

INCH-POUND

MIL-DTL-13777/2C
w/AMENDMENT 2
7 September 2021
SUPERSEDING
MIL-DTL-13777/2C
w/AMENDMENT 1
12 September 2014

DETAIL SPECIFICATION SHEET

CABLE, SPECIAL PURPOSE, ELECTRICAL
6, 7, 8, 9, 10, 12, 13, AND 15 CONDUCTORS

Inactive for new design after 1 July 2002.

This specification is mandatory for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-13777.

REQUIREMENTS:

Dimensions and configurations: See applicable figure and design data for the following cable types specified in table I. Design data is shown in table II. Fillers are to be used as necessary to produce a firm, round, finished cable.

TABLE I. Cable types.

060410S	070618	080766	100660	150885
060480	070730	080840	100870	150915S
060565	070823S	080918	101091	
061530	070930	090540	120620	
061805	071090	090675	120650S	
070590	S080625	100595	130685	

In any conflict between the design data and the applicable figure, the design data shall govern.

AMSC N/A
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

FSC 6145



MIL-DTL-13777/2C
w/AMENDMENT 2

TABLE II. Design data.

	Design data			
Type designation	060410S		060480	060565
Figure number	1		2	2
Total wires	6		6	6
Number of conductors & AWG #	3/#18	3/#18S	6/#18	6/#16
Insulation				
Minimum average thickness	0.012"	0.012"	0.015"	0.015"
Spark test voltage	2000	2000	2000	2000
Inspection test voltage	1000	1000	1500	1500
Cabling				
Layer 1	Filler		Filler	Filler
Layer 2				
(a) Number of wires	3	3	6	6
(b) AWG #	#18	#18S	#18	#16
(c) Maximum lay				5.00"
Sheath				
Number of layers	1		1	1
Total thickness min	0.056"		0.070"	0.078"
Minimum OD cable	0.390"		0.460"	0.540"
Maximum OD cable	0.430"		0.500"	0.590"
	Design data			
Type designation	061530		061805	070590
Figure number	3		4	5
Total wires	6		6	7
Number of conductors & AWG #	4/#18	2/#0	3/#00	3/#5
Insulation				
Minimum average thickness	0.015"	0.078"	0.075"	0.060"
Spark test voltage	3000	7500	7500	3000
Inspection test voltage	1500	2500	5000	1500
Cabling				
Layer 1			Filler	
(a) Number of wires	4	2		
(b) AWG #	#18	#0		
(c) Maximum lay				
Layer 2				
(a) Number of wires			6	7
(b) AWG #			3/#00	3/#5
(c) Maximum lay			12.00	
Sheath				
Number of layers	2		2	1
Total thickness min	0.125"		0.188"	0.070"
Minimum OD cable	1.480"		1.760"	0.575"
Maximum OD cable	1.579"		1.850"	0.605"

MIL-DTL-13777/2C
w/AMENDMENT 2

TABLE II. Design data – Continued.

	Design data				
Type designation	070618		070730		070823S
Figure number	5		6		7
Total wires	7		7		7
Number of conductors & AWG #	7/#18		4/#16	3/#12	3 Pairs Twisted and Shielded, 1 Single: all #18
Insulation					
Minimum average thickness	0.015"		0.015"	0.020"	0.015"
Spark test voltage	3000		3000	4000	3000
Inspection test voltage	1500		1500	2000	1500
Cabling					
Layer 1	Filler		Filler		Filler
Layer 2					
(a) Number of wires	7		4	3	3 Pairs and 1 Single
(b) AWG #	#18		#16	#12	#18
(c) Maximum lay	4.00"				5.00"
Sheath					
Number of layers	1		2		2
Total thickness minimum	0.093"		0.098"		0.109"
Minimum OD cable	0.596"		0.710"		0.798
Maximum OD cable	0.640"		0.750"		0.848"
	Design data				
Type designation	070930	071090	S080625	080766	
Figure number	5	5	8	9	
Total wires	7	7	8	8	
Number of conductors & AWG #	7/#10	7/#8	8/#18	4/#16	4/#12
Insulation					
Minimum average thickness	0.020"	0.025"	0.015"	0.015"	0.020"
Spark test voltage	4000	4000	3000	3000	4000
Inspection test voltage	2000	2000	1500	1500	2000
Cabling					
Layer 1	Filler	Filler	Filler	Filler	
Layer 2					
(a) Number of wires	7	7	8	4	4
(b) AWG #	#10	#8	#18	#16	#12
(c) Maximum lay	6.00"	8.00"	2.50"		
Sheath					
Number of layers	2	2	1	1	
Total thickness minimum	0.125"	0.120"	0.070"	0.080"	
Minimum OD cable	0.912"	1.070"	0.610"	0.746"	
Maximum OD cable	0.948"	1.110"	0.640"	0.786"	
Maximum weight (lbs. /1000ft.)			245		

MIL-DTL-13777/2C
w/AMENDMENT 2

TABLE II. Design data – Continued.

	Design data			
Type designation	080840	080918	090540	090675
Figure number	9	10	11	11
Total wires	8	8	9	9
Number of conductors & AWG #	8#12	4/#18	4/#9	9/#20
Insulation				
Minimum average thickness	0.020"	0.015"	0.040"	0.012"
Spark test voltage	4000	3000	4000	3000
Inspection test voltage	2000	1500	2000	1500
Cabling				
Layer 1	Filler	Filler	Filler	Filler
Layer 2				
(a) Number of wires	8	4	4	9
(b) AWG #	#12	#18	#9	#20
(c) Maximum lay			3.5"	3.10"
Sheath				
Number of layers	1	2	1	1
Total thickness minimum	0.070"	0.110"	0.063"	0.094"
Minimum OD cable	0.815"	0.888"	0.525"	0.660"
Maximum OD cable	0.865"	0.948"	0.555"	0.690"
Maximum weight (lbs. /1000ft.)				255
	Design data			
Type designation	100595	100660	100870	
Figure number	18	12	19	
Total wires	10	10	10	
Number of conductors & AWG #	10/#20	10/#18	6/#16	4/#12
Insulation				
Minimum average thickness	0.015"	0.015"	0.015"	0.020"
Spark test voltage	3000	3000	3000	4000
Inspection test voltage	1500	1500	1500	2000
Cabling				
Layer 1		Filler		
(a) Number of wires	2	2	2	
(b) AWG #	#20	#18	#16	
(c) Maximum lay				
Layer 2				
(a) Number of wires	8	8	4	4
(b) AWG #	#20	#18	#16	#12
(c) Maximum lay		4.00"		
Sheath				
Number of layers	1	2	2	
Total thickness minimum	0.070"	0.110"	0.098"	
Minimum OD cable	0.580"	0.645"	0.845"	
Maximum OD cable	0.610"	0.675"	0.895"	

