



## Supplement to Yanmar Kit Installation Instructions

# SAFETY

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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.

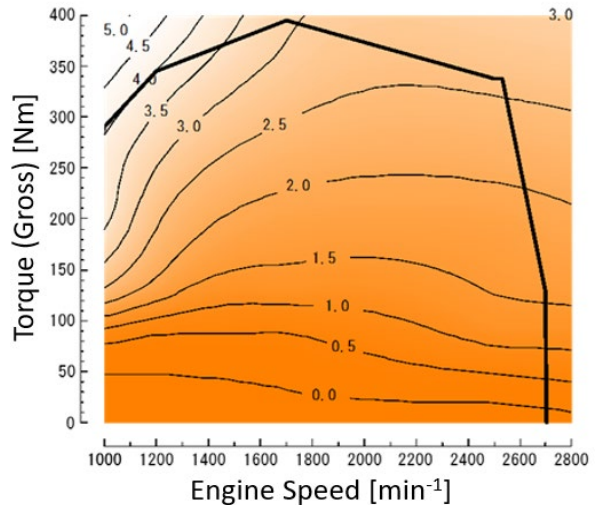
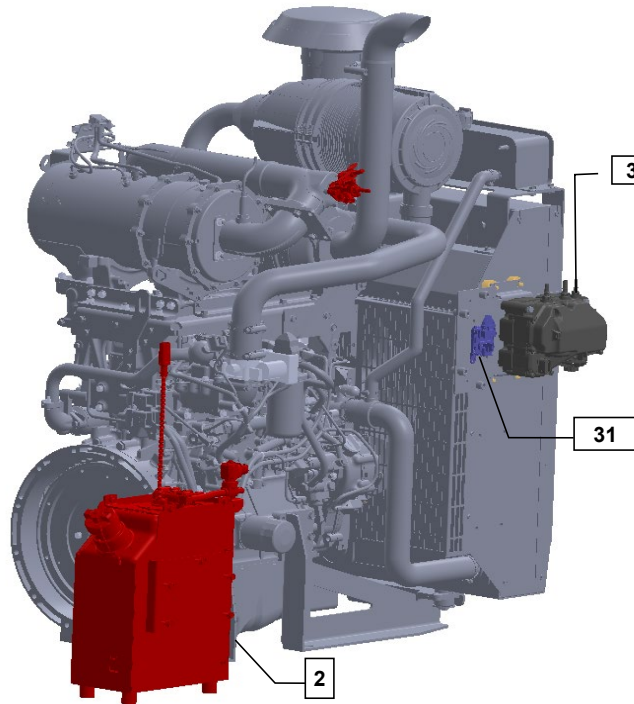


Item	Lev	Part No.	Description	Quantity	Remarks
1	-	129G90-19002	DEF Kit, KDEF1	1	
2	--	129F88-19100*	DEF Tank, 3-gallon	1	
3	--	129F88-19400*	Coolant Control Valve	1	
4	--	129F88-19600*	Hose, 3/8" ID, Supply Line	1	
5	--	129F88-19610*	Hose, 3/8" ID, Return Line	1	
6	--	129F88-19620*	Hose, 5/16" ID, Pressure Line	1	
7	--	129F88-19700	Hose, 3/8" ID, Engine Block to Tee, 15"	1	
8	--	129F88-19700	Hose, 3/8" ID, Tee to Dosing Module, 29.5"	1	
9	--	129F88-19710	Hose, 1/2" ID, DEF tank to Engine Water pump, 70.9"	1	
10	--	129F88-19710	Hose, 1/2" ID, Tee to Coolant control valve, 71.9"	1	
11	--	129F88-19710	Hose, 1/2" ID, Coolant control valve to DEF tank, 4.9"	1	
12	--	23000-022000*	Clamp, Hose	10	
13	--	26106-080162*	Bolt, M8-1.25 X 16	4	
14	--	26306-080002*	Nut, M8-1.25	4	
15	--	129G90-19800*	Tee Fitting	1	
16	--	129F88-19850	Assy, Supply Module Bracket	1	
17	---	129F88-19410	Isolator, Double Stud	4	
18	---	129F88-19420	Hex Nut, 5/16-18	4	
19	---	129689-44880	Isolator, M8-1.25	4	
20	---	129689-44290*	Bolt, M8-1.25X16	4	
21	---	119E34-12830	Bolt, M8-1.25X30	5	
22	---	129F88-19430	Bolt, Hex cap, M5-0.8X8	2	
23	---	129F88-19440	Bolt, Hex cap, M8-1.25X85	3	
24	---	129F88-19450	Washer, M8	3	
25	---	129F88-19460	Washer, M5	2	
26	---	129F88-44350	Bolt, M10-1.5X25	2	
27	---	129F88-19470	Assy, DEF Tank Bracket	1	
28	---	129F88-19480	Bracket, Misc	1	
29	---	129F88-19490	Bracket, Misc	2	
30	---	129G01-19521*	Supply Module (SM)	1	Included w/ the engine as loose part
31	---	129F01-19800*	Nox Module	2	Assembled to the engine.
32	---	129F01-19801*	Nox Module	3	Assembled to the engine.

