



## A collection of various automotive electrical components. The items include: a coiled black cable with a multi-pin connector; a small multi-pin connector; a square metal housing with a circular multi-pin connector; a green fuse; a cylindrical metal component with a threaded end; a red plastic component with '12-10 CMS' and '8' printed on it; a small black electronic component; a black cylindrical component with a threaded end; and a complex metal component with multiple pins and a lever.

## CABLE AND PLUG ASSEMBLIES

### Six-Way Coiled Cable Assembly



- 12' working length
- Durable black outer jacket resists abrasion and has excellent coil memory
- Heavy-duty zinc die cast plugs with spring guards included

| Part # | Working length | Description       |
|--------|----------------|-------------------|
| 590061 | 12'            | 6/14 Gauge        |
| 050029 | 12'            | Replacement cable |

### Single Pole Coiled Cable Assemblies



#### Tailgate Lift Power Cable

For applications that require direct electrical power to trailer lift gates; BLUE JACKETED

- Rated at 265 amps intermittent service (30 seconds on/50 seconds off)
- Heavy-duty zinc die cast plugs with spring guards included
- 2 gauge cable

| Part # | Description                            |
|--------|--|
| 590135 | 12' Tailgate lift power cable assembly |
| 590136 | 15' Tailgate lift power cable assembly |

#### Tailgate Lift

##### Battery Charging Cable

For applications where cables are used to charge trailer lift gate batteries; GREEN JACKETED, heavy-duty zinc die cast plugs with spring guards included

- 200 amp max for intermittent lift gate applications at 12 VDC
- 110 amp max for continuous applications at 12 VDC
- External ground option
- 4 gauge cable

| Part # | Description   |
|--------|---|
| 590263 | 12' Tailgate lift battery charging 4 gauge cable assembly |
| 590264 | 15' Tailgate lift battery charging 4 gauge cable assembly |

### Two Pole Coiled Cable Assemblies



- Rated at 200 amps for lift gate applications at 12 VDC
- 4 gauge cable
- Internally grounded
- Withstand temperatures of -85° to +185°F
- Durable black polyethylene outer jacket resists abrasions and chemical damage while offering excellent coil retention
- Heavy-duty zinc die cast plugs with springs guards included

| Part # | Description                                 |
|--------|---|
| 590171 | 12' Two pole coiled cable assembly          |
| 590172 | 15' Two pole coiled cable assembly          |
| 590181 | 12' Vertical two pole coiled cable assembly |
| 590182 | 15' Vertical two pole coiled cable assembly |

**NOTE: Part numbers listed in RED are NEW!**



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## SEVEN-WAY COILED CABLE ASSEMBLIES



### Seven-Way ISO Coiled Cable Assemblies

- Used in tractor/trailer systems requiring ISO 3731 style connectors; ISO pin prevents connections with non-ISO sockets
- 1/8, 2/10, 4/12 gauge cable
- Durable yellow outer jacket resists abrasion, provides excellent coil retention and offers quick identification of auxiliary circuit lines
- Heavy-duty zinc die cast plugs with spring guards included

| Part # | Working Length | Description              |
|--------|----------------|--------------------------|
| 590251 | 12'            | 2-12" Leads              |
| 590252 | 15'            | 2-12" Leads              |
| 590253 | 15'            | 1-48" Lead<br>1-12" Lead |
| 590254 | 15'            | 1-72" Lead<br>1-12" Lead |



### Seven-Way ABS Coiled Cable Assemblies

- Assemblies include heavy gauge wire commonly used to power trailer and dolly ABS
- 1/8, 2/10, 4/12 gauge cable
- Durable green outer jacket resists abrasion, provides excellent coil retention and offers quick identification of ABS lines
- Heavy-duty zinc die cast plugs with spring guards included
- Cable meets SAE J2394 June 1998 Type F requirements

| Part # | Working Length | Description              |
|--------|----------------|--------------------------|
| 590160 | 12'            | 2-12" Leads              |
| 590161 | 15'            | 2-12" Leads              |
| 590163 | 15'            | 1-40" Lead<br>1-12" Lead |
| 590080 | 20'            | 2-12" Leads              |
| 590081 | 20'            | 1-12" Lead<br>1-40" Lead |

NOTE: See page E8 for ABS color code chart



### Seven-Way Coiled Cable Assemblies

- Durable black outer jacket resists abrasion and provides excellent coil retention
- Heavy-duty zinc die cast plugs with spring guards included
- Operating temperature range of -55° to +185°F

| Part # | Working Length | Description                                     |
|--------|----------------|---|
| 590154 | 12'            | 6/12, 1/10 Gauge<br>(2-12" Leads)               |
| 590156 | 12'            | 6/14, 1/12 Gauge<br>(2-12" Leads)               |
| 590155 | 15'            | 6/12, 1/10 Gauge<br>(2-12" Leads)               |
| 590157 | 15'            | 6/14, 1/12 Gauge<br>(2-12" Leads)               |
| 590159 | 15'            | 6/12, 1/10 Gauge<br>(1-72" Lead,<br>1-12" Lead) |



- ISO assemblies used in tractor/trailer systems requiring ISO 3731 style connectors

| Part # | Working Length | Description           |
|--------|----------------|-----------------------|
| 590255 | 12'            | 1/8, 2/10, 4/12 Gauge |
| 590256 | 15'            | 1/8, 2/10, 4/12 Gauge |

### Seven-Way ABS & ISO Straight Cable Assemblies

- ABS assemblies include heavy gauge wire commonly used to power trailer and dolly ABS - ABS cable meets SAE J2394 June 1998 Type F requirements

| Part # | Working Length | Description           |
|--------|----------------|-----------------------|
| 590165 | 12'            | 1/8, 2/10, 4/12 Gauge |
| 590166 | 15'            | 1/8, 2/10, 4/12 Gauge |
| 590179 | 20'            | 1/8, 2/10, 4/12 Gauge |

- Heavy-duty zinc die cast plugs with spring guards included

| Part # | Working Length | Description      |
|--------|----------------|------------------|
| 590180 | 5'             | 6/12, 1/10 Gauge |
| 590036 | 8'             | 6/12, 1/10 Gauge |
| 590046 | 12'            | 6/12, 1/10 Gauge |
| 590177 | 10'            | 6/12, 1/10 Gauge |
| 590178 | 15'            | 6/12, 1/10 Gauge |

## ELECTRICAL PLUGS

ISO plug



T-grip



Plastic plug with weather guard



### Seven-Way Plugs

- Heavy-duty nickel-plated zinc die cast housings on all except plastic plug, which has an unbreakable nylon housing
- Easy to remove interiors make for quick replacements
- ATA color-coded wire terminals
- Internal clamp holds cable securely in place
- Standard seven-way plugs meet ATA and SAE J560 requirements; ISO plugs meet ISO 3731: 1997 requirements

### T-Grip Seven-Way Plugs

| Part # | Description                             |
|--------|---|
| 593057 | Plug with spring guard                  |
| 593101 | ISO plug with spring guard              |
| 593111 | Plastic plug with weather guard         |
| 593019 | Replacement interior for 593057, 593111 |
| 593060 | Replacement spring guard                |

### Single Grip Seven-Way Plugs

| Part # | Description               |
|--------|---------------------------|
| 593022 | Plug with spring guard    |
| 593024 | Plug without spring guard |
| 593019 | Replacement interior      |
| 593029 | Replacement spring guard  |

### Single Pole Plugs

- Used to provide power to heavy draw auxiliary trailer equipment
- Heavy-duty zinc die cast housings
- Power and ground terminals hold up to 1/0 gauge wire

| Part # | Description                           |
|--------|---------------------------------------|
| 591161 | T-grip plug with spring guard         |
| 591105 | Single grip plug without spring guard |



### Seven-Way Blade Type Plug

- Primarily used in RV applications
- Constructed of molded PVC for impact resistance

| Part # | Description               |
|--------|---------------------------|
| 054001 | Seven-way blade type plug |

NOTE: See page E6 for seven-way blade type socket

591161



591105



593116



593123



### Two Pole Plug

- 200 amp, 4 gauge wire capacity
- Heavy-duty zinc die cast housings
- Internal ground
- Spring guard supports and protects cable

| Part # | Description                   |
|--------|-------------------------------|
| 593116 | T-grip plug with spring guard |
| 593123 | Vertical T-grip plug w/ guard |

Plug with spring guard



Plug without spring guard



### Four-Way and Six Way Plugs

- Heavy-duty zinc die cast housings
- Plug locking system works with socket door to ensure proper hookup and prevent unintentional disconnections
- Spring guard 055049 supports and protects cable

| Part # | Description                           |
|--------|---------------------------------------|
| 055059 | Four-way plug with spring guard       |
| 055054 | Four-way plug without spring guard    |
| 055049 | Six-way plug with spring guard        |
| 055050 | Six-way plug without spring guard     |
| 055051 | Replacement interior for six-way plug |



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## PLUG ADAPTERS AND ACCESSORIES

Female Pins



591009

Male Pins



591010



591116

### Truck Tractor to Trailer Adapters

- Heavy-duty zinc die cast housing on part nos. 591009 and 591010; also includes split brass pins and terminals and a spring clip to lock adapter and plug together
- Part no. 591116 constructed of molded PVC for impact resistance

| Part # | Description                              |
|--------|--|
| 591009 | Seven-way pin to six-way adapter         |
| 591010 | Six-way round to seven-way adapter       |
| 591116 | Seven-way round to four-way flat adapter |



057118



057119



057120



057121

### Continuity Testers

- LED indicators quickly identify complete circuits by glowing red; no light means problem circuit
- Fits standard seven-way blade type, four-way flat connectors and seven-way round
- Constructed of molded PVC for impact resistance
- Internally grounded

| Part # | Description                     |
|--------|---------------------------------|
| 057118 | Seven-way plug circuit tester   |
| 057119 | Seven-way socket circuit tester |
| 057120 | Seven-way blade circuit tester  |
| 057121 | Four-way flat circuit tester    |



### Four-Way Flat Set

- Set: 48" lead (female) side and 12" lead (male) side
- Single: 48" leads
- Constructed of molded PVC for impact resistance
- ATA color-coded:  
White: Ground  
Green: Right turn and brake lights  
Yellow: Left turn and brake lights  
Brown: Tail lights

| Part #  | Description                                    |
|---------|--|
| 090226* | Four-way flat - female                         |
| 090227* | Four-way flat - male                           |
|         | *Together these replace Velvac part no. 054003 |
| 054003  | Four-way flat set                              |



### Seven-Way Plug Cleaner

- Stainless steel brushes quickly clean electrical contacts for improved conductivity
- Durable plastic body

| Part # | Description            |
|--------|------------------------|
| 055034 | Seven-way plug cleaner |

**NOTE: Part numbers listed in RED are NEW!**

## ELECTRICAL SOCKETS AND ACCESSORIES

### Seven-Way Circuit Breaker Sockets and Adapter Boxes

- Non-corrosive, reinforced nylon housing for added durability
- Designed for #8 ring terminals (see page E27)
- ATA color-coded contacts (see page E8 for ATA color code chart)
- Solid brass split pins are zinc-plated for corrosion resistance

| Part #  | Description  |
|---------|--|
| 055037  | Socket with 20 amp circuit breakers  |
| 055038  | Socket with 30 amp circuit breakers  |
| 055040  | Socket without circuit breakers  |
| 055039  | Replacement cover kit (includes cover, shaft retainer, steel hinge pin and stainless steel spring) |
| 055041* | Deep adapter box with bottom entry   |
| 055045* | Deep adapter box with back entry   |

\*5/16" - 18" UNC cover plate studs and 2" inside depth

- Each socket includes automatic reset circuit breakers with positive snap open/snap closed action to eliminate arcing (unless noted)
- Mounting holes are 4-1/2" on center and include steel bushings for added housing protection
- Adhesive-backed mounting gasket included
- Circuit breaker sockets meet SAE J560 requirements



Deep adapter box with back entry



Deep adapter box with bottom entry



- Durable zinc die cast housings
- Solid brass split pin socket offers replaceable circuit breakers for circuit protection of trailer wiring systems
- Slanted door front for plug support
- Replaceable thermoplastic base plate with ATA color codes for quick identification
- Each socket includes automatic reset circuit breakers with positive snap open/snap closed action to eliminate arcing

| Part # | Description                         |
|--------|-------------------------------------|
| 593052 | Socket with 20 amp circuit breakers |
| 593054 | Socket with 30 amp circuit breakers |

### Single and Two Pole Sockets

- Durable zinc die cast housings
- Power and ground terminals on single pole socket hold up to 1/0 gauge wire
- 200 amp, 4 gauge wire capacity on two pole socket
- Two pole socket has internal ground
- Single pole socket may be soldered or crimped

- Mounting holes 3" on center
- Rear housing 1-3/4" O.D.

| Part # | Description                                 |
|--------|---|
| 591113 | Single pole socket                          |
| 593121 | Two pole socket                             |
| 593124 | Vertical two pole socket                    |
| 591090 | Replacement interior for single pole socket |



593113



593124



593121

### Seven-Way Blade Type Socket

- Screw-type socket primarily used in RV applications
- 6-24 VDC
- Mounting holes are 2-1/4" on center
- Constructed of molded PVC for impact resistance

| Part # | Description                 |
|--------|-----------------------------|
| 054002 | Seven-way blade type socket |
| 090216 | Mounting bracket            |

NOTE: See page E4 for seven-way blade type plug



Optional mounting bracket



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## ELECTRICAL SOCKETS AND ACCESSORIES

Two hole  
socket  
with screw  
terminals



Two hole  
socket  
with push  
terminals



Optional terminal  
protector boot

### Seven-Way Sockets

- Non-corrosive, reinforced nylon housing for added durability
- Screw type socket with split pins designed for #8 ring terminals (see page E27)
- Push type socket with solid pins designed for 180° snap receptacles (see Part No. 056079 on page E26)
- Mounting holes are 3" on center
- Screw type socket includes screws and washers
- Gasket included on each socket
- Sockets meet SAE J560 requirements
- Protective rubber boot seals out moisture and contaminants - sold separately

| Part # | Description                          |
|--------|--------------------------------------|
| 055043 | Two hole socket with screw terminals |
| 055062 | Two hole socket with push terminals  |
| 055063 | Rubber terminal protector boot       |