MIL-DTL-13777/2C
w/AMENDMENT 2

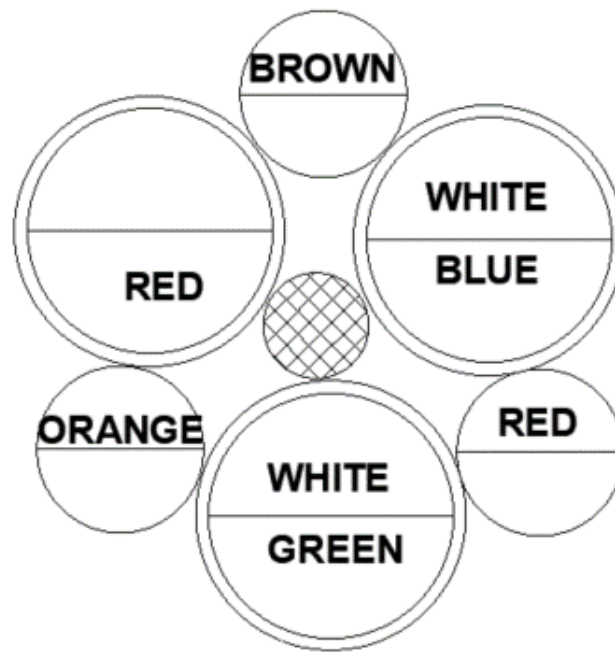
TABLE II. Design data – Continued.

	Design data				
Type designation	101091	120620	120650S	130685	
Figure number	13	14	15	16	
Total wires	10	12	12	13	
Number of conductors & AWG #	6/#18	4/#9	12/#20	8/#20	4/#20S
Insulation					
Minimum average thickness	0.015"	0.040"	0.015"	0.015"	0.015"
Spark test voltage	3000	4000	3000	3000	3000
Inspection test voltage	1500	2000	1500	1500	1500
Cabling					
Layer 1	Filler			Filler	Filler
(a) Number of wires			3		
(b) AWG #			#20		
(c) Maximum lay					
Layer 2					
(a) Number of wires	6	4	9	4	3
(b) AWG #	#18	#9	#20	#20S	#18
(c) Maximum lay					4.25"
Layer No. 3					
(a) Number of wires				8	10
(b) AWG #				#20	#18
(c) Maximum lay					6.00"
Sheath					
Number of layers	2		1	1	1
Total thickness minimum	0.155"		0.070"	0.056"	0.090"
Minimum OD cable	1.061"		0.605"	0.635"	0.670"
Maximum OD cable	1.121"		0.635"	0.665"	0.700"
Maximum weight (lbs. /1000ft.)					320

MIL-DTL-13777/2C
w/AMENDMENT 2

TABLE II. Design data – Continued.

	Design data				
Type designation	150885		150915S		
Figure number	17		17		
Total wires	15		15		
Number of conductors & AWG #	12/#18	3/#12	7/#18	5/#18S	3/#12
Insulation					
Min average thickness	0.015"	0.020"	0.015"	0.015"	0.020"
Spark test voltage	3000	4000	3000	3000	4000
Inspection test voltage	1500	2000	1500	1500	2000
Cabling					
Layer 1	Filler		Filler		
Layer 2					
(a) Number of wires	3		3		
(b) AWG #	#12		#12		
(c) Maximum lay	3.00"		3.00"		
Layer 3					
(a) Number of wires	12			7	5
(b) AWG #	#18			#18	#18S
(c) Maximum lay	6.00"			6.00"	
Sheath					
Number of layers	2		2		
Total thickness minimum	0.125"		0.120"		
Minimum OD cable	0.870"		0.900"		
Maximum OD cable	0.900"		0.930"		
Maximum weight (lbs. /1000ft.)	490		557		



NOTE: Double circle indicates shielded construction.

FIGURE 1. Cable type (060410S).

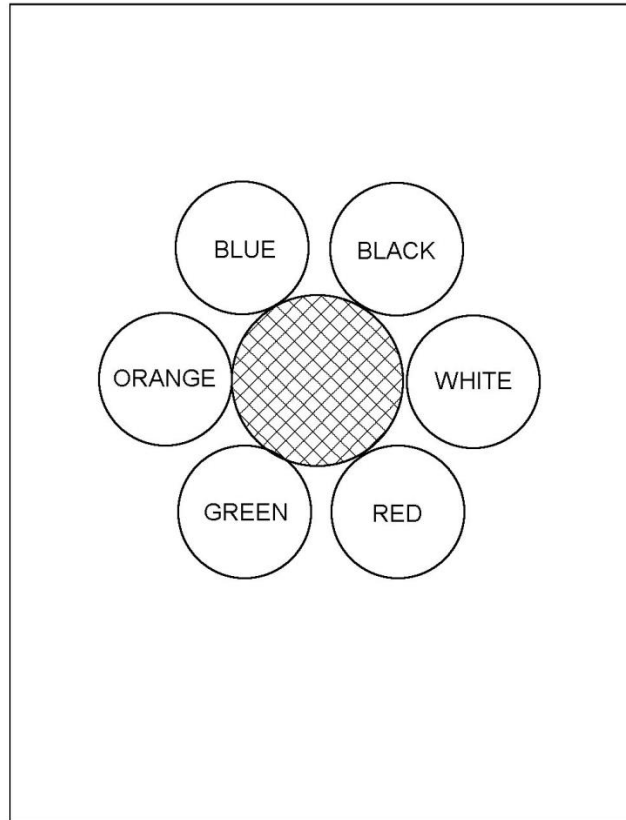


FIGURE 2. Cable types (060480, 060565).

