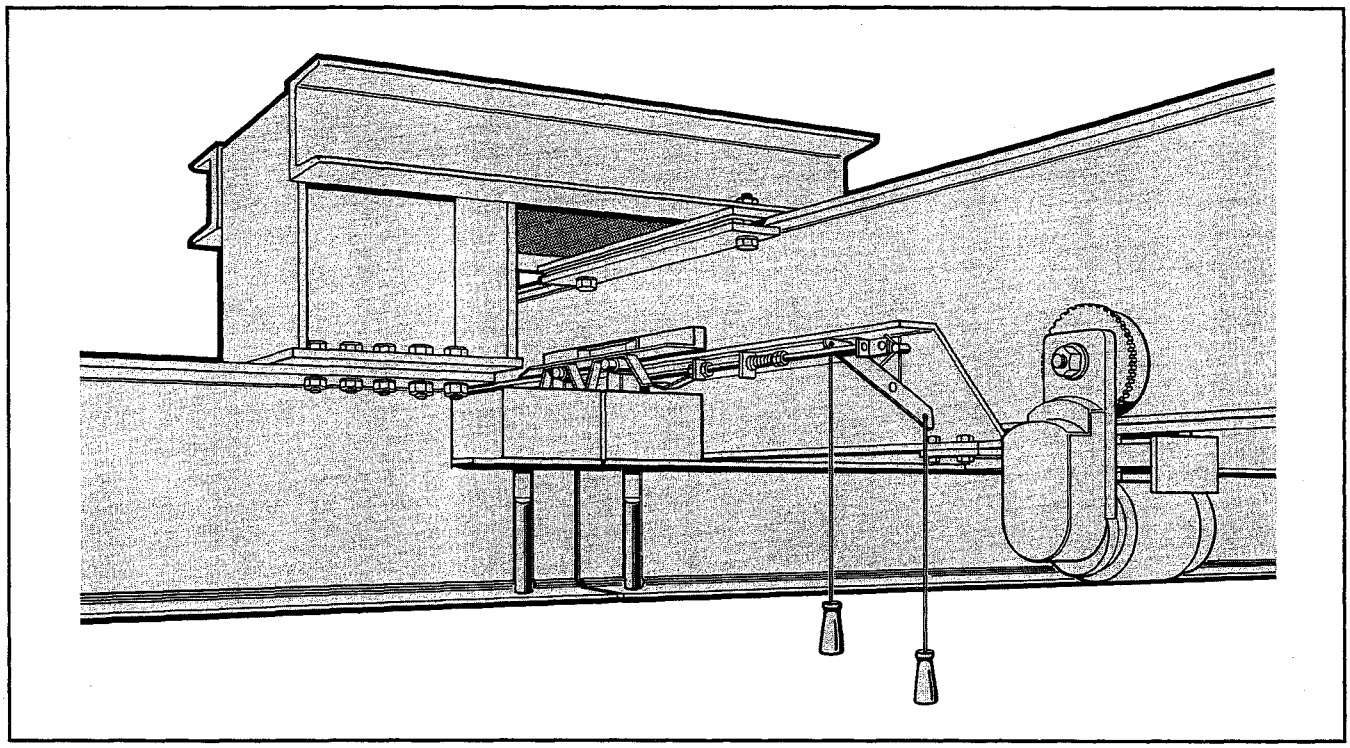
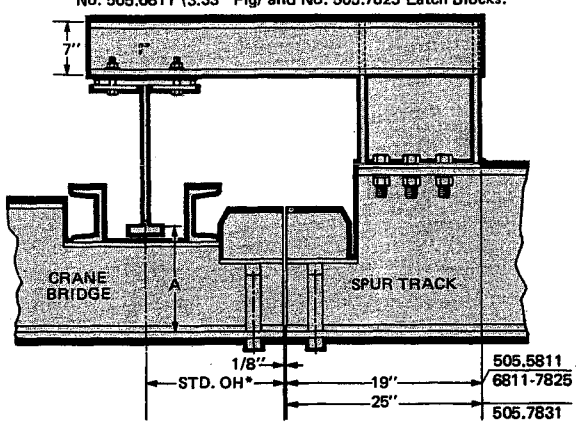
TRACK SUPPORTS

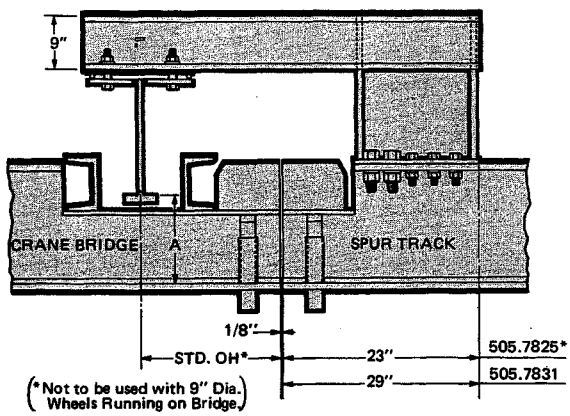


DATA:

Spur Track Supports using No. 505.5811 (2" Flg) — No. 505.6811 (3.33" Flg) and No. 505.7825 Latch Blocks.