593083



Optional terminal  
protector boot

- Durable zinc die cast housings
- ABS plastic interior with ATA color codes for quick identification
- Solid brass pins
- Wires attached by set screw retainers
- Slanted door front for plug support
- Tongue and groove door design protects socket interior from dirt and moisture
- Mounting holes are 2-15/16" on center
- 1-13/16" rear housing length
- Terminal protector boot keeps terminals free from moisture and contaminants - sold separately
- Sockets meet SAE J560 requirements (SAE applies only to solid pins)

| Part # | Description   |
|--------|---|
| 593083 | Socket with solid pins                                    |
| 593084 | Socket with split pins                                    |
| 054017 | Terminal protector boot                                   |
| 591022 | Replacement solid pin interior                            |
| 591019 | Replacement cover kit (includes door, hinge pin & spring) |



### ISO Seven-Way Socket

- Used in tractor/trailer systems requiring ISO 3731 style connectors - ISO socket prevents connections with non-ISO plugs
- ISO color-coded yellow, non-corrosive, reinforced nylon housing
- Wires secured by set screws
- Mounting holes are 2-15/16" on center

| Part # | Description             |
|--------|-------------------------|
| 593106 | ISO socket              |
| 054017 | Terminal protector boot |



Optional  
terminal  
protector  
boot

### Four-Way and Six-Way Sockets

- Durable zinc die cast housings
- Solid brass split pins
- Locking system on door works with plug to ensure proper hook-up and prevent unintentional disconnections
- Optional protector boot keeps terminals free of moisture and contaminants - sold separately

| Part # | Description                  |
|--------|------------------------------|
| 055052 | Six-way socket               |
| 055056 | Four-way socket              |
| 090217 | Mounting bracket             |
| 090218 | Terminal protector boot      |
| 055053 | Replacement six-way interior |

**NOTE: Part numbers listed in RED are NEW!**

## ELECTRICAL CABLE



### Battery and Starter Cable

- Durable thermoplastic outer jacket keeps cable flexible at low temperatures and resists abrasion, ozone, oil and road salts
- Soft annealed stranded copper
- Cable meets SAE J1127 Type SGT requirements

#### Red Jacketed

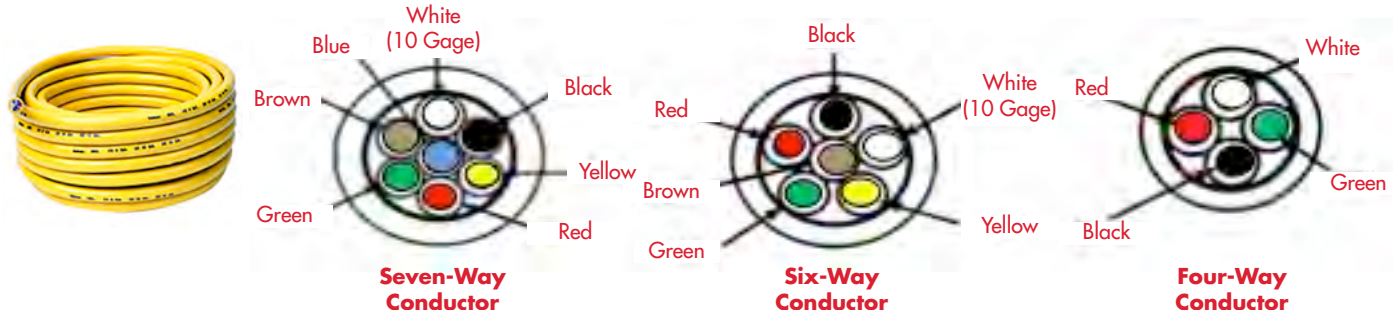
| Part #   | Coil Length | Wire Gauge |
|----------|-------------|------------|
| 058033   | 25'         | 6          |
| 058033-7 | 100'        | 6          |
| 058035   | 25'         | 4          |
| 058035-7 | 100'        | 4          |
| 058037   | 25'         | 2          |
| 058037-7 | 100'        | 2          |
| 058039   | 25'         | 1          |
| 058039-7 | 100'        | 1          |
| 058241   | 25'         | 1/0        |
| 058241-7 | 100'        | 1/0        |
| 058243   | 25'         | 2/0        |
| 058243-7 | 100'        | 2/0        |
| 058245   | 25'         | 3/0        |
| 058247   | 25'         | 4/0        |

#### Black Jacketed

| Part #   | Coil Length | Wire Gauge |
|----------|-------------|------------|
| 058233   | 25'         | 6          |
| 058233-7 | 100'        | 6          |
| 058235   | 25'         | 4          |
| 058235-7 | 100'        | 4          |
| 058237   | 25'         | 2          |
| 058237-7 | 100'        | 2          |
| 058239   | 25'         | 1          |
| 058239-7 | 100'        | 1          |
| 058041   | 25'         | 1/0        |
| 058041-7 | 100'        | 1/0        |
| 058043   | 25'         | 2/0        |
| 058043-7 | 100'        | 2/0        |
| 058045   | 25'         | 3/0        |
| 058047   | 25'         | 4/0        |

NOTE: Battery terminals and lugs sold separately (see pages E10-12)

### Multiple Conductor Cable



- ABS cable meets SAE J2394 June 1998 Type F requirements

#### ADA Color Code Chart

|        |   |
|--------|---|
| White  | Ground return to towing vehicle         |
| Black  | ICC required marker and clearance light |
| Yellow | Left-hand directional signal            |
| Red    | Stoplights                              |
| Green  | Right-hand directional signal           |
| Brown  | Tail lamps, 3-bar marker lamps          |
| Blue   | Auxiliary                               |

| Part #   | Jacket Color | Coil Length | Conductor | Gauge           |
|----------|--------------|-------------|-----------|-----------------|
| 050019   | Black        | 100'        | Seven     | 6/12, 1/10      |
| 050019-7 | Black        | 500'        | Seven     | 6/12, 1/10      |
| 050042   | Black        | 100'        | Seven     | 14              |
| 050042-7 | Black        | 500'        | Seven     | 14              |
| 050037   | Green (ABS)  | 100'        | Seven     | 1/8, 2/10, 4/12 |
| 050051   | Yellow (ISO) | 50'         | Seven     | 1/8, 2/10, 4/12 |
| 050052   | Yellow (ISO) | 100'        | Seven     | 1/8, 2/10, 4/12 |
| 050007   | Black        | 100'        | Six       | 14              |
| 050007-7 | Black        | 500'        | Six       | 14              |
| 050001   | Black        | 100'        | Four      | 14              |
| 050001-7 | Black        | 500'        | Four      | 14              |



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## BATTERY CABLE



### Battery-to-Battery Crossover Cable

- 2/0 gauge wire
- Molded lead terminals and black neoprene outer jacket

| Part # | Description                 |
|--------|-----------------------------|
| 058212 | 12" Battery crossover cable |



### Ground Strap

- 4 gauge wire
- Molded zinc-plated steel lugs and tin-plated copper stranding
- 7/16" diameter bolt hole

| Part # | Description              |
|--------|--------------------------|
| 058116 | Ground strap (12" - 14") |



### Switch-to-Starter Cable

- 4 gauge wire
- Molded zinc-plated steel lugs and red PVC outer jacket

| Part # | Description                 |
|--------|-----------------------------|
| 058115 | 18" Switch-to-starter cable |



### Battery Cable

- 2/0 gauge wire
- Molded copper lug and lead terminal
- Black PVC outer jacket

| Part # | Description       |
|--------|-------------------|
| 058117 | 12" Battery cable |



### Battery Booster Cables

- Copper stranded, 4 gauge wire
- Rated at 400 amps
- Black PVC outer jacket
- Red and black vinyl coated clamps feature solid copper contacts and heavy springs for positive clamping

| Part # | Description               |
|--------|---------------------------|
| 058152 | 16' Battery booster cable |



### 800A Booster Cable

These heavy duty battery cables are rated at 800 amps and are designed to handle jump starting heavy duty equipment

- Solid copper parrot clamps for increased conductivity
- Tangle proof design
- Braided copper wire remains flexible even in subzero temperatures
- Includes strong plastic storage container to protect cables from damage when not in use

| Part # | Description        |
|--------|--------------------|
| 058151 | 800A Booster cable |

### Stud Top Battery Cable

- 2/0 gauge wire
- Molded tin-plated copper lugs and black PVC outer jacket

| Part # | Color | Description                |
|--------|-------|----------------------------|
| 058118 | Black | 8" Stud top battery cable  |
| 058128 | Red   | 8" Stud top battery cable  |
| 058119 | Black | 12" Stud top battery cable |
| 058129 | Red   | 12" Stud top battery cable |



## BATTERY LUGS

- Fully annealed electrolytic copper construction provides excellent conductivity
- Wire gauge identification marked on lug barrels
- Heat-shrink tubing should be used over all battery terminal connections (see pages E33-E35)

### Standard Battery Lugs

- Unique flared barrel design eliminates wire strand hang-ups
- Unplated
- Crimpable



| Part # | Wire Gauge | Stud Size |
|--------|------------|-----------|
| 056033 | 6          | 1/4"      |
| 058073 | 6          | 5/16"     |
| 058074 | 6          | 3/8"      |
| 056034 | 4          | 1/4"      |
| 058076 | 4          | 5/16"     |
| 058077 | 4          | 3/8"      |
| 058078 | 4          | 1/2"      |
| 058079 | 2          | 5/16"     |
| 056035 | 2          | 3/8"      |
| 058081 | 1          | 5/16"     |
| 056036 | 1          | 3/8"      |

| Part # | Wire Gauge | Stud Size |
|--------|------------|-----------|
| 058082 | 1          | 1/2"      |
| 058083 | 1/0        | 5/16"     |
| 056037 | 1/0        | 3/8"      |
| 056038 | 1/0        | 1/2"      |
| 058084 | 2/0        | 5/16"     |
| 056039 | 2/0        | 3/8"      |
| 056040 | 2/0        | 1/2"      |
| 058086 | 3/0        | 3/8"      |
| 056041 | 3/0        | 1/2"      |
| 058088 | 4/0        | 3/8"      |
| 056042 | 4/0        | 1/2"      |

### Heavy-Duty Battery Lugs

- Tin-plated for corrosion resistance
- Crimpable



| Part # | Wire Gauge | Stud Size |
|--------|------------|-----------|
| 058325 | 1/0        | 3/8"      |
| 058326 | 1/0        | 1/2"      |
| 058327 | 2/0        | 3/8"      |
| 058328 | 2/0        | 1/2"      |

| Part # | Wire Gauge | Stud Size |
|--------|------------|-----------|
| 058329 | 3/0        | 3/8"      |
| 058330 | 3/0        | 1/2"      |
| 058331 | 4/0        | 3/8"      |
| 058332 | 4/0        | 1/2"      |

### Heavy-Duty Flared Lug Maintenance Kit



- Kit includes 50 lugs in ten varieties ranging from 6 to 4/0 gauge with stud sized of 1/4", 3/8" and 1/2"
- Packaged in a durable plastic case with product information shown on inside label for easy identification

| Part # | Description                           |
|--------|---------------------------------------|
| 057002 | Heavy-duty flared lug maintenance kit |

| Part # | Qty | Part # | Qty |
|--------|-----|--------|-----|
| 056033 | 6   | 056038 | 4   |
| 056034 | 6   | 056039 | 4   |
| 056035 | 6   | 056040 | 4   |
| 056036 | 6   | 056041 | 4   |
| 056037 | 6   | 056042 | 4   |

### Flared Butt Connectors

- Seamless construction
- Tin-plated for corrosion resistance



| Part # | Wire Gauge |
|--------|------------|
| 058020 | 1          |
| 058021 | 1/0        |
| 058022 | 2/0        |
| 058023 | 3/0        |
| 058024 | 4/0        |



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## BATTERY TERMINALS

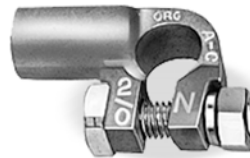
### Crimpable or Solderable Battery Terminals

- One-piece, cast copper construction
- Lead-plated for corrosion resistance
- Cable size clearly designated on terminals for correct size selection
- Polarity shown on terminals to avoid mixing positive and negative connections
- Tool die and letter codes permanently marked on terminals to simplify installation with other manufacturers' tools
- Uniform wall thickness assures high reliability when connector is crimped on cable
- Long barrels for added strength and vibration resistance
- Heat-shrink tubing should be used over all battery terminal connections (See page E33)



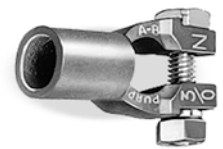
**Right Angle Barrel Terminals**

| Part # | Wire Gauge               | Polarity |
|--------|--------------------------|----------|
| 057056 | 2/0                      | Positive |
| 057057 | 2/0                      | Negative |
| 058055 | 3/0                      | Positive |
| 058056 | 3/0                      | Negative |
| 058011 | Replacement nut and bolt |          |



**Right Elbow Terminals**

| Part # | Wire Gauge               | Polarity |
|--------|--------------------------|----------|
| 058052 | 1/0                      | Positive |
| 058051 | 1/0                      | Negative |
| 058005 | 2/0                      | Positive |
| 058006 | 2/0                      | Negative |
| 058009 | 3/0                      | Positive |
| 058010 | 3/0                      | Negative |
| 058011 | Replacement nut and bolt |          |



**Straight Barrel Terminals**

| Part # | Wire Gauge               | Polarity  |
|--------|--------------------------|-----------|
| 058050 | 4                        | Universal |
| 057050 | 1                        | Positive  |
| 057051 | 1                        | Negative  |
| 058001 | 1/0                      | Positive  |
| 058002 | 1/0                      | Negative  |
| 057052 | 2/0                      | Positive  |
| 057053 | 2/0                      | Negative  |
| 057054 | 3/0                      | Positive  |
| 057055 | 3/0                      | Negative  |
| 058057 | 4/0                      | Positive  |
| 058058 | 4/0                      | Negative  |
| 058011 | Replacement nut and bolt |           |



**Left Elbow Terminals**

| Part # | Wire Gauge               | Polarity |
|--------|--------------------------|----------|
| 058054 | 1/0                      | Positive |
| 058053 | 1/0                      | Negative |
| 058003 | 2/0                      | Positive |
| 058004 | 2/0                      | Negative |
| 058007 | 3/0                      | Positive |
| 058008 | 3/0                      | Negative |
| 058011 | Replacement nut and bolt |          |