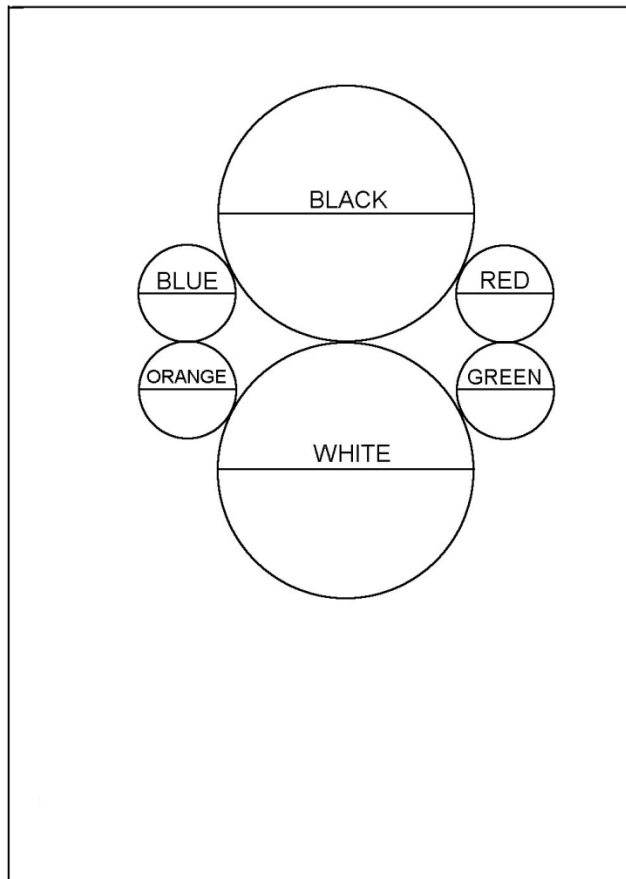


FIGURE 3. Cable type (061530).

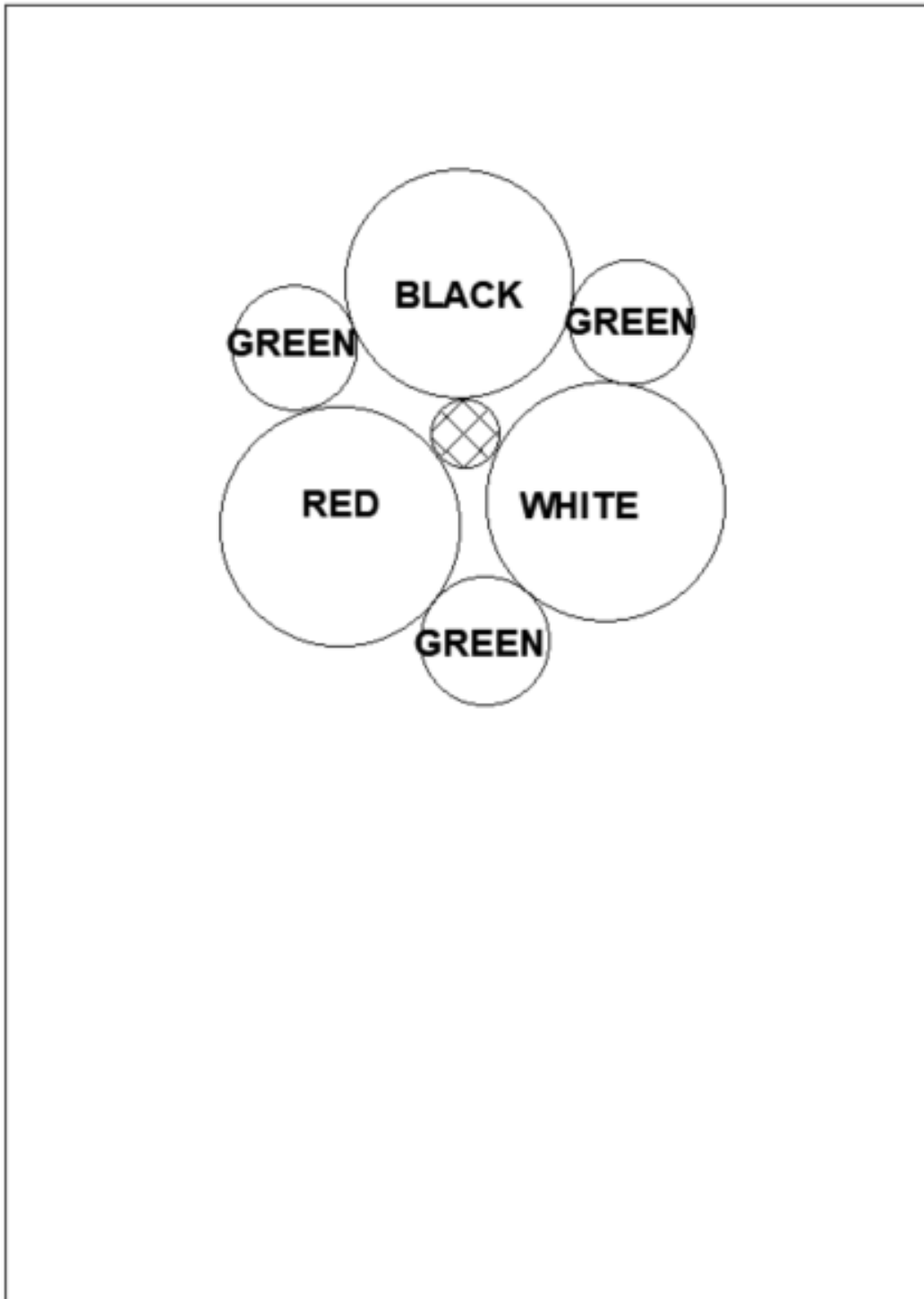


FIGURE 4. Cable type (061805).

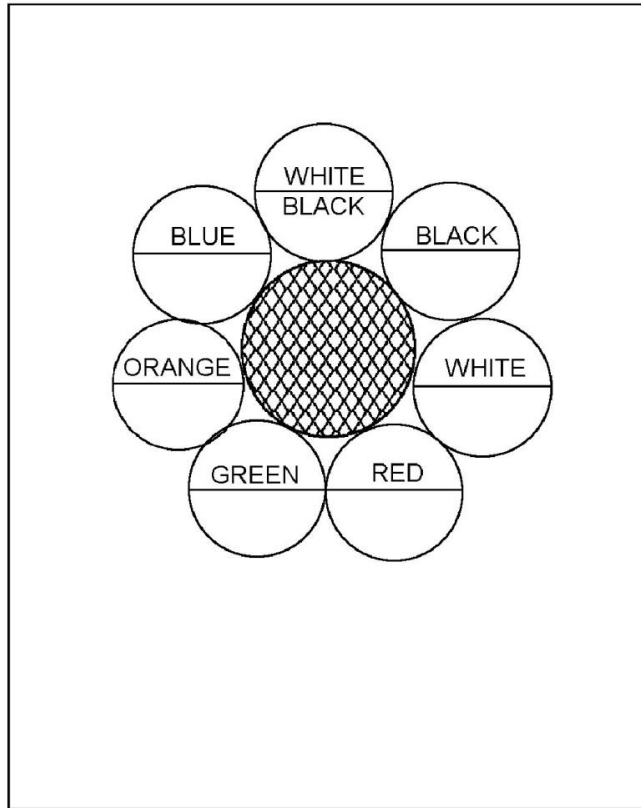


FIGURE 5. Cable types (070590, 070930, 070618, 071090).

