
TOPS Report

Total Optimised Production Service



April 2016

DISA
shaping industry

Inspection Information

Customer	Customer name	Foundry
	Country	Denmark
	Customer No.	102569
	Customer contact	James Anderson
	Contact e-mail	jaan@foundry.dk
Machine	Machine type	DISA 231-B
	Machine ID	150189
	Voltage/frequency	380VAC/50Hz
	Delivery date	2012-03-16
	Counter DMM	3.256.548
	Counter CSE	1.254.853
Inspection	Case No.	5215
	First inspection day	2016-04-05
	Technician initials	SEPN
	Service report No.	16-254
Equipment	DISA Moulding Machine / Core Setter / Automatic Moulding Conveyer / Synchronies Belt Conveyer / Automatic Pattern Change /	
DISA contact	Support/troubleshooting Email: support.moulding@noricangroup.com Spare parts Email: sparepartdk@noricangroup.com DISA Industries A/S Højager 8, 2630 Taastrup Denmark Tel: +45 44 50 50 50	

Inspection Overview

Allover inspection score has been calculated to 7,5/10. All inspection points are categorized to one of 5 categories:

OK – Inspection point is OK and need no action (Action OK – action has been taken during visit).

<6 month – Action needs to be taken within 6 months.

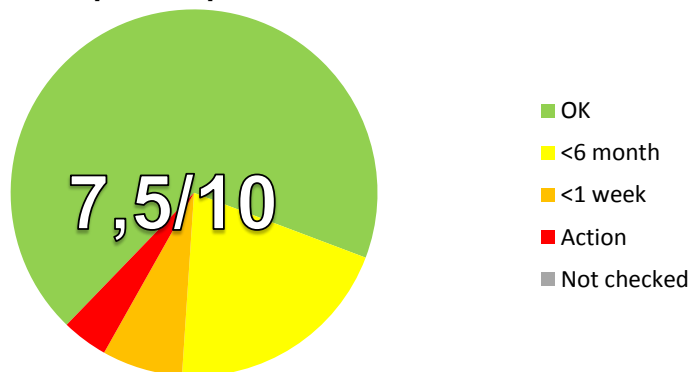
<1 week – Action needs to be taken within 1 week.

Action – Action needs to be taken now.

Not checked – Is has not been possible to check the point.

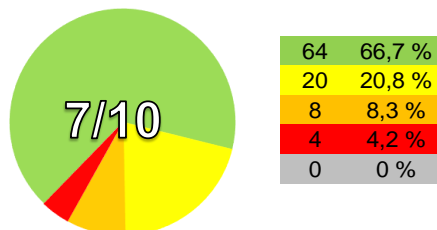
197 point(s) has been inspected and categorized as follow:

All inspection points

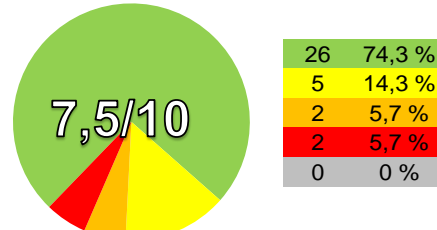


Status	Points	%	Score Scale
OK	135	68,5 %	+2
<6 month	40	20,3 %	-1
<1 week	14	7,1 %	-2
Action	8	4,1 %	-4
Not checked	0	0 %	0

