

Electrical

Columbus Fleet Industrial Supply



Wire, Nylon Ties

Deka American Made Wire

Stranded
Annealed
Bunched
Copper Core



Color-Coded
PVC
Insulation



- General-purpose high temperature (up to 125°C or 257°F) automotive wire is ideal for under-hood automotive wiring applications with hard-to-fit areas.
- Thin-walled, abrasion-resistant design not only gives it a small diameter for a better fit, but is also highly resistant to moisture, oil, grease, gasoline, and other damaging solvents. Works well with most standard automotive connections and is specified for use in engine compartments where high heat resistance is required by SAE J1128 specifications.
- Cross-linking structure reinforces the polyethylene insulation for enhanced durability and resistance to heat and abrasion. Voltage: Rated at 60VDC/25VAC or less Temperature:
 - Rated at -40°C (-40°F) to 125°C 257°F) Specifications: SAE J1128, Ford ESB-M1L 85A, and Chrysler MS-8900 Print Legend: EAST PENN HITECH® SAE J1128 GXL TYPE2 60V (size) GA 125°C (257°F) DRY MADE IN USA

Primary Wire 100' RI

20 GA	18 GA	16 GA	ITEM	QT	14 GA	12 GA	10 GA
430-851	431-011	431-021	RED	RL	431-041	431-061	431-081
430-852	431-012	431-022	WHITE	RL	431-042	431-062	431-082
430-853	431-013	431-023	YELLOW	RL	431-043	431-063	431-083
430-854	431-104	431-024	GREEN	RL	431-044	431-064	431-184
430-855	431-015	431-025	BLUE	RL	431-045	431-065	431-085
430-856	431-016	431-026	BLACK	RL	431-046	431-066	431-086
430-857	431-017	431-027	BROWN	RL	431-047	431-067	431-087
-----	431-018	431-028	ORANGE	RL	431-048	431-068	431-088

Wire, Nylon Ties

A.C.T. American Made Nylon Wire Ties

- Working temperatures from -40° F to 185° F
- Indoor and outdoor use
- High tensile strength with low insertion force
- Great for industrial and commercial applications
- Used for larger cable management, hoses, packaging



Black Ties

Buy Quality. Buy Advanced Cable Ties.

Tie it all together with the strongest ties in the industry

Part #	Item	Lb	Qt
439-004	4" X 3/32"	18	100
439-006	6" X 1/8"	18	100
439-007	8" X 3/16"	50	100
439-011	12" X 3/16"	50	100
439-014	14" X 3/16"	50	100
439-015	15" X 5/16"	120	50
439-016	24" X 5/16"	120	50
439-026	36" X 5/16"	175	50

Dual Clamp Ties

DUAL BUNDLE DESIGN – Provides parallel spacing between hoses, wire, and cables and tubing.

PREVENTS DAMAGE & WEAR – Secure holding and bundle separation provides protection against abrasion from vibration or flexing.

BUILT-IN 1/4" STUD MOUNTING HOLE – Allows securing bundles along the chassis of truck, tractor or trailer.

U.V. BLACK – Extra durability against weather and sun light.

ONE PIECE DESIGN – forms 2 separating straps to bundle wire, loom, or hydraulic hose reducing wear.

150 LB TENSILE STRENGTH



17-1/2 Double Wrap Block Ties

Part #	Qt
439-045	EA



Wire, Nylon Ties

Nylon Ties

- No more sorting – all your color ties in one place
- Easy to close – just fold and go
- Hang from nearby equipment
- Ideal applications include: color coding and identifying communication panels



**Specialty Pack Color Cable Ties,
4" 18 lb RD,OR,YW,GR,BL,PR**

Part #	Item	Qt
439-162	Color Ties	Ea
439-165	Flourescent Ties	Ea



11" Fluorescent Nylon Color Ties

Part #	Qt	Qt
439-179	Yellow	100

7" Nylon Fluorescent Color Ties

Part #	Qt	Qt
439-180	Green	100
439-181	Orange	100
439-182	Yellow	100
439-183	Pink	100
439-184	Blue	100



Black Tie Mounts With Adhesive






Part #	Qt
439-090	25



7" Nylon Color Ties





Part #	Qt	Qt
439-185	Brown	100
439-187	Orange	100
439-189	Green	100
439-190	Blue	100
439-191	Purple	100
439-193	Gray	100
439-195	Red	100
439-197	Yellow	100

Wire nuts, Connectors

Wire Nuts

Part #	Item	Qt	
440-001	Gray 18-16 AWG MIN – 2-#18 MAX – 2 #16	25	
440-002	Blue 18-14 AWG MIN – 2-#18 MAX – 3 #16	25	
440-003	Orange 18-14 AWG MIN – 2-#18 MAX – 3 #16 & 1 #18	25	
440-004	Yellow 18-12 AWG MIN – 1 #14 & 1 #18 MAX – 2 #14 & 3 #16	25	
440-005	Red 18-10 AWG MIN – 1 #12 & 2 #18 MAX – 2 #10 & 1 #12	25	

Part #	Item	Qt	
440-032	Small Nut 16-14 Fast & Easy “pigtail” Crimp Once Rated for 600 volt	25	
440-034	Large Nut 12-10 Fast & Easy “pigtail” Crimp Once Rated for 600 volt	25	




Part #	Item	Qt	
440-041	Red 22-18 Gauge Quick Splice & Tap Connectors	50	
440-042	Blue 18-14 Gauge Quick Splice & Tap Connectors	50	
440-044	Yellow 12-10 Gauge Quick Splice & Tap Connectors	10	
440-045	Tan 18-10 to 16-12 Gauge Quick Splice & Tap Connectors	10	

Wire nuts, Connectors

Wire Nuts

Part #	Item	Qt	
440-010	Yellow 18-10 AWG MIN – 2 #18 MAX – 4 #14	25	
440-011	Red 18-10 AWG MIN – 2 #14 MAX – 4 #12	25	
440-012	Gray 14-6 AWG MIN – 3 #14 MAX – 1 #6 & 1 #8	25	
440-014	Blue 12-6 AWG MIN – 1 #10 & 1 #12 MAX – 1 #6 & 2 #8	25	
440-022	Orange/ Blue Wire Size 22-12 MIN – 2 #22 MAX – 2 #12	25	
440-024	Red / Yellow Wire Size 18-8 MIN – 2 #18 MAX – 2 #8	25	
440-026	Blue / Gray Wire Size 14-8 MIN – 4 #14 MAX – 5 #12	25	



440-084	T-Tap 22-18 Red	25	
440-085	T-Tap 16-14 Blue	25	
440-086	T-Tap 12-10 Yellow	10	

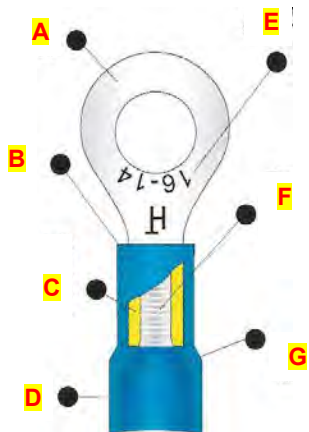
Just insert the wire and press the cap down with pliers. Dielectric grease filled and waterproof

Scotchlock Self-Sealing Pigtail Connector

440-075	3-Wire Moisture Resistance Wire Connector	25
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22-18 P.V.C. Terminals / Nylon Terminals



A: Electro Tin Plating for Exceptional Corrosion Resistance.

B: Insulator sleeve is color coded for wire size.

C: Our rings, spades and butt terminals are constructed from pure copper.

D: Insulators made from P.V.C. nylon or heat shrink

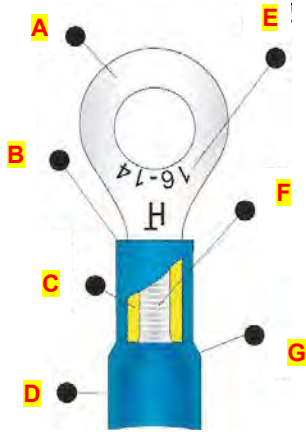
E: Terminals and connectors are clearly marked with size

F: Terminals have "V" grooved serrations to provide maximum contact and tensile strength after crimping

G: PVC and Nylon injection molded with funnel entry for fast, easy wire insertion

PVC Part #	NYLON Part #	Item	Qt	
441-000	451-000	Butt Conn	50	
441-001	451-001	4-6 Ring	50	
441-003	451-003	8-10 Ring	50	
441-005	-----	1/4 Ring	50	
441-006	-----	5/16 Ring	25	
441-010	451-010	4-6 Snap Fork	25	
441-011	451-011	8-10 Snap Fork	25	
441-015	-----	8-10 Hook	25	
441-028	-----	.110 Male	25	
441-029	-----	.110 Female	25	
441-026	-----	.187 Male	25	
441-027	-----	.187 Female	25	
441-024	-----	.250 Male	25	
441-025	-----	.250 Female	25	
441-034	451-034	.250 Male	25	
441-028	451-035	.250 Female (fully insulated)	25	
441-051	451-051	.157 Female Bullet	25	
441-052		157 Male Bullet	25	
-----	451-042 451-043	.187 90* Flag .250 90* Flag	25	
441-045	-----	3-Way Connector	10	
441-046	-----	4-3-Way Connector	10	
441-055	-----	Male Pin	25	

16-14 P.V.C. Terminals / Nylon Terminals



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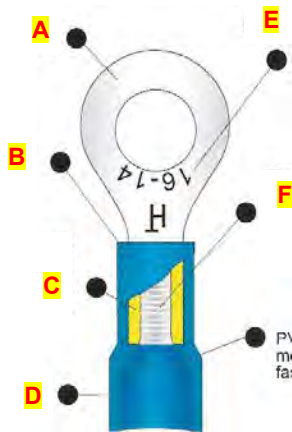
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G: PVC and Nylon injection molded with funnel entry for fast, easy wire insertion

PVC Part #	NYLON Part #	Item	Qt	
442-000	452-000	Butt Conn	50	
442-001	452-001	4-6 Ring	50	
442-003	452-003	8-10 Ring	50	
442-005	452-005	1/4 Ring	50	
442-006	452-006	5/16 Ring	25	
442-007	452-007	3/8 Ring	25	
442-010	452-010	4-6 Snap Fork	50	
442-011	452-011	8-10 Snap Fork	50	
-----	452-014	4-6 Hook	25	
442-015	452-015	8-10 Hook	25	
442-028	-----	.110 Male	25	
442-029	-----	.110 Female	25	
442-026	-----	.187 Male	25	
442-027	-----	.187 Female	25	
442-024	452-024	.250 Male	25	
442-025	452-025	.250 Female	25	
442-020	-----	.387 Female	25	
442-030		.250 Piggy Back	25	
-----	452-034	.250 Male	25	
-----	452-035	.250 Female (fully insulated)	25	
442-047	452-051	.157 Female Bullet	25	
442-048	452-052	157 Male Bullet	25	
442-049	-----	.180 Female Bullet	25	
442-050	-----	.180 Male Bullet	25	
442-051	-----	.195 Female Bullet	25	
442-052	-----	195 Male Bullet (ford)	25	
-----	452-042	.187 90* Flag	25	
-	452-043	.250 90* Flag	25	

16-14 P.V.C. Terminals / Nylon Terminals



442-045	452-045	3-Way Connector	10	
442-046	452-046	4-3-Way Connector	5	
442-055	-----	Male Pin	25	

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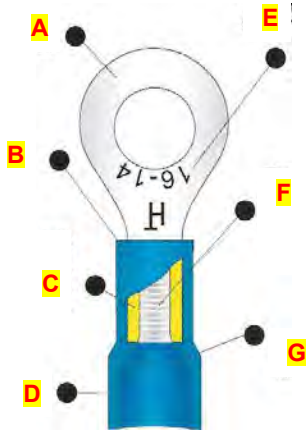
D: Insulators made from P.V.C. nylon or heat shrink

E: Terminals and connectors are clearly marked with size

F: Terminals have "V" grooved serrations to provide maximum contact and tensile strength after crimping

G: PVC and Nylon injection molded with funnel entry for fast, easy wire insertion

12-10 P.V.C. Terminals / Nylon Terminals



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B: Insulator sleeve is color coded for wire size.

C: Our rings, spades and butt terminals are constructed from pure copper.

D: Insulators made from P.V.C. nylon or heat shrink

E: Terminals and connectors are clearly marked with size



F: Terminals have "V" grooved serrations to provide maximum contact and tensile strength after crimping

G: PVC and Nylon injection molded with funnel entry for fast, easy wire insertion



PVC Part #	NYLON Part #	Item	Qt	
443-000	----- 453-000	Butt Conn P.V.C. Butt Conn Nylon	25 50	
443-001	453-001	4-6 Ring	50	
443-003	453-003	8-10 Ring	50	
443-005	453-005	1/4 Ring	25	
443-006	453-006	5/16 Ring	25	
443-007	453-007	3/8 Ring	25	
443-008	453-008	1/2 Ring	25	
443-010	453-010	4-6 Snap Fork	25	
443-011	453-011	8-10 Snap Fork	25	
----- 443-015	----- 453-015	4-6 Hook 8-10 Hook	25 25	
443-026	-----	.187 Male	25	
443-027	-----	.187 Female	25	
443-024	453-024	.250 Male	25	
443-025	453-025	.250 Female	25	
443-020	-----	.387 Female	25	
-----	-----	.250 Piggy Back	25	
-----	453-034	.250 Male	25	
-----	453-035	.250 Female (fully insulated)	25	
443-043	453-043	.250 90* Flag	25	
443-045	453-045	3-Way Connector	10	
443-046	453-046	4-3-Way Connector	5	
443-055	-----	Male Pin	25	

22-18 – 2ga P.V.C. Terminals / Non-Insul Terminals

8 GA PVC Wire Ends

Part #	Item	Qt	
445-000	Butt Conn	25	
445-003	8-10 Ring	25	
445-005	1/4 Ring	25	
445-006	5/16 Ring	25	
445-007	3/8 Ring	20	
445-008	1/2 Ring	15	

6 GA PVC Wire Ends

Part #	Item	Qt	
446-000	Butt Conn	15	
446-003	8-10 Ring	25	
446-005	1/4 Ring	25	
446-006	5/16 Ring	25	
446-007	3/8 Ring	20	
446-008	1/2 Ring	15	

Pass Thru Butt Connector

- Features a brazed barrel seam bonded with special silver brazing alloy
- Will not open under stress or wire pull
- Versakrimp barrel is tough and versatile, guaranteed not to split and may be crimped from any direction
- Ideal for difficult to crimp solid and stranded wires






Stripped Wires Overlap Inside Connector
Requires Only One Crimp In Center









Part #	Item	Qt
461-001	22-18	100
462-001	16-14	100
463-001	12-10	50
464-001	8 ga	25

22-18 – 2ga P.V.C. Terminals / Non-Insul Terminals

22-18 Non-Insulated Wire Ends






Part #	Item	Qt	
461-000	Butt Conn	100	
-----	6-8 Ring	50	
461-003	8-10 Ring	50	
461-005	1/4 Ring	50	
-----	5/16 Ring	50	
-----	6-8 Fork	50	
-----	8-10 Fork	50	
-----	6-8 Hook	50	
-----	8-10 Hook	50	
-----	8-10 Flag	50	

16-14 Non-Insulated Wire Ends



Part #	Item	Qt	
462-000	Butt Coon	100	
-----	6-8 Ring	50	
462-003	8-10 Ring	50	
-----	1/4 Ring	50	
-----	5/16 Ring	50	
-----	3/8 Ring	50	
-----	6-8 Snap Fork	50	
462-011	8-10 Snap Fork	50	
-----	6-8 Hook	50	
-----	8-10 Hook	50	
462-027	.187 Female	50	
462-025	.250 Female	50	
462-043	8-10 Flag	50	

22-18 – 2ga P.V.C. Terminals / Non-Insul Terminals



12-10 Non-Insulated Wire Ends

Part #	Item	Qt	
463-000	Butt Conn	100	
-----	6-8 Ring	50	
463-003	8-10 Ring	50	
463-005	1/4 Ring	50	
463-006	5/16 Ring	50	
463-007	3/8 Ring	50	
463-008	1/2 Ring	25	
-----	6-8 Fork	25	
463-011	8-10 Fork	25	
-----	6-8 Hook	50	
-----	8-10 Hook	50	
-----	8-10 Flag	50	

8 GA Non-Insulated Wire Ends



Part #v	Item	Qt	
465-000	Butt Conn	20	
465-003	8-10 Ring	20	
465-005	1/4 Ring	20	
465-006	5/16 Ring	20	
465-007	3/8 Ring	20	
465-008	1/2 Ring	20	

6 GA Non-Insulated Wire Ends



Part #v	Item	Qt	
466-000	Butt Conn	20	
466-003	8-10 Ring	20	
466-005	1/4 Ring	20	
466-006	5/16 Ring	20	
466-007	3/8 Ring	20	
466-008	1/2 Ring	20	

22-18 – 2ga P.V.C. Terminals / Non-Insul Terminals

4 GA Non-Insulated Wire Ends

Part #	Item	Qt	
467-000	Butt Conn	20	
-----	8-10 Ring	20	
467-005	1/4 Ring	20	
467-006	5/16 Ring	20	
467-007	3/8 Ring	20	
467-008	1/2 Ring	20	

2 GA Non-Insulated Wire Ends

Part #	Item	Qt	
468-000	Butt Conn	20	
-----	8-10 Ring	20	
468-005	1/4 Ring	20	
-----	5/16 Ring	20	
468-007	3/8 Ring	20	
468-008	1/2 Ring	20	

Heat Shrink Terminals

CFIS ASSORTMENT CHART: KRIMP & SEAL

Premium Grade NYAX Heat Shrink Terminals

Adhesive Lined sealant locks out corrosion



Clear see thru shrink tubing for easy inspection
Pre-applied NYAX heat shrink tubing encapsulates connection

All Weather Sealed Connections – Moisture Proof connection to eliminate corrosion related equipment failure and costly equipment downtime.

