



SECTION 4

SPECIAL TRACK WORK

How To Order Frogs	19
Frog Types	20
• One-Piece Solid Manganese Steel Frog	20
• Bolted Rigid Frogs	21
• Rail Bound Manganese Steel Frogs	21
• Plates for Frogs	22
• Guard Rails	22
Industrial Switch Plates	23
• Heel Plate	
• Plain Plate	
• Combination Plate	
• Solid Base Slide Plate with Rail Brace & Riser	
• Adjustable Brace & Switch Plate	
• Switch Gauge Plate	
• Insulated Gauge Plate	
Switch Point Guards & Switch Points	24
Switch Rods	25
Switch Clips	26
Switch Stands	26



HOW TO ORDER FROGS

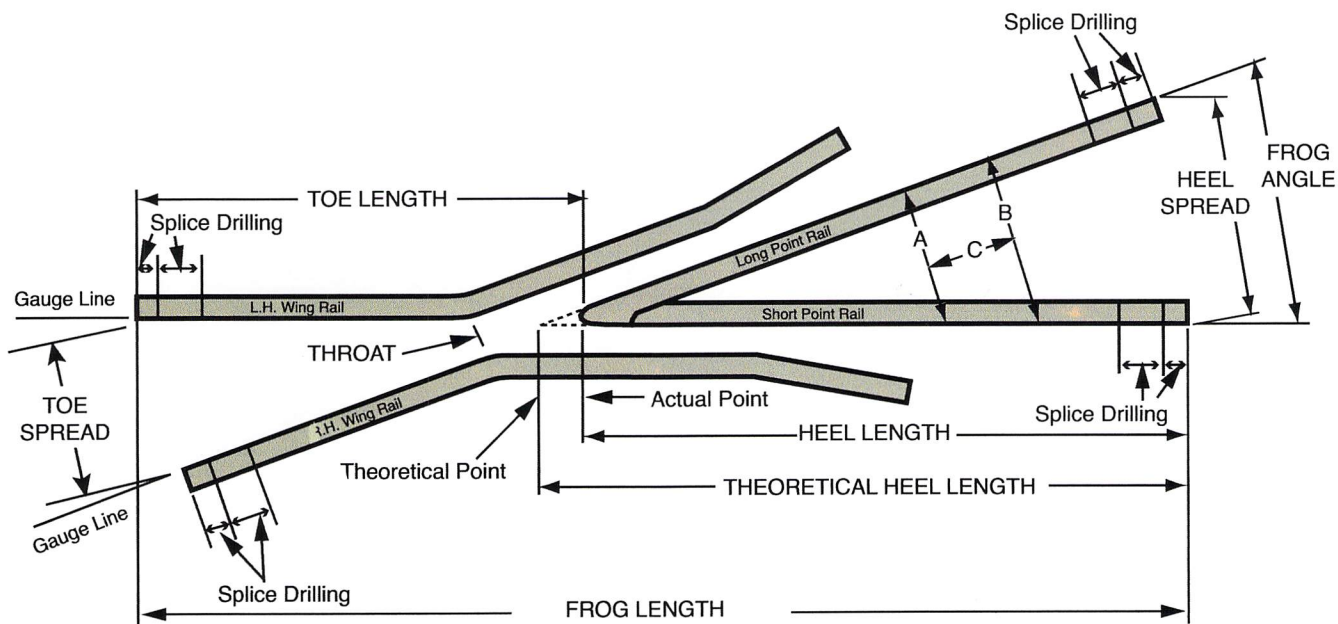
Please specify the following

1. Frog design
2. Frog number or angle
3. Weight and section of rail
4. Overall length (all measurements should be taken on the gauge lines)

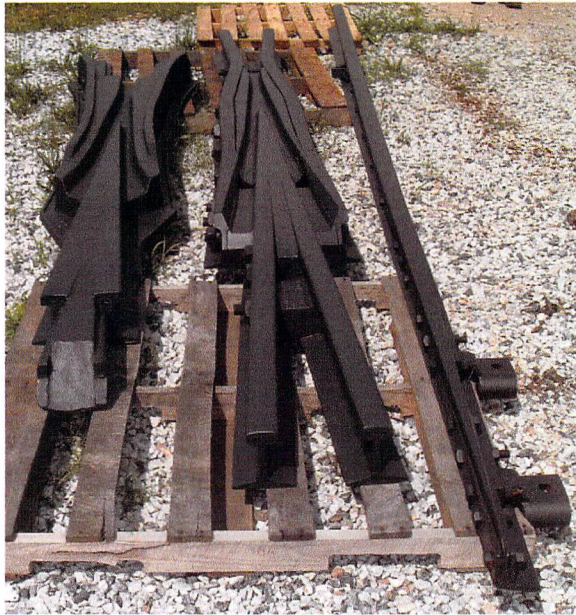
HOW TO DETERMINE THE NUMBER OF A FROG

The frog number is the ratio of its length (measured on center line of frog) to its width, or the number of inches in length necessary for it to spread one inch in width. For example, a No. 3 frog spreads 1 in 3, a No. 5 spreads 1 in 5, etc.

