WHAT IS CLAIMED IS:

[Claim 1]. A crash attenuator comprising:

a frame comprising a first frame member having opposite first and second sides and a second frame member having opposite first and second sides, the second frame member moveable relative to the first frame member between a pre-impact configuration and an impact configuration, wherein the first and second frame members are rigidly connected with a hinge assembly in the pre-impact configuration and wherein the first and second frame members are hingedly connected with the hinge assembly in the impact configuration, wherein the hinge assembly comprises:

a release plate fixedly connected to the first side of the first frame member, wherein the release plate comprises a fastener opening and a slot extending between the fastener opening and an edge of the release plate;

a hinge plate spaced apart from the release plate, wherein the hinge plate is fixedly connected to the second side of the first frame member and is fixedly connected to the second frame member; and

a fastener extending through the fastener opening and connecting the release plate to the second frame member at a location spaced apart from and free of any engagement with the hinge plate when the first and second frame members are in the pre-impact configuration, wherein the fastener is releasable through the slot as the first and second frame members are moveable from the pre-impact configuration to the impact configuration.

[Claim 2]. The crash attenuator of claim 1, wherein the hinge plate comprises a first flange connected to the first frame member and a second flange connected to the second frame member, and wherein the release plate comprises a first flange connected to the first frame member and a second flange connected to the second frame member, wherein the first and second flanges of the hinge plate are non-parallel and the first and second flanges of the release plate are non-parallel.

[Claim 3]. The crash attenuator of claim 2 wherein the first flange of the hinge plate is parallel to the first flange of the release plate.

[Claim 4]. The crash attenuator of claim 3 wherein the second flange of the hinge plate extends away from the release plate and the second flange of the release plate extends away from the hinge plate.

[Claim 5]. The crash attenuator of claim 1 wherein the fastener comprises a bolt having a head, and further comprising a washer disposed between the head of the bolt and a surface of the release plate.

[Claim 6]. The crash attenuator of claim 1 wherein the fastener opening has a diameter and the slot has a width, wherein the width is less than the diameter.

[Claim 7]. The crash attenuator of claim 6 wherein the fastener opening has a central axis, and wherein the slot communicates with the fastener opening offset from the central axis.

[Claim 8]. The crash attenuator of claim 7 wherein the slot has a side edge defining a tangent to an outer edge of the fastener opening.

[Claim 9]. The crash attenuator of claim 8 wherein the fastener opening and slot, in combination, are P shaped.

[Claim 10]. The crash attenuator of claim 1 wherein the fastener opening comprises a first fastener opening, the slot comprises a first slot and the fastener comprises a first fastener, and wherein the release plate comprises a second fastener opening spaced apart from the first fastener opening and a second slot extending between the second fastener opening and the edge of the release plate; and wherein the second fastener extends through the second fastener opening and connects the release plate to the second frame member when the first and second frame members are in the pre-impact configuration, and wherein the second fastener is releasable through the second slot as the first and second frame members are moveable from the pre-impact configuration to the impact configuration.

[Claim 11]. The crash attenuator of claim 1 wherein the release plate comprises a first flange fixedly connected to the first frame member and a second flange extending from the first flange in a non-parallel relationship.

[Claim 12]. The crash attenuator of claim 11 wherein the first and second flanges are oblique.

[Claim 13]. The crash attenuator of claim 11 wherein the release plate further comprises a gusset flange connected to the first flange.

[Claim 14]. A crash attenuator comprising:

a frame comprising a first frame member and a second frame member moveable relative to each other between a pre-impact configuration and an impact configuration, wherein the first and second frame members are rigidly connected with a hinge assembly in the pre-impact configuration and wherein the first and second frame members are hingedly connected with the hinge assembly in the impact configuration, wherein the hinge assembly comprises:

a release plate fixedly connected to the first frame member, wherein the release plate comprises a first flange fixedly connected to the first frame member, a second flange extending from the first flange in a non-parallel relationship, and a gusset flange connected to the first flange, wherein the gusset flange comprises a free edge disposed along a surface of the second flange, and wherein the second flange comprises a fastener opening and a slot extending between the fastener opening and an edge of the release plate; and

a fastener extending through the fastener opening and connecting the second flange of the release plate to the second frame member when the first and second frame members are in the pre-impact configuration, wherein the fastener is releasable through the slot as the first and second frame members are moveable from the pre-impact configuration to the impact configuration.

[Claim 15]. The crash attenuator of claim 2 wherein the hinge plate is bendable as the first and second frame members are moveable from the pre-impact configuration to the impact configuration.

[Claim 16]. A crash attenuator comprising:

a frame comprising a first frame member and a second frame member moveable relative to each other between a pre-impact configuration and an impact configuration, wherein the first and second frame members are rigidly connected with a hinge assembly in the pre-impact configuration and wherein the first and second frame members are hingedly connected with the hinge assembly in the impact configuration, wherein the hinge assembly comprises:

a hinge plate fixedly connected to the first and second frame members;

a release plate fixedly connected to the first frame member, wherein the release plate comprises a first fastener opening and a first slot extending between the first fastener opening and an edge of the release plate, and a second fastener opening spaced apart from the first fastener opening and a second slot extending between the second fastener opening and the edge of the release plate; and

a first fastener extending through the first fastener opening and a second fastener extending through the second fastener opening, wherein the first and second fasteners connect the release plate to the second frame member free of any engagement with the hinge plate when the first and second frame members are in the pre-impact configuration, and wherein the first and second fasteners are releasable through the first and second slots respectively as the first and second frame members are moveable from the pre-impact configuration to the impact configuration.

[Claim 17]. The crash attenuator of claim 16 wherein the hinge plate is bendable as the first and second frame members are moveable from the pre-impact configuration to the impact configuration.

[Claim 18]. The crash attenuator of claim 16 wherein the hinge plate comprises a first flange connected to the first frame member and a second flange connected to the second frame member, and wherein the release plate comprises a first flange connected to the first frame member and a second flange connected to the second frame member, wherein the first and second flanges of the hinge plate are non-parallel and the first and second flanges of the release plate are non-parallel.

[Claim 19]. The crash attenuator of claim 18 wherein the first flange of the hinge plate is parallel to the first flange of the release plate.

[Claim 20]. The crash attenuator of claim 19 wherein the second flange of the hinge plate extends away from the release plate and the second flange of the release plate extends away from the hinge plate.

[Claim 21]. The crash attenuator of claim 18 wherein the release plate further comprises a gusset flange connected to the first flange.

[Claim 22]. The crash attenuator of claim 21 wherein the gusset flange comprises a free edge disposed along a surface of the second flange.

[Claim 23]. The crash attenuator of claim 16 wherein the first fastener comprises a bolt having a head, and further comprising a washer disposed between the head of the bolt and a surface of the release plate.

[Claim 24]. The crash attenuator of claim 16 wherein the first fastener opening has a diameter and the first slot has a width, wherein the width is less than the diameter.

[Claim 25]. The crash attenuator of claim 24 wherein the fastener opening has a central axis, and wherein the slot communicates with the fastener opening offset from the central axis.

[Claim 26]. The crash attenuator of claim 25 wherein the first slot has a side edge defining a tangent to an outer edge of the first fastener opening.

[Claim 27]. The crash attenuator of claim 26 wherein the first fastener opening and the first slot, in combination, are P shaped.