**MODELS**  
4TNV94FHT-NYEA2

NOTE: 1. Item No. 4, 5, and 6 are corrugated hoses included in the DEF kit.  
2. Item No. 7 to 11 are rubber hoses included in the DEF Kit.  
3. Service parts are denoted by an asterisk. To replace non-service parts, the entire kit will need to be purchased.

## Installation Instructions



**WARNING:** As EPA requirement, for regulation applied area, set the urea water tank capacity so that the urea water replenishment timing to the urea water tank is adjusted such that the refueling of fuel is performed at least once for one urea water supplementation, even in the operating condition with the worst urea water consumption amount.

### DEF System Precautions:

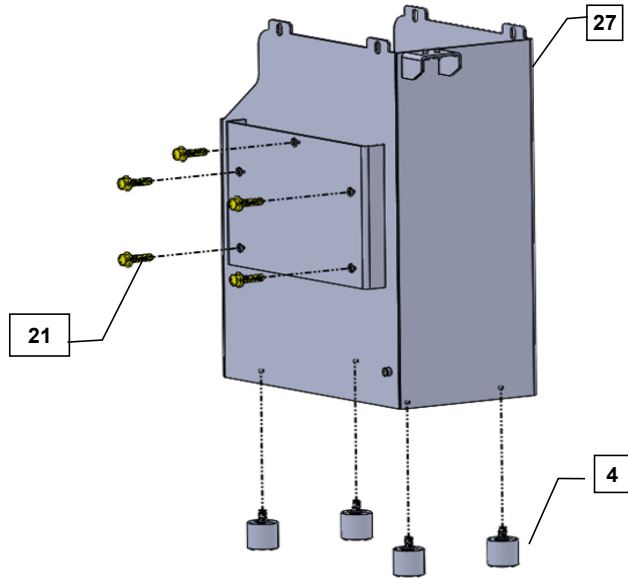
- Place the tank where the hot air from the engine or other machine components will not strike it directly and the tank is prevented from over heating.
- Do not cutoff or unplug the wires from the battery until the power of the DCU is turned off as urea water will be vacuumed after 10 minutes of standby time after the engine key is turned off.
- Ensure to use AdBlue® as urea water in the DEF tank which confirms to ISO22241-1. Do not use other liquid as urea water other than AdBlue® and also do not add or mix other substances into AdBlue®.
- Ensure DEF system (DEF Tank, Urea Water, DEF Hoses, SM, and DM) are not contaminated with other substances like oil, fuel, etc.
- YMR recommends not to use different hoses other than the Hoses included in the DEF Kit.
- The DEF consumption rate is 3% per gallon of fuel and the current size of the DEF tank (3 gallon) will support fuel tanks upto 100 gallons.**

Table 1: Comply with torque standards in the table to avoid unexpected damage during installation or in the future.

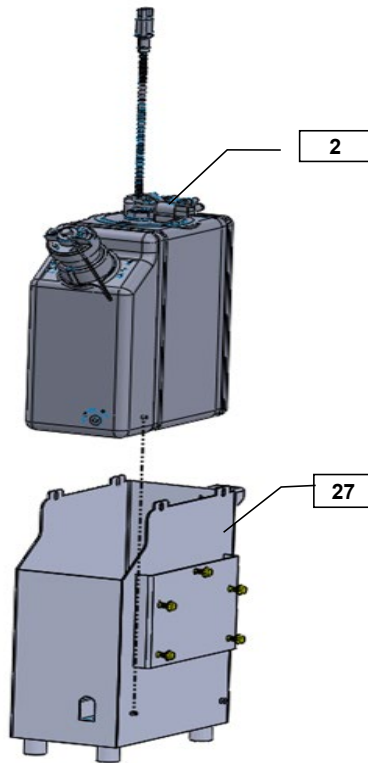
Diameter x Pitch	Kgf-m	Foot-lbf	N-m
5/16" - 18 Nut	~0.86	~6.25	~8.47
M5 X 0.8	0.4 ~ 0.7	3 ~ 5	4 ~ 6.7
M8 X 1.25	1.5 ~ 2.9	10.6 ~ 20.9	14.4 ~ 28.3
M10 X 1.5	4.5 ~ 5.5	32.5 ~ 39.8	44.0 ~ 54.0
Hose Clamps	0.3 ~ 0.4	1.8 ~ 2.5	2.5 ~ 3.4

