TVS-Girling

HYDRAULIC ACTUATION

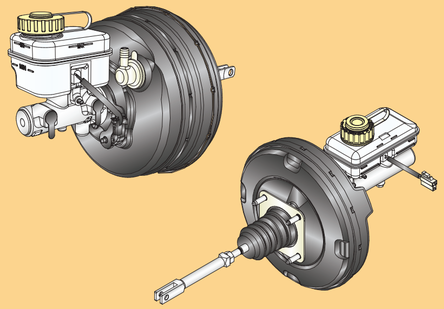
BRAKE BOOSTER (BRAKE SERVO)

The key function of the brake booster is to multiply the force that the driver applies on the brake pedal.

The booster achieves this by using vacuum from the engine from separate vacuum pump.

TVS-Girling brake boosters have a number of unique design features, including a tie bar design that provides high stiffness with reduced shell thickness.

This design also ensures that the booster is light. Brake boosters enable easy integration of additional functions, such as brake assist. They also provide an improved brake pedal feel.



BRAKE MASTER CYLINDER

The function of the brake master cylinder is to convert the force generated by the brake booster into hydraulic pressure.

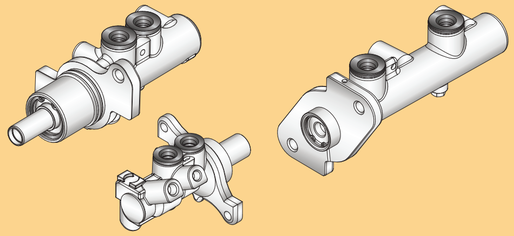
TVS-Girling offers the widest range of brake master cylinders, The present day hydraulic braking system uses Tandem master cylinder from diameter 15.58 to 38.1mm.

TVS-Girling brake master cylinders are manufactured as per the highest quality and environmental standards.

Especially the rubber parts are of particular importance. The aluminium body have the benefits of high corrosion resistance, durability and light weight.

Specially coated pistons ensure in extended cylinder lifetime. A brake master cylinder can be manufactured out of cast iron or aluminium.

Brake master cylinder should be overhauled with TVS-Girling service kits as per recommended maintenance schedule.



FLUID RESERVOIR

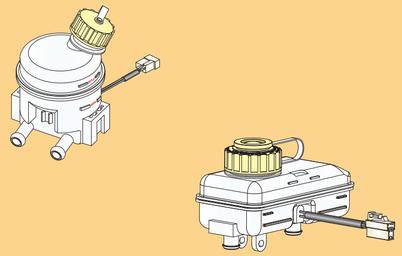
The brake fluid is part of hydraulic braking system and is stored in the fluid reservoir. The reservoir is either closely coupled with master cylinder or installed in a remote place. It is made of transparent material like polypropylene.

The reservoir is provided with partition to have reserve fluid volume for primary and secondary circuits.

This is necessary to avoid total fluid loss and brake failure incase of anyone circuit leaking.

The reservoir is marked with “MAX” and “MIN” to indicate the maximum & minimum fluid level.

Fluid Level warning indicator (either electronic or mechanical type) which swithes “ON” an indicator lamp when fluid level goes below MIN level.



BRAKE FLUID

TVS Girling heavy duty brake fluid caters for almost every type of vehicle, from those with drum brakes all-round to high performance vehicles with Anti lock braking system, Whether DOT3 or DOT4.

Driven by safety, all TVS-Girling heavy duty brake fluids are tested to the extreme and far exceed international DOT specifications.

This means that TVS-Girling brake fluids deliver higher performance in safety critical areas including boiling points and viscosity performance, as well as offering better anti-corrosion and rubber performance.

TVS-Girling brake fluids incorporate the latest technology to make all vehicles safer. Containing a blend of advanced lubricants, stabilisers, anti-oxidants and corrosion inhibitors.

Through continual research and development this careful mix helps to minimise wear, maximise performance and make sure brakes work in ambient temperatures from -40˚C to +50˚C.

