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(54) **NOISE CONTROL TYPE INTAKE HOSE**

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(57) **ABSTRACT**

A noise control type intake hose adapted to improve a noise reducing function to increase the productivity and minimize space in the intake system. The noise control type intake hose comprises an intake hose, a hose expanding part formed at a certain portion of the intake hose, an inner cover formed inside the hose expanding part, a wall formed for obtaining a sealed area between the hose expanding part and the inner cover, and an inner hose protruding out from the inner cover to interconnect the inner side of the intake hose and the sealed area.

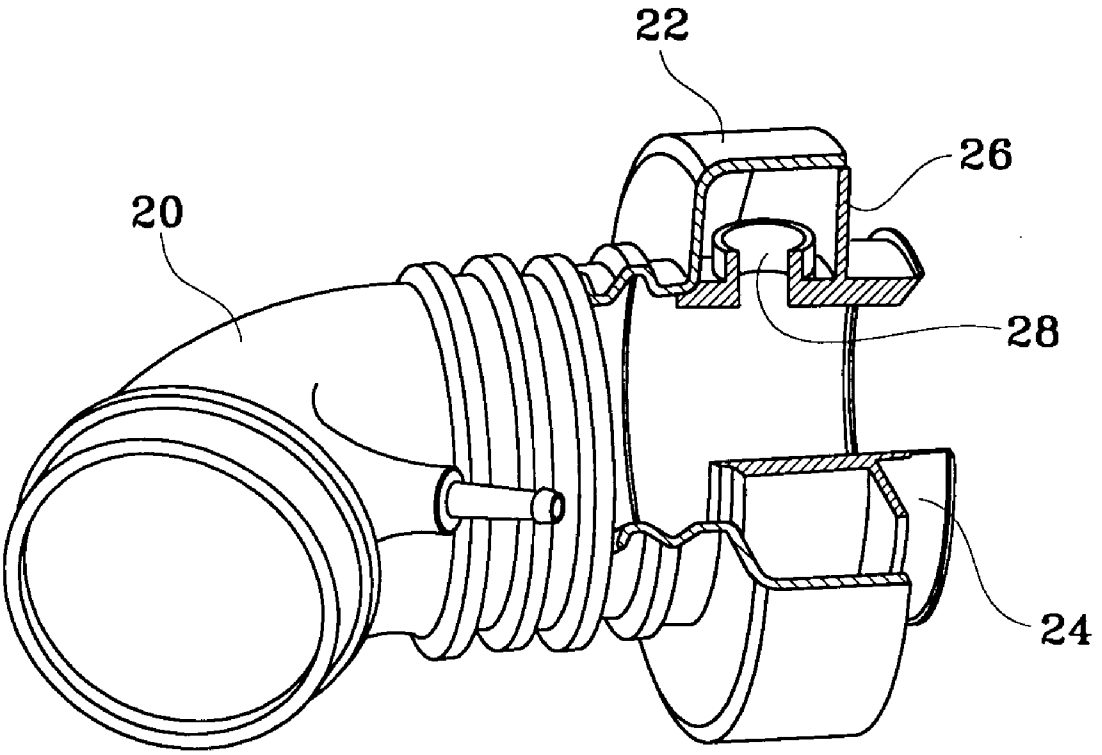
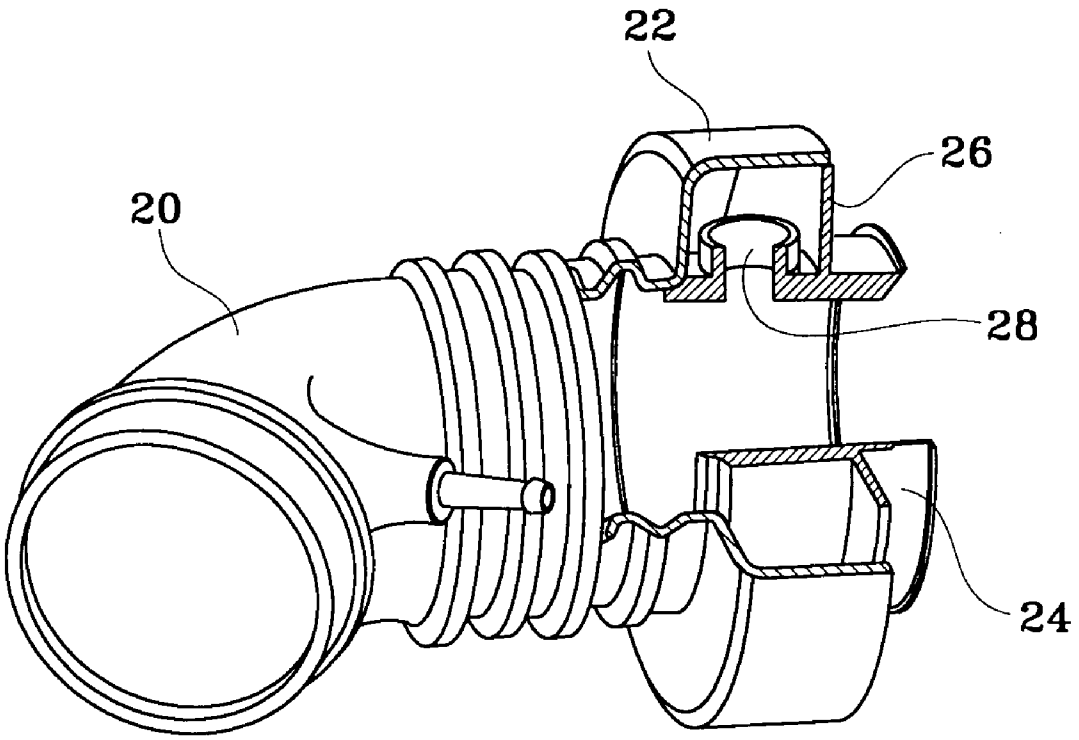


FIG. 1



NOISE CONTROL TYPE INTAKE HOSE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to Korean Application No. 10-2003-0069566, filed on Oct. 7, 2003, the disclosure of which is incorporated fully herein by reference.

