

AN INTERCHANGABLE LIFT LID SYSTEM

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Yale Repertory Theatre's 2004 production of *The Intelligent Design of Jenny Chow* required a lift with interchangeable lids to present a variety of locations from a single lift bed. The lift lids needed to be able to be changed quickly and quietly while still leaving a path in the trap room for the performers to get on and off the lift. Additionally, the tight confines of the trap room necessitated components that would store and move easily. Our solution was a simple self-aligning tracking system that allowed interchangeable lids to be transferred from the lift bed to their storage carts.

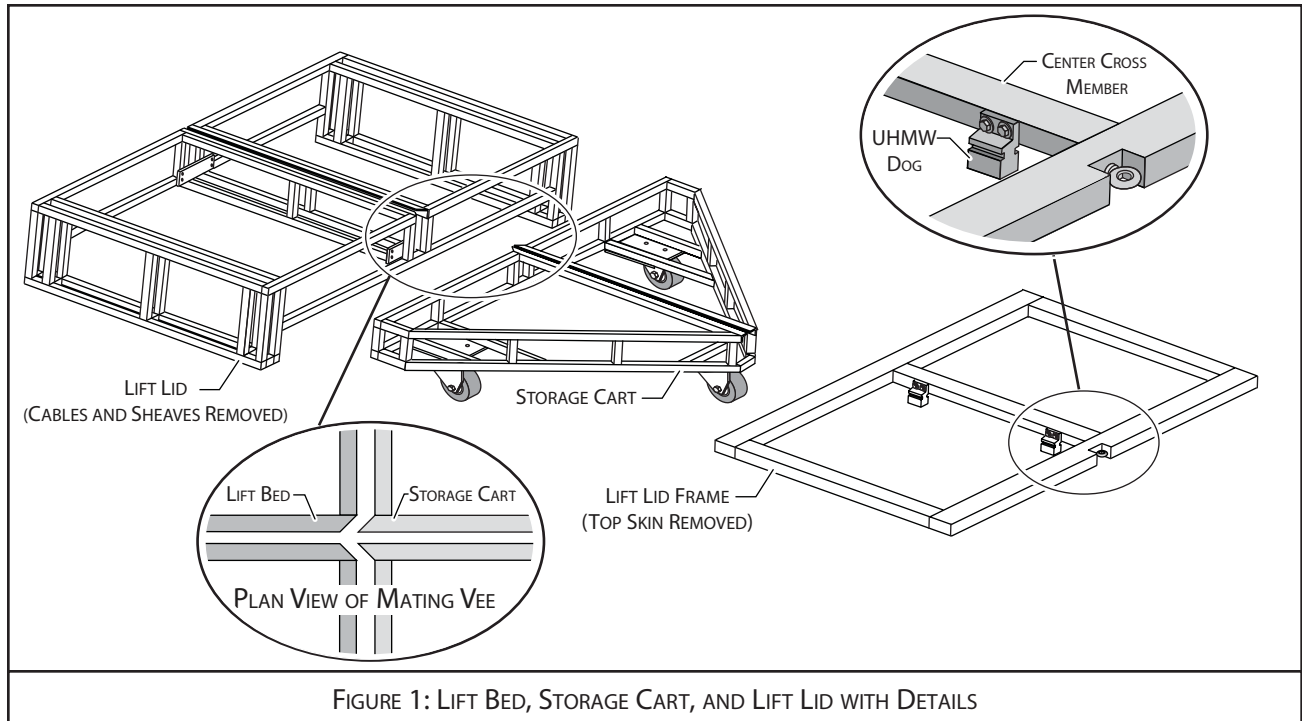


FIGURE 1: LIFT BED, STORAGE CART, AND LIFT LID WITH DETAILS

LIFT LIDS AND DOGS

The lift lids were 2x4 flat frames covered with plywood. The center cross member was offset to allow the UHMW dogs (upper detail in Figure 1) to track on center. At the back of each lid was a notch for an eye lag used to pull the lids from the lift bed onto the storage cart with a hooked pull stick.

The dogs were machined from blocks of UHMW (See Tech Brief on A Quiet Glide and Unistrut Traveler System for construction details). The dogs were then lagged to the offset center cross member.

STORAGE CARTS AND LIFT BED

The carts were built out of 1" box tube in the shape of a triangle and three swivel castors, which allowed the carts to be maneuverable in the confines of the trap room. The track was made up of two pieces of angle iron with the legs facing each other spaced apart to accept the slotted dogs. The ends of the angle iron track on the lift bed and on the storage carts were cut in a mating vee shape (lower detail in Figure 1). The mating vee shape allowed the lift bed and the storage cart to self-align when pushed into place. Both ends were ground to make a smooth transition for the dog from the cart to the bed and back.

To make the transition from one lid to another, a stagehand would align the storage cart, foot the back center wheel, and use the pull stick hooked into the lift lid to move the lid straight and evenly onto the storage cart.

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