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**SPIDERTRAX**  
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## PROPORTIONING VALVE (PPV-002) KIT INSTRUCTIONS

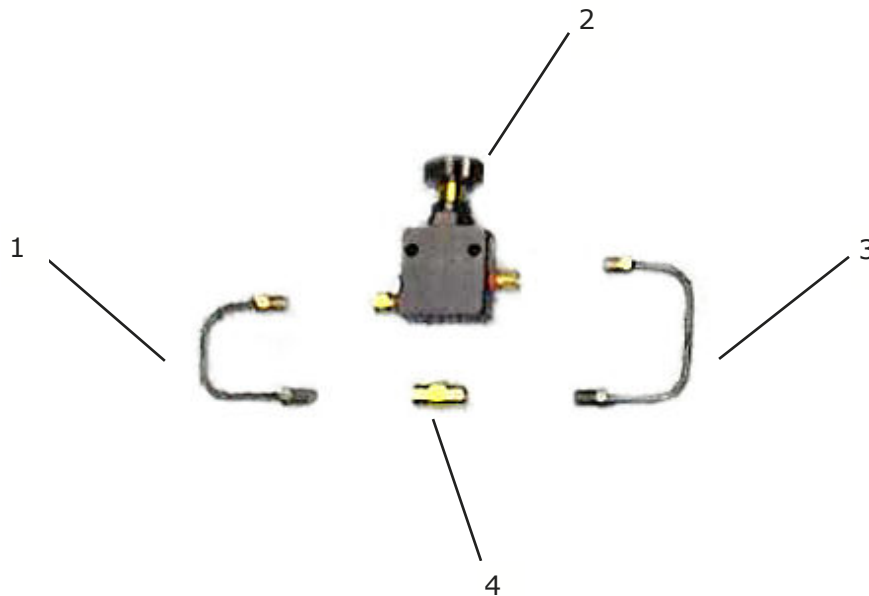
### **\*\*WARNING\*\***

**BRAKE PROPORTIONING SHOULD ONLY BE PERFORMED BY THOSE EXPERIENCE IN BRAKE AND PROPORTIONING SYSTEMS. FAILURE TO PROPERLY PROPORTION THIS BRAKE SYSTEM CAN RESULT IN SERIOUS INJURY OR EVEN DEATH.**

### **GENERAL DESCRIPTION**

The Proportioning Valve Kit is used to bias rear disc brakes in the Suzuki Samurai. This kit installs by the master cylinder and connects to the rear brake line. By passing brake fluid from the master cylinder through the proportioning valve to the rear brake line, brake pressure can be reduced. By reducing the rear brake pressure, proper brake bias can be achieved.

The kit comes complete with a proportioning valve and brake lines to connect proportioning valve to the master cylinder. The Proportioning Valve Kit requires no special tools to install.



1. PV-104: PV Out/Metric Union Line
2. PV-101: Proportioning Valve
3. PV-105: Master Cylinder/PV In Line
4. PV-103: Metric Union

**Fig. 1**

## INSTALLATION

1. Double check to see proper PV kit has been purchased. The PV-02 kit is only for vehicles with 1 brake hose feeding the rear axle brake lines. If 2 brake hoses are feeding the rear axle brake lines, PV-01 kit needs to be purchased.
2. Hand tighten the Proportioning Valve Kit assembly to the master cylinder in the following order:
  - A) Disconnect brake line from master cylinder port closest to firewall.
  - B) Connect PV-105 from master cylinder port (closest to firewall) to proportioning valve IN.
  - C) Connect proportioning valve to end of PV-105.
  - D) Connect PV-104 from proportioning valve OUT to PV-103.
  - E) Connect PV-103 to disconnected brake line from step a.



**Fig 2**

3. Verify assembly is correct and tighten all brakeline and proportioning valve fittings.

## PROPORTIONING VALVE CALIBRATION

4. Rotate proportioning valve dial counterclockwise completely. This will fully decrease rear brake pressure.
5. Check tires for proper tire pressure. Tires with improper tire pressure will greatly effect this calibration procedure.
6. Locate an open dry lot to perform this calibration procedure. Calibration procedure requires at least 2 people to perform (1 Driver, 1 Observer).
7. Drive vehicle slowly and apply brakes to ensure calipers are functioning. If vehicle pulls hard in one direction when brakes are applied, calipers need inspection. **Do not perform this calibration procedure if calipers are not functioning properly.** Consult Suzuki service manual for inspection procedure.
8. In an open lot, drive vehicle 20 mph and apply brakes in an attempt to lock tires. The Observer needs to watch behavior of tires outside the vehicle. When braking, the Observer will see one of three possible situations:
  - A) Front and rear tires lock simultaneously and equally.
  - B) Front tires lock completely with rear tires slightly chirping (on the verge of locking).
  - C) Front tires not locking at all and rear locking completely.
9. Proper brake bias will result when situation B in step 8 is reached. If situation A occurs, rotate proportioning valve dial clockwise 1/4 turn and repeat step 8. If situation C occurs, rotate proportioning valve counterclockwise 1/4 turn and repeat step 8. Although unlikely, if adjustment is necessary and no adjustment is left in proportioning valve dial, contact Spidertrax Inc. for assistance.

### **SPIDERTRAX INC.**

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