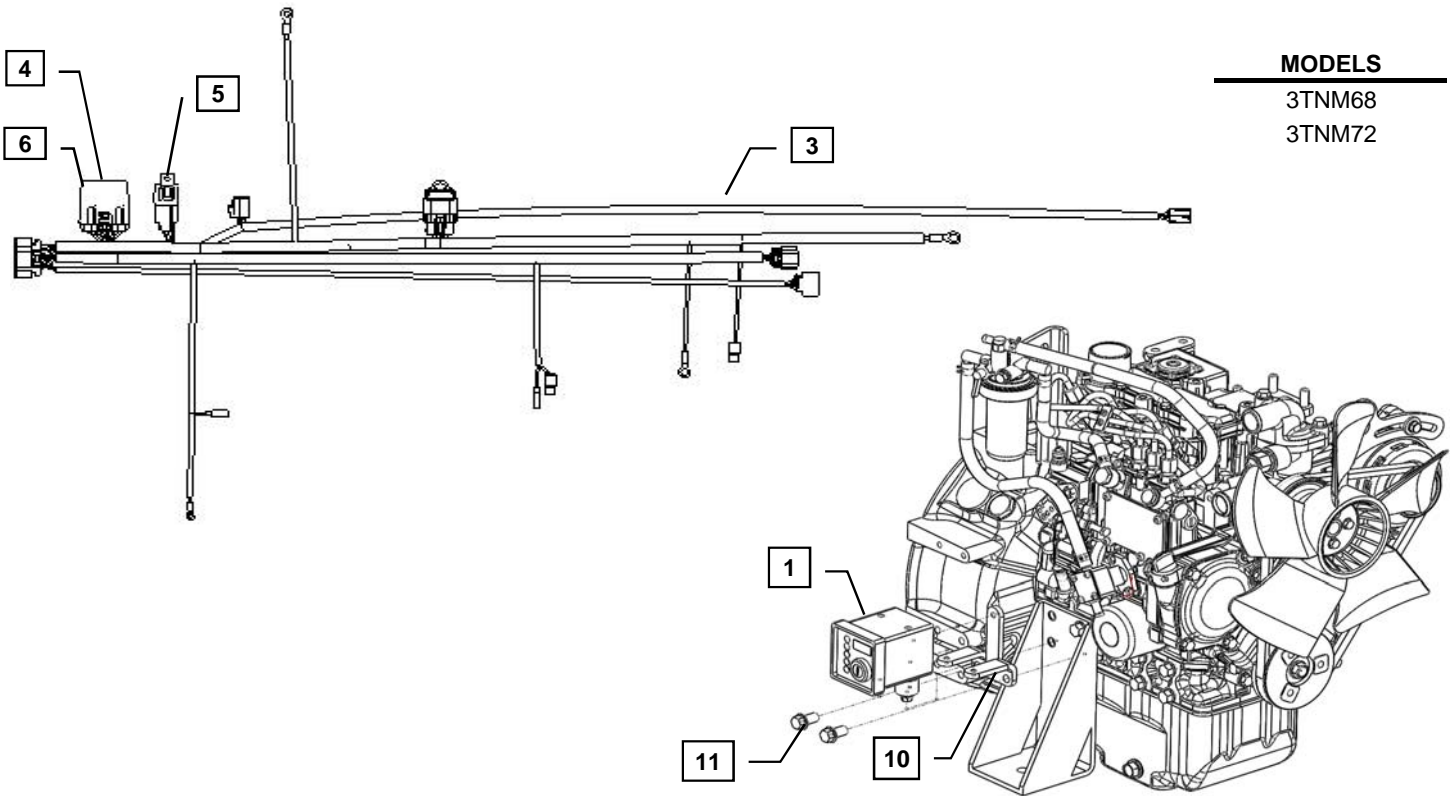




YANMAR CO., LTD.
YANMAR AMERICA CORP.

