ISUZU 4L30E

SOLENOID CODES STORED WITH FAILSAFE

COMPLAINT: The vehicle comes in for a fluid change, after the fluid change is completed, the transmission is in failsafe, in some instances the TCM is found to be faulty. ***None of these complaints existed before the fluid change.***

CAUSE: The internal wire harness in the main valve body area, where the filter is located, is encased in a plastic conduit which hardens over a period of time, (Refer to Figure 1).
When the filter is replaced, it can be pushed up against the wire harness, See Figure 2, causing the conduit to break up in sections. This can expose a wire splice in the internal harness causing it to come into contact with the valve body resulting in a short to power or ground, See Figure 3, causing the above complaints.
The type of failure that will occur depends on the year of the vehicle. 1990 to 1993 Isuzu vehicles were equipped with a Bosch TCM which controlled the solenoids on the power side. A short causes solenoid codes or a "Ground Control Relay fault, to store and a failsafe condition.
1994 and later vehicles are equipped with a Delco TCM which control the solenoids on the ground side. In addition to solenoid codes and failsafe, a short here will more than likely destroy the TCM because of a short to power.

CORRECTION: Verify the internal harness splice is covered with heat shrink or conduit that can be "zip tied" to the harness.
As a side note, this transmission is also in Cadillac Catera. The solenoids in these vehicles are controlled on the ground side. Therefore it is possible to have the same TCM failure and or a P1625 indicating a TCM fault. Note: there have been many instances that by unplugging the rear harness connector the P1625 code would go away which would indicate that the TCM may be functional after the short in the harness is covered.

