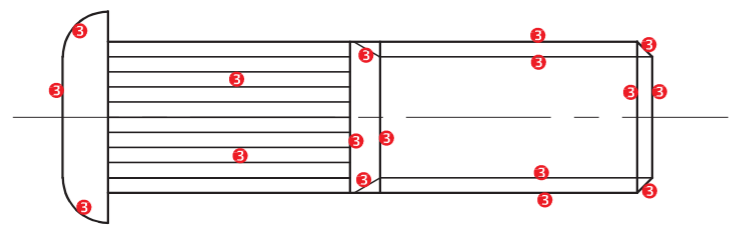
ASSESSMENT CRITERIA					
SECTIONAL FRONT VIEW					
		POSSIBLE	OBTAINED	SIGN	MODERATE
1	SHAFT A	2			
2	BUSH A	1			
3	OFFSET CONN	7½			
4	TIE-ROD	9			
5	M12 NUT	8			
6	SHAFT B	2			
7	DOWEL	1			
8	FORK	10½			
9	BUSH B	1			
H	HATCHING	12			
SUB-TOTAL		54			
RIGHT VIEW					
3	OFFSET CONN	5½			
4	TIE-ROD	5			
5	M12 NUT	4½			
8	FORK	6			
SUB-TOTAL		21			
GENERAL					
1	CENTRE LINES	4			
2	CUTTING PLANE + TITLE	5			
3	FV ASSEMBLY	7			
SUB-TOTAL		16			
TOTAL		91			
EXAMINATION NUMBER					
EXAMINATION NUMBER					



ASSESSMENT CRITERIA				
TOP VIEW				
	POSSIBLE	OBTAINED	SIGN	MODERATE
1. M14 BOLT	3			
2. BUSH	1			
3. SWIVEL	3			
4. FIXED ARM	2½			
5. PIN	4			
6. BUSH	2			
7. LOCKING PIN	1			
8. YOKE	10			
9. MOUNTING BRACKET	4½			
SUBTOTAL	31			
SECTIONAL FRONT VIEW				
1. M14 BOLT	10½			
2. BUSH	3½			
3. SWIVEL	3½			
4. FIXED ARM	4			
5. SPRING WASHER	2½			
6. M14 NUT	5			
7. PIN	1			
8. YOKE	9			
9. MOUNTING BRACKET	4			
SUBTOTAL	43			
GENERAL				
THIRD ANGLE	2			
◇ CENTRE LINES	3			
⊗ SECTION A-A	4			
▲ HATCHING	9			
ASSEMBLY ½ MARK OF EVERY PART CORRECTLY ASSEMBLED	5			
SUBTOTAL	23			
TOTAL	97			

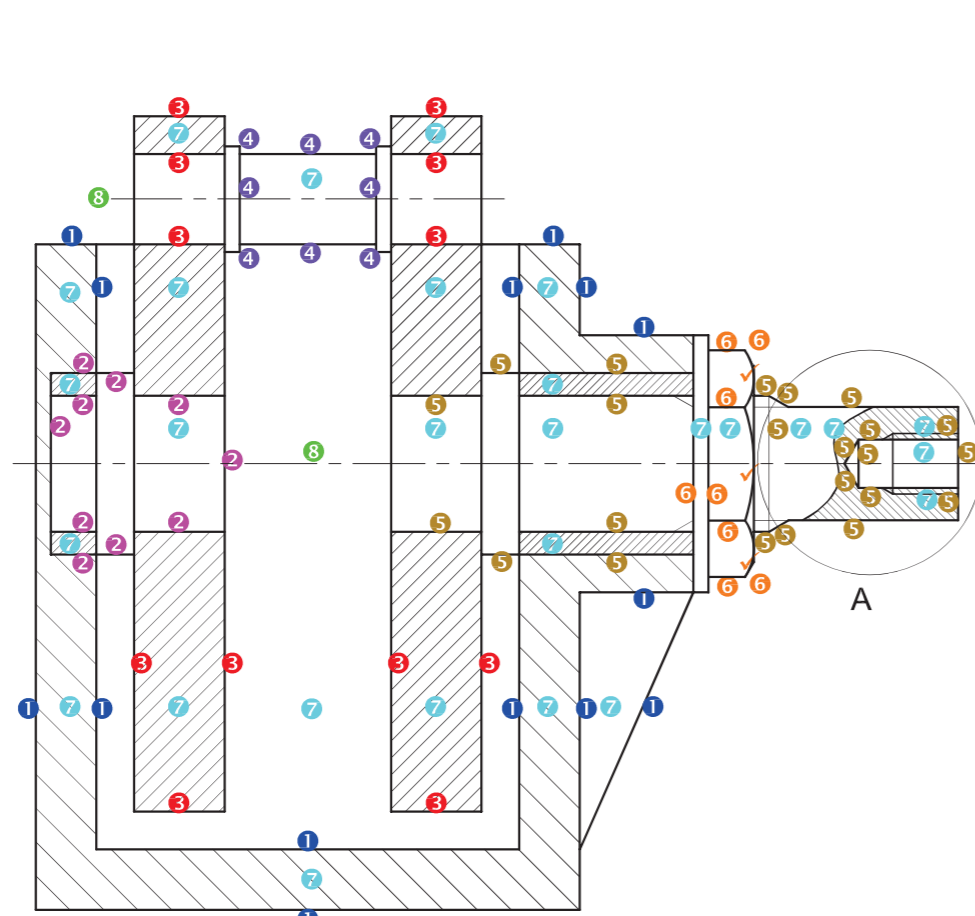
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EXAMINATION NUMBER	6