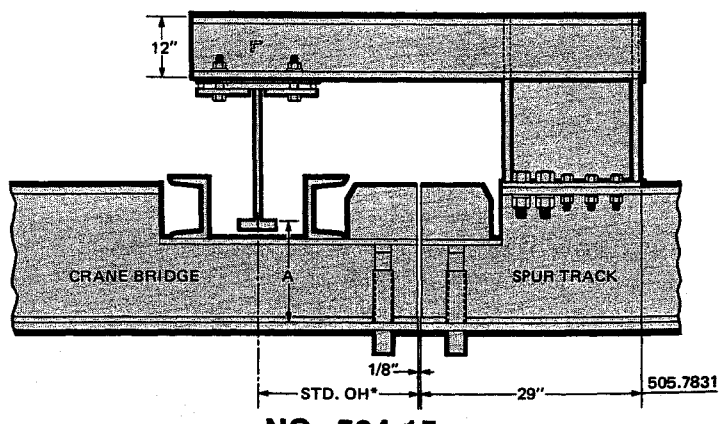
NO. 504.3



NO. 504.12

504.3 TO AND INCLUDING 3 TON
504.12 TO AND INCLUDING 5 TON
504.15 TO AND INCLUDING 7½ TON

A spur track support is used to provide smooth passage of trolley wheels over the transfer joint from crane to monorail. They are constructed of heavy structural steel members welded together in accordance with the best shop practice by certified welders. Since the end of the spur track is supported on the crane runway, any deflections at the ends of the crane bridge and spur track are equalized. No other support of the spur track should be provided close to the spur track support since such a support would upset its equalizing effect. Where the layout calls for the spur track to curve immediately adjacent to the crane runway, a spur track support is not feasible; but the superstructure supporting the curve should be arranged so that it bears on the runway and gives the same equalizing effect as the spur track support.



NO. 504.15

GUIDE TO TREAD TO TREAD DIMENSIONS AND OVERHANGS ON CRANES WITH LATCHES OR LATCH BLOCKS

LATCH NO.	CRANE SERIES	NUMBER OF WHEELS ON TRUCK	TREAD/ TREAD "A"	MINIMUM OVERHANG W/LATCH	MINIMUM OVERHANG W/LATCH LATCH BLOCK	MAXIMUM OVERHANG W/LATCH OR LATCH BLOCK
5810/6810	551 Non-Electrified	4	10″	12″	12″	18″
7824	551 Electrified 604.922 BRI	4	1′-1¼″	12″	12″	18″
7824	551-E 603.6 Bri 603.7 Bri	4	1′-0½″	12″	12″	18″
7824	552 Electrified	4	See Note #2	15″	15″	18″
7824	552 Electrified	8	See Note #2	17″	17″	18″
7824	503	4 8	See Note #2	15″ 17″	15″ 17″	18″
7824	503-T 5 Ton Cap. Only	8	See Note #2	18″	18″	18″
7824	517	8 16	See Note #2	15″ 17″	15″ 17″	18″
7824	517-T 5 Ton Cap. Only	8 16	See Note #2	18″	18″	18″
7824	585	4 8	See Note #2	14″ 16½″	14″ 16½″	18″
7824	586	8 16	See Note #2	14″ 16½″	14″ 16½″	18″
7830	503-T 517-T	8 16	See Note #3	16″	16″	18″

NOTES:

1. **Standard overhang** at latch end of crane is 18″ for all models of cranes and latches.
2. The following are the tread to tread dimensions for the designated bridge girder depths. (505.7824/7825 manual latches)

604.9	11″
604.12	14″
605.12	14″
604.14	16″
15″ Depth Bridge Girders and Greater	17″

3. Tread to tread dimension for cranes with #505.7830 motor operated latches -*SuperTrack* Girder or *TrojanTrack* bridges.

4½″ diameter wheels running on bridge	14″
TrojanTrack with 9″ diameter wheels running on bridge	17″

