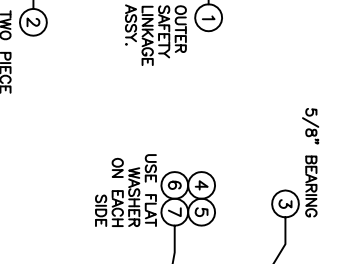


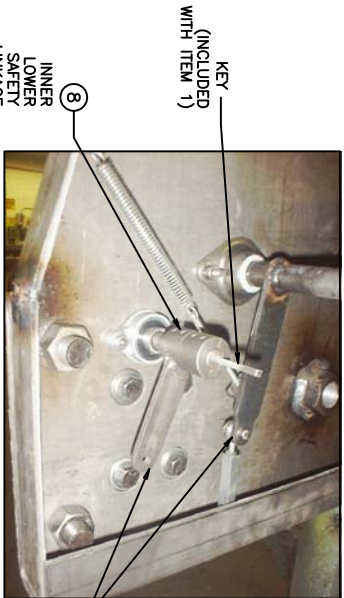
BEFORE BEGINNING INSTALLATION OF SAFETY LINKAGE, MAKE SURE THAT CAR FRAME IS INSTALLED ON GUIDE RAILS WITH ROLLER GUIDES AND SAFETIES INSTALLED AND PROPERLY ADJUSTED.



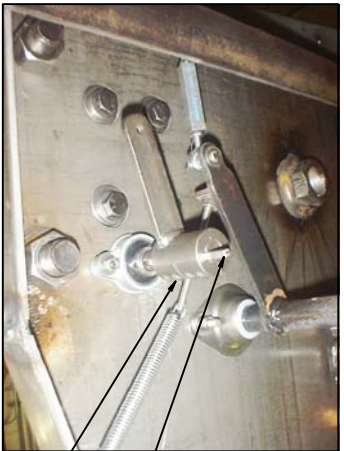
STEP 1: WITH TWO PIECE NYLON COLLAR LOOSE ON OUTER SAFETY LINKAGE SHAFT AS SHOWN, INSERT SHAFT THRU THE 3/4" DIA HOLE IN THE CAR FRAME FROM THE OUTSIDE. SLIDE COLLAR ALONG SHAFT UNTIL SLOT IN END OF LEVER ENGAGES SAFETY ROLLER PIN. TYPICAL BOTH SIDES.



STEP 2: SLIDE THE 5/8" FLANGE BEARING OVER THE SHAFT OF THE OUTER SAFETY LINKAGE ASSY. ON THE INSIDE OF THE SLING. FASTEN THE BEARING TO THE INSIDE OF THE SLING AS SHOWN USING THE 1/4" BOLTS PROVIDED. USE FLAT WASHERS INSIDE AND OUT. TYPICAL BOTH SIDES OF SLING.



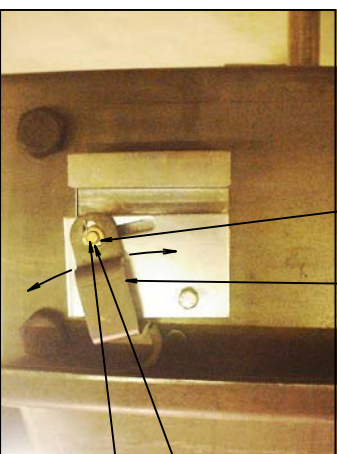
STEP 3: SLIDE LOWER SAFETY LINKAGE ASSEMBLY ON THE 5/8" SHAFT AS SHOWN SO THAT LOWER LEVER LINES UP WITH THE UPPER LEVER. IF KEY WAY IN SHAFT AND COUPLING DO NOT LINE UP SWITCH LOWER SAFETY LINKAGE ASSEMBLES FROM ONE SIDE TO THE OTHER. INSTALL THE 3/16" SQUARE KEY IN SHAFT/COUPLING KEYWAY. TYPICAL BOTH SIDES.



