

Available executions

Execution No.	Material ID
001	PTAA036181

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

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.

This publication is designed to provide accurate and authoritative information with regard to the subject-matter covered as it was available at the time of printing. However, the publication deals with complicated technical matters suited only for specialists in the area, and the design of the subject-products is subject to regular improvements, modifications and changes. Consequently, the publisher and copyright owner of this publication cannot accept any responsibility or liability for any eventual errors or omissions in this document or for discrepancies arising from the features of any actual item in the respective product being different from those shown in this publication. The publisher and copyright owner shall under no circumstances be held liable for any financial consequential damages or other loss, or any other damage or injury, suffered by any party making use of this publication or the information contained herein.

Prod.	X92DF-2.0										
Change History											
	-	sna102	dst009	22.06.2022	CNA002074	new Design				-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved		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		
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the drawing the recipient recognizes and honours 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 Winterthur Gas & Diesel Ltd.				Main Design	Design Group	9724	Q-Code XXXXX	Standard	WDS
				Qty per	A4	Item ID	PTAA026439		Drawing Page/s

SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
3	1	PTAA036177	LEAKAGE COLLECTION/WASHING SYS.				0

--	--	--	--	--	--	--	--

Prod.	6,7,8,9,10,11,12 X92DF-2.0						
Change History							
	-	dkl021	dst009	21062022	01A002059	Main Design/Drawing Introduced	-
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code E C

	<h1>LEAKAGE COLLECTION/WASHING SYS.</h1> <h2>iCER off-engine</h2>
--	---

Bill Of Material		Dimension iCER off-engine					
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the document the recipient recognizes and honours these rights. Neither the whole nor any part of this document 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 Winterthur Gas & Diesel Ltd.	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	PTAA036181		BOM Page/s

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

--	--	--	--	--	--	--	--

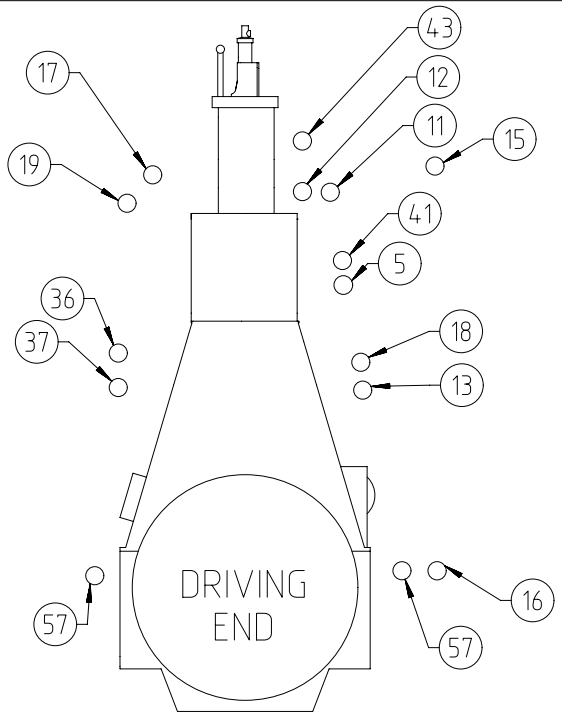
Prod.	X92DF-2.0												
Change History	C	dki021	mhu019	19.12.2022	CNAA002848	Drawing Updated					4	3	
	B	rth101	mhu019	22.11.2022	CNAA002751	Drawing Updated					4	3	
	A	mhu019	dst009	23.06.2022	CNAA002091	Drawing Updated					4	3	
	-	dki021	dst009	21.06.2022	CNAA002059	new Design					-	-	
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E	C			

	LEAKAGE COLLECTION/WASHING SYS.
--	---------------------------------

Bill Of Material			Dimension				
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the document the recipient recognizes and honours these rights. Neither the whole nor any part of this document 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 Winterthur Gas & Diesel Ltd.	Units	[m] [kg]	Basic Material			Net Weight	0.001
	Main Design	Design Group	9724	Q-Code	XXXXX	Standard	WDS
	Qty per	A4	Item ID	PTAA036177		BOM Page/s	01/01