To determine the number of a straight frog, measure across the frog point at place (A) where the distance between the gauge lines is an even number of inches: measure again where the distance (B) is an inch greater than at (A); the number of inches (C) between the two measured sections (A and B) is the number of the frog.



FROG TYPES

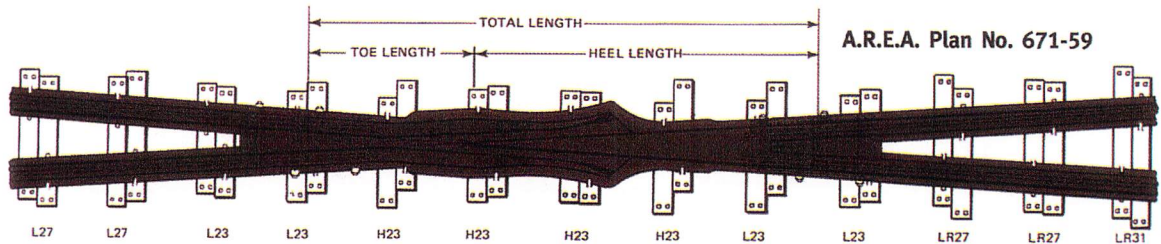


Left: Solid Manganese Self-Guarded Frog
Middle: Rail Bound Manganese Frog
Right: Switch Point



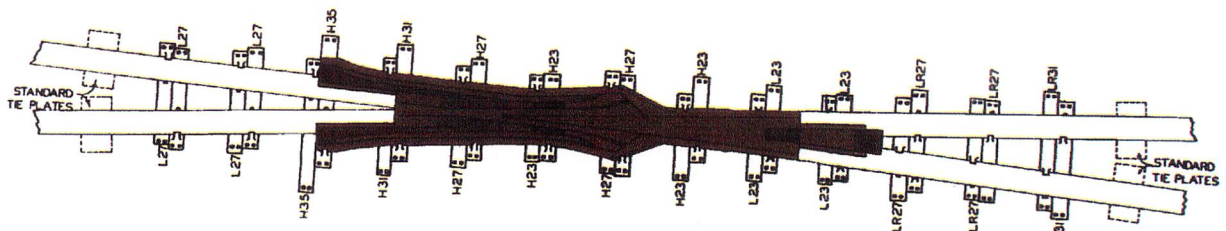
Left: Hook Flange Guard Rail
Right: Manganese Flat Top Frog

Solid Manganese Steel Frog



Solid Manganese Steel Frogs are recommended for mainline turnouts or crossovers or heavy industrial applications.

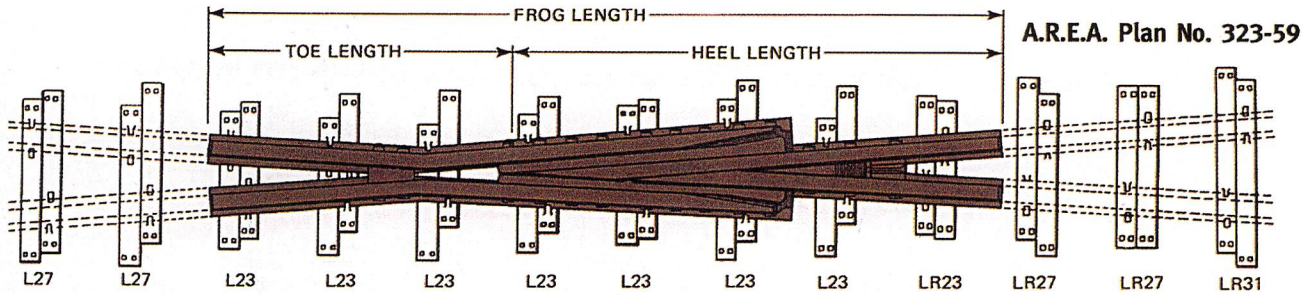
Solid Manganese Self-Guarded Frog



Solid Manganese Self-Guarded Frogs are recommended for locations subject to heavy traffic and moderate speeds.

