UE SERVICE INFORMATION

Japan Engine Corporation

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Subject :

ECL Timing System
Maintenance Schedule for Maintenance
Recommendation parts

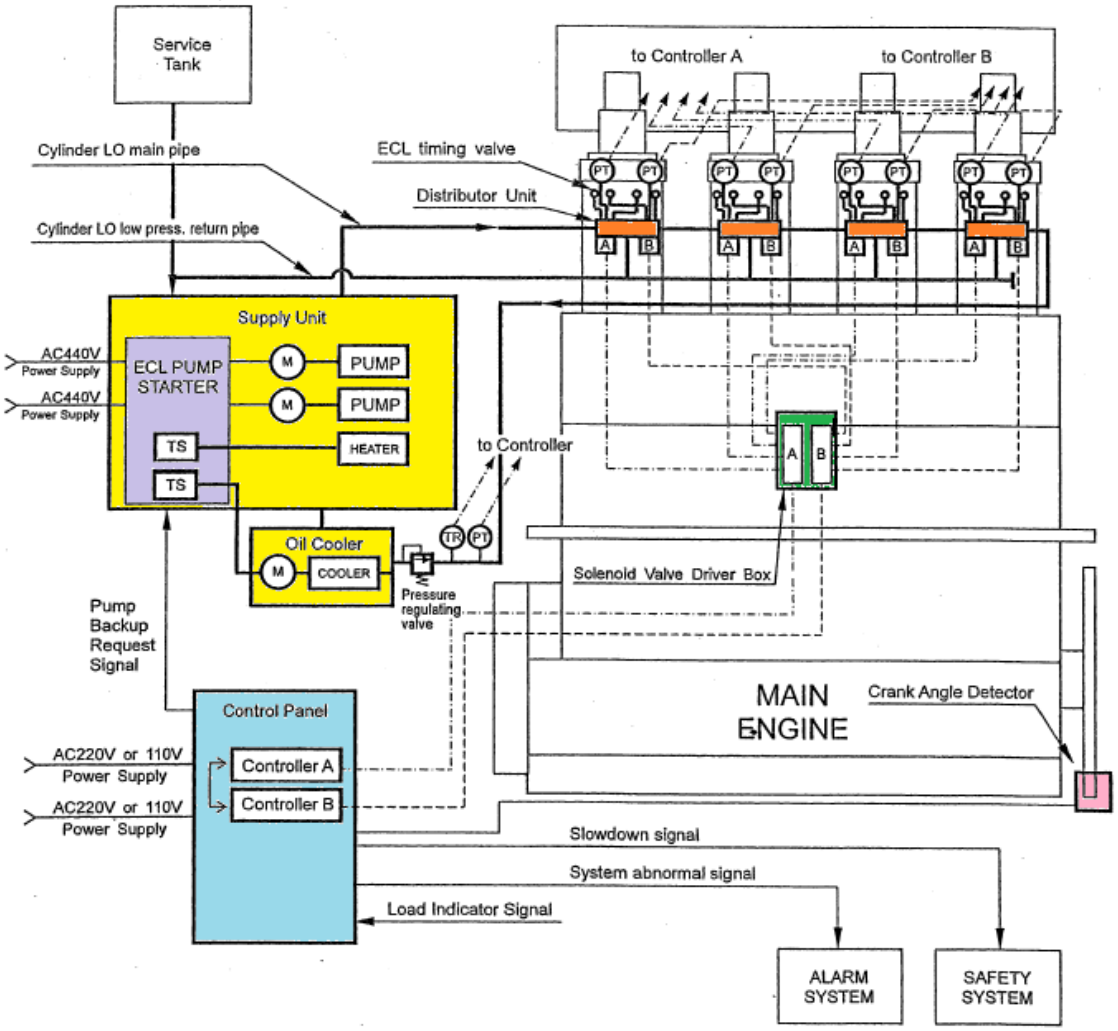
Application	UEC Diesel Engine
Type	All UEC
No.	USI-28201E Rev.1

General

For engines equipped with *) ECL timing system, we settled the recommended maintenance schedule of main parts of this system. (Refer to page 2 and 3)

*) ECL : **E**lectronically **C**ontrolled **L**ubricating

Outline of ECL timing system



Plan record				
	Newly issued 29th May 2018 T.Y, N.N, M.H MSI-1458E Rev.1 (19th Jan.2015) Rev.1 Item of Distributor unit revised. 4th Aug. 2021 K.Y, H.H	Approved	K.Yoshida	DESIGNING AND SERVICE ENGINEERING DEPT.
		Checked	—	SERVICE ENGINEERING SECTION
		Designed	H.Hirabayashi	DATE OF REVISED : 4th Aug. 2021