SPECIFICATION which must be met:

A	①9	OUTLET - SAC condensate water, iCER - To EGC wastewater holding tank during iCER operation - The system components downstream of this connection until the pH-neutralisation dosing unit must be designed for low pH operation.	⑤	OUTLET - Cylinder cooling water drain. - Gravity flow to cooling water drain tank or appropriate tank.
	③6	OUTLET - Dirty oil piston underside - Flow with SAC pressure to sludge oil trap or appropriate arrangement. - Min. inclination of drain pipe: 15°	⑪ ③	INLET - SAC wash water - Optional connection. Only necessary if an external SAC washing system is installed. - Wash water supply: From external washing system - Wash water supply pressure: min. 3.0 bar - Wash water circulation rate: min. 4.5 m³/h
B	③7	OUTLET - Leakage oil gland box - Gravity flow to sludge tank or appropriate tank.	⑫	INLET - Air for cleaning plants TC - Working air, supply pressure: 7-9 bar
	④1	OUTLET - Venting crankcase - Venting to funnel - Must not be connected to other venting pipes.	⑬	OUTLET - Oily water from scavenge air receiver - Gravity flow to oily water tank or appropriate tank.
	④3	OUTLET - Venting turbocharger - Venting to funnel - Minimum inclination according to TC suppliers specification - Must not be connected to other venting pipes.	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
C	⑤7	OUTLET - Various leakages - Gravity flow to sludge tank or appropriate tank.	⑯	OUTLET - SAC condensate water - Gravity flow to bilge water tank or wash 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.



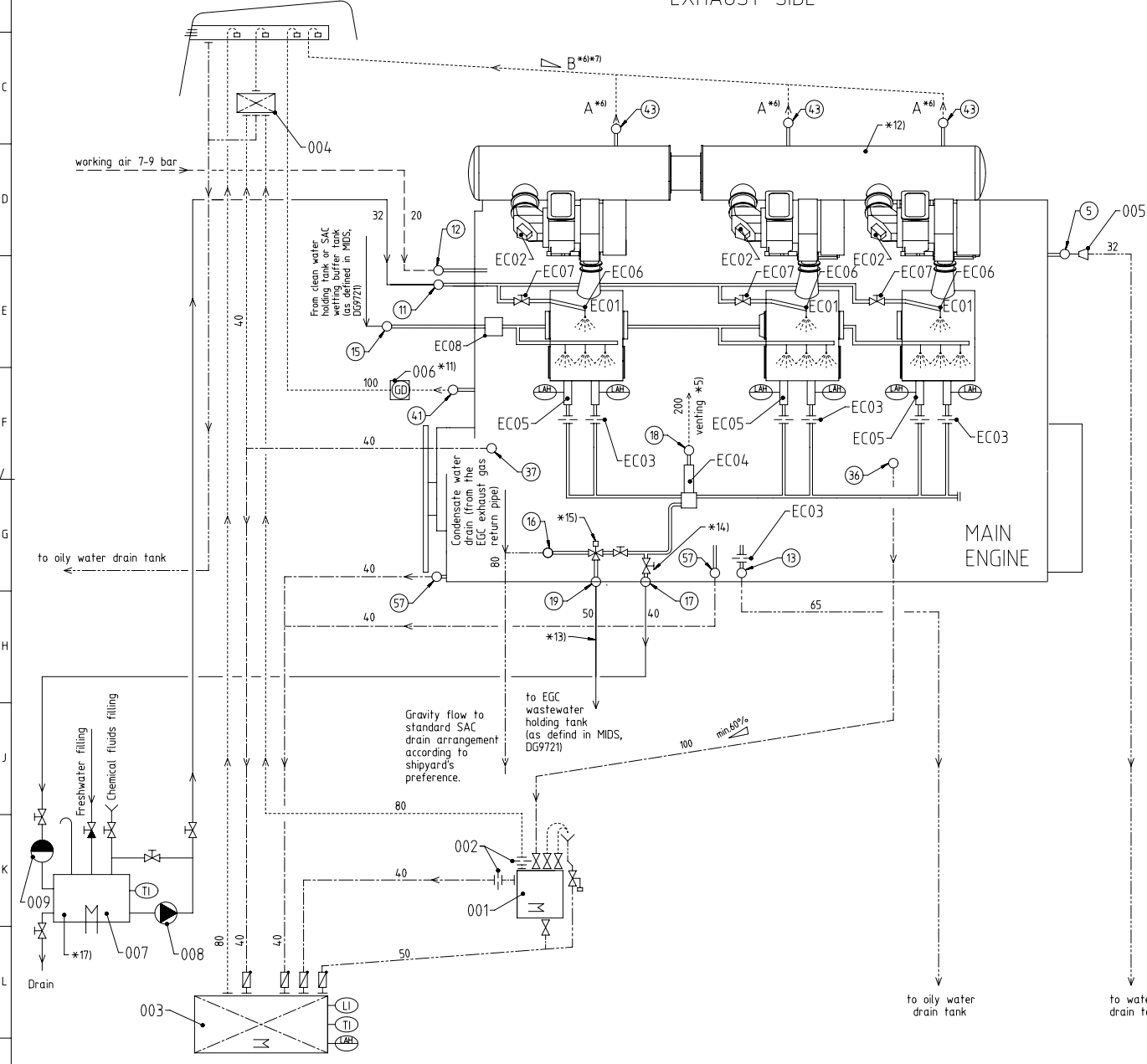
D	⑰	OUTLET - SAC wash water - Optional connection. Only necessary if an external SAC washing system is installed.
	③	- To wash water collection tank during SAC cleaning.
D	⑱	OUTLET - SAC venting - Free flow outside of engine room

