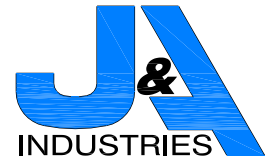


LOCKING HARDWARE



Locking Fasteners—are a physical locking fastener

- Over 1 million fasteners in service with zero failures
- Available in a wide variety of styles and for every application
- Locking system ensures hardware will never loosen
- Easy to install - forget ever retightening hardware again



Transducer mounting using
Locking fasteners



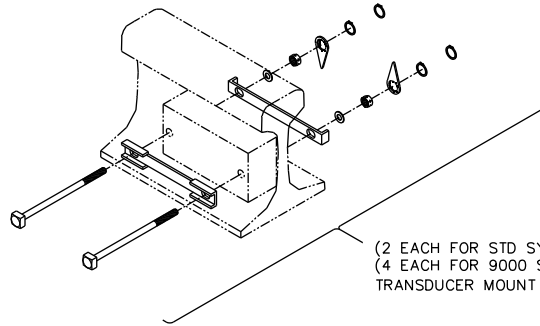
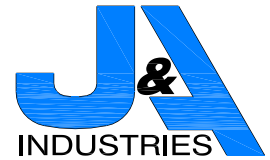
Traditional method of attaching ties to
bridge deck. Repairs are needed weekly
to retighten loosened bolts



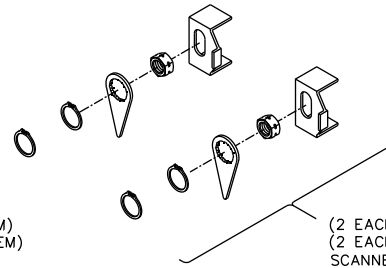
Using Locking fasteners on this bridge application, these bolts
have been in use for over 3 years and have never needed re-
tightening (Compared to every other week retightening or
replacing hardware previously)