| No. | FIELD ASSEMBLY and INSTALLATION of SAFETY LINKAGE - SHEET 1 | PART NO. | QTY | S/P | SHIPPED |
|-----|---|----------|-----|-----|---------|
| 1 | OUTER SAFETY LINKAGE ASSY. (INCLUDING KEY) | 23430 | 2 | S | |
| 2 | 5/8" 2 PC NYLON COLLAR | 23435 | 2 | S | |
| 3 | 5/8" RIGID FLANGE MOUNT BEARING | 23440 | 2 | S | |
| 4 | 1/4" HHMB x 1 1/2" LONG | 50030 | 4 | S | |
| 5 | 1/4" FLAT WASHER | 50325 | 8 | S | |
| 6 | 1/4" LOCK WASHER | 50375 | 4 | S | |
| 7 | 1/4" HEX NUT | 50445 | 4 | S | |
| 8 | INNER LOWER SAFETY LINKAGE | 23455 | 2 | S | |
| 10 | SAFETY ROLLER COTTER PIN (INCL. W/ SAFETY) | X | 2 | S | |
| 11 | 1/4" FLAT WASHER | 50325 | 2 | S | |
| 12 | | | | | |
| 13 | | | | | |

FIELD NOTE:
SQUARE KEYS INCLUDED WITH ITEM 2 ARE MATCH FIT PER SQUARE. DO NOT INTERCHANGE.

NOTE: GUIDE RAILS ARE OMITTED FROM PHOTOS FOR CLARITY.



STEP 4: WITH THE SLOT IN THE SAFETY LEVER ENGAGING THE SAFETY ROLLER PIN - INSTALL THE FLAT WASHER AND THE COTTER PIN ON THE SAFETY ROLLER PIN AS SHOWN TO RETAIN THE LEVER ON THE PIN. ROTATE THE SAFETY LEVER UP AND DOWN AS SHOWN TO CHECK FOR FREEDOM OF MOVEMENT WITHOUT ANY BINDING. SAFETY LEVER MUST ROTATE FREELY FOR PROPER OPERATION. IF LEVER BINDS OR IS HARD TO ROTATE REPOSITION LEVER IN OR OUT SLIGHTLY TO FREE UP.

| REVISIONS | | DATE | BY | SCALE | DATE | BY | SCALE |
|-----------|----------|------|-----|-------|-------|-----|-------------|
| 01 | 2-2-00 | 10# | DMB | NONE | XXXX | DMB | XXXX |
| 02 | 3-30-00 | .5 | DMB | NONE | XXX | DMB | XXX |
| 03 | 5-17-00 | | KK | | | DMB | SLS.001 |
| 04 | 8-15-00 | | DMB | | 1-10B | DMB | SLS.001 |
| 05 | 11-10-03 | | DMB | | | DMB | JOB # XXXXX |



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| No. | TITLE | PART NO. | QTY | S/P | SHIPPED |
|-----|---|----------|-----|-----|---------|
| 1 | FIELD ASSEMBLY and INSTALLATION of SAFETY LINKAGE - SHEET 2 | 23398 | 2 | S | |
| 2 | 1/4" FLAT WASHER (STEEL) | 50325 | 4 | S | |
| 3 | 5/16" NYLON FLAT WASHER | 23400 | 4 | S | |
| 4 | 1/8" x 1 1/2" LONG SST COTTER PIN | 23390 | 2 | S | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |

BEFORE BEGINNING INSTALLATION OF SAFETY LINKAGE, MAKE SURE THAT CAR FRAME IS INSTALLED ON GUIDE RAILS WITH ROLLER GUIDES AND SAFETIES INSTALLED AND PROPERLY ADJUSTED.



