



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.

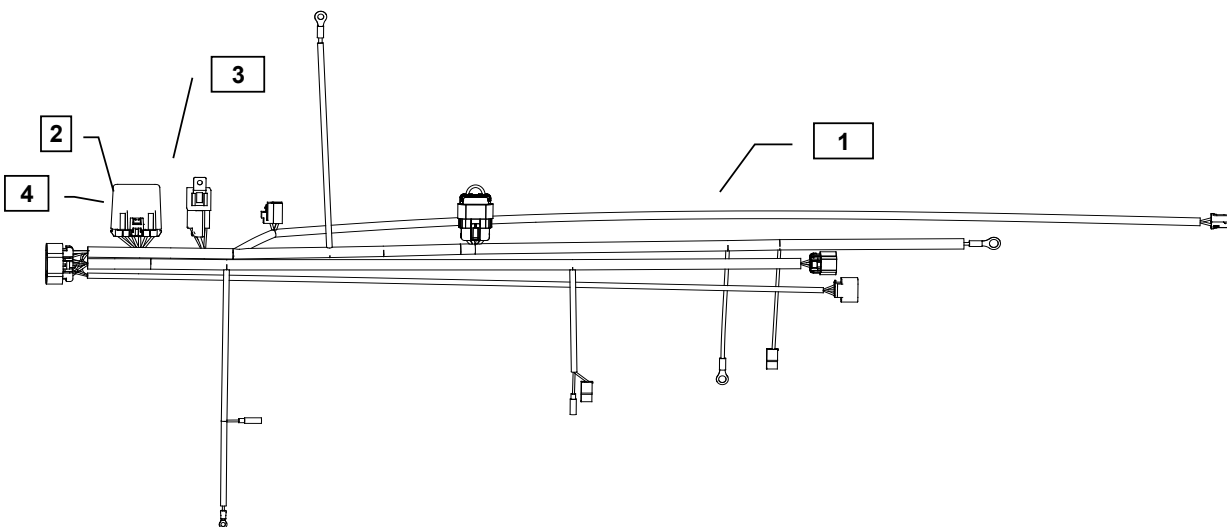


Item	Part No.	Description	Quantity	Remarks
1	119749-91091*	Wiring Harness - MINIMAX	1	(A)
2	119749-91420*	Control Module Timer	1	
3	119749-91460*	Relay 70A 12V Sealed	1	
4	119749-91440*	Control Module Housing	1	

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

MODELS

- 3TNM68
- 3TNM72



Remarks: (A) When utilizing the Yanmar harness to a control panel that has 10 ft. or more of wiring between them, you must install a relay, 119749-91400.



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. Connect harness terminals to appropriate locations. See engine wiring harness diagram and schematics provided with panel kit.
2. After connecting all terminals to appropriate locations, check the following:
 - a) Make sure the wires do not contact the exhaust manifold or muffler.
 - 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 relay and control module timer is mounted in a vertical fashion to prevent water intrusion.

WARNING: Be sure battery cables are connected correctly before operation. If at any time during operation, the battery cables are removed, the harness could fail prematurely.

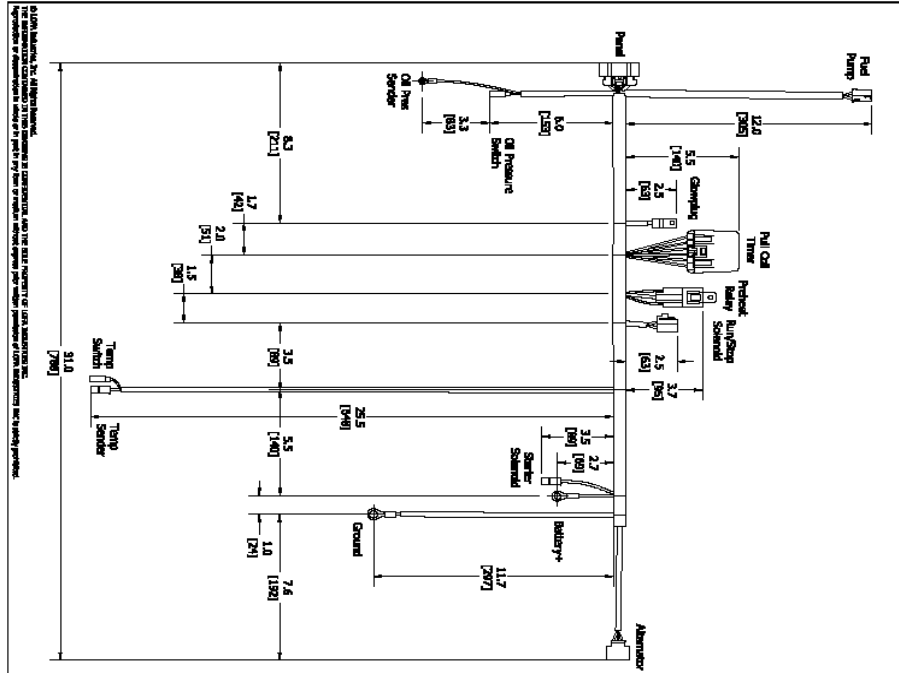
NOTE: Application requiring a harness extension to a control panel over 10Ft in length must use the starter relay at the connector labeled **Starter Jumper, 119749-91400**.

