

# Installation Instructions



## Blue Bird Brake Switch Interface Service Kit

### GENERAL

This document provides the instructions for modifying the brake pedal in order to allow for proper functionality of the brake switch interface on Blue Bird vehicles.

### KIT COMPONENTS

This service kit (Bendix part number K252380) includes the following components:

- Cotter Pin
- Clevis Pin
- E-clip
- 3/8-in. Flanged Locknut

### RECOMMENDED TOOLS

- Vise
- 9/16-in. High-speed Steel Drill Bit
- Drill Press
- In-lbs Torque Wrench

### REMOVING THE BRAKE PEDAL

See *Figure 1*.

**NOTE:** The pivot shaft is not shown in *Figure 1*.

1. Disconnect the power source to the vehicle (battery power).
2. Remove the cotter pin (or Rue Ring™) from the clevis pin that connects the brake pedal and the push rod (or HydroMax® yoke).
3. Remove the clevis pin. The brake pedal should now rotate freely. **NOTE:** For hydraulic brake applications, there is a brake switch that is attached by the clevis pin. The brake switch can hang from the wire harness with no detrimental effect.
4. Remove the 3/8-16 x 2-in. SEMS screw that acts as a pedal stop. Backing out the screw to clear the brake pedal is sufficient.
5. Remove the e-clip from the outside edge of the brake pedal pivot shaft. See *Figure 2*. **NOTE:** Ensure the e-clip is removed to prevent any damage to the brake pedal pivot shaft.
6. Remove the 3/8-in. flanged locknut from the brake pedal pivot shaft.
7. Remove the 3/8-in. flat washer (if used) from the brake pedal pivot shaft.
8. Remove the brake pedal from the assembly by sliding it off of the pivot shaft.



### GENERAL SAFETY GUIDELINES

**WARNING! PLEASE READ AND FOLLOW THESE INSTRUCTIONS**

**TO AVOID PERSONAL INJURY OR DEATH:**

When working on or around a vehicle, the following guidelines should be observed **AT ALL TIMES**:

- ▲ Park the vehicle on a level surface, apply the parking brakes, and always block the wheels. Always wear personal protection equipment.
- ▲ Stop the engine and remove the ignition key when working under or around the vehicle. When working in the engine compartment, the engine should be shut off and the ignition key should be removed. Where circumstances require that the engine be in operation, **EXTREME CAUTION** should be used to prevent personal injury resulting from contact with moving, rotating, leaking, heated, or electrically charged components.
- ▲ Do not attempt to install, remove, disassemble, or assemble a component until you have read, and thoroughly understand, the recommended procedures. Use only the proper tools and observe all precautions pertaining to use of those tools.
- ▲ If the work is being performed on the vehicle's air brake system, or any auxiliary pressurized air systems, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle. If the vehicle is equipped with a Bendix® AD-IS® air dryer system, a Bendix® DRM™ dryer reservoir module, a Bendix® AD-9si®, AD-HF®, or AD-HFi™ air dryer, be sure to drain the purge reservoir.
- ▲ Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.
- ▲ Never exceed manufacturer's recommended pressures.
- ▲ Never connect or disconnect a hose or line containing pressure; it may whip and/or cause hazardous airborne dust and dirt particles. Wear eye protection. Slowly open connections with care, and verify that no pressure is present. Never remove a component or plug unless you are certain all system pressure has been depleted.
- ▲ Use only genuine Bendix® brand replacement parts, components, and kits. Replacement hardware, tubing, hose, fittings, wiring, etc. must be of equivalent size, type, and strength as original equipment and be designed specifically for such applications and systems.
- ▲ Components with stripped threads or damaged parts should be replaced rather than repaired. Do not attempt repairs requiring machining or welding unless specifically stated and approved by the vehicle and component manufacturer.
- ▲ Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
- ▲ For vehicles with Automatic Traction Control (ATC), the ATC function must be disabled (ATC indicator lamp should be ON) prior to performing any vehicle maintenance where one or more wheels on a drive axle are lifted off the ground and moving.
- ▲ The power **MUST** be temporarily disconnected from the radar sensor whenever any tests USING A DYNAMOMETER are conducted on a vehicle equipped with a Bendix® Wingman® system.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the guidelines above.

