

ELECTRICIAN

1st YEAR

TRANSPARENCIES



**CENTRAL INSTRUCTIONAL
MEDIA INSTITUTE, CHENNAI**

Directorate General of Employment and Training, Ministry of Labour, Govt. of India.

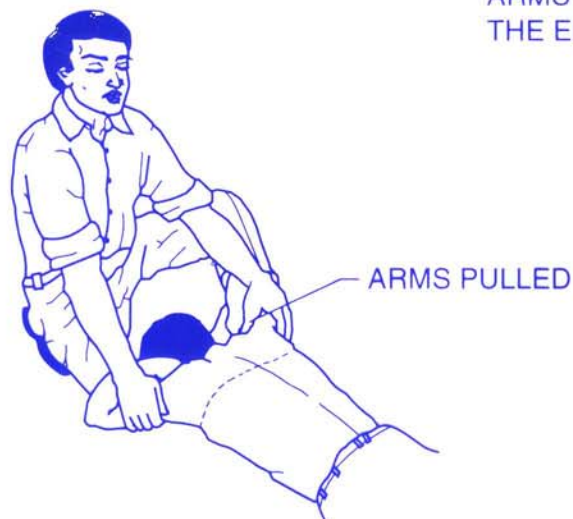
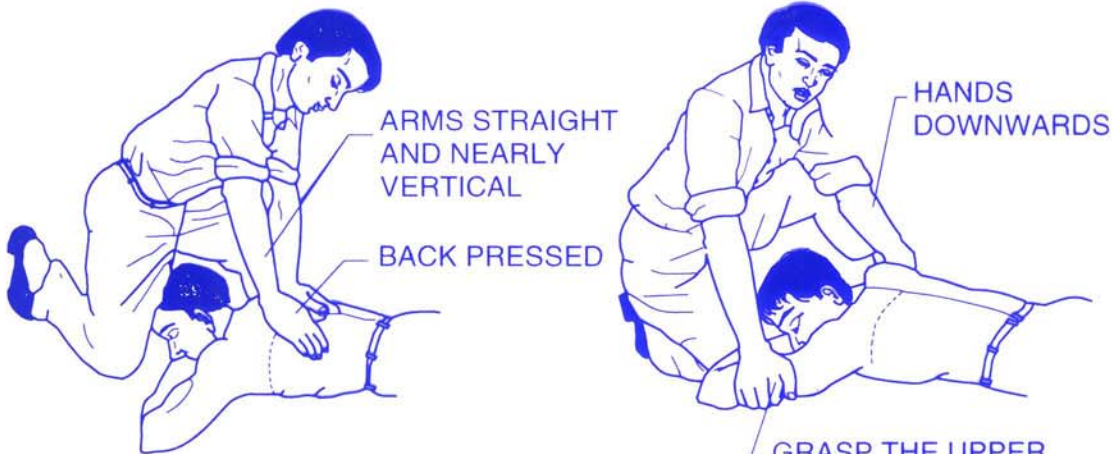
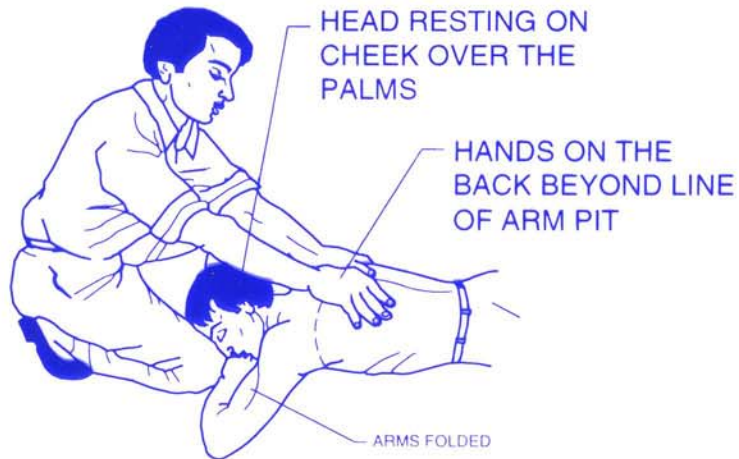
Developed by

CENTRAL INSTRUCTIONAL MEDIA INSTITUTE

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ARTIFICIAL RESPIRATION - NELSON'S ARM-LIFT BACK-PRESSURE METHOD





ARTIFICIAL RESPIRATION - SCAFFER'S METHOD



Lay the victim on his belly, one arm extended directly forward, the other arm bent at the elbow and with the face turned sideward and resting on the hand or forearm as shown.

Kneel astride the victim, so that his thighs are between your knees and with your fingers and thumbs positioned as shown



With the arms held straight, swing forward slowly so that the weight of your body is gradually brought to bear upon the lower ribs of the victim to force the air, out of the victim's lungs as shown

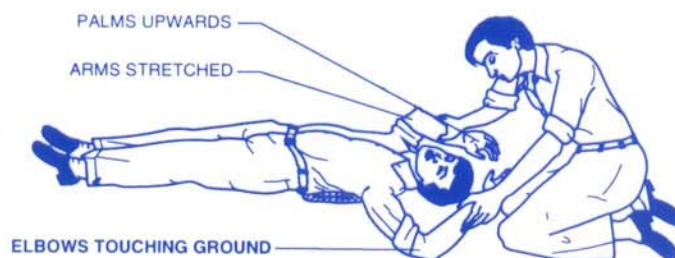
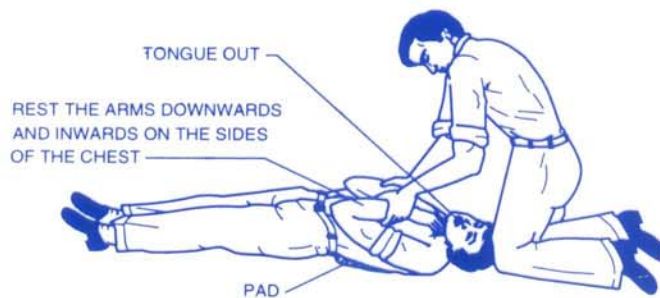
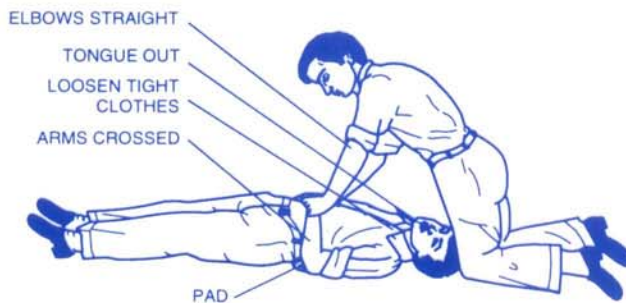


Now immediately swing backward removing all the pressure from the victim's body as shown and thereby allowing the lungs to fill with air

After two seconds, swing forward again and repeat the cycle twelve to fifteen times a minute



ARTIFICIAL RESPIRATION - SILVESTER'S METHOD

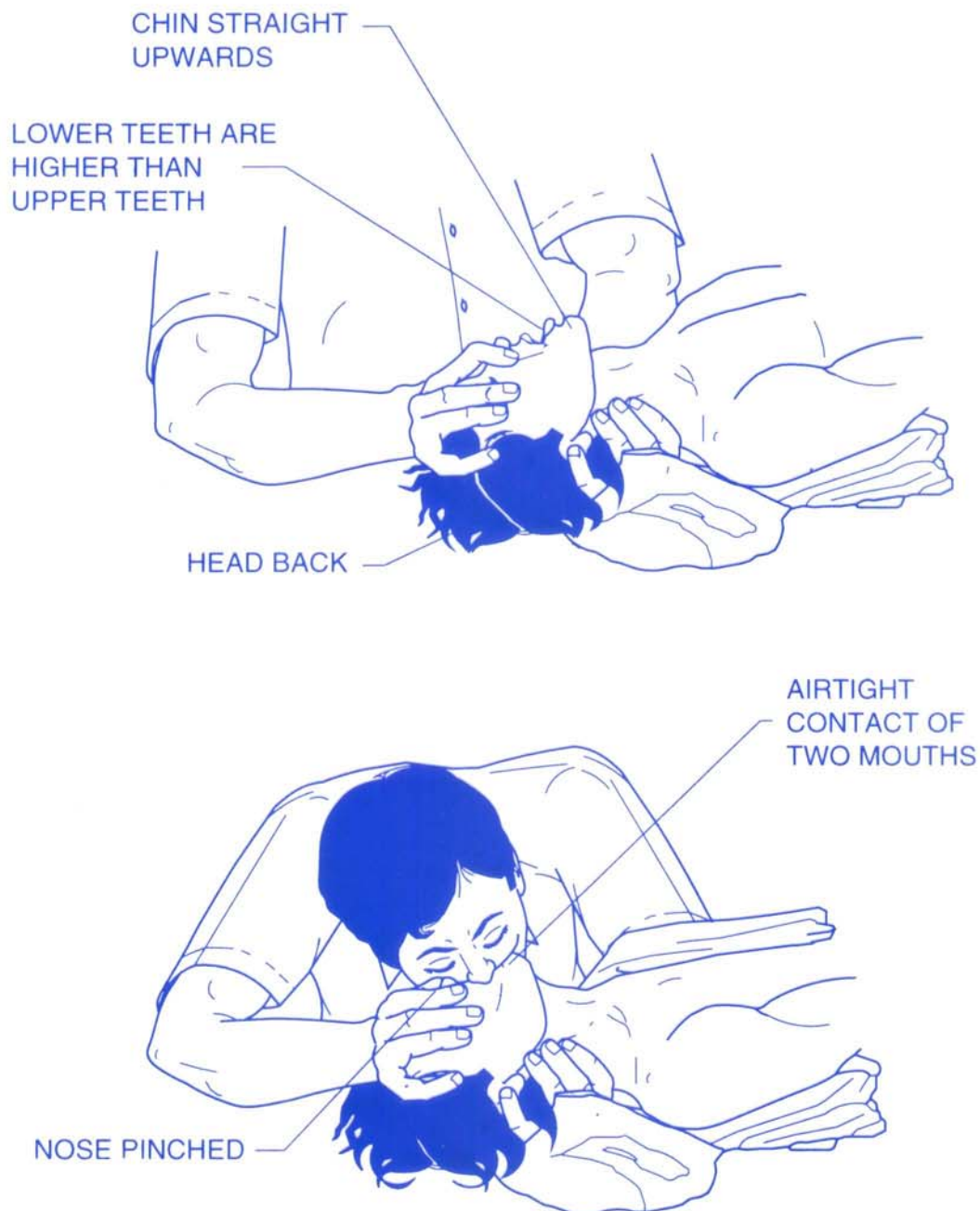


To be used if the victim cannot lie on his belly or chest due to injury.