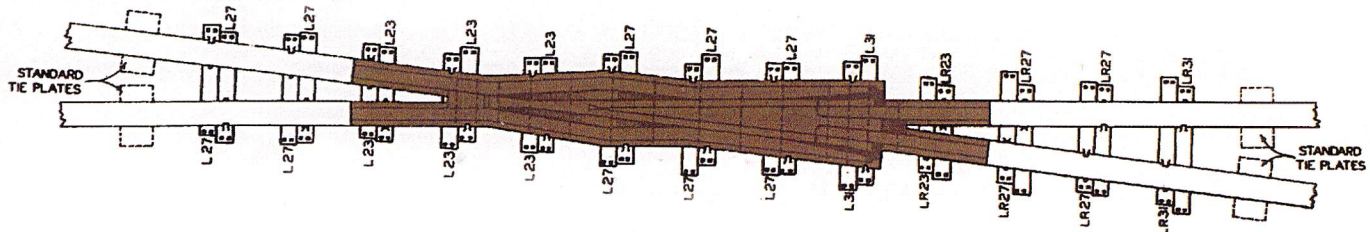


Bolted Rigid Frogs



Bolted Rigid Frogs are used in yard and industrial tracks where the traffic is light on both sides of the frog.

Rail Bound Manganese Steel Frogs

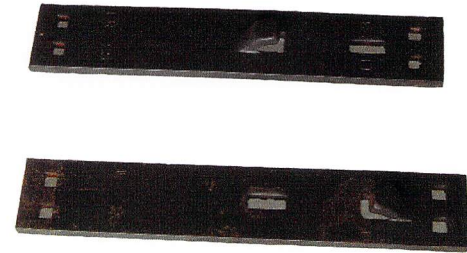
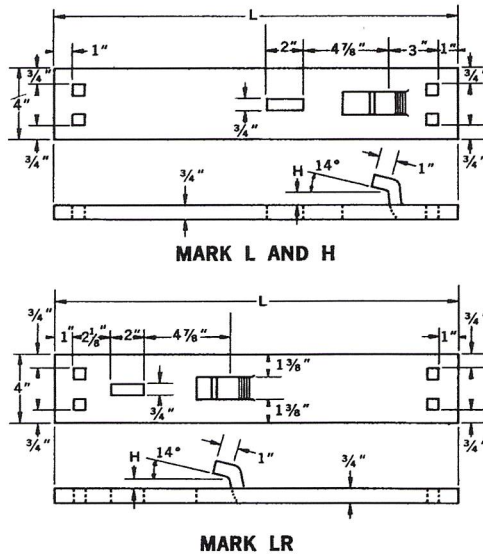


Rail Bound Manganese Steel Frogs are used for heavy or high speed mainline service or industrial applications where the traffic is approximately equal on both sides of the frog.



Plates for Frogs

Flat twin tie plates and hook twin tie plates provide more bearing area and better support for frogs and switches. They eliminate the need for many special-use plates that require specific punchings. Two plates fit side by side on each tie and easily adapt to any position.



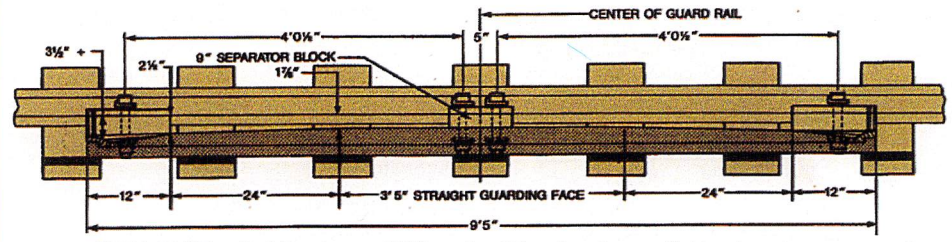
Hook Twin Tie Plates

Guard Rails

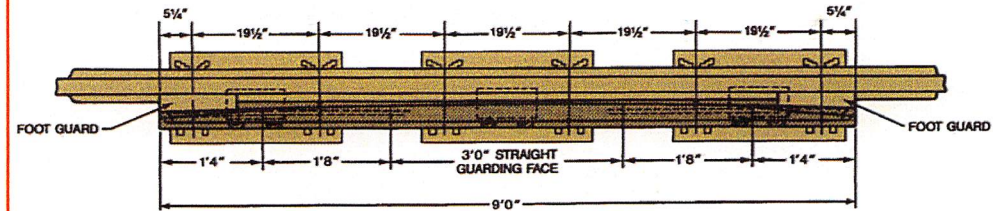
HOW TO ORDER GUARD RAIL:

Provide the following information:

