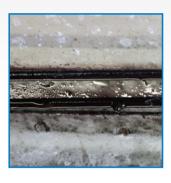


#### **REGULATORS BRAKE HOSES**



#### **APPEARANCE** Leakage, wet spots **CAUSE** Brake hose worn **EFFECT** • Loss of brake force Extended brake pedal travel

**REMEDY** Replace brake hose

### 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** Leakage, wet spots **CAUSE** Brake line rusted **EFFECT** • Loss of brake force • Extended brake pedal travel **REMEDY** Replace brake line



**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** 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



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

**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

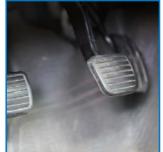


**HYDRAULIC CLUTCH** 

PPEARANCE	None or leakage/wet spots at master or slave cylinder
CAUSE	<ul><li>Leaking master cylinder</li><li>Leaking slave cylinder</li></ul>
EFFECT	Soft clutch pedal
REMEDY	<ul><li> Overhaul or replace master cylinder</li><li> Overhaul or replace slave cylinder</li></ul>







APPEARANCE (	Clutch pedal remains on the floor
CAUSE	Clutch cable broken
	The clutch can not disengage and the gears cannot be shifted
REMEDY	Replace clutch cable



# **TROUBLE TRACER – HYDRAULICS**

## **BRAKE CALIPERS**



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

# **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 continiously brakes causing the brakes to overheat	
REMEDY	Replace the parking brake cable	
APPEARANCE	The vehicle won't remain at it's position on a slope with the parking brake applied. The parking brake lever travel	



**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

## **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

Overhaul or replace the master

**REMEDY** cylinder

## **PRESSURE REGULATOR VALVES**



PPEARANCE	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.

is at it's maximum without any effort

**EFFECT** The parking brake cannot be applied

CAUSE Parking brake cable broken

**REMEDY** Replace the parking brake cable

