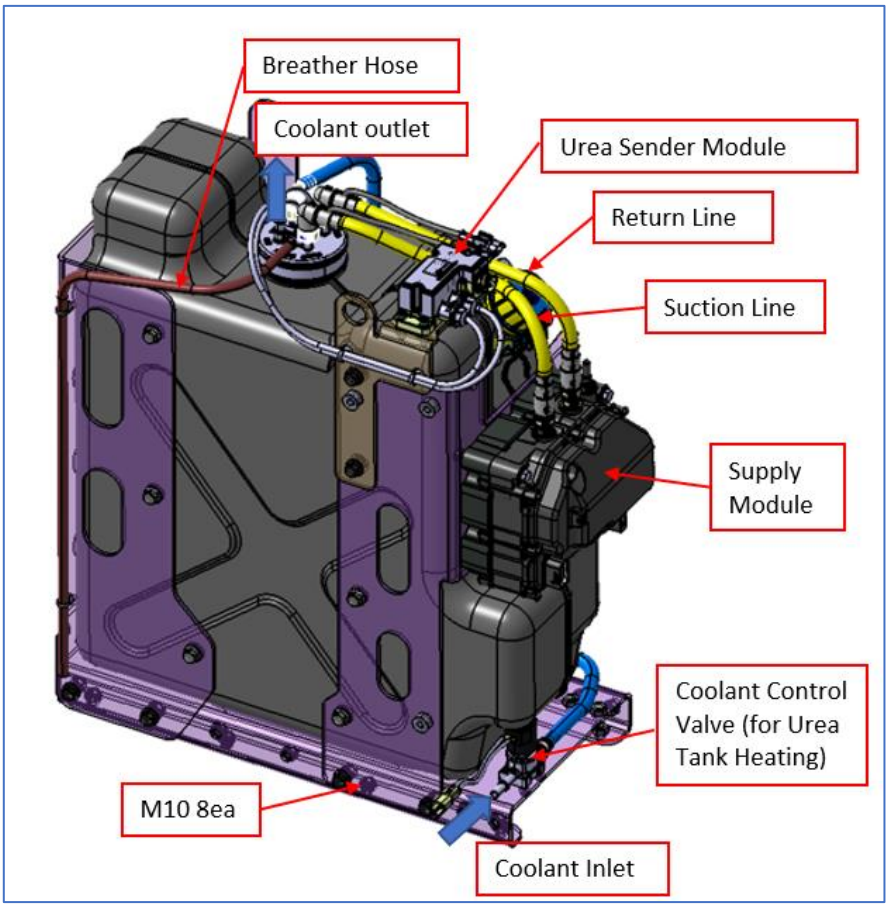
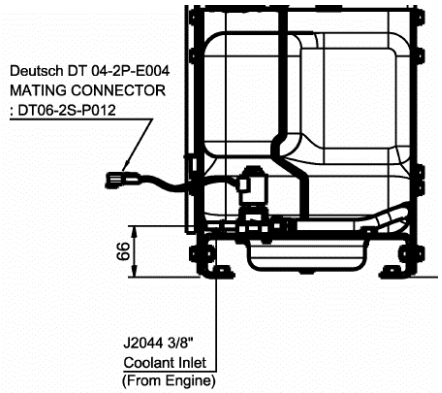
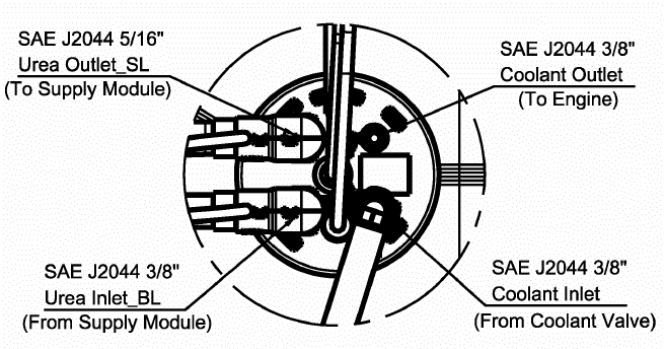