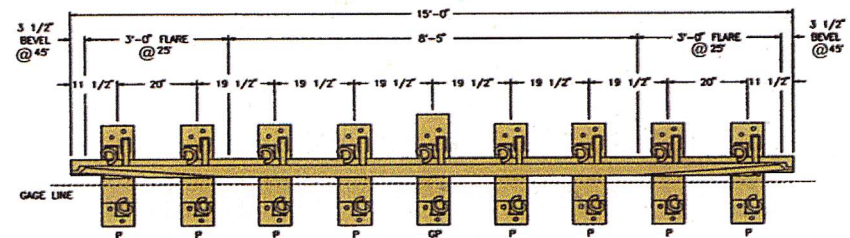
1. Type of Guard Rail – Standard, Heavy Duty Industrial, AREA Design Number
2. Length of Guard Rail
3. Angle of Frog with which the Guard Rail is to be used
4. Number of plates, type and size
5. Number of end blocks
6. Number of separator blocks



AREA 504 Tee-Rail Design – 9'5" length. Other lengths available at customer request.



Design 750 – Adjustable Flangeway 9'0" length. Other lengths available at customer request.



Boltless Design – 15'0" length. Other lengths available at customer request.

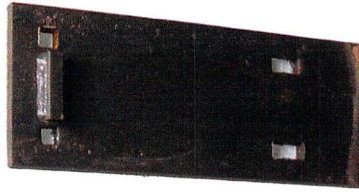


Industrial Switch Plates

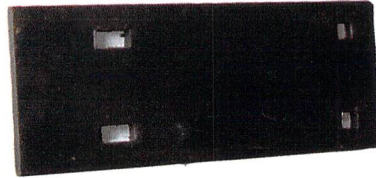
SWITCH PLATES

- 1. Heel Plate
- 2. Plain Plate
- 3. Combination Plate for use with Rigid Brace

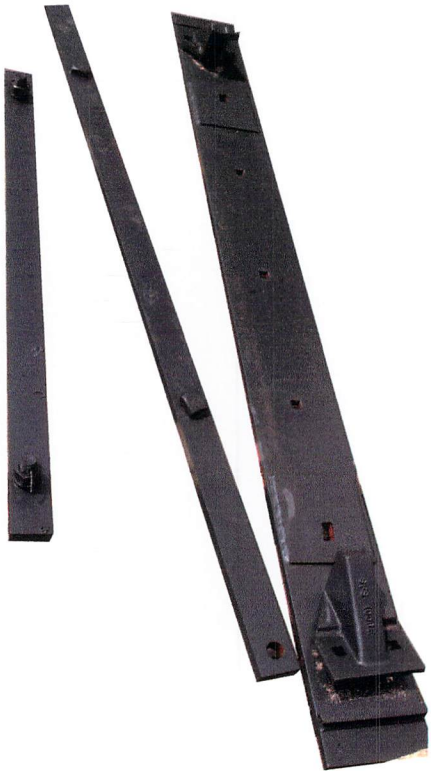
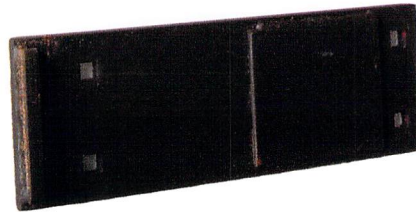
1.



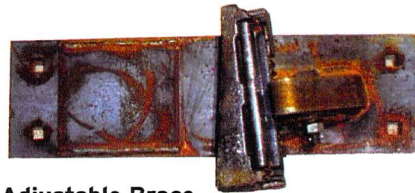
2.



3.



