

INSTRUCTIONS FOR USING *NICOPRESS*® TOOLS

NO. 51-APPLE, NO. 51-ORANGE, NO. 51-PEACH, NO. 51-PLUM, and NO. 55-PLUM:ORANGE

These tools are for use in splicing ACSR, AAAC (Alloy 6201-T81) and Alloy 5005 conductor.

Each No. 51 tool in this series has a small inner die-groove for compressing the steel core sleeve of the *Nicopress*® Splicing Unit. Each tool also has a larger outer die-groove for compressing the aluminum cover sleeve of the *Nicopress*® Splicing Unit, and other aluminum sleeves as specified.

The No. 55-Plum:Orange tool has two large die-grooves for compressing the aluminum sleeves specified for it.

With the No. 55-Plum:Orange tool, the outer "Orange" die-groove has two sleeve straightening devices that are swung into position before the "Orange" die-groove is used. These devices must be swung back out of the way when the "Plum" die-groove is used. The "Plum" die groove has two straightening straps that are fixed and require no manipulation.

None of the No. 51 tools have sleeve straightening devices. If sleeves need straightening after compression with these tools, tap the sleeves with a hammer against an anvil. With all tools, rotating the tool 180° between presses, or group of presses, keeps the sleeves relatively straight.

To make satisfactory splices, tools must compress the sleeves to the proper press diameter. Details of gauging press diameter and adjusting tools are given further in this instruction.

FULL-TENSION SINGLE SLEEVES

These sleeves contain a special corrosion-inhibiting compound. DO NOT apply any additional inhibitor.

Conductor ends should be neat and free from heavy burrs. Clean the portion entering the sleeve with a wire brush. Insert conductor into sleeve, making sure it is all the way into the center.

Hold conductor in place until the first press is made on each half of sleeve about 1/4" from the center groove. If conductor is not held in place, the inhibitor may push it back a short way from the center.

Continue pressing, working out towards ends and leaving about 1/8" between presses. Make the exact number of presses listed in the table.

If possible, rotate the tool 180° about the sleeve between presses to help keep the sleeve straight. If necessary, straighten pressed sleeve by tapping with a hammer against an anvil.

TAPERED END PORTIONS MUST BE PRESSED

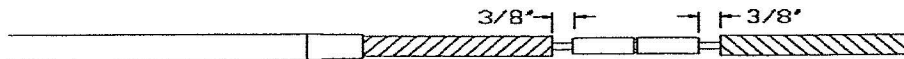
Conductor size ACSR-AAAC 5005	ACSR Stranding	Sleeve Stock Number	No. 51 Tools		No. 55 Tool	
			Outer Die- Groove	Presses Per Half	Tool Die- Groove	Presses Per Half
6	6/1	661 P	51-Apple	9	---	---
4	6/1 & 7/1	467 Orange	51-Orange	15	Orange	15
2	6/1	261 Peach	51-Peach	15	---	---
2	6/1 & 7/1	267 Plum	51-Plum	22	Plum	20
1	6/1	2281 Plum	51-Plum	23	Plum	21
1/0	6/1	1061 Plum	51-Plum	23	Plum	21

The No. 661 P sleeve is also pressed in the *Nicopress*® Tools having regular "P" die-grooves as, 51-PJ, 53-XPJ, etc. See instruction No. 69

FULL-TENSION SPLICING UNITS

These units are for splicing ACSR. only. They are all compressed with the No. 51-type tools, as specified. Each *Nicopress*® Splicing Unit for ACSR. consists of two sleeves, a galvanized steel sleeve for splicing the core wire, and an aluminum cover sleeve.

- (1) First, slip the cover sleeve over one cable end, pushing it far enough along the cable to be out of the way.
- (2) Cut back the aluminum strands $\frac{3}{8}$ " to $\frac{1}{2}$ " farther than half the length of the steel core sleeve, taking care not to destroy the lay of the strands.
- (3) Insert ends of core wires into galvanized steel sleeve until they meet the center stop. If wires do not go all the way in, do not twist them. Remove each wire; straighten it and clear burrs from cut end. Then push STRAIGHT in.



