

Available executions

Execution No.	Material ID
001	PTAA073711

NOTE

The above executions can be configured using the Engine Configurator. Detailed guidance for the executions is provided within the Marine Installation Manual (MIM). If a specific execution of interest is not shown in the above table, then it may still be under development or not available. For further information or in case of a project-specific request, WinGD must be contacted directly.

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Prod.	X52DF-S2.0										
Change History											
	-	sna102					new Design				
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis			Activity Code	E	C



LEAKAGE COLLECTION/WASHING SYS.
MIDS master drawing

separate BOM available

Dimension

Scale	-		NX	Units [mm] [kg]	Basic Material			Net Weight	0.001	
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				Qty per	A4	Item ID	PTAA023263		Drawing Page/s	1/1

SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
1	1	PTAA073706	LEAKAGE COLLECTION/WASHING SYS.				0.001

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Prod.	5,6,7,8 X52DF-S2.0						
Change History	B	npa101	mhu019	23.08.2024	CNAA006157	Drawing updated	4 3
	A	sde101	mhu019	03.06.2024	CNAA005807	Drawing update	4 3
	-	npa101	mhu019	16.02.2024	CNAA004270	New MainDesign introduced	- -
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved Activity Code

	LEAKAGE COLLECTION/WASHING SYS.
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Bill Of Material		Dimension					
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	Main Design	Yes	Design Group		9724	Q-Code	X X M
	Qty per	Engine	A4	Item ID	PTAA073711		BOM Page/s

SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
001	1	107.425.369.500	SLUDGE OIL TRAP				0.001

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Proc.	X52DF-S2.0							
Change History	B	npa101	mhu019	23.08.2024	CNAA006157	Drawing updated	4	3
	A	sde101	mhu019	03.06.2024	CNAA005807	Drawing update	4	3
	-	npa101	mhu019	16.02.2024	CNAA004270	new Design	-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code

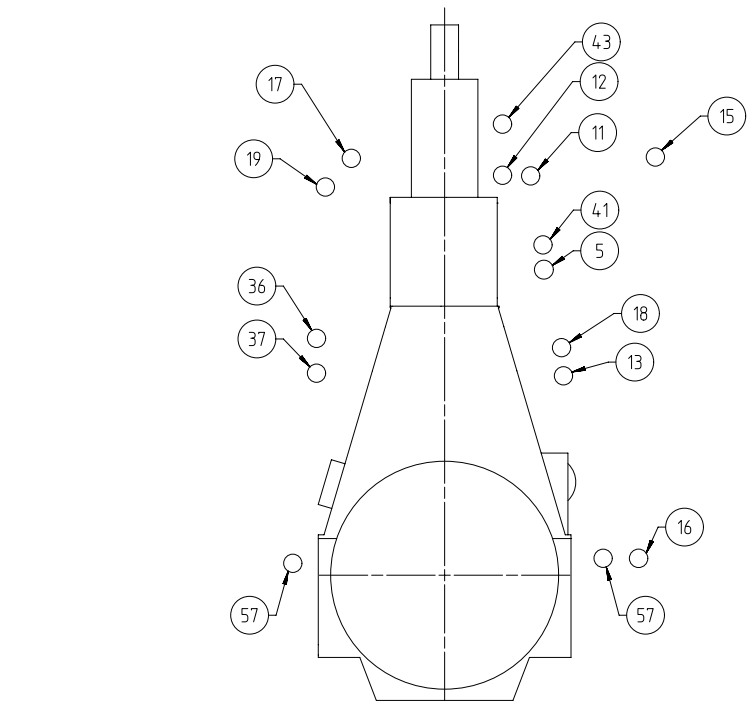
WIN GD	LEAKAGE COLLECTION/WASHING SYS. TC 1
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Bill Of Material		Dimension	
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	Main Design	Design Group	9724 Q-Code X X M Standard WDS
	Qty per	A4 Item ID	PTAA073706 BOM Page/s 01/01

1 2 3 4 5 6 7 8 9 10 11 12

SPECIFICATION which must be met:

37	OUTLET - Leakage oil gland box - Gravity flow to sludge tank or appropriate tank
41	OUTLET - Venting crankcase - Venting to funnel - Must not be connected to other venting pipes
43	OUTLET - Venting turbocharger - Venting to funnel - Minimum inclination according to TC suppliers specification - Must not be connected to other venting pipes
57	OUTLET - Various leakages - Gravity flow to sludge tank or appropriate tank

