

















CUSTOMER	
SHIP NO.	
BUILDER	

Engine Type	Turbocharger Type	Tier 2	Tier 3 (SCR)
5UEC33LSH-C2 5UEC33LSH-C2-SCR	MET33MB×1	×	
	MET33MB×1 with jet assist	×	
	MET33MB/–EGB×1	×	×
	MET33MB/–EGB×1 with jet assist	×	×
	MET37MB×1	×	
	MET37MB×1 with jet assist	×	
	MET37MB/–EGB×1	×	×
	MET37MB/–EGB×1 with jet assist	×	×

DESTINATION		SERIAL NO.	MODEL 5UEC33LSH-C2	
		ORDER NO.	諸管線図集 PIPING DIAGRAM	
		ENGINEERING DEPARTMENT		
	APPROVED 江戸			
	CHECKED 飯岡			
	DRAWN 吉川 渡邊			
		DATE Dec.1. 2021	DRAWING NO.	REV.
Total		SHEETS 23 (with cover)	SHEETS U7-0N015	A

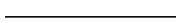

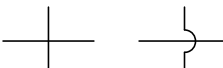

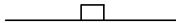
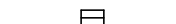
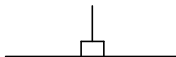

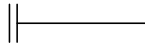
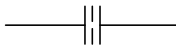






諸管線図名称

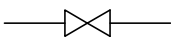
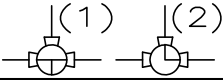

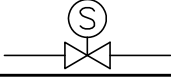

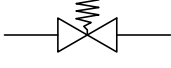
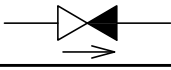
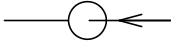
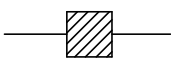
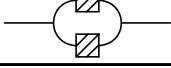

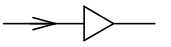

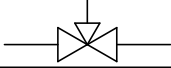
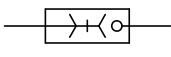
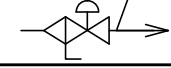
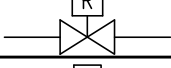
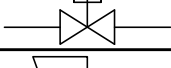
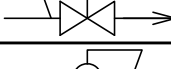
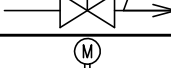
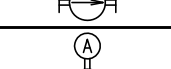

Name of piping diagram

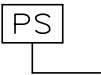
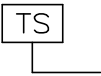
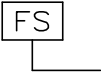
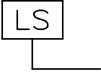
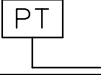
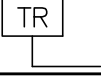
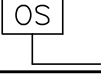

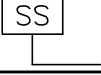
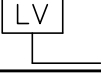

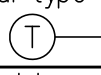
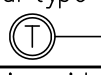
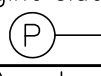
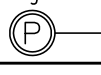

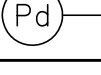

U7-ON015		Starting air 始動空気管線図
" "		Fuel oil 燃料油管線図
" "		Fuel oil (steam or thermal oil) 燃料油加熱管線図 (蒸気または熱媒油)
" "		Lubricating oil (ELEC. GOV.) 潤滑油管線図
" "		Lubricating oil (MECHA. GOV.) 潤滑油管線図
" "		Piston cooling oil ピストン冷却油管線図
" "		Actuator oil for exhaust valve 排気弁駆動油管線図
" "		Cylinder lubricating oil シリンダ注油管線図
" "		Turbocharger lubricating oil 過給機潤滑油管線図
" "		Cylinder cooling water シリンダ冷却水管線図
" "		Cylinder cooling water (with bypass pipe) シリンダ冷却水管線図 (バイパス管付)
" "		Air cooler cooling water 空気冷却器冷却水管線図
" "		Stuffing box drain and piston under drain ピストン棒パッキン箱ドレン管及び シリンダ下部ドレン管線図
" "		Scavenging air trunk drain 掃気トランクドレン管線図
" "		Turbocharger and air cooler washing water, and exhaust gas system 過給機空気冷却器洗浄水管及び排気ガス線図
" "		Fire extinguishing 掃気室火災消火装置管線図


SYMBOLS FOR MAIN ENGINE PIPING DIAGRAM

主 機 関 諸 管 線 図 記 号

SYMBOLS 記 号	NAME	名 称	REMARKS 備 考
	<u>Nominal inner diameter</u>	<u>称呼口径</u>	
	Crossing pipes, connected	連結管	
	Crossing pipes, not connected	不連結管	
	To bilge	ビルジへ	
	Boss	ボス	
	Boss with plug	プラグ付ボス	
	Joint, bossed	ボス継手	
	Joint, flanged	フランジ継手	
	Blind flange	閉止フランジ	
	Orifice	オリフィス	
	Flexible pipe	フレキシブルパイプ	
	Hopper	ホッ パー	
	Hopper with cover	ふた付ホッ パー	
	Air vent pipe	空気抜管	
	Siphon	サイフォン	
	Air chamber	エアチャンバー	

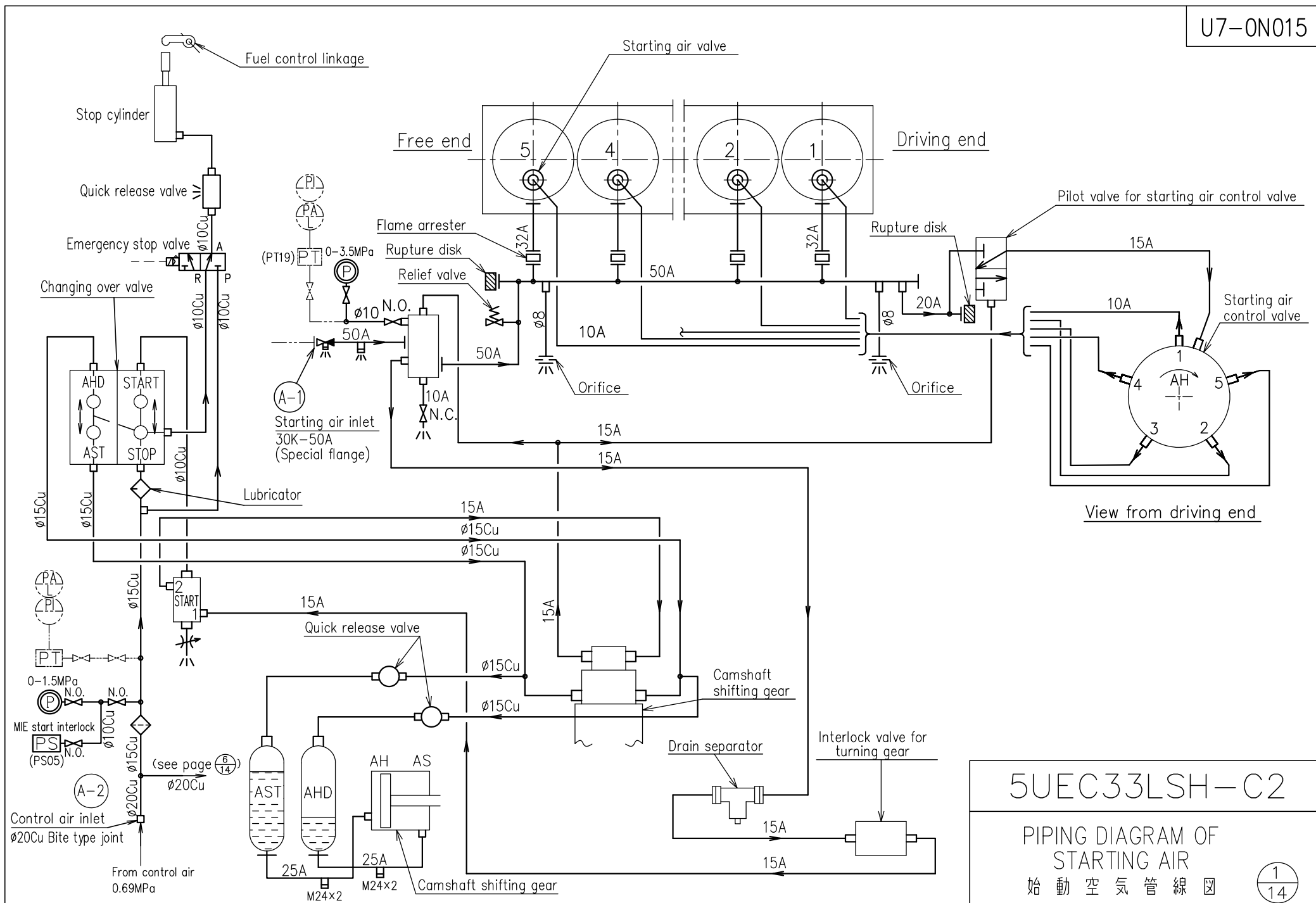
SYMBOLS 記号	NAME	名 称	REMARKS 備 考
	Stop valve	止め弁	
	Three-way cock	三方コック	(1) T形 (T-PORT) (2) L形 (L-PORT)
	Butterfly valve	バタフライ弁	
	Solenoid operated valve	電磁弁	
	Gate valve	仕切弁	
	Safety valve	安全弁	
	Check valve	逆止弁	
	Sight glass	サイトグラス	
	Simplex strainer	単式コシ	
	Duplex strainer	複式コシ	
	Y type strainer	Y形ストレーナ	
	Reducer	レジュース	
	Hose coupling	ホース継手	
	Regulating valve	自動調整弁	
	Self-seal joint	セルフシール継手	
	Filter and regulator	フィルタ及び調圧弁	
	Remote control valve	遠隔制御弁	
	Control valve	制御弁	
	Back pressure valve	背圧弁	
	Regulator	レギュレータ	
	Electric driven pump	電動ポンプ	
	Air driven pump	エア駆動ポンプ	