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
M8 x 1.25	1.5 ~ 2.9	10.6 ~ 20.9	14.4 ~ 28.3
M10 x 1.50	4.5 ~ 5.5	32.5 ~ 39.8	44.0 ~ 54.0

Installation Instructions



©2009 Yanmar. For 13-Model Engines. This document is copyrighted and the sole property of Yanmar America, Inc. The information contained in this document is the property of Yanmar America, Inc. and is not to be used for any other purpose without the written permission of Yanmar America, Inc.

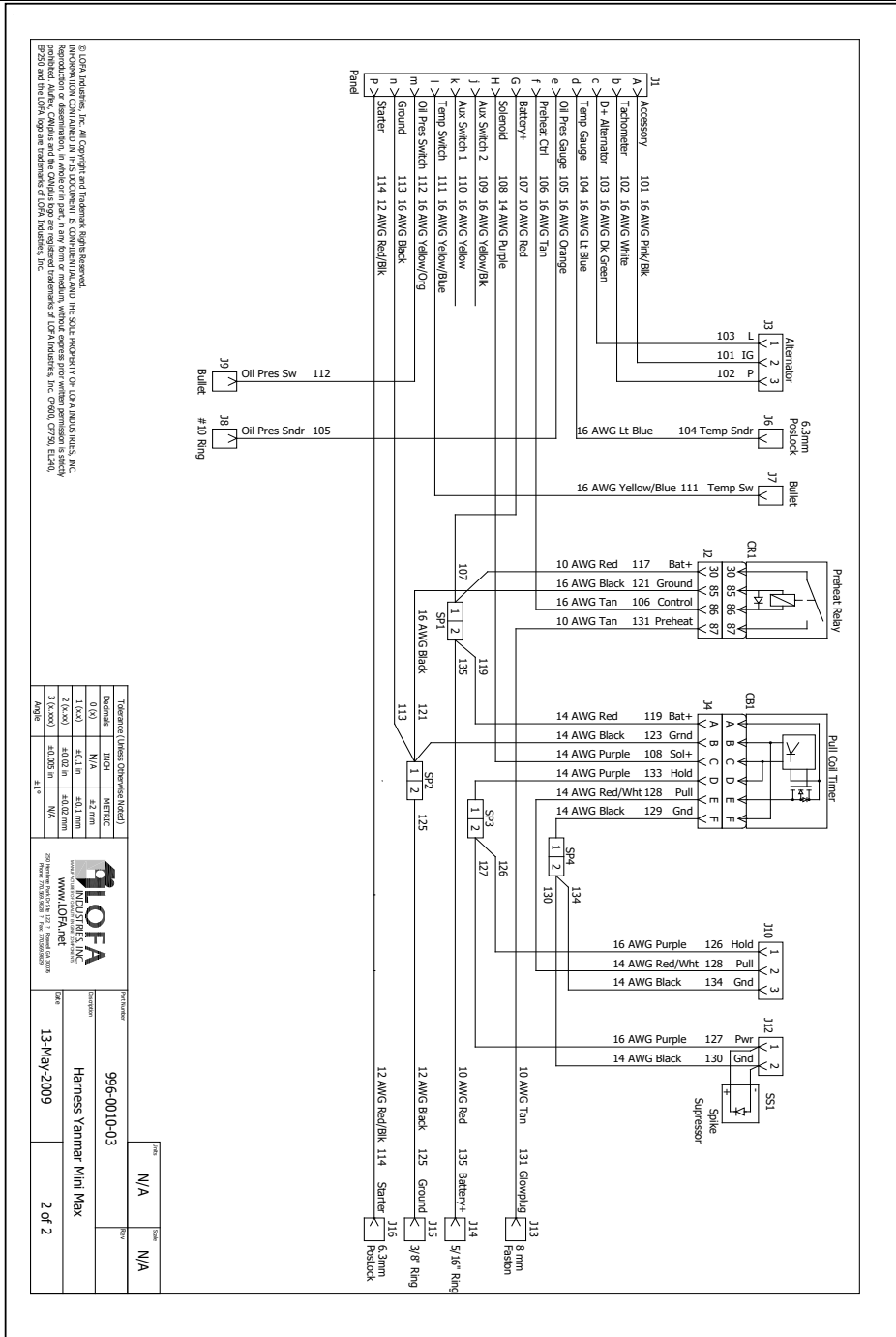
- Notes**
1. Verify the location, opening dimensions, 10-63/87, amplitude from the center of the engine.
 2. Stock positions, Design/Links: 100 G
 3. Belays can be installed directly to the engine; however, they should be position up right to prevent water from collecting in the relay connector.
 4. Approved relay is LDF4, PN 541-1270-50 (Seng Chuan 807-144-523-1101, sealed).
 5. Relay and harness should not be washed with high pressure systems.
 6. Relay should not be stored in a damp or wet area.
 7. Relay should not be stored in a hot area.
 8. Relay should not be stored in a dirty area.
 9. Relay should not be stored in a dirty area.
 10. The panel meter will return to the factory in order to create a water leak seal.
 11. Panel meter will be located in the back of the panel that is installed on the bottom of the panel.
 12. Panel meter must be installed in the back of the panel.
 13. Panel meter must be installed in the back of the panel.
 14. Panel meter must be installed in the back of the panel.
 15. Harness should be routed on engine per former specifications.
 16. All warranty claims should be directed to Yanmar.
 17. Temperature Spec: -30° to 60° C
 18. Temperature Spec: -30° to 60° C
 19. Temperature Spec: -30° to 60° C
 20. For more information on engine specifications, please contact Yanmar.
 21. For more information on engine specifications, please contact Yanmar.
 22. Connector body should be installed and locked on all GT connectors.
 23. Do not use dielectric grease on sealed connectors.
 24. Probe ring is provided by the panel. The correct probe ring for the air filter engine is 3 second probe with 3 second filter gun.