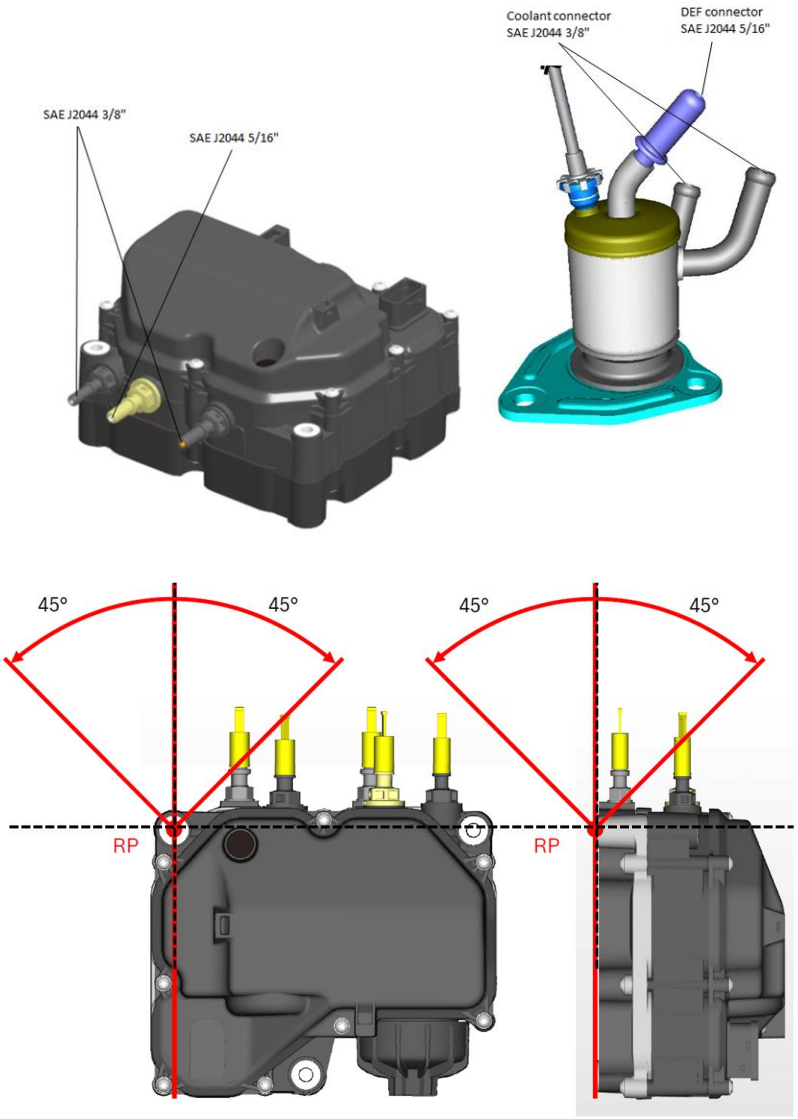
DEF Tank installation and Tubing

• SAE J2044 3/8″ and 5/16″ is used for SM and DM hose connection.