4. Applications requiring overhangs in excess of 18″; consult estimating.

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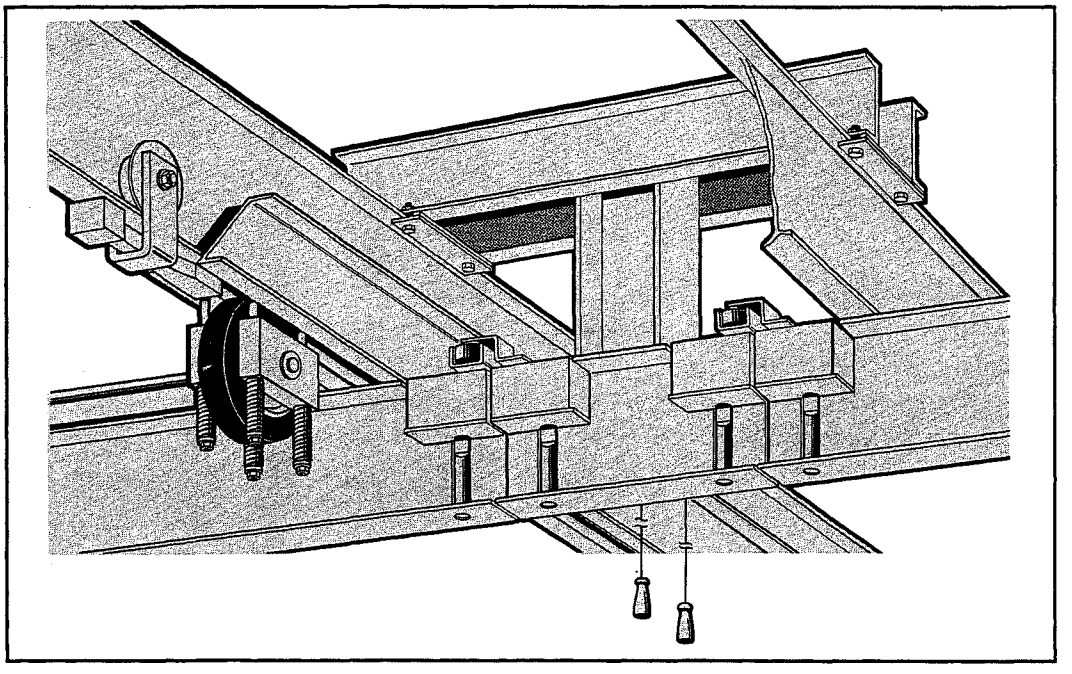
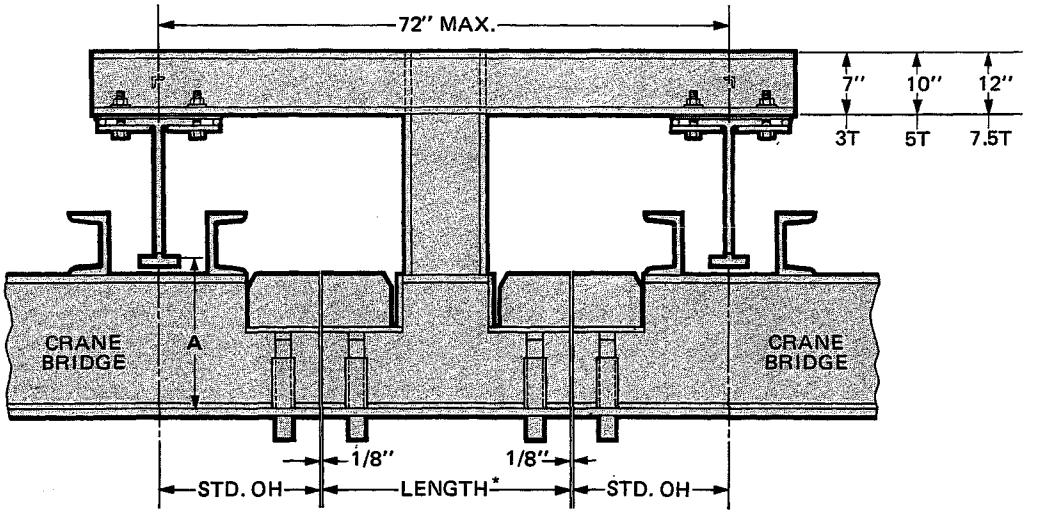
TRANSFER SECTIONS





504.5 - 504.28 - 504.30 TRANSFER SECTIONS

CAPACITIES:

No. 504.5 to and including 3 Ton
No. 504.28 to and including 5 Ton
No. 504.30 to and including 7½ Ton

*MINIMUM LENGTH:

18" with No. 505.5811 and No. 505.6811 latch blocks.
24" with No. 505.7825 latch blocks.
18" with No. 505.7831 latch blocks.

