

SERVO-TOP

QE5542

CE

Type

P340SE

Instruction Manual

Part 3

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English 2003-02-26

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Technical updatings reserved!

11. Survey and List of Parameters

11.1 Explanation of Parameter Survey

The parameter survey is designed as an aid for finding parameters quickly. It is a summary of references for the parameter list. Listed behind each reference are all parameters which exert an influence on the function described by the reference.

The parameter survey is divided into five columns:

Column 1 shows the references (functions) to which parameters are assigned.

Column 2 shows the abbreviations of the respective functions.

Column 3 shows all parameters (setting numbers) belonging to the respective reference.

Column 4 shows, for each function (reference) which controls inputs or outputs, the applicable indications such as Ex or Ax which can also be found on the connections diagram.

Column 5 shows, for each function (control inputs (Ex) or control outputs (Ax)), the respective plugs with the number of contacts (see connections diagram).

Example for searching a parameter:

Keyword (function): inverse rotation

The parameter survey shows in column 3 the parameter numbers 618, 623, 801.

Suppose that the inverse rotation function is to be enabled. The parameter list shows this function under parameter number 618.

11.2 Explanation of Parameter List

The parameter list is divided into 5 columns. These comprise, in

column 1: the parameter number,

column 2: is the explanation (meaning) of the parameters and the coding system of row 1 of the keys of the mini operator's panel, used when the parameter concerned can be programmed with the mini operator's panel,

column 3: the programming level (A, B, C) on which the parameter in question can be accessed,

column 4: the range of values within which the parameter in question can be set,

column 5: the value of the parameter in question is set on delivery ex factory.

Parameters having "either/or" validity (software switches) can merely be set to value I or II. In the case of such parameters, column 4 is empty.

11.3 Parameter survey P340SE (2z_055_B.hex)

Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Affichage	ANZ	605		
Auxiliary drive	ZUSAN	809		
Backtack	RIE	102/103/105 108/109/110 523		
Band supply	BZUF	474/475/490		
Brake	DRZAB	723/851		
Chopper	MESSER	105/110/537		
Control	REG	867/874/884 885/886/887 889/890/891 894		
Decorative backtack	ZRIE	523/530/775		
Defect search	HWT	797		
Delay	VERZ	730/770/939		
Direction of rotation	DRR	800/809		
Display	ANZ	605		
End backtack	ER	108/109/110		
Feed reverse	TUM	721/939	A5	X4:4
Front backtack	AR	102/103/105		
Hardware test	HWT	797		
Inverse rotation	RDR	618/801		
Needle position	NAPO	521/700/701 702/703/705 706		
Number of stitches	STZA	102/103/108 109/112		
ON period	EINZ	475/537/715 889		
Operator panel	BDF	681		
Photocell	LS	112/161		
Presser foot	PF	719/729/730 770	A4	X4:5

A4	X4:5	
Program	PR	203/381/851
Programming level C	EBC	798
Residual brake	STBR	718
Seam end	NE	110
Seam start	NA	105
Speed	DRZ	105/110/203 530/605/606 607/609/676 850
Speed decrease	DRZAB	723/851
Speed increase	DRZAN	722
Speed limitation	DB	676
Start	START	161/603
Start delay	STVERZ	474/729
Stepper motor	SMOT	367/490/809 855/856/858 859/862/863 874/882/972 977
Stitch condensation	STVD	102/105/108 110
Stop time	STOPZ	775
Tape tension	BSP	379
Tefron	TEF	882
Thread puller	FZ	761
Thread tension release	FSL	761
Thread trimming	SN	609/705/706
Thread wiper	WI	715
Time needed to switch on	EINZ	475/537/715 889
Timing output	TA	719/721
Vacuum	SAUG	105/110

