SURFACE PROTECTION SEE GROUP 0344

TOLERANCING PRINCIPLE ISO8015

Available executions

Execution No.	Material ID
001	PAAD332487

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.	X40DF-1.0							

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
–	sna102	mhu019	16.06.2023	CNAA003886	new Design	Approved	-	-

WIN GD
Winterthur Gas & Diesel

LEAKAGE COLLECTION/WASHING SYS.

MIDS master drawing

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			A4	Item ID PTAA024839	Drawing Page/s	1/1

SEQ NO	QTY	Item ID	Item Name / Dimension	Standard-ID	Basic Material	Net Weight
001	1	PAAD332486	LEAKAGE COLLECTION/WASHING SYS.			0.001

Prod.				
	5,6,7,8 X40DF-1.0			

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
A	sna102	mhu019	06.10.2022	CNAA002572	Main Design/Drawing Introduced		-	-
-	sde101	mhu019	06.09.2019	EAAD784688	-		-	-

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	PAAD332487		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.	X40DF-1.0							

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
B	npa101	mhu019	15.12.2023	CNAA004312	Drawing Updated		4	3
A	sde101	mhu019	01.09.2021	CNAA000231	drawing updated		4	3
-	sde101	mhu019	06.09.2019	EAAD784688	-		-	-

Approved

WIN GD
Winterthur Gas & Diesel

LEAKAGE COLLECTION/WASHING SYS.

SYSTEM DIAGRAM

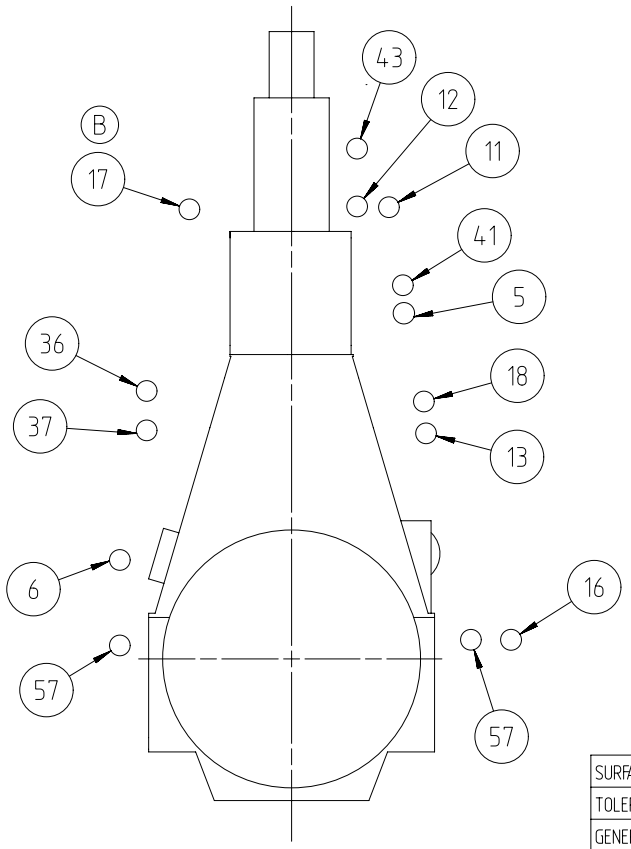
Bill Of Material

Dimension

Units [m] [kg]	Basic Material				Net Weight 0
Main Design	Design Group 9724		Q-Code X X M		Standard WDS
Qty per	A4	Item ID PAAD332486			BOM Page/s 01/01