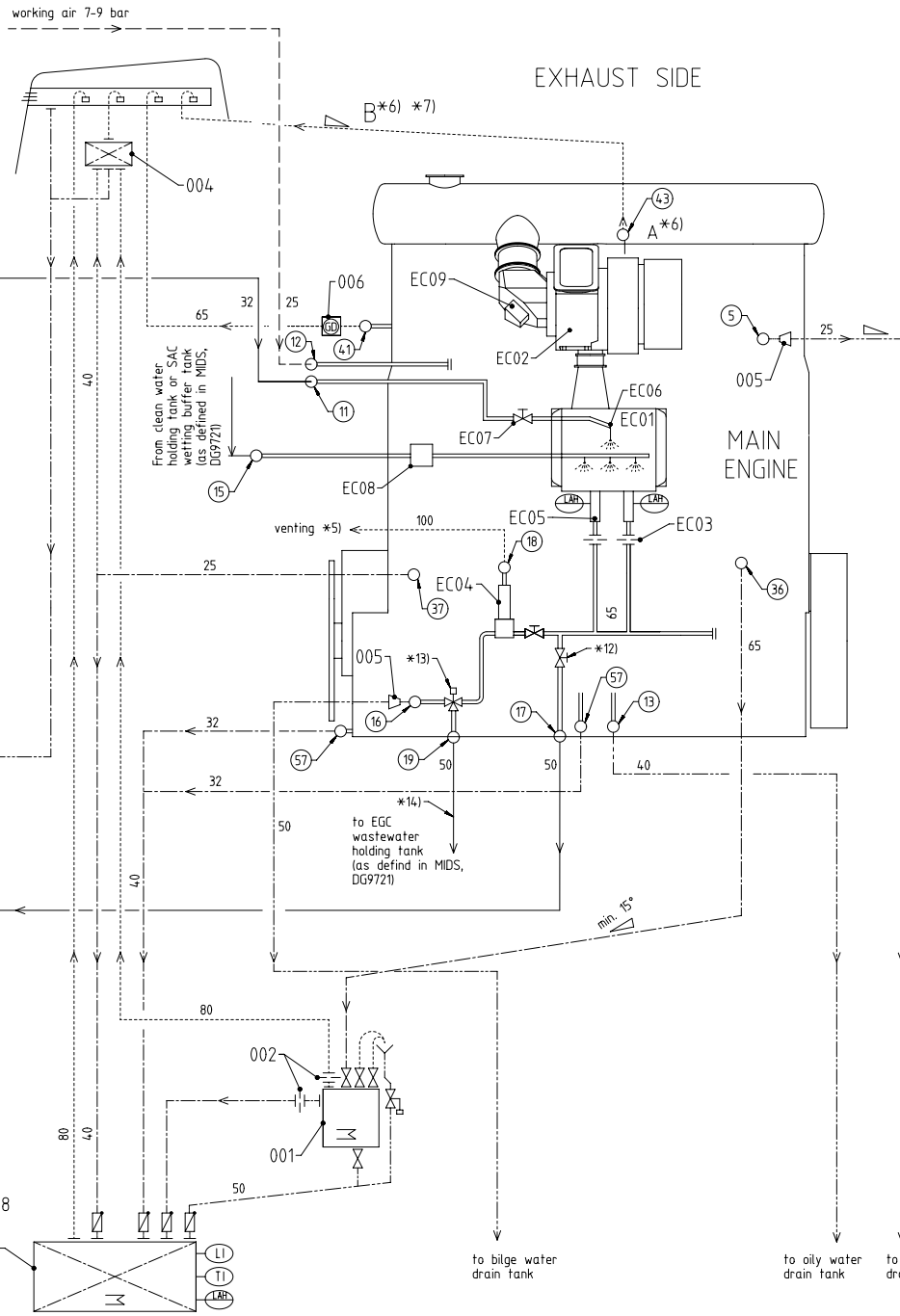


5	OUTLET - Cylinder cooling water drain - Gravity flow to cooling water drain tank or appropriate tank
11	INLET - SAC washing water - Washing water supply from an external washing system, which must be installed on the ship side - Washing water properties: Fresh water mixed with a chemical washing agent - Mixing ratio according to chemical washing agent suppliers specification - Washing water supply pressure: 2.5 bar - Washing water temperature: 50 °C - 60 °C - Washing water pump circulation rate: 3.8 m³/h
12	INLET - Air for turbocharger cleaning - Working air, supply pressure: 7 - 9 bar
13	OUTLET - Oily water from scavenge air receiver - Gravity flow to oily water tank or appropriate tank
15	INLET - SAC wetting water - Wetting water supply: From clean water holding tank or SAC wetting buffer tank - Wetting water supply pressure: max. 10 bar - Wetting water circulation rate: 500 - 1000 l/h per SAC
16	OUTLET - SAC condensate water - Gravity flow to bilge water tank or appropriate tank
17	OUTLET - SAC washing water - During SAC cleaning to the chemical washing water circulation tank, which is part of the external washing system, as installed on the ship side
18	OUTLET - SAC venting - Free flow outside of engine room
19	OUTLET - SAC condensate water, iCER - To EGC wastewater holding tank during iCER operation - The system components downstream of this connection must be made of stainless steel
36	OUTLET - Dirty oil piston underside - Flow with SAC pressure to sludge oil trap or appropriate arrangement - Min. inclination of drain pipe: 15°

Prod.	X52DF-S2.0											
Change History	B	npa101	mhu09	23.06.2024	CNA00657	Drawing updated			4	3		
	A	sde101	mhu019	03.06.2024	CNA005807	Drawing update			4	3		
	-	npa101	mhu019	16.02.2024	CNA004270	new Design			-	-		
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved		Activity Code	E	G		
WINGD						LEAKAGE COLLECTION/WASHING SYS. TC 1						
separate BOM available						Dimension						
Scale	-	NX		Units [mm] [kg]	Basic Material		Net Weight 0.001					
SURFACE PROTECTION SEE GROUP 0344						Main Design		Design Group	9724	Q-Code X X M	Standard WDS	
TOLERANCING PRINCIPLE ISO8015						Qty per	A2	Item ID	PTAA073706		Drawing Pages 1/2	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK						Copyright WingD Ltd. All rights reserved. By taking possession of the drawing the recipient recognizes and warrants these rights, neither the whole nor any part of this drawing may be used in any way for construction, fabrication, marketing or any other purpose nor copied in any way nor made accessible to third parties without the previous written consent of WingD Ltd.						

SYSTEM PROPOSAL

NOTE
Further installation details and variants can be found listed in the Marine Installation Manual (MIM), which provides also the acronyms used in this drawing set. The piping symbols are explained by the piping symbol key as included in the drawing set "Various Installation Items".



Turbocharger type	A**	B**	Min. Inclination
1 x A165-L	65	65	≥ 5°
1 x A170-L	65	65	≥ 5°
1 x A175-L	65	65	≥ 5°
1 x A265-L	65	65	≥ 5°
1 x A270-L	65	65	≥ 5°
1 x MET42	50	50	≥ 3°
1 x MET48	65	65	≥ 3°
1 x MET53	65	65	≥ 3°
1 x MET60	80	80	≥ 3°
2 x A165-L	65	80	≥ 5°
2 x MET33MB	40	50	≥ 3°
2 x MET37MB	50	65	≥ 3°
2 x MET42MB	50	65	≥ 3°
2 x MET48MB	65	80	≥ 3°

Pos.	SYSTEM COMPONENTS *1)
001	Sludge oil trap (according to separate drawing)
002	Throttling disc (size shown on separate sludge oil trap drawing)
003	Sludge or appropriate tank
004	Air vent manifold
005	Transition piece (adaptor) *9)
006	Gas detector *11)
007	Chemical washing water circulation tank *15)
008	Chemical washing water circulation pump
009	Chemical washing water strainer (0.5-1.0 mm)

