

# LOAD DIVIDER EQUIPPED CARS

## GENERAL INFORMATION

CARS EQUIPPED WITH LOAD DIVIDERS HAVE BEEN TESTED AND APPROVED FOR THE LOADING OF AMMUNITION ITEMS, SUBJECT TO PROVISIONS OF THE FOLLOWING NOTES AND ILLUSTRATIONS. (DETAILED LOADING METHODS FOR SELECTED AMMUNITION ITEMS ARE CONTAINED WITHIN THIS PAMPHLET).

CARS EQUIPPED WITH LOAD DIVIDERS MUST NOT BE USED FOR SHIPMENTS OF SO-CALLED BULK EXPLOSIVES (SEE NOTE 6 ON THE FOLLOWING PAGE).

SEE NOTE 2 BELOW FOR THOSE MANUFACTURERS WHOSE LOAD DIVIDER BULKHEADS HAVE BEEN TESTED AND APPROVED.

LOAD DIVIDER CARS FOR LOADING OF AMMUNITION ITEMS MUST BE CUSHIONED WITH UNDER CAR OR END-OF-CAR CUSHIONING HAVING AT LEAST 15" OF TRAVEL (SEE NOTE 1 BELOW).

THOSE LOAD DIVIDER EQUIPPED CARS HAVING DRAIN HOLES MUST HAVE SAID DRAINS PLUGGED WITH A NON-FLAMMABLE MATERIAL PRIOR TO BEING SELECTED FOR LOADING WITH EXPLOSIVE AMMUNITION ITEMS.

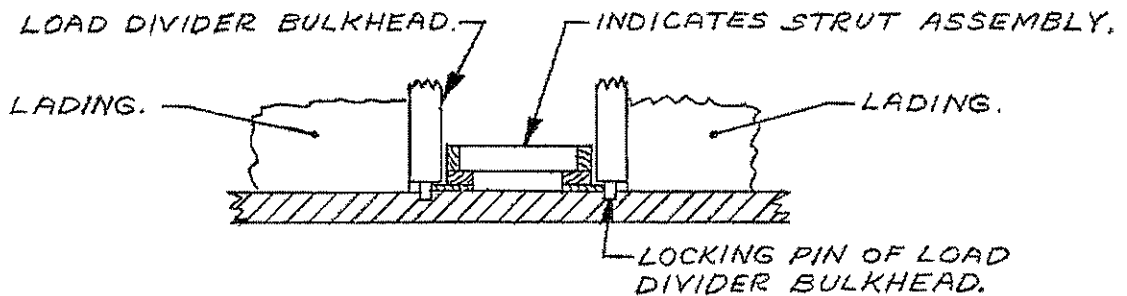
IN ADDITION TO PROVISIONS OF THE DEPARTMENT OF TRANSPORTATION REGULATIONS COVERING INSPECTION AND CERTIFICATION OF CARS FOR CLASS "A" EXPLOSIVES, THE BULKHEADS, LOCKING MECHANISM AND LOCKING PINS OF LOAD DIVIDER EQUIPPED CARS MUST BE CAREFULLY INSPECTED PRIOR TO BEING CERTIFIED FOR CLASS "A" OR SELECTED FOR CLASS "B" AND "C", EXPLOSIVE AMMUNITION LOADING