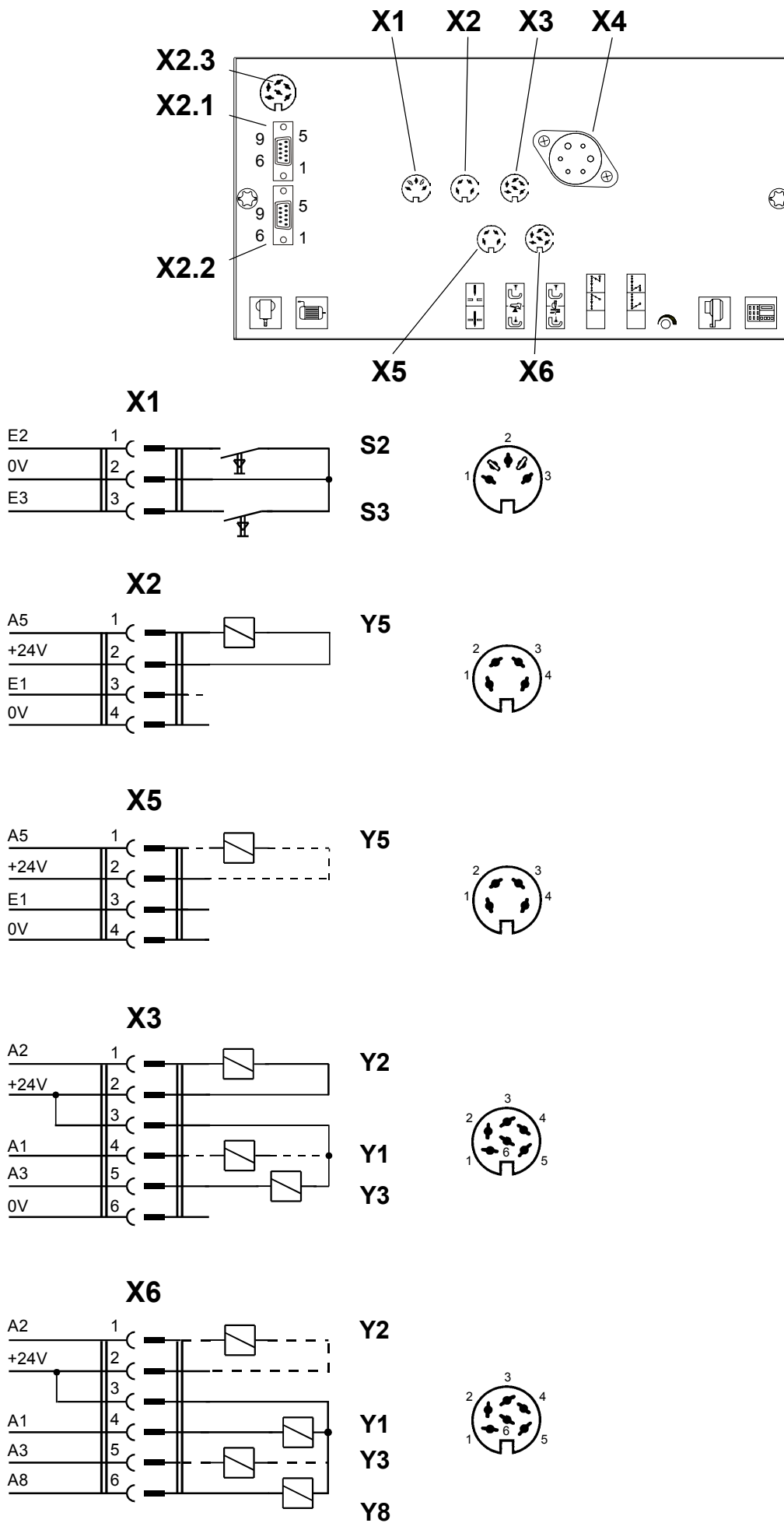
11.4 List of Parameters P340SE (2z_055_B.hex)

