Available executions

Execution No.	Material ID	Attribute 1: Emission class (Tier)			
		Tier II without SCR	Tier III HP-SCR on-engine	Tier III HP-SCR off-engine	Tier III LP-SCR off-engine
001	PAAD177827	X		X	X
002	PTAA038558		X		

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.

Prod. X52

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
–	sna102	mhu019	24.05.2023	CNAA003753	new Design	Approved	-	-

WIN GD Winterthur Gas & Diesel

LEAKAGE COLLECTION/WASHING SYS.

MIDS master drawing

separate BOM available

Dimension

Scale	Units	Basic Material	Net Weight
– NX	[mm] [kg]		0.001

Main Design	Design Group	Q-Code	Standard
	9724	XXXXX	WDS

Qty per	Item ID	Drawing Page/s
A4	PTAA025308	1/1

SEQ NO	QTY	Item ID	Item Name / Dimension	Standard-ID	Basic Material	Net Weight
001	1	PAAD177965	LEAKAGE COLLECTION/WASHING SYS.			0.001

Prod.				
	5,6,7,8 X52			

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
B	sna102	mhu019	07.11.2022	CNAA002687	Main Design/Drawing Introduced		4	3
A	yku101	mhu019	13.09.2019	EAAD090104	Legacy information. See corresponding ChangeNotice		4	3
-	grpadm	bha009	16.01.2015	EAAD778076	-		-	-

WIN GD
Winterthur Gas & Diesel

LEAKAGE COLLECTION/WASHING SYS.

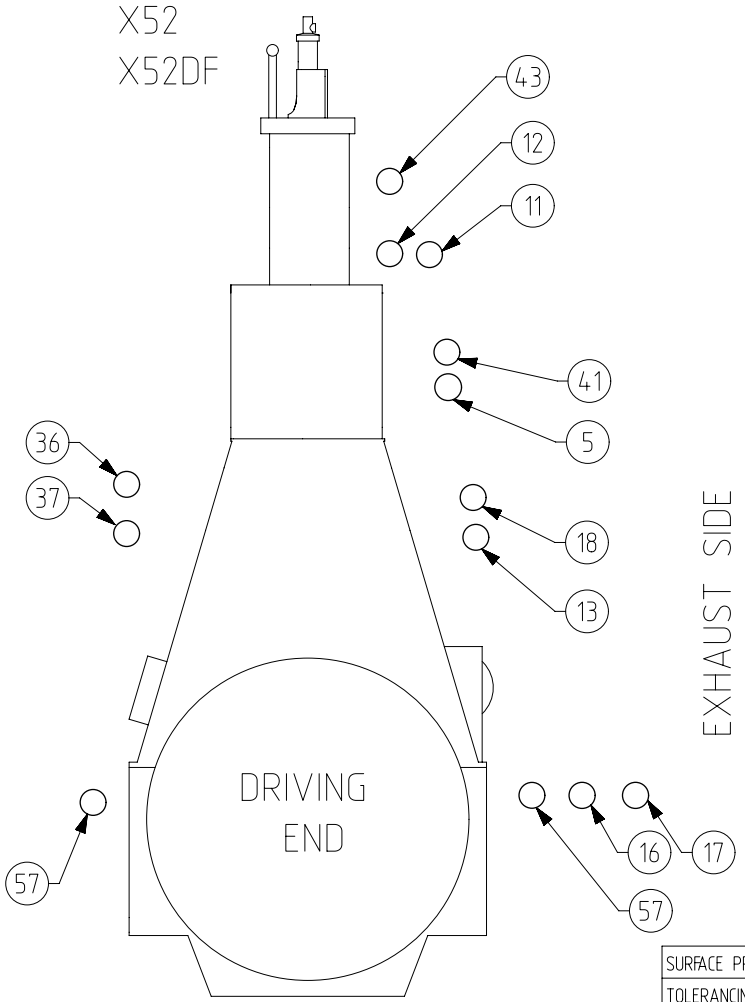
Bill Of Material

Dimension

Units	[m] [kg]	Basic Material				Net Weight	0
Main Design	Yes	Design Group	9724	Q-Code	XXXXX	Standard	WDS
Qty per	Engine	A4	Item ID	PAAD177827		BOM Page/s	01/01

