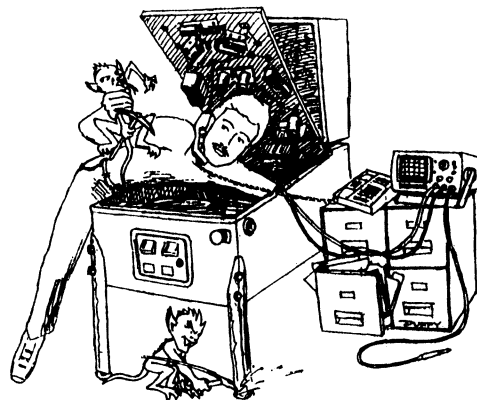




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## Technical Support

*Joe Blackwell, Technical Support Manager  
Eric Winston, Technical Support Engineer*

TO: Service Managers  
DATE: January 31, 1994  
RE: **"Jurassic Park" Common & Inherent Problems**

"Jurassic Park" made money! It was #1 for 3 months running on both the "Re-Play" and "Playmeter" Polls, indicating its operator acceptance. Having said that, it did have problems...which cost us all time and money. We at Data East tried to be pro-active by shipping out thousands of dollars worth of update kits and warranty replacement parts. We also took a hard look at our in-house procedures and priorities which included making some organizational changes all focusing on better quality. Listed below are some of the problems we have seen and some you have informed us of.

**1) Symptom:** Coils firing at random, switch matrix problems, blown fuses.

**Problem:** One of the main trunks of the playfield wiring harness is rubbing against the upper right flipper coil stop bracket. The vibration from the coil energizing causes the harness to saw against the bracket which cuts through the insulation leaving a short condition.

**Solution:** Cut/remove some of the wire ties and inspect each wire individually insulating any bare wires. Resecure harness with wire ties. Use a large wire tie to pull the bundle away from the coil stop bracket by securing it to another wire bundle.

**2) Symptom:** Display indicates "**SIX BALLS MISSING.**"

**Problem:** Switch drive transistor Q54 has failed. The lock-ball assy. solenoid (mounted under the arch on top of the playfield) has the 32vDC line (red wire) located extremely close to the mounting screw for the six-ball trough assy.. This creates a potential short condition through the Q54 drive line.

**Solution:** Insure the solder lug on the solenoid is insulated from the mounting screw (i.e. electrical tape or heat shrink).

*(continued on next page)*

**3) Symptom:** Flipper does not energize and LED on the Solid State Flipper Board does not flicker when flipper cabinet switch is actuated.

**Problem:** E.O.S. mounted on the flipper assy. is defective or out of adjustment.

**Solution:** If the switch contacts are not making, then the series circuit to the 50 volt drive circuit enable will be open causing the flipper not to work at all. This can be easily determined by using a jumper wire to short across the switch solder lugs. You may solder the two wires together going to the switch and bypass it completely until a replacement is installed. The switch contacts should be adjusted so that when the solenoid is energized, the contacts stay closed for almost the full travel of the plunger. The contacts should open 1/16" before the plunger reaches maximum travel.

**4) Symptom:** In game over mode, the display blanks out for approximately 15-30 seconds. If any coins are inserted during this period only the first coin will give a credit all others will not. We have found this condition only occurs in some games.

**Problem:** There is a communication error between the game CPU and the Display Board CPU at which time the game microprocessor goes into a wait status which times out in approximately 15-30 seconds.

**Solution:** Install CPU/DISP EPROM Revision 5.10

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**Update kits:**

**Mechanical -**

This kit for the T-rex assy. was installed to reduce torque on the motors.  
*This only needed to be installed on games prior to serial # 87012,* few of which were sold in the domestic (USA) market.

**Software -**

**CPU 5.01** is the latest T-Rex related update. This slowed the left/right motor down to reduce wear and tear on the gears.

**CPU 5.10** is the latest revision and was released strictly to eliminate the display blanking out in attract mode (see item #4).

**Note:** If you have any questions, please call our technical support line.