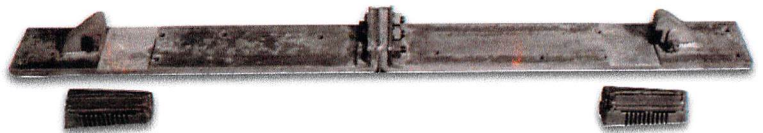
Switch Gauge Plate with Rigid Braces



Adjustable Brace & Switch Plate



Solid Base Slide Plate with Rail Brace & Riser

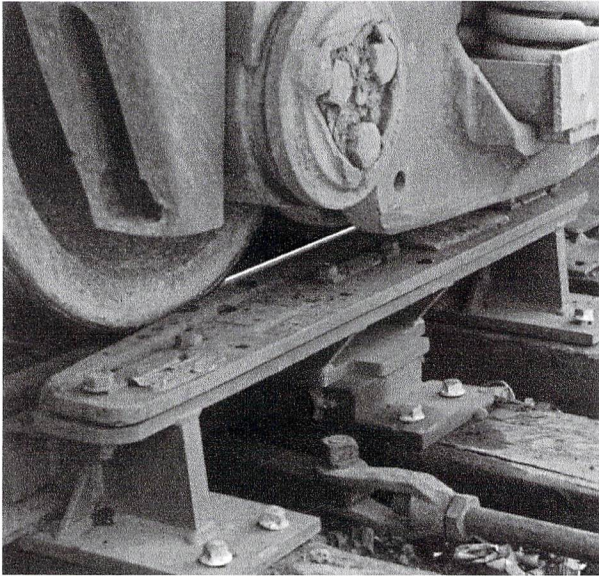


Insulated Gauge Plate

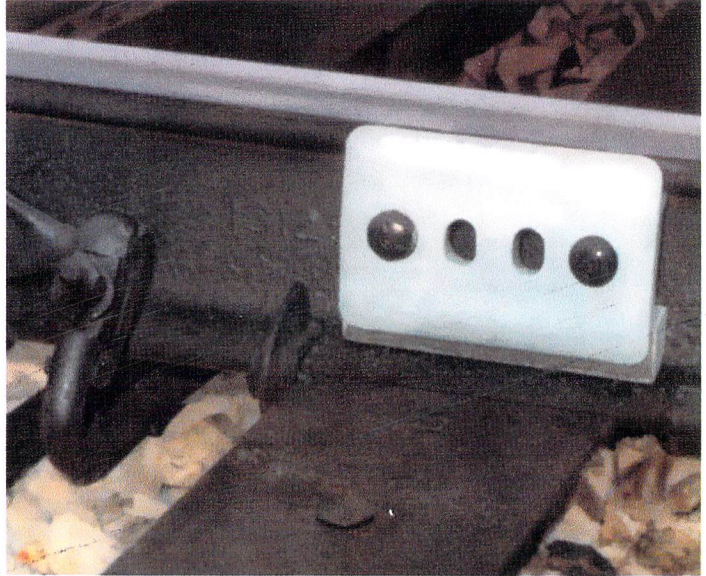


Switch Point Guards

Protect switches, eliminate flange cutting and greatly reduce wear and possible derailment at the switch. In locations where turnout traffic is heavy, the switch point guard rail can protect the switch point and prolong the life of the stock rail. Specify weight and rail section.

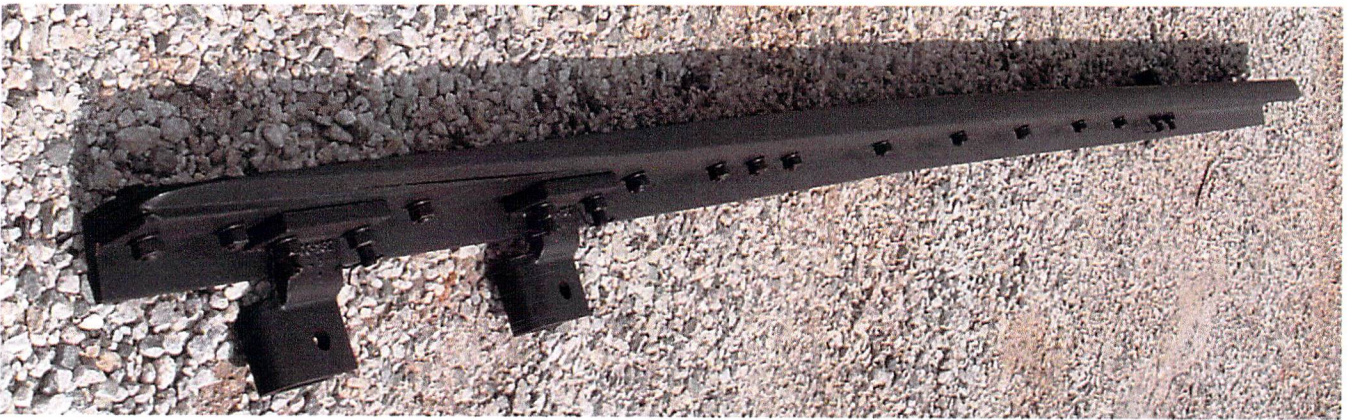


Switch Point Guards



Switch Point Protectors

Switch Points (11' - 15' - 16'6")