- (4) With the inner tool groove, make a press about $\frac{1}{8}$ " each side of the center of the sleeve. Be sure before pressing that the core wire is all the way in.
- (5) Continue making presses, working out toward the ends and leaving about $\frac{1}{8}$ " between presses. Make the exact number of presses listed in the table below.
- (6) If possible, rotate the tool 180° about the sleeve between presses to help keep the sleeve straight. If necessary, straighten sleeve by tapping with a hammer against an anvil.
- (7) Mark the cable at a point half the length of the aluminum cover sleeve away from the center of the steel sleeve—it is essential that the steel sleeve be centered in the aluminum sleeve before the aluminum sleeve is pressed.
- (8) Clean the aluminum strands with a wire brush and cover the entire surface to be enclosed in the aluminum sleeve with a light coat of corrosion inhibitor.
- (9) Center the aluminum sleeve over the core sleeve.
- (10) Press the cover sleeve, using the outer tool die-groove, beginning at the circumferential markings and working out to the ends. Make the exact number of presses shown in the table below. There should be only about $\frac{1}{8}$ " space between presses. BE SURE TO PRESS THE TAPERED PORTION.
- (11) Rotate tool between presses if possible. See step 6 above. Straighten by tapping with a hammer against an anvil if necessary.



SPLICING UNITS

ACSR Conductor		Stock Word for Splicing Unit	Tool	Presses Per Half	
Size	Stranding			Steel Core Sleeve	Aluminum Cover Sleeve
6	6/1	Apple	51-Apple	3	9
5	6/1	Grape	51-Apple	3	9
4	6/1	Orange	51-Orange	8	9
4	7/1	Tangerine	51-Orange	8	9
3	6/1	Grapefruit	51-Orange	8	9
2	6/1	Peach	51-Peach	8	10
2	7/1	Pear	51-Peach	8	10
1	6/1	Quince	51-Peach	8	13
1/0	6/1	Plum	51-Plum	9	19

PARTIAL-TENSION SPLICING UNITS

These units, shorter than full-tension, are primarily for splicing ACSR neutrals of service drops. Procedure is the same as for full-tension units. Make the number of presses listed below.

ACSR Conductor		Stock Word for Splicing Unit	Tool	Presses Per Half	
Size	Stranding			Steel Core Sleeve	Aluminum Cover Sleeve
6	6/1	6610-Apple	51-Apple	2	5
4	6/1	4610-Grape	51-Orange	4	5
2	6/1	2610-Orange	51-Peach	5	6

JUMPER SLEEVES

These sleeves are for conductivity splices in jumper loops. To avoid "basketing" of the cable, we recommend the jumper sleeves are pressed in a manner opposite to that used with full tension sleeves. The first press should be made about 1/8" from the end of the sleeve, then continue to press in toward the center. Press the other half in the same manner. Otherwise the procedure is the same for Full-Tension Single Sleeves.

ACSR Conductor		Jumper Sleeve Stock Number	No. 51 Tools		No. 55 Tools	
Size	Stranding		Outer Die Groove	Presses Per Half	Tool Die Groove	Presses Per Half
6	6/1	JU-6 ACSR-Apple	51-Apple	4	----	---
4	6/1 & 7/1	JU-4 ACSR-Orange	51-Orange	5	Orange	5
2	6/1 & 7/1	JU-2 ACSR-Peach	51-Peach	6	----	----
		JU-2 ACSR-Plum	51-Plum	7	Plum	6
1	6/1	JU-1 ACSR-Peach	61-Peach	6	----	----
1/0	6/1	JU-1/0 ACSR-Plum	51-Plum	7	Plum	6
80 MCM	8/1	JU-80 8/1-Plum	51-Plum	12	Plum	10

SPLIT REPAIR SLEEVES

These sleeves are split their entire length. Clean cable thoroughly with a wire brush, and cover the portion to be enclosed with corrosion inhibitor before installing the sleeve. (See our catalog for splicing compounds.) Center the sleeve over the cable damage. Using the outer tool groove begin pressing at one end and continue to the other end. Hold the tool so that the open end of the jaw and the sleeve slot are on the same side. Leave approximately 1/8" space between presses and at each end of the sleeve.