Item	Part No.	Description	Quantity	Remarks
1	119749-91111	Control Panel (IDI)	1	
2	129689-91190	Ignition Key, Engine Control Panel	1	
3	119749-91091	Wiring Harness - MINIMAX	1	(B)
4	119749-91420	Control Module Timer	1	
5	119749-91460	Relay 70A 12V Sealed	1	
6	119749-91440	Control Module Housing	1	
7	129689-92100	Isolator Mount M6 x 1.0	3	
8	129689-91180	Washer, M6 (Star)	3	(A)
9	26366-060002	Nut, M6 x 1.0 (Flanged hex head)	4	
10	119749-91140	Panel Mounting Bracket	1	
11	26106-100252	Bolt, M10 x 1.5 - 25 (Flanged hex head)	2	



MODELS

3TNM68
 3TNM72

Remarks: (A) 129689-91180 is not a service part and does not need to be replaced.
 (B) 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. Fasten Control Panel (1) to the Mounting Bracket (10) using Isolators (7), Star Washers (8) and Lock Nuts (9). Star washers should be installed between isolators and bracket.

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 mounting pad using M10x1.5 - 25 Bolts (11).
3. Connect harness terminals to appropriate locations. See engine wiring harness diagram and schematics provided with panel kit.
5. 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 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.

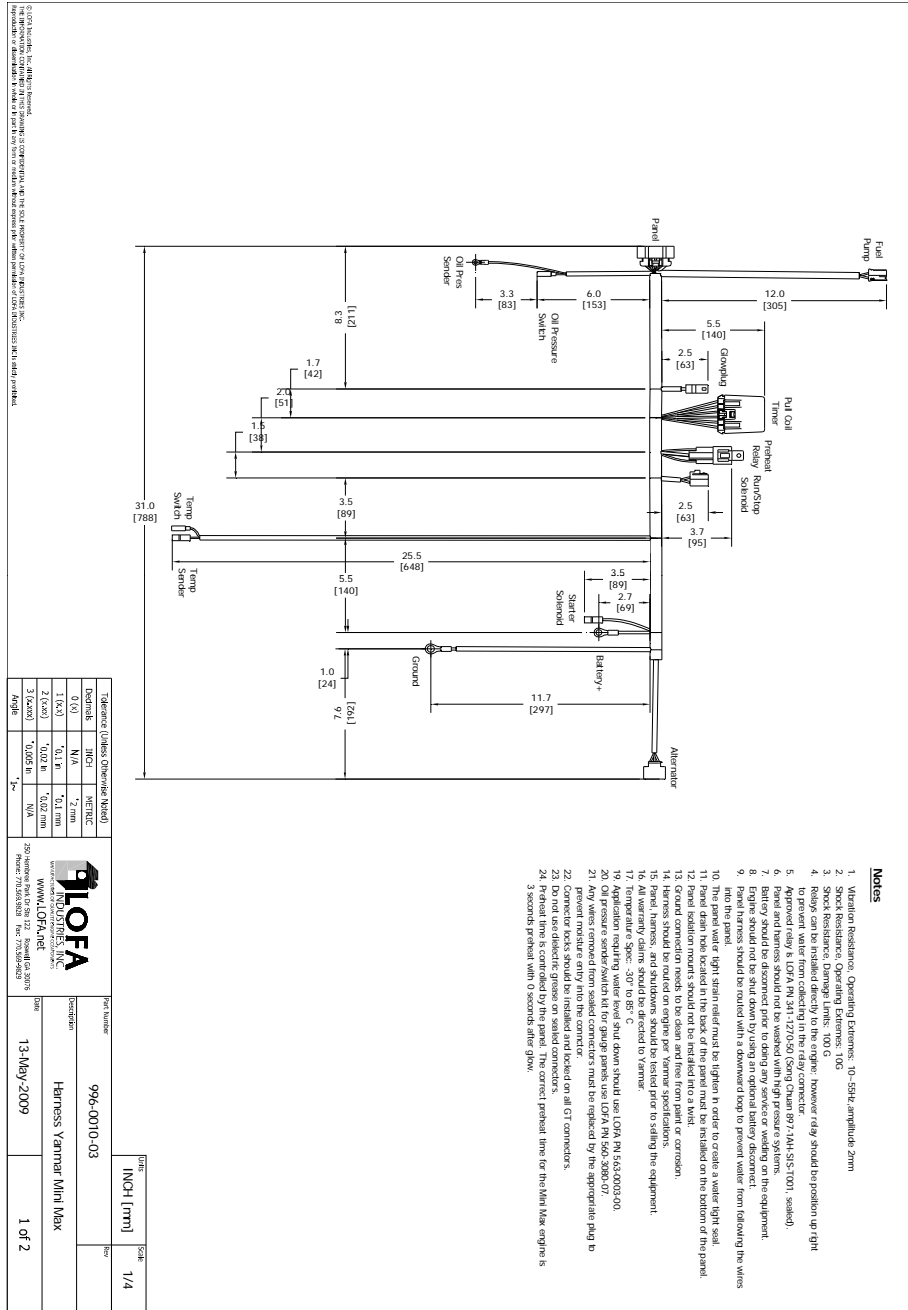
Refer to harness drawing for additional design requirements for consideration of application. A troubleshooting guide is available through Yanmar's Distributor Website or by contacting Yanmar America's Service Department.