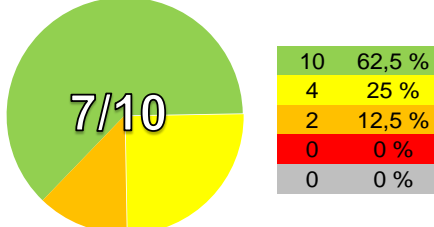
DMM - DISA Moulding Machine



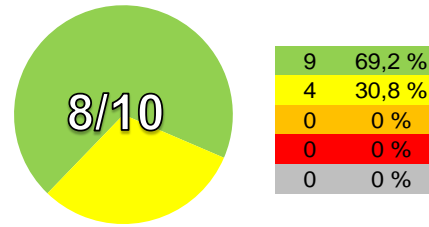
CSE - Core Setter



AMC - Automatic Moulding Convayer



SBC - Synchronies Belt Convayer

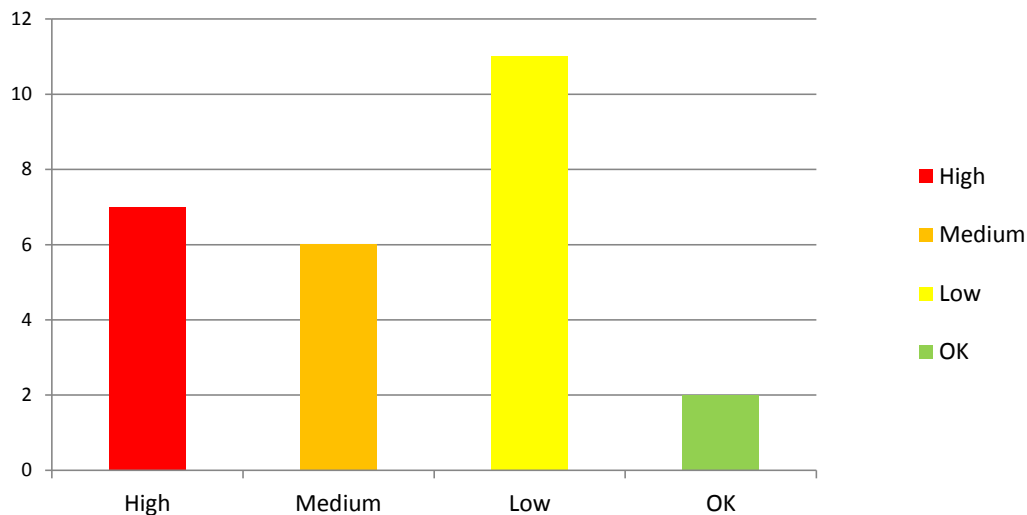


Spare Part Overview

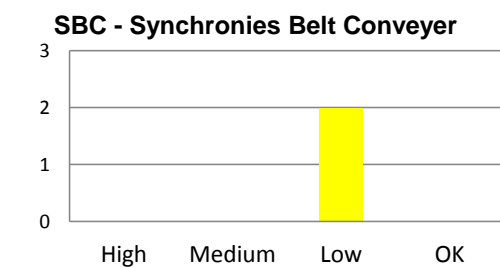
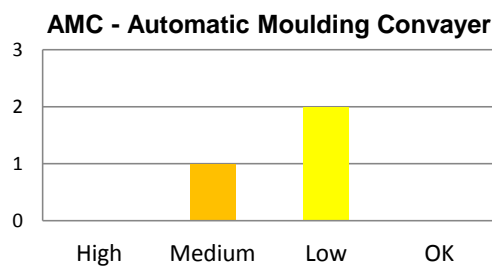
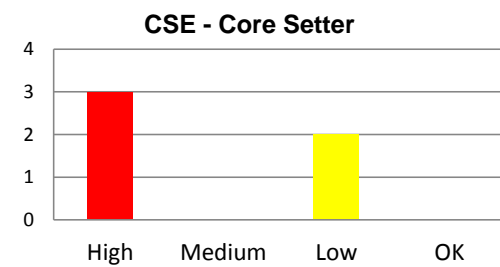
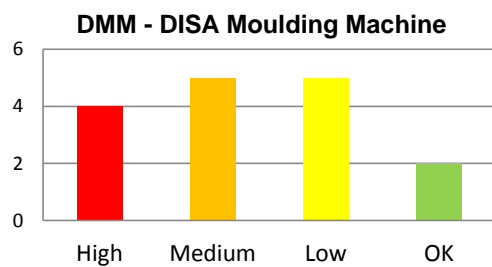
All recommended spare parts are categorized to one of 4 categories:

- High – Part need to be replaced now.
- Medium – Part need to be replaced within 1 week.
- Low – Part need to be replaced within 6 months.
- OK – Part is OK but recommended for warehouse.

26 spare part(s) has been recommended. Piroritys are categorized as follow:



Status	Quantity	%
High	7	26,9 %
Medium	6	23,1 %
Low	11	42,3 %
OK	2	7,7 %



Values Overview

Inspection point category percent, spare part priority percent and overall score has been calculated as follow:

$$Category \% = \frac{Category}{OK + < 6M + < 1W + N.C} * 100$$

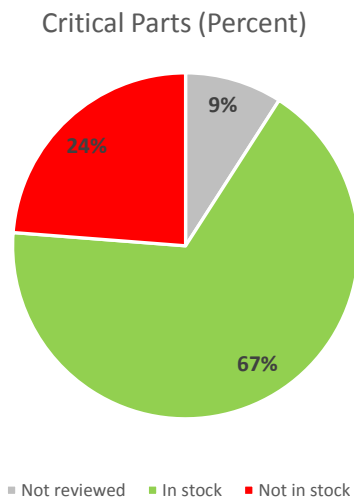
$$Priority\% = \frac{Priority}{OK + High + Medium + Low} * 100$$

$$Score = \frac{10}{(OK \% * 3) + (< 6M \% * 1) + (< 1W \% * 2) + (A \% * 3)} * (OK \% * 3)$$

	Action / High	>1W / Medium	>6M / Low	OK	Not checked	Score
All inspection points						
Inspection	8	14	40	135	0	7,5/10
Spare part	7	6	11	2	-	-
Score cal.	10 / (68,5 %*2) + (20,3 %*1) + (7,1 %*2) + (4,1 %*4)*(68,5 %3)					
DMM - DISA Moulding Machine						
Inspection	4	8	20	64	0	7/10
Spare part	4	5	5	2	-	-
Score cal.	10 / (66,7 %*2) + (20,8 %*1) + (8,3 %*2) + (4,2 %*4)*(66,7 %3)					
CSE - Core Setter						
Inspection	2	2	5	26	0	7,5/10
Spare part	3	0	2	0	-	-
Score cal.	10 / (74,3 %*2) + (14,3 %*1) + (5,7 %*2) + (5,7 %*4)*(74,3 %3)					
AMC - Automatic Moulding Convayer						
Inspection	0	2	4	10	0	7/10
Spare part	0	1	2	0	-	-
Score cal.	10 / (62,5 %*2) + (25 %*1) + (12,5 %*2) + (0 %*4)*(62,5 %3)					
SBC - Synchronies Belt Convayer						
Inspection	0	0	4	9	0	8/10
Spare part	0	0	2	0	-	-
Score cal.	10 / (69,2 %*2) + (30,8 %*1) + (0 %*2) + (0 %*4)*(69,2 %3)					
APC - Automatic Pattern Change						
Inspection	2	2	7	26	0	7,5/10
Spare part	0	0	0	0	-	-
Score cal.	10 / (70,3 %*2) + (18,9 %*1) + (5,4 %*2) + (5,4 %*4)*(70,3 %3)					