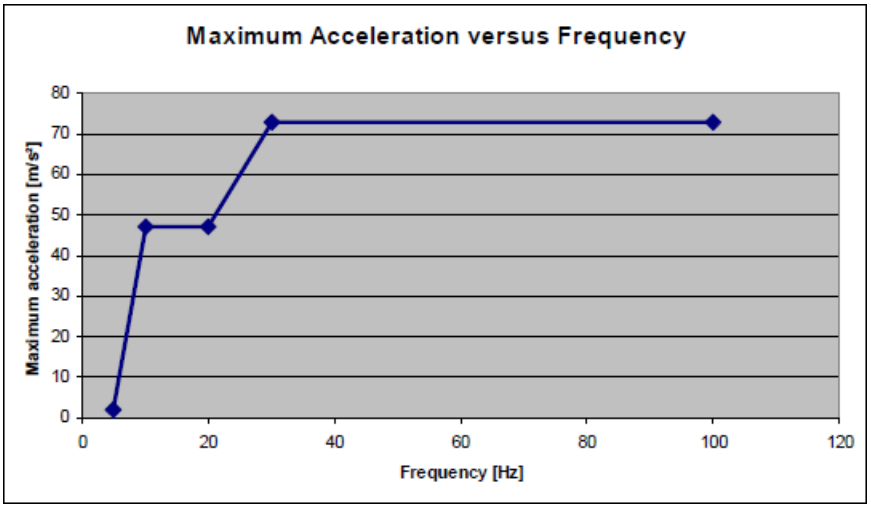




• Between +45° and -45° in both directions from the reference point(RP) at the SM. These angles have to be met for all possible inclinations of the machine (vehicle and vessel, construction equipment etc.)

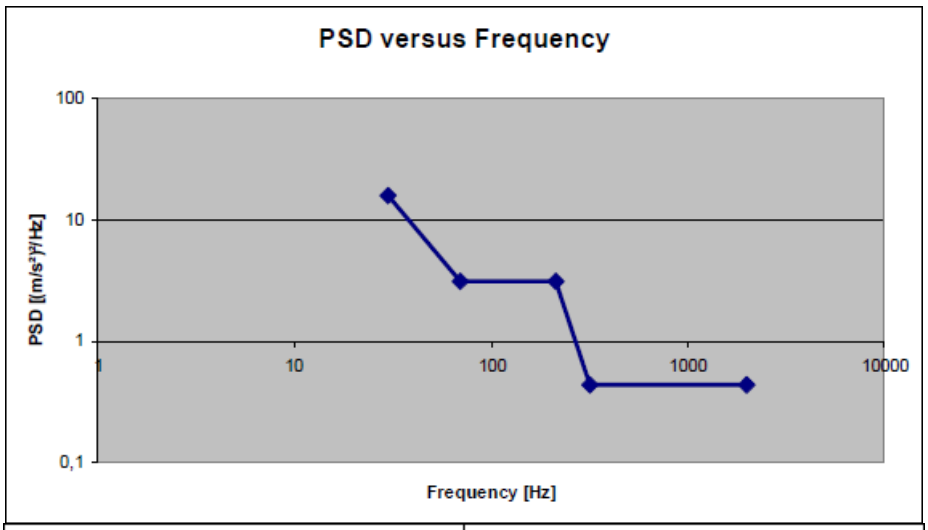


- The acceptable vibration limit regarding Max. acceleration and PSD of SM as below.



Frequency [Hz]	Maximum acceleration [m/s²]
5	2
10	47
20	47
30	73
100	73

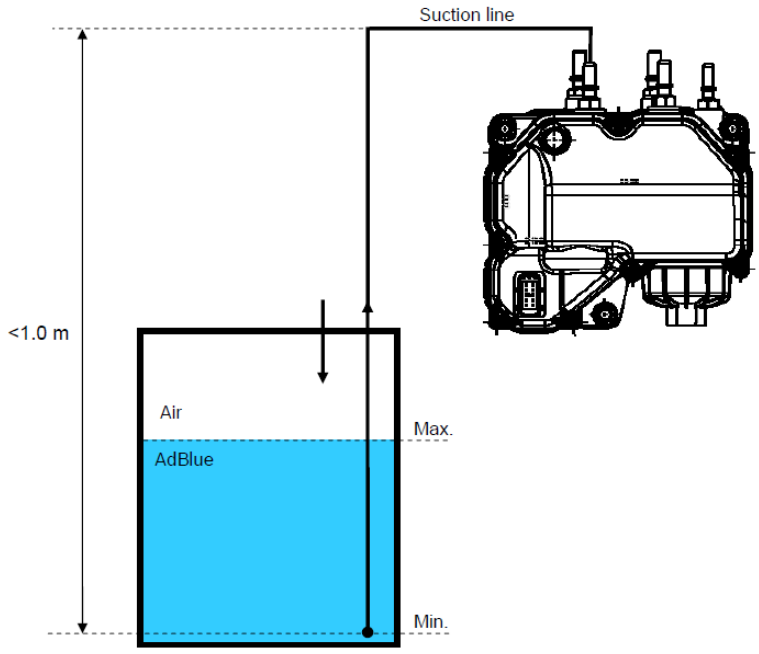
(SM) Maximal allowed mechanical load: Maximum acceleration versus frequency