SYMBOLS 記 号	NAME	名 称	REMARKS 備 考
	Pressure switch	圧力スイッチ	
	Temperature switch	温度スイッチ	
	Float switch	フロートスイッチ	
	Limit switch	リミットスイッチ	
	Pressure transmitter	圧力トランスミッター	
	Temperature sensor	温度センサ	
	O ₂ concentration sensor	O ₂ 濃度センサ	
	Mist sensor	ミストセンサ	
	Smoke sensor	スモークセンサ	
	Oil or water level sensor	液面レベルセンサ	
	Differential pressure switch	差圧スイッチ	
Bar type 	Thermometer	温度計	
Dial type 			
Engine side 	Pressure gauge	圧力計	
on Gauge board 			
	U Tube manometer	U字管式圧力計	
	Differential pressure gauge	差圧計	
	Oil mist detector	オイルミスト警報装置	

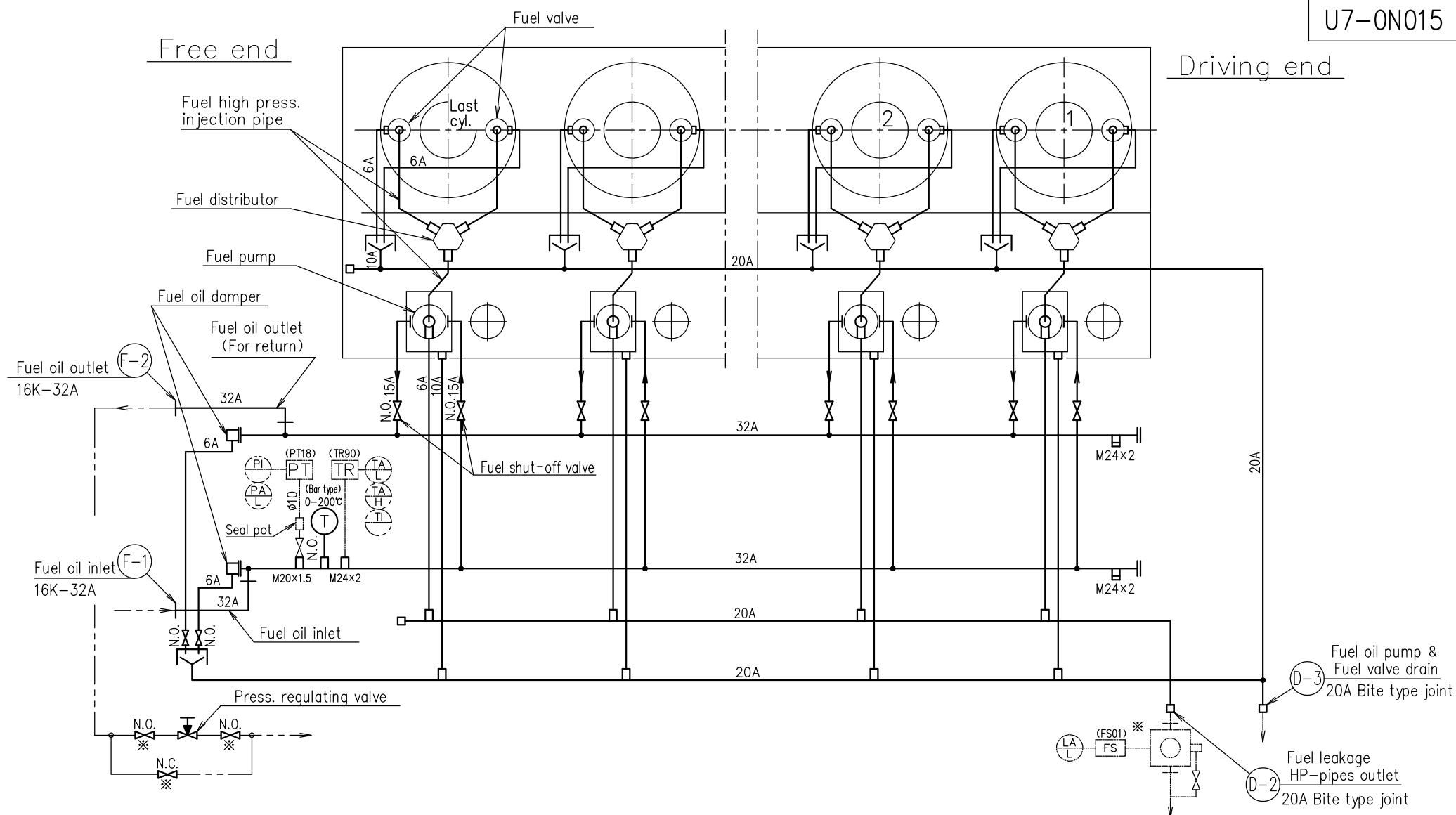
SYMBOLS 記 号	NAME	名 称	REMARKS 備 考
	Remotely indicated	遠隔指示計	
PI	Pressure indication	圧力指示	
PA	Pressure alarm	圧力警報	
DPA	Differential pressure alarm	差圧警報	
PSD	Pressure slow down	圧力減速	
PE	Pressure emergency stop	圧力危急停止	
TI	Temperature indication	温度指示	
TA	Temperature alarm	温度警報	
TSD	Temperature slow down	温度減速	
TE	Temperature emergency stop	温度危急停止	
LI	Level indication	液面指示	
LA	Oil or water level alarm	液面警報	
FI	Flow indication	流れ指示	
FA	Flow alarm	流れ警報	
FIA	Flow, indication, alarm	流れ指示、警報	
FSD	Flow slow down	流れ減速	
OI	O ₂ concentration indication	O ₂ 濃度指示	
OA	O ₂ concentration alarm	O ₂ 濃度警報	
MSA	Mist alarm	ミスト警報	
ASD	Auto slow down	自動減速	

[illegible]

