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| **CERTIFICATION AREA** | **VIDEOS TO BE MASTERED** | **NUMBER TO BE MASTERED** |
| Electrical System | 1-10 and 14 | 11 |
| Pneumatic System | 1-4 and 19-24 | 10 |
| Programing | 1-4 ; 6; 10-12; 20 and 25 | 14 |
| Mechanical System | 5; 13-19 | 8 |

14. Motor Analysis and Selection

15. Mechanical Advantage

16. Transmissions

17. Chassis Types

18. Chains and Belts

19. Pneumatic Circuits Overview

20. Programming and the Electrical Control of Pneumaticsl

21. Connecting and cutting pneumatic tubing

22. The Pressure Regulator

23. Wiring and Testing Directional Control Valves

24. Wiring the compressor relay and pressure switch

25. Overview of RobotC Programming

1. Voltage

2. Troubleshooting with a Voltmeter

3. Current and Overcurrent Protection

4. Resistance and Short-circuits

5. Power Considerations

6. The Electrical Control Box Overview

7. The Cortex

8. Spikes and Speed Controllers

9. Joystick Control Modules

10. Radio Communication with VEXNet

11. Updating and Installing Firmware

12. The Default RobotC Program

13. Torque

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