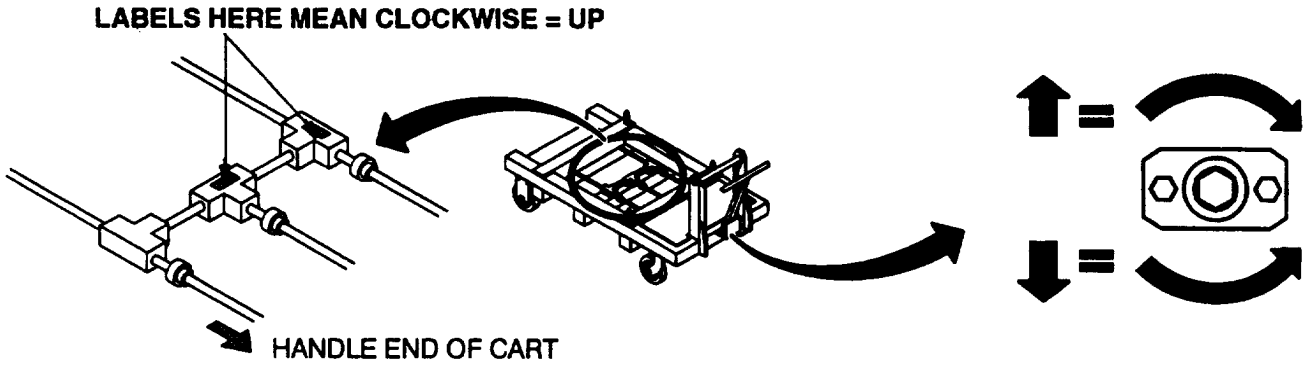
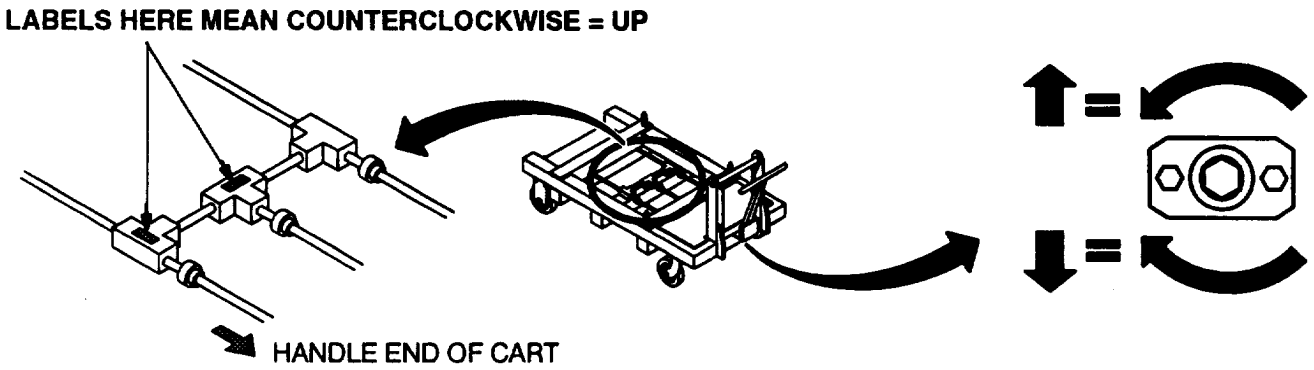
USING THE SIGNA HORIZON EPOXY-FILLED GRADIENT COIL CRADLE/CART

Since this Service Note was initially issued, a change was made in the design of the cart, specifically regarding the Lift Assembly Height Adjuster. The original Service Note said that the adjuster is turned counterclockwise to raise the cradle. This is still true on some carts; most, however, have been changed to the reverse: turn clockwise to raise the cradle. As of now, fewer than ten carts still require a counterclockwise direction to raise. As carts come back for modification, the screw shaft direction will be changed. This discrepancy will be cleared up in the next few months, and all carts will require clockwise turns to raise the cradle.