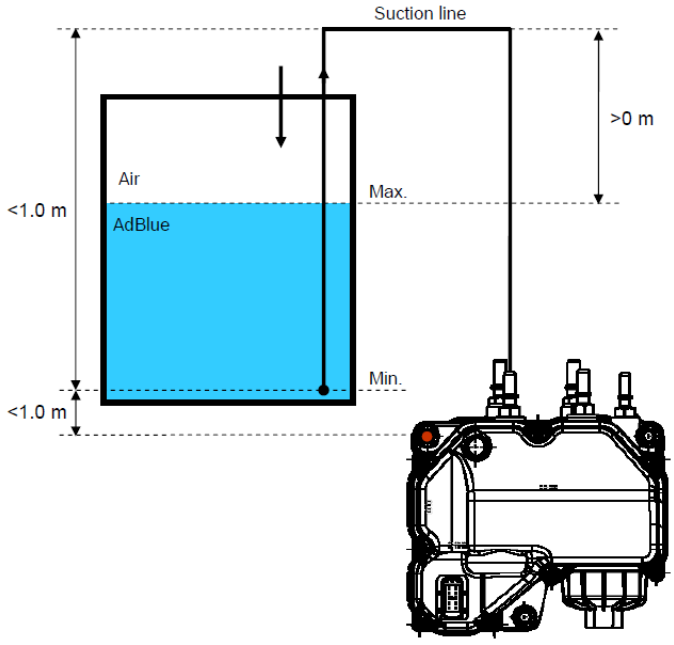
Frequency [Hz]	PSD [(m/s²)²/Hz]
30	16
70	3.1
215	3.1
320	0.44
2000	0.44

(SM) Maximal allowed mechanical load: PSD versus frequency

- Protection against rocks, mud and debris. Protective shield must not collect rocks, mud, etc.
- Protection against overheating in all driving conditions. Protect from additional heat sources (such as a bypassing exhaust pipe, muffler, turbocharger, engine, etc). The temperature around the SM and urea tank must not exceed 60 ℃.
- The figure below is a guide for the relative positions of the SM and tank and must be installed in compliance with this guide.



SM above urea tank



SM below urea tank

- The urea tank must be fixed to a solid structure such as a frame to prevent damage from vibration. (It must be fixed with M10 bolts and a force of 6 to 7 kgfm.)
- Urea tanks must be mounted vertically.

- Since the point of DEF is -11℃, the urea tank has a built-in coolant heating tube to prevent freezing, and when DEF is frozen, engine coolant must flow to melt the frozen DEF. Therefore, the coolant inlet and outlet of the DEF tank must be connected to the engine. The connecting hoses are shown in Table 5.