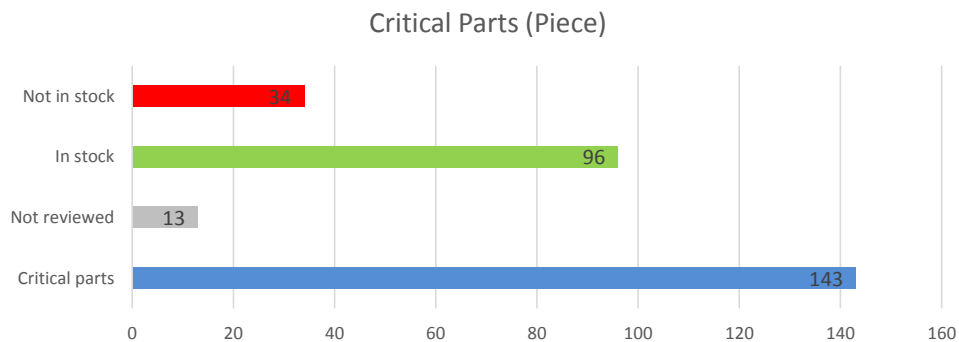
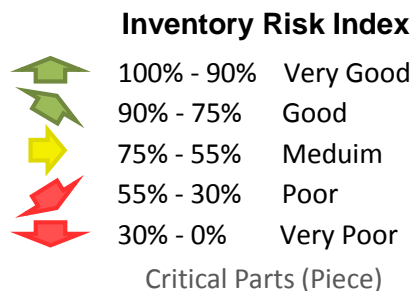
Critical Parts Inventory

The critical spare part list for the machine contains 143 different spare part(s), 130 (91%) of those part(s) has been review according to the inventory.47 part(s) (33%) are not reviewed or not in stock.



67% of the critical spare parts are in stock (9% are not reviewed). The inventory risk level are therefore categorised as 'Meduim'.

It is recommended to prioritize the critical spare parts to be able to handle emergency breakdowns, ensure high performance and low downtime



General Comments

General moulding machine condition

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General moulding line condition

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General safety condition

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Machine settings and parameters

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Optimization proposal

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Inspection Checklist

ID No.	Inspection Name	Manual Ref.	Status	Comment
DMM - DISA Moulding Machine				
DMM.001	Chamber Top Plate, Condition	4.3.1	OK	
DMM.002	Chamber Side Plates, Condition	4.3.1	OK	
DMM.003	Bottom wear Plate, Condition	4.3.3	<1 week	Slightly worn
DMM.004	Spray nozzles, Function	4.3.2	OK	
DMM.005	Guide Rails, Condition	4.3.4	OK	
DMM.006	Mould retainers, Function	4.3.6	OK	
DMM.007	Sand Hopper, Condition	4.4.1	<6 month	Cleaning needed
DMM.008	Sand funnel, Condition	4.4.2	OK	
DMM.009	Dome valve, function	4.4.3	<6 month	Slight damage to dome
DMM.010	Inflateable seal and protective ring, Function	4.4.3.1	<6 month	Not correctly positioned
DMM.011	Exhaust pipe insert, Condition	4.4.3.2	OK	
DMM.012	Exhaust valve P0-V82, Function	4.4.4	OK	
DMM.013	Sand probe, Adjustment	4.4.5	OK	
DMM.014	Exhaust filter (EFI), Condition	4.4.6	Action	Insert is missing
DMM.015	PP Heater Plate, Function	4.5.1	OK	
DMM.016	SP Heater Plate, Function	4.5.1	OK	
DMM.017	PP pattern locks, Function		OK	
DMM.018	SP pattern locks, Function		<6 month	Leaking
DMM.019	PP wear Shoe, Adjustment	4.5.2	<6 month	Adjustment required
DMM.020	Parallism PP/SP, Function	4.5.3	<6 month	Change by next overhaul
DMM.021	SP Guide pins, Condition	4.5.4	<1 week	Adjustment required
DMM.022	Horizontal pos. of SP guide pin, Adjustment	4.5.4.1	OK	
DMM.023	PP guide pins, Adjustment	4.5.5	OK	
DMM.024	PP guide pins, Adjustment	4.5.5.1	OK	
DMM.025	SP bearings, Condition	4.5.6	<1 week	Lubrication device missing
DMM.026	Inflateable Seal SP, function	4.5.7	OK	
DMM.027	Tie Rods, Condition	4.6.1.1	Action	Tie bar worn out
DMM.028	Tie Rod bearings and Scrapers, Condition	4.6.1.1	OK	
DMM.029	SP pull rods and guide rods, Condition	4.6.1.2	<6 month	Dents on tie bar
DMM.030	Lifting rods and cam rollers, Condition	4.6.2	<1 week	Excessive play
DMM.031	Lifting Cams, Condition	4.6.3	<1 week	Adjustment required
DMM.032	Central lubrication system, Condition	4.6.4	<6 month	Too much lubrication
DMM.033	Position Transducer, Adjustment	4.6.5	<6 month	Change by next overhaul
DMM.034	PP and SP magnets, Adjustment	8.6.1	<6 month	Adjustment required
DMM.035	Mould blow off system, function	4.6.6	OK	
DMM.036	PP Protection Tube, Condition		Action	Imidiate exchange required
DMM.037	SP Energy Chain, Condition		OK	
DMM.038	PP Cylinder, Condition		OK	
DMM.039	Chamber bearing, Condition	4.3.5	OK	
DMM.040	SP cylinder, Condition		OK	
DMM.041	SP Cross Member bearings, Condition		OK	
DMM.042	Hydraulic fluid, maintenance, Condition	4.7.2.2	<6 month	Contains too much water
DMM.043	Pressure reducing valve H1-V48, Function	4.7.4	<6 month	Adjustment required
DMM.044	Pressure reducing valve H1-V59, Function	4.7.4	OK	
DMM.045	Pressure reducing valve H1-V64, Function	4.7.4	OK	
DMM.046	Pressure reducing valve H1-V68, Function	4.7.4	OK	
DMM.047	PP Pump H1-P70, Function	4.7.4	<6 month	Adjustment required
DMM.048	SP Pump H1-P71, Function	4.7.4	<6 month	Adjustment required