STAPLE

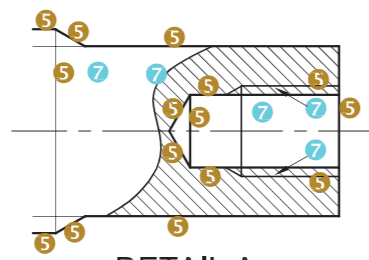


ASSESSMENT CRITERIA				
HALF-SECTIONAL FRONT VIEW				
	POSSIBLE	OBTAINED	SIGN	MODERATE
THIRD ANGLE	2			
1. AXLE PIPE	3			
2. STUB AXLE	9½			
3. WHEEL STUD	8½			
4. WHEEL HUB	8			
5. BEARINGS	7			
6. SPACER	1			
7. WASHER	1½			
8. CIRCLIP	1½			
9. HUB CAP	5			
SUBTOTAL	47			
RIGHT VIEW + GENERAL				
1. WHEEL HUB	4½			
2. WHEEL STUD	2			
3. BEARING	9			
4. WASHER	1			
5. CIRCLIP	3			
6. STUB AXLE	2			
7. ASSEMBLY	9			
8. SECTION A-A	4			
9. CENTRE LINES	4			
10. HATCHING	11½			
SUBTOTAL	50			
TOTAL	97			

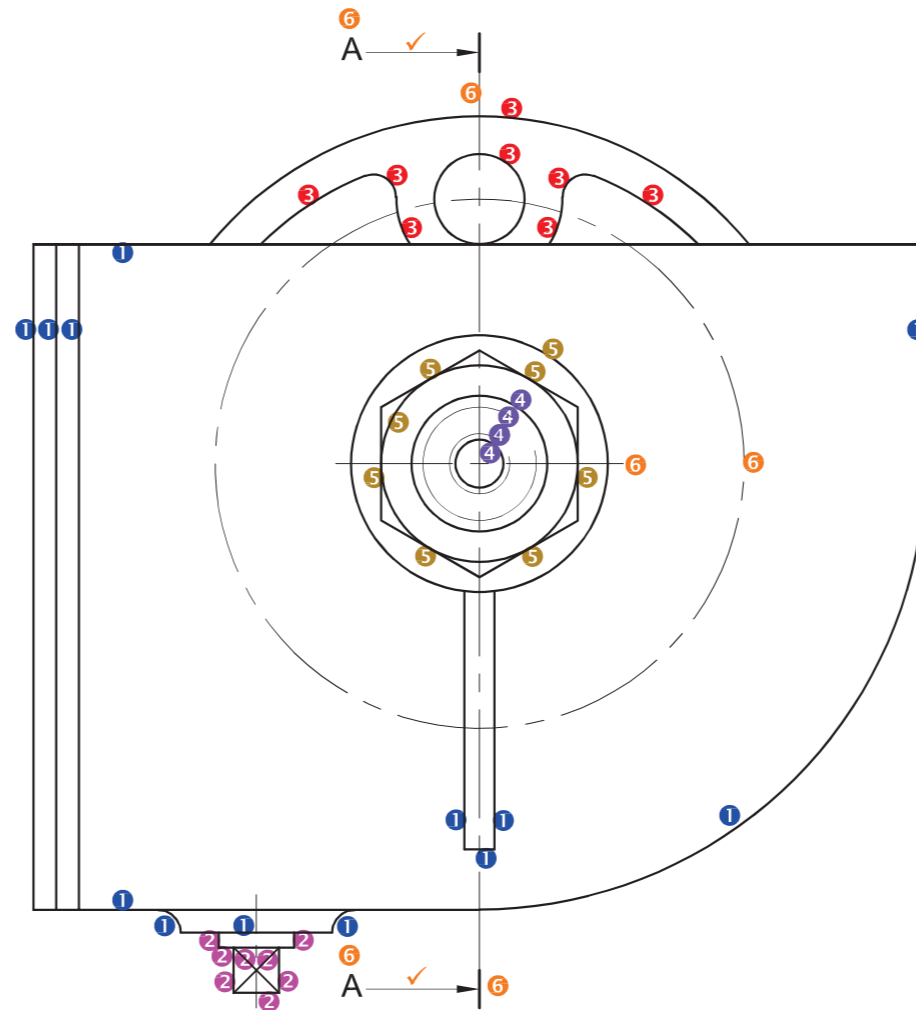
EXAMINATION NUMBER	
EXAMINATION NUMBER	6



