Claims

What is claimed is:

1. A dual clutch travel joint system, comprising:
an inner-mandrel comprising:
a first connector on a downhole portion of the inner-mandrel, wherein the first connector comprises a first set of lugs and slots; and
a second connector on an uphole portion of the inner-mandrel, wherein the second connector comprises a second set of lugs and slots; and
an outer-mandrel comprising:
a third connector comprising a third set of lugs and slots positionable to mate with the first set of lugs and slots of the first connector to apply torque to the inner-mandrel while the inner-mandrel is in a tension arrangement with the outer-mandrel within a wellbore; and
a fourth connector comprising a fourth set of lugs and slots positionable to mate with the second set of lugs and slots of the second connector to apply torque to the inner-mandrel while the inner-mandrel is in a compression arrangement with the outer-mandrel within the wellbore.

2. The system of claim 1, wherein the inner-mandrel and the outer-mandrel are positionable to free-rotate with respect to one another while the inner-mandrel and the outer-mandrel are between the tension arrangement and the compression arrangement with one another.

3. The system of claim 1, further comprising a seal or a seal stack positionable between the first connector and the second connector of the inner-mandrel to maintain a hydraulic seal between a conduit of the inner-mandrel and an annulus of the wellbore.

4. The system of claim 1, wherein the first connector is integral to a portion of completion tubing extendable downhole within the wellbore from the outer-mandrel.

5. The system of claim 4, wherein the second connector is attachable to an uphole end of the portion of completion tubing comprising the first connector.

6. The system of claim 1, wherein the outer-mandrel further comprises:
a shear sub comprising at least one shear pin, wherein the at least one shear pin is positionable to shear upon receiving a compressive force from the outer-mandrel to enable

relative movement of the inner-mandrel from the tension arrangement to the compression arrangement or a free-rotation arrangement.

7. The system of claim 1, wherein the outer-mandrel further comprises:
a shear sub comprising at least one shear pin, wherein the shear sub is couplable to the inner-mandrel to maintain the inner-mandrel and the outer-mandrel in the tension arrangement, the compression arrangement, or a free-rotation arrangement prior to shearing of the at least one shear pin.

8. The system of claim 1, wherein the first connector and the second connector comprise a single piece of material, and wherein the inner-mandrel further comprises:
a seal positionable within a groove between the first connector and the second connector.

9. A method, comprising:
positioning a dual clutch travel joint within a wellbore;
applying tension on the dual clutch travel joint to form a first connection between a first set of lugs and slots on a downhole portion of an outer-mandrel of the dual clutch travel joint and a corresponding first set of lugs and slots on a downhole portion of an inner-mandrel of the dual clutch travel joint, the first connection enabling a first transfer of torque from the outer-mandrel to the inner-mandrel; and
applying compression on the dual clutch travel joint to form a second connection between a second set of lugs and slots on an uphole portion of the outer-mandrel and a corresponding second set of lugs and slots on an uphole portion of the inner-mandrel, the second connection enabling a second transfer of torque from the outer-mandrel to the inner-mandrel.

10. The method of claim 9, further comprising:
removing tension and compression on the dual clutch travel joint to disengage the first connection and the second connection to enable free-rotation between the inner-mandrel and the outer-mandrel.

11. The method of claim 10, further comprising:
manipulating one or more wellbore tools uphole from the travel joint during the free-rotation between the inner-mandrel and the outer-mandrel while preventing application of torque on a downhole portion of completion string coupled to the travel joint.

12. The method of claim 9, wherein applying the compression on the dual clutch travel joint shears at least one shearing pin to enable relative movement between the outer-mandrel and the inner-mandrel from the first connection to the second connection.

13. An inner-mandrel, comprising:

a first connector on a downhole portion of the inner-mandrel, the first connector positionable to receive torque from an outer-mandrel when the inner-mandrel is in a tension arrangement with the outer-mandrel, wherein the first connector comprises a first lug connector positionable to mate with a downhole sub of the outer-mandrel while the inner-mandrel is in the tension arrangement with the outer-mandrel; and

a second connector on an uphole portion of the inner-mandrel, the second connector positionable to receive torque from the outer-mandrel when the inner-mandrel is in a compression arrangement with the outer-mandrel, and wherein the second connector comprises a second lug connector positionable to mate with an uphole sub of the outer-mandrel while the inner-mandrel is in the compression arrangement with the outer-mandrel.

14. The inner-mandrel of claim 13, wherein the first connector and the second connector are positionable to rotate independently from the outer-mandrel when the first connector and the second connector are not engaged with the outer-mandrel.

15. The inner-mandrel of claim 13, further comprising:

at least one seal positionable between the first connector and the second connector to maintain a hydraulic seal between a conduit of the inner-mandrel and an annulus of a wellbore.

16. The inner-mandrel of claim 13, wherein the first connector and the second connector together comprise a single piece of material.