

Engineering												Service						
Item#	2	3	4	5	6	Part Name	Rev	Part Code	Qty	Rev Code	Remarks	Engine Model	Supplier Information			Service		
													Part Code	Supplier	P	S	N	
-	x					<b>BIO Fuel assembly</b>		<b>D19746-59250</b>	<b>1</b>		<b>V370BGS-BI</b>	3TNV70,76	<b>D19746-59250</b>	<b>YANMAR</b>	<b>x</b>	<b>x</b>		
1		x				Supply, and Return hose, to fuel tank		129946-59050	2				129946-59050	Yanmar	x	x		
2			x			Fuel Oil Hose		129946-59550	2				129946-59550	Yanmar	x	x		
3			x			Clamp, hose 12		124766-59050	4				124766-59050	Yanmar	x	x		
4		x				Hose from Fuel feed pump to Filter		119546-59020	1				119546-59020	Yanmar	x	x		
5			x			Fuel Oil Hose		119546-59520	1				119546-59520	Yanmar	x	x		
6			x			Clamp, hose 12		124766-59050	2				124766-59050	Yanmar	x	x		
7		x				Hose from Fuel Filter to Injection pump		119546-59200	1				119546-59200	Yanmar	x	x		
8			x			Fuel Oil Hose		119546-59500	1				119546-59500	Yanmar	x	x		
9			x			Clamp, hose 12		124766-59050	2				124766-59050	Yanmar	x	x		
10			x			Protector, pipe 15		129950-59241	1				129950-59241	Yanmar	x	x	x	
11		x				Hose from Injection pump to Fuel Filter		119546-59220	1				119546-59220	Yanmar	x	x		
12			x			Fuel Oil Hose		119546-59520	1				119546-59520	Yanmar	x	x		
13			x			Clamp, hose 12		124766-59050	2				124766-59050	Yanmar	x	x		
14			x			Protector, pipe 15		129957-59101	1				129957-59101	Yanmar	x	x	x	
15		x				Fuel Injection pump to Fuel Injection nozzle		119546-59300	1				119546-59300	Yanmar	x	x		
16			x			Fuel Oil Hose		119416-59510	1				119416-59510	Yanmar	x	x		
17			x			Clamp, hose 10		124060-77680	2				124060-77680	Yanmar	x	x		
18			x			Protector, pipe 13.2		119546-59700	1				119546-59700	Yanmar	x	x	x	
19		x				Fuel Oil Filter O-ring 44mm		24316-000440	1				24316-000440	Yanmar	x	x		
20		x				Fuel Water Seperator O-ring 44mm		24316-000440	1				24316-000440	Yanmar	x	x		
21		x				Instructions for B20		INS-V370GS-BI-0010	1			INS-V370GS-BI-0010	Yanmar	x	x			

Notes	
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Revision History				
Revision Code	Part Number	Design Notification File	Remarks	Date
0	D19746-59250	N/A	Established the V370GS-BI, "B20 Bio Fuel" Kit for the 3TNV70,76 engine	26-Jan-09

**Bill of Materials Release**

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Yanmar America Sales Department

Yanmar America Parts Department

Newstream Enterprises

**Bill of Materials Approval**

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Engineer	Project Manager	Engineering Manager
Andy Helgeland	Jeff Williams	Jim Strepek
Date: 1/26/2009	Date:	Date:



YANMAR CO., LTD.  
YANMAR AMERICA CORP.

Item	Lev.	O	Part No.	Description	Quantity	Remarks
1	-		129946-59050	Supply, and Return hose, to fuel tank	2	
2	--		129946-59550	Fuel Oil Hose	2	
3	--		124766-59050	Clamp, hose 12	4	
4	-		119546-59020	Hose from Fuel feed pump to Filter	1	
5	--		119546-59520	Fuel Oil Hose	1	
6	--		124766-59050	Clamp, hose 12	2	
7	-		119546-59200	Hose from Fuel Filter to Injection pump	1	
8	--		119546-59500	Fuel Oil Hose	1	
9	--		124766-59050	Clamp, hose 12	2	
10	--	X	129950-59241	Protector, pipe 15	1	
11	-		119546-59220	Hose from Injection pump to Fuel Filter	1	
12	--		119546-59520	Fuel Oil Hose	1	
13	--		124766-59050	Clamp, hose 12	2	
14	--	X	129957-59101	Protector, pipe 15	1	
15	-		119546-59300	Fuel Injection pump to Fuel Injection nozzle	1	
16	--		119416-59510	Fuel Oil Hose	1	
17	--		124060-77680	Clamp, hose 10	2	
18	--	X	119546-59700	Protector, pipe 13.2	1	
19	-		24316-000440	Fuel Oil Filter O-ring 44mm	1	
20	-		24316-000440	Fuel Water Seperator O-ring 44mm	1	
21	-		INS-V370GS-BI-0010	Instructions for B20	1	