ID No.	Inspection Name	Manual Ref.	Status	Comment
DMM.049	Servo Pump H1-P72, Function	4.7.5.2	<6 month	Adjustment required
DMM.050	Cooling Pump H1-P73, Function	4.7.4	OK	
DMM.051	DMM Pressure transducers zero, Adjustment	8.5.1	OK	
DMM.052	Oil filter H1-Z55, Condition	4.7.4	Action	Incorrect type/size
DMM.053	Oil filter H1-Z62, Condition	4.7.4	OK	
DMM.054	Cooling water filter H1-Z66, Condition	4.7.4	OK	
DMM.055	Accumulator H1--Z52, Function	4.7.4	OK	
DMM.056	Shut off valve P0-V1, Function	4.8.2.1	OK	
DMM.057	Shut off valve P0-V2, Function	4.8.2.1	OK	
DMM.058	Filter and water trap P0-Z3, Condition	4.8.2.1	<6 month	Filter needs cleaning
DMM.059	Filter and water trap P0-Z4, Condition	4.8.2.1	OK	
DMM.060	Safety valve P0-V19, Function	4.8.2.1	OK	
DMM.061	Prop. valve P0-V90 for mould retainers, Function	4.3.6	OK	
DMM.062	Pressure regulator spray air P1-V8, Function	4.8.2.1	Action OK	Adjusted during visit
DMM.063	Pressure regulator SP seal P1-V31, Function	4.8.2.1	OK	
DMM.064	Regulator for wear shoes P1-V34, Function	4.8.2.1	OK	
DMM.065	Press. regulator spray pump P1-V38, Function	4.8.2.1	<1 week	Adjustment required
DMM.066	Spray system fluid level P1-Z55, Function	4.8.2.1	OK	
DMM.067			OK	
DMM.068	Pressure transducer P0-S83 zero, Adjustment	4.8.2.1	OK	
DMM.069	Control cabinet, Condition	8.1.2	OK	
DMM.070	Panel P1 general, Condition	8.1.3	<6 month	Screen not clearly readable
DMM.071	Displays/VDU readability, Condition	8.1.3	<1 week	Symbols or signs unreadable
DMM.072	Panel P2 general, Condition	8.1.3	OK	
DMM.073	Panel P3 general, Condition	8.1.3	OK	
DMM.074	Proximity C12-B156, SP vertical, Function	8.6.2.1	<1 week	Adjusted during visit
DMM.075	Proximity C12-B154, 45° < SP < 90°, Function	8.6.2.2	<6 month	Adjusted during visit
DMM.076	Proximity C12-B164, SP horizontal, Function	8.6.2.3	OK	
DMM.077	Proximity C12-B158, PP in chamber, Function	8.5.1	OK	
DMM.078	Proximity C12-B166, H0-V83 open, Function	8.6.2.4	<6 month	Adjustment required
DMM.079	Proximity C12-B168, sand valve open, Function	8.6.2.5	OK	
DMM.080	Proximity C12-B170, sand valve closed, Function	8.6.2.6	OK	
DMM.081	Photo cell C12-B172, bottom plate clear, Function	8.6.2.7	OK	
DMM.083	Safety: Main power switch, Function	IU 5.1-1.1	OK	
DMM.084	Safety: Shot system, PN shut-off valve, Function	IU 5.1-1.2	OK	
DMM.085	Safety: Control system, PN shut-off valve, Function	IU 5.1-1.3	OK	
DMM.086	Safety: Operators panel emergency-stop, Function	IU 5.1-2.1	<6 month	
DMM.087	Safety: Left panel emergency-stop, Function	IU 5.1-2.1	OK	
DMM.088	Safety: Right panel emergency-stop, Function	IU 5.1-2.1	OK	
DMM.089	Safety: External emergency-stop (option), Function		OK	

