



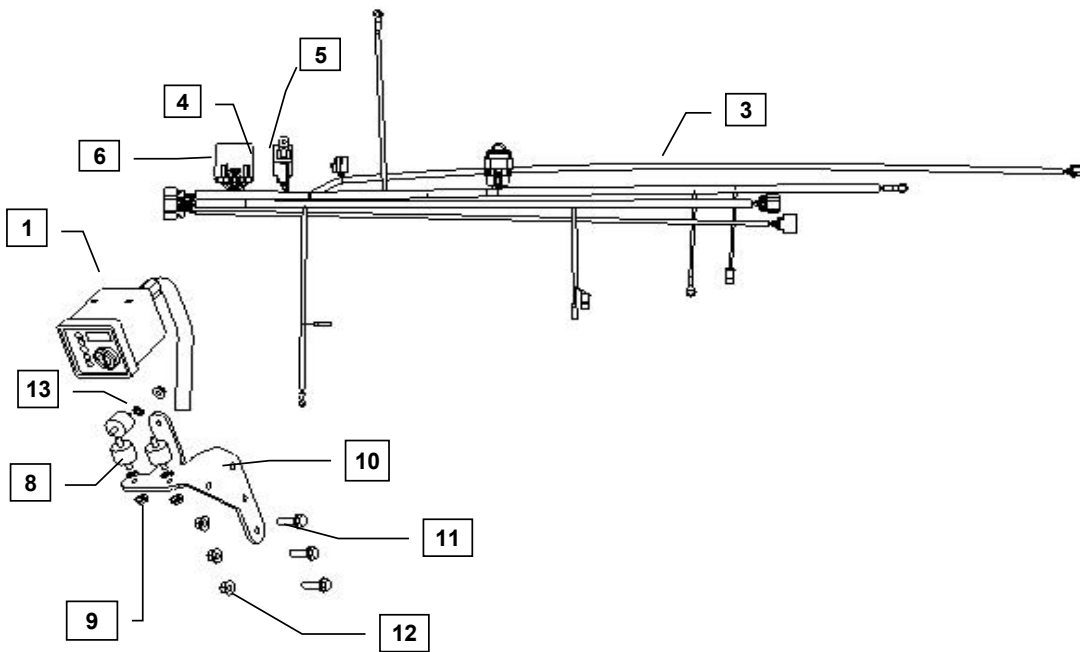
Supplement to Yanmar Kit Installation Instructions

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.

YANMAR

Item	Part No.	Description	Quantity	Remarks
1	119749-91111*	Control Panel (IDI)	1	
2	119749-91050*	Ignition Key, Engine Control Panel	2	
3	129689-91090*	Wiring Harness (DI)	1 (A)	
4	119749-91420*	Control Module Timer	1	
5	119749-91460*	Relay 70A 12V Sealed	1	
6	119749-91440*	Control Module Housing	1	
7	1908-00*	Switch Retainer	2	
8	129689-92100*	Isolator Mount M6 x 1.0	3	
9	26366-060002*	Nut, M6 x 1.0 (Flanged hex head)	3	
10	119749-91130*	Panel Mounting Bracket	1	
11	26106-080252*	Bolt, M8 x 1.25 - 25 (Flanged hex head)	3	
12	26366-080002*	Nut, M8 x 1.25 (Flanged hex head)	3	
13	129689-91180	Washer, M6 (Star)	3	
14	26106-080122*	Bolt, M8 X 1.25 - 12 (Flanged hex head)	1	
15	26106-100162*	Bolt, M10 X 1.5 - 16 (Flanged hex head)	1	



MODELS
 3TNV82A-BDSAX
 3TNV88-B
 4TNV88-B

Remarks: (A) When utilizing Yanmar harness PN: 129689-91090 (included) to a control panel that requires 10 feet or more of wiring from the power source you must modify the Yanmar 60" harness extension PN: 119749-91500 to desired length and install LOFA starter relay kit PN: LPN010-0002-06 (sold separately*). When using an unmodified 60" harness extension, the starter relay kit is not required.