- Lay the victim flat on his back and place a roll of clothing under his shoulders to ensure that his head is thrown well back.
- Wipe saliva out of his mouth: Pull the tongue forward and towards the chin and hold it in this position if there is an assistant if not, tie it with a strip of cloth, cross the strip under the chin, and tie below the neck to prevent the tongue from blocking the wind pipe.
- Kneel over the Victim's head and grasp his arms above the wrist as shown.
- Swing forward and press his arms steadily and firmly downwards and inwards against the sides of the chest to force the air out of the lungs as shown.
- Bring the victim's arms steadily first upward and then backwards until they are in line with the body and the elbows are almost touching the floor as shown, this allowing the lungs to fill the air.
- After three seconds, swing forward again and repeat the cycle. The complete cycle should take about six seconds.

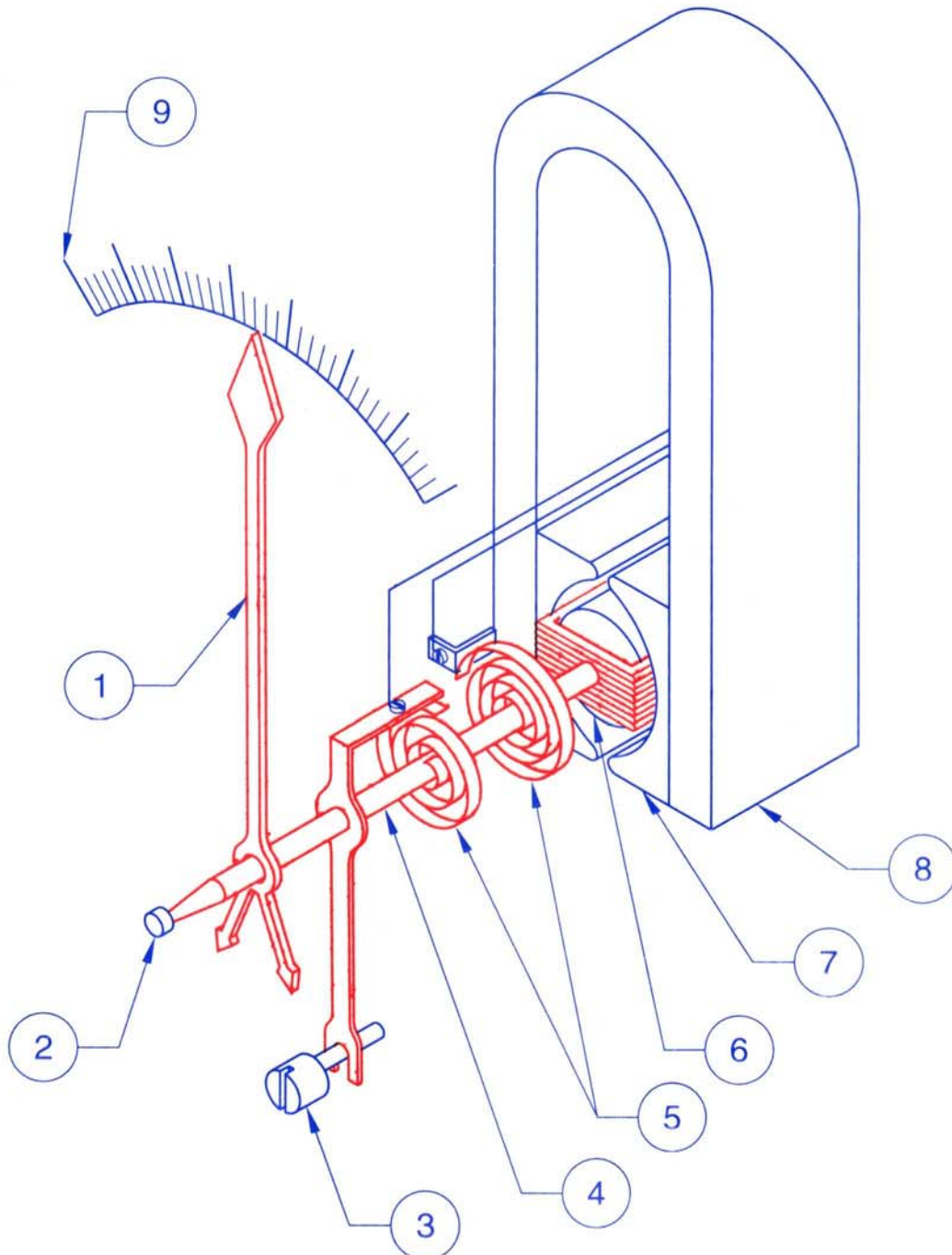


ARTIFICIAL RESPIRATION - MOUTH TO MOUTH METHOD



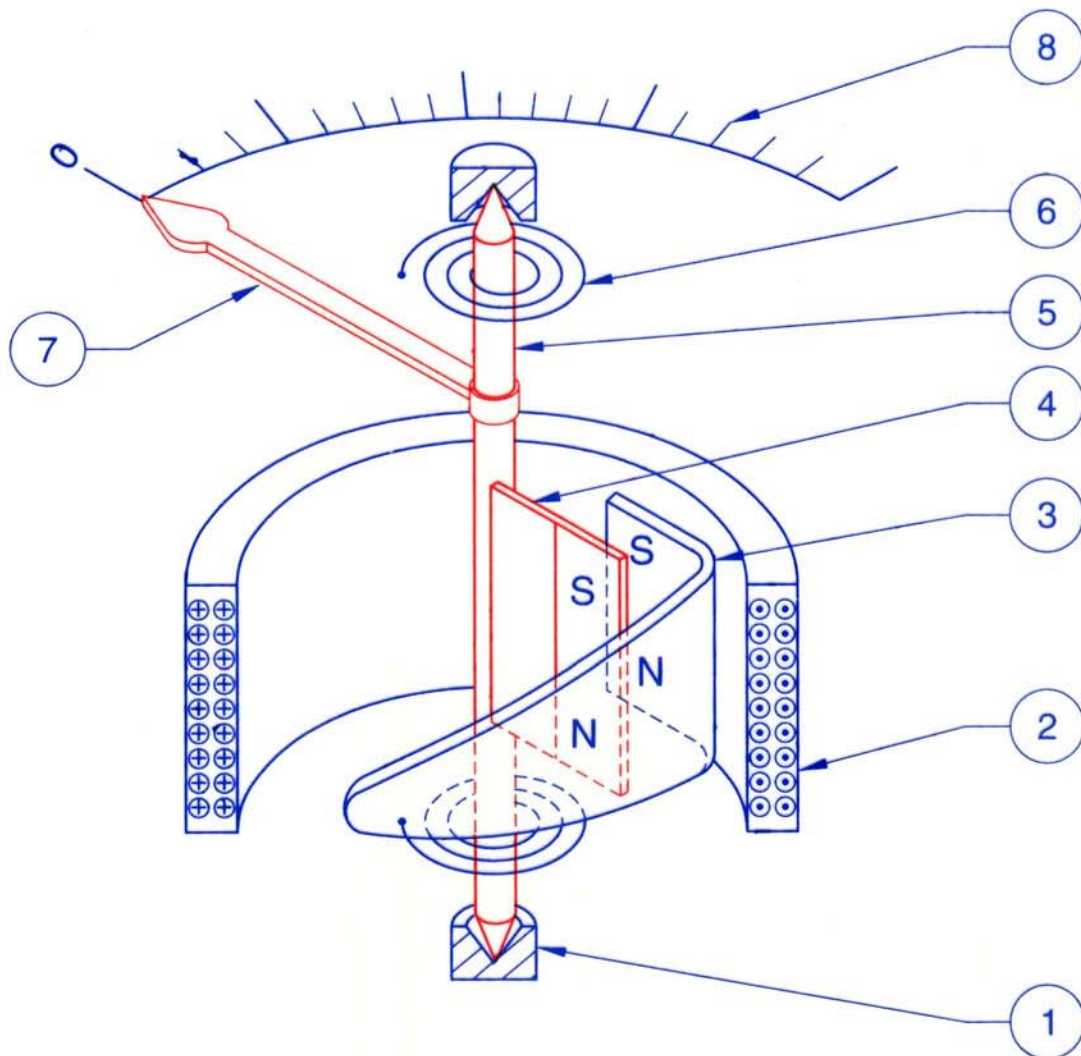


PARTS OF A MOVING COIL INSTRUMENT