FIELD OF THE INVENTION

[0002] Generally, the present invention relates to a noise control intake hose adapted to reduce noise generated from the intake hose of a vehicle intake system.

BACKGROUND OF THE INVENTION

[0003] Typically, an intake system of a vehicle is used for purifying air intake into an engine and for dampening intake noise generated from the engine. The intake system is typically constituted by an intake hose, an air filter, and an air duct. However, there is a drawback in the intake hose designed for airflow in that it lacks a noise reducing function.

SUMMARY OF THE INVENTION

[0004] An embodiment of the present invention provides an intake hose integrally formed with a noise control device for improving the noise reducing function, thereby increasing the productivity and minimize space in the intake system.

[0005] In a preferred embodiment, the noise control type intake hose comprises an intake hose of an intake system for a vehicle. A hose expanding part is formed at a certain portion of the intake hose. An inner cover is formed inside the hose expanding part. A wall is formed for obtaining a sealed area between the hose expanding part and the inner cover. An inner hose is formed from the inner cover to interconnect the inside of the intake hose and the sealed area.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] For a better understanding of the nature and objects of the present invention, reference should be made to the following detailed description with the accompanying drawings, in which:

[0007] **FIG. 1** illustrates a structure of a noise control type intake hose according to an embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0008] As shown in **FIG. 1**, a noise control type intake hose according to an embodiment of the present invention comprises a hose expanding part **22**. The hose expanding part **22** expands the hose to a predetermined width at a certain portion of an intake hose **20**. An inner cover **24** is formed inside the hose expanding part **22**. A wall **26** is formed between the hose expanding part **22** and the inner cover **24** for sealing an inner portion of the hose expanding part **22**.

[0009] In order for the sealed area formed between the inner cover **24** and the hose expanding part **22** via the wall **26** to interconnect with the inner side of the intake hose **20**, an inner hose **28** protrudes out in a prescribed length from a certain portion of the inner cover **24** to face the inner portion of the hose expanding part **22**. If the inner hose **28** is extended in length inside the hose expanding part **22**, low-frequency noise emitted from the intake hose **20** is reduced. On the other hand, if the length of the inner hose **28** is shortened, high-frequency noise of the intake hose **20** is reduced. Thus, it is preferable to adjust the length of the inner hose **28** according to the desired frequency to be reduced in relation to the intake hose **20**.

[0010] The hose expanding part **22**, inner cover **24**, wall **26**, and inner hose **28** installed in the intake hose **20** are preferably integrally formed by molding. The hose expanding part **22** according to the embodiment of the present invention is formed at a certain portion of the intake hose **20** of the intake system. The inner cover **24** is formed inside the hose expanding part **22**. The wall **26** is installed to form a certain sealed area between the hose expanding part **22** and the inner cover **24**. The inner hose **28** extends out from the inner cover **24** to form a hole thereto, thereby interconnecting the inner side of the intake hose **20** and the sealed area formed inside the hose expanding part **22**.

[0011] The sealed area between the hose expanding part **22** and inner cover **24** functions as a resonator, thereby improving the noise reducing function generated from the intake hose **20**. In order to improve the noise reducing function of a low-frequency noise, the inner hose **28** is extended in length, while the inner hose **28** is shortened in length for improving the noise reducing function of a high-frequency noise.

[0012] As apparent from the forgoing, there in an advantage in the present invention in that the intake hose of the intake system for a vehicle extends at a certain portion thereof, and the wall is mounted between the inner side of the expanded hose and an inner cover so as to obtain a sealed area therebetween. An inner hose is also formed for interconnecting the sealed area and the inner side of the intake hose, thereby improving the noise reducing function of the intake hose in a simple structure.

[0013] The present invention may be modified, changed, replaced, or added as long as it is under the gist of the present invention and within the scope of claims.

What is claimed is:

1. A noise control type intake hose, comprising:

an intake hose;

a hose expanding part formed at a certain portion of said intake hose;

an inner cover formed inside said hose expanding part;

a wall formed for obtaining a sealed area between said hose expanding part and said inner cover; and

an inner hose protruding out from said inner cover for interconnecting the inside of said intake hose and said sealed area.

2. The intake hose as defined in claim 1, wherein said inner hose is extended in length for reducing low-frequency noise emitted from said intake hose.

3. The intake hose as defined in claim 1, wherein said inner hose is shortened in length for reducing high-frequency noise emitted from said intake hose.

4. The intake hose as defined in claim 1, wherein said hose expanding part, said inner cover, said wall, and said inner hose installed in said intake hose are integrally formed by molding.

5. A noise control intake hose, comprising:

an intake hose configured and dimensioned with an expanded portion; and

an inner member couplable with the expanded portion, wherein said inner member is adjustable in length to function as a resonator and reduce intake noise.

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