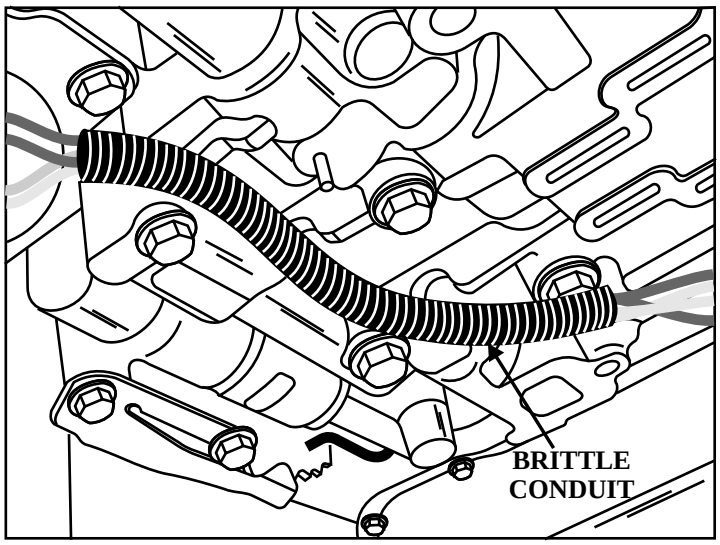

Figure 1

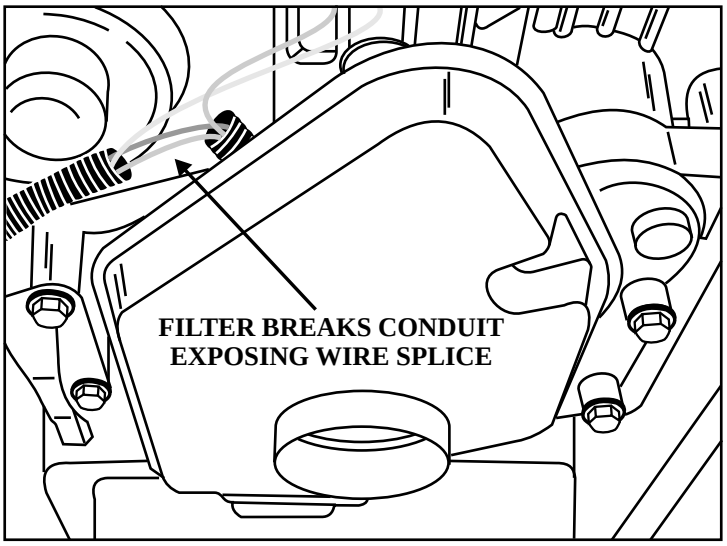

Figure 2

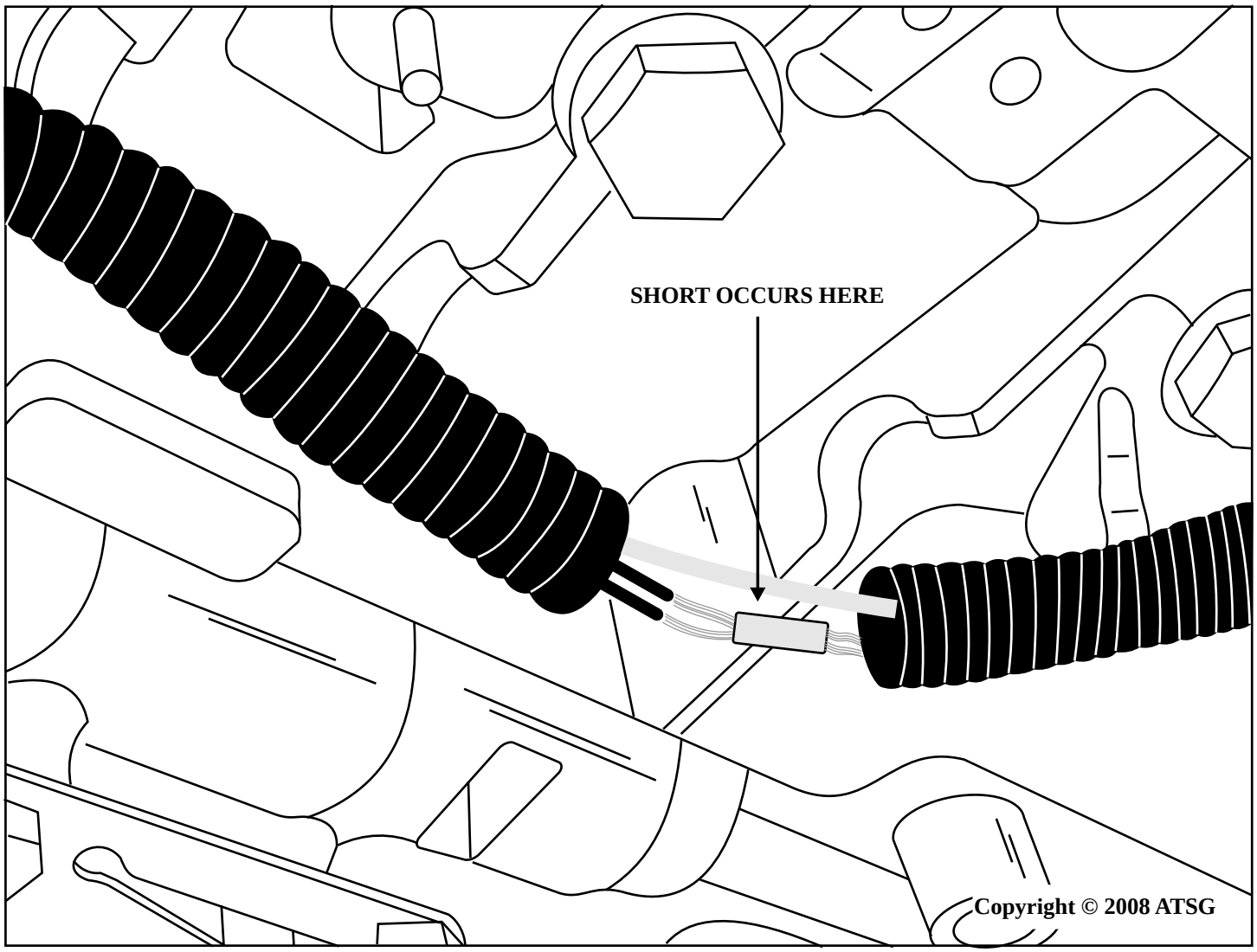

Figure 3