**Marine Terminal**

- 5/16" post

| Part # | Description     |
|--------|-----------------|
| 058019 | Marine terminal |

#### Helpful hint:

Most Velvac terminals are colorcoded according to wire gauge specifications:

4 - Green    1/0 - Black  
 2 - Pink    2/0 - Orange  
 1 - Pink    3/0 - Purple  
               4/0 - Yellow

## BATTERY TERMINALS

### ECO-MAX Battery Terminals

- ECO-MAX is the first environmentally friendly, 100% copper battery terminal
- The post top design is manufactured with the highest quality C11000 ETP (Electrolytic Tough Pitch) copper and is completely lead free
- RoHS compliant and therefore exempt from CA Proposition 65 requirements
- C11000 ETP copper battery terminals provide the highest conductivity rating compared to any competing copper design
- Maximum electrical conductivity is 101% IACS at 68°F. Typical designs fall at 20% and 32% IACS at 68°F
- Tin plated for corrosion resistance
- Provided with nut and bolt installed
- Has a beveled barrel for facilitating cable insertion
- Color-coded for polarity identification and color and die coded for crimp settings
- Exceeds SAE Standard J-1811



ECO-Max right elbow



ECO-Max left elbow



ECO-Max flag



ECO-Max straight

| Part # | Cable Gauge | Gage ID Color | Polarity  | Terminal Style |
|--------|-------------|---------------|-----------|----------------|
| 058416 | 4           | Gray          | Negative  | Straight       |
| 058417 | 4           | Gray          | Positive  | Straight       |
| 058418 | 4           | Gray          | Universal | Straight       |
| 058419 | 1-2         | Pink          | Negative  | Straight       |
| 058420 | 1-2         | Pink          | Positive  | Straight       |
| 058421 | 1/0         | Black         | Negative  | Straight       |
| 058422 | 1/0         | Black         | Positive  | Straight       |
| 058423 | 2/0         | Orange        | Negative  | Straight       |
| 058424 | 2/0         | Orange        | Positive  | Straight       |
| 058425 | 3/0         | Purple        | Negative  | Straight       |
| 058426 | 3/0         | Purple        | Positive  | Straight       |
| 058427 | 4/0         | Yellow        | Negative  | Straight       |
| 058428 | 4/0         | Yellow        | Positive  | Straight       |
| 058445 | 1/0         | Black         | Negative  | Flag           |
| 058446 | 1/0         | Black         | Positive  | Flag           |
| 058447 | 2/0         | Orange        | Negative  | Flag           |
| 058448 | 2/0         | Orange        | Positive  | Flag           |
| 058449 | 3/0         | Purple        | Negative  | Flag           |
| 058450 | 3/0         | Purple        | Positive  | Flag           |
| 058451 | 4/0         | Yellow        | Negative  | Flag           |
| 058452 | 4/0         | Yellow        | Positive  | Flag           |
| 058437 | 1/0         | Black         | Negative  | Left elbow     |
| 058438 | 1/0         | Black         | Positive  | Left elbow     |
| 058439 | 2/0         | Orange        | Negative  | Left elbow     |
| 058440 | 2/0         | Orange        | Positive  | Left elbow     |
| 058441 | 3/0         | Purple        | Negative  | Left elbow     |
| 058442 | 3/0         | Purple        | Positive  | Left elbow     |
| 058443 | 4/0         | Yellow        | Negative  | Left elbow     |
| 058444 | 4/0         | Yellow        | Positive  | Left elbow     |
| 058429 | 1/0         | Black         | Negative  | Right elbow    |
| 058430 | 1/0         | Black         | Positive  | Right elbow    |
| 058431 | 2/0         | Orange        | Negative  | Right elbow    |
| 058432 | 2/0         | Orange        | Positive  | Right elbow    |
| 058433 | 3/0         | Purple        | Negative  | Right elbow    |
| 058434 | 3/0         | Purple        | Positive  | Right elbow    |
| 058435 | 4/0         | Yellow        | Negative  | Right elbow    |
| 058436 | 4/0         | Yellow        | Positive  | Right elbow    |



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## BATTERY TERMINALS

### Battery Stud Nut

- Stainless steel construction

| Part # | Description           |
|--------|-----------------------|
| 058068 | 3/8" Battery stud nut |

### Heavy-Duty Terminal

- For 1" 4/0 gauge wire

| Part # | Description         |
|--------|---------------------|
| 058016 | Heavy duty terminal |

### Crimpable or Solderable Terminals for Stud Top Batteries



Base terminal

| Part # | Wire Gauge | Polarity  |
|--------|------------|-----------|
| 058090 | 1/0        | Universal |
| 058091 | 2/0        | Universal |
| 058092 | 3/0        | Universal |
| 058093 | 4/0        | Universal |



Flag terminal

| Part # | Wire Gauge | Polarity  |
|--------|------------|-----------|
| 058251 | 1/0        | Universal |
| 058252 | 2/0        | Universal |
| 058253 | 3/0        | Universal |
| 058254 | 4/0        | Universal |

### Medium-Duty Terminal

- For 6 to 2 gauge wire

| Part # | Description          |
|--------|----------------------|
| 058012 | Medium-duty terminal |

### Three-Way Battery Terminals

- For 1 to 2/0 gauge wire
- Lead construction with zinc-plated steel bolts and nuts
- Positive and negative terminals included

| Part # | Description                 |
|--------|-----------------------------|
| 058071 | Three-way battery terminals |

### OEM Battery Bolt

- Recessed groove permits attachment of battery charger or jumper cables
- Zinc-plated steel construction
- 3/8" - 16" UNC
- 1-3/16" long

| Part # | Description      |
|--------|------------------|
| 058296 | OEM battery bolt |



### Battery Post and Terminal Cleaner

| Part # | Description                       |
|--------|-----------------------------------|
| 058046 | Battery post and terminal cleaner |

### Side Post Terminal

- For 6 to 2 gauge wire

| Part # | Description        |
|--------|--------------------|
| 058013 | Side post terminal |

### Stud Mount To-Post Mount Conversion Terminals

- All lead construction
- Both positive and negative posts included

| Part # | Description                                   |
|--------|---|
| 058017 | Stud mount-to-post mount conversion terminals |

### Protective Battery Washers

- Washers seal out acid fumes protecting terminals from corrosion
- Packaged in convenient plastic screw top jars



| Part # | Description                        |
|--------|------------------------------------|
| 058094 | Protective battery washers - red   |
| 058095 | Protective battery washers - black |

## SWITCHES AND SOLENOIDS



### Indicator Lights

- Chrome housing and nylon base
- LED's rated for 15mA at 12 VDC
- 100,000 hours estimated bulb life expectancy
- Temperature rating up to +185°F (85°C)
- 20 AWG lead wires
- 7/16" diameter recommended mounting hole

| Part # | Color |
|--------|-------|
| 090213 | Red   |
| 090214 | Amber |
| 090215 | Green |



### Wiper Control Switch

- Operating temperature: -20° to +160°F
- Washer motor: 6 amps max. current draw
- Nominal voltage: 12 VDC (9 VDC min., 16VDC max.)
- Terminal configuration: 8 pin amp connector-mates with amp connector 770579-1 and 171639-1 socket terminals (not included and not available from Velvac)
- Integrates multi-speed wiper and washer functions into a single dashboard device
- Backlit for easy identification
- Fits standard 22 mm x 44 mm opening

| Part # | Description          |
|--------|----------------------|
| 090120 | Wiper control switch |



### Toggle Accessories

- Protect toggle switches from moisture, dust and dirt
- UV-resistant, black silicon construction
- Built-in hex nut base screws on to most Velvac toggle switches
- Rated for -40° to +350°F (+180°C)

| Part # | Description |
|--------|-------------|
| 090210 | Full boot   |
| 090211 | Half boot   |



### License / Utility Lights

- 12 VDC
- Weather-proof gasket
- 31" wire lead with .250" male disconnect
- 89 bulb
- Fits 1-1/4" mounting hole

| Part # | Description                      |
|--------|----------------------------------|
| 090173 | Twist-in license / utility light |

- Fits GM/GMC trucks with step bumper
- 12 VDC
- 7-7/8" wire lead with protective boot where wire attaches to light and self-grounding single post adapter
- 67 bulb
- Mounting holes approx. 2-11/16" on center



| Part # | Description                          |
|--------|--------------------------------------|
| 090174 | Bumper mount license / utility light |

- Rugged, spring-loaded design provides protection against accident actuation
- Mounting hole accepts all standard Velvac toggles with 15/32" mounting stems



| Part # | Description  |
|--------|--------------|
| 090212 | Safety cover |

### Battery Disconnect Switch

- Two position: on/off
- Continuous rating 180 amps (max)
- Momentary rating 1000 amps (max)
- Momentary use only: 15 sec. on/5 min. off
- Heavy gauge, plated steel casing
- Die cast lever
- 3/4" diameter mounting stem
- UL approved for 6 to 36 VDC



090104



090233, 090234

| Part #  | Description   |
|---------|---|
| 090104* | Battery disconnect switch SPST                                |
| 090233  | Battery disconnect switch DPST                                |
| 090234  | Battery disconnect switch DPST w/ anti-rotation indexing post |

\*Not UL approved

### Push Button Switch

- Rated for 50 amps at 12VDC
- 5/8" - 32 UNS mounting bushing for panels up to 1/2" thick
- Push for momentary-on action
- Die cast with silver/copper contacts and two screw terminals
- Dust and moisture resistant
- Boot nut included



| Part # | Description                  |
|--------|------------------------------|
| 090190 | Momentary push button switch |

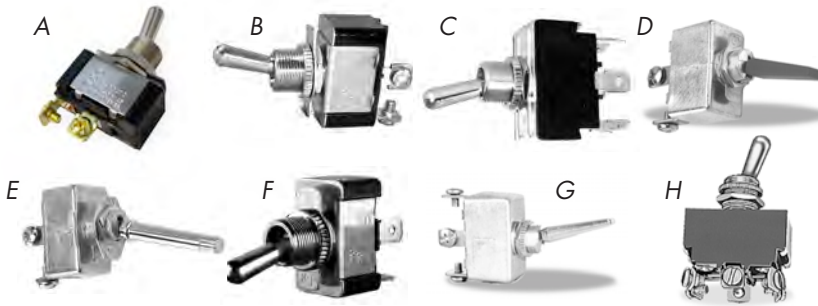


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## SWITCHES AND SOLENOIDS

### Heavy Duty Toggle Switches



- Frame and support constructed from steel with zinc chromate, brass terminals
- Neoprene-sealed toggles are moisture and dust resistant

- Fully assembled with locating ring/tongue nut (and On/Off faceplate on single pole switches only)
- 1/2" diameter recommended mounting hole- all toggles must be installed with provided hex nut behind panel to prevent damage during installation

| Photo                  | Part # | Poles | Amp | VDC     | Circuitry         | Terminals             | Miscellaneous   |
|------------------------|--------|-------|-----|---------|-------------------|-----------------------|---|
| Single Pole            |        |       |     |         |                   |                       |   |
| B                      | 090176 | SPST  | 21A | 14      | On / Off          | (2) 0.250" Flat blade | -   |
| A                      | 090177 | SPST  | 21A | 14      | On / Off          | (2) Screw             | -   |
| B                      | 090199 | SPDT  | 21A | 14      | On / Off / On     | (3) 0.250" Flat blade | -   |
| A                      | 090200 | SPDT  | 21A | 14      | On / Off / On     | (3) Screw             | -   |
| A                      | 090201 | SPDT  | 21A | 14      | (On) / Off / (On) | (3) Screw             | -   |
| A                      | 090202 | SPDT  | 21A | 14      | On / Off / (On)   | (3) Screw             | -   |
| F                      | 090191 | SPST  | 30A | 12      | On / Off          | (3) 0.250" Flat blade | Red LED handle****  |
| F                      | 090192 | SPST  | 30A | 12      | On / Off          | (3) 0.250" Flat blade | Green LED handle****  |
| F                      | 090193 | SPST  | 30A | 12      | On / Off          | (3) 0.250" Flat blade | Blue LED handle****   |
| D                      | 090186 | SPST  | 50A | 12      | On / Off          | (2) Screw             | Black handle**  |
| D                      | 090187 | SPST  | 50A | 12      | On / Off          | (2) Screw             | Red handle**  |
| D                      | 090188 | SPST  | 50A | 12      | On / Off          | (2) Screw             | Chrome handle**   |
| E                      | 090189 | SPST  | 50A | 6/12/24 | On / Off          | (2) Screw             | 1-5/8" Chrome handle  |
| G                      | 090184 | SPDT  | 50A | 6/12/24 | On / Off / On     | (3) Screw             | Chrome plated***  |
| -                      | 090040 | SPDT  | 50A | 6-24    | On / On           | (3) Screw             | ( ) indicates<br>MOMENTARY<br>ACTION  |
| -                      | 090043 | SPDT  | 50A | 6-24    | (On) / Off / (On) | (3) Screw             |   |
| Double Pole            |        |       |     |         |                   |                       |   |
| A                      | 090203 | DPST  | 21A | 14      | On / Off          | (4) Screw             | ** Die cast housing<br>with silver-plated<br>contacts, heavy<br>copper terminals,<br>stems measure 15/32"<br>dia. X 15/32" long |
| C                      | 090204 | DPST  | 21A | 14      | On / Off          | (4) 0.250" Flat blade |   |
| H                      | 090048 | DPDT  | 21A | 14      | On / On           | (6) Screw             |   |
| C                      | 090205 | DPDT  | 21A | 14      | On / On           | (6) 0.250" Flat blade |   |
| C                      | 090206 | DPDT  | 21A | 14      | On / Off / On     | (6) 0.250" Flat blade |   |
| A                      | 090208 | DPDT  | 21A | 14      | (On) / Off / (On) | (6) Screw             |   |
| C                      | 090209 | DPDT  | 21A | 14      | (On) / Off / (On) | (6) 0.250" Flat blade |   |
| *** Paddle type handle |        |       |     |         |                   |                       |   |
| "O" Ring Sealed        |        |       |     |         |                   |                       |   |
| A                      | 090179 | SPST  | 21A | 14      | On / Off          | (2) Screw             | ****Black toggle<br>handles tipped with<br>LED, min draw<br>requirements for LED<br>is 20 mA at 12 VDC                          |
| A                      | 090194 | SPST  | 21A | 14      | (On) / Off        | (2) Screw             |   |
| A                      | 090196 | SPDT  | 21A | 14      | On / On           | (3) Screw             |   |
| A                      | 090197 | SPDT  | 21A | 14      | On / Off / On     | (3) Screw             |   |
| B                      | 090198 | SPDT  | 21A | 14      | On / Off / On     | (3) 0.250" Flat blade |   |
| A                      | 090207 | DPDT  | 21A | 14      | On / Off / On     | (6) Screw             |   |