SPECIFICATION which must be met

(36)	OUTLET - Dirty oil piston underside - Flow with SAC pressure to sludge oil trap or appropriate arrangement - Min. inclination of drain pipe: 60 % - Must not be connected to other drain pipes
(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
(6)	OUTLET - SAC drain - Gravity flow to cooling water drain or appropriate tank
(11) (B)	INLET - SAC washing water - Only in use if an optional SAC washing system is installed on the ship side Otherwise blinded with a blind flange - 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: 1.9 m3/h - Washing water circulation tank capacity: 0.25 m3
(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
(16)	OUTLET - SAC condensate water - Gravity flow to bilge water tank or appropriate tank
(17) (B)	OUTLET - SAC washing water - Only in use if an optional SAC washing system is installed on the ship side Otherwise blinded with a blind flange - To chemical washing water circulation tank during SAC cleaning
(18)	OUTLET - SAC venting - Free flow outside of engine room

Prod. X40DF-1.0

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
B	npa101	mhu019	15.12.2023	CNAA00432	Drawing Updated		4	3
A	sde101	mhu019	01.09.2021	CNAA000231	drawing updated		4	3
-	sde101	mhu019	06.09.2019	EAAD784688	-		-	-

WIN GD Winterthur Gas & Diesel

LEAKAGE COLLECTION/WASHING SYS.
SYSTEM DIAGRAM

separate BOM available

Dimension

Scale - NX | Units [mm] [kg] | Basic Material | Net Weight 0.000

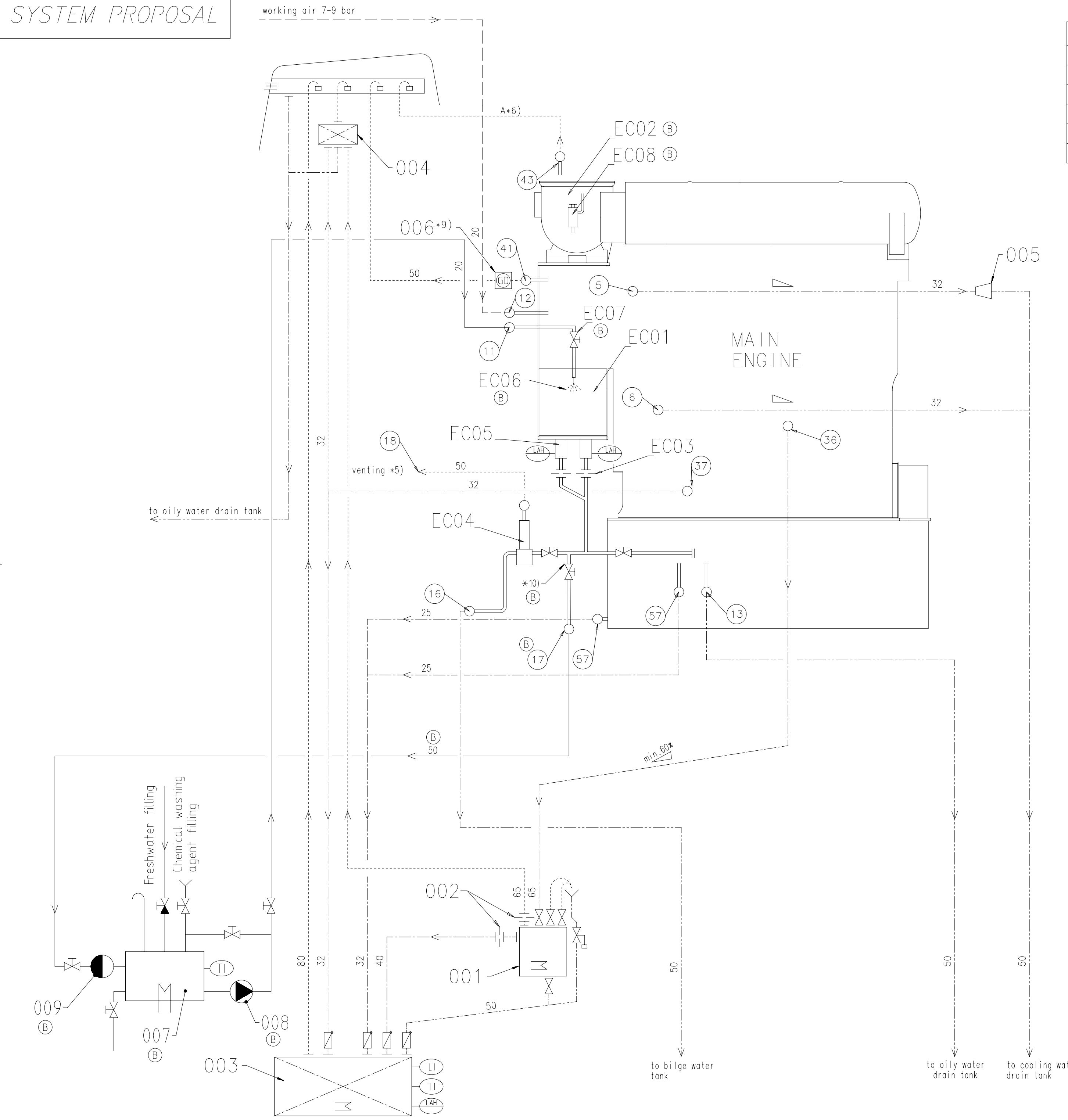
SURFACE PROTECTION SEE GROUP 0344

TOLERANCING PRINCIPLE ISO8015

GENERAL TOLERANCES ACCORDING TO ISO2768-mK

Main Design	Design Group 9724	Q-Code X X M	Standard WDS
Qty per	A3	Item ID PAAD332486	Drawing Page/s 1/2

SYSTEM PROPOSAL



TC type	A	Inclination
A-165	65	>5°
