

Cable Reheading Made Simple (After GOI)

1-7/16 Inch O.D. Single Conductor Cone Type Cablehead

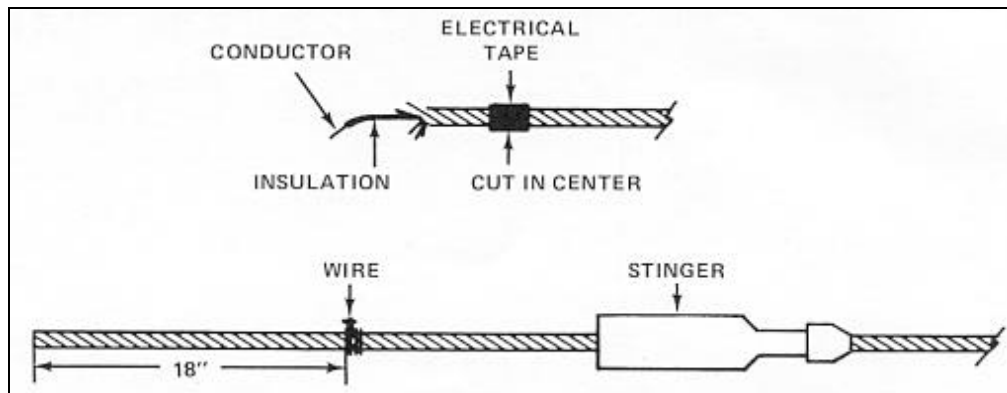


FIGURE 1

STEP 1

Before starting the reheading procedure, check the cable for continuity and/or a short circuit. Remove the contact (teardrop) sub assembly from the cablehead and check for a possible short circuit by placing one ohmmeter probe on the sub body and the other on the banana plug or brass terminal nut. If shorted, disassemble and correct the shorted condition.

STEP 2

Prepare the cable by putting four wraps of common black vinyl electrical tape on the cable at the point to be cut. Using an impact type cable cutter, cut the cable in the center of the electrical tape. Remove the remaining electrical tape from the newly cut cable end.

STEP 3

Slide the cablehead stinger (fishing neck) onto the cable to a position about ten feet from the cable end; failure to do so will later cause much wailing and gnashing of teeth.

STEP 4

Put four wraps of stove pipe wire (soft iron wire) 18 inches from the cable end and secure it by twisting the two ends together with a pair of pliers. Clip off the excess wire leaving 1/4 inch of twist (see Figure 1).

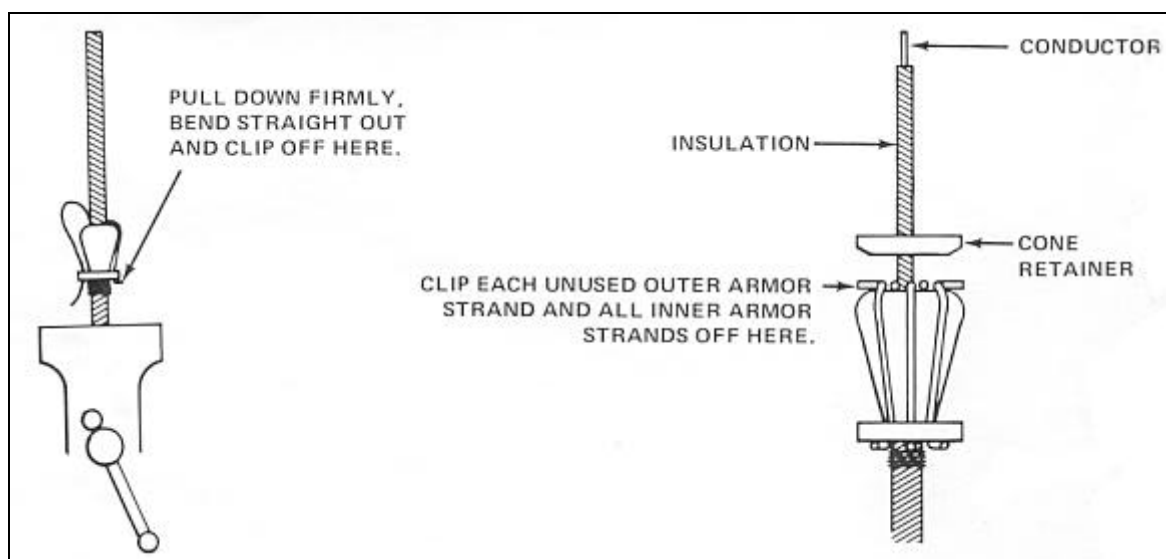


FIGURE 2

STEP 5

Lightly clamp the cable in a bench vise with the stove pipe wire about three inches above the vise jaws. Slide the cablehead (rope socket) cone onto the cable until it firmly contacts the stove pipe wire (See Figure 2).

STEP 6

Refer to the Cable Properties Tables below to determine the number of outer armor wire strands to be wrapped around the cone to establish the desired "weak-point capacity", that is, the number of pounds of pull required to pull the cable out of the cablehead. For example: If you have a 5/16 inch Rochester cable and desire a weak-point capacity of about 2,500 pounds pull-out, you must wrap only six (6) of the outer armor strands around the cone ($6 \times 426 = 2,556$).