## KDEF Installation Instructions

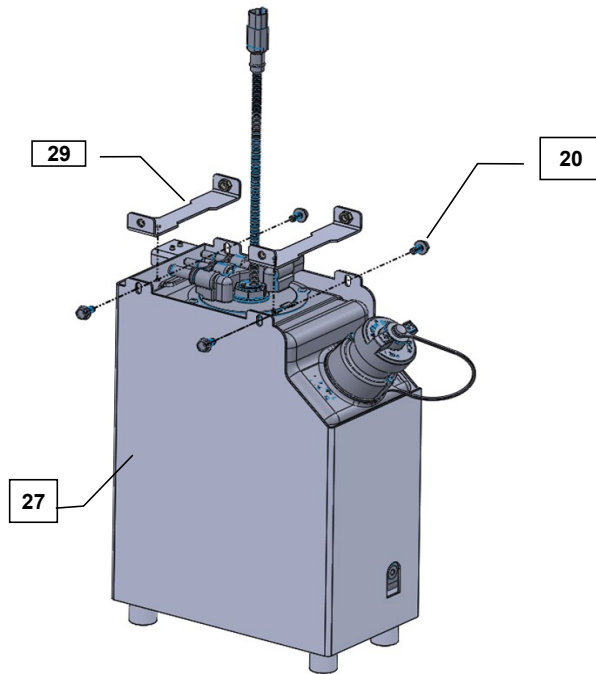
- 1 Fasten the isolators (4) to bottom of the DEF Tank Bracket (27) that is included in the DEF kit. The Bolt, M8-1.25X30 (21) can be used to fasten the DCU to side the DEF Tank Bracket (27).



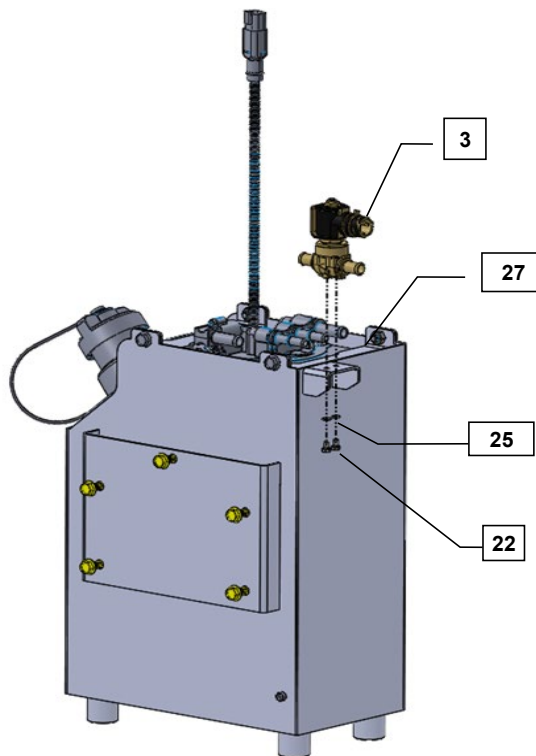
- 2 Place the DEF Tank assembly (2) inside the DEF Tank Bracket (27) as shown in the picture below.



- 5 Fasten the two Brackets (29) on top of each corner of the DEF Tank Bracket (27) using Bolt, M8-1.25X16 (20).