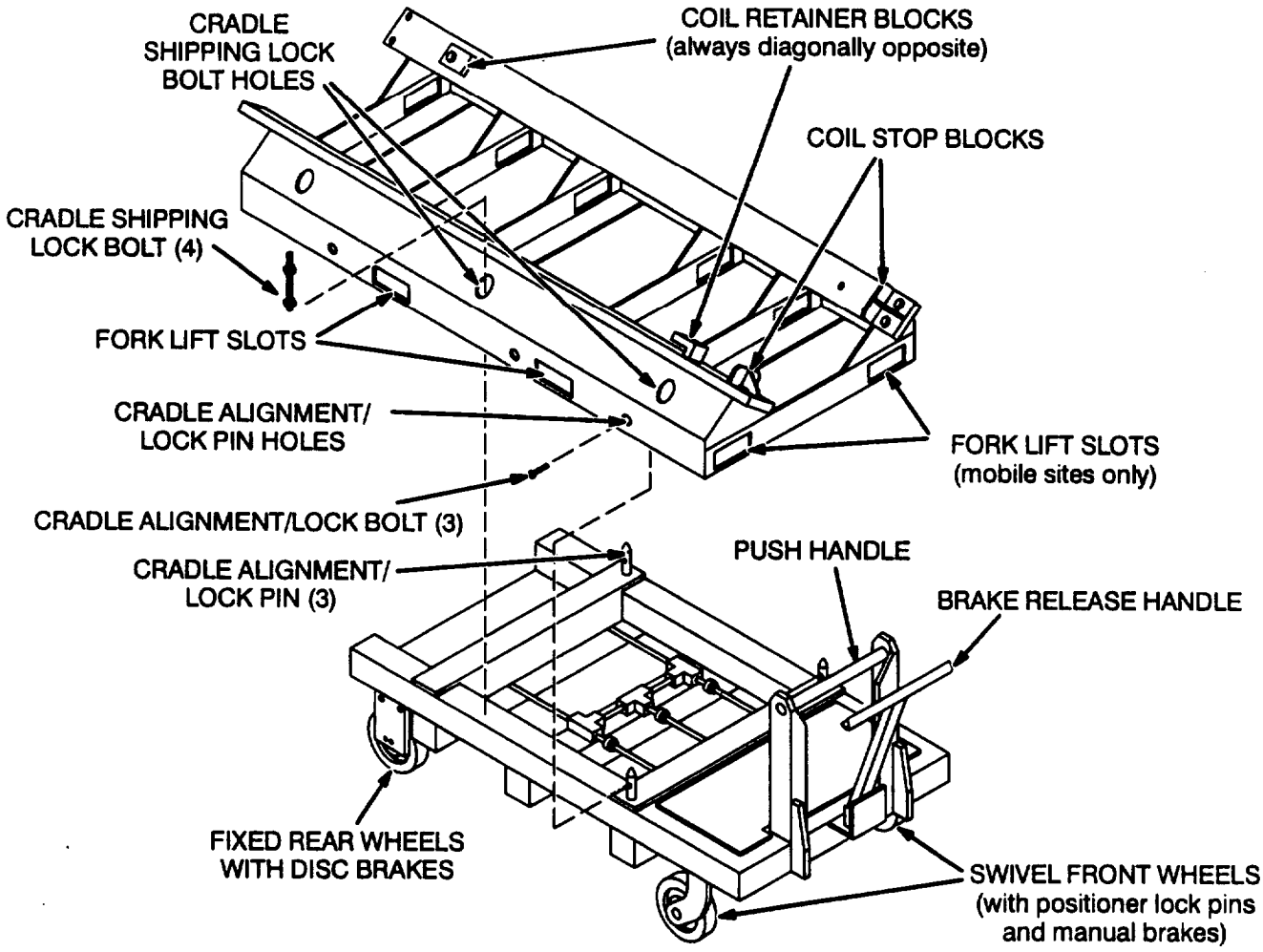
You can tell which direction to turn the adjuster by looking at the cart from the handle end. The locations of the labels on the three gear boxes (see illustrations below) tell you which way to turn the height adjuster. Should your cart have a coil on it, look through the fork slift slots on the side of the cart to view the label positions.





Purpose

The Epoxy-filled Gradient Coil Cradle and Cart are used to install and remove the Epoxy-filled Gradient Coil at the magnet. The components are called out in Illustration 1; look them over carefully. The combination of the coil, cradle, and cart weighs about 3300 pounds and requires a minimum of four people to move; therefore, follow the steps in this service note to avoid damaging the equipment, and for the safety of those using that equipment.



