CLAIMS

What is claimed is:

1. A seal assembly that seals an interface between adjacent liner sections comprising:

a seal carrier mounted to a first plate;

a seal body overlapping at least a portion of the seal carrier to define a plane of travel between the seal body and the seal carrier;

at least one resilient member configured to bias the seal body against a second plate; and

wherein the seal carrier includes an indented portion that extends radially inward of the plane of travel.

2. The seal assembly according to claim 1 wherein the seal carrier comprises a carrier body having a first linear portion fixed to the first plate and a second linear portion in sliding engagement with the seal body along the plane of travel, and wherein the indented portion provides a transition between the first and second linear portions.

3. The seal assembly according to claim 2 wherein seal body comprises an annular component having a center axis, and wherein the carrier body includes an inner surface facing the center axis and an outer surface facing away from the center axis, and wherein the outer surface of the indented portion is spaced radially inwardly toward the center axis and away from the plane of travel by a distance.

4. The seal assembly according to claim 3 wherein the indented portion comprises a U-shape wherein a bottom of the U-shape is radially closer to the center axis than an inner surface of the second linear portion.

5. The seal assembly according to claim 2 wherein the first and second linear portions are orientated transversely relative to each other.

6. The seal assembly according to claim 1 wherein the seal body comprises a J-shape.

7. The seal assembly according to claim 6 wherein the J-shape comprises a first leg biased against the second plate, a second leg sliding along the plane of travel, and a curved portion transitioning between the first and second legs, and wherein the first leg is shorter than the second leg.

8. The seal assembly according to claim 1 including a clip fixed to the seal body, the resilient member having a first end reacting against the carrier body at the first plate and a second end reacting against the clip.

9. The seal assembly according to claim 8 including a retainer having a base portion fixed to the first plate and an arm portion extending outwardly from the first plate to overlap at least a portion of the clip.

10. The seal assembly according to claim 1 wherein the seal carrier includes a plurality of holes configured to meter flow into an exhaust gas flow path.

11. The seal assembly according to claim 10 wherein the plurality of holes are formed within the indented portion.

12. The seal assembly according to claim 1 wherein the first plate is configured for attachment to a first engine exhaust liner and the second plate is configured for attachment to a second engine exhaust liner that cooperate to define an exhaust gas flow path

13. The seal assembly according to claim 12 wherein the exhaust gas flow path comprises a core flow that flows internally through the first and second engine exhaust liners and including a bypass air flow path provided external to the first and second engine exhaust liners, the bypass air flow path defined within a fan nacelle.

14. A sealed joint assembly comprising:

a first exhaust liner;

a first plate fixed to the first exhaust liner;

a second exhaust liner cooperating with the first exhaust liner to define an exhaust gas passageway having a center axis;

a second plate fixed to the second exhaust liner;

a seal assembly positioned between the first and second exhaust liners, the seal assembly comprising a seal carrier mounted to the first plate, a seal body overlapping at least a portion of the seal carrier to define a plane of travel between the seal body and the seal carrier, and at least one resilient member configured to bias the seal body against the second plate, wherein the seal carrier includes an indented portion that extends radially inward of the plane of travel.

15. The sealed joint assembly according to claim 14 wherein the seal carrier comprises a carrier body having a first linear portion fixed to the first plate and a second linear portion in sliding engagement with the seal body along the plane of travel, and wherein the indented portion provides a transition between the first and second linear portions.

16. The sealed joint assembly according to claim 15 wherein the first and second linear portions are orientated transversely relative to each other and wherein the indented portion comprises a U-shape with a bottom of the U-shape being radially closer to the center axis than a bottom surface of the second linear portion.

17. The sealed joint assembly according to claim 15 wherein the seal body comprises a J-shape.

18. The sealed joint assembly according to claim 17 wherein the J-shape comprises a first leg biased against the second plate, a second leg sliding along the plane of travel, and a radius portion that transitions between the first and second legs, and wherein the first leg is shorter than the second leg.