UPPER LEVER
LOWER LEVER
TURNBUCKLE END
CLEVIS PIN
NYLON WASHER BETWEEN
STEEL WASHER OUTSIDE BOTH ENDS

STEP 5: CONNECT UPPER AND LOWER LEVERS AS FOLLOWS: INSTALL 1/4" STEEL FLAT WASHER ON THE CLEVIS PIN. INSERT THE CLEVIS PIN THRU THE LOWER LEVER FROM THE OUTSIDE. PUT 5/16" NYLON WASHER ON CLEVIS PIN SO THAT NYLON WASHER WILL BE BETWEEN LEVER AND TURNBUCKLE END. INSERT CLEVIS PIN THRU TURNBUCKLE END. INSTALL 1/4" STEEL FLAT WASHER ON CLEVIS PIN. INSTALL COTTER PIN IN CLEVIS PIN HOLE AND BEND. TYPICAL BOTH SIDES OF SLING.
TRIM ENDS OF COTTER PINS AS NEEDED SO THAT THEY DO NOT EXTEND PAST WASHER OD.



STEP 6: USING AN ALLEN WRENCH, TIGHTEN THE TWO PIECE COLLAR ON THE 5/8" SHAFT TO RESTRAIN THE SHAFT ASSEMBLY. TYPICAL BOTH SIDES OF SLING.



STEP 7: USING AN ALLEN WRENCH, TIGHTEN THE COUPLING SCREWS AND THE BEARING SHAFT SET SCREWS. TYPICAL BOTH SIDES OF SLING.

TIGHTEN BEARING SHAFT SET SCREWS
TIGHTEN COUPLING SCREWS

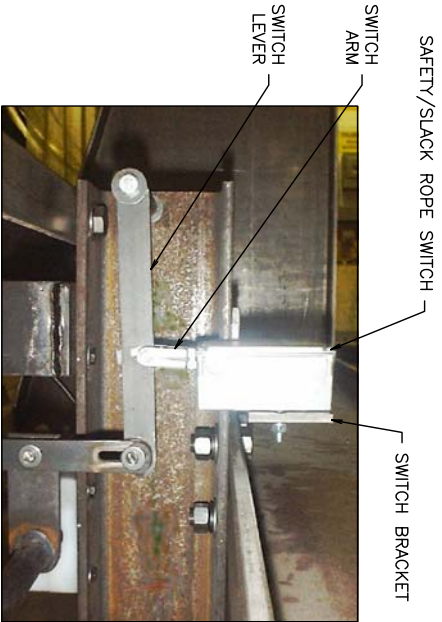


COMPLETED SAFETY LINKAGE INSTALLATION. CHECK THAT ALL CLEVIS PINS HAVE NYLON WASHERS BETWEEN CONNECTED COMPONENTS, STEEL WASHERS ON BOTH ENDS, AND COTTER PINS PROPERLY INSTALLED AND BENT OVER TO LOCK CLEVIS PINS. COMPLETELY TIGHTEN ALL THREADED FASTENERS. CHECK AND TIGHTEN TURNBUCKLE LOCKING NUTS AGAINST TURNBUCKLE BODIES IF REQUIRED.

NOTE: GUIDE RAILS ARE OMITTED FROM PHOTOS FOR CLARITY.

| REVISIONS | | CANTON ELEVATOR | |
|-----------|--------|-----------------|--------|
| DATE | BY | DATE | BY |
| 2-4-00 | Br DMB | XXX | |
| 3-30-00 | Br DMB | .25 | |
| 8-15-00 | Br DMB | 1-10B | |
| 3-2-05 | Br DMB | SCALE | NONE |
| | | JOB # | XXXXXX |

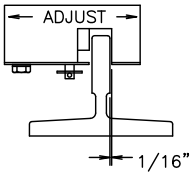
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SWITCH IS SHOWN HERE IN THE NORMAL OPERATING POSITION (CAR RUNNING). ADJUST SWITCH AND BRACKET LOCATION AS NEEDED SO THAT SWITCH LEVER HOLDS SWITCH ARM AS SHOWN FOR NORMAL OPERATION. SWITCH SHOULD BE WIRED IN SERIES WITH THE SAFETY CIRCUIT USING NORMALLY OPEN (HELD CLOSED) CONTACT. SEE WIRING PRINTS.



