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Safetrack

S35 S95

INSTALLATION & MAINTENANCE
INSTRUCTIONS

INSTALLATION NOTES

1. TOOL KIT REQUIRED

i SAFETRACK ASSEMBLY TOOL - SUPPLIED WITH EVERY INSTALLATION.

SCREW DRIVERS, SPANNERS SETS

ii FOR CUTTING LENGTH AT SITE

SAFETRACK SLOT TOOL

HACKSAW

HALF ROUND FILE

iii FOR CURVED / SWITCH ASSEMBLY FORMATION

SAFETRACK BENDING TOOL

SAFETRACK INSERTION ROD

2. ATTENTION TO THE FOLLOWING WILL ENSURE A TROUBLE FREE SYSTEM.

i HANGER CLAMP BRACKETS ARE PROPERLY MOUNTED AT RIGHT ANGLE TO TRACK AND THEIR ALIGNMENT IS CHECKED WITH RESPECT TO BEAM AND WITH RESPECT TO EACH OTHER.

ii CURRENT COLLECTOR BRACKET IS MOUNTED AT THE SPECIFIED DIMENSIONS AND IMPROPER ALIGNMENT WITH THE CONDUCTORS.

iii POWER CABLE CONNECTIONS AND ACCESSORIES ARE MOUNTED AS PER INSTRUCTIONS.

3. EXPANSION ASSEMBLY

THE SYSTEM DESIGN HAS INHERENT EXPANSION ALLOWANCE AT EVERY JOINT.

IF MECHANICAL INSTALLATION 1' BEAM HAS EXPANSION JOINT, THEN ONLY EXPANSION ASSEMBLY IS REQUIRED.

4. INSTALLATION SPACE

THE SYSTEM IS COMPACT AND FLEXIBLE.

IT CAN BE MOUNTED IN ANY CONVENIENT POSITION

HORIZONTAL, VERTICAL, EDGE, WEB MOUNTING ETC.

4 POLES SYSTEM, NEEDS SPACE OF 40 X 65 mm ONLY.

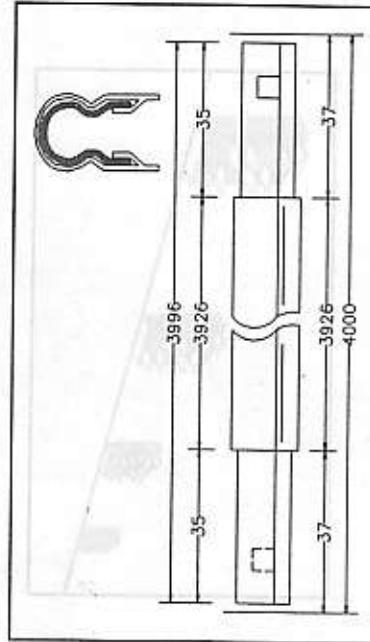
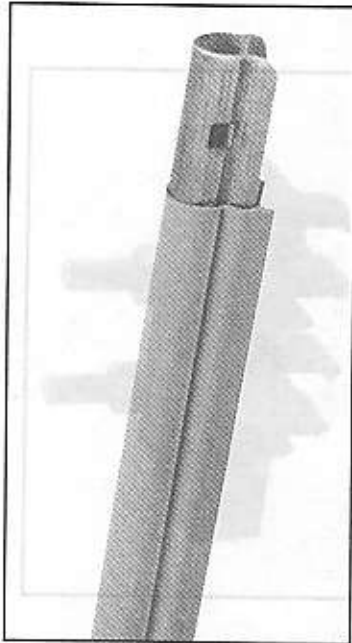
COLLECTORS MOUNTING AT DISTANCE OF 98 mm.

THE SUPPORTS ALSO CAN BE IN ANY SECTION AND FORM AS PER SITE CONDITIONS.

2 mm THICK M.S. IS SUFFICIENT.

EVEN SLOTTED ANGLES CAN BE USED AS SUPPORT.