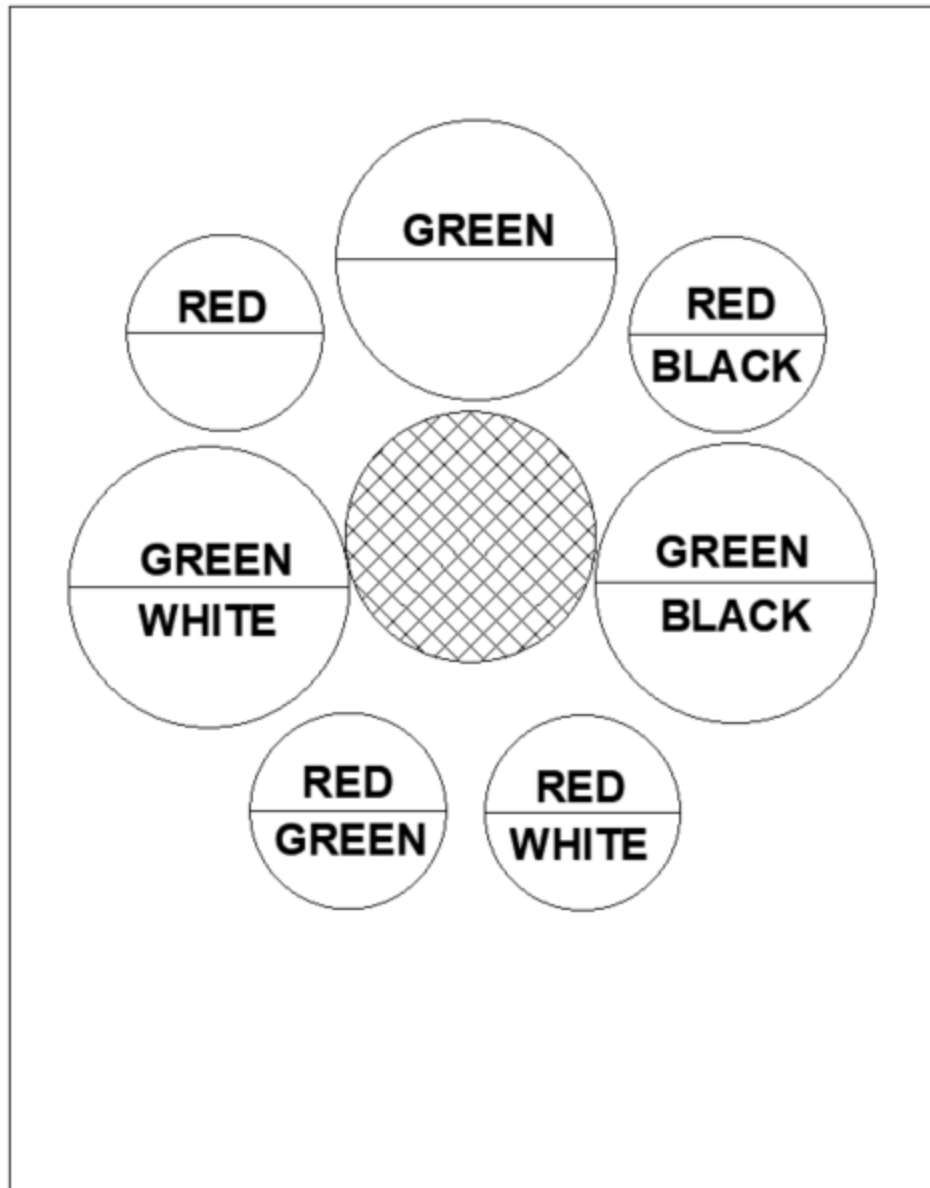
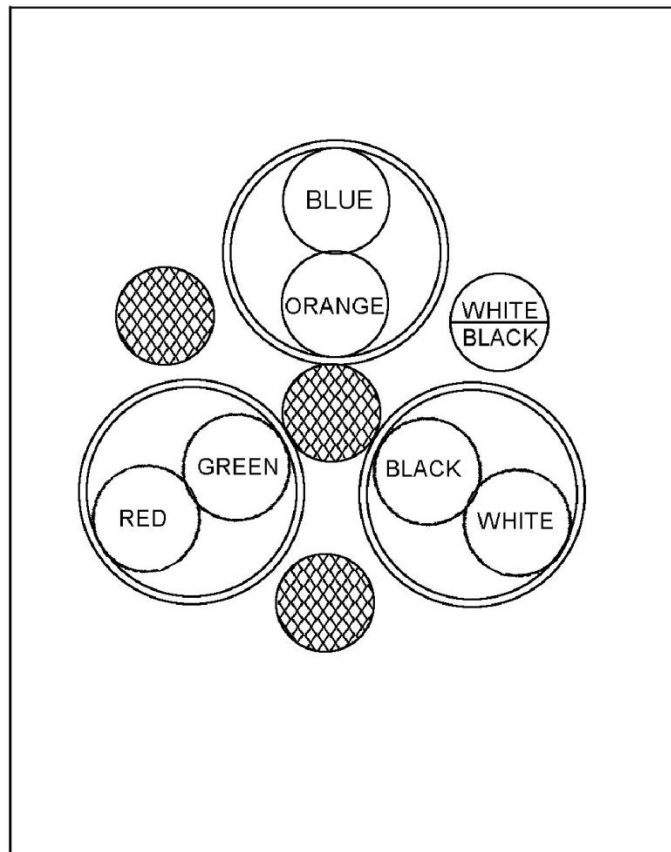


FIGURE 6. Cable type (070730).



NOTE: Double circle indicates shielded construction.

FIGURE 7. Cable type (070823S).