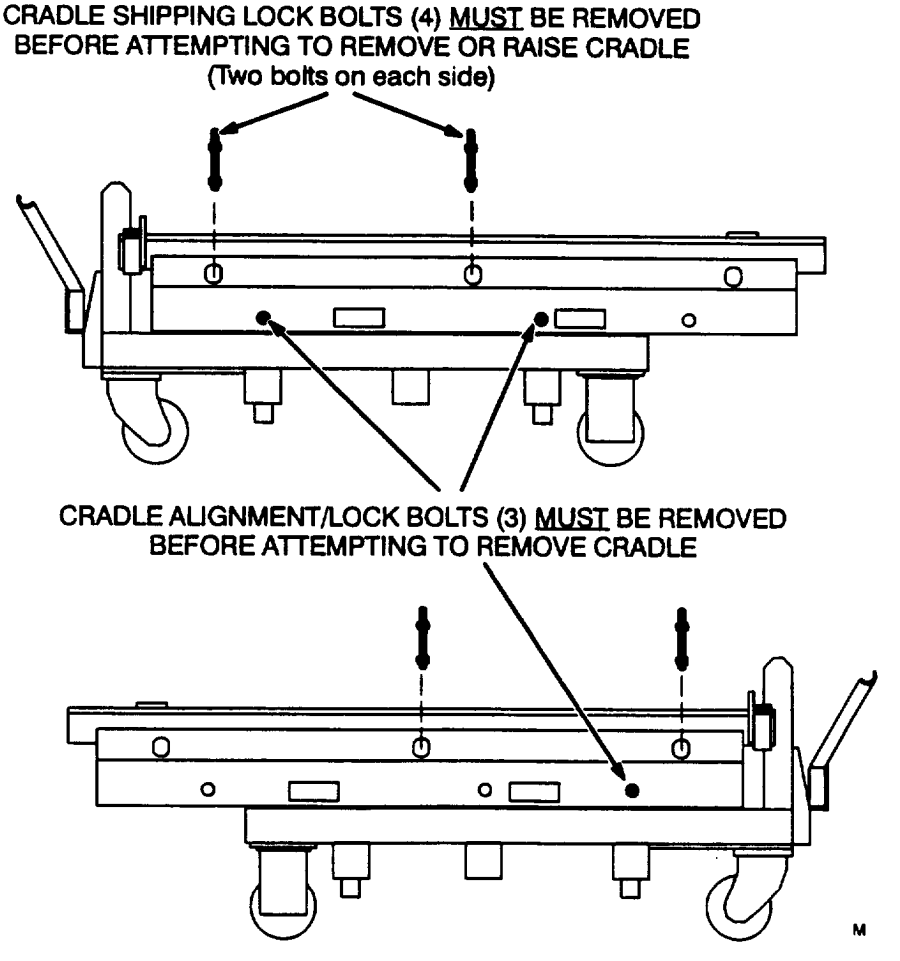
EPOXY-FILLED GRADIENT COIL CRADLE/CART COMPONENTS
ILLUSTRATION 1

Loading an Epoxy-filled Gradient Coil and Cradle onto the Cart

This process assumes that there is a cart with an empty cradle standing by. The objective is to remove the empty cradle from the cart, and to install a cradle with a coil onto the cart.

1. Remove the four Cradle Shipping Lock Bolts from the cart. They belong with the cart; do not misplace them. See Illustration 2. This must be done before the Lift Assembly can be used to raise the cradle.

2. Remove the three Cradle Alignment/Lock Bolts (these hold the cradle on the cart), and set aside (see Illustration 2).



EPOXY-FILLED GRADIENT COIL CRADLE/CART - SIDE VIEWS
ILLUSTRATION 2

3. Have a fork lift truck remove the spare cradle (which weighs about 225 pounds) and set aside.

4. Have the fork lift raise the replacement coil and cradle combination.

5. Position the cart beneath the raised cradle so that the Cradle/Alignment Lock Pins are aligned with their holes in the cradle.

> **Note:** The Brake Release Handle controls the disc brakes on the fixed rear wheels. It must be pushed against the Push Handle in order to move the cart.

6. Lower the replacement coil/cradle onto the cart, and insert the three Cradle Alignment/Lock Bolts (see illustration 2).

> **Note:** Replacement Epoxy-filled Gradient Coils are shipped with the gradient leads at the end of the cradle away from the handle, and with the Coil Stop Blocks located at the handle end (see Illustration 1). This is the proper position for loading the coil into the front of the magnet at fixed sites.