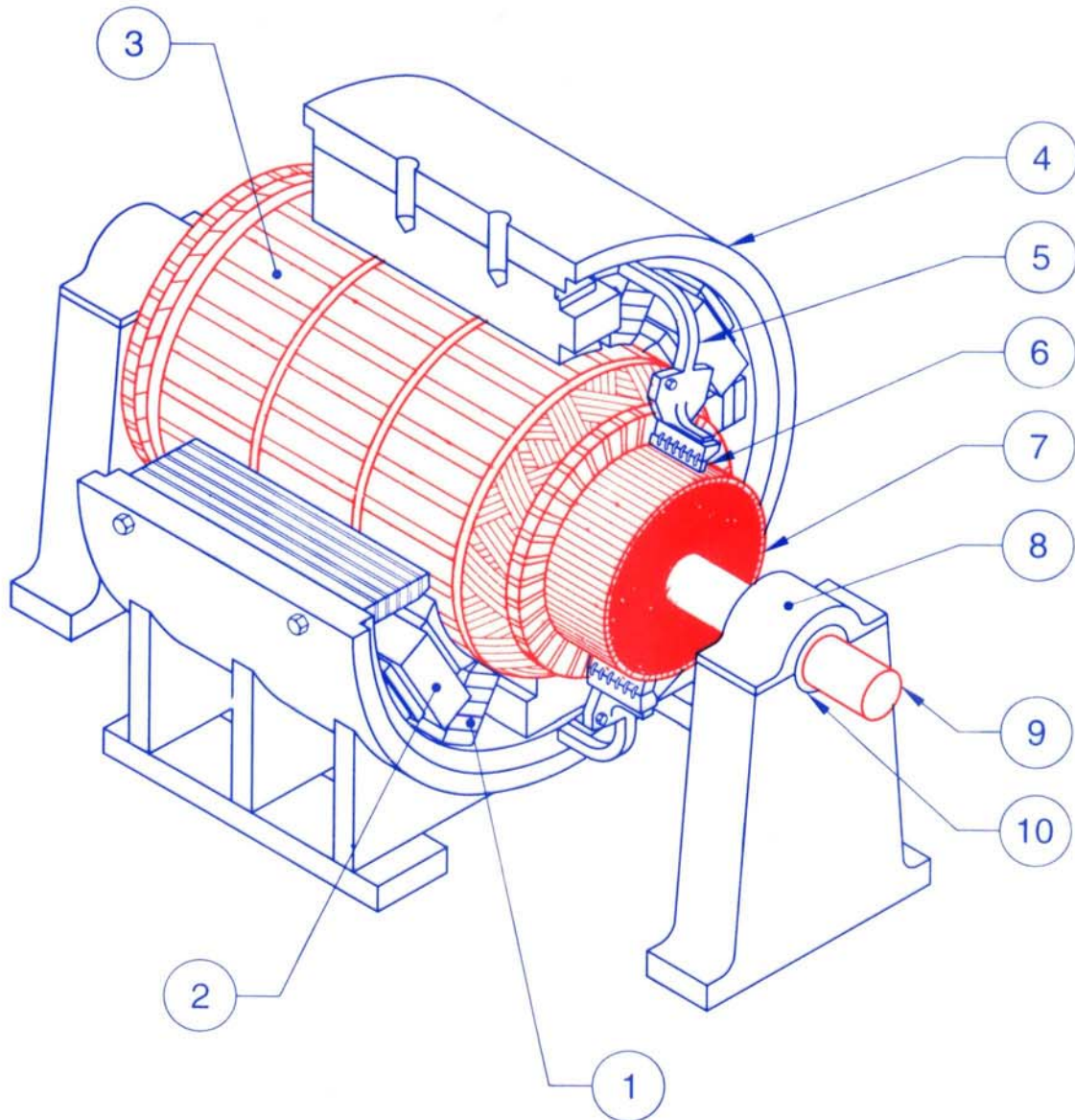


PARTS OF A MOVING IRON INSTRUMENT



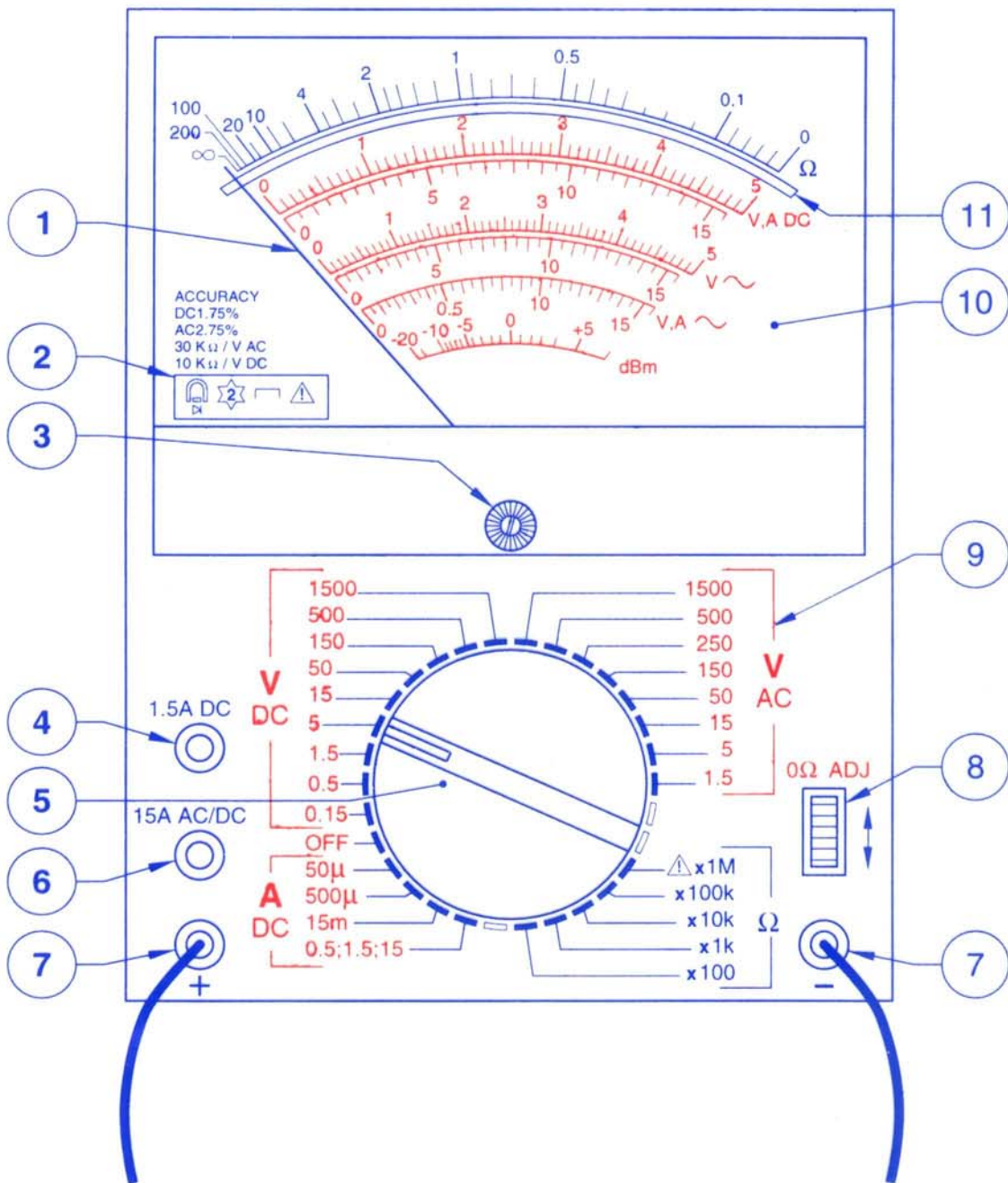


PARTS OF A D.C. MACHINE





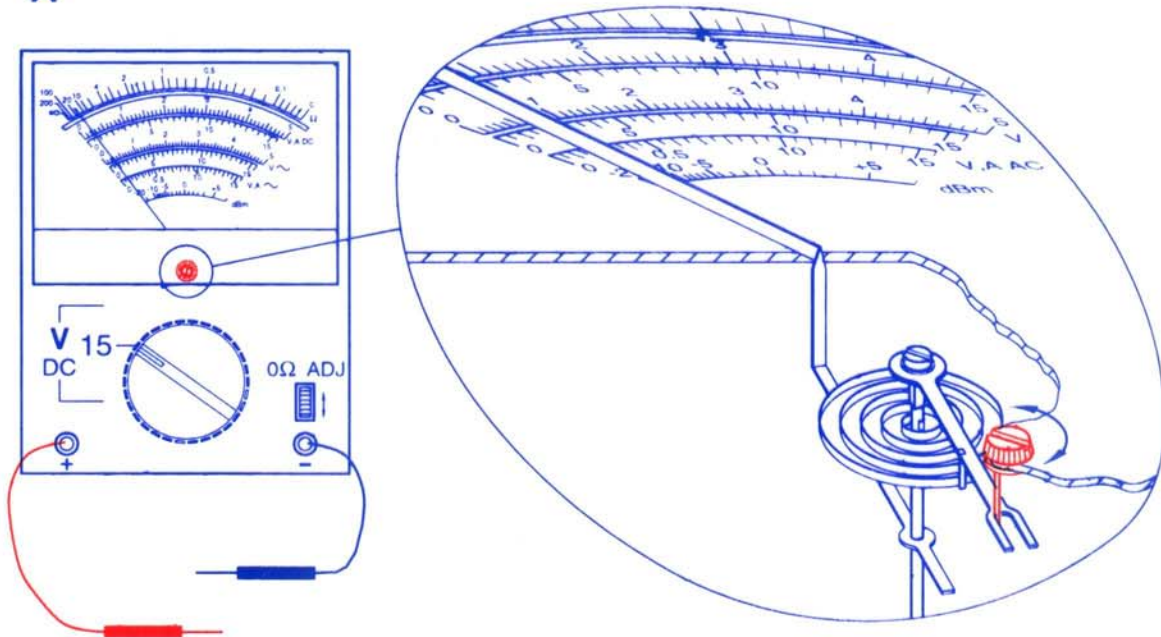
MULTIMETER - 1



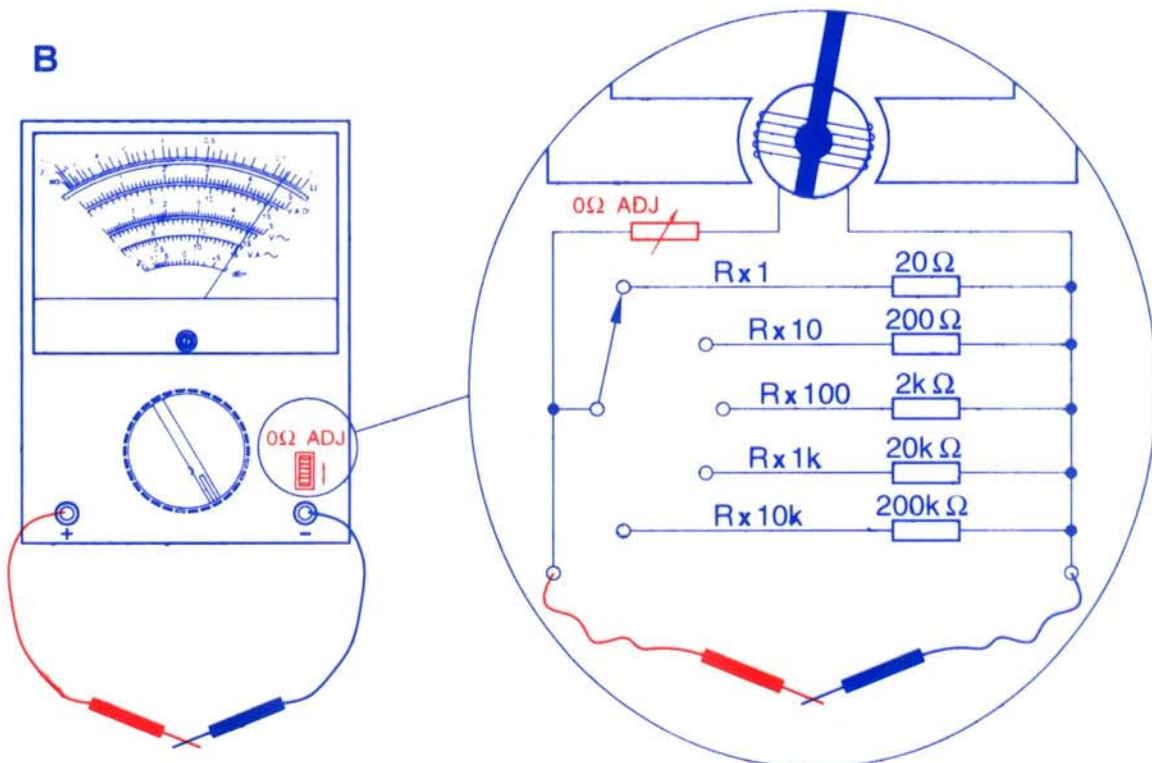


MULTIMETER - 2 ZERO ADJUSTMENT

A

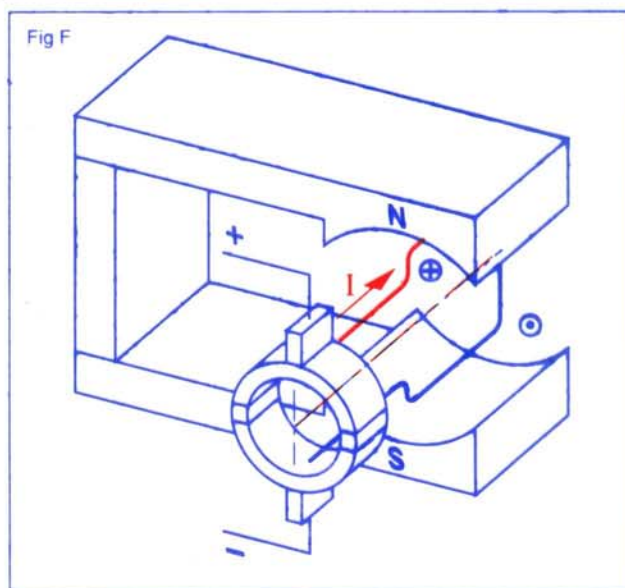
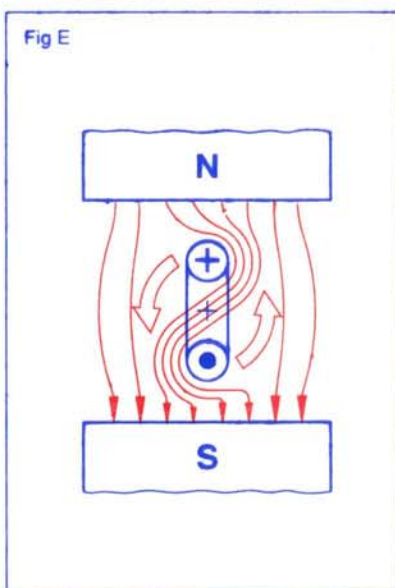
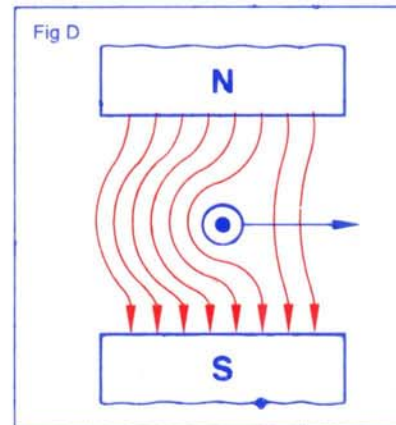
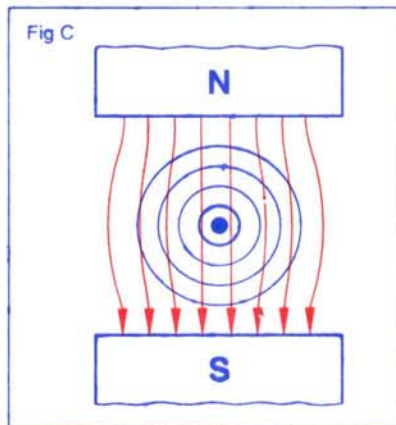
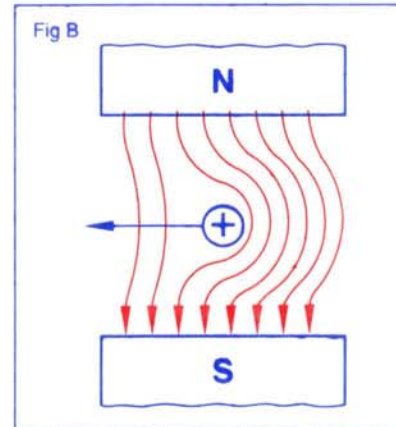
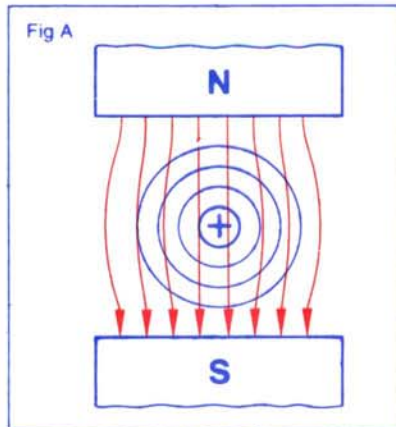


