

TROUBLE TRACER – HYDRAULICS

REGULATORS BRAKE HOSES



APPEARANCE Leakage, wet spots

CAUSE Brake hose worn

EFFECT

- Loss of brake force
- Extended brake pedal travel

REMEDY Replace brake hose



APPEARANCE Leakage, wet spots

CAUSE Brake line rusted

EFFECT

- Loss of brake force
- Extended brake pedal travel

REMEDY Replace brake line



APPEARANCE Bulge on brake hose

CAUSE Brake hose harness damaged, brake hose clamped between moving parts.

EFFECT Brake pedal sinks deeper than normal, spongy feel

REMEDY Replace all brake hoses

WHEEL CYLINDERS



APPEARANCE Rust around brake cylinder pins

CAUSE Limited usage of brakes, improper lubrication during assembly

EFFECT No brake force, vehicle tends to pull to one side during braking

REMEDY Replace or overhaul brake cylinder



APPEARANCE Wet spots at brake drum

CAUSE Brake cylinder leakage

EFFECT Mushy brake pedal, brake pedal sinks to the floor, limited brake performance. Due to brake fluid on the brake lining the vehicle may tend to pull to one side during braking

REMEDY Replace brake cylinder



APPEARANCE Smoke from the drum brake

CAUSE Brake lining drags against the brake drum due to stuck pistons in the wheel cylinder

EFFECT Brake lining overheats, excessive wear

REMEDY Replace wheel cylinder and brake lining, drum when needed.

BRAKE CALIPERS



APPEARANCE Rust around brake caliper piston

CAUSE Dirt and moisture have entered the brake caliper, dust cap broken

EFFECT Limited brake performance, vehicle tends to pull to one side during braking.

REMEDY Replace overhaul brake caliper

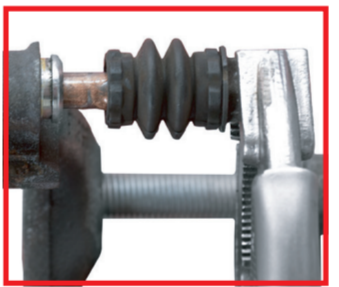


APPEARANCE Wet spots around brake caliper

CAUSE Leakage of brake caliper piston seal.

EFFECT Mushy brake pedal, brake pedal sinks to the floor, limited brake performance. Due to brake fluid on the brake pads the vehicle may tend to pull to one side during braking

REMEDY Replace or overhaul the brake caliper



APPEARANCE Uneven wear of brake pads on one brake caliper

CAUSE Brake caliper sliding mechanism stuck

EFFECT One brake pad needs to brake the wheel. The vehicle may tend to pull to one side during braking. Excessive brake pad wear.

REMEDY Clean and lubricate the caliper sliding mechanism

HANDBRAKE CABLES

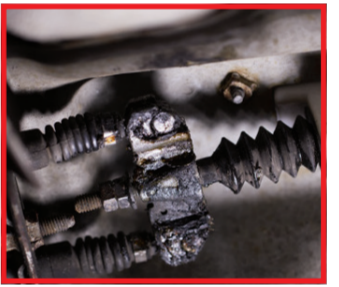


APPEARANCE Handbrake travel is too long

CAUSE brake lining is worn while the brake lining adjustment does not work automatically

EFFECT The parking brake cannot be applied with enough force to hold the vehicle on a slope

REMEDY Adjust the parking brake lining, adjust the parking brake cable or replace the brake lining



APPEARANCE The vehicle seems to drag while driving

CAUSE The parking brake cable won't release due to rust in the inner cable

EFFECT The parking brake continuously brakes causing the brakes to overheat

REMEDY Replace the parking brake cable



APPEARANCE The vehicle won't remain at its position on a slope with the parking brake applied. The parking brake lever travel is at its maximum without any effort

CAUSE Parking brake cable broken

EFFECT The parking brake cannot be applied

REMEDY Replace the parking brake cable

CLUTCH CABLES



APPEARANCE Clutch pedal slowly returns to engaged position after release

CAUSE Clutch cable does not move freely in the outer cable

EFFECT The clutch slips, excessive wear of the clutch plate

REMEDY Replace the clutch inner and outer cable



APPEARANCE Clutch pedal remains on the floor

CAUSE Clutch cable broken

EFFECT The clutch can not disengage and the gears cannot be shifted

REMEDY Replace clutch cable

HYDRAULIC CLUTCH



APPEARANCE None or leakage/wet spots at master or slave cylinder

CAUSE

- Leaking master cylinder
- Leaking slave cylinder

EFFECT Soft clutch pedal

REMEDY

- Overhaul or replace master cylinder
- Overhaul or replace slave cylinder

BRAKE MASTER CYLINDERS



APPEARANCE Abnormal brake pedal behaviour
Brown contaminated brake fluid

CAUSE Worn seals

EFFECT

- Mushy, spongy feel in the pedal
- Pedal sinks slowly to the floor

REMEDY Overhaul or replace the master cylinder

PRESSURE REGULATOR VALVES



APPEARANCE Flat spots on rear tires

CAUSE The pressure regulator valve does not work

EFFECT The rear brakes tend to lock up, especially when the vehicle is empty or the road surface is slippery

REMEDY Check and replace the pressure regulator valve.