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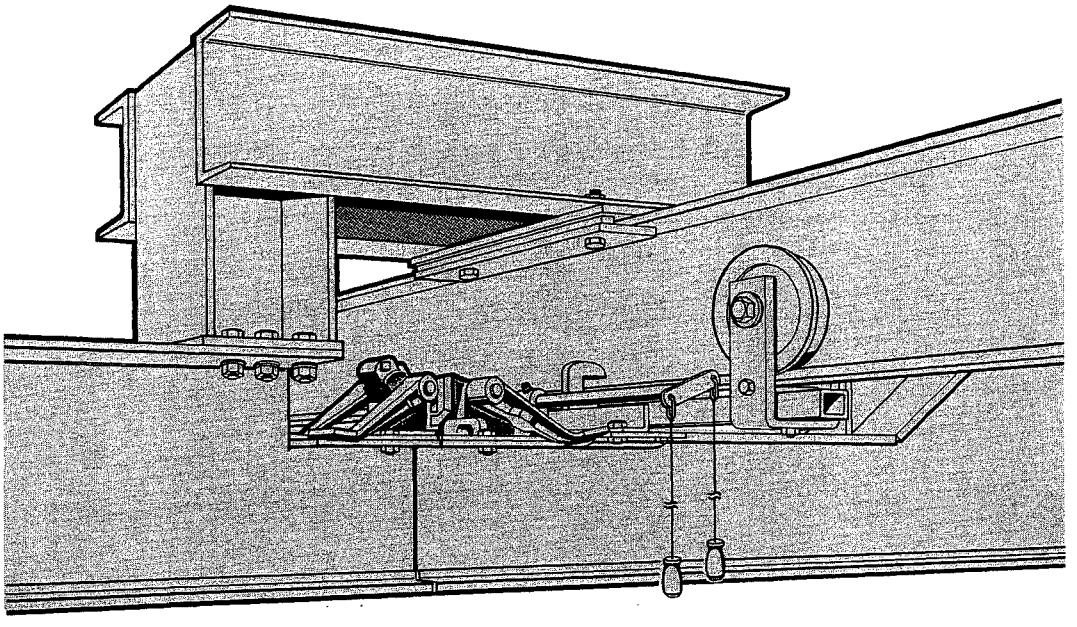
551 NON-ELECTRIFIED • 552 NON-ELECTRIFIED CRANE LATCHES



MANUALLY OPERATED, FOR CRANES WITHOUT BRIDGE CONDUCTORS

FEATURES:

The baffles on both the latch and block cannot be raised until the bridge and spur are aligned. It is a function of the latch plunger to raise the baffles on the block and at the same time actuate the arm shown protruding above the block which, in turn, moves downward to raise the baffles on the latch.

The #505.6810 latch for 3.33″ operating flange SUPERTRACK or the #505.5810 latch for 2″ operating flange SUPERTRACK, is designed for use with hand propelled non-electrified systems.

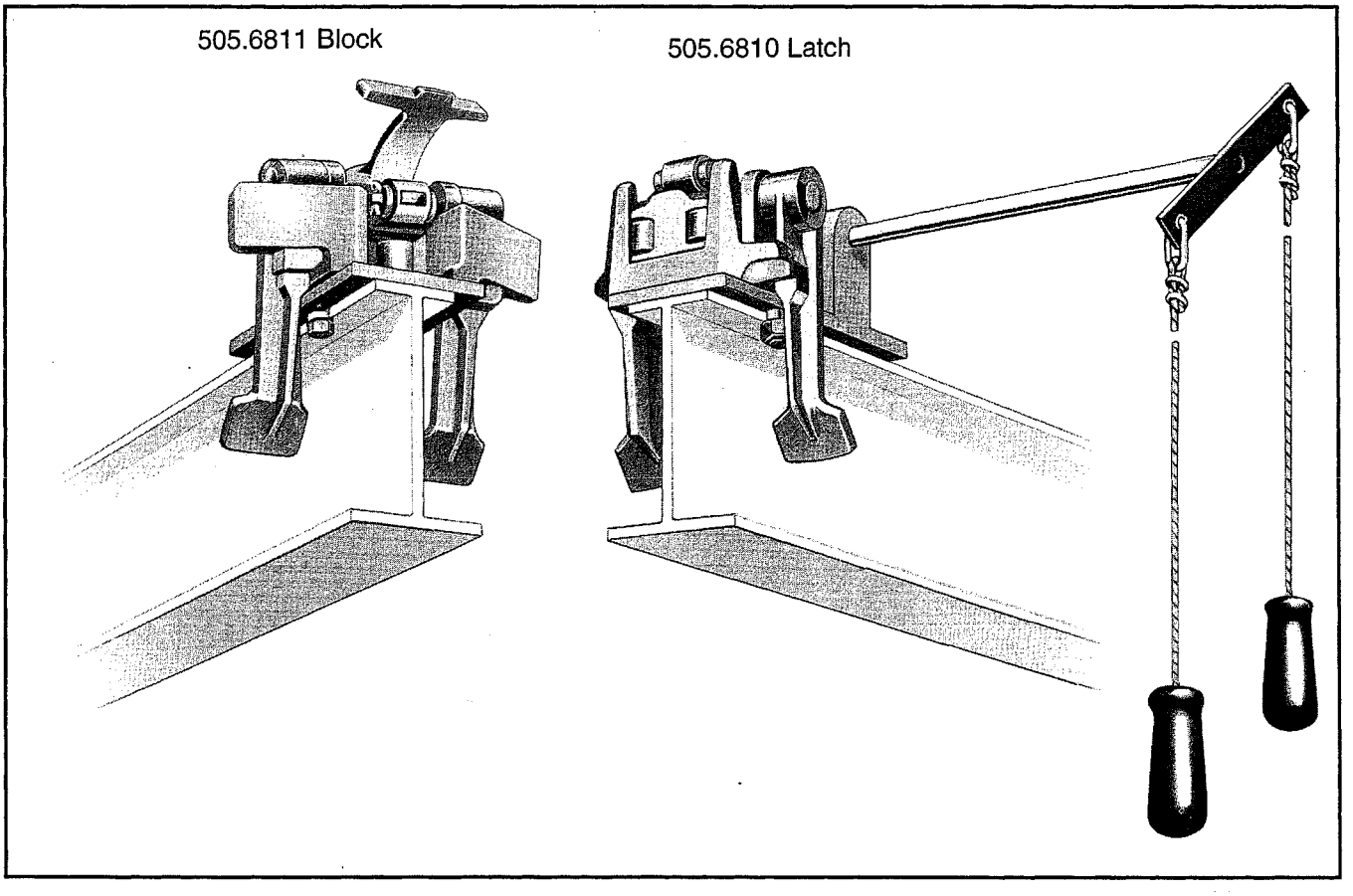
The 505.5810/6810 latch assembly is designed specifically for moderate duty.