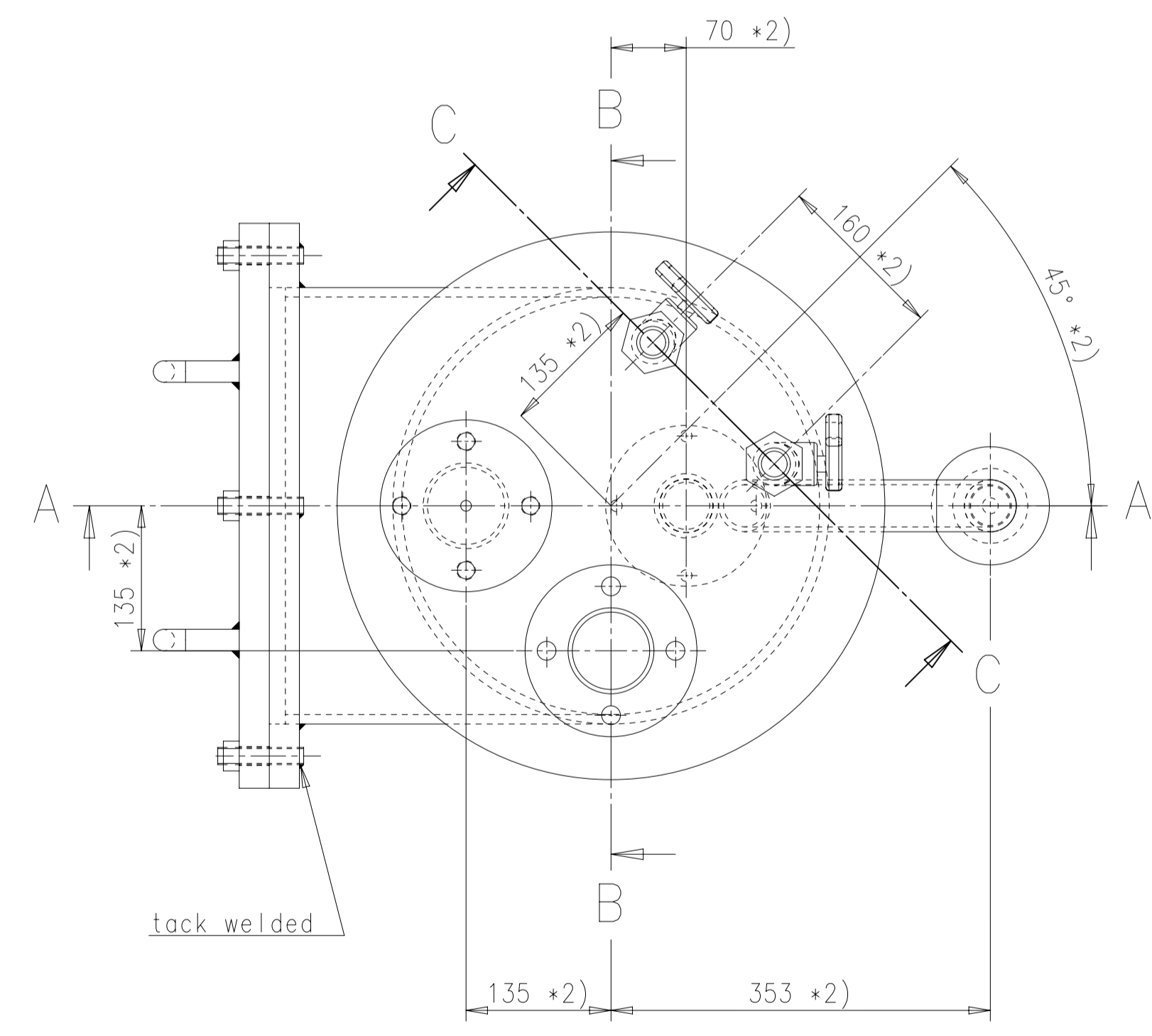
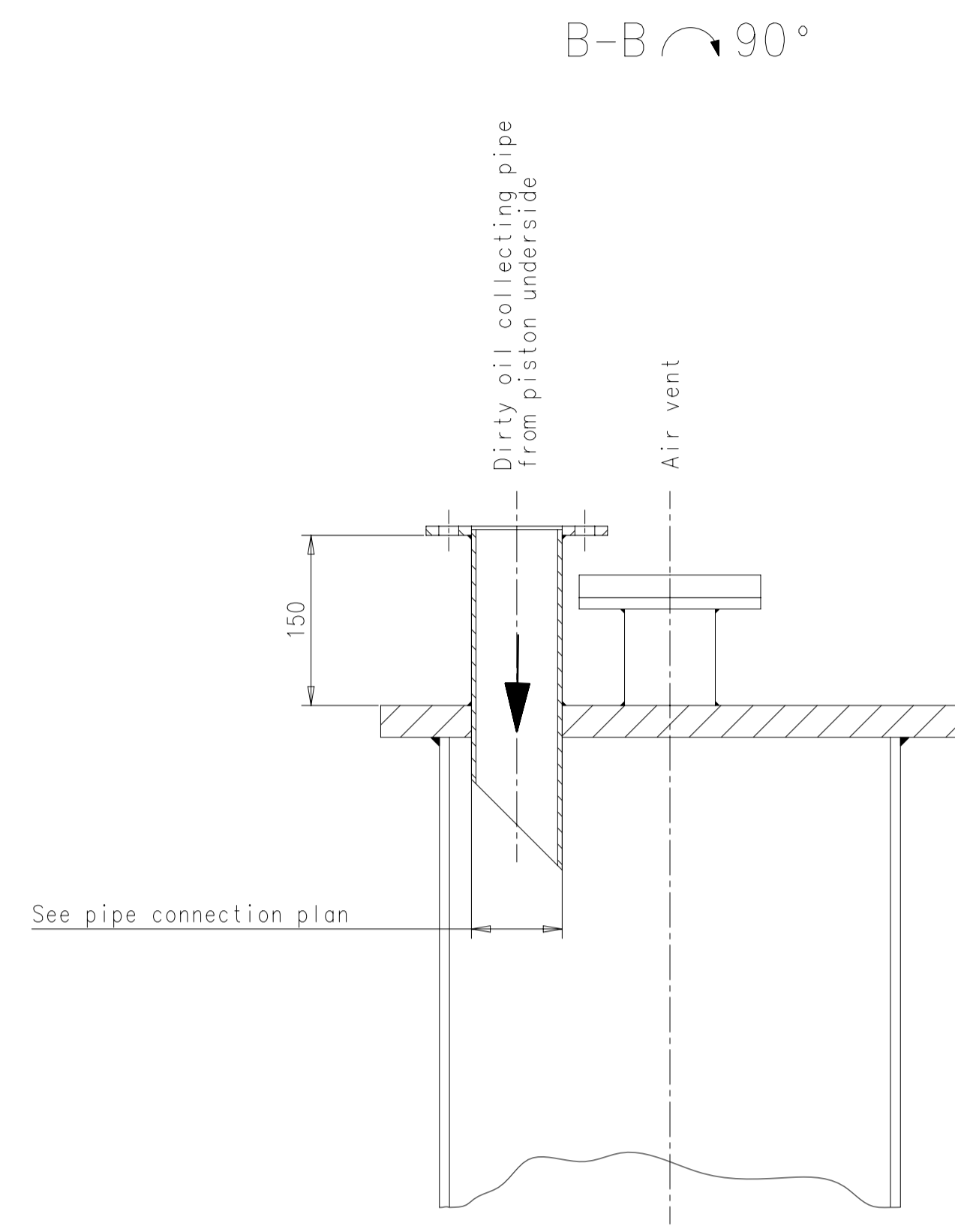
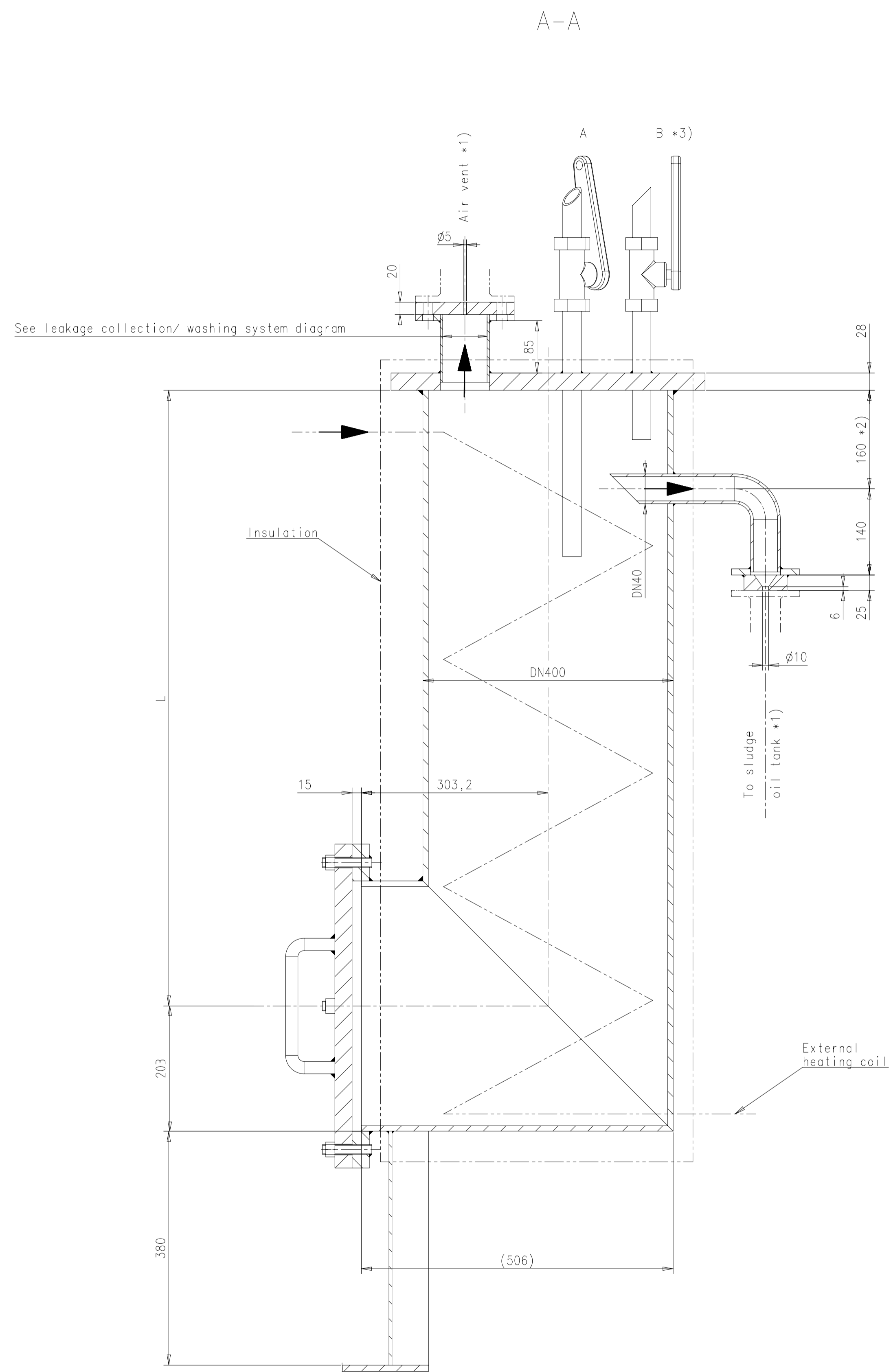
Pos.	ENGINE CONNECTIONS *2)
5	OUTLET - Cylinder cooling water drain
11	INLET - SAC washing water
12	INLET - Air for turbocharger cleaning
13	OUTLET - Oily water from scavenge air receiver *10)
15	INLET - SAC wetting water
16	OUTLET - SAC condensate water *4) *10) *14)
17	OUTLET - SAC washing water *12)
18	OUTLET - SAC venting *5)
19	OUTLET - SAC condensate water, iCER *13)
36	OUTLET - Dirty oil piston underside
37	OUTLET - Leakage oil gland box
41	OUTLET - Venting crankcase
43	OUTLET - Venting turbocharger
57	OUTLET - Various leakages