## LOAD DIVIDER NOTES

1. CARS THAT ARE EQUIPPED WITH LOAD DIVIDERS MUST BE CUSHIONED. ONLY CUSHIONED CARS THAT HAVE SLIDING CENTER SILL TYPE CUSHIONING DEVICES OR END-OF-CAR TYPE DEVICES WHICH HAVE AT LEAST 15" OF TRAVEL ARE ACCEPTABLE.
2. ONLY CARS EQUIPPED WITH LOAD DIVIDERS MANUFACTURED BY EVANS EQUIPCO, OR PRECO MAY BE USED. LOAD DIVIDERS MANUFACTURED BY TRANSICO ARE NOT ACCEPTABLE, WHETHER OF ALUMINUM OR STEEL CONSTRUCTION.
3. BOX CARS EQUIPPED WITH ADJUSTABLE SIDE FILLERS THAT HAVE 3/8" OR THICKER PANELS MAY BE USED. HOWEVER THESE SIDE FILLERS MUST NOT BE USED FOR LATERAL BLOCKING; THEY MUST BE RETRACTED AND LOCKED AGAINST THE SIDEWALL. A "FILL PIECE" MUST BE INSTALLED IN THE VOID BETWEEN THE CAR WALL AND THE SIDE FILLER PANEL. SEE THE "TYPICAL TYPE A" VIEW ON PAGE 26 FOR GUIDANCE. IF THE BACK OF THE SIDE FILLER PANELS ARE REINFORCED WITH VERTICAL AND HORIZONTAL STEEL MEMBERS AS SHOWN IN THE "TYPICAL TYPE B" VIEW ON PAGE 26, THE "FILL PIECE" MATERIAL IS NOT REQUIRED.
4. AFTER THE LOAD DIVIDER BULKHEADS IN A LOAD-DIVIDER-EQUIPPED CAR ARE POSITIONED AGAINST THE LADING AND THE LOCKING PINS ARE ENGAGED IN THE HOLES OF THE RAILS, THE LOWER LOCKING PINS MUST BE INSPECTED TO ENSURE THAT THE PINS ARE FULLY ENGAGED IN THE LOCKING HOLES. IF THE PINS ARE NOT FULLY SEATED IN THE HOLES, THE LINKAGE MECHANISM WILL BE ADJUSTED AS REQUIRED SO THAT THE PINS WILL BE FULLY SEATED INTO THE LOCKING HOLES OF THE LOWER RAILS. IF PRESENT, DEBRIS MUST BE REMOVED FROM BENEATH THE LOCKING HOLES SELECTED FOR SECURING A DIVIDER.
5. A "STRUT ASSEMBLY" MUST BE INSTALLED BETWEEN THE LOAD DIVIDER BULKHEADS IF THE LOAD IN EITHER END OF A CAR CONSISTS OF 50,000 POUNDS OR MORE OF CLASS "A" OR CLASS "B" EXPLOSIVES. SEE THE DETAILS ON PAGE 24.