2.11 CONDUCTOR OIA

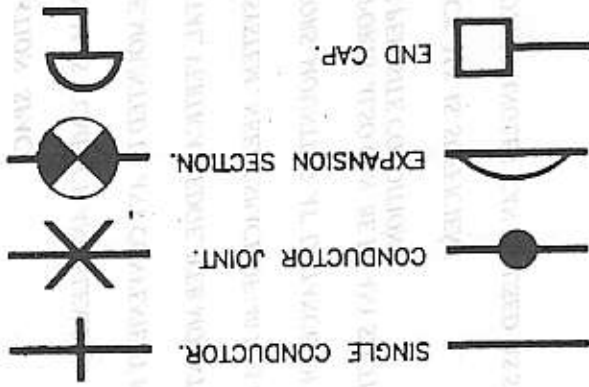


G.I. RATED FOR - 35A
 CU. RATED FOR - 95A

INSULATION COVER IN CENTRE
 STD. CONDUCTOR LENGTH - 4 M. (3996+ gap 4mm) 4000A
 CURVED SECTIONS min. RADIUS - 400 mm
 BENDING AT SITE POSSIBLE
 SLOT TOOL & BENDING TOOL Rqd

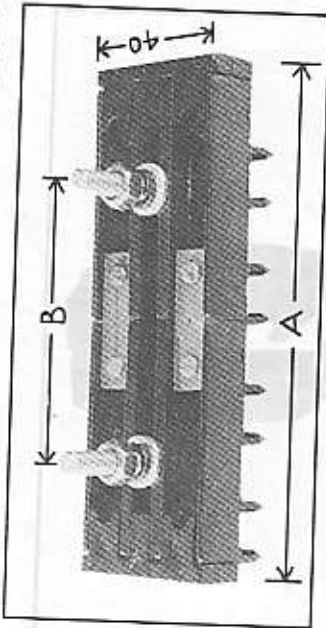
SYMBOLS

HANGER CLAMP,
 ANCHOR CLAMP,
 POWERFEED,
 COLLECTOR.



SINGLE CONDUCTOR,
 CONDUCTOR JOINT,
 EXPANSION SECTION,
 END CAP.

HANGER CLAMP MULTI POLE ARRANGEMENT



BASIC BRACKET 4 POLE. ADD ON ARRANGEMENTS FOR MULTI POLE COMBINATIONS.

14 mm CENTRE DISTANCE IS MAINTAINED FOR ALL POLE COMBINATIONS BRACKET BOLTS 6 X 20 mm ADJUSTABLE. FOR MOUNTING, DRILL 2 HOLES OF 7 mm

SUPP. DISTANCE HORIZ. INST. - 665 mm

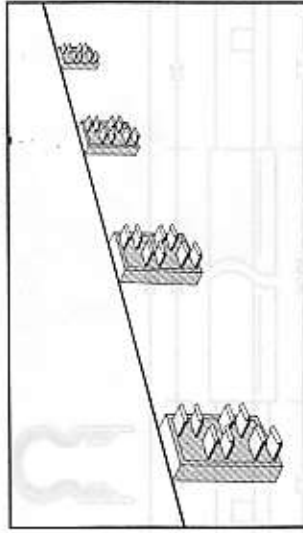
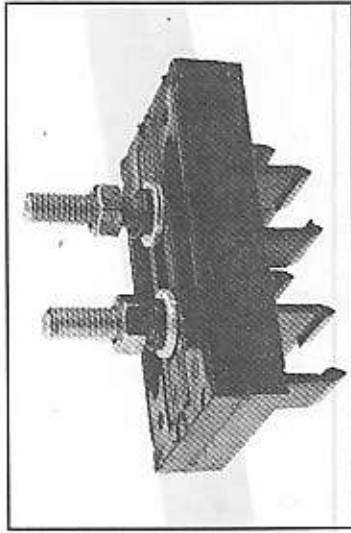
CURVED INST. - 330 mm

START INSTALLATION FROM LEFT TO RIGHT

	A	B	C
4 POLE	65	Adjustable	Preferred Mtg. Centre
6 POLE	94	14 - 23 mm	20 mm
8 POLE	122	14 - 50 mm	40 mm
10 POLE	150	14 - 80 mm	50 mm
12 POLE	178	14 - 105 mm	65 mm
		14 - 135 mm	80 mm

NOT RECOMMENDED FOR OUTDOOR INSTALLATION.

MOUNTING DETAILS

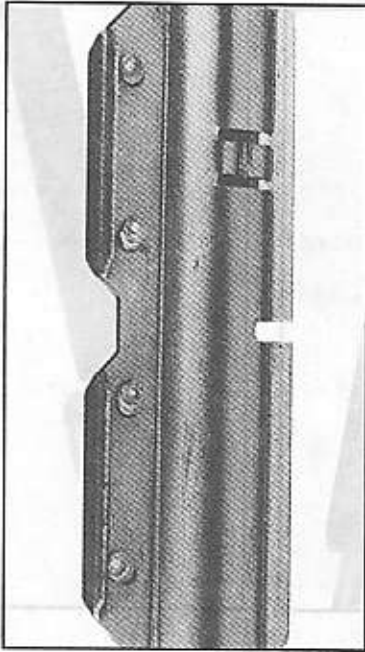


CONDUCTOR DESIGN - 14 mm CENTRE DISTANCES.