Remarks

- Air vent and drain pipes must be fully functional at all inclination angles of the ship at which the engine must be operational.
- *1) To be installed by the shipyard.
- *2) Refer to the "Pipe Connection Plan" for the execution and location of the engine pipe connections.
- *3) To be delivered by the engine manufacturer, i.e. already equipped on engine side
- *4) The amount of condensate water drained off after the SAC depends on the relative air humidity and the scavenge air temperature before and after the SAC. During iCER operation, the SAC drain water amount is significantly increased. The specific drain amount is provided by the GTD.
- *5) Free flow venting outside of engine room.
- *6) Depends on turbocharger type, see table on the left side.
- *7) Vent pipe diameter as per turbocharger requirements.
- *8) Vent pipe diameter of common collection pipe.
- *9) Installed as required (check with the Pipe Connection Plan).
- *10) Drain connection 13 and 16 are with air flow from scavenging system. Both drain lines must be kept separated and directed to separate tanks. The tanks must be designed with sufficiently sized vents to prevent excessive pressure in the tanks. The drain amount depends on the ambient conditions.
- *11) Optional, to be installed if requested by the flag state and/or class to achieve IGC compliance.
- *12) Switching to the separate washing water collection tank must be carried out for SAC cleaning.
- *13) While the iCER is in operation, drain to the EGC waste water holding tank. The solenoid valve is actuated by a signal from the "Engine Control System".
- *14) The system components from the iCER bleed-off water outlet must be made of stainless steel.
- *15) Washing water is heated to between 50 and 60 °C by a heating coil. Recommended washing water circulation tank capacity: 0.4 m³

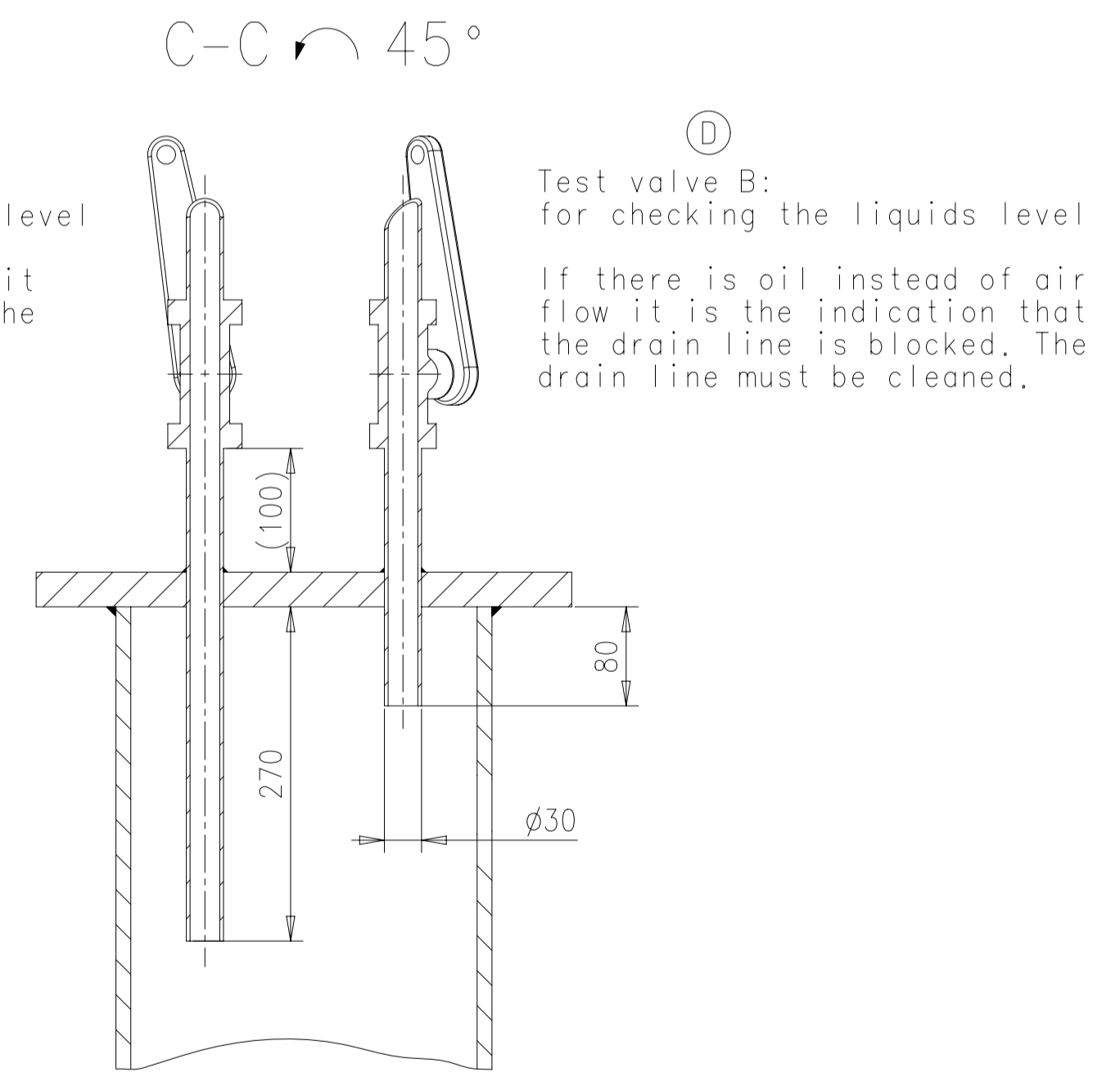
Pos.	ENGINE COMPONENTS *3)
EC01	Scavenge Air Cooler (SAC)
EC02	Turbocharger (TC)
EC03	Throttling disc
EC04	Venting Unit
EC05	Condensate drain unit
EC06	SAC washing water spray nozzle
EC07	SAC washing water isolating valve
EC08	SAC wetting valve unit
EC09	TC dry cleaning device

- Compressed air pipes
- Air vent pipes
- Drain & overflow pipes
- Dirty oil drain pipes
- Washing water pipes
- Pipes on engine
- Pipe connections



Ⓓ
Test valve A:
for checking the solids level

If there is no oil flow it is the indication that the solid level is too high. The sludge oil trap must be cleaned.