No.	Function (Meaning)	Level	Range Values	of Value	Standard
102	(AR/RIE/STVD/STZA) Front backtack stitches forward	A,B,C	0 - 9	3	Kl. 1
103	(AR/RIE/STZA) Front backtack stitches backward	A,B,C	0 - 9	3	Kl. 1
105	(AR/RIE/DRZ/MESSER/NA/SAUG/STVD) Speed for front backtack / stitch condensation	A,B,C	100 - 6400	1200	Kl. 1
108	(ER/RIE/STVD/STZA) End backtack stitches backward	A,B,C	0 - 9	3	Kl. 1
109	(ER/RIE/STZA) End backtack stitches forward	A,B,C	0 - 9	3	Kl. 1
110	(ER/RIE/DRZ/MESSER/NE/SAUG/STVD) Speed for end backtack / stitch condensation	A,B,C	100 - 6400	1200	Kl. 1
112	(LS/STZA) Number of stitches for light barrier fade-out on knit fabrics (according to stitch size)	B,C	0 - 255	0	Kl. 1
161	(LS/START) Start delay for start of photocell	B,C	0 - 2550	100	Kl. 1
203	(PR/DRZ) Speed for seam program I variable (treadle-controlled) II constant (corresponding to <221> or <222>)	B,C		II	Kl. 1
367	(SMOT) Limitation of the adjustment value for the stepping motors	B,C	0 - 99	70	Kl. 1
379	(BSP) Sensitivity of the tape tension sensor (1= maximum, 10= minimum)	C	1 - 10	4	Kl. 1
381	(PR) Indexing from seam line to seam line in programmed sewing via input E3 is possible I yes II no	B,C		II	Kl. 1
474	(BZUF/STVERZ) tape feed start delayed	B,C	0 - 255	0	Kl. 1
475	(BZUF/EINZ) tape advance duration on manual start (at button F4 on OC-TOP)	A,B,C	0 - 2550	250	Kl. 1
490	(BZUF/SMOT) tape feed I via sensor II in sync with main drive	B,C		I	Kl. 1
521	(NAPO) Needle position at stop before seam end I position 2 (up) II position 1 (down)	B,C		II	Kl. 1
523	(RIE/ZRIE) Backtack I decorative backtack (stitch in stitch) II standard backtack	A,B,C		II	Kl. 1
530	(DRZ/ZRIE) Speed (max.) for decorative backtack	B,C	100 - 3000	1000	Kl. 1
537	(EINZ/MESSER) Chopper duty cycle (ms)	B,C	10 - 2550	200	Kl. 1
603	(START) Start after seam end I after treadle 0 only II immediate start of operation	B,C		I	Kl. 1
605	(DRZ/ANZ) Actual speed in display I yes II no	B,C		II	Kl. 1
606	(DRZ) Speed: level 1 (min.)	B,C	30 - 640	200	Kl. 1
607	(DRZ) Speed: level 12 (max.)	B,C	100 - 6400	4500	Kl. 1
609	(SN/DRZ) Trimming speed 1	B,C	30 - 300	180	Kl. 1
618	(RDR) Inverse rotation after seam end I yes II no	B,C		II	Kl. 1
676	(DRZ/DB) Speed adjustment via potentiometer possible I yes II no	B,C		II	Kl. 1
681	(BDF) Operator panel push-button locked I yes II no	B,C		II	Kl. 1
700	(NAPO) Needle position 0 (reference position of the needle)	B,C	0 - 239	0	Kl. 1