A-170	65	>5°
A-265	65	>5°
MET48MB	50	>3°
MET53MB	50	>3°
MET60MB	50	>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 approriate tank
	004	Air vent manifold
	005	Transition piece (adaptor) *7)
	006	Gas detector *9)
(B)	007	Chemical washing water circulation tank *11)
(B)	008	Chemical washing water circulation pump
(B)	009	Chemical washing water strainer (0.5-1.0 mm)

	Pos.	ENGINE CONNECTIONS *2)
	5	OUTLET - Cylinder cooling water drain
	6	OUTLET - SAC drain
	11	INLET - SAC washing water
	12	INLET - Air for turbocharger cleaning
	13	OUTLET - Oily water from scavenge air receiver *8)
	16	OUTLET - SAC condensate water *4) *8)
(B)	17	OUTLET - SAC washing water
	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 (SAC)
(B)	EC02	Turbocharger (TC)
	EC03	Throttling disc
	EC04	Venting Unit
	EC05	Condensate drain unit
(B)	EC06	SAC washing spray nozzle
(B)	EC07	SAC washing isolating valve
(B)	EC08	TC dry cleaning device

Remarks

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

(B)
*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. 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) Depends on turbocharger type, see table on the left side.
*7) Installed as required (check with the pipe connection plan).
*8) Drain connection 13 and 16 are with air flow from scavenging air system. It is recommended to connect these drains to different tanks. The tanks must be designed with sufficient sized vents to avoid excessive pressure in the tanks. The drain amount depends on the ambient conditions.
*9) Optional, if requested by the flag state and/or class to achieve IGC compliance.
(B) *10) Switching to the chemical washing water circulation tank must be carried out for SAC cleaning.
(B) *11) Washing water is heated to between 50 and 60 °C by a heating coil.