B



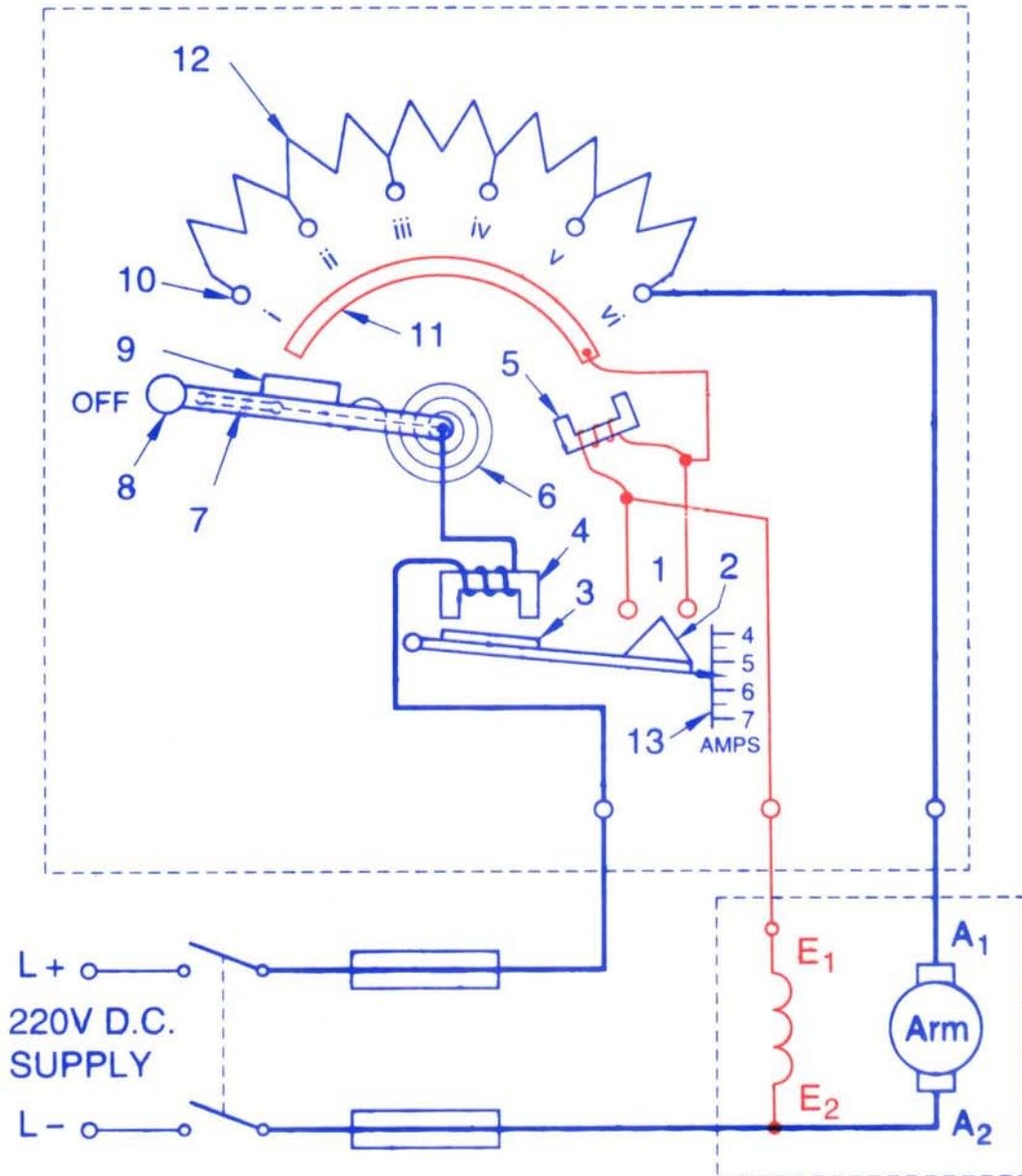


CURRENT CARRYING CONDUCTOR IN MAGNETIC FIELD





THREE POINT STARTER





FOUR POINT STARTER

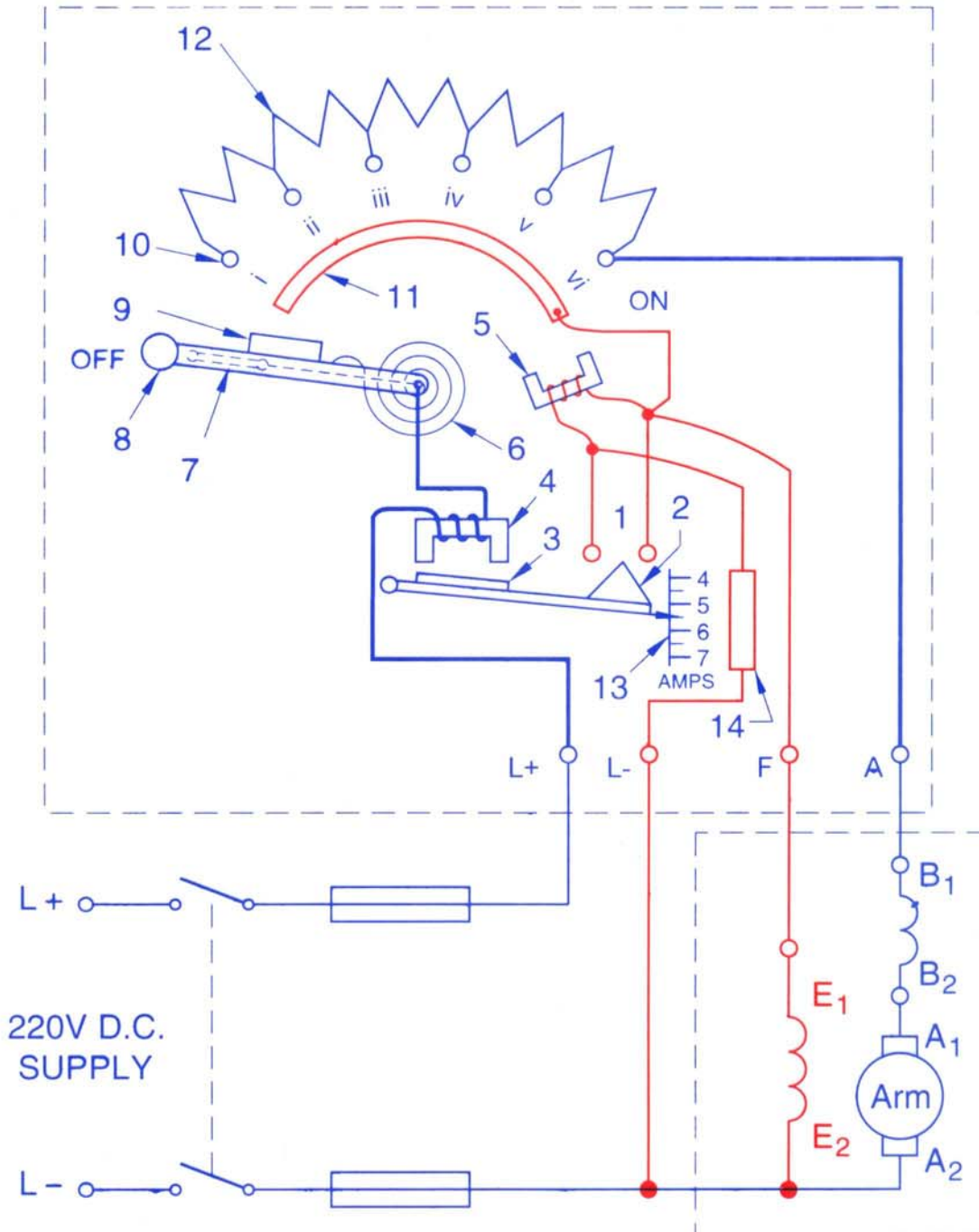
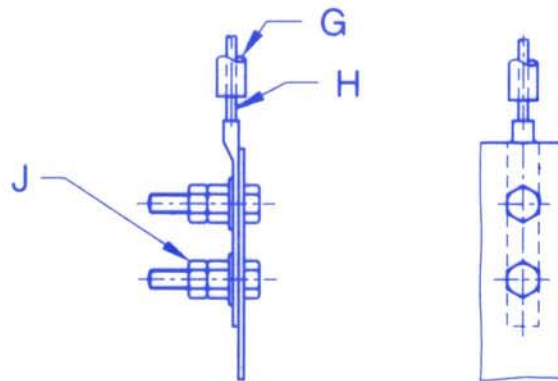
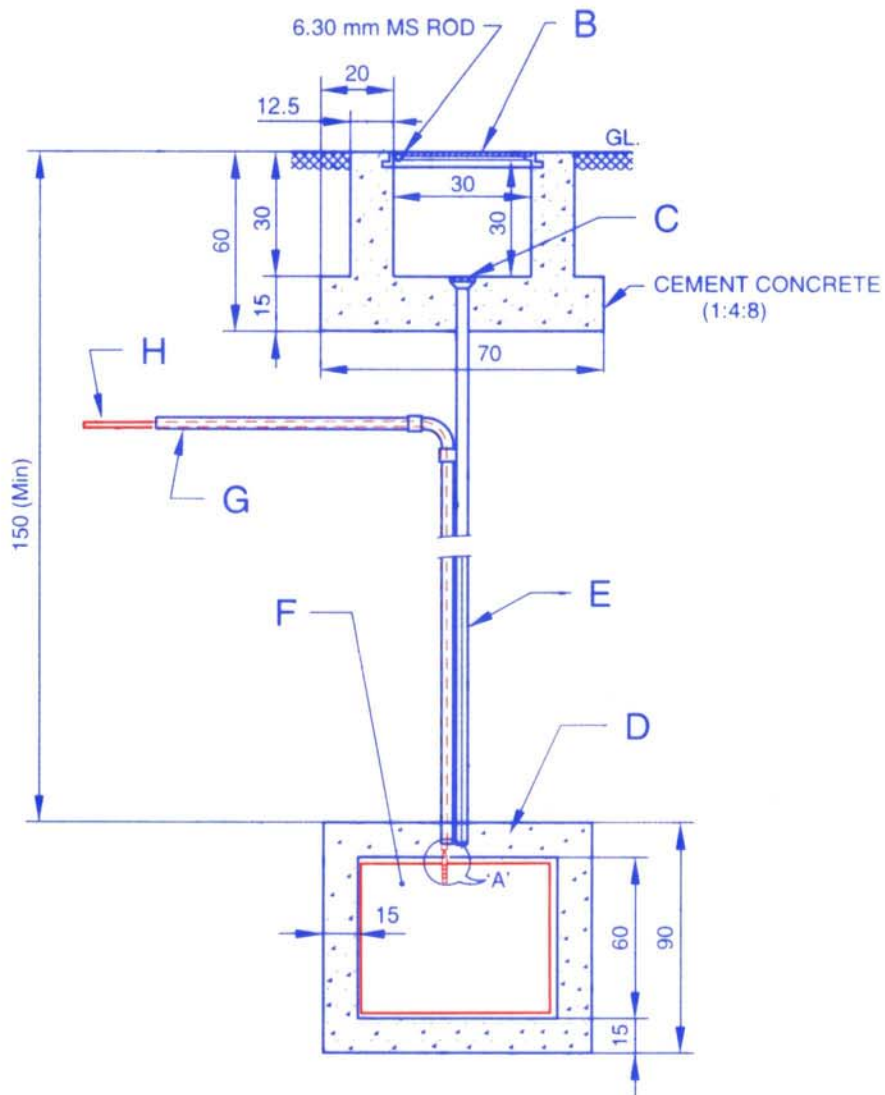