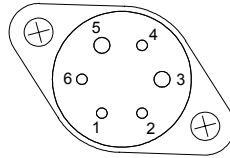
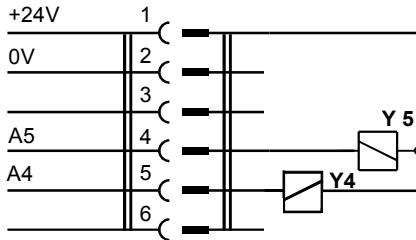
701	(NAPO) Angular adjustment I with handwheel (teach-in) II by keys (+/-)	C		I	Kl. 1
702	(NAPO) Needle position 1 (needle down)	B,C	0 - 239	75	Kl. 1
703	(NAPO) Needle position 2 (thread take-up lever up)	B,C	0 - 239	213	Kl. 1
705	(NAPO/SN) Needle position 5 (end of trimming signal 1)	B,C	0 - 239	125	Kl. 1
706	(NAPO/SN) Needle position 6 (start trimming signal 2)	B,C	0 - 239	119	Kl. 1
715	(EINZ/WI) Duration (ms) of thread wiper	B,C	0 - 2550	120	Kl. 1
718	(STBR) Timing of residual brake (0 = brake off)	C	0 - 100	0	Kl. 1
719	(PF/TA) Timing output A4 (0 = 100% switching on)	C	0 - 100	50	Kl. 1
721	(TUM/TA) Timing output A5 (0 = 100% switching on)	C	0 - 100	50	Kl. 1
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B,C	1 - 50	45	Kl. 1
723	(DRZAB) Brake ramp 1 gradual 50 steep	B,C	1 - 50	14	Kl. 1
729	(STVERZ/PF) Start delay after lowering presser foot	B,C	0 - 2550	130	Kl. 1
730	(PF/VERZ) Lift delay for presser foot after seam end	B,C	0 - 2550	30	Kl. 1
761	(FSL/FZ) Prolongation Thread tension release/ Thread puller	B,C	0 - 2550	0	Kl. 1
770	(PF/VERZ) Lifting delay of presser foot at threadle- position „-1“	B,C	0 - 250	80	Kl. 1
775	(ZRIE/STOPZ) Stop time (ms) with stitch in stitch backtack (decorative backtack)	B,C	0 - 2550	200	Kl. 1
797	(HWT) Hardware test I yes II no	B,C		II	Kl. 1
798	(EBC) Programming level C I yes II no	B,C		II	Kl. 1
800	(DRR) Direction of motor rotation viewed from belt pulley I left-hand rotation II right-hand rotation	B,C		I	Kl. 1
801	(RDR) Reverse rotation angle after seam end	B,C	5 - 200	30	Kl. 1
809	(DRR/ZUSAN/SMOT) Rotation direction stepping motor 2 I Anticlockwise II Clockwise	B,C		II	Kl. 1
850	(DRZ) Maximum motor speed	C		4500	Kl. 1
851	(PR/DRZAB) Brake ramp for stitch-count seams I steep II gradual	C		I	Kl. 1
855	(SMOT) maximum speed of stepping motor 2	B,C	100 - 6000	6000	Kl. 1
856	(SMOT) Start-/stopping speed of stepping motor 2	B,C	10 - 2000	2000	Kl. 1
858	(SMOT) acceleration of stepping motor 2	B,C	1 - 100	10	Kl. 1
859	(SMOT) reduction ratio of main motor/stepping motor 2	B,C	1 - 99	10	Kl. 1
862	(SMOT) maximum current of stepping motor 2 (255 = 3.6 A)	B,C	1 - 255	135	Kl. 1
863	(SMOT) stationary current of stepping motor 2 (255 = 3.6 A)	B,C	0 - 255	10	Kl. 1
867	(REG) integral amplification, tape tension regulation	B,C	1 - 127	7	Kl. 1
874	(SMOT/REG) proportional amplification of tape tension regulation	B,C	1 - 127	41	Kl. 1
882	(SMOT/TEF) tape feeder distance for stepping motor 2	A,B,C	0 - 255	0	Kl. 1

884	(REG) Proportional amplification of the speed control (in general)	C	4 - 50	11	Kl. 1
885	(REG) Integral amplification of the speed control	C	0 - 100	30	Kl. 1
886	(REG) Proportional amplification of the order controllers	C	1 - 50	20	Kl. 1
887	(REG) Differential amplification of the order controllers	C	1 - 100	30	Kl. 1
889	(EINZ/REG) Time required for order controlling (0 = always)	C	0 - 1000	400	Kl. 1
890	(REG) Proportional amplification of the superior order controllers for the residual brake	C	1 - 50	25	Kl. 1
891	(REG) Proportional amplification of the lower speed controllers for the residual brake	C	1 - 50	20	Kl. 1
894	(REG) Rotational direction of motor and synchronizer I different II same	C		I	Kl. 1
934	(SONST) Selector for the displaychoice in the diagnosis mode (<933>=I)	C	0 - 5	0	Kl. 1
939	(VERZ/TUM) Rate time (premature switching on) for the transport changer	B,C	0 - 100	27	Kl. 1
972	(SMOT) number of stepping motor axes 0 none 1 one (only the first) 2 one (only the second) 3 two	B,C	0 - 1	1	Kl. 1
977	(SMOT) stepping motor 2 - mode 1 full step 2 half step 3 quarter step 4 eighth step	B,C	1 - 3	2	Kl. 1