## SWITCHES AND SOLENOIDS

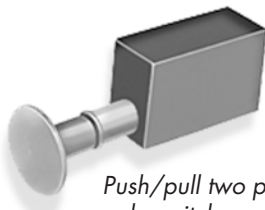
### Two-Speed Axle Switch and Automatic Terminal Block Switch

- Terminal block switch used in conjunction with axle switch to control two-speed electric axle shift
- Axle switch has red knob and uses (3) .156" female snap plugs (see page E25)

| Part # | Description                     |
|--------|---------------------------------|
| 090078 | Two-speed axle switch           |
| 090079 | Automatic terminal block switch |



Terminal block switch



Push/pull two position axle switch



090225



090085

### Three Wire Connector

- Use as a flasher socket or any other three wire application (see page E19 for flashers)
- 18 gauge 12" leads

| Part # | Description          |
|--------|----------------------|
| 090225 | Three wire connector |
| 090085 | Three wire socket    |

## Dimmer Switches and Socket Assemblies



### Application

- Chrysler floor mounted (1841895, 1881938, 2097628, 2291202, CH-2437)  
Year: 1959-83
- Dodge Trucks  
Year: 1959-79
- AMC (3156124, 3160926)  
Year: 1959-83

| Part # | Description                   |
|--------|-------------------------------|
| 090073 | Dimmer switch                 |
| 090083 | Dimmer switch socket assembly |



### Application

- All Ford floor mounted  
Year: 1959-83 (COTF-130A024A; COTZ-13A024A, SW-263)

| Part # | Description                   |
|--------|-------------------------------|
| 090081 | Dimmer switch                 |
| 090083 | Dimmer switch socket assembly |



### Application

- Vehicles without auto dimmer
- All GM floor mounted (1997028, 1997037, 3841892, D808)  
Year: 1961-83
- All Jeep floor mounted (5461816)  
Year: 1974-82

| Part # | Description                   |
|--------|-------------------------------|
| 090080 | Dimmer switch                 |
| 090082 | Dimmer switch socket assembly |



## Universal Solenoids

- Designed to operate a minimum of 50,000 cycles
- 125 amps at 12 VDC
- Continuous voltage
- SPST, normally Off, one circuit Off/On
- 5/16" side studs, #10 top stud/s
- Both include hardware

| Part # | Description                   |
|--------|-------------------------------|
| 090054 | Three stud universal solenoid |
| 090056 | Four stud universal solenoid  |

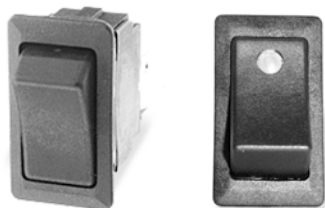


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## SWITCHES AND SOLENOIDS

### Full Size Rocker Switches (Standard)



Standard

Lighted

- 21 amps at 14 VDC
- .830" x 1.450" recommended mounting hole
- Universal, snap-in design allows for easy installation
- Moisture and dust resistant
- Packaging for all new switches displays easily on pegboards or wire display rack (see [Retail](#) section)

| Part # | Poles | Circuitry       | Terminals            |
|--------|-------|-----------------|----------------------|
| 090109 | SPST  | On / Off        | (2) .250" Flat blade |
| 090150 | SPST  | (On) / Off      | (2) .250" Flat blade |
| 090147 | SPST  | On / (Off)      | (2) Screw            |
| 090153 | SPDT  | On / (On)       | (3) Screw            |
| 090111 | DPST  | On / Off        | (4) .250" Flat blade |
| 090149 | DPST  | On / (Off)      | (4) Screw            |
| 090136 | DPDT  | On / On         | (6) .250" Flat blade |
| 090110 | DPDT  | On / Off / On   | (6) .250" Flat blade |
| 090158 | DPDT  | On / Off / (On) | (6) .250" Flat blade |

( ) indicates MOMENTARY ACTION

### Accessories

| Part # | Description    |
|--------|----------------|
| 090219 | End bracket    |
| 090220 | Middle bracket |
| 090221 | Single bracket |
| 090222 | Panel plug     |



Accessories

### Full Size Rocker Switches (Lighted)

| Part # | Poles | Circuitry | Terminals            | Light Color |
|--------|-------|-----------|----------------------|-------------|
| 090123 | SPST  | On / Off  | (3) Screw            | Red         |
| 090124 | SPST  | On / Off  | (3) Screw            | Green       |
| 090125 | SPST  | On / Off  | (3) Screw            | Amber       |
| 090128 | SPST  | On / Off  | (3) .250" Flat blade | Red         |

### On / Off Round Rocker Switch

- Single pole switches rated for 10 amps at 12 VDC
- 12 VDC illumination voltage
- Snap-in mounting design for easy installation in .79" diameter mounting hole
- (3) .187" flat blade terminals
- Two positions (SPST) with two .187" silver-plated brass blade terminals
- On/Off designation permanently etched on rocker switch
- Snap-in mounting design for easy installation in .79" diameter mounting hole

| Part # | Poles | Light Color |
|--------|-------|-------------|
| 090167 | SPST  | Red         |
| 090168 | SPST  | Amber       |
| 090169 | SPST  | Green       |

| Part # | Description                              |
|--------|--|
| 090166 | Round rocker switch with On/Off markings |



090166

## SWITCHES AND SOLENOIDS



Keys included

### Universal Ignition Switch

- Single throw ignition
- 6 to 24 VDC
- 3/4" diameter mounting stem with two terminals

| Part # | Description               |
|--------|---------------------------|
| 090076 | Universal ignition switch |

### Push / Pull Switches

- Rated for 15 amps at 12 VDC, 25 amps at 6 VDC
- Heavy-duty, two position (SPST) push/pull switch with two brass screw terminals
- Brass and chrome construction
- 3-1/8" overall length x 7/8" wide
- Mounting stem measures 3/8" in diameter and 1-1/4" long
- Accommodates 1" panel with stainless steel springs

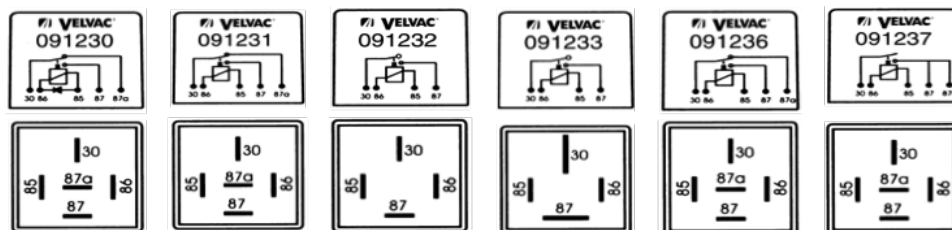
| Part # | Description        |
|--------|--------------------|
| 090181 | Push / pull switch |



- Rated for 75 amps at 6 to 28 VDC
- Heavy-duty, two position (SPST) push/pull switch with two brass screw terminals
- Chrome-plated metal knob
- Mounting stem measures 15/32" in diameter and 5/8" long

| Part # | Description        |
|--------|--------------------|
| 090180 | Push / pull switch |

## RELAYS



### Heavy-Duty Relay Kit

- Ideal for powering accessories with high voltage draws such as fog lights, power windows and fans
- Help ensure maximum power available to accessories and lights
- Kit includes heavy-duty relay, switch, switch mounting plate, 20' of 14 gauge wire and terminals

| Part #  | Description          | Voltage | Amp | Terminals | Mounting Tab |
|---|----------------------|---------|-----|-----------|--------------|
| 091230  | Relay with diode     | 12      | 40  | 5         | No           |
| Application for 091230: Diode eliminates voltage spikes that can occur when the relay is shut off; it can be used to run up to 30 amps continuously |                      |         |     |           |              |
| 091231  | Relay                | 12      | 40  | 5         | Yes          |
| 091232  | Relay                | 12      | 40  | 4         | Yes          |
| Application for 091232: Used to run up to 30 amps continuously  |                      |         |     |           |              |
| 091236  | Relay                | 24      | 20  | 5         | Yes          |
| 091237  | Dual relay           | 12      | 40  | 5         | Yes          |
| Application for 091237: Controls two separate 20 amp accessories; also used as a single 40 amp relay  |                      |         |     |           |              |
| 091233  | Heavy-duty relay     | 12      | 70  | 4         | Yes          |
| Application for 091233: Ideal for controlling larger devices; can run up to 50 amps continuously  |                      |         |     |           |              |
| 091235  | Heavy-duty relay kit | 12      | 70  | 4         | Yes          |
| In addition to standard package of one, all relays may also be ordered in bulk shop packs of 25 by adding a -7 to the part number shown             |                      |         |     |           |              |



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## SIGNAL FLASHERS

### Electro-Mechanical and Electronic Flashers

- Designed and tested to perform in excess of one million cycles
- Audible signal indicates that flasher is activated
- Non-polarity sensitive
- 12 VDC operating range



Style A  
electro-mechanical



Style B  
electronic



### Solid State LED Flasher

- 6 amp flasher provides constant flash rate of 90 FPM for new LED lights
- Compact size fits standard two terminal flasher footprint - includes remote mount 36" long ground wire

| Part # | Description             |
|--------|-------------------------|
| 091225 | Solid state LED flasher |



| Part #   | Style | Terminals | Color       | Lamp Rating      | Flash Rate FPM | Amp Rating |
|--|-------|-----------|-------------|------------------|----------------|------------|
| 091215   | A     | 2         | Clear smoke | 1-10             | 60-120         | 25         |
| 091216   | A     | 3         | Clear smoke | 1-10             | 60-120         | 25         |
| Applications for 091216: Fits most American cars, older import cars and light trucks                         |       |           |             |                  |                |            |
| 091208   | B     | 2         | Red         | 2-12             | 70-120         | 25         |
| 091209   | B     | 3         | Clear smoke | 2-12             | 70-120         | 25         |
| Applications for 091209: Straight truck, single trailer, high flasher usage                                  |       |           |             |                  |                |            |
| 091210   | B     | 2         | Clear smoke | 2-16             | 70-120         | 35         |
| 091211   | B     | 3         | Clear smoke | 2-16             | 70-120         | 35         |
| Applications for 091211: Straight truck, single or double trailer or any vehicle with high flasher usage     |       |           |             |                  |                |            |
| 091212   | B     | 2         | Clear smoke | 2-20             | 70-120         | 45         |
| 091213   | B     | 3         | Black       | 2-20             | 70-120         | 45         |
| Applications for 091213: Severe duty, double or triple trailers or vehicles where flasher is frequently used |       |           |             |                  |                |            |
| 091214   | B     | 3         | Clear smoke | 10 Lamps / Side* | 60-120         | 25         |
| Application for 091214: Alternating "Wig-Wag" headlight application for emergency vehicles and school buses  |       |           |             |                  |                |            |

\*10 lamps per side (1156, 1157) or 4 (H4651) sealed beams  
See page E16 for three wire flasher socket Part No. 090225

### Thermal Flashers

- Flash two to three lamps for turn signals, two to six lamps for hazard warning

| Part # | Description    |
|--------|----------------|
| 091203 | Two terminal   |
| 091204 | Three terminal |



### Heavy-Duty Flashers

- 12 lamp and 25 amp rating
- Last five times longer than thermal flashers
- Three-terminal flasher for vehicles equipped with flashing dash lights
- Operate at voltages as low as 7 VDC

| Part # | Description    |
|--------|----------------|
| 091201 | Two terminal   |
| 091202 | Three terminal |

#### NOTES

A thermal flasher (fixed load) is NOT recommended for use when a trailer is connected to a car or truck. A heavy-duty flasher (variable load) is recommended duty for this type of application

Dash "- xx" indicates package quantity

## CIRCUIT BREAKERS

### Standard Circuit Breakers



- Copper colored battery stud provides easy identification
- "Waterproof" sealant and insert molded studs on waterproof breakers make them suitable for marine applications and trailer connections
- 12 VDC
- Meets applicable SAE J553 requirements
- Each circuit breaker includes two #10-32 nuts

| Part # w/o mounting strap | Part # w/ mounting Strap | Amp |
|---------------------------|--------------------------|-----|
| 091011                    | 091051                   | 10  |
| 091015                    | 091052                   | 15  |
| 091020                    | 091053                   | 20  |
| 091025                    | 091054                   | 25  |
| 091030                    | 091055                   | 30  |
| 091040                    | 091056                   | 40  |
| 091050                    | 091057                   | 50  |

### ATM and MAXI™ Circuit Breaker



- Replacement for ATM/MINI® and MAXI™ blade type fuses
- 12 VDC, rated 5 to 30 amps
- -40°F (-40°C) to 185°F (85°C) operating temperature range
- ATM/MINI® Type II Modified Reset type breakers and MAXI™ Type I Automatic Reset type breakers meet applicable SAE J553 requirements

| ATM/Mini® Part # | Maxi™ Part # | Amp |
|------------------|--------------|-----|
| 091500-3         | -            | 5   |
| 091501           | 091510-10    | 10  |
| 091502           | 091511-10    | 15  |
| 091503           | 091512-10    | 20  |
| 091504           | 091513-10    | 25  |
| 091505           | 091514-10    | 30  |

### Fuse Clip Circuit Breakers



- Replacement for 1/4" x 1-1/4" glass fuses
- 12 VDC
- -25°F (-32°C) to 180°F (82°C) operating temperature range
- Type II Modified Reset type breakers meet SAE J553 requirements

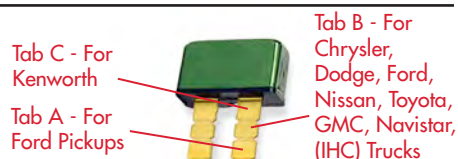
| Part # | Amp |
|--------|-----|
| 091080 | 10  |
| 091081 | 15  |
| 091082 | 20  |
| 091083 | 30  |