Switch Point 16'6" with Side Jaw Clips



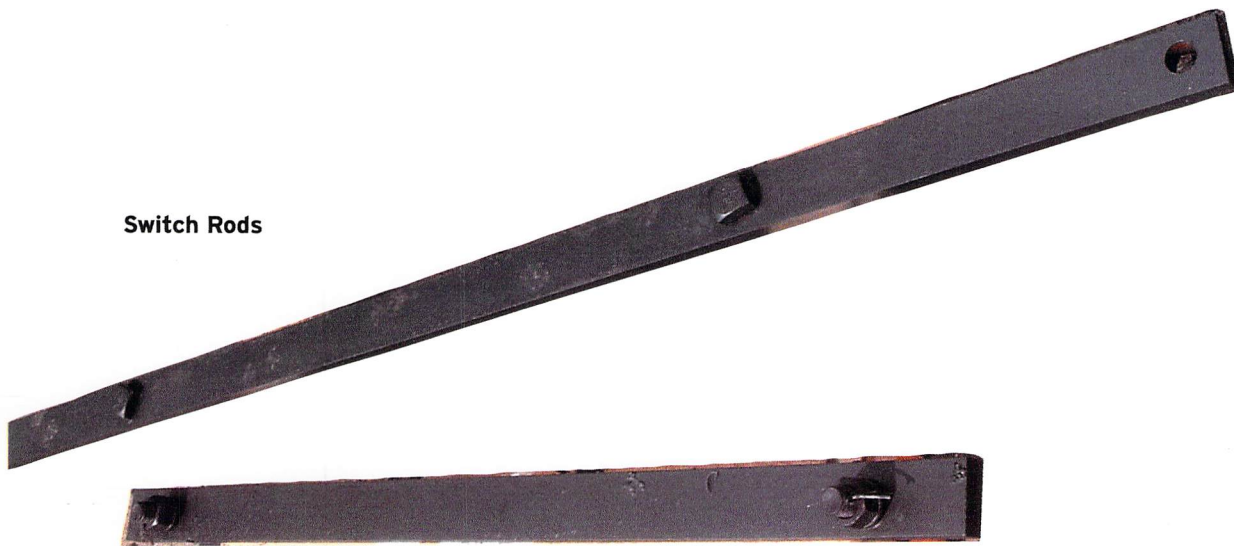
Switch Rods

Switch Rods connect the right and left hand switch points so that both move simultaneously and maintain the proper position to one another.

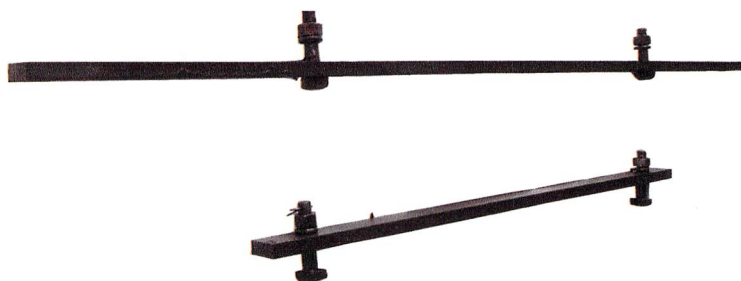
How To Order Switch Rods - Specify the following:

1. Type of rod – insulated or non-insulated, horizontal or vertical, end throw or center throw, switch point length with rail weight and section
2. Size of rod and clip style
3. Hole locations and size

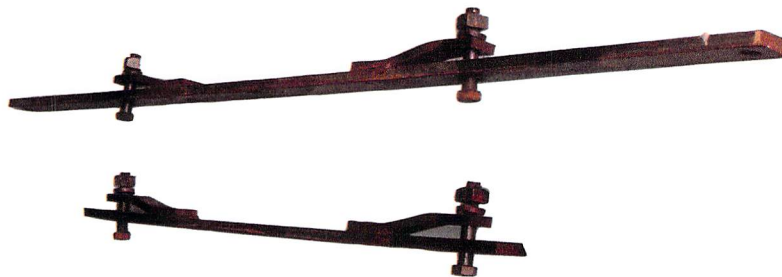
Switch Rods



Switch Rods for Side Jaw Clips

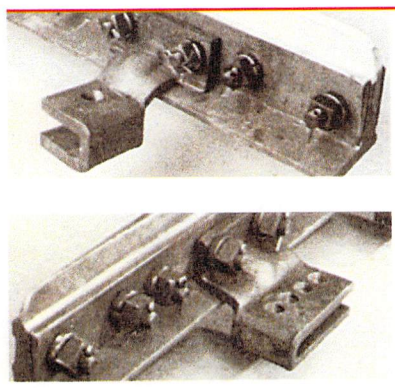


Switch Rods for Transit Clips



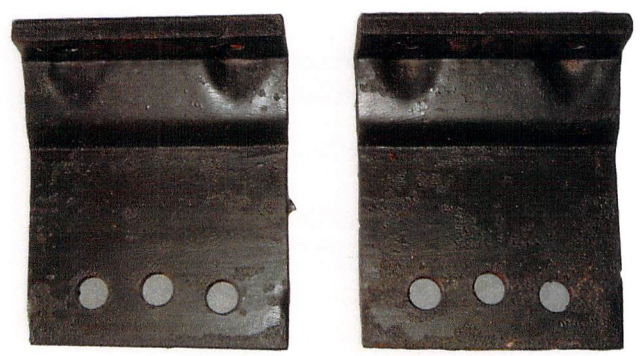
Switch Clips

Side Jaw Clips – non-adjustable, for use with horizontal switch rod, left-hand or right-hand