WHEN SAFETIES ACTIVATE DUE TO SLACK ROPE OR GOVERNOR OVERSPEED THE SAFETY LINKAGE PULLS THE SWITCH LEVER DOWN RELEASING THE SWITCH ARM. THIS OPENS THE SAFETY CIRCUIT. THE SAFETY LINKAGE IS DESIGNED TO RELEASE THE SAFETIES UPON UPWARD MOVEMENT OF THE CAR, BUT THE SWITCH MUST BE MANUALLY RESET BY LIFTING THE SWITCH LEVER AND RE-ENGAGING THE SWITCH ARM IN THE SWITCH LEVER NOTCH.



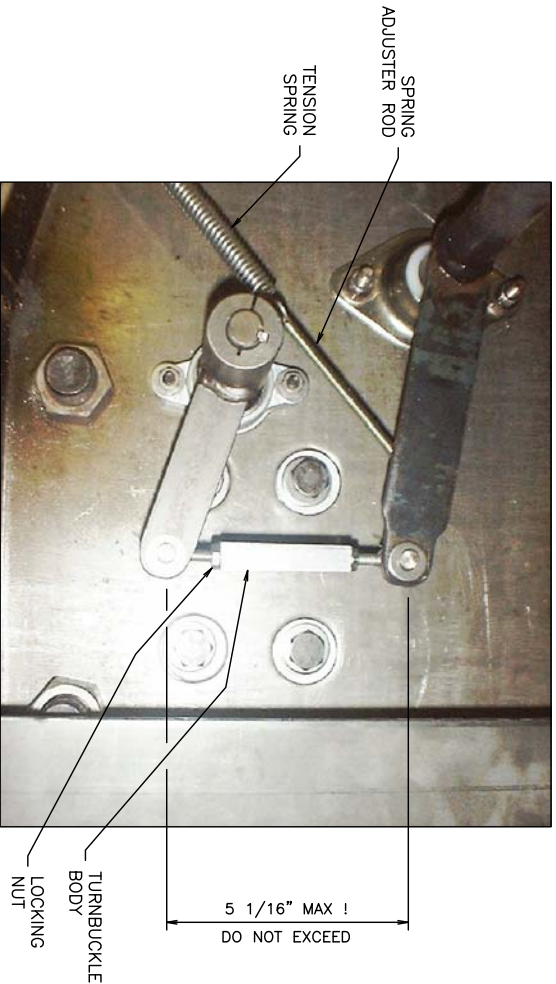
THE TWO TENSION SPRINGS WHICH HOLD THE SAFETY LINKAGE IN THE UNSET POSITION ARE CRITICALLY IMPORTANT FOR PROPER OPERATION OF THE SAFETIES. THE FORCE WHICH THESE SPRINGS EXERT IS ADJUSTABLE, BUT EACH ITEM BELOW MUST BE CONSIDERED BEFORE ADJUSTING THE SPRINGS. IF THE SPRINGS DO NOT RETURN THE SAFETY LINKAGE TO THE UNSET POSITION, FIRST CHECK FOR ANY BINDING OR RESTRICTION IN THE OPERATION OF THE SAFETY SYSTEM. DO NOT ALTER THE SPRINGS OR SUBSTITUTE OTHER SPRINGS - CONTACT THE FACTORY FOR NEW SPRINGS.

THE SPRINGS ARE FACTORY SET AT 5 7/16" LONG END TO END FOR SKEWED GOVERNORS LOCATED BETWEEN THE BUFFERS AND AT 5 3/4" LONG FOR GOVERNORS LOCATED BEHIND THE BUFFERS. IF A SPRING IS OVER STRETCHED IT MAY NOT ADEQUATELY RESTRAIN THE SAFETY LINKAGE AND THE SAFETIES MAY INADVERTENTLY SET. IF THE SPRING IS STRETCHED TO 6 1/2" OR MORE, PERMANENT DEFORMATION MAY OCCUR. INSPECT A SPRING FOR DEFORMATION BY REMOVING ADJUSTING NUT ON THREADED ROD. THE FREE SPRING LENGTH SHOULD BE 4 1/8" AND NO LIGHT SHOULD SHOW BETWEEN THE COILS.