LOCKING HARDWARE

TRANSDUCER AND SCANNER MOUNTING

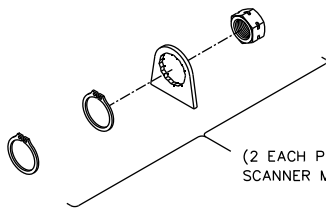


(2 EACH FOR STD SYSTEM)
(4 EACH FOR 9000 SYSTEM)
TRANSDUCER MOUNT

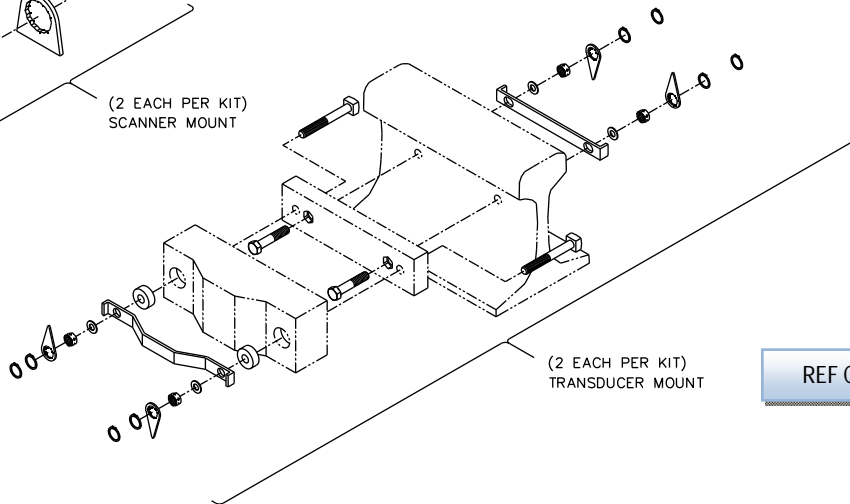


(2 EACH FOR STD SYSTEM)
(2 EACH FOR 9000 SYSTEM)
SCANNER MOUNT

REF A-B



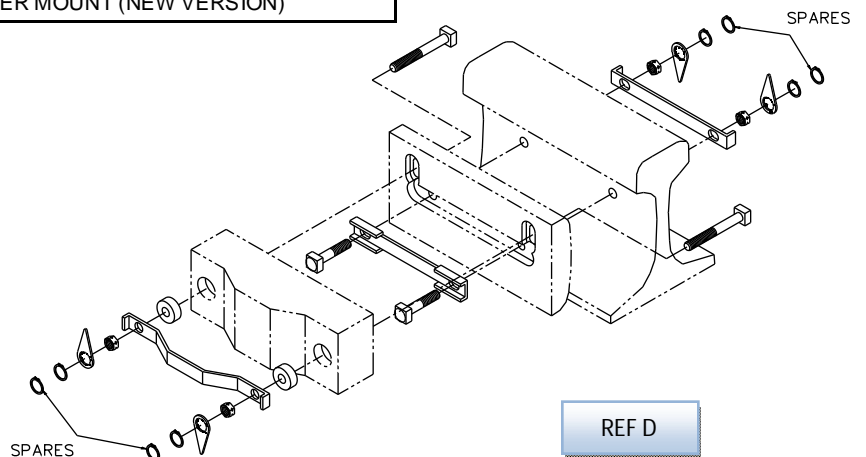
(2 EACH PER KIT)
SCANNER MOUNT



(2 EACH PER KIT)
TRANSDUCER MOUNT

REF C

| REF | J&A # | DESCRIPTION |
|-----|------------|---|
| A | 180441-000 | KIT, HBD SCANNER AND TRANSDUCER STANDARD SYSTEM |
| B | 180441-001 | KIT, HBD SCANNER AND TRANSDUCER 9000 SYSTEM |
| C | 180442-000 | KIT, HBD SCANNER AND TRANSDUCER STC |
| D | 180457-000 | BRACKET STC TRANSDUCER MOUNT (NEW VERSION) |



REF D

SHUNTS

TRACK TEST



REF A1



REF C1



REF C2



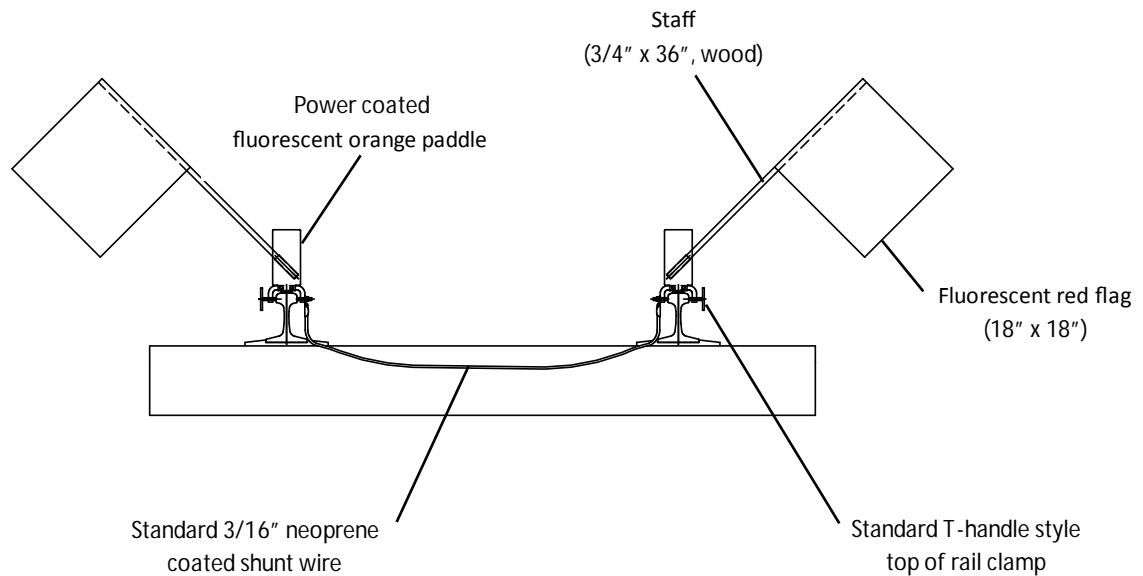
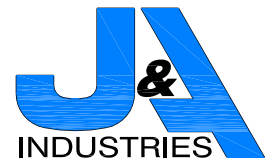
REF D1