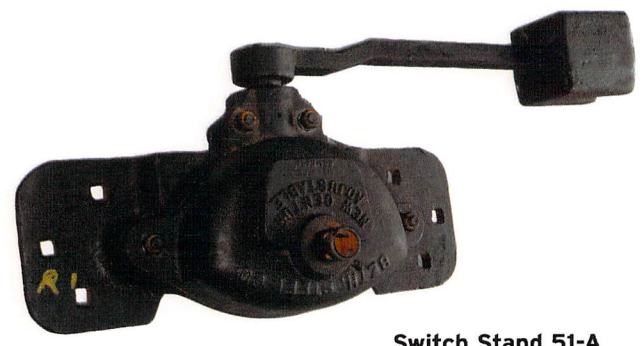


Adjustable Side Jaw Clip

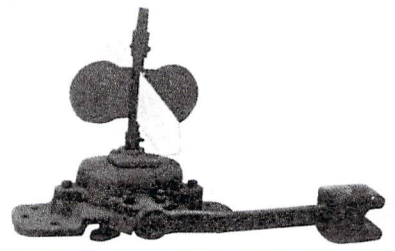
Transit Clips – adjustable, for use with horizontal switch rod, requires lugs on switch rod, left-hand or right-hand



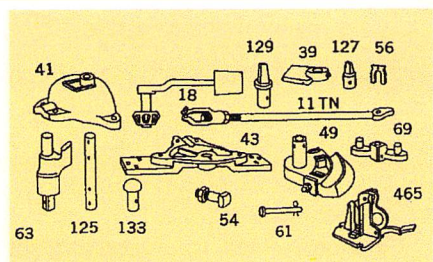
Switch Stand - 51-A



Switch Stand 51-A



- Switch Stand Parts**
- 11 TN Adjustable Rod
 - 18 Throwing Lever
 - 39 Cover
 - 41 Top
 - 43 Bottom
 - 49 Segment Gear
 - 54 Bolt
 - 61 Cross Pin
 - 63 Spindle Lug
 - 69 Double Crank
 - 125 Mast
 - 127 Socket Lamp Tip
 - 129 Plug Lamp Tip
 - 133 Dummy Plug
 - 465 Latch
 - 1824 Shim

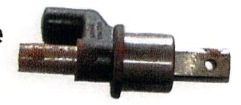


51-A Switch Stands



Bow Handle for 51-A Switch Stand

#63 Spindle



#49 Segment Gear



#69 Double Crank



#465 Foot Lever





SECTION 5 TRACK TOOLS

Saws & Drills	27
• Portable Gas	
• Portable Hydraulic	
Tools	28 - 29
• Adze	28
• Ballast Fork	28
• Ballast Shovel	28
• Chisels	28
• Cribbing Shovel	28
• Cutters	28
• Digital Surface Thermometer	28
• Drill Bits	28
• Lining Bar	28
- Diamond Point	
- Pinch Point	
- Wedge Point	
• Saw Blades	28
• Double Face Sledge Hammer	28
• Spike Lifter	29
• Spike Mauls	29
• Spike Puller	29
• Switch Broom	29
• Tongs (one man or two man)	29
- Rail	
- Tie	
• Track Jack - 15 Ton	29
• Wrenches	29
- Single End	
- Double End	