- Increased Visual Clarity
- Cross-Linked Ionic Polymer
- Adhesive Lined – Moisture Proof
- Shrink ratio increased (3: 1 vs 2.5: 1)
- Shrinks Lower Temperature – 100*
- Tough & Durable, resist abrasions and cuts
- Increased operating temperature range (-55* to 125*)

All Weather Sealed Connections

16-14 Krimp / Seal Wire Ends

Illustration	Stud Size	CFIS Part #
--------------	-----------	-------------



16-14
Butt
472-000
(25)



8-10
Ring
472-003
(25)
1/4
Ring
471-005
(25)
5/16
Ring
471-006
(25)
3/8
Ring
471-007
(25)



6-8
Fork
471-012
(25)
8-10
Fork
471-013
(25)



8-10
Hook
471-015
(25)



.250
Male
471-024
(25)



.250
Female
471-025
(25)



.250
Male Full-Insl
471-034
(25)



.250
Female Full-Insl
471-035
(25)



.180
Female
471-051
(25)



.150
Female
471-053
(25)



.180
Male
471-052
(25)



3-Way
Union
471-055
(25)



4-Way
Union
471-056
(25)

Illustration	Stud Size	CFIS Part #
--------------	-----------	-------------



22-24
Butt
470-098
(25)

22-18 Krimp / Seal Wire Ends

Illustration	Stud Size	CFIS Part #
--------------	-----------	-------------



22-18
Butt
471-000
(25)



8-10
Ring
471-003
(25)



1/4
Ring
471-005
(25)



8-10
Fork
471-013
(25)



.250
Male Full-Insl
471-034
(25)



.250
Female Full-Insl
471-035
(25)

Heat Shrink Terminals

Premium Grade NYAX Heat Shrink Terminals

All Weather Sealed Connections

Adhesive Lined sealant locks out corrosion






Pre-applied NYAX heat shrink tubing encapsulates connection

Clear see thru shrink tubing for easy inspection



All Weather Sealed Connections – Moisture Proof connection to eliminate corrosion related equipment failure and costly equipment downtime.






- Increased Visual Clarity
- Cross-Linked Ionic Polymer
- Adhesive Lined – Moisture Proof
- Shrink ratio increased (3: 1 vs 2.5: 1)
- Shrinks Lower Temperature – 100*
- Tough & Durable, resist abrasions and cuts
- Increased operating temperature range (-55* to 125*)

12-10 Krimp / Seal Wire Ends

Illustration	Stud Size	CFIS Part #
	16-14 Butt	473-000 (25)
	8-10 Ring	473-003 (25)
	1/4 Ring	473-005 (25)
	5/16 Ring	473-006 (25)
	3/8 Ring	473-007 (25)
	1/2 Ring	473-008 (25)
	6-8 Fork	473-012 (25)
	8-10 Fork	473-013 (25)

8 guage Krimp / Seal Wire Ends

Illustration	Stud Size	CFIS Part #
	16-14 Butt	473-000 (10)
	8-10 Ring	474-003 (10)
	1/4 Ring	474-005 (10)
	5/16 Ring	474-006 (10)
	3/8 Ring	474-007 (10)
	1/2 Ring	474-008 (10)

	.250 Male	473-025 (25)
	.250 Female	473-026 (25)
	.250 Male Full-InsI	473-034 (25)
	.250 Female Full-InsI	473-035 (25)
	3-Way Union	473-055 (25)

Heat Shrink Terminals

Premium Grade MULTI-WIRE CONNECTOR

All Weather Sealed Connections – Moisture Proof connection to eliminate corrosion related equipment failure and costly equipment downtime.

One wire to 2 wire

- Increased Visual Clarity
- Cross-Linked Ionic Polymer
- Adhesive Lined – Moisture Proof
- Shrink ratio increased (3: 1 vs 2.5: 1)
- Shrinks Lower Temperature – 100*
- Tough & Durable, resist abrasions and cuts
- Increased operating temperature range (-55* to 125*)

IN-LINE BUTT CONNECTORS

JOIN TWO WIRES TO ONE WIRE ...

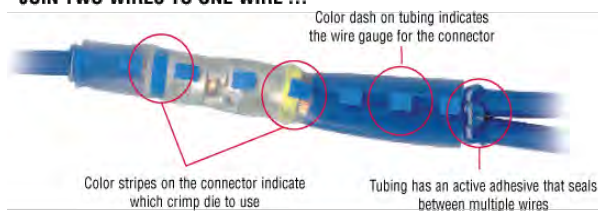







Illustration	Wire Range	Wire Size Joined	Color Code	CFIS Part #
	20-18 to 24-22	Two 24-22 to One 24-22 Or One 20-18 to One 24-22	White Dashes Red & White Stripes	470-018 (25)
	16-14 to 20-18	Two 20-18 to One 20-18 Or One 16-14 to One 20-18	Red Dashes Red & Blue Stripes	470-020 (25)
	12-10 to 16-14	Two 16-14 to One 16-14 Or One 12-10 to One 16-14	Blue Dashes Blue & Yellow Stripes	470-022 (25)
	8 to 12-10	Two 12-10 to One 12-10 Or One 8 to One 12-10	Yellow Dashes Yellow & Red Stripes	470-024 (25)

Premium Grade MULTI-WIRE CONNECTOR



Connect up to 4 wires
4-.1 Heat Shrink Tubing



COMPLETELY SEALED CONNECTION

Illustration	Wire Range	Wire Size Joined	Color Code	CFIS Part #
	22-18 to 24-24	Two 24-22 to One 24-22	Blue Dashes	470-030 (25)
	18-10 to 8-10	Two 18-22 to One 12-10	Yellow Dashes	470-032 (25)

Heat Shrink Terminals




Premium Grade MULTI-WIRE CONNECTOR One wire to 2 wire

- Joins 2 wires on one side to 1 wire on the other.
- Joins wires of different diameter - such as 22 gauge to 14 gauge.
- Replaces bulky, awkward 3 way connectors.
- Provides compact, reliable connections.
- Color coded stripe on the "Step-Down" end gives quick and easy identification.

Illustration	Wire Size Joined	Color Code	CFIS Part #
	18-20 to 22-18	Clear	470-089 (25)
	22-16 to 16-14	Blue	470-090 (25)
	16-14 to 12-10	Yellow	470-091 (25)
	12-10 to 8 ga	Pink	470-092 (25)




- Pre-fluxed, low temperature solder, superior current flow and the highest tensile strength.
- Clear shrink tubing allows visually inspecting the connection.
- Shrink sealant melts during installation, sealing openings and locking out corrosion.
- Crimped, soldered & sealed connections meet or exceed the toughest OEM requirements.

Krimp & Solder Butt Connector

Illustration	Wire Size Joined	Color Code	CFIS Part #
	22-18	Red	474-290 (25)
	16-14	Blue	474-320 (25)
	12-10	Yellow	474-350 (25)

- Self-Soldering terminals
- One step the connection is soldered, completely insulated and sealed against corrosion.
- The proven reliability of real soldered connections.
- The durability of Solder & Sealant melts on installation, lock out corrosion.
- 2200 P.S.I. soldered tensile strength, Pullout strength exceeds 150 lbs. per terminal.

Solder Link Butt Connector

Illustration	Wire Size Joined	Color Code	CFIS Part #
	22-18	Red	474-520 (25)
	16-14	Blue	474-540 (25)
	12-10	Yellow	474-560 (25)

Weather Pack Environmental Connectors

Weather Pack Environmental Connector Housings

Weather Pack environmental connectors are designed to the engine compartment of a vehicle. They also are ideal for use in marine, agriculture and other harsh environmental applications. Snap-action lock housings and secondary terminal lock helps reduce terminal stress.



Shroud (female)



Tower (male)



Female Tower	O.E.M. #	Fig	Qt	Desc.	Fig	O.E.M. #	Male Shroud
476050	12015791	A	6	1-way housing	F	12010996	476070
476052	12015792	B	6	2-way housing	G	12010973	476072
476054	12015793	C	6	3-way housing	H	12010717	476074
476056	12015797	D	4	4-way housing	I	12010974	476076
476058	12015799	E	4	6-way housing	J	12010975	476078

Weather Pack Environmental Seals and Plugs

Self-lubricating, silicone seals have multiple “ribs” to guard against dust, moisture, engine compartment fluids and chemicals. Cavity seals are crimped to the terminal to assure positive position of the seal in the housing cavity. The cavity plug is designed to fill and seal.



Part #	O.E.M. #	Qt	Color	Description
476122	12010300	25	Green Plug	Cavity plug
476124	15324983	25	Red Seal	24-18 ga
476126	15324982	25	Green Seal	20-18 ga
476128	15324980	25	Gray Seal	16-14 ga
476130	15324981	25	Blue Seal	12 ga

ASSEMBLY INSTRUCTIONS



1. Put seal onto cable before stripping insulation.



2. Crimp terminal onto stripped wire and seal and insert into connector housing.



3. Once all terminals are inserted, lock wire and seals as shown above.



4. Male and female housings connect together until locked once steps 1, 2, and 3 are completed.

Weather Pack Environmental Connectors

Weather Pack Environmental Connector Housings

Weather Pack environmental connectors are designed to the engine compartment of a vehicle. They also are ideal for use in marine, agriculture and other harsh environmental applications. Snap-action lock housings and secondary terminal lock helps reduce terminal stress.

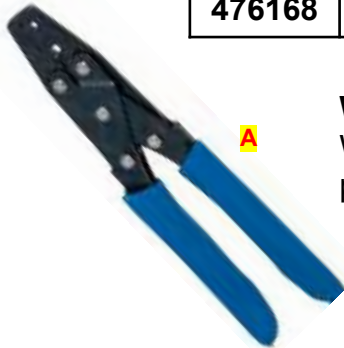


Weather Pack Environmental Terminals

The flex-pin and lap-lock design gives these terminals a positive connection. Dual "tang" lock the terminal into the connector cavity. Cable seal crimp wings reduce strain on the cable core and assure proper positioning of the cable seal.



Male Pin	O.E.M. #	Qt	Desc.	O.E.M. #	Fem Socket
476154	12089040	25	20-18 ga term	12089188	476155
476160	12124582	25	16-14 ga term	12124580	476161
476168	12124587	25	12 ga term	12124581	476169



Weather Pack and Metri-Pack 150 & 280 Crimp Tools

Weather Pack and Metri-Pack 150 & 280 Tools are designed for positive crimp and removal of terminals.



Part #	O.E.M. #	Fig	Qt	Desc.
476470	WPT-18	A	ea	Weather Pack Crimping Tool
476365	12014012	B	ea	Weather Pack Extraction Tool
476470	WPT-6	C	ea	Weather Pack Pick

ASSEMBLY INSTRUCTIONS



1. Put seal onto cable before stripping insulation.



2. Crimp terminal onto stripped wire and seal and insert into connector housing.

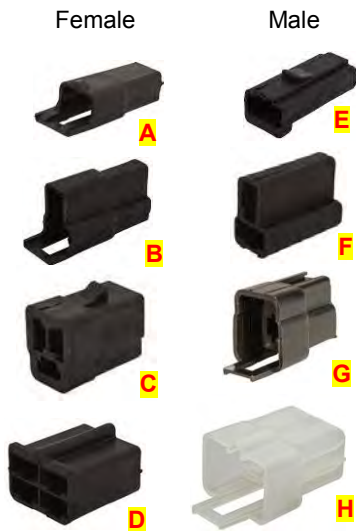


3. Once all terminals are inserted, lock wire and seals as shown above.



4. Male and female housings connect together until locked once steps 1, 2, and 3 are completed.

Packard Type 56 Series Connectors



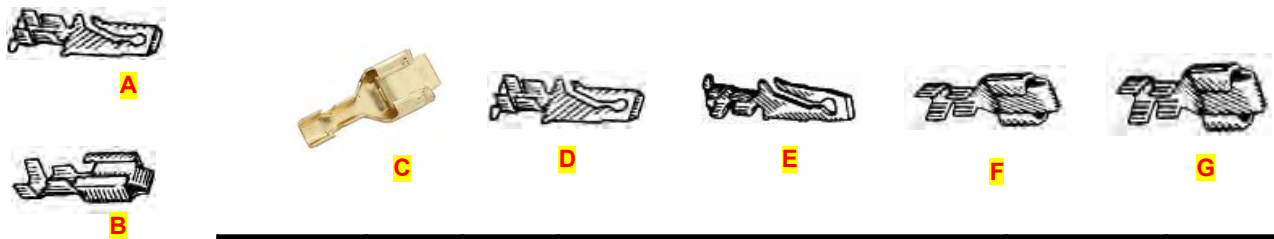
Packard Type 56 Series Housings

These quick connectors were OEM connectors on American cars from 50's, 60's, 70's and early 80's. They are available in 1-2-3 or 4 contact housings and housings have locking tabs for both male and female terminals

Female	Fig	Qt	Desc.	Male	Fig
476620	A	2	1-way housing	476622	E
476624	B	2	2-way housing	476626	F
476628	C	2	3-way housing	476630	G
476632	D	2	4-way housing	476634	H

Packard Type 56 Series Terminals

These quick connectors were OEM connectors on American cars from 50's, 60's, 70's and early 80's. They are available in 1-2-3 or 4 contact housings and housings have locking tabs for both male and female terminals



Male	Fig	Qt	Desc.	Female	Fig
476650	A	25	16-14 Tin Plated	476652	B
-----	--	25	16-14 Brass Unplated	476655	C
476657	D	25	16-14 Tin Plated	-----	--
476662	E	25	12-10 Tin Plated	-----	--
-----	--	25	16-14 Tin Plated 5/16" Tab	476680	F
-----	--	25	16-14 Tin Plated 3/8" Tab	476685	G

OEM Type Crimping Crimp Tools

This tool crimps 20-12 gauge OEM type (open barrel) automotive terminals. There are five crimping stages. Five dies make rollover crimps on both stranding (electrical crimp) and insulation (strain relief crimp). For use on AT and Packard connectors.

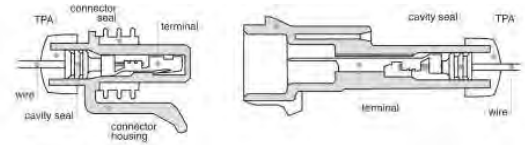


Part #	Fig	Qt	Desc.
476690	A	ea	OEM / 56 Series Crimper

Metri-Pack 280 Terminal Connectors

Metri-Pack Sealed 280 Series Connector Housings

Positive locking action ensures proper connections between housings. Made from heat stabilized, impact modified Polyamide 66 material. Tri-ribbed seal on female housing aids in resistance to harsh environments. Temp rating -40°C to 125°C



Housing (female)



Housing (male)



Female	O.E.M. #	Fig	Qt	Desc.	Fig	O.E.M. #	Male
476850	12065172	A	4	1-way housing	G	12065171	476870
476852	15300027	B	4	2-way housing	H	15300002	476872
476854	12040977	C	3	3-way housing	I	15300003	476874
476856	12129565	D	2	4-way housing	J	12129600	476876
476858	12084891	E	2	5-way housing	K	12186400	476878
476860		F	2	4-way housing Square	L		476880

Metri-Pack Terminal Position Assurance - TPA

Firmly holds terminals in connector housings. Helps reduce tension between terminal and wire connection. Made from heat stabilized, impact modified Polyamide 66 material.

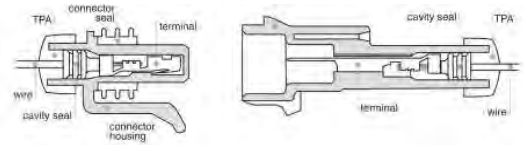


Female	O.E.M. #	Fig	Qt	Description	Fig	O.E.M. #	Male
476952	12065249	A	4	1-way TPA	A	12065249	476952
476954	15300014	B	4	2-way TPA	B	15300014	476954
476956	12034145	C	3	3-way TPA	D	15300015	476958
476960	15300016	E	2	4-way TPA	F	15324063	476962
476964	15324857	G	2	5-way TPA	H	12084673	476966

Metri-Pack 280 Terminal Connectors

Metri-Pack Sealed 280 Series Connector Housings

Positive locking action ensures proper connections between housings. Made from heat stabilized, impact modified Polyamide 66 material. Tri-ribbed seal on female housing aids in resistance to harsh environments. Temp rating -40°C to 125°C



Metri-Pack Terminals

Terminals are push-to-seat. Singular “tang” lock terminals into housing, ensuring proper insertion. Tin-plated for added protection from corrosion.



Male Pin	O.E.M. #	Qt	Desc.	O.E.M. #	Fem Socket
476912	12034047	25	20-18 ga term	12034046	476914
476916	12020116	25	18-16 ga term	12066214	476918
476920	12129498	25	14-12 ga term	12129494	476922
476924	12084586	25	10-12 ga term	12015858	476926

Metri-Pack Terminal Seals and Plugs

Self-lubricating, silicone seals have multiple “ribs” to guard against dust, moisture, engine compartment fluids and chemicals. Cavity seals are crimped to the terminal to assure positive position of the seal in the housing cavity. The cavity plug is designed to fill and seal.