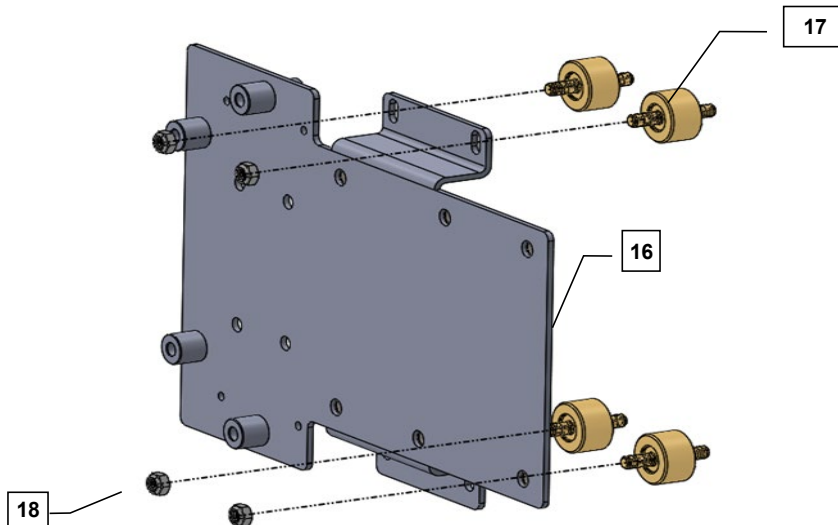


- 6 Install the Coolant control valve (3) to the DEF Tank Bracket (27) as shown in the picture below using Bolt M5-0.8X8 (22) and washer M5 (25).

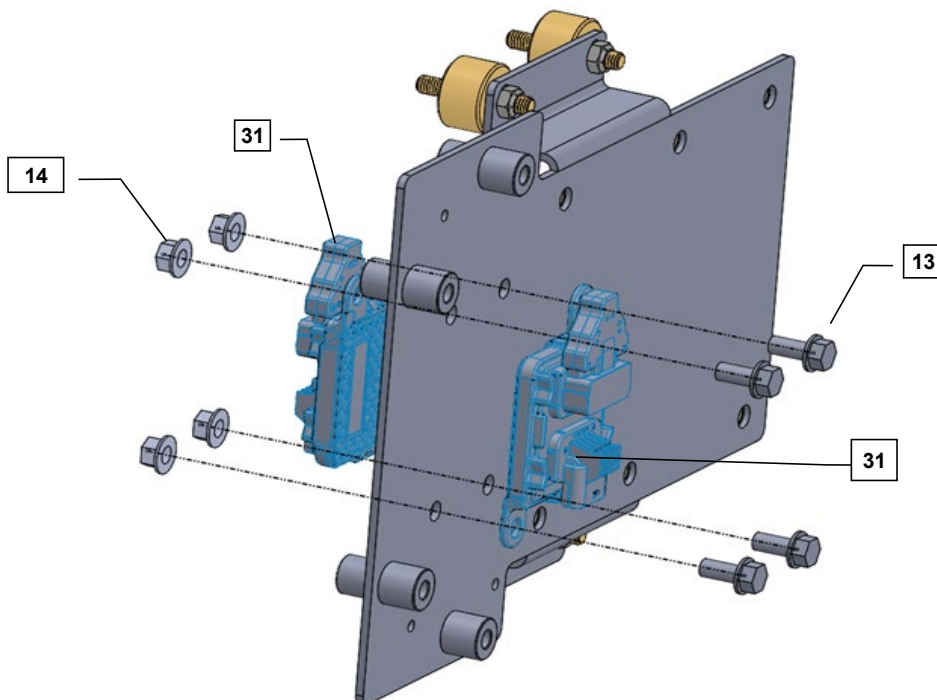


## KDEF Installation Instructions

- 7 Fasten one end of the double stud Isolator (17) to the Supply Module Bracket (16) using Hex Nut (18). Assemble the other end of the double stud Isolator (17) with the Supply Module Bracket (16) to side of the Radiator.



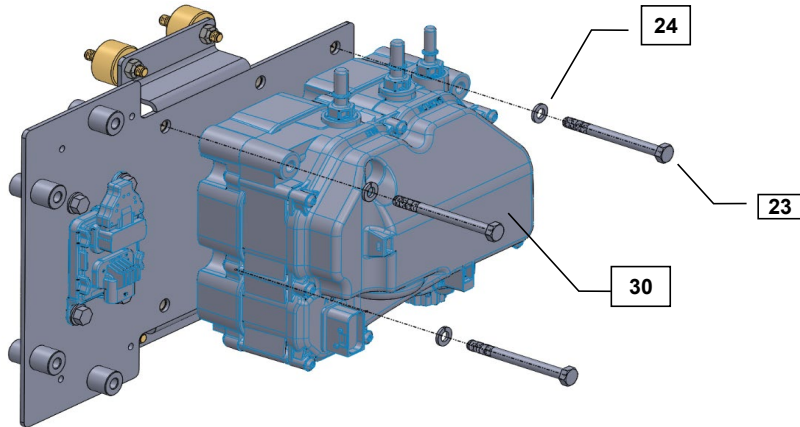
- 8 Install Nox modules (31) to the Supply Module Bracket (16) as shown in the picture below using Bolt, M8-1.25X16 (13) and Nut, M8 (14).