### High Amp Circuit Breaker



- Type III switchable breaker typically used in auxiliary and accessory circuits for trucks, buses, RVs and marine applications
- Flush mount with sems nut installed
- 30 VDC
- -25°F (-32°C) to 180°F (82°C) operating temperature range
- Measures 2" x 3" overall
- Meets SAE J1625 requirements

| Part # | Description      |
|--------|------------------|
| 091005 | 60 High amp      |
| 091006 | 80 High amp      |
| 091007 | 100 High amp     |
| 091008 | 120 High amp     |
| 091003 | 150 High amp     |
| 091004 | Economic 150 amp |
| 091009 | 200 High amp     |



### Universal Snap-off Blade Type Circuit Breakers

- Replacement for ATC/ATO® blade type fuses
- Color-coded for easy identification
- 12 VDC
- -40°F (-40°C) to 185°F (85°C) operating temperature range
- Type I Automatic Reset type breakers meet applicable SAE J553 requirements

| Part # | Amp | Color  |
|--------|-----|--------|
| 091076 | 6   | Silver |
| 091071 | 10  | Red    |
| 091072 | 15  | Blue   |
| 091073 | 20  | Yellow |
| 091074 | 25  | Silver |
| 091075 | 30  | Green  |

### Fuse and Fuse Block

- Isolates faults in equipment such as lift trucks and other battery operated systems
- Silver plated copper link visible through a mica window



| Part # | Description                    |
|--------|--------------------------------|
| 091351 | ANL style fuse, 300 amp        |
| 091350 | Fuse block for ANL style fuses |



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## FUSES AND ACCESSORIES

### AGC, AGX and SFE Fuses

| AGC<br>Part # | AGX<br>Part # | SFE<br>Part # | Amp   |
|---------------|---------------|---------------|-------|
| 091131-5      | -             | -             | 1     |
| 091132-5      | -             | -             | 2     |
| 091133-5      | -             | -             | 3     |
| 091135-5      | -             | -             | 5     |
| 091137-5      | -             | -             | 7 1/2 |
| 091140-5      | -             | -             | 10    |
| 091141-5      | -             | -             | 15    |
| 091142-5      | See<br>below  | 091171-5      | 20    |
| 091143-5      | -             | -             | 25    |
| 091144-5      | See<br>below  | 091172-5      | 30    |



AGC 1-30 / SFE 20, 30  
AGC 20, 30



ATC/  
ATO®



ATM/  
MINI®



MAXI™

### ATC/ATO®, ATM/MINI® and MAXI™ Fuses

| ATC/<br>ATO® | ATM/<br>MINI® | MAXI™    | Amp   | Color   |
|--------------|---------------|----------|-------|---------|
| -            | 091300-5      | -        | 2     | Gray    |
| 091173-5     | 091301-5      | -        | 3     | Violet  |
| 091174-5     | 091302-5      | -        | 4     | Pink    |
| 091175-5     | 091303-5      | -        | 5     | Tan     |
| 091177-5     | 091304-5      | -        | 7-1/2 | Brown   |
| 091180-5*    | 091305-5*     | -        | 10    | Red     |
| 091181-5*    | 091306-5*     | -        | 15    | Blue    |
| 091182-5     | 091307-5*     | 091400-5 | 20    | Yellow  |
| 091183-5*    | 091308-5*     | -        | 25    | Clear   |
| 091184-5*    | 091309-5*     | 091401-5 | 30    | Green   |
| -            | -             | 091402-5 | 40    | Orange  |
| -            | -             | 091403-5 | 50    | Red     |
| -            | -             | 091404-5 | 60    | Blue    |
| -            | -             | 091406-3 | 80    | Natural |

### AGX Fuse Assortments

| Part # | Description              |
|--------|--------------------------|
| 091251 | AGX 20-30 amp assortment |

Includes (2) 20 amp, (2) 25 amp and (2) 30 amp AGX fuses

#### NOTES

Dash "- xx" indicates package quantity

\* In addition to display card packaging, fuses may also be ordered in bulk packs of 25 by adding a -25 to the part number



### ATC/ATO® Fuse Panel

- Accepts blade-type fuses, auto or manual reset circuit breakers
- 6 circuits, 30 amps per circuit with quick connect terminals
- No top cover needed; recessed fuse contacts provide touch-safe protection
- Black thermoplastic construction - temperature rating of -20°F (29°C) to +150°F (65°C)
- Fuses/circuit breakers sold separately

| Part # | Description         |
|--------|---------------------|
| 091427 | ATC/ATO® fuse panel |



### ATC/ATO® Fuse Assortment with Combination Fuse Tester/Puller

- Assortment contains 42 ATC fuses - seven each of the six most popular fuses from 5 to 30 amps
- Combination fuse tester/puller tests and removes blade type and a variety of glass fuses
- Reclosable heavy-duty display pkg.

| Part # | Description                 |
|--------|-----------------------------|
| 091254 | Fuse assortment with tester |



### Electrical Junction Box

- Measures 6-9/16" x 3-1/4"
- Includes all fasteners and grommets

| Part # | Description             |
|--------|-------------------------|
| 055060 | Electrical junction box |

## FUSES AND ACCESSORIES



### Universal In-Line Fuse Holder

- Universal nylon twist-lock fuse holder for 1/4" x 1-1/4" AGC, AGA, AGW, AGX and SFE fuses
- 20 amp maximum load
- 14 gauge lead wire
- Fuse sold separately

| Part # | Description                   |
|--------|-------------------------------|
| 091188 | Universal in-line fuse holder |



### Heavy Duty In-Line Fuse Holder

- Nylon heavy duty fuse holder for 1/4" x 1-1/4" glass fuses
- 30 amp maximum load
- 12 gauge lead wire
- Includes one 30 amp AGC fuse installed

| Part # | Description                                       |
|--------|---|
| 091189 | Heavy duty in-line fuse holder w/ 30 amp AGC fuse |



### Heavy Duty ATC/ATO® In-Line Fuse Holders

- Fits blade type fuses from 3 to 30 amps
- 12 gauge lead wire
- Part No. 091130 includes one 30 amp ATC fuse

| Part # | Description  |
|--------|--|
| 091190 | Heavy duty ATC/ATO® in-line fuse holder w/o fuse           |
| 091130 | Heavy duty ATC/ATO® in-line fuse holder w/ 30 amp ATC Fuse |



### ATM/MINI® In-Line Fuse Holder with Cover

- Fits ATM/MINI® blade type fuses from 2 to 30 amps
- 12 gauge lead wire
- Cover provides protection from harsh under-the-hood environmental elements
- Fuse sold separately

| Part # | Description                              |
|--------|--|
| 091426 | ATM/MINI® In-line fuse holder with cover |



### MAXI™ In-Line Fuse Holder with Cover

- Fits MAXI blade type fuses from 20 to 60 amps
- 8 gauge lead wire
- Cover provides protection from harsh under-the-hood environmental elements
- Fuse sold separately

| Part # | Description                         |
|--------|-------------------------------------|
| 091425 | MAXI In-line fuse holder with cover |



091325



091326

### Add-A-Circuits

- Converts one circuit into two fuse protected circuits; plugs into fuse-block and accepts two fuses to provide protection for the existing circuit and the add-on circuit
- 10 amp maximum circuit load
- Fuse sold separately

| Part # | Description             |
|--------|-------------------------|
| 091325 | ATM/MINI® Add-a-circuit |
| 091326 | ATC/ATO® Add-a-circuit  |

### Self-Stripping ATC/ATO® Fuse Holder

- For use with ATC/ATO® blade type fuses up to 30 amps
- Easily attaches to wires ranging from 18 to 14 gauge
- Fuse sold separately



| Part # | Description                         |
|--------|-------------------------------------|
| 057003 | Self-stripping ATC/ATO® fuse holder |

In-line fuse holders (except MAXI) and add-a-circuits are display carded to fit on display rack in **Retail** section



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## FUSES AND ACCESSORIES

### Fuse Kits



| Part # | Description                          |
|--------|--------------------------------------|
| 091001 | ATM/MINI® and MAXI fuse kit          |
| 091002 | ATC/ATO®, AGC and ATM/MINI® fuse kit |

- Convenient, pre-packaged fuse assortments save time by keeping popular sized fuses close at hand
- Durable, see-through plastic cases with handy "locator" cards are easy to refill for using over and over
- Multi-functional kits can be displayed on the front counter to attract the impulse sale of single fuses or used as mini storage systems to save time and money by eliminating multiple trips to the shop for additional parts

### ATM/MINI® and MAXI™ Fuse Kit

| ATM/MINI® | MAXI™  | Qty | Amp   |
|-----------|--------|-----|-------|
| 091300    | -      | 10  | 2     |
| 091301    | -      | 10  | 3     |
| 091303    | -      | 10  | 5     |
| 091304    | -      | 10  | 7-1/2 |
| 091305    | -      | 10  | 10    |
| 091306    | -      | 10  | 15    |
| 091307    | -      | 10  | 20    |
| 091308    | -      | 10  | 25    |
| 091309    | -      | 10  | 30    |
| -         | 091400 | 5   | 20    |
| -         | 091401 | 5   | 30    |
| -         | 091402 | 5   | 40    |
| -         | 091403 | 5   | 50    |
| -         | 091404 | 5   | 60    |
| -         | 091406 | 3   | 80    |

### ATC/ATO®, AGC and ATM/MINI® Fuse Kit

| AGC    | ATM/MINI® | AGC    | Qty | Amp |
|--------|-----------|--------|-----|-----|
| 091133 | -         | -      | 10  | 3   |
| 091135 | -         | -      | 10  | 5   |
| 091140 | -         | -      | 10  | 10  |
| 091141 | -         | -      | 10  | 15  |
| 091142 | -         | -      | 10  | 20  |
| 091144 | -         | -      | 10  | 30  |
| -      | 091303    | -      | 10  | 5   |
| -      | 091305    | -      | 10  | 10  |
| -      | 091306    | -      | 10  | 15  |
| -      | 091307    | -      | 10  | 20  |
| -      | 091308    | -      | 10  | 25  |
| -      | 091309    | -      | 10  | 30  |
| -      | -         | 091175 | 10  | 5   |
| -      | -         | 091180 | 10  | 10  |
| -      | -         | 091181 | 10  | 15  |
| -      | -         | 091182 | 10  | 20  |
| -      | -         | 091183 | 10  | 25  |
| -      | -         | 091184 | 10  | 30  |

#### Did you know...

Federal Motor Carrier Safety Regulation 393.95 requires every bus, truck, truck tractor and a drive-away towaway operation to carry a replacement fuse for each kind and size in the vehicle?

## TERMINALS AND CONNECTORS

### Crimp Terminals and Connectors

- One-piece construction assures maximum electrical conductivity
- Electro bright, tin-plated annealed copper construction for maximum corrosion resistance
- Injection-molded insulation allows a funnel barrel construction for easy installation and ensures a consistent wall thickness for maximum reliability after crimping
- Crimp ridge on each terminal for positive location of crimp tool on terminal barrel means fewer mis-crims
- Open end terminal design permits easy inspection of wire
- Designed to withstand temps of -40° to +221°F (+105°C)
- Heat-shrink tubing and electrical tape available and sold separately (see pages E32, E33 and E38)



**Velvac offers a wide variety of terminals and connectors. For the same application the following terminals may be available: crimp, crimp and seal, crimp/solder/seal, snap or heatless connectors**

### Crimp and Seal Terminals and Connectors

Simple three step installation reduces wiring time and costs



- Heat-shrink terminals combine color-coded, heat-shrink tubing with one-piece solderless terminals to produce fast, watertight, corrosion resistance cutwire connections
- UL approved
- Improved mechanical performance provides improved pull-out strength and strain relief
- Designed to withstand temperatures of -67°F (-55°C) to +221°F (+150°C)
- Electrical tape and heat gun available and sold separately (see page E38)
- Resist abrasion, scoring, cut-through and the effects of long term aging



STEP 1:  
STRIP copper wire

STEP 2: INSERT wire  
into sealing gel.  
Rotate to coat wire

STEP 3: RE-INSERT wire  
until insulation contacts  
connector. CRIMP connector

### Heatless Terminals and Connectors-Revolutionary New Product

- Pre-inserted solder terminals reduce installation time and increase efficiency, while achieving the benefits of both crimp terminals and solder terminals
- Each terminal contains solder for increased strength and conductivity
- Adhesive-lined heat shrink tubing seals out moisture and contaminants
- Wire gauge is printed on each connector for easy ID
- A heatless, solder-less terminal utilizing a revolutionary anaerobic sealing technology requires NO HEAT
- Simply strip the wire and crimp, activating the sealant that reacts when the copper wire is inserted into the connector to create an environmentally sealed connection
- Easily installs in a fraction of the time of comparable heat seal connectors
- Prevents the ingress of moisture and air that can result in corrosion
- Nylon insulation provides maximum abrasion and puncture resistance while remaining seamless
- Reduces overall installation costs by eliminating the need for torches or heat guns, reducing the installation time and improving productivity



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## TERMINALS AND CONNECTORS

### Butt Splices



#### Crimps

| Part #     | Wire Gauge | Insulation   |
|------------|------------|--------------|
| 056051-50* | 22-18      | Vinyl-butted |
| 057085-50  | 22-18      | Nylon-smls** |
| 056052-50* | 16-14      | Vinyl-butted |
| 057086-50* | 16-14      | Nylon-smls** |
| 056053-50* | 12-10      | Vinyl-butted |
| 057087-50* | 12-10      | Nylon-smls** |



| Part #     | Wire Gauge | Insulation |
|------------|------------|------------|
| 058362-50* | 22-18      | None       |
| 058028-50* | 16-14      | None       |
| 058029-50* | 12-10      | None       |

#### Brazed seam



| Part #    | Wire Gauge | Insulation |
|-----------|------------|------------|
| 056054-10 | 8          | Vinyl      |
| 056055-10 | 6          | Vinyl      |
| 056056-10 | 4          | Vinyl      |

| Part #    | Wire Gauge | Insulation |
|-----------|------------|------------|
| 055106-10 | 22-18      | Nylon      |
| 055107-10 | 16-14      | Nylon      |
| 055108-10 | 12-10      | Nylon      |

