

## Cleaning Requirements

The game cabinet and display shield may be cleaned with any non-abrasive household cleaner. The coin mechanism should be cleaned periodically with hot or boiling water and a mild detergent. A toothbrush may be used to remove any stubborn build-up of residue in the coin path. After cleaning the coin mechanism, flush thoroughly with hot or boiling water and blow out all the water with compressed air. Compressed air is also recommended for cleaning dust from the interior of the cabinet.

## Opening the Control Panel

1. Unlock and open the coin door. Reach up through the opening to the top of the control panel and release the two spring-draw latches.
2. Close the coin door.
3. Lift the control panel at the top edge and tilt it toward you. The control panel has foam tape on it. Make sure the tape is in good condition.

## Pushbutton Leaf Switches

1. With the control panel open, adjust the leaf switch contacts for a narrow gap. When a pushbutton is depressed, the resulting wiping action of the cross-bar contacts provides a self-cleaning feature. *Don't burnish the contacts.* To clean them, use electrical contact cleaner.
2. To replace a leaf switch, remove the screw with a Phillips-head screwdriver.
3. To replace the switch pushbutton, turn the stamped nut with a wrench in a counterclockwise direction, as seen from the inside of the control panel. The ring on the outside of the control panel should not spin.
4. Reinstall the pushbutton switch. Reconnect the harness wires to the switch terminals.

## Lighted Midi Trak-Ball Assembly

Routine maintenance of the Midi Trak-Ball assembly consists primarily of inspecting the roller shafts for excessive wear and periodically lubricating the bearings.

### Removing the Midi Trak-Ball

1. Open the control panel as previously described and disconnect the wires from the Midi Trak-Ball lamp socket. Disconnect the harness at the six-pin connector.
2. Remove the four nuts and carriage bolts that secure the Midi Trak-Ball assembly to the control panel (see Figure 4-1).

### Disassembling the Midi Trak-Ball

To disassemble the Midi Trak-Ball after it has been removed from the control panel, remove the six screws that secure the upper and lower frames (see Figure 4-1). Lift off the upper frame. The Midi Trak-Ball can now be disassembled.

### Inspecting the Midi Trak-Ball

1. With the Midi Trak-Ball disassembled, inspect the roller shafts and the idler shaft for excessive wear (see Figure 4-2). If the wear band exceeds  $\frac{3}{8}$  inch, replace the roller shaft as described in steps 2–6 or replace the idler shaft as described in steps 7–10.
2. To replace a roller shaft, first remove the roller shaft from the lower frame.
3. Remove the metal encoding wheel by loosening the socket-head screw, flat washer, and split-lock washer. Remove the encoding wheel and bearings.
4. Remount the bearings and encoding wheel on a new roller shaft.
5. Tighten the encoding wheel by inserting a  $\frac{1}{8}$ -inch diameter pin or screwdriver through the hole in the shaft. Tighten the socket-head screw with an Allen wrench.
6. Reinstall the roller shaft in the lower frame.
7. To replace the idler shaft, first remove the idler shaft from the lower frame.
8. Remove the bearings from the ends of the idler shaft.
9. Remount the bearings on a new idler shaft.
10. Reinstall the idler shaft in the lower frame.

### Lubricating the Midi Trak-Ball

Lubrication of the Midi Trak-Ball assembly should be performed every three months or 6,000 credits (as counted on the coin counter). To lubricate, place two drops of a light-duty oil, such as 3-In-One oil, on each of the six ball bearings shown in Figure 4-1.

### Replacing the Coupler PCB

1. To remove the Coupler PCB, first disassemble the Midi Trak-Ball. Lift the PCB out of its slot. Carefully disconnect the red connector and remove the PCB.
2. To reinstall the Coupler PCB, place the PCB in the slot in the lower frame and reconnect the red connector.

#### NOTE

When you reinstall the Coupler PCB, make sure that the metal encoding wheel is not bent or damaged. Be sure the encoding wheel turns freely between the two halves of the radial optical coupler.