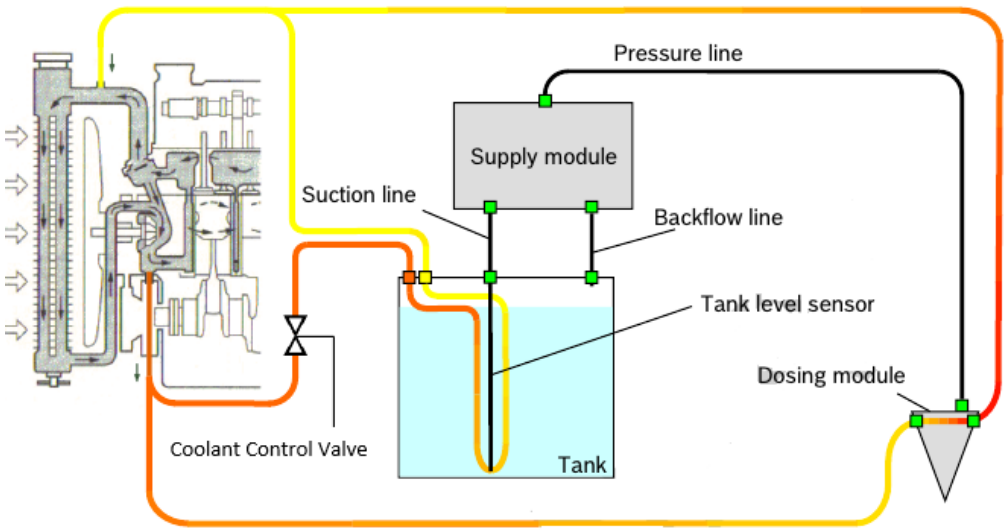


Fig. 9 The system diagram of Urea Tank heating & Dosing Module cooling

Table 5 SCR system tubing Specification

Item	Connection Type
Engine ↔ Urea Tank**	Quick Connector (J2044 3/8'')
Engine ↔ Dosing Module**	Inner ϕ: 7mm, Out ϕ *: 13mm, Material: NBR
Supply Module ↔ Dosing Module	Quick Connector (J2044 5/16'')

* Recommend

** These Connection Tubes are not HDI's supply parts

- The DM and SM coolant connections for the DX12, DL08, and DL06 engine are shown in Figs. 10–12.

