

SERVICE BULLETIN

SUBJECT: ROLLERGAMES Upper Diverter Assembly Improvements

Information: Improvements to the Upper Diverter Assembly, p/n C-13489, include (1) a coil change (replace the AE-23-800 coil with one marked AE-26-1200); (2) a Solenoid Bracket Assembly, p/n B-13488, change; and (3) a change to the assembly comprising the coil plunger, drive link, and spring.

It is suggested that these changes can occur in the order listed in the preceding paragraph; that is, coil replacement should be first, followed by replacing the Solenoid Bracket Assembly. If necessary, the more complex change of the coil plunger, drive link, and spring should resolve all associated problems with the Upper Diverter Assembly.

See the accompanying diagram for details. The parenthetical numbers in the following procedure refer to the diagram's parts. (Some parts shown in the ROLLERGAMES manual (p.61) are not used in this new assembly.)

PROCEDURE:

NOTE: The following procedures require access to the upper portion of the playfield; however, the playfield can remain in the game, while the work is being done, and none of the playfield cables requires disconnection. Turn OFF the game. Remove the playfield glass. Lift the playfield from its tilting hinge brackets, until the upper portion is accessible. Place the playfield on the cabinet carefully to avoid damaging any parts. Remove the screws mounting the plastic shield to the end of the playfield.

1. Coil and Solenoid Bracket Assembly Replacement:

- A. Unsolder the wires connected to the Coil, noting each wire's coil terminal.
- B. Remove the solenoid bracket Mounting Screws (19), retaining them for reassembly.
- C. Remove the AE-23-800 Coil (1), and replace it with an AE-26-1200 Coil.
- D. Replace the Solenoid Bracket Assembly, p/n B-13488, (3) with a new 'revision A' Assembly. (The revision A Solenoid Bracket Assembly has a slightly shorter solenoid stop than the original assembly.)
- E. Mount the Coil (1) and Solenoid Bracket Assembly (3), as they were on the original unit; install and tighten the bracket Mounting Screws (19), using Loc-Tite.
- F. Solder the wires to the new Coil, connecting them to the proper terminals (noted in step A).

2. Coil Plunger, Drive Link, and Spring Replacement:

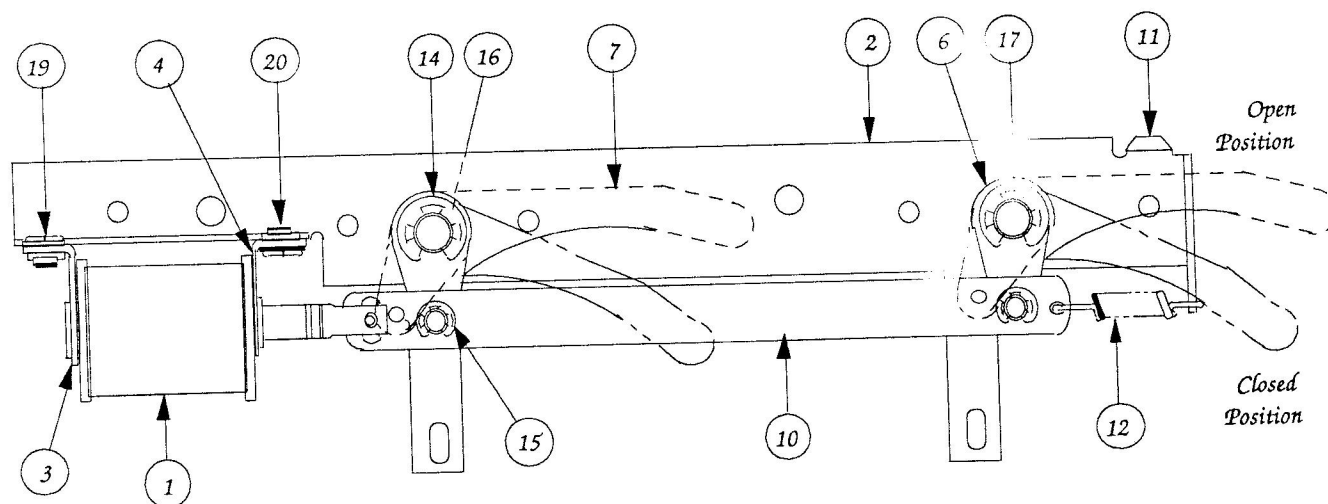
- A. Remove the two "E" Rings attaching the old Diverter Drive Link to the two black, plastic Arm Assemblies; retain these "E" Rings for reassembly.
- B. Remove the spring at the end of the old Drive Link; remove the old Drive Link, including the spring-attached Coil Plunger.

2. Coil Plunger, Drive Link, and Spring Replacement (Continued)

- C. Replace all of the old Drive Link parts (coil plunger, springs, etc.) with the new Link-Plunger-Spring Assembly (10), p/n B-13843, sliding the plunger into the coil and inserting the post of each Arm Assembly (7) into the proper hole of the new Link-Plunger-Spring Assembly.
- D. Attach an "E" Ring on each Arm Assembly post to reassemble the Link-Plunger-Spring Assembly. Slip the loop of the Spring into the hole of the Diverter bracket, where the old spring was removed.
- E. Move the updated Diverter Assembly back and forth several times to verify that it is moving freely, without binding. If necessary, apply a small amount of Williams' Drop Target Grease (or similar lubricant) to the rotating posts on each Arm Assembly.

3. Final Preparation.

- A. After the Upper Diverter Assembly improvements are completed, reinstall the plastic shield on the playfield, carefully reinstall the playfield in the game cabinet, and check to see that all cables are properly located (not kinked or binding).
- B. Reinstall the playfield glass, and prepare the game for play. Play several games to verify that the Upper Diverter Assembly is operating satisfactorily. NOTE: Installation of Revision 2 (or higher) game software is recommended for satisfactory operation.



Upper Diverter Assembly
p/n C-13489 , Rev. C

Item	Part Number	Description	Item	Part Number	Description
1	AE-26-1200	Coil Assembly	11	23-6577	Rubber Bumper
2	C-13490	Diverter Bracket Assy	12	10-362	Spring
3	B-13488	Solenoid Bracket Assy	13	Not Used on rev. C	
4	01-8-508-S	Solenoid Bracket	14	20-8712-25	"E" Ring, 1/4" Shaft
5	Not Used on rev. C		15	20-8712-18	"E" Ring, 3/16" Shaft
6	A-13491	Drive Arm Assy	16	4700-00073-00	Flatwasher
7	C-13432	Diverter Gate/Shaft Assy	17	20-8716-2	Roll Pin, 3/32 x 5/8
8	Not Used on rev. C		18	Not Used on rev. C	
9	Not Used on rev. C		19	4008-01017-06	M/Screw, #8-32 x 3/8
10	B-13843	Plunger Assembly	20	4006-01003-06	M/Screw, #6-32 x 3/8