HANGER BRACKET SHOULD BE INSTALLED AT RIGHT ANGLES AND PARALLEL TO THE BEAM.

HANGER CLAMP BRACKETS SHOULD BE ALIGNED, USE PLUMB LINE.

JOINTING OF CONDUCTORS



ENSURE CONDUCTOR ENDS ARE CLEAN, BURR FREE.

JOINT CLIP NOTCHES SHOULD BE LOCATED IN THE SLOT ON EITHER SIDE.

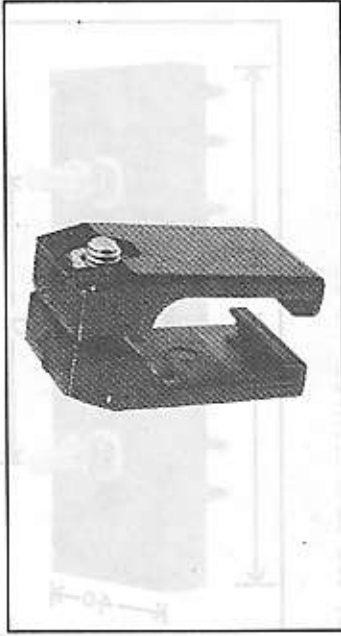
USE ASSEMBLY TOOL.

THE 4 mm GAP BETWEEN CONDUCTORS IS DESIGNED FOR EXPANSION & CONTRACTION.

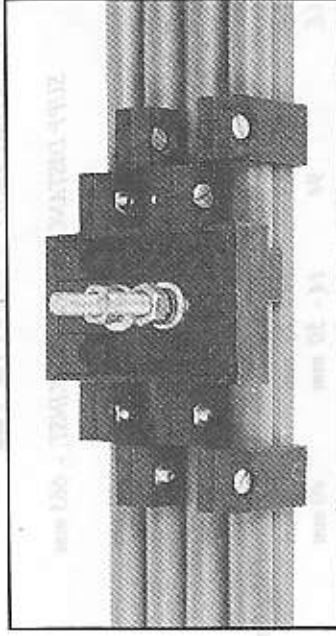
4M LONG OR FACTORY MADE LENGTHS ARE SUPPLIED READY FOR INSTALLATION.

IF SPECIFIC LENGTH IS TO BE CUT AT SITE, THE END HAS TO BE PREPARED FOR INSTALLATION.
REF PAGE NO.16

ANCHOR CLAMP ASSEMBLY



ANCHOR CLAMPS SHOULD BE TOUCHING HANGER CLAMP BRACKET OR EACH OTHER



ONE SET REQUIRED FOR EVERY 36 METER RUN CONDUCTOR

JOINT COVER FITTING

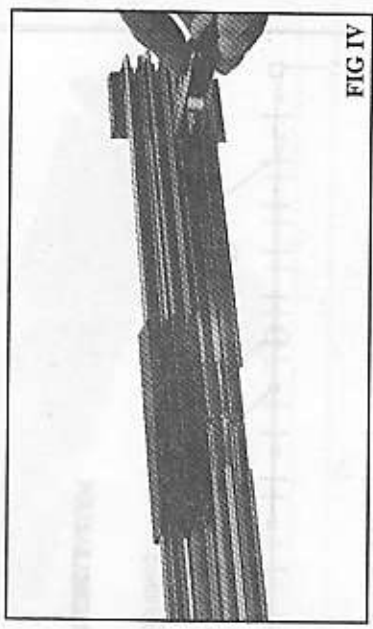


FIG IV

**SNAP - IN JOINT CLIP AT THE RIGHT END OF THE CONDUCTOR
FIGURE - I**

**SLIDE JOINT COVER ON TO THE LEFT END OF THE NEXT
CONDUCTOR BAR. PUSH IT FOR ENOUGH SO THAT THE
CONDUCTOR BECOMES ACCESSIBLE. FIGURE - II**