19. The sealed joint assembly according to claim 14 including a clip fixed to the seal body, the resilient member having a first end reacting against the carrier body at the first plate and a second end reacting against the clip.

20. The seal assembly according to claim 14 wherein the seal carrier includes a plurality of holes configured to meter flow into an exhaust gas flow path, and wherein the plurality of holes are formed within the indented portion.

21. The seal assembly according to claim 1 wherein the seal carrier defines a center axis and includes a linear portion at the plane of travel, and wherein the indented portion comprises a surface that curves radially inward from the linear portion toward the center axis to form an enlarged gap between the at least one resilient member and the seal carrier.

22. The seal assembly according to claim 21 wherein the linear portion of the seal carrier comprises a first linear portion that is in sliding engagement with the seal body along the plane of travel, and wherein the seal carrier includes a second linear portion fixed to the first plate, and wherein a radially outer surface of the first linear portion is spaced from the resilient member by a first distance and wherein the surface of the indented portion is spaced from the resilient member by a second distance that is greater than the first distance to form the enlarged gap.

23. The seal assembly according to claim 1 wherein the seal carrier defines a center axis, and wherein the indented portion is in an overlapping relationship with the at least one resilient member in a radial direction.

24. The seal assembly according to claim 1 wherein the seal carrier has a first surface in abutting engagement with the first plate and a second surface facing opposite the first surface, and including a retainer that abuts against the second surface.

25. The seal assembly according to claim 1 including a clip fixed to the seal body, wherein the clip includes a first end that is directly fixed to the seal body and a second end that extends in a radially outward direction.

26. The sealed joint assembly according to claim 14 wherein the seal carrier includes a linear portion at the plane of travel, and wherein the indented portion comprises a surface that curves radially inward from the linear portion toward the center axis to form an enlarged gap between the at least one resilient member and the seal carrier.

27. The sealed joint assembly according to claim 26 wherein the linear portion of the seal carrier comprises a first linear portion that is in sliding engagement with the seal body along the plane of travel, and wherein the seal carrier includes a second linear portion fixed to the first plate, and wherein a radially outer surface of the first linear portion is spaced from the

resilient member by a first distance and wherein the surface of the indented portion is spaced from the resilient member by a second distance that is greater than the first distance to form the enlarged gap.

28. The sealed joint assembly according to claim 14 wherein the indented portion is in an overlapping relationship with the at least one resilient member in a radial direction.

29. The sealed joint assembly according to claim 14 wherein the seal carrier has a first surface in abutting engagement with the first plate and a second surface facing opposite the first surface, and including a retainer that abuts against the second surface.

30. The sealed joint assembly according to claim 14 including a clip fixed to the seal body, wherein the clip includes a first end that is directly fixed to the seal body and a second end that extends in a radially outward direction.

Claims

What is claimed is:

1. A seal assembly that seals an interface between adjacent liner sections comprising:

a seal carrier mounted to a first plate;

a seal body overlapping at least a portion of the seal carrier to define a plane of travel between the seal body and the seal carrier;

at least one resilient member configured to bias the seal body against a second plate;

wherein the seal carrier includes an indented portion that extends radially inward of the plane of travel; and

a clip fixed to the seal body, wherein the clip includes a first end that is directly fixed to the seal body and a second end that extends in a radially outward direction.

2. The seal assembly according to claim 1 wherein the seal carrier comprises a carrier body having a first linear portion fixed to the first plate and a second linear portion in sliding engagement with the seal body along the plane of travel, and wherein the indented portion provides a transition between the first and second linear portions.

3. The seal assembly according to claim 2 wherein seal body comprises an annular component having a center axis, and wherein the carrier body includes an inner surface facing the center axis and an outer surface facing away from the center axis, and wherein the outer surface of the indented portion is spaced radially inwardly toward the center axis and away from the plane of travel by a distance.