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U7-0N015



※ 造船所殿所掌
SUPPLIED BY SHIPYARD

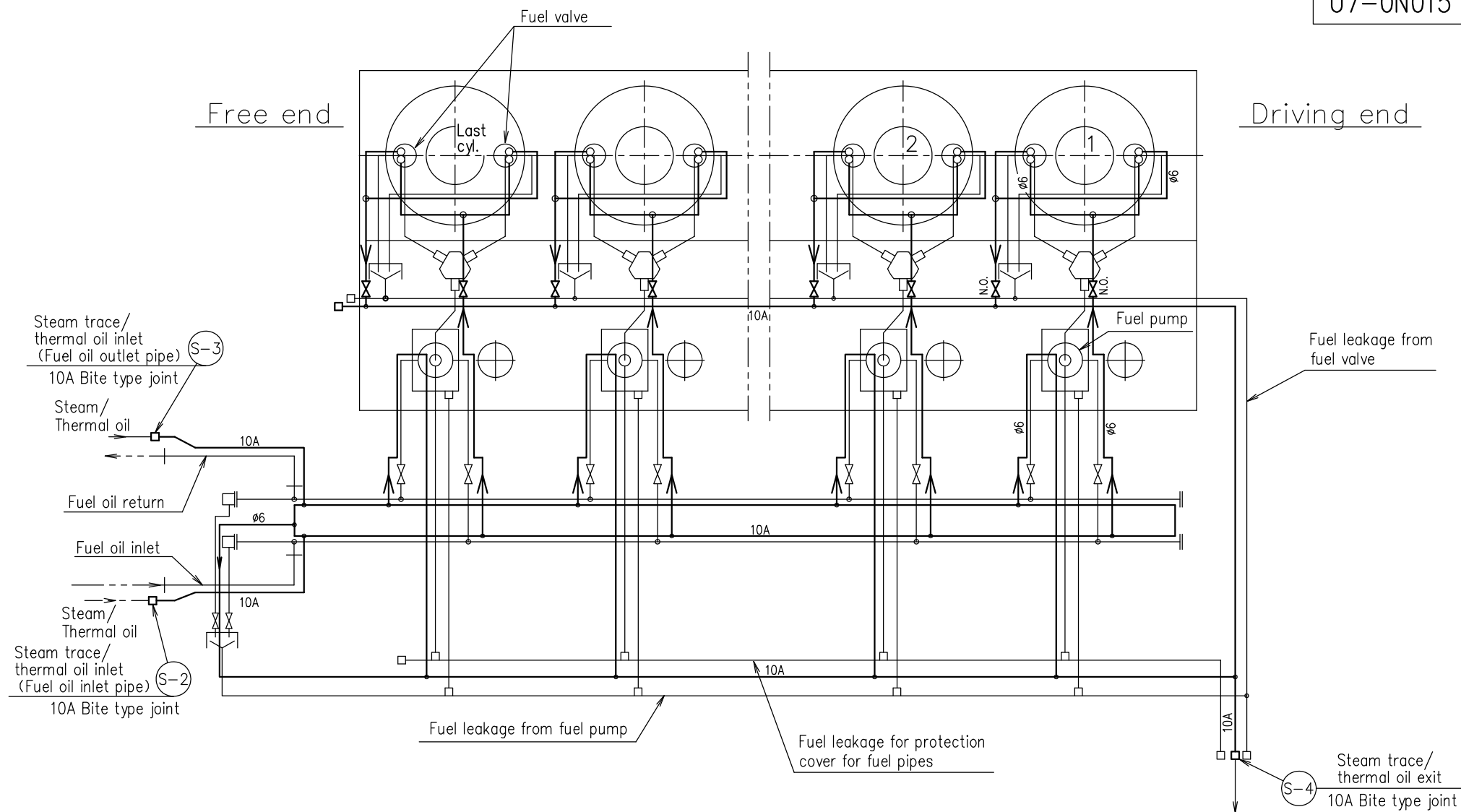
5UEC33LSH-C2

PIPING DIAGRAM OF
FUEL OIL

燃料油管線図

2
14

U7-0N015

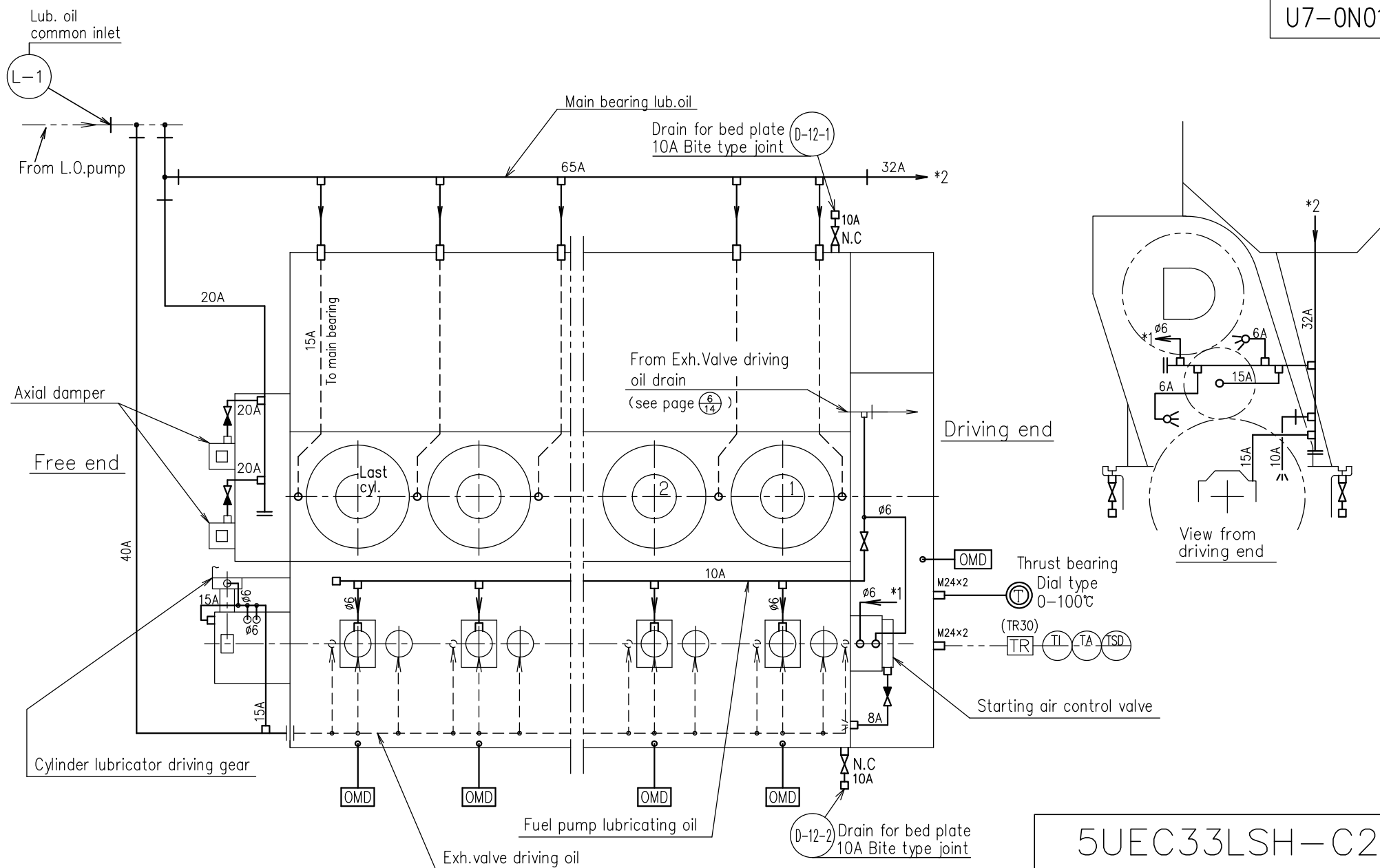


5UEC33LSH-C2

PIPING DIAGRAM OF
FUEL OIL (STEAM or THERMAL OIL)