## LOAD DIVIDER NOTES (CONTINUED)

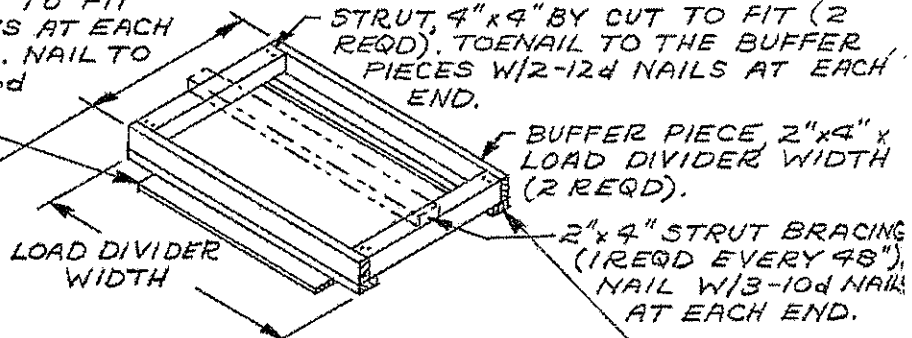
6. CAUTION: CARS EQUIPPED WITH LOAD DIVIDER BULKHEADS MUST NOT BE USED FOR SHIPMENT OF EXPLOSIVES SUCH AS DYNAMITE, TNT, BLACK POWDER, SMOKELESS POWDER (PROPELLANT EXPLOSIVES), TETRYL AND SIMILAR EXPLOSIVES (EXCEPT AS A COMPONENT PART OF AMMUNITION OR PROPELLING CHARGES) WHICH ARE LIABLE TO SIFT OR BECOME LODGED IN THE MECHANISM OF THE LOADING AND BRACING DEVICE IN THE EVENT OF A CONTAINER FAILURE.
7. CAUTION: THE TOTAL WEIGHT OF A LOAD IN A CAR MUST NOT EXCEED THE LOAD LIMIT WHICH IS STENCILED ON THE SIDE OF THE CAR. ALSO, THE LOAD WEIGHT ON ONE TRUCK MUST NOT EXCEED ONE-HALF OF THE STENCILED LOAD LIMIT.
8. IN THE EVENT THAT A "STRUT ASSEMBLY IS OF SUCH A LENGTH THAT THE 4" x 4" STRUTS OF THE ASSEMBLY ARE LONGER THAN 12'-0", A SPECIAL HOLD DOWN ASSEMBLY MUST BE USED. SEE THE "STRUT ASSEMBLY HOLD DOWN" DETAIL ON PAGE 25 FOR GUIDANCE.
9. THE NORMAL LOADING PATTERN IN CARS EQUIPPED WITH LOAD DIVIDER BULKHEADS IS TO POSITION THE LADING BETWEEN THE CAR END WALL AND A LOAD DIVIDER BULKHEAD IN FULL LAYERS. OBVIOUSLY, A LOAD QUANTITY MUST THEN BE A MULTIPLE OF THE NUMBER OF CONTAINERS (PALLET, ETC) WHICH ARE IN ONE LOAD UNIT. A LOAD UNIT IS DEFINED AS A STACK OF CONTAINERS WHICH IS FULL CAR WIDTH BY FULL LOAD HEIGHT BY ONE CONTAINER IN LENGTH. IF THE QUANTITY TO BE SHIPPED CANNOT BE ATTAINED BY ADJUSTING THE NUMBER OF LAYERS IN ONE OR BOTH ENDS OF A CAR, OR BY ADJUSTING THE NUMBER OF LOAD UNITS IN EITHER END OF THE CAR, ONE OF THE FOLLOWING PROCEDURES MUST BE USED IN ORDER TO OBTAIN THE DESIRED QUANTITY.
  - A. FOR LOADS OF SMALL BOXES, RISER ASSEMBLIES CAN BE USED. THE LOCATION AND/OR QUANTITY OF RISERS CAN BE ADJUSTED TO INCREASE OR DECREASE A LOAD QUANTITY.
  - B. FOR LOADS OF WOODEN, METAL, OR PLASTIC CONTAINERS, ONE OR MORE FILLER ASSEMBLIES CAN BE INSTALLED TO ADJUST A LOAD QUANTITY DOWNWARD BY OTHER THAN A MULTIPLE OF A LOAD UNIT. CONSTRUCT A FILLER ASSEMBLY TO EQUAL THE SIZE AND STRENGTH OF THE CONTAINER.
  - C. FOR LOADS OF PALLETIZED UNITS OR SKIDDED UNITS, A "GATES AND STRUTS" METHOD OF OMITTING A UNIT MAY BE USED TO ADJUST A LOAD QUANTITY DOWNWARD BY OTHER THAN A MULTIPLE OF A LOAD UNIT.
  - D. A K-BRACE MAY BE USED TO BRACE A PARTIAL LAYER IF THE CAR IS NOT EQUIPPED WITH ADJUSTABLE SIDE FILLERS AND HAS AVAILABLE SIDEWALLS.
  - E. A LOAD CAN CONTINUE TOWARD THE CENTER OF A CAR FROM THE INSTALLED LOAD DIVIDER BULKHEADS, AND THEN BE BLOCKED AND BRACED WITH CENTER GATES AND STRUTS AS IN A CONVENTIONAL CAR LOAD.
  - F. A SINGLE UNIT OR TWO CAN BE PLACED AGAINST THE CENTER-OF-CAR SIDE OF A LOAD DIVIDER BULKHEAD AND BLOCKED WITH LCL BRACES.
10. NOTE: IF AN INDIVIDUAL CONTAINER, OR THE END OF A CONTAINER IN A PALLET UNIT IS LESS THAN 18" IN WIDTH, A LUMBER-CONSTRUCTED OR A PLYWOOD-AND-LUMBER CONSTRUCTED SEPARATOR GATE MUST BE INSTALLED BETWEEN THE LADING AND A LOAD DIVIDER BULKHEAD.



**INSTALLATION OF STRUT ASSEMBLY**

THIS VIEW SHOWS THE STRUT ASSEMBLY INSTALLED BETWEEN THE LOAD DIVIDER BULKHEADS. NOTE THE SPACE ( $\frac{1}{2}$ " TO  $\frac{3}{4}$ " TOTAL) INTENTIONALLY PROVIDED BETWEEN THE ASSEMBLY AND THE BULKHEADS.

