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 Brake pads worn Leak in brake system Master cylinder faulty Air in brake system Wheel cylinder faulty Brake cylinder faulty Piston seals worn or damaged Rear brake automatic adjuster faulty	Replace brake shoes Replace pads Repair leak Repair or replace master cylinder Bleed brake system Repair wheel cylinder Repair cylinder Repair cylinder Repair or replace adjuster	BR-27 BR-19, 36 BR-9 BR-7 BR-27 BR-19, 36 BR-19, 36
Brakes drag	Parking brake out of adjustment Binding parking brake wire Mal–adjustment of brake pedal or booster push rod Tension or return spring faulty Brake line restricted Lining cracked or distorted Pad cracked or distorted wheel cylinder or caliper piston sticking	Adjust parking brake Repair as necessary Inspect and adjust Replace spring Repair as necessary Replace shoe Replace pad Repair as necessary	BR-8 BR-6,17 BR-27, 44 BR-27 BR-19, 36 BR-19, 27 36
	Adjuster broken Master cylinder faulty	Replace adjuster Repair or replace master cylinder	BR-9
Brakes pull	Tires improperly inflated Oil or grease on shoes or pads Brake shoes distorted, linings worn or glazed Brake pads distorted, worn or glazed Drum or disc out of round Tension or return spring faulty Wheel cylinder faulty Brake cylinder faulty Piston frozen in brake cylinder Brake pad sticking	Inflate tires to proper pressure Check for cause. Replace shoes or pads Replace brake shoes Replace pads Replace drum or disc Replace spring Repair wheel cylinder Repair cylinder Repair cylinder Replace pads	BR-27 BR-19, 36 BR-19, 27 36 BR-27, 44 BR-27 BR-19, 36 BR-19, 36 BR-19, 36

TROUBLESHOOTING (Cont'd)

Problem	Possible cause	Remedy	Page
Hard pedal but brakes inefficient	Oil or grease on shoes or pads Brake shoes distorted, linings worn or glazed, drums worn Brake pads distorted, worn or glazed Piston frozen in brake cylinder Brake booster faulty Vacuum leaks Brake line restricted	Check for cause. Replace shoes or pads Replace brake shoes Replace pads Repair cylinder Repair booster Repair as necessary Repair as necessary	BR-19, 27 36 BR-27 BR-19, 36 BR-19, 36 BR-15
Snapping or clicking noise when brakes are applied	(Drum brake) Brake shoes binding at backing plate ledges Backing plate ledges worn Loose or missing shoes hold–down spring Loose set bolt at backing plate (Disc brake) Loose or missing pad support plate Loose installation bolt	Lubricate Replace and lubricate ledges Replace shoes hold–down spring Tighten Replace pad support plate Tighten	BR-27 BR-27 BR-27 BR-27 BR-19, 36 BR-19, 36
Scraping or grinding noise when brakes are applied	Worn brake linings or pads Caliper to wheel or rotor interference Dust cover to rotor or backing plate to drum interference Other brake system components faulty Tires rubbing against chassis and/or body	Replace or refinish drums or rotors if heavily scored Replace as required Correct or replace Repair or replace as necessary Repair as necessary	BR-19, 27 36 BR-19, 36 BR-19, 27 36

TROUBLESHOOTING (Cont'd)

Problem	Possible cause	Remedy	Page
Squeaking, squealing groaning or chatter ing noise when brakes are applied Note: Brake friction materials inherently generate noise and heat in order to dissi pate energy. As a result, occasional squeal is normal and is aggravated by se vere environmental conditions such as cold, heat, wetness, snow, salt, mud, etc. This occasional squeal is not a func tional problem and does not indicate any loss of brake effec tiveness	Brake drums and linings, rotors and pads worn or scored Dirty, greased, contaminated or glazed linings or pads Improper linings or pads using Mal–adjustment of brake pedal or booster push rod (Disc brake) Missing or damaged brake pad anti–squeal shim Burred or rusted calipers (Drum brake) Weak damaged or incorrect shoe hold– down springs, loose or damaged shoe hold–down spring pins and springs and grooved backing plate ledges	Inspect, repair or replace Clean or replace Inspect for correct usage or replace Inspect and adjust Replace Clean or deburr Inspect, repair or replace	BR-19, 27 36 BR-19, 27 36 BR-19, 27 36 BR-6, 17 BR-19, 36 BR-19, 36 BR-27
Squealing and squeaking noise when brakes are not applied	Mal-adjustment of brake pedal or booster push rod Poor return of brake booster or master cylinder or wheel cylinder (Disc brake) Rusted or stuck piston Improper positioning of pad in caliper Rotor rubbing against caliper housing Improper installation of disc brake pad support plate (Drum brake or parking brake) Weak, damaged or incorrect shoe hold- down springs Grooved backing plate ledges Bent or warped backing plate causing interference with drum Improper machining of drum causing interference with backing plate or shoe 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 and adjust Inspect, repair or replace Inspect and lubricate as necessary Repair or replace Repair or replace Replace Replace Replace drum Inspect, repair or replace as necessary	BR-6,17 BR-9,15 27 BR-19, 36 BR-19, 36 BR-19, 36 BR-27, 44 BR-27, 44 BR-27, 44 BR-27, 44

TROUBLESHOOTING (Cont'd)

Problem	Possible cause	Remedy	Page
Problem Groaning, clicking or rattling noise when brakes are not applied	Possible cause Stones or foreign material trapped inside wheel covers Loose wheel nuts Mal-adjustment of brake pedal or booster push rod Worn, damaged or dry wheel bearings (Disc brake) Loose or missing anti-rattle spring or pad support plate or crimping on outer pad Failure of shim Wear on slide bushing Loose installation bolt Poor return of piston (Drum brake or parking brake) Loose or extra parts	Remedy Remove foreign material Tighten to correct torque Replace if stud holes are elongated Inspect and adjust Inspect and lubricate or replace Inspect, repair or replace Inspect, replace if necessary Inspect, replace if necessary Inspect, replace if necessary Inspect, repair or replace Inspect and repair	BR-6,17 BR-19, 36 BR-19, 36 BR-19, 36 BR-19, 36 BR-19, 36 BR-27, 44