Table 1: Proper torque specifications for bolts and nuts.

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



NOTES

1. Vibration Resistance, Operating Extreme: 10-50Hz amplitude 2mm
2. Shock Resistance, Operating Extreme: 10G
3. Shock Resistance, Damage Limit: 100 G
4. Relays can be installed directly to the engine; however relay should be position up right
5. Preheat wire (LOFA PN 543-0003-00) should be installed in the engine compartment
6. Panel and harness should not be washed with high pressure systems.
7. Battery should be disconnected prior to doing service or welding on the equipment.
8. Engine should not be shut down by using an approved battery disconnect.
9. The preheat wire should be secured with a downlock loop to prevent water from following the wires into the panel.
10. The panel water tight strain relief must be tighten in order to create a water tight seal.
11. Panel drain hole located in the back of the panel must be installed on the bottom of the panel.
12. The panel must be installed in a clean and free from paint or corrosion.
13. Ground connection needs to be clean and free from paint or corrosion.
14. Harness should be installed on engine per Yanmar specifications.
15. Panel, harness, and startdowns should be tested prior to sailing the equipment.
16. All battery cables should be secured to Yanmar.
17. The battery should be secured to the engine.
18. Application requiring water level shut down should use LOFA PN 543-0003-00.
19. Oil pressure sender/water kit for gauge panels use LOFA PN 560-3080-07.
20. Any wires connected from sealed connectors must be replaced by the appropriate plug to prevent water from entering the connectors.
21. Any wires connected from sealed connectors must be replaced by the appropriate plug to prevent water from entering the connectors.
22. Connector nuts should be installed and torqued on all GT connectors.
23. Do not use dielectric grease on sealed connectors.
24. Preheat time is controlled by the panel. The correct preheat time for the Minn Max engine is 3 seconds per test with 0 seconds after glow.