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



Installation Instructions

Hand tighten all bolts and nuts until assembly is completed, then torque according to specifications in Table 1. The numbers in () represent the item numbers.

1. Fasten Control Panel (1) to the Mounting Bracket (11) using Isolators (8), and Lock Nuts (10).

NOTE: Make sure isolators are not twisted during installation to avoid premature failure of components.

2. Assemble Control Panel (1) and Mounting Bracket (10) assembly to injection pump side rear engine leg using MX1.25 - 25 Bolts (11) and M8X1.25 Flange Nuts (12).
3. Connect harness terminals to appropriate locations. See engine wiring harness diagram and schematics provided with panel kit.

NOTE: If Denso starter is being used you must replace the starter solenoid spade connector with the Denso ring terminal included in the loose parts bag.

4. Use the Retainer Clips (7) to attach the Wire Harness (3) to two 8 mm open thread bores on the rear fuel injection side of the cylinder head.
5. After connecting all terminals to appropriate locations, check the following:
 - a) Make sure the wires do not contact the exhaust manifold or muffler and are away from all heat sources.
 - b) Make sure the wires do not contact any sharp or abrasive surfaces.
 - c) Use wire ties to secure the wire harness to the engine.
 - d) Cover all harness terminals not used after assembly is completed
 - e) Make sure that the Ves-pak and relays are mounted vertically so that water will not be trapped inside of the housing.

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.

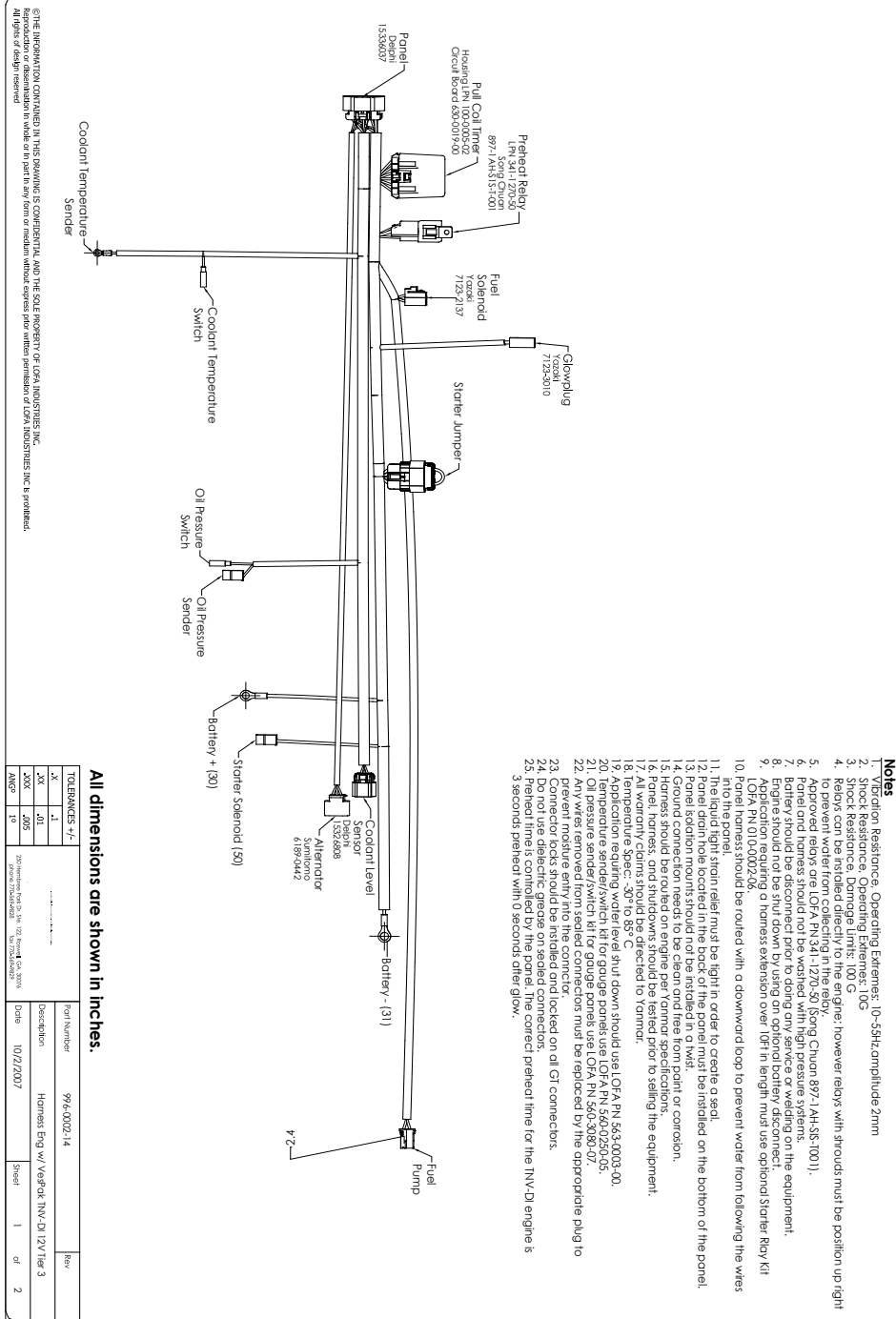
NOTE: When utilizing Yanmar harness PN: 129689-91090 (included) to a control panel that requires 10 feet or more of wiring from the power source you must modify Yanmar harness extension PN: 119749-91500 to desired length and install LOFA starter relay kit PN: LPN010-0002-06 (sold separately). When using an unmodified 60" harness extension, the starter relay kit is not required. LOFA contact number 1-770-569-9828.