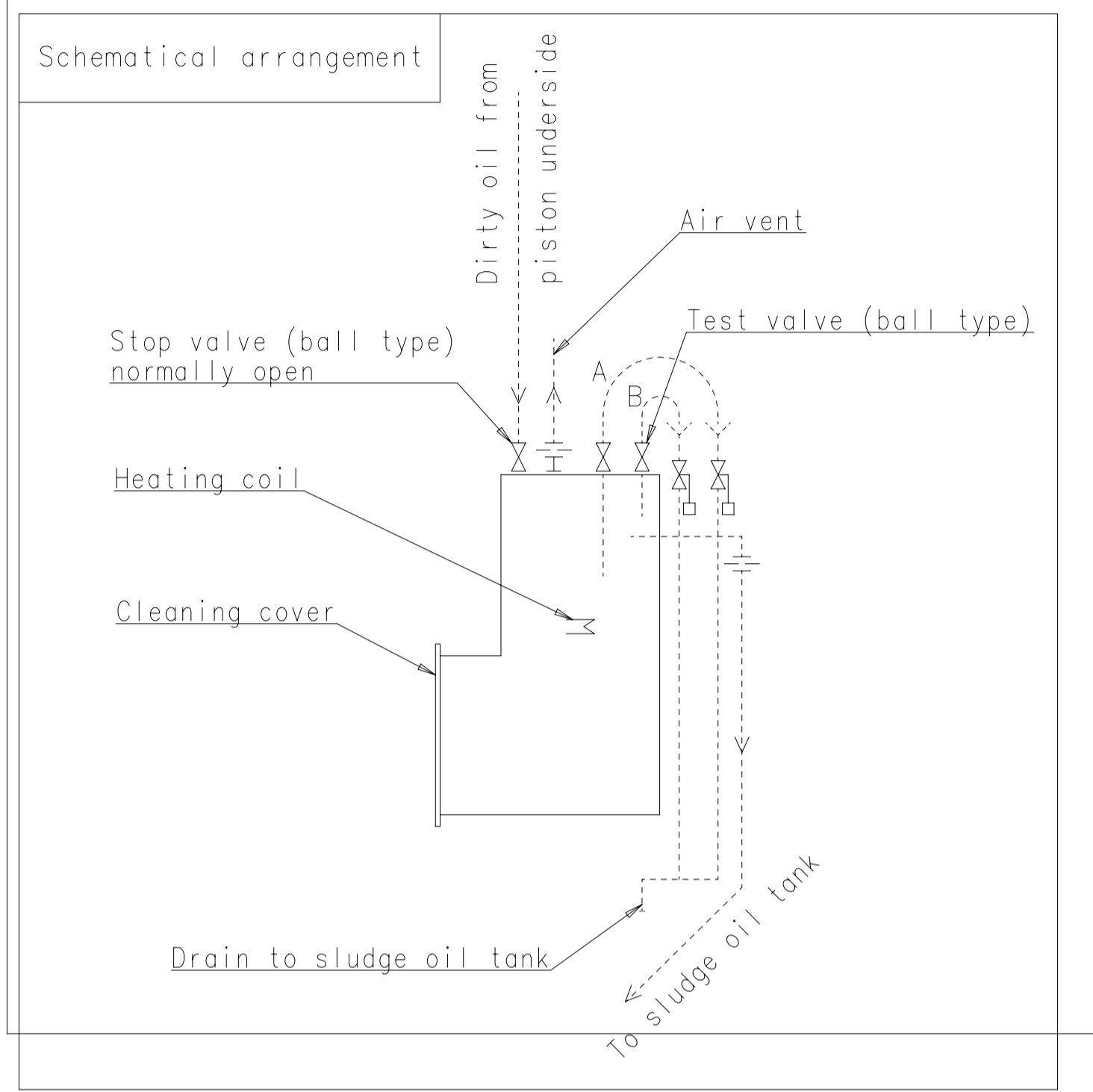
Ⓓ
Test valve B:
for checking the liquids level

If there is oil instead of air flow it is the indication that the drain line is blocked. The drain line must be cleaned.

Remarks:

- *1) Orifice to be as shown
- *2) Observe location of pipes with regard to each other
- *3) Optional - Alternatives, such as level sensors, are possible

Details:	Cylinder bore size:	L = 1000	L = 550
	Capacity:	55-96	35-54
	Working pressure:	150 l	100 l
	Testing pressure:	4 bar	
	Temperatur:	6 bar	
		80°C	



Prof.	CX40DF RT-flex48T-D	RT-flex50-D RT-flex48T-D	RT-flex58T-D V1 RT-flex58T-D V2	RT-flex58T-E RT-flex68-D	RT-flex68-D_L RT-flex82C	RT-flex82SCR-HHM-PILOT RTA68-D	X35-B [...]	
Change History	□	sde101	mhu019	19.01.2022	CNA001373	drawing updated	4	3
	□	sde101	mhu019	10.09.2018	EAAD089439	Legacy information. See corresponding ChangeNotice	4	-
	□	dkl021	mhu019	14.07.2017	EAAD087849	Legacy information. See corresponding ChangeNotice	4	-
	□	-	WinGD	jba029	13.11.2009	-	-	-
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E C

WINGD
Winterthur Gas & Diesel

SLUDGE OIL TRAP

Scale: 1:5

Units: [mm] [kg]

Basic Material: [] NX

Net Weight: 0.001

SURFACE PROTECTION SEE GROUP 0344		TOLERANCING PRINCIPLE ISO8015		GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Copyright Winterthur Gas & Diesel Ltd. All rights reserved. No part of this drawing may be used in any way for construction, fabrication, marking or any other purpose nor copied in any way nor made accessible to third parties without the previous written consent of Winterthur Gas & Diesel Ltd.	
Main Design	Design Group	9724	Q-Code	XXXXX	Standard	WDS	
Qty per	Item ID	A1	107.425.369.500	Drawing Page/s	1/1		

Available executions

Execution No.	Material ID	Cylinder No.	Attribute 1: Turbocharger amount	
			1 TC	2 TC
001	PTAA023264	5-7	X	
002	PTAA028610	7-8		X

SURFACE PROTECTION SEE GROUP 0344
 TOLERANCING PRINCIPLE ISO8015
 GENERAL TOLERANCES ACCORDING TO ISO2768-mK

NOTE

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 contracted before April 2022

Prod.	X52DF-S2.0								
Change History									
	-	sna102			new Design				
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C



LEAKAGE COLLECTION/WASHING SYS.
 MIDS master drawing

separate BOM available

Dimension

Scale	-		NX	Units [mm] [kg]	Basic Material	Net Weight	0.001		
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				Qty per	A4	Item ID	PTAA023263		Drawing Page/s

SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
1	1	PTAA023214	LEAKAGE COLLECTION/WASHING SYS.				0.001

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Proc.	5,6,7 X52DF-S2.0							
Change History								
	-	sna102	mhu019	16.03.2022	CNAA001365	Main Design/Drawing Introduced	-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E C


	LEAKAGE COLLECTION/WASHING SYS.
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Bill Of Material			Dimension								
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			Main Design	Yes	Design Group		9724	Q-Code	XXXXX	Standard	WDS
			Qty per	Engine	A4	Item ID	PTAA023264		BOM Page/s	01/01	

SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
001	1	107.425.369.500	SLUDGE OIL TRAP				0.001

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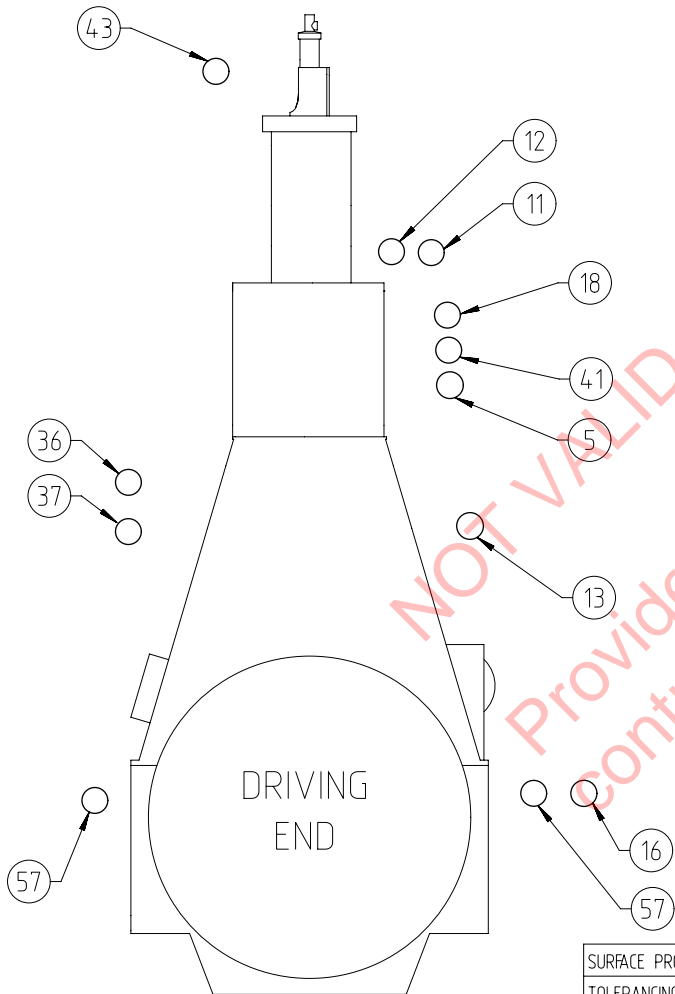
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Change History										
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	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E	C

	LEAKAGE COLLECTION/WASHING SYS.
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Bill Of Material		Dimension					
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		Main Design		Design Group	9724 Q-Code XXXXX	Standard	WDS
		Qty per		A4 Item ID	PTAA023214		BOM Page/s

SPECIFICATION which must be met:

(43)	OUTLET - Venting turbocharger - Venting to funnel - Minimum inclination according to TC suppliers specification - Must not be connected to other venting pipes.
(57)	OUTLET - Various leakages - Gravity flow to sludge tank or appropriate tank.