**INSTALL CONDUCTORS INTO HANGER CLAMP. ENSURE JOINT
CLIP IS PROPERLY LOCATED. USE ASSEMBLY TOOL. FIGURE - III.**

**SLIDE JOINT COVER WITH THE HELP OF ASSEMBLY TOOL
OVER JOINT CLIP. TAP LIGHTLY IF REQUIRED. FIGURE - IV**

**ENSURE INTERNAL EXTN OF SPLICE COVER IS LOCATED IN
SLOT. AFTER POSITIONING COVER WOULD NOT SLIDE ON THE
SIDES.**

JOINT COVER FITTING

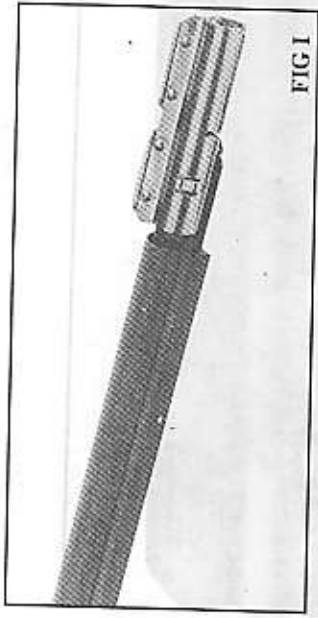


FIG I

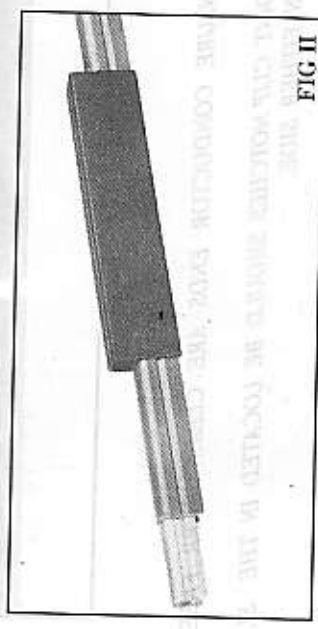


FIG II

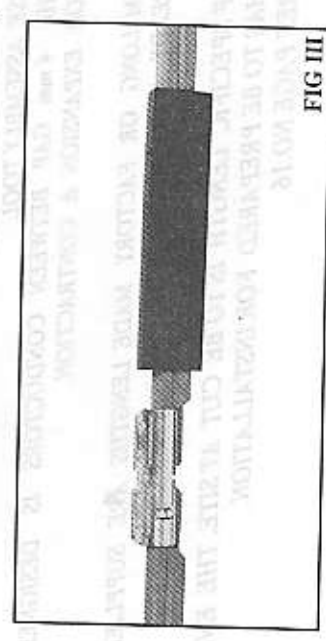
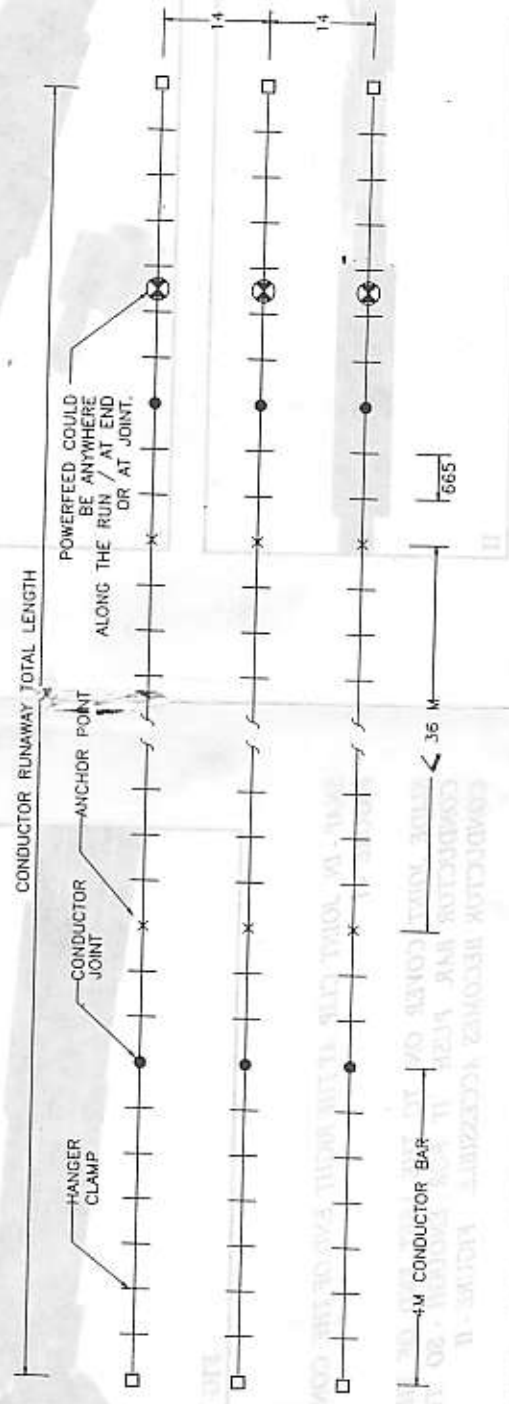