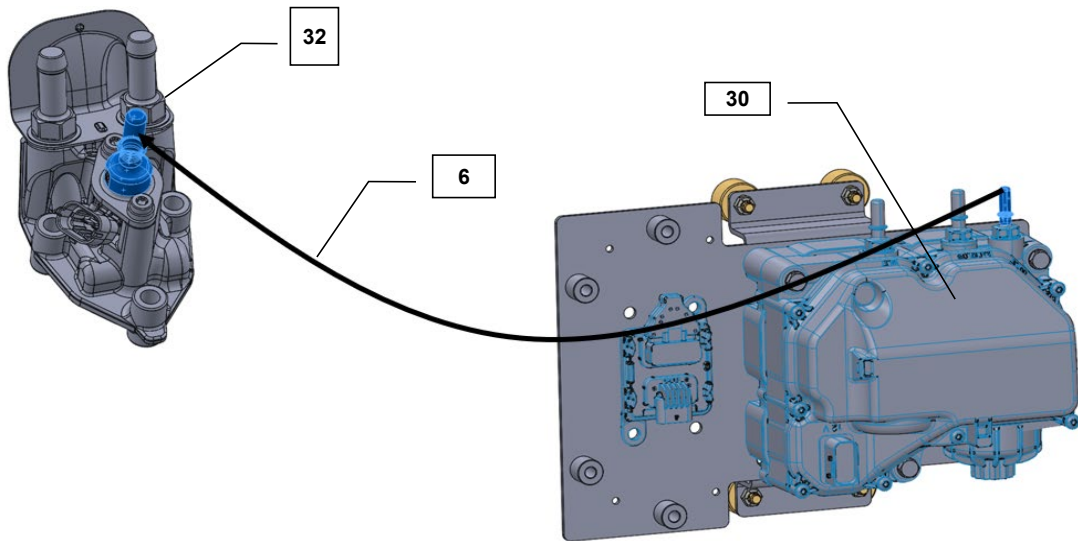
Note: The two Nox modules will be included on the engine aftertreatment.

## KDEF Installation Instructions

- 9 Assemble the Supply Module (30) to the Supply Module Bracket (16) using Bolt, M8-1.25X85 (23) and Washer, M8 (24).



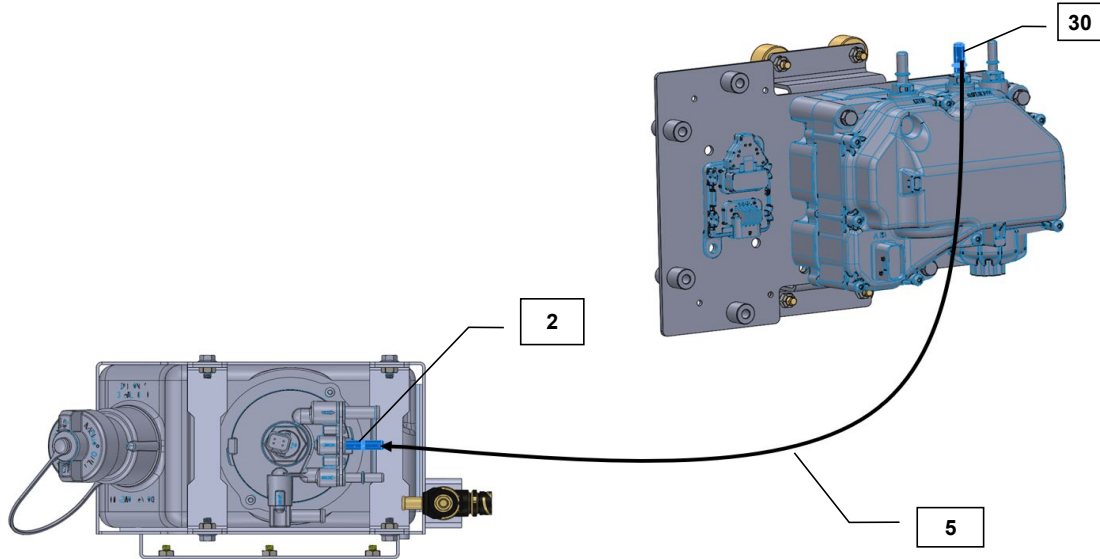
- 10 Attach the Hose, 5/16" ID, Pressure Line (6) to the Supply Module (30) and the Dosing Module (32). A white ring on each Hose (6) connectors is used to lock and unlock the hose connection.