| REF | SAFETRAN | J&A # | DESCRIPTION | RAIL |
|-----|------------|------------|---|------|
| A1 | 021500-5X | 180001-000 | SHUNT, ZERO OHM AND .06 OHM RESISTANCE | BASE |
| | 021500-6X | 180001-001 | SHUNT, ZERO OHM AND .06 OHM RESISTANCE | TOP |
| | 021500-10X | 180001-002 | SHUNT, OPEN CIRCUIT AND ZERO OHM RESISTANCE | BASE |
| | 021500-11X | 180001-003 | SHUNT, OPEN CIRCUIT AND ZERO OHM RESISTANCE | TOP |
| C1 | 021500-X | 180001-004 | SHUNT, ZERO OHM RESISTANCE | BASE |
| C2 | 021500-12X | 180001-005 | SHUNT, ZERO OHM RESISTANCE | TOP |
| | 021500-6XA | 180001-006 | SHUNT, ON/OFF CIRCUIT, ZERO OHM AND .06 OHM RESISTANCE | BASE |
| | 021500-5XA | 180001-007 | SHUNT, ON/OFF CIRCUIT, ZERO OHM AND .06 OHM RESISTANCE | TOP |
| | | 180001-011 | SHUNT, PADDLES AND FLAGS WITHOUT WIRE | TOP |
| D1 | | 180001-014 | SHUNT, ZERO OHM AND .06 OHM RESISTANCE, 3 POINT CLAMP | TOP |
| D2 | | 180001-015 | SHUNT, ZERO OHM AND .06 OHM RESISTANCE, 3 POINT CLAMP, W/ BAG | TOP |
| D3 | | 180001-016 | SHUNT, ON/OFF CIRCUIT, ZERO OHM AND .06 OHM RES., 3 POINT CLAMP | TOP |
| D4 | | 180001-017 | SHUNT, ON/OFF CIRCUIT, ZERO OHM AND .06 OHM RES., 3 POINT CLAMP, W/ BAG | TOP |
| | | 180001-018 | SHUNT, ZERO OHM RESISTANCE, ORANGE WIRE | BASE |

- Sealed resistor and AAR hardware enclosed in Delrin
- Open circuit, on/off circuit, zero resistance, and .06 ohm shunting
- All external hardware cadmium plated or stainless for corrosion resistance
- Portable, lightweight and durable construction
- Hardened steel points to penetrate rust and scale
- Wire is #6 (3/16") tinned copper cable with neoprene jacket
- On/off shunts do not need to be removed from rail in high traffic areas

