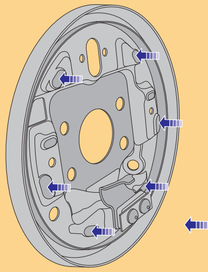
TVS-Girling

DRUM BRAKE - HASF

BACK PLATE

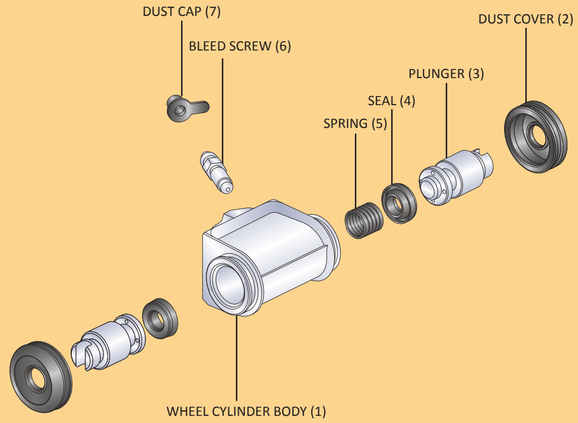
- Back plate assembly holds all the parts of the brake and its bolted on to axle. Back plate withstands the entire braking torque.
- There are window openings in the back plate for lining inspection and brake collapsing. These are kept closed with rubber grommet.
- Ensure the rubber grommets are fitted always. Absence of grommet will lead to dust entry into brake and affect brake performances.
- There are shoe seating platforms for the shoe to seat and slide. This should be lubricated with graphite grease when ever lined shoes are replaced. Using ordinary grease will lead to grease melt at higher temperature.
- Shoe seating platform to be free from any deep groove, as this will restrict the smooth moment of shoe during braking. If found with any deep groove mark in shoe seating platform, replace with new Genuine TVS-Girling back plate assembly.



Kit – Back plate assembly.
Inspect – Every lining replacement.

WHEEL CYLINDER

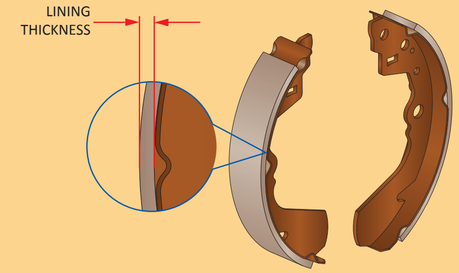
- Wheel cylinder converts hydraulic pressure into mechanical force and push the lined shoe against rotating drum.
- Any score mark or corrosion in the bore will damage the seal and lead to wheel cylinder leak. If found with score mark or corrosion in bore, replace with new wheel cylinder assembly.
- If found any defect or score mark on piston surface replace with Genuine TVS-Girling major kit.
- Seals are used to seal the fluid and hold hydraulic pressure for brake application
- Dust cover prevent dust entry into bore.
- The seals and dust cover are made of a special rubber material.
- The spring helps to place the piston in position.
- The dust cover and seals to be replaced with genuine TVS-Girling minor kit.
- Use only Brake fluid to clean the hydraulic brake system components.
- Using of petrol, diesel, kerosene or any other petroleum products will affect the rubber and may lead to brake failure.
- Apply the special grease provided in the kit for the dust cover inner surface.
- Inspect for any defect in bleed screw or block in port. If found any defect replace with Genuine TVS-Girling kit bleed screw.



Kit	Kit Minor	Kit Major	Kit Bleed screw
Image reference	2,4,7	2,3,4,5,7	6,7
Replacement	40,000 kms	80,000 Kms	Inspect and replace

LINED SHOE

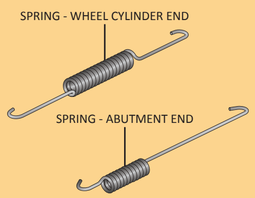
- During brake application, friction material generates the required friction between the rotating drum and lined shoe, in turn the vehicle slows or brings down to complete stop.
- Kinetic energy is converted into heat energy between the friction material and the drum during every brake application.
- Use of genuine APACHE lined shoe / lining (From TVS-Girling) is essential for best performance of brakes at all conditions.
- Lined shoes to be replaced before the friction material wears below 1mm from riveted head for riveted shoes & 1mm from rim for bonded shoes.
- Replace the lined shoe as an axle set to avoid vehicle pulling related issues.
- Friction surface to be clean without any grease or oil traces.



