

1. Title	Overhaul hydraulic lift power units
2. Code	EMLEOR321A
3. Range	Arrange and implement overhauls of hydraulic lift power units at field locations.
4. Level	3
5. Credit	3
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Structure and working principles of hydraulic lift power units</p> <ul style="list-style-type: none"> ◆ Understand the structure and working principles of different 3-phase AC motors including: <ul style="list-style-type: none"> • AC star-delta controlled motor • AC variable voltage variable frequency controlled motor ◆ Understand the structure and working principles of different hydraulic oil pumps including: <ul style="list-style-type: none"> • gear-type hydraulic oil pump • vane-type hydraulic oil pump • screw-type hydraulic oil pump ◆ Understand the structure and working principles of different oil valve controllers including: <ul style="list-style-type: none"> • single-stage variable speed oil valve controller • 2-stage variable speed oil valve controller • stage-less variable speed oil valve controller <p>6.2 Overhaul methods and procedures for hydraulic power units</p> <ul style="list-style-type: none"> ◆ Formulate overhaul procedure lists for different hydraulic power units including: <ul style="list-style-type: none"> • hydraulic oil pumps • oil valve controllers • hydraulic oil cooling devices • 3-phase AC motors ◆ Implement and assign full shutdown and restart work for different hydraulic power units including: <ul style="list-style-type: none"> • safety preparation works for shutdown • safety precaution works for prevention car (direct plunge) creeping • safety precaution works for prevention car (indirect plunge) creeping • safety works for resumption operation

	<p>6.3 Professionalism in completed disassembly and assembly of different hydraulic power units</p> <ul style="list-style-type: none"> ◆ Effectively use different lifting gears to implement and assign completed lifting work for hydraulic power units including: <ul style="list-style-type: none"> • different hydraulic oil pumps • different oil valve controllers • hydraulic oil cooling devices • different types of 3-phase AC motor ◆ Effectively use different tools to implement and assign completed disassembly and assembly work for hydraulic power units including: <ul style="list-style-type: none"> • hydraulic oil pumps such as bearing, belt pulley, coupling, oil seal and packing seal • oil valve controllers such as manual hydraulic pump, hydraulic pressure gauge, oil seal and packing seal • hydraulic oil cooling devices such as oil cooling pump, cooling oil tank and cooling fan • 3-phase AC motors such as bearing, belt pulley and coupling ◆ Apply manufacturer’s repair instructions and the code of practice for lift work safety to implement and assign completed disassembly and assembly work for different hydraulic power units ◆ Apply manufacturer’s repair instructions and the code of practice for lift design and construction to implement and assign completed adjustment and testing work for different hydraulic power units including: <ul style="list-style-type: none"> • Cut off valve, one way valve, pressure relief valve, upstream valve, downstream valve, speed control shut off valve, excess flow valve, manual valve, manual hydraulic pump, hydraulic oil temperature indicating device
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> (i) Capable to arrange and assign completed disassembly, assembly and testing procedures for different hydraulic power units of hydraulic lifts systematically and through effective communication; and (ii) Capable to implement completed disassembly, assembly and testing for different hydraulic power units of hydraulic lifts under general or complicated situations in compliance with the prescribed standards of repair.
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses knowledge and skills in maintaining the hydraulic power units of hydraulic lifts.</p>