ECL Timing System
Maintenance Schedule for Maintenance Recommendation Parts (1/2)

Component / Parts		Check item	Work to be carried out	Group No. of instruction books	Recommended replacement parts	Recommended intervals									
						Daily	Every 500 hrs.	Every 1～2000 hrs.	Every 2～4000 hrs.	Every 4～6000 hrs.	Every 6～8000 hrs.	Every 15～20000hrs.	Every 35～40000 hrs.	Every 60000 hrs.	As required
Timing lubricating valve		Function check	Visual check of injection condition at the time of the disassembly of the exhaust valve or piston overhauling.	4320−01 −02	—										●
		Adjustment	Confirmation of injected oil amount, opening pressure and seat condition using ECL valve test device. Renew and unloading maintenance, if cannot adjust.		・Gasket ・O-ring ・Timing lube. valve						●				
		Cleaning	In addition, clean the injection quill of nozzle, if necessary.								●				
Distributor unit		Renew	Renew the distributor including solenoid every 35～40000hrs.	4310−01 431−03	・Distributor unit								●		
		Operation check	Visual check the operation situation with LED (Normal by LED flickering)			●									
Supply unit	Suction filter	Differential pressure check	Visual check the clogging of element with detector on filter body in engine operation	4310−02	—	●									
		Cleaning/renewal of element	When the red indication ring of the analyzer is located in the yellow part, cleaning/renewal to be carried out.		・O-ring ・Packing										●
	Line filter	Differential pressure check	Visual check the clogging of element with detector on filter body in engine operation		—	●									
		Cleaning/renewal of element	Cleaning of element every 500hrs.		・O-ring ・Back-up ring ・Packing		●								
			If the clogging of the element occurs frequently, renewal of element is recommended.												●
	Pump starter panel	Internal parts check	Check for looseness connector and dust.		—							●			
	Pump coupling	Renew of spider	Renew every 15000 hrs. (*1) Refer to USI-28202E)		・Spider							●			
Solenoid valve driver box	Capacitor	Renew of parts	Renew every 35000hrs. (*2) Refer to USI-43801E)	431−05	・Capacitor								●		
	Printed circuit board	Connector check	Check for looseness connector or dust. (After the operation by the MHI's service staff is confirmed at ten years, renew if necessary)		・Print circuit board							●			
	Noise filter	Check	Check for looseness of terminals.		—						●				
	Terminal board		Tighten screws.		—						●				

*1) Refer to UE service information USI-28202E "ECL Supply Pump Inspection/Replacement of Flexible Coupling"
*2) Refer to UE service information USI-43801E "Exchange Procedure of Capacitor in the Solenoid Valve Driver Box"

(2/3)

ECL Timing System
Maintenance Schedule for Maintenance Recommendation Parts （2/2）

Component / Parts		Check item	Work to be carried out	Group No. of instruction books	Recommended replacement parts	Recommended intervals									
						Daily	Every 500 hrs.	Every 1～2000 hrs.	Every 2～4000 hrs.	Every 4～6000 hrs.	Every 6～8000 hrs.	Every 15～20000 hrs.	Every 35～40000 hrs.	Every 60000 hrs.	As required
Control panel	Ten-key data	*3) Operation condition check （Both of sys. A, B）	*4) Check the according to ten-key data sheet ・Cylinder L.O. temperature ・Base pressure , Peak pressure (for cyl. L.O. pressure)	431-06	–	●									
			*4) Check the according to ten-key data sheet ・M/E general data as output, speed and others ・Lubricating oil feed rate ・Driving condition of distributor ・Base pressure , Peak pressure (for cyl. L.O. pressure) ・Lubricating period				●								
	Printed circuit board	Connector check	Check for looseness connector or dust. (After the operation by the MHI's service staff is confirmed at ten years, renew if necessary)	431-05	・Print circuit board							●			
	Voltage converter	Voltage check	Check the output voltage every 35000 hrs. (Renew, If abnormality is discovered)		・Voltage converter								●		
	Noise filter	Looseness check	Check for looseness of terminals.		–						●				
	Amplifier	Looseness check	Check for looseness of screws.		–						●				
	Terminal board	Looseness check	Tighten screws.		–				●						
	Other parts	Check	Check for looseness of fitting screws and dust.		–							●			
Proximity sensor for crank angle detector		Check and adjust	Clean the sensor head（i.e. removal of dust and the grease）		–				●						
			Check the gap between sensor and flywheel. If necessary, within the rated value by adjusting a gap.						●						

*3) To judge measured data, please carry out the check / record on the same operating conditions of the main engine.

*4) We recommend that check data do not have a big change than the last measurement data.