FIG III

JOINT COVER FITTING

POWER FEEDS

TYPICAL 3-PHASE CONDUCTOR SYSTEM



	S-35	S-95
STANDARD CONDUCTOR LENGTH	4.000	4.000
MAXIMUM HANGER SPACING	0.665	0.665
VERTICAL MOUNT CURVES	0.665	0.665
HORIZONTAL MOUNT CURVES	0.330	0.330
MINIMUM BENDING RADIUS - VERTICAL	0.400	0.400
HORIZONTAL	0.400	0.400
MAXIMUM DISTANCE BETWEEN ANCHOR POINTS	36.000	36.000
D.C. RESISTANCE m.Ohms/M	5.400	0.745
IMPEDANCE m.Ohms/M	5.414	0.750

SAFETRACK



POWER FEEDS



1. STRAIGHT FUNNEL WITH POWER FEED CLIP OF 254 IS SUPPLIED AS STANDARD END FEED. FIG. I

2. DOUBLE ENDED POWER FEED - 2 X 254 = 504 CAN BE MOUNTED ANY WHERE ALONG THE RUN. FIG. II

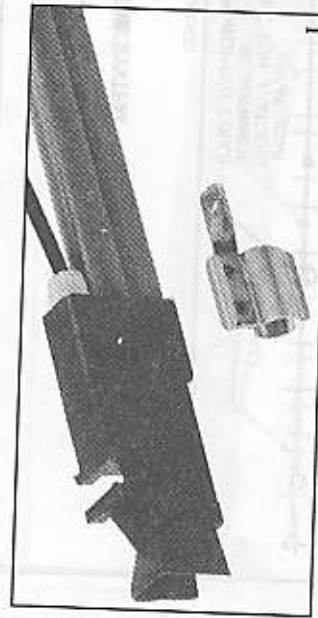
3. DOUBLE ENDED JOINT POWER FEED KIT 2X 254 = 504 FOR JOINT LOCATION FIG. III.



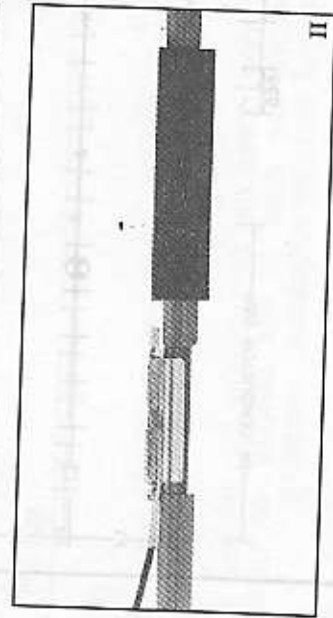
FIGURE

REQUIREMENT TO CONNECTORS
 CONNECTORS ARE MOUNTED IN MIDDLE
 OF RUN - FERRULE IS REQUIRED
 WITHOUT FERRULE REQUIRED
 (POWER BRANCH SYSTEM)
 COUPLER SHOULD BE MOUNTED EVERY
 10 FEET