Cavity Seals

Part #	O.E.M. #	Qt	Color	Description
476124	15324983	25	Red Seal	24-18 ga
476126	15324982	25	Green Seal	20-18 ga
476128	15324980	25	Gray Seal	16-14 ga
476130	15324981	25	Blue Seal	12 ga



Cavity Plug

Part #	O.E.M. #	Qt	Color	Description
476122	12010300	25	Green Plug	Cavity plug

Metri-Pack 150 Terminal Connectors

Metri-Pack Sealed 150 Series Connector Housings

Current capability: 0-14 amps

One terminal & one cable seal are required for each cavity & one secondary lock is required for each connector.

Cavity plugs are required for each unused cavity.



Female



Male



Female	O.E.M. #	No. of Cavities	O.E.M. #	Male
477-002	12052641	2	12162000	477-012
477-003	12110293	3	12129615	477-013
477-004	12162144	4	12162102	477-014
477-006	12052848	6	12125107	477-016
477-008	120479937	8	12047931	477-018



477-030

Secondary Lock	O.E.M. #	No. of Cavities
477-022	12052634	2
477-023	12052845	3
477-024	12047948	4
477-026	12052850	6
477-028	12066304	8
477-030	12047936	8

Metri-Pack 150 Terminal Connectors

Metri-Pack Sealed 150 Series Connector Housings

Current capability: 0-14 amps

One terminal & one cable seal are required for each cavity & one secondary lock is required for each connector.

Cavity plugs are required for each unused cavity.



Seal	O.E.M. #	Color	Wire Guage
477-040	15324974	Blue	20
477-042	15324973	Dark Red	16
477-044	15324976	White	18



Plug	O.E.M. #	Color
477-050	12059168	Dark Red



Part #	O.E.M. #	Wire Size
477-062	12077628	22-20
477-064	12045773	18-16

Part #	O.E.M. #	Wire Size
477-066	12084200	22-20
477-068	12048074	18-16



PACKARD CONNECTOR POSITION ASSURANCE
FOR USE ON ALL METRI PACK SEALED CONNECTIONS

Part #	O.E.M. #	Color
477-080	12020833	White

Deutsch: DT Terminal Connectors

DEUTSCH DT SERIES CONNECTORS

DT series connectors provide superior electrical properties and weather resistance in an attractive, economical and user friendly product. The Deutsch DT connector system is the preferred choice for many top NASCAR, IRL, CCWS, Formula 1, ALMS, Grand American Road Racing Association Racing Teams, and by leading manufactures due to its reliability, serviceability, and common terminal / crimper system.



Receptacle	O.E.M. #	No. of Cavities	O.E.M. #	Wedge
477-172	DT04-2P	2	W2P	477-202
477-174	DT04-3P	3	W3P	477-204
477-176	DT04-4P	4	W4P	477-206
477-178	DT04-6P	6	W6P	477-208
477-180	DT04-08PA	8	W8P	477-210
477-181	DT04-12PA	12	W12P	477-212



Plug	O.E.M. #	No. of Cavities	O.E.M. #	Wedge
477-160	DT04-2S	2	W2S	477-182
477-162	DT04-3S	3	W3S	477-184
477-164	DT04-4S	4	W4S	477-186
477-166	DT04-6S	6	W6S	477-188
477-168	DT04-08SA	8	W8S	477-190
477-170	DT04-12SA	12	W12S	477-192

Deutsch: DT Terminal Connectors

DEUTSCH DT SERIES CONNECTORS

DT series connectors provide superior electrical properties and weather resistance in an attractive, economical and user friendly product. The Deutsch DT connector system is the preferred choice for many top NASCAR, IRL, CCWS, Formula 1, ALMS, Grand American Road Racing Association Racing Teams, and by leading manufactures due to its reliability, serviceability, and common terminal / crimper system.



Gold Plated



Gold Solid Male Pin	O.E.M. #	Wire Size	O.E.M. #	Gold Solid Fem Socket
477-216	0460-202-1631	16-20	0462-201-1631	477-218
477-217	0460-215-1631	14	0462-209-1631	477-219



Nickle Plated



Nickle Solid Male Pin	O.E.M. #	Wire Size	O.E.M. #	Nickle Solid Fem Socket
477-224	0460-202-16141	18-20	0462-201-16141	477-220
477-225	0460-215-16141	14-16	0462-209-16141	477-221

Please Note: Crimping Solid Pins Requires Duetsch Tool



Stamped



Stamped Male Pin	O.E.M. #	Wire Size	O.E.M. #	Stamped Fem Socket
477-212	1060-14-0122	16-14	1062-14-0122	477-214
477-226	1060-16-0122	18-16	1062-16-0122	477-222



Sealing Plug Male Pin	O.E.M. #
477-230	114017

Deutsch: DTM Terminal Connectors

DEUTSCH DTM SERIES CONNECTORS

are the answer to all of your smaller wire gauge applications. Building on the DT design strengths, the DTM connector line was developed to fill the need for lower amperage, multi-pin, inexpensive connectors. The DTM Series offers the designer the ability to use multiple size 20 contacts, each with 7.5 amp continuous capacity, within a single shell.



Receptacle	O.E.M. #	No. of Cavities	O.E.M. #	Wedge
477-522	DTM04-2P	2	WM-2P	477-562
477-523	DTM04-3P	3	WM-3P	477-563
477-524	DTM04-4P	4	WM-4P	477-564
477-526	DTM04-6P	6	WM-6P	477-566
477-528	DTM04-08PA	8	WM-8P	477-568
477-530	DTM04-12PA	12	WM-12P	477-570



Plug	O.E.M. #	No. of Cavities	O.E.M. #	Wedge
477-542	DTM06-2P	2	WM-2S	477-582
477-543	DTM06-3P	3	WM-3S	477-583
477-544	DTM06-4P	4	WM-4S	477-584
477-546	DTM06-6P	6	WM-6S	477-586
477-548	DTM06-08PA	8	WM-8S	477-588
477-550	DTM06-12PA	12	WM-12S	477-590

Deutsch: DTM Terminal Connectors

DEUTSCH DTM SERIES CONNECTORS

are the answer to all of your smaller wire gauge applications. Building on the DT design strengths, the DTM connector line was developed to fill the need for lower amperage, multi-pin, inexpensive connectors. The DTM Series offers the designer the ability to use multiple size 20 contacts, each with 7.5 amp continuous capacity, within a single shell.



Solid

Solid Male Pin	O.E.M. #	Wire Size	O.E.M. #	Solid Fem Socket
477-622	0460-202-20141	20	0462-201-20141	477-624

Please Note: Crimping Solid Pins Requires Duetsch Tool



Stamped

Stamped Male Pin	O.E.M. #	Wire Size	O.E.M. #	Stamped Fem Socket
477-626	1060-20-0122	20	1062-20-0122	477-628



Sealing Plug	O.E.M. #
477-635	0413-204-2005

INSTALLATION



Deutsch: Terminal Tools

DT SERIES



477-820

DTM SERIES



477-822

DTP SERIES



477-824

DTHD SERIES



477-826

Part #	O.E.M. #	Color	Contact	Wire Guage
477-820	0411-310-1605	BLUE	16	18-16
477-822	0411-240-2005	RED	20	18-16
477-824	114010	YELLOW	12	14-12
477-826	114009	WHITE	4	6



Deutsch Contact Extraction Tool is a must have for any installation or removal of new or old harnesses and wiring.

Part Number	O.E.M. #
477-830	DT-RT-1



The A Series removal tool is a stainless steel tool designed with specific features that allow you to remove components from both the A Series receptacle and plug sealed connector assemblies.

Part Number	Description
477110	AT, ATM,ATP Series removal tool

Deutsch: Terminal Tools



PA-1461 Crimper; 20-12 AWG; 4-indent crimping of closed barrel D-sub contacts

Part #	O.E.M. #	Contact	Wire Guage
477-850	PA-1461	4 INDENT	20-12



PA-1462 Crimper; 26-20 AWG; 8-indent crimping of closed barrel D-sub contacts

Part #	O.E.M. #	Contact	Wire Guage
477-856	PA-1462	4 INDENT	26-20



DEUTSCH EIGHT INDENT CRIMPER
CRIMPS:20-12GA., UNIV. CRIMP TOOL, SOLID CONTACTS

Part #	O.E.M. #	Contact	Wire Guage
477-860	HDT-48-00	20.16,12	22-12



GREEN ADJUSTMENT SCREW FOR HDT-48-00 TOOL

Part #	O.E.M. #	Contact	Wire Guage
477-862	0426-209-000	20	22-20

Deutsch: Terminal Kits



This Deutsch Compatible AT Series Connector Kit contains an assortment of essential components needed for AT series connector assembly. With 224 pieces total, the kit holds all of the connector housings, terminals and wedges needed to make multiple wire connections. The kit is designed to provide the inventory needed for fleet maintenance or when working on multiple projects. Kit components are compatible with all Deutsch DT series and Amphenol AT series Connectors

Part #	Qt	Desc.
477-150	ea	AT Series kit



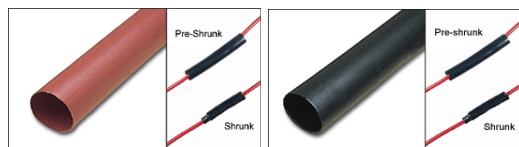
This Deutsch Compatible AT Series Connector Kit contains an assortment of essential components needed for AT series connector assembly. With 129 pieces total, the kit holds all of the connector housings, terminals and wedges needed to make multiple wire connections. The kit is designed to provide the inventory needed for fleet maintenance or when working on multiple projects. Kit components are compatible with all Deutsch DT series and Amphenol AT series Connectors

Part #	Qt	Desc.
477-155	ea	AT Series kit with crimper

Heat Shrink Tubing

- Flexible tubing absorbs bending stress and vibration
- Meltable inner wall bonds tube to wire and cable for a waterproof seal.
- Provides excellent strain relief and protection.
- 3 to 1 shrink ratio – one size covers multiple wire ranges.

Dual Wall Heat Shrink Tubing Medium Grade Heat Shrink Tubing



6" Length

Illustration	Pre-Shrunk	Qty	Black CFIS Part #	Clear CFIS Part #	Red CFIS Part #
	1/8	4	479-102	479-150	479-176
	3/16	4	479-104	479-152	479-178
	1/4	4	479-106	479-154	479-180
	3/8	4	479-108	479-156	479-182
	1/2	4	479-110	479-158	479-184
	3/4	4	479-112	479-160	479-186
	1"	4	479-114	479-165	479-188



Part #	Qt	Desc.
479-550	Ea	1/4" X 48"
479-554	Ea	3/8" X 48"

- Extra thick wall design provides maximum abrasion, vibration & stress resistance in heavy duty applications.
- Meltable inner wall sealant bonds tubing to wire and cable for a weatherproof, completely sealed connection.
- Ideal for over-the-road trucks, battery cable ends.
- 3 to 1 shrink ratio – one size covers multiple wire ranges.

Dual Wall Heat Shrink Tubing Medium Grade Heat Shrink Tubing



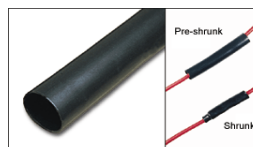
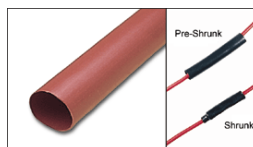
1-1/2" Length

Illustration	Pre-Shrunk	Qty	Black CFIS Part #	Red CFIS Part #
	.50	4	479-510	479-515
	.75	4	479-520	479-525
	1.10	2	479-530	479-535

Heat Shrink Tubing

- Extra thick wall design provides maximum abrasion, vibration & stress resistance in heavy duty applications.
- Meltable inner wall sealant bonds tubing to wire and cable for a weatherproof, completely sealed connection.
- Ideal for over-the-road trucks, battery cable ends.
- 3 to 1 shrink ratio – one size covers multiple wire ranges.

Heavy-Dual Wall Heat Shrink Tubing Premium Grade Heat Shrink Tubing



6" Length

Illustration	Pre-Shrunk	Qty	Black CFIS Part #	Red CFIS Part #
	.30	4	479-300	479-301
	.40	4	479-302	479-304
	.80	4	479-310	479-312
	1.10	2	479-314	479-316

- Clear tubing allows full visibility and inspection of electrical connection.
- Heavy duty tubing wall provides superior protection and durability.
- Meltable inner wall sealant bonds tubing to wire for a weatherproof seal and prevents vibration and flexing from pulling tubing away from wire and opening the seal.
- Provides excellent strain relief and protection.
- 3 to 1 shrink ratio – one size covers multiple wire ranges.
- Flame resistant, waterproof and resists hydraulic fluids, oil and chemicals.

Clear Heat Shrink Tubing Dual Wall Tubing

6" Length

Illustration	Pre-Shrunk	Qty	Color	Red CFIS Part #
	1/8	4	Clear	479-202
	3/16	4	Red	479-204
	1/4	4	Blue	479-206
	5/16	4	Yellow	479-208

Battery Terminals



Solder Pellets

Part #	Color	Item	Qt
490-120	Gray	4 Ga	10
490-130	Green	1 Ga	10
490-160	Black	1/0	10
490-170	Orange	2/0	10
490-180	Purple	3/0	10

SPLICES • 100% tin-plated copper alloy • Resists corrosion • Thick wall for strong crimp • Crimp or solder to cable



STRAIGHT TERMINALS • 100% tin-plated copper alloy • Bolt & shoulder nut included • Resists corrosion • Gauge and polarity stamped on terminal • Thick wall for strong crimp



Crimpable Terminals

Part #	Item	Type	Qt
491-120	4 Ga	Pos	2
491-121	4 Ga	Neg	2
491-125	2 Ga	Pos	2
491-126	2 Ga	Neg	2
491-127	1 Ga	Pos	2
491-128	1 Ga	Neg	2
491-135	1/0	Pos	2
491-136	1/0	Neg	2
491-141	2/0	Pos	2
491-142	2/0	Neg	2
491-145	3/0	Pos	2
491-146	3/0	Neg	2

FLAG TERMINALS • 100% tin-plated copper alloy • Bolt & shoulder nut included • Resists corrosion • Gauge and polarity stamped on terminal • Thick wall for strong crimp



Battery Ends Flag

Part #	Item	Type	Qt
491-166	2/0	Pos	2
491-168	2/0	Neg	2

Cable Splicers



Part #	Item	Qt
491-110	4 Ga	5
491-112	1-2 Ga	5
491-114	1/0	5
491-116	2/0	5
491-118	3/0	5
491-119	4/0	2

ELBOW TERMINALS • 100% tin-plated copper alloy • Bolt & shoulder nut included • Resists corrosion • Gauge and polarity stamped on terminal • Thick wall for strong crimp



Crimpable Elbow Terminals

Part #	Item	Type	Qt
491-160	2/0	Pos	2
491-162	2/0	Neg	2

Battery Terminals

LOCKING ANTI-ROTATING STACKABLE LUGS • 100% tin-plated copper alloy • Resists corrosion • Thick wall for strong crimp • Gauges identified on lugs • Crimp or solder to cable • 3/8" hole size

Battery Ends Stackable

Part #	Item	Qt
491-178	2/0	2
491-180	3/0	2



GROUP 31 NUTS • Closed top has 3/8"-16 UNC thread and 9/16" hex head • Open top has 3/8"-16 UNC thread and 9/16" hex head.