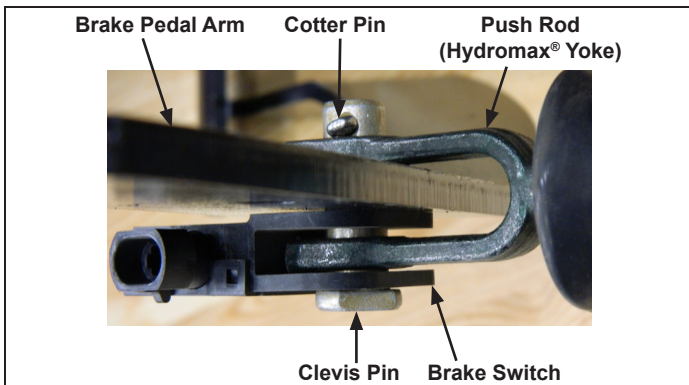


Figure 1 – Brake Pedal Components

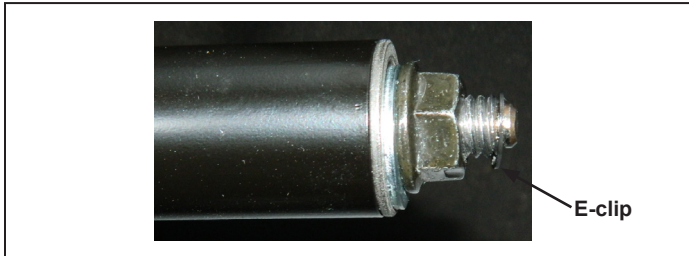


Figure 2 – E-clip Location

## MODIFYING THE BRAKE PEDAL

**NOTE:** Bendix recommends maintaining as close to perpendicular as possible for this operation.

See Figure 3.

1. Secure the brake pedal in a vise.
2. Using a drill press with a 9/16-in. high-speed steel drill bit, enlarge the lower hole on the brake pedal. The hole is already nearly the same size as the 9/16-in. high-speed steel drill bit, so minimal material will be removed.



Figure 3 – Brake Pedal Modification

## REINSTALLING THE BRAKE PEDAL

**NOTE:** Use the new parts included in this kit.

**NOTE:** The pivot shaft is not shown in Figure 1.

See Figure 1.

1. Position the modified brake pedal on the pivot shaft.
2. Install the new 3/8-in. flanged locknut onto the pivot shaft. Torque to 225 - 275 in.-lbs (25 - 31 N•m). **NOTE:** An over-torqued flanged locknut may cause damage to the pivot shaft.
3. Install the new e-clip by pressing it onto the groove on the end of the pivot shaft. See Figure 2.
4. Engage the brake pedal arm with the push rod (or HydroMax® yoke).
5. Position the brake switch with the connector oriented upward on the inboard arm of the push rod yoke (or HydroMax yoke).
6. Install the new clevis pin through the brake switch, through the push rod (or HydroMax yoke), and through the brake pedal arm.



**It is imperative to use the new, unmodified clevis pin to maintain the geometric relationship of parts that is required for proper brake switch operation.**

7. Install a new cotter pin and bend the legs to prevent losing it.
8. Reconnect the power source to the vehicle (battery power).

## TESTING FOR PROPER FUNCTIONALITY OF THE BRAKE SWITCH INTERFACE

1. Once vehicle power is restored, a light push (less than 10 lbs) on the brake pedal foot pad should actuate the brake light.

**NOTE:** If the brake switch interface does not actuate properly, it may be necessary to replace the brake switch and/or the brake pedal. Refer to Table 1 for the kit part numbers and kit installation instructions, which can also be found on [b2bendix.com](http://b2bendix.com).

Kit Part Number	Kit Description	Installation Instructions
5006950	Brake Switch Replacement	S-1686
K040347	Brake Pedal Replacement	S-1684

For direct telephone technical support, contact the Bendix Tech Team at 1-800-AIR-BRAKE (1-800-247-2725), option 2. Representatives are available Monday through Thursday, 8 a.m. – 6 p.m., and Friday, 8 a.m. – 5 p.m. ET. For assistance, follow the instructions in the recorded message. You can also reach the Bendix Tech Team by email at [techteam@bendix.com](mailto:techteam@bendix.com).