(5)	OUTLET - Cylinder cooling water drain. - Gravity flow to cooling water drain tank or appropriate tank.
(11)	INLET - Washing water SAC - From freshwater hydrophore system
(12)	INLET - Air for cleaning plants TC and SAC - Working air, supply pressure: 7-9 bar
(13)	OUTLET - Oily water from scavenge air receiver - Gravity flow to oily water tank or appropriate tank.
(16)	OUTLET - SAC condensate water - Gravity flow to bilge water tank or washing water collection tank or to the EGC bleed-off line depending on the operation mode. - The system components downstream of this connection until the pH-neutralisation dosing unit must be designed for low pH operation.
(18)	OUTLET - SAC venting - Free flow outside of engine room
(36)	OUTLET - Dirty oil piston underside - Flow with SAC pressure to sludge oil trap or appropriate arrangement. - Min. inclination of drain pipe: 15°
(37)	OUTLET - Leakage oil gland box - Gravity flow to sludge tank or appropriate tank.
(41)	OUTLET - Venting crankcase - Venting to funnel - Must not be connected to other venting pipes.

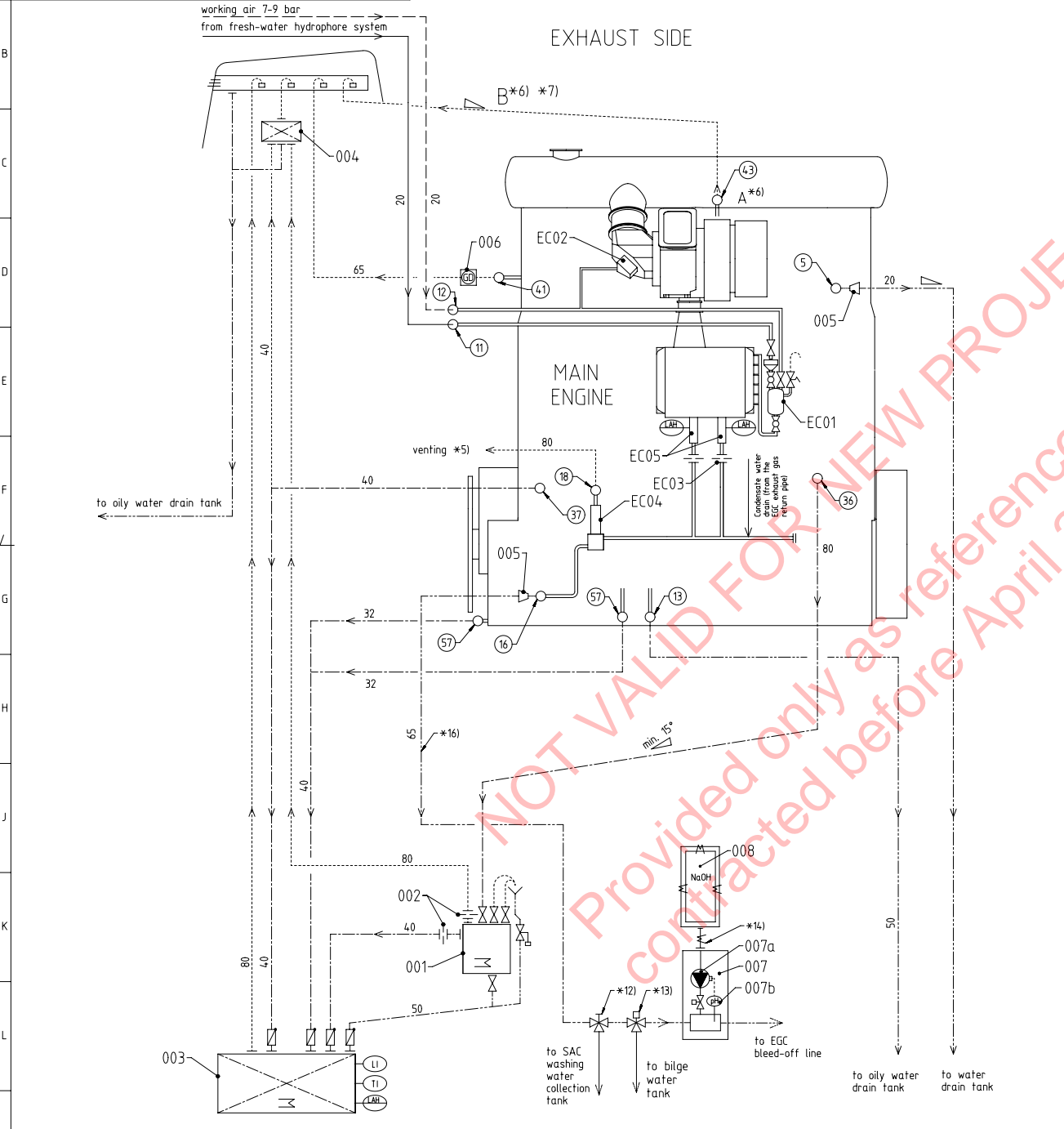
NOT VALID FOR NEW PROJECTS
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Contracted before April 2022

Prod.	X52DF-S2.0									
Change History	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E	C
	-	sna102	mhu019	16.03.2022	CNA001365	new Design			-	-
						LEAKAGE COLLECTION/WASHING SYS.				
separate BOM available						Dimension				
Scale	-		NX	Units [mm] [kg]	Basic Material			Net Weight	0.001	
Main Design				Design Group	9724	Q-Code	XXXXXX	Standard	WDS	
Qty per				A3 Item ID	PTAA023214			Drawing Page/s	1/2	

SURFACE PROTECTION SEE GROUP 0344
TOLERANCING PRINCIPLE ISO8015
GENERAL TOLERANCES ACCORDING TO ISO2768-mK

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NOTE
Further installation details and variants can be found listed in the Marine Installation Manual (MIM), which provides also the acronyms used in this drawing set. The piping symbols are explained by the piping symbol key as included in the drawing set "Various Installation Items".



Turbocharger type	A**	B**	Min. Inclination
1x A165-L	65	65	≥ 5°
1x A170-L	65	65	≥ 5°
1x A175-L	65	65	≥ 5°
1x A265-L	65	65	≥ 5°
1x A270-L	65	65	≥ 5°
1x MET42MB	50	50	≥ 3°
1x MET48MB	65	65	≥ 3°
1x MET53MB	65	65	≥ 3°
1x MET60MB	80	80	≥ 3°
1x MET33MBII	40	50	≥ 3°
1x MET42MBII	50	50	≥ 3°
1x MET48MBII	65	65	≥ 3°
1x MET53MBII	65	65	≥ 3°

Pos.	SYSTEM COMPONENTS *1)
001	Sludge oil trap (link to detail drawing on the partlist of this drawing).
002	Throttling disc (size shown on separate sludge oil trap drawing)
003	Sludge or appropriate tank
004	Air vent manifold
005	Transition piece (adaptor) *9)
006	Gas detector *11)
007	pH-neutralisation dosing unit with *15) 007a - NaOH dosing pump 007b - pH sensor
008	NaOH storage tank *14) *15)

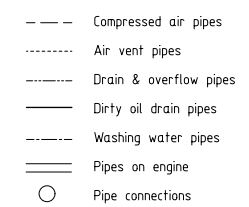
Pos.	ENGINE CONNECTIONS *2)
⑤	OUTLET - Cylinder cooling water drain
⑪	INLET - Washing water SAC
⑫	INLET - Air for cleaning TC and SAC
⑬	OUTLET - Oily water from scavenge air receiver *10)
⑯	OUTLET - SAC condensate water *4) *10) *16)
⑰	OUTLET - SAC venting *5)
⑳	OUTLET - Dirty oil piston underside
㉑	OUTLET - Leakage oil gland box
㉒	OUTLET - Venting crankcase
㉓	OUTLET - Venting turbocharger
㉔	OUTLET - Various leakages

Pos.	ENGINE COMPONENTS *3)
EC01	Scavenge air cooler washing plant
EC02	Dry cleaning device
EC03	Throttling disc
EC04	Venting Unit
EC05	Condensate drain unit

Remarks

Air vent and drain pipes must be fully functional at all inclination angles of the ship at which the engine must be operational.