Dimension	Unit	Value	Unit	Value
Overall Length	mm	1170	INCH	46.1
Overall Width	mm	100	INCH	3.9
Overall Height	mm	100	INCH	3.9
Weight	kg	1.0	lb	2.2

DOFA DISTRIBUTION YANMAR USA, INC. 13-Model Engines	
Part No.	996-0010-03
Manufacturer	Yanmar America, Inc.
Revision	13-May-2009
Page	1 of 2



Installation Instructions



© LOFA, Inc. All Copyright and Trademark Rights Reserved.
 REPRODUCTION OR DISTRIBUTION IN ANY FORM OR MEDIUM WITHOUT EXPRESS WRITTEN PERMISSION IS STRICTLY PROHIBITED. THIS DOCUMENT IS CONFIDENTIAL AND THE SOLE PROPERTY OF LOFA INDUSTRIES, INC. EP201 and this LOFA logo are trademarks of LOFA Industries, Inc.

Torque (Metric/Imperial/Inch)		UNIT	METRIC
0.0	N/A	42 mm	HERTZ
1.0	4.1 Lb	42 mm	HERTZ
1.5	4.0 Lb	42 mm	HERTZ
2.0	4.5 Lb	42 mm	HERTZ
3.0	6.7 Lb	42 mm	HERTZ
4.0	9.0 Lb	42 mm	HERTZ
5.0	11.2 Lb	42 mm	HERTZ
6.0	13.5 Lb	42 mm	HERTZ
7.0	15.7 Lb	42 mm	HERTZ
8.0	17.9 Lb	42 mm	HERTZ
9.0	20.1 Lb	42 mm	HERTZ
10	22.5 Lb	42 mm	HERTZ
11	24.7 Lb	42 mm	HERTZ
12	27.0 Lb	42 mm	HERTZ
13	29.2 Lb	42 mm	HERTZ
14	31.4 Lb	42 mm	HERTZ
15	33.6 Lb	42 mm	HERTZ
16	35.8 Lb	42 mm	HERTZ
17	38.0 Lb	42 mm	HERTZ
18	40.2 Lb	42 mm	HERTZ
19	42.4 Lb	42 mm	HERTZ
20	44.6 Lb	42 mm	HERTZ
21	46.8 Lb	42 mm	HERTZ
22	49.0 Lb	42 mm	HERTZ
23	51.2 Lb	42 mm	HERTZ
24	53.4 Lb	42 mm	HERTZ
25	55.6 Lb	42 mm	HERTZ
26	57.8 Lb	42 mm	HERTZ
27	60.0 Lb	42 mm	HERTZ
28	62.2 Lb	42 mm	HERTZ
29	64.4 Lb	42 mm	HERTZ
30	66.6 Lb	42 mm	HERTZ
31	68.8 Lb	42 mm	HERTZ
32	71.0 Lb	42 mm	HERTZ
33	73.2 Lb	42 mm	HERTZ
34	75.4 Lb	42 mm	HERTZ
35	77.6 Lb	42 mm	HERTZ