Prod.	X92DF-2.0												
Change History	C	dki021	mhu019	19.12.2022	CNA002848	Drawing Updated	4	3					
	B	rth101	mhu019	22.11.2022	CNA002751	Drawing Updated	4	3					
	A	mhu019	dst009	23.06.2022	CNA002091	Drawing Updated	4	3					
	-	dki021	dst009	21.06.2022	CNA002059	new Design	-	-					
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E c					
WINGD Winterthur Gas & Diesel		LEAKAGE COLLECTION/WASHING SYS.											
separate BOM available		Dimension											
Scale	-		NX	Units [mm] [kg]	Basic Material			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. By taking possession of the drawing the recipient recognizes and honours 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 not 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	XXXXXX	Standard	WDS
Qty per	A3		Item ID	PTAA036177			Drawing Page/s	1/2					

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".

EXHAUST SIDE



Turbocharger type	A**	B**	Min. Inclination
2x A175	65	100	≥ 5°
2x A180	80	100	≥ 5°
2x A185	80	125	≥ 5°
2x A190	80	125	≥ 5°
2x A275	65	100	≥ 5°
2x A280	80	100	≥ 5°
2x A285	80	125	≥ 5°
3x A175	65	125	≥ 5°
3x A180	80	125	≥ 5°
3x A185	80	150	≥ 5°
3x A190	80	150	≥ 5°
3x A275	65	125	≥ 5°
3x A280	80	125	≥ 5°
3x A285	80	150	≥ 5°
2x MET66MB	80	100	≥ 3°
2x MET71MB	80	100	≥ 3°
2x MET83MB	100	125	≥ 3°
2x MET90MB	100	125	≥ 3°
3x MET66MB	80	125	≥ 3°
3x MET71MB	80	125	≥ 3°
3x MET83MB	100	150	≥ 3°
3x MET90MB	100	150	≥ 3°