CRANE LATCHES

MANUALLY OPERATED • FOR CRANES WITHOUT BRIDGE CONDUCTORS

505.6811 Block

505.6810 Latch



Cat. No. 505.6811 Latch Block with 3.33″ Operating Flange.

Cat. No. 505.5811 Latch Block with 2″ Operating Flange.

Cat. No. 505.6810 Latch with 3.33″ Operating Flange.

Cat. No. 505.5810 Latch with 2″ Operating Flange.

OPERATION. With the operating mechanism in the "unlatched" position, the latch plunger is retracted within the latch housing and the end of the bridge is free to pass the spur track without the plunger striking the block or the baffles being disturbed.

When the operator desires to align and latch with the spur track, he pulls the rope throwing the operating mechanism to the "latching" position so that the latch plunger protrudes from the housing, then approaches the spur slowly. If the bridge is moving too fast, the plunger will not register in the block, but will permit the end of the bridge to pass the spur. If the bridge is moving at slow speed, the plunger will register in the block and the latching operation will be completed automatically under spring pressure. This action also raises the baffles on both the latch and block.

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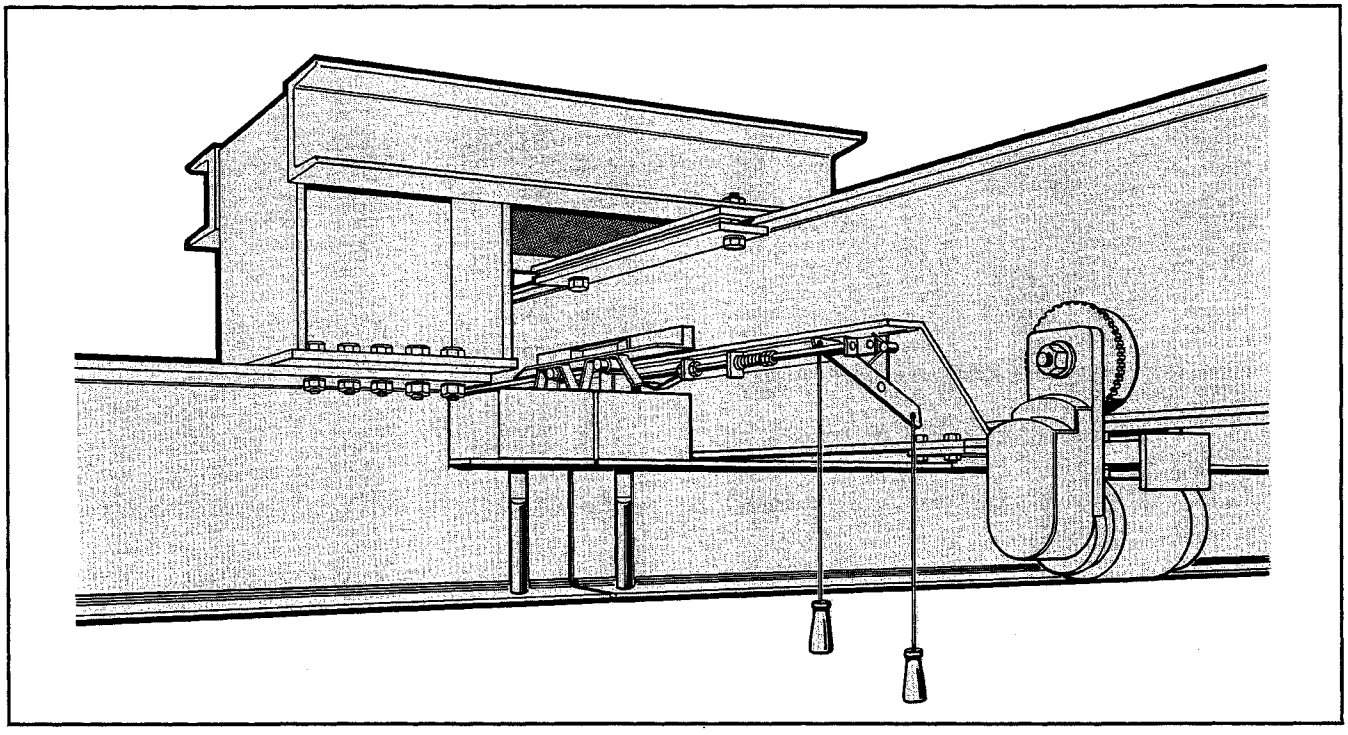
CRANE LATCHES