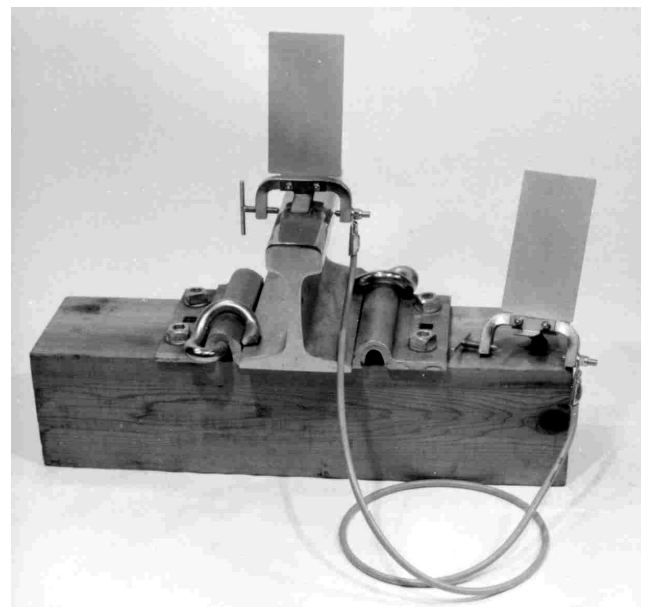
SHUNTS

TRACK TEST



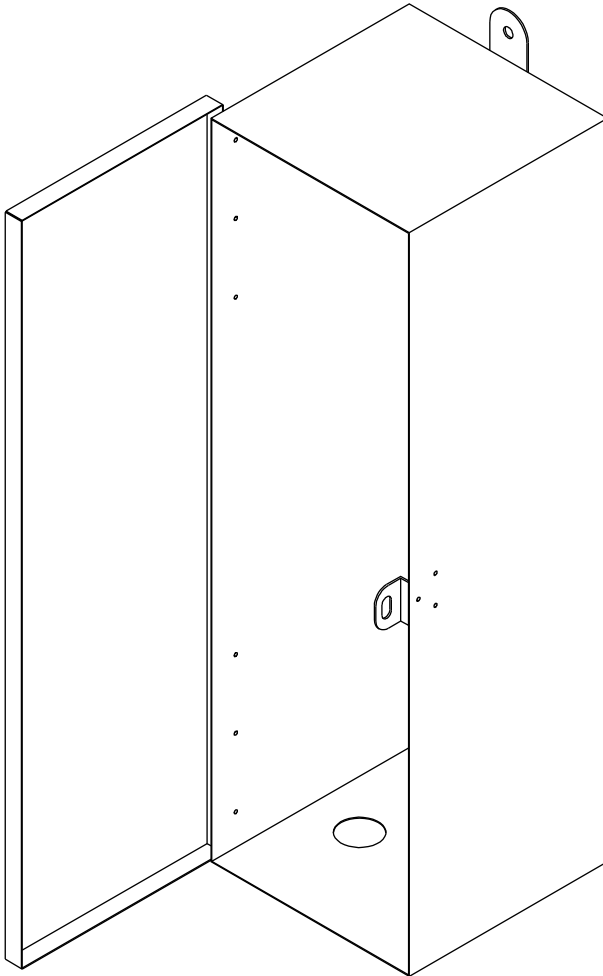
| J&A # | DESCRIPTION |
|------------|--|
| 180001-008 | SHUNT, ZERO OHM RESISTANCE WITH PADDLES |
| 180001-009 | SHUNT, ZERO OHM RESISTANCE WITH PADDLES AND RED FLAGS, 50' |
| 180001-010 | SHUNT, ZERO OHM RESISTANCE WITH PADDLES AND RED FLAGS, 6' |
| 050014-000 | BAG, ORANGE CANVAS, FOR 6' SHUNT WITH PADDLES |
| 050014-001 | BAG, ORANGE CANVAS, FOR 50' SHUNT WITH PADDLES |
| 225428-000 | FLAG, RED, 18" X 18" |

- Increases shunt visibility
- Installs easily on 132# thru 136# rail
- Hardened points penetrates rust and scale
- Supplied with a brightly colored nylon storage bag
- Flag is easily inserted and removed from socket in paddle



SHUNTS

SHUNT BOX



- Box is 8 x 8 x 24
- Available in steel or aluminum (powder coated or bare)
- 3/8" hardware included for attaching to standard sign pole
- Two 1 1/2" holes in bottom for running Shunt Cables
- Lockable with up to 3/8" padlock
- Lightweight; Steel - 11.5lbs, Aluminum - 4.5lbs

| J&A # | DESCRIPTION |
|------------|---------------------------------------|
| 225584-000 | ENCLOSURE, SHUNT, VERT, 8X8X24, STEEL |
| 225584-100 | ENCLOSURE, SHUNT, VERT, 8X8X24, ALUM |