S/S Battery Nut

Part #	Item	Qt
491-184	Nut	5



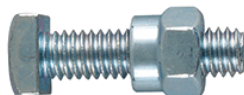
GROUP 31 OR STUD STYLE CONVERSION POSTS • Use to convert 3/8" stud type terminals to post type terminals

Battery Nut

Part #	Item	Qt
491-187	universal	5



BATTERY BOLT WITH SHOULDER NUT • Zinc-plated • 5/16"-18 x 1-1/4" bolt • 5/16"-18 hex nut



Part #	Item	Qt
491-188	5/16-18 X 1-1/4 Bolt & Nut	25
491-189	5/16-18 X 1-1/2 Bolt & Nut	25
491-190	5/16-18 Nut Only	25

BRASS BOLT EXTENDERS • For adding direct to battery auxiliary connections

1-3/4" Short Side Bolt **A** 3/8-16 Thread



1-13/16" Short Side Bolt **B** 3/8-16 Thread



1-7/16" Short Side Bolt **C** 5/16-18 Thread



Part #	Item	Fig	Qt
491-186	1-3/4	A	2
491-185	1-13/16	B	2
491-183	1-7/16	C	2



OE REPLACEMENT SIDE TERMINAL BOLTS • 3/8"-16 UNC thread • Use long bolt and/or spacer for dual cable hook-up • Bolt head 5/16"



Part #	Item	Fig	Qt
491-194	short	A	5
491-196	long	B	5

Battery Terminals

EXTRA HEAVY DUTY COPPER LUGS • Thicker walls for greater strength and conductivity • Used for severe-duty applications • Gauge stamped on lug for easy identification • Lugs can be crimped or soldered and are stackable • Tin-plated copper



Part #	Item	Size	Qt
491-204	4 Ga	3/8	5
491-218	6 Ga	5/16	5
491-220	6 Ga	3/8	5
491-228	1-2 Ga	3/8	5
491-230	1/0	3/8	5
491-232	1/0	1/2	5
491-233	2/0	5/16	5
491-234	2/0	3/8	5
491-236	2/0	1/2	5
491-238	3/0	3/8	5
491-240	3/0	1/2	5
491-244	4/0	3/8	2
491-246	4/0	1/2	2

Heavy-Duty Truck Terminal

3-WAY TOP POST
COMMERCIAL TERMINAL
Fits 2 to 4/0 gauge cables



Part #	Type	Qt
491-320	3-way	2

Light-Duty Battery Terminal



Part #	Item	Qt
491-305	Univ End	5
491-303	Card of 10	Ea

Medium-Duty Battery Terminal



Part #	Item	Qt
491-310	Univ End	5
491-308	Card of 10	Ea

Heavy-Duty Battery Terminal



Part #	Item	Qt
491-312	Univ	5

Battery Terminals

Marine Battery Terminal



Part #	Item	Type	Qt
491-343	2/0	Universal Card	Ea
491-345	2/0	Universal	5
491-350	2/0	Positive	2
491-352	2/0	Negative	2

Military Ordinance Terminal



5/16" Battery Bolt & Nut
3/8" Lug Bolt & Nut

Part #	Item	Type	Qt
491-362	2/0	Positive	2
491-364	2/0	Negative	2

Side Terminal



Part #	Type	Fig	Qt
491-277	Univ (card) 7ea	A	7
491-280	Univ End	B	5
491-285	Replacement Bolt	C	5

Battery Terminals

COPPER LUGS

- Lugs can be crimped or soldered and are stackable • Gauge stamped on lug for easy identification • Flared ends for easy entry • UL Listed



Copper Lugs

Part #	Item	Size	Qt
492-530	8 Ga	#10	10
492-532	8 Ga	1/4	10
492-534	8 Ga	5/16	10
492-536	8 Ga	3/8	10
492-538	8 Ga	1/2	10
492-540	6 Ga	#10	10
492-542	6 Ga	1/4	10
492-544	6 Ga	5/16	10
492-546	6 Ga	3/8	10
492-548	6 Ga	1/2	10
492-552	4 Ga	1/4	10
492-554	4 Ga	5/16	10
492-556	4 Ga	3/8	10
492-558	4 Ga	1/2	10
492-562	2 Ga	1/4	10
492-564	2 Ga	5/16	10
492-566	2 Ga	3/8	10
492-568	2 Ga	1/2	10

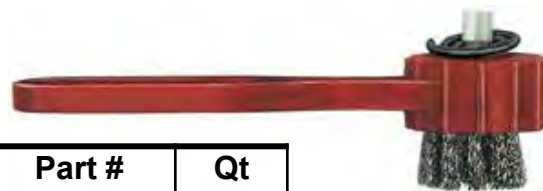


Copper Lugs

Part #	Item	Size	Qt
492-572	1 Ga	1/4	10
492-574	1 Ga	5/16	10
492-576	1 Ga	3/8	10
492-578	1 Ga	1/2	10
492-583	1/0	1/4	5
492-584	1/0	5/16	5
492-586	1/0	3/8	5
492-588	1/0	1/2	5
492-592	2/0	1/4	5
492-594	2/0	5/16	5
492-596	2/0	3/8	5
492-598	2/0	1/2	5
492-605	3/0	5/16	5
492-606	3/0	3/8	5
492-608	3/0	1/2	5
492-612	4/0	3/8	5
492-614	4/0	1/2	5

Battery Terminals Tools

- Side Terminal Battery Cleaner
- Coil spring cutters polish the battery contacts while stainless steel brushes clean the cable terminals.



Part #	Qt
493-010	EA

- Battery Post & Clamp Cleaning Tool
- This tool cleans both post and terminals. Tapered reamer assures correct angles on terminal clamps



Part #	Qt
493-015	EA

- Battery Brush
- Cleans dirt and corrosion from post type battery terminals and cable clamps.
- Heavy-duty stainless steel wire.
- Case is made of high impact plastic that will not weaken in cleaning solutions



Part #	Qt
493-020	EA

HAMMER CRIMPER

- Crimping tool driven by hammer impact with locking lever for easy loading
- Crimps up to 2/0 battery terminals and 8 guage to 4/0 standard Lugs plus non-insulated terminals.
- Takes the place of 3 different tools.
- One nest and one indenter eliminates changing tooling to crimp different terminals.
- Extremely compact – just 4” high, fits anywhere.
- Strike ram with a hammer for perfect connections.
- Crimping scale on side of tool makes crimping easy and prevents under-crimping.
- Nested design eliminates over-crimping.
- Ideal for truck garages, fleet, automotive service, off-road equipment, Farms.



Part #	Qt
413-070	EA

Battery Terminals Tools

CABLE CUTTER

- For cutting copper or aluminum
- Precise blades give clean cut, minimum distortion.
- Contoured grips provide safe and easy operation.
- Heavy-duty construction for lasting durability.



Part #	Qt
413-065	EA

HEAVY DUTY CRIMPING TOOL (8 gauge to 1/0)

- Unique triangular crimp exerts equal pressure around the terminal, centers the cable and forms a solid mass of copper.
- Works on any battery terminal or lug.
- Crimps AWG or metric sizes.
- Crimps battery terminals, lugs and conventional stamped terminals of any thickness quickly and accurately.
- Toggle action head distributes equal force on all sides of the terminal to eliminate pinching and fracturing.
- Simple two finger die setting adjustments – no rotating dies, pins or springs to miss-align or set incorrectly.
- Compact design fits easily into tight fitting areas.
- Crimps from 8 gauge to 1/0



Part #	Qt
413-075	EA

HEAVY DUTY CRIMPING TOOL (8 gauge to 4/0)

- Unique triangular crimp exerts equal pressure around the terminal, centers the cable and forms a solid mass of copper.
- Works on any battery terminal or lug.
- Crimps AWG or metric sizes.
- Crimps battery terminals, lugs and conventional stamped terminals of any thickness quickly and accurately.
- Toggle action head distributes equal force on all sides of the terminal to eliminate pinching and fracturing.
- Simple two finger die setting adjustments – no rotating dies, pins or springs to miss-align or set incorrectly.
- Compact design fits easily into tight fitting areas.
- Crimps from 8 gauge to 1/0



Part #	Qt
413-080	EA

Wiring Tools

HEAVY DUTY CRIMPER TOOL

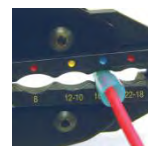
- Crimps vertically all wire end connections, including flags, closed end and crimp sleeves.
- Crimps insulated & non-insulated terminals from 26 to 6 gauge.
- True circular knife-edge strippers give clean stripping without rotating the tool.
- Crimping stations provide exceptional crimp force with minimum user efforts.
- Built-in wire cutter at tip gives easy cutting.
- High strength, heat treated carbon steel construction gives greater strength, reliability and longer life.



Part #	Item	Qt
413-125	Crimper Tool	Ea

HEAT SHRINK TERMINAL RATCHETING CRIMPER

- DESIGNED FOR HEAT SHRINK TERMINALS – Each crimp station is rounded to create a professional crimp without cutting or damaging the terminal's heat shrink insulation.
- PERFORMS PERFECT CRIMPS – EVERY TIME – Ratcheting mechanism locks in place and assures a complete crimp cycle is achieved before the tool opens.
- USE ON HEAT SHRINK & PLAIN TERMINALS – Parallel oval jaws properly crimp heat-shrink, nylon and vinyl insulated terminals.
- CRIMPS UP TO 8 GAUGE TERMINALS – Eliminates the need for a second crimping tool with the addition of a fourth 8 gauge crimping nest. Crimps terminals from 22 gauge to 8 gauge using one tool.
- 4 COLOR CODED CRIMP STATIONS – Each crimp station is labeled and color coded.
- ERGONOMIC DESIGN – Comfortable, cushioned rubber grips reduce hand fatigue caused by repetitive use.



Release at any time



- MAKE PROFESSIONAL CRIMPS WITH EASE
- SELF ALIGNING JAWS
- SAFETY RELEASE SWITCH

Part #	Item	Qt
413-130	RATCHETING Crimping Tool	Ea

THE AL-MARK-15 WIRE MARKER DISPENSER

is a user friendly, compact, convenient and refillable marker system that offers pre-cut Tyvek markers with acrylic adhesive.

Part #	Item	Qt
413-525	dispenser	Ea



Test Clips and Insulators

Illustration	Description	Qty	Red CFIS Part #
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10 amp Length 2" – Jaws open to 5/16"Nickle Plated

5

493-100

Illustration	Length	Max Opening	Qty	Red CFIS Part #	Black CFIS Part #
--------------	--------	-------------	-----	-----------------	-------------------



1-1/4"

1/4"

5

493-101

493-102

1-3/8"

5/16"

5

493-103

493-104

1-5/8"

7/16"

5

493-105

493-106

2"

7/16"

5

493-107

493-108

Illustration	Length	Max Opening	Qty	Red CFIS Part #	Black CFIS Part #
--------------	--------	-------------	-----	-----------------	-------------------



10 AMP

2-1/16"

19/32"

5

493-109

493-110

20 AMP

2-1/2"

3/4"

5

493-111

493-112

30 AMP

2-3/4"

7/8"

5

493-113

493-114

50 AMP

4-1/8"

1-1/2"

5

493-115

493-116

Illustration	AMP	LENGTH	Qty	Red CFIS Part #	Black CFIS Part #
--------------	-----	--------	-----	-----------------	-------------------



10 AMP

2-1/4

2

493-118

493-119

30 AMP

3"

2

493-120

493-121

50 AMP

3"

2

493-122

493-123

Illustration	DESC	Qty	Red CFIS Part #	Black CFIS Part #
--------------	------	-----	-----------------	-------------------



- 600 AMP 50 Pound clamping force.
- Extra heavy duty. Securely clamps to post.
- Specially designed to grip to side terminals and post terminals

EA

493-125

493-127

Wire and Cable

BATTERY CABLE: Full-gauge copper conductor wire ideal for connecting a battery to switch, starter, and ground. Tough, high temperature resistant PVC insulation is durable enough to handle heavy-duty automotive demands. Copper stranding is highly conductive maximizing current transfer while remaining flexible for easy installation.

Voltage: Rated at 60 Volts or less Temperature: Rated -50°C (-58°F) to 105°C (221°F) Specifications: SAE J1127, SAE J378

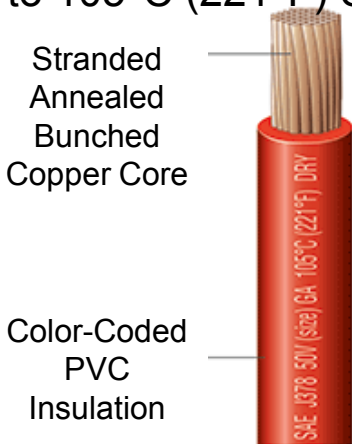
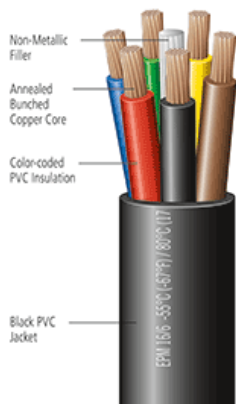


Illustration 25' ROLLS	Outside Diam.	Wire Gauge	Red CFIS Part #	Black CFIS Part #
	.380	4	495-006	495-008
	.450	2	495-012	495-014
	.490	1	495-016	495-017
	.550	1/0	495-020	495-022
	.605	2/0	495-026	495-028
	.695	3/0	495-031	495-032

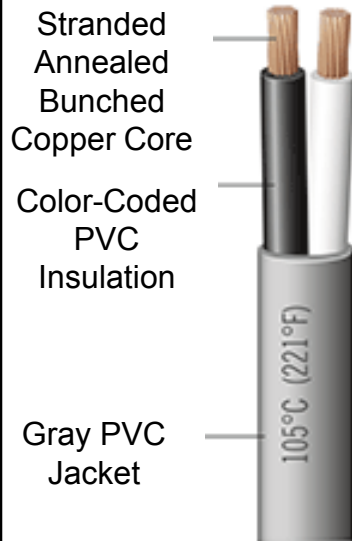
TRAILER CABLE: General-purpose primary wires encased in a high quality, PVC jacket. Specially designed for reliability as an integral part of the brake and safety system. Heavy-duty compact cable protects insulated conductors against weathering, chemicals, and abrasion. Color-coded conductors enable easy identification. Voltage: Rated at 60 Volts or less Temperature: Rated -65°C (-85°F) to 80°C (176°F) Specifications: Inner wires meet SAE J1128, SAE J378



Wire Colors 100' ROLLS	# wire	Wire Gauge	Black CFIS Part #
YELLOW/RED/GREEN/BROWN	4	16	496-005
YELLOW/RED/GREEN/BROWN	4	14	496-020
RED/GRN/BRN/WHT/BLK/YEL	6	14	496-025
RED/GRN/BRN/WHT/BLK/YEL/B LU	7	14	496-026
BLU/WHT/BRN/GRN/RED/YEL/B LK	7	6-14/1-12	496-027
WHT/BLK/YEL/RED/GRN/BRN/B LU	7	6-12/1-10	496-029

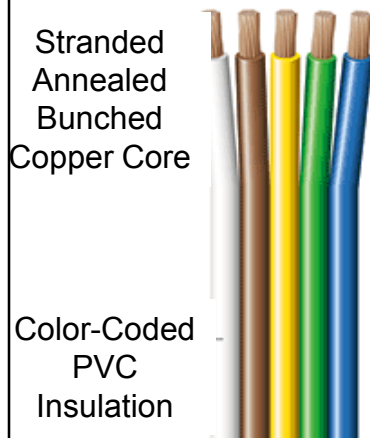
Wire and Cable

JACKETED DUPLEX WIRE: Two-conductor, general-purpose primary wires covered in a high quality PVC jacket. Ideal for use in truck, bus, tractor, light-duty boats, and general service applications. Heavy-duty compact cable protects insulated conductors against weathering, chemicals, and abrasion. Color-coded conductors enable easy identification. Voltage: Rated at 60 Volts or less Temperature: Rated -40°C (-40°F) to 80°C (176°F) Specifications: Inner wires meet SAE J1128, SAE J378



Wire Colors 100' ROLLS	# wire	Wire Gauge	Black CFIS Part #
BLACK/WHITE	2	16	496-030
BLACK/WHITE	2	14	496-031
BLACK/WHITE	2	12	496-032
BLACK/WHITE	2	10	496-033
BLACK/GREEN/WHITE	3	14	496-034
WHT/GRN/RED/BLK	4	14	496-035

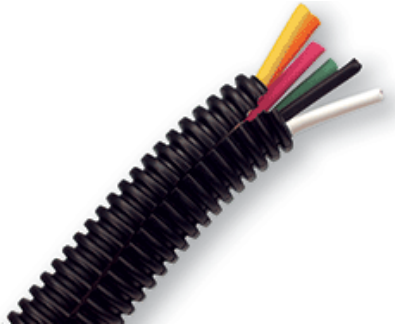
BONDED PARALLEL WIRE: Multiple primary wires parallel bonded with color-coding for identification purposes. Ideal for use in RVs, marine, and utility trailer applications. Built to stay together under the toughest operating conditions yet easy to separate at the end of a run for final terminal connection. All-copper stranded core is highly conductive maximizing current transfer while remaining flexible for easy installation. Voltage: Rated at 60 Volts or less Temperature: Rated -40°C (-40°F) to 80°C (176°F) Specifications: SAE J1128, SAE J378



Wire Colors 100' ROLLS	# wire	Wire Gauge	Black CFIS Part #
RED/BLACK	2	18	496-037
BROWN/YELLOW/GREEN	3	16	496-040
WHITE/BROWN/YELLOW/GREEN	4	14	496-044
EN	3	14	496-043
BROWN/YELLOW/GREEN	2	14	496-042
RED/BLACK			

Wire Protecting Loom

Convolute Split Loom



- Black polyethylene corrugated loom is durable; split for easy installation.
- For protection of wires on cars, buses, trucks, and boats.
- Coiled and boxed. • Temp rating of 93°C (200°F) • RoHS Compliant

Part #	Item	Qt
498-114	1/4	100'
498-116	3/8	100'
498-118	1/2	100'
498-119	5/8	50'
498-120	3/4	50'
498-122	1"	25'

SPIRAL CUT LOOM



- Black polyethylene spiral wrap loom
- For protection of wires on cars, buses, trucks, and boats.
- Resists abrasion, chemicals, fuel, oil, moisture and vibration.