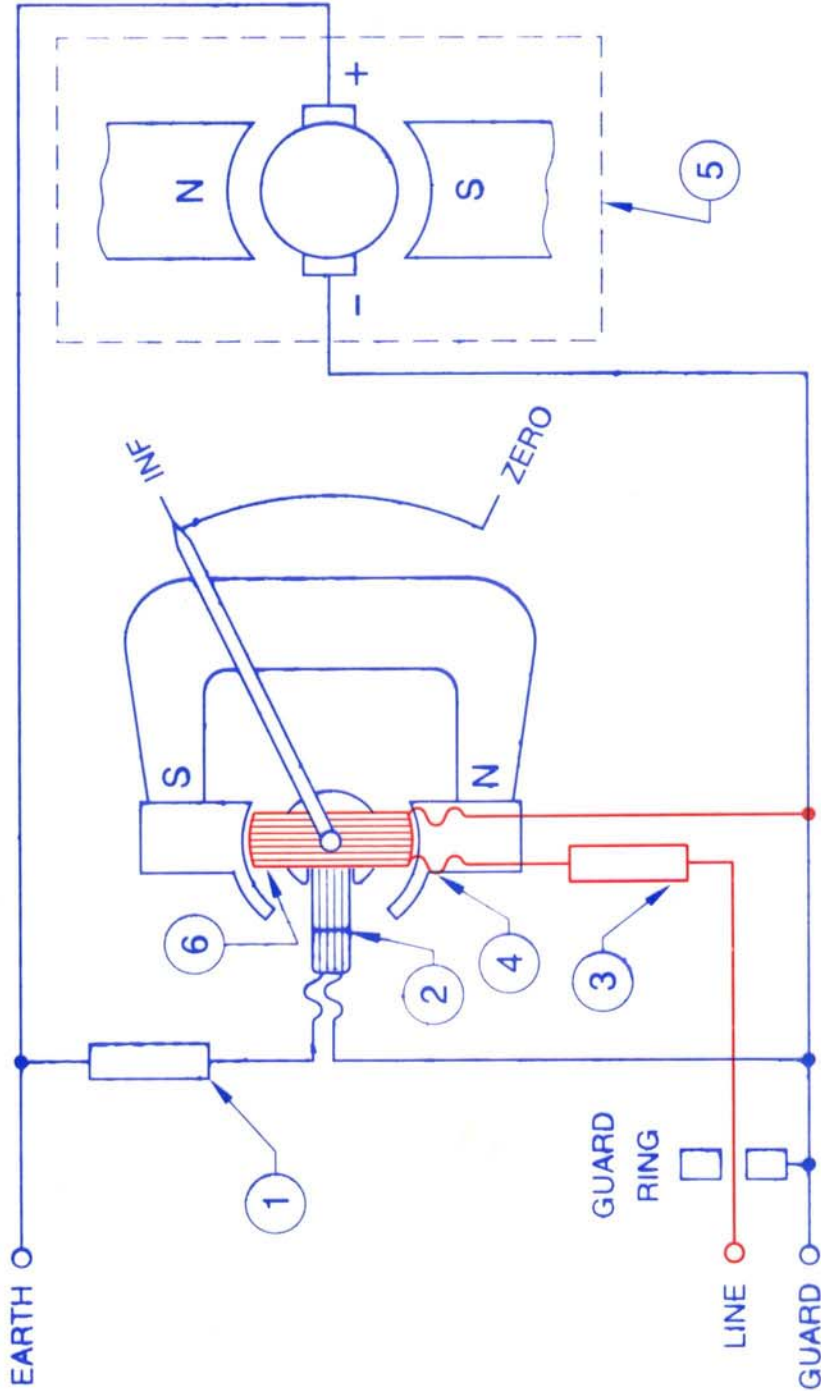
PLATE EARTHING



ENLARGED DETAIL 'A'

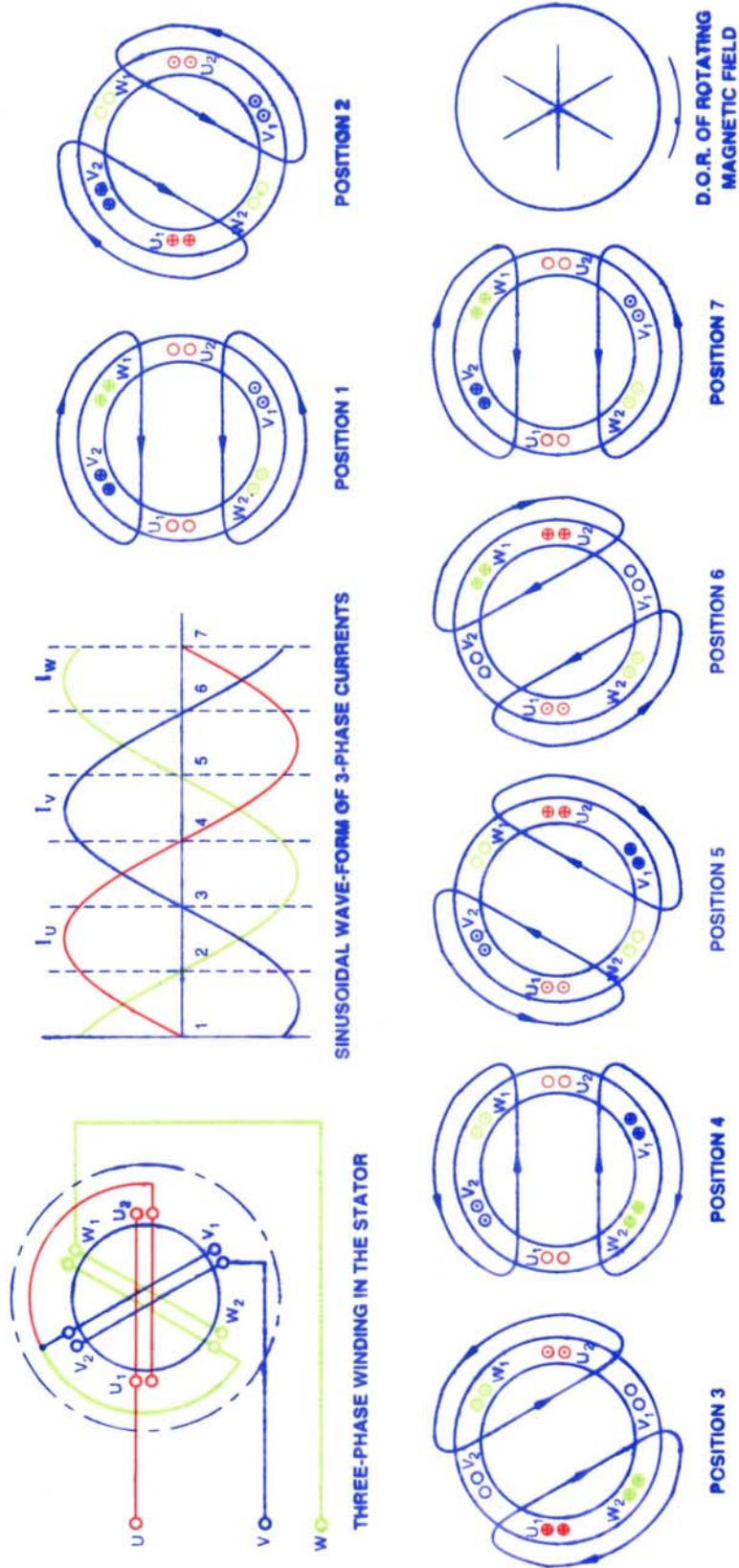
NOTE:- DIMENSIONS ARE IN cm UNLESS OTHERWISE SPECIFIED

INTERNAL CONNECTIONS OF THE MEGGER (INSULATION TESTER)





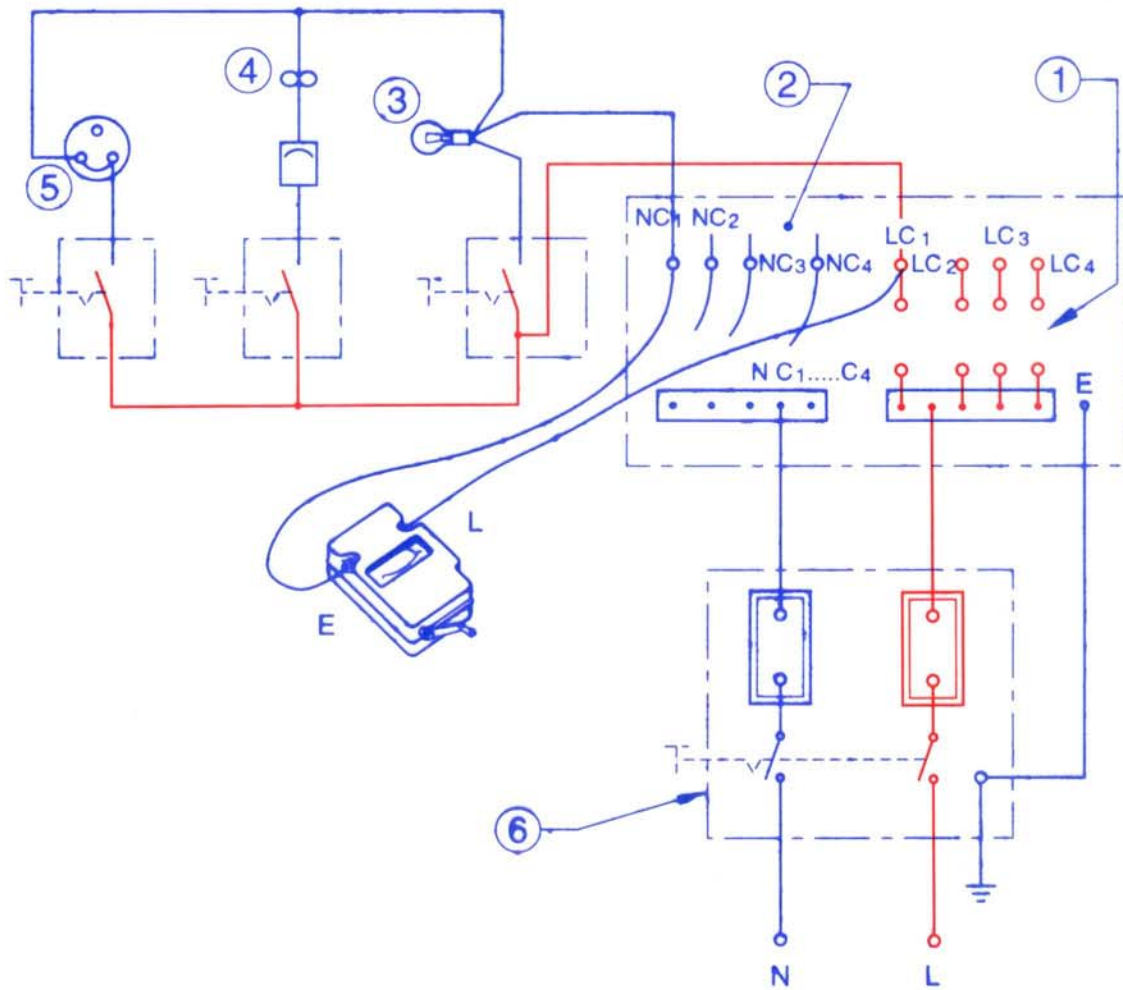
ROTATING MAGNETIC FIELD FROM A THREE-PHASE STATOR