DRAGGING EQUIPMENT

DETECTOR PADDLES



| J&A # | DESCRIPTION |
|------------|--------------------------|
| 121061-000 | STANDARD TAPERED NOTCH |
| 121058-000 | HEAVY DUTY TAPERED NOTCH |

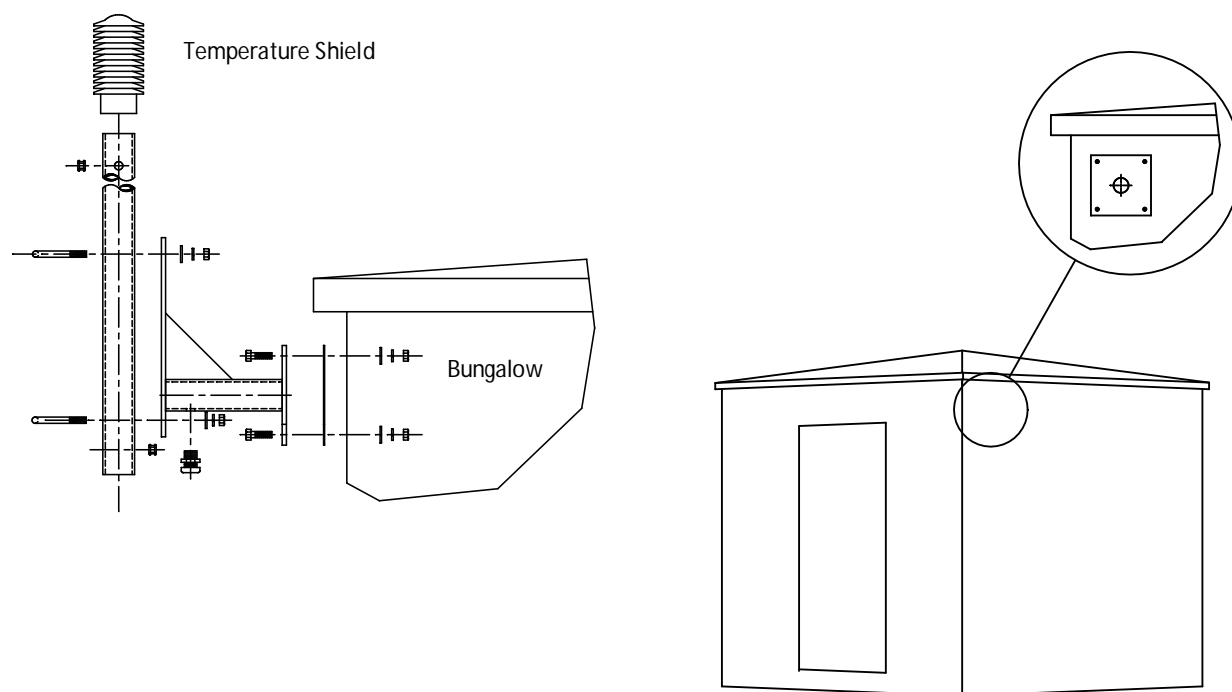


| J&A # | DESCRIPTION |
|------------|-------------------------|
| 121062-000 | STANDARD SQUARE NOTCH |
| 121057-000 | HEAVY DUTY SQUARE NOTCH |



- Replacement paddles for dragging equipment detectors
- Heavy duty paddles now available for use in high speed traffic areas