Above illustration shows the No. 505.7824 Latch on the crane aligned and latched with the No. 504.7825 Latch Block on spur track.

FEATURES:

The baffles cannot be raised unless the bridge and spur are in alignment and as described in the paragraph under Operation, this is accomplished only by an extra pull on the rope. This latching operation is positive and fool-proof, it is not dependent on the spring action.

End alignment and spacing is assured and maintained by the roller and guide on top of the latch and block.

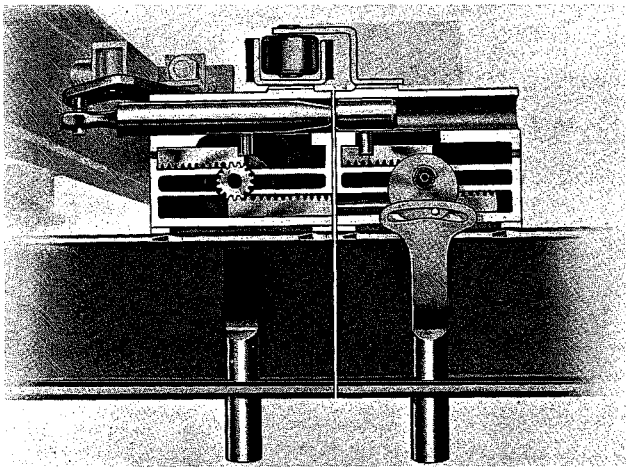
Horizontal and vertical alignment of the bridge and spur is assured even under load because of the close fit of the heavy main latch pin when mated with the latch block.

The latch pin cannot be fully withdrawn until baffles are lowered to safe position. This prevents unlatching and moving the crane away from the spur with the trolley parked in an unsafe position at the extreme latch end of the bridge or spur.

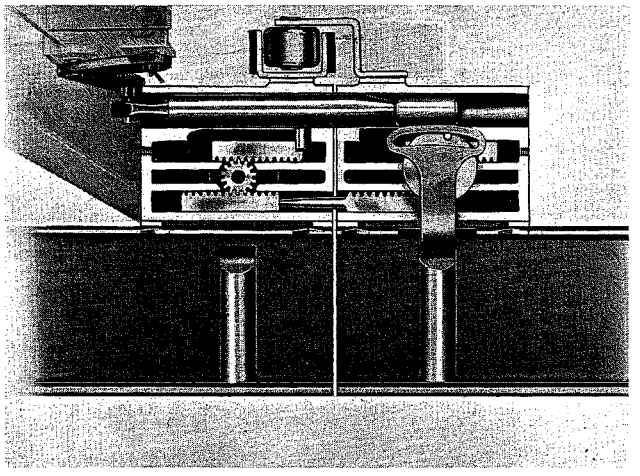
An under the rail baffle engages the trolley bumper eliminating the possibility of damaging wheel bearings and connecting pins.

CRANE LATCHES

MANUALLY OPERATED • FOR CRANES WITH BRIDGE CONDUCTORS



ALIGNED — NOT LATCHED



ALIGNED AND LATCHED

CATALOG NO. 505.7824 LATCH AND NO. 505.7825 LATCH BLOCK

OPERATION:

With the operating mechanism in the unlatched position, the latch is retracted within the latch housing and the end of the bridge is free to pass the spur track without the plunger striking the block or the baffles being disturbed.

When the operator desires to align and latch with the spur track or transfer section, he moves the crane into position and by visual means aligns the crane with the spur track or transfer section. When the operator is satisfied that the two ends are aligned he completes the latching procedure by pulling on the rope actuating the operating mechanism so that the plunger will register in the block completing the latching operation.

When the transfer operation is completed the operator pulls on the rope which disengages the plunger from the latch block, the baffles are lowered and the crane is free to traverse.