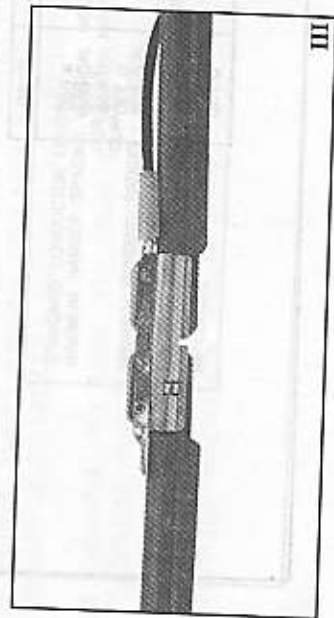
POWER FEEDS



I

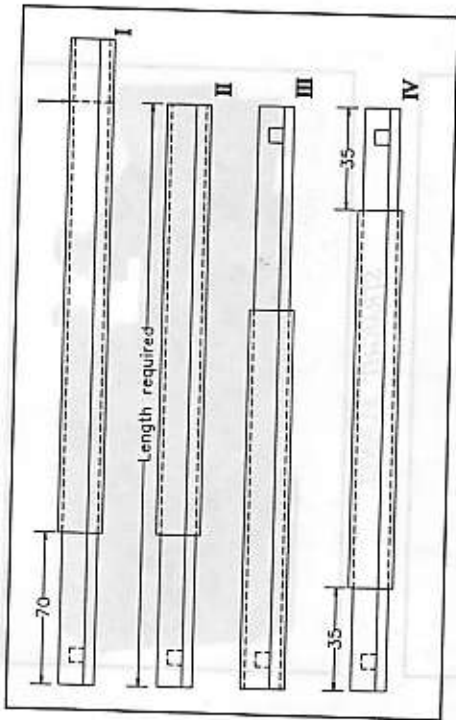


II



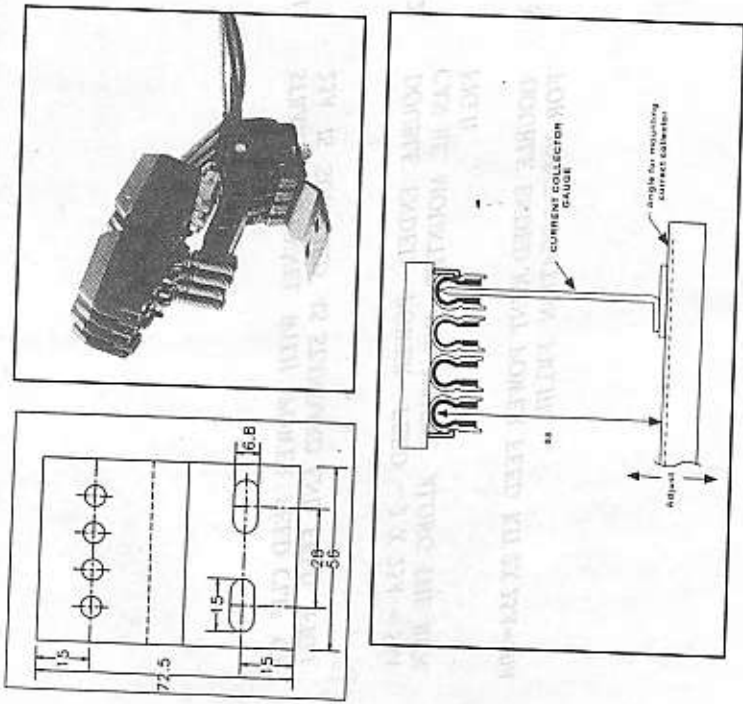
III

PREPARING CONDUCTOR LENGTHS AT SITE



- I. PUSH INSULATING SLEEVE ON THE CONDUCTOR 70 mm
- II. MEASURE THE REQD. LENGTH FROM THIS END AND CUT THE CONDUCTOR AND SLEEVE - HACKSAW TOOL.
- III. PUNCH HOLES AT BOTH ENDS ON OPPOSITE SIDES. USE- SLOT TOOL.
- IV. REMOVE BURR, SLIGHTLY BEVEL THE ENDS. USE- HALF ROUND FILE.
- V. ADJUST SLEEVE IN CENTRE.

INSTALLING CURRENT COLLECTOR

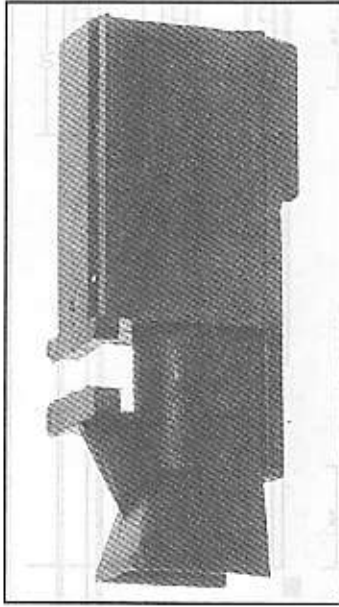


ENSURE -

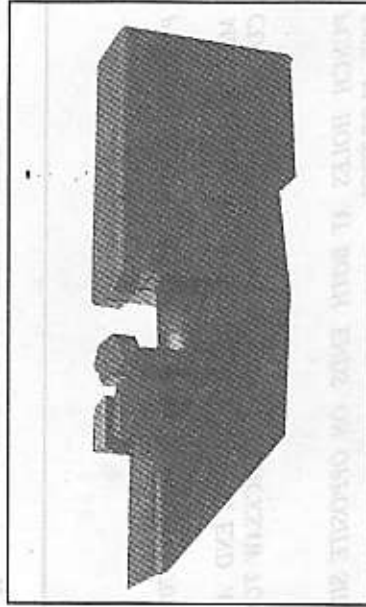
98 mm HEIGHT IS MAINTAINED. COLLECTORS ARE MOUNTED IN PROPER ALIGNMENT TO CONDUCTORS