SECTION A-A 88



DETAIL A



NOTE:
THE ARROW MUST POINT
FROM THE LEFT.

NOTE:
SHOULD THE CANDIDATE HAVE ASSEMBLED THE
DRAWING INCORRECTLY, ANY MARK ALLOCATED
TO A PARTICULAR LINE ON THE ASSEMBLY CAN
ONLY BE AWARDED TO THE LINE ONCE.

ASSESSMENT CRITERIA

SECTIONAL FRONT VIEW

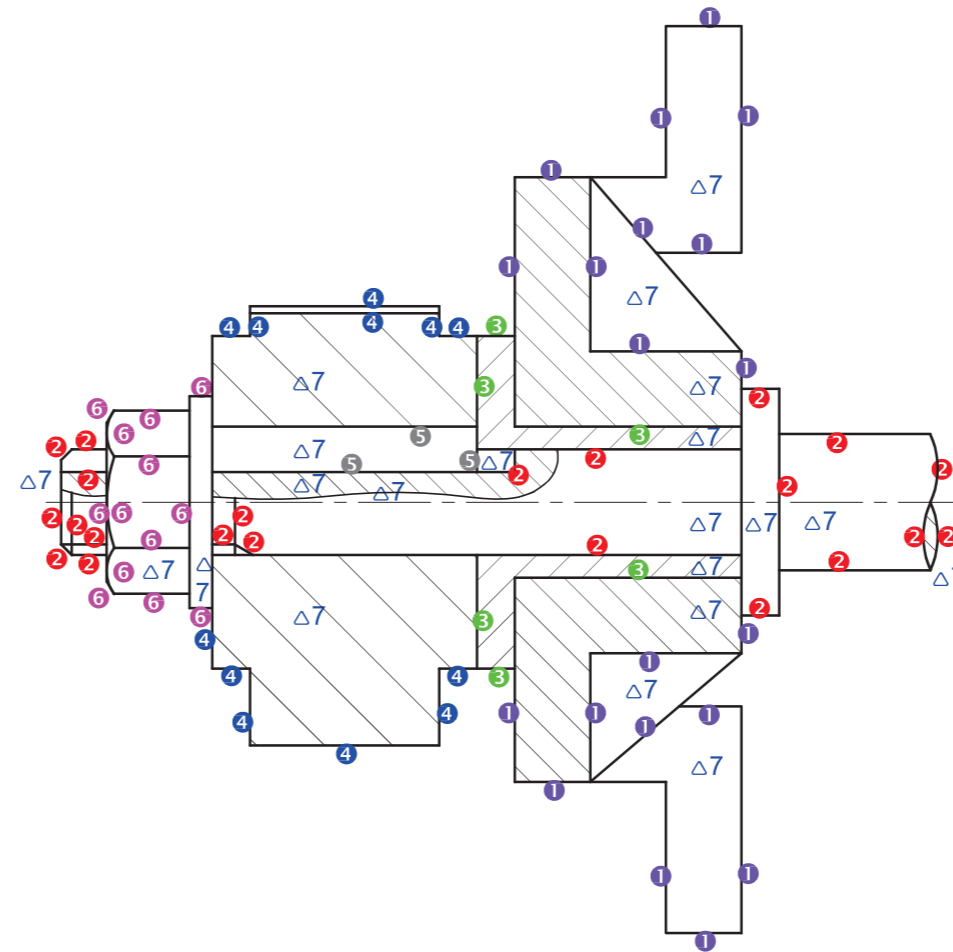