燃料油加熱熱媒油管線図

3
14

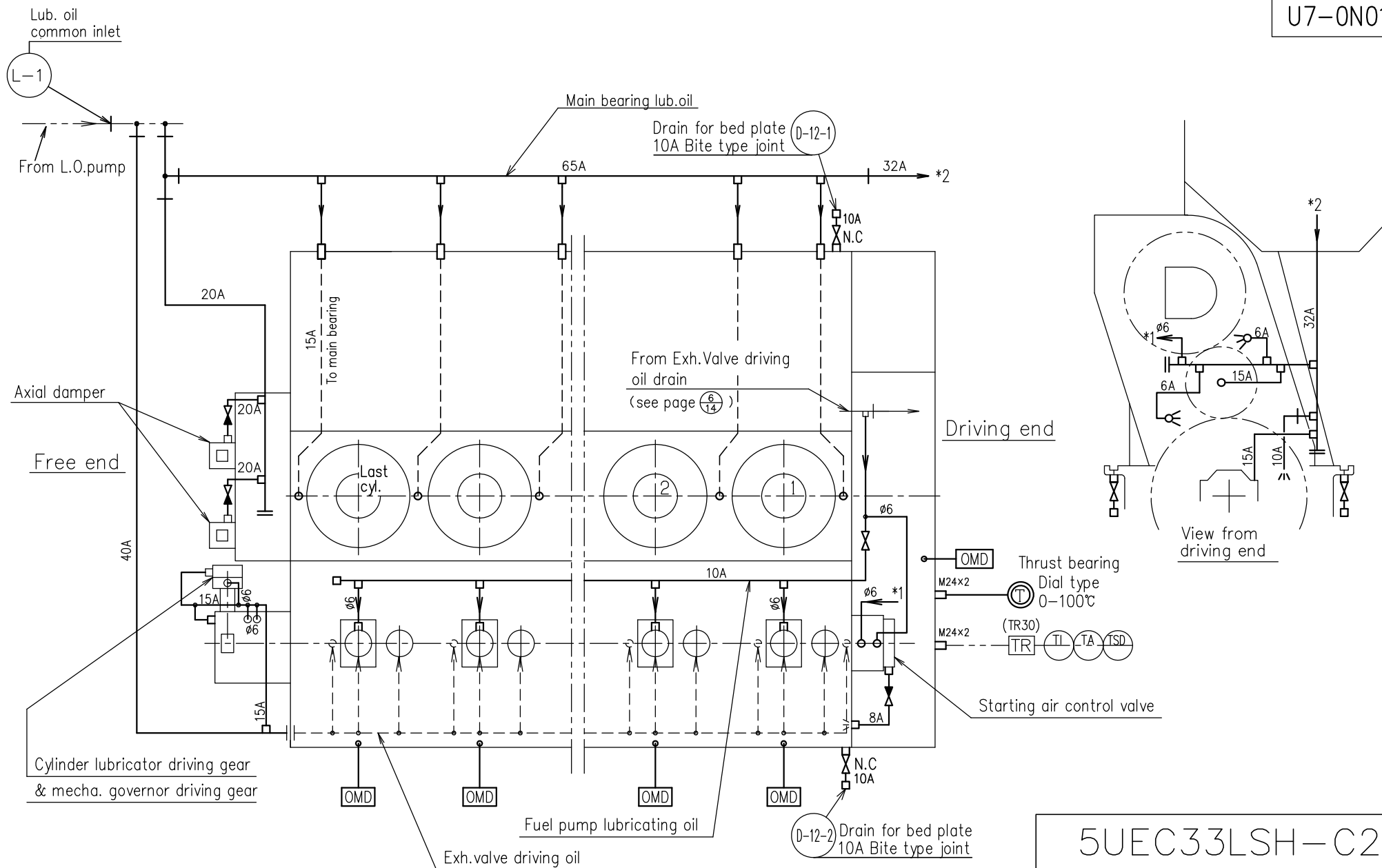


5UEC33LSH-C2

PIPING DIAGRAM OF
LUBRICATING OIL (ELEC. GOV.)

潤滑油管線図

U7-0N015

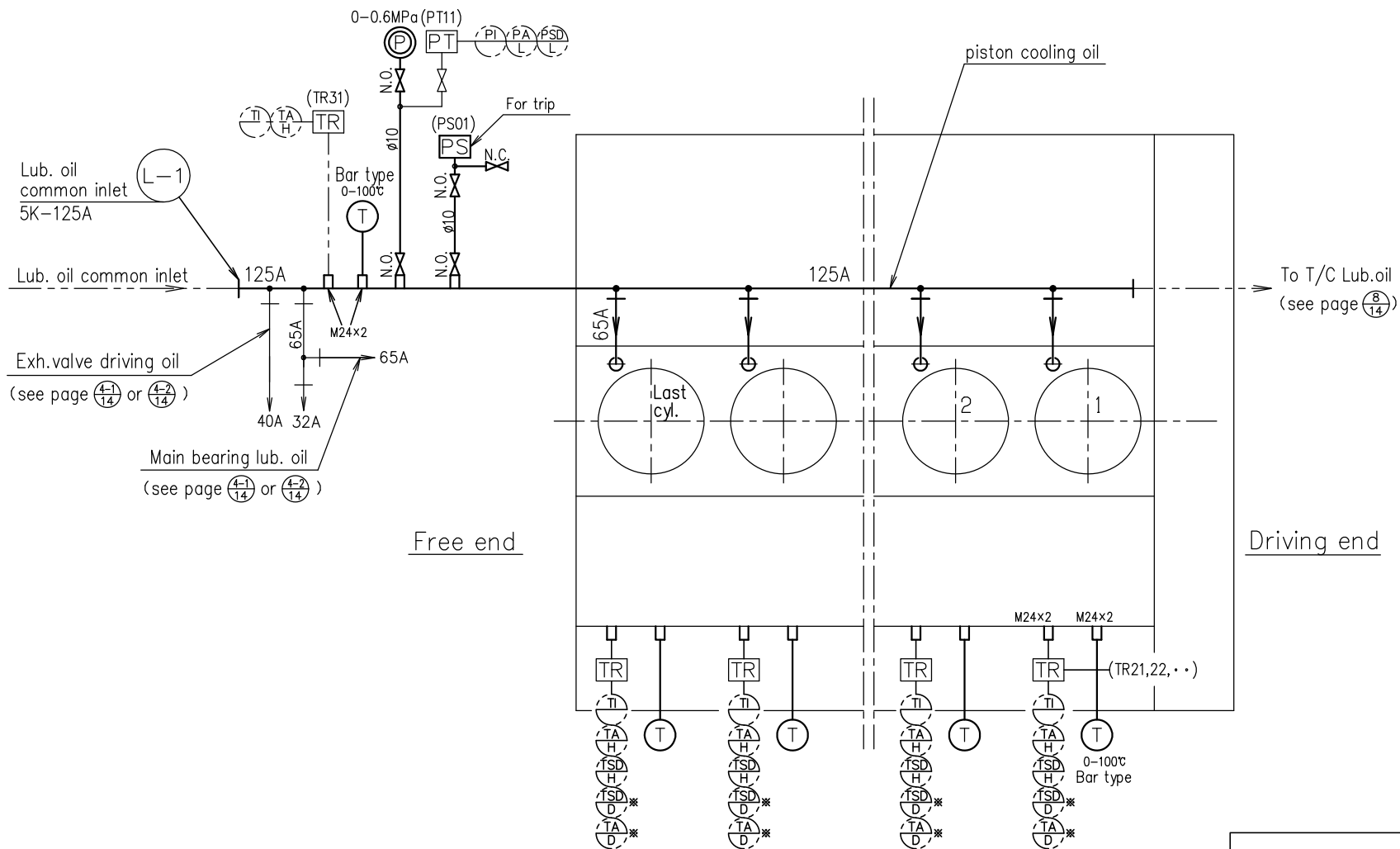


5UEC33LSH-C2

PIPING DIAGRAM OF
LUBRICATING OIL (MECHA. GOV.)

潤滑油管線図

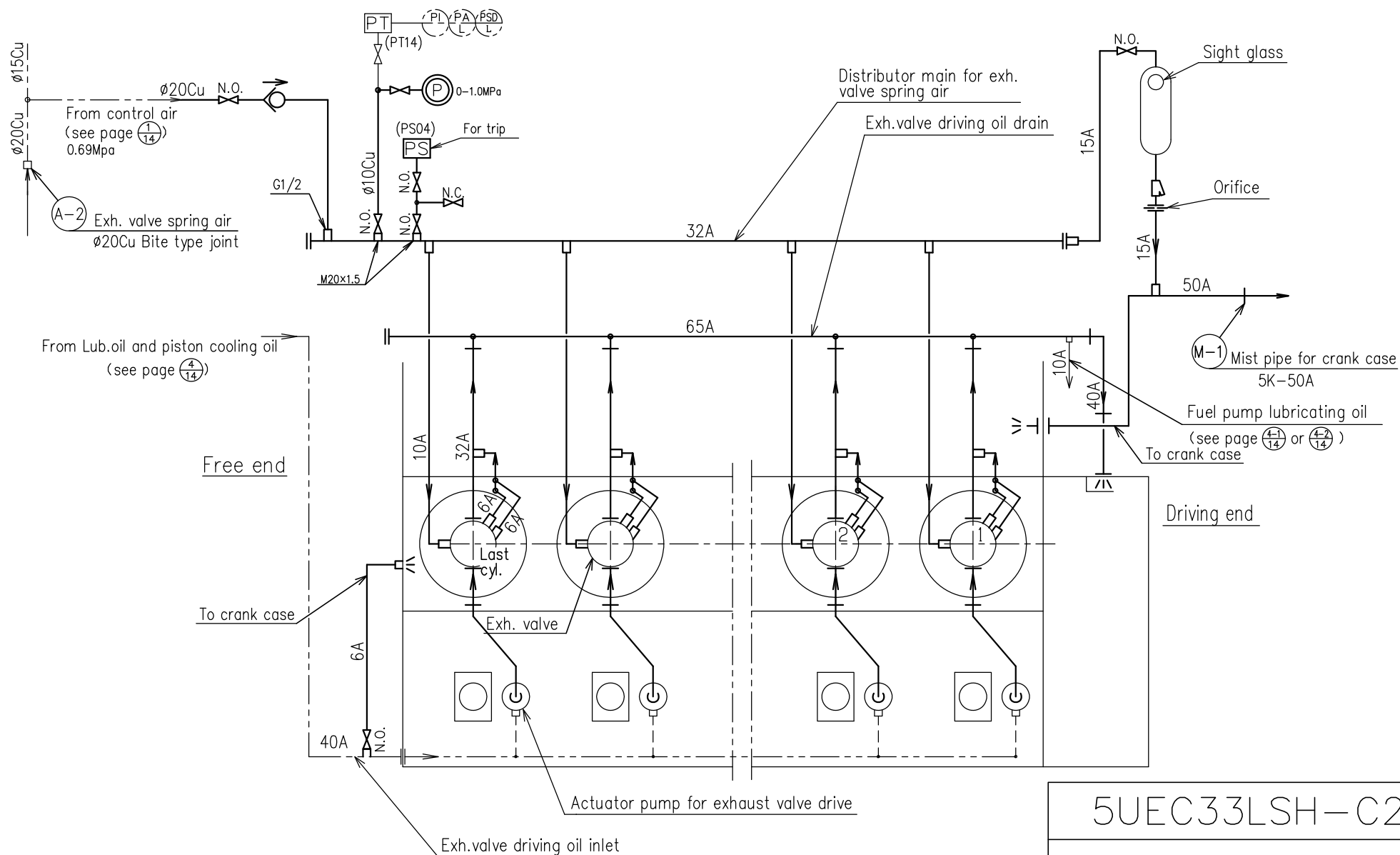
4-2
14



※As alternative to piston coolant flow sensor of each piston.