ID No.	Inspection Name	Manual Ref.	Status	Comment
DMM.090	Safety: Left guard gate, Function	IU 5.1-3.3	OK	
DMM.091	Safety: Right guard gate, Function	IU 5.1-3.3	OK	
DMM.092	Safety: Cover plates with locks, Condition	IU 5.1-3.1	OK	
DMM.093	Safety: Fixed guard fences, Condition	IU 5.1-3.2	OK	
DMM.094	Safety: SP locking tool, Condition	IU 5.1	OK	
DMM.095	Safety: Sand valve locking pin, Condition	IU 5.1-1.5	OK	
DMM.096	Safety: Manuals, Condition	IU 5.1	OK	
DMM.097	Safety: Warning signs, Condition	IU 5.1	OK	
CSE - Core Setter				
CSE.001	Guide shafts bearings, Condition	5.1.2.1	OK	
CSE.002	Guide shafts, Condition	5.1.2.2	OK	
CSE.003	Guide pins on carrying frame , Condition	5.1.2.3	<6 month	Adjustment required
CSE.004	Guide pins on base plate, Condition	5.1.2.4	OK	
CSE.005	Base plate, Condition	5.1.2.5	OK	
CSE.006	Internal protection plate, Condition	5.1.2.6	<6 month	Switches missing or bridged
CSE.007	Swing arm roller, Condition	5.1.2.7	OK	
CSE.008	Lubrication of guide shafts, Condition	5.1.2.8	OK	
CSE.009	CSE proportional valve H4-V151, Function	4.7.6.2	OK	
CSE.010	Relief valves H4-V154 and V155, Function	4.7.6.2	OK	
CSE.011	CSE proportional valve H4-V157, Function	4.7.6.2	<1 week	Adjusted during visit
CSE.012	Cylinder H4-A158, Condition	4.7.6.2	OK	
CSE.013	Rotary actuator H4-A170, Condition	4.7.6.2	<6 month	
CSE.014	Rotating joints mechanism (option), Condition	(5.1.3.1)	<1 week	Excessive play
CSE.015	Pressure regulator P3-V301, Function	4.8.2.5	OK	
CSE.016	Pressure regulator P3-V306, Function	4.8.2.5	OK	
CSE.017	Pressure regulator P3-V310, Function	4.8.2.5	Action	Unstable function
CSE.018	Pressure regulator P3-V318 (option), Function	4.8.2.5	OK	
CSE.019	Shut-off valve P3-V312, Function	4.8.2.5	OK	
CSE.020	Filter and water trap P3-Z309, Condition	4.8.2.5	OK	
CSE.021	Vacuum producer P3-P313, Function	4.8.2.5	OK	
CSE.022	Vacuum unit, filter P3-Z314, Condition	4.8.2.5	OK	
CSE.023	Core mask locks P3-A307, Function	4.8.2.5	<6 month	Internal leakage
CSE.024	Panel P4, Condition	8.1.3	OK	
CSE.025	Light curtain, Function	8.7.1	Action	Adjustment not possible
CSE.026	Proximity C10-B84, core mask out, Function	8.7.2.1	OK	
CSE.027	Pos. Transducer C14-B162, Adjustment	8.7.3.1	<6 month	Adjusted during visit
CSE.028	Pos. Transducer C14-B166, Adjustment	8.7.3.2	OK	
CSE.030	Safety: Emergency-stop, Function	IU 5.1-2.1	OK	
CSE.031	Safety: Core setting area, light curtain, Function	IU 5.1-3.4	OK	
CSE.032	Safety: Internal movable guard, Function		OK	
CSE.033	Safety: Guard gates, Function	IU 5.1-3.3	OK	
CSE.034	Safety: Cover plates with locks, Condition	IU 5.1-3.1	OK	

ID No.	Inspection Name	Manual Ref.	Status	Comment
CSE.035	Safety: Fixed guard fences, Condition	IU 5.1-3.2	OK	
CSE.036	Safety: Warning signs, Condition	IU 5.1	OK	
AMC - Automatic Moulding Convayer				
AMC.001	Mould slideway, Condition	6.1.1.1	OK	
AMC.002	Thrust bar system, Condition	6.1.1.2	<6 month	Adjustment required
AMC.003	Drive unit, Condition	6.1.1.3	OK	
AMC.004	AMC proportional valve H3-V100, Function	4.7.5	<6 month	Adjustment required
AMC.005	Relief valves H3-V103 and V104, Function	4.7.5	<6 month	Adjustment required
AMC.006	Test of HY components on AMC, Condition	4.7.5.3	OK	
AMC.007	AMC cylinder brakes, Function	8.8.3	<1 week	Unstable function
AMC.008	HY-pressure transducers on AMC zero, Function	4.7.6.2	OK	
AMC.009	Pos. Transducer C14-B192, Adjustment	8.8.1	OK	
AMC.010	AMC/SBC shut off valve P4-V150, Function	4.8.2.2	<1 week	Do not close properly
AMC.011	Filter with water separator P4-Z151, Condition	4.8.2.2	OK	
AMC.012	Pressure regulator for AMC P4-V170, Function	4.8.2.3	OK	
AMC.013	Pressure transducer P4-S174 zero, Function	4.8.2.3	OK	
AMC.014	Sand Spillage Conveyor (option), Condition	6.3	OK	
AMC.016	Safety: Fixed guard fences, Condition	IU 5.1-3.2	OK	
AMC.017	Safety: Warning signs, Condition	IU 5.1	<6 month	
SBC - Synchronies Belt Conveyor				
SBC.001	SBC, carrying rollers, Condition	6.2.1	OK	
SBC.002	SBC, return rollers, Condition	6.2.1	<6 month	Adjustment required
SBC.003	SBC, lateral guide rollers, Condition	6.2.1	OK	
SBC.004	SBC, return stop, Condition	6.2.1	<6 month	Change by next overhaul
SBC.005	SBC belt, scrapers, Condition	6.2.1	<6 month	Adjusted during visit
SBC.006	SBC Clamping clutch, Condition	6.2.1	OK	
SBC.007	SBC belt, tension, Condition	6.2.2	OK	
SBC.008	SBC belt general, Condition	6.2.2	OK	
SBC.009	Pressure regulator for SBC P4-V152, Function	4.8.2.2	OK	
SBC.010	Pressure transducer P4-S161 zero, Adjustment	4.8.2.2	OK	
SBC.012	Safety: Clamping clutches, PN shut-off valve, Function	IU 5.1-1.4	OK	
SBC.013	Safety: Fixed guard fences, Condition		OK	
SBC.014	Safety: Warning signs, Condition		<6 month	
APC - Automatic Pattern Change				
APC.001	Beam along DMM side cleanliness, Condition	2.2	OK	
APC.002	Beam along DMM side, Condition	2.2	OK	
APC.003	Rail on floor cleanliness, Condition	2.2	<6 month	Cleaning needed
APC.004	Rail on floor general, Condition	2.2	<6 month	Change by next overhaul
APC.005	Locks on pattern fixtures, Function	2.2	<6 month	Excessive play
APC.006	Wagon, level in X-direction, Condition	3.1.1	OK	
APC.007	Wagon, level in Y-direction, Condition	3.1.1	OK	
APC.008	V-rollers on DMM rail, Condition	2.2	OK	
APC.009	Rollers and scrapers on floor rail, Condition	2.2	<6 month	Lubrication needed