SPECIFICATION which must be met (D)

(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 be not 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 fresh water hydrophore system, supply pressure: 2.5 bar
(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 appropriate tank.
(17)	OUTLET - Washing water from scavenge air coller. - Gravity flow to bilge water or chemical cleaning tank.
(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: 60 %
(37)	OUTLET - Leakage oil gland box - Gravity flow to sludge tank or appropriate tank.



1	001	107.425.369.500	SLUDGE OIL TRAP		107.425.369		0,001
QTY	SEQ NO	Material ID	Material Name / Dimension, Occ		Standard or Drawing	Basic Material / Material Standard	Weight GR./NET
Free space for lic.						Q-Code XXXXX Standard ISO; JIS	Main Drw.

Modif.											
	A	EAAD086014	04.12.2015	B	EAAD087692	06.07.2017	C	EAAD088733	22.12.2017	D	EAAD090104	26.08.2019
		Number	Drawn date		Number	Drawn date		Number	Drawn date		Number	Drawn date

WIN GD Winterthur Gas & Diesel

Product: 5-8X52, 5-8X52DF

LEAKAGE COLLECTION/WASHING SYS.
SYSTEME DIAGRAM

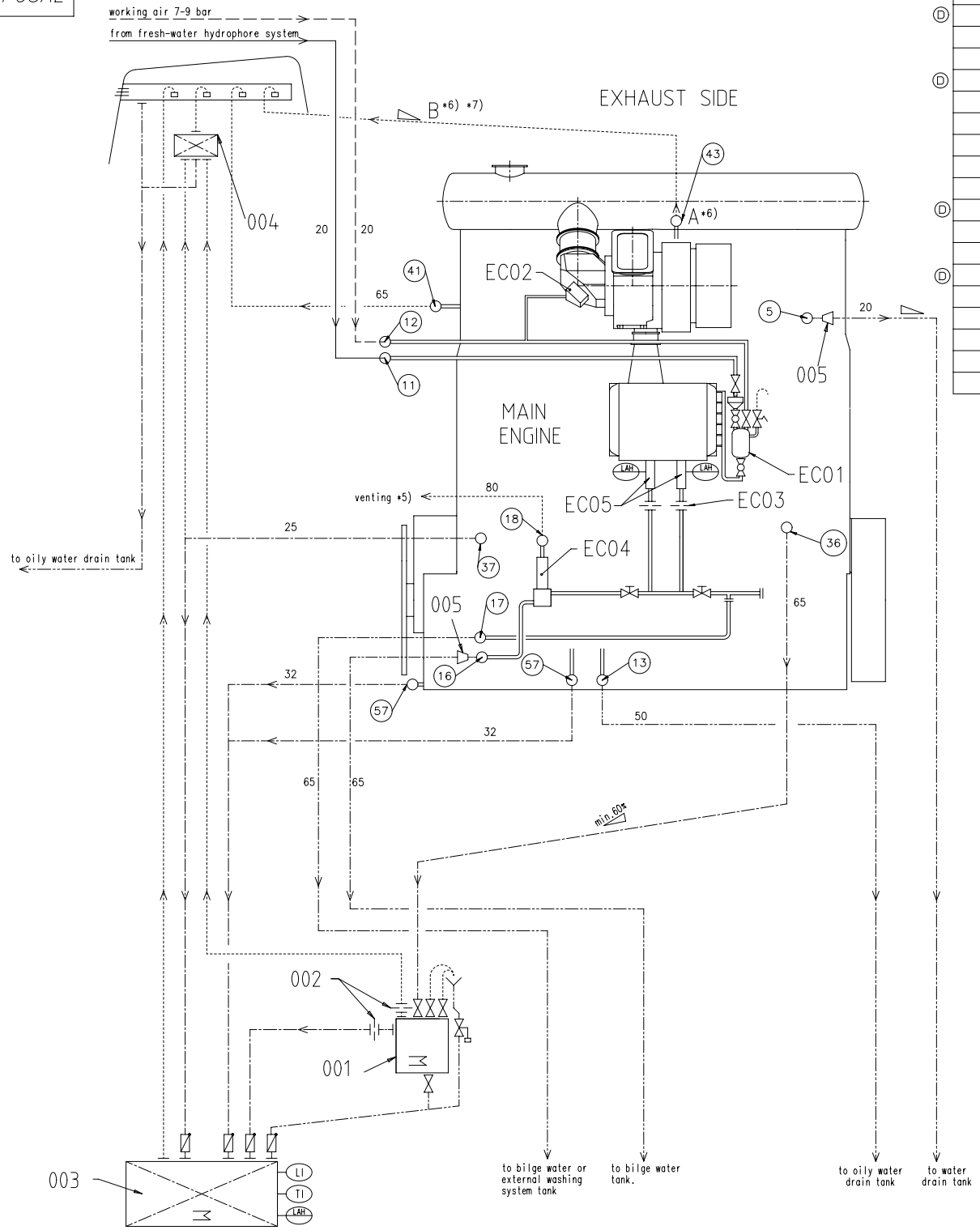
LEAKAGE COLLECTION/WASHING SYS.