5UEC33LSH-C2

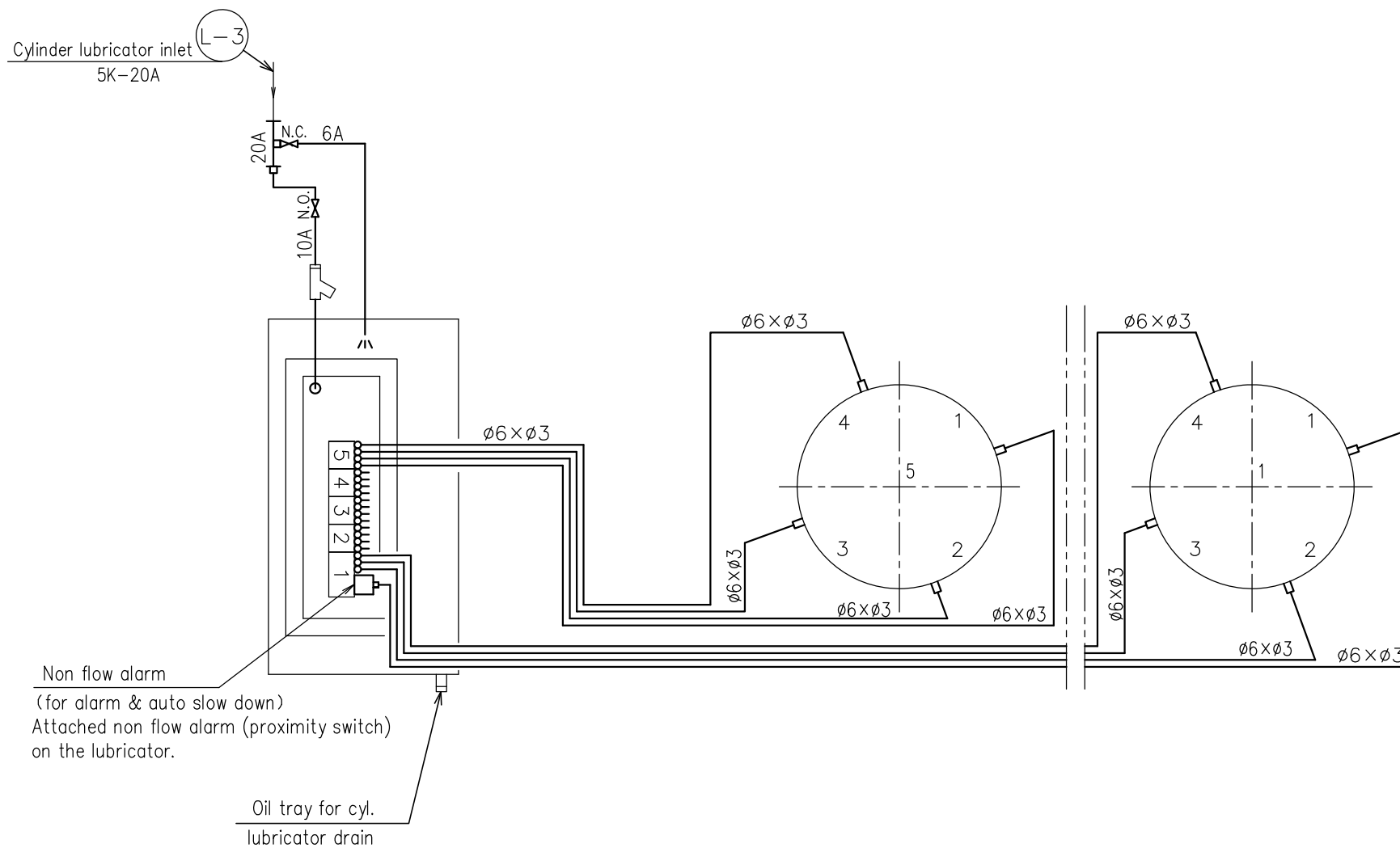
PIPING DIAGRAM OF
PISTON COOLING OIL
ピストン冷却油管線図