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

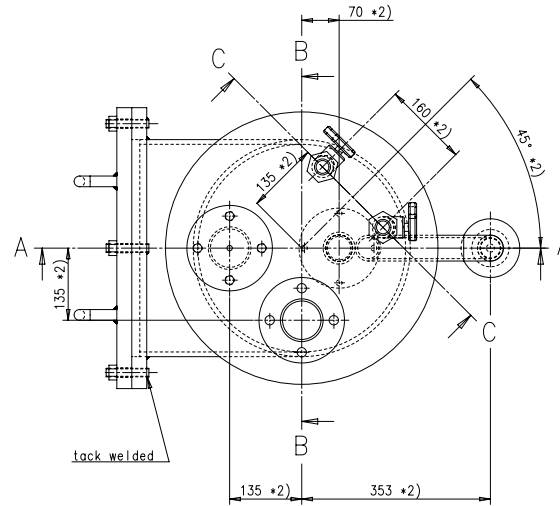
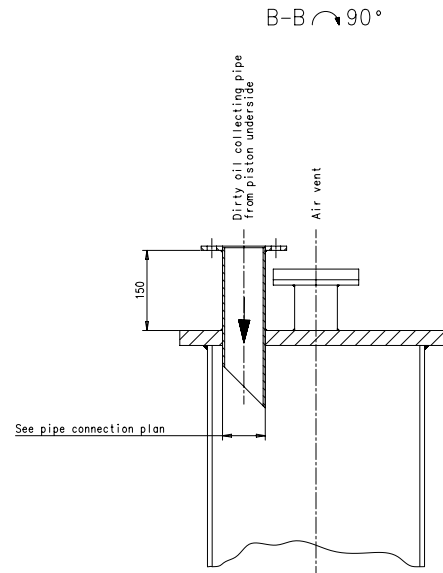
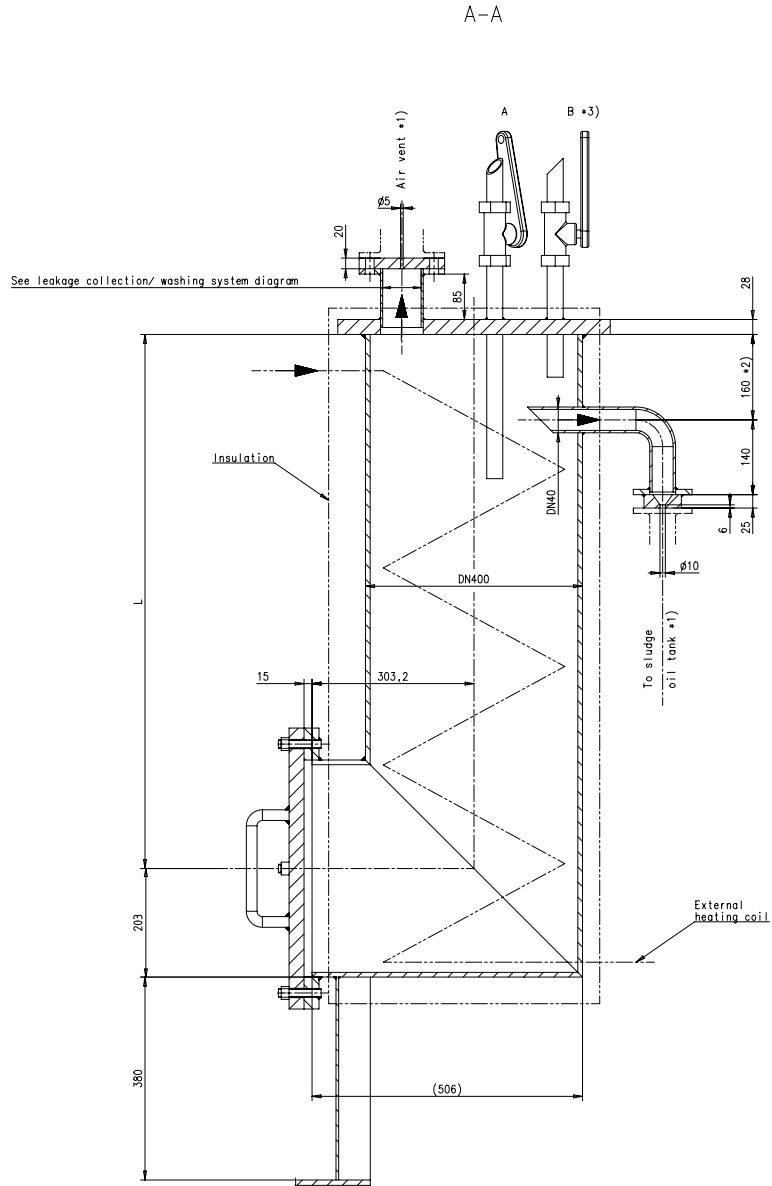
- *1) To be installed by the shipyard.
- *2) Refer to the "Pipe Connection Plan" for the execution and location of the engine pipe connections.
- *3) To be delivered by the engine manufacturer, i.e. already equipped on engine side.
- *4) The amount of condensate water drained off after the SAC depends 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) The system components from the iCER bleed-off water outlet must be designed for low pH operation. After the pH neutralisation the system components can be of standard material.
- *14) Switching to the separate wash water collection tank must be carried out for SAC cleaning.
- *15) While the iCER is in operation, drain to the EGC wastewater holding tank. The solenoid valve is actuated by a signal from the "Engine Control System".
- *16) Wash water is heated to between 50 and 60 °C by a heating coil.
- *17) Optional, only necessary if an external SAC washing system is installed.