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

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

Change	B	npa101	mhu019	15.12.2023	ChAA00432	Drawing Updated
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis

[mm] [kg] - NX A1 Item ID PAAD332486 Approved Drawing Pages 2/2

Remarks:

*1) Orifice to be as shown

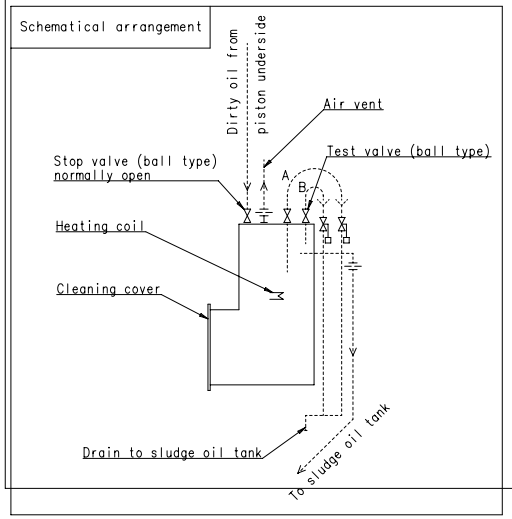
*2) Observe location of pipes with regard to each other

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

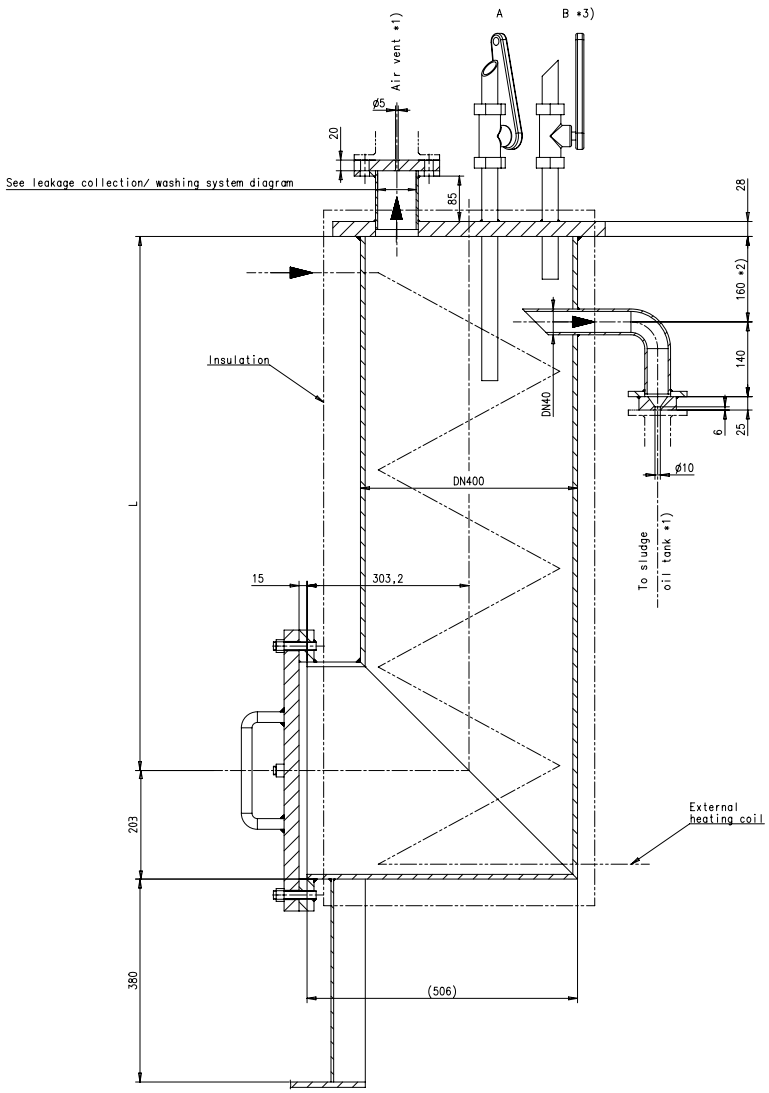
Details:

	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	

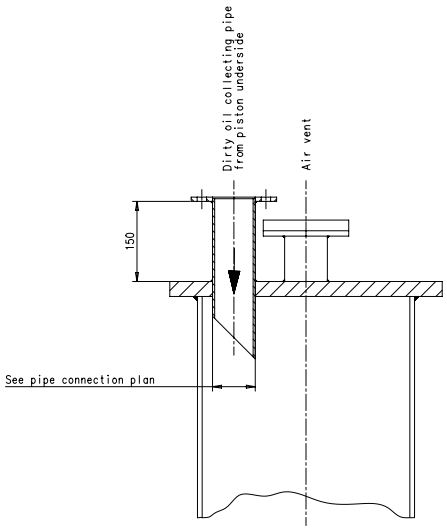
Schematical arrangement

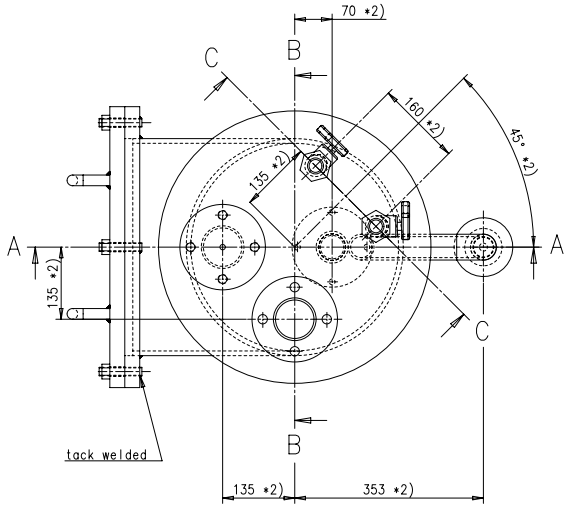


A-A



B-B 90°

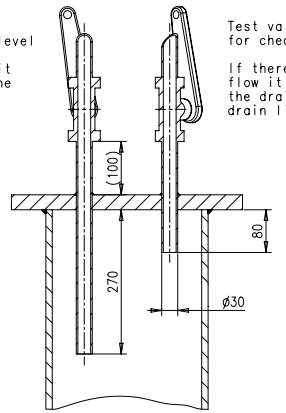




C-C 45°

Ⓓ
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.

Func.	CX40DF RT-flex48T-D	RT-flex50-D RT-flex58T-D	RT-flex58T-D V1 RT-flex58T-D V2	RT-flex58T-E RT-flex68-D	RT-flex68-D_L RT-flex82C	RT-flex82T RTA68-D	CR-HHM-PILOT X35	X35-B [...]

	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
Change History	D	sde101	mhu019	19.012022	CNAAD01373	drawing updated		4	3
	C	sde101	mhu019	10.09.2018	EAAD089439	Legacy information. See corresponding ChangeNotice		4	-
	B	dki021	mhu019	14.07.2017	EAAD087849	Legacy information. See corresponding ChangeNotice		4	-
	-	WinGD	jba029	13.11.2009		-		-	-

Approved

WINGD Winterthur Gas & Diesel

SLUDGE OIL TRAP

Dimension

Scale 1:5	NX	Units [mm] [kg]	Basic Material	Net Weight	0.001
SURFACE PROTECTION SEE GROUP 0344		Main Design	Design Group 9724	Q-Code XXXXX	Standard WDS
TOLERANCING PRINCIPLE ISO8015		Qty per	A1	Item ID 107.425.369.500	Drawing Page/s 1/1
GENERAL TOLERANCES ACCORDING TO ISO2768-mK					

MIDS - Leakage Collection and Washing System (DG9724)

WinGD X40DF

TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2019-09-09	DRAWING SET	First web upload
2021-11-01	PAAD332486	new revision
2023-12-19	PAAD332486B	New revsion

Winterthur Gas & Diesel Ltd.
Winterthur Gas & Diesel AG.
Winterthur Gas & Diesel S.A.

Schützenstrasse 3
PO Box 414, CH-8401
Winterthur, Switzerland

Tel. +41 (0)52 264 8844
Fax +41 (0)52 264 8866

www.wingd.com