4. The seal assembly according to claim 3 wherein the indented portion comprises a U-shape wherein a bottom of the U-shape is radially closer to the center axis than an inner surface of the second linear portion.

5. The seal assembly according to claim 2 wherein the first and second linear portions are orientated transversely relative to each other.

6. The seal assembly according to claim 1 wherein the seal body comprises a J-shape.

7. The seal assembly according to claim 6 wherein the J-shape comprises a first leg biased against the second plate, a second leg sliding along the plane of travel, and a curved portion transitioning between the first and second legs, and wherein the first leg is shorter than the second leg.

8. The seal assembly according to claim 1 wherein the resilient member has a first end reacting against the carrier body at the first plate and a second end reacting against the clip.

9. The seal assembly according to claim 8 including a retainer having a base portion fixed to the first plate and an arm portion extending outwardly from the first plate to overlap at least a portion of the clip.

10. The seal assembly according to claim 1 wherein the seal carrier includes a plurality of holes configured to meter flow into an exhaust gas flow path.

11. The seal assembly according to claim 10 wherein the plurality of holes are formed within the indented portion.

12. The seal assembly according to claim 1 wherein the first plate is configured for attachment to a first engine exhaust liner and the second plate is configured for attachment to a second engine exhaust liner that cooperate to define an exhaust gas flow path

13. The seal assembly according to claim 12 wherein the exhaust gas flow path comprises a core flow that flows internally through the first and second engine exhaust liners and including a bypass air flow path provided external to the first and second engine exhaust liners, the bypass air flow path defined within a fan nacelle.

14. A sealed joint assembly comprising:

a first exhaust liner;

a first plate fixed to the first exhaust liner;

a second exhaust liner cooperating with the first exhaust liner to define an exhaust gas passageway having a center axis;

a second plate fixed to the second exhaust liner; and

a seal assembly positioned between the first and second exhaust liners, the seal assembly comprising a seal carrier mounted to the first plate, a seal body overlapping at least a portion of the seal carrier to define a plane of travel between the seal body and the seal carrier, and at least one resilient member configured to bias the seal body against the second plate, wherein the seal carrier includes an indented portion that extends radially inward of the plane of travel, and wherein the seal carrier has a first surface in abutting engagement with the first plate and a second surface facing opposite the first surface, and including a retainer that abuts against the second surface.

15. The sealed joint assembly according to claim 14 wherein the seal carrier comprises a carrier body having a first linear portion fixed to the first plate and a second linear portion in sliding engagement with the seal body along the plane of travel, and wherein the indented portion provides a transition between the first and second linear portions.

16. The sealed joint assembly according to claim 15 wherein the first and second linear portions are orientated transversely relative to each other and wherein the indented portion comprises a U-shape with a bottom of the U-shape being radially closer to the center axis than a bottom surface of the second linear portion.

17. The sealed joint assembly according to claim 15 wherein the seal body comprises a J-shape.

18. The sealed joint assembly according to claim 17 wherein the J-shape comprises a first leg biased against the second plate, a second leg sliding along the plane of travel, and a radius portion that transitions between the first and second legs, and wherein the first leg is shorter than the second leg.

19. The sealed joint assembly according to claim 14 including a clip fixed to the seal body, the resilient member having a first end reacting against the carrier body at the first plate and a second end reacting against the clip.

20. The seal assembly according to claim 14 wherein the seal carrier includes a plurality of holes configured to meter flow into an exhaust gas flow path, and wherein the plurality of holes are formed within the indented portion.

21. The seal assembly according to claim 1 wherein the seal carrier defines a center axis and includes a linear portion at the plane of travel, and wherein the indented portion comprises a surface that curves radially inward from the linear portion toward the center axis to form an enlarged gap between the at least one resilient member and the seal carrier.