- *1) To be installed by the shipyard.
- *2) Refer to the "Pipe Connection Plan" for the execution and location of the engine pipe connections.
- *3) To be delivered by the engine manufacturer, i.e. already equipped on engine side
- *4) The amount of condensate water drained off after the SAC depends on the relative air humidity and the scavenge air temperature before and after the SAC. During ICER operation, the SAC drain water amount is significantly increased. The specific drain amount is provided by the GTD.
- *5) Free flow venting outside of engine room.
- *6) In relation to turbocharger type, see table on the left side.
- *7) Vent pipe diameter as per turbocharger requirements.
- *8) Vent pipe diameter of common collection pipe.
- *9) Installed as required (check with the Pipe Connection Plan).
- *10) Drain connection 13 and 16 are with air flow from scavenging system. Both drain lines must be kept separated and directed to separate tanks. The tanks must be designed with sufficiently sized vents to prevent excessive pressure in the tanks. The drain amount depends on the ambient conditions.
- *11) Optional, to be installed if requested by the flag state and/or class to achieve IGC compliance.
- *12) Switching to the separate washing water collection tank must be carried out for SAC cleaning.
- *13) While the ICER is in operation, drain to the EGC bleed-off line. The solenoid valve is actuated by a signal from the "Engine Control System".
- *14) If the caustic soda water solution has a mass fraction of 50% min NaOH, then the tank and supply line must be trace heated and insulated to keep the caustic soda temperature in the range of 27 - 37 °C. If the caustic soda water solution has a mass fraction of max. 30% min NaOH, then no heating is required.
- *15) The caustic soda storage tank and the pH-neutralisation dosing unit must be applied for installations with ICER diesel Tier III mode. For installations with only ICER gas mode, this unit can be omitted.
- *16) The system components from the SAC condensation water outlet (engine connection 16) must be designed for low pH operation. After pH neutralisation (unit 007 on this drawing or the pH-neutralisation dosing unit in the EGC bleed-off line), the system components can be of standard material.



SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
1	1	PTAA028608	LEAKAGE COLLECTION/WASHING SYS.				0.001

NOT VALID FOR NEW PROJECTS!
 Provided only as reference for projects
 contracted before April 2022

Proc.	7,8 X52DF-S2.0							
Change History								
	-	sde101	mhu019	16.03.2022	CNAA001365	Main Design/Drawing Introduced	-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E C

	LEAKAGE COLLECTION/WASHING SYS.
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Bill Of Material		Dimension							
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	Main Design	Yes	Design Group		9724	Q-Code	XXXXX	Standard	WDS
	Qty per	Engine	A4	Item ID	PTAA028610		BOM Page/s	01/01	

SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
1	1	107.425.369.500	SLUDGE OIL TRAP				0.001

NOT VALID FOR NEW PROJECTS!
 Provided only as reference for projects
 contracted before April 2022

Prod.	X52DF-S2.0							
Change History								
	-	sde101	mhu019	16.03.2022	CNAA001365	new Design		-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code



LEAKAGE COLLECTION/WASHING SYS.

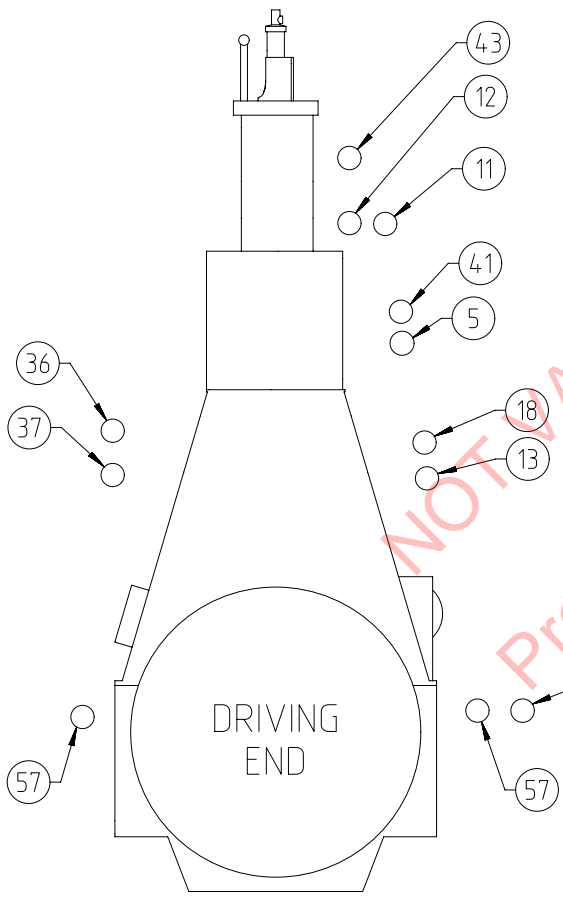
Bill Of Material		Dimension	
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	Main Design	Design Group	9724 Q-Code XXXXX Standard WDS
	Qty per	A4 Item ID	PTAA028608 BOM Page/s 01/01
			Net Weight 0.001

1 2 3 4 5 6 7 8

SPECIFICATION which must be met:

- A
- ④3 OUTLET - Venting turbocharger
 - Venting to funnel
 - Minimum inclination according to TC suppliers specification
 - Must not be connected to other venting pipes.
 - ⑤7 OUTLET - Various leakages
 - Gravity flow to sludge tank or appropriate tank.

- A
- ⑤ OUTLET - Cylinder cooling water drain.
 - Gravity flow to cooling water drain tank or appropriate tank.
 - ①1 INLET - Washing water SAC
 - From freshwater hydrophore system
 - ①2 INLET - Air for cleaning plants TC and SAC
 - Working air, supply pressure: 7-9 bar
 - ①3 OUTLET - Oily water from scavenge air receiver
 - Gravity flow to oily water tank or appropriate tank.
 - ①6 OUTLET - SAC condensate water
 - Gravity flow to bilge water tank or washing water collection tank or to the EGC bleed-off line depending on the operation mode.
 - The system components downstream of this connection until the pH-neutralisation dosing unit must be designed for low pH operation.
 - ①8 OUTLET - SAC venting
 - Free flow outside of engine room
 - ③6 OUTLET - Dirty oil piston underside
 - Flow with SAC pressure to sludge oil trap or appropriate arrangement.
 - Min. inclination of drain pipe: 15°
 - ③7 OUTLET - Leakage oil gland box
 - Gravity flow to sludge tank or appropriate tank.
 - ④1 OUTLET - Venting crankcase
 - Venting to funnel
 - Must not be connected to other venting pipes.
- B
- C
- D



Prod.	X52DF-S2.0												
Change History													
	-	sde101	mhu019	16.03.2022	CNA001365	new Design				-	-		
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis		Approved	Activity Code	E	C		
						LEAKAGE COLLECTION/WASHING SYS.							
separate BOM available						Dimension							
Scale	-			NX	Units [mm] [kg]	Basic Material				Net Weight	0.001		
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Qty per					A3	Item ID	PTAA028608			Drawing Page/s	1/2		

SURFACE PROTECTION SEE GROUP 0344

TOLERANCING PRINCIPLE ISO8015

GENERAL TOLERANCES ACCORDING TO ISO2768-mK

SYSTEM PROPOSAL

NOTE
Further installation details and variants can be found listed in the Marine Installation Manual (MIM), which provides also the acronyms used in this drawing set. The piping symbols are explained by the piping symbol key as included in the drawing set "Various Installation Items".