5UEC33LSH-C2

PIPING DIAGRAM OF
ACTUATOR OIL FOR EXH. VALVE

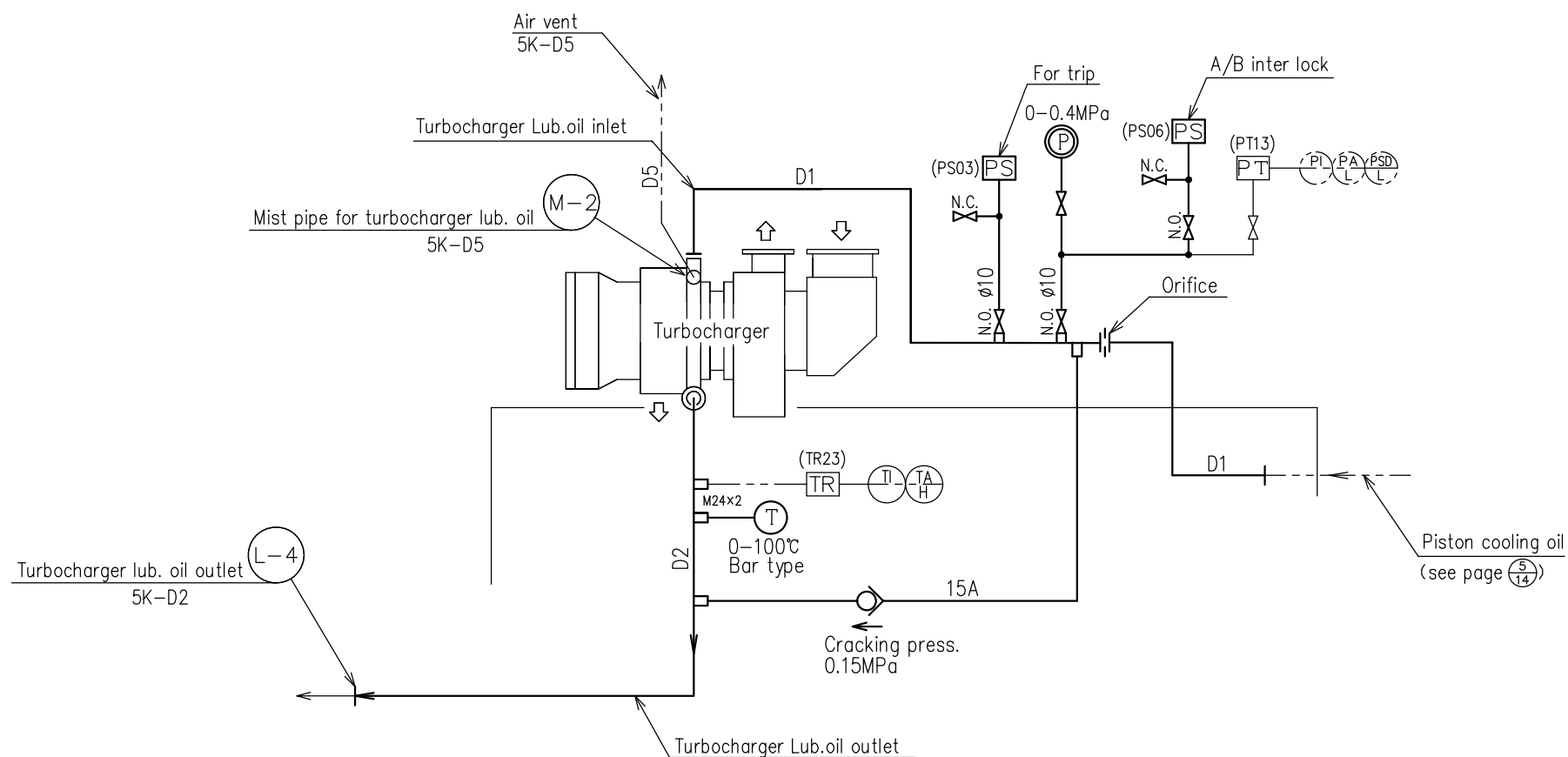
排気弁駆動油管線図



5UEC33LSH-C2

PIPING DIAGRAM OF
CYLINDER LUBRICATING OIL

シリンダ注油管線図



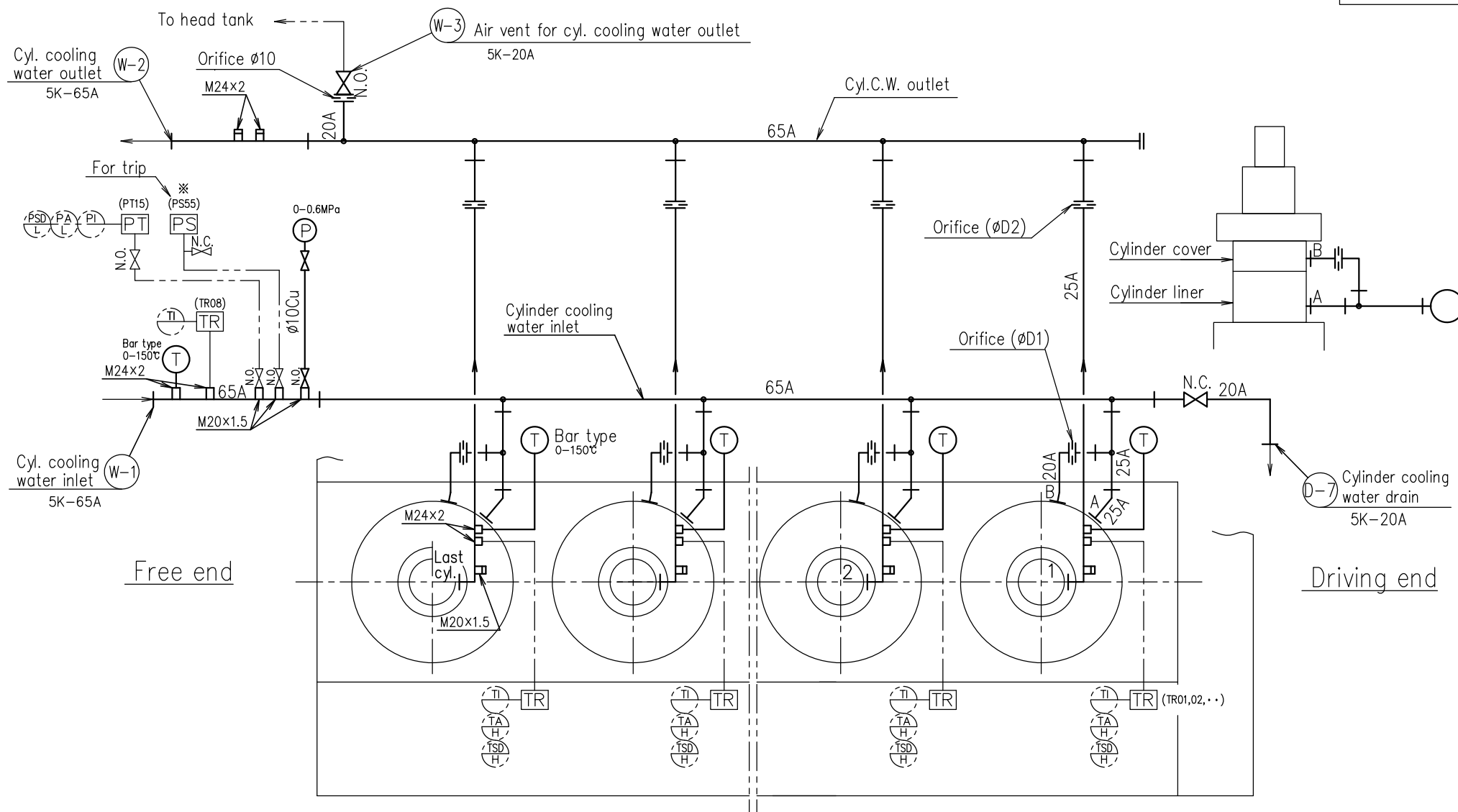
Turbocharger type	Pipe sizes		
	D1	D2	D5
MET33MB/-EGB×1	20A	40A	40A
MET37MB/-EGB×1	25A	50A	50A

5UEC33LSH-C2

PIPING DIAGRAM OF
TURBOCHARGER LUB. OIL

過給機潤滑油管線図

U7-0N015



※: To be applied according to classification rule.

Orifice	ØD1	ØD2
(mm)		