Units mm kg	NX		Basic Material		Net Weight 0,001
SURFACE PROTECTION SEE GROUP 0344	Made	04.12.2014 wwa008 W.WANG	Scale -	Size A3	Page 1/2
TOLERANCING PRINCIPLE ISO8015	Chkd	16.01.2015 mhu019 Hug	Design Group 9724	Material ID PAAD177965	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	16.01.2015 bha009 Haag		Drawing ID DAAD056670	Rev. D

Approved

DID - DIMENSIONAL DRAWING - Confidential

SYSTEM PROPOSAL



	Turbocharger type	A*7)	B*8)	Min. Inclination
(D)	A165	65	65	≥ 5°
	A170	65	65	≥ 5°
	A175	65	65	≥ 5°
(D)	A265	65	65	≥ 5°
	A270	65	65	≥ 5°
	MET53	65	65	≥ 3°
	MET60	80	80	≥ 3°
	MET66	80	80	≥ 3°
	MET71	80	80	≥ 3°
(D)	2x A165	65	80	≥ 5°
	2x A170	65	90	≥ 5°
	2x A175	65	100	≥ 5°
(D)	2x A265	65	80	≥ 5°
	2x A270	65	90	≥ 5°
	2x MET53	65	80	≥ 3°
	2x MET60	80	100	≥ 3°
	2x MET66	80	100	≥ 3°
	2x MET71	80	100	≥ 3°

Pos.	SYSTEM COMPONENTS *1) (D)
001	Sludge oil trap (according to separate drawing)
002	Throttling disc (size shown on separate sludge oil trap drawing)
003	Sludge or approriate tank
004	Air vent manifold
005	Transition piece (adaptor) *9)

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)
(17)	OUTLET - Washing water from scavenge air coller
(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

Remarks (D)

- 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 delivered by external suppliers and 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. Under extreme ambient conditions a maximum condensate quantity of up to 0.16 kg/kWh may be produced

*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. It is recommended to connect these drains to different tanks. The tanks must be designed with sufficiently sized vents to avoid excessive pressure in the tanks. The drain amount depends on the ambient conditions.

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

Free space for lic. | Q-Code XXXXX | Standard ISO; JIS | Main Drw.

Modif.	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
	A EAAD086014	04.12.2015	B EAAD087692	06.07.2017	C EAAD088733	22.12.2017	D EAAD090104	26.08.2019

WinGD Winterthur Gas & Diesel

Product 5-8X52 5-8X52DF

LEAKAGE COLLECTION/WASHING SYS.
SYSTEME DIAGRAM
LEAKAGE COLLECTION/WASHING SYS.