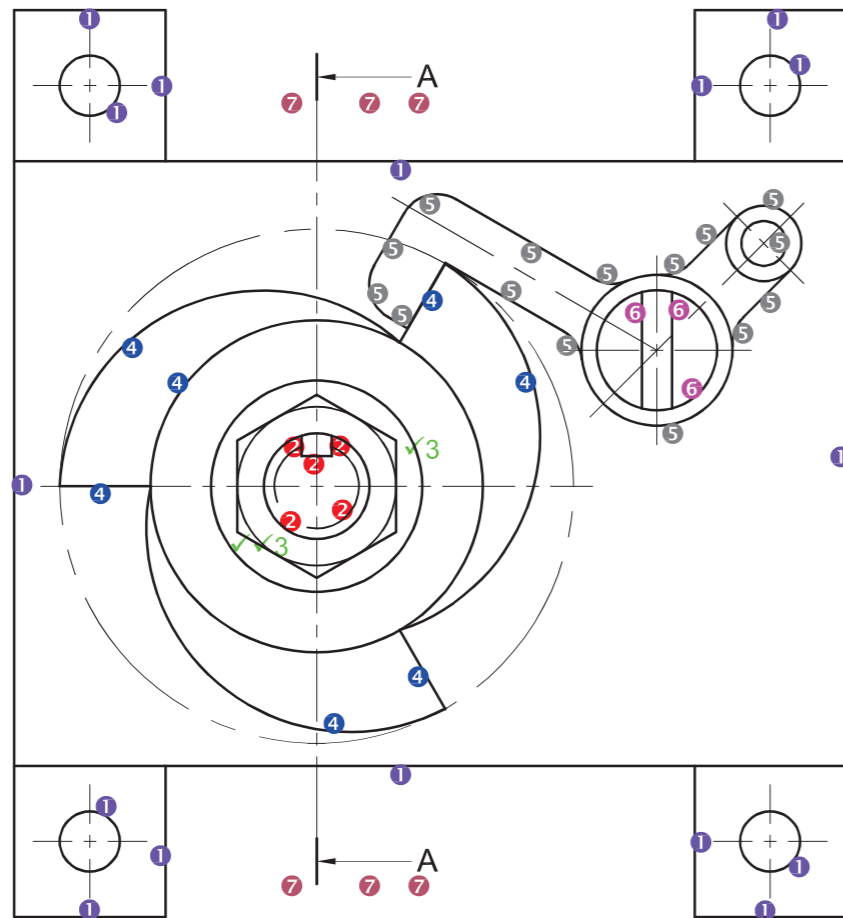
		POSSIBLE	OBTAINED	SIGN	MODERATE
1	HOUSING	7			
2	BUSH A + SHORT SHAFT	5			
3	FLYWHEELS	6			
4	JOURNAL	4			
5	BUSH B + DRIVE SHAFT	11½			
6	WASHER + NUT	7			
7	HATCHING + NON-HATCHING	14			
8	LABELS + CENTRE LINES	2			
SUBTOTAL		56½			