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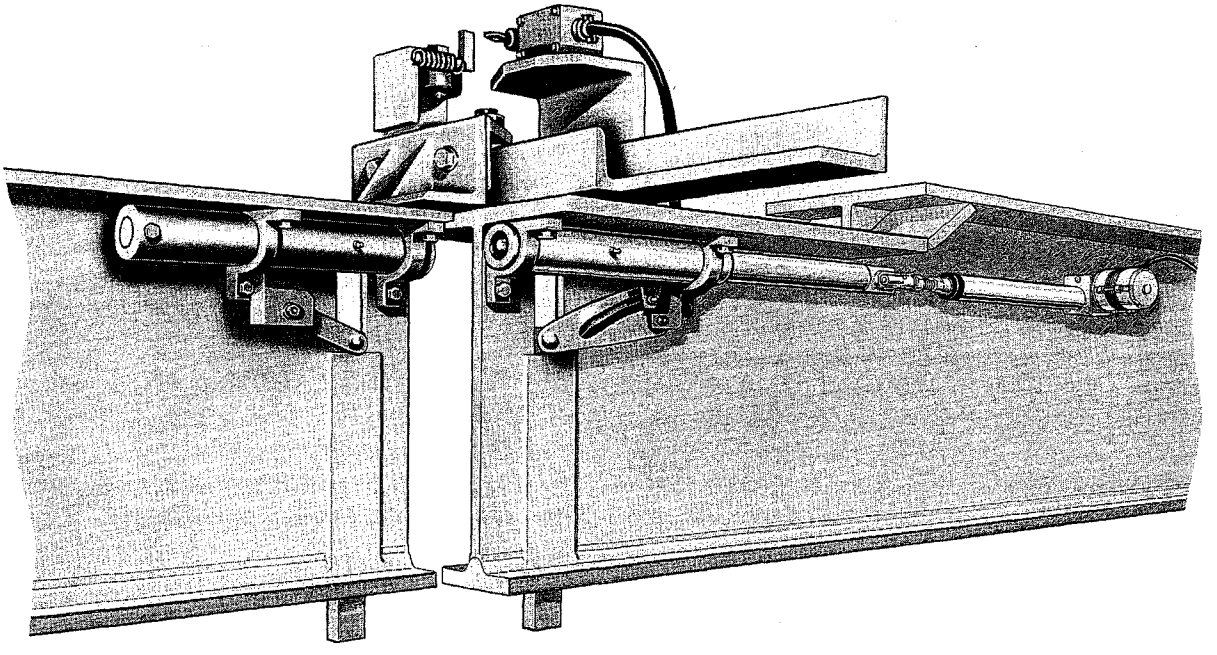
CRANE LATCHES

MOTOR OPERATED, FOR MOTOR PROPELLED CRANES



Catalog No. 505.7830 motor operated latch on crane at the right approaching the aligning position with the No. 505.7831 latch block on the spur track at the left.

FEATURES:

ALIGNMENT: The motor operated latch assembly is equipped with a flared guide channel which works in conjunction with a heavy duty guide roller mounted on the latch block. This arrangement will either pull together or force apart the ends of the crane bridge and spur track/transfer section. This arrangement assures proper gap spacing, therefore, preventing the stubbing of the two track ends.

Located directly above the guide roller and channel guide is a centering limit switch and cam device. The end of the crane and the end of the spur track/transfer section must be aligned horizontally before the contacts on the limit switch are closed. Until this alignment is accomplished and the limit switch is closed, the latch motor circuit is inoperative, preventing the operator from extending the latch pin.

Without additional bridge conductors, the centering limit switch can also be used to energize an indicating light circuit to give the operator a signal the crane is properly aligned for latching. The signal light can be mounted on the crane itself, in the operator's cab, or as an integral part of a pendant station.

SAFETY CIRCUIT: The latch should be provided with a safety circuit when: a crane is latched to a spur track; two cranes in adjacent bays are latched to the same transfer section; two cranes are directly interlocked end to end and there are two or more carriers operating on these cranes. Unlatching the cranes while there is a carrier on the transfer section or astraddle the interlock joint is prevented.

OPERATION: On floor controlled cranes the latch is controlled from a pendant pushbutton station. The pendant may be suspended from the crane structure itself or from the hoist carrier operating on the bridge. For the latter, additional bridge conductors and carrier collectors are required for the pilot circuits controlling the operation.

On cab operated carriers the pushbuttons are located in the cab. The requirement for additional control conductors and collectors is the same as for floor controlled units, depending on whether the cab is mounted on the carrier or on the crane itself.

CRANE LATCHES

OPERATION (Cont'd.)

When the operator has aligned the crane with the spur or transfer section, he actuates the linear motor by depressing the latch pushbutton. The linear motor exerts sufficient force to cause the tapered pin, as it is driven into the latch block tube, to pull the ends of the two tracks into horizontal and vertical alignment for passage of the loaded trolleys across the gap.

A lug and cam roller on the latch pin operates a pivoted and slotted cam lever which is, in turn, connected to the upper end of the baffle bar. The stroke of the latch pin in a horizontal plane is transferred to a vertical motion in the baffle bar, sufficient to withdraw the baffle bar flush with the underside of the track. As the latch pin is driven forward, it enters the latch block guide tube and contacts the latch block pin which is forced back against a coil spring at the closed rear end. The latch block pin is connected to a bell crank, the opposite end of which is, in turn, connected to the upper end of the latch block baffle. The baffle is raised in the same fashion as that for the latch itself.