Kit – Kit lined shoe.
Inspection – Every 10,000 kms.

SHOE RETURN SPRINGS

- Shoe return springs are used to retract the shoe to home position once the brake is released.
- There are two shoe return springs in a brake. Namely wheel cylinder end spring (Near wheel cylinder) and abutment end spring (Near abutment).
- Shoe return Springs are fitted in continuous stretched condition and subjected at to higher temperature generated during brake application. This leads to loose its stiffness.
- Elongated or weaken springs will lead to brake dragging, overheating and noise.
- Genuine TVS-Girling springs to be replaced whenever lined shoe are replaced.

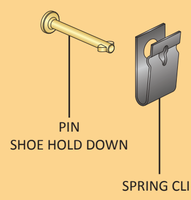


Kit – Kit spring.
Replacement – Every lining replacement.

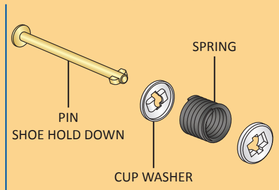
SHOE HOLD DOWN

- Shoe hold down arrangement holds the shoe on the back plate shoe seating platform, and allows it to slide for brake application.
- There are two types of shoe hold down arrangement based on the brake design.
  1. Pin with spring clip arrangement.
  2. Pin with spring and cup washer arrangement.
- Weaken springs/ spring clip will lead to brake juddering.
- Springs are subjected to continues stress and higher temperature generated during brake application. This leads to loose its stiffness.
- Genuine TVS-Girling kit shoe hold down to be replaced whenever lined shoe are replaced.

Pin with spring clip



Pin with spring and cup washer

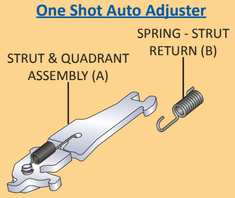


Kit – Kit shoe hold down pin.
Replacement – Every lining replacement.

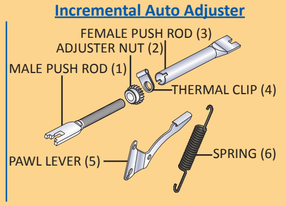
AUTO ADJUSTER UNIT

- Auto adjuster unit is placed in between both the shoes. This also transfers the hand brake force to the other lined shoe when hand brake applied.
- Whenever the lining wears and the drum to lining clearance increases, beyond designed limit the auto adjuster mechanism adjusts and retain the designed gap.
- There are two types of auto adjuster used according to the brake design.
  1. One shot auto adjuster. 2. Incremental auto adjuster.
- In incremental auto adjuster, few brake variants have thermal clip arrangement which avoids over adjustment due to the thermal expansion of brake drum.
- Inspect for any bend and knurling / thread defect during lining replacement. If found any defect replace with genuine TVS-Girling auto adjuster kit.

One Shot Auto Adjuster



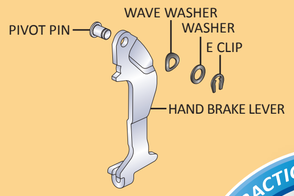
Incremental Auto Adjuster



Kit	One Shot		Incremental	
	Strut & quadrant assembly	Spring strut return	Kit Adjuster assembly	Kit lever pawl
Image reference	A	B	1,2,3,4 (4 - optional)	5,6
Inspection	Every lining replacement			

HAND BRAKE LEVER

- Hand brake lever receives force from the hand brake cable and transfers to both the lined shoe to actuate the brake.
- Hand brake lever is assemble to the lined shoe with pivot pin.
- In some brake, the hand brake lever is riveted to lined shoe which cannot be dismantled.
- Inspect for any defect in the cable seating slot and strut seating slot during every lining replacement.
- For replace use genuine TVS-Girling kit hand brake lever.



Kit – kit hand brake lever.
Inspection – Every Lining replacement .