STEP 7

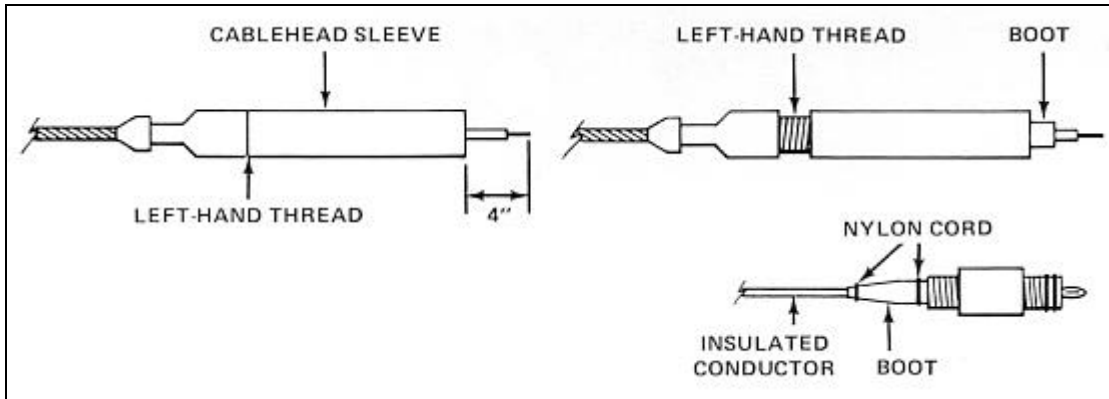
Grip one of the outer armor strands with a pair of pliers, and while holding the cone with one hand, firmly bend the strand around the rounded part of the cone; then pass the strand through the nearest hole at the lower end of the cone and pull it down firmly with the pliers. Next, bend the strand straight out from the cone and clip it off flush with the side of the cone (see Figure 2). Repeat this procedure, skipping strands so as to evenly space the number of strands selected in Step 6, until all of the required number of strands have been wrapped and passed through the appropriate holes and clipped.

STEP 8

Bend the remaining outer armor strands down (but not around the cone) and clip them off flush with the upper rounded edge of the cone.

STEP 9

Bend all the inner armor strands down and clip them off in the same manner as in Step 8 (see Figure 2).

**FIGURE 3****STEP 10**

Remove the cable from the vise and slide the stinger over the cone, making sure it seats properly in the stinger interior. Slide the cone retainer disc (compression washer) over the insulated conductor, with the beveled side toward the cone, until it contacts the cone (see Figure 2)

STEP 11

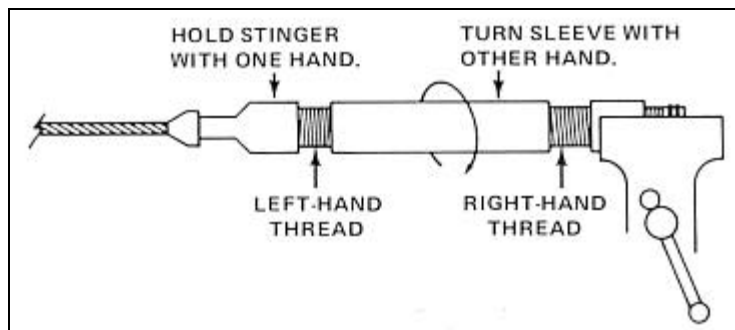
While holding the stinger, thread the cablehead sleeve (body) over the insulated conductor and screw it into the stinger until hand tight; note that these parts have left hand threads. Cut the insulated conductor off four inches from the end of the cablehead sleeve and remove one inch of insulation from the conductor. Slide a rubber insulating boot over the insulated conductor (see Figure 3).

STEP 12

Insert the bare cable conductor into the hole in the brass terminal nut of the contact (teardrop) sub assembly and twist to secure (some versions have a set screw to secure the wire).

STEP 13

Slide the rubber insulating boot over the brass terminal nut and secure the boot at both ends with nylon seizing cord (see Figure 3). Two separate ties at each end is a good idea as is melting the loose ends and a little of the knot with a soldering iron to prevent loosening; dental floss tape has been used in a pinch.

**FIGURE 4****STEP 14**

Hold the stinger with one hand and “back off” the sleeve with the other hand until only one thread holds them together (remember this is a left hand thread). Rotate the contact (teardrop) sub to the left (counterclockwise) about one turn, then screw it into the sleeve one full turn; these parts have normal right hand threads. Clamp the contact (teardrop) sub assembly in the vise, and while holding the stinger in one hand, screw the sleeve onto the contact (teardrop) sub assembly. During this process, the sleeve will also be screwing into the stinger because of the opposite rotation of the two sets of threads (logging people are so clever).