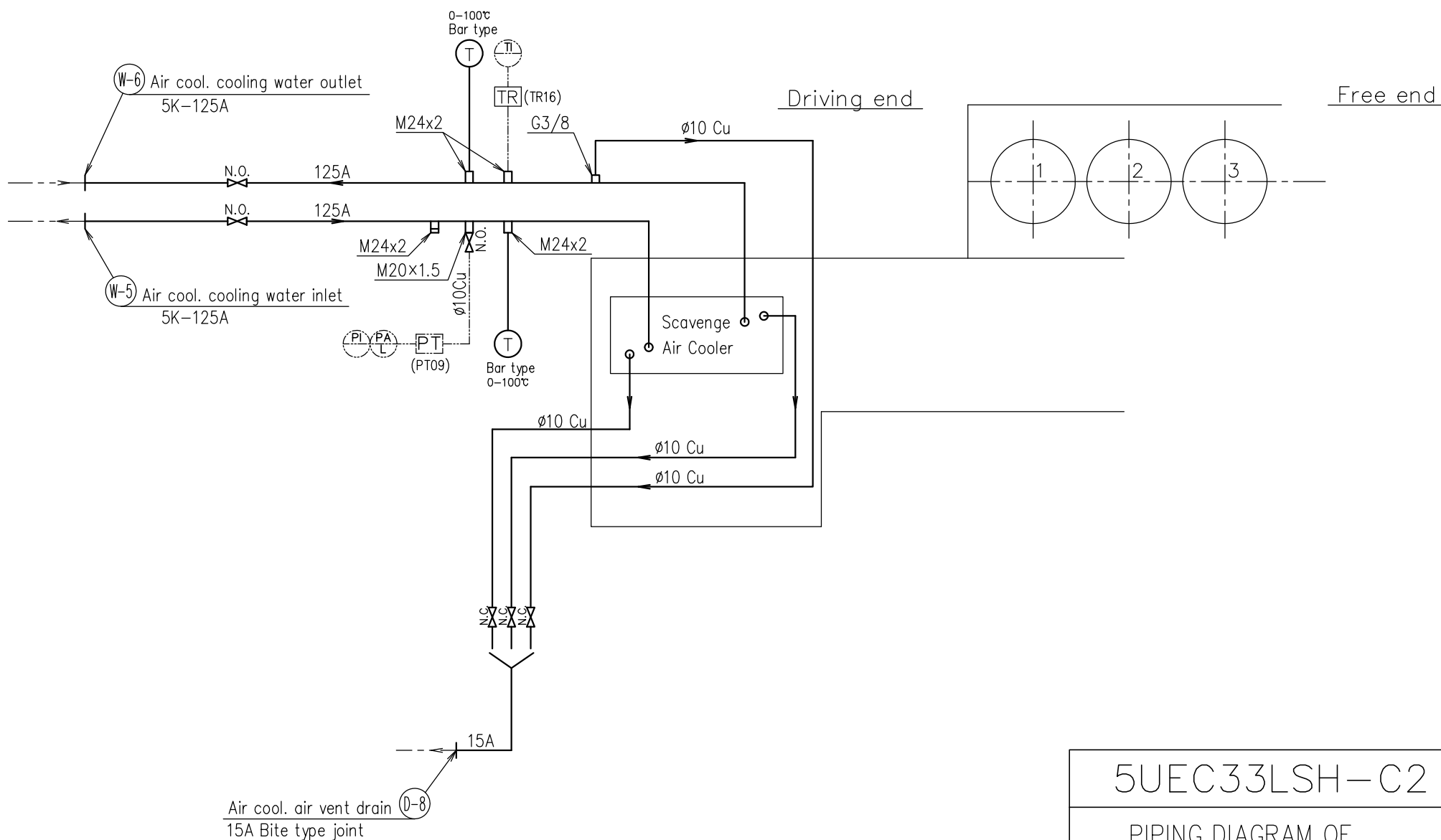
5UEC33LSH-C2

PIPING DIAGRAM OF
CYLINDER COOLING WATER

シリンダ冷却水管線図

9-2
14

U7-0N015



5UEC33LSH-C2

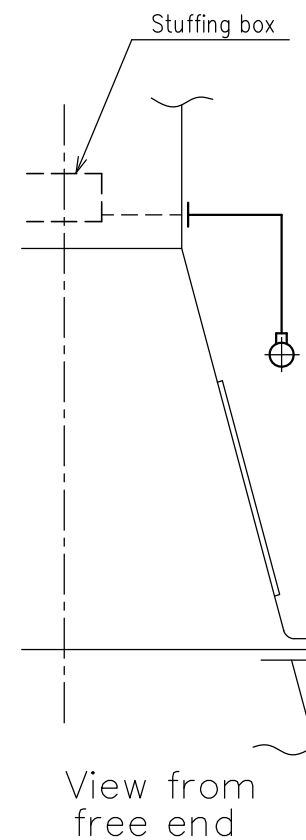
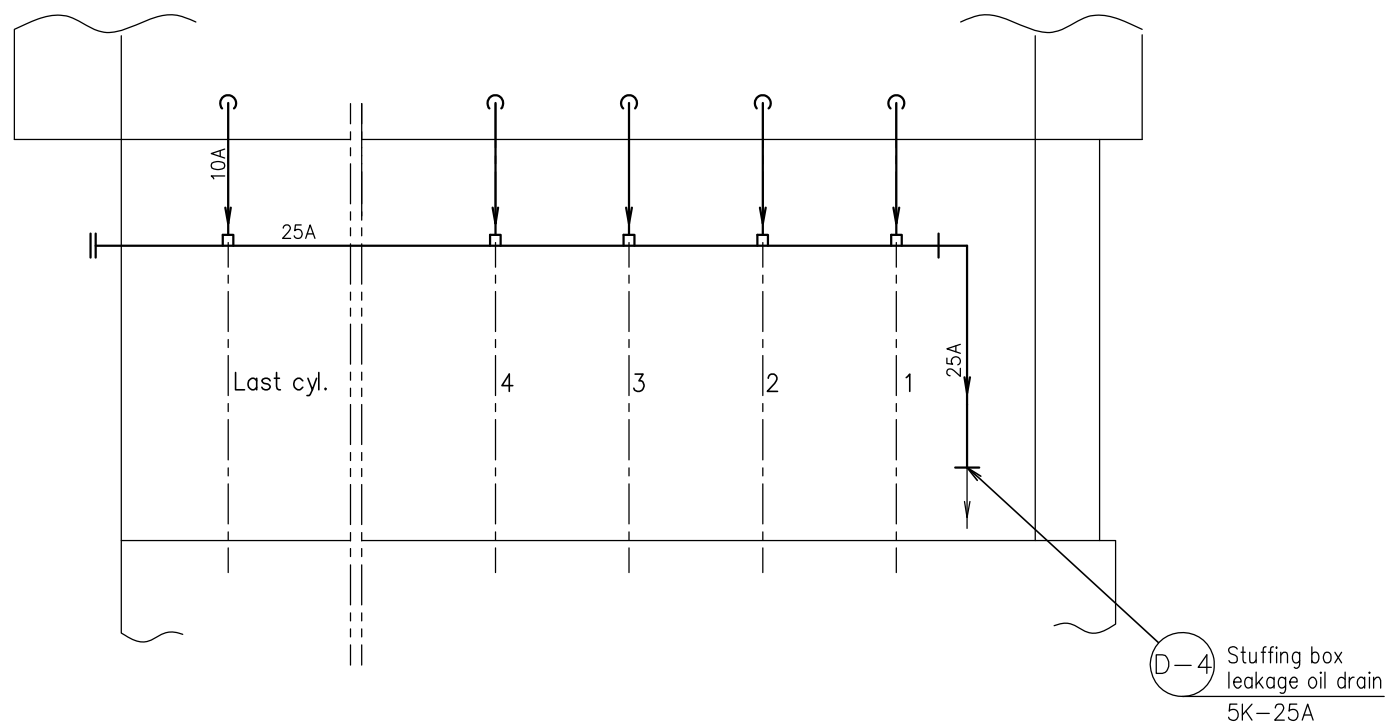
PIPING DIAGRAM OF
AIR COOLER COOLING WATER