Dimensions (Unless Otherwise Noted)	
Standard	Metric
0 (0)	N/A
1 (25.4)	25.4 mm
2 (50.8)	50.8 mm
3 (76.2)	76.2 mm
4 (101.6)	101.6 mm
5 (127.0)	127.0 mm
6 (152.4)	152.4 mm
7 (177.8)	177.8 mm
8 (203.2)	203.2 mm
9 (228.6)	228.6 mm
10 (254.0)	254.0 mm
11 (279.4)	279.4 mm
12 (304.8)	304.8 mm
13 (330.2)	330.2 mm
14 (355.6)	355.6 mm
15 (381.0)	381.0 mm
16 (406.4)	406.4 mm
17 (431.8)	431.8 mm
18 (457.2)	457.2 mm
19 (482.6)	482.6 mm
20 (508.0)	508.0 mm
21 (533.4)	533.4 mm
22 (558.8)	558.8 mm
23 (584.2)	584.2 mm
24 (609.6)	609.6 mm
25 (635.0)	635.0 mm
26 (660.4)	660.4 mm
27 (685.8)	685.8 mm
28 (711.2)	711.2 mm
29 (736.6)	736.6 mm
30 (762.0)	762.0 mm
31 (787.4)	787.4 mm
32 (812.8)	812.8 mm
33 (838.2)	838.2 mm
34 (863.6)	863.6 mm
35 (889.0)	889.0 mm
36 (914.4)	914.4 mm
37 (939.8)	939.8 mm
38 (965.2)	965.2 mm
39 (990.6)	990.6 mm
40 (1016.0)	1016.0 mm
41 (1041.4)	1041.4 mm
42 (1066.8)	1066.8 mm
43 (1092.2)	1092.2 mm
44 (1117.6)	1117.6 mm
45 (1143.0)	1143.0 mm
46 (1168.4)	1168.4 mm
47 (1193.8)	1193.8 mm
48 (1219.2)	1219.2 mm
49 (1244.6)	1244.6 mm
50 (1270.0)	1270.0 mm
51 (1295.4)	1295.4 mm
52 (1320.8)	1320.8 mm
53 (1346.2)	1346.2 mm
54 (1371.6)	1371.6 mm
55 (1397.0)	1397.0 mm
56 (1422.4)	1422.4 mm
57 (1447.8)	1447.8 mm
58 (1473.2)	1473.2 mm
59 (1498.6)	1498.6 mm
60 (1524.0)	1524.0 mm
61 (1549.4)	1549.4 mm
62 (1574.8)	1574.8 mm
63 (1600.2)	1600.2 mm
64 (1625.6)	1625.6 mm
65 (1651.0)	1651.0 mm
66 (1676.4)	1676.4 mm
67 (1701.8)	1701.8 mm
68 (1727.2)	1727.2 mm
69 (1752.6)	1752.6 mm
70 (1778.0)	1778.0 mm
71 (1803.4)	1803.4 mm
72 (1828.8)	1828.8 mm
73 (1854.2)	1854.2 mm
74 (1879.6)	1879.6 mm
75 (1905.0)	1905.0 mm
76 (1930.4)	1930.4 mm
77 (1955.8)	1955.8 mm
78 (1981.2)	1981.2 mm
79 (2006.6)	2006.6 mm
80 (2032.0)	2032.0 mm
81 (2057.4)	2057.4 mm
82 (2082.8)	2082.8 mm
83 (2108.2)	2108.2 mm
84 (2133.6)	2133.6 mm
85 (2159.0)	2159.0 mm
86 (2184.4)	2184.4 mm
87 (2209.8)	2209.8 mm
88 (2235.2)	2235.2 mm
89 (2260.6)	2260.6 mm
90 (2286.0)	2286.0 mm
91 (2311.4)	2311.4 mm
92 (2336.8)	2336.8 mm
93 (2362.2)	2362.2 mm
94 (2387.6)	2387.6 mm
95 (2413.0)	2413.0 mm
96 (2438.4)	2438.4 mm
97 (2463.8)	2463.8 mm
98 (2489.2)	2489.2 mm
99 (2514.6)	2514.6 mm
100 (2540.0)	2540.0 mm