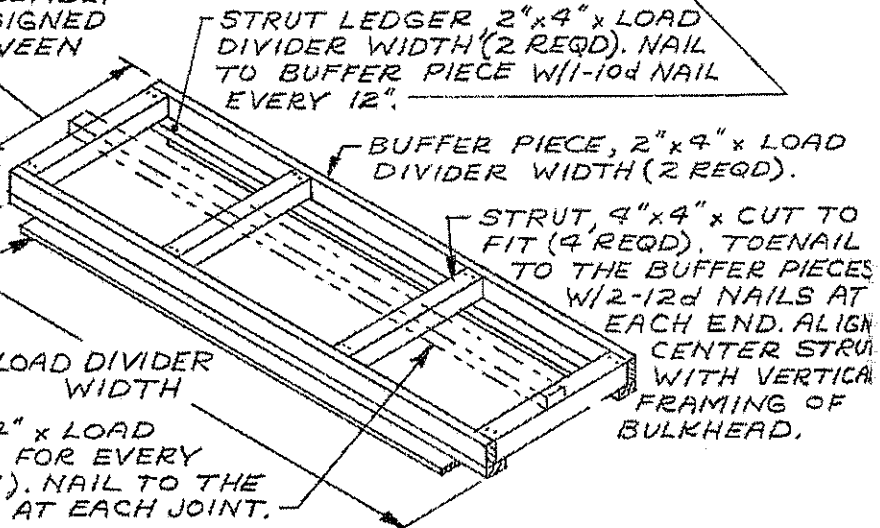
HOLD DOWN, 1"x8" x CUT TO FIT BETWEEN LOCKING PINS AT EACH SIDE OF LOAD DIVIDER. NAIL TO STRUT LEDGER W/1-6d NAIL EVERY 8".



**STRUT ASSEMBLY FOR 2-PIECE BULKHEADS**

FABRICATE TO FIT BETWEEN LOAD DIVIDERS MINUS  $\frac{1}{2}$ " TO  $\frac{3}{4}$ ". CAUTION: THE ASSEMBLY IS INTENTIONALLY DESIGNED FOR A LOOSE FIT BETWEEN THE LOAD DIVIDERS.

HOLD DOWN, 1"x8" x CUT TO FIT BETWEEN LOCKING PINS AT EACH SIDE OF LOAD DIVIDER. NAIL TO STRUT LEDGER W/1-6d NAIL EVERY 8".



**STRUT ASSEMBLY FOR 1-PIECE BULKHEADS**

NOTE: A STRUT ASSEMBLY IS REQUIRED WHEN A LOAD OF CLASS A OR CLASS B EXPLOSIVES BEHIND EITHER LOAD DIVIDER BULKHEAD EXCEEDS 50,000 POUNDS, IF A STRUT ASSEMBLY IS LONGER THAN 12'-0", THE ASSEMBLY MUST BE HELD DOWN IN THE CENTER. SEE THE DETAILS ON PAGE 25.

DOOR SPANNER PIECE, 2"x 6" x DOOR OPENING WIDTH PLUS 24" (2 REQD). NAIL TO CAR DOOR POST/SIDEWALL OR TO A NAILING STRIP W/5-12d NAILS AT EACH END.  
 NOTE: PRIOR TO NAILING THESE PIECES IN PLACE, THE STRUTS OF THE ASSEMBLY ARE TO BE PRESSED DOWNWARD UNTIL THE FILLER PIECES ARE TOUCHING OR ALMOST TOUCHING THE FLOOR OF THE CAR.

HOLD-DOWN PIECE, 2"x 6" BY CAR WIDTH (CUT TO FIT IF CAR HAS PLUG DOORS, OR CAR WIDTH PLUS 4" IF CONVENTIONAL SLIDING DOORS) (2 REQD). NAIL TO SPACER PIECES AND TOENAIL TO STRUTS W/2-12d NAILS AT EACH JOINT.

HOLD-DOWN CLEAT, 2"x 6" x 18" (4 REQD). NAIL TO CAR DOOR POST/SIDEWALL OR TO A NAILING STRIP W/5-12d NAILS.

SPACER PIECE, 2"x 4" x 72" (4 REQD). POSITION ON EDGE IN CENTER OF DOORWAY AREA AND TOENAIL TO A STRUT W/3-12d NAILS ON EACH SIDE.

LOAD DIVIDER BULKHEAD.

BRACE PIECE, 4"x 4" x 18" (8 REQD). TOENAIL TO A STRUT W/3-12d NAILS ON EACH SIDE.