Allows flexibility routing and lead-out of wiring and cable.
Temp rating of 93°C (200°F) • RoHS

Part #	Item	Qt
498-135	1/8	100'
498-140	1/4	100'
498-145	3/8	100'
498-155	1/2	100'
498-180	5/8	100'
498-186	1"	50'

SPIRAL HOSE GUARD



PolyGuard™ -- Heavy-duty polyethylene provides protection in rugged operating conditions. Great for bundling highpressure hose lines. Cut edges can be smoothed by applying heat. (CAUTION: This material will support combustion). Color: Black
Temperature range: -0o F to +200o F



Part #	Item	Qt
A-HG-150	1-1/2"	50'

Tube Clamps

Wiring, Loom & Tube Clamps

Nylon clamps help reduce vibration while holding the loom or cable in place preventing movement and chafing. Typical application include loom, wire, wire harness and or hydraulic hose

Nylon Tubing Clamp



Part #	Hole Diam.	Width	Item	Qt
499-002	3/16	3/8	3/16	25
499-004	3/16	3/8	1/4	25
499-005	3/16	3/8	5/16	25
499-006	3/16	3/8	3/8	25
499-008	3/16	3/8	1/2	25
499-010	3/16	1/2	5/8	25
499-011	3/16	1/2	3/4	25
499-012	3/16	1/2	1"	25

Wiring, Loom & Tube Clamps

Plated steel clamps help reduce vibration while holding the loom or cable in place preventing movement and chafing. Typical application include loom, wire, wire harness and or hydraulic hose

Metal Tubing Clamp 1/4" Mounting Hole



Part #	Hole Diam.	Width	Item	Qt
499-132	9/32	1/2	3/16	25
499-134	9/32	1/2	1/4	25
499-135	9/32	1/2	5/16	25
499-136	9/32	1/2	3/8	25
499-138	9/32	1/2	1/2	25
499-140	9/32	1/2	5/8	15
499-142	9/32	1/2	3/4	10
499-143	9/32	1/2	7/8	10
499-144	9/32	1/2	1	10

Metal Tubing Clamp 3/8" Hole

Part #	Hole Diam.	Width	Item	Qt
499-254	13/32	3/4	1/4	15
499-255	13/32	3/4	5/16	15
499-256	13/32	3/4	3/8	10
499-258	13/32	3/4	1/2	10
499-260	13/32	3/4	5/8	10
499-262	13/32	3/4	3/4	10
499-264	13/32	3/4	7/8	10
499-266	13/32	3/4	1	10
499-270	13/32	3/4	1-1/4	10
499-274	13/32	3/4	1-1/2	5
499-275	13/32	3/4	1-3/4	5
499-282	13/32	3/4	2	5

Tube Clamps

Wiring, Loom & Tube Clamps

Steel with neoprene jacket clamps help reduce vibration while holding the loom or cable in place preventing movement and chafing. Typical application include loom, wire, wire harness and or hydraulic hose

Padded H/D Tubing Clamp 1/4" Hole



Part #	Hole Diam.	Width	Item	Qt
499-304	17/64	1/2	1/4	10
499-306	17/64	1/2	3/8	10
499-308	17/64	1/2	1/2	10
499-310	17/64	1/2	5/8	10
499-312	17/64	1/2	3/4	10
499-314	17/64	1/2	7/8	10
499-316	17/64	1/2	1	5
499-318	17/64	1/2	1-1/4	5
499-319	17/64	1/2	1-3/8	5
499-320	17/64	1/2	1-1/2	5
499-322	17/64	1/2	1-3/4	5
499-324	17/64	1/2	2	5

Padded H/D Tubing Clamp 3/8" Hole



Part #	Hole Diam.	Width	Item	Qt
499-404	13/32	1/2	1/4	10
499-406	13/32	1/2	3/8	10
499-408	13/32	1/2	1/2	10
499-410	13/32	1/2	5/8	5
499-412	13/32	1/2	3/4	5
499-413	13/32	1/2	7/8	5
499-414	13/32	1/2	1	5
499-416	13/32	1/2	1-1/8	5
499-418	13/32	1/2	1-1/4	5
499-420	13/32	1/2	1-3/8	5
499-421	13/32	1/2	1-1/2	5
499-422	13/32	1/2	1-5/8	5
499-424	13/32	1/2	1-3/4	5
499-426	13/32	1/2	1-7/8	5
499-430	13/32	1/2	2	5

Tube Clamps

Wiring, Loom & Tube Clamps

Stainless steel with neoprene jacket clamps help reduce vibration while holding the loom or cable in place preventing movement and chafing. Typical application include loom, wire, wire harness and or hydraulic hose

Stainless Tubing Clamp 1/4" Hole



Part #	Hole Diam.	Width	Item	Qt
499-504	17/64	1/2	1/4	10
499-506	17/64	1/2	3/8	10
499-508	17/64	1/2	1/2	10
499-510	17/64	1/2	5/8	10
499-512	17/64	1/2	3/4	10
499-516	17/64	1/2	1	10
499-520	17/64	1/2	1-1/4	10
499-524	17/64	1/2	1-1/2	10
499-532	17/64	1/2	2	5

Heavy Duty Hose Tube Clamps

Description:









Used for support for long hose lengths. Also aids proper hose routing where abrasion or heat exists. Material: ASTM A1008 CS type B Steel with 1/32" thick black vinyl cushion.



Part #	Hole Diam.	Width	Item	Qt
499-476	1/2"	1"	1-1/4	Ea
499-478	1/2"	1"	1-1/2	Ea
499-482	1/2"	1"	2	Ea
499-486	1/2"	1"	2-1/2	Ea
499-488	1/2"	1"	2-3/4	Ea



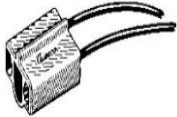


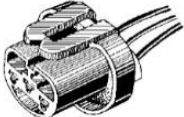
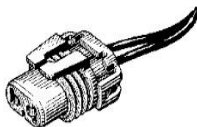
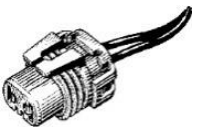
Pig Tails and Sockets

Electrical Plugs

Part #	Wire	Item	Qt	
496-650	16-14	Male	5	
496-651	16-14	Female	5	
496-652	16-14	Female 90*	5	
496-654	16-14	2-Way	2	
496-658	16-14	Male 3-Way	2	
496-659	16-14	Female 3-Way	2	
496-662	16-14	Male 4-Way	2	
496-663	16-14	Female 4-Way	2	

Pig Tails and Sockets

Headlight Sockets

Part #	Item	Qt	
500-125	194 194A 158	5	
500-130	194 194A 158	2	
500-185	2Prong	Ea	
500-195	2 & 3 Prong	Ea	
500-205	Male 3-Way	Ea	
500-215	9007 9004	Ea	
500-225	9006	Ea	
500-230	9005	Ea	

Headlamps and Bulbs



Item	Picture
510-002 896	
510-006 899	
510-020 9003LL	
510-023 HIB9003	
510-025 9004LL	
510-028 HIB9004	
510-035 9005	
510-040 9005SXLL	
510-043 HIB9005	
510-045 9006	

Item	Picture
510-050 9006XSLL	
510-053 HIB9006	
510-055 9007LL	
510-058 HIB9007L	
510-065 9008	
510-125 H3 55W	
510-130 H4 100/55W	
510-135 H3 100W	
510-140 9H4 60/55W	
510-160 H1-11 60/55W	

Headlamps and Bulbs

SEALED BEAM LAMPS



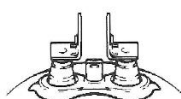
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- Truck.
- Agricultural.
- Construction.



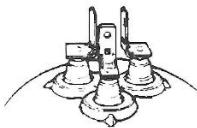
2 Screw
Terminals



2 Slip-On
Terminals

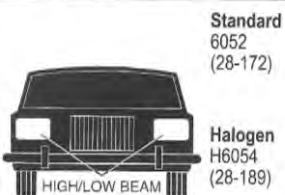


2 Contact
Lugs

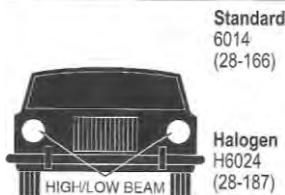


3 Contact
Lugs

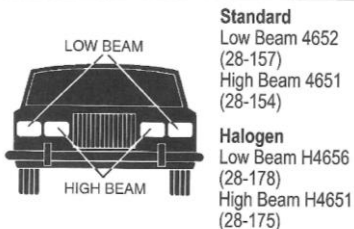
2 Headlight System (Square)



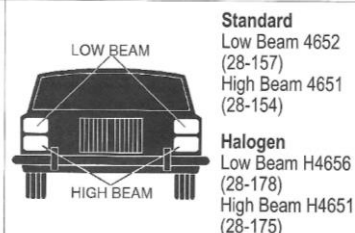
2 Headlight System (Round)



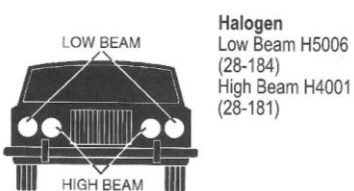
Horizontal 4 Headlight System (Square)



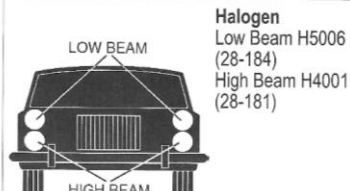
Vertical 4 Headlight System (Square)



Horizontal 4 Headlight System (Round)



Vertical 4 Headlight System (Round)








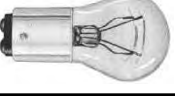

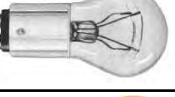








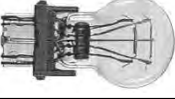



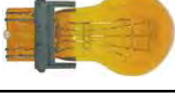

Item	Picture
510-310 GE 4411	
510-350 GE 4651	
510-352 GE 4656	
510-354 GE 4666	
510-364 GE 5024	
510-370 GE 5054	
510-378 GE 6024	
510-382 GE 6054	

Headlamps and Bulbs

Item	Picture	Item	Picture	Item	Picture	Item	Picture
511-014 PR2 / K2		511-042 63		511-060 211-2		511-110 912/921	
511-018 PR3		511-043 327		511-065 211		511-112 916	
511-020 24		511-044 330		511-070 67		511-113 916A	
511-025 37		511-045 57		511-075 89		511-115 198	
511-026 70		511-046 256		511-077 90		511-117 199	
511-027 73		511-047 1816		511-080 97		511-120 1003	
511-028 74		511-049 1873		511-083 623		511-125 1004	
511-030 168		511-050 1892		511-085 561		511-130 1034	
511-035 194		511-052 1893		511-090 571		511-135 1073 1076	
511-037 194A		511-055 1895		511-095 904 906		511-139 1141	
511-040 53		511-057 456		511-098 906A		511-140 1142	

Headlamps and Bulbs

Item	Picture
511-145 1156	
511-146 1156NA	
511-147 1156DC	
511-150 1157	
511-153 1157A	
511-155 1157NA	
511-158 1226	
511-160 2057	
511-165 2057NA	
511-167 2357	
511-168 2357NA	

Item	Picture
511-170 3057	
511-180 3057NA	
511-184 3155	
511-185 3156	
511-186 3156 N/A	
511-190 3157	
511-200 3157 N/A	
511-205 3456LL	
511-210 3457	
511-211 3457NA	
511-212 3757	

Item	Picture
511-213 3757NA LL	
511-214 4157LL	
511-215 4157NA LL	
511-218 7440	
511-221 7443	
511-225 PC74	
511-228 PC161	
511-230 PC168	
511-235 PC194	

Reference Material

MINIATURE LAMPS - ILLUSTRATIONS

Miniature Bayonet (G3-1/2)

No. 53 (28-003)
No. 1445 (28-082)
No. 51 (28-1600)



S.C. Bayonet (B6)

No. 105 (28-019)
No. 1003 (28-047)



D.C. Bayonet (S8)

No. 1076 (28-055)
No. 1156DC (28-552)
No. 1176 (28-079)
No. 94 (28-1606)
No. 1142 (28-1613)
No. 1295NA (28-1614)
No. 7225 (28-1647)



Miniature Bayonet (G4-1/2)

No. 55 (28-005)
No. 57 (28-007)
No. 293 (28-035)
No. 1895 (28-092)



S.C. Bayonet (S8)

No. 93 (28-015)
No. 199 (28-031)
No. 1073 (28-053)
No. 1129 (28-061)
No. 1141 (28-063)
No. 1156 (28-071)
No. 1156NA (28-072)
No. 1203 (28-553)
No. 1683 (28-557)
No. 7506 (28-1648)
No. 7511 (28-1668)



D.C. Bayonet (G6)

No. 90 (28-013)
No. 1252 (28-555)
No. 68 (28-1601)



Miniature Bayonet (T3-1/4)

No. 1816 (28-083)
No. 1850 (28-084)
No. 1889 (28-085)
No. 1891 (28-087)
No. 1892 (28-089)
No. 1893 (28-091)
No. 755 (28-1610)
No. 1815 (28-1615)
No. 1847 (28-1616)
No. 1829 (28-1636)
No. 313 (28-1664)



S.C. Bayonet (RP-11)

No. 1143 (28-065)
No. 1195 (28-081)
No. 1133 (28-1612)



D.C. Bayonet (B6)

No. 1004 (28-049)



BA7S (T2-1/4)

3898 (28-1641)



S.C. Bayonet (G6)

No. 1143 (28-065)
No. 1195 (28-081)
No. 1133 (28-1612)



D.C. Bayonet (B6)

No. 1004 (28-049)



BA 15s (B6)

5007 (28-1642)
5008 (28-1643)



S.C. Bayonet (G6)

No. 63 (28-008)
No. 67 (28-009)
No. 89 (28-011)
No. 97 (28-017)
No. 631 (28-041)
No. 1155 (28-069)
No. 1251 (28-554)



D.C. Indexed (S8)

No. 198 (28-030)
No. 1034 (28-051)
No. 1154 (28-067)
No. 1157 (28-073)
No. 1157NA (28-077)
No. 2057 (28-095)
No. 2057NA (28-097)
No. 3496 (28-101)
No. 2357 (28-106)
No. 2357NA (28-107)
No. 7528 (28-1650)
No. 7537 (28-1669)
No. 2057NALL (28-1670)



PC Base (T3-1/4)

No. PC161 (28-024)
No. PC168 (28-026)
No. PC194 (28-029)



S.C. Bayonet (T6)

No. 349 (28-102)
No. 795 (28-1611)



2 Pin Base (Halogen)

No. 891 (28-548)



S.C. Grooved (Single End)

SE1274 (28-575)



Reference Material

MINIATURE LAMPS - ILLUSTRATIONS

<p>Wedge (T5) No. 904 (28-042) No. 906 (28-043) No. 912 (28-045) No. 921 (28-046) No. 916 (28-549) No. 916NA (28-550) No. 922 (28-551)</p>		<p>Wedge (S8) No. 3357LL/3457LL (28-1625)(28-1626) No. 4114K (28-1693)</p>		<p>Socket & Lamp Assembly (T1-3/4) No. PC74 (28-1605) No. 2721MF (28-1639)</p>	
<p>Wedge (T3-1/4) No. 158 (28-021) No. 161 (28-023) No. 168 (28-025) No. 194 (28-027) No. 194NA (28-028) No. 3652 (28-103) No. 194B (28-540) No. 193 (28-1607) No. 2825 (28-1640) No. 656 (28-1665) No. 657 (28-1666)</p>		<p>Wedge (Halogen) No. 2040 (28-1617)</p>		<p>Rigid Loops (T3) No. 561 (28-037) No. 562 (28-039)</p>	
<p>Wedge (GT8) No. 3155 (28-104) No. 3156 (28-105) No. 3057 (28-108) No. 3057LL (28-1622) No. 3057NA (28-109) No. 3157 (28-110) No. 3157NA (28-111) No. 3156NA (28-113) No. 3157LL (28-1623) No. 3157NALL (28-1624) No. 3457 (28-558) No. 3457NA (28-559) No. 3157NA-SA (28-561) No. 3757AK (28-1667) No. 3057NALL (28-1671) No. 3156LL (28-1672) No. 3456LL (28-1673) No. 4156LL (28-1674) No. 4157LL (28-1627) No. 4157NALL (28-1628)</p>		<p>Sub Miniature Wedge (T1-3/4) No. 37 (28-001) No. 70 (28-1602) No. 73 (28-1603) No. 74 (28-1604) No. 2723 (28-1618) No. 2721 (28-1638)</p>		<p>End Caps (T3) No. 211-2 (28-032) No. 212-2 (28-033) No. 214-2 (28-034)</p>	
<p>Wedge (T2-3/4) No. 24 (28-098) No. 24NA (28-099)</p>		<p>Cone Shaped Caps (Double End) DE3021 (28-570) DE3022 (28-571)</p>		<p>End Caps (T4-3/4) No. 577 (28-040)</p>	
<p>Wedge (T6- 1/2) No. 7440NA (28-1619) No. 7443NA (28-1620)</p>		<p>Cone Shaped Caps (Double End) DE3175 (28-572)</p>		<p>Cone Shaped Caps (Double End) DE3423 (28-573) DE3425 (28-574)</p>	
<p>Festoon (T3-1/4) 6411 (28-1644) 6418 (28-1645) 6423 (28-1646) 6429 (28-1675)</p>		<p>Cone Shaped Caps (Double End) DE3175 (28-572)</p>		<p>Festoon (T3-1/4) 6411 (28-1644) 6418 (28-1645) 6423 (28-1646) 6429 (28-1675)</p>	

Fuse Accessories

Conveniently and easily tests ATO® and MINI® blade fuses either in or out of the fuse block. Indicator light on tester glows bright green when fuse is good. Fuse puller end allows for easy fuse removal and replacement. 24V maximum.



Part #	Qt
512-140	EA

Conveniently removes and installs ATC / ATO® and MINI® blade fuses either in or out of the fuse block.



Part #	Qt
512-150	EA

Conveniently removes and installs Glass, ceramic, ATC / ATO® and MINI® blade fuses either in or out of the fuse block.



Part #	Qt
512-154	EA

Conveniently removes and installs Maxi blade fuses either in or out of the fuse block.



Part #	Qt
512-158	EA

Fuse taps fit over an existing blade fuse leg for an additional non-fused circuit. Includes crimp-on connector that attaches easily to the power lead for electronic gear.