Part Number: 996-0010-03

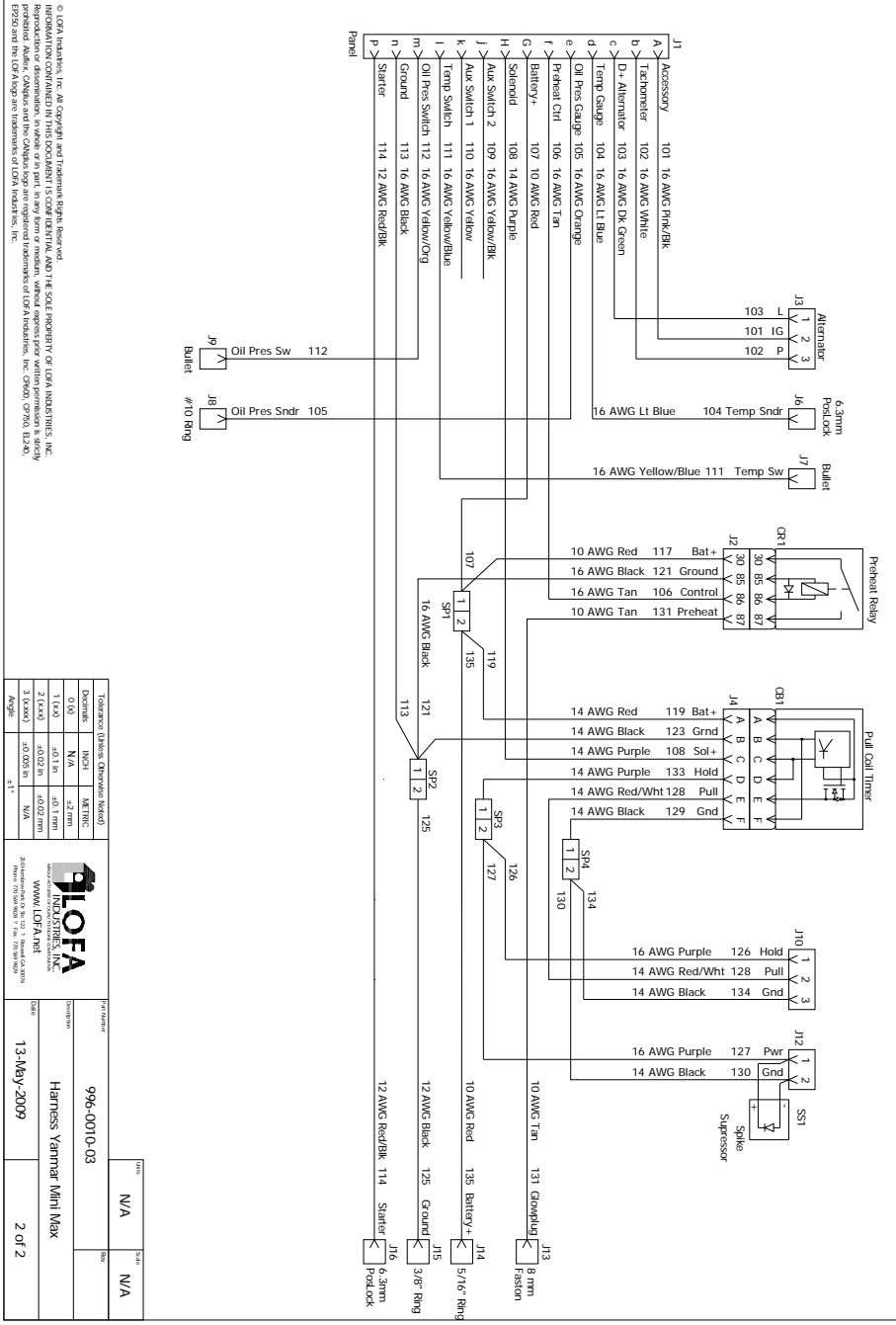
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Installation Instructions



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Tolerances (Unless Otherwise Noted)			
Dimensions	INCH	METRIC	
0 (0)	N/A	.2 mm	
1 (1.0)	±0.1 in	±2.5 mm	
2 (2.0)	±0.02 in	±0.5 mm	
3 (3.0)	±0.005 in	±0.125 mm	
Angles	±1°		

Part Number	996-0010-03	Part Name	N/A
Revision		Part Name	N/A
Manufacturer	Harness Yammar Mini Max	Part Name	N/A
Part Number	13-May-2009	Part Name	N/A
Page	2 of 2	Part Name	N/A