> **Note:** For replacing an Epoxy-filled Gradient Coil in a mobile site (through the rear of the magnet), the cradle must be placed on the cart with the gradient leads toward the handle end of the cart. Then the Coil Stop Blocks must be moved to the far end of the cradle.

Avoid possible bodily injury. The combined coil/cradle/cart weigh about 3300 pounds. To avoid physical injury, and to control this amount of weight as it moves, a minimum of four people must be used.

Loading the Epoxy-filled Gradient Coil into the Magnet

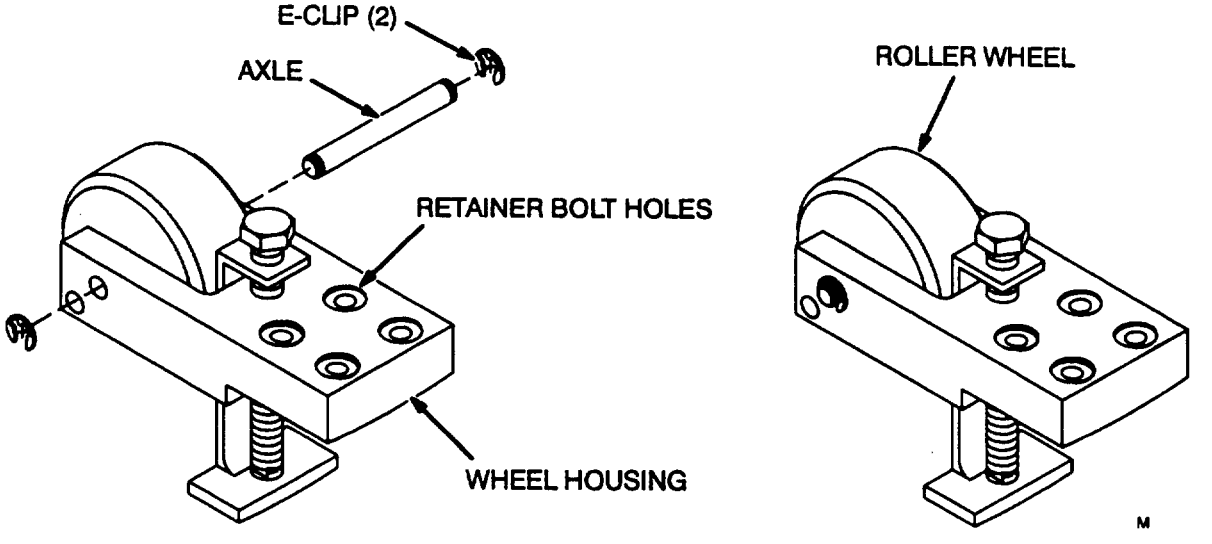
The following may or may not be a continuation of the preceding section. It outlines the necessary steps to place the Epoxy-filled Gradient Coil into the magnet.

1. Remove the four Cradle Shipping Lock Bolts from the cart (if this has not already been done). They belong with the cart; do not misplace them.

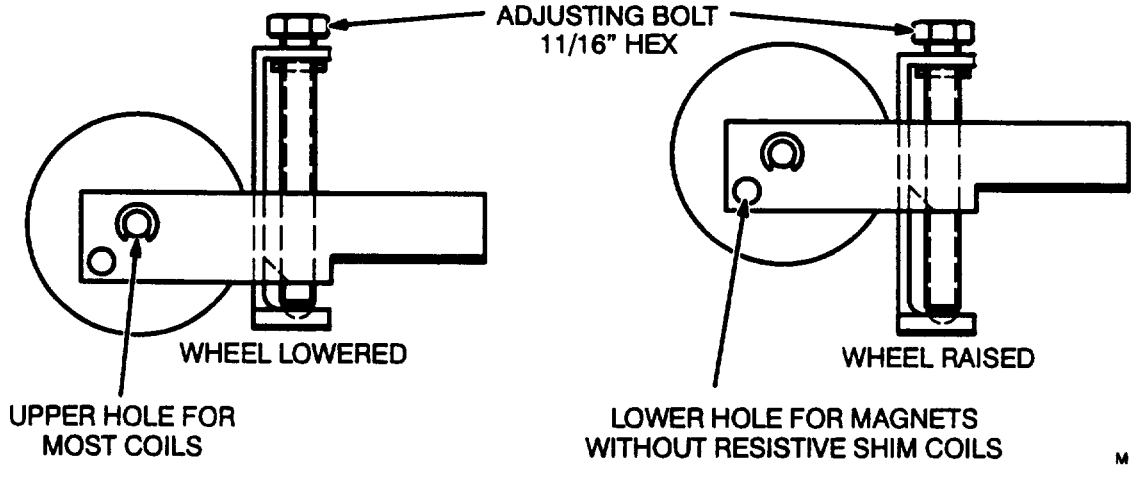
2. Remove the two Coil Retainer Blocks (they attach the coil to the cradle during shipment).