COPPER SHOES ARE MOVING FREELY. UNDER PROPER PRESSURE, WITHOUT UNDUE RUBBING

TRANSFER SWITCHES



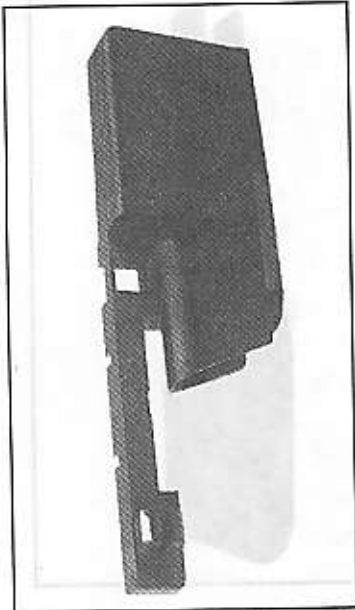
STRAIGHT FUNNEL



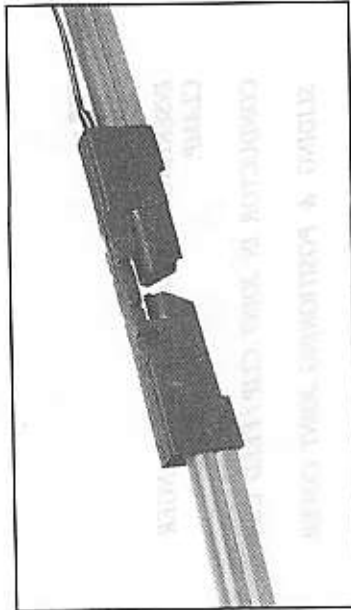
OBLIQUE FUNNEL

STRAIGHT FUNNEL CAN BE USED AS END CAP.
BOTH FUNNELS CAN HOUSE POWER CLIP 25A.
FOR SWITCH ASSEMBLIES SEPARATE INSTRUCTION
SHEETS AVAILABLE.

ISOLATING SECTION

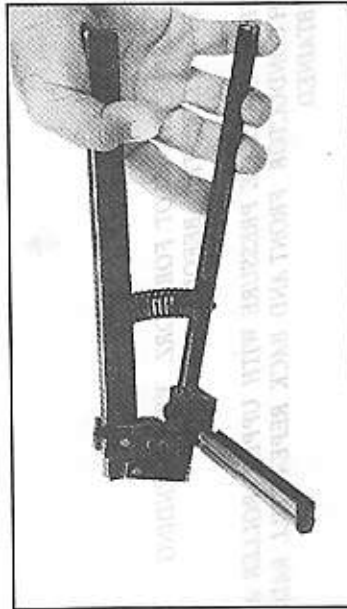
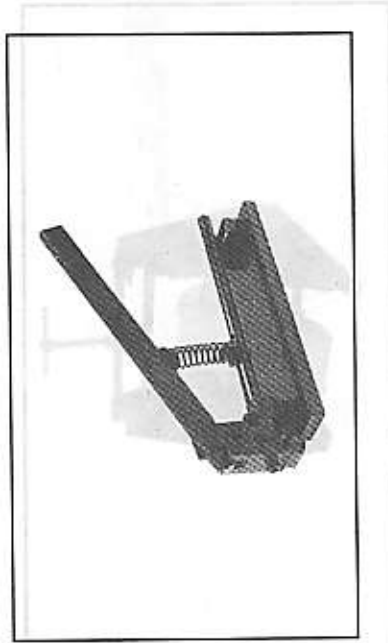


POSITION LOCATING POINT IN THE NOTCH OF THE
CONDUCTOR.



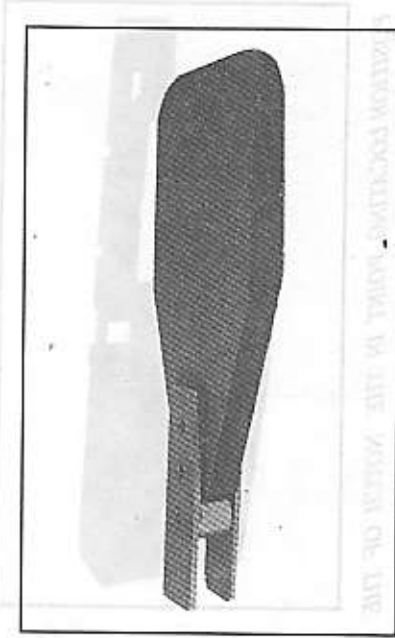
ISOLATING POINT CAN BE PROVIDED WITH
POWERFEED POINTS ON EITHER SIDE.

