

ABSTRACT

A vehicle and a vehicle body collision energy absorbing device thereof are disclosed by this application. A coupler (8) of the vehicle body collision energy absorbing device includes
5 a coupler body (81) and an expansion pipe (82) that absorbs energy and expands relative to the coupler body, and the coupler body (81) is arranged on a coupler mounting plate (1). A vehicle body structure (2) is provided with an energy absorbing cavity, and the coupler mounting plate (1) and the expansion pipe (82) are arranged in the energy absorbing cavity. The vehicle body collision energy absorbing device further includes a compression energy
10 absorbing unit (6) arranged in the energy absorbing cavity, a locking device (3) that locks the coupler mounting plate (1) relative to the energy absorbing cavity, a retreat support (5) arranged between the coupler mounting plate (1) and the compression energy absorbing unit (6), and a shear pin (4) connecting the vehicle body structure (2) with the retreat support (5). One end of the compression energy absorbing unit (6) abuts against a rear plate of the energy
15 absorbing cavity. The retreat support (5) is slidably arranged in the energy absorbing cavity, and is provided with a locking component and a linkage structure. The locking component unlocks the locking device (3) after being away from the coupler mounting plate (1), and the linkage structure has a positioning structure axially positioned with the expansion pipe (82). The vehicle body collision energy absorbing device improves the energy absorption effect and
20 ensures the safety of passengers' lives and properties.