Glass Fuse tap

Part #	Qt
512-200	25



ATO Fuse tap

Part #	Qt
512-204	25



ATC Fuse tap

Part #	Qt
512-206	25



3-WAY TAP Adapter

Part #	Qt
512-207	25



Fuses



ATO Fuse

ATC & ATO blade fuses are standard sized fuses and are the most common type of fuse for automotive and marine applications, but can be used in various other electrical applications that require circuit protection. These fuses are commonly mounted in a fuse holder, block or panel within an electrical application. ATC® & ATO® blade fuses are available in 3-40 amps and each amperage fuse carries standard color coordination.

Used in most domestic and imported cars.
Meets or exceeds OEM and SAE standards.

Reg	Amp	Qt	Blow-Glo
512-301	1	10	-----
512-302	2	10	-----
512-303	3	10	512-450
512-304	4	10	512-452
512-305	5	10	512-454
512-307	7-1/2	10	512-456
512-310	10	10	512-458
512-315	15	10	512-460
512-320	20	10	512-462
512-325	25	10	512-464
512-330	30	10	512-466
512-340	40	10	512-468



ATC Mini Fuse

Mini ATM fuses are available in a variety of different amperages and styles that meet the circuit protection needs of various electrical components within a vehicle and other electrical equipment. Until recently, Mini fuses were the smallest type of blade fuse found in newer automotive vehicles. Today, these fuses are still very common in applications that have a large number of electrical components that need circuit protection, and where space is limited. Mini fuses are available in 2-30 amps and each amperage fuse carries standard color coordination.

-
- Used in most domestic and imported cars.
- Meets or exceeds OEM and S.A.E. standards.

Reg	Amp	Qt	Blow-Glo
512-402	2	10	-----
512-403	3	10	512-474
512-404	4	10	512-476
512-405	5	10	512-478
512-407	7-1/2	10	512-480
512-410	10	10	512-482
512-415	15	10	512-484
512-420	20	10	512-486
512-425	25	10	512-488
512-430	30	10	512-490

Fuses



Glass Fuse

Glass fuses are the classic style of fuse for circuit protection. Commonly found in older model cars, AGC fuses are great for restoration and older automotive applications. AGC glass fuses are available in a wide variety of amp ratings to meet the circuit protect demands of an electrical application.

Used in most domestic and imported cars.
Meets or exceeds OEM and S.A.E. standards.

Part #	Type	Amp	Size	Qt
512-208	AGW	20	1/4 x 7/8	5
512-210	AGC	1	1/4 x 1-1/4	5
512-215		2	1/4 x 1-1/4	5
512-220		3	1/4 x 1-1/4	5
512-225		5	1/4 x 1-1/4	5
512-230		10	1/4 x 1-1/4	5
512-235		15	1/4 x 1-1/4	5
512-240		20	1/4 x 1-1/4	5
512-245		25	1/4 x 1-1/4	5
512-250		30	1/4 x 1-1/4	5
512-253	SFE	9	1/4 x 7/8	5
512-255		14	1/4 x 1-1/16	5
512-260		20	1/4 x 1-1/4	5
512-265		30	1/4 x 1-7/16	5
512-280	GBC	16		5

Micro2 fuses are the new standard for vehicle circuit protection. Their sub-miniature design meets the need for more circuits to be protected while utilizing less space. Micro2 fuses are designed to be the ideal choice for high temperatures in adverse environments. Protect the circuits in your vehicle with a powerful Micro2 fuse, available in 5 amp to 30 amp options.

Voltage Rating: 32 Volts DC.

Interrupting Ratings: 1,000 Amps @ 32 Volts DC.

Operating Temperature: -40°F - 257°F (-40°C - 125°C).

Terminals: Ag Plated Zinc Alloy.



Micro2 Fuse

Reg	Amp	Qt
512-360	5	10
512-362	7-1/2	10
512-364	10	10
512-366	15	10
512-368	20	10
512-370	25	10
512-372	30	10

Fuses

Low-profile mini ATM fuse is an even smaller, more compact version of the mini ATM fuse. In general, these fuses are ideal for applications that contain a large number of electrical components that need circuit protection, with extremely limited space. The lower overall height of the low-profile fuse allows for even more space and weight savings than standard mini fuses. The low-profile mini fuse design allows you to provide your application with the circuit protection required without sacrificing a large area of space to do so. Low-profile mini fuses are available in 5-30 amps with each fuse colored to standard industry specs.

Similar performance characteristics as the standard Mini Fuses.

Most commonly found in newer model vehicles.

Rated up to 58V DC and for operating temperatures of -40°F to 125°C.



Low Profile Mini Fuse

Reg	Amp	Qt
512-434	2	10
512-435	3	10
512-436	4	10
512-437	5	10
512-438	7-1/2	10
512-439	10	10
512-440	15	10
512-442	20	10
512-443	25	10
512-444	30	10

A Maxi fuse is the largest sized blade fuse used in electrical applications. Maxi fuses are particularly popular for older automotive applications where a high amperage circuit is required. Maxi fuses are available in 20-100 amps and each amperage fuse carries standard color coordination.

Voltage Rating: 32V DC

Interrupting Ratings: 1000A @ 32V DC

Operating Temperature Range: -40°C to +125°C

Terminals: Ag plated (Silver Plated)

Meet or exceed OEM and S.A.E. standards

Used in most domestic and imported cars



Maxi Fuse

Reg	Amp	Qt	Blow-Glo
512-520	20	2	512-502
512-530	30	2	512-504
512-540	40	2	512-506
512-542	50	2	512-508
512-544	60	2	512-510
512-546	70	2	_____
512-548	80	2	_____

Fuses / Breakers

Maxi Fuse Breakers - Auto Reset

These blade-style Maxi type circuit breakers are single pole thermal overload type circuit protection devices. This circuit breaker combines a Maxi sized housing, but utilizes ATC / ATO type circuit breaker terminals, and is often used in applications such as automotive, marine, trucks, buses, and portable generators. Interchangeable with MAXI-Fuse blades



512-559	10	2	TYPE 1 Maxi™ Auto Reset Circuit Breaker	Used in many applications including automotive, marine, trucks, buses, and portable generators.
512-560	15	2		
512-561	20	2		
512-563	30	2		
512-565	40	2		
512-567	50	2		

Maxi Fuse Breakers - ATC / ATO - Auto Reset

These blade-style Maxi type circuit breakers are single pole thermal overload type circuit protection devices. This circuit breaker combines a Maxi sized housing, but utilizes ATC®/ATO® type circuit breaker terminals.



512-570	10	2	ATO Blade Configuration Circuit Breaker, 10A Auto Reset	Used in many applications including automotive, marine, trucks, buses, and portable generators.
512-572	15	2		
512-575	20	2		
512-576	30	2		

ATO / ATC Breakers - Low Profile

UNIQUE LOW PROFILE DESIGN -Low profile ATO / ATC circuit breakers are single pole thermal overload type circuit protection devices. They can be used in many automotive, marine, and industrial applications. Low profile breakers are ideal when space is limited and for replacing fuses on your critical accessories. Commonly considered a type-3 thermal breaker, these can fit into most ATO / ATC fuse panels. Each breaker is color-coded by amperage according to automotive industry standards.

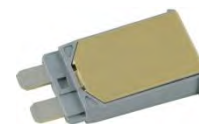


512-578	10	Ea	TYPE 3 ATO Blade Low Profile Manual Reset Type Circuit Breaker	Single pole thermal overload type circuit protection devices. They can be used in many automotive, marine, and industrial applications.
512-579	15			
512-580	20			
512-581	25			
512-582	30			

Fuses / Breakers

ATO / ATC Blade-Style Breakers - Auto Reset

Blade-style ATO / ATC type circuit breakers are single pole thermal overload type circuit protection devices. They can be used in many automotive and marine applications and other diverse applications including portable generators.



512-585	10	2	ATC®-Type Auto Reset Circuit Breaker	Single pole thermal overload type circuit protection devices. Can be used in many automotive and marine applications and others, including portable generators.
512-586	15	2		
512-587	20	2		
512-588	25	2		
512-589	30	2		



ATO / ATC Blade-Style Breakers - Manual Reset

Blade-style ATO / ATC type circuit breakers are single pole thermal overload type circuit protection devices. They can be used in many automotive and marine applications and other diverse applications including portable generators.





512-597	10	2	ATC TYPE Manual Reset Circuit Breaker	Single pole thermal overload type circuit protection devices. Used in many automotive and marine applications and others, including portable generators.
512-598	15	2		
512-599	20	2		
512-600	30	2		

Circuit Breakers

Part #	Amp	Qt	Type		
512-601 512-602	15 20	2 2	Type I automatic reset, cycles or continuously resets until the fault is corrected.	MMB Breaker Blade configuration is of the MINI design and fits in a standard ATO fuse slot	
512-610 512-615 512-620 512-625 512-630	10 15 20 25 30	Ea	ATC/ATO modified reset, non-cycling, remains in open position while there is power to the circuit	MNB Breaker Blade configuration is of the MINI design and fits in a standard ATO fuse slot.	


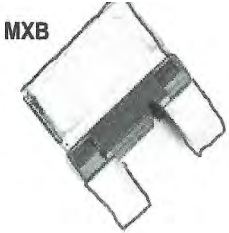
Fuses / Breakers

Circuit Breakers

512-640	5	2	ATC Mini-Blade	MIB Breaker Designed to fit in mini blade fuse box.	
512-642	10	2			
512-644	15	2			
512-646	20	2			
512-648	25	2			
512-650	30	2			
512-660	10	2	Designed to mount in ATO or ACT style fuse blocks and panels.	MRB Breaker Used primarily as wiring harness protector in heavy duty 12 volt DC truck systems.	
512-662	15	2			
512-664	20	2			
512-666	25	2			
512-668	30	2			

MAXI™ Circuit Breakers

Direct factory replacement for many domestic OEM applications. Designed to fit a MAXI™ Blade fuse block or panel. Available in either SAE Type I cycling or SAE Type II non-cycling used primarily as a wiring harness protector in 12 volt DC automotive systems. Meets OEM requirements. Conforms to SAE J553C standard.

512-670	20	2	MCB Breaker Automotive Headlamp Seats & Wipers	
512-672	30	2		
512-675	20	2	MXB Breaker Automotive Power Devices Heavy Truck & Auto Cooling Fan Automotive Power Window Heavy Truck & Auto Cooling Fan & Power Window Heavy Truck	
512-680	30	2		

Fuses / Breakers

JCase Fuses

JCase fuses are designed to be used as replacements for fusible links. The JCase series of FMX fuses are the female standard cartridge design and reduce typical replacement wear on automotive or marine applications. FMX fuses provide both increased time delay and low voltage drop protection. Each JCase fuse is easily identified with the amperage clearly stamped on the fuses window.



Cartridge replacement for fusible links.

Provides time delay and low voltage drop protection.

Amperage printed on each fuse use window.

Available in 20-60 amps.

Voltage rating: 32V AC/DC.

512-720	20	2	20a-Blue	JCASE Fuse Cartridge style fuse with female terminal design
512-725	25	2	25a-White	
512-730	30	2	30a-Pink	
512-740	40	2	40a-Green	
512-750	50	2	50a-Red	
512-760	60	2	60a-Yellow	

JCase Fuses - Low Profile

Low profile JCase fuses are designed to provide more space and weight savings in automotive and marine applications, while still maintaining the same performance as a standard JCase fuse.



Designed to offer less wear on fuses boxes with its female to male connection terminals.

Rated up to 32V DC and for operating temperatures of -40°F to 125°C.

512-770	20	2	20a-Blue	JCASE Low-Profile Fuse Cartridge style fuse with female terminal design
512-772	25	2	25a-White	
512-774	30	2	30a-Pink	
512-776	40	2	40a-Green	
512-778	50	2	50a-Red	
512-780	60	2	60a-Yellow	

MCase Fuses

The MCase is a cartridge style fuse with female terminals for 2.8 mm male terminals. It has a miniaturized footprint for optimal usage of space. It is a time delayed fuse and can handle inrush currents.



Voltage Rating: 32 VDC.

Interrupting Ratings: 1000A @ 32 VDC.

Operating Temperature

Range: -40°C to +125°C.

Insertion Force: 44.1N Max. (9.9 lbs).

Extraction Force: 4N Min.

(0.9 lbs)/24.5N Max. (5.5 lbs).

RoHS.

512-790	15	2	15a-Gray	MCASE Commonly found in many new vehicles.
512-792	20	2	20a-Blue	
512-794	25	2	25a-White	
512-796	30	2	30a-Pink	
512-798	40	2	40a-Green	

Fuses / Breakers

PAL BOLT-ON FUSE

FLB series cartridge fuses are perfect for newer car models that require high amperage protection on accessory circuits. FLB series cartridge fuses help reduce typical replacement wear on automotive or marine fuse boxes.



13/16" bent male terminal.
Commonly found in many Japanese and domestic built vehicles.
Bolts directly into fuse blocks.
Available in 30-120 amps.
Voltage rating: 32V AC/DC.

512-810	230	2	30a-Pink	PAL 230-280 Fuse 13/16 Bent Fuse Commonly found in many Japanese and domestic built vehicles.
512-812	240	2	40a-Green	
512-814	250	2	50a-Red	
512-816	260	2	60a-Yellow	
512-818	270	2	70a-Brown	
512-820	280	2	80a-Black	

PAL 2000 Series Auto Link PAL™ Fuses

Commonly found on many Japanese and Domestic built vehicles in current ratings up to 120 amperes. Available with male connector, bent connector and locking female connector.
Color coded to indicate amp rating.



512-822	2100	2	100a-Blue	PAL 2000 Series Fuse 9/16 Bent Fuse Commonly found on many Japanese and Domestic built vehicles
512-824	2120	2	120a-Gray	
512-826	2140	2	140a-Purple	

PAL 430 - 4100 Series Auto Link PAL™ Fuses

Commonly found on many Japanese and Domestic built vehicles in current ratings up to 120 amperes. Available with male connector, bent connector and locking female connector.
Color coded to indicate amp rating.



512-840	430	2	30a-Pink	PAL 430-4100 Fuse 9/16 Bent Fuse Auto Link PAL Bent Male Terminal. Color coding to indicate amp rating.
512-842	440	2	40a-Green	
512-844	450	2	50a-Red	
512-848	480	2	80a-Black	
512-852	4100	2	100a-Blue	

PAL 130 - 1120 Series Auto Link PAL™ Fuses

Commonly found on many Japanese and Domestic built vehicles in current ratings up to 120 amperes. Available male connector, bent Connector and locking female connector. Color coded to indicate amp rating.



512-872	130	2	30a-Pink	PAL 130-1120 Fuse Auto Link PAL Straight Male Terminal. Color coding to indicate amp rating.
512-874	160	2	60a-Yellow	
512-876	180	2	80a-Black	
512-878	1100	2	100a-Blue	
512-880	1120	2	120a-Gray	

Fuses / Breakers

Cartridge Fuses - FLF Series

The FLF series cartridge fuse is a mini female cartridge fuse and is perfect for space savings on newer automotive applications. FLF series cartridge fuses help reduce typical replacement wear on automotive or marine fuse boxes.



Female terminated fusible link.
Available in 20-60 amps.
Replaces commonly used fusible wire.
Voltage rating: 32V AC/DC.

512-890	020	2	20a-Blue	PAL 020-060 Fuse Commonly found in many Japanese and domestic built vehicles.
512-892	030	2	30a-Pink	
512-894	040	2	40a-Green	
512-896	050	2	50a-Red	
512-898	060	2	60a-Yellow	

PAL 330, 340 Series Auto Link PAL™ Fuses

A FLS series cartridge fuse is a standard locking female terminal fuse and is typically found in newer car models that require high amperage circuit protection. The female design helps reduce typical replacement wear on automotive or marine fuse boxes.



Equipped with visual window to inspect for blown fuse.
Available in 30 and 40 amps.
Color-coded for easy amp identification.
Voltage rating: 32V AC/DC.

512-904	330	2	30a-Pink	PAL 330-340 Fuse Commonly found in many Japanese and domestic built vehicles
512-906	340	2	40a-Green	

PAL 525, 530 Series Auto Link PAL™ Fuses

A FLS series cartridge fuse is a standard female terminal fuse and is typically found in newer car models that require high amperage circuit protection. The female design helps reduce typical replacement wear on automotive or marine fuse boxes.



Equipped with visual window to inspect for blown fuse.
Available in 25 and 30 amps.
Color-coded for easy amp identification.
Voltage rating: 32V AC/DC.

512-912	525	2	30a-Pink	PAL 525-530 Fuse Commonly found in many Japanese and domestic built vehicles. Bolts directly into fuse blocks.
512-914	530	2	40a-Green	

Fuses / Breakers

ATO / ATC Blade-Style Breakers - Auto Reset

Blade-style ATO / ATC type circuit breakers are single pole thermal overload type circuit protection devices. They can be used in many automotive and marine applications and other diverse applications including portable generators.



Bussman

512-970	7-1/2a	2	21175
512-972	10a	2	21110
512-974	15a	2	21115
512-976	20a	2	21120
512-978	25a	2	21125
512-980	30a	2	21130

Fuse Holders / Breakers

AGC Fuse Holder - 12 Gauge

This AGC nylon inline fuse holder features a molded nylon body that is furnished with one AGC glass tube fuse. The inline design provides easy installation while the nylon construction provides strength and durability.



Rated to 32V DC, the AGC 12 gauge inline fuse holder includes one AGC glass tube fuse. The holder also features a molded nylon body.

Fuse holders with molded nylon bodies are furnished with one fuse (fuse not assembled inside).

Made with standard 8" GPT wire. Red wire leads.