ID No.	Inspection Name	Manual Ref.	Status	Comment
APC.010	Play in wagon motor drive, Condition	2.2	<6 month	Excessive play
APC.011	Clearance between fixtures and wagon, Condition	2.2	OK	
APC.012	Changing mechanism lubrication, Condition	2.3	OK	
APC.013	Changing mechanism rails, Condition	2.3	<1 week	Imidiate exchange required
APC.014	Play in motor drives, Condition	2.3	OK	
APC.015	Cables in energy chain, Condition	2.3	<6 month	Change by next overhaul
APC.016	Light curtain, Function	2.4	OK	
APC.017	APC arm levelling, Condition	3.1.3.1	OK	
APC.018	APC arm, Y-position calibration, Adjustment	3.3.3	OK	
APC.019	APC arm, X-position calibration, Adjustment	3.3.1	OK	
APC.020	Wagon, position calibration, Adjustment	3.3.6	<6 month	Adjusted during visit
APC.021	Laser beam angle, Adjustment	3.3.10.2	OK	
APC.022	Laser alignment, Adjustment	3.3.10.3	OK	
APC.023	Proximity switch APC arm lifted, Function	4.6.1	Action OK	Adjusted during visit
APC.024	Proximity switch APC arm lowered, Function	4.6.2	OK	
APC.025	Prox. switch APC gripper unlocked, Function	4.6.3	OK	
APC.026	Prox. switch APC gripper locked, Function	4.6.4	<1 week	Adjustment required
APC.027	Prox. switch DMM sliding door open, Function	4.6.5	Action	Exchange required
APC.028	Prox. switch DMM sliding door closed, Function	4.6.6	Action	Exchange required
APC.029	Prox. switch Wagon end stop, Function	4.6.7	OK	
APC.030	Prox. switch Fixture A in position, Function	4.6.8	OK	
APC.031	Prox. switch Fixture B in position, Function	4.6.9	OK	
APC.032	Photo sensor doors closed on APC side, Function	4.6.10	OK	
APC.034	Safety: Main switch, Function		OK	
APC.035	Safety: Operators panel emergency-stop, Function		OK	
APC.036	Safety: Light curtain, Function		OK	
APC.037	Safety: Fixed guard fences, Condition		OK	
APC.038	Safety: Warning signs, Condition		OK	

Recommended Spare Part List

ID No.	Spare Part Name	Spare Part No	Priority	Quantity	Comment
DMM.014	EFI filter with rotary valve (Exhaust filter (EFI), Condition)	2040B2152	High	1	
DMM.027	Tie rod ø165, hardened (Tie Rods, Condition)	2440F2080	High	1	
DMM.036	Scraper sleeve (PP Protection Tube, Condition)	2440G2310	High	4	
DMM.052	Filter cartridges (Oil filter H1-Z55, Condition)	9107L7510	High	1	
CSE.017	Valve, Pressure regulator 3/4" (Pressure regulator P3-V310, Function)	10082545	High	2	
CSE.025	Light curtain transmitter 750 mm (Light curtain, Function)	10112548	High	1	
CSE.025	Light curtain receiver 750 mm (Light curtain, Function)	9107L9637	High	1	
DMM.003	Chamber bottom plate (Bottom wear Plate, Condition)	10254521	Medium	2	
DMM.021	V-ring V 15 (SP Guide pins, Condition)	9105F0598	Medium	4	
DMM.031	Lifting cam, 130 (Lifting Cams, Condition)	2410F2000	Medium	1	
DMM.031	Shim 0,1 mm (Lifting Cams, Condition)	2440F2350	Medium	10	
DMM.065	Reduction valve ISO 1 (Press. regulator spray pump P1-V38, Function)	9107L7878	Medium	1	
AMC.007	Cross bar cylinder (AMC cylinder brakes, Function)	10082569	Medium	1	
DMM.007	Sand hopper (Sand Hopper, Condition)	10082545	Low	1	
DMM.018	Pattern plate lock, spec., assy. (SP pattern locks, Function)	10049069	Low	2	
DMM.019	V-ring V 90 (PP wear Shoe, Adjustment)	9105F0665	Low	2	
DMM.019	Banjo, R15 ø8-1/8" (PP wear Shoe, Adjustment)	9107L1770	Low	2	
DMM.042	Breather filter (Hydraulic fluid, maintenance, Condition)	9107L7332	Low	1	
CSE.003	Guide pin (Guide pins on carrying frame, Condition)	2040B2154	Low	4	
CSE.027	Measuring sensor 1500 mm (Pos. Transducer C14-B162, Adjustment)	10265485	Low	1	
AMC.004	Proportional valve (AMC proportional valve H3-V100, Function)	9107L5485	Low	2	
AMC.005	Pressure control valve (Relief valves H3-V103 and V104, Function)	2040Y2541	Low	2	
SBC.002	Roller (SBC, return rollers, Condition)	10256854	Low	10	
SBC.005	Scraper (SBC belt, scrapers, Condition)	10082548	Low	2	
DMM.012	Butterfly valve DN=100 (Exhaust valve P0-V82, Function)	9107L8073	OK	1	
DMM.011	Exhaust orifice ø55 (Exhaust pipe insert, Condition)	2440A2750	OK	1	