BRAKE CLEANER

Brake cleaner is an essential choice for quicker, safer and easier braking repairs or servicing. As an example, to reuse the brake master cylinder reservoir it is essential to clean the reservoir with brake cleaner to avoid dirt causing internal leaks in the master cylinder. Specially formulated, TVS-Girling brake cleaner makes up an important part of TVS-Girling comprehensive braking system service range and are marketed under trade name “EzClean”

- Safe brake repair
- Fast and effective
- Quick evaporation
- CFC free (chlorofluorocarbons)
- Bio-degradable
- Safe on rubber components

For your convenience, TVS-Girling brake cleaner is available in two sizes: 500ml and 100ml aerosol that works at all angles.

This unit can even be used upside down and is perfect for tight and awkward spaces.

CLUTCH CYLINDER

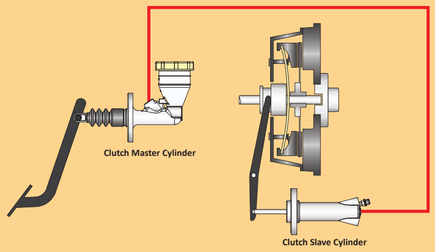
The hydraulic clutch actuation consists of master cylinder, Slave cylinder and connection pipe.

BIPL use cast iron, aluminium and special automotive plastics as the main materials. The clutch cylinders are available from diameter 15.58 to 25.4 mm. It is important to bleed the clutch system together with the brakes.

Brake fluid should be replaced as per recommended maintenance schedule.

Clutch cylinder should be overhauled with TVS-Girling service kits as per recommended maintenance schedule.

Always check user manual or the instruction on the reservoir cap for correct brake fluid specification.



BRAKE HOSES

TVS-Girling offer the widest range of brake hoses.

TVS-Girling offer high-pressure low expansion hoses for use with braking system and clutch actuation. Here are some of the main features of TVS-Girling brake hoses:

- High stability against ozone – low brittle tendency
- High flexibility over the life time
- High resistance to atmosphere (humidity)
- High thermal resistance
- Low expansion rate of the hose – superior pedal feel
- High chemical resistance
- High resistivity against aging and atmospheric conditions
- Extremely resistant against fuels and greases

Brake hoses need to be checked especially for chafing, cuts, general deterioration and leakage.

PROPORTIONATING VALVES

Valves are situated between master cylinder and rear axle brakes.

Their function is to avoid over braking (locked wheels) on the rear axle. Due to the dynamic weight transfer to the front axle brakes, the brake force has to be transferred to the front axle as well. Therefore the brake pressure has to be limited or reduced on the rear axle. The driver will realise it when the front of the car is “diving” while braking. TVS-Girling has a range of valves to suit to various category of vehicle.

PCRV – Pressure conscious regulating valve

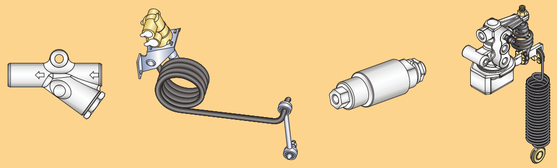
LCRV – Load conscious regulating valve

GP Valve – G. Proportionating valve

LSPV – Load sensing pressure regulating valve

A special pressure valve is the load conscious regulating valve. It has in addition a lever sensing the load of the vehicle and adjusting automatically the hydraulic pressure, depending on the load.

If the pressure valve is not working correctly a rear wheel could be locked during braking. If rear axle brake is locked (car has no ABS) the car starts to yaw (turn around its vertical axis) and the driver could lose control.



BRAKE FLUID TESTER

Used to measure the brake fluid boiling point.

Naturally brake fluid in a vehicle’s braking system will absorb more moisture under conditions of high humidity.

If brake fluid is not changed as per recommendation, higher wear of master cylinder rubber parts due to corrosion will be the result - visible as black coloured brake fluid.

In this case brake fluid needs to be replaced immediately, otherwise it will do harm to systems. The reason is that brake fluid can boil and the brakes lose their performance resulting in a much longer braking distance!

To follow the service intervals, including brake fluid change will extend the life of actuation products. With TVS-Girling easy check provides a comprehensive hand tool to check the brake fluid boiling point temperature.

If brake fluid boiling point temperature is below 160°C replace with fresh brake fluid.

BEST PRACTICE FOR BEST BRAKING

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Brakes India Private Limited

Always use genuine **TVS-Girling** Products