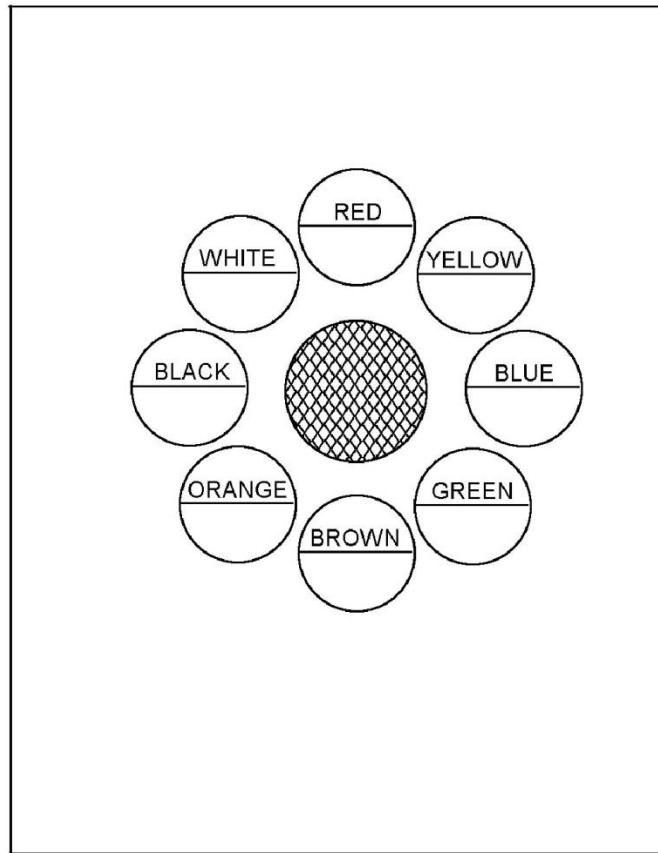


FIGURE 8. Cable type (S080625).

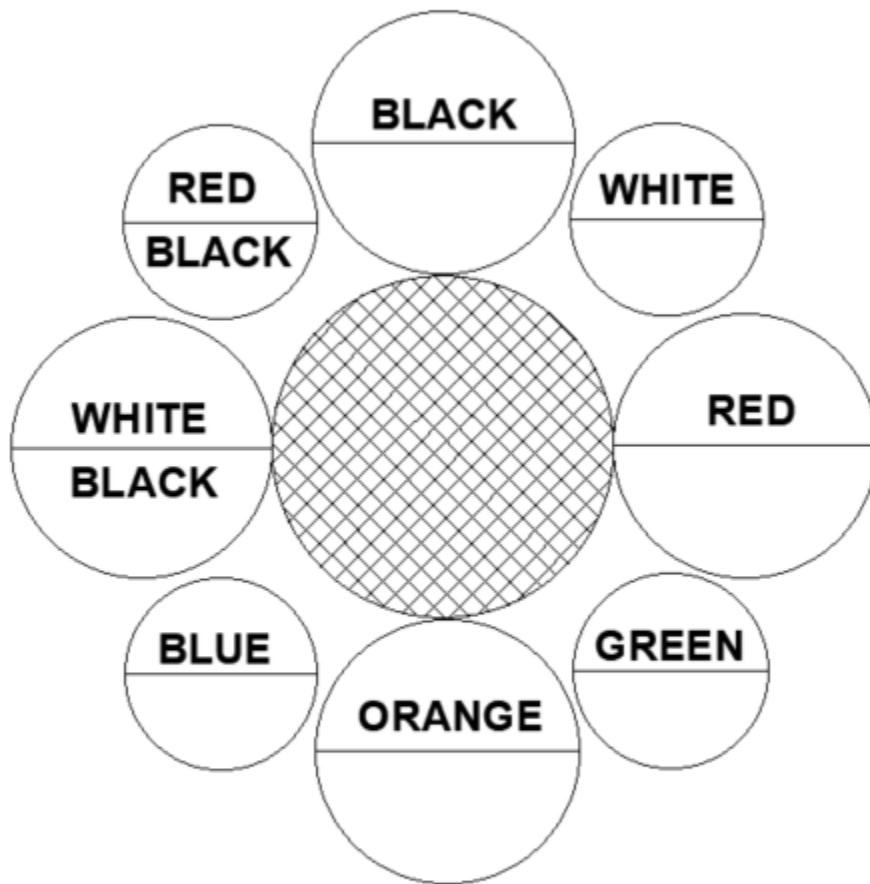


FIGURE 9. Cable types (080766, 080840).

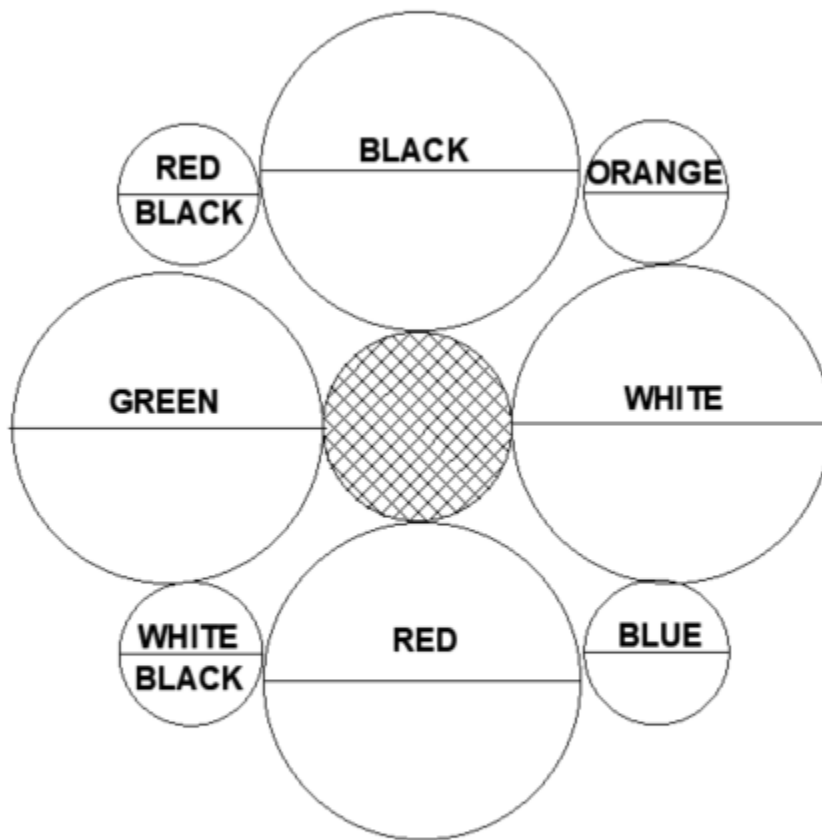


FIGURE 10. Cable type (080918).