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Critical Spare Part List

Item name	Part numbers	Quantity	In stock
Parts sand shot system			
Pressure sensor 0-10 Bar 4-20 mA	9117X3618 / 10086160	1	Yes
Solenoid valve 5/2 ISO 3, 24V DC	9107L8123	1	Yes
Level sensor rod 855mm, assy.	10281774	1	Yes
Sensor Level Insert	10149475	1	No
Parts sand valve			
Sealing	2410A2090	1	Yes
Dome valve seal	2440A2241	1	Yes
Proxim switch 24V,PNP,M18X1,0	9116X7585 / 10043469	1	Yes
Parts sand valve cylinder			
Rear eye ball joint	9107L6962	1	Yes
BALL EYE ROD END	9107L6961	1	Yes
Parts sand shot valve			
R_2410A0140 Rep kit shot valve	10135044	1	Yes
Parts exhaust valve			
ButterflyValve DN=100	9107L8073	1	No
Wear pin	2410A2290	1	Yes
Parts lifting mechanism			
Shim 0,5 mm.	2440F2330	2	No
Shim 0,2 mm.	2440F2340	2	No
Shim 0,1 mm.	2440F2350	2	No
Bearing A 35/72/29 RL	10191304	2	Yes
Parts swing plate			
Chamber seal assy A	2440F3191	1	Yes
Heating element 380-480V	2440G2220	1	No
Shim 0.5, stop pad	2440F2420	2	Yes
Shim 0.2, stop pad	2440F2430	2	Yes
Shim 0.1, stop pad	2440F2440	2	No
Shim 0.05, stop pad	2440F2450	2	No
Parts guide pin blocks			
Guide pin	2440G2180	2	Yes
Guide pin	2440G2160	1	Yes
V-ring D19,5	9105F0598 / 10083210	3	No
Pin	2440F2090	1	Yes
Parts pattern plate lock			
Pattern plate lock - komp. assy.	2440F0160	1	No
Repair kit pattern plate lock	2040R5091	4	No
Tong 90 - Pattern plate lock	2440F3381	1	Yes
Sealing	2013F2311	1	No
Parts position transducer			
Measuring rod 1500mm 4-20ma	9138X3555	1	Yes
Floating Magnet	9138X3611	2	Yes
Parts PP/SP cylinder			
Cartridge NG 25	9107L7524	1	Yes
Solenoid valve	9107L5657	1	Yes
Cartridge m. overvågning	9107L7527	1	Yes
Pressure sensor 0-250Bar 4-20mA	9117X3619 / 10086161	1	Yes
Connector 4P M12 female MOSA	9113X4108 / 10085638	1	No
Cartridge m. overvågning	9107L7528	1	Yes
2-way valve	9107L7566	1	Yes
Seal kit main cylinder 2440H0100	2440R0420	1	No
Parts HY10	10132986	1	Yes
Valve oil magn 4-way	9107L7286	1	Yes
Seal kit for H2-V10.	2440R2190	1	No
Parts oil tank			
Oil cooler	9107L5668	1	No
Transmitter Temp -50-100C 4-20	9117X3506 / 10086146	1	Yes
Filter kit 231	10122552	1	No
Parts main pump			
Solenoid valve	9107L7516	1	Yes
ServoValve	9107L7537	1	Yes
Parts cooling water			
Angle seat valve	9107L8188	1	Yes