22. A seal assembly that seals an interface between adjacent liner sections comprising:

a seal carrier mounted to a first plate;

a seal body overlapping at least a portion of the seal carrier to define a plane of travel between the seal body and the seal carrier;

at least one resilient member configured to bias the seal body against a second plate;

wherein the seal carrier includes an indented portion that extends radially inward of the plane of travel;

wherein the seal carrier defines a center axis and includes a linear portion at the plane of travel, and wherein the indented portion comprises a surface that curves radially inward from the linear portion toward the center axis to form an enlarged gap between the at least one resilient member and the seal carrier; and

wherein the linear portion of the seal carrier comprises a first linear portion that is in sliding engagement with the seal body along the plane of travel, and wherein the seal carrier includes a second linear portion fixed to the first plate, and wherein a radially outer surface of the first linear portion is spaced from the resilient member by a first distance and wherein the surface of the indented portion is spaced from the resilient member by a second distance that is greater than the first distance to form the enlarged gap.

23. The seal assembly according to claim 1 wherein the seal carrier defines a center axis, and wherein the indented portion is in an overlapping relationship with the at least one resilient member in a radial direction.

24. A seal assembly that seals an interface between adjacent liner sections comprising:

a seal carrier mounted to a first plate, wherein the seal carrier has a first surface in abutting engagement with the first plate and a second surface facing opposite the first surface;

a seal body overlapping at least a portion of the seal carrier to define a plane of travel between the seal body and the seal carrier, and wherein the seal carrier includes an indented portion that extends radially inward of the plane of travel;

at least one resilient member configured to bias the seal body against a second plate; and

a retainer that abuts against the second surface.

25. The sealed joint assembly according to claim 14 wherein the seal carrier includes a linear portion at the plane of travel, and wherein the indented portion comprises a surface that curves radially inward from the linear portion toward the center axis to form an enlarged gap between the at least one resilient member and the seal carrier.

26. A sealed joint assembly comprising:

a first exhaust liner;

a first plate fixed to the first exhaust liner;

a second exhaust liner cooperating with the first exhaust liner to define an exhaust gas passageway having a center axis;

a second plate fixed to the second exhaust liner;

a seal assembly positioned between the first and second exhaust liners, the seal assembly comprising a seal carrier mounted to the first plate, a seal body overlapping at least a portion of the seal carrier to define a plane of travel between the seal body and the seal carrier, and at least one resilient member configured to bias the seal body against the second plate, wherein the seal carrier includes an indented portion that extends radially inward of the plane of travel;

wherein the seal carrier includes a linear portion at the plane of travel, and wherein the indented portion comprises a surface that curves radially inward from the linear portion toward the center axis to form an enlarged gap between the at least one resilient member and the seal carrier; and

wherein the linear portion of the seal carrier comprises a first linear portion that is in sliding engagement with the seal body along the plane of travel, and wherein the seal carrier includes a second linear portion fixed to the first plate, and wherein a radially outer surface of the first linear portion is spaced from the resilient member by a first distance and wherein the surface of the indented portion is spaced from the resilient member by a second distance that is greater than the first distance to form the enlarged gap.

27. The sealed joint assembly according to claim 14 wherein the indented portion is in an overlapping relationship with the at least one resilient member in a radial direction.

28. A sealed joint assembly comprising:

a first exhaust liner;

a first plate fixed to the first exhaust liner;

a second exhaust liner cooperating with the first exhaust liner to define an exhaust gas passageway having a center axis;

a second plate fixed to the second exhaust liner;

a seal assembly positioned between the first and second exhaust liners, the seal assembly comprising a seal carrier mounted to the first plate, a seal body overlapping at least a portion of the seal carrier to define a plane of travel between the seal body and the seal carrier, and at least one resilient member configured to bias the seal body against the second plate, wherein the seal carrier includes an indented portion that extends radially inward of the plane of travel; and

a clip fixed to the seal body, wherein the clip includes a first end that is directly fixed to the seal body and a second end that extends in a radially outward direction.