



TASK CARD AMC-Fleet

TaskCard: Electrical Troubleshooting			Date: Feb 2018	Aircraft: N/A
E/C:	P/N:	S/N:	A/C Pos:	NLA Pos:
Description: This is a 4-person individual effort contributing to a team score worth a maximum of 100 points. The time period to complete the task is 30 minutes. Each team member will individually troubleshoot an electrical trainer device consisting of switches, circuit breakers, lights, and a fan. Each device has 4 faults that prevent it from functioning correctly.				
Area: Use of Multimeter		Labor Hours: 0.5	W/O Phase:	
Skills: Performance level 3				

ITEM:	INSTRUCTIONS	MECH:	QC
	<p>OBJECTIVE: Given a faulty Electrical Trainer, a reference Master Electrical Trainer, applicable electrical schematic, Fluke multimeter, and 4 jumper cables, utilizes your knowledge of multimeter usage, Ohms law, and electrical schematic diagrams to diagnose and correctly identify the faults within the electrical trainer.</p> <p>EVALUATION CRITERIA: Each team will be evaluated on the following skills, abilities, and outcomes:</p> <ul style="list-style-type: none"> (1) Each member correctly identify circuit faults on his/her Electrical Trainer (6 points per fault. 24 points maximum) (2) All team member scores are combined into a total team score (3) A bonus of 4 points awarded to total team score if each member correctly identifies all 4 circuit faults in his/her Electrical Trainer (Team score = maximum 100 points) <p>PROCEDURES: Each team member will work independently in identifying faults on his/her assigned Electrical Trainer.</p> <ol style="list-style-type: none"> 1. Refer to Master Electrical Trainer to understand normal circuit operation/performance. 2. Using supplied electrical schematic and Fluke multimeter, perform diagnostic troubleshooting methods to determine where the four faults exist (each trainer has different faults). 3. Jumper cables can be used to bypass suspected faults to prove operation. 4. Annotate the faults on your individual worksheet by placing a mark beside the item which has a detectable fault. NOTE: DO NOT ATTEMPT TO CORRECT FAULTS 5. Present your completed worksheet to the judge for evaluation. <p style="text-align: center;">----- END -----</p>		



WORKSHEET

ELECTRICAL TROUBLESHOOTING SKILLS CHALLENGE

School Name: _____

Team Member Name: _____

ELECTRICAL TRAINER DEVICE #: _____

Identify each fault by checking appropriate boxes below (4 Maximum)

Relay RL1	
Switch SW1	
Switch SW2	
Switch SW3	
Circuit Breaker CB1	
Circuit Breaker CB2	
Circuit Breaker CB3	
Terminal Block TB1	
Terminal Block TB2	
LED Light L1	
Socket Light L2	
Fan F1	
Wire W1	
Wire W2	

Wire W3	
Wire W4	
Wire W5	
Wire W6	
Wire W7	
Wire W8	
Wire W9	
Wire W10	
Wire W11	
Wire W12	
Wire W13	
Wire W14	
Wire W15	
Wire W16	

ELECTRICAL TROUBLESHOOTING SCORE SHEET

School/Team Name: _____

Judge Name: _____

Each team member will work independently to identify up to 4 faults on his/her assigned Electrical Trainer device. The scoring criteria is as follows:

- Each team member receives 6 points for each correct fault identification
- Each team member can receive a total score of 24
- All team member scores are totaled for team score
- If all team members correctly identify all faults, a bonus of 4 points is added to total score resulting in a maximum team score of 100 points

ITEM	EVALUATION CRITERIA	SCORE
1	#1 Electrical Trainer device -- 24 points possible Fault 1: Fault 2: Fault 3: Fault 4: <div style="text-align: right;">_____ X 6 =</div>	
2	#1 Electrical Trainer device -- 24 points possible Fault 1: Fault 2: Fault 3: Fault 4: <div style="text-align: right;">_____ X 6 =</div>	
3	#1 Electrical Trainer device -- 24 points possible Fault 1: Fault 2: Fault 3: Fault 4: <div style="text-align: right;">_____ X 6 =</div>	
4	#1 Electrical Trainer device -- 24 points possible Fault 1: Fault 2: Fault 3: Fault 4: <div style="text-align: right;">_____ X 6 =</div>	
5	Bonus Points. Award <u>4 POINTS</u> if all four team members correctly identified 4 faults on each Electrical Trainer	
TOTAL TEAM SCORE:		