		Engineering								P: Production Service S: Serviceable N: Not Serviceable						
									Rev		Engine	Supplier Information		9	Service	
Item#	2 3	3 4	5	6	Part Name	Rev	Part Code	Qty	Code	Remarks	Model	Part Code	Supplier	Р	S	N
-	х				BIO Fuel assembly		D19125-59250	1		V370BGS-BI		D19125-59250	YANMAR	Х	Х	
1)	(Supply, and Return hose, to fuel tank		129946-59050	2				129946-59050	Yanmar	Х	Х	
2		Х			Fuel Oil Hose		129946-59550	2				129946-59550	Yanmar	Х	Х	
3		х			Clamp, hose 12		124766-59050	4				124766-59050	Yanmar	Х	Х	
4)	(Hose from Fuel feed pump to Filter		119546-59030	1				119546-59030	Yanmar	Х	Х	
5		Х			Fuel Oil Hose		119546-59530	1				119546-59530	Yanmar	Х	Х	
6		Х			Clamp, hose 12		124766-59050	2				124766-59050	Yanmar	Х	Х	
7	,				Hose from Fuel Filter to Injection pump		129236-59000	1				129236-59000	Yanmar	Х	Х	
8		х			Fuel Oil Hose		129236-59500	1				129236-59500	Yanmar	Х	Х	
9		Х			Clamp, hose 12		124766-59050	2				124766-59050	Yanmar	Х	Х	
10		Х			Protector, pipe 15		129044-59100	1			3TNM68,	129044-59100	Yanmar	Х		Х
11)	(Hose from Injection pump to Fuel Filter		119546-59210	1			72	119546-59210	Yanmar	Х	Х	
12		х			Fuel Oil Hose		119546-59510	1				119546-59510	Yanmar	Х	Х	
13		Х			Clamp, hose 12		124766-59050	2				124766-59050	Yanmar	Х	Х	
14		Х			Protector, pipe 15		129961-59110	1				129961-59110	Yanmar	Х		Х
15)	(Fuel Injection pump to Fuel Injection nozzle		119546-59300	1				119546-59300	Yanmar	Х	Х	
16		Х			Fuel Oil Hose		119416-59510	1		_		119416-59510	Yanmar	Х	Х	
17		Х			Clamp, hose 10		124060-77680	2		_		124060-77680	Yanmar	Х	Х	
18		Х			Protector, pipe 13.2		119546-59700	1		_		119546-59700	Yanmar	Х		Х
19)				Fuel Oil Filter O-ring 44mm		24316-000440	1		_		24316-000440	Yanmar	Х	Х	
20)				Fuel Water Seperator O-ring 44mm		24316-000440	1		_		24316-000440	Yanmar	Х	Х	
21)	(Instructions for B20		INS-M368GS-BI-0010	1		-		INS-M368GS-BI-0010	Yanmar	Х	Х	

Notes	Notes					
1						
2						
3						
4						

Revision History	Revision History						
Revision Code	Part Number	Design Notification File	Remarks	Date			
0	D19125-59250	N/A	Established the M368GS-BI, "B20 Bio Fuel" Kit for the 3TNM68 engine	26-Jan-09			

Bill of Materials Release						
✓ Yanmar America Sales Department						
✓ Yanmar America Parts Department						
✓ Newstream Enterprises						

Bill of Materials Approval

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.	0	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	-		119546-59030	Hose from Fuel feed pump to Filter 1		
5			119546-59530	Fuel Oil Hose	1	
6			124766-59050	Clamp, hose 12	2	
7	-		129236-59000	Hose from Fuel Filter to Injection pump	1	
8			129236-59500	Fuel Oil Hose	1	
9			124766-59050	Clamp, hose 12	2	
10		Χ	129044-59100	Protector, pipe 15	1	
11	-		119546-59210	Hose from Injection pump to Fuel Filter	1	
12			119546-59510	Fuel Oil Hose	1	
13			124766-59050	Clamp, hose 12 2		
14		Χ	129961-59110	Protector, pipe 15		
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		Χ	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-M368GS-BI-0010	Instructions for B20	1	
						MODELS

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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 119546-59030, 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	119546-59030

Replace engine feed and return

- 4. Using the hose clamps provided, install supply fuel line [7], p/n 129236-59000 from the fuel filter to the fuel injection pump, then connect the return fuel line [11] p/n 119546-59210 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	129236-59000
11	From injection pump to fuel filter	119546-59210
15	From fuel injection pump to fuel injection nozzle	119546-59300

Replace seals

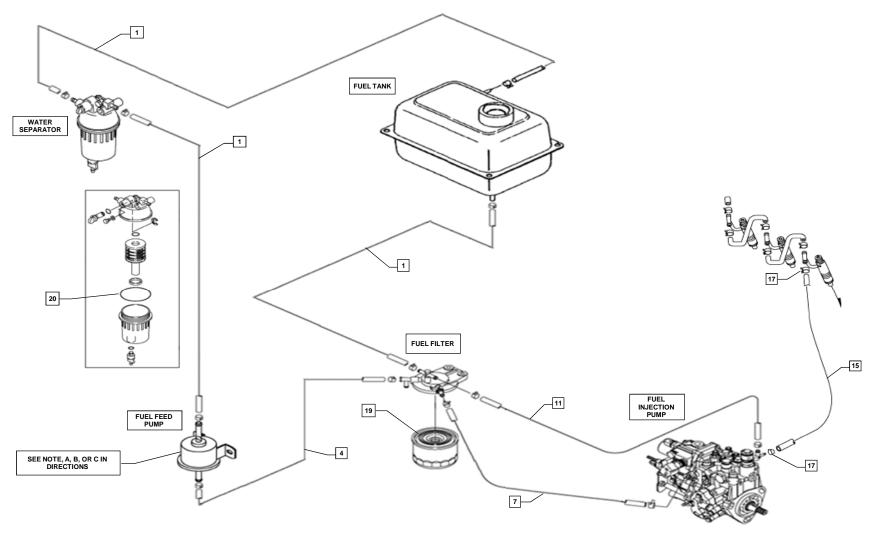
6. Remove O-rings [19], and [20] then refer to the diagram, and the Chart below for specific Water separator requirements. Choose the correct O-ring and install in filter and separator.

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	24310-000440	44111111	Hel 4	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, according 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.





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