

CLAIMS:

1. A computer-implemented method of maintaining information regarding a part on a vehicle, the method comprising:

receiving, by a computer, information regarding an installation of the part on the vehicle;

recording the information for the part in part history blockchains for the part in a part history blockchain network;

recording, by the computer, the information regarding the installation of the part in vehicle configuration and activity history blockchains for the vehicle in a vehicle configuration and activity history blockchain network; and

receiving, by the computer for as long as the part is installed on the vehicle, a token from the part history blockchain network, and locking, by the computer, the part history blockchains for the part and thereby preventing adding additional information for the part to the part history blockchains for the part until the token returns back to the part history blockchain network.

2. The method of claim 1, wherein locking the part history blockchains for the part comprises sending, by the computer, a part installation notification to the part history blockchain network, wherein the part installation notification identifies the part and indicates that the part is installed on the vehicle, and wherein the part history blockchain network locks the part history blockchains for the part in response to receiving the part installation notification.

3. The method of claim 1 further comprising:

receiving, by the computer, information regarding a removal of the part from the vehicle;

recording, by the computer, the information regarding the removal of the part from the vehicle in the vehicle

configuration and activity history blockchains for the vehicle in the vehicle configuration and activity history blockchain network; and

unlocking, by the computer, the part history blockchains for the part to allow adding the additional information for the part to the part history blockchains for the part in the part history blockchain network.

4. The method of claim 3 further comprising sending, by the computer, a part removal notification to the part history blockchain network, wherein the part removal notification identifies the part and indicates that the part is removed from the vehicle.

5. The method of claim 1 further comprising:

receiving, by the computer, information regarding a removal of the part from the vehicle;

recording, by the computer, the information regarding the removal of the part from the vehicle in the vehicle configuration and activity history blockchains for the vehicle in the vehicle configuration and activity history blockchain network; and

sending, by the computer, the token back to the part history blockchain network to unlock the part history blockchains for the part to allow adding the additional information for the part to the part history blockchains for the part in the part history blockchain network.

6. The method of claim 1, wherein the vehicle is an aircraft and the part is an aircraft part for the aircraft.

7. A computer-implemented method of recording information for a part, the method comprising:

receiving, by a computer, a part installation notification by a part history blockchain network, wherein the part installation notification identifies the part and indicates that the part is installed on a vehicle, wherein the part history blockchain network comprises part history blockchains for the part that are configured to record the information for the part, and wherein configuration and activity history information for the vehicle is recorded in vehicle configuration and activity history blockchains for the vehicle in a vehicle configuration and activity history blockchain network;

sending a token from the part history blockchain network to the vehicle configuration and activity history blockchain network; and

locking, by the computer for as long as the part is installed on the vehicle, the part history blockchains for the part and preventing adding additional information for the part to the part history blockchains for the part until the token is returned back to the part history blockchain network.

8. The method of claim 7, wherein the part installation notification comprises information regarding an installation of the part on the vehicle, and further comprising recording, by the computer, the information regarding the installation of the part on the vehicle in the part history blockchains for the part before locking the part history blockchains for the part.

9. The method of claim 7 further comprising:

receiving, by the computer, a part removal notification by the part history blockchain network, wherein the part removal notification identifies the part and indicates that the part is removed from the vehicle; and

unlocking, by the computer, the part history blockchains for the part in response to receiving the part removal notification to allow adding the additional information for the part to the part history blockchains for the part in the part history blockchain network.

10. The method of claim 9, wherein the part removal notification comprises information regarding a removal of the part from the vehicle, and further comprising, by the computer, recording the information regarding the removal of the part from the vehicle in the part history blockchains for the part after unlocking the part history blockchains for the part.

11. The method of claim 7 further comprising:

receiving, by the computer, the token back from the vehicle configuration and activity history blockchain network by the part history blockchain network; and

unlocking, by the computer, the part history blockchains for the part in response to receiving the token back from the vehicle configuration and activity history blockchain network.

12. The method of claim 7, wherein the vehicle is an aircraft and the part is an aircraft part for the aircraft.

13. An apparatus configured to record information for a part, such that the apparatus comprises a data processing system in a part history blockchain network configured to:

receive a part installation notification configured to identify the part and indicate an installation of the part on a vehicle, wherein the part history blockchain network comprises part history blockchains for the part that are configured to record the information for the part, and wherein vehicle configuration and activity history blockchains for the

vehicle are configured to record configuration and activity history information for the vehicle in a vehicle configuration and activity history blockchain network;

send a token from the part history blockchain network to the vehicle configuration and activity history blockchain network; and

lock, responsive to receipt of the part installation notification for as long as the part is installed on the vehicle, the part history blockchains for the part to prevent an addition of more information for the part to the part history blockchains for the part until the token is returned back to the part history blockchain network.

14. The apparatus of claim 13, wherein the part installation notification comprises information regarding the installation of the part on the vehicle, and wherein the data processing system is configured to record the information regarding the installation of the part on the vehicle in the part history blockchains for the part before locking the part history blockchains for the part.

15. The apparatus of claim 13, wherein the data processing system is configured to:

receive a part removal notification, wherein the part removal notification comprises information regarding a removal of the part from the vehicle, wherein the information regarding the removal of the part from the vehicle identifies the part and indicates that the part is removed from the vehicle;

unlock the part history blockchains for the part in response to receiving the part removal notification to allow adding additional information for the part to the part history blockchains for the part in the part history blockchain network; and

record the information regarding removal of the part from the vehicle in the part history blockchains for the part after unlocking the part history blockchains for the part.

16. The apparatus of claim 13, wherein the data processing system is configured to:

receive the token back from the vehicle configuration and activity history blockchain network; and

unlock the part history blockchains for the part in response to receiving the token back from the vehicle configuration and activity history blockchain network.

17. The apparatus of claim 13, wherein the vehicle is an aircraft and the part is an aircraft part for the aircraft.

18. The method of claim 1, further comprising a trusted entity with permission to access, read, and submit changes to the part history blockchains for the part.

19. The method of claim 7, further comprising a trusted entity with permission to access, read, and submit changes to the part history blockchains for the part.

20. The apparatus of claim 13, further comprising a trusted entity with permission to access, read, and submit changes to the part history blockchains for the part.