STEP 15

Using an 18 inch pipe wrench, tighten the sleeve onto the contact (teardrop) sub assembly. Reverse the cablehead in the bench vise so that the stinger is clamped in the vise. Using the 18 inch pipe wrench again, tighten the sleeve into the stinger, remembering this is a left hand thread.

STEP 16

Check the cablehead and the cable for continuity and/or short circuits.

NOTE:

Babbitt cableheads are headed onto a cable in the same manner except that the Babbitt stinger and cone sleeve screwed together will be referred to as the “stinger” in the foregoing instructions.

CABLE PROPERTIES TABLE I

Cablesa (Undated, 2000 Catalog Specs)

DIAMETER in Inches	BREAKING *LOAD Pounds	ARMOR WIRES Out/In	ONE OUTER WIRE BREAK STRENGTH Pounds	CONDUCTOR RESISTANCE Ohms/Mfeet	ARMOR RESISTANCE Ohms/Mfeet	CAPACITANCE (Polypropylene) pf/foot
1/10	1,000	18/12		21.3	19.4	51
1/8	1,600	18/12		20.5	13.0	41
3/16	4,000	12/12	278	9.4	6.0	53
2/10	4,800	12/12	339	6.1	4.5	62
7/32	5,600	18/12	212	4.1	4.4	58
9/32	10,000	18/12	355	2.8	2.4	54
5/16	11,200	18/12	435	2.8	2.1	46
3/8	15,000	18/12	597	2.8	1.5	39
7/16	19,500	18/12	775	2.8	1.2	34
15/32	18,300	24/24	537	9.8		40
Slammer	22,200	18/18	925	9.8		46
17/32	25,500	19/20	910	9.8		39

*Cablesa's published **Working Load (Maximum)** is 50% (1/2) of the Breaking Load.

CABLE PROPERTIES TABLE II

Camesa (March, 2000 Catalog Specs)

DIAMETER in Inches	BREAKING *LOAD Pounds	ARMOR WIRES Out/In	ONE OUTER WIRE BREAK STRENGTH Pounds	CONDUCTOR RESISTANCE Ohms/Mfeet	ARMOR RESISTANCE Ohms/Mfeet	CAPACITANCE (Polypropylene) pf/foot
1/10	1,000	18/12	42	21.0	22.0	51
1/8	1,600	18/12	65	21.0	13.0	41
3/16	4,000	12/12	272	9.4	6.0	53
2/10	4,800	12/12	323	6.1	5.0	62
7/32	5,200	15/15	272	4.0	4.3	60
7/32	5,200	18/12	204	4.1	4.4	58
1/4	7,000	18/12	272	4.1	3.0	50
9/32	9,100	18/12	357	3.5	2.8	54
5/16	11,000	18/12	420	2.8	2.1	46
3/8	15,000	18/12	585	2.8	1.5	39
7/16	18,500	18/12	726	2.8	1.2	35

*Camesa's published **Maximum Working Tension** is 50% (1/2) of the Breaking Strength.

CABLE PROPERTIES TABLE III

Rochester (1998 /1999 Specs)

DIAMETER in Inches	BREAKING LOAD Pounds	ARMOR WIRES Out/In	ONE OUTER WIRE BREAK STRENGTH Pounds	CONDUCTOR RESISTANCE Ohms/Mfeet	ARMOR RESISTANCE Ohms/Mfeet	CAPACITANCE (Polypropylene) pf/foot
1/10	1,000	18/12	43	25.2	22.2	40
1/8	1,500	18/12	64	25.2	15.1	35
3/16	3,900	15/12	198	9.8	6.4	50
13/64	4,500	16/10	211	6.9		60
7/32	5,500	18/12	211	4.5	4.5	56
1/4	6,500	18/12	262	4.5	3.7	47
9/32	10,000	18/12	352	2.9	2.7	55
5/16	11,200	18/12	426	2.9	2.2	47
11/32	12,400	18/12		2.9	1.9	45
3/8	14,600	18/12	595	2.9	1.6	39
7/16	17,800	18/12	727	2.9	1.3	35
15/32	18,300	24/24	539	10.0		43
Slammer	22,200	18/18	929	10.0		47
17/32	26,000	20/16	958	10.0		42

CABLE PROPERTIES TABLE IV

Tiger Brand (1985 Specs - No Longer Manufactured)

DIAMETER in Inches	BREAKING LOAD Pounds	ARMOR WIRES Out/In	ONE OUTER WIRE BREAK STRENGTH Pounds	CONDUCTOR RESISTANCE Ohms/Mfeet	ARMOR RESISTANCE Ohms/Mfeet	CAPACITANCE (Polypropylene) pf/foot
1/10	1,000	18/12		24.0	19.4	56.7
1/8	1,600	18/12		24.0	12.4	40.9
3/16	3,600	12/12		10.3	5.7	52.5
2/10	4,500	16/10		6.8	4.7	58.2
7/32	5,200	18/12		4.2	4.2	61.2
1/4	5,900	18/18		10.3	3.6	27.2
5/16	10,300	18/12		2.52	2.0	50.0
3/8	13,900	18/12		2.52	1.5	41.6
7/16	17,900	18/12		2.52	1.2	36.2