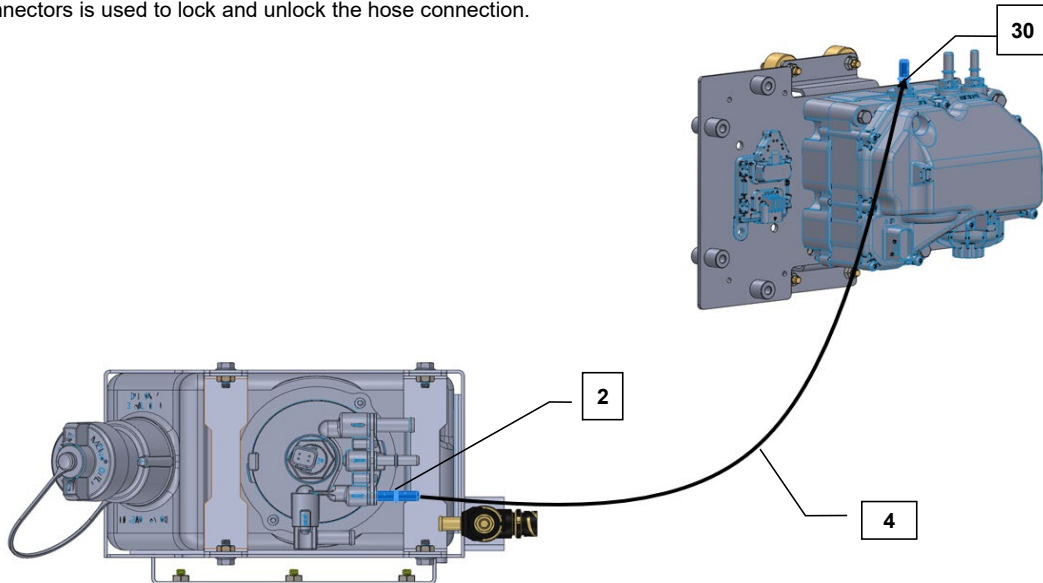


## KDEF Installation Instructions

- 11 Attach the Hose, 3/8" ID, Return Line (5) to the Supply Module (30) and the DEF Tank (2). A white ring on each Hose (6) connectors is used to lock and unlock the hose connection.



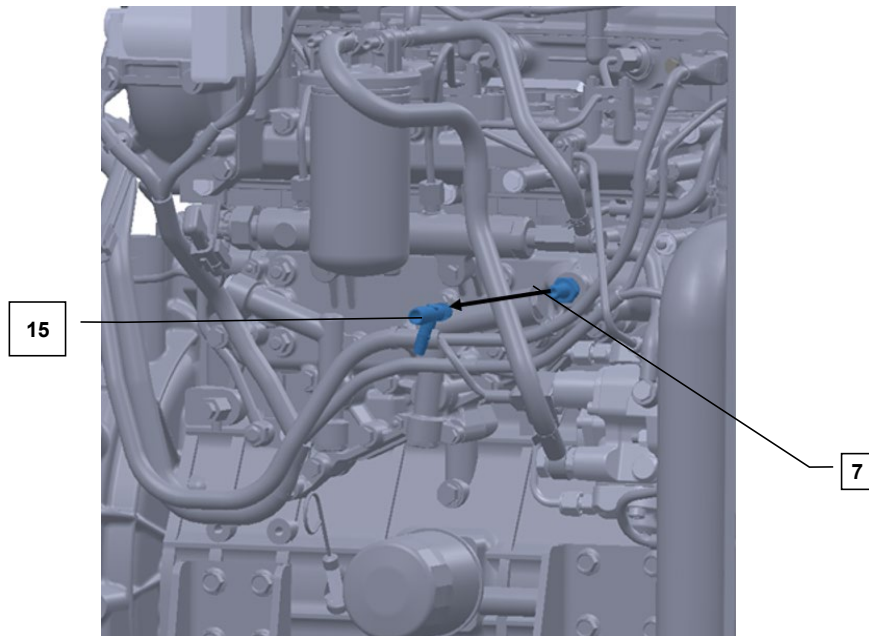
- 12 Attach the Hose, 3/8" ID, Supply Line (4) to the Supply Module (30) and the DEF Tank (2). A white ring on each Hose (6) connectors is used to lock and unlock the hose connection.