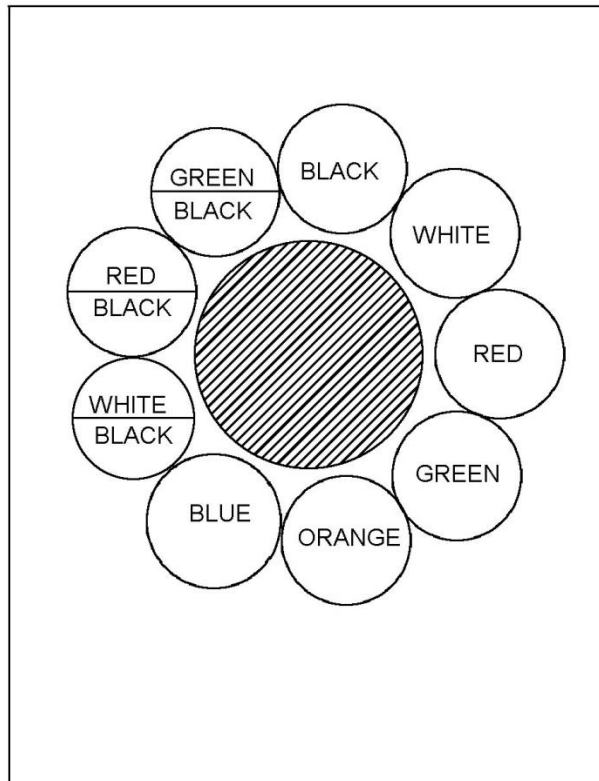


FIGURE 11. Cable types (090540, 090675).

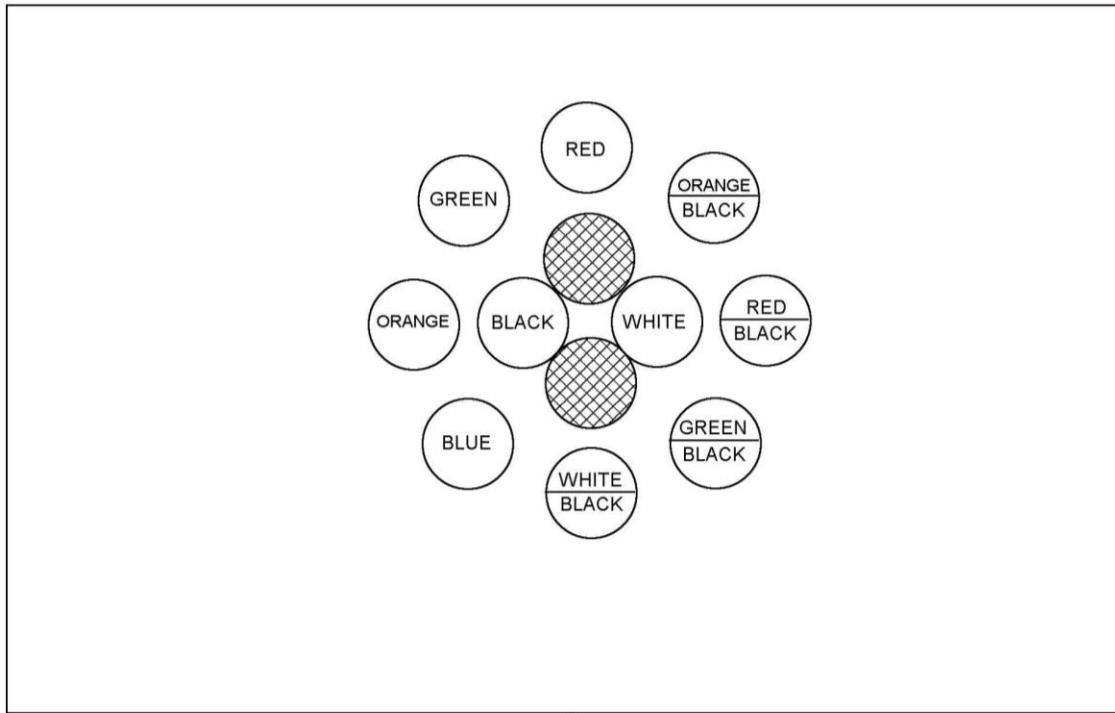


FIGURE 12. Cable type (100660).

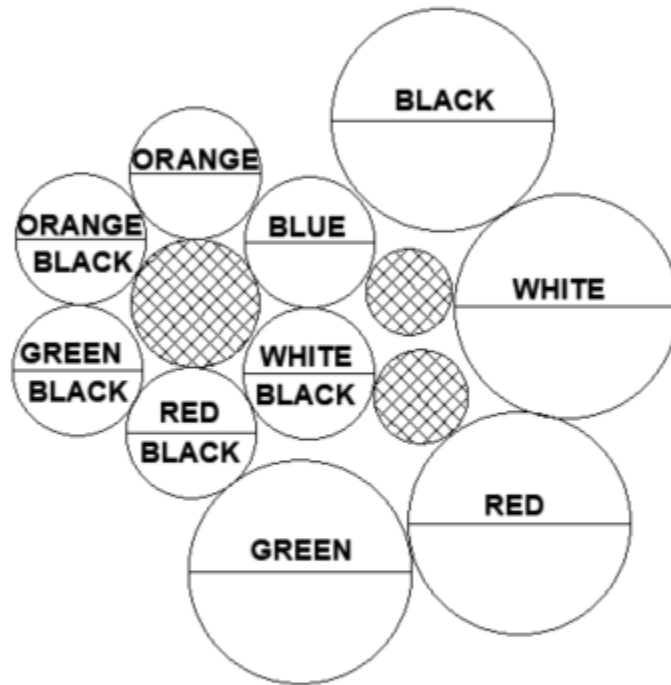


FIGURE 13. Cable type (101091).