RIGHT VIEW

1	HOUSING	6½			
2	DRAIN PLUG	4			
3	FLYWHEEL	4			
4	DRIVE SHAFT	2			
5	NUT + WASHER	4			
6	CUTTING PLANE + CENTRE LINES	5			
7	3RD ANGLE RIGHT VIEW	2			
8	ASSEMBLY	10			
SUBTOTAL		37½			
TOTAL		94			

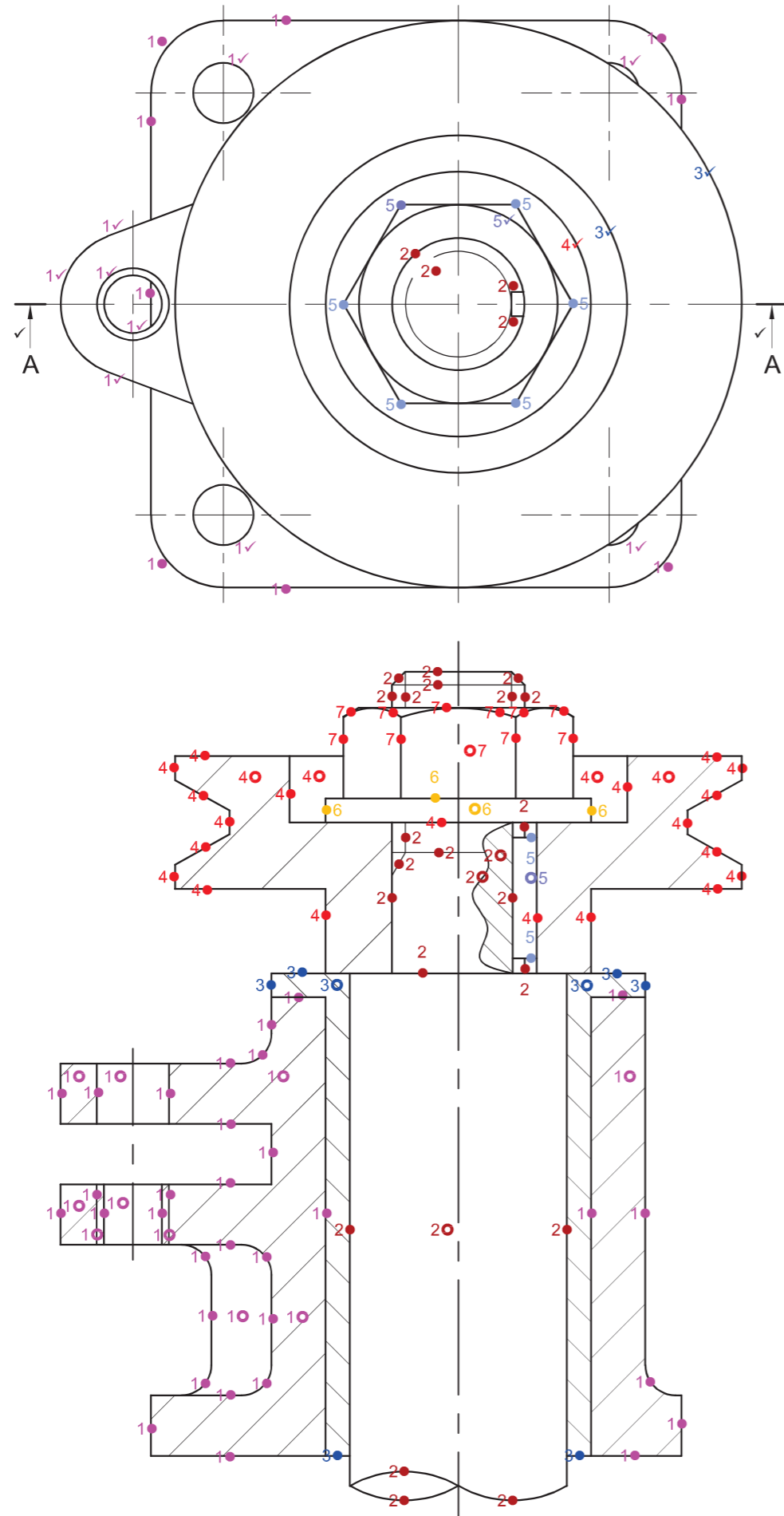
EXAMINATION NUMBER

EXAMINATION NUMBER



ASSESSMENT CRITERIA				
SECTIONAL VIEW				
	POSSIBLE	OBTAINED	SIGN	MODERATE
1. BASE	10			
2. SHAFT	11			
3. BUSH	3			
4. RATCHET	6			
5. KEY	1½			
6. WASHER + M14 NUT	6½			
7. HATCHING	10½			
FRONT VIEW				
1. BASE	8			
2. SHAFT	2½			
3. WASHER + M14 NUT	3			
4. RATCHET	3½			
5. RATCHET ARM	7½			
6. PIN	1½			
7. CUTTING PLANE A-A	3			
CENTRE LINES	$15 \times \frac{1}{2} = 7\frac{1}{2}$			
ASSEMBLY	6			
3rd ANGLE	2			
TOTAL	93			
EXAMINATION NUMBER				
EXAMINATION NUMBER				