Units mm kg | NX | Basic Material | Net Weight 0,001

SURFACE PROTECTION SEE GROUP 0344	Made	04.12.2014	wwa008 W.WANG	Scale	-	Size A1	Page 2/2
TOLERANCING PRINCIPLE ISO8015	Chkd	16.01.2015	mhu019 Hug	Design Group	9724	Material ID	PAAD177965
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	16.01.2015	bha009 Haag	Drawing ID	DAAD056670	Rev.	D

3D - DIMENSIONAL DRAWING - confidential

Approved

SEQ NO	QTY	Item ID	Item Name / Dimension	Standard-ID	Basic Material	Net Weight
001	1	PTAA038549	LEAKAGE COLLECTION/WASHING SYS.			0.001

Prod.			
	5,6,7 X52		

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
-	sde101	mhu019	29.07.2022	CNAA002265	Main Design/Drawing Introduced		-	-

WIN GD
Winterthur Gas & Diesel

LEAKAGE COLLECTION/WASHING SYS.

with iSCR

Bill **O**f **M**aterial

Dimension

Units	[m] [kg]	Basic Material				Net Weight	0.001
Main Design	Yes	Design Group	9724	Q-Code	XXXXX	Standard	WDS
Qty per	Engine	A4	Item ID	PTAA038558		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

Prod.	X52							

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
-	sde101	mhu019	29.07.2022	CNAA002265	new Design	Approved	-	-

WIN GD
Winterthur Gas & Diesel

LEAKAGE COLLECTION/WASHING SYS.

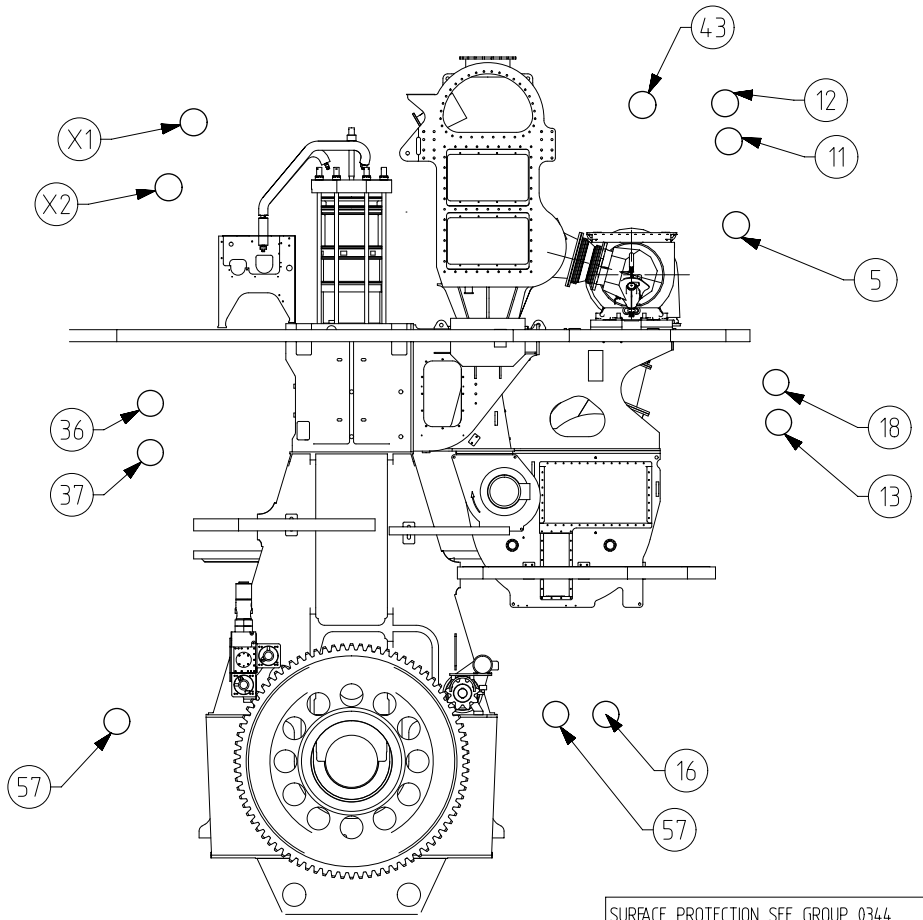
with iSCR

Bill Of Material

Dimension					
Units [m] [kg]	Basic Material			Net Weight	0.001
Main Design	Design Group 9724	Q-Code XXXXX		Standard	WDS
Qty per	A4	Item ID PTAA038549		BOM Page/s	01/01