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	Chemical wash water circulation tank *16)
008	Chemical wash water circulation pump *17)
009	Chemical wash water strainer (0.5-1.0 mm) *17)

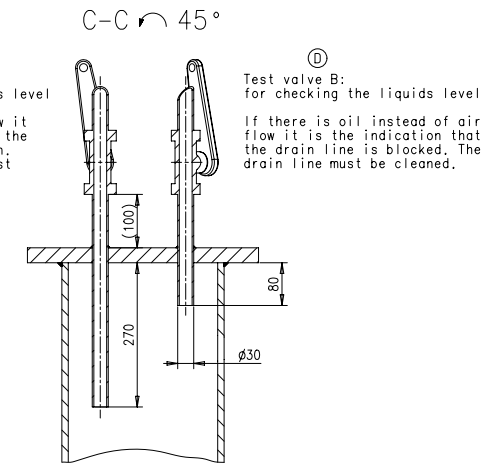
Pos.	ENGINE CONNECTIONS *2)
5	OUTLET - Cylinder cooling water drain
11	INLET - SAC wash water *17)
12	INLET - Air for cleaning TC
13	OUTLET - Oily water from scavenge air receiver *10)
15	INLET - SAC wetting water
16	INLET - SAC condensate water *4) *10) *13)
17	OUTLET - SAC wash water *14) *17)
18	OUTLET - SAC venting *5)
19	OUTLET - SAC condensate water, iCER *15)
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 (SAC)
EC02	Dry cleaning device
EC03	Throttling disc
EC04	Venting Unit
EC05	Condensate drain unit
EC06	SAC washing spray nozzle
EC07	SAC washing isolating valve
EC08	SAC wetting valve unit

- Compressed air pipes
- Air vent pipes
- Drain & overflow pipes
- Wash water pipes
- - - Dirty oil drain 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.



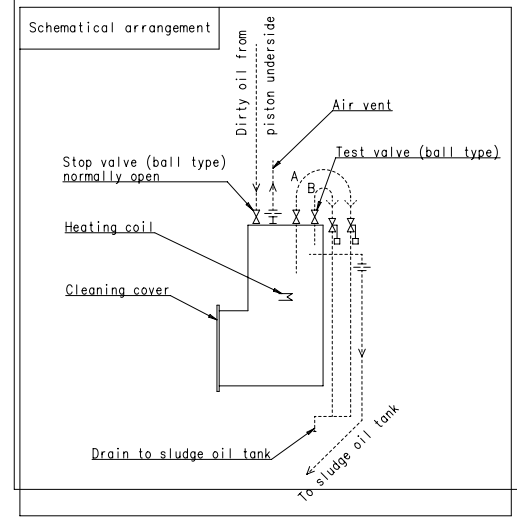
Test valve B:
for checking the liquids level
If there is oil instead of air flow it is the indication that the drain line is blocked. The drain line must be cleaned.