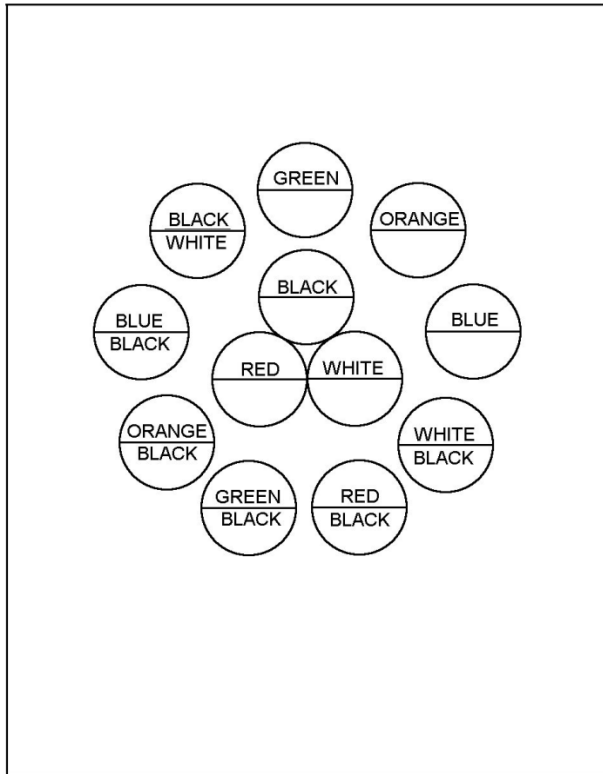
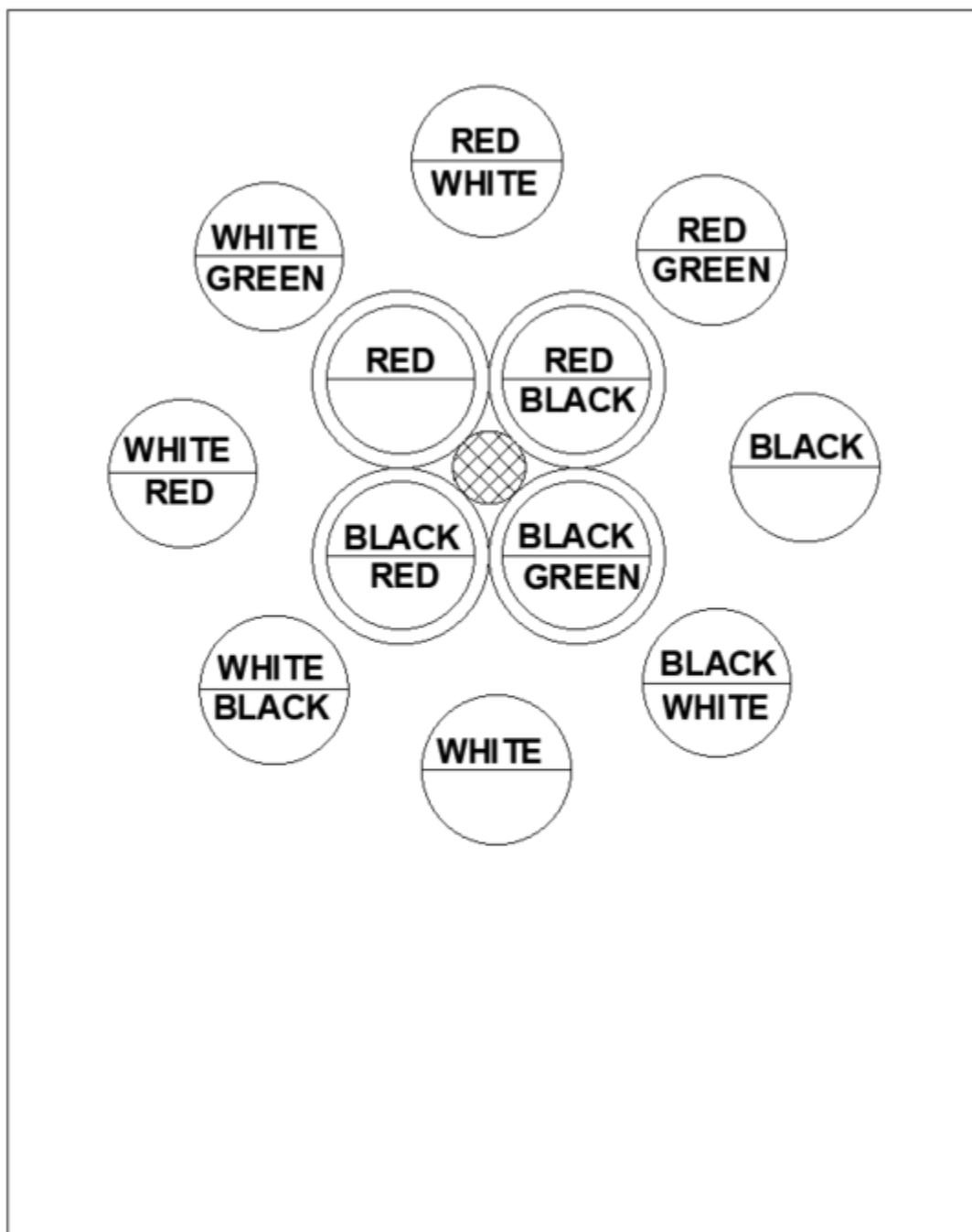


FIGURE 14. Cable type (120620).



Note: Double circle indicates shielded construction.

FIGURE 15. Cable type (120650S).