ACSR Conductor		Jumper Sleeve Stock Number	No. 51 Tools		No. 55 Tools	
Size	Stranding		Outer Die Groove	Total Presses	Tool Die Groove	Total Presses
8	6/1	AR 6-5 Apple	51-Apple	24	----	---
6	6/1	AR 6-5 Apple	51-Apple	24	----	----
5	6/1	AR 6-5 Apple	51-Apple	24	----	----
4	6/1 & 7/1	AR 4-3 Orange	51-Orange	24	Orange	24
3	6/1	AR 4-3 Orange	51-Orange	24	Orange	24
2	6/1 & 7/1	AR 2-1 Peach	51-Peach	27	----	----
		AR 2-1 Plum	51-Plum	32	Plum	28
1	6/1	AR 2-1 Peach	51-Peach	27	----	----
		AR 2-1 Plum	51-Plum	32	Plum	28
1/0	6/1	AR 1/0 Plum	51-Plum	32	Plum	28

SERVICE-CONNECTION SLEEVES

These sleeves are for connecting Service Drop conductors at the end of the drop. These splices are for electrical conductivity only and should not be subjected to line tension. The sleeves are made of aluminum and are used in splicing aluminum to aluminum or aluminum to copper. Use a copper *Nicopress*® Sleeve for splicing copper to copper. The "3200" series sleeves are pressed in the outer groove of the No. 51-Peach tool.

The end-caps on these sleeves are color coded according to conductor size. Be sure the cap color matches the conductor to be used as listed in the following table.

Make two presses on each half of the sleeve. Make the first press about 1/8" from the center of the sleeve and the second press midway between the first press and the end of the sleeve.

NOTE: The No. 3200 for 1/0 to 1/0 conductor is longer and requires three presses on each half of the sleeve.

Splicing procedure is the same as Full Tension Single Sleeves. DO NOT have the splice at the low point of the loop. If the sleeve has one copper conductor, have the aluminum end higher than the copper end.

Tape the completed splice thoroughly.

3200 SERIES SLEEVES 5/8" O.D.

Conductor and Color Code	YELLOW 1/0 Strand 1/0 ACSR	RED 2 Strand 2 ACSR 1 Solid	ORANGE 4 Strand 4 ACSR 3 Strand 2 Solid	BLUE 6 Strand 6 ACSR 5 Strand 4 Solid	GREEN 8 Strand 6 Solid
YELLOW 1/0 Strand 1/0 ACSR	3200 Yellow: Yellow	3202 Yellow: Red	3204 Yellow: Orange	3206 Yellow: Blue	
RED 2 Strand 2 ACSR 1 Solid		3200 Red: Red	3224 Red: Orange	3226 Red: Blue	3228 Red: Green
ORANGE 2 Strand 4 ACSR 2 Solid			3244 Orange: Orange	3246 Orange: Blue	3248 Orange: Green
BLUE 6 Strand 6 ACSR 5 Strand 4 Solid				3266 Blue: Blue	3268 Blue: Green
GREEN 8 Strand 6 Solid					3288 Green: Green

TOOL ADJUSTMENT

A flat gauge with multiple openings is supplied with each tool for checking the sleeve compressions made with that tool. Markings on the gauge indicate the proper gauge opening to be used for each sleeve. In the case of the *thacopress*® Sleeve Units, each unit consists of a small steel core sleeve and a larger aluminum cover sleeve. Only the steel core sleeves are gauged. The tool is in proper adjustment for compressing the aluminum cover sleeve if the tool is in proper adjustment for compressing the steel core sleeve.

The larger gauge openings are for use in checking presses on Full-Tension Single Sleeves for ACSR. These larger openings apply to the proper die-grooves of both No. 51 and No. 55 type tools.

In the case of compressing split repair sleeves or service connection sleeves, we suggest that the tool adjustment be checked on one of the above regular sleeves. The tool can be used directly for compressing service connection sleeves or split repair sleeves if it found to be in proper adjustment. Adjust the tool in the following manner:

The gauge should be held so that it contacts the pressed portion of the sleeve at right angles to the fins. The pressed portion of the sleeve should enter the gauge opening easily. Adjust the tool as described if it does not.

With the tool handles in the open position use the wrench provided with the tool to loosen the locking screw one or two turns. Then turn the adjusting screw clockwise only a fraction of a turn. Make a press and check with gauge. Continue adjusting if necessary until press passes easily into gauge. When the correct setting is obtained, tighten the locking screw hard so the tool will hold the adjustment.

Tools should be cleaned and oiled in addition to checking and adjusting. An empty tool should work freely with a slight spring at the final closing. If the tool binds, it can be eased by slightly loosening the particular bolt which is causing the binding.