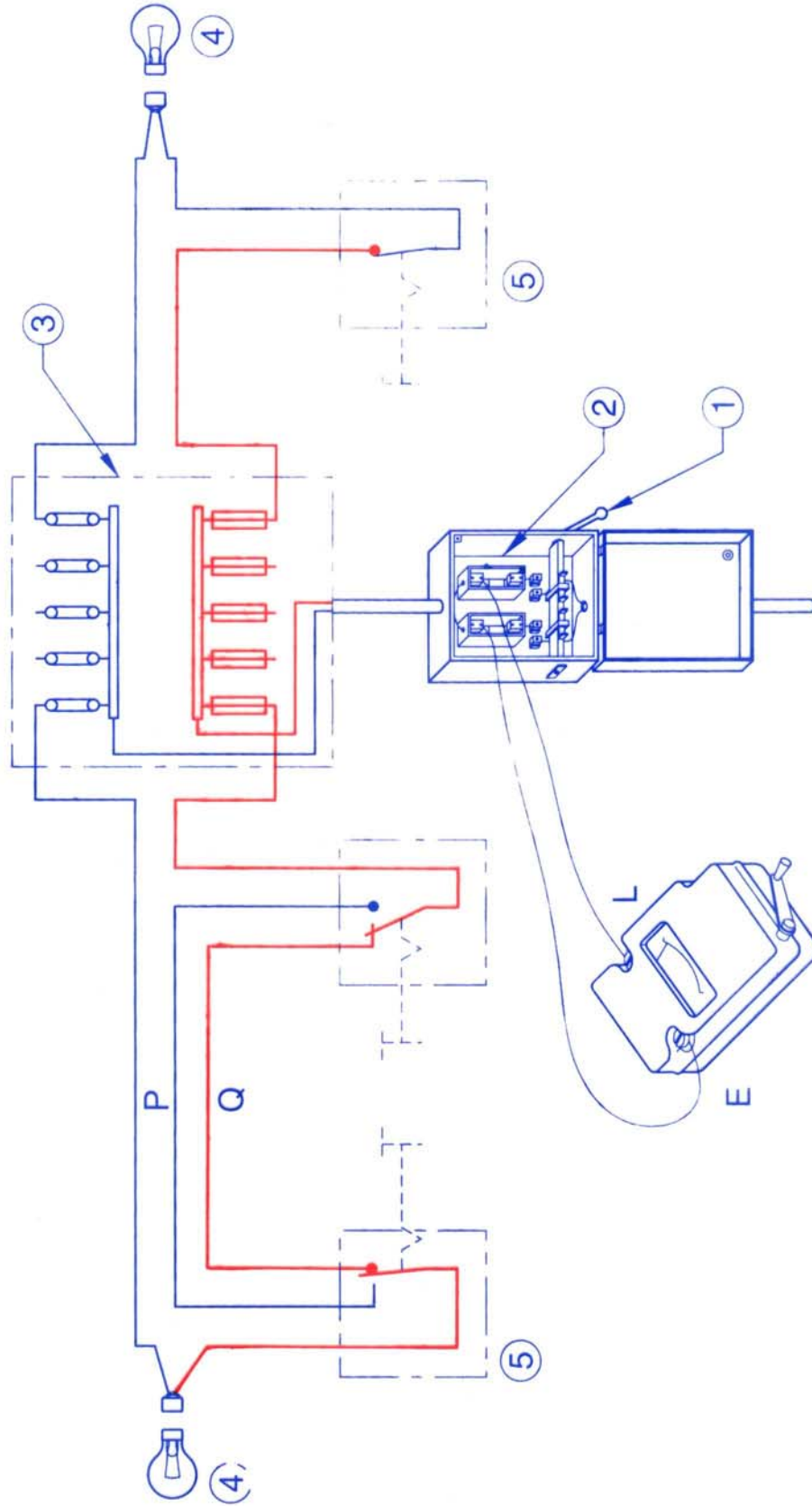
TEST ON DOMESTIC WIRING INSTALLATION

CONTINUTY TEST





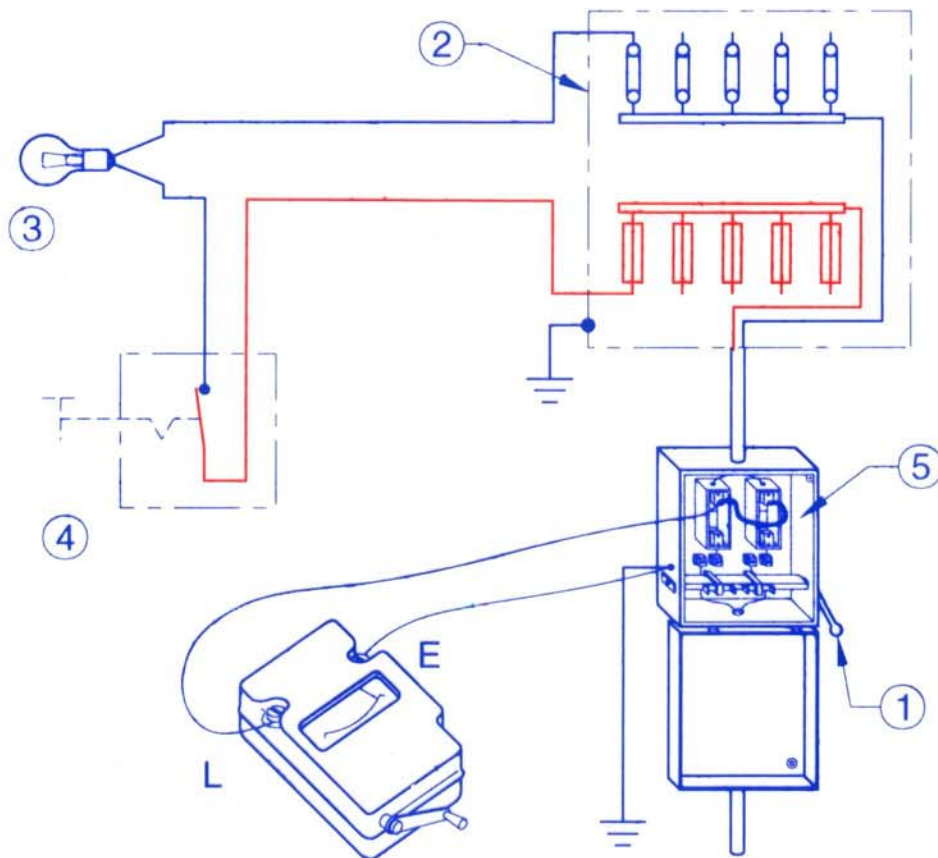
TEST ON DOMESTIC WIRING INSTALLATION - INSULATION RESISTANCE TEST BETWEEN CONDUCTORS