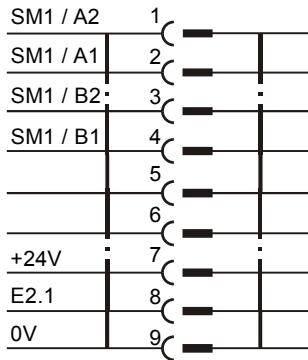
12. Electrical Connections Diagramm P340SE



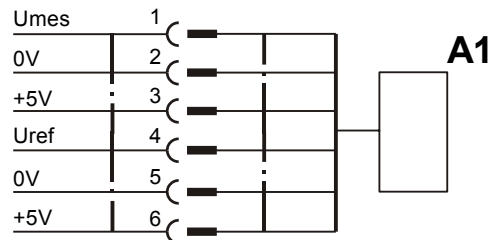
X4



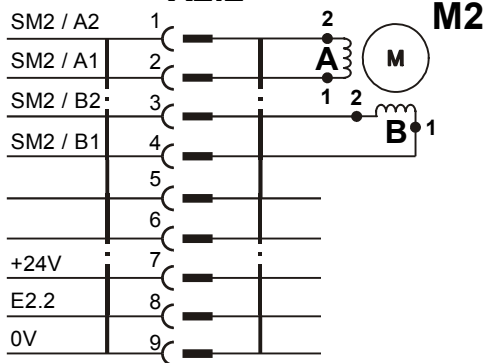
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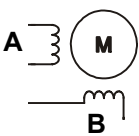
X2.3



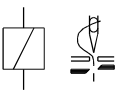
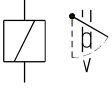
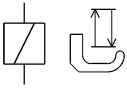
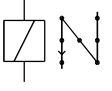
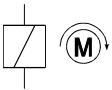
X2.2



Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
 Signification des aimants resp. solenoides et touches / Significação dos imãs e/ou as solenoidas e teclas
 Significato dei magneti, delle valvole magnetiche e dei tasti / Significación de los imanes y/o los solenoides
 y pulsadores / Betekenis van de magneten resp. magneetkleppen, toetsen

A1	Bandspannungssensor / tape tension sensor
M2 	Schrittmotor 2 für Bandtransport / stepping motor 2 for tape transport
S2 	Abhacker / chopper chopper / guillotina taglio / guillotina afhakker

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S3 	Raffwert-Weiterschaltung bei manuellem Nähen / gathering value change-over at manuel sewing
S3  <381> = I	Weiterschaltung von Nahtstrecke zu Nahtstrecke bei programmiertem Nähen / change-over from seam section to seam section at programmed sewing
Y1 I max 8 A * <799> = 1 	Abhacker / chopper / chopper / cortar / coltello / guillotina / mes
Y2 I max 10 A * 	Fadenschneider magnet. / magn. thread trimmer / coupe-fil magnétique / corte de linhas magnético / rasafilo magnetico / cortahilos magnético / draadsnijder magnetisch
Y3 I max 10 A * 	Fadenwischer / thread wiper / écarteur de fil / retira-linhas / scartafilo / retirahilos / draadwisser
Y4 I max 10 A * 	Presserfuß heben / lifting presser foot / relevage du pied presseur / levantar do calcador / sollevamento del alzapiedino / elevación de prensatelas / drukvoet optillen
Y5 I max 10 A * 	Transportumsteller / feed reverse / renversement de marche / mudança do transporte / commutazione trasporto / inversión de transporte / transportomschakeling
Y8 I max 300 mA 	Maschinenlauf / motor runs / moteur en marche / motor em movimento / motore in moto / motor en marcha / loop van de machine