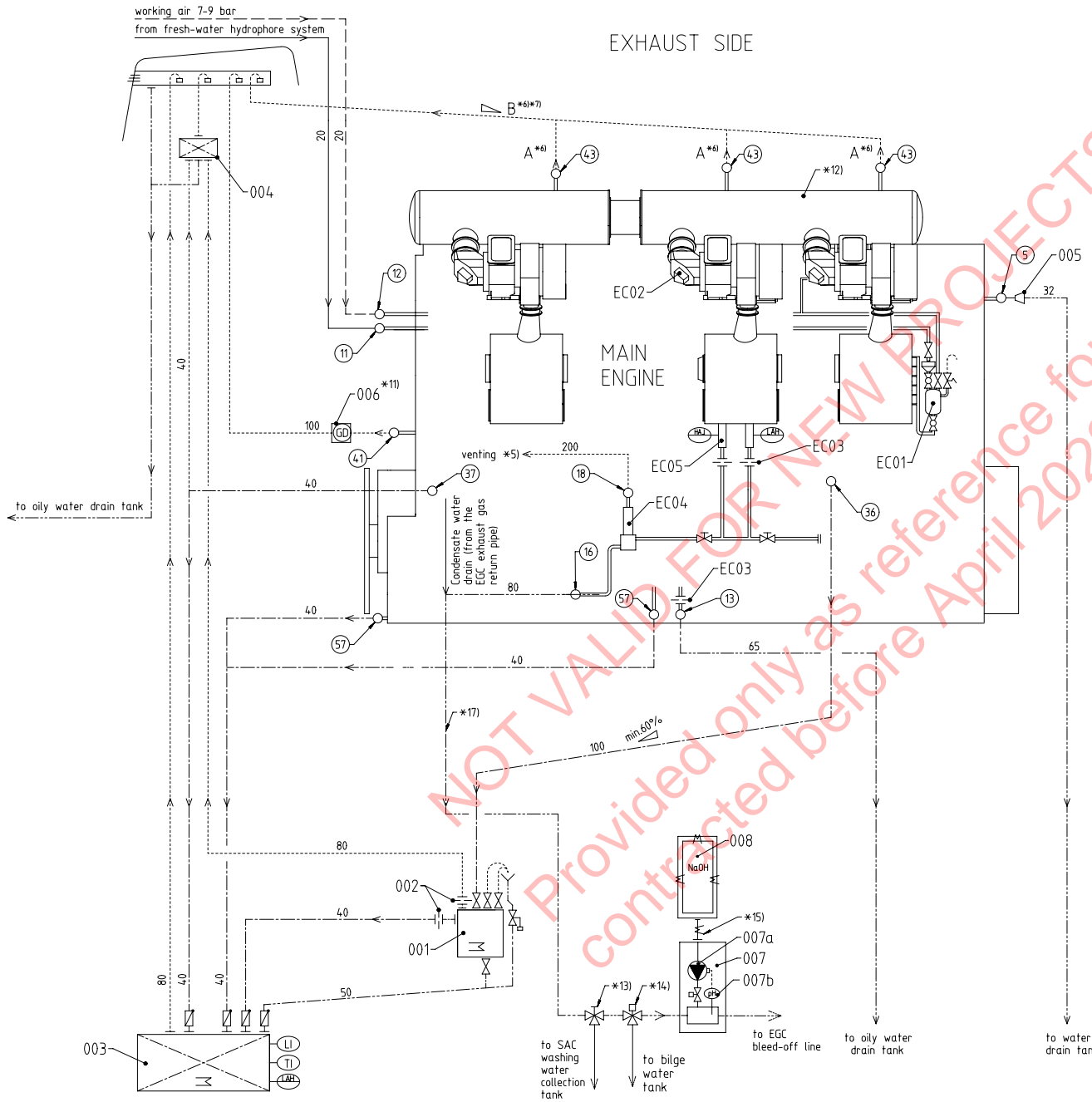
Turbocharger type	A**)	B**)	Min. Inclination
2x A165-L	65	80	≥ 5°
2x MET33MB	40	50	≥ 3°
2x MET37MB	50	65	≥ 3°
2x MET42MB	50	65	≥ 3°
2x MET48MB	65	80	≥ 3°
2x MET33MBII	40	50	≥ 3°
2x MET37MBII	50	65	≥ 3°
2x MET42MBII	50	65	≥ 3°

Pos.	SYSTEM COMPONENTS *1)
001	Sludge oil trap (link to detail drawing on the partlist of this drawing).
002	Throttling disc (size shown on separate sludge oil trap drawing)
003	Sludge or appropriate tank
004	Air vent manifold
005	Transition piece (adaptor) *9)
006	Gas detector *11)
007	pH-neutralisation dosing unit with *16) 007a - NaOH dosing pump 007b - pH sensor
008	NaOH storage tank *15) *16)

Pos.	ENGINE CONNECTIONS *2)
5	OUTLET - Cylinder cooling water drain
11	INLET - Washing water SAC
12	INLET - Air for cleaning TC and SAC
13	OUTLET - Dirty water from scavenge air receiver *10)
16	OUTLET - SAC condensate water *4) *10) *17)
18	OUTLET - SAC venting *5)
36	OUTLET - Dirty oil piston underside
37	OUTLET - Leakage oil gland box
41	OUTLET - Venting crankcase
43	OUTLET - Venting turbocharger
57	OUTLET - Various leakages

Pos.	ENGINE COMPONENTS *3)
EC01	Scavenge air cooler washing plant
EC02	Dry cleaning device
EC03	Throttling disc
EC04	Venting Unit
EC05	Condensate drain unit

EXHAUST SIDE



Remarks

- Air vent and drain pipes must be fully functional at all inclination angles of the ship at which the engine must be operational.
- *1) To be installed by the shipyard.
- *2) Refer to the "Pipe Connection Plan" for the execution and location of the engine pipe connections.
- *3) To be delivered by the engine manufacturer, i.e. already equipped on engine side
- *4) The amount of condensate water drained off after the SAC depends on the relative air humidity and the scavenge air temperature before and after the SAC. During iCER operation, the SAC drain water amount is significantly increased. The specific drain amount is provided by the GTD.
- *5) Free flow venting outside of engine room.
- *6) In relation to turbocharger type, see table on the left side.
- *7) Vent pipe diameter as per turbocharger requirements.
- *8) Vent pipe diameter of common collection pipe.
- *9) Installed as required (check with the Pipe Connection Plan).
- *10) Drain connection 13 and 16 are with air flow from scavenging system. Both drain lines must be kept separated and directed to separate tanks. The tanks must be designed with sufficiently sized vents to prevent excessive pressure in the tanks. The drain amount depends on the ambient conditions.
- *11) Optional, to be installed if requested by the flag state and/or class to achieve IGC compliance.
- *12) Manifold pipe for 2 TC
- *13) Switching to the separate washing water collection tank must be carried out for SAC cleaning.
- *14) While the iCER is in operation, drain to the EGC bleed-off line. The solenoid valve is actuated by a signal from the "Engine Control System".
- *15) If the caustic soda water solution has a mass fraction of 50% m/m NaOH, then the tank and supply line must be trace heated and insulated to keep the caustic soda temperature in the range of 27 - 37 °C. If the caustic soda water solution has a mass fraction of max. 30% m/m NaOH, then no heating is required.
- *16) The caustic soda storage tank and the pH-neutralisation dosing unit must be applied for installations with iCER diesel Tier III mode. For installations with only iCER gas mode, this unit can be omitted.
- *17) The system components from the SAC condensate water outlet (engine connection 16) must be designed for low pH operation. After pH neutralisation (unit 007 on this drawing or the pH-neutralisation dosing unit in the EGC bleed-off line), the system components can be of standard material.

- Compressed air pipes
- Air vent pipes
- .-.-.-.- Drain & overflow pipes
- Washing water pipes
- Dirty oil drain pipes
- Pipes on engine
- Pipe connections

MIDS – Leakage Collection & Washing System (DG9724)

WinGD X52DF-S2.0

TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2022-03-14	DRAWING SET	First web upload
2022-06-30	PTAA037452 PTAA037082	System and main drgs – new drgs as a replacement for the previous drawing set added
2022-12-02	PTAA037082	System drg – new revision
2023-12-20	PTAA037082	System drg – new revision
2024-04-22	PTAA073706- PTAA073711-	New drawings
2024-06-05	PTAA073711A PTAA073706A	New revision
2024-08-26	PTAA073706B PTAA073711B	New revision

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