

Claims

1. A gas turbine engine washing cart comprising a platform (52) having a drip tray (58), a front wall (62) and lateral walls (64) that capture droplets (43) carried in the efflux or streams/droplets (40,42) from an engine during washing wherein the system comprises actuation means capable of rotating or elongating at least one wall (64, 62) between stowed and deployed positions and is characterised in that the washing cart (50) comprises a control system (148) for automatic operation of the actuation means and the control system is programmed with a set of actuator positions to deploy the walls (62, 64) or drip tray (58) to accommodate different engine sizes, configurations or washing operations.
2. A gas turbine engine washing cart as claimed in claim 1 wherein movement between stowed and deployed positions is a rotation of part or all of the wall (62, 64) or an elongation or shortening of the wall (64) relative to the platform (52).
3. A washing cart (50) as claimed in any one of claims 1-2 wherein the wall (62, 64) comprises a first portion (72) joined to the platform (52) and a second portion (74) arranged at an angle to the first portion (72) to further surround the engine efflux.
4. A washing cart (50) as claimed in any one of claims 1-3 wherein the wall (64, 62) or a portion of the wall (72, 74) is arcuate.
5. A washing cart (50) as claimed in any one of claims 1-4 wherein the wall (64, 62) comprises extendable telescopic struts (64).
6. A washing cart (50) as claimed in any one of claims 1-5 wherein the wall (64, 62) comprises a scissor arrangement (105) coupled to an actuator (124) for extension / contraction of the walls (64, 62).
7. A washing cart (50) as claimed in any one of claims 1-6 wherein the wall (64, 62) is rotatably mounted to the platform (52) and a second actuator (125) extends between

the wall and platform and enables angular movement of the walls (64, 62).

8. A washing cart (50) as claimed in any one of claims 1-7 wherein the wall (64, 62) is extendable via folding wall portions (170, 172), the folding wall portions are rotatably attached to one another and an actuator (174) extends between one portion and the platform and enables movement of the wall portion.

9. A washing cart (50) as claimed in any one of claims 1-8 wherein the wall (64, 62) is constructed from a frame structure (90) and mounted thereto is a flexible sheet (92).

10. A gas turbine engine washing cart as claimed in any one of claims 1-8 wherein the wall (62, 64) comprises at least two relatively slidable parts or units (130, 136).

11. A gas turbine engine washing cart as claimed in any one of claims 1-10 wherein the wall (62, 64) comprises a droplet separator.

12. A gas turbine engine washing cart as claimed in claim 11 wherein the droplet separator (130, 136, 144) is any one of a group comprising a profiled (130) or a carpet style (140) separator.

13. A gas turbine engine washing cart as claimed in any one of claims 1-12 wherein the drip tray (58) is an extendable drip tray (58) that is moveable from a stowed position to a deployed position where it is directly under the engine to catch liquid streams or droplets (40, 42) falling from the engine.

14. A gas turbine engine washing cart as claimed in claim 13 wherein the extendable drip tray (58) is stowed within the platform (52).

15. A method of washing a gas turbine engine with a washing cart as claimed in any one of claims 1-14, the method comprises selecting a program for a particular engine configuration and the step of elongating or rotating the at least one wall (64, 62) between stowed and deployed positions.

Claims

1. A gas turbine engine washing cart comprising a platform (52) having a drip tray (58), a front wall (62) and lateral walls (64) that can capture droplets (43) carried in the efflux or streams/droplets (40,42) from an engine during washing wherein the system comprises actuation means capable of rotating or elongating at least one wall (64, 62) between stowed and deployed positions and is **characterised in that** the washing cart (50) comprises a control system (148) for automatic operation of the actuation means and the control system is programmed with a set of actuator positions to deploy the walls (62, 64) or drip tray (58) to accommodate different engine sizes, configurations or washing operations.
2. A gas turbine engine washing cart as claimed in claim 1 wherein movement between stowed and deployed positions is a rotation of part or all of the wall (62, 64) or an elongation or shortening of the wall (64) relative to the platform (52).
3. A washing cart (50) as claimed in any one of claims 1-2 wherein the wall (62, 64) comprises a first portion (72) joined to the platform (52) and a second portion (74) arranged at an angle to the first portion (72) to further surround the engine efflux.
4. A washing cart (50) as claimed in any one of claims 1-3 wherein the wall (64, 62) or a portion of the wall (72, 74) is arcuate.
5. A washing cart (50) as claimed in any one of claims 1-4 wherein the wall (64, 62) comprises extendable telescopic struts (64).
6. A washing cart (50) as claimed in any one of claims 1-5 wherein the wall (64, 62) comprises a scissor arrangement (105) coupled to an actuator (124) for extension / contraction of the walls (64, 62).
7. A washing cart (50) as claimed in any one of claims 1-6 wherein the wall (64, 62) is rotatably mounted to the platform (52) and a second actuator (125) extends between the wall and platform and enables angular movement of the walls (64, 62).

8. A washing cart (50) as claimed in any one of claims 1-7 wherein the wall (64, 62) is extendable via folding wall portions (170, 172), the folding wall portions are rotatably attached to one another and an actuator (174) extends between one portion and the platform and enables movement of the wall portion.
9. A washing cart (50) as claimed in any one of claims 1-8 wherein the wall (64, 62) is constructed from a frame structure (90) and mounted thereto is a flexible sheet (92) .
10. A gas turbine engine washing cart as claimed in any one of claims 1-8 wherein the wall (62, 64) comprises at least two relatively slidable parts or units (130, 136).
11. A gas turbine engine washing cart as claimed in any one of claims 1-10 wherein the wall (62, 64) comprises a droplet separator.
12. A gas turbine engine washing cart as claimed in claim 11 wherein the droplet separator (130, 136, 144) is any one of a group comprising a profiled (130) or a carpet style (140) separator.
13. A gas turbine engine washing cart as claimed in any one of claims 1-12 wherein the drip tray (58) is an extendable drip tray (58) that is moveable from a stowed position to a deployed position where it is directly under the engine to catch liquid streams or droplets (40, 42) falling from the engine.
14. A gas turbine engine washing cart as claimed in claim 13 wherein the extendable drip tray (58) is stowed within the platform (52).
15. A method of washing a gas turbine engine with a washing cart as claimed in any one of claims 1-14, comprising the steps of moving the wall (64,62) relative to the platform (52), between a stowed position and a deployed position for capturing washing medium, the method comprises selecting a program for a particular engine configuration and the step of elongating or rotating the at least one wall (64, 62) between stowed and deployed positions.