



# Installation Instructions

KIT  
800239

**This Field Modification Kit is intended to modify the parking brake system on a 4x2 Ford CF (Cargo) Series refuse truck.**

## Contents:

Refer to system schematic.

**Note:** This instruction sheet is intended to be a generic representation of a typical 4X2 Ford CF Series vehicle. The actual plumbing may differ from that illustrated.

6. Replace or install the new TW-2 dual circuit "work brake" control valve making certain that the indicator light is installed and operating properly.

**Note:** Bendix recommends that the RV-3 pressure reducing valves (Items 17 and 18) be part number 107154 with a nominal 44 PSI setting. Consult with vehicle manufacturer for recommended setting.

## Instructions

1. Chock the wheels, release the parking brakes, and drain all air reservoirs.

2. Remove the ITI actuators in the released position noting the push rod length. Replace with Type 30/30 spring brake actuators installing per the manufacturers recommendations for push rod length, mounting, etc.

*Note: It may also be advisable to inspect all other foundation brake parts that impact brake output (slack adjusters, shoes, linings, drums, cams, bushings, etc.) at this time.*

3. Remove the ITI control valve identifying the following ports:

### ITI Control Valve Ports

EMR  
(No port exists)

### R-7 Modulating Valve Ports

SUP  
BAL  
(Service/Control line  
to rear axle service relay)

DELIVERY PORT (3/8 NPT)  
Balance Port (brass capnut top)

DEL  
CON

Replace with the R-7 spring brake modulating valve.

**IMPORTANT:** Make certain that all lines affected by this retrofit are installed per the schematic contained in this instruction sheet.

4. Remove the balance of the rear axle valving for both the service and emergency circuits. Replace with the one R-12 relay valve for service and one QR-1 quick release valve for the parking brake contained in the kit.

Refer to Kit 800240 for 6X4 Ford CF series vehicles.

5. Remove and replace to existing PP-1 parking control valve with the new valve in the kit.

7. Temporarily cap off any remaining air lines and charge the system to governor cut-out (120-130 PSI).

8. Release the parking brake and make a service brake application checking to see that the service brakes apply on all axles.

9. With the system charged and the parking brake released, turn off the engine, and drain the rear service reservoir. Apply the service brake and check to see that the front service chambers apply air pressure and the rear spring brakes exhaust with the application of the foot valve. Check to see that the TW-2 control valve produces the same results. If it does not the supply and delivery ports may be crossed at the TW-2.

**Note:** It may be necessary to install gages at the front and rear service chambers and the spring brakes to determine if the system is operating properly.

10. Recharge the system with the parking brakes released and drain the other (front) service reservoir. The rear service brakes should be operational via the foot valve or the TW-2 control valve without front brakes. The spring brakes should not be affected. Apply the TW-2 to make certain of its operation.

11. Recharge the system release the parking brake and adjust to the manufacturers recommended brake adjustment. Drain one service reservoir and slowly drain the other to verify that the PP-1 parking control "pops" at approximately 40 PSI.

12. Remove any extra lines from the vehicles' chassis and plug at the source.

KIT COMPONENTS			
ITEM NO	QTY	MODEL	DESCRIPTION
27	1	TW-2	CONTROL VALVE
28	1	PP-1	PARKING CONTROL VALVE
29	1	R-7	SPRING BRAKE CONTROL VALVE
30	1	R-12	RELAY VALVE
31	1	OR-1	QUICK RELEASE VALVE

LIST OF MATERIAL			
ITEM NO	QTY	MODEL	DESCRIPTION
1	1		AIR COMPRESSOR
2	1	D-2	GOVERNOR
3	1		AIR DRYER
4	1		RESERVOIR-SUPPLY
5	1		RESERVOIR-SERVICE-FRONT
6	1		RESERVOIR-SERVICE-REAR
7	3		DRAIN COCK
8	1	ST-3	SAFETY VALVE
9	1	PR-4	PRESSURE PROTECTION VALVE
10	2	SC-1	SINGLE CHECK VALVE
11	2	LP-3	LOW PRESSURE INDICATOR (80 PSI NOM CLOSING)
12	2		AIR PRESSURE GAGE
13	3	DC-4	DOUBLE CHECK VALVE
14	2	E-6/E-7	DUAL BRAKE VALVE
15	2	DS-2	DOUBLE CHECK VALVE & STOPLAMP SWITCH
16	1	QR-1/QR-N	QUICK RELEASE VALVE
17	1	RV-3	PRESSURE REDUCING VALVE
18	1	RV-3	PRESSURE REDUCING VALVE
19	1	LP-3	PARKING INDICATOR
20	1	LP-3	EMERGENCY STOPLAMP INDICATOR
21	1		WORKPLACE INDICATOR LIGHT
22	2	ASA-5	SLACK ADJUSTER-FRONT-AUTOMATIC
23	2	ASA-5	SLACK ADJUSTER-REAR-AUTOMATIC
24	2		BRAKE CHAMBER-FRONT
25	2		SPRING BRAKE ACTUATOR-REAR
26	1	SL-5	STOPLIGHT SWITCH

**Important**

All lines are to be 3/8" tubing unless otherwise specified on this schematic.