SPECIFICATION which must be met:

(43)	OUTLET - Venting turbocharger - Venting to funnel - Minimum inclination according to TC suppliers specification - Must be not connected to other venting pipes.
(57)	OUTLET - Various leakages - Gravity flow to sludge tank or appropriate tank.
(X1)	INLET - SCR freshwater supply - Freshwater, supply pressure: 0.2 -1.5 bar
(X2)	OUTLET - SCR water drain - Gravity flow to sewage tank or an appropriate tank
(5)	OUTLET - Cylinder cooling water drain. - Gravity flow to cooling water drain tank or appropriate tank.
(11)	INLET - Washing water SAC - From fresh water hydrophore system, supply pressure: 2.5 bar
(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 appropriate tank.
(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.



SURFACE PROTECTION SEE GROUP 0344

TOLERANCING PRINCIPLE ISO8015

Prod.	X52								
Change History									
–	sde101	mhu019	29.07.2022	CNAA002265	new Design			-	-
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis		Approved	Activity Code	E C

WIN GD
Winterthur Gas & Diesel

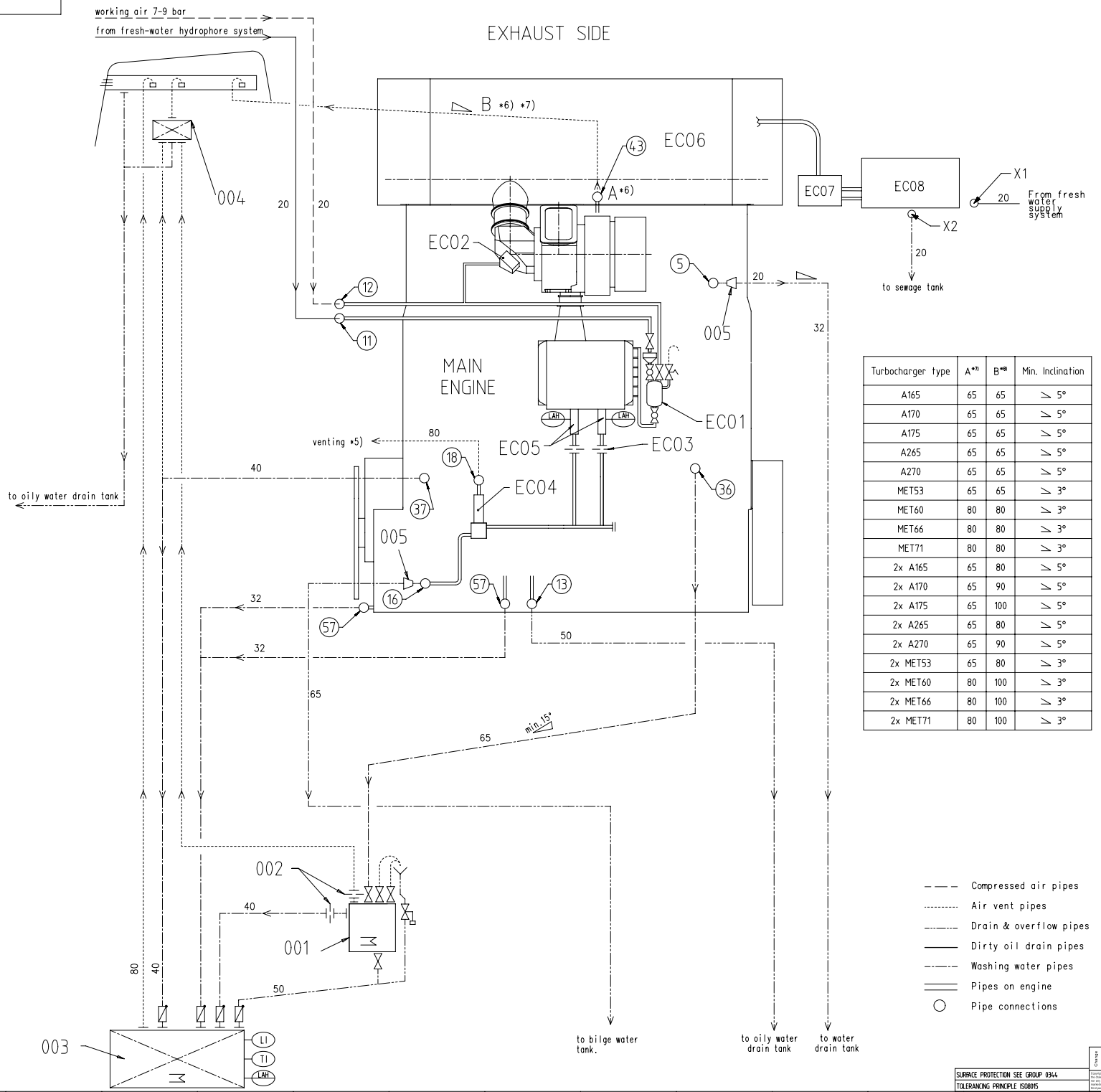
LEAKAGE COLLECTION/WASHING SYS.
with iSCR