- * Die Summe der Lastströme aller gleichzeitig eingeschalteten Stellglieder (Magnete, Magnetventile) darf den Wert von 4A nicht überschreiten (siehe hierzu Kapitel 2. Technische Daten).
- * The total of load currents of all servos activated simultaneously (solenoids, solenoid valves) is not allowed to exceed 4 amps (see also section 2. Technical Specifications).
- * Le total des courants de charge de tous les vérins (aimants, électro-vannes) activés simultanément ne doit pas dépasser 4 A (voir aussi le chapitre 2. "caractéristiques techniques").
- * A soma das correntes sob carga de todos os atuadores ligados ao mesmo tempo (ímãs, solenóides) não pode ultrapassar o valor de 4A (ver também capítulo 2. Dados Técnicos).
- * La somma delle correnti di carico di tutti gli attuatori inseriti contemporaneamente (magnet, elettrovalvole) non deve essere superiore a 4 A (vedere il capitolo 2. Dati Tecnici).
- * La suma de las corrientes bajo carga de todos los elementos de todos los componentes de regulación conectados simultáneamente (imanes, válvula magnética) no podrá sobrepasar el valor de 4A (véase también el capítulo 2. de datos técnicos).
- * De belastingsstroom van alle tegelijkertijd ingeschakelde bedieningsschakels (magnet, magneetventielen) mag in totaal niet meer dan 4 A bedragen (zie hiervoor hoofdstuk 2. Technische gegevens).

13. Maintenance and Repair



!! Before starting maintenance or repair work, switch off the SERVO-TOP, separate the drive system from mains power (for instance by pulling out the mains plug) and wait for the motor to come to a complete stop.

General maintenance work must only be done by specially trained personnel paying close attention to the operating instructions.

The SERVO-TOP is largely maintenance-free.

However, make sure to perform the following maintenance work:

Depending on the operating conditions, clean the drive system regularly, at least once a week, from any dust or lint. Make sure in particular that the ventilation louvres and cooling fins of the motor, especially the cooling fins between the motor and the control box, are perfectly clean (Fig. 13).

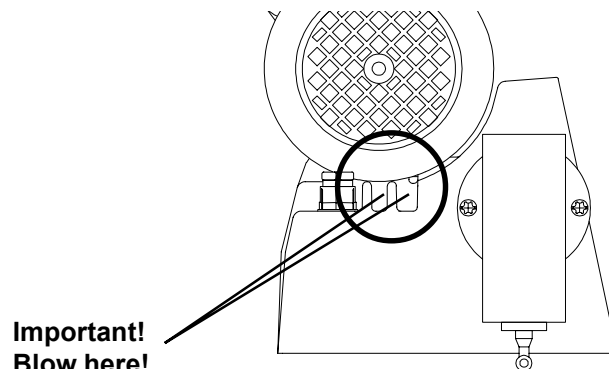


Fig. 13

Remove any threads caught on the synchronizer shaft or on the belt pulley and/or motor shaft.

Check if the drive system is perfectly secured to the stand and that the accessories (synchronizer on machine shaft, speed control unit on control box) are safely mounted in their respective positions.

Check the drive belt for any wear and for correct tension.
Incorrect belt tension can increase noise and vibrations.



When opening covers or removing parts, apart from those removable by hand, live elements can be exposed.
Connections can also be electrically live.

If you require to open the drive system before starting maintenance or repair work or before replacing any parts, disconnect the drive system from any and all power sources.

If maintenance or repair work on the open unit is unavoidable, this may only be done by qualified personnel familiar with the risks involved. Observe all regulations as per EN 50110.

There can still be capacitors carrying a charge in the power electronics system, even when the drive system has been disconnected from all power sources. To avoid injury by electrical shock, it is therefore essential to wait at least 10 minutes between mains power shutoff and opening the control box.

In order to protect semi-conductor components from overvoltage, use only high-resistivity measuring equipment when making checks on the control system.

Any repair or servicing work requiring skilled knowhow may only be done by qualified personnel authorized by Quick-Rotan.

We emphasize that in accordance with the product liability law we are under no responsibility for damages caused by our products if these are due to

- unqualified repair
- the use of components not authorized by us
- actions made by any persons not authorized by us.