Item name	Part numbers	Quantity	In stock
Solniod valve 3/2	9107L8189	1	Yes
Solenoid 24V DC for 9107L8189	9128X5161 / 10086636	1	Yes
Parts PN system			
Solenoid valve	9107L5563	1	No
Valve air magnet 2-way	9107L5606	1	Yes
3-way valve	9107L5614	1	Yes
Parts PN valves			
Reduction valve ISO 1	9107L7878	1	Yes
Solenoid valve 5/2	9107L7968	1	Yes
Solenoid valve 5/2	9107L7876	1	Yes
Solenoid valve 5/2	9107L8093	1	Yes
Solenoid valve 5/3	9107L7877	1	No
Reduction valve ISO 3	9107L8112	1	No
Solenoid valve 5/2 ISO 3, 24V DC	9107L8123	1	Yes
Parts central lubrication			
R_9138X0049_oil level switch	10455400	1	Yes
Parts pattern spray system	10132997	1	Yes
Solenoid valve 2/2	9107L7551	1	Yes
Pattern spray pump, 2440D0080	2440R0480	1	No
Check valve G 1/4"	9107L7474	1	Yes
Parts operators panels			
Switch with key	9116X0078	1	Yes
Switch 1 pole 2 step	9116X0081	1	Yes
Switch 4 step spring back	9116X0121	1	Yes
Switch with key 1pole 2step+0	9116X0080	1	Yes
switch 1Pole 3 step	9116X0079	1	Yes
Switch Binary code 0-9	9116X0147	1	Yes
Omskifter 1pol 4trin+O	9116X0151	1	Yes
Switch 1pole 2 step	9116X0093	1	Yes
Switch 3pol 2level	9116X0155 / 10234798	1	Yes
Safety stop	2040R3541	1	Yes
Switch 1pole 4step+0	9116X0115	1	Yes
Push-button, black, flush	9116X1075	1	Yes
Switch 2pole 2 step	9116X0084	1	Yes
Parts Control Cabinet			
Contactor Aux 2NO+2NC 24Vdc	9117X1061 / 10086006	1	No
Contactor Aux 3NO+1NC 24Vdc	9117X1062 / 10086007	1	No
Safety relay 24Vdc	9117X1081 / 10086023	1	Yes
Safety relay Expansion module	9117X1082 / 10086024	1	Yes
Parts voltage/frequency dep			
RC-led S6,S10,S12	9127X0023	1	Yes
Varibig S0-S2-S3	9127X0020	1	Yes
Contactor 25A 24Vdc S0	9117X0123 / 10085943	1	Yes
Contactor 12A 24Vdc S0	9117X0122 / 10085942	1	Yes
Contact Block 2NO+2NC S0-S3	9117X0301 / 10085964	1	No
Circuit breaker 7,0-10,0A	9117X2540 / 10086070	1	No
Circuit breaker 4,5-6,3A	9117X2538 / 10086068	1	Yes
Switch for Siemens sirius	9117X2809 / 10086111	1	Yes
Circuit breaker 7,0-10,0A	9117X2562 / 10086089	1	Yes
Circuit breaker 2,8-4,0A	9117X2536 / 10086066	1	Yes
Circuit breaker 2,2-3,2A	9117X2535 / 10086065	1	No
Parts PLC			
Card 8AI 14 BIT S7-300	9138Y1326 / 10086962	1	No
Card S7-300 AI8x16bit	9138Y1335 / 10086971	1	No
Card 8AO 11/12 BIT S7-300	9138Y1327 / 10086963	1	Yes
Card 32DI 24VDC SM321	9138Y1323 / 10086959	1	Yes
Card S7-300 DO16 24V DC/0,5A	9138Y1338 / 10086974	1	Yes
Card 8DO 24VDC 2A	9138Y1324 / 10086960	1	Yes
Card S7-300 4AO 16 bit ISO CH	9138Y1343 / 10086979	1	Yes
Parts AMC Drive Mechanism			
Roller R 30/72/23.8 RL	9108K4008 / 10024184	6	Yes
Parts AMC Slideway			
AMC support roller	10135450	4	?
Capping strip AMC 12x75	2052B2380	6	?

Item name	Part numbers	Quantity	In stock
T-screw assy	2072B2850	20	?
Parts AMC Thrustbars/Crossbars			
PN-hose G1/2 cylinder, grp.	2482D2010	1	?
Cross bar cylinder	2482B2190	1	?
Membran	2482R0030	2	?
Junction plate AMC	2023C5701	2	?
JUNCTION PLATE	10028727	2	?
Parts Displacement Measuring			
Measuring prope 450mm 4-20ma	9138X3535	1	Yes
Parts Hydraulics & Pneumatics			
Proportional valve	9107L8063	1	Yes
Proportional Valve	9107L7964	1	Yes
Filter	9107L5343	1	No
Regulator 1"	9107L8163 / 10101586	1	Yes
Parts SBC			
Hose element	2119A0821	1	?
Quick exh. valve G1/2	9107L5190 / 10085035	1	?
Bearing R 30/72/19 BL	9108K1046 / 10000089	2	?
Parts CSE Mechanism			
Roller bearing R 50/90/28 SH	9108K1567 / 10024211	2	Yes
R_10093272 Piston rod eye assy.	10116009	1	Yes
V-ring D53-58	9105F0596 / 10083208	1	Yes
Guide pin	2043B1001	1	Yes
Guide pin	2443A2060	1	No
Limit switch safety	9116X7212 / 10085820	1	No
R_10093272 Piston rod eye assy.	10116009	1	Yes
Bearing A 47/20/66 RL	9108K1129 / 10023811	1	Yes
Pivot pin	2413B2121	1	Yes
Bearing R 25/52/18 BL	9108K1572 / 10023909	2	Yes
Measuring rod 1500mm 4-20ma	9138X3558	1	Yes
Measuring rod 300mm 4-20ma	9138X3557	1	Yes
Gripper core mask lock	2055B1040	1	No
O-ring D20,00-3,00	9105F0300 / 10083095	1	Yes
Magnet for safety switch	9116X7213 / 10085821	1	Yes
Parts CSE HY, PN & VA			
Solenoid valve	9107L7361	1	Yes
Proportional valve	9107L8088	1	Yes
Prop. valve 4/3 E, NG 6	10137667	1	?
Directional valve	9107L7792	1	?
Solenoid valve 24V 2/2	9107L8050	1	No
Valve, Pressure regulator 3/4_	9107L8164	1	Yes
Parts CSE electrical			
Push-button, green	9116X1083	1	Yes
Contact block, Puchbutton	9116X1073	1	Yes
Push-button, red	9116X1076	1	Yes
Contact block, Puchbutton	9116X1074	1	No

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