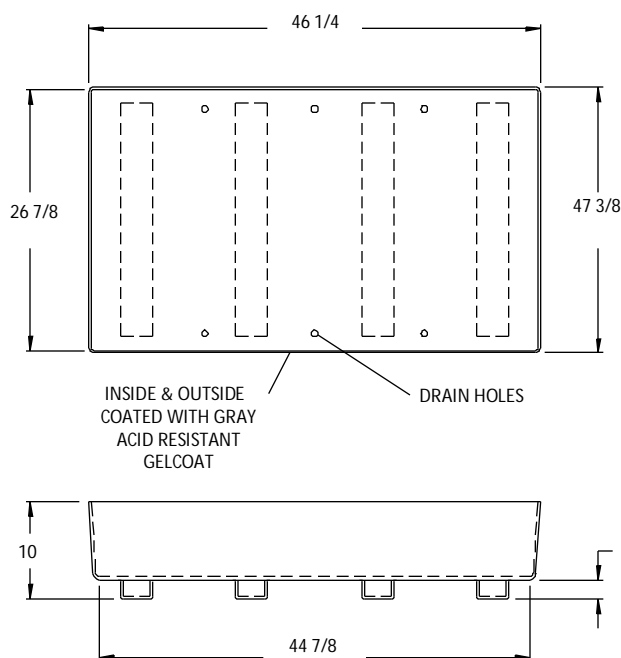
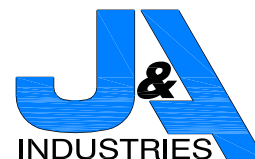
TEMP PROBE MOUNTING



| J&A # | DESCRIPTION |
|------------|--------------------------------|
| 180097-000 | STANDARD TEMPERATURE PROBE KIT |
| 180097-001 | FIBERGLASS BUNGALOW KIT |

- Provides an easy solution for locating ambient temperature probes
- Locates the ambient temperature sensor above the bungalow roof and away from any obstructions
- Normal installation time is only 1 hour
- Kit includes all components except wire and ambient temperature sensor
- Hardware includes 5/16" and 1/8" grommets

FIBERGLASS BATTERY TRAY



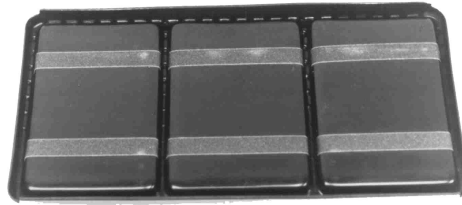
| J&A # | DESCRIPTION |
|------------|-------------------------|
| 027000-000 | STANDARD WITHOUT BOLTS |
| 225119-000 | STANDARD WITH EYE BOLTS |

Eye bolts available for removal onto ramp

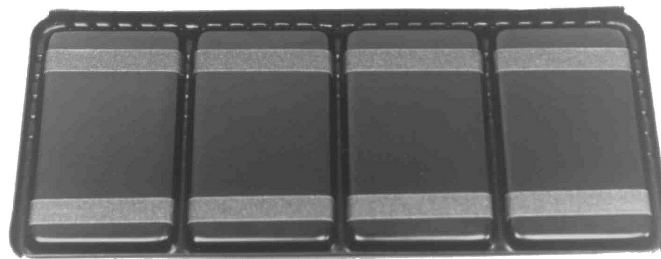
- Unit holds 4 mono-cells
- Drain holes prevent liquid accumulation
- Special molding on bottom allows easy access for forklifts
- Lightweight fiberglass construction provides added strength
- This unit is very cost-effective, our low prices provide rapid recovery of initial investment
- No longer will battery tray corrosion be a problem



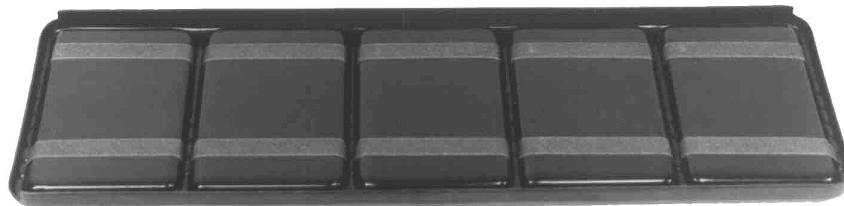
SIGNAL BATTERY TRAY



REF A



REF B



REF C

- Forward flow feature allows for easy collection of spilled electrolyte
- Polyethylene construction is acid resistant
- Edge protector prevents battery movement caused by vibrations
- Non-conductive material eliminates grounding potentials
- These units are very cost-effective, our prices provide rapid recovery of initial investment
- Battery tray corrosion will no longer be a problem

| REF | J&A# | SIZE |
|-----|------------|---------|
| A | 027002-001 | 12 X 24 |
| B | 027003-001 | 12 X 27 |
| C | 027004-001 | 12 X 38 |