separate BOM available

Dimension

Scale –	NX	Units [mm] [kg]	Basic Material	Net Weight	0.001
Main Design		Design Group	9724 Q-Code XXXXX	Standard	WDS
Qty per		A3	Item ID PTAA038549	Drawing Page/s	1/2

SYSTEM PROPOSAL



Turbocharger type	A*7)	B*8)	Min. Inclination
A165	65	65	≥ 5°
A170	65	65	≥ 5°
A175	65	65	≥ 5°
A265	65	65	≥ 5°
A270	65	65	≥ 5°
MET53	65	65	≥ 3°
MET60	80	80	≥ 3°
MET66	80	80	≥ 3°
MET71	80	80	≥ 3°
2x A165	65	80	≥ 5°
2x A170	65	90	≥ 5°
2x A175	65	100	≥ 5°
2x A265	65	80	≥ 5°
2x A270	65	90	≥ 5°
2x MET53	65	80	≥ 3°
2x MET60	80	100	≥ 3°
2x MET66	80	100	≥ 3°
2x MET71	80	100	≥ 3°

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

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 approriate tank
004	Air vent manifold
005	Transition piece (adaptor) *9)

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)
(18)	OUTLET - SAC venting *5)
(36)	OUTLET - Dirty oil piston underside
(37)	OUTLET - Leakage oil gland box
(43)	OUTLET - Venting turbocharger
(57)	OUTLET - Various leakages
(X1)	INLET - SCR freshwater supply
(X2)	OUTLET - SCR water drain

Pos.	ENGINE COMPONENTS *3)
EC01	Scavenge air cooler washing plant
EC02	Dry cleaning device
EC03	Throttling disc
EC04	Venting Unit
EC05	Condensate drain unit
EC06	SCR reactor
EC07	Urea dosing unit
EC08	Urea pump 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 delivered by external suppliers and 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. Under extreme ambient conditions a maximum condensate quantity of up to 0.16 kg/kWh may be produced.
*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 connections 13 and 16 include air flow from scavenging system. It is recommended to connect these drains to different tanks. The tanks must be designed with sufficiently sized vents to avoid excessive pressure in the tanks. The drain amount depends on the ambient conditions.