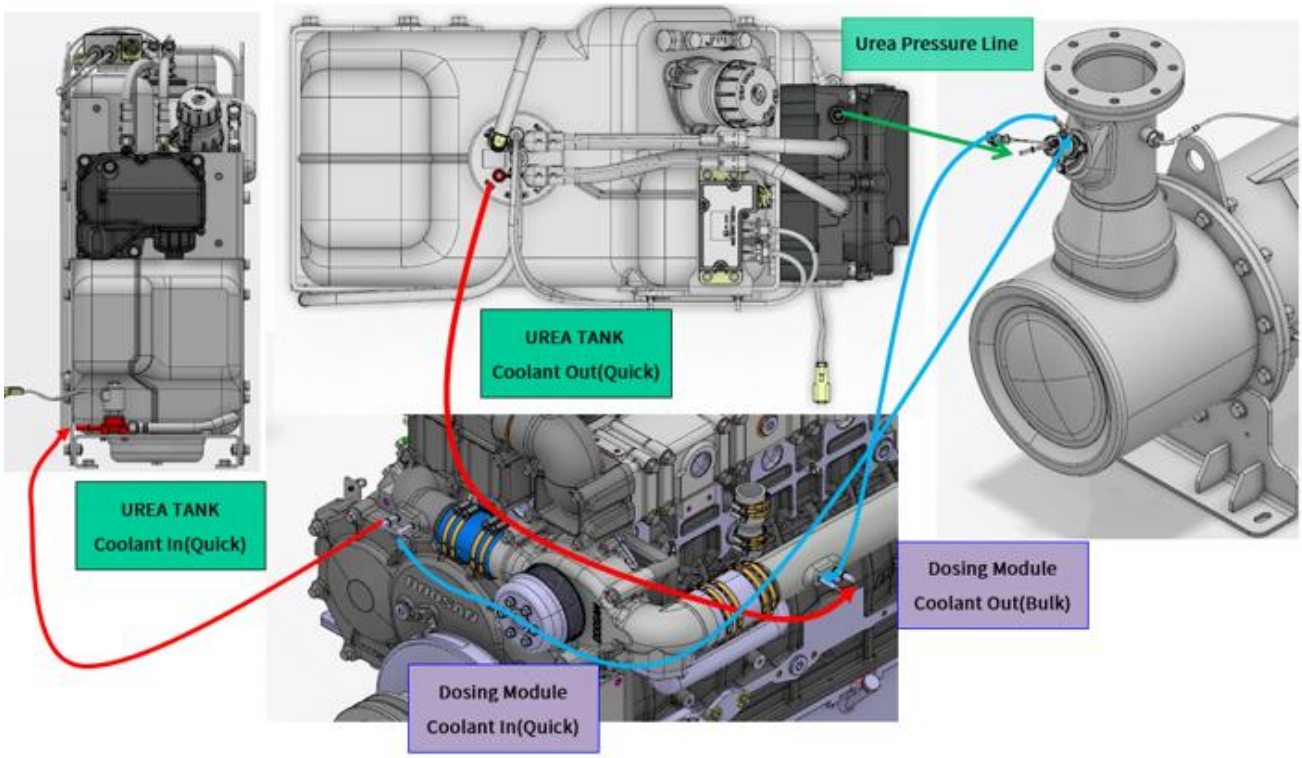


Fig. 10 Urea Tank heating & Dosing Module cooling Hose connection (DX12)

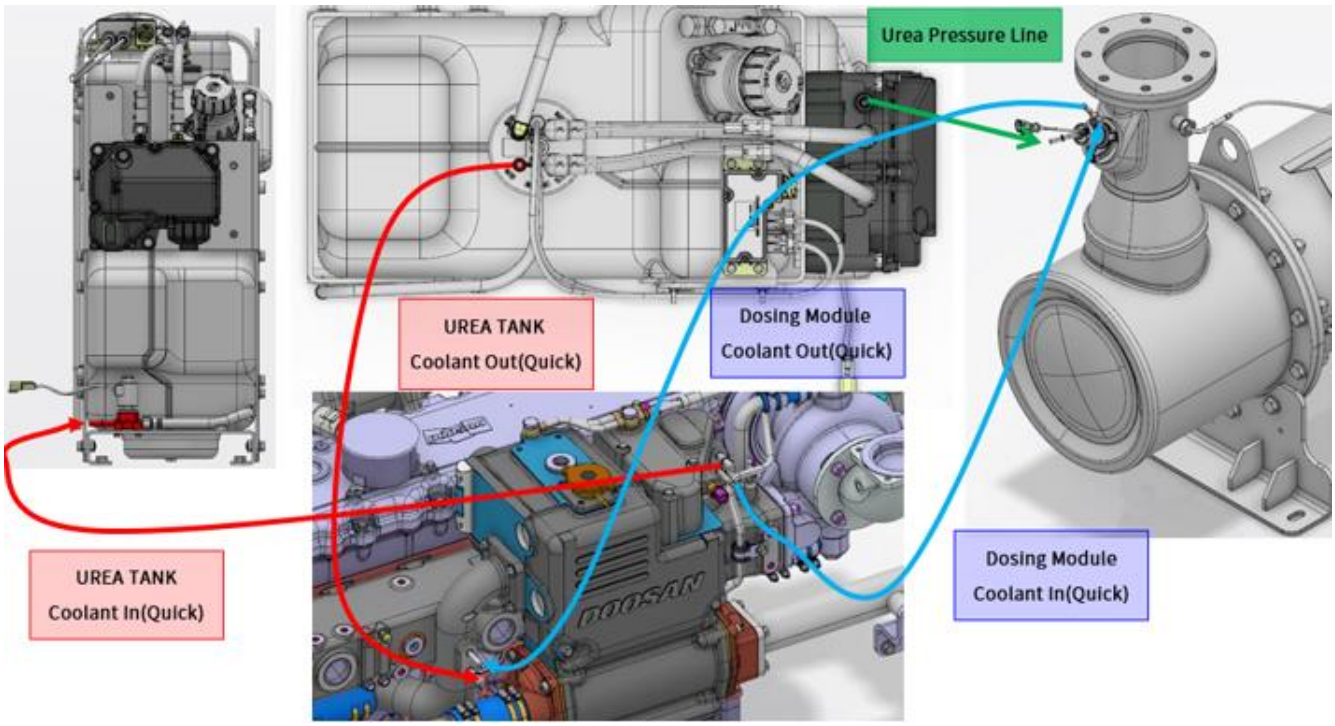


Fig.11 Urea Tank heating & Dosing Module cooling Hose connection (DL06)