SIGNAL BATTERY TUB COVER



| DIM | J&A # |
|-----------------|------------|
| 61 X 49 | 225079-000 |
| 31 X 31 | 225079-001 |
| 56 1/2 X 46 1/2 | 225079-002 |
| 45 X 29 | 225079-003 |
| 61 X 25 | 225079-004 |
| 58 X 29 | 225079-005 |



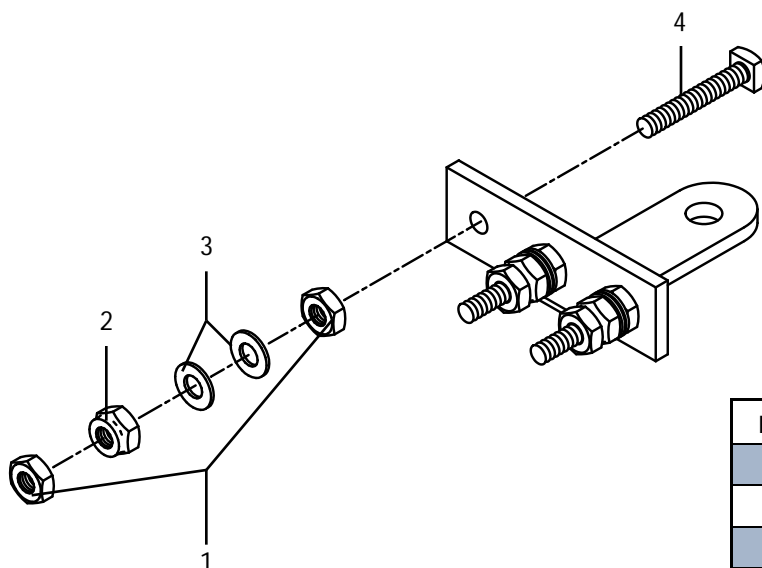
- Made of lightweight fiberglass (approx. ½ the weight of steel)
- Reduces possibility of injuries
- Eliminates theft of aluminum covers
- Eliminates costly painting maintenance
- Cover has foam laminated between fiberglass for strength
- Reduces heat buildup in summer
- Reduces heat loss in winter

BATTERY FILLER



- Safest way to top-off batteries with distilled water
- Safe non-conductive material construction
- Grounding wire prevents unintentional static potential

MISCELLANEOUS PARTS



225481-000 SHOWN

| REF | J&A # | DESCRIPTION |
|-----|-------------|-----------------------------|
| 1 | 013101-000 | 14-24 AAR NUT |
| 2 | 013102-000 | 14-24 AAR BINDING NUT |
| 2B | 013113-000 | 14-24 AAR GOLD NUT |
| 3 | 013002-000 | BRASS AAR WASHER |
| 4 | 013210-5530 | 14-24 X 1 7/8 SQ. AAR SCREW |
| | 225481-000 | 3 PT. BATTERY TERMINAL |