36	79.8 Lb	42 mm	HERTZ
37	82.0 Lb	42 mm	HERTZ
38	84.2 Lb	42 mm	HERTZ
39	86.4 Lb	42 mm	HERTZ
40	88.6 Lb	42 mm	HERTZ
41	90.8 Lb	42 mm	HERTZ
42	93.0 Lb	42 mm	HERTZ
43	95.2 Lb	42 mm	HERTZ
44	97.4 Lb	42 mm	HERTZ
45	99.6 Lb	42 mm	HERTZ
46	101.8 Lb	42 mm	HERTZ
47	104.0 Lb	42 mm	HERTZ
48	106.2 Lb	42 mm	HERTZ
49	108.4 Lb	42 mm	HERTZ
50	110.6 Lb	42 mm	HERTZ
51	112.8 Lb	42 mm	HERTZ
52	115.0 Lb	42 mm	HERTZ
53	117.2 Lb	42 mm	HERTZ
54	119.4 Lb	42 mm	HERTZ
55	121.6 Lb	42 mm	HERTZ
56	123.8 Lb	42 mm	HERTZ
57	126.0 Lb	42 mm	HERTZ
58	128.2 Lb	42 mm	HERTZ
59	130.4 Lb	42 mm	HERTZ
60	132.6 Lb	42 mm	HERTZ
61	134.8 Lb	42 mm	HERTZ
62	137.0 Lb	42 mm	HERTZ
63	139.2 Lb	42 mm	HERTZ
64	141.4 Lb	42 mm	HERTZ
65	143.6 Lb	42 mm	HERTZ
66	145.8 Lb	42 mm	HERTZ
67	148.0 Lb	42 mm	HERTZ
68	150.2 Lb	42 mm	HERTZ
69	152.4 Lb	42 mm	HERTZ
70	154.6 Lb	42 mm	HERTZ
71	156.8 Lb	42 mm	HERTZ
72	159.0 Lb	42 mm	HERTZ
73	161.2 Lb	42 mm	HERTZ
74	163.4 Lb	42 mm	HERTZ
75	165.6 Lb	42 mm	HERTZ
76	167.8 Lb	42 mm	HERTZ
77	170.0 Lb	42 mm	HERTZ
78	172.2 Lb	42 mm	HERTZ
79	174.4 Lb	42 mm	HERTZ
80	176.6 Lb	42 mm	HERTZ
81	178.8 Lb	42 mm	HERTZ
82	181.0 Lb	42 mm	HERTZ
83	183.2 Lb	42 mm	HERTZ
84	185.4 Lb	42 mm	HERTZ
85	187.6 Lb	42 mm	HERTZ
86	189.8 Lb	42 mm	HERTZ
87	192.0 Lb	42 mm	HERTZ
88	194.2 Lb	42 mm	HERTZ
89	196.4 Lb	42 mm	HERTZ
90	198.6 Lb	42 mm	HERTZ
91	200.8 Lb	42 mm	HERTZ
92	203.0 Lb	42 mm	HERTZ
93	205.2 Lb	42 mm	HERTZ
94	207.4 Lb	42 mm	HERTZ
95	209.6 Lb	42 mm	HERTZ
96	211.8 Lb	42 mm	HERTZ
97	214.0 Lb	42 mm	HERTZ
98	216.2 Lb	42 mm	HERTZ
99	218.4 Lb	42 mm	HERTZ
100	220.6 Lb	42 mm	HERTZ