IF THE SAFETIES SET INADVERTENTLY DURING "NORMAL" OPERATION OF THE ELEVATOR:

- MAKE SURE THAT ALL UP AND DOWN SPEED TRANSITIONS AND STOPS ARE GRADUAL AND NOT ABRUPT. MODERATELY "HARD" STOPS, SLOW DOWNS, AND ACCELERATIONS CAN CAUSE EVEN PROPERLY ADJUSTED SAFETIES TO ACTIVATE WHEN NOT DESIRED.
- MAKE SURE THAT KNURLED SAFETY ROLLERS IN SAFETY BLOCKS BELOW GUIDES ARE NOT CLOSE TO OR "DRAGGING" ON THE GUIDE RAIL AT ANY POINT OF THE CAR TRAVEL. ACCURACY OF RAIL INSTALLATION IS CRITICAL. ADJUST SAFETY BLOCKS IN SLOTS OF SLING FOR PROPER CLEARANCE PER "LOWER SLING AND STILE FIELD INSTALLATION" DRAWING OF THIS PACKAGE.
- CHECK CAR ROPE SHACKLE ROD ENDS FOR CLEARANCE TO TRIGGER PAN. IF SHACKLE RODS ARE TOO CLOSE TO PAN, THEY MAY ACTIVATE SAFETIES. IF THE SHACKLES "BOUNCE" SHACKLE ROD ENDS SHOULD BE 1/2" TO 1" FROM TRIGGER PAN WHEN SAFETIES ARE UNSET.

IF THE TENSION OF THE SPRINGS MUST BE ADJUSTED, MAKE SMALL CHANGES AND EVALUATE PERFORMANCE. DO NOT OVER-TIGHTEN SPRINGS OR THE SAFETIES MAY NOT ACTIVATE WHEN THE GOVERNOR ACTIVATES. TRY THREE TURNS OF ADJUSTING NUTS FIRST. AFTER EACH ADJUSTMENT OF SPRING TENSION, VERIFY PROPER OPERATION OF THE SAFETIES BY RUNNING THE CAR DOWN AT INSPECTION SPEED AND HAND TRIPPING THE GOVERNOR. IF THE GOVERNOR ROPE PULLS THROUGH OR SLIDES WITHOUT SETTING THE SAFETIES THE SPRINGS ARE TOO TIGHT AND THE SAFETIES WILL NOT OPERATE WHEN REQUIRED TO STOP AN OVERSPEEDING CONDITION.



ADJUST EITHER TURNBUCKLE IF REQUIRED TO EQUALIZE THE TWO SAFETIES (IF ONE SAFETY SETS BEFORE THE OTHER). IF POSSIBLE, SHORTEN A TURNBUCKLE TO ACHIEVE THE REQUIRED ADJUSTMENT. IF A TURNBUCKLE MUST BE LENGTHENED MAKE SURE THAT MAXIMUM CENTER TO CENTER LENGTH SHOWN HERE IS NOT EXCEEDED. AFTER ADJUSTMENT IS COMPLETE, TIGHTEN THE LOCKING NUTS AGAINST THE TURNBUCKLE BODY.

| REVISIONS | | CANTON ELEVATOR | |
|-----------|-----|-----------------|--------------|
| DATE | BY | WEIGHT | DATE |
| 08-2-3-00 | DMB | NA | XXX |
| DATE | BY | TIME | DWG |
| 9-19-02 | DMB | NA | XXX |
| DATE | BY | STUDY | DWG # |
| | | 1-JOB | SLS.003 |
| DATE | BY | SCALE | NONE |
| | | | JOB # XXXXXX |

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