**MODELS**  
3TNV70, 76



**Installation Instructions**

Whenever Bio-fuel of any concentration is used, all of the rubber parts in contact with fuel must be compliant with the fuel used. This kit is compliant with B-20 and lesser concentrations. Refer to service manual for priming the fuel system.

**Note:** THE FOLLOWING INSTRUCTIONS COVER "GENERAL INSTALLATIONS", IT IS THE END USERS RESPONSIBILITY TO IDENTIFY ALL RUBBER COMPONENTS THAT COME IN CONTACT WITH THE FUEL AND VERIFY B-20 COMPLAIANCE OR REPLACE THEM AS NECESSARY. ITEMS SUCH AS: FUEL COOLERS, TANKS, LEVEL SENDERS, CAPS AND O-RINGS, SECONDARY TANKS, TEES, SHUT-OFF VALVES, FUEL PUMPS, NON YANMAR SUPPLIED

**Replace Supply and Return lines:**

1. Using the hose clamps provided, replace the fuel supply line from the tank to the Water Separator [1] using one of the supplied p/n 129946-59050, cut to appropriate length.
2. Replace the fuel supply line from the Water Separator to the fuel feed pump [1] using one of the supplied p/n 129946-59050, cut to appropriate length.
3. Replace the fuel return line from the filter to the tank [1] using the second supplied p/n 129946-59050, cut to appropriate length, Using the hose clamps provided.
4. Replace the fuel line from the feed pump to the filter [4] using p/n 119546-59020, the chart below is provided to help clarify.

If the supplied hoses are not long enough, you may purchase commercially available B-20 compliant bulk hose of the proper size and dia. and cut it to fit

Item	Fuel Contact	Part number
1	From tank to water separator	129946-59050
1	From water separator to fuel feed pump	129946-59050
1	From fuel filter to tank	129946-59050
4	From fuel feed pump to fuel filter	119546-59020

**Replace engine feed and return**

4. Using the hose clamps provided, install supply fuel line [7], p/n 119546-59200 from the fuel filter to the fuel injection pump , then connect the return fuel line [11] p/n 119546-59220 from the fuel injection pump to the fuel filter.
5. Replace the fuel hose [15] p/n 119546-59300 from Injection pump to the Injection nozzles, using the hose clamps provided.

Item	Fuel Contact	Part number
7	From fuel filter to injection pump	119546-59200
11	From injection pump to fuel filter	119546-59220
15	From fuel injection pump to fuel injection nozzle	119546-59300

**Replace seals**

6. Remove O-rings [19], and [20] then refer to the diagram, and the Chart below for specific Water separator requirements. Choose the correct O-ring and install in filter and separator.

Item	Water Separator PN	O-Ring PN	Size	Tier	Description
19	119833-55620	24316-000440	44mm	Tier 4	Use 44mm O-ring for Fuel Oil Filter p/n 119833-55620
20	129335-55700				Use 44mm O-ring for Water separator p/n 129335-55700

**NOTE:**

- A. If application uses the integrated mechanical feed pump located on the injection pump, remove the mechanical feed pump, and install Fuel Pump Cover Assembly p/n 129255-52000, installing the Gasket p/n 129155-52051 first, then the cover p/n 129100-52200 using the existing; nuts, studs, and washers. install the fuel feed pump p/n 119225-52102, accorindg to the diagram.
- B. If the application is gravity fed or uses Yanmar p/n #119225-52102, then install Fuel Pump Cover Assembly p/n 129255-52000, installing the Gasket p/n 129155-52051 first, then the cover p/n 129100-52200 using the existing; nuts, studs, and washers.
- C. If application is using a customer supplied electric feed pump then user must verify B-20 compliant components as required.