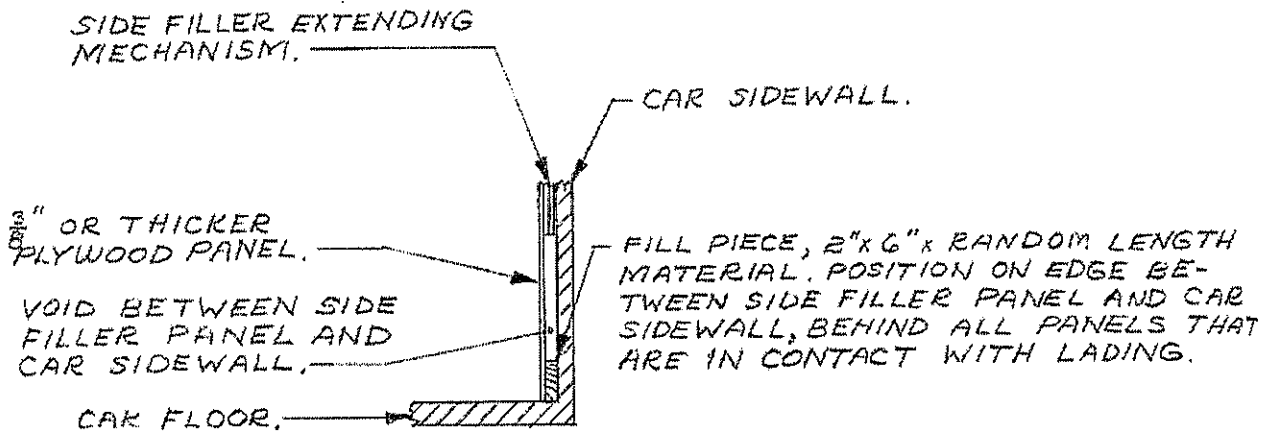
DOORWAY OPENING.

FILLER PIECE, 2"x 4" x 96" (4 REQD). POSITION TO BE CENTERED IN DOORWAY AREA AND NAIL TO BOTTOM SURFACE OF STRUT W/4-10d NAILS.

STRUT ASSEMBLY.

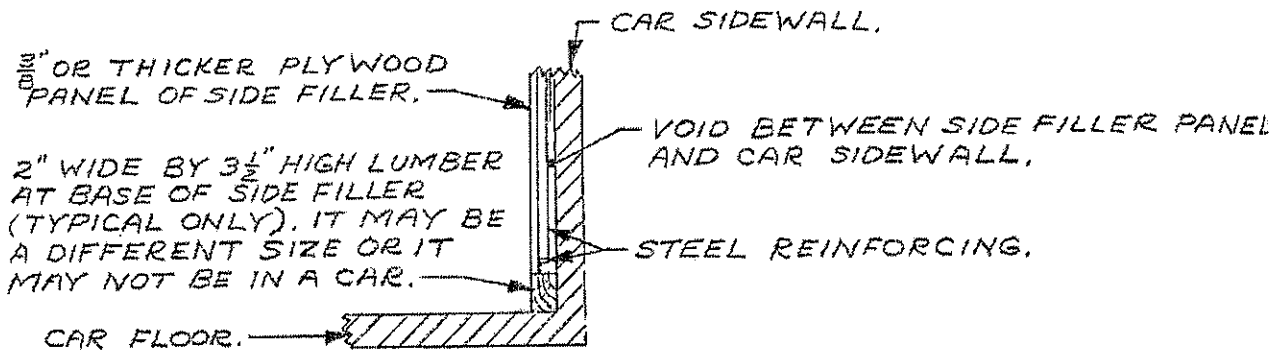
### STRUT ASSEMBLY HOLD DOWN

THIS VIEW DEPICTS THE HOLD-DOWN BLOCKING WHICH IS REQUIRED WHEN THE STRUTS OF THE "STRUT ASSEMBLY" USED IN A LOAD DIVIDER CAR ARE LONGER THAN 12'-0". NOTE THAT THE SPECIAL STRUT HOLD DOWN AND THE STRUT ASSEMBLY ARE ONLY REQUIRED IF THE LOAD BEHIND EITHER BULKHEAD IS MORE THAN 50,000 POUNDS.



### TYPICAL TYPE A

THIS VIEW SHOWS THE INSTALLATION OF A "FILL PIECE" IN A CAR EQUIPPED WITH A STANDARD ADJUSTABLE SIDE FILLER.



### TYPICAL TYPE B

THIS VIEW SHOWS A TYPICAL SECTION OF A CAR EQUIPPED WITH HEAVY DUTY, STEEL REINFORCED, ADJUSTABLE SIDE FILLERS. A "FILL PIECE", AS SHOWN IN "TYPICAL TYPE A" DETAIL ABOVE, IS NOT REQUIRED IN CARS SO EQUIPPED.

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