513-000	12 ga	5
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ATM Mini Fuse & ATO Weatherproof Fuse Holders

The ATC and ATO weatherproof in-line fuse holder works with any 2-30 amp ATC and ATO blade fuse. The weatherproof construction of the fuse holder provides extra protection against water and dust.



Premium quality, insulated and weatherproof ATO fuse retainer.

12 gauge leads, 30 amp max.

513-003	2-15 amp 16 ga wire	ATM Mini fuse	2
513-004	20,25.30 amp 12 ga wire	ATM Mini fuse	2
513-005	3 – 30 amp 12 ga wire	ATO	2

ATC & ATO Fuse Holder - Inline - 12 Gauge

This 12 gauge ATC and ATO fuse holder is a standard inline fuse holder that allows for one ATC and ATO fuse to be fitted. The 12 gauge ATC and ATO fuse holder has a "write-in" space that allows for easy circuit identification.



A "write-in" space is available to easily identify the circuits.

513-010	30 amp 12 ga wire	ATO	2
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ATC and ATO Universal Fuse Holder

The ATC and ATO universal fuse holder features a self-tapping design for quick circuit protection installation. The ATC and ATO universal fuse holder requires no wire stripping, and easily installs by using common pliers.



For use with 18-16-14 gauge wire.
20 amp max.

513-015	ATO	5
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Fuse Holders

ATC and ATO Waterproof Fuse Holders – Inline

This ATC and ATO inline waterproof fuse holder is compatible with any ATC and ATO blade fuse. The deluxe waterproof body and water resistant cap is ideal for marine applications or any application that is continually in wet environments.



12" wire loop.

ATC & ATO fuses sold separately.

Red wire leads.

513-020	16 ga. ATO	5
513-021	12 ga. ATO	5
513-025	14 ga ATC Mini	5

ATO Weatherproof Fuse Holders

The ATO weatherproof in-line fuse holder works with any 2-30 amp ATO blade fuse. The weatherproof construction of the fuse holder provides extra protection against water and dust.



Premium quality, insulated and weatherproof ATO fuse retainer.

12 gauge leads, 30 amp max.

513-022	12 ga	5
513-023	14 ga	5
512-024	10 ga	5

- Adds additional circuits without cutting or splicing.
- Provides both an extra circuit and fuse protection in one simple step.
- Turns one fuse slot into two.
- Adds an additional circuit to an existing circuit while providing protection to both.
- Maintains new car warranties - does not void factory warranties since there is no altering of existing circuits by cutting wires.
- Will not interfere with today's sophisticated on-board computer Systems.



513-050	ATO Add A Fuse	Ea
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513-055	ATC Mini Add A Fuse	Ea
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Fuses / Breakers

ATC and ATO Pigtail Fuses

- Pre-wired ATO/ATC and ATM Mini Fuses are the fastest and easiest way to tap into automotive fuse blocks.
- Provides accessory power and fuse protection in one easy step.
- Pigtail fuses plug directly into the fuse block for a reliable, fuse protected power tap.
- OEM type fuses will not over-expand contacts, cause shorting or result in poor connections.
- Just connect the 7" pigtail lead to the accessory power with a butt connector or splice.



ATO Fuse

513-070	20 amp	5
513-071	25 amp	5
513-072	30 amp	5

ATM Mini Fuse

513-080	20 amp	5
513-081	25 amp	5
513-082	30 amp	5

Bussman Surface Mount Breaker

Flush mount with push-to-trip button, 48 Vdc Weatherproof, marine rated M6 threaded studs Stainless steel hardware installed

These high amp circuit breakers are typically used in auxiliary and accessory circuits for trucks, buses, RVs and marine applications. All high amp circuit breakers comply with the SAE J1117 standard for ignition protection and have applications in battery charger systems and DC audio systems. Offered in flush-mount or panel-mount (see chart for amps available).



513-750	Fuse Holder	Ea
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Fuses / Fuse Holders

MEGA Fuse Holder - 250 Amp - 500 Amp

The MEGA bolt-down fuse block is ideal for battery and alternator connections and other heavy gauge cables requiring ultra high current protection. Includes protective cover. Features interconnecting pins on side of fuse block for securing multiple block configurations. Includes M8 threaded studs and hex nuts with lock washers.



513-755	Fuse Holder	Ea
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Max Voltage Rating: 32V DC.
 Max Current Rating: 500A.
 Mounting Torque: 5 Nm.
 Studs: M8 Threaded.
 Included Hardware: Hex nuts with lock washers.
 MEGA fuses sold separately.



513-758	60 amp	Ea
513-761	100amp	
513-763	125amp	
513-765	150amp	
513-770	175amp	
513-775	200amp	
513-780	250amp	
513-782	300amp	
513-786	500amp	

MIDI Fuses are a cost-effect, space saving protection solution for high current wiring. MIDI Fuses are common standard circuit protection devices for automobiles and trucks. The fuse features a bolt-on design that saves space and fits right in to your application or project. Tin plated contacts on the MIDI Fuses provide excellent corrosion resistance to keep the fuse protected and performing. MIDI Fuses are available in 30 Amp to 200 Amp options. Protect your vehicles currents with a comfortable and secure fit with one of our MIDI Fuses.

Interrupting Rating: 1000A @ 32VDC.
 Voltage Rating: 32 VDC.
 Operating Temperature Range: -40°C to +125°C.
 Housing Material: Heat Resistant 94-V0 Thermoplastic.
 Terminals: Tin plated Copper.
 RoHS Compliant.



513-788	50amp	Ea
513-789	60amp	
513-790	70amp	
513-791	80amp	
513-793	100amp	
513-795	125amp	
513-797	150 amp	
513-798	175amp	

Circuit Breakers

ACB and FCB Circuit Breakers

Designed to mount in ATO style fuse blocks and panels.

512-928	20	Ea	ACB- 20 (gm)
512-930	30		ACB-30 (gm)
512-940	20		FCB-20 (ford)



CCB Circuit Breakers Designed to mount in ATO style fuse blocks and panels

512-950	25	Ea	CCB- 25 (Chrysler)
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CB100 Circuit Breakers

Circuit Breaker and Relay
Plug in for ATC and ATO fuses

514-050	20	2	CB100-20
514-054	30		CB100-30



CB120 Circuit Breakers

Fuse Clip Type 2 Circuit Breaker
1/4 INCH ROUND BASE

514-110	10	2	CB120-10
514-112	15		CB120-15
514-114	20		CB120-20
514-116	25		CB120-25
514-118	30		CB120-30
514-120	35		CB120-35
514-122	40		CB120-40



CB125 Circuit Breakers

Fuse Clip Type 2 Circuit Breaker
1.0 inches on center. For use with Mac Trucks.

514-140	10	2	CB125-10
514-142	15		CB125-15
514-144	20		CB125-20
514-146	25		CB125-25
514-148	30		CB125-30
514-150	40		CB125-40
514-152	50		CB125-50



CB130 Circuit Breakers

Metal Stud Type 1 Circuit Breaker
Two 10-32 stud terminals at 0.67 inches

514-172	10	2	CB130-10
514-174	15		CB130-15
514-176	20		CB130-20
514-178	25		CB130-25
514-180	30		CB130-30
514-182	40		CB130-40
514-184	50		CB130-50



CB135 Circuit Breakers

Metal Stud Type 1 Circuit Breaker
Two 10-32 Stud Terminals at different heights: 0.58" and 0.71"

514-188	10	2	CB135-10
514-190	15		CB135-15
514-192	20		CB135-20
514-194	25		CB135-25
514-196	30		CB135-30
514-198	40		CB135-40
514-200	50		CB135-50



Circuit Breakers / Flashers

CB140 Circuit Breakers

Fuse Clip Type 2 Circuit Breaker SFE 20 Fuses.
SFE style fuse 1/4 inch by 1 1/4 inch

514-210	10	2	CB140-10
514-212	15		CB140-15
514-214	20		CB140-20
514-216	30		CB140-30
514-218	40		CB140-40



CB155 / UCB Circuit Breakers

Type I automatic reset,
Universal blade allows for minimum inventory

514-238	5	2	CB155-5
514-240	10		CB155-10
514-242	15		CB155-15
514-244	20		CB155-20
514-246	25		CB155-25
514-248	30		CB155-30
514-250	40		CB155-40



FLASHERS Thermal Flasher
12V 12A 3PIN



515-262	550	Ea
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FLASHERS Thermal Flasher
12V 12A 2PIN



515-275	536	Ea
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ELECTRONIC FLASHERS



- Dependable & Reliable – Not affected by extreme temperatures. Operation is electromechanical, not heat governed like conventional thermal operated flashers.
- True variable load capacity allows operation 1-8 standard or heavy duty bulbs.
- Non-polarity sensitive design easy hook up without fear of shorting electrical systems.
- Starts faster – first flash in less than 750 milliseconds.
- Built tough to hold up under the most demanding conditions.

Circuit Breakers / Flashers

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Part #	Amp	Qt	Type		
515-315	EF32	Ea	Round Plastic 2-PRONG	Variable Load 12V 25A 2PIN ELECTRONIC FLASHER	 VARIABLE LOAD
515-320	EF33	Ea	Round Plastic 3-PRONG	Variable Load 12V 25A 3PIN ELECTRONIC FLASHER	 VARIABLE LOAD
515-325	EF32H	Ea	Square Plastic 2-PRONG	Heavy Duty Variable Load Electronic Flasher 12V 25A 2 PIN	 VARIABLE LOAD HEAVY DUTY RATED 100 HOURS CONTINUOUS USE
515-327	EF32L	Ea	EF32L 2-PRONG FLASHER FOR LED	Self adjusts to LED current. Used for lamps with low amp draw. Used when converting a truck from incandescent to LED lighting	

Part #	Amp	Qt	Type		
515-330	EF33 H	Ea	EF33H 3-PRONG FLASHER	12V 25A 3PIN HEAVY DUTY FLASHER	 VARIABLE LOAD HEAVY DUTY RATED 100 HOURS CONTINUOUS USE
515-335	EF32 RL	Ea	EF32RL 2-PRONG FLASHER FOR LED	Self adjusts to LED current. Used for lamps with low amp draw. Round	 LED & INCANDESCENT COMPATIBLE

Electronic Flashers

ELECTRONIC FLASHERS

- Dependable & Reliable – Not affected by extreme temperatures. Operation is electromechanical, not heat governed like conventional thermal operated flashers.
- True variable load capacity allows operation 1-8 standard or heavy duty bulbs.
- Non-polarity sensitive design easy hook up without fear of shorting electrical systems.
- Starts faster – first flash in less than 750 milliseconds.
- Built tough to hold up under the most demanding conditions.

Part #	Amp	Qt	Type		
515-336	EF33RL	Ea	EF33RL 3-PRONG FLASHER	Variable Load LED/Incandescent Compatible Flasher	 LED & INCANDESCENT COMPATIBLE
515-340	EF33L	Ea	EF33L 3-PRONG FLASHER	Heavy Duty Electronic Flasher With Lead Wire	 LED & INCANDESCENT COMPATIBLE
515-375	EF27	Ea	12V 12A 5PIN	Combination TS & Hazard Electronic Flasher	
515-385	EF26	Ea	12V 12A 4PIN	Combination TS & Hazard Electronic Flasher	
515-390	EF28	Ea	12V 12A 3PIN	Combination TS & Hazard Electronic Flasher	



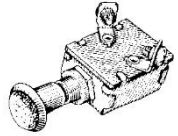





Electronic Flashers

ELECTRONIC FLASHERS

- Dependable & Reliable – Not affected by extreme temperatures. Operation is electromechanical, not heat governed like conventional thermal operated flashers.
- True variable load capacity allows operation 1-8 standard or heavy duty bulbs.
- Non-polarity sensitive design easy hook up without fear of shorting electrical systems.
- Starts faster – first flash in less than 750 milliseconds.
- Built tough to hold up under the most demanding conditions.

Part #	Amp	Qt	Type		
515-395	EF28	Ea	12V 12A 4PIN	Combination TS & Hazard Electronic Flasher	
515-425	EF22	Ea	24V 12A 2PIN	Combination TS & Hazard Electronic Flasher 24v	
515-430	EF23	Ea	24V 12A 3PIN	Combination TS & Hazard Electronic Flasher 24v	
515-725	RY-46	Ea	E-TRON RY-46 ECHLIN AR240 NIEHOFF FF165	Fuel Pump Relay	
515-750	RY-30	Ea	E-TRON RY-30 ECHLIN AR201 NIEHOFF DR165C	Fuel Pump Relay	









Toggle Switches

Part #	Type	Item	Qt	
518-420	Boot	Toggle Boot	Ea	
518-460 518-464	Red Black	toggle switch guard is a spring-loaded cover that adds protection against accidental actuation	Ea	
518-540	Push-Pull On-Off-On	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-542	Push-Pull On-Off		Ea	
518-580	SPST On-Off Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-584	SPST (On)-Off Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-588	SPDT On-On Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-592	SPDT On-Off-On Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-596	SPDT On-Off-(On) Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	

() indicates momentary action

Single Pole Rated: 10A/277V AC; 20A/125V AC; 21A/14V DC; 3/4 HP 125-250V AC.
Double Pole Rated: 10A/277V AC; 20A/125V AC; 21A/14V DC; 1-1/2 HP 125-250V AC.

Toggle Switches

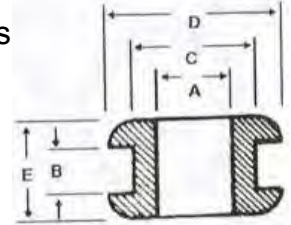
Part #	Type	Item	Qt	
518-600	SPDT (On)-Off- (On) Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-740	DPST On-Off Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-744	DPST (On)-Off Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-746	DPDT On-On Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-748	DPDT On-(On) Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-752	DPDT On-Off-On Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-756	DPDT On-Off- (On) Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	
518-760	DPDT (On)-Off- (On) Toggle Switch	industrial controls, marine panels, trucks, buses and automotive	Ea	

() indicates momentary action

Single Pole Rated: 10A/277V AC; 20A/125V AC; 21A/14V DC; 3/4 HP 125-250V AC.
Double Pole Rated: 10A/277V AC; 20A/125V AC; 21A/14V DC; 1-1/2 HP 125-250V AC.

Grommets

- Works as well as natural rubber
- Ideal for use in manufacturing, machinery, and automotive applications
- Protects cables from sharp edges or corners
- Abrasion and tear resistant
- Withstands temperatures up to 180° F (82° C)



When running your cables through small openings or around sharp curves, you will encounter rough metal or wooden edges that may damage or break your cables. These rubber grommets provide an abrasion resistant cushion around these small openings and sharp edges to protect your wiring. They are available in numerous sizes to fit just about any application.

Made out of SBR rubber, 60 durometer commercial rubber.

Part#	Ref #	A - BORE	B - GROVE	C - GROVE	D - O.D.	Qt
549-440	4408	1/8	3/32	3/8	1/2	10
549-445	4410	5/32	1/16	1/4	3/8	10
549-450	4411	5/32	3/32	1/4	7/16	10
549-455	4413	3/16	1/16	5/16	1/2	10
549-460	4414	3/16	3/32	9/32	3/8	10
549-465	4415	3/16	1/4	5/16	7/16	10
549-470	16454	1/4	1/16	3/8	1/2	10
549-475	4417	1/4	1/16	7/16	5/8	10
549-480	4418	1/4	1/16	1	1-1/4	10
549-485	4419	5/16	1/16	7/16	9/16	10
549-490	4420	5/16	1/16	9/16	13/16	10
549-495	16455	5/16	1/16	3/4	1	10
549-500	4421	5/16	1/8	9/16	13/16	10
549-505	4422	5/16	1/4	9/16	13/16	10
549-510	4423	3/8	1/16	1/2	5/8	10
549-515	16456	3/8	1/16	5/8	7/8	10
549-520	4425	3/8	1/16	1	1-1/4	10
549-525	4426	3/8	1/4	5/8	7/8	10
549-530	16457	7/16	1/16	9/16	3/4	10
549-535	4428	1/2	3/32	3/4	31/32	10
549-540	4429	1/2	3/32	25/32	1	10
549-545	16458	1/2	1/8	3/4	1	10
549-550	4430	1/2	1/4	13/16	1-1/16	10
549-555	4431	5/8	1/8	7/8	1-1/8	10
549-560	4432	5/8	1/16	7/8	1-1/8	10
549-565	4433	3/4	1/16	15/16	1-1/8	10
549-570	4434	3/4	1/16	1-1/16	1-3/8	10
549-575	4435	3/4	1/16	1-1/4	1-5/8	10
549-580	4436	3/4	1/4	1-1/4	1-5/8	10

Grommets

- Works as well as natural rubber
- Ideal for use in manufacturing, machinery, and automotive applications
- Protects cables from sharp edges or corners
- Abrasion and tear resistant
- Withstands temperatures up to 180° F (82° C)

Plastic Grommets: Installs easily into any existing hole from 1/16” to 1/8” inch thick. The top wings keep any diameter and shape wires centered. Designed to protect wires and cables, as well as absorb shock, vibration.