ANSWER SHEET 4



ASSESSMENT CRITERIA

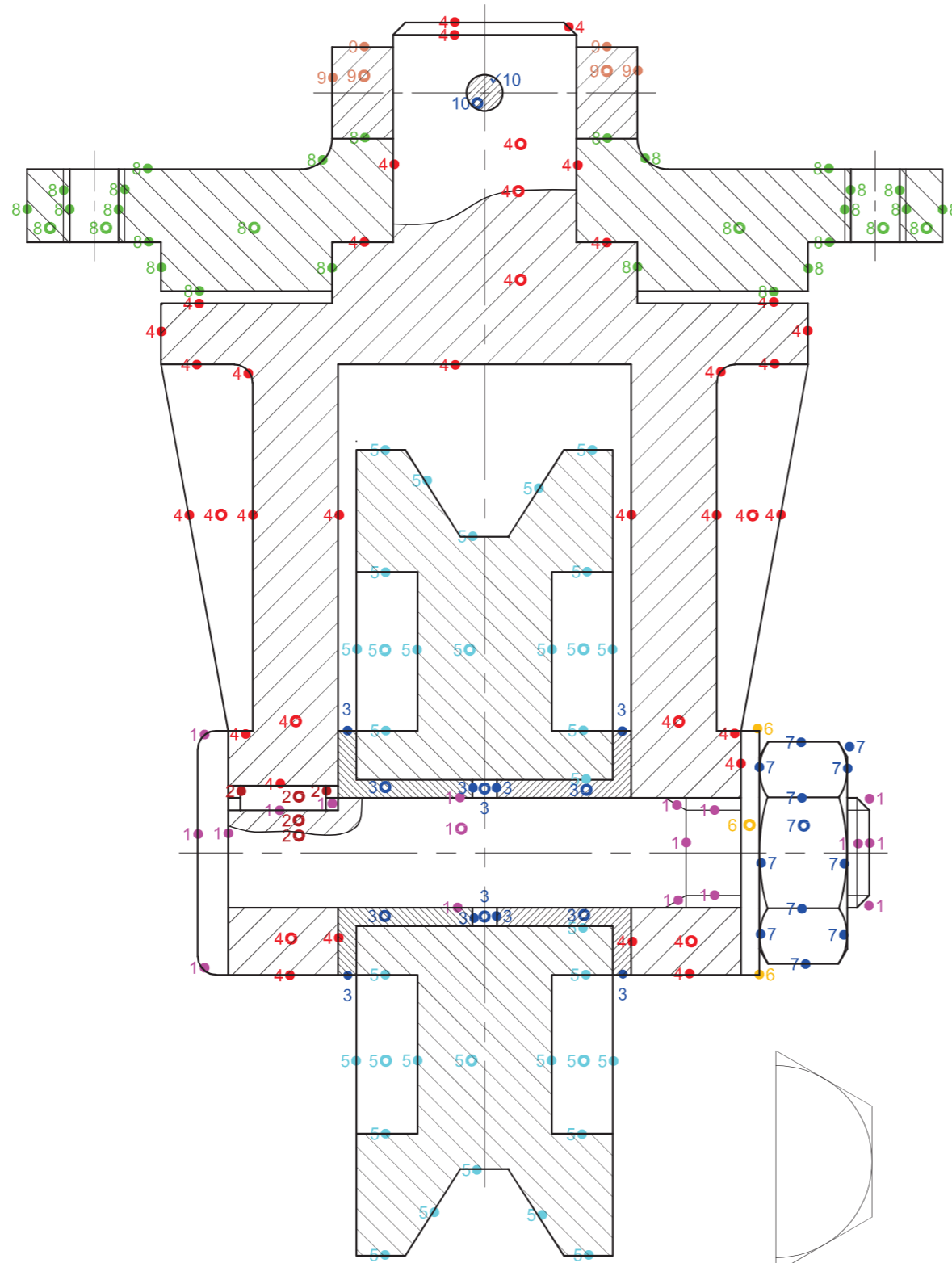
FRONT VIEW	FACET		SECTIONING		TOTAL	
	POSSIBLE	OBTAINED	POSSIBLE	OBTAINED	POSSIBLE	OBTAINED
1. SUPPORT BRACKET	16		5		21	
2. SHAFT	10 $\frac{1}{2}$		1 $\frac{1}{2}$		12	
3. BUSH	3		1		4	
4. PULLEY	10		2		12	
5. KEY	1		$\frac{1}{2}$		1 $\frac{1}{2}$	
6. WASHER	1 $\frac{1}{2}$		$\frac{1}{2}$		2	
7. M22 NUT	5		$\frac{1}{2}$		5 $\frac{1}{2}$	
TOP VIEW	FACET		SECTIONING		TOTAL	
	POSSIBLE	OBTAINED	POSSIBLE	OBTAINED	POSSIBLE	OBTAINED
1. SUPPORT BRACKET	13 $\frac{1}{2}$				13 $\frac{1}{2}$	
2. SHAFT	2				2	
3. PULLEY	2				2	
4. WASHER	1				1	
5. M22 NUT	4				4	
6. CUTTING PLANE A A	2				2	
CENTRE LINES					6 $\frac{1}{2}$	
ASSEMBLY					6	
TOTAL					95	

EXAMINATION NUMBER

EXAMINATION NUMBER

6

ANSWER SHEET 4



CONSTRUCTION

ASSESSMENT CRITERIA

	FACET		SECTIONING		TOTAL	
	POSSIBLE	OBTAINED	POSSIBLE	OBTAINED	POSSIBLE	OBTAINED
1. SHAFT	8½		½		9	
2. KEY	1		1½		2½	
3. BUSH	4		3		7	
4. HANGER BRACKET	15		4½		19½	
5. PULLEY	14		3		17	
6. WASHER	1		½		1½	
7. M18 NUT	6½		½		7	
8. MOUNTING PLATE	12		3		15	
9. COLLAR	2		1		3	
10. PIN	1		½		1½	
CENTRE LINES					5	
ASSEMBLY					10	
TOTAL					98	