#### Helpful hint:

Terminal insulation is color-coded according to wire gauge specifications:

Red 22 - 18 AWG, 8 AWG  
Blue 16 - 14 AWG, 6 AWG  
Yellow 12 - 10 AWG, 4 AWG

#### Crimp/Seal

| Part #     | Wire Gauge | Insulation     |
|------------|------------|----------------|
| 055067-10  | 26-22      | Nylon          |
| 058312-50* | 22-18      | Heat shrink    |
| 055075-10  | 22-18      | Nylon & copper |
| 055075-50  | 22-18      | Nylon & copper |
| 058313-40* | 16-14      | Heat shrink    |
| 055076-10  | 16-14      | Nylon & copper |
| 055076-50  | 16-14      | Nylon & copper |
| 058314-40* | 12-10      | Heat shrink    |
| 055077-10  | 12-10      | Nylon & copper |
| 055077-50  | 12-10      | Nylon & copper |
| 055068-10  | 8          | Nylon          |

#### NOTES

Dash - "x" indicates package qty

\* Clam shell with quantity of ten (10) also available by adding "-10" to the base six digit number

\*\* Seamless



#### Step Down Splices

| Part #    | Wire Gauge  | Tube Color |
|-----------|-------------|------------|
| 055069-10 | 22-18/16-14 | Blue       |
| 055070-10 | 16-14/12-10 | Yellow     |
| 055071-10 | 12-10/8     | Pink       |

#### Crimp/Solder/Seal

| Part #    | Wire Gauge | Insulation  |
|-----------|------------|-------------|
| 056144-25 | 22-18      | Heat shrink |
| 056145-25 | 16-14      | Heat shrink |
| 056146-25 | 12-10      | Heat shrink |



#### Heatless

| Part #     | Wire Gauge | Insulation |
|------------|------------|------------|
| 056111-5   | 22-18      | Nylon      |
| 056111-100 | 22-18      | Nylon      |
| 056112-5   | 16-14      | Nylon      |
| 056112-100 | 16-14      | Nylon      |
| 056113-5   | 12-10      | Nylon      |
| 056113-100 | 12-10      | Nylon      |

## TERMINALS AND CONNECTORS

### Spade Connectors

#### Crimp

| Wire Gauge | Crimp Part # | Stud Size, Insulation | Crimp Part # | Stud Size, Insulation |
|------------|--------------|-----------------------|--------------|-----------------------|
| 22-18      | 056043-50    | 8-10, Vinyl           | 056046-50    | 4-6, Vinyl            |
| 22-18      | -            | -                     | 058345-50    | 6, Nylon              |
| 22-18      | -            | -                     | 055114-10    | 6, Nylon              |
| 22-18      | -            | -                     | 055115-10    | 10, Nylon             |
| 16-14      | 056044-50    | 8-10, Vinyl           | 056047-50*   | 4-6, Vinyl            |
| 16-14      | 057082-50    | 8-10, Nylon           | 057084-50    | 4-6, Nylon            |
| 16-14      | -            | -                     | 055125-10    | 10, Nylon             |
| 12-10      | 056045-50    | 8-10, Vinyl           | 055135-10    | 10, Nylon             |
| 12-10      | 057083-50    | 8-10, Nylon           | -            | -                     |

#### Block spade

#### Crimp/Seal

| Part #    | Wire Gauge | Stud Size |
|-----------|------------|-----------|
| 058309-50 | 22-18      | 8-10      |
| 055078-10 | 22-18      | 6         |
| 055079-10 | 22-18      | 10        |
| 058335-50 | 16-14      | 6         |
| 058310-50 | 16-14      | 8-10      |
| 058336-50 | 16-14      | 1/4"      |
| 055080-10 | 16-14      | 6         |
| 055081-10 | 16-14      | 10        |
| 058311-50 | 12-10      | 8-10      |
| 058337-50 | 12-10      | 1/4"      |
| 055082-10 | 12-10      | 10        |
| 055083-10 | 12-10      | 1/4"      |

#### Crimp/Solder/Seal

| Part #    | Wire Gauge | Stud Size |
|-----------|------------|-----------|
| 056155-25 | 22-18      | 10        |
| 056156-25 | 16-14      | 10        |
| 056157-25 | 12-10      | 10        |

### Snap Terminals and Connectors

Plugs -  
butted seam



Receptacles -  
butted



Spades -  
butted



Receptacles -  
double



| Wire Gauge | Part #     | Snap Dia. Insulation | Part #    | Snap Dia. Insulation | Part #    | Stud Size Insulation | Part #    | Snap Dia. Insulation |
|------------|------------|----------------------|-----------|----------------------|-----------|----------------------|-----------|----------------------|
| 22-18      | 058338-50  | 0.156", Nylon        | 056076-50 | 0.156", Nylon        | -         | -                    | 056080-50 | 0.157", Vinyl        |
| 16-14      | 058340-50* | 0.156", Nylon        | 056078-50 | 0.156", Nylon        | 057092-50 | 8, Vinyl             | -         | -                    |

### Male/Female Bullet Connections

| Part #    | Wire Gauge | Type   | Insulation |
|-----------|------------|--------|------------|
| 055104-10 | 16-14      | Male   | Nylon      |
| 055105-10 | 16-14      | Female | Nylon      |
| 055116-10 | 22-18      | Male   | Nylon      |
| 055117-10 | 22-18      | Female | Nylon      |
| 055126-10 | 16-14      | Male   | Nylon      |
| 055127-10 | 16-14      | Female | Nylon      |



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## TERMINALS AND CONNECTORS

### Ring Tongue Connectors

#### Crimp



Butted seam



Hooked  
tongue -  
butted seam

| Wire Gauge | Crimp Part # | Stud Size, Insulation |
|------------|--------------|-----------------------|
| 22-18      | 056001-50    | 4-6, Vinyl            |
| 22-18      | 056002-50    | 8-10, Vinyl           |
| 22-18      | 056003-50    | 12-1/4", Vinyl        |
| 22-18      | 055109-10    | 6, Nylon              |
| 22-18      | 055110-10    | 10, Nylon             |
| 22-18      | 055111-10    | 1/4", Nylon           |
| 22-18      | 055112-10    | 5/16", Nylon          |
| 22-18      | 055113-10    | 3/8", Nylon           |
| 16-14      | 056004-50    | 4-6, Vinyl            |
| 16-14      | 057075-50    | 4-6, Nylon            |
| 16-14      | 057076-50*   | 8-10, Nylon           |
| 16-14      | 056006-50*   | 12-1/4", Vinyl        |
| 16-14      | 057077-50    | 12-1/4", Nylon        |
| 16-14      | 056007-50*   | 5/16"-3/8", Vinyl     |
| 16-14      | 057078-50    | 5/16"-3/8", Nylon     |
| 16-14      | 055120-10    | 6, Nylon              |
| 16-14      | 055121-10    | 10, Nylon             |
| 16-14      | 055122-10    | 1/4", Nylon           |
| 16-14      | 055123-10    | 5/16", Nylon          |
| 16-14      | 055124-10    | 3/8", Nylon           |
| 12-10      | 056008-50*   | 8-10, Vinyl           |
| 12-10      | 057079-50    | 8-10, Nylon           |
| 12-10      | 056009-50*   | 12-1/4", Vinyl        |
| 12-10      | 057080-50    | 12-1/4", Nylon        |
| 12-10      | 056010-50    | 5/16", Vinyl          |
| 12-10      | 057081-50    | 5/16", Nylon          |
| 12-10      | 056011-50*   | 3/8", Vinyl           |
| 12-10      | 056012-50    | 7/16"-1/2", Vinyl     |
| 12-10      | 055130-10    | 10, Nylon             |
| 12-10      | 055131-10    | 1/4", Nylon           |
| 12-10      | 055132-10    | 5/16", Nylon          |
| 12-10      | 055133-10    | 3/8", Nylon           |
| 12-10      | 055134-10    | 1/2", Nylon           |

| Wire Gauge | Crimp Part # | Stud Size, Insulation |
|------------|--------------|-----------------------|
| 16-14      | 056049-50    | 4-6, Vinyl            |



Brazed seam

| Wire Gauge | Crimp Part # | Stud Size, Insulation |
|------------|--------------|-----------------------|
| 8          | 058349-50    | 8-10, Nylon           |
| 8          | 058350-50    | 12-1/4", Nylon        |
| 8          | 058351-50    | 5/16"-3/8", Nylon     |
| 8          | 058352-50    | 7/16"-1/2", Nylon     |
| 6          | 058353-50    | 12-1/4", Nylon        |
| 6          | 058354-50    | 5/16"-3/8", Nylon     |
| 6          | 058355-50    | 7/16"-1/2", Nylon     |
| 4          | 058356-50    | 12-1/4", Nylon        |
| 4          | 058357-50    | 5/16"-3/8", Nylon     |
| 4          | 058358-50    | 7/16"-1/2", Nylon     |

#### NOTES

Dash - "x" indicates package qty

\* Clam shell with quantity of ten (10) also available by adding "-10" to the base six digit number

## TERMINALS AND CONNECTORS

### Ring Tongue Connectors

Continued

#### Crimp/Seal



| Part #    | Wire Gauge | Stud Size  |
|-----------|------------|------------|
| 058334-50 | 22-18      | 6          |
| 058301-50 | 22-18      | 8-10       |
| 055064-10 | 22-18      | 6, 8, 10   |
| 055084-10 | 22-18      | 6          |
| 055085-10 | 22-18      | 8          |
| 055086-10 | 22-18      | 10         |
| 055087-10 | 22-18      | 1/4"       |
| 055088-10 | 22-18      | 5/16"      |
| 058302-50 | 16-14      | 4-6        |
| 058303-50 | 16-14      | 8-10       |
| 058304-50 | 16-14      | 1/4"       |
| 058305-50 | 16-14      | 5/16"-3/8" |
| 055065-10 | 16-14      | 6, 8, 10   |
| 055089-10 | 16-14      | 8          |
| 055090-10 | 16-14      | 10         |
| 055091-10 | 16-14      | 1/4"       |
| 055092-10 | 16-14      | 5/16"      |
| 055093-10 | 16-14      | 3/8"       |
| 058306-50 | 12-10      | 8-10       |
| 058307-50 | 12-10      | 1/4"       |
| 058308-50 | 12-10      | 5/16"-3/8" |
| 055066-10 | 12-10      | 6, 8, 10   |
| 055094-10 | 12-10      | 10         |
| 055095-10 | 12-10      | 1/4"       |
| 055096-10 | 12-10      | 5/16"      |
| 055097-10 | 12-10      | 3/8"       |

#### Crimp/Solder/Seal



| Part #    | Wire Gauge | Stud Size |
|-----------|------------|-----------|
| 056147-25 | 22-18      | 10        |
| 056149-25 | 16-14      | 1/4"      |
| 056150-25 | 16-14      | 3/8"      |
| 056151-25 | 12-10      | 10        |
| 056152-25 | 12-10      | 1/4"      |
| 056153-25 | 12-10      | 3/8"      |
| 056154-25 | 12-10      | 1/2"      |

#### NOTES

Dash - "x" indicates package quantity

\*Clam shell with quantity of ten (10) also available by adding "-10" to the base six digit number

### Three and Four Way Connectors



Three-way butted



Four-way butted

| Wire Gauge | Four-Way # | Insulation | Three-Way # | Insulation |
|------------|------------|------------|-------------|------------|
| 22 - 18    | 058346-10  | Vinyl      | 058363-10   | Vinyl      |
| 16 - 14    | 056084-10  | Vinyl      | 056082-10   | Vinyl      |
| 12 - 10    | -          | -          | 056083-10   | Vinyl      |

### Pig Tails



| Wire Gauge | Part #     | Insulation |
|------------|------------|------------|
| 22 - 18    | 056184-50* | Nylon      |
| 16 - 14    | 056185-50* | Nylon      |
| 12 - 10    | 056186-50* | Nylon      |

### Wire Nuts



| Part #    | Size | Color  |
|-----------|------|--------|
| 058364-50 | 71B  | Grey   |
| 058365-50 | 72B  | Blue   |
| 058366-40 | 73B  | Orange |
| 058367-10 | 74B  | Yellow |



Self strip connector

| Part #     | Wire Gauge           |
|------------|----------------------|
| 056093-50* | 18-14                |
| 056094-10  | 12-10 Run, 18-14 Tap |



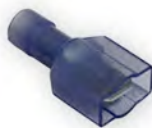
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## TERMINALS AND CONNECTORS

### Male Quick Slide Terminals And Connectors - Tab Width .250"

#### Crimp



Butted seam -  
fully insulated



Butted  
seam

| Wire Gauge | Part #    | Insulation | Part #     | Insulation |
|------------|-----------|------------|------------|------------|
| 22-18      | 056069-50 | Nylon      | 056063-50  | Vinyl      |
| 22-18      | 055098-10 | Nylon      | -          | -          |
| 16-14      | 056070-50 | Nylon      | 056064-50* | Vinyl      |
| 16-14      | -         | -          | 057090-50  | Nylon      |
| 16-14      | 055100-10 | Nylon      | -          | -          |
| 12-10      | 056071-50 | Nylon      | 056065-50* | Vinyl      |
| 12-10      | -         | -          | 057091-50  | Nylon      |
| 12-10      | 055102-10 | Nylon      | -          | -          |



Double male to female

056088-50

None



90° Flag  
butted seam

056086-50

None

#### Crimp/Seal



Fully  
insulated

| Wire Gauge | Part #    | Insulation |
|------------|-----------|------------|
| 22-18      | 058315-40 | Ht Shrink  |
| 16-14      | 058316-40 | Ht Shrink  |
| 12-10      | 058317-10 | Ht Shrink  |
| 22-18      | 055118-10 | Nylon      |
| 16-14      | 055128-10 | Nylon      |
| 12-10      | 055136-10 | Nylon      |

#### Crimp/Solder/Seal



Fully  
insulated

| Wire Gauge | Part #    | Insulation |
|------------|-----------|------------|
| 22-18      | 056169-25 | Vinyl      |
| 16-14      | 056159-25 | Vinyl      |
| 12-10      | 056164-25 | Vinyl      |