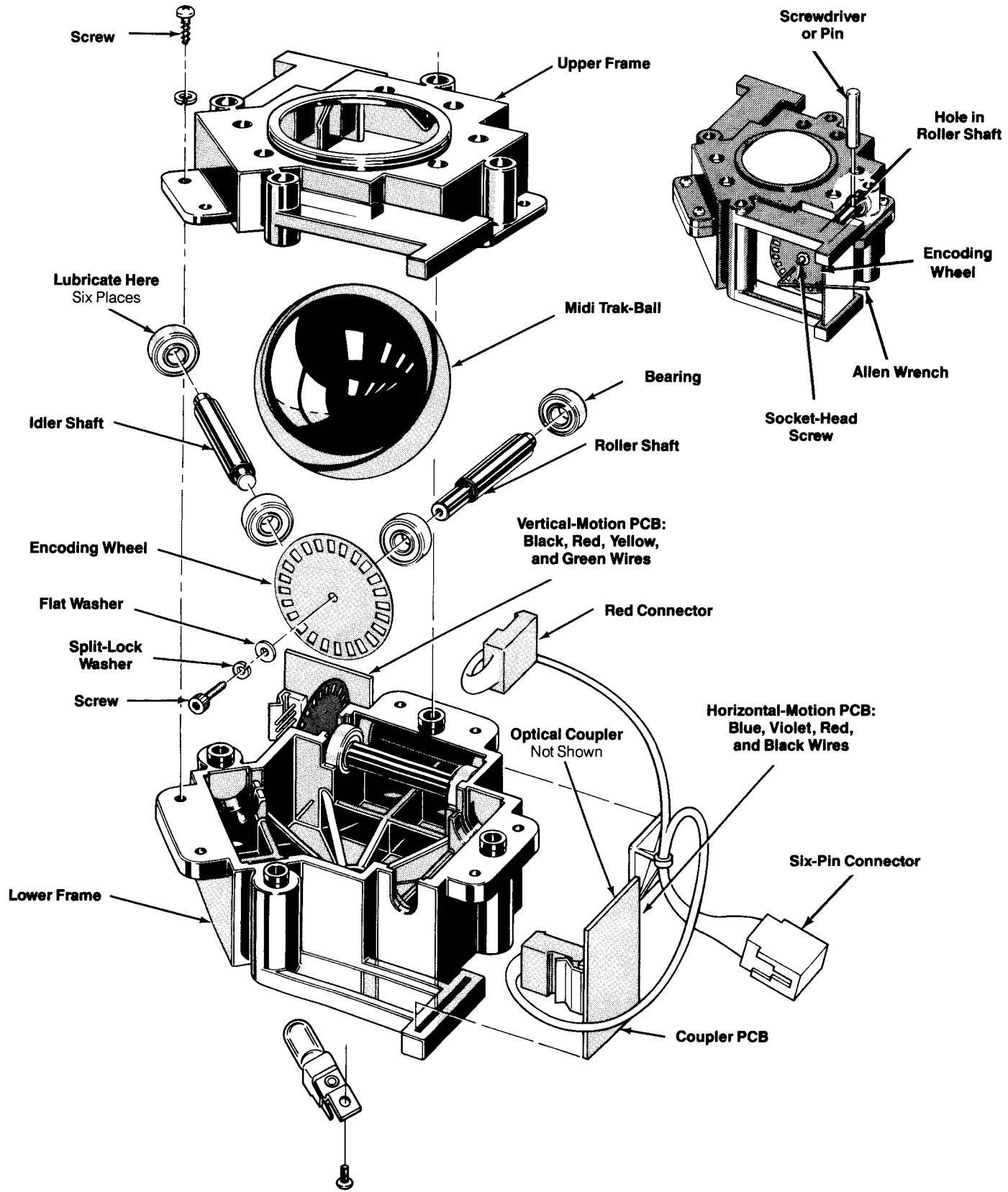
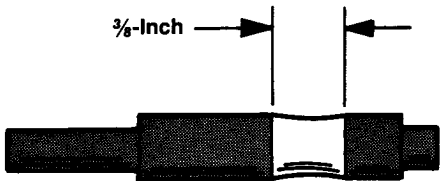


Figure 4-1 Midi Trak-Ball™ Assembly and Lubrication

## Reassembling the Midi Trak-Ball

1. Install the upper frame of the Midi Trak-Ball over the assembly. Be sure that each Coupler PCB is engaged in the slots of the upper frame.
2. Replace the six screws that secure the upper and lower frames together.
3. Remount the Midi Trak-Ball assembly to the control panel using the four nuts and carriage bolts.
4. Reconnect the six-pin connector of the harness.
5. Reconnect the wires to the lamp.



**Figure 4-2 Excessive Shaft Wear**