SAWS & DRILLS

Portable Gas

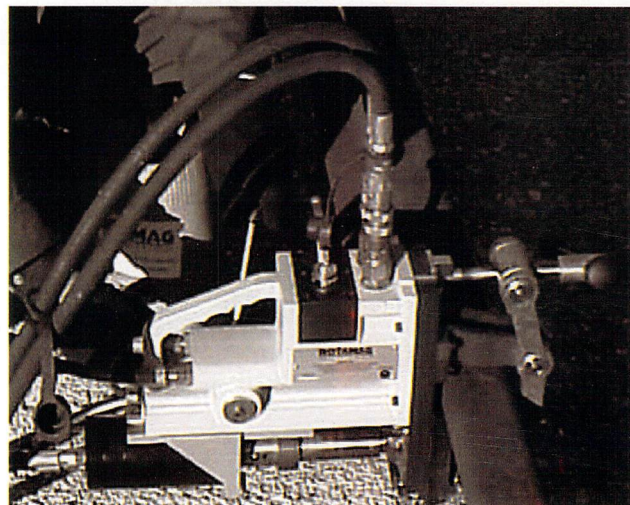


Ultra Kut II Gas Saw

Portable Hydraulic

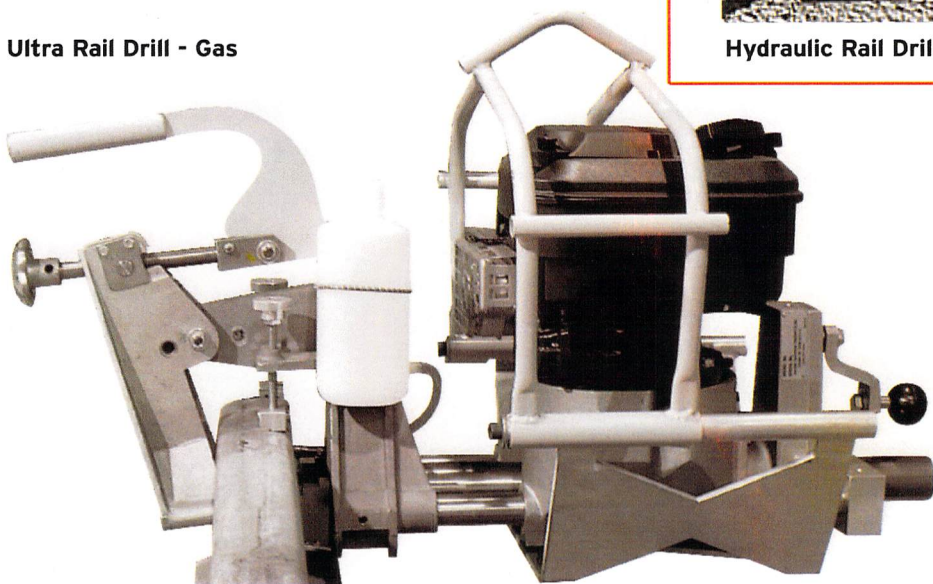


Stand-Up Hydraulic Rail Saw

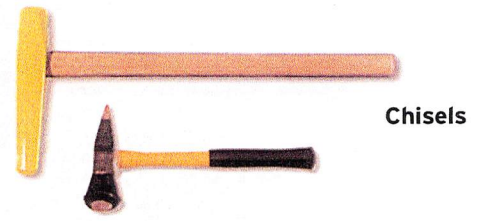
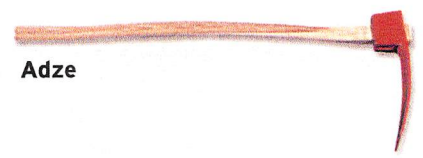


Hydraulic Rail Drill

Ultra Rail Drill - Gas



TOOLS



Pinch Point Lining Bar
High Carbon Steel 60", 63", 66"

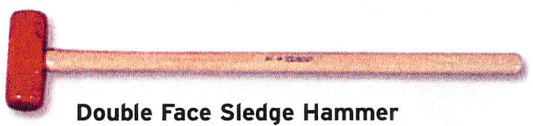


Diamond Point Lining Bar
High Carbon Steel 60", 63", 66"



DRILL BITS

Wedge Point Lining Bar
High Carbon Steel 60", 63", 66"



TOOLS

Spike Mauls (#10)



Spike Lifter

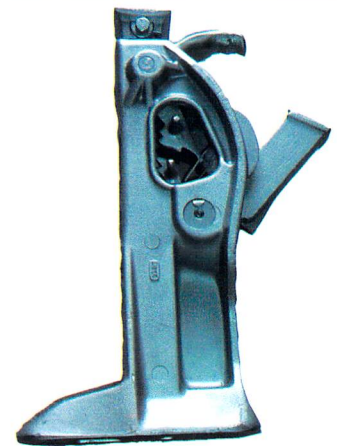


Spike Puller

TONGS



Burro Anti-Slip RAIL TONG



Aluminum Track Jack - 15 ton



Switch Broom

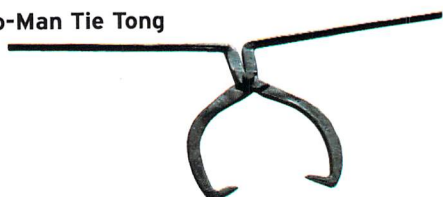
Two-Man Rail Tong



One-Man Tie Tong



Two-Man Tie Tong



WRENCHES



Single End



Double End Track Wrench



NOTES