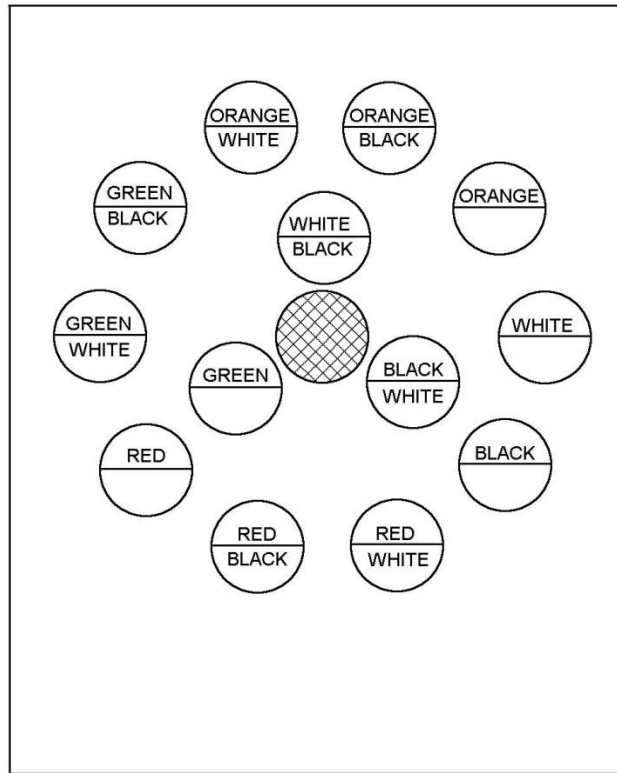
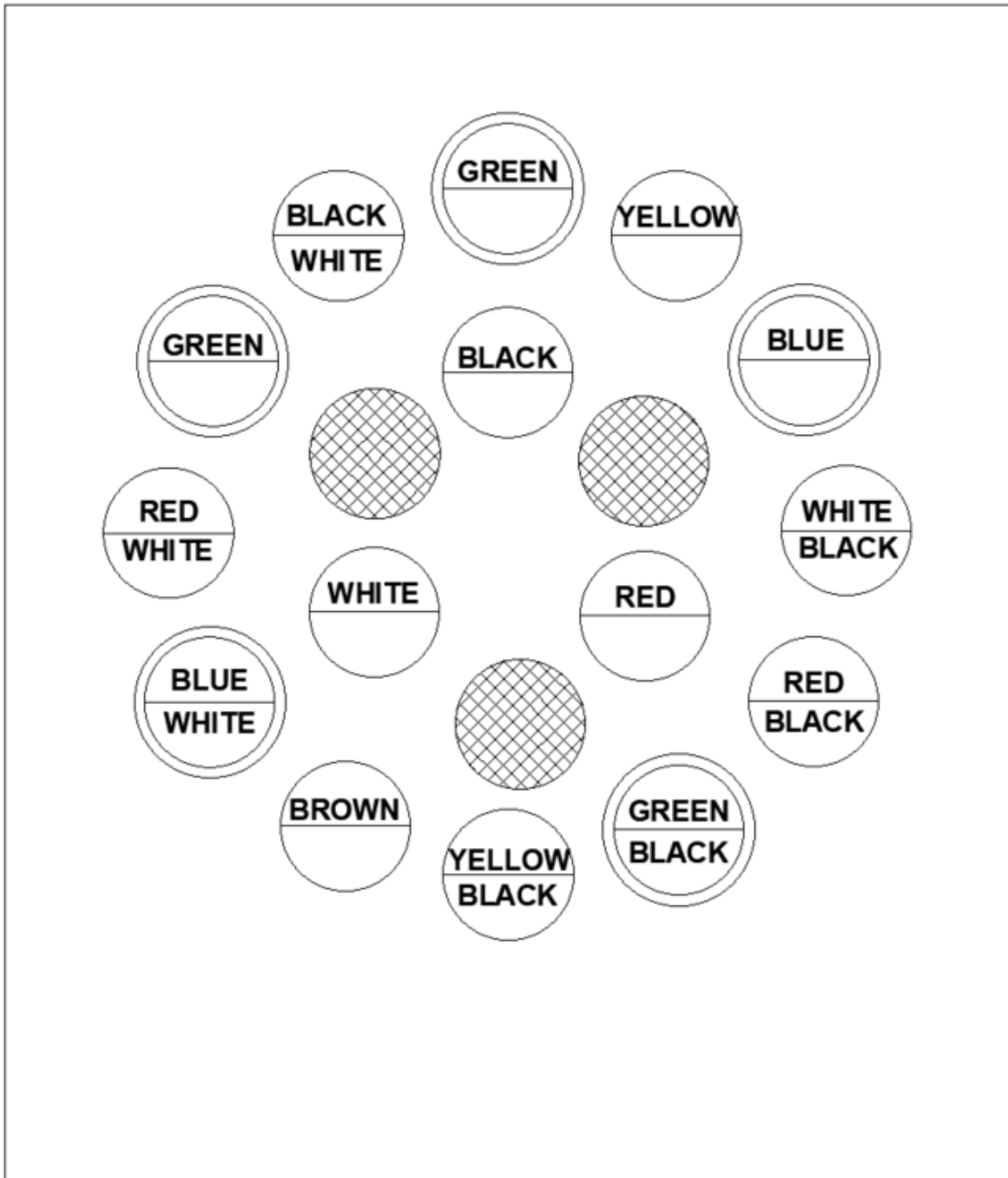


FIGURE 16. Cable type (130685).



Note: Double circle indicates shielded construction.

FIGURE 17. Cables types (150885, 150915S).

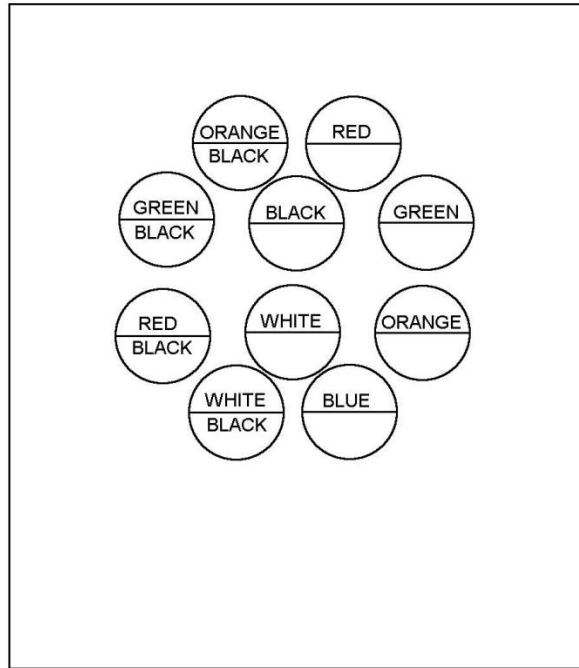


FIGURE 18. Cable type (100595).

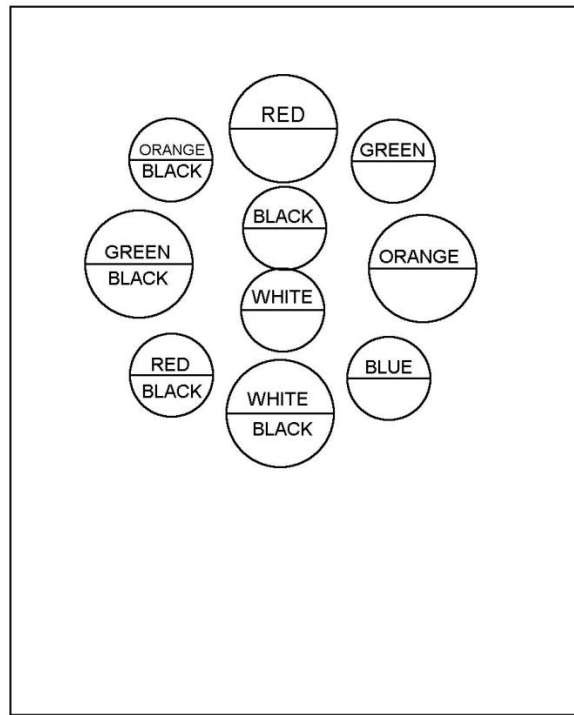


FIGURE 19. Cable type (100870).

MIL-DTL-13777/2C
w/AMENDMENT 2

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. This document references MIL-DTL-13777.

CONCLUDING MATERIAL

Custodians:

Army - AR
Navy - SH
Air Force - 85
DLA - CC

Preparing activity:

DLA - CC

(Project 6145-2021-027)

Review activities:

Army - AT, CR, CR4, MI
Navy - EC, MC

Note: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information using the Assist Online database at <https://assist.dla.mil>.