



## Supplement to Yanmar Kit Installation Instructions

# SAFETY

---

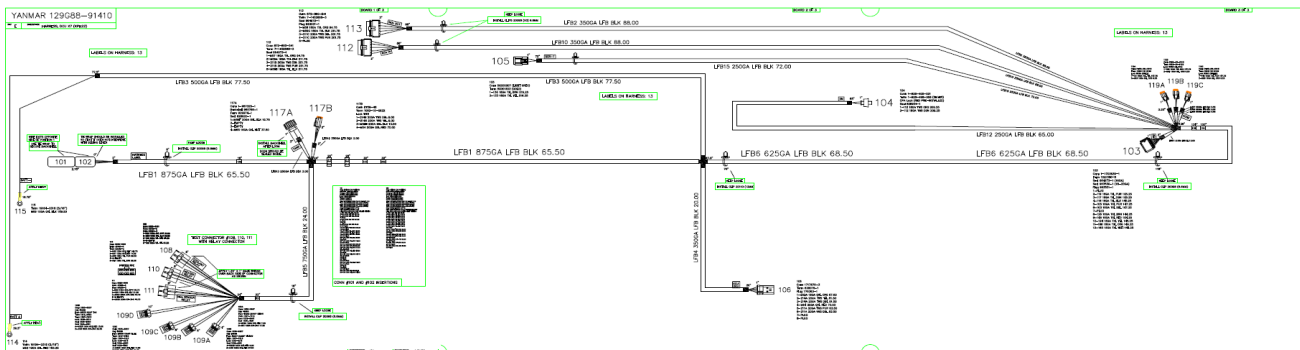
This product is designed and intended only for use with a YANMAR engine. All safety and warning information contained in the Yanmar Operation Manual and Service Manual is adopted and incorporated to apply to the components, accessories, and parts that are utilized with Yanmar engines. Follow all instructions and precautions before installing this product, before operating, during operation, and during periodic maintenance procedures for your safety, the safety of others, and to protect the performance of your engine.



Item	Part No.	Description	Quantity	Remarks
1	129G88-91410	Main Harness Assembly	1	
2	129G88-91020	Harness, DCU	1	
3	172B02-17150*	RELAY,CA C TYPE	3	Supplied loose

Note: Service parts are denoted by an asterisk. To replace non-service parts, the entire kit will need to be purchased.

**MODELS**  
4TN107FTT-1SYA2





## Installation Instructions

NOTE: The optional connections for distributor use are located in the Accessory Coupler. The optional features include Pre-Heat Lamp, Engine Stop 1 & 2, Charge Lamp, etc.

Please see the next page for detailed installation instructions.

WARNING: Be sure battery cables are connected correctly. Disconnecting either the positive or negative battery cable while the equipment is operating will cause premature failure of electronic components. Also, never weld on equipment with the ECU/DCU connected to the wire harness.

NOTE: In the event that the wire harness needs to be extended, never use scotch locks or butt connectors to extend the wire harness. All extended wires must be soldered and sealed.

### Remote Mounted DCU Applications:

For applications that remotely mount the DCU within the wire harnesses reach please use the following DCU mounting guidelines:

- 1- Install the DCU in a location that is not subject to steam or high-pressure water for cleaning
- 2- Install the DCU in a location that is well ventilated and not subject to direct sunlight.
- 3- Install the DCU so that the connector faces downward. Failure to do so may trap water in the connector, resulting in corrosion of connector pins.
- 4- Ensure no water is trapped inside the connector when plugging the connector. Water inside the connector may corrode connector pins, resulting in malfunctioning of the DCU.

Refer to harness drawing for additional design requirements for consideration of application. A troubleshooting guide is available through Yanmar's Distributor Website or by contacting Yanmar America's Service Department.

Table 1: Comply with torque standards in the table to avoid unexpected damage during installation or in the future.

Diameter x Pitch	Kgf-m	Foot-lbf	N-m
M5x0.8	0.4 ~ 0.7	3 ~ 5	4 ~ 6.7
M6 x 1.0	1.0~1.2	7 ~ 9	9.8 ~ 11.8
M8 x 1.25	1.5 ~ 2.9	10.6 ~ 20.9	22.6 ~ 28.4

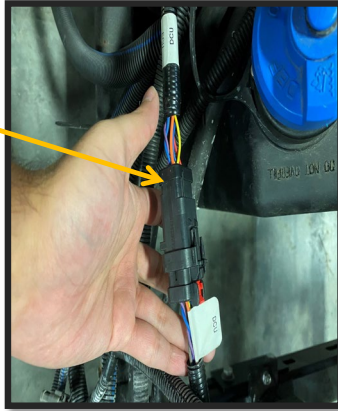
Note: There are no bolts included with harness kit

KPH22 - Harness KIT  
INS-KPH22-0011

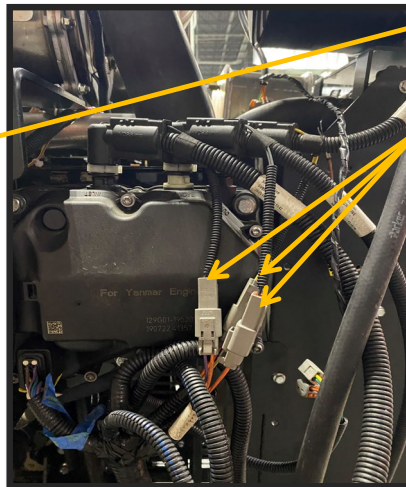
## Harness Routing Instructions

1. Lay the loose harness on engine to gauge fitment and placement of where the relays, DCU, and connectors should go based on the wiring diagrams provided. Please refer to TNV application manual for cautionary measures to be taken when mounting a harness to an engine.
2. Initially start with connecting the ECU-DCU plug (106) on KPH22 with DCU plug (9) on KPH21 ECU Harness. Use the P-clips to attach and route the harness around the engine.

ECU/DCU Plugs (106) & DCU Plug (76) from KPH17



3. Connect SM plug on the Supply Module (103), and respectively connect NOx In (112), NOx Out (113), 119 (A,B&C), DM plug (104) and SCR-T plug (105). 119 plugs on the harness and couplers on SM each are color coded. Make sure the harness is routed using the loose clips preventing the harness touching on any hot surface like DPF, SCR, DM, EGR etc. Connection for 119 plugs come from DEF lines. See on below picture how three DEF lines are connected on SM and one on DM (DEF lines coming from DEF tank to SM or DM are not part of the Harness).



DM plug (104)

119 (A,B&C) color coded couplers

4. Layout harness connectors 101, 102, 108-111, 117(A&B), and the battery leads for DCU (114 & 115) all on the flywheel side (rear side) of the Engine. Connect the DCU terminals (101, 102) to the DCU, and make sure the harness is clamped within 300 mm to the connector to avoid damage from vibration. Install Relays (provided with engine loose parts) to the terminals 108-111 being sure to prevent water intrusion with installation.



---

**Harness Routing Instructions**

---

5. Connect the plugs for Coolant Control Valve (117A) and DEF Tank (117B) on the respective couplers coming from the DEF Tank as shown in the picture below.



Coolant Control Valve (117A)

DEF Tank Plug (117B)

Refer to harness drawing for additional design requirements for consideration of application.