EXAMINATION NUMBER

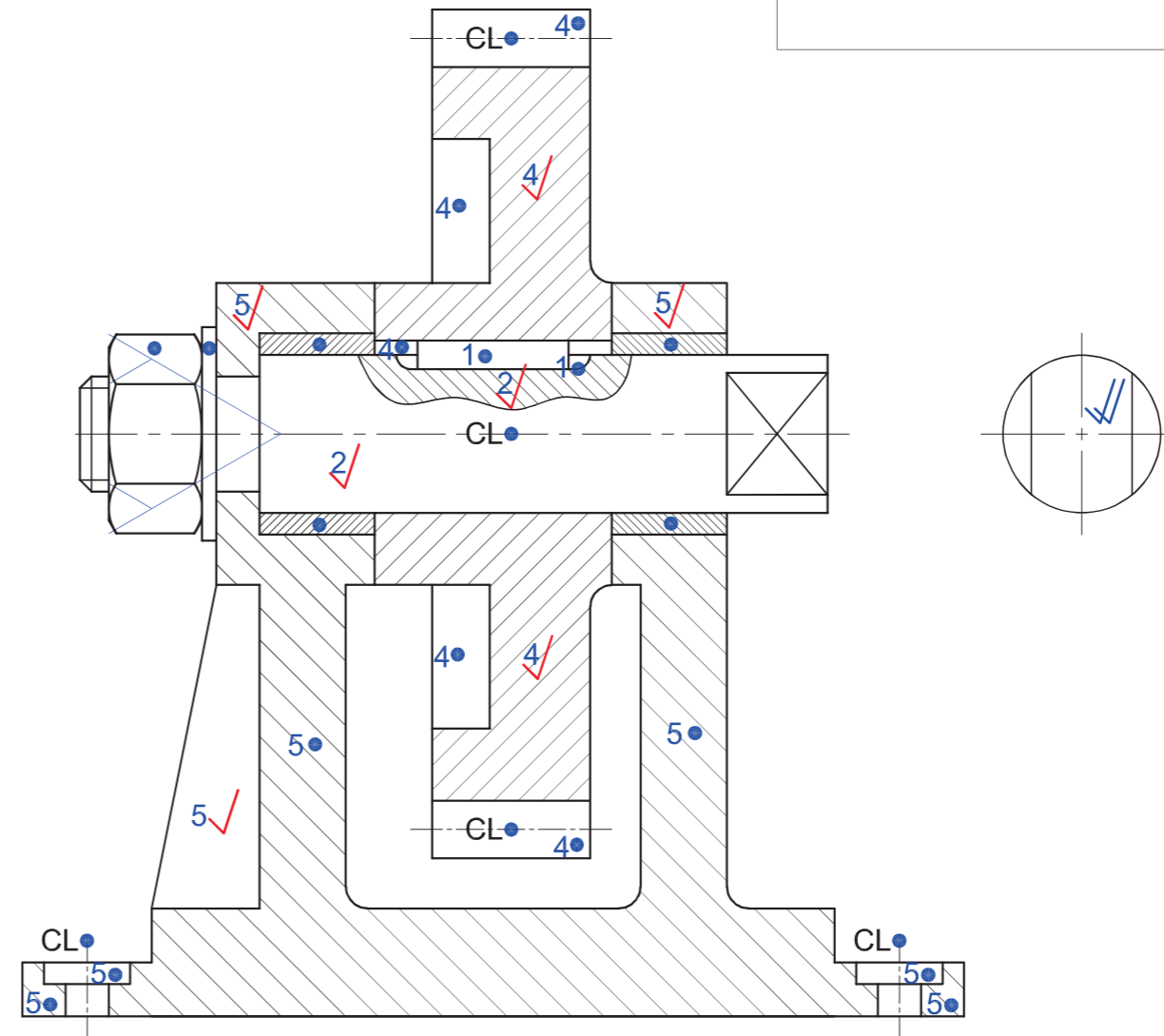
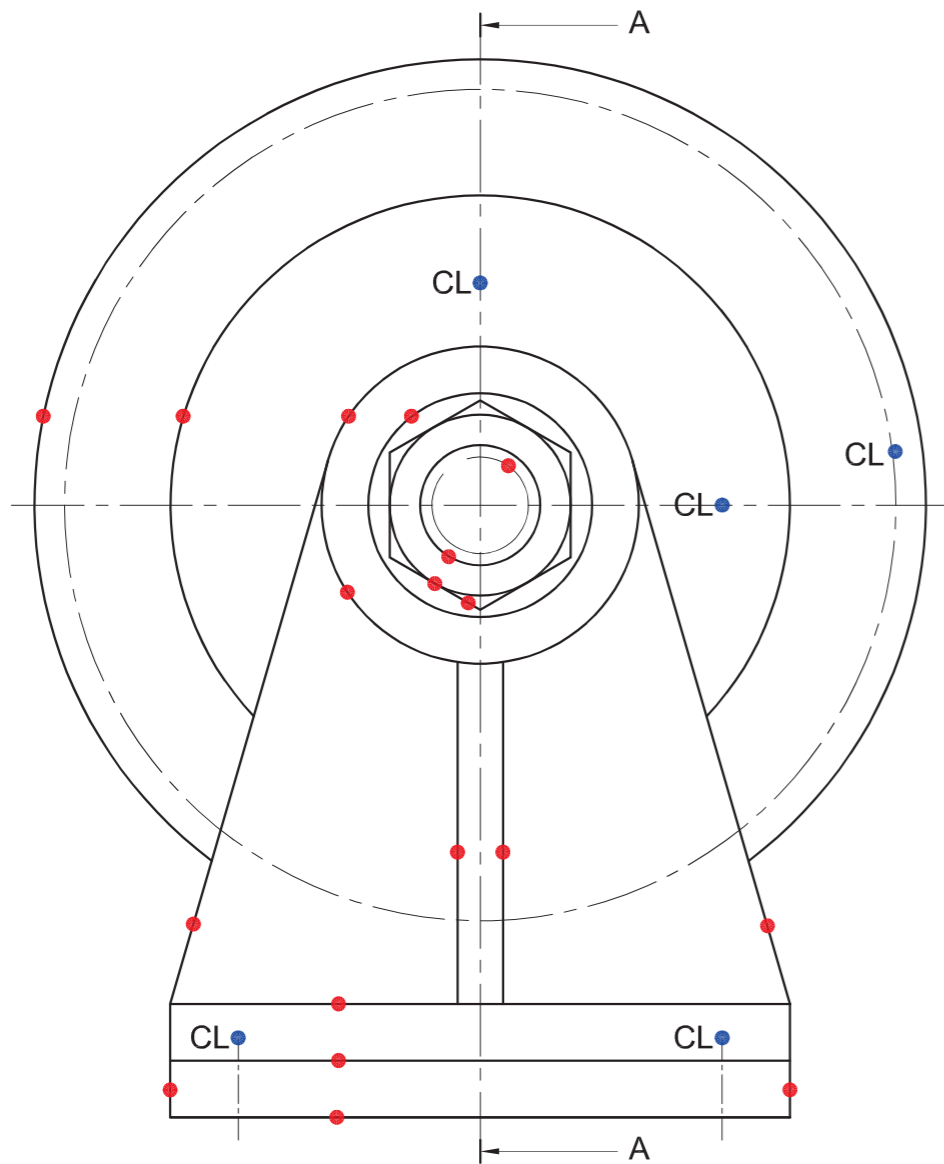
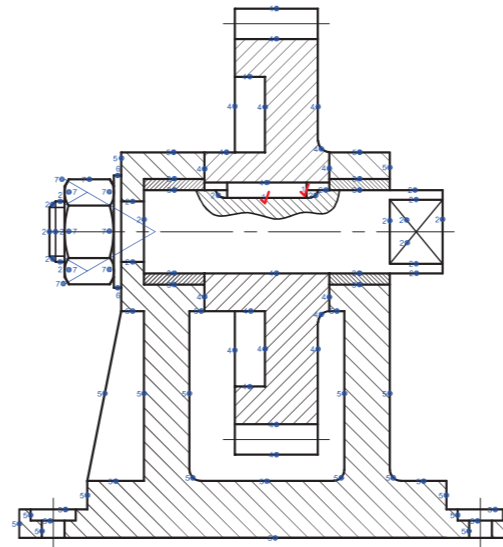
EXAMINATION NUMBER

6

ANSWER SHEET 4

ASSESSMENT CRITERIA

	FACET		SECTIONING		TOTAL	
	POSSIBLE	OBTAINED	POSSIBLE	OBTAINED	POSSIBLE	OBTAINED
1 KEY	2		1		3	
2 SHAFT	10		2½		12½	
3 BUSH	4		2		6	
4 SPUR GEAR	11		4½		15½	
5 HOUSING BRACKET	15½		6		21½	
6 WASHER	1		½		1½	
7 M16-NUT	4½		½		5	
CENTRE LINES					5	
ASSEMBLY					7	
LEFT VIEW					9	
CUTTING PLANE					1	
LABEL VIEW					1	
AUXILIARY VIEW					2	
TOTAL					90	



SECTION ON A-A

EXAMINATION NUMBER

EXAMINATION NUMBER

5