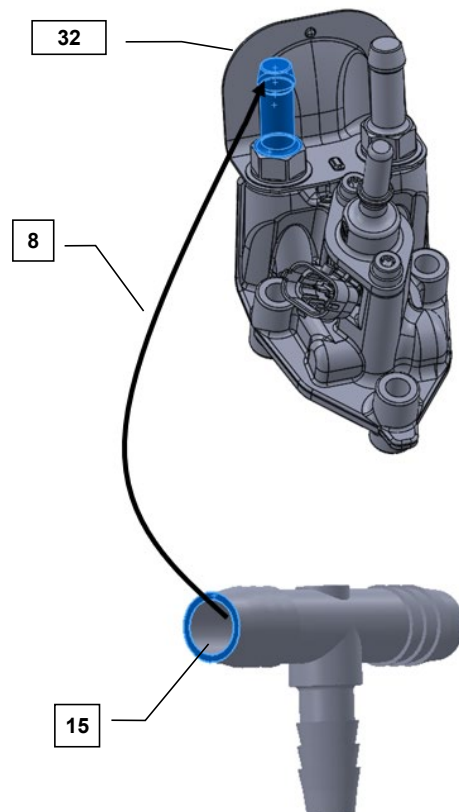


## KDEF Installation Instructions

- 13 Cut the Hose, 3/8" ID (7) provided in the DEF kit to precise length - **15"**, and attach it to the Engine block and Tee Fitting (15) using Hose Clamps (12).

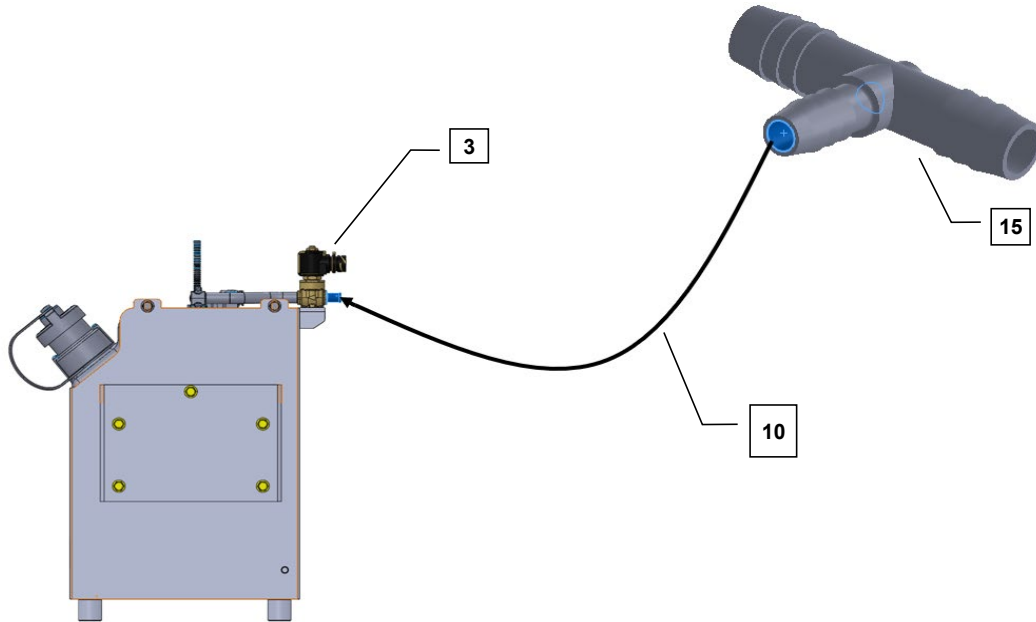


- 14 Cut the Hose, 3/8" ID (8) provided in the DEF kit to precise length - **29.5"**, and attach it to the Tee Fitting (15) and the Dosing Module (32) using Hose Clamps (12).