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:

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



Proj.	CX40DF	R1=rev50-D	R2=rev50-T-D V1	R1=rev58T-E	R1=rev80-L	R1=rev82	CR4HMM-PILOT	X33-B
Rev.	01	30.01.2022	04A003373					
Change History	D sde01	mhu019	10.09.2018	EAA0089439	Legacy information. See corresponding ChangeNotice			4 -
	B dki021	mhu019	16.07.2017	EAA0087849	Legacy information. See corresponding ChangeNotice			4 -
	-	WniGD	jba029	13.11.2009				-
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approval	Activity Code	E C

WIN GD Winterthur Gas & Diesel		SLUDGE OIL TRAP	
Scale	1:5	Units [mm] [kg]	Basic Material
Dimension			
Net Weight	0.001		

SURFACE PROTECTION SEE GROUP 0344	Copyright Winterthur Gas & Diesel Ltd. All rights reserved. For legal purposes only. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written consent of Winterthur Gas & Diesel Ltd.	Main Design	Design Group	9724	Q-Code XXXXX	Standard	WDS
GENERAL TOLERANCES ACCORDING TO ISO2768-MK		Rev. per	Form ID	A1	107.425.369.500	Drawing Page	1/1

Available executions

Execution No.	Material ID	Cylinder No.
001	PTAA004212	6-12

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

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.

This publication is designed to provide accurate and authoritative information with regard to the subject-matter covered as it was available at the time of printing. However, the publication deals with complicated technical matters suited only for specialists in the area, and the design of the subject-products is subject to regular improvements, modifications and changes. Consequently, the publisher and copyright owner of this publication cannot accept any responsibility or liability for any eventual errors or omissions in this document or for discrepancies arising from the features of any actual item in the respective product being different from those shown in this publication. The publisher and copyright owner shall under no circumstances be held liable for any financial consequential damages or other loss, or any other damage or injury, suffered by any party making use of this publication or the information contained herein.

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

Prod.	X92DF-2.0								
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		
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the drawing the recipient recognizes and honours 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 Winterthur Gas & Diesel Ltd.				Main Design	Design Group	9724	Q-Code XXXXX	Standard	WDS
				Qty per	A4	Item ID	PTAA026439		Drawing Page/s

SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
3	1	PTAA004208	LEAKAGE COLLECTION/WASHING SYS.				0

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

Prod.	6,7,8,9,10,11,12		X92DF-2.0					
Change History								
	-	dki021	dst009	22.12.2021	CNAA001288	Main Design/Drawing Introduced	-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code
							E	C

	LEAKAGE COLLECTION/WASHING SYS.
--	---------------------------------

Bill Of Material		Dimension	
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the document the recipient recognizes and honours these rights. Neither the whole nor any part of this document 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 Winterthur Gas & Diesel Ltd.	Units	[m] [kg]	Basic Material
	Main Design	Yes	Design Group 9724 Q-Code XXXXX Standard WDS
	Qty per	Engine A4	Item ID PTAA004212

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.	X92DF-2.0									
Change History										
	-	dkl021	dst 009	20.12.2021	CNAA001054	new Design		-	-	
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E C	