The unlatching operation is set in operation by depressing the "unlatch" button and the function of the latch and block and block parts is the reverse of that described above for latching. The baffle on the latch is forced down by the motor and it's connecting system of levers, while the baffle on the block is driven by the coil spring behind the latch block pin.

The latch and unlatch position of the linear motor is limited by a limit switch which is actuated by a cam mounted on the linear motors shaft.

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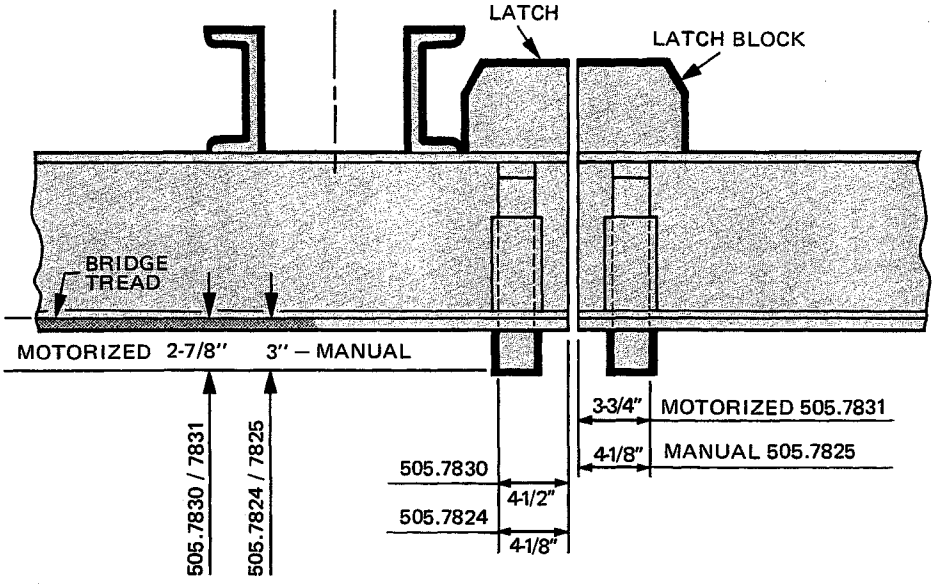
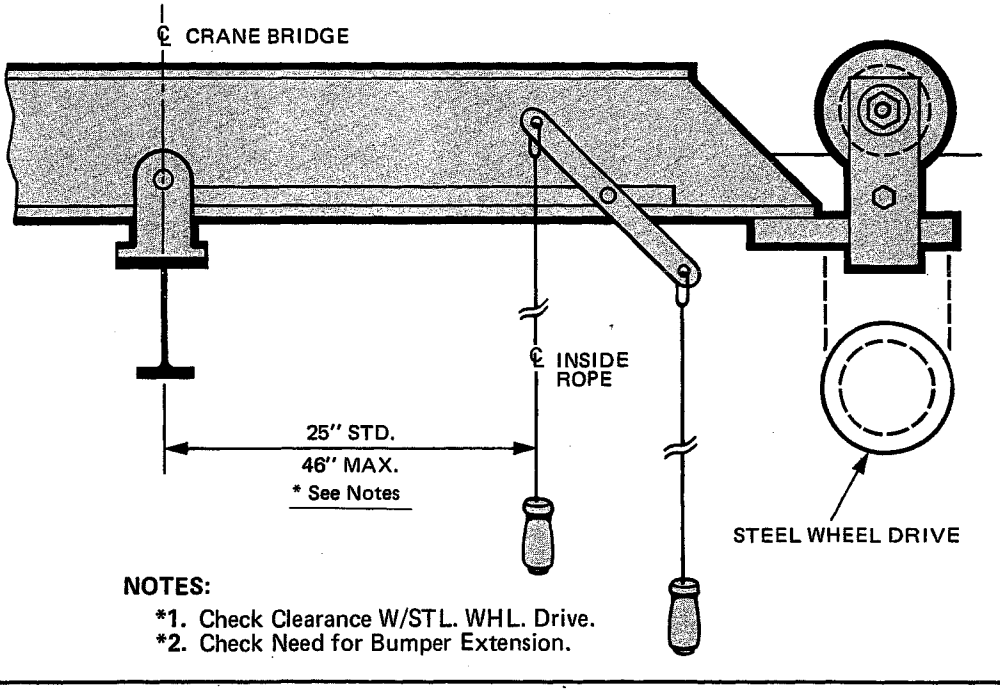
CRANE LATCHES



LATCH UNDER-RAIL BAFFLE DIMENSION



NOTES:

*1. Check Clearance W/STL. WHL. Drive.
*2. Check Need for Bumper Extension.

505.7824 LATCH OPERATING MECHANISM LOCATION

NOTE:

When facing the interlock end of the crane, the operating mechanism will be on the right hand as shown and will be furnished as such, unless otherwise specified.