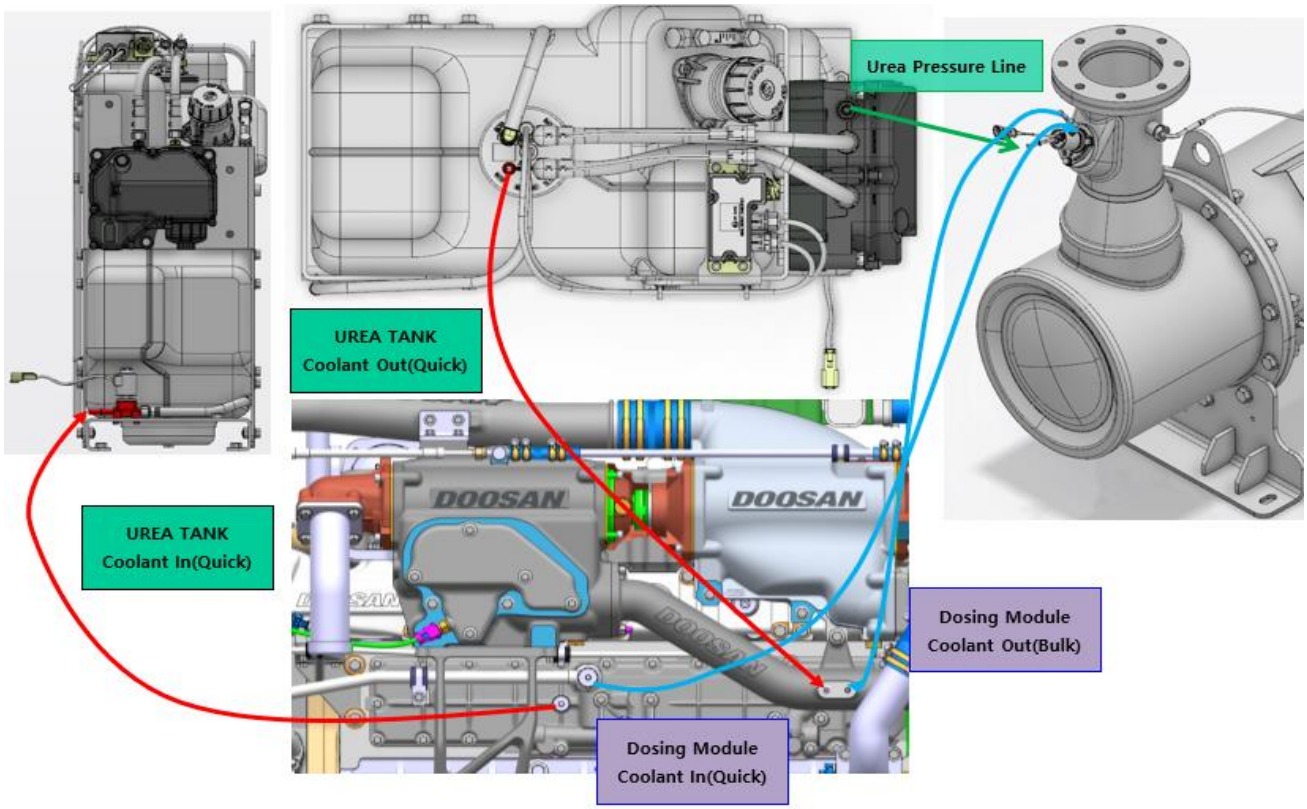


Fig.12 Urea Tank heating & Dosing Module cooling Hose connection (DL08)