

## PRECAUTIONS

1. Care must be taken to replace each part properly as it could affect the performance of the brake system and result in a driving hazard. Replace the parts with parts of the same part number or equivalent.
2. It is very important to keep parts and the area clean when repairing the brake system.

## TROUBLESHOOTING

Problem	Possible cause	Remedy	Page
Low or spongy pedal	Linings worn	Replace brake shoes or pads	BR-30,37,44
	Leak in brake system	Repair leak	
	Master cylinder faulty	Repair or replace master cylinder	BR-9
	Air in brake system	Bleed brake system	BR-6
	Wheel cylinder faulty	Repair wheel cylinder	BR-30,44
	Piston seals worn or damaged	Repair brake calipers	BR-39
	Rear brake automatic adjuster faulty	Repair or replace adjuster	BR-44
Brakes drag	Parking brake out of adjustment	Adjust parking brake	BR-7
	Parking brake wire binding	Repair as necessary	
	Booster push rod out of adjustment	Adjust push rod	BR-16
	Return spring faulty	Replace spring	BR-16
	Brake line restricted	Repair as necessary	
	Lining cracked or distorted	Replace brake shoes and pads	BR-30,37,44
	Wheel cylinder or caliper piston sticking	Repair as necessary	BR-30,39,44
	Automatic adjuster broken	Replace adjuster	BR-44
Brakes pull	Tires improperly inflated	Inflate tires to proper pressure	
	Oil or grease on linings	Check for cause. Replace shoes	BR-30,37,44
	Brake shoes distorted, linings worn or glazed	Replace brake shoes	BR-30,44
	Drum or disc out of round	Replace drum or disc	BR-30,39,44
	Return spring faulty	Replace spring	BR-30,44
	Wheel cylinder faulty	Repair wheel cylinder	BR-30,44
	Piston frozen in caliper	Repair caliper	BR-39
	Disc brake pad sticking	Replace pads	BR-37
Brakes grab/chatter	Oil or grease on linings	Check for cause. Replace shoes	BR-30,37,44
	Drum or disc scored or out of round	Replace drum or disc	BR-30,39,44
	Brake shoes distorted, linings worn or glazed	Replace brake shoes	BR-30,44
	Wheel cylinder faulty	Repair wheel cylinder	BR-30,44
	Disc brake pad sticking	Replace pads	BR-37
	Brake booster faulty	Repair booster	BR-16

## TROUBLESHOOTING (Cont'd)

Problem	Possible cause	Remedy	Page
Hard pedal but brakes inefficient	Oil or grease on linings Brake shoes distorted, linings worn or glazed, drums worn Disc brake pads worn Piston frozen in caliper Brake booster faulty Brake line restricted Vacuum leaking Vacuum pump faulty	Check for cause. Replace shoes Replace as required  Replace pads Repair caliper Repair booster Repair as necessary Repair as necessary Repair or replace vacuum pump	BR-30,37,44 BR-30,44  BR-37 BR-39 BR-16  BR-25
Snapping or clicking noise when brakes are applied	On drum brakes—brake shoes binding at backing plate ledges On drum brakes—backing plate ledges worn On drum brakes—loose or missing hold-down spring On drum brakes—loose set bolt at backing plate On disc brakes—rust on front edge of inboard shoes On disc brakes—loose installation bolt	Lubricate  Replace and lubricate ledges Replace  Tighten  Inspect, lubricate. Replace if necessary Tighten	BR-30,44  BR-30,44 BR-30,44  BR-30,44  BR-37 BR-37
Scraping or grinding noise when brakes are applied	Worn brake linings  Caliper to wheel or rotor interference Dust cover to rotor or drum interference Other brake system components: Warped or bent brake backing plate, cracked drum or rotor Tires rubbing against chassis and body	Replace, refinish drums or rotors if heavily scored Replace as required Correct or replace Inspect and service  Inspect and service	BR-30,44  BR-39  BR-30,39,44  
Squealing, groaning or chattering noise when brakes are applied  Note: Brake friction materials inherently generate noise and heat in order to dissipate energy. As a result, occasional squeal is normal and is aggravated by severe environmental conditions such as cold, heat, wetness, snow, salt, mud, etc. This occasional squeal is not a functional problem and does not indicate any loss of brake effectiveness	Brake drums and linings rotors and pads worn or scored Disc brakes—burred or rusted calipers Dirty, greased, contaminated or glazed linings Improper lining parts Mal adjustment of brake pedal or booster push-rod Drum brakes—weak damaged or incorrect shoe hold-down springs, loose or damaged shoe hold-down pins and springs and grooved backing plate ledges	Inspect, service or replace  Clean deburr Clean or replace  Inspect for correct usage replace Inspect and adjust  Inspect, service or replace	BR-30,39,44  BR-39 BR-30,44  BR-30,44 BR-5, 16  BR-30,44

## TROUBLESHOOTING (Cont'd)

Problem	Possible cause	Remedy	Page
Squealing noise when brakes are not applied	Bent or warped backing plate causing interference with drum	Service or replace	BR-30,44
	Improper machining of drum causing interference with backing plate or shoe	Replace drum	BR-30,44
	Mal adjustment of brake pedal or booster push-rod	Inspect and adjust	BR-5,16
	Poor return of brake booster or master cylinder or wheel cylinder	Inspect, service or replace	BR-9,16,30,44
	Disc brakes—rusted, stuck	Inspect. Lubricate if necessary	BR-39
	Other brake system components: Loose or extra parts in brakes Rear drum adjustment too tight causing lining to glaze Worn, damaged or insufficiently lubricated wheel bearings	Inspect, service, replace as required	BR-30,44
	Drum brakes—weak, damaged or incorrect shoe retracting springs		BR-30,44
	Drum brakes—grooved backing plate ledges		BR-30,44
	Improper positioning of pads in caliper		
	Outside diameter of rotor rubbing caliper housing		
Groaning, clicking or rattling noise when brakes are not applied	Stones or foreign material trapped inside wheel covers	Remove stones, etc.	
	Loose wheel hub nuts	Tighten to correct torque. Replace if stud holes are elongated	
	Disc brakes—loose installation bolt	Inspect. Tighten if necessary	BR-39
	Mal adjustment of brake pedal or booster push-rod	Inspect and adjust	BR-5,16
	Disc brakes—poor return of piston	Inspect, service or replace	
	Drum brakes—loose or extra parts Worn, damaged or dry wheel bearings	Inspect, remove or service Inspect, lubricate or replace	BR-30,44