Custom kits designed for your special applications

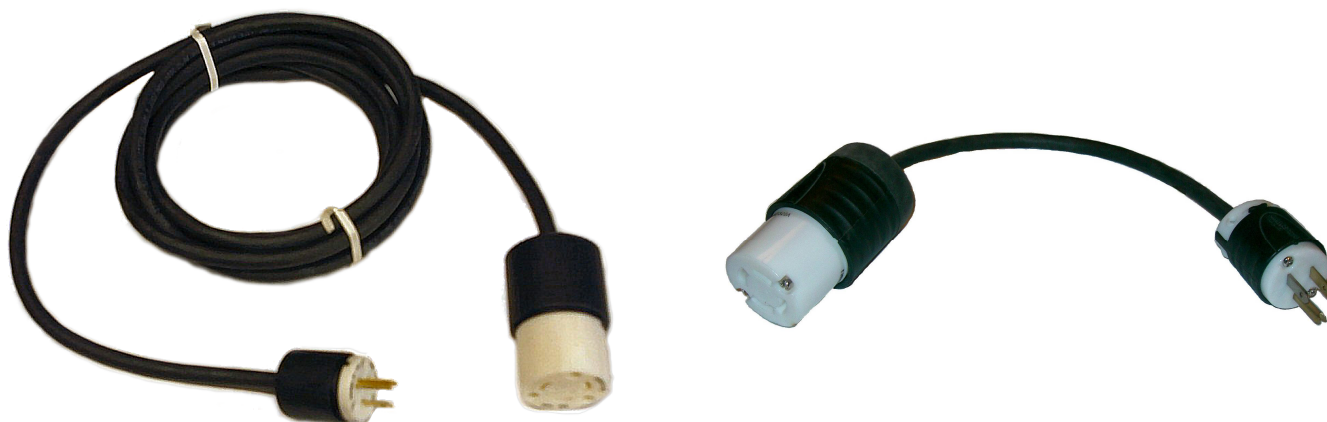
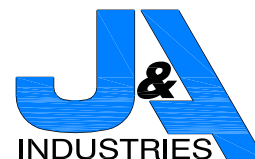


- All types of kits assembled and packaged
 - Hardware kits
 - Bootleg kits
 - Electrical wiring and connection kits
 - Installation kits
- Packaged and ready to use in the field
- Reduces inventory and cost
- Each kit provided with complete materials list

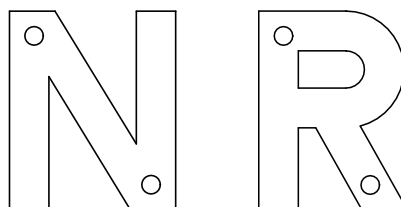
BOOTLEG PARTS

180428-000

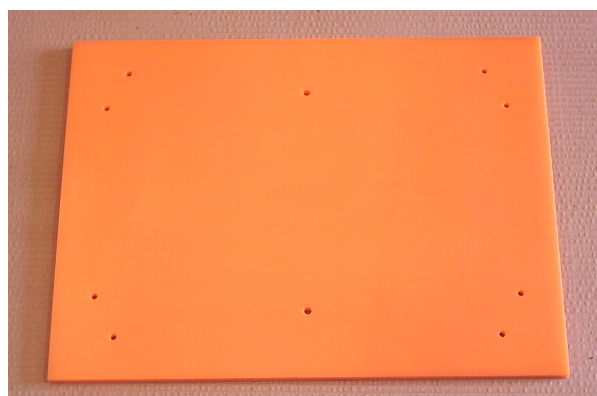
MISCELLANEOUS PARTS



| J&A # | DESCRIPTION |
|------------|-----------------------------|
| 180439-000 | 15" BUNGALOW EXTENSION CORD |
| 180506-000 | 12' BUNGALOW EXTENSION CORD |



| J&A # | DESCRIPTION |
|------------|---|
| 150368-000 | 4" TALL "N" 1/4 " STEEL PLATE, FOR USE WITH LAYOUTS, ZP |
| 150369-000 | 4" TALL "R" 1/4 " STEEL PLATE, FOR USE WITH LAYOUTS, ZP |



| J&A # | DESCRIPTION |
|------------|--------------------------------------|
| 180453-000 | TRANSPONDER MOUNTING PLATE (18 X 24) |
| 150369-000 | TRANSPONDER MOUNTING PLATE HDW |