

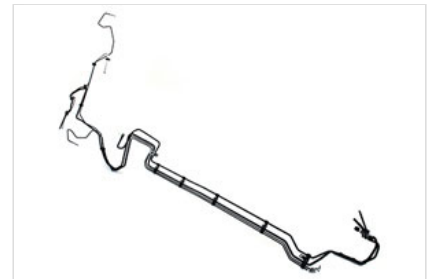
Overview

Cluster Tubes are assemblies of integrated fuel tubes, purge tubes, brake tubes, and other tubes that pass under the vehicle floor.

Each tube undergoes an end-forming process to shape the ends to fit the mating connections, after which the tubes are bent and secured together in a plastic clamp. The bending process is performed using benders made in-house.

At Sanoh, we have developed a variety of benders that utilize different bending methods. By selecting the processing method most suitable for a product's configuration, and at times combining multiple methods, we have the capability to achieve a variety of bending configurations.

Conventionally, rubber hose and hose bands have been used to connect fuel tubes and purge tubes to engines and fuel tanks; however, replacing this older technology with Sanoh plastic tubing and quick connectors increases performance and helps to achieve weight savings. In addition, the integration of plastic tubing and steel tubing lowers transportation costs and assembly costs.



Features

1. Benders are designed for a variety of bending methods, enabling most suitable method to be used for a given configuration.
2. By using plastic tubing and quick connectors, working efficiency is improved and costs are lowered.
3. Steel tubing, plastic tubing, and quick connectors are designed and manufactured in-house, which enables comprehensive development that combines these products.
4. Equipment for cluster tubes is designed and fabricated entirely in-house.

Primary Applications

Automotive cluster tubes (fuel tubes, purge tubes, brake tubes, etc.)