Status	-	sde101	mhu039	29.07.2022	CNAA002265	new Design			-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E C

SURFACE PROTECTION SEE GROUP 0344
TOLERANCING PRINCIPLE ISO8015

[mm] [kg] | - | NX | A1 | Item ID | PTAA038549 | Drawing Pages | 2/2

Remarks:

*1) Orifice to be as shown

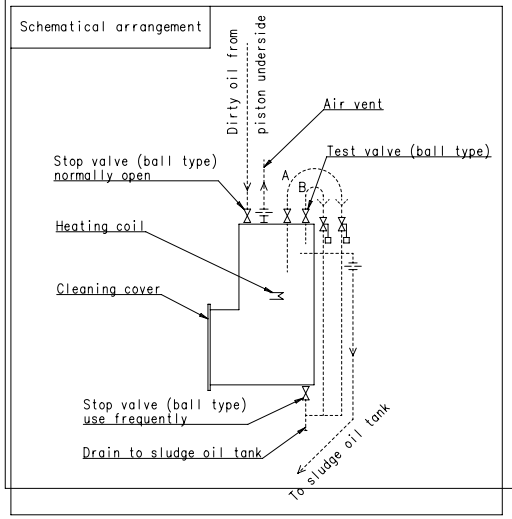
*2) Observe location of pipes with regard to each other

*3) Optional - Alternatives, such as level sensors, are possible

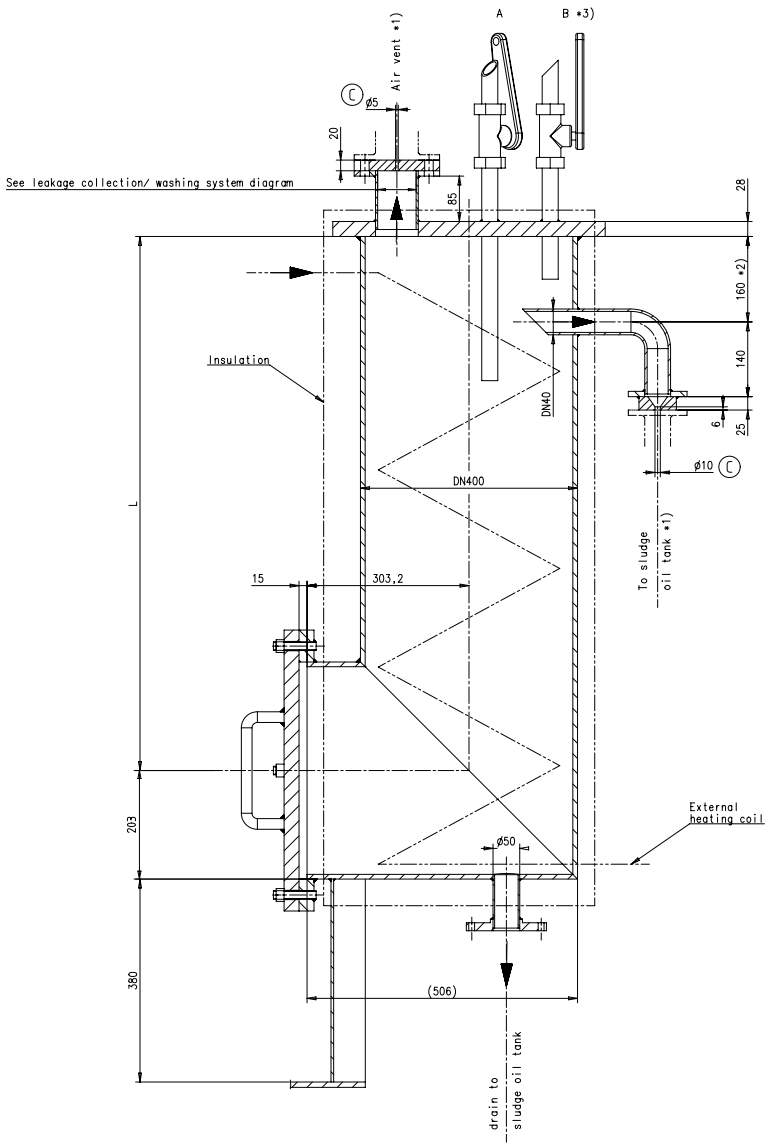
Details:

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

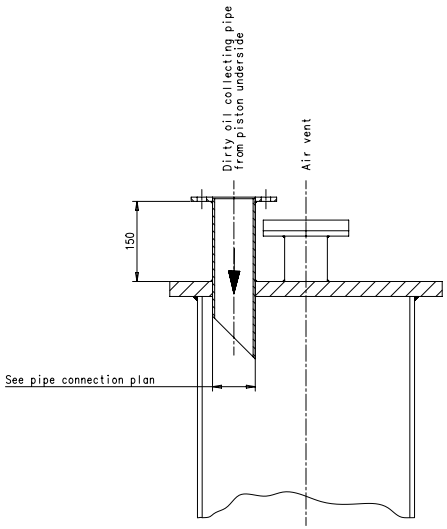
Schematical arrangement

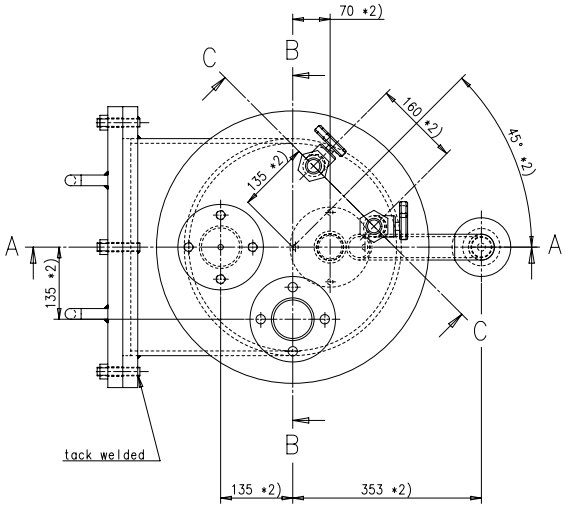


A-A



B-B 90°





C-C 45°

A:

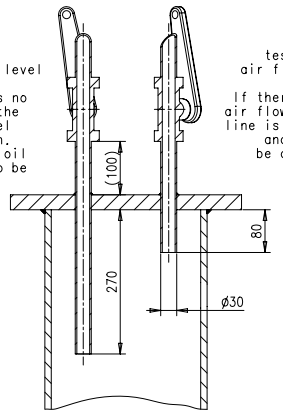
Test valve sludge oil level

If there is no oil flow, the sludge level is too high. The sludge oil trap has to be cleaned!

B:

test valve air flow *3)

If there is no air flow, drain line is blocked and has to be cleaned!



Free space for lic.										Q-Code XXXXX	Main Drw.
										Standard ISO; JIS	
Modif.	A	EAAD084051	22.01.2013	B	EAAD087849	14.07.2017	C	EAAD089439	12.07.2018		
	Number		Drawn date	Number		Drawn date	Number		Drawn date	Number	Drawn date

WINGD Winterthur Gas & Diesel

Product W-2S

SLUDGE OIL TRAP

Units mm kg	NX	Basic Material						Net Weight 0.001	
SURFACE PROTECTION SEE GROUP 0344	Made	31.08.2009	J.BAUMANN	Scale	1:5	Size	A1	Page	1/1
TOLERANCING PRINCIPLE ISO8015	Chkd			Design Group	9724	Drawing ID	107.425.369	Rev.	C
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	13.11.2009	JBA029 Baumann					Material ID	107.425.369.500

MIDS - LEAKAGE-COLLECTION and WASHING-SYSTEM

WinGD X52

TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2017-02-15	DRAWING SET	First web upload
2017-08-18	107.425.369	Sludge oil trap drg – new revision
2017-12-22	DAAD056670	System drg – new revision
2018-10-01	107.425.369	Sludge oil trap drg – new revision
2019-09-18	DAAD056587 DAAD056670	Main and system drg.- new revision
2023-01-12	PTAA038549 PTAA038558	Main and system drg.- new drawings
2023-05-26	PTAA025308	MIDS master – new revision

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