Plastic Grommets

Part#	ID	OD	Qt
549-620	1/8	1/4	50
549-624	3/16	3/8	50
549-628	1/4	15/32	50
549-632	5/16	17/32	50
549-636	3/8	37/64	50



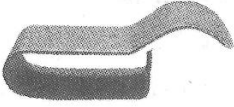
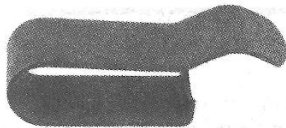
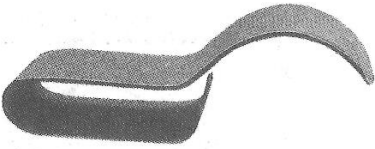
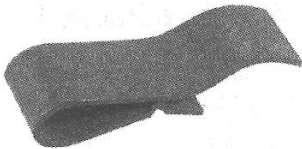
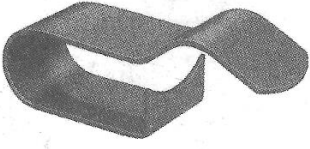
Plastic Grommets

Part#	ID	OD	Qt
549-650	5/8	23/32	25
549-654	3/4	55/64	25
549-658	7/8	15/16	25
549-662	1”	1-1/16	25
549-666	1-3/32	1-5/32	25
549-680	1”	3/4	25

Wiring and Frame Routing Clips

- Works to hold wire or wire loom in place.
- Ideal for use in manufacturing, machinery, and automotive applications
- Protects cables from sharp edges or corners
- Abrasion and tear resistant

WIRE LOOM CLIPS (ILLISTRATION ACTUAL SIZE)

<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 2px;">Part#</th> <th style="padding: 2px;">Qt</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">549-750</td> <td style="padding: 2px;">25</td> </tr> </tbody> </table> <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center;">Wire Loom Clip 3/16" Clamping Diam. (av1341)</p>	Part#	Qt	549-750	25	<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 2px;">Part#</th> <th style="padding: 2px;">Qt</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">549-775</td> <td style="padding: 2px;">25</td> </tr> </tbody> </table> <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center;">Wire Loom Clip General Duty (av9464)</p>	Part#	Qt	549-775	25
Part#	Qt								
549-750	25								
Part#	Qt								
549-775	25								
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Part#	Qt								
549-760	25								
Part#	Qt								
549-780	25								
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 2px;">Part#</th> <th style="padding: 2px;">Qt</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">549-770</td> <td style="padding: 2px;">25</td> </tr> </tbody> </table> <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center;">Wire Loom Clip 3/8" Clamping Diam. (av3758)</p>	Part#	Qt	549-770	25					
Part#	Qt								
549-770	25								

Weather Pack Environmental Connectors

Rubber Caps:

Can be used for capping lines and hoses while testing carburetors, emission control systems, vacuum lines, etc.

Special Heat Resistant EPDM Rubber

Part #	Type	Item	Qt
535-222	1/8	Vacuum Cap	10
535-224	3/16		10
535-226	1/4		10
535-227	5/16		10
535-228	3/8		10
535-230	1/2		10



Vacuum Connectors:

Nylon material, used for vacuum hose, fuel lines, water lines etc.

535-252	1/8	Straight Connectors	10
535-254	3/16		10
535-256	1/4		10
535-258	5/16		10
535-260	3/8		10
535-262	1/2		10
535-266	1/8 – 3/16	Straight Connectors	10
535-268	1/8 – 1/4		10
535-270	3/16 – 1/4		10
535-272	3/8 – 1/4		10
535-280	1/8	Tee Connectors	10
535-282	3/16		10
535-284	1/4		10
535-286	5/16		10
535-288	3/8		10
535-292	1/2		10



Windshield Wiper/Vacuum Tubing

Low pressure EPDM tubing for windshield washers, vacuum and emissions systems for power accessories. Similar to SAE J1037 specification. Will not deteriorate from heat, weathering, or ozone.

Maintains its flexibility even at low temperatures.



Part#	Size	Qt
535-314	7/64	50'
535-316	5/32	50'
535-317	7/32	50'
535-318	9/32	50'

Fuel Lines

Premium Fuel Line

Designed for conveying gasoline, E-85, diesel, and bio-diesel fuels in cars, trucks, buses, etc. Handles temperature ranges of -40 to +257 degrees F. Withstands oil, grease, abrasion, and ozone. Exceeds the burst requirements of the SAE30R7 specification.

Application: Fuel Line

Specification: Similar to SAE30R7

Branding: Made In USA

Cover Color: Black Reinforcement: Two Spiral Polyester

Cover: NBR/PVC

Temperature Resistance: -40°F to +257°F (+302°F

Intermittent

— Not for Steam Use)



Part#	Size	Qt
535-352	3/16	25'
535-354	1/4	25'
535-356	5/16	25'
535-358	3/8	25'
535-360	7/16	25'

Fuel Injector Hose:

Designed specifically for auto and truck fuel injection systems.

Specific Fuel: gasoline, ethanol extended gasoline, oxidized sour gas, diesel fuel, biodiesel, lubrication oil

Application: Fuel Line

Style: Fuel Injection (SAE30R9) Specification: SAE30R9

Branding: Fuel Injection Hose Date Made In USA

Cover Color: Black

Tube: Fluoroelastomer Reinforcement: Two Spiral Aramid Fiber

Cover: Synthetic Oil Resistant

Temperature Resistance: -29°F to +275°F (+302°F Intermittent)



Part#	Size	Qt
535-375	1/4	10'
535-377	5/16	10'
535-379	3/8	10'

Transmission Oil Cooler

A special hose for circulating transmission fluid at high temperatures. The tube and cover are designed to meet OEM and SAE J1532 performance requirements. Features a polyester reinforcement for high burst protection. Will withstand fluid temperatures up to 257 degrees F and is resistant to fuel, ozone, oil, grease, and heat aging. Application:

Transmission Oil Cooler

Specification: Similar to SAE J1532 Branding:

Thermoid Transmission Oil Cooler (Size)

Made In USA (Date)

Cover Color: Black Tube:

Nitrile Reinforcement: Polyester Cover:

Nitrile/PVC Temperature Resistance:

-30°F to +257°F



Part#	Size	Qt
535-385	5/16	25'
535-387	3/8	25'

Brake Lines

Zinc Plated Brake Line

Double wall (.028) Zinc plated brake lines. 16,000psi burst pressure, with double annealed seams.

Part#	Size	Qt
535-410	3/16	25'
535-412	1/4	25'
535-414	5/16	25'
535-416	3/8	25'



Copper / Nickle Brake Line

CUPRO/NICKEL made of 88% copper, 10% nickel and 2% iron Liquid Sodium chloride and rock salt used to de-ice winter roads break down and destroy steel tubing lines. Steel brake lines have had zinc, galfan, PVF (poly vinyl fluoride) and Nylon plating to protect them from the winter de-icing onslaught and still life expectancy for these steel tubing lines has fallen dramatically. When sand and road debris is added to the mix steel tubing lines don't stand a chance against the elements.



The answer is a totally different type of brake, fuel and transmission line made from materials that liquid calcium or rock salt solutions have no damaging affects on and can be offered with a Lifetime guarantee.

Part#	Size	Qt
535-417	3/16	50'
535-418	1/4	50'
535-420	3/16	25'
535-421	1/4	25'
535-422	5/16	25'

PVF (Poly Vinyl Fluoride) coated brake:

PVF coated lines which will extend the life of brake and all fluid carrying lines. Although Sodium Chloride has shown to be more effective in making roads safer it has major consequences for the undercarriage of vehicles. Fluid carrying lines including critical application hydraulic brake fluid lines are corroding and failing in shorter time with the brake line lasting five to eight years as opposed to the nine to twelve years which was the average only ten years ago. PVF does provide significant protection against all road elements mentioned above and is what technicians are seeing on the vehicles that are coming into their shops today. With the exception of General Motors virtually all car manufacturers have gone to coated lines like PVF. Garage owners and technicians alike are demanding PVF lines for their customer vehicles as Zinc plated lines the standard for many years will not stand up to the harsh environment the cars of today are subjected to.



Part#	Size	Qt
535-425	3/16	25'
535-427	1/4	25'
535-429	5/16	25'
535-431	3/8	25'

Heater Hose

Red Premium Heater:

A replacement for OE hose on most cars and light trucks. The high quality hose is similar to SAE20R3 Class D2, SAE J2387 for higher underhood temperatures.

Withstands the abuse of corrosive solutions and additives.

Resists weathering to provide a long, trouble-free service life.

Application: Heater Style:

Red Grade: Red Premium

Specification: Similar to SAE20R3 Class D2, SAE J2387

Branding: Thermoid Premium Heater Made In USA

Color: Red Tube: EPDM

Reinforcement: Two Spiral Polyester Cover: EPDM

Temperature Resistance: -40°F to +257°F (Not for Steam Use)



Part#	Size	Qt
536-354	1/2	50'
536-356	5/8	50'
536-358	3/4	50'
536-360	1"	50'

Red Premium Thermal Heater:

A replacement for OE hose on most cars and light trucks. The high quality hose is similar to SAE20R3 Class D2, SAE J2387 for higher underhood temperatures. Withstands the abuse of corrosive solutions and additives.

Resists weathering to provide a long, trouble-free service life. A blue insulating layer helps to minimize heat loss. Four spiral reinforcement for extra strength.

Application: Heater Style: Thermal

Grade: Red Premium

Specification: Similar to SAE20R3 Class D2, SAE J2387

Branding: Thermoid Premium Made In USA

Color: Red Tube: EPDM Reinforcement: Four Spiral

Polyester Cover: EPDM

Temperature Resistance: -40°F to +257°F (Not for Steam Use)



Part#	Size	Qt
536-370	5/8	50'
536-372	3/4	50'
536-374	1"	50'

Fram Fuel Filters:

Clean fuel is important because there are small jets and passages in the openings of your fuel system, especially in carburetors and fuel injectors. The fuel filter is responsible for keeping the smaller contaminants in the system out of the engine and other fuel delivery components.

To ensure this cleanliness, fuel filters are installed in the fuel line. Filters can be located at any point between the fuel tank and the engine fuel rail. The most common placement is mounted on the underside frame rail between the fuel tank and engine.



Part#	Size	Qt
537-510	1/4	Ea
537-515	5/16	Ea
537-520	3/8	Ea

Tire Repair

Tire Repair



Part#	Size	Item	Qt
541-125	8 oz	Tire Cement	Ea



Part#	Size	Item	Qt
541-210	Quart	Bead Sealer	Ea



Part#	Size	Item	Qt
541-215	Gallon	Tire Mount Lube	Ea



Part#	Size	Item	Qt
541-220	8 lb	Murphy Tire Mounting Paste	Ea




Part#	Type	Item	Qt	
541-225 541-230	Euro Style Clip-On Air Chuck	Open Closed	Ea Ea	
541-235 541-240 541-245	Ball Foot Air Chuck With Clip	Open Closed Clip	Ea Ea Ea	
541-248 541-250	Lock-On Air Chuck	Open Closed	Ea Ea	
541-252	Pocket pressure Gauge 10 lb – 50 lb	Air	Ea	
541-254 541-256	Pocket pressure Gauge 5 lb – 50 lb Pocket pressure Gauge 20 lb – 120 lb	Air	Ea Ea	
541-258	Pocket pressure Gauge 20 lb – 120 lb	Air	Ea	

Tire Repair







Part#	Type	Item	Qt	
541-270	Heavy Duty Pressure Guage	Air	Ea	
541-275	10 lb – 150 lb Heavy Duty Pressure Guage		Ea	
541-285	Air Chucks	Air	Ea	
541-287	Air Chucks	Air	Ea	
541-312	Pistol-Grip Spiral Cement Probe	Reamer	Ea	
541-330	Open Eye Needle Tool	Reamer	Ea	
541-332	T-Handle Eye Needle Insert Tool	tool	Ea	
541-401	Thread Depth Gauge	32 nd & Metric	Ea	
541-402	Standard Bore Core Remover Tool	Tool	Ea	

Tire Repair

Part#	Item	Type	Qt	
541-406 541-407	Four-Way Valve Tool	Regular Large	Ea Ea	
541-410	Short Standard Bore Valve Core Black	Core	100	
541-416	Long Skirted Metal Dome Cap	Long	100	
541-418	Short Skirted Metal Dome Cap		100	
541-420	Metal Screwdriver Cap		100	
541-422	Heavy Duty Metal Dome Cap		100	
541-428	Chrome Hex-Head Valve Cap		100	
541-432	Dome Chrome Hex Valve Cap		100	
541-506	15" Cotton Tire Swab		Ea	

Part#	Item	Type	Qt	
541-530 541-535	Fat Brown String Repair	4" Long 8" Long	50 25	
541-580	1-3/4" x 3" Radial Patch	Radial	10	
541-585	2-1/4" x 4" Radial Patch	Radial	10	

Wheel Lugs / Nuts

Part#	A	B	Lgt	Ref	Type	Qt	A - B
544-725	5/16-24	5/16-18	1-3/4	9676	Grade 5	10	
544-730	5/16-18	5/16-18	2"	9679			
544-732	5/16-18	5/16-18	3"	9681			
544-735	3/8-24	3/8-16	1-1/2	9683	Grade 5	10	
544-737	3/8-24	3/8-16	1-3/4	9684			
544-740	3/8-24	3/8-16	2"	9686			
544-742	3/8-16	3/8-16	2"	9687			
544-745	3/8-16	3/8-16	2-1/2	19597			
544-747	3/8-16	3/8-16	3"	12129			
544-750	3/8-16	3/8-16	4"	9695			
544-765	7/16-14	7/16-14	2"	9702	Grade 5	10	
544-770	7/16-20	7/16-14	1-1/2	9697			
544-772	7/16-20	7/16-14	1-3/4	9699			
544-773	7/16-20	7/16-14	2"	9701			
544-774	7/16-20	7/16-14	2-1/2	9709			
544-775	7/16-14	7/16-14	1-3/4	9798			
544-777	7/16-14	7/16-14	2"	9702			
544-779	7/16-14	7/16-14	2-1/2	9711			
544-784	1/2-20	1/2-13	1-7/8	9727	Grade 5	10	
544-786	1/2-20	1/2-13	2"	9728			
544-788	1/2-20	1/2-13	2-1/2	9731			
544-790	1/2-20	1/2-13	3"	9732			
544-825	5/8-11	5/8-11	2-3/4	15016	Grade 8	10	
544-860	5/8-18	5/8-11	2-1/2	9743			
544-865	5/8-18	5/8-11	3"	9745			
544-875	3/4-10	3/4-10	3"	15017	Grade 8	10	

Alum Inner Wheel Nuts



Part#	Item	Type	Qt
545-250	Budd	Right - Hand	10
545-275	Budd	Left - Hand	10



Wheel Nuts

Part #	Item	Qt
544-955	3/4-10	10

Alum Outer Wheel Nuts



Part#	Item	Type	Qt
545-295	Budd	Right - Hand	10
545-300	Budd	Left - Hand	10

Pull Springs

Part#	Wire	OD	Length	Qt
546-210	1/16	1/2	4-3/8	5



Part#	Wire	OD	Length	Qt
546-240	3/64	25/32	5-3/4	5



Part#	Wire	OD	Length	Qt
546-270	1/16	7/16	8-1/4	5



Part#	Wire	OD	Length	Qt
546-300	1/32	3/8	1-13/16	5



Part#	Wire	OD	Length	Qt
546-330	3/32	3/4	8-1/2	5



Part#	Wire	OD	Length	Qt
546-360	1/32	13/32	11-1/2	5



Part#	Wire	OD	Length	Qt
546-390	1/16	13/16	17-1/2	5



Part#	Wire	OD	Length	Qt
546-420	3/32	13/16	2"	5



Windshield Replacement Blades

Anco Wiper Blades

ANCO's AeroVantage wiper blades are created with an aerodynamic design that maintains a clean wipe at high speeds.

They feature a vented bridge and are engineered for today's vehicles with sloped windshields. The ANCO AeroVantage wiper blades use the advanced DuraKlear-Plus wiper element to provide a streak-free wipe every time.

The blades are available in 12 in. to 28 in. lengths, and the KwikConnect system that allows for easy installation and removal of the blades.

For maximum visibility at higher speeds, try these ANCO AeroVantage wiper blades to keep your view clear.



Aero-vantage Wiper Blades

Part#	OD	Anco #	Qt
547-013	13"	31-13	Ea
547-014	14"	31-14	Ea
547-015	15"	31-15	Ea
547-016	16"	31-16	Ea
547-017	17"	31-17	Ea
547-018	18"	31-18	Ea
547-019	19"	31-19	Ea
547-020	20"	31-20	Ea
547-021	21"	31-21	Ea
547-022	22"	31-22	Ea
547-024	24"	31-24	Ea
547-026	26"	31-26	Ea

Body Shop Parts

J-Nuts Short



Part #	Ref #	Item	Qt
555-324	10048	8-32	25
555-330	15677	10-32	25
555-335	10050	1/4-20	25
555-345	8372	5/16-18	25
555-355	10054	3/8-16	25
555-364	12669	6 X 1.00	25
555-366	11628	6.3 X 1.00	25
555-368	11630	8 X 1.25	25
555-370	11631	10 X 1.50	25

J-Nuts Long



Part #	Ref #	Item	Qt
555-340	10051	1/4-20	25
555-350	8814	5/16-18	25
555-360	10055	3/8-16	25
555-375	19901	12 X 1.75	10

Universal U-Nuts Short



Part #	Ref #	Item	Qt
555-520	10064	# 6	50
555-525	10065	# 8	25
555-530	10066	# 10	25
555-540	9881	1/4	25

Universal U-Nuts Long



Part #	Ref #	Item	Qt
555-570	9879	# 8	50
555-575	15752	# 10	25

Push In Retainers



Part #	Ref #	Item	Qt
555-750	14757	1/4 x 1	25
555-760	15414	5/16 x 1	25
555-770	17664	5/16 x 1-1/4	25

License Plate Nut



Part #	Ref #	Item	Qt
555-850	8954	# 14	50