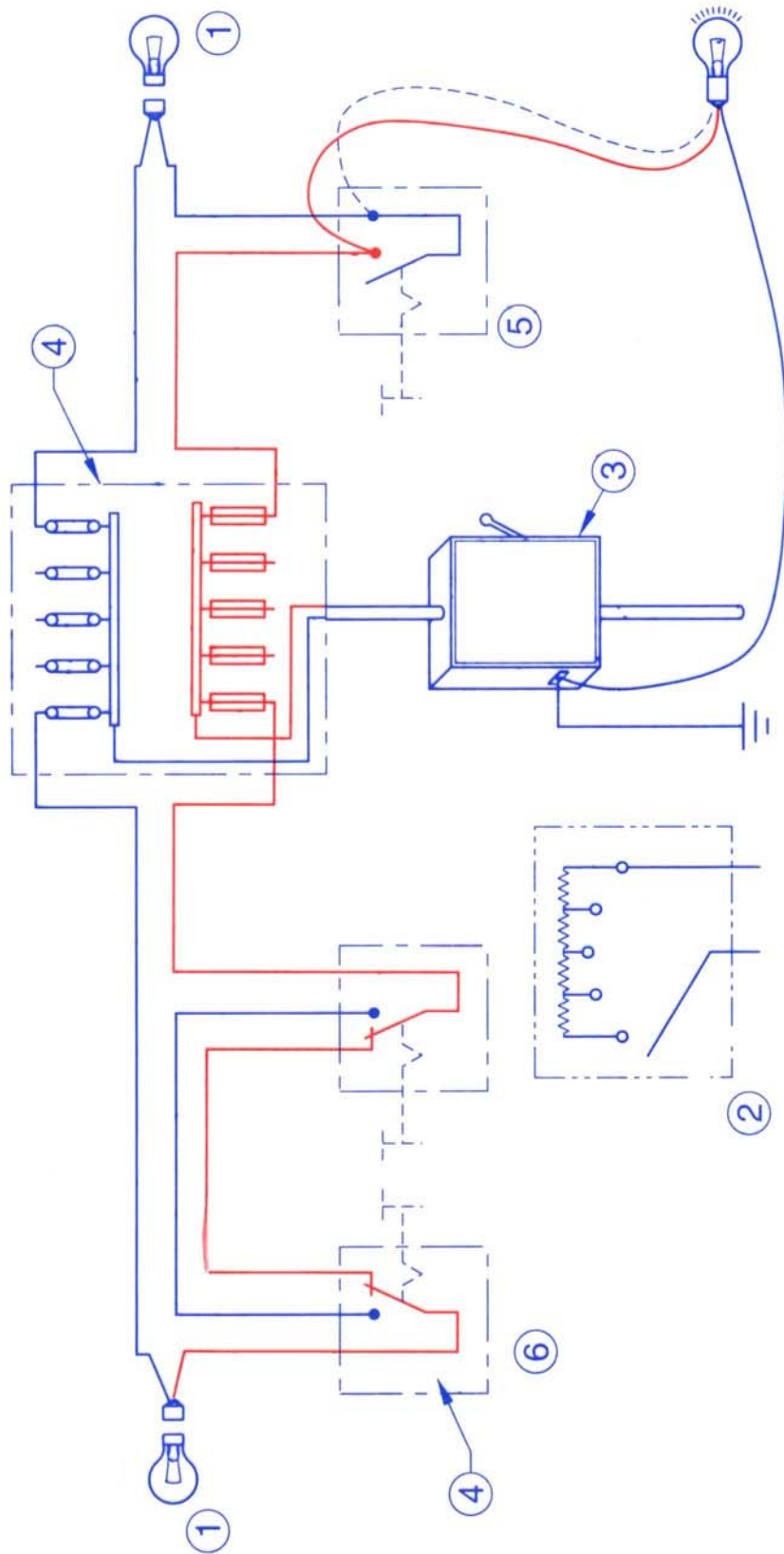
TEST ON DOMESTIC WIRING INSTALLATION

INSULATION RESISTANCE TEST BETWEEN CONDUCTORS AND EARTH



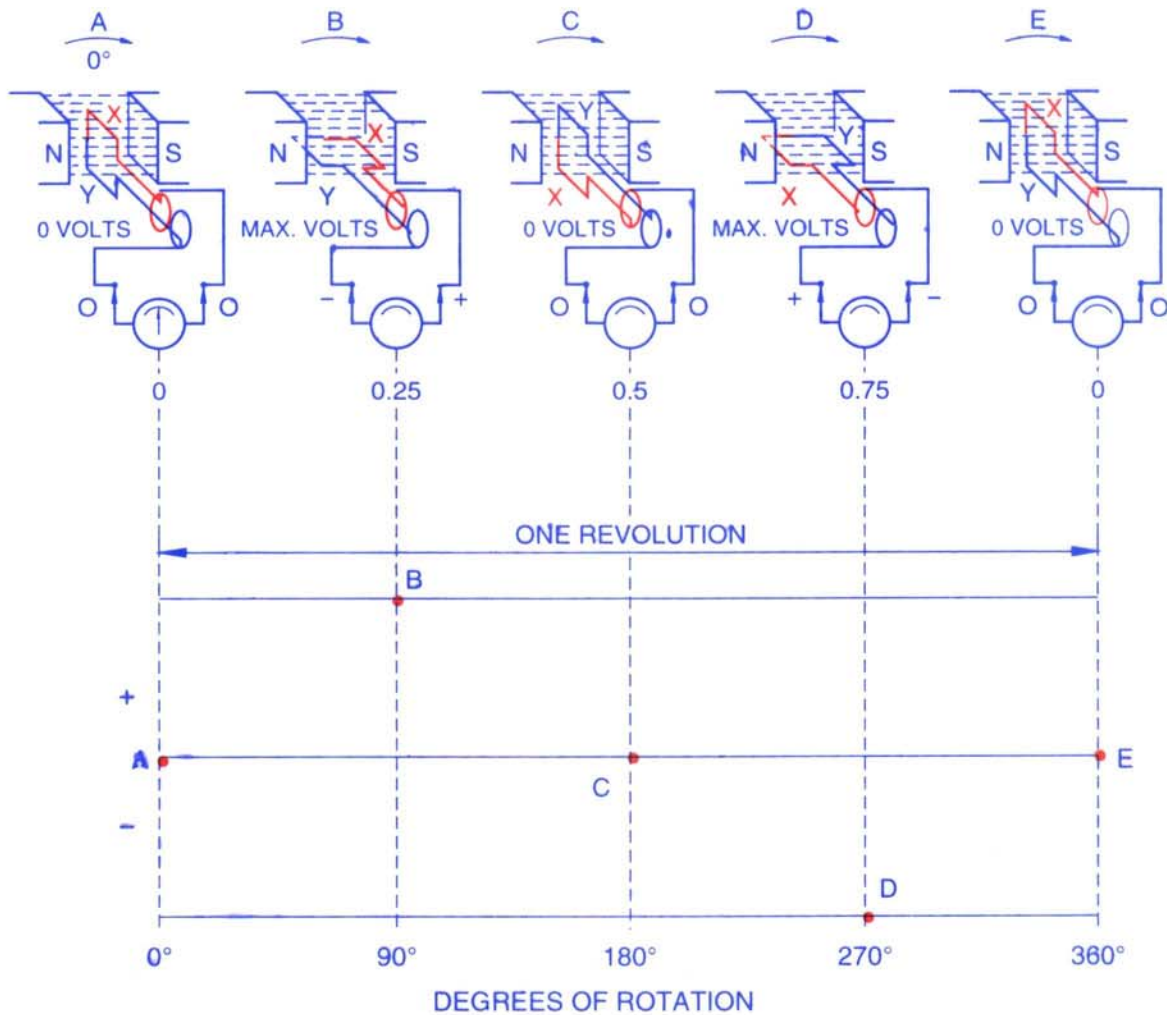


TEST ON DOMESTIC WIRING INSTALLATION - POLARITY TEST





GENERATION OF AC

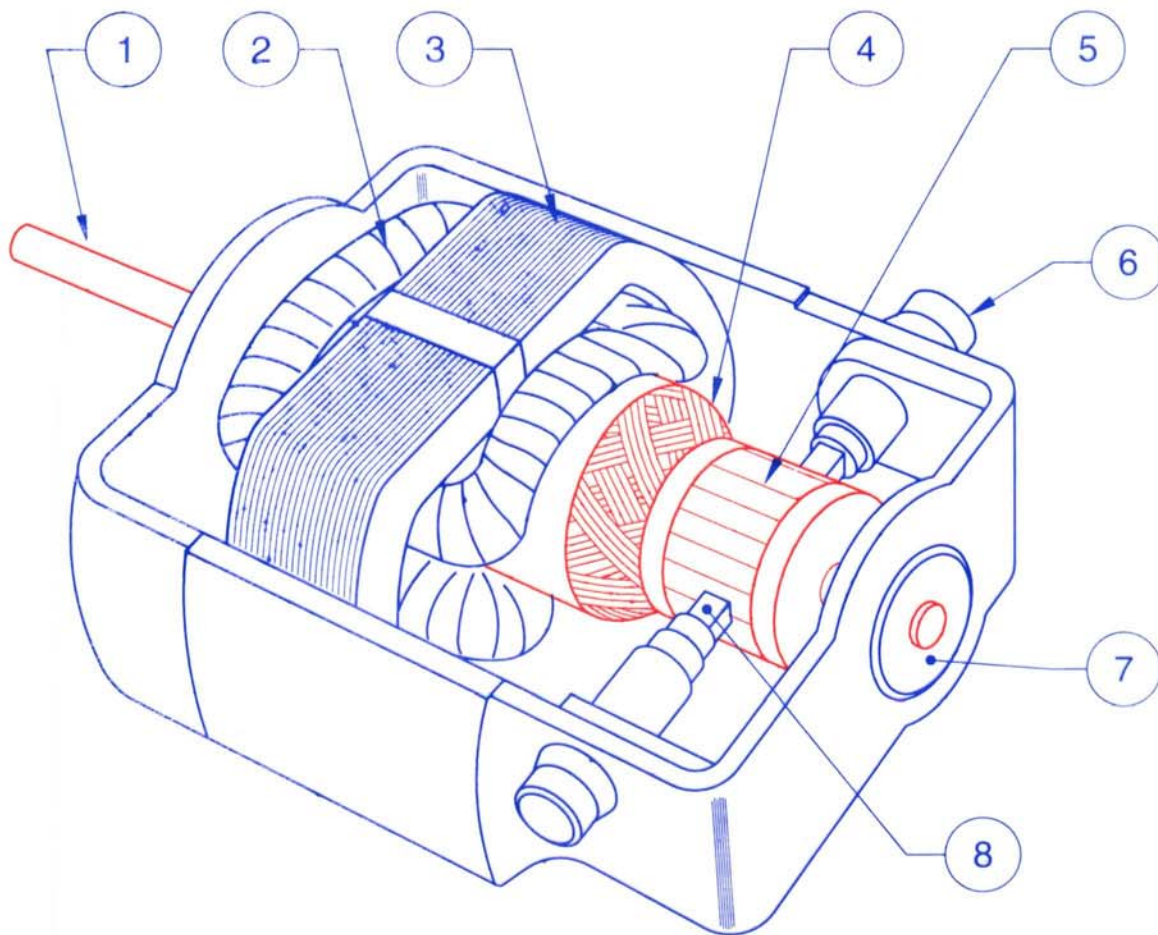


GENERATION OF AN ALTERNATING VOLTAGE:

AS THE LOOP ROTATES THROUGH THE MAGNETIC FIELD, THE MAGNITUDE AND DIRECTION OF THE VOLTAGE CHANGES WITH ANGLE AND DIRECTION OF MOTION.



PARTS OF AN UNIVERSAL MOTOR





RESISTOR COLOUR CODING

COLOUR	1st	2nd	MULTIPLIER	TOLERANCE
BLACK	0	0	1	
BROWN	1	1	10	
RED	2	2	100	
ORANGE	3	3	1000	
YELLOW	4	4	10 000	
GREEN	5	5	100 000	
BLUE	6	6	1 000 000	
VIOLET	7	7	10 000 000	
GRAY	8	8	100 000 000	
WHITE	9	9	1 000 000 000	
GOLD			0.1	5
SILVER			0.01	10
NONE				20
	BAND 1	BAND 2	BAND 3	BAND 4