NOTE: In the event that the 60" wire harness extension need to be extended please follow the manufacturer's assembly and wiring procedures. Please visit www.deutschip.com and click on the Connector Repair or Helpful Hints link to download a more detailed procedure on how to properly assemble a connector. As always never use scotch locks or butt connectors to extend the wire harness. All extended wires must be soldered and sealed.

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: Proper torque specifications for bolts and nuts.

Diameter x Pitch	Kgf-m	Foot-lbf	N-m
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	14.4 ~ 28.3
M12 x 1.75	8.0 ~ 10.0	57.8 ~ 72.3	78.4 ~ 98.0



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All dimensions are shown in inches.

TOLERANCES - IN.		Part Number	Rev
XX	.01	994-002-14	
XX	.02		
XX	.50		
ANG	1°		
		Description	
		Harness Eng. w/ 949804 IN-CD 12V Tier 3	
Date	10/2/2007	Sheet	1 of 2

Notes

- Vibration Resistance, Operating Extremes: 10-55Hz, amplitude 2mm
- Shock Resistance, Operating Extremes: 10G
- Relays can be installed directly to the engine; however relays with studs must be position up right to prevent water from collecting in the relay.
- Approved relays are LOFA PN 34-1270-50 (Song Chuan 897-1AH-S5-1001).
- Panel and harness should not be washed with high pressure systems.
- Engine should not be shut down by using optional battery disconnect.
- Application requiring a harness extension over 1ft in length must use optional Starter Relay Kit LOFA PN 01000206.
- Panel harness should be routed with a downward loop to prevent water from following the wires.
- The panel strain relief must be tight in order to create a seal.
- Panel diam hole located in the back of the panel must be installed on the bottom of the panel.
- Ground connection needs to be clean and free from paint or corrosion.
- Harness should be routed on engine per naming specifications.
- All warranty claims should be directed to Yanmar.
- Temperature spec: -30° to 85° C
- Application requiring water level shut down should use LOFA PN 543-0003-00.
- Temperature sender/switch kit for gauge panels use LOFA PN 580-02026.
- Any wires removed from sealed connectors must be replaced by the appropriate plug to prevent moisture entry into the connector.
- Connector locks should be installed and locked on all GT connectors.
- Do not use dielectric grease on sealed connectors.
- Preheat time is controlled by the panel, the correct preheat time for the IN-CD engine is 3 seconds preheat with 9 seconds after glow.

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Part Number	996-0002-14	Rev
Description	Harness Eng Ver#04 TNVD01 12V Tr 3	
Date	10/22/07	
Sheet	1	of 1