SAFETRACK SLOT TOOL



AFTER PUNCHING REMOVE BURRS OUTSIDE & INSIDE. BEVEL WITH HALF ROUND FILES.

SAFETRACK ASSEMBLY TOOL



USED FOR :

INSERTING CONDUCTOR IN HANGER CLAMP.

CONDUCTOR IN JOINT CLIP / FEED CLIP.

SLIDING & POSITIONING JOINT COVER.

SUPPLIED WITH EVERY INSTALLATION.

COMMISSIONING

AFTER INSTALLATION IS COMPLETED, VISUAL INSPECTION OF TOTAL SYSTEM SHOULD BE CARRIED OUT.

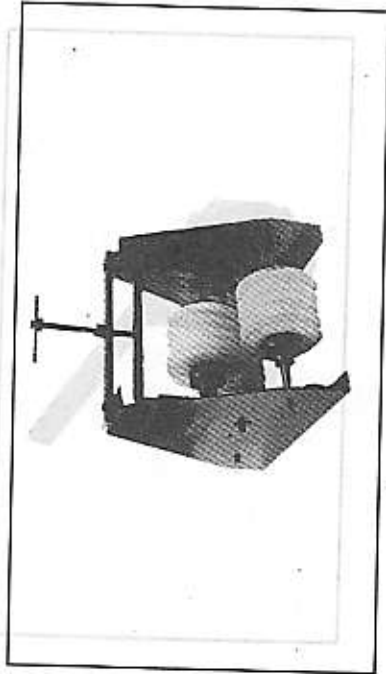
FOLLOWING SHOULD BE SPECIFICALLY CHECKED

- ALIGNMENT OF HANGER CLAMP BRACKET WITH PLUMB LINE
- PROPER SPACING OF HANGER CLAMP BRACKETS.
- CORRECT INSTALLATION OF JOINT COVERS.
- CORRECT INSTALLATION OF FEED CLIPS.
- CURRENT COLLECTOR MOUNTING VERIFY 98 mm HEIGHT DISTANCES.
- CHECK FOR LOOSE WIRING.

AFTER INSTALLATION INSPECTION AND CORRECTIONS, START HOIST/CARRIER MANUALLY OR AT LOW SPEED.

- ENSURE INSTALLATION IS CLEAN, DUST & OIL FREE.
- FOLLOW COLLECTORS THRO' ENTIRE SYSTEM AND OBSERVE THEIR MOVEMENT FOR COMPLETE RUN.
- COLLECTORS MOVEMENT SHOULD BE SMOOTH, POSITIVE CONTACT SHOULD ALWAYS BE MAINTAINED.
- NO SPARKING SHOULD OCCUR.
- COLLECTORS CAN HANDLE VERTICAL & HORIZONTAL VARIATION UPTO ± 15 mm

SAFETRACK BENDING TOOL



USE RESPECTIVE SLOT FOR HORZ. VERT. BENDING. INSERT FILLER STRIP BEFORE BENDING.

SLIGHTLY INCREASE PRESSURE WITH UPPER ROLLER AND PUSH CONDUCTOR FRONT AND BACK REPEAT TILL RADIUS IS OBTAINED.

AFTER ACHIEVING PROPER RADIUS ENDS ARE TO BE PREPARED AS PER INST. ON PAGE 16.

MAINTENANCE

SAFETRACK S35/S93 DOES NOT REQUIRE REGULAR MAINTENANCE.

FOLLOWING CHECKS WOULD ENSURE LONG LIFE AND MAINTAIN HIGH LEVEL OF RELIABILITY OF INSTALLATION.

1. VISUAL INSPECTION EVERY 1-2 MONTHS AS PER PLANT SCHEDULE.

- ANY LOOSE WIRES
- ANY SIGN OF ARCING
- JOINT COVERS ARE IN POSITION

CURRENT COLLECTOR - ALL MOVING PARTS, SPRINGS ETC.

COPPER SHOE - EXTENT OF WEAR - WHETHER IT IS UNEVEN.

CHECK / VERIFY / REALIGN - 98mm DISTANCE FROM THE CONDUCTOR.

REPLACE COPPER SHOE IF WORN OUT.

SUSHEEL ENGINEERING CORPN.

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