Integrated Manufacturing Systems Troubleshooting (IMST) Level 1
Attachment 1-1: PBOs Checklist

Subtopic	Level	PBO	Performance Based Objective (PBO)
		ISYS-1	Identify, by physical examination, the sequence of operations of each station of the integrated system.
		ISYS-2	Identify the type of technology associated with each action on the integrated systems trainer. (e.g. electrical, pneumatic, etc.)
	1	ISYS-3	Identify each output associated with every step in the sequence of operation on each station on the integrated systems trainer.
	1	ISYS-4	Generate a list of most probable triggering elements associated with each step in the sequence on each station on the integrated systems trainer.
	1	ISYS-14	Given a selected part on the drawings (prints), locate the part on the integrated system.
	1	ISYS-15	Given a part on the integrated system, locate the part on the drawings (prints).
	1	ISYS-5	Compare the PLC inputs and outputs associated with each real world input and output with the working drawings of the integrated systems trainer.
	1	ISYS-6	Generate a Sequence diagram of each station on the trainer reflecting: The step, timing, output actuating, and most probable triggers causing the action.
	1	ISYS-7	Given the Status of an operator's complaint, all I/O indicators (including blown fuse indicators) and the processor logic, identify a faulted part. Given a copy of the logic as it would appear on a programming terminal, and a drawing depicting the physical layout of the machine with all indicators reflecting the state of the machine and processor status indications.
	1	ISYS-8	Given the Status of an operator's complaint, all I/O Indicators and a sequence Diagram with outputs and triggers identified, Identify the most likely faulted Item(s). Given a drawing depicting the physical layout of the machine with all indicators reflecting the state of the machine and processor status indications.
	1	ISYS-9	Isolate a fault on the integrated system trainer as to the input that is expected/output that is expected for the paused sequence of operation.

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	1	ISYS-10	Use the internet to supplement their understanding with unfamiliar technology as it relates to components on the integrated system trainer.
	1	ISYS-11	Generate a flow chart (or List of actions) that reflect the troubleshooting logic used on sequencing machines.
	1	ISYS-12	List the part flow and process flow of the integrated systems trainer.
	1	ISYS-13	Match the following LANS with an example of their function: - Robot and Tooling LAN – Local I/O and Remote I/O (includes names of DeviceNet and ProfiBus) - PLC to PLC LAN - Program Back-up–and- Data Collection LAN - F.I.S. LAN (Factory Information Systems) - Work Scheduling LAN (includes Just in time, etc.)
	1	ISYS-16	Generate a flow chart of a standardized procedure for troubleshooting sequencing machines.

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