3. Mount the four Roller Wheel Assemblies to the coil, two at each end. Using Illustrations 3 and 4 for reference, mount each roller as follows:
   a. Back the long adjusting bolt all the way out by turning it counterclockwise.

b. Using a standard screwdriver, remove one of the e–clips that holds the wheel and axle in place; remove wheel and axle.
c. Place the Wheel Housing in position over the four threaded holes on the coil, install the four retainer bolts and tighten, turning clockwise. Install all four housings in this manner.
d. Turn the adjusting bolt clockwise on all four Roller Wheel Assemblies to raise the coil to the point that the wheels and axles can be installed.
e. Install the four wheels and axles.



ROLLER WHEEL ASSEMBLY
ILLUSTRATION 3



ROLLER WHEEL POSITIONS
ILLUSTRATION 4

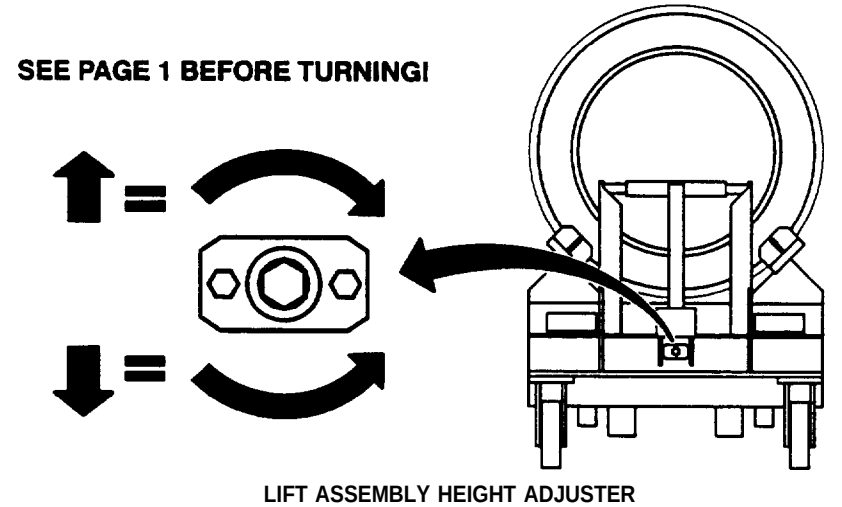
CAUTION

Personal injury and equipment damage possibility. Not having the cradle anchored to the cart could cause the coil/cradle to tip. The three Cradle Alignment/Lock Bolts MUST be in place before attempting to roll the coil into the magnet.

WARNING!

RISK OF BODILY INJURY OR EQUIPMENT DAMAGE! IF THE WHEELS ON THE ROLLER WHEEL ASSEMBLIES ARE LOWERED BEFORE THE CART IS IN POSITION AT THE MAGNET, IT IS POSSIBLE FOR THE COIL TO ROLL OFF THE CRADLE. TO AVOID THE RISK OF BODILY INJURY OR EQUIPMENT DAMAGE, DO NOT LOWER THE WHEELS UNTIL THE COIL IS IN POSITION FOR MOVEMENT INTO THE BORE.

4. Roll the cart into position for unloading the coil into the magnet.
5. Lower the wheels on the Roller Wheel Assemblies by turning the adjusting screws counterclockwise.
6. With a 19-mm socket on the Lift Assembly Height Adjuster, turn clockwise to raise the cradle even with the magnet bore (see Illustration 5). **Be sure to see page 1 before turning!**
7. Roll the coil into the magnet bore.
8. Turn Lift Assembly Height Adjuster counterclockwise to completely lower the Lift Assembly, and install the four Cradle Shipping Lock Bolts and the two Coil Retainer Blocks.
9. Remove Roller Wheel Assemblies from the coil and return them, and the various tools, to the accessory kit.



LIFT ASSEMBLY HEIGHT ADJUSTER
ILLUSTRATION 5