### Female Quick Slide Terminals And Connectors - Tab Width .250"

#### Crimp



Butted seam -  
fully insulated



T-tap self  
stripping



Butted  
Seam

| Wire Gauge | Part #     | Insulation | Part #    | Insulation | Part #     | Insulation |
|------------|------------|------------|-----------|------------|------------|------------|
| 22-18      | 056066-50  | Nylon      | 058347-40 | Nylon      | 056060-50  | Vinyl      |
| 22-18      | 055099-10  | Nylon      | -         | -          | -          | -          |
| 16-14      | 056067-50* | Nylon      | 057096-40 | Nylon      | 056061-50* | Vinyl      |
| 16-14      | 055101-10  | Nylon      | -         | -          | 057088-50* | Nylon      |
| 12-10      | 056068-50* | Nylon      | 058348-40 | Nylon      | 056062-50* | Vinyl      |
| 12-10      | 055103-10  | Nylon      | -         | -          | 057089-50  | Nylon      |



Fully  
insulated

#### Crimp/Seal

| Wire Gauge | Part #    | Insulation |
|------------|-----------|------------|
| 22-18      | 058318-50 | Ht Shrink  |
| 22-18      | 055119-10 | Nylon      |
| 16-14      | 058319-50 | Ht Shrink  |
| 16-14      | 055129-10 | Nylon      |
| 12-10      | 058320-10 | Ht Shrink  |
| 12-10      | 055137-10 | Nylon      |

#### Crimp/Solder/Seal



Fully  
insulated



Butted  
Seam

| Wire Gauge | Part #    | Insulation | Part #    | Insulation |
|------------|-----------|------------|-----------|------------|
| 22-18      | 056165-25 | Ht Shrink  | 056168-25 | Vinyl      |
| 16-14      | 056166-25 | Ht Shrink  | 056158-25 | Vinyl      |
| 12-10      | 056167-25 | Ht Shrink  | 056160-25 | Vinyl      |

#### NOTES

Dash- "x" indicates package qty

\* Clam shell with quantity of ten (10) also available by adding "-10" to the base six digit number

## TERMINALS AND CONNECTORS

### Terminal Kits

- Convenient, pre-packaged terminal assortments
- Durable, see-through plastic cases with handy "locator" cards are easy to identify and refill
- Multi-functional kits can be displayed on the front counter to attract the impulse sale of single terminals or used as mini storage system

| Part # | Description              |
|--------|--------------------------|
| 056107 | Solderless terminal kit  |
| 056108 | Heat-shrink terminal kit |
| 056109 | Electrical connector kit |



### Solderless Terminal Kit

- 195 total fittings

| Part # | Description             | Qty. |
|--------|-------------------------|------|
| 057085 | 22-18 ga. Butt conn     | 12   |
| 057086 | 16-14 ga. Butt conn     | 12   |
| 057087 | 12-10 ga. Butt conn     | 12   |
| 056002 | 22-18 ga. Ring tongue   | 12   |
| 056005 | 16-14 ga. Ring tongue   | 12   |
| 056011 | 12-10 ga. Ring tongue   | 12   |
| 056043 | 22-18 ga. Spade tubing  | 12   |
| 056044 | 16-14 ga. Spade         | 12   |
| 056045 | 12-10 ga. Spade         | 12   |
| 057061 | 16-14 ga. Shrink tubing | 5    |
| 057062 | 12-10 ga. Shrink tubing | 5    |
| 057149 | 22-18 ga. Shrink tubing | 5    |
| 056061 | 16-14 ga. F. quick      | 12   |
| 056062 | 12-10 ga. F. quick      | 12   |
| 056064 | 16-14 ga. M. quick      | 12   |
| 056065 | 12-10 ga. M. quick      | 12   |
| 058340 | 16-14 ga. Snap plug     | 12   |
| 056078 | 16-14 ga. Snap plug     | 12   |

### Heat Shrink Terminal Kit

- 132 total fittings

| Part # | Description              | Qty. |
|--------|--------------------------|------|
| 058312 | 22-18 ga. Butt conn      | 8    |
| 058313 | 16-14 ga. Butt conn      | 8    |
| 058314 | 12-10 ga. Butt conn      | 8    |
| 058309 | 22-18 ga. spade          | 8    |
| 058310 | 16-14 ga. spade          | 8    |
| 058311 | 12-10 ga. spade          | 8    |
| 058302 | 16-14 ga. Ring tongue    | 8    |
| 058303 | 16-14 ga. Ring tongue    | 8    |
| 058304 | 16-14 ga. Ring tongue    | 8    |
| 058305 | 16-14 ga. Ring tongue    | 8    |
| 058306 | 12-10 ga. Ring tongue    | 8    |
| 058308 | 12-10 ga. Ring tongue    | 8    |
| 058315 | 22-18 ga. F. quick slide | 6    |
| 058316 | 16-14 ga. F. quick slide | 6    |
| 058317 | 12-10 ga. F. quick slide | 6    |
| 058318 | 22-18 ga. F. quick slide | 12   |
| 058319 | 16-14 ga. F. quick slide | 6    |
| 058320 | 12-10 ga. F. quick slide | 6    |

### Electrical Connector Kit

- 170 total fittings

| Part # | Description              | Qty. |
|--------|--------------------------|------|
| 056051 | 22-18 ga. Butt conn      | 12   |
| 056052 | 16-14 ga. Butt conn      | 12   |
| 056053 | 12-10 ga. Butt conn      | 12   |
| 021007 | 3/8" tube O.D. clip      | 6    |
| 056091 | 22-14 ga. Pigtail        | 15   |
| 056093 | 18-14 Tap                | 10   |
| 056002 | 22-18 Ring tongue        | 12   |
| 056005 | 16-14 Ring tongue        | 12   |
| 056008 | 12-10 Ring tongue        | 12   |
| 021009 | 1/2" tube O.D. tube clip | 6    |
| 056092 | 18-10 ga. Pigtail        | 15   |
| 056094 | 12-10 run 18-14 tap      | 10   |
| 056043 | 22-18 Spade              | 12   |
| 056044 | 16-14 ga. Spade          | 12   |
| 056045 | 12-10 ga. Spade          | 12   |

### Solderless Terminal Fleet Maintenance Kit

- Packaged in a heavy-duty steel box with 20 popular styles of solderless terminals and nylon tie straps

| Part # | Description               |
|--------|---------------------------|
| 056096 | Kit with crimping tool    |
| 056097 | Kit without crimping tool |



NOTE: Terminals also sold separately on pages E24-E28. Tie straps sold separately on page E35. Crimping tool sold separately on page E37

| Part # | Qty. | Part # | Qty. |
|--------|------|--------|------|
| 056002 | 20   | 056044 | 20   |
| 056004 | 20   | 056047 | 20   |
| 056005 | 20   | 058340 | 20   |
| 056006 | 20   | 056078 | 20   |
| 056061 | 20   | 056093 | 20   |
| 056064 | 20   | 056050 | 20   |
| 056067 | 20   | 056051 | 20   |
| 056070 | 20   | 056052 | 20   |
| 056009 | 20   | 056053 | 20   |
| 056011 | 20   | 056186 | 20   |
| 056014 | 20   |        |      |



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## PRIMARY WIRE AND ACCESSORIES

### General Purpose Primary Wire

- Soft annealed copper strands
- PVC outer jacket
- Designed to withstand temperatures up to +250°F
- Wire meets SAE J1128 Type GPT requirements



| Part #   | Wire Gauge | Spool Size | Color  |
|----------|------------|------------|--------|
| 051101   | 18         | 100'       | Black  |
| 051103   | 18         | 100'       | Red    |
| 051105   | 18         | 100'       | White  |
| 051117-6 | 16         | 1000'      | Black  |
| 051121-6 | 16         | 1000'      | Red    |
| 051123-6 | 16         | 1000'      | White  |
| 051119-6 | 16         | 1000'      | Green  |
| 051117   | 16         | 100'       | Black  |
| 051121   | 16         | 100'       | Red    |
| 051123   | 16         | 100'       | White  |
| 051125   | 16         | 100'       | Yellow |
| 051127   | 16         | 100'       | Blue   |
| 051129   | 16         | 100'       | Brown  |
| 051119   | 16         | 100'       | Green  |
| 051135-6 | 14         | 1000'      | Black  |
| 051139-6 | 14         | 1000'      | Red    |
| 051141-6 | 14         | 1000'      | White  |
| 051143-6 | 14         | 1000'      | Yellow |
| 051145-6 | 14         | 1000'      | Blue   |
| 051147-6 | 14         | 1000'      | Brown  |
| 051137-6 | 14         | 1000'      | Green  |
| 051135   | 14         | 100'       | Black  |
| 051139   | 14         | 100'       | Red    |
| 051141   | 14         | 100'       | White  |

| Part #   | Wire Gauge | Spool Size | Color  |
|----------|------------|------------|--------|
| 051143   | 14         | 100'       | Yellow |
| 051145   | 14         | 100'       | Blue   |
| 051147   | 14         | 100'       | Brown  |
| 051137   | 14         | 100'       | Green  |
| 051157-7 | 12         | 500'       | Red    |
| 051159-7 | 12         | 500'       | White  |
| 051161-7 | 12         | 500'       | Yellow |
| 051163-7 | 12         | 500'       | Blue   |
| 051155-7 | 12         | 500'       | Green  |
| 051153   | 12         | 100'       | Black  |
| 051157   | 12         | 100'       | Red    |
| 051159   | 12         | 100'       | White  |
| 051161   | 12         | 100'       | Yellow |
| 051163   | 12         | 100'       | Blue   |
| 051165   | 12         | 100'       | Brown  |
| 051155   | 12         | 100'       | Green  |
| 051175-7 | 10         | 500'       | Black  |
| 051171-7 | 10         | 500'       | Red    |
| 051177-7 | 10         | 500'       | White  |
| 051175   | 10         | 100'       | Black  |
| 051171   | 10         | 100'       | Red    |
| 051177   | 10         | 100'       | White  |
| 051173   | 10         | 100'       | Blue   |

### Primary Wire Rack

- Holds (12) 100' spools, (8) 100' and (2) 1000' spools or (4) 1000' spools
- Heavy gauge plated steel construction
- Wire spools sold separately

| Part # | Description       |
|--------|-------------------|
| 691015 | Primary wire rack |



## SPIRAL WRAP

- Replace worn or damaged 3-in-1 or 4-in-1 air/electrical assembly wrap
- Use to protect or bundle jumper lines, slider hoses, ABS lines, hydraulic hoses and more
- Prevents tangling and potential damage to lines
- Various sizes allow for customized bundle combinations

| 100' Coil | Diameter |
|-----------|----------|
| 020078    | 1.25"    |
| 020079    | 1.50"    |
| 020080    | 2"       |



## SPLIT LOOM

### Convuluted Split Loom

- High temperature loom suitable for engine compartment use
- Split seam permits easy insertion and repair of wire, tubing, cable, etc.
- Convuluted black nylon allows for excellent pinch and abrasion resistance
- Designed to withstand temperatures from -40° to +200°F
- Meets FMVSS 302 requirements

| 100' Coil | 250' Coil | Loom I.D. |
|-----------|-----------|-----------|
| 020104-7  | 020104    | 1/4"      |
| 020106-7  | 020106    | 3/8"      |
| 020108-7  | 020108    | 1/2"      |
| 020110-7  | 020110    | 5/8"      |
| 020112-7  | 020112    | 3/4"      |
| 020116-7  | -         | 1"        |
| 020117-7  | -         | 1-1/4"    |
| 020118-7  | -         | 1-1/2"    |
| 020119-7  | -         | 1-7/8"    |



**NOTE: Part numbers listed in RED are NEW!**



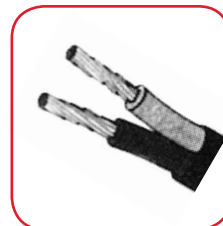
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## PRIMARY WIRE AND ACCESSORIES

### Gray Jacketed Parallel Wire

| Part #   | Wire Gauge | Spool Size |
|----------|------------|------------|
| 051050   | 16         | 100'       |
| 051058   | 14         | 100'       |
| 051066   | 12         | 100'       |
| 051050-7 | 16         | 500'       |
| 051058-7 | 14         | 500'       |



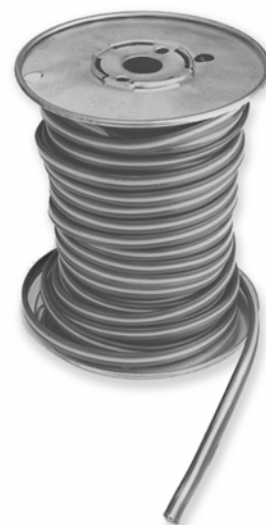
### Three-Way and Four-Way Bonded Parallel Wire\*

| Part # | Wire Gauge | Conductor | Wire Color               | Spool Size |
|--------|------------|-----------|--------------------------|------------|
| 051052 | 16         | Three     | Brown-Green-Yellow       | 100'       |
| 051060 | 16         | Three     | Brown-Green-Yellow       | 100'       |
| 051054 | 14         | Four      | Brown-Green Yellow-White | 100'       |
| 051062 | 14         | Four      | Brown-Green Yellow-White | 100'       |

#### NOTES

See page E8 for ATA color code description

\* Round wire glued together



## HEAT-SHRINK TUBING

### Heavy Wall Heat-Shrink Tubing With Liner



| Part #    | Wire Gauge | Length | I.D. Pre-Shrink | I.D. After |
|-----------|------------|--------|-----------------|------------|
| 057146-10 | 18-14      | 6"     | .300"           | .100"      |
| 057148-5  | 18-14      | 48"    | .300"           | .100"      |
| 057058-10 | 14-6       | 6"     | .400"           | .150"      |
| 057159-5  | 14-6       | 48"    | .400"           | .150"      |
| 057059-10 | 8-1        | 6"     | .750"           | .200"      |
| 057150-25 | 8-1        | 1-1/2" | .750"           | .200"      |
| 057152-2  | 8-1        | 48"    | .750"           | .200"      |
| 057060-10 | 2-4/0      | 6"     | 1.100"          | .375"      |
| 057097-25 | 2-4/0      | 1-1/2" | 1.100"          | .375"      |
| 057160-2  | 2-4/0      | 48"    | 1.100"          | .375"      |

- Durable polyolefin construction
- Inner liner melts to produce a flexible, waterproof seal for the life of the connection
- UL Listed/CSA certified in direct buried applications
- Flame retardant
- 3:1 shrink ratio
- See page E38 for heat gun - recommended heat range is 250°F (120°C) to 485°F (250°C)