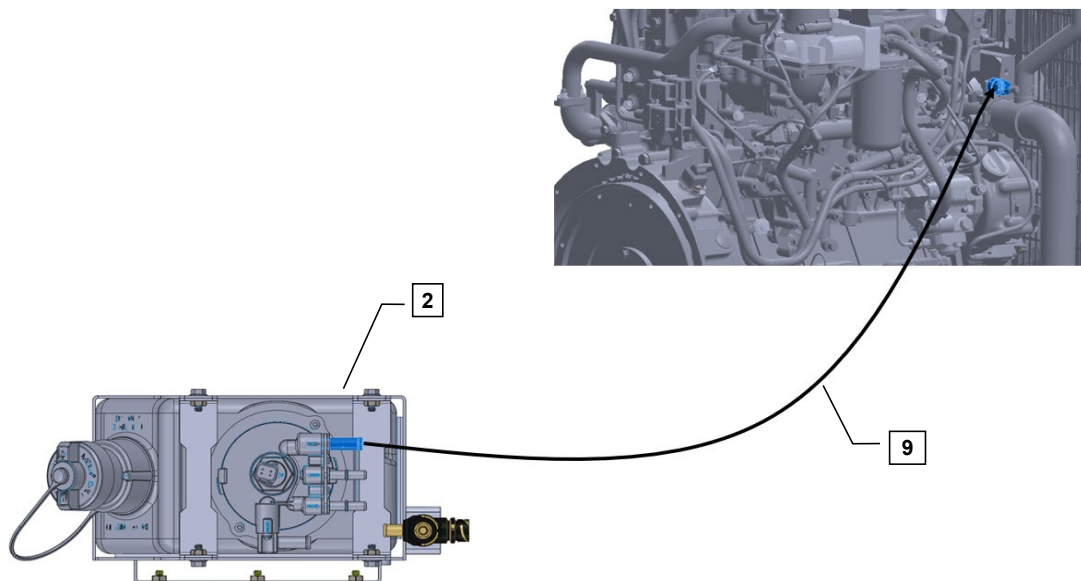


## KDEF Installation Instructions

- 15 Cut the Hose, 1/2" ID (10) provided in the DEF kit to precise length - **71.9"**, and attach it to the Tee Fitting (15) and the Coolant Control Valve (3) using Hose Clamps (12).

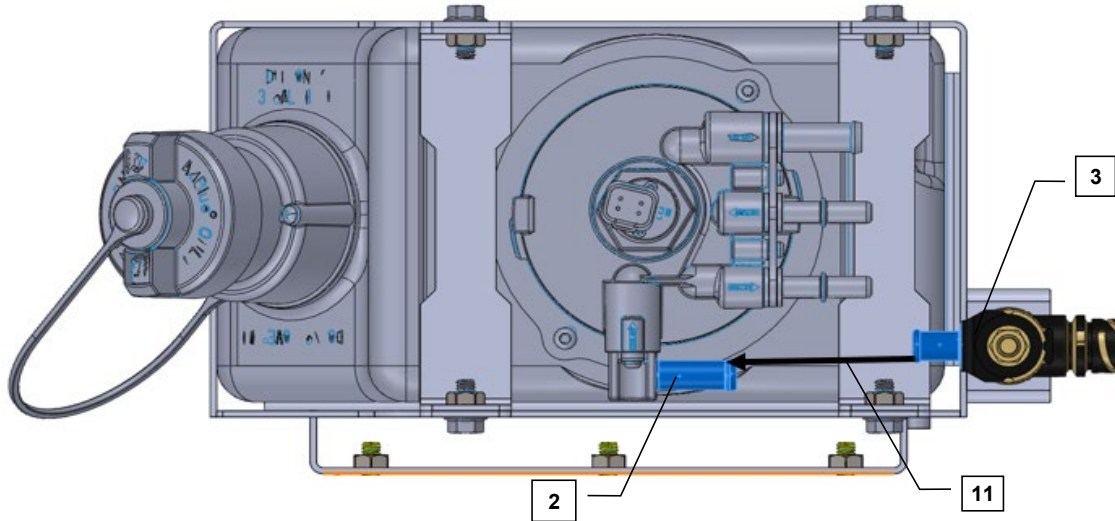


- 16 Cut the Hose, 1/2" ID (9) provided in the DEF kit to precise length - **70.9"**, and attach it to the DEF Tank (2) and the Engine water pump inlet using Hose Clamps (12).



## KDEF Installation Instructions

- 17 Cut the Hose, 1/2" ID (11) provided in the DEF kit to precise length - 4.9", and attach it to the DEF Tank (2) and the Coolant Control Valve (3) using Hose Clamps (12).



- 18 Fasten the Bracket (28) to the Aftertreatment bracket using M10-1.5X25 (26) as shown in the below picture. The M8 and M10 holes on the bracket can be used to attach the harness with the help of clips provided in the harness kit.