	LEAKAGE COLLECTION/WASHING SYS.
--	---------------------------------

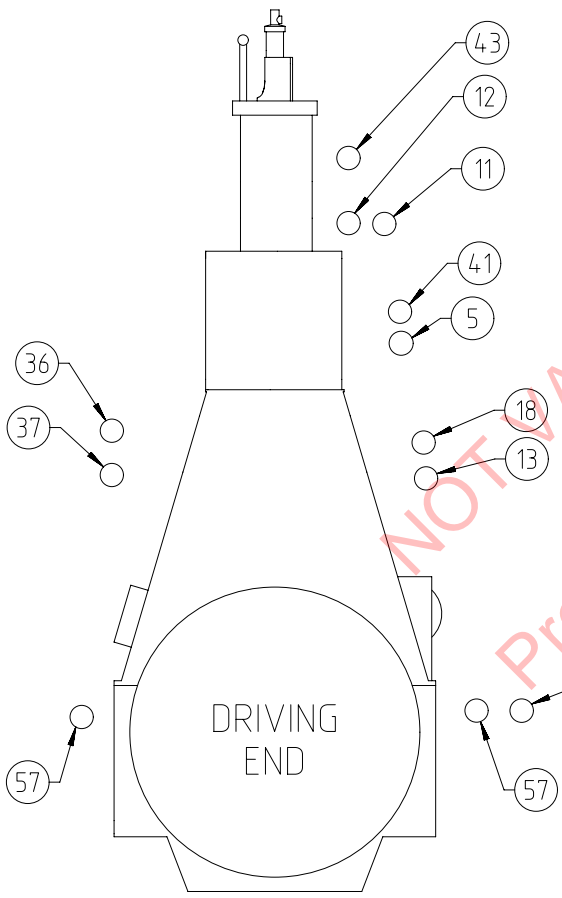
Bill Of Material				Dimension				
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the document the recipient recognizes and honours these rights. Neither the whole nor any part of this document may be used in any way for construction, fabrication, marketing or any other purpose nor copied in any way nor made accessible to third parties without the previous written consent of Winterthur Gas & Diesel Ltd.		Units	[m] [kg]	Basic Material		Net Weight		0
Main Design		Design Group		9724	Q-Code	XXXXX	Standard	WDS
Qty per		A4	Item ID	PTAA004208		BOM Page/s	01/01	

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



NOT VALID FOR NEW PROJECTS
 Provided only as reference
 Contracted before April 2022

Prod.	X92DF-2.0											
Change History												
	-	dki021	dst009	20.12.2021	CNA001054	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		
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the drawing the recipient recognizes and honours 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 not 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					A3	Item ID	PTAA004208			Drawing Page/s	1/2	

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

MIDS - WinGD X92DF-2.0 – Leakage Collection & Washing System (DG9724)

TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2021-08-31	DRAWING SET	First web upload
2021-12-22	PTAA004208	System drg – new revision
2022-03-14	107.425.369.500	System drg – new revision
2022-06-24	PTAA036181 PTAA036177	System main and system drg – new drgs. added as replacement for the previous drawing set
2022-12-01	PTAA036177	System drg – new revision
2022-12-20	PTAA036177	System drg – new revision

DISCLAIMER

© Copyright by Winterthur Gas & Diesel Ltd.

All rights reserved. No part of this document may be reproduced or copied in any form or by any means (electronic, mechanical, graphic, photocopying, recording, taping or other information retrieval systems) without the prior written permission of the copyright owner.

THIS PUBLICATION IS DESIGNED TO PROVIDE AN ACCURATE AND AUTHORITATIVE INFORMATION WITH REGARD TO THE SUBJECT-MATTER COVERED AS WAS AVAILABLE AT THE TIME OF PRINTING. HOWEVER, THE PUBLICATION DEALS WITH COMPLICATED TECHNICAL MATTERS SUITED ONLY FOR SPECIALISTS IN THE AREA, AND THE DESIGN OF THE SUBJECT-PRODUCTS IS SUBJECT TO REGULAR IMPROVEMENTS, MODIFICATIONS AND CHANGES. CONSEQUENTLY, THE PUBLISHER AND COPYRIGHT OWNER OF THIS PUBLICATION CAN NOT ACCEPT ANY RESPONSIBILITY OR LIABILITY FOR ANY EVENTUAL ERRORS OR OMISSIONS IN THIS BOOKLET OR FOR DISCREPANCIES ARISING FROM THE FEATURES OF ANY ACTUAL ITEM IN THE RESPECTIVE PRODUCT BEING DIFFERENT FROM THOSE SHOWN IN THIS PUBLICATION. THE PUBLISHER AND COPYRIGHT OWNER SHALL UNDER NO CIRCUMSTANCES BE HELD LIABLE FOR ANY FINANCIAL CONSEQUENTIAL DAMAGES OR OTHER LOSS, OR ANY OTHER DAMAGE OR INJURY, SUFFERED BY ANY PARTY MAKING USE OF THIS PUBLICATION OR THE INFORMATION CONTAINED HEREIN.