#### NOTES

See next page for more heavy wall heat-shrink tubing with liner

## HEAT-SHRINK TUBING

### Heavy Wall Heat-Shrink Tubing With Liner

- Durable polyolefin construction
- Inner liner melts to produce a flexible, waterproof seal for the life of the connection
- UL Listed/CSA certified in direct buried applications
- Flame retardant
- 3:1 shrink ratio
- See page E38 for heat gun - recommended heat range is 250°F (120°C) to 485°F (250°C)

| Part #    | Wire Gauge | Length | I.D. Pre-Shrink | I.D. After |
|-----------|------------|--------|-----------------|------------|
| 057147-10 | 18-14      | 6"     | .300"           | .100"      |
| 057158-10 | 14-6       | 6"     | .400"           | .150"      |
| 057073-10 | 8-1        | 6"     | .750"           | .220"      |
| 057151-25 | 8-1        | 1-1/2" | .750"           | .220"      |
| 057153-2  | 8-1        | 48"    | .750"           | .220"      |
| 057074-10 | 2-4/0      | 6"     | 1.100"          | .375"      |
| 057098-25 | 2-4/0      | 1-1/2" | 1.100"          | .375"      |
| 057174-2  | 2-4/0      | 48"    | 1.100"          | .375"      |



### Thin Wall Heat-Shrink Tubing Without Liner

- Durable polyolefin construction
- UL recognized and flame retardant
- Continuous operating temperature: -67°F (-55°C) to 275°F (135°C)
- Recommended heat range is 250°F (120°C) to 485°F (250°C)
- 2:1 shrink ration

| Part #    | Wire Gauge | Length | Color  | I.D. Pre-Shrink | I.D. After |
|-----------|------------|--------|--------|-----------------|------------|
| 057061-25 | 16-14      | 2"     | Blue   | .250"           | .125"      |
| 057062-25 | 12-10      | 2"     | Yellow | .375"           | .187"      |
| 057149-25 | 22-18      | 6"     | Red    | .125"           | .062"      |
| 057112-10 | -          | 6"     | Black  | .190"           | .093"      |
| 057113-10 | -          | 6"     | White  | .250"           | .125"      |
| 057114-10 | -          | 6"     | Red    | .375"           | .187"      |
| 057115-10 | -          | 6"     | Black  | .500"           | .250"      |
| 057116-10 | -          | 6"     | White  | .750"           | .370"      |
| 057117-10 | -          | 6"     | Red    | 1.00"           | .500"      |

#### NOTES

Dash - "x" indicates package quantity



### Thin Wall Heat-Shrink Tubing

- Disk packaging for convenient storage and waste reduction
- Packaged for showroom display and impulse buying
- Available in three colors corresponding to NEMA color-codes
- Easily fits in toolbox

| Part # | Description        |
|--------|--------------------|
| 057131 | 3/16" I.D., Red    |
| 057132 | 1/4" I.D., Blue    |
| 057133 | 5/16" I.D., Yellow |

Packaged in 8' rolls - one roll per disk pack



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## HEAT-SHRINK TUBING

### Heat-Shrink Tubing Kits

- Convenient, pre-packaged tubing assortments save time by keeping popular sized tubing in 6" lengths close at hand
- Durable, see-through plastic cases with handy "locator" cards are easy to find items and refill

| Part # | Description                       |
|--------|-----------------------------------|
| 057110 | Heavy wall heat-shrink tubing kit |
| 057111 | Thin wall heat-shrink             |

#### Heavy Wall Heat-Shrink Tubing Kit

- 36 total fittings

| Part # | Pieces | Description |
|--------|--------|-------------|
| 057060 | 4 pcs  | 1.10" Black |
| 057059 | 4 pcs  | .750" Black |
| 057058 | 10 pcs | .400" Black |
| 057074 | 4 pcs  | 1.10" Red   |
| 057073 | 4 pcs  | .750" Red   |
| 057158 | 10 pcs | .400" Red   |

#### Thin Wall Heat-Shrink Tubing Kit

- 86 total fittings

| Part # | Pieces | Description |
|--------|--------|-------------|
| 057112 | 36 pcs | 3/16" Black |
| 057113 | 24 pcs | 1/4" White  |
| 057114 | 12 pcs | 3/8" Red    |
| 057115 | 6 pcs  | 1/2" Black  |
| 057116 | 4 pcs  | 3/4" White  |
| 057117 | 4 pcs  | 1" Red      |



057110



057111

## TIE STRAPS, GROMMETS AND WIRE CLIPS

### Cable Tie Straps

| Stand. Part # | BK UV Tie Part # | Length | Min. Diam | Max. Diam | Min Ten. Strength | Stud Size |
|---------------|------------------|--------|-----------|-----------|-------------------|-----------|
| 090002-100    | 090064-100       | 5"     | 1/16"     | 1-1/4"    | 30 lb             | -         |
| 090004-100    | 090067-100       | 7"     | 1/16"     | 1-3/4"    | 50 lb             | 10        |
| 090006-25     | 090070-25        | 14"    | 3/16"     | 4"        | 120 lb            | -         |
| 090010-25     | 090071-25        | 14"    | 3/16"     | 4"        | 120 lb            | 14        |
| 090014-100    | 090066-100       | 7"     | 1/16"     | 1-3/4"    | 50 lb             | -         |
| 090016-100    | 090068-100       | 14"    | 1/16"     | 4"        | 50 lb             | -         |
| -             | 090030-50        | 24"    | -         | -         | 175 lb            | -         |
| -             | 090029-50        | 36"    | -         | -         | 175 lb            | -         |



090002, 090064



090004, 090067



090006, 090070



090010, 090071



090014, 090066  
090016, 090068  
090030, 090029

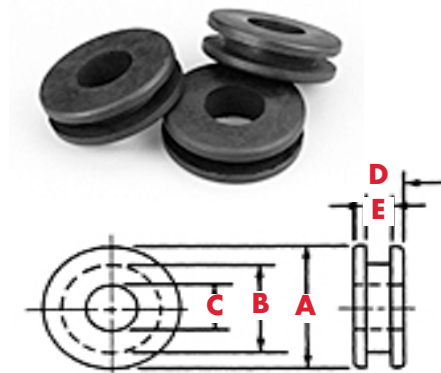
#### NOTES

Dash "-xxx" indicates package quantity

## TIE STRAPS, GROMMETS AND WIRE CLIPS

### Rubber Grommets

| Part # | A      | B       | C     | D     | E     |
|--------|--------|---------|-------|-------|-------|
| 021059 | 9/16"  | 7/16"   | 5/16" | 3/16" | 1/16" |
| 021061 | 1-3/8" | 1"      | 1/2"  | 1/2"  | 1/8"  |
| 021063 | 1-1/4" | 31/32"  | 5/8"  | 3/8"  | 1/8"  |
| 021065 | 1-3/4" | 1-3/16" | 3/4"  | 1/2"  | 7/32" |



### Nylon Grommet



- Provides protection for 16, 14 and 12 gauge wires
- Fits into a 3/8" diameter mounting hole with wall thickness up to 1/8"

| Part # | Description   |
|--------|---------------|
| 021070 | Nylon grommet |

### Tube Clips



- Zinc-plated steel construction for corrosion resistance
- Rubber coating protects tubing and wires

| Part # | Tube O.D. | Mounting Bolt Size |
|--------|-----------|--------------------|
| 021001 | 3/16"     | 1/4"               |
| 021003 | 1/4"      | 1/4"               |
| 021005 | 5/16"     | 1/4"               |
| 021007 | 3/8"      | 1/4"               |
| 021009 | 1/2"      | 1/4"               |
| 021011 | 5/8"      | 1/4"               |
| 021013 | 3/4"      | 3/8"               |
| 021015 | 7/8"      | 1/4"               |
| 021017 | 1"        | 1/4"               |
| 021019 | 1-1/4"    | 5/16"              |

### Wire Clips



- Spring tension clips are ideal for holding primary wire to truck frame
- Tips are vinyl coated for wire protection

| Part # | Description    |
|--------|----------------|
| 021021 | 1/4" Wire clip |
| 021023 | 1/2" Wire clip |

### Rubber Cushioned Clamps



| Clamp Diam. | 3/8" Mount Screw, 5/8" Wide Part # | 1/4" Mount Screw, 1/2" Wide Part # |
|-------------|------------------------------------|------------------------------------|
| 1/4"        | 021102                             | 021114                             |
| 3/8"        | 021103                             | 021115                             |
| 1/2"        | 021104                             | 021116                             |
| 5/8"        | 021100                             | 021117                             |

| Clamp Diam. | 3/8" Mount Screw, 5/8" Wide Part # | 1/4" Mount Screw, 1/2" Wide Part # |
|-------------|------------------------------------|------------------------------------|
| 3/4"        | 021105                             | 021118                             |
| 1"          | 021106                             | 021119                             |
| 1-1/4"      | 021107                             | -                                  |
| 1-1/2"      | 021108                             | -                                  |
| 2"          | 021109                             | -                                  |
| 2-1/2"      | 021110                             | -                                  |
| 3"          | 021111                             | -                                  |
| 4"          | 021112                             | -                                  |
| 5"          | 021113                             | -                                  |



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### Work Lights

- Incandescent light includes grounded metal swing-open bulb guard and 25' 16/3 outdoor all-weather power cord (cord remains flexible in sub-zero temperatures to -20°F)
- On/Off switch, grounded three prong outlet and 13 amp resettable circuit breaker built into handle
- Metal hanging hook
- For use with up to 75 watt standard incandescent bulb (not included)

| Part # | Description |
|--------|-------------|
| 057123 | Work light  |



### Deluxe Crimping Tool

- Crimps terminals ranging in size from 26 to 6 gauge
- Five popular sized bolt cutting stations cleanly cut mild steel and nonferrous material

| Part # | Description          |
|--------|----------------------|
| 058026 | Deluxe crimping tool |



### Economy Crimping Tool

- Accepts 8 through 4/0 gauge terminals, connectors, lugs
- Hammer required for operation

| Part # | Description           |
|--------|-----------------------|
| 058030 | Economy crimping tool |



### Short Tube Work Light 13 Watt

- Fluorescent light features new ergonomic handle, shatter resistant housing and 25' 16/3 attached cord
- Ballast, On/Off switch and three prong tool outlet built into bottom end of handle
- Handle accepts 360° adjustable magnet mounting clip allowing lamp to adhere to metal surface
- Shatter resistant polycarbonate lens with 270° arc of light
- 360° adjustable swivel hanging hook
- No tools needed for easy bulb replacement means it's cool and energy efficient
- Includes 13 watt fluorescent twin tube

| Part # | Description     |
|--------|-----------------|
| 057125 | Light - 13 Watt |



### Heavy-Duty Crimping Tool

- For crimp-type terminals from 6 to 4/0 gauge
- Rotating, letter-coded crimping die
- Reference guides on handles for proper die settings

| Part # | Description              |
|--------|--------------------------|
| 058171 | Heavy-duty crimping tool |
| 058172 | Replacement left jaw     |
| 058173 | Replacement right jaw    |



### Long Tube Work Light 15 Watt

- Fluorescent light features shatter resistant lamp housing an 25' 18/2 attached power cord
- On/Off switch built into handle
- Plug-in ballast built into power cord plug
- Non-glare reflector
- 360° adjustable swivel hanging hook

| Part # | Description     |
|--------|-----------------|
| 057124 | Light - 15 Watt |



### Copper Cable Cutter

- Capable of cutting up to 1" diameter copper stranded electrical cable
- 13" long steel handles with vinyl hand grips

| Part # | Description         |
|--------|---------------------|
| 057072 | Copper cable cutter |



### Compact Cable Cutter

- Designed to cut copper wire and cable up to 4/0 gauge

| Part # | Description          |
|--------|----------------------|
| 057071 | Compact cable cutter |

## SHOP TOOLS AND ACCESSORIES



### Heat Gun

- Produces temperatures from 750° to 1100°F
- Built-in circuit breaker and three position switch (Hot/Off/Fan only)

| Part # | Description |
|--------|-------------|
| 058160 | Heat gun    |



### Triple Outlet All-Weather Extension Cord

- 50' 12/3 high visibility yellow cord rated at 15 amps, 125 VDC
- Heavy duty power block at female end with resettable 15 amp circuit breaker and three grounded outlets

| Part # | Description        |
|--------|--------------------|
| 057128 | 50' Extension cord |



### General Purpose Vinyl Electrical Tape

- Rated to 176°F (80°C)
- Meets UL510 requirements for UV resistance
- UL listed 539H and meets Canadian Standards Association LR48769

| Part # | Tape Thickness | Roll Size  |
|--------|----------------|------------|
| 058382 | 7 mil          | 3/4" x 60' |



### 25' Cord Reel

- Retractable 25' 16/3 cord rated at 10 amps, 125 VDC
- Housing constructed of high impact plastic with 4 built-in grounded outlets, 10 amp resettable circuit breaker and a convenient wind-up knob
- When completely wound, reel fits easily into tool box or drawer
- Carrying handle attached for convenient portability

| Part # | Description   |
|--------|---------------|
| 057126 | 25' Cord reel |



### 50' Cord Reel

- Retractable 50' 14/3 yellow cord rated at 13 amps, 125 VDC to -40°
- Heavy duty cord includes heavy duty power block with built-in resettable 13 amp circuit breaker and three grounded outlets
- Industrial/commercial grade auto ratcheting plastic alloy reel housing with built-in carrying handle
- Includes quick release wall/ceiling mounting bracket for portability
- All hardware included

| Part # | Description   |
|--------|---------------|
| 057127 | 50' Cord reel |



### Silicon Self-Fusing Tape

- Tape self fuses and cures in 24 hours to form a permanent moisture tight seal
- Has no adhesive lining leaving the application clean with no sticky residue
- Provides high tech alternative to heat shrink tubing
- Ideal for high temperature applications such as battery terminals
- High dielectric strength
- Temperature range: -85° to +500°F
- Packaged in clamshell, 1" wide, 20' long rolls (qty 1 per clamshell)

| Part #  | Color | Description      |
|---------|-------|------------------|
| 058380* | Black | Self-fusing tape |
| 058381* | Red   | Self-fusing tape |

\*Add -4 to the part number for 10 piece bucket display in *Retail* section



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