空気冷却器冷却水管線図

10
14

Free end

Driving end

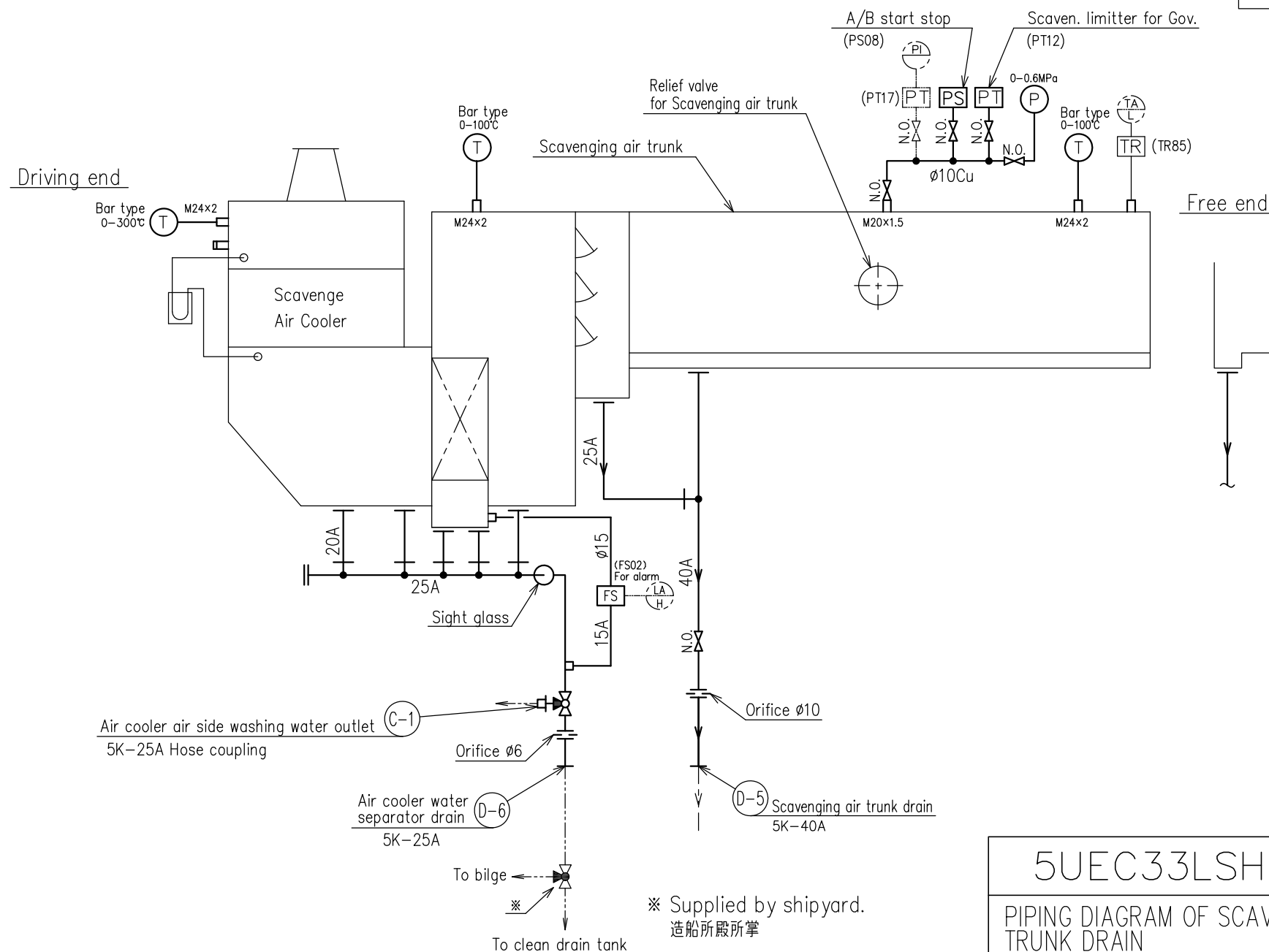


5UEC33LSH-C2

PIPING DIAGRAM OF STUFFING BOX

ピストン棒パッキン箱ドレン管

U7-0N015



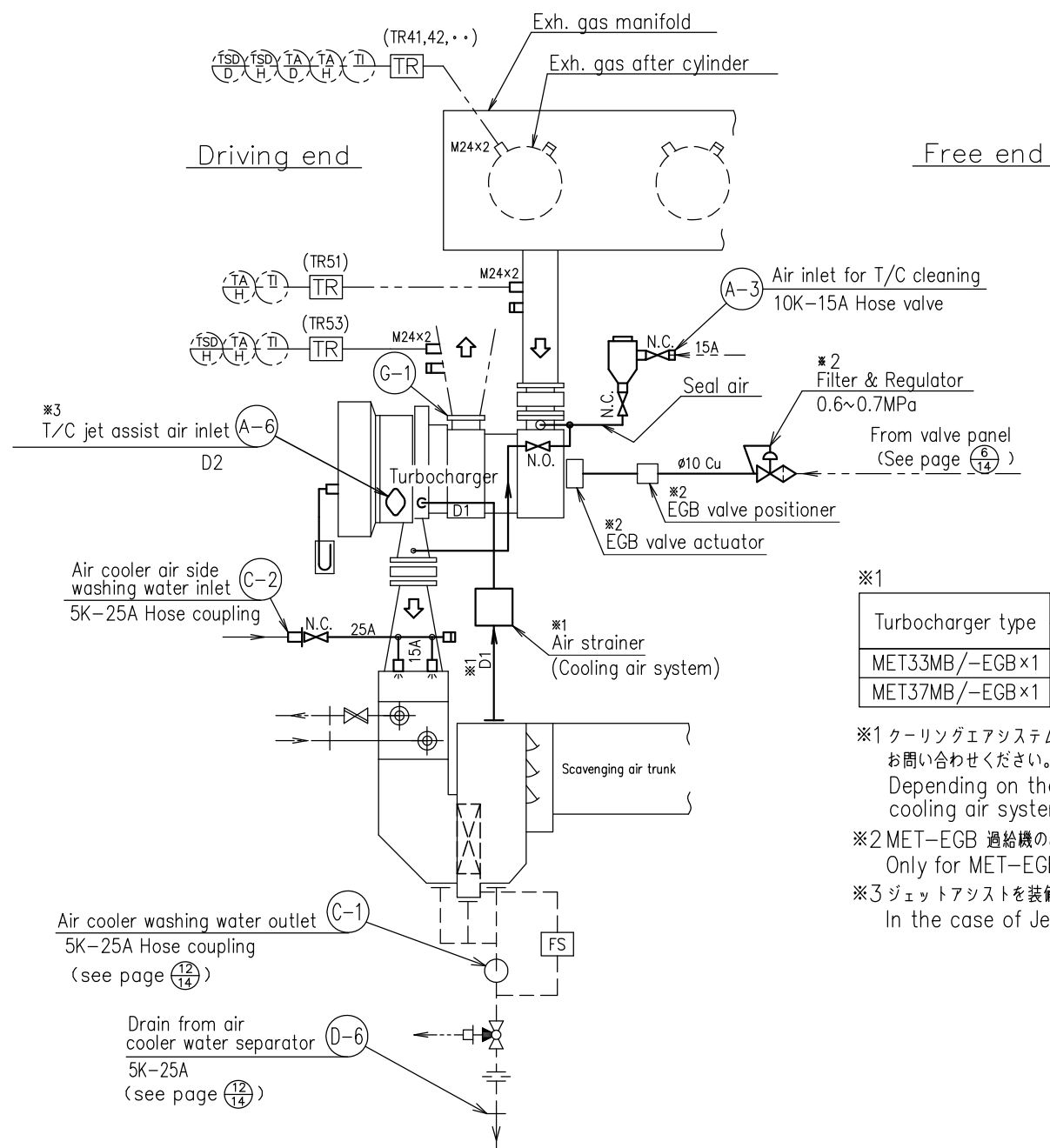
※ Supplied by shipyard.
造船所蔵所掌

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PIPING DIAGRAM OF SCAVENGING AIR TRUNK DRAIN

掃気トランクドレン管線図

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※1

Turbocharger type	Pipe size
	D1
MET33MB/-EGB×1	32A
MET37MB/-EGB×1	

※3

Turbocharger type	Pipe size
	D2
MET33MB/-EGB×1 with jet assist	32A
MET37MB/-EGB×1 with jet assist	

※1 クーリングエアシステムは、機関の仕様により必要となる場合があります。
お問い合わせください。

Depending on the engine specification,
cooling air system may be required.

※2 MET-EGB 過給機のみ

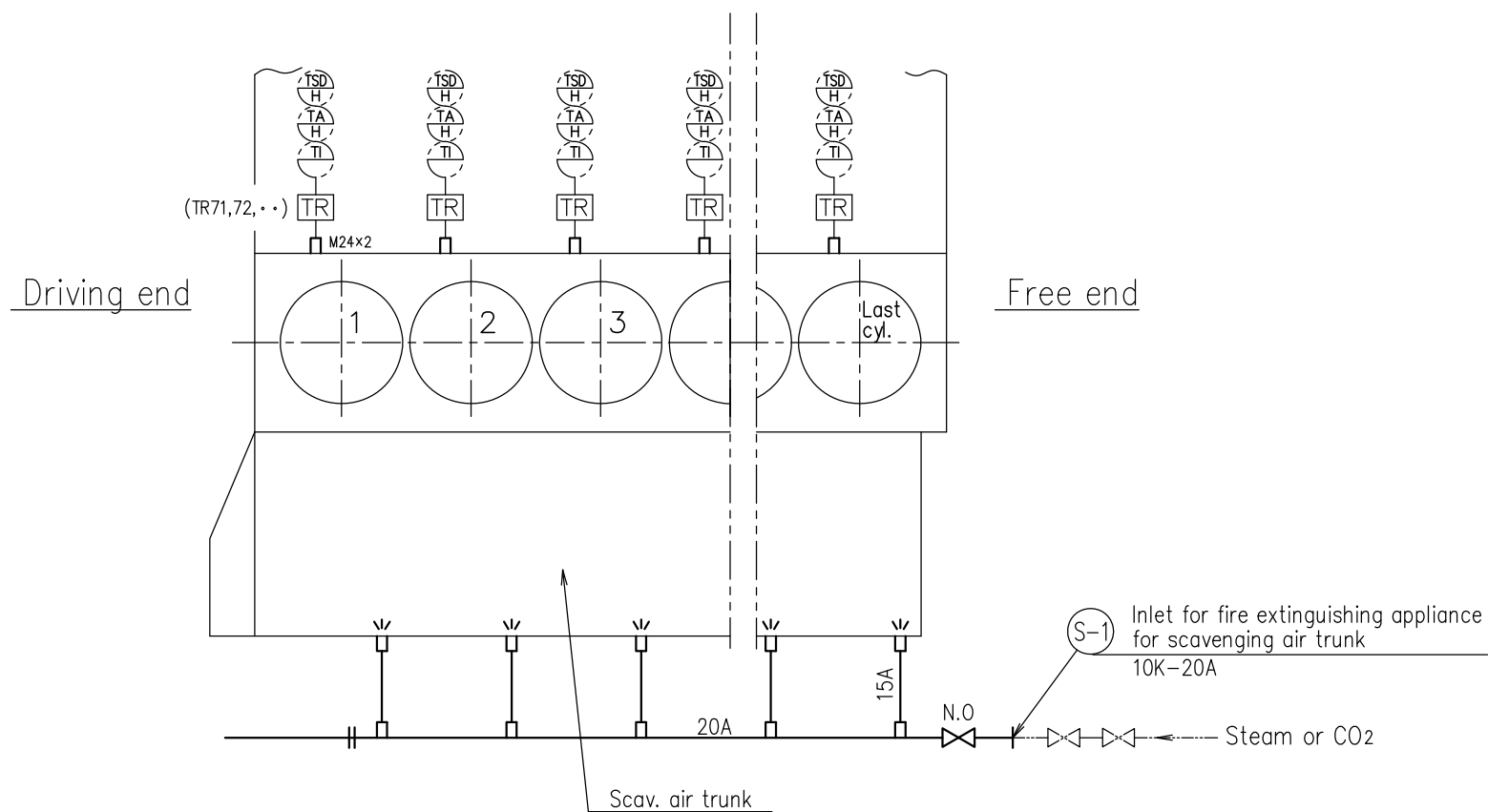
Only for MET-EGB type turbocharger.

※3 ジェットアシストを装備する場合。

In the case of Jet Assist required.

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PIPING DIAGRAM OF TURBOCHARGER
AND AIR COOLER WASHING
WATER, AND EXHAUST GAS SYSTEM
過給機空気冷却器洗浄水管及び排気ガス線図

Steam or CO₂

5UEC33LSH-C2

PIPING DIAGRAM OF
FIRE EXTINGUISHING
掃気室火災消火装置管線図

[illegible]